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VOLUME II

PLANETARY POSITION-VELOCITY EPHEMERIDES, 1965-2000

HELIOCENTRIC ECLIPTIC SYSTEM

(BASED ON THE JPL EPHEMERIS TAPE LIBRARY)

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VOLUME II HELIOCENTRIC ECLIPTIC SYSTEM

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REVISIONS

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ABSTRACT

This document contains lunar and planetary position and velocity ephemerides for the period from 1965 to 2000. The position ephemeris appears in both rectangular and spherical coordinates, while the velocity ephemeris is presented only in the rectangular form. The distance from the central body and the magnitude of the planet's velocity are also printed out. These ephemerides are presented in three coordinate systems: the heliocentric mean ecliptic and equinox of 1950.0, the heliocentric mean equatorial and equinox of 1950.0, and the geocentric mean equatorial and equinox of 1950.0.

The data are based upon the first release from the JPL Ephemeris Tape System, a basic position-velocity ephemerides prepared under contract to the National Aeronautics and Space Administration.

KEY WORDS

Ephemeris
Planets
Moon
Position
Velocity
Sun
Heliocentric
Equatorial
Ecliptic
Geocentric

0.0 GENERAL INFORMATION

0.0.1 INTRODUCTION

The basic ephemerides presented in the tables of volumes one, two and three are those produced and released on magnetic tape by JPL. They were generated by selecting initial values such that the subsequent position predictions obtained by integrating the equations of motion using Cowell's perturbation method were the best least-squares fit to certain source position predictions over the arc of integration. The success of this method in generating acquisition ephemerides for radar observations of Venus in 1961 led to the establishment of the ephemeris library system from which this data was obtained.

To insure the easy availability of these results and to supplement or supplant ephemerides previously used within The Boeing Company, it was decided to release this document. It is hoped that it will prove useful in the analysis of interplanetary and lunar missions.

0.0.2 GENERATION OF THE EPHEMERIS

Given epoch conditions, the equations of motion to be integrated are the equations of Cowell's method.

$$\ddot{X}^i = -k^2(1+m)\frac{X^i}{r^3} + \Sigma_j k^2 m_j \left(\frac{X^i_j - X^i}{(\rho_j)^3} - \frac{X^i_j}{(r_j)^3} \right)_{(i=1,2,3)}$$

where

$$(r)^2 = \sum_{i=1}^{3} (X^i)^2$$

$$(r_j)^2 = \sum_{i=1}^{3} (X^i_j)^2$$

$$(\rho_j)^2 = \sum_{i=1}^{3} (X^i_j - X^i)^2$$

and where X^i are the position coordinates and m is the mass of the body whose motion is sought, while m_j and X^i_j are the masses and positions of the set of perturbing bodies.

The integration of this equation yields coordinates $X^i(t,c)$ and the consistent velocity components $\dot{x}_j(t,c)$, $(i = 1,2,3)$, at time points $t_o \leq t_1 < t_2 < \ldots \leq t_f$. The computed coordinates in general depend on some parameter

set $C = (C_1, C_2, \ldots C_6)$, the six constants of integration. JPL used the osculating elements of the initial epoch for this parameter set, as these values serve to fix the coordinates and velocity components at t_o. The C are chosen such that the sum of the squared residuals, the difference between the computed position coordinates and the source coordinates, is a minimum.

$$S = \sum_{j=0}^{n} \left\{ \sum_{i=1}^{3} (\Delta X^i_j)^2 \right\} = \min$$

The method used in minimizing S consisted of calculating the partial derivatives $\partial X^i_j / \partial C_k$ $(i = 1,2,3)$, $(k = 1,2,\ldots 6)$ for assumed values of the C at the points t_j, then solving the normal equations

$$\sum_{j=0}^{n} \left\{ \sum_{i=1}^{3} \left(\frac{\partial X^i_j}{\partial C_m} \Delta X^i_j \right) \right\} = \sum_{k=1}^{6} \left\{ \sum_{L=1}^{n} \frac{\partial X^i_j}{\partial C_m} \frac{\partial X^i_j}{\partial C_k} \right) \right\} \Delta C_k$$

$$(m=1,2,\ldots 6)$$

for corrections ΔC_k to the values of C_k.

For the initial fit of Jupiter, the perturbing set consisted of source positions only. Then a fitted Jupiter ephemeris was used in fitting Saturn, Jupiter was then refitted with this fitted Saturn ephemeris; and Uranus and Pluto were fitted using the previous fits to Jupiter and Saturn.

The remaining fits were generated using fitted Jupiter, Saturn, Uranus and Pluto ephemerides. Next Mars, the Earth-Moon barycenter, and finally Venus were fitted. The fit of Mercury has been delayed until relativistic effects can be included and difficulty was experienced in fitting Neptune; consequently, the position-velocity ephemerides of these planets were obtained by evaluating and then numerically differentiating the source position prediction theories.

0.0.3 SOURCE EPHEMERIDES

The source position theories used by JPL were, for the inner planets, results obtained through general perturbation methods. One can think of such a method as a harmonic analysis in which the constants are determined by observation. Such expressions may be improved by the incorporation of either more terms or by time variable coefficients, e.g. in first order theories the coefficients are taken to be functions of constant osculating orbital elements at some epoch; in second order theory, the change in the orbital elements with time is taken into account, etc. Each higher order theory yields a slightly better approximation to the actual orbit than the preceding one, but the accuracy of any order is limited by the exactness of the determination of certain astrodynamic constants (e.g. solar parallax). The theories employed were of either second or third order.

The particular theories used were:

1. Brown's improved Lunar Theory
2. The Newcomb-Duncombe Theories of Venus and the Earth-Moon Barycenter
3. The Hansen-Clemence Theory of Mars
4. The Newcomb-Clemence Theory of Mercury.

The results of a numerical integration procedure carried out by Eckert, Clemence, and Brouwer (and later modified by Clemence) were used as the source data for the coordinates of the five outer planets.

0.0.4 ACCURACY OF THE EPHEMERIDES

The ephemerides produced using a fitting process can be no more accurate than the original source predictions, and those theories present varying degrees of accuracy. The greatest accuracy is shown in the source data for the moon, where the uncertainty in latitude and longitude are of the order of a few hundredths of a second of arc while the uncertainty of the radius vector is of the order of one kilometer. Systematic errors in longitude, moreover, are assimilated into Δt, the difference between Ephemeris Time and Universal Time. For the inner planets, the accuracy is on the order of 0".1 in latitude and longitude with the uncertainty in the radius vectors essentially the uncertainty of the astronomical unit (although no value is available on the uncertainty of the radius vector of Mercury.) An estimation of the accuracy of the source data for the outer planets is more difficult to make; since, for example, Krotkov and Dicke[7] found the source data for Jupiter to show systematic discrepancies with observation of about 0".25 while according to Gurnette and Woolley, Pluto showed a right ascension in 1960 about 0".5 greater than that predicted by the source data. Such systematic departures from observation are caused by errors in the constants adopted in the original calculations.

In summary, the accuracy of 12 significant figures quoted in JPL reports indicates the number of digits free from random error generated within the computer program. The use of accuracy in this sense is similar to that of Clemence and Brouwer in Reference 3. If, however, accuracy refers to agreement with observation then a more realistic figure would be five-six significant figures for the inner planets.

0.0.5 PRINTOUT FORMAT AND CONSTANTS

Three coordinate systems appear in these tables. They are the heliocentric mean equatorial of 1950.0, the heliocentric mean ecliptic of 1950.0, and the geocentric mean equatorial of 1950.0. In all three reference frames the vernal equinox of 1950.0 serves as the x-axis. (It should be noted that 1950.0 indicates the beginning of the Besselian year, or the instant when the right ascension of the fictitious mean sun, affected by aberration and measured from the mean equinox, is 18 hours and 40 minutes. It does not coincide exactly with the calendar year.)

The basic units used by the original tapes are astronomical units (A.U.'s) and A.U.'s/day. In the printout, these have on some occasions been converted to other units. When such transformations have been carried out, the conversion factors are printed on the table. The factors used are:

1. 1 A.U. = 149,599,000 Km
2. 1 Earth Radius (ER) = 6378.3255 Km
3. $\bar{\epsilon}$ (mean obliquity of 1950.0) = .409206194 radians
4. 1 radian = 57.29577951 degrees

The quantities appearing in these tables were found from the basic $\dot{X}$, Y, Z, $\dot{X}$, $\dot{Y}$, $\dot{Z}$ of the tapes by the following formulae:

1. Velocity = $\sqrt{\dot{X}^2 + \dot{Y}^2 + \dot{Z}^2}$

2. Radius = $\sqrt{X^2 + Y^2 + Z^2}$

3. declination = $\tan^{-1}\left(Z/(X^2+Y^2)^{\frac{1}{2}}\right) = \phi$, $0° \leq |\phi| \leq 90°$

4. right ascension = $\tan^{-1}(Y/X) = \theta$, $0° \leq \theta \leq 360°$

5. Transformations between the tapes' equatorial system and the ecliptic system is carried out by use of the matrix:

$$\bar{X}_{ecliptic} = \begin{pmatrix} 1 & 0 & 0 \\ 0 & \cos\bar{\epsilon} & \sin\bar{\epsilon} \\ 0 & -\sin\bar{\epsilon} & \cos\bar{\epsilon} \end{pmatrix} \bar{X}_{equatorial}$$

6. $\sin\bar{\epsilon} = .91743695225$

7. $\cos\bar{\epsilon} = .3978811865$

8. Transformations into the geocentric system are carried out by equations of the form:

$$\bar{X}_{geocentric} = \bar{X}_{heliocentric} - \bar{X}_{earth}$$

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1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
64/12/31	2438760.5	-0.32184	0.14709	0.04140	-30.25262	-42.10269	-0.72991	0.35627	51.84969	155.44	6.67
65/ 1/ 2	2438762.5	-0.35256	0.09680	0.04004	-22.95592	-44.75208	-1.61199	0.36780	50.32217	164.65	6.25
65/ 1/ 4	2438764.5	-0.37492	0.04419	0.03773	-15.79447	-46.14870	-2.37825	0.37940	48.83466	173.28	5.71
65/ 1/ 6	2438766.5	-0.38917	-0.00940	0.03459	-8.92815	-46.46858	-3.02871	0.39081	47.41533	181.38	5.08
65/ 1/ 8	2438768.5	-0.39570	-0.06281	0.03077	-2.45824	-45.87939	-3.56802	0.40183	46.08353	189.02	4.39
65/ 1/10	2438770.5	-0.39502	-0.11510	0.02639	3.55670	-44.53119	-4.00326	0.41229	44.85202	196.24	3.67
65/ 1/12	2438772.5	-0.38767	-0.16545	0.02156	9.08753	-42.55317	-4.34245	0.42205	43.72885	203.11	2.93
65/ 1/14	2438774.5	-0.37422	-0.21320	0.01639	14.12428	-40.05378	-4.59365	0.43100	42.71887	209.67	2.18
65/ 1/16	2438776.5	-0.35523	-0.25781	0.01098	18.66873	-37.12268	-4.76443	0.43906	41.82480	215.97	1.43
65/ 1/18	2438778.5	-0.33127	-0.29882	0.00541	22.72917	-33.83326	-4.86162	0.44617	41.04802	222.05	0.70
65/ 1/20	2438780.5	-0.30290	-0.33586	-0.00023	26.31680	-30.24532	-4.89117	0.45227	40.38907	227.95	-0.03
65/ 1/22	2438782.5	-0.27066	-0.36860	-0.00586	29.44325	-26.40755	-4.85816	0.45733	39.84803	233.71	-0.73
65/ 1/24	2438784.5	-0.23506	-0.39678	-0.01143	32.11903	-22.35977	-4.76683	0.46132	39.42479	239.36	-1.42
65/ 1/26	2438786.5	-0.19663	-0.42019	-0.01685	34.35235	-18.13480	-4.62065	0.46422	39.11911	244.92	-2.08
65/ 1/28	2438788.5	-0.15587	-0.43862	-0.02208	36.14836	-13.76026	-4.42236	0.46601	38.93079	250.44	-2.72
65/ 1/30	2438790.5	-0.11328	-0.45193	-0.02705	37.50871	-9.25992	-4.17409	0.46669	38.85965	255.93	-3.32
65/ 2/ 1	2438792.5	-0.06938	-0.45997	-0.03171	38.43103	-4.65517	-3.87738	0.46625	38.90563	261.42	-3.90
65/ 2/ 3	2438794.5	-0.02467	-0.46265	-0.03599	38.90867	0.03375	-3.53330	0.46470	39.06878	266.95	-4.44
65/ 2/ 5	2438796.5	0.02033	-0.45987	-0.03985	38.93039	4.78648	-3.14251	0.46204	39.34922	272.53	-4.95
65/ 2/ 7	2438798.5	0.06508	-0.45157	-0.04323	38.48010	9.58115	-2.70536	0.45828	39.74715	278.20	-5.41
65/ 2/ 9	2438800.5	0.10903	-0.43773	-0.04608	37.53667	14.39286	-2.22198	0.45345	40.26281	283.99	-5.83
65/ 2/11	2438802.5	0.15160	-0.41833	-0.04835	36.07378	19.19194	-1.69244	0.44757	40.89636	289.92	-6.20
65/ 2/13	2438804.5	0.19216	-0.39341	-0.04997	34.05995	23.94183	-1.11689	0.44067	41.64780	296.03	-6.51
65/ 2/15	2438806.5	0.23006	-0.36305	-0.05091	31.45898	28.59642	-0.49586	0.43281	42.51668	302.36	-6.76
65/ 2/17	2438808.5	0.26459	-0.32741	-0.05110	28.23076	33.09695	0.16945	0.42405	43.50187	308.94	-6.92
65/ 2/19	2438810.5	0.29502	-0.28668	-0.05050	24.33308	37.36816	0.87665	0.41445	44.60097	315.82	-7.00
65/ 2/21	2438812.5	0.32053	-0.24120	-0.04906	19.72477	41.31382	1.62152	0.40414	45.80969	323.04	-6.97
65/ 2/23	2438814.5	0.34030	-0.19141	-0.04674	14.37093	44.81177	2.39715	0.39323	47.12074	330.64	-6.83
65/ 2/25	2438816.5	0.35344	-0.13791	-0.04352	8.25121	47.70913	3.19276	0.38188	48.52255	338.68	-6.54
65/ 2/27	2438818.5	0.35907	-0.08150	-0.03937	1.37216	49.81882	3.99228	0.37030	49.99736	347.21	-6.10
65/ 3/ 1	2438820.5	0.35633	-0.02321	-0.03430	-6.21546	50.91960	4.77283	0.35873	51.51910	356.27	-5.49
65/ 3/ 3	2438822.5	0.34448	0.03565	-0.02836	-14.39434	50.76340	5.50323	0.34748	53.05097	5.91	-4.68
65/ 3/ 5	2438824.5	0.32293	0.09348	-0.02162	-22.95556	49.09464	6.14338	0.33688	54.54340	16.14	-3.68
65/ 3/ 7	2438826.5	0.29142	0.14840	-0.01422	-31.57716	45.68665	6.64529	0.32734	55.93341	26.99	-2.49
65/ 3/ 9	2438828.5	0.25013	0.19830	-0.00634	-39.81778	40.39656	6.95704	0.31926	57.14664	38.41	-1.14
65/ 3/11	2438830.5	0.19979	0.24100	0.00176	-47.14090	33.23164	7.03047	0.31305	58.10365	50.34	0.32
65/ 3/13	2438832.5	0.14180	0.27443	0.00979	-52.98089	24.40628	6.83190	0.30905	58.73088	62.67	1.82
65/ 3/15	2438834.5	0.07816	0.29691	0.01743	-56.84557	14.35937	6.35285	0.30751	58.97431	75.25	3.25
65/ 3/17	2438836.5	0.01136	0.30737	0.02437	-58.42537	3.70797	5.61620	0.30854	58.81169	87.88	4.53
65/ 3/19	2438838.5	-0.05591	0.30550	0.03033	-57.66377	-6.85847	4.67379	0.31206	58.25799	100.37	5.58
65/ 3/21	2438840.5	-0.12103	0.29180	0.03511	-54.75723	-16.70562	3.59587	0.31785	57.36168	112.53	6.34
65/ 3/23	2438842.5	-0.18173	0.26738	0.03861	-50.08841	-25.35403	2.45686	0.32559	56.19352	124.20	6.81
65/ 3/25	2438844.5	-0.23625	0.23380	0.04079	-44.12781	-32.52104	1.32288	0.33487	54.83276	135.30	7.00
65/ 3/27	2438846.5	-0.28336	0.19286	0.04169	-37.34363	-38.10767	0.24465	0.34529	53.35542	145.76	6.93
65/ 3/29	2438848.5	-0.32236	0.14636	0.04139	-30.14298	-42.15319	-0.74408	0.35644	51.82706	155.58	6.67

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
65/ 3/31	2438850.5	-0.35296	0.09602	0.04001	-22.84667	-44.78253	-1.62446	0.36797	50.29995	164.78	6.24
65/ 4/ 2	2438852.5	-0.37519	0.04339	0.03768	-15.68851	-46.16170	-2.38898	0.37957	48.81330	173.40	5.70
65/ 4/ 4	2438854.5	-0.38932	-0.01021	0.03454	-8.82739	-46.46668	-3.03773	0.39098	47.39518	181.50	5.07
65/ 4/ 6	2438856.5	-0.39574	-0.06361	0.03071	-2.36385	-45.86497	-3.57542	0.40199	46.06481	189.13	4.38
65/ 4/ 8	2438858.5	-0.39495	-0.11587	0.02632	3.64407	-44.50631	-4.00915	0.41244	44.83486	196.35	3.66
65/ 4/10	2438860.5	-0.38751	-0.16619	0.02148	9.16757	-42.51959	-4.34695	0.42219	43.71333	203.21	2.92
65/ 4/12	2438862.5	-0.37396	-0.21390	0.01631	14.19692	-40.01296	-4.59688	0.43112	42.70505	209.77	2.17
65/ 4/14	2438864.5	-0.35490	-0.25846	0.01089	18.73403	-37.07584	-4.76650	0.43917	41.81269	216.06	1.42
65/ 4/16	2438866.5	-0.33087	-0.29941	0.00533	22.78726	-33.78139	-4.86261	0.44627	41.03762	222.14	0.68
65/ 4/18	2438868.5	-0.30244	-0.33639	-0.00031	26.36783	-30.18924	-4.89116	0.45235	40.38039	228.04	-0.04
65/ 4/20	2438870.5	-0.27013	-0.36906	-0.00595	29.48739	-26.34792	-4.85723	0.45740	39.84108	233.80	-0.75
65/ 4/22	2438872.5	-0.23449	-0.39717	-0.01151	32.15639	-22.29713	-4.76503	0.46137	39.41955	239.44	-1.43
65/ 4/24	2438874.5	-0.19602	-0.42050	-0.01694	34.38301	-18.06962	-4.61803	0.46425	39.11558	245.01	-2.09
65/ 4/26	2438876.5	-0.15523	-0.43886	-0.02216	36.17237	-13.69291	-4.41896	0.46603	38.92895	250.52	-2.73
65/ 4/28	2438878.5	-0.11262	-0.45209	-0.02713	37.52603	-9.19077	-4.16993	0.46669	38.85951	256.01	-3.33
65/ 4/30	2438880.5	-0.06870	-0.46005	-0.03177	38.44159	-4.58454	-3.87248	0.46624	38.90720	261.51	-3.91
65/ 5/ 2	2438882.5	-0.02399	-0.46265	-0.03605	38.91233	0.10554	-3.52767	0.46467	39.07205	267.03	-4.45
65/ 5/ 4	2438884.5	0.02101	-0.45978	-0.03991	38.92696	4.85910	-3.13617	0.46199	39.35422	272.62	-4.96
65/ 5/ 6	2438886.5	0.06576	-0.45140	-0.04328	38.46931	9.65423	-2.69831	0.45822	39.75390	278.29	-5.42
65/ 5/ 8	2438888.5	0.10970	-0.43747	-0.04612	37.51816	14.46598	-2.21423	0.45337	40.27132	284.08	-5.84
65/ 5/10	2438890.5	0.15223	-0.41759	-0.04838	36.04710	19.26460	-1.68398	0.44747	40.90665	290.01	-6.21
65/ 5/12	2438892.5	0.19276	-0.39299	-0.04999	34.02462	24.01338	-1.10774	0.44056	41.65986	296.13	-6.52
65/ 5/14	2438894.5	0.23061	-0.36255	-0.05092	31.41440	28.66607	-0.48602	0.43269	42.53052	302.46	-6.76
65/ 5/16	2438896.5	0.26509	-0.32682	-0.05110	28.17632	33.16370	0.17994	0.42391	43.51745	309.05	-6.92
65/ 5/18	2438898.5	0.29545	-0.28603	-0.05049	24.26814	37.43072	0.88774	0.41430	44.61826	315.93	-7.00
65/ 5/20	2438900.5	0.32088	-0.24048	-0.04903	19.64875	41.37053	1.63314	0.40398	45.82861	323.15	-6.97
65/ 5/22	2438902.5	0.34055	-0.19063	-0.04670	14.28341	44.86057	2.40916	0.39306	47.14117	330.76	-6.82
65/ 5/24	2438904.5	0.35358	-0.13707	-0.04346	8.15206	47.74745	3.20496	0.38170	48.54428	338.81	-6.54
65/ 5/26	2438906.5	0.35909	-0.08063	-0.03930	1.26176	49.84356	4.00438	0.37012	50.02007	347.35	-6.09
65/ 5/28	2438908.5	0.35622	-0.02232	-0.03422	-6.33590	50.92717	4.78441	0.35856	51.54233	356.42	-5.48
65/ 5/30	2438910.5	0.34422	0.03654	-0.02826	-14.52242	50.74991	5.51376	0.34731	53.07406	6.06	-4.67
65/ 6/ 1	2438912.5	0.32253	0.09434	-0.02152	-23.08730	49.05632	6.15219	0.33673	54.56552	16.30	-3.66
65/ 6/ 3	2438914.5	0.29087	0.14920	-0.01410	-31.70675	45.62052	6.65160	0.32720	55.95349	27.16	-2.47
65/ 6/ 5	2438916.5	0.24943	0.19900	-0.00622	-39.93770	40.30141	6.96006	0.31915	57.16350	38.58	-1.12
65/ 6/ 7	2438918.5	0.19896	0.24158	0.00188	-47.24255	33.10901	7.02956	0.31297	58.11609	50.53	0.34
65/ 6/ 9	2438920.5	0.14086	0.27485	0.00991	-53.05593	24.26114	6.82670	0.30900	58.73788	62.86	1.84
65/ 6/11	2438922.5	0.07716	0.29715	0.01754	-56.88765	14.19993	6.34347	0.30751	58.97527	75.44	3.27
65/ 6/13	2438924.5	0.01033	0.30743	0.02447	-58.43157	3.54445	5.60322	0.30857	58.80653	88.08	4.55
65/ 6/15	2438926.5	-0.05693	0.30538	0.03041	-57.63521	-7.01568	4.65816	0.31213	58.24720	100.56	5.59
65/ 6/17	2438928.5	-0.12199	0.29150	0.03518	-54.69850	-16.84785	3.57874	0.31795	57.34618	112.71	6.35
65/ 6/19	2438930.5	-0.18261	0.26692	0.03865	-50.00623	-25.47540	2.43933	0.32572	56.17446	124.38	6.82
65/ 6/21	2438932.5	-0.23702	0.23322	0.04081	-44.02949	-32.61870	1.30584	0.33502	54.81132	135.46	7.00
65/ 6/23	2438934.5	-0.28401	0.19218	0.04169	-37.23594	-38.18122	0.22875	0.34545	53.33267	145.92	6.93
65/ 6/25	2438936.5	-0.32289	0.14561	0.04138	-30.03151	-42.20398	-0.75844	0.35661	51.80389	155.73	6.66
65/ 6/27	2438938.5	-0.35336	0.09523	0.03998	-22.73566	-44.81284	-1.63709	0.36814	50.27704	164.92	6.24

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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65/ 6/29	2438940.5	-0.37547	0.04257	0.03764	-15.58093	-46.17418	-2.39981	0.37974	48.79118	173.53	5.69
65/ 7/ 1	2438942.5	-0.38947	-0.01103	0.03448	-8.72522	-46.46399	-3.04682	0.39115	47.37420	181.62	5.06
65/ 7/ 3	2438944.5	-0.39578	-0.06443	0.03064	-2.26828	-45.84954	-3.58285	0.40216	46.04522	189.25	4.37
65/ 7/ 5	2438946.5	-0.39489	-0.11666	0.02625	3.73240	-44.48030	-4.01504	0.41259	44.81683	196.46	3.65
65/ 7/ 7	2438948.5	-0.38734	-0.16694	0.02141	9.24838	-42.48479	-4.35143	0.42233	43.69697	203.32	2.91
65/ 7/ 9	2438950.5	-0.37371	-0.21461	0.01623	14.27016	-39.97091	-4.60007	0.43125	42.69041	209.87	2.16
65/ 7/11	2438952.5	-0.35456	-0.25912	0.01081	18.79978	-37.02776	-4.76850	0.43929	41.79983	216.16	1.41
65/ 7/13	2438954.5	-0.33047	-0.30001	0.00524	22.84568	-33.72830	-4.86353	0.44637	41.02654	222.23	0.67
65/ 7/15	2438956.5	-0.30197	-0.33692	-0.00040	26.41909	-30.13196	-4.89108	0.45244	40.37110	228.13	-0.05
65/ 7/17	2438958.5	-0.26961	-0.36953	-0.00604	29.53165	-26.28712	-4.85622	0.45747	39.83358	233.89	-0.76
65/ 7/19	2438960.5	-0.23392	-0.39757	-0.01160	32.19379	-22.23337	-4.76315	0.46143	39.41384	239.53	-1.44
65/ 7/21	2438962.5	-0.19541	-0.42082	-0.01702	34.41366	-18.00337	-4.61533	0.46429	39.11167	245.09	-2.10
65/ 7/23	2438964.5	-0.15459	-0.43910	-0.02224	36.19632	-13.62457	-4.41547	0.46605	38.92684	250.61	-2.74
65/ 7/25	2438966.5	-0.11196	-0.45225	-0.02720	37.54329	-9.12068	-4.16569	0.46669	38.85921	256.10	-3.34
65/ 7/27	2438968.5	-0.06802	-0.46013	-0.03184	38.45210	-4.51302	-3.86750	0.46622	38.90872	261.59	-3.92
65/ 7/29	2438970.5	-0.02330	-0.46264	-0.03612	38.91596	0.17819	-3.52198	0.46464	39.07541	267.12	-4.46
65/ 7/31	2438972.5	0.02170	-0.45970	-0.03996	38.92348	4.93255	-3.12976	0.46194	39.35941	272.70	-4.96
65/ 8/ 2	2438974.5	0.06644	-0.45123	-0.04333	38.45844	9.72813	-2.69119	0.45815	39.76092	278.38	-5.43
65/ 8/ 4	2438976.5	0.11036	-0.43722	-0.04616	37.49953	14.53993	-2.20640	0.45329	40.28017	284.17	-5.84
65/ 8/ 6	2438978.5	0.15287	-0.41765	-0.04841	36.02026	19.33809	-1.67544	0.44737	40.91733	290.10	-6.21
65/ 8/ 8	2438980.5	0.19336	-0.39256	-0.05001	33.98904	24.08578	-1.09849	0.44045	41.67237	296.22	-6.52
65/ 8/10	2438982.5	0.23117	-0.36204	-0.05093	31.36951	28.73660	-0.47609	0.43256	42.54485	302.56	-6.76
65/ 8/12	2438984.5	0.26559	-0.32624	-0.05110	28.12146	33.23132	0.19054	0.42377	43.53359	309.15	-6.93
65/ 8/14	2438986.5	0.29587	-0.28536	-0.05047	24.20266	37.49413	0.89896	0.41415	44.63616	316.04	-7.00
65/ 8/16	2438988.5	0.32123	-0.23974	-0.04901	19.57204	41.42807	1.64489	0.40381	45.84818	323.26	-6.97
65/ 8/18	2438990.5	0.34080	-0.18983	-0.04666	14.19500	44.91011	2.42132	0.39288	47.16226	330.88	-6.82
65/ 8/20	2438992.5	0.35372	-0.13623	-0.04340	8.05180	47.78637	3.21731	0.38153	48.56665	338.94	-6.53
65/ 8/22	2438994.5	0.35911	-0.07974	-0.03923	1.15005	49.86868	4.01662	0.36994	50.04339	347.48	-6.09
65/ 8/24	2438996.5	0.35611	-0.02141	-0.03413	-6.45783	50.93483	4.79614	0.35838	51.56610	356.56	-5.47
65/ 8/26	2438998.5	0.34396	0.03744	-0.02817	-14.65208	50.73614	5.52441	0.34714	53.09763	6.21	-4.65
65/ 8/28	2439000.5	0.32211	0.09521	-0.02141	-23.22062	49.01728	6.16108	0.33657	54.58800	16.47	-3.65
65/ 8/30	2439002.5	0.29030	0.15001	-0.01399	-31.83780	45.55321	6.65794	0.32707	55.97382	27.33	-2.45
65/ 9/ 1	2439004.5	0.24871	0.19972	-0.00610	-40.05878	40.20467	6.96306	0.31904	57.18046	38.76	-1.10
65/ 9/ 3	2439006.5	0.19812	0.24216	0.00201	-47.34493	32.98449	7.02855	0.31289	58.12847	50.71	0.37
65/ 9/ 5	2439008.5	0.13992	0.27528	0.01003	-53.13116	24.11397	6.82135	0.30896	58.74465	63.06	1.86
65/ 9/ 7	2439010.5	0.07614	0.29741	0.01766	-56.92934	14.03851	6.33389	0.30750	58.97582	75.64	3.29
65/ 9/ 9	2439012.5	0.00929	0.30749	0.02457	-58.43687	3.37923	5.59001	0.30861	58.80081	88.27	4.57
65/ 9/11	2439014.5	-0.05795	0.30525	0.03049	-57.60538	-7.17419	4.64231	0.31220	58.23572	100.75	5.61
65/ 9/13	2439016.5	-0.12297	0.29120	0.03524	-54.63830	-16.99090	3.56141	0.31806	57.32990	112.89	6.36
65/ 9/15	2439018.5	-0.18350	0.26647	0.03870	-49.92254	-25.59715	2.42162	0.32585	56.15459	124.55	6.82
65/ 9/17	2439020.5	-0.23781	0.23264	0.04084	-43.92976	-32.71636	1.28866	0.33517	54.78909	135.63	7.00
65/ 9/19	2439022.5	-0.28468	0.19150	0.04170	-37.12702	-38.25455	0.21275	0.34562	53.30921	146.07	6.93
65/ 9/21	2439024.5	-0.32342	0.14486	0.04136	-29.91902	-42.25442	-0.77286	0.35679	51.78012	155.87	6.66
65/ 9/23	2439026.5	-0.35376	0.09443	0.03995	-22.62381	-44.84275	-1.64975	0.36832	50.25366	165.05	6.23
65/ 9/25	2439028.5	-0.37574	0.04174	0.03760	-15.47268	-46.18626	-2.41067	0.37992	48.76870	173.66	5.68

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65/ 9/27	2439030.5	-0.38962	-0.01186	0.03443	-8.62250	-46.46093	-3.05592	0.39132	47.35297	181.74	5.05
65/ 9/29	2439032.5	-0.39582	-0.06524	0.03058	-2.17225	-45.83377	-3.59029	0.40232	46.02546	189.36	4.36
65/10/ 1	2439034.5	-0.39482	-0.11745	0.02617	3.82111	-44.45395	-4.02094	0.41275	44.79869	196.57	3.64
65/10/ 3	2439036.5	-0.38718	-0.16770	0.02133	9.32950	-42.44969	-4.35591	0.42247	43.68054	203.42	2.89
65/10/ 5	2439038.5	-0.37346	-0.21532	0.01615	14.34365	-39.92857	-4.60325	0.43139	42.67576	209.97	2.14
65/10/ 7	2439040.5	-0.35423	-0.25978	0.01072	18.86575	-36.97943	-4.77050	0.43941	41.78699	216.25	1.40
65/10/ 9	2439042.5	-0.33006	-0.30061	0.00515	22.90428	-33.67500	-4.86445	0.44647	41.01554	222.33	0.66
65/10/11	2439044.5	-0.30150	-0.33746	-0.00049	26.47051	-30.07451	-4.89100	0.45252	40.36194	228.22	-0.06
65/10/13	2439046.5	-0.26909	-0.36999	-0.00612	29.57607	-26.22619	-4.85521	0.45754	39.82625	233.97	-0.77
65/10/15	2439048.5	-0.23335	-0.39796	-0.01168	32.23136	-22.16950	-4.76127	0.46148	39.40833	239.61	-1.45
65/10/17	2439050.5	-0.19480	-0.42114	-0.01710	34.44446	-17.93701	-4.61262	0.46433	39.10797	245.18	-2.11
65/10/19	2439052.5	-0.15394	-0.43934	-0.02232	36.22040	-13.55610	-4.41199	0.46607	38.92494	250.69	-2.74
65/10/21	2439054.5	-0.11129	-0.45241	-0.02727	37.56065	-9.05045	-4.16144	0.46670	38.85911	256.18	-3.35
65/10/23	2439056.5	-0.06734	-0.46021	-0.03191	38.46265	-4.44134	-3.86251	0.46621	38.91041	261.68	-3.93
65/10/25	2439058.5	-0.02260	-0.46264	-0.03618	38.91957	0.25100	-3.51626	0.46460	39.07890	267.20	-4.47
65/10/27	2439060.5	0.02240	-0.45961	-0.04002	38.91995	5.00617	-3.12333	0.46189	39.36470	272.79	-4.97
65/10/29	2439062.5	0.06713	-0.45106	-0.04338	38.44748	9.80220	-2.68405	0.45808	39.76803	278.46	-5.43
65/10/31	2439064.5	0.11103	-0.43696	-0.04620	37.48077	14.61404	-2.19854	0.45320	40.28910	284.26	-5.85
65/11/ 2	2439066.5	0.15351	-0.41730	-0.04844	35.99326	19.41174	-1.66687	0.44727	40.92810	290.20	-6.22
65/11/ 4	2439068.5	0.19397	-0.39213	-0.05003	33.95327	24.15835	-1.08922	0.44033	41.68497	296.32	-6.52
65/11/ 6	2439070.5	0.23172	-0.36153	-0.05094	31.32436	28.80726	-0.46612	0.43243	42.55926	302.66	-6.76
65/11/ 8	2439072.5	0.26609	-0.32564	-0.05109	28.06629	33.29904	0.20118	0.42362	43.54978	309.25	-6.93
65/11/10	2439074.5	0.29630	-0.28469	-0.05046	24.13681	37.55759	0.91022	0.41400	44.65408	316.14	-7.00
65/11/12	2439076.5	0.32157	-0.23901	-0.04898	19.49490	41.48557	1.65668	0.40365	45.86772	323.38	-6.97
65/11/14	2439078.5	0.34105	-0.18903	-0.04662	14.10613	44.95952	2.43350	0.39271	47.18330	331.00	-6.82
65/11/16	2439080.5	0.35387	-0.13537	-0.04335	7.95108	47.82507	3.22968	0.38135	48.58897	339.07	-6.53
65/11/18	2439082.5	0.35913	-0.07885	-0.03915	1.03787	49.89350	4.02888	0.36976	50.06666	347.62	-6.08
65/11/20	2439084.5	0.35599	-0.02050	-0.03405	-6.58018	50.94211	4.80787	0.35820	51.58985	356.70	-5.45
65/11/22	2439086.5	0.34370	0.03835	-0.02807	-14.78210	50.72191	5.53506	0.34697	53.12117	6.37	-4.64
65/11/24	2439088.5	0.32170	0.09609	-0.02130	-23.35419	48.97770	6.16995	0.33642	54.61045	16.63	-3.63
65/11/26	2439090.5	0.28973	0.15082	-0.01387	-31.96894	45.48531	6.66424	0.32693	55.99409	27.50	-2.43
65/11/28	2439092.5	0.24800	0.20044	-0.00597	-40.17977	40.10729	6.96599	0.31893	57.19732	38.95	-1.07
65/11/30	2439094.5	0.19727	0.24275	0.00213	-47.44701	32.85936	7.02747	0.31281	58.14070	50.90	0.39
65/12/ 2	2439096.5	0.13897	0.27571	0.01016	-53.20591	23.96630	6.81591	0.30892	58.75124	63.25	1.88
65/12/ 4	2439098.5	0.07513	0.29765	0.01777	-56.97041	13.87678	6.32423	0.30750	58.97617	75.83	3.31
65/12/ 6	2439100.5	0.00824	0.30755	0.02467	-58.44151	3.21392	5.57674	0.30864	58.79490	88.46	4.58
65/12/ 8	2439102.5	-0.05898	0.30512	0.03058	-57.57493	-7.33258	4.62642	0.31227	58.22408	100.94	5.62
65/12/10	2439104.5	-0.12394	0.29090	0.03530	-54.57760	-17.13368	3.54405	0.31816	57.31350	113.08	6.37
65/12/12	2439106.5	-0.18439	0.26601	0.03874	-49.83849	-25.71854	2.40391	0.32598	56.13463	124.73	6.83
65/12/14	2439108.5	-0.23859	0.23206	0.04086	-43.82981	-32.81363	1.27150	0.33533	54.76681	135.79	7.00
65/12/16	2439110.5	-0.28534	0.19082	0.04170	-37.01800	-38.32746	0.19679	0.34579	53.28570	146.23	6.93
65/12/18	2439112.5	-0.32395	0.14411	0.04135	-29.80651	-42.30444	-0.78725	0.35696	51.75629	156.02	6.65
65/12/20	2439114.5	-0.35417	0.09363	0.03992	-22.51202	-44.87227	-1.66238	0.36850	50.23022	165.19	6.22
65/12/22	2439116.5	-0.37602	0.04092	0.03755	-15.36455	-46.19800	-2.42149	0.38010	48.74616	173.79	5.67
65/12/24	2439118.5	-0.38978	-0.01268	0.03437	-8.51994	-46.45756	-3.06498	0.39150	47.33169	181.86	5.04

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65/12/26	2439120.5	-0.39586	-0.06606	0.03052	-2.07641	-45.81776	-3.59769	0.40249	46.00568	189.47	4.35
65/12/28	2439122.5	-0.39475	-0.11824	0.02610	3.90962	-44.42745	-4.02680	0.41291	44.78056	196.67	3.62
65/12/30	2439124.5	-0.38701	-0.16845	0.02125	9.41042	-42.41450	-4.36036	0.42262	43.66416	203.52	2.88
66/ 1/ 1	2439126.5	-0.37320	-0.21603	0.01606	14.41696	-39.88619	-4.60641	0.43152	42.66118	210.06	2.13
66/ 1/ 3	2439128.5	-0.35389	-0.26043	0.01064	18.93154	-36.93109	-4.77249	0.43952	41.77422	216.35	1.39
66/ 1/ 5	2439130.5	-0.32965	-0.30121	0.00507	22.96272	-33.62170	-4.86535	0.44657	41.00459	222.42	0.65
66/ 1/ 7	2439132.5	-0.30103	-0.33799	-0.00057	26.52178	-30.01706	-4.89090	0.45261	40.35281	228.31	-0.07
66/ 1/ 9	2439134.5	-0.26856	-0.37046	-0.00621	29.62034	-26.16526	-4.85418	0.45761	39.81895	234.06	-0.78
66/ 1/11	2439136.5	-0.23277	-0.39836	-0.01177	32.26877	-22.10564	-4.75938	0.46153	39.40285	239.70	-1.46
66/ 1/13	2439138.5	-0.19418	-0.42146	-0.01718	34.47514	-17.87068	-4.60992	0.46436	39.10432	245.26	-2.12
66/ 1/15	2439140.5	-0.15330	-0.43958	-0.02240	36.24440	-13.48770	-4.40849	0.46609	38.92312	250.77	-2.75
66/ 1/17	2439142.5	-0.11062	-0.45257	-0.02735	37.57796	-8.98031	-4.15719	0.46670	38.85912	256.26	-3.36
66/ 1/19	2439144.5	-0.06665	-0.46029	-0.03198	38.47320	-4.36978	-3.85754	0.46619	38.91224	261.76	-3.93
66/ 1/21	2439146.5	-0.02191	-0.46263	-0.03624	38.92321	0.32369	-3.51056	0.46457	39.08254	267.29	-4.47
66/ 1/23	2439148.5	0.02309	-0.45952	-0.04007	38.91645	5.07966	-3.11691	0.46184	39.37015	272.88	-4.98
66/ 1/25	2439150.5	0.06781	-0.45088	-0.04342	38.43654	9.87614	-2.67691	0.45802	39.77527	278.55	-5.44
66/ 1/27	2439152.5	0.11169	-0.43670	-0.04624	37.46202	14.68800	-2.19070	0.45312	40.29814	284.35	-5.86
66/ 1/29	2439154.5	0.15415	-0.41696	-0.04847	35.96626	19.48521	-1.65832	0.44718	40.93892	290.29	-6.22
66/ 1/31	2439156.5	0.19457	-0.39170	-0.05005	33.91749	24.23067	-1.07996	0.44022	41.69757	296.41	-6.53
66/ 2/ 2	2439158.5	0.23228	-0.36102	-0.05094	31.27922	28.87762	-0.45617	0.43230	42.57364	302.76	-6.77
66/ 2/ 4	2439160.5	0.26659	-0.32505	-0.05109	28.01114	33.36641	0.21179	0.42348	43.56589	309.36	-6.93
66/ 2/ 6	2439162.5	0.29673	-0.28403	-0.05044	24.07103	37.62064	0.92143	0.41384	44.67187	316.25	-7.00
66/ 2/ 8	2439164.5	0.32192	-0.23827	-0.04895	19.41791	41.54261	1.66842	0.40349	45.88711	323.49	-6.97
66/ 2/10	2439166.5	0.34130	-0.18823	-0.04657	14.01749	45.00844	2.44562	0.39254	47.20414	331.12	-6.81
66/ 2/12	2439168.5	0.35401	-0.13453	-0.04329	7.85068	47.86322	3.24198	0.38117	48.61102	339.19	-6.52
66/ 2/14	2439170.5	0.35915	-0.07797	-0.03908	0.92616	49.91772	4.04105	0.36959	50.08958	347.75	-6.07
66/ 2/16	2439172.5	0.35588	-0.01960	-0.03396	-6.70189	50.94873	4.81949	0.35803	51.61314	356.85	-5.44
66/ 2/18	2439174.5	0.34344	0.03924	-0.02797	-14.91128	50.70703	5.54557	0.34681	53.14416	6.52	-4.63
66/ 2/20	2439176.5	0.32129	0.09695	-0.02119	-23.48669	48.93756	6.17867	0.33626	54.63227	16.79	-3.61
66/ 2/22	2439178.5	0.28917	0.15162	-0.01375	-32.09877	45.41703	6.67039	0.32680	56.01368	27.67	-2.41
66/ 2/24	2439180.5	0.24729	0.20115	-0.00585	-40.29927	40.00986	6.96879	0.31882	57.21350	39.13	-1.05
66/ 2/26	2439182.5	0.19643	0.24333	0.00226	-47.54752	32.73461	7.02627	0.31273	58.15230	51.09	0.41
66/ 2/28	2439184.5	0.13803	0.27613	0.01028	-53.27917	23.81949	6.81041	0.30888	58.75730	63.44	1.91
66/ 3/ 2	2439186.5	0.07412	0.29790	0.01788	-57.01028	13.71636	6.31456	0.30750	58.97613	76.03	3.33
66/ 3/ 4	2439188.5	0.00721	0.30760	0.02476	-58.44536	3.05021	5.56352	0.30868	58.78875	88.66	4.60
66/ 3/ 6	2439190.5	-0.05999	0.30500	0.03066	-57.54418	-7.48924	4.61064	0.31235	58.21237	101.13	5.63
66/ 3/ 8	2439192.5	-0.12490	0.29059	0.03537	-54.51708	-17.27478	3.52685	0.31827	57.29720	113.26	6.38
66/ 3/10	2439194.5	-0.18527	0.26556	0.03878	-49.75505	-25.83845	2.38638	0.32611	56.11493	124.90	6.83
66/ 3/12	2439196.5	-0.23936	0.23148	0.04088	-43.73078	-32.90971	1.25453	0.33548	54.74489	135.96	7.00
66/ 3/14	2439198.5	-0.28599	0.19014	0.04170	-36.91007	-38.39953	0.18099	0.34595	53.26265	146.38	6.92
66/ 3/16	2439200.5	-0.32448	0.14336	0.04134	-29.69517	-42.35395	-0.80149	0.35714	51.73299	156.16	6.65
66/ 3/18	2439202.5	-0.35456	0.09284	0.03989	-22.40139	-44.90156	-1.67488	0.36868	50.20735	165.33	6.21
66/ 3/20	2439204.5	-0.37629	0.04011	0.03751	-15.25751	-46.20973	-2.43222	0.38027	48.72419	173.92	5.66
66/ 3/22	2439206.5	-0.38993	-0.01350	0.03432	-8.41836	-46.45438	-3.07397	0.39167	47.31097	181.98	5.03
66/ 3/24	2439208.5	-0.39589	-0.06686	0.03045	-1.98144	-45.80207	-3.60504	0.40265	45.98643	189.59	4.34

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66/ 3/26	2439210.5	-0.39468	-0.11902	0.02603	3.99736	-44.40134	-4.03263	0.41306	44.76293	196.78	3.61
66/ 3/28	2439212.5	-0.38684	-0.16920	0.02117	9.49067	-42.37976	-4.36479	0.42276	43.64823	203.62	2.87
66/ 3/30	2439214.5	-0.37295	-0.21673	0.01598	14.48967	-39.84429	-4.60956	0.43164	42.64699	210.16	2.12
66/ 4/ 1	2439216.5	-0.35356	-0.26108	0.01055	18.99679	-36.88326	-4.77446	0.43964	41.76181	216.44	1.38
66/ 4/ 3	2439218.5	-0.32925	-0.30180	0.00498	23.02067	-33.56894	-4.86625	0.44667	40.99397	222.51	0.64
66/ 4/ 5	2439220.5	-0.30056	-0.33852	-0.00066	26.57261	-29.96019	-4.89082	0.45269	40.34397	228.40	-0.08
66/ 4/ 7	2439222.5	-0.26804	-0.37092	-0.00629	29.66421	-26.10495	-4.85318	0.45767	39.81189	234.15	-0.79
66/ 4/ 9	2439224.5	-0.23220	-0.39875	-0.01185	32.30582	-22.04242	-4.75751	0.46158	39.39757	239.79	-1.47
66/ 4/11	2439226.5	-0.19357	-0.42178	-0.01726	34.50545	-17.80502	-4.60723	0.46440	39.10078	245.35	-2.13
66/ 4/13	2439228.5	-0.15266	-0.43982	-0.02247	36.26802	-13.41998	-4.40503	0.46610	38.92132	250.86	-2.76
66/ 4/15	2439230.5	-0.10996	-0.45273	-0.02742	37.59486	-8.91089	-4.15297	0.46670	38.85903	256.35	-3.37
66/ 4/17	2439232.5	-0.06597	-0.46037	-0.03205	38.48331	-4.29899	-3.85258	0.46618	38.91387	261.84	-3.94
66/ 4/19	2439234.5	-0.02122	-0.46263	-0.03630	38.92640	0.39553	-3.50489	0.46454	39.08587	267.37	-4.48
66/ 4/21	2439236.5	0.02378	-0.45943	-0.04013	38.91253	5.15221	-3.11053	0.46179	39.37519	272.96	-4.99
66/ 4/23	2439238.5	0.06849	-0.45071	-0.04347	38.42523	9.94904	-2.66984	0.45795	39.78203	278.64	-5.45
66/ 4/25	2439240.5	0.11236	-0.43644	-0.04628	37.44298	14.76082	-2.18292	0.45304	40.30662	284.44	-5.86
66/ 4/27	2439242.5	0.15479	-0.41662	-0.04850	35.93905	19.55743	-1.64985	0.44708	40.94912	290.38	-6.23
66/ 4/29	2439244.5	0.19517	-0.39128	-0.05007	33.88161	24.30165	-1.07080	0.44011	41.70947	296.51	-6.53
66/ 5/ 1	2439246.5	0.23283	-0.36052	-0.05095	31.23411	28.94656	-0.44635	0.43218	42.58723	302.86	-6.77
66/ 5/ 3	2439248.5	0.26708	-0.32447	-0.05109	27.95621	33.43228	0.22225	0.42335	43.58115	309.46	-6.93
66/ 5/ 5	2439250.5	0.29716	-0.28337	-0.05042	24.00568	37.68212	0.93248	0.41370	44.68875	316.36	-7.00
66/ 5/ 7	2439252.5	0.32226	-0.23755	-0.04892	19.34161	41.59807	1.67996	0.40333	45.90555	323.61	-6.97
66/ 5/ 9	2439254.5	0.34155	-0.18745	-0.04653	13.92986	45.05579	2.45752	0.39238	47.22399	331.24	-6.81
66/ 5/11	2439256.5	0.35415	-0.13369	-0.04323	7.75165	47.89992	3.25403	0.38100	48.63208	339.32	-6.52
66/ 5/13	2439258.5	0.35917	-0.07710	-0.03901	0.81620	49.94070	4.05296	0.36942	50.11154	347.88	-6.06
66/ 5/15	2439260.5	0.35576	-0.01872	-0.03388	-6.82150	50.95448	4.83085	0.35786	51.63554	356.99	-5.43
66/ 5/17	2439262.5	0.34319	0.04012	-0.02787	-15.03806	50.69175	5.55584	0.34665	53.16638	6.67	-4.61
66/ 5/19	2439264.5	0.32088	0.09780	-0.02108	-23.61661	48.89762	6.18718	0.33612	54.65348	16.95	-3.60
66/ 5/21	2439266.5	0.28861	0.15241	-0.01363	-32.22603	45.34965	6.67638	0.32667	56.03286	27.84	-2.39
66/ 5/23	2439268.5	0.24659	0.20184	-0.00573	-40.41638	39.91403	6.97150	0.31871	57.22950	39.30	-1.03
66/ 5/25	2439270.5	0.19561	0.24390	0.00238	-47.64606	32.61207	7.02508	0.31266	58.16396	51.27	0.44
66/ 5/27	2439272.5	0.13711	0.27654	0.01039	-53.35107	23.67534	6.80500	0.30884	58.76365	63.63	1.93
66/ 5/29	2439274.5	0.07314	0.29813	0.01799	-57.04950	13.55878	6.30507	0.30750	58.97660	76.22	3.35
66/ 5/31	2439276.5	0.00621	0.30765	0.02486	-58.44930	2.88930	5.55055	0.30872	58.78331	88.84	4.62
66/ 6/ 2	2439278.5	-0.06099	0.30486	0.03074	-57.51419	-7.64341	4.59513	0.31242	58.20154	101.31	5.65
66/ 6/ 4	2439280.5	-0.12584	0.29029	0.03543	-54.45781	-17.41388	3.50993	0.31837	57.28190	113.44	6.39
66/ 6/ 6	2439282.5	-0.18613	0.26511	0.03882	-49.67313	-25.95691	2.36911	0.32624	56.09629	125.07	6.83
66/ 6/ 8	2439284.5	-0.24011	0.23090	0.04090	-43.63335	-33.00486	1.23777	0.33563	54.72406	136.12	7.00
66/ 6/10	2439286.5	-0.28663	0.18947	0.04171	-36.80370	-38.47111	0.16537	0.34611	53.24064	146.53	6.92
66/ 6/12	2439288.5	-0.32499	0.14262	0.04132	-29.58522	-42.40329	-0.81559	0.35730	51.71063	156.31	6.64
66/ 6/14	2439290.5	-0.35494	0.09205	0.03986	-22.29195	-44.93090	-1.68728	0.36885	50.18529	165.46	6.20
66/ 6/16	2439292.5	-0.37655	0.03930	0.03747	-15.15144	-46.22166	-2.44286	0.38044	48.70293	174.04	5.65
66/ 6/18	2439294.5	-0.39007	-0.01432	0.03427	-8.31757	-46.45145	-3.08291	0.39183	47.29084	182.10	5.02
66/ 6/20	2439296.5	-0.39592	-0.06767	0.03039	-1.88708	-45.78665	-3.61236	0.40281	45.96767	189.70	4.33
66/ 6/22	2439298.5	-0.39460	-0.11981	0.02596	4.08465	-44.37548	-4.03844	0.41321	44.74569	196.89	3.60

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66/ 6/24	2439300.5	-0.38667	-0.16995	0.02110	9.57059	-42.34523	-4.36921	0.42289	43.63261	203.73	2.86
66/ 6/26	2439302.5	-0.37268	-0.21743	0.01590	14.56216	-39.80254	-4.61270	0.43177	42.63303	210.26	2.11
66/ 6/28	2439304.5	-0.35322	-0.26173	0.01047	19.06190	-36.83550	-4.77643	0.43975	41.74954	216.54	1.36
66/ 6/30	2439306.5	-0.32883	-0.30240	0.00489	23.07854	-33.51615	-4.86714	0.44676	40.98341	222.60	0.63
66/ 7/ 2	2439308.5	-0.30008	-0.33905	-0.00075	26.62339	-29.90318	-4.89071	0.45277	40.33515	228.49	-0.09
66/ 7/ 4	2439310.5	-0.26751	-0.37138	-0.00638	29.70805	-26.04439	-4.85215	0.45774	39.80480	234.23	-0.80
66/ 7/ 6	2439312.5	-0.23163	-0.39914	-0.01194	32.34286	-21.97887	-4.75561	0.46163	39.39222	239.87	-1.48
66/ 7/ 8	2439314.5	-0.19296	-0.42209	-0.01735	34.53575	-17.73893	-4.60450	0.46443	39.09718	245.43	-2.14
66/ 7/10	2439316.5	-0.15201	-0.44006	-0.02255	36.29163	-13.35175	-4.40151	0.46612	38.91947	250.94	-2.77
66/ 7/12	2439318.5	-0.10929	-0.45289	-0.02750	37.61176	-8.84087	-4.14870	0.46670	38.85894	256.43	-3.38
66/ 7/14	2439320.5	-0.06529	-0.46044	-0.03212	38.49343	-4.22750	-3.84757	0.46616	38.91555	261.93	-3.95
66/ 7/16	2439322.5	-0.02053	-0.46262	-0.03637	38.92960	0.46816	-3.49916	0.46450	39.08934	267.46	-4.49
66/ 7/18	2439324.5	0.02447	-0.45934	-0.04018	38.90859	5.22566	-3.10408	0.46174	39.38046	273.05	-4.99
66/ 7/20	2439326.5	0.06917	-0.45054	-0.04352	38.41386	10.02292	-2.66267	0.45789	39.78911	278.73	-5.45
66/ 7/22	2439328.5	0.11302	-0.43618	-0.04632	37.42380	14.83471	-2.17504	0.45296	40.31551	284.53	-5.87
66/ 7/24	2439330.5	0.15543	-0.41627	-0.04853	35.91161	19.63080	-1.64126	0.44698	40.95981	290.47	-6.23
66/ 7/26	2439332.5	0.19577	-0.39085	-0.05009	33.84539	24.37387	-1.06152	0.44000	41.72197	296.61	-6.54
66/ 7/28	2439334.5	0.23339	-0.36000	-0.05096	31.18851	29.01681	-0.43637	0.43205	42.60151	302.96	-6.77
66/ 7/30	2439336.5	0.26758	-0.32388	-0.05108	27.90061	33.49952	0.23289	0.42321	43.59720	309.56	-6.93
66/ 8/ 1	2439338.5	0.29759	-0.28270	-0.05041	23.93943	37.74502	0.94372	0.41354	44.70652	316.47	-7.00
66/ 8/ 3	2439340.5	0.32261	-0.23681	-0.04889	19.26412	41.65492	1.69172	0.40317	45.92495	323.72	-6.96
66/ 8/ 5	2439342.5	0.34180	-0.18665	-0.04649	13.84073	45.10446	2.46966	0.39221	47.24487	331.36	-6.81
66/ 8/ 7	2439344.5	0.35429	-0.13284	-0.04318	7.65076	47.93775	3.26634	0.38083	48.65420	339.45	-6.51
66/ 8/ 9	2439346.5	0.35918	-0.07621	-0.03894	0.70401	49.96450	4.06514	0.36924	50.13454	348.02	-6.05
66/ 8/11	2439348.5	0.35564	-0.01781	-0.03379	-6.94367	50.96059	4.84246	0.35769	51.65893	357.13	-5.42
66/ 8/13	2439350.5	0.34292	0.04102	-0.02777	-15.16764	50.67623	5.56634	0.34648	53.18949	6.82	-4.60
66/ 8/15	2439352.5	0.32046	0.09867	-0.02097	-23.74941	48.85673	6.19587	0.33596	54.67544	17.11	-3.58
66/ 8/17	2439354.5	0.28804	0.15321	-0.01352	-32.35604	45.28053	6.68248	0.32653	56.05261	28.01	-2.37
66/ 8/19	2439356.5	0.24588	0.20254	-0.00561	-40.53588	39.81570	6.97422	0.31861	57.24585	39.48	-1.01
66/ 8/21	2439358.5	0.19477	0.24447	0.00250	-47.74637	32.48640	7.02379	0.31258	58.17573	51.46	0.46
66/ 8/23	2439360.5	0.13617	0.27696	0.01051	-53.42391	23.52766	6.79939	0.30880	58.76986	63.82	1.95
66/ 8/25	2439362.5	0.07213	0.29837	0.01810	-57.08873	13.39761	6.29528	0.30750	58.97668	76.41	3.38
66/ 8/27	2439364.5	0.00517	0.30770	0.02496	-58.45236	2.72503	5.53721	0.30876	58.77725	89.04	4.64
66/ 8/29	2439366.5	-0.06200	0.30472	0.03082	-57.48257	-7.80040	4.57925	0.31249	58.18987	101.50	5.66
66/ 8/31	2439368.5	-0.12681	0.28998	0.03549	-54.39641	-17.55510	3.49264	0.31848	57.26561	113.62	6.40
66/ 9/ 2	2439370.5	-0.18701	0.26465	0.03887	-49.58884	-26.07674	2.35150	0.32637	56.07654	125.25	6.84
66/ 9/ 4	2439372.5	-0.24089	0.23032	0.04092	-43.53354	-33.10071	1.22074	0.33578	54.70207	136.28	7.00
66/ 9/ 6	2439374.5	-0.28728	0.18879	0.04171	-36.69508	-38.54282	0.14954	0.34628	53.21748	146.69	6.92
66/ 9/ 8	2439376.5	-0.32551	0.14187	0.04131	-29.47330	-42.45236	-0.82985	0.35748	51.68720	156.45	6.64
66/ 9/10	2439378.5	-0.35534	0.09126	0.03983	-22.18083	-44.95970	-1.69978	0.36902	50.16227	165.60	6.20
66/ 9/12	2439380.5	-0.37681	0.03848	0.03742	-15.04400	-46.23287	-2.45358	0.38062	48.68080	174.17	5.64
66/ 9/14	2439382.5	-0.39021	-0.01514	0.03421	-8.21566	-46.44772	-3.09188	0.39200	47.26994	182.22	5.01
66/ 9/16	2439384.5	-0.39595	-0.06848	0.03032	-1.79184	-45.77038	-3.61968	0.40297	45.94824	189.81	4.32
66/ 9/18	2439386.5	-0.39453	-0.12059	0.02589	4.17261	-44.34879	-4.04424	0.41336	44.72786	197.00	3.59
66/ 9/20	2439388.5	-0.38650	-0.17070	0.02102	9.65103	-42.30987	-4.37360	0.42304	43.61647	203.83	2.85

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66/ 9/22	2439390.5	-0.37242	-0.21814	0.01582	14.63502	-39.76002	-4.61581	0.43190	42.61864	210.36	2.10
66/ 9/24	2439392.5	-0.35288	-0.26239	0.01038	19.12729	-36.78704	-4.77837	0.43986	41.73694	216.63	1.35
66/ 9/26	2439394.5	-0.32842	-0.30299	0.00481	23.13660	-33.46274	-4.86800	0.44686	40.97261	222.69	0.62
66/ 9/28	2439396.5	-0.29961	-0.33958	-0.00084	26.67430	-29.84564	-4.89058	0.45286	40.32615	228.58	-0.11
66/ 9/30	2439398.5	-0.26698	-0.37184	-0.00647	29.75198	-25.98338	-4.85108	0.45781	39.79760	234.32	-0.81
66/10/ 2	2439400.5	-0.23105	-0.39953	-0.01202	32.37993	-21.91493	-4.75368	0.46168	39.38682	239.96	-1.49
66/10/ 4	2439402.5	-0.19234	-0.42240	-0.01743	34.56609	-17.67250	-4.60176	0.46446	39.09358	245.52	-2.15
66/10/ 6	2439404.5	-0.15136	-0.44030	-0.02263	36.31526	-13.28322	-4.39798	0.46614	38.91766	251.03	-2.78
66/10/ 8	2439406.5	-0.10862	-0.45304	-0.02757	37.62869	-8.77058	-4.14441	0.46670	38.85894	256.52	-3.39
66/10/10	2439408.5	-0.06460	-0.46052	-0.03219	38.50358	-4.15577	-3.84254	0.46614	38.91736	262.01	-3.96
66/10/12	2439410.5	-0.01984	-0.46261	-0.03643	38.93281	0.54103	-3.49340	0.46447	39.09297	267.54	-4.50
66/10/14	2439412.5	0.02516	-0.45924	-0.04024	38.90465	5.29934	-3.09761	0.46169	39.38592	273.14	-5.00
66/10/16	2439414.5	0.06986	-0.45035	-0.04357	38.40248	10.09706	-2.65548	0.45782	39.79639	278.82	-5.46
66/10/18	2439416.5	0.11369	-0.43591	-0.04636	37.40459	14.90888	-2.16714	0.45287	40.32461	284.62	-5.88
66/10/20	2439418.5	0.15607	-0.41592	-0.04855	35.88411	19.70450	-1.63265	0.44688	40.97075	290.57	-6.24
66/10/22	2439420.5	0.19637	-0.39041	-0.05011	33.80906	24.44645	-1.05219	0.43988	41.73474	296.70	-6.54
66/10/24	2439422.5	0.23394	-0.35948	-0.05097	31.14274	29.08745	-0.42634	0.43192	42.61610	303.06	-6.78
66/10/26	2439424.5	0.26807	-0.32328	-0.05108	27.84476	33.56717	0.24358	0.42306	43.61358	309.67	-6.93
66/10/28	2439426.5	0.29801	-0.28203	-0.05039	23.87283	37.80834	0.95504	0.41339	44.72465	316.58	-7.00
66/10/30	2439428.5	0.32295	-0.23606	-0.04886	19.18617	41.71218	1.70357	0.40300	45.94472	323.83	-6.96
66/11/ 1	2439430.5	0.34205	-0.18584	-0.04644	13.75098	45.15351	2.48190	0.39203	47.26615	331.48	-6.80
66/11/ 3	2439432.5	0.35442	-0.13199	-0.04312	7.54911	47.97591	3.27875	0.38065	48.67676	339.57	-6.50
66/11/ 5	2439434.5	0.35919	-0.07532	-0.03887	0.59091	49.98854	4.07742	0.36906	50.15804	348.16	-6.05
66/11/ 7	2439436.5	0.35552	-0.01690	-0.03371	-7.06689	50.96680	4.85419	0.35751	51.68287	357.28	-5.41
66/11/ 9	2439438.5	0.34265	0.04193	-0.02767	-15.29839	50.66061	5.57694	0.34631	53.21316	6.98	-4.58
66/11/11	2439440.5	0.32004	0.09954	-0.02086	-23.88345	48.81545	6.20464	0.33581	54.69795	17.28	-3.56
66/11/13	2439442.5	0.28746	0.15402	-0.01340	-32.48724	45.21068	6.68862	0.32640	56.07284	28.18	-2.35
66/11/15	2439444.5	0.24515	0.20325	-0.00548	-40.65639	39.71627	6.97694	0.31850	57.26257	39.66	-0.99
66/11/17	2439446.5	0.19391	0.24505	0.00263	-47.84737	32.35931	7.02245	0.31251	58.18772	51.64	0.48
66/11/19	2439448.5	0.13521	0.27738	0.01064	-53.49701	23.37837	6.79367	0.30876	58.77612	64.01	1.97
66/11/21	2439450.5	0.07111	0.29861	0.01822	-57.12776	13.23480	6.28535	0.30750	58.97666	76.61	3.40
66/11/23	2439452.5	0.00413	0.30775	0.02506	-58.45478	2.55929	5.52370	0.30880	58.77093	89.23	4.65
66/11/25	2439454.5	-0.06303	0.30458	0.03090	-57.44997	-7.95860	4.56317	0.31257	58.17784	101.69	5.67
66/11/27	2439456.5	-0.12778	0.28967	0.03555	-54.33382	-17.69717	3.47517	0.31859	57.24885	113.80	6.41
66/11/29	2439458.5	-0.18789	0.26418	0.03891	-49.50326	-26.19708	2.33374	0.32651	56.05628	125.42	6.84
66/12/ 1	2439460.5	-0.24166	0.22973	0.04095	-43.43246	-33.19676	1.20358	0.33593	54.67954	136.45	7.00
66/12/ 3	2439462.5	-0.28793	0.18810	0.04171	-36.58529	-38.61449	0.13360	0.34645	53.19379	146.84	6.92
66/12/ 5	2439464.5	-0.32604	0.14111	0.04129	-29.36032	-42.50119	-0.84419	0.35766	51.66326	156.60	6.63
66/12/ 7	2439466.5	-0.35573	0.09045	0.03980	-22.06880	-44.98813	-1.71234	0.36921	50.13876	165.73	6.19
66/12/ 9	2439468.5	-0.37708	0.03765	0.03738	-14.93579	-46.24363	-2.46433	0.38080	48.65824	174.30	5.63
66/12/11	2439470.5	-0.39036	-0.01597	0.03415	-8.11315	-46.44350	-3.10086	0.39218	47.24867	182.34	5.00
66/12/13	2439472.5	-0.39598	-0.06930	0.03026	-1.69612	-45.75361	-3.62701	0.40314	45.92848	189.93	4.30
66/12/15	2439474.5	-0.39445	-0.12138	0.02582	4.26095	-44.32160	-4.05003	0.41351	44.70976	197.10	3.58
66/12/17	2439476.5	-0.38633	-0.17145	0.02094	9.73174	-42.27406	-4.37799	0.42318	43.60011	203.93	2.84
66/12/19	2439478.5	-0.37216	-0.21885	0.01574	14.70810	-39.71707	-4.61891	0.43203	42.60409	210.46	2.09

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66/12/21	2439480.5	-0.35254	-0.26304	0.01030	19.19284	-36.73817	-4.78029	0.43998	41.72421	216.73	1.34
66/12/23	2439482.5	-0.32801	-0.30358	0.00472	23.19479	-33.40896	-4.86884	0.44696	40.96172	222.79	0.61
66/12/25	2439484.5	-0.29913	-0.34011	-0.00092	26.72532	-29.78775	-4.89042	0.45294	40.31711	228.67	-0.12
66/12/27	2439486.5	-0.26645	-0.37231	-0.00655	29.79600	-25.92204	-4.85001	0.45787	39.79040	234.41	-0.82
66/12/29	2439488.5	-0.23047	-0.39991	-0.01210	32.41710	-21.85068	-4.75174	0.46173	39.38146	240.04	-1.50
66/12/31	2439490.5	-0.19173	-0.42272	-0.01751	34.59650	-17.60579	-4.59899	0.46450	39.09006	245.60	-2.16
67/ 1/ 2	2439492.5	-0.15072	-0.44053	-0.02271	36.33897	-13.21443	-4.39443	0.46615	38.91597	251.11	-2.79
67/ 1/ 4	2439494.5	-0.10795	-0.45320	-0.02764	37.64567	-8.70004	-4.14010	0.46670	38.85908	256.60	-3.40
67/ 1/ 6	2439496.5	-0.06392	-0.46059	-0.03226	38.51376	-4.08380	-3.83750	0.46612	38.91932	262.10	-3.97
67/ 1/ 8	2439498.5	-0.01914	-0.46260	-0.03649	38.93604	0.61413	-3.48763	0.46443	39.09675	267.63	-4.51
67/ 1/10	2439500.5	0.02586	-0.45915	-0.04029	38.90070	5.37325	-3.09112	0.46164	39.39151	273.22	-5.01
67/ 1/12	2439502.5	0.07054	-0.45017	-0.04361	38.39105	10.17141	-2.64827	0.45775	39.80381	278.91	-5.47
67/ 1/14	2439504.5	0.11435	-0.43564	-0.04639	37.38530	14.98326	-2.15921	0.45279	40.33387	284.71	-5.88
67/ 1/16	2439506.5	0.15671	-0.41557	-0.04858	35.85651	19.77839	-1.62400	0.44678	40.98184	290.66	-6.24
67/ 1/18	2439508.5	0.19698	-0.38997	-0.05013	33.77261	24.51919	-1.04284	0.43976	41.74766	296.80	-6.55
67/ 1/20	2439510.5	0.23450	-0.35896	-0.05098	31.09684	29.15822	-0.41629	0.43179	42.63084	303.16	-6.78
67/ 1/22	2439512.5	0.26857	-0.32268	-0.05107	27.78874	33.63491	0.25430	0.42292	43.63010	309.77	-6.94
67/ 1/24	2439514.5	0.29844	-0.28135	-0.05037	23.80604	37.87168	0.96637	0.41323	44.74289	316.69	-7.00
67/ 1/26	2439516.5	0.32329	-0.23532	-0.04883	19.10801	41.76941	1.71542	0.40283	45.96458	323.95	-6.96
67/ 1/28	2439518.5	0.34229	-0.18503	-0.04640	13.66103	45.20243	2.49414	0.39186	47.28746	331.61	-6.80
67/ 1/30	2439520.5	0.35456	-0.13113	-0.04306	7.44727	48.01383	3.29116	0.38047	48.69930	339.70	-6.50
67/ 2/ 1	2439522.5	0.35920	-0.07443	-0.03879	0.47767	50.01223	4.08969	0.36888	50.18144	348.29	-6.04
67/ 2/ 3	2439524.5	0.35539	-0.01599	-0.03362	-7.19016	50.97253	4.86587	0.35733	51.70661	357.42	-5.40
67/ 2/ 5	2439526.5	0.34237	0.04283	-0.02757	-15.42902	50.64441	5.58748	0.34614	53.23655	7.13	-4.57
67/ 2/ 7	2439528.5	0.31961	0.10041	-0.02075	-24.01715	48.77352	6.21332	0.33565	54.72006	17.44	-3.54
67/ 2/ 9	2439530.5	0.28688	0.15483	-0.01328	-32.61784	45.14019	6.69466	0.32627	56.09259	28.36	-2.33
67/ 2/11	2439532.5	0.24443	0.20396	-0.00536	-40.77603	39.61633	6.97954	0.31839	57.27873	39.84	-0.96
67/ 2/13	2439534.5	0.19306	0.24563	0.00275	-47.94726	32.23198	7.02098	0.31243	58.19909	51.83	0.51
67/ 2/15	2439536.5	0.13426	0.27780	0.01076	-53.56888	23.22921	6.78785	0.30873	58.78176	64.21	2.00
67/ 2/17	2439538.5	0.07009	0.29885	0.01833	-57.16556	13.07255	6.27534	0.30750	58.97604	76.80	3.42
67/ 2/19	2439540.5	0.00309	0.30780	0.02516	-58.45617	2.39448	5.51017	0.30884	58.76410	89.43	4.67
67/ 2/21	2439542.5	-0.06405	0.30444	0.03098	-57.41666	-8.11556	4.54713	0.31265	58.16539	101.88	5.69
67/ 2/23	2439544.5	-0.12874	0.28935	0.03561	-54.27092	-17.83788	3.45779	0.31870	57.23180	113.99	6.42
67/ 2/25	2439546.5	-0.18877	0.26372	0.03895	-49.41780	-26.31607	2.31610	0.32665	56.03587	125.60	6.85
67/ 2/27	2439548.5	-0.24243	0.22914	0.04097	-43.33184	-33.29158	1.18657	0.33609	54.65699	136.61	7.00
67/ 3/ 1	2439550.5	-0.28858	0.18742	0.04171	-36.47623	-38.68513	0.11782	0.34662	53.17019	147.00	6.91
67/ 3/ 3	2439552.5	-0.32656	0.14036	0.04128	-29.24827	-42.54924	-0.85837	0.35783	51.63948	156.74	6.62
67/ 3/ 5	2439554.5	-0.35612	0.08966	0.03977	-21.95780	-45.01601	-1.72476	0.36939	50.11547	165.87	6.18
67/ 3/ 7	2439556.5	-0.37735	0.03684	0.03734	-14.82865	-46.25406	-2.47495	0.38097	48.63591	174.42	5.62
67/ 3/ 9	2439558.5	-0.39050	-0.01679	0.03410	-8.01169	-46.43913	-3.10974	0.39235	47.22764	182.46	4.99
67/ 3/11	2439560.5	-0.39601	-0.07010	0.03019	-1.60143	-45.73687	-3.63425	0.40330	45.90897	190.04	4.29
67/ 3/13	2439562.5	-0.39438	-0.12216	0.02574	4.34832	-44.29459	-4.05575	0.41367	44.69192	197.21	3.57
67/ 3/15	2439564.5	-0.38615	-0.17219	0.02086	9.81157	-42.23856	-4.38231	0.42332	43.58402	204.03	2.82
67/ 3/17	2439566.5	-0.37190	-0.21955	0.01565	14.78036	-39.67454	-4.62196	0.43216	42.58980	210.55	2.08
67/ 3/19	2439568.5	-0.35220	-0.26369	0.01021	19.25766	-36.68982	-4.78218	0.44009	41.71174	216.82	1.33

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67/ 3/21	2439570.5	-0.32760	-0.30417	0.00463	23.25234	-33.35576	-4.86967	0.44706	40.95108	222.88	0.59
67/ 3/23	2439572.5	-0.29866	-0.34063	-0.00101	26.77577	-29.73049	-4.89027	0.45302	40.30829	228.76	-0.13
67/ 3/25	2439574.5	-0.26592	-0.37276	-0.00664	29.83953	-25.86136	-4.84894	0.45794	39.78341	234.50	-0.83
67/ 3/27	2439576.5	-0.22990	-0.40030	-0.01219	32.45385	-21.78711	-4.74981	0.46178	39.37628	240.13	-1.51
67/ 3/29	2439578.5	-0.19112	-0.42303	-0.01759	34.62656	-17.53978	-4.59625	0.46453	39.08667	245.69	-2.17
67/ 3/31	2439580.5	-0.15008	-0.44076	-0.02279	36.36238	-13.14636	-4.39092	0.46617	38.91439	251.20	-2.80
67/ 4/ 2	2439582.5	-0.10728	-0.45335	-0.02772	37.66242	-8.63024	-4.13584	0.46669	38.85929	256.69	-3.40
67/ 4/ 4	2439584.5	-0.06324	-0.46066	-0.03232	38.52376	-4.01258	-3.83250	0.46610	38.92132	262.18	-3.98
67/ 4/ 6	2439586.5	-0.01846	-0.46259	-0.03655	38.93915	0.68644	-3.48191	0.46440	39.10054	267.72	-4.51
67/ 4/ 8	2439588.5	0.02654	-0.45905	-0.04035	38.89669	5.44635	-3.08468	0.46159	39.39709	273.31	-5.01
67/ 4/10	2439590.5	0.07122	-0.44999	-0.04366	38.37963	10.24495	-2.64113	0.45768	39.81118	278.99	-5.47
67/ 4/12	2439592.5	0.11501	-0.43538	-0.04643	37.36609	15.05681	-2.15136	0.45270	40.34304	284.80	-5.89
67/ 4/14	2439594.5	0.15734	-0.41521	-0.04861	35.82905	19.85142	-1.61544	0.44668	40.99280	290.75	-6.25
67/ 4/16	2439596.5	0.19757	-0.38954	-0.05015	33.73637	24.59107	-1.03357	0.43965	41.76041	296.89	-6.55
67/ 4/18	2439598.5	0.23505	-0.35844	-0.05098	31.05122	29.22812	-0.40634	0.43166	42.64536	303.25	-6.78
67/ 4/20	2439600.5	0.26906	-0.32208	-0.05107	27.73310	33.70176	0.26491	0.42277	43.64635	309.88	-6.94
67/ 4/22	2439602.5	0.29886	-0.28068	-0.05035	23.73972	37.93415	0.97758	0.41308	44.76080	316.80	-7.00
67/ 4/24	2439604.5	0.32363	-0.23458	-0.04880	19.03044	41.82576	1.72715	0.40267	45.98407	324.06	-6.96
67/ 4/26	2439606.5	0.34253	-0.18423	-0.04635	13.57179	45.25052	2.50624	0.39169	47.30840	331.73	-6.80
67/ 4/28	2439608.5	0.35469	-0.13028	-0.04300	7.34628	48.05100	3.30343	0.38030	48.72144	339.83	-6.49
67/ 4/30	2439610.5	0.35921	-0.07354	-0.03872	0.36541	50.03527	4.10181	0.36870	50.20445	348.43	-6.03
67/ 5/ 2	2439612.5	0.35526	-0.01509	-0.03353	-7.31231	50.97777	4.87742	0.35716	51.73000	357.57	-5.39
67/ 5/ 4	2439614.5	0.34210	0.04373	-0.02747	-15.55843	50.62793	5.59788	0.34598	53.25963	7.28	-4.55
67/ 5/ 6	2439616.5	0.31918	0.10127	-0.02064	-24.14957	48.73158	6.22189	0.33550	54.74195	17.60	-3.53
67/ 5/ 8	2439618.5	0.28631	0.15563	-0.01316	-32.74716	45.06999	6.70060	0.32613	56.11220	28.53	-2.31
67/ 5/10	2439620.5	0.24371	0.20466	-0.00523	-40.89448	39.51699	6.98209	0.31829	57.29486	40.02	-0.94
67/ 5/12	2439622.5	0.19221	0.24620	0.00288	-48.04615	32.10554	7.01950	0.31236	58.21058	52.02	0.53
67/ 5/14	2439624.5	0.13331	0.27821	0.01088	-53.64000	23.08115	6.78205	0.30869	58.78763	64.40	2.02
67/ 5/16	2439626.5	0.06908	0.29908	0.01844	-57.20295	12.91151	6.26540	0.30751	58.97575	76.99	3.44
67/ 5/18	2439628.5	0.00205	0.30784	0.02525	-58.45746	2.23089	5.49673	0.30888	58.75769	89.62	4.69
67/ 5/20	2439630.5	-0.06507	0.30430	0.03106	-57.38356	-8.27143	4.53121	0.31273	58.15342	102.07	5.70
67/ 5/22	2439632.5	-0.12970	0.28904	0.03567	-54.20843	-17.97766	3.44052	0.31881	57.21528	114.17	6.42
67/ 5/24	2439634.5	-0.18964	0.26325	0.03899	-49.33286	-26.43434	2.29857	0.32678	56.01597	125.77	6.85
67/ 5/26	2439636.5	-0.24320	0.22855	0.04099	-43.23178	-33.38588	1.16964	0.33625	54.63490	136.78	7.00
67/ 5/28	2439638.5	-0.28922	0.18674	0.04172	-36.36771	-38.75541	0.10211	0.34678	53.14699	147.15	6.91
67/ 5/30	2439640.5	-0.32707	0.13961	0.04126	-29.13669	-42.59704	-0.87249	0.35801	51.61604	156.88	6.62
67/ 6/ 1	2439642.5	-0.35651	0.08887	0.03974	-21.84721	-45.04373	-1.73713	0.36956	50.09248	166.00	6.17
67/ 6/ 3	2439644.5	-0.37761	0.03602	0.03729	-14.72186	-46.26441	-2.48553	0.38115	48.61385	174.55	5.61
67/ 6/ 5	2439646.5	-0.39064	-0.01761	0.03404	-7.91052	-46.43474	-3.11859	0.39252	47.20686	182.58	4.98
67/ 6/ 7	2439648.5	-0.39604	-0.07091	0.03013	-1.50697	-45.72015	-3.64147	0.40346	45.88969	190.15	4.28
67/ 6/ 9	2439650.5	-0.39430	-0.12295	0.02567	4.43549	-44.26762	-4.06145	0.41382	44.67427	197.32	3.56
67/ 6/11	2439652.5	-0.38598	-0.17294	0.02078	9.89122	-42.20309	-4.38663	0.42346	43.56810	204.13	2.81
67/ 6/13	2439654.5	-0.37164	-0.22025	0.01557	14.85246	-39.63204	-4.62501	0.43228	42.57563	210.65	2.06
67/ 6/15	2439656.5	-0.35186	-0.26433	0.01013	19.32230	-36.64148	-4.78406	0.44020	41.69936	216.92	1.32
67/ 6/17	2439658.5	-0.32719	-0.30476	0.00455	23.30967	-33.30256	-4.87048	0.44716	40.94048	222.97	0.58

1.1 1 A.U.=149,599,000 KM.

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67/ 6/19	2439660.5	-0.29819	-0.34116	-0.00110	26.82597	-29.67325	-4.89009	0.45311	40.29947	228.84	-0.14
67/ 6/21	2439662.5	-0.26539	-0.37322	-0.00673	29.88277	-25.80073	-4.84784	0.45801	39.77637	234.58	-0.84
67/ 6/23	2439664.5	-0.22933	-0.40068	-0.01227	32.49026	-21.72363	-4.74786	0.46183	39.37100	240.22	-1.52
67/ 6/25	2439666.5	-0.19051	-0.42334	-0.01767	34.65624	-17.47390	-4.59349	0.46456	39.08314	245.77	-2.18
67/ 6/27	2439668.5	-0.14943	-0.44100	-0.02286	36.38537	-13.07846	-4.38737	0.46619	38.91260	251.28	-2.81
67/ 6/29	2439670.5	-0.10662	-0.45350	-0.02779	37.67870	-8.56067	-4.13155	0.46670	38.85923	256.77	-3.41
67/ 7/ 1	2439672.5	-0.06256	-0.46073	-0.03239	38.53327	-3.94166	-3.82748	0.46609	38.92299	262.27	-3.99
67/ 7/ 3	2439674.5	-0.01777	-0.46258	-0.03661	38.94174	0.75840	-3.47618	0.46437	39.10394	267.80	-4.52
67/ 7/ 5	2439676.5	0.02723	-0.45896	-0.04040	38.89217	5.51901	-3.07824	0.46154	39.40223	273.40	-5.02
67/ 7/ 7	2439678.5	0.07190	-0.44981	-0.04371	38.36771	10.31793	-2.63399	0.45761	39.81807	279.08	-5.48
67/ 7/ 9	2439680.5	0.11567	-0.43512	-0.04647	37.34642	15.12969	-2.14352	0.45262	40.35167	284.89	-5.89
67/ 7/11	2439682.5	0.15797	-0.41487	-0.04864	35.80119	19.92370	-1.60691	0.44658	41.00319	290.85	-6.25
67/ 7/13	2439684.5	0.19817	-0.38911	-0.05017	33.69981	24.66209	-1.02435	0.43954	41.77255	296.99	-6.55
67/ 7/15	2439686.5	0.23559	-0.35793	-0.05099	31.00540	29.29708	-0.39645	0.43153	42.65924	303.35	-6.79
67/ 7/17	2439688.5	0.26955	-0.32149	-0.05106	27.67740	33.76762	0.27544	0.42264	43.66196	309.98	-6.94
67/ 7/19	2439690.5	0.29927	-0.28002	-0.05034	23.67354	37.99558	0.98870	0.41293	44.77810	316.90	-7.00
67/ 7/21	2439692.5	0.32396	-0.23385	-0.04877	18.95321	41.88109	1.73877	0.40251	46.00297	324.18	-6.96
67/ 7/23	2439694.5	0.34277	-0.18345	-0.04631	13.48312	45.29761	2.51822	0.39152	47.32874	331.85	-6.79
67/ 7/25	2439696.5	0.35482	-0.12944	-0.04294	7.24612	48.08724	3.31555	0.38012	48.74301	339.96	-6.49
67/ 7/27	2439698.5	0.35922	-0.07267	-0.03865	0.25422	50.05752	4.11377	0.36853	50.22692	348.56	-6.02
67/ 7/29	2439700.5	0.35513	-0.01420	-0.03345	-7.43317	50.98244	4.88880	0.35699	51.75289	357.71	-5.38
67/ 7/31	2439702.5	0.34183	0.04461	-0.02738	-15.68640	50.61116	5.60813	0.34581	53.28230	7.44	-4.54
67/ 8/ 2	2439704.5	0.31876	0.10212	-0.02053	-24.28046	48.68972	6.23032	0.33535	54.76355	17.76	-3.51
67/ 8/ 4	2439706.5	0.28573	0.15641	-0.01304	-32.87498	45.00027	6.70645	0.32600	56.13168	28.70	-2.29
67/ 8/ 6	2439708.5	0.24299	0.20535	-0.00511	-41.01159	39.41853	6.98458	0.31818	57.31104	40.20	-0.92
67/ 8/ 8	2439710.5	0.19138	0.24675	0.00300	-48.14396	31.98029	7.01802	0.31229	58.22227	52.20	0.55
67/ 8/10	2439712.5	0.13238	0.27861	0.01100	-53.71042	22.93449	6.77630	0.30865	58.79386	64.59	2.04
67/ 8/12	2439714.5	0.06808	0.29930	0.01855	-57.24005	12.75191	6.25555	0.30750	58.97598	77.18	3.46
67/ 8/14	2439716.5	0.00103	0.30787	0.02535	-58.45887	2.06862	5.48342	0.30892	58.75191	89.81	4.71
67/ 8/16	2439718.5	-0.06607	0.30415	0.03114	-57.35088	-8.42622	4.51541	0.31280	58.14219	102.26	5.71
67/ 8/18	2439720.5	-0.13065	0.28872	0.03573	-54.14659	-18.11669	3.42337	0.31891	57.19953	114.35	6.43
67/ 8/20	2439722.5	-0.19050	0.26278	0.03903	-49.24864	-26.55219	2.28114	0.32691	55.99688	125.94	6.86
67/ 8/22	2439724.5	-0.24395	0.22796	0.04101	-43.13242	-33.48005	1.15279	0.33639	54.61363	136.94	7.00
67/ 8/24	2439726.5	-0.28986	0.18605	0.04172	-36.25977	-38.82577	0.08645	0.34695	53.12456	147.30	6.91
67/ 8/26	2439728.5	-0.32758	0.13885	0.04124	-29.02553	-42.64507	-0.88660	0.35818	51.59331	157.03	6.61
67/ 8/28	2439730.5	-0.35689	0.08807	0.03971	-21.73686	-45.07174	-1.74950	0.36974	50.07009	166.14	6.17
67/ 8/30	2439732.5	-0.37786	0.03520	0.03725	-14.61514	-46.27501	-2.49613	0.38132	48.59228	174.68	5.61
67/ 9/ 1	2439734.5	-0.39078	-0.01843	0.03399	-7.80928	-46.43054	-3.12747	0.39268	47.18645	182.70	4.97
67/ 9/ 3	2439736.5	-0.39606	-0.07172	0.03006	-1.41233	-45.70350	-3.64870	0.40362	45.87067	190.26	4.27
67/ 9/ 5	2439738.5	-0.39422	-0.12373	0.02560	4.52291	-44.24059	-4.06717	0.41397	44.65678	197.43	3.55
67/ 9/ 7	2439740.5	-0.38580	-0.17369	0.02071	9.97115	-42.16744	-4.39095	0.42360	43.55224	204.24	2.80
67/ 9/ 9	2439742.5	-0.37137	-0.22095	0.01549	14.92486	-39.58923	-4.62805	0.43241	42.56145	210.75	2.05
67/ 9/11	2439744.5	-0.35151	-0.26499	0.01004	19.38725	-36.59272	-4.78593	0.44032	41.68690	217.01	1.31
67/ 9/13	2439746.5	-0.32677	-0.30535	0.00446	23.36731	-33.24885	-4.87127	0.44726	40.92977	223.06	0.57
67/ 9/15	2439748.5	-0.29771	-0.34169	-0.00118	26.87647	-29.61538	-4.88989	0.45319	40.29053	228.93	-0.15

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67/ 9/17	2439750.5	-0.26486	-0.37368	-0.00681	29.92628	-25.73938	-4.84672	0.45807	39.76919	234.67	-0.85
67/ 9/19	2439752.5	-0.22875	-0.40107	-0.01236	32.52692	-21.65933	-4.74587	0.46188	39.36559	240.30	-1.53
67/ 9/21	2439754.5	-0.18989	-0.42365	-0.01776	34.68612	-17.40711	-4.59067	0.46460	39.07952	245.86	-2.19
67/ 9/23	2439756.5	-0.14878	-0.44123	-0.02294	36.40852	-13.00958	-4.38376	0.46620	38.91075	251.37	-2.82
67/ 9/25	2439758.5	-0.10594	-0.45366	-0.02786	37.69511	-8.49003	-4.12718	0.46669	38.85917	256.86	-3.42
67/ 9/27	2439760.5	-0.06187	-0.46080	-0.03246	38.54285	-3.86960	-3.82237	0.46607	38.92475	262.35	-3.99
67/ 9/29	2439762.5	-0.01707	-0.46256	-0.03668	38.94437	0.83157	-3.47034	0.46433	39.10752	267.89	-4.53
67/10/ 1	2439764.5	0.02792	-0.45886	-0.04046	38.88761	5.59296	-3.07169	0.46148	39.40765	273.48	-5.03
67/10/ 3	2439766.5	0.07258	-0.44963	-0.04375	38.35567	10.39230	-2.62672	0.45755	39.82533	279.17	-5.49
67/10/ 5	2439768.5	0.11634	-0.43485	-0.04651	37.32651	15.20404	-2.13554	0.45254	40.36076	284.98	-5.90
67/10/ 7	2439770.5	0.15861	-0.41451	-0.04867	35.77294	19.99751	-1.59821	0.44648	41.01411	290.94	-6.26
67/10/ 9	2439772.5	0.19877	-0.38867	-0.05018	33.66267	24.73471	-1.01495	0.43942	41.78530	297.09	-6.56
67/10/11	2439774.5	0.23615	-0.35741	-0.05100	30.95877	29.36767	-0.38635	0.43140	42.67382	303.45	-6.79
67/10/13	2439776.5	0.27004	-0.32089	-0.05106	27.62064	33.83514	0.28620	0.42249	43.67835	310.08	-6.94
67/10/15	2439778.5	0.29970	-0.27934	-0.05032	23.60599	38.05865	1.00008	0.41277	44.79625	317.01	-7.00
67/10/17	2439780.5	0.32430	-0.23310	-0.04873	18.87428	41.93797	1.75067	0.40234	46.02279	324.29	-6.96
67/10/19	2439782.5	0.34301	-0.18264	-0.04626	13.39239	45.34613	2.53049	0.39135	47.35009	331.97	-6.79
67/10/21	2439784.5	0.35494	-0.12858	-0.04288	7.14349	48.12466	3.32798	0.37994	48.76564	340.09	-6.48
67/10/23	2439786.5	0.35922	-0.07178	-0.03858	0.14019	50.08060	4.12605	0.36835	50.25048	348.70	-6.01
67/10/25	2439788.5	0.35500	-0.01329	-0.03336	-7.55723	50.98743	4.90050	0.35681	51.77687	357.86	-5.36
67/10/27	2439790.5	0.34154	0.04551	-0.02728	-15.81780	50.59404	5.61866	0.34564	53.30599	7.59	-4.53
67/10/29	2439792.5	0.31833	0.10299	-0.02042	-24.41486	48.64668	6.23898	0.33520	54.78604	17.93	-3.49
67/10/31	2439794.5	0.28514	0.15721	-0.01292	-33.00615	44.92848	6.71243	0.32587	56.15185	28.87	-2.27
67/11/ 2	2439796.5	0.24225	0.20605	-0.00499	-41.13158	39.31711	6.98708	0.31807	57.32766	40.38	-0.90
67/11/ 4	2439798.5	0.19051	0.24733	0.00313	-48.24391	31.85135	7.01643	0.31221	58.23413	52.39	0.57
67/11/ 6	2439800.5	0.13141	0.27902	0.01112	-53.78200	22.78368	6.77032	0.30861	58.79997	64.78	2.06
67/11/ 8	2439802.5	0.06705	0.29952	0.01866	-57.27723	12.58807	6.24536	0.30750	58.97580	77.38	3.48
67/11/10	2439804.5	-0.00002	0.30791	0.02545	-58.45932	1.90239	5.46968	0.30896	58.74546	90.00	4.72
67/11/12	2439806.5	-0.06710	0.30400	0.03122	-57.31639	-8.58437	4.49916	0.31288	58.13005	102.45	5.73
67/11/14	2439808.5	-0.13162	0.28839	0.03579	-54.08231	-18.25831	3.40579	0.31902	57.18270	114.53	6.44
67/11/16	2439810.5	-0.19139	0.26230	0.03907	-49.16167	-26.67178	2.26331	0.32705	55.97657	126.12	6.86
67/11/18	2439812.5	-0.24473	0.22736	0.04103	-43.03024	-33.57518	1.13561	0.33655	54.59106	137.11	7.00
67/11/20	2439814.5	-0.29051	0.18535	0.04172	-36.14914	-38.89644	0.07053	0.34712	53.10083	147.46	6.90
67/11/22	2439816.5	-0.32810	0.13809	0.04123	-28.91193	-42.69289	-0.90090	0.35836	51.56932	157.18	6.61
67/11/24	2439818.5	-0.35728	0.08726	0.03968	-21.62439	-45.09919	-1.76202	0.36992	50.04653	166.28	6.16
67/11/26	2439820.5	-0.37812	0.03437	0.03720	-14.50663	-46.28484	-2.50682	0.38150	48.56967	174.81	5.60
67/11/28	2439822.5	-0.39092	-0.01927	0.03393	-7.70657	-46.42542	-3.13640	0.39286	47.16512	182.82	4.95
67/11/30	2439824.5	-0.39609	-0.07254	0.03000	-1.31650	-45.68589	-3.65597	0.40379	45.85084	190.38	4.26
67/12/ 2	2439826.5	-0.39414	-0.12453	0.02553	4.61129	-44.21259	-4.07290	0.41413	44.63861	197.53	3.53
67/12/ 4	2439828.5	-0.38562	-0.17445	0.02063	10.05185	-42.13085	-4.39527	0.42375	43.53581	204.34	2.79
67/12/ 6	2439830.5	-0.37111	-0.22166	0.01541	14.99788	-39.54553	-4.63108	0.43254	42.54682	210.85	2.04
67/12/ 8	2439832.5	-0.35116	-0.26564	0.00996	19.45268	-36.54314	-4.78778	0.44043	41.67410	217.11	1.30
67/12/10	2439834.5	-0.32635	-0.30595	0.00437	23.42533	-33.19438	-4.87204	0.44736	40.91881	223.15	0.56
67/12/12	2439836.5	-0.29723	-0.34222	-0.00127	26.92727	-29.55684	-4.88966	0.45327	40.28142	229.02	-0.16
67/12/14	2439838.5	-0.26432	-0.37414	-0.00690	29.97004	-25.67742	-4.84556	0.45814	39.76195	234.76	-0.86

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67/12/16	2439840.5	-0.22816	-0.40146	-0.01244	32.56378	-21.59449	-4.74384	0.46193	39.36021	240.39	-1.54
67/12/18	2439842.5	-0.18926	-0.42396	-0.01784	34.71620	-17.33984	-4.58782	0.46463	39.07598	245.94	-2.20
67/12/20	2439844.5	-0.14813	-0.44146	-0.02302	36.43187	-12.94023	-4.38014	0.46622	38.90908	251.45	-2.83
67/12/22	2439846.5	-0.10527	-0.45381	-0.02794	37.71171	-8.41896	-4.12279	0.46669	38.85935	256.94	-3.43
67/12/24	2439848.5	-0.06118	-0.46087	-0.03253	38.55261	-3.79710	-3.81724	0.46605	38.92677	262.44	-4.00
67/12/26	2439850.5	-0.01638	-0.46255	-0.03674	38.94713	0.90519	-3.46448	0.46429	39.11139	267.97	-4.54
67/12/28	2439852.5	0.02862	-0.45876	-0.04051	38.88314	5.66736	-3.06511	0.46143	39.41335	273.57	-5.04
67/12/30	2439854.5	0.07327	-0.44944	-0.04380	38.34364	10.46711	-2.61942	0.45747	39.83286	279.26	-5.49
68/ 1/ 1	2439856.5	0.11701	-0.43457	-0.04655	37.30655	15.27883	-2.12752	0.45245	40.37014	285.07	-5.90
68/ 1/ 3	2439858.5	0.15925	-0.41415	-0.04870	35.74459	20.07175	-1.58947	0.44638	41.02533	291.03	-6.26
68/ 1/ 5	2439860.5	0.19937	-0.38822	-0.05020	33.62540	24.80776	-1.00550	0.43930	41.79837	297.18	-6.56
68/ 1/ 7	2439862.5	0.23670	-0.35688	-0.05100	30.91196	29.43868	-0.37620	0.43127	42.68872	303.55	-6.79
68/ 1/ 9	2439864.5	0.27054	-0.32028	-0.05105	27.56363	33.90304	0.29702	0.42235	43.69506	310.19	-6.94
68/ 1/11	2439866.5	0.30012	-0.27865	-0.05030	23.53812	38.12206	1.01151	0.41261	44.81470	317.12	-7.00
68/ 1/13	2439868.5	0.32464	-0.23234	-0.04870	18.79493	41.99512	1.76263	0.40218	46.04288	324.41	-6.96
68/ 1/15	2439870.5	0.34325	-0.18182	-0.04622	13.30114	45.39479	2.54283	0.39117	47.37165	332.09	-6.79
68/ 1/17	2439872.5	0.35507	-0.12772	-0.04282	7.04027	48.16209	3.34048	0.37976	48.78843	340.22	-6.47
68/ 1/19	2439874.5	0.35922	-0.07087	-0.03850	0.02552	50.10350	4.13838	0.36817	50.27412	348.84	-6.00
68/ 1/21	2439876.5	0.35486	-0.01237	-0.03327	-7.68190	50.99203	4.91222	0.35663	51.80085	358.00	-5.35
68/ 1/23	2439878.5	0.34126	0.04643	-0.02717	-15.94973	50.57633	5.62919	0.34547	53.32961	7.75	-4.51
68/ 1/25	2439880.5	0.31789	0.10387	-0.02030	-24.54963	48.60288	6.24761	0.33504	54.80836	18.09	-3.47
68/ 1/27	2439882.5	0.28455	0.15802	-0.01280	-33.13744	44.85577	6.71835	0.32573	56.17176	29.05	-2.25
68/ 1/29	2439884.5	0.24151	0.20676	-0.00486	-41.25140	39.21472	6.98950	0.31797	57.34392	40.57	-0.88
68/ 1/31	2439886.5	0.18964	0.24790	0.00325	-48.34337	31.72151	7.01471	0.31214	58.24553	52.58	0.60
68/ 2/ 2	2439888.5	0.13044	0.27943	0.01124	-53.85281	22.63217	6.76421	0.30858	58.80557	64.98	2.09
68/ 2/ 4	2439890.5	0.06603	0.29975	0.01877	-57.31344	12.42384	6.23504	0.30751	58.97507	77.58	3.50
68/ 2/ 6	2439892.5	-0.00107	0.30794	0.02555	-58.45875	1.73614	5.45586	0.30900	58.73846	90.20	4.74
68/ 2/ 8	2439894.5	-0.06813	0.30384	0.03130	-57.28098	-8.74223	4.48286	0.31296	58.11741	102.64	5.74
68/ 2/10	2439896.5	-0.13259	0.28806	0.03586	-54.01733	-18.39939	3.38818	0.31913	57.16546	114.72	6.45
68/ 2/12	2439898.5	-0.19227	0.26183	0.03911	-49.07426	-26.79073	2.24550	0.32719	55.95595	126.29	6.87
68/ 2/14	2439900.5	-0.24550	0.22676	0.04105	-42.92788	-33.66967	1.11846	0.33671	54.56831	137.27	7.00
68/ 2/16	2439902.5	-0.29116	0.18466	0.04172	-36.03855	-38.96655	0.05465	0.34729	53.07703	147.62	6.90
68/ 2/18	2439904.5	-0.32862	0.13732	0.04121	-28.79854	-42.74026	-0.91515	0.35853	51.54535	157.32	6.60
68/ 2/20	2439906.5	-0.35767	0.08645	0.03965	-21.51222	-45.12629	-1.77448	0.37010	50.02306	166.41	6.15
68/ 2/22	2439908.5	-0.37838	0.03354	0.03716	-14.39849	-46.29442	-2.51747	0.38168	48.54716	174.93	5.59
68/ 2/24	2439910.5	-0.39105	-0.02009	0.03388	-7.60424	-46.42016	-3.14528	0.39303	47.14391	182.94	4.94
68/ 2/26	2439912.5	-0.39611	-0.07336	0.02993	-1.22106	-45.66821	-3.66320	0.40396	45.83116	190.49	4.25
68/ 2/28	2439914.5	-0.39405	-0.12531	0.02545	4.69928	-44.18461	-4.07860	0.41428	44.62060	197.64	3.52
68/ 3/ 1	2439916.5	-0.38544	-0.17520	0.02055	10.13219	-42.09435	-4.39956	0.42389	43.51955	204.44	2.78
68/ 3/ 3	2439918.5	-0.37084	-0.22237	0.01532	15.07056	-39.50199	-4.63409	0.43267	42.53238	210.95	2.03
68/ 3/ 5	2439920.5	-0.35081	-0.26629	0.00987	19.51782	-36.49375	-4.78962	0.44055	41.66149	217.20	1.28
68/ 3/ 7	2439922.5	-0.32593	-0.30654	0.00429	23.48311	-33.14013	-4.87280	0.44746	40.90806	223.24	0.55
68/ 3/ 9	2439924.5	-0.29675	-0.34274	-0.00136	26.97787	-29.49852	-4.88943	0.45336	40.27251	229.11	-0.17
68/ 3/11	2439926.5	-0.26379	-0.37460	-0.00699	30.01364	-25.61567	-4.84441	0.45821	39.75487	234.85	-0.87
68/ 3/13	2439928.5	-0.22758	-0.40184	-0.01253	32.60052	-21.52986	-4.74182	0.46198	39.35497	240.48	-1.55

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68/ 3/15	2439930.5	-0.18864	-0.42427	-0.01792	34.74616	-17.27275	-4.58499	0.46466	39.07257	246.03	-2.21
68/ 3/17	2439932.5	-0.14748	-0.44169	-0.02310	36.45510	-12.87109	-4.37652	0.46623	38.90749	251.54	-2.84
68/ 3/19	2439934.5	-0.10459	-0.45396	-0.02801	37.72820	-8.34809	-4.11841	0.46669	38.85960	257.03	-3.44
68/ 3/21	2439936.5	-0.06049	-0.46094	-0.03260	38.56228	-3.72481	-3.81212	0.46603	38.92885	262.52	-4.01
68/ 3/23	2439938.5	-0.01568	-0.46253	-0.03680	38.94981	0.97859	-3.45864	0.46426	39.11531	268.06	-4.55
68/ 3/25	2439940.5	0.02931	-0.45865	-0.04057	38.87861	5.74155	-3.05854	0.46138	39.41912	273.66	-5.04
68/ 3/27	2439942.5	0.07395	-0.44925	-0.04385	38.33161	10.54174	-2.61213	0.45740	39.84048	279.35	-5.50
68/ 3/29	2439944.5	0.11768	-0.43429	-0.04659	37.28662	15.35346	-2.11951	0.45236	40.37962	285.16	-5.91
68/ 3/31	2439946.5	0.15989	-0.41379	-0.04873	35.71629	20.14586	-1.58075	0.44627	41.03666	291.13	-6.27
68/ 4/ 2	2439948.5	0.19997	-0.38778	-0.05022	33.58817	24.88067	-0.99606	0.43918	41.81154	297.28	-6.57
68/ 4/ 4	2439950.5	0.23726	-0.35635	-0.05101	30.86519	29.50955	-0.36606	0.43114	42.70371	303.66	-6.79
68/ 4/ 6	2439952.5	0.27103	-0.31967	-0.05105	27.50665	33.97076	0.30783	0.42220	43.71182	310.29	-6.94
68/ 4/ 8	2439954.5	0.30054	-0.27797	-0.05028	23.47026	38.18525	1.02293	0.41245	44.83317	317.23	-7.00
68/ 4/10	2439956.5	0.32497	-0.23159	-0.04867	18.71562	42.05202	1.77456	0.40201	46.06295	324.53	-6.95
68/ 4/12	2439958.5	0.34349	-0.18100	-0.04617	13.20997	45.44316	2.55513	0.39099	47.39317	332.21	-6.78
68/ 4/14	2439960.5	0.35520	-0.12685	-0.04276	6.93717	48.19919	3.35293	0.37958	48.81115	340.35	-6.47
68/ 4/16	2439962.5	0.35922	-0.06997	-0.03843	-0.08895	50.12605	4.15066	0.36799	50.29768	348.98	-5.99
68/ 4/18	2439964.5	0.35472	-0.01146	-0.03318	-7.80628	50.99626	4.92388	0.35646	51.82471	358.15	-5.34
68/ 4/20	2439966.5	0.34097	0.04733	-0.02707	-16.08123	50.55823	5.63965	0.34530	53.35304	7.90	-4.50
68/ 4/22	2439968.5	0.31745	0.10474	-0.02019	-24.68380	48.55868	6.25615	0.33489	54.83042	18.26	-3.46
68/ 4/24	2439970.5	0.28395	0.15883	-0.01268	-33.26794	44.78276	6.72416	0.32560	56.19133	29.22	-2.23
68/ 4/26	2439972.5	0.24078	0.20746	-0.00473	-41.37021	39.11219	6.99181	0.31786	57.35977	40.75	-0.85
68/ 4/28	2439974.5	0.18878	0.24847	0.00338	-48.44168	31.59180	7.01291	0.31207	58.25649	52.77	0.62
68/ 4/30	2439976.5	0.12948	0.27983	0.01136	-53.92240	22.48115	6.75802	0.30855	58.81070	65.17	2.11
68/ 5/ 2	2439978.5	0.06500	0.29997	0.01888	-57.34853	12.26049	6.22470	0.30752	58.97390	77.77	3.52
68/ 5/ 4	2439980.5	-0.00211	0.30797	0.02564	-58.45729	1.57111	5.44205	0.30905	58.73107	90.39	4.76
68/ 5/ 6	2439982.5	-0.06915	0.30369	0.03138	-57.24500	-8.89862	4.46663	0.31304	58.10445	102.83	5.75
68/ 5/ 8	2439984.5	-0.13355	0.28774	0.03592	-53.95218	-18.53890	3.37069	0.31925	57.14797	114.90	6.46
68/ 5/10	2439986.5	-0.19314	0.26135	0.03915	-48.98706	-26.90812	2.22784	0.32733	55.93516	126.46	6.87
68/ 5/12	2439988.5	-0.24626	0.22616	0.04107	-42.82606	-33.76272	1.10148	0.33687	54.54545	137.44	7.00
68/ 5/14	2439990.5	-0.29180	0.18397	0.04172	-35.92876	-39.03540	0.03895	0.34746	53.05318	147.77	6.90
68/ 5/16	2439992.5	-0.32913	0.13657	0.04120	-28.68614	-42.78661	-0.92923	0.35871	51.52137	157.46	6.59
68/ 5/18	2439994.5	-0.35805	0.08566	0.03962	-21.40117	-45.15262	-1.78677	0.37028	49.99962	166.55	6.14
68/ 5/20	2439996.5	-0.37864	0.03273	0.03711	-14.29152	-46.30349	-2.52796	0.38186	48.52475	175.06	5.58
68/ 5/22	2439998.5	-0.39119	-0.02091	0.03382	-7.50309	-46.41465	-3.15403	0.39321	47.12286	183.06	4.93
68/ 5/24	2440000.5	-0.39613	-0.07416	0.02987	-1.12676	-45.65052	-3.67032	0.40412	45.81169	190.60	4.24
68/ 5/26	2440002.5	-0.39397	-0.12609	0.02538	4.78622	-44.15683	-4.08421	0.41444	44.60285	197.75	3.51
68/ 5/28	2440004.5	-0.38526	-0.17594	0.02047	10.21157	-42.05821	-4.40379	0.42403	43.50360	204.54	2.77
68/ 5/30	2440006.5	-0.37057	-0.22306	0.01524	15.14239	-39.45894	-4.63706	0.43280	42.51826	211.05	2.02
68/ 6/ 1	2440008.5	-0.35047	-0.26694	0.00979	19.58221	-36.44497	-4.79143	0.44066	41.64921	217.29	1.27
68/ 6/ 3	2440010.5	-0.32552	-0.30712	0.00420	23.54023	-33.08656	-4.87356	0.44756	40.89761	223.33	0.54
68/ 6/ 5	2440012.5	-0.29627	-0.34326	-0.00145	27.02790	-29.44095	-4.88921	0.45344	40.26390	229.20	-0.18
68/ 6/ 7	2440014.5	-0.26326	-0.37505	-0.00707	30.05675	-25.55474	-4.84328	0.45827	39.74809	234.93	-0.88
68/ 6/ 9	2440016.5	-0.22701	-0.40222	-0.01261	32.63685	-21.46609	-4.73984	0.46203	39.35001	240.56	-1.56
68/ 6/11	2440018.5	-0.18803	-0.42457	-0.01800	34.77582	-17.20658	-4.58220	0.46469	39.06943	246.11	-2.22

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68/ 6/13	2440020.5	-0.14684	-0.44191	-0.02318	36.47811	-12.80289	-4.37295	0.46625	38.90616	251.62	-2.85
68/ 6/15	2440022.5	-0.10393	-0.45410	-0.02808	37.74453	-8.27819	-4.11410	0.46669	38.86005	257.11	-3.45
68/ 6/17	2440024.5	-0.05981	-0.46100	-0.03266	38.57184	-3.65352	-3.80708	0.46601	38.93108	262.61	-4.02
68/ 6/19	2440026.5	-0.01499	-0.46251	-0.03686	38.95245	1.05097	-3.45287	0.46422	39.11931	268.14	-4.55
68/ 6/21	2440028.5	0.03000	-0.45855	-0.04062	38.87409	5.81468	-3.05206	0.46132	39.42487	273.74	-5.05
68/ 6/23	2440030.5	0.07463	-0.44906	-0.04389	38.31962	10.61526	-2.60494	0.45733	39.84799	279.44	-5.51
68/ 6/25	2440032.5	0.11834	-0.43402	-0.04662	37.26678	15.42694	-2.11161	0.45227	40.38889	285.25	-5.92
68/ 6/27	2440034.5	0.16052	-0.41343	-0.04875	35.68815	20.21876	-1.57214	0.44617	41.04770	291.22	-6.27
68/ 6/29	2440036.5	0.20057	-0.38734	-0.05024	33.55120	24.95234	-0.98675	0.43907	41.82434	297.38	-6.57
68/ 7/ 1	2440038.5	0.23780	-0.35583	-0.05102	30.81878	29.57913	-0.35607	0.43101	42.71825	303.76	-6.80
68/ 7/ 3	2440040.5	0.27152	-0.31907	-0.05104	27.45017	34.03720	0.31848	0.42206	43.72807	310.40	-6.95
68/ 7/ 5	2440042.5	0.30096	-0.27729	-0.05026	23.40307	38.24715	1.03417	0.41230	44.85106	317.34	-7.00
68/ 7/ 7	2440044.5	0.32531	-0.23084	-0.04864	18.63715	42.10763	1.78631	0.40184	46.08240	324.64	-6.95
68/ 7/ 9	2440046.5	0.34372	-0.18020	-0.04613	13.11984	45.49030	2.56724	0.39082	47.41401	332.33	-6.78
68/ 7/11	2440048.5	0.35532	-0.12600	-0.04270	6.83536	48.23516	3.36518	0.37941	48.83316	340.48	-6.46
68/ 7/13	2440050.5	0.35922	-0.06909	-0.03835	-0.20190	50.14762	4.16272	0.36781	50.32050	349.11	-5.99
68/ 7/15	2440052.5	0.35459	-0.01056	-0.03309	-7.92890	50.99976	4.93532	0.35628	51.84786	358.29	-5.33
68/ 7/17	2440054.5	0.34069	0.04823	-0.02697	-16.21079	50.53978	5.64991	0.34514	53.37584	8.06	-4.48
68/ 7/19	2440056.5	0.31701	0.10560	-0.02008	-24.81591	48.51461	6.26451	0.33474	54.85199	18.42	-3.44
68/ 7/21	2440058.5	0.28337	0.15962	-0.01256	-33.39641	44.71040	6.72985	0.32547	56.21059	29.39	-2.21
68/ 7/23	2440060.5	0.24005	0.20815	-0.00461	-41.48718	39.01086	6.99405	0.31776	57.37551	40.93	-0.83
68/ 7/25	2440062.5	0.18793	0.24902	0.00350	-48.53847	31.46376	7.01110	0.31200	58.26754	52.96	0.64
68/ 7/27	2440064.5	0.12853	0.28023	0.01148	-53.99095	22.33213	6.75191	0.30851	58.81611	65.36	2.13
68/ 7/29	2440066.5	0.06399	0.30019	0.01899	-57.38311	12.09927	6.21449	0.30752	58.97316	77.97	3.54
68/ 7/31	2440068.5	-0.00314	0.30800	0.02574	-58.45586	1.40814	5.42841	0.30909	58.72426	90.58	4.78
68/ 8/ 2	2440070.5	-0.07015	0.30353	0.03146	-57.20955	-9.05317	4.45059	0.31312	58.09217	103.01	5.77
68/ 8/ 4	2440072.5	-0.13450	0.28741	0.03598	-53.88791	-18.67692	3.35341	0.31936	57.13125	115.08	6.47
68/ 8/ 6	2440074.5	-0.19400	0.26088	0.03919	-48.90096	-27.02444	2.21036	0.32746	55.91521	126.64	6.87
68/ 8/ 8	2440076.5	-0.24701	0.22557	0.04109	-42.72543	-33.85509	1.08466	0.33702	54.52344	137.60	7.00
68/ 8/10	2440078.5	-0.29243	0.18328	0.04172	-35.82013	-39.10393	0.02338	0.34763	53.03018	147.92	6.89
68/ 8/12	2440080.5	-0.32963	0.13582	0.04118	-28.57479	-42.83292	-0.94321	0.35889	51.49822	157.61	6.59
68/ 8/14	2440082.5	-0.35843	0.08486	0.03958	-21.29102	-45.17911	-1.79900	0.37045	49.97696	166.68	6.13
68/ 8/16	2440084.5	-0.37889	0.03191	0.03707	-14.18529	-46.31283	-2.53841	0.38203	48.50303	175.19	5.57
68/ 8/18	2440086.5	-0.39132	-0.02173	0.03376	-7.40255	-46.40941	-3.16276	0.39338	47.10238	183.18	4.92
68/ 8/20	2440088.5	-0.39615	-0.07497	0.02980	-1.03296	-45.63308	-3.67742	0.40428	45.79267	190.72	4.23
68/ 8/22	2440090.5	-0.39389	-0.12687	0.02531	4.87272	-44.12923	-4.08980	0.41459	44.58541	197.85	3.50
68/ 8/24	2440092.5	-0.38508	-0.17668	0.02039	10.29054	-42.02221	-4.40800	0.42417	43.48783	204.65	2.76
68/ 8/26	2440094.5	-0.37030	-0.22376	0.01516	15.21380	-39.41596	-4.64000	0.43292	42.50420	211.14	2.01
68/ 8/28	2440096.5	-0.35012	-0.26758	0.00970	19.64617	-36.39621	-4.79322	0.44077	41.63690	217.39	1.26
68/ 8/30	2440098.5	-0.32510	-0.30771	0.00411	23.59689	-33.03300	-4.87428	0.44765	40.88705	223.43	0.53
68/ 9/ 1	2440100.5	-0.29579	-0.34378	-0.00153	27.07744	-29.38337	-4.88895	0.45352	40.25508	229.29	-0.19
68/ 9/ 3	2440102.5	-0.26273	-0.37550	-0.00716	30.09932	-25.49378	-4.84210	0.45834	39.74101	235.02	-0.89
68/ 9/ 5	2440104.5	-0.22643	-0.40260	-0.01270	32.67260	-21.40230	-4.73781	0.46208	39.34468	240.65	-1.57
68/ 9/ 7	2440106.5	-0.18742	-0.42487	-0.01808	34.80483	-17.14040	-4.57935	0.46473	39.06584	246.20	-2.23
68/ 9/ 9	2440108.5	-0.14619	-0.44214	-0.02326	36.50043	-12.73470	-4.36933	0.46626	38.90431	251.70	-2.86

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68/ 9/11	2440110.5	-0.10326	-0.45425	-0.02816	37.76016	-8.20833	-4.10973	0.46669	38.85996	257.19	-3.46
68/ 9/13	2440112.5	-0.05913	-0.46107	-0.03273	38.58072	-3.58231	-3.80198	0.46599	38.93276	262.69	-4.03
68/ 9/15	2440114.5	-0.01431	-0.46249	-0.03692	38.95443	1.12321	-3.44706	0.46418	39.12277	268.23	-4.56
68/ 9/17	2440116.5	0.03069	-0.45845	-0.04068	38.86896	5.88765	-3.04554	0.46127	39.43014	273.83	-5.06
68/ 9/19	2440118.5	0.07531	-0.44888	-0.04394	38.30709	10.68858	-2.59771	0.45727	39.85507	279.52	-5.51
68/ 9/21	2440120.5	0.11899	-0.43375	-0.04666	37.24647	15.50019	-2.10368	0.45219	40.39778	285.34	-5.92
68/ 9/23	2440122.5	0.16115	-0.41308	-0.04878	35.65959	20.29143	-1.56351	0.44607	41.05841	291.31	-6.28
68/ 9/25	2440124.5	0.20115	-0.38690	-0.05025	33.51387	25.02378	-0.97742	0.43895	41.83688	297.47	-6.57
68/ 9/27	2440126.5	0.23834	-0.35531	-0.05102	30.77209	29.64853	-0.34606	0.43088	42.73261	303.85	-6.80
68/ 9/29	2440128.5	0.27200	-0.31847	-0.05104	27.39348	34.10348	0.32914	0.42191	43.74424	310.50	-6.95
68/10/ 1	2440130.5	0.30136	-0.27662	-0.05025	23.33574	38.30898	1.04543	0.41214	44.86901	317.45	-7.00
68/10/ 3	2440132.5	0.32563	-0.23010	-0.04861	18.55859	42.16329	1.79807	0.40168	46.10203	324.75	-6.95
68/10/ 5	2440134.5	0.34395	-0.17940	-0.04608	13.02963	45.53759	2.57937	0.39065	47.43518	332.45	-6.77
68/10/ 7	2440136.5	0.35544	-0.12515	-0.04264	6.73341	48.27139	3.37745	0.37923	48.85563	340.60	-6.46
68/10/ 9	2440138.5	0.35921	-0.06820	-0.03828	-0.31509	50.16954	4.17484	0.36763	50.34393	349.25	-5.98
68/10/11	2440140.5	0.35444	-0.00966	-0.03301	-8.05194	51.00365	4.94684	0.35611	51.87174	358.44	-5.32
68/10/13	2440142.5	0.34040	0.04912	-0.02687	-16.34098	50.52165	5.66024	0.34497	53.39947	8.21	-4.47
68/10/15	2440144.5	0.31657	0.10645	-0.01997	-24.94887	48.47071	6.27296	0.33458	54.87445	18.59	-3.42
68/10/17	2440146.5	0.28277	0.16040	-0.01244	-33.52590	44.63794	6.73562	0.32534	56.23077	29.56	-2.19
68/10/19	2440148.5	0.23931	0.20884	-0.00449	-41.60528	38.90906	6.99635	0.31765	57.39218	41.11	-0.81
68/10/21	2440150.5	0.18706	0.24958	0.00363	-48.63637	31.33482	7.00932	0.31192	58.27948	53.15	0.67
68/10/23	2440152.5	0.12757	0.28062	0.01160	-54.06044	22.18178	6.74577	0.30847	58.82234	65.55	2.15
68/10/25	2440154.5	0.06297	0.30040	0.01910	-57.41832	11.93637	6.20419	0.30752	58.97315	78.16	3.56
68/10/27	2440156.5	-0.00418	0.30802	0.02584	-58.45463	1.24328	5.41464	0.30913	58.71803	90.78	4.79
68/10/29	2440158.5	-0.07118	0.30336	0.03154	-57.17378	-9.20968	4.43437	0.31319	58.08032	103.20	5.78
68/10/31	2440160.5	-0.13546	0.28707	0.03603	-53.82283	-18.81677	3.33590	0.31947	57.11476	115.26	6.48
68/11/ 2	2440162.5	-0.19488	0.26039	0.03923	-48.81362	-27.14229	2.19265	0.32760	55.89527	126.81	6.88
68/11/ 4	2440164.5	-0.24778	0.22496	0.04111	-42.62322	-33.94861	1.06761	0.33718	54.50125	137.76	7.00
68/11/ 6	2440166.5	-0.29307	0.18257	0.04172	-35.70972	-39.17317	0.00759	0.34780	53.00681	148.08	6.89
68/11/ 8	2440168.5	-0.33014	0.13504	0.04116	-28.46158	-42.87951	-0.95737	0.35906	51.47456	157.75	6.58
68/11/10	2440170.5	-0.35881	0.08405	0.03955	-21.17904	-45.20551	-1.81138	0.37063	49.95368	166.82	6.13
68/11/12	2440172.5	-0.37914	0.03108	0.03702	-14.07731	-46.32175	-2.54898	0.38221	48.48064	175.31	5.56
68/11/14	2440174.5	-0.39145	-0.02257	0.03371	-7.30039	-46.40354	-3.17157	0.39355	47.08124	183.30	4.91
68/11/16	2440176.5	-0.39617	-0.07579	0.02974	-0.93770	-45.61482	-3.68458	0.40445	45.77299	190.83	4.22
68/11/18	2440178.5	-0.39380	-0.12767	0.02523	4.96054	-44.10067	-4.09543	0.41474	44.56735	197.96	3.49
68/11/20	2440180.5	-0.38490	-0.17744	0.02031	10.37068	-41.98512	-4.41222	0.42431	43.47148	204.75	2.74
68/11/22	2440182.5	-0.37003	-0.22447	0.01507	15.28625	-39.37183	-4.64294	0.43305	42.48961	211.24	1.99
68/11/24	2440184.5	-0.34977	-0.26823	0.00962	19.71105	-36.34624	-4.79498	0.44089	41.62411	217.48	1.25
68/11/26	2440186.5	-0.32468	-0.30830	0.00402	23.65436	-32.97818	-4.87497	0.44775	40.87609	223.52	0.52
68/11/28	2440188.5	-0.29531	-0.34431	-0.00162	27.12769	-29.32452	-4.88864	0.45360	40.24597	229.38	-0.20
68/11/30	2440190.5	-0.26219	-0.37595	-0.00725	30.14253	-25.43156	-4.84088	0.45841	39.73375	235.11	-0.91
68/12/ 2	2440192.5	-0.22584	-0.40298	-0.01278	32.70891	-21.33724	-4.73571	0.46213	39.33926	240.73	-1.58
68/12/ 4	2440194.5	-0.18679	-0.42518	-0.01816	34.83434	-17.07295	-4.57644	0.46476	39.06227	246.28	-2.24
68/12/ 6	2440196.5	-0.14554	-0.44237	-0.02333	36.52320	-12.66523	-4.36564	0.46628	38.90258	251.79	-2.87
68/12/ 8	2440198.5	-0.10259	-0.45439	-0.02823	37.77617	-8.13719	-4.10528	0.46669	38.86008	257.28	-3.47

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68/12/10	2440200.5	-0.05844	-0.46113	-0.03280	38.58988	-3.50979	-3.79679	0.46597	38.93473	262.78	-4.04
68/12/12	2440202.5	-0.01361	-0.46247	-0.03698	38.95658	1.19679	-3.44115	0.46415	39.12658	268.31	-4.57
68/12/14	2440204.5	0.03138	-0.45834	-0.04073	38.86387	5.96196	-3.03891	0.46122	39.43578	273.92	-5.07
68/12/16	2440206.5	0.07599	-0.44869	-0.04399	38.29445	10.76325	-2.59036	0.45720	39.86254	279.61	-5.52
68/12/18	2440208.5	0.11966	-0.43347	-0.04670	37.22589	15.57478	-2.09562	0.45210	40.40708	285.43	-5.93
68/12/20	2440210.5	0.16179	-0.41271	-0.04881	35.63062	20.36542	-1.55473	0.44597	41.06956	291.41	-6.28
68/12/22	2440212.5	0.20175	-0.38645	-0.05027	33.47596	25.09650	-0.96794	0.43883	41.84986	297.57	-6.58
68/12/24	2440214.5	0.23889	-0.35478	-0.05103	30.72463	29.71914	-0.33589	0.43074	42.74744	303.95	-6.80
68/12/26	2440216.5	0.27249	-0.31786	-0.05103	27.33582	34.17092	0.33997	0.42177	43.76088	310.61	-6.95
68/12/28	2440218.5	0.30178	-0.27593	-0.05023	23.26722	38.37184	1.05688	0.41199	44.88740	317.56	-7.00
68/12/30	2440220.5	0.32596	-0.22935	-0.04857	18.47862	42.21979	1.81004	0.40151	46.12208	324.87	-6.95
69/ 1/ 1	2440222.5	0.34418	-0.17858	-0.04603	12.93778	45.58550	2.59170	0.39047	47.45673	332.58	-6.77
69/ 1/ 3	2440224.5	0.35555	-0.12428	-0.04258	6.62963	48.30794	3.38992	0.37905	48.87842	340.73	-6.45
69/ 1/ 5	2440226.5	0.35921	-0.06731	-0.03820	-0.43025	50.19142	4.18713	0.36745	50.36760	349.39	-5.97
69/ 1/ 7	2440228.5	0.35430	-0.00874	-0.03292	-8.17699	51.00707	4.95849	0.35593	51.89577	358.59	-5.31
69/ 1/ 9	2440230.5	0.34010	0.05002	-0.02677	-16.47313	50.50260	5.67068	0.34480	53.42315	8.37	-4.45
69/ 1/11	2440232.5	0.31612	0.10732	-0.01986	-25.08362	48.42541	6.28147	0.33443	54.89686	18.75	-3.40
69/ 1/13	2440234.5	0.28217	0.16120	-0.01232	-33.65685	44.56367	6.74138	0.32520	56.25078	29.74	-2.17
69/ 1/15	2440236.5	0.23856	0.20954	-0.00436	-41.72437	38.80513	6.99857	0.31754	57.40854	41.29	-0.79
69/ 1/17	2440238.5	0.18618	0.25014	0.00375	-48.73470	31.20360	7.00739	0.31185	58.29098	53.34	0.69
69/ 1/19	2440240.5	0.12659	0.28101	0.01172	-54.12976	22.02920	6.73943	0.30844	58.82802	65.75	2.18
69/ 1/21	2440242.5	0.06193	0.30061	0.01922	-57.45282	11.77150	6.19367	0.30753	58.97250	78.36	3.58
69/ 1/23	2440244.5	-0.00523	0.30804	0.02593	-58.45228	1.07685	5.40064	0.30917	58.71112	90.97	4.81
69/ 1/25	2440246.5	-0.07221	0.30320	0.03162	-57.13669	-9.36727	4.41794	0.31328	58.06777	103.40	5.79
69/ 1/27	2440248.5	-0.13643	0.28673	0.03609	-53.75638	-18.95725	3.31821	0.31958	57.09760	115.45	6.49
69/ 1/29	2440250.5	-0.19576	0.25990	0.03927	-48.72500	-27.26041	2.17479	0.32773	55.87473	126.99	6.88
69/ 1/31	2440252.5	-0.24854	0.22434	0.04113	-42.51990	-34.04214	1.05045	0.33734	54.47855	137.93	7.00
69/ 2/ 2	2440254.5	-0.29371	0.18187	0.04172	-35.59840	-39.24226	-0.00827	0.34797	52.98303	148.23	6.89
69/ 2/ 4	2440256.5	-0.33066	0.13427	0.04114	-28.34764	-42.92585	-0.97159	0.35924	51.45058	157.90	6.58
69/ 2/ 6	2440258.5	-0.35919	0.08323	0.03952	-21.06648	-45.23161	-1.82380	0.37082	49.93017	166.95	6.12
69/ 2/ 8	2440260.5	-0.37940	0.03024	0.03698	-13.96890	-46.33037	-2.55957	0.38239	48.45807	175.44	5.55
69/ 2/10	2440262.5	-0.39158	-0.02340	0.03365	-7.19790	-46.39735	-3.18040	0.39372	47.05995	183.42	4.90
69/ 2/12	2440264.5	-0.39618	-0.07661	0.02967	-0.84217	-45.59625	-3.69174	0.40461	45.75321	190.94	4.21
69/ 2/14	2440266.5	-0.39371	-0.12846	0.02516	5.04855	-44.07185	-4.10106	0.41490	44.54923	198.07	3.48
69/ 2/16	2440268.5	-0.38471	-0.17819	0.02023	10.45098	-41.94781	-4.41644	0.42446	43.45511	204.85	2.73
69/ 2/18	2440270.5	-0.36976	-0.22518	0.01499	15.35884	-39.32751	-4.64587	0.43318	42.47506	211.34	1.98
69/ 2/20	2440272.5	-0.34942	-0.26889	0.00953	19.77605	-36.29612	-4.79674	0.44100	41.61140	217.58	1.24
69/ 2/22	2440274.5	-0.32425	-0.30889	0.00394	23.71195	-32.92323	-4.87565	0.44785	40.86524	223.61	0.50
69/ 2/24	2440276.5	-0.29482	-0.34484	-0.00171	27.17805	-29.26553	-4.88833	0.45369	40.23697	229.47	-0.22
69/ 2/26	2440278.5	-0.26165	-0.37641	-0.00733	30.18584	-25.36918	-4.83964	0.45847	39.72659	235.20	-0.92
69/ 2/28	2440280.5	-0.22526	-0.40337	-0.01287	32.74530	-21.27199	-4.73362	0.46218	39.33394	240.82	-1.60
69/ 3/ 2	2440282.5	-0.18617	-0.42549	-0.01825	34.86391	-17.00529	-4.57352	0.46479	39.05879	246.37	-2.25
69/ 3/ 4	2440284.5	-0.14488	-0.44260	-0.02341	36.54600	-12.59554	-4.36193	0.46630	38.90095	251.87	-2.88
69/ 3/ 6	2440286.5	-0.10191	-0.45454	-0.02830	37.79218	-8.06580	-4.10081	0.46668	38.86030	257.36	-3.48
69/ 3/ 8	2440288.5	-0.05775	-0.46119	-0.03287	38.59902	-3.43703	-3.79159	0.46595	38.93679	262.86	-4.04

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69/ 3/10	2440290.5	-0.01291	-0.46245	-0.03705	38.95871	1.27062	-3.43521	0.46411	39.13050	268.40	-4.58
69/ 3/12	2440292.5	0.03208	-0.45823	-0.04079	38.85875	6.03653	-3.03225	0.46116	39.44156	274.00	-5.07
69/ 3/14	2440294.5	0.07668	-0.44849	-0.04403	38.28177	10.83820	-2.58299	0.45712	39.87019	279.70	-5.53
69/ 3/16	2440296.5	0.12032	-0.43319	-0.04673	37.20526	15.64969	-2.08752	0.45202	40.41661	285.52	-5.93
69/ 3/18	2440298.5	0.16243	-0.41235	-0.04884	35.60156	20.43975	-1.54592	0.44587	41.08094	291.50	-6.29
69/ 3/20	2440300.5	0.20235	-0.38600	-0.05029	33.43791	25.16957	-0.95841	0.43871	41.86311	297.67	-6.58
69/ 3/22	2440302.5	0.23944	-0.35424	-0.05103	30.67697	29.79011	-0.32566	0.43061	42.76252	304.06	-6.81
69/ 3/24	2440304.5	0.27298	-0.31724	-0.05102	27.27788	34.23867	0.35087	0.42162	43.77776	310.71	-6.95
69/ 3/26	2440306.5	0.30220	-0.27524	-0.05021	23.19834	38.43497	1.06838	0.41183	44.90603	317.67	-7.00
69/ 3/28	2440308.5	0.32629	-0.22859	-0.04854	18.39820	42.27650	1.82205	0.40134	46.14234	324.99	-6.95
69/ 3/30	2440310.5	0.34441	-0.17776	-0.04599	12.84542	45.63352	2.60408	0.39030	47.47846	332.70	-6.77
69/ 4/ 1	2440312.5	0.35567	-0.12341	-0.04252	6.52529	48.34449	3.40245	0.37887	48.90139	340.86	-6.44
69/ 4/ 3	2440314.5	0.35920	-0.06640	-0.03813	-0.54599	50.21316	4.19946	0.36727	50.39142	349.53	-5.96
69/ 4/ 5	2440316.5	0.35415	-0.00782	-0.03283	-8.30262	51.01020	4.97018	0.35575	51.91991	358.73	-5.29
69/ 4/ 7	2440318.5	0.33980	0.05093	-0.02667	-16.60578	50.48307	5.68113	0.34463	53.44687	8.52	-4.44
69/ 4/ 9	2440320.5	0.31566	0.10819	-0.01974	-25.21873	48.37945	6.28994	0.33427	54.91921	18.92	-3.39
69/ 4/11	2440322.5	0.28156	0.16201	-0.01220	-33.78795	44.48858	6.74708	0.32507	56.27061	29.92	-2.15
69/ 4/13	2440324.5	0.23780	0.21024	-0.00423	-41.84331	38.70030	7.00071	0.31744	57.42461	41.48	-0.76
69/ 4/15	2440326.5	0.18530	0.25070	0.00388	-48.83256	31.07154	7.00535	0.31177	58.30209	53.53	0.71
69/ 4/17	2440328.5	0.12562	0.28141	0.01184	-54.19833	21.87596	6.73298	0.30840	58.83324	65.94	2.20
69/ 4/19	2440330.5	0.06090	0.30082	0.01933	-57.48639	11.60626	6.18303	0.30753	58.97135	78.56	3.60
69/ 4/21	2440332.5	-0.00629	0.30806	0.02603	-58.44896	0.91039	5.38654	0.30922	58.70370	91.17	4.83
69/ 4/23	2440334.5	-0.07323	0.30303	0.03170	-57.09870	-9.52459	4.40145	0.31336	58.05473	103.59	5.81
69/ 4/25	2440336.5	-0.13740	0.28639	0.03615	-53.68921	-19.09721	3.30050	0.31970	57.08001	115.63	6.49
69/ 4/27	2440338.5	-0.19663	0.25941	0.03931	-48.63589	-27.37787	2.15695	0.32788	55.85383	127.16	6.89
69/ 4/29	2440340.5	-0.24931	0.22373	0.04115	-42.41633	-34.13497	1.03333	0.33750	54.45557	138.09	7.00
69/ 5/ 1	2440342.5	-0.29435	0.18116	0.04172	-35.48703	-39.31068	-0.02408	0.34814	52.95904	148.39	6.88
69/ 5/ 3	2440344.5	-0.33117	0.13350	0.04113	-28.23382	-42.97163	-0.98575	0.35942	51.42646	158.04	6.57
69/ 5/ 5	2440346.5	-0.35957	0.08242	0.03949	-20.95416	-45.25727	-1.83615	0.37100	49.90660	167.09	6.11
69/ 5/ 7	2440348.5	-0.37965	0.02941	0.03693	-13.86079	-46.33868	-2.57010	0.38257	48.43552	175.57	5.54
69/ 5/ 9	2440350.5	-0.39171	-0.02423	0.03359	-7.09574	-46.39099	-3.18917	0.39390	47.03875	183.54	4.89
69/ 5/11	2440352.5	-0.39620	-0.07743	0.02960	-0.74698	-45.57765	-3.69887	0.40478	45.73359	191.06	4.19
69/ 5/13	2440354.5	-0.39362	-0.12925	0.02509	5.13625	-44.04308	-4.10666	0.41505	44.53132	198.18	3.47
69/ 5/15	2440356.5	-0.38452	-0.17894	0.02015	10.53099	-41.91064	-4.42065	0.42460	43.43899	204.96	2.72
69/ 5/17	2440358.5	-0.36948	-0.22588	0.01491	15.43117	-39.28339	-4.64880	0.43331	42.46077	211.44	1.97
69/ 5/19	2440360.5	-0.34906	-0.26954	0.00944	19.84082	-36.24622	-4.79851	0.44112	41.59895	217.67	1.23
69/ 5/21	2440362.5	-0.32383	-0.30948	0.00385	23.76934	-32.86853	-4.87634	0.44795	40.85463	223.70	0.49
69/ 5/23	2440364.5	-0.29433	-0.34536	-0.00180	27.22825	-29.20681	-4.88803	0.45377	40.22820	229.56	-0.23
69/ 5/25	2440366.5	-0.26110	-0.37687	-0.00742	30.22902	-25.30709	-4.83843	0.45854	39.71968	235.28	-0.93
69/ 5/27	2440368.5	-0.22467	-0.40375	-0.01295	32.78160	-21.20706	-4.73154	0.46223	39.32888	240.91	-1.61
69/ 5/29	2440370.5	-0.18554	-0.42579	-0.01833	34.89344	-16.93797	-4.57062	0.46482	39.05557	246.45	-2.26
69/ 5/31	2440372.5	-0.14423	-0.44282	-0.02349	36.56879	-12.52621	-4.35825	0.46631	38.89957	251.96	-2.89
69/ 6/ 2	2440374.5	-0.10123	-0.45468	-0.02838	37.80820	-7.99479	-4.09638	0.46668	38.86074	257.45	-3.49
69/ 6/ 4	2440376.5	-0.05705	-0.46125	-0.03294	38.60818	-3.36466	-3.78642	0.46593	38.93904	262.95	-4.05
69/ 6/ 6	2440378.5	-0.01221	-0.46243	-0.03711	38.96083	1.34404	-3.42931	0.46407	39.13455	268.49	-4.59

1.1 1 A.U.=149,599,000 KM.

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69/ 6/ 8	2440380.5	0.03278	-0.45813	-0.04084	38.85362	6.11067	-3.02563	0.46111	39.44741	274.09	-5.08
69/ 6/10	2440382.5	0.07736	-0.44830	-0.04408	38.26907	10.91267	-2.57565	0.45705	39.87784	279.79	-5.53
69/ 6/12	2440384.5	0.12099	-0.43291	-0.04677	37.18462	15.72405	-2.07947	0.45193	40.42605	285.61	-5.94
69/ 6/14	2440386.5	0.16306	-0.41198	-0.04887	35.57251	20.51344	-1.53716	0.44576	41.09218	291.59	-6.29
69/ 6/16	2440388.5	0.20295	-0.38555	-0.05031	33.39992	25.24193	-0.94895	0.43860	41.87613	297.76	-6.59
69/ 6/18	2440390.5	0.23999	-0.35371	-0.05104	30.62944	29.86025	-0.31552	0.43048	42.77729	304.16	-6.81
69/ 6/20	2440392.5	0.27347	-0.31663	-0.05102	27.22017	34.30550	0.36166	0.42148	43.79424	310.82	-6.95
69/ 6/22	2440394.5	0.30261	-0.27455	-0.05019	23.12981	38.49708	1.07977	0.41167	44.92415	317.78	-7.00
69/ 6/24	2440396.5	0.32662	-0.22783	-0.04851	18.31830	42.33209	1.83393	0.40118	46.16199	325.10	-6.95
69/ 6/26	2440398.5	0.34464	-0.17695	-0.04594	12.75380	45.68036	2.61630	0.39013	47.49948	332.82	-6.76
69/ 6/28	2440400.5	0.35579	-0.12255	-0.04246	6.42197	48.37983	3.41477	0.37869	48.92351	340.99	-6.44
69/ 6/30	2440402.5	0.35919	-0.06551	-0.03805	-0.66038	50.23372	4.21156	0.36709	50.41429	349.66	-5.95
69/ 7/ 2	2440404.5	0.35400	-0.00692	-0.03274	-8.42651	51.01227	4.98162	0.35558	51.94299	358.88	-5.28
69/ 7/ 4	2440406.5	0.33951	0.05183	-0.02657	-16.73629	50.46274	5.69131	0.34447	53.46946	8.68	-4.42
69/ 7/ 6	2440408.5	0.31522	0.10905	-0.01963	-25.35131	48.33313	6.29816	0.33413	54.94040	19.08	-3.37
69/ 7/ 8	2440410.5	0.28096	0.16280	-0.01208	-33.91623	44.41374	6.75254	0.32495	56.28932	30.09	-2.13
69/ 7/10	2440412.5	0.23707	0.21092	-0.00411	-41.95933	38.59651	7.00265	0.31734	57.43964	41.66	-0.74
69/ 7/12	2440414.5	0.18444	0.25125	0.00400	-48.92762	30.94136	7.00321	0.31171	58.31231	53.72	0.74
69/ 7/14	2440416.5	0.12466	0.28180	0.01196	-54.26453	21.72543	6.72652	0.30838	58.83774	66.14	2.22
69/ 7/16	2440418.5	0.05989	0.30103	0.01944	-57.51827	11.44438	6.17252	0.30754	58.96970	78.75	3.62
69/ 7/18	2440420.5	-0.00731	0.30808	0.02613	-58.44484	0.74767	5.37268	0.30927	58.69603	91.36	4.85
69/ 7/20	2440422.5	-0.07424	0.30286	0.03178	-57.06088	-9.67811	4.38528	0.31344	58.04171	103.77	5.82
69/ 7/22	2440424.5	-0.13834	0.28606	0.03621	-53.62311	-19.23366	3.28318	0.31981	57.06269	115.81	6.50
69/ 7/24	2440426.5	-0.19748	0.25893	0.03934	-48.54859	-27.49233	2.13952	0.32801	55.83342	127.33	6.89
69/ 7/26	2440428.5	-0.25005	0.22313	0.04116	-42.31510	-34.22543	1.01662	0.33765	54.43327	138.26	7.00
69/ 7/28	2440430.5	-0.29497	0.18047	0.04172	-35.37831	-39.37741	-0.03951	0.34831	52.93587	148.54	6.88
69/ 7/30	2440432.5	-0.33166	0.13275	0.04111	-28.12276	-43.01634	-0.99956	0.35960	51.40325	158.19	6.56
69/ 8/ 1	2440434.5	-0.35993	0.08163	0.03945	-20.84455	-45.28242	-1.84822	0.37117	49.88395	167.22	6.10
69/ 8/ 3	2440436.5	-0.37989	0.02860	0.03688	-13.75525	-46.34694	-2.58040	0.38274	48.41389	175.69	5.53
69/ 8/ 5	2440438.5	-0.39184	-0.02505	0.03354	-6.99595	-46.38495	-3.19776	0.39407	47.01843	183.66	4.88
69/ 8/ 7	2440440.5	-0.39621	-0.07822	0.02954	-0.65393	-45.55965	-3.70585	0.40494	45.71479	191.17	4.18
69/ 8/ 9	2440442.5	-0.39353	-0.13002	0.02501	5.22205	-44.01513	-4.11216	0.41520	44.51417	198.28	3.45
69/ 8/11	2440444.5	-0.38434	-0.17968	0.02008	10.60934	-41.87445	-4.42478	0.42474	43.42357	205.06	2.71
69/ 8/13	2440446.5	-0.36921	-0.22657	0.01483	15.50207	-39.24036	-4.65169	0.43344	42.44712	211.54	1.96
69/ 8/15	2440448.5	-0.34871	-0.27017	0.00936	19.90436	-36.19749	-4.80025	0.44123	41.58707	217.77	1.22
69/ 8/17	2440450.5	-0.32341	-0.31006	0.00376	23.82567	-32.81504	-4.87704	0.44805	40.84452	223.79	0.48
69/ 8/19	2440452.5	-0.29385	-0.34587	-0.00188	27.27754	-29.14933	-4.88776	0.45385	40.21987	229.65	-0.24
69/ 8/21	2440454.5	-0.26057	-0.37731	-0.00750	30.27143	-25.24624	-4.83724	0.45860	39.71310	235.37	-0.94
69/ 8/23	2440456.5	-0.22409	-0.40412	-0.01304	32.81725	-21.14336	-4.72950	0.46228	39.32406	240.99	-1.62
69/ 8/25	2440458.5	-0.18493	-0.42609	-0.01841	34.92241	-16.87186	-4.56777	0.46485	39.05252	246.54	-2.27
69/ 8/27	2440460.5	-0.14358	-0.44304	-0.02357	36.59110	-12.45807	-4.35463	0.46632	38.89826	252.04	-2.90
69/ 8/29	2440462.5	-0.10056	-0.45482	-0.02845	37.82383	-7.92496	-4.09201	0.46668	38.86118	257.53	-3.50
69/ 8/31	2440464.5	-0.05637	-0.46131	-0.03300	38.61703	-3.29344	-3.78131	0.46591	38.94124	263.03	-4.06
69/ 9/ 2	2440466.5	-0.01152	-0.46240	-0.03717	38.96275	1.41634	-3.42349	0.46404	39.13850	268.57	-4.59
69/ 9/ 4	2440468.5	0.03346	-0.45802	-0.04089	38.84837	6.18372	-3.01909	0.46105	39.45312	274.18	-5.09

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69/ 9/ 6	2440470.5	0.07804	-0.44810	-0.04412	38.25634	10.98610	-2.56840	0.45698	39.88532	279.88	-5.54
69/ 9/ 8	2440472.5	0.12165	-0.43263	-0.04681	37.16402	15.79742	-2.07151	0.45184	40.43531	285.70	-5.95
69/ 9/10	2440474.5	0.16369	-0.41162	-0.04889	35.54358	20.58621	-1.52849	0.44566	41.10322	291.69	-6.30
69/ 9/12	2440476.5	0.20354	-0.38510	-0.05032	33.36213	25.31342	-0.93958	0.43848	41.88894	297.86	-6.59
69/ 9/14	2440478.5	0.24053	-0.35318	-0.05105	30.58218	29.92962	-0.30546	0.43035	42.79188	304.26	-6.81
69/ 9/16	2440480.5	0.27395	-0.31602	-0.05101	27.16280	34.37165	0.37237	0.42133	43.81058	310.92	-6.95
69/ 9/18	2440482.5	0.30302	-0.27387	-0.05017	23.06170	38.55862	1.09107	0.41152	44.94218	317.89	-7.00
69/ 9/20	2440484.5	0.32695	-0.22708	-0.04848	18.23889	42.38727	1.84573	0.40101	46.18164	325.22	-6.94
69/ 9/22	2440486.5	0.34487	-0.17614	-0.04590	12.66271	45.72694	2.62845	0.38995	47.52059	332.94	-6.76
69/ 9/24	2440488.5	0.35590	-0.12170	-0.04240	6.31917	48.41507	3.42705	0.37852	48.94584	341.12	-6.43
69/ 9/26	2440490.5	0.35918	-0.06462	-0.03798	-0.77431	50.25435	4.22364	0.36691	50.43747	349.80	-5.94
69/ 9/28	2440492.5	0.35385	-0.00602	-0.03265	-8.55003	51.01454	4.99304	0.35541	51.96650	359.03	-5.27
69/ 9/30	2440494.5	0.33921	0.05272	-0.02647	-16.86657	50.44271	5.70150	0.34431	53.49257	8.83	-4.41
69/10/ 2	2440496.5	0.31477	0.10991	-0.01952	-25.48383	48.28713	6.30640	0.33398	54.96220	19.25	-3.35
69/10/ 4	2440498.5	0.28036	0.16358	-0.01196	-34.04462	44.33917	6.75804	0.32482	56.30870	30.26	-2.11
69/10/ 6	2440500.5	0.23632	0.21160	-0.00399	-42.07560	38.49285	7.00464	0.31724	57.45538	41.84	-0.72
69/10/ 8	2440502.5	0.18358	0.25180	0.00413	-49.02304	30.81112	7.00109	0.31164	58.32323	53.91	0.76
69/10/10	2440504.5	0.12370	0.28218	0.01208	-54.33108	21.57460	6.72008	0.30834	58.84292	66.33	2.25
69/10/12	2440506.5	0.05887	0.30123	0.01955	-57.55043	11.28198	6.16198	0.30755	58.96868	78.94	3.64
69/10/14	2440508.5	-0.00835	0.30809	0.02622	-58.44082	0.58425	5.35878	0.30931	58.68890	91.55	4.86
69/10/16	2440510.5	-0.07525	0.30269	0.03185	-57.02293	-9.83242	4.36905	0.31352	58.02913	103.96	5.83
69/10/18	2440512.5	-0.13929	0.28571	0.03627	-53.55664	-19.37086	3.26576	0.31992	57.04567	115.99	6.51
69/10/20	2440514.5	-0.19834	0.25844	0.03938	-48.46070	-27.60742	2.12198	0.32815	55.81319	127.50	6.89
69/10/22	2440516.5	-0.25080	0.22253	0.04118	-42.21309	-34.31636	0.99980	0.33781	54.41100	138.42	7.00
69/10/24	2440518.5	-0.29560	0.17978	0.04172	-35.26870	-39.44440	-0.05504	0.34848	52.91262	148.69	6.88
69/10/26	2440520.5	-0.33216	0.13199	0.04109	-28.01077	-43.06110	-1.01347	0.35977	51.37985	158.33	6.56
69/10/28	2440522.5	-0.36030	0.08083	0.03942	-20.73405	-45.30741	-1.86035	0.37135	49.86104	167.36	6.09
69/10/30	2440524.5	-0.38013	0.02778	0.03684	-13.64890	-46.35487	-2.59074	0.38292	48.39192	175.82	5.52
69/11/ 1	2440526.5	-0.39196	-0.02587	0.03348	-6.89546	-46.37842	-3.20637	0.39424	46.99773	183.78	4.87
69/11/ 3	2440528.5	-0.39622	-0.07903	0.02947	-0.56032	-45.54102	-3.71283	0.40510	45.69556	191.28	4.17
69/11/ 5	2440530.5	-0.39343	-0.13080	0.02494	5.30825	-43.98647	-4.11763	0.41536	44.49654	198.39	3.44
69/11/ 7	2440532.5	-0.38415	-0.18042	0.02000	10.68794	-41.83748	-4.42888	0.42488	43.40762	205.16	2.70
69/11/ 9	2440534.5	-0.36893	-0.22726	0.01474	15.57306	-39.19652	-4.65452	0.43356	42.43291	211.63	1.95
69/11/11	2440536.5	-0.34836	-0.27081	0.00927	19.96787	-36.14797	-4.80193	0.44134	41.57463	217.86	1.20
69/11/13	2440538.5	-0.32299	-0.31064	0.00368	23.88187	-32.76081	-4.87766	0.44814	40.83388	223.88	0.47
69/11/15	2440540.5	-0.29337	-0.34639	-0.00197	27.32662	-29.09115	-4.88740	0.45393	40.21102	229.74	-0.25
69/11/17	2440542.5	-0.26004	-0.37776	-0.00759	30.31355	-25.18477	-4.83598	0.45867	39.70605	235.46	-0.95
69/11/19	2440544.5	-0.22351	-0.40449	-0.01312	32.85256	-21.07912	-4.72738	0.46232	39.31881	241.08	-1.63
69/11/21	2440546.5	-0.18431	-0.42639	-0.01849	34.95101	-16.80528	-4.56485	0.46489	39.04905	246.62	-2.28
69/11/23	2440548.5	-0.14294	-0.44326	-0.02364	36.61303	-12.38953	-4.35094	0.46634	38.89659	252.13	-2.91
69/11/25	2440550.5	-0.09990	-0.45496	-0.02852	37.83907	-7.85478	-4.08757	0.46667	38.86131	257.62	-3.50
69/11/27	2440552.5	-0.05569	-0.46137	-0.03307	38.62551	-3.22194	-3.77615	0.46589	38.94316	263.12	-4.07
69/11/29	2440554.5	-0.01084	-0.46238	-0.03723	38.96430	1.48885	-3.41761	0.46400	39.14222	268.66	-4.60
69/12/ 1	2440556.5	0.03415	-0.45791	-0.04095	38.84277	6.25692	-3.01251	0.46100	39.45865	274.26	-5.10
69/12/ 3	2440558.5	0.07871	-0.44791	-0.04417	38.24329	11.05963	-2.56111	0.45691	39.89266	279.97	-5.55

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
69/12/ 5	2440560.5	0.12230	-0.43235	-0.04685	37.14314	15.87084	-2.06352	0.45176	40.44446	285.79	-5.95
69/12/ 7	2440562.5	0.16432	-0.41125	-0.04892	35.51440	20.65901	-1.51979	0.44556	41.11419	291.78	-6.30
69/12/ 9	2440564.5	0.20413	-0.38465	-0.05034	33.32411	25.38493	-0.93019	0.43836	41.90175	297.95	-6.59
69/12/11	2440566.5	0.24107	-0.35265	-0.05105	30.53474	29.99900	-0.29539	0.43022	42.80651	304.36	-6.81
69/12/13	2440568.5	0.27442	-0.31542	-0.05100	27.10529	34.43783	0.38309	0.42119	43.82702	311.02	-6.96
69/12/15	2440570.5	0.30343	-0.27319	-0.05015	22.99346	38.62021	1.10239	0.41136	44.96037	318.00	-7.00
69/12/17	2440572.5	0.32727	-0.22634	-0.04844	18.15933	42.44250	1.85755	0.40085	46.20149	325.33	-6.94
69/12/19	2440574.5	0.34509	-0.17533	-0.04585	12.57142	45.77359	2.64062	0.38978	47.54193	333.07	-6.76
69/12/21	2440576.5	0.35601	-0.12084	-0.04234	6.21612	48.45037	3.43935	0.37834	48.96844	341.25	-6.43
69/12/23	2440578.5	0.35916	-0.06373	-0.03790	-0.88856	50.27501	4.23574	0.36673	50.46095	349.94	-5.93
69/12/25	2440580.5	0.35370	-0.00511	-0.03256	-8.67398	51.01681	5.00450	0.35523	51.99036	359.17	-5.26
69/12/27	2440582.5	0.33891	0.05361	-0.02637	-16.99739	50.42260	5.71173	0.34414	53.51611	8.99	-4.39

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
69/12/17	2440572.5	0.32727	-0.22634	-0.04844	18.15933	42.44250	1.85755	0.40085	46.20149	325.33	-6.94
69/12/19	2440574.5	0.34509	-0.17533	-0.04585	12.57142	45.77359	2.64062	0.38978	47.54193	333.07	-6.76
69/12/21	2440576.5	0.35601	-0.12084	-0.04234	6.21612	48.45037	3.43935	0.37834	48.96844	341.25	-6.43
69/12/23	2440578.5	0.35916	-0.06373	-0.03790	-0.88856	50.27501	4.23574	0.36673	50.46095	349.94	-5.93
69/12/25	2440580.5	0.35370	-0.00511	-0.03256	-8.67398	51.01681	5.00450	0.35523	51.99036	359.17	-5.26
69/12/27	2440582.5	0.33891	0.05361	-0.02637	-16.99739	50.42260	5.71173	0.34414	53.51611	8.99	-4.39
69/12/29	2440584.5	0.31431	0.11076	-0.01941	-25.61699	48.24093	6.31468	0.33382	54.98448	19.41	-3.33
69/12/31	2440586.5	0.27975	0.16436	-0.01184	-34.17373	44.26423	6.76357	0.32468	56.32860	30.44	-2.09
70/ 1/ 2	2440588.5	0.23557	0.21228	-0.00386	-42.19260	38.38859	7.00664	0.31713	57.47167	42.02	-0.70
70/ 1/ 4	2440590.5	0.18270	0.25234	0.00425	-49.11911	30.68002	6.99896	0.31157	58.33469	54.09	0.78
70/ 1/ 6	2440592.5	0.12273	0.28256	0.01220	-54.39811	21.42268	6.71359	0.30831	58.84860	66.52	2.27
70/ 1/ 8	2440594.5	0.05784	0.30143	0.01966	-57.58280	11.11832	6.15137	0.30755	58.96808	79.14	3.66
70/ 1/10	2440596.5	-0.00939	0.30809	0.02632	-58.43670	0.41951	5.34475	0.30936	58.68211	91.75	4.88
70/ 1/12	2440598.5	-0.07627	0.30251	0.03193	-56.98454	-9.98801	4.35266	0.31360	58.01676	104.15	5.84
70/ 1/14	2440600.5	-0.14025	0.28536	0.03633	-53.48943	-19.50920	3.24818	0.32003	57.02875	116.17	6.52
70/ 1/16	2440602.5	-0.19921	0.25794	0.03942	-48.37182	-27.72344	2.10427	0.32829	55.79292	127.68	6.90
70/ 1/18	2440604.5	-0.25155	0.22191	0.04120	-42.10992	-34.40793	0.98282	0.33796	54.38858	138.58	7.00
70/ 1/20	2440606.5	-0.29623	0.17907	0.04172	-35.15784	-39.51176	-0.07072	0.34865	52.88911	148.85	6.87
70/ 1/22	2440608.5	-0.33266	0.13121	0.04107	-27.89750	-43.10598	-1.02750	0.35995	51.35613	158.47	6.55
70/ 1/24	2440610.5	-0.36067	0.08001	0.03939	-20.62228	-45.33230	-1.87259	0.37153	49.83777	167.49	6.09
70/ 1/26	2440612.5	-0.38037	0.02695	0.03679	-13.54134	-46.36251	-2.60117	0.38310	48.36958	175.95	5.51
70/ 1/28	2440614.5	-0.39208	-0.02670	0.03342	-6.79385	-46.37146	-3.21505	0.39441	46.97665	183.90	4.86
70/ 1/30	2440616.5	-0.39623	-0.07985	0.02941	-0.46567	-45.52185	-3.71986	0.40527	45.67596	191.39	4.16
70/ 2/ 1	2440618.5	-0.39334	-0.13159	0.02487	5.39541	-43.95718	-4.12314	0.41551	44.47858	198.50	3.43
70/ 2/ 3	2440620.5	-0.38396	-0.18117	0.01992	10.76741	-41.79981	-4.43299	0.42502	43.39139	205.26	2.69
70/ 2/ 5	2440622.5	-0.36865	-0.22797	0.01466	15.64485	-39.15193	-4.65736	0.43369	42.41846	211.73	1.94
70/ 2/ 7	2440624.5	-0.34800	-0.27146	0.00919	20.03211	-36.09766	-4.80361	0.44145	41.56202	217.96	1.19
70/ 2/ 9	2440626.5	-0.32256	-0.31123	0.00359	23.93872	-32.70573	-4.87827	0.44824	40.82309	223.98	0.46
70/ 2/11	2440628.5	-0.29288	-0.34691	-0.00206	27.37626	-29.03211	-4.88702	0.45401	40.20207	229.83	-0.26
70/ 2/13	2440630.5	-0.25949	-0.37821	-0.00768	30.35616	-25.12240	-4.83468	0.45873	39.69894	235.55	-0.96
70/ 2/15	2440632.5	-0.22292	-0.40487	-0.01320	32.88828	-21.01395	-4.72523	0.46237	39.31352	241.16	-1.64
70/ 2/17	2440634.5	-0.18369	-0.42669	-0.01857	34.97992	-16.73775	-4.56188	0.46492	39.04559	246.71	-2.29
70/ 2/19	2440636.5	-0.14228	-0.44348	-0.02372	36.63519	-12.32001	-4.34719	0.46635	38.89496	252.21	-2.92
70/ 2/21	2440638.5	-0.09922	-0.45510	-0.02860	37.85447	-7.78362	-4.08307	0.46667	38.86151	257.70	-3.51
70/ 2/23	2440640.5	-0.05500	-0.46143	-0.03314	38.63405	-3.14944	-3.77091	0.46587	38.94520	263.20	-4.08
70/ 2/25	2440642.5	-0.01014	-0.46235	-0.03729	38.96585	1.56238	-3.41165	0.46396	39.14611	268.74	-4.61
70/ 2/27	2440644.5	0.03484	-0.45780	-0.04100	38.83709	6.33115	-3.00583	0.46095	39.46439	274.35	-5.10
70/ 3/ 1	2440646.5	0.07940	-0.44771	-0.04422	38.23006	11.13420	-2.55372	0.45684	39.90025	280.06	-5.55
70/ 3/ 3	2440648.5	0.12296	-0.43207	-0.04688	37.12197	15.94531	-2.05541	0.45167	40.45391	285.89	-5.96
70/ 3/ 5	2440650.5	0.16495	-0.41088	-0.04895	35.48482	20.73284	-1.51097	0.44545	41.12550	291.87	-6.31
70/ 3/ 7	2440652.5	0.20472	-0.38420	-0.05036	33.28557	25.45746	-0.92066	0.43824	41.91490	298.05	-6.60
70/ 3/ 9	2440654.5	0.24162	-0.35212	-0.05106	30.48661	30.06936	-0.28517	0.43008	42.82150	304.46	-6.82
70/ 3/11	2440656.5	0.27491	-0.31480	-0.05100	27.04691	34.50492	0.39397	0.42104	43.84381	311.13	-6.96
70/ 3/13	2440658.5	0.30384	-0.27250	-0.05013	22.92418	38.68261	1.11386	0.41120	44.97892	318.11	-7.00
70/ 3/15	2440660.5	0.32759	-0.22558	-0.04841	18.07856	42.49840	1.86954	0.40068	46.22168	325.45	-6.94

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70/ 3/17	2440662.5	0.34531	-0.17451	-0.04580	12.47878	45.82073	2.65296	0.38960	47.56361	333.19	-6.75
70/ 3/19	2440664.5	0.35612	-0.11997	-0.04228	6.11156	48.48595	3.45181	0.37816	48.99136	341.38	-6.42
70/ 3/21	2440666.5	0.35914	-0.06283	-0.03783	-1.00442	50.29567	4.24799	0.36655	50.48474	350.08	-5.92
70/ 3/23	2440668.5	0.35354	-0.00420	-0.03247	-8.79958	51.01873	5.01608	0.35505	52.01447	359.32	-5.25
70/ 3/25	2440670.5	0.33860	0.05452	-0.02626	-17.12980	50.40177	5.72205	0.34397	53.53980	9.15	-4.38
70/ 3/27	2440672.5	0.31385	0.11162	-0.01929	-25.75158	48.19361	6.32300	0.33367	55.00680	19.58	-3.31
70/ 3/29	2440674.5	0.27914	0.16516	-0.01172	-34.30394	44.18780	6.76908	0.32455	56.34840	30.61	-2.07
70/ 3/31	2440676.5	0.23481	0.21297	-0.00374	-42.31028	38.28257	7.00856	0.31703	57.48769	42.21	-0.68
70/ 4/ 2	2440678.5	0.18182	0.25289	0.00438	-49.21533	30.54706	6.99670	0.31150	58.34574	54.29	0.81
70/ 4/ 4	2440680.5	0.12175	0.28294	0.01232	-54.46477	21.26900	6.70691	0.30827	58.85375	66.72	2.29
70/ 4/ 6	2440682.5	0.05681	0.30162	0.01977	-57.61434	10.95316	6.14055	0.30756	58.96686	79.33	3.68
70/ 4/ 8	2440684.5	-0.01044	0.30810	0.02641	-58.43145	0.25367	5.33053	0.30941	58.67464	91.94	4.90
70/ 4/10	2440686.5	-0.07729	0.30233	0.03201	-56.94490	-10.14425	4.33610	0.31369	58.00370	104.34	5.86
70/ 4/12	2440688.5	-0.14121	0.28501	0.03639	-53.42098	-19.64780	3.23047	0.32015	57.01117	116.36	6.53
70/ 4/14	2440690.5	-0.20008	0.25744	0.03946	-48.28183	-27.83939	2.08648	0.32843	55.77204	127.85	6.90
70/ 4/16	2440692.5	-0.25231	0.22129	0.04122	-42.00586	-34.49925	0.96578	0.33813	54.36564	138.75	7.00
70/ 4/18	2440694.5	-0.29686	0.17836	0.04172	-35.04629	-39.57876	-0.08642	0.34882	52.86519	149.00	6.87
70/ 4/20	2440696.5	-0.33316	0.13044	0.04105	-27.78374	-43.15046	-1.04155	0.36013	51.33209	158.62	6.55
70/ 4/22	2440698.5	-0.36104	0.07920	0.03935	-20.51019	-45.35682	-1.88483	0.37171	49.81427	167.63	6.08
70/ 4/24	2440700.5	-0.38062	0.02611	0.03674	-13.43358	-46.36982	-2.61159	0.38328	48.34710	176.08	5.50
70/ 4/26	2440702.5	-0.39220	-0.02753	0.03336	-6.69212	-46.36424	-3.22371	0.39458	46.95550	184.02	4.85
70/ 4/28	2440704.5	-0.39624	-0.08067	0.02934	-0.37096	-45.50249	-3.72689	0.40543	45.65637	191.51	4.15
70/ 4/30	2440706.5	-0.39324	-0.13238	0.02479	5.48260	-43.92775	-4.12864	0.41567	44.46067	198.61	3.42
70/ 5/ 2	2440708.5	-0.38376	-0.18192	0.01984	10.84689	-41.76207	-4.43710	0.42516	43.37526	205.36	2.67
70/ 5/ 4	2440710.5	-0.36837	-0.22867	0.01457	15.71664	-39.10732	-4.66020	0.43382	42.40415	211.83	1.93
70/ 5/ 6	2440712.5	-0.34764	-0.27211	0.00910	20.09632	-36.04736	-4.80528	0.44157	41.54955	218.05	1.18
70/ 5/ 8	2440714.5	-0.32213	-0.31181	0.00350	23.99554	-32.65070	-4.87888	0.44834	40.81247	224.07	0.45
70/ 5/10	2440716.5	-0.29239	-0.34743	-0.00214	27.42588	-28.97314	-4.88665	0.45410	40.19330	229.92	-0.27
70/ 5/12	2440718.5	-0.25895	-0.37866	-0.00776	30.39876	-25.06011	-4.83339	0.45880	39.69200	235.63	-0.97
70/ 5/14	2440720.5	-0.22234	-0.40525	-0.01329	32.92399	-20.94887	-4.72308	0.46242	39.30842	241.25	-1.65
70/ 5/16	2440722.5	-0.18306	-0.42699	-0.01865	35.00884	-16.67032	-4.55892	0.46495	39.04232	246.79	-2.30
70/ 5/18	2440724.5	-0.14163	-0.44370	-0.02380	36.65736	-12.25061	-4.34345	0.46637	38.89351	252.30	-2.93
70/ 5/20	2440726.5	-0.09854	-0.45524	-0.02867	37.86986	-7.71259	-4.07857	0.46667	38.86187	257.79	-3.52
70/ 5/22	2440728.5	-0.05431	-0.46148	-0.03320	38.64259	-3.07709	-3.76568	0.46585	38.94738	263.29	-4.09
70/ 5/24	2440730.5	-0.00944	-0.46232	-0.03735	38.96737	1.63574	-3.40570	0.46393	39.15010	268.83	-4.62
70/ 5/26	2440732.5	0.03553	-0.45768	-0.04105	38.83135	6.40518	-2.99917	0.46089	39.47018	274.44	-5.11
70/ 5/28	2440734.5	0.08008	-0.44751	-0.04426	38.21677	11.20854	-2.54634	0.45677	39.90785	280.15	-5.56
70/ 5/30	2440736.5	0.12363	-0.43179	-0.04692	37.10073	16.01953	-2.04732	0.45158	40.46333	285.98	-5.96
70/ 6/ 1	2440738.5	0.16558	-0.41051	-0.04897	35.45517	20.80639	-1.50217	0.44535	41.13674	291.97	-6.31
70/ 6/ 3	2440740.5	0.20532	-0.38374	-0.05037	33.24696	25.52965	-0.91116	0.43812	41.92796	298.15	-6.60
70/ 6/ 5	2440742.5	0.24216	-0.35158	-0.05106	30.43843	30.13932	-0.27498	0.42995	42.83634	304.56	-6.82
70/ 6/ 7	2440744.5	0.27539	-0.31419	-0.05099	26.98852	34.57153	0.40481	0.42089	43.86040	311.24	-6.96
70/ 6/ 9	2440746.5	0.30424	-0.27181	-0.05011	22.85493	38.74445	1.12529	0.41104	44.99719	318.22	-7.00
70/ 6/11	2440748.5	0.32791	-0.22482	-0.04838	17.99791	42.55367	1.88146	0.40051	46.24153	325.57	-6.94
70/ 6/13	2440750.5	0.34553	-0.17370	-0.04575	12.38636	45.86716	2.66522	0.38943	47.58489	333.31	-6.75

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70/ 6/15	2440752.5	0.35623	-0.11911	-0.04221	6.00740	48.52076	3.46417	0.37798	49.01381	341.51	-6.41
70/ 6/17	2440754.5	0.35912	-0.06194	-0.03775	-1.11970	50.31557	4.26012	0.36637	50.50800	350.21	-5.91
70/ 6/19	2440756.5	0.35338	-0.00329	-0.03238	-8.92438	51.01995	5.02753	0.35488	52.03802	359.47	-5.24
70/ 6/21	2440758.5	0.33830	0.05541	-0.02616	-17.26119	50.38034	5.73222	0.34380	53.56291	9.30	-4.36
70/ 6/23	2440760.5	0.31339	0.11248	-0.01918	-25.88492	48.14589	6.33117	0.33352	55.02853	19.74	-3.30
70/ 6/25	2440762.5	0.27853	0.16594	-0.01159	-34.43274	44.11126	6.77445	0.32442	56.36763	30.79	-2.05
70/ 6/27	2440764.5	0.23406	0.21365	-0.00361	-42.42644	38.17681	7.01036	0.31693	57.50319	42.39	-0.65
70/ 6/29	2440766.5	0.18094	0.25343	0.00450	-49.31006	30.41478	6.99435	0.31143	58.35634	54.47	0.83
70/ 7/ 1	2440768.5	0.12079	0.28332	0.01244	-54.53012	21.11641	6.70021	0.30824	58.85855	66.91	2.31
70/ 7/ 3	2440770.5	0.05578	0.30182	0.01988	-57.64491	10.78946	6.12976	0.30757	58.96543	79.53	3.71
70/ 7/ 5	2440772.5	-0.01148	0.30810	0.02651	-58.42566	0.08949	5.31640	0.30945	58.66712	92.13	4.91
70/ 7/ 7	2440774.5	-0.07830	0.30214	0.03209	-56.90522	-10.29881	4.31969	0.31377	57.99076	104.53	5.87
70/ 7/ 9	2440776.5	-0.14216	0.28466	0.03644	-53.35296	-19.78484	3.21292	0.32026	56.99387	116.54	6.53
70/ 7/11	2440778.5	-0.20094	0.25695	0.03949	-48.19265	-27.95407	2.06885	0.32857	55.75160	128.03	6.90
70/ 7/13	2440780.5	-0.25306	0.22067	0.04123	-41.90282	-34.58960	0.94891	0.33828	54.34323	138.91	7.00
70/ 7/15	2440782.5	-0.29748	0.17765	0.04171	-34.93587	-39.64511	-0.10198	0.34899	52.84184	149.16	6.86
70/ 7/17	2440784.5	-0.33365	0.12967	0.04103	-27.67112	-43.19458	-1.05546	0.36031	51.30864	158.76	6.54
70/ 7/19	2440786.5	-0.36140	0.07839	0.03932	-20.39918	-45.38120	-1.89696	0.37189	49.79134	167.76	6.07
70/ 7/21	2440788.5	-0.38086	0.02529	0.03670	-13.32679	-46.37717	-2.62192	0.38345	48.32515	176.20	5.49
70/ 7/23	2440790.5	-0.39232	-0.02836	0.03331	-6.59123	-46.35719	-3.23232	0.39475	46.93486	184.13	4.84
70/ 7/25	2440792.5	-0.39625	-0.08148	0.02927	-0.27697	-45.48339	-3.73386	0.40559	45.63724	191.62	4.14
70/ 7/27	2440794.5	-0.39314	-0.13316	0.02472	5.56918	-43.89865	-4.13411	0.41582	44.44320	198.71	3.41
70/ 7/29	2440796.5	-0.38357	-0.18266	0.01976	10.92587	-41.72468	-4.44119	0.42530	43.35951	205.46	2.66
70/ 7/31	2440798.5	-0.36809	-0.22937	0.01449	15.78801	-39.06306	-4.66303	0.43395	42.39018	211.93	1.91
70/ 8/ 2	2440800.5	-0.34728	-0.27275	0.00901	20.16020	-35.99740	-4.80696	0.44168	41.53737	218.15	1.17
70/ 8/ 4	2440802.5	-0.32170	-0.31240	0.00341	24.05210	-32.59598	-4.87949	0.44844	40.80210	224.16	0.44
70/ 8/ 6	2440804.5	-0.29190	-0.34795	-0.00223	27.47530	-28.91444	-4.88628	0.45418	40.18473	230.01	-0.28
70/ 8/ 8	2440806.5	-0.25841	-0.37910	-0.00785	30.44119	-24.99807	-4.83211	0.45886	39.68525	235.72	-0.98
70/ 8/10	2440808.5	-0.22175	-0.40562	-0.01337	32.95958	-20.88403	-4.72094	0.46247	39.30348	241.34	-1.66
70/ 8/12	2440810.5	-0.18243	-0.42729	-0.01874	35.03767	-16.60312	-4.55597	0.46498	39.03920	246.88	-2.31
70/ 8/14	2440812.5	-0.14097	-0.44392	-0.02388	36.67946	-12.18144	-4.33972	0.46638	38.89220	252.38	-2.93
70/ 8/16	2440814.5	-0.09787	-0.45538	-0.02874	37.88520	-7.64179	-4.07410	0.46667	38.86237	257.87	-3.53
70/ 8/18	2440816.5	-0.05362	-0.46154	-0.03327	38.65107	-3.00498	-3.76047	0.46583	38.94966	263.37	-4.10
70/ 8/20	2440818.5	-0.00875	-0.46229	-0.03741	38.96883	1.70884	-3.39977	0.46389	39.15416	268.92	-4.63
70/ 8/22	2440820.5	0.03623	-0.45757	-0.04111	38.82557	6.47894	-2.99252	0.46084	39.47602	274.53	-5.12
70/ 8/24	2440822.5	0.08076	-0.44731	-0.04431	38.20343	11.28257	-2.53898	0.45670	39.91547	280.23	-5.57
70/ 8/26	2440824.5	0.12429	-0.43150	-0.04696	37.07945	16.09336	-2.03925	0.45149	40.47271	286.07	-5.97
70/ 8/28	2440826.5	0.16622	-0.41014	-0.04900	35.42549	20.87948	-1.49341	0.44525	41.14788	292.06	-6.32
70/ 8/30	2440828.5	0.20591	-0.38329	-0.05039	33.20834	25.60130	-0.90170	0.43801	41.94083	298.25	-6.61
70/ 9/ 1	2440830.5	0.24270	-0.35104	-0.05107	30.39029	30.20866	-0.26485	0.42982	42.85094	304.66	-6.82
70/ 9/ 3	2440832.5	0.27587	-0.31357	-0.05098	26.93024	34.63744	0.41558	0.42075	43.87668	311.34	-6.96
70/ 9/ 5	2440834.5	0.30465	-0.27113	-0.05009	22.78590	38.80552	1.13664	0.41089	45.01508	318.33	-7.00
70/ 9/ 7	2440836.5	0.32823	-0.22407	-0.04834	17.91760	42.60808	1.89328	0.40035	46.26093	325.68	-6.94
70/ 9/ 9	2440838.5	0.34576	-0.17289	-0.04571	12.29446	45.91267	2.67735	0.38926	47.60562	333.43	-6.74
70/ 9/11	2440840.5	0.35634	-0.11825	-0.04215	5.90398	48.55461	3.47638	0.37781	49.03562	341.64	-6.41

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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70/ 9/13	2440842.5	0.35911	-0.06105	-0.03768	-1.23395	50.33447	4.27208	0.36620	50.53050	350.35	-5.91
70/ 9/15	2440844.5	0.35323	-0.00239	-0.03229	-9.04782	51.02020	5.03878	0.35471	52.06067	359.61	-5.22
70/ 9/17	2440846.5	0.33800	0.05630	-0.02606	-17.39083	50.35811	5.74217	0.34365	53.58501	9.46	-4.35
70/ 9/19	2440848.5	0.31294	0.11333	-0.01907	-26.01614	48.09770	6.33911	0.33338	55.04918	19.91	-3.28
70/ 9/21	2440850.5	0.27793	0.16672	-0.01148	-34.55910	44.03476	6.77960	0.32430	56.38577	30.96	-2.03
70/ 9/23	2440852.5	0.23332	0.21432	-0.00349	-42.53999	38.07180	7.01198	0.31683	57.51765	42.57	-0.63
70/ 9/25	2440854.5	0.18008	0.25397	0.00463	-49.40225	30.28404	6.99191	0.31137	58.36602	54.66	0.85
70/ 9/27	2440856.5	0.11984	0.28369	0.01256	-54.59326	20.96615	6.69350	0.30822	58.86260	67.10	2.33
70/ 9/29	2440858.5	0.05478	0.30201	0.01998	-57.67387	10.62872	6.11908	0.30758	58.96345	79.72	3.72
70/10/ 1	2440860.5	-0.01250	0.30810	0.02660	-58.41907	-0.07134	5.30247	0.30950	58.65926	92.32	4.93
70/10/ 3	2440862.5	-0.07929	0.30197	0.03216	-56.86558	-10.44993	4.30356	0.31386	57.97772	104.71	5.88
70/10/ 5	2440864.5	-0.14308	0.28432	0.03650	-53.28580	-19.91866	3.19572	0.32038	56.97668	116.71	6.54
70/10/ 7	2440866.5	-0.20177	0.25646	0.03953	-48.10499	-28.06593	2.05161	0.32871	55.73146	128.19	6.91
70/10/ 9	2440868.5	-0.25378	0.22007	0.04125	-41.80181	-34.67770	0.93242	0.33844	54.32130	139.07	7.00
70/10/11	2440870.5	-0.29809	0.17696	0.04171	-34.82779	-39.70983	-0.11718	0.34916	52.81911	149.30	6.86
70/10/13	2440872.5	-0.33413	0.12892	0.04102	-27.56095	-43.23766	-1.06906	0.36048	51.28590	158.90	6.53
70/10/15	2440874.5	-0.36176	0.07760	0.03928	-20.29060	-45.40508	-1.90882	0.37206	49.76920	167.89	6.06
70/10/17	2440876.5	-0.38108	0.02448	0.03665	-13.22232	-46.38449	-2.63204	0.38362	48.30402	176.32	5.48
70/10/19	2440878.5	-0.39243	-0.02917	0.03325	-6.49249	-46.35047	-3.24075	0.39492	46.91504	184.25	4.83
70/10/21	2440880.5	-0.39625	-0.08227	0.02921	-0.18491	-45.46491	-3.74071	0.40575	45.61892	191.73	4.13
70/10/23	2440882.5	-0.39304	-0.13393	0.02465	5.65405	-43.87037	-4.13950	0.41596	44.42649	198.82	3.40
70/10/25	2440884.5	-0.38337	-0.18339	0.01968	11.00335	-41.68826	-4.44523	0.42543	43.34449	205.56	2.65
70/10/27	2440886.5	-0.36781	-0.23005	0.01441	15.85809	-39.01987	-4.66583	0.43407	42.37687	212.02	1.90
70/10/29	2440888.5	-0.34693	-0.27338	0.00893	20.22296	-35.94857	-4.80862	0.44179	41.52579	218.24	1.16
70/10/31	2440890.5	-0.32128	-0.31297	0.00333	24.10770	-32.54246	-4.88011	0.44853	40.79226	224.25	0.43
70/11/ 2	2440892.5	-0.29141	-0.34845	-0.00232	27.52390	-28.85696	-4.88594	0.45425	40.17663	230.09	-0.29
70/11/ 4	2440894.5	-0.25787	-0.37954	-0.00794	30.48295	-24.93727	-4.83087	0.45892	39.67890	235.81	-0.99
70/11/ 6	2440896.5	-0.22117	-0.40599	-0.01346	32.99460	-20.82041	-4.71885	0.46251	39.29887	241.42	-1.67
70/11/ 8	2440898.5	-0.18181	-0.42758	-0.01882	35.06604	-16.53711	-4.55307	0.46501	39.03631	246.96	-2.32
70/11/10	2440900.5	-0.14032	-0.44414	-0.02396	36.70117	-12.11341	-4.33605	0.46639	38.89103	252.47	-2.94
70/11/12	2440902.5	-0.09720	-0.45551	-0.02881	37.90022	-7.57207	-4.06968	0.46666	38.86290	257.96	-3.54
70/11/14	2440904.5	-0.05294	-0.46159	-0.03334	38.65929	-2.93389	-3.75532	0.46581	38.95190	263.46	-4.10
70/11/16	2440906.5	-0.00806	-0.46226	-0.03747	38.97009	1.78098	-3.39390	0.46385	39.15812	269.00	-4.63
70/11/18	2440908.5	0.03691	-0.45745	-0.04116	38.81964	6.55179	-2.98593	0.46078	39.48172	274.61	-5.12
70/11/20	2440910.5	0.08144	-0.44711	-0.04435	38.19001	11.35574	-2.53169	0.45663	39.92291	280.32	-5.57
70/11/22	2440912.5	0.12495	-0.43122	-0.04699	37.05816	16.16641	-2.03126	0.45141	40.48193	286.16	-5.98
70/11/24	2440914.5	0.16684	-0.40978	-0.04903	35.39587	20.95186	-1.48471	0.44515	41.15887	292.15	-6.32
70/11/26	2440916.5	0.20650	-0.38284	-0.05040	33.16986	25.67233	-0.89230	0.43789	41.95359	298.34	-6.61
70/11/28	2440918.5	0.24324	-0.35051	-0.05107	30.34234	30.27747	-0.25478	0.42969	42.86546	304.76	-6.83
70/11/30	2440920.5	0.27635	-0.31296	-0.05098	26.87219	34.70293	0.42629	0.42061	43.89293	311.44	-6.96
70/12/ 2	2440922.5	0.30506	-0.27044	-0.05007	22.71712	38.86627	1.14794	0.41074	45.03301	318.44	-7.00
70/12/ 4	2440924.5	0.32855	-0.22332	-0.04831	17.83756	42.66231	1.90506	0.40019	46.28045	325.80	-6.93
70/12/ 6	2440926.5	0.34597	-0.17208	-0.04566	12.20280	45.95812	2.68946	0.38909	47.62657	333.56	-6.74
70/12/ 8	2440928.5	0.35644	-0.11740	-0.04209	5.80072	48.58852	3.48859	0.37763	49.05775	341.77	-6.40
70/12/10	2440930.5	0.35908	-0.06016	-0.03760	-1.34815	50.35356	4.28405	0.36603	50.55345	350.49	-5.90

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70/12/12	2440932.5	0.35307	-0.00150	-0.03221	-9.17138	51.02075	5.05006	0.35454	52.08391	359.76	-5.21
70/12/14	2440934.5	0.33769	0.05718	-0.02596	-17.52081	50.33620	5.75217	0.34348	53.60783	9.61	-4.33
70/12/16	2440936.5	0.31248	0.11417	-0.01896	-26.14793	48.04975	6.34712	0.33323	55.07067	20.07	-3.26
70/12/18	2440938.5	0.27732	0.16749	-0.01136	-34.68624	43.95831	6.78482	0.32417	56.40481	31.13	-2.01
70/12/20	2440940.5	0.23257	0.21499	-0.00336	-42.65447	37.96651	7.01367	0.31673	57.53304	42.75	-0.61
70/12/22	2440942.5	0.17921	0.25449	0.00475	-49.49539	30.15264	6.98949	0.31130	58.37661	54.85	0.87
70/12/24	2440944.5	0.11888	0.28406	0.01267	-54.65721	20.81482	6.68678	0.30819	58.86748	67.29	2.36
70/12/26	2440946.5	0.05376	0.30219	0.02009	-57.70336	10.46658	6.10833	0.30759	58.96218	79.91	3.74
70/12/28	2440948.5	-0.01353	0.30810	0.02669	-58.41262	-0.23378	5.28843	0.30955	58.65199	92.51	4.95
70/12/30	2440950.5	-0.08029	0.30178	0.03224	-56.82565	-10.60270	4.28726	0.31394	57.96510	104.90	5.89
71/ 1/ 1	2440952.5	-0.14402	0.28396	0.03656	-53.21793	-20.05400	3.17832	0.32049	56.95974	116.89	6.55
71/ 1/ 3	2440954.5	-0.20262	0.25596	0.03957	-48.01626	-28.17906	2.03416	0.32884	55.71138	128.37	6.91
71/ 1/ 5	2440956.5	-0.25452	0.21946	0.04126	-41.69944	-34.76673	0.91572	0.33859	54.29924	139.23	7.00
71/ 1/ 7	2440958.5	-0.29870	0.17626	0.04171	-34.71820	-39.77507	-0.13256	0.34932	52.79609	149.46	6.86
71/ 1/ 9	2440960.5	-0.33462	0.12815	0.04100	-27.44925	-43.28087	-1.08281	0.36065	51.26273	159.04	6.53
71/ 1/11	2440962.5	-0.36211	0.07679	0.03925	-20.18054	-45.42874	-1.92081	0.37224	49.74650	168.03	6.05
71/ 1/13	2440964.5	-0.38132	0.02366	0.03660	-13.11652	-46.39129	-2.64224	0.38380	48.28226	176.45	5.47
71/ 1/15	2440966.5	-0.39255	-0.02999	0.03319	-6.39259	-46.34300	-3.24923	0.39509	46.89452	184.37	4.82
71/ 1/17	2440968.5	-0.39625	-0.08308	0.02914	-0.09190	-45.44552	-3.74758	0.40591	45.59987	191.84	4.12
71/ 1/19	2440970.5	-0.39294	-0.13471	0.02457	5.73968	-43.84107	-4.14487	0.41611	44.40905	198.92	3.39
71/ 1/21	2440972.5	-0.38318	-0.18413	0.01960	11.08141	-41.65077	-4.44923	0.42557	43.32874	205.67	2.64
71/ 1/23	2440974.5	-0.36753	-0.23074	0.01433	15.92859	-38.97560	-4.66858	0.43419	42.36287	212.12	1.89
71/ 1/25	2440976.5	-0.34657	-0.27402	0.00884	20.28602	-35.89867	-4.81023	0.44190	41.51356	218.33	1.15
71/ 1/27	2440978.5	-0.32085	-0.31354	0.00324	24.16349	-32.48786	-4.88066	0.44863	40.78181	224.34	0.41
71/ 1/29	2440980.5	-0.29093	-0.34896	-0.00241	27.57258	-28.79844	-4.88552	0.45433	40.16796	230.18	-0.30
71/ 1/31	2440982.5	-0.25733	-0.37998	-0.00802	30.52467	-24.87545	-4.82954	0.45899	39.67201	235.89	-1.00
71/ 2/ 2	2440984.5	-0.22058	-0.40635	-0.01354	33.02951	-20.75581	-4.71667	0.46256	39.29376	241.51	-1.68
71/ 2/ 4	2440986.5	-0.18119	-0.42787	-0.01890	35.09421	-16.47018	-4.55009	0.46504	39.03299	247.05	-2.33
71/ 2/ 6	2440988.5	-0.13967	-0.44435	-0.02403	36.72267	-12.04452	-4.33229	0.46640	38.88950	252.55	-2.95
71/ 2/ 8	2440990.5	-0.09653	-0.45565	-0.02889	37.91501	-7.50156	-4.06517	0.46666	38.86319	258.04	-3.55
71/ 2/10	2440992.5	-0.05225	-0.46164	-0.03341	38.66731	-2.86208	-3.75009	0.46579	38.95402	263.54	-4.11
71/ 2/12	2440994.5	-0.00737	-0.46223	-0.03753	38.97117	1.85380	-3.38795	0.46381	39.16206	269.09	-4.64
71/ 2/14	2440996.5	0.03760	-0.45734	-0.04121	38.81354	6.62529	-2.97928	0.46073	39.48749	274.70	-5.13
71/ 2/16	2440998.5	0.08211	-0.44691	-0.04440	38.17642	11.42956	-2.52432	0.45656	39.93051	280.41	-5.58
71/ 2/18	2441000.5	0.12560	-0.43093	-0.04703	37.03667	16.24011	-2.02318	0.45132	40.49135	286.25	-5.98
71/ 2/20	2441002.5	0.16747	-0.40941	-0.04905	35.36600	21.02489	-1.47593	0.44504	41.17012	292.25	-6.33
71/ 2/22	2441004.5	0.20708	-0.38239	-0.05042	33.13107	25.74401	-0.88283	0.43777	41.96667	298.44	-6.61
71/ 2/24	2441006.5	0.24378	-0.34998	-0.05108	30.29403	30.34694	-0.24462	0.42956	42.88035	304.86	-6.83
71/ 2/26	2441008.5	0.27682	-0.31235	-0.05097	26.81370	34.76908	0.43710	0.42046	43.90962	311.55	-6.96
71/ 2/28	2441010.5	0.30546	-0.26976	-0.05005	22.64782	38.92769	1.15934	0.41058	45.05145	318.55	-7.00
71/ 3/ 2	2441012.5	0.32886	-0.22256	-0.04828	17.75686	42.71719	1.91695	0.40002	46.30053	325.91	-6.93
71/ 3/ 4	2441014.5	0.34619	-0.17126	-0.04561	12.11032	46.00418	2.70169	0.38892	47.64812	333.68	-6.73
71/ 3/ 6	2441016.5	0.35654	-0.11654	-0.04203	5.69647	48.62295	3.50092	0.37745	49.08052	341.90	-6.39
71/ 3/ 8	2441018.5	0.35906	-0.05927	-0.03752	-1.46354	50.37300	4.29616	0.36585	50.57705	350.63	-5.89
71/ 3/10	2441020.5	0.35290	-0.00059	-0.03212	-9.29628	51.02139	5.06148	0.35436	52.10779	359.90	-5.20

1.1 1 A.U.=149,599,000 KM.

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71/ 3/12	2441022.5	0.33738	0.05808	-0.02586	-17.65225	50.31407	5.76229	0.34332	53.63125	9.77	-4.32
71/ 3/14	2441024.5	0.31202	0.11502	-0.01885	-26.28120	48.00118	6.35522	0.33308	55.09268	20.24	-3.24
71/ 3/16	2441026.5	0.27670	0.16827	-0.01124	-34.81476	43.88081	6.79009	0.32404	56.42427	31.31	-1.99
71/ 3/18	2441028.5	0.23181	0.21566	-0.00324	-42.77007	37.85975	7.01533	0.31663	57.54871	42.93	-0.59
71/ 3/20	2441030.5	0.17833	0.25503	0.00487	-49.58923	30.01944	6.98698	0.31123	58.38730	55.04	0.90
71/ 3/22	2441032.5	0.11790	0.28442	0.01279	-54.72136	20.66153	6.67991	0.30816	58.87230	67.48	2.38
71/ 3/24	2441034.5	0.05273	0.30237	0.02020	-57.73251	10.30251	6.09738	0.30760	58.96069	80.11	3.77
71/ 3/26	2441036.5	-0.01457	0.30809	0.02679	-58.40532	-0.39793	5.27416	0.30960	58.64432	92.71	4.96
71/ 3/28	2441038.5	-0.08131	0.30159	0.03231	-56.78450	-10.75682	4.27075	0.31402	57.95194	105.09	5.91
71/ 3/30	2441040.5	-0.14497	0.28360	0.03661	-53.14859	-20.19028	3.16072	0.32060	56.94216	117.08	6.56
71/ 4/ 1	2441042.5	-0.20348	0.25546	0.03960	-47.92599	-28.29272	2.01652	0.32898	55.69062	128.54	6.91
71/ 4/ 3	2441044.5	-0.25526	0.21883	0.04128	-41.59560	-34.85593	0.89888	0.33875	54.27649	139.39	7.00
71/ 4/ 5	2441046.5	-0.29932	0.17554	0.04171	-34.60724	-39.84024	-0.14807	0.34949	52.77242	149.61	6.85
71/ 4/ 7	2441048.5	-0.33510	0.12738	0.04098	-27.33634	-43.32386	-1.09665	0.36083	51.23899	159.19	6.52
71/ 4/ 9	2441050.5	-0.36247	0.07598	0.03922	-20.06946	-45.45208	-1.93286	0.37242	49.72334	168.16	6.04
71/ 4/11	2441052.5	-0.38155	0.02283	0.03656	-13.00982	-46.39771	-2.65249	0.38398	48.26012	176.58	5.46
71/ 4/13	2441054.5	-0.39266	-0.03082	0.03313	-6.29194	-46.33512	-3.25774	0.39526	46.87371	184.49	4.81
71/ 4/15	2441056.5	-0.39625	-0.08389	0.02907	0.00176	-45.42570	-3.75446	0.40607	45.58059	191.95	4.11
71/ 4/17	2441058.5	-0.39284	-0.13549	0.02450	5.82586	-43.81134	-4.15025	0.41627	44.39142	199.03	3.37
71/ 4/19	2441060.5	-0.38298	-0.18488	0.01952	11.15993	-41.61283	-4.45324	0.42571	43.31285	205.77	2.63
71/ 4/21	2441062.5	-0.36725	-0.23143	0.01424	15.99947	-38.93088	-4.67133	0.43432	42.34876	212.22	1.88
71/ 4/23	2441064.5	-0.34621	-0.27466	0.00876	20.34939	-35.84835	-4.81182	0.44201	41.50127	218.43	1.14
71/ 4/25	2441066.5	-0.32042	-0.31412	0.00315	24.21952	-32.43288	-4.88121	0.44872	40.77135	224.43	0.40
71/ 4/27	2441068.5	-0.29043	-0.34948	-0.00249	27.62147	-28.73958	-4.88508	0.45441	40.15934	230.27	-0.31
71/ 4/29	2441070.5	-0.25678	-0.38043	-0.00811	30.56659	-24.81332	-4.82820	0.45905	39.66521	235.98	-1.01
71/ 5/ 1	2441072.5	-0.21999	-0.40672	-0.01362	33.06459	-20.69093	-4.71448	0.46261	39.28877	241.59	-1.69
71/ 5/ 3	2441074.5	-0.18057	-0.42816	-0.01898	35.12254	-16.40297	-4.54709	0.46507	39.02981	247.13	-2.34
71/ 5/ 5	2441076.5	-0.13902	-0.44456	-0.02411	36.74426	-11.97536	-4.32852	0.46642	38.88812	252.63	-2.96
71/ 5/ 7	2441078.5	-0.09585	-0.45578	-0.02896	37.92985	-7.43078	-4.06065	0.46665	38.86360	258.12	-3.56
71/ 5/ 9	2441080.5	-0.05157	-0.46169	-0.03347	38.67530	-2.78998	-3.74483	0.46577	38.95621	263.63	-4.12
71/ 5/11	2441082.5	-0.00668	-0.46220	-0.03759	38.97216	1.92688	-3.38197	0.46377	39.16605	269.17	-4.65
71/ 5/13	2441084.5	0.03829	-0.45722	-0.04127	38.80729	6.69903	-2.97259	0.46067	39.49328	274.79	-5.14
71/ 5/15	2441086.5	0.08279	-0.44671	-0.04444	38.16262	11.50358	-2.51693	0.45649	39.93812	280.50	-5.59
71/ 5/17	2441088.5	0.12626	-0.43064	-0.04706	37.01495	16.31398	-2.01508	0.45123	40.50078	286.34	-5.99
71/ 5/19	2441090.5	0.16810	-0.40903	-0.04908	35.33589	21.09807	-1.46711	0.44494	41.18138	292.34	-6.33
71/ 5/21	2441092.5	0.20767	-0.38193	-0.05044	33.09202	25.81581	-0.87331	0.43765	41.97976	298.53	-6.62
71/ 5/23	2441094.5	0.24431	-0.34944	-0.05108	30.24541	30.41649	-0.23442	0.42942	42.89525	304.96	-6.83
71/ 5/25	2441096.5	0.27730	-0.31173	-0.05096	26.75487	34.83525	0.44794	0.42032	43.92628	311.65	-6.96
71/ 5/27	2441098.5	0.30586	-0.26906	-0.05003	22.57813	38.98903	1.17077	0.41042	45.06980	318.66	-7.00
71/ 5/29	2441100.5	0.32918	-0.22180	-0.04824	17.67575	42.77188	1.92886	0.39985	46.32048	326.03	-6.93
71/ 5/31	2441102.5	0.34640	-0.17045	-0.04556	12.01746	46.04995	2.71393	0.38874	47.66952	333.80	-6.73
71/ 6/ 2	2441104.5	0.35664	-0.11568	-0.04197	5.59187	48.65699	3.51326	0.37728	49.10310	342.03	-6.39
71/ 6/ 4	2441106.5	0.35903	-0.05838	-0.03745	-1.57920	50.39198	4.30825	0.36567	50.60046	350.76	-5.88
71/ 6/ 6	2441108.5	0.35274	0.00031	-0.03203	-9.42136	51.02154	5.07287	0.35419	52.13150	0.05	-5.19
71/ 6/ 8	2441110.5	0.33706	0.05897	-0.02575	-17.78375	50.29140	5.77237	0.34315	53.65451	9.92	-4.30

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71/ 6/10	2441112.5	0.31155	0.11587	-0.01873	-26.41439	47.95207	6.36326	0.33293	55.11454	20.40	-3.23
71/ 6/12	2441114.5	0.27608	0.16905	-0.01111	-34.94305	43.80278	6.79529	0.32391	56.44356	31.48	-1.97
71/ 6/14	2441116.5	0.23105	0.21633	-0.00311	-42.88526	37.75254	7.01692	0.31653	57.56420	43.12	-0.56
71/ 6/16	2441118.5	0.17745	0.25556	0.00500	-49.68252	29.88592	6.98440	0.31117	58.39780	55.23	0.92
71/ 6/18	2441120.5	0.11693	0.28479	0.01291	-54.78485	20.50811	6.67297	0.30813	58.87691	67.68	2.40
71/ 6/20	2441122.5	0.05171	0.30255	0.02031	-57.76098	10.13852	6.08638	0.30761	58.95901	80.30	3.79
71/ 6/22	2441124.5	-0.01561	0.30808	0.02688	-58.39742	-0.56179	5.25986	0.30965	58.63651	92.90	4.98
71/ 6/24	2441126.5	-0.08232	0.30139	0.03239	-56.74290	-10.91052	4.25423	0.31411	57.93871	105.28	5.92
71/ 6/26	2441128.5	-0.14592	0.28324	0.03667	-53.07901	-20.32605	3.14314	0.32072	56.92459	117.26	6.56
71/ 6/28	2441130.5	-0.20433	0.25495	0.03964	-47.83565	-28.40588	1.99892	0.32912	55.66991	128.71	6.92
71/ 6/30	2441132.5	-0.25600	0.21821	0.04130	-41.49183	-34.94468	0.88207	0.33891	54.25385	139.56	7.00
71/ 7/ 2	2441134.5	-0.29993	0.17483	0.04170	-34.49647	-39.90501	-0.16352	0.34967	52.74887	149.76	6.85
71/ 7/ 4	2441136.5	-0.33559	0.12660	0.04096	-27.22366	-43.36649	-1.11045	0.36101	51.21536	159.33	6.51
71/ 7/ 6	2441138.5	-0.36283	0.07517	0.03918	-19.95863	-45.47512	-1.94486	0.37260	49.70026	168.30	6.04
71/ 7/ 8	2441140.5	-0.38178	0.02200	0.03651	-12.90340	-46.40389	-2.66269	0.38415	48.23804	176.70	5.45
71/ 7/10	2441142.5	-0.39277	-0.03164	0.03307	-6.19154	-46.32705	-3.26622	0.39543	46.85295	184.61	4.80
71/ 7/12	2441144.5	-0.39625	-0.08470	0.02901	0.09516	-45.40573	-3.76131	0.40624	45.56136	192.07	4.09
71/ 7/14	2441146.5	-0.39273	-0.13627	0.02442	5.91180	-43.78151	-4.15561	0.41642	44.37386	199.14	3.36
71/ 7/16	2441148.5	-0.38278	-0.18562	0.01944	11.23824	-41.57485	-4.45722	0.42585	43.29704	205.87	2.62
71/ 7/18	2441150.5	-0.36696	-0.23213	0.01416	16.07018	-38.88616	-4.67406	0.43445	42.33475	212.32	1.87
71/ 7/20	2441152.5	-0.34584	-0.27530	0.00867	20.41263	-35.79803	-4.81341	0.44212	41.48907	218.52	1.12
71/ 7/22	2441154.5	-0.31999	-0.31470	0.00307	24.27544	-32.37790	-4.88174	0.44882	40.76097	224.52	0.39
71/ 7/24	2441156.5	-0.28994	-0.34999	-0.00258	27.67027	-28.68069	-4.88465	0.45449	40.15078	230.36	-0.33
71/ 7/26	2441158.5	-0.25624	-0.38087	-0.00819	30.60844	-24.75115	-4.82685	0.45912	39.65847	236.07	-1.02
71/ 7/28	2441160.5	-0.21940	-0.40709	-0.01371	33.09961	-20.62600	-4.71228	0.46266	39.28386	241.68	-1.70
71/ 7/30	2441162.5	-0.17994	-0.42845	-0.01906	35.15083	-16.33572	-4.54408	0.46510	39.02673	247.22	-2.35
71/ 8/ 1	2441164.5	-0.13837	-0.44478	-0.02419	36.76586	-11.90616	-4.32474	0.46643	38.88687	252.72	-2.97
71/ 8/ 3	2441166.5	-0.09518	-0.45591	-0.02903	37.94473	-7.35996	-4.05613	0.46665	38.86416	258.21	-3.57
71/ 8/ 5	2441168.5	-0.05088	-0.46174	-0.03354	38.68335	-2.71786	-3.73958	0.46575	38.95860	263.71	-4.13
71/ 8/ 7	2441170.5	-0.00598	-0.46216	-0.03765	38.97321	2.00001	-3.37600	0.46373	39.17025	269.26	-4.66
71/ 8/ 9	2441172.5	0.03898	-0.45710	-0.04132	38.80111	6.77283	-2.96590	0.46062	39.49929	274.87	-5.15
71/ 8/11	2441174.5	0.08347	-0.44651	-0.04449	38.14889	11.57768	-2.50953	0.45641	39.94594	280.59	-5.59
71/ 8/13	2441176.5	0.12692	-0.43035	-0.04710	36.99327	16.38792	-2.00697	0.45114	40.51041	286.43	-5.99
71/ 8/15	2441178.5	0.16872	-0.40866	-0.04911	35.30577	21.17130	-1.45830	0.44484	41.19282	292.43	-6.34
71/ 8/17	2441180.5	0.20826	-0.38147	-0.05045	33.05292	25.88763	-0.86380	0.43753	41.99299	298.63	-6.62
71/ 8/19	2441182.5	0.24485	-0.34890	-0.05108	30.19674	30.48601	-0.22423	0.42929	42.91026	305.06	-6.83
71/ 8/21	2441184.5	0.27777	-0.31111	-0.05095	26.69597	34.90134	0.45879	0.42017	43.94302	311.76	-6.97
71/ 8/23	2441186.5	0.30626	-0.26837	-0.05001	22.50838	39.05025	1.18219	0.41027	45.08821	318.77	-7.00
71/ 8/25	2441188.5	0.32949	-0.22104	-0.04821	17.59460	42.82640	1.94077	0.39968	46.34045	326.14	-6.93
71/ 8/27	2441190.5	0.34661	-0.16963	-0.04551	11.92457	46.09545	2.72615	0.38857	47.69086	333.92	-6.73
71/ 8/29	2441192.5	0.35674	-0.11481	-0.04190	5.48729	48.69066	3.52556	0.37710	49.12556	342.16	-6.38
71/ 8/31	2441194.5	0.35900	-0.05748	-0.03737	-1.69476	50.41046	4.32030	0.36549	50.62363	350.90	-5.87
71/ 9/ 2	2441196.5	0.35257	0.00122	-0.03194	-9.54620	51.02104	5.08418	0.35401	52.15482	0.20	-5.18
71/ 9/ 4	2441198.5	0.33675	0.05986	-0.02565	-17.91481	50.26800	5.78235	0.34299	53.67725	10.08	-4.29
71/ 9/ 6	2441200.5	0.31108	0.11672	-0.01862	-26.54688	47.90221	6.37117	0.33278	55.13575	20.57	-3.21

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71/ 9/ 8	2441202.5	0.27546	0.16982	-0.01099	-35.07033	43.72414	6.80035	0.32379	56.46214	31.65	-1.95
71/ 9/10	2441204.5	0.23029	0.21700	-0.00299	-42.99921	37.64498	7.01837	0.31644	57.57894	43.30	-0.54
71/ 9/12	2441206.5	0.17657	0.25609	0.00512	-49.77441	29.75246	6.98170	0.31110	58.40758	55.41	0.94
71/ 9/14	2441208.5	0.11596	0.28515	0.01303	-54.84697	20.35522	6.66595	0.30810	58.88089	67.87	2.42
71/ 9/16	2441210.5	0.05069	0.30273	0.02041	-57.78828	9.97551	6.07536	0.30763	58.95681	80.50	3.81
71/ 9/18	2441212.5	-0.01664	0.30807	0.02697	-58.38871	-0.72433	5.24560	0.30970	58.62834	93.09	5.00
71/ 9/20	2441214.5	-0.08332	0.30120	0.03246	-56.70091	-11.06271	4.23779	0.31419	57.92526	105.46	5.93
71/ 9/22	2441216.5	-0.14685	0.28288	0.03672	-53.00947	-20.46031	3.12568	0.32084	56.90693	117.44	6.57
71/ 9/24	2441218.5	-0.20517	0.25445	0.03967	-47.74575	-28.51766	1.98148	0.32927	55.64926	128.88	6.92
71/ 9/26	2441220.5	-0.25673	0.21760	0.04131	-41.38880	-35.03228	0.86544	0.33907	54.23137	139.72	7.00
71/ 9/28	2441222.5	-0.30054	0.17413	0.04170	-34.38663	-39.96893	-0.17882	0.34984	52.72558	149.91	6.85
71/ 9/30	2441224.5	-0.33607	0.12584	0.04094	-27.11201	-43.40857	-1.12410	0.36118	51.19208	159.47	6.51
71/10/ 2	2441226.5	-0.36318	0.07437	0.03915	-19.84884	-45.49788	-1.95674	0.37278	49.67759	168.43	6.03
71/10/ 4	2441228.5	-0.38201	0.02118	0.03646	-12.79797	-46.41004	-2.67280	0.38433	48.21642	176.83	5.44
71/10/ 6	2441230.5	-0.39288	-0.03246	0.03302	-6.09207	-46.31915	-3.27462	0.39560	46.83268	184.72	4.79
71/10/ 8	2441232.5	-0.39624	-0.08550	0.02894	0.18776	-45.38609	-3.76812	0.40640	45.54263	192.18	4.08
71/10/10	2441234.5	-0.39263	-0.13704	0.02435	5.99704	-43.75211	-4.16093	0.41657	44.35679	199.24	3.35
71/10/12	2441236.5	-0.38258	-0.18635	0.01936	11.31594	-41.53736	-4.46119	0.42599	43.28169	205.97	2.61
71/10/14	2441238.5	-0.36667	-0.23281	0.01408	16.14035	-38.84196	-4.67678	0.43457	42.32117	212.41	1.86
71/10/16	2441240.5	-0.34548	-0.27593	0.00859	20.47538	-35.74827	-4.81500	0.44223	41.47727	218.61	1.11
71/10/18	2441242.5	-0.31956	-0.31527	0.00298	24.33095	-32.32352	-4.88228	0.44891	40.75097	224.61	0.38
71/10/20	2441244.5	-0.28945	-0.35049	-0.00267	27.71870	-28.62245	-4.88422	0.45457	40.14258	230.45	-0.34
71/10/22	2441246.5	-0.25570	-0.38131	-0.00828	30.64996	-24.68968	-4.82554	0.45918	39.65206	236.15	-1.03
71/10/24	2441248.5	-0.21882	-0.40746	-0.01379	33.13435	-20.56180	-4.71012	0.46270	39.27924	241.76	-1.71
71/10/26	2441250.5	-0.17932	-0.42874	-0.01914	35.17885	-16.26923	-4.54112	0.46513	39.02385	247.30	-2.36
71/10/28	2441252.5	-0.13772	-0.44499	-0.02426	36.78718	-11.83774	-4.32101	0.46644	38.88573	252.80	-2.98
71/10/30	2441254.5	-0.09450	-0.45605	-0.02910	37.95931	-7.28995	-4.05164	0.46664	38.86475	258.29	-3.58
71/11/ 1	2441256.5	-0.05019	-0.46179	-0.03361	38.69109	-2.64659	-3.73437	0.46573	38.96089	263.80	-4.14
71/11/ 3	2441258.5	-0.00529	-0.46213	-0.03771	38.97396	2.07221	-3.37008	0.46370	39.17424	269.34	-4.67
71/11/ 5	2441260.5	0.03967	-0.45698	-0.04137	38.79463	6.84560	-2.95927	0.46056	39.50498	274.96	-5.15
71/11/ 7	2441262.5	0.08414	-0.44630	-0.04453	38.13489	11.65064	-2.50220	0.45634	39.95333	280.68	-5.60
71/11/ 9	2441264.5	0.12757	-0.43007	-0.04714	36.97138	16.46062	-1.99894	0.45106	40.51951	286.52	-6.00
71/11/11	2441266.5	0.16935	-0.40829	-0.04913	35.27554	21.24318	-1.44958	0.44474	41.20361	292.53	-6.34
71/11/13	2441268.5	0.20885	-0.38102	-0.05047	33.01383	25.95800	-0.85440	0.43742	42.00548	298.73	-6.63
71/11/15	2441270.5	0.24538	-0.34837	-0.05109	30.14820	30.55398	-0.21417	0.42916	42.92442	305.16	-6.84
71/11/17	2441272.5	0.27824	-0.31050	-0.05094	26.63740	34.96579	0.46946	0.42003	43.95882	311.86	-6.97
71/11/19	2441274.5	0.30666	-0.26769	-0.04999	22.43918	39.10976	1.19342	0.41012	45.10559	318.88	-7.00
71/11/21	2441276.5	0.32980	-0.22030	-0.04817	17.51430	42.87917	1.95245	0.39953	46.35931	326.26	-6.93
71/11/23	2441278.5	0.34683	-0.16883	-0.04547	11.83288	46.13925	2.73813	0.38841	47.71106	334.04	-6.72
71/11/25	2441280.5	0.35684	-0.11397	-0.04184	5.38432	48.72276	3.53759	0.37693	49.14684	342.29	-6.37
71/11/27	2441282.5	0.35898	-0.05661	-0.03730	-1.80829	50.42762	4.33204	0.36532	50.64565	351.04	-5.86
71/11/29	2441284.5	0.35241	0.00210	-0.03185	-9.66862	51.01964	5.09519	0.35385	52.17707	0.34	-5.16
71/12/ 1	2441286.5	0.33644	0.06073	-0.02555	-18.04311	50.24426	5.79205	0.34283	53.69904	10.23	-4.27
71/12/ 3	2441288.5	0.31062	0.11755	-0.01851	-26.67642	47.85274	6.37885	0.33264	55.15620	20.73	-3.19
71/12/ 5	2441290.5	0.27486	0.17058	-0.01088	-35.19471	43.64668	6.80524	0.32367	56.48019	31.82	-1.93

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71/12/ 7	2441292.5	0.22955	0.21765	-0.00287	-43.11051	37.53942	7.01975	0.31634	57.59341	43.48	-0.52
71/12/ 9	2441294.5	0.17571	0.25660	0.00524	-49.86419	29.62170	6.97903	0.31104	58.41737	55.60	0.97
71/12/11	2441296.5	0.11501	0.28550	0.01315	-54.90770	20.20550	6.65907	0.30808	58.88515	68.06	2.45
71/12/13	2441298.5	0.04969	0.30290	0.02052	-57.81504	9.81586	6.06456	0.30764	58.95514	80.68	3.82
71/12/15	2441300.5	-0.01764	0.30806	0.02706	-58.38031	-0.88364	5.23163	0.30975	58.62091	93.28	5.01
71/12/17	2441302.5	-0.08429	0.30100	0.03254	-56.65999	-11.21208	4.22169	0.31427	57.91276	105.64	5.94
71/12/19	2441304.5	-0.14777	0.28252	0.03678	-52.94154	-20.59234	3.10856	0.32095	56.89037	117.61	6.58
71/12/21	2441306.5	-0.20600	0.25395	0.03971	-47.65775	-28.62785	1.96434	0.32940	55.62979	129.05	6.92
71/12/23	2441308.5	-0.25745	0.21698	0.04133	-41.28774	-35.11890	0.84906	0.33922	54.21010	139.87	7.00
71/12/25	2441310.5	-0.30113	0.17343	0.04170	-34.27868	-40.03236	-0.19390	0.35000	52.70347	150.06	6.84
71/12/27	2441312.5	-0.33653	0.12508	0.04092	-27.00207	-43.45056	-1.13759	0.36135	51.16988	159.61	6.50
71/12/29	2441314.5	-0.36352	0.07357	0.03911	-19.74052	-45.52081	-1.96850	0.37295	49.65589	168.56	6.02
71/12/31	2441316.5	-0.38222	0.02037	0.03641	-12.69377	-46.41650	-2.68283	0.38449	48.19565	176.95	5.43
72/ 1/ 2	2441318.5	-0.39298	-0.03327	0.03296	-5.99360	-46.31166	-3.28297	0.39576	46.81314	184.84	4.78
72/ 1/ 4	2441320.5	-0.39623	-0.08629	0.02887	0.27954	-45.36688	-3.77488	0.40655	45.52452	192.29	4.07
72/ 1/ 6	2441322.5	-0.39251	-0.13781	0.02428	6.08163	-43.72314	-4.16623	0.41671	44.34023	199.35	3.34
72/ 1/ 8	2441324.5	-0.38237	-0.18708	0.01928	11.39314	-41.50026	-4.46514	0.42612	43.26676	206.07	2.59
72/ 1/10	2441326.5	-0.36638	-0.23350	0.01399	16.21014	-38.79809	-4.67950	0.43469	42.30790	212.51	1.84
72/ 1/12	2441328.5	-0.34511	-0.27656	0.00850	20.53784	-35.69875	-4.81658	0.44233	41.46568	218.71	1.10
72/ 1/14	2441330.5	-0.31912	-0.31584	0.00289	24.38622	-32.26927	-4.88282	0.44900	40.74108	224.70	0.37
72/ 1/16	2441332.5	-0.28896	-0.35100	-0.00275	27.76694	-28.56423	-4.88379	0.45465	40.13439	230.54	-0.35
72/ 1/18	2441334.5	-0.25515	-0.38174	-0.00837	30.69131	-24.62811	-4.82419	0.45924	39.64559	236.24	-1.04
72/ 1/20	2441336.5	-0.21823	-0.40782	-0.01388	33.16891	-20.49741	-4.70792	0.46274	39.27448	241.85	-1.72
72/ 1/22	2441338.5	-0.17869	-0.42903	-0.01922	35.20670	-16.20245	-4.53811	0.46515	39.02083	247.39	-2.37
72/ 1/24	2441340.5	-0.13706	-0.44520	-0.02434	36.80834	-11.76895	-4.31722	0.46645	38.88445	252.89	-2.99
72/ 1/26	2441342.5	-0.09383	-0.45617	-0.02918	37.97374	-7.21949	-4.04711	0.46664	38.86522	258.38	-3.58
72/ 1/28	2441344.5	-0.04950	-0.46184	-0.03367	38.69871	-2.57479	-3.72911	0.46570	38.96313	263.88	-4.15
72/ 1/30	2441346.5	-0.00460	-0.46209	-0.03777	38.97459	2.14503	-3.36409	0.46366	39.17827	269.43	-4.67
72/ 2/ 1	2441348.5	0.04036	-0.45686	-0.04143	38.78804	6.91910	-2.95257	0.46051	39.51081	275.05	-5.16
72/ 2/ 3	2441350.5	0.08482	-0.44610	-0.04458	38.12075	11.72443	-2.49479	0.45627	39.96096	280.77	-5.61
72/ 2/ 5	2441352.5	0.12823	-0.42978	-0.04717	36.94929	16.53423	-1.99082	0.45097	40.52893	286.61	-6.00
72/ 2/ 7	2441354.5	0.16998	-0.40791	-0.04916	35.24503	21.31606	-1.44076	0.44463	41.21483	292.62	-6.35
72/ 2/ 9	2441356.5	0.20943	-0.38056	-0.05048	32.97435	26.02945	-0.84488	0.43730	42.01849	298.83	-6.63
72/ 2/11	2441358.5	0.24592	-0.34782	-0.05109	30.09915	30.62312	-0.20397	0.42903	42.93921	305.26	-6.84
72/ 2/13	2441360.5	0.27872	-0.30988	-0.05094	26.57814	35.03149	0.48030	0.41989	43.97537	311.97	-6.97
72/ 2/15	2441362.5	0.30705	-0.26700	-0.04997	22.36909	39.17057	1.20484	0.40996	45.12385	318.99	-7.00
72/ 2/17	2441364.5	0.33011	-0.21954	-0.04814	17.43284	42.93326	1.96435	0.39936	46.37917	326.37	-6.92
72/ 2/19	2441366.5	0.34704	-0.16801	-0.04542	11.73972	46.18431	2.75034	0.38823	47.73233	334.17	-6.72
72/ 2/21	2441368.5	0.35694	-0.11311	-0.04178	5.27952	48.75595	3.54988	0.37675	49.16927	342.42	-6.37
72/ 2/23	2441370.5	0.35895	-0.05572	-0.03722	-1.92402	50.44559	4.34406	0.36515	50.66883	351.18	-5.85
72/ 2/25	2441372.5	0.35224	0.00300	-0.03176	-9.79357	51.01860	5.10647	0.35368	52.20046	0.49	-5.15
72/ 2/27	2441374.5	0.33612	0.06162	-0.02545	-18.17420	50.22028	5.80198	0.34267	53.72189	10.39	-4.26
72/ 2/29	2441376.5	0.31015	0.11840	-0.01840	-26.80885	47.80229	6.38672	0.33249	55.17756	20.89	-3.17
72/ 3/ 2	2441378.5	0.27423	0.17135	-0.01076	-35.32183	43.56743	6.81023	0.32354	56.49895	32.00	-1.91
72/ 3/ 4	2441380.5	0.22879	0.21831	-0.00275	-43.22417	37.43127	7.02112	0.31624	57.60838	43.66	-0.50

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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72/ 3/ 6	2441382.5	0.17483	0.25712	0.00537	-49.95567	29.48768	6.97624	0.31098	58.42739	55.79	0.99
72/ 3/ 8	2441384.5	0.11404	0.28586	0.01326	-54.96927	20.05213	6.65196	0.30805	58.88937	68.25	2.47
72/ 3/10	2441386.5	0.04867	0.30307	0.02063	-57.84170	9.65249	6.05345	0.30765	58.95318	80.88	3.84
72/ 3/12	2441388.5	-0.01868	0.30804	0.02716	-58.37090	-1.04640	5.21729	0.30980	58.61294	93.47	5.03
72/ 3/14	2441390.5	-0.08530	0.30080	0.03261	-56.61731	-11.36435	4.20519	0.31436	57.89949	105.83	5.95
72/ 3/16	2441392.5	-0.14870	0.28216	0.03683	-52.87133	-20.72656	3.09105	0.32106	56.87286	117.79	6.59
72/ 3/18	2441394.5	-0.20684	0.25344	0.03974	-47.56723	-28.73948	1.94684	0.32954	55.60926	129.22	6.93
72/ 3/20	2441396.5	-0.25818	0.21636	0.04134	-41.18413	-35.20627	0.83239	0.33938	54.18770	140.04	7.00
72/ 3/22	2441398.5	-0.30174	0.17272	0.04169	-34.16831	-40.09597	-0.20922	0.35017	52.68021	150.21	6.84
72/ 3/24	2441400.5	-0.33701	0.12431	0.04090	-26.88997	-43.49227	-1.15125	0.36153	51.14659	159.75	6.50
72/ 3/26	2441402.5	-0.36387	0.07276	0.03908	-19.63035	-45.54315	-1.98039	0.37312	49.63317	168.69	6.01
72/ 3/28	2441404.5	-0.38245	0.01955	0.03637	-12.58802	-46.42217	-2.69293	0.38467	48.17394	177.07	5.42
72/ 3/30	2441406.5	-0.39308	-0.03410	0.03290	-5.89387	-46.30324	-3.29135	0.39593	46.79274	184.96	4.77
72/ 4/ 1	2441408.5	-0.39623	-0.08710	0.02880	0.37233	-45.34668	-3.78166	0.40671	45.50562	192.40	4.06
72/ 4/ 3	2441410.5	-0.39240	-0.13859	0.02420	6.16700	-43.69315	-4.17152	0.41686	44.32296	199.45	3.33
72/ 4/ 5	2441412.5	-0.38217	-0.18782	0.01920	11.47093	-41.46216	-4.46906	0.42626	43.25119	206.17	2.58
72/ 4/ 7	2441414.5	-0.36609	-0.23419	0.01391	16.28035	-38.75328	-4.68218	0.43481	42.29408	212.61	1.83
72/ 4/ 9	2441416.5	-0.34475	-0.27719	0.00842	20.60060	-35.64836	-4.81811	0.44244	41.45364	218.80	1.09
72/ 4/11	2441418.5	-0.31869	-0.31641	0.00281	24.44169	-32.21424	-4.88330	0.44910	40.73083	224.79	0.36
72/ 4/13	2441420.5	-0.28846	-0.35151	-0.00284	27.81530	-28.50533	-4.88330	0.45473	40.12594	230.63	-0.36
72/ 4/15	2441422.5	-0.25460	-0.38218	-0.00845	30.73272	-24.56595	-4.82281	0.45930	39.63894	236.33	-1.05
72/ 4/17	2441424.5	-0.21764	-0.40818	-0.01396	33.20350	-20.43250	-4.70569	0.46279	39.26962	241.93	-1.73
72/ 4/19	2441426.5	-0.17807	-0.42932	-0.01930	35.23456	-16.13521	-4.53507	0.46518	39.01777	247.47	-2.38
72/ 4/21	2441428.5	-0.13641	-0.44541	-0.02442	36.82950	-11.69977	-4.31341	0.46646	38.88318	252.97	-3.00
72/ 4/23	2441430.5	-0.09315	-0.45630	-0.02925	37.98817	-7.14869	-4.04255	0.46663	38.86576	258.46	-3.59
72/ 4/25	2441432.5	-0.04882	-0.46188	-0.03374	38.70631	-2.50267	-3.72381	0.46568	38.96548	263.97	-4.15
72/ 4/27	2441434.5	-0.00391	-0.46205	-0.03783	38.97520	2.21815	-3.35808	0.46362	39.18243	269.52	-4.68
72/ 4/29	2441436.5	0.04105	-0.45674	-0.04148	38.78141	6.99289	-2.94584	0.46045	39.51678	275.14	-5.17
72/ 5/ 1	2441438.5	0.08550	-0.44589	-0.04462	38.10656	11.79850	-2.48735	0.45620	39.96875	280.85	-5.61
72/ 5/ 3	2441440.5	0.12888	-0.42948	-0.04721	36.92713	16.60814	-1.98267	0.45088	40.53855	286.70	-6.01
72/ 5/ 5	2441442.5	0.17060	-0.40753	-0.04918	35.21442	21.38926	-1.43190	0.44453	41.22628	292.72	-6.35
72/ 5/ 7	2441444.5	0.21002	-0.38009	-0.05050	32.93473	26.10124	-0.83532	0.43718	42.03176	298.92	-6.63
72/ 5/ 9	2441446.5	0.24645	-0.34728	-0.05110	30.04991	30.69261	-0.19373	0.42890	42.95429	305.36	-6.84
72/ 5/11	2441448.5	0.27919	-0.30926	-0.05093	26.51863	35.09753	0.49120	0.41974	43.99222	312.07	-6.97
72/ 5/13	2441450.5	0.30745	-0.26630	-0.04995	22.29866	39.23171	1.21632	0.40980	45.14240	319.10	-7.00
72/ 5/15	2441452.5	0.33042	-0.21877	-0.04810	17.35094	42.98763	1.97631	0.39919	46.39933	326.49	-6.92
72/ 5/17	2441454.5	0.34724	-0.16719	-0.04537	11.64601	46.22961	2.76262	0.38806	47.75393	334.29	-6.71
72/ 5/19	2441456.5	0.35703	-0.11224	-0.04172	5.17405	48.78931	3.56223	0.37657	49.19205	342.55	-6.36
72/ 5/21	2441458.5	0.35891	-0.05482	-0.03714	-2.04053	50.46364	4.35615	0.36497	50.69239	351.32	-5.84
72/ 5/23	2441460.5	0.35206	0.00391	-0.03167	-9.91940	51.01751	5.11782	0.35350	52.22426	0.64	-5.14
72/ 5/25	2441462.5	0.33580	0.06251	-0.02534	-18.30625	50.19607	5.81199	0.34250	53.74517	10.55	-4.24
72/ 5/27	2441464.5	0.30967	0.11925	-0.01828	-26.94225	47.75136	6.39462	0.33234	55.19935	21.06	-3.15
72/ 5/29	2441466.5	0.27360	0.17212	-0.01063	-35.44985	43.48741	6.81524	0.32342	56.51809	32.17	-1.88
72/ 5/31	2441468.5	0.22801	0.21898	-0.00262	-43.33853	37.32207	7.02247	0.31615	57.62361	43.84	-0.47
72/ 6/ 2	2441470.5	0.17394	0.25765	0.00549	-50.04754	29.35240	6.97339	0.31091	58.43755	55.98	1.01

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72/ 6/ 4	2441472.5	0.11306	0.28621	0.01338	-55.03087	19.89740	6.64474	0.30802	58.89359	68.44	2.49
72/ 6/ 6	2441474.5	0.04764	0.30324	0.02073	-57.86798	9.48782	6.04219	0.30766	58.95108	81.07	3.86
72/ 6/ 8	2441476.5	-0.01972	0.30802	0.02725	-58.36078	-1.21029	5.20279	0.30985	58.60473	93.66	5.05
72/ 6/10	2441478.5	-0.08631	0.30060	0.03269	-56.57368	-11.51748	4.18853	0.31445	57.88590	106.02	5.97
72/ 6/12	2441480.5	-0.14965	0.28178	0.03689	-52.80007	-20.86134	3.07339	0.32118	56.85498	117.97	6.59
72/ 6/14	2441482.5	-0.20769	0.25293	0.03978	-47.47563	-28.85139	1.92923	0.32968	55.58831	129.39	6.93
72/ 6/16	2441484.5	-0.25891	0.21573	0.04136	-41.07949	-35.29369	0.81562	0.33954	54.16488	140.20	7.00
72/ 6/18	2441486.5	-0.30235	0.17200	0.04169	-34.05701	-40.15945	-0.22461	0.35034	52.65655	150.36	6.83
72/ 6/20	2441488.5	-0.33749	0.12353	0.04087	-26.77704	-43.53372	-1.16497	0.36171	51.12291	159.90	6.49
72/ 6/22	2441490.5	-0.36422	0.07195	0.03904	-19.51945	-45.56514	-1.99231	0.37330	49.61008	168.83	6.00
72/ 6/24	2441492.5	-0.38267	0.01872	0.03632	-12.48167	-46.42743	-2.70305	0.38484	48.15190	177.20	5.41
72/ 6/26	2441494.5	-0.39319	-0.03492	0.03284	-5.79364	-46.29437	-3.29974	0.39610	46.77204	185.08	4.76
72/ 6/28	2441496.5	-0.39622	-0.08791	0.02874	0.46553	-45.32603	-3.78843	0.40687	45.48646	192.51	4.05
72/ 6/30	2441498.5	-0.39229	-0.13937	0.02413	6.25271	-43.66272	-4.17680	0.41701	44.30547	199.56	3.32
72/ 7/ 2	2441500.5	-0.38196	-0.18856	0.01912	11.54900	-41.42365	-4.47298	0.42640	43.23547	206.27	2.57
72/ 7/ 4	2441502.5	-0.36580	-0.23488	0.01383	16.35082	-38.70807	-4.68485	0.43494	42.28016	212.70	1.82
72/ 7/ 6	2441504.5	-0.34438	-0.27783	0.00833	20.66360	-35.59760	-4.81964	0.44255	41.44156	218.89	1.08
72/ 7/ 8	2441506.5	-0.31825	-0.31699	0.00272	24.49740	-32.15886	-4.88378	0.44919	40.72058	224.89	0.35
72/ 7/10	2441508.5	-0.28797	-0.35202	-0.00293	27.86389	-28.44606	-4.88281	0.45480	40.11754	230.72	-0.37
72/ 7/12	2441510.5	-0.25406	-0.38262	-0.00854	30.77435	-24.50342	-4.82141	0.45936	39.63237	236.42	-1.07
72/ 7/14	2441512.5	-0.21704	-0.40855	-0.01404	33.23831	-20.36722	-4.70344	0.46284	39.26488	242.02	-1.74
72/ 7/16	2441514.5	-0.17744	-0.42961	-0.01938	35.26262	-16.06760	-4.53201	0.46521	39.01486	247.56	-2.39
72/ 7/18	2441516.5	-0.13575	-0.44561	-0.02449	36.85083	-11.63019	-4.30958	0.46648	38.88210	253.06	-3.01
72/ 7/20	2441518.5	-0.09248	-0.45643	-0.02932	38.00275	-7.07748	-4.03797	0.46662	38.86650	258.55	-3.60
72/ 7/22	2441520.5	-0.04813	-0.46193	-0.03380	38.71402	-2.43015	-3.71850	0.46566	38.96804	264.05	-4.16
72/ 7/24	2441522.5	-0.00321	-0.46201	-0.03789	38.97587	2.29168	-3.35204	0.46358	39.18681	269.60	-4.69
72/ 7/26	2441524.5	0.04174	-0.45661	-0.04153	38.77480	7.06709	-2.93908	0.46039	39.52299	275.22	-5.18
72/ 7/28	2441526.5	0.08618	-0.44568	-0.04466	38.09233	11.87300	-2.47987	0.45612	39.97679	280.94	-5.62
72/ 7/30	2441528.5	0.12954	-0.42918	-0.04724	36.90490	16.68248	-1.97448	0.45079	40.54843	286.80	-6.02
72/ 8/ 1	2441530.5	0.17123	-0.40715	-0.04921	35.18370	21.46288	-1.42299	0.44442	41.23800	292.81	-6.36
72/ 8/ 3	2441532.5	0.21061	-0.37963	-0.05051	32.89495	26.17343	-0.82571	0.43706	42.04531	299.02	-6.64
72/ 8/ 5	2441534.5	0.24699	-0.34673	-0.05110	30.00045	30.76247	-0.18343	0.42876	42.96964	305.46	-6.84
72/ 8/ 7	2441536.5	0.27966	-0.30863	-0.05092	26.45882	35.16390	0.50214	0.41959	44.00933	312.18	-6.97
72/ 8/ 9	2441538.5	0.30785	-0.26560	-0.04992	22.22786	39.29310	1.22785	0.40964	45.16119	319.21	-7.00
72/ 8/11	2441540.5	0.33073	-0.21800	-0.04807	17.26860	43.04217	1.98832	0.39902	46.41967	326.61	-6.92
72/ 8/13	2441542.5	0.34745	-0.16636	-0.04532	11.55180	46.27492	2.77494	0.38788	47.77565	334.41	-6.71
72/ 8/15	2441544.5	0.35712	-0.11136	-0.04165	5.06807	48.82252	3.57463	0.37640	49.21486	342.68	-6.35
72/ 8/17	2441546.5	0.35887	-0.05392	-0.03706	-2.15752	50.48133	4.36826	0.36479	50.71589	351.46	-5.83
72/ 8/19	2441548.5	0.35188	0.00482	-0.03157	-10.04561	51.01585	5.12916	0.35333	52.24786	0.79	-5.13
72/ 8/21	2441550.5	0.33547	0.06341	-0.02524	-18.43848	50.17108	5.82194	0.34234	53.76811	10.70	-4.23
72/ 8/23	2441552.5	0.30919	0.12010	-0.01817	-27.07555	47.69951	6.40245	0.33220	55.22065	21.23	-3.14
72/ 8/25	2441554.5	0.27297	0.17290	-0.01051	-35.57742	43.40646	6.82013	0.32329	56.53660	32.35	-1.86
72/ 8/27	2441556.5	0.22724	0.21964	-0.00249	-43.45208	37.21207	7.02368	0.31605	57.63812	44.03	-0.45
72/ 8/29	2441558.5	0.17305	0.25817	0.00561	-50.13827	29.21661	6.97039	0.31085	58.44693	56.17	1.03
72/ 8/31	2441560.5	0.11208	0.28657	0.01350	-55.09112	19.74261	6.63740	0.30800	58.89701	68.64	2.51

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
72/ 9/ 2	2441562.5	0.04661	0.30341	0.02084	-57.89292	9.32358	6.03085	0.30768	58.94820	81.27	3.88
72/ 9/ 4	2441564.5	-0.02075	0.30800	0.02734	-58.34950	-1.37326	5.18826	0.30991	58.59580	93.85	5.06
72/ 9/ 6	2441566.5	-0.08731	0.30040	0.03276	-56.52924	-11.66934	4.17190	0.31454	57.87169	106.21	5.98
72/ 9/ 8	2441568.5	-0.15058	0.28142	0.03694	-52.72842	-20.99467	3.05582	0.32130	56.83661	118.15	6.60
72/ 9/10	2441570.5	-0.20853	0.25242	0.03981	-47.38408	-28.96185	1.91175	0.32983	55.56703	129.56	6.93
72/ 9/12	2441572.5	-0.25964	0.21511	0.04137	-40.97531	-35.37978	0.79900	0.33970	54.14188	140.36	7.00
72/ 9/14	2441574.5	-0.30295	0.17130	0.04168	-33.94648	-40.22183	-0.23985	0.35051	52.63284	150.51	6.83
72/ 9/16	2441576.5	-0.33796	0.12276	0.04085	-26.66508	-43.57434	-1.17853	0.36188	51.09930	160.04	6.48
72/ 9/18	2441578.5	-0.36456	0.07115	0.03901	-19.40965	-45.58658	-2.00408	0.37348	49.58717	168.96	5.99
72/ 9/20	2441580.5	-0.38289	0.01790	0.03627	-12.37644	-46.43241	-2.71304	0.38502	48.13009	177.32	5.41
72/ 9/22	2441582.5	-0.39329	-0.03574	0.03278	-5.69452	-46.28547	-3.30803	0.39627	46.75163	185.19	4.75
72/ 9/24	2441584.5	-0.39621	-0.08871	0.02867	0.55767	-45.30554	-3.79513	0.40703	45.46764	192.62	4.04
72/ 9/26	2441586.5	-0.39218	-0.14013	0.02405	6.33745	-43.63262	-4.18202	0.41716	44.28835	199.66	3.31
72/ 9/28	2441588.5	-0.38176	-0.18929	0.01904	11.62619	-41.38560	-4.47686	0.42654	43.22012	206.37	2.56
72/ 9/30	2441590.5	-0.36551	-0.23556	0.01374	16.42050	-38.66344	-4.68749	0.43506	42.26662	212.80	1.81
72/10/ 2	2441592.5	-0.34401	-0.27845	0.00824	20.72590	-35.54750	-4.82116	0.44266	41.42983	218.99	1.07
72/10/ 4	2441594.5	-0.31782	-0.31755	0.00263	24.55249	-32.10419	-4.88426	0.44928	40.71068	224.98	0.34
72/10/ 6	2441596.5	-0.28747	-0.35252	-0.00301	27.91195	-28.38757	-4.88234	0.45488	40.10946	230.80	-0.38
72/10/ 8	2441598.5	-0.25351	-0.38305	-0.00862	30.81555	-24.44170	-4.82004	0.45942	39.62610	236.50	-1.08
72/10/10	2441600.5	-0.21646	-0.40891	-0.01413	33.27276	-20.30276	-4.70123	0.46288	39.26042	242.11	-1.75
72/10/12	2441602.5	-0.17682	-0.42989	-0.01946	35.29040	-16.00084	-4.52900	0.46524	39.01219	247.64	-2.40
72/10/14	2441604.5	-0.13510	-0.44582	-0.02457	36.87196	-11.56148	-4.30580	0.46648	38.88122	253.14	-3.02
72/10/16	2441606.5	-0.09180	-0.45655	-0.02939	38.01718	-7.00714	-4.03344	0.46662	38.86739	258.63	-3.61
72/10/18	2441608.5	-0.04744	-0.46197	-0.03387	38.72164	-2.35850	-3.71324	0.46563	38.97071	264.14	-4.17
72/10/20	2441610.5	-0.00252	-0.46197	-0.03795	38.97650	2.36433	-3.34606	0.46353	39.19125	269.69	-4.70
72/10/22	2441612.5	0.04242	-0.45649	-0.04158	38.76819	7.14040	-2.93240	0.46034	39.52919	275.31	-5.18
72/10/24	2441614.5	0.08685	-0.44546	-0.04471	38.07818	11.94658	-2.47247	0.45605	39.98477	281.03	-5.63
72/10/26	2441616.5	0.13020	-0.42889	-0.04728	36.88278	16.75589	-1.96637	0.45070	40.55818	286.89	-6.02
72/10/28	2441618.5	0.17185	-0.40677	-0.04923	35.15315	21.53555	-1.41418	0.44432	41.24953	292.90	-6.36
72/10/30	2441620.5	0.21119	-0.37916	-0.05053	32.85541	26.24465	-0.81620	0.43694	42.05860	299.12	-6.64
72/11/ 1	2441622.5	0.24752	-0.34618	-0.05110	29.95131	30.83134	-0.17325	0.42863	42.98468	305.56	-6.85
72/11/ 3	2441624.5	0.28013	-0.30801	-0.05091	26.39943	35.22927	0.51297	0.41945	44.02606	312.29	-6.97
72/11/ 5	2441626.5	0.30824	-0.26490	-0.04990	22.15759	39.35350	1.23926	0.40948	45.17955	319.32	-7.00
72/11/ 7	2441628.5	0.33104	-0.21724	-0.04803	17.18692	43.09572	2.00019	0.39886	46.43955	326.73	-6.92
72/11/ 9	2441630.5	0.34766	-0.16554	-0.04527	11.45840	46.31931	2.78712	0.38771	47.79687	334.54	-6.71
72/11/11	2441632.5	0.35721	-0.11050	-0.04159	4.96306	48.85490	3.58686	0.37622	49.23717	342.81	-6.35
72/11/13	2441634.5	0.35884	-0.05302	-0.03699	-2.27338	50.40833	4.38020	0.36461	50.73890	351.59	-5.82
72/11/15	2441636.5	0.35171	0.00573	-0.03148	-10.17053	51.01369	5.14035	0.35316	52.27102	0.93	-5.11
72/11/17	2441638.5	0.33515	0.06429	-0.02514	-18.56929	50.14588	5.83175	0.34218	53.79068	10.86	-4.21
72/11/19	2441640.5	0.30871	0.12094	-0.01805	-27.20738	47.64778	6.41015	0.33205	55.24168	21.39	-3.12
72/11/21	2441642.5	0.27235	0.17367	-0.01039	-35.70355	43.32598	6.82493	0.32317	56.55496	32.52	-1.84
72/11/23	2441644.5	0.22648	0.22030	-0.00237	-43.56430	37.10291	7.02484	0.31596	57.65261	44.21	-0.43
72/11/25	2441646.5	0.17216	0.25868	0.00574	-50.22794	29.08200	6.96739	0.31079	58.45642	56.35	1.06
72/11/27	2441648.5	0.11111	0.28691	0.01362	-55.15066	19.58921	6.63010	0.30798	58.90068	68.83	2.53
72/11/29	2441650.5	0.04559	0.30358	0.02095	-57.91754	9.16082	6.01960	0.30770	58.94571	81.46	3.90

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

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72/12/ 1	2441652.5	-0.02178	0.30797	0.02743	-58.33829	-1.53482	5.17385	0.30996	58.58737	94.05	5.08
72/12/ 3	2441654.5	-0.08830	0.30019	0.03283	-56.48519	-11.81998	4.15541	0.31463	57.85807	106.39	5.99
72/12/ 5	2441656.5	-0.15151	0.28105	0.03699	-52.65738	-21.12703	3.03839	0.32142	56.81886	118.33	6.61
72/12/ 7	2441658.5	-0.20936	0.25191	0.03984	-47.29326	-29.07160	1.89439	0.32997	55.54636	129.73	6.94
72/12/ 9	2441660.5	-0.26036	0.21449	0.04138	-40.87185	-35.46540	0.78248	0.33986	54.11945	140.52	6.99
72/12/11	2441662.5	-0.30354	0.17059	0.04168	-33.83661	-40.28391	-0.25499	0.35068	52.60965	150.66	6.83
72/12/13	2441664.5	-0.33843	0.12200	0.04083	-26.55371	-43.61480	-1.19202	0.36206	51.07613	160.18	6.48
72/12/15	2441666.5	-0.36490	0.07035	0.03897	-19.30035	-45.60796	-2.01581	0.37366	49.56463	169.09	5.99
72/12/17	2441668.5	-0.38311	0.01708	0.03622	-12.27164	-46.43739	-2.72300	0.38519	48.10862	177.45	5.40
72/12/19	2441670.5	-0.39339	-0.03655	0.03272	-5.59575	-46.27661	-3.31629	0.39643	46.73152	185.31	4.73
72/12/21	2441672.5	-0.39620	-0.08951	0.02860	0.64951	-45.28513	-3.80180	0.40719	45.44907	192.73	4.03
72/12/23	2441674.5	-0.39207	-0.14090	0.02398	6.42192	-43.60261	-4.18723	0.41731	44.27145	199.77	3.29
72/12/25	2441676.5	-0.38155	-0.19002	0.01896	11.70314	-41.34763	-4.48071	0.42667	43.20493	206.47	2.55
72/12/27	2441678.5	-0.36522	-0.23624	0.01366	16.48993	-38.61886	-4.69012	0.43518	42.25318	212.90	1.80
72/12/29	2441680.5	-0.34365	-0.27908	0.00816	20.78793	-35.49743	-4.82266	0.44277	41.41816	219.08	1.06
72/12/31	2441682.5	-0.31738	-0.31812	0.00255	24.60729	-32.04955	-4.88472	0.44938	40.70077	225.07	0.32
73/ 1/ 2	2441684.5	-0.28698	-0.35302	-0.00310	27.95968	-28.32911	-4.88183	0.45496	40.10130	230.89	-0.39
73/ 1/ 4	2441686.5	-0.25297	-0.38348	-0.00871	30.85636	-24.38004	-4.81864	0.45948	39.61970	236.59	-1.09
73/ 1/ 6	2441688.5	-0.21587	-0.40926	-0.01421	33.30678	-20.23841	-4.69899	0.46292	39.25576	242.19	-1.76
73/ 1/ 8	2441690.5	-0.17619	-0.43017	-0.01954	35.31769	-15.93421	-4.52596	0.46527	39.00927	247.73	-2.41
73/ 1/10	2441692.5	-0.13445	-0.44602	-0.02465	36.89256	-11.49296	-4.30199	0.46650	38.88003	253.23	-3.03
73/ 1/12	2441694.5	-0.09113	-0.45668	-0.02946	38.03106	-6.93706	-4.02889	0.46661	38.86793	258.71	-3.62
73/ 1/14	2441696.5	-0.04676	-0.46201	-0.03394	38.72871	-2.28717	-3.70797	0.46561	38.97298	264.22	-4.18
73/ 1/16	2441698.5	-0.00183	-0.46193	-0.03801	38.97659	2.43657	-3.34008	0.46350	39.19525	269.77	-4.70
73/ 1/18	2441700.5	0.04311	-0.45636	-0.04163	38.76107	7.21322	-2.92570	0.46028	39.53493	275.40	-5.19
73/ 1/20	2441702.5	0.08752	-0.44526	-0.04475	38.06353	12.01960	-2.46508	0.45598	39.99224	281.12	-5.63
73/ 1/22	2441704.5	0.13085	-0.42859	-0.04731	36.86022	16.82863	-1.95829	0.45061	40.56739	286.98	-6.03
73/ 1/24	2441706.5	0.17247	-0.40639	-0.04926	35.12222	21.60744	-1.40540	0.44421	41.26048	293.00	-6.37
73/ 1/26	2441708.5	0.21177	-0.37870	-0.05054	32.81559	26.31502	-0.80674	0.43683	42.07129	299.21	-6.64
73/ 1/28	2441710.5	0.24805	-0.34565	-0.05111	29.90201	30.89930	-0.16312	0.42850	42.99911	305.66	-6.85
73/ 1/30	2441712.5	0.28060	-0.30739	-0.05090	26.34004	35.29369	0.52372	0.41930	44.04221	312.39	-6.97
73/ 2/ 1	2441714.5	0.30863	-0.26422	-0.04988	22.08752	39.41293	1.25056	0.40933	45.19737	319.43	-7.00
73/ 2/ 3	2441716.5	0.33134	-0.21649	-0.04800	17.10566	43.14835	2.01195	0.39870	46.45893	326.84	-6.91
73/ 2/ 5	2441718.5	0.34786	-0.16474	-0.04522	11.36566	46.36284	2.79917	0.38754	47.81764	334.66	-6.70
73/ 2/ 7	2441720.5	0.35730	-0.10965	-0.04153	4.85892	48.88654	3.59896	0.37605	49.25906	342.94	-6.34
73/ 2/ 9	2441722.5	0.35880	-0.05214	-0.03691	-2.38815	50.51476	4.39200	0.36444	50.76154	351.73	-5.81
73/ 2/11	2441724.5	0.35153	0.00661	-0.03139	-10.29421	51.01119	5.15139	0.35299	52.29387	1.08	-5.10
73/ 2/13	2441726.5	0.33482	0.06517	-0.02504	-18.69877	50.12060	5.84143	0.34202	53.81302	11.01	-4.20
73/ 2/15	2441728.5	0.30824	0.12177	-0.01794	-27.33785	47.59631	6.41775	0.33191	55.26259	21.56	-3.10
73/ 2/17	2441730.5	0.27172	0.17442	-0.01027	-35.82839	43.24610	6.82966	0.32305	56.57334	32.70	-1.82
73/ 2/19	2441732.5	0.22572	0.22094	-0.00225	-43.67545	36.99465	7.02598	0.31586	57.66726	44.39	-0.41
73/ 2/21	2441734.5	0.17129	0.25919	0.00586	-50.31681	28.94849	6.96441	0.31073	58.46623	56.54	1.08
73/ 2/23	2441736.5	0.11015	0.28725	0.01373	-55.20975	19.43700	6.62286	0.30795	58.90480	69.02	2.56
73/ 2/25	2441738.5	0.04458	0.30373	0.02105	-57.94206	8.99920	6.00844	0.30771	58.94378	81.65	3.92
73/ 2/27	2441740.5	-0.02280	0.30794	0.02752	-58.32730	-1.69542	5.15954	0.31001	58.57960	94.23	5.09

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73/ 3/ 1	2441742.5	-0.08929	0.29998	0.03291	-56.44158	-11.96991	4.13902	0.31471	57.84516	106.58	6.00
73/ 3/ 3	2441744.5	-0.15243	0.28067	0.03705	-52.58690	-21.25898	3.02104	0.32153	56.80187	118.51	6.62
73/ 3/ 5	2441746.5	-0.21018	0.25140	0.03988	-47.20298	-29.18121	1.87709	0.33010	55.52646	129.90	6.94
73/ 3/ 7	2441748.5	-0.26107	0.21386	0.04140	-40.76886	-35.55109	0.76601	0.34001	54.09776	140.68	6.99
73/ 3/ 9	2441750.5	-0.30413	0.16987	0.04167	-33.72708	-40.34621	-0.27013	0.35084	52.58712	150.81	6.82
73/ 3/11	2441752.5	-0.33889	0.12122	0.04081	-26.44251	-43.65552	-1.20552	0.36223	51.05354	160.32	6.47
73/ 3/13	2441754.5	-0.36524	0.06954	0.03893	-19.19107	-45.62957	-2.02755	0.37383	49.54256	169.22	5.98
73/ 3/15	2441756.5	-0.38332	0.01626	0.03617	-12.16673	-46.44253	-2.73298	0.38536	48.08749	177.57	5.39
73/ 3/17	2441758.5	-0.39348	-0.03737	0.03266	-5.49677	-46.26780	-3.32457	0.39660	46.71163	185.43	4.72
73/ 3/19	2441760.5	-0.39618	-0.09031	0.02853	0.74162	-45.26462	-3.80849	0.40735	45.43061	192.84	4.02
73/ 3/21	2441762.5	-0.39195	-0.14168	0.02390	6.50669	-43.57238	-4.19244	0.41745	44.25455	199.87	3.28
73/ 3/23	2441764.5	-0.38134	-0.19075	0.01888	11.78038	-41.30931	-4.48457	0.42681	43.18968	206.57	2.54
73/ 3/25	2441766.5	-0.36492	-0.23693	0.01358	16.55966	-38.57384	-4.69273	0.43530	42.23962	212.99	1.79
73/ 3/27	2441768.5	-0.34327	-0.27971	0.00807	20.85026	-35.44684	-4.82413	0.44288	41.40632	219.17	1.04
73/ 3/29	2441770.5	-0.31694	-0.31869	0.00246	24.66236	-31.99429	-4.88516	0.44947	40.69068	225.16	0.31
73/ 3/31	2441772.5	-0.28648	-0.35352	-0.00319	28.00768	-28.26995	-4.88129	0.45503	40.09298	230.98	-0.40
73/ 4/ 2	2441774.5	-0.25241	-0.38391	-0.00880	30.89741	-24.31759	-4.81720	0.45954	39.61314	236.68	-1.10
73/ 4/ 4	2441776.5	-0.21527	-0.40962	-0.01430	33.34100	-20.17319	-4.69669	0.46297	39.25097	242.28	-1.77
73/ 4/ 6	2441778.5	-0.17556	-0.43045	-0.01963	35.34517	-15.86665	-4.52286	0.46529	39.00625	247.81	-2.42
73/ 4/ 8	2441780.5	-0.13379	-0.44623	-0.02472	36.91331	-11.42343	-4.29811	0.46651	38.87879	253.31	-3.04
73/ 4/10	2441782.5	-0.09045	-0.45680	-0.02954	38.04504	-6.86591	-4.02426	0.46660	38.86850	258.80	-3.63
73/ 4/12	2441784.5	-0.04606	-0.46205	-0.03400	38.73583	-2.21471	-3.70260	0.46559	38.97536	264.31	-4.19
73/ 4/14	2441786.5	-0.00114	-0.46189	-0.03807	38.97668	2.51003	-3.33399	0.46346	39.19946	269.86	-4.71
73/ 4/16	2441788.5	0.04380	-0.45623	-0.04169	38.75388	7.28733	-2.91890	0.46022	39.54097	275.48	-5.20
73/ 4/18	2441790.5	0.08820	-0.44504	-0.04480	38.04873	12.09396	-2.45757	0.45590	40.00012	281.21	-5.64
73/ 4/20	2441792.5	0.13150	-0.42829	-0.04735	36.83740	16.90279	-1.95005	0.45052	40.57710	287.07	-6.03
73/ 4/22	2441794.5	0.17310	-0.40600	-0.04928	35.09088	21.68084	-1.39646	0.44411	41.27201	293.09	-6.37
73/ 4/24	2441796.5	0.21235	-0.37823	-0.05056	32.77516	26.38694	-0.79709	0.43670	42.08464	299.31	-6.65
73/ 4/26	2441798.5	0.24858	-0.34509	-0.05111	29.85188	30.96883	-0.15279	0.42836	43.01426	305.77	-6.85
73/ 4/28	2441800.5	0.28106	-0.30676	-0.05089	26.27957	35.35968	0.53469	0.41916	44.05914	312.50	-6.97
73/ 4/30	2441802.5	0.30903	-0.26351	-0.04986	22.01607	39.47389	1.26212	0.40917	45.21602	319.55	-7.00
73/ 5/ 2	2441804.5	0.33164	-0.21572	-0.04796	17.02268	43.20239	2.02398	0.39853	46.47919	326.96	-6.91
73/ 5/ 4	2441806.5	0.34806	-0.16391	-0.04517	11.27084	46.40761	2.81150	0.38737	47.83934	334.78	-6.70
73/ 5/ 6	2441808.5	0.35739	-0.10878	-0.04146	4.75234	48.91913	3.61135	0.37587	49.28192	343.07	-6.33
73/ 5/ 8	2441810.5	0.35875	-0.05124	-0.03683	-2.50573	50.53175	4.40411	0.36426	50.78516	351.87	-5.80
73/ 5/10	2441812.5	0.35134	0.00752	-0.03130	-10.42098	51.00872	5.16271	0.35282	52.31768	1.23	-5.09
73/ 5/12	2441814.5	0.33449	0.06606	-0.02493	-18.83152	50.09469	5.85135	0.34186	53.83626	11.17	-4.18
73/ 5/14	2441816.5	0.30775	0.12262	-0.01783	-27.47160	47.54339	6.42553	0.33176	55.28427	21.72	-3.08
73/ 5/16	2441818.5	0.27108	0.17519	-0.01015	-35.95628	43.16393	6.83448	0.32292	56.59231	32.87	-1.80
73/ 5/18	2441820.5	0.22493	0.22160	-0.00212	-43.78911	36.88329	7.02708	0.31576	57.68227	44.57	-0.39
73/ 5/20	2441822.5	0.17039	0.25970	0.00598	-50.40742	28.81128	6.96127	0.31067	58.47612	56.73	1.10
73/ 5/22	2441824.5	0.10916	0.28760	0.01385	-55.26959	19.28077	6.61536	0.30793	58.90873	69.21	2.58
73/ 5/24	2441826.5	0.04354	0.30389	0.02116	-57.96631	8.83360	5.99692	0.30772	58.94140	81.85	3.94
73/ 5/26	2441828.5	-0.02384	0.30791	0.02761	-58.31510	-1.85961	5.14482	0.31006	58.57114	94.43	5.11
73/ 5/28	2441830.5	-0.09030	0.29976	0.03298	-56.39602	-12.12279	4.12221	0.31480	57.83136	106.76	6.01

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73/ 5/30	2441832.5	-0.15337	0.28029	0.03710	-52.51398	-21.39310	3.00329	0.32165	56.78382	118.69	6.62
73/ 6/ 1	2441834.5	-0.21103	0.25087	0.03991	-47.11005	-29.29220	1.85943	0.33025	55.50538	130.07	6.94
73/ 6/ 3	2441836.5	-0.26180	0.21322	0.04141	-40.66323	-35.63745	0.74924	0.34017	54.07483	140.84	6.99
73/ 6/ 5	2441838.5	-0.30474	0.16915	0.04167	-33.61506	-40.40858	-0.28549	0.35102	52.56336	150.97	6.82
73/ 6/ 7	2441840.5	-0.33937	0.12044	0.04079	-26.32909	-43.69589	-1.21919	0.36241	51.02978	160.46	6.46
73/ 6/ 9	2441842.5	-0.36558	0.06872	0.03890	-19.07986	-45.65054	-2.03941	0.37401	49.51941	169.35	5.97
73/ 6/11	2441844.5	-0.38353	0.01542	0.03612	-12.06019	-46.44685	-2.74304	0.38554	48.06539	177.70	5.38
73/ 6/13	2441846.5	-0.39358	-0.03820	0.03260	-5.39645	-46.25807	-3.33290	0.39677	46.69088	185.54	4.71
73/ 6/15	2441848.5	-0.39617	-0.09112	0.02846	0.83484	-45.24318	-3.81520	0.40751	45.41143	192.95	4.01
73/ 6/17	2441850.5	-0.39183	-0.14246	0.02383	6.59238	-43.54121	-4.19766	0.41761	44.23705	199.98	3.27
73/ 6/19	2441852.5	-0.38113	-0.19149	0.01880	11.85839	-41.27011	-4.48842	0.42694	43.17394	206.68	2.52
73/ 6/21	2441854.5	-0.36463	-0.23762	0.01349	16.63003	-38.52798	-4.69534	0.43543	42.22570	213.09	1.78
73/ 6/23	2441856.5	-0.34290	-0.28035	0.00798	20.91312	-35.39546	-4.82560	0.44299	41.39424	219.27	1.03
73/ 6/25	2441858.5	-0.31650	-0.31926	0.00237	24.71790	-31.93832	-4.88557	0.44956	40.68046	225.25	0.30
73/ 6/27	2441860.5	-0.28597	-0.35403	-0.00328	28.05606	-28.21013	-4.88074	0.45511	40.08460	231.07	-0.41
73/ 6/29	2441862.5	-0.25186	-0.38435	-0.00888	30.93882	-24.25454	-4.81574	0.45960	39.60662	236.76	-1.11
73/ 7/ 1	2441864.5	-0.21467	-0.40999	-0.01438	33.37556	-20.10739	-4.69438	0.46301	39.24630	242.36	-1.78
73/ 7/ 3	2441866.5	-0.17493	-0.43074	-0.01971	35.37295	-15.79854	-4.51973	0.46532	39.00343	247.90	-2.43
73/ 7/ 5	2441868.5	-0.13312	-0.44643	-0.02480	36.93435	-11.35336	-4.29421	0.46652	38.87782	253.40	-3.05
73/ 7/ 7	2441870.5	-0.08977	-0.45692	-0.02961	38.05929	-6.79420	-4.01960	0.46660	38.86937	258.89	-3.64
73/ 7/ 9	2441872.5	-0.04537	-0.46209	-0.03407	38.74318	-2.14168	-3.69721	0.46556	38.97807	264.39	-4.20
73/ 7/11	2441874.5	-0.00044	-0.46184	-0.03813	38.97695	2.58406	-3.32787	0.46341	39.20401	269.95	-4.72
73/ 7/13	2441876.5	0.04450	-0.45610	-0.04174	38.74680	7.36202	-2.91206	0.46016	39.54736	275.57	-5.20
73/ 7/15	2441878.5	0.08889	-0.44482	-0.04484	38.03396	12.16892	-2.45000	0.45583	40.00834	281.30	-5.65
73/ 7/17	2441880.5	0.13217	-0.42799	-0.04738	36.81453	16.97755	-1.94177	0.45043	40.58716	287.16	-6.04
73/ 7/19	2441882.5	0.17373	-0.40561	-0.04931	35.05942	21.75484	-1.38745	0.44400	41.28391	293.19	-6.38
73/ 7/21	2441884.5	0.21294	-0.37776	-0.05057	32.73455	26.45946	-0.78738	0.43658	42.09838	299.41	-6.65
73/ 7/23	2441886.5	0.24912	-0.34453	-0.05111	29.80148	31.03894	-0.14239	0.42822	43.02981	305.87	-6.85
73/ 7/25	2441888.5	0.28154	-0.30613	-0.05088	26.21872	35.42620	0.54575	0.41901	44.07647	312.60	-6.97
73/ 7/27	2441890.5	0.30942	-0.26280	-0.04983	21.94412	39.53532	1.27376	0.40901	45.23503	319.66	-7.00
73/ 7/29	2441892.5	0.33195	-0.21494	-0.04793	16.93908	43.25680	2.03609	0.39836	46.49977	327.08	-6.91
73/ 7/31	2441894.5	0.34826	-0.16307	-0.04512	11.17526	46.45258	2.82393	0.38719	47.86129	334.91	-6.69
73/ 8/ 2	2441896.5	0.35747	-0.10790	-0.04140	4.64492	48.95172	3.62382	0.37569	49.30495	343.20	-6.33
73/ 8/ 4	2441898.5	0.35871	-0.05033	-0.03675	-2.62417	50.54849	4.41627	0.36408	50.80885	352.01	-5.79
73/ 8/ 6	2441900.5	0.35116	0.00844	-0.03121	-10.54858	51.00574	5.17407	0.35264	52.34146	1.38	-5.08
73/ 8/ 8	2441902.5	0.33415	0.06696	-0.02483	-18.96496	50.06799	5.86127	0.34169	53.85933	11.33	-4.17
73/ 8/10	2441904.5	0.30726	0.12348	-0.01771	-27.60579	47.48947	6.43326	0.33161	55.30566	21.89	-3.06
73/ 8/12	2441906.5	0.27043	0.17597	-0.01003	-36.08426	43.08060	6.83922	0.32280	56.61084	33.05	-1.78
73/ 8/14	2441908.5	0.22415	0.22226	-0.00200	-43.90247	36.77078	7.02807	0.31567	57.69671	44.76	-0.36
73/ 8/16	2441910.5	0.16948	0.26022	0.00611	-50.49730	28.67306	6.95799	0.31061	58.48535	56.92	1.13
73/ 8/18	2441912.5	0.10817	0.28794	0.01397	-55.32839	19.12386	6.60770	0.30791	58.91192	69.41	2.60
73/ 8/20	2441914.5	0.04250	0.30405	0.02127	-57.98934	8.66775	5.98528	0.30774	58.93824	82.04	3.96
73/ 8/22	2441916.5	-0.02489	0.30788	0.02771	-58.30166	-2.02360	5.13001	0.31012	58.56190	94.62	5.13
73/ 8/24	2441918.5	-0.09131	0.29955	0.03305	-56.34941	-12.27509	4.10534	0.31489	57.81684	106.95	6.03
73/ 8/26	2441920.5	-0.15431	0.27991	0.03715	-52.44031	-21.52638	2.98554	0.32177	56.76517	118.87	6.63

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73/ 8/28	2441922.5	-0.21187	0.25035	0.03994	-47.01673	-29.40226	1.84182	0.33039	55.48385	130.24	6.94
73/ 8/30	2441924.5	-0.26253	0.21258	0.04142	-40.55753	-35.72293	0.73253	0.34033	54.05162	141.00	6.99
73/ 9/ 1	2441926.5	-0.30534	0.16843	0.04166	-33.50326	-40.47023	-0.30078	0.35119	52.53949	151.12	6.81
73/ 9/ 3	2441928.5	-0.33984	0.11966	0.04077	-26.21608	-43.73573	-1.23279	0.36259	51.00604	160.60	6.46
73/ 9/ 5	2441930.5	-0.36592	0.06790	0.03886	-18.96917	-45.67117	-2.05120	0.37419	49.49639	169.49	5.96
73/ 9/ 7	2441932.5	-0.38375	0.01460	0.03607	-11.95422	-46.45100	-2.75303	0.38572	48.04350	177.82	5.37
73/ 9/ 9	2441934.5	-0.39367	-0.03903	0.03254	-5.29670	-46.24833	-3.34118	0.39694	46.67040	185.66	4.70
73/ 9/11	2441936.5	-0.39615	-0.09193	0.02840	0.92751	-45.22184	-3.82187	0.40767	45.39253	193.06	3.99
73/ 9/13	2441938.5	-0.39171	-0.14323	0.02375	6.67755	-43.51026	-4.20285	0.41776	44.21986	200.09	3.26
73/ 9/15	2441940.5	-0.38092	-0.19223	0.01872	11.93593	-41.23120	-4.49226	0.42708	43.15853	206.78	2.51
73/ 9/17	2441942.5	-0.36433	-0.23830	0.01341	16.69999	-38.48248	-4.69794	0.43555	42.21210	213.19	1.76
73/ 9/19	2441944.5	-0.34252	-0.28098	0.00790	20.97563	-35.34447	-4.82706	0.44310	41.38248	219.36	1.02
73/ 9/21	2441946.5	-0.31606	-0.31983	0.00228	24.77314	-31.88276	-4.88599	0.44966	40.67053	225.34	0.29
73/ 9/23	2441948.5	-0.28547	-0.35453	-0.00336	28.10421	-28.15072	-4.88020	0.45519	40.07651	231.16	-0.42
73/ 9/25	2441950.5	-0.25131	-0.38478	-0.00897	30.98004	-24.19189	-4.81429	0.45966	39.60035	236.85	-1.12
73/ 9/27	2441952.5	-0.21408	-0.41034	-0.01446	33.40996	-20.04200	-4.69208	0.46305	39.24185	242.45	-1.79
73/ 9/29	2441954.5	-0.17429	-0.43102	-0.01979	35.40061	-15.73082	-4.51663	0.46534	39.00079	247.98	-2.44
73/10/ 1	2441956.5	-0.13246	-0.44663	-0.02488	36.95527	-11.28367	-4.29033	0.46652	38.87699	253.48	-3.06
73/10/ 3	2441958.5	-0.08909	-0.45704	-0.02968	38.07344	-6.72288	-4.01497	0.46659	38.87035	258.97	-3.65
73/10/ 5	2441960.5	-0.04468	-0.46213	-0.03414	38.75044	-2.06903	-3.69184	0.46553	38.98086	264.48	-4.21
73/10/ 7	2441962.5	0.00026	-0.46179	-0.03819	38.97715	2.65773	-3.32177	0.46337	39.20862	270.03	-4.73
73/10/ 9	2441964.5	0.04519	-0.45597	-0.04179	38.73968	7.43636	-2.90524	0.46010	39.55379	275.66	-5.21
73/10/11	2441966.5	0.08957	-0.44460	-0.04488	38.01919	12.24356	-2.44246	0.45575	40.01661	281.39	-5.65
73/10/13	2441968.5	0.13283	-0.42768	-0.04742	36.79169	17.05202	-1.93351	0.45034	40.59727	287.25	-6.04
73/10/15	2441970.5	0.17436	-0.40522	-0.04933	35.02801	21.82857	-1.37848	0.44389	41.29586	293.28	-6.38
73/10/17	2441972.5	0.21353	-0.37728	-0.05058	32.69399	26.53171	-0.77770	0.43646	42.11215	299.51	-6.66
73/10/19	2441974.5	0.24965	-0.34398	-0.05111	29.75115	31.10879	-0.13201	0.42809	43.04538	305.97	-6.86
73/10/21	2441976.5	0.28201	-0.30549	-0.05087	26.15793	35.49245	0.55677	0.41885	44.09378	312.71	-6.98
73/10/23	2441978.5	0.30982	-0.26209	-0.04981	21.87224	39.59645	1.28537	0.40885	45.25401	319.77	-7.00
73/10/25	2441980.5	0.33225	-0.21416	-0.04789	16.85557	43.31088	2.04818	0.39819	46.52030	327.20	-6.91
73/10/27	2441982.5	0.34846	-0.16224	-0.04507	11.07984	46.49722	2.83631	0.38701	47.88318	335.03	-6.69
73/10/29	2441984.5	0.35756	-0.10702	-0.04133	4.53770	48.98398	3.63625	0.37551	49.32792	343.34	-6.32
73/10/31	2441986.5	0.35866	-0.04942	-0.03667	-2.74234	50.56491	4.42837	0.36390	50.83248	352.15	-5.78
73/11/ 2	2441988.5	0.35097	0.00936	-0.03112	-10.67580	51.00243	5.18536	0.35247	52.36515	1.53	-5.06
73/11/ 4	2441990.5	0.33381	0.06786	-0.02472	-19.09790	50.04099	5.87112	0.34153	53.88228	11.49	-4.15
73/11/ 6	2441992.5	0.30676	0.12433	-0.01760	-27.73933	47.43528	6.44091	0.33147	55.32686	22.06	-3.04
73/11/ 8	2441994.5	0.26979	0.17674	-0.00991	-36.21145	42.99711	6.84386	0.32268	56.62913	33.23	-1.76
73/11/10	2441996.5	0.22336	0.22292	-0.00187	-44.01487	36.65827	7.02897	0.31558	57.71087	44.94	-0.34
73/11/12	2441998.5	0.16858	0.26074	0.00623	-50.58615	28.53511	6.95464	0.31055	58.49426	57.11	1.15
73/11/14	2442000.5	0.10718	0.28829	0.01409	-55.38615	18.96752	6.60000	0.30789	58.91479	69.60	2.62
73/11/16	2442002.5	0.04147	0.30421	0.02137	-58.01145	8.50278	5.97362	0.30776	58.93479	82.24	3.98
73/11/18	2442004.5	-0.02592	0.30784	0.02780	-58.28757	-2.18644	5.11524	0.31018	58.55242	94.81	5.14
73/11/20	2442006.5	-0.09231	0.29933	0.03313	-56.30244	-12.42609	4.08856	0.31499	57.80215	107.14	6.04
73/11/22	2442008.5	-0.15524	0.27953	0.03721	-52.36661	-21.65832	2.96790	0.32190	56.74639	119.05	6.64
73/11/24	2442010.5	-0.21271	0.24983	0.03997	-46.92369	-29.51102	1.82434	0.33054	55.46225	130.41	6.95

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73/11/26	2442012.5	-0.26325	0.21195	0.04144	-40.45237	-35.80722	0.71597	0.34050	54.02837	141.16	6.99
73/11/28	2442014.5	-0.30593	0.16772	0.04166	-33.39219	-40.53085	-0.31592	0.35137	52.51559	151.27	6.81
73/11/30	2442016.5	-0.34030	0.11889	0.04075	-26.10394	-43.77470	-1.24623	0.36277	50.98229	160.74	6.45
73/12/ 2	2442018.5	-0.36626	0.06710	0.03882	-18.85947	-45.69114	-2.06285	0.37437	49.47337	169.62	5.95
73/12/ 4	2442020.5	-0.38396	0.01378	0.03603	-11.84929	-46.45470	-2.76289	0.38589	48.02164	177.94	5.36
73/12/ 6	2442022.5	-0.39377	-0.03984	0.03248	-5.19800	-46.23833	-3.34934	0.39711	46.64998	185.78	4.69
73/12/ 8	2442024.5	-0.39614	-0.09272	0.02833	1.01916	-45.20045	-3.82844	0.40783	45.37374	193.17	3.98
73/12/10	2442026.5	-0.39160	-0.14400	0.02368	6.76176	-43.47942	-4.20796	0.41791	44.20281	200.19	3.25
73/12/12	2442028.5	-0.38071	-0.19295	0.01864	12.01259	-41.19254	-4.49603	0.42722	43.14328	206.88	2.50
73/12/14	2442030.5	-0.36404	-0.23898	0.01332	16.76914	-38.43734	-4.70049	0.43567	42.19867	213.28	1.75
73/12/16	2442032.5	-0.34215	-0.28160	0.00781	21.03742	-35.29395	-4.82850	0.44320	41.37088	219.45	1.01
73/12/18	2442034.5	-0.31562	-0.32039	0.00220	24.82773	-31.82773	-4.88639	0.44975	40.66076	225.43	0.28
73/12/20	2442036.5	-0.28498	-0.35502	-0.00345	28.15178	-28.09192	-4.87965	0.45526	40.06856	231.25	-0.43
73/12/22	2442038.5	-0.25076	-0.38520	-0.00905	31.02075	-24.12990	-4.81285	0.45972	39.59422	236.94	-1.13
73/12/24	2442040.5	-0.21349	-0.41069	-0.01455	33.44394	-19.97733	-4.68981	0.46310	39.23755	242.53	-1.80
73/12/26	2442042.5	-0.17367	-0.43129	-0.01987	35.42793	-15.66387	-4.51356	0.46537	38.99830	248.07	-2.45
73/12/28	2442044.5	-0.13181	-0.44683	-0.02495	36.97596	-11.21481	-4.28650	0.46653	38.87631	253.56	-3.07
73/12/30	2442046.5	-0.08841	-0.45716	-0.02975	38.08744	-6.65241	-4.01040	0.46658	38.87146	259.05	-3.66
74/ 1/ 1	2442048.5	-0.04399	-0.46216	-0.03420	38.75763	-1.99726	-3.68654	0.46551	38.98376	264.56	-4.21
74/ 1/ 3	2442050.5	0.00095	-0.46174	-0.03825	38.97733	2.73049	-3.31575	0.46333	39.21329	270.12	-4.74
74/ 1/ 5	2442052.5	0.04588	-0.45583	-0.04184	38.73260	7.50978	-2.89850	0.46004	39.56024	275.75	-5.22
74/ 1/ 7	2442054.5	0.09024	-0.44438	-0.04493	38.00451	12.31724	-2.43501	0.45567	40.02482	281.48	-5.66
74/ 1/ 9	2442056.5	0.13348	-0.42738	-0.04745	36.76900	17.12550	-1.92535	0.45024	40.60725	287.34	-6.05
74/ 1/11	2442058.5	0.17498	-0.40483	-0.04936	34.99681	21.90127	-1.36961	0.44378	41.30761	293.38	-6.39
74/ 1/13	2442060.5	0.21411	-0.37681	-0.05060	32.65374	26.60291	-0.76813	0.43633	42.12567	299.61	-6.66
74/ 1/15	2442062.5	0.25018	-0.34342	-0.05112	29.70122	31.17757	-0.12176	0.42795	43.06063	306.07	-6.86
74/ 1/17	2442064.5	0.28247	-0.30486	-0.05086	26.09768	35.55764	0.56766	0.41871	44.11073	312.82	-6.98
74/ 1/19	2442066.5	0.31020	-0.26139	-0.04979	21.80103	39.65655	1.29683	0.40869	45.27260	319.88	-7.00
74/ 1/21	2442068.5	0.33255	-0.21340	-0.04785	16.77289	43.36398	2.06010	0.39802	46.54040	327.31	-6.91
74/ 1/23	2442070.5	0.34866	-0.16141	-0.04502	10.98539	46.54093	2.84852	0.38684	47.90461	335.16	-6.68
74/ 1/25	2442072.5	0.35764	-0.10615	-0.04127	4.43164	49.01542	3.64850	0.37533	49.35040	343.47	-6.31
74/ 1/27	2442074.5	0.35861	-0.04853	-0.03659	-2.85918	50.58065	4.44030	0.36373	50.85561	352.29	-5.77
74/ 1/29	2442076.5	0.35078	0.01026	-0.03102	-10.80155	50.99866	5.19648	0.35230	52.38836	1.68	-5.05
74/ 1/31	2442078.5	0.33347	0.06875	-0.02462	-19.22924	50.01381	5.88081	0.34137	53.90481	11.65	-4.14
74/ 2/ 2	2442080.5	0.30627	0.12517	-0.01748	-27.87123	47.38128	6.44843	0.33132	55.34775	22.23	-3.02
74/ 2/ 4	2442082.5	0.26915	0.17750	-0.00978	-36.33704	42.91422	6.84841	0.32256	56.64725	33.40	-1.74
74/ 2/ 6	2442084.5	0.22259	0.22357	-0.00175	-44.12586	36.54677	7.02982	0.31549	57.72501	45.13	-0.32
74/ 2/ 8	2442086.5	0.16769	0.26124	0.00636	-50.67388	28.39848	6.95130	0.31049	58.50330	57.30	1.17
74/ 2/10	2442088.5	0.10621	0.28862	0.01420	-55.44318	18.81272	6.59236	0.30787	58.91794	69.80	2.64
74/ 2/12	2442090.5	0.04045	0.30436	0.02148	-58.03325	8.33941	5.96206	0.30778	58.93174	82.43	4.00
74/ 2/14	2442092.5	-0.02695	0.30780	0.02789	-58.27356	-2.34778	5.10059	0.31024	58.54346	95.00	5.16
74/ 2/16	2442094.5	-0.09330	0.29911	0.03320	-56.25591	-12.57578	4.07192	0.31508	57.78804	107.32	6.05
74/ 2/18	2442096.5	-0.15616	0.27915	0.03726	-52.29360	-21.78924	2.95041	0.32202	56.72827	119.22	6.64
74/ 2/20	2442098.5	-0.21353	0.24931	0.04001	-46.83146	-29.61906	1.80699	0.33068	55.44132	130.58	6.95
74/ 2/22	2442100.5	-0.26396	0.21132	0.04145	-40.34807	-35.89109	0.69953	0.34066	54.00580	141.32	6.99

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74/ 2/24	2442102.5	-0.30652	0.16700	0.04165	-33.28193	-40.59127	-0.33096	0.35154	52.49236	151.42	6.80
74/ 2/26	2442104.5	-0.34076	0.11812	0.04072	-25.99254	-43.81367	-1.25960	0.36294	50.95916	160.88	6.44
74/ 2/28	2442106.5	-0.36659	0.06629	0.03879	-18.75038	-45.71120	-2.07444	0.37455	49.45092	169.75	5.94
74/ 3/ 2	2442108.5	-0.38417	0.01296	0.03598	-11.74487	-46.45853	-2.77272	0.38607	48.00026	178.07	5.35
74/ 3/ 4	2442110.5	-0.39386	-0.04066	0.03242	-5.09972	-46.22847	-3.35747	0.39728	46.62994	185.89	4.68
74/ 3/ 6	2442112.5	-0.39612	-0.09352	0.02826	1.11043	-45.17915	-3.83498	0.40799	45.35522	193.28	3.97
74/ 3/ 8	2442114.5	-0.39148	-0.14477	0.02360	6.84560	-43.44863	-4.21304	0.41805	44.18591	200.29	3.24
74/ 3/10	2442116.5	-0.38049	-0.19368	0.01856	12.08887	-41.15389	-4.49977	0.42735	43.12808	206.98	2.49
74/ 3/12	2442118.5	-0.36374	-0.23966	0.01324	16.83789	-38.39218	-4.70301	0.43580	42.18521	213.38	1.74
74/ 3/14	2442120.5	-0.34178	-0.28222	0.00773	21.09876	-35.24339	-4.82989	0.44331	41.35918	219.55	1.00
74/ 3/16	2442122.5	-0.31518	-0.32095	0.00211	24.88184	-31.77268	-4.88676	0.44984	40.65083	225.52	0.27
74/ 3/18	2442124.5	-0.28448	-0.35552	-0.00354	28.19884	-28.03310	-4.87905	0.45534	40.06039	231.33	-0.45
74/ 3/20	2442126.5	-0.25021	-0.38563	-0.00914	31.06091	-24.06792	-4.81137	0.45978	39.58780	237.02	-1.14
74/ 3/22	2442128.5	-0.21290	-0.41105	-0.01463	33.47732	-19.91269	-4.68749	0.46314	39.23287	242.62	-1.81
74/ 3/24	2442130.5	-0.17304	-0.43157	-0.01995	35.45460	-15.59698	-4.51044	0.46540	38.99537	248.15	-2.46
74/ 3/26	2442132.5	-0.13116	-0.44703	-0.02503	36.99595	-11.14603	-4.28261	0.46654	38.87512	253.65	-3.08
74/ 3/28	2442134.5	-0.08774	-0.45727	-0.02982	38.10073	-6.58208	-4.00577	0.46657	38.87204	259.14	-3.66
74/ 3/30	2442136.5	-0.04331	-0.46220	-0.03427	38.76413	-1.92569	-3.68119	0.46548	38.98612	264.65	-4.22
74/ 4/ 1	2442138.5	0.00163	-0.46170	-0.03831	38.97688	2.80299	-3.30969	0.46328	39.21744	270.20	-4.74
74/ 4/ 3	2442140.5	0.04656	-0.45570	-0.04189	38.72495	7.58288	-2.89174	0.45998	39.56620	275.83	-5.23
74/ 4/ 5	2442142.5	0.09091	-0.44417	-0.04497	37.98933	12.39056	-2.42754	0.45560	40.03259	281.57	-5.66
74/ 4/ 7	2442144.5	0.13412	-0.42708	-0.04748	36.74588	17.19859	-1.91718	0.45015	40.61683	287.43	-6.06
74/ 4/ 9	2442146.5	0.17559	-0.40445	-0.04938	34.96528	21.97356	-1.36074	0.44368	41.31900	293.47	-6.39
74/ 4/11	2442148.5	0.21468	-0.37634	-0.05061	32.61322	26.67370	-0.75856	0.43621	42.13887	299.70	-6.66
74/ 4/13	2442150.5	0.25070	-0.34288	-0.05112	29.65111	31.24597	-0.11153	0.42782	43.07564	306.17	-6.86
74/ 4/15	2442152.5	0.28293	-0.30423	-0.05085	26.03733	35.62248	0.57853	0.41856	44.12752	312.92	-6.98
74/ 4/17	2442154.5	0.31058	-0.26069	-0.04977	21.72983	39.71635	1.30827	0.40853	45.29112	319.99	-7.00
74/ 4/19	2442156.5	0.33285	-0.21263	-0.04782	16.69029	43.41688	2.07200	0.39785	46.56055	327.43	-6.90
74/ 4/21	2442158.5	0.34885	-0.16059	-0.04497	10.89107	46.58457	2.86072	0.38666	47.92621	335.28	-6.68
74/ 4/23	2442160.5	0.35771	-0.10529	-0.04120	4.32569	49.04691	3.66075	0.37515	49.37319	343.60	-6.31
74/ 4/25	2442162.5	0.35856	-0.04764	-0.03652	-2.97598	50.59657	4.45225	0.36355	50.87919	352.43	-5.76
74/ 4/27	2442164.5	0.35058	0.01116	-0.03093	-10.92739	50.99516	5.20764	0.35212	52.41216	1.82	-5.04
74/ 4/29	2442166.5	0.33313	0.06963	-0.02451	-19.36088	49.98694	5.89055	0.34121	53.92806	11.81	-4.12
74/ 5/ 1	2442168.5	0.30577	0.12600	-0.01737	-28.00365	47.32752	6.45601	0.33117	55.36947	22.40	-3.01
74/ 5/ 3	2442170.5	0.26850	0.17825	-0.00966	-36.46335	42.83138	6.85303	0.32243	56.66627	33.58	-1.72
74/ 5/ 5	2442172.5	0.22180	0.22421	-0.00162	-44.23771	36.43501	7.03073	0.31539	57.74007	45.31	-0.29
74/ 5/ 7	2442174.5	0.16679	0.26174	0.00648	-50.76248	28.26125	6.94798	0.31043	58.51327	57.49	1.20
74/ 5/ 9	2442176.5	0.10522	0.28895	0.01432	-55.50098	18.65693	6.58470	0.30784	58.92197	69.99	2.67
74/ 5/11	2442178.5	0.03941	0.30450	0.02159	-58.05558	8.17473	5.95045	0.30780	58.92949	82.62	4.02
74/ 5/13	2442180.5	-0.02799	0.30776	0.02798	-58.25973	-2.51064	5.08584	0.31029	58.53516	95.20	5.17
74/ 5/15	2442182.5	-0.09431	0.29888	0.03327	-56.20912	-12.72707	4.05512	0.31517	57.77445	107.51	6.06
74/ 5/17	2442184.5	-0.15709	0.27875	0.03731	-52.21989	-21.92164	2.93273	0.32214	56.71046	119.40	6.65
74/ 5/19	2442186.5	-0.21437	0.24878	0.04004	-46.73815	-29.72836	1.78944	0.33083	55.42051	130.75	6.95
74/ 5/21	2442188.5	-0.26468	0.21068	0.04146	-40.24237	-35.97587	0.68288	0.34082	53.98312	141.48	6.99
74/ 5/23	2442190.5	-0.30711	0.16627	0.04165	-33.17010	-40.65224	-0.34620	0.35171	52.46884	151.57	6.80

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74/ 5/25	2442192.5	-0.34122	0.11733	0.04070	-25.87946	-43.85281	-1.27314	0.36312	50.93561	161.02	6.44
74/ 5/27	2442194.5	-0.36692	0.06547	0.03875	-18.63962	-45.73111	-2.08618	0.37472	49.42795	169.88	5.94
74/ 5/29	2442196.5	-0.38438	0.01213	0.03593	-11.63884	-46.46195	-2.78265	0.38624	47.97831	178.19	5.34
74/ 5/31	2442198.5	-0.39395	-0.04149	0.03236	-4.99995	-46.21798	-3.36568	0.39745	46.60932	186.01	4.67
74/ 6/ 2	2442200.5	-0.39610	-0.09433	0.02819	1.20309	-45.15706	-3.84159	0.40815	45.33613	193.40	3.96
74/ 6/ 4	2442202.5	-0.39135	-0.14555	0.02353	6.93072	-43.41691	-4.21817	0.41820	44.16850	200.40	3.23
74/ 6/ 6	2442204.5	-0.38028	-0.19442	0.01848	12.16631	-41.11421	-4.50354	0.42749	43.11240	207.08	2.48
74/ 6/ 8	2442206.5	-0.36344	-0.24035	0.01316	16.90770	-38.34591	-4.70553	0.43592	42.17133	213.48	1.73
74/ 6/10	2442208.5	-0.34140	-0.28285	0.00764	21.16107	-35.19165	-4.83127	0.44342	41.34712	219.64	0.99
74/ 6/12	2442210.5	-0.31473	-0.32152	0.00202	24.93683	-31.71639	-4.88710	0.44993	40.64060	225.61	0.26
74/ 6/14	2442212.5	-0.28397	-0.35602	-0.00362	28.24669	-27.97301	-4.87842	0.45542	40.05201	231.42	-0.46
74/ 6/16	2442214.5	-0.24965	-0.38606	-0.00923	31.10177	-24.00464	-4.80984	0.45984	39.58128	237.11	-1.15
74/ 6/18	2442216.5	-0.21230	-0.41140	-0.01471	33.51132	-19.84672	-4.68511	0.46318	39.22819	242.71	-1.82
74/ 6/20	2442218.5	-0.17241	-0.43185	-0.02003	35.48183	-15.52874	-4.50726	0.46542	38.99253	248.24	-2.47
74/ 6/22	2442220.5	-0.13049	-0.44723	-0.02511	37.01642	-11.07589	-4.27865	0.46655	38.87412	253.73	-3.08
74/ 6/24	2442222.5	-0.08706	-0.45739	-0.02989	38.11440	-6.51035	-4.00107	0.46656	38.87288	259.22	-3.67
74/ 6/26	2442224.5	-0.04261	-0.46223	-0.03433	38.77090	-1.85269	-3.67575	0.46546	38.98880	264.73	-4.23
74/ 6/28	2442226.5	0.00233	-0.46164	-0.03837	38.97656	2.87694	-3.30352	0.46324	39.22196	270.29	-4.75
74/ 6/30	2442228.5	0.04725	-0.45556	-0.04195	38.71727	7.65745	-2.88485	0.45993	39.57254	275.92	-5.23
74/ 7/ 2	2442230.5	0.09159	-0.44394	-0.04501	37.97397	12.46534	-2.41994	0.45552	40.04076	281.66	-5.67
74/ 7/ 4	2442232.5	0.13478	-0.42677	-0.04752	36.72241	17.27312	-1.90886	0.45006	40.62683	287.53	-6.06
74/ 7/ 6	2442234.5	0.17622	-0.40405	-0.04941	34.93320	22.04727	-1.35170	0.44357	41.33083	293.56	-6.40
74/ 7/ 8	2442236.5	0.21526	-0.37586	-0.05062	32.57198	26.74585	-0.74882	0.43609	42.15253	299.80	-6.67
74/ 7/10	2442238.5	0.25123	-0.34231	-0.05112	29.60008	31.31564	-0.10110	0.42768	43.09112	306.28	-6.86
74/ 7/12	2442240.5	0.28339	-0.30359	-0.05084	25.97585	35.68850	0.58960	0.41841	44.14478	313.03	-6.98
74/ 7/14	2442242.5	0.31097	-0.25998	-0.04974	21.65725	39.77720	1.31992	0.40837	45.31009	320.10	-7.00
74/ 7/16	2442244.5	0.33314	-0.21185	-0.04778	16.60608	43.47061	2.08412	0.39768	46.58110	327.55	-6.90
74/ 7/18	2442246.5	0.34904	-0.15976	-0.04492	10.79492	46.62875	2.87313	0.38649	47.94816	335.41	-6.67
74/ 7/20	2442248.5	0.35779	-0.10441	-0.04114	4.21774	49.07859	3.67320	0.37497	49.39625	343.73	-6.30
74/ 7/22	2442250.5	0.35850	-0.04673	-0.03643	-3.09489	50.61225	4.46436	0.36337	50.90293	352.57	-5.75
74/ 7/24	2442252.5	0.35039	0.01207	-0.03084	-11.05533	50.99096	5.21892	0.35195	52.43601	1.97	-5.03
74/ 7/26	2442254.5	0.33278	0.07052	-0.02441	-19.49447	49.95886	5.90038	0.34104	53.95125	11.97	-4.10
74/ 7/28	2442256.5	0.30527	0.12685	-0.01725	-28.13773	47.27210	6.46361	0.33103	55.39098	22.56	-2.99
74/ 7/30	2442258.5	0.26785	0.17902	-0.00954	-36.59088	42.74649	6.85759	0.32231	56.68493	33.76	-1.70
74/ 8/ 1	2442260.5	0.22101	0.22487	-0.00149	-44.35021	36.32100	7.03151	0.31530	57.75464	45.50	-0.27
74/ 8/ 3	2442262.5	0.16587	0.26224	0.00660	-50.85112	28.12173	6.94448	0.31037	58.52259	57.69	1.22
74/ 8/ 5	2442264.5	0.10422	0.28928	0.01444	-55.55820	18.49907	6.57683	0.30782	58.92524	70.19	2.69
74/ 8/ 7	2442266.5	0.03837	0.30464	0.02169	-58.07684	8.00838	5.93859	0.30782	58.92640	82.82	4.04
74/ 8/ 9	2442268.5	-0.02904	0.30771	0.02807	-58.24452	-2.67467	5.07086	0.31035	58.52599	95.39	5.19
74/ 8/11	2442270.5	-0.09531	0.29865	0.03334	-56.16087	-12.87899	4.03814	0.31526	57.76000	107.70	6.07
74/ 8/13	2442272.5	-0.15803	0.27836	0.03736	-52.14481	-22.05424	2.91491	0.32226	56.69187	119.59	6.66
74/ 8/15	2442274.5	-0.21521	0.24824	0.04007	-46.64368	-29.83754	1.77179	0.33097	55.39902	130.92	6.95
74/ 8/17	2442276.5	-0.26540	0.21003	0.04147	-40.13578	-36.06037	0.66618	0.34098	53.95994	141.64	6.99
74/ 8/19	2442278.5	-0.30771	0.16554	0.04164	-33.05762	-40.71286	-0.36146	0.35188	52.44497	151.72	6.80
74/ 8/21	2442280.5	-0.34169	0.11654	0.04068	-25.76596	-43.89163	-1.28669	0.36330	50.91184	161.17	6.43

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74/ 8/23	2442282.5	-0.36725	0.06465	0.03871	-18.52859	-45.75075	-2.09791	0.37491	49.40487	170.02	5.93
74/ 8/25	2442284.5	-0.38459	0.01129	0.03588	-11.53265	-46.46515	-2.79259	0.38642	47.95634	178.32	5.33
74/ 8/27	2442286.5	-0.39404	-0.04232	0.03230	-4.90008	-46.20732	-3.37390	0.39762	46.58874	186.13	4.66
74/ 8/29	2442288.5	-0.39607	-0.09514	0.02812	1.29580	-45.13484	-3.84819	0.40831	45.31712	193.51	3.95
74/ 8/31	2442290.5	-0.39123	-0.14633	0.02345	7.01586	-43.38511	-4.22328	0.41835	44.15118	200.51	3.21
74/ 9/ 2	2442292.5	-0.38006	-0.19515	0.01840	12.24375	-41.07449	-4.50730	0.42763	43.09685	207.18	2.47
74/ 9/ 4	2442294.5	-0.36313	-0.24104	0.01307	16.97749	-38.29964	-4.70804	0.43604	42.15760	213.58	1.72
74/ 9/ 6	2442296.5	-0.34102	-0.28348	0.00755	21.22337	-35.13994	-4.83266	0.44353	41.33523	219.74	0.98
74/ 9/ 8	2442298.5	-0.31429	-0.32209	0.00193	24.99181	-31.66014	-4.88743	0.45003	40.63056	225.70	0.25
74/ 9/10	2442300.5	-0.28347	-0.35652	-0.00371	28.29453	-27.91296	-4.87780	0.45550	40.04381	231.51	-0.47
74/ 9/12	2442302.5	-0.24910	-0.38649	-0.00931	31.14263	-23.94138	-4.80831	0.45990	39.57490	237.20	-1.16
74/ 9/14	2442304.5	-0.21169	-0.41176	-0.01480	33.54532	-19.78073	-4.68273	0.46323	39.22364	242.79	-1.83
74/ 9/16	2442306.5	-0.17177	-0.43213	-0.02011	35.50905	-15.46046	-4.50407	0.46545	38.98980	248.32	-2.48
74/ 9/18	2442308.5	-0.12983	-0.44742	-0.02518	37.03687	-11.00567	-4.27469	0.46656	38.87322	253.82	-3.09
74/ 9/20	2442310.5	-0.08638	-0.45751	-0.02997	38.12804	-6.43853	-3.99635	0.46655	38.87381	259.31	-3.68
74/ 9/22	2442312.5	-0.04192	-0.46226	-0.03440	38.77762	-1.77958	-3.67029	0.46543	38.99156	264.82	-4.24
74/ 9/24	2442314.5	0.00303	-0.46159	-0.03843	38.97618	2.95102	-3.29734	0.46320	39.22656	270.38	-4.76
74/ 9/26	2442316.5	0.04795	-0.45543	-0.04200	38.70954	7.73215	-2.87795	0.45986	39.57900	276.01	-5.24
74/ 9/28	2442318.5	0.09227	-0.44372	-0.04506	37.95853	12.54030	-2.41231	0.45545	40.04908	281.75	-5.68
74/ 9/30	2442320.5	0.13544	-0.42646	-0.04755	36.69886	17.34786	-1.90051	0.44997	40.63701	287.62	-6.07
74/10/ 2	2442322.5	0.17685	-0.40365	-0.04943	34.90103	22.12122	-1.34264	0.44346	41.34287	293.66	-6.40
74/10/ 4	2442324.5	0.21585	-0.37538	-0.05064	32.53060	26.81829	-0.73905	0.43596	42.16642	299.90	-6.67
74/10/ 6	2442326.5	0.25176	-0.34175	-0.05112	29.54884	31.38562	-0.09064	0.42754	43.10684	306.38	-6.87
74/10/ 8	2442328.5	0.28386	-0.30295	-0.05083	25.91410	35.75481	0.60072	0.41826	44.16229	313.14	-6.98
74/10/10	2442330.5	0.31136	-0.25926	-0.04972	21.58432	39.83830	1.33162	0.40821	45.32931	320.22	-7.00
74/10/12	2442332.5	0.33344	-0.21107	-0.04774	16.52143	43.52455	2.09629	0.39751	46.60191	327.67	-6.90
74/10/14	2442334.5	0.34924	-0.15892	-0.04487	10.69826	46.67309	2.88560	0.38631	47.97037	335.53	-6.67
74/10/16	2442336.5	0.35786	-0.10352	-0.04107	4.10920	49.11033	3.68570	0.37479	49.41958	343.87	-6.29
74/10/18	2442338.5	0.35844	-0.04582	-0.03635	-3.21442	50.62788	4.47652	0.36319	50.92695	352.72	-5.74
74/10/20	2442340.5	0.35018	0.01299	-0.03074	-11.18391	50.98655	5.23025	0.35177	52.46011	2.13	-5.01
74/10/22	2442342.5	0.33242	0.07143	-0.02430	-19.62867	49.93038	5.91022	0.34088	53.97461	12.13	-4.09
74/10/24	2442344.5	0.30476	0.12770	-0.01713	-28.27230	47.21604	6.47120	0.33088	55.41258	22.73	-2.97
74/10/26	2442346.5	0.26718	0.17979	-0.00942	-36.71871	42.66079	6.86211	0.32218	56.70357	33.94	-1.67
74/10/28	2442348.5	0.22020	0.22552	-0.00137	-44.46274	36.20604	7.03222	0.31520	57.76907	45.68	-0.25
74/10/30	2442350.5	0.16496	0.26275	0.00673	-50.93947	27.98127	6.94088	0.31031	58.53168	57.88	1.24
74/11/ 1	2442352.5	0.10322	0.28962	0.01456	-55.61486	18.34038	6.56883	0.30781	58.92819	70.38	2.71
74/11/ 3	2442354.5	0.03732	0.30479	0.02180	-58.09734	7.84143	5.92662	0.30784	58.92294	83.02	4.06
74/11/ 5	2442356.5	-0.03009	0.30766	0.02816	-58.22845	-2.83901	5.05578	0.31041	58.51644	95.59	5.21
74/11/ 7	2442358.5	-0.09633	0.29842	0.03342	-56.11177	-13.03095	4.02108	0.31536	57.74518	107.89	6.08
74/11/ 9	2442360.5	-0.15897	0.27796	0.03742	-52.06898	-22.18665	2.89704	0.32239	56.67292	119.77	6.66
74/11/11	2442362.5	-0.21605	0.24770	0.04010	-46.54861	-29.94637	1.75412	0.33112	55.37720	131.09	6.96
74/11/13	2442364.5	-0.26612	0.20938	0.04148	-40.02874	-36.14441	0.64947	0.34115	53.93645	141.80	6.98
74/11/15	2442366.5	-0.30830	0.16481	0.04163	-32.94486	-40.77299	-0.37671	0.35206	52.42082	151.87	6.79
74/11/17	2442368.5	-0.34215	0.11576	0.04065	-25.65231	-43.92994	-1.30021	0.36348	50.88783	161.31	6.42
74/11/19	2442370.5	-0.36759	0.06383	0.03867	-18.41754	-45.76993	-2.10961	0.37509	49.38160	170.15	5.92

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74/11/21	2442372.5	-0.38479	0.01046	0.03583	-11.42653	-46.46795	-2.80248	0.38660	47.93423	178.44	5.32
74/11/23	2442374.5	-0.39413	-0.04314	0.03224	-4.80035	-46.19635	-3.38207	0.39779	46.56807	186.25	4.65
74/11/25	2442376.5	-0.39605	-0.09595	0.02805	1.38832	-45.11241	-3.85476	0.40847	45.29808	193.62	3.94
74/11/27	2442378.5	-0.39110	-0.14710	0.02338	7.10079	-43.35318	-4.22837	0.41851	44.13387	200.61	3.20
74/11/29	2442380.5	-0.37984	-0.19589	0.01832	12.32100	-41.03469	-4.51103	0.42777	43.08135	207.28	2.45
74/12/ 1	2442382.5	-0.36283	-0.24172	0.01299	17.04710	-38.25333	-4.71054	0.43617	42.14392	213.67	1.71
74/12/ 3	2442384.5	-0.34064	-0.28411	0.00747	21.28548	-35.08822	-4.83402	0.44364	41.32339	219.83	0.96
74/12/ 5	2442386.5	-0.31384	-0.32266	0.00185	25.04661	-31.60392	-4.88776	0.45012	40.62057	225.79	0.23
74/12/ 7	2442388.5	-0.28296	-0.35702	-0.00380	28.34221	-27.85296	-4.87716	0.45557	40.03568	231.60	-0.48
74/12/ 9	2442390.5	-0.24854	-0.38692	-0.00940	31.18337	-23.87821	-4.80678	0.45996	39.56863	237.29	-1.17
74/12/11	2442392.5	-0.21109	-0.41211	-0.01488	33.57924	-19.71490	-4.68035	0.46327	39.21923	242.88	-1.84
74/12/13	2442394.5	-0.17113	-0.43240	-0.02019	35.53622	-15.39237	-4.50089	0.46547	38.98725	248.41	-2.49
74/12/15	2442396.5	-0.12917	-0.44762	-0.02526	37.05732	-10.93568	-4.27074	0.46657	38.87252	253.90	-3.10
74/12/17	2442398.5	-0.08569	-0.45762	-0.03004	38.14171	-6.36696	-3.99165	0.46654	38.87494	259.39	-3.69
74/12/19	2442400.5	-0.04122	-0.46229	-0.03446	38.78439	-1.70673	-3.66486	0.46540	38.99452	264.90	-4.25
74/12/21	2442402.5	0.00373	-0.46154	-0.03849	38.97585	3.02483	-3.29119	0.46315	39.23135	270.46	-4.77
74/12/23	2442404.5	0.04864	-0.45529	-0.04205	38.70186	7.80657	-2.87107	0.45980	39.58559	276.10	-5.25
74/12/25	2442406.5	0.09295	-0.44349	-0.04510	37.94316	12.61493	-2.40472	0.45537	40.05749	281.84	-5.68
74/12/27	2442408.5	0.13610	-0.42614	-0.04759	36.67537	17.42224	-1.89220	0.44987	40.64723	287.71	-6.07
74/12/29	2442410.5	0.17747	-0.40326	-0.04945	34.86893	22.19474	-1.33362	0.44335	41.35490	293.75	-6.40
74/12/31	2442412.5	0.21643	-0.37490	-0.05065	32.48934	26.89022	-0.72933	0.43584	42.18024	300.00	-6.67
75/ 1/ 2	2442414.5	0.25229	-0.34119	-0.05112	29.49778	31.45502	-0.08024	0.42740	43.12243	306.48	-6.87
75/ 1/ 4	2442416.5	0.28433	-0.30231	-0.05082	25.85258	35.82046	0.61176	0.41811	44.17959	313.24	-6.98
75/ 1/ 6	2442418.5	0.31175	-0.25854	-0.04969	21.51173	39.89866	1.34323	0.40805	45.34823	320.33	-7.00
75/ 1/ 8	2442420.5	0.33374	-0.21029	-0.04770	16.43725	43.57767	2.10835	0.39734	46.62232	327.78	-6.90
75/ 1/10	2442422.5	0.34943	-0.15808	-0.04481	10.60223	46.71653	2.89793	0.38613	47.99208	335.66	-6.66
75/ 1/12	2442424.5	0.35794	-0.10264	-0.04100	4.00153	49.14113	3.69804	0.37461	49.44227	344.00	-6.28
75/ 1/14	2442426.5	0.35839	-0.04491	-0.03627	-3.33282	50.64256	4.48851	0.36301	50.95020	352.86	-5.73
75/ 1/16	2442428.5	0.34999	0.01391	-0.03065	-11.31103	50.98124	5.24137	0.35160	52.48332	2.28	-5.00
75/ 1/18	2442430.5	0.33208	0.07232	-0.02419	-19.76105	49.90120	5.91984	0.34072	53.99698	12.29	-4.07
75/ 1/20	2442432.5	0.30426	0.12855	-0.01702	-28.40472	47.15964	6.47857	0.33074	55.43313	22.90	-2.95
75/ 1/22	2442434.5	0.26653	0.18055	-0.00929	-36.84412	42.57526	6.86643	0.32207	56.72116	34.11	-1.65
75/ 1/24	2442436.5	0.21942	0.22617	-0.00124	-44.57274	36.09194	7.03276	0.31511	57.78250	45.87	-0.23
75/ 1/26	2442438.5	0.16405	0.26325	0.00685	-51.02541	27.84243	6.93719	0.31026	58.53988	58.07	1.27
75/ 1/28	2442440.5	0.10224	0.28994	0.01468	-55.66948	18.18404	6.56084	0.30779	58.93042	70.58	2.73
75/ 1/30	2442442.5	0.03630	0.30493	0.02191	-58.11642	7.67740	5.91477	0.30786	58.91897	83.21	4.08
75/ 2/ 1	2442444.5	-0.03111	0.30761	0.02825	-58.21176	-3.00011	5.04091	0.31047	58.50659	95.78	5.22
75/ 2/ 3	2442446.5	-0.09732	0.29819	0.03349	-56.06290	-13.17964	4.00432	0.31545	57.73029	108.07	6.09
75/ 2/ 5	2442448.5	-0.15989	0.27757	0.03747	-51.99417	-22.31604	2.87951	0.32251	56.65413	119.94	6.67
75/ 2/ 7	2442450.5	-0.21686	0.24718	0.04013	-46.45519	-30.05261	1.73681	0.33127	55.35576	131.26	6.96
75/ 2/ 9	2442452.5	-0.26683	0.20875	0.04150	-39.92381	-36.22642	0.63312	0.34131	53.91349	141.96	6.98
75/ 2/11	2442454.5	-0.30888	0.16410	0.04163	-32.83446	-40.83165	-0.39162	0.35223	52.39732	152.02	6.79
75/ 2/13	2442456.5	-0.34260	0.11499	0.04063	-25.54112	-43.96734	-1.31343	0.36366	50.86453	161.45	6.41
75/ 2/15	2442458.5	-0.36791	0.06303	0.03864	-18.30892	-45.78866	-2.12106	0.37527	49.35906	170.28	5.91
75/ 2/17	2442460.5	-0.38499	0.00965	0.03578	-11.32273	-46.47072	-2.81216	0.38677	47.91284	178.56	5.31

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
75/ 2/19	2442462.5	-0.39421	-0.04395	0.03218	-4.70276	-46.18568	-3.39007	0.39796	46.54809	186.36	4.64
75/ 2/21	2442464.5	-0.39603	-0.09674	0.02799	1.47891	-45.09052	-3.86119	0.40863	45.27970	193.73	3.93
75/ 2/23	2442466.5	-0.39098	-0.14786	0.02330	7.18400	-43.32201	-4.23336	0.41865	44.11720	200.72	3.19
75/ 2/25	2442468.5	-0.37962	-0.19661	0.01824	12.39671	-40.99583	-4.51470	0.42790	43.06645	207.38	2.44
75/ 2/27	2442470.5	-0.36253	-0.24239	0.01290	17.11536	-38.20809	-4.71301	0.43629	42.13082	213.77	1.69
75/ 3/ 1	2442472.5	-0.34027	-0.28473	0.00738	21.34643	-35.03766	-4.83538	0.44374	41.31209	219.92	0.95
75/ 3/ 3	2442474.5	-0.31340	-0.32321	0.00176	25.10042	-31.54891	-4.88810	0.45021	40.61106	225.88	0.22
75/ 3/ 5	2442476.5	-0.28246	-0.35751	-0.00389	28.38904	-27.79422	-4.87655	0.45564	40.02795	231.69	-0.49
75/ 3/ 7	2442478.5	-0.24799	-0.38734	-0.00948	31.22337	-23.81631	-4.80529	0.46002	39.56269	237.37	-1.18
75/ 3/ 9	2442480.5	-0.21050	-0.41246	-0.01497	33.61252	-19.65033	-4.67803	0.46331	39.21506	242.96	-1.85
75/ 3/11	2442482.5	-0.17051	-0.43267	-0.02027	35.56285	-15.32554	-4.49777	0.46550	38.98485	248.49	-2.50
75/ 3/13	2442484.5	-0.12851	-0.44781	-0.02534	37.07731	-10.86695	-4.26686	0.46657	38.87189	253.99	-3.11
75/ 3/15	2442486.5	-0.08502	-0.45773	-0.03011	38.15501	-6.29665	-3.98703	0.46653	38.87607	259.48	-3.70
75/ 3/17	2442488.5	-0.04054	-0.46232	-0.03453	38.79087	-1.63515	-3.65951	0.46538	38.99740	264.99	-4.25
75/ 3/19	2442490.5	0.00442	-0.46148	-0.03854	38.97534	3.09739	-3.28512	0.46311	39.23599	270.55	-4.77
75/ 3/21	2442492.5	0.04932	-0.45515	-0.04210	38.69409	7.87977	-2.86429	0.45974	39.59201	276.18	-5.25
75/ 3/23	2442494.5	0.09362	-0.44327	-0.04514	37.92779	12.68837	-2.39723	0.45529	40.06568	281.93	-5.69
75/ 3/25	2442496.5	0.13675	-0.42583	-0.04762	36.65199	17.49546	-1.88400	0.44978	40.65721	287.80	-6.08
75/ 3/27	2442498.5	0.17809	-0.40286	-0.04948	34.83704	22.26715	-1.32471	0.44324	41.36665	293.85	-6.41
75/ 3/29	2442500.5	0.21700	-0.37442	-0.05066	32.44836	26.96109	-0.71972	0.43572	42.19377	300.10	-6.68
75/ 3/31	2442502.5	0.25281	-0.34063	-0.05112	29.44710	31.52340	-0.06995	0.42727	43.13770	306.58	-6.87
75/ 4/ 2	2442504.5	0.28478	-0.30167	-0.05081	25.79155	35.88518	0.62269	0.41796	44.19658	313.35	-6.98
75/ 4/ 4	2442506.5	0.31213	-0.25784	-0.04967	21.43972	39.95819	1.35472	0.40789	45.36689	320.44	-6.99
75/ 4/ 6	2442508.5	0.33403	-0.20952	-0.04767	16.35376	43.63010	2.12030	0.39717	46.64254	327.90	-6.89
75/ 4/ 8	2442510.5	0.34961	-0.15725	-0.04476	10.50698	46.75946	2.91016	0.38596	48.01367	335.78	-6.66
75/ 4/10	2442512.5	0.35801	-0.10177	-0.04094	3.89468	49.17163	3.71029	0.37443	49.46497	344.13	-6.28
75/ 4/12	2442514.5	0.35833	-0.04402	-0.03619	-3.45039	50.65716	4.50041	0.36283	50.97359	353.00	-5.73
75/ 4/14	2442516.5	0.34979	0.01481	-0.03056	-11.43739	50.97610	5.25243	0.35143	52.50681	2.42	-4.99
75/ 4/16	2442518.5	0.33173	0.07320	-0.02409	-19.89281	49.87239	5.92943	0.34056	54.01978	12.44	-4.06
75/ 4/18	2442520.5	0.30376	0.12938	-0.01690	-28.53669	47.10376	6.48594	0.33059	55.45425	23.07	-2.93
75/ 4/20	2442522.5	0.26588	0.18131	-0.00917	-36.96929	42.49031	6.87077	0.32194	56.73943	34.29	-1.63
75/ 4/22	2442524.5	0.21863	0.22681	-0.00112	-44.68273	35.97837	7.03335	0.31502	57.79669	46.05	-0.20
75/ 4/24	2442526.5	0.16315	0.26374	0.00698	-51.11153	27.70397	6.93354	0.31020	58.54888	58.26	1.29
75/ 4/26	2442528.5	0.10125	0.29026	0.01479	-55.72438	18.02787	6.55289	0.30777	58.93345	70.77	2.75
75/ 4/28	2442530.5	0.03527	0.30506	0.02201	-58.13579	7.51331	5.90293	0.30788	58.91574	83.41	4.10
75/ 4/30	2442532.5	-0.03214	0.30756	0.02834	-58.19528	-3.16148	5.02604	0.31053	58.49741	95.97	5.24
75/ 5/ 2	2442534.5	-0.09831	0.29796	0.03356	-56.01408	-13.32875	3.98752	0.31555	57.71597	108.26	6.11
75/ 5/ 4	2442536.5	-0.16081	0.27717	0.03752	-51.91921	-22.44590	2.86192	0.32263	56.63579	120.12	6.68
75/ 5/ 6	2442538.5	-0.21769	0.24665	0.04016	-46.36140	-30.15931	1.71944	0.33141	55.33462	131.43	6.96
75/ 5/ 8	2442540.5	-0.26753	0.20811	0.04151	-39.81834	-36.30877	0.61670	0.34147	53.89070	142.12	6.98
75/ 5/10	2442542.5	-0.30946	0.16337	0.04162	-32.72339	-40.89052	-0.40661	0.35241	52.37385	152.17	6.78
75/ 5/12	2442544.5	-0.34305	0.11421	0.04061	-25.42919	-44.00478	-1.32672	0.36384	50.84117	161.59	6.41
75/ 5/14	2442546.5	-0.36823	0.06222	0.03860	-18.19956	-45.80727	-2.13255	0.37544	49.33637	170.41	5.90
75/ 5/16	2442548.5	-0.38519	0.00882	0.03573	-11.21823	-46.47320	-2.82189	0.38695	47.89123	178.69	5.30
75/ 5/18	2442550.5	-0.39429	-0.04477	0.03212	-4.60457	-46.17458	-3.39809	0.39812	46.52785	186.48	4.63

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75/ 5/20	2442552.5	-0.39600	-0.09754	0.02792	1.56999	-45.06811	-3.86763	0.40879	45.26099	193.84	3.92
75/ 5/22	2442554.5	-0.39085	-0.14863	0.02323	7.26756	-43.29021	-4.23833	0.41880	44.10015	200.82	3.18
75/ 5/24	2442556.5	-0.37940	-0.19733	0.01816	12.47265	-40.95628	-4.51834	0.42804	43.05112	207.48	2.43
75/ 5/26	2442558.5	-0.36223	-0.24307	0.01282	17.18374	-38.16212	-4.71542	0.43641	42.11726	213.86	1.68
75/ 5/28	2442560.5	-0.33989	-0.28535	0.00730	21.40738	-34.98639	-4.83668	0.44385	41.30032	220.01	0.94
75/ 5/30	2442562.5	-0.31295	-0.32377	0.00167	25.15412	-31.49322	-4.88837	0.45030	40.60109	225.97	0.21
75/ 6/ 1	2442564.5	-0.28196	-0.35800	-0.00397	28.43568	-27.73483	-4.87587	0.45572	40.01978	231.78	-0.50
75/ 6/ 3	2442566.5	-0.24744	-0.38776	-0.00957	31.26311	-23.75382	-4.80372	0.46008	39.55631	237.46	-1.19
75/ 6/ 5	2442568.5	-0.20991	-0.41280	-0.01505	33.64549	-19.58523	-4.67563	0.46335	39.21048	243.05	-1.86
75/ 6/ 7	2442570.5	-0.16988	-0.43294	-0.02035	35.58912	-15.25824	-4.49458	0.46552	38.98205	248.58	-2.51
75/ 6/ 9	2442572.5	-0.12786	-0.44800	-0.02541	37.09690	-10.79780	-4.26290	0.46658	38.87087	254.07	-3.12
75/ 6/11	2442574.5	-0.08435	-0.45784	-0.03018	38.16789	-6.22598	-3.98233	0.46653	38.87685	259.56	-3.71
75/ 6/13	2442576.5	-0.03985	-0.46235	-0.03459	38.79693	-1.56327	-3.65410	0.46535	38.99998	265.07	-4.26
75/ 6/15	2442578.5	0.00511	-0.46143	-0.03860	38.97440	3.17016	-3.27899	0.46307	39.24036	270.63	-4.78
75/ 6/17	2442580.5	0.05000	-0.45501	-0.04215	38.68590	7.95310	-2.85746	0.45968	39.59818	276.27	-5.26
75/ 6/19	2442582.5	0.09429	-0.44304	-0.04519	37.91201	12.76188	-2.38969	0.45522	40.07364	282.01	-5.70
75/ 6/21	2442584.5	0.13739	-0.42553	-0.04765	36.62822	17.56867	-1.87576	0.44969	40.66698	287.89	-6.08
75/ 6/23	2442586.5	0.17870	-0.40247	-0.04950	34.80479	22.33951	-1.31577	0.44313	41.37824	293.94	-6.41
75/ 6/25	2442588.5	0.21758	-0.37395	-0.05068	32.40708	27.03187	-0.71009	0.43560	42.20716	300.19	-6.68
75/ 6/27	2442590.5	0.25333	-0.34007	-0.05112	29.39617	31.59170	-0.05965	0.42713	43.15291	306.68	-6.87
75/ 6/29	2442592.5	0.28523	-0.30104	-0.05080	25.73032	35.94981	0.63362	0.41781	44.21357	313.46	-6.98
75/ 7/ 1	2442594.5	0.31250	-0.25714	-0.04965	21.36757	40.01765	1.36621	0.40773	45.38559	320.55	-6.99
75/ 7/ 3	2442596.5	0.33431	-0.20875	-0.04763	16.27014	43.68245	2.13224	0.39700	46.66284	328.02	-6.89
75/ 7/ 5	2442598.5	0.34980	-0.15643	-0.04471	10.41161	46.80232	2.92238	0.38578	48.03539	335.91	-6.66
75/ 7/ 7	2442600.5	0.35807	-0.10090	-0.04087	3.78769	49.20204	3.72254	0.37426	49.48782	344.26	-6.27
75/ 7/ 9	2442602.5	0.35826	-0.04312	-0.03611	-3.56814	50.67167	4.51232	0.36265	50.99717	353.14	-5.72
75/ 7/11	2442604.5	0.34958	0.01571	-0.03046	-11.56397	50.97085	5.26351	0.35126	52.53054	2.57	-4.98
75/ 7/13	2442606.5	0.33137	0.07408	-0.02398	-20.02482	49.84343	5.93903	0.34040	54.04288	12.60	-4.04
75/ 7/15	2442608.5	0.30325	0.13021	-0.01679	-28.66897	47.04767	6.49332	0.33045	55.47573	23.24	-2.91
75/ 7/17	2442610.5	0.26522	0.18205	-0.00905	-37.09482	42.40506	6.87512	0.32182	56.75811	34.47	-1.61
75/ 7/19	2442612.5	0.21783	0.22744	-0.00099	-44.79307	35.86437	7.03394	0.31493	57.81132	46.24	-0.18
75/ 7/21	2442614.5	0.16224	0.26423	0.00710	-51.19793	27.56493	6.92988	0.31014	58.55831	58.45	1.31
75/ 7/23	2442616.5	0.10026	0.29058	0.01491	-55.77944	17.87099	6.54490	0.30775	58.93687	70.96	2.78
75/ 7/25	2442618.5	0.03423	0.30519	0.02211	-58.15515	7.34842	5.89103	0.30790	58.91286	83.60	4.12
75/ 7/27	2442620.5	-0.03318	0.30750	0.02843	-58.17859	-3.32367	5.01108	0.31059	58.48851	96.16	5.25
75/ 7/29	2442622.5	-0.09931	0.29771	0.03363	-55.96484	-13.47864	3.97061	0.31564	57.70185	108.45	6.12
75/ 7/31	2442624.5	-0.16173	0.27677	0.03757	-51.84364	-22.57644	2.84423	0.32275	56.61756	120.30	6.68
75/ 8/ 2	2442626.5	-0.21851	0.24610	0.04019	-46.26688	-30.26653	1.70195	0.33156	55.31350	131.60	6.96
75/ 8/ 4	2442628.5	-0.26824	0.20745	0.04152	-39.71203	-36.39150	0.60016	0.34163	53.86787	142.28	6.98
75/ 8/ 6	2442630.5	-0.31005	0.16264	0.04161	-32.61143	-40.94961	-0.42170	0.35258	52.35030	152.32	6.78
75/ 8/ 8	2442632.5	-0.34351	0.11342	0.04058	-25.31635	-44.04229	-1.34011	0.36402	50.81768	161.73	6.40
75/ 8/10	2442634.5	-0.36856	0.06140	0.03856	-18.08929	-45.82582	-2.14413	0.37562	49.31354	170.54	5.89
75/ 8/12	2442636.5	-0.38539	0.00799	0.03567	-11.11284	-46.47550	-2.83167	0.38712	47.86947	178.81	5.29
75/ 8/14	2442638.5	-0.39437	-0.04560	0.03206	-4.50551	-46.16318	-3.40616	0.39829	46.50743	186.60	4.62
75/ 8/16	2442640.5	-0.39597	-0.09835	0.02785	1.66188	-45.04529	-3.87410	0.40895	45.24211	193.95	3.90

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75/ 8/18	2442642.5	-0.39072	-0.14940	0.02315	7.35189	-43.25792	-4.24333	0.41895	44.08292	200.93	3.17
75/ 8/20	2442644.5	-0.37918	-0.19807	0.01808	12.54930	-40.91616	-4.52199	0.42817	43.03563	207.58	2.42
75/ 8/22	2442646.5	-0.36192	-0.24375	0.01274	17.25276	-38.11552	-4.71784	0.43653	42.10355	213.96	1.67
75/ 8/24	2442648.5	-0.33951	-0.28597	0.00721	21.46891	-34.93442	-4.83797	0.44396	41.28842	220.11	0.93
75/ 8/26	2442650.5	-0.31250	-0.32433	0.00159	25.20835	-31.43678	-4.88862	0.45039	40.59102	226.06	0.20
75/ 8/28	2442652.5	-0.28145	-0.35850	-0.00406	28.48278	-27.67466	-4.87517	0.45580	40.01153	231.87	-0.51
75/ 8/30	2442654.5	-0.24688	-0.38818	-0.00965	31.30324	-23.69051	-4.80212	0.46014	39.54988	237.54	-1.20
75/ 9/ 1	2442656.5	-0.20931	-0.41315	-0.01513	33.67877	-19.51926	-4.67318	0.46340	39.20586	243.13	-1.87
75/ 9/ 3	2442658.5	-0.16924	-0.43321	-0.02043	35.61563	-15.19004	-4.49133	0.46555	38.97925	248.66	-2.52
75/ 9/ 5	2442660.5	-0.12720	-0.44820	-0.02549	37.11666	-10.72773	-4.25888	0.46659	38.86989	254.16	-3.13
75/ 9/ 7	2442662.5	-0.08367	-0.45796	-0.03025	38.18085	-6.15437	-3.97757	0.46652	38.87769	259.65	-3.72
75/ 9/ 9	2442664.5	-0.03916	-0.46238	-0.03466	38.80301	-1.49042	-3.64861	0.46533	39.00265	265.16	-4.27
75/ 9/11	2442666.5	0.00580	-0.46137	-0.03866	38.97340	3.24393	-3.27278	0.46302	39.24488	270.72	-4.79
75/ 9/13	2442668.5	0.05069	-0.45486	-0.04220	38.67756	8.02746	-2.85053	0.45962	39.60454	276.36	-5.27
75/ 9/15	2442670.5	0.09497	-0.44282	-0.04523	37.89601	12.83643	-2.38205	0.45514	40.08187	282.10	-5.70
75/ 9/17	2442672.5	0.13804	-0.42521	-0.04769	36.60412	17.64296	-1.86740	0.44959	40.67706	287.99	-6.09
75/ 9/19	2442674.5	0.17932	-0.40207	-0.04952	34.77210	22.41295	-1.30670	0.44302	41.39018	294.04	-6.42
75/ 9/21	2442676.5	0.21815	-0.37346	-0.05069	32.36521	27.10374	-0.70032	0.43547	42.22097	300.29	-6.68
75/ 9/23	2442678.5	0.25385	-0.33951	-0.05112	29.34449	31.66105	-0.04920	0.42699	43.16855	306.79	-6.88
75/ 9/25	2442680.5	0.28569	-0.30040	-0.05079	25.66816	36.01545	0.64472	0.41766	44.23102	313.56	-6.98
75/ 9/27	2442682.5	0.31288	-0.25642	-0.04962	21.29428	40.07802	1.37789	0.40756	45.40477	320.66	-6.99
75/ 9/29	2442684.5	0.33460	-0.20797	-0.04759	16.18518	43.73560	2.14438	0.39683	46.68363	328.14	-6.89
75/10/ 1	2442686.5	0.34998	-0.15559	-0.04466	10.31469	46.84578	2.93480	0.38560	48.05760	336.03	-6.65
75/10/ 3	2442688.5	0.35814	-0.10002	-0.04081	3.67898	49.23282	3.73498	0.37407	49.51117	344.40	-6.26
75/10/ 5	2442690.5	0.35820	-0.04221	-0.03603	-3.68775	50.68623	4.52441	0.36247	51.02121	353.28	-5.71
75/10/ 7	2442692.5	0.34937	0.01662	-0.03037	-11.69248	50.96525	5.27473	0.35108	52.55467	2.72	-4.96
75/10/ 9	2442694.5	0.33101	0.07497	-0.02388	-20.15875	49.81367	5.94874	0.34023	54.06630	12.76	-4.02
75/10/11	2442696.5	0.30273	0.13105	-0.01667	-28.80299	46.99029	6.50075	0.33030	55.49738	23.41	-2.89
75/10/13	2442698.5	0.26455	0.18282	-0.00893	-37.22176	42.31807	6.87945	0.32170	56.77680	34.65	-1.59
75/10/15	2442700.5	0.21702	0.22808	-0.00087	-44.90433	35.74828	7.03443	0.31483	57.82578	46.42	-0.16
75/10/17	2442702.5	0.16132	0.26472	0.00722	-51.28467	27.42364	6.92606	0.31009	58.56742	58.64	1.33
75/10/19	2442704.5	0.09925	0.29090	0.01503	-55.83425	17.71191	6.53670	0.30773	58.93983	71.16	2.80
75/10/21	2442706.5	0.03318	0.30532	0.02222	-58.17372	7.18157	5.87889	0.30792	58.90941	83.80	4.14
75/10/23	2442708.5	-0.03423	0.30744	0.02852	-58.16072	-3.48741	4.99588	0.31065	58.47897	96.35	5.27
75/10/25	2442710.5	-0.10031	0.29747	0.03370	-55.91420	-13.62961	3.95350	0.31573	57.68704	108.64	6.13
75/10/27	2442712.5	-0.16267	0.27636	0.03762	-51.76661	-22.70759	2.82635	0.32288	56.59863	120.48	6.69
75/10/29	2442714.5	-0.21935	0.24556	0.04022	-46.17097	-30.37398	1.68431	0.33171	55.29172	131.77	6.97
75/10/31	2442716.5	-0.26896	0.20680	0.04153	-39.60449	-36.47416	0.58353	0.34180	53.84441	142.44	6.98
75/11/ 2	2442718.5	-0.31063	0.16190	0.04160	-32.49843	-41.00841	-0.43686	0.35275	52.32617	152.47	6.77
75/11/ 4	2442720.5	-0.34396	0.11262	0.04056	-25.20268	-44.07938	-1.35353	0.36420	50.79369	161.87	6.39
75/11/ 6	2442722.5	-0.36888	0.06057	0.03852	-17.97837	-45.84389	-2.15573	0.37580	49.29027	170.67	5.88
75/11/ 8	2442724.5	-0.38559	0.00715	0.03562	-11.00697	-46.47731	-2.84146	0.38730	47.84734	178.94	5.28
75/11/10	2442726.5	-0.39446	-0.04643	0.03200	-4.40611	-46.15133	-3.41423	0.39847	46.48673	186.71	4.61
75/11/12	2442728.5	-0.39594	-0.09916	0.02778	1.75402	-45.02206	-3.88057	0.40911	45.22301	194.06	3.89
75/11/14	2442730.5	-0.39059	-0.15018	0.02307	7.43640	-43.22527	-4.24832	0.41910	44.06555	201.03	3.16

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75/11/16	2442732.5	-0.37895	-0.19880	0.01800	12.62608	-40.87573	-4.52563	0.42831	43.02005	207.68	2.41
75/11/18	2442734.5	-0.36161	-0.24444	0.01265	17.32187	-38.06867	-4.72025	0.43666	42.08980	214.06	1.66
75/11/20	2442736.5	-0.33912	-0.28660	0.00712	21.53051	-34.88224	-4.83925	0.44407	41.27653	220.20	0.92
75/11/22	2442738.5	-0.31205	-0.32490	0.00150	25.26262	-31.38017	-4.88887	0.45049	40.58098	226.16	0.19
75/11/24	2442740.5	-0.28094	-0.35899	-0.00415	28.52992	-27.61434	-4.87446	0.45587	40.00336	231.95	-0.52
75/11/26	2442742.5	-0.24632	-0.38861	-0.00974	31.34341	-23.62708	-4.80052	0.46020	39.54356	237.63	-1.21
75/11/28	2442744.5	-0.20870	-0.41350	-0.01522	33.71211	-19.45322	-4.67074	0.46344	39.20140	243.22	-1.88
75/11/30	2442746.5	-0.16861	-0.43349	-0.02051	35.64221	-15.12178	-4.48809	0.46557	38.97664	248.75	-2.52
75/12/ 2	2442748.5	-0.12653	-0.44839	-0.02556	37.13650	-10.65763	-4.25487	0.46660	38.86912	254.24	-3.14
75/12/ 4	2442750.5	-0.08298	-0.45807	-0.03032	38.19391	-6.08274	-3.97281	0.46651	38.87876	259.73	-3.73
75/12/ 6	2442752.5	-0.03847	-0.46240	-0.03472	38.80916	-1.41756	-3.64312	0.46530	39.00555	265.24	-4.28
75/12/ 8	2442754.5	0.00650	-0.46131	-0.03872	38.97247	3.31769	-3.26657	0.46298	39.24960	270.81	-4.80
75/12/10	2442756.5	0.05139	-0.45472	-0.04225	38.66928	8.10179	-2.84361	0.45956	39.61109	276.45	-5.28
75/12/12	2442758.5	0.09564	-0.44259	-0.04527	37.88003	12.91095	-2.37441	0.45506	40.09024	282.19	-5.71
75/12/14	2442760.5	0.13870	-0.42490	-0.04772	36.58003	17.71718	-1.85905	0.44950	40.68726	288.08	-6.09
75/12/16	2442762.5	0.17994	-0.40167	-0.04955	34.73940	22.48631	-1.29764	0.44292	41.40222	294.13	-6.42
75/12/18	2442764.5	0.21873	-0.37298	-0.05070	32.32332	27.17547	-0.69055	0.43535	42.23482	300.39	-6.69
75/12/20	2442766.5	0.25438	-0.33894	-0.05113	29.29278	31.73022	-0.03875	0.42685	43.18420	306.89	-6.88
75/12/22	2442768.5	0.28615	-0.29975	-0.05077	25.60597	36.08082	0.65580	0.41751	44.24840	313.67	-6.99
75/12/24	2442770.5	0.31326	-0.25570	-0.04960	21.22097	40.13804	1.38953	0.40740	45.42381	320.78	-6.99
75/12/26	2442772.5	0.33489	-0.20719	-0.04755	16.10026	43.78829	2.15647	0.39666	46.70421	328.26	-6.89
75/12/28	2442774.5	0.35016	-0.15475	-0.04460	10.21788	46.88869	2.94717	0.38543	48.07952	336.16	-6.65
75/12/30	2442776.5	0.35820	-0.09914	-0.04074	3.57049	49.26296	3.74735	0.37389	49.53413	344.53	-6.26
76/ 1/ 1	2442778.5	0.35813	-0.04131	-0.03595	-3.80698	50.70010	4.53640	0.36229	51.04480	353.42	-5.70
76/ 1/ 3	2442780.5	0.34916	0.01753	-0.03027	-11.82042	50.95894	5.28584	0.35091	52.57828	2.87	-4.95
76/ 1/ 5	2442782.5	0.33065	0.07586	-0.02377	-20.29187	49.78324	5.95833	0.34007	54.08912	12.92	-4.01
76/ 1/ 7	2442784.5	0.30221	0.13189	-0.01656	-28.93597	46.93238	6.50804	0.33016	55.51840	23.58	-2.87
76/ 1/ 9	2442786.5	0.26389	0.18357	-0.00880	-37.34744	42.23078	6.88365	0.32158	56.79485	34.82	-1.57
76/ 1/11	2442788.5	0.21622	0.22872	-0.00074	-45.01420	35.63224	7.03481	0.31475	57.83964	46.61	-0.13
76/ 1/13	2442790.5	0.16040	0.26521	0.00735	-51.37001	27.28282	6.92215	0.31003	58.57598	58.83	1.36
76/ 1/15	2442792.5	0.09826	0.29121	0.01514	-55.88780	17.55374	6.52846	0.30772	58.94235	71.36	2.82
76/ 1/17	2442794.5	0.03215	0.30545	0.02233	-58.19134	7.01601	5.86677	0.30795	58.90565	83.99	4.16
76/ 1/19	2442796.5	-0.03527	0.30737	0.02861	-58.14232	-3.64966	4.98077	0.31071	58.46928	96.55	5.28
76/ 1/21	2442798.5	-0.10131	0.29723	0.03377	-55.86351	-13.77903	3.93650	0.31583	57.67226	108.82	6.14
76/ 1/23	2442800.5	-0.16359	0.27596	0.03767	-51.68998	-22.83733	2.80862	0.32300	56.57990	120.66	6.70
76/ 1/25	2442802.5	-0.22017	0.24502	0.04025	-46.07579	-30.48025	1.66685	0.33185	55.27027	131.94	6.97
76/ 1/27	2442804.5	-0.26966	0.20615	0.04154	-39.49790	-36.55591	0.56705	0.34196	53.82137	142.60	6.98
76/ 1/29	2442806.5	-0.31121	0.16117	0.04160	-32.38649	-41.06660	-0.45187	0.35293	52.30253	152.62	6.77
76/ 1/31	2442808.5	-0.34441	0.11184	0.04053	-25.09007	-44.11613	-1.36683	0.36438	50.77019	162.01	6.39
76/ 2/ 2	2442810.5	-0.36920	0.05976	0.03848	-17.86847	-45.86183	-2.16722	0.37598	49.26750	170.81	5.87
76/ 2/ 4	2442812.5	-0.38579	0.00632	0.03557	-10.90202	-46.47917	-2.85117	0.38748	47.82569	179.06	5.27
76/ 2/ 6	2442814.5	-0.39453	-0.04725	0.03194	-4.30752	-46.13965	-3.42224	0.39863	46.46648	186.83	4.60
76/ 2/ 8	2442816.5	-0.39591	-0.09996	0.02771	1.84545	-44.99911	-3.88699	0.40927	45.20436	194.17	3.88
76/ 2/10	2442818.5	-0.39045	-0.15095	0.02300	7.52031	-43.19299	-4.25329	0.41925	44.04860	201.14	3.14
76/ 2/12	2442820.5	-0.37873	-0.19953	0.01792	12.70235	-40.83572	-4.52926	0.42845	43.00488	207.78	2.40

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76/ 2/14	2442822.5	-0.36130	-0.24511	0.01257	17.39056	-38.02224	-4.72265	0.43678	42.07643	214.15	1.65
76/ 2/16	2442824.5	-0.33874	-0.28722	0.00704	21.59177	-34.83048	-4.84053	0.44417	41.26497	220.30	0.91
76/ 2/18	2442826.5	-0.31160	-0.32546	0.00141	25.31661	-31.32397	-4.88912	0.45058	40.57124	226.25	0.18
76/ 2/20	2442828.5	-0.28043	-0.35949	-0.00423	28.57683	-27.55441	-4.87376	0.45595	39.99543	232.04	-0.53
76/ 2/22	2442830.5	-0.24576	-0.38903	-0.00983	31.38340	-23.56403	-4.79892	0.46026	39.53746	237.72	-1.22
76/ 2/24	2442832.5	-0.20810	-0.41385	-0.01530	33.74529	-19.38753	-4.66831	0.46348	39.19712	243.30	-1.89
76/ 2/26	2442834.5	-0.16797	-0.43376	-0.02059	35.66866	-15.05389	-4.48486	0.46560	38.97418	248.83	-2.53
76/ 2/28	2442836.5	-0.12587	-0.44858	-0.02564	37.15623	-10.58789	-4.25088	0.46661	38.86848	254.33	-3.15
76/ 3/ 1	2442838.5	-0.08230	-0.45817	-0.03039	38.20686	-6.01148	-3.96808	0.46650	38.87992	259.82	-3.74
76/ 3/ 3	2442840.5	-0.03778	-0.46243	-0.03479	38.81522	-1.34511	-3.63766	0.46527	39.00850	265.33	-4.29
76/ 3/ 5	2442842.5	0.00719	-0.46125	-0.03878	38.97145	3.39104	-3.26039	0.46294	39.25434	270.89	-4.80
76/ 3/ 7	2442844.5	0.05208	-0.45458	-0.04230	38.66092	8.17567	-2.83671	0.45950	39.61761	276.54	-5.28
76/ 3/ 9	2442846.5	0.09632	-0.44236	-0.04531	37.86400	12.98496	-2.36681	0.45498	40.09855	282.28	-5.72
76/ 3/11	2442848.5	0.13935	-0.42458	-0.04775	36.55590	17.79084	-1.85074	0.44941	40.69734	288.17	-6.10
76/ 3/13	2442850.5	0.18056	-0.40127	-0.04957	34.70668	22.55900	-1.28863	0.44281	41.41404	294.23	-6.43
76/ 3/15	2442852.5	0.21931	-0.37250	-0.05071	32.28146	27.24645	-0.68085	0.43523	42.24838	300.49	-6.69
76/ 3/17	2442854.5	0.25490	-0.33838	-0.05113	29.24117	31.79853	-0.02839	0.42672	43.19946	306.99	-6.88
76/ 3/19	2442856.5	0.28661	-0.29912	-0.05076	25.54398	36.14524	0.66678	0.41736	44.26531	313.78	-6.99
76/ 3/21	2442858.5	0.31364	-0.25499	-0.04957	21.14802	40.19703	1.40106	0.40725	45.44230	320.89	-6.99
76/ 3/23	2442860.5	0.33518	-0.20641	-0.04751	16.01586	43.83990	2.16843	0.39649	46.72416	328.37	-6.88
76/ 3/25	2442862.5	0.35035	-0.15393	-0.04455	10.12185	46.93049	2.95937	0.38526	48.10073	336.28	-6.64
76/ 3/27	2442864.5	0.35827	-0.09827	-0.04067	3.46306	49.29200	3.75952	0.37372	49.55631	344.66	-6.25
76/ 3/29	2442866.5	0.35807	-0.04041	-0.03587	-3.92483	50.71292	4.54818	0.36212	51.06751	353.56	-5.69
76/ 3/31	2442868.5	0.34896	0.01843	-0.03018	-11.94660	50.95175	5.29672	0.35074	52.60093	3.02	-4.94
76/ 4/ 2	2442870.5	0.33029	0.07674	-0.02367	-20.42286	49.75224	5.96767	0.33992	54.11092	13.08	-3.99
76/ 4/ 4	2442872.5	0.30171	0.13272	-0.01644	-29.06649	46.87437	6.51510	0.33002	55.53840	23.74	-2.86
76/ 4/ 6	2442874.5	0.26324	0.18431	-0.00868	-37.47044	42.14404	6.88764	0.32146	56.81191	35.00	-1.55
76/ 4/ 8	2442876.5	0.21544	0.22934	-0.00062	-45.12137	35.51752	7.03505	0.31466	57.85261	46.79	-0.11
76/ 4/10	2442878.5	0.15951	0.26569	0.00747	-51.45287	27.14413	6.91819	0.30998	58.58381	59.02	1.38
76/ 4/12	2442880.5	0.09728	0.29152	0.01526	-55.93937	17.39841	6.52028	0.30770	58.94431	71.55	2.84
76/ 4/14	2442882.5	0.03113	0.30557	0.02243	-58.20772	6.85380	5.85482	0.30797	58.90155	84.18	4.18
76/ 4/16	2442884.5	-0.03628	0.30731	0.02870	-58.12354	-3.80832	4.96591	0.31077	58.45947	96.73	5.30
76/ 4/18	2442886.5	-0.10228	0.29699	0.03384	-55.81331	-13.92497	3.91984	0.31592	57.65757	109.00	6.15
76/ 4/20	2442888.5	-0.16449	0.27556	0.03772	-51.61459	-22.96392	2.79127	0.32313	56.56146	120.83	6.70
76/ 4/22	2442890.5	-0.22097	0.24449	0.04028	-45.98245	-30.58389	1.64976	0.33200	55.24927	132.11	6.97
76/ 4/24	2442892.5	-0.27035	0.20551	0.04155	-39.39354	-36.63567	0.55094	0.34212	53.79895	142.76	6.98
76/ 4/26	2442894.5	-0.31177	0.16045	0.04159	-32.27697	-41.12342	-0.46655	0.35310	52.27960	152.77	6.76
76/ 4/28	2442896.5	-0.34485	0.11107	0.04051	-24.97994	-44.15209	-1.37984	0.36455	50.74749	162.15	6.38
76/ 4/30	2442898.5	-0.36951	0.05896	0.03844	-17.76095	-45.87949	-2.17848	0.37616	49.24556	170.93	5.87
76/ 5/ 2	2442900.5	-0.38598	0.00551	0.03552	-10.79931	-46.48117	-2.86069	0.38765	47.80490	179.18	5.26
76/ 5/ 4	2442902.5	-0.39461	-0.04806	0.03188	-4.21096	-46.12846	-3.43011	0.39880	46.44709	186.94	4.58
76/ 5/ 6	2442904.5	-0.39587	-0.10074	0.02764	1.93509	-44.97690	-3.89331	0.40943	45.18654	194.28	3.87
76/ 5/ 8	2442906.5	-0.39032	-0.15171	0.02292	7.60265	-43.16161	-4.25818	0.41939	44.03245	201.24	3.13
76/ 5/10	2442908.5	-0.37850	-0.20024	0.01784	12.77726	-40.79672	-4.53284	0.42858	42.99044	207.88	2.39
76/ 5/12	2442910.5	-0.36099	-0.24578	0.01248	17.45808	-37.97692	-4.72504	0.43690	42.06373	214.25	1.64

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76/ 5/14	2442912.5	-0.33836	-0.28783	0.00695	21.65201	-34.77988	-4.84182	0.44428	41.25401	220.39	0.90
76/ 5/16	2442914.5	-0.31116	-0.32601	0.00132	25.36974	-31.26896	-4.88940	0.45066	40.56202	226.34	0.17
76/ 5/18	2442916.5	-0.27993	-0.35997	-0.00432	28.62301	-27.49569	-4.87309	0.45602	39.98796	232.13	-0.54
76/ 5/20	2442918.5	-0.24521	-0.38944	-0.00991	31.42276	-23.50218	-4.79738	0.46031	39.53172	237.80	-1.23
76/ 5/22	2442920.5	-0.20751	-0.41419	-0.01538	33.77795	-19.32303	-4.66593	0.46352	39.19311	243.39	-1.90
76/ 5/24	2442922.5	-0.16734	-0.43402	-0.02067	35.69466	-14.98715	-4.48169	0.46562	38.97190	248.92	-2.54
76/ 5/26	2442924.5	-0.12521	-0.44876	-0.02572	37.17556	-10.51925	-4.24695	0.46661	38.86790	254.41	-3.16
76/ 5/28	2442926.5	-0.08163	-0.45828	-0.03046	38.21947	-5.94128	-3.96340	0.46649	38.88104	259.90	-3.74
76/ 5/30	2442928.5	-0.03709	-0.46245	-0.03485	38.82098	-1.27366	-3.63225	0.46525	39.01133	265.41	-4.30
76/ 6/ 1	2442930.5	0.00788	-0.46119	-0.03884	38.97017	3.46340	-3.25427	0.46289	39.25888	270.98	-4.81
76/ 6/ 3	2442932.5	0.05276	-0.45443	-0.04235	38.65235	8.24859	-2.82988	0.45944	39.62388	276.62	-5.29
76/ 6/ 5	2442934.5	0.09699	-0.44213	-0.04536	37.84782	13.05804	-2.35927	0.45491	40.10655	282.37	-5.72
76/ 6/ 7	2442936.5	0.14000	-0.42427	-0.04779	36.53170	17.86359	-1.84250	0.44932	40.70710	288.26	-6.11
76/ 6/ 9	2442938.5	0.18117	-0.40088	-0.04959	34.67398	22.63084	-1.27969	0.44270	41.42556	294.32	-6.43
76/ 6/11	2442940.5	0.21988	-0.37202	-0.05073	32.23970	27.31664	-0.67123	0.43511	42.26166	300.58	-6.69
76/ 6/13	2442942.5	0.25542	-0.33782	-0.05113	29.18974	31.86612	-0.01810	0.42659	43.21448	307.09	-6.88
76/ 6/15	2442944.5	0.28706	-0.29848	-0.05075	25.48226	36.20904	0.67769	0.41722	44.28205	313.88	-6.99
76/ 6/17	2442946.5	0.31402	-0.25429	-0.04955	21.07541	40.25551	1.41252	0.40709	45.46069	321.00	-6.99
76/ 6/19	2442948.5	0.33546	-0.20564	-0.04747	15.93188	43.89112	2.18032	0.39633	46.74408	328.49	-6.88
76/ 6/21	2442950.5	0.35053	-0.15310	-0.04450	10.02624	46.97203	2.97151	0.38509	48.12200	336.41	-6.64
76/ 6/23	2442952.5	0.35833	-0.09741	-0.04061	3.35605	49.32093	3.77165	0.37355	49.57865	344.79	-6.24
76/ 6/25	2442954.5	0.35800	-0.03953	-0.03579	-4.04229	50.72580	4.55993	0.36195	51.09051	353.70	-5.68
76/ 6/27	2442956.5	0.34875	0.01932	-0.03009	-12.07251	50.94477	5.30759	0.35057	52.62400	3.17	-4.92
76/ 6/29	2442958.5	0.32993	0.07761	-0.02356	-20.55373	49.72155	5.97702	0.33976	54.13329	13.24	-3.98
76/ 7/ 1	2442960.5	0.30120	0.13354	-0.01633	-29.19709	46.81669	6.52219	0.32988	55.55908	23.91	-2.84
76/ 7/ 3	2442962.5	0.26258	0.18505	-0.00856	-37.59373	42.05754	6.89168	0.32135	56.82975	35.17	-1.53
76/ 7/ 5	2442964.5	0.21464	0.22996	-0.00049	-45.22898	35.40285	7.03533	0.31457	57.86638	46.97	-0.09
76/ 7/ 7	2442966.5	0.15860	0.26616	0.00759	-51.53625	27.00521	6.91426	0.30993	58.59243	59.21	1.40
76/ 7/ 9	2442968.5	0.09630	0.29182	0.01537	-55.99143	17.24257	6.51210	0.30769	58.94704	71.74	2.86
76/ 7/11	2442970.5	0.03011	0.30569	0.02253	-58.22443	6.69081	5.84283	0.30799	58.89813	84.37	4.20
76/ 7/13	2442972.5	-0.03730	0.30724	0.02878	-58.10485	-3.96795	4.95098	0.31083	58.45024	96.92	5.31
76/ 7/15	2442974.5	-0.10326	0.29674	0.03391	-55.76292	-14.07193	3.90308	0.31602	57.64335	109.19	6.16
76/ 7/17	2442976.5	-0.16539	0.27515	0.03777	-51.53873	-23.09150	2.77380	0.32325	56.54336	121.01	6.71
76/ 7/19	2442978.5	-0.22178	0.24394	0.04031	-45.88839	-30.68838	1.63254	0.33214	55.22849	132.27	6.97
76/ 7/21	2442980.5	-0.27104	0.20486	0.04156	-39.28826	-36.71605	0.53469	0.34228	53.77659	142.92	6.97
76/ 7/23	2442982.5	-0.31234	0.15973	0.04158	-32.16643	-41.18060	-0.48135	0.35327	52.25660	152.92	6.76
76/ 7/25	2442984.5	-0.34528	0.11029	0.04049	-24.86874	-44.18813	-1.39295	0.36472	50.72460	162.29	6.37
76/ 7/27	2442986.5	-0.36982	0.05814	0.03840	-17.65240	-45.89697	-2.18981	0.37633	49.22331	171.07	5.86
76/ 7/29	2442988.5	-0.38616	0.00469	0.03547	-10.69566	-46.48275	-2.87026	0.38782	47.78370	179.30	5.25
76/ 7/31	2442990.5	-0.39468	-0.04887	0.03182	-4.11360	-46.11664	-3.43799	0.39896	46.42721	187.06	4.57
76/ 8/ 2	2442992.5	-0.39584	-0.10154	0.02757	2.02537	-44.95390	-3.89962	0.40958	45.16816	194.39	3.86
76/ 8/ 4	2442994.5	-0.39018	-0.15247	0.02285	7.68547	-43.12934	-4.26305	0.41954	44.01568	201.34	3.12
76/ 8/ 6	2442996.5	-0.37827	-0.20097	0.01776	12.85252	-40.75679	-4.53638	0.42871	42.97536	207.98	2.37
76/ 8/ 8	2442998.5	-0.36068	-0.24645	0.01240	17.52583	-37.93063	-4.72737	0.43702	42.05040	214.34	1.63
76/ 8/10	2443000.5	-0.33797	-0.28845	0.00686	21.71239	-34.72831	-4.84304	0.44438	41.24244	220.48	0.89

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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76/ 8/12	2443002.5	-0.31070	-0.32656	0.00124	25.42291	-31.21297	-4.88959	0.45075	40.55222	226.43	0.16
76/ 8/14	2443004.5	-0.27942	-0.36045	-0.00441	28.66914	-27.43601	-4.87234	0.45610	39.97992	232.22	-0.55
76/ 8/16	2443006.5	-0.24465	-0.38986	-0.01000	31.46201	-23.43939	-4.79574	0.46037	39.52546	237.89	-1.24
76/ 8/18	2443008.5	-0.20691	-0.41453	-0.01546	33.81041	-19.25762	-4.66346	0.46356	39.18862	243.47	-1.91
76/ 8/20	2443010.5	-0.16671	-0.43429	-0.02075	35.72042	-14.91954	-4.47842	0.46565	38.96918	249.00	-2.55
76/ 8/22	2443012.5	-0.12456	-0.44895	-0.02579	37.19464	-10.44981	-4.24292	0.46662	38.86698	254.49	-3.17
76/ 8/24	2443014.5	-0.08095	-0.45838	-0.03053	38.23183	-5.87032	-3.95864	0.46648	38.88193	259.98	-3.75
76/ 8/26	2443016.5	-0.03640	-0.46248	-0.03492	38.82651	-1.20150	-3.62677	0.46522	39.01404	265.50	-4.30
76/ 8/28	2443018.5	0.00857	-0.46113	-0.03889	38.96870	3.53645	-3.24807	0.46285	39.26342	271.06	-4.82
76/ 8/30	2443020.5	0.05344	-0.45429	-0.04240	38.64360	8.32220	-2.82298	0.45938	39.63025	276.71	-5.30
76/ 9/ 1	2443022.5	0.09766	-0.44190	-0.04540	37.83145	13.13182	-2.35166	0.45483	40.11476	282.46	-5.73
76/ 9/ 3	2443024.5	0.14064	-0.42395	-0.04782	36.50729	17.93707	-1.83418	0.44922	40.71714	288.35	-6.11
76/ 9/ 5	2443026.5	0.18179	-0.40048	-0.04962	34.64102	22.70345	-1.27067	0.44259	41.43744	294.41	-6.44
76/ 9/ 7	2443028.5	0.22045	-0.37153	-0.05074	32.19763	27.38763	-0.66151	0.43498	42.27537	300.68	-6.70
76/ 9/ 9	2443030.5	0.25593	-0.33726	-0.05113	29.13793	31.93456	-0.00771	0.42645	43.23003	307.19	-6.89
76/ 9/11	2443032.5	0.28751	-0.29784	-0.05074	25.42005	36.27372	0.68872	0.41706	44.29939	313.99	-6.99
76/ 9/13	2443034.5	0.31439	-0.25357	-0.04952	21.00216	40.31488	1.42411	0.40693	45.47976	321.11	-6.99
76/ 9/15	2443036.5	0.33574	-0.20486	-0.04744	15.84707	43.94322	2.19235	0.39616	46.76476	328.61	-6.88
76/ 9/17	2443038.5	0.35070	-0.15227	-0.04445	9.92960	47.01439	2.98381	0.38491	48.14409	336.53	-6.63
76/ 9/19	2443040.5	0.35839	-0.09654	-0.04054	3.24776	49.35054	3.78396	0.37337	49.60183	344.92	-6.23
76/ 9/21	2443042.5	0.35792	-0.03863	-0.03571	-4.16129	50.73912	4.57185	0.36177	51.11435	353.84	-5.66
76/ 9/23	2443044.5	0.34853	0.02022	-0.02999	-12.20018	50.93789	5.31863	0.35040	52.64789	3.32	-4.91
76/ 9/25	2443046.5	0.32957	0.07849	-0.02345	-20.68651	49.69051	5.98652	0.33959	54.15641	13.40	-3.96
76/ 9/27	2443048.5	0.30068	0.13437	-0.01621	-29.32961	46.75813	6.52939	0.32973	55.58040	24.08	-2.82
76/ 9/29	2443050.5	0.26191	0.18579	-0.00844	-37.71878	41.96960	6.89577	0.32122	56.84809	35.35	-1.51
76/10/ 1	2443052.5	0.21384	0.23059	-0.00037	-45.33800	35.28622	7.03557	0.31448	57.88049	47.16	-0.07
76/10/ 3	2443054.5	0.15768	0.26664	0.00771	-51.62052	26.86395	6.91022	0.30987	58.60120	59.40	1.43
76/10/ 5	2443056.5	0.09530	0.29213	0.01549	-56.04372	17.08418	6.50373	0.30767	58.94970	71.93	2.89
76/10/ 7	2443058.5	0.02907	0.30581	0.02263	-58.24070	6.52533	5.83060	0.30802	58.89444	84.57	4.21
76/10/ 9	2443060.5	-0.03834	0.30717	0.02887	-58.08512	-4.12977	4.93577	0.31089	58.44055	97.11	5.33
76/10/11	2443062.5	-0.10426	0.29648	0.03398	-55.71101	-14.22063	3.88603	0.31611	57.62850	109.37	6.17
76/10/13	2443064.5	-0.16631	0.27474	0.03782	-51.46107	-23.22028	2.75606	0.32337	56.52449	121.19	6.72
76/10/15	2443066.5	-0.22260	0.24339	0.04034	-45.79241	-30.79355	1.61509	0.33229	55.20684	132.44	6.97
76/10/17	2443068.5	-0.27174	0.20420	0.04157	-39.18111	-36.79665	0.51826	0.34245	53.75334	143.08	6.97
76/10/19	2443070.5	-0.31291	0.15899	0.04157	-32.05416	-41.23766	-0.49630	0.35344	52.23275	153.07	6.75
76/10/21	2443072.5	-0.34573	0.10950	0.04046	-24.75601	-44.22381	-1.40617	0.36490	50.70092	162.43	6.37
76/10/23	2443074.5	-0.37014	0.05732	0.03837	-17.54255	-45.91395	-2.20122	0.37651	49.20038	171.20	5.85
76/10/25	2443076.5	-0.38635	0.00386	0.03542	-10.59089	-46.48375	-2.87988	0.38799	47.76191	179.43	5.24
76/10/27	2443078.5	-0.39475	-0.04970	0.03176	-4.01528	-46.10420	-3.44591	0.39913	46.40683	187.18	4.56
76/10/29	2443080.5	-0.39580	-0.10234	0.02750	2.11646	-44.93027	-3.90596	0.40974	45.14936	194.50	3.85
76/10/31	2443082.5	-0.39005	-0.15324	0.02277	7.76897	-43.09643	-4.26792	0.41969	43.99858	201.45	3.11
76/11/ 2	2443084.5	-0.37804	-0.20169	0.01768	12.92836	-40.71621	-4.53992	0.42885	42.96007	208.08	2.36
76/11/ 4	2443086.5	-0.36037	-0.24713	0.01231	17.59406	-37.88372	-4.72969	0.43714	42.03686	214.44	1.61
76/11/ 6	2443088.5	-0.33759	-0.28907	0.00678	21.77316	-34.67616	-4.84425	0.44449	41.23073	220.57	0.87
76/11/ 8	2443090.5	-0.31025	-0.32712	0.00115	25.47642	-31.15647	-4.88978	0.45085	40.54236	226.52	0.15

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76/11/10	2443092.5	-0.27891	-0.36094	-0.00449	28.71557	-27.37586	-4.87158	0.45617	39.97192	232.31	-0.56
76/11/12	2443094.5	-0.24409	-0.39027	-0.01008	31.50152	-23.37618	-4.79409	0.46043	39.51929	237.98	-1.25
76/11/14	2443096.5	-0.20631	-0.41488	-0.01555	33.84314	-19.19182	-4.66097	0.46360	39.18429	243.56	-1.92
76/11/16	2443098.5	-0.16607	-0.43455	-0.02083	35.74641	-14.85155	-4.47515	0.46567	38.96667	249.08	-2.56
76/11/18	2443100.5	-0.12389	-0.44913	-0.02587	37.21392	-10.37998	-4.23888	0.46663	38.86629	254.58	-3.18
76/11/20	2443102.5	-0.08027	-0.45849	-0.03060	38.24434	-5.79899	-3.95385	0.46647	38.88304	260.07	-3.76
76/11/22	2443104.5	-0.03571	-0.46250	-0.03498	38.83214	-1.12896	-3.62126	0.46519	39.01696	265.58	-4.31
76/11/24	2443106.5	0.00926	-0.46107	-0.03895	38.96724	3.60989	-3.24185	0.46280	39.26814	271.15	-4.83
76/11/26	2443108.5	0.05413	-0.45414	-0.04245	38.63481	8.39618	-2.81604	0.45932	39.63678	276.80	-5.30
76/11/28	2443110.5	0.09833	-0.44166	-0.04544	37.81498	13.20595	-2.34400	0.45475	40.12311	282.55	-5.73
76/11/30	2443112.5	0.14129	-0.42363	-0.04785	36.48273	18.01089	-1.82582	0.44913	40.72733	288.44	-6.12
76/12/ 2	2443114.5	0.18240	-0.40007	-0.04964	34.60787	22.77635	-1.26160	0.44248	41.44947	294.51	-6.44
76/12/ 4	2443116.5	0.22102	-0.37105	-0.05075	32.15530	27.45888	-0.65175	0.43486	42.28923	300.78	-6.70
76/12/ 6	2443118.5	0.25645	-0.33669	-0.05113	29.08580	32.00319	0.00273	0.42631	43.24567	307.30	-6.89
76/12/ 8	2443120.5	0.28796	-0.29719	-0.05073	25.35745	36.33851	0.69979	0.41691	44.31679	314.10	-6.99
76/12/10	2443122.5	0.31476	-0.25286	-0.04950	20.92846	40.37425	1.43574	0.40677	45.49881	321.22	-6.99
76/12/12	2443124.5	0.33602	-0.20408	-0.04740	15.76176	43.99518	2.20442	0.39599	46.78535	328.73	-6.87
76/12/14	2443126.5	0.35088	-0.15143	-0.04439	9.83244	47.05648	2.99613	0.38473	48.16602	336.66	-6.63
76/12/16	2443128.5	0.35844	-0.09566	-0.04047	3.13898	49.37974	3.79627	0.37319	49.62482	345.06	-6.23
76/12/18	2443130.5	0.35785	-0.03772	-0.03563	-4.28072	50.75191	4.58377	0.36159	51.13797	353.98	-5.65
76/12/20	2443132.5	0.34831	0.02113	-0.02990	-12.32815	50.93037	5.32964	0.35023	52.67154	3.47	-4.90
76/12/22	2443134.5	0.32920	0.07938	-0.02335	-20.81944	49.65876	5.99598	0.33943	54.17927	13.56	-3.94
76/12/24	2443136.5	0.30015	0.13520	-0.01609	-29.46208	46.69882	6.53652	0.32959	55.60144	24.25	-2.80
76/12/26	2443138.5	0.26123	0.18654	-0.00831	-37.84356	41.88093	6.89976	0.32111	56.86611	35.53	-1.48
76/12/28	2443140.5	0.21303	0.23122	-0.00024	-45.44653	35.16898	7.03573	0.31439	57.89426	47.35	-0.04
76/12/30	2443142.5	0.15676	0.26712	0.00784	-51.70410	26.72226	6.90607	0.30982	58.60962	59.59	1.45
77/ 1/ 1	2443144.5	0.09430	0.29243	0.01560	-56.09523	16.92564	6.49528	0.30765	58.95202	72.13	2.91
77/ 1/ 3	2443146.5	0.02803	0.30592	0.02274	-58.25619	6.35999	5.81830	0.30804	58.89045	84.76	4.23
77/ 1/ 5	2443148.5	-0.03937	0.30709	0.02896	-58.06472	-4.29122	4.92054	0.31095	58.43063	97.31	5.34
77/ 1/ 7	2443150.5	-0.10525	0.29623	0.03405	-55.65864	-14.36879	3.86899	0.31621	57.61349	109.56	6.18
77/ 1/ 9	2443152.5	-0.16723	0.27432	0.03787	-51.38317	-23.34845	2.73835	0.32350	56.50557	121.37	6.72
77/ 1/11	2443154.5	-0.22341	0.24284	0.04037	-45.69642	-30.89812	1.59769	0.33244	55.18523	132.61	6.97
77/ 1/13	2443156.5	-0.27244	0.20355	0.04158	-39.07412	-36.87673	0.50189	0.34261	53.73018	143.24	6.97
77/ 1/15	2443158.5	-0.31348	0.15825	0.04156	-31.94215	-41.29428	-0.51119	0.35362	52.20901	153.21	6.75
77/ 1/17	2443160.5	-0.34617	0.10871	0.04043	-24.64360	-44.25916	-1.41933	0.36508	50.67735	162.57	6.36
77/ 1/19	2443162.5	-0.37045	0.05651	0.03833	-17.43303	-45.93067	-2.21257	0.37669	49.17756	171.33	5.84
77/ 1/21	2443164.5	-0.38654	0.00303	0.03537	-10.48646	-46.48456	-2.88946	0.38817	47.74023	179.55	5.23
77/ 1/23	2443166.5	-0.39482	-0.05052	0.03169	-3.91730	-46.09165	-3.45379	0.39930	46.38657	187.29	4.55
77/ 1/25	2443168.5	-0.39576	-0.10314	0.02743	2.20724	-44.90660	-3.91226	0.40990	45.13070	194.61	3.84
77/ 1/27	2443170.5	-0.38991	-0.15401	0.02269	7.85220	-43.06356	-4.27278	0.41983	43.98163	201.55	3.10
77/ 1/29	2443172.5	-0.37781	-0.20242	0.01759	13.00394	-40.67573	-4.54345	0.42898	42.94486	208.18	2.35
77/ 1/31	2443174.5	-0.36006	-0.24780	0.01223	17.66207	-37.83694	-4.73201	0.43726	42.02350	214.54	1.60
77/ 2/ 2	2443176.5	-0.33720	-0.28968	0.00669	21.83376	-34.62415	-4.84545	0.44459	41.21920	220.67	0.86
77/ 2/ 4	2443178.5	-0.30980	-0.32767	0.00106	25.52978	-31.10008	-4.88996	0.45094	40.53265	226.61	0.13
77/ 2/ 6	2443180.5	-0.27840	-0.36143	-0.00458	28.76187	-27.31581	-4.87081	0.45624	39.96402	232.39	-0.58

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77/ 2/ 8	2443182.5	-0.24353	-0.39069	-0.01017	31.54091	-23.31304	-4.79244	0.46049	39.51321	238.06	-1.27
77/ 2/10	2443184.5	-0.20571	-0.41522	-0.01563	33.87574	-19.12609	-4.65849	0.46364	39.18003	243.65	-1.93
77/ 2/12	2443186.5	-0.16544	-0.43481	-0.02091	35.77231	-14.78364	-4.47187	0.46569	38.96423	249.17	-2.57
77/ 2/14	2443188.5	-0.12323	-0.44932	-0.02594	37.23312	-10.31025	-4.23484	0.46663	38.86567	254.66	-3.19
77/ 2/16	2443190.5	-0.07959	-0.45859	-0.03067	38.25680	-5.72775	-3.94908	0.46646	38.88426	260.15	-3.77
77/ 2/18	2443192.5	-0.03502	-0.46252	-0.03505	38.83774	-1.05652	-3.61575	0.46516	39.01999	265.67	-4.32
77/ 2/20	2443194.5	0.00996	-0.46101	-0.03901	38.96578	3.68322	-3.23563	0.46276	39.27299	271.24	-4.84
77/ 2/22	2443196.5	0.05481	-0.45399	-0.04250	38.62602	8.47007	-2.80910	0.45926	39.64345	276.88	-5.31
77/ 2/24	2443198.5	0.09900	-0.44143	-0.04548	37.79851	13.27999	-2.33636	0.45467	40.13159	282.64	-5.74
77/ 2/26	2443200.5	0.14194	-0.42331	-0.04788	36.45815	18.08460	-1.81746	0.44904	40.73760	288.54	-6.12
77/ 2/28	2443202.5	0.18302	-0.39967	-0.04966	34.57467	22.84913	-1.25254	0.44237	41.46154	294.60	-6.45
77/ 3/ 2	2443204.5	0.22159	-0.37056	-0.05076	32.11292	27.52997	-0.64199	0.43473	42.30308	300.88	-6.71
77/ 3/ 4	2443206.5	0.25697	-0.33612	-0.05113	29.03361	32.07162	0.01315	0.42617	43.26129	307.40	-6.89
77/ 3/ 6	2443208.5	0.28841	-0.29655	-0.05071	25.29480	36.40304	0.71084	0.41676	44.33411	314.20	-6.99
77/ 3/ 8	2443210.5	0.31513	-0.25214	-0.04947	20.85475	40.43332	1.44734	0.40661	45.51778	321.34	-6.99
77/ 3/10	2443212.5	0.33630	-0.20330	-0.04736	15.67650	44.04680	2.21646	0.39582	46.80583	328.85	-6.87
77/ 3/12	2443214.5	0.35105	-0.15060	-0.04434	9.73540	47.09817	3.00842	0.38456	48.18782	336.78	-6.62
77/ 3/14	2443216.5	0.35850	-0.09478	-0.04040	3.03040	49.40849	3.80853	0.37301	49.64762	345.19	-6.22
77/ 3/16	2443218.5	0.35777	-0.03682	-0.03555	-4.39983	50.76419	4.59562	0.36142	51.16133	354.12	-5.64
77/ 3/18	2443220.5	0.34809	0.02203	-0.02980	-12.45566	50.92229	5.34057	0.35006	52.69483	3.62	-4.88
77/ 3/20	2443222.5	0.32883	0.08026	-0.02324	-20.95171	49.62644	6.00533	0.33928	54.20168	13.72	-3.93
77/ 3/22	2443224.5	0.29963	0.13603	-0.01598	-29.59368	46.63902	6.54353	0.32945	55.62196	24.42	-2.78
77/ 3/24	2443226.5	0.26056	0.18728	-0.00819	-37.96724	41.79197	6.90364	0.32099	56.88357	35.71	-1.46
77/ 3/26	2443228.5	0.21222	0.23184	-0.00012	-45.55380	35.05173	7.03576	0.31431	57.90747	47.53	-0.02
77/ 3/28	2443230.5	0.15585	0.26759	0.00796	-51.78639	26.58095	6.90184	0.30977	58.61751	59.78	1.47
77/ 3/30	2443232.5	0.09331	0.29273	0.01572	-56.14555	16.76789	6.48678	0.30764	58.95390	72.32	2.93
77/ 4/ 1	2443234.5	0.02700	0.30603	0.02284	-58.27076	6.19578	5.80602	0.30807	58.88615	84.96	4.25
77/ 4/ 3	2443236.5	-0.04040	0.30701	0.02905	-58.04377	-4.45132	4.90536	0.31102	58.42051	97.50	5.36
77/ 4/ 5	2443238.5	-0.10623	0.29598	0.03412	-55.60612	-14.51554	3.85205	0.31631	57.59844	109.74	6.19
77/ 4/ 7	2443240.5	-0.16814	0.27391	0.03792	-51.30551	-23.47530	2.72077	0.32363	56.48670	121.54	6.73
77/ 4/ 9	2443242.5	-0.22422	0.24230	0.04040	-45.60096	-31.00156	1.58043	0.33259	55.16378	132.78	6.98
77/ 4/11	2443244.5	-0.27313	0.20290	0.04158	-38.96787	-36.95592	0.48565	0.34277	53.70727	143.39	6.97
77/ 4/13	2443246.5	-0.31405	0.15752	0.04155	-31.83101	-41.35028	-0.52595	0.35379	52.18558	153.36	6.74
77/ 4/15	2443248.5	-0.34660	0.10793	0.04041	-24.53209	-44.29412	-1.43238	0.36526	50.65416	162.70	6.35
77/ 4/17	2443250.5	-0.37076	0.05569	0.03829	-17.32439	-45.94724	-2.22384	0.37687	49.15515	171.46	5.83
77/ 4/19	2443252.5	-0.38673	0.00221	0.03532	-10.38284	-46.48543	-2.89896	0.38834	47.71900	179.67	5.22
77/ 4/21	2443254.5	-0.39489	-0.05133	0.03163	-3.82005	-46.07930	-3.46162	0.39947	46.36677	187.41	4.54
77/ 4/23	2443256.5	-0.39572	-0.10394	0.02736	2.29737	-44.88324	-3.91853	0.41006	45.11250	194.72	3.83
77/ 4/25	2443258.5	-0.38977	-0.15477	0.02262	7.93487	-43.03106	-4.27761	0.41998	43.96513	201.66	3.09
77/ 4/27	2443260.5	-0.37758	-0.20314	0.01751	13.07904	-40.63567	-4.54697	0.42911	42.93010	208.28	2.34
77/ 4/29	2443262.5	-0.35974	-0.24847	0.01215	17.72966	-37.79061	-4.73432	0.43738	42.01053	214.63	1.59
77/ 5/ 1	2443264.5	-0.33681	-0.29030	0.00660	21.89396	-34.57260	-4.84666	0.44470	41.20802	220.76	0.85
77/ 5/ 3	2443266.5	-0.30935	-0.32822	0.00098	25.58278	-31.04420	-4.89015	0.45103	40.52326	226.70	0.12
77/ 5/ 5	2443268.5	-0.27789	-0.36191	-0.00467	28.80785	-27.25631	-4.87006	0.45632	39.95642	232.48	-0.59
77/ 5/ 7	2443270.5	-0.24297	-0.39110	-0.01025	31.58002	-23.25050	-4.79081	0.46054	39.50741	238.15	-1.28

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77/ 5/ 9	2443272.5	-0.20510	-0.41556	-0.01571	33.90809	-19.06099	-4.65603	0.46368	39.17599	243.73	-1.94
77/ 5/11	2443274.5	-0.16480	-0.43508	-0.02099	35.79795	-14.71639	-4.46862	0.46572	38.96195	249.25	-2.58
77/ 5/13	2443276.5	-0.12257	-0.44950	-0.02602	37.25205	-10.24121	-4.23083	0.46664	38.86512	254.75	-3.20
77/ 5/15	2443278.5	-0.07891	-0.45869	-0.03074	38.26896	-5.65725	-3.94433	0.46645	38.88541	260.24	-3.78
77/ 5/17	2443280.5	-0.03434	-0.46254	-0.03511	38.84299	-0.98489	-3.61029	0.46514	39.02284	265.75	-4.33
77/ 5/19	2443282.5	0.01065	-0.46094	-0.03907	38.96397	3.75565	-3.22945	0.46272	39.27754	271.32	-4.84
77/ 5/21	2443284.5	0.05550	-0.45384	-0.04255	38.61689	8.54293	-2.80222	0.45920	39.64969	276.97	-5.32
77/ 5/23	2443286.5	0.09967	-0.44120	-0.04552	37.78173	13.35287	-2.32878	0.45460	40.13953	282.73	-5.75
77/ 5/25	2443288.5	0.14258	-0.42300	-0.04792	36.43333	18.15702	-1.80920	0.44895	40.74724	288.63	-6.13
77/ 5/27	2443290.5	0.18363	-0.39927	-0.04968	34.54134	22.92048	-1.24359	0.44227	41.47287	294.70	-6.45
77/ 5/29	2443292.5	0.22216	-0.37008	-0.05077	32.07054	27.59950	-0.63237	0.43462	42.31610	300.98	-6.71
77/ 5/31	2443294.5	0.25748	-0.33556	-0.05113	28.98160	32.13837	0.02342	0.42604	43.27595	307.50	-6.89
77/ 6/ 2	2443296.5	0.28886	-0.29592	-0.05070	25.23257	36.46580	0.72171	0.41662	44.35040	314.31	-6.99
77/ 6/ 4	2443298.5	0.31550	-0.25144	-0.04945	20.78174	40.49054	1.45873	0.40645	45.53562	321.45	-6.99
77/ 6/ 6	2443300.5	0.33658	-0.20254	-0.04732	15.59229	44.09655	2.22824	0.39566	46.82510	328.96	-6.87
77/ 6/ 8	2443302.5	0.35123	-0.14978	-0.04429	9.63982	47.13804	3.02042	0.38439	48.20834	336.90	-6.62
77/ 6/10	2443304.5	0.35856	-0.09393	-0.04034	2.92376	49.43559	3.82047	0.37284	49.66913	345.32	-6.21
77/ 6/12	2443306.5	0.35770	-0.03595	-0.03547	-4.51653	50.77515	4.60714	0.36125	51.18340	354.26	-5.63
77/ 6/14	2443308.5	0.34788	0.02291	-0.02971	-12.58032	50.91339	5.35116	0.34990	52.71691	3.77	-4.87
77/ 6/16	2443310.5	0.32847	0.08111	-0.02314	-21.08078	49.59399	6.01437	0.33913	54.22302	13.87	-3.91
77/ 6/18	2443312.5	0.29912	0.13683	-0.01587	-29.72192	46.57993	6.55029	0.32932	55.64161	24.58	-2.76
77/ 6/20	2443314.5	0.25991	0.18800	-0.00807	-38.08766	41.70464	6.90735	0.32088	56.90042	35.88	-1.44
77/ 6/22	2443316.5	0.21144	0.23244	0.00000	-45.65819	34.93701	7.03575	0.31422	57.92035	47.71	0.00
77/ 6/24	2443318.5	0.15496	0.26804	0.00808	-51.86645	26.44293	6.89769	0.30972	58.62538	59.97	1.49
77/ 6/26	2443320.5	0.09235	0.29301	0.01583	-56.19452	16.61389	6.47847	0.30763	58.95605	72.51	2.95
77/ 6/28	2443322.5	0.02600	0.30614	0.02294	-58.28498	6.03545	5.79402	0.30809	58.88239	85.14	4.27
77/ 6/30	2443324.5	-0.04139	0.30693	0.02913	-58.02345	-4.60775	4.89055	0.31108	58.41121	97.68	5.37
77/ 7/ 2	2443326.5	-0.10719	0.29572	0.03418	-55.55504	-14.65916	3.83550	0.31640	57.58441	109.92	6.20
77/ 7/ 4	2443328.5	-0.16902	0.27350	0.03796	-51.22986	-23.59970	2.70357	0.32374	56.46905	121.72	6.73
77/ 7/ 6	2443330.5	-0.22500	0.24176	0.04042	-45.50783	-31.10330	1.56352	0.33272	55.14365	132.94	6.98
77/ 7/ 8	2443332.5	-0.27380	0.20225	0.04159	-38.86401	-37.03410	0.46972	0.34293	53.68572	143.55	6.97
77/ 7/10	2443334.5	-0.31459	0.15680	0.04154	-31.72214	-41.40585	-0.54046	0.35395	52.16350	153.51	6.74
77/ 7/12	2443336.5	-0.34702	0.10715	0.04038	-24.42263	-44.32909	-1.44524	0.36543	50.63222	162.84	6.34
77/ 7/14	2443338.5	-0.37105	0.05489	0.03825	-17.21754	-45.96410	-2.23496	0.37703	49.13387	171.59	5.82
77/ 7/16	2443340.5	-0.38690	0.00140	0.03527	-10.28074	-46.48676	-2.90837	0.38851	47.69875	179.79	5.21
77/ 7/18	2443342.5	-0.39495	-0.05214	0.03157	-3.72405	-46.06750	-3.46939	0.39962	46.34781	187.52	4.53
77/ 7/20	2443344.5	-0.39568	-0.10472	0.02729	2.38650	-44.86045	-3.92476	0.41021	45.09500	194.82	3.81
77/ 7/22	2443346.5	-0.38962	-0.15552	0.02254	8.01673	-42.99913	-4.28241	0.42012	43.94920	201.76	3.08
77/ 7/24	2443348.5	-0.37735	-0.20385	0.01743	13.15350	-40.59612	-4.55047	0.42924	42.91580	208.38	2.33
77/ 7/26	2443350.5	-0.35942	-0.24913	0.01206	17.79674	-37.74471	-4.73662	0.43749	41.99789	214.73	1.58
77/ 7/28	2443352.5	-0.33642	-0.29090	0.00652	21.95378	-34.52140	-4.84786	0.44480	41.19706	220.85	0.84
77/ 7/30	2443354.5	-0.30889	-0.32877	0.00089	25.63548	-30.98855	-4.89033	0.45111	40.51400	226.79	0.11
77/ 8/ 1	2443356.5	-0.27738	-0.36239	-0.00475	28.85358	-27.19692	-4.86930	0.45639	39.94886	232.57	-0.60
77/ 8/ 3	2443358.5	-0.24241	-0.39151	-0.01034	31.61891	-23.18795	-4.78916	0.46060	39.50156	238.24	-1.29
77/ 8/ 5	2443360.5	-0.20450	-0.41589	-0.01580	33.94023	-18.99577	-4.65355	0.46372	39.17186	243.82	-1.95

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77/ 8/ 7	2443362.5	-0.16417	-0.43534	-0.02107	35.82340	-14.64891	-4.46534	0.46574	38.95954	249.34	-2.59
77/ 8/ 9	2443364.5	-0.12191	-0.44968	-0.02609	37.27081	-10.17185	-4.22678	0.46665	38.86445	254.83	-3.21
77/ 8/11	2443366.5	-0.07823	-0.45879	-0.03081	38.28097	-5.58633	-3.93954	0.46643	38.88649	260.32	-3.79
77/ 8/13	2443368.5	-0.03364	-0.46255	-0.03518	38.84814	-0.91274	-3.60477	0.46511	39.02570	265.84	-4.34
77/ 8/15	2443370.5	0.01134	-0.46088	-0.03912	38.96206	3.82870	-3.22321	0.46267	39.28219	271.41	-4.85
77/ 8/17	2443372.5	0.05618	-0.45369	-0.04260	38.60766	8.61654	-2.79527	0.45914	39.65614	277.06	-5.32
77/ 8/19	2443374.5	0.10034	-0.44096	-0.04556	37.76484	13.42663	-2.32113	0.45452	40.14779	282.82	-5.75
77/ 8/21	2443376.5	0.14323	-0.42268	-0.04795	36.40834	18.23043	-1.80083	0.44885	40.75732	288.72	-6.13
77/ 8/23	2443378.5	0.18424	-0.39886	-0.04971	34.50775	22.99294	-1.23451	0.44216	41.48475	294.79	-6.45
77/ 8/25	2443380.5	0.22273	-0.36959	-0.05078	32.02779	27.67026	-0.62261	0.43449	42.32978	301.07	-6.71
77/ 8/27	2443382.5	0.25799	-0.33499	-0.05113	28.92905	32.20646	0.03385	0.42590	43.29142	307.60	-6.89
77/ 8/29	2443384.5	0.28930	-0.29527	-0.05069	25.16960	36.52999	0.73276	0.41647	44.36762	314.42	-6.99
77/ 8/31	2443386.5	0.31587	-0.25072	-0.04942	20.70772	40.54927	1.47033	0.40629	45.55452	321.56	-6.99
77/ 9/ 2	2443388.5	0.33686	-0.20176	-0.04728	15.50674	44.14780	2.24027	0.39549	46.84556	329.08	-6.87
77/ 9/ 4	2443390.5	0.35140	-0.14895	-0.04424	9.54253	47.17934	3.03269	0.38422	48.23015	337.03	-6.61
77/ 9/ 6	2443392.5	0.35861	-0.09305	-0.04027	2.81496	49.46389	3.83271	0.37266	49.69195	345.45	-6.20
77/ 9/ 8	2443394.5	0.35762	-0.03505	-0.03539	-4.63580	50.78692	4.61896	0.36107	51.20680	354.40	-5.62
77/ 9/10	2443396.5	0.34766	0.02381	-0.02962	-12.70791	50.90474	5.36205	0.34973	52.74026	3.92	-4.86
77/ 9/12	2443398.5	0.32810	0.08199	-0.02303	-21.21303	49.56105	6.02367	0.33897	54.24550	14.03	-3.90
77/ 9/14	2443400.5	0.29860	0.13765	-0.01575	-29.85337	46.51948	6.55723	0.32918	55.66222	24.75	-2.74
77/ 9/16	2443402.5	0.25924	0.18874	-0.00795	-38.21107	41.61501	6.91114	0.32076	56.91800	36.06	-1.42
77/ 9/18	2443404.5	0.21063	0.23306	0.00013	-45.76503	34.81915	7.03569	0.31414	57.93368	47.89	0.02
77/ 9/20	2443406.5	0.15404	0.26851	0.00820	-51.94816	26.30110	6.89336	0.30967	58.63342	60.16	1.52
77/ 9/22	2443408.5	0.09135	0.29331	0.01594	-56.24414	16.45575	6.46988	0.30762	58.95808	72.70	2.97
77/ 9/24	2443410.5	0.02497	0.30624	0.02304	-58.29878	5.87103	5.78165	0.30812	58.87821	85.34	4.29
77/ 9/26	2443412.5	-0.04242	0.30685	0.02922	-58.00173	-4.76786	4.87530	0.31114	58.40121	97.87	5.39
77/ 9/28	2443414.5	-0.10817	0.29546	0.03425	-55.50180	-14.80575	3.81850	0.31650	57.56945	110.11	6.21
77/ 9/30	2443416.5	-0.16993	0.27308	0.03801	-51.15156	-23.72625	2.68596	0.32387	56.45026	121.89	6.74
77/10/ 2	2443418.5	-0.22581	0.24120	0.04045	-45.41184	-31.20634	1.54624	0.33287	55.12224	133.11	6.98
77/10/ 4	2443420.5	-0.27448	0.20159	0.04160	-38.75733	-37.11283	0.45348	0.34309	53.66282	143.70	6.96
77/10/ 6	2443422.5	-0.31515	0.15607	0.04153	-31.61066	-41.46134	-0.55521	0.35412	52.14005	153.65	6.74
77/10/ 8	2443424.5	-0.34745	0.10637	0.04036	-24.31089	-44.36354	-1.45827	0.36560	50.60899	162.98	6.34
77/10/10	2443426.5	-0.37135	0.05408	0.03821	-17.10875	-45.98015	-2.24620	0.37721	49.11139	171.72	5.81
77/10/12	2443428.5	-0.38708	0.00057	0.03521	-10.17704	-46.48709	-2.91784	0.38868	47.67741	179.92	5.20
77/10/14	2443430.5	-0.39501	-0.05296	0.03151	-3.62677	-46.05461	-3.47718	0.39979	46.32787	187.64	4.52
77/10/16	2443432.5	-0.39563	-0.10552	0.02722	2.47662	-44.83654	-3.93098	0.41037	45.07662	194.93	3.80
77/10/18	2443434.5	-0.38948	-0.15629	0.02247	8.09935	-42.96608	-4.28720	0.42026	43.93248	201.86	3.06
77/10/20	2443436.5	-0.37711	-0.20457	0.01735	13.22854	-40.55549	-4.55393	0.42937	42.90082	208.48	2.32
77/10/22	2443438.5	-0.35911	-0.24980	0.01198	17.86425	-37.69782	-4.73888	0.43761	41.98468	214.82	1.57
77/10/24	2443440.5	-0.33603	-0.29152	0.00643	22.01390	-34.46930	-4.84901	0.44490	41.18565	220.94	0.83
77/10/26	2443442.5	-0.30843	-0.32932	0.00080	25.68840	-30.93211	-4.89047	0.45120	40.50440	226.88	0.10
77/10/28	2443444.5	-0.27686	-0.36288	-0.00484	28.89946	-27.13685	-4.86849	0.45646	39.94108	232.66	-0.61
77/10/30	2443446.5	-0.24184	-0.39192	-0.01042	31.65791	-23.12483	-4.78747	0.46065	39.49558	238.32	-1.30
77/11/ 1	2443448.5	-0.20390	-0.41623	-0.01588	33.97247	-18.93006	-4.65103	0.46376	39.16769	243.90	-1.96
77/11/ 3	2443450.5	-0.16353	-0.43560	-0.02115	35.84894	-14.58102	-4.46203	0.46576	38.95718	249.42	-2.60

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
77/11/ 5	2443452.5	-0.12125	-0.44986	-0.02617	37.28966	-10.10212	-4.22271	0.46665	38.86390	254.92	-3.21
77/11/ 7	2443454.5	-0.07755	-0.45889	-0.03088	38.29307	-5.51508	-3.93473	0.46642	38.88775	260.41	-3.80
77/11/ 9	2443456.5	-0.03295	-0.46257	-0.03524	38.85337	-0.84028	-3.59923	0.46508	39.02877	265.92	-4.35
77/11/11	2443458.5	0.01203	-0.46081	-0.03918	38.96023	3.90206	-3.21696	0.46263	39.28707	271.50	-4.86
77/11/13	2443460.5	0.05687	-0.45354	-0.04265	38.59848	8.69044	-2.78831	0.45907	39.66284	277.15	-5.33
77/11/15	2443462.5	0.10101	-0.44072	-0.04560	37.74796	13.50067	-2.31344	0.45444	40.15631	282.91	-5.76
77/11/17	2443464.5	0.14388	-0.42235	-0.04798	36.38334	18.30414	-1.79244	0.44876	40.76765	288.81	-6.14
77/11/19	2443466.5	0.18485	-0.39845	-0.04973	34.47411	23.06572	-1.22541	0.44205	41.49691	294.89	-6.46
77/11/21	2443468.5	0.22329	-0.36910	-0.05079	31.98492	27.74134	-0.61281	0.43437	42.34375	301.17	-6.72
77/11/23	2443470.5	0.25851	-0.33442	-0.05113	28.87633	32.27488	0.04433	0.42576	43.30719	307.70	-6.90
77/11/25	2443472.5	0.28975	-0.29462	-0.05068	25.10636	36.59450	0.74386	0.41632	44.38513	314.52	-6.99
77/11/27	2443474.5	0.31624	-0.25000	-0.04939	20.63335	40.60827	1.48199	0.40613	45.57371	321.67	-6.99
77/11/29	2443476.5	0.33713	-0.20097	-0.04724	15.42073	44.19928	2.25237	0.39532	46.86628	329.20	-6.86
77/12/ 1	2443478.5	0.35157	-0.14811	-0.04418	9.44465	47.22077	3.04503	0.38404	48.25220	337.16	-6.61
77/12/ 3	2443480.5	0.35866	-0.09217	-0.04020	2.70548	49.49224	3.84502	0.37248	49.71505	345.59	-6.20
77/12/ 5	2443482.5	0.35754	-0.03414	-0.03530	-4.75585	50.79862	4.63085	0.36089	51.23049	354.55	-5.61
77/12/ 7	2443484.5	0.34743	0.02472	-0.02952	-12.83636	50.89588	5.37299	0.34956	52.76392	4.07	-4.84
77/12/ 9	2443486.5	0.32772	0.08287	-0.02292	-21.34618	49.52770	6.03301	0.33881	54.26831	14.19	-3.88
77/12/11	2443488.5	0.29806	0.13848	-0.01563	-29.98568	46.45838	6.56420	0.32903	55.68313	24.92	-2.72
77/12/13	2443490.5	0.25855	0.18948	-0.00783	-38.33519	41.52450	6.91492	0.32065	56.93582	36.24	-1.40
77/12/15	2443492.5	0.20981	0.23368	0.00025	-45.87235	34.70019	7.03559	0.31405	57.94717	48.08	0.05
77/12/17	2443494.5	0.15311	0.26898	0.00832	-52.03002	26.15805	6.88895	0.30962	58.64149	60.35	1.54
77/12/19	2443496.5	0.09035	0.29360	0.01606	-56.29356	16.29639	6.46116	0.30760	58.96002	72.90	2.99
77/12/21	2443498.5	0.02393	0.30634	0.02315	-58.31204	5.70552	5.76914	0.30815	58.87384	85.53	4.31
77/12/23	2443500.5	-0.04345	0.30676	0.02930	-57.97921	-4.92885	4.85992	0.31121	58.39094	98.06	5.40
77/12/25	2443502.5	-0.10916	0.29519	0.03432	-55.44762	-14.95295	3.80138	0.31660	57.55415	110.29	6.22
77/12/27	2443504.5	-0.17084	0.27265	0.03806	-51.07227	-23.85314	2.66823	0.32400	56.43110	122.07	6.75
77/12/29	2443506.5	-0.22661	0.24065	0.04048	-45.31488	-31.30949	1.52887	0.33302	55.10046	133.28	6.98
77/12/31	2443508.5	-0.27517	0.20093	0.04161	-38.64976	-37.19149	0.43718	0.34326	53.63956	143.86	6.96
78/ 1/ 2	2443510.5	-0.31572	0.15533	0.04152	-31.49840	-41.51666	-0.57001	0.35430	52.11628	153.80	6.73
78/ 1/ 4	2443512.5	-0.34788	0.10558	0.04033	-24.19846	-44.39772	-1.47134	0.36578	50.58545	163.12	6.33
78/ 1/ 6	2443514.5	-0.37166	0.05326	0.03817	-16.99938	-45.99587	-2.25746	0.37739	49.08865	171.85	5.80
78/ 1/ 8	2443516.5	-0.38726	-0.00026	0.03516	-10.07286	-46.48706	-2.92732	0.38885	47.65584	180.04	5.19
78/ 1/10	2443518.5	-0.39508	-0.05378	0.03145	-3.52909	-46.04136	-3.48497	0.39996	46.30774	187.75	4.51
78/ 1/12	2443520.5	-0.39559	-0.10632	0.02715	2.56706	-44.81228	-3.93721	0.41052	45.05809	195.04	3.79
78/ 1/14	2443522.5	-0.38933	-0.15705	0.02239	8.18224	-42.93269	-4.29197	0.42041	43.91566	201.97	3.05
78/ 1/16	2443524.5	-0.37687	-0.20529	0.01727	13.30379	-40.51456	-4.55739	0.42951	42.88578	208.58	2.30
78/ 1/18	2443526.5	-0.35879	-0.25048	0.01189	17.93195	-37.65063	-4.74113	0.43773	41.97145	214.92	1.56
78/ 1/20	2443528.5	-0.33564	-0.29213	0.00635	22.07420	-34.41692	-4.85016	0.44501	41.17425	221.04	0.82
78/ 1/22	2443530.5	-0.30798	-0.32987	0.00071	25.74147	-30.87539	-4.89059	0.45129	40.49483	226.97	0.09
78/ 1/24	2443532.5	-0.27635	-0.36336	-0.00493	28.94548	-27.07648	-4.86767	0.45653	39.93333	232.75	-0.62
78/ 1/26	2443534.5	-0.24128	-0.39233	-0.01051	31.69703	-23.06139	-4.78577	0.46071	39.48966	238.41	-1.31
78/ 1/28	2443536.5	-0.20329	-0.41656	-0.01596	34.00480	-18.86404	-4.64849	0.46380	39.16359	243.99	-1.97
78/ 1/30	2443538.5	-0.16289	-0.43585	-0.02123	35.87454	-14.51280	-4.45870	0.46578	38.95490	249.51	-2.61
78/ 2/ 1	2443540.5	-0.12058	-0.45004	-0.02624	37.30855	-10.03206	-4.21862	0.46665	38.86343	255.00	-3.22

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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78/ 2/ 3	2443542.5	-0.07687	-0.45899	-0.03095	38.30518	-5.44352	-3.92989	0.46641	38.88911	260.49	-3.81
78/ 2/ 5	2443544.5	-0.03226	-0.46258	-0.03530	38.85859	-0.76750	-3.59366	0.46505	39.03195	266.01	-4.35
78/ 2/ 7	2443546.5	0.01272	-0.46074	-0.03924	38.95834	3.97573	-3.21067	0.46258	39.29208	271.58	-4.87
78/ 2/ 9	2443548.5	0.05756	-0.45338	-0.04270	38.58922	8.76466	-2.78130	0.45901	39.66968	277.24	-5.34
78/ 2/11	2443550.5	0.10168	-0.44048	-0.04565	37.73098	13.57505	-2.30572	0.45436	40.16497	283.00	-5.77
78/ 2/13	2443552.5	0.14452	-0.42202	-0.04801	36.35819	18.37819	-1.78400	0.44866	40.77816	288.90	-6.14
78/ 2/15	2443554.5	0.18547	-0.39804	-0.04975	34.44029	23.13883	-1.21627	0.44194	41.50925	294.98	-6.46
78/ 2/17	2443556.5	0.22386	-0.36860	-0.05080	31.94184	27.81274	-0.60296	0.43424	42.35791	301.27	-6.72
78/ 2/19	2443558.5	0.25902	-0.33384	-0.05113	28.82334	32.34358	0.05485	0.42562	43.32315	307.81	-6.90
78/ 2/21	2443560.5	0.29020	-0.29396	-0.05066	25.04280	36.65924	0.75502	0.41617	44.40283	314.63	-6.99
78/ 2/23	2443562.5	0.31660	-0.24927	-0.04937	20.55860	40.66743	1.49370	0.40597	45.59306	321.79	-6.98
78/ 2/25	2443564.5	0.33741	-0.20018	-0.04720	15.33429	44.25084	2.26450	0.39515	46.88716	329.32	-6.86
78/ 2/27	2443566.5	0.35173	-0.14726	-0.04413	9.34632	47.26220	3.05741	0.38386	48.27440	337.28	-6.60
78/ 3/ 1	2443568.5	0.35870	-0.09128	-0.04013	2.59554	49.52046	3.85736	0.37231	49.73824	345.72	-6.19
78/ 3/ 3	2443570.5	0.35745	-0.03323	-0.03522	-4.87633	50.81004	4.64275	0.36072	51.25421	354.69	-5.60
78/ 3/ 5	2443572.5	0.34720	0.02563	-0.02942	-12.96515	50.88656	5.38393	0.34938	52.78753	4.22	-4.83
78/ 3/ 7	2443574.5	0.32733	0.08376	-0.02281	-21.47950	49.49373	6.04231	0.33865	54.29095	14.35	-3.86
78/ 3/ 9	2443576.5	0.29753	0.13931	-0.01551	-30.11792	46.39654	6.57109	0.32889	55.70375	25.09	-2.70
78/ 3/11	2443578.5	0.25787	0.19022	-0.00770	-38.45894	41.43322	6.91861	0.32053	56.95322	36.41	-1.38
78/ 3/13	2443580.5	0.20900	0.23430	0.00038	-45.97898	34.58054	7.03537	0.31397	57.96013	48.27	0.07
78/ 3/15	2443582.5	0.15219	0.26944	0.00845	-52.11092	26.01457	6.88442	0.30957	58.64896	60.54	1.56
78/ 3/17	2443584.5	0.08935	0.29389	0.01617	-56.34186	16.13695	6.45234	0.30760	58.96133	73.09	3.01
78/ 3/19	2443586.5	0.02289	0.30645	0.02325	-58.32418	5.54032	5.75656	0.30818	58.86886	85.73	4.33
78/ 3/21	2443588.5	-0.04448	0.30668	0.02939	-57.95573	-5.08915	4.84450	0.31128	58.38010	98.25	5.42
78/ 3/23	2443590.5	-0.11015	0.29493	0.03438	-55.39275	-15.09919	3.78426	0.31670	57.53836	110.48	6.23
78/ 3/25	2443592.5	-0.17174	0.27223	0.03810	-50.99264	-23.97894	2.65056	0.32413	56.41156	122.25	6.75
78/ 3/27	2443594.5	-0.22742	0.24009	0.04051	-45.21793	-31.41156	1.51159	0.33317	55.07841	133.45	6.98
78/ 3/29	2443596.5	-0.27586	0.20027	0.04161	-38.54250	-37.26916	0.42097	0.34342	53.61615	144.02	6.96
78/ 3/31	2443598.5	-0.31627	0.15460	0.04151	-31.38666	-41.57114	-0.58470	0.35447	52.09246	153.95	6.73
78/ 4/ 2	2443600.5	-0.34831	0.10479	0.04031	-24.08671	-44.43127	-1.48429	0.36596	50.56195	163.26	6.32
78/ 4/ 4	2443602.5	-0.37196	0.05244	0.03813	-16.89078	-46.01116	-2.26861	0.37757	49.06599	171.97	5.80
78/ 4/ 6	2443604.5	-0.38744	-0.00108	0.03511	-9.96950	-46.48679	-2.93671	0.38903	47.63441	180.16	5.18
78/ 4/ 8	2443606.5	-0.39514	-0.05459	0.03139	-3.43223	-46.02803	-3.49269	0.40013	46.28778	187.87	4.50
78/ 4/10	2443608.5	-0.39554	-0.10711	0.02708	2.65672	-44.78808	-3.94336	0.41068	45.03977	195.15	3.78
78/ 4/12	2443610.5	-0.38919	-0.15781	0.02231	8.26438	-42.89950	-4.29670	0.42056	43.89907	202.07	3.04
78/ 4/14	2443612.5	-0.37664	-0.20601	0.01719	13.37835	-40.47393	-4.56081	0.42964	42.87097	208.68	2.29
78/ 4/16	2443614.5	-0.35847	-0.25114	0.01181	17.99900	-37.60384	-4.74335	0.43785	41.95846	215.01	1.55
78/ 4/18	2443616.5	-0.33525	-0.29274	0.00626	22.13391	-34.36501	-4.85129	0.44511	41.16308	221.13	0.81
78/ 4/20	2443618.5	-0.30752	-0.33041	0.00063	25.79401	-30.81921	-4.89072	0.45138	40.48548	227.05	0.08
78/ 4/22	2443620.5	-0.27584	-0.36384	-0.00501	28.99104	-27.01672	-4.86686	0.45660	39.92580	232.83	-0.63
78/ 4/24	2443622.5	-0.24072	-0.39274	-0.01059	31.73576	-22.99860	-4.78409	0.46076	39.48394	238.49	-1.32
78/ 4/26	2443624.5	-0.20269	-0.41690	-0.01604	34.03681	-18.79868	-4.64598	0.46384	39.15967	244.07	-1.98
78/ 4/28	2443626.5	-0.16226	-0.43611	-0.02131	35.89989	-14.44530	-4.45540	0.46580	38.95278	249.59	-2.62
78/ 4/30	2443628.5	-0.11992	-0.45022	-0.02632	37.32723	-9.96275	-4.21457	0.46666	38.86310	255.08	-3.23
78/ 5/ 2	2443630.5	-0.07619	-0.45908	-0.03102	38.31714	-5.37270	-3.92510	0.46640	38.89056	260.58	-3.81

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78/ 5/ 4	2443632.5	-0.03158	-0.46260	-0.03537	38.86368	-0.69550	-3.58815	0.46502	39.03517	266.10	-4.36
78/ 5/ 6	2443634.5	0.01341	-0.46066	-0.03930	38.95638	4.04859	-3.20444	0.46253	39.29706	271.67	-4.87
78/ 5/ 8	2443636.5	0.05824	-0.45323	-0.04275	38.57993	8.83804	-2.77437	0.45895	39.67643	277.32	-5.35
78/ 5/10	2443638.5	0.10235	-0.44024	-0.04569	37.71401	13.64854	-2.29808	0.45428	40.17350	283.09	-5.77
78/ 5/12	2443640.5	0.14517	-0.42170	-0.04804	36.33312	18.45130	-1.77565	0.44857	40.78847	289.00	-6.15
78/ 5/14	2443642.5	0.18608	-0.39763	-0.04977	34.40661	23.21096	-1.20722	0.44183	41.52133	295.08	-6.47
78/ 5/16	2443644.5	0.22443	-0.36811	-0.05082	31.89899	27.88312	-0.59322	0.43411	42.37176	301.37	-6.72
78/ 5/18	2443646.5	0.25953	-0.33327	-0.05112	28.77069	32.41124	0.06525	0.42549	43.33873	307.91	-6.90
78/ 5/20	2443648.5	0.29064	-0.29332	-0.05065	24.97970	36.72291	0.76604	0.41602	44.42009	314.74	-6.99
78/ 5/22	2443650.5	0.31697	-0.24855	-0.04934	20.48445	40.72553	1.50526	0.40581	45.61192	321.90	-6.98
78/ 5/24	2443652.5	0.33768	-0.19940	-0.04716	15.24864	44.30135	2.27648	0.39498	46.90749	329.44	-6.86
78/ 5/26	2443654.5	0.35190	-0.14643	-0.04407	9.24896	47.30263	3.06961	0.38369	48.29601	337.41	-6.60
78/ 5/28	2443656.5	0.35875	-0.09041	-0.04006	2.48677	49.54778	3.86952	0.37213	49.76083	345.85	-6.18
78/ 5/30	2443658.5	0.35737	-0.03234	-0.03514	-4.99544	50.82073	4.65447	0.36054	51.27734	354.83	-5.59
78/ 6/ 1	2443660.5	0.34697	0.02653	-0.02933	-13.09238	50.87676	5.39469	0.34922	52.81059	4.37	-4.82
78/ 6/ 3	2443662.5	0.32696	0.08463	-0.02271	-21.61113	49.45962	6.05145	0.33849	54.31312	14.51	-3.85
78/ 6/ 5	2443664.5	0.29700	0.14013	-0.01540	-30.24842	46.33498	6.57786	0.32876	55.72401	25.26	-2.68
78/ 6/ 7	2443666.5	0.25719	0.19095	-0.00758	-38.58102	41.34265	6.92220	0.32042	56.97040	36.59	-1.36
78/ 6/ 9	2443668.5	0.20819	0.23491	0.00050	-46.08415	34.46205	7.03511	0.31388	57.97305	48.45	0.09
78/ 6/11	2443670.5	0.15127	0.26990	0.00857	-52.19070	25.87258	6.87990	0.30952	58.65656	60.73	1.59
78/ 6/13	2443672.5	0.08836	0.29417	0.01629	-56.38947	15.97923	6.44360	0.30759	58.96293	73.28	3.04
78/ 6/15	2443674.5	0.02187	0.30654	0.02335	-58.33612	5.37690	5.74410	0.30821	58.86432	85.92	4.35
78/ 6/17	2443676.5	-0.04550	0.30659	0.02947	-57.93251	-5.24780	4.82923	0.31134	58.36983	98.44	5.43
78/ 6/19	2443678.5	-0.11112	0.29466	0.03445	-55.33851	-15.24405	3.76732	0.31680	57.52325	110.66	6.24
78/ 6/21	2443680.5	-0.17264	0.27181	0.03815	-50.91387	-24.10367	2.63305	0.32425	56.39275	122.42	6.76
78/ 6/23	2443682.5	-0.22821	0.23954	0.04053	-45.12194	-31.51287	1.49446	0.33332	55.05709	133.61	6.98
78/ 6/25	2443684.5	-0.27653	0.19962	0.04162	-38.43618	-37.34637	0.40490	0.34359	53.59343	144.18	6.96
78/ 6/27	2443686.5	-0.31682	0.15386	0.04150	-31.27581	-41.62538	-0.59929	0.35465	52.06926	154.10	6.72
78/ 6/29	2443688.5	-0.34873	0.10401	0.04028	-23.97575	-44.46472	-1.49717	0.36614	50.53899	163.39	6.32
78/ 7/ 1	2443690.5	-0.37225	0.05163	0.03809	-16.78284	-46.02646	-2.27971	0.37774	49.04381	172.10	5.79
78/ 7/ 3	2443692.5	-0.38761	-0.00189	0.03506	-9.86667	-46.48660	-2.94606	0.38920	47.61338	180.28	5.17
78/ 7/ 5	2443694.5	-0.39520	-0.05540	0.03132	-3.33582	-46.01482	-3.50037	0.40029	46.26817	187.98	4.49
78/ 7/ 7	2443696.5	-0.39549	-0.10790	0.02701	2.74601	-44.76402	-3.94950	0.41084	45.02174	195.26	3.77
78/ 7/ 9	2443698.5	-0.38904	-0.15856	0.02224	8.34621	-42.86644	-4.30141	0.42070	43.88272	202.17	3.03
78/ 7/11	2443700.5	-0.37640	-0.20672	0.01711	13.45263	-40.43342	-4.56421	0.42977	42.85635	208.78	2.28
78/ 7/13	2443702.5	-0.35815	-0.25180	0.01172	18.06581	-37.55714	-4.74556	0.43797	41.94559	215.11	1.53
78/ 7/15	2443704.5	-0.33485	-0.29334	0.00617	22.19337	-34.31318	-4.85240	0.44521	41.15198	221.22	0.79
78/ 7/17	2443706.5	-0.30706	-0.33095	0.00054	25.84631	-30.76309	-4.89082	0.45146	40.47616	227.14	0.07
78/ 7/19	2443708.5	-0.27532	-0.36431	-0.00510	29.03633	-26.95700	-4.86603	0.45667	39.91825	232.92	-0.64
78/ 7/21	2443710.5	-0.24016	-0.39315	-0.01068	31.77418	-22.93586	-4.78238	0.46082	39.47814	238.58	-1.33
78/ 7/23	2443712.5	-0.20209	-0.41723	-0.01613	34.06846	-18.73341	-4.64345	0.46387	39.15562	244.16	-1.99
78/ 7/25	2443714.5	-0.16162	-0.43637	-0.02139	35.92483	-14.37789	-4.45208	0.46583	38.95046	249.68	-2.63
78/ 7/27	2443716.5	-0.11926	-0.45039	-0.02639	37.34547	-9.89357	-4.21048	0.46666	38.86251	255.17	-3.24
78/ 7/29	2443718.5	-0.07552	-0.45918	-0.03109	38.32862	-5.30208	-3.92028	0.46639	38.89169	260.66	-3.82
78/ 7/31	2443720.5	-0.03089	-0.46261	-0.03543	38.86830	-0.62375	-3.58262	0.46499	39.03804	266.18	-4.37

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78/ 8/ 2	2443722.5	0.01410	-0.46060	-0.03935	38.95394	4.12114	-3.19820	0.46249	39.30167	271.75	-4.88
78/ 8/ 4	2443724.5	0.05892	-0.45307	-0.04280	38.57018	8.91103	-2.76742	0.45889	39.68279	277.41	-5.35
78/ 8/ 6	2443726.5	0.10302	-0.44000	-0.04573	37.69662	13.72157	-2.29044	0.45421	40.18162	283.18	-5.78
78/ 8/ 8	2443728.5	0.14581	-0.42138	-0.04808	36.30767	18.52387	-1.76732	0.44847	40.79833	289.09	-6.15
78/ 8/10	2443730.5	0.18668	-0.39722	-0.04979	34.37261	23.28248	-1.19819	0.44172	41.53295	295.17	-6.47
78/ 8/12	2443732.5	0.22499	-0.36762	-0.05083	31.85589	27.95282	-0.58352	0.43399	42.38512	301.47	-6.73
78/ 8/14	2443734.5	0.26004	-0.33270	-0.05112	28.71790	32.47816	0.07561	0.42535	43.35382	308.01	-6.90
78/ 8/16	2443736.5	0.29108	-0.29268	-0.05064	24.91660	36.78582	0.77700	0.41587	44.43690	314.84	-6.99
78/ 8/18	2443738.5	0.31733	-0.24784	-0.04931	20.41046	40.78286	1.51675	0.40565	45.63035	322.01	-6.98
78/ 8/20	2443740.5	0.33795	-0.19863	-0.04712	15.16331	44.35111	2.28837	0.39482	46.92743	329.56	-6.85
78/ 8/22	2443742.5	0.35206	-0.14560	-0.04402	9.15212	47.34235	3.08171	0.38352	48.31724	337.53	-6.59
78/ 8/24	2443744.5	0.35879	-0.08955	-0.04000	2.37870	49.57447	3.88156	0.37196	49.78306	345.99	-6.17
78/ 8/26	2443746.5	0.35728	-0.03145	-0.03506	-5.11367	50.83092	4.66606	0.36037	51.30013	354.97	-5.58
78/ 8/28	2443748.5	0.34674	0.02741	-0.02923	-13.21859	50.86663	5.40532	0.34905	52.83334	4.52	-4.80
78/ 8/30	2443750.5	0.32658	0.08549	-0.02260	-21.74163	49.42539	6.06048	0.33834	54.33504	14.67	-3.83
78/ 9/ 1	2443752.5	0.29647	0.14093	-0.01528	-30.37777	46.27356	6.58453	0.32862	55.74412	25.42	-2.67
78/ 9/ 3	2443754.5	0.25652	0.19167	-0.00746	-38.70199	41.25252	6.92573	0.32030	56.98755	36.77	-1.33
78/ 9/ 5	2443756.5	0.20739	0.23550	0.00063	-46.18834	34.34427	7.03483	0.31380	57.98604	48.63	0.11
78/ 9/ 7	2443758.5	0.15036	0.27035	0.00869	-52.26973	25.73152	6.87540	0.30947	58.66436	60.92	1.61
78/ 9/ 9	2443760.5	0.08737	0.29445	0.01640	-56.43662	15.82253	6.43490	0.30757	58.96485	73.47	3.06
78/ 9/11	2443762.5	0.02085	0.30663	0.02345	-58.34791	5.21449	5.73171	0.30823	58.86019	86.11	4.36
78/ 9/13	2443764.5	-0.04651	0.30649	0.02956	-57.90942	-5.40555	4.81406	0.31140	58.36005	98.63	5.45
78/ 9/15	2443766.5	-0.11208	0.29439	0.03452	-55.28459	-15.38819	3.75047	0.31689	57.50868	110.84	6.25
78/ 9/17	2443768.5	-0.17353	0.27138	0.03820	-50.83553	-24.22793	2.61563	0.32437	56.37451	122.60	6.76
78/ 9/19	2443770.5	-0.22900	0.23898	0.04056	-45.02640	-31.61393	1.47739	0.33346	55.03635	133.78	6.99
78/ 9/21	2443772.5	-0.27721	0.19896	0.04163	-38.33029	-37.42350	0.38887	0.34374	53.57126	144.33	6.96
78/ 9/23	2443774.5	-0.31737	0.15313	0.04149	-31.16528	-41.67966	-0.61385	0.35481	52.04657	154.24	6.72
78/ 9/25	2443776.5	-0.34915	0.10322	0.04025	-23.86499	-44.49829	-1.51003	0.36631	50.51649	163.53	6.31
78/ 9/27	2443778.5	-0.37255	0.05082	0.03804	-16.67499	-46.04189	-2.29081	0.37791	49.02202	172.23	5.78
78/ 9/29	2443780.5	-0.38778	-0.00272	0.03500	-9.76384	-46.48651	-2.95541	0.38937	47.59267	180.40	5.16
78/10/ 1	2443782.5	-0.39525	-0.05622	0.03126	-3.23931	-46.00164	-3.50806	0.40045	46.24879	188.09	4.48
78/10/ 3	2443784.5	-0.39544	-0.10869	0.02694	2.83546	-44.73992	-3.95564	0.41099	45.00386	195.37	3.76
78/10/ 5	2443786.5	-0.38889	-0.15932	0.02216	8.42824	-42.83324	-4.30613	0.42084	43.86644	202.28	3.02
78/10/ 7	2443788.5	-0.37616	-0.20744	0.01703	13.52715	-40.39266	-4.56762	0.42990	42.84173	208.88	2.27
78/10/ 9	2443790.5	-0.35783	-0.25247	0.01164	18.13285	-37.51012	-4.74776	0.43808	41.93269	215.21	1.52
78/10/11	2443792.5	-0.33446	-0.29395	0.00609	22.25308	-34.26093	-4.85350	0.44531	41.14082	221.31	0.78
78/10/13	2443794.5	-0.30660	-0.33150	0.00045	25.89883	-30.70647	-4.89091	0.45155	40.46675	227.23	0.06
78/10/15	2443796.5	-0.27480	-0.36479	-0.00519	29.08184	-26.89673	-4.86517	0.45675	39.91062	233.01	-0.65
78/10/17	2443798.5	-0.23959	-0.39355	-0.01076	31.81282	-22.87250	-4.78064	0.46087	39.47228	238.67	-1.34
78/10/19	2443800.5	-0.20148	-0.41756	-0.01621	34.10032	-18.66744	-4.64087	0.46391	39.15153	244.24	-2.00
78/10/21	2443802.5	-0.16098	-0.43662	-0.02147	35.94996	-14.30971	-4.44871	0.46585	38.94815	249.76	-2.64
78/10/23	2443804.5	-0.11860	-0.45057	-0.02647	37.36387	-9.82353	-4.20635	0.46667	38.86198	255.25	-3.25
78/10/25	2443806.5	-0.07483	-0.45927	-0.03116	38.34024	-5.23052	-3.91540	0.46637	38.89296	260.75	-3.83
78/10/27	2443808.5	-0.03019	-0.46262	-0.03550	38.87300	-0.55100	-3.57701	0.46496	39.04112	266.27	-4.38
78/10/29	2443810.5	0.01480	-0.46052	-0.03941	38.95153	4.19477	-3.19187	0.46244	39.30657	271.84	-4.89

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78/10/31	2443812.5	0.05961	-0.45291	-0.04285	38.56039	8.98518	-2.76038	0.45882	39.68951	277.50	-5.36
78/11/ 2	2443814.5	0.10369	-0.43976	-0.04577	37.67908	13.79583	-2.28268	0.45413	40.19015	283.27	-5.78
78/11/ 4	2443816.5	0.14646	-0.42104	-0.04811	36.28195	18.59775	-1.75884	0.44838	40.80869	289.18	-6.16
78/11/ 6	2443818.5	0.18730	-0.39681	-0.04981	34.33819	23.35535	-1.18901	0.44161	41.54512	295.27	-6.48
78/11/ 8	2443820.5	0.22556	-0.36712	-0.05084	31.81217	28.02393	-0.57364	0.43387	42.39910	301.57	-6.73
78/11/10	2443822.5	0.26055	-0.33212	-0.05112	28.66425	32.54651	0.08615	0.42521	43.36960	308.11	-6.91
78/11/12	2443824.5	0.29152	-0.29202	-0.05062	24.85238	36.85014	0.78818	0.41572	44.45442	314.95	-6.99
78/11/14	2443826.5	0.31769	-0.24711	-0.04929	20.33506	40.84153	1.52847	0.40549	45.64955	322.12	-6.98
78/11/16	2443828.5	0.33821	-0.19783	-0.04708	15.07624	44.40209	2.30052	0.39464	46.94817	329.68	-6.85
78/11/18	2443830.5	0.35222	-0.14476	-0.04396	9.05318	47.38309	3.09409	0.38334	48.33933	337.66	-6.59
78/11/20	2443832.5	0.35884	-0.08866	-0.03993	2.26819	49.60190	3.89388	0.37178	49.80617	346.12	-6.17
78/11/22	2443834.5	0.35719	-0.03055	-0.03497	-5.23465	50.84142	4.67794	0.36019	51.32382	355.11	-5.57
78/11/24	2443836.5	0.34651	0.02832	-0.02914	-13.34780	50.85628	5.41621	0.34888	52.85698	4.67	-4.79
78/11/26	2443838.5	0.32619	0.08637	-0.02249	-21.87526	49.39028	6.06972	0.33818	54.35778	14.83	-3.81
78/11/28	2443840.5	0.29593	0.14176	-0.01517	-30.51016	46.21050	6.59134	0.32848	55.76491	25.60	-2.65
78/11/30	2443842.5	0.25583	0.19240	-0.00734	-38.82570	41.15996	6.92931	0.32019	57.00520	36.95	-1.31
78/12/ 2	2443844.5	0.20656	0.23611	0.00075	-46.29470	34.22335	7.03448	0.31372	57.99932	48.82	0.14
78/12/ 4	2443846.5	0.14942	0.27081	0.00881	-52.35011	25.58681	6.87072	0.30942	58.67219	61.11	1.63
78/12/ 6	2443848.5	0.08636	0.29473	0.01652	-56.48419	15.66200	6.42592	0.30756	58.96655	73.67	3.08
78/12/ 8	2443850.5	0.01981	0.30672	0.02355	-58.35914	5.04839	5.71897	0.30826	58.85561	86.30	4.38
78/12/10	2443852.5	-0.04755	0.30639	0.02964	-57.88493	-5.56655	4.79849	0.31147	58.34961	98.82	5.46
78/12/12	2443854.5	-0.11307	0.29411	0.03458	-55.22865	-15.53494	3.73322	0.31699	57.49326	111.03	6.26
78/12/14	2443856.5	-0.17444	0.27095	0.03824	-50.75479	-24.35404	2.59783	0.32450	56.35527	122.77	6.77
78/12/16	2443858.5	-0.22980	0.23841	0.04058	-44.92832	-31.71612	1.45999	0.33361	55.01452	133.95	6.99
78/12/18	2443860.5	-0.27789	0.19828	0.04163	-38.22189	-37.50112	0.37257	0.34391	53.54797	144.49	6.95
78/12/20	2443862.5	-0.31793	0.15238	0.04148	-31.05243	-41.73392	-0.62862	0.35499	52.02277	154.39	6.71
78/12/22	2443864.5	-0.34958	0.10243	0.04022	-23.75216	-44.53146	-1.52305	0.36649	50.49292	163.67	6.30
78/12/24	2443866.5	-0.37284	0.04999	0.03800	-16.56536	-46.05666	-2.30201	0.37809	48.99925	172.36	5.77
78/12/26	2443868.5	-0.38796	-0.00355	0.03495	-9.65952	-46.48560	-2.96483	0.38954	47.57108	180.52	5.15
78/12/28	2443870.5	-0.39531	-0.05704	0.03120	-3.14156	-45.98758	-3.51580	0.40062	46.22864	188.21	4.47
78/12/30	2443872.5	-0.39539	-0.10949	0.02687	2.92592	-44.71489	-3.96181	0.41115	44.98531	195.48	3.75
79/ 1/ 1	2443874.5	-0.38873	-0.16009	0.02208	8.51110	-42.79913	-4.31084	0.42099	43.84961	202.38	3.01
79/ 1/ 3	2443876.5	-0.37592	-0.20816	0.01694	13.60233	-40.35104	-4.57101	0.43004	42.82667	208.98	2.26
79/ 1/ 5	2443878.5	-0.35750	-0.25314	0.01155	18.20044	-37.46227	-4.74995	0.43820	41.91944	215.30	1.51
79/ 1/ 7	2443880.5	-0.33406	-0.29457	0.00600	22.31322	-34.20790	-4.85458	0.44542	41.12940	221.41	0.77
79/ 1/ 9	2443882.5	-0.30614	-0.33205	0.00036	25.95171	-30.64913	-4.89096	0.45164	40.45716	227.33	0.05
79/ 1/11	2443884.5	-0.27428	-0.36527	-0.00528	29.12763	-26.83577	-4.86428	0.45682	39.90286	233.10	-0.66
79/ 1/13	2443886.5	-0.23902	-0.39396	-0.01085	31.85167	-22.80850	-4.77887	0.46093	39.46637	238.75	-1.35
79/ 1/15	2443888.5	-0.20087	-0.41789	-0.01629	34.13236	-18.60086	-4.63827	0.46395	39.14746	244.33	-2.01
79/ 1/17	2443890.5	-0.16034	-0.43688	-0.02154	35.97527	-14.24096	-4.44531	0.46587	38.94593	249.85	-2.65
79/ 1/19	2443892.5	-0.11793	-0.45074	-0.02654	37.38244	-9.75294	-4.20218	0.46667	38.86161	255.34	-3.26
79/ 1/21	2443894.5	-0.07414	-0.45937	-0.03123	38.35200	-5.15842	-3.91049	0.46636	38.89444	260.83	-3.84
79/ 1/23	2443896.5	-0.02950	-0.46263	-0.03556	38.87783	-0.47768	-3.57136	0.46493	39.04444	266.35	-4.39
79/ 1/25	2443898.5	0.01549	-0.46044	-0.03947	38.94921	4.26898	-3.18550	0.46239	39.31173	271.93	-4.90
79/ 1/27	2443900.5	0.06030	-0.45275	-0.04290	38.55062	9.05992	-2.75328	0.45876	39.69651	277.59	-5.37

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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79/ 1/29	2443902.5	0.10436	-0.43951	-0.04581	37.66150	13.87068	-2.27487	0.45404	40.19900	283.36	-5.79
79/ 1/31	2443904.5	0.14711	-0.42071	-0.04814	36.25611	18.67223	-1.75031	0.44828	40.81937	289.27	-6.16
79/ 2/ 2	2443906.5	0.18791	-0.39639	-0.04984	34.30358	23.42884	-1.17976	0.44149	41.55765	295.36	-6.48
79/ 2/ 4	2443908.5	0.22613	-0.36662	-0.05085	31.76820	28.09565	-0.56369	0.43374	42.41346	301.67	-6.73
79/ 2/ 6	2443910.5	0.26106	-0.33154	-0.05112	28.61027	32.61545	0.09679	0.42507	43.38577	308.22	-6.91
79/ 2/ 8	2443912.5	0.29197	-0.29136	-0.05061	24.78773	36.91503	0.79944	0.41557	44.47235	315.06	-6.99
79/ 2/10	2443914.5	0.31805	-0.24638	-0.04926	20.25910	40.90072	1.54029	0.40532	45.66917	322.24	-6.98
79/ 2/12	2443916.5	0.33848	-0.19703	-0.04704	14.98848	44.45350	2.31276	0.39447	46.96932	329.80	-6.85
79/ 2/14	2443918.5	0.35239	-0.14391	-0.04391	8.95343	47.42413	3.10656	0.38316	48.36179	337.79	-6.58
79/ 2/16	2443920.5	0.35887	-0.08777	-0.03986	2.15677	49.62943	3.90629	0.37160	49.82962	346.26	-6.16
79/ 2/18	2443922.5	0.35709	-0.02963	-0.03489	-5.35662	50.85181	4.68989	0.36001	51.34778	355.26	-5.56
79/ 2/20	2443924.5	0.34626	0.02923	-0.02904	-13.47798	50.84552	5.42716	0.34871	52.88078	4.83	-4.78
79/ 2/22	2443926.5	0.32580	0.08726	-0.02238	-22.00975	49.35447	6.07898	0.33802	54.38057	14.99	-3.80
79/ 2/24	2443928.5	0.29538	0.14259	-0.01505	-30.64320	46.14644	6.59812	0.32834	55.78561	25.77	-2.63
79/ 2/26	2443930.5	0.25513	0.19314	-0.00721	-38.94973	41.06619	6.93281	0.32007	57.02260	37.13	-1.29
79/ 2/28	2443932.5	0.20573	0.23673	0.00088	-46.40098	34.10113	7.03401	0.31363	58.01220	49.01	0.16
79/ 3/ 2	2443934.5	0.14848	0.27127	0.00893	-52.42999	25.44089	6.86589	0.30937	58.67949	61.30	1.65
79/ 3/ 4	2443936.5	0.08535	0.29501	0.01663	-56.53087	15.50051	6.41679	0.30756	58.96762	73.86	3.10
79/ 3/ 6	2443938.5	0.01876	0.30681	0.02366	-58.36927	4.88169	5.70607	0.30829	58.85033	86.50	4.40
79/ 3/ 8	2443940.5	-0.04859	0.30629	0.02973	-57.85926	-5.72775	4.78279	0.31154	58.33846	99.01	5.48
79/ 3/10	2443942.5	-0.11406	0.29383	0.03465	-55.17163	-15.68152	3.71588	0.31710	57.47718	111.22	6.27
79/ 3/12	2443944.5	-0.17535	0.27051	0.03829	-50.67317	-24.47973	2.57999	0.32464	56.33546	122.95	6.77
79/ 3/14	2443946.5	-0.23061	0.23785	0.04061	-44.82963	-31.81775	1.44259	0.33377	54.99224	134.11	6.99
79/ 3/16	2443948.5	-0.27857	0.19762	0.04164	-38.11314	-37.57817	0.35629	0.34408	53.52436	144.65	6.95
79/ 3/18	2443950.5	-0.31848	0.15163	0.04147	-30.93945	-41.78767	-0.64336	0.35517	51.99878	154.54	6.70
79/ 3/20	2443952.5	-0.35000	0.10163	0.04020	-23.63938	-44.56420	-1.53603	0.36667	50.46927	163.81	6.29
79/ 3/22	2443954.5	-0.37314	0.04917	0.03796	-16.45590	-46.07111	-2.31317	0.37827	48.97647	172.49	5.76
79/ 3/24	2443956.5	-0.38813	-0.00438	0.03490	-9.55542	-46.48448	-2.97422	0.38972	47.54954	180.65	5.14
79/ 3/26	2443958.5	-0.39536	-0.05786	0.03113	-3.04410	-45.97337	-3.52349	0.40079	46.20857	188.33	4.46
79/ 3/28	2443960.5	-0.39533	-0.11029	0.02680	3.01607	-44.68981	-3.96793	0.41130	44.96688	195.59	3.74
79/ 3/30	2443962.5	-0.38858	-0.16086	0.02200	8.59364	-42.76504	-4.31553	0.42114	43.83290	202.49	3.00
79/ 4/ 1	2443964.5	-0.37567	-0.20888	0.01686	13.67721	-40.30950	-4.57438	0.43017	42.81176	209.07	2.25
79/ 4/ 3	2443966.5	-0.35718	-0.25381	0.01147	18.26774	-37.41456	-4.75212	0.43832	41.90635	215.40	1.50
79/ 4/ 5	2443968.5	-0.33366	-0.29517	0.00591	22.37310	-34.15507	-4.85565	0.44552	41.11815	221.50	0.76
79/ 4/ 7	2443970.5	-0.30567	-0.33260	0.00028	26.00436	-30.59202	-4.89102	0.45173	40.44776	227.42	0.04
79/ 4/ 9	2443972.5	-0.27376	-0.36575	-0.00536	29.17324	-26.77507	-4.86340	0.45689	39.89530	233.19	-0.67
79/ 4/11	2443974.5	-0.23845	-0.39437	-0.01094	31.89039	-22.74477	-4.77710	0.46098	39.46064	238.84	-1.36
79/ 4/13	2443976.5	-0.20026	-0.41823	-0.01638	34.16429	-18.53456	-4.63567	0.46399	39.14356	244.41	-2.02
79/ 4/15	2443978.5	-0.15969	-0.43713	-0.02162	36.00046	-14.17248	-4.44192	0.46589	38.94384	249.93	-2.66
79/ 4/17	2443980.5	-0.11726	-0.45092	-0.02662	37.40089	-9.68264	-4.19802	0.46667	38.86134	255.42	-3.27
79/ 4/19	2443982.5	-0.07346	-0.45946	-0.03130	38.36365	-5.08661	-3.90559	0.46634	38.89598	260.92	-3.85
79/ 4/21	2443984.5	-0.02880	-0.46264	-0.03562	38.88254	-0.40468	-3.56573	0.46490	39.04780	266.44	-4.39
79/ 4/23	2443986.5	0.01619	-0.46037	-0.03952	38.94679	4.34286	-3.17915	0.46234	39.31691	272.01	-4.90
79/ 4/25	2443988.5	0.06099	-0.45259	-0.04295	38.54079	9.13434	-2.74621	0.45869	39.70353	277.67	-5.37
79/ 4/27	2443990.5	0.10504	-0.43926	-0.04585	37.64390	13.94523	-2.26708	0.45396	40.20786	283.45	-5.80

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79/ 4/29	2443992.5	0.14775	-0.42037	-0.04817	36.23029	18.74641	-1.74181	0.44818	40.83009	289.37	-6.17
79/ 5/ 1	2443994.5	0.18853	-0.39597	-0.04986	34.26902	23.50204	-1.17055	0.44138	41.57021	295.46	-6.49
79/ 5/ 3	2443996.5	0.22670	-0.36611	-0.05086	31.72430	28.16707	-0.55377	0.43361	42.42784	301.77	-6.74
79/ 5/ 5	2443998.5	0.26157	-0.33095	-0.05112	28.55638	32.68408	0.10738	0.42493	43.40193	308.32	-6.91
79/ 5/ 7	2444000.5	0.29241	-0.29069	-0.05059	24.72318	36.97956	0.81066	0.41541	44.49023	315.17	-7.00
79/ 5/ 9	2444002.5	0.31842	-0.24564	-0.04923	20.18327	40.95951	1.55206	0.40516	45.68868	322.35	-6.98
79/ 5/11	2444004.5	0.33875	-0.19624	-0.04699	14.90091	44.50448	2.32496	0.39430	46.99033	329.92	-6.85
79/ 5/13	2444006.5	0.35255	-0.14306	-0.04385	8.85394	47.46472	3.11898	0.38298	48.38409	337.91	-6.57
79/ 5/15	2444008.5	0.35891	-0.08688	-0.03979	2.04571	49.65651	3.91864	0.37142	49.85288	346.39	-6.15
79/ 5/17	2444010.5	0.35700	-0.02872	-0.03481	-5.47810	50.86176	4.70176	0.35984	51.37153	355.40	-5.55
79/ 5/19	2444012.5	0.34602	0.03015	-0.02894	-13.60755	50.83438	5.43801	0.34854	52.90436	4.98	-4.76
79/ 5/21	2444014.5	0.32540	0.08814	-0.02228	-22.14349	49.31834	6.08815	0.33786	54.40311	15.16	-3.78
79/ 5/23	2444016.5	0.29483	0.14342	-0.01493	-30.77534	46.08220	6.60481	0.32820	55.80604	25.94	-2.61
79/ 5/25	2444018.5	0.25443	0.19388	-0.00709	-39.07273	40.97242	6.93622	0.31996	57.03971	37.31	-1.27
79/ 5/27	2444020.5	0.20490	0.23734	0.00100	-46.50612	33.97918	7.03346	0.31355	58.02476	49.20	0.18
79/ 5/29	2444022.5	0.14755	0.27172	0.00906	-52.50873	25.29555	6.86100	0.30933	58.68649	61.50	1.68
79/ 5/31	2444024.5	0.08434	0.29529	0.01675	-56.57653	15.33992	6.40763	0.30755	58.96842	74.06	3.12
79/ 6/ 2	2444026.5	0.01772	0.30690	0.02376	-58.37860	4.71619	5.69321	0.30833	58.84485	86.70	4.42
79/ 6/ 4	2444028.5	-0.04962	0.30619	0.02982	-57.83312	-5.88755	4.76717	0.31161	58.32717	99.20	5.49
79/ 6/ 6	2444030.5	-0.11504	0.29356	0.03472	-55.11451	-15.82663	3.69866	0.31720	57.46104	111.40	6.28
79/ 6/ 8	2444032.5	-0.17625	0.27008	0.03833	-50.59181	-24.60399	2.56228	0.32477	56.31565	123.13	6.78
79/ 6/10	2444034.5	-0.23141	0.23728	0.04064	-44.73149	-31.91808	1.42534	0.33392	54.97001	134.28	6.99
79/ 6/12	2444036.5	-0.27925	0.19695	0.04165	-38.00517	-37.65408	0.34017	0.34425	53.50082	144.81	6.95
79/ 6/14	2444038.5	-0.31903	0.15089	0.04145	-30.82740	-41.84047	-0.65793	0.35534	51.97487	154.69	6.70
79/ 6/16	2444040.5	-0.35042	0.10084	0.04017	-23.52762	-44.59621	-1.54886	0.36685	50.44571	163.95	6.29
79/ 6/18	2444042.5	-0.37343	0.04836	0.03792	-16.34750	-46.08502	-2.32420	0.37845	48.95377	172.62	5.75
79/ 6/20	2444044.5	-0.38830	-0.00520	0.03484	-9.45240	-46.48301	-2.98348	0.38989	47.52809	180.77	5.13
79/ 6/22	2444046.5	-0.39542	-0.05867	0.03107	-2.94767	-45.95902	-3.53108	0.40095	46.18863	188.44	4.44
79/ 6/24	2444048.5	-0.39528	-0.11108	0.02673	3.10525	-44.66477	-3.97398	0.41146	44.94860	195.70	3.72
79/ 6/26	2444050.5	-0.38843	-0.16161	0.02193	8.67529	-42.73115	-4.32016	0.42128	43.81639	202.59	2.98
79/ 6/28	2444052.5	-0.37543	-0.20959	0.01678	13.75130	-40.26829	-4.57771	0.43030	42.79706	209.17	2.24
79/ 6/30	2444054.5	-0.35685	-0.25447	0.01138	18.33435	-37.36727	-4.75426	0.43844	41.89349	215.49	1.49
79/ 7/ 2	2444056.5	-0.33326	-0.29578	0.00583	22.43239	-34.10273	-4.85671	0.44562	41.10713	221.59	0.75
79/ 7/ 4	2444058.5	-0.30521	-0.33313	0.00019	26.05652	-30.53545	-4.89108	0.45181	40.43857	227.50	0.02
79/ 7/ 6	2444060.5	-0.27325	-0.36622	-0.00545	29.21843	-26.71493	-4.86252	0.45696	39.88794	233.27	-0.68
79/ 7/ 8	2444062.5	-0.23789	-0.39477	-0.01102	31.92876	-22.68163	-4.77536	0.46104	39.45512	238.93	-1.37
79/ 7/10	2444064.5	-0.19965	-0.41855	-0.01646	34.19595	-18.46889	-4.63310	0.46402	39.13986	244.50	-2.03
79/ 7/12	2444066.5	-0.15906	-0.43738	-0.02170	36.02546	-14.10467	-4.43857	0.46591	38.94196	250.02	-2.67
79/ 7/14	2444068.5	-0.11660	-0.45109	-0.02669	37.41923	-9.61303	-4.19391	0.46668	38.86127	255.51	-3.28
79/ 7/16	2444070.5	-0.07278	-0.45954	-0.03137	38.37526	-5.01551	-3.90074	0.46633	38.89771	261.00	-3.86
79/ 7/18	2444072.5	-0.02811	-0.46264	-0.03569	38.88727	-0.33238	-3.56016	0.46487	39.05131	266.52	-4.40
79/ 7/20	2444074.5	0.01688	-0.46029	-0.03958	38.94443	4.41602	-3.17286	0.46229	39.32221	272.10	-4.91
79/ 7/22	2444076.5	0.06167	-0.45242	-0.04300	38.53105	9.20802	-2.73921	0.45863	39.71061	277.76	-5.38
79/ 7/24	2444078.5	0.10571	-0.43901	-0.04589	37.62642	14.01902	-2.25936	0.45388	40.21672	283.54	-5.80
79/ 7/26	2444080.5	0.14840	-0.42004	-0.04820	36.20464	18.81980	-1.73338	0.44808	40.84073	289.46	-6.18

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79/ 7/28	2444082.5	0.18913	-0.39555	-0.04988	34.23468	23.57442	-1.16141	0.44127	41.58263	295.56	-6.49
79/ 7/30	2444084.5	0.22726	-0.36561	-0.05087	31.68068	28.23764	-0.54395	0.43348	42.44203	301.86	-6.74
79/ 8/ 1	2444086.5	0.26208	-0.33037	-0.05112	28.50285	32.75184	0.11787	0.42479	43.41785	308.42	-6.91
79/ 8/ 3	2444088.5	0.29285	-0.29004	-0.05058	24.65908	37.04324	0.82178	0.41526	44.50783	315.28	-7.00
79/ 8/ 5	2444090.5	0.31878	-0.24492	-0.04920	20.10800	41.01746	1.56371	0.40500	45.70786	322.46	-6.98
79/ 8/ 7	2444092.5	0.33902	-0.19545	-0.04695	14.81402	44.55462	2.33702	0.39413	47.01096	330.04	-6.84
79/ 8/ 9	2444094.5	0.35270	-0.14221	-0.04380	8.75526	47.50449	3.13125	0.38281	48.40595	338.04	-6.57
79/ 8/11	2444096.5	0.35895	-0.08600	-0.03972	1.93559	49.68283	3.93083	0.37124	49.87566	346.53	-6.14
79/ 8/13	2444098.5	0.35690	-0.02782	-0.03472	-5.59848	50.87103	4.71347	0.35966	51.39476	355.54	-5.54
79/ 8/15	2444100.5	0.34578	0.03105	-0.02885	-13.73584	50.82273	5.44871	0.34837	52.92742	5.13	-4.75
79/ 8/17	2444102.5	0.32501	0.08902	-0.02217	-22.27579	49.28196	6.09716	0.33771	54.42516	15.32	-3.76
79/ 8/19	2444104.5	0.29429	0.14423	-0.01481	-30.90595	46.01804	6.61137	0.32806	55.82605	26.11	-2.59
79/ 8/21	2444106.5	0.25374	0.19460	-0.00697	-39.19419	40.87913	6.93953	0.31985	57.05651	37.49	-1.25
79/ 8/23	2444108.5	0.20408	0.23794	0.00113	-46.60986	33.85811	7.03286	0.31347	58.03716	49.38	0.21
79/ 8/25	2444110.5	0.14662	0.27217	0.00918	-52.58631	25.15146	6.85611	0.30929	58.69346	61.69	1.70
79/ 8/27	2444112.5	0.08334	0.29556	0.01686	-56.62138	15.18084	6.39853	0.30755	58.96931	74.25	3.14
79/ 8/29	2444114.5	0.01669	0.30698	0.02386	-58.38753	4.55232	5.68044	0.30836	58.83956	86.89	4.44
79/ 8/31	2444116.5	-0.05064	0.30609	0.02990	-57.80700	-6.04574	4.75169	0.31168	58.31619	99.39	5.50
79/ 9/ 2	2444118.5	-0.11601	0.29328	0.03478	-55.05776	-15.97029	3.68159	0.31730	57.44529	111.58	6.29
79/ 9/ 4	2444120.5	-0.17714	0.26964	0.03838	-50.51110	-24.72705	2.54474	0.32490	56.29631	123.30	6.78
79/ 9/ 6	2444122.5	-0.23219	0.23672	0.04066	-44.63418	-32.01751	1.40825	0.33407	54.94829	134.45	6.99
79/ 9/ 8	2444124.5	-0.27992	0.19629	0.04165	-37.89812	-37.72940	0.32418	0.34441	53.47784	144.96	6.95
79/ 9/10	2444126.5	-0.31957	0.15016	0.04144	-30.71628	-41.89296	-0.67240	0.35552	51.95154	154.83	6.69
79/ 9/12	2444128.5	-0.35083	0.10006	0.04014	-23.41673	-44.62813	-1.56160	0.36703	50.42273	164.08	6.28
79/ 9/14	2444130.5	-0.37372	0.04755	0.03788	-16.23989	-46.09903	-2.33515	0.37863	48.93166	172.75	5.74
79/ 9/16	2444132.5	-0.38846	-0.00602	0.03479	-9.35006	-46.48175	-2.99269	0.39006	47.50718	180.89	5.12
79/ 9/18	2444134.5	-0.39547	-0.05948	0.03101	-2.85184	-45.94493	-3.53864	0.40112	46.16916	188.55	4.43
79/ 9/20	2444136.5	-0.39523	-0.11186	0.02666	3.19391	-44.63997	-3.97999	0.41162	44.93071	195.80	3.71
79/ 9/22	2444138.5	-0.38828	-0.16236	0.02185	8.75646	-42.69748	-4.32475	0.42142	43.80016	202.69	2.97
79/ 9/24	2444140.5	-0.37519	-0.21030	0.01670	13.82491	-40.22727	-4.58101	0.43043	42.78256	209.27	2.22
79/ 9/26	2444142.5	-0.35653	-0.25513	0.01130	18.40048	-37.32017	-4.75638	0.43855	41.88073	215.59	1.48
79/ 9/28	2444144.5	-0.33287	-0.29638	0.00574	22.49118	-34.05056	-4.85773	0.44573	41.09613	221.68	0.74
79/ 9/30	2444146.5	-0.30475	-0.33367	0.00010	26.10814	-30.47907	-4.89110	0.45190	40.42934	227.59	0.01
79/10/ 2	2444148.5	-0.27273	-0.36669	-0.00553	29.26306	-26.65502	-4.86162	0.45703	39.88047	233.36	-0.69
79/10/ 4	2444150.5	-0.23732	-0.39517	-0.01110	31.96654	-22.61874	-4.77358	0.46109	39.44939	239.01	-1.38
79/10/ 6	2444152.5	-0.19905	-0.41888	-0.01654	34.22698	-18.40349	-4.63050	0.46406	39.13587	244.58	-2.04
79/10/ 8	2444154.5	-0.15842	-0.43763	-0.02178	36.04980	-14.03715	-4.43518	0.46593	38.93970	250.10	-2.68
79/10/10	2444156.5	-0.11594	-0.45126	-0.02677	37.43689	-9.54374	-4.18977	0.46668	38.86075	255.59	-3.29
79/10/12	2444158.5	-0.07210	-0.45963	-0.03144	38.38618	-4.94477	-3.89587	0.46632	38.89894	261.08	-3.87
79/10/14	2444160.5	-0.02743	-0.46265	-0.03575	38.89134	-0.26052	-3.55456	0.46484	39.05431	266.61	-4.41
79/10/16	2444162.5	0.01757	-0.46021	-0.03964	38.94145	4.48870	-3.16656	0.46225	39.32698	272.19	-4.92
79/10/18	2444164.5	0.06235	-0.45226	-0.04305	38.52075	9.28116	-2.73220	0.45856	39.71717	277.85	-5.39
79/10/20	2444166.5	0.10637	-0.43876	-0.04593	37.60846	14.09221	-2.25165	0.45380	40.22507	283.63	-5.81
79/10/22	2444168.5	0.14903	-0.41971	-0.04823	36.17859	18.89257	-1.72497	0.44799	40.85088	289.55	-6.18
79/10/24	2444170.5	0.18973	-0.39513	-0.04990	34.20002	23.64615	-1.15231	0.44116	41.59459	295.65	-6.49

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79/10/26	2444172.5	0.22782	-0.36512	-0.05088	31.63684	28.30758	-0.53416	0.43336	42.45579	301.96	-6.74
79/10/28	2444174.5	0.26258	-0.32980	-0.05111	28.44921	32.81900	0.12833	0.42465	43.43340	308.53	-6.91
79/10/30	2444176.5	0.29328	-0.28939	-0.05056	24.59499	37.10635	0.83284	0.41511	44.52515	315.38	-7.00
79/11/ 1	2444178.5	0.31913	-0.24420	-0.04918	20.03287	41.07492	1.57532	0.40484	45.72687	322.58	-6.98
79/11/ 3	2444180.5	0.33928	-0.19466	-0.04691	14.72736	44.60440	2.34903	0.39396	47.03153	330.15	-6.84
79/11/ 5	2444182.5	0.35285	-0.14138	-0.04374	8.65689	47.54405	3.14348	0.38263	48.42789	338.17	-6.56
79/11/ 7	2444184.5	0.35898	-0.08513	-0.03965	1.82580	49.70910	3.94299	0.37106	49.89865	346.66	-6.13
79/11/ 9	2444186.5	0.35680	-0.02692	-0.03464	-5.71857	50.88045	4.72517	0.35948	51.41838	355.68	-5.53
79/11/11	2444188.5	0.34554	0.03194	-0.02875	-13.86398	50.81137	5.45942	0.34820	52.95102	5.28	-4.74
79/11/13	2444190.5	0.32461	0.08988	-0.02206	-22.40814	49.24595	6.10621	0.33755	54.44791	15.48	-3.75
79/11/15	2444192.5	0.29374	0.14504	-0.01470	-31.03685	45.95424	6.61798	0.32792	55.84690	26.28	-2.57
79/11/17	2444194.5	0.25305	0.19532	-0.00684	-39.31618	40.78606	6.94291	0.31973	57.07424	37.66	-1.23
79/11/19	2444196.5	0.20325	0.23854	0.00125	-46.71430	33.73700	7.03232	0.31339	58.05054	49.57	0.23
79/11/21	2444198.5	0.14569	0.27261	0.00930	-52.66467	25.00697	6.85126	0.30924	58.70142	61.88	1.72
79/11/23	2444200.5	0.08234	0.29582	0.01697	-56.66696	15.02100	6.38942	0.30753	58.97117	74.45	3.16
79/11/25	2444202.5	0.01565	0.30706	0.02396	-58.39699	4.38734	5.66762	0.30839	58.83519	87.08	4.46
79/11/27	2444204.5	-0.05166	0.30597	0.02998	-57.78109	-6.20530	4.73611	0.31175	58.30601	99.58	5.52
79/11/29	2444206.5	-0.11699	0.29299	0.03485	-55.00083	-16.11541	3.66439	0.31740	57.43018	111.77	6.30
79/12/ 1	2444208.5	-0.17804	0.26920	0.03842	-50.42979	-24.85151	2.52703	0.32502	56.27742	123.48	6.79
79/12/ 3	2444210.5	-0.23299	0.23615	0.04068	-44.53589	-32.11813	1.39096	0.33422	54.92681	134.61	6.99
79/12/ 5	2444212.5	-0.28059	0.19561	0.04166	-37.78977	-37.80560	0.30800	0.34457	53.45489	145.12	6.94
79/12/ 7	2444214.5	-0.32012	0.14940	0.04143	-30.60367	-41.94598	-0.68704	0.35569	51.92804	154.98	6.69
79/12/ 9	2444216.5	-0.35125	0.09926	0.04011	-23.30426	-44.66022	-1.57450	0.36720	50.39943	164.22	6.27
79/12/11	2444218.5	-0.37401	0.04672	0.03784	-16.13068	-46.11287	-2.34624	0.37881	48.90911	172.88	5.73
79/12/13	2444220.5	-0.38863	-0.00686	0.03474	-9.24619	-46.48004	-3.00200	0.39024	47.48576	181.01	5.11
79/12/15	2444222.5	-0.39552	-0.06031	0.03095	-2.75457	-45.93016	-3.54627	0.40128	46.14914	188.67	4.42
79/12/17	2444224.5	-0.39517	-0.11267	0.02659	3.28388	-44.61434	-3.98606	0.41177	44.91226	195.91	3.70
79/12/19	2444226.5	-0.38812	-0.16313	0.02177	8.83883	-42.66283	-4.32938	0.42157	43.78340	202.80	2.96
79/12/21	2444228.5	-0.37494	-0.21102	0.01662	13.89961	-40.18515	-4.58432	0.43056	42.76753	209.37	2.21
79/12/23	2444230.5	-0.35620	-0.25580	0.01121	18.46758	-37.27186	-4.75848	0.43867	41.86749	215.68	1.46
79/12/25	2444232.5	-0.33246	-0.29699	0.00565	22.55084	-33.99712	-4.85873	0.44583	41.08469	221.77	0.73
79/12/27	2444234.5	-0.30428	-0.33422	0.00002	26.16054	-30.42134	-4.89108	0.45199	40.41973	227.68	0.00
79/12/29	2444236.5	-0.27220	-0.36717	-0.00562	29.30836	-26.59371	-4.86065	0.45710	39.87269	233.45	-0.70
79/12/31	2444238.5	-0.23675	-0.39557	-0.01119	32.00490	-22.55443	-4.77174	0.46115	39.44344	239.10	-1.39
80/ 1/ 2	2444240.5	-0.19844	-0.41921	-0.01662	34.25852	-18.33665	-4.62783	0.46410	39.13177	244.67	-2.05
80/ 1/ 4	2444242.5	-0.15777	-0.43788	-0.02186	36.07458	-13.96817	-4.43171	0.46595	38.93745	250.19	-2.69
80/ 1/ 6	2444244.5	-0.11527	-0.45143	-0.02684	37.45491	-9.47298	-4.18554	0.46668	38.86034	255.68	-3.30
80/ 1/ 8	2444246.5	-0.07142	-0.45972	-0.03151	38.39738	-4.87254	-3.89089	0.46630	38.90038	261.17	-3.87
80/ 1/10	2444248.5	-0.02673	-0.46265	-0.03581	38.89559	-0.18712	-3.54886	0.46480	39.05760	266.69	-4.42
80/ 1/12	2444250.5	0.01826	-0.46013	-0.03969	38.93853	4.56294	-3.16013	0.46220	39.33212	272.27	-4.93
80/ 1/14	2444252.5	0.06304	-0.45209	-0.04310	38.51038	9.35589	-2.72506	0.45850	39.72415	277.94	-5.39
80/ 1/16	2444254.5	0.10704	-0.43851	-0.04597	37.59025	14.16701	-2.24379	0.45372	40.23389	283.72	-5.82
80/ 1/18	2444256.5	0.14968	-0.41937	-0.04826	36.15210	18.96692	-1.71639	0.44789	40.86153	289.64	-6.19
80/ 1/20	2444258.5	0.19035	-0.39471	-0.04992	34.16474	23.71945	-1.14302	0.44104	41.60707	295.75	-6.50
80/ 1/22	2444260.5	0.22838	-0.36461	-0.05088	31.59218	28.37903	-0.52416	0.43323	42.47011	302.06	-6.75

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80/ 1/24	2444262.5	0.26309	-0.32921	-0.05111	28.39452	32.88761	0.13899	0.42451	43.44954	308.63	-6.92
80/ 1/26	2444264.5	0.29372	-0.28872	-0.05055	24.52962	37.17083	0.84414	0.41495	44.54307	315.49	-7.00
80/ 1/28	2444266.5	0.31949	-0.24346	-0.04915	19.95619	41.13360	1.58716	0.40467	45.74649	322.69	-6.98
80/ 1/30	2444268.5	0.33954	-0.19386	-0.04687	14.63889	44.65518	2.36128	0.39378	47.05271	330.28	-6.84
80/ 2/ 1	2444270.5	0.35301	-0.14052	-0.04368	8.55644	47.58433	3.15595	0.38245	48.45039	338.29	-6.56
80/ 2/ 3	2444272.5	0.35901	-0.08423	-0.03958	1.71372	49.73570	3.95539	0.37088	49.92216	346.80	-6.13
80/ 2/ 5	2444274.5	0.35669	-0.02601	-0.03455	-5.84112	50.88970	4.73708	0.35930	51.44240	355.83	-5.52
80/ 2/ 7	2444276.5	0.34529	0.03285	-0.02865	-13.99459	50.79928	5.47029	0.34803	52.97489	5.43	-4.72
80/ 2/ 9	2444278.5	0.32421	0.09077	-0.02195	-22.54285	49.20861	6.11536	0.33739	54.47077	15.64	-3.73
80/ 2/11	2444280.5	0.29318	0.14587	-0.01458	-31.16979	45.88851	6.62462	0.32778	55.86768	26.45	-2.55
80/ 2/13	2444282.5	0.25234	0.19605	-0.00672	-39.43971	40.69057	6.94623	0.31962	57.09171	37.85	-1.20
80/ 2/15	2444284.5	0.20241	0.23914	0.00138	-46.81963	33.61316	7.03163	0.31330	58.06346	49.76	0.25
80/ 2/17	2444286.5	0.14474	0.27306	0.00942	-52.74318	24.85969	6.84619	0.30919	58.70875	62.07	1.75
80/ 2/19	2444288.5	0.08131	0.29609	0.01709	-56.71195	14.85855	6.38005	0.30753	58.97226	74.64	3.19
80/ 2/21	2444290.5	0.01460	0.30714	0.02406	-58.40528	4.22017	5.65453	0.30842	58.82993	87.28	4.47
80/ 2/23	2444292.5	-0.05271	0.30586	0.03007	-57.75362	-6.36648	4.72025	0.31182	58.29488	99.78	5.53
80/ 2/25	2444294.5	-0.11798	0.29270	0.03491	-54.94218	-16.26157	3.64694	0.31751	57.41412	111.95	6.31
80/ 2/27	2444296.5	-0.17894	0.26875	0.03847	-50.34680	-24.97648	2.50912	0.32516	56.25763	123.66	6.79
80/ 2/29	2444298.5	-0.23379	0.23557	0.04071	-44.43610	-32.21888	1.37353	0.33437	54.90455	134.78	6.99
80/ 3/ 2	2444300.5	-0.28127	0.19493	0.04166	-37.68017	-37.88167	0.29172	0.34474	53.43128	145.28	6.94
80/ 3/ 4	2444302.5	-0.32067	0.14865	0.04142	-30.49005	-41.99872	-0.70175	0.35587	51.90402	155.13	6.68
80/ 3/ 6	2444304.5	-0.35167	0.09845	0.04008	-23.19100	-44.69197	-1.58744	0.36738	50.37573	164.36	6.26
80/ 3/ 8	2444306.5	-0.37430	0.04589	0.03779	-16.02088	-46.12635	-2.35736	0.37899	48.88626	173.01	5.72
80/ 3/10	2444308.5	-0.38879	-0.00769	0.03468	-9.14188	-46.47797	-3.01133	0.39041	47.46413	181.13	5.10
80/ 3/12	2444310.5	-0.39557	-0.06113	0.03088	-2.65698	-45.91504	-3.55390	0.40145	46.12896	188.79	4.41
80/ 3/14	2444312.5	-0.39511	-0.11347	0.02651	3.37408	-44.58837	-3.99212	0.41193	44.89370	196.02	3.69
80/ 3/16	2444314.5	-0.38796	-0.16390	0.02170	8.92135	-42.62790	-4.33400	0.42172	43.76656	202.90	2.95
80/ 3/18	2444316.5	-0.37469	-0.21175	0.01654	13.97440	-40.14281	-4.58762	0.43070	42.75249	209.47	2.20
80/ 3/20	2444318.5	-0.35587	-0.25647	0.01113	18.53474	-37.22339	-4.76057	0.43879	41.85427	215.78	1.45
80/ 3/22	2444320.5	-0.33206	-0.29760	0.00557	22.61054	-33.94356	-4.85972	0.44593	41.07333	221.87	0.72
80/ 3/24	2444322.5	-0.30381	-0.33477	-0.00007	26.21297	-30.36353	-4.89106	0.45207	40.41022	227.78	-0.01
80/ 3/26	2444324.5	-0.27168	-0.36765	-0.00571	29.35370	-26.53234	-4.85969	0.45717	39.86504	233.54	-0.72
80/ 3/28	2444326.5	-0.23618	-0.39598	-0.01128	32.04329	-22.49005	-4.76989	0.46120	39.43764	239.19	-1.40
80/ 3/30	2444328.5	-0.19782	-0.41954	-0.01671	34.29008	-18.26973	-4.62515	0.46414	39.12780	244.75	-2.06
80/ 4/ 1	2444330.5	-0.15713	-0.43813	-0.02194	36.09937	-13.89910	-4.42824	0.46597	38.93532	250.27	-2.70
80/ 4/ 3	2444332.5	-0.11459	-0.45160	-0.02692	37.47293	-9.40211	-4.18130	0.46669	38.86004	255.76	-3.31
80/ 4/ 5	2444334.5	-0.07073	-0.45981	-0.03158	38.40856	-4.80018	-3.88590	0.46629	38.90192	261.26	-3.88
80/ 4/ 7	2444336.5	-0.02603	-0.46265	-0.03588	38.89980	-0.11360	-3.54314	0.46477	39.06099	266.78	-4.43
80/ 4/ 9	2444338.5	0.01896	-0.46005	-0.03975	38.93556	4.63731	-3.15369	0.46215	39.33736	272.36	-4.93
80/ 4/11	2444340.5	0.06373	-0.45192	-0.04314	38.49995	9.43074	-2.71789	0.45843	39.73124	278.03	-5.40
80/ 4/13	2444342.5	0.10772	-0.43825	-0.04601	37.57199	14.24195	-2.23591	0.45363	40.24285	283.81	-5.82
80/ 4/15	2444344.5	0.15033	-0.41903	-0.04829	36.12556	19.04146	-1.70779	0.44779	40.87236	289.74	-6.19
80/ 4/17	2444346.5	0.19096	-0.39428	-0.04994	34.12939	23.79296	-1.13370	0.44093	41.61977	295.84	-6.50
80/ 4/19	2444348.5	0.22895	-0.36410	-0.05089	31.54741	28.45071	-0.51414	0.43310	42.48466	302.16	-6.75
80/ 4/21	2444350.5	0.26360	-0.32861	-0.05111	28.33967	32.95643	0.14969	0.42436	43.46591	308.74	-6.92

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

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80/ 4/23	2444352.5	0.29416	-0.28805	-0.05053	24.46401	37.23547	0.85547	0.41480	44.56119	315.60	-7.00
80/ 4/25	2444354.5	0.31984	-0.24272	-0.04912	19.87919	41.19239	1.59904	0.40450	45.76628	322.81	-6.97
80/ 4/27	2444356.5	0.33980	-0.19306	-0.04683	14.55004	44.70600	2.37358	0.39361	47.07403	330.40	-6.83
80/ 4/29	2444358.5	0.35316	-0.13967	-0.04363	8.45557	47.62456	3.16846	0.38227	48.47303	338.42	-6.55
80/ 5/ 1	2444360.5	0.35904	-0.08334	-0.03950	1.60119	49.76217	3.96782	0.37070	49.94578	346.93	-6.12
80/ 5/ 3	2444362.5	0.35659	-0.02509	-0.03447	-5.96411	50.89872	4.74901	0.35912	51.46653	355.97	-5.51
80/ 5/ 5	2444364.5	0.34503	0.03377	-0.02855	-14.12563	50.78684	5.48117	0.34785	52.99886	5.59	-4.71
80/ 5/ 7	2444366.5	0.32380	0.09165	-0.02184	-22.67789	49.17078	6.12450	0.33723	54.49368	15.80	-3.71
80/ 5/ 9	2444368.5	0.29261	0.14669	-0.01446	-31.30293	45.82216	6.63122	0.32764	55.88844	26.63	-2.53
80/ 5/11	2444370.5	0.25162	0.19679	-0.00659	-39.56325	40.59435	6.94948	0.31950	57.10908	38.03	-1.18
80/ 5/13	2444372.5	0.20156	0.23975	0.00151	-46.92471	33.48858	7.03086	0.31322	58.07621	49.95	0.28
80/ 5/15	2444374.5	0.14378	0.27350	0.00955	-52.82120	24.71175	6.84103	0.30914	58.71583	62.27	1.77
80/ 5/17	2444376.5	0.08029	0.29636	0.01720	-56.75627	14.69562	6.37058	0.30752	58.97304	74.84	3.21
80/ 5/19	2444378.5	0.01355	0.30721	0.02416	-58.41279	4.05278	5.64134	0.30846	58.82435	87.47	4.49
80/ 5/21	2444380.5	-0.05375	0.30574	0.03015	-57.72537	-6.52762	4.70432	0.31189	58.28344	99.97	5.55
80/ 5/23	2444382.5	-0.11897	0.29240	0.03498	-54.88284	-16.40748	3.62945	0.31761	57.39777	112.14	6.32
80/ 5/25	2444384.5	-0.17985	0.26830	0.03852	-50.26327	-25.10107	2.49119	0.32529	56.23759	123.84	6.80
80/ 5/27	2444386.5	-0.23459	0.23499	0.04073	-44.33592	-32.31914	1.35610	0.33453	54.88205	134.95	6.99
80/ 5/29	2444388.5	-0.28195	0.19425	0.04167	-37.57034	-37.95723	0.27547	0.34491	53.40747	145.44	6.94
80/ 5/31	2444390.5	-0.32122	0.14789	0.04140	-30.37633	-42.05095	-0.71643	0.35605	51.87984	155.28	6.68
80/ 6/ 2	2444392.5	-0.35209	0.09765	0.04006	-23.07776	-44.72325	-1.60034	0.36757	50.35190	164.50	6.26
80/ 6/ 4	2444394.5	-0.37458	0.04506	0.03775	-15.91118	-46.13943	-2.36843	0.37917	48.86330	173.14	5.71
80/ 6/ 6	2444396.5	-0.38896	-0.00853	0.03463	-9.03772	-46.47558	-3.02061	0.39059	47.44243	181.26	5.09
80/ 6/ 8	2444398.5	-0.39562	-0.06196	0.03082	-2.55956	-45.89971	-3.56150	0.40162	46.10877	188.90	4.40
80/ 6/10	2444400.5	-0.39505	-0.11427	0.02644	3.46411	-44.56229	-3.99815	0.41209	44.87519	196.13	3.68
80/ 6/12	2444402.5	-0.38780	-0.16466	0.02162	9.00372	-42.59292	-4.33860	0.42186	43.74983	203.01	2.94
80/ 6/14	2444404.5	-0.37444	-0.21247	0.01645	14.04906	-40.10048	-4.59090	0.43083	42.73758	209.57	2.19
80/ 6/16	2444406.5	-0.35553	-0.25713	0.01104	18.60181	-37.17496	-4.76266	0.43891	41.84122	215.88	1.44
80/ 6/18	2444408.5	-0.33165	-0.29821	0.00548	22.67017	-33.89005	-4.86071	0.44604	41.06213	221.96	0.70
80/ 6/20	2444410.5	-0.30334	-0.33531	-0.00016	26.26534	-30.30578	-4.89104	0.45216	40.40088	227.87	-0.02
80/ 6/22	2444412.5	-0.27115	-0.36812	-0.00580	29.39901	-26.47104	-4.85873	0.45724	39.85755	233.63	-0.73
80/ 6/24	2444414.5	-0.23560	-0.39638	-0.01136	32.08170	-22.42576	-4.76805	0.46125	39.43202	239.27	-1.41
80/ 6/26	2444416.5	-0.19721	-0.41986	-0.01679	34.32168	-18.20290	-4.62248	0.46417	39.12404	244.84	-2.07
80/ 6/28	2444418.5	-0.15648	-0.43838	-0.02202	36.12422	-13.83014	-4.42477	0.46599	38.93342	250.36	-2.71
80/ 6/30	2444420.5	-0.11392	-0.45176	-0.02699	37.49103	-9.33136	-4.17707	0.46669	38.86000	255.85	-3.32
80/ 7/ 2	2444422.5	-0.07004	-0.45989	-0.03165	38.41984	-4.72797	-3.88094	0.46627	38.90372	261.34	-3.89
80/ 7/ 4	2444424.5	-0.02534	-0.46265	-0.03594	38.90410	-0.04022	-3.53744	0.46474	39.06461	266.87	-4.44
80/ 7/ 6	2444426.5	0.01966	-0.45996	-0.03981	38.93267	4.71154	-3.14726	0.46210	39.34281	272.45	-4.94
80/ 7/ 8	2444428.5	0.06442	-0.45175	-0.04319	38.48958	9.50545	-2.71075	0.45836	39.73851	278.12	-5.41
80/ 7/10	2444430.5	0.10839	-0.43799	-0.04605	37.55378	14.31671	-2.22805	0.45355	40.25194	283.90	-5.83
80/ 7/12	2444432.5	0.15098	-0.41868	-0.04832	36.09906	19.11576	-1.69921	0.44769	40.88327	289.83	-6.20
80/ 7/14	2444434.5	0.19157	-0.39385	-0.04996	34.09407	23.86616	-1.12441	0.44081	41.63248	295.94	-6.51
80/ 7/16	2444436.5	0.22952	-0.36358	-0.05090	31.50269	28.52200	-0.50416	0.43297	42.49915	302.26	-6.75
80/ 7/18	2444438.5	0.26411	-0.32802	-0.05111	28.28490	33.02477	0.16035	0.42422	43.48214	308.84	-6.92
80/ 7/20	2444440.5	0.29460	-0.28738	-0.05052	24.39854	37.29955	0.86674	0.41464	44.57910	315.71	-7.00

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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80/ 7/22	2444442.5	0.32020	-0.24198	-0.04909	19.80243	41.25052	1.61084	0.40434	45.78577	322.92	-6.97
80/ 7/24	2444444.5	0.34006	-0.19225	-0.04678	14.46154	44.75606	2.38578	0.39344	47.09494	330.52	-6.83
80/ 7/26	2444446.5	0.35331	-0.13881	-0.04357	8.35522	47.66392	3.18085	0.38210	48.49512	338.55	-6.55
80/ 7/28	2444448.5	0.35907	-0.08244	-0.03943	1.48942	49.78768	3.98010	0.37052	49.96872	347.07	-6.11
80/ 7/30	2444450.5	0.35648	-0.02418	-0.03438	-6.08604	50.90674	4.76076	0.35895	51.48982	356.12	-5.50
80/ 8/ 1	2444452.5	0.34478	0.03468	-0.02845	-14.25522	50.77345	5.49185	0.34769	53.02184	5.74	-4.69
80/ 8/ 3	2444454.5	0.32340	0.09253	-0.02173	-22.81109	49.13221	6.13341	0.33708	54.51549	15.97	-3.70
80/ 8/ 5	2444456.5	0.29206	0.14751	-0.01434	-31.43384	45.75547	6.63760	0.32751	55.90802	26.80	-2.51
80/ 8/ 7	2444458.5	0.25092	0.19751	-0.00647	-39.68425	40.49838	6.95253	0.31940	57.12527	38.21	-1.16
80/ 8/ 9	2444460.5	0.20073	0.24035	0.00163	-47.02716	33.36499	7.02993	0.31315	58.08783	50.13	0.30
80/ 8/11	2444462.5	0.14285	0.27395	0.00967	-52.89672	24.56563	6.83579	0.30911	58.72190	62.46	1.79
80/ 8/13	2444464.5	0.07929	0.29662	0.01732	-56.79853	14.53529	6.36113	0.30752	58.97298	75.03	3.23
80/ 8/15	2444466.5	0.01252	0.30729	0.02426	-58.41894	3.88857	5.62828	0.30850	58.81811	87.67	4.51
80/ 8/17	2444468.5	-0.05476	0.30563	0.03024	-57.69662	-6.68528	4.68864	0.31197	58.27157	100.16	5.56
80/ 8/19	2444470.5	-0.11994	0.29212	0.03504	-54.82391	-16.54991	3.61228	0.31772	57.38126	112.32	6.33
80/ 8/21	2444472.5	-0.18073	0.26786	0.03856	-50.18097	-25.22247	2.47364	0.32542	56.21763	124.01	6.80
80/ 8/23	2444474.5	-0.23537	0.23442	0.04076	-44.23764	-32.41673	1.33907	0.33468	54.85988	135.12	6.99
80/ 8/25	2444476.5	-0.28261	0.19358	0.04167	-37.46286	-38.03074	0.25959	0.34508	53.38417	145.59	6.94
80/ 8/27	2444478.5	-0.32175	0.14716	0.04139	-30.26522	-42.10179	-0.73076	0.35622	51.85632	155.42	6.67
80/ 8/29	2444480.5	-0.35249	0.09687	0.04003	-22.96719	-44.75374	-1.61293	0.36774	50.32883	164.63	6.25
80/ 8/31	2444482.5	-0.37486	0.04425	0.03771	-15.80409	-46.15225	-2.37924	0.37934	48.84117	173.27	5.71
80/ 9/ 2	2444484.5	-0.38912	-0.00934	0.03458	-8.93602	-46.47338	-3.02969	0.39076	47.42158	181.37	5.08
80/ 9/ 4	2444486.5	-0.39566	-0.06276	0.03075	-2.46440	-45.88492	-3.56894	0.40178	46.08944	189.01	4.39
80/ 9/ 6	2444488.5	-0.39499	-0.11505	0.02637	3.55210	-44.53702	-4.00407	0.41224	44.85751	196.24	3.67
80/ 9/ 8	2444490.5	-0.38764	-0.16540	0.02154	9.08428	-42.55896	-4.34312	0.42200	43.73388	203.11	2.93
80/ 9/10	2444492.5	-0.37419	-0.21317	0.01637	14.12215	-40.05931	-4.59414	0.43096	42.72341	209.67	2.18
80/ 9/12	2444494.5	-0.35521	-0.25778	0.01096	18.66750	-37.12780	-4.76473	0.43903	41.82884	215.97	1.43
80/ 9/14	2444496.5	-0.33125	-0.29880	0.00539	22.72861	-33.83789	-4.86171	0.44614	41.05154	222.05	0.69
80/ 9/16	2444498.5	-0.30288	-0.33584	-0.00025	26.31670	-30.24945	-4.89104	0.45224	40.39208	227.95	-0.03
80/ 9/18	2444500.5	-0.27063	-0.36859	-0.00588	29.44344	-26.41117	-4.85780	0.45731	39.85053	233.71	-0.74
80/ 9/20	2444502.5	-0.23503	-0.39677	-0.01145	32.11935	-22.36291	-4.76626	0.46130	39.42676	239.36	-1.42
80/ 9/22	2444504.5	-0.19660	-0.42018	-0.01687	34.35265	-18.13753	-4.61987	0.46421	39.12056	244.93	-2.08
80/ 9/24	2444506.5	-0.15584	-0.43862	-0.02210	36.14855	-13.76264	-4.42138	0.46600	38.93169	250.44	-2.72
80/ 9/26	2444508.5	-0.11326	-0.45193	-0.02707	37.50869	-9.26206	-4.17293	0.46669	38.86002	255.93	-3.32
80/ 9/28	2444510.5	-0.06936	-0.45997	-0.03172	38.43076	-4.65718	-3.87606	0.46625	38.90548	261.43	-3.90
80/ 9/30	2444512.5	-0.02465	-0.46265	-0.03600	38.90814	0.03175	-3.53183	0.46470	39.06812	266.95	-4.44
80/10/ 2	2444514.5	0.02035	-0.45988	-0.03986	38.92962	4.78435	-3.14094	0.46205	39.34807	272.53	-4.95
80/10/ 4	2444516.5	0.06510	-0.45158	-0.04324	38.47914	9.57877	-2.70372	0.45830	39.74553	278.20	-5.41
80/10/ 6	2444518.5	0.10905	-0.43774	-0.04609	37.53560	14.39012	-2.22030	0.45347	40.26073	283.99	-5.83
80/10/ 8	2444520.5	0.15162	-0.41834	-0.04835	36.07269	19.18875	-1.69075	0.44759	40.89384	289.92	-6.20
80/10/10	2444522.5	0.19218	-0.39343	-0.04998	34.05899	23.93810	-1.11525	0.44070	41.64482	296.03	-6.51
80/10/12	2444524.5	0.23007	-0.36308	-0.05091	31.45831	28.59209	-0.49431	0.43284	42.51326	302.36	-6.75
80/10/14	2444526.5	0.26461	-0.32744	-0.05110	28.23059	33.09200	0.17086	0.42408	43.49800	308.94	-6.92
80/10/16	2444528.5	0.29503	-0.28672	-0.05050	24.33366	37.36261	0.87787	0.41449	44.59666	315.82	-7.00
80/10/18	2444530.5	0.32055	-0.24125	-0.04906	19.72638	41.30777	1.62250	0.40418	45.80496	323.03	-6.97

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80/10/20	2444532.5	0.34032	-0.19146	-0.04674	14.37388	44.80541	2.39785	0.39327	47.11563	330.64	-6.83
80/10/22	2444534.5	0.35346	-0.13797	-0.04351	8.25579	47.70279	3.19311	0.38192	48.51711	338.68	-6.54
80/10/24	2444536.5	0.35910	-0.08156	-0.03936	1.37860	49.81294	3.99227	0.37034	49.99168	347.20	-6.10
80/10/26	2444538.5	0.35637	-0.02328	-0.03430	-6.20702	50.91479	4.77243	0.35878	51.51329	356.26	-5.49
80/10/28	2444540.5	0.34453	0.03557	-0.02836	-14.38397	50.76036	5.50247	0.34752	53.04517	5.90	-4.68
80/10/30	2444542.5	0.32299	0.09340	-0.02162	-22.94360	49.09415	6.14231	0.33692	54.53781	16.13	-3.68
80/11/ 1	2444544.5	0.29150	0.14832	-0.01422	-31.56430	45.68943	6.64398	0.32737	55.92827	26.97	-2.49
80/11/ 3	2444546.5	0.25022	0.19823	-0.00634	-39.80506	40.40312	6.95562	0.31929	57.14224	38.39	-1.14
80/11/ 5	2444548.5	0.19990	0.24093	0.00176	-47.12967	33.24203	7.02906	0.31307	58.10031	50.32	0.32
80/11/ 7	2444550.5	0.14191	0.27438	0.00979	-52.97253	24.41994	6.83060	0.30906	58.72886	62.65	1.81
80/11/ 9	2444552.5	0.07828	0.29688	0.01743	-56.84119	14.37512	6.35174	0.30752	58.97381	75.23	3.25
80/11/11	2444554.5	0.01148	0.30735	0.02436	-58.42548	3.72424	5.61526	0.30853	58.81274	87.86	4.53
80/11/13	2444556.5	-0.05579	0.30551	0.03032	-57.66816	-6.84331	4.67296	0.31204	58.26049	100.35	5.58
80/11/15	2444558.5	-0.12091	0.29182	0.03511	-54.76507	-16.69289	3.59508	0.31782	57.36540	112.51	6.34
80/11/17	2444560.5	-0.18162	0.26741	0.03860	-50.09852	-25.34447	2.45603	0.32556	56.19818	124.18	6.81
80/11/19	2444562.5	-0.23615	0.23385	0.04078	-44.13896	-32.51487	1.32196	0.33483	54.83806	135.28	7.00
80/11/21	2444564.5	-0.28327	0.19291	0.04168	-37.35479	-38.10466	0.24363	0.34525	53.36108	145.75	6.93
80/11/23	2444566.5	-0.32229	0.14641	0.04138	-30.15337	-42.15285	-0.74517	0.35639	51.83284	155.57	6.67
80/11/25	2444568.5	-0.35290	0.09607	0.04000	-22.85585	-44.78425	-1.62560	0.36792	50.30568	164.77	6.24
80/11/27	2444570.5	-0.37514	0.04343	0.03767	-15.69623	-46.16488	-2.39011	0.37952	48.81885	173.40	5.70
80/11/29	2444572.5	-0.38927	-0.01016	0.03452	-8.83361	-46.47081	-3.03880	0.39093	47.40045	181.50	5.07
80/12/ 1	2444574.5	-0.39570	-0.06357	0.03069	-2.36864	-45.86959	-3.57639	0.40195	46.06973	189.13	4.38
80/12/ 3	2444576.5	-0.39492	-0.11584	0.02630	3.64056	-44.51108	-4.00997	0.41240	44.83938	196.35	3.66
80/12/ 5	2444578.5	-0.38748	-0.16616	0.02146	9.16517	-42.52424	-4.34760	0.42215	43.71742	203.21	2.91
80/12/ 7	2444580.5	-0.37394	-0.21388	0.01629	14.19541	-40.01733	-4.59733	0.43109	42.70869	209.77	2.17
80/12/ 9	2444582.5	-0.35487	-0.25844	0.01087	18.73323	-37.07981	-4.76674	0.43914	41.81588	216.06	1.42
80/12/11	2444584.5	-0.33085	-0.29940	0.00531	22.78697	-33.78491	-4.86263	0.44624	41.04036	222.14	0.68
80/12/13	2444586.5	-0.30241	-0.33638	-0.00033	26.36787	-30.19231	-4.89095	0.45233	40.38269	228.04	-0.04
80/12/15	2444588.5	-0.27011	-0.36905	-0.00597	29.48761	-26.35056	-4.85680	0.45738	39.84294	233.80	-0.75
80/12/17	2444590.5	-0.23447	-0.39717	-0.01153	32.15666	-22.29938	-4.76439	0.46136	39.42097	239.44	-1.43
80/12/19	2444592.5	-0.19599	-0.42050	-0.01695	34.38322	-18.07155	-4.61718	0.46424	39.11655	245.01	-2.09
80/12/21	2444594.5	-0.15520	-0.43886	-0.02218	36.17244	-13.69459	-4.41791	0.46602	38.92949	250.52	-2.73
80/12/23	2444596.5	-0.11260	-0.45209	-0.02714	37.52591	-9.19228	-4.16870	0.46669	38.85962	256.01	-3.33
80/12/25	2444598.5	-0.06868	-0.46006	-0.03179	38.44125	-4.58598	-3.87110	0.46624	38.90689	261.51	-3.91
80/12/27	2444600.5	-0.02396	-0.46265	-0.03607	38.91176	0.10406	-3.52616	0.46467	39.07134	267.04	-4.45
80/12/29	2444602.5	0.02104	-0.45979	-0.03992	38.92617	4.85746	-3.13456	0.46200	39.35310	272.62	-4.96
80/12/31	2444604.5	0.06578	-0.45141	-0.04329	38.46833	9.65232	-2.69663	0.45823	39.75237	278.29	-5.42
81/ 1/ 2	2444606.5	0.10972	-0.43749	-0.04613	37.51706	14.46370	-2.21250	0.45339	40.26938	284.08	-5.84
81/ 1/ 4	2444608.5	0.15225	-0.41801	-0.04838	36.04598	19.26187	-1.68226	0.44749	40.90431	290.01	-6.21
81/ 1/ 6	2444610.5	0.19278	-0.39301	-0.05000	34.02360	24.01013	-1.10605	0.44059	41.65712	296.13	-6.52
81/ 1/ 8	2444612.5	0.23063	-0.36257	-0.05092	31.41367	28.66227	-0.48442	0.43271	42.52739	302.46	-6.76
81/ 1/10	2444614.5	0.26510	-0.32685	-0.05110	28.17606	33.15933	0.18141	0.42394	43.51395	309.05	-6.92
81/ 1/12	2444616.5	0.29546	-0.28606	-0.05049	24.26858	37.42580	0.88903	0.41434	44.61440	315.93	-7.00
81/ 1/14	2444618.5	0.32090	-0.24052	-0.04903	19.65013	41.36517	1.63420	0.40401	45.82440	323.15	-6.97
81/ 1/16	2444620.5	0.34057	-0.19067	-0.04670	14.28599	44.85493	2.40995	0.39309	47.13663	330.76	-6.82

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81/ 1/18	2444622.5	0.35360	-0.13713	-0.04346	8.15609	47.74182	3.20542	0.38174	48.53945	338.80	-6.54
81/ 1/20	2444624.5	0.35912	-0.08068	-0.03929	1.26744	49.83835	4.00448	0.37016	50.01503	347.34	-6.09
81/ 1/22	2444626.5	0.35626	-0.02238	-0.03421	-6.32846	50.92290	4.78415	0.35860	51.53717	356.41	-5.47
81/ 1/24	2444628.5	0.34427	0.03647	-0.02826	-14.51328	50.74723	5.51314	0.34735	53.06893	6.05	-4.67
81/ 1/26	2444630.5	0.32258	0.09427	-0.02151	-23.07677	49.05591	6.15124	0.33676	54.56059	16.29	-3.66
81/ 1/28	2444632.5	0.29094	0.14913	-0.01410	-31.69546	45.62302	6.65040	0.32723	55.94899	27.14	-2.47
81/ 1/30	2444634.5	0.24951	0.19894	-0.00622	-39.92659	40.30724	6.95872	0.31917	57.15969	38.57	-1.12
81/ 2/ 1	2444636.5	0.19905	0.24152	0.00188	-47.23282	33.11820	7.02818	0.31298	58.11325	50.51	0.34
81/ 2/ 3	2444638.5	0.14097	0.27481	0.00991	-53.04879	24.27316	6.82537	0.30902	58.73624	62.84	1.84
81/ 2/ 5	2444640.5	0.07727	0.29713	0.01754	-56.88405	14.21371	6.34226	0.30751	58.97498	75.42	3.27
81/ 2/ 7	2444642.5	0.01044	0.30742	0.02446	-58.43192	3.55859	5.60212	0.30856	58.80763	88.06	4.55
81/ 2/ 9	2444644.5	-0.05682	0.30538	0.03040	-57.63928	-7.00262	4.65713	0.31211	58.24957	100.54	5.59
81/ 2/11	2444646.5	-0.12189	0.29152	0.03517	-54.70552	-16.83699	3.57772	0.31793	57.34961	112.69	6.35
81/ 2/13	2444648.5	-0.18252	0.26695	0.03865	-50.01513	-25.46739	2.43825	0.32569	56.17870	124.36	6.81
81/ 2/15	2444650.5	-0.23694	0.23326	0.04080	-44.03919	-32.61368	1.30469	0.33499	54.81610	135.45	7.00
81/ 2/17	2444652.5	-0.28394	0.19222	0.04168	-37.24553	-38.17899	0.22752	0.34541	53.33776	145.90	6.93
81/ 2/19	2444654.5	-0.32283	0.14565	0.04137	-30.04032	-42.20408	-0.75971	0.35657	51.80910	155.72	6.66
81/ 2/21	2444656.5	-0.35331	0.09527	0.03997	-22.74330	-44.81472	-1.63837	0.36810	50.28222	164.91	6.23
81/ 2/23	2444658.5	-0.37542	0.04260	0.03763	-15.58722	-46.17731	-2.40106	0.37970	48.79621	173.53	5.69
81/ 2/25	2444660.5	-0.38943	-0.01100	0.03447	-8.73013	-46.46787	-3.04798	0.39111	47.37899	181.62	5.06
81/ 2/27	2444662.5	-0.39574	-0.06440	0.03063	-2.27189	-45.85378	-3.58388	0.40212	46.04970	189.24	4.37
81/ 3/ 1	2444664.5	-0.39486	-0.11664	0.02623	3.72993	-44.48456	-4.01591	0.41256	44.82093	196.46	3.64
81/ 3/ 3	2444666.5	-0.38731	-0.16692	0.02139	9.24687	-42.48886	-4.35211	0.42230	43.70067	203.31	2.90
81/ 3/ 5	2444668.5	-0.37369	-0.21459	0.01621	14.26942	-39.97463	-4.60053	0.43122	42.69370	209.87	2.15
81/ 3/ 7	2444670.5	-0.35454	-0.25911	0.01079	18.79962	-37.03107	-4.76874	0.43926	41.80271	216.16	1.41
81/ 3/ 9	2444672.5	-0.33044	-0.30001	0.00522	22.84592	-33.73116	-4.86353	0.44634	41.02903	222.24	0.67
81/ 3/11	2444674.5	-0.30194	-0.33692	-0.00042	26.41958	-30.13437	-4.89086	0.45242	40.37320	228.13	-0.05
81/ 3/13	2444676.5	-0.26958	-0.36953	-0.00606	29.53224	-26.28913	-4.85576	0.45745	39.83528	233.89	-0.76
81/ 3/15	2444678.5	-0.23389	-0.39757	-0.01162	32.19437	-22.23500	-4.76248	0.46141	39.41515	239.53	-1.44
81/ 3/17	2444680.5	-0.19538	-0.42082	-0.01704	34.41411	-18.00468	-4.61444	0.46428	39.11256	245.10	-2.10
81/ 3/19	2444682.5	-0.15456	-0.43911	-0.02226	36.19657	-13.62564	-4.41439	0.46604	38.92732	250.61	-2.74
81/ 3/21	2444684.5	-0.11193	-0.45225	-0.02722	37.54329	-9.12158	-4.16442	0.46669	38.85928	256.10	-3.34
81/ 3/23	2444686.5	-0.06799	-0.46014	-0.03186	38.45181	-4.51386	-3.86607	0.46622	38.90839	261.59	-3.92
81/ 3/25	2444688.5	-0.02327	-0.46265	-0.03613	38.91538	0.17730	-3.52041	0.46464	39.07469	267.12	-4.46
81/ 3/27	2444690.5	0.02173	-0.45970	-0.03997	38.92263	4.93151	-3.12809	0.46195	39.35830	272.71	-4.96
81/ 3/29	2444692.5	0.06647	-0.45124	-0.04334	38.45736	9.72683	-2.68944	0.45816	39.75943	278.38	-5.43
81/ 3/31	2444694.5	0.11038	-0.43723	-0.04617	37.49827	14.53826	-2.20461	0.45330	40.27830	284.17	-5.85
81/ 4/ 2	2444696.5	0.15290	-0.41766	-0.04841	36.01893	19.33598	-1.67364	0.44739	40.91509	290.11	-6.21
81/ 4/ 4	2444698.5	0.19338	-0.39258	-0.05002	33.98775	24.08316	-1.09673	0.44047	41.66976	296.22	-6.52
81/ 4/ 6	2444700.5	0.23119	-0.36206	-0.05093	31.36842	28.73342	-0.47440	0.43258	42.54188	302.56	-6.76
81/ 4/ 8	2444702.5	0.26561	-0.32626	-0.05110	28.12075	33.22756	0.19210	0.42379	43.53027	309.15	-6.92
81/ 4/10	2444704.5	0.29589	-0.28539	-0.05047	24.20254	37.48981	0.90035	0.41418	44.63250	316.04	-7.00
81/ 4/12	2444706.5	0.32124	-0.23978	-0.04900	19.57275	41.42327	1.64606	0.40385	45.84418	323.26	-6.97
81/ 4/14	2444708.5	0.34082	-0.18987	-0.04665	14.19678	44.90499	2.42221	0.39292	47.15797	330.88	-6.82
81/ 4/16	2444710.5	0.35375	-0.13627	-0.04340	8.05490	47.78121	3.21788	0.38156	48.56212	338.93	-6.53

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81/ 4/18	2444712.5	0.35914	-0.07979	-0.03922	1.15465	49.86385	4.01685	0.36998	50.03871	347.47	-6.09
81/ 4/20	2444714.5	0.35614	-0.02147	-0.03413	-6.45161	50.93083	4.79600	0.35842	51.56137	356.55	-5.46
81/ 4/22	2444716.5	0.34401	0.03738	-0.02816	-14.64430	50.73356	5.52392	0.34717	53.09297	6.20	-4.65
81/ 4/24	2444718.5	0.32216	0.09515	-0.02140	-23.21158	49.01674	6.16025	0.33660	54.58357	16.45	-3.65
81/ 4/26	2444720.5	0.29036	0.14995	-0.01398	-31.82805	45.55527	6.65684	0.32709	55.96982	27.31	-2.45
81/ 4/28	2444722.5	0.24879	0.19966	-0.00610	-40.04919	40.20967	6.96178	0.31906	57.17711	38.75	-1.09
81/ 4/30	2444724.5	0.19820	0.24212	0.00201	-47.33657	32.99245	7.02719	0.31290	58.12602	50.70	0.37
81/ 5/ 2	2444726.5	0.14001	0.27524	0.01003	-53.12513	24.12439	6.81999	0.30897	58.74332	63.04	1.86
81/ 5/ 4	2444728.5	0.07624	0.29738	0.01766	-56.92646	14.05042	6.33258	0.30751	58.97574	75.62	3.29
81/ 5/ 6	2444730.5	0.00938	0.30748	0.02456	-58.43749	3.39137	5.58877	0.30860	58.80201	88.25	4.57
81/ 5/ 8	2444732.5	-0.05786	0.30526	0.03049	-57.60924	-7.16310	4.64109	0.31218	58.23809	100.73	5.60
81/ 5/10	2444734.5	-0.12288	0.29121	0.03523	-54.64468	-16.98186	3.56018	0.31804	57.33323	112.88	6.36
81/ 5/12	2444736.5	-0.18342	0.26649	0.03869	-49.93045	-25.59068	2.42033	0.32582	56.15862	124.54	6.82
81/ 5/14	2444738.5	-0.23773	0.23267	0.04083	-43.93822	-32.71255	1.28731	0.33514	54.79357	135.62	7.00
81/ 5/16	2444740.5	-0.28461	0.19153	0.04169	-37.13522	-38.25316	0.21134	0.34558	53.31392	146.06	6.93
81/ 5/18	2444742.5	-0.32337	0.14489	0.04135	-29.92640	-42.25500	-0.77430	0.35675	51.78488	155.86	6.66
81/ 5/20	2444744.5	-0.35372	0.09446	0.03994	-22.63005	-44.84480	-1.65117	0.36829	50.25835	165.05	6.23
81/ 5/22	2444746.5	-0.37570	0.04177	0.03758	-15.47766	-46.18930	-2.41203	0.37988	48.77322	173.66	5.68
81/ 5/24	2444748.5	-0.38959	-0.01183	0.03441	-8.62621	-46.46453	-3.05716	0.39129	47.35726	181.74	5.05
81/ 5/26	2444750.5	-0.39579	-0.06522	0.03056	-2.17480	-45.83759	-3.59138	0.40229	46.02947	189.36	4.36
81/ 5/28	2444752.5	-0.39479	-0.11744	0.02616	3.81958	-44.45772	-4.02185	0.41272	44.80238	196.57	3.63
81/ 5/30	2444754.5	-0.38715	-0.16769	0.02131	9.32881	-42.45321	-4.35661	0.42244	43.68389	203.42	2.89
81/ 6/ 1	2444756.5	-0.37343	-0.21531	0.01612	14.34362	-39.93172	-4.60373	0.43136	42.67875	209.97	2.14
81/ 6/ 3	2444758.5	-0.35420	-0.25977	0.01070	18.86620	-36.98213	-4.77074	0.43938	41.78961	216.26	1.40
81/ 6/ 5	2444760.5	-0.33003	-0.30061	0.00513	22.90504	-33.67723	-4.86444	0.44645	41.01780	222.33	0.66
81/ 6/ 7	2444762.5	-0.30147	-0.33746	-0.00051	26.47143	-30.07628	-4.89076	0.45251	40.36383	228.22	-0.06
81/ 6/ 9	2444764.5	-0.26906	-0.37000	-0.00614	29.57701	-26.22754	-4.85473	0.45752	39.82778	233.98	-0.77
81/ 6/11	2444766.5	-0.23332	-0.39797	-0.01170	32.23221	-22.17048	-4.76057	0.46147	39.40949	239.62	-1.45
81/ 6/13	2444768.5	-0.19476	-0.42115	-0.01712	34.44513	-17.93768	-4.61170	0.46432	39.10876	245.18	-2.11
81/ 6/15	2444770.5	-0.15391	-0.43935	-0.02234	36.22083	-13.55655	-4.41086	0.46606	38.92537	250.69	-2.75
81/ 6/17	2444772.5	-0.11126	-0.45242	-0.02729	37.56078	-9.05076	-4.16013	0.46669	38.85917	256.18	-3.35
81/ 6/19	2444774.5	-0.06731	-0.46022	-0.03193	38.46247	-4.44162	-3.86105	0.46621	38.91012	261.68	-3.93
81/ 6/21	2444776.5	-0.02257	-0.46265	-0.03619	38.91907	0.25065	-3.51466	0.46461	39.07825	267.21	-4.47
81/ 6/23	2444778.5	0.02243	-0.45962	-0.04003	38.91913	5.00565	-3.12162	0.46190	39.36369	272.79	-4.97
81/ 6/25	2444780.5	0.06716	-0.45107	-0.04339	38.44637	9.80140	-2.68225	0.45810	39.76664	278.47	-5.43
81/ 6/27	2444782.5	0.11106	-0.43697	-0.04621	37.47944	14.61285	-2.19670	0.45322	40.28734	284.26	-5.85
81/ 6/29	2444784.5	0.15354	-0.41731	-0.04844	35.99181	19.41008	-1.66503	0.44729	40.92595	290.20	-6.22
81/ 7/ 1	2444786.5	0.19399	-0.39215	-0.05004	33.95181	24.15613	-1.08740	0.44036	41.68244	296.32	-6.52
81/ 7/ 3	2444788.5	0.23175	-0.36155	-0.05094	31.32305	28.80444	-0.46438	0.43246	42.55637	302.66	-6.76
81/ 7/ 5	2444790.5	0.26611	-0.32566	-0.05109	28.06531	33.29560	0.20279	0.42365	43.54652	309.25	-6.93
81/ 7/ 7	2444792.5	0.29633	-0.28472	-0.05045	24.13638	37.55353	0.91165	0.41403	44.65046	316.14	-7.00
81/ 7/ 9	2444794.5	0.32160	-0.23903	-0.04897	19.49527	41.48097	1.65789	0.40368	45.86376	323.38	-6.97
81/ 7/11	2444796.5	0.34108	-0.18906	-0.04661	14.10756	44.95453	2.43443	0.39275	47.17902	331.00	-6.82
81/ 7/13	2444798.5	0.35389	-0.13541	-0.04334	7.95380	47.81995	3.23029	0.38138	48.58441	339.06	-6.53
81/ 7/15	2444800.5	0.35916	-0.07890	-0.03915	1.04212	49.88862	4.02914	0.36980	50.06190	347.61	-6.08

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81/ 7/17	2444802.5	0.35603	-0.02056	-0.03404	-6.57429	50.93796	4.80774	0.35824	51.58499	356.70	-5.45
81/ 7/19	2444804.5	0.34374	0.03829	-0.02806	-14.77461	50.71908	5.53456	0.34701	53.11634	6.36	-4.64
81/ 7/21	2444806.5	0.32175	0.09603	-0.02129	-23.34537	48.97684	6.16911	0.33645	54.60582	16.62	-3.63
81/ 7/23	2444808.5	0.28979	0.15076	-0.01386	-31.95934	45.48701	6.66312	0.32696	55.98986	27.49	-2.43
81/ 7/25	2444810.5	0.24807	0.20038	-0.00597	-40.17025	40.11194	6.96469	0.31895	57.19374	38.93	-1.07
81/ 7/27	2444812.5	0.19736	0.24270	0.00213	-47.43865	32.86699	7.02607	0.31282	58.13803	50.88	0.39
81/ 7/29	2444814.5	0.13906	0.27567	0.01016	-53.19983	23.97645	6.81452	0.30893	58.74972	63.23	1.88
81/ 7/31	2444816.5	0.07523	0.29763	0.01777	-56.96747	13.88847	6.32289	0.30750	58.97594	75.82	3.31
81/ 8/ 2	2444818.5	0.00834	0.30754	0.02466	-58.44207	3.22587	5.57547	0.30864	58.79598	88.45	4.58
81/ 8/ 4	2444820.5	-0.05888	0.30513	0.03057	-57.57875	-7.32166	4.62518	0.31226	58.22638	100.92	5.62
81/ 8/ 6	2444822.5	-0.12385	0.29091	0.03530	-54.58396	-17.12480	3.54281	0.31814	57.31683	113.06	6.37
81/ 8/ 8	2444824.5	-0.18431	0.26604	0.03873	-49.84640	-25.71226	2.40261	0.32595	56.13872	124.71	6.82
81/ 8/10	2444826.5	-0.23852	0.23209	0.04085	-43.83828	-32.81005	1.27013	0.33530	54.77141	135.78	7.00
81/ 8/12	2444828.5	-0.28527	0.19085	0.04169	-37.02620	-38.32633	0.19535	0.34575	53.29057	146.22	6.93
81/ 8/14	2444830.5	-0.32390	0.14414	0.04134	-29.81385	-42.30531	-0.78872	0.35693	51.76126	156.01	6.65
81/ 8/16	2444832.5	-0.35412	0.09366	0.03991	-22.51818	-44.87462	-1.66383	0.36846	50.23513	165.18	6.22
81/ 8/18	2444834.5	-0.37598	0.04095	0.03754	-15.36939	-46.20132	-2.42288	0.38006	48.75091	173.78	5.67
81/ 8/20	2444836.5	-0.38974	-0.01266	0.03436	-8.52347	-46.46142	-3.06626	0.39146	47.33619	181.86	5.04
81/ 8/22	2444838.5	-0.39582	-0.06604	0.03050	-2.07874	-45.82180	-3.59882	0.40245	46.00989	189.47	4.35
81/ 8/24	2444840.5	-0.39472	-0.11823	0.02608	3.90833	-44.43138	-4.02774	0.41287	44.78443	196.67	3.62
81/ 8/26	2444842.5	-0.38698	-0.16844	0.02123	9.41000	-42.41813	-4.36109	0.42259	43.66767	203.52	2.88
81/ 8/28	2444844.5	-0.37317	-0.21602	0.01604	14.41719	-39.88939	-4.60691	0.43149	42.66430	210.07	2.13
81/ 8/30	2444846.5	-0.35387	-0.26043	0.01062	18.93224	-36.93380	-4.77274	0.43950	41.77696	216.35	1.38
81/ 9/ 1	2444848.5	-0.32962	-0.30121	0.00504	22.96371	-33.62389	-4.86536	0.44655	41.00695	222.42	0.65
81/ 9/ 3	2444850.5	-0.30100	-0.33799	-0.00060	26.52291	-30.01875	-4.89067	0.45259	40.35479	228.31	-0.08
81/ 9/ 5	2444852.5	-0.26853	-0.37046	-0.00623	29.62148	-26.16649	-4.85371	0.45759	39.82054	234.06	-0.78
81/ 9/ 7	2444854.5	-0.23274	-0.39836	-0.01179	32.26979	-22.10648	-4.75868	0.46152	39.40407	239.70	-1.46
81/ 9/ 9	2444856.5	-0.19415	-0.42147	-0.01720	34.47594	-17.87119	-4.60899	0.46435	39.10515	245.27	-2.12
81/ 9/11	2444858.5	-0.15326	-0.43959	-0.02241	36.24492	-13.48797	-4.40736	0.46608	38.92357	250.78	-2.76
81/ 9/13	2444860.5	-0.11058	-0.45258	-0.02736	37.57812	-8.98044	-4.15587	0.46670	38.85917	256.27	-3.36
81/ 9/15	2444862.5	-0.06662	-0.46030	-0.03200	38.47300	-4.36989	-3.85605	0.46619	38.91191	261.76	-3.94
81/ 9/17	2444864.5	-0.02188	-0.46264	-0.03625	38.92263	0.32349	-3.50894	0.46458	39.08182	267.29	-4.48
81/ 9/19	2444866.5	0.02312	-0.45953	-0.04009	38.91553	5.07926	-3.11518	0.46185	39.36904	272.88	-4.98
81/ 9/21	2444868.5	0.06784	-0.45089	-0.04343	38.43532	9.87542	-2.67511	0.45803	39.77378	278.56	-5.44
81/ 9/23	2444870.5	0.11173	-0.43671	-0.04625	37.46057	14.68685	-2.18884	0.45314	40.29626	284.35	-5.86
81/ 9/25	2444872.5	0.15418	-0.41697	-0.04847	35.96467	19.48353	-1.65646	0.44720	40.93665	290.29	-6.22
81/ 9/27	2444874.5	0.19460	-0.39172	-0.05006	33.91589	24.22839	-1.07814	0.44024	41.69490	296.42	-6.53
81/ 9/29	2444876.5	0.23231	-0.36103	-0.05095	31.27776	28.87469	-0.45443	0.43233	42.57056	302.76	-6.77
81/10/ 1	2444878.5	0.26661	-0.32507	-0.05109	28.01004	33.36280	0.21339	0.42351	43.56242	309.36	-6.93
81/10/ 3	2444880.5	0.29676	-0.28405	-0.05044	24.07050	37.61635	0.92286	0.41388	44.66800	316.25	-7.00
81/10/ 5	2444882.5	0.32194	-0.23830	-0.04894	19.41822	41.53773	1.66961	0.40352	45.88287	323.49	-6.97
81/10/ 7	2444884.5	0.34133	-0.18827	-0.04657	14.01893	45.00312	2.44652	0.39258	47.19954	331.12	-6.81
81/10/ 9	2444886.5	0.35404	-0.13457	-0.04328	7.85353	47.85774	3.24254	0.38121	48.60612	339.19	-6.52
81/10/11	2444888.5	0.35918	-0.07801	-0.03908	0.93066	49.91247	4.04125	0.36963	50.08445	347.75	-6.07
81/10/13	2444890.5	0.35591	-0.01965	-0.03396	-6.69561	50.94425	4.81930	0.35807	51.60789	356.84	-5.44

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81/10/15	2444892.5	0.34349	0.03919	-0.02796	-14.90324	50.70396	5.54500	0.34684	53.13893	6.51	-4.62
81/10/17	2444894.5	0.32134	0.09689	-0.02118	-23.47718	48.93661	6.17776	0.33630	54.62723	16.78	-3.61
81/10/19	2444896.5	0.28923	0.15156	-0.01375	-32.08839	45.41886	6.66920	0.32683	56.00907	27.66	-2.41
81/10/21	2444898.5	0.24737	0.20109	-0.00585	-40.28894	40.01491	6.96744	0.31885	57.20958	39.11	-1.05
81/10/23	2444900.5	0.19653	0.24328	0.00226	-47.53841	32.74291	7.02486	0.31275	58.14935	51.07	0.41
81/10/25	2444902.5	0.13813	0.27610	0.01027	-53.27249	23.83056	6.80903	0.30889	58.75556	63.42	1.91
81/10/27	2444904.5	0.07423	0.29788	0.01788	-57.00696	13.72916	6.31328	0.30751	58.97576	76.01	3.33
81/10/29	2444906.5	0.00732	0.30760	0.02476	-58.44581	3.06337	5.56234	0.30868	58.78977	88.64	4.60
81/10/31	2444908.5	-0.05989	0.30500	0.03065	-57.54819	-7.47711	4.60952	0.31233	58.21467	101.11	5.63
81/11/ 2	2444910.5	-0.12480	0.29061	0.03536	-54.52389	-17.26480	3.52574	0.31825	57.30059	113.24	6.38
81/11/ 4	2444912.5	-0.18518	0.26559	0.03878	-49.76361	-25.83122	2.38522	0.32609	56.11915	124.89	6.83
81/11/ 6	2444914.5	-0.23928	0.23152	0.04087	-43.74005	-32.90539	1.25329	0.33545	54.74968	135.94	7.00
81/11/ 8	2444916.5	-0.28592	0.19018	0.04169	-36.91917	-38.39787	0.17968	0.34592	53.26775	146.37	6.92
81/11/10	2444918.5	-0.32442	0.14340	0.04132	-29.70344	-42.35449	-0.80284	0.35710	51.73821	156.15	6.65
81/11/12	2444920.5	-0.35451	0.09288	0.03988	-22.40847	-44.90376	-1.67623	0.36864	50.21252	165.32	6.21
81/11/14	2444922.5	-0.37624	0.04014	0.03750	-15.26322	-46.21307	-2.43352	0.38023	48.72921	173.91	5.66
81/11/16	2444924.5	-0.38989	-0.01347	0.03430	-8.42268	-46.45838	-3.07518	0.39163	47.31575	181.98	5.03
81/11/18	2444926.5	-0.39586	-0.06684	0.03043	-1.98447	-45.80635	-3.60612	0.40261	45.99092	189.58	4.34
81/11/20	2444928.5	-0.39465	-0.11900	0.02601	3.99548	-44.40560	-4.03354	0.41302	44.76707	196.78	3.61
81/11/22	2444930.5	-0.38681	-0.16918	0.02115	9.48975	-42.38377	-4.36550	0.42272	43.65200	203.62	2.87
81/11/24	2444932.5	-0.37292	-0.21672	0.01596	14.48950	-39.84790	-4.61006	0.43161	42.65036	210.16	2.12
81/11/26	2444934.5	-0.35353	-0.26108	0.01053	18.99718	-36.88638	-4.77472	0.43961	41.76477	216.45	1.37
81/11/28	2444936.5	-0.32922	-0.30180	0.00496	23.02143	-33.57152	-4.86627	0.44664	40.99651	222.51	0.64
81/11/30	2444938.5	-0.30053	-0.33852	-0.00068	26.57356	-29.96225	-4.89059	0.45267	40.34611	228.40	-0.09
81/12/ 2	2444940.5	-0.26800	-0.37092	-0.00632	29.66523	-26.10651	-4.85272	0.45766	39.81362	234.15	-0.79
81/12/ 4	2444942.5	-0.23217	-0.39875	-0.01187	32.30678	-22.04356	-4.75682	0.46157	39.39891	239.79	-1.47
81/12/ 6	2444944.5	-0.19354	-0.42178	-0.01728	34.50625	-17.80578	-4.60632	0.46439	39.10174	245.35	-2.13
81/12/ 8	2444946.5	-0.15262	-0.43983	-0.02249	36.26859	-13.42046	-4.40391	0.46610	38.92189	250.86	-2.77
81/12/10	2444948.5	-0.10992	-0.45274	-0.02744	37.59514	-8.91116	-4.15167	0.46670	38.85923	256.35	-3.37
81/12/12	2444950.5	-0.06594	-0.46037	-0.03206	38.48326	-4.29914	-3.85112	0.46618	38.91369	261.85	-3.94
81/12/14	2444952.5	-0.02119	-0.46264	-0.03632	38.92600	0.39538	-3.50328	0.46454	39.08533	267.38	-4.48
81/12/16	2444954.5	0.02381	-0.45944	-0.04014	38.91178	5.15197	-3.10880	0.46180	39.37428	272.97	-4.99
81/12/18	2444956.5	0.06852	-0.45072	-0.04348	38.42417	9.94857	-2.66802	0.45797	39.78077	278.64	-5.45
81/12/20	2444958.5	0.11239	-0.43645	-0.04629	37.44166	14.76002	-2.18105	0.45306	40.30500	284.44	-5.86
81/12/22	2444960.5	0.15482	-0.41663	-0.04850	35.93757	19.55620	-1.64796	0.44710	40.94716	290.38	-6.23
81/12/24	2444962.5	0.19520	-0.39129	-0.05008	33.88008	24.29993	-1.06895	0.44013	41.70718	296.51	-6.53
81/12/26	2444964.5	0.23286	-0.36053	-0.05095	31.23267	28.94429	-0.44455	0.43220	42.58461	302.86	-6.77
81/12/28	2444966.5	0.26711	-0.32448	-0.05109	27.95504	33.42943	0.22393	0.42337	43.57822	309.46	-6.93
81/12/30	2444968.5	0.29718	-0.28339	-0.05042	24.00496	37.67871	0.93399	0.41372	44.68552	316.36	-7.00
82/ 1/ 1	2444970.5	0.32229	-0.23757	-0.04891	19.34155	41.59415	1.68126	0.40336	45.90202	323.60	-6.97
82/ 1/ 3	2444972.5	0.34158	-0.18748	-0.04652	13.93071	45.05148	2.45856	0.39241	47.22018	331.24	-6.81
82/ 1/ 5	2444974.5	0.35417	-0.13373	-0.04323	7.75363	47.89543	3.25475	0.38104	48.62802	339.31	-6.51
82/ 1/ 7	2444976.5	0.35920	-0.07714	-0.03900	0.81952	49.93635	4.05334	0.36945	50.10728	347.88	-6.06
82/ 1/ 9	2444978.5	0.35580	-0.01876	-0.03387	-6.81670	50.95069	4.83084	0.35790	51.63117	356.98	-5.43
82/ 1/11	2444980.5	0.34322	0.04008	-0.02786	-15.03178	50.68906	5.55545	0.34668	53.16200	6.66	-4.61

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82/ 1/13	2444982.5	0.32093	0.09775	-0.02107	-23.60907	48.89662	6.18643	0.33615	54.64924	16.94	-3.59
82/ 1/15	2444984.5	0.28867	0.15236	-0.01363	-32.21771	45.35088	6.67533	0.32669	56.02895	27.83	-2.39
82/ 1/17	2444986.5	0.24666	0.20179	-0.00573	-40.40805	39.91789	6.97022	0.31874	57.22615	39.29	-1.03
82/ 1/19	2444988.5	0.19569	0.24386	0.00238	-47.63869	32.61860	7.02367	0.31268	58.16141	51.25	0.44
82/ 1/21	2444990.5	0.13719	0.27651	0.01039	-53.34566	23.68416	6.80355	0.30885	58.76212	63.61	1.93
82/ 1/23	2444992.5	0.07323	0.29811	0.01799	-57.04683	13.56906	6.30363	0.30750	58.97623	76.20	3.35
82/ 1/25	2444994.5	0.00629	0.30765	0.02486	-58.44973	2.89989	5.54915	0.30871	58.78412	88.83	4.62
82/ 1/27	2444996.5	-0.06090	0.30487	0.03073	-57.51752	-7.63365	4.59375	0.31241	58.20344	101.30	5.65
82/ 1/29	2444998.5	-0.12576	0.29031	0.03542	-54.46342	-17.40586	3.50855	0.31835	57.28471	113.42	6.39
82/ 1/31	2445000.5	-0.18605	0.26513	0.03882	-49.68017	-25.95114	2.36768	0.32622	56.09979	125.06	6.83
82/ 2/ 2	2445002.5	-0.24005	0.23093	0.04089	-43.64094	-33.00147	1.23631	0.33560	54.72803	136.11	7.00
82/ 2/ 4	2445004.5	-0.28657	0.18950	0.04170	-36.81111	-38.46990	0.16388	0.34608	53.24489	146.52	6.92
82/ 2/ 6	2445006.5	-0.32494	0.14265	0.04131	-29.59195	-42.40388	-0.81708	0.35727	51.71499	156.30	6.64
82/ 2/ 8	2445008.5	-0.35490	0.09208	0.03985	-22.29768	-44.93284	-1.68872	0.36881	50.18963	165.45	6.20
82/ 2/10	2445010.5	-0.37651	0.03933	0.03745	-15.15603	-46.22451	-2.44423	0.38041	48.70713	174.04	5.65
82/ 2/12	2445012.5	-0.39004	-0.01429	0.03425	-8.32102	-46.45481	-3.08414	0.39180	47.29483	182.10	5.01
82/ 2/14	2445014.5	-0.39589	-0.06765	0.03037	-1.88948	-45.79020	-3.61343	0.40278	45.97140	189.70	4.32
82/ 2/16	2445016.5	-0.39458	-0.11979	0.02594	4.08318	-44.37900	-4.03932	0.41318	44.74912	196.89	3.60
82/ 2/18	2445018.5	-0.38665	-0.16993	0.02107	9.56991	-42.34852	-4.36988	0.42287	43.63572	203.73	2.86
82/ 2/20	2445020.5	-0.37266	-0.21743	0.01588	14.56207	-39.80550	-4.61314	0.43174	42.63581	210.26	2.11
82/ 2/22	2445022.5	-0.35319	-0.26173	0.01045	19.06227	-36.83805	-4.77664	0.43972	41.75198	216.54	1.36
82/ 2/24	2445024.5	-0.32881	-0.30239	0.00487	23.07919	-33.51826	-4.86711	0.44674	40.98551	222.60	0.62
82/ 2/26	2445026.5	-0.30006	-0.33905	-0.00077	26.62418	-29.90487	-4.89044	0.45276	40.33689	228.49	-0.10
82/ 2/28	2445028.5	-0.26748	-0.37138	-0.00640	29.70886	-26.04569	-4.85164	0.45773	39.80619	234.24	-0.80
82/ 3/ 2	2445030.5	-0.23160	-0.39914	-0.01196	32.34357	-21.97982	-4.75488	0.46162	39.39325	239.88	-1.48
82/ 3/ 4	2445032.5	-0.19293	-0.42209	-0.01737	34.53630	-17.73961	-4.60356	0.46442	39.09786	245.44	-2.14
82/ 3/ 6	2445034.5	-0.15198	-0.44006	-0.02257	36.29195	-13.35222	-4.40038	0.46612	38.91980	250.95	-2.78
82/ 3/ 8	2445036.5	-0.10926	-0.45289	-0.02751	37.61182	-8.84121	-4.14739	0.46670	38.85893	256.44	-3.38
82/ 3/10	2445038.5	-0.06526	-0.46045	-0.03213	38.49321	-4.22780	-3.84610	0.46616	38.91521	261.93	-3.95
82/ 3/12	2445040.5	-0.02050	-0.46263	-0.03638	38.92908	0.46781	-3.49755	0.46451	39.08868	267.46	-4.49
82/ 3/14	2445042.5	0.02450	-0.45935	-0.04020	38.90778	5.22517	-3.10236	0.46175	39.37947	273.05	-4.99
82/ 3/16	2445044.5	0.06920	-0.45054	-0.04353	38.41281	10.02221	-2.66087	0.45790	39.78779	278.73	-5.45
82/ 3/18	2445046.5	0.11305	-0.43619	-0.04632	37.42255	14.83368	-2.17320	0.45297	40.31387	284.53	-5.87
82/ 3/20	2445048.5	0.15545	-0.41628	-0.04853	35.91025	19.62938	-1.63941	0.44700	40.95786	290.48	-6.23
82/ 3/22	2445050.5	0.19579	-0.39086	-0.05009	33.84403	24.37199	-1.05969	0.44002	41.71973	296.61	-6.54
82/ 3/24	2445052.5	0.23341	-0.36001	-0.05096	31.18730	29.01444	-0.43460	0.43207	42.59899	302.96	-6.77
82/ 3/26	2445054.5	0.26760	-0.32389	-0.05108	27.89969	33.49664	0.23454	0.42323	43.59441	309.56	-6.93
82/ 3/28	2445056.5	0.29760	-0.28272	-0.05040	23.93898	37.74167	0.94522	0.41357	44.70349	316.47	-7.00
82/ 3/30	2445058.5	0.32263	-0.23683	-0.04888	19.26433	41.65116	1.69301	0.40319	45.92167	323.72	-6.96
82/ 4/ 1	2445060.5	0.34182	-0.18668	-0.04648	13.84180	45.10043	2.47070	0.39224	47.24139	331.36	-6.81
82/ 4/ 3	2445062.5	0.35431	-0.13288	-0.04317	7.65288	47.93367	3.26708	0.38086	48.65056	339.44	-6.51
82/ 4/ 5	2445064.5	0.35921	-0.07625	-0.03893	0.70734	49.96067	4.06555	0.36927	50.13081	348.02	-6.05
82/ 4/ 7	2445066.5	0.35567	-0.01786	-0.03378	-6.93905	50.95741	4.84252	0.35772	51.65518	357.13	-5.42
82/ 4/ 9	2445068.5	0.34295	0.04098	-0.02777	-15.16177	50.67418	5.56604	0.34651	53.18583	6.81	-4.60
82/ 4/11	2445070.5	0.32050	0.09862	-0.02096	-23.74254	48.85628	6.19522	0.33599	54.67198	17.10	-3.58

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82/ 4/13	2445072.5	0.28809	0.15317	-0.01351	-32.34861	45.28213	6.68153	0.32656	56.04951	28.00	-2.37
82/ 4/15	2445074.5	0.24594	0.20250	-0.00560	-40.52861	39.81961	6.97304	0.31862	57.24328	39.47	-1.01
82/ 4/17	2445076.5	0.19484	0.24443	0.00251	-47.74011	32.49261	7.02245	0.31260	58.17389	51.44	0.46
82/ 4/19	2445078.5	0.13624	0.27693	0.01052	-53.41951	23.53574	6.79796	0.30881	58.76893	63.80	1.95
82/ 4/21	2445080.5	0.07221	0.29835	0.01810	-57.08682	13.40679	6.29382	0.30750	58.97677	76.40	3.38
82/ 4/23	2445082.5	0.00525	0.30769	0.02496	-58.45317	2.73430	5.53573	0.30875	58.77835	89.02	4.64
82/ 4/25	2445084.5	-0.06193	0.30473	0.03081	-57.48585	-7.79204	4.57774	0.31248	58.19188	101.49	5.66
82/ 4/27	2445086.5	-0.12674	0.28999	0.03548	-54.40156	-17.54838	3.49111	0.31846	57.26834	113.61	6.40
82/ 4/29	2445088.5	-0.18694	0.26466	0.03886	-49.59506	-26.07206	2.34992	0.32635	56.07980	125.24	6.84
82/ 5/ 1	2445090.5	-0.24083	0.23034	0.04092	-43.54008	-33.09812	1.21912	0.33575	54.70567	136.28	7.00
82/ 5/ 3	2445092.5	-0.28723	0.18881	0.04170	-36.70133	-38.54210	0.14790	0.34625	53.22126	146.68	6.92
82/ 5/ 5	2445094.5	-0.32547	0.14189	0.04129	-29.47883	-42.45316	-0.83146	0.35745	51.69104	156.44	6.63
82/ 5/ 7	2445096.5	-0.35530	0.09128	0.03982	-22.18541	-44.96160	-1.70133	0.36900	50.16605	165.59	6.20
82/ 5/ 9	2445098.5	-0.37678	0.03850	0.03741	-15.04755	-46.23549	-2.45501	0.38059	48.68446	174.17	5.64
82/ 5/11	2445100.5	-0.39018	-0.01513	0.03419	-8.21821	-46.45071	-3.09316	0.39197	47.27341	182.22	5.00
82/ 5/13	2445102.5	-0.39592	-0.06847	0.03030	-1.79348	-45.77348	-3.62078	0.40294	45.95147	189.81	4.31
82/ 5/15	2445104.5	-0.39451	-0.12058	0.02587	4.17176	-44.35178	-4.04513	0.41333	44.73083	197.00	3.59
82/ 5/17	2445106.5	-0.38647	-0.17069	0.02100	9.65082	-42.31263	-4.37427	0.42301	43.61916	203.83	2.85
82/ 5/19	2445108.5	-0.37240	-0.21814	0.01580	14.63530	-39.76245	-4.61624	0.43187	42.62105	210.36	2.10
82/ 5/21	2445110.5	-0.35285	-0.26239	0.01036	19.12792	-36.78908	-4.77856	0.43984	41.73905	216.63	1.35
82/ 5/23	2445112.5	-0.32840	-0.30299	0.00478	23.13744	-33.46440	-4.86794	0.44685	40.97443	222.70	0.61
82/ 5/25	2445114.5	-0.29958	-0.33958	-0.00086	26.67521	-29.84692	-4.89028	0.45284	40.32766	228.58	-0.11
82/ 5/27	2445116.5	-0.26695	-0.37185	-0.00649	29.75285	-25.98431	-4.85055	0.45780	39.79880	234.33	-0.81
82/ 5/29	2445118.5	-0.23102	-0.39953	-0.01204	32.38068	-21.91557	-4.75293	0.46167	39.38770	239.96	-1.49
82/ 5/31	2445120.5	-0.19232	-0.42241	-0.01745	34.56663	-17.67292	-4.60079	0.46446	39.09414	245.52	-2.15
82/ 6/ 2	2445122.5	-0.15134	-0.44030	-0.02265	36.31555	-13.28349	-4.39682	0.46614	38.91789	251.03	-2.79
82/ 6/ 4	2445124.5	-0.10859	-0.45305	-0.02759	37.62868	-8.77077	-4.14307	0.46670	38.85883	256.52	-3.39
82/ 6/ 6	2445126.5	-0.06458	-0.46053	-0.03220	38.50325	-4.15597	-3.84105	0.46614	38.91691	262.02	-3.96
82/ 6/ 8	2445128.5	-0.01981	-0.46262	-0.03644	38.93217	0.54072	-3.49178	0.46448	39.09218	267.55	-4.50
82/ 6/10	2445130.5	0.02519	-0.45925	-0.04025	38.90370	5.29883	-3.09588	0.46170	39.38477	273.14	-5.00
82/ 6/12	2445132.5	0.06988	-0.45036	-0.04358	38.40127	10.09626	-2.65368	0.45783	39.79490	278.82	-5.46
82/ 6/14	2445134.5	0.11371	-0.43592	-0.04636	37.40321	14.90771	-2.16529	0.45289	40.32280	284.62	-5.88
82/ 6/16	2445136.5	0.15609	-0.41593	-0.04856	35.88265	19.70288	-1.63079	0.44690	40.96862	290.57	-6.24
82/ 6/18	2445138.5	0.19639	-0.39043	-0.05011	33.80765	24.44432	-1.05037	0.43990	41.73230	296.70	-6.54
82/ 6/20	2445140.5	0.23396	-0.35950	-0.05097	31.14153	29.08478	-0.42460	0.43194	42.61338	303.06	-6.78
82/ 6/22	2445142.5	0.26809	-0.32330	-0.05108	27.84391	33.56396	0.24520	0.42309	43.61058	309.67	-6.93
82/ 6/24	2445144.5	0.29803	-0.28205	-0.05039	23.87252	37.80461	0.95648	0.41342	44.72137	316.58	-7.00
82/ 6/26	2445146.5	0.32297	-0.23609	-0.04885	19.18661	41.70803	1.70480	0.40303	45.94118	323.83	-6.96
82/ 6/28	2445148.5	0.34206	-0.18588	-0.04644	13.75237	45.14909	2.48287	0.39206	47.26238	331.48	-6.80
82/ 6/30	2445150.5	0.35444	-0.13203	-0.04311	7.55166	47.97146	3.27942	0.38068	48.67282	339.57	-6.50
82/ 7/ 2	2445152.5	0.35922	-0.07536	-0.03886	0.59477	49.98442	4.07776	0.36909	50.15400	348.15	-6.04
82/ 7/ 4	2445154.5	0.35555	-0.01695	-0.03370	-7.06163	50.96344	4.85417	0.35754	51.67883	357.27	-5.41
82/ 7/ 6	2445156.5	0.34268	0.04188	-0.02767	-15.29180	50.65854	5.57656	0.34634	53.20926	6.97	-4.58
82/ 7/ 8	2445158.5	0.32008	0.09949	-0.02085	-23.87582	48.81519	6.20393	0.33583	54.69430	17.27	-3.56
82/ 7/10	2445160.5	0.28752	0.15397	-0.01339	-32.47909	45.21268	6.68763	0.32642	56.06962	28.17	-2.35

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82/ 7/12	2445162.5	0.24521	0.20321	-0.00548	-40.64851	39.72079	6.97575	0.31852	57.25996	39.65	-0.99
82/ 7/14	2445164.5	0.19399	0.24501	0.00263	-47.84066	32.36629	7.02112	0.31252	58.18592	51.63	0.48
82/ 7/16	2445166.5	0.13529	0.27735	0.01064	-53.49237	23.38732	6.79229	0.30877	58.77530	64.00	1.97
82/ 7/18	2445168.5	0.07119	0.29859	0.01822	-57.12584	13.24485	6.28395	0.30750	58.97690	76.59	3.40
82/ 7/20	2445170.5	0.00421	0.30774	0.02506	-58.45579	2.56935	5.52230	0.30879	58.77224	89.22	4.65
82/ 7/22	2445172.5	-0.06295	0.30459	0.03090	-57.45362	-7.94956	4.56176	0.31255	58.18010	101.68	5.67
82/ 7/24	2445174.5	-0.12770	0.28968	0.03555	-54.33945	-17.68995	3.47372	0.31857	57.25187	113.79	6.41
82/ 7/26	2445176.5	-0.18783	0.26420	0.03890	-49.51004	-26.19207	2.33224	0.32649	56.05986	125.41	6.84
82/ 7/28	2445178.5	-0.24160	0.22975	0.04094	-43.43956	-33.19399	1.20203	0.33591	54.68346	136.44	7.00
82/ 7/30	2445180.5	-0.28788	0.18813	0.04170	-36.59206	-38.61372	0.13202	0.34642	53.19789	146.84	6.91
82/ 8/ 1	2445182.5	-0.32599	0.14114	0.04128	-29.36633	-42.50203	-0.84575	0.35762	51.66739	156.59	6.63
82/ 8/ 3	2445184.5	-0.35570	0.09048	0.03979	-22.07380	-44.99013	-1.71385	0.36917	50.14281	165.73	6.19
82/ 8/ 5	2445186.5	-0.37705	0.03767	0.03736	-14.93969	-46.24637	-2.46573	0.38077	48.66211	174.29	5.63
82/ 8/ 7	2445188.5	-0.39033	-0.01595	0.03414	-8.11599	-46.44661	-3.10212	0.39214	47.25230	182.34	4.99
82/ 8/ 9	2445190.5	-0.39596	-0.06928	0.03024	-1.69801	-45.75683	-3.62809	0.40311	45.93184	189.92	4.30
82/ 8/11	2445192.5	-0.39443	-0.12137	0.02580	4.25987	-44.32471	-4.05090	0.41349	44.71282	197.10	3.58
82/ 8/13	2445194.5	-0.38630	-0.17144	0.02092	9.73133	-42.27694	-4.37864	0.42315	43.60288	203.93	2.83
82/ 8/15	2445196.5	-0.37214	-0.21884	0.01571	14.70818	-39.71963	-4.61933	0.43200	42.60654	210.46	2.08
82/ 8/17	2445198.5	-0.35251	-0.26304	0.01028	19.19327	-36.74035	-4.78046	0.43996	41.72635	216.73	1.34
82/ 8/19	2445200.5	-0.32799	-0.30359	0.00470	23.19543	-33.41075	-4.86877	0.44695	40.96353	222.79	0.60
82/ 8/21	2445202.5	-0.29911	-0.34011	-0.00094	26.72602	-29.78916	-4.89011	0.45293	40.31857	228.67	-0.12
82/ 8/23	2445204.5	-0.26642	-0.37231	-0.00658	29.79666	-25.92310	-4.84946	0.45786	39.79152	234.41	-0.82
82/ 8/25	2445206.5	-0.23045	-0.39992	-0.01213	32.41762	-21.85145	-4.75097	0.46172	39.38223	240.05	-1.50
82/ 8/27	2445208.5	-0.19170	-0.42272	-0.01753	34.59681	-17.60636	-4.59801	0.46449	39.09047	245.61	-2.16
82/ 8/29	2445210.5	-0.15069	-0.44054	-0.02273	36.33902	-13.21487	-4.39326	0.46615	38.91604	251.12	-2.79
82/ 8/31	2445212.5	-0.10792	-0.45321	-0.02766	37.64544	-8.70045	-4.13876	0.46670	38.85880	256.61	-3.40
82/ 9/ 2	2445214.5	-0.06389	-0.46060	-0.03227	38.51323	-4.08426	-3.83600	0.46613	38.91869	262.10	-3.97
82/ 9/ 4	2445216.5	-0.01912	-0.46261	-0.03650	38.93521	0.61352	-3.48601	0.46444	39.09577	267.63	-4.51
82/ 9/ 6	2445218.5	0.02588	-0.45916	-0.04031	38.89961	5.37240	-3.08940	0.46165	39.39018	273.23	-5.01
82/ 9/ 8	2445220.5	0.07056	-0.45018	-0.04362	38.38974	10.17025	-2.64648	0.45776	39.80213	278.91	-5.47
82/ 9/10	2445222.5	0.11438	-0.43566	-0.04640	37.38385	14.98169	-2.15739	0.45280	40.33185	284.71	-5.88
82/ 9/12	2445224.5	0.15673	-0.41558	-0.04859	35.85503	19.77634	-1.62219	0.44680	40.97948	290.66	-6.24
82/ 9/14	2445226.5	0.19699	-0.38999	-0.05013	33.77122	24.51661	-1.04106	0.43979	41.74498	296.80	-6.55
82/ 9/16	2445228.5	0.23452	-0.35898	-0.05098	31.09571	29.15507	-0.41460	0.43181	42.62785	303.16	-6.78
82/ 9/18	2445230.5	0.26859	-0.32270	-0.05107	27.78806	33.63120	0.25586	0.42295	43.62681	309.77	-6.94
82/ 9/20	2445232.5	0.29845	-0.28138	-0.05037	23.80600	37.86746	0.96775	0.41326	44.73932	316.69	-7.00
82/ 9/22	2445234.5	0.32331	-0.23535	-0.04882	19.10882	41.76478	1.71658	0.40287	45.96075	323.95	-6.96
82/ 9/24	2445236.5	0.34231	-0.18507	-0.04639	13.66290	45.19759	2.49503	0.39189	47.28342	331.60	-6.80
82/ 9/26	2445238.5	0.35458	-0.13117	-0.04305	7.45042	48.00905	3.29175	0.38050	48.69510	339.70	-6.50
82/ 9/28	2445240.5	0.35923	-0.07448	-0.03879	0.48222	50.00788	4.08994	0.36891	50.17717	348.29	-6.04
82/ 9/30	2445242.5	0.35542	-0.01605	-0.03361	-7.18414	50.96910	4.86577	0.35737	51.70238	357.41	-5.40
82/10/ 2	2445244.5	0.34241	0.04277	-0.02757	-15.42165	50.64243	5.58703	0.34617	53.23249	7.12	-4.57
82/10/ 4	2445246.5	0.31966	0.10035	-0.02074	-24.00877	48.77356	6.21257	0.33568	54.71633	17.43	-3.54
82/10/ 6	2445248.5	0.28694	0.15477	-0.01327	-32.60904	45.14269	6.69365	0.32629	56.08936	28.34	-2.33
82/10/ 8	2445250.5	0.24449	0.20391	-0.00535	-40.76766	39.62152	6.97835	0.31841	57.27621	39.83	-0.96

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82/10/10	2445252.5	0.19314	0.24558	0.00276	-47.94030	32.23974	7.01969	0.31244	58.19750	51.82	0.51
82/10/12	2445254.5	0.13434	0.27776	0.01076	-53.56426	23.23895	6.78653	0.30873	58.78126	64.19	2.00
82/10/14	2445256.5	0.07018	0.29882	0.01833	-57.16393	13.08329	6.27402	0.30750	58.97670	76.78	3.42
82/10/16	2445258.5	0.00317	0.30779	0.02515	-58.45766	2.40506	5.50886	0.30883	58.76589	89.41	4.67
82/10/18	2445260.5	-0.06397	0.30444	0.03098	-57.42090	-8.10625	4.54579	0.31263	58.16816	101.87	5.69
82/10/20	2445262.5	-0.12867	0.28936	0.03561	-54.27713	-17.83060	3.45639	0.31868	57.23533	113.97	6.42
82/10/22	2445264.5	-0.18870	0.26373	0.03894	-49.42506	-26.31118	2.31463	0.32662	56.03991	125.58	6.85
82/10/24	2445266.5	-0.24237	0.22916	0.04096	-43.33929	-33.28905	1.18502	0.33606	54.66131	136.60	7.00
82/10/26	2445268.5	-0.28853	0.18744	0.04170	-36.48321	-38.68464	0.11623	0.34659	53.17461	146.99	6.91
82/10/28	2445270.5	-0.32651	0.14038	0.04126	-29.25433	-42.55036	-0.85995	0.35780	51.64387	156.73	6.62
82/10/30	2445272.5	-0.35609	0.08968	0.03976	-21.96273	-45.01827	-1.72629	0.36935	50.11972	165.86	6.18
82/11/ 1	2445274.5	-0.37731	0.03686	0.03732	-14.83240	-46.25702	-2.47638	0.38094	48.63995	174.42	5.62
82/11/ 3	2445276.5	-0.39047	-0.01677	0.03408	-8.01431	-46.44242	-3.11103	0.39232	47.23141	182.46	4.98
82/11/ 5	2445278.5	-0.39599	-0.07009	0.03018	-1.60305	-45.74021	-3.63536	0.40327	45.91245	190.04	4.29
82/11/ 7	2445280.5	-0.39435	-0.12216	0.02572	4.34753	-44.29777	-4.05665	0.41364	44.69507	197.21	3.57
82/11/ 9	2445282.5	-0.38613	-0.17219	0.02084	9.81143	-42.24143	-4.38298	0.42330	43.58685	204.03	2.82
82/11/11	2445284.5	-0.37188	-0.21955	0.01563	14.78070	-39.67703	-4.62239	0.43213	42.59228	210.56	2.07
82/11/13	2445286.5	-0.35217	-0.26369	0.01019	19.25829	-36.69188	-4.78236	0.44007	41.71387	216.82	1.33
82/11/15	2445288.5	-0.32757	-0.30418	0.00461	23.25311	-33.35740	-4.86960	0.44705	40.95285	222.88	0.59
82/11/17	2445290.5	-0.29864	-0.34064	-0.00103	26.77655	-29.73175	-4.88995	0.45301	40.30971	228.76	-0.13
82/11/19	2445292.5	-0.26589	-0.37277	-0.00666	29.84022	-25.86230	-4.84839	0.45793	39.78447	234.50	-0.83
82/11/21	2445294.5	-0.22987	-0.40031	-0.01221	32.45436	-21.78781	-4.74903	0.46178	39.37699	240.13	-1.52
82/11/23	2445296.5	-0.19109	-0.42304	-0.01761	34.62682	-17.54032	-4.59527	0.46453	39.08703	245.69	-2.17
82/11/25	2445298.5	-0.15005	-0.44077	-0.02281	36.36234	-13.14683	-4.38974	0.46617	38.91437	251.20	-2.80
82/11/27	2445300.5	-0.10725	-0.45336	-0.02773	37.66204	-8.63074	-4.13449	0.46670	38.85888	256.69	-3.41
82/11/29	2445302.5	-0.06321	-0.46067	-0.03234	38.52302	-4.01320	-3.83100	0.46611	38.92050	262.19	-3.98
82/12/ 1	2445304.5	-0.01843	-0.46260	-0.03657	38.93806	0.68560	-3.48029	0.46441	39.09930	267.72	-4.52
82/12/ 3	2445306.5	0.02657	-0.45907	-0.04036	38.89530	5.44517	-3.08297	0.46160	39.39542	273.31	-5.02
82/12/ 5	2445308.5	0.07124	-0.45001	-0.04367	38.37800	10.24332	-2.63935	0.45770	39.80908	279.00	-5.48
82/12/ 7	2445310.5	0.11504	-0.43540	-0.04644	37.36433	15.05463	-2.14956	0.45273	40.34050	284.80	-5.89
82/12/ 9	2445312.5	0.15736	-0.41523	-0.04862	35.82730	19.84862	-1.61366	0.44671	40.98984	290.76	-6.25
82/12/11	2445314.5	0.19759	-0.38956	-0.05015	33.73479	24.58759	-1.03185	0.43968	41.75704	296.89	-6.55
82/12/13	2445316.5	0.23507	-0.35847	-0.05098	31.05001	29.22393	-0.40473	0.43169	42.64159	303.25	-6.78
82/12/15	2445318.5	0.26908	-0.32211	-0.05107	27.73249	33.69689	0.26636	0.42281	43.64221	309.87	-6.94
82/12/17	2445320.5	0.29887	-0.28072	-0.05035	23.73997	37.92866	0.97883	0.41311	44.75631	316.79	-7.00
82/12/19	2445322.5	0.32365	-0.23462	-0.04879	19.03181	41.81981	1.72815	0.40271	45.97926	324.06	-6.96
82/12/21	2445324.5	0.34255	-0.18429	-0.04635	13.57455	45.24433	2.50694	0.39173	47.30331	331.72	-6.80
82/12/23	2445326.5	0.35471	-0.13034	-0.04299	7.35069	48.04492	3.30379	0.38034	48.71614	339.82	-6.49
82/12/25	2445328.5	0.35924	-0.07361	-0.03872	0.37164	50.02979	4.10181	0.36874	50.19903	348.42	-6.03
82/12/27	2445330.5	0.35530	-0.01516	-0.03353	-7.30421	50.97350	4.87705	0.35720	51.72461	357.56	-5.39
82/12/29	2445332.5	0.34215	0.04365	-0.02747	-15.54863	50.62557	5.59718	0.34601	53.25445	7.27	-4.55
82/12/31	2445334.5	0.31924	0.10120	-0.02063	-24.13852	48.73185	6.22090	0.33553	54.73720	17.59	-3.53
83/ 1/ 2	2445336.5	0.28638	0.15555	-0.01316	-32.73564	45.07349	6.69942	0.32616	56.10814	28.51	-2.31
83/ 1/ 4	2445338.5	0.24379	0.20459	-0.00523	-40.88358	39.52399	6.98080	0.31831	57.29175	40.00	-0.94
83/ 1/ 6	2445340.5	0.19231	0.24614	0.00288	-48.03713	32.11584	7.01823	0.31237	58.20866	52.00	0.53

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83/ 1/ 8	2445342.5	0.13342	0.27816	0.01087	-53.63403	23.09398	6.78086	0.30869	58.78708	64.38	2.02
83/ 1/10	2445344.5	0.06919	0.29905	0.01843	-57.20082	12.92559	6.26430	0.30750	58.97666	76.97	3.44
83/ 1/12	2445346.5	0.00217	0.30782	0.02525	-58.45935	2.24472	5.49572	0.30887	58.75999	89.60	4.69
83/ 1/14	2445348.5	-0.06496	0.30430	0.03105	-57.38897	-8.25925	4.53021	0.31270	58.15696	102.05	5.70
83/ 1/16	2445350.5	-0.12960	0.28905	0.03567	-54.21641	-17.96812	3.43947	0.31878	57.21977	114.15	6.42
83/ 1/18	2445352.5	-0.18955	0.26328	0.03898	-49.34224	-26.42786	2.29742	0.32675	56.02113	125.75	6.85
83/ 1/20	2445354.5	-0.24312	0.22858	0.04098	-43.24148	-33.38243	1.16838	0.33621	54.64044	136.77	7.00
83/ 1/22	2445356.5	-0.28915	0.18677	0.04170	-36.37686	-38.75459	0.10076	0.34674	53.15265	147.14	6.91
83/ 1/24	2445358.5	-0.32701	0.13964	0.04125	-29.14473	-42.59829	-0.87390	0.35797	51.62164	156.88	6.62
83/ 1/26	2445360.5	-0.35646	0.08890	0.03973	-21.85385	-45.04644	-1.73854	0.36952	50.09785	166.00	6.17
83/ 1/28	2445362.5	-0.37756	0.03605	0.03728	-14.72701	-46.26800	-2.48689	0.38111	48.61890	174.55	5.61
83/ 1/30	2445364.5	-0.39061	-0.01759	0.03403	-7.91426	-46.43876	-3.11984	0.39248	47.21152	182.58	4.97
83/ 2/ 1	2445366.5	-0.39601	-0.07089	0.03011	-1.50945	-45.72424	-3.64256	0.40343	45.89393	190.15	4.28
83/ 2/ 3	2445368.5	-0.39427	-0.12293	0.02565	4.43405	-44.27152	-4.06235	0.41379	44.67808	197.32	3.55
83/ 2/ 5	2445370.5	-0.38595	-0.17293	0.02076	9.89060	-42.20663	-4.38731	0.42343	43.57146	204.14	2.81
83/ 2/ 7	2445372.5	-0.37161	-0.22024	0.01555	14.85246	-39.63512	-4.62545	0.43226	42.57855	210.65	2.06
83/ 2/ 9	2445374.5	-0.35183	-0.26434	0.01011	19.32271	-36.64404	-4.78426	0.44018	41.70182	216.92	1.32
83/ 2/11	2445376.5	-0.32716	-0.30476	0.00452	23.31031	-33.30460	-4.87043	0.44714	40.94250	222.97	0.58
83/ 2/13	2445378.5	-0.29816	-0.34116	-0.00112	26.82669	-29.67480	-4.88979	0.45309	40.30105	228.85	-0.14
83/ 2/15	2445380.5	-0.26536	-0.37323	-0.00675	29.88344	-25.80184	-4.84730	0.45800	39.77752	234.59	-0.84
83/ 2/17	2445382.5	-0.22930	-0.40069	-0.01229	32.49077	-21.72439	-4.74709	0.46182	39.37174	240.22	-1.53
83/ 2/19	2445384.5	-0.19047	-0.42335	-0.01769	34.65652	-17.47440	-4.59250	0.46456	39.08350	245.78	-2.18
83/ 2/21	2445386.5	-0.14940	-0.44100	-0.02288	36.38535	-13.07880	-4.38619	0.46619	38.91256	251.28	-2.81
83/ 2/23	2445388.5	-0.10658	-0.45351	-0.02781	37.67836	-8.56095	-4.13018	0.46670	38.85881	256.77	-3.42
83/ 2/25	2445390.5	-0.06253	-0.46074	-0.03241	38.53257	-3.94199	-3.82596	0.46609	38.92218	262.27	-3.99
83/ 2/27	2445392.5	-0.01774	-0.46259	-0.03663	38.94071	0.75792	-3.47452	0.46438	39.10275	267.80	-4.52
83/ 3/ 1	2445394.5	0.02726	-0.45897	-0.04042	38.89083	5.51827	-3.07649	0.46155	39.40066	273.40	-5.02
83/ 3/ 3	2445396.5	0.07192	-0.44983	-0.04372	38.36611	10.31683	-2.63217	0.45763	39.81612	279.08	-5.48
83/ 3/ 5	2445398.5	0.11570	-0.43513	-0.04648	37.34466	15.12812	-2.14167	0.45264	40.34935	284.89	-5.89
83/ 3/ 7	2445400.5	0.15799	-0.41488	-0.04865	35.79938	19.92157	-1.60507	0.44661	41.00050	290.85	-6.25
83/ 3/ 9	2445402.5	0.19819	-0.38913	-0.05017	33.69809	24.65935	-1.02256	0.43956	41.76949	296.99	-6.55
83/ 3/11	2445404.5	0.23561	-0.35796	-0.05099	31.00394	29.29367	-0.39475	0.43156	42.65583	303.35	-6.79
83/ 3/13	2445406.5	0.26957	-0.32152	-0.05106	27.67643	33.76357	0.27699	0.42267	43.65822	309.98	-6.94
83/ 3/15	2445408.5	0.29929	-0.28005	-0.05034	23.67329	37.99093	0.99006	0.41296	44.77405	316.90	-7.00
83/ 3/17	2445410.5	0.32398	-0.23388	-0.04876	18.95392	41.87597	1.73989	0.40255	45.99864	324.17	-6.96
83/ 3/19	2445412.5	0.34279	-0.18349	-0.04630	13.48505	45.29224	2.51905	0.39156	47.32419	331.84	-6.79
83/ 3/21	2445414.5	0.35484	-0.12949	-0.04294	7.24949	48.08190	3.31606	0.38016	48.73829	339.95	-6.48
83/ 3/23	2445416.5	0.35925	-0.07273	-0.03864	0.25922	50.05264	4.11392	0.36857	50.22209	348.56	-6.02
83/ 3/25	2445418.5	0.35517	-0.01426	-0.03344	-7.42649	50.97855	4.88859	0.35703	51.74808	357.70	-5.37
83/ 3/27	2445420.5	0.34187	0.04454	-0.02737	-15.67816	50.60888	5.60757	0.34585	53.27765	7.42	-4.54
83/ 3/29	2445422.5	0.31882	0.10205	-0.02052	-24.27102	48.68968	6.22945	0.33538	54.75924	17.75	-3.51
83/ 3/31	2445424.5	0.28580	0.15634	-0.01304	-32.86503	45.00303	6.70534	0.32603	56.12793	28.68	-2.29
83/ 4/ 2	2445426.5	0.24307	0.20529	-0.00511	-41.00208	39.42437	6.98332	0.31820	57.30810	40.18	-0.92
83/ 4/ 4	2445428.5	0.19146	0.24670	0.00300	-48.13604	31.98908	7.01671	0.31230	58.22039	52.19	0.55
83/ 4/ 6	2445430.5	0.13247	0.27857	0.01099	-53.70514	22.94557	6.77502	0.30866	58.79322	64.57	2.04

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83/ 4/ 8	2445432.5	0.06818	0.29927	0.01855	-57.23815	12.76417	6.25432	0.30750	58.97666	77.17	3.46
83/ 4/10	2445434.5	0.00113	0.30786	0.02535	-58.46051	2.08072	5.48223	0.30890	58.75385	89.79	4.71
83/ 4/12	2445436.5	-0.06597	0.30415	0.03113	-57.35565	-8.41551	4.51423	0.31278	58.14524	102.24	5.71
83/ 4/14	2445438.5	-0.13056	0.28873	0.03573	-54.15362	-18.10827	3.42214	0.31889	57.20345	114.33	6.43
83/ 4/16	2445440.5	-0.19042	0.26280	0.03902	-49.25691	-26.54644	2.27983	0.32688	56.00138	125.93	6.86
83/ 4/18	2445442.5	-0.24388	0.22799	0.04100	-43.14097	-33.47695	1.15140	0.33636	54.61845	136.93	7.00
83/ 4/20	2445444.5	-0.28980	0.18608	0.04171	-36.26785	-38.82499	0.08500	0.34691	53.12950	147.30	6.90
83/ 4/22	2445446.5	-0.32753	0.13888	0.04123	-29.03264	-42.64612	-0.88807	0.35814	51.59820	157.02	6.61
83/ 4/24	2445448.5	-0.35685	0.08809	0.03970	-21.74275	-45.07410	-1.75095	0.36970	50.07482	166.13	6.16
83/ 4/26	2445450.5	-0.37782	0.03523	0.03723	-14.61974	-46.27819	-2.49750	0.38129	48.59676	174.67	5.60
83/ 4/28	2445452.5	-0.39074	-0.01841	0.03397	-7.81263	-46.43413	-3.12871	0.39265	47.19061	182.70	4.96
83/ 4/30	2445454.5	-0.39603	-0.07171	0.03005	-1.41458	-45.70719	-3.64978	0.40359	45.87449	190.26	4.27
83/ 5/ 2	2445456.5	-0.39419	-0.12372	0.02558	4.52160	-44.24414	-4.06805	0.41394	44.66025	197.43	3.54
83/ 5/ 4	2445458.5	-0.38577	-0.17368	0.02068	9.97058	-42.17069	-4.39161	0.42357	43.55532	204.24	2.80
83/ 5/ 6	2445460.5	-0.37135	-0.22095	0.01547	14.92483	-39.59210	-4.62847	0.43238	42.56416	210.75	2.05
83/ 5/ 8	2445462.5	-0.35148	-0.26499	0.01002	19.38758	-36.59516	-4.78611	0.44029	41.68921	217.01	1.30
83/ 5/10	2445464.5	-0.32674	-0.30536	0.00444	23.36783	-33.25085	-4.87120	0.44724	40.93169	223.06	0.57
83/ 5/12	2445466.5	-0.29768	-0.34169	-0.00121	26.87704	-29.61697	-4.88958	0.45318	40.29204	228.94	-0.15
83/ 5/14	2445468.5	-0.26483	-0.37368	-0.00683	29.92680	-25.74061	-4.84617	0.45806	39.77031	234.67	-0.85
83/ 5/16	2445470.5	-0.22872	-0.40108	-0.01238	32.52728	-21.66029	-4.74509	0.46187	39.36633	240.31	-1.54
83/ 5/18	2445472.5	-0.18986	-0.42366	-0.01777	34.68627	-17.40788	-4.58969	0.46459	39.07988	245.86	-2.19
83/ 5/20	2445474.5	-0.14875	-0.44124	-0.02296	36.40841	-13.01025	-4.38260	0.46620	38.91075	251.37	-2.82
83/ 5/22	2445476.5	-0.10591	-0.45367	-0.02788	37.69471	-8.49071	-4.12584	0.46670	38.85879	256.86	-3.42
83/ 5/24	2445478.5	-0.06184	-0.46081	-0.03247	38.54214	-3.87036	-3.82088	0.46608	38.92397	262.36	-4.00
83/ 5/26	2445480.5	-0.01705	-0.46258	-0.03669	38.94334	0.83062	-3.46873	0.46434	39.10634	267.89	-4.53
83/ 5/28	2445482.5	0.02795	-0.45887	-0.04047	38.88630	5.59171	-3.06998	0.46150	39.40605	273.49	-5.03
83/ 5/30	2445484.5	0.07260	-0.44964	-0.04376	38.35414	10.39065	-2.62495	0.45756	39.82331	279.17	-5.49
83/ 6/ 1	2445486.5	0.11636	-0.43486	-0.04652	37.32486	15.20190	-2.13375	0.45256	40.35834	284.98	-5.90
83/ 6/ 3	2445488.5	0.15863	-0.41453	-0.04868	35.77130	19.99478	-1.59644	0.44651	41.01129	290.94	-6.26
83/ 6/ 5	2445490.5	0.19878	-0.38869	-0.05019	33.66122	24.73135	-1.01323	0.43945	41.78210	297.09	-6.56
83/ 6/ 7	2445492.5	0.23616	-0.35744	-0.05100	30.95768	29.36364	-0.38474	0.43143	42.67024	303.45	-6.79
83/ 6/ 9	2445494.5	0.27006	-0.32092	-0.05106	27.62013	33.83045	0.28766	0.42253	43.67440	310.08	-6.94
83/ 6/11	2445496.5	0.29971	-0.27938	-0.05032	23.60630	38.05337	1.00133	0.41281	44.79196	317.01	-7.00
83/ 6/13	2445498.5	0.32432	-0.23314	-0.04873	18.87568	41.93225	1.75168	0.40238	46.01819	324.29	-6.96
83/ 6/15	2445500.5	0.34303	-0.18269	-0.04626	13.39513	45.34019	2.53121	0.39139	47.34521	331.96	-6.79
83/ 6/17	2445502.5	0.35497	-0.12864	-0.04288	7.14781	48.11885	3.32837	0.37998	48.76057	340.08	-6.48
83/ 6/19	2445504.5	0.35925	-0.07184	-0.03857	0.14627	50.07538	4.12608	0.36839	50.24530	348.69	-6.01
83/ 6/21	2445506.5	0.35504	-0.01336	-0.03335	-7.54933	50.98339	4.90016	0.35685	51.77171	357.84	-5.36
83/ 6/23	2445508.5	0.34159	0.04544	-0.02727	-15.80824	50.59186	5.61799	0.34568	53.30102	7.58	-4.52
83/ 6/25	2445510.5	0.31839	0.10292	-0.02041	-24.40407	48.64706	6.23802	0.33523	54.78145	17.91	-3.49
83/ 6/27	2445512.5	0.28521	0.15714	-0.01292	-32.99488	44.93198	6.71126	0.32589	56.14790	28.85	-2.27
83/ 6/29	2445514.5	0.24234	0.20599	-0.00499	-41.12089	39.32403	6.98580	0.31809	57.32459	40.36	-0.90
83/ 7/ 1	2445516.5	0.19061	0.24727	0.00313	-48.23504	31.86150	7.01514	0.31222	58.23217	52.37	0.57
83/ 7/ 3	2445518.5	0.13151	0.27897	0.01111	-53.77608	22.79632	6.76910	0.30862	58.79932	64.76	2.06
83/ 7/ 5	2445520.5	0.06716	0.29950	0.01866	-57.27504	12.60198	6.24423	0.30750	58.97653	77.36	3.48

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83/ 7/ 7	2445522.5	0.00009	0.30789	0.02544	-58.46104	1.91613	5.46864	0.30894	58.74752	89.98	4.72
83/ 7/ 9	2445524.5	-0.06699	0.30400	0.03121	-57.32158	-8.57217	4.49814	0.31286	58.13328	102.43	5.73
83/ 7/11	2445526.5	-0.13152	0.28841	0.03579	-54.09005	-18.24860	3.40473	0.31899	57.18687	114.51	6.44
83/ 7/13	2445528.5	-0.19130	0.26233	0.03906	-49.17087	-26.66503	2.26218	0.32701	55.98138	126.10	6.86
83/ 7/15	2445530.5	-0.24465	0.22739	0.04102	-43.03984	-33.57138	1.13437	0.33651	54.59626	137.09	7.00
83/ 7/17	2445532.5	-0.29044	0.18539	0.04171	-36.15831	-38.89524	0.06921	0.34708	53.10619	147.45	6.90
83/ 7/19	2445534.5	-0.32805	0.13812	0.04122	-28.92012	-42.69377	-0.90226	0.35832	51.57465	157.17	6.61
83/ 7/21	2445536.5	-0.35723	0.08729	0.03966	-21.63128	-45.10156	-1.76337	0.36988	50.05169	166.27	6.16
83/ 7/23	2445538.5	-0.37808	0.03440	0.03719	-14.51214	-46.28817	-2.50812	0.38146	48.57455	174.80	5.59
83/ 7/25	2445540.5	-0.39088	-0.01924	0.03391	-7.71073	-46.42926	-3.13758	0.39282	47.16965	182.82	4.95
83/ 7/27	2445542.5	-0.39606	-0.07252	0.02998	-1.31947	-45.68988	-3.65700	0.40375	45.85499	190.38	4.26
83/ 7/29	2445544.5	-0.39411	-0.12451	0.02551	4.60934	-44.21650	-4.07375	0.41410	44.64236	197.53	3.53
83/ 7/31	2445546.5	-0.38559	-0.17443	0.02061	10.05072	-42.13450	-4.39590	0.42372	43.53915	204.34	2.79
83/ 8/ 2	2445548.5	-0.37108	-0.22165	0.01538	14.99735	-39.54883	-4.63149	0.43251	42.54975	210.85	2.04
83/ 8/ 4	2445550.5	-0.35114	-0.26564	0.00994	19.45259	-36.54602	-4.78795	0.44041	41.67660	217.11	1.29
83/ 8/ 6	2445552.5	-0.32633	-0.30595	0.00435	23.42550	-33.19683	-4.87197	0.44734	40.92089	223.15	0.56
83/ 8/ 8	2445554.5	-0.29720	-0.34222	-0.00129	26.92754	-29.55888	-4.88935	0.45326	40.28306	229.03	-0.16
83/ 8/10	2445556.5	-0.26430	-0.37414	-0.00692	29.97029	-25.67909	-4.84502	0.45813	39.76315	234.76	-0.87
83/ 8/12	2445558.5	-0.22814	-0.40146	-0.01246	32.56392	-21.59587	-4.74308	0.46193	39.36099	240.39	-1.55
83/ 8/14	2445560.5	-0.18924	-0.42397	-0.01786	34.71614	-17.34102	-4.58685	0.46463	39.07634	245.95	-2.20
83/ 8/16	2445562.5	-0.14811	-0.44147	-0.02304	36.43155	-12.94133	-4.37898	0.46622	38.90902	251.45	-2.83
83/ 8/18	2445564.5	-0.10524	-0.45382	-0.02795	37.71110	-8.42008	-4.12147	0.46670	38.85887	256.94	-3.43
83/ 8/20	2445566.5	-0.06116	-0.46088	-0.03254	38.55172	-3.79833	-3.81578	0.46606	38.92586	262.44	-4.00
83/ 8/22	2445568.5	-0.01635	-0.46256	-0.03675	38.94595	0.90373	-3.46290	0.46431	39.11005	267.98	-4.54
83/ 8/24	2445570.5	0.02864	-0.45877	-0.04052	38.88174	5.66558	-3.06344	0.46145	39.41158	273.57	-5.04
83/ 8/26	2445572.5	0.07329	-0.44946	-0.04381	38.34209	10.46493	-2.61769	0.45750	39.83068	279.26	-5.50
83/ 8/28	2445574.5	0.11703	-0.43459	-0.04655	37.30496	15.27615	-2.12577	0.45247	40.36756	285.07	-5.91
83/ 8/30	2445576.5	0.15927	-0.41417	-0.04870	35.74309	20.06850	-1.58775	0.44641	41.02236	291.03	-6.26
83/ 9/ 1	2445578.5	0.19938	-0.38825	-0.05020	33.62415	24.80387	-1.00384	0.43933	41.79501	297.18	-6.56
83/ 9/ 3	2445580.5	0.23672	-0.35691	-0.05101	30.91115	29.43413	-0.37466	0.43130	42.68498	303.55	-6.79
83/ 9/ 5	2445582.5	0.27055	-0.32032	-0.05105	27.56348	33.89784	0.29841	0.42238	43.69093	310.19	-6.94
83/ 9/ 7	2445584.5	0.30013	-0.27870	-0.05030	23.53888	38.11629	1.01269	0.41265	44.81022	317.12	-7.00
83/ 9/ 9	2445586.5	0.32465	-0.23239	-0.04870	18.79689	41.98894	1.76354	0.40222	46.03807	324.40	-6.95
83/ 9/11	2445588.5	0.34327	-0.18188	-0.04621	13.30456	45.38846	2.54344	0.39121	47.36657	332.08	-6.78
83/ 9/13	2445590.5	0.35509	-0.12778	-0.04282	7.04539	48.15598	3.34076	0.37981	48.78316	340.21	-6.47
83/ 9/15	2445592.5	0.35925	-0.07095	-0.03850	0.03251	50.09811	4.13831	0.36821	50.26875	348.83	-6.00
83/ 9/17	2445594.5	0.35490	-0.01245	-0.03327	-7.67299	50.98798	4.91178	0.35667	51.79551	357.99	-5.35
83/ 9/19	2445596.5	0.34131	0.04634	-0.02717	-15.93908	50.57434	5.62843	0.34551	53.32445	7.73	-4.51
83/ 9/21	2445598.5	0.31795	0.10379	-0.02030	-24.53771	48.60365	6.24657	0.33507	54.80359	18.08	-3.47
83/ 9/23	2445600.5	0.28462	0.15794	-0.01280	-33.12506	44.85992	6.71712	0.32576	56.16762	29.03	-2.25
83/ 9/25	2445602.5	0.24160	0.20669	-0.00486	-41.23967	39.22254	6.98819	0.31799	57.34067	40.55	-0.88
83/ 9/27	2445604.5	0.18975	0.24784	0.00325	-48.33361	31.73281	7.01343	0.31215	58.24343	52.56	0.60
83/ 9/29	2445606.5	0.13056	0.27938	0.01124	-53.84624	22.64617	6.76303	0.30858	58.80481	64.95	2.09
83/10/ 1	2445608.5	0.06614	0.29972	0.01877	-57.31091	12.43925	6.23400	0.30751	58.97574	77.56	3.50
83/10/ 3	2445610.5	-0.00095	0.30793	0.02554	-58.46045	1.75140	5.45493	0.30899	58.74052	90.18	4.74

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
83/10/ 5	2445612.5	-0.06801	0.30385	0.03129	-57.28646	-8.72855	4.48199	0.31294	58.12069	102.62	5.74
83/10/ 7	2445614.5	-0.13248	0.28808	0.03585	-54.02565	-18.38834	3.38729	0.31911	57.16971	114.70	6.45
83/10/ 9	2445616.5	-0.19217	0.26186	0.03910	-49.08424	-26.78282	2.24453	0.32715	55.96088	126.27	6.86
83/10/11	2445618.5	-0.24541	0.22679	0.04104	-42.93842	-33.66491	1.11739	0.33667	54.57364	137.26	7.00
83/10/13	2445620.5	-0.29108	0.18470	0.04171	-36.04876	-38.96460	0.05349	0.34725	53.08254	147.60	6.90
83/10/15	2445622.5	-0.32856	0.13737	0.04120	-28.80781	-42.74061	-0.91636	0.35849	51.55085	157.31	6.60
83/10/17	2445624.5	-0.35762	0.08649	0.03963	-21.52022	-45.12834	-1.77570	0.37006	50.02839	166.40	6.15
83/10/19	2445626.5	-0.37834	0.03358	0.03714	-14.40507	-46.29763	-2.51865	0.38164	48.55224	174.93	5.58
83/10/21	2445628.5	-0.39102	-0.02006	0.03386	-7.60943	-46.42405	-3.14637	0.39300	47.14865	182.94	4.94
83/10/23	2445630.5	-0.39608	-0.07333	0.02992	-1.22499	-45.67241	-3.66416	0.40392	45.83552	190.49	4.25
83/10/25	2445632.5	-0.39403	-0.12529	0.02543	4.69646	-44.18884	-4.07938	0.41425	44.62456	197.64	3.52
83/10/27	2445634.5	-0.38542	-0.17518	0.02053	10.13027	-42.09842	-4.40015	0.42386	43.52310	204.44	2.78
83/10/29	2445636.5	-0.37082	-0.22235	0.01530	15.06932	-39.50578	-4.63447	0.43264	42.53550	210.95	2.03
83/10/31	2445638.5	-0.35079	-0.26628	0.00985	19.51709	-36.49720	-4.78977	0.44052	41.66418	217.20	1.28
83/11/ 2	2445640.5	-0.32591	-0.30653	0.00426	23.48269	-33.14320	-4.87273	0.44744	40.91030	223.24	0.55
83/11/ 4	2445642.5	-0.29673	-0.34274	-0.00138	26.97763	-29.50124	-4.88913	0.45334	40.27430	229.12	-0.17
83/11/ 6	2445644.5	-0.26377	-0.37459	-0.00701	30.01345	-25.61808	-4.84389	0.45820	39.75621	234.85	-0.88
83/11/ 8	2445646.5	-0.22756	-0.40184	-0.01255	32.60028	-21.53203	-4.74109	0.46197	39.35587	240.48	-1.56
83/11/10	2445648.5	-0.18862	-0.42427	-0.01794	34.74582	-17.27478	-4.58406	0.46466	39.07305	246.03	-2.21
83/11/12	2445650.5	-0.14746	-0.44170	-0.02312	36.45458	-12.87306	-4.37541	0.46623	38.90753	251.54	-2.84
83/11/14	2445652.5	-0.10458	-0.45396	-0.02803	37.72745	-8.35012	-4.11715	0.46670	38.85918	257.03	-3.44
83/11/16	2445654.5	-0.06047	-0.46095	-0.03261	38.56130	-3.72700	-3.81073	0.46604	38.92796	262.53	-4.01
83/11/18	2445656.5	-0.01566	-0.46254	-0.03681	38.94860	0.97614	-3.45713	0.46427	39.11391	268.06	-4.55
83/11/20	2445658.5	0.02933	-0.45867	-0.04058	38.87723	5.73873	-3.05695	0.46139	39.41722	273.66	-5.05
83/11/22	2445660.5	0.07397	-0.44927	-0.04386	38.33013	10.53845	-2.61050	0.45743	39.83808	279.35	-5.50
83/11/24	2445662.5	0.11769	-0.43432	-0.04659	37.28518	15.34962	-2.11787	0.45239	40.37673	285.16	-5.91
83/11/26	2445664.5	0.15990	-0.41382	-0.04873	35.71503	20.14138	-1.57915	0.44630	41.03331	291.13	-6.27
83/11/28	2445666.5	0.19998	-0.38781	-0.05022	33.58729	24.87551	-0.99454	0.43922	41.80773	297.28	-6.57
83/11/30	2445668.5	0.23726	-0.35639	-0.05101	30.86490	29.50370	-0.36468	0.43117	42.69945	303.65	-6.79
83/12/ 2	2445670.5	0.27104	-0.31972	-0.05105	27.50720	33.96425	0.30904	0.42224	43.70712	310.29	-6.94
83/12/ 4	2445672.5	0.30055	-0.27802	-0.05028	23.47194	38.17819	1.02391	0.41250	44.82805	317.23	-7.00
83/12/ 6	2445674.5	0.32499	-0.23165	-0.04867	18.71871	42.04459	1.77527	0.40205	46.05746	324.52	-6.95
83/12/ 8	2445676.5	0.34350	-0.18108	-0.04617	13.21476	45.43568	2.55553	0.39104	47.38736	332.20	-6.78
83/12/10	2445678.5	0.35522	-0.12693	-0.04276	6.94392	48.19209	3.35298	0.37963	48.80510	340.34	-6.47
83/12/12	2445680.5	0.35925	-0.07006	-0.03842	-0.08007	50.11990	4.15035	0.36803	50.29151	348.96	-5.99
83/12/14	2445682.5	0.35477	-0.01155	-0.03318	-7.79526	50.99179	4.92321	0.35650	51.81859	358.13	-5.34
83/12/16	2445684.5	0.34103	0.04723	-0.02707	-16.06833	50.55627	5.63868	0.34535	53.34719	7.89	-4.50
83/12/18	2445686.5	0.31752	0.10464	-0.02019	-24.66958	48.56005	6.25494	0.33493	54.82510	18.24	-3.46
83/12/20	2445688.5	0.28404	0.15873	-0.01268	-33.25340	44.78811	6.72283	0.32563	56.18683	29.20	-2.23
83/12/22	2445690.5	0.24088	0.20738	-0.00474	-41.35667	39.12181	6.99048	0.31789	57.35640	40.73	-0.85
83/12/24	2445692.5	0.18890	0.24840	0.00338	-48.43062	31.60536	7.01169	0.31208	58.25451	52.75	0.62
83/12/26	2445694.5	0.12961	0.27978	0.01135	-53.91521	22.49768	6.75700	0.30855	58.81030	65.14	2.11
83/12/28	2445696.5	0.06514	0.29994	0.01888	-57.34607	12.27842	6.22387	0.30751	58.97515	77.75	3.52
83/12/30	2445698.5	-0.00197	0.30796	0.02564	-58.45971	1.58864	5.44137	0.30903	58.73389	90.37	4.76
84/ 1/ 1	2445700.5	-0.06902	0.30369	0.03137	-57.25169	-8.88311	4.46602	0.31301	58.10862	102.80	5.75

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
84/ 1/ 3	2445702.5	-0.13343	0.28776	0.03591	-53.96199	-18.52654	3.37005	0.31922	57.15319	114.88	6.46
84/ 1/ 5	2445704.5	-0.19303	0.26139	0.03914	-48.99864	-26.89942	2.22708	0.32729	55.94109	126.45	6.87
84/ 1/ 7	2445706.5	-0.24617	0.22620	0.04106	-42.83814	-33.75762	1.10058	0.33682	54.55176	137.42	7.00
84/ 1/ 9	2445708.5	-0.29171	0.18401	0.04171	-35.94035	-39.03347	0.03792	0.34741	53.05960	147.76	6.90
84/ 1/11	2445710.5	-0.32906	0.13661	0.04118	-28.69657	-42.78721	-0.93035	0.35867	51.52770	157.45	6.59
84/ 1/13	2445712.5	-0.35799	0.08570	0.03960	-21.41009	-45.15508	-1.78794	0.37023	50.00570	166.54	6.14
84/ 1/15	2445714.5	-0.37859	0.03277	0.03710	-14.29881	-46.30718	-2.52911	0.38181	48.53048	175.05	5.58
84/ 1/17	2445716.5	-0.39115	-0.02088	0.03380	-7.50882	-46.41902	-3.15511	0.39316	47.12815	183.06	4.93
84/ 1/19	2445718.5	-0.39610	-0.07413	0.02985	-1.13108	-45.65518	-3.67128	0.40408	45.81652	190.60	4.24
84/ 1/21	2445720.5	-0.39394	-0.12607	0.02536	4.78310	-44.16147	-4.08500	0.41440	44.60718	197.75	3.51
84/ 1/23	2445722.5	-0.38524	-0.17592	0.02045	10.20940	-42.06263	-4.40439	0.42400	43.50742	204.54	2.76
84/ 1/25	2445724.5	-0.37055	-0.22305	0.01522	15.14093	-39.46302	-4.63744	0.43277	42.52156	211.05	2.02
84/ 1/27	2445726.5	-0.35045	-0.26693	0.00977	19.58126	-36.44864	-4.79159	0.44063	41.65199	217.30	1.27
84/ 1/29	2445728.5	-0.32550	-0.30712	0.00418	23.53959	-33.08983	-4.87348	0.44754	40.89987	223.34	0.53
84/ 1/31	2445730.5	-0.29625	-0.34326	-0.00147	27.02740	-29.44383	-4.88890	0.45342	40.26563	229.20	-0.19
84/ 2/ 2	2445732.5	-0.26324	-0.37505	-0.00709	30.05625	-25.55730	-4.84274	0.45826	39.74929	234.94	-0.89
84/ 2/ 4	2445734.5	-0.22699	-0.40222	-0.01263	32.63625	-21.46841	-4.73909	0.46202	39.35069	240.56	-1.57
84/ 2/ 6	2445736.5	-0.18801	-0.42458	-0.01802	34.77504	-17.20877	-4.58124	0.46469	39.06959	246.12	-2.22
84/ 2/ 8	2445738.5	-0.14682	-0.44192	-0.02320	36.47709	-12.80507	-4.37182	0.46625	38.90580	251.62	-2.85
84/ 2/10	2445740.5	-0.10391	-0.45411	-0.02810	37.74326	-8.28048	-4.11281	0.46670	38.85917	257.11	-3.45
84/ 2/12	2445742.5	-0.05979	-0.46102	-0.03268	38.57031	-3.65604	-3.80566	0.46602	38.92966	262.61	-4.02
84/ 2/14	2445744.5	-0.01498	-0.46253	-0.03687	38.95070	1.04810	-3.45134	0.46424	39.11735	268.15	-4.56
84/ 2/16	2445746.5	0.03001	-0.45857	-0.04063	38.87220	5.81136	-3.05047	0.46135	39.42239	273.74	-5.05
84/ 2/18	2445748.5	0.07464	-0.44909	-0.04390	38.31769	10.61137	-2.60331	0.45736	39.84499	279.44	-5.51
84/ 2/20	2445750.5	0.11834	-0.43405	-0.04663	37.26495	15.42239	-2.10999	0.45231	40.38538	285.25	-5.92
84/ 2/22	2445752.5	0.16053	-0.41347	-0.04876	35.68659	20.21349	-1.57058	0.44621	41.04369	291.22	-6.27
84/ 2/24	2445754.5	0.20057	-0.38738	-0.05024	33.55012	24.94630	-0.98529	0.43911	41.81984	297.37	-6.57
84/ 2/26	2445756.5	0.23781	-0.35588	-0.05102	30.81844	29.57233	-0.35476	0.43105	42.71329	303.75	-6.80
84/ 2/28	2445758.5	0.27152	-0.31913	-0.05104	27.45086	34.02969	0.31959	0.42210	43.72267	310.39	-6.95
84/ 3/ 1	2445760.5	0.30096	-0.27736	-0.05026	23.40510	38.23909	1.03504	0.41235	44.84527	317.34	-7.00
84/ 3/ 3	2445762.5	0.32531	-0.23092	-0.04864	18.64085	42.09926	1.78688	0.40190	46.07627	324.63	-6.95
84/ 3/ 5	2445764.5	0.34373	-0.18029	-0.04613	13.12551	45.48198	2.56748	0.39088	47.40761	332.32	-6.78
84/ 3/ 7	2445766.5	0.35534	-0.12609	-0.04270	6.84325	48.22738	3.36506	0.37946	48.82657	340.46	-6.46
84/ 3/ 9	2445768.5	0.35925	-0.06919	-0.03835	-0.19164	50.14104	4.16225	0.36786	50.31386	349.10	-5.98
84/ 3/11	2445770.5	0.35463	-0.01067	-0.03309	-7.91633	50.99517	4.93450	0.35633	51.84134	358.28	-5.33
84/ 3/13	2445772.5	0.34075	0.04811	-0.02697	-16.19623	50.53805	5.64880	0.34519	53.36967	8.04	-4.48
84/ 3/15	2445774.5	0.31709	0.10548	-0.02008	-24.80005	48.51663	6.26320	0.33478	54.84645	18.40	-3.44
84/ 3/17	2445776.5	0.28347	0.15951	-0.01256	-33.38036	44.71683	6.72846	0.32550	56.20601	29.37	-2.21
84/ 3/19	2445778.5	0.24016	0.20805	-0.00462	-41.47243	39.02194	6.99272	0.31778	57.37222	40.90	-0.83
84/ 3/21	2445780.5	0.18806	0.24894	0.00350	-48.52665	31.47906	7.00995	0.31201	58.26583	52.93	0.64
84/ 3/23	2445782.5	0.12867	0.28016	0.01147	-53.98352	22.35048	6.75101	0.30851	58.81616	65.33	2.13
84/ 3/25	2445784.5	0.06414	0.30015	0.01899	-57.38096	12.11890	6.21382	0.30751	58.97503	77.94	3.54
84/ 3/27	2445786.5	-0.00299	0.30798	0.02573	-58.45904	1.42708	5.42792	0.30907	58.72783	90.56	4.78
84/ 3/29	2445788.5	-0.07001	0.30353	0.03145	-57.21729	-9.03669	4.45016	0.31309	58.09720	102.99	5.77
84/ 3/31	2445790.5	-0.13437	0.28743	0.03597	-53.89888	-18.66405	3.35291	0.31932	57.13736	115.06	6.47

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

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84/ 4/ 2	2445792.5	-0.19389	0.26091	0.03918	-48.91364	-27.01563	2.20971	0.32742	55.92201	126.62	6.87
84/ 4/ 4	2445794.5	-0.24691	0.22560	0.04108	-42.73843	-33.85019	1.08384	0.33697	54.53057	137.58	7.00
84/ 4/ 6	2445796.5	-0.29234	0.18332	0.04171	-35.83240	-39.10238	0.02238	0.34758	53.03732	147.91	6.89
84/ 4/ 8	2445798.5	-0.32956	0.13586	0.04117	-28.58565	-42.83397	-0.94432	0.35883	51.50515	157.60	6.59
84/ 4/10	2445800.5	-0.35836	0.08490	0.03957	-21.30015	-45.18202	-1.80018	0.37040	49.98352	166.67	6.13
84/ 4/12	2445802.5	-0.37884	0.03195	0.03705	-14.19260	-46.31692	-2.53959	0.38198	48.50913	175.18	5.57
84/ 4/14	2445804.5	-0.39128	-0.02170	0.03375	-7.40814	-46.41413	-3.16387	0.39333	47.10798	183.17	4.92
84/ 4/16	2445806.5	-0.39611	-0.07494	0.02978	-1.03702	-45.63799	-3.67841	0.40424	45.79773	190.71	4.23
84/ 4/18	2445808.5	-0.39385	-0.12685	0.02529	4.86994	-44.13402	-4.09063	0.41455	44.58993	197.85	3.50
84/ 4/20	2445810.5	-0.38505	-0.17667	0.02037	10.28877	-42.02666	-4.40863	0.42413	43.49178	204.65	2.75
84/ 4/22	2445812.5	-0.37027	-0.22375	0.01514	15.21278	-39.41996	-4.64041	0.43289	42.50759	211.14	2.00
84/ 4/24	2445814.5	-0.35009	-0.26758	0.00968	19.64567	-36.39970	-4.79339	0.44075	41.63973	217.39	1.26
84/ 4/26	2445816.5	-0.32507	-0.30771	0.00409	23.59669	-33.03597	-4.87421	0.44763	40.88933	223.43	0.52
84/ 4/28	2445818.5	-0.29576	-0.34378	-0.00155	27.07738	-29.38587	-4.88864	0.45350	40.25683	229.29	-0.20
84/ 4/30	2445820.5	-0.26270	-0.37550	-0.00718	30.09926	-25.49589	-4.84156	0.45833	39.74225	235.02	-0.90
84/ 5/ 2	2445822.5	-0.22640	-0.40261	-0.01272	32.67240	-21.40410	-4.73704	0.46207	39.34540	240.65	-1.58
84/ 5/ 4	2445824.5	-0.18739	-0.42488	-0.01810	34.80442	-17.14201	-4.57837	0.46472	39.06606	246.20	-2.23
84/ 5/ 6	2445826.5	-0.14616	-0.44215	-0.02327	36.49974	-12.73624	-4.36816	0.46627	38.90403	251.71	-2.86
84/ 5/ 8	2445828.5	-0.10323	-0.45426	-0.02817	37.75915	-8.20993	-4.10840	0.46669	38.85917	257.20	-3.46
84/ 5/10	2445830.5	-0.05910	-0.46108	-0.03275	38.57938	-3.58410	-3.80051	0.46601	38.93146	262.70	-4.03
84/ 5/12	2445832.5	-0.01428	-0.46251	-0.03694	38.95279	1.12110	-3.44548	0.46420	39.12094	268.23	-4.56
84/ 5/14	2445834.5	0.03071	-0.45847	-0.04069	38.86709	5.88508	-3.04388	0.46129	39.42778	273.83	-5.06
84/ 5/16	2445836.5	0.07532	-0.44890	-0.04395	38.30508	10.68544	-2.59602	0.45729	39.85219	279.53	-5.52
84/ 5/18	2445838.5	0.11901	-0.43378	-0.04667	37.24447	15.49638	-2.10199	0.45222	40.39439	285.34	-5.92
84/ 5/20	2445840.5	0.16116	-0.41311	-0.04879	35.65777	20.28685	-1.56187	0.44611	41.05451	291.31	-6.28
84/ 5/22	2445842.5	0.20117	-0.38693	-0.05026	33.51243	25.01838	-0.97587	0.43899	41.83246	297.47	-6.57
84/ 5/24	2445844.5	0.23835	-0.35535	-0.05102	30.77129	29.64229	-0.34466	0.43092	42.72770	303.85	-6.80
84/ 5/26	2445846.5	0.27201	-0.31852	-0.05104	27.39360	34.09645	0.33034	0.42196	43.73885	310.50	-6.95
84/ 5/28	2445848.5	0.30138	-0.27668	-0.05025	23.33711	38.30128	1.04639	0.41219	44.86317	317.45	-7.00
84/ 5/30	2445850.5	0.32565	-0.23017	-0.04861	18.56156	42.15513	1.79873	0.40173	46.09579	324.75	-6.95
84/ 6/ 1	2445852.5	0.34397	-0.17948	-0.04608	13.03453	45.52933	2.57968	0.39070	47.42862	332.44	-6.77
84/ 6/ 3	2445854.5	0.35546	-0.12524	-0.04264	6.74054	48.26351	3.37740	0.37928	48.84883	340.59	-6.45
84/ 6/ 5	2445856.5	0.35925	-0.06830	-0.03828	-0.30555	50.16269	4.17440	0.36768	50.33701	349.24	-5.98
84/ 6/ 7	2445858.5	0.35449	-0.00976	-0.03301	-8.03998	50.99864	4.94603	0.35616	51.86488	358.42	-5.32
84/ 6/ 9	2445860.5	0.34046	0.04901	-0.02687	-16.32690	50.51939	5.65913	0.34502	53.39291	8.19	-4.47
84/ 6/11	2445862.5	0.31665	0.10634	-0.01997	-24.93334	48.47212	6.27163	0.33462	54.86849	18.56	-3.42
84/ 6/13	2445864.5	0.28287	0.16030	-0.01244	-33.51000	44.64375	6.73419	0.32537	56.22574	29.54	-2.19
84/ 6/15	2445866.5	0.23942	0.20874	-0.00449	-41.59050	38.91957	6.99497	0.31768	57.38843	41.08	-0.81
84/ 6/17	2445868.5	0.18719	0.24950	0.00362	-48.62438	31.34967	7.00811	0.31193	58.27731	53.12	0.67
84/ 6/19	2445870.5	0.12771	0.28056	0.01159	-54.05274	22.19983	6.74481	0.30847	58.82197	65.52	2.15
84/ 6/21	2445872.5	0.06312	0.30036	0.01910	-57.41587	11.95589	6.20349	0.30751	58.97464	78.13	3.56
84/ 6/23	2445874.5	-0.00403	0.30800	0.02583	-58.45755	1.26225	5.41413	0.30911	58.72130	90.75	4.79
84/ 6/25	2445876.5	-0.07103	0.30337	0.03153	-57.18137	-9.19304	4.43393	0.31316	58.08511	103.18	5.78
84/ 6/27	2445878.5	-0.13533	0.28709	0.03602	-53.83376	-18.80369	3.33541	0.31943	57.12073	115.24	6.48
84/ 6/29	2445880.5	-0.19476	0.26042	0.03922	-48.82639	-27.13329	2.19202	0.32755	55.90203	126.79	6.88

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					MERCURY		
84/ 7/ 1	2445882.5	-0.24767	0.22500	0.04110	-42.63640	-33.94357	1.06681	0.33713	54.50842	137.75	7.00
84/ 7/ 3	2445884.5	-0.29298	0.18262	0.04171	-35.72225	-39.17156	0.00662	0.34774	53.01405	148.06	6.89
84/ 7/ 5	2445886.5	-0.33007	0.13509	0.04115	-28.47273	-42.88059	-0.95847	0.35901	51.48164	157.74	6.58
84/ 7/ 7	2445888.5	-0.35874	0.08409	0.03954	-21.18844	-45.20851	-1.81254	0.37058	49.96043	166.81	6.12
84/ 7/ 9	2445890.5	-0.37909	0.03112	0.03701	-14.08487	-46.32599	-2.55015	0.38216	48.48695	175.31	5.56
84/ 7/11	2445892.5	-0.39141	-0.02253	0.03369	-7.30618	-46.40844	-3.17268	0.39350	47.08704	183.29	4.91
84/ 7/13	2445894.5	-0.39613	-0.07576	0.02972	-0.94191	-45.61993	-3.68557	0.40440	45.77826	190.83	4.21
84/ 7/15	2445896.5	-0.39376	-0.12764	0.02521	4.95765	-44.10568	-4.09627	0.41470	44.57207	197.96	3.49
84/ 7/17	2445898.5	-0.38486	-0.17742	0.02029	10.36886	-41.98981	-4.41287	0.42428	43.47563	204.75	2.74
84/ 7/19	2445900.5	-0.37000	-0.22446	0.01505	15.28523	-39.37606	-4.64336	0.43302	42.49321	211.24	1.99
84/ 7/21	2445902.5	-0.34974	-0.26823	0.00959	19.71058	-36.34995	-4.79517	0.44086	41.62715	217.49	1.25
84/ 7/23	2445904.5	-0.32465	-0.30830	0.00400	23.65423	-32.98136	-4.87492	0.44773	40.87857	223.52	0.51
84/ 7/25	2445906.5	-0.29528	-0.34431	-0.00164	27.12772	-29.32719	-4.88835	0.45359	40.24789	229.38	-0.21
84/ 7/27	2445908.5	-0.26216	-0.37596	-0.00727	30.14256	-25.43379	-4.84035	0.45839	39.73513	235.11	-0.91
84/ 7/29	2445910.5	-0.22581	-0.40299	-0.01280	32.70882	-21.33911	-4.73496	0.46212	39.34011	240.74	-1.59
84/ 7/31	2445912.5	-0.18676	-0.42519	-0.01818	34.83405	-17.07459	-4.57547	0.46476	39.06261	246.29	-2.24
84/ 8/ 2	2445914.5	-0.14551	-0.44238	-0.02335	36.52263	-12.66676	-4.36448	0.46628	38.90241	251.79	-2.87
84/ 8/ 4	2445916.5	-0.10256	-0.45441	-0.02825	37.77527	-8.13874	-4.10395	0.46669	38.85940	257.28	-3.47
84/ 8/ 6	2445918.5	-0.05841	-0.46114	-0.03281	38.58865	-3.51150	-3.79533	0.46598	38.93353	262.78	-4.04
84/ 8/ 8	2445920.5	-0.01358	-0.46249	-0.03700	38.95506	1.19479	-3.43957	0.46416	39.12486	268.32	-4.57
84/ 8/10	2445922.5	0.03141	-0.45836	-0.04074	38.86211	5.95953	-3.03725	0.46124	39.43354	273.92	-5.07
84/ 8/12	2445924.5	0.07601	-0.44871	-0.04400	38.29254	10.76028	-2.58866	0.45722	39.85979	279.61	-5.52
84/ 8/14	2445926.5	0.11968	-0.43350	-0.04671	37.22397	15.57117	-2.09392	0.45213	40.40383	285.43	-5.93
84/ 8/16	2445928.5	0.16180	-0.41274	-0.04882	35.62885	20.36106	-1.55308	0.44600	41.06580	291.41	-6.28
84/ 8/18	2445930.5	0.20177	-0.38648	-0.05028	33.47455	25.09133	-0.96637	0.43887	41.84560	297.57	-6.58
84/ 8/20	2445932.5	0.23891	-0.35482	-0.05103	30.72383	29.71314	-0.33446	0.43079	42.74267	303.95	-6.80
84/ 8/22	2445934.5	0.27250	-0.31791	-0.05103	27.33591	34.16411	0.34120	0.42181	43.75562	310.60	-6.95
84/ 8/24	2445936.5	0.30180	-0.27599	-0.05023	23.26853	38.36434	1.05785	0.41204	44.88169	317.56	-7.00
84/ 8/26	2445938.5	0.32598	-0.22941	-0.04857	18.48149	42.21180	1.81071	0.40156	46.11594	324.86	-6.95
84/ 8/28	2445940.5	0.34420	-0.17866	-0.04603	12.94256	45.57735	2.59203	0.39053	47.45022	332.57	-6.77
84/ 8/30	2445942.5	0.35558	-0.12437	-0.04258	6.63664	48.30011	3.38988	0.37910	48.87163	340.72	-6.45
84/ 9/ 1	2445944.5	0.35924	-0.06740	-0.03820	-0.42081	50.18455	4.18669	0.36750	50.36064	349.37	-5.97
84/ 9/ 3	2445946.5	0.35434	-0.00884	-0.03292	-8.16510	51.00196	4.95768	0.35598	51.88879	358.57	-5.31
84/ 9/ 5	2445948.5	0.34017	0.04992	-0.02677	-16.45902	50.50017	5.66954	0.34485	53.41638	8.35	-4.45
84/ 9/ 7	2445950.5	0.31620	0.10721	-0.01986	-25.06793	48.42661	6.28009	0.33447	54.89059	18.73	-3.40
84/ 9/ 9	2445952.5	0.28227	0.16110	-0.01232	-33.64066	44.56927	6.73989	0.32524	56.24535	29.72	-2.17
84/ 9/11	2445954.5	0.23868	0.20944	-0.00437	-41.70914	38.81550	6.99713	0.31757	57.40431	41.27	-0.79
84/ 9/13	2445956.5	0.18632	0.25006	0.00375	-48.72213	31.21846	7.00612	0.31186	58.28829	53.31	0.69
84/ 9/15	2445958.5	0.12674	0.28096	0.01171	-54.12143	22.04748	6.73843	0.30844	58.82710	65.72	2.18
84/ 9/17	2445960.5	0.06209	0.30057	0.01921	-57.44977	11.79148	6.19294	0.30752	58.97345	78.33	3.58
84/ 9/19	2445962.5	-0.00508	0.30803	0.02592	-58.45474	1.09650	5.40013	0.30916	58.71388	90.94	4.81
84/ 9/21	2445964.5	-0.07206	0.30320	0.03161	-57.14401	-9.34981	4.41754	0.31325	58.07212	103.37	5.79
84/ 9/23	2445966.5	-0.13629	0.28676	0.03608	-53.76729	-18.94328	3.31779	0.31954	57.10322	115.42	6.48
84/ 9/25	2445968.5	-0.19563	0.25994	0.03926	-48.73799	-27.25056	2.17426	0.32769	55.88124	126.97	6.88
84/ 9/27	2445970.5	-0.24844	0.22439	0.04111	-42.53353	-34.03637	1.04976	0.33729	54.48558	137.91	7.00

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84/ 9/29	2445972.5	-0.29362	0.18192	0.04171	-35.61154	-39.24009	-0.00913	0.34792	52.99025	148.22	6.89
84/10/ 1	2445974.5	-0.33058	0.13433	0.04113	-28.35950	-42.92658	-0.97258	0.35919	51.45774	157.89	6.58
84/10/ 3	2445976.5	-0.35912	0.08328	0.03950	-21.07664	-45.23447	-1.82487	0.37076	49.93708	166.94	6.12
84/10/ 5	2445978.5	-0.37934	0.03029	0.03696	-13.97720	-46.33465	-2.56067	0.38234	48.46462	175.43	5.55
84/10/ 7	2445980.5	-0.39154	-0.02336	0.03363	-7.20439	-46.40245	-3.18145	0.39367	47.06604	183.41	4.90
84/10/ 9	2445982.5	-0.39614	-0.07657	0.02965	-0.84702	-45.60169	-3.69270	0.40457	45.75880	190.94	4.20
84/10/11	2445984.5	-0.39367	-0.12843	0.02514	5.04511	-44.07727	-4.10187	0.41486	44.55429	198.07	3.47
84/10/13	2445986.5	-0.38468	-0.17817	0.02021	10.44868	-41.95298	-4.41708	0.42442	43.45961	204.85	2.73
84/10/15	2445988.5	-0.36973	-0.22516	0.01497	15.35742	-39.33226	-4.64630	0.43315	42.47900	211.34	1.98
84/10/17	2445990.5	-0.34939	-0.26887	0.00951	19.77527	-36.30037	-4.79695	0.44097	41.61477	217.58	1.24
84/10/19	2445992.5	-0.32423	-0.30889	0.00392	23.71159	-32.92697	-4.87563	0.44783	40.86804	223.61	0.50
84/10/21	2445994.5	-0.29479	-0.34483	-0.00173	27.17792	-29.26878	-4.88807	0.45367	40.23921	229.47	-0.22
84/10/23	2445996.5	-0.26162	-0.37641	-0.00735	30.18578	-25.37199	-4.83915	0.45846	39.72829	235.20	-0.92
84/10/25	2445998.5	-0.22523	-0.40337	-0.01289	32.74519	-21.27445	-4.73291	0.46217	39.33510	240.82	-1.60
84/10/27	2446000.5	-0.18614	-0.42549	-0.01827	34.86366	-17.00750	-4.57260	0.46479	39.05942	246.37	-2.25
84/10/29	2446002.5	-0.14486	-0.44260	-0.02343	36.54551	-12.59762	-4.36082	0.46629	38.90104	251.88	-2.88
84/10/31	2446004.5	-0.10188	-0.45455	-0.02832	37.79141	-8.06787	-4.09954	0.46669	38.85984	257.37	-3.48
84/11/ 2	2446006.5	-0.05772	-0.46120	-0.03288	38.59794	-3.43924	-3.79017	0.46596	38.93578	262.87	-4.05
84/11/ 4	2446008.5	-0.01289	-0.46246	-0.03706	38.95733	1.26815	-3.43368	0.46413	39.12891	268.40	-4.58
84/11/ 6	2446010.5	0.03210	-0.45825	-0.04080	38.85714	6.03366	-3.03065	0.46118	39.43941	274.01	-5.08
84/11/ 8	2446012.5	0.07670	-0.44851	-0.04404	38.28003	10.83480	-2.58134	0.45715	39.86749	279.70	-5.53
84/11/10	2446014.5	0.12034	-0.43322	-0.04674	37.20353	15.64564	-2.08588	0.45205	40.41336	285.52	-5.94
84/11/12	2446016.5	0.16244	-0.41238	-0.04884	35.60001	20.43495	-1.54432	0.44590	41.07716	291.50	-6.29
84/11/14	2446018.5	0.20237	-0.38603	-0.05029	33.43675	25.16396	-0.95691	0.43875	41.85878	297.66	-6.58
84/11/16	2446020.5	0.23946	-0.35428	-0.05104	30.67646	29.78365	-0.32431	0.43065	42.75765	304.05	-6.81
84/11/18	2446022.5	0.27299	-0.31729	-0.05102	27.27831	34.23139	0.35202	0.42167	43.77235	310.71	-6.95
84/11/20	2446024.5	0.30221	-0.27530	-0.05021	23.20005	38.42697	1.06928	0.41188	44.90008	317.67	-7.00
84/11/22	2446026.5	0.32631	-0.22866	-0.04854	18.40155	42.26799	1.82264	0.40140	46.13591	324.98	-6.95
84/11/24	2446028.5	0.34443	-0.17784	-0.04599	12.85079	45.62485	2.60431	0.39035	47.47159	332.69	-6.77
84/11/26	2446030.5	0.35570	-0.12350	-0.04252	6.53302	48.33615	3.40229	0.37893	48.89416	340.85	-6.44
84/11/28	2446032.5	0.35924	-0.06650	-0.03813	-0.53567	50.20584	4.19890	0.36732	50.38396	349.51	-5.96
84/11/30	2446034.5	0.35420	-0.00793	-0.03283	-8.28967	51.00474	4.96924	0.35581	51.91238	358.72	-5.29
84/12/ 2	2446036.5	0.33987	0.05082	-0.02667	-16.59043	50.48047	5.67986	0.34469	53.43951	8.50	-4.44
84/12/ 4	2446038.5	0.31575	0.10808	-0.01975	-25.20163	48.38075	6.28844	0.33432	54.91232	18.90	-3.39
84/12/ 6	2446040.5	0.28167	0.16190	-0.01220	-33.77024	44.49462	6.74549	0.32511	56.26457	29.89	-2.15
84/12/ 8	2446042.5	0.23793	0.21014	-0.00424	-41.82657	38.71154	6.99919	0.31747	57.41980	41.45	-0.77
84/12/10	2446044.5	0.18545	0.25062	0.00387	-48.81861	31.08770	7.00406	0.31180	58.29887	53.50	0.71
84/12/12	2446046.5	0.12578	0.28135	0.01183	-54.18890	21.89595	6.73201	0.30841	58.83187	65.91	2.20
84/12/14	2446048.5	0.06107	0.30079	0.01932	-57.48264	11.62826	6.18240	0.30753	58.97197	78.52	3.60
84/12/16	2446050.5	-0.00612	0.30805	0.02602	-58.45122	0.93222	5.38620	0.30921	58.70626	91.14	4.83
84/12/18	2446052.5	-0.07307	0.30304	0.03169	-57.10635	-9.50497	4.40126	0.31333	58.05902	103.56	5.80
84/12/20	2446054.5	-0.13725	0.28642	0.03614	-53.70093	-19.08127	3.30032	0.31966	57.08570	115.60	6.49
84/12/22	2446056.5	-0.19650	0.25946	0.03930	-48.65008	-27.36634	2.15667	0.32783	55.86053	127.14	6.88
84/12/24	2446058.5	-0.24919	0.22379	0.04113	-42.43143	-34.12787	1.03289	0.33745	54.46288	138.07	7.00
84/12/26	2446060.5	-0.29425	0.18123	0.04171	-35.50180	-39.30755	-0.02471	0.34809	52.96661	148.37	6.88

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84/12/28	2446062.5	-0.33108	0.13357	0.04111	-28.24738	-42.97174	-0.98653	0.35937	51.43402	158.03	6.57
84/12/30	2446064.5	-0.35949	0.08249	0.03947	-20.96600	-45.25982	-1.83704	0.37094	49.91392	167.08	6.11
85/ 1/ 1	2446066.5	-0.37959	0.02947	0.03691	-13.87071	-46.34292	-2.57104	0.38252	48.44248	175.56	5.54
85/ 1/ 3	2446068.5	-0.39166	-0.02418	0.03358	-7.10375	-46.39629	-3.19010	0.39384	47.04525	183.53	4.89
85/ 1/ 5	2446070.5	-0.39616	-0.07738	0.02959	-0.75322	-45.58348	-3.69973	0.40473	45.73957	191.05	4.19
85/ 1/ 7	2446072.5	-0.39358	-0.12921	0.02507	5.13156	-44.04906	-4.10740	0.41501	44.53676	198.17	3.46
85/ 1/ 9	2446074.5	-0.38449	-0.17891	0.02013	10.52760	-41.91649	-4.42124	0.42456	43.44387	204.95	2.72
85/ 1/11	2446076.5	-0.36945	-0.22585	0.01489	15.42882	-39.28891	-4.64921	0.43327	42.46507	211.44	1.97
85/ 1/13	2446078.5	-0.34904	-0.26951	0.00942	19.83925	-36.25132	-4.79871	0.44108	41.60266	217.67	1.22
85/ 1/15	2446080.5	-0.32381	-0.30947	0.00383	23.76831	-32.87315	-4.87633	0.44792	40.85774	223.70	0.49
85/ 1/17	2446082.5	-0.29431	-0.34535	-0.00182	27.22757	-29.21096	-4.88780	0.45375	40.23072	229.56	-0.23
85/ 1/19	2446084.5	-0.26108	-0.37686	-0.00744	30.22852	-25.31081	-4.83797	0.45852	39.72161	235.29	-0.93
85/ 1/21	2446086.5	-0.22465	-0.40374	-0.01297	32.78115	-21.21043	-4.73087	0.46222	39.33023	240.91	-1.61
85/ 1/23	2446088.5	-0.18552	-0.42579	-0.01835	34.89292	-16.94108	-4.56975	0.46482	39.05636	246.46	-2.26
85/ 1/25	2446090.5	-0.14421	-0.44282	-0.02351	36.56813	-12.52918	-4.35720	0.46631	38.89979	251.96	-2.89
85/ 1/27	2446092.5	-0.10121	-0.45469	-0.02839	37.80734	-7.99775	-4.09517	0.46668	38.86038	257.45	-3.49
85/ 1/29	2446094.5	-0.05704	-0.46126	-0.03295	38.60710	-3.36772	-3.78507	0.46594	38.93811	262.95	-4.06
85/ 1/31	2446096.5	-0.01220	-0.46244	-0.03712	38.95956	1.34074	-3.42786	0.46409	39.13304	268.49	-4.59
85/ 2/ 2	2446098.5	0.03279	-0.45814	-0.04085	38.85219	6.10700	-3.02410	0.46113	39.44532	274.09	-5.08
85/ 2/ 4	2446100.5	0.07738	-0.44832	-0.04409	38.26757	10.90852	-2.57409	0.45708	39.87517	279.79	-5.54
85/ 2/ 6	2446102.5	0.12100	-0.43294	-0.04678	37.18319	15.71930	-2.07791	0.45196	40.42281	285.62	-5.94
85/ 2/ 8	2446104.5	0.16307	-0.41201	-0.04887	35.57131	20.50801	-1.53565	0.44580	41.08838	291.59	-6.29
85/ 2/10	2446106.5	0.20296	-0.38559	-0.05031	33.39916	25.23575	-0.94753	0.43863	41.87177	297.76	-6.59
85/ 2/12	2446108.5	0.24000	-0.35376	-0.05104	30.62938	29.85330	-0.31424	0.43052	42.77238	304.15	-6.81
85/ 2/14	2446110.5	0.27348	-0.31669	-0.05102	27.22109	34.29780	0.36274	0.42152	43.78879	310.81	-6.95
85/ 2/16	2446112.5	0.30262	-0.27462	-0.05019	23.13205	38.48875	1.08059	0.41172	44.91819	317.78	-7.00
85/ 2/18	2446114.5	0.32664	-0.22791	-0.04851	18.32221	42.32336	1.83445	0.40123	46.15556	325.10	-6.94
85/ 2/20	2446116.5	0.34466	-0.17703	-0.04594	12.75975	45.67158	2.61647	0.39018	47.49264	332.81	-6.76
85/ 2/22	2446118.5	0.35582	-0.12265	-0.04246	6.43026	48.37150	3.41456	0.37875	48.91635	340.98	-6.44
85/ 2/24	2446120.5	0.35923	-0.06561	-0.03805	-0.64954	50.22653	4.21097	0.36715	50.40693	349.65	-5.95
85/ 2/26	2446122.5	0.35405	-0.00703	-0.03274	-8.41309	51.00707	4.98065	0.35563	51.93561	358.86	-5.28
85/ 2/28	2446124.5	0.33958	0.05171	-0.02657	-16.72057	50.46051	5.69003	0.34452	53.46230	8.66	-4.42
85/ 3/ 2	2446126.5	0.31531	0.10894	-0.01963	-25.33399	48.33487	6.29667	0.33417	54.93377	19.06	-3.37
85/ 3/ 4	2446128.5	0.28107	0.16269	-0.01208	-33.89845	44.42027	6.75098	0.32498	56.28358	30.06	-2.13
85/ 3/ 6	2446130.5	0.23719	0.21082	-0.00412	-41.94270	38.60820	7.00118	0.31737	57.43517	41.63	-0.74
85/ 3/ 8	2446132.5	0.18459	0.25117	0.00400	-48.91395	30.95788	7.00196	0.31173	58.30945	53.69	0.73
85/ 3/10	2446134.5	0.12482	0.28174	0.01195	-54.25550	21.74562	6.72560	0.30838	58.83676	66.10	2.22
85/ 3/12	2446136.5	0.06006	0.30099	0.01943	-57.51498	11.46637	6.17193	0.30754	58.97069	78.72	3.62
85/ 3/14	2446138.5	-0.00715	0.30806	0.02612	-58.44750	0.76928	5.37235	0.30925	58.69893	91.33	4.84
85/ 3/16	2446140.5	-0.07408	0.30287	0.03177	-57.06882	-9.65887	4.38508	0.31341	58.04630	103.74	5.82
85/ 3/18	2446142.5	-0.13819	0.28609	0.03620	-53.63497	-19.21818	3.28297	0.31977	57.06861	115.78	6.50
85/ 3/20	2446144.5	-0.19735	0.25898	0.03933	-48.56274	-27.48128	2.13919	0.32797	55.84028	127.31	6.89
85/ 3/22	2446146.5	-0.24993	0.22319	0.04115	-42.33001	-34.21877	1.01612	0.33760	54.44067	138.24	7.00
85/ 3/24	2446148.5	-0.29487	0.18054	0.04171	-35.39276	-39.37465	-0.04020	0.34825	52.94348	148.52	6.88
85/ 3/26	2446150.5	-0.33158	0.13281	0.04110	-28.13593	-43.01674	-1.00041	0.35954	51.41081	158.17	6.56

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85/ 3/28	2446152.5	-0.35986	0.08169	0.03944	-20.85597	-45.28516	-1.84916	0.37112	49.89125	167.21	6.10
85/ 3/30	2446154.5	-0.37983	0.02866	0.03687	-13.76475	-46.35129	-2.58138	0.38269	48.42080	175.69	5.53
85/ 4/ 1	2446156.5	-0.39179	-0.02499	0.03352	-7.00357	-46.39026	-3.19872	0.39401	47.02487	183.65	4.88
85/ 4/ 3	2446158.5	-0.39617	-0.07818	0.02952	-0.65984	-45.56540	-3.70673	0.40489	45.72068	191.16	4.18
85/ 4/ 5	2446160.5	-0.39349	-0.12998	0.02500	5.21762	-44.02095	-4.11291	0.41516	44.51948	198.28	3.45
85/ 4/ 7	2446162.5	-0.38431	-0.17965	0.02006	10.60612	-41.88008	-4.42536	0.42469	43.42827	205.05	2.71
85/ 4/ 9	2446164.5	-0.36918	-0.22654	0.01481	15.49979	-39.24562	-4.65208	0.43340	42.45120	211.53	1.96
85/ 4/11	2446166.5	-0.34869	-0.27015	0.00934	19.90278	-36.20232	-4.80042	0.44119	41.59053	217.77	1.21
85/ 4/13	2446168.5	-0.32339	-0.31005	0.00374	23.82456	-32.81941	-4.87699	0.44802	40.84738	223.79	0.48
85/ 4/15	2446170.5	-0.29383	-0.34586	-0.00190	27.27670	-29.15326	-4.88748	0.45383	40.22212	229.65	-0.24
85/ 4/17	2446172.5	-0.26055	-0.37730	-0.00752	30.27070	-25.24978	-4.83674	0.45859	39.71475	235.37	-0.94
85/ 4/19	2446174.5	-0.22407	-0.40412	-0.01305	32.81651	-21.14660	-4.72879	0.46226	39.32510	240.99	-1.62
85/ 4/21	2446176.5	-0.18491	-0.42609	-0.01843	34.92156	-16.87490	-4.56687	0.46485	39.05296	246.54	-2.27
85/ 4/23	2446178.5	-0.14356	-0.44305	-0.02358	36.59007	-12.46101	-4.35354	0.46632	38.89811	252.05	-2.90
85/ 4/25	2446180.5	-0.10055	-0.45483	-0.02847	37.82258	-7.92794	-4.09076	0.46668	38.86044	257.53	-3.50
85/ 4/27	2446182.5	-0.05636	-0.46132	-0.03302	38.61556	-3.29659	-3.77994	0.46592	38.93991	263.04	-4.06
85/ 4/29	2446184.5	-0.01151	-0.46242	-0.03718	38.96110	1.41288	-3.42201	0.46405	39.13660	268.57	-4.60
85/ 5/ 1	2446186.5	0.03347	-0.45804	-0.04090	38.84660	6.17982	-3.01755	0.46108	39.45065	274.18	-5.09
85/ 5/ 3	2446188.5	0.07805	-0.44813	-0.04413	38.25456	10.98165	-2.56683	0.45701	39.88228	279.88	-5.54
85/ 5/ 5	2446190.5	0.12166	-0.43266	-0.04682	37.16237	15.79231	-2.06996	0.45187	40.43171	285.70	-5.95
85/ 5/ 7	2446192.5	0.16370	-0.41165	-0.04890	35.54223	20.58037	-1.52699	0.44570	41.09907	291.69	-6.30
85/ 5/ 9	2446194.5	0.20355	-0.38514	-0.05033	33.36130	25.30679	-0.93819	0.43852	41.88425	297.86	-6.59
85/ 5/11	2446196.5	0.24054	-0.35323	-0.05105	30.58214	29.92220	-0.30423	0.43039	42.78665	304.25	-6.81
85/ 5/13	2446198.5	0.27395	-0.31608	-0.05101	27.16385	34.36348	0.37339	0.42138	43.80483	310.92	-6.95
85/ 5/15	2446200.5	0.30303	-0.27395	-0.05017	23.06419	38.54985	1.09183	0.41157	44.93595	317.89	-7.00
85/ 5/17	2446202.5	0.32696	-0.22717	-0.04848	18.24317	42.37812	1.84618	0.40107	46.17496	325.21	-6.94
85/ 5/19	2446204.5	0.34488	-0.17623	-0.04589	12.66914	45.71782	2.62854	0.39001	47.51353	332.93	-6.76
85/ 5/21	2446206.5	0.35593	-0.12180	-0.04240	6.32804	48.40651	3.42676	0.37857	48.93851	341.11	-6.43
85/ 5/23	2446208.5	0.35921	-0.06473	-0.03798	-0.76282	50.24709	4.22297	0.36697	50.43000	349.78	-5.94
85/ 5/25	2446210.5	0.35390	-0.00613	-0.03265	-8.53597	51.00946	4.99202	0.35546	51.95910	359.01	-5.27
85/ 5/27	2446212.5	0.33928	0.05260	-0.02647	-16.85029	50.44082	5.70019	0.34436	53.48552	8.81	-4.41
85/ 5/29	2446214.5	0.31486	0.10978	-0.01952	-25.46609	48.28941	6.30491	0.33402	54.95581	19.22	-3.35
85/ 5/31	2446216.5	0.28047	0.16346	-0.01196	-34.02666	44.34638	6.75651	0.32485	56.30333	30.23	-2.11
85/ 6/ 2	2446218.5	0.23645	0.21150	-0.00399	-42.05908	38.50525	7.00323	0.31727	57.45142	41.81	-0.72
85/ 6/ 4	2446220.5	0.18373	0.25171	0.00412	-49.00977	30.82824	6.99993	0.31165	58.32098	53.87	0.76
85/ 6/ 6	2446222.5	0.12386	0.28211	0.01207	-54.32269	21.59516	6.71924	0.30834	58.84262	66.30	2.24
85/ 6/ 8	2446224.5	0.05904	0.30119	0.01954	-57.54792	11.30402	6.16146	0.30754	58.97039	78.91	3.64
85/ 6/10	2446226.5	-0.00818	0.30807	0.02621	-58.44428	0.60556	5.35849	0.30929	58.69254	91.52	4.86
85/ 6/12	2446228.5	-0.07509	0.30269	0.03184	-57.03153	-9.81380	4.36885	0.31349	58.03441	103.93	5.83
85/ 6/14	2446230.5	-0.13914	0.28574	0.03626	-53.56891	-19.35624	3.26552	0.31988	57.05222	115.96	6.51
85/ 6/16	2446232.5	-0.19821	0.25848	0.03937	-48.47496	-27.59734	2.12159	0.32810	55.82057	127.48	6.89
85/ 6/18	2446234.5	-0.25069	0.22258	0.04117	-42.22780	-34.31065	0.99921	0.33775	54.41880	138.40	7.00
85/ 6/20	2446236.5	-0.29550	0.17983	0.04171	-35.28267	-39.44247	-0.05584	0.34842	52.92049	148.68	6.87
85/ 6/22	2446238.5	-0.33207	0.13204	0.04108	-28.02323	-43.06214	-1.01443	0.35972	51.38753	158.32	6.56
85/ 6/24	2446240.5	-0.36023	0.08088	0.03940	-20.74459	-45.31060	-1.86141	0.37129	49.86836	167.35	6.09

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85/ 6/26	2446242.5	-0.38007	0.02783	0.03682	-13.65743	-46.35945	-2.59183	0.38286	48.39877	175.81	5.52
85/ 6/28	2446244.5	-0.39191	-0.02583	0.03346	-6.90206	-46.38378	-3.20742	0.39418	47.00405	183.77	4.87
85/ 6/30	2446246.5	-0.39618	-0.07900	0.02945	-0.56518	-45.54666	-3.71379	0.40505	45.70131	191.28	4.17
85/ 7/ 2	2446248.5	-0.39340	-0.13077	0.02492	5.30487	-43.99202	-4.11845	0.41531	44.50170	198.39	3.44
85/ 7/ 4	2446250.5	-0.38411	-0.18040	0.01998	10.68575	-41.84270	-4.42951	0.42484	43.41218	205.16	2.70
85/ 7/ 6	2446252.5	-0.36890	-0.22725	0.01472	15.57179	-39.20125	-4.65495	0.43353	42.43686	211.63	1.95
85/ 7/ 8	2446254.5	-0.34833	-0.27080	0.00925	19.96725	-36.15214	-4.80213	0.44131	41.57799	217.86	1.20
85/ 7/10	2446256.5	-0.32296	-0.31064	0.00366	23.88168	-32.76440	-4.87762	0.44812	40.83665	223.89	0.47
85/ 7/12	2446258.5	-0.29334	-0.34639	-0.00199	27.32663	-29.09420	-4.88713	0.45391	40.21320	229.74	-0.25
85/ 7/14	2446260.5	-0.26000	-0.37776	-0.00761	30.31361	-25.18734	-4.83547	0.45865	39.70767	235.46	-0.95
85/ 7/16	2446262.5	-0.22348	-0.40450	-0.01314	32.85252	-21.08131	-4.72665	0.46231	39.31985	241.08	-1.63
85/ 7/18	2446264.5	-0.18428	-0.42639	-0.01851	34.95076	-16.80719	-4.56390	0.46488	39.04954	246.63	-2.28
85/ 7/20	2446266.5	-0.14291	-0.44327	-0.02366	36.61250	-12.39128	-4.34980	0.46634	38.89653	252.13	-2.91
85/ 7/22	2446268.5	-0.09987	-0.45497	-0.02854	37.83823	-7.85652	-4.08626	0.46668	38.86070	257.62	-3.51
85/ 7/24	2446270.5	-0.05566	-0.46138	-0.03308	38.62435	-3.22380	-3.77469	0.46590	38.94203	263.12	-4.07
85/ 7/26	2446272.5	-0.01081	-0.46239	-0.03724	38.96286	1.48673	-3.41604	0.46401	39.14057	268.66	-4.60
85/ 7/28	2446274.5	0.03417	-0.45793	-0.04096	38.84109	6.25440	-3.01086	0.46102	39.45647	274.27	-5.10
85/ 7/30	2446276.5	0.07874	-0.44793	-0.04418	38.24146	11.05658	-2.55942	0.45694	39.88994	279.97	-5.55
85/ 8/ 1	2446278.5	0.12232	-0.43238	-0.04685	37.14128	15.86714	-2.06183	0.45179	40.44121	285.80	-5.95
85/ 8/ 3	2446280.5	0.16434	-0.41128	-0.04893	35.51268	20.65455	-1.51815	0.44559	41.11041	291.78	-6.30
85/ 8/ 5	2446282.5	0.20415	-0.38469	-0.05034	33.32274	25.37967	-0.92864	0.43840	41.89743	297.95	-6.59
85/ 8/ 7	2446284.5	0.24109	-0.35269	-0.05105	30.53395	29.99289	-0.29398	0.43026	42.80166	304.35	-6.81
85/ 8/ 9	2446286.5	0.27444	-0.31547	-0.05101	27.10540	34.43090	0.38430	0.42123	43.82165	311.02	-6.95
85/ 8/11	2446288.5	0.30344	-0.27325	-0.05015	22.99480	38.61257	1.10334	0.41141	44.95451	318.00	-7.00
85/ 8/13	2446290.5	0.32728	-0.22640	-0.04844	18.16226	42.43434	1.85820	0.40090	46.19517	325.33	-6.94
85/ 8/15	2446292.5	0.34511	-0.17541	-0.04585	12.57631	45.76524	2.64092	0.38983	47.53520	333.06	-6.75
85/ 8/17	2446294.5	0.35604	-0.12093	-0.04234	6.22329	48.44232	3.43925	0.37839	48.96138	341.24	-6.42
85/ 8/19	2446296.5	0.35920	-0.06383	-0.03790	-0.87889	50.26793	4.23525	0.36679	50.45369	349.92	-5.93
85/ 8/21	2446298.5	0.35375	-0.00522	-0.03256	-8.66180	51.01152	5.00363	0.35528	51.98306	359.16	-5.26
85/ 8/23	2446300.5	0.33898	0.05351	-0.02637	-16.98293	50.42009	5.71053	0.34419	53.50902	8.97	-4.39
85/ 8/25	2446302.5	0.31440	0.11065	-0.01941	-25.60093	48.24217	6.31325	0.33387	54.97792	19.39	-3.33
85/ 8/27	2446304.5	0.27986	0.16426	-0.01184	-34.15716	44.27002	6.76204	0.32472	56.32292	30.41	-2.09
85/ 8/29	2446306.5	0.23570	0.21219	-0.00387	-42.17707	38.39930	7.00517	0.31716	57.46724	42.00	-0.70
85/ 8/31	2446308.5	0.18284	0.25226	0.00425	-49.10637	30.69532	6.99770	0.31159	58.33186	54.06	0.78
85/ 9/ 2	2446310.5	0.12289	0.28250	0.01219	-54.38978	21.44146	6.71260	0.30831	58.84763	66.49	2.27
85/ 9/ 4	2446312.5	0.05800	0.30139	0.01965	-57.57992	11.13876	6.15068	0.30755	58.96906	79.11	3.66
85/ 9/ 6	2446314.5	-0.00923	0.30808	0.02631	-58.43948	0.43952	5.34429	0.30934	58.68498	91.72	4.88
85/ 9/ 8	2446316.5	-0.07611	0.30252	0.03192	-56.99228	-9.97033	4.35231	0.31357	58.02129	104.12	5.84
85/ 9/10	2446318.5	-0.14011	0.28539	0.03632	-53.50080	-19.49519	3.24781	0.31999	57.03461	116.15	6.52
85/ 9/12	2446320.5	-0.19908	0.25799	0.03941	-48.38524	-27.71370	2.10378	0.32824	55.79970	127.66	6.90
85/ 9/14	2446322.5	-0.25144	0.22196	0.04119	-42.12391	-34.40239	0.98215	0.33791	54.39589	138.56	7.00
85/ 9/16	2446324.5	-0.29613	0.17912	0.04170	-35.17122	-39.50991	-0.07157	0.34859	52.89663	148.83	6.87
85/ 9/18	2446326.5	-0.33258	0.13127	0.04106	-27.90950	-43.10707	-1.02850	0.35989	51.36358	158.46	6.55
85/ 9/20	2446328.5	-0.36060	0.08006	0.03937	-20.63246	-45.33554	-1.87368	0.37148	49.84496	167.48	6.08
85/ 9/22	2446330.5	-0.38032	0.02699	0.03678	-13.54956	-46.36716	-2.60229	0.38304	48.37640	175.94	5.51

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85/ 9/24	2446332.5	-0.39203	-0.02666	0.03340	-6.80017	-46.37690	-3.21613	0.39436	46.98301	183.89	4.86
85/ 9/26	2446334.5	-0.39619	-0.07981	0.02939	-0.47026	-45.52759	-3.72085	0.40522	45.68180	191.39	4.16
85/ 9/28	2446336.5	-0.39330	-0.13156	0.02485	5.39229	-43.96283	-4.12399	0.41546	44.48387	198.50	3.43
85/ 9/30	2446338.5	-0.38392	-0.18115	0.01990	10.76550	-41.80513	-4.43366	0.42498	43.39611	205.26	2.68
85/10/ 2	2446340.5	-0.36862	-0.22795	0.01464	15.64386	-39.15675	-4.65782	0.43365	42.42260	211.73	1.93
85/10/ 4	2446342.5	-0.34797	-0.27145	0.00917	20.03178	-36.10191	-4.80384	0.44142	41.56557	217.96	1.19
85/10/ 6	2446344.5	-0.32253	-0.31122	0.00357	23.93883	-32.70939	-4.87826	0.44821	40.82609	223.98	0.46
85/10/ 8	2446346.5	-0.29285	-0.34691	-0.00208	27.37660	-29.03521	-4.88678	0.45399	40.20450	229.83	-0.26
85/10/10	2446348.5	-0.25946	-0.37821	-0.00770	30.35656	-25.12498	-4.83420	0.45872	39.70082	235.55	-0.96
85/10/12	2446350.5	-0.22289	-0.40487	-0.01322	32.88859	-21.01609	-4.72452	0.46236	39.31484	241.17	-1.64
85/10/14	2446352.5	-0.18365	-0.42669	-0.01859	34.98004	-16.73956	-4.56096	0.46491	39.04636	246.71	-2.29
85/10/16	2446354.5	-0.14225	-0.44349	-0.02374	36.63502	-12.32161	-4.34606	0.46635	38.89517	252.22	-2.92
85/10/18	2446356.5	-0.09919	-0.45511	-0.02861	37.85395	-7.78513	-4.08176	0.46667	38.86117	257.71	-3.52
85/10/20	2446358.5	-0.05497	-0.46144	-0.03315	38.63318	-3.15102	-3.76946	0.46588	38.94433	263.21	-4.08
85/10/22	2446360.5	-0.01011	-0.46236	-0.03730	38.96464	1.56058	-3.41008	0.46398	39.14469	268.75	-4.61
85/10/24	2446362.5	0.03487	-0.45781	-0.04101	38.83558	6.32898	-3.00417	0.46096	39.46243	274.36	-5.10
85/10/26	2446364.5	0.07942	-0.44773	-0.04423	38.22835	11.13152	-2.55201	0.45686	39.89775	280.06	-5.56
85/10/28	2446366.5	0.12299	-0.43209	-0.04689	37.12017	15.94201	-2.05369	0.45170	40.45087	285.89	-5.96
85/10/30	2446368.5	0.16497	-0.41091	-0.04895	35.48310	20.72881	-1.50930	0.44549	41.12192	291.87	-6.31
85/11/ 1	2446370.5	0.20475	-0.38423	-0.05036	33.28412	25.45263	-0.91907	0.43828	41.91078	298.05	-6.60
85/11/ 3	2446372.5	0.24164	-0.35215	-0.05106	30.48567	30.06369	-0.28371	0.43012	42.81684	304.46	-6.82
85/11/ 5	2446374.5	0.27493	-0.31484	-0.05100	27.04678	34.49840	0.39523	0.42108	43.83861	311.13	-6.96
85/11/ 7	2446376.5	0.30386	-0.27255	-0.05013	22.92518	38.67533	1.11488	0.41125	44.97319	318.11	-7.00
85/11/ 9	2446378.5	0.32761	-0.22564	-0.04841	18.08107	42.49053	1.87025	0.40073	46.21545	325.44	-6.94
85/11/11	2446380.5	0.34534	-0.17458	-0.04580	12.48316	45.81257	2.65331	0.38966	47.55692	333.18	-6.75
85/11/13	2446382.5	0.35615	-0.12005	-0.04227	6.11818	48.47798	3.45177	0.37821	48.98429	341.37	-6.42
85/11/15	2446384.5	0.35918	-0.06292	-0.03782	-0.99533	50.28855	4.24754	0.36661	50.47742	350.06	-5.92
85/11/17	2446386.5	0.35359	-0.00430	-0.03247	-8.78795	51.01328	5.01524	0.35510	52.00707	359.30	-5.25
85/11/19	2446388.5	0.33867	0.05442	-0.02626	-17.11585	50.39896	5.72086	0.34402	53.53257	9.13	-4.38
85/11/21	2446390.5	0.31394	0.11152	-0.01930	-25.73593	48.19443	6.32157	0.33371	55.00003	19.56	-3.31
85/11/23	2446392.5	0.27924	0.16506	-0.01172	-34.28768	44.19308	6.76753	0.32459	56.34246	30.59	-2.07
85/11/25	2446394.5	0.23493	0.21288	-0.00374	-42.29491	38.29272	7.00705	0.31706	57.48296	42.18	-0.68
85/11/27	2446396.5	0.18196	0.25282	0.00437	-49.20260	30.56182	6.99538	0.31152	58.34257	54.26	0.80
85/11/29	2446398.5	0.12191	0.28289	0.01231	-54.45630	21.28729	6.70587	0.30828	58.85241	66.69	2.29
85/12/ 1	2446400.5	0.05696	0.30159	0.01976	-57.61123	10.97325	6.13981	0.30756	58.96748	79.30	3.68
85/12/ 3	2446402.5	-0.01028	0.30809	0.02640	-58.43395	0.27345	5.33002	0.30939	58.67717	91.91	4.90
85/12/ 5	2446404.5	-0.07714	0.30234	0.03200	-56.95238	-10.12669	4.33572	0.31366	58.00795	104.31	5.86
85/12/ 7	2446406.5	-0.14107	0.28504	0.03638	-53.43216	-19.63382	3.23007	0.32011	57.01680	116.33	6.52
85/12/ 9	2446408.5	-0.19995	0.25749	0.03945	-48.29513	-27.82964	2.08597	0.32839	55.77867	127.83	6.90
85/12/11	2446410.5	-0.25220	0.22134	0.04120	-42.01979	-34.49369	0.96511	0.33808	54.37287	138.73	7.00
85/12/13	2446412.5	-0.29676	0.17841	0.04170	-35.05966	-39.57690	-0.08727	0.34877	52.87266	148.99	6.87
85/12/15	2446414.5	-0.33308	0.13049	0.04104	-27.79575	-43.15157	-1.04254	0.36008	51.33954	158.61	6.54
85/12/17	2446416.5	-0.36097	0.07925	0.03934	-20.52041	-45.36009	-1.88591	0.37166	49.82150	167.62	6.08
85/12/19	2446418.5	-0.38056	0.02616	0.03673	-13.44184	-46.37454	-2.61270	0.38322	48.35397	176.07	5.50
85/12/21	2446420.5	-0.39216	-0.02749	0.03335	-6.69846	-46.36977	-3.22479	0.39453	46.96194	184.01	4.85

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85/12/23	2446422.5	-0.39620	-0.08063	0.02932	-0.37556	-45.50834	-3.72788	0.40538	45.66232	191.50	4.15
85/12/25	2446424.5	-0.39320	-0.13235	0.02477	5.47951	-43.93354	-4.12950	0.41562	44.46610	198.60	3.42
85/12/27	2446426.5	-0.38373	-0.18190	0.01982	10.84504	-41.76753	-4.43778	0.42512	43.38013	205.36	2.67
85/12/29	2446428.5	-0.36834	-0.22865	0.01455	15.71575	-39.11227	-4.66068	0.43378	42.40844	211.83	1.92
85/12/31	2446430.5	-0.34761	-0.27210	0.00908	20.09614	-36.05170	-4.80553	0.44153	41.55326	218.05	1.18
86/ 1/ 2	2446432.5	-0.32210	-0.31181	0.00348	23.99584	-32.65441	-4.87889	0.44831	40.81561	224.07	0.44
86/ 1/ 4	2446434.5	-0.29236	-0.34743	-0.00217	27.42644	-28.97622	-4.88642	0.45407	40.19587	229.92	-0.27
86/ 1/ 6	2446436.5	-0.25892	-0.37866	-0.00779	30.39939	-25.06263	-4.83293	0.45878	39.69403	235.64	-0.97
86/ 1/ 8	2446438.5	-0.22230	-0.40525	-0.01331	32.92456	-20.95091	-4.72238	0.46241	39.30990	241.25	-1.65
86/ 1/10	2446440.5	-0.18302	-0.42699	-0.01867	35.00923	-16.67199	-4.55801	0.46494	39.04327	246.80	-2.30
86/ 1/12	2446442.5	-0.14159	-0.44371	-0.02382	36.65748	-12.25202	-4.34233	0.46636	38.89394	252.30	-2.93
86/ 1/14	2446444.5	-0.09851	-0.45525	-0.02869	37.86965	-7.71386	-4.07728	0.46667	38.86179	257.79	-3.52
86/ 1/16	2446446.5	-0.05428	-0.46149	-0.03322	38.64202	-3.07837	-3.76423	0.46586	38.94678	263.29	-4.09
86/ 1/18	2446448.5	-0.00941	-0.46233	-0.03736	38.96645	1.63430	-3.40412	0.46394	39.14898	268.83	-4.62
86/ 1/20	2446450.5	0.03557	-0.45769	-0.04107	38.83011	6.40344	-2.99749	0.46091	39.46855	274.44	-5.11
86/ 1/22	2446452.5	0.08011	-0.44753	-0.04427	38.21527	11.20634	-2.54461	0.45679	39.90569	280.15	-5.56
86/ 1/24	2446454.5	0.12366	-0.43180	-0.04693	37.09909	16.01673	-2.04557	0.45161	40.46063	285.98	-5.96
86/ 1/26	2446456.5	0.16561	-0.41053	-0.04898	35.45354	20.80289	-1.50046	0.44538	41.13350	291.97	-6.31
86/ 1/28	2446458.5	0.20535	-0.38377	-0.05038	33.24553	25.52535	-0.90952	0.43816	41.92417	298.15	-6.60
86/ 1/30	2446460.5	0.24218	-0.35161	-0.05106	30.43744	30.13417	-0.27348	0.42999	42.83201	304.56	-6.82
86/ 2/ 1	2446462.5	0.27541	-0.31422	-0.05099	26.98824	34.56552	0.40613	0.42094	43.85551	311.23	-6.96
86/ 2/ 3	2446464.5	0.30427	-0.27186	-0.05011	22.85571	38.73765	1.12637	0.41109	44.99175	318.22	-7.00
86/ 2/ 5	2446466.5	0.32794	-0.22487	-0.04837	18.00009	42.54622	1.88223	0.40056	46.23556	325.56	-6.94
86/ 2/ 7	2446468.5	0.34556	-0.17376	-0.04575	12.39034	45.85934	2.66563	0.38948	47.57841	333.31	-6.75
86/ 2/ 9	2446470.5	0.35626	-0.11918	-0.04221	6.01354	48.51300	3.46418	0.37803	49.00688	341.50	-6.41
86/ 2/11	2446472.5	0.35917	-0.06201	-0.03775	-1.11110	50.30846	4.25972	0.36643	50.50070	350.20	-5.91
86/ 2/13	2446474.5	0.35344	-0.00338	-0.03238	-8.91320	51.01430	5.02671	0.35493	52.03049	359.45	-5.23
86/ 2/15	2446476.5	0.33837	0.05532	-0.02616	-17.24757	50.37713	5.73103	0.34386	53.55538	9.29	-4.36
86/ 2/17	2446478.5	0.31348	0.11239	-0.01918	-25.86941	48.14615	6.32970	0.33357	55.02130	19.72	-3.30
86/ 2/19	2446480.5	0.27863	0.16585	-0.01160	-34.41634	44.11592	6.77283	0.32447	56.36107	30.76	-2.05
86/ 2/21	2446482.5	0.23418	0.21357	-0.00362	-42.41063	38.18641	7.00876	0.31696	57.49771	42.36	-0.65
86/ 2/23	2446484.5	0.18108	0.25336	0.00450	-49.29663	30.42920	6.99293	0.31146	58.35234	54.45	0.83
86/ 2/25	2446486.5	0.12094	0.28327	0.01243	-54.52078	21.13469	6.69909	0.30826	58.85634	66.88	2.31
86/ 2/27	2446488.5	0.05594	0.30179	0.01987	-57.64089	10.80992	6.12897	0.30757	58.96517	79.50	3.70
86/ 3/ 1	2446490.5	-0.01132	0.30810	0.02650	-58.42738	0.11003	5.31588	0.30944	58.66881	92.10	4.91
86/ 3/ 3	2446492.5	-0.07814	0.30216	0.03208	-56.91215	-10.28018	4.31934	0.31375	57.99424	104.50	5.87
86/ 3/ 5	2446494.5	-0.14201	0.28470	0.03643	-53.36392	-19.76962	3.21261	0.32023	56.99884	116.51	6.53
86/ 3/ 7	2446496.5	-0.20080	0.25700	0.03948	-48.20610	-27.94304	2.06847	0.32853	55.75769	128.00	6.90
86/ 3/ 9	2446498.5	-0.25294	0.22074	0.04122	-41.91726	-34.58286	0.94839	0.33824	54.35007	138.89	7.00
86/ 3/11	2446500.5	-0.29738	0.17772	0.04170	-34.95006	-39.64226	-0.10267	0.34894	52.84909	149.14	6.86
86/ 3/13	2446502.5	-0.33357	0.12974	0.04102	-27.68418	-43.19494	-1.05629	0.36025	51.31600	158.75	6.54
86/ 3/15	2446504.5	-0.36133	0.07846	0.03930	-20.41057	-45.38400	-1.89789	0.37184	49.79860	167.75	6.07
86/ 3/17	2446506.5	-0.38080	0.02535	0.03668	-13.33629	-46.38169	-2.62290	0.38340	48.33216	176.19	5.49
86/ 3/19	2446508.5	-0.39227	-0.02830	0.03329	-6.59882	-46.36276	-3.23328	0.39470	46.94150	184.13	4.84
86/ 3/21	2446510.5	-0.39620	-0.08143	0.02925	-0.28277	-45.48951	-3.73476	0.40554	45.64345	191.61	4.14

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

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86/ 3/23	2446512.5	-0.39311	-0.13312	0.02470	5.56498	-43.90489	-4.13490	0.41577	44.44892	198.71	3.41
86/ 3/25	2446514.5	-0.38354	-0.18263	0.01974	10.92301	-41.73075	-4.44183	0.42526	43.36471	205.46	2.66
86/ 3/27	2446516.5	-0.36806	-0.22933	0.01447	15.78624	-39.06875	-4.66348	0.43391	42.39482	211.93	1.91
86/ 3/29	2446518.5	-0.34726	-0.27273	0.00899	20.15926	-36.00258	-4.80720	0.44164	41.54144	218.15	1.17
86/ 3/31	2446520.5	-0.32168	-0.31238	0.00339	24.05175	-32.60061	-4.87952	0.44841	40.80559	224.16	0.43
86/ 4/ 2	2446522.5	-0.29187	-0.34793	-0.00225	27.47533	-28.91850	-4.88608	0.45415	40.18765	230.01	-0.28
86/ 4/ 4	2446524.5	-0.25838	-0.37909	-0.00787	30.44142	-25.00160	-4.83169	0.45884	39.68760	235.72	-0.98
86/ 4/ 6	2446526.5	-0.22172	-0.40561	-0.01339	32.95985	-20.88708	-4.72030	0.46245	39.30526	241.34	-1.66
86/ 4/ 8	2446528.5	-0.18241	-0.42728	-0.01875	35.03786	-16.60579	-4.55512	0.46497	39.04040	246.88	-2.31
86/ 4/10	2446530.5	-0.14095	-0.44392	-0.02390	36.67946	-12.18381	-4.33867	0.46637	38.89283	252.39	-2.94
86/ 4/12	2446532.5	-0.09784	-0.45538	-0.02876	37.88496	-7.64398	-4.07287	0.46666	38.86244	257.87	-3.53
86/ 4/14	2446534.5	-0.05359	-0.46154	-0.03329	38.65055	-3.00712	-3.75909	0.46584	38.94918	263.38	-4.10
86/ 4/16	2446536.5	-0.00872	-0.46230	-0.03742	38.96803	1.70662	-3.39826	0.46390	39.15314	268.92	-4.63
86/ 4/18	2446538.5	0.03625	-0.45758	-0.04112	38.82451	6.47650	-2.99092	0.46085	39.47446	274.53	-5.12
86/ 4/20	2446540.5	0.08079	-0.44733	-0.04432	38.20218	11.27976	-2.53732	0.45672	39.91338	280.24	-5.57
86/ 4/22	2446542.5	0.12431	-0.43152	-0.04696	37.07811	16.09008	-2.03758	0.45152	40.47010	286.07	-5.97
86/ 4/24	2446544.5	0.16624	-0.41017	-0.04901	35.42419	20.87561	-1.49175	0.44528	41.14474	292.06	-6.32
86/ 4/26	2446546.5	0.20593	-0.38332	-0.05039	33.20727	25.59676	-0.90012	0.43804	41.93718	298.25	-6.61
86/ 4/28	2446548.5	0.24272	-0.35108	-0.05107	30.38965	30.20340	-0.26339	0.42986	42.84677	304.66	-6.82
86/ 4/30	2446550.5	0.27589	-0.31361	-0.05098	26.93030	34.63145	0.41687	0.42079	43.87200	311.34	-6.96
86/ 5/ 2	2446552.5	0.30467	-0.27117	-0.05009	22.78695	38.79887	1.13770	0.41094	45.00991	318.33	-7.00
86/ 5/ 4	2446554.5	0.32825	-0.22412	-0.04834	17.91999	42.60092	1.89405	0.40040	46.25529	325.68	-6.93
86/ 5/ 6	2446556.5	0.34578	-0.17295	-0.04570	12.29853	45.90528	2.67779	0.38931	47.59957	333.43	-6.74
86/ 5/ 8	2446558.5	0.35637	-0.11832	-0.04215	5.91003	48.54741	3.47645	0.37786	49.02922	341.63	-6.40
86/ 5/10	2446560.5	0.35914	-0.06113	-0.03767	-1.22567	50.32804	4.27176	0.36625	50.52387	350.34	-5.90
86/ 5/12	2446562.5	0.35328	-0.00248	-0.03229	-9.03725	51.01530	5.03807	0.35476	52.05397	359.60	-5.22
86/ 5/14	2446564.5	0.33806	0.05621	-0.02606	-17.37816	50.35561	5.74111	0.34369	53.57843	9.44	-4.35
86/ 5/16	2446566.5	0.31302	0.11324	-0.01907	-26.00192	48.09848	6.33779	0.33342	55.04299	19.89	-3.28
86/ 5/18	2446568.5	0.27802	0.16663	-0.01148	-34.54430	44.03957	6.77813	0.32434	56.38028	30.94	-2.03
86/ 5/20	2446570.5	0.23343	0.21424	-0.00349	-42.52596	38.08102	7.01050	0.31686	57.51321	42.55	-0.63
86/ 5/22	2446572.5	0.18021	0.25390	0.00462	-49.39059	30.29746	6.99056	0.31139	58.36295	54.63	0.85
86/ 5/24	2446574.5	0.11997	0.28364	0.01255	-54.58544	20.98283	6.69238	0.30823	58.86117	67.07	2.33
86/ 5/26	2446576.5	0.05492	0.30198	0.01997	-57.67092	10.64707	6.11820	0.30758	58.96378	79.69	3.72
86/ 5/28	2446578.5	-0.01235	0.30810	0.02659	-58.42123	-0.05320	5.30180	0.30949	58.66134	92.30	4.93
86/ 5/30	2446580.5	-0.07915	0.30198	0.03215	-56.87230	-10.43375	4.30299	0.31383	57.98136	104.69	5.88
86/ 6/ 1	2446582.5	-0.14296	0.28435	0.03649	-53.29593	-19.90570	3.19514	0.32034	56.98160	116.69	6.54
86/ 6/ 3	2446584.5	-0.20166	0.25651	0.03952	-48.11711	-28.05680	2.05095	0.32867	55.73730	128.17	6.91
86/ 6/ 5	2446586.5	-0.25368	0.22012	0.04124	-41.81456	-34.67239	0.93162	0.33839	54.32771	139.05	7.00
86/ 6/ 7	2446588.5	-0.29800	0.17702	0.04170	-34.84011	-39.70790	-0.11811	0.34911	52.82579	149.29	6.86
86/ 6/ 9	2446590.5	-0.33406	0.12897	0.04100	-27.57210	-43.23846	-1.07010	0.36043	51.29259	158.89	6.53
86/ 6/11	2446592.5	-0.36169	0.07765	0.03927	-20.30017	-45.40789	-1.90992	0.37201	49.77571	167.88	6.06
86/ 6/13	2446594.5	-0.38103	0.02453	0.03664	-13.23017	-46.38865	-2.63314	0.38357	48.31022	176.32	5.48
86/ 6/15	2446596.5	-0.39239	-0.02912	0.03323	-6.49864	-46.35541	-3.24179	0.39487	46.92085	184.24	4.83
86/ 6/17	2446598.5	-0.39621	-0.08223	0.02919	-0.18951	-45.47020	-3.74165	0.40570	45.62428	191.73	4.13
86/ 6/19	2446600.5	-0.39301	-0.13390	0.02463	5.65081	-43.87565	-4.14029	0.41592	44.43137	198.81	3.39

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86/ 6/21	2446602.5	-0.38334	-0.18337	0.01966	11.00124	-41.69330	-4.44584	0.42540	43.34887	205.56	2.65
86/ 6/23	2446604.5	-0.36778	-0.23003	0.01439	15.85688	-39.02451	-4.66624	0.43403	42.38074	212.02	1.90
86/ 6/25	2446606.5	-0.34690	-0.27336	0.00891	20.22243	-35.95272	-4.80882	0.44175	41.52914	218.24	1.16
86/ 6/27	2446608.5	-0.32125	-0.31296	0.00331	24.10763	-32.54607	-4.88008	0.44850	40.79510	224.25	0.42
86/ 6/29	2446610.5	-0.29139	-0.34844	-0.00234	27.52410	-28.86005	-4.88567	0.45423	40.17895	230.10	-0.30
86/ 7/ 1	2446612.5	-0.25784	-0.37954	-0.00796	30.48324	-24.93987	-4.83037	0.45891	39.68070	235.81	-0.99
86/ 7/ 3	2446614.5	-0.22114	-0.40598	-0.01348	32.99485	-20.82260	-4.71813	0.46250	39.30015	241.42	-1.67
86/ 7/ 5	2446616.5	-0.18179	-0.42758	-0.01884	35.06615	-16.53897	-4.55215	0.46500	39.03709	246.97	-2.32
86/ 7/ 7	2446618.5	-0.14030	-0.44414	-0.02397	36.70107	-12.11504	-4.33493	0.46639	38.89132	252.47	-2.95
86/ 7/ 9	2446620.5	-0.09717	-0.45552	-0.02883	37.89987	-7.57357	-4.06838	0.46666	38.86272	257.96	-3.54
86/ 7/11	2446622.5	-0.05291	-0.46160	-0.03335	38.65868	-2.93540	-3.75388	0.46582	38.95128	263.46	-4.11
86/ 7/13	2446624.5	-0.00803	-0.46227	-0.03748	38.96923	1.77935	-3.39233	0.46386	39.15705	269.00	-4.64
86/ 7/15	2446626.5	0.03694	-0.45747	-0.04117	38.81853	6.54990	-2.98428	0.46080	39.48019	274.62	-5.13
86/ 7/17	2446628.5	0.08146	-0.44713	-0.04436	38.18871	11.35349	-2.52998	0.45665	39.92093	280.33	-5.57
86/ 7/19	2446630.5	0.12497	-0.43123	-0.04700	37.05676	16.16367	-2.02952	0.45143	40.47946	286.16	-5.98
86/ 7/21	2446632.5	0.16686	-0.40980	-0.04903	35.39449	20.94854	-1.48300	0.44517	41.15593	292.16	-6.32
86/ 7/23	2446634.5	0.20652	-0.38286	-0.05041	33.16867	25.66836	-0.89066	0.43792	41.95020	298.34	-6.61
86/ 7/25	2446636.5	0.24326	-0.35054	-0.05107	30.34156	30.27282	-0.25325	0.42972	42.86161	304.76	-6.83
86/ 7/27	2446638.5	0.27636	-0.31300	-0.05098	26.87205	34.69758	0.42765	0.42065	43.88864	311.44	-6.96
86/ 7/29	2446640.5	0.30507	-0.27048	-0.05007	22.71792	38.86031	1.14907	0.41078	45.02830	318.44	-7.00
86/ 7/31	2446642.5	0.32857	-0.22336	-0.04831	17.83958	42.65587	1.90592	0.40023	46.27533	325.79	-6.93
86/ 8/ 2	2446644.5	0.34599	-0.17213	-0.04566	12.20635	45.95145	2.69000	0.38914	47.62107	333.55	-6.74
86/ 8/ 4	2446646.5	0.35647	-0.11746	-0.04209	5.80608	48.58200	3.48877	0.37768	49.05194	341.76	-6.40
86/ 8/ 6	2446648.5	0.35912	-0.06023	-0.03760	-1.34078	50.34772	4.28386	0.36607	50.54743	350.48	-5.89
86/ 8/ 8	2446650.5	0.35311	-0.00157	-0.03220	-9.16192	51.01628	5.04949	0.35458	52.07782	359.74	-5.21
86/ 8/10	2446652.5	0.33775	0.05710	-0.02596	-17.50945	50.33390	5.75125	0.34352	53.60186	9.60	-4.33
86/ 8/12	2446654.5	0.31255	0.11409	-0.01896	-26.13517	48.05042	6.34592	0.33327	55.06505	20.05	-3.26
86/ 8/14	2446656.5	0.27741	0.16741	-0.01136	-34.67297	43.96263	6.78345	0.32421	56.39985	31.11	-2.01
86/ 8/16	2446658.5	0.23267	0.21492	-0.00337	-42.64192	37.97481	7.01224	0.31676	57.52905	42.73	-0.61
86/ 8/18	2446660.5	0.17933	0.25444	0.00475	-49.48500	30.16471	6.98813	0.31132	58.37387	54.82	0.87
86/ 8/20	2446662.5	0.11900	0.28401	0.01267	-54.65032	20.82978	6.68559	0.30820	58.86624	67.27	2.36
86/ 8/22	2446664.5	0.05389	0.30216	0.02008	-57.70087	10.48300	6.10732	0.30759	58.96256	79.89	3.74
86/ 8/24	2446666.5	-0.01340	0.30809	0.02669	-58.41471	-0.21760	5.28757	0.30954	58.65394	92.49	4.95
86/ 8/26	2446668.5	-0.08017	0.30179	0.03223	-56.83180	-10.58836	4.28649	0.31391	57.96845	104.88	5.89
86/ 8/28	2446670.5	-0.14391	0.28399	0.03655	-53.22707	-20.04260	3.17753	0.32046	56.96423	116.87	6.55
86/ 8/30	2446672.5	-0.20252	0.25600	0.03956	-48.02711	-28.17114	2.03328	0.32881	55.71670	128.35	6.91
86/ 9/ 1	2446674.5	-0.25443	0.21950	0.04125	-41.71079	-34.76227	0.91473	0.33855	54.30509	139.21	7.00
86/ 9/ 3	2446676.5	-0.29862	0.17630	0.04170	-34.72907	-39.77368	-0.13367	0.34928	52.80220	149.44	6.86
86/ 9/ 5	2446678.5	-0.33455	0.12820	0.04098	-27.45898	-43.28196	-1.08400	0.36061	51.26888	159.03	6.53
86/ 9/ 7	2446680.5	-0.36206	0.07684	0.03924	-20.18877	-45.43164	-1.92203	0.37219	49.75253	168.02	6.05
86/ 9/ 9	2446682.5	-0.38127	0.02370	0.03659	-13.12311	-46.39538	-2.64344	0.38375	48.28804	176.44	5.47
86/ 9/11	2446684.5	-0.39250	-0.02995	0.03317	-6.39758	-46.34774	-3.25036	0.39504	46.89997	184.36	4.82
86/ 9/13	2446686.5	-0.39621	-0.08305	0.02912	-0.09544	-45.45049	-3.74858	0.40587	45.60491	191.84	4.11
86/ 9/15	2446688.5	-0.39291	-0.13468	0.02455	5.73740	-43.84595	-4.14571	0.41607	44.41364	198.92	3.38
86/ 9/17	2446690.5	-0.38315	-0.18411	0.01958	11.08016	-41.65533	-4.44988	0.42554	43.33287	205.67	2.64

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86/ 9/19	2446692.5	-0.36750	-0.23073	0.01431	15.92815	-38.97970	-4.66902	0.43416	42.36653	212.12	1.89
86/ 9/21	2446694.5	-0.34654	-0.27401	0.00882	20.28617	-35.90225	-4.81043	0.44187	41.51675	218.33	1.14
86/ 9/23	2446696.5	-0.32082	-0.31354	0.00322	24.16402	-32.49090	-4.88063	0.44860	40.78454	224.34	0.41
86/ 9/25	2446698.5	-0.29089	-0.34896	-0.00243	27.57332	-28.80095	-4.88525	0.45431	40.17024	230.19	-0.31
86/ 9/27	2446700.5	-0.25730	-0.37998	-0.00804	30.52546	-24.87747	-4.82904	0.45897	39.67382	235.90	-1.00
86/ 9/29	2446702.5	-0.22055	-0.40636	-0.01356	33.03021	-20.75741	-4.71594	0.46255	39.29510	241.51	-1.68
86/10/ 1	2446704.5	-0.18116	-0.42787	-0.01892	35.09471	-16.47143	-4.54914	0.46503	39.03385	247.05	-2.33
86/10/ 3	2446706.5	-0.13964	-0.44435	-0.02405	36.72289	-12.04552	-4.33114	0.46640	38.88989	252.55	-2.96
86/10/ 5	2446708.5	-0.09649	-0.45565	-0.02890	37.91492	-7.50240	-4.06384	0.46666	38.86312	258.04	-3.55
86/10/ 7	2446710.5	-0.05222	-0.46165	-0.03342	38.66687	-2.86289	-3.74861	0.46579	38.95349	263.55	-4.11
86/10/ 9	2446712.5	-0.00734	-0.46224	-0.03755	38.97039	1.85288	-3.38633	0.46382	39.16110	269.09	-4.64
86/10/11	2446714.5	0.03763	-0.45735	-0.04123	38.81244	6.62414	-2.97756	0.46074	39.48608	274.70	-5.13
86/10/13	2446716.5	0.08214	-0.44692	-0.04441	38.17505	11.42805	-2.52255	0.45657	39.92866	280.41	-5.58
86/10/15	2446718.5	0.12563	-0.43094	-0.04704	37.03512	16.23812	-2.02138	0.45134	40.48905	286.25	-5.98
86/10/17	2446720.5	0.16749	-0.40942	-0.04906	35.36440	21.02234	-1.47414	0.44507	41.16737	292.25	-6.33
86/10/19	2446722.5	0.20711	-0.38240	-0.05042	33.12956	25.74082	-0.88109	0.43780	41.96348	298.44	-6.61
86/10/21	2446724.5	0.24380	-0.35000	-0.05108	30.29281	30.34306	-0.24299	0.42959	42.87674	304.86	-6.83
86/10/23	2446726.5	0.27684	-0.31238	-0.05097	26.81300	34.76450	0.43857	0.42050	43.90557	311.55	-6.96
86/10/25	2446728.5	0.30548	-0.26979	-0.05005	22.64790	38.92244	1.16060	0.41062	45.04698	318.55	-7.00
86/10/27	2446730.5	0.32888	-0.22260	-0.04827	17.75801	42.71139	1.91794	0.40006	46.29566	325.91	-6.93
86/10/29	2446732.5	0.34621	-0.17131	-0.04561	12.11285	45.99805	2.70237	0.38896	47.64289	333.67	-6.73
86/10/31	2446734.5	0.35657	-0.11659	-0.04202	5.70066	48.61685	3.50124	0.37750	49.07498	341.89	-6.39
86/11/ 2	2446736.5	0.35909	-0.05933	-0.03752	-1.45747	50.36743	4.29610	0.36589	50.57132	350.62	-5.89
86/11/ 4	2446738.5	0.35294	-0.00066	-0.03211	-9.28825	51.01700	5.06103	0.35440	52.10201	359.89	-5.20
86/11/ 6	2446740.5	0.33743	0.05801	-0.02585	-17.64241	50.31159	5.76148	0.34336	53.62560	9.75	-4.32
86/11/ 8	2446742.5	0.31208	0.11495	-0.01884	-26.26999	48.00138	6.35411	0.33311	55.08738	20.22	-3.24
86/11/10	2446744.5	0.27678	0.16820	-0.01123	-34.80299	43.88432	6.78878	0.32407	56.41958	31.29	-1.99
86/11/12	2446746.5	0.23190	0.21560	-0.00324	-42.75888	37.86690	7.01393	0.31666	57.54493	42.91	-0.59
86/11/14	2446748.5	0.17843	0.25498	0.00487	-49.57995	30.03004	6.98560	0.31125	58.38470	55.02	0.90
86/11/16	2446750.5	0.11801	0.28439	0.01279	-54.71522	20.67478	6.67864	0.30817	58.87110	67.46	2.38
86/11/18	2446752.5	0.05285	0.30235	0.02019	-57.73035	10.31709	6.09625	0.30760	58.96101	80.08	3.76
86/11/20	2446754.5	-0.01445	0.30809	0.02678	-58.40733	-0.38358	5.27315	0.30959	58.64613	92.69	4.96
86/11/22	2446756.5	-0.08119	0.30160	0.03231	-56.79018	-10.74416	4.26979	0.31400	57.95509	105.07	5.91
86/11/24	2446758.5	-0.14487	0.28362	0.03660	-53.15695	-20.18032	3.15974	0.32058	56.94639	117.06	6.56
86/11/26	2446760.5	-0.20338	0.25549	0.03959	-47.93584	-28.28595	2.01546	0.32895	55.69562	128.52	6.91
86/11/28	2446762.5	-0.25518	0.21887	0.04127	-41.60582	-34.85232	0.89771	0.33871	54.28198	139.38	7.00
86/11/30	2446764.5	-0.29925	0.17559	0.04169	-34.61694	-39.83940	-0.14932	0.34945	52.77814	149.60	6.85
86/12/ 2	2446766.5	-0.33504	0.12742	0.04096	-27.34491	-43.32521	-1.09797	0.36079	51.24474	159.18	6.52
86/12/ 4	2446768.5	-0.36242	0.07602	0.03920	-20.07658	-45.45502	-1.93418	0.37238	49.72896	168.15	6.04
86/12/ 6	2446770.5	-0.38151	0.02286	0.03654	-13.01540	-46.40167	-2.65377	0.38393	48.26550	176.57	5.46
86/12/ 8	2446772.5	-0.39262	-0.03079	0.03311	-6.29601	-46.33961	-3.25893	0.39522	46.87878	184.48	4.81
86/12/10	2446774.5	-0.39621	-0.08386	0.02905	-0.00096	-45.43032	-3.75551	0.40603	45.58528	191.95	4.10
86/12/12	2446776.5	-0.39280	-0.13547	0.02448	5.82431	-43.81582	-4.15112	0.41623	44.39572	199.03	3.37
86/12/14	2446778.5	-0.38295	-0.18486	0.01950	11.15934	-41.61696	-4.45390	0.42568	43.31674	205.77	2.63
86/12/16	2446780.5	-0.36721	-0.23143	0.01422	15.99961	-38.93453	-4.67177	0.43429	42.35222	212.22	1.88

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
86/12/18	2446782.5	-0.34617	-0.27465	0.00874	20.35007	-35.85144	-4.81203	0.44198	41.50430	218.43	1.13
86/12/20	2446784.5	-0.32039	-0.31412	0.00313	24.22053	-32.43540	-4.88117	0.44870	40.77396	224.43	0.40
86/12/22	2446786.5	-0.29040	-0.34948	-0.00251	27.62263	-28.74153	-4.88481	0.45439	40.16151	230.27	-0.32
86/12/24	2446788.5	-0.25675	-0.38043	-0.00813	30.56775	-24.81477	-4.82768	0.45903	39.66695	235.98	-1.01
86/12/26	2446790.5	-0.21996	-0.40673	-0.01365	33.06562	-20.69193	-4.71373	0.46260	39.29008	241.60	-1.69
86/12/28	2446792.5	-0.18053	-0.42817	-0.01900	35.12334	-16.40362	-4.54612	0.46506	39.03069	247.14	-2.34
86/12/30	2446794.5	-0.13898	-0.44457	-0.02413	36.74477	-11.97574	-4.32734	0.46641	38.88859	252.64	-2.97

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
86/12/16	2446780.5	-0.36721	-0.23143	0.01422	15.99961	-38.93453	-4.67177	0.43429	42.35222	212.22	1.88
86/12/18	2446782.5	-0.34617	-0.27465	0.00874	20.35007	-35.85144	-4.81203	0.44198	41.50430	218.43	1.13
86/12/20	2446784.5	-0.32039	-0.31412	0.00313	24.22053	-32.43540	-4.88117	0.44870	40.77396	224.43	0.40
86/12/22	2446786.5	-0.29040	-0.34948	-0.00251	27.62263	-28.74153	-4.88481	0.45439	40.16151	230.27	-0.32
86/12/24	2446788.5	-0.25675	-0.38043	-0.00813	30.56775	-24.81477	-4.82768	0.45903	39.66695	235.98	-1.01
86/12/26	2446790.5	-0.21996	-0.40673	-0.01365	33.06562	-20.69193	-4.71373	0.46260	39.29008	241.60	-1.69
86/12/28	2446792.5	-0.18053	-0.42817	-0.01900	35.12334	-16.40362	-4.54612	0.46506	39.03069	247.14	-2.34
86/12/30	2446794.5	-0.13898	-0.44457	-0.02413	36.74477	-11.97574	-4.32734	0.46641	38.88859	252.64	-2.97
87/ 1/ 1	2446796.5	-0.09581	-0.45579	-0.02898	37.93002	-7.43100	-4.05929	0.46665	38.86366	258.13	-3.56
87/ 1/ 3	2446798.5	-0.05153	-0.46170	-0.03349	38.67511	-2.79017	-3.74332	0.46577	38.95589	263.63	-4.12
87/ 1/ 5	2446800.5	-0.00664	-0.46220	-0.03761	38.97159	1.92662	-3.38032	0.46378	39.16533	269.18	-4.65
87/ 1/ 7	2446802.5	0.03833	-0.45723	-0.04128	38.80636	6.69856	-2.97083	0.46068	39.49216	274.79	-5.14
87/ 1/ 9	2446804.5	0.08283	-0.44672	-0.04445	38.16137	11.50279	-2.51510	0.45650	39.93657	280.50	-5.59
87/ 1/11	2446806.5	0.12629	-0.43065	-0.04707	37.01344	16.31273	-2.01321	0.45125	40.49880	286.34	-5.99
87/ 1/13	2446808.5	0.16813	-0.40904	-0.04908	35.33422	21.09627	-1.46525	0.44496	41.17896	292.34	-6.33
87/ 1/15	2446810.5	0.20770	-0.38194	-0.05044	33.09034	25.81338	-0.87150	0.43768	41.97691	298.54	-6.62
87/ 1/17	2446812.5	0.24434	-0.34945	-0.05108	30.24392	30.41336	-0.23271	0.42945	42.89198	304.96	-6.83
87/ 1/19	2446814.5	0.27732	-0.31175	-0.05096	26.75379	34.83140	0.44951	0.42035	43.92258	311.66	-6.96
87/ 1/21	2446816.5	0.30588	-0.26909	-0.05003	22.57771	38.98449	1.17213	0.41046	45.06570	318.66	-7.00
87/ 1/23	2446818.5	0.32920	-0.22183	-0.04824	17.67628	42.76673	1.92996	0.39989	46.31597	326.03	-6.93
87/ 1/25	2446820.5	0.34643	-0.17048	-0.04556	12.01922	46.04437	2.71472	0.38878	47.66461	333.80	-6.73
87/ 1/27	2446822.5	0.35667	-0.11572	-0.04196	5.59517	48.65129	3.51369	0.37732	49.09786	342.02	-6.39
87/ 1/29	2446824.5	0.35906	-0.05843	-0.03744	-1.57413	50.38661	4.30829	0.36571	50.59496	350.76	-5.88
87/ 1/31	2446826.5	0.35278	0.00026	-0.03202	-9.41439	51.01709	5.07250	0.35423	52.12585	0.04	-5.19
87/ 2/ 2	2446828.5	0.33711	0.05891	-0.02575	-17.77497	50.28858	5.77163	0.34319	53.64888	9.91	-4.30
87/ 2/ 4	2446830.5	0.31161	0.11581	-0.01873	-26.40416	47.95164	6.36218	0.33296	55.10914	20.39	-3.22
87/ 2/ 6	2446832.5	0.27615	0.16899	-0.01111	-34.93210	43.80542	6.79397	0.32395	56.43868	31.46	-1.97
87/ 2/ 8	2446834.5	0.23113	0.21628	-0.00311	-42.87468	37.75862	7.01548	0.31656	57.56013	43.10	-0.56
87/ 2/10	2446836.5	0.17755	0.25551	0.00500	-49.67358	29.89535	6.98295	0.31118	58.39485	55.21	0.92
87/ 2/12	2446838.5	0.11703	0.28476	0.01291	-54.77879	20.52019	6.67161	0.30814	58.87533	67.66	2.40
87/ 2/14	2446840.5	0.05182	0.30254	0.02030	-57.75866	10.15203	6.08515	0.30761	58.95893	80.28	3.78
87/ 2/16	2446842.5	-0.01550	0.30808	0.02688	-58.39907	-0.54836	5.25874	0.30964	58.63793	92.88	4.98
87/ 2/18	2446844.5	-0.08221	0.30140	0.03238	-56.74810	-10.89859	4.25316	0.31409	57.94148	105.26	5.92
87/ 2/20	2446846.5	-0.14582	0.28326	0.03666	-53.08683	-20.31665	3.14206	0.32069	56.92846	117.24	6.56
87/ 2/22	2446848.5	-0.20424	0.25499	0.03963	-47.84496	-28.39950	1.99778	0.32909	55.67462	128.69	6.92
87/ 2/24	2446850.5	-0.25592	0.21825	0.04129	-41.50154	-34.94133	0.88085	0.33887	54.25910	139.54	7.00
87/ 2/26	2446852.5	-0.29986	0.17488	0.04169	-34.50571	-39.90436	-0.16483	0.34963	52.75442	149.75	6.85
87/ 2/28	2446854.5	-0.33553	0.12664	0.04094	-27.23183	-43.36799	-1.11180	0.36097	51.22100	159.32	6.51
87/ 3/ 2	2446856.5	-0.36278	0.07521	0.03917	-19.96540	-45.47816	-1.94622	0.37256	49.70581	168.29	6.03
87/ 3/ 4	2446858.5	-0.38174	0.02204	0.03649	-12.90865	-46.40792	-2.66400	0.38411	48.24340	176.70	5.45
87/ 3/ 6	2446860.5	-0.39273	-0.03161	0.03306	-6.19533	-46.33160	-3.26743	0.39539	46.85803	184.60	4.80
87/ 3/ 8	2446862.5	-0.39621	-0.08467	0.02899	0.09272	-45.41041	-3.76239	0.40620	45.56610	192.06	4.09
87/ 3/10	2446864.5	-0.39270	-0.13625	0.02440	5.91051	-43.78602	-4.15650	0.41638	44.37822	199.13	3.36
87/ 3/12	2446866.5	-0.38275	-0.18560	0.01942	11.23789	-41.57900	-4.45791	0.42582	43.30099	205.87	2.61
87/ 3/14	2446868.5	-0.36693	-0.23212	0.01414	16.07055	-38.88980	-4.67452	0.43441	42.33828	212.32	1.86

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
87/ 3/16	2446870.5	-0.34581	-0.27529	0.00865	20.41351	-35.80109	-4.81363	0.44209	41.49217	218.52	1.12
87/ 3/18	2446872.5	-0.31996	-0.31470	0.00304	24.27665	-32.38037	-4.88172	0.44879	40.76365	224.53	0.39
87/ 3/20	2446874.5	-0.28991	-0.34999	-0.00260	27.67161	-28.68259	-4.88438	0.45447	40.15304	230.36	-0.33
87/ 3/22	2446876.5	-0.25620	-0.38087	-0.00822	30.60977	-24.75254	-4.82634	0.45910	39.66031	236.07	-1.03
87/ 3/24	2446878.5	-0.21937	-0.40710	-0.01373	33.10081	-20.62694	-4.71154	0.46264	39.28527	241.68	-1.70
87/ 3/26	2446880.5	-0.17991	-0.42846	-0.01908	35.15178	-16.33629	-4.54312	0.46509	39.02771	247.22	-2.35
87/ 3/28	2446882.5	-0.13833	-0.44478	-0.02421	36.76649	-11.90647	-4.32357	0.46642	38.88743	252.72	-2.97
87/ 3/30	2446884.5	-0.09514	-0.45592	-0.02905	37.94499	-7.36010	-4.05477	0.46665	38.86431	258.21	-3.57
87/ 4/ 1	2446886.5	-0.05084	-0.46175	-0.03355	38.68322	-2.71796	-3.73806	0.46575	38.95834	263.72	-4.13
87/ 4/ 3	2446888.5	-0.00594	-0.46217	-0.03767	38.97269	1.99981	-3.37435	0.46374	39.16958	269.26	-4.66
87/ 4/ 5	2446890.5	0.03902	-0.45711	-0.04133	38.80021	6.77242	-2.96414	0.46063	39.49820	274.88	-5.15
87/ 4/ 7	2446892.5	0.08351	-0.44651	-0.04450	38.14764	11.57691	-2.50770	0.45643	39.94441	280.59	-5.59
87/ 4/ 9	2446894.5	0.12695	-0.43036	-0.04711	36.99175	16.38668	-2.00510	0.45116	40.50843	286.44	-5.99
87/ 4/11	2446896.5	0.16876	-0.40867	-0.04911	35.30409	21.16947	-1.45644	0.44486	41.19037	292.44	-6.34
87/ 4/13	2446898.5	0.20829	-0.38148	-0.05045	33.05123	25.88513	-0.86199	0.43756	41.99008	298.64	-6.62
87/ 4/15	2446900.5	0.24488	-0.34891	-0.05108	30.19521	30.48277	-0.22252	0.42932	42.90687	305.06	-6.83
87/ 4/17	2446902.5	0.27780	-0.31113	-0.05095	26.69485	34.89733	0.46034	0.42021	43.93917	311.76	-6.96
87/ 4/19	2446904.5	0.30629	-0.26840	-0.05001	22.50792	39.04549	1.18353	0.41030	45.08389	318.77	-7.00
87/ 4/21	2446906.5	0.32952	-0.22107	-0.04820	17.59512	42.82097	1.94184	0.39972	46.33567	326.14	-6.93
87/ 4/23	2446908.5	0.34664	-0.16967	-0.04551	11.92639	46.08956	2.72691	0.38861	47.68567	333.92	-6.73
87/ 4/25	2446910.5	0.35678	-0.11486	-0.04190	5.49074	48.68463	3.52595	0.37714	49.11999	342.16	-6.38
87/ 4/27	2446912.5	0.35904	-0.05753	-0.03737	-1.68942	50.40477	4.32028	0.36554	50.61778	350.90	-5.87
87/ 4/29	2446914.5	0.35261	0.00116	-0.03193	-9.53884	51.01632	5.08375	0.35406	52.14881	0.19	-5.17
87/ 5/ 1	2446916.5	0.33680	0.05980	-0.02565	-17.90550	50.26501	5.78154	0.34303	53.67126	10.07	-4.29
87/ 5/ 3	2446918.5	0.31115	0.11666	-0.01862	-26.53602	47.90177	6.37003	0.33282	55.13000	20.55	-3.21
87/ 5/ 5	2446920.5	0.27554	0.16976	-0.01099	-35.05870	43.72695	6.79897	0.32382	56.45693	31.64	-1.95
87/ 5/ 7	2446922.5	0.23038	0.21694	-0.00299	-42.98792	37.65148	7.01689	0.31646	57.57458	43.28	-0.54
87/ 5/ 9	2446924.5	0.17667	0.25604	0.00512	-49.76484	29.76254	6.98024	0.31112	58.40439	55.39	0.94
87/ 5/11	2446926.5	0.11607	0.28512	0.01303	-54.84042	20.36816	6.66461	0.30811	58.87912	67.85	2.42
87/ 5/13	2446928.5	0.05081	0.30272	0.02041	-57.78567	9.99003	6.07417	0.30763	58.95659	80.47	3.80
87/ 5/15	2446930.5	-0.01652	0.30807	0.02697	-58.39031	-0.70982	5.24456	0.30969	58.62966	93.07	5.00
87/ 5/17	2446932.5	-0.08320	0.30122	0.03246	-56.70632	-11.04973	4.23683	0.31418	57.92801	105.44	5.93
87/ 5/19	2446934.5	-0.14675	0.28291	0.03672	-53.01774	-20.44995	3.12473	0.32081	56.91085	117.42	6.57
87/ 5/21	2446936.5	-0.20507	0.25449	0.03966	-47.75569	-28.51048	1.98046	0.32923	55.65407	128.86	6.92
87/ 5/23	2446938.5	-0.25665	0.21764	0.04130	-41.39926	-35.02831	0.86433	0.33903	54.23678	139.70	7.00
87/ 5/25	2446940.5	-0.30047	0.17418	0.04169	-34.39669	-39.96782	-0.18001	0.34979	52.73131	149.90	6.84
87/ 5/27	2446942.5	-0.33601	0.12589	0.04092	-27.12103	-43.40978	-1.12535	0.36114	51.19791	159.46	6.51
87/ 5/29	2446944.5	-0.36313	0.07441	0.03913	-19.85645	-45.50080	-1.95801	0.37273	49.68335	168.42	6.03
87/ 5/31	2446946.5	-0.38196	0.02123	0.03645	-12.80402	-46.41407	-2.67404	0.38428	48.22198	176.82	5.44
87/ 6/ 2	2446948.5	-0.39284	-0.03242	0.03300	-6.09659	-46.32382	-3.27577	0.39555	46.83796	184.72	4.79
87/ 6/ 4	2446950.5	-0.39621	-0.08547	0.02892	0.18466	-45.39098	-3.76914	0.40635	45.54758	192.17	4.08
87/ 6/ 6	2446952.5	-0.39259	-0.13702	0.02433	5.99518	-43.75692	-4.16179	0.41653	44.36137	199.24	3.35
87/ 6/ 8	2446954.5	-0.38255	-0.18633	0.01934	11.31512	-41.54187	-4.46186	0.42595	43.28587	205.97	2.60
87/ 6/10	2446956.5	-0.36664	-0.23280	0.01406	16.14034	-38.84600	-4.67724	0.43454	42.32492	212.41	1.85
87/ 6/12	2446958.5	-0.34545	-0.27592	0.00857	20.47598	-35.75175	-4.81522	0.44220	41.48059	218.61	1.11

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87/ 6/14	2446960.5	-0.31953	-0.31526	0.00296	24.33194	-32.32639	-4.88227	0.44889	40.75384	224.62	0.38
87/ 6/16	2446962.5	-0.28942	-0.35049	-0.00269	27.71991	-28.62472	-4.88397	0.45455	40.14500	230.45	-0.34
87/ 6/18	2446964.5	-0.25566	-0.38130	-0.00830	30.65121	-24.69139	-4.82504	0.45916	39.65403	236.16	-1.04
87/ 6/20	2446966.5	-0.21878	-0.40746	-0.01381	33.13551	-20.56302	-4.70939	0.46269	39.28076	241.77	-1.71
87/ 6/22	2446968.5	-0.17928	-0.42874	-0.01916	35.17982	-16.27002	-4.54017	0.46512	39.02495	247.31	-2.36
87/ 6/24	2446970.5	-0.13768	-0.44499	-0.02428	36.78788	-11.83820	-4.31985	0.46644	38.88641	252.81	-2.98
87/ 6/26	2446972.5	-0.09447	-0.45605	-0.02912	37.95969	-7.29018	-4.05030	0.46664	38.86502	258.30	-3.58
87/ 6/28	2446974.5	-0.05015	-0.46180	-0.03362	38.69112	-2.64670	-3.73287	0.46573	38.96077	263.80	-4.14
87/ 6/30	2446976.5	-0.00526	-0.46213	-0.03773	38.97361	2.07211	-3.36843	0.46370	39.17375	269.35	-4.67
87/ 7/ 2	2446978.5	0.03970	-0.45699	-0.04138	38.79391	6.84540	-2.95751	0.46057	39.50410	274.97	-5.16
87/ 7/ 4	2446980.5	0.08418	-0.44631	-0.04454	38.13383	11.65019	-2.50035	0.45636	39.95206	280.68	-5.60
87/ 7/ 6	2446982.5	0.12761	-0.43007	-0.04714	36.97002	16.45980	-1.99705	0.45107	40.51784	286.53	-6.00
87/ 7/ 8	2446984.5	0.16938	-0.40829	-0.04914	35.27399	21.24188	-1.44769	0.44476	41.20155	292.53	-6.34
87/ 7/10	2446986.5	0.20888	-0.38103	-0.05047	33.01221	25.95614	-0.85255	0.43744	42.00302	298.73	-6.63
87/ 7/12	2446988.5	0.24541	-0.34838	-0.05109	30.14668	30.55149	-0.21240	0.42919	42.92156	305.16	-6.84
87/ 7/14	2446990.5	0.27827	-0.31052	-0.05094	26.63616	34.96264	0.47110	0.42006	43.95559	311.87	-6.97
87/ 7/16	2446992.5	0.30668	-0.26771	-0.04998	22.43847	39.10597	1.19487	0.41015	45.10199	318.88	-7.00
87/ 7/18	2446994.5	0.32983	-0.22032	-0.04817	17.51436	42.87480	1.95365	0.39956	46.35534	326.26	-6.92
87/ 7/20	2446996.5	0.34685	-0.16886	-0.04546	11.83399	46.13445	2.73903	0.38844	47.70674	334.04	-6.72
87/ 7/22	2446998.5	0.35687	-0.11400	-0.04184	5.38675	48.71777	3.53815	0.37697	49.14221	342.28	-6.37
87/ 7/24	2447000.5	0.35901	-0.05665	-0.03729	-1.80430	50.42284	4.33222	0.36536	50.64076	351.03	-5.86
87/ 7/26	2447002.5	0.35245	0.00206	-0.03184	-9.66292	51.01558	5.09497	0.35389	52.17202	0.33	-5.16
87/ 7/28	2447004.5	0.33649	0.06068	-0.02554	-18.03575	50.24155	5.79143	0.34287	53.69397	10.22	-4.27
87/ 7/30	2447006.5	0.31068	0.11750	-0.01850	-26.66770	47.85207	6.37788	0.33267	55.15128	20.72	-3.19
87/ 8/ 1	2447008.5	0.27492	0.17053	-0.01087	-35.18524	43.64866	6.80399	0.32370	56.47566	31.81	-1.92
87/ 8/ 3	2447010.5	0.22963	0.21760	-0.00287	-43.10123	37.54444	7.01832	0.31637	57.58957	43.46	-0.52
87/ 8/ 5	2447012.5	0.17580	0.25656	0.00524	-49.85624	29.62972	6.97754	0.31106	58.41448	55.58	0.97
87/ 8/ 7	2447014.5	0.11511	0.28547	0.01314	-54.90219	20.21595	6.65761	0.30809	58.88344	68.04	2.45
87/ 8/ 9	2447016.5	0.04979	0.30289	0.02052	-57.81277	9.82770	6.06318	0.30764	58.95475	80.66	3.82
87/ 8/11	2447018.5	-0.01754	0.30806	0.02706	-58.38153	-0.87173	5.23034	0.30974	58.62184	93.26	5.01
87/ 8/13	2447020.5	-0.08420	0.30102	0.03253	-56.66438	-11.20136	4.22045	0.31426	57.91489	105.63	5.94
87/ 8/15	2447022.5	-0.14768	0.28255	0.03677	-52.94833	-20.58375	3.10732	0.32093	56.89351	117.59	6.58
87/ 8/17	2447024.5	-0.20591	0.25399	0.03970	-47.66597	-28.62188	1.96307	0.32937	55.63372	129.03	6.92
87/ 8/19	2447026.5	-0.25738	0.21702	0.04132	-41.29643	-35.11562	0.84774	0.33919	54.21457	139.86	7.00
87/ 8/21	2447028.5	-0.30107	0.17347	0.04168	-34.28705	-40.03149	-0.19526	0.34996	52.70826	150.05	6.84
87/ 8/23	2447030.5	-0.33648	0.12512	0.04090	-27.00959	-43.45165	-1.13896	0.36132	51.17480	159.60	6.50
87/ 8/25	2447032.5	-0.36347	0.07361	0.03910	-19.74686	-45.52334	-1.96985	0.37291	49.66079	168.55	6.02
87/ 8/27	2447034.5	-0.38218	0.02040	0.03640	-12.69881	-46.41998	-2.68410	0.38446	48.20040	176.94	5.43
87/ 8/29	2447036.5	-0.39294	-0.03324	0.03294	-5.99735	-46.31564	-3.28413	0.39572	46.81765	184.84	4.77
87/ 8/31	2447038.5	-0.39620	-0.08627	0.02885	0.27698	-45.37105	-3.77589	0.40651	45.52874	192.28	4.07
87/ 9/ 2	2447040.5	-0.39249	-0.13779	0.02426	6.08011	-43.72722	-4.16706	0.41668	44.34413	199.34	3.34
87/ 9/ 4	2447042.5	-0.38235	-0.18706	0.01926	11.39250	-41.50408	-4.46577	0.42609	43.27032	206.07	2.59
87/ 9/ 6	2447044.5	-0.36636	-0.23349	0.01397	16.21018	-38.80153	-4.67991	0.43466	42.31111	212.51	1.84
87/ 9/ 8	2447046.5	-0.34509	-0.27655	0.00848	20.53839	-35.70172	-4.81676	0.44231	41.46854	218.71	1.10
87/ 9/10	2447048.5	-0.31910	-0.31584	0.00287	24.38711	-32.27175	-4.88276	0.44898	40.74357	224.71	0.37

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87/ 9/12	2447050.5	-0.28893	-0.35100	-0.00277	27.76800	-28.56621	-4.88349	0.45463	40.13650	230.54	-0.35
87/ 9/14	2447052.5	-0.25512	-0.38174	-0.00839	30.69239	-24.62962	-4.82366	0.45922	39.64730	236.24	-1.05
87/ 9/16	2447054.5	-0.21820	-0.40782	-0.01390	33.16989	-20.49850	-4.70717	0.46273	39.27579	241.85	-1.72
87/ 9/18	2447056.5	-0.17866	-0.42903	-0.01924	35.20749	-16.20319	-4.53714	0.46514	39.02174	247.39	-2.37
87/ 9/20	2447058.5	-0.13703	-0.44520	-0.02436	36.80888	-11.76944	-4.31605	0.46645	38.88498	252.89	-2.99
87/ 9/22	2447060.5	-0.09380	-0.45618	-0.02919	37.97399	-7.21981	-4.04576	0.46663	38.86538	258.38	-3.59
87/ 9/24	2447062.5	-0.04947	-0.46184	-0.03369	38.69864	-2.57504	-3.72760	0.46570	38.96293	263.89	-4.15
87/ 9/26	2447064.5	-0.00457	-0.46210	-0.03779	38.97419	2.14475	-3.36245	0.46366	39.17772	269.43	-4.67
87/ 9/28	2447066.5	0.04039	-0.45687	-0.04144	38.78732	6.91870	-2.95083	0.46052	39.50990	275.05	-5.16
87/ 9/30	2447068.5	0.08485	-0.44610	-0.04458	38.11974	11.72379	-2.49296	0.45628	39.95969	280.77	-5.61
87/10/ 2	2447070.5	0.12826	-0.42978	-0.04718	36.94804	16.53325	-1.98896	0.45098	40.52730	286.62	-6.00
87/10/ 4	2447072.5	0.17000	-0.40792	-0.04916	35.24364	21.31465	-1.43889	0.44465	41.21285	292.62	-6.35
87/10/ 6	2447074.5	0.20946	-0.38057	-0.05048	32.97293	26.02754	-0.84305	0.43732	42.01616	298.83	-6.63
87/10/ 8	2447076.5	0.24594	-0.34784	-0.05109	30.09786	30.62065	-0.20222	0.42905	42.93654	305.26	-6.84
87/10/10	2447078.5	0.27874	-0.30990	-0.05093	26.57715	35.02845	0.48192	0.41991	43.97237	311.97	-6.97
87/10/12	2447080.5	0.30708	-0.26702	-0.04996	22.36861	39.16698	1.20628	0.40999	45.12052	318.99	-7.00
87/10/14	2447082.5	0.33014	-0.21956	-0.04813	17.43308	42.92918	1.96556	0.39939	46.37554	326.37	-6.92
87/10/16	2447084.5	0.34706	-0.16804	-0.04541	11.74093	46.17990	2.75127	0.38826	47.72842	334.16	-6.72
87/10/18	2447086.5	0.35696	-0.11314	-0.04177	5.28193	48.75146	3.55048	0.37679	49.16513	342.41	-6.37
87/10/20	2447088.5	0.35897	-0.05575	-0.03721	-1.92022	50.44138	4.34430	0.36518	50.66452	351.17	-5.85
87/10/22	2447090.5	0.35227	0.00296	-0.03175	-9.78829	51.01514	5.10633	0.35371	52.19607	0.48	-5.15
87/10/24	2447092.5	0.33616	0.06157	-0.02544	-18.16749	50.21813	5.80147	0.34270	53.71755	10.38	-4.26
87/10/26	2447094.5	0.31020	0.11835	-0.01839	-26.80102	47.80202	6.38585	0.33252	55.17343	20.88	-3.17
87/10/28	2447096.5	0.27429	0.17130	-0.01075	-35.31345	43.56955	6.80908	0.32357	56.49521	31.99	-1.90
87/10/30	2447098.5	0.22885	0.21827	-0.00274	-43.21607	37.43607	7.01978	0.31626	57.60526	43.64	-0.50
87/11/ 1	2447100.5	0.17491	0.25709	0.00537	-49.94886	29.49507	6.97480	0.31099	58.42512	55.77	0.99
87/11/ 3	2447102.5	0.11413	0.28583	0.01326	-54.96470	20.06156	6.65050	0.30806	58.88815	68.23	2.47
87/11/ 5	2447104.5	0.04876	0.30306	0.02063	-57.84002	9.66301	6.05201	0.30765	58.95310	80.86	3.84
87/11/ 7	2447106.5	-0.01859	0.30804	0.02715	-58.37227	-1.03595	5.21589	0.30979	58.61400	93.45	5.03
87/11/ 9	2447108.5	-0.08521	0.30081	0.03261	-56.62139	-11.35505	4.20380	0.31435	57.90157	105.82	5.95
87/11/11	2447110.5	-0.14863	0.28218	0.03683	-52.87742	-20.71920	3.08965	0.32104	56.87577	117.78	6.59
87/11/13	2447112.5	-0.20677	0.25347	0.03973	-47.57446	-28.73446	1.94541	0.32951	55.61279	129.21	6.93
87/11/15	2447114.5	-0.25812	0.21639	0.04133	-41.19166	-35.20360	0.83091	0.33935	54.19167	140.03	7.00
87/11/17	2447116.5	-0.30168	0.17275	0.04168	-34.17548	-40.09541	-0.21072	0.35014	52.68443	150.20	6.84
87/11/19	2447118.5	-0.33697	0.12434	0.04088	-26.89631	-43.49340	-1.15273	0.36149	51.15091	159.75	6.49
87/11/21	2447120.5	-0.36383	0.07279	0.03906	-19.63561	-45.54551	-1.98182	0.37309	49.63747	168.69	6.01
87/11/23	2447122.5	-0.38241	0.01957	0.03635	-12.59211	-46.42532	-2.69426	0.38463	48.17811	177.07	5.42
87/11/25	2447124.5	-0.39305	-0.03407	0.03288	-5.89681	-46.30679	-3.29254	0.39589	46.79671	184.95	4.76
87/11/27	2447126.5	-0.39620	-0.08708	0.02879	0.37043	-45.35034	-3.78268	0.40668	45.50933	192.40	4.06
87/11/29	2447128.5	-0.39238	-0.13857	0.02418	6.16602	-43.69669	-4.17235	0.41683	44.32639	199.45	3.33
87/12/ 1	2447130.5	-0.38215	-0.18781	0.01918	11.47070	-41.46544	-4.46968	0.42623	43.25434	206.17	2.58
87/12/ 3	2447132.5	-0.36607	-0.23418	0.01389	16.28072	-38.75618	-4.68257	0.43479	42.29693	212.61	1.83
87/12/ 5	2447134.5	-0.34472	-0.27719	0.00839	20.60140	-35.65083	-4.81827	0.44242	41.45619	218.80	1.09
87/12/ 7	2447136.5	-0.31866	-0.31641	0.00278	24.44277	-32.21626	-4.88322	0.44908	40.73306	224.80	0.36
87/12/ 9	2447138.5	-0.28844	-0.35151	-0.00286	27.81650	-28.50688	-4.88298	0.45471	40.12784	230.63	-0.36

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87/12/11	2447140.5	-0.25458	-0.38218	-0.00847	30.73391	-24.56708	-4.82225	0.45928	39.64050	236.33	-1.06
87/12/13	2447142.5	-0.21761	-0.40819	-0.01398	33.20458	-20.43326	-4.70491	0.46278	39.27083	241.94	-1.73
87/12/15	2447144.5	-0.17804	-0.42932	-0.01932	35.23543	-16.13567	-4.53408	0.46517	39.01863	247.48	-2.38
87/12/17	2447146.5	-0.13637	-0.44541	-0.02444	36.83010	-11.69999	-4.31222	0.46646	38.88369	252.98	-3.00
87/12/19	2447148.5	-0.09312	-0.45631	-0.02926	37.98846	-7.14877	-4.04118	0.46663	38.86592	258.47	-3.60
87/12/21	2447150.5	-0.04878	-0.46189	-0.03375	38.70627	-2.50271	-3.72229	0.46568	38.96529	263.97	-4.16
87/12/23	2447152.5	-0.00388	-0.46206	-0.03785	38.97481	2.21807	-3.35642	0.46362	39.18189	269.52	-4.68
87/12/25	2447154.5	0.04108	-0.45674	-0.04149	38.78068	6.99266	-2.94408	0.46046	39.51589	275.14	-5.17
87/12/27	2447156.5	0.08553	-0.44589	-0.04463	38.10552	11.79801	-2.48551	0.45621	39.96751	280.86	-5.61
87/12/29	2447158.5	0.12891	-0.42949	-0.04721	36.92586	16.60730	-1.98079	0.45089	40.53696	286.71	-6.01
87/12/31	2447160.5	0.17063	-0.40754	-0.04919	35.21301	21.38797	-1.43002	0.44455	41.22434	292.72	-6.35
88/ 1/ 2	2447162.5	0.21004	-0.38010	-0.05050	32.93330	26.09944	-0.83348	0.43720	42.02949	298.92	-6.63
88/ 1/ 4	2447164.5	0.24648	-0.34729	-0.05110	30.04862	30.69025	-0.19197	0.42892	42.95169	305.36	-6.84
88/ 1/ 6	2447166.5	0.27921	-0.30927	-0.05093	26.51763	35.09460	0.49283	0.41977	43.98930	312.08	-6.97
88/ 1/ 8	2447168.5	0.30747	-0.26632	-0.04994	22.29816	39.22823	1.21777	0.40983	45.13917	319.10	-7.00
88/ 1/10	2447170.5	0.33044	-0.21880	-0.04810	17.35115	42.98367	1.97753	0.39922	46.39578	326.49	-6.92
88/ 1/12	2447172.5	0.34727	-0.16722	-0.04536	11.64715	46.22529	2.76356	0.38809	47.75009	334.29	-6.71
88/ 1/14	2447174.5	0.35706	-0.11227	-0.04171	5.17637	48.78490	3.56285	0.37661	49.18796	342.55	-6.36
88/ 1/16	2447176.5	0.35894	-0.05486	-0.03713	-2.03683	50.45948	4.35640	0.36500	50.68812	351.31	-5.84
88/ 1/18	2447178.5	0.35209	0.00387	-0.03166	-9.91422	51.01407	5.11769	0.35353	52.21990	0.63	-5.14
88/ 1/20	2447180.5	0.33584	0.06247	-0.02534	-18.29964	50.19390	5.81147	0.34254	53.74084	10.54	-4.24
88/ 1/22	2447182.5	0.30972	0.11920	-0.01828	-26.93452	47.75105	6.39376	0.33237	55.19521	21.05	-3.15
88/ 1/24	2447184.5	0.27366	0.17208	-0.01063	-35.44156	43.48947	6.81409	0.32344	56.51433	32.16	-1.88
88/ 1/26	2447186.5	0.22808	0.21894	-0.00262	-43.33051	37.32679	7.02112	0.31617	57.62047	43.83	-0.47
88/ 1/28	2447188.5	0.17401	0.25761	0.00549	-50.04079	29.35969	6.97193	0.31093	58.43526	55.96	1.01
88/ 1/30	2447190.5	0.11314	0.28619	0.01338	-55.02633	19.90672	6.64327	0.30803	58.89234	68.43	2.49
88/ 2/ 1	2447192.5	0.04772	0.30323	0.02073	-57.86631	9.49823	6.04074	0.30766	58.95096	81.06	3.86
88/ 2/ 3	2447194.5	-0.01963	0.30802	0.02725	-58.36213	-1.19993	5.20137	0.30984	58.60573	93.65	5.04
88/ 2/ 5	2447196.5	-0.08622	0.30061	0.03268	-56.57772	-11.50824	4.18713	0.31443	57.88791	106.00	5.97
88/ 2/ 7	2447198.5	-0.14957	0.28180	0.03688	-52.80610	-20.85402	3.07198	0.32116	56.85782	117.96	6.59
88/ 2/ 9	2447200.5	-0.20762	0.25296	0.03977	-47.48280	-28.84637	1.92779	0.32966	55.59178	129.38	6.93
88/ 2/11	2447202.5	-0.25885	0.21576	0.04135	-41.08699	-35.29099	0.81414	0.33951	54.16879	140.19	6.99
88/ 2/13	2447204.5	-0.30229	0.17204	0.04168	-34.06417	-40.15883	-0.22610	0.35031	52.66071	150.36	6.83
88/ 2/15	2447206.5	-0.33745	0.12356	0.04086	-26.78341	-43.53478	-1.16644	0.36167	51.12718	159.89	6.49
88/ 2/17	2447208.5	-0.36418	0.07198	0.03903	-19.52477	-45.56742	-1.99372	0.37327	49.61433	168.82	6.00
88/ 2/19	2447210.5	-0.38264	0.01875	0.03630	-12.48584	-46.43049	-2.70436	0.38481	48.15600	177.20	5.41
88/ 2/21	2447212.5	-0.39316	-0.03490	0.03282	-5.79670	-46.29785	-3.30092	0.39607	46.77594	185.07	4.75
88/ 2/23	2447214.5	-0.39619	-0.08789	0.02872	0.46349	-45.32963	-3.78944	0.40684	45.49010	192.51	4.05
88/ 2/25	2447216.5	-0.39227	-0.13935	0.02411	6.25156	-43.66623	-4.17761	0.41698	44.30885	199.56	3.31
88/ 2/27	2447218.5	-0.38194	-0.18854	0.01910	11.54858	-41.42692	-4.47357	0.42637	43.23855	206.27	2.57
88/ 2/29	2447220.5	-0.36578	-0.23487	0.01380	16.35097	-38.71101	-4.68522	0.43491	42.28295	212.70	1.82
88/ 3/ 2	2447222.5	-0.34436	-0.27782	0.00831	20.66416	-35.60015	-4.81978	0.44253	41.44404	218.90	1.08
88/ 3/ 4	2447224.5	-0.31823	-0.31699	0.00270	24.49822	-32.16097	-4.88368	0.44917	40.72273	224.89	0.34
88/ 3/ 6	2447226.5	-0.28794	-0.35201	-0.00295	27.86482	-28.44775	-4.88248	0.45479	40.11934	230.72	-0.37
88/ 3/ 8	2447228.5	-0.25403	-0.38262	-0.00856	30.77527	-24.50472	-4.82084	0.45935	39.63382	236.42	-1.07

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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88/ 3/10	2447230.5	-0.21702	-0.40855	-0.01406	33.23912	-20.36818	-4.70265	0.46283	39.26597	242.02	-1.74
88/ 3/12	2447232.5	-0.17741	-0.42961	-0.01940	35.26323	-16.06830	-4.53102	0.46520	39.01559	247.56	-2.39
88/ 3/14	2447234.5	-0.13572	-0.44562	-0.02451	36.85120	-11.63071	-4.30839	0.46647	38.88248	253.06	-3.01
88/ 3/16	2447236.5	-0.09245	-0.45643	-0.02934	38.00284	-7.07790	-4.03661	0.46662	38.86653	258.55	-3.60
88/ 3/18	2447238.5	-0.04810	-0.46193	-0.03382	38.71382	-2.43056	-3.71699	0.46566	38.96772	264.06	-4.16
88/ 3/20	2447240.5	-0.00318	-0.46202	-0.03791	38.97537	2.29119	-3.35040	0.46358	39.18615	269.61	-4.69
88/ 3/22	2447242.5	0.04177	-0.45662	-0.04154	38.77401	7.06642	-2.93735	0.46040	39.52198	275.23	-5.18
88/ 3/24	2447244.5	0.08621	-0.44568	-0.04467	38.09130	11.87206	-2.47807	0.45614	39.97542	280.95	-5.62
88/ 3/26	2447246.5	0.12957	-0.42919	-0.04725	36.90367	16.68118	-1.97264	0.45080	40.54669	286.80	-6.02
88/ 3/28	2447248.5	0.17125	-0.40716	-0.04921	35.18237	21.46112	-1.42116	0.44444	41.23589	292.81	-6.36
88/ 3/30	2447250.5	0.21063	-0.37964	-0.05051	32.89365	26.17115	-0.82392	0.43708	42.04284	299.02	-6.64
88/ 4/ 1	2447252.5	0.24701	-0.34674	-0.05110	29.99934	30.75962	-0.18173	0.42879	42.96682	305.47	-6.84
88/ 4/ 3	2447254.5	0.27968	-0.30865	-0.05092	26.45809	35.16048	0.50371	0.41962	44.00617	312.18	-6.97
88/ 4/ 5	2447256.5	0.30787	-0.26562	-0.04992	22.22772	39.28915	1.22923	0.40967	45.15772	319.21	-7.00
88/ 4/ 7	2447258.5	0.33075	-0.21803	-0.04806	17.26926	43.03778	1.98946	0.39905	46.41590	326.61	-6.92
88/ 4/ 9	2447260.5	0.34747	-0.16640	-0.04531	11.55349	46.27028	2.77580	0.38791	47.77161	334.41	-6.71
88/ 4/11	2447262.5	0.35715	-0.11140	-0.04165	5.07102	48.81791	3.57516	0.37643	49.21062	342.68	-6.35
88/ 4/13	2447264.5	0.35890	-0.05396	-0.03706	-2.15316	50.47712	4.36844	0.36482	50.71152	351.45	-5.83
88/ 4/15	2447266.5	0.35192	0.00478	-0.03157	-10.03977	51.01252	5.12897	0.35336	52.24347	0.78	-5.13
88/ 4/17	2447268.5	0.33551	0.06336	-0.02523	-18.43126	50.16920	5.82139	0.34237	53.76382	10.69	-4.23
88/ 4/19	2447270.5	0.30924	0.12005	-0.01816	-27.06732	47.69966	6.40157	0.33222	55.21664	21.22	-3.13
88/ 4/21	2447272.5	0.27303	0.17285	-0.01051	-35.56880	43.40910	6.81899	0.32332	56.53307	32.34	-1.86
88/ 4/23	2447274.5	0.22731	0.21960	-0.00249	-43.44394	37.21743	7.02237	0.31607	57.63529	44.01	-0.45
88/ 4/25	2447276.5	0.17313	0.25813	0.00562	-50.13166	29.22452	6.96899	0.31086	58.44504	56.15	1.04
88/ 4/27	2447278.5	0.11217	0.28654	0.01350	-55.08694	19.75243	6.63599	0.30801	58.89623	68.62	2.51
88/ 4/29	2447280.5	0.04670	0.30340	0.02084	-57.89176	9.33428	6.02947	0.30768	58.94862	81.25	3.88
88/ 5/ 1	2447282.5	-0.02067	0.30800	0.02734	-58.35144	-1.36286	5.18689	0.30990	58.59737	93.84	5.06
88/ 5/ 3	2447284.5	-0.08723	0.30041	0.03276	-56.53382	-11.66032	4.17053	0.31452	57.87425	106.19	5.98
88/ 5/ 5	2447286.5	-0.15051	0.28143	0.03693	-52.73486	-20.98774	3.05442	0.32128	56.83995	118.14	6.60
88/ 5/ 7	2447288.5	-0.20846	0.25245	0.03980	-47.39148	-28.95731	1.91029	0.32980	55.57092	129.55	6.93
88/ 5/ 9	2447290.5	-0.25958	0.21514	0.04136	-40.98282	-35.37757	0.79749	0.33967	54.14610	140.35	6.99
88/ 5/11	2447292.5	-0.30290	0.17132	0.04167	-33.95347	-40.22163	-0.24138	0.35048	52.63721	150.51	6.83
88/ 5/13	2447294.5	-0.33792	0.12279	0.04084	-26.67114	-43.57572	-1.18005	0.36185	51.10368	160.03	6.48
88/ 5/15	2447296.5	-0.36452	0.07117	0.03899	-19.41457	-45.58907	-2.00554	0.37345	49.59144	168.95	5.99
88/ 5/17	2447298.5	-0.38286	0.01792	0.03625	-12.38017	-46.43558	-2.71440	0.38499	48.13418	177.32	5.40
88/ 5/19	2447300.5	-0.39326	-0.03572	0.03276	-5.69711	-46.28895	-3.30924	0.39624	46.75549	185.19	4.74
88/ 5/21	2447302.5	-0.39619	-0.08869	0.02865	0.55609	-45.30907	-3.79616	0.40700	45.47122	192.62	4.04
88/ 5/23	2447304.5	-0.39216	-0.14012	0.02403	6.33672	-43.63600	-4.18285	0.41713	44.29165	199.66	3.30
88/ 5/25	2447306.5	-0.38174	-0.18928	0.01902	11.62614	-41.38868	-4.47746	0.42651	43.22311	206.37	2.56
88/ 5/27	2447308.5	-0.36549	-0.23556	0.01372	16.42095	-38.66613	-4.68786	0.43504	42.26930	212.80	1.81
88/ 5/29	2447310.5	-0.34399	-0.27845	0.00822	20.72669	-35.54977	-4.82129	0.44264	41.43219	218.99	1.06
88/ 5/31	2447312.5	-0.31779	-0.31756	0.00261	24.55347	-32.10602	-4.88415	0.44927	40.71271	224.98	0.33
88/ 6/ 2	2447314.5	-0.28745	-0.35252	-0.00304	27.91298	-28.38899	-4.88198	0.45487	40.11113	230.81	-0.38
88/ 6/ 4	2447316.5	-0.25348	-0.38305	-0.00864	30.81651	-24.44277	-4.81945	0.45941	39.62743	236.51	-1.08
88/ 6/ 6	2447318.5	-0.21643	-0.40891	-0.01415	33.27355	-20.30354	-4.70042	0.46287	39.26139	242.11	-1.75

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88/ 6/ 8	2447320.5	-0.17678	-0.42989	-0.01948	35.29094	-16.00141	-4.52799	0.46523	39.01279	247.65	-2.40
88/ 6/10	2447322.5	-0.13507	-0.44582	-0.02459	36.87220	-11.56193	-4.30459	0.46648	38.88145	253.15	-3.02
88/ 6/12	2447324.5	-0.09177	-0.45656	-0.02941	38.01709	-7.00757	-4.03207	0.46662	38.86724	258.63	-3.61
88/ 6/14	2447326.5	-0.04741	-0.46198	-0.03389	38.72121	-2.35900	-3.71172	0.46564	38.97016	264.14	-4.17
88/ 6/16	2447328.5	-0.00249	-0.46198	-0.03797	38.97573	2.36365	-3.34442	0.46354	39.19030	269.69	-4.70
88/ 6/18	2447330.5	0.04245	-0.45650	-0.04159	38.76712	7.13944	-2.93066	0.46035	39.52783	275.31	-5.18
88/ 6/20	2447332.5	0.08688	-0.44548	-0.04472	38.07684	11.94522	-2.47068	0.45607	39.98298	281.04	-5.63
88/ 6/22	2447334.5	0.13022	-0.42890	-0.04728	36.88127	16.75402	-1.96456	0.45072	40.55595	286.89	-6.02
88/ 6/24	2447336.5	0.17188	-0.40678	-0.04924	35.15159	21.53307	-1.41239	0.44434	41.24684	292.91	-6.36
88/ 6/26	2447338.5	0.21121	-0.37918	-0.05053	32.85396	26.24150	-0.81447	0.43697	42.05547	299.12	-6.64
88/ 6/28	2447340.5	0.24754	-0.34621	-0.05110	29.95017	30.82749	-0.17163	0.42866	42.98111	305.57	-6.85
88/ 6/30	2447342.5	0.28015	-0.30804	-0.05091	26.39884	35.22472	0.51443	0.41948	44.02209	312.29	-6.97
88/ 7/ 2	2447344.5	0.30826	-0.26494	-0.04990	22.15781	39.34833	1.24050	0.40952	45.17519	319.32	-7.00
88/ 7/ 4	2447346.5	0.33106	-0.21728	-0.04803	17.18823	43.09007	2.00117	0.39890	46.43484	326.72	-6.92
88/ 7/ 6	2447348.5	0.34768	-0.16559	-0.04527	11.46108	46.31341	2.78778	0.38775	47.79184	334.53	-6.70
88/ 7/ 8	2447350.5	0.35724	-0.11055	-0.04158	4.96736	48.84910	3.58717	0.37626	49.23187	342.80	-6.35
88/ 7/10	2447352.5	0.35887	-0.05308	-0.03698	-2.26725	50.49313	4.38014	0.36465	50.73344	351.59	-5.82
88/ 7/12	2447354.5	0.35175	0.00566	-0.03148	-10.16255	51.00971	5.13990	0.35320	52.26554	0.92	-5.11
88/ 7/14	2447356.5	0.33520	0.06423	-0.02513	-18.55962	50.14384	5.83095	0.34222	53.78535	10.85	-4.21
88/ 7/16	2447358.5	0.30878	0.12087	-0.01805	-27.19650	47.64841	6.40907	0.33208	55.23674	21.38	-3.12
88/ 7/18	2447360.5	0.27242	0.17360	-0.01039	-35.69229	43.32987	6.82365	0.32320	56.55068	32.51	-1.84
88/ 7/20	2447362.5	0.22657	0.22024	-0.00237	-43.55380	37.11029	7.02347	0.31598	57.64925	44.19	-0.43
88/ 7/22	2447364.5	0.17227	0.25863	0.00574	-50.21947	29.09259	6.96604	0.31081	58.45425	56.33	1.06
88/ 7/24	2447366.5	0.11122	0.28688	0.01361	-55.14535	19.60217	6.62884	0.30798	58.89988	68.81	2.53
88/ 7/26	2447368.5	0.04570	0.30356	0.02094	-57.91610	9.17482	6.01846	0.30769	58.94636	81.44	3.90
88/ 7/28	2447370.5	-0.02167	0.30797	0.02743	-58.34078	-1.52127	5.17279	0.30995	58.58941	94.02	5.08
88/ 7/30	2447372.5	-0.08820	0.30020	0.03283	-56.49105	-11.80821	4.15439	0.31461	57.86131	106.37	5.99
88/ 8/ 1	2447374.5	-0.15141	0.28107	0.03699	-52.66564	-21.11795	3.03733	0.32139	56.82308	118.31	6.61
88/ 8/ 3	2447376.5	-0.20927	0.25194	0.03983	-47.30278	-29.06557	1.89325	0.32993	55.55128	129.71	6.93
88/ 8/ 5	2447378.5	-0.26028	0.21452	0.04137	-40.88160	-35.46235	0.78125	0.33982	54.12480	140.50	6.99
88/ 8/ 7	2447380.5	-0.30348	0.17063	0.04167	-33.84576	-40.28344	-0.25631	0.35064	52.61518	150.65	6.82
88/ 8/ 9	2447382.5	-0.33838	0.12203	0.04082	-26.56173	-43.61634	-1.19338	0.36202	51.08165	160.17	6.47
88/ 8/11	2447384.5	-0.36485	0.07038	0.03895	-19.30697	-45.61091	-2.01715	0.37362	49.56998	169.08	5.98
88/ 8/13	2447386.5	-0.38307	0.01711	0.03620	-12.27679	-46.44121	-2.72428	0.38515	48.11369	177.44	5.39
88/ 8/15	2447388.5	-0.39335	-0.03653	0.03270	-5.59949	-46.28084	-3.31746	0.39640	46.73624	185.31	4.73
88/ 8/17	2447390.5	-0.39617	-0.08948	0.02858	0.64703	-45.28942	-3.80281	0.40715	45.45340	192.73	4.03
88/ 8/19	2447392.5	-0.39204	-0.14089	0.02396	6.42049	-43.60673	-4.18805	0.41727	44.27538	199.77	3.29
88/ 8/21	2447394.5	-0.38152	-0.19000	0.01894	11.70256	-41.35140	-4.48133	0.42664	43.20846	206.47	2.54
88/ 8/23	2447396.5	-0.36519	-0.23623	0.01364	16.48999	-38.62220	-4.69050	0.43515	42.25630	212.90	1.80
88/ 8/25	2447398.5	-0.34362	-0.27908	0.00814	20.78844	-35.50027	-4.82280	0.44275	41.42086	219.08	1.05
88/ 8/27	2447400.5	-0.31735	-0.31812	0.00252	24.60808	-32.05186	-4.88463	0.44936	40.70306	225.07	0.32
88/ 8/29	2447402.5	-0.28695	-0.35302	-0.00312	27.96060	-28.33091	-4.88150	0.45494	40.10317	230.89	-0.39
88/ 8/31	2447404.5	-0.25294	-0.38348	-0.00873	30.85726	-24.38137	-4.81807	0.45947	39.62115	236.59	-1.09
88/ 9/ 2	2447406.5	-0.21584	-0.40927	-0.01423	33.30755	-20.23934	-4.69819	0.46291	39.25681	242.19	-1.76
88/ 9/ 4	2447408.5	-0.17616	-0.43018	-0.01956	35.31825	-15.93484	-4.52495	0.46526	39.00991	247.73	-2.41

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88/ 9/ 6	2447410.5	-0.13441	-0.44603	-0.02467	36.89283	-11.49337	-4.30078	0.46649	38.88027	253.23	-3.03
88/ 9/ 8	2447412.5	-0.09110	-0.45668	-0.02948	38.03100	-6.93737	-4.02751	0.46661	38.86778	258.72	-3.62
88/ 9/10	2447414.5	-0.04672	-0.46202	-0.03395	38.72830	-2.28748	-3.70643	0.46561	38.97245	264.23	-4.18
88/ 9/12	2447416.5	-0.00180	-0.46194	-0.03802	38.97585	2.43617	-3.33841	0.46350	39.19435	269.78	-4.71
88/ 9/14	2447418.5	0.04314	-0.45637	-0.04165	38.76002	7.21261	-2.92394	0.46029	39.53366	275.40	-5.19
88/ 9/16	2447420.5	0.08756	-0.44526	-0.04476	38.06222	12.01866	-2.46325	0.45599	39.99060	281.12	-5.63
88/ 9/18	2447422.5	0.13088	-0.42860	-0.04732	36.85872	16.82727	-1.95643	0.45063	40.56537	286.98	-6.03
88/ 9/20	2447424.5	0.17250	-0.40640	-0.04926	35.12062	21.60557	-1.40355	0.44424	41.25807	293.00	-6.37
88/ 9/22	2447426.5	0.21179	-0.37872	-0.05054	32.81403	26.31255	-0.80494	0.43685	42.06850	299.22	-6.64
88/ 9/24	2447428.5	0.24807	-0.34566	-0.05111	29.90067	30.89618	-0.16142	0.42853	42.99593	305.67	-6.85
88/ 9/26	2447430.5	0.28062	-0.30742	-0.05090	26.33913	35.28993	0.52527	0.41933	44.03868	312.39	-6.97
88/ 9/28	2447432.5	0.30865	-0.26424	-0.04988	22.08728	39.40859	1.25191	0.40936	45.19350	319.43	-7.00
88/ 9/30	2447434.5	0.33136	-0.21652	-0.04799	17.10633	43.14353	2.01305	0.39873	46.45475	326.84	-6.91
88/10/ 2	2447436.5	0.34788	-0.16477	-0.04522	11.36751	46.35775	2.79997	0.38758	47.81319	334.66	-6.70
88/10/ 4	2447438.5	0.35733	-0.10969	-0.04152	4.86220	48.88147	3.59942	0.37608	49.25439	342.93	-6.34
88/10/ 6	2447440.5	0.35883	-0.05219	-0.03690	-2.38327	50.51014	4.39209	0.36448	50.75672	351.72	-5.81
88/10/ 8	2447442.5	0.35157	0.00656	-0.03139	-10.28766	51.00756	5.15110	0.35303	52.28901	1.07	-5.10
88/10/10	2447444.5	0.33487	0.06511	-0.02503	-18.69067	50.11859	5.84077	0.34206	53.80826	11.00	-4.20
88/10/12	2447446.5	0.30830	0.12171	-0.01794	-27.32861	47.59657	6.41677	0.33194	55.25813	21.54	-3.10
88/10/14	2447448.5	0.27179	0.17436	-0.01027	-35.81872	43.24918	6.82845	0.32307	56.56942	32.68	-1.82
88/10/16	2447450.5	0.22580	0.22089	-0.00225	-43.66633	37.00079	7.02462	0.31588	57.66413	44.37	-0.41
88/10/18	2447452.5	0.17138	0.25915	0.00586	-50.30940	28.95750	6.96301	0.31074	58.46414	56.52	1.08
88/10/20	2447454.5	0.11025	0.28722	0.01373	-55.20505	19.44816	6.62150	0.30796	58.90392	69.00	2.56
88/10/22	2447456.5	0.04468	0.30372	0.02105	-57.94073	9.01136	6.00715	0.30771	58.94420	81.63	3.92
88/10/24	2447458.5	-0.02270	0.30794	0.02752	-58.32942	-1.68357	5.15831	0.31000	58.58125	94.22	5.09
88/10/26	2447460.5	-0.08920	0.29999	0.03290	-56.44666	-11.95954	4.13781	0.31469	57.84789	106.56	6.00
88/10/28	2447462.5	-0.15234	0.28069	0.03704	-52.59410	-21.25090	3.01980	0.32151	56.80545	118.49	6.62
88/10/30	2447464.5	-0.21011	0.25142	0.03987	-47.21132	-29.17576	1.87579	0.33007	55.53064	129.88	6.94
88/11/ 1	2447466.5	-0.26100	0.21389	0.04139	-40.77743	-35.54823	0.76465	0.33998	54.10231	140.67	6.99
88/11/ 3	2447468.5	-0.30408	0.16991	0.04166	-33.73516	-40.34562	-0.27152	0.35081	52.59186	150.80	6.82
88/11/ 5	2447470.5	-0.33885	0.12126	0.04080	-26.44966	-43.65672	-1.20692	0.36219	51.05830	160.31	6.47
88/11/ 7	2447472.5	-0.36519	0.06957	0.03892	-19.19701	-45.63206	-2.02891	0.37379	49.54721	169.21	5.98
88/11/ 9	2447474.5	-0.38328	0.01629	0.03616	-12.17139	-46.44584	-2.73425	0.38533	48.09194	177.57	5.38
88/11/11	2447476.5	-0.39345	-0.03735	0.03265	-5.50021	-46.27152	-3.32572	0.39656	46.71580	185.42	4.72
88/11/13	2447478.5	-0.39616	-0.09029	0.02851	0.73930	-45.26846	-3.80947	0.40731	45.43448	192.84	4.01
88/11/15	2447480.5	-0.39192	-0.14166	0.02388	6.50532	-43.57610	-4.19323	0.41742	44.25810	199.87	3.28
88/11/17	2447482.5	-0.38132	-0.19074	0.01886	11.77978	-41.31278	-4.48515	0.42678	43.19288	206.57	2.53
88/11/19	2447484.5	-0.36490	-0.23692	0.01355	16.55964	-38.57694	-4.69309	0.43528	42.24248	212.99	1.78
88/11/21	2447486.5	-0.34325	-0.27971	0.00805	20.85065	-35.44952	-4.82426	0.44286	41.40883	219.18	1.04
88/11/23	2447488.5	-0.31692	-0.31869	0.00244	24.66301	-31.99654	-4.88504	0.44945	40.69283	225.16	0.31
88/11/25	2447490.5	-0.28645	-0.35352	-0.00321	28.00843	-28.27177	-4.88095	0.45502	40.09475	230.98	-0.40
88/11/27	2447492.5	-0.25239	-0.38391	-0.00882	30.89816	-24.31904	-4.81662	0.45953	39.61454	236.68	-1.10
88/11/29	2447494.5	-0.21524	-0.40963	-0.01432	33.34165	-20.17433	-4.69589	0.46296	39.25201	242.28	-1.77
88/12/ 1	2447496.5	-0.17553	-0.43046	-0.01964	35.34563	-15.86755	-4.52186	0.46529	39.00693	247.82	-2.42
88/12/ 3	2447498.5	-0.13376	-0.44623	-0.02474	36.91354	-11.42418	-4.29692	0.46650	38.87910	253.31	-3.04

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88/12/ 5	2447500.5	-0.09042	-0.45681	-0.02955	38.04499	-6.86658	-4.02290	0.46661	38.86843	258.80	-3.63
88/12/ 7	2447502.5	-0.04604	-0.46206	-0.03402	38.73548	-2.21541	-3.70110	0.46559	38.97491	264.31	-4.19
88/12/ 9	2447504.5	-0.00111	-0.46190	-0.03808	38.97604	2.50920	-3.33236	0.46346	39.19863	269.86	-4.71
88/12/11	2447506.5	0.04383	-0.45624	-0.04170	38.75296	7.28628	-2.91718	0.46023	39.53975	275.49	-5.20
88/12/13	2447508.5	0.08823	-0.44505	-0.04481	38.04759	12.09258	-2.45579	0.45592	39.99851	281.21	-5.64
88/12/15	2447510.5	0.13153	-0.42831	-0.04735	36.83611	16.90099	-1.94825	0.45054	40.57509	287.07	-6.03
88/12/17	2447512.5	0.17312	-0.40602	-0.04929	35.08956	21.67853	-1.39467	0.44413	41.26961	293.09	-6.37
88/12/19	2447514.5	0.21237	-0.37825	-0.05056	32.77396	26.38404	-0.79536	0.43673	42.08186	299.31	-6.65
88/12/21	2447516.5	0.24860	-0.34511	-0.05111	29.85098	30.96532	-0.15116	0.42839	43.01110	305.77	-6.85
88/12/23	2447518.5	0.28108	-0.30679	-0.05089	26.27916	35.35556	0.53617	0.41919	44.05562	312.50	-6.97
88/12/25	2447520.5	0.30904	-0.26354	-0.04985	22.01639	39.46923	1.26339	0.40921	45.21214	319.54	-7.00
88/12/27	2447522.5	0.33166	-0.21576	-0.04796	17.02398	43.19731	2.02500	0.39856	46.47498	326.95	-6.91
88/12/29	2447524.5	0.34808	-0.16395	-0.04517	11.27336	46.40230	2.81222	0.38740	47.83483	334.78	-6.70
88/12/31	2447526.5	0.35741	-0.10883	-0.04146	4.75634	48.91392	3.61173	0.37591	49.27717	343.07	-6.33
89/ 1/ 2	2447528.5	0.35878	-0.05130	-0.03683	-2.50007	50.52707	4.40412	0.36430	50.78023	351.86	-5.80
89/ 1/ 4	2447530.5	0.35138	0.00746	-0.03130	-10.41362	51.00515	5.16234	0.35285	52.31270	1.22	-5.09
89/ 1/ 6	2447532.5	0.33453	0.06600	-0.02493	-18.82258	50.09288	5.85063	0.34189	53.83137	11.16	-4.18
89/ 1/ 8	2447534.5	0.30781	0.12256	-0.01782	-27.46151	47.54403	6.42450	0.33179	55.27968	21.71	-3.08
89/ 1/10	2447536.5	0.27115	0.17513	-0.01015	-35.94579	43.16756	6.83324	0.32295	56.58827	32.86	-1.80
89/ 1/12	2447538.5	0.22502	0.22155	-0.00212	-43.77928	36.89018	7.02572	0.31579	57.67903	44.55	-0.38
89/ 1/14	2447540.5	0.17048	0.25966	0.00598	-50.39941	28.82119	6.95990	0.31068	58.47395	56.71	1.10
89/ 1/16	2447542.5	0.10926	0.28756	0.01385	-55.26449	19.29295	6.61404	0.30793	58.90779	69.20	2.58
89/ 1/18	2447544.5	0.04365	0.30387	0.02116	-57.96479	8.84686	5.99570	0.30772	58.94177	81.83	3.94
89/ 1/20	2447546.5	-0.02374	0.30791	0.02761	-58.31723	-1.84665	5.14368	0.31005	58.57275	94.41	5.11
89/ 1/22	2447548.5	-0.09020	0.29977	0.03297	-56.40134	-12.11138	4.12110	0.31478	57.83407	106.75	6.01
89/ 1/24	2447550.5	-0.15328	0.28031	0.03709	-52.52160	-21.38408	3.00217	0.32163	56.78742	118.67	6.62
89/ 1/26	2447552.5	-0.21095	0.25090	0.03990	-47.11897	-29.28597	1.85825	0.33022	55.50963	130.06	6.94
89/ 1/28	2447554.5	-0.26173	0.21326	0.04140	-40.67250	-35.63399	0.74800	0.34014	54.07951	140.83	6.99
89/ 1/30	2447556.5	-0.30468	0.16919	0.04166	-33.62393	-40.40758	-0.28678	0.35098	52.56827	150.96	6.82
89/ 2/ 1	2447558.5	-0.33932	0.12048	0.04078	-26.33704	-43.69686	-1.22050	0.36237	51.03474	160.45	6.46
89/ 2/ 3	2447560.5	-0.36554	0.06876	0.03888	-19.08661	-45.65294	-2.04069	0.37397	49.52428	169.35	5.97
89/ 2/ 5	2447562.5	-0.38350	0.01546	0.03611	-12.06564	-46.45019	-2.74424	0.38550	48.07006	177.69	5.37
89/ 2/ 7	2447564.5	-0.39355	-0.03817	0.03259	-5.40063	-46.26192	-3.33399	0.39673	46.69526	185.54	4.71
89/ 2/ 9	2447566.5	-0.39614	-0.09110	0.02845	0.83181	-45.24722	-3.81613	0.40747	45.41548	192.95	4.00
89/ 2/11	2447568.5	-0.39181	-0.14244	0.02381	6.59034	-43.54521	-4.19841	0.41757	44.24075	199.98	3.27
89/ 2/13	2447570.5	-0.38111	-0.19147	0.01878	11.85717	-41.27390	-4.48897	0.42692	43.17729	206.68	2.52
89/ 2/15	2447572.5	-0.36461	-0.23761	0.01347	16.62944	-38.53147	-4.69567	0.43540	42.22868	213.09	1.77
89/ 2/17	2447574.5	-0.34288	-0.28034	0.00796	20.91299	-35.39858	-4.82570	0.44296	41.39685	219.27	1.03
89/ 2/19	2447576.5	-0.31648	-0.31926	0.00235	24.71807	-31.94104	-4.88544	0.44954	40.68268	225.25	0.30
89/ 2/21	2447578.5	-0.28595	-0.35402	-0.00330	28.05639	-28.21245	-4.88039	0.45510	40.08642	231.07	-0.42
89/ 2/23	2447580.5	-0.25184	-0.38435	-0.00890	30.93917	-24.25650	-4.81516	0.45959	39.60803	236.77	-1.11
89/ 2/25	2447582.5	-0.21465	-0.40999	-0.01440	33.37584	-20.10907	-4.69359	0.46300	39.24731	242.37	-1.78
89/ 2/27	2447584.5	-0.17490	-0.43074	-0.01972	35.37309	-15.80001	-4.51875	0.46531	39.00404	247.90	-2.43
89/ 3/ 1	2447586.5	-0.13310	-0.44643	-0.02482	36.93428	-11.35471	-4.29304	0.46651	38.87802	253.40	-3.05
89/ 3/ 3	2447588.5	-0.08975	-0.45693	-0.02962	38.05898	-6.79553	-4.01828	0.46660	38.86916	258.89	-3.64

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89/ 3/ 5	2447590.5	-0.04535	-0.46210	-0.03408	38.74263	-2.14307	-3.69575	0.46557	38.97746	264.40	-4.20
89/ 3/ 7	2447592.5	-0.00042	-0.46185	-0.03814	38.97616	2.58251	-3.32629	0.46342	39.20300	269.95	-4.72
89/ 3/ 9	2447594.5	0.04452	-0.45611	-0.04175	38.74582	7.36023	-2.91040	0.46018	39.54595	275.57	-5.21
89/ 3/11	2447596.5	0.08891	-0.44484	-0.04485	38.03285	12.16680	-2.44828	0.45584	40.00654	281.30	-5.65
89/ 3/13	2447598.5	0.13218	-0.42800	-0.04739	36.81338	16.97503	-1.94004	0.45045	40.58497	287.16	-6.04
89/ 3/15	2447600.5	0.17375	-0.40563	-0.04931	35.05833	21.75182	-1.38575	0.44402	41.28133	293.19	-6.38
89/ 3/17	2447602.5	0.21296	-0.37778	-0.05057	32.73368	26.45587	-0.78574	0.43661	42.09541	299.41	-6.65
89/ 3/19	2447604.5	0.24913	-0.34456	-0.05111	29.80100	31.03477	-0.14086	0.42825	43.02646	305.87	-6.85
89/ 3/21	2447606.5	0.28155	-0.30616	-0.05088	26.21884	35.42145	0.54712	0.41904	44.07274	312.60	-6.97
89/ 3/23	2447608.5	0.30944	-0.26284	-0.04983	21.94508	39.53008	1.27492	0.40905	45.23095	319.65	-7.00
89/ 3/25	2447610.5	0.33197	-0.21499	-0.04792	16.94114	43.25122	2.03700	0.39839	46.49538	327.07	-6.91
89/ 3/27	2447612.5	0.34828	-0.16312	-0.04512	11.17867	46.44692	2.82453	0.38723	47.85663	334.90	-6.69
89/ 3/29	2447614.5	0.35750	-0.10795	-0.04139	4.64990	48.94633	3.62410	0.37573	49.30009	343.20	-6.32
89/ 3/31	2447616.5	0.35874	-0.05040	-0.03675	-2.61746	50.54384	4.41618	0.36412	50.80388	352.00	-5.79
89/ 4/ 2	2447618.5	0.35120	0.00837	-0.03120	-10.54012	51.00241	5.17362	0.35268	52.33648	1.37	-5.08
89/ 4/ 4	2447620.5	0.33420	0.06689	-0.02482	-18.95494	50.06667	5.86049	0.34173	53.85449	11.32	-4.17
89/ 4/ 6	2447622.5	0.30732	0.12340	-0.01771	-27.59470	47.49081	6.43219	0.33164	55.30116	21.88	-3.06
89/ 4/ 8	2447624.5	0.27051	0.17590	-0.01003	-36.07291	43.08515	6.83796	0.32283	56.60691	33.03	-1.78
89/ 4/10	2447626.5	0.22424	0.22220	-0.00200	-43.89196	36.77874	7.02672	0.31569	57.69362	44.74	-0.36
89/ 4/12	2447628.5	0.16958	0.26017	0.00611	-50.48886	28.68416	6.95667	0.31062	58.48334	56.90	1.13
89/ 4/14	2447630.5	0.10828	0.28791	0.01397	-55.32311	19.13726	6.60647	0.30791	58.91118	69.39	2.60
89/ 4/16	2447632.5	0.04261	0.30403	0.02126	-57.98789	8.68218	5.98416	0.30774	58.93883	82.02	3.96
89/ 4/18	2447634.5	-0.02478	0.30787	0.02770	-58.30410	-2.00958	5.12898	0.31011	58.56375	94.60	5.13
89/ 4/20	2447636.5	-0.09120	0.29956	0.03305	-56.35519	-12.26275	4.10435	0.31487	57.81979	106.93	6.02
89/ 4/22	2447638.5	-0.15421	0.27993	0.03715	-52.44850	-21.51659	2.98453	0.32175	56.76898	118.85	6.63
89/ 4/24	2447640.5	-0.21178	0.25038	0.03993	-47.02628	-29.39539	1.84075	0.33036	55.48827	130.23	6.94
89/ 4/26	2447642.5	-0.26245	0.21262	0.04141	-40.56745	-35.71894	0.73140	0.34030	54.05641	140.99	6.99
89/ 4/28	2447644.5	-0.30527	0.16847	0.04165	-33.51278	-40.46879	-0.30197	0.35116	52.54446	151.11	6.81
89/ 4/30	2447646.5	-0.33978	0.11971	0.04075	-26.22469	-43.73634	-1.23400	0.36255	51.01102	160.59	6.45
89/ 5/ 2	2447648.5	-0.36587	0.06795	0.03885	-18.97659	-45.67330	-2.05239	0.37415	49.50125	169.48	5.96
89/ 5/ 4	2447650.5	-0.38371	0.01464	0.03606	-11.96034	-46.45416	-2.75415	0.38568	48.04814	177.82	5.36
89/ 5/ 6	2447652.5	-0.39364	-0.03899	0.03253	-5.30155	-46.25209	-3.34219	0.39690	46.67476	185.66	4.70
89/ 5/ 8	2447654.5	-0.39613	-0.09190	0.02838	0.92383	-45.22590	-3.82274	0.40764	45.39657	193.06	3.99
89/ 5/10	2447656.5	-0.39169	-0.14321	0.02373	6.67488	-43.51436	-4.20355	0.41772	44.22356	200.08	3.26
89/ 5/12	2447658.5	-0.38090	-0.19220	0.01870	11.93410	-41.23518	-4.49276	0.42705	43.16188	206.78	2.51
89/ 5/14	2447660.5	-0.36431	-0.23829	0.01339	16.69881	-38.48623	-4.69823	0.43553	42.21509	213.19	1.76
89/ 5/16	2447662.5	-0.34251	-0.28096	0.00788	20.97494	-35.34792	-4.82714	0.44307	41.38508	219.36	1.02
89/ 5/18	2447664.5	-0.31604	-0.31982	0.00226	24.77278	-31.88589	-4.88585	0.44964	40.67274	225.34	0.29
89/ 5/20	2447666.5	-0.28546	-0.35452	-0.00338	28.10404	-28.15353	-4.87983	0.45517	40.07831	231.16	-0.43
89/ 5/22	2447668.5	-0.25129	-0.38477	-0.00899	30.97994	-24.19441	-4.81372	0.45965	39.60174	236.85	-1.12
89/ 5/24	2447670.5	-0.21406	-0.41034	-0.01448	33.40984	-20.04430	-4.69131	0.46305	39.24283	242.45	-1.79
89/ 5/26	2447672.5	-0.17428	-0.43102	-0.01980	35.40040	-15.73298	-4.51567	0.46534	39.00137	247.98	-2.44
89/ 5/28	2447674.5	-0.13245	-0.44663	-0.02489	36.95493	-11.28579	-4.28920	0.46652	38.87715	253.48	-3.06
89/ 5/30	2447676.5	-0.08907	-0.45705	-0.02969	38.07292	-6.72503	-4.01369	0.46659	38.87008	258.97	-3.65
89/ 6/ 1	2447678.5	-0.04466	-0.46214	-0.03415	38.74973	-2.07132	-3.69044	0.46554	38.98014	264.48	-4.21

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89/ 6/ 3	2447680.5	0.00027	-0.46180	-0.03820	38.97626	2.65521	-3.32027	0.46338	39.20744	270.03	-4.73
89/ 6/ 5	2447682.5	0.04520	-0.45598	-0.04180	38.73866	7.43353	-2.90366	0.46012	39.55215	275.66	-5.21
89/ 6/ 7	2447684.5	0.08958	-0.44462	-0.04489	38.01812	12.24031	-2.44084	0.45577	40.01450	281.39	-5.65
89/ 6/ 9	2447686.5	0.13284	-0.42770	-0.04742	36.79067	17.04828	-1.93189	0.45036	40.59469	287.25	-6.04
89/ 6/11	2447688.5	0.17437	-0.40525	-0.04934	35.02717	21.82425	-1.37690	0.44392	41.29282	293.28	-6.38
89/ 6/13	2447690.5	0.21353	-0.37731	-0.05059	32.69353	26.52677	-0.77620	0.43649	42.10865	299.51	-6.66
89/ 6/15	2447692.5	0.24966	-0.34401	-0.05111	29.75126	31.10322	-0.13065	0.42812	43.04143	305.97	-6.86
89/ 6/17	2447694.5	0.28201	-0.30553	-0.05087	26.15886	35.48630	0.55796	0.41889	44.08940	312.71	-6.98
89/ 6/19	2447696.5	0.30982	-0.26214	-0.04981	21.87426	39.58983	1.28632	0.40889	45.24923	319.77	-7.00
89/ 6/21	2447698.5	0.33227	-0.21422	-0.04789	16.85896	43.30400	2.04885	0.39823	46.51515	327.19	-6.91
89/ 6/23	2447700.5	0.34848	-0.16231	-0.04507	11.08486	46.49038	2.83667	0.38706	47.87772	335.03	-6.69
89/ 6/25	2447702.5	0.35758	-0.10709	-0.04133	4.54458	48.97763	3.63627	0.37555	49.32224	343.33	-6.32
89/ 6/27	2447704.5	0.35869	-0.04951	-0.03667	-2.73346	50.55960	4.42803	0.36395	50.82669	352.14	-5.78
89/ 6/29	2447706.5	0.35101	0.00927	-0.03111	-10.66496	50.99888	5.18467	0.35251	52.35941	1.51	-5.06
89/ 7/ 1	2447708.5	0.33387	0.06777	-0.02472	-19.08538	50.03997	5.87013	0.34157	53.87679	11.47	-4.15
89/ 7/ 3	2447710.5	0.30684	0.12424	-0.01760	-27.72578	47.43756	6.43969	0.33150	55.32188	22.04	-3.04
89/ 7/ 5	2447712.5	0.26988	0.17665	-0.00991	-36.19786	43.00325	6.84253	0.32271	56.62495	33.21	-1.76
89/ 7/ 7	2447714.5	0.22347	0.22285	-0.00187	-44.00256	36.66842	7.02763	0.31560	57.70777	44.92	-0.34
89/ 7/ 9	2447716.5	0.16870	0.26067	0.00623	-50.57654	28.54881	6.95342	0.31056	58.49249	57.09	1.15
89/ 7/11	2447718.5	0.10731	0.28824	0.01408	-55.38045	18.98370	6.59895	0.30789	58.91452	69.58	2.62
89/ 7/13	2447720.5	0.04160	0.30418	0.02137	-58.01032	8.51988	5.97274	0.30776	58.93606	82.21	3.98
89/ 7/15	2447722.5	-0.02580	0.30784	0.02779	-58.29095	-2.17010	5.11448	0.31016	58.55512	94.79	5.14
89/ 7/17	2447724.5	-0.09219	0.29934	0.03312	-56.30963	-12.41193	4.08784	0.31496	57.80606	107.12	6.04
89/ 7/19	2447726.5	-0.15513	0.27955	0.03720	-52.37647	-21.64728	2.96715	0.32187	56.75124	119.03	6.64
89/ 7/21	2447728.5	-0.21261	0.24987	0.03997	-46.93495	-29.50345	1.82349	0.33050	55.46772	130.39	6.95
89/ 7/23	2447730.5	-0.26316	0.21200	0.04143	-40.46391	-35.80300	0.71501	0.34046	54.03419	141.15	6.99
89/ 7/25	2447732.5	-0.30586	0.16776	0.04165	-33.40314	-40.52951	-0.31698	0.35132	52.52153	151.26	6.81
89/ 7/27	2447734.5	-0.34024	0.11894	0.04073	-26.11374	-43.77566	-1.24735	0.36272	50.98815	160.73	6.45
89/ 7/29	2447736.5	-0.36620	0.06715	0.03881	-18.86783	-45.69375	-2.06398	0.37433	49.47902	169.61	5.95
89/ 7/31	2447738.5	-0.38392	0.01382	0.03601	-11.85613	-46.45839	-2.76399	0.38585	48.02697	177.94	5.35
89/ 8/ 2	2447740.5	-0.39373	-0.03980	0.03247	-5.20338	-46.24263	-3.35034	0.39707	46.65491	185.77	4.69
89/ 8/ 4	2447742.5	-0.39611	-0.09269	0.02831	1.01508	-45.20499	-3.82931	0.40779	45.37824	193.17	3.98
89/ 8/ 6	2447744.5	-0.39157	-0.14397	0.02366	6.75877	-43.48394	-4.20866	0.41787	44.20687	200.19	3.25
89/ 8/ 8	2447746.5	-0.38068	-0.19293	0.01862	12.01049	-41.19688	-4.49654	0.42719	43.14688	206.88	2.50
89/ 8/10	2447748.5	-0.36402	-0.23896	0.01330	16.76771	-38.44139	-4.70078	0.43565	42.20182	213.28	1.75
89/ 8/12	2447750.5	-0.34213	-0.28159	0.00779	21.03646	-35.29765	-4.82857	0.44318	41.37357	219.46	1.01
89/ 8/14	2447752.5	-0.31560	-0.32038	0.00218	24.82709	-31.83108	-4.88624	0.44973	40.66297	225.43	0.28
89/ 8/16	2447754.5	-0.28496	-0.35502	-0.00347	28.15130	-28.09493	-4.87927	0.45525	40.07029	231.25	-0.44
89/ 8/18	2447756.5	-0.25074	-0.38520	-0.00907	31.02030	-24.13263	-4.81227	0.45971	39.59546	236.94	-1.13
89/ 8/20	2447758.5	-0.21347	-0.41070	-0.01457	33.44341	-19.97984	-4.68901	0.46309	39.23828	242.54	-1.80
89/ 8/22	2447760.5	-0.17365	-0.43130	-0.01988	35.42725	-15.66627	-4.51258	0.46537	38.99853	248.07	-2.45
89/ 8/24	2447762.5	-0.13179	-0.44684	-0.02497	36.97506	-11.21720	-4.28534	0.46653	38.87602	253.57	-3.07
89/ 8/26	2447764.5	-0.08840	-0.45717	-0.02977	38.08632	-6.65492	-4.00909	0.46659	38.87066	259.06	-3.66
89/ 8/28	2447766.5	-0.04398	-0.46217	-0.03421	38.75630	-1.99999	-3.68511	0.46552	38.98244	264.56	-4.21
89/ 8/30	2447768.5	0.00096	-0.46176	-0.03826	38.97584	2.72742	-3.31423	0.46334	39.21146	270.12	-4.74

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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89/ 9/ 1	2447770.5	0.04589	-0.45585	-0.04185	38.73102	7.50627	-2.89692	0.46006	39.55791	275.75	-5.22
89/ 9/ 3	2447772.5	0.09025	-0.44441	-0.04494	38.00294	12.31321	-2.43341	0.45570	40.02199	281.48	-5.66
89/ 9/ 5	2447774.5	0.13348	-0.42741	-0.04746	36.76757	17.12087	-1.92376	0.45027	40.60393	287.34	-6.05
89/ 9/ 7	2447776.5	0.17498	-0.40487	-0.04936	34.99569	21.89595	-1.36808	0.44382	41.30379	293.37	-6.39
89/ 9/ 9	2447778.5	0.21411	-0.37685	-0.05060	32.65313	26.59688	-0.76671	0.43637	42.12136	299.60	-6.66
89/ 9/11	2447780.5	0.25018	-0.34347	-0.05112	29.70137	31.17085	-0.12050	0.42799	43.05586	306.07	-6.86
89/ 9/13	2447782.5	0.28247	-0.30492	-0.05086	26.09888	35.55030	0.56872	0.41875	44.10554	312.81	-6.98
89/ 9/15	2447784.5	0.31021	-0.26145	-0.04979	21.80359	39.64875	1.29763	0.40874	45.26702	319.87	-7.00
89/ 9/17	2447786.5	0.33256	-0.21347	-0.04785	16.77712	43.35599	2.06061	0.39807	46.53450	327.30	-6.90
89/ 9/19	2447788.5	0.34867	-0.16150	-0.04502	10.99157	46.53313	2.84869	0.38689	47.89845	335.15	-6.68
89/ 9/21	2447790.5	0.35766	-0.10624	-0.04126	4.43999	49.00831	3.64832	0.37538	49.34408	343.46	-6.31
89/ 9/23	2447792.5	0.35865	-0.04863	-0.03659	-2.84857	50.57490	4.43976	0.36377	50.84925	352.28	-5.77
89/ 9/25	2447794.5	0.35083	0.01015	-0.03102	-10.78878	50.99506	5.19561	0.35234	52.38214	1.66	-5.05
89/ 9/27	2447796.5	0.33353	0.06864	-0.02462	-19.21472	50.01323	5.87967	0.34141	53.89897	11.63	-4.13
89/ 9/29	2447798.5	0.30635	0.12506	-0.01748	-27.85573	47.38453	6.44711	0.33136	55.34257	22.21	-3.02
89/10/ 1	2447800.5	0.26925	0.17740	-0.00979	-36.32174	42.92184	6.84704	0.32258	56.64305	33.38	-1.74
89/10/ 3	2447802.5	0.22270	0.22348	-0.00175	-44.11226	36.55883	7.02852	0.31551	57.72209	45.10	-0.32
89/10/ 5	2447804.5	0.16782	0.26117	0.00635	-50.66354	28.41437	6.95018	0.31050	58.50193	57.28	1.17
89/10/ 7	2447806.5	0.10635	0.28857	0.01420	-55.43739	18.83112	6.59148	0.30787	58.91827	69.77	2.64
89/10/ 9	2447808.5	0.04059	0.30433	0.02147	-58.03264	8.35854	5.96140	0.30777	58.93378	82.40	4.00
89/10/11	2447810.5	-0.02681	0.30779	0.02788	-58.27795	-2.32981	5.10006	0.31021	58.54706	94.98	5.16
89/10/13	2447812.5	-0.09317	0.29912	0.03319	-56.26439	-12.56051	4.07141	0.31505	57.79294	107.30	6.05
89/10/15	2447814.5	-0.15604	0.27917	0.03725	-52.30482	-21.77759	2.94983	0.32198	56.73411	119.20	6.64
89/10/17	2447816.5	-0.21342	0.24935	0.04000	-46.84400	-29.61133	1.80627	0.33064	55.44776	130.56	6.95
89/10/19	2447818.5	-0.26386	0.21136	0.04144	-40.36067	-35.88701	0.69865	0.34061	54.01249	141.30	6.99
89/10/21	2447820.5	-0.30644	0.16705	0.04164	-33.29370	-40.59027	-0.33198	0.35149	52.49906	151.40	6.80
89/10/23	2447822.5	-0.34069	0.11816	0.04071	-26.00289	-43.81505	-1.26071	0.36289	50.96566	160.87	6.44
89/10/25	2447824.5	-0.36653	0.06634	0.03877	-18.75906	-45.71425	-2.07558	0.37450	49.45709	169.74	5.94
89/10/27	2447826.5	-0.38412	0.01300	0.03596	-11.75182	-46.46264	-2.77383	0.38602	48.00600	178.06	5.35
89/10/29	2447828.5	-0.39382	-0.04062	0.03241	-5.10506	-46.23312	-3.35850	0.39723	46.63521	185.89	4.68
89/10/31	2447830.5	-0.39608	-0.09349	0.02824	1.10653	-45.18395	-3.83589	0.40795	45.35998	193.28	3.97
89/11/ 2	2447832.5	-0.39145	-0.14474	0.02358	6.84289	-43.45331	-4.21378	0.41801	44.19017	200.29	3.23
89/11/ 4	2447834.5	-0.38046	-0.19366	0.01854	12.08711	-41.15827	-4.50031	0.42732	43.13182	206.98	2.49
89/11/ 6	2447836.5	-0.36371	-0.23965	0.01322	16.83684	-38.39615	-4.70332	0.43577	42.18844	213.38	1.74
89/11/ 8	2447838.5	-0.34176	-0.28221	0.00771	21.09822	-35.24690	-4.82998	0.44328	41.36191	219.55	1.00
89/11/10	2447840.5	-0.31516	-0.32095	0.00209	24.88161	-31.77573	-4.88662	0.44982	40.65305	225.52	0.27
89/11/12	2447842.5	-0.28446	-0.35552	-0.00356	28.19877	-28.03573	-4.87868	0.45532	40.06213	231.34	-0.45
89/11/14	2447844.5	-0.25019	-0.38563	-0.00916	31.06086	-24.07019	-4.81077	0.45977	39.58907	237.03	-1.14
89/11/16	2447846.5	-0.21287	-0.41105	-0.01465	33.47717	-19.91467	-4.68668	0.46313	39.23366	242.62	-1.81
89/11/18	2447848.5	-0.17302	-0.43158	-0.01997	35.45428	-15.59879	-4.50943	0.46539	38.99568	248.15	-2.46
89/11/20	2447850.5	-0.13113	-0.44703	-0.02505	36.99538	-11.14777	-4.28142	0.46654	38.87495	253.65	-3.08
89/11/22	2447852.5	-0.08772	-0.45729	-0.02984	38.09988	-6.58388	-4.00443	0.46658	38.87137	259.14	-3.67
89/11/24	2447854.5	-0.04329	-0.46221	-0.03428	38.76300	-1.92767	-3.67972	0.46550	38.98495	264.65	-4.22
89/11/26	2447856.5	0.00166	-0.46171	-0.03832	38.97550	2.80071	-3.30812	0.46330	39.21578	270.21	-4.74
89/11/28	2447858.5	0.04658	-0.45572	-0.04190	38.72339	7.58018	-2.89010	0.46001	39.56403	275.84	-5.23

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89/11/30	2447860.5	0.09093	-0.44419	-0.04498	37.98769	12.38732	-2.42587	0.45563	40.02993	281.57	-5.67
89/12/ 2	2447862.5	0.13414	-0.42710	-0.04749	36.74429	17.19473	-1.91551	0.45018	40.61367	287.44	-6.06
89/12/ 4	2447864.5	0.17561	-0.40448	-0.04939	34.96389	21.96900	-1.35913	0.44371	41.31534	293.47	-6.39
89/12/ 6	2447866.5	0.21469	-0.37638	-0.05061	32.61224	26.66838	-0.75705	0.43625	42.13472	299.70	-6.66
89/12/ 8	2447868.5	0.25071	-0.34292	-0.05112	29.65079	31.23989	-0.11017	0.42786	43.07101	306.17	-6.86
89/12/10	2447870.5	0.28294	-0.30428	-0.05085	26.03795	35.61571	0.57969	0.41860	44.12244	312.92	-6.98
89/12/12	2447872.5	0.31060	-0.26075	-0.04976	21.73170	39.70902	1.30917	0.40858	45.28561	319.99	-7.00
89/12/14	2447874.5	0.33286	-0.21270	-0.04781	16.69374	43.40921	2.07260	0.39790	46.55466	327.42	-6.90
89/12/16	2447876.5	0.34887	-0.16067	-0.04497	10.89641	46.57692	2.86098	0.38671	47.92000	335.27	-6.68
89/12/18	2447878.5	0.35774	-0.10537	-0.04120	4.33317	49.03976	3.66064	0.37520	49.36674	343.59	-6.30
89/12/20	2447880.5	0.35860	-0.04773	-0.03651	-2.96621	50.59057	4.45176	0.36360	50.87261	352.42	-5.76
89/12/22	2447882.5	0.35063	0.01106	-0.03093	-10.91538	50.99112	5.20679	0.35217	52.40564	1.81	-5.04
89/12/24	2447884.5	0.33319	0.06953	-0.02451	-19.34696	49.98574	5.88941	0.34125	53.92184	11.79	-4.12
89/12/26	2447886.5	0.30586	0.12590	-0.01737	-27.98856	47.33004	6.45466	0.33121	55.36384	22.37	-3.01
89/12/28	2447888.5	0.26860	0.17816	-0.00967	-36.44825	42.83823	6.85160	0.32246	56.66157	33.56	-1.72
89/12/30	2447890.5	0.22192	0.22413	-0.00162	-44.22409	36.44636	7.02936	0.31541	57.73664	45.28	-0.30
90/ 1/ 1	2447892.5	0.16692	0.26167	0.00647	-50.75195	28.27654	6.94679	0.31044	58.51138	57.47	1.19
90/ 1/ 3	2447894.5	0.10536	0.28890	0.01432	-55.49486	18.67493	6.58376	0.30785	58.92180	69.96	2.67
90/ 1/ 5	2447896.5	0.03956	0.30447	0.02158	-58.05460	8.19367	5.94973	0.30779	58.93107	82.60	4.02
90/ 1/ 7	2447898.5	-0.02785	0.30775	0.02797	-58.26377	-2.49267	5.08527	0.31027	58.53837	95.17	5.17
90/ 1/ 9	2447900.5	-0.09417	0.29889	0.03326	-56.21735	-12.71164	4.05461	0.31514	57.77903	107.49	6.06
90/ 1/11	2447902.5	-0.15697	0.27878	0.03730	-52.23100	-21.90975	2.93216	0.32210	56.71607	119.38	6.65
90/ 1/13	2447904.5	-0.21426	0.24882	0.04003	-46.75072	-29.72037	1.78875	0.33078	55.42680	130.73	6.95
90/ 1/15	2447906.5	-0.26458	0.21072	0.04145	-40.25514	-35.97157	0.68204	0.34077	53.98977	141.46	6.99
90/ 1/17	2447908.5	-0.30703	0.16632	0.04163	-33.18212	-40.65109	-0.34717	0.35166	52.47557	151.56	6.80
90/ 1/19	2447910.5	-0.34116	0.11738	0.04069	-25.89013	-43.85413	-1.27421	0.36307	50.94220	161.01	6.43
90/ 1/21	2447912.5	-0.36686	0.06552	0.03873	-18.64864	-45.73420	-2.08729	0.37468	49.43425	169.87	5.93
90/ 1/23	2447914.5	-0.38433	0.01217	0.03591	-11.64613	-46.46616	-2.78374	0.38620	47.98422	178.19	5.34
90/ 1/25	2447916.5	-0.39391	-0.04145	0.03235	-5.00560	-46.22279	-3.36670	0.39740	46.61477	186.01	4.67
90/ 1/27	2447918.5	-0.39606	-0.09430	0.02817	1.19891	-45.16207	-3.84248	0.40811	45.34109	193.39	3.96
90/ 1/29	2447920.5	-0.39132	-0.14552	0.02351	6.92777	-43.42183	-4.21889	0.41816	44.17294	200.40	3.22
90/ 1/31	2447922.5	-0.38025	-0.19440	0.01846	12.16435	-41.11885	-4.50407	0.42746	43.11633	207.08	2.48
90/ 2/ 2	2447924.5	-0.36341	-0.24033	0.01314	16.90648	-38.35016	-4.70585	0.43589	42.17474	213.48	1.73
90/ 2/ 4	2447926.5	-0.34138	-0.28284	0.00762	21.16038	-35.19545	-4.83137	0.44339	41.35001	219.64	0.98
90/ 2/ 6	2447928.5	-0.31471	-0.32152	0.00200	24.93648	-31.71973	-4.88696	0.44991	40.64298	225.61	0.25
90/ 2/ 8	2447930.5	-0.28395	-0.35602	-0.00364	28.24651	-27.97591	-4.87806	0.45540	40.05387	231.43	-0.46
90/ 2/10	2447932.5	-0.24963	-0.38606	-0.00925	31.10163	-24.00716	-4.80925	0.45983	39.58262	237.11	-1.15
90/ 2/12	2447934.5	-0.21227	-0.41141	-0.01473	33.51111	-19.84893	-4.68431	0.46317	39.22904	242.71	-1.82
90/ 2/14	2447936.5	-0.17238	-0.43185	-0.02005	35.48146	-15.53076	-4.50626	0.46542	38.99288	248.24	-2.47
90/ 2/16	2447938.5	-0.13047	-0.44723	-0.02512	37.01583	-11.07782	-4.27748	0.46655	38.87399	253.74	-3.09
90/ 2/18	2447940.5	-0.08704	-0.45740	-0.02991	38.11356	-6.51233	-3.99973	0.46657	38.87225	259.23	-3.68
90/ 2/20	2447942.5	-0.04259	-0.46224	-0.03435	38.76981	-1.85482	-3.67429	0.46547	38.98767	264.74	-4.23
90/ 2/22	2447944.5	0.00235	-0.46166	-0.03838	38.97524	2.87453	-3.30196	0.46326	39.22035	270.29	-4.75
90/ 2/24	2447946.5	0.04727	-0.45558	-0.04196	38.71580	7.65464	-2.88322	0.45995	39.57044	275.92	-5.23
90/ 2/26	2447948.5	0.09161	-0.44396	-0.04502	37.97243	12.46204	-2.41828	0.45555	40.03818	281.66	-5.67

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90/ 2/28	2447950.5	0.13480	-0.42679	-0.04753	36.72093	17.26923	-1.90721	0.45009	40.62376	287.53	-6.06
90/ 3/ 2	2447952.5	0.17623	-0.40408	-0.04941	34.93193	22.04270	-1.35010	0.44360	41.32727	293.56	-6.40
90/ 3/ 4	2447954.5	0.21528	-0.37590	-0.05063	32.57112	26.74056	-0.74732	0.43613	42.14848	299.80	-6.67
90/ 3/ 6	2447956.5	0.25124	-0.34236	-0.05112	29.59987	31.30961	-0.09976	0.42772	43.08659	306.27	-6.86
90/ 3/ 8	2447958.5	0.28341	-0.30364	-0.05084	25.97658	35.68179	0.59075	0.41845	44.13980	313.03	-6.98
90/ 3/10	2447960.5	0.31099	-0.26003	-0.04974	21.65922	39.76993	1.32081	0.40842	45.30467	320.10	-7.00
90/ 3/12	2447962.5	0.33316	-0.21192	-0.04778	16.60961	43.46302	2.08471	0.39773	46.57531	327.54	-6.90
90/ 3/14	2447964.5	0.34906	-0.15983	-0.04491	10.80034	46.62120	2.87338	0.38654	47.94205	335.40	-6.67
90/ 3/16	2447966.5	0.35781	-0.10449	-0.04113	4.22530	49.07155	3.67308	0.37502	49.38989	343.72	-6.30
90/ 3/18	2447968.5	0.35854	-0.04682	-0.03643	-3.08504	50.60636	4.46387	0.36342	50.89644	352.56	-5.75
90/ 3/20	2447970.5	0.35044	0.01198	-0.03084	-11.04324	50.98701	5.21807	0.35200	52.42954	1.96	-5.03
90/ 3/22	2447972.5	0.33284	0.07042	-0.02441	-19.48047	49.95774	5.89922	0.34109	53.94502	11.95	-4.10
90/ 3/24	2447974.5	0.30535	0.12675	-0.01725	-28.12252	47.27465	6.46225	0.33107	55.38528	22.54	-2.99
90/ 3/26	2447976.5	0.26795	0.17893	-0.00954	-36.57561	42.75338	6.85615	0.32234	56.68009	33.73	-1.70
90/ 3/28	2447978.5	0.22112	0.22478	-0.00150	-44.33637	36.33239	7.03012	0.31532	57.75101	45.47	-0.27
90/ 3/30	2447980.5	0.16601	0.26218	0.00660	-50.84032	28.13713	6.94327	0.31038	58.52047	57.66	1.22
90/ 4/ 1	2447982.5	0.10437	0.28923	0.01443	-55.55180	18.51725	6.57586	0.30783	58.92481	70.16	2.69
90/ 4/ 3	2447984.5	0.03852	0.30462	0.02169	-58.07561	8.02760	5.93787	0.30781	58.92772	82.79	4.04
90/ 4/ 5	2447986.5	-0.02889	0.30771	0.02806	-58.24838	-2.65633	5.07031	0.31033	58.52895	95.36	5.19
90/ 4/ 7	2447988.5	-0.09518	0.29867	0.03333	-56.16902	-12.86314	4.03765	0.31523	57.76436	107.68	6.07
90/ 4/ 9	2447990.5	-0.15791	0.27839	0.03736	-52.15595	-22.04192	2.91438	0.32223	56.69729	119.56	6.66
90/ 4/11	2447992.5	-0.21509	0.24828	0.04006	-46.65638	-29.82913	1.77115	0.33093	55.40516	130.90	6.95
90/ 4/13	2447994.5	-0.26530	0.21008	0.04146	-40.14877	-36.05570	0.66539	0.34094	53.96647	141.63	6.99
90/ 4/15	2447996.5	-0.30763	0.16560	0.04163	-33.06994	-40.71142	-0.36238	0.35184	52.45162	151.71	6.79
90/ 4/17	2447998.5	-0.34162	0.11660	0.04066	-25.77698	-43.89274	-1.28770	0.36325	50.91840	161.15	6.43
90/ 4/19	2448000.5	-0.36720	0.06470	0.03870	-18.53800	-45.75372	-2.09897	0.37486	49.41119	170.01	5.93
90/ 4/21	2448002.5	-0.38454	0.01134	0.03586	-11.54034	-46.46933	-2.79364	0.38637	47.96231	178.31	5.33
90/ 4/23	2448004.5	-0.39400	-0.04227	0.03229	-4.90612	-46.21220	-3.37487	0.39757	46.59428	186.12	4.66
90/ 4/25	2448006.5	-0.39604	-0.09511	0.02810	1.29123	-45.13999	-3.84906	0.40827	45.32219	193.50	3.95
90/ 4/27	2448008.5	-0.39120	-0.14629	0.02343	7.01255	-43.39024	-4.22399	0.41831	44.15576	200.50	3.21
90/ 4/29	2448010.5	-0.38003	-0.19513	0.01838	12.24147	-41.07938	-4.50782	0.42759	43.10092	207.18	2.46
90/ 5/ 1	2448012.5	-0.36311	-0.24102	0.01305	16.97599	-38.30418	-4.70836	0.43601	42.16115	213.57	1.72
90/ 5/ 3	2448014.5	-0.34100	-0.28347	0.00753	21.22243	-35.14406	-4.83275	0.44350	41.33826	219.74	0.97
90/ 5/ 5	2448016.5	-0.31426	-0.32208	0.00191	24.99124	-31.66384	-4.88731	0.45000	40.63307	225.70	0.24
90/ 5/ 7	2448018.5	-0.28345	-0.35652	-0.00373	28.29418	-27.91625	-4.87745	0.45548	40.04581	231.51	-0.47
90/ 5/ 9	2448020.5	-0.24908	-0.38649	-0.00933	31.14236	-23.94432	-4.80774	0.45989	39.57640	237.20	-1.16
90/ 5/11	2448022.5	-0.21167	-0.41176	-0.01482	33.54502	-19.78340	-4.68196	0.46322	39.22464	242.79	-1.83
90/ 5/13	2448024.5	-0.17175	-0.43213	-0.02013	35.50863	-15.46295	-4.50310	0.46544	38.99030	248.32	-2.48
90/ 5/15	2448026.5	-0.12981	-0.44743	-0.02520	37.03627	-11.00810	-4.27355	0.46656	38.87321	253.82	-3.10
90/ 5/17	2448028.5	-0.08636	-0.45752	-0.02998	38.12721	-6.44101	-3.99506	0.46656	38.87327	259.31	-3.68
90/ 5/19	2448030.5	-0.04190	-0.46227	-0.03441	38.77656	-1.78223	-3.66888	0.46544	38.99049	264.82	-4.24
90/ 5/21	2448032.5	0.00305	-0.46161	-0.03844	38.97491	2.94809	-3.29583	0.46321	39.22496	270.38	-4.76
90/ 5/23	2448034.5	0.04796	-0.45544	-0.04201	38.70813	7.72882	-2.87637	0.45988	39.57686	276.01	-5.24
90/ 5/25	2448036.5	0.09229	-0.44374	-0.04507	37.95710	12.53645	-2.41071	0.45547	40.04641	281.75	-5.68
90/ 5/27	2448038.5	0.13545	-0.42648	-0.04756	36.69753	17.34340	-1.89892	0.45000	40.63382	287.62	-6.07

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90/ 5/29	2448040.5	0.17686	-0.40369	-0.04943	34.89997	22.11605	-1.34111	0.44349	41.33916	293.66	-6.40
90/ 5/31	2448042.5	0.21586	-0.37542	-0.05064	32.53002	26.81237	-0.73763	0.43600	42.16218	299.90	-6.67
90/ 6/ 2	2448044.5	0.25177	-0.34180	-0.05112	29.54900	31.37893	-0.08938	0.42758	43.10207	306.38	-6.87
90/ 6/ 4	2448046.5	0.28387	-0.30301	-0.05083	25.91528	35.74740	0.60177	0.41830	44.15700	313.13	-6.98
90/ 6/ 6	2448048.5	0.31137	-0.25932	-0.04972	21.58687	39.83031	1.33240	0.40826	45.32352	320.21	-6.99
90/ 6/ 8	2448050.5	0.33346	-0.21114	-0.04774	16.52569	43.51623	2.09676	0.39756	46.59568	327.66	-6.90
90/ 6/10	2448052.5	0.34926	-0.15900	-0.04486	10.70458	46.66483	2.88571	0.38636	47.96376	335.52	-6.67
90/ 6/12	2448054.5	0.35789	-0.10361	-0.04107	4.11787	49.10267	3.68543	0.37484	49.41266	343.85	-6.29
90/ 6/14	2448056.5	0.35849	-0.04592	-0.03635	-3.20325	50.62151	4.47587	0.36324	50.91986	352.70	-5.74
90/ 6/16	2448058.5	0.35024	0.01289	-0.03074	-11.17028	50.98233	5.22923	0.35182	52.45301	2.11	-5.01
90/ 6/18	2448060.5	0.33250	0.07132	-0.02430	-19.61295	49.92929	5.90890	0.34093	53.96774	12.11	-4.09
90/ 6/20	2448062.5	0.30485	0.12759	-0.01714	-28.25526	47.21903	6.46970	0.33092	55.40626	22.71	-2.97
90/ 6/22	2448064.5	0.26730	0.17969	-0.00942	-36.70159	42.66857	6.86057	0.32222	56.69816	33.91	-1.68
90/ 6/24	2448066.5	0.22034	0.22543	-0.00137	-44.44718	36.21883	7.03078	0.31523	57.76493	45.66	-0.25
90/ 6/26	2448068.5	0.16510	0.26268	0.00672	-50.92724	27.99854	6.93968	0.31033	58.52915	57.85	1.24
90/ 6/28	2448070.5	0.10338	0.28956	0.01455	-55.60747	18.36082	6.56796	0.30781	58.92748	70.35	2.71
90/ 6/30	2448072.5	0.03749	0.30476	0.02179	-58.09566	7.86312	5.92606	0.30783	58.92412	82.99	4.06
90/ 7/ 2	2448074.5	-0.02992	0.30766	0.02815	-58.23247	-2.81817	5.05544	0.31039	58.51940	95.56	5.20
90/ 7/ 4	2448076.5	-0.09617	0.29844	0.03341	-56.12065	-13.01277	4.02085	0.31533	57.74969	107.86	6.08
90/ 7/ 6	2448078.5	-0.15883	0.27800	0.03741	-52.08133	-22.17232	2.89678	0.32235	56.67863	119.74	6.66
90/ 7/ 8	2448080.5	-0.21592	0.24776	0.04009	-46.56285	-29.93636	1.75375	0.33108	55.38376	131.07	6.96
90/ 7/10	2448082.5	-0.26601	0.20944	0.04147	-40.04349	-36.13858	0.64894	0.34110	53.94348	141.78	6.98
90/ 7/12	2448084.5	-0.30821	0.16488	0.04162	-32.95902	-40.77079	-0.37739	0.35201	52.42802	151.86	6.79
90/ 7/14	2448086.5	-0.34207	0.11582	0.04064	-25.66516	-43.93066	-1.30102	0.36343	50.89495	161.29	6.42
90/ 7/16	2448088.5	-0.36752	0.06390	0.03866	-18.42870	-45.77279	-2.11050	0.37503	49.38846	170.14	5.92
90/ 7/18	2448090.5	-0.38474	0.01052	0.03581	-11.43586	-46.47228	-2.80339	0.38655	47.94070	178.43	5.32
90/ 7/20	2448092.5	-0.39408	-0.04309	0.03223	-4.80789	-46.20157	-3.38293	0.39774	46.57408	186.24	4.65
90/ 7/22	2448094.5	-0.39602	-0.09590	0.02804	1.38242	-45.11805	-3.85554	0.40843	45.30359	193.61	3.94
90/ 7/24	2448096.5	-0.39107	-0.14706	0.02336	7.09630	-43.35893	-4.22901	0.41846	44.13886	200.61	3.20
90/ 7/26	2448098.5	-0.37981	-0.19585	0.01830	12.31767	-41.04032	-4.51152	0.42773	43.08581	207.28	2.45
90/ 7/28	2448100.5	-0.36281	-0.24169	0.01297	17.04470	-38.25868	-4.71084	0.43613	42.14784	213.67	1.70
90/ 7/30	2448102.5	-0.34063	-0.28409	0.00745	21.28378	-35.09321	-4.83412	0.44361	41.32677	219.83	0.96
90/ 8/ 1	2448104.5	-0.31382	-0.32264	0.00183	25.04541	-31.60851	-4.88765	0.45009	40.62339	225.79	0.23
90/ 8/ 3	2448106.5	-0.28295	-0.35701	-0.00382	28.34134	-27.85716	-4.87684	0.45555	40.03794	231.60	-0.48
90/ 8/ 5	2448108.5	-0.24852	-0.38691	-0.00942	31.18266	-23.88206	-4.80625	0.45995	39.57033	237.29	-1.17
90/ 8/ 7	2448110.5	-0.21108	-0.41211	-0.01490	33.57858	-19.71846	-4.67962	0.46326	39.22037	242.88	-1.84
90/ 8/ 9	2448112.5	-0.17112	-0.43240	-0.02021	35.53551	-15.39575	-4.49997	0.46547	38.98784	248.41	-2.49
90/ 8/11	2448114.5	-0.12915	-0.44762	-0.02528	37.05649	-10.93899	-4.26965	0.46657	38.87255	253.91	-3.11
90/ 8/13	2448116.5	-0.08568	-0.45763	-0.03005	38.14073	-6.37032	-3.99042	0.46655	38.87440	259.40	-3.69
90/ 8/15	2448118.5	-0.04121	-0.46230	-0.03448	38.78324	-1.71026	-3.66351	0.46542	38.99341	264.91	-4.25
90/ 8/17	2448120.5	0.00374	-0.46155	-0.03850	38.97458	3.02101	-3.28974	0.46317	39.22967	270.46	-4.77
90/ 8/19	2448122.5	0.04865	-0.45531	-0.04206	38.70053	7.80237	-2.86957	0.45982	39.58336	276.10	-5.25
90/ 8/21	2448124.5	0.09296	-0.44352	-0.04511	37.94187	12.61023	-2.40320	0.45539	40.05470	281.84	-5.68
90/ 8/23	2448126.5	0.13610	-0.42617	-0.04759	36.67427	17.41695	-1.89070	0.44990	40.64390	287.71	-6.07
90/ 8/25	2448128.5	0.17748	-0.40329	-0.04946	34.86818	22.18879	-1.33218	0.44338	41.35102	293.75	-6.40

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90/ 8/27	2448130.5	0.21643	-0.37494	-0.05065	32.48915	26.88355	-0.72800	0.43588	42.17582	300.00	-6.67
90/ 8/29	2448132.5	0.25230	-0.34124	-0.05112	29.49841	31.44763	-0.07907	0.42745	43.11746	306.48	-6.87
90/ 8/31	2448134.5	0.28433	-0.30237	-0.05082	25.85433	35.81243	0.61271	0.41815	44.17410	313.24	-6.98
90/ 9/ 2	2448136.5	0.31176	-0.25862	-0.04969	21.51492	39.89014	1.34391	0.40810	45.34226	320.32	-6.99
90/ 9/ 4	2448138.5	0.33375	-0.21037	-0.04770	16.44223	43.56892	2.10872	0.39739	46.61593	327.78	-6.89
90/ 9/ 6	2448140.5	0.34945	-0.15817	-0.04481	10.60934	46.70798	2.89795	0.38619	47.98533	335.65	-6.66
90/ 9/ 8	2448142.5	0.35796	-0.10274	-0.04100	4.01102	49.13333	3.69768	0.37467	49.43526	343.99	-6.28
90/ 9/10	2448144.5	0.35843	-0.04502	-0.03627	-3.32081	50.63624	4.48778	0.36306	50.94307	352.84	-5.73
90/ 9/12	2448146.5	0.35004	0.01379	-0.03065	-11.29659	50.97728	5.24029	0.35165	52.47625	2.26	-5.00
90/ 9/14	2448148.5	0.33215	0.07220	-0.02420	-19.74461	49.90058	5.91849	0.34077	53.99023	12.26	-4.07
90/ 9/16	2448150.5	0.30435	0.12843	-0.01702	-28.38710	47.16328	6.47706	0.33078	55.42702	22.88	-2.95
90/ 9/18	2448152.5	0.26665	0.18045	-0.00930	-36.82663	42.58384	6.86491	0.32210	56.71606	34.09	-1.65
90/ 9/20	2448154.5	0.21955	0.22607	-0.00125	-44.55707	36.10557	7.03138	0.31514	57.77876	45.84	-0.23
90/ 9/22	2448156.5	0.16420	0.26317	0.00684	-51.01333	27.86048	6.93607	0.31027	58.53781	58.04	1.26
90/ 9/24	2448158.5	0.10240	0.28989	0.01467	-55.66246	18.20510	6.56005	0.30779	58.93021	70.55	2.73
90/ 9/26	2448160.5	0.03646	0.30490	0.02190	-58.11525	7.69948	5.91428	0.30785	58.92065	83.18	4.08
90/ 9/28	2448162.5	-0.03095	0.30761	0.02824	-58.21633	-2.97913	5.04064	0.31045	58.51004	95.75	5.22
90/ 9/30	2448164.5	-0.09716	0.29821	0.03348	-56.07226	-13.16155	4.00412	0.31542	57.73523	108.05	6.09
90/10/ 2	2448166.5	-0.15974	0.27761	0.03746	-52.00686	-22.30195	2.87926	0.32247	56.66022	119.92	6.67
90/10/ 4	2448168.5	-0.21674	0.24723	0.04012	-46.46962	-30.04292	1.73644	0.33122	55.36260	131.24	6.96
90/10/ 6	2448170.5	-0.26672	0.20881	0.04148	-39.93858	-36.22092	0.63257	0.34126	53.92074	141.94	6.98
90/10/ 8	2448172.5	-0.30879	0.16416	0.04161	-32.84851	-40.82978	-0.39234	0.35218	52.40467	152.00	6.79
90/10/10	2448174.5	-0.34252	0.11505	0.04062	-25.55376	-43.96833	-1.31428	0.36361	50.87177	161.43	6.41
90/10/12	2448176.5	-0.36785	0.06309	0.03862	-18.31981	-45.79175	-2.12198	0.37521	49.36601	170.27	5.91
90/10/14	2448178.5	-0.38494	0.00970	0.03576	-11.33176	-46.47520	-2.81311	0.38672	47.91937	178.56	5.31
90/10/16	2448180.5	-0.39417	-0.04390	0.03217	-4.71000	-46.19097	-3.39096	0.39791	46.55414	186.36	4.64
90/10/18	2448182.5	-0.39599	-0.09670	0.02797	1.47327	-45.09616	-3.86199	0.40858	45.28520	193.72	3.93
90/10/20	2448184.5	-0.39095	-0.14782	0.02328	7.17972	-43.32767	-4.23402	0.41861	44.12213	200.71	3.19
90/10/22	2448186.5	-0.37959	-0.19658	0.01822	12.39353	-41.00129	-4.51518	0.42786	43.07078	207.38	2.44
90/10/24	2448188.5	-0.36251	-0.24237	0.01288	17.11304	-38.21322	-4.71329	0.43625	42.13456	213.77	1.69
90/10/26	2448190.5	-0.34025	-0.28471	0.00736	21.34473	-35.04241	-4.83545	0.44371	41.31525	219.92	0.95
90/10/28	2448192.5	-0.31338	-0.32320	0.00174	25.09914	-31.55327	-4.88796	0.45018	40.61365	225.88	0.22
90/10/30	2448194.5	-0.28244	-0.35750	-0.00390	28.38803	-27.79821	-4.87620	0.45563	40.02996	231.69	-0.49
90/11/ 1	2448196.5	-0.24797	-0.38733	-0.00950	31.22246	-23.81999	-4.80472	0.46001	39.56412	237.37	-1.18
90/11/ 3	2448198.5	-0.21049	-0.41245	-0.01498	33.61161	-19.65377	-4.67726	0.46330	39.21591	242.96	-1.85
90/11/ 5	2448200.5	-0.17049	-0.43267	-0.02029	35.56184	-15.32883	-4.49682	0.46549	38.98511	248.49	-2.50
90/11/ 7	2448202.5	-0.12850	-0.44782	-0.02535	37.07614	-10.87021	-4.26573	0.46658	38.87156	253.99	-3.11
90/11/ 9	2448204.5	-0.08501	-0.45774	-0.03012	38.15365	-6.30002	-3.98576	0.46654	38.87516	259.48	-3.70
90/11/11	2448206.5	-0.04053	-0.46233	-0.03454	38.78935	-1.63874	-3.65813	0.46539	38.99591	264.99	-4.26
90/11/13	2448208.5	0.00443	-0.46150	-0.03856	38.97370	3.09343	-3.28365	0.46313	39.23393	270.55	-4.78
90/11/15	2448210.5	0.04933	-0.45517	-0.04211	38.69241	7.87533	-2.86278	0.45977	39.58938	276.19	-5.26
90/11/17	2448212.5	0.09363	-0.44330	-0.04515	37.92620	12.68336	-2.39570	0.45532	40.06250	281.93	-5.69
90/11/19	2448214.5	0.13675	-0.42587	-0.04763	36.65064	17.48978	-1.88251	0.44981	40.65348	287.80	-6.08
90/11/21	2448216.5	0.17809	-0.40291	-0.04948	34.83611	22.26075	-1.32329	0.44328	41.36239	293.85	-6.41
90/11/23	2448218.5	0.21701	-0.37447	-0.05067	32.44809	26.95393	-0.71843	0.43576	42.18897	300.09	-6.68

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90/11/25	2448220.5	0.25281	-0.34069	-0.05112	29.44775	31.51552	-0.06884	0.42731	43.13238	306.58	-6.87
90/11/27	2448222.5	0.28478	-0.30174	-0.05081	25.79344	35.87665	0.62358	0.41801	44.19077	313.34	-6.98
90/11/29	2448224.5	0.31213	-0.25792	-0.04967	21.44319	39.94919	1.35533	0.40794	45.36061	320.43	-6.99
90/12/ 1	2448226.5	0.33404	-0.20961	-0.04766	16.35916	43.62091	2.12058	0.39723	46.63585	327.89	-6.89
90/12/ 3	2448228.5	0.34963	-0.15735	-0.04476	10.51463	46.75053	2.91009	0.38601	48.00665	335.77	-6.66
90/12/ 5	2448230.5	0.35803	-0.10188	-0.04094	3.90483	49.16356	3.70985	0.37449	49.45772	344.12	-6.28
90/12/ 7	2448232.5	0.35837	-0.04413	-0.03619	-3.43766	50.65072	4.49960	0.36289	50.96626	352.98	-5.72
90/12/ 9	2448234.5	0.34984	0.01468	-0.03056	-11.42220	50.97222	5.25129	0.35148	52.49962	2.40	-4.99
90/12/11	2448236.5	0.33180	0.07307	-0.02409	-19.87565	49.87207	5.92804	0.34061	54.01302	12.42	-4.06
90/12/13	2448238.5	0.30385	0.12925	-0.01691	-28.51850	47.10793	6.48442	0.33063	55.44826	23.04	-2.93
90/12/15	2448240.5	0.26600	0.18119	-0.00918	-36.95147	42.49959	6.86927	0.32198	56.73459	34.26	-1.63
90/12/17	2448242.5	0.21876	0.22670	-0.00112	-44.66700	35.99279	7.03202	0.31504	57.79335	46.02	-0.20
90/12/19	2448244.5	0.16330	0.26366	0.00697	-51.09970	27.72276	6.93250	0.31021	58.54733	58.23	1.29
90/12/21	2448246.5	0.10141	0.29020	0.01478	-55.71789	18.04948	6.55219	0.30777	58.93385	70.74	2.75
90/12/23	2448248.5	0.03544	0.30503	0.02200	-58.13534	7.53565	5.90252	0.30787	58.91811	83.37	4.10
90/12/25	2448250.5	-0.03198	0.30755	0.02833	-58.20062	-3.14058	5.02582	0.31050	58.50158	95.94	5.23
90/12/27	2448252.5	-0.09815	0.29797	0.03355	-56.02413	-13.31105	3.98735	0.31551	57.72162	108.23	6.10
90/12/29	2448254.5	-0.16067	0.27721	0.03751	-51.93238	-22.43244	2.86167	0.32259	56.64253	120.10	6.68
90/12/31	2448256.5	-0.21756	0.24669	0.04015	-46.37607	-30.15036	1.71902	0.33136	55.34202	131.41	6.96
91/ 1/ 2	2448258.5	-0.26742	0.20816	0.04149	-39.83308	-36.30404	0.61608	0.34142	53.89840	142.10	6.98
91/ 1/ 4	2448260.5	-0.30937	0.16343	0.04161	-32.73715	-40.88934	-0.40741	0.35235	52.38153	152.15	6.78
91/ 1/ 6	2448262.5	-0.34298	0.11426	0.04059	-25.44135	-44.00633	-1.32767	0.36378	50.84862	161.57	6.41
91/ 1/ 8	2448264.5	-0.36817	0.06227	0.03858	-18.20980	-45.81077	-2.13357	0.37539	49.34344	170.40	5.90
91/ 1/10	2448266.5	-0.38514	0.00887	0.03571	-11.22650	-46.47793	-2.82291	0.38689	47.89782	178.68	5.30
91/ 1/12	2448268.5	-0.39425	-0.04473	0.03211	-4.61098	-46.17997	-3.39906	0.39807	46.53390	186.47	4.63
91/ 1/14	2448270.5	-0.39596	-0.09750	0.02790	1.56520	-45.07370	-3.86849	0.40874	45.26647	193.83	3.91
91/ 1/16	2448272.5	-0.39082	-0.14860	0.02321	7.26416	-43.29568	-4.23905	0.41876	44.10502	200.82	3.18
91/ 1/18	2448274.5	-0.37937	-0.19731	0.01814	12.47035	-40.96141	-4.51887	0.42800	43.05539	207.48	2.43
91/ 1/20	2448276.5	-0.36220	-0.24305	0.01280	17.18227	-38.16679	-4.71574	0.43638	42.12092	213.86	1.68
91/ 1/22	2448278.5	-0.33986	-0.28534	0.00728	21.40650	-34.99054	-4.83677	0.44382	41.30340	220.02	0.94
91/ 1/24	2448280.5	-0.31293	-0.32376	0.00165	25.15362	-31.49686	-4.88823	0.45028	40.60359	225.97	0.21
91/ 1/26	2448282.5	-0.28193	-0.35800	-0.00399	28.43537	-27.73800	-4.87551	0.45570	40.02172	231.78	-0.50
91/ 1/28	2448284.5	-0.24741	-0.38776	-0.00959	31.26283	-23.75659	-4.80313	0.46007	39.55769	237.46	-1.19
91/ 1/30	2448286.5	-0.20988	-0.41261	-0.01507	33.64513	-19.58768	-4.67482	0.46334	39.21130	243.05	-1.86
91/ 2/ 1	2448288.5	-0.16986	-0.43295	-0.02037	35.58858	-15.26049	-4.49357	0.46552	38.98232	248.58	-2.51
91/ 2/ 3	2448290.5	-0.12783	-0.44801	-0.02543	37.09612	-10.79997	-4.26172	0.46658	38.87060	254.07	-3.12
91/ 2/ 5	2448292.5	-0.08432	-0.45785	-0.03019	38.16685	-6.22819	-3.98100	0.46653	38.87604	259.56	-3.71
91/ 2/ 7	2448294.5	-0.03983	-0.46236	-0.03461	38.79564	-1.56566	-3.65264	0.46536	38.99865	265.08	-4.26
91/ 2/ 9	2448296.5	0.00513	-0.46144	-0.03861	38.97290	3.16746	-3.27743	0.46309	39.23852	270.64	-4.78
91/ 2/11	2448298.5	0.05002	-0.45503	-0.04216	38.68425	7.94996	-2.85584	0.45971	39.59582	276.27	-5.26
91/ 2/13	2448300.5	0.09431	-0.44307	-0.04519	37.91033	12.75819	-2.38805	0.45524	40.07078	282.02	-5.70
91/ 2/15	2448302.5	0.13741	-0.42555	-0.04766	36.62663	17.56434	-1.87413	0.44972	40.66360	287.89	-6.08
91/ 2/17	2448304.5	0.17871	-0.40251	-0.04951	34.80346	22.33446	-1.31420	0.44317	41.37434	293.94	-6.41
91/ 2/19	2448306.5	0.21759	-0.37399	-0.05068	32.40622	27.02604	-0.70863	0.43564	42.20275	300.19	-6.68
91/ 2/21	2448308.5	0.25334	-0.34012	-0.05113	29.39604	31.58509	-0.05836	0.42717	43.14799	306.68	-6.87

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91/ 2/23	2448310.5	0.28524	-0.30110	-0.05080	25.73123	35.94249	0.63470	0.41786	44.20816	313.45	-6.98
91/ 2/25	2448312.5	0.31252	-0.25720	-0.04964	21.36985	40.00975	1.36702	0.40778	45.37972	320.55	-6.99
91/ 2/27	2448314.5	0.33433	-0.20882	-0.04763	16.27414	43.67424	2.13274	0.39705	46.65657	328.01	-6.89
91/ 3/ 1	2448316.5	0.34982	-0.15651	-0.04471	10.41765	46.79417	2.92252	0.38584	48.02877	335.90	-6.65
91/ 3/ 3	2448318.5	0.35810	-0.10100	-0.04087	3.79605	49.19449	3.72230	0.37431	49.48094	344.25	-6.27
91/ 3/ 5	2448320.5	0.35831	-0.04322	-0.03611	-3.55733	50.66544	4.51170	0.36271	50.99016	353.12	-5.71
91/ 3/ 7	2448322.5	0.34964	0.01560	-0.03046	-11.55078	50.96678	5.26253	0.35131	52.52359	2.55	-4.97
91/ 3/ 9	2448324.5	0.33144	0.07397	-0.02398	-20.00966	49.84248	5.93776	0.34044	54.03624	12.58	-4.04
91/ 3/11	2448326.5	0.30334	0.13010	-0.01679	-28.65263	47.05074	6.49187	0.33049	55.46972	23.21	-2.91
91/ 3/13	2448328.5	0.26533	0.18195	-0.00905	-37.07857	42.41281	6.87363	0.32185	56.75309	34.44	-1.61
91/ 3/15	2448330.5	0.21796	0.22735	-0.00100	-44.77852	35.87692	7.03255	0.31495	57.80766	46.21	-0.18
91/ 3/17	2448332.5	0.16238	0.26416	0.00709	-51.18680	27.58166	6.92872	0.31016	58.55633	58.42	1.31
91/ 3/19	2448334.5	0.10041	0.29053	0.01490	-55.77316	17.89052	6.54404	0.30775	58.93675	70.93	2.78
91/ 3/21	2448336.5	0.03439	0.30516	0.02211	-58.15443	7.36881	5.89043	0.30789	58.91463	83.57	4.12
91/ 3/23	2448338.5	-0.03303	0.30749	0.02842	-58.18327	-3.30445	5.01066	0.31056	58.49205	96.13	5.25
91/ 3/25	2448340.5	-0.09916	0.29773	0.03362	-55.97397	-13.46228	3.97025	0.31560	57.70686	108.42	6.11
91/ 3/27	2448342.5	-0.16160	0.27680	0.03756	-51.85577	-22.56397	2.84380	0.32271	56.62367	120.28	6.68
91/ 3/29	2448344.5	-0.21839	0.24615	0.04018	-46.28047	-30.25827	1.70138	0.33151	55.32033	131.58	6.96
91/ 3/31	2448346.5	-0.26814	0.20750	0.04151	-39.72573	-36.38719	0.59942	0.34158	53.87505	142.26	6.98
91/ 4/ 2	2448348.5	-0.30996	0.16269	0.04160	-32.62425	-40.94865	-0.42260	0.35252	52.35754	152.31	6.78
91/ 4/ 4	2448350.5	-0.34343	0.11347	0.04057	-25.32767	-44.04393	-1.34113	0.36396	50.82477	161.72	6.40
91/ 4/ 6	2448352.5	-0.36850	0.06145	0.03854	-18.09879	-45.82932	-2.14521	0.37557	49.32033	170.53	5.89
91/ 4/ 8	2448354.5	-0.38534	0.00803	0.03566	-11.12047	-46.48018	-2.83275	0.38707	47.87585	178.81	5.29
91/ 4/10	2448356.5	-0.39433	-0.04556	0.03204	-4.51136	-46.16849	-3.40718	0.39824	46.51334	186.59	4.62
91/ 4/12	2448358.5	-0.39593	-0.09831	0.02783	1.65760	-45.05078	-3.87500	0.40890	45.24750	193.94	3.90
91/ 4/14	2448360.5	-0.39068	-0.14938	0.02313	7.34894	-43.26328	-4.24408	0.41891	44.08775	200.92	3.17
91/ 4/16	2448362.5	-0.37915	-0.19805	0.01806	12.54741	-40.92116	-4.52254	0.42814	43.03989	207.58	2.42
91/ 4/18	2448364.5	-0.36189	-0.24374	0.01271	17.25166	-38.12007	-4.71818	0.43650	42.10725	213.96	1.67
91/ 4/20	2448366.5	-0.33948	-0.28596	0.00719	21.46839	-34.93845	-4.83808	0.44393	41.29157	220.11	0.93
91/ 4/22	2448368.5	-0.31248	-0.32433	0.00156	25.20817	-31.44030	-4.88850	0.45037	40.59362	226.07	0.20
91/ 4/24	2448370.5	-0.28142	-0.35849	-0.00408	28.48279	-27.67769	-4.87482	0.45578	40.01360	231.87	-0.51
91/ 4/26	2448372.5	-0.24685	-0.38818	-0.00967	31.30328	-23.69312	-4.80154	0.46012	39.55141	237.55	-1.20
91/ 4/28	2448374.5	-0.20928	-0.41316	-0.01515	33.67872	-19.52154	-4.67239	0.46339	39.20686	243.14	-1.87
91/ 4/30	2448376.5	-0.16922	-0.43322	-0.02045	35.61539	-15.19208	-4.49034	0.46554	38.97971	248.66	-2.52
91/ 5/ 2	2448378.5	-0.12717	-0.44820	-0.02551	37.11616	-10.72965	-4.25771	0.46659	38.86982	254.16	-3.13
91/ 5/ 4	2448380.5	-0.08364	-0.45797	-0.03027	38.18006	-6.15630	-3.97623	0.46652	38.87708	259.65	-3.72
91/ 5/ 6	2448382.5	-0.03914	-0.46239	-0.03467	38.80192	-1.49251	-3.64713	0.46534	39.00151	265.16	-4.27
91/ 5/ 8	2448384.5	0.00583	-0.46139	-0.03867	38.97205	3.24154	-3.27121	0.46304	39.24321	270.72	-4.79
91/ 5/10	2448386.5	0.05072	-0.45488	-0.04221	38.67602	8.02464	-2.84889	0.45964	39.60234	276.36	-5.27
91/ 5/12	2448388.5	0.09499	-0.44284	-0.04524	37.89438	12.83307	-2.38038	0.45516	40.07914	282.11	-5.70
91/ 5/14	2448390.5	0.13806	-0.42524	-0.04769	36.60253	17.63895	-1.86575	0.44963	40.67381	287.99	-6.09
91/ 5/16	2448392.5	0.17934	-0.40210	-0.04953	34.77072	22.40821	-1.30510	0.44306	41.38640	294.04	-6.42
91/ 5/18	2448394.5	0.21817	-0.37350	-0.05069	32.36425	27.09821	-0.69883	0.43551	42.21666	300.29	-6.68
91/ 5/20	2448396.5	0.25387	-0.33955	-0.05113	29.34421	31.65471	-0.04787	0.42704	43.16371	306.78	-6.88
91/ 5/22	2448398.5	0.28571	-0.30045	-0.05079	25.66885	36.00834	0.64583	0.41771	44.22564	313.56	-6.98

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91/ 5/24	2448400.5	0.31290	-0.25648	-0.04962	21.29629	40.07027	1.37873	0.40761	45.39889	320.66	-6.99
91/ 5/26	2448402.5	0.33462	-0.20804	-0.04759	16.18889	43.72744	2.14490	0.39688	46.67729	328.13	-6.89
91/ 5/28	2448404.5	0.35001	-0.15567	-0.04465	10.32043	46.83759	2.93496	0.38566	48.05086	336.02	-6.65
91/ 5/30	2448406.5	0.35817	-0.10011	-0.04080	3.68705	49.22515	3.73475	0.37413	49.50412	344.38	-6.26
91/ 6/ 1	2448408.5	0.35824	-0.04231	-0.03603	-3.67719	50.67980	4.52378	0.36253	51.01400	353.26	-5.70
91/ 6/ 3	2448410.5	0.34943	0.01652	-0.03037	-11.67948	50.96093	5.27374	0.35113	52.54749	2.71	-4.96
91/ 6/ 5	2448412.5	0.33108	0.07487	-0.02388	-20.14369	49.81243	5.94745	0.34028	54.05940	12.74	-4.02
91/ 6/ 7	2448414.5	0.30282	0.13095	-0.01667	-28.78666	46.99306	6.49927	0.33034	55.49108	23.38	-2.89
91/ 6/ 9	2448416.5	0.26466	0.18272	-0.00893	-37.20542	42.32553	6.87792	0.32173	56.77147	34.62	-1.59
91/ 6/11	2448418.5	0.21715	0.22799	-0.00087	-44.88961	35.76060	7.03301	0.31486	57.82180	46.40	-0.16
91/ 6/13	2448420.5	0.16146	0.26465	0.00722	-51.27331	27.44024	6.92486	0.31010	58.56511	58.61	1.33
91/ 6/15	2448422.5	0.09941	0.29085	0.01502	-55.82771	17.73142	6.53581	0.30773	58.93941	71.13	2.80
91/ 6/17	2448424.5	0.03334	0.30530	0.02221	-58.17279	7.20206	5.87828	0.30791	58.91092	83.77	4.14
91/ 6/19	2448426.5	-0.03407	0.30743	0.02851	-58.16527	-3.46803	4.99547	0.31063	58.48231	96.32	5.27
91/ 6/21	2448428.5	-0.10017	0.29749	0.03369	-55.92332	-13.61307	3.95315	0.31570	57.69194	108.61	6.13
91/ 6/23	2448430.5	-0.16253	0.27640	0.03761	-51.77884	-22.69497	2.82595	0.32284	56.60473	120.46	6.69
91/ 6/25	2448432.5	-0.21923	0.24560	0.04021	-46.18473	-30.36564	1.68377	0.33166	55.29861	131.75	6.96
91/ 6/27	2448434.5	-0.26885	0.20685	0.04152	-39.61841	-36.46985	0.58281	0.34175	53.85172	142.43	6.98
91/ 6/29	2448436.5	-0.31054	0.16196	0.04159	-32.51147	-41.00752	-0.43774	0.35270	52.33359	152.46	6.77
91/ 7/ 1	2448438.5	-0.34389	0.11268	0.04055	-25.21419	-44.08116	-1.35454	0.36414	50.80097	161.86	6.39
91/ 7/ 3	2448440.5	-0.36882	0.06063	0.03851	-17.98803	-45.84755	-2.15680	0.37575	49.29725	170.67	5.88
91/ 7/ 5	2448442.5	-0.38554	0.00720	0.03561	-11.01471	-46.48218	-2.84254	0.38725	47.85391	178.93	5.28
91/ 7/ 7	2448444.5	-0.39441	-0.04639	0.03198	-4.41202	-46.15683	-3.41525	0.39841	46.49283	186.71	4.60
91/ 7/ 9	2448446.5	-0.39590	-0.09912	0.02776	1.74973	-45.02775	-3.88148	0.40907	45.22860	194.06	3.89
91/ 7/11	2448448.5	-0.39055	-0.15015	0.02305	7.43348	-43.23083	-4.24908	0.41906	44.07058	201.03	3.15
91/ 7/13	2448450.5	-0.37892	-0.19878	0.01798	12.62426	-40.88093	-4.52620	0.42827	43.02452	207.68	2.41
91/ 7/15	2448452.5	-0.36158	-0.24442	0.01263	17.32090	-38.07337	-4.72061	0.43662	42.09370	214.06	1.66
91/ 7/17	2448454.5	-0.33909	-0.28659	0.00710	21.53015	-34.88639	-4.83938	0.44404	41.27986	220.20	0.92
91/ 7/19	2448456.5	-0.31202	-0.32489	0.00148	25.26265	-31.38374	-4.88877	0.45046	40.58375	226.16	0.19
91/ 7/21	2448458.5	-0.28091	-0.35899	-0.00417	28.53016	-27.61737	-4.87413	0.45585	40.00558	231.96	-0.52
91/ 7/23	2448460.5	-0.24629	-0.38861	-0.00976	31.34369	-23.62964	-4.79995	0.46018	39.54524	237.63	-1.22
91/ 7/25	2448462.5	-0.20867	-0.41351	-0.01524	33.71230	-19.45537	-4.66995	0.46343	39.20254	243.22	-1.88
91/ 7/27	2448464.5	-0.16858	-0.43349	-0.02053	35.64221	-15.12365	-4.48710	0.46557	38.97725	248.75	-2.53
91/ 7/29	2448466.5	-0.12650	-0.44839	-0.02558	37.13623	-10.65933	-4.25369	0.46660	38.86920	254.25	-3.14
91/ 7/31	2448468.5	-0.08295	-0.45807	-0.03034	38.19334	-6.08440	-3.97147	0.46651	38.87832	259.74	-3.73
91/ 8/ 2	2448470.5	-0.03844	-0.46242	-0.03474	38.80827	-1.41934	-3.64164	0.46531	39.00459	265.25	-4.28
91/ 8/ 4	2448472.5	0.00653	-0.46133	-0.03873	38.97129	3.31567	-3.26498	0.46299	39.24812	270.81	-4.80
91/ 8/ 6	2448474.5	0.05141	-0.45474	-0.04226	38.66787	8.09938	-2.84194	0.45958	39.60910	276.45	-5.28
91/ 8/ 8	2448476.5	0.09567	-0.44261	-0.04528	37.87849	12.90803	-2.37271	0.45508	40.08774	282.20	-5.71
91/ 8/10	2448478.5	0.13872	-0.42492	-0.04773	36.57849	17.71363	-1.85736	0.44953	40.68425	288.08	-6.09
91/ 8/12	2448480.5	0.17996	-0.40170	-0.04955	34.73801	22.48202	-1.29600	0.44295	41.39867	294.13	-6.42
91/ 8/14	2448482.5	0.21875	-0.37301	-0.05070	32.32230	27.17039	-0.68902	0.43539	42.23074	300.39	-6.69
91/ 8/16	2448484.5	0.25440	-0.33898	-0.05113	29.29237	31.72430	-0.03738	0.42690	43.17957	306.89	-6.88
91/ 8/18	2448486.5	0.28617	-0.29980	-0.05077	25.60648	36.07410	0.65696	0.41755	44.24324	313.67	-6.98
91/ 8/20	2448488.5	0.31328	-0.25576	-0.04959	21.22274	40.13063	1.39043	0.40745	45.41811	320.77	-6.99

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91/ 8/22	2448490.5	0.33491	-0.20725	-0.04755	16.10364	43.78041	2.15705	0.39671	46.69801	328.25	-6.88
91/ 8/24	2448492.5	0.35019	-0.15483	-0.04460	10.22326	46.88068	2.94737	0.38548	48.07287	336.15	-6.64
91/ 8/26	2448494.5	0.35824	-0.09922	-0.04074	3.57818	49.25534	3.74715	0.37395	49.52710	344.52	-6.25
91/ 8/28	2448496.5	0.35818	-0.04140	-0.03595	-3.79677	50.69356	4.53579	0.36235	51.03749	353.41	-5.69
91/ 8/30	2448498.5	0.34922	0.01743	-0.03027	-11.80767	50.95435	5.28485	0.35096	52.57087	2.86	-4.95
91/ 9/ 1	2448500.5	0.33072	0.07576	-0.02377	-20.27690	49.78160	5.95700	0.34012	54.08184	12.90	-4.01
91/ 9/ 3	2448502.5	0.30231	0.13179	-0.01656	-28.91952	46.93467	6.50650	0.33020	55.51159	23.55	-2.87
91/ 9/ 5	2448504.5	0.26400	0.18348	-0.00881	-37.33073	42.23780	6.88204	0.32162	56.78889	34.80	-1.57
91/ 9/ 7	2448506.5	0.21635	0.22864	-0.00075	-44.99886	35.64428	7.03329	0.31478	57.83493	46.58	-0.14
91/ 9/ 9	2448508.5	0.16055	0.26514	0.00734	-51.35783	27.29940	6.92087	0.31005	58.57289	58.80	1.36
91/ 9/11	2448510.5	0.09842	0.29117	0.01513	-55.88037	17.57358	6.52751	0.30772	58.94111	71.32	2.82
91/ 9/13	2448512.5	0.03231	0.30543	0.02232	-58.18958	7.03720	5.86614	0.30794	58.90637	83.96	4.16
91/ 9/15	2448514.5	-0.03510	0.30738	0.02860	-58.14624	-3.62925	4.98037	0.31069	58.47188	96.51	5.28
91/ 9/17	2448516.5	-0.10115	0.29725	0.03376	-55.87229	-13.76124	3.93623	0.31580	57.67650	108.79	6.14
91/ 9/19	2448518.5	-0.16345	0.27600	0.03766	-51.70222	-22.82337	2.80833	0.32297	56.58545	120.63	6.70
91/ 9/21	2448520.5	-0.22004	0.24507	0.04024	-46.08994	-30.47061	1.66645	0.33181	55.27674	131.92	6.97
91/ 9/23	2448522.5	-0.26955	0.20621	0.04153	-39.51253	-36.55048	0.56649	0.34191	53.82841	142.58	6.98
91/ 9/25	2448524.5	-0.31112	0.16124	0.04158	-32.40049	-41.06483	-0.45259	0.35288	52.30982	152.60	6.77
91/ 9/27	2448526.5	-0.34433	0.11191	0.04052	-25.10272	-44.11730	-1.36768	0.36432	50.77749	162.00	6.39
91/ 9/29	2448528.5	-0.36914	0.05982	0.03847	-17.87936	-45.86518	-2.16815	0.37593	49.27460	170.79	5.87
91/10/ 1	2448530.5	-0.38573	0.00639	0.03556	-10.91101	-46.48399	-2.85213	0.38742	47.83248	179.05	5.27
91/10/ 3	2448532.5	-0.39449	-0.04720	0.03192	-4.31464	-46.14535	-3.42317	0.39858	46.47287	186.82	4.59
91/10/ 5	2448534.5	-0.39587	-0.09991	0.02769	1.84005	-45.00520	-3.88783	0.40922	45.21028	194.16	3.88
91/10/ 7	2448536.5	-0.39042	-0.15091	0.02298	7.51639	-43.19910	-4.25400	0.41920	44.05400	201.13	3.14
91/10/ 9	2448538.5	-0.37870	-0.19949	0.01790	12.69966	-40.84159	-4.52980	0.42840	43.00972	207.78	2.39
91/10/11	2448540.5	-0.36127	-0.24508	0.01255	17.38884	-38.02773	-4.72300	0.43674	42.08071	214.15	1.65
91/10/13	2448542.5	-0.33871	-0.28720	0.00702	21.59078	-34.83548	-4.84068	0.44414	41.26869	220.29	0.91
91/10/15	2448544.5	-0.31158	-0.32544	0.00139	25.31614	-31.32845	-4.88905	0.45055	40.57439	226.25	0.18
91/10/17	2448546.5	-0.28041	-0.35947	-0.00425	28.57668	-27.55839	-4.87346	0.45593	39.99803	232.04	-0.53
91/10/19	2448548.5	-0.24574	-0.38902	-0.00985	31.38340	-23.56754	-4.79841	0.46024	39.53949	237.72	-1.23
91/10/21	2448550.5	-0.20808	-0.41385	-0.01532	33.74531	-19.39064	-4.66759	0.46347	39.19859	243.31	-1.89
91/10/23	2448552.5	-0.16795	-0.43375	-0.02061	35.66858	-15.05668	-4.48394	0.46559	38.97508	248.83	-2.54
91/10/25	2448554.5	-0.12585	-0.44858	-0.02566	37.15596	-10.59046	-4.24977	0.46660	38.86880	254.33	-3.15
91/10/27	2448556.5	-0.08228	-0.45818	-0.03041	38.20635	-6.01396	-3.96681	0.46650	38.87966	259.82	-3.74
91/10/29	2448558.5	-0.03775	-0.46244	-0.03480	38.81444	-1.34763	-3.63625	0.46528	39.00768	265.33	-4.29
91/10/31	2448560.5	0.00722	-0.46126	-0.03879	38.97043	3.38834	-3.25887	0.46295	39.25297	270.90	-4.81
91/11/ 2	2448562.5	0.05210	-0.45459	-0.04231	38.65971	8.17266	-2.83512	0.45952	39.61570	276.54	-5.28
91/11/ 4	2448564.5	0.09634	-0.44237	-0.04532	37.86269	12.98152	-2.36517	0.45501	40.09610	282.29	-5.72
91/11/ 6	2448566.5	0.13937	-0.42460	-0.04776	36.55463	17.78686	-1.84911	0.44944	40.69438	288.17	-6.10
91/11/ 8	2448568.5	0.18058	-0.40130	-0.04958	34.70559	22.55440	-1.28705	0.44284	41.41057	294.23	-6.43
91/11/10	2448570.5	0.21932	-0.37253	-0.05072	32.28075	27.24117	-0.67937	0.43526	42.24440	300.49	-6.69
91/11/12	2448572.5	0.25492	-0.33842	-0.05113	29.24106	31.79253	-0.02705	0.42676	43.19497	306.99	-6.88
91/11/14	2448574.5	0.28662	-0.29916	-0.05076	25.54476	36.13855	0.66792	0.41740	44.26032	313.77	-6.99
91/11/16	2448576.5	0.31366	-0.25505	-0.04957	21.15000	40.18976	1.40195	0.40729	45.43682	320.88	-6.99
91/11/18	2448578.5	0.33520	-0.20647	-0.04751	16.01938	43.83227	2.16901	0.39654	46.71823	328.37	-6.88

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91/11/20	2448580.5	0.35037	-0.15400	-0.04455	10.12724	46.92284	2.95960	0.38531	48.09442	336.27	-6.64
91/11/22	2448582.5	0.35830	-0.09835	-0.04067	3.47061	49.28484	3.75937	0.37377	49.54970	344.65	-6.25
91/11/24	2448584.5	0.35811	-0.04050	-0.03587	-3.91495	50.70692	4.54764	0.36217	51.06074	353.55	-5.68
91/11/26	2448586.5	0.34901	0.01833	-0.03018	-11.93445	50.94772	5.29582	0.35079	52.59417	3.01	-4.94
91/11/28	2448588.5	0.33036	0.07664	-0.02366	-20.40876	49.75110	5.96646	0.33996	54.10442	13.06	-3.99
91/11/30	2448590.5	0.30180	0.13262	-0.01644	-29.05119	46.87698	6.51368	0.33006	55.53244	23.72	-2.86
91/12/ 2	2448592.5	0.26334	0.18422	-0.00868	-37.45511	42.15105	6.88615	0.32150	56.80682	34.98	-1.55
91/12/ 4	2448594.5	0.21556	0.22926	-0.00062	-45.10752	35.52909	7.03362	0.31469	57.84873	46.77	-0.11
91/12/ 6	2448596.5	0.15964	0.26562	0.00746	-51.44214	27.15972	6.91696	0.31000	58.58146	58.99	1.38
91/12/ 8	2448598.5	0.09743	0.29148	0.01525	-55.93313	17.41677	6.51931	0.30771	58.94371	71.52	2.84
91/12/10	2448600.5	0.03128	0.30555	0.02242	-58.20673	6.87312	5.85410	0.30797	58.90274	84.15	4.17
91/12/12	2448602.5	-0.03613	0.30731	0.02869	-58.12770	-3.78998	4.96537	0.31075	58.46237	96.71	5.30
91/12/14	2448604.5	-0.10214	0.29701	0.03383	-55.82177	-13.90922	3.91936	0.31590	57.66193	108.98	6.15
91/12/16	2448606.5	-0.16436	0.27559	0.03771	-51.62603	-22.95182	2.79076	0.32309	56.56696	120.81	6.70
91/12/18	2448608.5	-0.22085	0.24453	0.04027	-45.99540	-30.57579	1.64913	0.33196	55.25554	132.09	6.97
91/12/20	2448610.5	-0.27025	0.20556	0.04154	-39.40671	-36.63136	0.55016	0.34208	53.80565	142.74	6.97
91/12/22	2448612.5	-0.31169	0.16051	0.04158	-32.28939	-41.12236	-0.46747	0.35305	52.28644	152.75	6.76
91/12/24	2448614.5	-0.34477	0.11113	0.04050	-24.99099	-44.15358	-1.38085	0.36450	50.75426	162.13	6.38
91/12/26	2448616.5	-0.36945	0.05901	0.03843	-17.77033	-45.88281	-2.17954	0.37610	49.25208	170.93	5.86
91/12/28	2448618.5	-0.38593	0.00556	0.03551	-10.80693	-46.48568	-2.86174	0.38760	47.81106	179.17	5.26
91/12/30	2448620.5	-0.39456	-0.04801	0.03186	-4.21690	-46.13361	-3.43109	0.39875	46.45282	186.94	4.58
92/ 1/ 1	2448622.5	-0.39584	-0.10071	0.02762	1.93065	-44.98226	-3.89417	0.40938	45.19177	194.27	3.87
92/ 1/ 3	2448624.5	-0.39029	-0.15167	0.02290	7.59949	-43.16688	-4.25889	0.41935	44.03714	201.24	3.13
92/ 1/ 5	2448626.5	-0.37847	-0.20022	0.01782	12.77516	-40.80169	-4.53336	0.42854	42.99458	207.88	2.38
92/ 1/ 7	2448628.5	-0.36097	-0.24576	0.01246	17.45679	-37.98146	-4.72535	0.43686	42.06732	214.25	1.63
92/ 1/ 9	2448630.5	-0.33833	-0.28782	0.00693	21.65132	-34.78393	-4.84191	0.44425	41.25707	220.39	0.89
92/ 1/11	2448632.5	-0.31113	-0.32599	0.00130	25.36944	-31.27250	-4.88926	0.45064	40.56455	226.34	0.17
92/ 1/13	2448634.5	-0.27990	-0.35996	-0.00434	28.62292	-27.49877	-4.87272	0.45600	39.98996	232.13	-0.55
92/ 1/15	2448636.5	-0.24518	-0.38944	-0.00993	31.42274	-23.50483	-4.79679	0.46030	39.53321	237.81	-1.24
92/ 1/17	2448638.5	-0.20748	-0.41419	-0.01540	33.77787	-19.32532	-4.66513	0.46351	39.19408	243.39	-1.90
92/ 1/19	2448640.5	-0.16732	-0.43402	-0.02069	35.69444	-14.98918	-4.48069	0.46562	38.97237	248.92	-2.55
92/ 1/21	2448642.5	-0.12519	-0.44877	-0.02573	37.17515	-10.52113	-4.24576	0.46661	38.86789	254.41	-3.16
92/ 1/23	2448644.5	-0.08160	-0.45828	-0.03048	38.21883	-5.94311	-3.96206	0.46649	38.88056	259.90	-3.75
92/ 1/25	2448646.5	-0.03707	-0.46246	-0.03487	38.82011	-1.27556	-3.63078	0.46525	39.01039	265.42	-4.30
92/ 1/27	2448648.5	0.00790	-0.46120	-0.03885	38.96909	3.46130	-3.25269	0.46291	39.25749	270.98	-4.81
92/ 1/29	2448650.5	0.05278	-0.45445	-0.04236	38.65110	8.24618	-2.82823	0.45946	39.62204	276.62	-5.29
92/ 1/31	2448652.5	0.09701	-0.44215	-0.04536	37.84647	13.05522	-2.35758	0.45493	40.10426	282.37	-5.72
92/ 2/ 2	2448654.5	0.14001	-0.42429	-0.04779	36.53036	17.86026	-1.84081	0.44934	40.70435	288.26	-6.11
92/ 2/ 4	2448656.5	0.18119	-0.40090	-0.04960	34.67278	22.62692	-1.27804	0.44273	41.42237	294.32	-6.43
92/ 2/ 6	2448658.5	0.21989	-0.37205	-0.05073	32.23884	27.31207	-0.66967	0.43514	42.25803	300.58	-6.69
92/ 2/ 8	2448660.5	0.25543	-0.33786	-0.05113	29.18944	31.86090	-0.01668	0.42662	43.21042	307.09	-6.88
92/ 2/10	2448662.5	0.28707	-0.29852	-0.05075	25.48276	36.20319	0.67892	0.41725	44.27757	313.88	-6.99
92/ 2/12	2448664.5	0.31403	-0.25433	-0.04954	21.07699	40.24913	1.41351	0.40713	45.45580	321.00	-6.99
92/ 2/14	2448666.5	0.33548	-0.20570	-0.04747	15.93484	43.88441	2.18102	0.39637	46.73882	328.49	-6.88
92/ 2/16	2448668.5	0.35055	-0.15317	-0.04450	10.03088	46.96530	2.97188	0.38513	48.11643	336.40	-6.63

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92/ 2/18	2448670.5	0.35836	-0.09748	-0.04060	3.36259	49.31463	3.77166	0.37359	49.57283	344.78	-6.24
92/ 2/20	2448672.5	0.35804	-0.03960	-0.03579	-4.03371	50.72052	4.55956	0.36199	51.08455	353.69	-5.67
92/ 2/22	2448674.5	0.34879	0.01924	-0.03008	-12.06192	50.94122	5.30687	0.35062	52.61807	3.16	-4.92
92/ 2/24	2448676.5	0.33000	0.07752	-0.02356	-20.54145	49.72054	5.97599	0.33980	54.12759	13.22	-3.98
92/ 2/26	2448678.5	0.30128	0.13345	-0.01633	-29.18378	46.81898	6.52093	0.32991	55.55386	23.89	-2.84
92/ 2/28	2448680.5	0.26267	0.18497	-0.00856	-37.58042	42.06368	6.89030	0.32138	56.82532	35.15	-1.53
92/ 3/ 1	2448682.5	0.21475	0.22989	-0.00050	-45.21702	35.41297	7.03395	0.31459	57.86306	46.95	-0.09
92/ 3/ 3	2448684.5	0.15872	0.26610	0.00759	-51.52708	27.01881	6.91300	0.30994	58.59049	59.19	1.40
92/ 3/ 5	2448686.5	0.09643	0.29178	0.01537	-55.98624	17.25851	6.51102	0.30769	58.94666	71.71	2.86
92/ 3/ 7	2448688.5	0.03024	0.30567	0.02252	-58.22385	6.70749	5.84193	0.30799	58.89936	84.35	4.19
92/ 3/ 9	2448690.5	-0.03717	0.30724	0.02878	-58.10875	-3.95223	4.95019	0.31081	58.45298	96.90	5.31
92/ 3/11	2448692.5	-0.10314	0.29675	0.03390	-55.77049	-14.05858	3.90232	0.31599	57.64737	109.17	6.16
92/ 3/13	2448694.5	-0.16528	0.27518	0.03776	-51.54877	-23.08140	2.77299	0.32321	56.54835	120.99	6.71
92/ 3/15	2448696.5	-0.22168	0.24398	0.04030	-45.89959	-30.68180	1.63162	0.33210	55.23412	132.26	6.97
92/ 3/17	2448698.5	-0.27095	0.20491	0.04155	-39.29951	-36.71278	0.53365	0.34224	53.78257	142.90	6.97
92/ 3/19	2448700.5	-0.31227	0.15977	0.04157	-32.17689	-41.18015	-0.48250	0.35322	52.26270	152.90	6.76
92/ 3/21	2448702.5	-0.34522	0.11033	0.04047	-24.87790	-44.18987	-1.39415	0.36468	50.73064	162.28	6.37
92/ 3/23	2448704.5	-0.36977	0.05819	0.03839	-17.66001	-45.90026	-2.19102	0.37628	49.22916	171.06	5.86
92/ 3/25	2448706.5	-0.38612	0.00473	0.03545	-10.70165	-46.48701	-2.87143	0.38777	47.78925	179.30	5.25
92/ 3/27	2448708.5	-0.39464	-0.04884	0.03180	-4.11806	-46.12137	-3.43907	0.39892	46.43239	187.06	4.57
92/ 3/29	2448710.5	-0.39580	-0.10151	0.02755	2.02226	-44.95872	-3.90056	0.40954	45.17290	194.38	3.86
92/ 3/31	2448712.5	-0.39015	-0.15245	0.02283	7.68349	-43.13397	-4.26380	0.41950	44.01994	201.34	3.12
92/ 4/ 2	2448714.5	-0.37824	-0.20095	0.01774	12.85145	-40.76104	-4.53693	0.42868	42.97913	207.98	2.37
92/ 4/ 4	2448716.5	-0.36065	-0.24644	0.01238	17.52544	-37.93440	-4.72770	0.43698	42.05367	214.35	1.62
92/ 4/ 6	2448718.5	-0.33794	-0.28844	0.00684	21.71247	-34.73158	-4.84313	0.44435	41.24524	220.48	0.88
92/ 4/ 8	2448720.5	-0.31068	-0.32655	0.00122	25.42329	-31.21574	-4.88945	0.45073	40.55457	226.43	0.15
92/ 4/10	2448722.5	-0.27939	-0.36045	-0.00443	28.66965	-27.43832	-4.87196	0.45608	39.98182	232.22	-0.56
92/ 4/12	2448724.5	-0.24462	-0.38986	-0.01002	31.46250	-23.44128	-4.79513	0.46036	39.52690	237.89	-1.25
92/ 4/14	2448726.5	-0.20688	-0.41454	-0.01548	33.81079	-19.25917	-4.66263	0.46355	39.18961	243.48	-1.91
92/ 4/16	2448728.5	-0.16668	-0.43429	-0.02077	35.72059	-14.92081	-4.47739	0.46564	38.96971	249.00	-2.56
92/ 4/18	2448730.5	-0.12453	-0.44895	-0.02581	37.19454	-10.45091	-4.24170	0.46662	38.86705	254.50	-3.17
92/ 4/20	2448732.5	-0.08092	-0.45839	-0.03055	38.23143	-5.87137	-3.95725	0.46648	38.88155	259.99	-3.75
92/ 4/22	2448734.5	-0.03637	-0.46248	-0.03493	38.82579	-1.20261	-3.62524	0.46523	39.01321	265.50	-4.31
92/ 4/24	2448736.5	0.00860	-0.46114	-0.03891	38.96768	3.53516	-3.24643	0.46286	39.26215	271.07	-4.82
92/ 4/26	2448738.5	0.05347	-0.45430	-0.04241	38.64233	8.32060	-2.82126	0.45940	39.62854	276.71	-5.30
92/ 4/28	2448740.5	0.09768	-0.44191	-0.04541	37.82999	13.12980	-2.34989	0.45485	40.11261	282.46	-5.73
92/ 4/30	2448742.5	0.14067	-0.42397	-0.04783	36.50575	17.93454	-1.83241	0.44925	40.71456	288.35	-6.11
92/ 5/ 2	2448744.5	0.18181	-0.40049	-0.04962	34.63954	22.70031	-1.26893	0.44262	41.43443	294.42	-6.44
92/ 5/ 4	2448746.5	0.22047	-0.37156	-0.05074	32.19637	27.38384	-0.65986	0.43501	42.27194	300.68	-6.70
92/ 5/ 6	2448748.5	0.25595	-0.33729	-0.05113	29.13711	31.93007	-0.00618	0.42648	43.22616	307.19	-6.89
92/ 5/ 8	2448750.5	0.28753	-0.29787	-0.05074	25.41991	36.26855	0.69006	0.41710	44.29510	313.99	-6.99
92/ 5/10	2448752.5	0.31441	-0.25361	-0.04952	21.00296	40.30911	1.42522	0.40697	45.47505	321.11	-6.99
92/ 5/12	2448754.5	0.33576	-0.20491	-0.04743	15.84911	43.93701	2.19318	0.39620	46.75966	328.60	-6.88
92/ 5/14	2448756.5	0.35073	-0.15233	-0.04444	9.93318	47.00805	2.98431	0.38495	48.13866	336.52	-6.63
92/ 5/16	2448758.5	0.35841	-0.09660	-0.04053	3.25313	49.34449	3.78409	0.37341	49.59618	344.92	-6.23

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92/ 5/18	2448760.5	0.35796	-0.03869	-0.03571	-4.15399	50.73394	4.57161	0.36181	51.10859	353.83	-5.66
92/ 5/20	2448762.5	0.34857	0.02015	-0.02999	-12.19095	50.93426	5.31802	0.35044	52.64218	3.31	-4.91
92/ 5/22	2448764.5	0.32962	0.07842	-0.02345	-20.67564	49.68920	5.98558	0.33963	54.15095	13.38	-3.96
92/ 5/24	2448766.5	0.30075	0.13429	-0.01621	-29.31771	46.75984	6.52820	0.32977	55.57543	24.06	-2.82
92/ 5/26	2448768.5	0.26199	0.18572	-0.00844	-37.70682	41.97486	6.89442	0.32125	56.84388	35.33	-1.50
92/ 5/28	2448770.5	0.21393	0.23053	-0.00037	-45.32723	35.29515	7.03420	0.31450	57.87733	47.14	-0.07
92/ 5/30	2448772.5	0.15779	0.26659	0.00771	-51.61228	26.87609	6.90891	0.30988	58.59936	59.38	1.43
92/ 6/ 1	2448774.5	0.09542	0.29209	0.01548	-56.03914	17.09847	6.50256	0.30767	58.94935	71.91	2.88
92/ 6/ 3	2448776.5	0.02919	0.30579	0.02263	-58.24035	6.54028	5.82957	0.30801	58.89565	84.55	4.21
92/ 6/ 5	2448778.5	-0.03822	0.30716	0.02887	-58.08887	-4.11575	4.93483	0.31087	58.44321	97.09	5.33
92/ 6/ 7	2448780.5	-0.10415	0.29650	0.03397	-55.71810	-14.20886	3.88510	0.31609	57.63239	109.35	6.17
92/ 6/ 9	2448782.5	-0.16621	0.27476	0.03781	-51.47036	-23.21154	2.75507	0.32334	56.52931	121.17	6.72
92/ 6/11	2448784.5	-0.22251	0.24343	0.04033	-45.80268	-30.78808	1.61400	0.33225	55.21228	132.43	6.97
92/ 6/13	2448786.5	-0.27166	0.20424	0.04156	-39.19130	-36.79423	0.51706	0.34241	53.75910	143.06	6.97
92/ 6/15	2448788.5	-0.31285	0.15903	0.04156	-32.06350	-41.23778	-0.49759	0.35340	52.23859	153.05	6.75
92/ 6/17	2448790.5	-0.34567	0.10954	0.04045	-24.76403	-44.22588	-1.40750	0.36486	50.70667	162.42	6.36
92/ 6/19	2448792.5	-0.37009	0.05736	0.03835	-17.54904	-45.91734	-2.20254	0.37647	49.20591	171.19	5.85
92/ 6/21	2448794.5	-0.38631	0.00389	0.03540	-10.59583	-46.48792	-2.88114	0.38795	47.76714	179.42	5.24
92/ 6/23	2448796.5	-0.39471	-0.04967	0.03174	-4.01878	-46.10871	-3.44705	0.39909	46.41170	187.17	4.56
92/ 6/25	2448798.5	-0.39577	-0.10232	0.02748	2.11423	-44.93477	-3.90694	0.40970	45.15382	194.50	3.85
92/ 6/27	2448800.5	-0.39001	-0.15323	0.02275	7.76780	-43.10068	-4.26872	0.41965	44.00261	201.45	3.11
92/ 6/29	2448802.5	-0.37801	-0.20168	0.01765	12.92801	-40.72004	-4.54050	0.42881	42.96360	208.08	2.36
92/ 7/ 1	2448804.5	-0.36034	-0.24712	0.01229	17.59434	-37.88703	-4.73004	0.43711	42.03999	214.44	1.61
92/ 7/ 3	2448806.5	-0.33755	-0.28906	0.00676	21.77386	-34.67891	-4.84435	0.44446	41.23343	220.58	0.87
92/ 7/ 5	2448808.5	-0.31022	-0.32712	0.00113	25.47735	-31.15866	-4.88963	0.45082	40.54461	226.52	0.14
92/ 7/ 7	2448810.5	-0.27888	-0.36095	-0.00452	28.71657	-27.37754	-4.87119	0.45615	39.97374	232.31	-0.57
92/ 7/ 9	2448812.5	-0.24405	-0.39028	-0.01010	31.50245	-23.37739	-4.79347	0.46042	39.52068	237.98	-1.26
92/ 7/11	2448814.5	-0.20627	-0.41488	-0.01557	33.84389	-19.19265	-4.66012	0.46359	39.18524	243.56	-1.92
92/ 7/13	2448816.5	-0.16604	-0.43456	-0.02085	35.74690	-14.85209	-4.47408	0.46566	38.96721	249.09	-2.57
92/ 7/15	2448818.5	-0.12386	-0.44914	-0.02588	37.21409	-10.38034	-4.23762	0.46663	38.86641	254.58	-3.18
92/ 7/17	2448820.5	-0.08023	-0.45850	-0.03062	38.24416	-5.79927	-3.95242	0.46647	38.88276	260.07	-3.76
92/ 7/19	2448822.5	-0.03568	-0.46250	-0.03500	38.83160	-1.12928	-3.61968	0.46520	39.01628	265.59	-4.31
92/ 7/21	2448824.5	0.00930	-0.46108	-0.03896	38.96635	3.60939	-3.24015	0.46281	39.26707	271.16	-4.83
92/ 7/23	2448826.5	0.05416	-0.45415	-0.04246	38.63360	8.39540	-2.81425	0.45933	39.63531	276.80	-5.30
92/ 7/25	2448828.5	0.09836	-0.44167	-0.04545	37.81351	13.20477	-2.34217	0.45477	40.12123	282.55	-5.74
92/ 7/27	2448830.5	0.14132	-0.42364	-0.04786	36.48109	18.00920	-1.82397	0.44915	40.72503	288.45	-6.12
92/ 7/29	2448832.5	0.18243	-0.40008	-0.04964	34.60619	22.77407	-1.25977	0.44251	41.44675	294.51	-6.44
92/ 7/31	2448834.5	0.22104	-0.37106	-0.05075	32.15375	27.45593	-0.64999	0.43489	42.28610	300.78	-6.70
92/ 8/ 2	2448836.5	0.25647	-0.33671	-0.05113	29.08456	31.99953	0.00436	0.42634	43.24212	307.30	-6.89
92/ 8/ 4	2448838.5	0.28798	-0.29722	-0.05072	25.35676	36.33413	0.70124	0.41695	44.31282	314.10	-6.99
92/ 8/ 6	2448840.5	0.31478	-0.25289	-0.04949	20.92859	40.36920	1.43696	0.40680	45.49443	321.22	-6.99
92/ 8/ 8	2448842.5	0.33605	-0.20412	-0.04739	15.76300	43.98961	2.20537	0.39603	46.78057	328.72	-6.87
92/ 8/10	2448844.5	0.35090	-0.15148	-0.04439	9.83510	47.05064	2.99675	0.38477	48.16090	336.65	-6.62
92/ 8/12	2448846.5	0.35847	-0.09571	-0.04047	3.14331	49.37402	3.79652	0.37323	49.61943	345.05	-6.22
92/ 8/14	2448848.5	0.35789	-0.03778	-0.03562	-4.27453	50.74683	4.58364	0.36163	51.13240	353.97	-5.65

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92/ 8/16	2448850.5	0.34835	0.02107	-0.02989	-12.32008	50.92657	5.32911	0.35027	52.66592	3.46	-4.90
92/ 8/18	2448852.5	0.32925	0.07931	-0.02334	-20.80969	49.65698	5.99509	0.33947	54.17379	13.54	-3.94
92/ 8/20	2448854.5	0.30022	0.13513	-0.01609	-29.45119	46.69979	6.53535	0.32962	55.59634	24.23	-2.80
92/ 8/22	2448856.5	0.26131	0.18648	-0.00831	-37.83241	41.88521	6.89841	0.32113	56.86167	35.51	-1.48
92/ 8/24	2448858.5	0.21312	0.23116	-0.00024	-45.43631	35.17674	7.03430	0.31441	57.89078	47.33	-0.04
92/ 8/26	2448860.5	0.15687	0.26707	0.00783	-51.69612	26.73317	6.90469	0.30983	58.60739	59.57	1.45
92/ 8/28	2448862.5	0.09441	0.29240	0.01560	-56.09060	16.93874	6.49400	0.30766	58.95124	72.11	2.91
92/ 8/30	2448864.5	0.02815	0.30590	0.02273	-58.25554	6.37388	5.81715	0.30804	58.89120	84.74	4.23
92/ 9/ 1	2448866.5	-0.03926	0.30709	0.02895	-58.06800	-4.27807	4.91948	0.31094	58.43283	97.29	5.34
92/ 9/ 3	2448868.5	-0.10514	0.29624	0.03404	-55.66515	-14.35768	3.86795	0.31619	57.61695	109.54	6.18
92/ 9/ 5	2448870.5	-0.16713	0.27435	0.03786	-51.39186	-23.34019	2.73727	0.32347	56.51000	121.35	6.72
92/ 9/ 7	2448872.5	-0.22332	0.24288	0.04036	-45.70612	-30.89298	1.59652	0.33240	55.19034	132.60	6.97
92/ 9/ 9	2448874.5	-0.27236	0.20359	0.04156	-39.08379	-36.87453	0.50062	0.34257	53.73569	143.22	6.97
92/ 9/11	2448876.5	-0.31342	0.15829	0.04155	-31.95105	-41.29457	-0.51253	0.35357	52.21469	153.20	6.75
92/ 9/13	2448878.5	-0.34611	0.10875	0.04042	-24.65123	-44.26135	-1.42071	0.36504	50.68302	162.56	6.36
92/ 9/15	2448880.5	-0.37040	0.05654	0.03831	-17.43917	-45.93418	-2.21393	0.37665	49.18308	171.32	5.84
92/ 9/17	2448882.5	-0.38650	0.00306	0.03535	-10.49107	-46.48886	-2.89075	0.38813	47.74550	179.55	5.23
92/ 9/19	2448884.5	-0.39478	-0.05049	0.03168	-3.92048	-46.09628	-3.45497	0.39926	46.39153	187.29	4.55
92/ 9/21	2448886.5	-0.39573	-0.10312	0.02741	2.20533	-44.91120	-3.91328	0.40986	45.13528	194.61	3.83
92/ 9/23	2448888.5	-0.38988	-0.15399	0.02267	7.85135	-43.06788	-4.27360	0.41980	43.98579	201.55	3.10
92/ 9/25	2448890.5	-0.37778	-0.20241	0.01757	13.00393	-40.67959	-4.54406	0.42895	42.94857	208.18	2.35
92/ 9/27	2448892.5	-0.36002	-0.24780	0.01221	17.66267	-37.84025	-4.73238	0.43723	42.02677	214.54	1.60
92/ 9/29	2448894.5	-0.33717	-0.28968	0.00667	21.83476	-34.62686	-4.84558	0.44457	41.22203	220.67	0.86
92/10/ 1	2448896.5	-0.30976	-0.32767	0.00104	25.53101	-31.10221	-4.88983	0.45091	40.53505	226.61	0.13
92/10/ 3	2448898.5	-0.27836	-0.36143	-0.00460	28.76317	-27.31740	-4.87044	0.45623	39.96600	232.40	-0.58
92/10/ 5	2448900.5	-0.24349	-0.39069	-0.01019	31.54214	-23.31416	-4.79183	0.46047	39.51478	238.07	-1.27
92/10/ 7	2448902.5	-0.20567	-0.41522	-0.01565	33.87678	-19.12680	-4.65765	0.46363	39.18118	243.65	-1.93
92/10/ 9	2448904.5	-0.16540	-0.43482	-0.02093	35.77307	-14.78403	-4.47082	0.46569	38.96496	249.17	-2.58
92/10/11	2448906.5	-0.12319	-0.44933	-0.02596	37.23353	-10.31043	-4.23358	0.46663	38.86597	254.67	-3.19
92/10/13	2448908.5	-0.07955	-0.45860	-0.03069	38.25681	-5.72784	-3.94764	0.46646	38.88413	260.16	-3.77
92/10/15	2448910.5	-0.03498	-0.46252	-0.03506	38.83732	-1.05664	-3.61417	0.46517	39.01944	265.67	-4.32
92/10/17	2448912.5	0.01000	-0.46101	-0.03902	38.96497	3.68293	-3.23392	0.46277	39.27201	271.24	-4.84
92/10/19	2448914.5	0.05485	-0.45400	-0.04252	38.62484	8.46948	-2.80731	0.45927	39.64204	276.89	-5.31
92/10/21	2448916.5	0.09904	-0.44144	-0.04549	37.79704	13.27897	-2.33451	0.45469	40.12975	282.65	-5.74
92/10/23	2448918.5	0.14197	-0.42332	-0.04789	36.45648	18.08304	-1.81560	0.44906	40.73534	288.54	-6.12
92/10/25	2448920.5	0.18305	-0.39968	-0.04967	34.57293	22.84695	-1.25070	0.44240	41.45883	294.61	-6.45
92/10/27	2448922.5	0.22162	-0.37057	-0.05076	32.11127	27.52707	-0.64023	0.43476	42.29992	300.88	-6.71
92/10/29	2448924.5	0.25699	-0.33614	-0.05113	29.03224	32.06796	0.01480	0.42620	43.25766	307.40	-6.89
92/10/31	2448926.5	0.28844	-0.29657	-0.05071	25.29397	36.39860	0.71230	0.41680	44.33002	314.20	-6.99
92/11/ 2	2448928.5	0.31516	-0.25217	-0.04947	20.85472	40.42815	1.44857	0.40665	45.51322	321.34	-6.99
92/11/ 4	2448930.5	0.33633	-0.20334	-0.04735	15.67761	44.04102	2.21740	0.39586	46.80081	328.84	-6.87
92/11/ 6	2448932.5	0.35108	-0.15064	-0.04434	9.73796	47.09205	3.00902	0.38460	48.18239	336.78	-6.62
92/11/ 8	2448934.5	0.35853	-0.09483	-0.04040	3.03473	49.40242	3.80875	0.37305	49.64187	345.18	-6.22
92/11/10	2448936.5	0.35781	-0.03688	-0.03554	-4.39351	50.75873	4.59544	0.36146	51.15534	354.12	-5.64
92/11/12	2448938.5	0.34814	0.02197	-0.02980	-12.44731	50.91813	5.33998	0.35010	52.68877	3.61	-4.88

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92/11/14	2448940.5	0.32889	0.08019	-0.02324	-20.94152	49.62437	6.00437	0.33932	54.19574	13.70	-3.93
92/11/16	2448942.5	0.29970	0.13596	-0.01598	-29.58219	46.63985	6.54228	0.32949	55.61639	24.40	-2.78
92/11/18	2448944.5	0.26065	0.18722	-0.00819	-37.95539	41.79631	6.90221	0.32102	56.87868	35.69	-1.46
92/11/20	2448946.5	0.21232	0.23179	-0.00012	-45.54284	35.05983	7.03429	0.31433	57.90357	47.51	-0.02
92/11/22	2448948.5	0.15596	0.26754	0.00796	-51.77771	26.59247	6.90044	0.30978	58.61491	59.76	1.47
92/11/24	2448950.5	0.09343	0.29270	0.01571	-56.14037	16.78184	6.48552	0.30765	58.95280	72.30	2.93
92/11/26	2448952.5	0.02713	0.30602	0.02284	-58.26977	6.21071	5.80492	0.30807	58.88664	84.93	4.25
92/11/28	2448954.5	-0.04028	0.30702	0.02904	-58.04698	-4.43702	4.90439	0.31101	58.42253	97.47	5.36
92/11/30	2448956.5	-0.10612	0.29599	0.03411	-55.61286	-14.50330	3.85112	0.31629	57.60180	109.72	6.19
92/12/ 2	2448958.5	-0.16803	0.27394	0.03791	-51.31469	-23.46599	2.71982	0.32360	56.49113	121.52	6.73
92/12/ 4	2448960.5	-0.22412	0.24234	0.04039	-45.61137	-30.99555	1.57940	0.33255	55.16897	132.76	6.98
92/12/ 6	2448962.5	-0.27304	0.20294	0.04157	-38.97841	-36.95305	0.48452	0.34273	53.71293	143.38	6.97
92/12/ 8	2448964.5	-0.31398	0.15757	0.04154	-31.84085	-41.35012	-0.52716	0.35375	52.19147	153.35	6.74
92/12/10	2448966.5	-0.34654	0.10797	0.04040	-24.54070	-44.29607	-1.43364	0.36521	50.66007	162.69	6.35
92/12/12	2448968.5	-0.37071	0.05574	0.03827	-17.33150	-45.95068	-2.22510	0.37682	49.16093	171.45	5.83
92/12/14	2448970.5	-0.38668	0.00225	0.03530	-10.38837	-46.48981	-2.90018	0.38830	47.72453	179.67	5.22
92/12/16	2448972.5	-0.39485	-0.05130	0.03162	-3.82406	-46.08414	-3.46274	0.39942	46.37200	187.40	4.54
92/12/18	2448974.5	-0.39569	-0.10391	0.02734	2.29474	-44.88816	-3.91951	0.41002	45.11735	194.71	3.82
92/12/20	2448976.5	-0.38973	-0.15475	0.02260	7.93340	-43.03579	-4.27841	0.41994	43.96956	201.66	3.08
92/12/22	2448978.5	-0.37755	-0.20312	0.01749	13.07852	-40.63998	-4.54756	0.42908	42.93409	208.28	2.34
92/12/24	2448980.5	-0.35971	-0.24846	0.01212	17.72986	-37.79438	-4.73468	0.43735	42.01405	214.63	1.59
92/12/26	2448982.5	-0.33678	-0.29029	0.00658	21.89467	-34.57578	-4.84679	0.44467	41.21107	220.76	0.85
92/12/28	2448984.5	-0.30931	-0.32821	0.00095	25.58380	-31.04676	-4.89004	0.45100	40.52585	226.70	0.12
92/12/30	2448986.5	-0.27786	-0.36191	-0.00469	28.80901	-27.25829	-4.86970	0.45630	39.95857	232.48	-0.59
93/ 1/ 1	2448988.5	-0.24293	-0.39110	-0.01027	31.58117	-23.25195	-4.79022	0.46053	39.50911	238.15	-1.28
93/ 1/ 3	2448990.5	-0.20507	-0.41556	-0.01573	33.90911	-19.06198	-4.65521	0.46367	39.17726	243.73	-1.94
93/ 1/ 5	2448992.5	-0.16477	-0.43508	-0.02101	35.79876	-14.71700	-4.46759	0.46571	38.96281	249.26	-2.59
93/ 1/ 7	2448994.5	-0.12254	-0.44951	-0.02604	37.25257	-10.24153	-4.22960	0.46663	38.86557	254.75	-3.20
93/ 1/ 9	2448996.5	-0.07888	-0.45870	-0.03076	38.26914	-5.65738	-3.94292	0.46644	38.88546	260.24	-3.78
93/ 1/11	2448998.5	-0.03430	-0.46254	-0.03513	38.84280	-0.98493	-3.60872	0.46514	39.02251	265.76	-4.33
93/ 1/13	2449000.5	0.01068	-0.46095	-0.03908	38.96340	3.75556	-3.22775	0.46272	39.27683	271.33	-4.84
93/ 1/15	2449002.5	0.05554	-0.45385	-0.04256	38.61596	8.54268	-2.80042	0.45921	39.64861	276.98	-5.32
93/ 1/17	2449004.5	0.09971	-0.44120	-0.04553	37.78049	13.35234	-2.32691	0.45461	40.13808	282.73	-5.75
93/ 1/19	2449006.5	0.14262	-0.42300	-0.04792	36.43185	18.15609	-1.80729	0.44896	40.74542	288.63	-6.13
93/ 1/21	2449008.5	0.18366	-0.39927	-0.04969	34.53973	22.91906	-1.24169	0.44229	41.47069	294.70	-6.45
93/ 1/23	2449010.5	0.22219	-0.37009	-0.05077	32.06893	27.59751	-0.63053	0.43464	42.31355	300.98	-6.71
93/ 1/25	2449012.5	0.25751	-0.33557	-0.05113	28.98015	32.13576	0.02516	0.42607	43.27305	307.50	-6.89
93/ 1/27	2449014.5	0.28888	-0.29593	-0.05070	25.23149	36.46255	0.72329	0.41665	44.34714	314.31	-6.99
93/ 1/29	2449016.5	0.31553	-0.25145	-0.04944	20.78124	40.48669	1.46011	0.40649	45.53201	321.45	-6.99
93/ 1/31	2449018.5	0.33661	-0.20256	-0.04731	15.59263	44.09217	2.22937	0.39569	46.82115	328.96	-6.87
93/ 2/ 2	2449020.5	0.35125	-0.14981	-0.04428	9.64127	47.13333	3.02123	0.38443	48.20407	336.90	-6.61
93/ 2/ 4	2449022.5	0.35858	-0.09396	-0.04033	2.92656	49.43083	3.82094	0.37288	49.66459	345.32	-6.21
93/ 2/ 6	2449024.5	0.35774	-0.03598	-0.03546	-4.51217	50.77075	4.60722	0.36129	51.17866	354.26	-5.63
93/ 2/ 8	2449026.5	0.34792	0.02287	-0.02970	-12.57432	50.90990	5.35084	0.34993	52.71207	3.76	-4.87
93/ 2/10	2449028.5	0.32852	0.08106	-0.02313	-21.07328	49.59202	6.01366	0.33916	54.21822	13.86	-3.91

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93/ 2/12	2449030.5	0.29918	0.13678	-0.01586	-29.71328	46.58013	6.54925	0.32935	55.63704	24.57	-2.76
93/ 2/14	2449032.5	0.25998	0.18795	-0.00807	-38.07861	41.70752	6.90605	0.32091	56.89632	35.87	-1.44
93/ 2/16	2449034.5	0.21152	0.23240	0.00001	-45.64971	34.94283	7.03430	0.31425	57.91700	47.69	0.00
93/ 2/18	2449036.5	0.15504	0.26801	0.00808	-51.85966	26.45147	6.89620	0.30973	58.62305	59.95	1.49
93/ 2/20	2449038.5	0.09244	0.29299	0.01583	-56.19042	16.62441	6.47702	0.30764	58.95495	72.49	2.95
93/ 2/22	2449040.5	0.02610	0.30613	0.02294	-58.28413	6.04682	5.79264	0.30809	58.88258	85.13	4.27
93/ 2/24	2449042.5	-0.04130	0.30694	0.02913	-58.02589	-4.59681	4.88923	0.31107	58.41266	97.66	5.37
93/ 2/26	2449044.5	-0.10710	0.29574	0.03418	-55.56026	-14.64976	3.83420	0.31638	57.58696	109.91	6.20
93/ 2/28	2449046.5	-0.16894	0.27352	0.03795	-51.23699	-23.59258	2.70226	0.32372	56.47248	121.70	6.73
93/ 3/ 2	2449048.5	-0.22493	0.24179	0.04042	-45.51591	-31.09874	1.56216	0.33270	55.14771	132.93	6.98
93/ 3/ 4	2449050.5	-0.27373	0.20229	0.04158	-38.87218	-37.03202	0.46831	0.34290	53.69019	143.54	6.97
93/ 3/ 6	2449052.5	-0.31454	0.15684	0.04153	-31.72975	-41.40589	-0.54190	0.35392	52.16817	153.50	6.74
93/ 3/ 8	2449054.5	-0.34697	0.10719	0.04037	-24.42927	-44.33080	-1.44666	0.36539	50.63696	162.83	6.34
93/ 3/10	2449056.5	-0.37101	0.05492	0.03823	-17.22297	-45.96698	-2.23633	0.37700	49.13853	171.58	5.82
93/ 3/12	2449058.5	-0.38687	0.00143	0.03525	-10.28492	-46.49035	-2.90964	0.38847	47.70323	179.79	5.21
93/ 3/14	2449060.5	-0.39492	-0.05211	0.03155	-3.72702	-46.07144	-3.47052	0.39959	46.35205	187.52	4.53
93/ 3/16	2449062.5	-0.39565	-0.10470	0.02727	2.38460	-44.86442	-3.92572	0.41017	45.09893	194.82	3.81
93/ 3/18	2449064.5	-0.38959	-0.15551	0.02252	8.01575	-43.00290	-4.28317	0.42009	43.95279	201.76	3.07
93/ 3/20	2449066.5	-0.37732	-0.20384	0.01741	13.15326	-40.59954	-4.55101	0.42921	42.91903	208.38	2.32
93/ 3/22	2449068.5	-0.35940	-0.24913	0.01204	17.79707	-37.74769	-4.73693	0.43747	42.00074	214.73	1.58
93/ 3/24	2449070.5	-0.33639	-0.29090	0.00650	21.95450	-34.52391	-4.84793	0.44478	41.19955	220.85	0.84
93/ 3/26	2449072.5	-0.30886	-0.32876	0.00087	25.63643	-30.99057	-4.89016	0.45109	40.51612	226.79	0.11
93/ 3/28	2449074.5	-0.27735	-0.36239	-0.00478	28.85461	-27.19847	-4.86889	0.45637	39.95062	232.57	-0.60
93/ 3/30	2449076.5	-0.24238	-0.39151	-0.01036	31.61991	-23.18909	-4.78853	0.46058	39.50294	238.24	-1.29
93/ 4/ 1	2449078.5	-0.20447	-0.41589	-0.01582	33.94109	-18.99655	-4.65269	0.46371	39.17288	243.82	-1.95
93/ 4/ 3	2449080.5	-0.16414	-0.43534	-0.02109	35.82404	-14.64941	-4.46428	0.46573	38.96020	249.34	-2.60
93/ 4/ 5	2449082.5	-0.12188	-0.44969	-0.02611	37.27119	-10.17213	-4.22553	0.46664	38.86475	254.84	-3.21
93/ 4/ 7	2449084.5	-0.07820	-0.45880	-0.03083	38.28104	-5.58650	-3.93812	0.46643	38.88645	260.33	-3.79
93/ 4/ 9	2449086.5	-0.03361	-0.46256	-0.03519	38.84789	-0.91288	-3.60320	0.46511	39.02531	265.84	-4.34
93/ 4/11	2449088.5	0.01137	-0.46088	-0.03914	38.96148	3.82849	-3.22152	0.46268	39.28146	271.41	-4.85
93/ 4/13	2449090.5	0.05621	-0.45370	-0.04261	38.60677	8.61614	-2.79349	0.45915	39.65507	277.06	-5.33
93/ 4/15	2449092.5	0.10037	-0.44097	-0.04557	37.76369	13.42595	-2.31927	0.45454	40.14637	282.82	-5.75
93/ 4/17	2449094.5	0.14326	-0.42268	-0.04795	36.40700	18.22938	-1.79895	0.44887	40.75556	288.72	-6.13
93/ 4/19	2449096.5	0.18427	-0.39887	-0.04971	34.50631	22.99145	-1.23265	0.44218	41.48267	294.80	-6.45
93/ 4/21	2449098.5	0.22275	-0.36960	-0.05078	32.02638	27.66824	-0.62079	0.43451	42.32737	301.08	-6.71
93/ 4/23	2449100.5	0.25802	-0.33501	-0.05113	28.92783	32.20390	0.03557	0.42593	43.28870	307.60	-6.89
93/ 4/25	2449102.5	0.28932	-0.29529	-0.05069	25.16874	36.52686	0.73433	0.41650	44.36458	314.42	-6.99
93/ 4/27	2449104.5	0.31589	-0.25074	-0.04942	20.70743	40.54560	1.47171	0.40632	45.55117	321.56	-6.99
93/ 4/29	2449106.5	0.33688	-0.20178	-0.04727	15.50723	44.14371	2.24141	0.39552	46.84192	329.08	-6.86
93/ 5/ 1	2449108.5	0.35142	-0.14898	-0.04423	9.54403	47.17501	3.03353	0.38425	48.22626	337.03	-6.61
93/ 5/ 3	2449110.5	0.35863	-0.09308	-0.04026	2.81768	49.45962	3.83322	0.37270	49.68789	345.45	-6.20
93/ 5/ 5	2449112.5	0.35765	-0.03509	-0.03538	-4.63171	50.78309	4.61911	0.36110	51.20264	354.40	-5.62
93/ 5/ 7	2449114.5	0.34769	0.02377	-0.02961	-12.70242	50.90184	5.36181	0.34976	52.73611	3.91	-4.86
93/ 5/ 9	2449116.5	0.32814	0.08194	-0.02302	-21.20630	49.55960	6.02307	0.33900	54.24148	14.02	-3.89
93/ 5/11	2449118.5	0.29865	0.13761	-0.01574	-29.84576	46.52001	6.55630	0.32920	55.65848	24.74	-2.74

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93/ 5/13	2449120.5	0.25930	0.18869	-0.00795	-38.20324	41.61793	6.90995	0.32078	56.91473	36.04	-1.42
93/ 5/15	2449122.5	0.21070	0.23302	0.00013	-45.75785	34.82459	7.03433	0.31415	57.93112	47.88	0.02
93/ 5/17	2449124.5	0.15411	0.26848	0.00820	-51.94258	26.30881	6.89191	0.30968	58.63176	60.14	1.52
93/ 5/19	2449126.5	0.09143	0.29329	0.01594	-56.24099	16.46503	6.46840	0.30762	58.95749	72.69	2.97
93/ 5/21	2449128.5	0.02505	0.30623	0.02304	-58.29848	5.88086	5.78019	0.30812	58.87876	85.32	4.29
93/ 5/23	2449130.5	-0.04234	0.30685	0.02921	-58.00424	-4.75859	4.87385	0.31113	58.40283	97.86	5.39
93/ 5/25	2449132.5	-0.10809	0.29547	0.03424	-55.50660	-14.79796	3.81703	0.31648	57.57197	110.09	6.21
93/ 5/27	2449134.5	-0.16986	0.27310	0.03800	-51.15786	-23.72053	2.68445	0.32385	56.45349	121.88	6.74
93/ 5/29	2449136.5	-0.22574	0.24123	0.04044	-45.41878	-31.20287	1.54469	0.33285	55.12596	133.10	6.98
93/ 5/31	2449138.5	-0.27443	0.20162	0.04159	-38.76419	-37.11148	0.45190	0.34306	53.66683	143.70	6.96
93/ 6/ 2	2449140.5	-0.31511	0.15610	0.04152	-31.61689	-41.46178	-0.55680	0.35409	52.14420	153.65	6.73
93/ 6/ 4	2449142.5	-0.34741	0.10639	0.04034	-24.31616	-44.36534	-1.45982	0.36557	50.61314	162.97	6.34
93/ 6/ 6	2449144.5	-0.37132	0.05410	0.03819	-17.11291	-45.98287	-2.24766	0.37718	49.11546	171.71	5.81
93/ 6/ 8	2449146.5	-0.38705	0.00059	0.03520	-10.18008	-46.49034	-2.91918	0.38865	47.68131	179.91	5.20
93/ 6/10	2449148.5	-0.39498	-0.05294	0.03149	-3.62875	-46.05806	-3.47835	0.39976	46.33154	187.63	4.52
93/ 6/12	2449150.5	-0.39561	-0.10551	0.02720	2.47557	-44.83994	-3.93197	0.41034	45.08003	194.93	3.80
93/ 6/14	2449152.5	-0.38945	-0.15628	0.02245	8.09908	-42.96923	-4.28796	0.42024	43.93560	201.86	3.06
93/ 6/16	2449154.5	-0.37709	-0.20457	0.01733	13.22888	-40.55828	-4.55447	0.42935	42.90362	208.48	2.31
93/ 6/18	2449156.5	-0.35908	-0.24980	0.01195	17.86505	-37.70017	-4.73917	0.43759	41.98717	214.83	1.57
93/ 6/20	2449158.5	-0.33600	-0.29152	0.00641	22.01501	-34.47119	-4.84907	0.44488	41.18782	220.95	0.83
93/ 6/22	2449160.5	-0.30840	-0.32932	0.00078	25.68966	-30.93353	-4.89028	0.45118	40.50626	226.88	0.10
93/ 6/24	2449162.5	-0.27683	-0.36288	-0.00486	28.90075	-27.13783	-4.86806	0.45644	39.94262	232.66	-0.61
93/ 6/26	2449164.5	-0.24181	-0.39193	-0.01044	31.65910	-23.12541	-4.78681	0.46064	39.49680	238.33	-1.30
93/ 6/28	2449166.5	-0.20387	-0.41623	-0.01590	33.97347	-18.93032	-4.65014	0.46375	39.16858	243.91	-1.96
93/ 6/30	2449168.5	-0.16350	-0.43560	-0.02117	35.84968	-14.58102	-4.46093	0.46576	38.95774	249.43	-2.60
93/ 7/ 2	2449170.5	-0.12121	-0.44987	-0.02619	37.29009	-10.10193	-4.22142	0.46665	38.86413	254.92	-3.22
93/ 7/ 4	2449172.5	-0.07752	-0.45890	-0.03090	38.29316	-5.51481	-3.93327	0.46642	38.88766	260.41	-3.80
93/ 7/ 6	2449174.5	-0.03292	-0.46257	-0.03525	38.85310	-0.84000	-3.59762	0.46508	39.02835	265.93	-4.35
93/ 7/ 8	2449176.5	0.01206	-0.46081	-0.03919	38.95959	3.90223	-3.21523	0.46263	39.28632	271.50	-4.86
93/ 7/10	2449178.5	0.05690	-0.45354	-0.04266	38.59751	8.69041	-2.78648	0.45908	39.66176	277.15	-5.33
93/ 7/12	2449180.5	0.10104	-0.44073	-0.04561	37.74671	13.50034	-2.31155	0.45446	40.15490	282.91	-5.76
93/ 7/14	2449182.5	0.14391	-0.42236	-0.04799	36.38187	18.30341	-1.79052	0.44877	40.76594	288.82	-6.14
93/ 7/16	2449184.5	0.18488	-0.39846	-0.04973	34.47254	23.06453	-1.22351	0.44207	41.49488	294.89	-6.46
93/ 7/18	2449186.5	0.22332	-0.36911	-0.05080	31.98338	27.73961	-0.61095	0.43439	42.34142	301.18	-6.72
93/ 7/20	2449188.5	0.25853	-0.33443	-0.05113	28.87496	32.27258	0.04608	0.42579	43.30456	307.71	-6.90
93/ 7/22	2449190.5	0.28977	-0.29463	-0.05067	25.10533	36.59162	0.74547	0.41635	44.38220	314.52	-6.99
93/ 7/24	2449192.5	0.31626	-0.25001	-0.04939	20.63284	40.60483	1.48340	0.40616	45.57046	321.67	-6.98
93/ 7/26	2449194.5	0.33715	-0.20099	-0.04723	15.42097	44.19538	2.25353	0.39535	46.86274	329.20	-6.86
93/ 7/28	2449196.5	0.35159	-0.14813	-0.04417	9.44587	47.21660	3.04590	0.38407	48.24842	337.15	-6.60
93/ 7/30	2449198.5	0.35868	-0.09220	-0.04019	2.70789	49.48808	3.84556	0.37252	49.71107	345.58	-6.19
93/ 8/ 1	2449200.5	0.35757	-0.03418	-0.03530	-4.75209	50.79484	4.63102	0.36093	51.22641	354.54	-5.61
93/ 8/ 3	2449202.5	0.34746	0.02468	-0.02951	-12.83121	50.89296	5.37278	0.34959	52.75984	4.06	-4.84
93/ 8/ 5	2449204.5	0.32776	0.08283	-0.02291	-21.33978	49.52617	6.03243	0.33884	54.26434	14.18	-3.88
93/ 8/ 7	2449206.5	0.29811	0.13844	-0.01563	-29.97838	46.45877	6.56328	0.32906	55.67942	24.91	-2.72
93/ 8/ 9	2449208.5	0.25861	0.18944	-0.00782	-38.32763	41.52720	6.91373	0.32067	56.93255	36.22	-1.40

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93/ 8/11	2449210.5	0.20988	0.23364	0.00026	-45.86538	34.70534	7.03422	0.31407	57.94457	48.07	0.05
93/ 8/13	2449212.5	0.15319	0.26895	0.00833	-52.02457	26.16543	6.88748	0.30963	58.63977	60.34	1.54
93/ 8/15	2449214.5	0.09043	0.29358	0.01606	-56.29044	16.30532	6.45966	0.30761	58.95934	72.88	2.99
93/ 8/17	2449216.5	0.02401	0.30633	0.02315	-58.31168	5.71502	5.76764	0.30814	58.87426	85.52	4.31
93/ 8/19	2449218.5	-0.04338	0.30676	0.02930	-57.98158	-4.91985	4.85842	0.31120	58.39240	98.05	5.40
93/ 8/21	2449220.5	-0.10909	0.29520	0.03431	-55.45222	-14.94536	3.79987	0.31658	57.55651	110.28	6.22
93/ 8/23	2449222.5	-0.17077	0.27267	0.03805	-51.07836	-23.84754	2.66669	0.32398	56.43416	122.06	6.74
93/ 8/25	2449224.5	-0.22655	0.24067	0.04047	-45.32163	-31.30608	1.52730	0.33300	55.10402	133.27	6.98
93/ 8/27	2449226.5	-0.27512	0.20096	0.04160	-38.65646	-37.19015	0.43558	0.34323	53.64344	143.85	6.96
93/ 8/29	2449228.5	-0.31567	0.15536	0.04151	-31.50451	-41.51708	-0.57161	0.35427	52.12033	153.80	6.73
93/ 8/31	2449230.5	-0.34784	0.10560	0.04032	-24.20365	-44.39949	-1.47289	0.36575	50.58953	163.11	6.33
93/ 9/ 2	2449232.5	-0.37162	0.05328	0.03815	-17.00348	-45.99856	-2.25892	0.37736	49.09265	171.84	5.80
93/ 9/ 4	2449234.5	-0.38723	-0.00023	0.03514	-10.07587	-46.49028	-2.92865	0.38882	47.65969	180.03	5.19
93/ 9/ 6	2449236.5	-0.39505	-0.05376	0.03143	-3.53107	-46.04477	-3.48614	0.39993	46.31137	187.75	4.51
93/ 9/ 8	2449238.5	-0.39556	-0.10631	0.02713	2.56600	-44.81564	-3.93818	0.41049	45.06146	195.04	3.79
93/ 9/10	2449240.5	-0.38931	-0.15704	0.02237	8.18193	-42.93582	-4.29273	0.42038	43.91875	201.97	3.05
93/ 9/12	2449242.5	-0.37685	-0.20529	0.01725	13.30407	-40.51735	-4.55791	0.42948	42.88856	208.58	2.30
93/ 9/14	2449244.5	-0.35876	-0.25047	0.01187	17.93266	-37.65301	-4.74141	0.43771	41.97392	214.92	1.55
93/ 9/16	2449246.5	-0.33561	-0.29213	0.00632	22.07519	-34.41885	-4.85020	0.44499	41.17640	221.04	0.81
93/ 9/18	2449248.5	-0.30795	-0.32987	0.00069	25.74261	-30.87688	-4.89039	0.45127	40.49666	226.97	0.09
93/ 9/20	2449250.5	-0.27632	-0.36336	-0.00495	28.94663	-27.07756	-4.86723	0.45652	39.93485	232.75	-0.62
93/ 9/22	2449252.5	-0.24125	-0.39234	-0.01053	31.69809	-23.06209	-4.78510	0.46070	39.49084	238.41	-1.31
93/ 9/24	2449254.5	-0.20326	-0.41657	-0.01598	34.00567	-18.86443	-4.64760	0.46379	39.16443	243.99	-1.97
93/ 9/26	2449256.5	-0.16286	-0.43586	-0.02125	35.87516	-14.51297	-4.45760	0.46578	38.95541	249.51	-2.61
93/ 9/28	2449258.5	-0.12055	-0.45005	-0.02626	37.30887	-10.03207	-4.21733	0.46665	38.86361	255.00	-3.23
93/ 9/30	2449260.5	-0.07684	-0.45899	-0.03097	38.30517	-5.44346	-3.92844	0.46641	38.88894	260.50	-3.81
93/10/ 2	2449262.5	-0.03223	-0.46259	-0.03532	38.85823	-0.76748	-3.59206	0.46505	39.03145	266.01	-4.36
93/10/ 4	2449264.5	0.01276	-0.46074	-0.03925	38.95764	3.97563	-3.20895	0.46259	39.29123	271.59	-4.87
93/10/ 6	2449266.5	0.05759	-0.45339	-0.04271	38.58821	8.76434	-2.77950	0.45902	39.66849	277.24	-5.34
93/10/ 8	2449268.5	0.10171	-0.44049	-0.04565	37.72971	13.57441	-2.30386	0.45438	40.16346	283.00	-5.77
93/10/10	2449270.5	0.14455	-0.42203	-0.04802	36.35674	18.37713	-1.78211	0.44868	40.77631	288.91	-6.14
93/10/12	2449272.5	0.18549	-0.39805	-0.04975	34.43876	23.13730	-1.21440	0.44196	41.50707	294.99	-6.46
93/10/14	2449274.5	0.22389	-0.36861	-0.05081	31.94036	27.81066	-0.60115	0.43426	42.35541	301.27	-6.72
93/10/16	2449276.5	0.25904	-0.33386	-0.05112	28.82208	32.34092	0.05656	0.42565	43.32032	307.81	-6.90
93/10/18	2449278.5	0.29022	-0.29398	-0.05066	25.04193	36.65599	0.75658	0.41619	44.39969	314.63	-6.99
93/10/20	2449280.5	0.31662	-0.24929	-0.04936	20.55833	40.66365	1.49506	0.40600	45.58961	321.79	-6.98
93/10/22	2449282.5	0.33743	-0.20020	-0.04719	15.33484	44.24663	2.26562	0.39518	46.88342	329.32	-6.86
93/10/24	2449284.5	0.35176	-0.14729	-0.04412	9.34792	47.25778	3.05822	0.38389	48.27042	337.28	-6.60
93/10/26	2449286.5	0.35873	-0.09132	-0.04013	2.59839	49.51612	3.85784	0.37234	49.73410	345.72	-6.19
93/10/28	2449288.5	0.35748	-0.03328	-0.03521	-4.87210	50.80620	4.64287	0.36075	51.25001	354.68	-5.60
93/10/30	2449290.5	0.34723	0.02558	-0.02942	-12.95952	50.88370	5.38368	0.34942	52.78337	4.21	-4.83
93/11/ 1	2449292.5	0.32738	0.08371	-0.02281	-21.47266	49.49240	6.04170	0.33868	54.28696	14.34	-3.86
93/11/ 3	2449294.5	0.29758	0.13926	-0.01551	-30.11028	46.39726	6.57016	0.32892	55.70010	25.08	-2.70
93/11/ 5	2449296.5	0.25793	0.19017	-0.00770	-38.45118	41.43634	6.91743	0.32055	56.95010	36.40	-1.38
93/11/ 7	2449298.5	0.20906	0.23426	0.00038	-45.97199	34.58616	7.03403	0.31398	57.95778	48.25	0.07

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93/11/ 9	2449300.5	0.15226	0.26941	0.00845	-52.10565	26.02237	6.88299	0.30958	58.64757	60.53	1.56
93/11/11	2449302.5	0.08943	0.29387	0.01618	-56.33908	16.14619	6.45089	0.30760	58.96105	73.07	3.01
93/11/13	2449304.5	0.02298	0.30643	0.02325	-58.32428	5.54996	5.75511	0.30817	58.86973	85.71	4.33
93/11/15	2449306.5	-0.04441	0.30668	0.02939	-57.95859	-5.08021	4.84304	0.31126	58.38203	98.24	5.42
93/11/17	2449308.5	-0.11007	0.29494	0.03438	-55.39779	-15.09186	3.78277	0.31668	57.54119	110.47	6.23
93/11/19	2449310.5	-0.17168	0.27225	0.03810	-50.99903	-23.97373	2.64902	0.32410	56.41505	122.23	6.75
93/11/21	2449312.5	-0.22736	0.24011	0.04050	-45.22481	-31.40859	1.50999	0.33315	55.08233	133.44	6.98
93/11/23	2449314.5	-0.27581	0.20030	0.04160	-38.54916	-37.26826	0.41934	0.34339	53.62030	144.01	6.96
93/11/25	2449316.5	-0.31623	0.15462	0.04150	-31.39260	-41.57193	-0.58634	0.35444	52.09669	153.94	6.72
93/11/27	2449318.5	-0.34827	0.10481	0.04029	-24.09162	-44.43331	-1.48588	0.36593	50.56613	163.25	6.32
93/11/29	2449320.5	-0.37193	0.05246	0.03811	-16.89453	-46.01403	-2.27012	0.37754	49.07004	171.97	5.79
93/12/ 1	2449322.5	-0.38741	-0.00106	0.03509	-9.97211	-46.49010	-2.93808	0.38900	47.63826	180.16	5.18
93/12/ 3	2449324.5	-0.39511	-0.05458	0.03137	-3.43380	-46.03146	-3.49389	0.40009	46.29139	187.86	4.50
93/12/ 5	2449326.5	-0.39552	-0.10710	0.02706	2.65606	-44.79139	-3.94437	0.41065	45.04311	195.15	3.78
93/12/ 7	2449328.5	-0.38916	-0.15780	0.02229	8.26445	-42.90251	-4.29748	0.42053	43.90211	202.07	3.04
93/12/ 9	2449330.5	-0.37661	-0.20601	0.01717	13.37898	-40.47653	-4.56135	0.42962	42.87368	208.68	2.29
93/12/11	2449332.5	-0.35844	-0.25114	0.01179	18.00001	-37.60598	-4.74364	0.43783	41.96084	215.02	1.54
93/12/13	2449334.5	-0.33522	-0.29274	0.00624	22.13515	-34.36666	-4.85133	0.44509	41.16512	221.13	0.80
93/12/15	2449336.5	-0.30749	-0.33042	0.00060	25.79533	-30.82040	-4.89051	0.45136	40.48720	227.06	0.08
93/12/17	2449338.5	-0.27580	-0.36384	-0.00504	28.99232	-27.01749	-4.86640	0.45659	39.92720	232.84	-0.63
93/12/19	2449340.5	-0.24069	-0.39275	-0.01061	31.73690	-22.99902	-4.78340	0.46075	39.48502	238.50	-1.32
93/12/21	2449342.5	-0.20266	-0.41690	-0.01607	34.03772	-18.79884	-4.64507	0.46383	39.16044	244.08	-1.98
93/12/23	2449344.5	-0.16222	-0.43612	-0.02133	35.90051	-14.44526	-4.45429	0.46580	38.95321	249.60	-2.62
93/12/25	2449346.5	-0.11989	-0.45023	-0.02634	37.32751	-9.96260	-4.21326	0.46666	38.86319	255.09	-3.24
93/12/27	2449348.5	-0.07616	-0.45909	-0.03104	38.31704	-5.37255	-3.92363	0.46640	38.89029	260.58	-3.82
93/12/29	2449350.5	-0.03154	-0.46260	-0.03538	38.86320	-0.69543	-3.58654	0.46503	39.03454	266.10	-4.36
93/12/31	2449352.5	0.01345	-0.46067	-0.03931	38.95552	4.04847	-3.20271	0.46254	39.29606	271.67	-4.87
94/ 1/ 2	2449354.5	0.05827	-0.45323	-0.04276	38.57873	8.83762	-2.77255	0.45896	39.67504	277.33	-5.35
94/ 1/ 4	2449356.5	0.10238	-0.44025	-0.04570	37.71253	13.64770	-2.29621	0.45430	40.17172	283.09	-5.77
94/ 1/ 6	2449358.5	0.14520	-0.42171	-0.04805	36.33146	18.44994	-1.77377	0.44859	40.78629	289.00	-6.15
94/ 1/ 8	2449360.5	0.18611	-0.39764	-0.04978	34.40489	23.20901	-1.20536	0.44185	41.51876	295.08	-6.47
94/ 1/10	2449362.5	0.22446	-0.36812	-0.05082	31.89737	27.88051	-0.59144	0.43414	42.36880	301.37	-6.72
94/ 1/12	2449364.5	0.25956	-0.33329	-0.05112	28.76936	32.40794	0.06692	0.42552	43.33538	307.91	-6.90
94/ 1/14	2449366.5	0.29066	-0.29334	-0.05065	24.97889	36.71894	0.76753	0.41605	44.41638	314.74	-6.99
94/ 1/16	2449368.5	0.31699	-0.24858	-0.04934	20.48440	40.72096	1.50654	0.40584	45.60786	321.90	-6.98
94/ 1/18	2449370.5	0.33770	-0.19943	-0.04715	15.24961	44.29631	2.27749	0.39502	46.90310	329.44	-6.86
94/ 1/20	2449372.5	0.35192	-0.14647	-0.04407	9.25122	47.29736	3.07030	0.38373	48.29133	337.40	-6.59
94/ 1/22	2449374.5	0.35878	-0.09046	-0.04006	2.49055	49.54265	3.86984	0.37217	49.75593	345.85	-6.18
94/ 1/24	2449376.5	0.35740	-0.03239	-0.03513	-4.98998	50.81621	4.65442	0.36058	51.27232	354.82	-5.59
94/ 1/26	2449378.5	0.34701	0.02647	-0.02932	-13.08524	50.87345	5.39425	0.34925	52.80558	4.36	-4.82
94/ 1/28	2449380.5	0.32701	0.08457	-0.02270	-21.60252	49.45818	6.05067	0.33853	54.30830	14.50	-3.85
94/ 1/30	2449382.5	0.29706	0.14007	-0.01539	-30.23887	46.33606	6.57678	0.32879	55.71959	25.24	-2.68
94/ 2/ 1	2449384.5	0.25727	0.19089	-0.00758	-38.57135	41.34670	6.92092	0.32044	56.96664	36.58	-1.36
94/ 2/ 3	2449386.5	0.20827	0.23486	0.00050	-46.07545	34.46919	7.03373	0.31390	57.97021	48.43	0.09
94/ 2/ 5	2449388.5	0.15136	0.26986	0.00857	-52.18411	25.88240	6.87852	0.30953	58.65487	60.71	1.59

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/ 2/ 7	2449390.5	0.08845	0.29415	0.01629	-56.38593	15.99082	6.44227	0.30759	58.96255	73.26	3.04
94/ 2/ 9	2449392.5	0.02197	0.30653	0.02335	-58.33609	5.38900	5.74283	0.30820	58.86528	85.90	4.34
94/ 2/11	2449394.5	-0.04540	0.30659	0.02947	-57.93586	-5.23652	4.82801	0.31133	58.37204	98.42	5.43
94/ 2/13	2449396.5	-0.11103	0.29467	0.03444	-55.34458	-15.23468	3.76609	0.31678	57.52653	110.65	6.24
94/ 2/15	2449398.5	-0.17255	0.27183	0.03814	-50.92168	-24.09688	2.63177	0.32423	56.39684	122.41	6.76
94/ 2/17	2449400.5	-0.22814	0.23957	0.04052	-45.13048	-31.50881	1.49310	0.33329	55.06173	133.60	6.98
94/ 2/19	2449402.5	-0.27647	0.19965	0.04161	-38.44458	-37.34486	0.40348	0.34355	53.59839	144.17	6.96
94/ 2/21	2449404.5	-0.31677	0.15389	0.04149	-31.28343	-41.62598	-0.60075	0.35461	52.07433	154.09	6.72
94/ 2/23	2449406.5	-0.34869	0.10404	0.04026	-23.98219	-44.46690	-1.49863	0.36610	50.54401	163.39	6.31
94/ 2/25	2449408.5	-0.37221	0.05166	0.03807	-16.78795	-46.02969	-2.28112	0.37771	49.04866	172.10	5.78
94/ 2/27	2449410.5	-0.38758	-0.00187	0.03504	-9.87044	-46.49042	-2.94736	0.38916	47.61797	180.28	5.17
94/ 3/ 1	2449412.5	-0.39517	-0.05538	0.03130	-3.33834	-46.01884	-3.50153	0.40025	46.27244	187.98	4.49
94/ 3/ 3	2449414.5	-0.39546	-0.10788	0.02699	2.74458	-44.76796	-3.95048	0.41080	45.02565	195.26	3.77
94/ 3/ 5	2449416.5	-0.38901	-0.15855	0.02222	8.34566	-42.87008	-4.30218	0.42067	43.88624	202.18	3.03
94/ 3/ 7	2449418.5	-0.37637	-0.20672	0.01709	13.45277	-40.43662	-4.56475	0.42974	42.85947	208.78	2.28
94/ 3/ 9	2449420.5	-0.35812	-0.25180	0.01170	18.06644	-37.55984	-4.74586	0.43794	41.94831	215.11	1.53
94/ 3/11	2449422.5	-0.33482	-0.29334	0.00615	22.19431	-34.31534	-4.85245	0.44519	41.15430	221.22	0.79
94/ 3/13	2449424.5	-0.30703	-0.33096	0.00052	25.84741	-30.76472	-4.89063	0.45144	40.47808	227.15	0.07
94/ 3/15	2449426.5	-0.27529	-0.36432	-0.00512	29.03746	-26.95816	-4.86559	0.45666	39.91979	232.92	-0.64
94/ 3/17	2449428.5	-0.24013	-0.39315	-0.01070	31.77522	-22.93660	-4.78170	0.46081	39.47932	238.58	-1.33
94/ 3/19	2449430.5	-0.20205	-0.41723	-0.01615	34.06932	-18.73380	-4.64255	0.46387	39.15644	244.16	-1.99
94/ 3/21	2449432.5	-0.16159	-0.43637	-0.02140	35.92544	-14.37801	-4.45098	0.46582	38.95093	249.68	-2.63
94/ 3/23	2449434.5	-0.11923	-0.45040	-0.02641	37.34576	-9.89350	-4.20918	0.46666	38.86263	255.17	-3.24
94/ 3/25	2449436.5	-0.07548	-0.45919	-0.03111	38.32856	-5.30192	-3.91882	0.46639	38.89146	260.67	-3.82
94/ 3/27	2449438.5	-0.03085	-0.46262	-0.03545	38.86787	-0.62361	-3.58100	0.46500	39.03746	266.18	-4.37
94/ 3/29	2449440.5	0.01414	-0.46060	-0.03936	38.95315	4.12117	-3.19646	0.46250	39.30076	271.76	-4.88
94/ 3/31	2449442.5	0.05895	-0.45308	-0.04281	38.56906	8.91085	-2.76559	0.45890	39.68153	277.41	-5.35
94/ 4/ 2	2449444.5	0.10305	-0.44001	-0.04574	37.69521	13.72106	-2.28855	0.45422	40.18002	283.18	-5.78
94/ 4/ 4	2449446.5	0.14584	-0.42138	-0.04808	36.30606	18.52293	-1.76540	0.44849	40.79639	289.09	-6.15
94/ 4/ 6	2449448.5	0.18671	-0.39723	-0.04980	34.37091	23.28102	-1.19629	0.44174	41.53067	295.18	-6.47
94/ 4/ 8	2449450.5	0.22502	-0.36763	-0.05083	31.85422	27.95079	-0.58168	0.43402	42.38250	301.47	-6.73
94/ 4/10	2449452.5	0.26006	-0.33272	-0.05112	28.71642	32.47550	0.07734	0.42538	43.35086	308.01	-6.90
94/ 4/12	2449454.5	0.29110	-0.29269	-0.05063	24.91552	36.78255	0.77857	0.41590	44.43361	314.84	-6.99
94/ 4/14	2449456.5	0.31735	-0.24786	-0.04931	20.41000	40.77902	1.51812	0.40568	45.62676	322.01	-6.98
94/ 4/16	2449458.5	0.33797	-0.19865	-0.04711	15.16370	44.34684	2.28949	0.39485	46.92357	329.55	-6.85
94/ 4/18	2449460.5	0.35209	-0.14564	-0.04401	9.15360	47.33784	3.08253	0.38355	48.31316	337.53	-6.59
94/ 4/20	2449462.5	0.35882	-0.08958	-0.03999	2.38149	49.57003	3.88203	0.37199	49.77881	345.98	-6.17
94/ 4/22	2449464.5	0.35731	-0.03150	-0.03505	-5.10942	50.82696	4.66616	0.36040	51.29580	354.96	-5.58
94/ 4/24	2449466.5	0.34678	0.02737	-0.02923	-13.21288	50.86366	5.40504	0.34908	52.82903	4.51	-4.80
94/ 4/26	2449468.5	0.32662	0.08544	-0.02260	-21.73463	49.42398	6.05984	0.33837	54.33089	14.66	-3.83
94/ 4/28	2449470.5	0.29652	0.14088	-0.01528	-30.36990	46.27426	6.58356	0.32865	55.74030	25.41	-2.66
94/ 4/30	2449472.5	0.25658	0.19162	-0.00746	-38.69397	41.25574	6.92452	0.32033	56.98428	36.75	-1.33
94/ 5/ 2	2449474.5	0.20746	0.23546	0.00063	-46.18110	34.35010	7.03346	0.31382	57.98356	48.62	0.11
94/ 5/ 4	2449476.5	0.15044	0.27032	0.00869	-52.26425	25.73964	6.87397	0.30948	58.66287	60.90	1.61
94/ 5/ 6	2449478.5	0.08745	0.29442	0.01640	-56.43373	15.83219	6.43346	0.30758	58.96451	73.46	3.06

1.1 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/ 5/ 8	2449480.5	0.02094	0.30662	0.02345	-58.34798	5.22459	5.73029	0.30823	58.86102	86.09	4.36
94/ 5/10	2449482.5	-0.04643	0.30649	0.02956	-57.91235	-5.39614	4.81264	0.31139	58.36197	98.61	5.45
94/ 5/12	2449484.5	-0.11201	0.29440	0.03451	-55.28980	-15.38039	3.74903	0.31687	57.51151	110.83	6.25
94/ 5/14	2449486.5	-0.17346	0.27140	0.03819	-50.84217	-24.22228	2.61415	0.32435	56.37800	122.58	6.76
94/ 5/16	2449488.5	-0.22894	0.23901	0.04055	-45.03362	-31.61058	1.47586	0.33344	55.04030	133.77	6.98
94/ 5/18	2449490.5	-0.27715	0.19898	0.04162	-38.33735	-37.42228	0.38730	0.34371	53.57545	144.32	6.95
94/ 5/20	2449492.5	-0.31732	0.15315	0.04148	-31.17166	-41.68020	-0.61542	0.35478	52.05084	154.24	6.71
94/ 5/22	2449494.5	-0.34911	0.10325	0.04024	-23.87036	-44.50015	-1.51156	0.36628	50.52071	163.52	6.31
94/ 5/24	2449496.5	-0.37251	0.05084	0.03803	-16.67923	-46.04463	-2.29225	0.37788	49.02610	172.23	5.78
94/ 5/26	2449498.5	-0.38775	-0.00270	0.03499	-9.76695	-46.48974	-2.95672	0.38934	47.59655	180.40	5.16
94/ 5/28	2449500.5	-0.39522	-0.05620	0.03124	-3.24136	-46.00506	-3.50921	0.40042	46.25242	188.09	4.47
94/ 5/30	2449502.5	-0.39541	-0.10868	0.02692	2.83433	-44.74327	-3.95660	0.41096	45.00720	195.37	3.76
94/ 6/ 1	2449504.5	-0.38886	-0.15932	0.02214	8.42787	-42.83636	-4.30687	0.42082	43.86949	202.28	3.02
94/ 6/ 3	2449506.5	-0.37613	-0.20743	0.01701	13.52736	-40.39543	-4.56812	0.42988	42.84446	208.88	2.27
94/ 6/ 5	2449508.5	-0.35780	-0.25247	0.01162	18.13348	-37.51246	-4.74803	0.43806	41.93509	215.21	1.52
94/ 6/ 7	2449510.5	-0.33443	-0.29395	0.00606	22.25396	-34.26282	-4.85352	0.44530	41.14288	221.31	0.78
94/ 6/ 9	2449512.5	-0.30657	-0.33150	0.00043	25.89983	-30.70793	-4.89068	0.45153	40.46847	227.24	0.05
94/ 6/11	2449514.5	-0.27477	-0.36480	-0.00521	29.08284	-26.89778	-4.86471	0.45673	39.91200	233.01	-0.65
94/ 6/13	2449516.5	-0.23956	-0.39356	-0.01078	31.81371	-22.87322	-4.77995	0.46086	39.47334	238.67	-1.34
94/ 6/15	2449518.5	-0.20145	-0.41757	-0.01623	34.10104	-18.66789	-4.63997	0.46391	39.15227	244.25	-2.00
94/ 6/17	2449520.5	-0.16095	-0.43663	-0.02148	35.95045	-14.30997	-4.44760	0.46584	38.94858	249.77	-2.64
94/ 6/19	2449522.5	-0.11857	-0.45058	-0.02649	37.36408	-9.82367	-4.20506	0.46667	38.86209	255.26	-3.25
94/ 6/21	2449524.5	-0.07480	-0.45928	-0.03118	38.34014	-5.23063	-3.91395	0.46638	38.89274	260.75	-3.83
94/ 6/23	2449526.5	-0.03016	-0.46263	-0.03551	38.87258	-0.55116	-3.57541	0.46497	39.04055	266.27	-4.38
94/ 6/25	2449528.5	0.01483	-0.46053	-0.03942	38.95079	4.19447	-3.19016	0.46245	39.30566	271.84	-4.89
94/ 6/27	2449530.5	0.05964	-0.45292	-0.04286	38.55935	8.98463	-2.75858	0.45884	39.68825	277.50	-5.36
94/ 6/29	2449532.5	0.10372	-0.43976	-0.04578	37.67780	13.79493	-2.28083	0.45414	40.18855	283.27	-5.79
94/ 7/ 1	2449534.5	0.14648	-0.42105	-0.04811	36.28052	18.59641	-1.75698	0.44840	40.80673	289.18	-6.16
94/ 7/ 3	2449536.5	0.18732	-0.39682	-0.04982	34.33673	23.35350	-1.18717	0.44163	41.54282	295.27	-6.48
94/ 7/ 5	2449538.5	0.22558	-0.36714	-0.05084	31.81082	28.02150	-0.57187	0.43389	42.39646	301.57	-6.73
94/ 7/ 7	2449540.5	0.26057	-0.33214	-0.05112	28.66318	32.54348	0.08782	0.42524	43.36662	308.11	-6.90
94/ 7/ 9	2449542.5	0.29154	-0.29204	-0.05062	24.85178	36.84653	0.78968	0.41575	44.45111	314.95	-6.99
94/ 7/11	2449544.5	0.31771	-0.24714	-0.04928	20.33515	40.83740	1.52977	0.40552	45.64594	322.12	-6.98
94/ 7/13	2449546.5	0.33824	-0.19786	-0.04707	15.07725	44.39757	2.30156	0.39468	46.94428	329.67	-6.85
94/ 7/15	2449548.5	0.35225	-0.14480	-0.04396	9.05534	47.37840	3.09482	0.38337	48.33519	337.65	-6.58
94/ 7/17	2449550.5	0.35886	-0.08871	-0.03992	2.27172	49.59736	3.89427	0.37181	49.80185	346.12	-6.16
94/ 7/19	2449552.5	0.35722	-0.03059	-0.03497	-5.22962	50.83748	4.67796	0.36023	51.31940	355.10	-5.57
94/ 7/21	2449554.5	0.34654	0.02827	-0.02913	-13.34125	50.85346	5.41586	0.34891	52.85257	4.66	-4.79
94/ 7/23	2449556.5	0.32624	0.08632	-0.02249	-21.86740	49.38918	6.06902	0.33821	54.35354	14.82	-3.81
94/ 7/25	2449558.5	0.29598	0.14170	-0.01516	-30.50146	46.21168	6.59033	0.32851	55.76101	25.58	-2.65
94/ 7/27	2449560.5	0.25589	0.19235	-0.00733	-38.81691	41.16383	6.92808	0.32021	57.00186	36.93	-1.31
94/ 7/29	2449562.5	0.20663	0.23607	0.00075	-46.28679	34.23001	7.03311	0.31373	57.99677	48.80	0.14
94/ 7/31	2449564.5	0.14951	0.27077	0.00881	-52.34412	25.59590	6.86931	0.30943	58.67064	61.09	1.63
94/ 8/ 2	2449566.5	0.08645	0.29470	0.01651	-56.48094	15.67271	6.42453	0.30757	58.96614	73.65	3.08
94/ 8/ 4	2449568.5	0.01990	0.30671	0.02355	-58.35907	5.05959	5.71762	0.30826	58.85637	86.29	4.38

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/ 8/ 6	2449570.5	-0.04746	0.30639	0.02964	-57.88791	-5.55605	4.79716	0.31146	58.35146	98.81	5.46
94/ 8/ 8	2449572.5	-0.11299	0.29413	0.03458	-55.23412	-15.52611	3.73189	0.31697	57.49604	111.01	6.26
94/ 8/10	2449574.5	-0.17436	0.27097	0.03824	-50.76188	-24.34749	2.59646	0.32448	56.35876	122.76	6.77
94/ 8/12	2449576.5	-0.22974	0.23844	0.04057	-44.93614	-31.71203	1.45858	0.33359	55.01852	133.93	6.99
94/ 8/14	2449578.5	-0.27783	0.19832	0.04162	-38.22966	-37.49936	0.37112	0.34388	53.55228	144.48	6.95
94/ 8/16	2449580.5	-0.31788	0.15241	0.04147	-31.05959	-41.73412	-0.63008	0.35496	52.02722	154.38	6.71
94/ 8/18	2449582.5	-0.34953	0.10246	0.04021	-23.75833	-44.53316	-1.52449	0.36645	50.49737	163.66	6.30
94/ 8/20	2449584.5	-0.37281	0.05002	0.03799	-16.57039	-46.05939	-2.30338	0.37806	49.00358	172.36	5.77
94/ 8/22	2449586.5	-0.38792	-0.00353	0.03493	-9.66337	-46.48895	-2.96608	0.38951	47.57521	180.52	5.15
94/ 8/24	2449588.5	-0.39528	-0.05702	0.03118	-3.14432	-45.99118	-3.51689	0.40059	46.23250	188.21	4.46
94/ 8/26	2449590.5	-0.39536	-0.10948	0.02685	2.92413	-44.71850	-3.96272	0.41112	44.98886	195.48	3.74
94/ 8/28	2449592.5	-0.38871	-0.16008	0.02206	8.51011	-42.80256	-4.31155	0.42096	43.85283	202.38	3.00
94/ 8/30	2449594.5	-0.37589	-0.20815	0.01692	13.60198	-40.35417	-4.57149	0.43001	42.82956	208.98	2.26
94/ 9/ 1	2449596.5	-0.35748	-0.25313	0.01153	18.20055	-37.46503	-4.75020	0.43818	41.92199	215.30	1.51
94/ 9/ 3	2449598.5	-0.33403	-0.29456	0.00598	22.31364	-34.21026	-4.85459	0.44540	41.13159	221.41	0.77
94/ 9/ 5	2449600.5	-0.30611	-0.33205	0.00034	25.95229	-30.65110	-4.89074	0.45162	40.45900	227.33	0.04
94/ 9/ 7	2449602.5	-0.27426	-0.36527	-0.00530	29.12826	-26.83736	-4.86383	0.45680	39.90434	233.10	-0.66
94/ 9/ 9	2449604.5	-0.23900	-0.39397	-0.01087	31.85225	-22.80977	-4.77819	0.46092	39.46748	238.76	-1.35
94/ 9/11	2449606.5	-0.20084	-0.41790	-0.01631	34.13279	-18.60187	-4.63738	0.46394	39.14821	244.33	-2.02
94/ 9/13	2449608.5	-0.16031	-0.43688	-0.02156	35.97548	-14.24179	-4.44422	0.46586	38.94631	249.85	-2.65
94/ 9/15	2449610.5	-0.11790	-0.45075	-0.02656	37.38238	-9.75370	-4.20091	0.46667	38.86161	255.34	-3.26
94/ 9/17	2449612.5	-0.07412	-0.45937	-0.03125	38.35166	-5.15918	-3.90907	0.46636	38.89406	260.83	-3.84
94/ 9/19	2449614.5	-0.02947	-0.46264	-0.03557	38.87719	-0.47853	-3.56980	0.46494	39.04368	266.35	-4.39
94/ 9/21	2449616.5	0.01552	-0.46045	-0.03948	38.94831	4.26795	-3.18384	0.46240	39.31060	271.93	-4.90
94/ 9/23	2449618.5	0.06032	-0.45276	-0.04291	38.54951	9.05862	-2.75154	0.45877	39.69501	277.59	-5.37
94/ 9/25	2449620.5	0.10439	-0.43952	-0.04582	37.66024	13.86903	-2.27308	0.45406	40.19715	283.36	-5.79
94/ 9/27	2449622.5	0.14713	-0.42072	-0.04814	36.25481	18.67014	-1.74852	0.44830	40.81718	289.27	-6.17
94/ 9/29	2449624.5	0.18793	-0.39640	-0.04984	34.30235	23.42625	-1.17800	0.44152	41.55512	295.37	-6.48
94/10/ 1	2449626.5	0.22615	-0.36664	-0.05085	31.76718	28.09250	-0.56201	0.43376	42.41059	301.67	-6.73
94/10/ 3	2449628.5	0.26108	-0.33156	-0.05112	28.60964	32.61173	0.09835	0.42510	43.38256	308.22	-6.91
94/10/ 5	2449630.5	0.29198	-0.29138	-0.05060	24.78768	36.91076	0.80084	0.41560	44.46881	315.06	-6.99
94/10/ 7	2449632.5	0.31807	-0.24641	-0.04925	20.25986	40.89599	1.54147	0.40536	45.66530	322.23	-6.98
94/10/ 9	2449634.5	0.33850	-0.19707	-0.04703	14.99030	44.44847	2.31368	0.39450	46.96519	329.79	-6.85
94/10/11	2449636.5	0.35241	-0.14395	-0.04390	8.95653	47.41907	3.10718	0.38320	48.35744	337.78	-6.58
94/10/13	2449638.5	0.35890	-0.08782	-0.03985	2.16135	49.62470	3.90657	0.37163	49.82513	346.25	-6.16
94/10/15	2449640.5	0.35712	-0.02969	-0.03488	-5.35045	50.84789	4.68980	0.36005	51.34325	355.25	-5.56
94/10/17	2449642.5	0.34630	0.02917	-0.02903	-13.47026	50.84298	5.42672	0.34874	52.87632	4.82	-4.78
94/10/19	2449644.5	0.32584	0.08720	-0.02238	-22.00074	49.35390	6.07821	0.33805	54.37633	14.98	-3.80
94/10/21	2449646.5	0.29544	0.14253	-0.01504	-30.63344	46.14843	6.59708	0.32837	55.78177	25.75	-2.63
94/10/23	2449648.5	0.25520	0.19308	-0.00721	-38.94005	41.07109	6.93158	0.32009	57.01937	37.11	-1.29
94/10/25	2449650.5	0.20581	0.23668	0.00088	-46.39240	34.10900	7.03268	0.31365	58.00980	48.99	0.16
94/10/27	2449652.5	0.14857	0.27123	0.00893	-52.42360	25.45130	6.86455	0.30938	58.67814	61.29	1.65
94/10/29	2449654.5	0.08544	0.29498	0.01663	-56.52753	15.51255	6.41549	0.30756	58.96745	73.85	3.10
94/10/31	2449656.5	0.01886	0.30680	0.02365	-58.36937	4.89416	5.70484	0.30829	58.85135	86.48	4.40
94/11/ 2	2449658.5	-0.04849	0.30629	0.02973	-57.86265	-5.71611	4.78160	0.31153	58.34058	99.00	5.48

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94/11/ 4	2449660.5	-0.11397	0.29385	0.03464	-55.17766	-15.67172	3.71469	0.31708	57.48022	111.20	6.27
94/11/ 6	2449662.5	-0.17526	0.27053	0.03828	-50.68093	-24.47237	2.57875	0.32461	56.33919	122.94	6.77
94/11/ 8	2449664.5	-0.23054	0.23788	0.04060	-44.83817	-31.81301	1.44130	0.33374	54.99642	134.10	6.99
94/11/10	2449666.5	-0.27851	0.19765	0.04163	-38.12166	-37.57587	0.35495	0.34405	53.52881	144.64	6.95
94/11/12	2449668.5	-0.31843	0.15167	0.04145	-30.94736	-41.78744	-0.64471	0.35513	52.00332	154.53	6.70
94/11/14	2449670.5	-0.34996	0.10167	0.04018	-23.64630	-44.56558	-1.53737	0.36664	50.47378	163.80	6.29
94/11/16	2449672.5	-0.37310	0.04920	0.03795	-16.46166	-46.07362	-2.31445	0.37824	48.98082	172.49	5.76
94/11/18	2449674.5	-0.38810	-0.00435	0.03488	-9.56000	-46.48769	-2.97539	0.38969	47.55367	180.64	5.14
94/11/20	2449676.5	-0.39534	-0.05783	0.03112	-3.04755	-45.97695	-3.52452	0.40075	46.21244	188.32	4.45
94/11/22	2449678.5	-0.39531	-0.11027	0.02678	3.01362	-44.69348	-3.96879	0.41128	44.97044	195.59	3.73
94/11/24	2449680.5	-0.38856	-0.16084	0.02199	8.59203	-42.76862	-4.31619	0.42111	43.83614	202.49	2.99
94/11/26	2449682.5	-0.37565	-0.20887	0.01684	13.67626	-40.31285	-4.57482	0.43014	42.81466	209.07	2.24
94/11/28	2449684.5	-0.35716	-0.25380	0.01145	18.26729	-37.41760	-4.75234	0.43830	41.90890	215.40	1.50
94/11/30	2449686.5	-0.33364	-0.29517	0.00589	22.37300	-34.15777	-4.85564	0.44550	41.12033	221.50	0.76
94/12/ 2	2449688.5	-0.30565	-0.33259	0.00026	26.00446	-30.59437	-4.89078	0.45171	40.44957	227.42	0.03
94/12/ 4	2449690.5	-0.27374	-0.36575	-0.00538	29.17342	-26.77710	-4.86293	0.45688	39.89674	233.19	-0.67
94/12/ 6	2449692.5	-0.23843	-0.39437	-0.01095	31.89056	-22.74654	-4.77643	0.46097	39.46172	238.84	-1.36
94/12/ 8	2449694.5	-0.20024	-0.41823	-0.01640	34.16438	-18.53615	-4.63479	0.46398	39.14428	244.42	-2.03
94/12/10	2449696.5	-0.15967	-0.43713	-0.02164	36.00040	-14.17396	-4.44086	0.46589	38.94421	249.93	-2.66
94/12/12	2449698.5	-0.11724	-0.45092	-0.02664	37.40065	-9.68409	-4.19680	0.46668	38.86133	255.43	-3.27
94/12/14	2449700.5	-0.07344	-0.45946	-0.03132	38.36319	-5.08812	-3.90421	0.46635	38.89558	260.92	-3.85
94/12/16	2449702.5	-0.02879	-0.46264	-0.03564	38.88185	-0.40632	-3.56423	0.46491	39.04699	266.44	-4.40
94/12/18	2449704.5	0.01621	-0.46038	-0.03953	38.94588	4.34099	-3.17755	0.46236	39.31568	272.02	-4.91
94/12/20	2449706.5	0.06101	-0.45260	-0.04296	38.53972	9.13214	-2.74455	0.45871	39.70187	277.68	-5.37
94/12/22	2449708.5	0.10505	-0.43927	-0.04586	37.64275	13.94262	-2.26538	0.45398	40.20578	283.45	-5.80
94/12/24	2449710.5	0.14777	-0.42039	-0.04817	36.22918	18.74330	-1.74011	0.44820	40.82760	289.37	-6.17
94/12/26	2449712.5	0.18854	-0.39599	-0.04986	34.26808	23.49837	-1.16890	0.44141	41.56731	295.46	-6.49
94/12/28	2449714.5	0.22671	-0.36614	-0.05086	31.72372	28.16280	-0.55222	0.43364	42.42455	301.77	-6.74
94/12/30	2449716.5	0.26158	-0.33099	-0.05112	28.55635	32.67922	0.10880	0.42496	43.39825	308.32	-6.91
95/ 1/ 1	2449718.5	0.29242	-0.29073	-0.05059	24.72392	36.97419	0.81190	0.41545	44.48620	315.17	-6.99
95/ 1/ 3	2449720.5	0.31843	-0.24569	-0.04923	20.18503	40.95372	1.55307	0.40520	45.68430	322.35	-6.98
95/ 1/ 5	2449722.5	0.33877	-0.19629	-0.04699	14.90393	44.49848	2.32568	0.39434	46.98564	329.91	-6.84
95/ 1/ 7	2449724.5	0.35257	-0.14312	-0.04385	8.85847	47.45881	3.11939	0.38302	48.37915	337.91	-6.57
95/ 1/ 9	2449726.5	0.35894	-0.08695	-0.03978	2.05192	49.65112	3.91871	0.37146	49.84777	346.38	-6.15
95/ 1/11	2449728.5	0.35703	-0.02879	-0.03480	-5.47010	50.85743	4.70147	0.35988	51.36637	355.39	-5.55
95/ 1/13	2449730.5	0.34607	0.03007	-0.02894	-13.59785	50.83177	5.43738	0.34857	52.89930	4.97	-4.76
95/ 1/15	2449732.5	0.32546	0.08807	-0.02227	-22.13243	49.31816	6.08722	0.33790	54.39834	15.14	-3.78
95/ 1/17	2449734.5	0.29490	0.14334	-0.01493	-30.76359	46.08507	6.60366	0.32823	55.80180	25.92	-2.61
95/ 1/19	2449736.5	0.25452	0.19381	-0.00709	-39.06128	40.97874	6.93494	0.31998	57.03625	37.29	-1.27
95/ 1/21	2449738.5	0.20499	0.23728	0.00100	-46.49619	33.98892	7.03216	0.31357	58.02236	49.18	0.18
95/ 1/23	2449740.5	0.14765	0.27167	0.00905	-52.50154	25.30814	6.85976	0.30934	58.68534	61.48	1.68
95/ 1/25	2449742.5	0.08445	0.29525	0.01674	-56.57301	15.35424	6.40650	0.30755	58.96864	74.04	3.12
95/ 1/27	2449744.5	0.01783	0.30689	0.02375	-58.37912	4.73079	5.69219	0.30832	58.84644	86.67	4.42
95/ 1/29	2449746.5	-0.04951	0.30619	0.02981	-57.83742	-5.87409	4.76621	0.31160	58.33000	99.18	5.49
95/ 1/31	2449748.5	-0.11494	0.29357	0.03471	-55.12177	-15.81544	3.69769	0.31718	57.46486	111.38	6.28

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95/ 2/ 2	2449750.5	-0.17615	0.27010	0.03833	-50.60096	-24.59571	2.56125	0.32474	56.32021	123.11	6.78
95/ 2/ 4	2449752.5	-0.23132	0.23732	0.04063	-44.74143	-31.91283	1.42422	0.33389	54.97502	134.27	6.99
95/ 2/ 6	2449754.5	-0.27918	0.19699	0.04164	-38.01499	-37.65163	0.33896	0.34421	53.50607	144.79	6.95
95/ 2/ 8	2449756.5	-0.31897	0.15093	0.04144	-30.83646	-41.84036	-0.65919	0.35530	51.98016	154.68	6.70
95/ 2/10	2449758.5	-0.35037	0.10088	0.04016	-23.53550	-44.59787	-1.55013	0.36681	50.45090	163.94	6.28
95/ 2/12	2449760.5	-0.37339	0.04839	0.03791	-16.35404	-46.08792	-2.32543	0.37841	48.95875	172.62	5.75
95/ 2/14	2449762.5	-0.38826	-0.00517	0.03483	-9.45759	-46.48666	-2.98462	0.38986	47.53276	180.76	5.13
95/ 2/16	2449764.5	-0.39539	-0.05864	0.03105	-2.95161	-45.96304	-3.53210	0.40092	46.19295	188.44	4.44
95/ 2/18	2449766.5	-0.39526	-0.11106	0.02671	3.10240	-44.66884	-3.97482	0.41143	44.95253	195.69	3.72
95/ 2/20	2449768.5	-0.38841	-0.16159	0.02191	8.67333	-42.73509	-4.32081	0.42125	43.81990	202.59	2.98
95/ 2/22	2449770.5	-0.37541	-0.20958	0.01676	13.75003	-40.27196	-4.57815	0.43027	42.80016	209.17	2.23
95/ 2/24	2449772.5	-0.35683	-0.25446	0.01136	18.33357	-37.37061	-4.75447	0.43841	41.89615	215.49	1.49
95/ 2/26	2449774.5	-0.33324	-0.29577	0.00581	22.43194	-34.10570	-4.85668	0.44561	41.10934	221.59	0.75
95/ 2/28	2449776.5	-0.30519	-0.33313	0.00017	26.05624	-30.53808	-4.89082	0.45180	40.44035	227.51	0.02
95/ 3/ 2	2449778.5	-0.27323	-0.36622	-0.00547	29.21820	-26.71727	-4.86204	0.45695	39.88928	233.27	-0.69
95/ 3/ 4	2449780.5	-0.23787	-0.39477	-0.01104	31.92848	-22.68374	-4.77466	0.46103	39.45601	238.93	-1.37
95/ 3/ 6	2449782.5	-0.19964	-0.41856	-0.01648	34.19553	-18.47085	-4.63221	0.46402	39.14031	244.50	-2.04
95/ 3/ 8	2449784.5	-0.15904	-0.43738	-0.02172	36.02485	-14.10657	-4.43749	0.46591	38.94196	250.02	-2.67
95/ 3/10	2449786.5	-0.11658	-0.45110	-0.02671	37.41838	-9.61497	-4.19267	0.46668	38.86079	255.51	-3.28
95/ 3/12	2449788.5	-0.07276	-0.45956	-0.03139	38.37417	-5.01759	-3.89936	0.46634	38.89676	261.00	-3.86
95/ 3/14	2449790.5	-0.02810	-0.46265	-0.03570	38.88595	-0.33472	-3.55866	0.46488	39.04989	266.52	-4.40
95/ 3/16	2449792.5	0.01689	-0.46030	-0.03959	38.94293	4.41334	-3.17127	0.46231	39.32031	272.10	-4.91
95/ 3/18	2449794.5	0.06168	-0.45244	-0.04301	38.52946	9.20490	-2.73758	0.45865	39.70823	277.76	-5.38
95/ 3/20	2449796.5	0.10571	-0.43903	-0.04590	37.62484	14.01536	-2.25771	0.45391	40.21388	283.54	-5.80
95/ 3/22	2449798.5	0.14841	-0.42007	-0.04821	36.20321	18.81554	-1.73176	0.44811	40.83743	289.46	-6.18
95/ 3/24	2449800.5	0.18914	-0.39558	-0.04988	34.23356	23.56949	-1.15986	0.44130	41.57887	295.55	-6.49
95/ 3/26	2449802.5	0.22727	-0.36565	-0.05087	31.68009	28.23203	-0.54250	0.43352	42.43784	301.86	-6.74
95/ 3/28	2449804.5	0.26209	-0.33042	-0.05112	28.50303	32.74559	0.11915	0.42483	43.41325	308.42	-6.91
95/ 3/30	2449806.5	0.29286	-0.29009	-0.05058	24.66030	37.03643	0.82285	0.41530	44.50287	315.27	-6.99
95/ 4/ 1	2449808.5	0.31878	-0.24498	-0.04920	20.11056	41.01028	1.56453	0.40504	45.70257	322.46	-6.98
95/ 4/ 3	2449810.5	0.33903	-0.19552	-0.04695	14.81819	44.54735	2.33753	0.39417	47.00542	330.03	-6.84
95/ 4/ 5	2449812.5	0.35272	-0.14229	-0.04379	8.76129	47.49753	3.13143	0.38285	48.40022	338.03	-6.57
95/ 4/ 7	2449814.5	0.35898	-0.08609	-0.03971	1.94364	49.67669	3.93067	0.37128	49.86984	346.51	-6.14
95/ 4/ 9	2449816.5	0.35694	-0.02791	-0.03472	-5.58837	50.86638	4.71296	0.35970	51.38901	355.53	-5.54
95/ 4/11	2449818.5	0.34583	0.03095	-0.02884	-13.72387	50.82031	5.44789	0.34841	52.92190	5.11	-4.75
95/ 4/13	2449820.5	0.32507	0.08892	-0.02217	-22.26246	49.28255	6.09608	0.33774	54.42011	15.30	-3.76
95/ 4/15	2449822.5	0.29437	0.14414	-0.01481	-30.89210	46.02229	6.61013	0.32809	55.82175	26.09	-2.59
95/ 4/17	2449824.5	0.25384	0.19451	-0.00697	-39.18102	40.88738	6.93825	0.31987	57.05322	37.46	-1.25
95/ 4/19	2449826.5	0.20419	0.23787	0.00113	-46.59877	33.87019	7.03164	0.31349	58.03515	49.36	0.21
95/ 4/21	2449828.5	0.14674	0.27211	0.00917	-52.57865	25.16656	6.85503	0.30929	58.69294	61.66	1.70
95/ 4/23	2449830.5	0.08347	0.29551	0.01685	-56.61810	15.19758	6.39761	0.30754	58.97038	74.23	3.14
95/ 4/25	2449832.5	0.01682	0.30696	0.02385	-58.38893	4.56898	5.67966	0.30835	58.84217	86.86	4.44
95/ 4/27	2449834.5	-0.05051	0.30608	0.02989	-57.81261	-6.03077	4.75096	0.31166	58.32015	99.37	5.50
95/ 4/29	2449836.5	-0.11590	0.29329	0.03477	-55.06655	-15.95818	3.68084	0.31727	57.45030	111.56	6.29
95/ 5/ 1	2449838.5	-0.17703	0.26967	0.03837	-50.52176	-24.71840	2.54387	0.32486	56.30203	123.28	6.78

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95/ 5/ 3	2449840.5	-0.23210	0.23675	0.04065	-44.64545	-32.01234	1.40724	0.33403	54.95440	134.43	6.99
95/ 5/ 5	2449842.5	-0.27984	0.19632	0.04164	-37.90897	-37.72730	0.32304	0.34437	53.48405	144.95	6.95
95/ 5/ 7	2449844.5	-0.31951	0.15019	0.04143	-30.72605	-41.89333	-0.67363	0.35547	51.95763	154.82	6.69
95/ 5/ 9	2449846.5	-0.35078	0.10009	0.04013	-23.42504	-44.63030	-1.56287	0.36698	50.42855	164.07	6.28
95/ 5/11	2449848.5	-0.37367	0.04758	0.03786	-16.24661	-46.10239	-2.33641	0.37859	48.93711	172.74	5.74
95/ 5/13	2449850.5	-0.38842	-0.00599	0.03477	-9.35524	-46.48577	-2.99386	0.39002	47.51221	180.88	5.12
95/ 5/15	2449852.5	-0.39543	-0.05946	0.03099	-2.85562	-45.94921	-3.53969	0.40108	46.17373	188.55	4.43
95/ 5/17	2449854.5	-0.39519	-0.11185	0.02664	3.19132	-44.64421	-3.98087	0.41158	44.93482	195.80	3.71
95/ 5/19	2449856.5	-0.38825	-0.16235	0.02183	8.75483	-42.70147	-4.32544	0.42139	43.80379	202.69	2.97
95/ 5/21	2449858.5	-0.37516	-0.21029	0.01668	13.82401	-40.23088	-4.58147	0.43040	42.78570	209.27	2.22
95/ 5/23	2449860.5	-0.35650	-0.25512	0.01128	18.4C009	-37.32332	-4.75660	0.43853	41.88340	215.59	1.47
95/ 5/25	2449862.5	-0.33284	-0.29638	0.00572	22.49112	-34.05324	-4.85772	0.44571	41.09831	221.68	0.74
95/ 5/27	2449864.5	-0.30473	-0.33367	0.00008	26.10824	-30.48130	-4.89084	0.45188	40.43106	227.60	0.01
95/ 5/29	2449866.5	-0.27270	-0.36670	-0.00556	29.26319	-26.65687	-4.86113	0.45702	39.88174	233.36	-0.70
95/ 5/31	2449868.5	-0.23730	-0.39518	-0.01113	31.96658	-22.62029	-4.77287	0.46108	39.45023	239.02	-1.38
95/ 6/ 2	2449870.5	-0.19902	-0.41888	-0.01656	34.22686	-18.40483	-4.62958	0.46406	39.13629	244.59	-2.05
95/ 6/ 4	2449872.5	-0.15839	-0.43764	-0.02180	36.04945	-14.03839	-4.43407	0.46593	38.93969	250.10	-2.68
95/ 6/ 6	2449874.5	-0.11591	-0.45127	-0.02678	37.43625	-9.54498	-4.18849	0.46669	38.86030	255.59	-3.29
95/ 6/ 8	2449876.5	-0.07208	-0.45965	-0.03146	38.38524	-4.94612	-3.89443	0.46632	38.89804	261.09	-3.87
95/ 6/10	2449878.5	-0.02741	-0.46266	-0.03576	38.89011	-0.26209	-3.55301	0.46485	39.05295	266.61	-4.41
95/ 6/12	2449880.5	0.01759	-0.46023	-0.03965	38.93997	4.48678	-3.16491	0.46227	39.32517	272.19	-4.92
95/ 6/14	2449882.5	0.06237	-0.45228	-0.04306	38.51910	9.27879	-2.73050	0.45858	39.71489	277.85	-5.39
95/ 6/16	2449884.5	0.10639	-0.43878	-0.04594	37.60673	14.08929	-2.24993	0.45383	40.22234	283.63	-5.81
95/ 6/18	2449886.5	0.14905	-0.41973	-0.04824	36.17691	18.88899	-1.72327	0.44802	40.84768	289.55	-6.18
95/ 6/20	2449888.5	0.18975	-0.39516	-0.04990	34.19858	23.64186	-1.15067	0.44119	41.59091	295.65	-6.49
95/ 6/22	2449890.5	0.22783	-0.36515	-0.05088	31.63584	28.30254	-0.53263	0.43340	42.45166	301.96	-6.74
95/ 6/24	2449892.5	0.26259	-0.32984	-0.05111	28.44889	32.81323	0.12969	0.42469	43.42884	308.52	-6.91
95/ 6/26	2449894.5	0.29330	-0.28943	-0.05056	24.59565	37.09994	0.83400	0.41515	44.52018	315.38	-7.00
95/ 6/28	2449896.5	0.31914	-0.24425	-0.04917	20.03479	41.06802	1.57621	0.40488	45.72154	322.57	-6.98
95/ 6/30	2449898.5	0.33929	-0.19473	-0.04691	14.73087	44.59726	2.34961	0.39400	47.02590	330.15	-6.84
95/ 7/ 2	2449900.5	0.35288	-0.14145	-0.04374	8.66225	47.53707	3.14372	0.38268	48.42201	338.16	-6.56
95/ 7/ 4	2449902.5	0.35901	-0.08521	-0.03964	1.83322	49.70278	3.94287	0.37111	49.89262	346.65	-6.13
95/ 7/ 6	2449904.5	0.35684	-0.02701	-0.03464	-5.70902	50.87544	4.72468	0.35953	51.41231	355.67	-5.53
95/ 7/ 8	2449906.5	0.34559	0.03185	-0.02875	-13.85243	50.80846	5.45859	0.34824	52.94512	5.27	-4.74
95/ 7/10	2449908.5	0.32468	0.08979	-0.02206	-22.39505	49.24597	6.10510	0.33759	54.44241	15.46	-3.75
95/ 7/12	2449910.5	0.29382	0.14495	-0.01470	-31.02305	45.95790	6.61669	0.32796	55.84209	26.26	-2.57
95/ 7/14	2449912.5	0.25314	0.19524	-0.00684	-39.30286	40.79378	6.94156	0.31976	57.07042	37.64	-1.23
95/ 7/16	2449914.5	0.20336	0.23846	0.00125	-46.70289	33.74870	7.03103	0.31340	58.04800	49.54	0.23
95/ 7/18	2449916.5	0.14581	0.27255	0.00929	-52.65659	25.02189	6.85012	0.30924	58.70039	61.85	1.72
95/ 7/20	2449918.5	0.08247	0.29578	0.01697	-56.66324	15.03777	6.38847	0.30753	58.97177	74.42	3.16
95/ 7/22	2449920.5	0.01579	0.30704	0.02395	-58.39800	4.40426	5.66683	0.30838	58.83738	87.06	4.45
95/ 7/24	2449922.5	-0.05154	0.30597	0.02998	-57.78645	-6.18990	4.73539	0.31173	58.30962	99.56	5.52
95/ 7/26	2449924.5	-0.11687	0.29300	0.03484	-55.00954	-16.10280	3.66366	0.31737	57.43494	111.75	6.30
95/ 7/28	2449926.5	-0.17793	0.26923	0.03842	-50.44057	-24.84236	2.52622	0.32499	56.28300	123.46	6.79
95/ 7/30	2449928.5	-0.23289	0.23618	0.04067	-44.54745	-32.11253	1.39002	0.33418	54.93288	134.60	6.99

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95/ 8/ 1	2449930.5	-0.28051	0.19565	0.04165	-37.80106	-37.80320	0.30694	0.34453	53.46117	145.11	6.94
95/ 8/ 3	2449932.5	-0.32005	0.14945	0.04142	-30.61395	-41.94619	-0.68821	0.35564	51.93429	154.97	6.69
95/ 8/ 5	2449934.5	-0.35119	0.09930	0.04010	-23.31311	-44.66238	-1.57572	0.36716	50.40548	164.21	6.27
95/ 8/ 7	2449936.5	-0.37396	0.04675	0.03782	-16.13794	-46.11633	-2.34745	0.37876	48.91482	172.87	5.73
95/ 8/ 9	2449938.5	-0.38859	-0.00682	0.03472	-9.25186	-46.48426	-3.00314	0.39019	47.49108	181.01	5.11
95/ 8/11	2449940.5	-0.39548	-0.06028	0.03093	-2.75879	-45.93471	-3.54730	0.40124	46.15400	188.67	4.42
95/ 8/13	2449942.5	-0.39513	-0.11264	0.02657	3.28091	-44.61888	-3.98693	0.41174	44.91664	195.91	3.70
95/ 8/15	2449944.5	-0.38809	-0.16311	0.02175	8.83687	-42.66716	-4.33006	0.42153	43.78728	202.80	2.96
95/ 8/17	2449946.5	-0.37491	-0.21101	0.01660	13.89843	-40.18912	-4.58478	0.43053	42.77093	209.37	2.21
95/ 8/19	2449948.5	-0.35617	-0.25579	0.01119	18.46696	-37.27540	-4.75871	0.43865	41.87038	215.68	1.46
95/ 8/21	2449950.5	-0.33244	-0.29698	0.00563	22.55058	-34.00019	-4.85873	0.44581	41.08709	221.78	0.72
95/ 8/23	2449952.5	-0.30426	-0.33422	-0.00001	26.16047	-30.42397	-4.89084	0.45197	40.42164	227.69	-0.00
95/ 8/25	2449954.5	-0.27218	-0.36717	-0.00564	29.30835	-26.59595	-4.86018	0.45709	39.87412	233.45	-0.71
95/ 8/27	2449956.5	-0.23672	-0.39558	-0.01121	32.00483	-22.55635	-4.77104	0.46114	39.44441	239.10	-1.39
95/ 8/29	2449958.5	-0.19841	-0.41921	-0.01664	34.25830	-18.33833	-4.62692	0.46409	39.13227	244.67	-2.06
95/ 8/31	2449960.5	-0.15775	-0.43789	-0.02188	36.07415	-13.96973	-4.43062	0.46595	38.93749	250.19	-2.69
95/ 9/ 2	2449962.5	-0.11524	-0.45144	-0.02686	37.45421	-9.47452	-4.18427	0.46669	38.85991	255.68	-3.30
95/ 9/ 4	2449964.5	-0.07139	-0.45973	-0.03153	38.39640	-4.87418	-3.88948	0.46631	38.89948	261.17	-3.88
95/ 9/ 6	2449966.5	-0.02671	-0.46266	-0.03583	38.89434	-0.18897	-3.54732	0.46482	39.05622	266.70	-4.42
95/ 9/ 8	2449968.5	0.01829	-0.46014	-0.03970	38.93705	4.56075	-3.15850	0.46222	39.33028	272.28	-4.93
95/ 9/10	2449970.5	0.06306	-0.45211	-0.04311	38.50875	9.35325	-2.72337	0.45852	39.72183	277.94	-5.39
95/ 9/12	2449972.5	0.10706	-0.43853	-0.04598	37.58858	14.16383	-2.24209	0.45374	40.23111	283.72	-5.82
95/ 9/14	2449974.5	0.14970	-0.41940	-0.04827	36.15052	18.96312	-1.71471	0.44792	40.85830	289.64	-6.19
95/ 9/16	2449976.5	0.19036	-0.39474	-0.04992	34.16342	23.71495	-1.14140	0.44108	41.60338	295.75	-6.50
95/ 9/18	2449978.5	0.22840	-0.36465	-0.05089	31.59133	28.37380	-0.52267	0.43327	42.46597	302.06	-6.74
95/ 9/20	2449980.5	0.26310	-0.32925	-0.05111	28.39439	32.88166	0.14033	0.42455	43.44496	308.63	-6.91
95/ 9/22	2449982.5	0.29373	-0.28877	-0.05055	24.53048	37.16424	0.84526	0.41500	44.53807	315.49	-7.00
95/ 9/24	2449984.5	0.31950	-0.24352	-0.04914	19.95836	41.12654	1.58801	0.40472	45.74112	322.69	-6.97
95/ 9/26	2449986.5	0.33956	-0.19393	-0.04687	14.64268	44.64791	2.36183	0.39383	47.04702	330.27	-6.83
95/ 9/28	2449988.5	0.35303	-0.14060	-0.04368	8.56213	47.57723	3.15615	0.38250	48.44445	338.28	-6.56
95/ 9/30	2449990.5	0.35904	-0.08432	-0.03957	1.72153	49.72931	3.95522	0.37093	49.91605	346.78	-6.12
95/10/ 2	2449992.5	0.35673	-0.02610	-0.03455	-5.83113	50.88468	4.73654	0.35935	51.43625	355.82	-5.52
95/10/ 4	2449994.5	0.34534	0.03276	-0.02865	-13.98256	50.79643	5.46941	0.34807	52.96890	5.42	-4.72
95/10/ 6	2449996.5	0.32428	0.09067	-0.02195	-22.52923	49.20877	6.11421	0.33743	54.46515	15.62	-3.73
95/10/ 8	2449998.5	0.29326	0.14577	-0.01458	-31.15543	45.89242	6.62329	0.32782	55.86272	26.43	-2.55
95/10/10	2450000.5	0.25244	0.19597	-0.00672	-39.42583	40.69866	6.94485	0.31965	57.08772	37.82	-1.20
95/10/12	2450002.5	0.20252	0.23907	0.00138	-46.80769	33.62536	7.03033	0.31332	58.06075	49.73	0.25
95/10/14	2450004.5	0.14487	0.27300	0.00942	-52.73465	24.87524	6.84506	0.30920	58.70754	62.05	1.75
95/10/16	2450006.5	0.08145	0.29605	0.01708	-56.70791	14.87606	6.37913	0.30752	58.97268	74.62	3.18
95/10/18	2450008.5	0.01474	0.30712	0.02405	-58.40613	4.23791	5.65378	0.30841	58.83197	87.25	4.47
95/10/20	2450010.5	-0.05257	0.30586	0.03006	-57.75899	-6.35024	4.71961	0.31180	58.29838	99.75	5.53
95/10/22	2450012.5	-0.11786	0.29271	0.03490	-54.95108	-16.24815	3.64630	0.31748	57.41881	111.93	6.31
95/10/24	2450014.5	-0.17883	0.26878	0.03846	-50.35792	-24.96661	2.50840	0.32512	56.26317	123.64	6.79
95/10/26	2450016.5	-0.23369	0.23561	0.04070	-44.44813	-32.21266	1.37269	0.33433	54.91062	134.77	6.99
95/10/28	2450018.5	-0.28119	0.19497	0.04165	-37.69202	-37.87880	0.29075	0.34470	53.43759	145.26	6.94

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95/10/30	2450020.5	-0.32060	0.14870	0.04140	-30.5C094	-41.99859	-0.70284	0.35582	51.91034	155.12	6.68
95/11/ 1	2450022.5	-0.35161	0.09850	0.04007	-23.20049	-44.69393	-1.58858	0.36734	50.38188	164.35	6.26
95/11/ 3	2450024.5	-0.37424	0.04593	0.03778	-16.02876	-46.12975	-2.35850	0.37894	48.89211	173.00	5.72
95/11/ 5	2450026.5	-0.38875	-0.00765	0.03467	-9.14815	-46.48225	-3.01242	0.39037	47.46960	181.13	5.09
95/11/ 7	2450028.5	-0.39553	-0.06110	0.03086	-2.66175	-45.91975	-3.55489	0.40141	46.13400	188.78	4.41
95/11/ 9	245C030.5	-0.39508	-0.11344	0.02649	3.37061	-44.59317	-3.99296	0.41189	44.89828	196.02	3.69
95/11/11	2450032.5	-0.38793	-0.16387	0.02168	8.91896	-42.63253	-4.33466	0.42168	43.77065	202.90	2.95
95/11/13	2450034.5	-0.37466	-0.21173	0.01651	13.97285	-40.14713	-4.58807	0.43067	42.75608	209.47	2.20
95/11/15	2450036.5	-0.35584	-0.25645	0.01111	18.53381	-37.22730	-4.76081	0.43876	41.85737	215.78	1.45
95/11/17	2450038.5	-0.33203	-0.29759	0.00554	22.61002	-33.94703	-4.85973	0.44591	41.07591	221.87	0.71
95/11/19	2450040.5	-0.30379	-0.33476	-0.00009	26.21269	-30.36658	-4.89083	0.45205	40.41230	227.78	-0.01
95/11/21	2450042.5	-0.27165	-0.36765	-0.00573	29.35352	-26.53502	-4.85923	0.45716	39.86664	233.54	-0.72
95/11/23	2450044.5	-0.23615	-0.39598	-0.01130	32.04312	-22.49243	-4.76922	0.46119	39.43876	239.19	-1.40
95/11/25	2450046.5	-0.19780	-0.41954	-0.01673	34.28981	-18.27188	-4.62427	0.46413	39.12846	244.76	-2.07
95/11/27	2450048.5	-0.15711	-0.43813	-0.02196	36.09893	-13.90115	-4.42718	0.46597	38.93551	250.27	-2.70
95/11/29	245C050.5	-0.11457	-0.45161	-0.02693	37.47226	-9.40415	-4.18007	0.46669	38.85976	255.76	-3.31
95/12/ 1	2450052.5	-0.07071	-0.45982	-0.03160	38.40764	-4.80233	-3.88453	0.46630	38.90114	261.26	-3.89
95/12/ 3	2450054.5	-0.02602	-0.46267	-0.03589	38.89862	-0.11596	-3.54165	0.46479	39.05969	266.78	-4.43
95/12/ 5	2450056.5	0.01898	-0.46006	-0.03976	38.93418	4.63461	-3.15211	0.46217	39.33555	272.36	-4.94
95/12/ 7	2450058.5	0.06375	-0.45194	-0.04315	38.49843	9.42760	-2.71626	0.45845	39.72892	278.03	-5.40
95/12/ 9	2450060.5	0.10773	-0.43828	-0.04602	37.57047	14.23825	-2.23426	0.45366	40.24003	283.81	-5.82
95/12/11	2450062.5	0.15034	-0.41906	-0.04830	36.12417	19.03712	-1.70617	0.44782	40.86904	289.74	-6.19
95/12/13	2450064.5	0.19097	-0.39432	-0.04994	34.12831	23.78789	-1.13216	0.44096	41.61595	295.84	-6.50
95/12/15	2450066.5	0.22896	-0.36414	-0.05090	31.54688	28.44489	-0.51272	0.43314	42.48035	302.16	-6.75
95/12/17	2450068.5	0.26361	-0.32866	-0.05111	28.33993	32.94987	0.15094	0.42441	43.46112	308.73	-6.92
95/12/19	245C070.5	0.29417	-0.28810	-0.05053	24.46537	37.22826	0.85649	0.41484	44.55594	315.60	-7.00
95/12/21	2450072.5	0.31986	-0.24278	-0.04912	19.88198	41.18469	1.59978	0.40455	45.76059	322.80	-6.97
95/12/23	2450074.5	0.33982	-0.19313	-0.04682	14.55458	44.69810	2.37400	0.39366	47.06795	330.39	-6.83
95/12/25	2450076.5	0.35318	-0.13975	-0.04362	8.46217	47.61686	3.16852	0.38232	48.46662	338.41	-6.55
95/12/27	245C078.5	0.35907	-0.08343	-0.03950	1.61011	49.75524	3.96750	0.37075	49.93913	346.92	-6.12
95/12/29	245C080.5	0.35663	-0.02519	-0.03447	-5.95279	50.89328	4.74831	0.35918	51.45978	355.96	-5.51
95/12/31	2450082.5	0.34509	0.03367	-0.02855	-14.11205	50.78377	5.48013	0.34790	52.99220	5.57	-4.71
96/ 1/ 2	2450084.5	0.32388	0.09155	-0.02184	-22.66254	49.17101	6.12319	0.33727	54.48736	15.78	-3.71
96/ 1/ 4	2450086.5	0.29271	0.14659	-0.01446	-31.28672	45.82654	6.62976	0.32768	55.88278	26.60	-2.53
96/ 1/ 6	2450088.5	0.25174	0.19669	-0.00660	-39.54750	40.60341	6.94801	0.31954	57.10443	38.00	-1.18
96/ 1/ 8	245C090.5	0.20169	0.23967	0.00150	-46.91106	33.50226	7.02952	0.31324	58.07291	49.92	0.27
96/ 1/10	2450092.5	0.14393	0.27344	0.00954	-52.81127	24.72927	6.83993	0.30915	58.71415	62.24	1.77
96/ 1/12	245C094.5	0.08044	0.29632	0.01719	-56.75131	14.71549	6.36976	0.30752	58.97313	74.81	3.21
96/ 1/14	245C096.5	0.01370	0.30719	0.02415	-58.41331	4.07307	5.64077	0.30845	58.82621	87.45	4.49
96/ 1/16	245C098.5	-0.05360	0.30575	0.03015	-57.73103	-6.50883	4.70392	0.31187	58.28691	99.94	5.55
96/ 1/18	2450100.5	-0.11883	0.29243	0.03497	-54.89261	-16.39170	3.62908	0.31758	57.40259	112.12	6.32
96/ 1/20	2450102.5	-0.17972	0.26834	0.03850	-50.27574	-25.08917	2.49076	0.32525	56.24340	123.81	6.80
96/ 1/22	2450104.5	-0.23447	0.23504	0.04072	-44.34963	-32.31132	1.35555	0.33448	54.88851	134.93	6.99
96/ 1/24	2450106.5	-0.28185	0.19431	0.04166	-37.58407	-37.95319	0.27476	0.34487	53.41425	145.42	6.94
96/ 1/26	2450108.5	-0.32114	0.14796	0.04139	-30.38919	-42.05010	-0.71727	0.35600	51.88668	155.26	6.68

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96/ 1/28	2450110.5	-0.35202	0.09771	0.04004	-23.08919	-44.72486	-1.60127	0.36752	50.35859	164.49	6.26
96/ 1/30	2450112.5	-0.37453	0.04512	0.03774	-15.92092	-46.14279	-2.36939	0.37912	48.86970	173.13	5.71
96/ 2/ 1	2450114.5	-0.38891	-0.00847	0.03461	-9.04573	-46.48009	-3.02156	0.39054	47.44843	181.25	5.08
96/ 2/ 3	2450116.5	-0.39558	-0.06191	0.03080	-2.56593	-45.90486	-3.56237	0.40158	46.11432	188.89	4.40
96/ 2/ 5	2450118.5	-0.39502	-0.11423	0.02642	3.45919	-44.56769	-3.99891	0.41205	44.88025	196.13	3.68
96/ 2/ 7	2450120.5	-0.38777	-0.16462	0.02160	9.00003	-42.59830	-4.33920	0.42182	43.75437	203.00	2.94
96/ 2/ 9	2450122.5	-0.37442	-0.21244	0.01643	14.04638	-40.10565	-4.59132	0.43080	42.74159	209.57	2.19
96/ 2/11	2450124.5	-0.35551	-0.25711	0.01102	18.59988	-37.17980	-4.76288	0.43888	41.84469	215.87	1.44
96/ 2/13	2450126.5	-0.33163	-0.29819	0.00546	22.66879	-33.89452	-4.86072	0.44601	41.06506	221.96	0.70
96/ 2/15	2450128.5	-0.30333	-0.33530	-0.00018	26.26433	-30.30987	-4.89082	0.45214	40.40325	227.87	-0.02
96/ 2/17	2450130.5	-0.27114	-0.36811	-0.00582	29.39820	-26.47477	-4.85830	0.45723	39.85939	233.63	-0.73
96/ 2/19	2450132.5	-0.23559	-0.39638	-0.01138	32.08097	-22.42920	-4.76742	0.46124	39.43331	239.27	-1.41
96/ 2/21	2450134.5	-0.19719	-0.41986	-0.01681	34.32095	-18.20614	-4.62165	0.46417	39.12481	244.84	-2.08
96/ 2/23	2450136.5	-0.15647	-0.43838	-0.02204	36.12340	-13.83329	-4.42377	0.46599	38.93366	250.36	-2.71
96/ 2/25	2450138.5	-0.11391	-0.45177	-0.02701	37.49007	-9.33451	-4.17591	0.46669	38.85970	255.85	-3.32
96/ 2/27	2450140.5	-0.07003	-0.45990	-0.03167	38.41872	-4.73123	-3.87964	0.46628	38.90288	261.34	-3.89
96/ 2/29	2450142.5	-0.02533	-0.46267	-0.03595	38.90282	-0.04371	-3.53604	0.46475	39.06322	266.87	-4.44
96/ 3/ 2	2450144.5	0.01967	-0.45998	-0.03982	38.93129	4.70770	-3.14578	0.46212	39.34086	272.45	-4.94
96/ 3/ 4	2450146.5	0.06443	-0.45178	-0.04320	38.48816	9.50117	-2.70922	0.45839	39.73601	278.12	-5.41
96/ 3/ 6	2450148.5	0.10840	-0.43802	-0.04606	37.55245	14.31190	-2.22651	0.45358	40.24890	283.90	-5.83
96/ 3/ 8	2450150.5	0.15098	-0.41872	-0.04833	36.09796	19.11032	-1.69771	0.44772	40.87970	289.83	-6.20
96/ 3/10	2450152.5	0.19158	-0.39389	-0.04996	34.09340	23.86003	-1.12299	0.44085	41.62838	295.94	-6.51
96/ 3/12	2450154.5	0.22952	-0.36363	-0.05091	31.50267	28.51516	-0.50287	0.43301	42.49453	302.26	-6.75
96/ 3/14	2450156.5	0.26411	-0.32808	-0.05111	28.28579	33.01726	0.16145	0.42427	43.47703	308.84	-6.92
96/ 3/16	2450158.5	0.29461	-0.28744	-0.05052	24.40066	37.29147	0.86762	0.41469	44.57352	315.71	-7.00
96/ 3/18	2450160.5	0.32021	-0.24205	-0.04909	19.80610	41.24207	1.61144	0.40439	45.77976	322.91	-6.97
96/ 3/20	2450162.5	0.34008	-0.19234	-0.04678	14.46710	44.74755	2.38606	0.39349	47.08857	330.51	-6.83
96/ 3/22	2450164.5	0.35334	-0.13891	-0.04357	8.36295	47.65582	3.18077	0.38215	48.48848	338.54	-6.55
96/ 3/24	2450166.5	0.35910	-0.08255	-0.03943	1.49953	49.78058	3.97965	0.37057	49.96191	347.05	-6.11
96/ 3/26	2450168.5	0.35653	-0.02429	-0.03438	-6.07351	50.90142	4.75996	0.35900	51.48300	356.10	-5.50
96/ 3/28	2450170.5	0.34484	0.03456	-0.02845	-14.24048	50.77081	5.49073	0.34774	53.01523	5.72	-4.69
96/ 3/30	2450172.5	0.32348	0.09242	-0.02173	-22.79471	49.13317	6.13206	0.33712	54.50935	15.94	-3.70
96/ 4/ 1	2450174.5	0.29215	0.14740	-0.01434	-31.41683	45.76084	6.63614	0.32755	55.90268	26.77	-2.51
96/ 4/ 3	2450176.5	0.25104	0.19741	-0.00647	-39.66802	40.50861	6.95110	0.31943	57.12107	38.18	-1.16
96/ 4/ 5	2450178.5	0.20086	0.24026	0.00163	-47.01340	33.37989	7.02867	0.31316	58.08510	50.10	0.30
96/ 4/ 7	2450180.5	0.14300	0.27388	0.00966	-52.88706	24.58426	6.83479	0.30911	58.72088	62.43	1.79
96/ 4/ 9	2450182.5	0.07944	0.29657	0.01731	-56.79415	14.55603	6.36043	0.30752	58.97379	75.00	3.23
96/ 4/11	2450184.5	0.01268	0.30727	0.02425	-58.42021	3.90940	5.62783	0.30848	58.82072	87.64	4.51
96/ 4/13	2450186.5	-0.05461	0.30563	0.03023	-57.70308	-6.66632	4.68832	0.31194	58.27577	100.13	5.56
96/ 4/15	2450188.5	-0.11980	0.29214	0.03503	-54.83437	-16.53427	3.61197	0.31769	57.38673	112.30	6.33
96/ 4/17	2450190.5	-0.18061	0.26790	0.03855	-50.19393	-25.21092	2.47323	0.32538	56.22400	123.99	6.80
96/ 4/19	2450192.5	-0.23525	0.23447	0.04075	-44.25161	-32.40937	1.33850	0.33463	54.86678	135.10	6.99
96/ 4/21	2450194.5	-0.28251	0.19364	0.04166	-37.47663	-38.02716	0.25885	0.34503	53.39129	145.57	6.94
96/ 4/23	2450196.5	-0.32167	0.14722	0.04138	-30.27793	-42.10134	-0.73164	0.35617	51.86339	155.41	6.67
96/ 4/25	2450198.5	-0.35242	0.09692	0.04001	-22.97836	-44.75566	-1.61391	0.36769	50.33566	164.62	6.25

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96/ 4/27	2450200.5	-0.37481	0.04430	0.03770	-15.81349	-46.15582	-2.38025	0.37929	48.84764	173.26	5.70
96/ 4/29	2450202.5	-0.38907	-0.00929	0.03456	-8.94366	-46.47799	-3.03067	0.39071	47.42761	181.37	5.07
96/ 5/ 1	2450204.5	-0.39562	-0.06272	0.03074	-2.47042	-45.89006	-3.56984	0.40174	46.09495	189.01	4.39
96/ 5/ 3	2450206.5	-0.39495	-0.11501	0.02635	3.54750	-44.54232	-4.00484	0.41220	44.86248	196.24	3.67
96/ 5/ 5	2450208.5	-0.38761	-0.16538	0.02152	9.08084	-42.56416	-4.34372	0.42197	43.73828	203.11	2.92
96/ 5/ 7	2450210.5	-0.37417	-0.21314	0.01635	14.11963	-40.06423	-4.59455	0.43093	42.72723	209.67	2.17
96/ 5/ 9	2450212.5	-0.35518	-0.25776	0.01094	18.66564	-37.13236	-4.76493	0.43900	41.83208	215.97	1.43
96/ 5/11	2450214.5	-0.33123	-0.29879	0.00537	22.72721	-33.84207	-4.86168	0.44611	41.05420	222.05	0.69
96/ 5/13	2450216.5	-0.30286	-0.33583	-0.00027	26.31558	-30.25325	-4.89079	0.45223	40.39416	227.95	-0.03
96/ 5/15	2450218.5	-0.27062	-0.36858	-0.00590	29.44244	-26.41466	-4.85734	0.45730	39.85205	233.71	-0.74
96/ 5/17	2450220.5	-0.23502	-0.39677	-0.01147	32.11835	-22.36616	-4.76558	0.46130	39.42771	239.36	-1.42
96/ 5/19	2450222.5	-0.19659	-0.42018	-0.01689	34.35157	-18.14063	-4.61900	0.46420	39.12094	244.93	-2.09
96/ 5/21	2450224.5	-0.15583	-0.43862	-0.02212	36.14732	-13.76569	-4.42034	0.46601	38.93151	250.44	-2.72
96/ 5/23	2450226.5	-0.11325	-0.45194	-0.02708	37.50728	-9.26519	-4.17172	0.46670	38.85927	255.93	-3.33
96/ 5/25	2450228.5	-0.06935	-0.45999	-0.03173	38.42916	-4.66051	-3.87472	0.46627	38.90417	261.43	-3.90
96/ 5/27	2450230.5	-0.02464	-0.46267	-0.03602	38.90639	0.02809	-3.53040	0.46472	39.06624	266.95	-4.44
96/ 5/29	2450232.5	0.02036	-0.45990	-0.03987	38.92777	4.78025	-3.13943	0.46207	39.34563	272.53	-4.95
96/ 5/31	2450234.5	0.06511	-0.45161	-0.04325	38.47730	9.57410	-2.70218	0.45833	39.74252	278.20	-5.41
96/ 6/ 2	2450236.5	0.10906	-0.43777	-0.04610	37.53390	14.38480	-2.21877	0.45350	40.25717	283.99	-5.83
96/ 6/ 4	2450238.5	0.15162	-0.41838	-0.04836	36.07131	19.18270	-1.68928	0.44763	40.88972	289.92	-6.20
96/ 6/ 6	2450240.5	0.19218	-0.39348	-0.04998	34.05814	23.93127	-1.11387	0.44074	41.64016	296.03	-6.51
96/ 6/ 8	2450242.5	0.23007	-0.36314	-0.05091	31.45824	28.58449	-0.49308	0.43289	42.50808	302.36	-6.75
96/ 6/10	2450244.5	0.26461	-0.32750	-0.05110	28.23160	33.08367	0.17189	0.42413	43.49232	308.94	-6.92
96/ 6/12	2450246.5	0.29503	-0.28679	-0.05050	24.33608	37.35369	0.87865	0.41454	44.59053	315.81	-7.00
96/ 6/14	2450248.5	0.32056	-0.24133	-0.04906	19.73057	41.29849	1.62299	0.40423	45.79841	323.03	-6.97
96/ 6/16	2450250.5	0.34033	-0.19156	-0.04674	14.38017	44.79613	2.39799	0.39332	47.10873	330.63	-6.82
96/ 6/18	2450252.5	0.35348	-0.13808	-0.04351	8.26448	47.69402	3.19289	0.38198	48.50995	338.66	-6.54
96/ 6/20	2450254.5	0.35913	-0.08168	-0.03936	1.38988	49.80536	3.99167	0.37040	49.98439	347.19	-6.10
96/ 6/22	2450256.5	0.35642	-0.02340	-0.03430	-6.19316	50.90924	4.77148	0.35883	51.50605	356.24	-5.48
96/ 6/24	2450258.5	0.34459	0.03545	-0.02836	-14.36781	50.75782	5.50122	0.34757	53.03823	5.87	-4.68
96/ 6/26	2450260.5	0.32308	0.09327	-0.02162	-22.92584	49.09561	6.14086	0.33697	54.53149	16.10	-3.68
96/ 6/28	2450262.5	0.29160	0.14820	-0.01423	-31.54605	45.69570	6.64248	0.32741	55.92292	26.94	-2.49
96/ 6/30	2450264.5	0.25034	0.19811	-0.00635	-39.78790	40.41457	6.95420	0.31931	57.13822	38.36	-1.14
96/ 7/ 2	2450266.5	0.20004	0.24084	0.00175	-47.11540	33.25837	7.02787	0.31308	58.09794	50.29	0.32
96/ 7/ 4	2450268.5	0.14207	0.27430	0.00978	-52.96283	24.44006	6.82973	0.30906	58.72838	62.62	1.81
96/ 7/ 6	2450270.5	0.07845	0.29682	0.01742	-56.83722	14.39719	6.35118	0.30751	58.97530	75.20	3.25
96/ 7/ 8	2450272.5	0.01165	0.30733	0.02435	-58.42754	3.74607	5.61495	0.30851	58.81614	87.83	4.53
96/ 7/10	2450274.5	-0.05563	0.30551	0.03031	-57.67562	-6.82376	4.67277	0.31201	58.26556	100.32	5.57
96/ 7/12	2450276.5	-0.12076	0.29184	0.03509	-54.77657	-16.67709	3.59487	0.31778	57.37178	112.48	6.34
96/ 7/14	2450278.5	-0.18149	0.26745	0.03859	-50.11241	-25.33313	2.45569	0.32551	56.20544	124.16	6.81
96/ 7/16	2450280.5	-0.23603	0.23389	0.04077	-44.15365	-32.50799	1.32141	0.33478	54.84578	135.26	6.99
96/ 7/18	2450282.5	-0.28317	0.19296	0.04167	-37.36899	-38.10170	0.24288	0.34519	53.36891	145.73	6.93
96/ 7/20	2450284.5	-0.32220	0.14646	0.04137	-30.16625	-42.15305	-0.74609	0.35634	51.84051	155.55	6.67
96/ 7/22	2450286.5	-0.35283	0.09612	0.03998	-22.86691	-44.78678	-1.62663	0.36787	50.31300	164.76	6.24
96/ 7/24	2450288.5	-0.37508	0.04348	0.03765	-15.70532	-46.16897	-2.39118	0.37947	48.82570	173.39	5.69

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
96/ 7/26	2450290.5	-0.38922	-0.01012	0.03450	-8.84078	-46.47580	-3.03985	0.39088	47.40676	181.49	5.06
96/ 7/28	2450292.5	-0.39566	-0.06354	0.03067	-2.37407	-45.87498	-3.57735	0.40190	46.07545	189.12	4.38
96/ 7/30	2450294.5	-0.39488	-0.11581	0.02628	3.63664	-44.51648	-4.01081	0.41236	44.84449	196.35	3.65
96/ 8/ 1	2450296.5	-0.38745	-0.16614	0.02144	9.16245	-42.52939	-4.34826	0.42211	43.72192	203.21	2.91
96/ 8/ 3	2450298.5	-0.37391	-0.21386	0.01627	14.19364	-40.02205	-4.59779	0.43106	42.71257	209.77	2.16
96/ 8/ 5	2450300.5	-0.35485	-0.25843	0.01085	18.73213	-37.08403	-4.76697	0.43911	41.81916	216.07	1.42
96/ 8/ 7	2450302.5	-0.33082	-0.29939	0.00528	22.78632	-33.78862	-4.86262	0.44621	41.04305	222.15	0.68
96/ 8/ 9	2450304.5	-0.30239	-0.33637	-0.00035	26.36746	-30.19552	-4.89072	0.45231	40.38479	228.05	-0.04
96/ 8/11	2450306.5	-0.27008	-0.36905	-0.00599	29.48727	-26.35333	-4.85633	0.45737	39.84446	233.80	-0.75
96/ 8/13	2450308.5	-0.23444	-0.39717	-0.01155	32.15625	-22.30181	-4.76369	0.46135	39.42192	239.45	-1.43
96/ 8/15	2450310.5	-0.19597	-0.42051	-0.01697	34.38264	-18.07373	-4.61627	0.46424	39.11695	245.01	-2.10
96/ 8/17	2450312.5	-0.15518	-0.43887	-0.02220	36.17162	-13.69665	-4.41681	0.46603	38.92933	250.53	-2.73
96/ 8/19	2450314.5	-0.11257	-0.45210	-0.02716	37.52481	-9.19436	-4.16744	0.46670	38.85891	256.02	-3.34
96/ 8/21	2450316.5	-0.06866	-0.46007	-0.03180	38.43987	-4.58822	-3.86969	0.46625	38.90565	261.51	-3.91
96/ 8/23	2450318.5	-0.02394	-0.46267	-0.03608	38.91012	0.10153	-3.52464	0.46469	39.06957	267.04	-4.45
96/ 8/25	2450320.5	0.02106	-0.45981	-0.03993	38.92433	4.85451	-3.13296	0.46202	39.35080	272.62	-4.96
96/ 8/27	2450322.5	0.06580	-0.45144	-0.04330	38.46639	9.64883	-2.69498	0.45826	39.74954	278.29	-5.42
96/ 8/29	2450324.5	0.10973	-0.43751	-0.04614	37.51514	14.45957	-2.21086	0.45342	40.26602	284.08	-5.84
96/ 8/31	2450326.5	0.15227	-0.41804	-0.04839	36.04424	19.25699	-1.68065	0.44753	40.90041	290.01	-6.21
96/ 9/ 2	2450328.5	0.19279	-0.39305	-0.05000	34.02225	24.00446	-1.10453	0.44063	41.65270	296.13	-6.52
96/ 9/ 4	2450330.5	0.23064	-0.36262	-0.05092	31.41293	28.65577	-0.48304	0.43276	42.52245	302.46	-6.76
96/ 9/ 6	2450332.5	0.26511	-0.32691	-0.05110	28.17623	33.15203	0.18260	0.42399	43.50851	309.04	-6.92
96/ 9/ 8	2450334.5	0.29547	-0.28612	-0.05049	24.27000	37.41781	0.88998	0.41439	44.60849	315.92	-7.00
96/ 9/10	2450336.5	0.32091	-0.24059	-0.04903	19.65316	41.35669	1.63485	0.40407	45.81806	323.14	-6.97
96/ 9/12	2450338.5	0.34059	-0.19075	-0.04670	14.29098	44.84628	2.41026	0.39315	47.12993	330.75	-6.82
96/ 9/14	2450340.5	0.35363	-0.13722	-0.04345	8.16335	47.73348	3.20536	0.38180	48.53246	338.79	-6.54
96/ 9/16	2450342.5	0.35915	-0.08079	-0.03929	1.27719	49.83094	4.00404	0.37022	50.00786	347.32	-6.09
96/ 9/18	2450344.5	0.35631	-0.02249	-0.03421	-6.31617	50.91725	4.78333	0.35865	51.53000	356.39	-5.47
96/ 9/20	2450346.5	0.34433	0.03636	-0.02826	-14.49867	50.74426	5.51199	0.34740	53.06198	6.03	-4.67
96/ 9/22	2450348.5	0.32266	0.09415	-0.02151	-23.06045	49.05661	6.14986	0.33681	54.55416	16.27	-3.66
96/ 9/24	2450350.5	0.29104	0.14902	-0.01411	-31.67847	45.62821	6.64892	0.32727	55.94343	27.11	-2.47
96/ 9/26	2450352.5	0.24963	0.19884	-0.00623	-39.91039	40.31738	6.95728	0.31920	57.15535	38.54	-1.12
96/ 9/28	2450354.5	0.19919	0.24143	0.00188	-47.21916	33.13308	7.02691	0.31300	58.11048	50.48	0.34
96/ 9/30	2450356.5	0.14112	0.27474	0.00990	-53.03934	24.29179	6.82439	0.30902	58.73529	62.81	1.84
96/10/ 2	2450358.5	0.07742	0.29708	0.01753	-56.87998	14.23438	6.34157	0.30750	58.97597	75.39	3.27
96/10/ 4	2450360.5	0.01060	0.30739	0.02445	-58.43360	3.57922	5.60167	0.30855	58.81050	88.03	4.55
96/10/ 6	2450362.5	-0.05666	0.30538	0.03039	-57.64616	-6.98402	4.65681	0.31208	58.25411	100.51	5.59
96/10/ 8	2450364.5	-0.12175	0.29154	0.03516	-54.71634	-16.82189	3.57739	0.31789	57.35548	112.67	6.35
96/10/10	2450366.5	-0.18239	0.26699	0.03864	-50.02832	-25.45652	2.43781	0.32564	56.18550	124.34	6.81
96/10/12	2450368.5	-0.23683	0.23330	0.04079	-44.05322	-32.60709	1.30407	0.33493	54.82343	135.43	7.00
96/10/14	2450370.5	-0.28384	0.19227	0.04167	-37.25915	-38.17620	0.22671	0.34536	53.34527	145.89	6.93
96/10/16	2450372.5	-0.32274	0.14570	0.04135	-30.05269	-42.20438	-0.76068	0.35651	51.81653	155.70	6.66
96/10/18	2450374.5	-0.35324	0.09532	0.03995	-22.75394	-44.81732	-1.63944	0.36805	50.28938	164.90	6.23
96/10/20	2450376.5	-0.37536	0.04265	0.03761	-15.59593	-46.18145	-2.40217	0.37965	48.80297	173.52	5.69
96/10/22	2450378.5	-0.38938	-0.01096	0.03445	-8.73695	-46.47293	-3.04906	0.39106	47.38527	181.61	5.05

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96/10/24	2450380.5	-0.39570	-0.06436	0.03061	-2.27698	-45.85922	-3.58488	0.40207	46.05545	189.24	4.37
96/10/26	2450382.5	-0.39482	-0.11661	0.02621	3.72634	-44.49001	-4.01678	0.41251	44.82612	196.45	3.64
96/10/28	2450384.5	-0.38728	-0.16690	0.02137	9.24450	-42.49405	-4.35280	0.42225	43.70529	203.31	2.90
96/10/30	2450386.5	-0.37365	-0.21458	0.01619	14.26798	-39.97939	-4.60101	0.43119	42.69773	209.87	2.15
96/11/ 1	2450388.5	-0.35451	-0.25910	0.01077	18.79886	-37.03530	-4.76900	0.43923	41.80615	216.16	1.40
96/11/ 3	2450390.5	-0.33041	-0.30000	0.00520	22.84561	-33.73485	-4.86356	0.44632	41.03189	222.24	0.67
96/11/ 5	2450392.5	-0.30191	-0.33691	-0.00044	26.41951	-30.13754	-4.89064	0.45240	40.37549	228.14	-0.06
96/11/ 7	2450394.5	-0.26955	-0.36953	-0.00608	29.53225	-26.29183	-4.85531	0.45744	39.83702	233.89	-0.76
96/11/ 9	2450396.5	-0.23386	-0.39757	-0.01164	32.19431	-22.23733	-4.76180	0.46140	39.41633	239.53	-1.45
96/11/11	2450398.5	-0.19535	-0.42083	-0.01706	34.41389	-18.00673	-4.61355	0.46428	39.11321	245.10	-2.11
96/11/13	2450400.5	-0.15453	-0.43911	-0.02227	36.19611	-13.62751	-4.41330	0.46604	38.92743	250.61	-2.74
96/11/15	2450402.5	-0.11190	-0.45227	-0.02723	37.54253	-9.12342	-4.16316	0.46670	38.85885	256.10	-3.35
96/11/17	2450404.5	-0.06797	-0.46015	-0.03187	38.45073	-4.51581	-3.86466	0.46623	38.90741	261.60	-3.92
96/11/19	2450406.5	-0.02324	-0.46267	-0.03614	38.91399	0.17511	-3.51888	0.46466	39.07316	267.12	-4.46
96/11/21	2450408.5	0.02176	-0.45972	-0.03999	38.92098	4.92891	-3.12648	0.46197	39.35622	272.71	-4.97
96/11/23	2450410.5	0.06649	-0.45126	-0.04335	38.45553	9.72370	-2.68778	0.45819	39.75679	278.38	-5.43
96/11/25	2450412.5	0.11040	-0.43725	-0.04618	37.49640	14.53448	-2.20294	0.45333	40.27511	284.17	-5.85
96/11/27	2450414.5	0.15291	-0.41769	-0.04842	36.01718	19.33145	-1.67201	0.44743	40.91134	290.11	-6.21
96/11/29	2450416.5	0.19340	-0.39261	-0.05002	33.98633	24.07781	-1.09518	0.44051	41.66547	296.22	-6.52
96/12/ 1	2450418.5	0.23120	-0.36210	-0.05093	31.36756	28.72722	-0.47298	0.43263	42.53705	302.56	-6.76
96/12/ 3	2450420.5	0.26562	-0.32631	-0.05110	28.12074	33.22052	0.19333	0.42384	43.52490	309.15	-6.92
96/12/ 5	2450422.5	0.29591	-0.28545	-0.05047	24.20372	37.48202	0.90133	0.41423	44.62661	316.03	-7.00
96/12/ 7	2450424.5	0.32126	-0.23984	-0.04900	19.57549	41.41489	1.64674	0.40390	45.83781	323.26	-6.97
96/12/ 9	2450426.5	0.34084	-0.18995	-0.04665	14.20146	44.89634	2.42255	0.39298	47.15115	330.87	-6.82
96/12/11	2450428.5	0.35377	-0.13636	-0.04340	8.06186	47.77273	3.21784	0.38162	48.55494	338.92	-6.53
96/12/13	2450430.5	0.35917	-0.07989	-0.03922	1.16415	49.85619	4.01640	0.37004	50.03126	347.46	-6.08
96/12/15	2450432.5	0.35619	-0.02157	-0.03413	-6.43948	50.92482	4.79516	0.35847	51.55383	356.53	-5.46
96/12/17	2450434.5	0.34407	0.03727	-0.02816	-14.62973	50.73016	5.52273	0.34723	53.08558	6.18	-4.65
96/12/19	2450436.5	0.32225	0.09504	-0.02140	-23.19513	49.01698	6.15882	0.33665	54.57663	16.43	-3.64
96/12/21	2450438.5	0.29047	0.14984	-0.01399	-31.81075	45.56006	6.65529	0.32713	55.96370	27.29	-2.45
96/12/23	2450440.5	0.24891	0.19956	-0.00610	-40.03254	40.21953	6.96026	0.31909	57.17220	38.72	-1.10
96/12/25	2450442.5	0.19834	0.24203	0.00200	-47.32235	33.00724	7.02586	0.31292	58.12268	50.67	0.37
96/12/27	2450444.5	0.14016	0.27518	0.01002	-53.11508	24.14318	6.81895	0.30898	58.74184	63.01	1.86
96/12/29	2450446.5	0.07640	0.29734	0.01765	-56.92187	14.07149	6.33188	0.30750	58.97626	75.59	3.29
96/12/31	2450448.5	0.00955	0.30746	0.02455	-58.43881	3.41258	5.58833	0.30858	58.80450	88.22	4.56
97/ 1/ 2	2450450.5	-0.05770	0.30526	0.03048	-57.61598	-7.14383	4.64082	0.31216	58.24236	100.70	5.60
97/ 1/ 4	2450452.5	-0.12273	0.29124	0.03522	-54.65561	-16.96608	3.55991	0.31800	57.33897	112.85	6.36
97/ 1/ 6	2450454.5	-0.18328	0.26653	0.03868	-49.94398	-25.57923	2.41997	0.32577	56.16542	124.51	6.82
97/ 1/ 8	2450456.5	-0.23761	0.23272	0.04082	-43.95275	-32.70554	1.28677	0.33509	54.80103	135.60	7.00
97/ 1/10	2450458.5	-0.28451	0.19159	0.04167	-37.14945	-38.25013	0.21061	0.34553	53.32165	146.04	6.93
97/ 1/12	2450460.5	-0.32328	0.14495	0.04134	-29.93939	-42.25524	-0.77520	0.35669	51.79260	155.85	6.66
97/ 1/14	2450462.5	-0.35364	0.09452	0.03993	-22.64129	-44.84749	-1.65219	0.36823	50.26584	165.04	6.22
97/ 1/16	2450464.5	-0.37564	0.04182	0.03757	-15.48692	-46.19365	-2.41310	0.37983	48.78033	173.65	5.68
97/ 1/18	2450466.5	-0.38954	-0.01179	0.03439	-8.63350	-46.46987	-3.05822	0.39123	47.36390	181.73	5.04
97/ 1/20	2450468.5	-0.39574	-0.06518	0.03054	-2.18028	-45.84339	-3.59237	0.40224	46.03558	189.35	4.35

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97/ 1/22	2450470.5	-0.39475	-0.11740	0.02614	3.81568	-44.46356	-4.02271	0.41267	44.80793	196.56	3.63
97/ 1/24	2450472.5	-0.38711	-0.16766	0.02129	9.32622	-42.45881	-4.35731	0.42240	43.68885	203.42	2.89
97/ 1/26	2450474.5	-0.37340	-0.21529	0.01610	14.34205	-39.93688	-4.60423	0.43132	42.68310	209.97	2.14
97/ 1/28	2450476.5	-0.35417	-0.25976	0.01068	18.86538	-36.98674	-4.77102	0.43935	41.79335	216.26	1.39
97/ 1/30	2450478.5	-0.33000	-0.30060	0.00511	22.90473	-33.68125	-4.86449	0.44642	41.02093	222.33	0.66
97/ 2/ 1	2450480.5	-0.30144	-0.33745	-0.00053	26.47142	-30.07973	-4.89057	0.45248	40.36636	228.23	-0.07
97/ 2/ 3	2450482.5	-0.26902	-0.37000	-0.00616	29.57711	-26.23046	-4.85430	0.45750	39.82972	233.98	-0.77
97/ 2/ 5	2450484.5	-0.23328	-0.39797	-0.01172	32.23227	-22.17296	-4.75991	0.46145	39.41086	239.62	-1.46
97/ 2/ 7	2450486.5	-0.19473	-0.42115	-0.01714	34.44505	-17.93983	-4.61083	0.46431	39.10957	245.19	-2.12
97/ 2/ 9	2450488.5	-0.15388	-0.43936	-0.02235	36.22052	-13.55849	-4.40979	0.46606	38.92563	250.70	-2.75
97/ 2/11	2450490.5	-0.11122	-0.45243	-0.02731	37.56019	-9.05261	-4.15889	0.46670	38.85889	256.19	-3.35
97/ 2/13	2450492.5	-0.06728	-0.46023	-0.03194	38.46156	-4.44352	-3.85965	0.46622	38.90930	261.68	-3.93
97/ 2/15	2450494.5	-0.02254	-0.46266	-0.03621	38.91785	0.24856	-3.51314	0.46462	39.07689	267.21	-4.47
97/ 2/17	2450496.5	0.02245	-0.45963	-0.04004	38.91765	5.00321	-3.12000	0.46192	39.36178	272.80	-4.97
97/ 2/19	2450498.5	0.06718	-0.45109	-0.04340	38.44470	9.79848	-2.68059	0.45812	39.76419	278.47	-5.44
97/ 2/21	2450500.5	0.11108	-0.43699	-0.04622	37.47770	14.60932	-2.19502	0.45325	40.28435	284.26	-5.85
97/ 2/23	2450502.5	0.15356	-0.41734	-0.04845	35.99015	19.40583	-1.66338	0.44733	40.92241	290.20	-6.22
97/ 2/25	2450504.5	0.19401	-0.39218	-0.05004	33.95043	24.15107	-1.08583	0.44040	41.67835	296.32	-6.52
97/ 2/27	2450506.5	0.23177	-0.36159	-0.05094	31.32219	28.79853	-0.46294	0.43250	42.55172	302.66	-6.76
97/ 3/ 1	2450508.5	0.26613	-0.32571	-0.05109	28.06526	33.28884	0.20404	0.42370	43.54132	309.25	-6.93
97/ 3/ 3	2450510.5	0.29634	-0.28477	-0.05045	24.13747	37.54599	0.91266	0.41408	44.64472	316.14	-7.00
97/ 3/ 5	2450512.5	0.32162	-0.23910	-0.04897	19.49787	41.47281	1.65860	0.40374	45.85752	323.37	-6.97
97/ 3/ 7	2450514.5	0.34110	-0.18914	-0.04661	14.11205	44.94605	2.43480	0.39280	47.17230	330.99	-6.81
97/ 3/ 9	2450516.5	0.35392	-0.13550	-0.04334	7.96055	47.81158	3.23027	0.38144	48.57728	339.05	-6.52
97/ 3/11	2450518.5	0.35920	-0.07899	-0.03915	1.05141	49.88098	4.02871	0.36986	50.05445	347.60	-6.08
97/ 3/13	2450520.5	0.35608	-0.02066	-0.03404	-6.56233	50.93185	4.80691	0.35830	51.57736	356.68	-5.45
97/ 3/15	2450522.5	0.34381	0.03818	-0.02806	-14.76012	50.71547	5.53336	0.34706	53.10874	6.34	-4.64
97/ 3/17	2450524.5	0.32184	0.09592	-0.02129	-23.32886	48.97679	6.16764	0.33650	54.59855	16.60	-3.63
97/ 3/19	2450526.5	0.28990	0.15066	-0.01387	-31.94180	45.49147	6.66151	0.32700	55.98329	27.46	-2.43
97/ 3/21	2450528.5	0.24820	0.20028	-0.00598	-40.15315	40.12154	6.96310	0.31899	57.18827	38.90	-1.07
97/ 3/23	2450530.5	0.19750	0.24262	0.00213	-47.42380	32.88170	7.02467	0.31285	58.13406	50.85	0.39
97/ 3/25	2450532.5	0.13922	0.27561	0.01015	-53.18905	23.99540	6.81342	0.30894	58.74757	63.20	1.88
97/ 3/27	2450534.5	0.07539	0.29759	0.01776	-56.96215	13.91001	6.32215	0.30751	58.97580	75.78	3.31
97/ 3/29	2450536.5	0.00851	0.30752	0.02465	-58.44277	3.24785	5.57504	0.30863	58.79785	88.41	4.58
97/ 3/31	2450538.5	-0.05872	0.30514	0.03056	-57.58510	-7.30139	4.62495	0.31223	58.23009	100.89	5.62
97/ 4/ 2	2450540.5	-0.12369	0.29094	0.03529	-54.59478	-17.10790	3.54262	0.31811	57.32207	113.03	6.37
97/ 4/ 4	2450542.5	-0.18417	0.26609	0.03872	-49.86012	-25.69966	2.40235	0.32591	56.14512	124.69	6.82
97/ 4/ 6	2450544.5	-0.23839	0.23215	0.04084	-43.85328	-32.80195	1.26973	0.33525	54.77856	135.76	7.00
97/ 4/ 8	2450546.5	-0.28517	0.19092	0.04168	-37.04113	-38.32238	0.19476	0.34570	53.29811	146.20	6.92
97/ 4/10	2450548.5	-0.32381	0.14421	0.04132	-29.82775	-42.30483	-0.78947	0.35687	51.76888	155.99	6.65
97/ 4/12	2450550.5	-0.35404	0.09373	0.03990	-22.53045	-44.87681	-1.66471	0.36841	50.24261	165.17	6.22
97/ 4/14	2450552.5	-0.37591	0.04101	0.03752	-15.37974	-46.20541	-2.42383	0.38000	48.75809	173.77	5.67
97/ 4/16	2450554.5	-0.38969	-0.01260	0.03434	-8.53186	-46.46672	-3.06721	0.39140	47.34297	181.85	5.03
97/ 4/18	2450556.5	-0.39578	-0.06599	0.03048	-2.08527	-45.82776	-3.59972	0.40240	46.01620	189.47	4.34
97/ 4/20	2450558.5	-0.39468	-0.11818	0.02607	3.90345	-44.43757	-4.02854	0.41282	44.79022	196.67	3.62

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97/ 4/22	2450560.5	-0.38695	-0.16840	0.02121	9.40651	-42.42423	-4.36175	0.42254	43.67291	203.52	2.88
97/ 4/24	2450562.5	-0.37314	-0.21599	0.01602	14.41484	-39.89517	-4.60739	0.43145	42.66896	210.06	2.13
97/ 4/26	2450564.5	-0.35384	-0.26040	0.01060	18.93075	-36.93912	-4.77302	0.43946	41.78103	216.35	1.38
97/ 4/28	2450566.5	-0.32960	-0.30119	0.00502	22.96284	-33.62870	-4.86542	0.44652	41.01041	222.42	0.64
97/ 4/30	2450568.5	-0.30097	-0.33798	-0.00062	26.52244	-30.02305	-4.89051	0.45256	40.35765	228.31	-0.08
97/ 5/ 2	2450570.5	-0.26850	-0.37046	-0.00625	29.62121	-26.17031	-4.85332	0.45757	39.82281	234.07	-0.78
97/ 5/ 4	2450572.5	-0.23272	-0.39836	-0.01181	32.26959	-22.10987	-4.75807	0.46150	39.40574	239.71	-1.47
97/ 5/ 6	2450574.5	-0.19412	-0.42147	-0.01722	34.47568	-17.87426	-4.60818	0.46434	39.10623	245.27	-2.13
97/ 5/ 8	2450576.5	-0.15324	-0.43959	-0.02243	36.24451	-13.49080	-4.40636	0.46608	38.92405	250.78	-2.76
97/ 5/10	2450578.5	-0.11056	-0.45258	-0.02738	37.57751	-8.98316	-4.15470	0.46670	38.85908	256.27	-3.36
97/ 5/12	2450580.5	-0.06660	-0.46031	-0.03201	38.47213	-4.37261	-3.85472	0.46620	38.91123	261.77	-3.94
97/ 5/14	2450582.5	-0.02186	-0.46265	-0.03627	38.92152	0.32061	-3.50749	0.46459	39.08055	267.30	-4.48
97/ 5/16	2450584.5	0.02314	-0.45954	-0.04010	38.91419	5.07609	-3.11364	0.46187	39.36719	272.88	-4.98
97/ 5/18	2450586.5	0.06786	-0.45091	-0.04344	38.43384	9.87182	-2.67351	0.45805	39.77135	278.56	-5.44
97/ 5/20	2450588.5	0.11174	-0.43673	-0.04625	37.45905	14.68270	-2.18723	0.45317	40.29326	284.35	-5.86
97/ 5/22	2450590.5	0.15420	-0.41700	-0.04848	35.96328	19.47873	-1.65488	0.44723	40.93308	290.29	-6.22
97/ 5/24	2450592.5	0.19461	-0.39175	-0.05006	33.91481	24.22286	-1.07664	0.44028	41.69077	296.42	-6.53
97/ 5/26	2450594.5	0.23232	-0.36108	-0.05095	31.27724	28.86838	-0.45306	0.43237	42.56588	302.76	-6.77
97/ 5/28	2450596.5	0.26662	-0.32512	-0.05109	28.01035	33.35572	0.21459	0.42356	43.55720	309.35	-6.93
97/ 5/30	2450598.5	0.29677	-0.28411	-0.05044	24.07197	37.60858	0.92381	0.41393	44.66227	316.25	-7.00
97/ 6/ 1	2450600.5	0.32196	-0.23837	-0.04894	19.42119	41.52943	1.67027	0.40357	45.87663	323.49	-6.97
97/ 6/ 3	2450602.5	0.34135	-0.18834	-0.04657	14.02377	44.99459	2.44685	0.39263	47.19287	331.11	-6.81
97/ 6/ 5	2450604.5	0.35406	-0.13465	-0.04328	7.86059	47.84944	3.24249	0.38127	48.59909	339.18	-6.52
97/ 6/ 7	2450606.5	0.35922	-0.07811	-0.03907	0.94018	49.90503	4.04081	0.36968	50.07718	347.73	-6.07
97/ 6/ 9	2450608.5	0.35596	-0.01976	-0.03395	-6.68354	50.93848	4.81847	0.35812	51.60054	356.82	-5.44
97/ 6/11	2450610.5	0.34355	0.03908	-0.02796	-14.88880	50.70080	5.54384	0.34690	53.13174	6.49	-4.62
97/ 6/13	2450612.5	0.32142	0.09678	-0.02118	-23.46094	48.93706	6.17635	0.33635	54.62050	16.76	-3.61
97/ 6/15	2450614.5	0.28934	0.15146	-0.01375	-32.07137	45.42377	6.66767	0.32687	56.00312	27.63	-2.41
97/ 6/17	2450616.5	0.24749	0.20099	-0.00585	-40.27259	40.02478	6.96593	0.31888	57.20479	39.08	-1.05
97/ 6/19	2450618.5	0.19666	0.24320	0.00225	-47.52448	32.75759	7.02353	0.31277	58.14607	51.04	0.41
97/ 6/21	2450620.5	0.13828	0.27603	0.01027	-53.26266	23.84912	6.80799	0.30890	58.75407	63.39	1.90
97/ 6/23	2450622.5	0.07439	0.29783	0.01787	-57.00248	13.74992	6.31255	0.30750	58.97619	75.98	3.33
97/ 6/25	2450624.5	0.00749	0.30758	0.02475	-58.44712	3.08425	5.56187	0.30866	58.79211	88.61	4.60
97/ 6/27	2450626.5	-0.05973	0.30501	0.03064	-57.55480	-7.45813	4.60920	0.31231	58.21876	101.08	5.63
97/ 6/29	2450628.5	-0.12465	0.29064	0.03535	-54.53462	-17.24924	3.52544	0.31821	57.30610	113.21	6.38
97/ 7/ 1	2450630.5	-0.18504	0.26563	0.03876	-49.77689	-25.81990	2.38482	0.32604	56.12569	124.86	6.83
97/ 7/ 3	2450632.5	-0.23916	0.23157	0.04086	-43.75433	-32.89839	1.25273	0.33540	54.75687	135.92	7.00
97/ 7/ 5	2450634.5	-0.28582	0.19024	0.04168	-36.93317	-38.39479	0.17894	0.34586	53.27524	146.35	6.92
97/ 7/ 7	2450636.5	-0.32433	0.14346	0.04131	-29.71628	-42.35461	-0.80374	0.35704	51.74569	156.14	6.64
97/ 7/ 9	2450638.5	-0.35444	0.09294	0.03987	-22.41963	-44.90627	-1.67723	0.36858	50.21978	165.31	6.21
97/ 7/11	2450640.5	-0.37618	0.04020	0.03748	-15.27249	-46.21721	-2.43457	0.38018	48.73609	173.90	5.66
97/ 7/13	2450642.5	-0.38984	-0.01342	0.03429	-8.43008	-46.46350	-3.07620	0.39157	47.32216	181.97	5.02
97/ 7/15	2450644.5	-0.39581	-0.06680	0.03042	-1.99014	-45.81194	-3.60706	0.40256	45.99680	189.58	4.33
97/ 7/17	2450646.5	-0.39461	-0.11897	0.02599	3.99132	-44.41126	-4.03436	0.41298	44.77239	196.78	3.61
97/ 7/19	2450648.5	-0.38678	-0.16915	0.02113	9.48684	-42.38923	-4.36615	0.42268	43.65673	203.62	2.87

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

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97/ 7/21	2450650.5	-0.37289	-0.21670	0.01594	14.48759	-39.85298	-4.61051	0.43158	42.65451	210.16	2.12
97/ 7/23	2450652.5	-0.35350	-0.26106	0.01051	18.99602	-36.89097	-4.77497	0.43957	41.76832	216.45	1.37
97/ 7/25	2450654.5	-0.32919	-0.30179	0.00494	23.02079	-33.57559	-4.86629	0.44662	40.99948	222.51	0.63
97/ 7/27	2450656.5	-0.30050	-0.33851	-0.00070	26.57323	-29.96579	-4.89038	0.45265	40.34849	228.40	-0.09
97/ 7/29	2450658.5	-0.26798	-0.37092	-0.00634	29.66501	-26.10958	-4.85227	0.45764	39.81542	234.15	-0.79
97/ 7/31	2450660.5	-0.23214	-0.39875	-0.01189	32.30655	-22.04621	-4.75615	0.46155	39.40012	239.79	-1.48
97/ 8/ 2	2450662.5	-0.19351	-0.42178	-0.01730	34.50589	-17.80813	-4.60544	0.46438	39.10238	245.35	-2.14
97/ 8/ 4	2450664.5	-0.15260	-0.43983	-0.02251	36.26802	-13.42260	-4.40284	0.46610	38.92198	250.87	-2.77
97/ 8/ 6	2450666.5	-0.10990	-0.45274	-0.02745	37.59434	-8.91322	-4.15042	0.46670	38.85879	256.36	-3.37
97/ 8/ 8	2450668.5	-0.06592	-0.46038	-0.03208	38.48222	-4.30127	-3.84972	0.46618	38.91275	261.85	-3.95
97/ 8/10	2450670.5	-0.02117	-0.46265	-0.03633	38.92472	0.39307	-3.50176	0.46455	39.08389	267.38	-4.49
97/ 8/12	2450672.5	0.02383	-0.45945	-0.04015	38.91031	5.14934	-3.10720	0.46182	39.37235	272.97	-4.99
97/ 8/14	2450674.5	0.06854	-0.45074	-0.04349	38.42257	9.94550	-2.66636	0.45799	39.77834	278.65	-5.45
97/ 8/16	2450676.5	0.11240	-0.43647	-0.04629	37.44003	14.75640	-2.17938	0.45308	40.30207	284.44	-5.86
97/ 8/18	2450678.5	0.15483	-0.41665	-0.04851	35.93604	19.55194	-1.64633	0.44713	40.94371	290.39	-6.23
97/ 8/20	2450680.5	0.19521	-0.39132	-0.05008	33.87884	24.29496	-1.06738	0.44017	41.70324	296.51	-6.53
97/ 8/22	2450682.5	0.23287	-0.36056	-0.05096	31.23195	28.93858	-0.44311	0.43224	42.58019	302.86	-6.77
97/ 8/24	2450684.5	0.26712	-0.32453	-0.05109	27.95511	33.42298	0.22519	0.42342	43.57333	309.46	-6.93
97/ 8/26	2450686.5	0.29719	-0.28344	-0.05042	24.00611	37.67160	0.93503	0.41377	44.68017	316.36	-7.00
97/ 8/28	2450688.5	0.32230	-0.23763	-0.04891	19.34412	41.58654	1.68202	0.40341	45.89624	323.60	-6.96
97/ 8/30	2450690.5	0.34159	-0.18755	-0.04652	13.93502	45.04366	2.45899	0.39246	47.21401	331.23	-6.81
97/ 9/ 1	2450692.5	0.35420	-0.13381	-0.04322	7.76000	47.88782	3.25482	0.38109	48.62155	339.30	-6.51
97/ 9/ 3	2450694.5	0.35923	-0.07723	-0.03900	0.82817	49.92953	4.05302	0.36950	50.10061	347.87	-6.06
97/ 9/ 5	2450696.5	0.35584	-0.01886	-0.03387	-6.80572	50.94541	4.83015	0.35795	51.62445	356.97	-5.43
97/ 9/ 7	2450698.5	0.34328	0.03998	-0.02786	-15.01865	50.68619	5.55443	0.34672	53.15545	6.64	-4.61
97/ 9/ 9	2450700.5	0.32100	0.09765	-0.02107	-23.59432	48.89706	6.18515	0.33619	54.64312	16.92	-3.59
97/ 9/11	2450702.5	0.28876	0.15226	-0.01363	-32.20228	45.35543	6.67390	0.32673	56.02359	27.80	-2.39
97/ 9/13	2450704.5	0.24677	0.20170	-0.00573	-40.39329	39.92695	6.96879	0.31876	57.22188	39.26	-1.03
97/ 9/15	2450706.5	0.19581	0.24378	0.00238	-47.62620	32.63202	7.02237	0.31269	58.15855	51.23	0.44
97/ 9/17	2450708.5	0.13733	0.27645	0.01039	-53.33698	23.70104	6.80247	0.30886	58.76093	63.58	1.93
97/ 9/19	2450710.5	0.07337	0.29807	0.01798	-57.04307	13.58784	6.30280	0.30750	58.97683	76.17	3.35
97/ 9/21	2450712.5	0.00644	0.30763	0.02485	-58.45122	2.91866	5.54852	0.30870	58.78648	88.80	4.62
97/ 9/23	2450714.5	-0.06076	0.30487	0.03072	-57.52378	-7.61672	4.59323	0.31238	58.20736	101.27	5.64
97/ 9/25	2450716.5	-0.12563	0.29033	0.03541	-54.47331	-17.39213	3.50802	0.31832	57.28991	113.40	6.39
97/ 9/27	2450718.5	-0.18593	0.26517	0.03881	-49.69222	-25.94131	2.36705	0.32618	56.10590	125.04	6.83
97/ 9/29	2450720.5	-0.23994	0.23098	0.04088	-43.65376	-32.99559	1.23552	0.33555	54.73469	136.09	7.00
97/10/ 1	2450722.5	-0.28648	0.18955	0.04168	-36.82354	-38.46756	0.16293	0.34603	53.25178	146.51	6.92
97/10/ 3	2450724.5	-0.32486	0.14270	0.04130	-29.60319	-42.40442	-0.81816	0.35722	51.72188	156.29	6.64
97/10/ 5	2450726.5	-0.35484	0.09213	0.03984	-22.30729	-44.93552	-1.68988	0.36876	50.19633	165.45	6.20
97/10/ 7	2450728.5	-0.37646	0.03937	0.03744	-15.16383	-46.22862	-2.44540	0.38036	48.71352	174.03	5.65
97/10/ 9	2450730.5	-0.38999	-0.01426	0.03423	-8.32704	-46.45976	-3.08527	0.39175	47.30082	182.09	5.01
97/10/11	2450732.5	-0.39585	-0.06762	0.03035	-1.89386	-45.79548	-3.61446	0.40273	45.97692	189.69	4.32
97/10/13	2450734.5	-0.39454	-0.11976	0.02592	4.08021	-44.38424	-4.04021	0.41313	44.75413	196.89	3.60
97/10/15	2450736.5	-0.38661	-0.16991	0.02105	9.56810	-42.35346	-4.37058	0.42283	43.64019	203.73	2.85
97/10/17	2450738.5	-0.37263	-0.21741	0.01586	14.56117	-39.80998	-4.61364	0.43171	42.63974	210.26	2.11

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97/10/19	2450740.5	-0.35316	-0.26172	0.01043	19.06202	-36.84198	-4.77691	0.43969	41.75537	216.54	1.36
97/10/21	2450742.5	-0.32878	-0.30239	0.00485	23.07938	-33.52164	-4.86714	0.44672	40.98837	222.61	0.62
97/10/23	2450744.5	-0.30003	-0.33905	-0.00079	26.62459	-29.90770	-4.89023	0.45273	40.33924	228.49	-0.10
97/10/25	2450746.5	-0.26745	-0.37139	-0.00642	29.70934	-26.04802	-4.85119	0.45771	39.80802	234.24	-0.80
97/10/27	2450748.5	-0.23157	-0.39914	-0.01198	32.34397	-21.98174	-4.75420	0.46161	39.39456	239.88	-1.49
97/10/29	2450750.5	-0.19290	-0.42210	-0.01739	34.53651	-17.74118	-4.60267	0.46441	39.09865	245.44	-2.15
97/10/31	2450752.5	-0.15195	-0.44007	-0.02259	36.29190	-13.35357	-4.39928	0.46611	38.92009	250.95	-2.78
97/11/ 2	2450754.5	-0.10922	-0.45290	-0.02753	37.61146	-8.84244	-4.14610	0.46670	38.85873	256.44	-3.38
97/11/ 4	2450756.5	-0.06523	-0.46046	-0.03215	38.49250	-4.22905	-3.84466	0.46617	38.91451	261.94	-3.95
97/11/ 6	2450758.5	-0.02047	-0.46264	-0.03639	38.92803	0.46641	-3.49598	0.46452	39.08748	267.47	-4.49
97/11/ 8	2450760.5	0.02453	-0.45936	-0.04021	38.90643	5.22348	-3.10069	0.46177	39.37777	273.06	-5.00
97/11/10	2450762.5	0.06923	-0.45056	-0.04354	38.41120	10.02009	-2.65914	0.45792	39.78559	278.74	-5.46
97/11/12	2450764.5	0.11307	-0.43620	-0.04633	37.42079	14.83101	-2.17144	0.45300	40.31116	284.53	-5.87
97/11/14	2450766.5	0.15548	-0.41630	-0.04854	35.90849	19.62606	-1.63767	0.44703	40.95465	290.48	-6.23
97/11/16	2450768.5	0.19581	-0.39089	-0.05010	33.84243	24.36795	-1.05801	0.44005	41.71602	296.61	-6.54
97/11/18	2450770.5	0.23343	-0.36005	-0.05096	31.18608	29.00962	-0.43304	0.43211	42.59480	302.96	-6.77
97/11/20	2450772.5	0.26762	-0.32393	-0.05108	27.89912	33.49104	0.23593	0.42327	43.58975	309.56	-6.93
97/11/22	2450774.5	0.29762	-0.28277	-0.05040	23.93934	37.73532	0.94639	0.41361	44.69834	316.47	-7.00
97/11/24	2450776.5	0.32265	-0.23688	-0.04888	19.26594	41.64420	1.69391	0.40324	45.91607	323.71	-6.96
97/11/26	2450778.5	0.34184	-0.18674	-0.04648	13.84499	45.09310	2.47127	0.39228	47.23536	331.35	-6.80
97/11/28	2450780.5	0.35434	-0.13295	-0.04316	7.65800	47.92636	3.26729	0.38091	48.64418	339.43	-6.51
97/11/30	2450782.5	0.35924	-0.07633	-0.03893	0.71463	49.95394	4.06536	0.36932	50.12419	348.00	-6.05
97/12/ 2	2450784.5	0.35572	-0.01794	-0.03378	-6.92947	50.95198	4.84194	0.35777	51.64849	357.11	-5.42
97/12/ 4	2450786.5	0.34301	0.04089	-0.02776	-15.15004	50.67091	5.56510	0.34655	53.17927	6.80	-4.60
97/12/ 6	2450788.5	0.32058	0.09853	-0.02096	-23.72913	48.85607	6.19400	0.33603	54.66583	17.08	-3.58
97/12/ 8	2450790.5	0.28818	0.15308	-0.01351	-32.33441	45.28576	6.68013	0.32659	56.04408	27.98	-2.37
97/12/10	2450792.5	0.24604	0.20242	-0.00560	-40.51488	39.82753	6.97160	0.31865	57.23890	39.44	-1.01
97/12/12	2450794.5	0.19496	0.24436	0.00250	-47.72839	32.50470	7.02110	0.31261	58.17087	51.42	0.46
97/12/14	2450796.5	0.13637	0.27688	0.01051	-53.41130	23.55119	6.79680	0.30882	58.76753	63.78	1.95
97/12/16	2450798.5	0.07234	0.29832	0.01810	-57.08321	13.42413	6.29287	0.30750	58.97712	76.37	3.37
97/12/18	2450800.5	0.00539	0.30768	0.02495	-58.45452	2.75171	5.53498	0.30874	58.78043	89.00	4.64
97/12/20	2450802.5	-0.06180	0.30473	0.03081	-57.49173	-7.77633	4.57709	0.31246	58.19554	101.46	5.66
97/12/22	2450804.5	-0.12661	0.29001	0.03547	-54.41089	-17.53569	3.49044	0.31843	57.27328	113.58	6.40
97/12/24	2450806.5	-0.18683	0.26470	0.03885	-49.60647	-26.06308	2.34916	0.32631	56.08569	125.22	6.84
97/12/26	2450808.5	-0.24073	0.23038	0.04091	-43.55219	-33.09290	1.21822	0.33571	54.71213	136.26	7.00
97/12/28	2450810.5	-0.28714	0.18886	0.04169	-36.71302	-38.54026	0.14685	0.34620	53.22799	146.67	6.92
97/12/30	2450812.5	-0.32540	0.14194	0.04128	-29.48934	-42.45404	-0.83263	0.35740	51.69778	156.43	6.63
98/ 1/ 1	2450814.5	-0.35524	0.09132	0.03981	-22.19431	-44.96449	-1.70256	0.36894	50.17262	165.58	6.19
98/ 1/ 3	2450816.5	-0.37673	0.03854	0.03739	-15.05466	-46.23970	-2.45625	0.38054	48.69071	174.16	5.64
98/ 1/ 5	2450818.5	-0.39014	-0.01509	0.03418	-8.22358	-46.45565	-3.09434	0.39192	47.27927	182.22	5.00
98/ 1/ 7	2450820.5	-0.39588	-0.06844	0.03029	-1.79725	-45.77868	-3.62186	0.40290	45.95689	189.81	4.31
98/ 1/ 9	2450822.5	-0.39447	-0.12056	0.02585	4.16937	-44.35690	-4.04605	0.41329	44.73576	196.99	3.59
98/ 1/11	2450824.5	-0.38644	-0.17067	0.02098	9.64956	-42.31741	-4.37501	0.42297	43.62359	203.83	2.84
98/ 1/13	2450826.5	-0.37237	-0.21813	0.01577	14.63493	-39.76672	-4.61676	0.43184	42.62497	210.36	2.09
98/ 1/15	2450828.5	-0.35282	-0.26238	0.01034	19.12818	-36.79276	-4.77884	0.43981	41.74245	216.64	1.35

1.1 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MERCURY

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
98/ 1/17	2450830.5	-0.32836	-0.30299	0.00476	23.13811	-33.46745	-4.86799	0.44682	40.97731	222.70	0.61
98/ 1/19	2450832.5	-0.29955	-0.33958	-0.00088	26.67608	-29.84936	-4.89007	0.45282	40.33002	228.58	-0.11
98/ 1/21	2450834.5	-0.26691	-0.37185	-0.00651	29.75375	-25.98620	-4.85010	0.45778	39.80065	234.33	-0.81
98/ 1/23	2450836.5	-0.23099	-0.39954	-0.01206	32.38146	-21.91697	-4.75224	0.46166	39.38904	239.97	-1.50
98/ 1/25	2450838.5	-0.19228	-0.42242	-0.01747	34.56719	-17.67394	-4.59988	0.46445	39.09498	245.53	-2.16
98/ 1/27	2450840.5	-0.15130	-0.44031	-0.02267	36.31581	-13.28423	-4.39570	0.46613	38.91826	251.04	-2.79
98/ 1/29	2450842.5	-0.10855	-0.45306	-0.02760	37.62860	-8.77137	-4.14176	0.46670	38.85875	256.53	-3.39
98/ 1/31	2450844.5	-0.06454	-0.46053	-0.03222	38.50281	-4.15655	-3.83958	0.46615	38.91639	262.02	-3.96
98/ 2/ 2	2450846.5	-0.01977	-0.46263	-0.03646	38.93136	0.54003	-3.49017	0.46448	39.09122	267.55	-4.50
98/ 2/ 4	2450848.5	0.02522	-0.45926	-0.04026	38.90254	5.29791	-3.09416	0.46171	39.38337	273.14	-5.00
98/ 2/ 6	2450850.5	0.06992	-0.45038	-0.04359	38.39981	10.09497	-2.65189	0.45785	39.79304	278.82	-5.46
98/ 2/ 8	2450852.5	0.11374	-0.43594	-0.04637	37.40151	14.90591	-2.16347	0.45291	40.32046	284.62	-5.88
98/ 2/10	2450854.5	0.15612	-0.41595	-0.04857	35.88084	19.70048	-1.62898	0.44693	40.96580	290.57	-6.24
98/ 2/12	2450856.5	0.19642	-0.39045	-0.05012	33.80588	24.44122	-1.04860	0.43993	41.72901	296.71	-6.54
98/ 2/14	2450858.5	0.23399	-0.35952	-0.05097	31.14001	29.08092	-0.42294	0.43198	42.60961	303.06	-6.78
98/ 2/16	2450860.5	0.26812	-0.32333	-0.05108	27.84288	33.55931	0.24671	0.42313	43.60635	309.67	-6.93
98/ 2/18	2450862.5	0.29805	-0.28209	-0.05039	23.87226	37.79920	0.95779	0.41346	44.71668	316.58	-7.00
98/ 2/20	2450864.5	0.32299	-0.23613	-0.04885	19.18742	41.70195	1.70584	0.40307	45.93604	323.83	-6.96
98/ 2/22	2450866.5	0.34209	-0.18592	-0.04643	13.75460	45.14254	2.48359	0.39211	47.25681	331.48	-6.80
98/ 2/24	2450868.5	0.35447	-0.13208	-0.04311	7.55563	47.96479	3.27978	0.38073	48.66688	339.56	-6.50
98/ 2/26	2450870.5	0.35925	-0.07543	-0.03886	0.60076	49.97811	4.07772	0.36914	50.14778	348.14	-6.04
98/ 2/28	2450872.5	0.35559	-0.01702	-0.03369	-7.05348	50.95815	4.85372	0.35759	51.67246	357.26	-5.41
98/ 3/ 2	2450874.5	0.34274	0.04180	-0.02766	-15.28156	50.65506	5.57574	0.34638	53.20291	6.95	-4.58
98/ 3/ 4	2450876.5	0.32015	0.09941	-0.02085	-23.86387	48.81437	6.20279	0.33587	54.68823	17.25	-3.56
98/ 3/ 6	2450878.5	0.28760	0.15389	-0.01339	-32.46620	45.21532	6.68627	0.32646	56.06412	28.15	-2.35
98/ 3/ 8	2450880.5	0.24531	0.20313	-0.00548	-40.63584	39.72738	6.97429	0.31855	57.25537	39.63	-0.99
98/ 3/10	2450882.5	0.19410	0.24495	0.00263	-47.82966	32.37682	7.01970	0.31254	58.18257	51.61	0.48
98/ 3/12	2450884.5	0.13541	0.27730	0.01063	-53.48449	23.40112	6.79101	0.30878	58.77347	63.97	1.97
98/ 3/14	2450886.5	0.07132	0.29856	0.01821	-57.12216	13.26059	6.28286	0.30750	58.97677	76.57	3.40
98/ 3/16	2450888.5	0.00434	0.30773	0.02505	-58.45674	2.58531	5.52138	0.30878	58.77381	89.19	4.65
98/ 3/18	2450890.5	-0.06283	0.30459	0.03089	-57.45886	-7.93506	4.56094	0.31253	58.18322	101.65	5.67
98/ 3/20	2450892.5	-0.12759	0.28970	0.03554	-54.34798	-17.67820	3.47291	0.31854	57.25629	113.77	6.41
98/ 3/22	2450894.5	-0.18772	0.26423	0.03889	-49.52058	-26.18376	2.33135	0.32645	56.06525	125.39	6.84
98/ 3/24	2450896.5	-0.24151	0.22979	0.04093	-43.45081	-33.18921	1.20101	0.33586	54.68948	136.42	7.00
98/ 3/26	2450898.5	-0.28780	0.18817	0.04169	-36.60296	-38.61213	0.13088	0.34637	53.20424	146.82	6.91
98/ 3/28	2450900.5	-0.32592	0.14118	0.04127	-29.37613	-42.50304	-0.84699	0.35758	51.67381	156.58	6.63
98/ 3/30	2450902.5	-0.35564	0.09052	0.03977	-22.08206	-44.99306	-1.71514	0.36913	50.14912	165.72	6.19
98/ 4/ 1	2450904.5	-0.37700	0.03771	0.03735	-14.94625	-46.25058	-2.46702	0.38072	48.66819	174.29	5.63
98/ 4/ 3	2450906.5	-0.39029	-0.01592	0.03412	-8.12086	-46.45153	-3.10335	0.39210	47.25806	182.34	4.99
98/ 4/ 5	2450908.5	-0.39592	-0.06926	0.03022	-1.70134	-45.76201	-3.62920	0.40306	45.93721	189.92	4.30
98/ 4/ 7	2450910.5	-0.39439	-0.12135	0.02578	4.25789	-44.32980	-4.05186	0.41345	44.71776	197.10	3.57
98/ 4/ 9	2450912.5	-0.38627	-0.17143	0.02090	9.73046	-42.28167	-4.37940	0.42312	43.60734	203.93	2.83
98/ 4/11	2450914.5	-0.37211	-0.21883	0.01569	14.70817	-39.72384	-4.61987	0.43197	42.61052	210.46	2.08
98/ 4/13	2450916.5	-0.35248	-0.26304	0.01026	19.19388	-36.74395	-4.78077	0.43992	41.72983	216.73	1.34
98/ 4/15	2450918.5	-0.32795	-0.30358	0.00468	23.19642	-33.41370	-4.86884	0.44692	40.96651	222.79	0.60

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
98/ 4/17	2450920.5	-0.29907	-0.34011	-0.00097	26.72721	-29.79150	-4.88992	0.45290	40.32106	228.67	-0.12
98/ 4/19	2450922.5	-0.26638	-0.37231	-0.00660	29.79787	-25.92487	-4.84903	0.45784	39.79353	234.42	-0.83
98/ 4/21	2450924.5	-0.23041	-0.39993	-0.01215	32.41871	-21.85273	-4.75030	0.46171	39.38375	240.05	-1.51
98/ 4/23	2450926.5	-0.19166	-0.42273	-0.01755	34.59767	-17.60724	-4.59711	0.46448	39.09152	245.61	-2.17
98/ 4/25	2450928.5	-0.15065	-0.44055	-0.02275	36.33957	-13.21546	-4.39215	0.46615	38.91663	251.12	-2.80
98/ 4/27	2450930.5	-0.10788	-0.45321	-0.02768	37.64562	-8.70087	-4.13746	0.46670	38.85893	256.61	-3.40
98/ 4/29	2450932.5	-0.06385	-0.46061	-0.03229	38.51300	-4.08463	-3.83453	0.46613	38.91836	262.11	-3.97
98/ 5/ 1	2450934.5	-0.01908	-0.46262	-0.03652	38.93457	0.61304	-3.48440	0.46445	39.09499	267.64	-4.51
98/ 5/ 3	2450936.5	0.02592	-0.45917	-0.04032	38.89857	5.37168	-3.08767	0.46166	39.38892	273.23	-5.01
98/ 5/ 5	2450938.5	0.07060	-0.45019	-0.04363	38.38835	10.16914	-2.64469	0.45778	39.80039	278.91	-5.47
98/ 5/ 7	2450940.5	0.11441	-0.43567	-0.04641	37.38219	14.98006	-2.15556	0.45283	40.32961	284.71	-5.88
98/ 5/ 9	2450942.5	0.15676	-0.41559	-0.04860	35.85322	19.77407	-1.62036	0.44683	40.97673	290.67	-6.24
98/ 5/11	2450944.5	0.19703	-0.39001	-0.05014	33.76943	24.51359	-1.03928	0.43982	41.74171	296.80	-6.55
98/ 5/13	2450946.5	0.23455	-0.35900	-0.05098	31.09414	29.15124	-0.41293	0.43185	42.62406	303.16	-6.78
98/ 5/15	2450948.5	0.26862	-0.32273	-0.05107	27.78694	33.62651	0.25737	0.42298	43.62250	309.77	-6.94
98/ 5/17	2450950.5	0.29848	-0.28141	-0.05037	23.80563	37.86192	0.96905	0.41330	44.73446	316.69	-7.00
98/ 5/19	2450952.5	0.32334	-0.23539	-0.04882	19.10955	41.75849	1.71761	0.40291	45.95537	323.95	-6.96
98/ 5/21	2450954.5	0.34234	-0.18512	-0.04639	13.66508	45.19074	2.49572	0.39194	47.27754	331.60	-6.80
98/ 5/23	2450956.5	0.35461	-0.13123	-0.04305	7.45442	48.00199	3.29206	0.38056	48.68877	339.69	-6.50
98/ 5/25	2450958.5	0.35927	-0.07454	-0.03878	0.48836	50.00112	4.08984	0.36896	50.17049	348.28	-6.03
98/ 5/27	2450960.5	0.35547	-0.01612	-0.03361	-7.17568	50.96334	4.86526	0.35742	51.69549	357.40	-5.40
98/ 5/29	2450962.5	0.34247	0.04270	-0.02756	-15.41092	50.63854	5.58612	0.34622	53.22558	7.11	-4.57
98/ 5/31	2450964.5	0.31973	0.10027	-0.02074	-23.99614	48.77246	6.21133	0.33573	54.70967	17.41	-3.54
98/ 6/ 2	2450966.5	0.28703	0.15469	-0.01327	-32.59530	45.14526	6.69219	0.32633	56.08327	28.32	-2.33
98/ 6/ 4	2450968.5	0.24460	0.20384	-0.00535	-40.75405	39.62833	6.97682	0.31844	57.27105	39.81	-0.96
98/ 6/ 6	2450970.5	0.19326	0.24552	0.00275	-47.92836	32.25083	7.01822	0.31247	58.19363	51.79	0.50
98/ 6/ 8	2450972.5	0.13447	0.27772	0.01075	-53.55554	23.25364	6.78524	0.30875	58.77896	64.16	2.00
98/ 6/10	2450974.5	0.07032	0.29879	0.01832	-57.15963	13.10021	6.27297	0.30750	58.97617	76.76	3.42
98/ 6/12	2450976.5	0.00331	0.30778	0.02515	-58.45830	2.42239	5.50802	0.30882	58.76716	89.38	4.67
98/ 6/14	2450978.5	-0.06383	0.30446	0.03097	-57.42618	-8.09031	4.54510	0.31261	58.17110	101.84	5.69
98/ 6/16	2450980.5	-0.12854	0.28939	0.03560	-54.28607	-17.81748	3.45573	0.31865	57.23969	113.95	6.41
98/ 6/18	2450982.5	-0.18858	0.26377	0.03893	-49.43633	-26.30167	2.31391	0.32658	56.04536	125.56	6.85
98/ 6/20	2450984.5	-0.24227	0.22921	0.04095	-43.35152	-33.28332	1.18418	0.33602	54.66751	136.59	7.00
98/ 6/22	2450986.5	-0.28844	0.18750	0.04169	-36.49523	-38.68238	0.11526	0.34654	53.18122	146.97	6.91
98/ 6/24	2450988.5	-0.32644	0.14044	0.04125	-29.26532	-42.55097	-0.86105	0.35775	51.65061	156.72	6.62
98/ 6/26	2450990.5	-0.35602	0.08973	0.03974	-21.97219	-45.02103	-1.72746	0.36930	50.12638	165.85	6.18
98/ 6/28	2450992.5	-0.37726	0.03690	0.03730	-14.84010	-46.26125	-2.47756	0.38089	48.64638	174.41	5.62
98/ 6/30	2450994.5	-0.39043	-0.01673	0.03407	-8.02023	-46.44754	-3.11218	0.39227	47.23752	182.45	4.98
98/ 7/ 2	2450996.5	-0.39594	-0.07006	0.03016	-1.60731	-45.74572	-3.63641	0.40322	45.91817	190.03	4.29
98/ 7/ 4	2450998.5	-0.39432	-0.12213	0.02570	4.34474	-44.30329	-4.05756	0.41360	44.70036	197.21	3.56
98/ 7/ 6	2451000.5	-0.38609	-0.17217	0.02082	9.80989	-42.24669	-4.38373	0.42325	43.59167	204.03	2.82
98/ 7/ 8	2451002.5	-0.37184	-0.21953	0.01561	14.78015	-39.68182	-4.62294	0.43209	42.59661	210.56	2.07
98/ 7/10	2451004.5	-0.35214	-0.26368	0.01017	19.25850	-36.69608	-4.78268	0.44004	41.71769	216.83	1.32
98/ 7/12	2451006.5	-0.32754	-0.30417	0.00459	23.25383	-33.36094	-4.86968	0.44702	40.95616	222.88	0.59
98/ 7/14	2451008.5	-0.29860	-0.34064	-0.00105	26.77757	-29.73463	-4.88979	0.45299	40.31248	228.76	-0.13

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98/ 7/16	2451010.5	-0.26586	-0.37277	-0.00668	29.84134	-25.86455	-4.84798	0.45791	39.78672	234.50	-0.84
98/ 7/18	2451012.5	-0.22983	-0.40031	-0.01223	32.45542	-21.78949	-4.74839	0.46176	39.37872	240.14	-1.52
98/ 7/20	2451014.5	-0.19105	-0.42304	-0.01763	34.62771	-17.54152	-4.59439	0.46451	39.08825	245.70	-2.18
98/ 7/22	2451016.5	-0.15001	-0.44078	-0.02282	36.36296	-13.14765	-4.38865	0.46616	38.91511	251.21	-2.81
98/ 7/24	2451018.5	-0.10721	-0.45337	-0.02775	37.66234	-8.63129	-4.13320	0.46670	38.85916	256.70	-3.41
98/ 7/26	2451020.5	-0.06317	-0.46068	-0.03235	38.52297	-4.01361	-3.82954	0.46611	38.92035	262.19	-3.98
98/ 7/28	2451022.5	-0.01839	-0.46261	-0.03658	38.93763	0.68520	-3.47868	0.46441	39.09872	267.72	-4.52
98/ 7/30	2451024.5	0.02661	-0.45907	-0.04037	38.89449	5.44466	-3.08125	0.46161	39.39441	273.32	-5.02
98/ 8/ 1	2451026.5	0.07128	-0.45001	-0.04368	38.37684	10.24256	-2.63754	0.45771	39.80764	279.00	-5.48
98/ 8/ 3	2451028.5	0.11507	-0.43540	-0.04645	37.36289	15.05349	-2.14770	0.45274	40.33863	284.80	-5.89
98/ 8/ 5	2451030.5	0.15740	-0.41524	-0.04862	35.82566	19.84699	-1.61179	0.44673	40.98754	290.76	-6.25
98/ 8/ 7	2451032.5	0.19762	-0.38957	-0.05015	33.73309	24.58536	-1.03002	0.43970	41.75431	296.90	-6.55
98/ 8/ 9	2451034.5	0.23510	-0.35849	-0.05099	31.04843	29.22102	-0.40298	0.43172	42.63843	303.26	-6.78
98/ 8/11	2451036.5	0.26911	-0.32213	-0.05107	27.73123	33.69327	0.26798	0.42284	43.63862	309.88	-6.94
98/ 8/13	2451038.5	0.29890	-0.28074	-0.05035	23.73928	37.92432	0.98026	0.41315	44.75230	316.79	-7.00
98/ 8/15	2451040.5	0.32367	-0.23465	-0.04879	19.03196	41.81482	1.72933	0.40275	45.97483	324.06	-6.96
98/ 8/17	2451042.5	0.34258	-0.18432	-0.04634	13.57585	45.23884	2.50783	0.39177	47.29847	331.72	-6.79
98/ 8/19	2451044.5	0.35474	-0.13038	-0.04299	7.35346	48.03919	3.30433	0.38038	48.71094	339.82	-6.49
98/ 8/21	2451046.5	0.35928	-0.07366	-0.03871	0.37614	50.02424	4.10196	0.36879	50.19354	348.41	-6.03
98/ 8/23	2451048.5	0.35534	-0.01522	-0.03352	-7.29780	50.96868	4.87680	0.35724	51.71892	357.55	-5.38
98/ 8/25	2451050.5	0.34220	0.04359	-0.02747	-15.54031	50.62217	5.59652	0.34605	53.24872	7.26	-4.55
98/ 8/27	2451052.5	0.31931	0.10113	-0.02063	-24.12857	48.73064	6.21990	0.33557	54.73162	17.57	-3.52
98/ 8/29	2451054.5	0.28645	0.15549	-0.01315	-32.72469	45.07519	6.69814	0.32620	56.10297	28.49	-2.31
98/ 8/31	2451056.5	0.24388	0.20454	-0.00523	-40.87261	39.52912	6.97936	0.31834	57.28729	39.99	-0.94
98/ 9/ 2	2451058.5	0.19241	0.24609	0.00288	-48.02740	32.12447	7.01675	0.31239	58.20522	51.98	0.53
98/ 9/ 4	2451060.5	0.13353	0.27813	0.01087	-53.62685	23.10560	6.77945	0.30871	58.78494	64.35	2.02
98/ 9/ 6	2451062.5	0.06931	0.29902	0.01843	-57.19721	12.93911	6.26303	0.30750	58.97599	76.95	3.44
98/ 9/ 8	2451064.5	0.00228	0.30782	0.02524	-58.45975	2.25867	5.49458	0.30886	58.76083	89.58	4.69
98/ 9/10	2451066.5	-0.06485	0.30431	0.03105	-57.39317	-8.24636	4.52916	0.31269	58.15919	102.03	5.70
98/ 9/12	2451068.5	-0.12949	0.28908	0.03566	-54.22362	-17.95747	3.43844	0.31876	57.22320	114.13	6.42
98/ 9/14	2451070.5	-0.18946	0.26331	0.03897	-49.35137	-26.42015	2.29636	0.32672	56.02549	125.74	6.85
98/ 9/16	2451072.5	-0.24303	0.22862	0.04097	-43.25141	-33.37781	1.16724	0.33617	54.64545	136.75	7.00
98/ 9/18	2451074.5	-0.28908	0.18681	0.04169	-36.38664	-38.75282	0.09954	0.34670	53.15805	147.13	6.91
98/ 9/20	2451076.5	-0.32695	0.13969	0.04123	-29.15366	-42.59889	-0.87518	0.35792	51.62719	156.87	6.62
98/ 9/22	2451078.5	-0.35641	0.08894	0.03971	-21.86151	-45.04883	-1.73983	0.36948	50.10339	165.99	6.17
98/ 9/24	2451080.5	-0.37752	0.03609	0.03726	-14.73322	-46.27162	-2.48815	0.38107	48.62429	174.54	5.61
98/ 9/26	2451082.5	-0.39057	-0.01755	0.03401	-7.91900	-46.44310	-3.12102	0.39244	47.21666	182.57	4.97
98/ 9/28	2451084.5	-0.39597	-0.07086	0.03009	-1.51281	-45.72889	-3.64361	0.40339	45.89875	190.15	4.28
98/ 9/30	2451086.5	-0.39424	-0.12291	0.02563	4.43192	-44.27615	-4.06325	0.41375	44.68254	197.32	3.55
98/10/ 2	2451088.5	-0.38592	-0.17291	0.02074	9.88950	-42.21102	-4.38801	0.42340	43.57553	204.13	2.81
98/10/ 4	2451090.5	-0.37158	-0.22023	0.01553	14.85219	-39.63910	-4.62595	0.43222	42.58222	210.65	2.06
98/10/ 6	2451092.5	-0.35180	-0.26433	0.01009	19.32306	-36.64753	-4.78453	0.44015	41.70508	216.92	1.31
98/10/ 8	2451094.5	-0.32713	-0.30476	0.00450	23.31109	-33.30755	-4.87046	0.44711	40.94534	222.97	0.58
98/10/10	2451096.5	-0.29813	-0.34116	-0.00114	26.82771	-29.67718	-4.88958	0.45307	40.30346	228.85	-0.14
98/10/12	2451098.5	-0.26533	-0.37322	-0.00677	29.88453	-25.80371	-4.84686	0.45798	39.77950	234.59	-0.85

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98/10/14	2451100.5	-0.22926	-0.40069	-0.01231	32.49180	-21.72578	-4.74641	0.46181	39.37328	240.22	-1.53
98/10/16	2451102.5	-0.19044	-0.42335	-0.01771	34.65737	-17.47539	-4.59160	0.46455	39.08459	245.78	-2.19
98/10/18	2451104.5	-0.14937	-0.44101	-0.02290	36.38596	-13.07948	-4.38508	0.46618	38.91324	251.29	-2.82
98/10/20	2451106.5	-0.10655	-0.45352	-0.02782	37.67867	-8.56143	-4.12889	0.46669	38.85907	256.78	-3.42
98/10/22	2451108.5	-0.06249	-0.46075	-0.03242	38.53255	-3.94236	-3.82450	0.46609	38.92205	262.28	-3.99
98/10/24	2451110.5	-0.01770	-0.46259	-0.03664	38.94033	0.75754	-3.47292	0.46438	39.10223	267.81	-4.53
98/10/26	2451112.5	0.02729	-0.45897	-0.04043	38.89010	5.51776	-3.07478	0.46156	39.39974	273.40	-5.02
98/10/28	2451114.5	0.07196	-0.44983	-0.04373	38.36506	10.31608	-2.63037	0.45764	39.81479	279.09	-5.48
98/10/30	2451116.5	0.11573	-0.43514	-0.04649	37.34333	15.12700	-2.13982	0.45266	40.34761	284.89	-5.89
98/11/ 1	2451118.5	0.15803	-0.41489	-0.04865	35.79788	19.91999	-1.60321	0.44663	40.99835	290.85	-6.25
98/11/ 3	2451120.5	0.19822	-0.38914	-0.05017	33.69656	24.65722	-1.02074	0.43959	41.76695	296.99	-6.55
98/11/ 5	2451122.5	0.23564	-0.35797	-0.05099	31.00253	29.29093	-0.39301	0.43159	42.65290	303.36	-6.79
98/11/ 7	2451124.5	0.26959	-0.32154	-0.05106	27.67533	33.76018	0.27861	0.42270	43.65491	309.98	-6.94
98/11/ 9	2451126.5	0.29932	-0.28007	-0.05033	23.67271	37.98689	0.99150	0.41299	44.77035	316.90	-7.00
98/11/11	2451128.5	0.32401	-0.23391	-0.04876	18.95411	41.87135	1.74110	0.40258	45.99456	324.17	-6.96
98/11/13	2451130.5	0.34282	-0.18352	-0.04630	13.48629	45.28717	2.51998	0.39159	47.31974	331.84	-6.79
98/11/15	2451132.5	0.35487	-0.12953	-0.04293	7.25205	48.07664	3.31665	0.38020	48.73352	339.95	-6.48
98/11/17	2451134.5	0.35928	-0.07277	-0.03864	0.26334	50.04758	4.11414	0.36860	50.21709	348.55	-6.02
98/11/19	2451136.5	0.35521	-0.01431	-0.03343	-7.42066	50.97421	4.88842	0.35706	51.74295	357.69	-5.37
98/11/21	2451138.5	0.34192	0.04449	-0.02737	-15.67063	50.60589	5.60702	0.34588	53.27253	7.41	-4.54
98/11/23	2451140.5	0.31887	0.10200	-0.02052	-24.26208	48.68873	6.22855	0.33542	54.75432	17.74	-3.51
98/11/25	2451142.5	0.28586	0.15629	-0.01303	-32.85525	45.00474	6.70416	0.32606	56.12344	28.67	-2.29
98/11/27	2451144.5	0.24314	0.20524	-0.00511	-40.99237	39.42916	6.98196	0.31823	57.30428	40.17	-0.92
98/11/29	2451146.5	0.19155	0.24666	0.00300	-48.12752	31.99697	7.01527	0.31232	58.21750	52.17	0.55
98/12/ 1	2451148.5	0.13256	0.27853	0.01099	-53.69897	22.95606	6.77360	0.30867	58.79150	64.55	2.04
98/12/ 3	2451150.5	0.06828	0.29925	0.01854	-57.23519	12.77625	6.25298	0.30750	58.97626	77.15	3.46
98/12/ 5	2451152.5	0.00123	0.30785	0.02534	-58.46113	2.09308	5.48098	0.30890	58.75479	89.77	4.71
98/12/ 7	2451154.5	-0.06587	0.30416	0.03113	-57.35960	-8.40420	4.51302	0.31276	58.14741	102.22	5.71
98/12/ 9	2451156.5	-0.13047	0.28875	0.03572	-54.16017	-18.09902	3.42094	0.31886	57.20665	114.31	6.43
98/12/11	2451158.5	-0.19034	0.26283	0.03901	-49.26507	-26.53984	2.27859	0.32685	56.00538	125.91	6.86
98/12/13	2451160.5	-0.24381	0.22802	0.04099	-43.14973	-33.47313	1.15009	0.33633	54.62300	136.92	7.00
98/12/15	2451162.5	-0.28973	0.18612	0.04169	-36.27637	-38.82370	0.08363	0.34687	53.13438	147.28	6.90
98/12/17	2451164.5	-0.32747	0.13892	0.04122	-29.04033	-42.64692	-0.88947	0.35810	51.60321	157.01	6.61
98/12/19	2451166.5	-0.35680	0.08813	0.03968	-21.74924	-45.07646	-1.75234	0.36966	50.07981	166.13	6.16
98/12/21	2451168.5	-0.37778	0.03526	0.03722	-14.62488	-46.28159	-2.49883	0.38125	48.60161	174.67	5.60
98/12/23	2451170.5	-0.39071	-0.01838	0.03395	-7.81644	-46.43811	-3.12994	0.39261	47.19524	182.69	4.96
98/12/25	2451172.5	-0.39600	-0.07168	0.03003	-1.41713	-45.71138	-3.65087	0.40355	45.87883	190.26	4.27
98/12/27	2451174.5	-0.39416	-0.12370	0.02556	4.52014	-44.24826	-4.06896	0.41391	44.66427	197.42	3.54
98/12/29	2451176.5	-0.38574	-0.17367	0.02066	9.97004	-42.17454	-4.39232	0.42354	43.55900	204.24	2.80
98/12/31	2451178.5	-0.37132	-0.22094	0.01545	14.92503	-39.59554	-4.62896	0.43235	42.56748	210.75	2.05
99/ 1/ 2	2451180.5	-0.35145	-0.26498	0.01000	19.38832	-36.59810	-4.78637	0.44027	41.69217	217.01	1.30
99/ 1/ 4	2451182.5	-0.32671	-0.30535	0.00442	23.36894	-33.25325	-4.87122	0.44722	40.93428	223.06	0.57
99/ 1/ 6	2451184.5	-0.29765	-0.34169	-0.00123	26.87835	-29.61883	-4.88935	0.45315	40.29425	228.94	-0.16
99/ 1/ 8	2451186.5	-0.26480	-0.37368	-0.00686	29.92813	-25.74196	-4.84570	0.45804	39.77213	234.68	-0.86
99/ 1/10	2451188.5	-0.22868	-0.40108	-0.01240	32.52852	-21.66118	-4.74439	0.46186	39.36776	240.31	-1.54

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99/ 1/12	2451190.5	-0.18982	-0.42366	-0.01779	34.68731	-17.40838	-4.58876	0.46458	39.08091	245.87	-2.20
99/ 1/14	2451192.5	-0.14872	-0.44124	-0.02298	36.40917	-13.01044	-4.38146	0.46620	38.91140	251.37	-2.83
99/ 1/16	2451194.5	-0.10588	-0.45367	-0.02790	37.69514	-8.49069	-4.12451	0.46669	38.85907	256.86	-3.43
99/ 1/18	2451196.5	-0.06180	-0.46082	-0.03249	38.54222	-3.87025	-3.81939	0.46608	38.92389	262.36	-4.00
99/ 1/20	2451198.5	-0.01701	-0.46258	-0.03670	38.94304	0.83073	-3.46709	0.46434	39.10590	267.89	-4.53
99/ 1/22	2451200.5	0.02798	-0.45887	-0.04048	38.88563	5.59171	-3.06823	0.46151	39.40525	273.49	-5.03
99/ 1/24	2451202.5	0.07264	-0.44965	-0.04377	38.35311	10.39043	-2.62311	0.45758	39.82214	279.18	-5.49
99/ 1/26	2451204.5	0.11640	-0.43487	-0.04652	37.32353	15.20134	-2.13185	0.45257	40.35681	284.98	-5.90
99/ 1/28	2451206.5	0.15866	-0.41454	-0.04868	35.76977	19.99379	-1.59453	0.44652	41.00939	290.94	-6.26
99/ 1/30	2451208.5	0.19882	-0.38870	-0.05019	33.65959	24.72983	-1.01134	0.43947	41.77984	297.09	-6.56
99/ 2/ 1	2451210.5	0.23619	-0.35745	-0.05100	30.95611	29.36153	-0.38293	0.43146	42.66763	303.46	-6.79
99/ 2/ 3	2451212.5	0.27009	-0.32093	-0.05106	27.61878	33.82770	0.28936	0.42255	43.67144	310.08	-6.94
99/ 2/ 5	2451214.5	0.29974	-0.27939	-0.05031	23.60539	38.04999	1.00286	0.41284	44.78863	317.01	-7.00
99/ 2/ 7	2451216.5	0.32434	-0.23316	-0.04873	18.87541	41.92827	1.75298	0.40241	46.01450	324.29	-6.95
99/ 2/ 9	2451218.5	0.34305	-0.18271	-0.04625	13.39577	45.33573	2.53223	0.39142	47.34118	331.96	-6.79
99/ 2/11	2451220.5	0.35499	-0.12867	-0.04287	7.14962	48.11414	3.32907	0.38002	48.75623	340.08	-6.48
99/ 2/13	2451222.5	0.35928	-0.07187	-0.03856	0.14949	50.07074	4.12641	0.36842	50.24071	348.69	-6.01
99/ 2/15	2451224.5	0.35507	-0.01340	-0.03335	-7.54453	50.97930	4.90010	0.35689	51.76697	357.84	-5.36
99/ 2/17	2451226.5	0.34163	0.04540	-0.02726	-15.80185	50.58889	5.61753	0.34571	53.29626	7.57	-4.52
99/ 2/19	2451228.5	0.31843	0.10287	-0.02041	-24.39630	48.64584	6.23719	0.33526	54.77682	17.90	-3.49
99/ 2/21	2451230.5	0.28527	0.15709	-0.01291	-32.98623	44.93312	6.71012	0.32592	56.14359	28.84	-2.27
99/ 2/23	2451232.5	0.24241	0.20594	-0.00498	-41.11218	39.32794	6.98445	0.31812	57.32085	40.35	-0.90
99/ 2/25	2451234.5	0.19069	0.24723	0.00313	-48.22729	31.86825	7.01367	0.31224	58.22928	52.36	0.57
99/ 2/27	2451236.5	0.13160	0.27894	0.01112	-53.77038	22.80549	6.76761	0.30863	58.79749	64.74	2.06
99/ 3/ 1	2451238.5	0.06726	0.29948	0.01866	-57.27221	12.61269	6.24279	0.30750	58.97592	77.34	3.48
99/ 3/ 3	2451240.5	0.00019	0.30789	0.02544	-58.46145	1.92719	5.46725	0.30894	58.74816	89.97	4.72
99/ 3/ 5	2451242.5	-0.06690	0.30401	0.03121	-57.32503	-8.56198	4.49680	0.31284	58.13508	102.41	5.73
99/ 3/ 7	2451244.5	-0.13144	0.28843	0.03578	-54.09590	-18.24025	3.40339	0.31898	57.18965	114.50	6.44
99/ 3/ 9	2451246.5	-0.19122	0.26236	0.03905	-49.17820	-26.65905	2.26080	0.32699	55.98492	126.09	6.86
99/ 3/11	2451248.5	-0.24458	0.22742	0.04101	-43.04776	-33.56791	1.13296	0.33649	54.60034	137.08	7.00
99/ 3/13	2451250.5	-0.29038	0.18542	0.04170	-36.16603	-38.89409	0.06776	0.34705	53.11060	147.44	6.90
99/ 3/15	2451252.5	-0.32799	0.13816	0.04120	-28.92710	-42.69453	-0.90372	0.35828	51.57923	157.16	6.60
99/ 3/17	2451254.5	-0.35719	0.08733	0.03965	-21.63718	-45.10376	-1.76480	0.36984	50.05628	166.26	6.15
99/ 3/19	2451256.5	-0.37805	0.03443	0.03717	-14.51681	-46.29133	-2.50947	0.38143	48.57903	174.80	5.59
99/ 3/21	2451258.5	-0.39085	-0.01921	0.03390	-7.71417	-46.43297	-3.13882	0.39279	47.17395	182.81	4.95
99/ 3/23	2451260.5	-0.39603	-0.07250	0.02996	-1.32176	-45.69381	-3.65809	0.40372	45.85905	190.37	4.26
99/ 3/25	2451262.5	-0.39408	-0.12449	0.02549	4.60806	-44.22037	-4.07465	0.41406	44.64614	197.53	3.53
99/ 3/27	2451264.5	-0.38557	-0.17442	0.02059	10.05029	-42.13813	-4.39660	0.42369	43.54263	204.34	2.78
99/ 3/29	2451266.5	-0.37105	-0.22164	0.01536	14.99760	-39.55209	-4.63196	0.43249	42.55291	210.85	2.04
99/ 3/31	2451268.5	-0.35111	-0.26563	0.00992	19.45332	-36.54883	-4.78819	0.44038	41.67943	217.11	1.29
99/ 4/ 2	2451270.5	-0.32630	-0.30595	0.00433	23.42656	-33.19914	-4.87197	0.44732	40.92338	223.16	0.55
99/ 4/ 4	2451272.5	-0.29717	-0.34222	-0.00131	26.92877	-29.56069	-4.88911	0.45324	40.28519	229.03	-0.17
99/ 4/ 6	2451274.5	-0.26427	-0.37414	-0.00694	29.97154	-25.68043	-4.84454	0.45811	39.76490	234.77	-0.87
99/ 4/ 8	2451276.5	-0.22811	-0.40147	-0.01248	32.56506	-21.59680	-4.74237	0.46191	39.36236	240.40	-1.55
99/ 4/10	2451278.5	-0.18921	-0.42397	-0.01788	34.71709	-17.34160	-4.58593	0.46462	39.07734	245.95	-2.21

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99/ 4/12	2451280.5	-0.14807	-0.44147	-0.02306	36.43224	-12.94165	-4.37785	0.46621	38.90964	251.46	-2.83
99/ 4/14	2451282.5	-0.10521	-0.45382	-0.02797	37.71149	-8.42023	-4.12015	0.46669	38.85913	256.95	-3.44
99/ 4/16	2451284.5	-0.06112	-0.46089	-0.03256	38.55177	-3.79841	-3.81430	0.46606	38.92577	262.45	-4.01
99/ 4/18	2451286.5	-0.01632	-0.46256	-0.03676	38.94566	0.90363	-3.46128	0.46431	39.10961	267.98	-4.54
99/ 4/20	2451288.5	0.02867	-0.45878	-0.04054	38.88109	5.66535	-3.06170	0.46145	39.41078	273.58	-5.04
99/ 4/22	2451290.5	0.07332	-0.44946	-0.04382	38.34112	10.46447	-2.61587	0.45751	39.82950	279.27	-5.50
99/ 4/24	2451292.5	0.11706	-0.43460	-0.04656	37.30371	15.27535	-2.12390	0.45249	40.36600	285.07	-5.91
99/ 4/26	2451294.5	0.15930	-0.41418	-0.04871	35.74164	20.06725	-1.58587	0.44642	41.02041	291.04	-6.26
99/ 4/28	2451296.5	0.19941	-0.38826	-0.05021	33.62262	24.80208	-1.00199	0.43935	41.79268	297.19	-6.56
99/ 4/30	2451298.5	0.23674	-0.35692	-0.05101	30.90969	29.43174	-0.37288	0.43133	42.68226	303.56	-6.79
99/ 5/ 2	2451300.5	0.27058	-0.32033	-0.05105	27.56228	33.89480	0.30006	0.42241	43.68783	310.19	-6.94
99/ 5/ 4	2451302.5	0.30016	-0.27871	-0.05030	23.53815	38.11260	1.01417	0.41268	44.80673	317.12	-7.00
99/ 5/ 6	2451304.5	0.32468	-0.23242	-0.04870	18.79686	41.98467	1.76480	0.40225	46.03422	324.40	-6.95
99/ 5/ 8	2451306.5	0.34329	-0.18190	-0.04621	13.30549	45.38374	2.54442	0.39125	47.36237	332.08	-6.78
99/ 5/10	2451308.5	0.35512	-0.12781	-0.04281	7.04754	48.15106	3.34141	0.37984	48.77866	340.21	-6.47
99/ 5/12	2451310.5	0.35928	-0.07098	-0.03849	0.03612	50.09336	4.13859	0.36824	50.26404	348.82	-6.00
99/ 5/14	2451312.5	0.35494	-0.01249	-0.03326	-7.66780	50.98388	4.91168	0.35671	51.79069	357.98	-5.35
99/ 5/16	2451314.5	0.34135	0.04630	-0.02716	-15.93233	50.57146	5.62794	0.34554	53.31965	7.72	-4.51
99/ 5/18	2451316.5	0.31800	0.10373	-0.02029	-24.52964	48.60264	6.24573	0.33511	54.79899	18.07	-3.47
99/ 5/20	2451318.5	0.28468	0.15789	-0.01279	-33.11622	44.86136	6.71599	0.32579	56.16342	29.01	-2.25
99/ 5/22	2451320.5	0.24168	0.20664	-0.00486	-41.23091	39.22680	6.98686	0.31801	57.33713	40.53	-0.88
99/ 5/24	2451322.5	0.18983	0.24780	0.00325	-48.32599	31.73990	7.01200	0.31217	58.24080	52.55	0.60
99/ 5/26	2451324.5	0.13064	0.27935	0.01124	-53.84082	22.65560	6.76159	0.30859	58.80331	64.94	2.09
99/ 5/28	2451326.5	0.06624	0.29970	0.01877	-57.30848	12.45007	6.23260	0.30751	58.97551	77.54	3.50
99/ 5/30	2451328.5	-0.00085	0.30792	0.02554	-58.46131	1.76238	5.45358	0.30898	58.74158	90.16	4.74
99/ 6/ 1	2451330.5	-0.06792	0.30385	0.03129	-57.29034	-8.71863	4.48066	0.31292	58.12292	102.60	5.74
99/ 6/ 3	2451332.5	-0.13240	0.28810	0.03584	-54.03181	-18.38040	3.38594	0.31909	57.17290	114.68	6.45
99/ 6/ 5	2451334.5	-0.19210	0.26188	0.03909	-49.09176	-26.77734	2.24314	0.32713	55.96480	126.26	6.86
99/ 6/ 7	2451336.5	-0.24535	0.22682	0.04103	-42.94634	-33.66196	1.11594	0.33664	54.57803	137.25	7.00
99/ 6/ 9	2451338.5	-0.29102	0.18473	0.04170	-36.05633	-38.96392	0.05199	0.34722	53.08718	147.59	6.90
99/ 6/11	2451340.5	-0.32851	0.13740	0.04119	-28.81450	-42.74175	-0.91788	0.35846	51.55555	157.30	6.60
99/ 6/13	2451342.5	-0.35757	0.08652	0.03962	-21.52573	-45.13080	-1.77718	0.37002	50.03304	166.40	6.15
99/ 6/15	2451344.5	-0.37830	0.03361	0.03713	-14.40930	-46.30094	-2.52005	0.38160	48.55672	174.92	5.58
99/ 6/17	2451346.5	-0.39099	-0.02004	0.03384	-7.61240	-46.42780	-3.14765	0.39296	47.15291	182.93	4.94
99/ 6/19	2451348.5	-0.39605	-0.07331	0.02990	-1.22680	-45.67629	-3.66528	0.40388	45.83953	190.49	4.25
99/ 6/21	2451350.5	-0.39400	-0.12528	0.02541	4.69564	-44.19260	-4.08031	0.41422	44.62828	197.64	3.52
99/ 6/23	2451352.5	-0.38539	-0.17517	0.02051	10.13026	-42.10188	-4.40087	0.42383	43.52652	204.44	2.77
99/ 6/25	2451354.5	-0.37079	-0.22235	0.01528	15.06994	-39.50881	-4.63495	0.43261	42.53859	210.95	2.02
99/ 6/27	2451356.5	-0.35076	-0.26628	0.00983	19.51815	-36.49973	-4.79002	0.44050	41.66693	217.20	1.28
99/ 6/29	2451358.5	-0.32588	-0.30654	0.00424	23.48404	-33.14521	-4.87273	0.44742	40.91269	223.25	0.54
99/ 7/ 1	2451360.5	-0.29669	-0.34274	-0.00140	26.97909	-29.50272	-4.88888	0.45332	40.27633	229.12	-0.18
99/ 7/ 3	2451362.5	-0.26373	-0.37460	-0.00703	30.01488	-25.61909	-4.84339	0.45818	39.75788	234.85	-0.88
99/ 7/ 5	2451364.5	-0.22753	-0.40185	-0.01257	32.60156	-21.53263	-4.74036	0.46196	39.35717	240.48	-1.56
99/ 7/ 7	2451366.5	-0.18859	-0.42428	-0.01796	34.74684	-17.27506	-4.58311	0.46465	39.07397	246.04	-2.21
99/ 7/ 9	2451368.5	-0.14742	-0.44170	-0.02314	36.45528	-12.87311	-4.37426	0.46623	38.90808	251.54	-2.84

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99/ 7/11	2451370.5	-0.10454	-0.45397	-0.02804	37.72780	-8.35003	-4.11581	0.46669	38.85936	257.03	-3.45
99/ 7/13	2451372.5	-0.06043	-0.46095	-0.03263	38.56126	-3.72688	-3.80922	0.46604	38.92777	262.53	-4.01
99/ 7/15	2451374.5	-0.01563	-0.46255	-0.03683	38.94818	0.97617	-3.45549	0.46428	39.11335	268.07	-4.55
99/ 7/17	2451376.5	0.02937	-0.45868	-0.04059	38.87643	5.73858	-3.05520	0.46140	39.41627	273.66	-5.05
99/ 7/19	2451378.5	0.07400	-0.44928	-0.04387	38.32898	10.53798	-2.60866	0.45744	39.83673	279.35	-5.50
99/ 7/21	2451380.5	0.11772	-0.43433	-0.04660	37.28373	15.34872	-2.11599	0.45240	40.37496	285.17	-5.91
99/ 7/23	2451382.5	0.15993	-0.41383	-0.04874	35.71339	20.13994	-1.57727	0.44633	41.03110	291.13	-6.27
99/ 7/25	2451384.5	0.20001	-0.38782	-0.05023	33.58558	24.87343	-0.99270	0.43924	41.80508	297.28	-6.57
99/ 7/27	2451386.5	0.23729	-0.35641	-0.05101	30.86330	29.50090	-0.36292	0.43120	42.69635	303.66	-6.79
99/ 7/29	2451388.5	0.27107	-0.31973	-0.05105	27.50593	33.96072	0.31066	0.42227	43.70358	310.29	-6.94
99/ 7/31	2451390.5	0.30058	-0.27805	-0.05028	23.47122	38.17393	1.02534	0.41253	44.82409	317.23	-7.00
99/ 8/ 2	2451392.5	0.32501	-0.23168	-0.04866	18.71884	42.03969	1.77645	0.40209	46.05308	324.52	-6.95
99/ 8/ 4	2451394.5	0.34353	-0.18111	-0.04616	13.21603	45.43028	2.55641	0.39108	47.38258	332.20	-6.78
99/ 8/ 6	2451396.5	0.35525	-0.12697	-0.04275	6.94664	48.18648	3.35352	0.37967	48.79999	340.33	-6.47
99/ 8/ 8	2451398.5	0.35929	-0.07011	-0.03842	-0.07566	50.11449	4.15050	0.36807	50.28613	348.96	-5.99
99/ 8/10	2451400.5	0.35481	-0.01160	-0.03317	-7.78900	50.98713	4.92297	0.35654	51.81305	358.13	-5.34
99/ 8/12	2451402.5	0.34108	0.04718	-0.02707	-16.06023	50.55306	5.63804	0.34539	53.34163	7.88	-4.49
99/ 8/14	2451404.5	0.31758	0.10458	-0.02019	-24.65996	48.55903	6.25395	0.33496	54.81975	18.23	-3.45
99/ 8/16	2451406.5	0.28411	0.15867	-0.01268	-33.24288	44.78997	6.72158	0.32567	56.18194	29.18	-2.23
99/ 8/18	2451408.5	0.24096	0.20732	-0.00474	-41.34624	39.12700	6.98906	0.31791	57.35225	40.71	-0.85
99/ 8/20	2451410.5	0.18899	0.24835	0.00338	-48.42152	31.61390	7.01024	0.31210	58.25140	52.73	0.62
99/ 8/22	2451412.5	0.12971	0.27974	0.01135	-53.90866	22.50899	6.75560	0.30856	58.80847	65.12	2.11
99/ 8/24	2451414.5	0.06525	0.29992	0.01887	-57.34301	12.29141	6.22259	0.30751	58.97474	77.73	3.52
99/ 8/26	2451416.5	-0.00186	0.30795	0.02563	-58.46049	1.60188	5.44020	0.30902	58.73492	90.35	4.76
99/ 8/28	2451418.5	-0.06891	0.30370	0.03137	-57.25605	-8.87104	4.46491	0.31300	58.11098	102.78	5.75
99/ 8/30	2451420.5	-0.13333	0.28778	0.03590	-53.96912	-18.51673	3.36894	0.31919	57.15667	114.86	6.46
99/ 9/ 1	2451422.5	-0.19294	0.26142	0.03913	-49.00747	-26.89247	2.22592	0.32726	55.94544	126.43	6.87
99/ 9/ 3	2451424.5	-0.24609	0.22624	0.04105	-42.84761	-33.75364	1.09935	0.33679	54.55671	137.41	7.00
99/ 9/ 5	2451426.5	-0.29165	0.18405	0.04170	-35.94955	-39.03219	0.03661	0.34738	53.06490	147.74	6.89
99/ 9/ 7	2451428.5	-0.32900	0.13666	0.04117	-28.70486	-42.78816	-0.93170	0.35863	51.53313	157.44	6.59
99/ 9/ 9	2451430.5	-0.35794	0.08574	0.03959	-21.41709	-45.15767	-1.78929	0.37019	50.01108	166.53	6.14
99/ 9/11	2451432.5	-0.37855	0.03280	0.03708	-14.30435	-46.31085	-2.53042	0.38177	48.53568	175.05	5.57
99/ 9/13	2451434.5	-0.39111	-0.02085	0.03379	-7.51291	-46.42330	-3.15633	0.39312	47.13310	183.05	4.93
99/ 9/15	2451436.5	-0.39606	-0.07411	0.02983	-1.13383	-45.65967	-3.67236	0.40404	45.82114	190.60	4.23
99/ 9/17	2451438.5	-0.39391	-0.12605	0.02534	4.78151	-44.16587	-4.08591	0.41436	44.61145	197.74	3.51
99/ 9/19	2451440.5	-0.38521	-0.17590	0.02043	10.20878	-42.06674	-4.40510	0.42396	43.51132	204.54	2.76
99/ 9/21	2451442.5	-0.37052	-0.22304	0.01520	15.14107	-39.46668	-4.63793	0.43274	42.52507	211.05	2.01
99/ 9/23	2451444.5	-0.35042	-0.26692	0.00975	19.58196	-36.45178	-4.79185	0.44061	41.65510	217.30	1.27
99/ 9/25	2451446.5	-0.32547	-0.30712	0.00416	23.54066	-33.09240	-4.87350	0.44751	40.90257	223.34	0.53
99/ 9/27	2451448.5	-0.29621	-0.34326	-0.00149	27.02868	-29.44583	-4.88867	0.45340	40.26792	229.21	-0.19
99/ 9/29	2451450.5	-0.26320	-0.37505	-0.00711	30.05759	-25.55876	-4.84227	0.45824	39.75118	234.94	-0.89
99/10/ 1	2451452.5	-0.22695	-0.40223	-0.01265	32.63751	-21.46938	-4.73839	0.46201	39.35217	240.57	-1.57
99/10/ 3	2451454.5	-0.18797	-0.42458	-0.01804	34.77610	-17.20934	-4.58031	0.46468	39.07068	246.12	-2.22
99/10/ 5	2451456.5	-0.14678	-0.44193	-0.02321	36.47788	-12.80530	-4.37068	0.46624	38.90649	251.63	-2.85
99/10/ 7	2451458.5	-0.10387	-0.45412	-0.02812	37.74371	-8.28049	-4.11148	0.46669	38.85947	257.12	-3.45

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99/10/ 9	2451460.5	-0.05975	-0.46102	-0.03269	38.57040	-3.65592	-3.80416	0.46602	38.92959	262.61	-4.02
99/10/11	2451462.5	-0.01494	-0.46253	-0.03689	38.95041	1.04823	-3.44971	0.46424	39.11692	268.15	-4.56
99/10/13	2451464.5	0.03005	-0.45857	-0.04065	38.87153	5.81139	-3.04871	0.46135	39.42160	273.75	-5.05
99/10/15	2451466.5	0.07468	-0.44909	-0.04391	38.31666	10.61118	-2.60147	0.45737	39.84384	279.44	-5.51
99/10/17	2451468.5	0.11838	-0.43406	-0.04664	37.26362	15.42188	-2.10809	0.45232	40.38386	285.26	-5.92
99/10/19	2451470.5	0.16056	-0.41347	-0.04877	35.68503	20.21254	-1.56866	0.44623	41.04180	291.22	-6.27
99/10/21	2451472.5	0.20060	-0.38738	-0.05024	33.54845	24.94480	-0.98339	0.43913	41.81756	297.38	-6.57
99/10/23	2451474.5	0.23784	-0.35589	-0.05102	30.81680	29.57022	-0.35294	0.43107	42.71063	303.75	-6.80
99/10/25	2451476.5	0.27155	-0.31914	-0.05104	27.44941	34.02693	0.32129	0.42213	43.71962	310.39	-6.94
99/10/27	2451478.5	0.30099	-0.27737	-0.05026	23.40407	38.23567	1.03657	0.41238	44.84185	317.34	-7.00
99/10/29	2451480.5	0.32534	-0.23094	-0.04863	18.64048	42.09523	1.78819	0.40193	46.07248	324.63	-6.95
99/10/31	2451482.5	0.34376	-0.18031	-0.04612	13.12607	45.47746	2.56850	0.39091	47.40349	332.32	-6.78
99/11/ 2	2451484.5	0.35537	-0.12612	-0.04269	6.84501	48.22261	3.36575	0.37950	48.82215	340.46	-6.46
99/11/ 4	2451486.5	0.35928	-0.06923	-0.03834	-0.18844	50.13635	4.16256	0.36790	50.30921	349.09	-5.98
99/11/ 6	2451488.5	0.35467	-0.01071	-0.03309	-7.91152	50.99104	4.93442	0.35637	51.83654	358.27	-5.33
99/11/ 8	2451490.5	0.34079	0.04807	-0.02697	-16.18981	50.53507	5.64832	0.34522	53.36485	8.03	-4.48
99/11/10	2451492.5	0.31714	0.10544	-0.02008	-24.79225	48.51544	6.26236	0.33481	54.84177	18.39	-3.44
99/11/12	2451494.5	0.28352	0.15946	-0.01256	-33.37170	44.71804	6.72732	0.32553	56.20169	29.35	-2.21
99/11/14	2451496.5	0.24023	0.20801	-0.00461	-41.46375	39.02596	6.99136	0.31781	57.36852	40.89	-0.83
99/11/16	2451498.5	0.18814	0.24890	0.00350	-48.51900	31.48594	7.00848	0.31203	58.26299	52.92	0.64
99/11/18	2451500.5	0.12876	0.28013	0.01147	-53.97797	22.35978	6.74953	0.30852	58.81443	65.31	2.13
99/11/20	2451502.5	0.06423	0.30013	0.01898	-57.37832	12.12971	6.21239	0.30751	58.97453	77.92	3.54
99/11/22	2451504.5	-0.00290	0.30798	0.02573	-58.45966	1.43818	5.42655	0.30906	58.72859	90.54	4.78
99/11/24	2451506.5	-0.06992	0.30354	0.03145	-57.22094	-9.02650	4.44883	0.31307	58.09910	102.97	5.76
99/11/26	2451508.5	-0.13429	0.28745	0.03596	-53.90489	-18.65572	3.35158	0.31930	57.14023	115.04	6.47
99/11/28	2451510.5	-0.19381	0.26094	0.03917	-48.92111	-27.00968	2.20835	0.32739	55.92562	126.60	6.87
99/11/30	2451512.5	-0.24684	0.22564	0.04107	-42.74645	-33.84673	1.08244	0.33694	54.53469	137.57	7.00
99/12/ 2	2451514.5	-0.29228	0.18336	0.04170	-35.84022	-39.10120	0.02095	0.34754	53.04173	147.90	6.89
99/12/ 4	2451516.5	-0.32951	0.13589	0.04115	-28.59273	-42.83468	-0.94576	0.35880	51.50970	157.59	6.59
99/12/ 6	2451518.5	-0.35832	0.08493	0.03956	-21.30615	-45.18415	-1.80158	0.37037	49.98805	166.67	6.13
99/12/ 8	2451520.5	-0.37880	0.03198	0.03704	-14.19738	-46.31999	-2.54091	0.38195	48.51353	175.17	5.56
99/12/10	2451522.5	-0.39125	-0.02167	0.03373	-7.41169	-46.41774	-3.16508	0.39329	47.11218	183.17	4.92
99/12/12	2451524.5	-0.39608	-0.07492	0.02977	-1.03943	-45.64182	-3.67947	0.40420	45.80169	190.71	4.22
99/12/14	2451526.5	-0.39383	-0.12683	0.02527	4.86854	-44.13781	-4.09150	0.41452	44.59361	197.85	3.49
99/12/16	2451528.5	-0.38502	-0.17665	0.02035	10.28821	-42.03024	-4.40930	0.42410	43.49517	204.65	2.75
99/12/18	2451530.5	-0.37025	-0.22374	0.01512	15.21290	-39.42319	-4.64086	0.43286	42.51067	211.14	2.00
99/12/20	2451532.5	-0.35007	-0.26757	0.00966	19.64629	-36.40249	-4.79361	0.44072	41.64248	217.39	1.26
99/12/22	2451534.5	-0.32505	-0.30770	0.00407	23.59765	-33.03829	-4.87419	0.44761	40.89175	223.43	0.52
99/12/24	2451536.5	-0.29574	-0.34378	-0.00158	27.07850	-29.38770	-4.88838	0.45348	40.25889	229.30	-0.20
99/12/26	2451538.5	-0.26267	-0.37550	-0.00720	30.10042	-25.49727	-4.84107	0.45831	39.74396	235.03	-0.90

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

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64/12/31	2438760.5	-0.55629	-0.46136	0.02551	22.10750	-27.12126	-1.65723	0.72316	35.02929	219.67	2.02
65/ 1/ 4	2438764.5	-0.50185	-0.52100	0.02153	24.97442	-24.45980	-1.78466	0.72371	35.00269	226.07	1.70
65/ 1/ 8	2438768.5	-0.44114	-0.57414	0.01728	27.52357	-21.49950	-1.88956	0.72425	34.97636	232.46	1.37
65/ 1/12	2438772.5	-0.37495	-0.62013	0.01281	29.72477	-18.27841	-1.97073	0.72479	34.95062	238.84	1.01
65/ 1/16	2438776.5	-0.30409	-0.65842	0.00819	31.55234	-14.83747	-2.02726	0.72530	34.92579	245.21	0.65
65/ 1/20	2438780.5	-0.22947	-0.68855	0.00347	32.98540	-11.21992	-2.05857	0.72579	34.90216	251.57	0.27
65/ 1/24	2438784.5	-0.15201	-0.71016	-0.00130	34.00798	-7.47076	-2.06439	0.72625	34.88004	257.92	-0.10
65/ 1/28	2438788.5	-0.07266	-0.72300	-0.00605	34.60916	-3.63625	-2.04472	0.72667	34.85968	264.26	-0.48
65/ 2/ 1	2438792.5	0.00757	-0.72693	-0.01073	34.78308	0.23671	-1.99990	0.72705	34.84133	270.60	-0.85
65/ 2/ 5	2438796.5	0.08772	-0.72192	-0.01527	34.52897	4.10105	-1.93055	0.72739	34.82521	276.93	-1.20
65/ 2/ 9	2438800.5	0.16678	-0.70803	-0.01963	33.85107	7.91011	-1.83758	0.72767	34.81152	283.25	-1.55
65/ 2/13	2438804.5	0.24380	-0.68545	-0.02375	32.75856	11.61807	-1.72216	0.72790	34.80041	289.58	-1.87
65/ 2/17	2438808.5	0.31783	-0.65446	-0.02757	31.26536	15.18052	-1.58572	0.72807	34.79203	295.90	-2.17
65/ 2/21	2438812.5	0.38796	-0.61545	-0.03106	29.38998	18.55485	-1.42994	0.72819	34.78646	302.23	-2.44
65/ 2/25	2438816.5	0.45334	-0.56891	-0.03416	27.15530	21.70074	-1.25669	0.72825	34.78378	308.55	-2.69
65/ 3/ 1	2438820.5	0.51317	-0.51539	-0.03685	24.58829	24.58054	-1.06808	0.72824	34.78402	314.88	-2.90
65/ 3/ 5	2438824.5	0.56672	-0.45557	-0.03909	21.71975	27.15970	-0.86635	0.72817	34.78717	321.21	-3.08
65/ 3/ 9	2438828.5	0.61332	-0.39016	-0.04085	18.58394	29.40708	-0.65393	0.72805	34.79320	327.54	-3.22
65/ 3/13	2438832.5	0.65241	-0.31997	-0.04210	15.21828	31.29533	-0.43336	0.72787	34.80204	333.87	-3.32
65/ 3/17	2438836.5	0.68349	-0.24586	-0.04284	11.66294	32.80120	-0.20728	0.72763	34.81358	340.22	-3.38
65/ 3/21	2438840.5	0.70618	-0.16873	-0.04306	7.96041	33.90575	0.02160	0.72733	34.82769	346.56	-3.39
65/ 3/25	2438844.5	0.72019	-0.08952	-0.04275	4.15510	34.59467	0.25051	0.72699	34.84421	352.91	-3.37
65/ 3/29	2438848.5	0.72533	-0.00922	-0.04190	0.29287	34.85844	0.47668	0.72660	34.86293	359.27	-3.31
65/ 4/ 2	2438852.5	0.72153	0.07120	-0.04055	-3.57948	34.69248	0.69735	0.72617	34.88363	5.64	-3.20
65/ 4/ 6	2438856.5	0.70882	0.15075	-0.03869	-7.41473	34.09731	0.90981	0.72571	34.90605	12.01	-3.06
65/ 4/10	2438860.5	0.68734	0.22842	-0.03635	-11.16573	33.07857	1.11141	0.72521	34.92994	18.38	-2.87
65/ 4/14	2438864.5	0.65733	0.30326	-0.03356	-14.78597	31.64707	1.29964	0.72470	34.95499	24.77	-2.65
65/ 4/18	2438868.5	0.61916	0.37433	-0.03036	-18.23016	29.81874	1.47212	0.72416	34.98089	31.16	-2.40
65/ 4/22	2438872.5	0.57327	0.44075	-0.02678	-21.45476	27.61451	1.62662	0.72361	35.00734	37.55	-2.12
65/ 4/26	2438876.5	0.52023	0.50165	-0.02286	-24.41857	25.06017	1.76115	0.72306	35.03398	43.96	-1.81
65/ 4/30	2438880.5	0.46068	0.55629	-0.01866	-27.08326	22.18613	1.87392	0.72252	35.06050	50.37	-1.48
65/ 5/ 4	2438884.5	0.39536	0.60394	-0.01422	-29.41396	19.02710	1.96343	0.72198	35.08656	56.79	-1.13
65/ 5/ 8	2438888.5	0.32506	0.64401	-0.00960	-31.37971	15.62174	2.02842	0.72146	35.11182	63.22	-0.76
65/ 5/12	2438892.5	0.25067	0.67596	-0.00487	-32.95399	12.01222	2.06799	0.72096	35.13596	69.65	-0.39
65/ 5/16	2438896.5	0.17312	0.69939	-0.00007	-34.11512	8.24371	2.08150	0.72049	35.15868	76.10	-0.01
65/ 5/20	2438900.5	0.09338	0.71397	0.00473	-34.84663	4.36379	2.06870	0.72006	35.17968	82.55	0.38
65/ 5/24	2438904.5	0.01246	0.71950	0.00947	-35.13759	0.42189	2.02964	0.71967	35.19869	89.01	0.75
65/ 5/28	2438908.5	-0.06863	0.71591	0.01409	-34.98282	-3.53141	1.96475	0.71933	35.21546	95.48	1.12
65/ 6/ 1	2438912.5	-0.14883	0.70321	0.01853	-34.38304	-7.44508	1.87480	0.71903	35.22978	101.95	1.48
65/ 6/ 5	2438916.5	-0.22715	0.68158	0.02273	-33.34493	-11.26834	1.76088	0.71879	35.24146	108.43	1.81
65/ 6/ 9	2438920.5	-0.30257	0.65126	0.02665	-31.88107	-14.95142	1.62442	0.71861	35.25034	114.92	2.13
65/ 6/13	2438924.5	-0.37414	0.61264	0.03022	-30.00985	-18.44624	1.46717	0.71849	35.25631	121.41	2.41
65/ 6/17	2438928.5	-0.44093	0.56621	0.03341	-27.75519	-21.70716	1.29115	0.71842	35.25930	127.91	2.67
65/ 6/21	2438932.5	-0.50210	0.51256	0.03617	-25.14622	-24.69162	1.09863	0.71842	35.25926	134.41	2.89
65/ 6/25	2438936.5	-0.55687	0.45237	0.03848	-22.21689	-27.36079	0.89213	0.71849	35.25619	140.91	3.07

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65/ 6/29	2438940.5	-0.60454	0.38641	0.04029	-19.00548	-29.68012	0.67434	0.71861	35.25015	147.41	3.21
65/ 7/ 3	2438944.5	-0.64450	0.31553	0.04159	-15.55399	-31.61984	0.44810	0.71879	35.24120	153.91	3.32
65/ 7/ 7	2438948.5	-0.67625	0.24063	0.04235	-11.90758	-33.15536	0.21635	0.71904	35.22947	160.41	3.38
65/ 7/11	2438952.5	-0.69940	0.16267	0.04258	-8.11383	-34.26761	-0.01789	0.71933	35.21511	166.91	3.39
65/ 7/15	2438956.5	-0.71366	0.08264	0.04227	-4.22211	-34.94326	-0.25159	0.71968	35.19831	173.40	3.37
65/ 7/19	2438960.5	-0.71887	0.00156	0.04142	-0.28282	-35.17485	-0.48174	0.72007	35.17928	179.88	3.30
65/ 7/23	2438964.5	-0.71497	-0.07954	0.04005	3.65330	-34.96085	-0.70541	0.72050	35.15829	186.35	3.19
65/ 7/27	2438968.5	-0.70203	-0.15963	0.03817	7.53592	-34.30559	-0.91974	0.72097	35.13559	192.81	3.03
65/ 7/31	2438972.5	-0.68023	-0.23771	0.03581	11.31575	-33.21914	-1.12205	0.72146	35.11148	199.26	2.85
65/ 8/ 4	2438976.5	-0.64987	-0.31280	0.03300	14.94525	-31.71704	-1.30981	0.72198	35.08627	205.70	2.62
65/ 8/ 8	2438980.5	-0.61133	-0.38395	0.02977	18.37919	-29.82007	-1.48072	0.72252	35.06028	212.13	2.36
65/ 8/12	2438984.5	-0.56513	-0.45029	0.02617	21.57522	-27.55384	-1.63270	0.72306	35.03384	218.55	2.07
65/ 8/16	2438988.5	-0.51186	-0.51100	0.02224	24.49438	-24.94841	-1.76393	0.72361	35.00727	224.95	1.76
65/ 8/20	2438992.5	-0.45220	-0.56533	0.01804	27.10152	-22.03780	-1.87288	0.72416	34.98092	231.34	1.43
65/ 8/24	2438996.5	-0.38691	-0.61261	0.01361	29.36567	-18.85951	-1.95827	0.72469	34.95509	237.72	1.08
65/ 8/28	2439000.5	-0.31680	-0.65229	0.00901	31.26037	-15.45400	-2.01918	0.72521	34.93013	244.10	0.71
65/ 9/ 1	2439004.5	-0.24277	-0.68388	0.00430	32.76386	-11.86415	-2.05494	0.72570	34.90632	250.46	0.34
65/ 9/ 5	2439008.5	-0.16574	-0.70700	-0.00046	33.85930	-8.13470	-2.06522	0.72617	34.88396	256.81	-0.04
65/ 9/ 9	2439012.5	-0.08666	-0.72139	-0.00522	34.53487	-4.31171	-2.05000	0.72659	34.86332	263.15	-0.41
65/ 9/13	2439016.5	-0.00650	-0.72688	-0.00992	34.78384	-0.44203	-2.00955	0.72698	34.84464	269.49	-0.78
65/ 9/17	2439020.5	0.07373	-0.72343	-0.01449	34.60454	3.42728	-1.94444	0.72732	34.82816	275.82	-1.14
65/ 9/21	2439024.5	0.15305	-0.71109	-0.01888	34.00033	7.24943	-1.85552	0.72762	34.81407	282.15	-1.49
65/ 9/25	2439028.5	0.23050	-0.69001	-0.02304	32.97953	10.97842	-1.74394	0.72786	34.80253	288.47	-1.81
65/ 9/29	2439032.5	0.30512	-0.66047	-0.02692	31.55524	14.56957	-1.61106	0.72804	34.79369	294.80	-2.12
65/10/ 3	2439036.5	0.37600	-0.62283	-0.03047	29.74519	17.97989	-1.45853	0.72816	34.78764	301.12	-2.40
65/10/ 7	2439040.5	0.44227	-0.57756	-0.03365	27.57151	21.16865	-1.28819	0.72823	34.78447	307.44	-2.65
65/10/11	2439044.5	0.50313	-0.52522	-0.03641	25.06048	24.09769	-1.10210	0.72824	34.78420	313.77	-2.87
65/10/15	2439048.5	0.55782	-0.46645	-0.03873	22.24224	26.73187	-0.90250	0.72818	34.78685	320.10	-3.05
65/10/19	2439052.5	0.60569	-0.40197	-0.04057	19.15049	29.03945	-0.69176	0.72806	34.79237	326.43	-3.19
65/10/23	2439056.5	0.64612	-0.33255	-0.04192	15.82211	30.99238	-0.47242	0.72789	34.80072	332.77	-3.30
65/10/27	2439060.5	0.67864	-0.25906	-0.04275	12.29683	32.56666	-0.24710	0.72766	34.81179	339.11	-3.37
65/10/31	2439064.5	0.70282	-0.18239	-0.04306	8.61678	33.74259	-0.01851	0.72738	34.82545	345.45	-3.39
65/11/ 4	2439068.5	0.71837	-0.10348	-0.04284	4.82606	34.50504	0.21061	0.72704	34.84154	351.80	-3.38
65/11/ 8	2439072.5	0.72507	-0.02329	-0.04209	0.97032	34.84362	0.43746	0.72666	34.85987	358.16	-3.32
65/11/12	2439076.5	0.72283	0.05718	-0.04082	-2.90379	34.75288	0.65930	0.72624	34.88022	4.52	-3.22
65/11/16	2439080.5	0.71167	0.13695	-0.03905	-6.74904	34.23246	0.87339	0.72578	34.90234	10.89	-3.08
65/11/20	2439084.5	0.69171	0.21502	-0.03679	-10.51825	33.28709	1.07708	0.72529	34.92597	17.27	-2.91
65/11/24	2439088.5	0.66317	0.29043	-0.03408	-14.16475	31.92668	1.26783	0.72478	34.95083	23.65	-2.70
65/11/28	2439092.5	0.62639	0.36222	-0.03095	-17.64300	30.16627	1.44323	0.72425	34.97660	30.04	-2.45
65/12/ 2	2439096.5	0.58182	0.42951	-0.02743	-20.90910	28.02595	1.60102	0.72370	35.00296	36.44	-2.17
65/12/ 6	2439100.5	0.52998	0.49144	-0.02356	-23.92140	25.53066	1.73918	0.72315	35.02960	42.84	-1.87
65/12/10	2439104.5	0.47152	0.54722	-0.01941	-26.64103	22.71004	1.85587	0.72261	35.05616	49.25	-1.54
65/12/14	2439108.5	0.40714	0.59614	-0.01501	-29.03249	19.59806	1.94954	0.72207	35.08233	55.67	-1.19
65/12/18	2439112.5	0.33766	0.63758	-0.01042	-31.06408	16.23275	2.01889	0.72154	35.10777	62.09	-0.83
65/12/22	2439116.5	0.26392	0.67098	-0.00570	-32.70849	12.65567	2.06295	0.72104	35.13214	68.53	-0.45

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

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65/12/26	2439120.5	0.18685	0.69592	-0.00091	-33.94316	8.91153	2.08104	0.72057	35.15514	74.97	-0.07
65/12/30	2439124.5	0.10741	0.71206	0.00390	-34.75068	5.04754	2.07284	0.72013	35.17647	81.42	0.31
66/ 1/ 3	2439128.5	0.02662	0.71919	0.00865	-35.11914	1.11286	2.03834	0.71973	35.19585	87.88	0.69
66/ 1/ 7	2439132.5	-0.05450	0.71719	0.01329	-35.04236	-2.84210	1.97792	0.71938	35.21301	94.35	1.06
66/ 1/11	2439136.5	-0.13494	0.70608	0.01777	-34.52000	-6.76631	1.89227	0.71908	35.22775	100.82	1.42
66/ 1/15	2439140.5	-0.21366	0.68599	0.02202	-33.55773	-10.60890	1.78243	0.71883	35.23985	107.30	1.76
66/ 1/19	2439144.5	-0.28966	0.65717	0.02599	-32.16711	-14.31986	1.64979	0.71864	35.24916	113.79	2.07
66/ 1/23	2439148.5	-0.36197	0.61997	0.02962	-30.36552	-17.85078	1.49603	0.71851	35.25554	120.28	2.36
66/ 1/27	2439152.5	-0.42966	0.57486	0.03288	-28.17595	-21.15554	1.32312	0.71844	35.25892	126.77	2.62
66/ 1/31	2439156.5	-0.49187	0.52243	0.03572	-25.62665	-24.19100	1.13331	0.71843	35.25924	133.27	2.85
66/ 2/ 4	2439160.5	-0.54781	0.46333	0.03811	-22.75080	-26.91765	0.92907	0.71849	35.25652	139.78	3.04
66/ 2/ 8	2439164.5	-0.59677	0.39832	0.04001	-19.58593	-29.30018	0.71305	0.71861	35.25078	146.28	3.19
66/ 2/12	2439168.5	-0.63812	0.32824	0.04140	-16.17345	-31.30795	0.48809	0.71878	35.24211	152.78	3.30
66/ 2/16	2439172.5	-0.67134	0.25398	0.04226	-12.55802	-32.91546	0.25710	0.71902	35.23064	159.28	3.37
66/ 2/20	2439176.5	-0.69602	0.17648	0.04258	-8.78684	-34.10269	0.02310	0.71931	35.21651	165.77	3.39
66/ 2/24	2439180.5	-0.71185	0.09675	0.04237	-4.90902	-34.85530	-0.21089	0.71965	35.19992	172.26	3.37
66/ 2/28	2439184.5	-0.71866	0.01578	0.04161	-0.97480	-35.16481	-0.44184	0.72003	35.18109	178.74	3.31
66/ 3/ 4	2439188.5	-0.71635	-0.06538	0.04033	2.96509	-35.02867	-0.66682	0.72046	35.16026	185.22	3.21
66/ 3/ 8	2439192.5	-0.70499	-0.14572	0.03854	6.86023	-34.45020	-0.88295	0.72092	35.13771	191.68	3.06
66/ 3/12	2439196.5	-0.68473	-0.22422	0.03626	10.66111	-33.43847	-1.08751	0.72142	35.11372	198.13	2.88
66/ 3/16	2439200.5	-0.65584	-0.29990	0.03352	14.31987	-32.00810	-1.27797	0.72194	35.08861	204.57	2.66
66/ 3/20	2439204.5	-0.61871	-0.37180	0.03037	17.79085	-30.17895	-1.45196	0.72247	35.06268	211.00	2.41
66/ 3/24	2439208.5	-0.57382	-0.43905	0.02683	21.03119	-27.97581	-1.60737	0.72301	35.03628	217.42	2.13
66/ 3/28	2439212.5	-0.52175	-0.50080	0.02296	24.00131	-25.42798	-1.74233	0.72356	35.00973	223.83	1.82
66/ 4/ 1	2439216.5	-0.46316	-0.55629	0.01880	26.66539	-22.56879	-1.85526	0.72411	34.98336	230.22	1.49
66/ 4/ 5	2439220.5	-0.39880	-0.60486	0.01440	28.99171	-19.43515	-1.94486	0.72464	34.95750	236.60	1.14
66/ 4/ 9	2439224.5	-0.32949	-0.64591	0.00983	30.95299	-16.06701	-2.01011	0.72516	34.93247	242.97	0.78
66/ 4/13	2439228.5	-0.25609	-0.67895	0.00513	32.52666	-12.50684	-2.05032	0.72566	34.90857	249.33	0.41
66/ 4/17	2439232.5	-0.17952	-0.70358	0.00037	33.69498	-8.79907	-2.06509	0.72612	34.88610	255.69	0.03
66/ 4/21	2439236.5	-0.10073	-0.71952	-0.00439	34.44524	-4.98955	-2.05435	0.72655	34.86532	262.03	-0.35
66/ 4/25	2439240.5	-0.02070	-0.72659	-0.00910	34.76979	-1.12500	-2.01831	0.72694	34.84649	268.37	-0.72
66/ 4/29	2439244.5	0.05959	-0.72471	-0.01370	34.66607	2.74753	-1.95749	0.72729	34.82983	274.70	-1.08
66/ 5/ 3	2439248.5	0.13914	-0.71393	-0.01812	34.13653	6.58117	-1.87271	0.72759	34.81553	281.03	-1.43
66/ 5/ 7	2439252.5	0.21699	-0.69437	-0.02233	33.18860	10.32976	-1.76503	0.72783	34.80377	287.35	-1.76
66/ 5/11	2439256.5	0.29217	-0.66630	-0.02626	31.83455	13.94835	-1.63580	0.72802	34.79469	293.68	-2.07
66/ 5/15	2439260.5	0.36378	-0.63006	-0.02987	30.09127	17.39363	-1.48661	0.72815	34.78840	300.00	-2.35
66/ 5/19	2439264.5	0.43092	-0.58610	-0.03312	27.98011	20.62442	-1.31928	0.72822	34.78496	306.32	-2.61
66/ 5/23	2439268.5	0.49279	-0.53496	-0.03596	25.52663	23.60206	-1.13581	0.72823	34.78442	312.65	-2.83
66/ 5/27	2439272.5	0.54862	-0.47727	-0.03835	22.76029	26.29086	-0.93842	0.72818	34.78679	318.98	-3.02
66/ 5/31	2439276.5	0.59774	-0.41374	-0.04028	19.71419	28.65841	-0.72947	0.72807	34.79203	325.31	-3.17
66/ 6/ 4	2439280.5	0.63952	-0.34513	-0.04172	16.42466	30.67598	-0.51146	0.72791	34.80010	331.65	-3.29
66/ 6/ 8	2439284.5	0.67347	-0.27229	-0.04264	12.93097	32.31881	-0.28699	0.72768	34.81089	337.99	-3.36
66/ 6/12	2439288.5	0.69914	-0.19611	-0.04304	9.27483	33.56642	-0.05877	0.72740	34.82428	344.33	-3.39
66/ 6/16	2439292.5	0.71623	-0.11752	-0.04291	5.50006	34.40281	0.17047	0.72707	34.84011	350.68	-3.38
66/ 6/20	2439296.5	0.72450	-0.03748	-0.04225	1.65208	34.81674	0.39793	0.72670	34.85819	357.04	-3.33

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66/ 6/24	2439300.5	0.72384	0.04301	-0.04108	-2.22258	34.80188	0.62086	0.72628	34.87831	3.40	-3.24
66/ 6/28	2439304.5	0.71425	0.12298	-0.03939	-6.07676	34.35693	0.83652	0.72583	34.90022	9.77	-3.11
66/ 7/ 2	2439308.5	0.69582	0.20143	-0.03722	-9.86318	33.48573	1.04224	0.72534	34.92367	16.14	-2.94
66/ 7/ 6	2439312.5	0.66876	0.27738	-0.03459	-13.53504	32.19727	1.23545	0.72483	34.94836	22.53	-2.73
66/ 7/10	2439316.5	0.63340	0.34988	-0.03152	-17.04652	30.50571	1.41372	0.72430	34.97400	28.92	-2.49
66/ 7/14	2439320.5	0.59016	0.41803	-0.02807	-20.35338	28.43024	1.57477	0.72376	35.00027	35.31	-2.22
66/ 7/18	2439324.5	0.53955	0.48096	-0.02426	-23.41352	25.99500	1.71651	0.72321	35.02684	41.71	-1.92
66/ 7/22	2439328.5	0.48220	0.53788	-0.02015	-26.18752	23.22882	1.83709	0.72266	35.05338	48.12	-1.60
66/ 7/26	2439332.5	0.41881	0.58806	-0.01579	-28.63924	20.16497	1.93489	0.72212	35.07956	54.54	-1.25
66/ 7/30	2439336.5	0.35015	0.63085	-0.01123	-30.73626	16.84079	2.00858	0.72160	35.10505	60.97	-0.89
66/ 8/ 3	2439340.5	0.27709	0.66570	-0.00653	-32.45047	13.29729	2.05712	0.72109	35.12952	67.40	-0.52
66/ 8/ 7	2439344.5	0.20053	0.69215	-0.00175	-33.75843	9.57869	2.07978	0.72062	35.15265	73.84	-0.14
66/ 8/11	2439348.5	0.12144	0.70986	0.00306	-34.64183	5.73180	2.07617	0.72017	35.17414	80.29	0.24
66/ 8/15	2439352.5	0.04081	0.71857	0.00783	-35.08776	1.80552	2.04625	0.71977	35.19372	86.75	0.62
66/ 8/19	2439356.5	-0.04033	0.71818	0.01249	-35.08904	-2.14989	1.99031	0.71942	35.21113	93.21	1.00
66/ 8/23	2439360.5	-0.12097	0.70866	0.01700	-34.64431	-6.08346	1.90899	0.71911	35.22614	99.69	1.35
66/ 8/27	2439364.5	-0.20006	0.69012	0.02130	-33.75820	-9.94423	1.80328	0.71885	35.23855	106.17	1.70
66/ 8/31	2439368.5	-0.27661	0.66280	0.02532	-32.44125	-13.68197	1.67450	0.71865	35.24820	112.65	2.02
66/ 9/ 4	2439372.5	-0.34963	0.62704	0.02902	-30.70987	-17.24795	1.52429	0.71852	35.25495	119.14	2.31
66/ 9/ 8	2439376.5	-0.41820	0.58328	0.03234	-28.58610	-20.59559	1.35457	0.71844	35.25873	125.64	2.58
66/ 9/12	2439380.5	-0.48143	0.53208	0.03526	-26.09730	-23.68119	1.16755	0.71842	35.25948	132.14	2.81
66/ 9/16	2439384.5	-0.53852	0.47410	0.03773	-23.27582	-26.46456	0.96564	0.71847	35.25719	138.64	3.01
66/ 9/20	2439388.5	-0.58875	0.41007	0.03971	-20.15850	-28.90962	0.75149	0.71858	35.25189	145.14	3.17
66/ 9/24	2439392.5	-0.63146	0.34081	0.04119	-16.78611	-30.98490	0.52788	0.71875	35.24367	151.64	3.29
66/ 9/28	2439396.5	-0.66614	0.26721	0.04215	-13.20277	-32.66398	0.29774	0.71897	35.23262	158.14	3.36
66/10/ 2	2439400.5	-0.69234	0.19021	0.04256	-9.45531	-33.92585	0.06406	0.71925	35.21889	164.64	3.39
66/10/ 6	2439404.5	-0.70974	0.11080	0.04244	-5.59254	-34.75518	-0.17014	0.71959	35.20267	171.13	3.38
66/10/10	2439408.5	-0.71813	0.02997	0.04178	-1.66457	-35.14247	-0.40183	0.71997	35.18417	177.61	3.33
66/10/14	2439412.5	-0.71742	-0.05123	0.04059	2.27792	-35.08415	-0.62805	0.72039	35.16363	184.08	3.23
66/10/18	2439416.5	-0.70763	-0.13179	0.03889	6.18441	-34.58251	-0.84592	0.72085	35.14132	190.55	3.09
66/10/22	2439420.5	-0.68891	-0.21068	0.03669	10.00519	-33.64564	-1.05269	0.72134	35.11753	197.00	2.92
66/10/26	2439424.5	-0.66151	-0.28692	0.03403	13.69207	-32.28720	-1.24577	0.72185	35.09256	203.45	2.70
66/10/30	2439428.5	-0.62579	-0.35955	0.03095	17.19896	-30.52617	-1.42279	0.72239	35.06673	209.88	2.46
66/11/ 3	2439432.5	-0.58221	-0.42767	0.02747	20.48249	-28.38651	-1.58158	0.72293	35.04037	216.30	2.18
66/11/ 7	2439436.5	-0.53135	-0.49043	0.02365	23.50248	-25.89675	-1.72024	0.72348	35.01382	222.71	1.87
66/11/11	2439440.5	-0.47386	-0.54707	0.01954	26.22241	-23.08955	-1.83712	0.72402	34.98739	229.10	1.55
66/11/15	2439444.5	-0.41045	-0.59690	0.01518	28.60985	-20.00123	-1.93087	0.72456	34.96142	235.49	1.20
66/11/19	2439448.5	-0.34195	-0.63930	0.01064	30.63672	-16.67124	-2.00044	0.72508	34.93623	241.86	0.84
66/11/23	2439452.5	-0.26920	-0.67377	0.00596	32.27959	-13.14164	-2.04506	0.72558	34.91213	248.22	0.47
66/11/27	2439456.5	-0.19311	-0.69990	0.00121	33.51990	-9.45656	-2.06430	0.72605	34.88942	254.57	0.10
66/12/ 1	2439460.5	-0.11464	-0.71738	-0.00356	34.34403	-5.66162	-2.05802	0.72649	34.86835	260.92	-0.28
66/12/ 5	2439464.5	-0.03476	-0.72601	-0.00828	34.74345	-1.80344	-2.02638	0.72689	34.84919	267.26	-0.65
66/12/ 9	2439468.5	0.04555	-0.72570	-0.01290	34.71471	2.07097	-1.96985	0.72724	34.83217	273.59	-1.02
66/12/13	2439472.5	0.12531	-0.71646	-0.01736	34.25938	5.91467	-1.88919	0.72755	34.81749	279.92	-1.37
66/12/17	2439476.5	0.20352	-0.69843	-0.02161	33.38403	9.68136	-1.78544	0.72780	34.80531	286.25	-1.70

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66/12/21	2439480.5	0.27924	-0.67183	-0.02560	32.10008	13.32581	-1.65988	0.72800	34.79580	292.57	-2.01
66/12/25	2439484.5	0.35153	-0.63699	-0.02927	30.42362	16.80442	-1.51407	0.72814	34.78905	298.89	-2.30
66/12/29	2439488.5	0.41952	-0.59435	-0.03258	28.37525	20.07560	-1.34978	0.72822	34.78515	305.22	-2.56
67/ 1/ 2	2439492.5	0.48237	-0.54442	-0.03549	25.97980	23.10022	-1.16899	0.72824	34.78414	311.54	-2.79
67/ 1/ 6	2439496.5	0.53931	-0.48783	-0.03797	23.26606	25.84203	-0.97388	0.72820	34.78604	317.87	-2.99
67/ 1/10	2439500.5	0.58965	-0.42527	-0.03998	20.26650	28.26804	-0.76678	0.72810	34.79082	324.20	-3.15
67/ 1/14	2439504.5	0.63276	-0.35749	-0.04150	17.01693	30.34884	-0.55017	0.72794	34.79843	330.53	-3.27
67/ 1/18	2439508.5	0.66811	-0.28533	-0.04252	13.55612	32.05894	-0.32665	0.72773	34.80878	336.87	-3.35
67/ 1/22	2439512.5	0.69526	-0.20967	-0.04301	9.92538	33.37710	-0.09889	0.72746	34.82174	343.22	-3.39
67/ 1/26	2439516.5	0.71387	-0.13143	-0.04297	6.16820	34.28651	0.13036	0.72714	34.83717	349.57	-3.39
67/ 1/30	2439520.5	0.72370	-0.05158	-0.04241	2.32974	34.77509	0.35833	0.72677	34.85489	355.92	-3.35
67/ 2/ 3	2439524.5	0.72461	0.02891	-0.04132	-1.54362	34.83563	0.58225	0.72636	34.87467	2.28	-3.26
67/ 2/ 7	2439528.5	0.71657	0.10904	-0.03972	-5.40479	34.46593	0.79938	0.72591	34.89629	8.65	-3.14
67/ 2/11	2439532.5	0.69968	0.18783	-0.03763	-9.20648	33.66894	1.00702	0.72543	34.91949	15.03	-2.97
67/ 2/15	2439536.5	0.67412	0.26428	-0.03508	-12.90175	32.45274	1.20261	0.72492	34.94398	21.41	-2.77
67/ 2/19	2439540.5	0.64019	0.33746	-0.03209	-16.44459	30.83058	1.38366	0.72439	34.96947	27.79	-2.54
67/ 2/23	2439544.5	0.59829	0.40643	-0.02870	-19.79042	28.82080	1.54788	0.72385	34.99564	34.19	-2.27
67/ 2/27	2439548.5	0.54893	0.47034	-0.02495	-22.89673	26.44666	1.69314	0.72330	35.02217	40.59	-1.98
67/ 3/ 3	2439552.5	0.49271	0.52837	-0.02089	-25.72361	23.73619	1.81755	0.72276	35.04874	47.00	-1.66
67/ 3/ 7	2439556.5	0.43032	0.57978	-0.01657	-28.23427	20.72191	1.91945	0.72221	35.07500	53.42	-1.31
67/ 3/11	2439560.5	0.36253	0.62390	-0.01204	-30.39563	17.44047	1.99745	0.72169	35.10063	59.84	-0.96
67/ 3/15	2439564.5	0.29018	0.66018	-0.00736	-32.17878	13.93228	2.05045	0.72118	35.12530	66.27	-0.58
67/ 3/19	2439568.5	0.21416	0.68814	-0.00259	-33.55943	10.24102	2.07768	0.72070	35.14869	72.71	-0.21
67/ 3/23	2439572.5	0.13544	0.70739	0.00222	-34.51834	6.41311	2.07869	0.72025	35.17051	79.16	0.18
67/ 3/27	2439576.5	0.05501	0.71770	0.00700	-35.04164	2.49710	2.05337	0.71984	35.19046	85.62	0.56
67/ 3/31	2439580.5	-0.02612	0.71890	0.01169	-35.12112	-1.45692	2.00194	0.71947	35.20829	92.08	0.93
67/ 4/ 4	2439584.5	-0.10692	0.71098	0.01623	-34.75441	-5.39806	1.92501	0.71915	35.22376	98.55	1.29
67/ 4/ 8	2439588.5	-0.18635	0.69401	0.02056	-33.94506	-9.27530	1.82349	0.71889	35.23667	105.03	1.64
67/ 4/12	2439592.5	-0.26342	0.66821	0.02463	-32.70259	-13.03824	1.69864	0.71868	35.24685	111.52	1.96
67/ 4/16	2439596.5	-0.33713	0.63389	0.02839	-31.04239	-16.63782	1.55205	0.71853	35.25416	118.01	2.26
67/ 4/20	2439600.5	-0.40654	0.59150	0.03179	-28.98551	-20.02703	1.38560	0.71844	35.25850	124.50	2.54
67/ 4/24	2439604.5	-0.47077	0.54156	0.03478	-26.55844	-23.16162	1.20143	0.71841	35.25982	131.00	2.77
67/ 4/28	2439608.5	-0.52899	0.48471	0.03733	-23.79266	-26.00074	1.00195	0.71845	35.25810	137.50	2.98
67/ 5/ 2	2439612.5	-0.58047	0.42168	0.03940	-20.72427	-28.50754	0.78974	0.71855	35.25336	144.00	3.14
67/ 5/ 6	2439616.5	-0.62454	0.35328	0.04097	-17.39339	-30.64971	0.56758	0.71870	35.24566	150.50	3.27
67/ 5/10	2439620.5	-0.66066	0.28037	0.04202	-13.84361	-32.39990	0.33836	0.71892	35.23512	157.00	3.35
67/ 5/14	2439624.5	-0.68837	0.20390	0.04253	-10.12132	-33.73614	0.10508	0.71919	35.22186	163.50	3.39
67/ 5/18	2439628.5	-0.70733	0.12483	0.04250	-6.27506	-34.64209	-0.12926	0.71952	35.20607	169.99	3.39
67/ 5/22	2439632.5	-0.71731	0.04418	0.04193	-2.35475	-35.10722	-0.36161	0.71989	35.18796	176.48	3.34
67/ 5/26	2439636.5	-0.71819	-0.03703	0.04083	1.58898	-35.12690	-0.58900	0.72030	35.16775	182.95	3.25
67/ 5/30	2439640.5	-0.70999	-0.11778	0.03922	5.50549	-34.70242	-0.80854	0.72076	35.14573	189.42	3.12
67/ 6/ 3	2439644.5	-0.69281	-0.19703	0.03711	9.34491	-33.84086	-1.01744	0.72124	35.12216	195.88	2.95
67/ 6/ 7	2439648.5	-0.66691	-0.27381	0.03453	13.05872	-32.55492	-1.21310	0.72175	35.09736	202.32	2.74
67/ 6/11	2439652.5	-0.63261	-0.34714	0.03151	16.60042	-30.86269	-1.39309	0.72228	35.07164	208.76	2.50
67/ 6/15	2439656.5	-0.59037	-0.41611	0.02811	19.92611	-28.78728	-1.55522	0.72283	35.04534	215.18	2.23

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67/ 6/19	2439660.5	-0.54074	-0.47987	0.02434	22.99503	-26.35644	-1.69753	0.72337	35.01878	221.59	1.93
67/ 6/23	2439664.5	-0.48435	-0.53764	0.02028	25.76999	-23.60216	-1.81833	0.72392	34.99229	227.98	1.61
67/ 6/27	2439668.5	-0.42193	-0.58870	0.01596	28.21779	-20.56016	-1.91621	0.72446	34.96621	234.37	1.26
67/ 7/ 1	2439672.5	-0.35425	-0.63244	0.01144	30.30960	-17.26938	-1.99006	0.72499	34.94086	240.75	0.90
67/ 7/ 5	2439676.5	-0.28218	-0.66833	0.00678	32.02114	-13.77147	-2.03909	0.72549	34.91654	247.11	0.54
67/ 7/ 9	2439680.5	-0.20661	-0.69594	0.00204	33.33299	-10.11023	-2.06278	0.72597	34.89355	253.46	0.16
67/ 7/13	2439684.5	-0.12849	-0.71495	-0.00273	34.23067	-6.33108	-2.06095	0.72641	34.87218	259.81	-0.22
67/ 7/17	2439688.5	-0.04878	-0.72514	-0.00746	34.70475	-2.48049	-2.03372	0.72682	34.85267	266.15	-0.59
67/ 7/21	2439692.5	0.03153	-0.72639	-0.01210	34.75089	1.39455	-1.98149	0.72718	34.83526	272.49	-0.95
67/ 7/25	2439696.5	0.11145	-0.71871	-0.01660	34.36979	5.24704	-1.90498	0.72749	34.82015	278.81	-1.31
67/ 7/29	2439700.5	0.19001	-0.70220	-0.02089	33.56717	9.03053	-1.80517	0.72776	34.80753	285.14	-1.64
67/ 8/ 2	2439704.5	0.26623	-0.67708	-0.02492	32.35361	12.69958	-1.68331	0.72796	34.79754	291.46	-1.96
67/ 8/ 6	2439708.5	0.33919	-0.64365	-0.02865	30.74439	16.21026	-1.54091	0.72812	34.79029	297.79	-2.25
67/ 8/10	2439712.5	0.40799	-0.60233	-0.03203	28.75936	19.52058	-1.37971	0.72821	34.78588	304.11	-2.52
67/ 8/14	2439716.5	0.47179	-0.55364	-0.03501	26.42261	22.59098	-1.20164	0.72824	34.78435	310.44	-2.76
67/ 8/18	2439720.5	0.52982	-0.49817	-0.03757	23.76229	25.38466	-1.00887	0.72821	34.78571	316.76	-2.96
67/ 8/22	2439724.5	0.58136	-0.43660	-0.03966	20.81025	27.86804	-0.80368	0.72813	34.78994	323.09	-3.12
67/ 8/26	2439728.5	0.62577	-0.36967	-0.04127	17.60174	30.01105	-0.58854	0.72798	34.79699	329.43	-3.25
67/ 8/30	2439732.5	0.66252	-0.29822	-0.04238	14.17503	31.78752	-0.36603	0.72778	34.80678	335.77	-3.34
67/ 9/ 3	2439736.5	0.69113	-0.22310	-0.04296	10.57105	33.17543	-0.13882	0.72752	34.81919	342.11	-3.39
67/ 9/ 7	2439740.5	0.71126	-0.14525	-0.04302	6.83291	34.15721	0.09037	0.72721	34.83406	348.46	-3.39
67/ 9/11	2439744.5	0.72263	-0.06561	-0.04254	3.00553	34.71994	0.31876	0.72685	34.85124	354.81	-3.36
67/ 9/15	2439748.5	0.72511	0.01484	-0.04155	-0.86489	34.85555	0.54357	0.72645	34.87051	1.17	-3.28
67/ 9/19	2439752.5	0.71864	0.09511	-0.04004	-4.73135	34.56098	0.76206	0.72601	34.89166	7.54	-3.16
67/ 9/23	2439756.5	0.70329	0.17420	-0.03803	-8.54657	33.83829	0.97154	0.72554	34.91443	13.91	-3.00
67/ 9/27	2439760.5	0.67923	0.25113	-0.03556	-12.26352	32.69466	1.16939	0.72504	34.93855	20.29	-2.81
67/10/ 1	2439764.5	0.64674	0.32494	-0.03264	-15.83599	31.14245	1.35313	0.72452	34.96372	26.68	-2.58
67/10/ 5	2439768.5	0.60621	0.39472	-0.02932	-19.21914	29.19912	1.52043	0.72398	34.98965	33.07	-2.32
67/10/ 9	2439772.5	0.55812	0.45957	-0.02563	-22.37006	26.88709	1.66913	0.72343	35.01601	39.47	-2.03
67/10/13	2439776.5	0.50306	0.51868	-0.02162	-25.24836	24.23356	1.79729	0.72289	35.04248	45.88	-1.71
67/10/17	2439780.5	0.44170	0.57130	-0.01734	-27.81670	21.27028	1.90321	0.72234	35.06873	52.29	-1.38
67/10/21	2439784.5	0.37480	0.61675	-0.01285	-30.04131	18.03320	1.98546	0.72181	35.09442	58.71	-1.02
67/10/25	2439788.5	0.30319	0.65444	-0.00819	-31.89252	14.56208	2.04289	0.72130	35.11924	65.14	-0.65
67/10/29	2439792.5	0.22775	0.68388	-0.00343	-33.34524	10.90005	2.07466	0.72082	35.14286	71.58	-0.27
67/11/ 2	2439796.5	0.14944	0.70469	0.00138	-34.37930	7.09306	2.08028	0.72036	35.16498	78.03	0.11
67/11/ 6	2439800.5	0.06924	0.71658	0.00616	-34.97989	3.18932	2.05955	0.71994	35.18531	84.48	0.49
67/11/10	2439804.5	-0.01184	0.71939	0.01087	-35.13777	-0.76132	2.01268	0.71957	35.20360	90.94	0.87
67/11/14	2439808.5	-0.09276	0.71306	0.01544	-34.84952	-4.70808	1.94016	0.71924	35.21959	97.41	1.23
67/11/18	2439812.5	-0.17251	0.69768	0.01982	-34.11766	-8.59994	1.84288	0.71896	35.23308	103.89	1.58
67/11/22	2439816.5	-0.25006	0.67341	0.02394	-32.95065	-12.38634	1.72203	0.71874	35.24389	110.37	1.91
67/11/26	2439820.5	-0.32443	0.64057	0.02776	-31.36282	-16.01796	1.57914	0.71858	35.25188	116.86	2.21
67/11/30	2439824.5	-0.39466	0.59956	0.03122	-29.37425	-19.44737	1.41604	0.71847	35.25694	123.36	2.49
67/12/ 4	2439828.5	-0.45986	0.55090	0.03429	-27.01045	-22.62979	1.23483	0.71843	35.25899	129.85	2.74
67/12/ 8	2439832.5	-0.51919	0.49522	0.03691	-24.30205	-25.52374	1.03786	0.71845	35.25802	136.35	2.95
67/12/12	2439836.5	-0.57191	0.43323	0.03907	-21.28433	-28.09161	0.82770	0.71853	35.25403	142.86	3.12

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67/12/16	2439840.5	-0.61733	0.36571	0.04073	-17.99676	-30.30024	0.60709	0.71868	35.24708	149.36	3.25
67/12/20	2439844.5	-0.65488	0.29353	0.04187	-14.48233	-32.12137	0.37890	0.71888	35.23725	155.86	3.34
67/12/24	2439848.5	-0.68410	0.21761	0.04248	-10.78699	-33.53205	0.14611	0.71913	35.22469	162.35	3.39
67/12/28	2439852.5	-0.70462	0.13893	0.04254	-6.95893	-34.51489	-0.08826	0.71945	35.20954	168.85	3.39
68/ 1/ 1	2439856.5	-0.71619	0.05848	0.04207	-3.04790	-35.05832	-0.32118	0.71981	35.19203	175.33	3.35
68/ 1/ 5	2439860.5	-0.71868	-0.02271	0.04106	0.89555	-35.15666	-0.54966	0.72021	35.17236	181.81	3.27
68/ 1/ 9	2439864.5	-0.71207	-0.10362	0.03954	4.82072	-34.81014	-0.77079	0.72065	35.15081	188.28	3.15
68/ 1/13	2439868.5	-0.69646	-0.18321	0.03751	8.67754	-34.02482	-0.98176	0.72113	35.12765	194.74	2.98
68/ 1/17	2439872.5	-0.67206	-0.26049	0.03501	12.41719	-32.81241	-1.17994	0.72163	35.10318	201.19	2.78
68/ 1/21	2439876.5	-0.63921	-0.33450	0.03207	15.99275	-31.19008	-1.36286	0.72216	35.07772	207.62	2.55
68/ 1/25	2439880.5	-0.59833	-0.40430	0.02873	19.35982	-29.18006	-1.52828	0.72270	35.05159	214.05	2.28
68/ 1/29	2439884.5	-0.54996	-0.46904	0.02502	22.47700	-26.80934	-1.67420	0.72324	35.02512	220.46	1.98
68/ 2/ 2	2439888.5	-0.49470	-0.52792	0.02101	25.30645	-24.10919	-1.79888	0.72379	34.99865	226.86	1.66
68/ 2/ 6	2439892.5	-0.43328	-0.58021	0.01673	27.81422	-21.11472	-1.90087	0.72433	34.97250	233.25	1.32
68/ 2/10	2439896.5	-0.36646	-0.62528	0.01224	29.97067	-17.86436	-1.97900	0.72486	34.94700	239.63	0.97
68/ 2/14	2439900.5	-0.29509	-0.66258	0.00761	31.75070	-14.39933	-2.03241	0.72537	34.92246	245.99	0.60
68/ 2/18	2439904.5	-0.22007	-0.69168	0.00287	33.13401	-10.76311	-2.06055	0.72585	34.89918	252.35	0.23
68/ 2/22	2439908.5	-0.14232	-0.71222	-0.00189	34.10524	-7.00091	-2.06318	0.72630	34.87745	258.70	-0.15
68/ 2/26	2439912.5	-0.06282	-0.72396	-0.00664	34.65406	-3.15905	-2.04035	0.72671	34.85752	265.04	-0.52
68/ 3/ 1	2439916.5	0.01746	-0.72679	-0.01130	34.77525	0.71549	-1.99244	0.72708	34.83963	271.38	-0.89
68/ 3/ 5	2439920.5	0.09753	-0.72067	-0.01583	34.46865	4.57567	-1.92009	0.72741	34.82400	277.71	-1.25
68/ 3/ 9	2439924.5	0.17640	-0.70569	-0.02016	33.73909	8.37489	-1.82425	0.72768	34.81081	284.03	-1.59
68/ 3/13	2439928.5	0.25310	-0.68205	-0.02424	32.59632	12.06749	-1.70613	0.72790	34.80022	290.36	-1.91
68/ 3/17	2439932.5	0.32669	-0.65005	-0.02802	31.05484	15.60923	-1.56718	0.72807	34.79234	296.68	-2.21
68/ 3/21	2439936.5	0.39629	-0.61008	-0.03146	29.13371	18.95775	-1.40911	0.72817	34.78728	303.01	-2.48
68/ 3/25	2439940.5	0.46103	-0.56264	-0.03452	26.85633	22.07301	-1.23382	0.72822	34.78509	309.33	-2.72
68/ 3/29	2439944.5	0.52012	-0.50831	-0.03715	24.25016	24.91773	-1.04344	0.72820	34.78580	315.66	-2.92
68/ 4/ 2	2439948.5	0.57284	-0.44775	-0.03933	21.34643	27.45771	-0.84024	0.72813	34.78939	321.99	-3.10
68/ 4/ 6	2439952.5	0.61855	-0.38170	-0.04103	18.17985	29.66227	-0.62665	0.72800	34.79583	328.32	-3.23
68/ 4/10	2439956.5	0.65667	-0.31098	-0.04222	14.78820	31.50454	-0.40524	0.72781	34.80504	334.66	-3.33
68/ 4/14	2439960.5	0.68673	-0.23644	-0.04290	11.21196	32.96176	-0.17865	0.72756	34.81691	341.00	-3.38
68/ 4/18	2439964.5	0.70836	-0.15899	-0.04304	7.49393	34.01556	0.05039	0.72726	34.83130	347.35	-3.39
68/ 4/22	2439968.5	0.72128	-0.07959	-0.04266	3.67872	34.65220	0.27911	0.72691	34.84804	353.70	-3.36
68/ 4/26	2439972.5	0.72532	0.00079	-0.04176	-0.18764	34.86276	0.50474	0.72652	34.86692	0.06	-3.29
68/ 4/30	2439976.5	0.72041	0.08115	-0.04034	-4.05825	34.64332	0.72453	0.72609	34.88773	6.43	-3.18
68/ 5/ 4	2439980.5	0.70660	0.16052	-0.03842	-7.88586	33.99501	0.93576	0.72562	34.91021	12.80	-3.03
68/ 5/ 8	2439984.5	0.68404	0.23790	-0.03602	-11.62334	32.92414	1.13581	0.72513	34.93409	19.18	-2.85
68/ 5/12	2439988.5	0.65300	0.31232	-0.03318	-15.22432	31.44217	1.32218	0.72461	34.95909	25.56	-2.62
68/ 5/16	2439992.5	0.61384	0.38287	-0.02992	-18.64366	29.56567	1.49250	0.72408	34.98489	31.95	-2.37
68/ 5/20	2439996.5	0.56704	0.44864	-0.02630	-21.83810	27.31621	1.64459	0.72353	35.01118	38.35	-2.08
68/ 5/24	2440000.5	0.51315	0.50881	-0.02234	-24.76675	24.72019	1.77646	0.72299	35.03763	44.76	-1.77
68/ 5/28	2440004.5	0.45284	0.56261	-0.01811	-27.39172	21.80857	1.88637	0.72244	35.06392	51.17	-1.44
68/ 6/ 1	2440008.5	0.38685	0.60936	-0.01364	-29.67858	18.61660	1.97283	0.72191	35.08971	57.59	-1.08
68/ 6/ 5	2440012.5	0.31600	0.64844	-0.00901	-31.59692	15.18340	2.03466	0.72140	35.11468	64.02	-0.72
68/ 6/ 9	2440016.5	0.24116	0.67936	-0.00426	-33.12080	11.55155	2.07096	0.72091	35.13850	70.46	-0.34

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68/ 6/13	2440020.5	0.16329	0.70170	0.00054	-34.22919	7.76655	2.08116	0.72045	35.16088	76.90	0.04
68/ 6/17	2440024.5	0.08335	0.71516	0.00533	-34.90631	3.87626	2.06504	0.72002	35.18153	83.35	0.42
68/ 6/21	2440028.5	0.00235	0.71956	0.01006	-35.14194	-0.06973	2.02270	0.71964	35.20017	89.81	0.80
68/ 6/25	2440032.5	-0.07868	0.71483	0.01466	-34.93164	-4.02075	1.95461	0.71930	35.21657	96.28	1.17
68/ 6/29	2440036.5	-0.15871	0.70102	0.01907	-34.27689	-7.92577	1.86158	0.71902	35.23050	102.76	1.52
68/ 7/ 3	2440040.5	-0.23671	0.67829	0.02324	-33.18509	-11.73411	1.74475	0.71878	35.24179	109.24	1.85
68/ 7/ 7	2440044.5	-0.31171	0.64692	0.02712	-31.66958	-15.39616	1.60559	0.71861	35.25028	115.73	2.16
68/ 7/11	2440048.5	-0.38273	0.60730	0.03064	-29.74944	-18.86415	1.44588	0.71850	35.25586	122.22	2.44
68/ 7/15	2440052.5	-0.44887	0.55994	0.03378	-27.44924	-22.09278	1.26767	0.71844	35.25846	128.72	2.70
68/ 7/19	2440056.5	-0.50928	0.50544	0.03649	-24.79876	-25.03994	1.07329	0.71845	35.25803	135.22	2.91
68/ 7/23	2440060.5	-0.56320	0.44450	0.03873	-21.83250	-27.66731	0.86524	0.71852	35.25459	141.72	3.09
68/ 7/27	2440064.5	-0.60994	0.37788	0.04048	-18.58920	-29.94091	0.64626	0.71865	35.24818	148.22	3.23
68/ 7/31	2440068.5	-0.64891	0.30645	0.04171	-15.11131	-31.83161	0.41919	0.71885	35.23888	154.72	3.33
68/ 8/ 4	2440072.5	-0.67962	0.23112	0.04241	-11.44429	-33.31549	0.18700	0.71909	35.22682	161.22	3.38
68/ 8/ 8	2440076.5	-0.70168	0.15285	0.04257	-7.63599	-34.37418	-0.04731	0.71939	35.21214	167.71	3.39
68/ 8/12	2440080.5	-0.71483	0.07264	0.04219	-3.73592	-34.99508	-0.28069	0.71975	35.19505	174.20	3.36
68/ 8/16	2440084.5	-0.71891	-0.00849	0.04128	0.20544	-35.17147	-0.51016	0.72014	35.17577	180.68	3.29
68/ 8/20	2440088.5	-0.71388	-0.08952	0.03984	4.13738	-34.90255	-0.73277	0.72058	35.15455	187.15	3.17
68/ 8/24	2440092.5	-0.69984	-0.16942	0.03790	8.00966	-34.19336	-0.94572	0.72105	35.13168	193.61	3.01
68/ 8/28	2440096.5	-0.67696	-0.24718	0.03548	11.77320	-33.05464	-1.14631	0.72155	35.10743	200.06	2.82
68/ 9/ 1	2440100.5	-0.64556	-0.32182	0.03262	15.38071	-31.50262	-1.33206	0.72207	35.08213	206.50	2.59
68/ 9/ 5	2440104.5	-0.60605	-0.39243	0.02934	18.78731	-29.55868	-1.50069	0.72260	35.05610	212.92	2.33
68/ 9/ 9	2440108.5	-0.55894	-0.45811	0.02570	21.95103	-27.24899	-1.65015	0.72315	35.02967	219.34	2.04
68/ 9/13	2440112.5	-0.50485	-0.51807	0.02173	24.83338	-24.60410	-1.77866	0.72370	35.00318	225.74	1.72
68/ 9/17	2440116.5	-0.44445	-0.57156	0.01750	27.39971	-21.65850	-1.88471	0.72424	34.97695	232.13	1.38
68/ 9/21	2440120.5	-0.37852	-0.61794	0.01304	29.61959	-18.45006	-1.96709	0.72477	34.95131	238.51	1.03
68/ 9/25	2440124.5	-0.30788	-0.65664	0.00843	31.46710	-15.01956	-2.02487	0.72528	34.92658	244.88	0.67
68/ 9/29	2440128.5	-0.23343	-0.68719	0.00371	32.92111	-11.41012	-2.05746	0.72577	34.90306	251.24	0.29
68/10/ 3	2440132.5	-0.15609	-0.70925	-0.00106	33.96536	-7.66667	-2.06455	0.72622	34.88103	257.59	-0.08
68/10/ 7	2440136.5	-0.07682	-0.72255	-0.00581	34.58867	-3.83540	-2.04616	0.72664	34.86077	263.93	-0.46
68/10/11	2440140.5	0.00339	-0.72694	-0.01050	34.78489	0.03680	-2.00260	0.72702	34.84251	270.27	-0.83
68/10/15	2440144.5	0.08356	-0.72238	-0.01505	34.55299	3.90288	-1.93447	0.72736	34.82648	276.60	-1.19
68/10/19	2440148.5	0.16271	-0.70895	-0.01941	33.89692	7.71610	-1.84266	0.72764	34.81286	282.93	-1.53
68/10/23	2440152.5	0.23986	-0.68681	-0.02354	32.82560	11.43062	-1.72833	0.72787	34.80181	289.25	-1.85
68/10/27	2440156.5	0.31407	-0.65624	-0.02738	31.35269	15.00190	-1.59291	0.72804	34.79347	295.58	-2.16
68/10/31	2440160.5	0.38443	-0.61764	-0.03089	29.49648	18.38723	-1.43806	0.72816	34.78794	301.90	-2.43
68/11/ 4	2440164.5	0.45007	-0.57146	-0.03401	27.27961	21.54614	-1.26564	0.72821	34.78527	308.22	-2.68
68/11/ 8	2440168.5	0.51021	-0.51829	-0.03672	24.72884	24.44082	-1.07773	0.72821	34.78550	314.55	-2.89
68/11/12	2440172.5	0.56410	-0.45877	-0.03898	21.87480	27.03652	-0.87660	0.72814	34.78863	320.88	-3.07
68/11/16	2440176.5	0.61107	-0.39363	-0.04077	18.75157	29.30191	-0.66465	0.72802	34.79461	327.21	-3.21
68/11/20	2440180.5	0.65056	-0.32366	-0.04205	15.39644	31.20941	-0.44441	0.72784	34.80338	333.55	-3.31
68/11/24	2440184.5	0.68206	-0.24972	-0.04282	11.84944	32.73553	-0.21853	0.72760	34.81483	339.89	-3.37
68/11/28	2440188.5	0.70519	-0.17272	-0.04306	8.15300	33.86112	0.01028	0.72731	34.82882	346.24	-3.39
68/12/ 2	2440192.5	0.71965	-0.09359	-0.04277	4.35145	34.57160	0.23926	0.72697	34.84520	352.59	-3.37
68/12/ 6	2440196.5	0.72525	-0.01331	-0.04195	0.49060	34.85720	0.46564	0.72658	34.86376	358.95	-3.31

1.2 1 A.U.=149,599,000 KM.

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68/12/10	2440200.5	0.72191	0.06713	-0.04062	-3.38277	34.71309	0.68665	0.72616	34.88428	5.31	-3.21
68/12/14	2440204.5	0.70965	0.14674	-0.03879	-7.22141	34.13953	0.89957	0.72570	34.90652	11.68	-3.06
68/12/18	2440208.5	0.68860	0.22454	-0.03647	-10.97814	33.14191	1.10177	0.72521	34.93021	18.06	-2.88
68/12/22	2440212.5	0.65902	0.29955	-0.03371	-14.60640	31.73079	1.29072	0.72469	34.95505	24.44	-2.67
68/12/26	2440216.5	0.62125	0.37084	-0.03052	-18.06080	29.92186	1.46401	0.72416	34.98076	30.83	-2.42
68/12/30	2440220.5	0.57574	0.43751	-0.02696	-21.29770	27.73581	1.61944	0.72362	35.00700	37.23	-2.13
69/ 1/ 3	2440224.5	0.52305	0.49872	-0.02305	-24.27576	25.19823	1.75498	0.72307	35.03346	43.64	-1.83
69/ 1/ 7	2440228.5	0.46381	0.55369	-0.01886	-26.95651	22.33929	1.86884	0.72253	35.05980	50.05	-1.50
69/ 1/11	2440232.5	0.39876	0.60171	-0.01444	-29.30487	19.19352	1.95950	0.72199	35.08570	56.47	-1.15
69/ 1/15	2440236.5	0.32869	0.64218	-0.00983	-31.28970	15.79942	2.02571	0.72147	35.11083	62.89	-0.78
69/ 1/19	2440240.5	0.25449	0.67455	-0.00510	-32.88424	12.19898	2.06652	0.72098	35.13487	69.33	-0.41
69/ 1/23	2440244.5	0.17707	0.69842	-0.00030	-34.06658	8.43723	2.08130	0.72051	35.15751	75.77	-0.02
69/ 1/27	2440248.5	0.09742	0.71345	0.00450	-34.81998	4.56169	2.06977	0.72008	35.17846	82.22	0.36
69/ 1/31	2440252.5	0.01653	0.71944	0.00924	-35.13325	0.62169	2.03199	0.71969	35.19745	88.68	0.74
69/ 2/ 4	2440256.5	-0.06457	0.71631	0.01387	-35.00091	-3.33224	1.96834	0.71935	35.21423	95.15	1.10
69/ 2/ 8	2440260.5	-0.14484	0.70408	0.01832	-34.42342	-7.24907	1.87959	0.71905	35.22859	101.62	1.46
69/ 2/12	2440264.5	-0.22328	0.68288	0.02253	-33.40714	-11.07800	1.76681	0.71881	35.24033	108.11	1.80
69/ 2/16	2440268.5	-0.29887	0.65300	0.02646	-31.96439	-14.76920	1.63142	0.71863	35.24930	114.59	2.11
69/ 2/20	2440272.5	-0.37065	0.61479	0.03006	-30.11326	-18.27450	1.47516	0.71851	35.25538	121.09	2.40
69/ 2/24	2440276.5	-0.43770	0.56874	0.03326	-27.87739	-21.54813	1.30001	0.71844	35.25848	127.58	2.65
69/ 2/28	2440280.5	-0.49918	0.51544	0.03605	-25.28568	-24.54737	1.10827	0.71844	35.25858	134.08	2.88
69/ 3/ 4	2440284.5	-0.55429	0.45557	0.03837	-22.37184	-27.23320	0.90241	0.71850	35.25565	140.58	3.06
69/ 3/ 8	2440288.5	-0.60233	0.38988	0.04021	-19.17394	-29.57085	0.68513	0.71862	35.24975	147.09	3.21
69/ 3/12	2440292.5	-0.64269	0.31923	0.04153	-15.73379	-31.53031	0.45926	0.71881	35.24093	153.59	3.31
69/ 3/16	2440296.5	-0.67487	0.24451	0.04233	-12.09641	-33.08672	0.22774	0.71904	35.22933	160.08	3.37
69/ 3/20	2440300.5	-0.69846	0.16668	0.04258	-8.30927	-34.22073	-0.00642	0.71934	35.21509	166.58	3.39
69/ 3/24	2440304.5	-0.71318	0.08674	0.04230	-4.42166	-34.91873	-0.24019	0.71968	35.19838	173.07	3.37
69/ 3/28	2440308.5	-0.71885	0.00569	0.04148	-0.48393	-35.17296	-0.47056	0.72007	35.17943	179.55	3.30
69/ 4/ 1	2440312.5	-0.71542	-0.07543	0.04013	3.45319	-34.98160	-0.69458	0.72050	35.15848	186.02	3.19
69/ 4/ 5	2440316.5	-0.70294	-0.15560	0.03827	7.33933	-34.34868	-0.90941	0.72097	35.13580	192.48	3.04
69/ 4/ 9	2440320.5	-0.68159	-0.23380	0.03594	11.12516	-33.28398	-1.11235	0.72147	35.11167	198.93	2.86
69/ 4/13	2440324.5	-0.65165	-0.30906	0.03315	14.76303	-31.80278	-1.30086	0.72199	35.08641	205.37	2.63
69/ 4/17	2440328.5	-0.61353	-0.38044	0.02994	18.20762	-29.92560	-1.47262	0.72253	35.06034	211.80	2.37
69/ 4/21	2440332.5	-0.56771	-0.44704	0.02636	21.41642	-27.67781	-1.62556	0.72307	35.03379	218.22	2.09
69/ 4/25	2440336.5	-0.51479	-0.50806	0.02244	24.35030	-25.08925	-1.75783	0.72362	35.00711	224.62	1.78
69/ 4/29	2440340.5	-0.45544	-0.56273	0.01825	26.97394	-22.19373	-1.86788	0.72417	34.98063	231.02	1.44
69/ 5/ 3	2440344.5	-0.39042	-0.61039	0.01383	29.25615	-19.02860	-1.95445	0.72470	34.95468	237.40	1.09
69/ 5/ 7	2440348.5	-0.32055	-0.65047	0.00924	31.17023	-15.63414	-2.01657	0.72522	34.92959	243.77	0.73
69/ 5/11	2440352.5	-0.24670	-0.68248	0.00453	32.69421	-12.05312	-2.05357	0.72572	34.90567	250.13	0.36
69/ 5/15	2440356.5	-0.16980	-0.70605	-0.00023	33.81098	-8.33018	-2.06512	0.72618	34.88322	256.48	-0.02
69/ 5/19	2440360.5	-0.09081	-0.72090	-0.00499	34.50847	-4.51129	-2.05116	0.72661	34.86250	262.82	-0.39
69/ 5/23	2440364.5	-0.01069	-0.72686	-0.00969	34.77968	-0.64327	-2.01196	0.72700	34.84377	269.16	-0.76
69/ 5/27	2440368.5	0.06956	-0.72387	-0.01427	34.62267	3.22685	-1.94806	0.72734	34.82724	275.49	-1.12
69/ 5/31	2440372.5	0.14895	-0.71198	-0.01867	34.04055	7.05226	-1.86032	0.72764	34.81313	281.82	-1.47
69/ 6/ 4	2440376.5	0.22652	-0.69135	-0.02284	33.04135	10.78694	-1.74985	0.72788	34.80159	288.14	-1.80

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69/ 6/ 8	2440380.5	0.30130	-0.66225	-0.02674	31.63792	14.38612	-1.61801	0.72806	34.79276	294.46	-2.10
69/ 6/12	2440384.5	0.37240	-0.62502	-0.03030	29.84774	17.80674	-1.46644	0.72818	34.78675	300.79	-2.39
69/ 6/16	2440388.5	0.43893	-0.58014	-0.03350	27.69269	21.00794	-1.29697	0.72825	34.78363	307.11	-2.64
69/ 6/20	2440392.5	0.50008	-0.52816	-0.03628	25.19882	23.95142	-1.11163	0.72825	34.78342	313.44	-2.86
69/ 6/24	2440396.5	0.55512	-0.46970	-0.03862	22.39606	26.60186	-0.91267	0.72820	34.78614	319.76	-3.04
69/ 6/28	2440400.5	0.60335	-0.40550	-0.04049	19.31792	28.92733	-0.70245	0.72808	34.79175	326.10	-3.19
69/ 7/ 2	2440404.5	0.64419	-0.33632	-0.04186	16.00110	30.89958	-0.48349	0.72790	34.80019	332.43	-3.30
69/ 7/ 6	2440408.5	0.67713	-0.26302	-0.04272	12.48519	32.49435	-0.25841	0.72767	34.81134	338.77	-3.37
69/ 7/10	2440412.5	0.70175	-0.18649	-0.04305	8.81218	33.69171	-0.02993	0.72739	34.82509	345.12	-3.39
69/ 7/14	2440416.5	0.71776	-0.10767	-0.04286	5.02610	34.47625	0.19922	0.72705	34.84126	351.47	-3.38
69/ 7/18	2440420.5	0.72492	-0.02753	-0.04214	1.17251	34.83733	0.42625	0.72667	34.85966	357.83	-3.32
69/ 7/22	2440424.5	0.72316	0.05296	-0.04089	-2.70195	34.76922	0.64840	0.72625	34.88008	4.19	-3.23
69/ 7/26	2440428.5	0.71246	0.13279	-0.03915	-6.55008	34.27127	0.86295	0.72579	34.90226	10.56	-3.09
69/ 7/30	2440432.5	0.69295	0.21098	-0.03691	-10.32465	33.34793	1.06722	0.72530	34.92595	16.93	-2.92
69/ 8/ 3	2440436.5	0.66485	0.28655	-0.03422	-13.97896	32.00884	1.25868	0.72478	34.95084	23.32	-2.71
69/ 8/ 7	2440440.5	0.62849	0.35856	-0.03111	-17.46736	30.26876	1.43490	0.72425	34.97664	29.71	-2.46
69/ 8/11	2440444.5	0.58431	0.42611	-0.02761	-20.74584	28.14752	1.59363	0.72370	35.00304	36.10	-2.19
69/ 8/15	2440448.5	0.53283	0.48834	-0.02376	-23.77260	25.66983	1.73282	0.72315	35.02969	42.51	-1.88
69/ 8/19	2440452.5	0.47469	0.54446	-0.01962	-26.50861	22.86506	1.85062	0.72260	35.05628	48.92	-1.56
69/ 8/23	2440456.5	0.41060	0.59375	-0.01523	-28.91814	19.76702	1.94547	0.72206	35.08246	55.33	-1.21
69/ 8/27	2440460.5	0.34136	0.63559	-0.01065	-30.96930	16.41350	2.01605	0.72154	35.10791	61.76	-0.85
69/ 8/31	2440464.5	0.26781	0.66943	-0.00593	-32.63450	12.84595	2.06138	0.72103	35.13230	68.20	-0.47
69/ 9/ 4	2440468.5	0.19089	0.69481	-0.00114	-33.89093	9.10891	2.08077	0.72056	35.15533	74.64	-0.09
69/ 9/ 8	2440472.5	0.11155	0.71142	0.00366	-34.72090	5.24950	2.07386	0.72012	35.17669	81.09	0.29
69/ 9/12	2440476.5	0.03080	0.71901	0.00842	-35.11222	1.31681	2.04065	0.71972	35.19611	87.55	0.67
69/ 9/16	2440480.5	-0.05034	0.71748	0.01307	-35.05838	-2.63877	1.98149	0.71937	35.21334	94.01	1.04
69/ 9/20	2440484.5	-0.13083	0.70684	0.01755	-34.55877	-6.56624	1.89705	0.71906	35.22815	100.49	1.40
69/ 9/24	2440488.5	-0.20967	0.68721	0.02181	-33.61872	-10.41467	1.78837	0.71881	35.24035	106.97	1.74
69/ 9/28	2440492.5	-0.28583	0.65882	0.02580	-32.24953	-14.13399	1.65681	0.71862	35.24978	113.45	2.06
69/10/ 2	2440496.5	-0.35836	0.62204	0.02945	-30.46828	-17.67567	1.50403	0.71848	35.25631	119.95	2.35
69/10/ 6	2440500.5	-0.42631	0.57733	0.03273	-28.29768	-20.99344	1.33201	0.71841	35.25986	126.44	2.61
69/10/10	2440504.5	-0.48882	0.52525	0.03559	-25.76575	-24.04400	1.14296	0.71840	35.26038	132.94	2.84
69/10/14	2440508.5	-0.54510	0.46647	0.03800	-22.90540	-26.78762	0.93936	0.71845	35.25786	139.44	3.03
69/10/18	2440512.5	-0.59443	0.40174	0.03993	-19.75399	-29.18874	0.72385	0.71857	35.25233	145.95	3.19
69/10/22	2440516.5	-0.63618	0.33190	0.04134	-16.35275	-31.21648	0.49924	0.71874	35.24386	152.45	3.30
69/10/26	2440520.5	-0.66983	0.25782	0.04223	-12.74619	-32.84505	0.26847	0.71897	35.23258	158.95	3.37
69/10/30	2440524.5	-0.69495	0.18046	0.04258	-8.98142	-34.05413	0.03453	0.71926	35.21861	165.44	3.39
69/11/ 3	2440528.5	-0.71124	0.10081	0.04239	-5.10748	-34.82909	-0.19954	0.71960	35.20216	171.93	3.38
69/11/ 7	2440532.5	-0.71850	0.01988	0.04166	-1.17460	-35.16117	-0.43073	0.71998	35.18342	178.41	3.32
69/11/11	2440536.5	-0.71666	-0.06130	0.04040	2.76650	-35.04751	-0.65608	0.72041	35.16265	184.89	3.21
69/11/15	2440540.5	-0.70575	-0.14171	0.03863	6.66534	-34.49114	-0.87271	0.72088	35.14011	191.35	3.07
69/11/19	2440544.5	-0.68594	-0.22033	0.03638	10.47234	-33.50086	-1.07791	0.72137	35.11609	197.81	2.89
69/11/23	2440548.5	-0.65748	-0.29617	0.03366	14.13954	-32.09103	-1.26911	0.72189	35.09090	204.25	2.67
69/11/27	2440552.5	-0.62075	-0.36829	0.03053	17.62114	-30.28127	-1.44395	0.72243	35.06487	210.68	2.42
69/12/ 1	2440556.5	-0.57624	-0.43579	0.02701	20.87412	-28.09615	-1.60030	0.72297	35.03831	217.10	2.14

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
69/12/ 5	2440560.5	-0.52451	-0.49784	0.02315	23.85873	-25.56476	-1.73630	0.72353	35.01158	223.51	1.83
69/12/ 9	2440564.5	-0.46623	-0.55367	0.01900	26.53895	-22.72026	-1.85033	0.72408	34.98499	229.90	1.50
69/12/13	2440568.5	-0.40215	-0.60260	0.01462	28.88286	-19.59940	-1.94107	0.72462	34.95889	236.28	1.16
69/12/17	2440572.5	-0.33307	-0.64404	0.01005	30.86297	-16.24202	-2.00751	0.72514	34.93360	242.65	0.79
69/12/21	2440576.5	-0.25985	-0.67750	0.00536	32.45646	-12.69047	-2.04893	0.72564	34.90942	249.02	0.42
69/12/25	2440580.5	-0.18342	-0.70256	0.00060	33.64538	-8.98909	-2.06493	0.72611	34.88666	255.37	0.05

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69/12/17	2440572.5	-0.33307	-0.64404	0.01005	30.86297	-16.24202	-2.00751	0.72514	34.93360	242.65	0.79
69/12/21	2440576.5	-0.25985	-0.67750	0.00536	32.45646	-12.69047	-2.04893	0.72564	34.90942	249.02	0.42
69/12/25	2440580.5	-0.18342	-0.70256	0.00060	33.64538	-8.98909	-2.06493	0.72611	34.88666	255.37	0.05
69/12/29	2440584.5	-0.10472	-0.71895	-0.00416	34.41677	-5.18370	-2.05542	0.72655	34.86559	261.71	-0.33
70/ 1/ 2	2440588.5	-0.02473	-0.72647	-0.00887	34.76275	-1.32096	-2.02059	0.72694	34.84647	268.05	-0.70
70/ 1/ 6	2440592.5	0.05557	-0.72504	-0.01348	34.68050	2.55208	-1.96096	0.72730	34.82952	274.38	-1.06
70/ 1/10	2440596.5	0.13518	-0.71471	-0.01791	34.17226	6.38855	-1.87731	0.72760	34.81495	280.71	-1.41
70/ 1/14	2440600.5	0.21313	-0.69559	-0.02213	33.24521	10.14225	-1.77072	0.72785	34.80294	287.04	-1.74
70/ 1/18	2440604.5	0.28847	-0.66794	-0.02608	31.91137	13.76816	-1.64251	0.72804	34.79361	293.36	-2.05
70/ 1/22	2440608.5	0.36027	-0.63211	-0.02971	30.18742	17.22292	-1.49427	0.72818	34.78709	299.68	-2.34
70/ 1/26	2440612.5	0.42766	-0.58853	-0.03297	28.09448	20.46523	-1.32779	0.72825	34.78345	306.00	-2.59
70/ 1/30	2440616.5	0.48982	-0.53775	-0.03583	25.65791	23.45633	-1.14508	0.72827	34.78274	312.33	-2.82
70/ 2/ 3	2440620.5	0.54597	-0.48038	-0.03825	22.90697	26.16036	-0.94833	0.72822	34.78495	318.66	-3.01
70/ 2/ 7	2440624.5	0.59544	-0.41712	-0.04020	19.87455	28.54476	-0.73991	0.72812	34.79007	324.99	-3.17
70/ 2/11	2440628.5	0.63761	-0.34876	-0.04166	16.59684	30.58062	-0.52230	0.72795	34.79802	331.32	-3.28
70/ 2/15	2440632.5	0.67196	-0.27612	-0.04261	13.11292	32.24298	-0.29811	0.72773	34.80873	337.66	-3.36
70/ 2/19	2440636.5	0.69807	-0.20009	-0.04304	9.46441	33.51113	-0.07003	0.72745	34.82205	344.01	-3.39
70/ 2/23	2440640.5	0.71560	-0.12160	-0.04293	5.69499	34.36884	0.15920	0.72712	34.83784	350.36	-3.38
70/ 2/27	2440644.5	0.72432	-0.04162	-0.04230	1.84999	34.80462	0.38680	0.72675	34.85590	356.71	-3.34
70/ 3/ 3	2440648.5	0.72412	0.03888	-0.04115	-2.02411	34.81189	0.61000	0.72633	34.87602	3.07	-3.25
70/ 3/ 7	2440652.5	0.71498	0.11890	-0.03949	-5.88017	34.38907	0.82606	0.72588	34.89795	9.44	-3.12
70/ 3/11	2440656.5	0.69700	0.19744	-0.03734	-9.67094	33.53973	1.03232	0.72539	34.92143	15.82	-2.95
70/ 3/15	2440660.5	0.67039	0.27354	-0.03473	-13.34957	32.27259	1.22620	0.72488	34.94617	22.20	-2.75
70/ 3/19	2440664.5	0.63545	0.34624	-0.03169	-16.87020	30.60153	1.40526	0.72435	34.97187	28.58	-2.51
70/ 3/23	2440668.5	0.59260	0.41463	-0.02825	-20.18850	28.54547	1.56720	0.72380	34.99822	34.98	-2.24
70/ 3/27	2440672.5	0.54236	0.47785	-0.02446	-23.26223	26.12829	1.70995	0.72325	35.02489	41.38	-1.94
70/ 3/31	2440676.5	0.48534	0.53510	-0.02036	-26.05184	23.37857	1.83162	0.72270	35.05155	47.79	-1.61
70/ 4/ 4	2440680.5	0.42224	0.58564	-0.01601	-28.52098	20.32934	1.93058	0.72216	35.07785	54.21	-1.27
70/ 4/ 8	2440684.5	0.35383	0.62883	-0.01146	-30.63705	17.01774	2.00550	0.72163	35.10348	60.63	-0.91
70/ 4/12	2440688.5	0.28098	0.66410	-0.00677	-32.37167	13.48460	2.05531	0.72112	35.12811	67.07	-0.54
70/ 4/16	2440692.5	0.20458	0.69099	-0.00199	-33.70116	9.77396	2.07928	0.72064	35.15141	73.51	-0.16
70/ 4/20	2440696.5	0.12559	0.70915	0.00282	-34.60691	5.93253	2.07699	0.72020	35.17310	79.96	0.22
70/ 4/24	2440700.5	0.04502	0.71834	0.00759	-35.07573	2.00909	2.04837	0.71979	35.19289	86.41	0.60
70/ 4/28	2440704.5	-0.03613	0.71841	0.01226	-35.10012	-1.94614	1.99371	0.71943	35.21052	92.88	0.98
70/ 5/ 2	2440708.5	-0.11682	0.70936	0.01678	-34.67842	-5.88221	1.91364	0.71911	35.22577	99.35	1.34
70/ 5/ 6	2440712.5	-0.19602	0.69129	0.02109	-33.81492	-9.74814	1.80911	0.71885	35.23844	105.83	1.68
70/ 5/10	2440716.5	-0.27272	0.66442	0.02512	-32.51986	-13.49365	1.68144	0.71865	35.24836	112.32	2.00
70/ 5/14	2440720.5	-0.34595	0.62907	0.02884	-30.80934	-17.06987	1.53225	0.71850	35.25541	118.81	2.30
70/ 5/18	2440724.5	-0.41477	0.58571	0.03219	-28.70509	-20.43011	1.36344	0.71842	35.25947	125.30	2.57
70/ 5/22	2440728.5	-0.47829	0.53488	0.03513	-26.23422	-23.53049	1.17721	0.71840	35.26052	131.80	2.80
70/ 5/26	2440732.5	-0.53572	0.47722	0.03761	-23.42884	-26.33060	0.97597	0.71844	35.25852	138.31	3.00
70/ 5/30	2440736.5	-0.58631	0.41348	0.03962	-20.32554	-28.79412	0.76234	0.71854	35.25351	144.81	3.16
70/ 6/ 3	2440740.5	-0.62943	0.34447	0.04113	-16.96494	-30.88931	0.53911	0.71870	35.24556	151.31	3.28
70/ 6/ 7	2440744.5	-0.66453	0.27107	0.04211	-13.39099	-32.58948	0.30920	0.71893	35.23476	157.81	3.36
70/ 6/11	2440748.5	-0.69118	0.19422	0.04256	-9.65042	-33.87331	0.07560	0.71920	35.22126	164.31	3.39

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70/ 6/15	2440752.5	-0.70903	0.11489	0.04246	-5.79198	-34.72516	-0.15867	0.71953	35.20524	170.80	3.38
70/ 6/19	2440756.5	-0.71788	0.03411	0.04182	-1.86572	-35.13524	-0.39058	0.71991	35.18691	177.28	3.33
70/ 6/23	2440760.5	-0.71764	-0.04710	0.04066	2.07765	-35.09964	-0.61717	0.72033	35.16650	183.76	3.24
70/ 6/27	2440764.5	-0.70831	-0.12772	0.03898	5.98756	-34.62038	-0.83553	0.72079	35.14427	190.22	3.10
70/ 7/ 1	2440768.5	-0.69004	-0.20672	0.03681	9.81424	-33.70526	-1.04293	0.72128	35.12052	196.68	2.93
70/ 7/ 5	2440772.5	-0.66307	-0.28312	0.03417	13.50938	-32.36766	-1.23676	0.72179	35.09555	203.12	2.71
70/ 7/ 9	2440776.5	-0.62776	-0.35596	0.03110	17.02675	-30.62631	-1.41463	0.72233	35.06968	209.55	2.47
70/ 7/13	2440780.5	-0.58457	-0.42433	0.02765	20.32283	-28.50495	-1.57437	0.72287	35.04323	215.98	2.19
70/ 7/17	2440784.5	-0.53406	-0.48739	0.02385	23.35723	-26.03189	-1.71406	0.72342	35.01653	222.38	1.89
70/ 7/21	2440788.5	-0.47688	-0.54436	0.01975	26.09327	-23.23962	-1.83204	0.72397	34.98993	228.78	1.56
70/ 7/25	2440792.5	-0.41375	-0.59455	0.01540	28.49826	-20.16431	-1.92694	0.72451	34.96374	235.17	1.22
70/ 7/29	2440796.5	-0.34548	-0.63734	0.01086	30.54391	-16.84529	-1.99770	0.72504	34.93831	241.54	0.86
70/ 8/ 2	2440800.5	-0.27293	-0.67223	0.00619	32.20658	-13.32450	-2.04354	0.72554	34.91393	247.90	0.49
70/ 8/ 6	2440804.5	-0.19699	-0.69879	0.00144	33.46745	-9.64600	-2.06401	0.72602	34.89091	254.26	0.11
70/ 8/10	2440808.5	-0.11861	-0.71671	-0.00333	34.31267	-5.85536	-2.05895	0.72646	34.86953	260.60	-0.26
70/ 8/14	2440812.5	-0.03878	-0.72579	-0.00805	34.73347	-1.99917	-2.02853	0.72687	34.85005	266.94	-0.63
70/ 8/18	2440816.5	0.04154	-0.72593	-0.01268	34.72615	1.87557	-1.97318	0.72723	34.83270	273.27	-1.00
70/ 8/22	2440820.5	0.12134	-0.71714	-0.01715	34.29206	5.72189	-1.89366	0.72754	34.81769	279.60	-1.35
70/ 8/26	2440824.5	0.19965	-0.69955	-0.02141	33.43754	9.49347	-1.79099	0.72780	34.80521	285.93	-1.69
70/ 8/30	2440828.5	0.27552	-0.67337	-0.02541	32.17376	13.14502	-1.66646	0.72800	34.79539	292.25	-2.00
70/ 9/ 3	2440832.5	0.34800	-0.63894	-0.02910	30.51661	16.63286	-1.52159	0.72815	34.78836	298.58	-2.29
70/ 9/ 7	2440836.5	0.41623	-0.59668	-0.03243	28.48645	19.91528	-1.35815	0.72824	34.78420	304.90	-2.55
70/ 9/11	2440840.5	0.47935	-0.54712	-0.03536	26.10792	22.95307	-1.17812	0.72826	34.78296	311.22	-2.78
70/ 9/15	2440844.5	0.53661	-0.49085	-0.03786	23.40962	25.70981	-0.98365	0.72823	34.78465	317.55	-2.98
70/ 9/19	2440848.5	0.58729	-0.42857	-0.03990	20.42383	28.15236	-0.77709	0.72813	34.78925	323.88	-3.14
70/ 9/23	2440852.5	0.63078	-0.36104	-0.04144	17.18621	30.25113	-0.56089	0.72798	34.79671	330.21	-3.26
70/ 9/27	2440856.5	0.66654	-0.28908	-0.04248	13.73535	31.98045	-0.33765	0.72777	34.80693	336.55	-3.35
70/10/ 1	2440860.5	0.69411	-0.21358	-0.04300	10.11245	33.31884	-0.11005	0.72750	34.81981	342.90	-3.39
70/10/ 5	2440864.5	0.71316	-0.13545	-0.04299	6.36089	34.24929	0.11919	0.72718	34.83517	349.25	-3.39
70/10/ 9	2440868.5	0.72344	-0.05566	-0.04245	2.52574	34.75947	0.34728	0.72681	34.85284	355.60	-3.35
70/10/13	2440872.5	0.72480	0.02482	-0.04139	-1.34668	34.84191	0.57145	0.72641	34.87261	1.96	-3.27
70/10/17	2440876.5	0.71722	0.10499	-0.03981	-5.20932	34.49418	0.78896	0.72596	34.89424	8.33	-3.14
70/10/21	2440880.5	0.70078	0.18387	-0.03775	-9.01489	33.71893	0.99713	0.72548	34.91745	14.70	-2.98
70/10/25	2440884.5	0.67565	0.26046	-0.03522	-12.71644	32.52399	1.19336	0.72497	34.94198	21.08	-2.78
70/10/29	2440888.5	0.64214	0.33382	-0.03225	-16.26788	30.92234	1.37518	0.72444	34.96751	27.47	-2.55
70/11/ 2	2440892.5	0.60064	0.40303	-0.02888	-19.62458	28.93205	1.54027	0.72390	34.99372	33.86	-2.29
70/11/ 6	2440896.5	0.55165	0.46722	-0.02514	-22.74390	26.57613	1.68652	0.72335	35.02029	40.26	-1.99
70/11/10	2440900.5	0.49576	0.52556	-0.02110	-25.58578	23.88238	1.81199	0.72280	35.04687	46.67	-1.67
70/11/14	2440904.5	0.43367	0.57733	-0.01679	-28.11327	20.88306	1.91503	0.72226	35.07314	53.09	-1.33
70/11/18	2440908.5	0.36614	0.62184	-0.01227	-30.29309	17.61464	1.99423	0.72173	35.09877	59.51	-0.97
70/11/22	2440912.5	0.29400	0.65854	-0.00759	-32.09611	14.11733	2.04849	0.72122	35.12343	65.94	-0.60
70/11/26	2440916.5	0.21815	0.68693	-0.00282	-33.49780	10.43464	2.07700	0.72074	35.14681	72.38	-0.22
70/11/30	2440920.5	0.13955	0.70664	0.00198	-34.47866	6.61288	2.07931	0.72029	35.16862	78.83	0.16
70/12/ 4	2440924.5	0.05918	0.71741	0.00676	-35.02455	2.70049	2.05528	0.71988	35.18858	85.28	0.54
70/12/ 8	2440928.5	-0.02193	0.71909	0.01146	-35.12696	-1.25252	2.00514	0.71951	35.20643	91.75	0.91

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70/12/12	2440932.5	-0.10277	0.71163	0.01601	-34.78321	-5.19528	1.92944	0.71919	35.22195	98.22	1.28
70/12/16	2440936.5	-0.18230	0.69513	0.02035	-33.99656	-9.07678	1.82911	0.71893	35.23493	104.70	1.62
70/12/20	2440940.5	-0.25951	0.66978	0.02444	-32.77623	-12.84659	1.70539	0.71872	35.24520	111.18	1.95
70/12/24	2440944.5	-0.33342	0.63590	0.02822	-31.13728	-16.45555	1.55984	0.71856	35.25264	117.67	2.25
70/12/28	2440948.5	-0.40307	0.59391	0.03163	-29.10049	-19.85656	1.39432	0.71847	35.25714	124.16	2.52
71/ 1/ 1	2440952.5	-0.46758	0.54435	0.03464	-26.69204	-23.00522	1.21099	0.71844	35.25864	130.66	2.76
71/ 1/ 5	2440956.5	-0.52614	0.48785	0.03722	-23.94318	-25.86049	1.01220	0.71847	35.25713	137.16	2.97
71/ 1/ 9	2440960.5	-0.57798	0.42512	0.03931	-20.88974	-28.38531	0.80057	0.71856	35.25263	143.66	3.14
71/ 1/13	2440964.5	-0.62245	0.35697	0.04091	-17.57164	-30.54711	0.57883	0.71871	35.24519	150.17	3.26
71/ 1/17	2440968.5	-0.65899	0.28428	0.04198	-14.03230	-32.31829	0.34990	0.71892	35.23492	156.67	3.35
71/ 1/21	2440972.5	-0.68715	0.20797	0.04252	-10.31797	-33.67658	0.11674	0.71919	35.22195	163.16	3.39
71/ 1/25	2440976.5	-0.70657	0.12902	0.04252	-6.47707	-34.60532	-0.11762	0.71951	35.20646	169.65	3.39
71/ 1/29	2440980.5	-0.71702	0.04842	0.04198	-2.55946	-35.09368	-0.35015	0.71987	35.18863	176.14	3.34
71/ 2/ 2	2440984.5	-0.71837	-0.03279	0.04090	1.38425	-35.13671	-0.57787	0.72028	35.16871	182.61	3.26
71/ 2/ 6	2440988.5	-0.71064	-0.11358	0.03931	5.30342	-34.73537	-0.79787	0.72073	35.14696	189.08	3.13
71/ 2/10	2440992.5	-0.69393	-0.19294	0.03723	9.14810	-33.89643	-1.00739	0.72121	35.12365	195.54	2.96
71/ 2/14	2440996.5	-0.66847	-0.26987	0.03467	12.86970	-32.63230	-1.20378	0.72172	35.09908	201.98	2.75
71/ 2/18	2441000.5	-0.63460	-0.34340	0.03168	16.42158	-30.96077	-1.38463	0.72224	35.07356	208.42	2.51
71/ 2/22	2441004.5	-0.59276	-0.41262	0.02829	19.75969	-28.90469	-1.54772	0.72278	35.04742	214.84	2.24
71/ 2/26	2441008.5	-0.54350	-0.47667	0.02454	22.84306	-26.49159	-1.69107	0.72333	35.02099	221.25	1.94
71/ 3/ 2	2441012.5	-0.48744	-0.53477	0.02049	25.63432	-23.75324	-1.81299	0.72388	34.99459	227.65	1.62
71/ 3/ 6	2441016.5	-0.42531	-0.58620	0.01618	28.10003	-20.72516	-1.91205	0.72441	34.96856	234.04	1.28
71/ 3/10	2441020.5	-0.35788	-0.63033	0.01167	30.21110	-17.44617	-1.98714	0.72494	34.94321	240.41	0.92
71/ 3/14	2441024.5	-0.28601	-0.66664	0.00702	31.94301	-13.95777	-2.03742	0.72544	34.91885	246.78	0.55
71/ 3/18	2441028.5	-0.21060	-0.69470	0.00228	33.27607	-10.30370	-2.06238	0.72592	34.89580	253.14	0.18
71/ 3/22	2441032.5	-0.13258	-0.71416	-0.00249	34.19554	-6.52929	-2.06182	0.72637	34.87431	259.48	-0.20
71/ 3/26	2441036.5	-0.05293	-0.72481	-0.00723	34.69172	-2.68101	-2.03583	0.72677	34.85467	265.82	-0.57
71/ 3/30	2441040.5	0.02737	-0.72652	-0.01188	34.76000	1.19417	-1.98483	0.72714	34.83709	272.16	-0.94
71/ 4/ 3	2441044.5	0.10734	-0.71930	-0.01638	34.40083	5.04923	-1.90949	0.72745	34.82180	278.49	-1.29
71/ 4/ 7	2441048.5	0.18599	-0.70325	-0.02068	33.61967	8.83765	-1.81079	0.72772	34.80898	284.81	-1.63
71/ 4/11	2441052.5	0.26236	-0.67856	-0.02473	32.42684	12.51394	-1.68998	0.72793	34.79878	291.14	-1.95
71/ 4/15	2441056.5	0.33551	-0.64555	-0.02847	30.83742	16.03406	-1.54854	0.72809	34.79132	297.46	-2.24
71/ 4/19	2441060.5	0.40455	-0.60463	-0.03187	28.87101	19.35591	-1.38820	0.72818	34.78669	303.79	-2.51
71/ 4/23	2441064.5	0.46863	-0.55630	-0.03487	26.55150	22.43979	-1.21090	0.72822	34.78494	310.11	-2.74
71/ 4/27	2441068.5	0.52698	-0.50116	-0.03745	23.90684	25.24873	-1.01878	0.72820	34.78611	316.44	-2.95
71/ 5/ 1	2441072.5	0.57887	-0.43988	-0.03957	20.96870	27.74899	-0.81413	0.72811	34.79016	322.77	-3.12
71/ 5/ 5	2441076.5	0.62366	-0.37321	-0.04121	17.77218	29.91030	-0.59941	0.72797	34.79707	329.10	-3.24
71/ 5/ 9	2441080.5	0.66081	-0.30197	-0.04234	14.35541	31.70629	-0.37718	0.72777	34.80673	335.44	-3.33
71/ 5/13	2441084.5	0.68985	-0.22701	-0.04295	10.75919	33.11470	-0.15011	0.72751	34.81905	341.78	-3.38
71/ 5/17	2441088.5	0.71042	-0.14928	-0.04303	7.02656	34.11774	0.07906	0.72720	34.83387	348.13	-3.39
71/ 5/21	2441092.5	0.72224	-0.06970	-0.04258	3.20233	34.70222	0.30758	0.72685	34.85102	354.49	-3.36
71/ 5/25	2441096.5	0.72518	0.01073	-0.04161	-0.66733	34.85983	0.53266	0.72645	34.87029	0.85	-3.28
71/ 5/29	2441100.5	0.71916	0.09103	-0.04012	-4.53544	34.58725	0.75155	0.72601	34.89144	7.21	-3.17
71/ 6/ 2	2441104.5	0.70426	0.17021	-0.03814	-8.35471	33.88625	0.96156	0.72554	34.91423	13.59	-3.01
71/ 6/ 6	2441108.5	0.68063	0.24727	-0.03569	-12.07809	32.76376	1.16006	0.72504	34.93838	19.97	-2.82

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
71/ 6/10	2441112.5	0.64856	0.32127	-0.03279	-15.65928	31.23189	1.34458	0.72452	34.96358	26.35	-2.59
71/ 6/14	2441116.5	0.60843	0.39127	-0.02949	-19.05336	29.30782	1.51276	0.72398	34.98954	32.74	-2.33
71/ 6/18	2441120.5	0.56071	0.45640	-0.02582	-22.21730	27.01375	1.66244	0.72344	35.01592	39.14	-2.05
71/ 6/22	2441124.5	0.50598	0.51582	-0.02183	-25.11054	24.37664	1.79167	0.72289	35.04240	45.55	-1.73
71/ 6/26	2441128.5	0.44493	0.56879	-0.01756	-27.69557	21.42803	1.89873	0.72235	35.06865	51.97	-1.39
71/ 6/30	2441132.5	0.37828	0.61462	-0.01307	-29.93843	18.20368	1.98218	0.72182	35.09434	58.39	-1.04
71/ 7/ 4	2441136.5	0.30689	0.65271	-0.00842	-31.80923	14.74318	2.04085	0.72131	35.11913	64.82	-0.67
71/ 7/ 8	2441140.5	0.23162	0.68258	-0.00366	-33.28261	11.08952	2.07390	0.72082	35.14272	71.26	-0.29
71/ 7/12	2441144.5	0.15343	0.70384	0.00114	-34.33818	7.28854	2.08080	0.72037	35.16480	77.70	0.09
71/ 7/16	2441148.5	0.07330	0.71618	0.00593	-34.96084	3.38836	2.06136	0.71995	35.18509	84.16	0.47
71/ 7/20	2441152.5	-0.00776	0.71945	0.01065	-35.14107	-0.56122	2.01574	0.71957	35.20331	90.62	0.85
71/ 7/24	2441156.5	-0.08872	0.71359	0.01523	-34.87519	-4.50946	1.94445	0.71925	35.21925	97.09	1.21
71/ 7/28	2441160.5	-0.16855	0.69866	0.01961	-34.16542	-8.40531	1.84835	0.71897	35.23267	103.56	1.56
71/ 8/ 1	2441164.5	-0.24624	0.67484	0.02375	-33.01992	-12.19819	1.72860	0.71875	35.24342	110.05	1.89
71/ 8/ 5	2441168.5	-0.32079	0.64242	0.02758	-31.45277	-15.83867	1.58674	0.71859	35.25135	116.54	2.20
71/ 8/ 9	2441172.5	-0.39126	0.60181	0.03106	-29.48376	-19.27925	1.42457	0.71848	35.25636	123.03	2.48
71/ 8/13	2441176.5	-0.45673	0.55353	0.03415	-27.13815	-22.47500	1.24419	0.71844	35.25837	129.53	2.72
71/ 8/17	2441180.5	-0.51638	0.49819	0.03680	-24.44634	-25.38426	1.04792	0.71846	35.25737	136.03	2.94
71/ 8/21	2441184.5	-0.56944	0.43649	0.03898	-21.44339	-27.96923	0.83834	0.71855	35.25336	142.53	3.11
71/ 8/25	2441188.5	-0.61524	0.36924	0.04067	-18.16856	-30.19654	0.61817	0.71869	35.24641	149.03	3.24
71/ 8/29	2441192.5	-0.65321	0.29727	0.04183	-14.66469	-32.03768	0.39029	0.71889	35.23661	155.53	3.34
71/ 9/ 2	2441196.5	-0.68286	0.22153	0.04246	-10.97758	-33.46944	0.15766	0.71915	35.22408	162.03	3.39
71/ 9/ 6	2441200.5	-0.70382	0.14296	0.04256	-7.15532	-34.47417	-0.07670	0.71946	35.20899	168.52	3.39
71/ 9/10	2441204.5	-0.71585	0.06258	0.04211	-3.24757	-35.04000	-0.30976	0.71982	35.19154	175.00	3.35
71/ 9/14	2441208.5	-0.71880	-0.01859	0.04113	0.69513	-35.16096	-0.53853	0.72022	35.17196	181.48	3.27
71/ 9/18	2441212.5	-0.71265	-0.09953	0.03963	4.62213	-34.83698	-0.76008	0.72066	35.15049	187.95	3.15
71/ 9/22	2441216.5	-0.69750	-0.17921	0.03763	8.48329	-34.07383	-0.97162	0.72113	35.12743	194.41	2.99
71/ 9/26	2441220.5	-0.67354	-0.25664	0.03515	12.22974	-32.88295	-1.17049	0.72164	35.10306	200.86	2.79
71/ 9/30	2441224.5	-0.64112	-0.33083	0.03223	15.81448	-31.28120	-1.35422	0.72216	35.07770	207.29	2.56
71/10/ 4	2441228.5	-0.60064	-0.40087	0.02891	19.19295	-29.29057	-1.52055	0.72270	35.05166	213.72	2.29
71/10/ 8	2441232.5	-0.55263	-0.46588	0.02522	22.32362	-26.93780	-1.66748	0.72324	35.02527	220.13	2.00
71/10/12	2441236.5	-0.49771	-0.52507	0.02122	25.16845	-24.25395	-1.79326	0.72379	34.99886	226.53	1.68
71/10/16	2441240.5	-0.43659	-0.57772	0.01695	27.69330	-21.27392	-1.89641	0.72433	34.97277	232.92	1.34
71/10/20	2441244.5	-0.37003	-0.62317	0.01247	29.86829	-18.03597	-1.97576	0.72486	34.94731	239.30	0.99
71/10/24	2441248.5	-0.29888	-0.66088	0.00784	31.66809	-14.58120	-2.03042	0.72536	34.92279	245.67	0.62
71/10/28	2441252.5	-0.22402	-0.69040	0.00311	33.07214	-10.95296	-2.05984	0.72584	34.89952	252.02	0.25
71/11/ 1	2441256.5	-0.14639	-0.71139	-0.00166	34.06483	-7.19635	-2.06375	0.72630	34.87778	258.37	-0.13
71/11/ 5	2441260.5	-0.06695	-0.72359	-0.00640	34.63558	-3.35768	-2.04219	0.72671	34.85783	264.71	-0.50
71/11/ 9	2441264.5	0.01331	-0.72688	-0.01107	34.77888	0.51613	-1.99552	0.72708	34.83990	271.05	-0.87
71/11/13	2441268.5	0.09341	-0.72122	-0.01560	34.49429	4.37803	-1.92438	0.72741	34.82422	277.38	-1.23
71/11/17	2441272.5	0.17236	-0.70669	-0.01995	33.78640	8.18139	-1.82969	0.72768	34.81097	283.71	-1.57
71/11/21	2441276.5	0.24920	-0.68349	-0.02404	32.66470	11.88049	-1.71265	0.72790	34.80032	290.03	-1.89
71/11/25	2441280.5	0.32298	-0.65191	-0.02784	31.14344	15.43101	-1.57471	0.72807	34.79238	296.36	-2.19
71/11/29	2441284.5	0.39280	-0.61234	-0.03130	29.24143	18.79048	-1.41754	0.72817	34.78725	302.68	-2.46
71/12/ 3	2441288.5	0.45781	-0.56527	-0.03438	26.98184	21.91873	-1.24307	0.72822	34.78500	309.00	-2.71

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

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71/12/ 7	2441292.5	0.51721	-0.51128	-0.03703	24.39194	24.77832	-1.05338	0.72821	34.78565	315.33	-2.92
71/12/11	2441296.5	0.57028	-0.45102	-0.03924	21.50275	27.33488	-0.85075	0.72813	34.78919	321.66	-3.09
71/12/15	2441300.5	0.61636	-0.38524	-0.04096	18.34881	29.55754	-0.63761	0.72800	34.79560	327.99	-3.23
71/12/19	2441304.5	0.65488	-0.31473	-0.04218	14.96774	31.41920	-0.41651	0.72781	34.80478	334.33	-3.32
71/12/23	2441308.5	0.68537	-0.24037	-0.04288	11.39989	32.89688	-0.19009	0.72756	34.81664	340.67	-3.38
71/12/27	2441312.5	0.70744	-0.16305	-0.04305	7.68795	33.97197	0.03891	0.72726	34.83104	347.02	-3.39
71/12/31	2441316.5	0.72081	-0.08373	-0.04270	3.87646	34.63048	0.26774	0.72691	34.84779	353.37	-3.37
72/ 1/ 4	2441320.5	0.72531	-0.00337	-0.04182	0.01137	34.86322	0.49363	0.72652	34.86671	359.73	-3.30
72/ 1/ 8	2441324.5	0.72086	0.07702	-0.04042	-3.86044	34.66598	0.71380	0.72609	34.88757	6.10	-3.19
72/ 1/12	2441328.5	0.70750	0.15647	-0.03853	-7.69169	34.03963	0.92555	0.72562	34.91011	12.47	-3.04
72/ 1/16	2441332.5	0.68539	0.23397	-0.03615	-11.43526	32.99022	1.12626	0.72513	34.93405	18.85	-2.86
72/ 1/20	2441336.5	0.65477	0.30857	-0.03333	-15.04467	31.52892	1.31340	0.72461	34.95912	25.23	-2.64
72/ 1/24	2441340.5	0.61601	0.37934	-0.03010	-18.47471	29.67205	1.48460	0.72407	34.98499	31.62	-2.38
72/ 1/28	2441344.5	0.56958	0.44538	-0.02649	-21.68199	27.44092	1.63767	0.72353	35.01136	38.02	-2.10
72/ 2/ 1	2441348.5	0.51604	0.50586	-0.02255	-24.62548	24.86169	1.77061	0.72298	35.03788	44.43	-1.79
72/ 2/ 5	2441352.5	0.45604	0.56001	-0.01832	-27.26708	21.96512	1.88167	0.72244	35.06424	50.84	-1.45
72/ 2/ 9	2441356.5	0.39032	0.60713	-0.01387	-29.57217	18.78623	1.96934	0.72190	35.09008	57.26	-1.10
72/ 2/13	2441360.5	0.31969	0.64662	-0.00924	-31.51011	15.36400	2.03243	0.72139	35.11510	63.69	-0.73
72/ 2/17	2441364.5	0.24503	0.67796	-0.00450	-33.05472	11.74084	2.07001	0.72090	35.13896	70.13	-0.36
72/ 2/21	2441368.5	0.16728	0.70075	0.00030	-34.18470	7.96214	2.08151	0.72044	35.16137	76.57	0.02
72/ 2/25	2441372.5	0.08742	0.71467	0.00510	-34.88399	4.07567	2.06668	0.72001	35.18202	83.03	0.41
72/ 2/29	2441376.5	0.00645	0.71953	0.00983	-35.14209	0.13098	2.02561	0.71963	35.20067	89.49	0.78
72/ 3/ 4	2441380.5	-0.07461	0.71527	0.01444	-34.95428	-3.82129	1.95876	0.71929	35.21705	95.95	1.15
72/ 3/ 8	2441384.5	-0.15471	0.70191	0.01886	-34.32172	-7.73010	1.86692	0.71901	35.23096	102.43	1.50
72/ 3/12	2441388.5	-0.23285	0.67962	0.02304	-33.25156	-11.54472	1.75121	0.71877	35.24221	108.91	1.84
72/ 3/16	2441392.5	-0.30802	0.64868	0.02693	-31.75683	-15.21546	1.61308	0.71860	35.25065	115.40	2.15
72/ 3/20	2441396.5	-0.37926	0.60947	0.03048	-29.85635	-18.69443	1.45432	0.71849	35.25619	121.89	2.43
72/ 3/24	2441400.5	-0.44567	0.56249	0.03364	-27.57446	-21.93620	1.27694	0.71843	35.25873	128.39	2.68
72/ 3/28	2441404.5	-0.50640	0.50833	0.03637	-24.94068	-24.89847	1.08327	0.71844	35.25826	134.89	2.90
72/ 4/ 1	2441408.5	-0.56066	0.44769	0.03863	-21.98929	-27.54275	0.87582	0.71852	35.25477	141.39	3.08
72/ 4/ 5	2441412.5	-0.60778	0.38135	0.04041	-18.75887	-29.83483	0.65729	0.71865	35.24832	147.89	3.22
72/ 4/ 9	2441416.5	-0.64715	0.31014	0.04167	-15.29168	-31.74533	0.43053	0.71884	35.23899	154.39	3.32
72/ 4/13	2441420.5	-0.67829	0.23498	0.04239	-11.63305	-33.25008	0.19851	0.71909	35.22690	160.89	3.38
72/ 4/17	2441424.5	-0.70079	0.15684	0.04258	-7.83074	-34.33044	-0.03578	0.71939	35.21222	167.38	3.39
72/ 4/21	2441428.5	-0.71439	0.07670	0.04223	-3.93418	-34.97353	-0.26929	0.71974	35.19514	173.87	3.36
72/ 4/25	2441432.5	-0.71893	-0.00441	0.04134	0.00619	-35.17235	-0.49903	0.72014	35.17589	180.35	3.29
72/ 4/29	2441436.5	-0.71437	-0.08546	0.03993	3.93966	-34.92579	-0.72205	0.72057	35.15470	186.82	3.18
72/ 5/ 3	2441440.5	-0.70078	-0.16544	0.03801	7.81597	-34.23863	-0.93554	0.72104	35.13187	193.28	3.02
72/ 5/ 7	2441444.5	-0.67834	-0.24333	0.03561	11.58598	-33.12132	-1.13680	0.72154	35.10768	199.73	2.83
72/ 5/11	2441448.5	-0.64736	-0.31815	0.03277	15.20229	-31.58982	-1.32335	0.72206	35.08244	206.17	2.60
72/ 5/15	2441452.5	-0.60825	-0.38898	0.02951	18.61990	-29.66525	-1.49287	0.72260	35.05647	212.60	2.34
72/ 5/19	2441456.5	-0.56152	-0.45493	0.02589	21.79670	-27.37355	-1.64333	0.72314	35.03010	219.01	2.05
72/ 5/23	2441460.5	-0.50776	-0.51520	0.02194	24.69402	-24.74506	-1.77291	0.72369	35.00366	225.42	1.74
72/ 5/27	2441464.5	-0.44767	-0.56903	0.01771	27.27701	-21.81406	-1.88010	0.72423	34.97747	231.81	1.40
72/ 5/31	2441468.5	-0.38200	-0.61578	0.01327	29.51501	-18.61827	-1.96368	0.72476	34.95185	238.19	1.05

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					VENUS		
72/ 6/ 4	2441472.5	-0.31158	-0.65488	0.00866	31.38190	-15.19832	-2.02270	0.72528	34.92712	244.56	0.68
72/ 6/ 8	2441476.5	-0.23730	-0.68586	0.00394	32.85628	-11.59722	-2.05655	0.72577	34.90358	250.91	0.31
72/ 6/12	2441480.5	-0.16009	-0.70836	-0.00082	33.92165	-7.85981	-2.06491	0.72622	34.88150	257.27	-0.07
72/ 6/16	2441484.5	-0.08090	-0.72211	-0.00558	34.56656	-4.03222	-2.04778	0.72665	34.86114	263.61	-0.44
72/ 6/20	2441488.5	-0.00071	-0.72696	-0.01027	34.78461	-0.16131	-2.00545	0.72703	34.84275	269.94	-0.81
72/ 6/24	2441492.5	0.07949	-0.72286	-0.01483	34.57452	3.70586	-1.93852	0.72736	34.82655	276.28	-1.17
72/ 6/28	2441496.5	0.15871	-0.70987	-0.01920	33.93998	7.52256	-1.84786	0.72765	34.81273	282.60	-1.51
72/ 7/ 2	2441500.5	0.23598	-0.68817	-0.02335	32.88967	11.24287	-1.73462	0.72788	34.80146	288.93	-1.84
72/ 7/ 6	2441504.5	0.31036	-0.65803	-0.02720	31.43701	14.82221	-1.60021	0.72806	34.79287	295.25	-2.14
72/ 7/10	2441508.5	0.38094	-0.61983	-0.03073	29.60005	18.21775	-1.44628	0.72818	34.78709	301.57	-2.42
72/ 7/14	2441512.5	0.44685	-0.57404	-0.03387	27.40123	21.38892	-1.27469	0.72824	34.78417	307.90	-2.67
72/ 7/18	2441516.5	0.50728	-0.52121	-0.03660	24.86710	24.29778	-1.08751	0.72824	34.78415	314.22	-2.88
72/ 7/22	2441520.5	0.56151	-0.46200	-0.03889	22.02808	26.90940	-0.88699	0.72818	34.78705	320.55	-3.06
72/ 7/26	2441524.5	0.60885	-0.39713	-0.04069	18.91808	29.19230	-0.67552	0.72806	34.79282	326.89	-3.20
72/ 7/30	2441528.5	0.64873	-0.32740	-0.04200	15.57423	31.11870	-0.45564	0.72788	34.80140	333.22	-3.31
72/ 8/ 3	2441532.5	0.68066	-0.25365	-0.04279	12.03641	32.66491	-0.22999	0.72764	34.81270	339.56	-3.37
72/ 8/ 7	2441536.5	0.70423	-0.17678	-0.04306	8.34691	33.81153	-0.00126	0.72736	34.82658	345.91	-3.39
72/ 8/11	2441540.5	0.71914	-0.09774	-0.04280	4.54998	34.54377	0.22777	0.72702	34.84288	352.26	-3.37
72/ 8/15	2441544.5	0.72521	-0.01750	-0.04201	0.69132	34.85158	0.45435	0.72663	34.86140	358.62	-3.31
72/ 8/19	2441548.5	0.72233	0.06295	-0.04070	-3.18231	34.72988	0.67569	0.72621	34.88192	4.98	-3.21
72/ 8/23	2441552.5	0.71053	0.14263	-0.03889	-7.02371	34.17864	0.88909	0.72574	34.90419	11.35	-3.07
72/ 8/27	2441556.5	0.68994	0.22054	-0.03660	-10.78570	33.20299	1.09189	0.72525	34.92796	17.73	-2.89
72/ 8/31	2441560.5	0.66079	0.29572	-0.03386	-14.42166	31.81320	1.28157	0.72473	34.95292	24.11	-2.68
72/ 9/ 4	2441564.5	0.62343	0.36722	-0.03069	-17.88614	30.02467	1.45572	0.72420	34.97876	30.50	-2.43
72/ 9/ 8	2441568.5	0.57832	0.43415	-0.02715	-21.13540	27.85783	1.61211	0.72365	35.00518	36.90	-2.15
72/ 9/12	2441572.5	0.52598	0.49567	-0.02326	-24.12796	25.33799	1.74871	0.72310	35.03184	43.30	-1.84
72/ 9/16	2441576.5	0.46706	0.55098	-0.01908	-26.82517	22.49508	1.86372	0.72256	35.05841	49.71	-1.51
72/ 9/20	2441580.5	0.40229	0.59938	-0.01467	-29.19177	19.36342	1.95560	0.72202	35.08455	56.13	-1.16
72/ 9/24	2441584.5	0.33247	0.64025	-0.01007	-31.19638	15.98126	2.02309	0.72149	35.10994	62.56	-0.80
72/ 9/28	2441588.5	0.25845	0.67306	-0.00534	-32.81199	12.39045	2.06521	0.72099	35.13424	68.99	-0.42
72/10/ 2	2441592.5	0.18118	0.69737	-0.00055	-34.01639	8.63587	2.08133	0.72052	35.15715	75.44	-0.04
72/10/ 6	2441596.5	0.10162	0.71287	0.00426	-34.79257	4.76491	2.07114	0.72009	35.17836	81.89	0.34
72/10/10	2441600.5	0.02076	0.71933	0.00900	-35.12902	0.82684	2.03468	0.71969	35.19761	88.35	0.72
72/10/14	2441604.5	-0.06035	0.71667	0.01364	-35.01996	-3.12784	1.97232	0.71934	35.21464	94.81	1.09
72/10/18	2441608.5	-0.14070	0.70491	0.01810	-34.46549	-7.04811	1.88481	0.71904	35.22923	101.29	1.44
72/10/22	2441612.5	-0.21925	0.68418	0.02233	-33.47169	-10.88312	1.77320	0.71880	35.24118	107.77	1.78
72/10/26	2441616.5	-0.29502	0.65473	0.02627	-32.05056	-14.58294	1.63890	0.71861	35.25034	114.26	2.10
72/10/30	2441620.5	-0.36702	0.61694	0.02988	-30.21989	-18.09930	1.48362	0.71848	35.25659	120.75	2.38
72/11/ 3	2441624.5	-0.43435	0.57128	0.03311	-28.00305	-21.38625	1.30936	0.71841	35.25985	127.25	2.64
72/11/ 7	2441628.5	-0.49613	0.51834	0.03592	-25.42869	-24.40089	1.11837	0.71841	35.26006	133.75	2.87
72/11/11	2441632.5	-0.55159	0.45878	0.03827	-22.53028	-27.10398	0.91313	0.71847	35.25724	140.25	3.05
72/11/15	2441636.5	-0.60001	0.39337	0.04013	-19.34569	-29.46051	0.69633	0.71858	35.25142	146.75	3.20
72/11/19	2441640.5	-0.64078	0.32295	0.04148	-15.91659	-31.44021	0.47079	0.71876	35.24267	153.25	3.31
72/11/23	2441644.5	-0.67340	0.24842	0.04230	-12.28783	-33.01793	0.23945	0.71900	35.23112	159.75	3.37
72/11/27	2441648.5	-0.69744	0.17072	0.04258	-8.50681	-34.17404	0.00532	0.71929	35.21691	166.25	3.39

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
72/12/ 1	2441652.5	-0.71262	0.09086	0.04233	-4.62274	-34.89463	-0.22857	0.71963	35.20024	172.73	3.37
72/12/ 5	2441656.5	-0.71876	0.00984	0.04153	-0.68596	-35.17163	-0.45920	0.72002	35.18132	179.22	3.31
72/12/ 9	2441660.5	-0.71579	-0.07130	0.04021	3.25281	-35.00294	-0.68363	0.72045	35.16040	185.69	3.20
72/12/13	2441664.5	-0.70377	-0.15155	0.03838	7.14314	-34.39228	-0.89900	0.72092	35.13775	192.15	3.05
72/12/17	2441668.5	-0.68286	-0.22988	0.03606	10.93562	-33.34916	-1.10260	0.72142	35.11367	198.61	2.87
72/12/21	2441672.5	-0.65335	-0.30531	0.03330	14.58251	-31.88858	-1.29190	0.72194	35.08847	205.05	2.64
72/12/25	2441676.5	-0.61563	-0.37691	0.03011	18.03832	-30.03082	-1.46457	0.72247	35.06246	211.48	2.39
72/12/29	2441680.5	-0.57019	-0.44378	0.02654	21.26039	-27.80100	-1.61850	0.72302	35.03597	217.89	2.10
73/ 1/ 2	2441684.5	-0.51761	-0.50509	0.02265	24.20941	-25.22875	-1.75185	0.72357	35.00935	224.30	1.79
73/ 1/ 6	2441688.5	-0.45857	-0.56010	0.01847	26.84982	-22.34772	-1.86305	0.72412	34.98291	230.69	1.46
73/ 1/10	2441692.5	-0.39382	-0.60814	0.01406	29.15022	-19.19506	-1.95082	0.72465	34.95700	237.07	1.11
73/ 1/14	2441696.5	-0.32417	-0.64861	0.00947	31.08369	-15.81096	-2.01418	0.72517	34.93192	243.44	0.75
73/ 1/18	2441700.5	-0.25050	-0.68104	0.00477	32.62797	-12.23807	-2.05244	0.72567	34.90798	249.81	0.38
73/ 1/22	2441704.5	-0.17373	-0.70505	0.00001	33.76573	-8.52095	-2.06526	0.72614	34.88547	256.16	0.00
73/ 1/26	2441708.5	-0.09481	-0.72034	-0.00475	34.48463	-4.70555	-2.05256	0.72657	34.86467	262.50	-0.37
73/ 1/30	2441712.5	-0.01473	-0.72675	-0.00946	34.77742	-0.83865	-2.01459	0.72696	34.84581	268.84	-0.75
73/ 2/ 3	2441716.5	0.06554	-0.72421	-0.01404	34.64190	3.03269	-1.95189	0.72731	34.82913	275.17	-1.11
73/ 2/ 7	2441720.5	0.14500	-0.71277	-0.01846	34.08094	6.86163	-1.86529	0.72760	34.81482	281.50	-1.45
73/ 2/11	2441724.5	0.22269	-0.69257	-0.02264	33.10234	10.60208	-1.75590	0.72785	34.80305	287.82	-1.78
73/ 2/15	2441728.5	0.29764	-0.66389	-0.02655	31.71873	14.20920	-1.62508	0.72804	34.79396	294.15	-2.09
73/ 2/19	2441732.5	0.36894	-0.62706	-0.03014	29.94735	17.63982	-1.47443	0.72817	34.78766	300.47	-2.37
73/ 2/23	2441736.5	0.43572	-0.58255	-0.03335	27.80990	20.85296	-1.30578	0.72824	34.78422	306.79	-2.62
73/ 2/27	2441740.5	0.49717	-0.53091	-0.03616	25.33225	23.81017	-1.12117	0.72825	34.78368	313.12	-2.85
73/ 3/ 3	2441744.5	0.55253	-0.47276	-0.03852	22.54414	26.47601	-0.92281	0.72820	34.78605	319.45	-3.03
73/ 3/ 7	2441748.5	0.60112	-0.40883	-0.04041	19.47891	28.81836	-0.71309	0.72809	34.79130	325.78	-3.18
73/ 3/11	2441752.5	0.64234	-0.33988	-0.04181	16.17316	30.80878	-0.49450	0.72792	34.79938	332.12	-3.29
73/ 3/15	2441756.5	0.67569	-0.26677	-0.04269	12.66630	32.42285	-0.26967	0.72770	34.81019	338.46	-3.36
73/ 3/19	2441760.5	0.70074	-0.19038	-0.04305	9.00025	33.64040	-0.04129	0.72742	34.82360	344.80	-3.39
73/ 3/23	2441764.5	0.71718	-0.11166	-0.04288	5.21893	34.44583	0.18788	0.72709	34.83946	351.15	-3.38
73/ 3/27	2441768.5	0.72480	-0.03156	-0.04219	1.36783	34.82825	0.41507	0.72671	34.85757	357.51	-3.33
73/ 3/31	2441772.5	0.72348	0.04893	-0.04097	-2.50646	34.78171	0.63752	0.72629	34.87773	3.87	-3.23
73/ 4/ 4	2441776.5	0.71324	0.12881	-0.03925	-6.35677	34.30530	0.85249	0.72584	34.89970	10.24	-3.10
73/ 4/ 8	2441780.5	0.69417	0.20710	-0.03704	-10.13587	33.40323	1.05732	0.72535	34.92320	16.61	-2.93
73/ 4/12	2441784.5	0.66650	0.28283	-0.03437	-13.79704	32.08488	1.24946	0.72484	34.94795	22.99	-2.72
73/ 4/16	2441788.5	0.63055	0.35504	-0.03128	-17.29457	30.36477	1.42647	0.72431	34.97365	29.38	-2.47
73/ 4/20	2441792.5	0.58675	0.42283	-0.02779	-20.58440	28.26244	1.58611	0.72376	34.99998	35.78	-2.20
73/ 4/24	2441796.5	0.53563	0.48534	-0.02396	-23.62460	25.80238	1.72630	0.72321	35.02662	42.18	-1.90
73/ 4/28	2441800.5	0.47782	0.54179	-0.01983	-26.37601	23.01371	1.84520	0.72266	35.05324	48.59	-1.57
73/ 5/ 2	2441804.5	0.41402	0.59145	-0.01546	-28.80273	19.93001	1.94122	0.72212	35.07949	55.01	-1.23
73/ 5/ 6	2441808.5	0.34502	0.63368	-0.01088	-30.87267	16.58886	2.01304	0.72160	35.10505	61.43	-0.86
73/ 5/10	2441812.5	0.27167	0.66793	-0.00617	-32.55803	13.03152	2.05966	0.72109	35.12959	67.87	-0.49
73/ 5/14	2441816.5	0.19490	0.69376	-0.00139	-33.83573	9.30237	2.08036	0.72061	35.15279	74.31	-0.11
73/ 5/18	2441820.5	0.11567	0.71081	0.00342	-34.68783	5.44838	2.07478	0.72017	35.17435	80.76	0.27
73/ 5/22	2441824.5	0.03497	0.71887	0.00818	-35.10183	1.51855	2.04289	0.71977	35.19400	87.22	0.65
73/ 5/26	2441828.5	-0.04617	0.71781	0.01284	-35.07093	-2.43679	1.98503	0.71941	35.21148	93.68	1.02

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					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM				VENUS		
73/ 5/30	2441832.5	-0.12673	0.70763	0.01733	-34.59420	-6.36668	1.90185	0.71910	35.22655	100.15	1.38
73/ 6/ 3	2441836.5	-0.20567	0.68845	0.02161	-33.67666	-10.22017	1.79437	0.71884	35.23903	106.63	1.72
73/ 6/ 7	2441840.5	-0.28200	0.66051	0.02560	-32.32927	-13.94714	1.66394	0.71864	35.24873	113.12	2.04
73/ 6/11	2441844.5	-0.35473	0.62415	0.02928	-30.56883	-17.49895	1.51220	0.71850	35.25555	119.61	2.34
73/ 6/15	2441848.5	-0.42293	0.57983	0.03258	-28.41775	-20.82922	1.34111	0.71842	35.25937	126.11	2.60
73/ 6/19	2441852.5	-0.48575	0.52811	0.03546	-25.90376	-23.89446	1.15287	0.71841	35.26017	132.61	2.83
73/ 6/23	2441856.5	-0.54236	0.46966	0.03789	-23.05954	-26.65475	0.94995	0.71845	35.25792	139.11	3.02
73/ 6/27	2441860.5	-0.59206	0.40522	0.03984	-19.92220	-29.07430	0.73497	0.71856	35.25265	145.61	3.18
73/ 7/ 1	2441864.5	-0.63422	0.33561	0.04128	-16.53280	-31.12195	0.51076	0.71873	35.24444	152.11	3.29
73/ 7/ 5	2441868.5	-0.66829	0.26173	0.04220	-12.93568	-32.77166	0.28022	0.71896	35.23339	158.61	3.36
73/ 7/ 9	2441872.5	-0.69386	0.18452	0.04257	-9.17783	-34.00279	0.04637	0.71924	35.21966	165.11	3.39
73/ 7/13	2441876.5	-0.71061	0.10496	0.04241	-5.30821	-34.80041	-0.18778	0.71957	35.20342	171.60	3.38
73/ 7/17	2441880.5	-0.71834	0.02407	0.04171	-1.37700	-35.15543	-0.41919	0.71995	35.18488	178.08	3.32
73/ 7/21	2441884.5	-0.71696	-0.05713	0.04048	2.56507	-35.06469	-0.64491	0.72037	35.16430	184.56	3.22
73/ 7/25	2441888.5	-0.70652	-0.13760	0.03873	6.46750	-34.53092	-0.86207	0.72083	35.14194	191.02	3.08
73/ 7/29	2441892.5	-0.68715	-0.21634	0.03650	10.28063	-33.56260	-1.06792	0.72133	35.11808	197.48	2.90
73/ 8/ 2	2441896.5	-0.65912	-0.29235	0.03381	13.95639	-32.17381	-1.25990	0.72184	35.09305	203.92	2.68
73/ 8/ 6	2441900.5	-0.62281	-0.36468	0.03069	17.44885	-30.38390	-1.43563	0.72237	35.06715	210.35	2.44
73/ 8/10	2441904.5	-0.57868	-0.43244	0.02719	20.71481	-28.21721	-1.59298	0.72292	35.04071	216.77	2.16
73/ 8/14	2441908.5	-0.52730	-0.49479	0.02335	23.71434	-25.70259	-1.73005	0.72347	35.01408	223.18	1.85
73/ 8/18	2441912.5	-0.46934	-0.55095	0.01922	26.41120	-22.87301	-1.84523	0.72402	34.98758	229.57	1.52
73/ 8/22	2441916.5	-0.40553	-0.60025	0.01484	28.77324	-19.76506	-1.93718	0.72456	34.96155	235.96	1.17
73/ 8/26	2441920.5	-0.33668	-0.64209	0.01028	30.77272	-16.41844	-2.00487	0.72508	34.93630	242.33	0.81
73/ 8/30	2441924.5	-0.26365	-0.67596	0.00560	32.38656	-12.87538	-2.04756	0.72558	34.91214	248.69	0.44
73/ 9/ 3	2441928.5	-0.18735	-0.70146	0.00084	33.59656	-9.18017	-2.06484	0.72605	34.88937	255.05	0.07
73/ 9/ 7	2441932.5	-0.10874	-0.71829	-0.00392	34.38949	-5.37856	-2.05660	0.72649	34.86826	261.39	-0.31
73/ 9/11	2441936.5	-0.02879	-0.72627	-0.00864	34.75720	-1.51722	-2.02302	0.72689	34.84906	267.73	-0.68
73/ 9/15	2441940.5	0.05152	-0.72529	-0.01325	34.69661	2.35681	-1.96460	0.72724	34.83201	274.06	-1.04
73/ 9/19	2441944.5	0.13119	-0.71540	-0.01770	34.20971	6.19660	-1.88211	0.72755	34.81730	280.39	-1.39
73/ 9/23	2441948.5	0.20926	-0.69673	-0.02193	33.30345	9.95590	-1.77662	0.72780	34.80511	286.72	-1.73
73/ 9/27	2441952.5	0.28475	-0.66950	-0.02589	31.98960	13.58961	-1.64943	0.72800	34.79558	293.04	-2.04
73/10/ 1	2441956.5	0.35676	-0.63407	-0.02953	30.28463	17.05424	-1.50212	0.72814	34.78882	299.36	-2.32
73/10/ 5	2441960.5	0.42439	-0.59087	-0.03282	28.20947	20.30838	-1.33648	0.72822	34.78492	305.69	-2.58
73/10/ 9	2441964.5	0.48683	-0.54043	-0.03570	25.78926	23.31311	-1.15450	0.72824	34.78390	312.01	-2.81
73/10/13	2441968.5	0.54330	-0.48337	-0.03814	23.05310	26.03243	-0.95838	0.72820	34.78580	318.34	-3.00
73/10/17	2441972.5	0.59312	-0.42039	-0.04012	20.03375	28.43361	-0.75046	0.72811	34.79058	324.67	-3.16
73/10/21	2441976.5	0.63568	-0.35227	-0.04160	16.76722	30.48754	-0.53323	0.72795	34.79819	331.01	-3.28
73/10/25	2441980.5	0.67043	-0.27982	-0.04257	13.29249	32.16906	-0.30929	0.72773	34.80854	337.35	-3.35
73/10/29	2441984.5	0.69696	-0.20394	-0.04303	9.65107	33.45725	-0.08134	0.72746	34.82151	343.69	-3.39
73/11/ 2	2441988.5	0.71493	-0.12555	-0.04295	5.88657	34.33569	0.14790	0.72714	34.83695	350.04	-3.39
73/11/ 6	2441992.5	0.72410	-0.04562	-0.04234	2.04423	34.79265	0.37564	0.72677	34.85468	356.40	-3.34
73/11/10	2441996.5	0.72435	0.03488	-0.04122	-1.82949	34.82131	0.59912	0.72636	34.87448	2.76	-3.25
73/11/14	2442000.5	0.71566	0.11494	-0.03958	-5.68749	34.41986	0.81559	0.72591	34.89613	9.12	-3.13
73/11/18	2442004.5	0.69812	0.19358	-0.03746	-9.48252	33.59163	1.02238	0.72543	34.91935	15.50	-2.96
73/11/22	2442008.5	0.67193	0.26982	-0.03487	-13.16771	32.34509	1.21692	0.72492	34.94388	21.88	-2.76

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73/11/26	2442012.5	0.63740	0.34271	-0.03185	-16.69714	30.69387	1.39675	0.72439	34.96940	28.27	-2.52
73/11/30	2442016.5	0.59494	0.41134	-0.02843	-20.02640	28.65666	1.55958	0.72385	34.99562	34.66	-2.25
73/12/ 4	2442020.5	0.54506	0.47484	-0.02465	-23.11318	26.25708	1.70330	0.72330	35.02220	41.06	-1.95
73/12/ 8	2442024.5	0.48837	0.53240	-0.02057	-25.91777	23.52349	1.82604	0.72275	35.04882	47.47	-1.63
73/12/12	2442028.5	0.42556	0.58329	-0.01623	-28.40367	20.48869	1.92616	0.72221	35.07513	53.89	-1.29
73/12/16	2442032.5	0.35740	0.62686	-0.01169	-30.53809	17.18961	2.00229	0.72168	35.10081	60.31	-0.93
73/12/20	2442036.5	0.28475	0.66254	-0.00700	-32.29245	13.66691	2.05336	0.72118	35.12553	66.74	-0.56
73/12/24	2442040.5	0.20851	0.68987	-0.00222	-33.64282	9.96444	2.07862	0.72069	35.14897	73.18	-0.18
73/12/28	2442044.5	0.12964	0.70848	0.00258	-34.57033	6.12880	2.07763	0.72025	35.17082	79.63	0.21
74/ 1/ 1	2442048.5	0.04912	0.71812	0.00735	-35.06153	2.20865	2.05033	0.71984	35.19081	86.09	0.59
74/ 1/ 5	2442052.5	-0.03202	0.71866	0.01203	-35.10860	-1.74584	1.99696	0.71947	35.20866	92.55	0.96
74/ 1/ 9	2442056.5	-0.11275	0.71007	0.01656	-34.70959	-5.68378	1.91813	0.71915	35.22414	99.02	1.32
74/ 1/13	2442060.5	-0.19205	0.69245	0.02088	-33.86847	-9.55415	1.81481	0.71889	35.23704	105.50	1.66
74/ 1/17	2442064.5	-0.26890	0.66601	0.02493	-32.59520	-13.30665	1.68826	0.71868	35.24718	111.99	1.99
74/ 1/21	2442068.5	-0.34233	0.63109	0.02866	-30.90554	-16.89233	1.54011	0.71853	35.25443	118.48	2.29
74/ 1/25	2442072.5	-0.41139	0.58813	0.03203	-28.82096	-20.26436	1.37224	0.71845	35.25869	124.97	2.56
74/ 1/29	2442076.5	-0.47521	0.53766	0.03499	-26.36830	-23.37872	1.18683	0.71842	35.25989	131.47	2.79
74/ 2/ 2	2442080.5	-0.53296	0.48034	0.03750	-23.57939	-26.19482	0.98629	0.71846	35.25803	137.97	2.99
74/ 2/ 6	2442084.5	-0.58392	0.41689	0.03954	-20.49064	-28.67612	0.77323	0.71856	35.25314	144.47	3.15
74/ 2/10	2442088.5	-0.62744	0.34813	0.04107	-17.14243	-30.79064	0.55043	0.71872	35.24527	150.98	3.28
74/ 2/14	2442092.5	-0.66296	0.27493	0.04207	-13.57858	-32.51143	0.32080	0.71894	35.23455	157.48	3.35
74/ 2/18	2442096.5	-0.69004	0.19824	0.04255	-9.84568	-33.81689	0.08733	0.71921	35.22112	163.97	3.39
74/ 2/22	2442100.5	-0.70836	0.11902	0.04248	-5.99236	-34.69110	-0.14696	0.71954	35.20515	170.46	3.38
74/ 2/26	2442104.5	-0.71768	0.03829	0.04187	-2.06866	-35.12395	-0.37904	0.71992	35.18686	176.95	3.33
74/ 3/ 2	2442108.5	-0.71790	-0.04292	0.04073	1.87478	-35.11125	-0.60593	0.72033	35.16649	183.42	3.24
74/ 3/ 6	2442112.5	-0.70904	-0.12359	0.03907	5.78736	-34.65471	-0.82475	0.72079	35.14431	189.89	3.11
74/ 3/10	2442116.5	-0.69122	-0.20270	0.03693	9.61926	-33.76182	-1.03274	0.72128	35.12060	196.34	2.93
74/ 3/14	2442120.5	-0.66469	-0.27926	0.03431	13.32209	-32.44569	-1.22730	0.72179	35.09568	202.79	2.72
74/ 3/18	2442124.5	-0.62980	-0.35230	0.03127	16.84953	-30.72478	-1.40601	0.72232	35.06986	209.22	2.48
74/ 3/22	2442128.5	-0.58701	-0.42092	0.02783	20.15788	-28.62254	-1.56669	0.72287	35.04347	215.64	2.21
74/ 3/26	2442132.5	-0.53687	-0.48428	0.02405	23.20663	-26.16708	-1.70742	0.72341	35.01685	222.05	1.90
74/ 3/30	2442136.5	-0.48002	-0.54158	0.01996	25.95887	-23.39066	-1.82652	0.72396	34.99032	228.45	1.58
74/ 4/ 3	2442140.5	-0.41718	-0.59213	0.01562	28.38171	-20.32925	-1.92262	0.72450	34.96422	234.83	1.24
74/ 4/ 7	2442144.5	-0.34916	-0.63532	0.01109	30.44663	-17.02201	-1.99461	0.72503	34.93887	241.21	0.88
74/ 4/11	2442148.5	-0.27680	-0.67062	0.00643	32.12972	-13.51075	-2.04173	0.72553	34.91459	247.57	0.51
74/ 4/15	2442152.5	-0.20102	-0.69762	0.00168	33.41191	-9.83943	-2.06348	0.72600	34.89166	253.93	0.13
74/ 4/19	2442156.5	-0.12275	-0.71599	-0.00309	34.27908	-6.05354	-2.05972	0.72645	34.87037	260.27	-0.24
74/ 4/23	2442160.5	-0.04296	-0.72554	-0.00782	34.72217	-2.19962	-2.03057	0.72685	34.85098	266.61	-0.62
74/ 4/27	2442164.5	0.03735	-0.72614	-0.01245	34.73721	1.67533	-1.97648	0.72721	34.83370	272.94	-0.98
74/ 5/ 1	2442168.5	0.11721	-0.71781	-0.01693	34.32528	5.52435	-1.89817	0.72752	34.81876	279.27	-1.33
74/ 5/ 5	2442172.5	0.19562	-0.70067	-0.02120	33.49244	9.30103	-1.79664	0.72778	34.80633	285.60	-1.67
74/ 5/ 9	2442176.5	0.27164	-0.67493	-0.02521	32.24961	12.96005	-1.67318	0.72798	34.79655	291.92	-1.98
74/ 5/13	2442180.5	0.34432	-0.64092	-0.02892	30.61243	16.45758	-1.52930	0.72813	34.78953	298.25	-2.28
74/ 5/17	2442184.5	0.41279	-0.59905	-0.03227	28.60102	19.75183	-1.36675	0.72821	34.78536	304.57	-2.54
74/ 5/21	2442188.5	0.47620	-0.54984	-0.03522	26.23981	22.80339	-1.18751	0.72824	34.78408	310.89	-2.77

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74/ 5/25	2442192.5	0.53378	-0.49390	-0.03774	23.55719	25.57571	-0.99371	0.72821	34.78571	317.22	-2.97
74/ 5/29	2442196.5	0.58482	-0.43191	-0.03980	20.58528	28.03544	-0.78770	0.72811	34.79023	323.55	-3.13
74/ 6/ 2	2442200.5	0.62869	-0.36463	-0.04137	17.35955	30.15279	-0.57192	0.72796	34.79758	329.89	-3.26
74/ 6/ 6	2442204.5	0.66486	-0.29288	-0.04244	13.91848	31.90186	-0.34897	0.72775	34.80768	336.23	-3.34
74/ 6/10	2442208.5	0.69287	-0.21754	-0.04298	10.30315	33.26094	-0.12151	0.72749	34.82040	342.57	-3.39
74/ 6/14	2442212.5	0.71236	-0.13952	-0.04300	6.55685	34.21278	0.10771	0.72717	34.83559	348.92	-3.39
74/ 6/18	2442216.5	0.72310	-0.05978	-0.04249	2.72459	34.74480	0.33593	0.72681	34.85308	355.27	-3.35
74/ 6/22	2442220.5	0.72492	0.02069	-0.04145	-1.14736	34.84928	0.56036	0.72640	34.87266	1.63	-3.27
74/ 6/26	2442224.5	0.71780	0.10090	-0.03990	-5.01194	34.52351	0.77827	0.72596	34.89410	8.00	-3.15
74/ 6/30	2442228.5	0.70181	0.17987	-0.03786	-8.82187	33.76991	0.98697	0.72548	34.91713	14.37	-2.99
74/ 7/ 4	2442232.5	0.67712	0.25660	-0.03535	-12.53015	32.59603	1.18385	0.72497	34.94148	20.75	-2.79
74/ 7/ 8	2442236.5	0.64403	0.33016	-0.03240	-16.09063	31.01461	1.36644	0.72445	34.96686	27.14	-2.56
74/ 7/12	2442240.5	0.60292	0.39960	-0.02905	-19.45858	29.04345	1.53241	0.72391	34.99295	33.54	-2.30
74/ 7/16	2442244.5	0.55430	0.46407	-0.02534	-22.59125	26.70534	1.67963	0.72336	35.01944	39.94	-2.01
74/ 7/20	2442248.5	0.49876	0.52273	-0.02130	-25.44842	24.02783	1.80618	0.72281	35.04599	46.34	-1.69
74/ 7/24	2442252.5	0.43696	0.57485	-0.01701	-27.99298	21.04300	1.91036	0.72227	35.07227	52.76	-1.35
74/ 7/28	2442256.5	0.36969	0.61975	-0.01250	-30.19144	17.78708	1.99077	0.72174	35.09795	59.18	-0.99
74/ 8/ 1	2442260.5	0.29776	0.65685	-0.00783	-32.01443	14.30014	2.04628	0.72123	35.12271	65.61	-0.62
74/ 8/ 5	2442264.5	0.22208	0.68567	-0.00306	-33.43719	10.62552	2.07609	0.72075	35.14623	72.05	-0.24
74/ 8/ 9	2442268.5	0.14359	0.70584	0.00174	-34.43994	6.80939	2.07970	0.72029	35.16821	78.50	0.14
74/ 8/13	2442272.5	0.06329	0.71706	0.00653	-35.00826	2.90014	2.05697	0.71988	35.18835	84.96	0.52
74/ 8/17	2442276.5	-0.01782	0.71920	0.01123	-35.13333	-1.05230	2.00811	0.71951	35.20640	91.42	0.89
74/ 8/21	2442280.5	-0.09870	0.71221	0.01579	-34.81219	-4.99708	1.93367	0.71919	35.22213	97.89	1.26
74/ 8/25	2442284.5	-0.17832	0.69616	0.02014	-34.04778	-8.88316	1.83453	0.71892	35.23531	104.37	1.61
74/ 8/29	2442288.5	-0.25568	0.67125	0.02424	-32.84902	-12.66005	1.71193	0.71870	35.24579	110.85	1.93
74/ 9/ 2	2442292.5	-0.32977	0.63779	0.02804	-31.23070	-16.27852	1.56742	0.71855	35.25341	117.34	2.24
74/ 9/ 6	2442296.5	-0.39967	0.59619	0.03147	-29.21330	-19.69131	1.40284	0.71845	35.25809	123.84	2.51
74/ 9/10	2442300.5	-0.46446	0.54700	0.03450	-26.82276	-22.85388	1.22033	0.71842	35.25974	130.33	2.75
74/ 9/14	2442304.5	-0.52333	0.49083	0.03710	-24.09009	-25.72498	1.02226	0.71845	35.25836	136.84	2.96
74/ 9/18	2442308.5	-0.57553	0.42839	0.03922	-21.05091	-28.26734	0.81119	0.71854	35.25396	143.34	3.13
74/ 9/22	2442312.5	-0.62039	0.36050	0.04084	-17.74497	-30.44816	0.58990	0.71869	35.24659	149.84	3.26
74/ 9/26	2442316.5	-0.65735	0.28801	0.04194	-14.21554	-32.23956	0.36126	0.71890	35.23636	156.34	3.34
74/ 9/30	2442320.5	-0.68593	0.21186	0.04250	-10.50874	-33.61901	0.12825	0.71916	35.22339	162.84	3.39
74/10/ 4	2442324.5	-0.70580	0.13301	0.04253	-6.67293	-34.56957	-0.10611	0.71948	35.20787	169.33	3.39
74/10/ 8	2442328.5	-0.71670	0.05247	0.04201	-2.75792	-35.08011	-0.33878	0.71985	35.18999	175.81	3.35
74/10/12	2442332.5	-0.71852	-0.02873	0.04097	1.18569	-35.14542	-0.56679	0.72026	35.16998	182.29	3.26
74/10/16	2442336.5	-0.71124	-0.10957	0.03940	5.10725	-34.76617	-0.78722	0.72071	35.14812	188.76	3.13
74/10/20	2442340.5	-0.69498	-0.18902	0.03734	8.95676	-33.94885	-0.99729	0.72119	35.12467	195.22	2.97
74/10/24	2442344.5	-0.66995	-0.26609	0.03480	12.68553	-32.70561	-1.19436	0.72170	35.09995	201.66	2.76
74/10/28	2442348.5	-0.63650	-0.33982	0.03183	16.24683	-31.05400	-1.37600	0.72223	35.07426	208.10	2.53
74/11/ 1	2442352.5	-0.59505	-0.40928	0.02846	19.59649	-29.01663	-1.53998	0.72277	35.04795	214.52	2.26
74/11/ 5	2442356.5	-0.54615	-0.47361	0.02473	22.69338	-26.62081	-1.68432	0.72332	35.02134	220.93	1.96
74/11/ 9	2442360.5	-0.49042	-0.53202	0.02069	25.49994	-23.89811	-1.80731	0.72387	34.99476	227.33	1.64
74/11/13	2442364.5	-0.42858	-0.58380	0.01640	27.98257	-20.88389	-1.90751	0.72441	34.96855	233.72	1.30
74/11/17	2442368.5	-0.36141	-0.62832	0.01190	30.11194	-17.61678	-1.98378	0.72494	34.94303	240.09	0.94

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74/11/21	2442372.5	-0.28974	-0.66504	0.00725	31.86334	-14.13819	-2.03529	0.72545	34.91852	246.46	0.57
74/11/25	2442376.5	-0.21449	-0.69351	0.00251	33.21682	-10.49171	-2.06150	0.72593	34.89532	252.81	0.20
74/11/29	2442380.5	-0.13659	-0.71342	-0.00225	34.15741	-6.72261	-2.06220	0.72638	34.87370	259.16	-0.18
74/12/ 3	2442384.5	-0.05700	-0.72452	-0.00699	34.67516	-2.87729	-2.03746	0.72679	34.85393	265.50	-0.55
74/12/ 7	2442388.5	0.02329	-0.72669	-0.01165	34.76520	0.99729	-1.98769	0.72716	34.83626	271.84	-0.92
74/12/11	2442392.5	0.10330	-0.71992	-0.01616	34.42774	4.85414	-1.91355	0.72747	34.82088	278.17	-1.27
74/12/15	2442396.5	0.18204	-0.70431	-0.02047	33.66796	8.64672	-1.81600	0.72774	34.80798	284.49	-1.61
74/12/19	2442400.5	0.25854	-0.68006	-0.02453	32.49596	12.32948	-1.69628	0.72796	34.79772	290.82	-1.93
74/12/23	2442404.5	0.33187	-0.64746	-0.02829	30.92655	15.85832	-1.55585	0.72811	34.79021	297.14	-2.23
74/12/27	2442408.5	0.40114	-0.60694	-0.03171	28.97909	19.19103	-1.39644	0.72821	34.78554	303.46	-2.50
74/12/31	2442412.5	0.46549	-0.55897	-0.03473	26.67727	22.28779	-1.21997	0.72825	34.78377	309.79	-2.73
75/ 1/ 4	2442416.5	0.52415	-0.50417	-0.03733	24.04879	25.11151	-1.02857	0.72822	34.78491	316.11	-2.94
75/ 1/ 8	2442420.5	0.57638	-0.44319	-0.03948	21.12515	27.62824	-0.82452	0.72814	34.78895	322.44	-3.11
75/ 1/12	2442424.5	0.62155	-0.37678	-0.04113	17.94126	29.80755	-0.61027	0.72800	34.79585	328.78	-3.24
75/ 1/16	2442428.5	0.65910	-0.30575	-0.04229	14.53508	31.62284	-0.38839	0.72780	34.80551	335.11	-3.33
75/ 1/20	2442432.5	0.68857	-0.23097	-0.04293	10.94728	33.05165	-0.16153	0.72754	34.81782	341.46	-3.38
75/ 1/24	2442436.5	0.70958	-0.15335	-0.04303	7.22078	34.07592	0.06758	0.72723	34.83264	347.81	-3.39
75/ 1/28	2442440.5	0.72186	-0.07384	-0.04261	3.40031	34.68224	0.29617	0.72688	34.84978	354.16	-3.36
75/ 2/ 1	2442444.5	0.72525	0.00657	-0.04167	-0.46802	34.86201	0.52147	0.72648	34.86905	0.52	-3.29
75/ 2/ 5	2442448.5	0.71970	0.08690	-0.04021	-4.33727	34.61165	0.74071	0.72604	34.89021	6.88	-3.17
75/ 2/ 9	2442452.5	0.70525	0.16616	-0.03825	-8.16016	33.93266	0.95121	0.72557	34.91301	13.26	-3.02
75/ 2/13	2442456.5	0.68207	0.24335	-0.03582	-11.88960	32.83169	1.15034	0.72506	34.93717	19.64	-2.83
75/ 2/17	2442460.5	0.65042	0.31753	-0.03295	-15.47925	31.32058	1.33561	0.72454	34.96241	26.02	-2.61
75/ 2/21	2442464.5	0.61069	0.38776	-0.02966	-18.88409	29.41625	1.50465	0.72400	34.98840	32.41	-2.35
75/ 2/25	2442468.5	0.56335	0.45316	-0.02601	-22.06097	27.14061	1.65530	0.72346	35.01484	38.81	-2.06
75/ 3/ 1	2442472.5	0.50897	0.51290	-0.02203	-24.96921	24.52041	1.78559	0.72291	35.04140	45.22	-1.75
75/ 3/ 5	2442476.5	0.44822	0.56621	-0.01778	-27.57108	21.58693	1.89380	0.72236	35.06775	51.63	-1.41
75/ 3/ 9	2442480.5	0.38184	0.61242	-0.01330	-29.83245	18.37574	1.97846	0.72183	35.09355	58.06	-1.06
75/ 3/13	2442484.5	0.31066	0.65093	-0.00865	-31.72318	14.92623	2.03840	0.72132	35.11848	64.49	-0.69
75/ 3/17	2442488.5	0.23557	0.68124	-0.00390	-33.21766	11.28124	2.07275	0.72083	35.14222	70.92	-0.31
75/ 3/21	2442492.5	0.15751	0.70294	0.00090	-34.29523	7.48646	2.08097	0.72037	35.16447	77.37	0.07
75/ 3/25	2442496.5	0.07745	0.71575	0.00569	-34.94049	3.58994	2.06285	0.71995	35.18495	83.82	0.45
75/ 3/29	2442500.5	-0.00359	0.71949	0.01041	-35.14363	-0.35861	2.01854	0.71957	35.20338	90.29	0.83
75/ 4/ 2	2442504.5	-0.08458	0.71409	0.01500	-34.90065	-4.30845	1.94852	0.71924	35.21952	96.76	1.20
75/ 4/ 6	2442508.5	-0.16450	0.69962	0.01940	-34.21346	-8.20852	1.85363	0.71896	35.23317	103.23	1.55
75/ 4/10	2442512.5	-0.24232	0.67624	0.02355	-33.08992	-12.00819	1.73503	0.71873	35.24414	109.71	1.88
75/ 4/14	2442516.5	-0.31706	0.64425	0.02740	-31.54380	-15.65794	1.59423	0.71857	35.25229	116.20	2.18
75/ 4/18	2442520.5	-0.38776	0.60405	0.03090	-29.59461	-19.11014	1.43302	0.71846	35.25750	122.70	2.46
75/ 4/22	2442524.5	-0.45351	0.55614	0.03400	-27.26734	-22.31969	1.25348	0.71841	35.25972	129.20	2.71
75/ 4/26	2442528.5	-0.51347	0.50114	0.03668	-24.59215	-25.24474	1.05795	0.71843	35.25890	135.70	2.93
75/ 4/30	2442532.5	-0.56689	0.43975	0.03888	-21.60388	-27.84728	0.84896	0.71851	35.25506	142.20	3.10
75/ 5/ 4	2442536.5	-0.61308	0.37275	0.04059	-18.34160	-30.09366	0.62925	0.71865	35.24824	148.70	3.24
75/ 5/ 8	2442540.5	-0.65146	0.30100	0.04178	-14.84800	-31.95513	0.40167	0.71885	35.23854	155.20	3.33
75/ 5/12	2442544.5	-0.68154	0.22542	0.04244	-11.16876	-33.40819	0.16920	0.71911	35.22609	161.70	3.38
75/ 5/16	2442548.5	-0.70295	0.14698	0.04256	-7.35189	-34.43491	-0.06514	0.71942	35.21104	168.19	3.39

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75/ 5/20	2442552.5	-0.71544	0.06666	0.04214	-3.44701	-35.02311	-0.29834	0.71977	35.19360	174.68	3.36
75/ 5/24	2442556.5	-0.71885	-0.01450	0.04119	0.49537	-35.16655	-0.52738	0.72018	35.17399	181.16	3.28
75/ 5/28	2442560.5	-0.71316	-0.09548	0.03971	4.42454	-34.86486	-0.74935	0.72062	35.15247	187.63	3.16
75/ 6/ 1	2442564.5	-0.69846	-0.17525	0.03773	8.29035	-34.12353	-0.96143	0.72110	35.12932	194.09	3.00
75/ 6/ 5	2442568.5	-0.67494	-0.25281	0.03528	12.04382	-32.95372	-1.16097	0.72160	35.10483	200.53	2.80
75/ 6/ 9	2442572.5	-0.64293	-0.32719	0.03238	15.63784	-31.37207	-1.34548	0.72213	35.07933	206.97	2.57
75/ 6/13	2442576.5	-0.60285	-0.39746	0.02907	19.02772	-29.40032	-1.51271	0.72267	35.05312	213.40	2.31
75/ 6/17	2442580.5	-0.55521	-0.46275	0.02541	22.17178	-27.06500	-1.66062	0.72322	35.02656	219.81	2.01
75/ 6/21	2442584.5	-0.50063	-0.52225	0.02142	25.03179	-24.39695	-1.78746	0.72376	34.99996	226.21	1.70
75/ 6/25	2442588.5	-0.43980	-0.57524	0.01716	27.57342	-21.43093	-1.89173	0.72431	34.97366	232.60	1.36
75/ 6/29	2442592.5	-0.37350	-0.62107	0.01270	29.76658	-18.20504	-1.97226	0.72484	34.94800	238.98	1.00
75/ 7/ 3	2442596.5	-0.30255	-0.65919	0.00807	31.58571	-14.76023	-2.02814	0.72535	34.92327	245.35	0.64
75/ 7/ 7	2442600.5	-0.22786	-0.68913	0.00334	33.01004	-11.13977	-2.05879	0.72584	34.89980	251.70	0.26
75/ 7/11	2442604.5	-0.15035	-0.71056	-0.00142	34.02371	-7.38869	-2.06395	0.72629	34.87786	258.05	-0.11
75/ 7/15	2442608.5	-0.07099	-0.72321	-0.00617	34.61588	-3.55322	-2.04364	0.72671	34.85773	264.39	-0.49
75/ 7/19	2442612.5	0.00926	-0.72695	-0.01085	34.78081	0.31974	-1.99819	0.72709	34.83963	270.73	-0.85
75/ 7/23	2442616.5	0.08938	-0.72174	-0.01539	34.51782	4.18314	-1.92824	0.72741	34.82380	277.06	-1.21
75/ 7/27	2442620.5	0.16841	-0.70766	-0.01974	33.83125	7.99034	-1.83470	0.72769	34.81041	283.39	-1.55
75/ 7/31	2442624.5	0.24538	-0.68490	-0.02384	32.73033	11.69556	-1.71874	0.72792	34.79964	289.71	-1.88
75/ 8/ 4	2442628.5	0.31933	-0.65374	-0.02766	31.22908	15.25442	-1.58181	0.72809	34.79159	296.03	-2.18
75/ 8/ 8	2442632.5	0.38937	-0.61456	-0.03114	29.34609	18.62435	-1.42557	0.72820	34.78637	302.36	-2.45
75/ 8/12	2442636.5	0.45464	-0.56786	-0.03423	27.10430	21.76508	-1.25192	0.72824	34.78403	308.68	-2.69
75/ 8/16	2442640.5	0.51435	-0.51421	-0.03691	24.53076	24.63900	-1.06296	0.72823	34.78460	315.01	-2.91
75/ 8/20	2442644.5	0.56775	-0.45425	-0.03914	21.65632	27.21161	-0.86094	0.72816	34.78806	321.34	-3.08
75/ 8/24	2442648.5	0.61420	-0.38874	-0.04088	18.51532	29.45184	-0.64828	0.72803	34.79437	327.67	-3.22
75/ 8/28	2442652.5	0.65312	-0.31845	-0.04212	15.14523	31.33241	-0.42754	0.72784	34.80345	334.01	-3.32
75/ 9/ 1	2442656.5	0.68403	-0.24426	-0.04285	11.58627	32.83010	-0.20135	0.72760	34.81519	340.35	-3.38
75/ 9/ 5	2442660.5	0.70654	-0.16708	-0.04305	7.88099	33.92610	0.02757	0.72730	34.82945	346.70	-3.39
75/ 9/ 9	2442664.5	0.72037	-0.08783	-0.04272	4.07386	34.60616	0.25644	0.72696	34.84607	353.05	-3.37
75/ 9/13	2442668.5	0.72532	-0.00751	-0.04187	0.21075	34.86086	0.48250	0.72657	34.86484	359.41	-3.30
75/ 9/17	2442672.5	0.72133	0.07290	-0.04050	-3.66150	34.68574	0.70299	0.72614	34.88555	5.77	-3.20
75/ 9/21	2442676.5	0.70843	0.15242	-0.03863	-7.49563	34.08141	0.91519	0.72567	34.90794	12.14	-3.05
75/ 9/25	2442680.5	0.68677	0.23005	-0.03628	-11.24450	33.05363	1.11647	0.72518	34.93175	18.52	-2.87
75/ 9/29	2442684.5	0.65658	0.30482	-0.03348	-14.86160	31.61332	1.30431	0.72466	34.95670	24.90	-2.65
75/10/ 3	2442688.5	0.61824	0.37581	-0.03027	-18.30166	29.77655	1.47633	0.72413	34.98247	31.29	-2.40
75/10/ 7	2442692.5	0.57219	0.44211	-0.02667	-21.52118	27.56435	1.63033	0.72359	35.00875	37.69	-2.11
75/10/11	2442696.5	0.51900	0.50289	-0.02275	-24.47901	25.00263	1.76429	0.72304	35.03522	44.10	-1.80
75/10/15	2442700.5	0.45932	0.55738	-0.01854	-27.13691	22.12192	1.87646	0.72249	35.06155	50.51	-1.47
75/10/19	2442704.5	0.39388	0.60489	-0.01410	-29.46006	18.95702	1.96531	0.72196	35.08740	56.93	-1.12
75/10/23	2442708.5	0.32349	0.64478	-0.00948	-31.41761	15.54668	2.02964	0.72144	35.11246	63.36	-0.75
75/10/27	2442712.5	0.24902	0.67656	-0.00474	-32.98315	11.93316	2.06850	0.72095	35.13641	69.79	-0.38
75/10/31	2442716.5	0.17141	0.69980	0.00006	-34.13512	8.16167	2.08132	0.72049	35.15894	76.24	0.00
75/11/ 4	2442720.5	0.09164	0.71419	0.00486	-34.85717	4.27987	2.06781	0.72006	35.17976	82.69	0.39
75/11/ 8	2442724.5	0.01070	0.71953	0.00959	-35.13851	0.33721	2.02806	0.71967	35.19860	89.15	0.76
75/11/12	2442728.5	-0.07037	0.71574	0.01421	-34.97409	-3.61573	1.96250	0.71933	35.21522	95.62	1.13

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75/11/16	2442732.5	-0.15055	0.70285	0.01864	-34.36477	-7.52791	1.87190	0.71904	35.22940	102.09	1.49
75/11/20	2442736.5	-0.22881	0.68102	0.02284	-33.31736	-11.34859	1.75737	0.71880	35.24096	108.57	1.82
75/11/24	2442740.5	-0.30416	0.65052	0.02674	-31.84458	-15.02802	1.62036	0.71862	35.24974	115.06	2.13
75/11/28	2442744.5	-0.37563	0.61174	0.03031	-29.96493	-18.51818	1.46260	0.71850	35.25562	121.55	2.42
75/12/ 2	2442748.5	-0.44231	0.56515	0.03349	-27.70244	-21.77349	1.28613	0.71844	35.25853	128.05	2.67
75/12/ 6	2442752.5	-0.50335	0.51135	0.03624	-25.08636	-24.75150	1.09324	0.71844	35.25843	134.55	2.89
75/12/10	2442756.5	-0.55798	0.45103	0.03853	-22.15073	-27.41345	0.88643	0.71850	35.25532	141.05	3.07
75/12/14	2442760.5	-0.60548	0.38496	0.04033	-18.93389	-29.72490	0.66840	0.71863	35.24924	147.55	3.22
75/12/18	2442764.5	-0.64527	0.31398	0.04161	-15.47794	-31.65618	0.44200	0.71881	35.24026	154.05	3.32
75/12/22	2442768.5	-0.67685	0.23901	0.04236	-11.82805	-33.18284	0.21018	0.71905	35.22851	160.55	3.38
75/12/26	2442772.5	-0.69981	0.16099	0.04258	-8.03186	-34.28592	-0.02406	0.71935	35.21414	167.04	3.39
75/12/30	2442776.5	-0.71388	0.08093	0.04225	-4.13877	-34.95220	-0.25768	0.71970	35.19733	173.53	3.37
76/ 1/ 3	2442780.5	-0.71890	-0.00016	0.04139	-0.19917	-35.17437	-0.48767	0.72009	35.17831	180.01	3.30
76/ 1/ 7	2442784.5	-0.71480	-0.08124	0.04001	3.73620	-34.95101	-0.71110	0.72052	35.15733	186.48	3.18
76/ 1/11	2442788.5	-0.70168	-0.16130	0.03811	7.61703	-34.28657	-0.92513	0.72099	35.13465	192.95	3.03
76/ 1/15	2442792.5	-0.67969	-0.23933	0.03574	11.39408	-33.19121	-1.12707	0.72148	35.11057	199.40	2.84
76/ 1/19	2442796.5	-0.64915	-0.31434	0.03292	15.01983	-31.68062	-1.31441	0.72200	35.08539	205.84	2.61
76/ 1/23	2442800.5	-0.61045	-0.38540	0.02968	18.44912	-29.77566	-1.48484	0.72254	35.05944	212.27	2.35
76/ 1/27	2442804.5	-0.56409	-0.45163	0.02607	21.63967	-27.50203	-1.63628	0.72308	35.03304	218.68	2.07
76/ 1/31	2442808.5	-0.51068	-0.51221	0.02214	24.55259	-24.88987	-1.76694	0.72363	35.00653	225.09	1.75
76/ 2/ 4	2442812.5	-0.45089	-0.56639	0.01792	27.15282	-21.97327	-1.87528	0.72417	34.98023	231.48	1.42
76/ 2/ 8	2442816.5	-0.38549	-0.61353	0.01349	29.40947	-18.78981	-1.96004	0.72470	34.95448	237.86	1.07
76/ 2/12	2442820.5	-0.31529	-0.65304	0.00889	31.29617	-15.37999	-2.02029	0.72522	34.92959	244.23	0.70
76/ 2/16	2442824.5	-0.24119	-0.68445	0.00417	32.79127	-11.78674	-2.05539	0.72571	34.90587	250.59	0.33
76/ 2/20	2442828.5	-0.16410	-0.70739	-0.00059	33.87803	-8.05482	-2.06500	0.72617	34.88360	256.94	-0.05
76/ 2/24	2442832.5	-0.08498	-0.72159	-0.00535	34.54473	-4.23032	-2.04912	0.72660	34.86305	263.28	-0.42
76/ 2/28	2442836.5	-0.00482	-0.72690	-0.01004	34.78472	-0.36010	-2.00802	0.72698	34.84449	269.62	-0.79
76/ 3/ 3	2442840.5	0.07540	-0.72326	-0.01461	34.59644	3.50878	-1.94228	0.72732	34.82812	275.95	-1.15
76/ 3/ 7	2442844.5	0.15470	-0.71072	-0.01899	33.98337	7.32954	-1.85276	0.72761	34.81414	282.28	-1.50
76/ 3/11	2442848.5	0.23210	-0.68946	-0.02315	32.95392	11.05620	-1.74060	0.72785	34.80273	288.61	-1.82
76/ 3/15	2442852.5	0.30665	-0.65975	-0.02702	31.52128	14.64409	-1.60719	0.72803	34.79401	294.93	-2.13
76/ 3/19	2442856.5	0.37744	-0.62194	-0.03056	29.70327	18.05028	-1.45417	0.72815	34.78810	301.25	-2.41
76/ 3/23	2442860.5	0.44361	-0.57652	-0.03372	27.52211	21.23407	-1.28340	0.72822	34.78505	307.58	-2.65
76/ 3/27	2442864.5	0.50434	-0.52403	-0.03648	25.00418	24.15735	-1.09694	0.72822	34.78491	313.90	-2.87
76/ 3/31	2442868.5	0.55890	-0.46513	-0.03878	22.17968	26.78506	-0.89701	0.72816	34.78768	320.23	-3.05
76/ 4/ 4	2442872.5	0.60661	-0.40053	-0.04061	19.08240	29.08550	-0.68602	0.72805	34.79332	326.56	-3.20
76/ 4/ 8	2442876.5	0.64689	-0.33102	-0.04195	15.74928	31.03072	-0.46650	0.72787	34.80177	332.90	-3.30
76/ 4/12	2442880.5	0.67923	-0.25745	-0.04276	12.22012	32.59678	-0.24106	0.72764	34.81292	339.24	-3.37
76/ 4/16	2442884.5	0.70323	-0.18072	-0.04306	8.53708	33.76409	-0.01243	0.72735	34.82665	345.59	-3.39
76/ 4/20	2442888.5	0.71859	-0.10177	-0.04282	4.74435	34.51759	0.21665	0.72702	34.84279	351.94	-3.38
76/ 4/24	2442892.5	0.72510	-0.02156	-0.04206	0.88758	34.84703	0.44340	0.72664	34.86115	358.30	-3.32
76/ 4/28	2442896.5	0.72267	0.05891	-0.04078	-2.98653	34.74705	0.66505	0.72622	34.88150	4.66	-3.22
76/ 5/ 2	2442900.5	0.71132	0.13865	-0.03899	-6.83075	34.21739	0.87889	0.72576	34.90360	11.03	-3.08
76/ 5/ 6	2442904.5	0.69117	0.21668	-0.03672	-10.59789	33.26292	1.08226	0.72527	34.92718	17.41	-2.90
76/ 5/10	2442908.5	0.66245	0.29202	-0.03400	-14.24129	31.89365	1.27261	0.72476	34.95196	23.79	-2.69

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

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76/ 5/14	2442912.5	0.62550	0.36373	-0.03085	-17.71544	30.12476	1.44755	0.72423	34.97761	30.18	-2.44
76/ 5/18	2442916.5	0.58077	0.43091	-0.02733	-20.97648	27.97643	1.60484	0.72369	35.00384	36.57	-2.16
76/ 5/22	2442920.5	0.52878	0.49272	-0.02346	-23.98282	25.47374	1.74243	0.72314	35.03032	42.98	-1.86
76/ 5/26	2442924.5	0.47018	0.54836	-0.01929	-26.69567	22.64641	1.85851	0.72259	35.05670	49.39	-1.53
76/ 5/30	2442928.5	0.40569	0.59713	-0.01489	-29.07958	19.52853	1.95154	0.72206	35.08267	55.81	-1.18
76/ 6/ 3	2442932.5	0.33610	0.63839	-0.01029	-31.10299	16.15820	2.02022	0.72154	35.10790	62.23	-0.82
76/ 6/ 7	2442936.5	0.26228	0.67162	-0.00557	-32.73867	12.57708	2.06358	0.72104	35.13206	68.67	-0.44
76/ 6/11	2442940.5	0.18516	0.69638	-0.00078	-33.96418	8.82992	2.08097	0.72057	35.15485	75.11	-0.06
76/ 6/15	2442944.5	0.10569	0.71233	0.00402	-34.76226	4.96397	2.07206	0.72014	35.17597	81.56	0.32
76/ 6/19	2442948.5	0.02488	0.71926	0.00877	-35.12112	1.02843	2.03688	0.71974	35.19516	88.02	0.70
76/ 6/23	2442952.5	-0.05624	0.71706	0.01341	-35.03469	-2.92627	1.97578	0.71939	35.21216	94.48	1.07
76/ 6/27	2442956.5	-0.13665	0.70576	0.01788	-34.50281	-6.84913	1.88949	0.71909	35.22676	100.96	1.43
76/ 7/ 1	2442960.5	-0.21532	0.68548	0.02213	-33.53124	-10.68931	1.77905	0.71885	35.23877	107.44	1.76
76/ 7/ 5	2442964.5	-0.29125	0.65648	0.02609	-32.13168	-14.39683	1.64585	0.71866	35.24801	113.92	2.08
76/ 7/ 9	2442968.5	-0.36346	0.61910	0.02971	-30.32163	-17.92333	1.49158	0.71852	35.25439	120.42	2.37
76/ 7/13	2442972.5	-0.43104	0.57384	0.03296	-28.12418	-21.22276	1.31823	0.71845	35.25780	126.91	2.63
76/ 7/17	2442976.5	-0.49313	0.52126	0.03579	-25.56768	-24.25206	1.12803	0.71845	35.25821	133.41	2.86
76/ 7/21	2442980.5	-0.54892	0.46202	0.03816	-22.68537	-26.97182	0.92347	0.71850	35.25561	139.91	3.04
76/ 7/25	2442984.5	-0.59772	0.39690	0.04005	-19.51489	-29.34678	0.70721	0.71861	35.25003	146.41	3.19
76/ 7/29	2442988.5	-0.63890	0.32672	0.04142	-16.09769	-31.34643	0.48207	0.71879	35.24155	152.92	3.30
76/ 8/ 2	2442992.5	-0.67194	0.25238	0.04227	-12.47847	-32.94537	0.25099	0.71902	35.23028	159.41	3.37
76/ 8/ 6	2442996.5	-0.69644	0.17483	0.04258	-8.70447	-34.12366	0.01696	0.71931	35.21637	165.91	3.39
76/ 8/10	2443000.5	-0.71208	0.09505	0.04235	-4.82483	-34.86708	-0.21698	0.71964	35.19999	172.40	3.37
76/ 8/14	2443004.5	-0.71869	0.01407	0.04158	-0.88982	-35.16726	-0.44782	0.72003	35.18137	178.88	3.31
76/ 8/18	2443008.5	-0.71619	-0.06709	0.04029	3.04985	-35.02176	-0.67261	0.72045	35.16074	185.35	3.21
76/ 8/22	2443012.5	-0.70463	-0.14740	0.03848	6.94373	-34.43400	-0.88848	0.72091	35.13837	191.82	3.06
76/ 8/26	2443016.5	-0.68418	-0.22585	0.03619	10.74236	-33.41316	-1.09272	0.72140	35.11455	198.27	2.88
76/ 8/30	2443020.5	-0.65511	-0.30146	0.03344	14.39787	-31.97397	-1.28278	0.72192	35.08959	204.71	2.66
76/ 9/ 3	2443024.5	-0.61780	-0.37328	0.03028	17.86466	-30.13640	-1.45632	0.72245	35.06379	211.14	2.40
76/ 9/ 7	2443028.5	-0.57274	-0.44041	0.02673	21.09989	-27.92534	-1.61123	0.72299	35.03749	217.56	2.12
76/ 9/11	2443032.5	-0.52052	-0.50204	0.02285	24.06407	-25.37017	-1.74565	0.72354	35.01103	223.96	1.81
76/ 9/15	2443036.5	-0.46180	-0.55739	0.01868	26.72141	-22.50433	-1.85799	0.72408	34.98472	230.36	1.48
76/ 9/19	2443040.5	-0.39732	-0.60581	0.01428	29.04028	-19.36481	-1.94696	0.72461	34.95889	236.74	1.13
76/ 9/23	2443044.5	-0.32790	-0.64669	0.00970	30.99350	-15.99163	-2.01155	0.72513	34.93387	243.11	0.77
76/ 9/27	2443048.5	-0.25442	-0.67955	0.00501	32.55856	-12.42735	-2.05109	0.72563	34.90997	249.47	0.40
76/10/ 1	2443052.5	-0.17778	-0.70399	0.00025	33.71786	-8.71643	-2.06518	0.72609	34.88746	255.83	0.02
76/10/ 5	2443056.5	-0.09895	-0.71974	-0.00452	34.45878	-4.90479	-2.05375	0.72652	34.86664	262.17	-0.36
76/10/ 9	2443060.5	-0.01890	-0.72661	-0.00922	34.77379	-1.03917	-2.01703	0.72692	34.84774	268.51	-0.73
76/10/13	2443064.5	0.06139	-0.72454	-0.01382	34.66044	2.83336	-1.95555	0.72726	34.83100	274.84	-1.09
76/10/17	2443068.5	0.14092	-0.71355	-0.01824	34.12132	6.66592	-1.87012	0.72756	34.81661	281.17	-1.44
76/10/21	2443072.5	0.21872	-0.69380	-0.02244	33.16398	10.41236	-1.76183	0.72781	34.80476	287.50	-1.77
76/10/25	2443076.5	0.29383	-0.66554	-0.02636	31.80079	14.02775	-1.63203	0.72800	34.79557	293.82	-2.08
76/10/29	2443080.5	0.36535	-0.62913	-0.02996	30.04877	17.46881	-1.48232	0.72813	34.78916	300.14	-2.36
76/11/ 2	2443084.5	0.43239	-0.58500	-0.03320	27.92940	20.69442	-1.31451	0.72821	34.78560	306.47	-2.61
76/11/ 6	2443088.5	0.49413	-0.53371	-0.03603	25.46832	23.66599	-1.13063	0.72822	34.78495	312.79	-2.84

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76/11/10	2443092.5	0.54982	-0.47588	-0.03841	22.69512	26.34788	-0.93289	0.72817	34.78720	319.12	-3.02
76/11/14	2443096.5	0.59877	-0.41222	-0.04033	19.64296	28.70778	-0.72365	0.72807	34.79233	325.46	-3.18
76/11/18	2443100.5	0.64039	-0.34351	-0.04175	16.34827	30.71707	-0.50543	0.72790	34.80028	331.79	-3.29
76/11/22	2443104.5	0.67415	-0.27058	-0.04266	12.85037	32.35108	-0.28083	0.72768	34.81097	338.13	-3.36
76/11/26	2443108.5	0.69964	-0.19434	-0.04304	9.19106	33.58943	-0.05255	0.72740	34.82425	344.48	-3.39
76/11/30	2443112.5	0.71653	-0.11570	-0.04290	5.41418	34.41627	0.17666	0.72708	34.83998	350.83	-3.38
76/12/ 4	2443116.5	0.72460	-0.03565	-0.04223	1.56518	34.82046	0.40402	0.72670	34.85796	357.18	-3.33
76/12/ 8	2443120.5	0.72374	0.04485	-0.04104	-2.30938	34.79580	0.62677	0.72629	34.87798	3.55	-3.24
76/12/12	2443124.5	0.71394	0.12479	-0.03934	-6.16235	34.34112	0.84217	0.72584	34.89981	9.91	-3.11
76/12/16	2443128.5	0.69532	0.20319	-0.03715	-9.94647	33.46039	1.04756	0.72535	34.92317	16.29	-2.94
76/12/20	2443132.5	0.66808	0.27907	-0.03451	-13.61495	32.16273	1.24038	0.72484	34.94777	22.67	-2.73
76/12/24	2443136.5	0.63254	0.35148	-0.03143	-17.12204	30.46241	1.41819	0.72431	34.97333	29.06	-2.49
76/12/28	2443140.5	0.58913	0.41952	-0.02797	-20.42354	28.37874	1.57872	0.72377	34.99951	35.45	-2.21
77/ 1/ 1	2443144.5	0.53837	0.48232	-0.02415	-23.47742	25.93595	1.71990	0.72323	35.02600	41.86	-1.91
77/ 1/ 5	2443148.5	0.48087	0.53910	-0.02004	-26.24435	23.16299	1.83987	0.72268	35.05246	48.27	-1.59
77/ 1/ 9	2443152.5	0.41736	0.58912	-0.01567	-28.68827	20.09321	1.93703	0.72214	35.07857	54.68	-1.24
77/ 1/13	2443156.5	0.34860	0.63174	-0.01111	-30.77688	16.76403	2.01005	0.72162	35.10398	61.11	-0.88
77/ 1/17	2443160.5	0.27545	0.66640	-0.00640	-32.48217	13.21652	2.05789	0.72112	35.12838	67.54	-0.51
77/ 1/21	2443164.5	0.19883	0.69267	-0.00162	-33.78083	9.49494	2.07986	0.72064	35.15145	73.98	-0.13
77/ 1/25	2443168.5	0.11970	0.71018	0.00319	-34.65466	5.64616	2.07555	0.72020	35.17290	80.43	0.25
77/ 1/29	2443172.5	0.03905	0.71869	0.00795	-35.09090	1.71907	2.04494	0.71980	35.19245	86.89	0.63
77/ 2/ 2	2443176.5	-0.04209	0.71810	0.01261	-35.08248	-2.23606	1.98833	0.71944	35.20985	93.35	1.00
77/ 2/ 6	2443180.5	-0.12270	0.70838	0.01712	-34.62817	-6.16827	1.90636	0.71913	35.22487	99.83	1.36
77/ 2/10	2443184.5	-0.20175	0.68965	0.02140	-33.73271	-10.02661	1.80005	0.71888	35.23732	106.31	1.71
77/ 2/14	2443188.5	-0.27822	0.66215	0.02542	-32.40677	-13.76092	1.67070	0.71868	35.24703	112.79	2.03
77/ 2/18	2443192.5	-0.35116	0.62621	0.02911	-30.66687	-17.32250	1.51998	0.71854	35.25388	119.28	2.32
77/ 2/22	2443196.5	-0.41961	0.58228	0.03242	-28.53513	-20.66483	1.34980	0.71846	35.25778	125.78	2.59
77/ 2/26	2443200.5	-0.48272	0.53093	0.03533	-26.03903	-23.74430	1.16237	0.71844	35.25867	132.28	2.82
77/ 3/ 2	2443204.5	-0.53967	0.47281	0.03778	-23.21099	-26.52079	0.96012	0.71848	35.25655	138.78	3.01
77/ 3/ 6	2443208.5	-0.58973	0.40866	0.03976	-20.08792	-28.95831	0.74570	0.71859	35.25144	145.28	3.17
77/ 3/10	2443212.5	-0.63228	0.33930	0.04122	-16.71065	-31.02547	0.52189	0.71875	35.24341	151.78	3.29
77/ 3/14	2443216.5	-0.66678	0.26561	0.04216	-13.12337	-32.69596	0.29162	0.71898	35.23257	158.28	3.36
77/ 3/18	2443220.5	-0.69279	0.18855	0.04257	-9.37295	-33.94888	0.05789	0.71925	35.21905	164.78	3.39
77/ 3/22	2443224.5	-0.71000	0.10909	0.04243	-5.50822	-34.76898	-0.17629	0.71958	35.20303	171.26	3.38
77/ 3/26	2443228.5	-0.71819	0.02825	0.04175	-1.57932	-35.14689	-0.40789	0.71996	35.18472	177.75	3.32
77/ 3/30	2443232.5	-0.71729	-0.05296	0.04055	2.36306	-35.07913	-0.63394	0.72038	35.16435	184.22	3.23
77/ 4/ 3	2443236.5	-0.70730	-0.13349	0.03883	6.26838	-34.56812	-0.85157	0.72084	35.14217	190.69	3.09
77/ 4/ 7	2443240.5	-0.68839	-0.21234	0.03662	10.08697	-33.62204	-1.05803	0.72133	35.11848	197.14	2.91
77/ 4/11	2443244.5	-0.66080	-0.28851	0.03395	13.77063	-32.25467	-1.25074	0.72184	35.09357	203.59	2.70
77/ 4/15	2443248.5	-0.62491	-0.36106	0.03086	17.27334	-30.48512	-1.42732	0.72237	35.06776	210.02	2.45
77/ 4/19	2443252.5	-0.58117	-0.42907	0.02737	20.55176	-28.33743	-1.58561	0.72292	35.04139	216.44	2.17
77/ 4/23	2443256.5	-0.53015	-0.49172	0.02355	23.56576	-25.84025	-1.72372	0.72346	35.01478	222.85	1.87
77/ 4/27	2443260.5	-0.47252	-0.54822	0.01943	26.27892	-23.02634	-1.84001	0.72401	34.98828	229.24	1.54
77/ 5/ 1	2443264.5	-0.40899	-0.59789	0.01506	28.65886	-19.93210	-1.93313	0.72455	34.96221	235.63	1.19
77/ 5/ 5	2443268.5	-0.34038	-0.64013	0.01051	30.67762	-16.59707	-2.00203	0.72507	34.93690	242.00	0.83

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77/ 5/ 9	2443272.5	-0.26755	-0.67442	0.00583	32.31187	-13.06338	-2.04598	0.72557	34.91267	248.36	0.46
77/ 5/13	2443276.5	-0.19140	-0.70037	0.00108	33.54314	-9.37520	-2.06452	0.72605	34.88981	254.72	0.09
77/ 5/17	2443280.5	-0.11289	-0.71765	-0.00369	34.35795	-5.57821	-2.05754	0.72649	34.86859	261.06	-0.29
77/ 5/21	2443284.5	-0.03298	-0.72609	-0.00841	34.74789	-1.71903	-2.02521	0.72689	34.84929	267.40	-0.66
77/ 5/25	2443288.5	0.04733	-0.72558	-0.01303	34.70962	2.15529	-1.96801	0.72724	34.83211	273.73	-1.03
77/ 5/29	2443292.5	0.12706	-0.71616	-0.01748	34.24485	5.99783	-1.88671	0.72755	34.81728	280.06	-1.38
77/ 6/ 2	2443296.5	0.20523	-0.69793	-0.02172	33.36026	9.76229	-1.78233	0.72781	34.80497	286.39	-1.71
77/ 6/ 6	2443300.5	0.28088	-0.67115	-0.02570	32.06739	13.40351	-1.65620	0.72801	34.79532	292.71	-2.02
77/ 6/10	2443304.5	0.35309	-0.63613	-0.02936	30.38245	16.87790	-1.50986	0.72815	34.78845	299.03	-2.31
77/ 6/14	2443308.5	0.42097	-0.59333	-0.03266	28.32613	20.14395	-1.34509	0.72823	34.78445	305.36	-2.57
77/ 6/18	2443312.5	0.48370	-0.54325	-0.03556	25.92336	23.16260	-1.16389	0.72825	34.78335	311.68	-2.80
77/ 6/22	2443316.5	0.54051	-0.48652	-0.03803	23.20304	25.89767	-0.96843	0.72822	34.78517	318.01	-2.99
77/ 6/26	2443320.5	0.59069	-0.42384	-0.04003	20.19770	28.31627	-0.76104	0.72812	34.78990	324.34	-3.15
77/ 6/30	2443324.5	0.63363	-0.35596	-0.04154	16.94321	30.38907	-0.54422	0.72796	34.79747	330.67	-3.27
77/ 7/ 4	2443328.5	0.66881	-0.28372	-0.04254	13.47840	32.09071	-0.32056	0.72774	34.80781	337.01	-3.35
77/ 7/ 8	2443332.5	0.69578	-0.20799	-0.04302	9.84463	33.40003	-0.09274	0.72747	34.82079	343.36	-3.39
77/ 7/12	2443336.5	0.71420	-0.12971	-0.04297	6.08541	34.30034	0.13650	0.72715	34.83625	349.71	-3.39
77/ 7/16	2443340.5	0.72383	-0.04984	-0.04239	2.24593	34.77967	0.36438	0.72678	34.85402	356.06	-3.34
77/ 7/20	2443344.5	0.72455	0.03065	-0.04129	-1.62743	34.83091	0.58814	0.72637	34.87387	2.42	-3.26
77/ 7/24	2443348.5	0.71632	0.11076	-0.03967	-5.48758	34.45199	0.80503	0.72592	34.89558	8.79	-3.13
77/ 7/28	2443352.5	0.69924	0.18950	-0.03757	-9.28725	33.64595	1.01238	0.72544	34.91888	15.16	-2.97
77/ 8/ 1	2443356.5	0.67350	0.26590	-0.03501	-12.97953	32.42099	1.20760	0.72493	34.94348	21.54	-2.77
77/ 8/ 5	2443360.5	0.63939	0.33899	-0.03200	-16.51843	30.79044	1.38822	0.72440	34.96909	27.93	-2.53
77/ 8/ 9	2443364.5	0.59733	0.40786	-0.02860	-19.85943	28.77275	1.55196	0.72386	34.99538	34.33	-2.26
77/ 8/13	2443368.5	0.54782	0.47165	-0.02485	-22.96007	26.39128	1.69669	0.72331	35.02204	40.73	-1.97
77/ 8/17	2443372.5	0.49146	0.52954	-0.02078	-25.78050	23.67414	1.82052	0.72276	35.04872	47.14	-1.65
77/ 8/21	2443376.5	0.42895	0.58080	-0.01645	-28.28400	20.65392	1.92180	0.72221	35.07510	53.55	-1.31
77/ 8/25	2443380.5	0.36105	0.62476	-0.01192	-30.43758	17.36737	1.99915	0.72168	35.10083	59.98	-0.95
77/ 8/29	2443384.5	0.28861	0.66087	-0.00724	-32.21241	13.85494	2.05149	0.72117	35.12559	66.41	-0.57
77/ 9/ 2	2443388.5	0.21253	0.68864	-0.00246	-33.58430	10.16039	2.07804	0.72069	35.14907	72.85	-0.20
77/ 9/ 6	2443392.5	0.13376	0.70771	0.00234	-34.53411	6.33016	2.07836	0.72024	35.17095	79.30	0.19
77/ 9/10	2443396.5	0.05330	0.71782	0.00712	-35.04809	2.41286	2.05234	0.71983	35.19095	85.75	0.57
77/ 9/14	2443400.5	-0.02783	0.71883	0.01181	-35.11814	-1.54141	2.00025	0.71946	35.20882	92.22	0.94
77/ 9/18	2443404.5	-0.10861	0.71071	0.01634	-34.74199	-5.48175	1.92265	0.71914	35.22431	98.69	1.30
77/ 9/22	2443408.5	-0.18801	0.69355	0.02067	-33.92334	-9.35713	1.82050	0.71888	35.23724	105.17	1.65
77/ 9/26	2443412.5	-0.26502	0.66756	0.02474	-32.67181	-13.11718	1.69506	0.71867	35.24742	111.65	1.97
77/ 9/30	2443416.5	-0.33865	0.63307	0.02849	-31.00290	-16.71286	1.54792	0.71852	35.25473	118.14	2.27
77/10/ 4	2443420.5	-0.40796	0.59051	0.03187	-28.93781	-20.09721	1.38097	0.71843	35.25906	124.64	2.54
77/10/ 8	2443424.5	-0.47206	0.54041	0.03485	-26.50310	-23.22603	1.19636	0.71840	35.26037	131.14	2.78
77/10/12	2443428.5	-0.53015	0.48342	0.03739	-23.73038	-26.05855	0.99650	0.71844	35.25864	137.64	2.98
77/10/16	2443432.5	-0.58147	0.42027	0.03945	-20.65582	-28.55800	0.78398	0.71853	35.25389	144.14	3.15
77/10/20	2443436.5	-0.62538	0.35176	0.04100	-17.31964	-30.69216	0.56159	0.71869	35.24619	150.64	3.27
77/10/24	2443440.5	-0.66133	0.27876	0.04204	-13.76550	-32.43379	0.33222	0.71891	35.23564	157.14	3.35
77/10/28	2443444.5	-0.68885	0.20222	0.04254	-10.03986	-33.76103	0.09885	0.71918	35.22237	163.64	3.39
77/11/ 1	2443448.5	-0.70762	0.12311	0.04249	-6.19127	-34.65765	-0.13548	0.71951	35.20657	170.13	3.39

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

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77/11/ 5	2443452.5	-0.71740	0.04243	0.04191	-2.26972	-35.11325	-0.36775	0.71988	35.18845	176.62	3.34
77/11/ 9	2443456.5	-0.71809	-0.03879	0.04080	1.67415	-35.12332	-0.59499	0.72029	35.16823	183.09	3.25
77/11/13	2443460.5	-0.70969	-0.11951	0.03917	5.58973	-34.68927	-0.81429	0.72075	35.14618	189.56	3.12
77/11/17	2443464.5	-0.69233	-0.19873	0.03704	9.42712	-33.81832	-1.02288	0.72123	35.12258	196.02	2.94
77/11/21	2443468.5	-0.66623	-0.27544	0.03445	13.13785	-32.52330	-1.21816	0.72175	35.09775	202.46	2.74
77/11/25	2443472.5	-0.63176	-0.34868	0.03143	16.67546	-30.82239	-1.39772	0.72228	35.07199	208.90	2.49
77/11/29	2443476.5	-0.58935	-0.41755	0.02801	19.99611	-28.73882	-1.55934	0.72282	35.04562	215.32	2.22
77/12/ 3	2443480.5	-0.53957	-0.48119	0.02424	23.05909	-26.30047	-1.70110	0.72337	35.01899	221.73	1.92
77/12/ 7	2443484.5	-0.48304	-0.53882	0.02016	25.82730	-23.53940	-1.82130	0.72392	34.99243	228.12	1.60
77/12/11	2443488.5	-0.42049	-0.58973	0.01584	28.26764	-20.49143	-1.91855	0.72446	34.96626	234.51	1.25
77/12/15	2443492.5	-0.35271	-0.63331	0.01132	30.35135	-17.19558	-1.99174	0.72499	34.94080	240.89	0.89
77/12/19	2443496.5	-0.28055	-0.66902	0.00666	32.05430	-13.69355	-2.04008	0.72550	34.91638	247.25	0.53
77/12/23	2443500.5	-0.20491	-0.69645	0.00191	33.35715	-10.02919	-2.06309	0.72597	34.89327	253.60	0.15
77/12/27	2443504.5	-0.12674	-0.71527	-0.00286	34.24556	-6.24797	-2.06057	0.72642	34.87178	259.95	-0.23
77/12/31	2443508.5	-0.04701	-0.72527	-0.00759	34.71020	-2.39636	-2.03265	0.72683	34.85215	266.29	-0.60
78/ 1/ 4	2443512.5	0.03330	-0.72633	-0.01223	34.74687	1.47862	-1.97975	0.72719	34.83462	272.62	-0.96
78/ 1/ 8	2443516.5	0.11320	-0.71845	-0.01672	34.35639	5.32999	-1.90259	0.72751	34.81939	278.95	-1.32
78/ 1/12	2443520.5	0.19171	-0.70175	-0.02100	33.54459	9.11133	-1.80217	0.72777	34.80666	285.28	-1.65
78/ 1/16	2443524.5	0.26787	-0.67644	-0.02503	32.32215	12.77723	-1.67974	0.72798	34.79656	291.60	-1.97
78/ 1/20	2443528.5	0.34075	-0.64284	-0.02875	30.70450	16.28380	-1.53682	0.72813	34.78922	297.93	-2.26
78/ 1/24	2443532.5	0.40945	-0.60136	-0.03211	28.71154	19.58913	-1.37515	0.72823	34.78473	304.25	-2.53
78/ 1/28	2443536.5	0.47314	-0.55252	-0.03509	26.36749	22.65371	-1.19667	0.72826	34.78314	310.57	-2.76
78/ 2/ 1	2443540.5	0.53103	-0.49691	-0.03763	23.70055	25.44083	-1.00354	0.72823	34.78447	316.90	-2.96
78/ 2/ 5	2443544.5	0.58242	-0.43521	-0.03971	20.74267	27.91699	-0.79808	0.72814	34.78870	323.23	-3.13
78/ 2/ 9	2443548.5	0.62667	-0.36818	-0.04131	17.52914	30.05223	-0.58273	0.72800	34.79579	329.56	-3.25
78/ 2/13	2443552.5	0.66324	-0.29664	-0.04240	14.09830	31.82045	-0.36008	0.72779	34.80565	335.90	-3.34
78/ 2/17	2443556.5	0.69167	-0.22146	-0.04297	10.49110	33.19976	-0.13280	0.72753	34.81817	342.25	-3.39
78/ 2/21	2443560.5	0.71161	-0.14356	-0.04301	6.75071	34.17265	0.09639	0.72722	34.83320	348.59	-3.39
78/ 2/25	2443564.5	0.72279	-0.06390	-0.04253	2.92203	34.72633	0.32470	0.72686	34.85056	354.95	-3.35
78/ 3/ 1	2443568.5	0.72508	0.01656	-0.04152	-0.94871	34.85281	0.54938	0.72645	34.87005	1.31	-3.28
78/ 3/ 5	2443572.5	0.71842	0.09681	-0.03999	-4.81451	34.54914	0.76766	0.72601	34.89143	7.67	-3.16
78/ 3/ 9	2443576.5	0.70287	0.17586	-0.03798	-8.62811	33.81746	0.97686	0.72553	34.91446	14.05	-3.00
78/ 3/13	2443580.5	0.67863	0.25273	-0.03549	-12.34248	32.66506	1.17438	0.72503	34.93884	20.43	-2.81
78/ 3/17	2443584.5	0.64596	0.32647	-0.03256	-15.91144	31.10439	1.35773	0.72450	34.96427	26.81	-2.58
78/ 3/21	2443588.5	0.60526	0.39614	-0.02923	-19.29018	29.15299	1.52457	0.72396	34.99046	33.20	-2.31
78/ 3/25	2443592.5	0.55701	0.46088	-0.02553	-22.43584	26.83338	1.67277	0.72341	35.01707	39.60	-2.02
78/ 3/29	2443596.5	0.50181	0.51986	-0.02151	-25.30806	24.17286	1.80039	0.72286	35.04378	46.01	-1.71
78/ 4/ 2	2443600.5	0.44032	0.57233	-0.01723	-27.86956	21.20325	1.90572	0.72231	35.07024	52.43	-1.37
78/ 4/ 6	2443604.5	0.37330	0.61762	-0.01273	-30.08663	17.96059	1.98735	0.72178	35.09613	58.85	-1.01
78/ 4/10	2443608.5	0.30160	0.65513	-0.00807	-31.92971	14.48472	2.04414	0.72127	35.12110	65.28	-0.64
78/ 4/14	2443612.5	0.22609	0.68439	-0.00330	-33.37374	10.81884	2.07524	0.72078	35.14485	71.72	-0.26
78/ 4/18	2443616.5	0.14772	0.70501	0.00150	-34.39869	7.00897	2.08018	0.72032	35.16706	78.17	0.12
78/ 4/22	2443620.5	0.06749	0.71670	0.00629	-34.98982	3.10338	2.05877	0.71990	35.18745	84.62	0.50
78/ 4/26	2443624.5	-0.01360	0.71931	0.01099	-35.13803	-0.84804	2.01121	0.71953	35.20575	91.08	0.88
78/ 4/30	2443628.5	-0.09452	0.71279	0.01556	-34.84002	-4.79449	1.93803	0.71920	35.22172	97.55	1.24

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78/ 5/ 4	2443632.5	-0.17424	0.69720	0.01993	-34.09842	-8.68491	1.84010	0.71892	35.23515	104.03	1.59
78/ 5/ 8	2443636.5	-0.25173	0.67274	0.02404	-32.92184	-12.46876	1.71864	0.71870	35.24587	110.52	1.92
78/ 5/12	2443640.5	-0.32602	0.63971	0.02785	-31.32475	-16.09671	1.57518	0.71854	35.25372	117.01	2.22
78/ 5/16	2443644.5	-0.39616	0.59853	0.03131	-29.32734	-19.52139	1.41155	0.71844	35.25862	123.50	2.50
78/ 5/20	2443648.5	-0.46124	0.54971	0.03436	-26.95528	-22.69807	1.22988	0.71840	35.26049	130.00	2.74
78/ 5/24	2443652.5	-0.52043	0.49388	0.03698	-24.23931	-25.58531	1.03250	0.71842	35.25931	136.50	2.95
78/ 5/28	2443656.5	-0.57299	0.43175	0.03912	-21.21485	-28.14562	0.82201	0.71851	35.25510	143.00	3.12
78/ 6/ 1	2443660.5	-0.61825	0.36411	0.04077	-17.92145	-30.34594	0.60114	0.71866	35.24791	149.50	3.25
78/ 6/ 5	2443664.5	-0.65562	0.29184	0.04189	-14.40220	-32.15811	0.37278	0.71886	35.23786	156.00	3.34
78/ 6/ 9	2443668.5	-0.68465	0.21585	0.04249	-10.70312	-33.55932	0.13989	0.71913	35.22506	162.50	3.39
78/ 6/13	2443672.5	-0.70497	0.13711	0.04254	-6.87246	-34.53234	-0.09449	0.71944	35.20968	168.99	3.39
78/ 6/17	2443676.5	-0.71634	0.05663	0.04205	-2.96000	-35.06571	-0.32734	0.71981	35.19194	175.48	3.35
78/ 6/21	2443680.5	-0.71863	-0.02456	0.04103	0.98368	-35.15391	-0.55567	0.72021	35.17206	181.96	3.27
78/ 6/25	2443684.5	-0.71181	-0.10545	0.03949	4.90791	-34.79732	-0.77657	0.72066	35.15031	188.43	3.14
78/ 6/29	2443688.5	-0.69600	-0.18500	0.03745	8.76261	-34.00213	-0.98723	0.72114	35.12695	194.89	2.98
78/ 7/ 3	2443692.5	-0.67142	-0.26222	0.03494	12.49901	-32.78021	-1.18503	0.72165	35.10231	201.33	2.77
78/ 7/ 7	2443696.5	-0.63838	-0.33614	0.03199	16.07026	-31.14884	-1.36750	0.72218	35.07668	207.77	2.54
78/ 7/11	2443700.5	-0.59733	-0.40584	0.02863	19.43201	-29.13038	-1.53242	0.72272	35.05040	214.19	2.27
78/ 7/15	2443704.5	-0.54879	-0.47045	0.02492	22.54297	-26.75193	-1.67778	0.72327	35.02379	220.61	1.97
78/ 7/19	2443708.5	-0.49339	-0.52919	0.02090	25.36538	-24.04485	-1.80187	0.72382	34.99720	227.00	1.65
78/ 7/23	2443712.5	-0.43184	-0.58132	0.01661	27.86541	-21.04434	-1.90323	0.72436	34.97095	233.39	1.31
78/ 7/27	2443716.5	-0.36492	-0.62623	0.01212	30.01352	-17.78888	-1.98070	0.72489	34.94537	239.77	0.96
78/ 7/31	2443720.5	-0.29346	-0.66335	0.00748	31.78473	-14.31977	-2.03344	0.72540	34.92076	246.14	0.59
78/ 8/ 4	2443724.5	-0.21837	-0.69226	0.00275	33.15886	-10.68051	-2.06090	0.72589	34.89743	252.49	0.22
78/ 8/ 8	2443728.5	-0.14057	-0.71260	-0.00202	34.12068	-6.91632	-2.06285	0.72634	34.87566	258.84	-0.16
78/ 8/12	2443732.5	-0.06104	-0.72415	-0.00677	34.65999	-3.07356	-2.03935	0.72675	34.85571	265.18	-0.53
78/ 8/16	2443736.5	0.01924	-0.72678	-0.01142	34.77168	0.80083	-1.99078	0.72712	34.83783	271.52	-0.90
78/ 8/20	2443740.5	0.09929	-0.72046	-0.01594	34.45569	4.65982	-1.91780	0.72745	34.82222	277.85	-1.26
78/ 8/24	2443744.5	0.17811	-0.70530	-0.02027	33.71699	8.45684	-1.82137	0.72772	34.80906	284.17	-1.60
78/ 8/28	2443748.5	0.25475	-0.68147	-0.02434	32.56542	12.14626	-1.70268	0.72794	34.79852	290.50	-1.92
78/ 9/ 1	2443752.5	0.32827	-0.64929	-0.02812	31.01557	15.68390	-1.56322	0.72810	34.79072	296.82	-2.21
78/ 9/ 5	2443756.5	0.39776	-0.60916	-0.03155	29.08661	19.02747	-1.40469	0.72821	34.78575	303.14	-2.48
78/ 9/ 9	2443760.5	0.46239	-0.56156	-0.03460	26.80200	22.13699	-1.22900	0.72825	34.78367	309.47	-2.72
78/ 9/13	2443764.5	0.52135	-0.50709	-0.03722	24.18927	24.97524	-1.03827	0.72823	34.78450	315.79	-2.93
78/ 9/17	2443768.5	0.57392	-0.44640	-0.03938	21.27975	27.50813	-0.83478	0.72815	34.78824	322.12	-3.10
78/ 9/21	2443772.5	0.61946	-0.38025	-0.04107	18.10817	29.70504	-0.62097	0.72802	34.79484	328.46	-3.23
78/ 9/25	2443776.5	0.65741	-0.30943	-0.04225	14.71237	31.53919	-0.39940	0.72782	34.80423	334.79	-3.33
78/ 9/29	2443780.5	0.68730	-0.23482	-0.04291	11.13288	32.98792	-0.17273	0.72757	34.81629	341.14	-3.38
78/10/ 3	2443784.5	0.70874	-0.15733	-0.04304	7.41250	34.03295	0.05633	0.72727	34.83088	347.48	-3.39
78/10/ 7	2443788.5	0.72147	-0.07790	-0.04265	3.59590	34.66063	0.28500	0.72692	34.84783	353.84	-3.36
78/10/11	2443792.5	0.72532	0.00249	-0.04173	-0.27090	34.86214	0.51052	0.72652	34.86693	0.20	-3.29
78/10/15	2443796.5	0.72022	0.08284	-0.04029	-4.14099	34.63365	0.73012	0.72609	34.88797	6.56	-3.18
78/10/19	2443800.5	0.70622	0.16218	-0.03836	-7.96711	33.97638	0.94110	0.72562	34.91067	12.93	-3.03
78/10/23	2443804.5	0.68348	0.23950	-0.03595	-11.70215	32.89676	1.14084	0.72512	34.93477	19.31	-2.84
78/10/27	2443808.5	0.65226	0.31386	-0.03310	-15.29974	31.40632	1.32684	0.72460	34.95997	25.70	-2.62

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78/10/31	2443812.5	0.61293	0.38431	-0.02984	-18.71479	29.52175	1.49673	0.72406	34.98596	32.09	-2.36
78/11/ 4	2443816.5	0.56596	0.44997	-0.02620	-21.90405	27.26471	1.64833	0.72351	35.01240	38.49	-2.08
78/11/ 8	2443820.5	0.51193	0.51001	-0.02224	-24.82669	24.66167	1.77967	0.72297	35.03898	44.89	-1.76
78/11/12	2443824.5	0.45149	0.56367	-0.01799	-27.44487	21.74371	1.88900	0.72242	35.06534	51.31	-1.43
78/11/16	2443828.5	0.38539	0.61026	-0.01353	-29.72424	18.54616	1.97486	0.72189	35.09117	57.73	-1.07
78/11/20	2443832.5	0.31444	0.64918	-0.00889	-31.63447	15.10822	2.03604	0.72137	35.11614	64.16	-0.71
78/11/24	2443836.5	0.23953	0.67991	-0.00414	-33.14972	11.47254	2.07167	0.72088	35.13993	70.59	-0.33
78/11/28	2443840.5	0.16159	0.70207	0.00066	-34.24905	7.68470	2.08119	0.72042	35.16224	77.04	0.05
78/12/ 2	2443844.5	0.08162	0.71534	0.00546	-34.91680	3.79261	2.06438	0.72000	35.18279	83.49	0.43
78/12/ 6	2443848.5	0.00061	0.71955	0.01018	-35.14288	-0.15410	2.02136	0.71962	35.20130	89.95	0.81
78/12/10	2443852.5	-0.08041	0.71462	0.01478	-34.92298	-4.10474	1.95261	0.71929	35.21755	96.42	1.18
78/12/14	2443856.5	-0.16041	0.70062	0.01918	-34.25868	-8.00825	1.85893	0.71900	35.23131	102.90	1.53
78/12/18	2443860.5	-0.23836	0.67770	0.02335	-33.15757	-11.81398	1.74149	0.71877	35.24241	109.38	1.86
78/12/22	2443864.5	-0.31328	0.64615	0.02721	-31.63308	-15.47236	1.60176	0.71860	35.25069	115.87	2.17
78/12/26	2443868.5	-0.38421	0.60636	0.03073	-29.70443	-18.93563	1.44154	0.71849	35.25605	122.36	2.45
78/12/30	2443872.5	-0.45023	0.55884	0.03386	-27.39634	-22.15857	1.26287	0.71844	35.25843	128.86	2.70
79/ 1/ 3	2443876.5	-0.51052	0.50420	0.03655	-24.73867	-25.09916	1.06809	0.71846	35.25778	135.36	2.92
79/ 1/ 7	2443880.5	-0.56429	0.44312	0.03878	-21.76604	-27.71917	0.85972	0.71853	35.25411	141.86	3.09
79/ 1/11	2443884.5	-0.61087	0.37640	0.04052	-18.51730	-29.98474	0.64049	0.71867	35.24748	148.36	3.23
79/ 1/15	2443888.5	-0.64967	0.30488	0.04174	-15.03493	-31.86684	0.41325	0.71886	35.23798	154.86	3.33
79/ 1/19	2443892.5	-0.68019	0.22948	0.04242	-11.36447	-33.34168	0.18096	0.71911	35.22573	161.36	3.38
79/ 1/23	2443896.5	-0.70207	0.15116	0.04257	-7.55382	-34.39105	-0.05336	0.71942	35.21089	167.85	3.39
79/ 1/27	2443900.5	-0.71503	0.07092	0.04218	-3.65249	-35.00245	-0.28668	0.71977	35.19367	174.34	3.36
79/ 1/31	2443904.5	-0.71891	-0.01022	0.04125	0.28902	-35.16931	-0.51601	0.72017	35.17428	180.81	3.28
79/ 2/ 4	2443908.5	-0.71370	-0.09124	0.03980	4.22004	-34.89096	-0.73840	0.72061	35.15299	187.28	3.17
79/ 2/ 8	2443912.5	-0.69946	-0.17109	0.03785	8.09034	-34.17256	-0.95106	0.72108	35.13007	193.75	3.01
79/ 2/12	2443916.5	-0.67640	-0.24879	0.03541	11.85089	-33.02497	-1.15130	0.72158	35.10581	200.19	2.81
79/ 2/16	2443920.5	-0.64483	-0.32336	0.03254	15.45446	-31.46453	-1.33663	0.72210	35.08053	206.63	2.58
79/ 2/20	2443924.5	-0.60515	-0.39387	0.02925	18.85621	-29.51270	-1.50479	0.72263	35.05454	213.06	2.32
79/ 2/24	2443928.5	-0.55789	-0.45944	0.02560	22.01429	-27.19577	-1.65374	0.72318	35.02818	219.47	2.03
79/ 2/28	2443932.5	-0.50366	-0.51927	0.02163	24.89027	-24.54435	-1.78169	0.72372	35.00178	225.87	1.71
79/ 3/ 4	2443936.5	-0.44314	-0.57261	0.01739	27.44958	-21.59298	-1.88715	0.72426	34.97567	232.26	1.38
79/ 3/ 8	2443940.5	-0.37710	-0.61883	0.01293	29.66188	-18.37961	-1.96891	0.72479	34.95017	238.64	1.02
79/ 3/12	2443944.5	-0.30637	-0.65736	0.00831	31.50138	-14.94505	-2.02606	0.72530	34.92558	245.01	0.66
79/ 3/16	2443948.5	-0.23185	-0.68775	0.00358	32.94701	-11.33246	-2.05800	0.72578	34.90223	251.37	0.28
79/ 3/20	2443952.5	-0.15446	-0.70962	-0.00118	33.98263	-7.58679	-2.06445	0.72624	34.88037	257.72	-0.09
79/ 3/24	2443956.5	-0.07517	-0.72273	-0.00593	34.59713	-3.75424	-2.04541	0.72666	34.86028	264.06	-0.47
79/ 3/28	2443960.5	0.00506	-0.72694	-0.01061	34.78448	0.11829	-2.00122	0.72703	34.84220	270.40	-0.84
79/ 4/ 1	2443964.5	0.08522	-0.72219	-0.01516	34.54373	3.98374	-1.93247	0.72736	34.82634	276.73	-1.19
79/ 4/ 5	2443968.5	0.16434	-0.70857	-0.01952	33.87895	7.79541	-1.84007	0.72764	34.81289	283.06	-1.54
79/ 4/ 9	2443972.5	0.24143	-0.68625	-0.02365	32.79913	11.50744	-1.72518	0.72787	34.80201	289.38	-1.86
79/ 4/13	2443976.5	0.31557	-0.65551	-0.02748	31.31803	15.07536	-1.58924	0.72804	34.79383	295.71	-2.16
79/ 4/17	2443980.5	0.38584	-0.61674	-0.03097	29.45401	18.45646	-1.43390	0.72815	34.78844	302.03	-2.44
79/ 4/21	2443984.5	0.45138	-0.57041	-0.03409	27.22983	21.61032	-1.26105	0.72820	34.78591	308.36	-2.68
79/ 4/25	2443988.5	0.51139	-0.51710	-0.03679	24.67231	24.49919	-1.07277	0.72819	34.78627	314.68	-2.90

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
79/ 4/29	2443992.5	0.56514	-0.45745	-0.03904	21.81216	27.08838	-0.87131	0.72813	34.78950	321.01	-3.07
79/ 5/ 3	2443996.5	0.61197	-0.39220	-0.04081	18.68354	29.34661	-0.65910	0.72800	34.79558	327.35	-3.21
79/ 5/ 7	2444000.5	0.65129	-0.32213	-0.04208	15.32380	31.24640	-0.43867	0.72782	34.80443	333.68	-3.31
79/ 5/11	2444004.5	0.68262	-0.24812	-0.04283	11.77304	32.76433	-0.21267	0.72758	34.81596	340.02	-3.37
79/ 5/15	2444008.5	0.70557	-0.17106	-0.04306	8.07373	33.88132	0.01620	0.72729	34.83001	346.37	-3.39
79/ 5/19	2444012.5	0.71984	-0.09190	-0.04275	4.27026	34.58292	0.24517	0.72694	34.84643	352.72	-3.37
79/ 5/23	2444016.5	0.72525	-0.01160	-0.04192	0.40846	34.85944	0.47146	0.72656	34.86502	359.08	-3.31
79/ 5/27	2444020.5	0.72172	0.06884	-0.04058	-3.46485	34.70616	0.69231	0.72613	34.88556	5.45	-3.20
79/ 5/31	2444024.5	0.70927	0.14842	-0.03873	-7.30242	34.12345	0.90500	0.72567	34.90780	11.82	-3.06
79/ 6/ 4	2444028.5	0.68805	0.22617	-0.03641	-11.05707	33.11682	1.10690	0.72518	34.93148	18.20	-2.88
79/ 6/ 8	2444032.5	0.65829	0.30111	-0.03363	-14.68224	31.69695	1.29547	0.72467	34.95630	24.58	-2.66
79/ 6/12	2444036.5	0.62034	0.37232	-0.03043	-18.13258	29.87962	1.46834	0.72414	34.98197	30.97	-2.41
79/ 6/16	2444040.5	0.57468	0.43888	-0.02686	-21.36447	27.68566	1.62328	0.72359	35.00816	37.37	-2.13
79/ 6/20	2444044.5	0.52183	0.49996	-0.02295	-24.33663	25.14075	1.75828	0.72305	35.03456	43.77	-1.82
79/ 6/24	2444048.5	0.46246	0.55479	-0.01875	-27.01066	22.27518	1.87156	0.72251	35.06084	50.19	-1.49
79/ 6/28	2444052.5	0.39729	0.60266	-0.01432	-29.35157	19.12357	1.96160	0.72197	35.08665	56.61	-1.14
79/ 7/ 2	2444056.5	0.32713	0.64296	-0.00971	-31.32829	15.72449	2.02716	0.72146	35.11169	63.03	-0.77
79/ 7/ 6	2444060.5	0.25284	0.67516	-0.00497	-32.91418	12.12004	2.06729	0.72096	35.13563	69.47	-0.40
79/ 7/10	2444064.5	0.17537	0.69883	-0.00017	-34.08742	8.35532	2.08139	0.72050	35.15815	75.91	-0.01
79/ 7/14	2444068.5	0.09568	0.71367	0.00462	-34.83142	4.47786	2.06917	0.72007	35.17898	82.36	0.37
79/ 7/18	2444072.5	0.01478	0.71947	0.00937	-35.13510	0.53705	2.03070	0.71969	35.19783	88.82	0.75
79/ 7/22	2444076.5	-0.06631	0.71615	0.01399	-34.99313	-3.41656	1.96639	0.71935	35.21447	95.29	1.11
79/ 7/26	2444080.5	-0.14656	0.70372	0.01843	-34.40608	-7.33195	1.87699	0.71905	35.22866	101.76	1.47
79/ 7/30	2444084.5	-0.22494	0.68234	0.02264	-33.38047	-11.15832	1.76360	0.71882	35.24023	108.25	1.80
79/ 8/ 3	2444088.5	-0.30046	0.65227	0.02656	-31.92874	-14.84588	1.62765	0.71864	35.24902	114.73	2.12
79/ 8/ 7	2444092.5	-0.37215	0.61389	0.03015	-30.06910	-18.34652	1.47086	0.71852	35.25492	121.23	2.40
79/ 8/11	2444096.5	-0.43910	0.56768	0.03334	-27.82534	-21.61451	1.29526	0.71846	35.25783	127.72	2.66
79/ 8/15	2444100.5	-0.50044	0.51423	0.03612	-25.22645	-24.60725	1.10312	0.71846	35.25773	134.22	2.88
79/ 8/19	2444104.5	-0.55540	0.45423	0.03843	-22.30625	-27.28579	0.89694	0.71852	35.25461	140.72	3.07
79/ 8/23	2444108.5	-0.60329	0.38843	0.04025	-19.10287	-29.61548	0.67941	0.71865	35.24852	147.22	3.21
79/ 8/27	2444112.5	-0.64348	0.31769	0.04156	-15.65823	-31.56642	0.45337	0.71883	35.23953	153.72	3.31
79/ 8/31	2444116.5	-0.67548	0.24290	0.04234	-12.01735	-33.11389	0.22175	0.71907	35.22777	160.22	3.38
79/ 9/ 4	2444120.5	-0.69889	0.16501	0.04258	-8.22777	-34.23866	-0.01242	0.71937	35.21338	166.72	3.39
79/ 9/ 8	2444124.5	-0.71342	0.08504	0.04229	-4.33877	-34.92726	-0.24613	0.71971	35.19657	173.20	3.37
79/ 9/12	2444128.5	-0.71890	0.00398	0.04145	-0.40073	-35.17205	-0.47636	0.72010	35.17755	179.68	3.30
79/ 9/16	2444132.5	-0.71527	-0.07713	0.04009	3.53566	-34.97133	-0.70016	0.72054	35.15658	186.15	3.19
79/ 9/20	2444136.5	-0.70260	-0.15726	0.03822	7.42005	-34.32926	-0.91471	0.72100	35.13391	192.62	3.04
79/ 9/24	2444140.5	-0.68107	-0.23541	0.03587	11.20316	-33.25573	-1.11729	0.72150	35.10986	199.07	2.85
79/ 9/28	2444144.5	-0.65096	-0.31059	0.03307	14.83740	-31.76611	-1.30540	0.72201	35.08473	205.51	2.63
79/10/ 2	2444148.5	-0.61266	-0.38187	0.02985	18.27747	-29.88102	-1.47671	0.72255	35.05884	211.94	2.37
79/10/ 6	2444152.5	-0.56669	-0.44837	0.02626	21.48097	-27.62591	-1.62915	0.72309	35.03252	218.35	2.08
79/10/10	2444156.5	-0.51363	-0.50925	0.02234	24.40883	-25.03068	-1.76088	0.72364	35.00610	224.76	1.77
79/10/14	2444160.5	-0.45415	-0.56378	0.01814	27.02579	-22.12921	-1.87036	0.72418	34.97990	231.15	1.44
79/10/18	2444164.5	-0.38902	-0.61129	0.01372	29.30076	-18.95888	-1.95634	0.72471	34.95427	237.53	1.08
79/10/22	2444168.5	-0.31906	-0.65120	0.00912	31.20710	-15.56004	-2.01784	0.72522	34.92950	243.90	0.72

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
79/10/26	2444172.5	-0.24513	-0.68304	0.00442	32.72293	-11.97548	-2.05422	0.72571	34.90590	250.26	0.35
79/10/30	2444176.5	-0.16818	-0.70643	-0.00035	33.83123	-8.24987	-2.06513	0.72617	34.88377	256.61	-0.03
79/11/ 3	2444180.5	-0.08915	-0.72108	-0.00511	34.52001	-4.42923	-2.05054	0.72659	34.86336	262.95	-0.40
79/11/ 7	2444184.5	-0.00901	-0.72685	-0.00980	34.78235	-0.56037	-2.01071	0.72697	34.84493	269.29	-0.77
79/11/11	2444188.5	0.07123	-0.72367	-0.01438	34.61641	3.30965	-1.94620	0.72731	34.82868	275.62	-1.13
79/11/15	2444192.5	0.15060	-0.71160	-0.01878	34.02537	7.13401	-1.85786	0.72760	34.81482	281.95	-1.48
79/11/19	2444196.5	0.22812	-0.69078	-0.02294	33.01738	10.86670	-1.74682	0.72784	34.80350	288.27	-1.81
79/11/23	2444200.5	0.30284	-0.66149	-0.02683	31.60538	14.46295	-1.61445	0.72802	34.79487	294.60	-2.11
79/11/27	2444204.5	0.37385	-0.62410	-0.03039	29.80693	17.87972	-1.46238	0.72814	34.78902	300.92	-2.39
79/12/ 1	2444208.5	0.44028	-0.57905	-0.03357	27.64402	21.07617	-1.29245	0.72820	34.78602	307.25	-2.64
79/12/ 5	2444212.5	0.50131	-0.52692	-0.03635	25.14281	24.01404	-1.10671	0.72820	34.78591	313.57	-2.86
79/12/ 9	2444216.5	0.55621	-0.46833	-0.03868	22.33330	26.65807	-0.90740	0.72814	34.78868	319.90	-3.04
79/12/13	2444220.5	0.60429	-0.40400	-0.04053	19.24911	28.97637	-0.69689	0.72803	34.79431	326.24	-3.19
79/12/17	2444224.5	0.64496	-0.33472	-0.04189	15.92704	30.94076	-0.47771	0.72785	34.80272	332.57	-3.30
79/12/21	2444228.5	0.67773	-0.26133	-0.04273	12.40673	32.52708	-0.25249	0.72762	34.81382	338.91	-3.37
79/12/25	2444232.5	0.70217	-0.18474	-0.04305	8.73028	33.71550	-0.02393	0.72734	34.82747	345.26	-3.39
79/12/29	2444236.5	0.71798	-0.10587	-0.04284	4.94175	34.49070	0.20522	0.72700	34.84352	351.61	-3.38
80/ 1/ 2	2444240.5	0.72495	-0.02570	-0.04211	1.08678	34.84216	0.43218	0.72663	34.86178	357.97	-3.32
80/ 1/ 6	2444244.5	0.72298	0.05478	-0.04085	-2.78796	34.76428	0.65418	0.72621	34.88202	4.33	-3.22
80/ 1/10	2444248.5	0.71209	0.13459	-0.03909	-6.63524	34.25652	0.86850	0.72575	34.90401	10.70	-3.09
80/ 1/14	2444252.5	0.69238	0.21273	-0.03685	-10.40785	33.32349	1.07247	0.72526	34.92747	17.08	-2.91
80/ 1/18	2444256.5	0.66409	0.28823	-0.03415	-14.05906	31.97496	1.26356	0.72475	34.95213	23.46	-2.70
80/ 1/22	2444260.5	0.62755	0.36016	-0.03102	-17.54327	30.22583	1.43934	0.72422	34.97769	29.85	-2.45
80/ 1/26	2444264.5	0.58320	0.42759	-0.02751	-20.81651	28.09605	1.59757	0.72368	35.00382	36.25	-2.18
80/ 1/30	2444268.5	0.53157	0.48970	-0.02365	-23.83706	25.61046	1.73620	0.72314	35.03021	42.65	-1.87
80/ 2/ 3	2444272.5	0.47329	0.54567	-0.01950	-26.56596	22.79858	1.85340	0.72259	35.05653	49.06	-1.55
80/ 2/ 7	2444276.5	0.40908	0.59481	-0.01511	-28.96757	19.69429	1.94760	0.72206	35.08245	55.48	-1.20
80/ 2/11	2444280.5	0.33973	0.63647	-0.01052	-31.01012	16.33550	2.01751	0.72154	35.10765	61.91	-0.84
80/ 2/15	2444284.5	0.26610	0.67012	-0.00581	-32.66615	12.76373	2.06215	0.72104	35.13179	68.34	-0.46
80/ 2/19	2444288.5	0.18911	0.69531	-0.00102	-33.91297	9.02358	2.08083	0.72057	35.15458	74.78	-0.08
80/ 2/23	2444292.5	0.10974	0.71172	0.00379	-34.73304	5.16223	2.07321	0.72014	35.17571	81.23	0.30
80/ 2/27	2444296.5	0.02897	0.71911	0.00854	-35.11430	1.22878	2.03931	0.71974	35.19493	87.69	0.68
80/ 3/ 2	2444300.5	-0.05216	0.71738	0.01319	-35.05041	-2.72637	1.97947	0.71939	35.21196	94.16	1.05
80/ 3/ 6	2444304.5	-0.13263	0.70654	0.01767	-34.54088	-6.65223	1.89438	0.71909	35.22660	100.63	1.41
80/ 3/10	2444308.5	-0.21141	0.68671	0.02192	-33.59121	-10.49790	1.78509	0.71885	35.23865	107.11	1.75
80/ 3/14	2444312.5	-0.28750	0.65813	0.02590	-32.21281	-14.21337	1.65296	0.71866	35.24794	113.60	2.07
80/ 3/18	2444316.5	-0.35993	0.62117	0.02955	-30.42290	-17.75016	1.49967	0.71852	35.25436	120.09	2.36
80/ 3/22	2444320.5	-0.42777	0.57629	0.03281	-28.24429	-21.06209	1.32720	0.71845	35.25781	126.59	2.62
80/ 3/26	2444324.5	-0.49015	0.52406	0.03566	-25.70512	-24.10596	1.13777	0.71845	35.25826	133.08	2.85
80/ 3/30	2444328.5	-0.54628	0.46515	0.03806	-22.83837	-26.84214	0.93385	0.71850	35.25569	139.59	3.04
80/ 4/ 3	2444332.5	-0.59545	0.40031	0.03997	-19.68148	-29.23517	0.71809	0.71861	35.25013	146.09	3.19
80/ 4/ 7	2444336.5	-0.63703	0.33036	0.04137	-16.27575	-31.25431	0.49332	0.71879	35.24167	152.59	3.30
80/ 4/11	2444340.5	-0.67049	0.25621	0.04224	-12.66571	-32.87388	0.26246	0.71902	35.23040	159.09	3.37
80/ 4/15	2444344.5	-0.69543	0.17880	0.04258	-8.89850	-34.07369	0.02850	0.71930	35.21648	165.58	3.39
80/ 4/19	2444348.5	-0.71152	0.09911	0.04238	-5.02317	-34.83923	-0.20551	0.71964	35.20009	172.07	3.38

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
80/ 4/23	2444352.5	-0.71859	0.01817	0.04163	-1.08995	-35.16185	-0.43656	0.72002	35.18145	178.55	3.31
80/ 4/27	2444356.5	-0.71655	-0.06300	0.04036	2.85046	-35.03882	-0.66170	0.72045	35.16080	185.02	3.21
80/ 5/ 1	2444360.5	-0.70545	-0.14338	0.03858	6.74760	-34.47328	-0.87807	0.72091	35.13841	191.49	3.07
80/ 5/ 5	2444364.5	-0.68545	-0.22195	0.03632	10.55195	-33.47412	-1.08293	0.72140	35.11457	197.94	2.89
80/ 5/ 9	2444368.5	-0.65681	-0.29772	0.03359	14.21557	-32.05580	-1.27374	0.72192	35.08958	204.38	2.67
80/ 5/13	2444372.5	-0.61991	-0.36975	0.03044	17.69274	-30.23803	-1.44814	0.72245	35.06378	210.81	2.42
80/ 5/17	2444376.5	-0.57524	-0.43714	0.02691	20.94048	-28.04547	-1.60401	0.72299	35.03748	217.23	2.13
80/ 5/21	2444380.5	-0.52337	-0.49906	0.02305	23.91913	-25.50727	-1.73948	0.72354	35.01101	223.64	1.83
80/ 5/25	2444384.5	-0.46496	-0.55475	0.01889	26.59272	-22.65665	-1.85294	0.72408	34.98471	230.03	1.50
80/ 5/29	2444388.5	-0.40076	-0.60353	0.01450	28.92941	-19.53045	-1.94309	0.72462	34.95890	236.42	1.15
80/ 6/ 2	2444392.5	-0.33157	-0.64481	0.00993	30.90179	-16.16851	-2.00892	0.72513	34.93390	242.79	0.79
80/ 6/ 6	2444396.5	-0.25828	-0.67809	0.00524	32.48711	-12.61327	-2.04971	0.72563	34.91000	249.15	0.41
80/ 6/10	2444400.5	-0.18178	-0.70297	0.00048	33.66751	-8.90909	-2.06508	0.72610	34.88750	255.50	0.04
80/ 6/14	2444404.5	-0.10304	-0.71917	-0.00428	34.43012	-5.10181	-2.05492	0.72653	34.86666	261.85	-0.34
80/ 6/18	2444408.5	-0.02303	-0.72650	-0.00899	34.76713	-1.23814	-2.01945	0.72692	34.84774	268.18	-0.71
80/ 6/22	2444412.5	0.05726	-0.72489	-0.01359	34.67584	2.63487	-1.95919	0.72727	34.83095	274.52	-1.07
80/ 6/26	2444416.5	0.13685	-0.71436	-0.01802	34.15858	6.47034	-1.87493	0.72757	34.81650	280.85	-1.42
80/ 6/30	2444420.5	0.21476	-0.69505	-0.02224	33.22262	10.22207	-1.76776	0.72782	34.80457	287.17	-1.75
80/ 7/ 4	2444424.5	0.29004	-0.66723	-0.02618	31.88011	13.84506	-1.63900	0.72801	34.79530	293.49	-2.06
80/ 7/ 8	2444428.5	0.36176	-0.63122	-0.02979	30.14781	17.29595	-1.49025	0.72815	34.78881	299.82	-2.35
80/ 7/12	2444432.5	0.42905	-0.58748	-0.03305	28.04697	20.53348	-1.32330	0.72822	34.78516	306.14	-2.60
80/ 7/16	2444436.5	0.49108	-0.53654	-0.03590	25.60302	23.51894	-1.14018	0.72824	34.78441	312.47	-2.83
80/ 7/20	2444440.5	0.54710	-0.47903	-0.03830	22.84534	26.21652	-0.94309	0.72819	34.78656	318.80	-3.02
80/ 7/24	2444444.5	0.59642	-0.41566	-0.04024	19.80691	28.59374	-0.73437	0.72809	34.79160	325.13	-3.17
80/ 7/28	2444448.5	0.63843	-0.34719	-0.04169	16.52400	30.62177	-0.51654	0.72792	34.79945	331.46	-3.28
80/ 8/ 1	2444452.5	0.67261	-0.27446	-0.04263	13.03577	32.27572	-0.29221	0.72770	34.81004	337.80	-3.36
80/ 8/ 5	2444456.5	0.69853	-0.19837	-0.04304	9.38391	33.53498	-0.06405	0.72743	34.82322	344.15	-3.39
80/ 8/ 9	2444460.5	0.71587	-0.11984	-0.04292	5.61215	34.38346	0.16517	0.72710	34.83886	350.50	-3.38
80/ 8/13	2444464.5	0.72441	-0.03983	-0.04228	1.76586	34.80978	0.39269	0.72673	34.85675	356.85	-3.33
80/ 8/17	2444468.5	0.72401	0.04067	-0.04111	-2.10844	34.80745	0.61574	0.72632	34.87669	3.21	-3.24
80/ 8/21	2444472.5	0.71468	0.12066	-0.03944	-5.96361	34.37506	0.83157	0.72587	34.89844	9.58	-3.11
80/ 8/25	2444476.5	0.69651	0.19916	-0.03728	-9.75239	33.51629	1.03753	0.72538	34.92174	15.96	-2.95
80/ 8/29	2444480.5	0.66971	0.27520	-0.03465	-13.42798	32.24000	1.23104	0.72487	34.94630	22.34	-2.74
80/ 9/ 2	2444484.5	0.63459	0.34781	-0.03160	-16.94452	30.56018	1.40966	0.72434	34.97182	28.73	-2.50
80/ 9/ 6	2444488.5	0.59157	0.41610	-0.02815	-20.25775	28.49588	1.57111	0.72380	34.99800	35.12	-2.23
80/ 9/10	2444492.5	0.54118	0.47920	-0.02435	-23.32550	26.07110	1.71331	0.72326	35.02451	41.52	-1.93
80/ 9/14	2444496.5	0.48402	0.53630	-0.02025	-26.10829	23.31450	1.83439	0.72271	35.05102	47.93	-1.61
80/ 9/18	2444500.5	0.42080	0.58669	-0.01590	-28.56986	20.25924	1.93273	0.72217	35.07719	54.35	-1.26
80/ 9/22	2444504.5	0.35229	0.62971	-0.01134	-30.67773	16.94251	2.00700	0.72164	35.10270	60.78	-0.90
80/ 9/26	2444508.5	0.27935	0.66480	-0.00664	-32.40362	13.40522	2.05613	0.72114	35.12723	67.21	-0.53
80/ 9/30	2444512.5	0.20289	0.69151	-0.00186	-33.72397	9.69147	2.07941	0.72066	35.15045	73.65	-0.15
80/10/ 4	2444516.5	0.12386	0.70948	0.00294	-34.62030	5.84799	2.07644	0.72021	35.17208	80.10	0.23
80/10/ 8	2444520.5	0.04327	0.71846	0.00771	-35.07954	1.92361	2.04715	0.71981	35.19184	86.55	0.61
80/10/12	2444524.5	-0.03788	0.71834	0.01238	-35.09433	-2.03147	1.99183	0.71944	35.20946	93.02	0.99
80/10/16	2444528.5	-0.11854	0.70909	0.01690	-34.66311	-5.96630	1.91111	0.71913	35.22471	99.49	1.35

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80/10/20	2444532.5	-0.19769	0.69083	0.02119	-33.79032	-9.82992	1.80599	0.71887	35.23740	105.97	1.69
80/10/24	2444536.5	-0.27433	0.66377	0.02522	-32.48631	-13.57207	1.67776	0.71867	35.24736	112.45	2.01
80/10/28	2444540.5	-0.34747	0.62825	0.02893	-30.76729	-17.14397	1.52805	0.71852	35.25445	118.95	2.31
80/11/ 1	2444544.5	-0.41618	0.58472	0.03227	-28.65510	-20.49895	1.35878	0.71844	35.25859	125.44	2.57
80/11/ 5	2444548.5	-0.47959	0.53374	0.03519	-26.17695	-23.59322	1.17215	0.71841	35.25970	131.94	2.81
80/11/ 9	2444552.5	-0.53687	0.47595	0.03767	-23.36502	-26.38647	0.97057	0.71845	35.25779	138.44	3.01
80/11/13	2444556.5	-0.58731	0.41209	0.03967	-20.25599	-28.84245	0.75668	0.71856	35.25286	144.94	3.16
80/11/17	2444560.5	-0.63026	0.34297	0.04116	-16.89054	-30.92951	0.53326	0.71872	35.24499	151.45	3.28
80/11/21	2444564.5	-0.66519	0.26948	0.04213	-13.31269	-32.62108	0.30323	0.71894	35.23428	157.95	3.36
80/11/25	2444568.5	-0.69165	0.19257	0.04256	-9.56920	-33.89594	0.06957	0.71921	35.22086	164.44	3.39
80/11/29	2444572.5	-0.70931	0.11321	0.04245	-5.70884	-34.73858	-0.16467	0.71954	35.20492	170.93	3.38
80/12/ 3	2444576.5	-0.71797	0.03241	0.04180	-1.78171	-35.13929	-0.39648	0.71992	35.18666	177.42	3.33
80/12/ 7	2444580.5	-0.71753	-0.04881	0.04062	2.16151	-35.09431	-0.62288	0.72034	35.16633	183.89	3.23
80/12/11	2444584.5	-0.70801	-0.12940	0.03893	6.07024	-34.60575	-0.84100	0.72079	35.14417	190.36	3.10
80/12/15	2444588.5	-0.68955	-0.20836	0.03674	9.89472	-33.68152	-1.04809	0.72128	35.12049	196.81	2.92
80/12/19	2444592.5	-0.66240	-0.28470	0.03410	13.58669	-32.33513	-1.24154	0.72179	35.09559	203.26	2.71
80/12/23	2444596.5	-0.62691	-0.35745	0.03102	17.09995	-30.58541	-1.41898	0.72232	35.06978	209.69	2.46
80/12/27	2444600.5	-0.58356	-0.42572	0.02755	20.39103	-28.45619	-1.57824	0.72287	35.04339	216.11	2.18
80/12/31	2444604.5	-0.53290	-0.48866	0.02374	23.41962	-25.97587	-1.71739	0.72342	35.01677	222.52	1.88
81/ 1/ 4	2444608.5	-0.47558	-0.54549	0.01964	26.14908	-23.17704	-1.83480	0.72396	34.99023	228.92	1.55
81/ 1/ 8	2444612.5	-0.41234	-0.59553	0.01528	28.54684	-20.09594	-1.92910	0.72450	34.96413	235.30	1.21
81/ 1/12	2444616.5	-0.34396	-0.63815	0.01074	30.58468	-16.77195	-1.99922	0.72503	34.93877	241.68	0.85
81/ 1/16	2444620.5	-0.27132	-0.67286	0.00607	32.23903	-13.24709	-2.04442	0.72553	34.91447	248.04	0.48
81/ 1/20	2444624.5	-0.19532	-0.69924	0.00131	33.49119	-9.56545	-2.06422	0.72601	34.89153	254.39	0.10
81/ 1/24	2444628.5	-0.11690	-0.71697	-0.00345	34.32741	-5.77265	-2.05850	0.72645	34.87022	260.74	-0.27
81/ 1/28	2444632.5	-0.03704	-0.72586	-0.00818	34.73903	-1.91530	-2.02742	0.72685	34.85081	267.08	-0.64
81/ 2/ 1	2444636.5	0.04328	-0.72581	-0.01280	34.72244	1.95957	-1.97143	0.72721	34.83352	273.41	-1.01
81/ 2/ 5	2444640.5	0.12306	-0.71683	-0.01727	34.27911	5.80501	-1.89129	0.72752	34.81856	279.74	-1.36
81/ 2/ 9	2444644.5	0.20133	-0.69905	-0.02152	33.41548	9.57468	-1.78802	0.72778	34.80612	286.07	-1.69
81/ 2/13	2444648.5	0.27714	-0.67269	-0.02551	32.14284	13.22333	-1.66292	0.72798	34.79632	292.39	-2.01
81/ 2/17	2444652.5	0.34954	-0.63808	-0.02919	30.47719	16.70729	-1.51754	0.72813	34.78930	298.71	-2.30
81/ 2/21	2444656.5	0.41767	-0.59565	-0.03251	28.43899	19.98492	-1.35363	0.72822	34.78514	305.04	-2.56
81/ 2/25	2444660.5	0.48067	-0.54593	-0.03543	26.05298	23.01702	-1.17318	0.72824	34.78387	311.36	-2.79
81/ 3/ 1	2444664.5	0.53779	-0.48952	-0.03792	23.34785	25.76727	-0.97836	0.72821	34.78551	317.69	-2.98
81/ 3/ 5	2444668.5	0.58833	-0.42712	-0.03994	20.35599	28.20259	-0.77151	0.72812	34.79005	324.02	-3.14
81/ 3/ 9	2444672.5	0.63165	-0.35948	-0.04148	17.11311	30.29347	-0.55509	0.72796	34.79743	330.36	-3.27
81/ 3/13	2444676.5	0.66723	-0.28744	-0.04250	13.65790	32.01434	-0.33170	0.72775	34.80756	336.69	-3.35
81/ 3/17	2444680.5	0.69462	-0.21186	-0.04300	10.03162	33.34382	-0.10403	0.72749	34.82032	343.04	-3.39
81/ 3/21	2444684.5	0.71348	-0.13369	-0.04298	6.27767	34.26501	0.12520	0.72717	34.83556	349.39	-3.39
81/ 3/25	2444688.5	0.72357	-0.05387	-0.04243	2.44119	34.76570	0.35322	0.72681	34.85309	355.74	-3.35
81/ 3/29	2444692.5	0.72473	0.02661	-0.04135	-1.43150	34.83854	0.57723	0.72640	34.87272	2.10	-3.26
81/ 4/ 2	2444696.5	0.71696	0.10676	-0.03976	-5.29332	34.48121	0.79452	0.72596	34.89419	8.47	-3.14
81/ 4/ 6	2444700.5	0.70032	0.18560	-0.03769	-9.09700	33.69651	1.00238	0.72548	34.91726	14.84	-2.98
81/ 4/10	2444704.5	0.67501	0.26213	-0.03514	-12.79562	32.49238	1.19824	0.72497	34.94164	21.22	-2.78
81/ 4/14	2444708.5	0.64132	0.33541	-0.03216	-16.34312	30.88192	1.37963	0.72445	34.96704	27.61	-2.54

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

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81/ 4/18	2444712.5	0.59965	0.40452	-0.02878	-19.69492	28.88331	1.54423	0.72391	34.99315	34.00	-2.28
81/ 4/22	2444716.5	0.55050	0.46858	-0.02504	-22.80844	26.51969	1.68993	0.72336	35.01963	40.40	-1.98
81/ 4/26	2444720.5	0.49448	0.52679	-0.02099	-25.64371	23.81892	1.81482	0.72281	35.04617	46.81	-1.66
81/ 4/30	2444724.5	0.43226	0.57840	-0.01667	-28.16386	20.81339	1.91724	0.72227	35.07244	53.23	-1.32
81/ 5/ 4	2444728.5	0.36462	0.62275	-0.01215	-30.33570	17.53962	1.99580	0.72174	35.09809	59.65	-0.96
81/ 5/ 8	2444732.5	0.29239	0.65926	-0.00747	-32.13020	14.03789	2.04939	0.72123	35.12281	66.08	-0.59
81/ 5/12	2444736.5	0.21648	0.68746	-0.00270	-33.52293	10.35179	2.07722	0.72075	35.14628	72.52	-0.21
81/ 5/16	2444740.5	0.13783	0.70698	0.00211	-34.49451	6.52762	2.07885	0.72030	35.16821	78.97	0.17
81/ 5/20	2444744.5	0.05744	0.71755	0.00688	-35.03091	2.61389	2.05415	0.71988	35.18830	85.42	0.55
81/ 5/24	2444748.5	-0.02368	0.71903	0.01158	-35.12373	-1.33940	2.00334	0.71951	35.20630	91.89	0.92
81/ 5/28	2444752.5	-0.10450	0.71137	0.01612	-34.77041	-5.28137	1.92701	0.71919	35.22198	98.36	1.28
81/ 6/ 1	2444756.5	-0.18399	0.69467	0.02046	-33.97433	-9.16102	1.82607	0.71892	35.23512	104.83	1.63
81/ 6/ 5	2444760.5	-0.26114	0.66913	0.02454	-32.74480	-12.92793	1.70177	0.71871	35.24556	111.32	1.96
81/ 6/ 9	2444764.5	-0.33496	0.63507	0.02831	-31.09702	-16.53299	1.55569	0.71855	35.25315	117.81	2.26
81/ 6/13	2444768.5	-0.40452	0.59291	0.03171	-29.05187	-19.92913	1.38970	0.71845	35.25781	124.30	2.53
81/ 6/17	2444772.5	-0.46891	0.54318	0.03471	-26.63564	-23.07201	1.20594	0.71842	35.25946	130.80	2.77
81/ 6/21	2444776.5	-0.52732	0.48653	0.03727	-23.87966	-25.92065	1.00680	0.71845	35.25808	137.30	2.97
81/ 6/25	2444780.5	-0.57901	0.42368	0.03936	-20.81988	-28.43806	0.79486	0.71854	35.25369	143.81	3.14
81/ 6/29	2444784.5	-0.62331	0.35542	0.04094	-17.49628	-30.59177	0.57290	0.71869	35.24634	150.31	3.27
81/ 7/ 3	2444788.5	-0.65968	0.28263	0.04200	-13.95237	-32.35427	0.34382	0.71890	35.23614	156.81	3.35
81/ 7/ 7	2444792.5	-0.68764	0.20625	0.04252	-10.23446	-33.70339	0.11058	0.71917	35.22322	163.30	3.39
81/ 7/11	2444796.5	-0.70687	0.12724	0.04251	-6.39101	-34.62260	-0.12377	0.71948	35.20774	169.80	3.39
81/ 7/15	2444800.5	-0.71711	0.04662	0.04195	-2.47195	-35.10117	-0.35622	0.71985	35.18991	176.28	3.34
81/ 7/19	2444804.5	-0.71827	-0.03459	0.04087	1.47209	-35.13428	-0.58378	0.72026	35.16995	182.76	3.25
81/ 7/23	2444808.5	-0.71033	-0.11537	0.03926	5.39047	-34.72303	-0.80356	0.72071	35.14814	189.23	3.12
81/ 7/27	2444812.5	-0.69342	-0.19469	0.03716	9.23324	-33.87431	-1.01277	0.72119	35.12474	195.68	2.95
81/ 7/31	2444816.5	-0.66777	-0.27155	0.03459	12.95182	-32.60068	-1.20879	0.72170	35.10007	202.13	2.75
81/ 8/ 4	2444820.5	-0.63371	-0.34500	0.03159	16.49962	-30.92003	-1.38919	0.72223	35.07443	208.56	2.51
81/ 8/ 8	2444824.5	-0.59170	-0.41412	0.02819	19.83264	-28.85536	-1.55178	0.72277	35.04816	214.99	2.24
81/ 8/12	2444828.5	-0.54227	-0.47805	0.02443	22.90998	-26.43430	-1.69458	0.72332	35.02158	221.40	1.94
81/ 8/16	2444832.5	-0.48607	-0.53601	0.02037	25.69434	-23.68872	-1.81590	0.72387	34.99503	227.80	1.61
81/ 8/20	2444836.5	-0.42381	-0.58728	0.01606	28.15238	-20.65427	-1.91433	0.72441	34.96884	234.18	1.27
81/ 8/24	2444840.5	-0.35627	-0.63124	0.01155	30.25511	-17.36982	-1.98876	0.72493	34.94334	240.56	0.91
81/ 8/28	2444844.5	-0.28431	-0.66737	0.00689	31.97813	-13.87696	-2.03835	0.72544	34.91884	246.93	0.54
81/ 9/ 1	2444848.5	-0.20883	-0.69523	0.00215	33.30187	-10.21947	-2.06262	0.72592	34.89565	253.28	0.17
81/ 9/ 5	2444852.5	-0.13076	-0.71450	-0.00262	34.21170	-6.44273	-2.06137	0.72637	34.87404	259.63	-0.21
81/ 9/ 9	2444856.5	-0.05108	-0.72494	-0.00736	34.69806	-2.59323	-2.03470	0.72678	34.85427	265.97	-0.58
81/ 9/13	2444860.5	0.02922	-0.72646	-0.01200	34.75647	1.28204	-1.98302	0.72715	34.83660	272.30	-0.95
81/ 9/17	2444864.5	0.10917	-0.71904	-0.01650	34.38751	5.13608	-1.90703	0.72747	34.82121	278.63	-1.30
81/ 9/21	2444868.5	0.18778	-0.70278	-0.02079	33.59675	8.92239	-1.80772	0.72773	34.80831	284.96	-1.64
81/ 9/25	2444872.5	0.26409	-0.67790	-0.02483	32.39465	12.59551	-1.68634	0.72795	34.79805	291.28	-1.96
81/ 9/29	2444876.5	0.33715	-0.64471	-0.02857	30.79639	16.11144	-1.54437	0.72810	34.79054	297.61	-2.25
81/10/ 3	2444880.5	0.40609	-0.60361	-0.03196	28.82168	19.42815	-1.38356	0.72820	34.78587	303.93	-2.52
81/10/ 7	2444884.5	0.47005	-0.55513	-0.03495	26.49451	22.50600	-1.20585	0.72824	34.78409	310.26	-2.75
81/10/11	2444888.5	0.52825	-0.49984	-0.03752	23.84292	25.30812	-1.01337	0.72821	34.78524	316.58	-2.95

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81/10/15	2444892.5	0.57998	-0.43843	-0.03962	20.89867	27.80083	-0.80844	0.72813	34.78928	322.91	-3.12
81/10/19	2444896.5	0.62461	-0.37165	-0.04124	17.69691	29.95399	-0.59351	0.72799	34.79618	329.25	-3.25
81/10/23	2444900.5	0.66158	-0.30032	-0.04236	14.27584	31.74130	-0.37114	0.72779	34.80585	335.58	-3.34
81/10/27	2444904.5	0.69043	-0.22529	-0.04295	10.67631	33.14063	-0.14401	0.72753	34.81818	341.93	-3.38
81/10/31	2444908.5	0.71080	-0.14751	-0.04302	6.94138	34.13428	0.08516	0.72722	34.83301	348.28	-3.39
81/11/ 4	2444912.5	0.72243	-0.06790	-0.04256	3.11592	34.70919	0.31359	0.72687	34.85018	354.63	-3.36
81/11/ 8	2444916.5	0.72517	0.01253	-0.04158	-0.75393	34.85717	0.53851	0.72647	34.86948	0.99	-3.28
81/11/12	2444920.5	0.71895	0.09282	-0.04008	-4.62117	34.57500	0.75717	0.72603	34.89067	7.36	-3.16
81/11/16	2444924.5	0.70385	0.17195	-0.03808	-8.43852	33.86458	0.96688	0.72555	34.91351	13.73	-3.01
81/11/20	2444928.5	0.68004	0.24896	-0.03562	-12.15896	32.73294	1.16503	0.72505	34.93770	20.11	-2.82
81/11/24	2444932.5	0.64779	0.32287	-0.03271	-15.73625	31.19230	1.34912	0.72453	34.96297	26.49	-2.59
81/11/28	2444936.5	0.60748	0.39278	-0.02940	-19.12547	29.25996	1.51682	0.72399	34.98899	32.89	-2.33
81/12/ 2	2444940.5	0.55960	0.45778	-0.02572	-22.28369	26.95818	1.66597	0.72345	35.01545	39.29	-2.04
81/12/ 6	2444944.5	0.50473	0.51707	-0.02172	-25.17040	24.31406	1.79463	0.72290	35.04202	45.69	-1.72
81/12/10	2444948.5	0.44354	0.56988	-0.01744	-27.74817	21.35919	1.90108	0.72235	35.06836	52.11	-1.38
81/12/14	2444952.5	0.37679	0.61554	-0.01295	-29.98312	18.12942	1.98390	0.72182	35.09414	58.53	-1.03
81/12/18	2444956.5	0.30529	0.65346	-0.00830	-31.84546	14.66441	2.04191	0.72131	35.11905	64.96	-0.66
81/12/22	2444960.5	0.22995	0.68315	-0.00354	-33.30993	11.00719	2.07428	0.72082	35.14275	71.40	-0.28
81/12/26	2444964.5	0.15171	0.70421	0.00127	-34.35625	7.20367	2.08050	0.72037	35.16494	77.84	0.10
81/12/30	2444968.5	0.07155	0.71636	0.00606	-34.96941	3.30200	2.06039	0.71995	35.18534	84.30	0.48
82/ 1/ 3	2444972.5	-0.00952	0.71943	0.01077	-35.14004	-0.64802	2.01410	0.71957	35.20368	90.76	0.86
82/ 1/ 7	2444976.5	-0.09047	0.71337	0.01534	-34.86455	-4.59560	1.94216	0.71924	35.21971	97.23	1.22
82/ 1/11	2444980.5	-0.17026	0.69824	0.01972	-34.14528	-8.48971	1.84543	0.71897	35.23323	103.70	1.57
82/ 1/15	2444984.5	-0.24789	0.67422	0.02385	-32.99052	-12.27977	1.72510	0.71874	35.24405	110.19	1.90
82/ 1/19	2444988.5	-0.32237	0.64162	0.02767	-31.41446	-15.91640	1.58268	0.71858	35.25202	116.68	2.21
82/ 1/23	2444992.5	-0.39273	0.60084	0.03115	-29.43701	-19.35213	1.42001	0.71848	35.25704	123.17	2.48
82/ 1/27	2444996.5	-0.45809	0.55239	0.03422	-27.08354	-22.54209	1.23918	0.71844	35.25904	129.67	2.73
82/ 1/31	2445000.5	-0.51760	0.49690	0.03686	-24.38456	-25.44469	1.04254	0.71846	35.25799	136.17	2.94
82/ 2/ 4	2445004.5	-0.57051	0.43508	0.03903	-21.37523	-28.02222	0.83265	0.71854	35.25391	142.67	3.11
82/ 2/ 8	2445008.5	-0.61615	0.36771	0.04070	-18.09490	-30.24139	0.61224	0.71869	35.24687	149.17	3.25
82/ 2/12	2445012.5	-0.65394	0.29565	0.04185	-14.58649	-32.07382	0.38420	0.71889	35.23696	155.67	3.34
82/ 2/16	2445016.5	-0.68341	0.21983	0.04247	-10.89587	-33.49640	0.15150	0.71915	35.22431	162.17	3.39
82/ 2/20	2445020.5	-0.70418	0.14122	0.04255	-7.07117	-34.49161	-0.08286	0.71946	35.20909	168.66	3.39
82/ 2/24	2445024.5	-0.71601	0.06081	0.04209	-3.16210	-35.04772	-0.31583	0.71982	35.19150	175.15	3.35
82/ 2/28	2445028.5	-0.71876	-0.02037	0.04109	0.78081	-35.15888	-0.54443	0.72023	35.17177	181.62	3.27
82/ 3/ 4	2445032.5	-0.71242	-0.10130	0.03958	4.70687	-34.82517	-0.76574	0.72067	35.15016	188.09	3.15
82/ 3/ 8	2445036.5	-0.69707	-0.18094	0.03756	8.56599	-34.05248	-0.97696	0.72115	35.12694	194.55	2.99
82/ 3/12	2445040.5	-0.67293	-0.25830	0.03507	12.30933	-32.85237	-1.17544	0.72165	35.10242	201.00	2.79
82/ 3/16	2445044.5	-0.64032	-0.33241	0.03214	15.88993	-31.24185	-1.35872	0.72218	35.07690	207.44	2.55
82/ 3/20	2445048.5	-0.59967	-0.40235	0.02881	19.26331	-29.24301	-1.52455	0.72272	35.05072	213.86	2.28
82/ 3/24	2445052.5	-0.55151	-0.46725	0.02512	22.38802	-26.88269	-1.67093	0.72327	35.02420	220.27	1.99
82/ 3/28	2445056.5	-0.49645	-0.52630	0.02111	25.22609	-24.19205	-1.79611	0.72381	34.99767	226.67	1.67
82/ 4/ 1	2445060.5	-0.43520	-0.57880	0.01683	27.74350	-21.20607	-1.89863	0.72435	34.97147	233.06	1.33
82/ 4/ 5	2445064.5	-0.36854	-0.62409	0.01235	29.91046	-17.96307	-1.97733	0.72488	34.94592	239.44	0.98
82/ 4/ 9	2445068.5	-0.29729	-0.66163	0.00772	31.70177	-14.50420	-2.03132	0.72539	34.92134	245.80	0.61

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82/ 4/13	2445072.5	-0.22237	-0.69097	0.00299	33.09697	-10.87285	-2.06006	0.72587	34.89803	252.16	0.24
82/ 4/17	2445076.5	-0.14469	-0.71176	-0.00178	34.08058	-7.11415	-2.06330	0.72632	34.87627	258.51	-0.14
82/ 4/21	2445080.5	-0.06523	-0.72377	-0.00653	34.64211	-3.27441	-2.04108	0.72674	34.85633	264.85	-0.51
82/ 4/25	2445084.5	0.01504	-0.72687	-0.01119	34.77619	0.59945	-1.99376	0.72711	34.83845	271.19	-0.88
82/ 4/29	2445088.5	0.09512	-0.72102	-0.01572	34.48247	4.46040	-1.92200	0.72743	34.82284	277.52	-1.24
82/ 5/ 3	2445092.5	0.17403	-0.70630	-0.02005	33.76566	8.26183	-1.82672	0.72771	34.80969	283.84	-1.58
82/ 5/ 7	2445096.5	0.25081	-0.68292	-0.02414	32.63534	11.95806	-1.70913	0.72792	34.79916	290.17	-1.90
82/ 5/11	2445100.5	0.32451	-0.65117	-0.02794	31.10584	15.50480	-1.57068	0.72809	34.79137	296.49	-2.20
82/ 5/15	2445104.5	0.39424	-0.61143	-0.03139	29.19608	18.85966	-1.41306	0.72819	34.78641	302.81	-2.47
82/ 5/19	2445108.5	0.45913	-0.56421	-0.03445	26.92929	21.98251	-1.23818	0.72823	34.78434	309.14	-2.71
82/ 5/23	2445112.5	0.51841	-0.51007	-0.03709	24.33281	24.83596	-1.04815	0.72821	34.78519	315.46	-2.92
82/ 5/27	2445116.5	0.57133	-0.44969	-0.03928	21.43775	27.38574	-0.84524	0.72814	34.78894	321.79	-3.09
82/ 5/31	2445120.5	0.61725	-0.38380	-0.04099	18.27868	29.60103	-0.63188	0.72800	34.79555	328.13	-3.23
82/ 6/ 4	2445124.5	0.65561	-0.31320	-0.04220	14.89329	31.45481	-0.41062	0.72780	34.80494	334.46	-3.32
82/ 6/ 8	2445128.5	0.68592	-0.23876	-0.04288	11.32198	32.92419	-0.18413	0.72755	34.81700	340.81	-3.38
82/ 6/12	2445132.5	0.70781	-0.16139	-0.04305	7.60747	33.99064	0.04489	0.72725	34.83158	347.16	-3.39
82/ 6/16	2445136.5	0.72099	-0.08204	-0.04268	3.79434	34.64026	0.27367	0.72690	34.84852	353.51	-3.37
82/ 6/20	2445140.5	0.72530	-0.00167	-0.04178	-0.07143	34.86395	0.49942	0.72650	34.86760	359.87	-3.30
82/ 6/24	2445144.5	0.72066	0.07872	-0.04037	-3.94294	34.65761	0.71940	0.72607	34.88860	6.23	-3.19
82/ 6/28	2445148.5	0.70711	0.15813	-0.03847	-7.77293	34.02222	0.93089	0.72560	34.91127	12.61	-3.04
82/ 7/ 2	2445152.5	0.68481	0.23558	-0.03608	-11.51424	32.96391	1.13126	0.72510	34.93532	18.98	-2.85
82/ 7/ 6	2445156.5	0.65402	0.31012	-0.03325	-15.12043	31.49397	1.31801	0.72458	34.96048	25.37	-2.63
82/ 7/10	2445160.5	0.61509	0.38079	-0.03000	-18.54631	29.62882	1.48876	0.72405	34.98641	31.76	-2.38
82/ 7/14	2445164.5	0.56850	0.44672	-0.02639	-21.74852	27.38988	1.64133	0.72350	35.01282	38.16	-2.09
82/ 7/18	2445168.5	0.51481	0.50708	-0.02244	-24.68606	24.80341	1.77371	0.72295	35.03936	44.57	-1.78
82/ 7/22	2445172.5	0.45468	0.56108	-0.01821	-27.32091	21.90026	1.88417	0.72241	35.06571	50.98	-1.44
82/ 7/26	2445176.5	0.38884	0.60805	-0.01375	-29.61852	18.71558	1.97121	0.72188	35.09153	57.40	-1.09
82/ 7/30	2445180.5	0.31811	0.64737	-0.00912	-31.54834	15.28840	2.03364	0.72136	35.11650	63.83	-0.72
82/ 8/ 3	2445184.5	0.24338	0.67853	-0.00437	-33.08427	11.66124	2.07054	0.72087	35.14030	70.27	-0.35
82/ 8/ 7	2445188.5	0.16557	0.70113	0.00043	-34.20513	7.87953	2.08135	0.72041	35.16262	76.71	0.03
82/ 8/11	2445192.5	0.08567	0.71485	0.00522	-34.89498	3.99111	2.06582	0.71999	35.18318	83.17	0.42
82/ 8/15	2445196.5	0.00468	0.71952	0.00995	-35.14344	0.04557	2.02407	0.71961	35.20171	89.63	0.79
82/ 8/19	2445200.5	-0.07636	0.71506	0.01456	-34.94591	-3.90644	1.95655	0.71927	35.21796	96.10	1.16
82/ 8/23	2445204.5	-0.15644	0.70151	0.01897	-34.30371	-7.81385	1.86407	0.71899	35.23174	102.57	1.51
82/ 8/27	2445208.5	-0.23452	0.67903	0.02315	-33.22411	-11.62595	1.74775	0.71876	35.24285	109.05	1.85
82/ 8/31	2445212.5	-0.30962	0.64790	0.02703	-31.72028	-15.29309	1.60906	0.71859	35.25115	115.54	2.16
82/ 9/ 4	2445216.5	-0.38077	0.60852	0.03057	-29.81117	-18.76741	1.44979	0.71848	35.25654	122.04	2.44
82/ 9/ 8	2445220.5	-0.44706	0.56138	0.03372	-27.52124	-22.00354	1.27196	0.71843	35.25893	128.53	2.69
82/ 9/12	2445224.5	-0.50765	0.50707	0.03643	-24.88012	-24.95928	1.07791	0.71844	35.25830	135.03	2.91
82/ 9/16	2445228.5	-0.56177	0.44630	0.03869	-21.92221	-27.59621	0.87014	0.71852	35.25467	141.53	3.09
82/ 9/20	2445232.5	-0.60873	0.37984	0.04044	-18.68618	-29.88023	0.65137	0.71865	35.24806	148.04	3.23
82/ 9/24	2445236.5	-0.64793	0.30854	0.04169	-15.21436	-31.78209	0.42446	0.71885	35.23859	154.54	3.32
82/ 9/28	2445240.5	-0.67888	0.23331	0.04240	-11.55216	-33.27773	0.19235	0.71910	35.22636	161.03	3.38
82/10/ 2	2445244.5	-0.70119	0.15511	0.04258	-7.74735	-34.34864	-0.04193	0.71941	35.21154	167.53	3.39
82/10/ 6	2445248.5	-0.71460	0.07494	0.04221	-3.84942	-34.98209	-0.27536	0.71976	35.19432	174.01	3.36

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82/10/10	2445252.5	-0.71895	-0.00618	0.04131	0.09118	-35.17119	-0.50493	0.72016	35.17494	180.49	3.29
82/10/14	2445256.5	-0.71419	-0.08722	0.03988	4.02377	-34.91500	-0.72771	0.72060	35.15363	186.96	3.17
82/10/18	2445260.5	-0.70040	-0.16716	0.03795	7.89810	-34.21840	-0.94089	0.72107	35.13067	193.42	3.02
82/10/22	2445264.5	-0.67778	-0.24499	0.03554	11.66507	-33.09198	-1.14177	0.72157	35.10636	199.87	2.82
82/10/26	2445268.5	-0.64662	-0.31974	0.03269	15.27734	-31.55182	-1.32787	0.72209	35.08101	206.31	2.59
82/10/30	2445272.5	-0.60734	-0.39047	0.02942	18.68997	-29.61914	-1.49690	0.72263	35.05494	212.74	2.33
82/11/ 3	2445276.5	-0.56045	-0.45630	0.02579	21.86094	-27.31998	-1.64681	0.72318	35.02847	219.15	2.04
82/11/ 7	2445280.5	-0.50655	-0.51644	0.02183	24.75167	-24.68477	-1.77581	0.72373	35.00195	225.55	1.73
82/11/11	2445284.5	-0.44634	-0.57012	0.01760	27.32738	-21.74786	-1.88238	0.72427	34.97569	231.94	1.39
82/11/15	2445288.5	-0.38056	-0.61671	0.01315	29.55756	-18.54702	-1.96531	0.72480	34.95002	238.32	1.04
82/11/19	2445292.5	-0.31006	-0.65565	0.00854	31.41617	-15.12294	-2.02368	0.72531	34.92527	244.69	0.67
82/11/23	2445296.5	-0.23571	-0.68645	0.00382	32.88192	-11.51866	-2.05687	0.72580	34.90173	251.05	0.30
82/11/27	2445300.5	-0.15844	-0.70876	-0.00095	33.93843	-7.77903	-2.06457	0.72626	34.87969	257.40	-0.07
82/12/ 1	2445304.5	-0.07922	-0.72232	-0.00570	34.57436	-3.95019	-2.04679	0.72668	34.85943	263.74	-0.45
82/12/ 5	2445308.5	0.00097	-0.72698	-0.01038	34.78342	-0.07900	-2.00382	0.72705	34.84118	270.08	-0.82
82/12/ 9	2445312.5	0.08116	-0.72269	-0.01494	34.56439	3.78749	-1.93628	0.72739	34.82516	276.41	-1.18
82/12/13	2445316.5	0.16035	-0.70952	-0.01931	33.92111	7.60258	-1.84504	0.72767	34.81157	282.73	-1.52
82/12/17	2445320.5	0.23756	-0.68764	-0.02345	32.86230	11.32038	-1.73126	0.72790	34.80056	289.06	-1.85
82/12/21	2445324.5	0.31187	-0.65733	-0.02730	31.40149	14.89633	-1.59635	0.72807	34.79228	295.38	-2.15
82/12/25	2445328.5	0.38235	-0.61896	-0.03081	29.55679	18.28767	-1.44196	0.72818	34.78681	301.71	-2.42
82/12/29	2445332.5	0.44816	-0.57300	-0.03394	27.35071	21.45386	-1.26996	0.72824	34.78423	308.03	-2.67
83/ 1/ 2	2445336.5	0.50847	-0.52003	-0.03666	24.80988	24.35700	-1.08242	0.72823	34.78456	314.36	-2.89
83/ 1/ 6	2445340.5	0.56255	-0.46069	-0.03893	21.96477	26.96224	-0.88159	0.72816	34.78780	320.68	-3.07
83/ 1/10	2445344.5	0.60974	-0.39571	-0.04073	18.84937	29.23813	-0.66989	0.72803	34.79391	327.02	-3.21
83/ 1/14	2445348.5	0.64946	-0.32588	-0.04202	15.50085	31.15698	-0.44983	0.72785	34.80282	333.35	-3.31
83/ 1/18	2445352.5	0.68121	-0.25205	-0.04280	11.95915	32.69515	-0.22406	0.72761	34.81442	339.70	-3.37
83/ 1/22	2445356.5	0.70460	-0.17512	-0.04306	8.26662	33.83332	0.00472	0.72731	34.82859	346.04	-3.39
83/ 1/26	2445360.5	0.71933	-0.09605	-0.04278	4.46754	34.55676	0.23373	0.72697	34.84514	352.39	-3.37
83/ 1/30	2445364.5	0.72520	-0.01579	-0.04198	0.60769	34.85554	0.46021	0.72658	34.86388	358.75	-3.31
83/ 2/ 3	2445368.5	0.72212	0.06467	-0.04066	-3.26619	34.72466	0.68140	0.72615	34.88458	5.12	-3.21
83/ 2/ 7	2445372.5	0.71013	0.14432	-0.03884	-7.10683	34.16419	0.89456	0.72569	34.90700	11.49	-3.07
83/ 2/11	2445376.5	0.68935	0.22219	-0.03653	-10.86703	33.17935	1.09707	0.72519	34.93086	17.87	-2.89
83/ 2/15	2445380.5	0.66002	0.29730	-0.03378	-14.50020	31.78054	1.28638	0.72468	34.95588	24.25	-2.67
83/ 2/19	2445384.5	0.62249	0.36872	-0.03060	-17.96086	29.98328	1.46010	0.72414	34.98174	30.64	-2.42
83/ 2/23	2445388.5	0.57720	0.43555	-0.02705	-21.20531	27.80813	1.61600	0.72360	35.00812	37.04	-2.14
83/ 2/27	2445392.5	0.52471	0.49693	-0.02315	-24.19209	25.28049	1.75206	0.72305	35.03470	43.44	-1.83
83/ 3/ 3	2445396.5	0.46565	0.55210	-0.01897	-26.88262	22.43044	1.86648	0.72250	35.06114	49.86	-1.50
83/ 3/ 7	2445400.5	0.40076	0.60035	-0.01454	-29.24170	19.29239	1.95772	0.72197	35.08712	56.28	-1.15
83/ 3/11	2445404.5	0.33083	0.64105	-0.00994	-31.23803	15.90473	2.02454	0.72145	35.11230	62.70	-0.79
83/ 3/15	2445408.5	0.25673	0.67367	-0.00521	-32.84471	12.30939	2.06596	0.72095	35.13636	69.14	-0.41
83/ 3/19	2445412.5	0.17939	0.69780	-0.00041	-34.03965	8.55135	2.08137	0.72049	35.15900	75.58	-0.03
83/ 3/23	2445416.5	0.09978	0.71309	0.00439	-34.80598	4.67805	2.07047	0.72005	35.17992	82.03	0.35
83/ 3/27	2445420.5	0.01891	0.71936	0.00913	-35.13231	0.73882	2.03329	0.71967	35.19885	88.49	0.73
83/ 3/31	2445424.5	-0.06220	0.71650	0.01376	-35.01302	-3.21580	1.97024	0.71932	35.21555	94.96	1.10
83/ 4/ 4	2445428.5	-0.14252	0.70453	0.01822	-34.44839	-7.13477	1.88205	0.71903	35.22980	101.44	1.45

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
83/ 4/ 8	2445432.5	-0.22102	0.68360	0.02244	-33.44463	-10.96728	1.76981	0.71879	35.24140	107.92	1.79
83/ 4/12	2445436.5	-0.29671	0.65396	0.02637	-32.01389	-14.66341	1.63492	0.71861	35.25022	114.40	2.10
83/ 4/16	2445440.5	-0.36862	0.61599	0.02998	-30.17413	-18.17494	1.47910	0.71849	35.25612	120.90	2.39
83/ 4/20	2445444.5	-0.43583	0.57016	0.03319	-27.94885	-21.45602	1.30436	0.71843	35.25905	127.39	2.65
83/ 4/24	2445448.5	-0.49748	0.51707	0.03599	-25.36683	-24.46383	1.11297	0.71843	35.25895	133.89	2.87
83/ 4/28	2445452.5	-0.55279	0.45737	0.03833	-22.46165	-27.15924	0.90740	0.71849	35.25583	140.40	3.06
83/ 5/ 2	2445456.5	-0.60104	0.39185	0.04017	-19.27128	-29.50737	0.69035	0.71862	35.24974	146.90	3.20
83/ 5/ 6	2445460.5	-0.64164	0.32133	0.04151	-15.83746	-31.47808	0.46465	0.71880	35.24075	153.40	3.31
83/ 5/10	2445464.5	-0.67407	0.24672	0.04232	-12.20509	-33.04637	0.23323	0.71904	35.22898	159.90	3.37
83/ 5/14	2445468.5	-0.69792	0.16897	0.04258	-8.42162	-34.19274	-0.00090	0.71934	35.21459	166.39	3.39
83/ 5/18	2445472.5	-0.71290	0.08907	0.04231	-4.53626	-34.90344	-0.23470	0.71969	35.19777	172.88	3.37
83/ 5/22	2445476.5	-0.71884	0.00804	0.04150	-0.59936	-35.17056	-0.46517	0.72008	35.17874	179.36	3.30
83/ 5/26	2445480.5	-0.71567	-0.07309	0.04017	3.33840	-34.99210	-0.68936	0.72051	35.15774	185.83	3.20
83/ 5/30	2445484.5	-0.70345	-0.15329	0.03832	7.22662	-34.37194	-0.90442	0.72098	35.13505	192.29	3.05
83/ 6/ 3	2445488.5	-0.68235	-0.23156	0.03600	11.01595	-33.31969	-1.10764	0.72147	35.11096	198.75	2.86
83/ 6/ 7	2445492.5	-0.65266	-0.30692	0.03322	14.65870	-31.85048	-1.29651	0.72199	35.08578	205.19	2.64
83/ 6/11	2445496.5	-0.61477	-0.37842	0.03002	18.10948	-29.98467	-1.46868	0.72253	35.05982	211.61	2.38
83/ 6/15	2445500.5	-0.56917	-0.44517	0.02645	21.32571	-27.74749	-1.62208	0.72307	35.03341	218.03	2.10
83/ 6/19	2445504.5	-0.51645	-0.50636	0.02254	24.26815	-25.16862	-1.75485	0.72362	35.00689	224.43	1.79
83/ 6/23	2445508.5	-0.45728	-0.56122	0.01836	26.90137	-22.28177	-1.86545	0.72417	34.98058	230.83	1.45
83/ 6/27	2445512.5	-0.39242	-0.60910	0.01394	29.19405	-19.12416	-1.95259	0.72470	34.95481	237.21	1.10
83/ 7/ 1	2445516.5	-0.32268	-0.64941	0.00935	31.11935	-15.73600	-2.01531	0.72522	34.92989	243.58	0.74
83/ 7/ 5	2445520.5	-0.24894	-0.68166	0.00465	32.65516	-12.15996	-2.05293	0.72571	34.90614	249.94	0.37
83/ 7/ 9	2445524.5	-0.17211	-0.70548	-0.00011	33.78421	-8.44062	-2.06509	0.72617	34.88383	256.29	-0.01
83/ 7/13	2445528.5	-0.09317	-0.72058	-0.00487	34.49428	-4.62395	-2.05175	0.72660	34.86325	262.63	-0.38
83/ 7/17	2445532.5	-0.01307	-0.72680	-0.00957	34.77819	-0.75671	-2.01315	0.72698	34.84463	268.97	-0.75
83/ 7/21	2445536.5	0.06719	-0.72408	-0.01416	34.63386	3.11405	-1.94984	0.72733	34.82820	275.30	-1.12
83/ 7/25	2445540.5	0.14663	-0.71245	-0.01856	34.06423	6.94149	-1.86267	0.72762	34.81415	281.63	-1.46
83/ 7/29	2445544.5	0.22426	-0.69207	-0.02274	33.07718	10.67957	-1.75272	0.72786	34.80266	287.95	-1.79
83/ 8/ 2	2445548.5	0.29914	-0.66321	-0.02665	31.68543	14.28346	-1.62139	0.72804	34.79386	294.28	-2.10
83/ 8/ 6	2445552.5	0.37036	-0.62622	-0.03022	29.90632	17.71003	-1.47026	0.72817	34.78785	300.60	-2.38
83/ 8/10	2445556.5	0.43704	-0.58155	-0.03343	27.76159	20.91833	-1.30119	0.72823	34.78470	306.93	-2.63
83/ 8/14	2445560.5	0.49837	-0.52976	-0.03622	25.27719	23.86998	-1.11620	0.72824	34.78445	313.25	-2.85
83/ 8/18	2445564.5	0.55359	-0.47149	-0.03857	22.48294	26.52956	-0.91752	0.72818	34.78709	319.58	-3.04
83/ 8/22	2445568.5	0.60203	-0.40744	-0.04045	19.41225	28.86500	-0.70753	0.72807	34.79259	325.91	-3.18
83/ 8/26	2445572.5	0.64310	-0.33839	-0.04183	16.10177	30.84795	-0.48874	0.72790	34.80089	332.25	-3.29
83/ 8/30	2445576.5	0.67627	-0.26520	-0.04270	12.59098	32.45404	-0.26377	0.72767	34.81189	338.59	-3.36
83/ 9/ 3	2445580.5	0.70115	-0.18875	-0.04305	8.92185	33.66320	-0.03533	0.72739	34.82545	344.93	-3.39
83/ 9/ 7	2445584.5	0.71741	-0.10998	-0.04287	5.13834	34.45990	0.19384	0.72705	34.84142	351.28	-3.38
83/ 9/11	2445588.5	0.72484	-0.02986	-0.04216	1.28600	34.83334	0.42095	0.72667	34.85961	357.64	-3.33
83/ 9/15	2445592.5	0.72333	0.05063	-0.04093	-2.58856	34.77768	0.64324	0.72626	34.87982	4.00	-3.23
83/ 9/19	2445596.5	0.71290	0.13049	-0.03919	-6.43813	34.29212	0.85798	0.72580	34.90179	10.37	-3.10
83/ 9/23	2445600.5	0.69364	0.20874	-0.03697	-10.21548	33.38097	1.06252	0.72531	34.92527	16.75	-2.92
83/ 9/27	2445604.5	0.66579	0.28441	-0.03429	-13.87388	32.05374	1.25429	0.72480	34.94996	23.13	-2.71
83/10/ 1	2445608.5	0.62967	0.35653	-0.03119	-17.36764	30.32505	1.43088	0.72427	34.97558	29.52	-2.47

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
83/10/ 5	2445612.5	0.58570	0.42422	-0.02769	-20.65271	28.21459	1.59003	0.72373	35.00180	35.92	-2.19
83/10/ 9	2445616.5	0.53444	0.48662	-0.02385	-23.68723	25.74694	1.72967	0.72318	35.02830	42.32	-1.89
83/10/13	2445620.5	0.47648	0.54293	-0.01972	-26.43209	22.95135	1.84798	0.72263	35.05474	48.73	-1.56
83/10/17	2445624.5	0.41256	0.59244	-0.01533	-28.85147	19.86150	1.94337	0.72210	35.08081	55.15	-1.22
83/10/21	2445628.5	0.34346	0.63450	-0.01076	-30.91337	16.51507	2.01452	0.72157	35.10616	61.57	-0.85
83/10/25	2445632.5	0.27003	0.66858	-0.00605	-32.59009	12.95341	2.06044	0.72107	35.13047	68.01	-0.48
83/10/29	2445636.5	0.19319	0.69422	-0.00126	-33.85867	9.22096	2.08044	0.72060	35.15343	74.45	-0.10
83/11/ 2	2445640.5	0.11392	0.71109	0.00355	-34.70130	5.36477	2.07415	0.72016	35.17475	80.90	0.28
83/11/ 6	2445644.5	0.03320	0.71895	0.00831	-35.10561	1.43386	2.04157	0.71976	35.19415	87.36	0.66
83/11/10	2445648.5	-0.04794	0.71769	0.01296	-35.06495	-2.52141	1.98302	0.71941	35.21137	93.82	1.03
83/11/14	2445652.5	-0.12847	0.70732	0.01745	-34.57853	-6.45007	1.89918	0.71910	35.22620	100.29	1.39
83/11/18	2445656.5	-0.20737	0.68795	0.02172	-33.65152	-10.30120	1.79108	0.71885	35.23844	106.77	1.73
83/11/22	2445660.5	-0.28362	0.65982	0.02571	-32.29501	-14.02471	1.66006	0.71866	35.24792	113.26	2.05
83/11/26	2445664.5	-0.35626	0.62329	0.02937	-30.52592	-17.57203	1.50779	0.71852	35.25452	119.75	2.34
83/11/30	2445668.5	-0.42436	0.57880	0.03266	-28.36680	-20.89683	1.33623	0.71845	35.25816	126.25	2.61
83/12/ 4	2445672.5	-0.48705	0.52694	0.03553	-25.84548	-23.95572	1.14760	0.71843	35.25879	132.75	2.83
83/12/ 8	2445676.5	-0.54352	0.46836	0.03795	-22.99474	-26.70887	0.94434	0.71848	35.25640	139.25	3.03
83/12/12	2445680.5	-0.59307	0.40380	0.03988	-19.85179	-29.12060	0.72911	0.71859	35.25102	145.75	3.18
83/12/16	2445684.5	-0.63505	0.33410	0.04131	-16.45773	-31.15989	0.50472	0.71876	35.24273	152.25	3.29
83/12/20	2445688.5	-0.66895	0.26014	0.04221	-12.85696	-32.80079	0.27409	0.71899	35.23164	158.75	3.37
83/12/24	2445692.5	-0.69433	0.18287	0.04257	-9.09650	-34.02281	0.04022	0.71927	35.21788	165.25	3.39
83/12/28	2445696.5	-0.71089	0.10327	0.04240	-5.22533	-34.81113	-0.19387	0.71960	35.20166	171.73	3.38
84/ 1/ 1	2445700.5	-0.71843	0.02237	0.04168	-1.29363	-35.15681	-0.42515	0.71999	35.18317	178.22	3.32
84/ 1/ 5	2445704.5	-0.71686	-0.05882	0.04044	2.64789	-35.05678	-0.65066	0.72041	35.16265	184.69	3.22
84/ 1/ 9	2445708.5	-0.70623	-0.13926	0.03868	6.54873	-34.51389	-0.86753	0.72087	35.14039	191.16	3.08
84/ 1/13	2445712.5	-0.68667	-0.21795	0.03644	10.35930	-33.53673	-1.07303	0.72135	35.11665	197.61	2.90
84/ 1/17	2445716.5	-0.65847	-0.29389	0.03373	14.03156	-32.13949	-1.26461	0.72187	35.09175	204.05	2.68
84/ 1/21	2445720.5	-0.62199	-0.36614	0.03061	17.51963	-30.34162	-1.43988	0.72240	35.06600	210.48	2.43
84/ 1/25	2445724.5	-0.57770	-0.43379	0.02710	20.78038	-28.16752	-1.59672	0.72294	35.03973	216.90	2.15
84/ 1/29	2445728.5	-0.52618	-0.49602	0.02325	23.77396	-25.64613	-1.73324	0.72349	35.01327	223.31	1.84
84/ 2/ 2	2445732.5	-0.46809	-0.55204	0.01910	26.46420	-22.81049	-1.84783	0.72403	34.98695	229.70	1.51
84/ 2/ 6	2445736.5	-0.40416	-0.60119	0.01473	28.81902	-19.69725	-1.93916	0.72457	34.96109	236.09	1.16
84/ 2/10	2445740.5	-0.33521	-0.64287	0.01016	30.81077	-16.34616	-2.00621	0.72509	34.93601	242.46	0.80
84/ 2/14	2445744.5	-0.26210	-0.67657	0.00548	32.41646	-12.79950	-2.04826	0.72558	34.91202	248.82	0.43
84/ 2/18	2445748.5	-0.18575	-0.70189	0.00072	33.61798	-9.10159	-2.06488	0.72605	34.88941	255.18	0.06
84/ 2/22	2445752.5	-0.10710	-0.71854	-0.00405	34.40219	-5.29820	-2.05598	0.72649	34.86845	261.52	-0.32
84/ 2/26	2445756.5	-0.02713	-0.72632	-0.00876	34.76104	-1.43601	-2.02175	0.72688	34.84938	267.86	-0.69
84/ 3/ 1	2445760.5	0.05318	-0.72517	-0.01337	34.69156	2.43789	-1.96270	0.72724	34.83245	274.19	-1.05
84/ 3/ 5	2445764.5	0.13283	-0.71509	-0.01781	34.19582	6.27662	-1.87960	0.72754	34.81785	280.52	-1.40
84/ 3/ 9	2445768.5	0.21085	-0.69623	-0.02203	33.28087	10.03392	-1.77353	0.72779	34.80576	286.85	-1.73
84/ 3/13	2445772.5	0.28629	-0.66883	-0.02599	31.95858	13.66470	-1.64580	0.72799	34.79632	293.17	-2.05
84/ 3/17	2445776.5	0.35821	-0.63322	-0.02962	30.24553	17.12551	-1.49799	0.72812	34.78964	299.50	-2.33
84/ 3/21	2445780.5	0.42575	-0.58986	-0.03289	28.16272	20.37497	-1.33189	0.72820	34.78580	305.82	-2.59
84/ 3/25	2445784.5	0.48807	-0.53928	-0.03576	25.73539	23.37422	-1.14952	0.72822	34.78485	312.15	-2.82
84/ 3/29	2445788.5	0.54441	-0.48209	-0.03820	22.99274	26.08730	-0.95305	0.72818	34.78681	318.47	-3.01

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
84/ 4/ 2	2445792.5	0.59409	-0.41899	-0.04016	19.96759	28.48156	-0.74486	0.72808	34.79164	324.81	-3.16
84/ 4/ 6	2445796.5	0.63648	-0.35076	-0.04163	16.69603	30.52796	-0.52742	0.72792	34.79931	331.14	-3.28
84/ 4/10	2445800.5	0.67107	-0.27823	-0.04259	13.21712	32.20142	-0.30334	0.72771	34.80970	337.48	-3.36
84/ 4/14	2445804.5	0.69742	-0.20228	-0.04303	9.57240	33.48112	-0.07531	0.72744	34.82272	343.83	-3.39
84/ 4/18	2445808.5	0.71520	-0.12385	-0.04294	5.80554	34.35071	0.15392	0.72711	34.83819	350.18	-3.39
84/ 4/22	2445812.5	0.72418	-0.04389	-0.04232	1.96184	34.79859	0.38159	0.72675	34.85594	356.53	-3.34
84/ 4/26	2445816.5	0.72424	0.03660	-0.04118	-1.91223	34.81803	0.60491	0.72633	34.87575	2.89	-3.25
84/ 4/30	2445820.5	0.71536	0.11665	-0.03953	-5.76956	34.40735	0.82115	0.72589	34.89739	9.26	-3.12
84/ 5/ 4	2445824.5	0.69763	0.19525	-0.03739	-9.56287	33.56997	1.02765	0.72541	34.92059	15.64	-2.95
84/ 5/ 8	2445828.5	0.67126	0.27143	-0.03479	-13.24531	32.31450	1.22182	0.72490	34.94507	22.02	-2.75
84/ 5/12	2445832.5	0.63656	0.34424	-0.03176	-16.77098	30.65467	1.40122	0.72437	34.97054	28.40	-2.51
84/ 5/16	2445836.5	0.59393	0.41277	-0.02833	-20.09552	28.60930	1.56356	0.72383	34.99667	34.80	-2.24
84/ 5/20	2445840.5	0.54390	0.47615	-0.02455	-23.17664	26.20212	1.70675	0.72329	35.02314	41.20	-1.94
84/ 5/24	2445844.5	0.48706	0.53357	-0.02046	-25.97471	23.46159	1.82890	0.72274	35.04963	47.61	-1.62
84/ 5/28	2445848.5	0.42413	0.58432	-0.01611	-28.45332	20.42062	1.92838	0.72220	35.07580	54.03	-1.28
84/ 6/ 1	2445852.5	0.35587	0.62772	-0.01157	-30.57975	17.11624	2.00385	0.72167	35.10132	60.45	-0.92
84/ 6/ 5	2445856.5	0.28313	0.66323	-0.00688	-32.32554	13.58917	2.05424	0.72117	35.12586	66.88	-0.55
84/ 6/ 9	2445860.5	0.20683	0.69037	-0.00210	-33.66686	9.88336	2.07880	0.72069	35.14910	73.32	-0.17
84/ 6/13	2445864.5	0.12791	0.70879	0.00271	-34.58498	6.04543	2.07711	0.72025	35.17076	79.77	0.22
84/ 6/17	2445868.5	0.04737	0.71824	0.00748	-35.06656	2.12409	2.04911	0.71984	35.19054	86.23	0.60
84/ 6/21	2445872.5	-0.03377	0.71858	0.01216	-35.10393	-1.83048	1.99506	0.71948	35.20820	92.69	0.97
84/ 6/25	2445876.5	-0.11448	0.70980	0.01668	-34.69528	-5.76737	1.91559	0.71916	35.22349	99.16	1.33
84/ 6/29	2445880.5	-0.19373	0.69199	0.02099	-33.84471	-9.63561	1.81164	0.71890	35.23622	105.64	1.67
84/ 7/ 3	2445884.5	-0.27052	0.66537	0.02503	-32.56229	-13.38490	1.68452	0.71869	35.24622	112.13	2.00
84/ 7/ 7	2445888.5	-0.34386	0.63027	0.02875	-30.86395	-16.96636	1.53585	0.71855	35.25336	118.62	2.29
84/ 7/11	2445892.5	-0.41282	0.58714	0.03211	-28.77124	-20.33322	1.36751	0.71846	35.25754	125.11	2.56
84/ 7/15	2445896.5	-0.47651	0.53652	0.03506	-26.31112	-23.44154	1.18170	0.71844	35.25872	131.61	2.80
84/ 7/19	2445900.5	-0.53413	0.47906	0.03756	-23.51551	-26.25082	0.98082	0.71848	35.25687	138.11	3.00
84/ 7/23	2445904.5	-0.58493	0.41549	0.03958	-20.42088	-28.72461	0.76749	0.71857	35.25202	144.61	3.16
84/ 7/27	2445908.5	-0.62828	0.34663	0.04110	-17.06771	-30.83104	0.54450	0.71873	35.24424	151.11	3.28
84/ 7/31	2445912.5	-0.66363	0.27335	0.04209	-13.49985	-32.54325	0.31475	0.71895	35.23362	157.61	3.36
84/ 8/ 4	2445916.5	-0.69053	0.19659	0.04255	-9.76392	-33.83978	0.08123	0.71922	35.22032	164.11	3.39
84/ 8/ 8	2445920.5	-0.70865	0.11733	0.04247	-5.90859	-34.70479	-0.15303	0.71955	35.20451	170.60	3.38
84/ 8/12	2445924.5	-0.71777	0.03658	0.04184	-1.98390	-35.12831	-0.38501	0.71992	35.18639	177.08	3.33
84/ 8/16	2445928.5	-0.71780	-0.04463	0.04069	1.95949	-35.10624	-0.61173	0.72034	35.16620	183.56	3.24
84/ 8/20	2445932.5	-0.70874	-0.12528	0.03902	5.87100	-34.64041	-0.83031	0.72079	35.14421	190.02	3.10
84/ 8/24	2445936.5	-0.69074	-0.20435	0.03686	9.70084	-33.73841	-1.03799	0.72127	35.12071	196.48	2.93
84/ 8/28	2445940.5	-0.66402	-0.28084	0.03424	13.40063	-32.41346	-1.23217	0.72178	35.09598	202.93	2.72
84/ 9/ 1	2445944.5	-0.62896	-0.35380	0.03118	16.92409	-30.68412	-1.41046	0.72231	35.07035	209.36	2.47
84/ 9/ 5	2445948.5	-0.58600	-0.42232	0.02774	20.22758	-28.57395	-1.57066	0.72285	35.04415	215.78	2.20
84/ 9/ 9	2445952.5	-0.53570	-0.48555	0.02394	23.27063	-26.11112	-1.71086	0.72340	35.01771	222.19	1.90
84/ 9/13	2445956.5	-0.47871	-0.54271	0.01985	26.01639	-23.32799	-1.82939	0.72394	34.99134	228.59	1.57
84/ 9/17	2445960.5	-0.41575	-0.59311	0.01551	28.43206	-20.26060	-1.92488	0.72448	34.96540	234.97	1.23
84/ 9/21	2445964.5	-0.34762	-0.63613	0.01097	30.48917	-16.94820	-1.99624	0.72500	34.94018	241.35	0.87
84/ 9/25	2445968.5	-0.27517	-0.67126	0.00630	32.16393	-13.43266	-2.04270	0.72550	34.91600	247.71	0.50

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84/ 9/29	2445972.5	-0.19932	-0.69808	0.00155	33.43733	-9.75799	-2.06379	0.72598	34.89316	254.06	0.12
84/10/ 3	2445976.5	-0.12100	-0.71626	-0.00321	34.29537	-5.96973	-2.05936	0.72642	34.87192	260.41	-0.25
84/10/ 7	2445980.5	-0.04119	-0.72561	-0.00794	34.72910	-2.11445	-2.02954	0.72682	34.85255	266.75	-0.63
84/10/11	2445984.5	0.03913	-0.72601	-0.01257	34.73465	1.76081	-1.97478	0.72718	34.83527	273.09	-0.99
84/10/15	2445988.5	0.11897	-0.71749	-0.01705	34.31322	5.60907	-1.89583	0.72749	34.82029	279.41	-1.34
84/10/19	2445992.5	0.19735	-0.70015	-0.02131	33.47098	9.38395	-1.79369	0.72775	34.80779	285.74	-1.68
84/10/23	2445996.5	0.27330	-0.67423	-0.02532	32.21898	13.04010	-1.66965	0.72795	34.79791	292.07	-1.99
84/10/27	2446000.5	0.34591	-0.64003	-0.02901	30.57297	16.53376	-1.52523	0.72810	34.79077	298.39	-2.28
84/10/31	2446004.5	0.41427	-0.59799	-0.03235	28.55320	19.82315	-1.36220	0.72819	34.78646	304.71	-2.55
84/11/ 4	2446008.5	0.47756	-0.54863	-0.03529	26.18419	22.86893	-1.18252	0.72822	34.78503	311.04	-2.78
84/11/ 8	2446012.5	0.53500	-0.49254	-0.03780	23.49446	25.63462	-0.98835	0.72819	34.78649	317.37	-2.98
84/11/12	2446016.5	0.58589	-0.43043	-0.03985	20.51621	28.08694	-0.78203	0.72810	34.79084	323.70	-3.14
84/11/16	2446020.5	0.62960	-0.36304	-0.04141	17.28501	30.19619	-0.56602	0.72795	34.79801	330.03	-3.26
84/11/20	2446024.5	0.66559	-0.29120	-0.04246	13.83941	31.93659	-0.34291	0.72774	34.80794	336.37	-3.34
84/11/24	2446028.5	0.69341	-0.21578	-0.04299	10.22056	33.28654	-0.11538	0.72748	34.82050	342.71	-3.39
84/11/28	2446032.5	0.71271	-0.13771	-0.04299	6.47179	34.22890	0.11385	0.72717	34.83554	349.06	-3.39
84/12/ 2	2446036.5	0.72325	-0.05795	-0.04246	2.63814	34.75122	0.34199	0.72681	34.85289	355.42	-3.35
84/12/ 6	2446040.5	0.72487	0.02252	-0.04141	-1.23408	34.84590	0.56627	0.72640	34.87234	1.78	-3.27
84/12/10	2446044.5	0.71755	0.10271	-0.03985	-5.09782	34.51037	0.78395	0.72596	34.89366	8.15	-3.15
84/12/14	2446048.5	0.70136	0.18164	-0.03780	-8.90580	33.74716	0.99234	0.72549	34.91660	14.52	-2.99
84/12/18	2446052.5	0.67648	0.25831	-0.03528	-12.61106	32.56397	1.18885	0.72498	34.94087	20.90	-2.79
84/12/22	2446056.5	0.64321	0.33178	-0.03232	-16.16748	30.97363	1.37101	0.72446	34.96617	27.29	-2.56
84/12/26	2446060.5	0.60193	0.40112	-0.02895	-19.53039	28.99409	1.53649	0.72392	34.99220	33.68	-2.29
84/12/30	2446064.5	0.55315	0.46546	-0.02523	-22.65710	26.64823	1.68317	0.72338	35.01864	40.08	-2.00
85/ 1/ 3	2446068.5	0.49746	0.52399	-0.02119	-25.50747	23.96370	1.80912	0.72283	35.04516	46.49	-1.68
85/ 1/ 7	2446072.5	0.43554	0.57595	-0.01689	-28.04448	20.97267	1.91268	0.72229	35.07141	52.90	-1.34
85/ 1/11	2446076.5	0.36815	0.62068	-0.01238	-30.23474	17.71146	1.99243	0.72176	35.09708	59.33	-0.98
85/ 1/15	2446080.5	0.29614	0.65760	-0.00770	-32.04900	14.22017	2.04727	0.72125	35.12183	65.76	-0.61
85/ 1/19	2446084.5	0.22039	0.68624	-0.00294	-33.46260	10.54224	2.07638	0.72076	35.14535	72.20	-0.23
85/ 1/23	2446088.5	0.14185	0.70621	0.00187	-34.45587	6.72387	2.07930	0.72031	35.16733	78.64	0.15
85/ 1/27	2446092.5	0.06152	0.71723	0.00665	-35.01453	2.81344	2.05589	0.71990	35.18749	85.10	0.53
85/ 1/31	2446096.5	-0.01959	0.71917	0.01135	-35.12988	-1.13907	2.00636	0.71953	35.20556	91.56	0.90
85/ 2/ 4	2446100.5	-0.10045	0.71198	0.01590	-34.79908	-5.08283	1.93127	0.71920	35.22131	98.03	1.27
85/ 2/ 8	2446104.5	-0.18003	0.69573	0.02025	-34.02520	-8.96681	1.83151	0.71893	35.23454	104.51	1.61
85/ 2/12	2446108.5	-0.25732	0.67063	0.02435	-32.81728	-12.74056	1.70833	0.71872	35.24505	110.99	1.94
85/ 2/16	2446112.5	-0.33133	0.63699	0.02813	-31.19021	-16.35488	1.56329	0.71856	35.25273	117.48	2.24
85/ 2/20	2446116.5	-0.40112	0.59523	0.03155	-29.16460	-19.76259	1.39824	0.71846	35.25746	123.98	2.52
85/ 2/24	2446120.5	-0.46580	0.54587	0.03458	-26.76647	-22.91919	1.21530	0.71843	35.25919	130.47	2.76
85/ 2/28	2446124.5	-0.52453	0.48956	0.03716	-24.02694	-25.78353	1.01687	0.71846	35.25788	136.98	2.96
85/ 3/ 4	2446128.5	-0.57658	0.42700	0.03926	-20.98170	-28.31842	0.80551	0.71855	35.25356	143.48	3.13
85/ 3/ 8	2446132.5	-0.62127	0.35900	0.04087	-17.67059	-30.49114	0.58400	0.71870	35.24628	149.98	3.26
85/ 3/12	2446136.5	-0.65805	0.28642	0.04196	-14.13692	-32.27394	0.35521	0.71890	35.23615	156.48	3.35
85/ 3/16	2446140.5	-0.68645	0.21020	0.04251	-10.42688	-33.64438	0.12213	0.71917	35.22328	162.98	3.39
85/ 3/20	2446144.5	-0.70613	0.13130	0.04252	-6.58884	-34.58565	-0.11223	0.71949	35.20785	169.47	3.39
85/ 3/24	2446148.5	-0.71683	0.05074	0.04199	-2.67266	-35.08672	-0.34483	0.71985	35.19005	175.95	3.34

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85/ 3/28	2446152.5	-0.71845	-0.03047	0.04093	1.27105	-35.14249	-0.57268	0.72026	35.17013	182.43	3.26
85/ 4/ 1	2446156.5	-0.71098	-0.11129	0.03935	5.19165	-34.75375	-0.79289	0.72071	35.14832	188.90	3.13
85/ 4/ 5	2446160.5	-0.69452	-0.19071	0.03727	9.03914	-33.92711	-1.00266	0.72119	35.12492	195.35	2.96
85/ 4/ 9	2446164.5	-0.66931	-0.26772	0.03473	12.76488	-32.67485	-1.19938	0.72170	35.10023	201.80	2.76
85/ 4/13	2446168.5	-0.63567	-0.34136	0.03174	16.32218	-31.01460	-1.38059	0.72223	35.07456	208.24	2.52
85/ 4/17	2446172.5	-0.59406	-0.41072	0.02836	19.66689	-28.96910	-1.54409	0.72277	35.04825	214.66	2.25
85/ 4/21	2446176.5	-0.54500	-0.47493	0.02463	22.75798	-26.56575	-1.68790	0.72332	35.02162	221.07	1.95
85/ 4/25	2446180.5	-0.48913	-0.53321	0.02058	25.55794	-23.83623	-1.81030	0.72387	34.99502	227.47	1.63
85/ 4/29	2446184.5	-0.42716	-0.58484	0.01628	28.03326	-20.81597	-1.90989	0.72441	34.96879	233.86	1.29
85/ 5/ 3	2446188.5	-0.35988	-0.62919	0.01177	30.15471	-17.54369	-1.98551	0.72494	34.94324	240.23	0.93
85/ 5/ 7	2446192.5	-0.28813	-0.66574	0.00712	31.89767	-14.06085	-2.03635	0.72545	34.91870	246.60	0.56
85/ 5/11	2446196.5	-0.21281	-0.69403	0.00239	33.24231	-10.41110	-2.06188	0.72593	34.89546	252.95	0.19
85/ 5/15	2446200.5	-0.13486	-0.71375	-0.00238	34.17375	-6.63975	-2.06189	0.72638	34.87381	259.30	-0.19
85/ 5/19	2446204.5	-0.05524	-0.72465	-0.00712	34.68216	-2.79321	-2.03648	0.72679	34.85400	265.64	-0.56
85/ 5/23	2446208.5	0.02506	-0.72663	-0.01177	34.76280	1.08154	-1.98604	0.72716	34.83628	271.97	-0.93
85/ 5/27	2446212.5	0.10505	-0.71967	-0.01628	34.41598	4.93751	-1.91126	0.72748	34.82085	278.30	-1.28
85/ 5/31	2446216.5	0.18375	-0.70387	-0.02059	33.64701	8.72816	-1.81309	0.72775	34.80789	284.63	-1.62
85/ 6/ 4	2446220.5	0.26019	-0.67943	-0.02464	32.46609	12.40797	-1.69279	0.72796	34.79756	290.95	-1.94
85/ 6/ 8	2446224.5	0.33344	-0.64666	-0.02839	30.88815	15.93289	-1.55183	0.72812	34.78998	297.28	-2.23
85/ 6/12	2446228.5	0.40261	-0.60596	-0.03179	28.93265	19.26076	-1.39194	0.72822	34.78524	303.60	-2.50
85/ 6/16	2446232.5	0.46685	-0.55785	-0.03481	26.62337	22.35182	-1.21504	0.72826	34.78339	309.93	-2.74
85/ 6/20	2446236.5	0.52537	-0.50290	-0.03740	23.98813	25.16904	-1.02327	0.72823	34.78445	316.25	-2.94
85/ 6/24	2446240.5	0.57746	-0.44180	-0.03953	21.05849	27.67858	-0.81892	0.72815	34.78842	322.58	-3.11
85/ 6/28	2446244.5	0.62247	-0.37528	-0.04117	17.86942	29.85008	-0.60445	0.72801	34.79524	328.91	-3.24
85/ 7/ 2	2446248.5	0.65985	-0.30416	-0.04231	14.45896	31.65705	-0.38241	0.72781	34.80484	335.25	-3.33
85/ 7/ 6	2446252.5	0.68914	-0.22931	-0.04294	10.86782	33.07713	-0.15546	0.72755	34.81710	341.60	-3.38
85/ 7/10	2446256.5	0.70996	-0.15164	-0.04303	7.13896	34.09238	0.07365	0.72725	34.83189	347.94	-3.39
85/ 7/14	2446260.5	0.72205	-0.07211	-0.04260	3.31715	34.68947	0.30218	0.72689	34.84902	354.30	-3.36
85/ 7/18	2446264.5	0.72525	0.00831	-0.04164	-0.55152	34.85994	0.52733	0.72649	34.86829	0.66	-3.29
85/ 7/22	2446268.5	0.71950	0.08862	-0.04016	-4.42008	34.60032	0.74637	0.72605	34.88949	7.02	-3.17
85/ 7/26	2446272.5	0.70486	0.16784	-0.03820	-8.24128	33.91221	0.95659	0.72558	34.91234	13.39	-3.02
85/ 7/30	2446276.5	0.68150	0.24498	-0.03575	-11.96804	32.80237	1.15537	0.72507	34.93658	19.77	-2.83
85/ 8/ 3	2446280.5	0.64967	0.31909	-0.03287	-15.55405	31.28274	1.34022	0.72455	34.96191	26.16	-2.60
85/ 8/ 7	2446284.5	0.60977	0.38922	-0.02957	-18.95435	29.37035	1.50880	0.72401	34.98801	32.55	-2.34
85/ 8/11	2446288.5	0.56227	0.45450	-0.02591	-22.12584	27.08720	1.65894	0.72346	35.01458	38.95	-2.05
85/ 8/15	2446292.5	0.50775	0.51411	-0.02192	-25.02788	24.46011	1.78867	0.72291	35.04128	45.36	-1.74
85/ 8/19	2446296.5	0.44687	0.56727	-0.01766	-27.62284	21.52048	1.89628	0.72236	35.06777	51.77	-1.40
85/ 8/23	2446300.5	0.38039	0.61332	-0.01318	-29.87664	18.30391	1.98031	0.72183	35.09371	58.19	-1.05
85/ 8/27	2446304.5	0.30912	0.65166	-0.00853	-31.75925	14.84989	2.03959	0.72131	35.11879	64.62	-0.68
85/ 8/31	2446308.5	0.23395	0.68179	-0.00378	-33.24515	11.20129	2.07327	0.72082	35.14267	71.06	-0.30
85/ 9/ 4	2446312.5	0.15584	0.70330	0.00103	-34.31375	7.40388	2.08081	0.72036	35.16505	77.51	0.08
85/ 9/ 8	2446316.5	0.07575	0.71592	0.00582	-34.94978	3.50573	2.06201	0.71994	35.18564	83.96	0.46
85/ 9/12	2446320.5	-0.00530	0.71946	0.01053	-35.14355	-0.44341	2.01702	0.71956	35.20417	90.42	0.84
85/ 9/16	2446324.5	-0.08629	0.71387	0.01512	-34.89114	-4.39280	1.94634	0.71922	35.22040	96.89	1.20
85/ 9/20	2446328.5	-0.16617	0.69920	0.01951	-34.19460	-8.29136	1.85081	0.71894	35.23411	103.37	1.55

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85/ 9/24	2446332.5	-0.24394	0.67564	0.02365	-33.06191	-12.08846	1.73162	0.71872	35.24513	109.85	1.89
85/ 9/28	2446336.5	-0.31860	0.64347	0.02749	-31.50695	-15.73463	1.59026	0.71855	35.25330	116.34	2.19
85/10/ 2	2446340.5	-0.38920	0.60309	0.03098	-29.54935	-19.18224	1.42854	0.71844	35.25852	122.84	2.47
85/10/ 6	2446344.5	-0.45484	0.55502	0.03408	-27.21422	-22.38627	1.24855	0.71840	35.26071	129.33	2.72
85/10/10	2446348.5	-0.51468	0.49988	0.03674	-24.53182	-25.30493	1.05262	0.71841	35.25986	135.84	2.93
85/10/14	2446352.5	-0.56795	0.43836	0.03893	-21.53710	-27.90026	0.84331	0.71849	35.25596	142.34	3.11
85/10/18	2446356.5	-0.61397	0.37124	0.04063	-18.26922	-30.13875	0.62334	0.71864	35.24907	148.84	3.24
85/10/22	2446360.5	-0.65218	0.29940	0.04180	-14.77095	-31.99171	0.39559	0.71884	35.23928	155.34	3.33
85/10/26	2446364.5	-0.68208	0.22375	0.04245	-11.08804	-33.43578	0.16303	0.71909	35.22673	161.84	3.38
85/10/30	2446368.5	-0.70330	0.14525	0.04256	-7.26855	-34.45313	-0.07134	0.71941	35.21157	168.33	3.39
85/11/ 3	2446372.5	-0.71560	0.06490	0.04212	-3.36214	-35.03173	-0.30447	0.71977	35.19402	174.82	3.35
85/11/ 7	2446376.5	-0.71881	-0.01627	0.04115	0.58066	-35.16545	-0.53337	0.72017	35.17428	181.30	3.28
85/11/11	2446380.5	-0.71292	-0.09723	0.03966	4.50914	-34.85406	-0.75511	0.72062	35.15264	187.77	3.16
85/11/15	2446384.5	-0.69803	-0.17697	0.03767	8.37315	-34.10319	-0.96690	0.72110	35.12936	194.23	2.99
85/11/19	2446388.5	-0.67432	-0.25447	0.03520	12.12375	-32.92413	-1.16607	0.72160	35.10475	200.68	2.80
85/11/23	2446392.5	-0.64213	-0.32877	0.03230	15.71386	-31.33363	-1.35015	0.72213	35.07912	207.11	2.56
85/11/27	2446396.5	-0.60188	-0.39895	0.02898	19.09887	-29.35357	-1.51689	0.72267	35.05281	213.54	2.30
85/12/ 1	2446400.5	-0.55408	-0.46412	0.02530	22.23715	-27.01056	-1.66426	0.72322	35.02614	219.95	2.00
85/12/ 5	2446404.5	-0.49935	-0.52349	0.02131	25.09056	-24.33556	-1.79051	0.72377	34.99945	226.35	1.69
85/12/ 9	2446408.5	-0.43840	-0.57633	0.01705	27.62486	-21.36340	-1.89416	0.72432	34.97307	232.74	1.35
85/12/13	2446412.5	-0.37199	-0.62200	0.01257	29.81008	-18.13226	-1.97403	0.72485	34.94734	239.12	0.99
85/12/17	2446416.5	-0.30095	-0.65994	0.00794	31.62076	-14.68315	-2.02924	0.72537	34.92256	245.49	0.63
85/12/21	2446420.5	-0.22619	-0.68970	0.00322	33.03623	-11.05939	-2.05922	0.72585	34.89904	251.84	0.25
85/12/25	2446424.5	-0.14863	-0.71094	-0.00155	34.04075	-7.30602	-2.06369	0.72631	34.87706	258.19	-0.12
85/12/29	2446428.5	-0.06924	-0.72339	-0.00630	34.62361	-3.46931	-2.04270	0.72673	34.85689	264.53	-0.50
86/ 1/ 2	2446432.5	0.01101	-0.72694	-0.01097	34.77917	0.40383	-1.99659	0.72710	34.83878	270.87	-0.86
86/ 1/ 6	2446436.5	0.09113	-0.72154	-0.01550	34.50688	4.26638	-1.92600	0.72743	34.82293	277.20	-1.22
86/ 1/10	2446440.5	0.17012	-0.70727	-0.01985	33.81117	8.07169	-1.83185	0.72771	34.80953	283.52	-1.56
86/ 1/14	2446444.5	0.24703	-0.68432	-0.02395	32.70141	11.77404	-1.71532	0.72794	34.79874	289.85	-1.89
86/ 1/18	2446448.5	0.32090	-0.65298	-0.02776	31.19169	15.32908	-1.57786	0.72810	34.79069	296.17	-2.18
86/ 1/22	2446452.5	0.39085	-0.61364	-0.03123	29.30072	18.69430	-1.42114	0.72821	34.78547	302.49	-2.46
86/ 1/26	2446456.5	0.45601	-0.56679	-0.03431	27.05152	21.82948	-1.24708	0.72826	34.78313	308.82	-2.70
86/ 1/30	2446460.5	0.51558	-0.51299	-0.03698	24.47123	24.69711	-1.05775	0.72825	34.78372	315.14	-2.91
86/ 2/ 3	2446464.5	0.56884	-0.45291	-0.03919	21.59076	27.26274	-0.85544	0.72818	34.78721	321.47	-3.08
86/ 2/ 7	2446468.5	0.61513	-0.38728	-0.04092	18.44453	29.49540	-0.64256	0.72805	34.79356	327.81	-3.22
86/ 2/11	2446472.5	0.65389	-0.31691	-0.04215	15.07006	31.36788	-0.42166	0.72786	34.80271	334.14	-3.32
86/ 2/15	2446476.5	0.68462	-0.24265	-0.04286	11.50761	32.85710	-0.19539	0.72761	34.81454	340.48	-3.38
86/ 2/19	2446480.5	0.70694	-0.16541	-0.04305	7.79978	33.94430	0.03354	0.72731	34.82891	346.83	-3.39
86/ 2/23	2446484.5	0.72058	-0.08613	-0.04271	3.99105	34.61535	0.26236	0.72696	34.84566	353.18	-3.37
86/ 2/27	2446488.5	0.72534	-0.00580	-0.04184	0.12731	34.86093	0.48830	0.72657	34.86458	359.54	-3.30
86/ 3/ 3	2446492.5	0.72116	0.07461	-0.04046	-3.74458	34.67666	0.70859	0.72614	34.88545	5.91	-3.19
86/ 3/ 7	2446496.5	0.70807	0.15409	-0.03857	-7.57739	34.06327	0.92054	0.72567	34.90803	12.28	-3.05
86/ 3/11	2446500.5	0.68622	0.23166	-0.03621	-11.32397	33.02661	1.12150	0.72517	34.93203	18.65	-2.86
86/ 3/15	2446504.5	0.65585	0.30637	-0.03340	-14.93784	31.57771	1.30896	0.72465	34.95718	25.04	-2.64
86/ 3/19	2446508.5	0.61733	0.37726	-0.03018	-18.37377	29.73271	1.48054	0.72411	34.98316	31.43	-2.39

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86/ 3/23	2446512.5	0.57113	0.44345	-0.02658	-21.58828	27.51275	1.63405	0.72356	35.00965	37.83	-2.10
86/ 3/27	2446516.5	0.51779	0.50411	-0.02264	-24.54028	24.94384	1.76748	0.72301	35.03633	44.23	-1.79
86/ 3/31	2446520.5	0.45798	0.55846	-0.01843	-27.19156	22.05658	1.87907	0.72246	35.06286	50.65	-1.46
86/ 4/ 4	2446524.5	0.39242	0.60580	-0.01398	-29.50739	18.88586	1.96732	0.72193	35.08892	57.07	-1.11
86/ 4/ 8	2446528.5	0.32192	0.64553	-0.00936	-31.45700	15.47051	2.03101	0.72141	35.11416	63.49	-0.74
86/ 4/12	2446532.5	0.24738	0.67712	-0.00462	-33.01404	11.85285	2.06922	0.72091	35.13828	69.93	-0.37
86/ 4/16	2446536.5	0.16971	0.70017	0.00018	-34.15704	8.07818	2.08135	0.72044	35.16095	76.38	0.01
86/ 4/20	2446540.5	0.08989	0.71436	0.00498	-34.86976	4.19420	2.06717	0.72001	35.18188	82.83	0.40
86/ 4/24	2446544.5	0.00893	0.71950	0.00972	-35.14152	0.25040	2.02674	0.71962	35.20081	89.29	0.77
86/ 4/28	2446548.5	-0.07213	0.71551	0.01433	-34.96739	-3.70259	1.96052	0.71928	35.21748	95.76	1.14
86/ 5/ 2	2446552.5	-0.15228	0.70243	0.01875	-34.34834	-7.61370	1.86927	0.71899	35.23168	102.23	1.49
86/ 5/ 6	2446556.5	-0.23050	0.68041	0.02294	-33.29132	-11.43220	1.75412	0.71875	35.24321	108.71	1.83
86/ 5/10	2446560.5	-0.30577	0.64972	0.02684	-31.80918	-15.10832	1.61653	0.71858	35.25193	115.20	2.14
86/ 5/14	2446564.5	-0.37715	0.61075	0.03040	-29.92056	-18.59409	1.45824	0.71846	35.25772	121.70	2.42
86/ 5/18	2446568.5	-0.44372	0.56399	0.03356	-27.64962	-21.84398	1.28129	0.71840	35.26049	128.19	2.68
86/ 5/22	2446572.5	-0.50463	0.51003	0.03630	-25.02573	-24.81557	1.08797	0.71841	35.26022	134.69	2.90
86/ 5/26	2446576.5	-0.55911	0.44958	0.03858	-22.08307	-27.47020	0.88081	0.71847	35.25691	141.20	3.08
86/ 5/30	2446580.5	-0.60645	0.38338	0.04037	-18.86009	-29.77352	0.66251	0.71860	35.25060	147.70	3.22
86/ 6/ 3	2446584.5	-0.64606	0.31230	0.04164	-15.39897	-31.69598	0.43591	0.71879	35.24136	154.20	3.32
86/ 6/ 7	2446588.5	-0.67745	0.23725	0.04238	-11.74498	-33.21325	0.20397	0.71904	35.22933	160.70	3.38
86/ 6/11	2446592.5	-0.70022	0.15917	0.04258	-7.94583	-34.30650	-0.03030	0.71934	35.21467	167.19	3.39
86/ 6/15	2446596.5	-0.71409	0.07908	0.04224	-4.05096	-34.96267	-0.26387	0.71969	35.19756	173.68	3.36
86/ 6/19	2446600.5	-0.71890	-0.00202	0.04136	-0.11079	-35.17459	-0.49372	0.72009	35.17823	180.16	3.29
86/ 6/23	2446604.5	-0.71460	-0.08310	0.03996	3.82394	-34.94101	-0.71694	0.72053	35.15694	186.63	3.18
86/ 6/27	2446608.5	-0.70127	-0.16312	0.03805	7.70293	-34.26651	-0.93067	0.72100	35.13396	193.09	3.03
86/ 7/ 1	2446612.5	-0.67909	-0.24109	0.03567	11.47697	-33.16142	-1.13224	0.72150	35.10958	199.55	2.83
86/ 7/ 5	2446616.5	-0.64836	-0.31602	0.03283	15.09861	-31.64156	-1.31913	0.72203	35.08413	205.99	2.61
86/ 7/ 9	2446620.5	-0.60949	-0.38698	0.02959	18.52275	-29.72790	-1.48906	0.72257	35.05792	212.41	2.35
86/ 7/13	2446624.5	-0.56297	-0.45309	0.02597	21.70721	-27.44629	-1.63996	0.72312	35.03129	218.83	2.06
86/ 7/17	2446628.5	-0.50940	-0.51353	0.02203	24.61320	-24.82696	-1.77002	0.72367	35.00458	225.23	1.74
86/ 7/21	2446632.5	-0.44949	-0.56757	0.01781	27.20576	-21.90408	-1.87773	0.72421	34.97811	231.62	1.41
86/ 7/25	2446636.5	-0.38397	-0.61453	0.01337	29.45414	-18.71530	-1.96183	0.72475	34.95222	238.00	1.06
86/ 7/29	2446640.5	-0.31368	-0.65386	0.00876	31.33208	-15.30118	-2.02141	0.72527	34.92723	244.37	0.69
86/ 8/ 2	2446644.5	-0.23951	-0.68509	0.00405	32.81806	-11.70466	-2.05583	0.72576	34.90345	250.73	0.32
86/ 8/ 6	2446648.5	-0.16237	-0.70784	-0.00072	33.89546	-7.97055	-2.06476	0.72622	34.88116	257.08	-0.06
86/ 8/10	2446652.5	-0.08322	-0.72185	-0.00547	34.55268	-4.14494	-2.04821	0.72665	34.86063	263.42	-0.43
86/ 8/14	2446656.5	-0.00305	-0.72695	-0.01016	34.78321	-0.27465	-2.00645	0.72703	34.84211	269.76	-0.80
86/ 8/18	2446660.5	0.07716	-0.72312	-0.01472	34.58559	3.59325	-1.94008	0.72737	34.82583	276.09	-1.16
86/ 8/22	2446664.5	0.15642	-0.71039	-0.01911	33.96341	7.41202	-1.84997	0.72766	34.81197	282.42	-1.50
86/ 8/26	2446668.5	0.23376	-0.68894	-0.02325	32.92516	11.13574	-1.73725	0.72789	34.80070	288.74	-1.83
86/ 8/30	2446672.5	0.30824	-0.65905	-0.02712	31.48416	14.71977	-1.60333	0.72807	34.79216	295.07	-2.13
86/ 9/ 3	2446676.5	0.37893	-0.62107	-0.03065	29.65829	18.12126	-1.44984	0.72819	34.78644	301.39	-2.41
86/ 9/ 7	2446680.5	0.44499	-0.57549	-0.03380	27.46985	21.29956	-1.27866	0.72825	34.78360	307.71	-2.66
86/ 9/11	2446684.5	0.50559	-0.52286	-0.03654	24.94529	24.21663	-1.09184	0.72825	34.78368	314.04	-2.88
86/ 9/15	2446688.5	0.56001	-0.46383	-0.03884	22.11488	26.83748	-0.89162	0.72819	34.78668	320.37	-3.06

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86/ 9/19	2446692.5	0.60756	-0.39912	-0.04065	19.01245	29.13050	-0.68040	0.72807	34.79256	326.70	-3.20
86/ 9/23	2446696.5	0.64767	-0.32951	-0.04197	15.67500	31.06781	-0.46071	0.72789	34.80124	333.03	-3.31
86/ 9/27	2446700.5	0.67984	-0.25587	-0.04278	12.14236	32.62555	-0.23517	0.72765	34.81263	339.38	-3.37
86/10/ 1	2446704.5	0.70366	-0.17908	-0.04306	8.45675	33.78423	-0.00651	0.72736	34.82658	345.72	-3.39
86/10/ 5	2446708.5	0.71883	-0.10009	-0.04281	4.66236	34.52887	0.22254	0.72702	34.84293	352.07	-3.38
86/10/ 9	2446712.5	0.72515	-0.01987	-0.04203	0.80487	34.84930	0.44918	0.72664	34.86149	358.43	-3.32
86/10/13	2446716.5	0.72253	0.06060	-0.04074	-3.06899	34.74028	0.67067	0.72621	34.88203	4.79	-3.22
86/10/17	2446720.5	0.71099	0.14031	-0.03894	-6.91201	34.20164	0.88427	0.72575	34.90430	11.16	-3.08
86/10/21	2446724.5	0.69066	0.21829	-0.03666	-10.67698	33.23834	1.08733	0.72526	34.92803	17.54	-2.90
86/10/25	2446728.5	0.66176	0.29357	-0.03392	-14.31728	31.86050	1.27733	0.72475	34.95293	23.92	-2.68
86/10/29	2446732.5	0.62464	0.36519	-0.03077	-17.78738	30.08339	1.45185	0.72421	34.97870	30.31	-2.43
86/11/ 2	2446736.5	0.57974	0.43227	-0.02723	-21.04349	27.92730	1.60867	0.72367	35.00501	36.71	-2.16
86/11/ 6	2446740.5	0.52761	0.49395	-0.02335	-24.04405	25.41740	1.74573	0.72312	35.03153	43.11	-1.85
86/11/10	2446744.5	0.46887	0.54946	-0.01918	-26.75032	22.58352	1.86125	0.72257	35.05794	49.52	-1.52
86/11/14	2446748.5	0.40426	0.59807	-0.01477	-29.12695	19.45982	1.95366	0.72204	35.08390	55.94	-1.17
86/11/18	2446752.5	0.33458	0.63917	-0.01017	-31.14242	16.08450	2.02171	0.72152	35.10910	62.37	-0.81
86/11/22	2446756.5	0.26067	0.67223	-0.00545	-32.76963	12.49928	2.06441	0.72102	35.13321	68.80	-0.43
86/11/26	2446760.5	0.18348	0.69680	-0.00065	-33.98623	8.74900	2.08112	0.72055	35.15593	75.25	-0.05
86/11/30	2446764.5	0.10398	0.71256	0.00415	-34.77506	4.88096	2.07153	0.72012	35.17698	81.70	0.33
86/12/ 4	2446768.5	0.02315	0.71930	0.00890	-35.12446	0.94438	2.03566	0.71973	35.19607	88.16	0.71
86/12/ 8	2446772.5	-0.05797	0.71691	0.01353	-35.02850	-3.01026	1.97389	0.71938	35.21298	94.62	1.08
86/12/12	2446776.5	-0.13835	0.70541	0.01800	-34.48713	-6.93197	1.88695	0.71908	35.22747	101.10	1.43
86/12/16	2446780.5	-0.21697	0.68495	0.02223	-33.50624	-10.76989	1.77590	0.71883	35.23936	107.58	1.77
86/12/20	2446784.5	-0.29283	0.65576	0.02619	-32.09767	-14.47408	1.64212	0.71865	35.24849	114.06	2.09
86/12/24	2446788.5	-0.36496	0.61821	0.02980	-30.27904	-17.99622	1.48733	0.71852	35.25473	120.56	2.38
86/12/28	2446792.5	-0.43243	0.57278	0.03304	-28.07356	-21.29031	1.31350	0.71845	35.25801	127.05	2.64

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
86/12/16	2446780.5	-0.21697	0.68495	0.02223	-33.50624	-10.76989	1.77590	0.71883	35.23936	107.58	1.77
86/12/20	2446784.5	-0.29283	0.65576	0.02619	-32.09767	-14.47408	1.64212	0.71865	35.24849	114.06	2.09
86/12/24	2446788.5	-0.36496	0.61821	0.02980	-30.27904	-17.99622	1.48733	0.71852	35.25473	120.56	2.38
86/12/28	2446792.5	-0.43243	0.57278	0.03304	-28.07356	-21.29031	1.31350	0.71845	35.25801	127.05	2.64
87/ 1/ 1	2446796.5	-0.49439	0.52005	0.03586	-25.50971	-24.31338	1.12290	0.71845	35.25828	133.55	2.86
87/ 1/ 5	2446800.5	-0.55005	0.46069	0.03822	-22.62083	-27.02607	0.91800	0.71850	35.25554	140.05	3.05
87/ 1/ 9	2446804.5	-0.59869	0.39545	0.04009	-19.44463	-29.39326	0.70147	0.71862	35.24981	146.55	3.20
87/ 1/13	2446808.5	-0.63970	0.32517	0.04145	-16.02266	-31.38454	0.47613	0.71880	35.24119	153.06	3.31
87/ 1/17	2446812.5	-0.67256	0.25075	0.04229	-12.39967	-32.97461	0.24493	0.71903	35.22977	159.55	3.37
87/ 1/21	2446816.5	-0.69687	0.17314	0.04258	-8.62297	-34.14368	0.01087	0.71932	35.21571	166.05	3.39
87/ 1/25	2446820.5	-0.71232	0.09333	0.04234	-4.74170	-34.87764	-0.22303	0.71966	35.19920	172.54	3.37
87/ 1/29	2446824.5	-0.71874	0.01233	0.04156	-0.80617	-35.16828	-0.45374	0.72004	35.18044	179.02	3.31
87/ 2/ 2	2446828.5	-0.71605	-0.06882	0.04025	3.13292	-35.01326	-0.67832	0.72047	35.15969	185.49	3.20
87/ 2/ 6	2446832.5	-0.70430	-0.14910	0.03843	7.02515	-34.41616	-0.89392	0.72093	35.13722	191.95	3.06
87/ 2/10	2446836.5	-0.68366	-0.22750	0.03613	10.82108	-33.38627	-1.09782	0.72143	35.11330	198.41	2.87
87/ 2/14	2446840.5	-0.65441	-0.30303	0.03337	14.47291	-31.93844	-1.28748	0.72194	35.08826	204.85	2.65
87/ 2/18	2446844.5	-0.61694	-0.37476	0.03019	17.93508	-30.09274	-1.46055	0.72247	35.06242	211.28	2.39
87/ 2/22	2446848.5	-0.57173	-0.44179	0.02663	21.16485	-27.87415	-1.61495	0.72302	35.03608	217.69	2.11
87/ 2/26	2446852.5	-0.51936	-0.50328	0.02274	24.12278	-25.31216	-1.74881	0.72356	35.00960	224.10	1.80
87/ 3/ 2	2446856.5	-0.46051	-0.55850	0.01857	26.77320	-22.44027	-1.86056	0.72411	34.98331	230.49	1.47
87/ 3/ 6	2446860.5	-0.39592	-0.60676	0.01416	29.08457	-19.29553	-1.94891	0.72464	34.95752	236.87	1.12
87/ 3/10	2446864.5	-0.32641	-0.64747	0.00958	31.02980	-15.91802	-2.01287	0.72516	34.93255	243.25	0.76
87/ 3/14	2446868.5	-0.25285	-0.68016	0.00488	32.58649	-12.35031	-2.05175	0.72565	34.90873	249.61	0.39
87/ 3/18	2446872.5	-0.17616	-0.70442	0.00012	33.73714	-8.63692	-2.06519	0.72611	34.88633	255.96	0.01
87/ 3/22	2446876.5	-0.09729	-0.71998	-0.00464	34.46924	-4.82376	-2.05311	0.72654	34.86563	262.30	-0.37
87/ 3/26	2446880.5	-0.01723	-0.72667	-0.00934	34.77535	-0.95758	-2.01575	0.72693	34.84688	268.64	-0.74
87/ 3/30	2446884.5	0.06305	-0.72440	-0.01393	34.65312	2.91454	-1.95364	0.72728	34.83030	274.97	-1.10
87/ 4/ 3	2446888.5	0.14255	-0.71323	-0.01835	34.10524	6.74575	-1.86761	0.72757	34.81609	281.30	-1.45
87/ 4/ 7	2446892.5	0.22031	-0.69330	-0.02254	33.13935	10.48993	-1.75875	0.72781	34.80443	287.63	-1.78
87/ 4/11	2446896.5	0.29536	-0.66487	-0.02646	31.76791	14.10216	-1.62842	0.72800	34.79544	293.95	-2.08
87/ 4/15	2446900.5	0.36679	-0.62828	-0.03005	30.00804	17.53920	-1.47821	0.72813	34.78924	300.28	-2.37
87/ 4/19	2446904.5	0.43372	-0.58400	-0.03328	27.88129	20.75998	-1.30996	0.72820	34.78590	306.60	-2.62
87/ 4/23	2446908.5	0.49535	-0.53256	-0.03609	25.41338	23.72596	-1.12570	0.72821	34.78546	312.93	-2.84
87/ 4/27	2446912.5	0.55090	-0.47460	-0.03847	22.63396	26.40155	-0.92762	0.72816	34.78791	319.26	-3.03
87/ 5/ 1	2446916.5	0.59971	-0.41082	-0.04037	19.57628	28.75452	-0.71812	0.72805	34.79323	325.59	-3.18
87/ 5/ 5	2446920.5	0.64116	-0.34201	-0.04178	16.27684	30.75629	-0.49969	0.72788	34.80136	331.92	-3.29
87/ 5/ 9	2446924.5	0.67476	-0.26901	-0.04267	12.77500	32.38228	-0.27495	0.72766	34.81219	338.26	-3.36
87/ 5/13	2446928.5	0.70007	-0.19270	-0.04305	9.11262	33.61220	-0.04660	0.72738	34.82560	344.61	-3.39
87/ 5/17	2446932.5	0.71677	-0.11403	-0.04289	5.33359	34.43028	0.18260	0.72705	34.84142	350.96	-3.38
87/ 5/21	2446936.5	0.72465	-0.03395	-0.04220	1.48340	34.82548	0.40989	0.72667	34.85947	357.32	-3.33
87/ 5/25	2446940.5	0.72360	0.04655	-0.04100	-2.39136	34.79171	0.63250	0.72626	34.87953	3.68	-3.24
87/ 5/29	2446944.5	0.71362	0.12647	-0.03929	-6.24352	34.32790	0.84768	0.72581	34.90136	10.05	-3.10
87/ 6/ 2	2446948.5	0.69481	0.20483	-0.03709	-10.02582	33.43813	1.05279	0.72532	34.92469	16.43	-2.93
87/ 6/ 6	2446952.5	0.66739	0.28065	-0.03443	-13.69148	32.13164	1.24525	0.72481	34.94924	22.81	-2.72
87/ 6/10	2446956.5	0.63168	0.35298	-0.03135	-17.19475	30.42280	1.42264	0.72429	34.97471	29.20	-2.48

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

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87/ 6/14	2446960.5	0.58810	0.42092	-0.02787	-20.49148	28.33107	1.58270	0.72375	35.00079	35.59	-2.21
87/ 6/18	2446964.5	0.53719	0.48360	-0.02405	-23.53968	25.88078	1.72334	0.72320	35.02715	41.99	-1.91
87/ 6/22	2446968.5	0.47956	0.54024	-0.01993	-26.30009	23.10098	1.84273	0.72266	35.05347	48.41	-1.58
87/ 6/26	2446972.5	0.41592	0.59011	-0.01555	-28.73673	20.02512	1.93927	0.72212	35.07942	54.82	-1.23
87/ 6/30	2446976.5	0.34706	0.63256	-0.01098	-30.81739	16.69072	2.01164	0.72160	35.10468	61.25	-0.87
87/ 7/ 4	2446980.5	0.27383	0.66706	-0.00628	-32.51416	13.13893	2.05881	0.72110	35.12891	67.68	-0.50
87/ 7/ 8	2446984.5	0.19715	0.69314	-0.00149	-33.80384	9.41408	2.08009	0.72063	35.15183	74.12	-0.12
87/ 7/12	2446988.5	0.11797	0.71046	0.00331	-34.66835	5.56308	2.07509	0.72019	35.17312	80.57	0.26
87/ 7/16	2446992.5	0.03731	0.71878	0.00808	-35.09507	1.63488	2.04379	0.71979	35.19252	87.03	0.64
87/ 7/20	2446996.5	-0.04383	0.71799	0.01274	-35.07704	-2.32024	1.98650	0.71944	35.20978	93.49	1.01
87/ 7/24	2447000.5	-0.12442	0.70808	0.01723	-34.61319	-6.25132	1.90388	0.71913	35.22467	99.97	1.37
87/ 7/28	2447004.5	-0.20342	0.68916	0.02151	-33.70839	-10.10744	1.79695	0.71888	35.23699	106.44	1.71
87/ 8/ 1	2447008.5	-0.27983	0.66148	0.02552	-32.37344	-13.83844	1.66703	0.71868	35.24658	112.93	2.03
87/ 8/ 5	2447012.5	-0.35268	0.62536	0.02920	-30.62497	-17.39569	1.51577	0.71855	35.25331	119.42	2.33
87/ 8/ 9	2447016.5	-0.42103	0.58127	0.03251	-28.48522	-20.73272	1.34511	0.71847	35.25710	125.92	2.59
87/ 8/13	2447020.5	-0.48401	0.52977	0.03540	-25.98179	-23.80601	1.15727	0.71845	35.25789	132.42	2.82
87/ 8/17	2447024.5	-0.54082	0.47151	0.03784	-23.14719	-26.57552	0.95468	0.71850	35.25567	138.92	3.02
87/ 8/21	2447028.5	-0.59073	0.40724	0.03980	-20.01841	-29.00537	0.73999	0.71861	35.25047	145.42	3.18
87/ 8/25	2447032.5	-0.63311	0.33778	0.04125	-16.63637	-31.06427	0.51599	0.71877	35.24236	151.92	3.29
87/ 8/29	2447036.5	-0.66744	0.26402	0.04218	-13.04529	-32.72603	0.28561	0.71900	35.23144	158.42	3.36
87/ 9/ 2	2447040.5	-0.69326	0.18690	0.04257	-9.29209	-33.96987	0.05183	0.71928	35.21786	164.91	3.39
87/ 9/ 6	2447044.5	-0.71028	0.10740	0.04242	-5.42563	-34.78067	-0.18231	0.71961	35.20179	171.40	3.38
87/ 9/10	2447048.5	-0.71828	0.02654	0.04173	-1.49605	-35.14919	-0.41379	0.71998	35.18345	177.88	3.32
87/ 9/14	2447052.5	-0.71718	-0.05466	0.04051	2.44595	-35.07206	-0.63964	0.72040	35.16307	184.36	3.22
87/ 9/18	2447056.5	-0.70701	-0.13516	0.03878	6.34988	-34.55182	-0.85701	0.72086	35.14091	190.82	3.08
87/ 9/22	2447060.5	-0.68791	-0.21396	0.03656	10.16607	-33.59678	-1.06313	0.72135	35.11727	197.28	2.91
87/ 9/26	2447064.5	-0.66015	-0.29007	0.03388	13.84638	-32.22082	-1.25545	0.72186	35.09245	203.72	2.69
87/ 9/30	2447068.5	-0.62408	-0.36252	0.03077	17.34484	-30.44313	-1.43159	0.72239	35.06675	210.15	2.44
87/10/ 4	2447072.5	-0.58018	-0.43043	0.02728	20.61816	-28.28787	-1.58939	0.72293	35.04052	216.57	2.16
87/10/ 8	2447076.5	-0.52902	-0.49295	0.02345	23.62631	-25.78373	-1.72696	0.72347	35.01408	222.98	1.86
87/10/12	2447080.5	-0.47125	-0.54932	0.01932	26.33291	-22.96357	-1.84268	0.72402	34.98775	229.37	1.53
87/10/16	2447084.5	-0.40761	-0.59884	0.01495	28.70568	-19.86384	-1.93520	0.72455	34.96188	235.76	1.18
87/10/20	2447088.5	-0.33890	-0.64091	0.01040	30.71673	-16.52412	-2.00348	0.72507	34.93677	242.13	0.82
87/10/24	2447092.5	-0.26598	-0.67503	0.00571	32.34283	-12.98661	-2.04679	0.72557	34.91275	248.49	0.45
87/10/28	2447096.5	-0.18977	-0.70080	0.00096	33.56560	-9.29549	-2.06469	0.72604	34.89009	254.85	0.08
87/11/ 1	2447100.5	-0.11122	-0.71790	-0.00381	34.37164	-5.49649	-2.05706	0.72647	34.86908	261.19	-0.30
87/11/ 5	2447104.5	-0.03129	-0.72615	-0.00853	34.75265	-1.63625	-2.02410	0.72687	34.84998	267.53	-0.67
87/11/ 9	2447108.5	0.04902	-0.72545	-0.01314	34.70537	2.23819	-1.96627	0.72722	34.83300	273.87	-1.04
87/11/13	2447112.5	0.12873	-0.71583	-0.01759	34.23161	6.07988	-1.88435	0.72753	34.81836	280.19	-1.39
87/11/17	2447116.5	0.20686	-0.69742	-0.02183	33.33815	9.84255	-1.77940	0.72778	34.80624	286.52	-1.72
87/11/21	2447120.5	0.28245	-0.67045	-0.02580	32.03663	13.48103	-1.65272	0.72797	34.79677	292.84	-2.03
87/11/25	2447124.5	0.35458	-0.63526	-0.02945	30.34335	16.95176	-1.50586	0.72811	34.79006	299.17	-2.32
87/11/29	2447128.5	0.42236	-0.59229	-0.03274	28.27909	20.21325	-1.34063	0.72819	34.78620	305.49	-2.58
87/12/ 3	2447132.5	0.48497	-0.54206	-0.03563	25.86890	23.22649	-1.15901	0.72821	34.78524	311.82	-2.80
87/12/ 7	2447136.5	0.54164	-0.48519	-0.03808	23.14173	25.95536	-0.96318	0.72817	34.78718	318.15	-3.00

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87/12/11	2447140.5	0.59167	-0.42238	-0.04007	20.13023	28.36699	-0.75550	0.72807	34.79200	324.48	-3.16
87/12/15	2447144.5	0.63446	-0.35439	-0.04157	16.87036	30.43216	-0.53845	0.72791	34.79964	330.81	-3.27
87/12/19	2447148.5	0.66946	-0.28206	-0.04255	13.40100	32.12556	-0.31462	0.72770	34.81002	337.15	-3.35
87/12/23	2447152.5	0.69625	-0.20626	-0.04302	9.76360	33.42613	-0.08670	0.72743	34.82301	343.50	-3.39
87/12/27	2447156.5	0.71448	-0.12793	-0.04295	6.00174	34.31729	0.14256	0.72711	34.83845	349.85	-3.39
87/12/31	2447160.5	0.72391	-0.04803	-0.04236	2.16064	34.78715	0.37039	0.72674	34.85615	356.20	-3.34
88/ 1/ 4	2447164.5	0.72443	0.03246	-0.04125	-1.71325	34.82875	0.59401	0.72633	34.87592	2.57	-3.26
88/ 1/ 8	2447168.5	0.71601	0.11256	-0.03962	-5.57284	34.44011	0.81069	0.72589	34.89749	8.93	-3.13
88/ 1/12	2447172.5	0.69873	0.19126	-0.03751	-9.37082	33.62443	1.01776	0.72541	34.92063	15.31	-2.96
88/ 1/16	2447176.5	0.67280	0.26759	-0.03493	-13.06030	32.39002	1.21262	0.72490	34.94503	21.69	-2.76
88/ 1/20	2447180.5	0.63851	0.34060	-0.03192	-16.59531	30.75037	1.39282	0.72438	34.97041	28.08	-2.53
88/ 1/24	2447184.5	0.59627	0.40937	-0.02851	-19.93136	28.72404	1.55607	0.72384	34.99645	34.47	-2.26
88/ 1/28	2447188.5	0.54660	0.47304	-0.02474	-23.02606	26.33454	1.70025	0.72329	35.02282	40.87	-1.96
88/ 2/ 1	2447192.5	0.49010	0.53079	-0.02067	-25.83961	23.61009	1.82349	0.72275	35.04921	47.28	-1.64
88/ 2/ 5	2447196.5	0.42746	0.58189	-0.01633	-28.33542	20.58340	1.92413	0.72221	35.07527	53.70	-1.30
88/ 2/ 9	2447200.5	0.35945	0.62569	-0.01180	-30.48057	17.29131	2.00081	0.72169	35.10068	60.12	-0.94
88/ 2/13	2447204.5	0.28692	0.66161	-0.00711	-32.24637	13.77439	2.05245	0.72118	35.12513	66.55	-0.56
88/ 2/17	2447208.5	0.21077	0.68919	-0.00233	-33.60877	10.07642	2.07829	0.72070	35.14830	72.99	-0.19
88/ 2/21	2447212.5	0.13196	0.70806	0.00247	-34.54876	6.24393	2.07790	0.72026	35.16989	79.44	0.20
88/ 2/25	2447216.5	0.05148	0.71797	0.00725	-35.05274	2.32554	2.05119	0.71985	35.18963	85.90	0.58
88/ 2/29	2447220.5	-0.02965	0.71878	0.01193	-35.11274	-1.62863	1.99840	0.71949	35.20725	92.36	0.95
88/ 3/ 4	2447224.5	-0.11041	0.71046	0.01646	-34.72667	-5.56769	1.92015	0.71918	35.22255	98.83	1.31
88/ 3/ 8	2447228.5	-0.18976	0.69311	0.02078	-33.89834	-9.44065	1.81737	0.71891	35.23530	105.31	1.66
88/ 3/12	2447232.5	-0.26670	0.66693	0.02484	-32.63753	-13.19718	1.69135	0.71871	35.24535	111.80	1.98
88/ 3/16	2447236.5	-0.34024	0.63226	0.02858	-30.95987	-16.78830	1.54368	0.71856	35.25257	118.29	2.28
88/ 3/20	2447240.5	-0.40944	0.58953	0.03196	-28.88664	-20.16714	1.37626	0.71847	35.25685	124.78	2.55
88/ 3/24	2447244.5	-0.47342	0.53928	0.03493	-26.44452	-23.28960	1.19125	0.71844	35.25814	131.28	2.79
88/ 3/28	2447248.5	-0.53136	0.48215	0.03745	-23.66520	-26.11498	0.99105	0.71848	35.25643	137.78	2.99
88/ 4/ 1	2447252.5	-0.58253	0.41887	0.03950	-20.58493	-28.60664	0.77826	0.71858	35.25174	144.28	3.15
88/ 4/ 5	2447256.5	-0.62627	0.35026	0.04104	-17.24398	-30.73247	0.55568	0.71873	35.24412	150.78	3.27
88/ 4/ 9	2447260.5	-0.66203	0.27718	0.04206	-13.68606	-32.46534	0.32619	0.71895	35.23369	157.28	3.35
88/ 4/13	2447264.5	-0.68937	0.20058	0.04254	-9.95764	-33.78350	0.09278	0.71922	35.22056	163.78	3.39
88/ 4/17	2447268.5	-0.70795	0.12142	0.04249	-6.10732	-34.67085	-0.14152	0.71954	35.20493	170.27	3.39
88/ 4/21	2447272.5	-0.71753	0.04072	0.04189	-2.18505	-35.11708	-0.37369	0.71991	35.18698	176.75	3.34
88/ 4/25	2447276.5	-0.71803	-0.04049	0.04076	1.75851	-35.11783	-0.60074	0.72032	35.16696	183.23	3.24
88/ 4/29	2447280.5	-0.70943	-0.12119	0.03912	5.67277	-34.67459	-0.81980	0.72077	35.14512	189.69	3.11
88/ 5/ 3	2447284.5	-0.69188	-0.20036	0.03698	9.50788	-33.79468	-1.02809	0.72125	35.12175	196.15	2.94
88/ 5/ 7	2447288.5	-0.66560	-0.27701	0.03438	13.21538	-32.49103	-1.22300	0.72176	35.09714	202.60	2.73
88/ 5/11	2447292.5	-0.63095	-0.35017	0.03135	16.74887	-30.78192	-1.40213	0.72229	35.07160	209.03	2.49
88/ 5/15	2447296.5	-0.58838	-0.41894	0.02792	20.06456	-28.69066	-1.56328	0.72283	35.04546	215.45	2.21
88/ 5/19	2447300.5	-0.53845	-0.48246	0.02414	23.12180	-26.24521	-1.70451	0.72337	35.01905	221.86	1.91
88/ 5/23	2447304.5	-0.48178	-0.53995	0.02006	25.88355	-23.47772	-1.82416	0.72392	34.99270	228.26	1.59
88/ 5/27	2447308.5	-0.41911	-0.59071	0.01573	28.31678	-20.42406	-1.92081	0.72446	34.96672	234.64	1.24
88/ 5/31	2447312.5	-0.35122	-0.63413	0.01120	30.39282	-17.12331	-1.99339	0.72498	34.94145	241.02	0.89
88/ 6/ 4	2447316.5	-0.27898	-0.66967	0.00654	32.08759	-13.61725	-2.04110	0.72548	34.91718	247.38	0.52

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
88/ 6/ 8	2447320.5	-0.20327	-0.69692	0.00179	33.38188	-9.94977	-2.06345	0.72596	34.89421	253.74	0.14
88/ 6/12	2447324.5	-0.12506	-0.71555	-0.00298	34.26141	-6.16635	-2.06027	0.72640	34.87281	260.09	-0.23
88/ 6/16	2447328.5	-0.04530	-0.72536	-0.00771	34.71698	-2.31353	-2.03170	0.72681	34.85325	266.43	-0.61
88/ 6/20	2447332.5	0.03502	-0.72622	-0.01235	34.74446	1.56168	-1.97815	0.72717	34.83575	272.76	-0.97
88/ 6/24	2447336.5	0.11490	-0.71816	-0.01683	34.34481	5.41228	-1.90037	0.72749	34.82054	279.09	-1.33
88/ 6/28	2447340.5	0.19338	-0.70127	-0.02111	33.52394	9.19185	-1.79935	0.72775	34.80779	285.42	-1.66
88/ 7/ 2	2447344.5	0.26948	-0.67578	-0.02513	32.29267	12.85500	-1.67635	0.72796	34.79767	291.74	-1.98
88/ 7/ 6	2447348.5	0.34228	-0.64200	-0.02884	30.66651	16.35786	-1.53290	0.72811	34.79029	298.06	-2.27
88/ 7/10	2447352.5	0.41088	-0.60036	-0.03220	28.66549	19.65856	-1.37074	0.72821	34.78575	304.39	-2.53
88/ 7/14	2447356.5	0.47445	-0.55136	-0.03516	26.31391	22.71763	-1.19183	0.72824	34.78410	310.71	-2.77
88/ 7/18	2447360.5	0.53221	-0.49561	-0.03769	23.64010	25.49844	-0.99834	0.72821	34.78536	317.04	-2.97
88/ 7/22	2447364.5	0.58345	-0.43379	-0.03976	20.67606	27.96755	-0.79256	0.72813	34.78953	323.37	-3.13
88/ 7/26	2447368.5	0.62754	-0.36665	-0.04135	17.45719	30.09508	-0.57698	0.72798	34.79655	329.70	-3.26
88/ 7/30	2447372.5	0.66394	-0.29502	-0.04242	14.02189	31.85503	-0.35416	0.72778	34.80635	336.04	-3.34
88/ 8/ 3	2447376.5	0.69220	-0.21977	-0.04298	10.41118	33.22559	-0.12679	0.72752	34.81880	342.39	-3.39
88/ 8/ 7	2447380.5	0.71195	-0.14182	-0.04301	6.66827	34.18939	0.10242	0.72721	34.83376	348.73	-3.39
88/ 8/11	2447384.5	0.72294	-0.06212	-0.04251	2.83812	34.73373	0.33067	0.72685	34.85105	355.09	-3.35
88/ 8/15	2447388.5	0.72503	0.01833	-0.04148	-1.03304	34.85075	0.55521	0.72644	34.87047	1.45	-3.27
88/ 8/19	2447392.5	0.71817	0.09857	-0.03995	-4.89819	34.53760	0.77329	0.72600	34.89178	7.81	-3.15
88/ 8/23	2447396.5	0.70244	0.17758	-0.03792	-8.71005	33.79657	0.98221	0.72553	34.91472	14.19	-3.00
88/ 8/27	2447400.5	0.67800	0.25440	-0.03542	-12.42164	32.63505	1.17937	0.72502	34.93901	20.57	-2.80
88/ 8/31	2447404.5	0.64516	0.32805	-0.03248	-15.98679	31.06562	1.36231	0.72450	34.96436	26.95	-2.57
88/ 9/ 4	2447408.5	0.60429	0.39763	-0.02913	-19.36074	29.10594	1.52868	0.72396	34.99044	33.35	-2.31
88/ 9/ 8	2447412.5	0.55588	0.46225	-0.02543	-22.50068	26.77863	1.67635	0.72341	35.01694	39.75	-2.01
88/ 9/12	2447416.5	0.50054	0.52109	-0.02141	-25.36634	24.11111	1.80339	0.72286	35.04353	46.15	-1.70
88/ 9/16	2447420.5	0.43892	0.57341	-0.01711	-27.92050	21.13529	1.90811	0.72232	35.06987	52.57	-1.36
88/ 9/20	2447424.5	0.37180	0.61854	-0.01261	-30.12958	17.88729	1.98910	0.72179	35.09563	58.99	-1.00
88/ 9/24	2447428.5	0.30000	0.65588	-0.00794	-31.96409	14.40703	2.04521	0.72128	35.12048	65.42	-0.63
88/ 9/28	2447432.5	0.22442	0.68496	-0.00318	-33.39911	10.73776	2.07563	0.72079	35.14411	71.86	-0.25
88/10/ 2	2447436.5	0.14601	0.70538	0.00163	-34.41472	6.92556	2.07988	0.72034	35.16621	78.31	0.13
88/10/ 6	2447440.5	0.06575	0.71688	0.00641	-34.99632	3.01873	2.05779	0.71992	35.18650	84.76	0.51
88/10/10	2447444.5	-0.01534	0.71929	0.01112	-35.13493	-0.93286	2.00956	0.71954	35.20471	91.22	0.89
88/10/14	2447448.5	-0.09624	0.71258	0.01568	-34.82738	-4.87837	1.93573	0.71922	35.22062	97.69	1.25
88/10/18	2447452.5	-0.17592	0.69680	0.02004	-34.07644	-8.76679	1.83718	0.71894	35.23401	104.17	1.60
88/10/22	2447456.5	-0.25335	0.67215	0.02415	-32.89081	-12.54760	1.71514	0.71872	35.24471	110.65	1.93
88/10/26	2447460.5	-0.32756	0.63895	0.02795	-31.28510	-16.17151	1.57114	0.71856	35.25257	117.14	2.23
88/10/30	2447464.5	-0.39759	0.59759	0.03139	-29.27961	-19.59123	1.40704	0.71846	35.25751	123.64	2.50
88/11/ 3	2447468.5	-0.46256	0.54862	0.03443	-26.90010	-22.76209	1.22494	0.71842	35.25944	130.14	2.75
88/11/ 7	2447472.5	-0.52162	0.49265	0.03704	-24.17739	-25.64274	1.02720	0.71844	35.25835	136.64	2.96
88/11/11	2447476.5	-0.57403	0.43039	0.03917	-21.14699	-28.19576	0.81642	0.71853	35.25425	143.14	3.13
88/11/15	2447480.5	-0.61912	0.36265	0.04080	-17.84850	-30.38818	0.59533	0.71867	35.24720	149.64	3.25
88/11/19	2447484.5	-0.65632	0.29029	0.04192	-14.32508	-32.19198	0.36681	0.71887	35.23728	156.14	3.34
88/11/23	2447488.5	-0.68517	0.21423	0.04249	-10.62278	-33.58442	0.13385	0.71913	35.22464	162.64	3.39
88/11/27	2447492.5	-0.70530	0.13545	0.04253	-6.78990	-34.54838	-0.10053	0.71945	35.20943	169.13	3.39
88/12/ 1	2447496.5	-0.71648	0.05494	0.04203	-2.87623	-35.07253	-0.33331	0.71981	35.19185	175.61	3.35

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
88/12/ 5	2447500.5	-0.71857	-0.02626	0.04100	1.06765	-35.15144	-0.56149	0.72021	35.17213	182.09	3.26
88/12/ 9	2447504.5	-0.71156	-0.10713	0.03944	4.99104	-34.78560	-0.78217	0.72066	35.15054	188.56	3.14
88/12/13	2447508.5	-0.69556	-0.18664	0.03739	8.84391	-33.98132	-0.99255	0.72114	35.12734	195.02	2.97
88/12/17	2447512.5	-0.67079	-0.26380	0.03487	12.57750	-32.75056	-1.19000	0.72164	35.10283	201.47	2.77
88/12/21	2447516.5	-0.63758	-0.33765	0.03190	16.14498	-31.11071	-1.37206	0.72217	35.07733	207.90	2.53
88/12/25	2447520.5	-0.59636	-0.40725	0.02854	19.50205	-29.08424	-1.53651	0.72271	35.05116	214.33	2.26
88/12/29	2447524.5	-0.54766	-0.47175	0.02482	22.60749	-26.69832	-1.68136	0.72325	35.02465	220.74	1.97
89/ 1/ 2	2447528.5	-0.49212	-0.53035	0.02079	25.42357	-23.98443	-1.80489	0.72380	34.99812	227.14	1.65
89/ 1/ 6	2447532.5	-0.43045	-0.58234	0.01650	27.91656	-20.97784	-1.90565	0.72434	34.97192	233.53	1.31
89/ 1/10	2447536.5	-0.36341	-0.62708	0.01200	30.05698	-17.71712	-1.98249	0.72487	34.94637	239.91	0.95
89/ 1/14	2447540.5	-0.29186	-0.66404	0.00736	31.81996	-14.24361	-2.03458	0.72538	34.92177	246.27	0.58
89/ 1/18	2447544.5	-0.21670	-0.69276	0.00262	33.18542	-10.60089	-2.06138	0.72587	34.89843	252.63	0.21
89/ 1/22	2447548.5	-0.13885	-0.71292	-0.00215	34.13823	-6.83422	-2.06266	0.72632	34.87664	258.98	-0.17
89/ 1/26	2447552.5	-0.05929	-0.72428	-0.00689	34.66829	-2.98999	-2.03849	0.72673	34.85665	265.32	-0.54
89/ 1/30	2447556.5	0.02100	-0.72671	-0.01155	34.77061	0.88483	-1.98926	0.72711	34.83870	271.66	-0.91
89/ 2/ 3	2447560.5	0.10103	-0.72020	-0.01606	34.44525	4.74320	-1.91565	0.72743	34.82302	277.99	-1.27
89/ 2/ 7	2447564.5	0.17982	-0.70484	-0.02038	33.69728	8.53855	-1.81860	0.72771	34.80978	284.31	-1.60
89/ 2/11	2447568.5	0.25641	-0.68083	-0.02445	32.53668	12.22529	-1.69933	0.72793	34.79915	290.64	-1.92
89/ 2/15	2447572.5	0.32985	-0.64848	-0.02821	30.97816	15.75924	-1.55933	0.72809	34.79126	296.96	-2.22
89/ 2/19	2447576.5	0.39924	-0.60817	-0.03164	29.04096	19.09817	-1.40031	0.72820	34.78618	303.28	-2.49
89/ 2/23	2447580.5	0.46375	-0.56042	-0.03467	26.74869	22.20216	-1.22418	0.72824	34.78400	309.61	-2.73
89/ 2/27	2447584.5	0.52258	-0.50580	-0.03728	24.12896	25.03404	-1.03307	0.72823	34.78473	315.93	-2.93
89/ 3/ 3	2447588.5	0.57501	-0.44499	-0.03943	21.21318	27.55982	-0.82927	0.72815	34.78836	322.26	-3.10
89/ 3/ 7	2447592.5	0.62039	-0.37872	-0.04111	18.03617	29.74895	-0.61522	0.72801	34.79486	328.60	-3.24
89/ 3/11	2447596.5	0.65817	-0.30782	-0.04227	14.63584	31.57477	-0.39348	0.72782	34.80414	334.94	-3.33
89/ 3/15	2447600.5	0.68787	-0.23313	-0.04292	11.05277	33.01469	-0.16671	0.72757	34.81611	341.28	-3.38
89/ 3/19	2447604.5	0.70913	-0.15559	-0.04304	7.32983	34.05057	0.06236	0.72727	34.83062	347.62	-3.39
89/ 3/23	2447608.5	0.72167	-0.07613	-0.04263	3.51170	34.66887	0.29098	0.72692	34.84749	353.98	-3.36
89/ 3/27	2447612.5	0.72532	0.00427	-0.04170	-0.35558	34.86089	0.51636	0.72653	34.86652	0.34	-3.29
89/ 3/31	2447616.5	0.72002	0.08461	-0.04025	-4.22509	34.62290	0.73576	0.72609	34.88750	6.70	-3.18
89/ 4/ 4	2447620.5	0.70583	0.16391	-0.03831	-8.04958	33.95626	0.94646	0.72562	34.91016	13.07	-3.03
89/ 4/ 8	2447624.5	0.68290	0.24117	-0.03589	-11.78196	32.86750	1.14586	0.72512	34.93423	19.45	-2.84
89/ 4/12	2447628.5	0.65150	0.31545	-0.03302	-15.37589	31.36829	1.33145	0.72460	34.95941	25.84	-2.61
89/ 4/16	2447632.5	0.61200	0.38580	-0.02975	-18.78633	29.47540	1.50087	0.72407	34.98539	32.23	-2.35
89/ 4/20	2447636.5	0.56487	0.45135	-0.02610	-21.97010	27.21059	1.65195	0.72352	35.01186	38.63	-2.07
89/ 4/24	2447640.5	0.51070	0.51126	-0.02213	-24.88642	24.60046	1.78272	0.72297	35.03848	45.03	-1.75
89/ 4/28	2447644.5	0.45013	0.56477	-0.01788	-27.49754	21.67616	1.89145	0.72243	35.06491	51.44	-1.42
89/ 5/ 2	2447648.5	0.38391	0.61120	-0.01341	-29.76918	18.47308	1.97668	0.72189	35.09083	57.87	-1.06
89/ 5/ 6	2447652.5	0.31287	0.64994	-0.00877	-31.67112	15.03052	2.03721	0.72137	35.11590	64.29	-0.70
89/ 5/10	2447656.5	0.23788	0.68049	-0.00402	-33.17760	11.39117	2.07217	0.72088	35.13980	70.73	-0.32
89/ 5/14	2447660.5	0.15990	0.70245	0.00079	-34.26780	7.60065	2.08101	0.72042	35.16223	77.18	0.06
89/ 5/18	2447664.5	0.07989	0.71553	0.00558	-34.92616	3.70690	2.06353	0.72000	35.18289	83.63	0.44
89/ 5/22	2447668.5	-0.00114	0.71954	0.01030	-35.14270	-0.24041	2.01985	0.71961	35.20152	90.09	0.82
89/ 5/26	2447672.5	-0.08214	0.71442	0.01489	-34.91322	-4.19058	1.95044	0.71928	35.21787	96.56	1.19
89/ 5/30	2447676.5	-0.16210	0.70021	0.01929	-34.23945	-8.09258	1.85615	0.71899	35.23173	103.03	1.54

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

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89/ 6/ 3	2447680.5	-0.24000	0.67710	0.02345	-33.12905	-11.89575	1.73812	0.71876	35.24292	109.52	1.87
89/ 6/ 7	2447684.5	-0.31485	0.64537	0.02731	-31.59560	-15.55054	1.59784	0.71859	35.25130	116.01	2.18
89/ 6/11	2447688.5	-0.38568	0.60540	0.03082	-29.65842	-19.00925	1.43712	0.71848	35.25675	122.50	2.46
89/ 6/15	2447692.5	-0.45159	0.55772	0.03393	-27.34234	-22.22670	1.25800	0.71843	35.25921	129.00	2.71
89/ 6/19	2447696.5	-0.51174	0.50293	0.03662	-24.67732	-25.16093	1.06283	0.71844	35.25864	135.50	2.92
89/ 6/23	2447700.5	-0.56536	0.44172	0.03883	-21.69808	-27.77378	0.85414	0.71851	35.25506	142.00	3.10
89/ 6/27	2447704.5	-0.61178	0.37488	0.04055	-18.44355	-30.03148	0.63465	0.71864	35.24851	148.50	3.24
89/ 7/ 1	2447708.5	-0.65040	0.30326	0.04176	-14.95631	-31.90510	0.40723	0.71884	35.23907	155.00	3.33
89/ 7/ 5	2447712.5	-0.68074	0.22778	0.04243	-11.28195	-33.37095	0.17484	0.71909	35.22688	161.50	3.38
89/ 7/ 9	2447716.5	-0.70242	0.14940	0.04257	-7.46841	-34.41092	-0.05951	0.71939	35.21210	167.99	3.39
89/ 7/13	2447720.5	-0.71518	0.06912	0.04216	-3.56528	-35.01265	-0.29279	0.71974	35.19492	174.48	3.36
89/ 7/17	2447724.5	-0.71886	-0.01203	0.04122	0.37694	-35.16967	-0.52199	0.72014	35.17556	180.96	3.28
89/ 7/21	2447728.5	-0.71344	-0.09303	0.03975	4.30755	-34.88144	-0.74418	0.72058	35.15428	187.43	3.16
89/ 7/25	2447732.5	-0.69901	-0.17285	0.03778	8.17632	-34.15325	-0.95656	0.72105	35.13135	193.89	3.00
89/ 7/29	2447736.5	-0.67575	-0.25050	0.03534	11.93423	-32.99610	-1.15645	0.72155	35.10706	200.34	2.81
89/ 8/ 2	2447740.5	-0.64399	-0.32499	0.03245	15.53409	-31.42643	-1.34138	0.72208	35.08173	206.78	2.58
89/ 8/ 6	2447744.5	-0.60413	-0.39540	0.02916	18.93110	-29.46586	-1.50907	0.72261	35.05568	213.20	2.31
89/ 8/10	2447748.5	-0.55671	-0.46085	0.02550	22.08346	-27.14075	-1.65748	0.72316	35.02923	219.62	2.02
89/ 8/14	2447752.5	-0.50232	-0.52054	0.02152	24.95281	-24.48187	-1.78486	0.72371	35.00272	226.02	1.70
89/ 8/18	2447756.5	-0.44166	-0.57374	0.01727	27.50468	-21.52384	-1.88970	0.72425	34.97648	232.41	1.37
89/ 8/22	2447760.5	-0.37551	-0.61979	0.01280	29.70883	-18.30470	-1.97080	0.72478	34.95084	238.79	1.01
89/ 8/26	2447764.5	-0.30468	-0.65814	0.00818	31.53956	-14.86534	-2.02728	0.72529	34.92610	245.16	0.65
89/ 8/30	2447768.5	-0.23009	-0.68834	0.00346	32.97593	-11.24899	-2.05853	0.72578	34.90256	251.52	0.27
89/ 9/ 3	2447772.5	-0.15264	-0.71001	-0.00131	34.00191	-7.50065	-2.06428	0.72624	34.88053	257.87	-0.10
89/ 9/ 7	2447776.5	-0.07331	-0.72292	-0.00606	34.60655	-3.66655	-2.04455	0.72666	34.86025	264.21	-0.48
89/ 9/11	2447780.5	0.00693	-0.72692	-0.01074	34.78394	0.20639	-1.99967	0.72704	34.84198	270.55	-0.85
89/ 9/15	2447784.5	0.08707	-0.72198	-0.01528	34.53325	4.07111	-1.93026	0.72737	34.82593	276.88	-1.20
89/ 9/19	2447788.5	0.16615	-0.70816	-0.01964	33.85870	7.88092	-1.83723	0.72765	34.81229	283.20	-1.55
89/ 9/23	2447792.5	0.24319	-0.68564	-0.02375	32.76939	11.59000	-1.72176	0.72788	34.80123	289.53	-1.87
89/ 9/27	2447796.5	0.31725	-0.65472	-0.02758	31.27922	15.15391	-1.58527	0.72806	34.79287	295.85	-2.17
89/10/ 1	2447800.5	0.38742	-0.61577	-0.03106	29.40668	18.53003	-1.42943	0.72817	34.78732	302.18	-2.45
89/10/ 5	2447804.5	0.45284	-0.56928	-0.03417	27.17459	21.67799	-1.25615	0.72823	34.78465	308.50	-2.69
89/10/ 9	2447808.5	0.51272	-0.51582	-0.03686	24.60992	24.56012	-1.06749	0.72822	34.78487	314.83	-2.90
89/10/13	2447812.5	0.56632	-0.45603	-0.03909	21.74343	27.14183	-0.86574	0.72816	34.78801	321.16	-3.08
89/10/17	2447816.5	0.61298	-0.39067	-0.04085	18.60937	29.39197	-0.65329	0.72803	34.79401	327.49	-3.22
89/10/21	2447820.5	0.65212	-0.32051	-0.04210	15.24513	31.28313	-0.43270	0.72785	34.80281	333.83	-3.32
89/10/25	2447824.5	0.68327	-0.24642	-0.04284	11.69088	32.79202	-0.20661	0.72761	34.81430	340.17	-3.38
89/10/29	2447828.5	0.70602	-0.16931	-0.04306	7.98910	33.89968	0.02227	0.72732	34.82836	346.51	-3.39
89/11/ 2	2447832.5	0.72010	-0.09011	-0.04274	4.18420	34.59177	0.25117	0.72698	34.84481	352.87	-3.37
89/11/ 6	2447836.5	0.72531	-0.00981	-0.04190	0.32203	34.85871	0.47733	0.72659	34.86347	359.23	-3.31
89/11/10	2447840.5	0.72158	0.07062	-0.04054	-3.55061	34.69591	0.69797	0.72616	34.88409	5.59	-3.20
89/11/14	2447844.5	0.70894	0.15017	-0.03868	-7.38647	34.10384	0.91039	0.72570	34.90645	11.96	-3.06
89/11/18	2447848.5	0.68752	0.22786	-0.03634	-11.13842	33.08811	1.11195	0.72520	34.93027	18.34	-2.87
89/11/22	2447852.5	0.65757	0.30273	-0.03355	-14.75992	31.65950	1.30013	0.72469	34.95525	24.72	-2.65
89/11/26	2447856.5	0.61946	0.37383	-0.03035	-18.20568	29.83391	1.47254	0.72415	34.98110	31.11	-2.40

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89/11/30	2447860.5	0.57363	0.44028	-0.02676	-21.43213	27.63225	1.62698	0.72361	35.00749	37.51	-2.12
89/12/ 4	2447864.5	0.52063	0.50123	-0.02284	-24.39805	25.08028	1.76143	0.72306	35.03409	43.91	-1.81
89/12/ 8	2447868.5	0.46113	0.55591	-0.01864	-27.06511	22.20837	1.87413	0.72251	35.06057	50.32	-1.48
89/12/12	2447872.5	0.39584	0.60362	-0.01420	-29.39839	19.05121	1.96355	0.72198	35.08660	56.74	-1.13
89/12/16	2447876.5	0.32558	0.64375	-0.00959	-31.36692	15.64746	2.02846	0.72146	35.11184	63.17	-0.76
89/12/20	2447880.5	0.25122	0.67576	-0.00485	-32.94414	12.03925	2.06794	0.72096	35.13597	69.61	-0.39
89/12/24	2447884.5	0.17368	0.69925	-0.00005	-34.10834	8.27173	2.08137	0.72050	35.15868	76.05	-0.00
89/12/28	2447888.5	0.09395	0.71390	0.00475	-34.84302	4.39249	2.06848	0.72007	35.17966	82.50	0.38
90/ 1/ 1	2447892.5	0.01304	0.71950	0.00948	-35.13721	0.45095	2.02935	0.71968	35.19865	88.96	0.76
90/ 1/ 5	2447896.5	-0.06805	0.71597	0.01410	-34.98569	-3.50234	1.96438	0.71933	35.21539	95.43	1.12
90/ 1/ 9	2447900.5	-0.14827	0.70335	0.01854	-34.38915	-7.41632	1.87435	0.71904	35.22965	101.90	1.48
90/ 1/13	2447904.5	-0.22660	0.68177	0.02274	-33.35422	-11.24022	1.76036	0.71880	35.24125	108.39	1.81
90/ 1/17	2447908.5	-0.30205	0.65152	0.02666	-31.89348	-14.92425	1.62385	0.71862	35.25003	114.87	2.13
90/ 1/21	2447912.5	-0.37365	0.61296	0.03023	-30.02526	-18.42035	1.46655	0.71850	35.25586	121.37	2.41
90/ 1/25	2447916.5	-0.44048	0.56659	0.03342	-27.77344	-21.68284	1.29048	0.71845	35.25869	127.86	2.67
90/ 1/29	2447920.5	-0.50170	0.51299	0.03618	-25.16715	-24.66918	1.09794	0.71845	35.25846	134.36	2.89
90/ 2/ 2	2447924.5	-0.55651	0.45285	0.03848	-22.24030	-27.34051	0.89143	0.71852	35.25520	140.86	3.07
90/ 2/ 6	2447928.5	-0.60424	0.38694	0.04029	-19.03114	-29.66227	0.67363	0.71864	35.24894	147.37	3.21
90/ 2/10	2447932.5	-0.64426	0.31610	0.04159	-15.58164	-31.60467	0.44740	0.71883	35.23979	153.87	3.32
90/ 2/14	2447936.5	-0.67608	0.24123	0.04235	-11.93693	-33.14311	0.21568	0.71907	35.22786	160.36	3.38
90/ 2/18	2447940.5	-0.69930	0.16329	0.04258	-8.14458	-34.25848	-0.01852	0.71937	35.21333	166.86	3.39
90/ 2/22	2447944.5	-0.71363	0.08328	0.04227	-4.25392	-34.93744	-0.25216	0.71972	35.19637	173.34	3.37
90/ 2/26	2447948.5	-0.71892	0.00221	0.04142	-0.31533	-35.17249	-0.48226	0.72011	35.17721	179.82	3.30
90/ 3/ 2	2447952.5	-0.71509	-0.07889	0.04005	3.62048	-34.96207	-0.70585	0.72055	35.15611	186.30	3.19
90/ 3/ 6	2447956.5	-0.70223	-0.15899	0.03817	7.50319	-34.31045	-0.92011	0.72101	35.13334	192.76	3.03
90/ 3/10	2447960.5	-0.68050	-0.23708	0.03580	11.28355	-33.22766	-1.12234	0.72151	35.10920	199.21	2.84
90/ 3/14	2447964.5	-0.65021	-0.31219	0.03299	14.91400	-31.72920	-1.31002	0.72203	35.08398	205.65	2.62
90/ 3/18	2447968.5	-0.61175	-0.38338	0.02976	18.34932	-29.83579	-1.48086	0.72256	35.05802	212.08	2.36
90/ 3/22	2447972.5	-0.56561	-0.44976	0.02616	21.54718	-27.57297	-1.63276	0.72311	35.03164	218.49	2.07
90/ 3/26	2447976.5	-0.51240	-0.51051	0.02224	24.46858	-24.97076	-1.76392	0.72366	35.00517	224.89	1.76
90/ 3/30	2447980.5	-0.45280	-0.56490	0.01803	27.07837	-22.06311	-1.87280	0.72420	34.97894	231.29	1.43
90/ 4/ 3	2447984.5	-0.38756	-0.61225	0.01360	29.34554	-18.88747	-1.95814	0.72473	34.95328	237.67	1.08
90/ 4/ 7	2447988.5	-0.31750	-0.65199	0.00900	31.24358	-15.48425	-2.01899	0.72524	34.92850	244.04	0.71
90/ 4/11	2447992.5	-0.24350	-0.68365	0.00429	32.75071	-11.89628	-2.05471	0.72573	34.90490	250.40	0.34
90/ 4/15	2447996.5	-0.16649	-0.70685	-0.00047	33.85001	-8.16826	-2.06495	0.72619	34.88277	256.75	-0.04
90/ 4/19	2448000.5	-0.08743	-0.72132	-0.00523	34.52961	-4.34623	-2.04970	0.72661	34.86237	263.09	-0.41
90/ 4/23	2448004.5	-0.00728	-0.72689	-0.00992	34.78271	-0.47699	-2.00922	0.72700	34.84396	269.43	-0.78
90/ 4/27	2448008.5	0.07295	-0.72352	-0.01449	34.60757	3.39238	-1.94408	0.72733	34.82774	275.76	-1.14
90/ 5/ 1	2448012.5	0.15229	-0.71125	-0.01889	34.00749	7.21510	-1.85515	0.72762	34.81392	282.09	-1.49
90/ 5/ 5	2448016.5	0.22976	-0.69025	-0.02305	32.99072	10.94517	-1.74354	0.72785	34.80265	288.41	-1.81
90/ 5/ 9	2448020.5	0.30441	-0.66079	-0.02693	31.57029	14.53787	-1.61065	0.72803	34.79407	294.73	-2.12
90/ 5/13	2448024.5	0.37533	-0.62322	-0.03047	29.76387	17.95022	-1.45810	0.72815	34.78828	301.06	-2.40
90/ 5/17	2448028.5	0.44165	-0.57802	-0.03365	27.59353	21.14141	-1.28775	0.72821	34.78535	307.38	-2.65
90/ 5/21	2448032.5	0.50256	-0.52574	-0.03641	25.08549	24.07326	-1.10165	0.72821	34.78531	313.71	-2.87
90/ 5/25	2448036.5	0.55731	-0.46702	-0.03873	22.26987	26.71059	-0.90204	0.72815	34.78816	320.04	-3.05

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90/ 5/29	2448040.5	0.60524	-0.40258	-0.04057	19.18032	29.02157	-0.69129	0.72804	34.79388	326.37	-3.19
90/ 6/ 2	2448044.5	0.64575	-0.33321	-0.04192	15.85370	30.97812	-0.47194	0.72786	34.80239	332.71	-3.30
90/ 6/ 6	2448048.5	0.67834	-0.25974	-0.04275	12.32972	32.55616	-0.24661	0.72763	34.81360	339.05	-3.37
90/ 6/10	2448052.5	0.70260	-0.18309	-0.04305	8.65050	33.73595	-0.01802	0.72734	34.82737	345.39	-3.39
90/ 6/14	2448056.5	0.71822	-0.10419	-0.04283	4.86014	34.50228	0.21110	0.72700	34.84355	351.75	-3.38
90/ 6/18	2448060.5	0.72500	-0.02401	-0.04208	1.00430	34.84471	0.43795	0.72662	34.86193	358.10	-3.32
90/ 6/22	2448064.5	0.72285	0.05647	-0.04081	-2.87034	34.75775	0.65977	0.72620	34.88231	4.47	-3.22
90/ 6/26	2448068.5	0.71176	0.13626	-0.03904	-6.71654	34.24097	0.87384	0.72574	34.90443	10.84	-3.08
90/ 6/30	2448072.5	0.69187	0.21435	-0.03678	-10.48710	33.29906	1.07751	0.72525	34.92804	17.21	-2.91
90/ 7/ 4	2448076.5	0.66340	0.28979	-0.03407	-14.13530	31.94191	1.26823	0.72474	34.95283	23.60	-2.69
90/ 7/ 8	2448080.5	0.62669	0.36163	-0.03093	-17.61557	30.18451	1.44358	0.72421	34.97852	29.99	-2.45
90/ 7/12	2448084.5	0.58218	0.42896	-0.02741	-20.88399	28.04691	1.60133	0.72366	35.00478	36.38	-2.17
90/ 7/16	2448088.5	0.53040	0.49094	-0.02355	-23.89885	25.55406	1.73942	0.72312	35.03129	42.79	-1.87
90/ 7/20	2448092.5	0.47198	0.54678	-0.01939	-26.62128	22.73556	1.85605	0.72257	35.05771	49.20	-1.54
90/ 7/24	2448096.5	0.40765	0.59576	-0.01499	-29.01570	19.62539	1.94964	0.72203	35.08372	55.62	-1.19
90/ 7/28	2448100.5	0.33820	0.63726	-0.01040	-31.05040	16.26153	2.01892	0.72151	35.10899	62.04	-0.83
90/ 8/ 1	2448104.5	0.26448	0.67073	-0.00568	-32.69803	12.68558	2.06289	0.72102	35.13318	68.48	-0.45
90/ 8/ 5	2448108.5	0.18744	0.69574	-0.00089	-33.93598	8.94222	2.08090	0.72055	35.15599	74.92	-0.07
90/ 8/ 9	2448112.5	0.10802	0.71195	0.00391	-34.74683	5.07866	2.07261	0.72011	35.17713	81.37	0.31
90/ 8/13	2448116.5	0.02723	0.71915	0.00866	-35.11863	1.14407	2.03803	0.71972	35.19631	87.83	0.69
90/ 8/17	2448120.5	-0.05390	0.71722	0.01331	-35.04516	-2.81114	1.97753	0.71937	35.21329	94.30	1.06
90/ 8/21	2448124.5	-0.13435	0.70619	0.01778	-34.52607	-6.73594	1.89180	0.71907	35.22784	100.77	1.42
90/ 8/25	2448128.5	-0.21308	0.68617	0.02203	-33.56697	-10.57945	1.78190	0.71883	35.23977	107.25	1.76
90/ 8/29	2448132.5	-0.28911	0.65741	0.02600	-32.17942	-14.29167	1.64921	0.71864	35.24893	113.74	2.07
90/ 9/ 2	2448136.5	-0.36145	0.62027	0.02963	-30.38077	-17.82415	1.49540	0.71851	35.25518	120.23	2.36
90/ 9/ 6	2448140.5	-0.42918	0.57523	0.03289	-28.19396	-21.13078	1.32246	0.71844	35.25845	126.73	2.62
90/ 9/10	2448144.5	-0.49144	0.52285	0.03573	-25.64724	-24.16840	1.13262	0.71844	35.25869	133.23	2.85
90/ 9/14	2448148.5	-0.54743	0.46380	0.03811	-22.77372	-26.89749	0.92837	0.71850	35.25591	139.73	3.04
90/ 9/18	2448152.5	-0.59644	0.39884	0.04001	-19.61093	-29.28269	0.71235	0.71861	35.25013	146.23	3.19
90/ 9/22	2448156.5	-0.63784	0.32879	0.04140	-16.20024	-31.29336	0.48739	0.71879	35.24145	152.73	3.30
90/ 9/26	2448160.5	-0.67113	0.25456	0.04226	-12.58627	-32.90396	0.25642	0.71903	35.22997	159.23	3.37
90/ 9/30	2448164.5	-0.69588	0.17709	0.04258	-8.81622	-34.09442	0.02245	0.71932	35.21584	165.72	3.39
90/10/ 4	2448168.5	-0.71178	0.09736	0.04236	-4.93916	-34.85037	-0.21151	0.71966	35.19926	172.21	3.37
90/10/ 8	2448172.5	-0.71865	0.01641	0.04161	-1.00533	-35.16329	-0.44243	0.72004	35.18045	178.69	3.31
90/10/12	2448176.5	-0.71642	-0.06476	0.04032	2.93456	-35.03060	-0.66736	0.72047	35.15964	185.17	3.21
90/10/16	2448180.5	-0.70513	-0.14511	0.03853	6.83009	-34.45556	-0.88344	0.72094	35.13711	191.63	3.06
90/10/20	2448184.5	-0.68494	-0.22362	0.03625	10.63175	-33.44721	-1.08795	0.72143	35.11315	198.08	2.88
90/10/24	2448188.5	-0.65612	-0.29932	0.03351	14.29168	-32.02010	-1.27834	0.72195	35.08808	204.52	2.66
90/10/28	2448192.5	-0.61905	-0.37126	0.03036	17.76419	-30.19408	-1.45227	0.72248	35.06220	210.95	2.41
90/11/ 1	2448196.5	-0.57422	-0.43854	0.02682	21.00641	-27.99388	-1.60762	0.72302	35.03585	217.37	2.13
90/11/ 5	2448200.5	-0.52220	-0.50034	0.02294	23.97875	-25.44875	-1.74252	0.72357	35.00936	223.78	1.82
90/11/ 9	2448204.5	-0.46366	-0.55588	0.01878	26.64533	-22.59200	-1.85539	0.72411	34.98306	230.17	1.49
90/11/13	2448208.5	-0.39935	-0.60451	0.01439	28.97443	-19.46049	-1.94491	0.72465	34.95727	236.55	1.14
90/11/17	2448212.5	-0.33007	-0.64562	0.00982	30.93872	-16.09415	-2.01010	0.72516	34.93231	242.92	0.78
90/11/21	2448216.5	-0.25670	-0.67872	0.00512	32.51557	-12.53543	-2.05024	0.72566	34.90849	249.28	0.40

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90/11/25	2448220.5	-0.18015	-0.70342	0.00036	33.68722	-8.82873	-2.06495	0.72612	34.88609	255.63	0.03
90/11/29	2448224.5	-0.10137	-0.71943	-0.00440	34.44091	-5.01990	-2.05415	0.72655	34.86539	261.98	-0.35
90/12/ 3	2448228.5	-0.02135	-0.72657	-0.00911	34.76894	-1.15564	-2.01805	0.72694	34.84662	268.32	-0.72
90/12/ 7	2448232.5	0.05894	-0.72476	-0.01371	34.66869	2.71700	-1.95718	0.72729	34.83003	274.65	-1.08
90/12/11	2448236.5	0.13850	-0.71405	-0.01813	34.14259	6.55114	-1.87234	0.72758	34.81580	280.98	-1.43
90/12/15	2448240.5	0.21637	-0.69456	-0.02234	33.19802	10.30062	-1.76461	0.72783	34.80410	287.30	-1.76
90/12/19	2448244.5	0.29158	-0.66655	-0.02627	31.84719	13.92046	-1.63534	0.72801	34.79507	293.63	-2.07
90/12/23	2448248.5	0.36321	-0.63038	-0.02988	30.10695	17.36733	-1.48612	0.72814	34.78881	299.95	-2.35
90/12/27	2448252.5	0.43040	-0.58648	-0.03312	27.99864	20.60004	-1.31875	0.72821	34.78541	306.27	-2.61
90/12/31	2448256.5	0.49231	-0.53539	-0.03596	25.54776	23.57991	-1.13526	0.72822	34.78490	312.60	-2.83
91/ 1/ 4	2448260.5	0.54820	-0.47775	-0.03836	22.78376	26.27119	-0.93784	0.72817	34.78728	318.93	-3.02
91/ 1/ 8	2448264.5	0.59737	-0.41426	-0.04028	19.73969	28.64147	-0.72887	0.72807	34.79253	325.26	-3.17
91/ 1/12	2448268.5	0.63921	-0.34569	-0.04172	16.45188	30.66196	-0.51085	0.72790	34.80059	331.60	-3.29
91/ 1/16	2448272.5	0.67322	-0.27288	-0.04264	12.95956	32.30788	-0.28638	0.72767	34.81137	337.94	-3.36
91/ 1/20	2448276.5	0.69897	-0.19672	-0.04304	9.30446	33.55868	-0.05816	0.72740	34.82473	344.28	-3.39
91/ 1/24	2448280.5	0.71612	-0.11814	-0.04291	5.53036	34.39836	0.17105	0.72707	34.84051	350.63	-3.38
91/ 1/28	2448284.5	0.72446	-0.03811	-0.04225	1.68268	34.81563	0.39850	0.72669	34.85854	356.99	-3.33
91/ 2/ 1	2448288.5	0.72387	0.04239	-0.04107	-2.19203	34.80410	0.62140	0.72628	34.87860	3.35	-3.24
91/ 2/ 5	2448292.5	0.71435	0.12236	-0.03938	-6.04661	34.36246	0.83702	0.72582	34.90044	9.72	-3.11
91/ 2/ 9	2448296.5	0.69599	0.20083	-0.03721	-9.83380	33.49451	1.04269	0.72534	34.92381	16.10	-2.94
91/ 2/13	2448300.5	0.66900	0.27680	-0.03458	-13.50677	32.20920	1.23585	0.72483	34.94843	22.48	-2.73
91/ 2/17	2448304.5	0.63371	0.34933	-0.03151	-17.01969	30.52064	1.41406	0.72430	34.97398	28.87	-2.49
91/ 2/21	2448308.5	0.59052	0.41752	-0.02805	-20.32832	28.44802	1.57505	0.72376	35.00016	35.26	-2.22
91/ 2/25	2448312.5	0.53997	0.48050	-0.02425	-23.39052	26.01543	1.71672	0.72321	35.02665	41.66	-1.92
91/ 3/ 1	2448316.5	0.48267	0.53747	-0.02014	-26.16688	23.25166	1.83723	0.72267	35.05311	48.07	-1.60
91/ 3/ 5	2448320.5	0.41932	0.58770	-0.01578	-28.62120	20.18995	1.93496	0.72213	35.07921	54.49	-1.25
91/ 3/ 9	2448324.5	0.35070	0.63055	-0.01122	-30.72107	16.86763	2.00857	0.72160	35.10463	60.92	-0.89
91/ 3/13	2448328.5	0.27767	0.66546	-0.00652	-32.43831	13.32568	2.05704	0.72110	35.12904	67.35	-0.52
91/ 3/17	2448332.5	0.20114	0.69198	-0.00173	-33.74949	9.60828	2.07963	0.72063	35.15212	73.79	-0.14
91/ 3/21	2448336.5	0.12207	0.70976	0.00307	-34.63622	5.76225	2.07595	0.72018	35.17358	80.24	0.24
91/ 3/25	2448340.5	0.04145	0.71855	0.00784	-35.08559	1.83644	2.04596	0.71978	35.19314	86.70	0.62
91/ 3/29	2448344.5	-0.03970	0.71822	0.01250	-35.09035	-2.11888	1.98996	0.71943	35.21055	93.16	1.00
91/ 4/ 2	2448348.5	-0.12034	0.70877	0.01701	-34.64912	-6.05275	1.90858	0.71912	35.22556	99.64	1.36
91/ 4/ 6	2448352.5	-0.19945	0.69031	0.02130	-33.76647	-9.91422	1.80283	0.71886	35.23799	106.12	1.70
91/ 4/10	2448356.5	-0.27602	0.66306	0.02532	-32.45289	-13.65306	1.67401	0.71866	35.24768	112.60	2.02
91/ 4/14	2448360.5	-0.34908	0.62736	0.02902	-30.72475	-17.22051	1.52376	0.71852	35.25448	119.09	2.31
91/ 4/18	2448364.5	-0.41768	0.58366	0.03235	-28.60403	-20.56999	1.35401	0.71845	35.25831	125.59	2.58
91/ 4/22	2448368.5	-0.48095	0.53252	0.03526	-26.11807	-23.65778	1.16696	0.71843	35.25912	132.09	2.81
91/ 4/26	2448372.5	-0.53810	0.47459	0.03773	-23.29916	-26.44366	0.96504	0.71847	35.25690	138.59	3.01
91/ 4/30	2448376.5	-0.58838	0.41060	0.03971	-20.18409	-28.89151	0.75088	0.71858	35.25168	145.09	3.17
91/ 5/ 4	2448380.5	-0.63116	0.34138	0.04119	-16.81361	-30.96982	0.52728	0.71875	35.24352	151.59	3.29
91/ 5/ 8	2448384.5	-0.66590	0.26782	0.04215	-13.23182	-32.65214	0.29714	0.71897	35.23253	158.09	3.36
91/ 5/12	2448388.5	-0.69217	0.19084	0.04256	-9.48551	-33.91740	0.06347	0.71925	35.21887	164.59	3.39
91/ 5/16	2448392.5	-0.70964	0.11144	0.04244	-5.62349	-34.75023	-0.17072	0.71959	35.20271	171.08	3.38
91/ 5/20	2448396.5	-0.71810	0.03062	0.04178	-1.69585	-35.14108	-0.40239	0.71996	35.18427	177.56	3.33

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91/ 5/24	2448400.5	-0.71746	-0.05058	0.04058	2.24674	-35.08631	-0.62858	0.72039	35.16379	184.03	3.23
91/ 5/28	2448404.5	-0.70775	-0.13115	0.03888	6.15374	-34.58819	-0.84641	0.72084	35.14153	190.50	3.09
91/ 6/ 1	2448408.5	-0.68909	-0.21006	0.03668	9.97543	-33.65473	-1.05314	0.72133	35.11779	196.95	2.91
91/ 6/ 5	2448412.5	-0.66176	-0.28632	0.03402	13.66361	-32.29958	-1.24618	0.72184	35.09287	203.40	2.70
91/ 6/ 9	2448416.5	-0.62610	-0.35898	0.03094	17.17218	-30.54165	-1.42315	0.72238	35.06710	209.83	2.45
91/ 6/13	2448420.5	-0.58259	-0.42714	0.02746	20.45772	-28.40486	-1.58189	0.72292	35.04079	216.25	2.18
91/ 6/17	2448424.5	-0.53178	-0.48995	0.02364	23.48003	-25.91771	-1.72049	0.72347	35.01428	222.66	1.87
91/ 6/21	2448428.5	-0.47433	-0.54664	0.01953	26.20257	-23.11283	-1.83731	0.72401	34.98790	229.05	1.55
91/ 6/25	2448432.5	-0.41097	-0.59652	0.01517	28.59284	-20.02651	-1.93100	0.72455	34.96199	235.44	1.20
91/ 6/29	2448436.5	-0.34250	-0.63899	0.01063	30.62274	-16.69817	-2.00050	0.72507	34.93685	241.81	0.84
91/ 7/ 3	2448440.5	-0.26978	-0.67352	0.00595	32.26880	-13.16987	-2.04505	0.72557	34.91279	248.17	0.47
91/ 7/ 7	2448444.5	-0.19372	-0.69972	0.00120	33.51240	-9.48570	-2.06422	0.72604	34.89012	254.53	0.09
91/ 7/11	2448448.5	-0.11526	-0.71726	-0.00357	34.33989	-5.69131	-2.05787	0.72647	34.86910	260.87	-0.28
91/ 7/15	2448452.5	-0.03538	-0.72596	-0.00829	34.74269	-1.83329	-2.02616	0.72687	34.84998	267.21	-0.65
91/ 7/19	2448456.5	0.04493	-0.72572	-0.01291	34.71730	2.04132	-1.96956	0.72723	34.83299	273.54	-1.02
91/ 7/23	2448460.5	0.12469	-0.71656	-0.01737	34.26526	5.88559	-1.88884	0.72753	34.81833	279.87	-1.37
91/ 7/27	2448464.5	0.20293	-0.69859	-0.02162	33.39311	9.65318	-1.78502	0.72778	34.80618	286.20	-1.70
91/ 7/31	2448468.5	0.27867	-0.67205	-0.02560	32.11222	13.29887	-1.65940	0.72798	34.79667	292.52	-2.02
91/ 8/ 4	2448472.5	0.35099	-0.63727	-0.02927	30.43867	16.77902	-1.51353	0.72812	34.78992	298.84	-2.30
91/ 8/ 8	2448476.5	0.41902	-0.59468	-0.03258	28.39300	20.05202	-1.34919	0.72821	34.78600	305.17	-2.56
91/ 8/12	2448480.5	0.48191	-0.54481	-0.03549	26.00002	23.07871	-1.16835	0.72823	34.78496	311.49	-2.79
91/ 8/16	2448484.5	0.53890	-0.48827	-0.03797	23.28852	25.82283	-0.97320	0.72819	34.78679	317.82	-2.99
91/ 8/20	2448488.5	0.58929	-0.42574	-0.03998	20.29095	28.25133	-0.76607	0.72809	34.79148	324.15	-3.15
91/ 8/24	2448492.5	0.63246	-0.35800	-0.04150	17.04309	30.33479	-0.54944	0.72794	34.79897	330.49	-3.27
91/ 8/28	2448496.5	0.66787	-0.28587	-0.04252	13.58370	32.04770	-0.32590	0.72773	34.80917	336.83	-3.35
91/ 9/ 1	2448500.5	0.69509	-0.21023	-0.04301	9.95410	33.36877	-0.09814	0.72746	34.82195	343.17	-3.39
91/ 9/ 5	2448504.5	0.71377	-0.13201	-0.04297	6.19775	34.28119	0.13109	0.72714	34.83719	349.52	-3.39
91/ 9/ 9	2448508.5	0.72366	-0.05217	-0.04240	2.35981	34.77285	0.35904	0.72678	34.85468	355.88	-3.34
91/ 9/13	2448512.5	0.72464	0.02832	-0.04131	-1.51333	34.83651	0.58291	0.72637	34.87424	2.24	-3.26
91/ 9/17	2448516.5	0.71668	0.10846	-0.03971	-5.37459	34.46997	0.79998	0.72593	34.89563	8.61	-3.14
91/ 9/21	2448520.5	0.69986	0.18726	-0.03762	-9.17668	33.67612	1.00756	0.72545	34.91859	14.98	-2.97
91/ 9/25	2448524.5	0.67436	0.26373	-0.03507	-12.87269	32.46305	1.20306	0.72495	34.94286	21.36	-2.77
91/ 9/29	2448528.5	0.64050	0.33693	-0.03208	-16.41658	30.84397	1.38403	0.72442	34.96813	27.75	-2.54
91/10/ 3	2448532.5	0.59866	0.40594	-0.02868	-19.76380	28.83718	1.54816	0.72389	34.99410	34.14	-2.27
91/10/ 7	2448536.5	0.54937	0.46989	-0.02494	-22.87182	26.46592	1.69333	0.72334	35.02045	40.54	-1.98
91/10/11	2448540.5	0.49320	0.52797	-0.02088	-25.70073	23.75817	1.81764	0.72279	35.04686	46.95	-1.66
91/10/15	2448544.5	0.43086	0.57943	-0.01656	-28.21375	20.74643	1.91944	0.72226	35.07298	53.37	-1.31
91/10/19	2448548.5	0.36311	0.62362	-0.01203	-30.37777	17.46730	1.99735	0.72173	35.09850	59.79	-0.95
91/10/23	2448552.5	0.29080	0.65996	-0.00735	-32.16387	13.96114	2.05026	0.72122	35.12309	66.22	-0.58
91/10/27	2448556.5	0.21482	0.68798	-0.00257	-33.54773	10.27160	2.07741	0.72074	35.14643	72.66	-0.20
91/10/31	2448560.5	0.13612	0.70731	0.00223	-34.51009	6.44505	2.07835	0.72029	35.16823	79.11	0.18
91/11/ 4	2448564.5	0.05570	0.71769	0.00701	-35.03704	2.53002	2.05296	0.71988	35.18820	85.56	0.56
91/11/ 8	2448568.5	-0.02542	0.71897	0.01170	-35.12032	-1.42346	2.00149	0.71951	35.20609	92.03	0.93
91/11/12	2448572.5	-0.10622	0.71112	0.01624	-34.75749	-5.36450	1.92451	0.71920	35.22165	98.50	1.29
91/11/16	2448576.5	-0.18567	0.69423	0.02057	-33.95207	-9.24213	1.82295	0.71893	35.23468	104.97	1.64

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91/11/20	2448580.5	-0.26276	0.66851	0.02464	-32.71351	-13.00594	1.69808	0.71872	35.24502	111.46	1.96
91/11/24	2448584.5	-0.33650	0.63427	0.02840	-31.05712	-16.60687	1.55147	0.71856	35.25252	117.95	2.26
91/11/28	2448588.5	-0.40595	0.59194	0.03179	-29.00390	-19.99792	1.38501	0.71847	35.25707	124.44	2.54
91/12/ 2	2448592.5	-0.47022	0.54207	0.03478	-26.58025	-23.13481	1.20084	0.71844	35.25863	130.94	2.78
91/12/ 6	2448596.5	-0.52850	0.48528	0.03733	-23.81760	-25.97666	1.00136	0.71847	35.25717	137.44	2.98
91/12/10	2448600.5	-0.58003	0.42230	0.03940	-20.75198	-28.48658	0.78916	0.71856	35.25270	143.94	3.14
91/12/14	2448604.5	-0.62418	0.35394	0.04097	-17.42345	-30.63220	0.56700	0.71871	35.24528	150.44	3.27
91/12/18	2448608.5	-0.66037	0.28107	0.04202	-13.87558	-32.38612	0.33780	0.71892	35.23501	156.94	3.35
91/12/22	2448612.5	-0.68815	0.20462	0.04253	-10.15471	-33.72629	0.10453	0.71919	35.22203	163.44	3.39
91/12/26	2448616.5	-0.70719	0.12557	0.04250	-6.30935	-34.63631	-0.12979	0.71951	35.20651	169.93	3.39
91/12/30	2448620.5	-0.71725	0.04493	0.04193	-2.38942	-35.10557	-0.36212	0.71987	35.18866	176.42	3.34
92/ 1/ 3	2448624.5	-0.71821	-0.03628	0.04083	1.55445	-35.12938	-0.58949	0.72028	35.16870	182.89	3.25
92/ 1/ 7	2448628.5	-0.71009	-0.11704	0.03921	5.47162	-34.70895	-0.80901	0.72073	35.14690	189.36	3.12
92/ 1/11	2448632.5	-0.69299	-0.19631	0.03710	9.31219	-33.85129	-1.01789	0.72121	35.12354	195.82	2.95
92/ 1/15	2448636.5	-0.66716	-0.27312	0.03452	13.02760	-32.56905	-1.21352	0.72172	35.09892	202.26	2.74
92/ 1/19	2448640.5	-0.63293	-0.34648	0.03150	16.57133	-30.88026	-1.39348	0.72225	35.07337	208.70	2.50
92/ 1/23	2448644.5	-0.59076	-0.41550	0.02809	19.89943	-28.80796	-1.55557	0.72279	35.04720	215.12	2.23
92/ 1/27	2448648.5	-0.54118	-0.47931	0.02433	22.97108	-26.37990	-1.69783	0.72333	35.02074	221.53	1.93
92/ 1/31	2448652.5	-0.48485	-0.53713	0.02027	25.74904	-23.62801	-1.81858	0.72388	34.99433	227.93	1.60
92/ 2/ 4	2448656.5	-0.42247	-0.58826	0.01595	28.20007	-20.58800	-1.91641	0.72442	34.96831	234.32	1.26
92/ 2/ 8	2448660.5	-0.35483	-0.63206	0.01143	30.29525	-17.29880	-1.99020	0.72494	34.94298	240.69	0.90
92/ 2/12	2448664.5	-0.28278	-0.66802	0.00677	32.01028	-13.80205	-2.03916	0.72544	34.91866	247.06	0.53
92/ 2/16	2448668.5	-0.20724	-0.69571	0.00203	33.32567	-10.14156	-2.06278	0.72592	34.89565	253.41	0.16
92/ 2/20	2448672.5	-0.12913	-0.71479	-0.00274	34.22689	-6.36274	-2.06087	0.72637	34.87422	259.76	-0.22
92/ 2/24	2448676.5	-0.04942	-0.72505	-0.00747	34.70447	-2.51209	-2.03355	0.72677	34.85464	266.10	-0.59
92/ 2/28	2448680.5	0.03089	-0.72638	-0.01212	34.75402	1.36337	-1.98124	0.72714	34.83714	272.44	-0.95
92/ 3/ 3	2448684.5	0.11082	-0.71877	-0.01661	34.37623	5.21665	-1.90465	0.72745	34.82192	278.77	-1.31
92/ 3/ 7	2448688.5	0.18939	-0.70233	-0.02090	33.57675	9.00125	-1.80476	0.72772	34.80917	285.09	-1.65
92/ 3/11	2448692.5	0.26564	-0.67727	-0.02493	32.36616	12.67172	-1.68282	0.72793	34.79903	291.42	-1.96
92/ 3/15	2448696.5	0.33863	-0.64390	-0.02866	30.75972	16.18409	-1.54035	0.72808	34.79163	297.74	-2.26
92/ 3/19	2448700.5	0.40747	-0.60265	-0.03203	28.77723	19.49637	-1.37908	0.72818	34.78705	304.06	-2.52
92/ 3/23	2448704.5	0.47132	-0.55401	-0.03502	26.44278	22.56895	-1.20096	0.72821	34.78535	310.39	-2.76
92/ 3/27	2448708.5	0.52940	-0.49858	-0.03757	23.78451	25.36501	-1.00814	0.72819	34.78654	316.72	-2.96
92/ 3/31	2448712.5	0.58099	-0.43705	-0.03967	20.83425	27.85095	-0.80292	0.72810	34.79060	323.05	-3.12
92/ 4/ 4	2448716.5	0.62546	-0.37016	-0.04127	17.62724	29.99668	-0.58776	0.72796	34.79750	329.38	-3.25
92/ 4/ 8	2448720.5	0.66227	-0.29874	-0.04238	14.20175	31.77600	-0.36525	0.72776	34.80715	335.72	-3.34
92/ 4/12	2448724.5	0.69094	-0.22365	-0.04296	10.59869	33.16687	-0.13803	0.72751	34.81943	342.06	-3.39
92/ 4/16	2448728.5	0.71113	-0.14581	-0.04301	6.86118	34.15168	0.09114	0.72720	34.83419	348.41	-3.39
92/ 4/20	2448732.5	0.72258	-0.06618	-0.04254	3.03413	34.71748	0.31950	0.72685	34.85128	354.77	-3.36
92/ 4/24	2448736.5	0.72512	0.01427	-0.04154	-0.83627	34.85619	0.54428	0.72645	34.87047	1.13	-3.28
92/ 4/28	2448740.5	0.71871	0.09454	-0.04003	-4.70302	34.56472	0.76272	0.72601	34.89154	7.49	-3.16
92/ 5/ 2	2448744.5	0.70343	0.17364	-0.03802	-8.51884	33.84507	0.97214	0.72554	34.91424	13.87	-3.00
92/ 5/ 6	2448748.5	0.67943	0.25059	-0.03554	-12.23670	32.70442	1.16993	0.72504	34.93829	20.25	-2.81
92/ 5/10	2448752.5	0.64700	0.32443	-0.03263	-15.81037	31.15509	1.35360	0.72452	34.96340	26.63	-2.58
92/ 5/14	2448756.5	0.60653	0.39424	-0.02930	-19.19502	29.21450	1.52081	0.72399	34.98927	33.02	-2.32

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92/ 5/18	2448760.5	0.55849	0.45913	-0.02561	-22.34773	26.90505	1.66943	0.72344	35.01557	39.42	-2.03
92/ 5/22	2448764.5	0.50348	0.51829	-0.02161	-25.22809	24.25391	1.79751	0.72290	35.04197	45.83	-1.71
92/ 5/26	2448768.5	0.44217	0.57095	-0.01733	-27.79873	21.29280	1.90334	0.72236	35.06815	52.24	-1.37
92/ 5/30	2448772.5	0.37531	0.61645	-0.01283	-30.02588	18.05764	1.98550	0.72183	35.09379	58.67	-1.02
92/ 6/ 3	2448776.5	0.30372	0.65420	-0.00817	-31.87984	14.58817	2.04284	0.72132	35.11854	65.10	-0.65
92/ 6/ 7	2448780.5	0.22832	0.68371	-0.00341	-33.33548	10.92749	2.07453	0.72083	35.14211	71.53	-0.27
92/ 6/11	2448784.5	0.15003	0.70458	0.00139	-34.37262	7.12153	2.08006	0.72038	35.16418	77.98	0.11
92/ 6/15	2448788.5	0.06984	0.71654	0.00618	-34.97639	3.21850	2.05926	0.71996	35.18447	84.43	0.49
92/ 6/19	2448792.5	-0.01124	0.71942	0.01089	-35.13754	-0.73180	2.01231	0.71959	35.20272	90.89	0.87
92/ 6/23	2448796.5	-0.09217	0.71316	0.01546	-34.85262	-4.67859	1.93972	0.71926	35.21870	97.36	1.23
92/ 6/27	2448800.5	-0.17193	0.69784	0.01983	-34.12407	-8.57086	1.84238	0.71898	35.23218	103.84	1.58
92/ 7/ 1	2448804.5	-0.24950	0.67364	0.02395	-32.96034	-12.35805	1.72148	0.71876	35.24299	110.32	1.91
92/ 7/ 5	2448808.5	-0.32389	0.64086	0.02777	-31.37570	-15.99082	1.57855	0.71860	35.25100	116.81	2.21
92/ 7/ 9	2448812.5	-0.39416	0.59991	0.03123	-29.39018	-19.42177	1.41542	0.71849	35.25608	123.31	2.49
92/ 7/13	2448816.5	-0.45939	0.55132	0.03429	-27.02926	-22.60608	1.23418	0.71845	35.25818	129.80	2.74
92/ 7/17	2448820.5	-0.51877	0.49569	0.03692	-24.32351	-25.50226	1.03720	0.71847	35.25726	136.30	2.95
92/ 7/21	2448824.5	-0.57154	0.43374	0.03907	-21.30820	-28.07266	0.82703	0.71855	35.25333	142.81	3.12
92/ 7/25	2448828.5	-0.61702	0.36626	0.04073	-18.02271	-30.28410	0.60642	0.71869	35.24646	149.31	3.25
92/ 7/29	2448832.5	-0.65463	0.29411	0.04187	-14.51004	-32.10828	0.37825	0.71889	35.23671	155.81	3.34
92/ 8/ 2	2448836.5	-0.68392	0.21822	0.04248	-10.81609	-33.52219	0.14547	0.71915	35.22423	162.30	3.39
92/ 8/ 6	2448840.5	-0.70451	0.13956	0.04254	-6.98904	-34.50843	-0.08887	0.71946	35.20918	168.80	3.39
92/ 8/10	2448844.5	-0.71615	0.05912	0.04207	-3.07860	-35.05535	-0.32177	0.71981	35.19175	175.28	3.35
92/ 8/14	2448848.5	-0.71871	-0.02207	0.04106	0.86466	-35.15724	-0.55021	0.72022	35.17217	181.76	3.27
92/ 8/18	2448852.5	-0.71217	-0.10298	0.03953	4.79006	-34.81425	-0.77130	0.72066	35.15070	188.23	3.14
92/ 8/22	2448856.5	-0.69663	-0.18258	0.03750	8.64753	-34.03241	-0.98223	0.72113	35.12762	194.69	2.98
92/ 8/26	2448860.5	-0.67230	-0.25989	0.03500	12.38822	-32.82339	-1.18036	0.72163	35.10322	201.13	2.78
92/ 8/30	2448864.5	-0.63951	-0.33392	0.03206	15.96522	-31.20428	-1.36322	0.72216	35.07783	207.57	2.54
92/ 9/ 3	2448868.5	-0.59870	-0.40376	0.02872	19.33408	-29.19730	-1.52859	0.72269	35.05175	214.00	2.28
92/ 9/ 7	2448872.5	-0.55038	-0.46855	0.02501	22.45340	-26.82937	-1.67445	0.72324	35.02533	220.41	1.98
92/ 9/11	2448876.5	-0.49518	-0.52747	0.02100	25.28528	-24.13174	-1.79907	0.72379	34.99890	226.81	1.66
92/ 9/15	2448880.5	-0.43380	-0.57982	0.01672	27.79575	-21.13948	-1.90099	0.72433	34.97278	233.20	1.32
92/ 9/19	2448884.5	-0.36702	-0.62495	0.01223	29.95512	-17.89100	-1.97906	0.72485	34.94731	239.58	0.97
92/ 9/23	2448888.5	-0.29568	-0.66231	0.00759	31.73826	-14.42751	-2.03241	0.72536	34.92279	245.94	0.60
92/ 9/27	2448892.5	-0.22068	-0.69147	0.00286	33.12482	-10.79246	-2.06048	0.72584	34.89952	252.30	0.23
92/10/ 1	2448896.5	-0.14295	-0.71208	-0.00191	34.09940	-7.03104	-2.06304	0.72629	34.87780	258.65	-0.15
92/10/ 5	2448900.5	-0.06346	-0.72390	-0.00665	34.65164	-3.18959	-2.04015	0.72670	34.85788	264.99	-0.52
92/10/ 9	2448904.5	0.01682	-0.72679	-0.01131	34.77625	0.68494	-1.99217	0.72708	34.83999	271.33	-0.89
92/10/13	2448908.5	0.09689	-0.72074	-0.01584	34.47303	4.54549	-1.91976	0.72740	34.82437	277.66	-1.25
92/10/17	2448912.5	0.17577	-0.70584	-0.02017	33.74678	8.34545	-1.82387	0.72767	34.81118	283.98	-1.59
92/10/21	2448916.5	0.25250	-0.68227	-0.02425	32.60721	12.03915	-1.70569	0.72789	34.80059	290.31	-1.91
92/10/25	2448920.5	0.32612	-0.65033	-0.02803	31.06879	15.58234	-1.56669	0.72806	34.79272	296.63	-2.21
92/10/29	2448924.5	0.39575	-0.61042	-0.03147	29.15052	18.93263	-1.40858	0.72816	34.78766	302.96	-2.48
92/11/ 2	2448928.5	0.46053	-0.56303	-0.03453	26.87578	22.04996	-1.23325	0.72821	34.78548	309.28	-2.72
92/11/ 6	2448932.5	0.51967	-0.50875	-0.03716	24.27200	24.89702	-1.04284	0.72819	34.78619	315.61	-2.92
92/11/10	2448936.5	0.57245	-0.44823	-0.03933	21.37038	27.43959	-0.83961	0.72812	34.78978	321.94	-3.10

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92/11/14	2448940.5	0.61821	-0.38223	-0.04103	18.20561	29.64694	-0.62601	0.72799	34.79622	328.27	-3.23
92/11/18	2448944.5	0.65639	-0.31153	-0.04222	14.81544	31.49218	-0.40458	0.72780	34.80543	334.61	-3.33
92/11/22	2448948.5	0.68652	-0.23702	-0.04289	11.24035	32.95249	-0.17799	0.72755	34.81729	340.95	-3.38
92/11/26	2448952.5	0.70822	-0.15959	-0.04304	7.52311	34.00950	0.05104	0.72725	34.83167	347.30	-3.39
92/11/30	2448956.5	0.72120	-0.08020	-0.04266	3.70834	34.64940	0.27975	0.72690	34.84840	353.65	-3.36
92/12/ 4	2448960.5	0.72531	0.00017	-0.04175	-0.15794	34.86326	0.50536	0.72651	34.86728	0.01	-3.29
92/12/ 8	2448964.5	0.72047	0.08054	-0.04033	-4.02884	34.64708	0.72512	0.72608	34.88807	6.38	-3.18
92/12/12	2448968.5	0.70673	0.15992	-0.03841	-7.85708	34.00199	0.93631	0.72561	34.91054	12.75	-3.03
92/12/16	2448972.5	0.68424	0.23732	-0.03601	-11.59556	32.93424	1.13632	0.72512	34.93440	19.13	-2.85
92/12/20	2448976.5	0.65326	0.31177	-0.03317	-15.19786	31.45527	1.32264	0.72460	34.95938	25.51	-2.62
92/12/24	2448980.5	0.61416	0.38235	-0.02991	-18.61884	29.58160	1.49290	0.72407	34.98516	31.90	-2.37
92/12/28	2448984.5	0.56741	0.44816	-0.02628	-21.81522	27.33477	1.64492	0.72353	35.01142	38.30	-2.08
93/ 1/ 1	2448988.5	0.51357	0.50838	-0.02233	-24.74610	24.74115	1.77671	0.72298	35.03784	44.71	-1.77
93/ 1/ 5	2448992.5	0.45330	0.56223	-0.01809	-27.37353	21.83168	1.88655	0.72244	35.06410	51.12	-1.43
93/ 1/ 9	2448996.5	0.38735	0.60903	-0.01363	-29.66307	18.64156	1.97294	0.72191	35.08985	57.54	-1.08
93/ 1/13	2449000.5	0.31653	0.64818	-0.00899	-31.58428	15.20992	2.03469	0.72139	35.11479	63.97	-0.71
93/ 1/17	2449004.5	0.24173	0.67916	-0.00425	-33.11119	11.57930	2.07090	0.72090	35.13858	70.41	-0.34
93/ 1/21	2449008.5	0.16387	0.70156	0.00055	-34.22272	7.79519	2.08102	0.72044	35.16092	76.85	0.04
93/ 1/25	2449012.5	0.08394	0.71509	0.00535	-34.90307	3.90544	2.06482	0.72002	35.18153	83.31	0.43
93/ 1/29	2449016.5	0.00294	0.71956	0.01007	-35.14197	-0.04037	2.02240	0.71964	35.20014	89.77	0.80
93/ 2/ 2	2449020.5	-0.07809	0.71490	0.01467	-34.93495	-3.99157	1.95424	0.71930	35.21651	96.23	1.17
93/ 2/ 6	2449024.5	-0.15813	0.70115	0.01908	-34.28343	-7.89713	1.86114	0.71902	35.23042	102.71	1.52
93/ 2/10	2449028.5	-0.23615	0.67849	0.02325	-33.19480	-11.70637	1.74424	0.71879	35.24169	109.19	1.85
93/ 2/14	2449032.5	-0.31117	0.64718	0.02713	-31.68235	-15.36968	1.60503	0.71861	35.25017	115.68	2.16
93/ 2/18	2449036.5	-0.38222	0.60762	0.03065	-29.76510	-18.83925	1.44527	0.71850	35.25574	122.17	2.45
93/ 2/22	2449040.5	-0.44840	0.56032	0.03379	-27.46762	-22.06979	1.26702	0.71845	35.25835	128.67	2.70
93/ 2/26	2449044.5	-0.50886	0.50587	0.03649	-24.81962	-25.01915	1.07260	0.71845	35.25793	135.17	2.91
93/ 3/ 2	2449048.5	-0.56284	0.44497	0.03873	-21.85558	-27.64899	0.86453	0.71853	35.25451	141.67	3.09
93/ 3/ 6	2449052.5	-0.60963	0.37839	0.04048	-18.61424	-29.92530	0.64553	0.71866	35.24812	148.17	3.23
93/ 3/10	2449056.5	-0.64866	0.30700	0.04171	-15.13798	-31.81890	0.41846	0.71885	35.23884	154.67	3.33
93/ 3/14	2449060.5	-0.67943	0.23169	0.04241	-11.47228	-33.30585	0.18626	0.71910	35.22680	161.17	3.38
93/ 3/18	2449064.5	-0.70156	0.15344	0.04257	-7.66496	-34.36774	-0.04803	0.71940	35.21215	167.66	3.39
93/ 3/22	2449068.5	-0.71477	0.07324	0.04219	-3.76552	-34.99193	-0.28140	0.71975	35.19507	174.15	3.36
93/ 3/26	2449072.5	-0.71892	-0.00789	0.04127	0.17556	-35.17164	-0.51084	0.72015	35.17579	180.63	3.29
93/ 3/30	2449076.5	-0.71397	-0.08892	0.03983	4.10757	-34.90605	-0.73342	0.72059	35.15455	187.10	3.17
93/ 4/ 3	2449080.5	-0.69999	-0.16883	0.03789	7.98029	-34.20015	-0.94632	0.72106	35.13162	193.56	3.01
93/ 4/ 7	2449084.5	-0.67718	-0.24661	0.03547	11.74461	-33.06465	-1.14686	0.72156	35.10730	200.01	2.82
93/ 4/11	2449088.5	-0.64584	-0.32128	0.03260	15.35325	-31.51574	-1.33255	0.72208	35.08190	206.45	2.59
93/ 4/15	2449092.5	-0.60640	-0.39192	0.02933	18.76129	-29.57476	-1.50111	0.72262	35.05575	212.88	2.33
93/ 4/19	2449096.5	-0.55935	-0.45765	0.02568	21.92677	-27.26787	-1.65049	0.72317	35.02919	219.29	2.04
93/ 4/23	2449100.5	-0.50530	-0.51765	0.02172	24.81118	-24.62558	-1.77892	0.72372	35.00255	225.69	1.72
93/ 4/27	2449104.5	-0.44495	-0.57119	0.01748	27.37984	-21.68235	-1.88488	0.72426	34.97618	232.08	1.38
93/ 5/ 1	2449108.5	-0.37907	-0.61763	0.01303	29.60230	-18.47604	-1.96717	0.72479	34.95039	238.46	1.03
93/ 5/ 5	2449112.5	-0.30847	-0.65639	0.00841	31.45264	-15.04738	-2.02487	0.72531	34.92553	244.83	0.66
93/ 5/ 9	2449116.5	-0.23405	-0.68701	0.00369	32.90967	-11.43949	-2.05737	0.72580	34.90188	251.19	0.29

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

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93/ 5/13	2449120.5	-0.15673	-0.70914	-0.00108	33.95713	-7.69727	-2.06438	0.72625	34.87974	257.54	-0.08
93/ 5/17	2449124.5	-0.07748	-0.72251	-0.00583	34.58378	-3.86688	-2.04591	0.72668	34.85938	263.88	-0.46
93/ 5/21	2449128.5	0.00273	-0.72697	-0.01051	34.78346	0.00481	-2.00228	0.72706	34.84104	270.22	-0.83
93/ 5/25	2449132.5	0.08291	-0.72249	-0.01506	34.55509	3.87074	-1.93408	0.72739	34.82495	276.55	-1.19
93/ 5/29	2449136.5	0.16206	-0.70913	-0.01943	33.90259	7.68423	-1.84222	0.72767	34.81130	282.87	-1.53
93/ 6/ 2	2449140.5	0.23923	-0.68706	-0.02355	32.83481	11.39940	-1.72785	0.72790	34.80024	289.20	-1.85
93/ 6/ 6	2449144.5	0.31346	-0.65657	-0.02739	31.36540	14.97175	-1.59239	0.72808	34.79191	295.52	-2.16
93/ 6/10	2449148.5	0.38385	-0.61803	-0.03090	29.51256	18.35856	-1.43751	0.72819	34.78641	301.84	-2.43
93/ 6/14	2449152.5	0.44954	-0.57192	-0.03402	27.29891	21.51933	-1.26507	0.72824	34.78380	308.17	-2.68
93/ 6/18	2449156.5	0.50972	-0.51881	-0.03673	24.75116	24.41625	-1.07715	0.72824	34.78410	314.49	-2.89
93/ 6/22	2449160.5	0.56367	-0.45934	-0.03899	21.89987	27.01455	-0.87601	0.72817	34.78732	320.82	-3.07
93/ 6/26	2449164.5	0.61070	-0.39425	-0.04077	18.77910	29.28287	-0.66406	0.72804	34.79342	327.16	-3.21
93/ 6/30	2449168.5	0.65025	-0.32432	-0.04205	15.42607	31.19359	-0.44383	0.72786	34.80231	333.49	-3.31
93/ 7/ 4	2449172.5	0.68183	-0.25041	-0.04282	11.88081	32.72319	-0.21796	0.72762	34.81391	339.83	-3.37
93/ 7/ 8	2449176.5	0.70503	-0.17344	-0.04306	8.18567	33.85246	0.01083	0.72733	34.82807	346.18	-3.39
93/ 7/12	2449180.5	0.71957	-0.09432	-0.04277	4.38499	34.56677	0.23979	0.72698	34.84461	352.53	-3.37
93/ 7/16	2449184.5	0.72525	-0.01405	-0.04195	0.52454	34.85629	0.46615	0.72659	34.86335	358.89	-3.31
93/ 7/20	2449188.5	0.72198	0.06639	-0.04062	-3.34890	34.71614	0.68713	0.72616	34.88406	5.25	-3.21
93/ 7/24	2449192.5	0.70980	0.14602	-0.03878	-7.18809	34.14651	0.90003	0.72570	34.90649	11.62	-3.06
93/ 7/28	2449196.5	0.68883	0.22384	-0.03647	-10.94585	33.15274	1.10220	0.72520	34.93037	18.00	-2.88
93/ 8/ 1	2449200.5	0.65932	0.29888	-0.03370	-14.57559	31.74532	1.29111	0.72469	34.95540	24.39	-2.67
93/ 8/ 5	2449204.5	0.62162	0.37020	-0.03051	-18.03191	29.93987	1.46436	0.72415	34.98128	30.78	-2.41
93/ 8/ 9	2449208.5	0.57618	0.43692	-0.02695	-21.27113	27.75705	1.61975	0.72360	35.00770	37.17	-2.13
93/ 8/13	2449212.5	0.52354	0.49818	-0.02304	-24.25188	25.22238	1.75525	0.72305	35.03431	43.58	-1.83
93/ 8/17	2449216.5	0.46435	0.55321	-0.01885	-26.93563	22.36601	1.86907	0.72251	35.06081	49.99	-1.50
93/ 8/21	2449220.5	0.39934	0.60130	-0.01443	-29.28727	19.22242	1.95968	0.72197	35.08684	56.41	-1.14
93/ 8/25	2449224.5	0.32932	0.64183	-0.00982	-31.27559	15.83008	2.02583	0.72145	35.11208	62.84	-0.78
93/ 8/29	2449228.5	0.25514	0.67428	-0.00509	-32.87378	12.23097	2.06658	0.72095	35.13620	69.27	-0.40
93/ 9/ 2	2449232.5	0.17774	0.69822	-0.00029	-34.05987	8.47012	2.08131	0.72049	35.15891	75.72	-0.02
93/ 9/ 6	2449236.5	0.09810	0.71333	0.00451	-34.81707	4.59501	2.06972	0.72005	35.17991	82.17	0.36
93/ 9/10	2449240.5	0.01722	0.71940	0.00925	-35.13413	0.65500	2.03186	0.71966	35.19893	88.63	0.74
93/ 9/14	2449244.5	-0.06389	0.71634	0.01388	-35.00553	-3.29937	1.96815	0.71932	35.21572	95.10	1.11
93/ 9/18	2449248.5	-0.14418	0.70418	0.01833	-34.43165	-7.21706	1.87933	0.71902	35.23005	101.57	1.46
93/ 9/22	2449252.5	-0.22263	0.68306	0.02254	-33.41884	-11.04724	1.76648	0.71878	35.24175	108.05	1.80
93/ 9/26	2449256.5	-0.29826	0.65325	0.02647	-31.97936	-14.74006	1.63103	0.71860	35.25066	114.54	2.11
93/ 9/30	2449260.5	-0.37008	0.61510	0.03006	-30.13126	-18.24731	1.47470	0.71848	35.25666	121.03	2.40
93/10/ 4	2449264.5	-0.43718	0.56911	0.03327	-27.89816	-21.52320	1.29950	0.71842	35.25966	127.53	2.65
93/10/ 8	2449268.5	-0.49870	0.51587	0.03605	-25.30893	-24.52496	1.10770	0.71842	35.25964	134.03	2.88
93/10/12	2449272.5	-0.55386	0.45604	0.03838	-22.39726	-27.21355	0.90181	0.71848	35.25659	140.53	3.06
93/10/16	2449276.5	-0.60197	0.39040	0.04021	-19.20119	-29.55415	0.68449	0.71860	35.25056	147.03	3.21
93/10/20	2449280.5	-0.64239	0.31978	0.04153	-15.76254	-31.51671	0.45859	0.71879	35.24161	153.54	3.31
93/10/24	2449284.5	-0.67464	0.24509	0.04233	-12.12630	-33.07634	0.22706	0.71903	35.22986	160.03	3.37
93/10/28	2449288.5	-0.69831	0.16728	0.04258	-8.33994	-34.21367	-0.00710	0.71932	35.21548	166.53	3.39
93/11/ 1	2449292.5	-0.71310	0.08735	0.04229	-4.45275	-34.91504	-0.24086	0.71967	35.19865	173.02	3.37
93/11/ 5	2449296.5	-0.71884	0.00631	0.04147	-0.51507	-35.17266	-0.47121	0.72006	35.17958	179.50	3.30

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93/11/ 9	2449300.5	-0.71548	-0.07482	0.04012	3.42237	-34.98466	-0.69519	0.72050	35.15853	185.97	3.19
93/11/13	2449304.5	-0.70307	-0.15500	0.03827	7.30919	-34.35506	-0.90998	0.72097	35.13577	192.43	3.04
93/11/17	2449308.5	-0.68178	-0.23322	0.03593	11.09606	-33.29358	-1.11286	0.72146	35.11159	198.88	2.85
93/11/21	2449312.5	-0.65191	-0.30850	0.03313	14.73531	-31.81548	-1.30131	0.72198	35.08629	205.32	2.63
93/11/25	2449316.5	-0.61385	-0.37991	0.02993	18.18159	-29.94124	-1.47301	0.72252	35.06020	211.75	2.37
93/11/29	2449320.5	-0.56809	-0.44656	0.02634	21.39240	-27.69619	-1.62587	0.72307	35.03366	218.17	2.09
93/12/ 3	2449324.5	-0.51522	-0.50761	0.02243	24.32857	-25.11014	-1.75807	0.72362	35.00699	224.57	1.78
93/12/ 7	2449328.5	-0.45592	-0.56234	0.01824	26.95474	-22.21687	-1.86805	0.72417	34.98052	230.97	1.44
93/12/11	2449332.5	-0.39094	-0.61006	0.01382	29.23971	-19.05370	-1.95455	0.72470	34.95460	237.35	1.09
93/12/15	2449336.5	-0.32111	-0.65020	0.00923	31.15674	-15.66089	-2.01659	0.72522	34.92953	243.72	0.73
93/12/19	2449340.5	-0.24729	-0.68227	0.00452	32.68381	-12.08118	-2.05352	0.72572	34.90563	250.08	0.36
93/12/23	2449344.5	-0.17041	-0.70590	-0.00024	33.80380	-8.35920	-2.06499	0.72618	34.88319	256.43	-0.02
93/12/27	2449348.5	-0.09143	-0.72082	-0.00500	34.50459	-4.54093	-2.05096	0.72661	34.86249	262.77	-0.39
93/12/31	2449352.5	-0.01131	-0.72685	-0.00970	34.77913	-0.67314	-2.01169	0.72700	34.84376	269.11	-0.76
94/ 1/ 4	2449356.5	0.06894	-0.72393	-0.01428	34.62546	3.19710	-1.94773	0.72734	34.82725	275.44	-1.12
94/ 1/ 8	2449360.5	0.14834	-0.71211	-0.01868	34.04663	7.02300	-1.85993	0.72764	34.81314	281.77	-1.47
94/ 1/12	2449364.5	0.22592	-0.69155	-0.02285	33.05064	10.75852	-1.74940	0.72788	34.80160	288.09	-1.80
94/ 1/16	2449368.5	0.30073	-0.66251	-0.02675	31.65032	14.35889	-1.61752	0.72806	34.79277	294.41	-2.11
94/ 1/20	2449372.5	0.37186	-0.62534	-0.03031	29.86308	17.78104	-1.46590	0.72818	34.78675	300.74	-2.39
94/ 1/24	2449376.5	0.43843	-0.58052	-0.03351	27.71079	20.98407	-1.29639	0.72825	34.78362	307.06	-2.64
94/ 1/28	2449380.5	0.49963	-0.52859	-0.03629	25.21947	23.92967	-1.11103	0.72825	34.78340	313.39	-2.86
94/ 2/ 1	2449384.5	0.55472	-0.47018	-0.03863	22.41900	26.58250	-0.91204	0.72820	34.78611	319.72	-3.04
94/ 2/ 5	2449388.5	0.60300	-0.40602	-0.04049	19.34288	28.91060	-0.70180	0.72808	34.79170	326.05	-3.19
94/ 2/ 9	2449392.5	0.64390	-0.33688	-0.04186	16.02779	30.88568	-0.48284	0.72791	34.80012	332.38	-3.30
94/ 2/13	2449396.5	0.67690	-0.26361	-0.04272	12.51328	32.48346	-0.25777	0.72768	34.81126	338.72	-3.37
94/ 2/17	2449400.5	0.70160	-0.18710	-0.04305	8.84134	33.68397	-0.02929	0.72739	34.82499	345.07	-3.39
94/ 2/21	2449404.5	0.71767	-0.10829	-0.04286	5.05598	34.47177	0.19983	0.72705	34.84115	351.42	-3.38
94/ 2/25	2449408.5	0.72490	-0.02815	-0.04213	1.20274	34.83618	0.42684	0.72667	34.85955	357.78	-3.32
94/ 3/ 1	2449412.5	0.72321	0.05233	-0.04089	-2.67173	34.77142	0.64896	0.72625	34.87995	4.14	-3.23
94/ 3/ 5	2449416.5	0.71258	0.13217	-0.03914	-6.52024	34.27681	0.86346	0.72579	34.90213	10.51	-3.09
94/ 3/ 9	2449420.5	0.69314	0.21038	-0.03691	-10.29557	33.35675	1.06769	0.72530	34.92580	16.88	-2.92
94/ 3/13	2449424.5	0.66510	0.28597	-0.03422	-13.95099	32.02086	1.25909	0.72478	34.95069	23.27	-2.71
94/ 3/17	2449428.5	0.62881	0.35802	-0.03110	-17.44084	30.28385	1.43526	0.72425	34.97648	29.66	-2.46
94/ 3/21	2449432.5	0.58468	0.42560	-0.02760	-20.72111	28.16550	1.59392	0.72371	35.00286	36.05	-2.19
94/ 3/25	2449436.5	0.53326	0.48787	-0.02375	-23.74998	25.69049	1.73304	0.72316	35.02950	42.46	-1.88
94/ 3/29	2449440.5	0.47517	0.54405	-0.01961	-26.48839	22.88817	1.85078	0.72261	35.05608	48.87	-1.55
94/ 4/ 2	2449444.5	0.41113	0.59340	-0.01522	-28.90059	19.79229	1.94555	0.72207	35.08224	55.28	-1.21
94/ 4/ 6	2449448.5	0.34192	0.63530	-0.01064	-30.95464	16.44065	2.01607	0.72154	35.10768	61.71	-0.84
94/ 4/10	2449452.5	0.26840	0.66920	-0.00592	-32.62293	12.87464	2.06132	0.72104	35.13205	68.15	-0.47
94/ 4/14	2449456.5	0.19150	0.69465	-0.00113	-33.88262	9.13879	2.08064	0.72057	35.15506	74.59	-0.09
94/ 4/18	2449460.5	0.11218	0.71133	0.00367	-34.71597	5.28021	2.07366	0.72013	35.17640	81.04	0.29
94/ 4/22	2449464.5	0.03144	0.71899	0.00843	-35.11075	1.34796	2.04039	0.71973	35.19581	87.50	0.67
94/ 4/26	2449468.5	-0.04970	0.71754	0.01308	-35.06040	-2.60757	1.98117	0.71937	35.21301	93.96	1.04
94/ 4/30	2449472.5	-0.13021	0.70697	0.01756	-34.56429	-6.53537	1.89667	0.71907	35.22781	100.44	1.40
94/ 5/ 4	2449476.5	-0.20906	0.68740	0.02182	-33.62769	-10.38455	1.78794	0.71882	35.23999	106.92	1.74

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94/ 5/ 8	2449480.5	-0.28525	0.65908	0.02581	-32.26183	-14.10499	1.65634	0.71863	35.24940	113.40	2.06
94/ 5/12	2449484.5	-0.35780	0.62237	0.02946	-30.48378	-17.64817	1.50352	0.71849	35.25592	119.89	2.35
94/ 5/16	2449488.5	-0.42579	0.57772	0.03274	-28.31620	-20.96781	1.33147	0.71842	35.25945	126.39	2.61
94/ 5/20	2449492.5	-0.48835	0.52569	0.03560	-25.78705	-24.02057	1.14240	0.71841	35.25996	132.89	2.84
94/ 5/24	2449496.5	-0.54469	0.46697	0.03801	-22.92923	-26.76670	0.93878	0.71846	35.25744	139.39	3.03
94/ 5/28	2449500.5	-0.59407	0.40229	0.03993	-19.78004	-29.17061	0.72326	0.71857	35.25192	145.90	3.19
94/ 6/ 1	2449504.5	-0.63588	0.33248	0.04134	-16.38070	-31.20138	0.49866	0.71875	35.24347	152.40	3.30
94/ 6/ 5	2449508.5	-0.66960	0.25843	0.04223	-12.77567	-32.83320	0.26789	0.71898	35.23221	158.90	3.37
94/ 6/ 9	2449512.5	-0.69479	0.18110	0.04258	-9.01204	-34.04570	0.03396	0.71927	35.21828	165.39	3.39
94/ 6/13	2449516.5	-0.71115	0.10146	0.04238	-5.13884	-34.82419	-0.20009	0.71960	35.20187	171.88	3.38
94/ 6/17	2449520.5	-0.71849	0.02054	0.04165	-1.20628	-35.15986	-0.43125	0.71999	35.18319	178.36	3.32
94/ 6/21	2449524.5	-0.71672	-0.06064	0.04040	2.73492	-35.04981	-0.65657	0.72041	35.16248	184.84	3.21
94/ 6/25	2449528.5	-0.70588	-0.14106	0.03863	6.63428	-34.49703	-0.87317	0.72088	35.14002	191.30	3.07
94/ 6/29	2449532.5	-0.68614	-0.21970	0.03637	10.44223	-33.51024	-1.07832	0.72137	35.11608	197.75	2.89
94/ 7/ 3	2449536.5	-0.65774	-0.29557	0.03365	14.11076	-32.10377	-1.26948	0.72189	35.09098	204.20	2.67
94/ 7/ 7	2449540.5	-0.62108	-0.36772	0.03052	17.59407	-30.29718	-1.44428	0.72242	35.06503	210.63	2.42
94/ 7/11	2449544.5	-0.57663	-0.43526	0.02700	20.84912	-28.11501	-1.60058	0.72297	35.03857	217.05	2.14
94/ 7/15	2449548.5	-0.52496	-0.49735	0.02314	23.83612	-25.58629	-1.73652	0.72352	35.01192	223.45	1.83
94/ 7/19	2449552.5	-0.46673	-0.55324	0.01899	26.51901	-22.74417	-1.85049	0.72407	34.98542	229.85	1.50
94/ 7/23	2449556.5	-0.40269	-0.60223	0.01461	28.86584	-19.62536	-1.94118	0.72460	34.95940	236.23	1.15
94/ 7/27	2449560.5	-0.33364	-0.64373	0.01004	30.84906	-16.26966	-2.00756	0.72513	34.93417	242.60	0.79
94/ 7/31	2449564.5	-0.26045	-0.67725	0.00535	32.44581	-12.71942	-2.04892	0.72562	34.91006	248.96	0.42
94/ 8/ 4	2449568.5	-0.18404	-0.70238	0.00059	33.63810	-9.01898	-2.06486	0.72610	34.88735	255.32	0.05
94/ 8/ 8	2449572.5	-0.10536	-0.71884	-0.00417	34.41293	-5.21411	-2.05528	0.72653	34.86633	261.66	-0.33
94/ 8/12	2449576.5	-0.02537	-0.72643	-0.00888	34.76236	-1.35151	-2.02039	0.72693	34.84724	268.00	-0.70
94/ 8/16	2449580.5	0.05493	-0.72508	-0.01349	34.68353	2.52177	-1.96070	0.72728	34.83032	274.33	-1.06
94/ 8/20	2449584.5	0.13455	-0.71481	-0.01792	34.17863	6.35887	-1.87699	0.72758	34.81576	280.66	-1.41
94/ 8/24	2449588.5	0.21252	-0.69576	-0.02214	33.25481	10.11356	-1.77034	0.72783	34.80374	286.99	-1.74
94/ 8/28	2449592.5	0.28789	-0.66818	-0.02609	31.92405	13.74081	-1.64208	0.72802	34.79442	293.31	-2.05
94/ 9/ 1	2449596.5	0.35972	-0.63240	-0.02971	30.20300	17.19722	-1.49378	0.72816	34.78788	299.63	-2.34
94/ 9/ 5	2449600.5	0.42715	-0.58888	-0.03298	28.11275	20.44148	-1.32725	0.72824	34.78422	305.96	-2.60
94/ 9/ 9	2449604.5	0.48935	-0.53815	-0.03583	25.67861	23.43479	-1.14450	0.72825	34.78348	312.28	-2.82
94/ 9/13	2449608.5	0.54555	-0.48083	-0.03825	22.92985	26.14128	-0.94772	0.72821	34.78566	318.61	-3.01
94/ 9/17	2449612.5	0.59508	-0.41761	-0.04020	19.89932	28.52835	-0.73926	0.72810	34.79074	324.94	-3.17
94/ 9/21	2449616.5	0.63731	-0.34928	-0.04166	16.62319	30.56705	-0.52163	0.72794	34.79866	331.27	-3.28
94/ 9/25	2449620.5	0.67172	-0.27667	-0.04261	13.14055	32.23239	-0.29743	0.72772	34.80933	337.61	-3.36
94/ 9/29	2449624.5	0.69789	-0.20066	-0.04303	9.49298	33.50362	-0.06935	0.72744	34.82261	343.96	-3.39
94/10/ 3	2449628.5	0.71549	-0.12219	-0.04293	5.72417	34.36450	0.15987	0.72712	34.83835	350.31	-3.38
94/10/ 7	2449632.5	0.72428	-0.04221	-0.04230	1.87946	34.80350	0.38746	0.72674	34.85636	356.66	-3.34
94/10/11	2449636.5	0.72415	0.03829	-0.04114	-1.99469	34.81398	0.61063	0.72633	34.87642	3.03	-3.25
94/10/15	2449640.5	0.71508	0.11831	-0.03948	-5.85112	34.39436	0.82666	0.72587	34.89829	9.39	-3.12
94/10/19	2449644.5	0.69717	0.19687	-0.03733	-9.64259	33.54816	1.03288	0.72539	34.92170	15.77	-2.95
94/10/23	2449648.5	0.67061	0.27299	-0.03472	-13.32223	32.28408	1.22671	0.72488	34.94636	22.15	-2.75
94/10/27	2449652.5	0.63573	0.34572	-0.03167	-16.84416	30.61596	1.40571	0.72435	34.97197	28.54	-2.51
94/10/31	2449656.5	0.59294	0.41415	-0.02823	-20.16404	28.56270	1.56759	0.72381	34.99819	34.93	-2.24

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/11/ 4	2449660.5	0.54276	0.47742	-0.02444	-23.23962	26.14815	1.71026	0.72326	35.02472	41.34	-1.94
94/11/ 8	2449664.5	0.48579	0.53471	-0.02035	-26.03134	23.40086	1.83185	0.72271	35.05120	47.74	-1.61
94/11/12	2449668.5	0.42273	0.58530	-0.01600	-28.50283	20.35385	1.93074	0.72218	35.07732	54.16	-1.27
94/11/16	2449672.5	0.35436	0.62855	-0.01145	-30.62148	17.04423	2.00557	0.72165	35.10275	60.59	-0.91
94/11/20	2449676.5	0.28154	0.66388	-0.00675	-32.35888	13.51281	2.05529	0.72115	35.12716	67.02	-0.54
94/11/24	2449680.5	0.20517	0.69085	-0.00197	-33.69135	9.80360	2.07917	0.72067	35.15026	73.46	-0.16
94/11/28	2449684.5	0.12620	0.70908	0.00283	-34.60025	5.96330	2.07679	0.72023	35.17174	79.91	0.23
94/12/ 2	2449688.5	0.04564	0.71834	0.00760	-35.07237	2.04066	2.04810	0.71982	35.19134	86.36	0.61
94/12/ 6	2449692.5	-0.03550	0.71848	0.01228	-35.10017	-1.91411	1.99337	0.71946	35.20880	92.83	0.98
94/12/10	2449696.5	-0.11619	0.70951	0.01679	-34.68196	-5.85008	1.91323	0.71915	35.22389	99.30	1.34
94/12/14	2449700.5	-0.19541	0.69151	0.02110	-33.82200	-9.71630	1.80866	0.71890	35.23642	105.78	1.68
94/12/18	2449704.5	-0.27213	0.66471	0.02513	-32.53048	-13.46249	1.68095	0.71869	35.24623	112.26	2.00
94/12/22	2449708.5	-0.34539	0.62944	0.02885	-30.82346	-17.03980	1.53172	0.71855	35.25318	118.75	2.30
94/12/26	2449712.5	-0.41424	0.58614	0.03220	-28.72261	-20.40154	1.36290	0.71847	35.25718	125.25	2.57
94/12/30	2449716.5	-0.47781	0.53537	0.03513	-26.25501	-23.50383	1.17666	0.71845	35.25819	131.75	2.80
95/ 1/ 3	2449720.5	-0.53529	0.47778	0.03762	-23.45269	-26.30626	0.97542	0.71849	35.25620	138.25	3.00
95/ 1/ 7	2449724.5	-0.58594	0.41409	0.03963	-20.35221	-28.77248	0.76180	0.71859	35.25122	144.75	3.16
95/ 1/11	2449728.5	-0.62913	0.34512	0.04113	-16.99411	-30.87073	0.53859	0.71875	35.24332	151.25	3.28
95/ 1/15	2449732.5	-0.66430	0.27176	0.04211	-13.42231	-32.57428	0.30871	0.71897	35.23262	157.75	3.36
95/ 1/19	2449736.5	-0.69101	0.19494	0.04256	-9.68347	-33.86178	0.07513	0.71924	35.21924	164.25	3.39
95/ 1/23	2449740.5	-0.70895	0.11564	0.04246	-5.82631	-34.71753	-0.15910	0.71957	35.20338	170.74	3.38
95/ 1/27	2449744.5	-0.71788	0.03487	0.04182	-1.90085	-35.13167	-0.39098	0.71994	35.18523	177.22	3.33
95/ 1/31	2449748.5	-0.71772	-0.04634	0.04066	2.04224	-35.10024	-0.61753	0.72036	35.16502	183.69	3.24
95/ 2/ 4	2449752.5	-0.70847	-0.12696	0.03898	5.95240	-34.62518	-0.83586	0.72081	35.14304	190.16	3.10
95/ 2/ 8	2449756.5	-0.69028	-0.20598	0.03680	9.77986	-33.71422	-1.04322	0.72130	35.11954	196.62	2.92
95/ 2/12	2449760.5	-0.66339	-0.28241	0.03417	13.47630	-32.38066	-1.23702	0.72180	35.09484	203.06	2.71
95/ 2/16	2449764.5	-0.62815	-0.35528	0.03110	16.99548	-30.64318	-1.41487	0.72233	35.06925	209.49	2.47
95/ 2/20	2449768.5	-0.58503	-0.42370	0.02764	20.29383	-28.52542	-1.57458	0.72287	35.04310	215.91	2.19
95/ 2/24	2449772.5	-0.53459	-0.48681	0.02384	23.33096	-26.05566	-1.71424	0.72342	35.01670	222.32	1.89
95/ 2/28	2449776.5	-0.47746	-0.54384	0.01974	26.07010	-23.26631	-1.83219	0.72396	34.99040	228.72	1.56
95/ 3/ 4	2449780.5	-0.41439	-0.59409	0.01539	28.47852	-20.19350	-1.92707	0.72450	34.96451	235.10	1.22
95/ 3/ 8	2449784.5	-0.34616	-0.63695	0.01085	30.52788	-16.87651	-1.99780	0.72502	34.93936	241.48	0.86
95/ 3/12	2449788.5	-0.27363	-0.67191	0.00618	32.19444	-13.35728	-2.04362	0.72552	34.91526	247.84	0.49
95/ 3/16	2449792.5	-0.19772	-0.69854	0.00143	33.45933	-9.67982	-2.06405	0.72599	34.89250	254.20	0.11
95/ 3/20	2449796.5	-0.11936	-0.71655	-0.00334	34.30864	-5.88973	-2.05896	0.72643	34.87134	260.54	-0.26
95/ 3/24	2449800.5	-0.03953	-0.72571	-0.00806	34.73350	-2.03358	-2.02849	0.72683	34.85206	266.88	-0.64
95/ 3/28	2449804.5	0.04079	-0.72593	-0.01269	34.73017	1.84160	-1.97310	0.72718	34.83488	273.22	-1.00
95/ 4/ 1	2449808.5	0.12061	-0.71722	-0.01716	34.29993	5.68884	-1.89353	0.72749	34.82001	279.55	-1.35
95/ 4/ 5	2449812.5	0.19895	-0.69970	-0.02142	33.44906	9.46175	-1.79081	0.72775	34.80763	285.87	-1.69
95/ 4/ 9	2449816.5	0.27484	-0.67359	-0.02542	32.18869	13.11504	-1.66622	0.72795	34.79788	292.20	-2.00
95/ 4/13	2449820.5	0.34737	-0.63923	-0.02910	30.53468	16.60495	-1.52129	0.72810	34.79088	298.52	-2.29
95/ 4/17	2449824.5	0.41563	-0.59703	-0.03243	28.50735	19.88977	-1.35779	0.72818	34.78671	304.84	-2.55
95/ 4/21	2449828.5	0.47881	-0.54752	-0.03536	26.13131	22.93019	-1.17770	0.72821	34.78543	311.17	-2.78
95/ 4/25	2449832.5	0.53612	-0.49130	-0.03786	23.43515	25.68979	-0.98318	0.72818	34.78705	317.50	-2.98
95/ 4/29	2449836.5	0.58687	-0.42907	-0.03990	20.45116	28.13536	-0.77657	0.72808	34.79155	323.83	-3.14

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95/ 5/ 3	2449840.5	0.63042	-0.36157	-0.04144	17.21496	30.23728	-0.56033	0.72793	34.79888	330.16	-3.26
95/ 5/ 7	2449844.5	0.66624	-0.28964	-0.04248	13.76516	31.96982	-0.33705	0.72772	34.80895	336.50	-3.35
95/ 5/11	2449848.5	0.69389	-0.21416	-0.04300	10.14298	33.31148	-0.10942	0.72746	34.82164	342.85	-3.39
95/ 5/15	2449852.5	0.71301	-0.13605	-0.04298	6.39178	34.24521	0.11983	0.72714	34.83681	349.20	-3.39
95/ 5/19	2449856.5	0.72335	-0.05626	-0.04244	2.55665	34.75864	0.34792	0.72678	34.85427	355.55	-3.35
95/ 5/23	2449860.5	0.72479	0.02422	-0.04138	-1.31608	34.84428	0.57208	0.72637	34.87381	1.91	-3.27
95/ 5/27	2449864.5	0.71728	0.10440	-0.03981	-5.17933	34.49966	0.78957	0.72593	34.89520	8.28	-3.14
95/ 5/31	2449868.5	0.70090	0.18329	-0.03774	-8.98582	33.72742	0.99770	0.72546	34.91818	14.66	-2.98
95/ 6/ 4	2449872.5	0.67584	0.25991	-0.03520	-12.68858	32.53537	1.19388	0.72495	34.94246	21.04	-2.78
95/ 6/ 8	2449876.5	0.64239	0.33330	-0.03223	-16.24151	30.93647	1.37564	0.72443	34.96776	27.42	-2.55
95/ 6/12	2449880.5	0.60095	0.40255	-0.02886	-19.59996	28.94876	1.54067	0.72389	34.99375	33.82	-2.28
95/ 6/16	2449884.5	0.55202	0.46677	-0.02513	-22.72129	26.59524	1.68683	0.72335	35.02013	40.22	-1.99
95/ 6/20	2449888.5	0.49619	0.52517	-0.02108	-25.56541	23.90368	1.81222	0.72280	35.04654	46.63	-1.67
95/ 6/24	2449892.5	0.43414	0.57698	-0.01677	-28.09537	20.90634	1.91517	0.72226	35.07268	53.04	-1.33
95/ 6/28	2449896.5	0.36664	0.62155	-0.01225	-30.27787	17.63966	1.99428	0.72174	35.09820	59.46	-0.97
95/ 7/ 2	2449900.5	0.29453	0.65831	-0.00758	-32.08374	14.14381	2.04844	0.72123	35.12279	65.90	-0.60
95/ 7/ 6	2449904.5	0.21871	0.68676	-0.00281	-33.48845	10.46231	2.07687	0.72075	35.14612	72.33	-0.22
95/ 7/10	2449908.5	0.14013	0.70654	0.00200	-34.47245	6.64142	2.07909	0.72030	35.16789	78.78	0.16
95/ 7/14	2449912.5	0.05977	0.71738	0.00678	-35.02157	2.72958	2.05498	0.71989	35.18784	85.24	0.54
95/ 7/18	2449916.5	-0.02134	0.71912	0.01147	-35.12726	-1.22323	2.00477	0.71953	35.20568	91.70	0.91
95/ 7/22	2449920.5	-0.10218	0.71173	0.01602	-34.78682	-5.16615	1.92900	0.71921	35.22120	98.17	1.28
95/ 7/26	2449924.5	-0.18173	0.69530	0.02037	-34.00346	-9.04816	1.82861	0.71894	35.23419	104.65	1.62
95/ 7/30	2449928.5	-0.25896	0.67001	0.02445	-32.78635	-12.81884	1.70484	0.71873	35.24448	111.13	1.95
95/ 8/ 3	2449932.5	-0.33289	0.63619	0.02823	-31.15052	-16.42903	1.55924	0.71858	35.25194	117.62	2.25
95/ 8/ 7	2449936.5	-0.40258	0.59426	0.03164	-29.11670	-19.83162	1.39369	0.71848	35.25646	124.12	2.52
95/ 8/11	2449940.5	-0.46713	0.54476	0.03465	-26.71104	-22.98219	1.21033	0.71845	35.25798	130.61	2.76
95/ 8/15	2449944.5	-0.52573	0.48830	0.03722	-23.96474	-25.83968	1.01153	0.71848	35.25650	137.11	2.97
95/ 8/19	2449948.5	-0.57762	0.42562	0.03931	-20.91359	-28.36700	0.79988	0.71857	35.25202	143.62	3.14
95/ 8/23	2449952.5	-0.62215	0.35752	0.04091	-17.59750	-30.53157	0.57815	0.71873	35.24461	150.12	3.26
95/ 8/27	2449956.5	-0.65876	0.28486	0.04198	-14.05983	-32.30573	0.34923	0.71894	35.23437	156.62	3.35
95/ 8/31	2449960.5	-0.68698	0.20857	0.04252	-10.34681	-33.66719	0.11608	0.71920	35.22144	163.11	3.39
95/ 9/ 4	2449964.5	-0.70647	0.12963	0.04252	-6.50684	-34.59924	-0.11825	0.71952	35.20597	169.60	3.39
95/ 9/ 8	2449968.5	-0.71698	0.04905	0.04197	-2.58977	-35.09101	-0.35075	0.71988	35.18819	176.09	3.34
95/ 9/12	2449972.5	-0.71841	-0.03216	0.04090	1.35379	-35.13749	-0.57843	0.72029	35.16831	182.56	3.26
95/ 9/16	2449976.5	-0.71075	-0.11295	0.03931	5.27322	-34.73960	-0.79840	0.72074	35.14661	189.03	3.13
95/ 9/20	2449980.5	-0.69410	-0.19233	0.03722	9.11857	-33.90406	-1.00786	0.72122	35.12335	195.49	2.96
95/ 9/24	2449984.5	-0.66871	-0.26928	0.03466	12.84123	-32.64324	-1.20421	0.72172	35.09884	201.93	2.75
95/ 9/28	2449988.5	-0.63490	-0.34284	0.03167	16.39455	-30.97488	-1.38500	0.72225	35.07339	208.37	2.51
95/10/ 2	2449992.5	-0.59313	-0.41209	0.02827	19.73446	-28.92178	-1.54802	0.72279	35.04732	214.79	2.24
95/10/ 6	2449996.5	-0.54392	-0.47619	0.02453	22.81997	-26.51143	-1.69131	0.72333	35.02096	221.20	1.94
95/10/10	2450000.5	-0.48792	-0.53434	0.02048	25.61366	-23.77557	-1.81317	0.72388	34.99464	227.60	1.62
95/10/14	2450004.5	-0.42583	-0.58582	0.01617	28.08208	-20.74968	-1.91217	0.72441	34.96868	233.99	1.28
95/10/18	2450008.5	-0.35844	-0.63001	0.01166	30.19608	-17.47255	-1.98719	0.72494	34.94342	240.36	0.92
95/10/22	2450012.5	-0.28660	-0.66639	0.00701	31.93112	-13.98567	-2.03740	0.72544	34.91914	246.73	0.55
95/10/26	2450016.5	-0.21121	-0.69450	0.00227	33.26745	-10.33274	-2.06230	0.72591	34.89616	253.08	0.18

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95/10/30	2450020.5	-0.13321	-0.71403	-0.00250	34.19028	-6.55910	-2.06167	0.72636	34.87474	259.43	-0.20
95/11/ 3	2450024.5	-0.05357	-0.72475	-0.00724	34.68987	-2.71119	-2.03562	0.72676	34.85514	265.77	-0.57
95/11/ 7	2450028.5	0.02674	-0.72654	-0.01189	34.76156	1.16399	-1.98455	0.72713	34.83761	272.11	-0.94
95/11/11	2450032.5	0.10671	-0.71939	-0.01639	34.40576	5.01944	-1.90915	0.72745	34.82235	278.44	-1.29
95/11/15	2450036.5	0.18538	-0.70340	-0.02069	33.62789	8.80862	-1.81040	0.72771	34.80954	284.76	-1.63
95/11/19	2450040.5	0.26177	-0.67878	-0.02474	32.43823	12.48601	-1.68953	0.72792	34.79933	291.09	-1.95
95/11/23	2450044.5	0.33495	-0.64583	-0.02848	30.85182	16.00757	-1.54805	0.72808	34.79186	297.41	-2.24
95/11/27	2450048.5	0.40402	-0.60497	-0.03188	28.88822	19.33117	-1.38766	0.72817	34.78720	303.74	-2.51
95/12/ 1	2450052.5	0.46815	-0.55670	-0.03488	26.57131	22.41708	-1.21033	0.72821	34.78541	310.06	-2.75
95/12/ 5	2450056.5	0.52654	-0.50161	-0.03746	23.92899	25.22833	-1.01817	0.72819	34.78652	316.39	-2.95
95/12/ 9	2450060.5	0.57848	-0.44037	-0.03957	20.99293	27.73112	-0.81350	0.72810	34.79052	322.72	-3.12
95/12/13	2450064.5	0.62334	-0.37374	-0.04121	17.79820	29.89517	-0.59877	0.72796	34.79735	329.05	-3.25
95/12/17	2450068.5	0.66055	-0.30252	-0.04234	14.38291	31.69407	-0.37653	0.72776	34.80695	335.39	-3.33
95/12/21	2450072.5	0.68965	-0.22760	-0.04294	10.78783	33.10553	-0.14947	0.72751	34.81919	341.74	-3.38
95/12/25	2450076.5	0.71029	-0.14988	-0.04302	7.05601	34.11172	0.07969	0.72720	34.83393	348.08	-3.39
95/12/29	2450080.5	0.72218	-0.07031	-0.04258	3.23225	34.69943	0.30819	0.72685	34.85101	354.44	-3.36
96/ 1/ 2	2450084.5	0.72519	0.01012	-0.04160	-0.63729	34.86030	0.53324	0.72645	34.87020	0.80	-3.28
96/ 1/ 6	2450088.5	0.71924	0.09042	-0.04012	-4.50563	34.59098	0.75209	0.72601	34.89129	7.17	-3.17
96/ 1/10	2450092.5	0.70441	0.16961	-0.03813	-8.32549	33.89321	0.96205	0.72554	34.91402	13.54	-3.01
96/ 1/14	2450096.5	0.68085	0.24670	-0.03568	-12.04980	32.77388	1.16051	0.72504	34.93811	19.92	-2.82
96/ 1/18	2450100.5	0.64884	0.32072	-0.03278	-15.63228	31.24505	1.34496	0.72452	34.96327	26.30	-2.59
96/ 1/22	2450104.5	0.60876	0.39076	-0.02948	-19.02796	29.32389	1.51308	0.72398	34.98919	32.70	-2.33
96/ 1/26	2450108.5	0.56110	0.45592	-0.02581	-22.19383	27.03253	1.66269	0.72344	35.01554	39.10	-2.04
96/ 1/30	2450112.5	0.50643	0.51539	-0.02181	-25.08930	24.39793	1.79185	0.72289	35.04201	45.50	-1.73
96/ 2/ 3	2450116.5	0.44542	0.56841	-0.01755	-27.67683	21.45157	1.89884	0.72235	35.06826	51.92	-1.39
96/ 2/ 7	2450120.5	0.37882	0.61429	-0.01306	-29.92244	18.22919	1.98221	0.72182	35.09395	58.34	-1.04
96/ 2/11	2450124.5	0.30745	0.65245	-0.00841	-31.79621	14.77035	2.04081	0.72131	35.11876	64.77	-0.67
96/ 2/15	2450128.5	0.23221	0.68239	-0.00365	-33.27275	11.11801	2.07379	0.72083	35.14237	71.21	-0.29
96/ 2/19	2450132.5	0.15404	0.70371	0.00116	-34.33161	7.31798	2.08061	0.72037	35.16449	77.65	0.09
96/ 2/23	2450136.5	0.07392	0.71612	0.00594	-34.95765	3.41839	2.06111	0.71995	35.18481	84.11	0.47
96/ 2/27	2450140.5	-0.00713	0.71946	0.01066	-35.14133	-0.53102	2.01543	0.71958	35.20309	90.57	0.85
96/ 3/ 2	2450144.5	-0.08810	0.71367	0.01524	-34.87890	-4.47946	1.94408	0.71925	35.21907	97.04	1.21
96/ 3/ 6	2450148.5	-0.16795	0.69881	0.01962	-34.17253	-8.37592	1.84791	0.71897	35.23255	103.51	1.56
96/ 3/10	2450152.5	-0.24565	0.67505	0.02376	-33.03035	-12.16979	1.72812	0.71875	35.24336	110.00	1.89
96/ 3/14	2450156.5	-0.32023	0.64269	0.02759	-31.46638	-15.81165	1.58621	0.71859	35.25135	116.49	2.20
96/ 3/18	2450160.5	-0.39073	0.60215	0.03107	-29.50037	-19.25396	1.42400	0.71848	35.25641	122.98	2.48
96/ 3/22	2450164.5	-0.45624	0.55392	0.03415	-27.15754	-22.45178	1.24358	0.71844	35.25848	129.48	2.72
96/ 3/26	2450168.5	-0.51594	0.49863	0.03680	-24.46823	-25.36341	1.04729	0.71846	35.25753	135.98	2.94
96/ 3/30	2450172.5	-0.56906	0.43699	0.03898	-21.46750	-27.95103	0.83769	0.71854	35.25359	142.48	3.11
96/ 4/ 3	2450176.5	-0.61492	0.36977	0.04067	-18.19456	-30.18121	0.61750	0.71868	35.24669	148.98	3.24
96/ 4/ 7	2450180.5	-0.65294	0.29783	0.04183	-14.69222	-32.02543	0.38961	0.71888	35.23693	155.48	3.34
96/ 4/11	2450184.5	-0.68266	0.22211	0.04246	-11.00626	-33.46040	0.15698	0.71914	35.22444	161.98	3.39
96/ 4/15	2450188.5	-0.70369	0.14356	0.04255	-7.18478	-34.46845	-0.07737	0.71945	35.20939	168.47	3.39
96/ 4/19	2450192.5	-0.71579	0.06319	0.04211	-3.27741	-35.03765	-0.31041	0.71981	35.19197	174.95	3.35
96/ 4/23	2450196.5	-0.71881	-0.01798	0.04112	0.66531	-35.16199	-0.53916	0.72021	35.17242	181.43	3.27

1.2 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
96/ 4/27	2450200.5	-0.71273	-0.09892	0.03962	4.59270	-34.84135	-0.76068	0.72065	35.15098	187.90	3.15
96/ 5/ 1	2450204.5	-0.69764	-0.17862	0.03762	8.45463	-34.08146	-0.97218	0.72112	35.12794	194.36	2.99
96/ 5/ 5	2450208.5	-0.67375	-0.25606	0.03514	12.20222	-32.89372	-1.17100	0.72163	35.10359	200.81	2.79
96/ 5/ 9	2450212.5	-0.64138	-0.33028	0.03222	15.78843	-31.29495	-1.35467	0.72215	35.07825	207.25	2.56
96/ 5/13	2450216.5	-0.60096	-0.40036	0.02889	19.16869	-29.30711	-1.52095	0.72269	35.05223	213.67	2.29
96/ 5/17	2450220.5	-0.55301	-0.46541	0.02521	22.30144	-26.95691	-1.66782	0.72323	35.02586	220.08	2.00
96/ 5/21	2450224.5	-0.49814	-0.52465	0.02120	25.14860	-24.27538	-1.79353	0.72378	34.99947	226.48	1.68
96/ 5/25	2450228.5	-0.43706	-0.57735	0.01694	27.67601	-21.29740	-1.89661	0.72432	34.97339	232.87	1.34
96/ 5/29	2450232.5	-0.37054	-0.62285	0.01246	29.85375	-18.06122	-1.97588	0.72485	34.94793	239.25	0.98
96/ 6/ 2	2450236.5	-0.29941	-0.66063	0.00783	31.65645	-14.60789	-2.03046	0.72535	34.92340	245.62	0.62
96/ 6/ 6	2450240.5	-0.22458	-0.69021	0.00310	33.06352	-10.98079	-2.05980	0.72584	34.90009	251.98	0.24
96/ 6/10	2450244.5	-0.14697	-0.71126	-0.00167	34.05930	-7.22501	-2.06362	0.72629	34.87829	258.33	-0.13
96/ 6/14	2450248.5	-0.06754	-0.72353	-0.00642	34.63318	-3.38683	-2.04198	0.72671	34.85825	264.67	-0.51
96/ 6/18	2450252.5	0.01272	-0.72689	-0.01109	34.77963	0.48681	-1.99523	0.72708	34.84021	271.00	-0.87
96/ 6/22	2450256.5	0.09283	-0.72129	-0.01562	34.49818	4.34886	-1.92401	0.72741	34.82440	277.33	-1.23
96/ 6/26	2450260.5	0.17179	-0.70684	-0.01996	33.79338	8.15269	-1.82925	0.72769	34.81099	283.66	-1.57
96/ 6/30	2450264.5	0.24864	-0.68370	-0.02405	32.67471	11.85257	-1.71214	0.72791	34.80016	289.98	-1.89
96/ 7/ 4	2450268.5	0.32245	-0.65219	-0.02785	31.15637	15.40417	-1.57414	0.72808	34.79204	296.31	-2.19
96/ 7/ 8	2450272.5	0.39230	-0.61268	-0.03131	29.25719	18.76501	-1.41693	0.72819	34.78672	302.63	-2.46
96/ 7/12	2450276.5	0.45735	-0.56566	-0.03439	27.00028	21.89492	-1.24242	0.72824	34.78428	308.96	-2.71
96/ 7/16	2450280.5	0.51680	-0.51172	-0.03704	24.41289	24.75644	-1.05271	0.72823	34.78475	315.28	-2.92
96/ 7/20	2450284.5	0.56992	-0.45151	-0.03924	21.52603	27.31520	-0.85007	0.72816	34.78811	321.61	-3.09
96/ 7/24	2450288.5	0.61605	-0.38577	-0.04096	18.37419	29.54031	-0.63693	0.72803	34.79434	327.95	-3.23
96/ 7/28	2450292.5	0.65464	-0.31531	-0.04218	14.99498	31.40465	-0.41584	0.72784	34.80337	334.28	-3.32
96/ 8/ 1	2450296.5	0.68519	-0.24097	-0.04288	11.42873	32.88523	-0.18945	0.72759	34.81508	340.62	-3.38
96/ 8/ 5	2450300.5	0.70733	-0.16367	-0.04305	7.71808	33.96340	0.03952	0.72730	34.82934	346.97	-3.39
96/ 8/ 9	2450304.5	0.72078	-0.08437	-0.04269	3.90755	34.62516	0.26830	0.72695	34.84599	353.32	-3.37
96/ 8/13	2450308.5	0.72535	-0.00402	-0.04181	0.04309	34.86129	0.49413	0.72656	34.86482	359.68	-3.30
96/ 8/17	2450312.5	0.72097	0.07637	-0.04042	-3.82847	34.66754	0.71424	0.72613	34.88561	6.05	-3.19
96/ 8/21	2450316.5	0.70769	0.15582	-0.03852	-7.65987	34.04475	0.92593	0.72566	34.90811	12.42	-3.04
96/ 8/25	2450320.5	0.68565	0.23335	-0.03615	-11.40399	32.99891	1.12657	0.72517	34.93205	18.79	-2.86
96/ 8/29	2450324.5	0.65510	0.30797	-0.03332	-15.01438	31.54115	1.31364	0.72465	34.95714	25.18	-2.64
96/ 9/ 2	2450328.5	0.61641	0.37877	-0.03009	-18.44582	29.68774	1.48477	0.72411	34.98306	31.57	-2.38
96/ 9/ 6	2450332.5	0.57004	0.44485	-0.02648	-21.65493	27.45992	1.63777	0.72356	35.00951	37.97	-2.10
96/ 9/10	2450336.5	0.51656	0.50538	-0.02254	-24.60064	24.88381	1.77065	0.72301	35.03614	44.37	-1.79
96/ 9/14	2450340.5	0.45661	0.55958	-0.01831	-27.24487	21.99010	1.88164	0.72247	35.06263	50.79	-1.45
96/ 9/18	2450344.5	0.39094	0.60676	-0.01386	-29.55294	18.81377	1.96926	0.72193	35.08864	57.21	-1.10
96/ 9/22	2450348.5	0.32035	0.64632	-0.00923	-31.49419	15.39374	2.03229	0.72141	35.11384	63.63	-0.73
96/ 9/26	2450352.5	0.24573	0.67773	-0.00449	-33.04239	11.77237	2.06983	0.72092	35.13790	70.07	-0.36
96/ 9/30	2450356.5	0.16800	0.70059	0.00031	-34.17618	7.99501	2.08128	0.72045	35.16053	76.51	0.02
96/10/ 4	2450360.5	0.08815	0.71459	0.00510	-34.87944	4.10941	2.06642	0.72002	35.18142	82.97	0.41
96/10/ 8	2450364.5	0.00719	0.71953	0.00984	-35.14161	0.16509	2.02532	0.71964	35.20031	89.43	0.78
96/10/12	2450368.5	-0.07387	0.71534	0.01444	-34.95788	-3.78732	1.95844	0.71929	35.21694	95.90	1.15
96/10/16	2450372.5	-0.15399	0.70207	0.01887	-34.32938	-7.69678	1.86656	0.71900	35.23110	102.37	1.50
96/10/20	2450376.5	-0.23215	0.67986	0.02305	-33.26315	-11.51255	1.75083	0.71877	35.24260	108.85	1.84

1.2 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM VENUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
96/10/24	2450380.5	-0.30735	0.64898	0.02694	-31.77217	-15.18492	1.61268	0.71859	35.25129	115.34	2.15
96/10/28	2450384.5	-0.37863	0.60984	0.03048	-29.87520	-18.66597	1.45389	0.71847	35.25706	121.83	2.43
96/11/ 1	2450388.5	-0.44509	0.56292	0.03364	-27.59651	-21.91023	1.27650	0.71841	35.25982	128.33	2.68
96/11/ 5	2450392.5	-0.50587	0.50882	0.03637	-24.96557	-24.87536	1.08281	0.71842	35.25955	134.83	2.90
96/11/ 9	2450396.5	-0.56019	0.44824	0.03863	-22.01664	-27.52278	0.87533	0.71849	35.25624	141.34	3.08
96/11/13	2450400.5	-0.60738	0.38193	0.04040	-18.78824	-29.81826	0.65679	0.71862	35.24994	147.84	3.22
96/11/17	2450404.5	-0.64682	0.31076	0.04166	-15.32262	-31.73234	0.43002	0.71880	35.24073	154.34	3.32
96/11/21	2450408.5	-0.67802	0.23563	0.04239	-11.66512	-33.24079	0.19798	0.71905	35.22874	160.84	3.38
96/11/25	2450412.5	-0.70060	0.15750	0.04257	-7.86346	-34.32491	-0.03631	0.71935	35.21413	167.33	3.39
96/11/29	2450416.5	-0.71428	0.07737	0.04222	-3.96710	-34.97176	-0.26982	0.71970	35.19708	173.82	3.36
96/12/ 3	2450420.5	-0.71890	-0.00374	0.04133	-0.02649	-35.17427	-0.49955	0.72010	35.17783	180.30	3.29
96/12/ 7	2450424.5	-0.71441	-0.08480	0.03992	3.90763	-34.93131	-0.72256	0.72053	35.15662	186.77	3.18
96/12/11	2450428.5	-0.70089	-0.16479	0.03800	7.78499	-34.24758	-0.93603	0.72100	35.13373	193.23	3.02
96/12/15	2450432.5	-0.67852	-0.24271	0.03560	11.55640	-33.13353	-1.13726	0.72150	35.10946	199.68	2.83
96/12/19	2450436.5	-0.64761	-0.31756	0.03276	15.17445	-31.60505	-1.32376	0.72202	35.08412	206.12	2.60
96/12/23	2450440.5	-0.60856	-0.38843	0.02950	18.59409	-29.68325	-1.49324	0.72256	35.05803	212.55	2.34
96/12/27	2450444.5	-0.56189	-0.45443	0.02587	21.77318	-27.39405	-1.64364	0.72311	35.03152	218.96	2.05
96/12/31	2450448.5	-0.50818	-0.51474	0.02192	24.67302	-24.76778	-1.77316	0.72366	35.00492	225.37	1.74
97/ 1/ 4	2450452.5	-0.44813	-0.56863	0.01770	27.25871	-21.83869	-1.88028	0.72420	34.97858	231.76	1.40
97/ 1/ 8	2450456.5	-0.38250	-0.61544	0.01325	29.49958	-18.64448	-1.96377	0.72474	34.95280	238.14	1.05
97/ 1/12	2450460.5	-0.31212	-0.65460	0.00864	31.36946	-15.22580	-2.02271	0.72525	34.92791	244.51	0.68
97/ 1/16	2450464.5	-0.23786	-0.68565	0.00393	32.84692	-11.62563	-2.05648	0.72575	34.90422	250.87	0.31
97/ 1/20	2450468.5	-0.16067	-0.70821	-0.00084	33.91544	-7.88883	-2.06475	0.72621	34.88200	257.22	-0.07
97/ 1/24	2450472.5	-0.08149	-0.72203	-0.00559	34.56354	-4.06152	-2.04754	0.72663	34.86153	263.56	-0.44
97/ 1/28	2450476.5	-0.00130	-0.72694	-0.01028	34.78478	-0.19056	-2.00513	0.72702	34.84305	269.90	-0.81
97/ 2/ 1	2450480.5	0.07890	-0.72291	-0.01484	34.57785	3.67698	-1.93812	0.72735	34.82678	276.23	-1.17
97/ 2/ 5	2450484.5	0.15813	-0.70999	-0.01922	33.94643	7.49437	-1.84739	0.72764	34.81291	282.56	-1.51
97/ 2/ 9	2450488.5	0.23543	-0.68836	-0.02336	32.89914	11.21567	-1.73409	0.72788	34.80160	288.88	-1.84
97/ 2/13	2450492.5	0.30983	-0.65828	-0.02721	31.44938	14.79629	-1.59962	0.72806	34.79299	295.20	-2.14
97/ 2/17	2450496.5	0.38044	-0.62013	-0.03073	29.61517	18.19341	-1.44564	0.72818	34.78718	301.53	-2.42
97/ 2/21	2450500.5	0.44638	-0.57439	-0.03388	27.41891	21.36641	-1.27401	0.72824	34.78424	307.85	-2.67
97/ 2/25	2450504.5	0.50686	-0.52162	-0.03661	24.88714	24.27734	-1.08679	0.72824	34.78420	314.18	-2.88
97/ 3/ 1	2450508.5	0.56114	-0.46245	-0.03889	22.05024	26.89128	-0.88625	0.72818	34.78706	320.51	-3.06
97/ 3/ 5	2450512.5	0.60853	-0.39762	-0.04069	18.94212	29.17668	-0.67477	0.72806	34.79278	326.84	-3.20
97/ 3/ 9	2450516.5	0.64847	-0.32792	-0.04200	15.59986	31.10578	-0.45489	0.72788	34.80132	333.18	-3.31
97/ 3/13	2450520.5	0.68046	-0.25419	-0.04279	12.06335	32.65482	-0.22924	0.72765	34.81256	339.52	-3.37
97/ 3/17	2450524.5	0.70409	-0.17735	-0.04306	8.37485	33.80440	-0.00053	0.72736	34.82637	345.86	-3.39
97/ 3/21	2450528.5	0.71907	-0.09833	-0.04279	4.57860	34.53969	0.22848	0.72702	34.84259	352.21	-3.37
97/ 3/25	2450532.5	0.72520	-0.01809	-0.04200	0.72032	34.85062	0.45501	0.72664	34.86103	358.57	-3.31
97/ 3/29	2450536.5	0.72239	0.06237	-0.04070	-3.15329	34.73206	0.67631	0.72622	34.88147	4.93	-3.21
97/ 4/ 2	2450540.5	0.71066	0.14205	-0.03889	-6.99500	34.18397	0.88965	0.72576	34.90366	11.30	-3.07
97/ 4/ 6	2450544.5	0.69013	0.21998	-0.03659	-10.75762	33.21144	1.09239	0.72527	34.92734	17.68	-2.89
97/ 4/10	2450548.5	0.66105	0.29518	-0.03385	-14.39457	31.82469	1.28200	0.72475	34.95223	24.06	-2.68
97/ 4/14	2450552.5	0.62375	0.36671	-0.03068	-17.86037	30.03911	1.45607	0.72422	34.97801	30.45	-2.43
97/ 4/18	2450556.5	0.57869	0.43368	-0.02713	-21.11127	27.87508	1.61239	0.72367	35.00437	36.85	-2.15

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97/ 4/22	2450560.5	0.52641	0.49524	-0.02325	-24.10579	25.35788	1.74891	0.72312	35.03098	43.25	-1.84
97/ 4/26	2450564.5	0.46754	0.55059	-0.01907	-26.80526	22.51740	1.86384	0.72257	35.05751	49.66	-1.51
97/ 4/30	2450568.5	0.40282	0.59905	-0.01465	-29.17439	19.38792	1.95564	0.72204	35.08363	56.08	-1.16
97/ 5/ 4	2450572.5	0.33303	0.63998	-0.01005	-31.18179	16.00766	2.02304	0.72151	35.10900	62.51	-0.80
97/ 5/ 8	2450576.5	0.25904	0.67285	-0.00533	-32.80041	12.41845	2.06508	0.72101	35.13330	68.94	-0.42
97/ 5/12	2450580.5	0.18179	0.69723	-0.00053	-34.00801	8.66513	2.08113	0.72054	35.15623	75.39	-0.04
97/ 5/16	2450584.5	0.10224	0.71280	0.00427	-34.78754	4.79506	2.07087	0.72011	35.17747	81.84	0.34
97/ 5/20	2450588.5	0.02140	0.71933	0.00902	-35.12745	0.85749	2.03434	0.71971	35.19676	88.30	0.72
97/ 5/24	2450592.5	-0.05971	0.71675	0.01365	-35.02191	-3.09709	1.97193	0.71936	35.21384	94.76	1.09
97/ 5/28	2450596.5	-0.14007	0.70505	0.01811	-34.47097	-7.01766	1.88436	0.71906	35.22849	101.24	1.44
97/ 6/ 1	2450600.5	-0.21864	0.68439	0.02234	-33.48067	-10.85339	1.77271	0.71881	35.24051	107.72	1.78
97/ 6/ 5	2450604.5	-0.29443	0.65501	0.02628	-32.06294	-14.55433	1.63837	0.71862	35.24975	114.20	2.10
97/ 6/ 9	2450608.5	-0.36647	0.61728	0.02989	-30.23553	-18.07221	1.48306	0.71849	35.25609	120.70	2.38
97/ 6/13	2450612.5	-0.43383	0.57168	0.03312	-28.02177	-21.36107	1.30877	0.71842	35.25943	127.19	2.64
97/ 6/17	2450616.5	-0.49566	0.51880	0.03592	-25.45024	-24.37797	1.11776	0.71842	35.25974	133.69	2.87
97/ 6/21	2450620.5	-0.55117	0.45929	0.03827	-22.55438	-27.08365	0.91251	0.71847	35.25701	140.20	3.05
97/ 6/25	2450624.5	-0.59965	0.39393	0.04013	-19.37202	-29.44305	0.69571	0.71859	35.25128	146.70	3.20
97/ 6/29	2450628.5	-0.64049	0.32354	0.04148	-15.94478	-31.42586	0.47017	0.71877	35.24261	153.20	3.31
97/ 7/ 3	2450632.5	-0.67317	0.24904	0.04230	-12.31751	-33.00689	0.23884	0.71900	35.23114	159.70	3.37
97/ 7/ 7	2450636.5	-0.69728	0.17136	0.04258	-8.53757	-34.16646	0.00473	0.71929	35.21701	166.19	3.39
97/ 7/11	2450640.5	-0.71254	0.09151	0.04232	-4.65417	-34.89060	-0.22914	0.71963	35.20040	172.68	3.37
97/ 7/15	2450644.5	-0.71875	0.01050	0.04152	-0.71763	-35.17121	-0.45974	0.72002	35.18154	179.16	3.31
97/ 7/19	2450648.5	-0.71585	-0.07065	0.04020	3.22131	-35.00611	-0.68414	0.72045	35.16067	185.64	3.20
97/ 7/23	2450652.5	-0.70390	-0.15090	0.03837	7.11224	-34.39899	-0.89947	0.72091	35.13807	192.10	3.05
97/ 7/27	2450656.5	-0.68306	-0.22925	0.03605	10.90573	-33.35930	-1.10303	0.72141	35.11402	198.55	2.86
97/ 7/31	2450660.5	-0.65362	-0.30471	0.03328	14.55400	-31.90201	-1.29229	0.72193	35.08884	204.99	2.64
97/ 8/ 4	2450664.5	-0.61597	-0.37634	0.03010	18.01156	-30.04732	-1.46490	0.72246	35.06286	211.42	2.39
97/ 8/ 8	2450668.5	-0.57058	-0.44325	0.02653	21.23572	-27.82036	-1.61877	0.72301	35.03639	217.84	2.10
97/ 8/12	2450672.5	-0.51806	-0.50462	0.02263	24.18712	-25.25069	-1.75207	0.72356	35.00977	224.25	1.79
97/ 8/16	2450676.5	-0.45907	-0.55968	0.01845	26.83019	-22.37194	-1.86320	0.72411	34.98334	230.64	1.46
97/ 8/20	2450680.5	-0.39436	-0.60778	0.01404	29.13348	-19.22124	-1.95091	0.72464	34.95743	237.02	1.11
97/ 8/24	2450684.5	-0.32474	-0.64831	0.00946	31.07002	-15.83875	-2.01420	0.72516	34.93235	243.39	0.75
97/ 8/28	2450688.5	-0.25110	-0.68081	0.00476	32.61753	-12.26709	-2.05239	0.72566	34.90841	249.75	0.38
97/ 9/ 1	2450692.5	-0.17435	-0.70488	-0.00001	33.75863	-8.55084	-2.06514	0.72612	34.88591	256.11	-0.00
97/ 9/ 5	2450696.5	-0.09545	-0.72024	-0.00477	34.48093	-4.73593	-2.05237	0.72655	34.86511	262.45	-0.38
97/ 9/ 9	2450700.5	-0.01537	-0.72672	-0.00947	34.77713	-0.86913	-2.01433	0.72695	34.84626	268.79	-0.75
97/ 9/13	2450704.5	0.06490	-0.72425	-0.01405	34.64502	3.00248	-1.95157	0.72729	34.82959	275.12	-1.11
97/ 9/17	2450708.5	0.14438	-0.71288	-0.01847	34.08739	6.83206	-1.86491	0.72759	34.81530	281.45	-1.45
97/ 9/21	2450712.5	0.22208	-0.69276	-0.02265	33.11203	10.57353	-1.75546	0.72783	34.80356	287.77	-1.78
97/ 9/25	2450716.5	0.29706	-0.66413	-0.02656	31.73150	14.18199	-1.62458	0.72802	34.79449	294.10	-2.09
97/ 9/29	2450720.5	0.36839	-0.62737	-0.03014	29.96304	17.61430	-1.47388	0.72815	34.78821	300.42	-2.37
97/10/ 3	2450724.5	0.43521	-0.58291	-0.03336	27.82830	20.82941	-1.30519	0.72822	34.78479	306.75	-2.63
97/10/ 7	2450728.5	0.49670	-0.53132	-0.03616	25.35309	23.78888	-1.12054	0.72824	34.78427	313.07	-2.85
97/10/11	2450732.5	0.55211	-0.47323	-0.03852	22.56717	26.45721	-0.92216	0.72819	34.78666	319.40	-3.03
97/10/15	2450736.5	0.60076	-0.40933	-0.04041	19.50384	28.80226	-0.71240	0.72808	34.79192	325.73	-3.18

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97/10/19	2450740.5	0.64204	-0.34042	-0.04181	16.19966	30.79556	-0.49380	0.72791	34.79999	332.07	-3.29
97/10/23	2450744.5	0.67545	-0.26733	-0.04269	12.69406	32.41263	-0.26896	0.72769	34.81078	338.41	-3.36
97/10/27	2450748.5	0.70057	-0.19097	-0.04305	9.02893	33.63330	-0.04059	0.72741	34.82416	344.75	-3.39
97/10/31	2450752.5	0.71708	-0.11225	-0.04288	5.24817	34.44191	0.18857	0.72708	34.83997	351.10	-3.38
97/11/ 4	2450756.5	0.72477	-0.03216	-0.04218	1.39730	34.82754	0.41574	0.72670	34.85804	357.46	-3.33
97/11/ 8	2450760.5	0.72352	0.04833	-0.04096	-2.47710	34.78420	0.63816	0.72629	34.87813	3.82	-3.23
97/11/12	2450764.5	0.71334	0.12822	-0.03924	-6.32787	34.31096	0.85309	0.72583	34.90002	10.19	-3.10
97/11/16	2450768.5	0.69434	0.20653	-0.03703	-10.10777	33.41199	1.05787	0.72535	34.92345	16.57	-2.93
97/11/20	2450772.5	0.66673	0.28228	-0.03436	-13.77005	32.09664	1.24995	0.72484	34.94812	22.95	-2.72
97/11/24	2450776.5	0.63084	0.35452	-0.03126	-17.26902	30.37938	1.42690	0.72431	34.97373	29.34	-2.47
97/11/28	2450780.5	0.58710	0.42235	-0.02778	-20.56058	28.27976	1.58647	0.72376	34.99999	35.73	-2.20
97/12/ 2	2450784.5	0.53603	0.48491	-0.02395	-23.60280	25.82220	1.72658	0.72322	35.02655	42.13	-1.90
97/12/ 6	2450788.5	0.47827	0.54140	-0.01982	-26.35648	23.03582	1.84540	0.72267	35.05309	48.54	-1.57
97/12/10	2450792.5	0.41451	0.59111	-0.01544	-28.78572	19.95416	1.94133	0.72213	35.07927	54.96	-1.23
97/12/14	2450796.5	0.34554	0.63340	-0.01087	-30.85840	16.61479	2.01307	0.72160	35.10477	61.39	-0.86
97/12/18	2450800.5	0.27223	0.66771	-0.00616	-32.54668	13.05893	2.05959	0.72110	35.12925	67.82	-0.49
97/12/22	2450804.5	0.19548	0.69360	-0.00137	-33.82747	9.33096	2.08021	0.72062	35.15241	74.26	-0.11
97/12/26	2450808.5	0.11626	0.71073	0.00343	-34.68278	5.47783	2.07454	0.72018	35.17393	80.71	0.27
97/12/30	2450812.5	0.03557	0.71885	0.00819	-35.10008	1.54852	2.04258	0.71978	35.19355	87.17	0.65
98/ 1/ 3	2450816.5	-0.04557	0.71786	0.01285	-35.07254	-2.40665	1.98464	0.71942	35.21099	93.63	1.02
98/ 1/ 7	2450820.5	-0.12613	0.70775	0.01734	-34.59918	-6.33671	1.90139	0.71911	35.22602	100.11	1.38
98/ 1/11	2450824.5	-0.20509	0.68864	0.02162	-33.68500	-10.19074	1.79385	0.71886	35.23845	106.58	1.72
98/ 1/15	2450828.5	-0.28144	0.66077	0.02561	-32.34091	-13.91859	1.66336	0.71866	35.24810	113.07	2.04
98/ 1/19	2450832.5	-0.35420	0.62447	0.02929	-30.58366	-17.47164	1.51157	0.71852	35.25483	119.56	2.34
98/ 1/23	2450836.5	-0.42245	0.58021	0.03258	-28.43562	-20.80350	1.34044	0.71845	35.25857	126.06	2.60
98/ 1/27	2450840.5	-0.48530	0.52855	0.03547	-25.92451	-23.87066	1.15218	0.71843	35.25927	132.56	2.83
98/ 1/31	2450844.5	-0.54197	0.47016	0.03790	-23.08294	-26.63318	0.94924	0.71848	35.25691	139.06	3.02
98/ 2/ 4	2450848.5	-0.59173	0.40576	0.03984	-19.94802	-29.05526	0.73426	0.71859	35.25153	145.56	3.18
98/ 2/ 8	2450852.5	-0.63394	0.33620	0.04128	-16.56075	-31.10572	0.51006	0.71876	35.24322	152.06	3.29
98/ 2/12	2450856.5	-0.66809	0.26235	0.04219	-12.96545	-32.75849	0.27955	0.71899	35.23208	158.56	3.36
98/ 2/16	2450860.5	-0.69373	0.18516	0.04257	-9.20910	-33.99289	0.04573	0.71927	35.21826	165.06	3.39
98/ 2/20	2450864.5	-0.71055	0.10562	0.04241	-5.34060	-34.79396	-0.18837	0.71961	35.20195	171.54	3.38
98/ 2/24	2450868.5	-0.71835	0.02474	0.04170	-1.41013	-35.15258	-0.41973	0.71999	35.18336	178.03	3.32
98/ 2/28	2450872.5	-0.71705	-0.05645	0.04047	2.53162	-35.06554	-0.64538	0.72041	35.16273	184.50	3.22
98/ 3/ 4	2450876.5	-0.70669	-0.13693	0.03873	6.43414	-34.53552	-0.86247	0.72087	35.14035	190.97	3.08
98/ 3/ 8	2450880.5	-0.68740	-0.21568	0.03649	10.24780	-33.57095	-1.06825	0.72136	35.11648	197.42	2.90
98/ 3/12	2450884.5	-0.65944	-0.29172	0.03380	13.92452	-32.18586	-1.26016	0.72188	35.09145	203.86	2.68
98/ 3/16	2450888.5	-0.62320	-0.36408	0.03068	17.41837	-30.39956	-1.43582	0.72241	35.06557	210.29	2.43
98/ 3/20	2450892.5	-0.57914	-0.43188	0.02718	20.68616	-28.23630	-1.59310	0.72295	35.03918	216.71	2.15
98/ 3/24	2450896.5	-0.52783	-0.49428	0.02334	23.68793	-25.72491	-1.73010	0.72350	35.01260	223.12	1.85
98/ 3/28	2450900.5	-0.46992	-0.55050	0.01921	26.38741	-22.89830	-1.84521	0.72405	34.98617	229.51	1.52
98/ 4/ 1	2450904.5	-0.40617	-0.59986	0.01483	28.75242	-19.79301	-1.93709	0.72458	34.96022	235.90	1.17
98/ 4/ 5	2450908.5	-0.33736	-0.64176	0.01027	30.75518	-16.44868	-2.00472	0.72510	34.93507	242.27	0.81
98/ 4/ 9	2450912.5	-0.26436	-0.67571	0.00559	32.37258	-12.90753	-2.04736	0.72560	34.91103	248.63	0.44
98/ 4/13	2450916.5	-0.18810	-0.70128	0.00083	33.58636	-9.21379	-2.06460	0.72607	34.88839	254.99	0.07

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98/ 4/17	2450920.5	-0.10950	-0.71820	-0.00393	34.38323	-5.41319	-2.05631	0.72651	34.86743	261.33	-0.31
98/ 4/21	2450924.5	-0.02956	-0.72625	-0.00865	34.75499	-1.55237	-2.02269	0.72690	34.84840	267.67	-0.68
98/ 4/25	2450928.5	0.05075	-0.72536	-0.01326	34.69851	2.32162	-1.96424	0.72725	34.83152	274.00	-1.04
98/ 4/29	2450932.5	0.13043	-0.71555	-0.01770	34.21570	6.16188	-1.88172	0.72755	34.81700	280.33	-1.39
98/ 5/ 3	2450936.5	0.20851	-0.69695	-0.02193	33.31344	9.92214	-1.77620	0.72780	34.80501	286.66	-1.73
98/ 5/ 7	2450940.5	0.28404	-0.66980	-0.02589	32.00345	13.55728	-1.64900	0.72800	34.79569	292.98	-2.04
98/ 5/11	2450944.5	0.35608	-0.63444	-0.02954	30.30215	17.02381	-1.50167	0.72813	34.78915	299.30	-2.32
98/ 5/15	2450948.5	0.42376	-0.59131	-0.03282	28.23039	20.28026	-1.33601	0.72821	34.78547	305.63	-2.58
98/ 5/19	2450952.5	0.48625	-0.54093	-0.03570	25.81327	23.28770	-1.15402	0.72823	34.78468	311.95	-2.81
98/ 5/23	2450956.5	0.54278	-0.48393	-0.03814	23.07985	26.01007	-0.95788	0.72818	34.78679	318.28	-3.00
98/ 5/27	2450960.5	0.59266	-0.42100	-0.04011	20.06284	28.41457	-0.74995	0.72808	34.79178	324.61	-3.16
98/ 5/31	2450964.5	0.63529	-0.35291	-0.04160	16.79823	30.47206	-0.53271	0.72792	34.79958	330.95	-3.28
98/ 6/ 4	2450968.5	0.67012	-0.28049	-0.04257	13.32497	32.15732	-0.30877	0.72770	34.81010	337.29	-3.35
98/ 6/ 8	2450972.5	0.69672	-0.20464	-0.04302	9.68456	33.44936	-0.08080	0.72743	34.82322	343.63	-3.39
98/ 6/12	2450976.5	0.71477	-0.12626	-0.04294	5.92060	34.33170	0.14843	0.72710	34.83878	349.98	-3.39
98/ 6/16	2450980.5	0.72402	-0.04634	-0.04234	2.07836	34.79255	0.37617	0.72673	34.85660	356.34	-3.34
98/ 6/20	2450984.5	0.72435	0.03416	-0.04121	-1.79571	34.82504	0.59963	0.72632	34.87646	2.70	-3.25
98/ 6/24	2450988.5	0.71573	0.11424	-0.03957	-5.65450	34.42732	0.81608	0.72587	34.89813	9.07	-3.13
98/ 6/28	2450992.5	0.69827	0.19290	-0.03744	-9.45071	33.60265	1.02285	0.72539	34.92134	15.44	-2.96
98/ 7/ 2	2450996.5	0.67215	0.26917	-0.03485	-13.13746	32.35948	1.21735	0.72488	34.94583	21.82	-2.76
98/ 7/ 6	2451000.5	0.63769	0.34210	-0.03183	-16.66878	30.71140	1.39713	0.72436	34.97128	28.21	-2.52
98/ 7/10	2451004.5	0.59529	0.41077	-0.02841	-20.00025	28.67705	1.55991	0.72382	34.99738	34.61	-2.25
98/ 7/14	2451008.5	0.54547	0.47432	-0.02464	-23.08950	26.28006	1.70358	0.72327	35.02383	41.01	-1.95
98/ 7/18	2451012.5	0.48883	0.53194	-0.02056	-25.89679	23.54874	1.82625	0.72272	35.05028	47.42	-1.63
98/ 7/22	2451016.5	0.42606	0.58289	-0.01622	-28.38559	20.51590	1.92629	0.72218	35.07641	53.84	-1.29
98/ 7/26	2451020.5	0.35795	0.62652	-0.01168	-30.52307	17.21845	2.00234	0.72166	35.10188	60.26	-0.93
98/ 7/30	2451024.5	0.28533	0.66227	-0.00699	-32.28061	13.69704	2.05332	0.72115	35.12638	66.69	-0.56
98/ 8/ 3	2451028.5	0.20911	0.68967	-0.00221	-33.63426	9.99553	2.07849	0.72068	35.14960	73.13	-0.18
98/ 8/ 7	2451032.5	0.13025	0.70835	0.00260	-34.56512	6.16049	2.07742	0.72023	35.17122	79.58	0.21
98/ 8/11	2451036.5	0.04974	0.71807	0.00737	-35.05970	2.24060	2.05003	0.71983	35.19098	86.04	0.59
98/ 8/15	2451040.5	-0.03140	0.71868	0.01205	-35.11015	-1.71399	1.99658	0.71946	35.20862	92.50	0.96
98/ 8/19	2451044.5	-0.11214	0.71016	0.01657	-34.71449	-5.65236	1.91768	0.71915	35.22390	98.97	1.32
98/ 8/23	2451048.5	-0.19145	0.69261	0.02089	-33.87668	-9.52354	1.81429	0.71889	35.23662	105.45	1.67
98/ 8/27	2451052.5	-0.26832	0.66625	0.02494	-32.60662	-13.27718	1.68769	0.71868	35.24661	111.94	1.99
98/ 8/31	2451056.5	-0.34178	0.63140	0.02867	-30.92006	-16.86436	1.53949	0.71854	35.25374	118.43	2.29
98/ 9/ 4	2451060.5	-0.41088	0.58849	0.03204	-28.83841	-20.23822	1.37159	0.71845	35.25792	124.92	2.56
98/ 9/ 8	2451064.5	-0.47474	0.53809	0.03499	-26.38850	-23.35473	1.18615	0.71843	35.25909	131.42	2.79
98/ 9/12	2451068.5	-0.53255	0.48082	0.03751	-23.60210	-26.17329	0.98560	0.71847	35.25722	137.92	2.99
98/ 9/16	2451072.5	-0.58356	0.41741	0.03954	-20.51559	-28.65732	0.77253	0.71857	35.25236	144.42	3.15
98/ 9/20	2451076.5	-0.62714	0.34869	0.04107	-17.16933	-30.77483	0.54974	0.71873	35.24454	150.93	3.28
98/ 9/24	2451080.5	-0.66272	0.27553	0.04207	-13.60709	-32.49880	0.32012	0.71895	35.23390	157.42	3.35
98/ 9/28	2451084.5	-0.68987	0.19886	0.04254	-9.87544	-33.80762	0.08667	0.71922	35.22055	163.92	3.39
98/10/ 2	2451088.5	-0.70826	0.11966	0.04247	-6.02299	-34.68532	-0.14760	0.71955	35.20468	170.41	3.38
98/10/ 6	2451092.5	-0.71765	0.03894	0.04186	-2.09975	-35.12173	-0.37964	0.71992	35.18649	176.89	3.33
98/10/10	2451096.5	-0.71794	-0.04227	0.04072	1.84363	-35.11263	-0.60650	0.72034	35.16623	183.37	3.24

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98/10/14	2451100.5	-0.70915	-0.12295	0.03907	5.75657	-34.65966	-0.82529	0.72079	35.14415	189.84	3.11
98/10/18	2451104.5	-0.69141	-0.20208	0.03692	9.58924	-33.77027	-1.03323	0.72128	35.12054	196.29	2.93
98/10/22	2451108.5	-0.66495	-0.27866	0.03430	13.29324	-32.45753	-1.22773	0.72179	35.09571	202.74	2.72
98/10/26	2451112.5	-0.63012	-0.35173	0.03126	16.82222	-30.73983	-1.40639	0.72232	35.06996	209.17	2.48
98/10/30	2451116.5	-0.58739	-0.42039	0.02782	20.13248	-28.64061	-1.56701	0.72286	35.04364	215.59	2.21
98/11/ 3	2451120.5	-0.53730	-0.48379	0.02403	23.18346	-26.18791	-1.70768	0.72341	35.01708	222.00	1.90
98/11/ 7	2451124.5	-0.48050	-0.54114	0.01995	25.93821	-23.41397	-1.82672	0.72396	34.99059	228.40	1.58
98/11/11	2451128.5	-0.41771	-0.59175	0.01561	28.36383	-20.35472	-1.92275	0.72450	34.96453	234.78	1.23
98/11/15	2451132.5	-0.34973	-0.63500	0.01108	30.43173	-17.04931	-1.99467	0.72502	34.93921	241.16	0.88
98/11/19	2451136.5	-0.27740	-0.67037	0.00641	32.11799	-13.53953	-2.04172	0.72552	34.91493	247.52	0.51
98/11/23	2451140.5	-0.20164	-0.69743	0.00167	33.40346	-9.86931	-2.06341	0.72600	34.89201	253.87	0.13
98/11/27	2451144.5	-0.12339	-0.71588	-0.00310	34.27401	-6.08415	-2.05958	0.72644	34.87071	260.22	-0.24
98/12/ 1	2451148.5	-0.04361	-0.72549	-0.00783	34.72054	-2.23056	-2.03037	0.72684	34.85131	266.56	-0.62
98/12/ 5	2451152.5	0.03670	-0.72617	-0.01246	34.73902	1.64443	-1.97621	0.72720	34.83402	272.89	-0.98
98/12/ 9	2451156.5	0.11657	-0.71791	-0.01694	34.33049	5.49387	-1.89783	0.72751	34.81905	279.22	-1.33
98/12/13	2451160.5	0.19500	-0.70084	-0.02121	33.50097	9.27135	-1.79625	0.72777	34.80660	285.55	-1.67
98/12/17	2451164.5	0.27104	-0.67517	-0.02522	32.26135	12.93152	-1.67274	0.72797	34.79679	291.87	-1.99
98/12/21	2451168.5	0.34375	-0.64122	-0.02893	30.62722	16.43055	-1.52881	0.72812	34.78975	298.20	-2.28
98/12/25	2451172.5	0.41226	-0.59941	-0.03227	28.61869	19.72662	-1.36622	0.72821	34.78556	304.52	-2.54
98/12/29	2451176.5	0.47571	-0.55026	-0.03522	26.26012	22.78031	-1.18694	0.72824	34.78427	310.84	-2.77
99/ 1/ 2	2451180.5	0.53334	-0.49437	-0.03775	23.57990	25.55504	-0.99312	0.72820	34.78589	317.17	-2.97
99/ 1/ 6	2451184.5	0.58444	-0.43243	-0.03980	20.61012	28.01741	-0.78708	0.72811	34.79040	323.50	-3.13
99/ 1/10	2451188.5	0.62837	-0.36518	-0.04137	17.38621	30.13762	-0.57129	0.72796	34.79774	329.84	-3.26
99/ 1/14	2451192.5	0.66460	-0.29346	-0.04244	13.94664	31.88973	-0.34833	0.72775	34.80783	336.18	-3.34
99/ 1/18	2451196.5	0.69268	-0.21814	-0.04298	10.33249	33.25200	-0.12088	0.72748	34.82055	342.52	-3.39
99/ 1/22	2451200.5	0.71224	-0.14014	-0.04299	6.58700	34.20714	0.10833	0.72717	34.83574	348.87	-3.39
99/ 1/26	2451204.5	0.72304	-0.06042	-0.04248	2.75519	34.74252	0.33653	0.72681	34.85322	355.22	-3.35
99/ 1/30	2451208.5	0.72494	0.02005	-0.04144	-1.11666	34.85039	0.56094	0.72640	34.87279	1.58	-3.27
99/ 2/ 3	2451212.5	0.71789	0.10027	-0.03989	-4.98151	34.52801	0.77882	0.72596	34.89420	7.95	-3.15
99/ 2/ 7	2451216.5	0.70196	0.17926	-0.03785	-8.79207	33.77773	0.98747	0.72548	34.91720	14.33	-2.99
99/ 2/11	2451220.5	0.67735	0.25602	-0.03534	-12.50134	32.60710	1.18430	0.72498	34.94151	20.71	-2.79
99/ 2/15	2451224.5	0.64432	0.32960	-0.03239	-16.06316	31.02880	1.36683	0.72445	34.96684	27.09	-2.56
99/ 2/19	2451228.5	0.60328	0.39908	-0.02904	-19.43278	29.06060	1.53274	0.72391	34.99287	33.49	-2.30
99/ 2/23	2451232.5	0.55471	0.46358	-0.02532	-22.56743	26.72526	1.67990	0.72337	35.01929	39.89	-2.01
99/ 2/27	2451236.5	0.49922	0.52230	-0.02129	-25.42688	24.05029	1.80637	0.72282	35.04576	46.29	-1.69
99/ 3/ 3	2451240.5	0.43747	0.57447	-0.01699	-27.97398	21.06774	1.91048	0.72228	35.07197	52.71	-1.35
99/ 3/ 7	2451244.5	0.37024	0.61943	-0.01248	-30.17522	17.81382	1.99082	0.72175	35.09757	59.13	-0.99
99/ 3/11	2451248.5	0.29834	0.65660	-0.00782	-32.00121	14.32856	2.04626	0.72124	35.12225	65.56	-0.62
99/ 3/15	2451252.5	0.22269	0.68549	-0.00305	-33.42715	10.65530	2.07599	0.72076	35.14569	72.00	-0.24
99/ 3/19	2451256.5	0.14422	0.70572	0.00176	-34.43323	6.84018	2.07953	0.72031	35.16760	78.45	0.14
99/ 3/23	2451260.5	0.06393	0.71702	0.00654	-35.00499	2.93155	2.05673	0.71989	35.18769	84.91	0.52
99/ 3/27	2451264.5	-0.01717	0.71923	0.01124	-35.13357	-1.02065	2.00781	0.71952	35.20569	91.37	0.89
99/ 3/31	2451268.5	-0.09806	0.71231	0.01580	-34.81596	-4.96558	1.93331	0.71920	35.22138	97.84	1.26
99/ 4/ 4	2451272.5	-0.17770	0.69633	0.02015	-34.05507	-8.85223	1.83412	0.71893	35.23456	104.32	1.61
99/ 4/ 8	2451276.5	-0.25507	0.67149	0.02425	-32.85977	-12.63008	1.71147	0.71871	35.24503	110.80	1.93

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99/ 4/12	2451280.5	-0.32920	0.63810	0.02804	-31.24478	-16.24992	1.56692	0.71856	35.25268	117.29	2.24
99/ 4/16	2451284.5	-0.39912	0.59657	0.03148	-29.23056	-19.66447	1.40231	0.71846	35.25739	123.78	2.51
99/ 4/20	2451288.5	-0.46396	0.54743	0.03451	-26.84298	-22.82915	1.21978	0.71843	35.25910	130.28	2.75
99/ 4/24	2451292.5	-0.52288	0.49132	0.03710	-24.11302	-25.70272	1.02168	0.71845	35.25778	136.78	2.96
99/ 4/28	2451296.5	-0.57514	0.42893	0.03922	-21.07624	-28.24786	0.81061	0.71854	35.25347	143.28	3.13
99/ 5/ 2	2451300.5	-0.62006	0.36108	0.04084	-17.77237	-30.43173	0.58931	0.71869	35.24620	149.79	3.26
99/ 5/ 6	2451304.5	-0.65708	0.28863	0.04194	-14.24463	-32.22641	0.36067	0.71890	35.23608	156.29	3.34
99/ 5/10	2451308.5	-0.68574	0.21250	0.04250	-10.53912	-33.60932	0.12766	0.71916	35.22323	162.78	3.39
99/ 5/14	2451312.5	-0.70567	0.13367	0.04252	-6.70418	-34.56348	-0.10669	0.71948	35.20783	169.27	3.39
99/ 5/18	2451316.5	-0.71665	0.05314	0.04201	-2.78960	-35.07770	-0.33935	0.71985	35.19009	175.76	3.35
99/ 5/22	2451320.5	-0.71854	-0.02806	0.04096	1.15402	-35.14670	-0.56733	0.72025	35.17022	182.24	3.26
99/ 5/26	2451324.5	-0.71134	-0.10891	0.03939	5.07603	-34.77110	-0.78774	0.72070	35.14848	188.70	3.13
99/ 5/30	2451328.5	-0.69514	-0.18838	0.03733	8.92641	-33.95735	-0.99778	0.72118	35.12517	195.16	2.97
99/ 6/ 3	2451332.5	-0.67019	-0.26547	0.03479	12.65647	-32.71753	-1.19482	0.72169	35.10058	201.61	2.76
99/ 6/ 7	2451336.5	-0.63679	-0.33923	0.03182	16.21945	-31.06914	-1.37642	0.72222	35.07501	208.04	2.53
99/ 6/11	2451340.5	-0.59541	-0.40873	0.02845	19.57114	-29.03475	-1.54035	0.72276	35.04881	214.47	2.26
99/ 6/15	2451344.5	-0.54656	-0.47310	0.02472	22.67038	-26.64163	-1.68465	0.72330	35.02229	220.88	1.96
99/ 6/19	2451348.5	-0.49089	-0.53157	0.02068	25.47957	-23.92132	-1.80758	0.72385	34.99579	227.28	1.64
99/ 6/23	2451352.5	-0.42909	-0.58340	0.01638	27.96505	-20.90915	-1.90772	0.72439	34.96965	233.67	1.30
99/ 6/27	2451356.5	-0.36195	-0.62798	0.01188	30.09747	-17.64375	-1.98393	0.72492	34.94418	240.04	0.94
99/ 7/ 1	2451360.5	-0.29032	-0.66476	0.00724	31.85206	-14.16648	-2.03537	0.72543	34.91970	246.41	0.57
99/ 7/ 5	2451364.5	-0.21509	-0.69330	0.00250	33.20883	-10.52096	-2.06151	0.72591	34.89651	252.76	0.20
99/ 7/ 9	2451368.5	-0.13720	-0.71328	-0.00227	34.15276	-6.75245	-2.06213	0.72635	34.87490	259.11	-0.18
99/ 7/13	2451372.5	-0.05762	-0.72444	-0.00701	34.67385	-2.90733	-2.03733	0.72676	34.85512	265.45	-0.55
99/ 7/17	2451376.5	0.02268	-0.72669	-0.01166	34.76722	0.96741	-1.98748	0.72713	34.83741	271.79	-0.92
99/ 7/21	2451380.5	0.10269	-0.71999	-0.01617	34.43301	4.82477	-1.91326	0.72745	34.82199	278.12	-1.27
99/ 7/25	2451384.5	0.18144	-0.70444	-0.02048	33.67639	8.61819	-1.81564	0.72772	34.80904	284.44	-1.61
99/ 7/29	2451388.5	0.25797	-0.68025	-0.02454	32.50742	12.30211	-1.69585	0.72794	34.79871	290.77	-1.93
99/ 8/ 2	2451392.5	0.33133	-0.64772	-0.02830	30.94088	15.83239	-1.55535	0.72810	34.79112	297.09	-2.23
99/ 8/ 6	2451396.5	0.40064	-0.60725	-0.03172	28.99611	19.16683	-1.39588	0.72820	34.78635	303.41	-2.50
99/ 8/10	2451400.5	0.46503	-0.55934	-0.03474	26.69677	22.26555	-1.21935	0.72824	34.78446	309.74	-2.73
99/ 8/14	2451404.5	0.52373	-0.50459	-0.03734	24.07056	25.09145	-1.02790	0.72822	34.78547	316.07	-2.94
99/ 8/18	2451408.5	0.57602	-0.44365	-0.03948	21.14894	27.61056	-0.82381	0.72814	34.78936	322.40	-3.11
99/ 8/22	2451412.5	0.62125	-0.37728	-0.04114	17.96682	29.79244	-0.60953	0.72800	34.79608	328.73	-3.24
99/ 8/26	2451416.5	0.65886	-0.30628	-0.04229	14.56216	31.61044	-0.38763	0.72780	34.80556	335.07	-3.33
99/ 8/30	2451420.5	0.68839	-0.23152	-0.04292	10.97559	33.04211	-0.16077	0.72755	34.81767	341.41	-3.38
99/ 9/ 3	2451424.5	0.70946	-0.15392	-0.04303	7.25004	34.06934	0.06833	0.72724	34.83228	347.76	-3.39
99/ 9/ 7	2451428.5	0.72181	-0.07443	-0.04261	3.43023	34.67872	0.29689	0.72689	34.84922	354.11	-3.36
99/ 9/11	2451432.5	0.72528	0.00598	-0.04166	-0.43776	34.86163	0.52215	0.72650	34.86829	0.47	-3.29
99/ 9/15	2451436.5	0.71979	0.08631	-0.04020	-4.30698	34.61446	0.74135	0.72606	34.88926	6.84	-3.17
99/ 9/19	2451440.5	0.70541	0.16558	-0.03824	-8.13015	33.93867	0.95178	0.72559	34.91187	13.21	-3.02
99/ 9/23	2451444.5	0.68230	0.24279	-0.03581	-11.86020	32.84091	1.15084	0.72509	34.93586	19.59	-2.83
99/ 9/27	2451448.5	0.65072	0.31700	-0.03294	-15.45079	31.33297	1.33602	0.72458	34.96093	25.97	-2.61
99/10/ 1	2451452.5	0.61105	0.38726	-0.02965	-18.85691	29.43173	1.50498	0.72404	34.98678	32.36	-2.35
99/10/ 5	2451456.5	0.56377	0.45270	-0.02600	-22.03541	27.15909	1.65554	0.72350	35.01308	38.76	-2.06

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99/10/ 9	2451460.5	0.50945	0.51248	-0.02202	-24.94559	24.54173	1.78574	0.72295	35.03952	45.17	-1.75
99/10/13	2451464.5	0.44875	0.56585	-0.01776	-27.54975	21.61092	1.89385	0.72241	35.06576	51.58	-1.41
99/10/17	2451468.5	0.38242	0.61211	-0.01329	-29.81371	18.40217	1.97843	0.72188	35.09147	58.00	-1.05
99/10/21	2451472.5	0.31128	0.65069	-0.00864	-31.70734	14.95484	2.03828	0.72136	35.11634	64.43	-0.69
99/10/25	2451476.5	0.23623	0.68106	-0.00389	-33.20500	11.31171	2.07255	0.72087	35.14004	70.87	-0.31
99/10/29	2451480.5	0.15819	0.70283	0.00091	-34.28598	7.51844	2.08069	0.72042	35.16226	77.32	0.07
99/11/ 2	2451484.5	0.07815	0.71572	0.00571	-34.93487	3.62305	2.06251	0.71999	35.18274	83.77	0.45
99/11/ 6	2451488.5	-0.00288	0.71953	0.01042	-35.14180	-0.32480	2.01814	0.71962	35.20120	90.23	0.83
99/11/10	2451492.5	-0.08388	0.71422	0.01501	-34.90273	-4.27439	1.94808	0.71928	35.21741	96.70	1.20
99/11/14	2451496.5	-0.16381	0.69982	0.01941	-34.21949	-8.17470	1.85314	0.71900	35.23114	103.17	1.55
99/11/18	2451500.5	-0.24165	0.67652	0.02355	-33.09990	-11.97509	1.73452	0.71877	35.24223	109.66	1.88
99/11/22	2451504.5	-0.31641	0.64461	0.02740	-31.55766	-15.62606	1.59370	0.71860	35.25052	116.14	2.19
99/11/26	2451508.5	-0.38714	0.60448	0.03090	-29.61220	-19.07996	1.43248	0.71849	35.25591	122.64	2.47
99/11/30	2451512.5	-0.45294	0.55664	0.03401	-27.28846	-22.29169	1.25294	0.71844	35.25832	129.14	2.71
99/12/ 4	2451516.5	-0.51296	0.50170	0.03668	-24.61651	-25.21937	1.05740	0.71845	35.25773	135.64	2.93
99/12/ 8	2451520.5	-0.56644	0.44036	0.03888	-21.63115	-27.82494	0.84842	0.71853	35.25413	142.14	3.10
99/12/12	2451524.5	-0.61269	0.37341	0.04059	-18.37138	-30.07472	0.62871	0.71866	35.24758	148.64	3.24
99/12/16	2451528.5	-0.65114	0.30171	0.04178	-14.87985	-31.93990	0.40114	0.71886	35.23816	155.14	3.33
99/12/20	2451532.5	-0.68130	0.22616	0.04244	-11.20219	-33.39690	0.16869	0.71911	35.22599	161.64	3.38
99/12/24	2451536.5	-0.70279	0.14773	0.04256	-7.38639	-34.42773	-0.06565	0.71941	35.21124	168.13	3.39

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON R

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
64/12/31	2438760.5	-0.15635	0.97080	-0.00003	-29.89705	-4.84044	0.00023	0.98331	30.28636	99.15	-0.00
65/ 1/ 4	2438764.5	-0.22498	0.95721	-0.00003	-29.48583	-6.91940	0.00030	0.98329	30.28683	103.23	-0.00
65/ 1/ 8	2438768.5	-0.29248	0.93885	-0.00003	-28.92787	-8.96378	0.00037	0.98336	30.28483	107.30	-0.00
65/ 1/12	2438772.5	-0.35852	0.91583	-0.00003	-28.22615	-10.96289	0.00043	0.98350	30.28036	111.38	-0.00
65/ 1/16	2438776.5	-0.42278	0.88824	-0.00003	-27.38446	-12.90634	0.00050	0.98373	30.27345	115.45	-0.00
65/ 1/20	2438780.5	-0.48494	0.85625	-0.00003	-26.40738	-14.78408	0.00056	0.98404	30.26415	119.53	-0.00
65/ 1/24	2438784.5	-0.54469	0.81999	-0.00003	-25.30025	-16.58646	0.00062	0.98442	30.25249	123.59	-0.00
65/ 1/28	2438788.5	-0.60174	0.77967	-0.00003	-24.06912	-18.30430	0.00068	0.98488	30.23855	127.66	-0.00
65/ 2/ 1	2438792.5	-0.65581	0.73549	-0.00002	-22.72071	-19.92894	0.00073	0.98541	30.22240	131.72	-0.00
65/ 2/ 5	2438796.5	-0.70664	0.68767	-0.00002	-21.26236	-21.45229	0.00078	0.98602	30.20412	135.78	-0.00
65/ 2/ 9	2438800.5	-0.75397	0.63646	-0.00002	-19.70199	-22.86689	0.00082	0.98669	30.18382	139.83	-0.00
65/ 2/13	2438804.5	-0.79759	0.58211	-0.00002	-18.04799	-24.16594	0.00087	0.98743	30.16161	143.88	-0.00
65/ 2/17	2438808.5	-0.83730	0.52490	-0.00002	-16.30922	-25.34331	0.00090	0.98822	30.13759	147.92	-0.00
65/ 2/21	2438812.5	-0.87289	0.46511	-0.00001	-14.49493	-26.39363	0.00094	0.98907	30.11190	151.95	-0.00
65/ 2/25	2438816.5	-0.90422	0.40305	-0.00001	-12.61467	-27.31223	0.00096	0.98998	30.08468	155.98	-0.00
65/ 3/ 1	2438820.5	-0.93113	0.33903	-0.00001	-10.67824	-28.09522	0.00099	0.99093	30.05605	159.99	-0.00
65/ 3/ 5	2438824.5	-0.95352	0.27335	-0.00001	-8.69565	-28.73947	0.00101	0.99193	30.02618	164.00	-0.00
65/ 3/ 9	2438828.5	-0.97128	0.20635	-0.00001	-6.67703	-29.24260	0.00102	0.99296	29.99521	168.01	-0.00
65/ 3/13	2438832.5	-0.98435	0.13835	-0.00000	-4.63256	-29.60301	0.00103	0.99402	29.96329	172.00	-0.00
65/ 3/17	2438836.5	-0.99267	0.06968	-0.00000	-2.57246	-29.81984	0.00104	0.99512	29.93059	175.98	-0.00
65/ 3/21	2438840.5	-0.99623	0.00068	0.00000	-0.50685	-29.89297	0.00103	0.99623	29.89727	179.96	0.00
65/ 3/25	2438844.5	-0.99502	-0.06832	0.00000	1.55420	-29.82301	0.00103	0.99736	29.86349	183.93	0.00
65/ 3/29	2438848.5	-0.98906	-0.13700	0.00001	3.60082	-29.61127	0.00102	0.99850	29.82941	187.89	0.00
65/ 4/ 2	2438852.5	-0.97840	-0.20503	0.00001	5.62333	-29.25973	0.00100	0.99965	29.79519	191.84	0.00
65/ 4/ 6	2438856.5	-0.96310	-0.27209	0.00001	7.61228	-28.77101	0.00098	1.00080	29.76101	195.78	0.00
65/ 4/10	2438860.5	-0.94326	-0.33786	0.00001	9.55854	-28.14836	0.00096	1.00194	29.72702	199.71	0.00
65/ 4/14	2438864.5	-0.91898	-0.40204	0.00002	11.45327	-27.39561	0.00093	1.00308	29.69338	203.63	0.00
65/ 4/18	2438868.5	-0.89039	-0.46434	0.00002	13.28803	-26.51713	0.00089	1.00419	29.66024	207.54	0.00
65/ 4/22	2438872.5	-0.85764	-0.52447	0.00002	15.05472	-25.51782	0.00086	1.00529	29.62776	211.45	0.00
65/ 4/26	2438876.5	-0.82089	-0.58215	0.00002	16.74570	-24.40305	0.00081	1.00636	29.59607	215.34	0.00
65/ 4/30	2438880.5	-0.78033	-0.63713	0.00002	18.35373	-23.17864	0.00077	1.00740	29.56533	219.23	0.00
65/ 5/ 4	2438884.5	-0.73616	-0.68917	0.00003	19.87204	-21.85081	0.00072	1.00840	29.53567	223.11	0.00
65/ 5/ 8	2438888.5	-0.68859	-0.73802	0.00003	21.29432	-20.42616	0.00067	1.00937	29.50722	226.98	0.00
65/ 5/12	2438892.5	-0.63785	-0.78347	0.00003	22.61476	-18.91161	0.00062	1.01029	29.48010	230.85	0.00
65/ 5/16	2438896.5	-0.58418	-0.82533	0.00003	23.82804	-17.31439	0.00056	1.01116	29.45443	234.71	0.00
65/ 5/20	2438900.5	-0.52784	-0.86341	0.00003	24.92933	-15.64201	0.00050	1.01198	29.43032	238.56	0.00
65/ 5/24	2438904.5	-0.46909	-0.89755	0.00003	25.91432	-13.90219	0.00044	1.01274	29.40787	242.41	0.00
65/ 5/28	2438908.5	-0.40820	-0.92760	0.00003	26.77923	-12.10287	0.00037	1.01345	29.38718	246.25	0.00
65/ 6/ 1	2438912.5	-0.34546	-0.95343	0.00003	27.52076	-10.25214	0.00031	1.01409	29.36833	250.08	0.00
65/ 6/ 5	2438916.5	-0.28114	-0.97494	0.00003	28.13617	-8.35826	0.00024	1.01466	29.35140	253.91	0.00
65/ 6/ 9	2438920.5	-0.21556	-0.99202	0.00004	28.62322	-6.42958	0.00017	1.01517	29.33647	257.74	0.00
65/ 6/13	2438924.5	-0.14899	-1.00462	0.00004	28.98019	-4.47453	0.00010	1.01561	29.32359	261.56	0.00
65/ 6/17	2438928.5	-0.08176	-1.01268	0.00004	29.20588	-2.50160	0.00003	1.01598	29.31282	265.38	0.00
65/ 6/21	2438932.5	-0.01415	-1.01617	0.00004	29.29960	-0.51931	-0.00004	1.01627	29.30420	269.20	0.00
65/ 6/25	2438936.5	0.05351	-1.01508	0.00004	29.26117	1.46382	-0.00011	1.01649	29.29776	273.02	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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65/ 6/29	2438940.5	0.12094	-1.00942	0.00003	29.09094	3.43930	-0.00018	1.01664	29.29354	276.83	0.00
65/ 7/ 3	2438944.5	0.18782	-0.99920	0.00003	28.78974	5.39868	-0.00024	1.01670	29.29155	280.65	0.00
65/ 7/ 7	2438948.5	0.25386	-0.98449	0.00003	28.35892	7.33357	-0.00031	1.01670	29.29180	284.46	0.00
65/ 7/11	2438952.5	0.31875	-0.96535	0.00003	27.80030	9.23570	-0.00038	1.01661	29.29428	288.27	0.00
65/ 7/15	2438956.5	0.38221	-0.94185	0.00003	27.11623	11.09691	-0.00044	1.01645	29.29900	292.09	0.00
65/ 7/19	2438960.5	0.44395	-0.91411	0.00003	26.30950	12.90918	-0.00050	1.01621	29.30592	295.90	0.00
65/ 7/23	2438964.5	0.50368	-0.88225	0.00003	25.38341	14.66468	-0.00056	1.01590	29.31502	299.72	0.00
65/ 7/27	2438968.5	0.56114	-0.84641	0.00003	24.34173	16.35574	-0.00062	1.01552	29.32627	303.54	0.00
65/ 7/31	2438972.5	0.61606	-0.80674	0.00003	23.18867	17.97494	-0.00067	1.01506	29.33961	307.37	0.00
65/ 8/ 4	2438976.5	0.66820	-0.76342	0.00003	21.92893	19.51508	-0.00072	1.01454	29.35500	311.19	0.00
65/ 8/ 8	2438980.5	0.71730	-0.71664	0.00002	20.56763	20.96924	-0.00077	1.01395	29.37237	315.03	0.00
65/ 8/12	2438984.5	0.76315	-0.66660	0.00002	19.11035	22.33079	-0.00082	1.01329	29.39166	318.86	0.00
65/ 8/16	2438988.5	0.80553	-0.61354	0.00002	17.56307	23.59342	-0.00086	1.01257	29.41277	322.71	0.00
65/ 8/20	2438992.5	0.84423	-0.55767	0.00002	15.93220	24.75118	-0.00090	1.01180	29.43562	326.55	0.00
65/ 8/24	2438996.5	0.87908	-0.49926	0.00002	14.22455	25.79846	-0.00093	1.01096	29.46012	330.41	0.00
65/ 8/28	2439000.5	0.90990	-0.43856	0.00001	12.44731	26.73009	-0.00096	1.01008	29.48615	334.27	0.00
65/ 9/ 1	2439004.5	0.93654	-0.37585	0.00001	10.60803	27.54131	-0.00098	1.00915	29.51362	338.13	0.00
65/ 9/ 5	2439008.5	0.95887	-0.31141	0.00001	8.71461	28.22780	-0.00100	1.00817	29.54240	342.01	0.00
65/ 9/ 9	2439012.5	0.97677	-0.24553	0.00001	6.77527	28.78576	-0.00102	1.00716	29.57236	345.89	0.00
65/ 9/13	2439016.5	0.99015	-0.17851	0.00000	4.79853	29.21188	-0.00103	1.00611	29.60338	349.78	0.00
65/ 9/17	2439020.5	0.99892	-0.11066	0.00000	2.79319	29.50339	-0.00104	1.00503	29.63531	353.68	0.00
65/ 9/21	2439024.5	1.00304	-0.04230	-0.00000	0.76826	29.65807	-0.00104	1.00393	29.66802	357.59	-0.00
65/ 9/25	2439028.5	1.00246	0.02626	-0.00000	-1.26700	29.67432	-0.00103	1.00281	29.70136	1.50	-0.00
65/ 9/29	2439032.5	0.99718	0.09470	-0.00001	-3.30320	29.55112	-0.00103	1.00167	29.73516	5.42	-0.00
65/10/ 3	2439036.5	0.98721	0.16269	-0.00001	-5.33080	29.28811	-0.00101	1.00052	29.76929	9.36	-0.00
65/10/ 7	2439040.5	0.97257	0.22991	-0.00001	-7.34015	28.88555	-0.00100	0.99937	29.80357	13.30	-0.00
65/10/11	2439044.5	0.95332	0.29604	-0.00001	-9.32157	28.34440	-0.00097	0.99823	29.83784	17.25	-0.00
65/10/15	2439048.5	0.92953	0.36077	-0.00001	-11.26540	27.66630	-0.00094	0.99708	29.87195	21.21	-0.00
65/10/19	2439052.5	0.90130	0.42377	-0.00002	-13.16201	26.85356	-0.00091	0.99596	29.90572	25.18	-0.00
65/10/23	2439056.5	0.86876	0.48474	-0.00002	-15.00185	25.90922	-0.00088	0.99484	29.93899	29.16	-0.00
65/10/27	2439060.5	0.83204	0.54338	-0.00002	-16.77558	24.83700	-0.00083	0.99376	29.97160	33.15	-0.00
65/10/31	2439064.5	0.79131	0.59940	-0.00002	-18.47403	23.64134	-0.00079	0.99270	30.00338	37.14	-0.00
65/11/ 4	2439068.5	0.74675	0.65252	-0.00002	-20.08833	22.32735	-0.00074	0.99167	30.03417	41.15	-0.00
65/11/ 8	2439072.5	0.69856	0.70247	-0.00003	-21.60990	20.90086	-0.00069	0.99069	30.06382	45.16	-0.00
65/11/12	2439076.5	0.64698	0.74901	-0.00003	-23.03058	19.36831	-0.00063	0.98975	30.09218	49.18	-0.00
65/11/16	2439080.5	0.59224	0.79189	-0.00003	-24.34264	17.73683	-0.00057	0.98885	30.11909	53.21	-0.00
65/11/20	2439084.5	0.53460	0.83089	-0.00003	-25.53886	16.01414	-0.00051	0.98801	30.14442	57.24	-0.00
65/11/24	2439088.5	0.47433	0.86581	-0.00003	-26.61255	14.20852	-0.00045	0.98723	30.16802	61.28	-0.00
65/11/28	2439092.5	0.41174	0.89648	-0.00003	-27.55765	12.32881	-0.00038	0.98651	30.18979	65.33	-0.00
65/12/ 2	2439096.5	0.34711	0.92273	-0.00003	-28.36874	10.38433	-0.00031	0.98586	30.20960	69.38	-0.00
65/12/ 6	2439100.5	0.28077	0.94442	-0.00003	-29.04111	8.38484	-0.00024	0.98527	30.22733	73.44	-0.00
65/12/10	2439104.5	0.21304	0.96143	-0.00003	-29.57080	6.34046	-0.00017	0.98475	30.24291	77.51	-0.00
65/12/14	2439108.5	0.14426	0.97368	-0.00003	-29.95460	4.26167	-0.00010	0.98431	30.25624	81.57	-0.00
65/12/18	2439112.5	0.07476	0.98111	-0.00003	-30.19014	2.15916	-0.00002	0.98395	30.26725	85.64	-0.00
65/12/22	2439116.5	0.00488	0.98365	-0.00003	-30.27585	0.04384	0.00005	0.98366	30.27588	89.72	-0.00

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65/12/26	2439120.5	-0.06501	0.98131	-0.00003	-30.21103	-2.07329	0.00012	0.98346	30.28209	93.79	-0.00
65/12/30	2439124.5	-0.13459	0.97408	-0.00003	-29.99583	-4.18117	0.00020	0.98333	30.28583	97.87	-0.00
66/ 1/ 3	2439128.5	-0.20349	0.96200	-0.00003	-29.63125	-6.26878	0.00027	0.98329	30.28710	101.94	-0.00
66/ 1/ 7	2439132.5	-0.27138	0.94514	-0.00003	-29.11917	-8.32521	0.00034	0.98333	30.28589	106.02	-0.00
66/ 1/11	2439136.5	-0.33792	0.92357	-0.00003	-28.46229	-10.33971	0.00041	0.98345	30.28220	110.10	-0.00
66/ 1/15	2439140.5	-0.40278	0.89741	-0.00003	-27.66416	-12.30180	0.00048	0.98365	30.27606	114.17	-0.00
66/ 1/19	2439144.5	-0.46563	0.86678	-0.00003	-26.72911	-14.20131	0.00056	0.98393	30.26751	118.24	-0.00
66/ 1/23	2439148.5	-0.52617	0.83185	-0.00003	-25.66224	-16.02845	0.00062	0.98429	30.25660	122.31	-0.00
66/ 1/27	2439152.5	-0.58410	0.79279	-0.00003	-24.46939	-17.77389	0.00069	0.98473	30.24338	126.38	-0.00
66/ 1/31	2439156.5	-0.63914	0.74980	-0.00002	-23.15707	-19.42879	0.00075	0.98524	30.22793	130.44	-0.00
66/ 2/ 4	2439160.5	-0.69101	0.70309	-0.00002	-21.73244	-20.98489	0.00081	0.98582	30.21034	134.50	-0.00
66/ 2/ 8	2439164.5	-0.73947	0.65292	-0.00002	-20.20323	-22.43451	0.00087	0.98647	30.19069	138.56	-0.00
66/ 2/12	2439168.5	-0.78428	0.59953	-0.00002	-18.57770	-23.77065	0.00092	0.98718	30.16910	142.60	-0.00
66/ 2/16	2439172.5	-0.82524	0.54318	-0.00002	-16.86457	-24.98695	0.00096	0.98796	30.14567	146.65	-0.00
66/ 2/20	2439176.5	-0.86214	0.48417	-0.00001	-15.07296	-26.07781	0.00100	0.98879	30.12052	150.68	-0.00
66/ 2/24	2439180.5	-0.89483	0.42279	-0.00001	-13.21233	-27.03832	0.00104	0.98968	30.09380	154.71	-0.00
66/ 2/28	2439184.5	-0.92314	0.35935	-0.00001	-11.29243	-27.86437	0.00106	0.99062	30.06563	158.73	-0.00
66/ 3/ 4	2439188.5	-0.94696	0.29416	-0.00001	-9.32319	-28.55256	0.00108	0.99160	30.03616	162.74	-0.00
66/ 3/ 8	2439192.5	-0.96619	0.22754	-0.00000	-7.31472	-29.10030	0.00110	0.99262	30.00554	166.75	-0.00
66/ 3/12	2439196.5	-0.98074	0.15981	-0.00000	-5.27719	-29.50572	0.00111	0.99367	29.97392	170.74	-0.00
66/ 3/16	2439200.5	-0.99056	0.09132	0.00000	-3.22081	-29.76774	0.00111	0.99476	29.94147	174.73	0.00
66/ 3/20	2439204.5	-0.99561	0.02239	0.00000	-1.15575	-29.88601	0.00111	0.99586	29.90834	178.71	0.00
66/ 3/24	2439208.5	-0.99590	-0.04665	0.00001	0.90790	-29.86091	0.00110	0.99699	29.87471	182.68	0.00
66/ 3/28	2439212.5	-0.99143	-0.11547	0.00001	2.96022	-29.69353	0.00108	0.99813	29.84072	186.64	0.00
66/ 4/ 1	2439216.5	-0.98224	-0.18374	0.00001	4.99143	-29.38565	0.00107	0.99927	29.80655	190.60	0.00
66/ 4/ 5	2439220.5	-0.96839	-0.25114	0.00001	6.99203	-28.93968	0.00104	1.00042	29.77236	194.54	0.00
66/ 4/ 9	2439224.5	-0.94996	-0.31735	0.00002	8.95277	-28.35869	0.00101	1.00157	29.73831	198.47	0.00
66/ 4/13	2439228.5	-0.92706	-0.38206	0.00002	10.86473	-27.64631	0.00098	1.00270	29.70456	202.40	0.00
66/ 4/17	2439232.5	-0.89981	-0.44498	0.00002	12.71931	-26.80677	0.00094	1.00383	29.67127	206.31	0.00
66/ 4/21	2439236.5	-0.86834	-0.50583	0.00002	14.50833	-25.84480	0.00090	1.00493	29.63858	210.22	0.00
66/ 4/25	2439240.5	-0.83283	-0.56431	0.00002	16.22399	-24.76561	0.00086	1.00601	29.60664	214.12	0.00
66/ 4/29	2439244.5	-0.79345	-0.62017	0.00003	17.85891	-23.57490	0.00081	1.00706	29.57561	218.01	0.00
66/ 5/ 3	2439248.5	-0.75038	-0.67315	0.00003	19.40618	-22.27876	0.00075	1.00807	29.54561	221.89	0.00
66/ 5/ 7	2439252.5	-0.70385	-0.72302	0.00003	20.85934	-20.88368	0.00070	1.00905	29.51678	225.77	0.00
66/ 5/11	2439256.5	-0.65408	-0.76957	0.00003	22.21243	-19.39649	0.00064	1.00998	29.48925	229.64	0.00
66/ 5/15	2439260.5	-0.60131	-0.81258	0.00003	23.45995	-17.82432	0.00058	1.01087	29.46312	233.50	0.00
66/ 5/19	2439264.5	-0.54577	-0.85186	0.00003	24.59693	-16.17459	0.00051	1.01170	29.43852	237.35	0.00
66/ 5/23	2439268.5	-0.48775	-0.88726	0.00003	25.61890	-14.45498	0.00045	1.01248	29.41555	241.20	0.00
66/ 5/27	2439272.5	-0.42750	-0.91860	0.00004	26.52191	-12.67335	0.00038	1.01321	29.39431	245.04	0.00
66/ 5/31	2439276.5	-0.36530	-0.94577	0.00004	27.30250	-10.83776	0.00031	1.01387	29.37488	248.88	0.00
66/ 6/ 4	2439280.5	-0.30145	-0.96864	0.00004	27.95777	-8.95641	0.00023	1.01446	29.35735	252.71	0.00
66/ 6/ 8	2439284.5	-0.23623	-0.98712	0.00004	28.48530	-7.03762	0.00016	1.01499	29.34178	256.54	0.00
66/ 6/12	2439288.5	-0.16994	-1.00114	0.00004	28.88322	-5.08981	0.00009	1.01546	29.32825	260.37	0.00
66/ 6/16	2439292.5	-0.10288	-1.01062	0.00004	29.15016	-3.12145	0.00002	1.01585	29.31681	264.19	0.00
66/ 6/20	2439296.5	-0.03535	-1.01555	0.00004	29.28528	-1.14107	-0.00006	1.01616	29.30750	268.01	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							
66/ 6/24	2439300.5	0.03233	-1.01589	0.00004	29.28824	0.84282	-0.00013	1.01641	29.30036	271.82	0.00
66/ 6/28	2439304.5	0.09987	-1.01166	0.00004	29.15922	2.82171	-0.00020	1.01658	29.29543	275.64	0.00
66/ 7/ 2	2439308.5	0.16696	-1.00287	0.00004	28.89890	4.78712	-0.00028	1.01667	29.29271	279.45	0.00
66/ 7/ 6	2439312.5	0.23329	-0.98956	0.00004	28.50847	6.73066	-0.00035	1.01668	29.29223	283.27	0.00
66/ 7/10	2439316.5	0.29858	-0.97179	0.00003	27.98961	8.64400	-0.00041	1.01662	29.29398	287.08	0.00
66/ 7/14	2439320.5	0.36252	-0.94965	0.00003	27.34450	10.51896	-0.00048	1.01649	29.29795	290.89	0.00
66/ 7/18	2439324.5	0.42482	-0.92323	0.00003	26.57580	12.34746	-0.00055	1.01628	29.30414	294.71	0.00
66/ 7/22	2439328.5	0.48521	-0.89264	0.00003	25.68665	14.12160	-0.00061	1.01599	29.31252	298.53	0.00
66/ 7/26	2439332.5	0.54341	-0.85803	0.00003	24.68067	15.83367	-0.00067	1.01563	29.32304	302.35	0.00
66/ 7/30	2439336.5	0.59916	-0.81954	0.00003	23.56195	17.47616	-0.00072	1.01520	29.33568	306.17	0.00
66/ 8/ 3	2439340.5	0.65219	-0.77734	0.00003	22.33503	19.04181	-0.00078	1.01470	29.35037	310.00	0.00
66/ 8/ 7	2439344.5	0.70227	-0.73162	0.00002	21.00490	20.52360	-0.00083	1.01413	29.36706	313.83	0.00
66/ 8/11	2439348.5	0.74917	-0.68258	0.00002	19.57700	21.91481	-0.00088	1.01350	29.38567	317.66	0.00
66/ 8/15	2439352.5	0.79266	-0.63044	0.00002	18.05719	23.20903	-0.00092	1.01280	29.40614	321.50	0.00
66/ 8/19	2439356.5	0.83253	-0.57543	0.00002	16.45175	24.40018	-0.00096	1.01204	29.42837	325.35	0.00
66/ 8/23	2439360.5	0.86861	-0.51779	0.00002	14.76737	25.48257	-0.00099	1.01123	29.45227	329.20	0.00
66/ 8/27	2439364.5	0.90071	-0.45778	0.00001	13.01112	26.45087	-0.00102	1.01036	29.47775	333.06	0.00
66/ 8/31	2439368.5	0.92867	-0.39567	0.00001	11.19044	27.30019	-0.00105	1.00945	29.50469	336.92	0.00
66/ 9/ 4	2439372.5	0.95237	-0.33174	0.00001	9.31313	28.02609	-0.00107	1.00849	29.53297	340.80	0.00
66/ 9/ 8	2439376.5	0.97167	-0.26628	0.00001	7.38731	28.62460	-0.00109	1.00749	29.56248	344.67	0.00
66/ 9/12	2439380.5	0.98647	-0.19958	0.00000	5.42141	29.09225	-0.00110	1.00646	29.59308	348.56	0.00
66/ 9/16	2439384.5	0.99669	-0.13196	0.00000	3.42413	29.42609	-0.00110	1.00539	29.62465	352.46	0.00
66/ 9/20	2439388.5	1.00227	-0.06373	-0.00000	1.40444	29.62376	-0.00111	1.00430	29.65703	356.36	-0.00
66/ 9/24	2439392.5	1.00317	0.00480	-0.00000	-0.62849	29.68343	-0.00110	1.00318	29.69009	0.27	-0.00
66/ 9/28	2439396.5	0.99937	0.07331	-0.00001	-2.66531	29.60392	-0.00109	1.00205	29.72366	4.20	-0.00
66/10/ 2	2439400.5	0.99086	0.14148	-0.00001	-4.69651	29.38466	-0.00108	1.00091	29.75761	8.13	-0.00
66/10/ 6	2439404.5	0.97768	0.20897	-0.00001	-6.71249	29.02571	-0.00106	0.99976	29.79177	12.07	-0.00
66/10/10	2439408.5	0.95987	0.27548	-0.00001	-8.70357	28.52782	-0.00103	0.99861	29.82598	16.01	-0.00
66/10/14	2439412.5	0.93749	0.34067	-0.00002	-10.66007	27.89241	-0.00100	0.99747	29.86007	19.97	-0.00
66/10/18	2439416.5	0.91065	0.40425	-0.00002	-12.57236	27.12158	-0.00097	0.99634	29.89389	23.94	-0.00
66/10/22	2439420.5	0.87944	0.46588	-0.00002	-14.43087	26.21815	-0.00093	0.99522	29.92727	27.91	-0.00
66/10/26	2439424.5	0.84402	0.52528	-0.00002	-16.22618	25.18562	-0.00089	0.99413	29.96004	31.90	-0.00
66/10/30	2439428.5	0.80453	0.58215	-0.00002	-17.94907	24.02820	-0.00084	0.99306	29.99205	35.89	-0.00
66/11/ 3	2439432.5	0.76115	0.63621	-0.00003	-19.59056	22.75080	-0.00078	0.99203	30.02314	39.89	-0.00
66/11/ 7	2439436.5	0.71408	0.68718	-0.00003	-21.14200	21.35901	-0.00073	0.99103	30.05314	43.90	-0.00
66/11/11	2439440.5	0.66354	0.73481	-0.00003	-22.59508	19.85910	-0.00067	0.99007	30.08191	47.92	-0.00
66/11/15	2439444.5	0.60977	0.77886	-0.00003	-23.94194	18.25796	-0.00060	0.98916	30.10929	51.94	-0.00
66/11/19	2439448.5	0.55301	0.81910	-0.00003	-25.17518	16.56314	-0.00053	0.98830	30.13515	55.97	-0.00
66/11/23	2439452.5	0.49354	0.85532	-0.00003	-26.28796	14.78274	-0.00046	0.98750	30.15935	60.01	-0.00
66/11/27	2439456.5	0.43165	0.88734	-0.00003	-27.27401	12.92543	-0.00039	0.98676	30.18175	64.06	-0.00
66/12/ 1	2439460.5	0.36763	0.91499	-0.00004	-28.12770	11.00039	-0.00032	0.98608	30.20225	68.11	-0.00
66/12/ 5	2439464.5	0.30179	0.93812	-0.00004	-28.84411	9.01722	-0.00024	0.98547	30.22073	72.17	-0.00
66/12/ 9	2439468.5	0.23447	0.95662	-0.00004	-29.41902	6.98595	-0.00016	0.98493	30.23709	76.23	-0.00
66/12/13	2439472.5	0.16598	0.97037	-0.00004	-29.84899	4.91693	-0.00008	0.98446	30.25125	80.29	-0.00
66/12/17	2439476.5	0.09667	0.97931	-0.00004	-30.13137	2.82081	-0.00000	0.98407	30.26312	84.36	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON 8

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
66/12/21	2439480.5	0.02688	0.98339	-0.00004	-30.26435	0.70843	0.00008	0.98376	30.27264	88.43	-0.00
66/12/25	2439484.5	-0.04305	0.98258	-0.00004	-30.24695	-1.40925	0.00016	0.98352	30.27976	92.51	-0.00
66/12/29	2439488.5	-0.11276	0.97688	-0.00004	-30.07904	-3.52116	0.00023	0.98337	30.28444	96.58	-0.00
67/ 1/ 2	2439492.5	-0.18191	0.96633	-0.00004	-29.76136	-5.61627	0.00031	0.98330	30.28665	100.66	-0.00
67/ 1/ 6	2439496.5	-0.25015	0.95096	-0.00003	-29.29550	-7.68363	0.00039	0.98331	30.28638	104.74	-0.00
67/ 1/10	2439500.5	-0.31715	0.93085	-0.00003	-28.68391	-9.71242	0.00046	0.98340	30.28363	108.81	-0.00
67/ 1/14	2439504.5	-0.38257	0.90612	-0.00003	-27.92986	-11.69208	0.00054	0.98357	30.27841	112.89	-0.00
67/ 1/18	2439508.5	-0.44609	0.87688	-0.00003	-27.03744	-13.61232	0.00061	0.98383	30.27075	116.96	-0.00
67/ 1/22	2439512.5	-0.50739	0.84328	-0.00003	-26.01151	-15.46322	0.00067	0.98416	30.26070	121.03	-0.00
67/ 1/26	2439516.5	-0.56617	0.80549	-0.00003	-24.85767	-17.23532	0.00074	0.98457	30.24830	125.10	-0.00
67/ 1/30	2439520.5	-0.62215	0.76371	-0.00003	-23.58223	-18.91959	0.00080	0.98505	30.23363	129.17	-0.00
67/ 2/ 3	2439524.5	-0.67504	0.71815	-0.00002	-22.19214	-20.50760	0.00085	0.98561	30.21677	133.23	-0.00
67/ 2/ 7	2439528.5	-0.72460	0.66904	-0.00002	-20.69497	-21.99148	0.00090	0.98624	30.19780	137.28	-0.00
67/ 2/11	2439532.5	-0.77059	0.61663	-0.00002	-19.09881	-23.36401	0.00095	0.98693	30.17684	141.33	-0.00
67/ 2/15	2439536.5	-0.81278	0.56118	-0.00002	-17.41225	-24.61861	0.00099	0.98769	30.15398	145.38	-0.00
67/ 2/19	2439540.5	-0.85097	0.50298	-0.00002	-15.64429	-25.74946	0.00103	0.98851	30.12936	149.41	-0.00
67/ 2/23	2439544.5	-0.88500	0.44231	-0.00001	-13.80429	-26.75141	0.00106	0.98938	30.10310	153.44	-0.00
67/ 2/27	2439548.5	-0.91471	0.37948	-0.00001	-11.90192	-27.62010	0.00108	0.99030	30.07533	157.47	-0.00
67/ 3/ 3	2439552.5	-0.93995	0.31480	-0.00001	-9.94707	-28.35191	0.00111	0.99127	30.04622	161.48	-0.00
67/ 3/ 7	2439556.5	-0.96063	0.24859	-0.00001	-7.94979	-28.94399	0.00112	0.99228	30.01589	165.49	-0.00
67/ 3/11	2439560.5	-0.97666	0.18118	-0.00000	-5.92026	-29.39425	0.00113	0.99332	29.98452	169.49	-0.00
67/ 3/15	2439564.5	-0.98797	0.11289	-0.00000	-3.86867	-29.70136	0.00113	0.99440	29.95225	173.48	-0.00
67/ 3/19	2439568.5	-0.99452	0.04406	0.00000	-1.80522	-29.86475	0.00113	0.99550	29.91926	177.46	0.00
67/ 3/23	2439572.5	-0.99631	-0.02498	0.00000	0.25998	-29.88456	0.00113	0.99662	29.88569	181.44	0.00
67/ 3/27	2439576.5	-0.99333	-0.09391	0.00001	2.31694	-29.76168	0.00111	0.99776	29.85173	185.40	0.00
67/ 3/31	2439580.5	-0.98562	-0.16238	0.00001	4.35583	-29.49766	0.00110	0.99890	29.81753	189.36	0.00
67/ 4/ 4	2439584.5	-0.97323	-0.23009	0.00001	6.36707	-29.09472	0.00107	1.00005	29.78325	193.30	0.00
67/ 4/ 8	2439588.5	-0.95623	-0.29671	0.00001	8.34130	-28.55573	0.00105	1.00120	29.74907	197.24	0.00
67/ 4/12	2439592.5	-0.93472	-0.36193	0.00002	10.26952	-27.88416	0.00101	1.00234	29.71514	201.17	0.00
67/ 4/16	2439596.5	-0.90882	-0.42544	0.00002	12.14302	-27.08404	0.00098	1.00347	29.68161	205.09	0.00
67/ 4/20	2439600.5	-0.87866	-0.48697	0.00002	13.95347	-26.15995	0.00093	1.00458	29.64865	209.00	0.00
67/ 4/24	2439604.5	-0.84441	-0.54622	0.00002	15.69296	-25.11696	0.00089	1.00567	29.61640	212.90	0.00
67/ 4/28	2439608.5	-0.80622	-0.60293	0.00003	17.35398	-23.96063	0.00084	1.00673	29.58500	216.79	0.00
67/ 5/ 2	2439612.5	-0.76429	-0.65684	0.00003	18.92947	-22.69691	0.00078	1.00776	29.55461	220.68	0.00
67/ 5/ 6	2439616.5	-0.71883	-0.70772	0.00003	20.41283	-21.33219	0.00073	1.00875	29.52534	224.55	0.00
67/ 5/10	2439620.5	-0.67005	-0.75533	0.00003	21.79793	-19.87318	0.00067	1.00970	29.49734	228.42	0.00
67/ 5/14	2439624.5	-0.61819	-0.79947	0.00003	23.07914	-18.32693	0.00060	1.01061	29.47072	232.29	0.00
67/ 5/18	2439628.5	-0.56350	-0.83995	0.00003	24.25133	-16.70078	0.00054	1.01146	29.44560	236.14	0.00
67/ 5/22	2439632.5	-0.50623	-0.87658	0.00003	25.30986	-15.00231	0.00047	1.01226	29.42207	239.99	0.00
67/ 5/26	2439636.5	-0.44665	-0.90921	0.00004	26.25062	-13.23934	0.00040	1.01300	29.40026	243.84	0.00
67/ 5/30	2439640.5	-0.38504	-0.93771	0.00004	27.07000	-11.41986	0.00032	1.01368	29.38023	247.68	0.00
67/ 6/ 3	2439644.5	-0.32168	-0.96194	0.00004	27.76491	-9.55204	0.00025	1.01430	29.36208	251.51	0.00
67/ 6/ 7	2439648.5	-0.25685	-0.98181	0.00004	28.33280	-7.64415	0.00018	1.01485	29.34588	255.34	0.00
67/ 6/11	2439652.5	-0.19087	-0.99724	0.00004	28.77162	-5.70460	0.00010	1.01534	29.33170	259.16	0.00
67/ 6/15	2439656.5	-0.12402	-1.00815	0.00004	29.07985	-3.74184	0.00002	1.01575	29.31960	262.99	0.00

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					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM						
67/ 6/19	2439660.5	-0.05661	-1.01451	0.00004	29.25647	-1.76436	-0.00005	1.01609	29.30962	266.81	0.00
67/ 6/23	2439664.5	0.01106	-1.01630	0.00004	29.30099	0.21929	-0.00013	1.01636	29.30181	270.62	0.00
67/ 6/27	2439668.5	0.07867	-1.01350	0.00004	29.21343	2.20062	-0.00020	1.01655	29.29619	274.44	0.00
67/ 7/ 1	2439672.5	0.14593	-1.00614	0.00004	28.99430	4.17113	-0.00027	1.01667	29.29280	278.25	0.00
67/ 7/ 5	2439676.5	0.21253	-0.99424	0.00004	28.64465	6.12240	-0.00035	1.01671	29.29164	282.07	0.00
67/ 7/ 9	2439680.5	0.27818	-0.97787	0.00004	28.16600	8.04609	-0.00042	1.01667	29.29271	285.88	0.00
67/ 7/13	2439684.5	0.34257	-0.95710	0.00003	27.56036	9.93396	-0.00049	1.01656	29.29602	289.69	0.00
67/ 7/17	2439688.5	0.40542	-0.93201	0.00003	26.83024	11.77790	-0.00055	1.01637	29.30155	293.51	0.00
67/ 7/21	2439692.5	0.46644	-0.90272	0.00003	25.97864	13.56996	-0.00062	1.01611	29.30927	297.33	0.00
67/ 7/25	2439696.5	0.52536	-0.86936	0.00003	25.00902	15.30235	-0.00068	1.01577	29.31916	301.15	0.00
67/ 7/29	2439700.5	0.58191	-0.83207	0.00003	23.92532	16.96752	-0.00074	1.01536	29.33117	304.97	0.00
67/ 8/ 2	2439704.5	0.63582	-0.79102	0.00003	22.73195	18.55810	-0.00080	1.01488	29.34526	308.79	0.00
67/ 8/ 6	2439708.5	0.68686	-0.74639	0.00003	21.43374	20.06701	-0.00085	1.01433	29.36137	312.62	0.00
67/ 8/10	2439712.5	0.73478	-0.69837	0.00002	20.03599	21.48744	-0.00090	1.01371	29.37943	316.46	0.00
67/ 8/14	2439716.5	0.77936	-0.64718	0.00002	18.54445	22.81286	-0.00095	1.01303	29.39937	320.29	0.00
67/ 8/18	2439720.5	0.82039	-0.59304	0.00002	16.96524	24.03710	-0.00099	1.01229	29.42111	324.14	0.00
67/ 8/22	2439724.5	0.85768	-0.53620	0.00002	15.30494	25.15433	-0.00104	1.01150	29.44455	327.99	0.00
67/ 8/26	2439728.5	0.89105	-0.47691	0.00001	13.57050	26.15912	-0.00108	1.01065	29.46961	331.84	0.00
67/ 8/30	2439732.5	0.92033	-0.41543	0.00001	11.76923	27.04643	-0.00111	1.00974	29.49617	335.71	0.00
67/ 9/ 3	2439736.5	0.94538	-0.35204	0.00001	9.90884	27.81167	-0.00114	1.00880	29.52413	339.58	0.00
67/ 9/ 7	2439740.5	0.96607	-0.28703	0.00001	7.99734	28.45072	-0.00116	1.00781	29.55335	343.45	0.00
67/ 9/11	2439744.5	0.98230	-0.22069	0.00000	6.04306	28.95994	-0.00118	1.00678	29.58372	347.34	0.00
67/ 9/15	2439748.5	0.99397	-0.15332	0.00000	4.05463	29.33622	-0.00119	1.00572	29.61509	351.23	0.00
67/ 9/19	2439752.5	1.00101	-0.08525	-0.00000	2.04094	29.57699	-0.00120	1.00463	29.64732	355.13	-0.00
67/ 9/23	2439756.5	1.00338	-0.01677	-0.00000	0.01109	29.68027	-0.00120	1.00352	29.68028	359.04	-0.00
67/ 9/27	2439760.5	1.00106	0.05178	-0.00001	-2.02561	29.64467	-0.00119	1.00240	29.71379	2.96	-0.00
67/10/ 1	2439764.5	0.99403	0.12009	-0.00001	-4.05969	29.46940	-0.00117	1.00125	29.74772	6.89	-0.00
67/10/ 5	2439768.5	0.98231	0.18783	-0.00001	-6.08159	29.15434	-0.00115	1.00011	29.78190	10.83	-0.00
67/10/ 9	2439772.5	0.96594	0.25468	-0.00002	-8.08164	28.70002	-0.00112	0.99896	29.81617	14.77	-0.00
67/10/13	2439776.5	0.94499	0.32033	-0.00002	-10.05016	28.10763	-0.00109	0.99781	29.85037	18.73	-0.00
67/10/17	2439780.5	0.91954	0.38445	-0.00002	-11.97749	27.37907	-0.00105	0.99667	29.88434	22.69	-0.00
67/10/21	2439784.5	0.88969	0.44673	-0.00002	-13.85403	26.51692	-0.00101	0.99555	29.91791	26.66	-0.00
67/10/25	2439788.5	0.85558	0.50686	-0.00003	-15.67031	25.52448	-0.00096	0.99445	29.95092	30.64	-0.00
67/10/29	2439792.5	0.81734	0.56456	-0.00003	-17.41703	24.40573	-0.00090	0.99337	29.98321	34.63	-0.00
67/11/ 2	2439796.5	0.77516	0.61953	-0.00003	-19.08514	23.16537	-0.00084	0.99232	30.01461	38.63	-0.00
67/11/ 6	2439800.5	0.72923	0.67150	-0.00003	-20.66586	21.80877	-0.00078	0.99131	30.04497	42.64	-0.00
67/11/10	2439804.5	0.67975	0.72021	-0.00003	-22.15078	20.34198	-0.00071	0.99034	30.07413	46.66	-0.00
67/11/14	2439808.5	0.62697	0.76541	-0.00003	-23.53188	18.77173	-0.00064	0.98941	30.10195	50.68	-0.00
67/11/18	2439812.5	0.57111	0.80687	-0.00004	-24.80161	17.10535	-0.00057	0.98854	30.12827	54.71	-0.00
67/11/22	2439816.5	0.51247	0.84438	-0.00004	-25.95295	15.35077	-0.00049	0.98772	30.15298	58.75	-0.00
67/11/26	2439820.5	0.45130	0.87774	-0.00004	-26.97945	13.51650	-0.00041	0.98696	30.17593	62.79	-0.00
67/11/30	2439824.5	0.38791	0.90677	-0.00004	-27.87527	11.61155	-0.00033	0.98626	30.19700	66.84	-0.00
67/12/ 4	2439828.5	0.32261	0.93134	-0.00004	-28.63525	9.64542	-0.00024	0.98563	30.21608	70.89	-0.00
67/12/ 8	2439832.5	0.25571	0.95130	-0.00004	-29.25496	7.62799	-0.00016	0.98507	30.23308	74.95	-0.00
67/12/12	2439836.5	0.18755	0.96655	-0.00004	-29.73071	5.56954	-0.00007	0.98458	30.24789	79.02	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
67/12/16	2439840.5	0.11846	0.97701	-0.00004	-30.05961	3.48063	0.00001	0.98416	30.26045	83.09	-0.00
67/12/20	2439844.5	0.04878	0.98262	-0.00004	-30.23956	1.37202	0.00010	0.98383	30.27067	87.16	-0.00
67/12/24	2439848.5	-0.02114	0.98334	-0.00004	-30.26933	-0.74531	0.00019	0.98357	30.27851	91.23	-0.00
67/12/28	2439852.5	-0.09096	0.97917	-0.00004	-30.14853	-2.86034	0.00027	0.98339	30.28391	95.31	-0.00
68/ 1/ 1	2439856.5	-0.16032	0.97014	-0.00004	-29.87762	-4.96203	0.00036	0.98329	30.28686	99.38	-0.00
68/ 1/ 5	2439860.5	-0.22889	0.95627	-0.00004	-29.45793	-7.03936	0.00044	0.98328	30.28733	103.46	-0.00
68/ 1/ 9	2439864.5	-0.29631	0.93764	-0.00004	-28.89165	-9.08149	0.00052	0.98335	30.28532	107.54	-0.00
68/ 1/13	2439868.5	-0.36227	0.91434	-0.00004	-28.18178	-11.07776	0.00060	0.98349	30.28084	111.61	-0.00
68/ 1/17	2439872.5	-0.42642	0.88650	-0.00003	-27.33217	-13.01778	0.00067	0.98372	30.27392	115.69	-0.00
68/ 1/21	2439876.5	-0.48845	0.85425	-0.00003	-26.34744	-14.89152	0.00075	0.98403	30.26458	119.76	-0.00
68/ 1/25	2439880.5	-0.54805	0.81775	-0.00003	-25.23297	-16.68936	0.00081	0.98442	30.25289	123.83	-0.00
68/ 1/29	2439884.5	-0.60494	0.77720	-0.00003	-23.99485	-18.40213	0.00088	0.98488	30.23891	127.90	-0.00
68/ 2/ 2	2439888.5	-0.65883	0.73280	-0.00003	-22.63984	-20.02121	0.00094	0.98542	30.22270	131.96	-0.00
68/ 2/ 6	2439892.5	-0.70946	0.68478	-0.00002	-21.17532	-21.53855	0.00099	0.98603	30.20436	136.01	-0.00
68/ 2/10	2439896.5	-0.75659	0.63337	-0.00002	-19.60922	-22.94670	0.00104	0.98670	30.18398	140.07	-0.00
68/ 2/14	2439900.5	-0.79999	0.57884	-0.00002	-17.94998	-24.23890	0.00109	0.98744	30.16167	144.11	-0.00
68/ 2/18	2439904.5	-0.83946	0.52147	-0.00002	-16.20649	-25.40908	0.00113	0.98824	30.13755	148.15	-0.00
68/ 2/22	2439908.5	-0.87481	0.46154	-0.00001	-14.38800	-26.45189	0.00116	0.98910	30.11174	152.18	-0.00
68/ 2/26	2439912.5	-0.90588	0.39936	-0.00001	-12.50410	-27.36271	0.00119	0.99000	30.08439	156.21	-0.00
68/ 3/ 1	2439916.5	-0.93254	0.33522	-0.00001	-10.56462	-28.13769	0.00121	0.99096	30.05563	160.23	-0.00
68/ 3/ 5	2439920.5	-0.95466	0.26946	-0.00001	-8.57955	-28.77375	0.00123	0.99196	30.02561	164.24	-0.00
68/ 3/ 9	2439924.5	-0.97215	0.20239	-0.00000	-6.55905	-29.26855	0.00124	0.99300	29.99448	168.24	-0.00
68/ 3/13	2439928.5	-0.98495	0.13434	-0.00000	-4.51331	-29.62053	0.00124	0.99406	29.96241	172.23	-0.00
68/ 3/17	2439932.5	-0.99299	0.06564	0.00000	-2.45254	-29.82890	0.00124	0.99516	29.92955	176.22	0.00
68/ 3/21	2439936.5	-0.99627	-0.00337	0.00001	-0.38687	-29.89357	0.00123	0.99628	29.89607	180.19	0.00
68/ 3/25	2439940.5	-0.99479	-0.07237	0.00001	1.67366	-29.81519	0.00122	0.99741	29.86213	184.16	0.00
68/ 3/29	2439944.5	-0.98855	-0.14102	0.00001	3.71916	-29.59512	0.00120	0.99856	29.82790	188.12	0.00
68/ 4/ 2	2439948.5	-0.97762	-0.20900	0.00001	5.73998	-29.23538	0.00118	0.99971	29.79353	192.07	0.00
68/ 4/ 6	2439952.5	-0.96206	-0.27599	0.00002	7.72668	-28.73864	0.00115	1.00086	29.75921	196.01	0.00
68/ 4/10	2439956.5	-0.94195	-0.34168	0.00002	9.67014	-28.10817	0.00111	1.00201	29.72509	199.94	0.00
68/ 4/14	2439960.5	-0.91742	-0.40576	0.00002	11.56157	-27.34785	0.00107	1.00315	29.69133	203.86	0.00
68/ 4/18	2439964.5	-0.88858	-0.46794	0.00002	13.39252	-26.46209	0.00103	1.00426	29.65808	207.77	0.00
68/ 4/22	2439968.5	-0.85559	-0.52793	0.00003	15.15494	-25.45581	0.00098	1.00536	29.62550	211.68	0.00
68/ 4/26	2439972.5	-0.81862	-0.58547	0.00003	16.84119	-24.33441	0.00092	1.00643	29.59374	215.57	0.00
68/ 4/30	2439976.5	-0.77784	-0.64028	0.00003	18.44409	-23.10374	0.00086	1.00748	29.56294	219.46	0.00
68/ 5/ 4	2439980.5	-0.73347	-0.69214	0.00003	19.95688	-21.77005	0.00080	1.00848	29.53323	223.34	0.00
68/ 5/ 8	2439984.5	-0.68571	-0.74079	0.00003	21.37329	-20.33994	0.00073	1.00944	29.50476	227.21	0.00
68/ 5/12	2439988.5	-0.63480	-0.78604	0.00004	22.68754	-18.82037	0.00066	1.01036	29.47763	231.08	0.00
68/ 5/16	2439992.5	-0.58097	-0.82769	0.00004	23.89433	-17.21858	0.00059	1.01123	29.45197	234.93	0.00
68/ 5/20	2439996.5	-0.52448	-0.86554	0.00004	24.98889	-15.54209	0.00052	1.01205	29.42789	238.79	0.00
68/ 5/24	2440000.5	-0.46560	-0.89945	0.00004	25.96692	-13.79863	0.00044	1.01281	29.40549	242.63	0.00
68/ 5/28	2440004.5	-0.40460	-0.92925	0.00004	26.82467	-11.99615	0.00036	1.01351	29.38487	246.47	0.00
68/ 6/ 1	2440008.5	-0.34176	-0.95483	0.00004	27.55889	-10.14276	0.00028	1.01415	29.36610	250.31	0.00
68/ 6/ 5	2440012.5	-0.27737	-0.97608	0.00004	28.16686	-8.24670	0.00020	1.01473	29.34927	254.14	0.00
68/ 6/ 9	2440016.5	-0.21172	-0.99291	0.00004	28.64637	-6.31634	0.00011	1.01523	29.33446	257.96	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM						EARTH-MOON B	
68/ 6/13	2440020.5	-0.14511	-1.00525	0.00004	28.99573	-4.36010	0.00003	1.01567	29.32171	261.79	0.00
68/ 6/17	2440024.5	-0.07785	-1.01304	0.00004	29.21377	-2.38649	-0.00005	1.01603	29.31108	265.61	0.00
68/ 6/21	2440028.5	-0.01023	-1.01627	0.00004	29.29984	-0.40400	-0.00014	1.01632	29.30262	269.42	0.00
68/ 6/25	2440032.5	0.05743	-1.01491	0.00004	29.25378	1.57883	-0.00022	1.01653	29.29636	273.24	0.00
68/ 6/29	2440036.5	0.12483	-1.00898	0.00004	29.07598	3.55352	-0.00030	1.01667	29.29232	277.05	0.00
68/ 7/ 3	2440040.5	0.19167	-0.99850	0.00004	28.76728	5.51162	-0.00038	1.01673	29.29052	280.87	0.00
68/ 7/ 7	2440044.5	0.25764	-0.98353	0.00004	28.32907	7.44477	-0.00046	1.01672	29.29097	284.68	0.00
68/ 7/11	2440048.5	0.32246	-0.96413	0.00004	27.76320	9.34468	-0.00054	1.01663	29.29366	288.49	0.00
68/ 7/15	2440052.5	0.38582	-0.94039	0.00004	27.07203	11.20322	-0.00061	1.01646	29.29858	292.31	0.00
68/ 7/19	2440056.5	0.44745	-0.91241	0.00004	26.25839	13.01238	-0.00068	1.01622	29.30572	296.12	0.00
68/ 7/23	2440060.5	0.50705	-0.88031	0.00003	25.32560	14.76433	-0.00075	1.01590	29.31504	299.94	0.00
68/ 7/27	2440064.5	0.56437	-0.84424	0.00003	24.27746	16.45141	-0.00082	1.01551	29.32650	303.76	0.00
68/ 7/31	2440068.5	0.61914	-0.80435	0.00003	23.11820	18.06622	-0.00088	1.01505	29.34007	307.59	0.00
68/ 8/ 4	2440072.5	0.67110	-0.76083	0.00003	21.85254	19.60158	-0.00094	1.01451	29.35567	311.41	0.00
68/ 8/ 8	2440076.5	0.72003	-0.71385	0.00003	20.48563	21.05058	-0.00099	1.01392	29.37325	315.25	0.00
68/ 8/12	2440080.5	0.76568	-0.66364	0.00002	19.02307	22.40661	-0.00104	1.01325	29.39274	319.08	0.00
68/ 8/16	2440084.5	0.80785	-0.61040	0.00002	17.47086	23.66338	-0.00109	1.01253	29.41405	322.93	0.00
68/ 8/20	2440088.5	0.84634	-0.55439	0.00002	15.83544	24.81494	-0.00113	1.01175	29.43709	326.77	0.00
68/ 8/24	2440092.5	0.88096	-0.49584	0.00002	14.12363	25.85573	-0.00116	1.01091	29.46177	330.63	0.00
68/ 8/28	2440096.5	0.91154	-0.43501	0.00001	12.34265	26.78058	-0.00119	1.01002	29.48797	334.49	0.00
68/ 9/ 1	2440100.5	0.93794	-0.37219	0.00001	10.50006	27.58476	-0.00122	1.00909	29.51559	338.36	0.00
68/ 9/ 5	2440104.5	0.96001	-0.30766	0.00001	8.60379	28.26399	-0.00124	1.00811	29.54451	342.23	0.00
68/ 9/ 9	2440108.5	0.97766	-0.24170	0.00000	6.66207	28.81447	-0.00125	1.00709	29.57460	346.11	0.00
68/ 9/13	2440112.5	0.99077	-0.17463	0.00000	4.68345	29.23293	-0.00126	1.00604	29.60572	350.00	0.00
68/ 9/17	2440116.5	0.99927	-0.10674	-0.00000	2.67672	29.51663	-0.00126	1.00496	29.63775	353.90	-0.00
68/ 9/21	2440120.5	1.00312	-0.03836	-0.00000	0.65093	29.66338	-0.00125	1.00385	29.67052	357.81	-0.00
68/ 9/25	2440124.5	1.00227	0.03021	-0.00001	-1.38467	29.67162	-0.00124	1.00273	29.70391	1.73	-0.00
68/ 9/29	2440128.5	0.99672	0.09863	-0.00001	-3.42066	29.54036	-0.00123	1.00159	29.73775	5.65	-0.00
68/10/ 3	2440132.5	0.98648	0.16659	-0.00001	-5.44749	29.26926	-0.00120	1.00044	29.77188	9.59	-0.00
68/10/ 7	2440136.5	0.97157	0.23376	-0.00002	-7.45552	28.85866	-0.00118	0.99929	29.80615	13.53	-0.00
68/10/11	2440140.5	0.95205	0.29982	-0.00002	-9.43507	28.30952	-0.00114	0.99814	29.84040	17.48	-0.00
68/10/15	2440144.5	0.92800	0.36445	-0.00002	-11.37646	27.62353	-0.00110	0.99700	29.87446	21.44	-0.00
68/10/19	2440148.5	0.89952	0.42734	-0.00002	-13.27007	26.80305	-0.00106	0.99587	29.90817	25.41	-0.00
68/10/23	2440152.5	0.86673	0.48819	-0.00003	-15.10637	25.85116	-0.00101	0.99477	29.94135	29.39	-0.00
68/10/27	2440156.5	0.82978	0.54669	-0.00003	-16.87601	24.77161	-0.00095	0.99368	29.97386	33.38	-0.00
68/10/31	2440160.5	0.78882	0.60255	-0.00003	-18.56985	23.56890	-0.00089	0.99262	30.00553	37.37	-0.00
68/11/ 4	2440164.5	0.74404	0.65549	-0.00003	-20.17901	22.24817	-0.00083	0.99160	30.03620	41.38	-0.00
68/11/ 8	2440168.5	0.69566	0.70526	-0.00003	-21.69497	20.81528	-0.00076	0.99062	30.06572	45.39	-0.00
68/11/12	2440172.5	0.64388	0.75159	-0.00004	-23.10956	19.27674	-0.00069	0.98968	30.09393	49.41	-0.00
68/11/16	2440176.5	0.58897	0.79425	-0.00004	-24.41511	17.63969	-0.00061	0.98879	30.12070	53.44	-0.00
68/11/20	2440180.5	0.53117	0.83302	-0.00004	-25.60440	15.91189	-0.00053	0.98796	30.14587	57.48	-0.00
68/11/24	2440184.5	0.47076	0.86770	-0.00004	-26.67079	14.10167	-0.00045	0.98718	30.16933	61.52	-0.00
68/11/28	2440188.5	0.40804	0.89812	-0.00004	-27.60826	12.21789	-0.00036	0.98646	30.19094	65.57	-0.00
68/12/ 2	2440192.5	0.34330	0.92410	-0.00004	-28.41144	10.26988	-0.00027	0.98581	30.21060	69.62	-0.00
68/12/ 6	2440196.5	0.27687	0.94552	-0.00004	-29.07564	8.26745	-0.00019	0.98523	30.22819	73.68	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
68/12/10	2440200.5	0.20907	0.96227	-0.00004	-29.59695	6.22073	-0.00010	0.98472	30.24363	77.74	-0.00
68/12/14	2440204.5	0.14024	0.97424	-0.00004	-29.97223	4.14021	-0.00001	0.98428	30.25683	81.81	-0.00
68/12/18	2440208.5	0.07071	0.98138	-0.00004	-30.19912	2.03660	0.00008	0.98392	30.26772	85.88	-0.00
68/12/22	2440212.5	0.00082	0.98364	-0.00004	-30.27614	-0.07919	0.00018	0.98364	30.27624	89.95	-0.00
68/12/26	2440216.5	-0.06906	0.98101	-0.00004	-30.20260	-2.19614	0.00026	0.98344	30.28234	94.03	-0.00
68/12/30	2440220.5	-0.13861	0.97350	-0.00004	-29.97873	-4.30320	0.00035	0.98332	30.28600	98.10	-0.00
69/ 1/ 3	2440224.5	-0.20746	0.96115	-0.00004	-29.60557	-6.38936	0.00044	0.98328	30.28718	102.18	-0.00
69/ 1/ 7	2440228.5	-0.27528	0.94401	-0.00004	-29.08504	-8.44369	0.00052	0.98332	30.28590	106.26	-0.00
69/ 1/11	2440232.5	-0.34173	0.92217	-0.00004	-28.41990	-10.45549	0.00061	0.98345	30.28214	110.33	-0.00
69/ 1/15	2440236.5	-0.40648	0.89574	-0.00004	-27.61373	-12.41426	0.00069	0.98365	30.27593	114.41	-0.00
69/ 1/19	2440240.5	-0.46921	0.86486	-0.00003	-26.67092	-14.30987	0.00076	0.98394	30.26731	118.48	-0.00
69/ 1/23	2440244.5	-0.52961	0.82968	-0.00003	-25.59660	-16.13255	0.00083	0.98430	30.25632	122.55	-0.00
69/ 1/27	2440248.5	-0.58738	0.79038	-0.00003	-24.39665	-17.87299	0.00090	0.98474	30.24302	126.62	-0.00
69/ 1/31	2440252.5	-0.64224	0.74717	-0.00003	-23.07763	-19.52239	0.00096	0.98526	30.22748	130.68	-0.00
69/ 2/ 4	2440256.5	-0.69392	0.70026	-0.00003	-21.64672	-21.07251	0.00102	0.98584	30.20979	134.74	-0.00
69/ 2/ 8	2440260.5	-0.74218	0.64989	-0.00002	-20.11169	-22.51573	0.00107	0.98650	30.19003	138.79	-0.00
69/ 2/12	2440264.5	-0.78677	0.59631	-0.00002	-18.48083	-23.84506	0.00112	0.98722	30.16832	142.84	-0.00
69/ 2/16	2440268.5	-0.82750	0.53981	-0.00002	-16.76288	-25.05420	0.00116	0.98800	30.14477	146.88	-0.00
69/ 2/20	2440272.5	-0.86416	0.48065	-0.00002	-14.96700	-26.13758	0.00120	0.98884	30.11950	150.92	-0.00
69/ 2/24	2440276.5	-0.89660	0.41914	-0.00001	-13.10267	-27.09036	0.00123	0.98973	30.09265	154.94	-0.00
69/ 2/28	2440280.5	-0.92466	0.35559	-0.00001	-11.17963	-27.90843	0.00126	0.99067	30.06434	158.97	-0.00
69/ 3/ 4	2440284.5	-0.94821	0.29030	-0.00001	-9.20786	-28.58848	0.00128	0.99166	30.03474	162.98	-0.00
69/ 3/ 8	2440288.5	-0.96717	0.22361	-0.00000	-7.19745	-29.12792	0.00129	0.99268	30.00398	166.98	-0.00
69/ 3/12	2440292.5	-0.98145	0.15583	-0.00000	-5.15858	-29.52497	0.00130	0.99374	29.97223	170.98	-0.00
69/ 3/16	2440296.5	-0.99099	0.08730	0.00000	-3.10146	-29.77857	0.00130	0.99483	29.93965	174.97	0.00
69/ 3/20	2440300.5	-0.99577	0.01835	0.00001	-1.03626	-29.88843	0.00130	0.99594	29.90639	178.94	0.00
69/ 3/24	2440304.5	-0.99578	-0.05068	0.00001	1.02694	-29.85496	0.00129	0.99707	29.87262	182.91	0.00
69/ 3/28	2440308.5	-0.99103	-0.11948	0.00001	3.07823	-29.67930	0.00128	0.99821	29.83850	186.87	0.00
69/ 4/ 1	2440312.5	-0.98157	-0.18770	0.00001	5.10784	-29.36327	0.00127	0.99936	29.80422	190.83	0.00
69/ 4/ 5	2440316.5	-0.96746	-0.25504	0.00002	7.10629	-28.90932	0.00124	1.00051	29.76992	194.77	0.00
69/ 4/ 9	2440320.5	-0.94877	-0.32117	0.00002	9.06436	-28.32056	0.00121	1.00166	29.73578	198.70	0.00
69/ 4/13	2440324.5	-0.92562	-0.38579	0.00002	10.97312	-27.60067	0.00118	1.00279	29.70196	202.63	0.00
69/ 4/17	2440328.5	-0.89812	-0.44860	0.00003	12.82403	-26.75389	0.00114	1.00392	29.66860	206.54	0.00
69/ 4/21	2440332.5	-0.86641	-0.50931	0.00003	14.60890	-25.78498	0.00109	1.00502	29.63587	210.45	0.00
69/ 4/25	2440336.5	-0.83067	-0.56764	0.00003	16.31997	-24.69920	0.00103	1.00610	29.60392	214.35	0.00
69/ 4/29	2440340.5	-0.79107	-0.62334	0.00003	17.94989	-23.50226	0.00097	1.00715	29.57287	218.24	0.00
69/ 5/ 3	2440344.5	-0.74781	-0.67615	0.00003	19.49178	-22.20027	0.00091	1.00816	29.54288	222.12	0.00
69/ 5/ 7	2440348.5	-0.70109	-0.72584	0.00004	20.93921	-20.79975	0.00084	1.00914	29.51406	225.99	0.00
69/ 5/11	2440352.5	-0.65114	-0.77218	0.00004	22.28623	-19.30752	0.00076	1.01007	29.48655	229.86	0.00
69/ 5/15	2440356.5	-0.59820	-0.81498	0.00004	23.52741	-17.73076	0.00069	1.01096	29.46047	233.72	0.00
69/ 5/19	2440360.5	-0.54252	-0.85404	0.00004	24.65779	-16.07689	0.00061	1.01179	29.43592	237.57	0.00
69/ 5/23	2440364.5	-0.48436	-0.88921	0.00004	25.67294	-14.35360	0.00052	1.01257	29.41301	241.42	0.00
69/ 5/27	2440368.5	-0.42399	-0.92032	0.00004	26.56892	-12.56875	0.00044	1.01329	29.39185	245.26	0.00
69/ 5/31	2440372.5	-0.36170	-0.94724	0.00005	27.34233	-10.73041	0.00035	1.01394	29.37252	249.10	0.00
69/ 6/ 4	2440376.5	-0.29776	-0.96986	0.00005	27.99027	-8.84680	0.00026	1.01454	29.35509	252.93	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM						
69/ 6/ 8	2440380.5	-0.23247	-0.98808	0.00005	28.51039	-6.92623	0.00017	1.01506	29.33965	256.76	0.00
69/ 6/12	2440384.5	-0.16613	-1.00184	0.00005	28.90082	-4.97713	0.00008	1.01552	29.32625	260.58	0.00
69/ 6/16	2440388.5	-0.09904	-1.01107	0.00005	29.16023	-3.00797	-0.00002	1.01590	29.31496	264.41	0.00
69/ 6/20	2440392.5	-0.03150	-1.01573	0.00005	29.28781	-1.02725	-0.00011	1.01622	29.30581	268.22	0.00
69/ 6/24	2440396.5	0.03618	-1.01581	0.00005	29.28324	0.95648	-0.00020	1.01645	29.29886	272.04	0.00
69/ 6/28	2440400.5	0.10370	-1.01131	0.00005	29.14674	2.93474	-0.00029	1.01662	29.29411	275.85	0.00
69/ 7/ 2	2440404.5	0.17075	-1.00226	0.00004	28.87900	4.89906	-0.00038	1.01670	29.29160	279.67	0.00
69/ 7/ 6	2440408.5	0.23703	-0.98869	0.00004	28.48126	6.84104	-0.00046	1.01671	29.29133	283.48	0.00
69/ 7/10	2440412.5	0.30224	-0.97068	0.00004	27.95521	8.75237	-0.00055	1.01664	29.29330	287.30	0.00
69/ 7/14	2440416.5	0.36609	-0.94829	0.00004	27.30305	10.62487	-0.00063	1.01650	29.29751	291.11	0.00
69/ 7/18	2440420.5	0.42830	-0.92162	0.00004	26.52748	12.45047	-0.00071	1.01628	29.30395	294.93	0.00
69/ 7/22	2440424.5	0.48857	-0.89080	0.00004	25.63165	14.22130	-0.00079	1.01599	29.31257	298.74	0.00
69/ 7/26	2440428.5	0.54663	-0.85596	0.00004	24.61922	15.92964	-0.00086	1.01562	29.32335	302.56	0.00
69/ 7/30	2440432.5	0.60223	-0.81726	0.00003	23.49428	17.56800	-0.00093	1.01518	29.33625	306.39	0.00
69/ 8/ 3	2440436.5	0.65510	-0.77485	0.00003	22.26140	19.12912	-0.00099	1.01467	29.35121	310.21	0.00
69/ 8/ 7	2440440.5	0.70501	-0.72894	0.00003	20.92561	20.60601	-0.00105	1.01409	29.36816	314.04	0.00
69/ 8/11	2440444.5	0.75171	-0.67971	0.00003	19.49235	21.99197	-0.00111	1.01345	29.38704	317.88	0.00
69/ 8/15	2440448.5	0.79500	-0.62740	0.00002	17.96750	23.28059	-0.00116	1.01275	29.40777	321.72	0.00
69/ 8/19	2440452.5	0.83466	-0.57223	0.00002	16.35738	24.46582	-0.00121	1.01198	29.43026	325.57	0.00
69/ 8/23	2440456.5	0.87051	-0.51444	0.00002	14.66869	25.54196	-0.00125	1.01116	29.45441	329.42	0.00
69/ 8/27	2440460.5	0.90238	-0.45430	0.00002	12.90852	26.50374	-0.00128	1.01029	29.48013	333.28	0.00
69/ 8/31	2440464.5	0.93011	-0.39208	0.00001	11.08433	27.34626	-0.00131	1.00937	29.50730	337.14	0.00
69/ 9/ 4	2440468.5	0.95355	-0.32805	0.00001	9.20394	28.06512	-0.00134	1.00840	29.53580	341.02	0.00
69/ 9/ 8	2440472.5	0.97259	-0.26251	0.00001	7.27549	28.65635	-0.00135	1.00740	29.56551	344.90	0.00
69/ 9/12	2440476.5	0.98714	-0.19575	0.00000	5.30743	29.11653	-0.00137	1.00636	29.59630	348.78	0.00
69/ 9/16	2440480.5	0.99709	-0.12808	0.00000	3.30848	29.44273	-0.00137	1.00529	29.62803	352.68	0.00
69/ 9/20	2440484.5	1.00241	-0.05982	-0.00000	1.28762	29.63260	-0.00137	1.00419	29.66056	356.58	-0.00
69/ 9/24	2440488.5	1.00303	0.00872	-0.00001	-0.74597	29.68437	-0.00136	1.00307	29.69375	0.50	-0.00
69/ 9/28	2440492.5	0.99896	0.07723	-0.00001	-2.78291	29.59688	-0.00135	1.00194	29.72743	4.42	-0.00
69/10/ 2	2440496.5	0.99018	0.14536	-0.00001	-4.81369	29.36959	-0.00133	1.00079	29.76146	8.35	-0.00
69/10/ 6	2440500.5	0.97673	0.21282	-0.00002	-6.82868	29.00260	-0.00130	0.99964	29.79567	12.29	-0.00
69/10/10	2440504.5	0.95865	0.27926	-0.00002	-8.81823	28.49670	-0.00127	0.99849	29.82990	16.24	-0.00
69/10/14	2440508.5	0.93601	0.34438	-0.00002	-10.77263	27.85335	-0.00123	0.99735	29.86400	20.20	-0.00
69/10/18	2440512.5	0.90891	0.40785	-0.00002	-12.68225	27.07469	-0.00118	0.99622	29.89779	24.17	-0.00
69/10/22	2440516.5	0.87746	0.46937	-0.00003	-14.53752	26.16357	-0.00113	0.99511	29.93112	28.14	-0.00
69/10/26	2440520.5	0.84179	0.52863	-0.00003	-16.32903	25.12356	-0.00108	0.99401	29.96382	32.13	-0.00
69/10/30	2440524.5	0.80207	0.58535	-0.00003	-18.04757	23.95890	-0.00102	0.99295	29.99572	36.12	-0.00
69/11/ 3	2440528.5	0.75847	0.63924	-0.00003	-19.68417	22.67454	-0.00095	0.99192	30.02668	40.12	-0.00
69/11/ 7	2440532.5	0.71119	0.69003	-0.00004	-21.23020	21.27612	-0.00088	0.99092	30.05652	44.13	-0.00
69/11/11	2440536.5	0.66045	0.73746	-0.00004	-22.67737	19.76995	-0.00080	0.98997	30.08511	48.15	-0.00
69/11/15	2440540.5	0.60649	0.78129	-0.00004	-24.01785	18.16297	-0.00072	0.98907	30.11229	52.18	-0.00
69/11/19	2440544.5	0.54957	0.82131	-0.00004	-25.24426	16.46275	-0.00064	0.98822	30.13793	56.21	-0.00
69/11/23	2440548.5	0.48995	0.85729	-0.00004	-26.34980	14.67745	-0.00055	0.98742	30.16188	60.25	-0.00
69/11/27	2440552.5	0.42792	0.88906	-0.00004	-27.32823	12.81577	-0.00046	0.98669	30.18403	64.30	-0.00
69/12/ 1	2440556.5	0.36379	0.91645	-0.00004	-28.17397	10.88690	-0.00037	0.98602	30.20426	68.35	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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69/12/ 5	2440560.5	0.29785	0.93932	-0.00005	-28.88214	8.90049	-0.00027	0.98541	30.22245	72.41	-0.00
69/12/ 9	2440564.5	0.23045	0.95754	-0.00005	-29.44857	6.86660	-0.00017	0.98488	30.23852	76.47	-0.00
69/12/13	2440568.5	0.16190	0.97102	-0.00005	-29.86986	4.79560	-0.00008	0.98442	30.25238	80.53	-0.00
69/12/17	2440572.5	0.09255	0.97968	-0.00005	-30.14343	2.69814	0.00002	0.98404	30.26394	84.60	-0.00
69/12/21	2440576.5	0.02274	0.98347	-0.00005	-30.26750	0.58507	0.00012	0.98374	30.27316	88.68	-0.00
69/12/25	2440580.5	-0.04718	0.98238	-0.00005	-30.24116	-1.53262	0.00022	0.98351	30.27997	92.75	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
69/12/17	2440572.5	0.09255	0.97968	-0.00005	-30.14343	2.69814	0.00002	0.98404	30.26394	84.60	-0.00
69/12/21	2440576.5	0.02274	0.98347	-0.00005	-30.26750	0.58507	0.00012	0.98374	30.27316	88.68	-0.00
69/12/25	2440580.5	-0.04718	0.98238	-0.00005	-30.24116	-1.53262	0.00022	0.98351	30.27997	92.75	-0.00
69/12/29	2440584.5	-0.11686	0.97640	-0.00004	-30.06433	-3.64388	0.00032	0.98337	30.28435	96.83	-0.00
70/ 1/ 2	2440588.5	-0.18597	0.96556	-0.00004	-29.73781	-5.73768	0.00041	0.98330	30.28627	100.90	-0.00
70/ 1/ 6	2440592.5	-0.25415	0.94991	-0.00004	-29.26323	-7.80306	0.00051	0.98332	30.28571	104.98	-0.00
70/ 1/10	2440596.5	-0.32106	0.92953	-0.00004	-28.64310	-9.82924	0.00060	0.98342	30.28269	109.06	-0.00
70/ 1/14	2440600.5	-0.38638	0.90453	-0.00004	-27.88075	-11.80566	0.00069	0.98360	30.27722	113.13	-0.00
70/ 1/18	2440604.5	-0.44978	0.87503	-0.00004	-26.98031	-13.72206	0.00077	0.98386	30.26932	117.20	-0.00
70/ 1/22	2440608.5	-0.51094	0.84119	-0.00004	-25.94668	-15.56856	0.00085	0.98420	30.25905	121.27	-0.00
70/ 1/26	2440612.5	-0.56956	0.80316	-0.00003	-24.78552	-17.33569	0.00093	0.98462	30.24646	125.34	-0.00
70/ 1/30	2440616.5	-0.62536	0.76116	-0.00003	-23.50317	-19.01450	0.00100	0.98511	30.23161	129.41	-0.00
70/ 2/ 3	2440620.5	-0.67807	0.71538	-0.00003	-22.10662	-20.59656	0.00107	0.98567	30.21459	133.47	-0.00
70/ 2/ 7	2440624.5	-0.72742	0.66607	-0.00003	-20.60347	-22.07406	0.00113	0.98630	30.19548	137.52	-0.00
70/ 2/11	2440628.5	-0.77319	0.61348	-0.00002	-19.00184	-23.43981	0.00119	0.98700	30.17440	141.57	-0.00
70/ 2/15	2440632.5	-0.81515	0.55786	-0.00002	-17.31034	-24.68729	0.00124	0.98776	30.15146	145.61	-0.00
70/ 2/19	2440636.5	-0.85310	0.49951	-0.00002	-15.53799	-25.81071	0.00128	0.98858	30.12676	149.65	-0.00
70/ 2/23	2440640.5	-0.88688	0.43871	-0.00002	-13.69418	-26.80497	0.00132	0.98946	30.10045	153.68	-0.00
70/ 2/27	2440644.5	-0.91633	0.37576	-0.00001	-11.78858	-27.66575	0.00135	0.99038	30.07265	157.70	-0.00
70/ 3/ 3	2440648.5	-0.94131	0.31099	-0.00001	-9.83109	-28.38948	0.00138	0.99135	30.04352	161.72	-0.00
70/ 3/ 7	2440652.5	-0.96172	0.24470	-0.00001	-7.83178	-28.97336	0.00140	0.99236	30.01320	165.72	-0.00
70/ 3/11	2440656.5	-0.97747	0.17723	-0.00000	-5.80080	-29.41533	0.00141	0.99341	29.98184	169.72	-0.00
70/ 3/15	2440660.5	-0.98850	0.10890	-0.00000	-3.74836	-29.71412	0.00141	0.99448	29.94961	173.71	-0.00
70/ 3/19	2440664.5	-0.99478	0.04005	0.00000	-1.68465	-29.86918	0.00141	0.99559	29.91665	177.69	0.00
70/ 3/23	2440668.5	-0.99629	-0.02899	0.00001	0.38023	-29.88072	0.00140	0.99671	29.88314	181.67	0.00
70/ 3/27	2440672.5	-0.99303	-0.09790	0.00001	2.43628	-29.74964	0.00139	0.99784	29.84923	185.63	0.00
70/ 3/31	2440676.5	-0.98504	-0.16634	0.00001	4.47372	-29.47754	0.00137	0.99899	29.81509	189.58	0.00
70/ 4/ 4	2440680.5	-0.97238	-0.23399	0.00002	6.48295	-29.06669	0.00134	1.00014	29.78088	193.53	0.00
70/ 4/ 8	2440684.5	-0.95512	-0.30053	0.00002	8.45466	-28.51998	0.00130	1.00129	29.74677	197.47	0.00
70/ 4/12	2440688.5	-0.93335	-0.36566	0.00002	10.37984	-27.84090	0.00126	1.00242	29.71291	201.39	0.00
70/ 4/16	2440692.5	-0.90720	-0.42907	0.00002	12.24982	-27.03354	0.00122	1.00355	29.67946	205.31	0.00
70/ 4/20	2440696.5	-0.87680	-0.49047	0.00003	14.05630	-26.10248	0.00116	1.00466	29.64657	209.22	0.00
70/ 4/24	2440700.5	-0.84231	-0.54958	0.00003	15.79136	-25.05284	0.00111	1.00575	29.61439	213.12	0.00
70/ 4/28	2440704.5	-0.80390	-0.60613	0.00003	17.44755	-23.89019	0.00104	1.00681	29.58307	217.02	0.00
70/ 5/ 2	2440708.5	-0.76177	-0.65988	0.00004	19.01781	-22.62051	0.00098	1.00783	29.55274	220.90	0.00
70/ 5/ 6	2440712.5	-0.71611	-0.71057	0.00004	20.49557	-21.25021	0.00091	1.00882	29.52354	224.78	0.00
70/ 5/10	2440716.5	-0.66715	-0.75799	0.00004	21.87475	-19.78601	0.00083	1.00977	29.49561	228.65	0.00
70/ 5/14	2440720.5	-0.61512	-0.80192	0.00004	23.14973	-18.23499	0.00075	1.01067	29.46905	232.51	0.00
70/ 5/18	2440724.5	-0.56027	-0.84218	0.00004	24.31541	-16.60451	0.00067	1.01152	29.44399	236.37	0.00
70/ 5/22	2440728.5	-0.50286	-0.87858	0.00004	25.36718	-14.90215	0.00058	1.01231	29.42054	240.22	0.00
70/ 5/26	2440732.5	-0.44315	-0.91098	0.00005	26.30096	-13.13574	0.00050	1.01305	29.39878	244.06	0.00
70/ 5/30	2440736.5	-0.38143	-0.93923	0.00005	27.11318	-11.31330	0.00041	1.01373	29.37883	247.90	0.00
70/ 6/ 3	2440740.5	-0.31798	-0.96322	0.00005	27.80078	-9.44298	0.00032	1.01435	29.36075	251.73	0.00
70/ 6/ 7	2440744.5	-0.25308	-0.98283	0.00005	28.36123	-7.53310	0.00022	1.01489	29.34463	255.56	0.00
70/ 6/11	2440748.5	-0.18704	-0.99800	0.00005	28.79252	-5.59202	0.00013	1.01537	29.33053	259.39	0.00

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		HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							EARTH-MOON B		
70/ 6/15	2440752.5	-0.12015	-1.00865	0.00005	29.09315	-3.62823	0.00003	1.01578	29.31851	263.21	0.00
70/ 6/19	2440756.5	-0.05272	-1.01475	0.00005	29.26213	-1.65021	-0.00006	1.01612	29.30863	267.03	0.00
70/ 6/23	2440760.5	0.01495	-1.01627	0.00005	29.29902	0.33349	-0.00015	1.01638	29.30091	270.84	0.00
70/ 6/27	2440764.5	0.08255	-1.01321	0.00005	29.20384	2.31438	-0.00025	1.01657	29.29541	274.66	0.00
70/ 7/ 1	2440768.5	0.14978	-1.00559	0.00005	28.97717	4.28397	-0.00034	1.01668	29.29213	278.47	0.00
70/ 7/ 5	2440772.5	0.21633	-0.99343	0.00005	28.62005	6.23385	-0.00043	1.01672	29.29109	282.29	0.00
70/ 7/ 9	2440776.5	0.28192	-0.97681	0.00005	28.13404	8.15567	-0.00052	1.01667	29.29230	286.10	0.00
70/ 7/13	2440780.5	0.34623	-0.95578	0.00004	27.52118	10.04121	-0.00061	1.01656	29.29576	289.91	0.00
70/ 7/17	2440784.5	0.40898	-0.93045	0.00004	26.78402	11.88236	-0.00069	1.01636	29.30144	293.73	0.00
70/ 7/21	2440788.5	0.46988	-0.90092	0.00004	25.92556	13.67119	-0.00077	1.01609	29.30932	297.54	0.00
70/ 7/25	2440792.5	0.52867	-0.86733	0.00004	24.94931	15.39993	-0.00085	1.01575	29.31938	301.36	0.00
70/ 7/29	2440796.5	0.58507	-0.82982	0.00004	23.85922	17.06102	-0.00092	1.01534	29.33157	305.19	0.00
70/ 8/ 2	2440800.5	0.63883	-0.78856	0.00003	22.65973	18.64712	-0.00099	1.01485	29.34584	309.01	0.00
70/ 8/ 6	2440804.5	0.68969	-0.74373	0.00003	21.35569	20.15116	-0.00106	1.01430	29.36213	312.84	0.00
70/ 8/10	2440808.5	0.73742	-0.69552	0.00003	19.95244	21.56633	-0.00112	1.01367	29.38038	316.67	0.00
70/ 8/14	2440812.5	0.78180	-0.64415	0.00003	18.45573	22.88615	-0.00118	1.01299	29.40050	320.51	0.00
70/ 8/18	2440816.5	0.82262	-0.58986	0.00002	16.87172	24.10444	-0.00123	1.01225	29.42242	324.36	0.00
70/ 8/22	2440820.5	0.85969	-0.53287	0.00002	15.20700	25.21541	-0.00127	1.01144	29.44604	328.21	0.00
70/ 8/26	2440824.5	0.89283	-0.47344	0.00002	13.46854	26.21362	-0.00131	1.01059	29.47127	332.06	0.00
70/ 8/30	2440828.5	0.92187	-0.41184	0.00002	11.66368	27.09408	-0.00134	1.00968	29.49798	335.93	0.00
70/ 9/ 3	2440832.5	0.94667	-0.34835	0.00001	9.80014	27.85222	-0.00137	1.00873	29.52607	339.80	0.00
70/ 9/ 7	2440836.5	0.96711	-0.28325	0.00001	7.88595	28.48393	-0.00139	1.00774	29.55542	343.68	0.00
70/ 9/11	2440840.5	0.98308	-0.21684	0.00001	5.92946	28.98562	-0.00141	1.00671	29.58589	347.56	0.00
70/ 9/15	2440844.5	0.99448	-0.14943	0.00000	3.93931	29.35420	-0.00142	1.00565	29.61735	351.45	0.00
70/ 9/19	2440848.5	1.00126	-0.08132	-0.00000	1.92440	29.58714	-0.00142	1.00456	29.64966	355.36	-0.00
70/ 9/23	2440852.5	1.00336	-0.01283	-0.00000	-0.10614	29.68248	-0.00141	1.00344	29.68267	359.27	-0.00
70/ 9/27	2440856.5	1.00076	0.05572	-0.00001	-2.14299	29.63886	-0.00140	1.00231	29.71623	3.19	-0.00
70/10/ 1	2440860.5	0.99346	0.12400	-0.00001	-4.17670	29.45555	-0.00139	1.00117	29.75019	7.11	-0.00
70/10/ 5	2440864.5	0.98148	0.19170	-0.00001	-6.19766	29.13244	-0.00137	1.00002	29.78440	11.05	-0.00
70/10/ 9	2440868.5	0.96484	0.25850	-0.00002	-8.19622	28.67012	-0.00134	0.99887	29.81868	15.00	-0.00
70/10/13	2440872.5	0.94363	0.32406	-0.00002	-10.16269	28.06980	-0.00130	0.99773	29.85288	18.95	-0.00
70/10/17	2440876.5	0.91792	0.38808	-0.00002	-12.08741	27.33344	-0.00126	0.99659	29.88683	22.92	-0.00
70/10/21	2440880.5	0.88782	0.45025	-0.00003	-13.96080	26.46365	-0.00122	0.99547	29.92037	26.89	-0.00
70/10/25	2440884.5	0.85346	0.51025	-0.00003	-15.77338	25.46375	-0.00117	0.99437	29.95334	30.87	-0.00
70/10/29	2440888.5	0.81500	0.56780	-0.00003	-17.51588	24.33780	-0.00111	0.99329	29.98557	34.86	-0.00
70/11/ 2	2440892.5	0.77260	0.62261	-0.00003	-19.17925	23.09051	-0.00105	0.99224	30.01691	38.86	-0.00
70/11/ 6	2440896.5	0.72645	0.67440	-0.00004	-20.75473	21.72730	-0.00098	0.99124	30.04720	42.87	-0.00
70/11/10	2440900.5	0.67678	0.72291	-0.00004	-22.23393	20.25428	-0.00091	0.99027	30.07629	46.89	-0.00
70/11/14	2440904.5	0.62380	0.76790	-0.00004	-23.60886	18.67818	-0.00083	0.98935	30.10404	50.91	-0.00
70/11/18	2440908.5	0.56778	0.80914	-0.00004	-24.87200	17.00640	-0.00075	0.98847	30.13028	54.94	-0.00
70/11/22	2440912.5	0.50898	0.84641	-0.00004	-26.01634	15.24690	-0.00066	0.98766	30.15490	58.98	-0.00
70/11/26	2440916.5	0.44767	0.87952	-0.00005	-27.03547	13.40821	-0.00057	0.98690	30.17775	63.02	-0.00
70/11/30	2440920.5	0.38416	0.90831	-0.00005	-27.92359	11.49938	-0.00047	0.98621	30.19872	67.07	-0.00
70/12/ 4	2440924.5	0.31876	0.93261	-0.00005	-28.67559	9.52992	-0.00037	0.98558	30.21769	71.13	-0.00
70/12/ 8	2440928.5	0.25178	0.95230	-0.00005	-29.28706	7.50976	-0.00027	0.98502	30.23455	75.19	-0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
70/12/12	2440932.5	0.18356	0.96728	-0.00005	-29.75436	5.44918	-0.00016	0.98454	30.24922	79.26	-0.00
70/12/16	2440936.5	0.11442	0.97745	-0.00005	-30.07465	3.35876	-0.00006	0.98413	30.26162	83.32	-0.00
70/12/20	2440940.5	0.04471	0.98278	-0.00005	-30.24589	1.24928	0.00005	0.98380	30.27168	87.39	-0.00
70/12/24	2440944.5	-0.02521	0.98322	-0.00005	-30.26688	-0.86829	0.00016	0.98354	30.27933	91.47	-0.00
70/12/28	2440948.5	-0.09501	0.97877	-0.00005	-30.13729	-2.98291	0.00026	0.98337	30.28455	95.54	-0.00
71/ 1/ 1	2440952.5	-0.16434	0.96945	-0.00005	-29.85764	-5.08353	0.00036	0.98328	30.28730	99.62	-0.00
71/ 1/ 5	2440956.5	-0.23285	0.95530	-0.00005	-29.42930	-7.15917	0.00046	0.98327	30.28757	103.70	-0.00
71/ 1/ 9	2440960.5	-0.30020	0.93640	-0.00005	-28.85450	-9.19896	0.00056	0.98334	30.28536	107.78	-0.00
71/ 1/13	2440964.5	-0.36606	0.91284	-0.00004	-28.13632	-11.19228	0.00066	0.98350	30.28068	111.85	-0.00
71/ 1/17	2440968.5	-0.43009	0.88473	-0.00004	-27.27864	-13.12875	0.00075	0.98373	30.27356	115.93	-0.00
71/ 1/21	2440972.5	-0.49199	0.85223	-0.00004	-26.28613	-14.99836	0.00084	0.98405	30.26403	120.00	-0.00
71/ 1/25	2440976.5	-0.55145	0.81549	-0.00004	-25.16421	-16.79152	0.00093	0.98444	30.25215	124.07	-0.00
71/ 1/29	2440980.5	-0.60816	0.77471	-0.00004	-23.91902	-18.49909	0.00100	0.98491	30.23799	128.13	-0.00
71/ 2/ 2	2440984.5	-0.66187	0.73009	-0.00003	-22.55735	-20.11248	0.00108	0.98545	30.22161	132.19	-0.00
71/ 2/ 6	2440988.5	-0.71230	0.68186	-0.00003	-21.08661	-21.62367	0.00115	0.98606	30.20312	136.25	-0.00
71/ 2/10	2440992.5	-0.75922	0.63027	-0.00003	-19.51478	-23.02526	0.00121	0.98674	30.18260	140.30	-0.00
71/ 2/14	2440996.5	-0.80240	0.57557	-0.00003	-17.85032	-24.31053	0.00127	0.98748	30.16017	144.35	-0.00
71/ 2/18	2441000.5	-0.84163	0.51804	-0.00002	-16.10213	-25.47345	0.00132	0.98828	30.13595	148.39	-0.00
71/ 2/22	2441004.5	-0.87674	0.45797	-0.00002	-14.27951	-26.50871	0.00137	0.98914	30.11007	152.42	-0.00
71/ 2/26	2441008.5	-0.90756	0.39566	-0.00002	-12.39203	-27.41174	0.00140	0.99005	30.08265	156.44	-0.00
71/ 3/ 2	2441012.5	-0.93395	0.33142	-0.00001	-10.44954	-28.17874	0.00143	0.99101	30.05385	160.46	-0.00
71/ 3/ 6	2441016.5	-0.95580	0.26557	-0.00001	-8.46207	-28.80664	0.00146	0.99201	30.02381	164.47	-0.00
71/ 3/10	2441020.5	-0.97302	0.19843	-0.00001	-6.43974	-29.29319	0.00147	0.99305	29.99268	168.47	-0.00
71/ 3/14	2441024.5	-0.98554	0.13034	-0.00000	-4.39278	-29.63685	0.00148	0.99412	29.96063	172.47	-0.00
71/ 3/18	2441028.5	-0.99331	0.06161	0.00000	-2.33136	-29.83686	0.00149	0.99522	29.92780	176.45	0.00
71/ 3/22	2441032.5	-0.99631	-0.00741	0.00000	-0.26564	-29.89319	0.00148	0.99633	29.89437	180.43	0.00
71/ 3/26	2441036.5	-0.99454	-0.07639	0.00001	1.79436	-29.80654	0.00147	0.99747	29.86050	184.39	0.00
71/ 3/30	2441040.5	-0.98803	-0.14502	0.00001	3.83877	-29.57828	0.00145	0.99861	29.82634	188.35	0.00
71/ 4/ 3	2441044.5	-0.97682	-0.21295	0.00001	5.85793	-29.21048	0.00143	0.99976	29.79207	192.30	0.00
71/ 4/ 7	2441048.5	-0.96099	-0.27987	0.00002	7.84245	-28.70584	0.00140	1.00091	29.75784	196.24	0.00
71/ 4/11	2441052.5	-0.94062	-0.34548	0.00002	9.78319	-28.06768	0.00136	1.00206	29.72382	200.17	0.00
71/ 4/15	2441056.5	-0.91583	-0.40946	0.00002	11.67139	-27.29989	0.00131	1.00319	29.69016	204.09	0.00
71/ 4/19	2441060.5	-0.88674	-0.47152	0.00003	13.49863	-26.40693	0.00126	1.00431	29.65702	208.00	0.00
71/ 4/23	2441064.5	-0.85351	-0.53137	0.00003	15.25687	-25.39374	0.00121	1.00541	29.62455	211.91	0.00
71/ 4/27	2441068.5	-0.81631	-0.58876	0.00003	16.93850	-24.26575	0.00115	1.00648	29.59289	215.80	0.00
71/ 5/ 1	2441072.5	-0.77531	-0.64341	0.00003	18.53634	-23.02882	0.00108	1.00751	29.56219	219.69	0.00
71/ 5/ 5	2441076.5	-0.73073	-0.69508	0.00004	20.04369	-21.68924	0.00101	1.00852	29.53257	223.57	0.00
71/ 5/ 9	2441080.5	-0.68278	-0.74354	0.00004	21.45429	-20.25364	0.00093	1.00948	29.50418	227.44	0.00
71/ 5/13	2441084.5	-0.63169	-0.78859	0.00004	22.76239	-18.72899	0.00085	1.01040	29.47713	231.30	0.00
71/ 5/17	2441088.5	-0.57769	-0.83001	0.00004	23.96271	-17.12255	0.00077	1.01126	29.45154	235.16	0.00
71/ 5/21	2441092.5	-0.52106	-0.86764	0.00005	25.05051	-15.44186	0.00069	1.01208	29.42752	239.01	0.00
71/ 5/25	2441096.5	-0.46204	-0.90131	0.00005	26.02154	-13.69466	0.00060	1.01284	29.40517	242.86	0.00
71/ 5/29	2441100.5	-0.40092	-0.93087	0.00005	26.87206	-11.88892	0.00051	1.01354	29.38458	246.70	0.00
71/ 6/ 2	2441104.5	-0.33798	-0.95620	0.00005	27.59886	-10.03275	0.00041	1.01418	29.36585	250.53	0.00
71/ 6/ 6	2441108.5	-0.27350	-0.97719	0.00005	28.19925	-8.13442	0.00032	1.01475	29.34904	254.36	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
71/ 6/10	2441112.5	-0.20779	-0.99376	0.00005	28.67105	-6.20229	0.00022	1.01525	29.33424	258.19	0.00
71/ 6/14	2441116.5	-0.14113	-1.00583	0.00005	29.01261	-4.24479	0.00012	1.01568	29.32149	262.01	0.00
71/ 6/18	2441120.5	-0.07384	-1.01336	0.00005	29.22279	-2.27044	0.00002	1.01605	29.31086	265.83	0.00
71/ 6/22	2441124.5	-0.00621	-1.01632	0.00005	29.30097	-0.28773	-0.00008	1.01633	29.30239	269.65	0.00
71/ 6/26	2441128.5	0.06144	-1.01469	0.00005	29.24705	1.69481	-0.00017	1.01655	29.29611	273.47	0.00
71/ 6/30	2441132.5	0.12882	-1.00849	0.00005	29.06140	3.66869	-0.00027	1.01669	29.29205	277.28	0.00
71/ 7/ 4	2441136.5	0.19561	-0.99775	0.00005	28.74495	5.62547	-0.00037	1.01675	29.29023	281.09	0.00
71/ 7/ 8	2441140.5	0.26153	-0.98252	0.00005	28.29908	7.55679	-0.00046	1.01673	29.29066	284.91	0.00
71/ 7/12	2441144.5	0.32627	-0.96286	0.00005	27.72569	9.45439	-0.00056	1.01664	29.29333	288.72	0.00
71/ 7/16	2441148.5	0.38953	-0.93887	0.00005	27.02717	11.31012	-0.00065	1.01647	29.29824	292.53	0.00
71/ 7/20	2441152.5	0.45105	-0.91064	0.00004	26.20638	13.11600	-0.00074	1.01623	29.30536	296.35	0.00
71/ 7/24	2441156.5	0.51053	-0.87831	0.00004	25.26668	14.86420	-0.00082	1.01591	29.31466	300.17	0.00
71/ 7/28	2441160.5	0.56770	-0.84202	0.00004	24.21188	16.54710	-0.00090	1.01552	29.32612	303.99	0.00
71/ 8/ 1	2441164.5	0.62231	-0.80192	0.00004	23.04625	18.15729	-0.00098	1.01505	29.33968	307.81	0.00
71/ 8/ 5	2441168.5	0.67410	-0.75819	0.00004	21.77454	19.68762	-0.00105	1.01452	29.35529	311.64	0.00
71/ 8/ 9	2441172.5	0.72284	-0.71102	0.00003	20.40192	21.13120	-0.00112	1.01392	29.37288	315.47	0.00
71/ 8/13	2441176.5	0.76829	-0.66062	0.00003	18.93400	22.48144	-0.00119	1.01326	29.39238	319.31	0.00
71/ 8/17	2441180.5	0.81025	-0.60722	0.00003	17.37684	23.73208	-0.00124	1.01253	29.41371	323.15	0.00
71/ 8/21	2441184.5	0.84851	-0.55105	0.00002	15.73687	24.87719	-0.00130	1.01175	29.43678	327.00	0.00
71/ 8/25	2441188.5	0.88290	-0.49237	0.00002	14.02095	25.91124	-0.00134	1.01091	29.46149	330.85	0.00
71/ 8/29	2441192.5	0.91324	-0.43143	0.00002	12.23631	26.82908	-0.00139	1.01002	29.48774	334.71	0.00
71/ 9/ 2	2441196.5	0.93939	-0.36850	0.00002	10.39053	27.62602	-0.00142	1.00908	29.51542	338.58	0.00
71/ 9/ 6	2441200.5	0.96121	-0.30388	0.00001	8.49155	28.29779	-0.00145	1.00810	29.54440	342.46	0.00
71/ 9/10	2441204.5	0.97859	-0.23785	0.00001	6.54762	28.84065	-0.00147	1.00708	29.57455	346.34	0.00
71/ 9/14	2441208.5	0.99143	-0.17073	0.00001	4.56729	29.25133	-0.00149	1.00603	29.60575	350.23	0.00
71/ 9/18	2441212.5	0.99967	-0.10281	0.00000	2.55939	29.52715	-0.00149	1.00494	29.63786	354.13	0.00
71/ 9/22	2441216.5	1.00324	-0.03441	-0.00000	0.53295	29.66594	-0.00150	1.00383	29.67073	358.04	-0.00
71/ 9/26	2441220.5	1.00213	0.03415	-0.00000	-1.50276	29.66617	-0.00149	1.00271	29.70421	1.95	-0.00
71/ 9/30	2441224.5	0.99630	0.10255	-0.00001	-3.53832	29.52690	-0.00148	1.00157	29.73815	5.88	-0.00
71/10/ 4	2441228.5	0.98578	0.17047	-0.00001	-5.56418	29.24782	-0.00146	1.00042	29.77239	9.81	-0.00
71/10/ 8	2441232.5	0.97061	0.23758	-0.00002	-7.57070	28.82929	-0.00143	0.99926	29.80677	13.75	-0.00
71/10/12	2441236.5	0.95083	0.30357	-0.00002	-9.54820	28.27234	-0.00140	0.99811	29.84113	17.71	-0.00
71/10/16	2441240.5	0.92652	0.36810	-0.00002	-11.48701	27.57866	-0.00136	0.99697	29.87530	21.67	-0.00
71/10/20	2441244.5	0.89779	0.43088	-0.00002	-13.37750	26.75066	-0.00131	0.99584	29.90912	25.64	-0.00
71/10/24	2441248.5	0.86476	0.49160	-0.00003	-15.21018	25.79145	-0.00126	0.99472	29.94242	29.62	-0.00
71/10/28	2441252.5	0.82757	0.54995	-0.00003	-16.97568	24.70484	-0.00120	0.99364	29.97504	33.61	-0.00
71/11/ 1	2441256.5	0.78638	0.60565	-0.00003	-18.66489	23.49533	-0.00113	0.99258	30.00681	37.60	-0.00
71/11/ 5	2441260.5	0.74139	0.65842	-0.00004	-20.26894	22.16812	-0.00106	0.99155	30.03757	41.61	-0.00
71/11/ 9	2441264.5	0.69281	0.70799	-0.00004	-21.77934	20.72910	-0.00098	0.99057	30.06718	45.62	-0.00
71/11/13	2441268.5	0.64084	0.75411	-0.00004	-23.18794	19.18481	-0.00090	0.98963	30.09547	49.64	-0.00
71/11/17	2441272.5	0.58575	0.79655	-0.00004	-24.48707	17.54242	-0.00081	0.98874	30.12230	53.67	-0.00
71/11/21	2441276.5	0.52779	0.83510	-0.00004	-25.66956	15.80972	-0.00072	0.98790	30.14753	57.71	-0.00
71/11/25	2441280.5	0.46725	0.86954	-0.00005	-26.72880	13.99507	-0.00062	0.98712	30.17103	61.75	-0.00
71/11/29	2441284.5	0.40440	0.89970	-0.00005	-27.65880	12.10736	-0.00053	0.98641	30.19267	65.80	-0.00
71/12/ 3	2441288.5	0.33956	0.92543	-0.00005	-28.45421	10.15596	-0.00042	0.98576	30.21234	69.85	-0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
71/12/ 7	2441292.5	0.27304	0.94658	-0.00005	-29.11040	8.15068	-0.00032	0.98518	30.22993	73.91	-0.00
71/12/11	2441296.5	0.20517	0.96305	-0.00005	-29.62349	6.10168	-0.00021	0.98467	30.24536	77.97	-0.00
71/12/15	2441300.5	0.13628	0.97475	-0.00005	-29.99036	4.01947	-0.00011	0.98423	30.25852	82.04	-0.00
71/12/19	2441304.5	0.06671	0.98161	-0.00005	-30.20874	1.91478	-0.00000	0.98387	30.26936	86.11	-0.00
71/12/23	2441308.5	-0.00318	0.98359	-0.00005	-30.27714	-0.20148	0.00011	0.98359	30.27781	90.19	-0.00
71/12/27	2441312.5	-0.07306	0.98068	-0.00005	-30.19497	-2.31827	0.00021	0.98339	30.28383	94.26	-0.00
71/12/31	2441316.5	-0.14258	0.97289	-0.00005	-29.96246	-4.42455	0.00032	0.98328	30.28739	98.34	-0.00
72/ 1/ 4	2441320.5	-0.21138	0.96025	-0.00005	-29.58074	-6.50929	0.00042	0.98324	30.28846	102.41	-0.00
72/ 1/ 8	2441324.5	-0.27914	0.94284	-0.00005	-29.05175	-8.56160	0.00053	0.98329	30.28705	106.49	-0.00
72/ 1/12	2441328.5	-0.34550	0.92073	-0.00005	-28.37831	-10.57075	0.00063	0.98342	30.28315	110.57	-0.00
72/ 1/16	2441332.5	-0.41015	0.89404	-0.00004	-27.56405	-12.52627	0.00072	0.98363	30.27680	114.64	-0.00
72/ 1/20	2441336.5	-0.47275	0.86290	-0.00004	-26.61339	-14.41805	0.00081	0.98392	30.26802	118.72	-0.00
72/ 1/24	2441340.5	-0.53301	0.82748	-0.00004	-25.53153	-16.23634	0.00090	0.98428	30.25686	122.79	-0.00
72/ 1/28	2441344.5	-0.59062	0.78795	-0.00004	-24.32438	-17.97185	0.00099	0.98473	30.24340	126.85	-0.00
72/ 2/ 1	2441348.5	-0.64530	0.74451	-0.00004	-22.99854	-19.61581	0.00107	0.98525	30.22769	130.92	-0.00
72/ 2/ 5	2441352.5	-0.69680	0.69739	-0.00003	-21.56123	-21.16003	0.00114	0.98584	30.20982	134.98	-0.00
72/ 2/ 9	2441356.5	-0.74484	0.64683	-0.00003	-20.02025	-22.59689	0.00121	0.98650	30.18989	139.03	-0.00
72/ 2/13	2441360.5	-0.78922	0.59307	-0.00003	-18.38392	-23.91946	0.00127	0.98722	30.16802	143.08	-0.00
72/ 2/17	2441364.5	-0.82972	0.53640	-0.00002	-16.66102	-25.12149	0.00133	0.98801	30.14430	147.12	-0.00
72/ 2/21	2441368.5	-0.86614	0.47710	-0.00002	-14.86073	-26.19743	0.00138	0.98885	30.11888	151.15	-0.00
72/ 2/25	2441372.5	-0.89833	0.41546	-0.00002	-12.99254	-27.14249	0.00142	0.98975	30.09188	155.18	-0.00
72/ 2/29	2441376.5	-0.92613	0.35180	-0.00001	-11.06622	-27.95262	0.00145	0.99069	30.06344	159.20	-0.00
72/ 3/ 4	2441380.5	-0.94942	0.28642	-0.00001	-9.09175	-28.62453	0.00148	0.99168	30.03371	163.21	-0.00
72/ 3/ 8	2441384.5	-0.96811	0.21965	-0.00001	-7.07924	-29.15571	0.00150	0.99271	30.00285	167.22	-0.00
72/ 3/12	2441388.5	-0.98211	0.15182	-0.00000	-5.03887	-29.54439	0.00151	0.99377	29.97100	171.21	-0.00
72/ 3/16	2441392.5	-0.99137	0.08325	-0.00000	-2.98086	-29.78957	0.00152	0.99486	29.93834	175.20	-0.00
72/ 3/20	2441396.5	-0.99587	0.01429	0.00000	-0.91537	-29.89100	0.00152	0.99598	29.90502	179.18	0.00
72/ 3/24	2441400.5	-0.99560	-0.05474	0.00001	1.14753	-29.84915	0.00151	0.99711	29.87120	183.15	0.00
72/ 3/28	2441404.5	-0.99058	-0.12351	0.00001	3.19791	-29.66518	0.00149	0.99825	29.83705	187.11	0.00
72/ 4/ 1	2441408.5	-0.98085	-0.19170	0.00001	5.22605	-29.34095	0.00147	0.99940	29.80273	191.06	0.00
72/ 4/ 5	2441412.5	-0.96646	-0.25897	0.00002	7.22246	-28.87896	0.00144	1.00056	29.76841	195.00	0.00
72/ 4/ 9	2441416.5	-0.94751	-0.32503	0.00002	9.17793	-28.28236	0.00140	1.00170	29.73426	198.93	0.00
72/ 4/13	2441420.5	-0.92409	-0.38955	0.00002	11.08357	-27.55484	0.00136	1.00284	29.70042	202.86	0.00
72/ 4/17	2441424.5	-0.89634	-0.45224	0.00003	12.93086	-26.70070	0.00131	1.00397	29.66706	206.77	0.00
72/ 4/21	2441428.5	-0.86440	-0.51282	0.00003	14.71162	-25.72473	0.00126	1.00507	29.63433	210.68	0.00
72/ 4/25	2441432.5	-0.82843	-0.57101	0.00003	16.41813	-24.63220	0.00119	1.00615	29.60237	214.58	0.00
72/ 4/29	2441436.5	-0.78860	-0.62654	0.00003	18.04306	-23.42887	0.00113	1.00720	29.57133	218.47	0.00
72/ 5/ 3	2441440.5	-0.74513	-0.67918	0.00004	19.57956	-22.12086	0.00106	1.00822	29.54135	222.35	0.00
72/ 5/ 7	2441444.5	-0.69821	-0.72867	0.00004	21.02122	-20.71472	0.00099	1.00919	29.51256	226.22	0.00
72/ 5/11	2441448.5	-0.64808	-0.77482	0.00004	22.36214	-19.21729	0.00091	1.01012	29.48508	230.09	0.00
72/ 5/15	2441452.5	-0.59497	-0.81740	0.00004	23.59690	-17.63578	0.00082	1.01101	29.45903	233.95	0.00
72/ 5/19	2441456.5	-0.53914	-0.85624	0.00005	24.72058	-15.97761	0.00074	1.01184	29.43452	237.80	0.00
72/ 5/23	2441460.5	-0.48085	-0.89117	0.00005	25.72877	-14.25048	0.00065	1.01262	29.41166	241.65	0.00
72/ 5/27	2441464.5	-0.42036	-0.92204	0.00005	26.61757	-12.46228	0.00056	1.01334	29.39054	245.49	0.00
72/ 5/31	2441468.5	-0.35796	-0.94871	0.00005	27.38362	-10.62108	0.00047	1.01399	29.37125	249.33	0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
72/ 6/ 4	2441472.5	-0.29393	-0.97107	0.00005	28.02406	-8.73510	0.00037	1.01458	29.35387	253.16	0.00
72/ 6/ 8	2441476.5	-0.22858	-0.98904	0.00005	28.53654	-6.81268	0.00027	1.01511	29.33848	256.99	0.00
72/ 6/12	2441480.5	-0.16218	-1.00253	0.00005	28.91925	-4.86222	0.00017	1.01556	29.32515	260.81	0.00
72/ 6/16	2441484.5	-0.09506	-1.01149	0.00005	29.17089	-2.89222	0.00007	1.01595	29.31392	264.63	0.00
72/ 6/20	2441488.5	-0.02751	-1.01588	0.00005	29.29067	-0.91118	-0.00003	1.01626	29.30484	268.45	0.00
72/ 6/24	2441492.5	0.04017	-1.01570	0.00005	29.27832	1.07238	-0.00014	1.01649	29.29795	272.26	0.00
72/ 6/28	2441496.5	0.10767	-1.01093	0.00005	29.13408	3.04994	-0.00024	1.01665	29.29328	276.08	0.00
72/ 7/ 2	2441500.5	0.17468	-1.00162	0.00005	28.85868	5.01305	-0.00034	1.01674	29.29085	279.89	0.00
72/ 7/ 6	2441504.5	0.24091	-0.98779	0.00005	28.45336	6.95333	-0.00044	1.01674	29.29066	283.71	0.00
72/ 7/10	2441508.5	0.30605	-0.96951	0.00005	27.91987	8.86246	-0.00054	1.01667	29.29270	287.52	0.00
72/ 7/14	2441512.5	0.36981	-0.94687	0.00005	27.26043	10.73228	-0.00064	1.01653	29.29698	291.33	0.00
72/ 7/18	2441516.5	0.43190	-0.91996	0.00005	26.47777	12.55474	-0.00073	1.01630	29.30347	295.15	0.00
72/ 7/22	2441520.5	0.49205	-0.88891	0.00004	25.57507	14.32195	-0.00082	1.01601	29.31215	298.97	0.00
72/ 7/26	2441524.5	0.54998	-0.85384	0.00004	24.55600	16.02624	-0.00091	1.01564	29.32299	302.79	0.00
72/ 7/30	2441528.5	0.60542	-0.81491	0.00004	23.42471	17.66012	-0.00099	1.01520	29.33593	306.61	0.00
72/ 8/ 3	2441532.5	0.65813	-0.77230	0.00004	22.18578	19.21635	-0.00106	1.01469	29.35093	310.44	0.00
72/ 8/ 7	2441536.5	0.70785	-0.72619	0.00003	20.84425	20.68797	-0.00113	1.01411	29.36792	314.27	0.00
72/ 8/11	2441540.5	0.75436	-0.67679	0.00003	19.40560	22.06828	-0.00120	1.01346	29.38684	318.10	0.00
72/ 8/15	2441544.5	0.79744	-0.62431	0.00003	17.87575	23.35091	-0.00126	1.01275	29.40761	321.94	0.00
72/ 8/19	2441548.5	0.83689	-0.56898	0.00003	16.26102	24.52982	-0.00131	1.01199	29.43014	325.79	0.00
72/ 8/23	2441552.5	0.87251	-0.51105	0.00002	14.56814	25.59936	-0.00136	1.01117	29.45433	329.64	0.00
72/ 8/27	2441556.5	0.90414	-0.45079	0.00002	12.80421	26.55425	-0.00141	1.01029	29.48009	333.50	0.00
72/ 8/31	2441560.5	0.93162	-0.38846	0.00002	10.97672	27.38965	-0.00144	1.00937	29.50731	337.37	0.00
72/ 9/ 4	2441564.5	0.95482	-0.32433	0.00001	9.09349	28.10117	-0.00147	1.00840	29.53586	341.24	0.00
72/ 9/ 8	2441568.5	0.97360	-0.25872	0.00001	7.16270	28.68488	-0.00150	1.00739	29.56563	345.12	0.00
72/ 9/12	2441572.5	0.98788	-0.19190	0.00001	5.19279	29.13738	-0.00151	1.00635	29.59649	349.01	0.00
72/ 9/16	2441576.5	0.99757	-0.12420	0.00000	3.19250	29.45579	-0.00152	1.00527	29.62829	352.90	0.00
72/ 9/20	2441580.5	1.00262	-0.05591	-0.00000	1.17082	29.63778	-0.00152	1.00417	29.66090	356.81	-0.00
72/ 9/24	2441584.5	1.00297	0.01264	-0.00000	-0.86306	29.68162	-0.00152	1.00305	29.69416	0.72	-0.00
72/ 9/28	2441588.5	0.99863	0.08112	-0.00001	-2.89976	29.58617	-0.00151	1.00191	29.72794	4.64	-0.00
72/10/ 2	2441592.5	0.98958	0.14923	-0.00001	-4.92977	29.35094	-0.00149	1.00077	29.76206	8.58	-0.00
72/10/ 6	2441596.5	0.97586	0.21663	-0.00001	-6.94346	28.97606	-0.00146	0.99962	29.79637	12.52	-0.00
72/10/10	2441600.5	0.95752	0.28300	-0.00002	-8.93117	28.46236	-0.00143	0.99846	29.83071	16.47	-0.00
72/10/14	2441604.5	0.93462	0.34803	-0.00002	-10.88321	27.81132	-0.00139	0.99732	29.86492	20.42	-0.00
72/10/18	2441608.5	0.90727	0.41139	-0.00002	-12.78994	27.02513	-0.00134	0.99618	29.89883	24.39	-0.00
72/10/22	2441612.5	0.87557	0.47279	-0.00003	-14.64181	26.10667	-0.00129	0.99507	29.93227	28.37	-0.00
72/10/26	2441616.5	0.83967	0.53192	-0.00003	-16.42942	25.05954	-0.00123	0.99397	29.96508	32.35	-0.00
72/10/30	2441620.5	0.79972	0.58848	-0.00003	-18.14356	23.88802	-0.00116	0.99290	29.99710	36.35	-0.00
72/11/ 3	2441624.5	0.75590	0.64219	-0.00004	-19.77529	22.59710	-0.00109	0.99187	30.02817	40.35	-0.00
72/11/ 7	2441628.5	0.70842	0.69280	-0.00004	-21.31598	21.19245	-0.00101	0.99087	30.05813	44.36	-0.00
72/11/11	2441632.5	0.65749	0.74003	-0.00004	-22.75737	19.68041	-0.00093	0.98992	30.08682	48.38	-0.00
72/11/15	2441636.5	0.60335	0.78365	-0.00004	-24.09165	18.06795	-0.00084	0.98901	30.11410	52.41	-0.00
72/11/19	2441640.5	0.54627	0.82344	-0.00004	-25.31148	16.36269	-0.00075	0.98816	30.13982	56.44	-0.00
72/11/23	2441644.5	0.48650	0.85919	-0.00005	-26.41007	14.57279	-0.00065	0.98736	30.16385	60.48	-0.00
72/11/27	2441648.5	0.42434	0.89071	-0.00005	-27.38122	12.70700	-0.00056	0.98663	30.18607	64.53	-0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM				EARTH-MOON B		
72/12/ 1	2441652.5	0.36009	0.91785	-0.00005	-28.21938	10.77453	-0.00045	0.98595	30.20635	68.58	-0.00
72/12/ 5	2441656.5	0.29406	0.94045	-0.00005	-28.91969	8.78506	-0.00035	0.98535	30.22459	72.64	-0.00
72/12/ 9	2441660.5	0.22658	0.95840	-0.00005	-29.47804	6.74866	-0.00024	0.98482	30.24069	76.70	-0.00
72/12/13	2441664.5	0.15798	0.97160	-0.00005	-29.89106	4.67572	-0.00014	0.98436	30.25455	80.76	-0.00
72/12/17	2441668.5	0.08859	0.97998	-0.00005	-30.15621	2.57693	-0.00003	0.98398	30.26611	84.83	-0.00
72/12/21	2441672.5	0.01876	0.98350	-0.00005	-30.27177	0.46313	0.00008	0.98368	30.27531	88.91	-0.00
72/12/25	2441676.5	-0.05116	0.98212	-0.00005	-30.23685	-1.65467	0.00019	0.98345	30.28209	92.98	-0.00
72/12/29	2441680.5	-0.12083	0.97586	-0.00005	-30.05143	-3.76542	0.00029	0.98331	30.28641	97.06	-0.00
73/ 1/ 2	2441684.5	-0.18989	0.96474	-0.00005	-29.71635	-5.85808	0.00040	0.98325	30.28826	101.14	-0.00
73/ 1/ 6	2441688.5	-0.25801	0.94881	-0.00005	-29.23331	-7.92170	0.00050	0.98327	30.28761	105.21	-0.00
73/ 1/10	2441692.5	-0.32485	0.92817	-0.00005	-28.60484	-9.94549	0.00061	0.98337	30.28448	109.29	-0.00
73/ 1/14	2441696.5	-0.39007	0.90290	-0.00005	-27.83434	-11.91892	0.00070	0.98356	30.27889	113.37	-0.00
73/ 1/18	2441700.5	-0.45335	0.87314	-0.00004	-26.92597	-13.83173	0.00080	0.98382	30.27085	117.44	-0.00
73/ 1/22	2441704.5	-0.51438	0.83905	-0.00004	-25.88469	-15.67406	0.00089	0.98417	30.26043	121.51	-0.00
73/ 1/26	2441708.5	-0.57285	0.80078	-0.00004	-24.71619	-17.43648	0.00098	0.98459	30.24766	125.58	-0.00
73/ 1/30	2441712.5	-0.62848	0.75855	-0.00004	-23.42687	-19.11004	0.00106	0.98508	30.23263	129.64	-0.00
73/ 2/ 3	2441716.5	-0.68100	0.71256	-0.00003	-22.02375	-20.68636	0.00114	0.98565	30.21542	133.70	-0.00
73/ 2/ 7	2441720.5	-0.73016	0.66306	-0.00003	-20.51447	-22.15765	0.00121	0.98629	30.19611	137.76	-0.00
73/ 2/11	2441724.5	-0.77571	0.61027	-0.00003	-18.90718	-23.51676	0.00127	0.98700	30.17481	141.81	-0.00
73/ 2/15	2441728.5	-0.81744	0.55449	-0.00003	-17.21052	-24.75721	0.00133	0.98776	30.15164	145.85	-0.00
73/ 2/19	2441732.5	-0.85517	0.49598	-0.00002	-15.43355	-25.87324	0.00138	0.98859	30.12672	149.89	-0.00
73/ 2/23	2441736.5	-0.88870	0.43505	-0.00002	-13.58568	-26.85982	0.00143	0.98947	30.10017	153.92	-0.00
73/ 2/27	2441740.5	-0.91789	0.37198	-0.00002	-11.67660	-27.71265	0.00147	0.99040	30.07215	157.94	-0.00
73/ 3/ 3	2441744.5	-0.94261	0.30711	-0.00001	-9.71621	-28.42823	0.00150	0.99138	30.04278	161.95	-0.00
73/ 3/ 7	2441748.5	-0.96275	0.24074	-0.00001	-7.71460	-29.00378	0.00152	0.99239	30.01223	165.96	-0.00
73/ 3/11	2441752.5	-0.97823	0.17321	-0.00001	-5.68194	-29.43730	0.00154	0.99345	29.98065	169.96	-0.00
73/ 3/15	2441756.5	-0.98899	0.10484	-0.00000	-3.62844	-29.72758	0.00154	0.99453	29.94820	173.95	-0.00
73/ 3/19	2441760.5	-0.99499	0.03597	0.00000	-1.56428	-29.87410	0.00154	0.99564	29.91503	177.93	0.00
73/ 3/23	2441764.5	-0.99621	-0.03307	0.00001	0.50044	-29.87713	0.00154	0.99676	29.88132	181.90	0.00
73/ 3/27	2441768.5	-0.99268	-0.10196	0.00001	2.55574	-29.73761	0.00152	0.99790	29.84723	185.86	0.00
73/ 3/31	2441772.5	-0.98442	-0.17036	0.00001	4.59183	-29.45718	0.00150	0.99905	29.81293	189.82	0.00
73/ 4/ 4	2441776.5	-0.97149	-0.23796	0.00002	6.59914	-29.03816	0.00148	1.00021	29.77857	193.76	0.00
73/ 4/ 8	2441780.5	-0.95396	-0.30443	0.00002	8.56838	-28.48347	0.00144	1.00136	29.74433	197.70	0.00
73/ 4/12	2441784.5	-0.93193	-0.36946	0.00002	10.49054	-27.79665	0.00140	1.00250	29.71036	201.63	0.00
73/ 4/16	2441788.5	-0.90553	-0.43276	0.00003	12.35700	-26.98182	0.00135	1.00363	29.67682	205.54	0.00
73/ 4/20	2441792.5	-0.87489	-0.49403	0.00003	14.15946	-26.04359	0.00130	1.00474	29.64387	209.45	0.00
73/ 4/24	2441796.5	-0.84017	-0.55300	0.00003	15.89006	-24.98712	0.00124	1.00582	29.61165	213.35	0.00
73/ 4/28	2441800.5	-0.80153	-0.60939	0.00003	17.54135	-23.81798	0.00117	1.00688	29.58032	217.25	0.00
73/ 5/ 2	2441804.5	-0.75918	-0.66296	0.00004	19.10632	-22.54222	0.00110	1.00791	29.55001	221.13	0.00
73/ 5/ 6	2441808.5	-0.71333	-0.71347	0.00004	20.57842	-21.16622	0.00103	1.00890	29.52085	225.01	0.00
73/ 5/10	2441812.5	-0.66418	-0.76069	0.00004	21.95159	-19.69677	0.00094	1.00984	29.49297	228.87	0.00
73/ 5/14	2441816.5	-0.61198	-0.80441	0.00004	23.22027	-18.14093	0.00086	1.01074	29.46649	232.74	0.00
73/ 5/18	2441820.5	-0.55698	-0.84444	0.00005	24.37936	-16.50608	0.00077	1.01159	29.44153	236.59	0.00
73/ 5/22	2441824.5	-0.49943	-0.88062	0.00005	25.42432	-14.79982	0.00068	1.01238	29.41820	240.44	0.00
73/ 5/26	2441828.5	-0.43960	-0.91277	0.00005	26.35107	-13.02999	0.00058	1.01312	29.39659	244.28	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
73/ 5/30	2441832.5	-0.37777	-0.94078	0.00005	27.15607	-11.20461	0.00049	1.01379	29.37679	248.12	0.00
73/ 6/ 3	2441836.5	-0.31423	-0.96451	0.00005	27.83632	-9.33185	0.00039	1.01440	29.35888	251.95	0.00
73/ 6/ 7	2441840.5	-0.24926	-0.98386	0.00005	28.38929	-7.42001	0.00029	1.01495	29.34294	255.78	0.00
73/ 6/11	2441844.5	-0.18316	-0.99877	0.00005	28.81301	-5.47748	0.00018	1.01542	29.32904	259.61	0.00
73/ 6/15	2441848.5	-0.11623	-1.00915	0.00005	29.10601	-3.51273	0.00008	1.01583	29.31722	263.43	0.00
73/ 6/19	2441852.5	-0.04878	-1.01499	0.00005	29.26735	-1.53425	-0.00002	1.01616	29.30754	267.25	0.00
73/ 6/23	2441856.5	0.01889	-1.01624	0.00005	29.29658	0.44942	-0.00013	1.01641	29.30003	271.07	0.00
73/ 6/27	2441860.5	0.08648	-1.01291	0.00005	29.19378	2.42978	-0.00023	1.01660	29.29472	274.88	0.00
73/ 7/ 1	2441864.5	0.15368	-1.00502	0.00005	28.95954	4.39835	-0.00033	1.01670	29.29164	278.69	0.00
73/ 7/ 5	2441868.5	0.22018	-0.99261	0.00005	28.59493	6.34672	-0.00043	1.01673	29.29080	282.51	0.00
73/ 7/ 9	2441872.5	0.28570	-0.97572	0.00005	28.10154	8.26656	-0.00053	1.01669	29.29220	286.32	0.00
73/ 7/13	2441876.5	0.34992	-0.95444	0.00005	27.48145	10.14964	-0.00063	1.01656	29.29583	290.13	0.00
73/ 7/17	2441880.5	0.41257	-0.92886	0.00005	26.73722	11.98787	-0.00072	1.01636	29.30167	293.95	0.00
73/ 7/21	2441884.5	0.47337	-0.89909	0.00004	25.87189	13.77333	-0.00081	1.01609	29.30971	297.77	0.00
73/ 7/25	2441888.5	0.53202	-0.86527	0.00004	24.88898	15.49824	-0.00090	1.01574	29.31991	301.59	0.00
73/ 7/29	2441892.5	0.58827	-0.82754	0.00004	23.79249	17.15508	-0.00098	1.01532	29.33222	305.41	0.00
73/ 8/ 2	2441896.5	0.64187	-0.78606	0.00004	22.58686	18.73651	-0.00106	1.01483	29.34660	309.23	0.00
73/ 8/ 6	2441900.5	0.69255	-0.74103	0.00004	21.27699	20.23548	-0.00113	1.01428	29.36299	313.06	0.00
73/ 8/10	2441904.5	0.74010	-0.69264	0.00003	19.86824	21.64520	-0.00120	1.01365	29.38131	316.90	0.00
73/ 8/14	2441908.5	0.78428	-0.64110	0.00003	18.36637	22.95920	-0.00126	1.01297	29.40150	320.74	0.00
73/ 8/18	2441912.5	0.82489	-0.58664	0.00003	16.77758	24.17133	-0.00132	1.01222	29.42347	324.58	0.00
73/ 8/22	2441916.5	0.86174	-0.52950	0.00002	15.10849	25.27582	-0.00137	1.01141	29.44713	328.43	0.00
73/ 8/26	2441920.5	0.89464	-0.46994	0.00002	13.36607	26.26726	-0.00142	1.01056	29.47237	332.29	0.00
73/ 8/30	2441924.5	0.92344	-0.40823	0.00002	11.55771	27.14068	-0.00146	1.00965	29.49910	336.15	0.00
73/ 9/ 3	2441928.5	0.94800	-0.34464	0.00001	9.69112	27.89153	-0.00149	1.00870	29.52720	340.02	0.00
73/ 9/ 7	2441932.5	0.96818	-0.27945	0.00001	7.77437	28.51576	-0.00152	1.00770	29.55654	343.90	0.00
73/ 9/11	2441936.5	0.98388	-0.21298	0.00001	5.81581	29.00978	-0.00153	1.00667	29.58700	347.79	0.00
73/ 9/15	2441940.5	0.99502	-0.14552	0.00000	3.82411	29.37054	-0.00155	1.00561	29.61845	351.68	0.00
73/ 9/19	2441944.5	1.00153	-0.07738	-0.00000	1.80818	29.59555	-0.00155	1.00452	29.65074	355.58	-0.00
73/ 9/23	2441948.5	1.00337	-0.00889	-0.00000	-0.22285	29.68289	-0.00155	1.00341	29.68373	359.49	-0.00
73/ 9/27	2441952.5	1.00050	0.05965	-0.00001	-2.25966	29.63124	-0.00154	1.00228	29.71727	3.41	-0.00
73/10/ 1	2441956.5	0.99293	0.12791	-0.00001	-4.29276	29.43988	-0.00152	1.00114	29.75121	7.34	-0.00
73/10/ 5	2441960.5	0.98068	0.19557	-0.00001	-6.31257	29.10877	-0.00149	0.99999	29.78539	11.28	-0.00
73/10/ 9	2441964.5	0.96378	0.26230	-0.00002	-8.30943	28.63851	-0.00146	0.99884	29.81964	15.22	-0.00
73/10/13	2441968.5	0.94231	0.32778	-0.00002	-10.27365	28.03039	-0.00142	0.99769	29.85382	19.18	-0.00
73/10/17	2441972.5	0.91635	0.39170	-0.00002	-12.19557	27.28636	-0.00137	0.99656	29.88775	23.14	-0.00
73/10/21	2441976.5	0.88600	0.45375	-0.00003	-14.06562	26.40910	-0.00132	0.99543	29.92126	27.12	-0.00
73/10/25	2441980.5	0.85141	0.51362	-0.00003	-15.87433	25.40197	-0.00126	0.99433	29.95421	31.10	-0.00
73/10/29	2441984.5	0.81271	0.57102	-0.00003	-17.61245	24.26905	-0.00119	0.99326	29.98641	35.09	-0.00
73/11/ 2	2441988.5	0.77009	0.62566	-0.00004	-19.27093	23.01510	-0.00112	0.99222	30.01772	39.09	-0.00
73/11/ 6	2441992.5	0.72374	0.67727	-0.00004	-20.84105	21.64558	-0.00104	0.99121	30.04797	43.10	-0.00
73/11/10	2441996.5	0.67387	0.72559	-0.00004	-22.31444	20.16662	-0.00096	0.99024	30.07701	47.12	-0.00
73/11/14	2442000.5	0.62072	0.77037	-0.00004	-23.68312	18.58501	-0.00087	0.98932	30.10470	51.14	-0.00
73/11/18	2442004.5	0.56453	0.81138	-0.00004	-24.93961	16.90814	-0.00078	0.98845	30.13087	55.17	-0.00
73/11/22	2442008.5	0.50558	0.84842	-0.00005	-26.07695	15.14403	-0.00068	0.98764	30.15541	59.21	-0.00

1.3 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — EARTH-MOON B

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73/11/26	2442012.5	0.44415	0.88129	-0.00005	-27.08874	13.30123	-0.00058	0.98689	30.17818	63.25	-0.00
73/11/30	2442016.5	0.38052	0.90983	-0.00005	-27.96923	11.38882	-0.00048	0.98619	30.19906	67.30	-0.00
73/12/ 4	2442020.5	0.31502	0.93387	-0.00005	-28.71335	9.41633	-0.00038	0.98557	30.21794	71.36	-0.00
73/12/ 8	2442024.5	0.24797	0.95329	-0.00005	-29.31674	7.39370	-0.00027	0.98502	30.23471	75.42	-0.00
73/12/12	2442028.5	0.17968	0.96800	-0.00005	-29.77579	5.33124	-0.00016	0.98453	30.24930	79.48	-0.00
73/12/16	2442032.5	0.11051	0.97790	-0.00005	-30.08771	3.23954	-0.00005	0.98413	30.26161	83.55	-0.00
73/12/20	2442036.5	0.04078	0.98295	-0.00005	-30.25050	1.12939	0.00006	0.98380	30.27158	87.62	-0.00
73/12/24	2442040.5	-0.02915	0.98312	-0.00005	-30.26302	-0.98824	0.00017	0.98355	30.27915	91.70	-0.00
73/12/28	2442044.5	-0.09893	0.97839	-0.00005	-30.12497	-3.10232	0.00028	0.98338	30.28429	95.77	-0.00
74/ 1/ 1	2442048.5	-0.16822	0.96879	-0.00005	-29.83692	-5.20178	0.00039	0.98329	30.28697	99.85	-0.00
74/ 1/ 5	2442052.5	-0.23667	0.95437	-0.00005	-29.40030	-7.27566	0.00050	0.98328	30.28717	103.93	-0.00
74/ 1/ 9	2442056.5	-0.30395	0.93520	-0.00005	-28.81737	-9.31312	0.00061	0.98336	30.28489	108.00	-0.00
74/ 1/13	2442060.5	-0.36971	0.91138	-0.00005	-28.09125	-11.30351	0.00071	0.98351	30.28015	112.08	-0.00
74/ 1/17	2442064.5	-0.43363	0.88302	-0.00004	-27.22587	-13.23651	0.00082	0.98375	30.27298	116.15	-0.00
74/ 1/21	2442068.5	-0.49540	0.85028	-0.00004	-26.22594	-15.10212	0.00092	0.98407	30.26341	120.23	-0.00
74/ 1/25	2442072.5	-0.55470	0.81330	-0.00004	-25.09693	-16.89075	0.00101	0.98446	30.25150	124.30	-0.00
74/ 1/29	2442076.5	-0.61126	0.77230	-0.00004	-23.84500	-18.59332	0.00110	0.98493	30.23732	128.36	-0.00
74/ 2/ 2	2442080.5	-0.66479	0.72747	-0.00003	-22.47699	-20.20123	0.00119	0.98547	30.22093	132.42	-0.00
74/ 2/ 6	2442084.5	-0.71503	0.67904	-0.00003	-21.00034	-21.70652	0.00127	0.98608	30.20244	136.48	-0.00
74/ 2/10	2442088.5	-0.76174	0.62726	-0.00003	-19.42304	-23.10182	0.00134	0.98676	30.18193	140.53	-0.00
74/ 2/14	2442092.5	-0.80470	0.57239	-0.00003	-17.75359	-24.38043	0.00141	0.98751	30.15950	144.58	-0.00
74/ 2/18	2442096.5	-0.84370	0.51471	-0.00002	-16.00091	-25.53637	0.00146	0.98831	30.13528	148.61	-0.00
74/ 2/22	2442100.5	-0.87857	0.45451	-0.00002	-14.17431	-26.56435	0.00151	0.98917	30.10940	152.65	-0.00
74/ 2/26	2442104.5	-0.90914	0.39208	-0.00002	-12.28339	-27.45985	0.00155	0.99008	30.08198	156.67	-0.00
74/ 3/ 2	2442108.5	-0.93528	0.32774	-0.00001	-10.33801	-28.21911	0.00158	0.99104	30.05316	160.69	-0.00
74/ 3/ 6	2442112.5	-0.95687	0.26180	-0.00001	-8.34820	-28.83912	0.00161	0.99204	30.02311	164.70	-0.00
74/ 3/10	2442116.5	-0.97383	0.19460	-0.00000	-6.32410	-29.31763	0.00162	0.99308	29.99196	168.70	-0.00
74/ 3/14	2442120.5	-0.98608	0.12645	-0.00000	-4.27593	-29.65318	0.00163	0.99415	29.95988	172.69	-0.00
74/ 3/18	2442124.5	-0.99357	0.05770	0.00000	-2.21388	-29.84503	0.00163	0.99525	29.92703	176.68	0.00
74/ 3/22	2442128.5	-0.99630	-0.01133	0.00001	-0.14808	-29.89320	0.00162	0.99637	29.89357	180.65	0.00
74/ 3/26	2442132.5	-0.99426	-0.08031	0.00001	1.91142	-29.79842	0.00160	0.99750	29.85966	184.62	0.00
74/ 3/30	2442136.5	-0.98748	-0.14890	0.00001	3.95479	-29.56211	0.00158	0.99865	29.82547	188.57	0.00
74/ 4/ 3	2442140.5	-0.97601	-0.21679	0.00002	5.97236	-29.18638	0.00155	0.99980	29.79117	192.52	0.00
74/ 4/ 7	2442144.5	-0.95992	-0.28365	0.00002	7.95475	-28.67396	0.00151	1.00095	29.75691	196.46	0.00
74/ 4/11	2442148.5	-0.93929	-0.34917	0.00002	9.89286	-28.02820	0.00146	1.00209	29.72286	200.39	0.00
74/ 4/15	2442152.5	-0.91425	-0.41305	0.00003	11.77792	-27.25304	0.00141	1.00322	29.68919	204.31	0.00
74/ 4/19	2442156.5	-0.88492	-0.47499	0.00003	13.60155	-26.35295	0.00135	1.00434	29.65603	208.23	0.00
74/ 4/23	2442160.5	-0.85146	-0.53471	0.00003	15.35572	-25.33292	0.00128	1.00543	29.62355	212.13	0.00
74/ 4/27	2442164.5	-0.81403	-0.59195	0.00004	17.03285	-24.19840	0.00121	1.00650	29.59190	216.02	0.00
74/ 5/ 1	2442168.5	-0.77282	-0.64644	0.00004	18.62579	-22.95528	0.00114	1.00754	29.56121	219.91	0.00
74/ 5/ 5	2442172.5	-0.72804	-0.69793	0.00004	20.12785	-21.60987	0.00105	1.00854	29.53162	223.79	0.00
74/ 5/ 9	2442176.5	-0.67990	-0.74621	0.00004	21.53281	-20.16881	0.00097	1.00950	29.50327	227.66	0.00
74/ 5/13	2442180.5	-0.62863	-0.79105	0.00005	22.83494	-18.63911	0.00088	1.01041	29.47627	231.53	0.00
74/ 5/17	2442184.5	-0.57448	-0.83226	0.00005	24.02900	-17.02803	0.00078	1.01128	29.45075	235.38	0.00
74/ 5/21	2442188.5	-0.51770	-0.86967	0.00005	25.11026	-15.34313	0.00068	1.01209	29.42681	239.24	0.00

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		HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							EARTH-MOON B		
74/ 5/25	2442192.5	-0.45855	-0.90310	0.00005	26.07452	-13.59218	0.00058	1.01285	29.40455	243.08	0.00
74/ 5/29	2442196.5	-0.39732	-0.93242	0.00005	26.91805	-11.78314	0.00048	1.01355	29.38407	246.92	0.00
74/ 6/ 2	2442200.5	-0.33428	-0.95751	0.00005	27.63769	-9.92414	0.00037	1.01418	29.36546	250.76	0.00
74/ 6/ 6	2442204.5	-0.26972	-0.97825	0.00005	28.23075	-8.02345	0.00027	1.01475	29.34879	254.59	0.00
74/ 6/10	2442208.5	-0.20394	-0.99455	0.00006	28.69511	-6.08945	0.00016	1.01525	29.33413	258.41	0.00
74/ 6/14	2442212.5	-0.13724	-1.00636	0.00006	29.02914	-4.13057	0.00005	1.01568	29.32153	262.23	0.00
74/ 6/18	2442216.5	-0.06991	-1.01362	0.00006	29.23172	-2.15532	-0.00006	1.01603	29.31107	266.05	0.00
74/ 6/22	2442220.5	-0.00228	-1.01631	0.00006	29.30226	-0.17221	-0.00016	1.01632	29.30277	269.87	0.00
74/ 6/26	2442224.5	0.06537	-1.01442	0.00005	29.24069	1.81023	-0.00027	1.01652	29.29667	273.69	0.00
74/ 6/30	2442228.5	0.13272	-1.00796	0.00005	29.04742	3.78351	-0.00038	1.01666	29.29279	277.50	0.00
74/ 7/ 4	2442232.5	0.19948	-0.99695	0.00005	28.72339	5.73921	-0.00048	1.01671	29.29115	281.31	0.00
74/ 7/ 8	2442236.5	0.26534	-0.98146	0.00005	28.27002	7.66895	-0.00059	1.01669	29.29176	285.13	0.00
74/ 7/12	2442240.5	0.33000	-0.96155	0.00005	27.68925	9.56448	-0.00069	1.01660	29.29461	288.94	0.00
74/ 7/16	2442244.5	0.39317	-0.93730	0.00005	26.98349	11.41767	-0.00078	1.01642	29.29969	292.76	0.00
74/ 7/20	2442248.5	0.45458	-0.90883	0.00005	26.15562	13.22052	-0.00088	1.01618	29.30697	296.57	0.00
74/ 7/24	2442252.5	0.51393	-0.87626	0.00004	25.20904	14.96523	-0.00097	1.01585	29.31644	300.39	0.00
74/ 7/28	2442256.5	0.57096	-0.83974	0.00004	24.14757	16.64418	-0.00105	1.01546	29.32804	304.21	0.00
74/ 8/ 1	2442260.5	0.62542	-0.79942	0.00004	22.97554	18.24999	-0.00113	1.01499	29.34174	308.04	0.00
74/ 8/ 5	2442264.5	0.67704	-0.75548	0.00004	21.69770	19.77549	-0.00121	1.01446	29.35746	311.87	0.00
74/ 8/ 9	2442268.5	0.72559	-0.70811	0.00003	20.31927	21.21384	-0.00128	1.01386	29.37515	315.70	0.00
74/ 8/13	2442272.5	0.77085	-0.65753	0.00003	18.84589	22.55844	-0.00135	1.01319	29.39474	319.54	0.00
74/ 8/17	2442276.5	0.81260	-0.60396	0.00003	17.28362	23.80306	-0.00141	1.01246	29.41614	323.38	0.00
74/ 8/21	2442280.5	0.85064	-0.54764	0.00002	15.63894	24.94179	-0.00146	1.01168	29.43925	327.23	0.00
74/ 8/25	2442284.5	0.88479	-0.48881	0.00002	13.91873	25.96913	-0.00151	1.01084	29.46399	331.08	0.00
74/ 8/29	2442288.5	0.91490	-0.42774	0.00002	12.13023	26.87995	-0.00155	1.00995	29.49024	334.94	0.00
74/ 9/ 2	2442292.5	0.94079	-0.36471	0.00001	10.28107	27.66958	-0.00158	1.00901	29.51789	338.81	0.00
74/ 9/ 6	2442296.5	0.96236	-0.29999	0.00001	8.37920	28.33379	-0.00161	1.00803	29.54683	342.69	0.00
74/ 9/10	2442300.5	0.97947	-0.23390	0.00001	6.43289	28.86887	-0.00163	1.00701	29.57691	346.57	0.00
74/ 9/14	2442304.5	0.99205	-0.16671	0.00000	4.45072	29.27159	-0.00164	1.00596	29.60802	350.46	0.00
74/ 9/18	2442308.5	1.00002	-0.09875	-0.00000	2.44151	29.53929	-0.00164	1.00488	29.64002	354.36	-0.00
74/ 9/22	2442312.5	1.00332	-0.03034	-0.00000	0.41433	29.66986	-0.00164	1.00378	29.67275	358.27	-0.00
74/ 9/26	2442316.5	1.00193	0.03822	-0.00001	-1.62155	29.66179	-0.00163	1.00265	29.70608	2.18	-0.00
74/ 9/30	2442320.5	0.99583	0.10660	-0.00001	-3.65670	29.51418	-0.00161	1.00152	29.73985	6.11	-0.00
74/10/ 4	2442324.5	0.98504	0.17448	-0.00002	-5.68156	29.22678	-0.00158	1.00037	29.77390	10.04	-0.00
74/10/ 8	2442328.5	0.96959	0.24154	-0.00002	-7.68649	28.79999	-0.00155	0.99922	29.80808	13.99	-0.00
74/10/12	2442332.5	0.94955	0.30744	-0.00002	-9.66181	28.23487	-0.00150	0.99808	29.84222	17.94	-0.00
74/10/16	2442336.5	0.92498	0.37189	-0.00003	-11.59785	27.53317	-0.00145	0.99694	29.87617	21.90	-0.00
74/10/20	2442340.5	0.89600	0.43455	-0.00003	-13.48501	26.69735	-0.00140	0.99581	29.90976	25.87	-0.00
74/10/24	2442344.5	0.86272	0.49514	-0.00003	-15.31378	25.73055	-0.00133	0.99471	29.94283	29.85	-0.00
74/10/28	2442348.5	0.82529	0.55334	-0.00004	-17.07483	24.63663	-0.00126	0.99363	29.97521	33.84	-0.00
74/11/ 1	2442352.5	0.78389	0.60887	-0.00004	-18.75906	23.42014	-0.00119	0.99257	30.00675	37.84	-0.00
74/11/ 5	2442356.5	0.73869	0.66146	-0.00004	-20.35765	22.08631	-0.00110	0.99156	30.03729	41.84	-0.00
74/11/ 9	2442360.5	0.68990	0.71083	-0.00004	-21.86209	20.64107	-0.00102	0.99058	30.06667	45.86	-0.00
74/11/13	2442364.5	0.63776	0.75675	-0.00005	-23.26429	19.09100	-0.00092	0.98964	30.09475	49.88	-0.00
74/11/17	2442368.5	0.58250	0.79896	-0.00005	-24.55662	17.44332	-0.00082	0.98876	30.12137	53.91	-0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
74/11/21	2442372.5	0.52439	0.83727	-0.00005	-25.73195	15.70583	-0.00072	0.98793	30.14641	57.94	-0.00
74/11/25	2442376.5	0.46370	0.87147	-0.00005	-26.78369	13.88693	-0.00061	0.98715	30.16973	61.98	-0.00
74/11/29	2442380.5	0.40074	0.90138	-0.00005	-27.70590	11.99553	-0.00050	0.98644	30.19121	66.03	-0.00
74/12/ 3	2442384.5	0.33579	0.92684	-0.00005	-28.49328	10.04101	-0.00039	0.98580	30.21074	70.08	-0.00
74/12/ 7	2442388.5	0.26919	0.94773	-0.00005	-29.14124	8.03321	-0.00027	0.98522	30.22820	74.14	-0.00
74/12/11	2442392.5	0.20126	0.96393	-0.00005	-29.64595	5.98231	-0.00015	0.98471	30.24351	78.21	-0.00
74/12/15	2442396.5	0.13233	0.97534	-0.00006	-30.00434	3.89880	-0.00003	0.98428	30.25659	82.27	-0.00
74/12/19	2442400.5	0.06275	0.98192	-0.00006	-30.21418	1.79344	0.00008	0.98393	30.26736	86.34	-0.00
74/12/23	2442404.5	-0.00715	0.98362	-0.00005	-30.27403	-0.32287	0.00020	0.98365	30.27576	90.42	-0.00
74/12/27	2442408.5	-0.07702	0.98043	-0.00005	-30.18335	-2.43910	0.00032	0.98345	30.28174	94.49	-0.00
74/12/31	2442412.5	-0.14650	0.97236	-0.00005	-29.94242	-4.54420	0.00044	0.98333	30.28528	98.57	-0.00
75/ 1/ 4	2442416.5	-0.21525	0.95945	-0.00005	-29.55240	-6.62717	0.00055	0.98330	30.28636	102.64	-0.00
75/ 1/ 8	2442420.5	-0.28292	0.94177	-0.00005	-29.01528	-8.67712	0.00067	0.98335	30.28496	106.72	-0.00
75/ 1/12	2442424.5	-0.34920	0.91939	-0.00005	-28.33393	-10.68333	0.00077	0.98347	30.28110	110.80	-0.00
75/ 1/16	2442428.5	-0.41373	0.89245	-0.00005	-27.51200	-12.63539	0.00088	0.98368	30.27479	114.87	-0.00
75/ 1/20	2442432.5	-0.47621	0.86106	-0.00005	-26.55397	-14.52316	0.00098	0.98397	30.26608	118.94	-0.00
75/ 1/24	2442436.5	-0.53632	0.82540	-0.00004	-25.46505	-16.33695	0.00107	0.98434	30.25500	123.01	-0.00
75/ 1/28	2442440.5	-0.59377	0.78565	-0.00004	-24.25121	-18.06749	0.00116	0.98478	30.24161	127.08	-0.00
75/ 2/ 1	2442444.5	-0.64827	0.74200	-0.00004	-22.91905	-19.70604	0.00125	0.98530	30.22600	131.14	-0.00
75/ 2/ 5	2442448.5	-0.69958	0.69467	-0.00003	-21.47584	-21.24442	0.00133	0.98589	30.20823	135.20	-0.00
75/ 2/ 9	2442452.5	-0.74742	0.64392	-0.00003	-19.92940	-22.67508	0.00140	0.98655	30.18841	139.25	-0.00
75/ 2/13	2442456.5	-0.79158	0.59000	-0.00003	-18.28808	-23.99109	0.00146	0.98727	30.16664	143.30	-0.00
75/ 2/17	2442460.5	-0.83185	0.53317	-0.00002	-16.56067	-25.18625	0.00152	0.98805	30.14304	147.34	-0.00
75/ 2/21	2442464.5	-0.86804	0.47372	-0.00002	-14.75635	-26.25505	0.00157	0.98889	30.11773	151.38	-0.00
75/ 2/25	2442468.5	-0.89998	0.41196	-0.00002	-12.88466	-27.19273	0.00161	0.98979	30.09085	155.40	-0.00
75/ 3/ 1	2442472.5	-0.92753	0.34819	-0.00001	-10.95537	-27.99527	0.00164	0.99073	30.06252	159.42	-0.00
75/ 3/ 5	2442476.5	-0.95056	0.28272	-0.00001	-8.97846	-28.65943	0.00167	0.99171	30.03291	163.44	-0.00
75/ 3/ 9	2442480.5	-0.96898	0.21588	-0.00001	-6.96405	-29.18272	0.00168	0.99274	30.00215	167.44	-0.00
75/ 3/13	2442484.5	-0.98272	0.14799	-0.00000	-4.92234	-29.56343	0.00169	0.99380	29.97041	171.44	-0.00
75/ 3/17	2442488.5	-0.99171	0.07940	0.00000	-2.86354	-29.80058	0.00169	0.99488	29.93785	175.42	0.00
75/ 3/21	2442492.5	-0.99594	0.01042	0.00001	-0.79780	-29.89397	0.00169	0.99600	29.90462	179.40	0.00
75/ 3/25	2442496.5	-0.99540	-0.05861	0.00001	1.26480	-29.84410	0.00167	0.99712	29.87089	183.37	0.00
75/ 3/29	2442500.5	-0.99011	-0.12736	0.00001	3.31434	-29.65216	0.00165	0.99827	29.83682	187.33	0.00
75/ 4/ 2	2442504.5	-0.98010	-0.19551	0.00002	5.34111	-29.32006	0.00162	0.99941	29.80258	191.28	0.00
75/ 4/ 6	2442508.5	-0.96545	-0.26273	0.00002	7.33562	-28.85034	0.00158	1.00056	29.76833	195.22	0.00
75/ 4/10	2442512.5	-0.94624	-0.32870	0.00002	9.28868	-28.24615	0.00153	1.00171	29.73423	199.16	0.00
75/ 4/14	2442516.5	-0.92258	-0.39313	0.00003	11.19142	-27.51125	0.00148	1.00285	29.70045	203.08	0.00
75/ 4/18	2442520.5	-0.89458	-0.45572	0.00003	13.03532	-26.64994	0.00142	1.00397	29.66713	207.00	0.00
75/ 4/22	2442524.5	-0.86240	-0.51617	0.00003	14.81224	-25.66706	0.00135	1.00507	29.63444	210.90	0.00
75/ 4/26	2442528.5	-0.82620	-0.57422	0.00004	16.51445	-24.56791	0.00128	1.00615	29.60252	214.80	0.00
75/ 4/30	2442532.5	-0.78616	-0.62960	0.00004	18.13467	-23.35826	0.00120	1.00720	29.57151	218.69	0.00
75/ 5/ 4	2442536.5	-0.74248	-0.68206	0.00004	19.66605	-22.04428	0.00112	1.00821	29.54156	222.57	0.00
75/ 5/ 8	2442540.5	-0.69537	-0.73138	0.00005	21.10223	-20.63252	0.00103	1.00918	29.51279	226.45	0.00
75/ 5/12	2442544.5	-0.64506	-0.77732	0.00005	22.43731	-19.12987	0.00093	1.01011	29.48533	230.31	0.00
75/ 5/16	2442548.5	-0.59178	-0.81970	0.00005	23.66590	-17.54352	0.00084	1.01100	29.45930	234.17	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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75/ 5/20	2442552.5	-0.53580	-0.85832	0.00005	24.78312	-15.88095	0.00073	1.01183	29.43481	238.03	0.00
75/ 5/24	2442556.5	-0.47737	-0.89302	0.00005	25.78459	-14.14986	0.00063	1.01260	29.41196	241.87	0.00
75/ 5/28	2442560.5	-0.41676	-0.92365	0.00005	26.66643	-12.35816	0.00052	1.01332	29.39086	245.71	0.00
75/ 6/ 1	2442564.5	-0.35425	-0.95008	0.00006	27.42531	-10.51393	0.00042	1.01398	29.37159	249.55	0.00
75/ 6/ 5	2442568.5	-0.29014	-0.97220	0.00006	28.05839	-8.62540	0.00030	1.01457	29.35423	253.38	0.00
75/ 6/ 9	2442572.5	-0.22471	-0.98991	0.00006	28.56337	-6.70092	0.00019	1.01509	29.33886	257.21	0.00
75/ 6/13	2442576.5	-0.15827	-1.00314	0.00006	28.93847	-4.74892	0.00008	1.01554	29.32554	261.03	0.00
75/ 6/17	2442580.5	-0.09111	-1.01183	0.00006	29.18240	-2.77787	-0.00003	1.01593	29.31432	264.85	0.00
75/ 6/21	2442584.5	-0.02354	-1.01596	0.00006	29.29443	-0.79629	-0.00014	1.01623	29.30525	268.67	0.00
75/ 6/25	2442588.5	0.04414	-1.01551	0.00006	29.27430	1.18729	-0.00025	1.01647	29.29837	272.49	0.00
75/ 6/29	2442592.5	0.11162	-1.01048	0.00006	29.12230	3.16437	-0.00036	1.01663	29.29371	276.30	0.00
75/ 7/ 3	2442596.5	0.17860	-1.00090	0.00006	28.83918	5.12650	-0.00047	1.01671	29.29128	280.12	0.00
75/ 7/ 7	2442600.5	0.24477	-0.98681	0.00005	28.42622	7.06529	-0.00058	1.01672	29.29110	283.93	0.00
75/ 7/11	2442604.5	0.30984	-0.96828	0.00005	27.88521	8.97244	-0.00068	1.01665	29.29316	287.74	0.00
75/ 7/15	2442608.5	0.37351	-0.94539	0.00005	27.21839	10.83979	-0.00078	1.01650	29.29747	291.56	0.00
75/ 7/19	2442612.5	0.43550	-0.91823	0.00005	26.42851	12.65929	-0.00088	1.01628	29.30399	295.37	0.00
75/ 7/23	2442616.5	0.49553	-0.88694	0.00005	25.51881	14.42308	-0.00098	1.01598	29.31271	299.19	0.00
75/ 7/27	2442620.5	0.55332	-0.85164	0.00004	24.49297	16.12349	-0.00107	1.01561	29.32359	303.01	0.00
75/ 7/31	2442624.5	0.60861	-0.81250	0.00004	23.35518	17.75305	-0.00115	1.01516	29.33658	306.84	0.00
75/ 8/ 4	2442628.5	0.66114	-0.76968	0.00004	22.11003	19.30455	-0.00124	1.01465	29.35164	310.66	0.00
75/ 8/ 8	2442632.5	0.71068	-0.72337	0.00004	20.76260	20.77101	-0.00132	1.01407	29.36870	314.49	0.00
75/ 8/12	2442636.5	0.75700	-0.67378	0.00003	19.31841	22.14578	-0.00139	1.01342	29.38770	318.33	0.00
75/ 8/16	2442640.5	0.79987	-0.62112	0.00003	17.78337	23.42251	-0.00146	1.01271	29.40854	322.17	0.00
75/ 8/20	2442644.5	0.83910	-0.56564	0.00003	16.16385	24.59518	-0.00152	1.01195	29.43115	326.02	0.00
75/ 8/24	2442648.5	0.87450	-0.50757	0.00002	14.46659	25.65815	-0.00158	1.01112	29.45544	329.87	0.00
75/ 8/28	2442652.5	0.90589	-0.44718	0.00002	12.69872	26.60619	-0.00163	1.01025	29.48130	333.73	0.00
75/ 9/ 1	2442656.5	0.93312	-0.38473	0.00002	10.86776	27.43447	-0.00167	1.00932	29.50861	337.59	0.00
75/ 9/ 5	2442660.5	0.95606	-0.32052	0.00001	8.98155	28.13862	-0.00171	1.00835	29.53727	341.47	0.00
75/ 9/ 9	2442664.5	0.97458	-0.25482	0.00001	7.04826	28.71476	-0.00174	1.00734	29.56713	345.35	0.00
75/ 9/13	2442668.5	0.98859	-0.18795	0.00000	5.07637	29.15950	-0.00175	1.00630	29.59808	349.24	0.00
75/ 9/17	2442672.5	0.99801	-0.12020	-0.00000	3.07465	29.47000	-0.00176	1.00522	29.62996	353.13	-0.00
75/ 9/21	2442676.5	1.00278	-0.05189	-0.00000	1.05207	29.64397	-0.00176	1.00412	29.66263	357.04	-0.00
75/ 9/25	2442680.5	1.00286	0.01666	-0.00001	-0.98215	29.67970	-0.00175	1.00300	29.69595	0.95	-0.00
75/ 9/29	2442684.5	0.99824	0.08513	-0.00001	-3.01863	29.57610	-0.00174	1.00187	29.72975	4.87	-0.00
75/10/ 3	2442688.5	0.98892	0.15321	-0.00002	-5.04785	29.33271	-0.00171	1.00072	29.76388	8.81	-0.00
75/10/ 7	2442692.5	0.97493	0.22055	-0.00002	-7.06017	28.94970	-0.00167	0.99957	29.79818	12.75	-0.00
75/10/11	2442696.5	0.95632	0.28686	-0.00002	-9.04594	28.42795	-0.00163	0.99842	29.83248	16.70	-0.00
75/10/15	2442700.5	0.93317	0.35180	-0.00003	-10.99547	27.76897	-0.00158	0.99727	29.86663	20.66	-0.00
75/10/19	2442704.5	0.90556	0.41506	-0.00003	-12.89912	26.97500	-0.00152	0.99614	29.90046	24.62	-0.00
75/10/23	2442708.5	0.87361	0.47633	-0.00004	-14.74735	26.04896	-0.00145	0.99503	29.93380	28.60	-0.00
75/10/27	2442712.5	0.83747	0.53531	-0.00004	-16.53077	24.99449	-0.00137	0.99394	29.96649	32.59	-0.00
75/10/31	2442716.5	0.79729	0.59172	-0.00004	-18.24019	23.81592	-0.00129	0.99287	29.99837	36.58	-0.00
75/11/ 4	2442720.5	0.75325	0.64526	-0.00004	-19.86669	22.51828	-0.00120	0.99184	30.02929	40.58	-0.00
75/11/ 8	2442724.5	0.70557	0.69567	-0.00005	-21.40166	21.10727	-0.00111	0.99085	30.05907	44.60	-0.00
75/11/12	2442728.5	0.65445	0.74270	-0.00005	-22.83688	19.58928	-0.00101	0.98990	30.08759	48.61	-0.00

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75/11/16	2442732.5	0.60014	0.78610	-0.00005	-24.16455	17.97132	-0.00090	0.98900	30.11468	52.64	-0.00
75/11/20	2442736.5	0.54289	0.82566	-0.00005	-25.37738	16.26102	-0.00079	0.98815	30.14021	56.67	-0.00
75/11/24	2442740.5	0.48298	0.86117	-0.00006	-26.46860	14.46661	-0.00068	0.98736	30.16404	60.71	-0.00
75/11/28	2442744.5	0.42069	0.89244	-0.00006	-27.43206	12.59684	-0.00056	0.98663	30.18606	64.76	-0.00
75/12/ 2	2442748.5	0.35633	0.91932	-0.00006	-28.26226	10.66096	-0.00044	0.98596	30.20614	68.81	-0.00
75/12/ 6	2442752.5	0.29022	0.94166	-0.00006	-28.95437	8.66866	-0.00031	0.98537	30.22419	72.87	-0.00
75/12/10	2442756.5	0.22266	0.95934	-0.00006	-29.50434	6.63004	-0.00019	0.98484	30.24009	76.93	-0.00
75/12/14	2442760.5	0.15401	0.97226	-0.00006	-29.90884	4.55550	-0.00006	0.98439	30.25378	81.00	-0.00
75/12/18	2442764.5	0.08459	0.98037	-0.00006	-30.16538	2.45571	0.00007	0.98401	30.26517	85.07	-0.00
75/12/22	2442768.5	0.01475	0.98360	-0.00006	-30.27228	0.34156	0.00020	0.98371	30.27421	89.14	-0.00
75/12/26	2442772.5	-0.05516	0.98194	-0.00006	-30.22871	-1.77596	0.00032	0.98349	30.28084	93.22	-0.00
75/12/30	2442776.5	-0.12480	0.97540	-0.00006	-30.03470	-3.88580	0.00045	0.98335	30.28503	97.29	-0.00
76/ 1/ 3	2442780.5	-0.19382	0.96400	-0.00006	-29.69114	-5.97694	0.00057	0.98329	30.28675	101.37	-0.00
76/ 1/ 7	2442784.5	-0.26187	0.94781	-0.00006	-29.19976	-8.03842	0.00069	0.98332	30.28601	105.45	-0.00
76/ 1/11	2442788.5	-0.32862	0.92689	-0.00005	-28.56316	-10.05950	0.00081	0.98342	30.28279	109.52	-0.00
76/ 1/15	2442792.5	-0.39373	0.90137	-0.00005	-27.78475	-12.02963	0.00092	0.98361	30.27712	113.60	-0.00
76/ 1/19	2442796.5	-0.45689	0.87136	-0.00005	-26.86876	-13.93859	0.00103	0.98388	30.26904	117.67	-0.00
76/ 1/23	2442800.5	-0.51778	0.83702	-0.00005	-25.82018	-15.77655	0.00113	0.98422	30.25857	121.74	-0.00
76/ 1/27	2442804.5	-0.57609	0.79853	-0.00004	-24.64474	-17.53409	0.00123	0.98465	30.24579	125.81	-0.00
76/ 1/31	2442808.5	-0.63155	0.75608	-0.00004	-23.34887	-19.20231	0.00132	0.98514	30.23075	129.87	-0.00
76/ 2/ 4	2442812.5	-0.68388	0.70988	-0.00004	-21.93961	-20.77286	0.00141	0.98571	30.21355	133.93	-0.00
76/ 2/ 8	2442816.5	-0.73284	0.66018	-0.00003	-20.42464	-22.23797	0.00149	0.98635	30.19426	137.99	-0.00
76/ 2/12	2442820.5	-0.77818	0.60722	-0.00003	-18.81214	-23.59054	0.00156	0.98705	30.17301	142.03	-0.00
76/ 2/16	2442824.5	-0.81969	0.55127	-0.00003	-17.11076	-24.82413	0.00162	0.98782	30.14989	146.08	-0.00
76/ 2/20	2442828.5	-0.85717	0.49262	-0.00002	-15.32959	-25.93301	0.00167	0.98865	30.12503	150.11	-0.00
76/ 2/24	2442832.5	-0.89046	0.43155	-0.00002	-13.47804	-26.91218	0.00172	0.98953	30.09855	154.14	-0.00
76/ 2/28	2442836.5	-0.91940	0.36838	-0.00002	-11.56581	-27.75741	0.00176	0.99045	30.07061	158.17	-0.00
76/ 3/ 3	2442840.5	-0.94386	0.30341	-0.00001	-9.60284	-28.46520	0.00179	0.99143	30.04134	162.18	-0.00
76/ 3/ 7	2442844.5	-0.96374	0.23697	-0.00001	-7.59919	-29.03283	0.00181	0.99244	30.01088	166.19	-0.00
76/ 3/11	2442848.5	-0.97895	0.16938	-0.00000	-5.56506	-29.45836	0.00182	0.99349	29.97940	170.18	-0.00
76/ 3/15	2442852.5	-0.98943	0.10097	0.00000	-3.51064	-29.74057	0.00182	0.99457	29.94706	174.17	0.00
76/ 3/19	2442856.5	-0.99516	0.03208	0.00001	-1.44611	-29.87903	0.00182	0.99568	29.91400	178.15	0.00
76/ 3/23	2442860.5	-0.99612	-0.03697	0.00001	0.61842	-29.87400	0.00180	0.99680	29.88040	182.13	0.00
76/ 3/27	2442864.5	-0.99231	-0.10584	0.00001	2.67298	-29.72649	0.00178	0.99794	29.84642	186.09	0.00
76/ 3/31	2442868.5	-0.98378	-0.17421	0.00002	4.70779	-29.43816	0.00175	0.99909	29.81223	190.04	0.00
76/ 4/ 4	2442872.5	-0.97058	-0.24175	0.00002	6.71330	-29.01137	0.00171	1.00024	29.77798	193.99	0.00
76/ 4/ 8	2442876.5	-0.95279	-0.30815	0.00003	8.68022	-28.44907	0.00167	1.00138	29.74384	197.92	0.00
76/ 4/12	2442880.5	-0.93051	-0.37309	0.00003	10.59957	-27.75484	0.00161	1.00252	29.70996	201.85	0.00
76/ 4/16	2442884.5	-0.90386	-0.43629	0.00003	12.46272	-26.93281	0.00155	1.00365	29.67652	205.77	0.00
76/ 4/20	2442888.5	-0.87298	-0.49744	0.00004	14.26142	-25.98765	0.00148	1.00476	29.64365	209.68	0.00
76/ 4/24	2442892.5	-0.83803	-0.55627	0.00004	15.98781	-24.92452	0.00140	1.00584	29.61151	213.58	0.00
76/ 4/28	2442896.5	-0.79917	-0.61251	0.00004	17.63446	-23.74904	0.00132	1.00690	29.58025	217.47	0.00
76/ 5/ 2	2442900.5	-0.75661	-0.66591	0.00005	19.19439	-22.46725	0.00123	1.00792	29.54999	221.35	0.00
76/ 5/ 6	2442904.5	-0.71056	-0.71624	0.00005	20.66107	-21.08560	0.00114	1.00891	29.52088	225.23	0.00
76/ 5/10	2442908.5	-0.66123	-0.76326	0.00005	22.02847	-19.61087	0.00104	1.00985	29.49304	229.10	0.00

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76/ 5/14	2442912.5	-0.60886	-0.80678	0.00005	23.29104	-18.05015	0.00094	1.01075	29.46660	232.96	0.00
76/ 5/18	2442916.5	-0.55370	-0.84660	0.00006	24.44373	-16.41083	0.00083	1.01159	29.44166	236.81	0.00
76/ 5/22	2442920.5	-0.49601	-0.88255	0.00006	25.48200	-14.70055	0.00072	1.01239	29.41833	240.66	0.00
76/ 5/26	2442924.5	-0.43606	-0.91448	0.00006	26.40182	-12.92716	0.00061	1.01312	29.39672	244.51	0.00
76/ 5/30	2442928.5	-0.37412	-0.94224	0.00006	27.19968	-11.09867	0.00049	1.01379	29.37692	248.34	0.00
76/ 6/ 3	2442932.5	-0.31048	-0.96572	0.00006	27.87260	-9.22328	0.00037	1.01440	29.35900	252.18	0.00
76/ 6/ 7	2442936.5	-0.24544	-0.98482	0.00006	28.41810	-7.30931	0.00025	1.01495	29.34304	256.01	0.00
76/ 6/11	2442940.5	-0.17928	-0.99947	0.00006	28.83422	-5.36513	0.00013	1.01542	29.32912	259.83	0.00
76/ 6/15	2442944.5	-0.11231	-1.00959	0.00006	29.11954	-3.39924	0.00001	1.01582	29.31727	263.65	0.00
76/ 6/19	2442948.5	-0.04484	-1.01516	0.00006	29.27314	-1.42013	-0.00011	1.01615	29.30757	267.47	0.00
76/ 6/23	2442952.5	0.02284	-1.01615	0.00006	29.29461	0.56366	-0.00023	1.01641	29.30003	271.29	0.00
76/ 6/27	2442956.5	0.09041	-1.01256	0.00006	29.18407	2.54364	-0.00035	1.01659	29.29471	275.10	0.00
76/ 7/ 1	2442960.5	0.15758	-1.00441	0.00006	28.94212	4.51133	-0.00047	1.01670	29.29161	278.92	0.00
76/ 7/ 5	2442964.5	0.22403	-0.99173	0.00006	28.56989	6.45831	-0.00058	1.01672	29.29075	282.73	0.00
76/ 7/ 9	2442968.5	0.28948	-0.97459	0.00006	28.06898	8.37626	-0.00070	1.01668	29.29214	286.54	0.00
76/ 7/13	2442972.5	0.35363	-0.95306	0.00006	27.44151	10.25697	-0.00081	1.01655	29.29577	290.36	0.00
76/ 7/17	2442976.5	0.41618	-0.92724	0.00005	26.69008	12.09236	-0.00092	1.01635	29.30163	294.17	0.00
76/ 7/21	2442980.5	0.47685	-0.89723	0.00005	25.81774	13.87451	-0.00102	1.01608	29.30969	297.99	0.00
76/ 7/25	2442984.5	0.53537	-0.86318	0.00005	24.82807	15.59567	-0.00112	1.01573	29.31992	301.81	0.00
76/ 7/29	2442988.5	0.59148	-0.82523	0.00005	23.72506	17.24831	-0.00121	1.01530	29.33228	305.63	0.00
76/ 8/ 2	2442992.5	0.64491	-0.78354	0.00004	22.51320	18.82514	-0.00130	1.01481	29.34672	309.46	0.00
76/ 8/ 6	2442996.5	0.69542	-0.73831	0.00004	21.19742	20.31910	-0.00138	1.01425	29.36318	313.29	0.00
76/ 8/10	2443000.5	0.74277	-0.68973	0.00004	19.78308	21.72343	-0.00146	1.01363	29.38159	317.12	0.00
76/ 8/14	2443004.5	0.78675	-0.63802	0.00003	18.27599	23.03168	-0.00153	1.01294	29.40187	320.96	0.00
76/ 8/18	2443008.5	0.82715	-0.58339	0.00003	16.68237	24.23773	-0.00160	1.01219	29.42395	324.80	0.00
76/ 8/22	2443012.5	0.86377	-0.52611	0.00003	15.00884	25.33581	-0.00165	1.01138	29.44772	328.65	0.00
76/ 8/26	2443016.5	0.89644	-0.46642	0.00002	13.26241	26.32056	-0.00170	1.01052	29.47309	332.51	0.00
76/ 8/30	2443020.5	0.92499	-0.40459	0.00002	11.45048	27.18701	-0.00174	1.00961	29.49995	336.38	0.00
76/ 9/ 3	2443024.5	0.94930	-0.34090	0.00001	9.58078	27.93067	-0.00177	1.00865	29.52818	340.25	0.00
76/ 9/ 7	2443028.5	0.96922	-0.27564	0.00001	7.66140	28.54748	-0.00180	1.00765	29.55766	344.12	0.00
76/ 9/11	2443032.5	0.98466	-0.20910	0.00001	5.70071	29.03390	-0.00182	1.00662	29.58827	348.01	0.00
76/ 9/15	2443036.5	0.99554	-0.14160	0.00000	3.70739	29.38692	-0.00182	1.00555	29.61985	351.91	0.00
76/ 9/19	2443040.5	1.00177	-0.07343	-0.00000	1.69036	29.60406	-0.00182	1.00446	29.65228	355.81	-0.00
76/ 9/23	2443044.5	1.00333	-0.00492	-0.00001	-0.34125	29.68344	-0.00182	1.00335	29.68540	359.72	-0.00
76/ 9/27	2443048.5	1.00019	0.06361	-0.00001	-2.37809	29.62377	-0.00180	1.00221	29.71907	3.64	-0.00
76/10/ 1	2443052.5	0.99235	0.13184	-0.00001	-4.41067	29.42438	-0.00177	1.00107	29.75312	7.57	-0.00
76/10/ 5	2443056.5	0.97982	0.19945	-0.00002	-6.42941	29.08526	-0.00174	0.99992	29.78741	11.51	-0.00
76/10/ 9	2443060.5	0.96266	0.26612	-0.00002	-8.42463	28.60704	-0.00170	0.99877	29.82175	15.45	-0.00
76/10/13	2443064.5	0.94093	0.33152	-0.00003	-10.38666	27.99104	-0.00165	0.99762	29.85600	19.41	-0.00
76/10/17	2443068.5	0.91470	0.39534	-0.00003	-12.30584	27.23927	-0.00159	0.99648	29.88999	23.37	-0.00
76/10/21	2443072.5	0.88411	0.45727	-0.00003	-14.17259	26.35444	-0.00152	0.99536	29.92355	27.35	-0.00
76/10/25	2443076.5	0.84927	0.51701	-0.00004	-15.97747	25.33996	-0.00145	0.99426	29.95652	31.33	-0.00
76/10/29	2443080.5	0.81034	0.57426	-0.00004	-17.71122	24.19993	-0.00137	0.99319	29.98873	35.32	-0.00
76/11/ 2	2443084.5	0.76750	0.62873	-0.00004	-19.36481	22.93918	-0.00128	0.99215	30.02002	39.32	-0.00
76/11/ 6	2443088.5	0.72094	0.68016	-0.00005	-20.92955	21.56318	-0.00119	0.99114	30.05023	43.33	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
76/11/10	2443092.5	0.67087	0.72828	-0.00005	-22.39707	20.07811	-0.00109	0.99018	30.07921	47.35	-0.00
76/11/14	2443096.5	0.61754	0.77284	-0.00005	-23.75944	18.49079	-0.00098	0.98926	30.10681	51.37	-0.00
76/11/18	2443100.5	0.56118	0.81364	-0.00005	-25.00919	16.80867	-0.00087	0.98840	30.13289	55.41	-0.00
76/11/22	2443104.5	0.50208	0.85044	-0.00006	-26.13939	15.03978	-0.00075	0.98759	30.15730	59.44	-0.00
76/11/26	2443108.5	0.44051	0.88307	-0.00006	-27.14369	13.19272	-0.00063	0.98684	30.17992	63.49	-0.00
76/11/30	2443112.5	0.37677	0.91134	-0.00006	-28.01637	11.27658	-0.00051	0.98615	30.20063	67.54	-0.00
76/12/ 4	2443116.5	0.31117	0.93512	-0.00006	-28.75240	9.30094	-0.00038	0.98553	30.21933	71.59	-0.00
76/12/ 8	2443120.5	0.24403	0.95428	-0.00006	-29.34746	7.27576	-0.00026	0.98498	30.23590	75.66	-0.00
76/12/12	2443124.5	0.17568	0.96871	-0.00006	-29.79800	5.21135	-0.00013	0.98451	30.25027	79.72	-0.00
76/12/16	2443128.5	0.10646	0.97833	-0.00006	-30.10127	3.11833	0.00001	0.98411	30.26236	83.79	-0.00
76/12/20	2443132.5	0.03672	0.98310	-0.00006	-30.25533	1.00751	0.00014	0.98379	30.27210	87.86	-0.00
76/12/24	2443136.5	-0.03321	0.98298	-0.00006	-30.25908	-1.11015	0.00027	0.98354	30.27943	91.94	-0.00
76/12/28	2443140.5	-0.10297	0.97798	-0.00006	-30.11227	-3.22360	0.00040	0.98338	30.28433	96.01	-0.00
77/ 1/ 1	2443144.5	-0.17222	0.96810	-0.00006	-29.81554	-5.32179	0.00052	0.98330	30.28676	100.09	-0.00
77/ 1/ 5	2443148.5	-0.24062	0.95341	-0.00006	-29.37035	-7.39375	0.00065	0.98330	30.28671	104.16	-0.00
77/ 1/ 9	2443152.5	-0.30781	0.93397	-0.00006	-28.77903	-9.42864	0.00077	0.98338	30.28419	108.24	-0.00
77/ 1/13	2443156.5	-0.37348	0.90988	-0.00005	-28.04475	-11.41586	0.00088	0.98355	30.27920	112.32	-0.00
77/ 1/17	2443160.5	-0.43728	0.88127	-0.00005	-27.17147	-13.34509	0.00100	0.98379	30.27177	116.39	-0.00
77/ 1/21	2443164.5	-0.49892	0.84827	-0.00005	-26.16396	-15.20635	0.00110	0.98412	30.26196	120.46	-0.00
77/ 1/25	2443168.5	-0.55807	0.81107	-0.00005	-25.02773	-16.99009	0.00121	0.98452	30.24980	124.53	-0.00
77/ 1/29	2443172.5	-0.61446	0.76984	-0.00004	-23.76898	-18.68725	0.00130	0.98499	30.23537	128.60	-0.00
77/ 2/ 2	2443176.5	-0.66780	0.72480	-0.00004	-22.39457	-20.28930	0.00139	0.98554	30.21875	132.66	-0.00
77/ 2/ 6	2443180.5	-0.71785	0.67618	-0.00004	-20.91200	-21.78829	0.00148	0.98616	30.20002	136.71	-0.00
77/ 2/10	2443184.5	-0.76435	0.62422	-0.00003	-19.32927	-23.17690	0.00155	0.98685	30.17929	140.76	-0.00
77/ 2/14	2443188.5	-0.80708	0.56918	-0.00003	-17.65492	-24.44848	0.00162	0.98760	30.15666	144.81	-0.00
77/ 2/18	2443192.5	-0.84585	0.51135	-0.00003	-15.89788	-25.59709	0.00168	0.98841	30.13226	148.85	-0.00
77/ 2/22	2443196.5	-0.88048	0.45101	-0.00002	-14.06748	-26.61748	0.00173	0.98927	30.10622	152.88	-0.00
77/ 2/26	2443200.5	-0.91080	0.38847	-0.00002	-12.17334	-27.50520	0.00178	0.99019	30.07867	156.90	-0.00
77/ 3/ 2	2443204.5	-0.93668	0.32403	-0.00001	-10.22531	-28.25651	0.00181	0.99115	30.04974	160.92	-0.00
77/ 3/ 6	2443208.5	-0.95801	0.25802	-0.00001	-8.23344	-28.86844	0.00184	0.99215	30.01960	164.93	-0.00
77/ 3/10	2443212.5	-0.97470	0.19076	-0.00001	-6.20787	-29.33882	0.00186	0.99319	29.98840	168.93	-0.00
77/ 3/14	2443216.5	-0.98668	0.12258	-0.00000	-4.15880	-29.66620	0.00187	0.99426	29.95628	172.92	-0.00
77/ 3/18	2443220.5	-0.99390	0.05380	0.00000	-2.09642	-29.84989	0.00187	0.99536	29.92342	176.90	0.00
77/ 3/22	2443224.5	-0.99636	-0.01523	0.00001	-0.03087	-29.88996	0.00187	0.99648	29.88998	180.88	0.00
77/ 3/26	2443228.5	-0.99405	-0.08419	0.00001	2.02785	-29.78717	0.00186	0.99761	29.85612	184.84	0.00
77/ 3/30	2443232.5	-0.98700	-0.15275	0.00002	4.06989	-29.54299	0.00183	0.99875	29.82201	188.80	0.00
77/ 4/ 3	2443236.5	-0.97527	-0.22058	0.00002	6.08562	-29.15954	0.00180	0.99990	29.78781	192.74	0.00
77/ 4/ 7	2443240.5	-0.95891	-0.28737	0.00002	8.06567	-28.63960	0.00177	1.00105	29.75369	196.68	0.00
77/ 4/11	2443244.5	-0.93804	-0.35280	0.00003	10.00097	-27.98655	0.00172	1.00219	29.71980	200.61	0.00
77/ 4/15	2443248.5	-0.91275	-0.41658	0.00003	11.88276	-27.20436	0.00166	1.00332	29.68631	204.53	0.00
77/ 4/19	2443252.5	-0.88318	-0.47840	0.00004	13.70266	-26.29751	0.00160	1.00443	29.65336	208.44	0.00
77/ 4/23	2443256.5	-0.84949	-0.53799	0.00004	15.45270	-25.27101	0.00153	1.00552	29.62110	212.35	0.00
77/ 4/27	2443260.5	-0.81184	-0.59507	0.00004	17.12530	-24.13035	0.00145	1.00658	29.58968	216.24	0.00
77/ 5/ 1	2443264.5	-0.77043	-0.64940	0.00005	18.71334	-22.88143	0.00136	1.00761	29.55924	220.13	0.00
77/ 5/ 5	2443268.5	-0.72545	-0.70072	0.00005	20.21014	-21.53056	0.00126	1.00861	29.52990	224.01	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							
77/ 5/ 9	2443272.5	-0.67713	-0.74880	0.00005	21.60953	-20.08443	0.00116	1.00956	29.50180	227.88	0.00
77/ 5/13	2443276.5	-0.62569	-0.79345	0.00005	22.90579	-18.55003	0.00106	1.01047	29.47505	231.74	0.00
77/ 5/17	2443280.5	-0.57138	-0.83445	0.00006	24.09370	-16.93466	0.00095	1.01132	29.44977	235.60	0.00
77/ 5/21	2443284.5	-0.51445	-0.87163	0.00006	25.16857	-15.24588	0.00083	1.01213	29.42607	239.45	0.00
77/ 5/25	2443288.5	-0.45518	-0.90484	0.00006	26.12621	-13.49146	0.00071	1.01288	29.40406	243.30	0.00
77/ 5/29	2443292.5	-0.39383	-0.93392	0.00006	26.96293	-11.67940	0.00059	1.01357	29.38381	247.13	0.00
77/ 6/ 2	2443296.5	-0.33070	-0.95876	0.00006	27.67559	-9.81782	0.00047	1.01419	29.36542	250.97	0.00
77/ 6/ 6	2443300.5	-0.26606	-0.97925	0.00006	28.26153	-7.91499	0.00034	1.01475	29.34896	254.80	0.00
77/ 6/10	2443304.5	-0.20022	-0.99531	0.00007	28.71864	-5.97931	0.00022	1.01525	29.33450	258.63	0.00
77/ 6/14	2443308.5	-0.13347	-1.00686	0.00007	29.04533	-4.01921	0.00009	1.01567	29.32210	262.45	0.00
77/ 6/18	2443312.5	-0.06612	-1.01387	0.00007	29.24051	-2.04321	-0.00004	1.01602	29.31181	266.27	0.00
77/ 6/22	2443316.5	0.00153	-1.01630	0.00007	29.30361	-0.05982	-0.00017	1.01630	29.30367	270.09	0.00
77/ 6/26	2443320.5	0.06917	-1.01414	0.00006	29.23459	1.92244	-0.00029	1.01650	29.29773	273.90	0.00
77/ 6/30	2443324.5	0.13650	-1.00742	0.00006	29.03388	3.89506	-0.00042	1.01663	29.29399	277.72	0.00
77/ 7/ 4	2443328.5	0.20322	-0.99616	0.00006	28.70247	5.84963	-0.00054	1.01668	29.29248	281.53	0.00
77/ 7/ 8	2443332.5	0.26902	-0.98041	0.00006	28.24179	7.77778	-0.00067	1.01665	29.29321	285.34	0.00
77/ 7/12	2443336.5	0.33361	-0.96025	0.00006	27.65380	9.67125	-0.00078	1.01655	29.29617	289.16	0.00
77/ 7/16	2443340.5	0.39669	-0.93576	0.00006	26.94094	11.52191	-0.00090	1.01637	29.30134	292.97	0.00
77/ 7/20	2443344.5	0.45799	-0.90706	0.00006	26.10615	13.32179	-0.00101	1.01612	29.30872	296.79	0.00
77/ 7/24	2443348.5	0.51722	-0.87426	0.00005	25.15281	15.06309	-0.00112	1.01580	29.31826	300.61	0.00
77/ 7/28	2443352.5	0.57412	-0.83751	0.00005	24.08481	16.73818	-0.00122	1.01540	29.32993	304.43	0.00
77/ 8/ 1	2443356.5	0.62842	-0.79698	0.00005	22.90648	18.33971	-0.00131	1.01493	29.34369	308.26	0.00
77/ 8/ 5	2443360.5	0.67987	-0.75284	0.00004	21.62262	19.86053	-0.00140	1.01439	29.35947	312.08	0.00
77/ 8/ 9	2443364.5	0.72824	-0.70528	0.00004	20.23845	21.29379	-0.00149	1.01378	29.37721	315.92	0.00
77/ 8/13	2443368.5	0.77331	-0.65452	0.00004	18.75965	22.63294	-0.00156	1.01312	29.39684	319.76	0.00
77/ 8/17	2443372.5	0.81485	-0.60079	0.00003	17.19231	23.87173	-0.00163	1.01239	29.41828	323.60	0.00
77/ 8/21	2443376.5	0.85268	-0.54431	0.00003	15.54294	25.00430	-0.00170	1.01160	29.44144	327.45	0.00
77/ 8/25	2443380.5	0.88661	-0.48534	0.00003	13.81843	26.02515	-0.00175	1.01076	29.46621	331.30	0.00
77/ 8/29	2443384.5	0.91647	-0.42415	0.00002	12.02606	26.92919	-0.00180	1.00986	29.49250	335.16	0.00
77/ 9/ 2	2443388.5	0.94212	-0.36102	0.00002	10.17347	27.71177	-0.00184	1.00893	29.52019	339.03	0.00
77/ 9/ 6	2443392.5	0.96344	-0.29621	0.00001	8.26863	28.36870	-0.00187	1.00794	29.54916	342.91	0.00
77/ 9/10	2443396.5	0.98029	-0.23004	0.00001	6.31983	28.89627	-0.00189	1.00692	29.57929	346.79	0.00
77/ 9/14	2443400.5	0.99261	-0.16280	0.00000	4.33568	29.29130	-0.00191	1.00587	29.61045	350.69	0.00
77/ 9/18	2443404.5	1.00031	-0.09481	0.00000	2.32500	29.55116	-0.00191	1.00479	29.64248	354.59	0.00
77/ 9/22	2443408.5	1.00334	-0.02637	-0.00000	0.29688	29.67377	-0.00191	1.00368	29.67526	358.49	-0.00
77/ 9/26	2443412.5	1.00167	0.04219	-0.00001	-1.73939	29.65766	-0.00190	1.00256	29.70863	2.41	-0.00
77/ 9/30	2443416.5	0.99530	0.11055	-0.00001	-3.77438	29.50197	-0.00188	1.00142	29.74243	6.34	-0.00
77/10/ 4	2443420.5	0.98424	0.17839	-0.00002	-5.79851	29.20649	-0.00185	1.00028	29.77653	10.27	-0.00
77/10/ 8	2443424.5	0.96853	0.24538	-0.00002	-7.80215	28.77163	-0.00181	0.99913	29.81074	14.22	-0.00
77/10/12	2443428.5	0.94822	0.31122	-0.00003	-9.77561	28.19852	-0.00176	0.99798	29.84492	18.17	-0.00
77/10/16	2443432.5	0.92339	0.37557	-0.00003	-11.70923	27.48895	-0.00171	0.99684	29.87889	22.13	-0.00
77/10/20	2443436.5	0.89415	0.43812	-0.00003	-13.59339	26.64540	-0.00164	0.99572	29.91250	26.10	-0.00
77/10/24	2443440.5	0.86063	0.49858	-0.00004	-15.41862	25.67107	-0.00157	0.99462	29.94557	30.08	-0.00
77/10/28	2443444.5	0.82297	0.55663	-0.00004	-17.17558	24.56985	-0.00149	0.99354	29.97796	34.07	-0.00
77/11/ 1	2443448.5	0.78133	0.61200	-0.00004	-18.85518	23.34633	-0.00140	0.99249	30.00948	38.07	-0.00

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM				EARTH-MOON B		
77/11/ 5	2443452.5	0.73591	0.66441	-0.00005	-20.44861	22.00580	-0.00131	0.99147	30.03999	42.08	-0.00
77/11/ 9	2443456.5	0.68692	0.71359	-0.00005	-21.94741	20.55421	-0.00120	0.99050	30.06932	46.09	-0.00
77/11/13	2443460.5	0.63459	0.75930	-0.00005	-23.34349	18.99819	-0.00110	0.98956	30.09734	50.11	-0.00
77/11/17	2443464.5	0.57915	0.80130	-0.00005	-24.62925	17.34498	-0.00098	0.98868	30.12388	54.14	-0.00
77/11/21	2443468.5	0.52088	0.83937	-0.00006	-25.79758	15.60245	-0.00086	0.98786	30.14882	58.18	-0.00
77/11/25	2443472.5	0.46006	0.87332	-0.00006	-26.84194	13.77901	-0.00074	0.98709	30.17202	62.22	-0.00
77/11/29	2443476.5	0.39696	0.90298	-0.00006	-27.75642	11.88360	-0.00061	0.98638	30.19336	66.27	-0.00
77/12/ 3	2443480.5	0.33192	0.92818	-0.00006	-28.53576	9.92566	-0.00048	0.98574	30.21272	70.32	-0.00
77/12/ 7	2443484.5	0.26523	0.94880	-0.00006	-29.17542	7.91501	-0.00035	0.98517	30.23000	74.38	-0.00
77/12/11	2443488.5	0.19723	0.96472	-0.00006	-29.67161	5.86189	-0.00022	0.98467	30.24510	78.45	-0.00
77/12/15	2443492.5	0.12825	0.97586	-0.00006	-30.02131	3.77680	-0.00008	0.98425	30.25795	82.51	-0.00
77/12/19	2443496.5	0.05863	0.98215	-0.00006	-30.22234	1.67051	0.00006	0.98390	30.26847	86.58	-0.00
77/12/23	2443500.5	-0.01128	0.98357	-0.00006	-30.27332	-0.44607	0.00019	0.98363	30.27661	90.66	-0.00
77/12/27	2443504.5	-0.08113	0.98009	-0.00006	-30.17375	-2.56191	0.00033	0.98344	30.28231	94.73	-0.00
77/12/31	2443508.5	-0.15057	0.97174	-0.00006	-29.92397	-4.66594	0.00046	0.98334	30.28555	98.81	-0.00
78/ 1/ 4	2443512.5	-0.21927	0.95855	-0.00006	-29.52519	-6.74718	0.00060	0.98331	30.28632	102.88	-0.00
78/ 1/ 8	2443516.5	-0.28688	0.94059	-0.00006	-28.97947	-8.79474	0.00073	0.98337	30.28460	106.96	-0.00
78/ 1/12	2443520.5	-0.35306	0.91795	-0.00006	-28.28972	-10.79794	0.00085	0.98350	30.28042	111.04	-0.00
78/ 1/16	2443524.5	-0.41748	0.89074	-0.00006	-27.45965	-12.74635	0.00097	0.98372	30.27378	115.11	-0.00
78/ 1/20	2443528.5	-0.47982	0.85911	-0.00005	-26.49378	-14.62988	0.00109	0.98402	30.26473	119.18	-0.00
78/ 1/24	2443532.5	-0.53979	0.82321	-0.00005	-25.39739	-16.43886	0.00120	0.98440	30.25332	123.25	-0.00
78/ 1/28	2443536.5	-0.59707	0.78322	-0.00005	-24.17646	-18.16406	0.00131	0.98485	30.23962	127.32	-0.00
78/ 2/ 1	2443540.5	-0.65140	0.73935	-0.00004	-22.83767	-19.79678	0.00140	0.98538	30.22369	131.38	-0.00
78/ 2/ 5	2443544.5	-0.70251	0.69183	-0.00004	-21.38829	-21.32887	0.00150	0.98597	30.20563	135.44	-0.00
78/ 2/ 9	2443548.5	-0.75014	0.64089	-0.00004	-19.83619	-22.75283	0.00158	0.98664	30.18552	139.49	-0.00
78/ 2/13	2443552.5	-0.79408	0.58679	-0.00003	-18.18975	-24.06178	0.00166	0.98737	30.16349	143.54	-0.00
78/ 2/17	2443556.5	-0.83412	0.52981	-0.00003	-16.45777	-25.24956	0.00172	0.98816	30.13965	147.58	-0.00
78/ 2/21	2443560.5	-0.87007	0.47023	-0.00003	-14.64946	-26.31070	0.00178	0.98900	30.11411	151.61	-0.00
78/ 2/25	2443564.5	-0.90175	0.40835	-0.00002	-12.77437	-27.24050	0.00183	0.98990	30.08703	155.64	-0.00
78/ 3/ 1	2443568.5	-0.92904	0.34447	-0.00002	-10.84227	-28.03500	0.00188	0.99085	30.05854	159.66	-0.00
78/ 3/ 5	2443572.5	-0.95181	0.27892	-0.00001	-8.86315	-28.69098	0.00191	0.99184	30.02878	163.67	-0.00
78/ 3/ 9	2443576.5	-0.96997	0.21202	-0.00001	-6.84715	-29.20602	0.00193	0.99287	29.99791	167.67	-0.00
78/ 3/13	2443580.5	-0.98343	0.14409	-0.00000	-4.80443	-29.57844	0.00195	0.99393	29.96609	171.66	-0.00
78/ 3/17	2443584.5	-0.99215	0.07546	0.00000	-2.74521	-29.80733	0.00195	0.99502	29.93347	175.65	0.00
78/ 3/21	2443588.5	-0.99611	0.00648	0.00001	-0.67964	-29.89250	0.00194	0.99613	29.90022	179.63	0.00
78/ 3/25	2443592.5	-0.99529	-0.06254	0.00001	1.38222	-29.83450	0.00193	0.99726	29.86650	183.60	0.00
78/ 3/29	2443596.5	-0.98973	-0.13126	0.00001	3.43049	-29.63458	0.00190	0.99840	29.83247	187.55	0.00
78/ 4/ 2	2443600.5	-0.97946	-0.19935	0.00002	5.45545	-29.29465	0.00187	0.99954	29.79830	191.50	0.00
78/ 4/ 6	2443604.5	-0.96455	-0.26650	0.00002	7.44764	-28.81730	0.00183	1.00069	29.76415	195.45	0.00
78/ 4/10	2443608.5	-0.94508	-0.33240	0.00003	9.39789	-28.20572	0.00178	1.00183	29.73017	199.38	0.00
78/ 4/14	2443612.5	-0.92117	-0.39672	0.00003	11.29736	-27.46368	0.00172	1.00297	29.69654	203.30	0.00
78/ 4/18	2443616.5	-0.89293	-0.45919	0.00003	13.13754	-26.59552	0.00165	1.00408	29.66339	207.21	0.00
78/ 4/22	2443620.5	-0.86052	-0.51951	0.00004	14.91033	-25.60609	0.00158	1.00518	29.63090	211.12	0.00
78/ 4/26	2443624.5	-0.82410	-0.57741	0.00004	16.60803	-24.50073	0.00150	1.00625	29.59919	215.02	0.00
78/ 4/30	2443628.5	-0.78385	-0.63263	0.00005	18.22336	-23.28520	0.00141	1.00729	29.56842	218.91	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							
78/ 5/ 4	2443632.5	-0.73997	-0.68492	0.00005	19.74952	-21.96571	0.00131	1.00830	29.53872	222.79	0.00
78/ 5/ 8	2443636.5	-0.69267	-0.73404	0.00005	21.18016	-20.54881	0.00121	1.00926	29.51021	226.66	0.00
78/ 5/12	2443640.5	-0.64219	-0.77979	0.00005	22.50942	-19.04141	0.00111	1.01019	29.48303	230.53	0.00
78/ 5/16	2443644.5	-0.58875	-0.82196	0.00006	23.73194	-17.45072	0.00100	1.01106	29.45730	234.39	0.00
78/ 5/20	2443648.5	-0.53262	-0.86036	0.00006	24.84284	-15.78421	0.00088	1.01188	29.43311	238.24	0.00
78/ 5/24	2443652.5	-0.47406	-0.89483	0.00006	25.83777	-14.04960	0.00077	1.01265	29.41057	242.09	0.00
78/ 5/28	2443656.5	-0.41334	-0.92523	0.00006	26.71290	-12.25481	0.00064	1.01336	29.38978	245.93	0.00
78/ 6/ 1	2443660.5	-0.35073	-0.95141	0.00006	27.46489	-10.40793	0.00052	1.01400	29.37082	249.76	0.00
78/ 6/ 5	2443664.5	-0.28654	-0.97328	0.00006	28.09096	-8.51718	0.00039	1.01458	29.35378	253.60	0.00
78/ 6/ 9	2443668.5	-0.22104	-0.99074	0.00007	28.58881	-6.59093	0.00027	1.01510	29.33872	257.42	0.00
78/ 6/13	2443672.5	-0.15455	-1.00371	0.00007	28.95669	-4.63760	0.00014	1.01554	29.32571	261.25	0.00
78/ 6/17	2443676.5	-0.08735	-1.01215	0.00007	29.19335	-2.66568	0.00001	1.01591	29.31480	265.07	0.00
78/ 6/21	2443680.5	-0.01976	-1.01602	0.00007	29.29805	-0.68369	-0.00012	1.01621	29.30603	268.89	0.00
78/ 6/25	2443684.5	0.04791	-1.01531	0.00007	29.27059	1.29985	-0.00025	1.01644	29.29943	272.70	0.00
78/ 6/29	2443688.5	0.11538	-1.01002	0.00006	29.11125	3.27644	-0.00038	1.01659	29.29505	276.52	0.00
78/ 7/ 3	2443692.5	0.18232	-1.00018	0.00006	28.82083	5.23761	-0.00051	1.01666	29.29288	280.33	0.00
78/ 7/ 7	2443696.5	0.24844	-0.98584	0.00006	28.40064	7.17499	-0.00063	1.01666	29.29295	284.14	0.00
78/ 7/11	2443700.5	0.31344	-0.96706	0.00006	27.85247	9.08027	-0.00075	1.01658	29.29525	287.96	0.00
78/ 7/15	2443704.5	0.37703	-0.94392	0.00006	27.17861	10.94529	-0.00087	1.01643	29.29976	291.77	0.00
78/ 7/19	2443708.5	0.43892	-0.91652	0.00006	26.38183	12.76203	-0.00098	1.01620	29.30648	295.59	0.00
78/ 7/23	2443712.5	0.49883	-0.88500	0.00005	25.46538	14.52260	-0.00109	1.01590	29.31538	299.41	0.00
78/ 7/27	2443716.5	0.55649	-0.84947	0.00005	24.43299	16.21935	-0.00120	1.01552	29.32641	303.23	0.00
78/ 7/31	2443720.5	0.61163	-0.81011	0.00005	23.28886	17.84482	-0.00129	1.01507	29.33954	307.05	0.00
78/ 8/ 4	2443724.5	0.66401	-0.76708	0.00005	22.03763	19.39180	-0.00139	1.01456	29.35471	310.88	0.00
78/ 8/ 8	2443728.5	0.71338	-0.72058	0.00004	20.68440	20.85334	-0.00148	1.01397	29.37186	314.71	0.00
78/ 8/12	2443732.5	0.75950	-0.67081	0.00004	19.23470	22.22278	-0.00156	1.01332	29.39091	318.55	0.00
78/ 8/16	2443736.5	0.80218	-0.61798	0.00004	17.69450	23.49379	-0.00163	1.01261	29.41179	322.39	0.00
78/ 8/20	2443740.5	0.84119	-0.56234	0.00003	16.07018	24.66038	-0.00169	1.01185	29.43442	326.24	0.00
78/ 8/24	2443744.5	0.87637	-0.50412	0.00003	14.36850	25.71692	-0.00175	1.01102	29.45868	330.09	0.00
78/ 8/28	2443748.5	0.90753	-0.44360	0.00002	12.59663	26.65821	-0.00180	1.01014	29.48449	333.95	0.00
78/ 9/ 1	2443752.5	0.93452	-0.38105	0.00002	10.76210	27.47943	-0.00185	1.00922	29.51173	337.82	0.00
78/ 9/ 5	2443756.5	0.95721	-0.31673	0.00001	8.87279	28.17627	-0.00188	1.00825	29.54028	341.69	0.00
78/ 9/ 9	2443760.5	0.97548	-0.25096	0.00001	6.93688	28.74484	-0.00191	1.00725	29.57002	345.57	0.00
78/ 9/13	2443764.5	0.98923	-0.18402	0.00001	4.96288	29.18182	-0.00192	1.00620	29.60083	349.46	0.00
78/ 9/17	2443768.5	0.99839	-0.11623	0.00000	2.95956	29.48439	-0.00193	1.00513	29.63255	353.36	0.00
78/ 9/21	2443772.5	1.00289	-0.04790	-0.00000	0.93593	29.65029	-0.00193	1.00403	29.66506	357.27	-0.00
78/ 9/25	2443776.5	1.00270	0.02065	-0.00001	-1.09879	29.67787	-0.00192	1.00292	29.69821	1.18	-0.00
78/ 9/29	2443780.5	0.99781	0.08911	-0.00001	-3.13521	29.56607	-0.00191	1.00178	29.73183	5.10	-0.00
78/10/ 3	2443784.5	0.98822	0.15715	-0.00002	-5.16379	29.31446	-0.00188	1.00064	29.76579	9.04	-0.00
78/10/ 7	2443788.5	0.97397	0.22445	-0.00002	-7.17491	28.92327	-0.00185	0.99949	29.79992	12.98	-0.00
78/10/11	2443792.5	0.95509	0.29068	-0.00002	-9.15890	28.39341	-0.00180	0.99835	29.83406	16.93	-0.00
78/10/15	2443796.5	0.93168	0.35553	-0.00003	-11.10608	27.72644	-0.00175	0.99721	29.86805	20.89	-0.00
78/10/19	2443800.5	0.90382	0.41868	-0.00003	-13.00681	26.92464	-0.00169	0.99608	29.90172	24.86	-0.00
78/10/23	2443804.5	0.87163	0.47983	-0.00004	-14.85157	25.99097	-0.00163	0.99497	29.93492	28.83	-0.00
78/10/27	2443808.5	0.83525	0.53867	-0.00004	-16.63098	24.92912	-0.00155	0.99388	29.96749	32.82	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
78/10/31	2443812.5	0.79484	0.59492	-0.00004	-18.33587	23.74345	-0.00147	0.99282	29.99926	36.81	-0.00
78/11/ 4	2443816.5	0.75059	0.64828	-0.00005	-19.95733	22.43903	-0.00138	0.99180	30.03008	40.82	-0.00
78/11/ 8	2443820.5	0.70270	0.69851	-0.00005	-21.48679	21.02162	-0.00129	0.99081	30.05979	44.83	-0.00
78/11/12	2443824.5	0.65139	0.74533	-0.00005	-22.91604	19.49763	-0.00118	0.98986	30.08824	48.85	-0.00
78/11/16	2443828.5	0.59691	0.78851	-0.00006	-24.23731	17.87411	-0.00107	0.98897	30.11529	52.87	-0.00
78/11/20	2443832.5	0.53950	0.82784	-0.00006	-25.44333	16.15873	-0.00095	0.98812	30.14080	56.91	-0.00
78/11/24	2443836.5	0.47944	0.86311	-0.00006	-26.52739	14.35974	-0.00083	0.98733	30.16462	60.95	-0.00
78/11/28	2443840.5	0.41703	0.89413	-0.00006	-27.48336	12.48591	-0.00070	0.98660	30.18663	65.00	-0.00
78/12/ 2	2443844.5	0.35256	0.92075	-0.00006	-28.30576	10.54653	-0.00056	0.98594	30.20671	69.05	-0.00
78/12/ 6	2443848.5	0.28635	0.94282	-0.00006	-28.98984	8.55131	-0.00043	0.98534	30.22475	73.11	-0.00
78/12/10	2443852.5	0.21873	0.96022	-0.00007	-29.53155	6.51036	-0.00029	0.98482	30.24065	77.17	-0.00
78/12/14	2443856.5	0.15002	0.97287	-0.00007	-29.92763	4.43409	-0.00014	0.98437	30.25433	81.23	-0.00
78/12/18	2443860.5	0.08057	0.98069	-0.00007	-30.17563	2.33321	-0.00000	0.98400	30.26570	85.30	-0.00
78/12/22	2443864.5	0.01071	0.98364	-0.00007	-30.27392	0.21859	0.00014	0.98370	30.27471	89.38	-0.00
78/12/26	2443868.5	-0.05919	0.98170	-0.00007	-30.22172	-1.89877	0.00028	0.98348	30.28131	93.45	-0.00
78/12/30	2443872.5	-0.12881	0.97487	-0.00006	-30.01909	-4.00781	0.00042	0.98335	30.28545	97.53	-0.00
79/ 1/ 3	2443876.5	-0.19778	0.96320	-0.00006	-29.66698	-6.09751	0.00056	0.98329	30.28712	101.60	-0.00
79/ 1/ 7	2443880.5	-0.26576	0.94672	-0.00006	-29.16718	-8.15694	0.00070	0.98332	30.28630	105.68	-0.00
79/ 1/11	2443884.5	-0.33243	0.92554	-0.00006	-28.52232	-10.17534	0.00083	0.98343	30.28301	109.76	-0.00
79/ 1/15	2443888.5	-0.39744	0.89975	-0.00006	-27.73587	-12.14220	0.00096	0.98362	30.27725	113.83	-0.00
79/ 1/19	2443892.5	-0.46047	0.86949	-0.00006	-26.81210	-14.04731	0.00108	0.98389	30.26905	117.91	-0.00
79/ 1/23	2443896.5	-0.52122	0.83490	-0.00005	-25.75604	-15.88086	0.00120	0.98424	30.25847	121.98	-0.00
79/ 1/27	2443900.5	-0.57938	0.79617	-0.00005	-24.57347	-17.63346	0.00131	0.98467	30.24556	126.04	-0.00
79/ 1/31	2443904.5	-0.63466	0.75350	-0.00005	-23.27084	-19.29623	0.00141	0.98517	30.23039	130.11	-0.00
79/ 2/ 4	2443908.5	-0.68681	0.70709	-0.00004	-21.85526	-20.86086	0.00151	0.98574	30.21304	134.17	-0.00
79/ 2/ 8	2443912.5	-0.73556	0.65720	-0.00004	-20.33441	-22.31962	0.00160	0.98638	30.19361	138.22	-0.00
79/ 2/12	2443916.5	-0.78069	0.60406	-0.00004	-18.71652	-23.66544	0.00168	0.98709	30.17219	142.27	-0.00
79/ 2/16	2443920.5	-0.82197	0.54794	-0.00003	-17.01026	-24.89192	0.00176	0.98786	30.14891	146.31	-0.00
79/ 2/20	2443924.5	-0.85922	0.48914	-0.00003	-15.22474	-25.99338	0.00182	0.98869	30.12389	150.35	-0.00
79/ 2/24	2443928.5	-0.89226	0.42795	-0.00002	-13.36940	-26.96486	0.00188	0.98958	30.09725	154.38	-0.00
79/ 2/28	2443932.5	-0.92094	0.36466	-0.00002	-11.45396	-27.80217	0.00192	0.99051	30.06915	158.40	-0.00
79/ 3/ 4	2443936.5	-0.94514	0.29960	-0.00001	-9.48835	-28.50186	0.00196	0.99149	30.03972	162.41	-0.00
79/ 3/ 8	2443940.5	-0.96475	0.23308	-0.00001	-7.48266	-29.06127	0.00199	0.99251	30.00912	166.42	-0.00
79/ 3/12	2443944.5	-0.97969	0.16543	-0.00001	-5.44708	-29.47847	0.00200	0.99356	29.97750	170.42	-0.00
79/ 3/16	2443948.5	-0.98990	0.09699	-0.00000	-3.39180	-29.75231	0.00201	0.99464	29.94503	174.40	-0.00
79/ 3/20	2443952.5	-0.99536	0.02808	0.00000	-1.32701	-29.88240	0.00201	0.99575	29.91185	178.38	0.00
79/ 3/24	2443956.5	-0.99604	-0.04097	0.00001	0.73720	-29.86905	0.00199	0.99688	29.87815	182.36	0.00
79/ 3/28	2443960.5	-0.99196	-0.10982	0.00001	2.79086	-29.71330	0.00197	0.99802	29.84408	186.32	0.00
79/ 4/ 1	2443964.5	-0.98316	-0.17815	0.00002	4.82422	-29.41686	0.00194	0.99917	29.80980	190.27	0.00
79/ 4/ 5	2443968.5	-0.96969	-0.24563	0.00002	6.82772	-28.98211	0.00190	1.00032	29.77550	194.21	0.00
79/ 4/ 9	2443972.5	-0.95164	-0.31195	0.00003	8.79210	-28.41205	0.00185	1.00146	29.74131	198.15	0.00
79/ 4/13	2443976.5	-0.92911	-0.37680	0.00003	10.70841	-27.71030	0.00180	1.00260	29.70742	202.08	0.00
79/ 4/17	2443980.5	-0.90221	-0.43988	0.00003	12.56803	-26.88102	0.00173	1.00373	29.67397	205.99	0.00
79/ 4/21	2443984.5	-0.87109	-0.50091	0.00004	14.36274	-25.92890	0.00166	1.00484	29.64112	209.90	0.00
79/ 4/25	2443988.5	-0.83590	-0.55959	0.00004	16.08469	-24.85913	0.00158	1.00592	29.60901	213.80	0.00

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		HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM								EARTH-MOON B	
79/ 4/29	2443992.5	-0.79683	-0.61568	0.00005	17.72650	-23.67736	0.00149	1.00698	29.57780	217.69	0.00
79/ 5/ 3	2443996.5	-0.75407	-0.66891	0.00005	19.28121	-22.38965	0.00140	1.00800	29.54761	221.58	0.00
79/ 5/ 7	2444000.5	-0.70782	-0.71905	0.00005	20.74231	-21.00247	0.00130	1.00898	29.51859	225.45	0.00
79/ 5/11	2444004.5	-0.65831	-0.76588	0.00005	22.10382	-19.52261	0.00119	1.00992	29.49086	229.32	0.00
79/ 5/15	2444008.5	-0.60577	-0.80918	0.00006	23.36019	-17.95719	0.00108	1.01081	29.46454	233.18	0.00
79/ 5/19	2444012.5	-0.55046	-0.84878	0.00006	24.50642	-16.31361	0.00096	1.01165	29.43975	237.04	0.00
79/ 5/23	2444016.5	-0.49263	-0.88450	0.00006	25.53800	-14.59951	0.00084	1.01244	29.41658	240.88	0.00
79/ 5/27	2444020.5	-0.43256	-0.91619	0.00006	26.45092	-12.82275	0.00072	1.01317	29.39514	244.73	0.00
79/ 5/31	2444024.5	-0.37051	-0.94371	0.00007	27.24171	-10.99137	0.00059	1.01384	29.37551	248.56	0.00
79/ 6/ 4	2444028.5	-0.30679	-0.96694	0.00007	27.90740	-9.11356	0.00046	1.01444	29.35779	252.40	0.00
79/ 6/ 8	2444032.5	-0.24167	-0.98579	0.00007	28.44555	-7.19763	0.00033	1.01498	29.34204	256.23	0.00
79/ 6/12	2444036.5	-0.17546	-1.00017	0.00007	28.85424	-5.25198	0.00020	1.01545	29.32832	260.05	0.00
79/ 6/16	2444040.5	-0.10845	-1.01004	0.00007	29.13205	-3.28509	0.00006	1.01584	29.31669	263.87	0.00
79/ 6/20	2444044.5	-0.04096	-1.01534	0.00007	29.27811	-1.30547	-0.00007	1.01617	29.30720	267.69	0.00
79/ 6/24	2444048.5	0.02672	-1.01606	0.00007	29.29204	0.67835	-0.00020	1.01642	29.29989	271.51	0.00
79/ 6/28	2444052.5	0.09428	-1.01221	0.00007	29.17396	2.65788	-0.00034	1.01659	29.29479	275.32	0.00
79/ 7/ 2	2444056.5	0.16141	-1.00379	0.00007	28.92453	4.62464	-0.00047	1.01669	29.29191	279.14	0.00
79/ 7/ 6	2444060.5	0.22782	-0.99086	0.00007	28.54489	6.57022	-0.00059	1.01671	29.29127	282.95	0.00
79/ 7/10	2444064.5	0.29320	-0.97346	0.00006	28.03667	8.48631	-0.00072	1.01666	29.29287	286.76	0.00
79/ 7/14	2444068.5	0.35726	-0.95168	0.00006	27.40201	10.36468	-0.00084	1.01653	29.29670	290.58	0.00
79/ 7/18	2444072.5	0.41971	-0.92561	0.00006	26.64353	12.19727	-0.00096	1.01632	29.30275	294.39	0.00
79/ 7/22	2444076.5	0.48027	-0.89536	0.00006	25.76434	13.97617	-0.00108	1.01604	29.31100	298.21	0.00
79/ 7/26	2444080.5	0.53866	-0.86108	0.00005	24.76801	15.69363	-0.00119	1.01568	29.32140	302.03	0.00
79/ 7/30	2444084.5	0.59462	-0.82291	0.00005	23.65858	17.34215	-0.00129	1.01526	29.33392	305.85	0.00
79/ 8/ 3	2444088.5	0.64789	-0.78101	0.00005	22.44056	18.91443	-0.00139	1.01476	29.34850	309.68	0.00
79/ 8/ 7	2444092.5	0.69823	-0.73558	0.00005	21.11891	20.40344	-0.00149	1.01420	29.36509	313.51	0.00
79/ 8/11	2444096.5	0.74539	-0.68681	0.00004	19.69902	21.80242	-0.00157	1.01357	29.38361	317.34	0.00
79/ 8/15	2444100.5	0.78917	-0.63492	0.00004	18.18671	23.10495	-0.00165	1.01287	29.40400	321.18	0.00
79/ 8/19	2444104.5	0.82935	-0.58014	0.00003	16.58823	24.30492	-0.00173	1.01212	29.42615	325.03	0.00
79/ 8/23	2444108.5	0.86575	-0.52270	0.00003	14.91024	25.39658	-0.00179	1.01131	29.44998	328.88	0.00
79/ 8/27	2444112.5	0.89819	-0.46288	0.00003	13.15976	26.37460	-0.00185	1.01045	29.47540	332.74	0.00
79/ 8/31	2444116.5	0.92651	-0.40094	0.00002	11.34422	27.23404	-0.00190	1.00954	29.50228	336.60	0.00
79/ 9/ 4	2444120.5	0.95056	-0.33715	0.00002	9.47138	27.97042	-0.00194	1.00858	29.53052	340.47	0.00
79/ 9/ 8	2444124.5	0.97023	-0.27180	0.00001	7.54934	28.57972	-0.00197	1.00758	29.55999	344.35	0.00
79/ 9/12	2444128.5	0.98541	-0.20520	0.00001	5.58648	29.05843	-0.00199	1.00655	29.59056	348.24	0.00
79/ 9/16	2444132.5	0.99602	-0.13764	0.00000	3.59151	29.40357	-0.00201	1.00548	29.62210	352.13	0.00
79/ 9/20	2444136.5	1.00198	-0.06945	-0.00000	1.57337	29.61270	-0.00201	1.00439	29.65447	356.04	-0.00
79/ 9/24	2444140.5	1.00327	-0.00093	-0.00001	-0.45881	29.68397	-0.00200	1.00327	29.68752	359.95	-0.00
79/ 9/28	2444144.5	0.99986	0.06760	-0.00001	-2.49566	29.61613	-0.00199	1.00214	29.72110	3.87	-0.00
79/10/ 2	2444148.5	0.99175	0.13580	-0.00001	-4.52769	29.40856	-0.00196	1.00100	29.75505	7.80	-0.00
79/10/ 6	2444152.5	0.97895	0.20337	-0.00002	-6.54531	29.06126	-0.00193	0.99985	29.78923	11.74	-0.00
79/10/10	2444156.5	0.96152	0.26997	-0.00002	-8.53885	28.57493	-0.00189	0.99870	29.82346	15.68	-0.00
79/10/14	2444160.5	0.93953	0.33529	-0.00003	-10.49862	27.95093	-0.00183	0.99756	29.85759	19.64	-0.00
79/10/18	2444164.5	0.91305	0.39901	-0.00003	-12.41498	27.19130	-0.00177	0.99643	29.89145	23.61	-0.00
79/10/22	2444168.5	0.88221	0.46082	-0.00004	-14.27836	26.29880	-0.00170	0.99531	29.92488	27.58	-0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
79/10/26	2444172.5	0.84713	0.52042	-0.00004	-16.07931	25.27687	-0.00162	0.99421	29.95771	31.56	-0.00
79/10/30	2444176.5	0.80797	0.57751	-0.00004	-17.80861	24.12967	-0.00153	0.99314	29.98979	35.56	-0.00
79/11/ 3	2444180.5	0.76491	0.63181	-0.00005	-19.45724	22.86205	-0.00144	0.99210	30.02095	39.56	-0.00
79/11/ 7	2444184.5	0.71814	0.68305	-0.00005	-21.01653	21.47954	-0.00134	0.99110	30.05104	43.57	-0.00
79/11/11	2444188.5	0.66788	0.73097	-0.00005	-22.47813	19.98835	-0.00123	0.99014	30.07990	47.58	-0.00
79/11/15	2444192.5	0.61436	0.77533	-0.00006	-23.83415	18.39533	-0.00111	0.98923	30.10739	51.61	-0.00
79/11/19	2444196.5	0.55784	0.81589	-0.00006	-25.07714	16.70797	-0.00099	0.98837	30.13336	55.64	-0.00
79/11/23	2444200.5	0.49859	0.85246	-0.00006	-26.20022	14.93434	-0.00086	0.98756	30.15768	59.68	-0.00
79/11/27	2444204.5	0.43689	0.88483	-0.00006	-27.19706	13.08304	-0.00073	0.98681	30.18022	63.72	-0.00
79/12/ 1	2444208.5	0.37303	0.91285	-0.00006	-28.06198	11.16322	-0.00060	0.98613	30.20086	67.77	-0.00
79/12/ 5	2444212.5	0.30734	0.93636	-0.00007	-28.78999	9.18446	-0.00046	0.98551	30.21950	71.83	-0.00
79/12/ 9	2444216.5	0.24012	0.95525	-0.00007	-29.37683	7.15675	-0.00032	0.98497	30.23602	75.89	-0.00
79/12/13	2444220.5	0.17172	0.96940	-0.00007	-29.81898	5.09041	-0.00018	0.98449	30.25035	79.96	-0.00
79/12/17	2444224.5	0.10246	0.97875	-0.00007	-30.11373	2.99608	-0.00003	0.98410	30.26241	84.02	-0.00
79/12/21	2444228.5	0.03269	0.98323	-0.00007	-30.25919	0.88456	0.00011	0.98377	30.27212	88.10	-0.00
79/12/25	2444232.5	-0.03723	0.98283	-0.00007	-30.25432	-1.23316	0.00026	0.98353	30.27944	92.17	-0.00
79/12/29	2444236.5	-0.10697	0.97754	-0.00007	-30.09891	-3.34604	0.00040	0.98337	30.28433	96.25	-0.00
80/ 1/ 2	2444240.5	-0.17618	0.96738	-0.00006	-29.79364	-5.44303	0.00054	0.98329	30.28675	100.32	-0.00
80/ 1/ 6	2444244.5	-0.24452	0.95241	-0.00006	-29.34002	-7.51318	0.00068	0.98330	30.28670	104.40	-0.00
80/ 1/10	2444248.5	-0.31163	0.93270	-0.00006	-28.74042	-9.54566	0.00082	0.98338	30.28418	108.48	-0.00
80/ 1/14	2444252.5	-0.37720	0.90834	-0.00006	-27.99806	-11.52986	0.00095	0.98355	30.27919	112.55	-0.00
80/ 1/18	2444256.5	-0.44089	0.87947	-0.00006	-27.11696	-13.45550	0.00107	0.98379	30.27177	116.63	-0.00
80/ 1/22	2444260.5	-0.50239	0.84623	-0.00005	-26.10191	-15.31260	0.00119	0.98412	30.26194	120.70	-0.00
80/ 1/26	2444264.5	-0.56139	0.80878	-0.00005	-24.95845	-17.09166	0.00131	0.98452	30.24978	124.77	-0.00
80/ 1/30	2444268.5	-0.61761	0.76732	-0.00005	-23.69284	-18.78363	0.00142	0.98500	30.23534	128.83	-0.00
80/ 2/ 3	2444272.5	-0.67077	0.72207	-0.00004	-22.31198	-20.38001	0.00152	0.98555	30.21869	132.89	-0.00
80/ 2/ 7	2444276.5	-0.72061	0.67324	-0.00004	-20.82338	-21.87288	0.00161	0.98617	30.19993	136.95	-0.00
80/ 2/11	2444280.5	-0.76690	0.62109	-0.00004	-19.23510	-23.25495	0.00170	0.98686	30.17916	141.00	-0.00
80/ 2/15	2444284.5	-0.80942	0.56588	-0.00003	-17.55568	-24.51963	0.00178	0.98761	30.15649	145.04	-0.00
80/ 2/19	2444288.5	-0.84795	0.50790	-0.00003	-15.79410	-25.66099	0.00184	0.98843	30.13204	149.08	-0.00
80/ 2/23	2444292.5	-0.88234	0.44742	-0.00002	-13.95969	-26.67384	0.00190	0.98929	30.10593	153.11	-0.00
80/ 2/27	2444296.5	-0.91240	0.38476	-0.00002	-12.06209	-27.55376	0.00195	0.99021	30.07829	157.14	-0.00
80/ 3/ 2	2444300.5	-0.93803	0.32022	-0.00002	-10.11119	-28.29706	0.00199	0.99118	30.04929	161.15	-0.00
80/ 3/ 6	2444304.5	-0.95909	0.25412	-0.00001	-8.11703	-28.90082	0.00202	0.99218	30.01905	165.16	-0.00
80/ 3/10	2444308.5	-0.97550	0.18680	-0.00001	-6.08976	-29.36289	0.00204	0.99323	29.98774	169.16	-0.00
80/ 3/14	2444312.5	-0.98721	0.11857	-0.00000	-4.03960	-29.68188	0.00205	0.99430	29.95551	173.15	-0.00
80/ 3/18	2444316.5	-0.99416	0.04977	0.00000	-1.97674	-29.85716	0.00205	0.99540	29.92253	177.13	0.00
80/ 3/22	2444320.5	-0.99634	-0.01927	0.00001	0.08870	-29.88883	0.00204	0.99652	29.88896	181.11	0.00
80/ 3/26	2444324.5	-0.99375	-0.08822	0.00001	2.14671	-29.77768	0.00202	0.99766	29.85496	185.07	0.00
80/ 3/30	2444328.5	-0.98643	-0.15675	0.00002	4.18746	-29.52524	0.00199	0.99881	29.82071	189.03	0.00
80/ 4/ 3	2444332.5	-0.97443	-0.22453	0.00002	6.20131	-29.13367	0.00195	0.99996	29.78636	192.98	0.00
80/ 4/ 7	2444336.5	-0.95781	-0.29125	0.00003	8.17893	-28.60579	0.00190	1.00111	29.75208	196.91	0.00
80/ 4/11	2444340.5	-0.93667	-0.35660	0.00003	10.11125	-27.94501	0.00185	1.00226	29.71803	200.84	0.00
80/ 4/15	2444344.5	-0.91113	-0.42027	0.00003	11.98955	-27.15534	0.00178	1.00339	29.68437	204.76	0.00
80/ 4/19	2444348.5	-0.88132	-0.48197	0.00004	13.80548	-26.24130	0.00171	1.00450	29.65126	208.67	0.00

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80/ 4/23	2444352.5	-0.84740	-0.54142	0.00004	15.55108	-25.20793	0.00163	1.00560	29.61884	212.58	0.00
80/ 4/27	2444356.5	-0.80953	-0.59835	0.00005	17.21880	-24.06075	0.00154	1.00666	29.58727	216.47	0.00
80/ 5/ 1	2444360.5	-0.76791	-0.65251	0.00005	18.80156	-22.80569	0.00145	1.00769	29.55669	220.36	0.00
80/ 5/ 5	2444364.5	-0.72273	-0.70364	0.00005	20.29272	-21.44908	0.00135	1.00869	29.52723	224.23	0.00
80/ 5/ 9	2444368.5	-0.67423	-0.75154	0.00006	21.68610	-19.99763	0.00124	1.00965	29.49902	228.10	0.00
80/ 5/13	2444372.5	-0.62262	-0.79597	0.00006	22.97605	-18.45835	0.00113	1.01056	29.47219	231.97	0.00
80/ 5/17	2444376.5	-0.56815	-0.83676	0.00006	24.15739	-16.83857	0.00101	1.01141	29.44685	235.82	0.00
80/ 5/21	2444380.5	-0.51109	-0.87372	0.00006	25.22544	-15.14584	0.00089	1.01222	29.42311	239.67	0.00
80/ 5/25	2444384.5	-0.45169	-0.90669	0.00007	26.17605	-13.38795	0.00077	1.01297	29.40107	243.52	0.00
80/ 5/29	2444388.5	-0.39024	-0.93553	0.00007	27.00557	-11.57290	0.00064	1.01366	29.38083	247.36	0.00
80/ 6/ 2	2444392.5	-0.32701	-0.96012	0.00007	27.71089	-9.70882	0.00051	1.01428	29.36247	251.19	0.00
80/ 6/ 6	2444396.5	-0.26230	-0.98036	0.00007	28.28939	-7.80399	0.00037	1.01484	29.34607	255.02	0.00
80/ 6/10	2444400.5	-0.19640	-0.99615	0.00007	28.73898	-5.86679	0.00024	1.01533	29.33169	258.85	0.00
80/ 6/14	2444404.5	-0.12962	-1.00744	0.00007	29.05811	-3.90567	0.00010	1.01575	29.31941	262.67	0.00
80/ 6/18	2444408.5	-0.06225	-1.01419	0.00007	29.24572	-1.92914	-0.00004	1.01609	29.30927	266.49	0.00
80/ 6/22	2444412.5	0.00541	-1.01635	0.00007	29.30127	0.05429	-0.00018	1.01637	29.30132	270.30	0.00
80/ 6/26	2444416.5	0.07303	-1.01394	0.00007	29.22473	2.03610	-0.00032	1.01656	29.29557	274.12	0.00
80/ 6/30	2444420.5	0.14033	-1.00695	0.00007	29.01659	4.00780	-0.00045	1.01668	29.29206	277.93	0.00
80/ 7/ 4	2444424.5	0.20700	-0.99543	0.00007	28.67783	5.96097	-0.00059	1.01673	29.29080	281.75	0.00
80/ 7/ 8	2444428.5	0.27274	-0.97943	0.00007	28.20993	7.88725	-0.00072	1.01670	29.29179	285.56	0.00
80/ 7/12	2444432.5	0.33724	-0.95902	0.00006	27.61486	9.77841	-0.00085	1.01659	29.29501	289.37	0.00
80/ 7/16	2444436.5	0.40023	-0.93428	0.00006	26.89510	11.62631	-0.00098	1.01640	29.30047	293.19	0.00
80/ 7/20	2444440.5	0.46141	-0.90534	0.00006	26.05359	13.42301	-0.00110	1.01614	29.30813	297.01	0.00
80/ 7/24	2444444.5	0.52052	-0.87231	0.00006	25.09376	15.16070	-0.00121	1.01581	29.31797	300.82	0.00
80/ 7/28	2444448.5	0.57727	-0.83534	0.00005	24.01949	16.83178	-0.00132	1.01540	29.32993	304.65	0.00
80/ 8/ 1	2444452.5	0.63141	-0.79460	0.00005	22.83516	18.42891	-0.00143	1.01492	29.34398	308.47	0.00
80/ 8/ 5	2444456.5	0.68269	-0.75026	0.00005	21.54557	19.94495	-0.00152	1.01437	29.36006	312.30	0.00
80/ 8/ 9	2444460.5	0.73088	-0.70251	0.00004	20.15599	21.37307	-0.00161	1.01376	29.37808	316.13	0.00
80/ 8/13	2444464.5	0.77575	-0.65158	0.00004	18.67209	22.70672	-0.00170	1.01308	29.39800	319.97	0.00
80/ 8/17	2444468.5	0.81708	-0.59768	0.00004	17.10000	23.93970	-0.00177	1.01235	29.41971	323.82	0.00
80/ 8/21	2444472.5	0.85469	-0.54105	0.00003	15.44624	25.06614	-0.00184	1.01155	29.44312	327.66	0.00
80/ 8/25	2444476.5	0.88839	-0.48195	0.00003	13.71773	26.08056	-0.00190	1.01070	29.46815	331.52	0.00
80/ 8/29	2444480.5	0.91802	-0.42064	0.00002	11.92176	26.97791	-0.00195	1.00980	29.49468	335.38	0.00
80/ 9/ 2	2444484.5	0.94343	-0.35740	0.00002	10.06599	27.75355	-0.00199	1.00886	29.52259	339.25	0.00
80/ 9/ 6	2444488.5	0.96449	-0.29251	0.00001	8.15841	28.40330	-0.00203	1.00787	29.55177	343.13	0.00
80/ 9/10	2444492.5	0.98109	-0.22626	0.00001	6.20734	28.92350	-0.00205	1.00684	29.58209	347.01	0.00
80/ 9/14	2444496.5	0.99314	-0.15897	0.00000	4.22138	29.31098	-0.00206	1.00579	29.61341	350.91	0.00
80/ 9/18	2444500.5	1.00058	-0.09094	-0.00000	2.20940	29.56314	-0.00207	1.00470	29.64559	354.81	-0.00
80/ 9/22	2444504.5	1.00334	-0.02249	-0.00001	0.18048	29.67794	-0.00206	1.00359	29.67849	358.72	-0.00
80/ 9/26	2444508.5	1.00140	0.04608	-0.00001	-1.85608	29.65393	-0.00205	1.00246	29.71196	2.63	-0.00
80/ 9/30	2444512.5	0.99476	0.11442	-0.00001	-3.89081	29.49029	-0.00202	1.00132	29.74585	6.56	-0.00
80/10/ 4	2444516.5	0.98344	0.18222	-0.00002	-5.91416	29.18682	-0.00199	1.00017	29.77999	10.50	-0.00
80/10/ 8	2444520.5	0.96745	0.24916	-0.00002	-7.91647	28.74401	-0.00194	0.99903	29.81423	14.44	-0.00
80/10/12	2444524.5	0.94688	0.31492	-0.00003	-9.88804	28.16300	-0.00189	0.99788	29.84841	18.40	-0.00
80/10/16	2444528.5	0.92180	0.37918	-0.00003	-11.81922	27.44562	-0.00183	0.99674	29.88236	22.36	-0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
80/10/20	2444532.5	0.89231	0.44163	-0.00004	-13.70039	26.59440	-0.00175	0.99562	29.91593	26.33	-0.00
80/10/24	2444536.5	0.85854	0.50196	-0.00004	-15.52207	25.61258	-0.00167	0.99452	29.94893	30.31	-0.00
80/10/28	2444540.5	0.82065	0.55987	-0.00004	-17.27494	24.50408	-0.00159	0.99344	29.98122	34.30	-0.00
80/11/ 1	2444544.5	0.77879	0.61508	-0.00005	-18.94993	23.27356	-0.00149	0.99239	30.01263	38.30	-0.00
80/11/ 5	2444548.5	0.73316	0.66731	-0.00005	-20.53823	21.92632	-0.00139	0.99138	30.04301	42.31	-0.00
80/11/ 9	2444552.5	0.68397	0.71630	-0.00005	-22.03140	20.46837	-0.00128	0.99040	30.07219	46.32	-0.00
80/11/13	2444556.5	0.63145	0.76180	-0.00006	-23.42139	18.90638	-0.00116	0.98948	30.10004	50.35	-0.00
80/11/17	2444560.5	0.57584	0.80358	-0.00006	-24.70060	17.24762	-0.00104	0.98860	30.12641	54.38	-0.00
80/11/21	2444564.5	0.51741	0.84143	-0.00006	-25.86197	15.50001	-0.00091	0.98778	30.15115	58.41	-0.00
80/11/25	2444568.5	0.45644	0.87514	-0.00006	-26.89900	13.67198	-0.00077	0.98702	30.17415	62.45	-0.00
80/11/29	2444572.5	0.39323	0.90454	-0.00007	-27.80580	11.77252	-0.00064	0.98632	30.19528	66.50	-0.00
80/12/ 3	2444576.5	0.32807	0.92948	-0.00007	-28.57717	9.81108	-0.00050	0.98568	30.21443	70.56	-0.00
80/12/ 7	2444580.5	0.26130	0.94983	-0.00007	-29.20860	7.79754	-0.00035	0.98512	30.23150	74.62	-0.00
80/12/11	2444584.5	0.19323	0.96548	-0.00007	-29.69634	5.74211	-0.00021	0.98462	30.24640	78.68	-0.00
80/12/15	2444588.5	0.12420	0.97634	-0.00007	-30.03744	3.65535	-0.00006	0.98421	30.25904	82.75	-0.00
80/12/19	2444592.5	0.05456	0.98235	-0.00007	-30.22975	1.54801	0.00009	0.98386	30.26936	86.82	-0.00
80/12/23	2444596.5	-0.01535	0.98348	-0.00007	-30.27195	-0.56896	0.00024	0.98360	30.27730	90.89	-0.00
80/12/27	2444600.5	-0.08519	0.97972	-0.00007	-30.16359	-2.68453	0.00038	0.98342	30.28281	94.97	-0.00
80/12/31	2444604.5	-0.15460	0.97109	-0.00007	-29.90507	-4.78766	0.00053	0.98332	30.28588	99.05	-0.00
81/ 1/ 4	2444608.5	-0.22325	0.95762	-0.00007	-29.49764	-6.86735	0.00067	0.98330	30.28648	103.12	-0.00
81/ 1/ 8	2444612.5	-0.29078	0.93938	-0.00006	-28.94341	-8.91272	0.00081	0.98336	30.28461	107.20	-0.00
81/ 1/12	2444616.5	-0.35686	0.91647	-0.00006	-28.24534	-10.91310	0.00095	0.98350	30.28028	111.28	-0.00
81/ 1/16	2444620.5	-0.42117	0.88901	-0.00006	-27.40720	-12.85809	0.00108	0.98373	30.27351	115.35	-0.00
81/ 1/20	2444624.5	-0.48339	0.85712	-0.00006	-26.43354	-14.73763	0.00120	0.98403	30.26433	119.42	-0.00
81/ 1/24	2444628.5	-0.54321	0.82097	-0.00005	-25.32969	-16.54205	0.00132	0.98441	30.25281	123.49	-0.00
81/ 1/28	2444632.5	-0.60033	0.78075	-0.00005	-24.10168	-18.26216	0.00143	0.98487	30.23900	127.56	-0.00
81/ 2/ 1	2444636.5	-0.65447	0.73666	-0.00005	-22.75620	-19.88928	0.00154	0.98540	30.22298	131.62	-0.00
81/ 2/ 5	2444640.5	-0.70538	0.68893	-0.00004	-21.30059	-21.41532	0.00164	0.98600	30.20482	135.68	-0.00
81/ 2/ 9	2444644.5	-0.75281	0.63780	-0.00004	-19.74273	-22.83280	0.00173	0.98667	30.18463	139.73	-0.00
81/ 2/13	2444648.5	-0.79653	0.58353	-0.00004	-18.09102	-24.13488	0.00181	0.98740	30.16252	143.77	-0.00
81/ 2/17	2444652.5	-0.83633	0.52638	-0.00003	-16.35432	-25.31543	0.00188	0.98820	30.13859	147.81	-0.00
81/ 2/21	2444656.5	-0.87203	0.46666	-0.00003	-14.54184	-26.36905	0.00194	0.98905	30.11299	151.85	-0.00
81/ 2/25	2444660.5	-0.90347	0.40465	-0.00002	-12.66313	-27.29106	0.00199	0.98995	30.08583	155.87	-0.00
81/ 3/ 1	2444664.5	-0.93050	0.34067	-0.00002	-10.72801	-28.07754	0.00204	0.99090	30.05725	159.89	-0.00
81/ 3/ 5	2444668.5	-0.95300	0.27503	-0.00001	-8.74648	-28.72534	0.00207	0.99189	30.02742	163.90	-0.00
81/ 3/ 9	2444672.5	-0.97088	0.20806	-0.00001	-6.72864	-29.23206	0.00210	0.99293	29.99647	167.90	-0.00
81/ 3/13	2444676.5	-0.98407	0.14008	-0.00000	-4.68472	-29.59609	0.00211	0.99399	29.96456	171.90	-0.00
81/ 3/17	2444680.5	-0.99252	0.07142	0.00000	-2.62489	-29.81654	0.00211	0.99508	29.93186	175.88	0.00
81/ 3/21	2444684.5	-0.99619	0.00242	0.00001	-0.55931	-29.89329	0.00211	0.99620	29.89852	179.86	0.00
81/ 3/25	2444688.5	-0.99510	-0.06659	0.00001	1.50196	-29.82691	0.00209	0.99733	29.86470	183.83	0.00
81/ 3/29	2444692.5	-0.98927	-0.13528	0.00002	3.54905	-29.61871	0.00206	0.99847	29.83058	187.79	0.00
81/ 4/ 2	2444696.5	-0.97872	-0.20333	0.00002	5.57225	-29.27064	0.00203	0.99962	29.79631	191.74	0.00
81/ 4/ 6	2444700.5	-0.96355	-0.27041	0.00003	7.56213	-28.78532	0.00198	1.00077	29.76206	195.68	0.00
81/ 4/10	2444704.5	-0.94382	-0.33622	0.00003	9.50954	-28.16598	0.00193	1.00192	29.72799	199.61	0.00
81/ 4/14	2444708.5	-0.91965	-0.40045	0.00003	11.40564	-27.41643	0.00186	1.00305	29.69426	203.53	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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81/ 4/18	2444712.5	-0.89117	-0.46280	0.00004	13.24196	-26.54105	0.00179	1.00417	29.66103	207.44	0.00
81/ 4/22	2444716.5	-0.85852	-0.52298	0.00004	15.01042	-25.54470	0.00171	1.00527	29.62844	211.35	0.00
81/ 4/26	2444720.5	-0.82187	-0.58073	0.00005	16.70335	-24.43277	0.00162	1.00634	29.59665	215.25	0.00
81/ 4/30	2444724.5	-0.78141	-0.63579	0.00005	18.31350	-23.21105	0.00152	1.00738	29.56581	219.13	0.00
81/ 5/ 4	2444728.5	-0.73732	-0.68790	0.00005	19.83410	-21.88575	0.00142	1.00839	29.53604	223.01	0.00
81/ 5/ 8	2444732.5	-0.68984	-0.73683	0.00006	21.25883	-20.46346	0.00131	1.00936	29.50748	226.89	0.00
81/ 5/12	2444736.5	-0.63918	-0.78238	0.00006	22.58187	-18.95111	0.00120	1.01028	29.48026	230.75	0.00
81/ 5/16	2444740.5	-0.58559	-0.82433	0.00006	23.79788	-17.35591	0.00108	1.01115	29.45448	234.61	0.00
81/ 5/20	2444744.5	-0.52931	-0.86251	0.00006	24.90202	-15.68536	0.00095	1.01197	29.43028	238.46	0.00
81/ 5/24	2444748.5	-0.47062	-0.89675	0.00007	25.88998	-13.94719	0.00082	1.01274	29.40774	242.31	0.00
81/ 5/28	2444752.5	-0.40978	-0.92690	0.00007	26.75795	-12.14931	0.00069	1.01345	29.38696	246.15	0.00
81/ 6/ 1	2444756.5	-0.34708	-0.95284	0.00007	27.50263	-10.29983	0.00055	1.01409	29.36803	249.99	0.00
81/ 6/ 5	2444760.5	-0.28281	-0.97446	0.00007	28.12127	-8.40698	0.00041	1.01467	29.35104	253.82	0.00
81/ 6/ 9	2444764.5	-0.21725	-0.99166	0.00007	28.61161	-6.47911	0.00027	1.01518	29.33604	257.64	0.00
81/ 6/13	2444768.5	-0.15071	-1.00438	0.00007	28.97192	-4.52467	0.00013	1.01562	29.32311	261.47	0.00
81/ 6/17	2444772.5	-0.08349	-1.01255	0.00007	29.20098	-2.55212	-0.00001	1.01599	29.31229	265.29	0.00
81/ 6/21	2444776.5	-0.01589	-1.01616	0.00007	29.29809	-0.57000	-0.00015	1.01628	29.30364	269.10	0.00
81/ 6/25	2444780.5	0.05177	-1.01518	0.00007	29.26307	1.41319	-0.00029	1.01650	29.29718	272.92	0.00
81/ 6/29	2444784.5	0.11921	-1.00964	0.00007	29.09624	3.38895	-0.00043	1.01665	29.29294	276.73	0.00
81/ 7/ 3	2444788.5	0.18611	-0.99954	0.00007	28.79843	5.34882	-0.00057	1.01672	29.29094	280.55	0.00
81/ 7/ 7	2444792.5	0.25217	-0.98494	0.00007	28.37095	7.28443	-0.00070	1.01671	29.29119	284.36	0.00
81/ 7/11	2444796.5	0.31709	-0.96591	0.00007	27.81564	9.18750	-0.00083	1.01662	29.29369	288.17	0.00
81/ 7/15	2444800.5	0.38059	-0.94252	0.00006	27.13481	11.04986	-0.00096	1.01646	29.29842	291.99	0.00
81/ 7/19	2444804.5	0.44237	-0.91489	0.00006	26.33125	12.86351	-0.00109	1.01623	29.30537	295.80	0.00
81/ 7/23	2444808.5	0.50216	-0.88313	0.00006	25.40824	14.62058	-0.00121	1.01592	29.31450	299.62	0.00
81/ 7/27	2444812.5	0.55968	-0.84739	0.00006	24.36953	16.31342	-0.00132	1.01553	29.32579	303.44	0.00
81/ 7/31	2444816.5	0.61467	-0.80781	0.00005	23.21933	17.93460	-0.00143	1.01508	29.33917	307.27	0.00
81/ 8/ 4	2444820.5	0.66688	-0.76458	0.00005	21.96232	19.47690	-0.00153	1.01455	29.35461	311.10	0.00
81/ 8/ 8	2444824.5	0.71606	-0.71789	0.00005	20.60361	20.93341	-0.00163	1.01396	29.37203	314.93	0.00
81/ 8/12	2444828.5	0.76200	-0.66794	0.00004	19.14875	22.29748	-0.00171	1.01330	29.39137	318.76	0.00
81/ 8/16	2444832.5	0.80447	-0.61494	0.00004	17.60373	23.56280	-0.00180	1.01258	29.41253	322.61	0.00
81/ 8/20	2444836.5	0.84327	-0.55915	0.00003	15.97494	24.72339	-0.00187	1.01180	29.43544	326.45	0.00
81/ 8/24	2444840.5	0.87822	-0.50080	0.00003	14.26918	25.77365	-0.00193	1.01097	29.45998	330.31	0.00
81/ 8/28	2444844.5	0.90914	-0.44015	0.00003	12.49363	26.70838	-0.00199	1.01009	29.48607	334.17	0.00
81/ 9/ 1	2444848.5	0.93589	-0.37749	0.00002	10.65583	27.52281	-0.00203	1.00916	29.51358	338.03	0.00
81/ 9/ 5	2444852.5	0.95834	-0.31308	0.00002	8.76367	28.21262	-0.00207	1.00818	29.54240	341.91	0.00
81/ 9/ 9	2444856.5	0.97635	-0.24724	0.00001	6.82536	28.77397	-0.00210	1.00717	29.57240	345.79	0.00
81/ 9/13	2444860.5	0.98984	-0.18024	0.00001	4.84943	29.20355	-0.00211	1.00612	29.60345	349.68	0.00
81/ 9/17	2444864.5	0.99873	-0.11241	0.00000	2.84465	29.49857	-0.00212	1.00504	29.63541	353.58	0.00
81/ 9/21	2444868.5	1.00297	-0.04405	-0.00000	0.82005	29.65679	-0.00212	1.00394	29.66813	357.49	-0.00
81/ 9/25	2444872.5	1.00251	0.02451	-0.00001	-1.21514	29.67660	-0.00211	1.00281	29.70147	1.40	-0.00
81/ 9/29	2444876.5	0.99735	0.09296	-0.00001	-3.25150	29.55697	-0.00209	1.00168	29.73527	5.32	-0.00
81/10/ 3	2444880.5	0.98750	0.16097	-0.00002	-5.27949	29.29750	-0.00205	1.00053	29.76939	9.26	-0.00
81/10/ 7	2444884.5	0.97298	0.22821	-0.00002	-7.28949	28.89845	-0.00201	0.99938	29.80364	13.20	-0.00
81/10/11	2444888.5	0.95384	0.29438	-0.00003	-9.27180	28.36077	-0.00196	0.99823	29.83789	17.15	-0.00

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81/10/15	2444892.5	0.93017	0.35915	-0.00003	-11.21676	27.68607	-0.00190	0.99709	29.87196	21.11	-0.00
81/10/19	2444896.5	0.90205	0.42220	-0.00004	-13.11472	26.87665	-0.00183	0.99596	29.90568	25.08	-0.00
81/10/23	2444900.5	0.86961	0.48322	-0.00004	-14.95615	25.93552	-0.00175	0.99485	29.93890	29.06	-0.00
81/10/27	2444904.5	0.83300	0.54193	-0.00004	-16.73169	24.86641	-0.00166	0.99377	29.97145	33.05	-0.00
81/10/31	2444908.5	0.79237	0.59802	-0.00005	-18.43217	23.67373	-0.00157	0.99271	30.00317	37.04	-0.00
81/11/ 4	2444912.5	0.74790	0.65122	-0.00005	-20.04869	22.36258	-0.00146	0.99169	30.03390	41.05	-0.00
81/11/ 8	2444916.5	0.69981	0.70126	-0.00005	-21.57269	20.93876	-0.00135	0.99070	30.06348	45.06	-0.00
81/11/12	2444920.5	0.64830	0.74788	-0.00006	-22.99599	19.40872	-0.00123	0.98976	30.09176	49.08	-0.00
81/11/16	2444924.5	0.59364	0.79085	-0.00006	-24.31085	17.77957	-0.00111	0.98887	30.11861	53.11	-0.00
81/11/20	2444928.5	0.53607	0.82996	-0.00006	-25.51003	16.05900	-0.00098	0.98803	30.14387	57.14	-0.00
81/11/24	2444932.5	0.47587	0.86499	-0.00007	-26.58683	14.25530	-0.00084	0.98725	30.16742	61.18	-0.00
81/11/28	2444936.5	0.41333	0.89577	-0.00007	-27.53519	12.37729	-0.00070	0.98653	30.18914	65.23	-0.00
81/12/ 2	2444940.5	0.34875	0.92213	-0.00007	-28.34966	10.43428	-0.00056	0.98587	30.20890	69.28	-0.00
81/12/ 6	2444944.5	0.28245	0.94393	-0.00007	-29.02553	8.43600	-0.00041	0.98528	30.22661	73.34	-0.00
81/12/10	2444948.5	0.21475	0.96107	-0.00007	-29.55880	6.39260	-0.00027	0.98477	30.24216	77.40	-0.00
81/12/14	2444952.5	0.14599	0.97344	-0.00007	-29.94627	4.31452	-0.00012	0.98433	30.25548	81.47	-0.00
81/12/18	2444956.5	0.07650	0.98099	-0.00007	-30.18552	2.21246	0.00004	0.98396	30.26650	85.54	-0.00
81/12/22	2444960.5	0.00664	0.98365	-0.00007	-30.27499	0.09731	0.00019	0.98368	30.27514	89.61	-0.00
81/12/26	2444964.5	-0.06326	0.98143	-0.00007	-30.21394	-2.01993	0.00034	0.98347	30.28138	93.69	-0.00
81/12/30	2444968.5	-0.13285	0.97433	-0.00007	-30.00250	-4.12819	0.00049	0.98334	30.28518	97.76	-0.00
82/ 1/ 3	2444972.5	-0.20177	0.96237	-0.00007	-29.64166	-6.21645	0.00064	0.98330	30.28651	101.84	-0.00
82/ 1/ 7	2444976.5	-0.26969	0.94563	-0.00007	-29.13327	-8.27381	0.00078	0.98334	30.28537	105.92	-0.00
82/ 1/11	2444980.5	-0.33626	0.92418	-0.00006	-28.48002	-10.28952	0.00093	0.98345	30.28177	109.99	-0.00
82/ 1/15	2444984.5	-0.40117	0.89813	-0.00006	-27.68542	-12.25308	0.00107	0.98365	30.27574	114.07	-0.00
82/ 1/19	2444988.5	-0.46407	0.86761	-0.00006	-26.75379	-14.15431	0.00120	0.98393	30.26730	118.14	-0.00
82/ 1/23	2444992.5	-0.52468	0.83279	-0.00006	-25.69021	-15.98342	0.00133	0.98429	30.25651	122.21	-0.00
82/ 1/27	2444996.5	-0.58268	0.79383	-0.00005	-24.50049	-17.73107	0.00146	0.98472	30.24343	126.28	-0.00
82/ 1/31	2445000.5	-0.63779	0.75093	-0.00005	-23.19114	-19.38840	0.00158	0.98523	30.22811	130.34	-0.00
82/ 2/ 4	2445004.5	-0.68974	0.70432	-0.00005	-21.76928	-20.94712	0.00169	0.98580	30.21066	134.40	-0.00
82/ 2/ 8	2445008.5	-0.73829	0.65423	-0.00004	-20.24264	-22.39957	0.00179	0.98645	30.19114	138.45	-0.00
82/ 2/12	2445012.5	-0.78319	0.60092	-0.00004	-18.61946	-23.73868	0.00188	0.98716	30.16968	142.50	-0.00
82/ 2/16	2445016.5	-0.82425	0.54464	-0.00003	-16.90845	-24.95813	0.00196	0.98794	30.14637	146.54	-0.00
82/ 2/20	2445020.5	-0.86126	0.48570	-0.00003	-15.11872	-26.05226	0.00202	0.98877	30.12135	150.58	-0.00
82/ 2/24	2445024.5	-0.89405	0.42437	-0.00002	-13.25972	-27.01616	0.00208	0.98965	30.09474	154.61	-0.00
82/ 2/28	2445028.5	-0.92248	0.36098	-0.00002	-11.34119	-27.84569	0.00213	0.99059	30.06667	158.63	-0.00
82/ 3/ 4	2445032.5	-0.94641	0.29582	-0.00001	-9.37307	-28.53743	0.00217	0.99157	30.03730	162.64	-0.00
82/ 3/ 8	2445036.5	-0.96575	0.22923	-0.00001	-7.36546	-29.08877	0.00219	0.99258	30.00677	166.65	-0.00
82/ 3/12	2445040.5	-0.98042	0.16153	-0.00000	-5.32852	-29.49782	0.00221	0.99364	29.97523	170.64	-0.00
82/ 3/16	2445044.5	-0.99036	0.09305	0.00000	-3.27248	-29.76349	0.00221	0.99472	29.94285	174.63	0.00
82/ 3/20	2445048.5	-0.99553	0.02412	0.00001	-1.20750	-29.88540	0.00221	0.99582	29.90978	178.61	0.00
82/ 3/24	2445052.5	-0.99594	-0.04492	0.00001	0.85633	-29.86391	0.00219	0.99695	29.87619	182.58	0.00
82/ 3/28	2445056.5	-0.99158	-0.11375	0.00002	2.90906	-29.70010	0.00216	0.99809	29.84223	186.54	0.00
82/ 4/ 1	2445060.5	-0.98251	-0.18204	0.00002	4.94094	-29.39572	0.00212	0.99923	29.80808	190.50	0.00
82/ 4/ 5	2445064.5	-0.96878	-0.24946	0.00003	6.94243	-28.95318	0.00207	1.00038	29.77388	194.44	0.00
82/ 4/ 9	2445068.5	-0.95047	-0.31571	0.00003	8.90429	-28.37553	0.00202	1.00153	29.73982	198.37	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
82/ 4/13	2445072.5	-0.92767	-0.38046	0.00004	10.81757	-27.66638	0.00195	1.00266	29.70604	202.30	0.00
82/ 4/17	2445076.5	-0.90053	-0.44344	0.00004	12.67369	-26.82995	0.00187	1.00379	29.67269	206.22	0.00
82/ 4/21	2445080.5	-0.86917	-0.50433	0.00004	14.46443	-25.87096	0.00179	1.00489	29.63995	210.12	0.00
82/ 4/25	2445084.5	-0.83375	-0.56288	0.00005	16.18199	-24.79462	0.00170	1.00597	29.60794	214.02	0.00
82/ 4/29	2445088.5	-0.79446	-0.61881	0.00005	17.81899	-23.60660	0.00160	1.00702	29.57682	217.92	0.00
82/ 5/ 3	2445092.5	-0.75149	-0.67187	0.00006	19.36849	-22.31300	0.00149	1.00804	29.54672	221.80	0.00
82/ 5/ 7	2445096.5	-0.70505	-0.72183	0.00006	20.82404	-20.92029	0.00138	1.00902	29.51777	225.67	0.00
82/ 5/11	2445100.5	-0.65535	-0.76846	0.00006	22.17964	-19.43529	0.00126	1.00996	29.49011	229.54	0.00
82/ 5/15	2445104.5	-0.60265	-0.81156	0.00006	23.42980	-17.86514	0.00113	1.01085	29.46386	233.40	0.00
82/ 5/19	2445108.5	-0.54719	-0.85094	0.00007	24.56954	-16.21725	0.00100	1.01169	29.43911	237.26	0.00
82/ 5/23	2445112.5	-0.48922	-0.88643	0.00007	25.59437	-14.49929	0.00087	1.01247	29.41600	241.11	0.00
82/ 5/27	2445116.5	-0.42902	-0.91788	0.00007	26.50031	-12.71911	0.00073	1.01320	29.39460	244.95	0.00
82/ 5/31	2445120.5	-0.36687	-0.94516	0.00007	27.28393	-10.88479	0.00059	1.01386	29.37502	248.79	0.00
82/ 6/ 4	2445124.5	-0.30306	-0.96814	0.00007	27.94229	-9.00450	0.00045	1.01446	29.35733	252.62	0.00
82/ 6/ 8	2445128.5	-0.23787	-0.98673	0.00007	28.47298	-7.08658	0.00030	1.01500	29.34161	256.45	0.00
82/ 6/12	2445132.5	-0.17160	-1.00086	0.00008	28.87409	-5.13944	0.00015	1.01546	29.32792	260.27	0.00
82/ 6/16	2445136.5	-0.10456	-1.01046	0.00008	29.14427	-3.17155	0.00001	1.01586	29.31633	264.09	0.00
82/ 6/20	2445140.5	-0.03705	-1.01550	0.00008	29.28265	-1.19142	-0.00014	1.01618	29.30688	267.91	0.00
82/ 6/24	2445144.5	0.03063	-1.01596	0.00008	29.28889	0.79241	-0.00028	1.01643	29.29961	271.73	0.00
82/ 6/28	2445148.5	0.09818	-1.01185	0.00007	29.16316	2.77145	-0.00043	1.01660	29.29455	275.54	0.00
82/ 7/ 2	2445152.5	0.16528	-1.00317	0.00007	28.90612	4.73723	-0.00057	1.01669	29.29172	279.36	0.00
82/ 7/ 6	2445156.5	0.23163	-0.98998	0.00007	28.51894	6.68134	-0.00071	1.01671	29.29113	283.17	0.00
82/ 7/10	2445160.5	0.29695	-0.97232	0.00007	28.00331	8.59547	-0.00085	1.01666	29.29279	286.98	0.00
82/ 7/14	2445164.5	0.36092	-0.95029	0.00007	27.36139	10.47142	-0.00098	1.01652	29.29669	290.80	0.00
82/ 7/18	2445168.5	0.42327	-0.92398	0.00007	26.59581	12.30111	-0.00111	1.01631	29.30281	294.61	0.00
82/ 7/22	2445172.5	0.48371	-0.89350	0.00006	25.70973	14.07666	-0.00124	1.01603	29.31113	298.43	0.00
82/ 7/26	2445176.5	0.54197	-0.85899	0.00006	24.70673	15.79034	-0.00136	1.01567	29.32162	302.25	0.00
82/ 7/30	2445180.5	0.59778	-0.82059	0.00006	23.59090	17.43465	-0.00147	1.01524	29.33424	306.07	0.00
82/ 8/ 3	2445184.5	0.65088	-0.77849	0.00005	22.36675	19.00231	-0.00158	1.01474	29.34892	309.90	0.00
82/ 8/ 7	2445188.5	0.70104	-0.73286	0.00005	21.03927	20.48630	-0.00168	1.01417	29.36561	313.73	0.00
82/ 8/11	2445192.5	0.74802	-0.68391	0.00005	19.61389	21.87989	-0.00177	1.01354	29.38425	317.56	0.00
82/ 8/15	2445196.5	0.79159	-0.63184	0.00004	18.09644	23.17667	-0.00186	1.01284	29.40475	321.40	0.00
82/ 8/19	2445200.5	0.83156	-0.57690	0.00004	16.49320	24.37056	-0.00193	1.01208	29.42703	325.25	0.00
82/ 8/23	2445204.5	0.86774	-0.51933	0.00003	14.81084	25.45583	-0.00200	1.01127	29.45099	329.10	0.00
82/ 8/27	2445208.5	0.89994	-0.45937	0.00003	13.05642	26.42717	-0.00206	1.01040	29.47653	332.96	0.00
82/ 8/31	2445212.5	0.92801	-0.39731	0.00002	11.23737	27.27966	-0.00211	1.00949	29.50354	336.82	0.00
82/ 9/ 4	2445216.5	0.95181	-0.33343	0.00002	9.36148	28.00886	-0.00215	1.00853	29.53190	340.69	0.00
82/ 9/ 8	2445220.5	0.97123	-0.26800	0.00001	7.43684	28.61076	-0.00218	1.00752	29.56150	344.57	0.00
82/ 9/12	2445224.5	0.98614	-0.20134	0.00001	5.47190	29.08189	-0.00220	1.00649	29.59219	348.46	0.00
82/ 9/16	2445228.5	0.99648	-0.13374	0.00000	3.47534	29.41929	-0.00221	1.00542	29.62385	352.36	0.00
82/ 9/20	2445232.5	1.00218	-0.06551	-0.00000	1.45612	29.62056	-0.00221	1.00432	29.65633	356.26	-0.00
82/ 9/24	2445236.5	1.00320	0.00302	-0.00001	-0.57660	29.68389	-0.00220	1.00321	29.68949	0.17	-0.00
82/ 9/28	2445240.5	0.99952	0.07153	-0.00001	-2.61346	29.60805	-0.00218	1.00207	29.72317	4.09	-0.00
82/10/ 2	2445244.5	0.99113	0.13971	-0.00002	-4.64495	29.39245	-0.00215	1.00093	29.75721	8.02	-0.00
82/10/ 6	2445248.5	0.97807	0.20723	-0.00002	-6.66148	29.03715	-0.00211	0.99978	29.79146	11.96	-0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM				EARTH-MOON B		
82/10/10	2445252.5	0.96037	0.27376	-0.00003	-8.65337	28.54286	-0.00206	0.99863	29.82576	15.91	-0.00
82/10/14	2445256.5	0.93811	0.33900	-0.00003	-10.61095	27.91100	-0.00200	0.99748	29.85994	19.87	-0.00
82/10/18	2445260.5	0.91138	0.40262	-0.00004	-12.52456	27.14364	-0.00193	0.99635	29.89384	23.83	-0.00
82/10/22	2445264.5	0.88029	0.46431	-0.00004	-14.38463	26.24357	-0.00185	0.99523	29.92729	27.81	-0.00
82/10/26	2445268.5	0.84497	0.52377	-0.00005	-16.18174	25.21430	-0.00176	0.99413	29.96013	31.79	-0.00
82/10/30	2445272.5	0.80558	0.58071	-0.00005	-17.90666	24.06000	-0.00166	0.99306	29.99220	35.79	-0.00
82/11/ 3	2445276.5	0.76229	0.63484	-0.00005	-19.55041	22.78557	-0.00155	0.99203	30.02334	39.79	-0.00
82/11/ 7	2445280.5	0.71531	0.68590	-0.00006	-21.10430	21.39659	-0.00144	0.99103	30.05338	43.80	-0.00
82/11/11	2445284.5	0.66486	0.73362	-0.00006	-22.56004	19.89930	-0.00132	0.99007	30.08218	47.81	-0.00
82/11/15	2445288.5	0.61116	0.77776	-0.00006	-23.90975	18.30059	-0.00119	0.98916	30.10959	51.84	-0.00
82/11/19	2445292.5	0.55448	0.81810	-0.00007	-25.14600	16.60799	-0.00105	0.98830	30.13547	55.87	-0.00
82/11/23	2445296.5	0.49507	0.85443	-0.00007	-26.26194	14.82958	-0.00091	0.98750	30.15968	59.91	-0.00
82/11/27	2445300.5	0.43323	0.88656	-0.00007	-27.25129	12.97403	-0.00077	0.98675	30.18209	63.96	-0.00
82/12/ 1	2445304.5	0.36926	0.91432	-0.00007	-28.10841	11.05050	-0.00062	0.98608	30.20258	68.01	-0.00
82/12/ 5	2445308.5	0.30347	0.93757	-0.00007	-28.82834	9.06859	-0.00047	0.98546	30.22106	72.06	-0.00
82/12/ 9	2445312.5	0.23617	0.95619	-0.00007	-29.40685	7.03832	-0.00031	0.98492	30.23741	76.13	-0.00
82/12/13	2445316.5	0.16771	0.97006	-0.00007	-29.84049	4.97004	-0.00015	0.98445	30.25154	80.19	-0.00
82/12/17	2445320.5	0.09841	0.97913	-0.00007	-30.12658	2.87438	0.00001	0.98406	30.26340	84.26	-0.00
82/12/21	2445324.5	0.02863	0.98333	-0.00007	-30.26330	0.76218	0.00017	0.98375	30.27290	88.33	-0.00
82/12/25	2445328.5	-0.04130	0.98265	-0.00007	-30.24964	-1.35557	0.00032	0.98351	30.28000	92.41	-0.00
82/12/29	2445332.5	-0.11102	0.97707	-0.00007	-30.08545	-3.46784	0.00048	0.98336	30.28465	96.48	-0.00
83/ 1/ 2	2445336.5	-0.18019	0.96664	-0.00007	-29.77146	-5.56358	0.00064	0.98329	30.28685	100.56	-0.00
83/ 1/ 6	2445340.5	-0.24846	0.95139	-0.00007	-29.30923	-7.63183	0.00079	0.98330	30.28656	104.64	-0.00
83/ 1/10	2445344.5	-0.31549	0.93140	-0.00007	-28.70119	-9.66178	0.00093	0.98339	30.28380	108.71	-0.00
83/ 1/14	2445348.5	-0.38096	0.90679	-0.00006	-27.95060	-11.64285	0.00108	0.98356	30.27858	112.79	-0.00
83/ 1/18	2445352.5	-0.44453	0.87766	-0.00006	-27.06153	-13.56475	0.00121	0.98381	30.27092	116.86	-0.00
83/ 1/22	2445356.5	-0.50589	0.84416	-0.00006	-26.03881	-15.41756	0.00134	0.98414	30.26088	120.93	-0.00
83/ 1/26	2445360.5	-0.56474	0.80648	-0.00006	-24.88804	-17.19178	0.00147	0.98455	30.24850	125.00	-0.00
83/ 1/30	2445364.5	-0.62079	0.76480	-0.00005	-23.61551	-18.87840	0.00159	0.98504	30.23386	129.07	-0.00
83/ 2/ 3	2445368.5	-0.67376	0.71933	-0.00005	-22.22815	-20.46895	0.00169	0.98559	30.21703	133.13	-0.00
83/ 2/ 7	2445372.5	-0.72341	0.67031	-0.00004	-20.73352	-21.95555	0.00179	0.98622	30.19810	137.18	-0.00
83/ 2/11	2445376.5	-0.76948	0.61797	-0.00004	-19.13969	-23.33097	0.00189	0.98691	30.17718	141.23	-0.00
83/ 2/15	2445380.5	-0.81177	0.56260	-0.00004	-17.45524	-24.58863	0.00197	0.98767	30.15437	145.28	-0.00
83/ 2/19	2445384.5	-0.85007	0.50446	-0.00003	-15.68917	-25.72266	0.00204	0.98848	30.12981	149.31	-0.00
83/ 2/23	2445388.5	-0.88420	0.44385	-0.00003	-13.85083	-26.72793	0.00210	0.98935	30.10361	153.34	-0.00
83/ 2/27	2445392.5	-0.91402	0.38107	-0.00002	-11.94987	-27.60003	0.00215	0.99027	30.07592	157.37	-0.00
83/ 3/ 3	2445396.5	-0.93937	0.31644	-0.00002	-9.99618	-28.33533	0.00219	0.99124	30.04687	161.38	-0.00
83/ 3/ 7	2445400.5	-0.96017	0.25026	-0.00001	-7.99982	-28.93096	0.00222	0.99225	30.01662	165.39	-0.00
83/ 3/11	2445404.5	-0.97631	0.18287	-0.00001	-5.97094	-29.38482	0.00224	0.99329	29.98533	169.39	-0.00
83/ 3/15	2445408.5	-0.98774	0.11460	-0.00000	-3.91976	-29.69555	0.00225	0.99437	29.95313	173.38	-0.00
83/ 3/19	2445412.5	-0.99441	0.04578	0.00000	-1.85645	-29.86256	0.00225	0.99547	29.92021	177.36	0.00
83/ 3/23	2445416.5	-0.99632	-0.02326	0.00001	0.20886	-29.88599	0.00224	0.99659	29.88672	181.34	0.00
83/ 3/27	2445420.5	-0.99345	-0.09219	0.00001	2.26617	-29.76668	0.00221	0.99772	29.85282	185.30	0.00
83/ 3/31	2445424.5	-0.98586	-0.16069	0.00002	4.30565	-29.50618	0.00218	0.99887	29.81867	189.26	0.00
83/ 4/ 4	2445428.5	-0.97358	-0.22842	0.00002	6.31772	-29.10670	0.00213	1.00002	29.78445	193.20	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
83/ 4/ 8	2445432.5	-0.95670	-0.29506	0.00003	8.29302	-28.57109	0.00208	1.00117	29.75031	197.14	0.00
83/ 4/12	2445436.5	-0.93530	-0.36032	0.00003	10.22251	-27.90279	0.00202	1.00231	29.71642	201.07	0.00
83/ 4/16	2445440.5	-0.90951	-0.42389	0.00004	12.09750	-27.10584	0.00194	1.00344	29.68292	204.99	0.00
83/ 4/20	2445444.5	-0.87945	-0.48547	0.00004	13.90964	-26.18478	0.00186	1.00455	29.64997	208.90	0.00
83/ 4/24	2445448.5	-0.84529	-0.54478	0.00005	15.65101	-25.14469	0.00177	1.00564	29.61773	212.80	0.00
83/ 4/28	2445452.5	-0.80720	-0.60156	0.00005	17.31408	-23.99111	0.00167	1.00670	29.58632	216.69	0.00
83/ 5/ 2	2445456.5	-0.76536	-0.65554	0.00005	18.89178	-22.72999	0.00156	1.00773	29.55590	220.58	0.00
83/ 5/ 6	2445460.5	-0.71999	-0.70650	0.00006	20.37750	-21.36769	0.00145	1.00872	29.52660	224.46	0.00
83/ 5/10	2445464.5	-0.67129	-0.75420	0.00006	21.76510	-19.91093	0.00133	1.00967	29.49855	228.33	0.00
83/ 5/14	2445468.5	-0.61950	-0.79843	0.00006	23.04893	-18.36675	0.00121	1.01058	29.47186	232.19	0.00
83/ 5/18	2445472.5	-0.56488	-0.83899	0.00007	24.22385	-16.74249	0.00108	1.01143	29.44666	236.05	0.00
83/ 5/22	2445476.5	-0.50767	-0.87573	0.00007	25.28521	-15.04572	0.00094	1.01224	29.42304	239.90	0.00
83/ 5/26	2445480.5	-0.44814	-0.90846	0.00007	26.22888	-13.28426	0.00080	1.01298	29.40111	243.74	0.00
83/ 5/30	2445484.5	-0.38657	-0.93706	0.00007	27.05125	-11.46609	0.00066	1.01367	29.38097	247.58	0.00
83/ 6/ 3	2445488.5	-0.32325	-0.96140	0.00007	27.74922	-9.59939	0.00052	1.01429	29.36268	251.42	0.00
83/ 6/ 7	2445492.5	-0.25846	-0.98138	0.00008	28.32021	-7.69243	0.00037	1.01485	29.34634	255.25	0.00
83/ 6/11	2445496.5	-0.19250	-0.99692	0.00008	28.76218	-5.75360	0.00022	1.01533	29.33201	259.07	0.00
83/ 6/15	2445500.5	-0.12567	-1.00795	0.00008	29.07358	-3.79136	0.00007	1.01575	29.31975	262.89	0.00
83/ 6/19	2445504.5	-0.05827	-1.01442	0.00008	29.25340	-1.81422	-0.00007	1.01610	29.30961	266.71	0.00
83/ 6/23	2445508.5	0.00939	-1.01633	0.00008	29.30114	0.16931	-0.00022	1.01637	29.30162	270.53	0.00
83/ 6/27	2445512.5	0.07701	-1.01364	0.00008	29.21678	2.15072	-0.00037	1.01656	29.29584	274.34	0.00
83/ 7/ 1	2445516.5	0.14428	-1.00640	0.00007	29.00087	4.12150	-0.00052	1.01669	29.29227	278.16	0.00
83/ 7/ 5	2445520.5	0.21090	-0.99462	0.00007	28.65440	6.07325	-0.00066	1.01673	29.29094	281.97	0.00
83/ 7/ 9	2445524.5	0.27657	-0.97836	0.00007	28.17890	7.99762	-0.00080	1.01670	29.29185	285.79	0.00
83/ 7/13	2445528.5	0.34100	-0.95769	0.00007	27.57638	9.88636	-0.00094	1.01659	29.29499	289.60	0.00
83/ 7/17	2445532.5	0.40389	-0.93271	0.00007	26.84933	11.73138	-0.00107	1.01640	29.30037	293.41	0.00
83/ 7/21	2445536.5	0.46496	-0.90353	0.00006	26.00073	13.52471	-0.00120	1.01614	29.30795	297.23	0.00
83/ 7/25	2445540.5	0.52393	-0.87027	0.00006	25.03405	15.25858	-0.00132	1.01581	29.31771	301.05	0.00
83/ 7/29	2445544.5	0.58054	-0.83308	0.00006	23.95320	16.92542	-0.00144	1.01540	29.32960	304.87	0.00
83/ 8/ 2	2445548.5	0.63452	-0.79212	0.00005	22.76257	18.51786	-0.00156	1.01493	29.34358	308.70	0.00
83/ 8/ 6	2445552.5	0.68563	-0.74758	0.00005	21.46701	20.02882	-0.00166	1.01438	29.35960	312.52	0.00
83/ 8/10	2445556.5	0.73363	-0.69965	0.00005	20.07178	21.45148	-0.00176	1.01377	29.37758	316.36	0.00
83/ 8/14	2445560.5	0.77829	-0.64854	0.00004	18.58262	22.77932	-0.00186	1.01309	29.39747	320.20	0.00
83/ 8/18	2445564.5	0.81942	-0.59448	0.00004	17.00566	24.00614	-0.00194	1.01235	29.41916	324.04	0.00
83/ 8/22	2445568.5	0.85680	-0.53771	0.00003	15.34743	25.12612	-0.00202	1.01156	29.44259	327.89	0.00
83/ 8/26	2445572.5	0.89027	-0.47848	0.00003	13.61490	26.13382	-0.00210	1.01070	29.46764	331.74	0.00
83/ 8/30	2445576.5	0.91966	-0.41705	0.00002	11.81536	27.02417	-0.00216	1.00980	29.49421	335.61	0.00
83/ 9/ 3	2445580.5	0.94482	-0.35371	0.00002	9.95649	27.79259	-0.00221	1.00886	29.52219	339.48	0.00
83/ 9/ 7	2445584.5	0.96562	-0.28874	0.00001	8.04631	28.43494	-0.00225	1.00787	29.55146	343.35	0.00
83/ 9/11	2445588.5	0.98196	-0.22243	0.00001	6.09313	28.94756	-0.00228	1.00684	29.58188	347.24	0.00
83/ 9/15	2445592.5	0.99375	-0.15509	0.00000	4.10557	29.32734	-0.00230	1.00578	29.61331	351.13	0.00
83/ 9/19	2445596.5	1.00091	-0.08703	-0.00000	2.09251	29.57168	-0.00230	1.00469	29.64562	355.03	-0.00
83/ 9/23	2445600.5	1.00340	-0.01857	-0.00001	0.06304	29.67859	-0.00230	1.00357	29.67866	358.94	-0.00
83/ 9/27	2445604.5	1.00120	0.04999	-0.00001	-1.97353	29.64666	-0.00228	1.00244	29.71227	2.86	-0.00
83/10/ 1	2445608.5	0.99429	0.11830	-0.00002	-4.00775	29.47508	-0.00225	1.00130	29.74630	6.79	-0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM				EARTH-MOON B		
83/10/ 5	2445612.5	0.98269	0.18606	-0.00002	-6.03005	29.16372	-0.00221	1.00015	29.78060	10.72	-0.00
83/10/ 9	2445616.5	0.96644	0.25294	-0.00003	-8.03076	28.71307	-0.00216	0.99899	29.81499	14.67	-0.00
83/10/13	2445620.5	0.94561	0.31862	-0.00003	-10.00022	28.12433	-0.00210	0.99784	29.84932	18.62	-0.00
83/10/17	2445624.5	0.92027	0.38278	-0.00004	-11.92874	27.39935	-0.00203	0.99670	29.88343	22.58	-0.00
83/10/21	2445628.5	0.89053	0.44511	-0.00004	-13.80674	26.54071	-0.00195	0.99558	29.91714	26.56	-0.00
83/10/25	2445632.5	0.85652	0.50531	-0.00005	-15.62473	25.55167	-0.00186	0.99447	29.95029	30.54	-0.00
83/10/29	2445636.5	0.81839	0.56307	-0.00005	-17.37342	24.43620	-0.00176	0.99339	29.98272	34.53	-0.00
83/11/ 2	2445640.5	0.77631	0.61812	-0.00005	-19.04374	23.19898	-0.00165	0.99234	30.01427	38.53	-0.00
83/11/ 6	2445644.5	0.73047	0.67017	-0.00006	-20.62690	21.84535	-0.00153	0.99132	30.04477	42.53	-0.00
83/11/10	2445648.5	0.68108	0.71897	-0.00006	-22.11447	20.38137	-0.00140	0.99035	30.07407	46.55	-0.00
83/11/14	2445652.5	0.62837	0.76426	-0.00006	-23.49843	18.81371	-0.00127	0.98942	30.10203	50.57	-0.00
83/11/18	2445656.5	0.57260	0.80582	-0.00007	-24.77122	17.14970	-0.00113	0.98854	30.12849	54.60	-0.00
83/11/22	2445660.5	0.51401	0.84343	-0.00007	-25.92578	15.39728	-0.00099	0.98772	30.15331	58.64	-0.00
83/11/26	2445664.5	0.45291	0.87690	-0.00007	-26.95564	13.56491	-0.00083	0.98695	30.17637	62.68	-0.00
83/11/30	2445668.5	0.38957	0.90605	-0.00007	-27.85496	11.66161	-0.00068	0.98625	30.19755	66.73	-0.00
83/12/ 4	2445672.5	0.32431	0.93073	-0.00008	-28.61856	9.69685	-0.00052	0.98562	30.21673	70.79	-0.00
83/12/ 8	2445676.5	0.25745	0.95081	-0.00008	-29.24197	7.68054	-0.00036	0.98505	30.23381	74.85	-0.00
83/12/12	2445680.5	0.18931	0.96619	-0.00008	-29.72148	5.62292	-0.00020	0.98456	30.24869	78.91	-0.00
83/12/16	2445684.5	0.12024	0.97677	-0.00008	-30.05418	3.53454	-0.00003	0.98414	30.26131	82.98	-0.00
83/12/20	2445688.5	0.05057	0.98250	-0.00008	-30.23796	1.42621	0.00013	0.98380	30.27158	87.05	-0.00
83/12/24	2445692.5	-0.01936	0.98335	-0.00008	-30.27156	-0.69115	0.00030	0.98354	30.27945	91.13	-0.00
83/12/28	2445696.5	-0.08918	0.97931	-0.00008	-30.15456	-2.80649	0.00046	0.98336	30.28488	95.20	-0.00
84/ 1/ 1	2445700.5	-0.15856	0.97040	-0.00007	-29.88741	-4.90876	0.00062	0.98327	30.28784	99.28	-0.00
84/ 1/ 5	2445704.5	-0.22716	0.95665	-0.00007	-29.47142	-6.98695	0.00078	0.98325	30.28832	103.36	-0.00
84/ 1/ 9	2445708.5	-0.29462	0.93814	-0.00007	-28.90874	-9.03021	0.00093	0.98332	30.28630	107.43	-0.00
84/ 1/13	2445712.5	-0.36062	0.91496	-0.00007	-28.20238	-11.02785	0.00108	0.98346	30.28181	111.51	-0.00
84/ 1/17	2445716.5	-0.42482	0.88723	-0.00007	-27.35616	-12.96950	0.00123	0.98369	30.27486	115.59	-0.00
84/ 1/21	2445720.5	-0.48691	0.85509	-0.00006	-26.37468	-14.84511	0.00136	0.98400	30.26550	119.66	-0.00
84/ 1/25	2445724.5	-0.54658	0.81870	-0.00006	-25.26330	-16.64503	0.00149	0.98439	30.25378	123.73	-0.00
84/ 1/29	2445728.5	-0.60354	0.77825	-0.00006	-24.02810	-18.36011	0.00162	0.98485	30.23976	127.79	-0.00
84/ 2/ 2	2445732.5	-0.65751	0.73394	-0.00005	-22.67584	-19.98168	0.00173	0.98539	30.22352	131.86	-0.00
84/ 2/ 6	2445736.5	-0.70822	0.68600	-0.00005	-21.21386	-21.50170	0.00184	0.98599	30.20515	135.91	-0.00
84/ 2/10	2445740.5	-0.75544	0.63468	-0.00004	-19.65011	-22.91270	0.00194	0.98667	30.18474	139.96	-0.00
84/ 2/14	2445744.5	-0.79894	0.58023	-0.00004	-17.99300	-24.20790	0.00202	0.98741	30.16240	144.01	-0.00
84/ 2/18	2445748.5	-0.83851	0.52293	-0.00003	-16.25141	-25.38122	0.00210	0.98821	30.13826	148.05	-0.00
84/ 2/22	2445752.5	-0.87397	0.46306	-0.00003	-14.43460	-26.42728	0.00217	0.98906	30.11244	152.08	-0.00
84/ 2/26	2445756.5	-0.90515	0.40092	-0.00002	-12.55213	-27.34146	0.00222	0.98997	30.08507	156.11	-0.00
84/ 3/ 1	2445760.5	-0.93192	0.33683	-0.00002	-10.61383	-28.11988	0.00227	0.99093	30.05630	160.13	-0.00
84/ 3/ 5	2445764.5	-0.95416	0.27111	-0.00001	-8.62971	-28.75945	0.00230	0.99193	30.02628	164.14	-0.00
84/ 3/ 9	2445768.5	-0.97177	0.20406	-0.00001	-6.60991	-29.25780	0.00233	0.99296	29.99516	168.14	-0.00
84/ 3/13	2445772.5	-0.98468	0.13604	-0.00000	-4.56461	-29.61337	0.00234	0.99403	29.96310	172.13	-0.00
84/ 3/17	2445776.5	-0.99285	0.06735	0.00000	-2.50403	-29.82533	0.00234	0.99513	29.93026	176.12	0.00
84/ 3/21	2445780.5	-0.99624	-0.00166	0.00001	-0.43830	-29.89359	0.00233	0.99625	29.89680	180.10	0.00
84/ 3/25	2445784.5	-0.99487	-0.07066	0.00001	1.62253	-29.81878	0.00231	0.99738	29.86289	184.06	0.00
84/ 3/29	2445788.5	-0.98876	-0.13932	0.00002	3.66858	-29.60224	0.00228	0.99853	29.82869	188.02	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
84/ 4/ 2	2445792.5	-0.97794	-0.20732	0.00002	5.69017	-29.24596	0.00223	0.99968	29.79436	191.97	0.00
84/ 4/ 6	2445796.5	-0.96249	-0.27434	0.00003	7.67789	-28.75260	0.00218	1.00083	29.76008	195.91	0.00
84/ 4/10	2445800.5	-0.94250	-0.34007	0.00003	9.62259	-28.12544	0.00211	1.00198	29.72599	199.84	0.00
84/ 4/14	2445804.5	-0.91807	-0.40419	0.00004	11.51546	-27.36831	0.00204	1.00311	29.69226	203.76	0.00
84/ 4/18	2445808.5	-0.88934	-0.46642	0.00004	13.34806	-26.48562	0.00196	1.00423	29.65904	207.68	0.00
84/ 4/22	2445812.5	-0.85645	-0.52647	0.00005	15.11232	-25.48228	0.00187	1.00533	29.62649	211.58	0.00
84/ 4/26	2445816.5	-0.81958	-0.58407	0.00005	16.80061	-24.36369	0.00177	1.00640	29.59476	215.48	0.00
84/ 4/30	2445820.5	-0.77889	-0.63896	0.00006	18.40569	-23.13566	0.00166	1.00744	29.56397	219.36	0.00
84/ 5/ 4	2445824.5	-0.73461	-0.69089	0.00006	19.92083	-21.80445	0.00154	1.00845	29.53428	223.24	0.00
84/ 5/ 8	2445828.5	-0.68693	-0.73963	0.00006	21.33974	-20.37666	0.00142	1.00941	29.50581	227.12	0.00
84/ 5/12	2445832.5	-0.63609	-0.78496	0.00007	22.65661	-18.85922	0.00129	1.01033	29.47868	230.98	0.00
84/ 5/16	2445836.5	-0.58233	-0.82670	0.00007	23.86615	-17.25939	0.00116	1.01121	29.45300	234.84	0.00
84/ 5/20	2445840.5	-0.52590	-0.86465	0.00007	24.96355	-15.58466	0.00102	1.01202	29.42890	238.69	0.00
84/ 5/24	2445844.5	-0.46708	-0.89865	0.00007	25.94452	-13.84277	0.00088	1.01279	29.40647	242.54	0.00
84/ 5/28	2445848.5	-0.40612	-0.92856	0.00008	26.80529	-12.04167	0.00073	1.01349	29.38580	246.38	0.00
84/ 6/ 1	2445852.5	-0.34332	-0.95425	0.00008	27.54260	-10.18945	0.00058	1.01413	29.36698	250.21	0.00
84/ 6/ 5	2445856.5	-0.27896	-0.97561	0.00008	28.15370	-8.29437	0.00043	1.01471	29.35009	254.04	0.00
84/ 6/ 9	2445860.5	-0.21334	-0.99255	0.00008	28.63639	-6.36479	0.00028	1.01522	29.33519	257.87	0.00
84/ 6/13	2445864.5	-0.14675	-1.00500	0.00008	28.98896	-4.40912	0.00012	1.01565	29.32235	261.69	0.00
84/ 6/17	2445868.5	-0.07950	-1.01291	0.00008	29.21023	-2.43588	-0.00003	1.01602	29.31162	265.51	0.00
84/ 6/21	2445872.5	-0.01189	-1.01624	0.00008	29.29954	-0.45357	-0.00019	1.01631	29.30305	269.33	0.00
84/ 6/25	2445876.5	0.05577	-1.01500	0.00008	29.25672	1.52930	-0.00034	1.01653	29.29666	273.14	0.00
84/ 6/29	2445880.5	0.12318	-1.00918	0.00008	29.08213	3.50422	-0.00050	1.01667	29.29249	276.96	0.00
84/ 7/ 3	2445884.5	0.19004	-0.99882	0.00008	28.77663	5.46275	-0.00065	1.01674	29.29055	280.77	0.00
84/ 7/ 7	2445888.5	0.25604	-0.98396	0.00007	28.34158	7.39652	-0.00080	1.01673	29.29084	284.59	0.00
84/ 7/11	2445892.5	0.32089	-0.96467	0.00007	27.77882	9.29726	-0.00094	1.01664	29.29338	288.40	0.00
84/ 7/15	2445896.5	0.38429	-0.94104	0.00007	27.09071	11.15681	-0.00108	1.01648	29.29814	292.21	0.00
84/ 7/19	2445900.5	0.44596	-0.91316	0.00007	26.28006	12.96718	-0.00122	1.01624	29.30511	296.03	0.00
84/ 7/23	2445904.5	0.50562	-0.88117	0.00006	25.35019	14.72051	-0.00135	1.01593	29.31426	299.85	0.00
84/ 7/27	2445908.5	0.56300	-0.84520	0.00006	24.30487	16.40917	-0.00147	1.01554	29.32555	303.67	0.00
84/ 7/31	2445912.5	0.61783	-0.80541	0.00006	23.14835	18.02574	-0.00159	1.01509	29.33894	307.49	0.00
84/ 8/ 4	2445916.5	0.66987	-0.76197	0.00005	21.88532	19.56304	-0.00170	1.01456	29.35438	311.32	0.00
84/ 8/ 8	2445920.5	0.71887	-0.71509	0.00005	20.52092	21.01414	-0.00180	1.01397	29.37179	315.15	0.00
84/ 8/12	2445924.5	0.76461	-0.66495	0.00005	19.06074	22.37245	-0.00190	1.01331	29.39112	318.99	0.00
84/ 8/16	2445928.5	0.80687	-0.61180	0.00004	17.51078	23.63165	-0.00199	1.01259	29.41228	322.83	0.00
84/ 8/20	2445932.5	0.84545	-0.55585	0.00004	15.87746	24.78581	-0.00206	1.01181	29.43518	326.68	0.00
84/ 8/24	2445936.5	0.88017	-0.49736	0.00003	14.16759	25.82934	-0.00213	1.01098	29.45973	330.53	0.00
84/ 8/28	2445940.5	0.91086	-0.43660	0.00003	12.38838	26.75709	-0.00219	1.01009	29.48582	334.39	0.00
84/ 9/ 1	2445944.5	0.93736	-0.37383	0.00002	10.54739	27.56429	-0.00224	1.00916	29.51334	338.26	0.00
84/ 9/ 5	2445948.5	0.95955	-0.30934	0.00002	8.65251	28.24667	-0.00228	1.00818	29.54218	342.13	0.00
84/ 9/ 9	2445952.5	0.97731	-0.24342	0.00001	6.71199	28.80042	-0.00231	1.00716	29.57220	346.01	0.00
84/ 9/13	2445956.5	0.99053	-0.17637	0.00001	4.73435	29.22225	-0.00232	1.00611	29.60327	349.90	0.00
84/ 9/17	2445960.5	0.99916	-0.10850	0.00000	2.72838	29.50940	-0.00233	1.00503	29.63526	353.80	0.00
84/ 9/21	2445964.5	1.00312	-0.04013	-0.00000	0.70312	29.65970	-0.00233	1.00393	29.66803	357.71	-0.00
84/ 9/25	2445968.5	1.00240	0.02843	-0.00001	-1.33219	29.67153	-0.00231	1.00280	29.70142	1.62	-0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
84/ 9/29	2445972.5	0.99697	0.09685	-0.00002	-3.36814	29.54392	-0.00229	1.00166	29.73529	5.55	-0.00
84/10/ 3	2445976.5	0.98684	0.16482	-0.00002	-5.39519	29.27650	-0.00225	1.00051	29.76948	9.48	-0.00
84/10/ 7	2445980.5	0.97206	0.23201	-0.00003	-7.40370	28.86958	-0.00220	0.99936	29.80382	13.42	-0.00
84/10/11	2445984.5	0.95266	0.29811	-0.00003	-9.38400	28.32412	-0.00214	0.99821	29.83815	17.38	-0.00
84/10/15	2445988.5	0.92873	0.36278	-0.00004	-11.32642	27.64177	-0.00208	0.99707	29.87232	21.34	-0.00
84/10/19	2445992.5	0.90036	0.42572	-0.00004	-13.22132	26.82488	-0.00200	0.99594	29.90615	25.31	-0.00
84/10/23	2445996.5	0.86768	0.48662	-0.00004	-15.05918	25.87650	-0.00191	0.99482	29.93948	29.28	-0.00
84/10/27	2446000.5	0.83084	0.54518	-0.00005	-16.83065	24.80037	-0.00181	0.99373	29.97214	33.27	-0.00
84/10/31	2446004.5	0.78998	0.60111	-0.00005	-18.52658	23.60094	-0.00170	0.99267	30.00398	37.27	-0.00
84/11/ 4	2446008.5	0.74530	0.65413	-0.00006	-20.13808	22.28337	-0.00158	0.99164	30.03483	41.27	-0.00
84/11/ 8	2446012.5	0.69701	0.70398	-0.00006	-21.65663	20.85346	-0.00146	0.99066	30.06453	45.29	-0.00
84/11/12	2446016.5	0.64532	0.75040	-0.00006	-23.07404	19.31771	-0.00133	0.98971	30.09294	49.31	-0.00
84/11/16	2446020.5	0.59048	0.79316	-0.00007	-24.38261	17.68324	-0.00119	0.98882	30.11991	53.33	-0.00
84/11/20	2446024.5	0.53275	0.83203	-0.00007	-25.57513	15.95779	-0.00104	0.98798	30.14529	57.37	-0.00
84/11/24	2446028.5	0.47241	0.86682	-0.00007	-26.64493	14.14968	-0.00089	0.98719	30.16895	61.41	-0.00
84/11/28	2446032.5	0.40974	0.89735	-0.00007	-27.58596	12.26774	-0.00074	0.98647	30.19077	65.46	-0.00
84/12/ 2	2446036.5	0.34505	0.92346	-0.00008	-28.39283	10.32131	-0.00058	0.98582	30.21063	69.51	-0.00
84/12/ 6	2446040.5	0.27866	0.94500	-0.00008	-29.06084	8.32016	-0.00042	0.98523	30.22843	73.57	-0.00
84/12/10	2446044.5	0.21089	0.96186	-0.00008	-29.58605	6.27444	-0.00025	0.98471	30.24406	77.63	-0.00
84/12/14	2446048.5	0.14208	0.97396	-0.00008	-29.96528	4.19461	-0.00009	0.98427	30.25745	81.70	-0.00
84/12/18	2446052.5	0.07256	0.98123	-0.00008	-30.19617	2.09139	0.00008	0.98390	30.26851	85.77	-0.00
84/12/22	2446056.5	0.00268	0.98361	-0.00008	-30.27718	-0.02431	0.00025	0.98362	30.27719	89.84	-0.00
84/12/26	2446060.5	-0.06722	0.98111	-0.00008	-30.20764	-2.14148	0.00041	0.98341	30.28345	93.92	-0.00
84/12/30	2446064.5	-0.13678	0.97373	-0.00008	-29.98771	-4.24906	0.00058	0.98329	30.28724	98.00	-0.00
85/ 1/ 3	2446068.5	-0.20566	0.96150	-0.00007	-29.61842	-6.33603	0.00074	0.98324	30.28855	102.07	-0.00
85/ 1/ 7	2446072.5	-0.27351	0.94448	-0.00007	-29.10169	-8.39147	0.00089	0.98328	30.28737	106.15	-0.00
85/ 1/11	2446076.5	-0.34001	0.92276	-0.00007	-28.44023	-10.40463	0.00104	0.98340	30.28371	110.23	-0.00
85/ 1/15	2446080.5	-0.40481	0.89644	-0.00007	-27.63761	-12.36504	0.00119	0.98361	30.27758	114.30	-0.00
85/ 1/19	2446084.5	-0.46760	0.86567	-0.00006	-26.69819	-14.26254	0.00133	0.98389	30.26902	118.38	-0.00
85/ 1/23	2446088.5	-0.52806	0.83060	-0.00006	-25.62710	-16.08734	0.00147	0.98425	30.25807	122.45	-0.00
85/ 1/27	2446092.5	-0.58591	0.79141	-0.00006	-24.43020	-17.83013	0.00159	0.98469	30.24480	126.51	-0.00
85/ 1/31	2446096.5	-0.64085	0.74829	-0.00005	-23.11402	-19.48208	0.00171	0.98520	30.22928	130.58	-0.00
85/ 2/ 4	2446100.5	-0.69261	0.70147	-0.00005	-21.68575	-21.03494	0.00182	0.98579	30.21159	134.64	-0.00
85/ 2/ 8	2446104.5	-0.74096	0.65118	-0.00004	-20.15314	-22.48105	0.00192	0.98644	30.19183	138.69	-0.00
85/ 2/12	2446108.5	-0.78565	0.59769	-0.00004	-18.52445	-23.81343	0.00201	0.98716	30.17010	142.74	-0.00
85/ 2/16	2446112.5	-0.82648	0.54125	-0.00004	-16.80845	-25.02576	0.00210	0.98794	30.14652	146.78	-0.00
85/ 2/20	2446116.5	-0.86326	0.48216	-0.00003	-15.01426	-26.11244	0.00217	0.98878	30.12121	150.82	-0.00
85/ 2/24	2446120.5	-0.89580	0.42070	-0.00003	-13.15137	-27.06860	0.00223	0.98967	30.09431	154.84	-0.00
85/ 2/28	2446124.5	-0.92397	0.35719	-0.00002	-11.22953	-27.89013	0.00228	0.99061	30.06596	158.86	-0.00
85/ 3/ 4	2446128.5	-0.94765	0.29195	-0.00002	-9.25869	-28.57369	0.00232	0.99160	30.03630	162.88	-0.00
85/ 3/ 8	2446132.5	-0.96672	0.22528	-0.00001	-7.24895	-29.11669	0.00235	0.99262	30.00549	166.88	-0.00
85/ 3/12	2446136.5	-0.98112	0.15753	-0.00000	-5.21051	-29.51732	0.00237	0.99368	29.97368	170.88	-0.00
85/ 3/16	2446140.5	-0.99078	0.08901	0.00000	-3.15357	-29.77449	0.00238	0.99477	29.94103	174.87	0.00
85/ 3/20	2446144.5	-0.99568	0.02007	0.00001	-1.08829	-29.88791	0.00237	0.99588	29.90772	178.85	0.00
85/ 3/24	2446148.5	-0.99581	-0.04897	0.00001	0.97523	-29.85797	0.00236	0.99702	29.87389	182.82	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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85/ 3/28	2446152.5	-0.99119	-0.11778	0.00002	3.02707	-29.68580	0.00234	0.99816	29.83974	186.78	0.00
85/ 4/ 1	2446156.5	-0.98184	-0.18602	0.00002	5.05748	-29.37319	0.00230	0.99931	29.80540	190.73	0.00
85/ 4/ 5	2446160.5	-0.96784	-0.25338	0.00003	7.05695	-28.92259	0.00226	1.00046	29.77107	194.67	0.00
85/ 4/ 9	2446164.5	-0.94927	-0.31955	0.00003	9.01623	-28.33708	0.00220	1.00161	29.73689	198.60	0.00
85/ 4/13	2446168.5	-0.92622	-0.38421	0.00004	10.92643	-27.62034	0.00214	1.00275	29.70303	202.53	0.00
85/ 4/17	2446172.5	-0.89883	-0.44707	0.00004	12.77896	-26.77660	0.00206	1.00387	29.66965	206.45	0.00
85/ 4/21	2446176.5	-0.86723	-0.50783	0.00005	14.56564	-25.81060	0.00197	1.00498	29.63689	210.35	0.00
85/ 4/25	2446180.5	-0.83159	-0.56623	0.00005	16.27870	-24.72759	0.00187	1.00606	29.60490	214.25	0.00
85/ 4/29	2446184.5	-0.79208	-0.62200	0.00006	17.91078	-23.53327	0.00176	1.00711	29.57382	218.14	0.00
85/ 5/ 3	2446188.5	-0.74890	-0.67488	0.00006	19.45497	-22.23375	0.00165	1.00813	29.54379	222.02	0.00
85/ 5/ 7	2446192.5	-0.70226	-0.72465	0.00006	20.90486	-20.83552	0.00152	1.00910	29.51494	225.90	0.00
85/ 5/11	2446196.5	-0.65239	-0.77108	0.00007	22.25447	-19.34542	0.00139	1.01004	29.48741	229.77	0.00
85/ 5/15	2446200.5	-0.59952	-0.81397	0.00007	23.49836	-17.77061	0.00126	1.01092	29.46129	233.63	0.00
85/ 5/19	2446204.5	-0.54390	-0.85313	0.00007	24.63156	-16.11851	0.00111	1.01176	29.43672	237.48	0.00
85/ 5/23	2446208.5	-0.48580	-0.88839	0.00008	25.64962	-14.39679	0.00097	1.01254	29.41378	241.33	0.00
85/ 5/27	2446212.5	-0.42549	-0.91960	0.00008	26.54860	-12.61333	0.00081	1.01326	29.39259	245.17	0.00
85/ 5/31	2446216.5	-0.36323	-0.94662	0.00008	27.32508	-10.77618	0.00066	1.01392	29.37322	249.01	0.00
85/ 6/ 4	2446220.5	-0.29933	-0.96935	0.00008	27.97615	-8.89356	0.00050	1.01452	29.35576	252.84	0.00
85/ 6/ 8	2446224.5	-0.23407	-0.98769	0.00008	28.49944	-6.97379	0.00034	1.01504	29.34028	256.67	0.00
85/ 6/12	2446228.5	-0.16775	-1.00155	0.00008	28.89308	-5.02527	0.00018	1.01550	29.32684	260.49	0.00
85/ 6/16	2446232.5	-0.10068	-1.01089	0.00008	29.15573	-3.05650	0.00002	1.01589	29.31551	264.31	0.00
85/ 6/20	2446236.5	-0.03314	-1.01566	0.00008	29.28655	-1.07597	-0.00014	1.01620	29.30631	268.13	0.00
85/ 6/24	2446240.5	0.03454	-1.01586	0.00008	29.28523	0.90778	-0.00031	1.01644	29.29930	271.95	0.00
85/ 6/28	2446244.5	0.10206	-1.01147	0.00008	29.15196	2.88626	-0.00047	1.01661	29.29449	275.76	0.00
85/ 7/ 2	2446248.5	0.16913	-1.00253	0.00008	28.88743	4.85099	-0.00062	1.01670	29.29191	279.58	0.00
85/ 7/ 6	2446252.5	0.23543	-0.98908	0.00008	28.49286	6.79358	-0.00078	1.01671	29.29156	283.39	0.00
85/ 7/10	2446256.5	0.30068	-0.97117	0.00008	27.96992	8.70572	-0.00093	1.01665	29.29345	287.20	0.00
85/ 7/14	2446260.5	0.36457	-0.94888	0.00007	27.32083	10.57921	-0.00108	1.01651	29.29757	291.02	0.00
85/ 7/18	2446264.5	0.42681	-0.92232	0.00007	26.54825	12.40599	-0.00122	1.01629	29.30389	294.83	0.00
85/ 7/22	2446268.5	0.48713	-0.89161	0.00007	25.65534	14.17818	-0.00136	1.01600	29.31240	298.65	0.00
85/ 7/26	2446272.5	0.54526	-0.85686	0.00007	24.64573	15.88805	-0.00149	1.01564	29.32306	302.47	0.00
85/ 7/30	2446276.5	0.60092	-0.81825	0.00006	23.52351	17.52812	-0.00161	1.01520	29.33582	306.29	0.00
85/ 8/ 3	2446280.5	0.65386	-0.77594	0.00006	22.29326	19.09111	-0.00173	1.01470	29.35064	310.12	0.00
85/ 8/ 7	2446284.5	0.70384	-0.73011	0.00005	20.95996	20.57004	-0.00184	1.01413	29.36744	313.95	0.00
85/ 8/11	2446288.5	0.75063	-0.68097	0.00005	19.52908	21.95818	-0.00194	1.01349	29.38616	317.79	0.00
85/ 8/15	2446292.5	0.79400	-0.62873	0.00004	18.00648	23.24914	-0.00203	1.01279	29.40673	321.63	0.00
85/ 8/19	2446296.5	0.83376	-0.57363	0.00004	16.39846	24.43686	-0.00212	1.01203	29.42906	325.47	0.00
85/ 8/23	2446300.5	0.86971	-0.51591	0.00003	14.71171	25.51563	-0.00219	1.01121	29.45304	329.32	0.00
85/ 8/27	2446304.5	0.90168	-0.45582	0.00003	12.95332	26.48016	-0.00225	1.01035	29.47859	333.18	0.00
85/ 8/31	2446308.5	0.92951	-0.39365	0.00002	11.13075	27.32556	-0.00231	1.00943	29.50559	337.05	0.00
85/ 9/ 4	2446312.5	0.95306	-0.32966	0.00002	9.25180	28.04741	-0.00235	1.00847	29.53393	340.92	0.00
85/ 9/ 8	2446316.5	0.97222	-0.26416	0.00001	7.32460	28.64176	-0.00239	1.00747	29.56349	344.80	0.00
85/ 9/12	2446320.5	0.98687	-0.19743	0.00001	5.35759	29.10513	-0.00241	1.00643	29.59413	348.69	0.00
85/ 9/16	2446324.5	0.99695	-0.12979	0.00000	3.35948	29.43463	-0.00242	1.00536	29.62573	352.58	0.00
85/ 9/20	2446328.5	1.00238	-0.06154	-0.00000	1.33925	29.62788	-0.00242	1.00427	29.65813	356.49	-0.00

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					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM				EARTH-MOON B		
85/ 9/24	2446332.5	1.00313	0.00700	-0.00001	-0.69393	29.68310	-0.00241	1.00315	29.69121	0.40	-0.00
85/ 9/28	2446336.5	0.99917	0.07550	-0.00001	-2.73069	29.59910	-0.00239	1.00202	29.72480	4.32	-0.00
85/10/ 2	2446340.5	0.99051	0.14365	-0.00002	-4.76153	29.37535	-0.00235	1.00088	29.75875	8.25	-0.00
85/10/ 6	2446344.5	0.97718	0.21112	-0.00003	-6.77684	29.01192	-0.00231	0.99973	29.79290	12.19	-0.00
85/10/10	2446348.5	0.95922	0.27759	-0.00003	-8.76695	28.50959	-0.00225	0.99858	29.82710	16.14	-0.00
85/10/14	2446352.5	0.93670	0.34274	-0.00004	-10.72217	27.86980	-0.00218	0.99744	29.86119	20.10	-0.00
85/10/18	2446356.5	0.90972	0.40625	-0.00004	-12.63287	27.09466	-0.00211	0.99631	29.89499	24.06	-0.00
85/10/22	2446360.5	0.87838	0.46782	-0.00005	-14.48949	26.18703	-0.00202	0.99519	29.92834	28.04	-0.00
85/10/26	2446364.5	0.84282	0.52715	-0.00005	-16.28261	25.15042	-0.00192	0.99410	29.96109	32.02	-0.00
85/10/30	2446368.5	0.80320	0.58393	-0.00005	-18.00302	23.98907	-0.00181	0.99303	29.99307	36.02	-0.00
85/11/ 3	2446372.5	0.75970	0.63789	-0.00006	-19.64176	22.70791	-0.00169	0.99199	30.02412	40.02	-0.00
85/11/ 7	2446376.5	0.71252	0.68876	-0.00006	-21.19016	21.31255	-0.00157	0.99100	30.05408	44.03	-0.00
85/11/11	2446380.5	0.66187	0.73628	-0.00007	-22.63995	19.80927	-0.00143	0.99004	30.08280	48.05	-0.00
85/11/15	2446384.5	0.60800	0.78021	-0.00007	-23.98328	18.20501	-0.00129	0.98913	30.11013	52.07	-0.00
85/11/19	2446388.5	0.55115	0.82032	-0.00007	-25.21277	16.50730	-0.00114	0.98828	30.13594	56.10	-0.00
85/11/23	2446392.5	0.49160	0.85641	-0.00007	-26.32158	14.72429	-0.00099	0.98748	30.16007	60.14	-0.00
85/11/27	2446396.5	0.42963	0.88829	-0.00008	-27.30347	12.86465	-0.00083	0.98674	30.18242	64.19	-0.00
85/12/ 1	2446400.5	0.36555	0.91580	-0.00008	-28.15284	10.93757	-0.00067	0.98606	30.20286	68.24	-0.00
85/12/ 5	2446404.5	0.29966	0.93878	-0.00008	-28.86477	8.95268	-0.00050	0.98545	30.22127	72.30	-0.00
85/12/ 9	2446408.5	0.23229	0.95713	-0.00008	-29.43508	6.92001	-0.00033	0.98491	30.23757	76.36	-0.00
85/12/13	2446412.5	0.16377	0.97073	-0.00008	-29.86036	4.84993	-0.00016	0.98445	30.25166	80.42	-0.00
85/12/17	2446416.5	0.09444	0.97951	-0.00008	-30.13797	2.75309	0.00002	0.98406	30.26346	84.49	-0.00
85/12/21	2446420.5	0.02464	0.98344	-0.00008	-30.26614	0.64032	0.00019	0.98375	30.27291	88.56	-0.00
85/12/25	2446424.5	-0.04528	0.98247	-0.00008	-30.24391	-1.47738	0.00036	0.98351	30.27997	92.64	-0.00
85/12/29	2446428.5	-0.11498	0.97662	-0.00008	-30.07117	-3.58897	0.00054	0.98336	30.28459	96.71	-0.00
86/ 1/ 2	2446432.5	-0.18411	0.96590	-0.00008	-29.74870	-5.68341	0.00070	0.98329	30.28674	100.79	-0.00
86/ 1/ 6	2446436.5	-0.25232	0.95038	-0.00008	-29.27812	-7.74974	0.00087	0.98330	30.28641	104.87	-0.00
86/ 1/10	2446440.5	-0.31927	0.93012	-0.00007	-28.66188	-9.77718	0.00103	0.98339	30.28361	108.95	-0.00
86/ 1/14	2446444.5	-0.38464	0.90524	-0.00007	-27.90331	-11.75514	0.00119	0.98357	30.27834	113.02	-0.00
86/ 1/18	2446448.5	-0.44809	0.87586	-0.00007	-27.00649	-13.67337	0.00134	0.98382	30.27064	117.09	-0.00
86/ 1/22	2446452.5	-0.50931	0.84212	-0.00006	-25.97634	-15.52196	0.00148	0.98416	30.26056	121.17	-0.00
86/ 1/26	2446456.5	-0.56801	0.80420	-0.00006	-24.81845	-17.29144	0.00162	0.98457	30.24813	125.23	-0.00
86/ 1/30	2446460.5	-0.62389	0.76229	-0.00006	-23.53918	-18.97282	0.00174	0.98505	30.23344	129.30	-0.00
86/ 2/ 3	2446464.5	-0.67668	0.71661	-0.00005	-22.14549	-20.55766	0.00186	0.98561	30.21655	133.36	-0.00
86/ 2/ 7	2446468.5	-0.72613	0.66739	-0.00005	-20.64495	-22.03813	0.00197	0.98624	30.19757	137.41	-0.00
86/ 2/11	2446472.5	-0.77199	0.61488	-0.00004	-19.04569	-23.40701	0.00207	0.98694	30.17659	141.46	-0.00
86/ 2/15	2446476.5	-0.81406	0.55933	-0.00004	-17.35630	-24.65777	0.00216	0.98769	30.15372	145.51	-0.00
86/ 2/19	2446480.5	-0.85212	0.50104	-0.00003	-15.58580	-25.78459	0.00224	0.98851	30.12909	149.54	-0.00
86/ 2/23	2446484.5	-0.88601	0.44030	-0.00003	-13.74357	-26.78235	0.00231	0.98938	30.10282	153.58	-0.00
86/ 2/27	2446488.5	-0.91557	0.37740	-0.00002	-11.83928	-27.64671	0.00237	0.99031	30.07506	157.60	-0.00
86/ 3/ 3	2446492.5	-0.94067	0.31267	-0.00002	-9.88282	-28.37408	0.00241	0.99128	30.04594	161.61	-0.00
86/ 3/ 7	2446496.5	-0.96120	0.24641	-0.00001	-7.88426	-28.96162	0.00244	0.99229	30.01561	165.62	-0.00
86/ 3/11	2446500.5	-0.97708	0.17896	-0.00001	-5.85376	-29.40727	0.00246	0.99333	29.98423	169.62	-0.00
86/ 3/15	2446504.5	-0.98823	0.11065	-0.00000	-3.80155	-29.70972	0.00247	0.99441	29.95195	173.61	-0.00
86/ 3/19	2446508.5	-0.99463	0.04181	0.00000	-1.73779	-29.86843	0.00247	0.99551	29.91894	177.59	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
		HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM									
86/ 3/23	2446512.5	-0.99626	-0.02724	0.00001	0.32738	-29.88357	0.00245	0.99663	29.88536	181.57	0.00
86/ 3/27	2446516.5	-0.99313	-0.09616	0.00002	2.38398	-29.75603	0.00242	0.99777	29.85138	185.53	0.00
86/ 3/31	2446520.5	-0.98526	-0.16462	0.00002	4.42219	-29.48740	0.00239	0.99892	29.81716	189.49	0.00
86/ 4/ 4	2446524.5	-0.97272	-0.23229	0.00003	6.43243	-29.07993	0.00234	1.00007	29.78286	193.43	0.00
86/ 4/ 8	2446528.5	-0.95557	-0.29887	0.00003	8.40536	-28.53650	0.00228	1.00122	29.74865	197.37	0.00
86/ 4/12	2446532.5	-0.93392	-0.36404	0.00004	10.33197	-27.86059	0.00220	1.00236	29.71468	201.30	0.00
86/ 4/16	2446536.5	-0.90787	-0.42750	0.00004	12.20358	-27.05627	0.00212	1.00349	29.68113	205.21	0.00
86/ 4/20	2446540.5	-0.87758	-0.48895	0.00005	14.01186	-26.12813	0.00203	1.00460	29.64813	209.12	0.00
86/ 4/24	2446544.5	-0.84319	-0.54813	0.00005	15.74892	-25.08127	0.00193	1.00569	29.61585	213.03	0.00
86/ 4/28	2446548.5	-0.80488	-0.60475	0.00006	17.40726	-23.92123	0.00182	1.00675	29.58442	216.92	0.00
86/ 5/ 2	2446552.5	-0.76283	-0.65857	0.00006	18.97982	-22.65403	0.00171	1.00778	29.55399	220.80	0.00
86/ 5/ 6	2446556.5	-0.71725	-0.70934	0.00006	20.46004	-21.28602	0.00158	1.00877	29.52470	224.68	0.00
86/ 5/10	2446560.5	-0.66837	-0.75685	0.00007	21.84180	-19.82396	0.00145	1.00972	29.49667	228.55	0.00
86/ 5/14	2446564.5	-0.61642	-0.80087	0.00007	23.11948	-18.27489	0.00131	1.01062	29.47002	232.42	0.00
86/ 5/18	2446568.5	-0.56163	-0.84122	0.00007	24.28797	-16.64618	0.00117	1.01148	29.44487	236.27	0.00
86/ 5/22	2446572.5	-0.50428	-0.87772	0.00008	25.34264	-14.94541	0.00102	1.01228	29.42133	240.12	0.00
86/ 5/26	2446576.5	-0.44463	-0.91022	0.00008	26.27942	-13.18040	0.00087	1.01302	29.39950	243.97	0.00
86/ 5/30	2446580.5	-0.38296	-0.93858	0.00008	27.09470	-11.35916	0.00071	1.01370	29.37947	247.80	0.00
86/ 6/ 3	2446584.5	-0.31954	-0.96267	0.00008	27.78543	-9.48986	0.00055	1.01432	29.36132	251.64	0.00
86/ 6/ 7	2446588.5	-0.25468	-0.98240	0.00008	28.34905	-7.58078	0.00038	1.01487	29.34514	255.47	0.00
86/ 6/11	2446592.5	-0.18866	-0.99767	0.00008	28.78355	-5.64032	0.00022	1.01535	29.33098	259.29	0.00
86/ 6/15	2446596.5	-0.12179	-1.00844	0.00008	29.08742	-3.67693	0.00006	1.01577	29.31890	263.11	0.00
86/ 6/19	2446600.5	-0.05437	-1.01465	0.00008	29.25966	-1.69912	-0.00011	1.01611	29.30896	266.93	0.00
86/ 6/23	2446604.5	0.01330	-1.01628	0.00008	29.29980	0.28458	-0.00027	1.01637	29.30119	270.75	0.00
86/ 6/27	2446608.5	0.08091	-1.01334	0.00008	29.20788	2.26567	-0.00044	1.01656	29.29562	274.56	0.00
86/ 7/ 1	2446612.5	0.14815	-1.00582	0.00008	28.98443	4.23566	-0.00060	1.01668	29.29229	278.38	0.00
86/ 7/ 5	2446616.5	0.21472	-0.99378	0.00008	28.63050	6.18613	-0.00076	1.01671	29.29119	282.19	0.00
86/ 7/ 9	2446620.5	0.28033	-0.97726	0.00008	28.14764	8.10874	-0.00091	1.01668	29.29234	286.01	0.00
86/ 7/13	2446624.5	0.34468	-0.95634	0.00008	27.53787	9.99527	-0.00106	1.01656	29.29573	289.82	0.00
86/ 7/17	2446628.5	0.40747	-0.93112	0.00007	26.80374	11.83759	-0.00121	1.01637	29.30135	293.63	0.00
86/ 7/21	2446632.5	0.46843	-0.90169	0.00007	25.94823	13.62777	-0.00135	1.01611	29.30916	297.45	0.00
86/ 7/25	2446636.5	0.52727	-0.86820	0.00007	24.97485	15.35805	-0.00149	1.01577	29.31915	301.27	0.00
86/ 7/29	2446640.5	0.58373	-0.83078	0.00006	23.88753	17.02084	-0.00161	1.01535	29.33126	305.09	0.00
86/ 8/ 2	2446644.5	0.63756	-0.78961	0.00006	22.69069	18.60882	-0.00174	1.01487	29.34545	308.92	0.00
86/ 8/ 6	2446648.5	0.68849	-0.74487	0.00006	21.38921	20.11490	-0.00185	1.01432	29.36166	312.75	0.00
86/ 8/10	2446652.5	0.73630	-0.69674	0.00005	19.98838	21.53227	-0.00196	1.01370	29.37982	316.58	0.00
86/ 8/14	2446656.5	0.78077	-0.64545	0.00005	18.49395	22.85443	-0.00205	1.01302	29.39985	320.42	0.00
86/ 8/18	2446660.5	0.82169	-0.59123	0.00004	16.91208	24.07521	-0.00214	1.01228	29.42166	324.26	0.00
86/ 8/22	2446664.5	0.85885	-0.53430	0.00004	15.24935	25.18880	-0.00222	1.01148	29.44518	328.11	0.00
86/ 8/26	2446668.5	0.89209	-0.47493	0.00003	13.51272	26.18977	-0.00229	1.01063	29.47028	331.97	0.00
86/ 8/30	2446672.5	0.92123	-0.41338	0.00003	11.70953	27.07310	-0.00235	1.00973	29.49688	335.83	0.00
86/ 9/ 3	2446676.5	0.94614	-0.34994	0.00002	9.84747	27.83422	-0.00240	1.00878	29.52485	339.70	0.00
86/ 9/ 7	2446680.5	0.96669	-0.28488	0.00001	7.93458	28.46902	-0.00243	1.00779	29.55407	343.58	0.00
86/ 9/11	2446684.5	0.98277	-0.21850	0.00001	5.97919	28.97389	-0.00246	1.00677	29.58441	347.47	0.00
86/ 9/15	2446688.5	0.99429	-0.15111	0.00000	3.98995	29.34573	-0.00247	1.00571	29.61574	351.36	0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
86/ 9/19	2446692.5	1.00119	-0.08302	-0.00000	1.97574	29.58201	-0.00248	1.00462	29.64791	355.26	-0.00
86/ 9/23	2446696.5	1.00341	-0.01454	-0.00001	-0.05433	29.68074	-0.00247	1.00351	29.68079	359.17	-0.00
86/ 9/27	2446700.5	1.00093	0.05401	-0.00001	-2.09093	29.64057	-0.00245	1.00239	29.71423	3.09	-0.00
86/10/ 1	2446704.5	0.99375	0.12230	-0.00002	-4.12461	29.46074	-0.00242	1.00125	29.74806	7.02	-0.00
86/10/ 5	2446708.5	0.98188	0.19002	-0.00002	-6.14579	29.14113	-0.00238	1.00010	29.78215	10.95	-0.00
86/10/ 9	2446712.5	0.96537	0.25684	-0.00003	-8.14481	28.68231	-0.00233	0.99895	29.81631	14.90	-0.00
86/10/13	2446716.5	0.94428	0.32244	-0.00004	-10.11199	28.08549	-0.00226	0.99781	29.85041	18.85	-0.00
86/10/17	2446720.5	0.91868	0.38650	-0.00004	-12.03767	27.35259	-0.00219	0.99667	29.88427	22.82	-0.00
86/10/21	2446724.5	0.88870	0.44871	-0.00005	-13.91226	26.48622	-0.00211	0.99555	29.91773	26.79	-0.00
86/10/25	2446728.5	0.85445	0.50878	-0.00005	-15.72630	25.48969	-0.00202	0.99445	29.95064	30.77	-0.00
86/10/29	2446732.5	0.81609	0.56639	-0.00006	-17.47051	24.36702	-0.00191	0.99338	29.98283	34.76	-0.00
86/11/ 2	2446736.5	0.77379	0.62127	-0.00006	-19.13583	23.12291	-0.00180	0.99233	30.01415	38.76	-0.00
86/11/ 6	2446740.5	0.72774	0.67313	-0.00006	-20.71352	21.76277	-0.00168	0.99132	30.04444	42.77	-0.00
86/11/10	2446744.5	0.67816	0.72173	-0.00007	-22.19517	20.29268	-0.00155	0.99035	30.07355	46.78	-0.00
86/11/14	2446748.5	0.62527	0.76681	-0.00007	-23.57277	18.71936	-0.00140	0.98943	30.10133	50.81	-0.00
86/11/18	2446752.5	0.56933	0.80815	-0.00007	-24.83880	17.05017	-0.00126	0.98856	30.12763	54.84	-0.00
86/11/22	2446756.5	0.51060	0.84552	-0.00008	-25.98624	15.29306	-0.00110	0.98774	30.15232	58.87	-0.00
86/11/26	2446760.5	0.44936	0.87875	-0.00008	-27.00867	13.45655	-0.00093	0.98698	30.17527	62.92	-0.00
86/11/30	2446764.5	0.38591	0.90764	-0.00008	-27.90026	11.54966	-0.00076	0.98628	30.19634	66.97	-0.00
86/12/ 4	2446768.5	0.32056	0.93206	-0.00008	-28.65589	9.58188	-0.00059	0.98565	30.21544	71.02	-0.00
86/12/ 8	2446772.5	0.25362	0.95188	-0.00008	-29.27115	7.56313	-0.00041	0.98508	30.23245	75.08	-0.00
86/12/12	2446776.5	0.18543	0.96698	-0.00008	-29.74236	5.50368	-0.00023	0.98459	30.24728	79.14	-0.00
86/12/16	2446780.5	0.11631	0.97728	-0.00008	-30.06665	3.41408	-0.00005	0.98418	30.25986	83.21	-0.00
86/12/20	2446784.5	0.04662	0.98274	-0.00008	-30.24196	1.30513	0.00013	0.98384	30.27011	87.28	-0.00
86/12/24	2446788.5	-0.02330	0.98331	-0.00008	-30.26709	-0.81223	0.00031	0.98358	30.27798	91.36	-0.00
86/12/28	2446792.5	-0.09311	0.97899	-0.00008	-30.14165	-2.92696	0.00050	0.98340	30.28343	95.43	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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86/12/16	2446780.5	0.11631	0.97728	-0.00008	-30.06665	3.41408	-0.00005	0.98418	30.25986	83.21	-0.00
86/12/20	2446784.5	0.04662	0.98274	-0.00008	-30.24196	1.30513	0.00013	0.98384	30.27011	87.28	-0.00
86/12/24	2446788.5	-0.02330	0.98331	-0.00008	-30.26709	-0.81223	0.00031	0.98358	30.27798	91.36	-0.00
86/12/28	2446792.5	-0.09311	0.97899	-0.00008	-30.14165	-2.92696	0.00050	0.98340	30.28343	95.43	-0.00
87/ 1/ 1	2446796.5	-0.16245	0.96979	-0.00008	-29.86613	-5.02802	0.00067	0.98330	30.28642	99.51	-0.00
87/ 1/ 5	2446800.5	-0.23098	0.95577	-0.00008	-29.44190	-7.10442	0.00085	0.98329	30.28693	103.59	-0.00
87/ 1/ 9	2446804.5	-0.29837	0.93700	-0.00008	-28.87115	-9.14529	0.00102	0.98335	30.28497	107.66	-0.00
87/ 1/13	2446808.5	-0.36427	0.91355	-0.00008	-28.15692	-11.14000	0.00118	0.98350	30.28055	111.74	-0.00
87/ 1/17	2446812.5	-0.42836	0.88557	-0.00007	-27.30307	-13.07816	0.00134	0.98373	30.27368	115.81	-0.00
87/ 1/21	2446816.5	-0.49031	0.85318	-0.00007	-26.31424	-14.94976	0.00150	0.98403	30.26441	119.89	-0.00
87/ 1/25	2446820.5	-0.54984	0.81655	-0.00007	-25.19583	-16.74518	0.00164	0.98442	30.25279	123.95	-0.00
87/ 1/29	2446824.5	-0.60663	0.77588	-0.00006	-23.95396	-18.45527	0.00178	0.98488	30.23887	128.02	-0.00
87/ 2/ 2	2446828.5	-0.66042	0.73136	-0.00006	-22.59539	-20.07142	0.00191	0.98541	30.22274	132.08	-0.00
87/ 2/ 6	2446832.5	-0.71095	0.68322	-0.00005	-21.12753	-21.58559	0.00202	0.98602	30.20447	136.14	-0.00
87/ 2/10	2446836.5	-0.75796	0.63171	-0.00005	-19.55831	-22.99037	0.00213	0.98669	30.18418	140.19	-0.00
87/ 2/14	2446840.5	-0.80124	0.57708	-0.00004	-17.89621	-24.27900	0.00223	0.98743	30.16196	144.24	-0.00
87/ 2/18	2446844.5	-0.84058	0.51962	-0.00004	-16.15010	-25.44542	0.00231	0.98823	30.13793	148.28	-0.00
87/ 2/22	2446848.5	-0.87580	0.45962	-0.00003	-14.32926	-26.48430	0.00239	0.98908	30.11222	152.31	-0.00
87/ 2/26	2446852.5	-0.90674	0.39736	-0.00003	-12.44329	-27.39105	0.00245	0.98999	30.08496	156.34	-0.00
87/ 3/ 2	2446856.5	-0.93325	0.33316	-0.00002	-10.50201	-28.16183	0.00250	0.99094	30.05629	160.35	-0.00
87/ 3/ 6	2446860.5	-0.95523	0.26735	-0.00001	-8.51545	-28.79357	0.00254	0.99194	30.02637	164.36	-0.00
87/ 3/10	2446864.5	-0.97257	0.20024	-0.00001	-6.49375	-29.28398	0.00256	0.99297	29.99533	168.37	-0.00
87/ 3/14	2446868.5	-0.98521	0.13216	-0.00000	-4.44711	-29.63149	0.00257	0.99404	29.96335	172.36	-0.00
87/ 3/18	2446872.5	-0.99311	0.06344	0.00000	-2.38575	-29.83534	0.00258	0.99513	29.93057	176.34	0.00
87/ 3/22	2446876.5	-0.99623	-0.00558	0.00001	-0.31980	-29.89546	0.00256	0.99625	29.89717	180.32	0.00
87/ 3/26	2446880.5	-0.99459	-0.07458	0.00001	1.74069	-29.81253	0.00254	0.99738	29.86330	184.29	0.00
87/ 3/30	2446884.5	-0.98820	-0.14322	0.00002	3.78584	-29.58791	0.00251	0.99852	29.82913	188.25	0.00
87/ 4/ 3	2446888.5	-0.97712	-0.21118	0.00003	5.80599	-29.22366	0.00246	0.99968	29.79483	192.20	0.00
87/ 4/ 7	2446892.5	-0.96140	-0.27814	0.00003	7.79172	-28.72246	0.00240	1.00083	29.76055	196.14	0.00
87/ 4/11	2446896.5	-0.94115	-0.34378	0.00004	9.73391	-28.08761	0.00233	1.00197	29.72647	200.07	0.00
87/ 4/15	2446900.5	-0.91647	-0.40781	0.00004	11.62377	-27.32300	0.00225	1.00311	29.69273	203.99	0.00
87/ 4/19	2446904.5	-0.88749	-0.46993	0.00005	13.45285	-26.43306	0.00216	1.00423	29.65949	207.90	0.00
87/ 4/23	2446908.5	-0.85436	-0.52985	0.00005	15.21311	-25.42273	0.00206	1.00532	29.62692	211.81	0.00
87/ 4/27	2446912.5	-0.81726	-0.58730	0.00006	16.89694	-24.29744	0.00195	1.00640	29.59514	215.70	0.00
87/ 5/ 1	2446916.5	-0.77636	-0.64203	0.00006	18.49714	-23.06305	0.00183	1.00744	29.56431	219.59	0.00
87/ 5/ 5	2446920.5	-0.73186	-0.69378	0.00007	20.00698	-21.72583	0.00171	1.00844	29.53457	223.47	0.00
87/ 5/ 9	2446924.5	-0.68399	-0.74233	0.00007	21.42020	-20.29239	0.00157	1.00941	29.50604	227.34	0.00
87/ 5/13	2446928.5	-0.63297	-0.78747	0.00007	22.73104	-18.76972	0.00143	1.01033	29.47885	231.21	0.00
87/ 5/17	2446932.5	-0.57905	-0.82899	0.00008	23.93421	-17.16508	0.00128	1.01120	29.45312	235.07	0.00
87/ 5/21	2446936.5	-0.52248	-0.86672	0.00008	25.02495	-15.48598	0.00113	1.01202	29.42896	238.92	0.00
87/ 5/25	2446940.5	-0.46352	-0.90049	0.00008	25.99899	-13.74018	0.00097	1.01279	29.40647	242.76	0.00
87/ 5/29	2446944.5	-0.40244	-0.93016	0.00008	26.85260	-11.93564	0.00081	1.01349	29.38574	246.60	0.00
87/ 6/ 2	2446948.5	-0.33954	-0.95560	0.00009	27.58255	-10.08048	0.00065	1.01413	29.36687	250.44	0.00
87/ 6/ 6	2446952.5	-0.27510	-0.97670	0.00009	28.18613	-8.18295	0.00048	1.01471	29.34993	254.27	0.00
87/ 6/10	2446956.5	-0.20941	-0.99338	0.00009	28.66115	-6.25141	0.00031	1.01522	29.33499	258.10	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
87/ 6/14	2446960.5	-0.14278	-1.00557	0.00009	29.00596	-4.29431	0.00014	1.01565	29.32212	261.92	0.00
87/ 6/18	2446964.5	-0.07550	-1.01321	0.00009	29.21940	-2.32015	-0.00003	1.01602	29.31137	265.74	0.00
87/ 6/22	2446968.5	-0.00787	-1.01628	0.00009	29.30084	-0.33744	-0.00020	1.01631	29.30278	269.56	0.00
87/ 6/26	2446972.5	0.05978	-1.01477	0.00009	29.25015	1.64530	-0.00037	1.01653	29.29639	273.37	0.00
87/ 6/30	2446976.5	0.12717	-1.00869	0.00009	29.06773	3.61959	-0.00054	1.01667	29.29222	277.19	0.00
87/ 7/ 4	2446980.5	0.19398	-0.99806	0.00008	28.75446	5.57697	-0.00071	1.01674	29.29030	281.00	0.00
87/ 7/ 8	2446984.5	0.25993	-0.98294	0.00008	28.31174	7.50908	-0.00087	1.01672	29.29063	284.81	0.00
87/ 7/12	2446988.5	0.32470	-0.96339	0.00008	27.74145	9.40766	-0.00103	1.01664	29.29321	288.63	0.00
87/ 7/16	2446992.5	0.38800	-0.93950	0.00008	27.04596	11.26456	-0.00118	1.01647	29.29803	292.44	0.00
87/ 7/20	2446996.5	0.44956	-0.91138	0.00008	26.22813	13.07179	-0.00133	1.01623	29.30506	296.26	0.00
87/ 7/24	2447000.5	0.50910	-0.87915	0.00007	25.29130	14.82153	-0.00148	1.01592	29.31429	300.07	0.00
87/ 7/28	2447004.5	0.56633	-0.84295	0.00007	24.23928	16.50614	-0.00161	1.01553	29.32568	303.89	0.00
87/ 8/ 1	2447008.5	0.62100	-0.80294	0.00006	23.07632	18.11822	-0.00174	1.01507	29.33917	307.72	0.00
87/ 8/ 5	2447012.5	0.67287	-0.75930	0.00006	21.80717	19.65061	-0.00187	1.01454	29.35471	311.55	0.00
87/ 8/ 9	2447016.5	0.72168	-0.71222	0.00006	20.43698	21.09640	-0.00198	1.01394	29.37224	315.38	0.00
87/ 8/13	2447020.5	0.76722	-0.66190	0.00005	18.97137	22.44902	-0.00209	1.01328	29.39168	319.21	0.00
87/ 8/17	2447024.5	0.80927	-0.60857	0.00005	17.41636	23.70217	-0.00218	1.01256	29.41296	323.06	0.00
87/ 8/21	2447028.5	0.84763	-0.55247	0.00004	15.77839	24.84994	-0.00227	1.01178	29.43599	326.90	0.00
87/ 8/25	2447032.5	0.88211	-0.49384	0.00004	14.06431	25.88678	-0.00235	1.01094	29.46065	330.76	0.00
87/ 8/29	2447036.5	0.91256	-0.43295	0.00003	12.28133	26.80754	-0.00242	1.01005	29.48686	334.62	0.00
87/ 9/ 2	2447040.5	0.93881	-0.37007	0.00002	10.43703	27.60750	-0.00247	1.00912	29.51450	338.49	0.00
87/ 9/ 6	2447044.5	0.96074	-0.30549	0.00002	8.53934	28.28240	-0.00252	1.00814	29.54344	342.36	0.00
87/ 9/10	2447048.5	0.97823	-0.23950	0.00001	6.59651	28.82848	-0.00255	1.00712	29.57355	346.24	0.00
87/ 9/14	2447052.5	0.99119	-0.17240	0.00001	4.61707	29.24247	-0.00257	1.00607	29.60471	350.13	0.00
87/ 9/18	2447056.5	0.99954	-0.10449	0.00000	2.60983	29.52164	-0.00258	1.00499	29.63678	354.03	0.00
87/ 9/22	2447060.5	1.00323	-0.03610	-0.00001	0.58385	29.66386	-0.00258	1.00388	29.66960	357.94	-0.00
87/ 9/26	2447064.5	1.00223	0.03246	-0.00001	-1.45163	29.66755	-0.00257	1.00276	29.70304	1.85	-0.00
87/ 9/30	2447068.5	0.99652	0.10087	-0.00002	-3.48718	29.53175	-0.00254	1.00162	29.73693	5.78	-0.00
87/10/ 4	2447072.5	0.98613	0.16880	-0.00002	-5.51327	29.25616	-0.00250	1.00047	29.77111	9.71	-0.00
87/10/ 8	2447076.5	0.97107	0.23593	-0.00003	-7.52025	28.84112	-0.00245	0.99932	29.80544	13.66	-0.00
87/10/12	2447080.5	0.95140	0.30195	-0.00003	-9.49844	28.28762	-0.00239	0.99817	29.83974	17.61	-0.00
87/10/16	2447084.5	0.92721	0.36653	-0.00004	-11.43818	27.59736	-0.00231	0.99703	29.87384	21.57	-0.00
87/10/20	2447088.5	0.89859	0.42935	-0.00004	-13.32984	26.77274	-0.00223	0.99590	29.90760	25.54	-0.00
87/10/24	2447092.5	0.86567	0.49012	-0.00005	-15.16392	25.81683	-0.00213	0.99479	29.94083	29.52	-0.00
87/10/28	2447096.5	0.82858	0.54854	-0.00005	-16.93106	24.73343	-0.00202	0.99370	29.97338	33.51	-0.00
87/11/ 1	2447100.5	0.78750	0.60431	-0.00006	-18.62213	23.52703	-0.00191	0.99264	30.00508	37.50	-0.00
87/11/ 5	2447104.5	0.74260	0.65715	-0.00006	-20.22827	22.20281	-0.00178	0.99162	30.03578	41.51	-0.00
87/11/ 9	2447108.5	0.69411	0.70681	-0.00007	-21.74097	20.76664	-0.00164	0.99064	30.06532	45.52	-0.00
87/11/13	2447112.5	0.64223	0.75302	-0.00007	-23.15209	19.22505	-0.00150	0.98970	30.09355	49.54	-0.00
87/11/17	2447116.5	0.58722	0.79556	-0.00007	-24.45395	17.58519	-0.00135	0.98881	30.12033	53.57	-0.00
87/11/21	2447120.5	0.52934	0.83420	-0.00008	-25.63935	15.85484	-0.00119	0.98797	30.14552	57.60	-0.00
87/11/25	2447124.5	0.46885	0.86875	-0.00008	-26.70170	14.04233	-0.00102	0.98719	30.16899	61.64	-0.00
87/11/29	2447128.5	0.40606	0.89902	-0.00008	-27.63496	12.15655	-0.00085	0.98647	30.19061	65.69	-0.00
87/12/ 3	2447132.5	0.34127	0.92487	-0.00008	-28.43380	10.20684	-0.00068	0.98582	30.21027	69.75	-0.00
87/12/ 7	2447136.5	0.27480	0.94614	-0.00008	-29.09356	8.20301	-0.00050	0.98524	30.22787	73.80	-0.00

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87/12/11	2447140.5	0.20696	0.96273	-0.00009	-29.61033	6.15521	-0.00031	0.98473	30.24332	77.87	-0.01
87/12/15	2447144.5	0.13810	0.97455	-0.00009	-29.98101	4.07391	-0.00013	0.98429	30.25653	81.93	-0.01
87/12/19	2447148.5	0.06855	0.98154	-0.00009	-30.20326	1.96986	0.00006	0.98393	30.26743	86.00	-0.01
87/12/23	2447152.5	-0.00134	0.98365	-0.00009	-30.27560	-0.14605	0.00024	0.98365	30.27595	90.08	-0.01
87/12/27	2447156.5	-0.07122	0.98086	-0.00009	-30.19741	-2.26280	0.00043	0.98345	30.28207	94.15	-0.00
87/12/31	2447160.5	-0.14074	0.97320	-0.00008	-29.96890	-4.36933	0.00061	0.98332	30.28574	98.23	-0.00
88/ 1/ 4	2447164.5	-0.20957	0.96069	-0.00008	-29.59115	-6.45464	0.00079	0.98328	30.28694	102.31	-0.00
88/ 1/ 8	2447168.5	-0.27735	0.94340	-0.00008	-29.06611	-8.50781	0.00097	0.98333	30.28567	106.38	-0.00
88/ 1/12	2447172.5	-0.34375	0.92142	-0.00008	-28.39656	-10.51812	0.00114	0.98345	30.28193	110.46	-0.00
88/ 1/16	2447176.5	-0.40844	0.89485	-0.00008	-27.58609	-12.47512	0.00131	0.98365	30.27575	114.53	-0.00
88/ 1/20	2447180.5	-0.47110	0.86383	-0.00007	-26.63912	-14.36865	0.00146	0.98394	30.26715	118.61	-0.00
88/ 1/24	2447184.5	-0.53142	0.82851	-0.00007	-25.56080	-16.18897	0.00162	0.98430	30.25619	122.68	-0.00
88/ 1/28	2447188.5	-0.58911	0.78909	-0.00006	-24.35703	-17.92679	0.00176	0.98474	30.24293	126.74	-0.00
88/ 2/ 1	2447192.5	-0.64387	0.74576	-0.00006	-23.03439	-19.57332	0.00189	0.98525	30.22743	130.81	-0.00
88/ 2/ 5	2447196.5	-0.69545	0.69873	-0.00006	-21.60006	-21.12032	0.00202	0.98584	30.20978	134.87	-0.00
88/ 2/ 9	2447200.5	-0.74359	0.64825	-0.00005	-20.06185	-22.56020	0.00213	0.98649	30.19007	138.92	-0.00
88/ 2/13	2447204.5	-0.78807	0.59458	-0.00005	-18.42804	-23.88598	0.00224	0.98721	30.16841	142.97	-0.00
88/ 2/17	2447208.5	-0.82867	0.53799	-0.00004	-16.70741	-25.09139	0.00233	0.98799	30.14491	147.01	-0.00
88/ 2/21	2447212.5	-0.86520	0.47875	-0.00004	-14.90911	-26.17087	0.00241	0.98883	30.11970	151.04	-0.00
88/ 2/25	2447216.5	-0.89750	0.41717	-0.00003	-13.04263	-27.11960	0.00248	0.98972	30.09290	155.07	-0.00
88/ 2/29	2447220.5	-0.92542	0.35355	-0.00002	-11.11775	-27.93349	0.00254	0.99066	30.06467	159.09	-0.00
88/ 3/ 4	2447224.5	-0.94883	0.28821	-0.00002	-9.14441	-28.60924	0.00258	0.99164	30.03513	163.10	-0.00
88/ 3/ 8	2447228.5	-0.96764	0.22147	-0.00001	-7.13274	-29.14431	0.00261	0.99266	30.00444	167.11	-0.00
88/ 3/12	2447232.5	-0.98177	0.15366	-0.00001	-5.09293	-29.53690	0.00263	0.99372	29.97276	171.10	-0.00
88/ 3/16	2447236.5	-0.99116	0.08511	0.00000	-3.03518	-29.78601	0.00264	0.99480	29.94025	175.09	0.00
88/ 3/20	2447240.5	-0.99578	0.01615	0.00001	-0.96966	-29.89134	0.00263	0.99591	29.90707	179.07	0.00
88/ 3/24	2447244.5	-0.99564	-0.05288	0.00001	1.09355	-29.85335	0.00261	0.99704	29.87337	183.04	0.00
88/ 3/28	2447248.5	-0.99074	-0.12167	0.00002	3.14453	-29.67317	0.00258	0.99818	29.83932	187.00	0.00
88/ 4/ 1	2447252.5	-0.98113	-0.18988	0.00002	5.17352	-29.35266	0.00254	0.99933	29.80510	190.95	0.00
88/ 4/ 5	2447256.5	-0.96686	-0.25718	0.00003	7.17103	-28.89429	0.00248	1.00048	29.77085	194.90	0.00
88/ 4/ 9	2447260.5	-0.94803	-0.32327	0.00004	9.12785	-28.30117	0.00242	1.00163	29.73674	198.83	0.00
88/ 4/13	2447264.5	-0.92473	-0.38784	0.00004	11.03507	-27.57701	0.00234	1.00277	29.70294	202.75	0.00
88/ 4/17	2447268.5	-0.89708	-0.45059	0.00005	12.88415	-26.72608	0.00225	1.00389	29.66959	206.67	0.00
88/ 4/21	2447272.5	-0.86525	-0.51123	0.00005	14.66690	-25.75315	0.00215	1.00499	29.63685	210.58	0.00
88/ 4/25	2447276.5	-0.82938	-0.56949	0.00006	16.37559	-24.66350	0.00204	1.00607	29.60487	214.48	0.00
88/ 4/29	2447280.5	-0.78965	-0.62510	0.00006	18.00287	-23.46286	0.00193	1.00712	29.57379	218.37	0.00
88/ 5/ 3	2447284.5	-0.74626	-0.67782	0.00007	19.54187	-22.15736	0.00180	1.00814	29.54375	222.25	0.00
88/ 5/ 7	2447288.5	-0.69943	-0.72740	0.00007	20.98618	-20.75353	0.00167	1.00912	29.51489	226.12	0.00
88/ 5/11	2447292.5	-0.64938	-0.77364	0.00007	22.32987	-19.25821	0.00153	1.01005	29.48732	229.99	0.00
88/ 5/15	2447296.5	-0.59634	-0.81632	0.00008	23.56751	-17.67860	0.00138	1.01094	29.46117	233.85	0.00
88/ 5/19	2447300.5	-0.54057	-0.85526	0.00008	24.69417	-16.02212	0.00123	1.01177	29.43655	237.70	0.00
88/ 5/23	2447304.5	-0.48233	-0.89029	0.00008	25.70542	-14.29647	0.00107	1.01255	29.41356	241.55	0.00
88/ 5/27	2447308.5	-0.42190	-0.92127	0.00008	26.59736	-12.50954	0.00091	1.01328	29.39231	245.39	0.00
88/ 5/31	2447312.5	-0.35954	-0.94805	0.00009	27.36659	-10.66940	0.00075	1.01394	29.37289	249.23	0.00
88/ 6/ 4	2447316.5	-0.29555	-0.97053	0.00009	28.01026	-8.78427	0.00058	1.01453	29.35537	253.06	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							
88/ 6/ 8	2447320.5	-0.23022	-0.98861	0.00009	28.52600	-6.86247	0.00040	1.01506	29.33984	256.89	0.01
88/ 6/12	2447324.5	-0.16385	-1.00221	0.00009	28.91199	-4.91244	0.00023	1.01552	29.32636	260.71	0.01
88/ 6/16	2447328.5	-0.09674	-1.01129	0.00009	29.16692	-2.94266	0.00005	1.01590	29.31499	264.54	0.01
88/ 6/20	2447332.5	-0.02919	-1.01580	0.00009	29.28999	-0.96164	-0.00012	1.01622	29.30577	268.35	0.01
88/ 6/24	2447336.5	0.03849	-1.01573	0.00009	29.28091	1.02210	-0.00030	1.01646	29.29874	272.17	0.01
88/ 6/28	2447340.5	0.10600	-1.01108	0.00009	29.13991	3.00004	-0.00048	1.01662	29.29393	275.98	0.00
88/ 7/ 2	2447344.5	0.17303	-1.00188	0.00009	28.86772	4.96374	-0.00065	1.01671	29.29136	279.80	0.00
88/ 7/ 6	2447348.5	0.23928	-0.98816	0.00009	28.46556	6.90479	-0.00082	1.01672	29.29103	283.61	0.00
88/ 7/10	2447352.5	0.30445	-0.97000	0.00008	27.93518	8.81490	-0.00099	1.01666	29.29294	287.43	0.00
88/ 7/14	2447356.5	0.36825	-0.94747	0.00008	27.27878	10.68587	-0.00115	1.01651	29.29710	291.24	0.00
88/ 7/18	2447360.5	0.43039	-0.92066	0.00008	26.49908	12.50967	-0.00131	1.01630	29.30347	295.06	0.00
88/ 7/22	2447364.5	0.49059	-0.88971	0.00008	25.59926	14.27841	-0.00146	1.01600	29.31203	298.87	0.00
88/ 7/26	2447368.5	0.54858	-0.85474	0.00007	24.58298	15.98440	-0.00160	1.01564	29.32276	302.69	0.00
88/ 7/30	2447372.5	0.60409	-0.81591	0.00007	23.45437	17.62016	-0.00174	1.01520	29.33560	306.52	0.00
88/ 8/ 3	2447376.5	0.65686	-0.77339	0.00006	22.21800	19.17844	-0.00187	1.01469	29.35050	310.34	0.00
88/ 8/ 7	2447380.5	0.70666	-0.72736	0.00006	20.87892	20.65226	-0.00199	1.01412	29.36741	314.17	0.00
88/ 8/11	2447384.5	0.75326	-0.67804	0.00005	19.44259	22.03492	-0.00210	1.01347	29.38626	318.01	0.00
88/ 8/15	2447388.5	0.79642	-0.62563	0.00005	17.91490	23.32006	-0.00221	1.01277	29.40695	321.85	0.00
88/ 8/19	2447392.5	0.83596	-0.57037	0.00004	16.30218	24.50162	-0.00230	1.01201	29.42942	325.69	0.00
88/ 8/23	2447396.5	0.87169	-0.51251	0.00004	14.61115	25.57394	-0.00238	1.01119	29.45356	329.55	0.00
88/ 8/27	2447400.5	0.90342	-0.45230	0.00003	12.84889	26.53174	-0.00245	1.01032	29.47927	333.40	0.00
88/ 8/31	2447404.5	0.93100	-0.39001	0.00003	11.02289	27.37017	-0.00251	1.00939	29.50644	337.27	0.00
88/ 9/ 4	2447408.5	0.95430	-0.32594	0.00002	9.14097	28.08481	-0.00256	1.00843	29.53496	341.14	0.00
88/ 9/ 8	2447412.5	0.97320	-0.26035	0.00002	7.21128	28.67174	-0.00260	1.00742	29.56469	345.02	0.00
88/ 9/12	2447416.5	0.98759	-0.19356	0.00001	5.24227	29.12753	-0.00263	1.00638	29.59551	348.91	0.00
88/ 9/16	2447420.5	0.99740	-0.12588	0.00000	3.24267	29.44930	-0.00264	1.00531	29.62729	352.81	0.00
88/ 9/20	2447424.5	1.00256	-0.05760	-0.00000	1.22145	29.63471	-0.00264	1.00421	29.65987	356.71	-0.00
88/ 9/24	2447428.5	1.00303	0.01094	-0.00001	-0.81219	29.68200	-0.00263	1.00309	29.69311	0.62	-0.00
88/ 9/28	2447432.5	0.99880	0.07943	-0.00001	-2.84887	29.59004	-0.00260	1.00196	29.72686	4.55	-0.00
88/10/ 2	2447436.5	0.98987	0.14755	-0.00002	-4.87909	29.35829	-0.00257	1.00081	29.76096	8.48	-0.00
88/10/ 6	2447440.5	0.97627	0.21497	-0.00003	-6.89323	28.98691	-0.00252	0.99966	29.79526	12.42	-0.00
88/10/10	2447444.5	0.95804	0.28137	-0.00003	-8.88162	28.47667	-0.00246	0.99851	29.82958	16.37	-0.00
88/10/14	2447448.5	0.93526	0.34644	-0.00004	-10.83458	27.82906	-0.00239	0.99736	29.86377	20.33	-0.00
88/10/18	2447452.5	0.90802	0.40985	-0.00004	-12.74246	27.04625	-0.00231	0.99623	29.89766	24.29	-0.00
88/10/22	2447456.5	0.87643	0.47130	-0.00005	-14.59572	26.13110	-0.00221	0.99511	29.93108	28.27	-0.00
88/10/26	2447460.5	0.84063	0.53048	-0.00005	-16.38493	25.08720	-0.00211	0.99402	29.96387	32.25	-0.00
88/10/30	2447464.5	0.80078	0.58711	-0.00006	-18.10091	23.91880	-0.00199	0.99295	29.99586	36.25	-0.00
88/11/ 3	2447468.5	0.75706	0.64091	-0.00006	-19.73469	22.63089	-0.00187	0.99192	30.02691	40.25	-0.00
88/11/ 7	2447472.5	0.70967	0.69159	-0.00007	-21.27765	21.22911	-0.00173	0.99092	30.05683	44.26	-0.00
88/11/11	2447476.5	0.65883	0.73891	-0.00007	-22.72151	19.71978	-0.00159	0.98997	30.08550	48.28	-0.00
88/11/15	2447480.5	0.60477	0.78262	-0.00007	-24.05846	18.10988	-0.00143	0.98906	30.11275	52.30	-0.00
88/11/19	2447484.5	0.54776	0.82251	-0.00008	-25.28114	16.40699	-0.00128	0.98821	30.13844	56.34	-0.00
88/11/23	2447488.5	0.48806	0.85836	-0.00008	-26.38276	14.61927	-0.00111	0.98742	30.16244	60.38	-0.00
88/11/27	2447492.5	0.42596	0.89000	-0.00008	-27.35709	12.75544	-0.00094	0.98668	30.18463	64.42	-0.00
88/12/ 1	2447496.5	0.36176	0.91725	-0.00008	-28.19859	10.82472	-0.00076	0.98601	30.20488	68.48	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
88/12/ 5	2447500.5	0.29578	0.93997	-0.00009	-28.90237	8.83675	-0.00058	0.98541	30.22309	72.53	-0.01
88/12/ 9	2447504.5	0.22833	0.95804	-0.00009	-29.46430	6.80161	-0.00039	0.98487	30.23916	76.59	-0.01
88/12/13	2447508.5	0.15975	0.97137	-0.00009	-29.88101	4.72967	-0.00021	0.98442	30.25301	80.66	-0.01
88/12/17	2447512.5	0.09038	0.97987	-0.00009	-30.14992	2.63160	-0.00002	0.98403	30.26455	84.73	-0.01
88/12/21	2447516.5	0.02057	0.98351	-0.00009	-30.26930	0.51826	0.00017	0.98373	30.27374	88.80	-0.01
88/12/25	2447520.5	-0.04936	0.98226	-0.00009	-30.23825	-1.59937	0.00036	0.98350	30.28051	92.88	-0.01
88/12/29	2447524.5	-0.11903	0.97613	-0.00009	-30.05671	-3.71023	0.00055	0.98336	30.28484	96.95	-0.01
89/ 1/ 2	2447528.5	-0.18811	0.96514	-0.00008	-29.72552	-5.80330	0.00073	0.98330	30.28671	101.03	-0.00
89/ 1/ 6	2447532.5	-0.25626	0.94934	-0.00008	-29.24633	-7.86761	0.00091	0.98332	30.28609	105.11	-0.00
89/ 1/10	2447536.5	-0.32313	0.92881	-0.00008	-28.62168	-9.89240	0.00109	0.98342	30.28300	109.18	-0.00
89/ 1/14	2447540.5	-0.38839	0.90367	-0.00008	-27.85491	-11.86710	0.00126	0.98360	30.27745	113.26	-0.00
89/ 1/18	2447544.5	-0.45172	0.87403	-0.00007	-26.95019	-13.78147	0.00142	0.98386	30.26948	117.33	-0.00
89/ 1/22	2447548.5	-0.51281	0.84005	-0.00007	-25.91244	-15.62564	0.00158	0.98420	30.25913	121.40	-0.00
89/ 1/26	2447552.5	-0.57135	0.80190	-0.00007	-24.74733	-17.39015	0.00173	0.98462	30.24645	125.47	-0.00
89/ 1/30	2447556.5	-0.62706	0.75977	-0.00006	-23.46124	-19.06607	0.00187	0.98511	30.23152	129.53	-0.00
89/ 2/ 3	2447560.5	-0.67966	0.71388	-0.00006	-22.06118	-20.64499	0.00200	0.98568	30.21442	133.59	-0.00
89/ 2/ 7	2447564.5	-0.72890	0.66446	-0.00005	-20.55475	-22.11910	0.00212	0.98631	30.19524	137.65	-0.00
89/ 2/11	2447568.5	-0.77455	0.61177	-0.00005	-18.95010	-23.48124	0.00223	0.98701	30.17408	141.70	-0.00
89/ 2/15	2447572.5	-0.81639	0.55606	-0.00004	-17.25585	-24.72492	0.00233	0.98778	30.15105	145.74	-0.00
89/ 2/19	2447576.5	-0.85422	0.49763	-0.00004	-15.48104	-25.84435	0.00242	0.98860	30.12628	149.78	-0.00
89/ 2/23	2447580.5	-0.88787	0.43675	-0.00003	-13.63506	-26.83448	0.00249	0.98947	30.09990	153.81	-0.00
89/ 2/27	2447584.5	-0.91717	0.37374	-0.00003	-11.72760	-27.69099	0.00256	0.99040	30.07204	157.83	-0.00
89/ 3/ 3	2447588.5	-0.94201	0.30891	-0.00002	-9.76856	-28.41036	0.00261	0.99137	30.04285	161.84	-0.00
89/ 3/ 7	2447592.5	-0.96227	0.24259	-0.00001	-7.76801	-28.98978	0.00265	0.99238	30.01248	165.85	-0.00
89/ 3/11	2447596.5	-0.97788	0.17508	-0.00001	-5.73612	-29.42724	0.00267	0.99343	29.98108	169.85	-0.00
89/ 3/15	2447600.5	-0.98876	0.10673	-0.00000	-3.68308	-29.72147	0.00268	0.99450	29.94881	173.84	-0.00
89/ 3/19	2447604.5	-0.99489	0.03787	0.00000	-1.61910	-29.87198	0.00268	0.99561	29.91583	177.82	0.00
89/ 3/23	2447608.5	-0.99624	-0.03118	0.00001	0.44574	-29.87897	0.00267	0.99673	29.88230	181.79	0.00
89/ 3/27	2447612.5	-0.99283	-0.10007	0.00002	2.50145	-29.74338	0.00265	0.99786	29.84838	185.76	0.00
89/ 3/31	2447616.5	-0.98470	-0.16849	0.00002	4.53823	-29.46682	0.00261	0.99901	29.81424	189.71	0.00
89/ 4/ 4	2447620.5	-0.97189	-0.23611	0.00003	6.54650	-29.05158	0.00256	1.00016	29.78005	193.66	0.00
89/ 4/ 8	2447624.5	-0.95448	-0.30262	0.00003	8.51696	-28.50058	0.00249	1.00130	29.74596	197.59	0.00
89/ 4/12	2447628.5	-0.93257	-0.36769	0.00004	10.44061	-27.81734	0.00242	1.00244	29.71213	201.52	0.00
89/ 4/16	2447632.5	-0.90628	-0.43104	0.00004	12.30879	-27.00593	0.00234	1.00357	29.67872	205.44	0.00
89/ 4/20	2447636.5	-0.87575	-0.49238	0.00005	14.11321	-26.07098	0.00224	1.00468	29.64589	209.35	0.00
89/ 4/24	2447640.5	-0.84113	-0.55141	0.00006	15.84597	-25.01761	0.00213	1.00576	29.61377	213.25	0.00
89/ 4/28	2447644.5	-0.80260	-0.60788	0.00006	17.49961	-23.85140	0.00202	1.00682	29.58252	217.14	0.00
89/ 5/ 2	2447648.5	-0.76034	-0.66153	0.00006	19.06711	-22.57836	0.00189	1.00784	29.55227	221.02	0.00
89/ 5/ 6	2447652.5	-0.71457	-0.71212	0.00007	20.54191	-21.20489	0.00176	1.00883	29.52316	224.90	0.00
89/ 5/10	2447656.5	-0.66551	-0.75943	0.00007	21.91792	-19.73775	0.00162	1.00977	29.49532	228.77	0.00
89/ 5/14	2447660.5	-0.61338	-0.80325	0.00008	23.18956	-18.18400	0.00147	1.01067	29.46886	232.63	0.00
89/ 5/18	2447664.5	-0.55845	-0.84339	0.00008	24.35173	-16.55102	0.00132	1.01152	29.44389	236.49	0.00
89/ 5/22	2447668.5	-0.50096	-0.87967	0.00008	25.39984	-14.84640	0.00116	1.01231	29.42053	240.34	0.00
89/ 5/26	2447672.5	-0.44118	-0.91193	0.00008	26.32983	-13.07799	0.00099	1.01305	29.39888	244.18	0.00
89/ 5/30	2447676.5	-0.37940	-0.94005	0.00009	27.13814	-11.25380	0.00082	1.01372	29.37902	248.02	0.00

1.3 1 A.U.=149,599,000 KM.

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
89/ 6/ 3	2447680.5	-0.31589	-0.96389	0.00009	27.82172	-9.38200	0.00065	1.01434	29.36103	251.85	0.01
89/ 6/ 7	2447684.5	-0.25095	-0.98337	0.00009	28.37807	-7.47089	0.00047	1.01488	29.34500	255.68	0.01
89/ 6/11	2447688.5	-0.18487	-0.99839	0.00009	28.80518	-5.52887	0.00030	1.01536	29.33099	259.51	0.01
89/ 6/15	2447692.5	-0.11796	-1.00890	0.00009	29.10157	-3.56440	0.00012	1.01577	29.31905	263.33	0.01
89/ 6/19	2447696.5	-0.05052	-1.01485	0.00009	29.26629	-1.58600	-0.00006	1.01610	29.30923	267.15	0.01
89/ 6/23	2447700.5	0.01716	-1.01622	0.00009	29.29888	0.39783	-0.00024	1.01636	29.30158	270.97	0.01
89/ 6/27	2447704.5	0.08475	-1.01301	0.00009	29.19941	2.37855	-0.00041	1.01655	29.29613	274.78	0.01
89/ 7/ 1	2447708.5	0.15197	-1.00524	0.00009	28.96845	4.34769	-0.00059	1.01666	29.29289	278.60	0.01
89/ 7/ 5	2447712.5	0.21850	-0.99294	0.00009	28.60707	6.29683	-0.00076	1.01669	29.29188	282.41	0.00
89/ 7/ 9	2447716.5	0.28404	-0.97617	0.00009	28.11685	8.21763	-0.00093	1.01665	29.29311	286.22	0.00
89/ 7/13	2447720.5	0.34831	-0.95500	0.00008	27.49985	10.10187	-0.00110	1.01653	29.29658	290.04	0.00
89/ 7/17	2447724.5	0.41101	-0.92953	0.00008	26.75862	11.94145	-0.00126	1.01634	29.30226	293.85	0.00
89/ 7/21	2447728.5	0.47185	-0.89986	0.00008	25.89621	13.72844	-0.00141	1.01607	29.31013	297.67	0.00
89/ 7/25	2447732.5	0.53057	-0.86614	0.00007	24.91613	15.45507	-0.00156	1.01573	29.32017	301.49	0.00
89/ 7/29	2447736.5	0.58688	-0.82851	0.00007	23.82234	17.11379	-0.00170	1.01531	29.33233	305.31	0.00
89/ 8/ 2	2447740.5	0.64055	-0.78713	0.00007	22.61930	18.69728	-0.00184	1.01483	29.34657	309.14	0.00
89/ 8/ 6	2447744.5	0.69131	-0.74218	0.00006	21.31190	20.19846	-0.00196	1.01427	29.36282	312.97	0.00
89/ 8/10	2447748.5	0.73894	-0.69387	0.00006	19.90547	21.61056	-0.00208	1.01365	29.38101	316.80	0.00
89/ 8/14	2447752.5	0.78321	-0.64241	0.00005	18.40578	22.92708	-0.00219	1.01297	29.40108	320.64	0.00
89/ 8/18	2447756.5	0.82392	-0.58802	0.00005	16.81902	24.14187	-0.00229	1.01223	29.42294	324.48	0.00
89/ 8/22	2447760.5	0.86086	-0.53095	0.00004	15.15179	25.24915	-0.00237	1.01143	29.44650	328.34	0.00
89/ 8/26	2447764.5	0.89387	-0.47145	0.00004	13.41106	26.24351	-0.00245	1.01057	29.47165	332.19	0.00
89/ 8/30	2447768.5	0.92277	-0.40979	0.00003	11.60420	27.11996	-0.00252	1.00967	29.49830	336.05	0.00
89/ 9/ 3	2447772.5	0.94744	-0.34624	0.00002	9.73892	27.87395	-0.00257	1.00872	29.52632	339.93	0.00
89/ 9/ 7	2447776.5	0.96773	-0.28110	0.00002	7.82329	28.50139	-0.00261	1.00773	29.55559	343.80	0.00
89/ 9/11	2447780.5	0.98355	-0.21465	0.00001	5.86564	28.99872	-0.00264	1.00670	29.58600	347.69	0.00
89/ 9/15	2447784.5	0.99481	-0.14721	0.00001	3.87465	29.36286	-0.00266	1.00564	29.61740	351.58	0.00
89/ 9/19	2447788.5	1.00143	-0.07909	0.00000	1.85920	29.59130	-0.00267	1.00455	29.64965	355.48	0.00
89/ 9/23	2447792.5	1.00338	-0.01060	-0.00001	-0.17157	29.68211	-0.00266	1.00344	29.68261	359.39	-0.00
89/ 9/27	2447796.5	1.00064	0.05794	-0.00001	-2.20835	29.63396	-0.00264	1.00231	29.71613	3.31	-0.00
89/10/ 1	2447800.5	0.99318	0.12621	-0.00002	-4.24165	29.44611	-0.00261	1.00117	29.75005	7.24	-0.00
89/10/ 5	2447804.5	0.98105	0.19389	-0.00002	-6.26190	29.11852	-0.00257	1.00002	29.78421	11.18	-0.00
89/10/ 9	2447808.5	0.96427	0.26065	-0.00003	-8.25943	28.65175	-0.00251	0.99887	29.81847	15.13	-0.00
89/10/13	2447812.5	0.94291	0.32616	-0.00004	-10.22456	28.04708	-0.00244	0.99773	29.85264	19.08	-0.00
89/10/17	2447816.5	0.91706	0.39013	-0.00004	-12.14763	27.30646	-0.00236	0.99659	29.88658	23.05	-0.00
89/10/21	2447820.5	0.88682	0.45223	-0.00005	-14.01906	26.43254	-0.00227	0.99547	29.92011	27.02	-0.00
89/10/25	2447824.5	0.85233	0.51216	-0.00005	-15.82939	25.42867	-0.00217	0.99437	29.95307	31.00	-0.00
89/10/29	2447828.5	0.81374	0.56962	-0.00006	-17.56935	24.29890	-0.00206	0.99330	29.98530	34.99	-0.00
89/11/ 2	2447832.5	0.77122	0.62433	-0.00006	-19.22990	23.04798	-0.00193	0.99225	30.01664	38.99	-0.00
89/11/ 6	2447836.5	0.72496	0.67602	-0.00007	-20.80231	21.68136	-0.00180	0.99125	30.04693	43.00	-0.00
89/11/10	2447840.5	0.67518	0.72442	-0.00007	-22.27819	20.20515	-0.00166	0.99028	30.07600	47.02	-0.00
89/11/14	2447844.5	0.62211	0.76930	-0.00007	-23.64957	18.62610	-0.00151	0.98936	30.10372	51.04	-0.00
89/11/18	2447848.5	0.56600	0.81041	-0.00008	-24.90895	16.95163	-0.00135	0.98849	30.12994	55.07	-0.00
89/11/22	2447852.5	0.50711	0.84755	-0.00008	-26.04934	15.18970	-0.00118	0.98768	30.15452	59.11	-0.00
89/11/26	2447856.5	0.44574	0.88053	-0.00008	-27.06435	13.34887	-0.00101	0.98692	30.17733	63.15	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
89/11/30	2447860.5	0.38217	0.90917	-0.00008	-27.94820	11.43820	-0.00083	0.98623	30.19825	67.20	-0.00
89/12/ 4	2447864.5	0.31671	0.93333	-0.00009	-28.69580	9.46721	-0.00065	0.98560	30.21717	71.26	-0.01
89/12/ 8	2447868.5	0.24969	0.95288	-0.00009	-29.30278	7.44583	-0.00047	0.98505	30.23398	75.32	-0.01
89/12/12	2447872.5	0.18143	0.96770	-0.00009	-29.76551	5.38436	-0.00028	0.98456	30.24859	79.38	-0.01
89/12/16	2447876.5	0.11228	0.97773	-0.00009	-30.08118	3.29338	-0.00009	0.98416	30.26093	83.45	-0.01
89/12/20	2447880.5	0.04256	0.98290	-0.00009	-30.24777	1.18367	0.00010	0.98383	30.27092	87.52	-0.01
89/12/24	2447884.5	-0.02736	0.98319	-0.00009	-30.26412	-0.93379	0.00029	0.98357	30.27852	91.59	-0.01
89/12/28	2447888.5	-0.09715	0.97859	-0.00009	-30.12990	-3.04797	0.00048	0.98340	30.28368	95.67	-0.01
90/ 1/ 1	2447892.5	-0.16646	0.96912	-0.00009	-29.84567	-5.14783	0.00067	0.98331	30.28637	99.75	-0.01
90/ 1/ 5	2447896.5	-0.23494	0.95483	-0.00008	-29.41283	-7.22238	0.00085	0.98331	30.28659	103.82	-0.00
90/ 1/ 9	2447900.5	-0.30224	0.93578	-0.00008	-28.83363	-9.26079	0.00103	0.98338	30.28433	107.90	-0.00
90/ 1/13	2447904.5	-0.36805	0.91208	-0.00008	-28.11116	-11.25241	0.00121	0.98353	30.27960	111.98	-0.00
90/ 1/17	2447908.5	-0.43202	0.88383	-0.00008	-27.24934	-13.18690	0.00138	0.98377	30.27244	116.05	-0.00
90/ 1/21	2447912.5	-0.49385	0.85120	-0.00007	-26.25286	-15.05424	0.00155	0.98409	30.26289	120.12	-0.00
90/ 1/25	2447916.5	-0.55322	0.81434	-0.00007	-25.12715	-16.84487	0.00171	0.98448	30.25100	124.19	-0.00
90/ 1/29	2447920.5	-0.60985	0.77344	-0.00007	-23.87838	-18.54965	0.00186	0.98495	30.23684	128.26	-0.00
90/ 2/ 2	2447924.5	-0.66346	0.72870	-0.00006	-22.51335	-20.16002	0.00201	0.98549	30.22048	132.32	-0.00
90/ 2/ 6	2447928.5	-0.71378	0.68037	-0.00006	-21.03949	-21.66797	0.00214	0.98610	30.20200	136.37	-0.00
90/ 2/10	2447932.5	-0.76059	0.62867	-0.00005	-19.46478	-23.06612	0.00226	0.98678	30.18151	140.42	-0.00
90/ 2/14	2447936.5	-0.80365	0.57388	-0.00005	-17.79770	-24.34777	0.00236	0.98752	30.15911	144.47	-0.00
90/ 2/18	2447940.5	-0.84275	0.51627	-0.00004	-16.04717	-25.50690	0.00246	0.98832	30.13492	148.51	-0.00
90/ 2/22	2447944.5	-0.87773	0.45613	-0.00003	-14.22247	-26.53823	0.00254	0.98918	30.10908	152.54	-0.00
90/ 2/26	2447948.5	-0.90842	0.39376	-0.00003	-12.33320	-27.43722	0.00261	0.99009	30.08170	156.57	-0.00
90/ 3/ 2	2447952.5	-0.93467	0.32947	-0.00002	-10.38921	-28.20007	0.00266	0.99104	30.05295	160.58	-0.00
90/ 3/ 6	2447956.5	-0.95639	0.26357	-0.00002	-8.40052	-28.82376	0.00270	0.99204	30.02295	164.59	-0.00
90/ 3/10	2447960.5	-0.97346	0.19640	-0.00001	-6.37727	-29.30602	0.00273	0.99308	29.99187	168.59	-0.00
90/ 3/14	2447964.5	-0.98583	0.12828	-0.00000	-4.32967	-29.64537	0.00274	0.99414	29.95987	172.59	-0.00
90/ 3/18	2447968.5	-0.99345	0.05954	0.00000	-2.26792	-29.84105	0.00275	0.99524	29.92710	176.57	0.00
90/ 3/22	2447972.5	-0.99631	-0.00949	0.00001	-0.20214	-29.89305	0.00273	0.99635	29.89373	180.55	0.00
90/ 3/26	2447976.5	-0.99439	-0.07847	0.00002	1.85762	-29.80208	0.00271	0.99748	29.85992	184.51	0.00
90/ 3/30	2447980.5	-0.98774	-0.14707	0.00002	3.90151	-29.56956	0.00267	0.99863	29.82584	188.47	0.00
90/ 4/ 3	2447984.5	-0.97639	-0.21498	0.00003	5.91988	-29.19755	0.00262	0.99977	29.79164	192.42	0.00
90/ 4/ 7	2447988.5	-0.96041	-0.28187	0.00003	7.90332	-28.68878	0.00255	1.00092	29.75750	196.36	0.00
90/ 4/11	2447992.5	-0.93990	-0.34743	0.00004	9.84275	-28.04658	0.00248	1.00206	29.72357	200.29	0.00
90/ 4/15	2447996.5	-0.91498	-0.41136	0.00005	11.72937	-27.27486	0.00239	1.00319	29.69000	204.21	0.00
90/ 4/19	2448000.5	-0.88576	-0.47335	0.00005	13.55478	-26.37808	0.00229	1.00431	29.65696	208.12	0.00
90/ 4/23	2448004.5	-0.85240	-0.53314	0.00006	15.31096	-25.36120	0.00218	1.00540	29.62459	212.02	0.00
90/ 4/27	2448008.5	-0.81507	-0.59044	0.00006	16.99031	-24.22968	0.00207	1.00646	29.59304	215.92	0.00
90/ 5/ 1	2448012.5	-0.77396	-0.64501	0.00007	18.58566	-22.98939	0.00194	1.00750	29.56245	219.81	0.00
90/ 5/ 5	2448016.5	-0.72927	-0.69658	0.00007	20.09030	-21.64660	0.00180	1.00850	29.53296	223.69	0.00
90/ 5/ 9	2448020.5	-0.68121	-0.74495	0.00007	21.49800	-20.20798	0.00166	1.00946	29.50469	227.56	0.00
90/ 5/13	2448024.5	-0.63002	-0.78988	0.00008	22.80301	-18.68051	0.00151	1.01037	29.47776	231.42	0.00
90/ 5/17	2448028.5	-0.57594	-0.83119	0.00008	24.00008	-17.07145	0.00135	1.01123	29.45230	235.28	0.00
90/ 5/21	2448032.5	-0.51922	-0.86870	0.00008	25.08447	-15.38835	0.00119	1.01204	29.42842	239.13	0.00
90/ 5/25	2448036.5	-0.46013	-0.90224	0.00009	26.05194	-13.63897	0.00102	1.01280	29.40620	242.98	0.00

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					EARTH-MOON B		
90/ 5/29	2448040.5	-0.39894	-0.93167	0.00009	26.89876	-11.83127	0.00085	1.01350	29.38575	246.82	0.01
90/ 6/ 2	2448044.5	-0.33594	-0.95687	0.00009	27.62175	-9.97339	0.00067	1.01413	29.36716	250.65	0.01
90/ 6/ 6	2448048.5	-0.27142	-0.97772	0.00009	28.21822	-8.07359	0.00050	1.01470	29.35049	254.49	0.01
90/ 6/10	2448052.5	-0.20567	-0.99415	0.00009	28.68601	-6.14024	0.00032	1.01520	29.33581	258.31	0.01
90/ 6/14	2448056.5	-0.13898	-1.00607	0.00009	29.02348	-4.18180	0.00013	1.01563	29.32319	262.13	0.01
90/ 6/18	2448060.5	-0.07167	-1.01345	0.00009	29.22950	-2.20675	-0.00005	1.01599	29.31269	265.95	0.01
90/ 6/22	2448064.5	-0.00403	-1.01626	0.00009	29.30348	-0.22362	-0.00023	1.01627	29.30433	269.77	0.01
90/ 6/26	2448068.5	0.06362	-1.01449	0.00009	29.24530	1.75906	-0.00041	1.01648	29.29816	273.59	0.01
90/ 6/30	2448072.5	0.13099	-1.00814	0.00009	29.05540	3.73281	-0.00059	1.01662	29.29420	277.40	0.01
90/ 7/ 4	2448076.5	0.19777	-0.99725	0.00009	28.73468	5.68917	-0.00076	1.01668	29.29246	281.22	0.01
90/ 7/ 8	2448080.5	0.26365	-0.98188	0.00009	28.28456	7.61979	-0.00094	1.01666	29.29296	285.03	0.00
90/ 7/12	2448084.5	0.32835	-0.96208	0.00009	27.70696	9.51640	-0.00110	1.01657	29.29569	288.84	0.00
90/ 7/16	2448088.5	0.39157	-0.93794	0.00008	27.00428	11.37086	-0.00127	1.01640	29.30065	292.66	0.00
90/ 7/20	2448092.5	0.45303	-0.90958	0.00008	26.17941	13.17518	-0.00143	1.01615	29.30780	296.48	0.00
90/ 7/24	2448096.5	0.51244	-0.87711	0.00008	25.23571	14.92154	-0.00158	1.01583	29.31712	300.30	0.00
90/ 7/28	2448100.5	0.56954	-0.84068	0.00007	24.17702	16.60232	-0.00172	1.01544	29.32857	304.12	0.00
90/ 8/ 1	2448104.5	0.62406	-0.80046	0.00007	23.00763	18.21012	-0.00186	1.01498	29.34211	307.94	0.00
90/ 8/ 5	2448108.5	0.67576	-0.75661	0.00006	21.73231	19.73779	-0.00199	1.01445	29.35768	311.77	0.00
90/ 8/ 9	2448112.5	0.72440	-0.70933	0.00006	20.35625	21.17845	-0.00211	1.01385	29.37522	315.60	0.00
90/ 8/13	2448116.5	0.76974	-0.65883	0.00005	18.88508	22.52552	-0.00222	1.01319	29.39465	319.44	0.00
90/ 8/17	2448120.5	0.81158	-0.60533	0.00005	17.32487	23.77274	-0.00232	1.01247	29.41589	323.28	0.00
90/ 8/21	2448124.5	0.84972	-0.54907	0.00004	15.68209	24.91422	-0.00241	1.01169	29.43886	327.13	0.00
90/ 8/25	2448128.5	0.88398	-0.49030	0.00004	13.96360	25.94442	-0.00249	1.01085	29.46345	330.98	0.00
90/ 8/29	2448132.5	0.91419	-0.42929	0.00003	12.17665	26.85822	-0.00256	1.00996	29.48957	334.85	0.00
90/ 9/ 2	2448136.5	0.94019	-0.36630	0.00003	10.32884	27.65093	-0.00262	1.00903	29.51709	338.71	0.00
90/ 9/ 6	2448140.5	0.96187	-0.30163	0.00002	8.42813	28.31833	-0.00266	1.00805	29.54591	342.59	0.00
90/ 9/10	2448144.5	0.97910	-0.23556	0.00001	6.48278	28.85667	-0.00269	1.00704	29.57590	346.47	0.00
90/ 9/14	2448148.5	0.99179	-0.16840	0.00001	4.50135	29.26273	-0.00272	1.00599	29.60692	350.36	0.00
90/ 9/18	2448152.5	0.99988	-0.10046	0.00000	2.49267	29.53383	-0.00272	1.00491	29.63884	354.26	0.00
90/ 9/22	2448156.5	1.00330	-0.03205	-0.00001	0.46581	29.66785	-0.00272	1.00381	29.67151	358.17	-0.00
90/ 9/26	2448160.5	1.00202	0.03651	-0.00001	-1.56999	29.66326	-0.00270	1.00269	29.70478	2.09	-0.00
90/ 9/30	2448164.5	0.99604	0.10490	-0.00002	-3.60529	29.51916	-0.00267	1.00155	29.73851	6.01	-0.00
90/10/ 4	2448168.5	0.98537	0.17279	-0.00002	-5.63053	29.23528	-0.00263	1.00041	29.77254	9.95	-0.00
90/10/ 8	2448172.5	0.97004	0.23987	-0.00003	-7.63607	28.81199	-0.00258	0.99926	29.80671	13.89	-0.00
90/10/12	2448176.5	0.95011	0.30580	-0.00004	-9.61225	28.25034	-0.00251	0.99812	29.84086	17.84	-0.00
90/10/16	2448180.5	0.92566	0.37029	-0.00004	-11.54939	27.55208	-0.00243	0.99698	29.87483	21.80	-0.00
90/10/20	2448184.5	0.89679	0.43300	-0.00005	-13.43789	26.71963	-0.00234	0.99585	29.90845	25.77	-0.00
90/10/24	2448188.5	0.86362	0.49364	-0.00005	-15.26824	25.75612	-0.00223	0.99475	29.94156	29.75	-0.00
90/10/28	2448192.5	0.82630	0.55191	-0.00006	-17.03110	24.66539	-0.00212	0.99366	29.97399	33.74	-0.00
90/11/ 1	2448196.5	0.78499	0.60751	-0.00006	-18.71738	23.45197	-0.00199	0.99261	30.00559	37.74	-0.00
90/11/ 5	2448200.5	0.73988	0.66017	-0.00007	-20.31823	22.12109	-0.00186	0.99159	30.03619	41.74	-0.00
90/11/ 9	2448204.5	0.69118	0.70963	-0.00007	-21.82515	20.67864	-0.00171	0.99061	30.06565	45.75	-0.00
90/11/13	2448208.5	0.63912	0.75563	-0.00007	-23.23005	19.13118	-0.00156	0.98968	30.09381	49.78	-0.00
90/11/17	2448212.5	0.58394	0.79795	-0.00008	-24.52526	17.48592	-0.00140	0.98879	30.12052	53.80	-0.00
90/11/21	2448216.5	0.52590	0.83635	-0.00008	-25.70363	15.75066	-0.00123	0.98796	30.14565	57.84	-0.00

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90/11/25	2448220.5	0.46527	0.87066	-0.00008	-26.75860	13.93376	-0.00105	0.98718	30.16906	61.88	-0.00
90/11/29	2448224.5	0.40236	0.90068	-0.00009	-27.68417	12.04412	-0.00087	0.98647	30.19063	65.93	-0.01
90/12/ 3	2448228.5	0.33747	0.92626	-0.00009	-28.47504	10.09114	-0.00068	0.98582	30.21025	69.98	-0.01
90/12/ 7	2448232.5	0.27090	0.94726	-0.00009	-29.12661	8.08460	-0.00049	0.98524	30.22781	74.04	-0.01
90/12/11	2448236.5	0.20300	0.96358	-0.00009	-29.63501	6.03471	-0.00030	0.98473	30.24321	78.10	-0.01
90/12/15	2448240.5	0.13409	0.97512	-0.00009	-29.99717	3.95194	-0.00010	0.98429	30.25637	82.17	-0.01
90/12/19	2448244.5	0.06452	0.98182	-0.00009	-30.21081	1.84704	0.00009	0.98394	30.26722	86.24	-0.01
90/12/23	2448248.5	-0.00538	0.98364	-0.00009	-30.27450	-0.26909	0.00029	0.98366	30.27570	90.31	-0.01
90/12/27	2448252.5	-0.07525	0.98058	-0.00009	-30.18766	-2.38542	0.00048	0.98346	30.28176	94.39	-0.01
90/12/31	2448256.5	-0.14474	0.97263	-0.00009	-29.95055	-4.49090	0.00067	0.98334	30.28537	98.46	-0.01
91/ 1/ 4	2448260.5	-0.21351	0.95984	-0.00009	-29.56430	-6.57453	0.00086	0.98330	30.28650	102.54	-0.01
91/ 1/ 8	2448264.5	-0.28122	0.94228	-0.00008	-29.03090	-8.62540	0.00104	0.98335	30.28515	106.62	-0.00
91/ 1/12	2448268.5	-0.34753	0.92002	-0.00008	-28.35318	-10.63280	0.00122	0.98348	30.28133	110.69	-0.00
91/ 1/16	2448272.5	-0.41212	0.89319	-0.00008	-27.53478	-12.58630	0.00140	0.98368	30.27506	114.77	-0.00
91/ 1/20	2448276.5	-0.47465	0.86192	-0.00007	-26.58016	-14.47578	0.00156	0.98397	30.26637	118.84	-0.00
91/ 1/24	2448280.5	-0.53483	0.82637	-0.00007	-25.49452	-16.29150	0.00172	0.98434	30.25530	122.91	-0.00
91/ 1/28	2448284.5	-0.59235	0.78671	-0.00007	-24.28379	-18.02419	0.00187	0.98478	30.24192	126.98	-0.00
91/ 2/ 1	2448288.5	-0.64693	0.74316	-0.00006	-22.95458	-19.66512	0.00201	0.98530	30.22631	131.04	-0.00
91/ 2/ 5	2448292.5	-0.69832	0.69593	-0.00006	-21.51413	-21.20607	0.00214	0.98588	30.20853	135.10	-0.00
91/ 2/ 9	2448296.5	-0.74626	0.64526	-0.00005	-19.97026	-22.63948	0.00226	0.98654	30.18870	139.15	-0.00
91/ 2/13	2448300.5	-0.79052	0.59142	-0.00005	-18.33129	-23.95843	0.00237	0.98726	30.16691	143.20	-0.00
91/ 2/17	2448304.5	-0.83089	0.53466	-0.00004	-16.60601	-25.15667	0.00246	0.98805	30.14329	147.24	-0.00
91/ 2/21	2448308.5	-0.86718	0.47528	-0.00004	-14.80360	-26.22869	0.00255	0.98889	30.11795	151.27	-0.00
91/ 2/25	2448312.5	-0.89923	0.41357	-0.00003	-12.93356	-27.16971	0.00262	0.98978	30.09103	155.30	-0.00
91/ 3/ 1	2448316.5	-0.92690	0.34985	-0.00002	-11.00569	-27.97569	0.00268	0.99072	30.06267	159.32	-0.00
91/ 3/ 5	2448320.5	-0.95005	0.28442	-0.00002	-9.02994	-28.64337	0.00272	0.99171	30.03303	163.33	-0.00
91/ 3/ 9	2448324.5	-0.96859	0.21762	-0.00001	-7.01644	-29.17026	0.00275	0.99273	30.00224	167.34	-0.00
91/ 3/13	2448328.5	-0.98244	0.14976	-0.00000	-4.97538	-29.55461	0.00277	0.99379	29.97047	171.33	-0.00
91/ 3/17	2448332.5	-0.99156	0.08117	0.00000	-2.91696	-29.79544	0.00277	0.99488	29.93788	175.32	0.00
91/ 3/21	2448336.5	-0.99592	0.01220	0.00001	-0.85135	-29.89251	0.00276	0.99599	29.90463	179.30	0.00
91/ 3/25	2448340.5	-0.99550	-0.05683	0.00001	1.21138	-29.84632	0.00274	0.99712	29.87089	183.27	0.00
91/ 3/29	2448344.5	-0.99033	-0.12559	0.00002	3.26131	-29.65804	0.00270	0.99826	29.83681	187.23	0.00
91/ 4/ 2	2448348.5	-0.98045	-0.19375	0.00003	5.28873	-29.32955	0.00265	0.99941	29.80257	191.18	0.00
91/ 4/ 6	2448352.5	-0.96592	-0.26100	0.00003	7.28413	-28.86338	0.00259	1.00056	29.76832	195.12	0.00
91/ 4/10	2448356.5	-0.94682	-0.32701	0.00004	9.23834	-28.26266	0.00252	1.00170	29.73424	199.05	0.00
91/ 4/14	2448360.5	-0.92327	-0.39148	0.00004	11.14245	-27.53114	0.00244	1.00284	29.70047	202.98	0.00
91/ 4/18	2448364.5	-0.89539	-0.45411	0.00005	12.98795	-26.67311	0.00234	1.00396	29.66718	206.89	0.00
91/ 4/22	2448368.5	-0.86331	-0.51462	0.00006	14.76669	-25.69338	0.00223	1.00506	29.63452	210.80	0.00
91/ 4/26	2448372.5	-0.82722	-0.57274	0.00006	16.47094	-24.59724	0.00212	1.00614	29.60264	214.70	0.00
91/ 4/30	2448376.5	-0.78728	-0.62819	0.00007	18.09339	-23.39045	0.00199	1.00718	29.57167	218.59	0.00
91/ 5/ 4	2448380.5	-0.74369	-0.68073	0.00007	19.62718	-22.07916	0.00185	1.00820	29.54176	222.47	0.00
91/ 5/ 8	2448384.5	-0.69666	-0.73012	0.00007	21.06595	-20.66993	0.00171	1.00917	29.51305	226.34	0.00
91/ 5/12	2448388.5	-0.64643	-0.77616	0.00008	22.40377	-19.16961	0.00156	1.01010	29.48564	230.21	0.00
91/ 5/16	2448392.5	-0.59323	-0.81863	0.00008	23.63526	-17.58540	0.00140	1.01098	29.45967	234.07	0.00
91/ 5/20	2448396.5	-0.53732	-0.85735	0.00008	24.75551	-15.92477	0.00124	1.01181	29.43524	237.92	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
91/ 5/24	2448400.5	-0.47894	-0.89216	0.00009	25.76011	-14.19540	0.00107	1.01258	29.41246	241.77	0.00
91/ 5/28	2448404.5	-0.41839	-0.92289	0.00009	26.64520	-12.40520	0.00090	1.01330	29.39142	245.61	0.01
91/ 6/ 1	2448408.5	-0.35593	-0.94943	0.00009	27.40740	-10.56225	0.00072	1.01395	29.37221	249.45	0.01
91/ 6/ 5	2448412.5	-0.29185	-0.97166	0.00009	28.04388	-8.67478	0.00054	1.01454	29.35492	253.28	0.01
91/ 6/ 9	2448416.5	-0.22645	-0.98948	0.00009	28.55231	-6.75112	0.00036	1.01507	29.33960	257.11	0.01
91/ 6/13	2448420.5	-0.16003	-1.00283	0.00009	28.93089	-4.79970	0.00018	1.01552	29.32633	260.93	0.01
91/ 6/17	2448424.5	-0.09288	-1.01165	0.00009	29.17834	-2.82901	-0.00001	1.01590	29.31516	264.75	0.01
91/ 6/21	2448428.5	-0.02532	-1.01589	0.00009	29.29388	-0.84756	-0.00019	1.01621	29.30613	268.57	0.01
91/ 6/25	2448432.5	0.04236	-1.01556	0.00009	29.27725	1.13613	-0.00038	1.01644	29.29929	272.39	0.01
91/ 6/29	2448436.5	0.10985	-1.01065	0.00009	29.12872	3.11356	-0.00056	1.01660	29.29465	276.20	0.01
91/ 7/ 3	2448440.5	0.17685	-1.00119	0.00009	28.84904	5.07625	-0.00074	1.01668	29.29224	280.02	0.01
91/ 7/ 7	2448444.5	0.24305	-0.98721	0.00009	28.43947	7.01583	-0.00091	1.01669	29.29207	283.83	0.00
91/ 7/11	2448448.5	0.30815	-0.96879	0.00009	27.90177	8.92399	-0.00108	1.01662	29.29413	287.64	0.00
91/ 7/15	2448452.5	0.37186	-0.94601	0.00008	27.23818	10.79255	-0.00125	1.01647	29.29842	291.46	0.00
91/ 7/19	2448456.5	0.43390	-0.91897	0.00008	26.45143	12.61348	-0.00141	1.01625	29.30492	295.28	0.00
91/ 7/23	2448460.5	0.49399	-0.88778	0.00008	25.54475	14.37890	-0.00156	1.01596	29.31360	299.09	0.00
91/ 7/27	2448464.5	0.55184	-0.85258	0.00007	24.52182	16.08112	-0.00171	1.01559	29.32443	302.91	0.00
91/ 7/31	2448468.5	0.60720	-0.81353	0.00007	23.38680	17.71267	-0.00186	1.01515	29.33736	306.74	0.00
91/ 8/ 4	2448472.5	0.65981	-0.77080	0.00006	22.14428	19.26632	-0.00199	1.01464	29.35235	310.56	0.00
91/ 8/ 8	2448476.5	0.70944	-0.72458	0.00006	20.79934	20.73511	-0.00212	1.01406	29.36933	314.40	0.00
91/ 8/12	2448480.5	0.75584	-0.67507	0.00005	19.35746	22.11236	-0.00224	1.01341	29.38823	318.23	0.00
91/ 8/16	2448484.5	0.79880	-0.62249	0.00005	17.82458	23.39171	-0.00235	1.01271	29.40897	322.07	0.00
91/ 8/20	2448488.5	0.83813	-0.56707	0.00004	16.20704	24.56713	-0.00245	1.01194	29.43148	325.92	0.00
91/ 8/24	2448492.5	0.87363	-0.50906	0.00004	14.51158	25.63298	-0.00254	1.01112	29.45566	329.77	0.00
91/ 8/28	2448496.5	0.90512	-0.44872	0.00003	12.74533	26.58400	-0.00262	1.01025	29.48139	333.63	0.00
91/ 9/ 1	2448500.5	0.93246	-0.38633	0.00003	10.91579	27.41537	-0.00268	1.00933	29.50859	337.50	0.00
91/ 9/ 5	2448504.5	0.95551	-0.32215	0.00002	9.03079	28.12269	-0.00274	1.00836	29.53711	341.37	0.00
91/ 9/ 9	2448508.5	0.97415	-0.25649	0.00001	7.09852	28.70208	-0.00278	1.00735	29.56685	345.25	0.00
91/ 9/13	2448512.5	0.98828	-0.18964	0.00001	5.12744	29.15014	-0.00280	1.00631	29.59766	349.14	0.00
91/ 9/17	2448516.5	0.99782	-0.12191	0.00000	3.12629	29.46401	-0.00282	1.00524	29.62941	353.03	0.00
91/ 9/21	2448520.5	1.00271	-0.05361	-0.00001	1.10407	29.64140	-0.00281	1.00414	29.66195	356.94	-0.00
91/ 9/25	2448524.5	1.00291	0.01494	-0.00001	-0.93001	29.68058	-0.00280	1.00302	29.69514	0.85	-0.00
91/ 9/29	2448528.5	0.99841	0.08342	-0.00002	-2.96659	29.58045	-0.00277	1.00189	29.72883	4.78	-0.00
91/10/ 3	2448532.5	0.98921	0.15150	-0.00003	-4.99613	29.34053	-0.00273	1.00075	29.76286	8.71	-0.00
91/10/ 7	2448536.5	0.97534	0.21887	-0.00003	-7.00903	28.96099	-0.00267	0.99960	29.79707	12.65	-0.00
91/10/11	2448540.5	0.95685	0.28521	-0.00004	-8.99560	28.44267	-0.00260	0.99845	29.83130	16.60	-0.00
91/10/15	2448544.5	0.93381	0.35018	-0.00004	-10.94617	27.78709	-0.00252	0.99731	29.86538	20.56	-0.00
91/10/19	2448548.5	0.90631	0.41349	-0.00005	-12.85110	26.99646	-0.00242	0.99618	29.89916	24.52	-0.00
91/10/23	2448552.5	0.87447	0.47481	-0.00005	-14.70085	26.07370	-0.00232	0.99506	29.93247	28.50	-0.00
91/10/27	2448556.5	0.83843	0.53386	-0.00006	-16.48602	25.02241	-0.00220	0.99397	29.96515	32.49	-0.00
91/10/31	2448560.5	0.79836	0.59033	-0.00006	-18.19743	23.84691	-0.00207	0.99291	29.99703	36.48	-0.00
91/11/ 4	2448564.5	0.75442	0.64395	-0.00007	-19.82614	22.55221	-0.00193	0.99188	30.02796	40.48	-0.00
91/11/ 8	2448568.5	0.70682	0.69444	-0.00007	-21.36354	21.14401	-0.00178	0.99088	30.05777	44.49	-0.00
91/11/12	2448572.5	0.65579	0.74156	-0.00008	-22.80139	19.62865	-0.00162	0.98993	30.08633	48.51	-0.00
91/11/16	2448576.5	0.60156	0.78506	-0.00008	-24.13189	18.01315	-0.00145	0.98903	30.11348	52.54	-0.00

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91/11/20	2448580.5	0.54438	0.82472	-0.00008	-25.34772	16.30512	-0.00128	0.98818	30.13908	56.57	-0.00
91/11/24	2448584.5	0.48453	0.86033	-0.00009	-26.44212	14.51276	-0.00109	0.98739	30.16299	60.61	-0.01
91/11/28	2448588.5	0.42231	0.89171	-0.00009	-27.40892	12.64481	-0.00091	0.98666	30.18510	64.66	-0.01
91/12/ 2	2448592.5	0.35800	0.91870	-0.00009	-28.24259	10.71052	-0.00071	0.98599	30.20529	68.71	-0.01
91/12/ 6	2448596.5	0.29192	0.94115	-0.00009	-28.93831	8.71955	-0.00052	0.98539	30.22344	72.77	-0.01
91/12/10	2448600.5	0.22440	0.95895	-0.00009	-29.49196	6.68200	-0.00032	0.98486	30.23946	76.83	-0.01
91/12/14	2448604.5	0.15577	0.97200	-0.00009	-29.90023	4.60826	-0.00012	0.98440	30.25326	80.90	-0.01
91/12/18	2448608.5	0.08637	0.98022	-0.00009	-30.16059	2.50900	0.00008	0.98402	30.26477	84.96	-0.01
91/12/22	2448612.5	0.01653	0.98358	-0.00009	-30.27135	0.39509	0.00029	0.98372	30.27393	89.04	-0.01
91/12/26	2448616.5	-0.05338	0.98205	-0.00009	-30.23165	-1.72247	0.00049	0.98350	30.28068	93.11	-0.01
91/12/30	2448620.5	-0.12303	0.97563	-0.00009	-30.04150	-3.83264	0.00068	0.98335	30.28499	97.19	-0.01
92/ 1/ 3	2448624.5	-0.19207	0.96435	-0.00009	-29.70176	-5.92438	0.00088	0.98329	30.28684	101.26	-0.01
92/ 1/ 7	2448628.5	-0.26015	0.94828	-0.00009	-29.21415	-7.98675	0.00107	0.98331	30.28621	105.34	-0.01
92/ 1/11	2448632.5	-0.32694	0.92748	-0.00008	-28.58123	-10.00898	0.00125	0.98342	30.28311	109.42	-0.00
92/ 1/15	2448636.5	-0.39210	0.90207	-0.00008	-27.80642	-11.98053	0.00143	0.98360	30.27755	113.49	-0.00
92/ 1/19	2448640.5	-0.45531	0.87217	-0.00008	-26.89390	-13.89118	0.00161	0.98387	30.26956	117.57	-0.00
92/ 1/23	2448644.5	-0.51625	0.83794	-0.00007	-25.84865	-15.73106	0.00177	0.98421	30.25919	121.64	-0.00
92/ 1/27	2448648.5	-0.57464	0.79955	-0.00007	-24.67638	-17.49076	0.00193	0.98463	30.24649	125.70	-0.00
92/ 1/31	2448652.5	-0.63017	0.75720	-0.00007	-23.38350	-19.16136	0.00207	0.98512	30.23153	129.77	-0.00
92/ 2/ 4	2448656.5	-0.68259	0.71110	-0.00006	-21.97705	-20.73448	0.00221	0.98569	30.21439	133.83	-0.00
92/ 2/ 8	2448660.5	-0.73163	0.66148	-0.00005	-20.46468	-22.20236	0.00233	0.98633	30.19517	137.88	-0.00
92/ 2/12	2448664.5	-0.77707	0.60860	-0.00005	-18.85456	-23.55786	0.00244	0.98703	30.17395	141.93	-0.00
92/ 2/16	2448668.5	-0.81868	0.55273	-0.00004	-17.15535	-24.79452	0.00254	0.98780	30.15086	145.98	-0.00
92/ 2/20	2448672.5	-0.85627	0.49414	-0.00004	-15.37609	-25.90661	0.00263	0.98862	30.12602	150.01	-0.00
92/ 2/24	2448676.5	-0.88967	0.43313	-0.00003	-13.52622	-26.88911	0.00271	0.98950	30.09955	154.04	-0.00
92/ 2/28	2448680.5	-0.91872	0.37000	-0.00003	-11.61543	-27.73776	0.00277	0.99043	30.07160	158.06	-0.00
92/ 3/ 3	2448684.5	-0.94330	0.30508	-0.00002	-9.65363	-28.44904	0.00282	0.99140	30.04231	162.08	-0.00
92/ 3/ 7	2448688.5	-0.96329	0.23867	-0.00001	-7.65091	-29.02023	0.00285	0.99242	30.01183	166.08	-0.00
92/ 3/11	2448692.5	-0.97862	0.17110	-0.00001	-5.61745	-29.44934	0.00287	0.99347	29.98031	170.08	-0.00
92/ 3/15	2448696.5	-0.98923	0.10271	0.00000	-3.56344	-29.73516	0.00287	0.99455	29.94792	174.07	0.00
92/ 3/19	2448700.5	-0.99508	0.03382	0.00001	-1.49907	-29.87722	0.00287	0.99565	29.91480	178.05	0.00
92/ 3/23	2448704.5	-0.99616	-0.03522	0.00001	0.56555	-29.87579	0.00285	0.99678	29.88114	182.03	0.00
92/ 3/27	2448708.5	-0.99247	-0.10410	0.00002	2.62045	-29.73183	0.00281	0.99792	29.84709	185.99	0.00
92/ 3/31	2448712.5	-0.98406	-0.17249	0.00003	4.65585	-29.44702	0.00276	0.99907	29.81282	189.94	0.00
92/ 4/ 4	2448716.5	-0.97098	-0.24005	0.00003	6.66217	-29.02368	0.00270	1.00022	29.77849	193.89	0.00
92/ 4/ 8	2448720.5	-0.95331	-0.30648	0.00004	8.63014	-28.46475	0.00263	1.00137	29.74427	197.82	0.00
92/ 4/12	2448724.5	-0.93115	-0.37147	0.00005	10.55076	-27.77381	0.00254	1.00251	29.71031	201.75	0.00
92/ 4/16	2448728.5	-0.90461	-0.43471	0.00005	12.41539	-26.95496	0.00244	1.00364	29.67679	205.67	0.00
92/ 4/20	2448732.5	-0.87383	-0.49591	0.00006	14.21578	-26.01286	0.00234	1.00475	29.64384	209.58	0.00
92/ 4/24	2448736.5	-0.83898	-0.55480	0.00006	15.94406	-24.95267	0.00222	1.00583	29.61163	213.48	0.00
92/ 4/28	2448740.5	-0.80023	-0.61112	0.00007	17.59278	-23.77999	0.00209	1.00689	29.58030	217.37	0.00
92/ 5/ 2	2448744.5	-0.75776	-0.66459	0.00007	19.15496	-22.50086	0.00195	1.00791	29.54998	221.25	0.00
92/ 5/ 6	2448748.5	-0.71180	-0.71500	0.00008	20.62407	-21.12170	0.00180	1.00890	29.52082	225.13	0.00
92/ 5/10	2448752.5	-0.66255	-0.76211	0.00008	21.99405	-19.64930	0.00165	1.00984	29.49293	229.00	0.00
92/ 5/14	2448756.5	-0.61026	-0.80572	0.00008	23.25935	-18.09073	0.00149	1.01074	29.46645	232.86	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
92/ 5/18	2448760.5	-0.55517	-0.84564	0.00009	24.41491	-16.45337	0.00132	1.01159	29.44149	236.71	0.00
92/ 5/22	2448764.5	-0.49754	-0.88169	0.00009	25.45616	-14.74486	0.00114	1.01238	29.41814	240.56	0.01
92/ 5/26	2448768.5	-0.43764	-0.91372	0.00009	26.37908	-12.97303	0.00096	1.01312	29.39652	244.41	0.01
92/ 5/30	2448772.5	-0.37575	-0.94158	0.00009	27.18014	-11.14590	0.00078	1.01379	29.37671	248.24	0.01
92/ 6/ 3	2448776.5	-0.31216	-0.96518	0.00010	27.85634	-9.27166	0.00059	1.01440	29.35880	252.08	0.01
92/ 6/ 7	2448780.5	-0.24714	-0.98439	0.00010	28.40518	-7.35861	0.00040	1.01494	29.34286	255.91	0.01
92/ 6/11	2448784.5	-0.18101	-0.99915	0.00010	28.82471	-5.41514	0.00021	1.01542	29.32896	259.73	0.01
92/ 6/15	2448788.5	-0.11406	-1.00940	0.00010	29.11348	-3.44972	0.00002	1.01582	29.31715	263.55	0.01
92/ 6/19	2448792.5	-0.04660	-1.01508	0.00010	29.27054	-1.47086	-0.00017	1.01615	29.30748	267.37	0.01
92/ 6/23	2448796.5	0.02107	-1.01619	0.00010	29.29550	0.51292	-0.00036	1.01641	29.29998	271.19	0.01
92/ 6/27	2448800.5	0.08865	-1.01271	0.00010	29.18842	2.49311	-0.00055	1.01659	29.29470	275.00	0.01
92/ 7/ 1	2448804.5	0.15583	-1.00468	0.00009	28.94993	4.46124	-0.00074	1.01669	29.29165	278.82	0.01
92/ 7/ 5	2448808.5	0.22231	-0.99212	0.00009	28.58111	6.40889	-0.00092	1.01672	29.29084	282.63	0.01
92/ 7/ 9	2448812.5	0.28779	-0.97509	0.00009	28.08356	8.32774	-0.00110	1.01667	29.29228	286.44	0.01
92/ 7/13	2448816.5	0.35197	-0.95367	0.00009	27.45938	10.20957	-0.00128	1.01655	29.29596	290.26	0.00
92/ 7/17	2448820.5	0.41457	-0.92795	0.00008	26.71116	12.04628	-0.00145	1.01635	29.30186	294.07	0.00
92/ 7/21	2448824.5	0.47529	-0.89805	0.00008	25.84194	13.82996	-0.00161	1.01607	29.30996	297.89	0.00
92/ 7/25	2448828.5	0.53387	-0.86410	0.00008	24.85526	15.55286	-0.00176	1.01572	29.32022	301.71	0.00
92/ 7/29	2448832.5	0.59004	-0.82624	0.00007	23.75514	17.20743	-0.00191	1.01530	29.33261	305.53	0.00
92/ 8/ 2	2448836.5	0.64355	-0.78465	0.00007	22.54602	18.78637	-0.00205	1.01481	29.34708	309.36	0.00
92/ 8/ 6	2448840.5	0.69414	-0.73951	0.00006	21.23284	20.28262	-0.00218	1.01425	29.36355	313.19	0.00
92/ 8/10	2448844.5	0.74157	-0.69101	0.00006	19.82095	21.68940	-0.00230	1.01362	29.38197	317.02	0.00
92/ 8/14	2448848.5	0.78564	-0.63937	0.00005	18.31614	23.00026	-0.00241	1.01293	29.40226	320.86	0.00
92/ 8/18	2448852.5	0.82613	-0.58482	0.00005	16.72461	24.20905	-0.00251	1.01218	29.42432	324.71	0.00
92/ 8/22	2448856.5	0.86286	-0.52760	0.00004	15.05300	25.31001	-0.00260	1.01138	29.44808	328.56	0.00
92/ 8/26	2448860.5	0.89563	-0.46797	0.00004	13.30829	26.29776	-0.00268	1.01052	29.47342	332.41	0.00
92/ 8/30	2448864.5	0.92429	-0.40618	0.00003	11.49788	27.16732	-0.00274	1.00961	29.50024	336.28	0.00
92/ 9/ 3	2448868.5	0.94871	-0.34254	0.00002	9.62949	27.91417	-0.00279	1.00865	29.52843	340.15	0.00
92/ 9/ 7	2448872.5	0.96875	-0.27731	0.00002	7.71121	28.53426	-0.00283	1.00766	29.55785	344.03	0.00
92/ 9/11	2448876.5	0.98430	-0.21080	0.00001	5.75140	29.02403	-0.00286	1.00662	29.58839	347.91	0.00
92/ 9/15	2448880.5	0.99530	-0.14331	0.00000	3.75873	29.38045	-0.00287	1.00556	29.61990	351.81	0.00
92/ 9/19	2448884.5	1.00165	-0.07516	-0.00000	1.74212	29.60103	-0.00287	1.00447	29.65225	355.71	-0.00
92/ 9/23	2448888.5	1.00333	-0.00665	-0.00001	-0.28928	29.68388	-0.00286	1.00335	29.68529	359.62	-0.00
92/ 9/27	2448892.5	1.00031	0.06189	-0.00002	-2.32616	29.62770	-0.00283	1.00222	29.71887	3.54	-0.00
92/10/ 1	2448896.5	0.99259	0.13013	-0.00002	-4.35901	29.43179	-0.00279	1.00108	29.75284	7.47	-0.00
92/10/ 5	2448900.5	0.98018	0.19776	-0.00003	-6.37826	29.09613	-0.00274	0.99993	29.78702	11.41	-0.00
92/10/ 9	2448904.5	0.96314	0.26446	-0.00004	-8.37423	28.62134	-0.00267	0.99878	29.82128	15.35	-0.00
92/10/13	2448908.5	0.94152	0.32990	-0.00004	-10.33724	28.00872	-0.00259	0.99764	29.85544	19.31	-0.00
92/10/17	2448912.5	0.91541	0.39377	-0.00005	-12.25764	27.26028	-0.00249	0.99651	29.88934	23.28	-0.00
92/10/21	2448916.5	0.88492	0.45575	-0.00005	-14.12584	26.37869	-0.00239	0.99539	29.92281	27.25	-0.00
92/10/25	2448920.5	0.85019	0.51554	-0.00006	-15.93239	25.36735	-0.00227	0.99429	29.95570	31.23	-0.00
92/10/29	2448924.5	0.81136	0.57286	-0.00006	-17.66803	24.23037	-0.00214	0.99321	29.98783	35.22	-0.00
92/11/ 2	2448928.5	0.76862	0.62740	-0.00007	-19.32375	22.97252	-0.00200	0.99217	30.01906	39.22	-0.00
92/11/ 6	2448932.5	0.72215	0.67891	-0.00007	-20.89081	21.59929	-0.00185	0.99117	30.04921	43.23	-0.00
92/11/10	2448936.5	0.67217	0.72712	-0.00008	-22.36086	20.11684	-0.00169	0.99021	30.07815	47.25	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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92/11/14	2448940.5	0.61891	0.77178	-0.00008	-23.72595	18.53197	-0.00152	0.98929	30.10572	51.27	-0.00
92/11/18	2448944.5	0.56263	0.81267	-0.00008	-24.97860	16.85210	-0.00135	0.98843	30.13178	55.30	-0.00
92/11/22	2448948.5	0.50360	0.84957	-0.00009	-26.11188	15.08527	-0.00117	0.98762	30.15619	59.34	-0.01
92/11/26	2448952.5	0.44208	0.88231	-0.00009	-27.11941	13.24004	-0.00098	0.98687	30.17882	63.39	-0.01
92/11/30	2448956.5	0.37840	0.91069	-0.00009	-27.99547	11.32552	-0.00078	0.98618	30.19956	67.44	-0.01
92/12/ 4	2448960.5	0.31284	0.93459	-0.00009	-28.73499	9.35125	-0.00058	0.98556	30.21830	71.49	-0.01
92/12/ 8	2448964.5	0.24574	0.95386	-0.00009	-29.33365	7.32719	-0.00038	0.98501	30.23493	75.55	-0.01
92/12/12	2448968.5	0.17742	0.96841	-0.00010	-29.78788	5.26365	-0.00018	0.98453	30.24936	79.62	-0.01
92/12/16	2448972.5	0.10822	0.97816	-0.00010	-30.09491	3.17122	0.00003	0.98413	30.26153	83.69	-0.01
92/12/20	2448976.5	0.03849	0.98305	-0.00010	-30.25277	1.06072	0.00023	0.98380	30.27136	87.76	-0.01
92/12/24	2448980.5	-0.03144	0.98306	-0.00009	-30.26035	-1.05689	0.00044	0.98356	30.27880	91.83	-0.01
92/12/28	2448984.5	-0.10121	0.97817	-0.00009	-30.11738	-3.17057	0.00064	0.98339	30.28381	95.91	-0.01
93/ 1/ 1	2448988.5	-0.17048	0.96842	-0.00009	-29.82446	-5.26927	0.00084	0.98331	30.28636	99.98	-0.01
93/ 1/ 5	2448992.5	-0.23890	0.95384	-0.00009	-29.38304	-7.34203	0.00104	0.98331	30.28644	104.06	-0.01
93/ 1/ 9	2448996.5	-0.30613	0.93452	-0.00009	-28.79543	-9.37800	0.00123	0.98339	30.28405	108.14	-0.01
93/ 1/13	2449000.5	-0.37183	0.91055	-0.00008	-28.06476	-11.36656	0.00141	0.98355	30.27920	112.21	-0.00
93/ 1/17	2449004.5	-0.43569	0.88205	-0.00008	-27.19500	-13.29740	0.00159	0.98379	30.27191	116.29	-0.00
93/ 1/21	2449008.5	-0.49738	0.84916	-0.00008	-26.19087	-15.16051	0.00176	0.98411	30.26223	120.36	-0.00
93/ 1/25	2449012.5	-0.55660	0.81206	-0.00007	-25.05786	-16.94636	0.00192	0.98450	30.25021	124.43	-0.00
93/ 1/29	2449016.5	-0.61306	0.77093	-0.00007	-23.80216	-18.64585	0.00207	0.98498	30.23592	128.49	-0.00
93/ 2/ 2	2449020.5	-0.66648	0.72599	-0.00006	-22.43062	-20.25044	0.00221	0.98552	30.21942	132.55	-0.00
93/ 2/ 6	2449024.5	-0.71661	0.67745	-0.00006	-20.95071	-21.75217	0.00234	0.98614	30.20081	136.61	-0.00
93/ 2/10	2449028.5	-0.76321	0.62557	-0.00005	-19.37044	-23.14369	0.00246	0.98682	30.18020	140.66	-0.00
93/ 2/14	2449032.5	-0.80604	0.57061	-0.00005	-17.69830	-24.41835	0.00256	0.98757	30.15768	144.70	-0.00
93/ 2/18	2449036.5	-0.84492	0.51284	-0.00004	-15.94325	-25.57016	0.00266	0.98838	30.13338	148.74	-0.00
93/ 2/22	2449040.5	-0.87965	0.45256	-0.00003	-14.11458	-26.59389	0.00274	0.98924	30.10742	152.78	-0.00
93/ 2/26	2449044.5	-0.91008	0.39007	-0.00003	-12.22192	-27.48504	0.00280	0.99015	30.07994	156.80	-0.00
93/ 3/ 2	2449048.5	-0.93608	0.32568	-0.00002	-10.27512	-28.23985	0.00286	0.99111	30.05107	160.82	-0.00
93/ 3/ 6	2449052.5	-0.95752	0.25970	-0.00001	-8.28421	-28.85535	0.00290	0.99211	30.02098	164.83	-0.00
93/ 3/10	2449056.5	-0.97433	0.19246	-0.00001	-6.25934	-29.32932	0.00292	0.99315	29.98980	168.83	-0.00
93/ 3/14	2449060.5	-0.98642	0.12430	-0.00000	-4.21071	-29.66031	0.00294	0.99422	29.95770	172.82	-0.00
93/ 3/18	2449064.5	-0.99377	0.05553	0.00001	-2.14853	-29.84762	0.00294	0.99532	29.92485	176.80	0.00
93/ 3/22	2449068.5	-0.99635	-0.01350	0.00001	-0.08291	-29.89128	0.00293	0.99644	29.89139	180.78	0.00
93/ 3/26	2449072.5	-0.99416	-0.08247	0.00002	1.97612	-29.79204	0.00290	0.99757	29.85751	184.74	0.00
93/ 3/30	2449076.5	-0.98723	-0.15104	0.00003	4.01870	-29.55136	0.00287	0.99872	29.82336	188.70	0.00
93/ 4/ 3	2449080.5	-0.97561	-0.21890	0.00003	6.03521	-29.17135	0.00282	0.99987	29.78911	192.65	0.00
93/ 4/ 7	2449084.5	-0.95937	-0.28572	0.00004	8.01626	-28.65476	0.00275	1.00101	29.75493	196.58	0.00
93/ 4/11	2449088.5	-0.93861	-0.35119	0.00005	9.95276	-28.00497	0.00267	1.00216	29.72097	200.51	0.00
93/ 4/15	2449092.5	-0.91343	-0.41501	0.00005	11.83597	-27.22593	0.00258	1.00329	29.68739	204.43	0.00
93/ 4/19	2449096.5	-0.88397	-0.47689	0.00006	13.65748	-26.32211	0.00247	1.00440	29.65434	208.35	0.00
93/ 4/23	2449100.5	-0.85038	-0.53653	0.00006	15.40932	-25.29851	0.00236	1.00549	29.62198	212.25	0.00
93/ 4/27	2449104.5	-0.81283	-0.59369	0.00007	17.08390	-24.16061	0.00223	1.00656	29.59044	216.14	0.00
93/ 5/ 1	2449108.5	-0.77151	-0.64808	0.00007	18.67408	-22.91430	0.00209	1.00759	29.55988	220.03	0.00
93/ 5/ 5	2449112.5	-0.72662	-0.69948	0.00008	20.17319	-21.56589	0.00194	1.00859	29.53041	223.91	0.00
93/ 5/ 9	2449116.5	-0.67838	-0.74765	0.00008	21.57503	-20.12204	0.00178	1.00954	29.50218	227.78	0.00

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM						
93/ 5/13	2449120.5	-0.62702	-0.79238	0.00009	22.87387	-18.58977	0.00161	1.01045	29.47530	231.65	0.00
93/ 5/17	2449124.5	-0.57278	-0.83348	0.00009	24.06451	-16.97634	0.00144	1.01132	29.44990	235.50	0.01
93/ 5/21	2449128.5	-0.51592	-0.87076	0.00009	25.14222	-15.28932	0.00126	1.01212	29.42608	239.35	0.01
93/ 5/25	2449132.5	-0.45670	-0.90407	0.00010	26.10279	-13.53648	0.00107	1.01288	29.40395	243.20	0.01
93/ 5/29	2449136.5	-0.39540	-0.93326	0.00010	26.94256	-11.72580	0.00088	1.01357	29.38359	247.04	0.01
93/ 6/ 2	2449140.5	-0.33231	-0.95821	0.00010	27.65833	-9.86539	0.00069	1.01420	29.36510	250.87	0.01
93/ 6/ 6	2449144.5	-0.26771	-0.97881	0.00010	28.24747	-7.96355	0.00049	1.01476	29.34855	254.70	0.01
93/ 6/10	2449148.5	-0.20190	-0.99498	0.00010	28.70783	-6.02863	0.00029	1.01526	29.33401	258.53	0.01
93/ 6/14	2449152.5	-0.13517	-1.00665	0.00010	29.03782	-4.06909	0.00009	1.01568	29.32154	262.35	0.01
93/ 6/18	2449156.5	-0.06783	-1.01377	0.00010	29.23633	-2.09342	-0.00011	1.01603	29.31118	266.17	0.01
93/ 6/22	2449160.5	-0.00019	-1.01631	0.00010	29.30279	-0.11016	-0.00031	1.01631	29.30300	269.99	0.01
93/ 6/26	2449164.5	0.06745	-1.01428	0.00010	29.23713	1.87218	-0.00050	1.01652	29.29701	273.80	0.01
93/ 6/30	2449168.5	0.13479	-1.00767	0.00010	29.03978	3.84512	-0.00070	1.01664	29.29324	277.62	0.01
93/ 7/ 4	2449172.5	0.20153	-0.99652	0.00010	28.71170	5.80022	-0.00089	1.01670	29.29171	281.43	0.01
93/ 7/ 8	2449176.5	0.26735	-0.98089	0.00010	28.25433	7.72911	-0.00108	1.01667	29.29242	285.25	0.01
93/ 7/12	2449180.5	0.33197	-0.96084	0.00009	27.66960	9.62354	-0.00126	1.01657	29.29538	289.06	0.01
93/ 7/16	2449184.5	0.39510	-0.93646	0.00009	26.95994	11.47538	-0.00144	1.01639	29.30056	292.88	0.01
93/ 7/20	2449188.5	0.45644	-0.90786	0.00009	26.12827	13.27665	-0.00161	1.01614	29.30795	296.69	0.00
93/ 7/24	2449192.5	0.51573	-0.87516	0.00008	25.17797	15.01953	-0.00178	1.01582	29.31751	300.51	0.00
93/ 7/28	2449196.5	0.57269	-0.83851	0.00008	24.11291	16.69642	-0.00193	1.01542	29.32921	304.33	0.00
93/ 8/ 1	2449200.5	0.62705	-0.79807	0.00007	22.93740	18.29994	-0.00208	1.01495	29.34300	308.16	0.00
93/ 8/ 5	2449204.5	0.67858	-0.75402	0.00007	21.65622	19.82293	-0.00222	1.01441	29.35882	311.99	0.00
93/ 8/ 9	2449208.5	0.72704	-0.70655	0.00006	20.27460	21.25855	-0.00235	1.01380	29.37661	315.82	0.00
93/ 8/13	2449212.5	0.77219	-0.65587	0.00006	18.79819	22.60021	-0.00247	1.01313	29.39629	319.66	0.00
93/ 8/17	2449216.5	0.81382	-0.60221	0.00005	17.23308	23.84169	-0.00257	1.01240	29.41778	323.50	0.00
93/ 8/21	2449220.5	0.85175	-0.54580	0.00005	15.58576	24.97710	-0.00267	1.01162	29.44098	327.35	0.00
93/ 8/25	2449224.5	0.88578	-0.48689	0.00004	13.86311	26.00092	-0.00276	1.01077	29.46581	331.20	0.00
93/ 8/29	2449228.5	0.91575	-0.42575	0.00003	12.07240	26.90807	-0.00283	1.00988	29.49215	335.07	0.00
93/ 9/ 2	2449232.5	0.94151	-0.36266	0.00003	10.22126	27.69386	-0.00289	1.00894	29.51989	338.93	0.00
93/ 9/ 6	2449236.5	0.96293	-0.29790	0.00002	8.31766	28.35410	-0.00293	1.00796	29.54891	342.81	0.00
93/ 9/10	2449240.5	0.97990	-0.23175	0.00001	6.36987	28.88507	-0.00297	1.00694	29.57908	346.69	0.00
93/ 9/14	2449244.5	0.99234	-0.16454	0.00001	4.38649	29.28357	-0.00299	1.00588	29.61028	350.59	0.00
93/ 9/18	2449248.5	1.00015	-0.09656	-0.00000	2.37635	29.54694	-0.00299	1.00480	29.64235	354.49	-0.00
93/ 9/22	2449252.5	1.00330	-0.02813	-0.00001	0.34854	29.67311	-0.00298	1.00370	29.67515	358.39	-0.00
93/ 9/26	2449256.5	1.00176	0.04044	-0.00001	-1.68768	29.66057	-0.00296	1.00257	29.70855	2.31	-0.00
93/ 9/30	2449260.5	0.99550	0.10881	-0.00002	-3.72286	29.50845	-0.00292	1.00143	29.74237	6.24	-0.00
93/10/ 4	2449264.5	0.98456	0.17667	-0.00003	-5.74743	29.21652	-0.00287	1.00029	29.77647	10.17	-0.00
93/10/ 8	2449268.5	0.96896	0.24369	-0.00004	-7.75176	28.78519	-0.00281	0.99914	29.81068	14.12	-0.00
93/10/12	2449272.5	0.94877	0.30956	-0.00004	-9.72615	28.21555	-0.00273	0.99799	29.84485	18.07	-0.00
93/10/16	2449276.5	0.92406	0.37395	-0.00005	-11.66093	27.50938	-0.00264	0.99686	29.87881	22.03	-0.00
93/10/20	2449280.5	0.89493	0.43656	-0.00005	-13.54650	26.66915	-0.00254	0.99573	29.91239	26.00	-0.00
93/10/24	2449284.5	0.86151	0.49707	-0.00006	-15.37336	25.69804	-0.00242	0.99463	29.94544	29.98	-0.00
93/10/28	2449288.5	0.82395	0.55519	-0.00006	-17.13218	24.59992	-0.00229	0.99355	29.97778	33.97	-0.00
93/11/ 1	2449292.5	0.78242	0.61064	-0.00007	-18.81386	23.37937	-0.00215	0.99250	30.00927	37.97	-0.00
93/11/ 5	2449296.5	0.73709	0.66312	-0.00007	-20.40958	22.04166	-0.00200	0.99148	30.03973	41.98	-0.00

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93/11/ 9	2449300.5	0.68819	0.71239	-0.00008	-21.91086	20.59272	-0.00184	0.99051	30.06902	45.99	-0.00
93/11/13	2449304.5	0.63593	0.75819	-0.00008	-23.30961	19.03918	-0.00167	0.98958	30.09698	50.01	-0.00
93/11/17	2449308.5	0.58058	0.80028	-0.00009	-24.59822	17.38826	-0.00149	0.98870	30.12348	54.04	-0.01
93/11/21	2449312.5	0.52237	0.83846	-0.00009	-25.76956	15.64781	-0.00130	0.98787	30.14837	58.08	-0.01
93/11/25	2449316.5	0.46161	0.87252	-0.00009	-26.81708	13.82623	-0.00111	0.98710	30.17152	62.12	-0.01
93/11/29	2449320.5	0.39857	0.90229	-0.00010	-27.73485	11.93247	-0.00091	0.98640	30.19281	66.17	-0.01
93/12/ 3	2449324.5	0.33357	0.92760	-0.00010	-28.51761	9.97593	-0.00071	0.98576	30.21214	70.22	-0.01
93/12/ 7	2449328.5	0.26691	0.94834	-0.00010	-29.16079	7.96645	-0.00050	0.98519	30.22939	74.28	-0.01
93/12/11	2449332.5	0.19894	0.96438	-0.00010	-29.66059	5.91423	-0.00029	0.98469	30.24448	78.34	-0.01
93/12/15	2449336.5	0.12998	0.97564	-0.00010	-30.01397	3.82979	-0.00007	0.98426	30.25732	82.41	-0.01
93/12/19	2449340.5	0.06038	0.98206	-0.00010	-30.21872	1.72387	0.00014	0.98391	30.26785	86.48	-0.01
93/12/23	2449344.5	-0.00952	0.98360	-0.00010	-30.27345	-0.39260	0.00036	0.98364	30.27600	90.55	-0.01
93/12/27	2449348.5	-0.07938	0.98024	-0.00010	-30.17764	-2.50861	0.00057	0.98345	30.28173	94.63	-0.01
93/12/31	2449352.5	-0.14884	0.97201	-0.00010	-29.93162	-4.61309	0.00078	0.98334	30.28502	98.71	-0.01
94/ 1/ 4	2449356.5	-0.21756	0.95895	-0.00009	-29.53656	-6.69505	0.00098	0.98332	30.28584	102.78	-0.01
94/ 1/ 8	2449360.5	-0.28519	0.94111	-0.00009	-28.99451	-8.74361	0.00118	0.98337	30.28419	106.86	-0.01
94/ 1/12	2449364.5	-0.35141	0.91858	-0.00009	-28.30835	-10.74807	0.00138	0.98351	30.28009	110.93	-0.01
94/ 1/16	2449368.5	-0.41588	0.89149	-0.00009	-27.48177	-12.69800	0.00157	0.98372	30.27354	115.01	-0.00
94/ 1/20	2449372.5	-0.47828	0.85996	-0.00008	-26.51928	-14.58332	0.00175	0.98402	30.26459	119.08	-0.00
94/ 1/24	2449376.5	-0.53831	0.82417	-0.00008	-25.42612	-16.39433	0.00192	0.98439	30.25329	123.15	-0.00
94/ 1/28	2449380.5	-0.59566	0.78428	-0.00007	-24.20828	-18.12179	0.00208	0.98484	30.23971	127.22	-0.00
94/ 2/ 1	2449384.5	-0.65007	0.74051	-0.00007	-22.87238	-19.75698	0.00223	0.98536	30.22390	131.28	-0.00
94/ 2/ 5	2449388.5	-0.70126	0.69307	-0.00006	-21.42572	-21.29175	0.00238	0.98596	30.20596	135.34	-0.00
94/ 2/ 9	2449392.5	-0.74898	0.64222	-0.00006	-19.87612	-22.71858	0.00250	0.98662	30.18599	139.39	-0.00
94/ 2/13	2449396.5	-0.79302	0.58819	-0.00005	-18.23195	-24.03056	0.00262	0.98734	30.16409	143.44	-0.00
94/ 2/17	2449400.5	-0.83315	0.53128	-0.00004	-16.50202	-25.22152	0.00272	0.98813	30.14037	147.48	-0.00
94/ 2/21	2449404.5	-0.86920	0.47176	-0.00004	-14.69552	-26.28598	0.00281	0.98897	30.11496	151.51	-0.00
94/ 2/25	2449408.5	-0.90100	0.40993	-0.00003	-12.82197	-27.21920	0.00289	0.98987	30.08800	155.54	-0.00
94/ 3/ 1	2449412.5	-0.92840	0.34610	-0.00003	-10.89117	-28.01719	0.00295	0.99082	30.05962	159.55	-0.00
94/ 3/ 5	2449416.5	-0.95129	0.28059	-0.00002	-8.91309	-28.67675	0.00299	0.99180	30.02997	163.57	-0.00
94/ 3/ 9	2449420.5	-0.96955	0.21371	-0.00001	-6.89786	-29.19540	0.00303	0.99283	29.99920	167.57	-0.00
94/ 3/13	2449424.5	-0.98313	0.14580	-0.00000	-4.85566	-29.57146	0.00304	0.99389	29.96746	171.56	-0.00
94/ 3/17	2449428.5	-0.99198	0.07719	0.00000	-2.79669	-29.80399	0.00305	0.99498	29.93492	175.55	0.00
94/ 3/21	2449432.5	-0.99605	0.00821	0.00001	-0.73112	-29.89279	0.00303	0.99609	29.90173	179.53	0.00
94/ 3/25	2449436.5	-0.99536	-0.06081	0.00002	1.33100	-29.83839	0.00301	0.99721	29.86806	183.50	0.00
94/ 3/29	2449440.5	-0.98991	-0.12954	0.00002	3.37976	-29.64201	0.00297	0.99835	29.83407	187.46	0.00
94/ 4/ 2	2449444.5	-0.97976	-0.19766	0.00003	5.40545	-29.30557	0.00291	0.99950	29.79992	191.41	0.00
94/ 4/ 6	2449448.5	-0.96496	-0.26484	0.00004	7.39860	-28.83161	0.00284	1.00065	29.76577	195.35	0.00
94/ 4/10	2449452.5	-0.94561	-0.33077	0.00004	9.35004	-28.22333	0.00276	1.00179	29.73179	199.28	0.00
94/ 4/14	2449456.5	-0.92180	-0.39514	0.00005	11.25090	-27.48448	0.00267	1.00292	29.69813	203.20	0.00
94/ 4/18	2449460.5	-0.89367	-0.45766	0.00006	13.09267	-26.61938	0.00256	1.00404	29.66495	207.12	0.00
94/ 4/22	2449464.5	-0.86136	-0.51804	0.00006	14.86723	-25.63288	0.00245	1.00514	29.63240	211.02	0.00
94/ 4/26	2449468.5	-0.82504	-0.57600	0.00007	16.56688	-24.53030	0.00232	1.00621	29.60062	214.92	0.00
94/ 4/30	2449472.5	-0.78488	-0.63129	0.00007	18.18433	-23.31740	0.00218	1.00726	29.56977	218.81	0.00
94/ 5/ 4	2449476.5	-0.74109	-0.68366	0.00008	19.71276	-22.00038	0.00203	1.00826	29.53997	222.69	0.00

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94/ 5/ 8	2449480.5	-0.69387	-0.73287	0.00008	21.14581	-20.58579	0.00187	1.00923	29.51135	226.57	0.00
94/ 5/12	2449484.5	-0.64346	-0.77870	0.00009	22.47761	-19.08053	0.00171	1.01016	29.48405	230.43	0.00
94/ 5/16	2449488.5	-0.59010	-0.82096	0.00009	23.70278	-17.49179	0.00153	1.01104	29.45818	234.29	0.01
94/ 5/20	2449492.5	-0.53403	-0.85946	0.00009	24.81645	-15.82705	0.00135	1.01186	29.43385	238.14	0.01
94/ 5/24	2449496.5	-0.47553	-0.89404	0.00010	25.81424	-14.09403	0.00116	1.01263	29.41117	241.99	0.01
94/ 5/28	2449500.5	-0.41485	-0.92453	0.00010	26.69232	-12.30063	0.00097	1.01334	29.39023	245.83	0.01
94/ 6/ 1	2449504.5	-0.35229	-0.95083	0.00010	27.44734	-10.45494	0.00078	1.01399	29.37111	249.67	0.01
94/ 6/ 5	2449508.5	-0.28814	-0.97281	0.00010	28.07649	-8.56520	0.00058	1.01458	29.35391	253.50	0.01
94/ 6/ 9	2449512.5	-0.22267	-0.99037	0.00010	28.57748	-6.63975	0.00038	1.01510	29.33869	257.33	0.01
94/ 6/13	2449516.5	-0.15620	-1.00346	0.00010	28.94854	-4.68702	0.00018	1.01555	29.32552	261.15	0.01
94/ 6/17	2449520.5	-0.08902	-1.01202	0.00010	29.18840	-2.71550	-0.00003	1.01592	29.31445	264.97	0.01
94/ 6/21	2449524.5	-0.02144	-1.01600	0.00010	29.29634	-0.73371	-0.00023	1.01623	29.30552	268.79	0.01
94/ 6/25	2449528.5	0.04624	-1.01540	0.00010	29.27211	1.24983	-0.00043	1.01646	29.29878	272.61	0.01
94/ 6/29	2449532.5	0.11371	-1.01023	0.00010	29.11602	3.22663	-0.00063	1.01661	29.29426	276.42	0.01
94/ 7/ 3	2449536.5	0.18066	-1.00051	0.00010	28.82883	5.18822	-0.00083	1.01669	29.29196	280.24	0.01
94/ 7/ 7	2449540.5	0.24681	-0.98628	0.00010	28.41185	7.12621	-0.00102	1.01669	29.29191	284.05	0.01
94/ 7/11	2449544.5	0.31184	-0.96761	0.00010	27.86685	9.03232	-0.00121	1.01662	29.29410	287.86	0.01
94/ 7/15	2449548.5	0.37546	-0.94458	0.00009	27.19612	10.89837	-0.00139	1.01646	29.29852	291.68	0.01
94/ 7/19	2449552.5	0.43740	-0.91729	0.00009	26.40241	12.71634	-0.00157	1.01624	29.30516	295.49	0.01
94/ 7/23	2449556.5	0.49736	-0.88587	0.00008	25.48896	14.47834	-0.00173	1.01594	29.31398	299.31	0.00
94/ 7/27	2449560.5	0.55508	-0.85044	0.00008	24.45949	16.17672	-0.00190	1.01556	29.32496	303.13	0.00
94/ 7/31	2449564.5	0.61029	-0.81118	0.00008	23.31818	17.80402	-0.00205	1.01512	29.33804	306.96	0.00
94/ 8/ 4	2449568.5	0.66273	-0.76824	0.00007	22.06967	19.35301	-0.00220	1.01460	29.35318	310.78	0.00
94/ 8/ 8	2449572.5	0.71218	-0.72183	0.00007	20.71903	20.81675	-0.00233	1.01402	29.37031	314.61	0.00
94/ 8/12	2449576.5	0.75839	-0.67213	0.00006	19.27179	22.18858	-0.00246	1.01337	29.38937	318.45	0.00
94/ 8/16	2449580.5	0.80115	-0.61938	0.00005	17.73390	23.46214	-0.00257	1.01266	29.41026	322.29	0.00
94/ 8/20	2449584.5	0.84026	-0.56381	0.00005	16.11173	24.63145	-0.00267	1.01189	29.43291	326.14	0.00
94/ 8/24	2449588.5	0.87553	-0.50566	0.00004	14.41202	25.69087	-0.00276	1.01106	29.45721	329.99	0.00
94/ 8/28	2449592.5	0.90679	-0.44520	0.00004	12.64194	26.63518	-0.00284	1.01019	29.48307	333.85	0.00
94/ 9/ 1	2449596.5	0.93389	-0.38269	0.00003	10.80900	27.45956	-0.00291	1.00926	29.51037	337.72	0.00
94/ 9/ 5	2449600.5	0.95669	-0.31842	0.00002	8.92106	28.15967	-0.00296	1.00829	29.53900	341.59	0.00
94/ 9/ 9	2449604.5	0.97508	-0.25268	0.00002	6.98631	28.73163	-0.00300	1.00728	29.56882	345.47	0.00
94/ 9/13	2449608.5	0.98894	-0.18577	0.00001	5.01323	29.17208	-0.00302	1.00624	29.59970	349.36	0.00
94/ 9/17	2449612.5	0.99822	-0.11800	0.00000	3.01059	29.47819	-0.00304	1.00517	29.63152	353.26	0.00
94/ 9/21	2449616.5	1.00284	-0.04968	-0.00001	0.98740	29.64769	-0.00303	1.00407	29.66412	357.16	-0.00
94/ 9/25	2449620.5	1.00277	0.01888	-0.00001	-1.04714	29.67890	-0.00302	1.00295	29.69737	1.08	-0.00
94/ 9/29	2449624.5	0.99800	0.08734	-0.00002	-3.08363	29.57075	-0.00299	1.00181	29.73109	5.00	-0.00
94/10/ 3	2449628.5	0.98853	0.15540	-0.00003	-5.11255	29.32279	-0.00294	1.00067	29.76515	8.93	-0.00
94/10/ 7	2449632.5	0.97439	0.22272	-0.00003	-7.12426	28.93524	-0.00289	0.99952	29.79938	12.87	-0.00
94/10/11	2449636.5	0.95563	0.28898	-0.00004	-9.10909	28.40896	-0.00282	0.99837	29.83362	16.83	-0.00
94/10/15	2449640.5	0.93233	0.35387	-0.00005	-11.05738	27.74552	-0.00273	0.99723	29.86770	20.78	-0.00
94/10/19	2449644.5	0.90458	0.41707	-0.00005	-12.95947	26.94717	-0.00264	0.99610	29.90147	24.75	-0.00
94/10/23	2449648.5	0.87250	0.47827	-0.00006	-14.80584	26.01686	-0.00253	0.99498	29.93476	28.73	-0.00
94/10/27	2449652.5	0.83622	0.53718	-0.00006	-16.58711	24.95824	-0.00241	0.99389	29.96742	32.72	-0.00
94/10/31	2449656.5	0.79591	0.59349	-0.00007	-18.29408	23.77568	-0.00228	0.99283	29.99927	36.71	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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94/11/ 4	2449660.5	0.75176	0.64694	-0.00007	-19.91784	22.47421	-0.00214	0.99180	30.03016	40.71	-0.00
94/11/ 8	2449664.5	0.70396	0.69725	-0.00008	-21.44981	21.05958	-0.00198	0.99081	30.05994	44.73	-0.00
94/11/12	2449668.5	0.65273	0.74416	-0.00008	-22.88176	19.53819	-0.00181	0.98986	30.08846	48.74	-0.00
94/11/16	2449672.5	0.59832	0.78744	-0.00009	-24.20591	17.91706	-0.00164	0.98896	30.11556	52.77	-0.01
94/11/20	2449676.5	0.54098	0.82687	-0.00009	-25.41498	16.20387	-0.00145	0.98812	30.14111	56.81	-0.01
94/11/24	2449680.5	0.48099	0.86224	-0.00009	-26.50223	14.40683	-0.00125	0.98733	30.16496	60.85	-0.01
94/11/28	2449684.5	0.41863	0.89338	-0.00010	-27.46152	12.53472	-0.00105	0.98660	30.18699	64.89	-0.01
94/12/ 2	2449688.5	0.35421	0.92011	-0.00010	-28.28737	10.59681	-0.00084	0.98593	30.20708	68.95	-0.01
94/12/ 6	2449692.5	0.28804	0.94230	-0.00010	-28.97499	8.60280	-0.00063	0.98534	30.22512	73.00	-0.01
94/12/10	2449696.5	0.22044	0.95982	-0.00010	-29.52031	6.56279	-0.00041	0.98481	30.24102	77.07	-0.01
94/12/14	2449700.5	0.15176	0.97259	-0.00010	-29.92008	4.48721	-0.00019	0.98436	30.25469	81.13	-0.01
94/12/18	2449704.5	0.08232	0.98053	-0.00010	-30.17179	2.38673	0.00003	0.98398	30.26605	85.20	-0.01
94/12/22	2449708.5	0.01247	0.98361	-0.00010	-30.27382	0.27224	0.00025	0.98369	30.27504	89.27	-0.01
94/12/26	2449712.5	-0.05744	0.98179	-0.00010	-30.22535	-1.84526	0.00047	0.98347	30.28162	93.35	-0.01
94/12/30	2449716.5	-0.12707	0.97509	-0.00010	-30.02644	-3.95472	0.00069	0.98333	30.28575	97.42	-0.01
95/ 1/ 3	2449720.5	-0.19606	0.96353	-0.00010	-29.67800	-6.04511	0.00091	0.98328	30.28741	101.50	-0.01
95/ 1/ 7	2449724.5	-0.26408	0.94718	-0.00010	-29.18181	-8.10549	0.00112	0.98331	30.28658	105.58	-0.01
95/ 1/11	2449728.5	-0.33078	0.92611	-0.00009	-28.54048	-10.12511	0.00132	0.98341	30.28328	109.66	-0.01
95/ 1/15	2449732.5	-0.39584	0.90044	-0.00009	-27.75746	-12.09344	0.00152	0.98360	30.27752	113.73	-0.01
95/ 1/19	2449736.5	-0.45892	0.87029	-0.00009	-26.83700	-14.00027	0.00171	0.98387	30.26933	117.80	-0.01
95/ 1/23	2449740.5	-0.51973	0.83581	-0.00008	-25.78412	-15.83577	0.00189	0.98422	30.25876	121.87	-0.00
95/ 1/27	2449744.5	-0.57796	0.79718	-0.00008	-24.60457	-17.59055	0.00206	0.98465	30.24587	125.94	-0.00
95/ 1/31	2449748.5	-0.63332	0.75460	-0.00007	-23.30480	-19.25572	0.00222	0.98515	30.23072	130.01	-0.00
95/ 2/ 4	2449752.5	-0.68555	0.70829	-0.00007	-21.89189	-20.82293	0.00237	0.98572	30.21340	134.07	-0.00
95/ 2/ 8	2449756.5	-0.73439	0.65847	-0.00006	-20.37351	-22.28447	0.00251	0.98636	30.19400	138.12	-0.00
95/ 2/12	2449760.5	-0.77960	0.60541	-0.00006	-18.75788	-23.63322	0.00263	0.98707	30.17262	142.17	-0.00
95/ 2/16	2449764.5	-0.82099	0.54937	-0.00005	-17.05367	-24.86278	0.00274	0.98784	30.14939	146.21	-0.00
95/ 2/20	2449768.5	-0.85834	0.49063	-0.00004	-15.26997	-25.96746	0.00284	0.98867	30.12442	150.25	-0.00
95/ 2/24	2449772.5	-0.89149	0.42949	-0.00004	-13.41620	-26.94227	0.00293	0.98955	30.09784	154.28	-0.00
95/ 2/28	2449776.5	-0.92028	0.36625	-0.00003	-11.50209	-27.78299	0.00299	0.99048	30.06980	158.30	-0.00
95/ 3/ 4	2449780.5	-0.94459	0.30123	-0.00002	-9.53757	-28.48618	0.00305	0.99146	30.04044	162.31	-0.00
95/ 3/ 8	2449784.5	-0.96431	0.23475	-0.00002	-7.53272	-29.04914	0.00309	0.99248	30.00990	166.32	-0.00
95/ 3/12	2449788.5	-0.97937	0.16712	-0.00001	-5.49771	-29.46992	0.00311	0.99353	29.97835	170.32	-0.00
95/ 3/16	2449792.5	-0.98970	0.09870	-0.00000	-3.44276	-29.74738	0.00312	0.99461	29.94594	174.31	-0.00
95/ 3/20	2449796.5	-0.99527	0.02979	0.00001	-1.37805	-29.88107	0.00312	0.99572	29.91283	178.29	0.00
95/ 3/24	2449800.5	-0.99607	-0.03925	0.00001	0.68633	-29.87130	0.00310	0.99684	29.87919	182.26	0.00
95/ 3/28	2449804.5	-0.99211	-0.10811	0.00002	2.74041	-29.71910	0.00307	0.99798	29.84518	186.22	0.00
95/ 4/ 1	2449808.5	-0.98342	-0.17646	0.00003	4.77443	-29.42615	0.00302	0.99913	29.81096	190.17	0.00
95/ 4/ 5	2449812.5	-0.97007	-0.24397	0.00003	6.77882	-28.99482	0.00295	1.00028	29.77670	194.12	0.00
95/ 4/ 9	2449816.5	-0.95213	-0.31032	0.00004	8.74431	-28.42810	0.00288	1.00143	29.74256	198.05	0.00
95/ 4/13	2449820.5	-0.92971	-0.37521	0.00005	10.66195	-27.72958	0.00279	1.00256	29.70870	201.98	0.00
95/ 4/17	2449824.5	-0.90291	-0.43834	0.00005	12.52311	-26.90341	0.00269	1.00369	29.67527	205.90	0.00
95/ 4/21	2449828.5	-0.87189	-0.49942	0.00006	14.31954	-25.95428	0.00257	1.00480	29.64243	209.80	0.00
95/ 4/25	2449832.5	-0.83681	-0.55817	0.00007	16.04341	-24.88736	0.00245	1.00588	29.61033	213.70	0.00
95/ 4/29	2449836.5	-0.79783	-0.61432	0.00007	17.68731	-23.70829	0.00231	1.00694	29.57911	217.60	0.00

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95/ 5/ 3	2449840.5	-0.75515	-0.66763	0.00008	19.24426	-22.42313	0.00216	1.00796	29.54891	221.48	0.00
95/ 5/ 7	2449844.5	-0.70899	-0.71785	0.00008	20.70775	-21.03832	0.00200	1.00894	29.51986	225.36	0.00
95/ 5/11	2449848.5	-0.65955	-0.76476	0.00009	22.07178	-19.56067	0.00184	1.00989	29.49208	229.22	0.00
95/ 5/15	2449852.5	-0.60709	-0.80816	0.00009	23.33080	-17.99727	0.00166	1.01078	29.46571	233.09	0.01
95/ 5/19	2449856.5	-0.55184	-0.84786	0.00009	24.47978	-16.35552	0.00148	1.01163	29.44083	236.94	0.01
95/ 5/23	2449860.5	-0.49407	-0.88367	0.00010	25.51420	-14.64307	0.00130	1.01242	29.41758	240.79	0.01
95/ 5/27	2449864.5	-0.43405	-0.91546	0.00010	26.43005	-12.86776	0.00110	1.01315	29.39604	244.63	0.01
95/ 5/31	2449868.5	-0.37205	-0.94309	0.00010	27.22384	-11.03764	0.00091	1.01382	29.37630	248.47	0.01
95/ 6/ 4	2449872.5	-0.30836	-0.96643	0.00010	27.89259	-9.16088	0.00071	1.01443	29.35844	252.30	0.01
95/ 6/ 8	2449876.5	-0.24327	-0.98538	0.00011	28.43384	-7.24582	0.00050	1.01497	29.34255	256.13	0.01
95/ 6/12	2449880.5	-0.17708	-0.99988	0.00011	28.84567	-5.30084	0.00030	1.01544	29.32868	259.96	0.01
95/ 6/16	2449884.5	-0.11010	-1.00986	0.00011	29.12666	-3.33442	0.00009	1.01584	29.31690	263.78	0.01
95/ 6/20	2449888.5	-0.04261	-1.01528	0.00011	29.27590	-1.35507	-0.00012	1.01617	29.30725	267.60	0.01
95/ 6/24	2449892.5	0.02507	-1.01612	0.00011	29.29302	0.62868	-0.00032	1.01643	29.29977	271.41	0.01
95/ 6/28	2449896.5	0.09263	-1.01238	0.00010	29.17814	2.60834	-0.00053	1.01660	29.29449	275.23	0.01
95/ 7/ 2	2449900.5	0.15978	-1.00407	0.00010	28.93188	4.57542	-0.00073	1.01671	29.29144	279.04	0.01
95/ 7/ 6	2449904.5	0.22621	-0.99125	0.00010	28.55539	6.52153	-0.00093	1.01673	29.29062	282.85	0.01
95/ 7/10	2449908.5	0.29162	-0.97396	0.00010	28.05029	8.43833	-0.00112	1.01668	29.29205	286.67	0.01
95/ 7/14	2449912.5	0.35571	-0.95229	0.00010	27.41871	10.31762	-0.00131	1.01656	29.29572	290.48	0.01
95/ 7/18	2449916.5	0.41820	-0.92633	0.00009	26.66326	12.15132	-0.00150	1.01636	29.30160	294.30	0.01
95/ 7/22	2449920.5	0.47881	-0.89619	0.00009	25.78703	13.93152	-0.00168	1.01608	29.30969	298.11	0.01
95/ 7/26	2449924.5	0.53726	-0.86201	0.00009	24.79359	15.65048	-0.00185	1.01573	29.31995	301.93	0.00
95/ 7/30	2449928.5	0.59328	-0.82393	0.00008	23.68697	17.30069	-0.00201	1.01531	29.33234	305.76	0.00
95/ 8/ 3	2449932.5	0.64662	-0.78213	0.00008	22.47166	18.87484	-0.00217	1.01481	29.34681	309.58	0.00
95/ 8/ 7	2449936.5	0.69703	-0.73679	0.00007	21.15261	20.36590	-0.00231	1.01425	29.36329	313.41	0.00
95/ 8/11	2449940.5	0.74427	-0.68810	0.00007	19.73519	21.76713	-0.00245	1.01362	29.38172	317.25	0.00
95/ 8/15	2449944.5	0.78814	-0.63629	0.00006	18.22523	23.07207	-0.00257	1.01293	29.40203	321.08	0.00
95/ 8/19	2449948.5	0.82841	-0.58158	0.00005	16.62895	24.27462	-0.00268	1.01218	29.42413	324.93	0.00
95/ 8/23	2449952.5	0.86491	-0.52422	0.00005	14.95300	25.36903	-0.00278	1.01137	29.44792	328.78	0.00
95/ 8/27	2449956.5	0.89745	-0.46445	0.00004	13.20439	26.34995	-0.00287	1.01051	29.47331	332.64	0.00
95/ 8/31	2449960.5	0.92587	-0.40256	0.00003	11.39053	27.21243	-0.00294	1.00960	29.50018	336.50	0.00
95/ 9/ 4	2449964.5	0.95003	-0.33882	0.00003	9.51917	27.95198	-0.00301	1.00864	29.52843	340.37	0.00
95/ 9/ 8	2449968.5	0.96981	-0.27351	0.00002	7.59840	28.56458	-0.00305	1.00764	29.55792	344.25	0.00
95/ 9/12	2449972.5	0.98511	-0.20694	0.00001	5.63660	29.04669	-0.00309	1.00661	29.58854	348.14	0.00
95/ 9/16	2449976.5	0.99583	-0.13941	0.00001	3.64246	29.39532	-0.00311	1.00554	29.62013	352.03	0.00
95/ 9/20	2449980.5	1.00192	-0.07123	-0.00000	1.62489	29.60802	-0.00311	1.00445	29.65257	355.93	-0.00
95/ 9/24	2449984.5	1.00333	-0.00271	-0.00001	-0.40694	29.68291	-0.00310	1.00333	29.68570	359.84	-0.00
95/ 9/28	2449988.5	1.00003	0.06581	-0.00002	-2.44371	29.61874	-0.00308	1.00220	29.71938	3.77	-0.00
95/10/ 2	2449992.5	0.99204	0.13403	-0.00002	-4.47592	29.41485	-0.00304	1.00105	29.75344	7.69	-0.00
95/10/ 6	2449996.5	0.97936	0.20161	-0.00003	-6.49399	29.07125	-0.00299	0.99990	29.78774	11.63	-0.00
95/10/10	2450000.5	0.96205	0.26824	-0.00004	-8.48823	28.58859	-0.00292	0.99875	29.82210	15.58	-0.00
95/10/14	2450004.5	0.94017	0.33359	-0.00004	-10.44899	27.96822	-0.00284	0.99760	29.85636	19.54	-0.00
95/10/18	2450008.5	0.91381	0.39736	-0.00005	-12.36659	27.21216	-0.00274	0.99646	29.89037	23.50	-0.00
95/10/22	2450012.5	0.88307	0.45922	-0.00006	-14.23147	26.32314	-0.00263	0.99534	29.92394	27.48	-0.00
95/10/26	2450016.5	0.84810	0.51888	-0.00006	-16.03418	25.30459	-0.00251	0.99424	29.95693	31.46	-0.00

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95/10/30	2450020.5	0.80905	0.57604	-0.00007	-17.76549	24.16065	-0.00238	0.99317	29.98916	35.45	-0.00
95/11/ 3	2450024.5	0.76608	0.63042	-0.00007	-19.41638	22.89614	-0.00223	0.99212	30.02048	39.45	-0.00
95/11/ 7	2450028.5	0.71940	0.68174	-0.00008	-20.97814	21.51658	-0.00207	0.99112	30.05072	43.46	-0.00
95/11/11	2450032.5	0.66923	0.72975	-0.00008	-22.44245	20.02815	-0.00190	0.99015	30.07973	47.48	-0.00
95/11/15	2450036.5	0.61579	0.77420	-0.00009	-23.80137	18.43770	-0.00172	0.98923	30.10737	51.50	-0.01
95/11/19	2450040.5	0.55935	0.81486	-0.00009	-25.04745	16.75268	-0.00154	0.98837	30.13349	55.53	-0.01
95/11/23	2450044.5	0.50016	0.85154	-0.00009	-26.17378	14.98115	-0.00134	0.98756	30.15795	59.57	-0.01
95/11/27	2450048.5	0.43851	0.88402	-0.00010	-27.17403	13.13172	-0.00114	0.98681	30.18062	63.62	-0.01
95/12/ 1	2450052.5	0.37471	0.91216	-0.00010	-28.04249	11.21350	-0.00093	0.98612	30.20138	67.67	-0.01
95/12/ 5	2450056.5	0.30905	0.93579	-0.00010	-28.77414	9.23606	-0.00072	0.98550	30.22013	71.72	-0.01
95/12/ 9	2450060.5	0.24187	0.95479	-0.00010	-29.36471	7.20940	-0.00050	0.98495	30.23676	75.78	-0.01
95/12/13	2450064.5	0.17349	0.96907	-0.00010	-29.81065	5.14384	-0.00028	0.98447	30.25118	79.85	-0.01
95/12/17	2450068.5	0.10425	0.97854	-0.00010	-30.10923	3.04999	-0.00005	0.98407	30.26332	83.92	-0.01
95/12/21	2450072.5	0.03449	0.98315	-0.00010	-30.25854	0.93867	0.00017	0.98375	30.27310	87.99	-0.01
95/12/25	2450076.5	-0.03544	0.98287	-0.00010	-30.25751	-1.17914	0.00039	0.98351	30.28048	92.07	-0.01
95/12/29	2450080.5	-0.10520	0.97770	-0.00010	-30.10592	-3.29240	0.00061	0.98334	30.28541	96.14	-0.01
96/ 1/ 2	2450084.5	-0.17443	0.96767	-0.00010	-29.80440	-5.39005	0.00083	0.98326	30.28787	100.22	-0.01
96/ 1/ 6	2450088.5	-0.24279	0.95282	-0.00010	-29.35447	-7.46113	0.00104	0.98326	30.28784	104.30	-0.01
96/ 1/10	2450092.5	-0.30994	0.93322	-0.00009	-28.75847	-9.49481	0.00125	0.98335	30.28533	108.37	-0.01
96/ 1/14	2450096.5	-0.37556	0.90898	-0.00009	-28.01960	-11.48047	0.00145	0.98351	30.28034	112.45	-0.01
96/ 1/18	2450100.5	-0.43930	0.88022	-0.00009	-27.14185	-13.40780	0.00165	0.98376	30.27291	116.52	-0.01
96/ 1/22	2450104.5	-0.50086	0.84709	-0.00008	-26.13001	-15.26685	0.00183	0.98408	30.26308	120.59	-0.00
96/ 1/26	2450108.5	-0.55993	0.80975	-0.00008	-24.98960	-17.04807	0.00201	0.98448	30.25089	124.66	-0.00
96/ 1/30	2450112.5	-0.61622	0.76839	-0.00008	-23.72686	-18.74240	0.00217	0.98496	30.23642	128.73	-0.00
96/ 2/ 3	2450116.5	-0.66947	0.72322	-0.00007	-22.34868	-20.34133	0.00233	0.98551	30.21975	132.79	-0.00
96/ 2/ 7	2450120.5	-0.71940	0.67448	-0.00006	-20.86256	-21.83693	0.00247	0.98613	30.20096	136.85	-0.00
96/ 2/11	2450124.5	-0.76578	0.62241	-0.00006	-19.27654	-23.22190	0.00260	0.98682	30.18015	140.90	-0.00
96/ 2/15	2450128.5	-0.80839	0.56728	-0.00005	-17.59917	-24.48961	0.00272	0.98758	30.15745	144.94	-0.00
96/ 2/19	2450132.5	-0.84703	0.50936	-0.00005	-15.83940	-25.63413	0.00283	0.98839	30.13296	148.98	-0.00
96/ 2/23	2450136.5	-0.88152	0.44894	-0.00004	-14.00658	-26.65026	0.00292	0.98925	30.10682	153.01	-0.00
96/ 2/27	2450140.5	-0.91170	0.38633	-0.00003	-12.11033	-27.53355	0.00299	0.99017	30.07917	157.04	-0.00
96/ 3/ 2	2450144.5	-0.93743	0.32183	-0.00003	-10.16053	-28.28028	0.00305	0.99114	30.05014	161.05	-0.00
96/ 3/ 6	2450148.5	-0.95861	0.25577	-0.00002	-8.16722	-28.88754	0.00310	0.99215	30.01989	165.06	-0.00
96/ 3/10	2450152.5	-0.97514	0.18847	-0.00001	-6.14057	-29.35315	0.00313	0.99319	29.98857	169.06	-0.00
96/ 3/14	2450156.5	-0.98696	0.12026	-0.00000	-4.09076	-29.67571	0.00315	0.99426	29.95634	173.05	-0.00
96/ 3/18	2450160.5	-0.99403	0.05147	0.00000	-2.02801	-29.85456	0.00315	0.99536	29.92336	177.04	0.00
96/ 3/22	2450164.5	-0.99633	-0.01757	0.00001	0.03756	-29.88977	0.00313	0.99649	29.88979	181.01	0.00
96/ 3/26	2450168.5	-0.99387	-0.08652	0.00002	2.09594	-29.78215	0.00310	0.99762	29.85581	184.98	0.00
96/ 3/30	2450172.5	-0.98666	-0.15507	0.00003	4.13730	-29.53318	0.00306	0.99877	29.82157	188.93	0.00
96/ 4/ 3	2450176.5	-0.97477	-0.22287	0.00003	6.15200	-29.14502	0.00300	0.99992	29.78724	192.88	0.00
96/ 4/ 7	2450180.5	-0.95826	-0.28962	0.00004	8.13069	-28.62047	0.00293	1.00107	29.75298	196.82	0.00
96/ 4/11	2450184.5	-0.93724	-0.35500	0.00005	10.06429	-27.96294	0.00284	1.00222	29.71895	200.75	0.00
96/ 4/15	2450188.5	-0.91181	-0.41872	0.00005	11.94409	-27.17640	0.00274	1.00335	29.68531	204.67	0.00
96/ 4/19	2450192.5	-0.88210	-0.48047	0.00006	13.76171	-26.26537	0.00263	1.00447	29.65223	208.58	0.00
96/ 4/23	2450196.5	-0.84828	-0.53998	0.00006	15.50919	-25.23489	0.00251	1.00556	29.61983	212.48	0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
96/ 4/27	2450200.5	-0.81050	-0.59698	0.00007	17.17897	-24.09044	0.00237	1.00663	29.58828	216.37	0.00
96/ 5/ 1	2450204.5	-0.76897	-0.65121	0.00008	18.76395	-22.83795	0.00223	1.00766	29.55771	220.26	0.00
96/ 5/ 5	2450208.5	-0.72388	-0.70242	0.00008	20.25749	-21.48376	0.00208	1.00866	29.52825	224.14	0.00
96/ 5/ 9	2450212.5	-0.67545	-0.75040	0.00008	21.65339	-20.03455	0.00191	1.00961	29.50005	228.01	0.00
96/ 5/13	2450216.5	-0.62391	-0.79492	0.00009	22.94599	-18.49734	0.00174	1.01052	29.47321	231.87	0.01
96/ 5/17	2450220.5	-0.56951	-0.83580	0.00009	24.13008	-16.87943	0.00156	1.01139	29.44785	235.73	0.01
96/ 5/21	2450224.5	-0.51251	-0.87285	0.00010	25.20099	-15.18839	0.00138	1.01219	29.42409	239.58	0.01
96/ 5/25	2450228.5	-0.45316	-0.90592	0.00010	26.15455	-13.43200	0.00119	1.01294	29.40203	243.42	0.01
96/ 5/29	2450232.5	-0.39176	-0.93487	0.00010	26.98710	-11.61825	0.00099	1.01363	29.38175	247.26	0.01
96/ 6/ 2	2450236.5	-0.32857	-0.95957	0.00010	27.69550	-9.75527	0.00079	1.01426	29.36334	251.10	0.01
96/ 6/ 6	2450240.5	-0.26389	-0.97991	0.00011	28.27713	-7.85135	0.00059	1.01482	29.34689	254.93	0.01
96/ 6/10	2450244.5	-0.19802	-0.99582	0.00011	28.72991	-5.91485	0.00038	1.01531	29.33246	258.75	0.01
96/ 6/14	2450248.5	-0.13125	-1.00722	0.00011	29.05223	-3.95425	0.00017	1.01574	29.32010	262.58	0.01
96/ 6/18	2450252.5	-0.06389	-1.01407	0.00011	29.24306	-1.97802	-0.00004	1.01608	29.30988	266.40	0.01
96/ 6/22	2450256.5	0.00376	-1.01635	0.00011	29.30182	0.00529	-0.00025	1.01636	29.30182	270.21	0.01
96/ 6/26	2450260.5	0.07139	-1.01405	0.00011	29.22849	1.98718	-0.00046	1.01656	29.29597	274.03	0.01
96/ 6/30	2450264.5	0.13871	-1.00718	0.00010	29.02354	3.95917	-0.00067	1.01669	29.29233	277.84	0.01
96/ 7/ 4	2450268.5	0.20539	-0.99577	0.00010	28.68793	5.91281	-0.00087	1.01673	29.29093	281.65	0.01
96/ 7/ 8	2450272.5	0.27115	-0.97988	0.00010	28.22314	7.83976	-0.00107	1.01671	29.29176	285.47	0.01
96/ 7/12	2450276.5	0.33570	-0.95958	0.00010	27.63114	9.73177	-0.00127	1.01660	29.29484	289.28	0.01
96/ 7/16	2450280.5	0.39872	-0.93495	0.00009	26.91439	11.58073	-0.00146	1.01642	29.30013	293.10	0.01
96/ 7/20	2450284.5	0.45996	-0.90611	0.00009	26.07582	13.37865	-0.00165	1.01617	29.30762	296.91	0.01
96/ 7/24	2450288.5	0.51911	-0.87318	0.00009	25.11885	15.11775	-0.00182	1.01584	29.31728	300.73	0.00
96/ 7/28	2450292.5	0.57593	-0.83631	0.00008	24.04736	16.79044	-0.00199	1.01543	29.32907	304.55	0.00
96/ 8/ 1	2450296.5	0.63013	-0.79566	0.00008	22.86571	18.38934	-0.00215	1.01496	29.34294	308.38	0.00
96/ 8/ 5	2450300.5	0.68149	-0.75141	0.00007	21.57869	19.90733	-0.00230	1.01442	29.35884	312.21	0.00
96/ 8/ 9	2450304.5	0.72976	-0.70375	0.00007	20.19156	21.33756	-0.00244	1.01381	29.37670	316.04	0.00
96/ 8/13	2450308.5	0.77471	-0.65289	0.00006	18.70999	22.67349	-0.00256	1.01314	29.39644	319.88	0.00
96/ 8/17	2450312.5	0.81614	-0.59907	0.00006	17.14009	23.90891	-0.00268	1.01240	29.41800	323.72	0.00
96/ 8/21	2450316.5	0.85384	-0.54251	0.00005	15.48837	25.03794	-0.00278	1.01161	29.44126	327.57	0.00
96/ 8/25	2450320.5	0.88764	-0.48347	0.00004	13.76174	26.05510	-0.00287	1.01077	29.46615	331.42	0.00
96/ 8/29	2450324.5	0.91737	-0.42221	0.00004	11.96749	26.95533	-0.00295	1.00987	29.49255	335.29	0.00
96/ 9/ 2	2450328.5	0.94289	-0.35902	0.00003	10.11325	27.73397	-0.00302	1.00893	29.52035	339.15	0.00
96/ 9/ 6	2450332.5	0.96406	-0.29417	0.00002	8.20702	28.38685	-0.00307	1.00794	29.54943	343.03	0.00
96/ 9/10	2450336.5	0.98077	-0.22796	0.00001	6.25710	28.91029	-0.00311	1.00692	29.57966	346.92	0.00
96/ 9/14	2450340.5	0.99294	-0.16070	0.00001	4.27208	29.30112	-0.00313	1.00586	29.61091	350.81	0.00
96/ 9/18	2450344.5	1.00049	-0.09268	0.00000	2.26080	29.55671	-0.00314	1.00478	29.64305	354.71	0.00
96/ 9/22	2450348.5	1.00338	-0.02424	-0.00001	0.23237	29.67501	-0.00313	1.00367	29.67592	358.62	-0.00
96/ 9/26	2450352.5	1.00156	0.04432	-0.00001	-1.80394	29.65456	-0.00311	1.00254	29.70938	2.53	-0.00
96/ 9/30	2450356.5	0.99504	0.11267	-0.00002	-3.83868	29.49452	-0.00307	1.00140	29.74327	6.46	-0.00
96/10/ 4	2450360.5	0.98383	0.18049	-0.00003	-5.86229	29.19469	-0.00302	1.00025	29.77745	10.40	-0.00
96/10/ 8	2450364.5	0.96797	0.24745	-0.00004	-7.86511	28.75552	-0.00296	0.99910	29.81174	14.34	-0.00
96/10/12	2450368.5	0.94752	0.31324	-0.00004	-9.83746	28.17813	-0.00288	0.99795	29.84598	18.29	-0.00
96/10/16	2450372.5	0.92255	0.37754	-0.00005	-11.76968	27.46435	-0.00279	0.99681	29.88002	22.26	-0.00
96/10/20	2450376.5	0.89318	0.44003	-0.00005	-13.65216	26.61667	-0.00268	0.99569	29.91369	26.23	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

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96/10/24	2450380.5	0.85952	0.50042	-0.00006	-15.47541	25.63832	-0.00256	0.99458	29.94682	30.21	-0.00
96/10/28	2450384.5	0.82173	0.55839	-0.00007	-17.23012	24.53320	-0.00243	0.99350	29.97924	34.20	-0.00
96/11/ 1	2450388.5	0.77997	0.61367	-0.00007	-18.90721	23.30592	-0.00229	0.99244	30.01081	38.20	-0.00
96/11/ 5	2450392.5	0.73443	0.66598	-0.00008	-20.49786	21.96179	-0.00213	0.99143	30.04135	42.20	-0.00
96/11/ 9	2450396.5	0.68533	0.71506	-0.00008	-21.99363	20.50679	-0.00196	0.99045	30.07072	46.22	-0.00
96/11/13	2450400.5	0.63290	0.76065	-0.00009	-23.38643	18.94755	-0.00179	0.98952	30.09875	50.24	-0.00
96/11/17	2450404.5	0.57737	0.80253	-0.00009	-24.66869	17.29135	-0.00160	0.98864	30.12532	54.27	-0.01
96/11/21	2450408.5	0.51901	0.84047	-0.00009	-25.83329	15.54605	-0.00140	0.98781	30.15027	58.30	-0.01
96/11/25	2450412.5	0.45810	0.87429	-0.00010	-26.87373	13.72011	-0.00120	0.98704	30.17348	62.35	-0.01
96/11/29	2450416.5	0.39494	0.90381	-0.00010	-27.78411	11.82246	-0.00099	0.98633	30.19482	66.40	-0.01
96/12/ 3	2450420.5	0.32983	0.92887	-0.00010	-28.55918	9.86257	-0.00078	0.98569	30.21419	70.45	-0.01
96/12/ 7	2450424.5	0.26310	0.94934	-0.00010	-29.19443	7.85028	-0.00056	0.98512	30.23146	74.51	-0.01
96/12/11	2450428.5	0.19506	0.96511	-0.00010	-29.68608	5.79581	-0.00034	0.98462	30.24657	78.57	-0.01
96/12/15	2450432.5	0.12605	0.97609	-0.00010	-30.03115	3.70971	-0.00012	0.98420	30.25941	82.64	-0.01
96/12/19	2450436.5	0.05642	0.98223	-0.00010	-30.22746	1.60273	0.00011	0.98385	30.26992	86.71	-0.01
96/12/23	2450440.5	-0.01350	0.98349	-0.00010	-30.27368	-0.51420	0.00033	0.98358	30.27805	90.79	-0.01
96/12/27	2450444.5	-0.08334	0.97986	-0.00010	-30.16932	-2.63003	0.00055	0.98340	30.28374	94.86	-0.01
96/12/31	2450448.5	-0.15277	0.97135	-0.00010	-29.91475	-4.73373	0.00077	0.98329	30.28697	98.94	-0.01
97/ 1/ 4	2450452.5	-0.22144	0.95800	-0.00010	-29.51121	-6.81428	0.00099	0.98327	30.28772	103.02	-0.01
97/ 1/ 8	2450456.5	-0.28901	0.93989	-0.00010	-28.96078	-8.86080	0.00120	0.98332	30.28598	107.09	-0.01
97/ 1/12	2450460.5	-0.35514	0.91710	-0.00009	-28.26639	-10.86262	0.00140	0.98346	30.28177	111.17	-0.01
97/ 1/16	2450464.5	-0.41951	0.88974	-0.00009	-27.43180	-12.80930	0.00160	0.98368	30.27510	115.24	-0.01
97/ 1/20	2450468.5	-0.48178	0.85797	-0.00009	-26.46153	-14.69079	0.00179	0.98398	30.26601	119.32	-0.01
97/ 1/24	2450472.5	-0.54167	0.82193	-0.00008	-25.36089	-16.49739	0.00197	0.98436	30.25456	123.39	-0.00
97/ 1/28	2450476.5	-0.59886	0.78181	-0.00008	-24.13590	-18.21990	0.00214	0.98481	30.24081	127.45	-0.00
97/ 2/ 1	2450480.5	-0.65309	0.73781	-0.00007	-22.79324	-19.84963	0.00230	0.98534	30.22482	131.51	-0.00
97/ 2/ 5	2450484.5	-0.70409	0.69017	-0.00007	-21.34023	-21.37846	0.00245	0.98594	30.20669	135.57	-0.00
97/ 2/ 9	2450488.5	-0.75161	0.63912	-0.00006	-19.78475	-22.79889	0.00259	0.98661	30.18651	139.62	-0.00
97/ 2/13	2450492.5	-0.79543	0.58492	-0.00005	-18.13518	-24.10407	0.00271	0.98734	30.16440	143.67	-0.00
97/ 2/17	2450496.5	-0.83534	0.52785	-0.00005	-16.40037	-25.28785	0.00282	0.98813	30.14046	147.71	-0.00
97/ 2/21	2450500.5	-0.87115	0.46818	-0.00004	-14.58953	-26.34480	0.00292	0.98899	30.11483	151.75	-0.00
97/ 2/25	2450504.5	-0.90270	0.40623	-0.00003	-12.71222	-27.27023	0.00300	0.98989	30.08764	155.77	-0.00
97/ 3/ 1	2450508.5	-0.92984	0.34229	-0.00003	-10.77823	-28.06020	0.00307	0.99084	30.05903	159.79	-0.00
97/ 3/ 5	2450512.5	-0.95246	0.27668	-0.00002	-8.79757	-28.71153	0.00312	0.99183	30.02914	163.80	-0.00
97/ 3/ 9	2450516.5	-0.97046	0.20974	-0.00001	-6.78036	-29.22183	0.00315	0.99286	29.99814	167.80	-0.00
97/ 3/13	2450520.5	-0.98377	0.14178	-0.00001	-4.73680	-29.58943	0.00318	0.99393	29.96618	171.80	-0.00
97/ 3/17	2450524.5	-0.99233	0.07314	0.00000	-2.67708	-29.81346	0.00318	0.99502	29.93342	175.78	0.00
97/ 3/21	2450528.5	-0.99613	0.00414	0.00001	-0.61137	-29.89376	0.00317	0.99614	29.90002	179.76	0.00
97/ 3/25	2450532.5	-0.99516	-0.06487	0.00002	1.45028	-29.83091	0.00315	0.99727	29.86614	183.73	0.00
97/ 3/29	2450536.5	-0.98944	-0.13358	0.00002	3.49798	-29.62617	0.00311	0.99842	29.83196	187.69	0.00
97/ 4/ 2	2450540.5	-0.97902	-0.20165	0.00003	5.52203	-29.28150	0.00305	0.99957	29.79764	191.64	0.00
97/ 4/ 6	2450544.5	-0.96395	-0.26876	0.00004	7.51298	-28.79950	0.00298	1.00072	29.76333	195.58	0.00
97/ 4/10	2450548.5	-0.94434	-0.33461	0.00004	9.46167	-28.18338	0.00290	1.00187	29.72921	199.51	0.00
97/ 4/14	2450552.5	-0.92028	-0.39888	0.00005	11.35925	-27.43695	0.00280	1.00300	29.69543	203.43	0.00
97/ 4/18	2450556.5	-0.89190	-0.46128	0.00006	13.19726	-26.56456	0.00270	1.00412	29.66215	207.35	0.00

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97/ 4/22	2450560.5	-0.85935	-0.52153	0.00006	14.96759	-25.57107	0.00257	1.00522	29.62952	211.25	0.00
97/ 4/26	2450564.5	-0.82280	-0.57934	0.00007	16.66256	-24.46186	0.00244	1.00630	29.59769	215.15	0.00
97/ 4/30	2450568.5	-0.78243	-0.63446	0.00007	18.27492	-23.24270	0.00230	1.00734	29.56681	219.04	0.00
97/ 5/ 4	2450572.5	-0.73843	-0.68665	0.00008	19.79788	-21.91981	0.00214	1.00835	29.53700	222.92	0.00
97/ 5/ 8	2450576.5	-0.69103	-0.73567	0.00008	21.22511	-20.49977	0.00198	1.00932	29.50840	226.79	0.00
97/ 5/12	2450580.5	-0.64044	-0.78130	0.00009	22.55077	-18.98948	0.00181	1.01024	29.48114	230.66	0.01
97/ 5/16	2450584.5	-0.58692	-0.82334	0.00009	23.76951	-17.39618	0.00163	1.01112	29.45534	234.52	0.01
97/ 5/20	2450588.5	-0.53071	-0.86161	0.00010	24.87650	-15.72733	0.00144	1.01194	29.43109	238.37	0.01
97/ 5/24	2450592.5	-0.47207	-0.89595	0.00010	25.86739	-13.99067	0.00125	1.01271	29.40852	242.22	0.01
97/ 5/28	2450596.5	-0.41128	-0.92621	0.00010	26.73838	-12.19412	0.00105	1.01342	29.38771	246.06	0.01
97/ 6/ 1	2450600.5	-0.34862	-0.95225	0.00010	27.48615	-10.34576	0.00084	1.01406	29.36874	249.89	0.01
97/ 6/ 5	2450604.5	-0.28438	-0.97398	0.00011	28.10792	-8.45384	0.00064	1.01465	29.35171	253.72	0.01
97/ 6/ 9	2450608.5	-0.21885	-0.99129	0.00011	28.60144	-6.52671	0.00043	1.01516	29.33667	257.55	0.01
97/ 6/13	2450612.5	-0.15233	-1.00411	0.00011	28.96496	-4.57279	0.00022	1.01560	29.32369	261.37	0.01
97/ 6/17	2450616.5	-0.08513	-1.01240	0.00011	29.19724	-2.60058	0.00001	1.01597	29.31283	265.19	0.01
97/ 6/21	2450620.5	-0.01753	-1.01612	0.00011	29.29759	-0.61858	-0.00021	1.01627	29.30412	269.01	0.01
97/ 6/25	2450624.5	0.05014	-1.01526	0.00011	29.26580	1.36468	-0.00042	1.01650	29.29760	272.83	0.01
97/ 6/29	2450628.5	0.11758	-1.00982	0.00011	29.10219	3.34070	-0.00063	1.01664	29.29330	276.64	0.01
97/ 7/ 3	2450632.5	0.18450	-0.99983	0.00010	28.80756	5.30103	-0.00083	1.01671	29.29124	280.46	0.01
97/ 7/ 7	2450636.5	0.25058	-0.98535	0.00010	28.38324	7.23731	-0.00104	1.01671	29.29141	284.27	0.01
97/ 7/11	2450640.5	0.31554	-0.96642	0.00010	27.83103	9.14123	-0.00124	1.01663	29.29383	288.08	0.01
97/ 7/15	2450644.5	0.37908	-0.94314	0.00010	27.15324	11.00463	-0.00143	1.01647	29.29847	291.90	0.01
97/ 7/19	2450648.5	0.44090	-0.91561	0.00009	26.35265	12.81950	-0.00161	1.01624	29.30532	295.71	0.01
97/ 7/23	2450652.5	0.50074	-0.88395	0.00009	25.43253	14.57797	-0.00179	1.01593	29.31434	299.53	0.01
97/ 7/27	2450656.5	0.55832	-0.84831	0.00008	24.39662	16.27239	-0.00196	1.01555	29.32551	303.35	0.00
97/ 7/31	2450660.5	0.61338	-0.80883	0.00008	23.24912	17.89531	-0.00213	1.01510	29.33877	307.18	0.00
97/ 8/ 4	2450664.5	0.66566	-0.76568	0.00007	21.99469	19.43953	-0.00228	1.01458	29.35408	311.00	0.00
97/ 8/ 8	2450668.5	0.71492	-0.71907	0.00007	20.63844	20.89812	-0.00242	1.01399	29.37136	314.83	0.00
97/ 8/12	2450672.5	0.76094	-0.66920	0.00006	19.18593	22.26441	-0.00256	1.01334	29.39054	318.67	0.00
97/ 8/16	2450676.5	0.80350	-0.61628	0.00006	17.64311	23.53210	-0.00268	1.01263	29.41155	322.51	0.00
97/ 8/20	2450680.5	0.84239	-0.56055	0.00005	16.01638	24.69521	-0.00279	1.01185	29.43429	326.36	0.00
97/ 8/24	2450684.5	0.87744	-0.50227	0.00004	14.31252	25.74812	-0.00288	1.01102	29.45868	330.21	0.00
97/ 8/28	2450688.5	0.90847	-0.44168	0.00004	12.53870	26.68563	-0.00296	1.01014	29.48460	334.07	0.00
97/ 9/ 1	2450692.5	0.93532	-0.37906	0.00003	10.70247	27.50295	-0.00303	1.00922	29.51195	337.94	0.00
97/ 9/ 5	2450696.5	0.95788	-0.31470	0.00002	8.81170	28.19577	-0.00309	1.00825	29.54061	341.81	0.00
97/ 9/ 9	2450700.5	0.97600	-0.24889	0.00002	6.87459	28.76024	-0.00313	1.00724	29.57045	345.69	0.00
97/ 9/13	2450704.5	0.98961	-0.18192	0.00001	4.89965	29.19303	-0.00316	1.00619	29.60135	349.58	0.00
97/ 9/17	2450708.5	0.99862	-0.11411	0.00000	2.89567	29.49134	-0.00317	1.00512	29.63316	353.48	0.00
97/ 9/21	2450712.5	1.00297	-0.04576	-0.00001	0.87165	29.65294	-0.00317	1.00402	29.66575	357.39	-0.00
97/ 9/25	2450716.5	1.00264	0.02279	-0.00001	-1.16318	29.67618	-0.00315	1.00290	29.69897	1.30	-0.00
97/ 9/29	2450720.5	0.99760	0.09124	-0.00002	-3.19941	29.56002	-0.00312	1.00176	29.73266	5.23	-0.00
97/10/ 3	2450724.5	0.98786	0.15926	-0.00003	-5.22752	29.30407	-0.00307	1.00062	29.76668	9.16	-0.00
97/10/ 7	2450728.5	0.97346	0.22653	-0.00003	-7.23787	28.90857	-0.00301	0.99947	29.80087	13.10	-0.00
97/10/11	2450732.5	0.95444	0.29272	-0.00004	-9.22079	28.37443	-0.00294	0.99832	29.83506	17.05	-0.00
97/10/15	2450736.5	0.93088	0.35753	-0.00005	-11.16660	27.70325	-0.00285	0.99718	29.86910	21.01	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
97/10/19	2450740.5	0.90288	0.42062	-0.00005	-13.06568	26.89733	-0.00274	0.99605	29.90281	24.98	-0.00
97/10/23	2450744.5	0.87056	0.48170	-0.00006	-14.90849	25.95965	-0.00262	0.99494	29.93604	28.96	-0.00
97/10/27	2450748.5	0.83405	0.54046	-0.00007	-16.68567	24.89391	-0.00249	0.99385	29.96863	32.94	-0.00
97/10/31	2450752.5	0.79352	0.59662	-0.00007	-18.38805	23.70451	-0.00235	0.99279	30.00040	36.94	-0.00
97/11/ 4	2450756.5	0.74916	0.64990	-0.00008	-20.00673	22.39652	-0.00219	0.99177	30.03120	40.94	-0.00
97/11/ 8	2450760.5	0.70116	0.70002	-0.00008	-21.53313	20.97572	-0.00203	0.99078	30.06088	44.95	-0.00
97/11/12	2450764.5	0.64974	0.74673	-0.00009	-22.95908	19.44855	-0.00185	0.98983	30.08929	48.97	-0.00
97/11/16	2450768.5	0.59516	0.78980	-0.00009	-24.27681	17.82207	-0.00166	0.98894	30.11627	53.00	-0.01
97/11/20	2450772.5	0.53766	0.82900	-0.00009	-25.47909	16.10398	-0.00147	0.98809	30.14170	57.03	-0.01
97/11/24	2450776.5	0.47753	0.86414	-0.00010	-26.55919	14.30253	-0.00126	0.98731	30.16542	61.07	-0.01
97/11/28	2450780.5	0.41505	0.89503	-0.00010	-27.51102	12.42652	-0.00106	0.98658	30.18733	65.12	-0.01
97/12/ 2	2450784.5	0.35052	0.92150	-0.00010	-28.32914	10.48525	-0.00084	0.98592	30.20730	69.17	-0.01
97/12/ 6	2450788.5	0.28427	0.94343	-0.00010	-29.00880	8.48845	-0.00062	0.98533	30.22522	73.23	-0.01
97/12/10	2450792.5	0.21660	0.96069	-0.00010	-29.54598	6.44622	-0.00040	0.98480	30.24101	77.29	-0.01
97/12/14	2450796.5	0.14787	0.97319	-0.00011	-29.93745	4.36901	-0.00017	0.98436	30.25457	81.36	-0.01
97/12/18	2450800.5	0.07840	0.98086	-0.00011	-30.18077	2.26750	0.00005	0.98398	30.26583	85.43	-0.01
97/12/22	2450804.5	0.00854	0.98365	-0.00011	-30.27434	0.15260	0.00028	0.98369	30.27472	89.50	-0.01
97/12/26	2450808.5	-0.06137	0.98156	-0.00010	-30.21740	-1.96471	0.00051	0.98348	30.28121	93.58	-0.01
97/12/30	2450812.5	-0.13096	0.97458	-0.00010	-30.01007	-4.07337	0.00073	0.98334	30.28525	97.65	-0.01
98/ 1/ 3	2450816.5	-0.19991	0.96275	-0.00010	-29.65329	-6.16236	0.00095	0.98329	30.28683	101.73	-0.01
98/ 1/ 7	2450820.5	-0.26786	0.94613	-0.00010	-29.14889	-8.22074	0.00117	0.98332	30.28594	105.81	-0.01
98/ 1/11	2450824.5	-0.33448	0.92480	-0.00010	-28.49953	-10.23778	0.00138	0.98343	30.28259	109.88	-0.01
98/ 1/15	2450828.5	-0.39943	0.89887	-0.00009	-27.70870	-12.20296	0.00159	0.98362	30.27679	113.96	-0.01
98/ 1/19	2450832.5	-0.46239	0.86847	-0.00009	-26.78069	-14.10609	0.00179	0.98389	30.26858	118.03	-0.01
98/ 1/23	2450836.5	-0.52306	0.83375	-0.00008	-25.72056	-15.93737	0.00199	0.98424	30.25801	122.10	-0.00
98/ 1/27	2450840.5	-0.58113	0.79490	-0.00008	-24.53411	-17.68742	0.00217	0.98467	30.24512	126.17	-0.00
98/ 1/31	2450844.5	-0.63633	0.75210	-0.00007	-23.22781	-19.34738	0.00234	0.98517	30.22999	130.23	-0.00
98/ 2/ 4	2450848.5	-0.68837	0.70558	-0.00007	-21.80878	-20.90895	0.00250	0.98575	30.21269	134.29	-0.00
98/ 2/ 8	2450852.5	-0.73701	0.65557	-0.00006	-20.28472	-22.36441	0.00264	0.98639	30.19332	138.35	-0.00
98/ 2/12	2450856.5	-0.78202	0.60234	-0.00006	-18.66386	-23.70672	0.00278	0.98710	30.17198	142.40	-0.00
98/ 2/16	2450860.5	-0.82317	0.54613	-0.00005	-16.95491	-24.92949	0.00289	0.98787	30.14877	146.44	-0.00
98/ 2/20	2450864.5	-0.86029	0.48725	-0.00004	-15.16697	-26.02706	0.00299	0.98869	30.12382	150.47	-0.00
98/ 2/24	2450868.5	-0.89320	0.42598	-0.00004	-13.30949	-26.99450	0.00308	0.98958	30.09727	154.50	-0.00
98/ 2/28	2450872.5	-0.92174	0.36263	-0.00003	-11.39220	-27.82763	0.00315	0.99051	30.06924	158.52	-0.00
98/ 3/ 4	2450876.5	-0.94580	0.29751	-0.00002	-9.42504	-28.52304	0.00320	0.99149	30.03989	162.54	-0.00
98/ 3/ 8	2450880.5	-0.96526	0.23095	-0.00001	-7.41811	-29.07805	0.00324	0.99250	30.00936	166.54	-0.00
98/ 3/12	2450884.5	-0.98005	0.16327	-0.00001	-5.38160	-29.49080	0.00326	0.99355	29.97781	170.54	-0.00
98/ 3/16	2450888.5	-0.99011	0.09480	0.00000	-3.32570	-29.76015	0.00327	0.99464	29.94539	174.53	0.00
98/ 3/20	2450892.5	-0.99541	0.02588	0.00001	-1.26060	-29.88570	0.00326	0.99574	29.91228	178.51	0.00
98/ 3/24	2450896.5	-0.99593	-0.04317	0.00002	0.80360	-29.86781	0.00323	0.99687	29.87862	182.48	0.00
98/ 3/28	2450900.5	-0.99170	-0.11201	0.00002	2.85695	-29.70753	0.00319	0.99801	29.84459	186.44	0.00
98/ 4/ 1	2450904.5	-0.98275	-0.18032	0.00003	4.88968	-29.40660	0.00314	0.99915	29.81035	190.40	0.00
98/ 4/ 5	2450908.5	-0.96913	-0.24777	0.00004	6.89224	-28.96742	0.00306	1.00030	29.77607	194.34	0.00
98/ 4/ 9	2450912.5	-0.95093	-0.31406	0.00005	8.85539	-28.39300	0.00298	1.00145	29.74190	198.28	0.00
98/ 4/13	2450916.5	-0.92825	-0.37886	0.00005	10.77018	-27.68699	0.00288	1.00259	29.70801	202.20	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM							
98/ 4/17	2450920.5	-0.90122	-0.44188	0.00006	12.62799	-26.85355	0.00277	1.00372	29.67456	206.12	0.00
98/ 4/21	2450924.5	-0.86996	-0.50284	0.00006	14.42060	-25.89742	0.00264	1.00483	29.64169	210.03	0.00
98/ 4/25	2450928.5	-0.83464	-0.56145	0.00007	16.14020	-24.82379	0.00251	1.00591	29.60957	213.93	0.00
98/ 4/29	2450932.5	-0.79545	-0.61744	0.00008	17.77940	-23.63833	0.00236	1.00696	29.57833	217.82	0.00
98/ 5/ 3	2450936.5	-0.75256	-0.67058	0.00008	19.33125	-22.34712	0.00220	1.00798	29.54811	221.70	0.00
98/ 5/ 7	2450940.5	-0.70620	-0.72062	0.00009	20.78927	-20.95664	0.00203	1.00897	29.51905	225.58	0.00
98/ 5/11	2450944.5	-0.65659	-0.76734	0.00009	22.14748	-19.47370	0.00186	1.00991	29.49128	229.45	0.01
98/ 5/15	2450948.5	-0.60395	-0.81053	0.00010	23.40036	-17.90543	0.00167	1.01080	29.46492	233.31	0.01
98/ 5/19	2450952.5	-0.54855	-0.85001	0.00010	24.54292	-16.25924	0.00148	1.01164	29.44007	237.16	0.01
98/ 5/23	2450956.5	-0.49065	-0.88560	0.00010	25.57066	-14.54279	0.00128	1.01243	29.41685	241.01	0.01
98/ 5/27	2450960.5	-0.43050	-0.91715	0.00010	26.47959	-12.76394	0.00108	1.01316	29.39536	244.86	0.01
98/ 5/31	2450964.5	-0.36840	-0.94453	0.00011	27.26627	-10.93074	0.00087	1.01383	29.37568	248.69	0.01
98/ 6/ 4	2450968.5	-0.30462	-0.96762	0.00011	27.92774	-9.05140	0.00066	1.01444	29.35790	252.53	0.01
98/ 6/ 8	2450972.5	-0.23946	-0.98632	0.00011	28.46158	-7.13422	0.00045	1.01497	29.34210	256.35	0.01
98/ 6/12	2450976.5	-0.17321	-1.00056	0.00011	28.86589	-5.18763	0.00023	1.01544	29.32834	260.18	0.01
98/ 6/16	2450980.5	-0.10619	-1.01027	0.00011	29.13929	-3.22009	0.00001	1.01584	29.31667	264.00	0.01
98/ 6/20	2450984.5	-0.03868	-1.01543	0.00011	29.28090	-1.24012	-0.00020	1.01616	29.30715	267.82	0.01
98/ 6/24	2450988.5	0.02900	-1.01600	0.00011	29.29036	0.74377	-0.00042	1.01642	29.29980	271.63	0.01
98/ 6/28	2450992.5	0.09655	-1.01200	0.00011	29.16784	2.72306	-0.00063	1.01659	29.29468	275.45	0.01
98/ 7/ 2	2450996.5	0.16366	-1.00343	0.00011	28.91400	4.68928	-0.00085	1.01669	29.29178	279.26	0.01
98/ 7/ 6	2451000.5	0.23004	-0.99035	0.00011	28.52999	6.63403	-0.00105	1.01671	29.29113	283.08	0.01
98/ 7/10	2451004.5	0.29538	-0.97280	0.00010	28.01747	8.54900	-0.00126	1.01666	29.29273	286.89	0.01
98/ 7/14	2451008.5	0.35939	-0.95088	0.00010	27.37860	10.42597	-0.00145	1.01653	29.29657	290.70	0.01
98/ 7/18	2451012.5	0.42179	-0.92467	0.00010	26.61602	12.25688	-0.00164	1.01632	29.30263	294.52	0.01
98/ 7/22	2451016.5	0.48228	-0.89429	0.00009	25.73285	14.03383	-0.00183	1.01604	29.31089	298.34	0.01
98/ 7/26	2451020.5	0.54059	-0.85987	0.00009	24.73268	15.74908	-0.00200	1.01569	29.32131	302.16	0.00
98/ 7/30	2451024.5	0.59646	-0.82157	0.00008	23.61957	17.39513	-0.00217	1.01526	29.33385	305.98	0.00
98/ 8/ 3	2451028.5	0.64964	-0.77956	0.00008	22.39805	18.96470	-0.00233	1.01476	29.34847	309.81	0.00
98/ 8/ 7	2451032.5	0.69987	-0.73401	0.00007	21.07307	20.45077	-0.00248	1.01420	29.36509	313.64	0.00
98/ 8/11	2451036.5	0.74693	-0.68514	0.00007	19.65006	21.84660	-0.00261	1.01357	29.38365	317.47	0.00
98/ 8/15	2451040.5	0.79059	-0.63315	0.00006	18.13485	23.14576	-0.00274	1.01287	29.40406	321.31	0.00
98/ 8/19	2451044.5	0.83065	-0.57828	0.00005	16.53371	24.34216	-0.00285	1.01212	29.42625	325.16	0.00
98/ 8/23	2451048.5	0.86692	-0.52076	0.00005	14.85329	25.43009	-0.00295	1.01131	29.45012	329.01	0.00
98/ 8/27	2451052.5	0.89922	-0.46087	0.00004	13.10064	26.40421	-0.00304	1.01045	29.47557	332.86	0.00
98/ 8/31	2451056.5	0.92740	-0.39886	0.00003	11.28320	27.25959	-0.00311	1.00953	29.50247	336.73	0.00
98/ 9/ 4	2451060.5	0.95131	-0.33501	0.00003	9.40873	27.99179	-0.00317	1.00858	29.53073	340.60	0.00
98/ 9/ 8	2451064.5	0.97083	-0.26962	0.00002	7.48533	28.59679	-0.00322	1.00758	29.56022	344.48	0.00
98/ 9/12	2451068.5	0.98586	-0.20299	0.00001	5.52143	29.07110	-0.00325	1.00654	29.59079	348.37	0.00
98/ 9/16	2451072.5	0.99632	-0.13541	0.00000	3.52572	29.41177	-0.00326	1.00548	29.62233	352.26	0.00
98/ 9/20	2451076.5	1.00214	-0.06720	-0.00000	1.50713	29.61637	-0.00326	1.00439	29.65469	356.16	-0.00
98/ 9/24	2451080.5	1.00327	0.00132	-0.00001	-0.52517	29.68308	-0.00325	1.00327	29.68773	0.08	-0.00
98/ 9/28	2451084.5	0.99971	0.06984	-0.00002	-2.56183	29.61067	-0.00322	1.00214	29.72128	4.00	-0.00
98/10/ 2	2451088.5	0.99144	0.13803	-0.00003	-4.59335	29.39853	-0.00317	1.00100	29.75521	7.93	-0.00
98/10/ 6	2451092.5	0.97850	0.20556	-0.00003	-6.61015	29.04670	-0.00311	0.99985	29.78934	11.86	-0.00
98/10/10	2451096.5	0.96092	0.27213	-0.00004	-8.60255	28.55590	-0.00304	0.99871	29.82353	15.81	-0.00

1.3 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
98/10/14	2451100.5	0.93877	0.33740	-0.00005	-10.56087	27.92749	-0.00295	0.99756	29.85761	19.77	-0.00
98/10/18	2451104.5	0.91216	0.40106	-0.00006	-12.47547	27.16357	-0.00284	0.99643	29.89141	23.73	-0.00
98/10/22	2451108.5	0.88117	0.46280	-0.00006	-14.33678	26.26689	-0.00272	0.99531	29.92478	27.71	-0.00
98/10/26	2451112.5	0.84596	0.52232	-0.00007	-16.13538	25.24093	-0.00259	0.99422	29.95755	31.69	-0.00
98/10/30	2451116.5	0.80668	0.57932	-0.00007	-17.86203	24.08987	-0.00244	0.99315	29.98956	35.68	-0.00
98/11/ 3	2451120.5	0.76350	0.63353	-0.00008	-19.50776	22.81857	-0.00229	0.99211	30.02065	39.69	-0.00
98/11/ 7	2451124.5	0.71662	0.68467	-0.00008	-21.06387	21.43260	-0.00212	0.99111	30.05067	43.69	-0.00
98/11/11	2451128.5	0.66625	0.73247	-0.00009	-22.52207	19.93818	-0.00194	0.99015	30.07947	47.71	-0.01
98/11/15	2451132.5	0.61264	0.77671	-0.00009	-23.87445	18.34218	-0.00174	0.98924	30.10689	51.74	-0.01
98/11/19	2451136.5	0.55603	0.81715	-0.00010	-25.11360	16.65209	-0.00154	0.98838	30.13279	55.77	-0.01
98/11/23	2451140.5	0.49670	0.85358	-0.00010	-26.23265	14.87602	-0.00133	0.98758	30.15705	59.81	-0.01
98/11/27	2451144.5	0.43492	0.88582	-0.00010	-27.22530	13.02257	-0.00112	0.98683	30.17954	63.85	-0.01
98/12/ 1	2451148.5	0.37101	0.91370	-0.00011	-28.08589	11.10090	-0.00090	0.98615	30.20012	67.90	-0.01
98/12/ 5	2451152.5	0.30526	0.93707	-0.00011	-28.80946	9.12061	-0.00067	0.98553	30.21871	71.96	-0.01
98/12/ 9	2451156.5	0.23801	0.95580	-0.00011	-29.39174	7.09168	-0.00044	0.98499	30.23519	76.02	-0.01
98/12/13	2451160.5	0.16957	0.96980	-0.00011	-29.82927	5.02446	-0.00021	0.98452	30.24948	80.08	-0.01
98/12/17	2451164.5	0.10030	0.97899	-0.00011	-30.11936	2.92957	0.00003	0.98412	30.26150	84.15	-0.01
98/12/21	2451168.5	0.03053	0.98333	-0.00011	-30.26013	0.81784	0.00026	0.98380	30.27118	88.22	-0.01
98/12/25	2451172.5	-0.03940	0.98277	-0.00011	-30.25057	-1.29976	0.00050	0.98356	30.27848	92.30	-0.01
98/12/29	2451176.5	-0.10913	0.97732	-0.00011	-30.09050	-3.41220	0.00073	0.98340	30.28335	96.37	-0.01
99/ 1/ 2	2451180.5	-0.17831	0.96702	-0.00010	-29.78062	-5.50842	0.00096	0.98332	30.28577	100.45	-0.01
99/ 1/ 6	2451184.5	-0.24661	0.95189	-0.00010	-29.32246	-7.57747	0.00118	0.98332	30.28572	104.52	-0.01
99/ 1/10	2451188.5	-0.31368	0.93203	-0.00010	-28.71844	-9.60854	0.00140	0.98340	30.28321	108.60	-0.01
99/ 1/14	2451192.5	-0.37919	0.90754	-0.00010	-27.97176	-11.59104	0.00161	0.98357	30.27824	112.68	-0.01
99/ 1/18	2451196.5	-0.44281	0.87852	-0.00009	-27.08648	-13.51467	0.00181	0.98381	30.27084	116.75	-0.01
99/ 1/22	2451200.5	-0.50424	0.84515	-0.00009	-26.06741	-15.36950	0.00201	0.98414	30.26106	120.82	-0.01
99/ 1/26	2451204.5	-0.56315	0.80757	-0.00008	-24.92012	-17.14601	0.00219	0.98454	30.24894	124.89	-0.00
99/ 1/30	2451208.5	-0.61928	0.76599	-0.00008	-23.65087	-18.83519	0.00236	0.98502	30.23455	128.95	-0.00
99/ 2/ 3	2451212.5	-0.67234	0.72062	-0.00007	-22.26658	-20.42853	0.00252	0.98556	30.21796	133.01	-0.00
99/ 2/ 7	2451216.5	-0.72208	0.67169	-0.00007	-20.77478	-21.91815	0.00267	0.98618	30.19928	137.07	-0.00
99/ 2/11	2451220.5	-0.76825	0.61944	-0.00006	-19.18353	-23.29677	0.00281	0.98687	30.17859	141.12	-0.00
99/ 2/15	2451224.5	-0.81064	0.56414	-0.00005	-17.50139	-24.55781	0.00293	0.98762	30.15601	145.17	-0.00
99/ 2/19	2451228.5	-0.84905	0.50607	-0.00005	-15.73736	-25.69537	0.00303	0.98843	30.13165	149.20	-0.00
99/ 2/23	2451232.5	-0.88330	0.44552	-0.00004	-13.90077	-26.70428	0.00312	0.98929	30.10564	153.23	-0.00
99/ 2/27	2451236.5	-0.91323	0.38279	-0.00003	-12.00127	-27.58012	0.00320	0.99021	30.07813	157.26	-0.00
99/ 3/ 3	2451240.5	-0.93871	0.31819	-0.00002	-10.04875	-28.31924	0.00326	0.99117	30.04924	161.28	-0.00
99/ 3/ 7	2451244.5	-0.95962	0.25205	-0.00002	-8.05325	-28.91873	0.00330	0.99217	30.01912	165.28	-0.00
99/ 3/11	2451248.5	-0.97589	0.18468	-0.00001	-6.02495	-29.37646	0.00333	0.99321	29.98794	169.28	-0.00
99/ 3/15	2451252.5	-0.98744	0.11643	-0.00000	-3.97404	-29.69107	0.00334	0.99428	29.95584	173.28	-0.00
99/ 3/19	2451256.5	-0.99424	0.04761	0.00001	-1.91073	-29.86192	0.00333	0.99538	29.92299	177.26	0.00
99/ 3/23	2451260.5	-0.99627	-0.02143	0.00001	0.15485	-29.88915	0.00331	0.99650	29.88955	181.23	0.00
99/ 3/27	2451264.5	-0.99353	-0.09038	0.00002	2.21271	-29.77357	0.00327	0.99764	29.85568	185.20	0.00
99/ 3/31	2451268.5	-0.98606	-0.15889	0.00003	4.25300	-29.51671	0.00322	0.99878	29.82154	189.15	0.00
99/ 4/ 4	2451272.5	-0.97390	-0.22665	0.00004	6.26612	-29.12077	0.00315	0.99993	29.78731	193.10	0.00
99/ 4/ 8	2451276.5	-0.95714	-0.29333	0.00004	8.24270	-28.58858	0.00307	1.00108	29.75313	197.04	0.00

1.3 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	EARTH-MOON B LONG	LAT
					HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM						
99/ 4/12	2451280.5	-0.93586	-0.35863	0.00005	10.17369	-27.92357	0.00298	1.00222	29.71918	200.97	0.00
99/ 4/16	2451284.5	-0.91017	-0.42225	0.00006	12.05038	-27.12976	0.00287	1.00335	29.68562	204.89	0.00
99/ 4/20	2451288.5	-0.88023	-0.48389	0.00006	13.86443	-26.21170	0.00274	1.00446	29.65258	208.80	0.00
99/ 4/24	2451292.5	-0.84617	-0.54326	0.00007	15.60787	-25.17445	0.00261	1.00555	29.62023	212.70	0.00
99/ 4/28	2451296.5	-0.80817	-0.60011	0.00008	17.27318	-24.02352	0.00246	1.00662	29.58872	216.60	0.00
99/ 5/ 2	2451300.5	-0.76643	-0.65418	0.00008	18.85327	-22.76489	0.00230	1.00765	29.55818	220.48	0.00
99/ 5/ 6	2451304.5	-0.72113	-0.70522	0.00009	20.34152	-21.40489	0.00213	1.00865	29.52874	224.36	0.00
99/ 5/10	2451308.5	-0.67252	-0.75300	0.00009	21.73177	-19.95025	0.00196	1.00960	29.50055	228.23	0.01
99/ 5/14	2451312.5	-0.62081	-0.79733	0.00010	23.01837	-18.40800	0.00177	1.01051	29.47372	232.10	0.01
99/ 5/18	2451316.5	-0.56625	-0.83799	0.00010	24.19615	-16.78548	0.00158	1.01137	29.44836	235.95	0.01
99/ 5/22	2451320.5	-0.50910	-0.87483	0.00010	25.26046	-15.09025	0.00138	1.01218	29.42459	239.80	0.01
99/ 5/26	2451324.5	-0.44963	-0.90767	0.00011	26.20716	-13.33013	0.00117	1.01293	29.40251	243.65	0.01
99/ 5/30	2451328.5	-0.38811	-0.93637	0.00011	27.03262	-11.51311	0.00096	1.01362	29.38221	247.49	0.01
99/ 6/ 3	2451332.5	-0.32482	-0.96082	0.00011	27.73374	-9.64736	0.00074	1.01424	29.36378	251.32	0.01
99/ 6/ 7	2451336.5	-0.26006	-0.98092	0.00011	28.30792	-7.74114	0.00052	1.01480	29.34730	255.15	0.01
99/ 6/11	2451340.5	-0.19413	-0.99657	0.00011	28.75311	-5.80286	0.00030	1.01530	29.33282	258.98	0.01
99/ 6/15	2451344.5	-0.12732	-1.00771	0.00011	29.06775	-3.84096	0.00008	1.01572	29.32042	262.80	0.01
99/ 6/19	2451348.5	-0.05993	-1.01430	0.00011	29.25082	-1.86396	-0.00014	1.01607	29.31015	266.62	0.01
99/ 6/23	2451352.5	0.00773	-1.01632	0.00011	29.30179	0.11962	-0.00036	1.01634	29.30204	270.44	0.01
99/ 6/27	2451356.5	0.07536	-1.01375	0.00011	29.22067	2.10128	-0.00058	1.01655	29.29613	274.25	0.01
99/ 7/ 1	2451360.5	0.14264	-1.00661	0.00011	29.00796	4.07252	-0.00080	1.01667	29.29244	278.07	0.01
99/ 7/ 5	2451364.5	0.20928	-0.99495	0.00011	28.66466	6.02491	-0.00101	1.01672	29.29100	281.88	0.01
99/ 7/ 9	2451368.5	0.27498	-0.97880	0.00011	28.19229	7.95012	-0.00122	1.01669	29.29180	285.69	0.01
99/ 7/13	2451372.5	0.33944	-0.95824	0.00010	27.59283	9.83989	-0.00142	1.01659	29.29485	289.51	0.01
99/ 7/17	2451376.5	0.40237	-0.93337	0.00010	26.86879	11.68612	-0.00162	1.01641	29.30012	293.32	0.01
99/ 7/21	2451380.5	0.46349	-0.90429	0.00010	26.02312	13.48085	-0.00181	1.01615	29.30761	297.14	0.01
99/ 7/25	2451384.5	0.52252	-0.87113	0.00009	25.05927	15.21630	-0.00199	1.01582	29.31728	300.96	0.01
99/ 7/29	2451388.5	0.57919	-0.83403	0.00009	23.98117	16.88489	-0.00216	1.01542	29.32910	304.78	0.00
99/ 8/ 2	2451392.5	0.63324	-0.79317	0.00008	22.79318	18.47926	-0.00233	1.01494	29.34301	308.60	0.00
99/ 8/ 6	2451396.5	0.68442	-0.74872	0.00008	21.50013	19.99231	-0.00249	1.01440	29.35895	312.43	0.00
99/ 8/10	2451400.5	0.73250	-0.70087	0.00007	20.10730	21.41722	-0.00263	1.01379	29.37688	316.26	0.00
99/ 8/14	2451404.5	0.77725	-0.64983	0.00006	18.62040	22.74746	-0.00277	1.01311	29.39670	320.10	0.00
99/ 8/18	2451408.5	0.81846	-0.59584	0.00006	17.04555	23.97684	-0.00290	1.01238	29.41835	323.95	0.00
99/ 8/22	2451412.5	0.85594	-0.53913	0.00005	15.38929	25.09951	-0.00301	1.01159	29.44173	327.79	0.00
99/ 8/26	2451416.5	0.88951	-0.47996	0.00004	13.65855	26.11001	-0.00311	1.01074	29.46674	331.65	0.00
99/ 8/30	2451420.5	0.91900	-0.41859	0.00004	11.86063	27.00330	-0.00320	1.00984	29.49327	335.51	0.00
99/ 9/ 3	2451424.5	0.94426	-0.35529	0.00003	10.00321	27.77477	-0.00327	1.00889	29.52121	339.38	0.00
99/ 9/ 7	2451428.5	0.96518	-0.29036	0.00002	8.09429	28.42025	-0.00332	1.00791	29.55044	343.26	0.00
99/ 9/11	2451432.5	0.98163	-0.22408	0.00001	6.14217	28.93611	-0.00336	1.00688	29.58081	347.14	0.00
99/ 9/15	2451436.5	0.99353	-0.15676	0.00000	4.15546	29.31919	-0.00338	1.00582	29.61221	351.03	0.00
99/ 9/19	2451440.5	1.00081	-0.08872	-0.00000	2.14304	29.56691	-0.00339	1.00473	29.64447	354.93	-0.00
99/ 9/23	2451444.5	1.00342	-0.02026	-0.00001	0.11399	29.67724	-0.00338	1.00362	29.67746	358.84	-0.00
99/ 9/27	2451448.5	1.00133	0.04829	-0.00002	-1.92239	29.64877	-0.00335	1.00249	29.71103	2.76	-0.00
99/10/ 1	2451452.5	0.99454	0.11662	-0.00003	-3.95665	29.48068	-0.00331	1.00135	29.74501	6.69	-0.00
99/10/ 5	2451456.5	0.98306	0.18440	-0.00003	-5.97921	29.17281	-0.00325	1.00020	29.77926	10.62	-0.00

1.3 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — EARTH-MOON B

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
99/10/ 9	2451460.5	0.96693	0.25130	-0.00004	-7.98043	28.72566	-0.00317	0.99905	29.81360	14.57	-0.00
99/10/13	2451464.5	0.94621	0.31701	-0.00005	-9.95062	28.14037	-0.00308	0.99790	29.84787	18.52	-0.00
99/10/17	2451468.5	0.92098	0.38122	-0.00006	-11.88012	27.41882	-0.00298	0.99676	29.88192	22.49	-0.00
99/10/21	2451472.5	0.89136	0.44360	-0.00006	-13.75933	26.56355	-0.00286	0.99564	29.91557	26.46	-0.00
99/10/25	2451476.5	0.85746	0.50385	-0.00007	-15.57877	25.57780	-0.00272	0.99453	29.94865	30.44	-0.00
99/10/29	2451480.5	0.81943	0.56168	-0.00008	-17.32914	24.46554	-0.00257	0.99345	29.98102	34.43	-0.00
99/11/ 2	2451484.5	0.77745	0.61679	-0.00008	-19.00136	23.23141	-0.00241	0.99240	30.01250	38.43	-0.00
99/11/ 6	2451488.5	0.73171	0.66892	-0.00009	-20.58666	21.88077	-0.00224	0.99139	30.04294	42.43	-0.00
99/11/10	2451492.5	0.68241	0.71781	-0.00009	-22.07658	20.41962	-0.00205	0.99042	30.07218	46.45	-0.01
99/11/14	2451496.5	0.62978	0.76319	-0.00010	-23.46311	18.85464	-0.00186	0.98949	30.10008	50.47	-0.01
99/11/18	2451500.5	0.57408	0.80485	-0.00010	-24.73866	17.19314	-0.00165	0.98861	30.12649	54.50	-0.01
99/11/22	2451504.5	0.51557	0.84256	-0.00010	-25.89618	15.44303	-0.00144	0.98779	30.15127	58.54	-0.01
99/11/26	2451508.5	0.45453	0.87614	-0.00011	-26.92918	13.61277	-0.00121	0.98702	30.17429	62.58	-0.01
99/11/30	2451512.5	0.39125	0.90540	-0.00011	-27.83180	11.71136	-0.00099	0.98632	30.19544	66.63	-0.01
99/12/ 4	2451516.5	0.32604	0.93020	-0.00011	-28.59885	9.74826	-0.00075	0.98569	30.21461	70.68	-0.01
99/12/ 8	2451520.5	0.25922	0.95040	-0.00011	-29.22585	7.73335	-0.00052	0.98512	30.23169	74.74	-0.01
99/12/12	2451524.5	0.19112	0.96590	-0.00011	-29.70907	5.67688	-0.00028	0.98463	30.24658	78.81	-0.01
99/12/16	2451528.5	0.12207	0.97661	-0.00011	-30.04558	3.58938	-0.00003	0.98421	30.25923	82.88	-0.01
99/12/20	2451532.5	0.05241	0.98247	-0.00011	-30.23326	1.48163	0.00021	0.98386	30.26954	86.95	-0.01
99/12/24	2451536.5	-0.01750	0.98345	-0.00011	-30.27081	-0.63542	0.00045	0.98360	30.27748	91.02	-0.01

1.4 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
64/12/31	2438760.5	-1.24237	1.09783	0.05352	-15.09726	-16.10689	0.02830	1.65879	22.07623	138.53	1.85
65/ 1/ 4	2438764.5	-1.27660	1.06006	0.05355	-14.53239	-16.59079	0.00429	1.66021	22.05549	140.29	1.85
65/ 1/ 8	2438768.5	-1.30951	1.02119	0.05354	-13.95387	-17.05637	-0.01967	1.66148	22.03703	142.05	1.85
65/ 1/12	2438772.5	-1.34106	0.98126	0.05346	-13.36220	-17.50336	-0.04355	1.66258	22.02085	143.81	1.84
65/ 1/16	2438776.5	-1.37124	0.94033	0.05333	-12.75788	-17.93151	-0.06735	1.66354	22.00698	145.56	1.84
65/ 1/20	2438780.5	-1.40000	0.89843	0.05315	-12.14140	-18.34056	-0.09103	1.66433	21.99541	147.31	1.83
65/ 1/24	2438784.5	-1.42732	0.85561	0.05291	-11.51326	-18.73026	-0.11460	1.66497	21.98615	149.06	1.82
65/ 1/28	2438788.5	-1.45319	0.81190	0.05262	-10.87394	-19.10036	-0.13802	1.66544	21.97920	150.81	1.81
65/ 2/ 1	2438792.5	-1.47756	0.76737	0.05228	-10.22394	-19.45062	-0.16129	1.66576	21.97457	152.55	1.80
65/ 2/ 5	2438796.5	-1.50042	0.72205	0.05188	-9.56375	-19.78082	-0.18438	1.66592	21.97226	154.30	1.78
65/ 2/ 9	2438800.5	-1.52174	0.67599	0.05142	-8.89387	-20.09072	-0.20727	1.66592	21.97227	156.05	1.77
65/ 2/13	2438804.5	-1.54150	0.62924	0.05092	-8.21478	-20.38008	-0.22996	1.66576	21.97460	157.79	1.75
65/ 2/17	2438808.5	-1.55969	0.58184	0.05036	-7.52698	-20.64869	-0.25243	1.66544	21.97926	159.54	1.73
65/ 2/21	2438812.5	-1.57627	0.53385	0.04975	-6.83097	-20.89633	-0.27464	1.66497	21.98622	161.29	1.71
65/ 2/25	2438816.5	-1.59124	0.48531	0.04909	-6.12726	-21.12276	-0.29661	1.66433	21.99551	163.04	1.69
65/ 3/ 1	2438820.5	-1.60458	0.43627	0.04838	-5.41634	-21.32779	-0.31829	1.66353	22.00710	164.79	1.67
65/ 3/ 5	2438824.5	-1.61626	0.38679	0.04762	-4.69872	-21.51118	-0.33968	1.66258	22.02100	166.54	1.64
65/ 3/ 9	2438828.5	-1.62628	0.33690	0.04681	-3.97493	-21.67274	-0.36076	1.66147	22.03719	168.30	1.61
65/ 3/13	2438832.5	-1.63462	0.28667	0.04596	-3.24547	-21.81225	-0.38151	1.66021	22.05568	170.05	1.59
65/ 3/17	2438836.5	-1.64127	0.23614	0.04505	-2.51088	-21.92951	-0.40192	1.65879	22.07645	171.81	1.56
65/ 3/21	2438840.5	-1.64622	0.18536	0.04410	-1.77169	-22.02431	-0.42197	1.65721	22.09948	173.58	1.52
65/ 3/25	2438844.5	-1.64946	0.13440	0.04310	-1.02844	-22.09644	-0.44163	1.65548	22.12477	175.34	1.49
65/ 3/29	2438848.5	-1.65097	0.08329	0.04206	-0.28168	-22.14572	-0.46090	1.65360	22.15231	177.11	1.46
65/ 4/ 2	2438852.5	-1.65076	0.03209	0.04097	0.46802	-22.17194	-0.47975	1.65158	22.18207	178.89	1.42
65/ 4/ 6	2438856.5	-1.64881	-0.01914	0.03984	1.22010	-22.17492	-0.49817	1.64940	22.21405	180.66	1.38
65/ 4/10	2438860.5	-1.64512	-0.07035	0.03867	1.97397	-22.15446	-0.51614	1.64707	22.24822	182.45	1.35
65/ 4/14	2438864.5	-1.63968	-0.12148	0.03746	2.72904	-22.11039	-0.53364	1.64461	22.28456	184.24	1.31
65/ 4/18	2438868.5	-1.63251	-0.17248	0.03621	3.48471	-22.04252	-0.55066	1.64199	22.32307	186.03	1.26
65/ 4/22	2438872.5	-1.62358	-0.22331	0.03492	4.24035	-21.95070	-0.56716	1.63924	22.36371	187.83	1.22
65/ 4/26	2438876.5	-1.61292	-0.27389	0.03359	4.99534	-21.83474	-0.58314	1.63635	22.40645	189.64	1.18
65/ 4/30	2438880.5	-1.60050	-0.32417	0.03222	5.74902	-21.69449	-0.59857	1.63332	22.45129	191.45	1.13
65/ 5/ 4	2438884.5	-1.58635	-0.37410	0.03082	6.50072	-21.52980	-0.61344	1.63016	22.49818	193.27	1.08
65/ 5/ 8	2438888.5	-1.57047	-0.42363	0.02939	7.24978	-21.34054	-0.62773	1.62687	22.54711	195.10	1.04
65/ 5/12	2438892.5	-1.55286	-0.47269	0.02792	7.99549	-21.12656	-0.64141	1.62345	22.59803	196.93	0.99
65/ 5/16	2438896.5	-1.53353	-0.52122	0.02642	8.73714	-20.88775	-0.65447	1.61990	22.65092	198.77	0.93
65/ 5/20	2438900.5	-1.51250	-0.56917	0.02490	9.47400	-20.62399	-0.66688	1.61624	22.70573	200.62	0.88
65/ 5/24	2438904.5	-1.48976	-0.61649	0.02334	10.20531	-20.33520	-0.67863	1.61245	22.76245	202.48	0.83
65/ 5/28	2438908.5	-1.46535	-0.66311	0.02176	10.93029	-20.02129	-0.68970	1.60855	22.82102	204.35	0.78
65/ 6/ 1	2438912.5	-1.43927	-0.70898	0.02016	11.64817	-19.68219	-0.70006	1.60454	22.88140	206.22	0.72
65/ 6/ 5	2438916.5	-1.41154	-0.75403	0.01853	12.35813	-19.31786	-0.70969	1.60042	22.94356	208.11	0.66
65/ 6/ 9	2438920.5	-1.38217	-0.79821	0.01688	13.05933	-18.92828	-0.71858	1.59619	23.00744	210.01	0.61
65/ 6/13	2438924.5	-1.35120	-0.84147	0.01521	13.75092	-18.51343	-0.72670	1.59187	23.07299	211.91	0.55
65/ 6/17	2438928.5	-1.31865	-0.88373	0.01352	14.43203	-18.07333	-0.73403	1.58745	23.14017	213.83	0.49
65/ 6/21	2438932.5	-1.28453	-0.92495	0.01182	15.10176	-17.60801	-0.74055	1.58294	23.20891	215.76	0.43
65/ 6/25	2438936.5	-1.24888	-0.96507	0.01010	15.75919	-17.11756	-0.74623	1.57834	23.27917	217.69	0.37

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
65/ 6/29	2438940.5	-1.21173	-1.00402	0.00837	16.40339	-16.60205	-0.75107	1.57366	23.35088	219.64	0.30
65/ 7/ 3	2438944.5	-1.17310	-1.04176	0.00663	17.03338	-16.06163	-0.75503	1.56891	23.42397	221.61	0.24
65/ 7/ 7	2438948.5	-1.13304	-1.07821	0.00488	17.64820	-15.49645	-0.75810	1.56408	23.49837	223.58	0.18
65/ 7/11	2438952.5	-1.09158	-1.11334	0.00313	18.24683	-14.90671	-0.76026	1.55919	23.57403	225.57	0.11
65/ 7/15	2438956.5	-1.04875	-1.14707	0.00137	18.82827	-14.29266	-0.76148	1.55423	23.65086	227.56	0.05
65/ 7/19	2438960.5	-1.00460	-1.17935	-0.00039	19.39146	-13.65455	-0.76175	1.54922	23.72879	229.58	-0.01
65/ 7/23	2438964.5	-0.95917	-1.21014	-0.00215	19.93536	-12.99273	-0.76105	1.54416	23.80774	231.60	-0.08
65/ 7/27	2438968.5	-0.91250	-1.23937	-0.00390	20.45889	-12.30755	-0.75935	1.53906	23.88762	233.64	-0.15
65/ 7/31	2438972.5	-0.86466	-1.26699	-0.00565	20.96097	-11.59943	-0.75665	1.53392	23.96834	235.69	-0.21
65/ 8/ 4	2438976.5	-0.81567	-1.29294	-0.00740	21.44051	-10.86884	-0.75292	1.52875	24.04982	237.75	-0.28
65/ 8/ 8	2438980.5	-0.76561	-1.31719	-0.00913	21.89638	-10.11631	-0.74816	1.52356	24.13195	239.83	-0.34
65/ 8/12	2438984.5	-0.71452	-1.33967	-0.01085	22.32749	-9.34242	-0.74233	1.51835	24.21464	241.93	-0.41
65/ 8/16	2438988.5	-0.66247	-1.36034	-0.01256	22.73272	-8.54781	-0.73544	1.51312	24.29778	244.03	-0.48
65/ 8/20	2438992.5	-0.60951	-1.37915	-0.01425	23.11093	-7.73318	-0.72746	1.50790	24.38127	246.16	-0.54
65/ 8/24	2438996.5	-0.55571	-1.39605	-0.01592	23.46101	-6.89931	-0.71840	1.50267	24.46499	248.29	-0.61
65/ 8/28	2439000.5	-0.50114	-1.41101	-0.01757	23.78186	-6.04704	-0.70823	1.49746	24.54883	250.45	-0.67
65/ 9/ 1	2439004.5	-0.44585	-1.42398	-0.01919	24.07236	-5.17726	-0.69694	1.49227	24.63267	252.61	-0.74
65/ 9/ 5	2439008.5	-0.38994	-1.43492	-0.02079	24.33143	-4.29097	-0.68455	1.48710	24.71638	254.80	-0.80
65/ 9/ 9	2439012.5	-0.33346	-1.44379	-0.02236	24.55800	-3.38922	-0.67103	1.48197	24.79984	256.99	-0.86
65/ 9/13	2439016.5	-0.27650	-1.45057	-0.02389	24.75102	-2.47313	-0.65639	1.47688	24.88293	259.21	-0.93
65/ 9/17	2439020.5	-0.21913	-1.45521	-0.02539	24.90947	-1.54391	-0.64063	1.47183	24.96549	261.44	-0.99
65/ 9/21	2439024.5	-0.16143	-1.45769	-0.02685	25.03238	-0.60283	-0.62376	1.46685	25.04741	263.68	-1.05
65/ 9/25	2439028.5	-0.10350	-1.45799	-0.02827	25.11881	0.34872	-0.60577	1.46193	25.12853	265.94	-1.11
65/ 9/29	2439032.5	-0.04541	-1.45607	-0.02965	25.16785	1.30933	-0.58667	1.45708	25.20871	268.21	-1.17
65/10/ 3	2439036.5	0.01276	-1.45193	-0.03098	25.17868	2.27748	-0.56649	1.45232	25.28782	270.50	-1.22
65/10/ 7	2439040.5	0.07090	-1.44554	-0.03226	25.15051	3.25157	-0.54522	1.44764	25.36569	272.81	-1.28
65/10/11	2439044.5	0.12893	-1.43690	-0.03350	25.08263	4.22995	-0.52290	1.44307	25.44218	275.13	-1.33
65/10/15	2439048.5	0.18676	-1.42600	-0.03468	24.97442	5.21087	-0.49954	1.43859	25.51714	277.46	-1.38
65/10/19	2439052.5	0.24429	-1.41283	-0.03580	24.82531	6.19254	-0.47517	1.43424	25.59041	279.81	-1.43
65/10/23	2439056.5	0.30143	-1.39739	-0.03687	24.63484	7.17308	-0.44981	1.43000	25.66186	282.17	-1.48
65/10/27	2439060.5	0.35808	-1.37969	-0.03788	24.40265	8.15057	-0.42349	1.42590	25.73132	284.55	-1.52
65/10/31	2439064.5	0.41414	-1.35973	-0.03883	24.12847	9.12303	-0.39626	1.42193	25.79864	286.94	-1.56
65/11/ 4	2439068.5	0.46953	-1.33754	-0.03971	23.81213	10.08842	-0.36814	1.41812	25.86367	289.34	-1.60
65/11/ 8	2439072.5	0.52413	-1.31313	-0.04053	23.45360	11.04467	-0.33919	1.41445	25.92626	291.76	-1.64
65/11/12	2439076.5	0.57786	-1.28652	-0.04128	23.05295	11.98968	-0.30945	1.41094	25.98627	294.19	-1.68
65/11/16	2439080.5	0.63061	-1.25774	-0.04196	22.61038	12.92131	-0.27897	1.40760	26.04356	296.63	-1.71
65/11/20	2439084.5	0.68230	-1.22683	-0.04257	22.12623	13.83740	-0.24780	1.40444	26.09799	299.08	-1.74
65/11/24	2439088.5	0.73281	-1.19382	-0.04310	21.60095	14.73580	-0.21600	1.40146	26.14941	301.54	-1.76
65/11/28	2439092.5	0.78207	-1.15876	-0.04356	21.03516	15.61436	-0.18364	1.39866	26.19771	304.02	-1.78
65/12/ 2	2439096.5	0.82997	-1.12170	-0.04395	20.42959	16.47092	-0.15076	1.39606	26.24275	306.50	-1.80
65/12/ 6	2439100.5	0.87643	-1.08268	-0.04426	19.78513	17.30337	-0.11745	1.39366	26.28443	308.99	-1.82
65/12/10	2439104.5	0.92136	-1.04177	-0.04449	19.10278	18.10961	-0.08376	1.39146	26.32264	311.49	-1.83
65/12/14	2439108.5	0.96466	-0.99903	-0.04465	18.38371	18.88762	-0.04978	1.38947	26.35726	314.00	-1.84
65/12/18	2439112.5	1.00627	-0.95452	-0.04472	17.62920	19.63539	-0.01557	1.38769	26.38821	316.51	-1.85
65/12/22	2439116.5	1.04609	-0.90833	-0.04472	16.84070	20.35103	0.01880	1.38613	26.41541	319.03	-1.85

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65/12/26	2439120.5	1.08405	-0.86052	-0.04464	16.01974	21.03269	0.05323	1.38480	26.43878	321.56	-1.85
65/12/30	2439124.5	1.12008	-0.81118	-0.04447	15.16800	21.67862	0.08767	1.38368	26.45824	324.09	-1.84
66/ 1/ 3	2439128.5	1.15411	-0.76039	-0.04423	14.28729	22.28718	0.12202	1.38279	26.47376	326.62	-1.83
66/ 1/ 7	2439132.5	1.18608	-0.70823	-0.04391	13.37950	22.85684	0.15621	1.38214	26.48529	329.16	-1.82
66/ 1/11	2439136.5	1.21591	-0.65481	-0.04351	12.44664	23.38616	0.19016	1.38171	26.49278	331.70	-1.80
66/ 1/15	2439140.5	1.24357	-0.60021	-0.04303	11.49080	23.87387	0.22379	1.38151	26.49623	334.24	-1.78
66/ 1/19	2439144.5	1.26899	-0.54454	-0.04248	10.51417	24.31881	0.25703	1.38154	26.49563	336.78	-1.76
66/ 1/23	2439148.5	1.29213	-0.48789	-0.04184	9.51897	24.71996	0.28980	1.38180	26.49096	339.31	-1.74
66/ 1/27	2439152.5	1.31296	-0.43036	-0.04114	8.50753	25.07645	0.32201	1.38230	26.48226	341.85	-1.71
66/ 1/31	2439156.5	1.33143	-0.37206	-0.04036	7.48219	25.38756	0.35361	1.38302	26.46954	344.39	-1.67
66/ 2/ 4	2439160.5	1.34752	-0.31309	-0.03950	6.44534	25.65272	0.38452	1.38398	26.45283	346.92	-1.64
66/ 2/ 8	2439164.5	1.36120	-0.25357	-0.03858	5.39938	25.87153	0.41467	1.38515	26.43220	349.45	-1.60
66/ 2/12	2439168.5	1.37246	-0.19359	-0.03759	4.34673	26.04371	0.44400	1.38656	26.40768	351.97	-1.55
66/ 2/16	2439172.5	1.38128	-0.13328	-0.03653	3.28982	26.16916	0.47245	1.38818	26.37936	354.49	-1.51
66/ 2/20	2439176.5	1.38766	-0.07272	-0.03541	2.23103	26.24792	0.49996	1.39001	26.34731	357.00	-1.46
66/ 2/24	2439180.5	1.39159	-0.01204	-0.03422	1.17275	26.28020	0.52647	1.39206	26.31162	359.50	-1.41
66/ 2/28	2439184.5	1.39308	0.04867	-0.03297	0.11731	26.26632	0.55194	1.39432	26.27238	2.00	-1.36
66/ 3/ 4	2439188.5	1.39214	0.10929	-0.03167	-0.93299	26.20676	0.57632	1.39678	26.22969	4.49	-1.30
66/ 3/ 8	2439192.5	1.38877	0.16972	-0.03031	-1.97591	26.10213	0.59956	1.39943	26.18368	6.97	-1.24
66/ 3/12	2439196.5	1.38301	0.22986	-0.02890	-3.00931	25.95318	0.62164	1.40228	26.13445	9.44	-1.18
66/ 3/16	2439200.5	1.37488	0.28960	-0.02744	-4.03107	25.76075	0.64252	1.40531	26.08215	11.89	-1.12
66/ 3/20	2439204.5	1.36440	0.34885	-0.02593	-5.03920	25.52581	0.66216	1.40853	26.02689	14.34	-1.06
66/ 3/24	2439208.5	1.35161	0.40750	-0.02438	-6.03176	25.24943	0.68055	1.41191	25.96881	16.78	-0.99
66/ 3/28	2439212.5	1.33654	0.46548	-0.02279	-7.00693	24.93278	0.69766	1.41546	25.90805	19.20	-0.92
66/ 4/ 1	2439216.5	1.31925	0.52267	-0.02116	-7.96298	24.57710	0.71348	1.41917	25.84477	21.61	-0.85
66/ 4/ 5	2439220.5	1.29977	0.57900	-0.01950	-8.89829	24.18371	0.72800	1.42303	25.77909	24.01	-0.78
66/ 4/ 9	2439224.5	1.27815	0.63438	-0.01780	-9.81132	23.75402	0.74121	1.42703	25.71118	26.40	-0.71
66/ 4/13	2439228.5	1.25445	0.68873	-0.01607	-10.70065	23.28946	0.75311	1.43117	25.64118	28.77	-0.64
66/ 4/17	2439232.5	1.22873	0.74196	-0.01432	-11.56499	22.79153	0.76369	1.43544	25.56924	31.13	-0.57
66/ 4/21	2439236.5	1.20104	0.79401	-0.01254	-12.40313	22.26177	0.77295	1.43983	25.49552	33.47	-0.50
66/ 4/25	2439240.5	1.17144	0.84480	-0.01075	-13.21396	21.70176	0.78091	1.44433	25.42017	35.80	-0.43
66/ 4/29	2439244.5	1.14001	0.89426	-0.00894	-13.99651	21.11308	0.78758	1.44893	25.34334	38.11	-0.35
66/ 5/ 3	2439248.5	1.10680	0.94232	-0.00711	-14.74989	20.49734	0.79296	1.45363	25.26517	40.41	-0.28
66/ 5/ 7	2439252.5	1.07188	0.98894	-0.00527	-15.47332	19.85616	0.79708	1.45841	25.18583	42.70	-0.21
66/ 5/11	2439256.5	1.03533	1.03405	-0.00343	-16.16610	19.19117	0.79994	1.46328	25.10545	44.96	-0.13
66/ 5/15	2439260.5	0.99721	1.07759	-0.00158	-16.82767	18.50397	0.80157	1.46821	25.02418	47.22	-0.06
66/ 5/19	2439264.5	0.95760	1.11953	0.00027	-17.45751	17.79617	0.80199	1.47321	24.94216	49.46	0.01
66/ 5/23	2439268.5	0.91658	1.15980	0.00213	-18.05523	17.06937	0.80123	1.47826	24.85953	51.68	0.08
66/ 5/27	2439272.5	0.87421	1.19838	0.00397	-18.62050	16.32513	0.79931	1.48336	24.77643	53.89	0.15
66/ 5/31	2439276.5	0.83057	1.23522	0.00582	-19.15307	15.56500	0.79625	1.48850	24.69298	56.08	0.22
66/ 6/ 4	2439280.5	0.78574	1.27028	0.00765	-19.65280	14.79050	0.79209	1.49368	24.60933	58.26	0.29
66/ 6/ 8	2439284.5	0.73979	1.30355	0.00948	-20.11958	14.00313	0.78685	1.49887	24.52558	60.42	0.36
66/ 6/12	2439288.5	0.69280	1.33498	0.01129	-20.55338	13.20433	0.78056	1.50408	24.44187	62.57	0.43
66/ 6/16	2439292.5	0.64485	1.36455	0.01308	-20.95425	12.39552	0.77326	1.50930	24.35831	64.71	0.50
66/ 6/20	2439296.5	0.59601	1.39224	0.01486	-21.32228	11.57809	0.76497	1.51453	24.27502	66.82	0.56

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66/ 6/24	2439300.5	0.54636	1.41804	0.01662	-21.65761	10.75337	0.75574	1.51974	24.19211	68.93	0.63
66/ 6/28	2439304.5	0.49597	1.44192	0.01835	-21.96046	9.92265	0.74558	1.52495	24.10968	71.02	0.69
66/ 7/ 2	2439308.5	0.44492	1.46388	0.02006	-22.23106	9.08721	0.73454	1.53013	24.02784	73.09	0.75
66/ 7/ 6	2439312.5	0.39328	1.48390	0.02174	-22.46971	8.24825	0.72264	1.53529	23.94668	75.16	0.81
66/ 7/10	2439316.5	0.34113	1.50199	0.02340	-22.67672	7.40693	0.70992	1.54042	23.86630	77.20	0.87
66/ 7/14	2439320.5	0.28853	1.51813	0.02502	-22.85246	6.56440	0.69641	1.54550	23.78679	79.24	0.93
66/ 7/18	2439324.5	0.23557	1.53232	0.02662	-22.99731	5.72174	0.68215	1.55055	23.70823	81.26	0.98
66/ 7/22	2439328.5	0.18230	1.54456	0.02817	-23.11170	4.87999	0.66716	1.55554	23.63071	83.27	1.04
66/ 7/26	2439332.5	0.12880	1.55487	0.02970	-23.19608	4.04015	0.65147	1.56047	23.55430	85.26	1.09
66/ 7/30	2439336.5	0.07515	1.56323	0.03118	-23.25089	3.20318	0.63513	1.56535	23.47909	87.25	1.14
66/ 8/ 3	2439340.5	0.02140	1.56967	0.03263	-23.27663	2.37000	0.61816	1.57015	23.40514	89.22	1.19
66/ 8/ 7	2439344.5	-0.03238	1.57419	0.03404	-23.27380	1.54150	0.60059	1.57489	23.33253	91.18	1.24
66/ 8/11	2439348.5	-0.08611	1.57679	0.03541	-23.24291	0.71851	0.58245	1.57954	23.26131	93.13	1.28
66/ 8/15	2439352.5	-0.13974	1.57751	0.03673	-23.18450	-0.09816	0.56377	1.58411	23.19156	95.06	1.33
66/ 8/19	2439356.5	-0.19321	1.57635	0.03801	-23.09908	-0.90774	0.54458	1.58860	23.12332	96.99	1.37
66/ 8/23	2439360.5	-0.24645	1.57332	0.03925	-22.98721	-1.70950	0.52491	1.59299	23.05666	98.90	1.41
66/ 8/27	2439364.5	-0.29940	1.56845	0.04044	-22.84944	-2.50272	0.50479	1.59729	22.99163	100.81	1.45
66/ 8/31	2439368.5	-0.35200	1.56177	0.04158	-22.68632	-3.28675	0.48425	1.60148	22.92828	102.70	1.49
66/ 9/ 4	2439372.5	-0.40420	1.55328	0.04267	-22.49841	-4.06094	0.46331	1.60557	22.86666	104.59	1.52
66/ 9/ 8	2439376.5	-0.45594	1.54301	0.04372	-22.28627	-4.82469	0.44199	1.60956	22.80681	106.46	1.56
66/ 9/12	2439380.5	-0.50715	1.53099	0.04471	-22.05046	-5.57740	0.42034	1.61343	22.74878	108.33	1.59
66/ 9/16	2439384.5	-0.55780	1.51725	0.04566	-21.79155	-6.31853	0.39836	1.61718	22.69261	110.19	1.62
66/ 9/20	2439388.5	-0.60782	1.50181	0.04655	-21.51010	-7.04755	0.37609	1.62081	22.63833	112.03	1.65
66/ 9/24	2439392.5	-0.65717	1.48470	0.04740	-21.20666	-7.76395	0.35355	1.62433	22.58598	113.88	1.67
66/ 9/28	2439396.5	-0.70579	1.46595	0.04819	-20.88180	-8.46725	0.33076	1.62771	22.53560	115.71	1.70
66/10/ 2	2439400.5	-0.75363	1.44559	0.04893	-20.53606	-9.15698	0.30775	1.63097	22.48721	117.53	1.72
66/10/ 6	2439404.5	-0.80065	1.42365	0.04961	-20.17000	-9.83272	0.28454	1.63410	22.44086	119.35	1.74
66/10/10	2439408.5	-0.84681	1.40017	0.05024	-19.78417	-10.49402	0.26115	1.63709	22.39656	121.17	1.76
66/10/14	2439412.5	-0.89205	1.37517	0.05082	-19.37910	-11.14050	0.23761	1.63995	22.35435	122.97	1.78
66/10/18	2439416.5	-0.93633	1.34871	0.05134	-18.95535	-11.77176	0.21393	1.64267	22.31424	124.77	1.79
66/10/22	2439420.5	-0.97961	1.32080	0.05180	-18.51344	-12.38743	0.19014	1.64525	22.27627	126.56	1.80
66/10/26	2439424.5	-1.02186	1.29148	0.05222	-18.05391	-12.98716	0.16625	1.64768	22.24045	128.35	1.82
66/10/30	2439428.5	-1.06302	1.26080	0.05257	-17.57728	-13.57060	0.14230	1.64997	22.20680	130.14	1.83
66/11/ 3	2439432.5	-1.10306	1.22880	0.05287	-17.08407	-14.13741	0.11828	1.65211	22.17534	131.91	1.83
66/11/ 7	2439436.5	-1.14194	1.19550	0.05312	-16.57481	-14.68729	0.09424	1.65410	22.14610	133.69	1.84
66/11/11	2439440.5	-1.17963	1.16095	0.05331	-16.05001	-15.21992	0.07018	1.65595	22.11908	135.46	1.84
66/11/15	2439444.5	-1.21608	1.12519	0.05344	-15.51018	-15.73501	0.04612	1.65764	22.09430	137.22	1.85
66/11/19	2439448.5	-1.25128	1.08826	0.05352	-14.95582	-16.23226	0.02209	1.65918	22.07178	138.99	1.85
66/11/23	2439452.5	-1.28517	1.05020	0.05355	-14.38745	-16.71139	-0.00191	1.66056	22.05152	140.75	1.85
66/11/27	2439456.5	-1.31774	1.01106	0.05351	-13.80555	-17.17214	-0.02584	1.66179	22.03353	142.50	1.85
66/12/ 1	2439460.5	-1.34895	0.97088	0.05343	-13.21063	-17.61424	-0.04970	1.66287	22.01783	144.26	1.84
66/12/ 5	2439464.5	-1.37877	0.92969	0.05328	-12.60319	-18.03742	-0.07347	1.66378	22.00442	146.01	1.84
66/12/ 9	2439468.5	-1.40717	0.88755	0.05309	-11.98372	-18.44143	-0.09712	1.66454	21.99330	147.76	1.83
66/12/13	2439472.5	-1.43413	0.84450	0.05284	-11.35271	-18.82603	-0.12064	1.66514	21.98450	149.51	1.82
66/12/17	2439476.5	-1.45962	0.80059	0.05253	-10.71066	-19.19098	-0.14402	1.66559	21.97800	151.26	1.81

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66/12/21	2439480.5	-1.48361	0.75585	0.05217	-10.05806	-19.53603	-0.16724	1.66587	21.97382	153.00	1.79
66/12/25	2439484.5	-1.50608	0.71034	0.05176	-9.39540	-19.86094	-0.19027	1.66600	21.97196	154.75	1.78
66/12/29	2439488.5	-1.52701	0.66410	0.05129	-8.72317	-20.16551	-0.21311	1.66596	21.97241	156.50	1.76
67/ 1/ 2	2439492.5	-1.54638	0.61718	0.05077	-8.04187	-20.44948	-0.23574	1.66577	21.97518	158.24	1.75
67/ 1/ 6	2439496.5	-1.56416	0.56963	0.05020	-7.35200	-20.71264	-0.25813	1.66541	21.98027	159.99	1.73
67/ 1/10	2439500.5	-1.58034	0.52150	0.04958	-6.65405	-20.95478	-0.28028	1.66490	21.98767	161.74	1.71
67/ 1/14	2439504.5	-1.59490	0.47283	0.04891	-5.94852	-21.17566	-0.30216	1.66423	21.99739	163.49	1.68
67/ 1/18	2439508.5	-1.60782	0.42368	0.04818	-5.23593	-21.37508	-0.32377	1.66340	22.00941	165.24	1.66
67/ 1/22	2439512.5	-1.61909	0.37409	0.04741	-4.51678	-21.55283	-0.34507	1.66242	22.02373	166.99	1.63
67/ 1/26	2439516.5	-1.62869	0.32411	0.04659	-3.79159	-21.70868	-0.36606	1.66127	22.04035	168.75	1.61
67/ 1/30	2439520.5	-1.63660	0.27380	0.04572	-3.06088	-21.84244	-0.38672	1.65998	22.05925	170.50	1.58
67/ 2/ 3	2439524.5	-1.64282	0.22321	0.04480	-2.32517	-21.95390	-0.40702	1.65852	22.08044	172.26	1.55
67/ 2/ 7	2439528.5	-1.64734	0.17238	0.04384	-1.58501	-22.04285	-0.42696	1.65692	22.10389	174.03	1.52
67/ 2/11	2439532.5	-1.65014	0.12138	0.04283	-0.84094	-22.10910	-0.44652	1.65516	22.12960	175.79	1.48
67/ 2/15	2439536.5	-1.65122	0.07025	0.04178	-0.09350	-22.15246	-0.46568	1.65325	22.15755	177.56	1.45
67/ 2/19	2439540.5	-1.65057	0.01905	0.04068	0.65673	-22.17271	-0.48441	1.65118	22.18773	179.34	1.41
67/ 2/23	2439544.5	-1.64819	-0.03218	0.03954	1.40919	-22.16969	-0.50271	1.64898	22.22012	181.12	1.37
67/ 2/27	2439548.5	-1.64406	-0.08337	0.03836	2.16329	-22.14320	-0.52055	1.64662	22.25470	182.90	1.33
67/ 3/ 3	2439552.5	-1.63819	-0.13447	0.03713	2.91844	-22.09305	-0.53792	1.64412	22.29147	184.69	1.29
67/ 3/ 7	2439556.5	-1.63058	-0.18543	0.03587	3.67402	-22.01908	-0.55480	1.64148	22.33038	186.49	1.25
67/ 3/11	2439560.5	-1.62122	-0.23619	0.03457	4.42941	-21.92111	-0.57116	1.63870	22.37143	188.29	1.21
67/ 3/15	2439564.5	-1.61011	-0.28669	0.03323	5.18399	-21.79898	-0.58700	1.63577	22.41459	190.10	1.16
67/ 3/19	2439568.5	-1.59727	-0.33689	0.03186	5.93709	-21.65254	-0.60228	1.63272	22.45984	191.91	1.12
67/ 3/23	2439572.5	-1.58268	-0.38672	0.03045	6.68805	-21.48163	-0.61699	1.62953	22.50714	193.73	1.07
67/ 3/27	2439576.5	-1.56637	-0.43612	0.02901	7.43618	-21.28613	-0.63112	1.62621	22.55647	195.56	1.02
67/ 3/31	2439580.5	-1.54833	-0.48505	0.02754	8.18079	-21.06589	-0.64464	1.62276	22.60780	197.39	0.97
67/ 4/ 4	2439584.5	-1.52857	-0.53343	0.02603	8.92116	-20.82080	-0.65753	1.61919	22.66110	199.24	0.92
67/ 4/ 8	2439588.5	-1.50711	-0.58123	0.02450	9.65655	-20.55076	-0.66977	1.61549	22.71632	201.09	0.87
67/ 4/12	2439592.5	-1.48396	-0.62837	0.02294	10.38619	-20.25568	-0.68134	1.61168	22.77344	202.95	0.82
67/ 4/16	2439596.5	-1.45913	-0.67480	0.02135	11.10933	-19.93547	-0.69222	1.60775	22.83242	204.82	0.76
67/ 4/20	2439600.5	-1.43264	-0.72046	0.01974	11.82516	-19.59007	-0.70239	1.60371	22.89320	206.70	0.71
67/ 4/24	2439604.5	-1.40450	-0.76529	0.01811	12.53286	-19.21945	-0.71183	1.59957	22.95575	208.59	0.65
67/ 4/28	2439608.5	-1.37474	-0.80924	0.01645	13.23160	-18.82358	-0.72052	1.59532	23.02003	210.48	0.59
67/ 5/ 2	2439612.5	-1.34337	-0.85224	0.01478	13.92052	-18.40246	-0.72844	1.59097	23.08598	212.39	0.53
67/ 5/ 6	2439616.5	-1.31043	-0.89424	0.01309	14.59874	-17.95612	-0.73556	1.58653	23.15354	214.31	0.47
67/ 5/10	2439620.5	-1.27593	-0.93519	0.01138	15.26536	-17.48459	-0.74187	1.58199	23.22267	216.24	0.41
67/ 5/14	2439624.5	-1.23991	-0.97501	0.00966	15.91946	-16.98795	-0.74734	1.57737	23.29331	218.18	0.35
67/ 5/18	2439628.5	-1.20239	-1.01366	0.00793	16.56009	-16.46631	-0.75195	1.57267	23.36539	220.13	0.29
67/ 5/22	2439632.5	-1.16340	-1.05107	0.00619	17.18629	-15.91980	-0.75568	1.56789	23.43885	222.10	0.23
67/ 5/26	2439636.5	-1.12299	-1.08719	0.00444	17.79707	-15.34859	-0.75852	1.56305	23.51362	224.07	0.16
67/ 5/30	2439640.5	-1.08119	-1.12197	0.00268	18.39143	-14.75288	-0.76044	1.55813	23.58963	226.06	0.10
67/ 6/ 3	2439644.5	-1.03803	-1.15534	0.00092	18.96835	-14.13293	-0.76142	1.55316	23.66681	228.06	0.03
67/ 6/ 7	2439648.5	-0.99356	-1.18725	-0.00084	19.52678	-13.48901	-0.76145	1.54813	23.74507	230.08	-0.03
67/ 6/11	2439652.5	-0.94782	-1.21764	-0.00259	20.06566	-12.82146	-0.76050	1.54306	23.82434	232.10	-0.10
67/ 6/15	2439656.5	-0.90087	-1.24647	-0.00435	20.58393	-12.13067	-0.75855	1.53794	23.90453	234.14	-0.16

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67/ 6/19	2439660.5	-0.85274	-1.27367	-0.00610	21.08048	-11.41705	-0.75559	1.53279	23.98555	236.20	-0.23
67/ 6/23	2439664.5	-0.80349	-1.29920	-0.00784	21.55423	-10.68109	-0.75160	1.52761	24.06731	238.27	-0.29
67/ 6/27	2439668.5	-0.75317	-1.32301	-0.00957	22.00406	-9.92333	-0.74657	1.52240	24.14970	240.35	-0.36
67/ 7/ 1	2439672.5	-0.70184	-1.34504	-0.01129	22.42886	-9.14436	-0.74048	1.51718	24.23264	242.44	-0.43
67/ 7/ 5	2439676.5	-0.64956	-1.36524	-0.01299	22.82750	-8.34483	-0.73332	1.51194	24.31602	244.56	-0.49
67/ 7/ 9	2439680.5	-0.59639	-1.38358	-0.01467	23.19888	-7.52548	-0.72507	1.50671	24.39972	246.68	-0.56
67/ 7/13	2439684.5	-0.54239	-1.40000	-0.01634	23.54186	-6.68707	-0.71573	1.50148	24.48364	248.82	-0.62
67/ 7/17	2439688.5	-0.48764	-1.41446	-0.01798	23.85535	-5.83048	-0.70528	1.49627	24.56765	250.98	-0.69
67/ 7/21	2439692.5	-0.43220	-1.42692	-0.01960	24.13823	-4.95661	-0.69373	1.49107	24.65164	253.15	-0.75
67/ 7/25	2439696.5	-0.37614	-1.43735	-0.02119	24.38943	-4.06647	-0.68105	1.48590	24.73548	255.34	-0.82
67/ 7/29	2439700.5	-0.31953	-1.44570	-0.02274	24.60787	-3.16113	-0.66726	1.48076	24.81905	257.54	-0.88
67/ 8/ 2	2439704.5	-0.26247	-1.45194	-0.02427	24.79251	-2.24173	-0.65234	1.47567	24.90220	259.75	-0.94
67/ 8/ 6	2439708.5	-0.20501	-1.45605	-0.02576	24.94236	-1.30950	-0.63630	1.47063	24.98481	261.99	-1.00
67/ 8/10	2439712.5	-0.14725	-1.45798	-0.02721	25.05643	-0.36574	-0.61915	1.46565	25.06674	264.23	-1.06
67/ 8/14	2439716.5	-0.08927	-1.45773	-0.02862	25.13379	0.58818	-0.60088	1.46074	25.14785	266.50	-1.12
67/ 8/18	2439720.5	-0.03115	-1.45526	-0.02998	25.17357	1.55079	-0.58152	1.45590	25.22799	268.77	-1.18
67/ 8/22	2439724.5	0.02701	-1.45056	-0.03130	25.17493	2.52058	-0.56107	1.45115	25.30702	271.07	-1.24
67/ 8/26	2439728.5	0.08513	-1.44361	-0.03257	25.13712	3.49592	-0.53954	1.44648	25.38479	273.38	-1.29
67/ 8/30	2439732.5	0.14312	-1.43440	-0.03379	25.05944	4.47515	-0.51696	1.44192	25.46114	275.70	-1.34
67/ 9/ 3	2439736.5	0.20089	-1.42293	-0.03496	24.94127	5.45650	-0.49334	1.43747	25.53593	278.04	-1.39
67/ 9/ 7	2439740.5	0.25833	-1.40919	-0.03607	24.78208	6.43816	-0.46872	1.43313	25.60900	280.39	-1.44
67/ 9/11	2439744.5	0.31536	-1.39319	-0.03713	24.58142	7.41824	-0.44312	1.42891	25.68020	282.75	-1.49
67/ 9/15	2439748.5	0.37187	-1.37492	-0.03812	24.33895	8.39480	-0.41657	1.42483	25.74938	285.13	-1.53
67/ 9/19	2439752.5	0.42778	-1.35440	-0.03905	24.05442	9.36585	-0.38912	1.42089	25.81639	287.53	-1.57
67/ 9/23	2439756.5	0.48298	-1.33165	-0.03992	23.72771	10.32935	-0.36079	1.41710	25.88107	289.94	-1.61
67/ 9/27	2439760.5	0.53738	-1.30669	-0.04072	23.35879	11.28320	-0.33164	1.41346	25.94328	292.35	-1.65
67/10/ 1	2439764.5	0.59087	-1.27953	-0.04145	22.94777	12.22529	-0.30170	1.40998	26.00286	294.79	-1.68
67/10/ 5	2439768.5	0.64337	-1.25021	-0.04211	22.49488	13.15348	-0.27104	1.40667	26.05969	297.23	-1.72
67/10/ 9	2439772.5	0.69478	-1.21877	-0.04270	22.00049	14.06562	-0.23971	1.40354	26.11361	299.69	-1.74
67/10/13	2439776.5	0.74499	-1.18524	-0.04322	21.46509	14.95955	-0.20776	1.40059	26.16450	302.15	-1.77
67/10/17	2439780.5	0.79392	-1.14966	-0.04366	20.88931	15.83310	-0.17526	1.39784	26.21223	304.63	-1.79
67/10/21	2439784.5	0.84148	-1.11210	-0.04403	20.27393	16.68413	-0.14226	1.39527	26.25667	307.11	-1.81
67/10/25	2439788.5	0.88756	-1.07260	-0.04432	19.61986	17.51053	-0.10884	1.39291	26.29771	309.61	-1.82
67/10/29	2439792.5	0.93210	-1.03122	-0.04453	18.92816	18.31021	-0.07507	1.39075	26.33523	312.11	-1.83
67/11/ 2	2439796.5	0.97499	-0.98802	-0.04466	18.20000	19.08114	-0.04102	1.38881	26.36915	314.62	-1.84
67/11/ 6	2439800.5	1.01616	-0.94308	-0.04472	17.43673	19.82136	-0.00675	1.38707	26.39935	317.14	-1.85
67/11/10	2439804.5	1.05553	-0.89646	-0.04469	16.63980	20.52896	0.02764	1.38556	26.42578	319.66	-1.85
67/11/14	2439808.5	1.09302	-0.84825	-0.04459	15.81079	21.20212	0.06209	1.38427	26.44834	322.19	-1.85
67/11/18	2439812.5	1.12856	-0.79853	-0.04441	14.95142	21.83912	0.09652	1.38321	26.46699	324.72	-1.84
67/11/22	2439816.5	1.16208	-0.74738	-0.04414	14.06350	22.43834	0.13084	1.38237	26.48166	327.25	-1.83
67/11/26	2439820.5	1.19351	-0.69489	-0.04380	13.14897	22.99826	0.16499	1.38176	26.49232	329.79	-1.82
67/11/30	2439824.5	1.22281	-0.64115	-0.04338	12.20987	23.51750	0.19887	1.38138	26.49893	332.33	-1.80
67/12/ 4	2439828.5	1.24991	-0.58626	-0.04288	11.24829	23.99479	0.23242	1.38124	26.50147	334.87	-1.78
67/12/ 8	2439832.5	1.27477	-0.53032	-0.04231	10.26645	24.42901	0.26555	1.38132	26.49995	337.41	-1.76
67/12/12	2439836.5	1.29733	-0.47342	-0.04166	9.26661	24.81918	0.29819	1.38164	26.49435	339.95	-1.73

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67/12/16	2439840.5	1.31757	-0.41568	-0.04093	8.25109	25.16446	0.33026	1.38219	26.48471	342.49	-1.70
67/12/20	2439844.5	1.33544	-0.35719	-0.04013	7.22225	25.46417	0.36170	1.38297	26.47104	345.03	-1.66
67/12/24	2439848.5	1.35093	-0.29806	-0.03926	6.18249	25.71778	0.39243	1.38398	26.45338	347.56	-1.63
67/12/28	2439852.5	1.36400	-0.23840	-0.03832	5.13423	25.92491	0.42238	1.38521	26.43179	350.09	-1.59
68/ 1/ 1	2439856.5	1.37465	-0.17831	-0.03731	4.07988	26.08533	0.45150	1.38667	26.40632	352.61	-1.54
68/ 1/ 5	2439860.5	1.38285	-0.11791	-0.03623	3.02187	26.19899	0.47972	1.38834	26.37705	355.13	-1.50
68/ 1/ 9	2439864.5	1.38861	-0.05730	-0.03509	1.96259	26.26596	0.50698	1.39023	26.34406	357.64	-1.45
68/ 1/13	2439868.5	1.39192	0.00341	-0.03389	0.90442	26.28647	0.53324	1.39234	26.30743	0.14	-1.39
68/ 1/17	2439872.5	1.39279	0.06412	-0.03263	-0.15032	26.26089	0.55843	1.39465	26.26726	2.64	-1.34
68/ 1/21	2439876.5	1.39123	0.12471	-0.03131	-1.19934	26.18975	0.58253	1.39716	26.22366	5.12	-1.28
68/ 1/25	2439880.5	1.38725	0.18509	-0.02994	-2.24042	26.07367	0.60548	1.39987	26.17675	7.60	-1.23
68/ 1/29	2439884.5	1.38088	0.24514	-0.02852	-3.27142	25.91343	0.62725	1.40277	26.12664	10.07	-1.16
68/ 2/ 2	2439888.5	1.37215	0.30478	-0.02704	-4.29025	25.70992	0.64781	1.40585	26.07347	12.52	-1.10
68/ 2/ 6	2439892.5	1.36107	0.36390	-0.02552	-5.29491	25.46413	0.66714	1.40911	26.01736	14.97	-1.04
68/ 2/10	2439896.5	1.34770	0.42240	-0.02396	-6.28352	25.17716	0.68520	1.41255	25.95846	17.40	-0.97
68/ 2/14	2439900.5	1.33206	0.48020	-0.02236	-7.25426	24.85020	0.70198	1.41614	25.89690	19.82	-0.90
68/ 2/18	2439904.5	1.31419	0.53719	-0.02072	-8.20543	24.48451	0.71746	1.41990	25.83283	22.23	-0.84
68/ 2/22	2439908.5	1.29416	0.59330	-0.01905	-9.13543	24.08146	0.73164	1.42380	25.76641	24.63	-0.77
68/ 2/26	2439912.5	1.27200	0.64843	-0.01734	-10.04274	23.64243	0.74451	1.42785	25.69777	27.01	-0.70
68/ 3/ 1	2439916.5	1.24778	0.70251	-0.01561	-10.92600	23.16890	0.75606	1.43203	25.62708	29.38	-0.62
68/ 3/ 5	2439920.5	1.22154	0.75545	-0.01385	-11.78390	22.66239	0.76629	1.43633	25.55448	31.73	-0.55
68/ 3/ 9	2439924.5	1.19335	0.80719	-0.01207	-12.61528	22.12443	0.77521	1.44076	25.48012	34.07	-0.48
68/ 3/13	2439928.5	1.16327	0.85765	-0.01027	-13.41908	21.55661	0.78283	1.44529	25.40417	36.40	-0.41
68/ 3/17	2439932.5	1.13137	0.90677	-0.00845	-14.19431	20.96053	0.78916	1.44993	25.32676	38.71	-0.33
68/ 3/21	2439936.5	1.09771	0.95447	-0.00662	-14.94014	20.33780	0.79420	1.45466	25.24806	41.01	-0.26
68/ 3/25	2439940.5	1.06237	1.00072	-0.00478	-15.65580	19.69004	0.79798	1.45948	25.16821	43.29	-0.19
68/ 3/29	2439944.5	1.02540	1.04543	-0.00294	-16.34063	19.01889	0.80051	1.46437	25.08735	45.55	-0.11
68/ 4/ 2	2439948.5	0.98689	1.08857	-0.00109	-16.99408	18.32595	0.80182	1.46934	25.00564	47.80	-0.04
68/ 4/ 6	2439952.5	0.94691	1.13009	0.00077	-17.61567	17.61282	0.80192	1.47436	24.92321	50.04	0.03
68/ 4/10	2439956.5	0.90553	1.16994	0.00262	-18.20502	16.88111	0.80085	1.47944	24.84021	52.26	0.10
68/ 4/14	2439960.5	0.86282	1.20807	0.00447	-18.76183	16.13236	0.79862	1.48456	24.75676	54.47	0.17
68/ 4/18	2439964.5	0.81887	1.24446	0.00631	-19.28588	15.36814	0.79526	1.48972	24.67301	56.65	0.24
68/ 4/22	2439968.5	0.77374	1.27907	0.00814	-19.77703	14.58994	0.79081	1.49491	24.58908	58.83	0.31
68/ 4/26	2439972.5	0.72751	1.31186	0.00996	-20.23521	13.79924	0.78528	1.50012	24.50509	60.99	0.38
68/ 4/30	2439976.5	0.68027	1.34282	0.01177	-20.66040	12.99750	0.77872	1.50534	24.42117	63.13	0.45
68/ 5/ 4	2439980.5	0.63208	1.37191	0.01356	-21.05266	12.18613	0.77115	1.51058	24.33743	65.26	0.51
68/ 5/ 8	2439984.5	0.58302	1.39911	0.01533	-21.41209	11.36649	0.76261	1.51581	24.25400	67.38	0.58
68/ 5/12	2439988.5	0.53317	1.42442	0.01708	-21.73888	10.53991	0.75312	1.52103	24.17097	69.48	0.64
68/ 5/16	2439992.5	0.48261	1.44781	0.01881	-22.03322	9.70769	0.74272	1.52624	24.08846	71.56	0.71
68/ 5/20	2439996.5	0.43140	1.46927	0.02051	-22.29539	8.87106	0.73144	1.53143	24.00656	73.64	0.77
68/ 5/24	2440000.5	0.37962	1.48879	0.02219	-22.52567	8.03124	0.71932	1.53659	23.92538	75.70	0.83
68/ 5/28	2440004.5	0.32735	1.50637	0.02384	-22.72440	7.18938	0.70639	1.54172	23.84501	77.74	0.89
68/ 6/ 1	2440008.5	0.27465	1.52201	0.02545	-22.89196	6.34660	0.69267	1.54680	23.76554	79.77	0.94
68/ 6/ 5	2440012.5	0.22160	1.53570	0.02703	-23.02874	5.50397	0.67821	1.55184	23.68705	81.79	1.00
68/ 6/ 9	2440016.5	0.16827	1.54744	0.02858	-23.13517	4.66253	0.66303	1.55683	23.60964	83.79	1.05

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68/ 6/13	2440020.5	0.11473	1.55724	0.03010	-23.21170	3.82326	0.64717	1.56175	23.53337	85.79	1.10
68/ 6/17	2440024.5	0.06105	1.56511	0.03157	-23.25881	2.98711	0.63065	1.56662	23.45832	87.77	1.15
68/ 6/21	2440028.5	0.00729	1.57105	0.03301	-23.27697	2.15500	0.61352	1.57141	23.38456	89.73	1.20
68/ 6/25	2440032.5	-0.04648	1.57507	0.03441	-23.26670	1.32780	0.59579	1.57613	23.31217	91.69	1.25
68/ 6/29	2440036.5	-0.10019	1.57719	0.03576	-23.22851	0.50633	0.57750	1.58077	23.24121	93.63	1.30
68/ 7/ 3	2440040.5	-0.15378	1.57741	0.03708	-23.16294	-0.30861	0.55869	1.58533	23.17173	95.57	1.34
68/ 7/ 7	2440044.5	-0.20719	1.57577	0.03834	-23.07052	-1.11626	0.53937	1.58979	23.10381	97.49	1.38
68/ 7/11	2440048.5	-0.26035	1.57226	0.03957	-22.95180	-1.91589	0.51958	1.59416	23.03749	99.40	1.42
68/ 7/15	2440052.5	-0.31322	1.56692	0.04074	-22.80733	-2.70681	0.49935	1.59844	22.97282	101.30	1.46
68/ 7/19	2440056.5	-0.36571	1.55976	0.04187	-22.63767	-3.48836	0.47870	1.60261	22.90986	103.20	1.50
68/ 7/23	2440060.5	-0.41779	1.55081	0.04296	-22.44337	-4.25992	0.45766	1.60668	22.84866	105.08	1.53
68/ 7/27	2440064.5	-0.46939	1.54009	0.04399	-22.22500	-5.02087	0.43625	1.61063	22.78926	106.95	1.57
68/ 7/31	2440068.5	-0.52046	1.52762	0.04497	-21.98312	-5.77065	0.41451	1.61447	22.73169	108.81	1.60
68/ 8/ 4	2440072.5	-0.57094	1.51344	0.04590	-21.71829	-6.50870	0.39245	1.61820	22.67600	110.67	1.63
68/ 8/ 8	2440076.5	-0.62079	1.49756	0.04678	-21.43106	-7.23451	0.37011	1.62180	22.62223	112.52	1.65
68/ 8/12	2440080.5	-0.66995	1.48002	0.04761	-21.12201	-7.94757	0.34750	1.62528	22.57042	114.35	1.68
68/ 8/16	2440084.5	-0.71836	1.46085	0.04839	-20.79168	-8.64741	0.32466	1.62864	22.52059	116.19	1.70
68/ 8/20	2440088.5	-0.76599	1.44008	0.04911	-20.44063	-9.33357	0.30160	1.63186	22.47278	118.01	1.72
68/ 8/24	2440092.5	-0.81279	1.41773	0.04978	-20.06941	-10.00562	0.27834	1.63495	22.42702	119.83	1.74
68/ 8/28	2440096.5	-0.85871	1.39386	0.05040	-19.67856	-10.66314	0.25491	1.63791	22.38333	121.64	1.76
68/ 9/ 1	2440100.5	-0.90370	1.36848	0.05096	-19.26863	-11.30574	0.23133	1.64073	22.34174	123.44	1.78
68/ 9/ 5	2440104.5	-0.94772	1.34163	0.05147	-18.84016	-11.93302	0.20762	1.64341	22.30228	125.24	1.79
68/ 9/ 9	2440108.5	-0.99073	1.31336	0.05192	-18.39368	-12.54461	0.18381	1.64595	22.26497	127.03	1.81
68/ 9/13	2440112.5	-1.03269	1.28368	0.05232	-17.92972	-13.14018	0.15990	1.64834	22.22982	128.82	1.82
68/ 9/17	2440116.5	-1.07356	1.25266	0.05266	-17.44880	-13.71938	0.13593	1.65059	22.19686	130.60	1.83
68/ 9/21	2440120.5	-1.11330	1.22031	0.05295	-16.95145	-14.28187	0.11191	1.65269	22.16610	132.37	1.84
68/ 9/25	2440124.5	-1.15187	1.18668	0.05318	-16.43818	-14.82734	0.08787	1.65464	22.13756	134.15	1.84
68/ 9/29	2440128.5	-1.18924	1.15181	0.05335	-15.90951	-15.35550	0.06381	1.65644	22.11126	135.92	1.85
68/10/ 3	2440132.5	-1.22537	1.11575	0.05347	-15.36594	-15.86603	0.03976	1.65809	22.08720	137.68	1.85
68/10/ 7	2440136.5	-1.26022	1.07852	0.05353	-14.80798	-16.35866	0.01573	1.65959	22.06541	139.44	1.85
68/10/11	2440140.5	-1.29377	1.04018	0.05354	-14.23613	-16.83311	-0.00824	1.66093	22.04589	141.20	1.85
68/10/15	2440144.5	-1.32599	1.00076	0.05350	-13.65090	-17.28910	-0.03216	1.66212	22.02864	142.96	1.84
68/10/19	2440148.5	-1.35684	0.96031	0.05340	-13.05278	-17.72637	-0.05599	1.66314	22.01369	144.71	1.84
68/10/23	2440152.5	-1.38629	0.91887	0.05324	-12.44226	-18.14467	-0.07972	1.66402	22.00103	146.46	1.83
68/10/27	2440156.5	-1.41431	0.87649	0.05303	-11.81984	-18.54374	-0.10334	1.66473	21.99067	148.21	1.83
68/10/31	2440160.5	-1.44089	0.83321	0.05276	-11.18601	-18.92333	-0.12683	1.66529	21.98261	149.96	1.82
68/11/ 4	2440164.5	-1.46599	0.78907	0.05244	-10.54127	-19.28320	-0.15016	1.66569	21.97687	151.71	1.80
68/11/ 8	2440168.5	-1.48959	0.74413	0.05207	-9.88609	-19.62312	-0.17333	1.66593	21.97343	153.46	1.79
68/11/12	2440172.5	-1.51166	0.69842	0.05164	-9.22099	-19.94284	-0.19632	1.66601	21.97230	155.20	1.78
68/11/16	2440176.5	-1.53218	0.65200	0.05116	-8.54644	-20.24215	-0.21910	1.66593	21.97349	156.95	1.76
68/11/20	2440180.5	-1.55114	0.60491	0.05063	-7.86296	-20.52081	-0.24166	1.66569	21.97699	158.70	1.74
68/11/24	2440184.5	-1.56851	0.55721	0.05004	-7.17102	-20.77860	-0.26399	1.66529	21.98280	160.44	1.72
68/11/28	2440188.5	-1.58427	0.50893	0.04941	-6.47114	-21.01530	-0.28607	1.66474	21.99091	162.19	1.70
68/12/ 2	2440192.5	-1.59840	0.46012	0.04872	-5.76381	-21.23069	-0.30788	1.66402	22.00133	163.94	1.68
68/12/ 6	2440196.5	-1.61089	0.41085	0.04799	-5.04954	-21.42456	-0.32941	1.66315	22.01404	165.69	1.65

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68/12/10	2440200.5	-1.62173	0.36115	0.04720	-4.32885	-21.59669	-0.35063	1.66212	22.02905	167.45	1.63
68/12/14	2440204.5	-1.63089	0.31108	0.04637	-3.60225	-21.74688	-0.37153	1.66094	22.04633	169.20	1.60
68/12/18	2440208.5	-1.63836	0.26069	0.04548	-2.87026	-21.87491	-0.39210	1.65960	22.06590	170.96	1.57
68/12/22	2440212.5	-1.64415	0.21003	0.04456	-2.13342	-21.98058	-0.41231	1.65810	22.08772	172.72	1.54
68/12/26	2440216.5	-1.64822	0.15915	0.04358	-1.39227	-22.06370	-0.43215	1.65646	22.11180	174.48	1.51
68/12/30	2440220.5	-1.65057	0.10810	0.04256	-0.64734	-22.12405	-0.45160	1.65466	22.13812	176.25	1.47
69/ 1/ 3	2440224.5	-1.65121	0.05695	0.04149	0.10080	-22.16145	-0.47065	1.65271	22.16667	178.02	1.44
69/ 1/ 7	2440228.5	-1.65011	0.00573	0.04038	0.85158	-22.17570	-0.48927	1.65061	22.19744	179.80	1.40
69/ 1/11	2440232.5	-1.64727	-0.04549	0.03923	1.60445	-22.16661	-0.50744	1.64837	22.23039	181.58	1.36
69/ 1/15	2440236.5	-1.64269	-0.09667	0.03804	2.35879	-22.13401	-0.52516	1.64597	22.26553	183.37	1.32
69/ 1/19	2440240.5	-1.63637	-0.14774	0.03681	3.11403	-22.07770	-0.54240	1.64344	22.30283	185.16	1.28
69/ 1/23	2440244.5	-1.62830	-0.19866	0.03553	3.86954	-21.99753	-0.55914	1.64076	22.34227	186.96	1.24
69/ 1/27	2440248.5	-1.61849	-0.24936	0.03422	4.62470	-21.89330	-0.57537	1.63795	22.38383	188.76	1.20
69/ 1/31	2440252.5	-1.60694	-0.29979	0.03288	5.37886	-21.76488	-0.59106	1.63499	22.42747	190.57	1.15
69/ 2/ 4	2440256.5	-1.59364	-0.34990	0.03149	6.13138	-21.61210	-0.60619	1.63191	22.47319	192.38	1.11
69/ 2/ 8	2440260.5	-1.57861	-0.39963	0.03008	6.88158	-21.43481	-0.62075	1.62869	22.52094	194.21	1.06
69/ 2/12	2440264.5	-1.56185	-0.44892	0.02863	7.62877	-21.23289	-0.63472	1.62534	22.57070	196.04	1.01
69/ 2/16	2440268.5	-1.54337	-0.49772	0.02714	8.37224	-21.00620	-0.64807	1.62186	22.62244	197.87	0.96
69/ 2/20	2440272.5	-1.52317	-0.54596	0.02563	9.11128	-20.75463	-0.66079	1.61826	22.67613	199.72	0.91
69/ 2/24	2440276.5	-1.50127	-0.59359	0.02409	9.84513	-20.47809	-0.67285	1.61454	22.73173	201.57	0.85
69/ 2/28	2440280.5	-1.47769	-0.64055	0.02252	10.57305	-20.17647	-0.68424	1.61071	22.78920	203.44	0.80
69/ 3/ 4	2440284.5	-1.45243	-0.68679	0.02093	11.29424	-19.84972	-0.69494	1.60676	22.84850	205.31	0.75
69/ 3/ 8	2440288.5	-1.42551	-0.73225	0.01931	12.00791	-19.49777	-0.70491	1.60270	22.90960	207.19	0.69
69/ 3/12	2440292.5	-1.39695	-0.77686	0.01767	12.71323	-19.12059	-0.71416	1.59853	22.97244	209.08	0.63
69/ 3/16	2440296.5	-1.36678	-0.82057	0.01601	13.40937	-18.71816	-0.72264	1.59426	23.03699	210.98	0.58
69/ 3/20	2440300.5	-1.33500	-0.86333	0.01434	14.09545	-18.29049	-0.73035	1.58990	23.10318	212.89	0.52
69/ 3/24	2440304.5	-1.30166	-0.90506	0.01264	14.77060	-17.83760	-0.73725	1.58544	23.17097	214.81	0.46
69/ 3/28	2440308.5	-1.26677	-0.94572	0.01093	15.43390	-17.35956	-0.74334	1.58089	23.24031	216.74	0.40
69/ 4/ 1	2440312.5	-1.23036	-0.98525	0.00921	16.08444	-16.85643	-0.74858	1.57626	23.31113	218.69	0.33
69/ 4/ 5	2440316.5	-1.19246	-1.02359	0.00747	16.72125	-16.32835	-0.75297	1.57154	23.38337	220.64	0.27
69/ 4/ 9	2440320.5	-1.15311	-1.06067	0.00573	17.34338	-15.77544	-0.75646	1.56676	23.45697	222.61	0.21
69/ 4/13	2440324.5	-1.11234	-1.09645	0.00398	17.94983	-15.19790	-0.75906	1.56190	23.53187	224.59	0.15
69/ 4/17	2440328.5	-1.07019	-1.13087	0.00222	18.53960	-14.59593	-0.76073	1.55698	23.60798	226.58	0.08
69/ 4/21	2440332.5	-1.02670	-1.16387	0.00046	19.11166	-13.96980	-0.76147	1.55200	23.68524	228.58	0.02
69/ 4/25	2440336.5	-0.98190	-1.19540	-0.00130	19.66496	-13.31981	-0.76124	1.54697	23.76357	230.60	-0.05
69/ 4/29	2440340.5	-0.93585	-1.22540	-0.00305	20.19844	-12.64629	-0.76002	1.54189	23.84288	232.63	-0.11
69/ 5/ 3	2440344.5	-0.88859	-1.25381	-0.00481	20.71102	-11.94964	-0.75781	1.53677	23.92310	234.67	-0.18
69/ 5/ 7	2440348.5	-0.84018	-1.28059	-0.00655	21.20162	-11.23031	-0.75459	1.53162	24.00412	236.73	-0.25
69/ 5/11	2440352.5	-0.79065	-1.30568	-0.00829	21.66913	-10.48878	-0.75033	1.52644	24.08586	238.80	-0.31
69/ 5/15	2440356.5	-0.74008	-1.32904	-0.01002	22.11245	-9.72562	-0.74502	1.52123	24.16822	240.89	-0.38
69/ 5/19	2440360.5	-0.68851	-1.35060	-0.01173	22.53045	-8.94142	-0.73866	1.51602	24.25110	242.99	-0.44
69/ 5/23	2440364.5	-0.63600	-1.37033	-0.01343	22.92203	-8.13687	-0.73121	1.51079	24.33440	245.10	-0.51
69/ 5/27	2440368.5	-0.58262	-1.38818	-0.01511	23.28606	-7.31270	-0.72268	1.50557	24.41799	247.23	-0.58
69/ 5/31	2440372.5	-0.52843	-1.40411	-0.01677	23.62142	-6.46971	-0.71306	1.50035	24.50178	249.38	-0.64
69/ 6/ 4	2440376.5	-0.47350	-1.41806	-0.01840	23.92702	-5.60878	-0.70233	1.49514	24.58564	251.54	-0.71

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69/ 6/ 8	2440380.5	-0.41790	-1.43001	-0.02001	24.20175	-4.73084	-0.69048	1.48996	24.66946	253.71	-0.77
69/ 6/12	2440384.5	-0.36171	-1.43991	-0.02159	24.44453	-3.83691	-0.67752	1.48480	24.75310	255.90	-0.83
69/ 6/16	2440388.5	-0.30499	-1.44773	-0.02314	24.65432	-2.92808	-0.66344	1.47968	24.83645	258.10	-0.90
69/ 6/20	2440392.5	-0.24782	-1.45343	-0.02466	24.83007	-2.00551	-0.64823	1.47461	24.91936	260.32	-0.96
69/ 6/24	2440396.5	-0.19029	-1.45698	-0.02614	24.97078	-1.07045	-0.63191	1.46959	25.00170	262.56	-1.02
69/ 6/28	2440400.5	-0.13247	-1.45836	-0.02758	25.07550	-0.12422	-0.61447	1.46463	25.08333	264.81	-1.08
69/ 7/ 2	2440404.5	-0.07446	-1.45755	-0.02898	25.14331	0.83180	-0.59593	1.45974	25.16412	267.08	-1.14
69/ 7/ 6	2440408.5	-0.01633	-1.45451	-0.03033	25.17334	1.79612	-0.57629	1.45492	25.24391	269.36	-1.19
69/ 7/10	2440412.5	0.04182	-1.44924	-0.03164	25.16478	2.76719	-0.55556	1.45019	25.32256	271.65	-1.25
69/ 7/14	2440416.5	0.09991	-1.44172	-0.03290	25.11689	3.74340	-0.53377	1.44556	25.39992	273.96	-1.30
69/ 7/18	2440420.5	0.15784	-1.43195	-0.03410	25.02899	4.72304	-0.51093	1.44102	25.47584	276.29	-1.36
69/ 7/22	2440424.5	0.21552	-1.41990	-0.03526	24.90049	5.70435	-0.48706	1.43660	25.55017	278.63	-1.41
69/ 7/26	2440428.5	0.27285	-1.40559	-0.03635	24.73088	6.68549	-0.46219	1.43229	25.62276	280.99	-1.45
69/ 7/30	2440432.5	0.32975	-1.38901	-0.03739	24.51973	7.66458	-0.43636	1.42811	25.69345	283.35	-1.50
69/ 8/ 3	2440436.5	0.38611	-1.37018	-0.03837	24.26673	8.63965	-0.40958	1.42406	25.76210	285.74	-1.54
69/ 8/ 7	2440440.5	0.44184	-1.34910	-0.03928	23.97166	9.60870	-0.38191	1.42015	25.82854	288.13	-1.59
69/ 8/11	2440444.5	0.49684	-1.32579	-0.04013	23.63441	10.56968	-0.35338	1.41640	25.89263	290.54	-1.62
69/ 8/15	2440448.5	0.55101	-1.30027	-0.04091	23.25500	11.52050	-0.32403	1.41280	25.95423	292.97	-1.66
69/ 8/19	2440452.5	0.60425	-1.27257	-0.04163	22.83356	12.45904	-0.29392	1.40936	26.01318	295.40	-1.69
69/ 8/23	2440456.5	0.65647	-1.24272	-0.04227	22.37036	13.38315	-0.26310	1.40609	26.06935	297.85	-1.72
69/ 8/27	2440460.5	0.70758	-1.21075	-0.04284	21.86579	14.29068	-0.23161	1.40300	26.12259	300.30	-1.75
69/ 8/31	2440464.5	0.75747	-1.17670	-0.04334	21.32038	15.17947	-0.19953	1.40010	26.17278	302.77	-1.77
69/ 9/ 4	2440468.5	0.80606	-1.14063	-0.04376	20.73479	16.04736	-0.16690	1.39738	26.21979	305.25	-1.79
69/ 9/ 8	2440472.5	0.85324	-1.10258	-0.04411	20.10984	16.89223	-0.13380	1.39486	26.26349	307.73	-1.81
69/ 9/12	2440476.5	0.89894	-1.06260	-0.04438	19.44646	17.71196	-0.10030	1.39255	26.30377	310.23	-1.83
69/ 9/16	2440480.5	0.94306	-1.02076	-0.04458	18.74574	18.50449	-0.06646	1.39044	26.34053	312.73	-1.84
69/ 9/20	2440484.5	0.98552	-0.97713	-0.04469	18.00891	19.26780	-0.03235	1.38854	26.37366	315.25	-1.84
69/ 9/24	2440488.5	1.02624	-0.93176	-0.04472	17.23732	19.99994	0.00194	1.38685	26.40308	317.76	-1.85
69/ 9/28	2440492.5	1.06514	-0.88475	-0.04468	16.43246	20.69902	0.03635	1.38539	26.42870	320.29	-1.85
69/10/ 2	2440496.5	1.10214	-0.83615	-0.04456	15.59594	21.36325	0.07079	1.38414	26.45046	322.81	-1.84
69/10/ 6	2440500.5	1.13718	-0.78607	-0.04435	14.72950	21.99093	0.10519	1.38313	26.46829	325.35	-1.84
69/10/10	2440504.5	1.17018	-0.73458	-0.04407	13.83499	22.58046	0.13947	1.38234	26.48213	327.88	-1.83
69/10/14	2440508.5	1.20108	-0.68177	-0.04371	12.91436	23.13036	0.17355	1.38178	26.49197	330.42	-1.81
69/10/18	2440512.5	1.22983	-0.62774	-0.04327	11.96966	23.63927	0.20735	1.38145	26.49776	332.96	-1.79
69/10/22	2440516.5	1.25637	-0.57258	-0.04275	11.00304	24.10597	0.24080	1.38135	26.49948	335.50	-1.77
69/10/26	2440520.5	1.28065	-0.51639	-0.04216	10.01669	24.52937	0.27381	1.38149	26.49715	338.04	-1.75
69/10/30	2440524.5	1.30263	-0.45928	-0.04149	9.01290	24.90851	0.30631	1.38185	26.49075	340.58	-1.72
69/11/ 3	2440528.5	1.32228	-0.40134	-0.04074	7.99401	25.24259	0.33823	1.38245	26.48031	343.12	-1.69
69/11/ 7	2440532.5	1.33956	-0.34269	-0.03992	6.96237	25.53098	0.36949	1.38327	26.46586	345.65	-1.65
69/11/11	2440536.5	1.35444	-0.28342	-0.03904	5.92039	25.77317	0.40003	1.38433	26.44744	348.18	-1.62
69/11/15	2440540.5	1.36691	-0.22364	-0.03808	4.87050	25.96882	0.42978	1.38560	26.42510	350.71	-1.57
69/11/19	2440544.5	1.37694	-0.16347	-0.03705	3.81510	26.11775	0.45868	1.38710	26.39890	353.23	-1.53
69/11/23	2440548.5	1.38453	-0.10300	-0.03596	2.75661	26.21992	0.48666	1.38882	26.36892	355.75	-1.48
69/11/27	2440552.5	1.38968	-0.04236	-0.03480	1.69743	26.27545	0.51368	1.39076	26.33523	358.25	-1.43
69/12/ 1	2440556.5	1.39238	0.01836	-0.03359	0.63992	26.28460	0.53968	1.39290	26.29793	0.76	-1.38

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69/12/ 5	2440560.5	1.39264	0.07905	-0.03231	-0.41361	26.24779	0.56460	1.39525	26.25712	3.25	-1.33
69/12/ 9	2440564.5	1.39047	0.13960	-0.03098	-1.46088	26.16555	0.58842	1.39780	26.21290	5.73	-1.27
69/12/13	2440568.5	1.38589	0.19991	-0.02959	-2.49969	26.03855	0.61108	1.40055	26.16539	8.21	-1.21
69/12/17	2440572.5	1.37893	0.25988	-0.02816	-3.52790	25.86759	0.63256	1.40349	26.11472	10.67	-1.15
69/12/21	2440576.5	1.36960	0.31940	-0.02667	-4.54347	25.65359	0.65282	1.40660	26.06101	13.13	-1.09
69/12/25	2440580.5	1.35795	0.37837	-0.02514	-5.54441	25.39757	0.67183	1.40990	26.00439	15.57	-1.02

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69/12/17	2440572.5	1.37893	0.25988	-0.02816	-3.52790	25.86759	0.63256	1.40349	26.11472	10.67	-1.15
69/12/21	2440576.5	1.36960	0.31940	-0.02667	-4.54347	25.65359	0.65282	1.40660	26.06101	13.13	-1.09
69/12/25	2440580.5	1.35795	0.37837	-0.02514	-5.54441	25.39757	0.67183	1.40990	26.00439	15.57	-1.02
69/12/29	2440584.5	1.34400	0.43671	-0.02357	-6.52885	25.10063	0.68958	1.41337	25.94500	18.00	-0.96
70/ 1/ 2	2440588.5	1.32780	0.49432	-0.02196	-7.49500	24.76400	0.70604	1.41699	25.88299	20.42	-0.89
70/ 1/ 6	2440592.5	1.30938	0.55110	-0.02031	-8.44118	24.38895	0.72120	1.42078	25.81850	22.83	-0.82
70/ 1/10	2440596.5	1.28881	0.60697	-0.01862	-9.36581	23.97686	0.73506	1.42471	25.75167	25.22	-0.75
70/ 1/14	2440600.5	1.26613	0.66185	-0.01691	-10.26741	23.52914	0.74760	1.42878	25.68266	27.60	-0.68
70/ 1/18	2440604.5	1.24139	0.71566	-0.01517	-11.14462	23.04728	0.75882	1.43299	25.61163	29.96	-0.61
70/ 1/22	2440608.5	1.21466	0.76831	-0.01341	-11.99619	22.53279	0.76873	1.43732	25.53871	32.31	-0.53
70/ 1/26	2440612.5	1.18598	0.81974	-0.01162	-12.82095	21.98723	0.77733	1.44176	25.46407	34.65	-0.46
70/ 1/30	2440616.5	1.15544	0.86988	-0.00982	-13.61787	21.41218	0.78462	1.44632	25.38786	36.97	-0.39
70/ 2/ 3	2440620.5	1.12309	0.91865	-0.00800	-14.38601	20.80926	0.79063	1.45097	25.31023	39.28	-0.32
70/ 2/ 7	2440624.5	1.08899	0.96601	-0.00616	-15.12454	20.18008	0.79536	1.45572	25.23133	41.58	-0.24
70/ 2/11	2440628.5	1.05323	1.01187	-0.00432	-15.83272	19.52626	0.79882	1.46055	25.15130	43.85	-0.17
70/ 2/15	2440632.5	1.01587	1.05621	-0.00247	-16.50992	18.84943	0.80105	1.46546	25.07030	46.12	-0.10
70/ 2/19	2440636.5	0.97697	1.09895	-0.00062	-17.15560	18.15119	0.80205	1.47043	24.98847	48.36	-0.02
70/ 2/23	2440640.5	0.93663	1.14006	0.00123	-17.76930	17.43316	0.80186	1.47546	24.90594	50.59	0.05
70/ 2/27	2440644.5	0.89490	1.17948	0.00308	-18.35067	16.69692	0.80049	1.48055	24.82287	52.81	0.12
70/ 3/ 3	2440648.5	0.85186	1.21719	0.00493	-18.89942	15.94402	0.79797	1.48568	24.73937	55.01	0.19
70/ 3/ 7	2440652.5	0.80760	1.25314	0.00677	-19.41536	15.17601	0.79434	1.49085	24.65559	57.20	0.26
70/ 3/11	2440656.5	0.76218	1.28730	0.00860	-19.89836	14.39438	0.78961	1.49604	24.57166	59.37	0.33
70/ 3/15	2440660.5	0.71569	1.31964	0.01042	-20.34835	13.60063	0.78382	1.50125	24.48769	61.53	0.40
70/ 3/19	2440664.5	0.66819	1.35013	0.01222	-20.76535	12.79618	0.77700	1.50648	24.40381	63.67	0.46
70/ 3/23	2440668.5	0.61977	1.37875	0.01401	-21.14943	11.98243	0.76918	1.51171	24.32013	65.80	0.53
70/ 3/27	2440672.5	0.57050	1.40549	0.01577	-21.50071	11.16074	0.76039	1.51694	24.23677	67.91	0.60
70/ 3/31	2440676.5	0.52046	1.43031	0.01752	-21.81937	10.33245	0.75067	1.52216	24.15384	70.00	0.66
70/ 4/ 4	2440680.5	0.46971	1.45322	0.01924	-22.10563	9.49882	0.74004	1.52737	24.07144	72.09	0.72
70/ 4/ 8	2440684.5	0.41834	1.47420	0.02094	-22.35977	8.66109	0.72854	1.53255	23.98967	74.16	0.78
70/ 4/12	2440688.5	0.36643	1.49324	0.02261	-22.58208	7.82045	0.71621	1.53770	23.90863	76.21	0.84
70/ 4/16	2440692.5	0.31403	1.51033	0.02424	-22.77291	6.97807	0.70307	1.54282	23.82842	78.25	0.90
70/ 4/20	2440696.5	0.26123	1.52548	0.02585	-22.93266	6.13504	0.68916	1.54790	23.74911	80.28	0.96
70/ 4/24	2440700.5	0.20810	1.53868	0.02743	-23.06171	5.29244	0.67450	1.55293	23.67081	82.30	1.01
70/ 4/28	2440704.5	0.15470	1.54993	0.02897	-23.16051	4.45128	0.65914	1.55790	23.59359	84.30	1.07
70/ 5/ 2	2440708.5	0.10111	1.55924	0.03047	-23.22951	3.61254	0.64311	1.56282	23.51753	86.29	1.12
70/ 5/ 6	2440712.5	0.04740	1.56662	0.03194	-23.26919	2.77717	0.62643	1.56767	23.44270	88.27	1.17
70/ 5/10	2440716.5	-0.00638	1.57208	0.03337	-23.28004	1.94606	0.60913	1.57245	23.36918	90.23	1.22
70/ 5/14	2440720.5	-0.06014	1.57562	0.03475	-23.26257	1.12008	0.59126	1.57715	23.29703	92.19	1.26
70/ 5/18	2440724.5	-0.11384	1.57726	0.03610	-23.21731	0.30005	0.57283	1.58177	23.22632	94.13	1.31
70/ 5/22	2440728.5	-0.16740	1.57701	0.03740	-23.14479	-0.51324	0.55388	1.58631	23.15710	96.06	1.35
70/ 5/26	2440732.5	-0.22075	1.57489	0.03866	-23.04554	-1.31905	0.53443	1.59076	23.08945	97.98	1.39
70/ 5/30	2440736.5	-0.27385	1.57092	0.03987	-22.92013	-2.11665	0.51452	1.59511	23.02340	99.89	1.43
70/ 6/ 3	2440740.5	-0.32663	1.56512	0.04103	-22.76909	-2.90537	0.49417	1.59937	22.95902	101.79	1.47
70/ 6/ 7	2440744.5	-0.37904	1.55751	0.04215	-22.59299	-3.68454	0.47342	1.60352	22.89636	103.68	1.51
70/ 6/11	2440748.5	-0.43100	1.54810	0.04322	-22.39240	-4.45354	0.45228	1.60756	22.83546	105.56	1.54

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70/ 6/15	2440752.5	-0.48248	1.53694	0.04424	-22.16787	-5.21179	0.43078	1.61150	22.77636	107.43	1.57
70/ 6/19	2440756.5	-0.53341	1.52403	0.04521	-21.91997	-5.95870	0.40895	1.61532	22.71912	109.29	1.60
70/ 6/23	2440760.5	-0.58374	1.50942	0.04613	-21.64925	-6.69375	0.38682	1.61902	22.66376	111.14	1.63
70/ 6/27	2440764.5	-0.63342	1.49311	0.04700	-21.35629	-7.41642	0.36440	1.62260	22.61033	112.99	1.66
70/ 7/ 1	2440768.5	-0.68240	1.47516	0.04781	-21.04163	-8.12621	0.34173	1.62605	22.55886	114.82	1.69
70/ 7/ 5	2440772.5	-0.73062	1.45558	0.04858	-20.70584	-8.82265	0.31882	1.62938	22.50939	116.65	1.71
70/ 7/ 9	2440776.5	-0.77805	1.43441	0.04929	-20.34946	-9.50530	0.29570	1.63258	22.46194	118.48	1.73
70/ 7/13	2440780.5	-0.82463	1.41167	0.04994	-19.97305	-10.17371	0.27240	1.63564	22.41654	120.29	1.75
70/ 7/17	2440784.5	-0.87032	1.38741	0.05055	-19.57715	-10.82749	0.24892	1.63857	22.37322	122.10	1.77
70/ 7/21	2440788.5	-0.91507	1.36166	0.05109	-19.16231	-11.46622	0.22531	1.64136	22.33202	123.90	1.78
70/ 7/25	2440792.5	-0.95884	1.33444	0.05159	-18.72906	-12.08954	0.20157	1.64401	22.29294	125.70	1.80
70/ 7/29	2440796.5	-1.00159	1.30581	0.05202	-18.27793	-12.69708	0.17773	1.64652	22.25602	127.49	1.81
70/ 8/ 2	2440800.5	-1.04328	1.27579	0.05241	-17.80947	-13.28850	0.15380	1.64888	22.22127	129.27	1.82
70/ 8/ 6	2440804.5	-1.08386	1.24443	0.05273	-17.32418	-13.86345	0.12981	1.65110	22.18872	131.05	1.83
70/ 8/10	2440808.5	-1.12331	1.21175	0.05301	-16.82259	-14.42162	0.10578	1.65317	22.15838	132.83	1.84
70/ 8/14	2440812.5	-1.16158	1.17781	0.05322	-16.30522	-14.96268	0.08173	1.65509	22.13027	134.60	1.84
70/ 8/18	2440816.5	-1.19863	1.14263	0.05338	-15.77258	-15.48634	0.05767	1.65686	22.10440	136.37	1.85
70/ 8/22	2440820.5	-1.23444	1.10627	0.05349	-15.22518	-15.99231	0.03362	1.65847	22.08079	138.13	1.85
70/ 8/26	2440824.5	-1.26897	1.06876	0.05354	-14.66352	-16.48029	0.00961	1.65993	22.05944	139.90	1.85
70/ 8/30	2440828.5	-1.30218	1.03014	0.05353	-14.08811	-16.95002	-0.01435	1.66124	22.04037	141.65	1.85
70/ 9/ 3	2440832.5	-1.33405	0.99045	0.05347	-13.49944	-17.40122	-0.03825	1.66239	22.02360	143.41	1.84
70/ 9/ 7	2440836.5	-1.36454	0.94975	0.05336	-12.89801	-17.83364	-0.06206	1.66338	22.00912	145.16	1.84
70/ 9/11	2440840.5	-1.39363	0.90807	0.05319	-12.28432	-18.24702	-0.08576	1.66422	21.99694	146.91	1.83
70/ 9/15	2440844.5	-1.42129	0.86546	0.05296	-11.65885	-18.64110	-0.10935	1.66490	21.98708	148.66	1.82
70/ 9/19	2440848.5	-1.44749	0.82196	0.05268	-11.02211	-19.01565	-0.13280	1.66542	21.97953	150.41	1.81
70/ 9/23	2440852.5	-1.47221	0.77762	0.05235	-10.37458	-19.37043	-0.15609	1.66578	21.97430	152.16	1.80
70/ 9/27	2440856.5	-1.49542	0.73248	0.05196	-9.71676	-19.70519	-0.17921	1.66598	21.97139	153.90	1.79
70/10/ 1	2440860.5	-1.51709	0.68659	0.05152	-9.04913	-20.01971	-0.20215	1.66602	21.97080	155.65	1.77
70/10/ 5	2440864.5	-1.53722	0.63999	0.05103	-8.37219	-20.31375	-0.22487	1.66590	21.97254	157.40	1.76
70/10/ 9	2440868.5	-1.55577	0.59275	0.05048	-7.68643	-20.58709	-0.24738	1.66563	21.97659	159.14	1.74
70/10/13	2440872.5	-1.57273	0.54489	0.04988	-6.99235	-20.83951	-0.26965	1.66519	21.98297	160.89	1.72
70/10/17	2440876.5	-1.58807	0.49648	0.04924	-6.29046	-21.07079	-0.29166	1.66460	21.99166	162.64	1.69
70/10/21	2440880.5	-1.60179	0.44755	0.04854	-5.58126	-21.28071	-0.31340	1.66384	22.00266	164.39	1.67
70/10/25	2440884.5	-1.61385	0.39817	0.04779	-4.86524	-21.46905	-0.33485	1.66293	22.01597	166.14	1.65
70/10/29	2440888.5	-1.62426	0.34837	0.04699	-4.14294	-21.63561	-0.35599	1.66186	22.03158	167.89	1.62
70/11/ 2	2440892.5	-1.63299	0.29822	0.04614	-3.41486	-21.78018	-0.37680	1.66064	22.04948	169.65	1.59
70/11/ 6	2440896.5	-1.64003	0.24776	0.04525	-2.68154	-21.90254	-0.39728	1.65926	22.06966	171.41	1.56
70/11/10	2440900.5	-1.64538	0.19704	0.04431	-1.94349	-22.00250	-0.41740	1.65773	22.09212	173.17	1.53
70/11/14	2440904.5	-1.64901	0.14612	0.04332	-1.20127	-22.07986	-0.43714	1.65604	22.11683	174.94	1.50
70/11/18	2440908.5	-1.65092	0.09504	0.04229	-0.45542	-22.13441	-0.45649	1.65420	22.14380	176.71	1.46
70/11/22	2440912.5	-1.65111	0.04387	0.04121	0.29350	-22.16595	-0.47543	1.65221	22.17300	178.48	1.43
70/11/26	2440916.5	-1.64957	-0.00736	0.04009	1.04493	-22.17431	-0.49394	1.65007	22.20441	180.26	1.39
70/11/30	2440920.5	-1.64628	-0.05857	0.03893	1.79828	-22.15929	-0.51200	1.64778	22.23803	182.04	1.35
70/12/ 4	2440924.5	-1.64126	-0.10972	0.03773	2.55297	-22.12070	-0.52960	1.64535	22.27383	183.82	1.31
70/12/ 8	2440928.5	-1.63449	-0.16076	0.03648	3.30839	-22.05837	-0.54671	1.64278	22.31179	185.62	1.27

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70/12/12	2440932.5	-1.62597	-0.21162	0.03520	4.06392	-21.97213	-0.56332	1.64006	22.35190	187.42	1.23
70/12/16	2440936.5	-1.61571	-0.26226	0.03388	4.81894	-21.86181	-0.57941	1.63721	22.39412	189.22	1.19
70/12/20	2440940.5	-1.60371	-0.31261	0.03253	5.57281	-21.72725	-0.59496	1.63421	22.43844	191.03	1.14
70/12/24	2440944.5	-1.58996	-0.36263	0.03113	6.32485	-21.56830	-0.60995	1.63109	22.48482	192.85	1.09
70/12/28	2440948.5	-1.57449	-0.41224	0.02971	7.07441	-21.38481	-0.62436	1.62783	22.53325	194.67	1.05
71/ 1/ 1	2440952.5	-1.55728	-0.46141	0.02825	7.82078	-21.17665	-0.63817	1.62444	22.58367	196.50	1.00
71/ 1/ 5	2440956.5	-1.53835	-0.51007	0.02676	8.56326	-20.94369	-0.65137	1.62093	22.63608	198.34	0.95
71/ 1/ 9	2440960.5	-1.51772	-0.55816	0.02524	9.30112	-20.68583	-0.66392	1.61730	22.69042	200.19	0.89
71/ 1/13	2440964.5	-1.49538	-0.60563	0.02369	10.03360	-20.40296	-0.67582	1.61354	22.74666	202.05	0.84
71/ 1/17	2440968.5	-1.47136	-0.65241	0.02212	10.75995	-20.09500	-0.68703	1.60967	22.80477	203.91	0.79
71/ 1/21	2440972.5	-1.44567	-0.69845	0.02052	11.47937	-19.76188	-0.69755	1.60569	22.86470	205.79	0.73
71/ 1/25	2440976.5	-1.41833	-0.74370	0.01890	12.19106	-19.40356	-0.70734	1.60159	22.92641	207.67	0.68
71/ 1/29	2440980.5	-1.38935	-0.78808	0.01725	12.89419	-19.01999	-0.71639	1.59740	22.98985	209.56	0.62
71/ 2/ 2	2440984.5	-1.35876	-0.83156	0.01559	13.58792	-18.61117	-0.72468	1.59310	23.05498	211.47	0.56
71/ 2/ 6	2440988.5	-1.32658	-0.87405	0.01390	14.27137	-18.17710	-0.73218	1.58870	23.12174	213.38	0.50
71/ 2/10	2440992.5	-1.29283	-0.91552	0.01220	14.94365	-17.71782	-0.73888	1.58422	23.19008	215.30	0.44
71/ 2/14	2440996.5	-1.25754	-0.95590	0.01049	15.60386	-17.23340	-0.74475	1.57964	23.25995	217.24	0.38
71/ 2/18	2441000.5	-1.22075	-0.99513	0.00876	16.25105	-16.72392	-0.74978	1.57498	23.33127	219.19	0.32
71/ 2/22	2441004.5	-1.18247	-1.03315	0.00703	16.88427	-16.18950	-0.75394	1.57025	23.40400	221.14	0.26
71/ 2/26	2441008.5	-1.14275	-1.06991	0.00528	17.50255	-15.63030	-0.75721	1.56544	23.47805	223.11	0.19
71/ 3/ 2	2441012.5	-1.10161	-1.10535	0.00353	18.10489	-15.04651	-0.75957	1.56056	23.55338	225.10	0.13
71/ 3/ 6	2441016.5	-1.05911	-1.13941	0.00177	18.69028	-14.43835	-0.76100	1.55563	23.62989	227.09	0.07
71/ 3/10	2441020.5	-1.01527	-1.17204	0.00001	19.25768	-13.80609	-0.76149	1.55063	23.70752	229.10	0.00
71/ 3/14	2441024.5	-0.97015	-1.20318	-0.00175	19.80605	-13.15005	-0.76101	1.54558	23.78618	231.12	-0.06
71/ 3/18	2441028.5	-0.92378	-1.23278	-0.00350	20.33431	-12.47057	-0.75954	1.54049	23.86579	233.15	-0.13
71/ 3/22	2441032.5	-0.87621	-1.26078	-0.00525	20.84139	-11.76807	-0.75707	1.53536	23.94627	235.20	-0.20
71/ 3/26	2441036.5	-0.82750	-1.28713	-0.00700	21.32619	-11.04300	-0.75358	1.53020	24.02753	237.26	-0.26
71/ 3/30	2441040.5	-0.77769	-1.31179	-0.00874	21.78761	-10.29586	-0.74905	1.52502	24.10946	239.34	-0.33
71/ 4/ 3	2441044.5	-0.72685	-1.33469	-0.01046	22.22455	-9.52724	-0.74348	1.51981	24.19197	241.43	-0.39
71/ 4/ 7	2441048.5	-0.67503	-1.35579	-0.01217	22.63587	-8.73775	-0.73683	1.51459	24.27496	243.53	-0.46
71/ 4/11	2441052.5	-0.62229	-1.37504	-0.01386	23.02047	-7.92808	-0.72911	1.50936	24.35832	245.65	-0.53
71/ 4/15	2441056.5	-0.56869	-1.39241	-0.01554	23.37721	-7.09898	-0.72030	1.50414	24.44194	247.78	-0.59
71/ 4/19	2441060.5	-0.51430	-1.40783	-0.01719	23.70500	-6.25129	-0.71039	1.49893	24.52571	249.93	-0.66
71/ 4/23	2441064.5	-0.45919	-1.42128	-0.01882	24.00272	-5.38588	-0.69937	1.49373	24.60950	252.10	-0.72
71/ 4/27	2441068.5	-0.40342	-1.43270	-0.02042	24.26929	-4.50372	-0.68724	1.48856	24.69320	254.27	-0.79
71/ 5/ 1	2441072.5	-0.34708	-1.44207	-0.02199	24.50362	-3.60584	-0.67398	1.48341	24.77668	256.47	-0.85
71/ 5/ 5	2441076.5	-0.29023	-1.44935	-0.02353	24.70467	-2.69336	-0.65961	1.47831	24.85981	258.68	-0.91
71/ 5/ 9	2441080.5	-0.23296	-1.45451	-0.02504	24.87142	-1.76745	-0.64412	1.47326	24.94246	260.90	-0.97
71/ 5/13	2441084.5	-0.17534	-1.45751	-0.02651	25.00287	-0.82939	-0.62751	1.46826	25.02449	263.14	-1.03
71/ 5/17	2441088.5	-0.11747	-1.45833	-0.02794	25.09808	0.11949	-0.60979	1.46332	25.10577	265.39	-1.09
71/ 5/21	2441092.5	-0.05941	-1.45695	-0.02933	25.15614	1.07778	-0.59096	1.45845	25.18615	267.66	-1.15
71/ 5/25	2441096.5	-0.00127	-1.45334	-0.03067	25.17620	2.04397	-0.57104	1.45367	25.26548	269.95	-1.21
71/ 5/29	2441100.5	0.05688	-1.44750	-0.03196	25.15746	3.01650	-0.55004	1.44897	25.34363	272.25	-1.26
71/ 6/ 2	2441104.5	0.11494	-1.43940	-0.03321	25.09921	3.99372	-0.52797	1.44437	25.42044	274.57	-1.32
71/ 6/ 6	2441108.5	0.17282	-1.42904	-0.03440	25.00079	4.97392	-0.50486	1.43987	25.49577	276.90	-1.37

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71/ 6/10	2441112.5	0.23042	-1.41642	-0.03554	24.86162	5.95531	-0.48073	1.43548	25.56946	279.24	-1.42
71/ 6/14	2441116.5	0.28766	-1.40153	-0.03662	24.68123	6.93604	-0.45562	1.43121	25.64136	281.60	-1.47
71/ 6/18	2441120.5	0.34443	-1.38438	-0.03764	24.45921	7.91419	-0.42953	1.42707	25.71131	283.97	-1.51
71/ 6/22	2441124.5	0.40063	-1.36497	-0.03861	24.19527	8.88781	-0.40253	1.42307	25.77918	286.36	-1.55
71/ 6/26	2441128.5	0.45618	-1.34332	-0.03950	23.88923	9.85488	-0.37463	1.41921	25.84481	288.76	-1.60
71/ 6/30	2441132.5	0.51098	-1.31944	-0.04034	23.54102	10.81333	-0.34589	1.41550	25.90805	291.17	-1.63
71/ 7/ 4	2441136.5	0.56492	-1.29336	-0.04110	23.15068	11.76106	-0.31635	1.41195	25.96876	293.59	-1.67
71/ 7/ 8	2441140.5	0.61791	-1.26511	-0.04180	22.71837	12.69595	-0.28605	1.40857	26.02679	296.03	-1.70
71/ 7/12	2441144.5	0.66985	-1.23471	-0.04242	22.24441	13.61586	-0.25505	1.40536	26.08200	298.48	-1.73
71/ 7/16	2441148.5	0.72066	-1.20221	-0.04298	21.72921	14.51863	-0.22341	1.40232	26.13425	300.94	-1.76
71/ 7/20	2441152.5	0.77022	-1.16765	-0.04345	21.17335	15.40209	-0.19119	1.39947	26.18343	303.41	-1.78
71/ 7/24	2441156.5	0.81845	-1.13107	-0.04386	20.57753	16.26411	-0.15844	1.39682	26.22939	305.89	-1.80
71/ 7/28	2441160.5	0.86526	-1.09252	-0.04419	19.94259	17.10255	-0.12523	1.39436	26.27203	308.38	-1.82
71/ 8/ 1	2441164.5	0.91057	-1.05207	-0.04444	19.26951	17.91532	-0.09164	1.39210	26.31123	310.88	-1.83
71/ 8/ 5	2441168.5	0.95427	-1.00977	-0.04461	18.55941	18.70037	-0.05773	1.39005	26.34689	313.38	-1.84
71/ 8/ 9	2441172.5	0.99629	-0.96569	-0.04470	17.81356	19.45569	-0.02358	1.38822	26.37892	315.89	-1.85
71/ 8/13	2441176.5	1.03655	-0.91990	-0.04472	17.03334	20.17936	0.01075	1.38659	26.40722	318.41	-1.85
71/ 8/17	2441180.5	1.07496	-0.87248	-0.04465	16.22027	20.86951	0.04516	1.38519	26.43172	320.94	-1.85
71/ 8/21	2441184.5	1.11147	-0.82350	-0.04451	15.37601	21.52438	0.07960	1.38401	26.45235	323.46	-1.84
71/ 8/25	2441188.5	1.14598	-0.77306	-0.04429	14.50231	22.14228	0.11397	1.38306	26.46905	326.00	-1.83
71/ 8/29	2441192.5	1.17845	-0.72123	-0.04398	13.60105	22.72167	0.14819	1.38233	26.48178	328.53	-1.82
71/ 9/ 2	2441196.5	1.20881	-0.66810	-0.04360	12.67420	23.26108	0.18220	1.38184	26.49049	331.07	-1.81
71/ 9/ 6	2441200.5	1.23699	-0.61378	-0.04314	11.72385	23.75919	0.21591	1.38157	26.49517	333.61	-1.79
71/ 9/10	2441204.5	1.26296	-0.55836	-0.04260	10.75214	24.21481	0.24924	1.38154	26.49580	336.15	-1.77
71/ 9/14	2441208.5	1.28666	-0.50194	-0.04199	9.76131	24.62688	0.28212	1.38173	26.49237	338.69	-1.74
71/ 9/18	2441212.5	1.30805	-0.44461	-0.04130	8.75364	24.99450	0.31446	1.38216	26.48491	341.23	-1.71
71/ 9/22	2441216.5	1.32709	-0.38649	-0.04054	7.73147	25.31691	0.34621	1.38282	26.47341	343.76	-1.68
71/ 9/26	2441220.5	1.34376	-0.32767	-0.03970	6.69719	25.59351	0.37728	1.38370	26.45793	346.30	-1.64
71/ 9/30	2441224.5	1.35803	-0.26827	-0.03880	5.65319	25.82382	0.40762	1.38481	26.43851	348.83	-1.61
71/10/ 4	2441228.5	1.36987	-0.20839	-0.03782	4.60190	26.00757	0.43714	1.38615	26.41519	351.35	-1.56
71/10/ 8	2441232.5	1.37928	-0.14814	-0.03678	3.54572	26.14459	0.46580	1.38770	26.38804	353.87	-1.52
71/10/12	2441236.5	1.38625	-0.08763	-0.03567	2.48706	26.23489	0.49354	1.38948	26.35714	356.38	-1.47
71/10/16	2441240.5	1.39077	-0.02697	-0.03450	1.42832	26.27863	0.52029	1.39146	26.32256	358.89	-1.42
71/10/20	2441244.5	1.39285	0.03375	-0.03326	0.37183	26.27611	0.54601	1.39366	26.28442	1.39	-1.37
71/10/24	2441248.5	1.39250	0.09440	-0.03197	-0.68010	26.22777	0.57064	1.39606	26.24279	3.88	-1.31
71/10/28	2441252.5	1.38972	0.15490	-0.03063	-1.72521	26.13418	0.59416	1.39866	26.19780	6.36	-1.25
71/11/ 1	2441256.5	1.38453	0.21512	-0.02923	-2.76132	25.99605	0.61652	1.40145	26.14956	8.83	-1.20
71/11/ 5	2441260.5	1.37697	0.27497	-0.02778	-3.78632	25.81420	0.63768	1.40443	26.09820	11.29	-1.13
71/11/ 9	2441264.5	1.36705	0.33436	-0.02628	-4.79818	25.58957	0.65762	1.40759	26.04383	13.74	-1.07
71/11/13	2441268.5	1.35481	0.39317	-0.02474	-5.79494	25.32321	0.67631	1.41092	25.98661	16.18	-1.00
71/11/17	2441272.5	1.34029	0.45133	-0.02316	-6.77475	25.01626	0.69372	1.41443	25.92666	18.61	-0.94
71/11/21	2441276.5	1.32352	0.50873	-0.02154	-7.73586	24.66994	0.70985	1.41809	25.86413	21.03	-0.87
71/11/25	2441280.5	1.30456	0.56528	-0.01988	-8.67660	24.28556	0.72468	1.42191	25.79916	23.43	-0.80
71/11/29	2441284.5	1.28345	0.62091	-0.01819	-9.59543	23.86449	0.73820	1.42587	25.73191	25.82	-0.73
71/12/ 3	2441288.5	1.26024	0.67552	-0.01647	-10.49090	23.40818	0.75040	1.42997	25.66252	28.19	-0.66

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
71/12/ 7	2441292.5	1.23500	0.72903	-0.01473	-11.36166	22.91810	0.76129	1.43420	25.59114	30.55	-0.59
71/12/11	2441296.5	1.20777	0.78138	-0.01296	-12.20650	22.39579	0.77087	1.43855	25.51792	32.90	-0.52
71/12/15	2441300.5	1.17862	0.83249	-0.01117	-13.02428	21.84281	0.77913	1.44302	25.44302	35.23	-0.44
71/12/19	2441304.5	1.14761	0.88228	-0.00936	-13.81399	21.26075	0.78610	1.44759	25.36659	37.55	-0.37
71/12/23	2441308.5	1.11482	0.93070	-0.00753	-14.57471	20.65122	0.79178	1.45226	25.28878	39.86	-0.30
71/12/27	2441312.5	1.08030	0.97768	-0.00570	-15.30565	20.01584	0.79619	1.45703	25.20973	42.15	-0.22
71/12/31	2441316.5	1.04412	1.02316	-0.00386	-16.00608	19.35623	0.79934	1.46187	25.12961	44.42	-0.15
72/ 1/ 4	2441320.5	1.00637	1.06709	-0.00201	-16.67540	18.67401	0.80125	1.46679	25.04854	46.68	-0.08
72/ 1/ 8	2441324.5	0.96710	1.10942	-0.00016	-17.31309	17.97078	0.80195	1.47177	24.96668	48.92	-0.01
72/ 1/12	2441328.5	0.92640	1.15011	0.00170	-17.91872	17.24815	0.80146	1.47681	24.88416	51.15	0.07
72/ 1/16	2441332.5	0.88433	1.18910	0.00355	-18.49195	16.50770	0.79980	1.48190	24.80113	53.36	0.14
72/ 1/20	2441336.5	0.84098	1.22637	0.00539	-19.03252	15.75098	0.79700	1.48703	24.71771	55.56	0.21
72/ 1/24	2441340.5	0.79642	1.26187	0.00723	-19.54024	14.97951	0.79309	1.49220	24.63404	57.74	0.28
72/ 1/28	2441344.5	0.75073	1.29557	0.00905	-20.01501	14.19480	0.78810	1.49739	24.55024	59.91	0.35
72/ 2/ 1	2441348.5	0.70397	1.32744	0.01087	-20.45678	13.39832	0.78205	1.50260	24.46643	62.06	0.41
72/ 2/ 5	2441352.5	0.65623	1.35746	0.01267	-20.86558	12.59148	0.77498	1.50782	24.38274	64.20	0.48
72/ 2/ 9	2441356.5	0.60759	1.38561	0.01445	-21.24148	11.77568	0.76691	1.51304	24.29929	66.32	0.55
72/ 2/13	2441360.5	0.55812	1.41187	0.01621	-21.58463	10.95227	0.75789	1.51826	24.21617	68.43	0.61
72/ 2/17	2441364.5	0.50789	1.43621	0.01795	-21.89522	10.12257	0.74794	1.52347	24.13351	70.52	0.68
72/ 2/21	2441368.5	0.45698	1.45863	0.01966	-22.17347	9.28784	0.73709	1.52867	24.05140	72.60	0.74
72/ 2/25	2441372.5	0.40546	1.47912	0.02135	-22.41967	8.44930	0.72538	1.53384	23.96995	74.67	0.80
72/ 2/29	2441376.5	0.35342	1.49767	0.02302	-22.63414	7.60815	0.71284	1.53898	23.88925	76.72	0.86
72/ 3/ 4	2441380.5	0.30091	1.51427	0.02465	-22.81722	6.76551	0.69951	1.54408	23.80939	78.76	0.91
72/ 3/ 8	2441384.5	0.24802	1.52893	0.02625	-22.96930	5.92250	0.68541	1.54914	23.73046	80.79	0.97
72/ 3/12	2441388.5	0.19481	1.54164	0.02781	-23.09080	5.08015	0.67058	1.55415	23.65254	82.80	1.03
72/ 3/16	2441392.5	0.14135	1.55240	0.02934	-23.18215	4.23950	0.65505	1.55910	23.57572	84.80	1.08
72/ 3/20	2441396.5	0.08772	1.56123	0.03084	-23.24381	3.40150	0.63885	1.56399	23.50006	86.78	1.13
72/ 3/24	2441400.5	0.03398	1.56812	0.03230	-23.27627	2.56709	0.62201	1.56882	23.42566	88.76	1.18
72/ 3/28	2441404.5	-0.01980	1.57309	0.03371	-23.28002	1.73716	0.60457	1.57358	23.35257	90.72	1.23
72/ 4/ 1	2441408.5	-0.07356	1.57615	0.03509	-23.25557	0.91256	0.58655	1.57826	23.28086	92.67	1.27
72/ 4/ 5	2441412.5	-0.12723	1.57731	0.03642	-23.20346	0.09411	0.56799	1.58285	23.21060	94.61	1.32
72/ 4/ 9	2441416.5	-0.18075	1.57659	0.03771	-23.12421	-0.71742	0.54892	1.58737	23.14185	96.54	1.36
72/ 4/13	2441420.5	-0.23405	1.57400	0.03896	-23.01837	-1.52128	0.52935	1.59179	23.07466	98.46	1.40
72/ 4/17	2441424.5	-0.28708	1.56957	0.04016	-22.88649	-2.31676	0.50933	1.59611	23.00909	100.37	1.44
72/ 4/21	2441428.5	-0.33978	1.56331	0.04131	-22.72913	-3.10319	0.48888	1.60034	22.94520	102.26	1.48
72/ 4/25	2441432.5	-0.39208	1.55524	0.04242	-22.54684	-3.87992	0.46802	1.60446	22.88302	104.15	1.51
72/ 4/29	2441436.5	-0.44393	1.54539	0.04347	-22.34018	-4.64633	0.44679	1.60847	22.82262	106.03	1.55
72/ 5/ 3	2441440.5	-0.49528	1.53378	0.04448	-22.10973	-5.40183	0.42521	1.61238	22.76402	107.90	1.58
72/ 5/ 7	2441444.5	-0.54607	1.52044	0.04544	-21.85603	-6.14587	0.40330	1.61616	22.70728	109.76	1.61
72/ 5/11	2441448.5	-0.59624	1.50539	0.04634	-21.57965	-6.87790	0.38109	1.61983	22.65242	111.61	1.64
72/ 5/15	2441452.5	-0.64576	1.48867	0.04720	-21.28116	-7.59743	0.35861	1.62338	22.59950	113.45	1.67
72/ 5/19	2441456.5	-0.69455	1.47030	0.04800	-20.96111	-8.30395	0.33588	1.62680	22.54854	115.29	1.69
72/ 5/23	2441460.5	-0.74259	1.45031	0.04875	-20.62006	-8.99700	0.31292	1.63010	22.49958	117.11	1.71
72/ 5/27	2441464.5	-0.78981	1.42874	0.04945	-20.25856	-9.67615	0.28975	1.63326	22.45264	118.93	1.73
72/ 5/31	2441468.5	-0.83617	1.40562	0.05009	-19.87716	-10.34096	0.26641	1.63629	22.40777	120.75	1.75

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72/ 6/ 4	2441472.5	-0.88163	1.38097	0.05068	-19.47641	-10.99102	0.24290	1.63919	22.36497	122.55	1.77
72/ 6/ 8	2441476.5	-0.92615	1.35485	0.05121	-19.05683	-11.62594	0.21925	1.64194	22.32428	124.36	1.79
72/ 6/12	2441480.5	-0.96967	1.32727	0.05169	-18.61898	-12.24536	0.19548	1.64456	22.28572	126.15	1.80
72/ 6/16	2441484.5	-1.01216	1.29828	0.05211	-18.16338	-12.84889	0.17162	1.64703	22.24932	127.94	1.81
72/ 6/20	2441488.5	-1.05358	1.26792	0.05248	-17.69057	-13.43621	0.14768	1.64936	22.21508	129.72	1.82
72/ 6/24	2441492.5	-1.09388	1.23621	0.05280	-17.20107	-14.00698	0.12368	1.65154	22.18304	131.50	1.83
72/ 6/28	2441496.5	-1.13304	1.20321	0.05305	-16.69539	-14.56087	0.09964	1.65358	22.15321	133.28	1.84
72/ 7/ 2	2441500.5	-1.17101	1.16895	0.05326	-16.17405	-15.09757	0.07559	1.65546	22.12561	135.05	1.84
72/ 7/ 6	2441504.5	-1.20776	1.13347	0.05340	-15.63758	-15.61680	0.05153	1.65719	22.10024	136.82	1.85
72/ 7/10	2441508.5	-1.24325	1.09681	0.05350	-15.08646	-16.11824	0.02750	1.65877	22.07713	138.58	1.85
72/ 7/14	2441512.5	-1.27745	1.05901	0.05353	-14.52122	-16.60163	0.00350	1.66020	22.05629	140.34	1.85
72/ 7/18	2441516.5	-1.31033	1.02012	0.05351	-13.94234	-17.06668	-0.02045	1.66147	22.03772	142.10	1.85
72/ 7/22	2441520.5	-1.34186	0.98017	0.05344	-13.35033	-17.51314	-0.04432	1.66258	22.02143	143.85	1.84
72/ 7/26	2441524.5	-1.37201	0.93921	0.05331	-12.74569	-17.94074	-0.06810	1.66354	22.00744	145.61	1.84
72/ 7/30	2441528.5	-1.40074	0.89729	0.05312	-12.12892	-18.34923	-0.09178	1.66434	21.99575	147.36	1.83
72/ 8/ 3	2441532.5	-1.42804	0.85445	0.05288	-11.50049	-18.73835	-0.11533	1.66498	21.98637	149.11	1.82
72/ 8/ 7	2441536.5	-1.45387	0.81073	0.05259	-10.86092	-19.10788	-0.13873	1.66547	21.97930	150.85	1.81
72/ 8/11	2441540.5	-1.47821	0.76618	0.05224	-10.21068	-19.45755	-0.16198	1.66579	21.97455	152.60	1.80
72/ 8/15	2441544.5	-1.50104	0.72084	0.05184	-9.55028	-19.78715	-0.18505	1.66596	21.97211	154.35	1.78
72/ 8/19	2441548.5	-1.52233	0.67477	0.05139	-8.88020	-20.09644	-0.20793	1.66597	21.97199	156.09	1.77
72/ 8/23	2441552.5	-1.54206	0.62801	0.05088	-8.20094	-20.38520	-0.23060	1.66581	21.97419	157.84	1.75
72/ 8/27	2441556.5	-1.56021	0.58060	0.05032	-7.51299	-20.65319	-0.25304	1.66550	21.97871	159.59	1.73
72/ 8/31	2441560.5	-1.57677	0.53260	0.04971	-6.81686	-20.90021	-0.27524	1.66503	21.98554	161.34	1.71
72/ 9/ 4	2441564.5	-1.59170	0.48405	0.04905	-6.11304	-21.12602	-0.29718	1.66440	21.99469	163.09	1.69
72/ 9/ 8	2441568.5	-1.60501	0.43501	0.04834	-5.40203	-21.33042	-0.31884	1.66361	22.00614	164.84	1.67
72/ 9/12	2441572.5	-1.61666	0.38551	0.04758	-4.68435	-21.51318	-0.34021	1.66267	22.01990	166.59	1.64
72/ 9/16	2441576.5	-1.62664	0.33562	0.04677	-3.96052	-21.67411	-0.36126	1.66157	22.03595	168.34	1.61
72/ 9/20	2441580.5	-1.63495	0.28539	0.04591	-3.23105	-21.81298	-0.38199	1.66031	22.05429	170.10	1.58
72/ 9/24	2441584.5	-1.64157	0.23486	0.04500	-2.49647	-21.92960	-0.40237	1.65889	22.07491	171.86	1.55
72/ 9/28	2441588.5	-1.64648	0.18408	0.04405	-1.75731	-22.02376	-0.42239	1.65733	22.09780	173.62	1.52
72/10/ 2	2441592.5	-1.64969	0.13312	0.04305	-1.01412	-22.09526	-0.44203	1.65561	22.12294	175.39	1.49
72/10/ 6	2441596.5	-1.65117	0.08201	0.04201	-0.26744	-22.14391	-0.46127	1.65374	22.15033	177.16	1.46
72/10/10	2441600.5	-1.65092	0.03082	0.04092	0.48216	-22.16951	-0.48010	1.65171	22.17995	178.93	1.42
72/10/14	2441604.5	-1.64894	-0.02040	0.03979	1.23411	-22.17187	-0.49849	1.64954	22.21178	180.71	1.38
72/10/18	2441608.5	-1.64522	-0.07160	0.03862	1.98783	-22.15080	-0.51643	1.64723	22.24581	182.49	1.34
72/10/22	2441612.5	-1.63975	-0.12273	0.03740	2.74274	-22.10613	-0.53390	1.64476	22.28202	184.28	1.30
72/10/26	2441616.5	-1.63254	-0.17372	0.03615	3.49821	-22.03767	-0.55088	1.64216	22.32039	186.07	1.26
72/10/30	2441620.5	-1.62359	-0.22453	0.03486	4.25364	-21.94526	-0.56736	1.63941	22.36090	187.87	1.22
72/11/ 3	2441624.5	-1.61289	-0.27510	0.03353	5.00839	-21.82874	-0.58330	1.63653	22.40352	189.68	1.17
72/11/ 7	2441628.5	-1.60045	-0.32537	0.03216	5.76182	-21.68793	-0.59871	1.63350	22.44824	191.49	1.13
72/11/11	2441632.5	-1.58627	-0.37528	0.03076	6.51325	-21.52270	-0.61355	1.63035	22.49501	193.31	1.08
72/11/15	2441636.5	-1.57036	-0.42479	0.02933	7.26202	-21.33291	-0.62780	1.62706	22.54382	195.14	1.03
72/11/19	2441640.5	-1.55272	-0.47383	0.02786	8.00742	-21.11842	-0.64145	1.62365	22.59464	196.97	0.98
72/11/23	2441644.5	-1.53336	-0.52235	0.02637	8.74874	-20.87911	-0.65448	1.62011	22.64743	198.81	0.93
72/11/27	2441648.5	-1.51230	-0.57028	0.02484	9.48525	-20.61488	-0.66686	1.61644	22.70216	200.66	0.88

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MARS

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72/12/ 1	2441652.5	-1.48954	-0.61757	0.02329	10.21620	-20.32563	-0.67858	1.61266	22.75879	202.52	0.83
72/12/ 5	2441656.5	-1.46510	-0.66417	0.02171	10.94082	-20.01128	-0.68961	1.60876	22.81728	204.39	0.77
72/12/ 9	2441660.5	-1.43900	-0.71001	0.02010	11.65831	-19.67177	-0.69994	1.60476	22.87760	206.26	0.72
72/12/13	2441664.5	-1.41124	-0.75504	0.01847	12.36787	-19.30704	-0.70954	1.60064	22.93969	208.15	0.66
72/12/17	2441668.5	-1.38186	-0.79920	0.01682	13.06866	-18.91707	-0.71840	1.59642	23.00351	210.04	0.60
72/12/21	2441672.5	-1.35087	-0.84243	0.01515	13.75984	-18.50186	-0.72649	1.59209	23.06902	211.95	0.55
72/12/25	2441676.5	-1.31829	-0.88467	0.01347	14.44052	-18.06142	-0.73379	1.58768	23.13616	213.86	0.49
72/12/29	2441680.5	-1.28416	-0.92586	0.01176	15.10980	-17.59579	-0.74027	1.58317	23.20487	215.79	0.43
73/ 1/ 2	2441684.5	-1.24849	-0.96595	0.01005	15.76679	-17.10504	-0.74593	1.57857	23.27510	217.73	0.36
73/ 1/ 6	2441688.5	-1.21132	-1.00487	0.00832	16.41053	-16.58927	-0.75074	1.57389	23.34679	219.68	0.30
73/ 1/10	2441692.5	-1.17268	-1.04257	0.00658	17.04006	-16.04861	-0.75467	1.56913	23.41988	221.64	0.24
73/ 1/14	2441696.5	-1.13260	-1.07900	0.00483	17.65441	-15.48321	-0.75771	1.56431	23.49430	223.61	0.18
73/ 1/18	2441700.5	-1.09112	-1.11409	0.00308	18.25258	-14.89328	-0.75984	1.55941	23.56998	225.60	0.11
73/ 1/22	2441704.5	-1.04828	-1.14780	0.00132	18.83355	-14.27906	-0.76103	1.55445	23.64684	227.59	0.05
73/ 1/26	2441708.5	-1.00412	-1.18005	-0.00044	19.39627	-13.64081	-0.76127	1.54944	23.72481	229.61	-0.02
73/ 1/30	2441712.5	-0.95868	-1.21080	-0.00219	19.93971	-12.97887	-0.76054	1.54438	23.80381	231.63	-0.08
73/ 2/ 3	2441716.5	-0.91201	-1.24000	-0.00395	20.46278	-12.29359	-0.75882	1.53927	23.88375	233.67	-0.15
73/ 2/ 7	2441720.5	-0.86415	-1.26759	-0.00570	20.96440	-11.58540	-0.75610	1.53413	23.96455	235.72	-0.21
73/ 2/11	2441724.5	-0.81516	-1.29351	-0.00744	21.44349	-10.85477	-0.75235	1.52896	24.04610	237.78	-0.28
73/ 2/15	2441728.5	-0.76509	-1.31772	-0.00918	21.89892	-10.10221	-0.74756	1.52376	24.12833	239.86	-0.35
73/ 2/19	2441732.5	-0.71400	-1.34017	-0.01090	22.32959	-9.32832	-0.74171	1.51854	24.21112	241.95	-0.41
73/ 2/23	2441736.5	-0.66194	-1.36081	-0.01260	22.73439	-8.53372	-0.73480	1.51331	24.29438	244.06	-0.48
73/ 2/27	2441740.5	-0.60898	-1.37958	-0.01429	23.11218	-7.71913	-0.72680	1.50808	24.37799	246.18	-0.54
73/ 3/ 3	2441744.5	-0.55518	-1.39646	-0.01596	23.46186	-6.88531	-0.71771	1.50285	24.46184	248.32	-0.61
73/ 3/ 7	2441748.5	-0.50060	-1.41138	-0.01761	23.78232	-6.03310	-0.70753	1.49763	24.54583	250.47	-0.67
73/ 3/11	2441752.5	-0.44532	-1.42432	-0.01923	24.07244	-5.16341	-0.69623	1.49243	24.62982	252.64	-0.74
73/ 3/15	2441756.5	-0.38940	-1.43523	-0.02082	24.33114	-4.27721	-0.68382	1.48726	24.71369	254.82	-0.80
73/ 3/19	2441760.5	-0.33292	-1.44407	-0.02239	24.55735	-3.37556	-0.67028	1.48212	24.79732	257.02	-0.87
73/ 3/23	2441764.5	-0.27596	-1.45081	-0.02392	24.75002	-2.45958	-0.65563	1.47702	24.88057	259.23	-0.93
73/ 3/27	2441768.5	-0.21860	-1.45542	-0.02541	24.90814	-1.53048	-0.63986	1.47197	24.96332	261.46	-0.99
73/ 3/31	2441772.5	-0.16090	-1.45787	-0.02687	25.03072	-0.58954	-0.62297	1.46697	25.04541	263.70	-1.05
73/ 4/ 4	2441776.5	-0.10297	-1.45814	-0.02829	25.11683	0.36188	-0.60497	1.46204	25.12672	265.96	-1.11
73/ 4/ 8	2441780.5	-0.04488	-1.45619	-0.02967	25.16557	1.32234	-0.58586	1.45719	25.20709	268.23	-1.17
73/ 4/12	2441784.5	0.01327	-1.45202	-0.03100	25.17610	2.29034	-0.56567	1.45241	25.28639	270.52	-1.22
73/ 4/16	2441788.5	0.07141	-1.44561	-0.03228	25.14764	3.26427	-0.54440	1.44773	25.36446	272.83	-1.28
73/ 4/20	2441792.5	0.12943	-1.43694	-0.03351	25.07949	4.24249	-0.52207	1.44314	25.44115	275.15	-1.33
73/ 4/24	2441796.5	0.18725	-1.42600	-0.03469	24.97100	5.22325	-0.49870	1.43866	25.51631	277.48	-1.38
73/ 4/28	2441800.5	0.24478	-1.41280	-0.03582	24.82163	6.20475	-0.47432	1.43430	25.58979	279.83	-1.43
73/ 5/ 2	2441804.5	0.30191	-1.39734	-0.03688	24.63091	7.18513	-0.44895	1.43005	25.66143	282.19	-1.48
73/ 5/ 6	2441808.5	0.35855	-1.37961	-0.03789	24.39846	8.16245	-0.42264	1.42594	25.73109	284.57	-1.52
73/ 5/10	2441812.5	0.41460	-1.35963	-0.03883	24.12402	9.13474	-0.39540	1.42197	25.79861	286.96	-1.56
73/ 5/14	2441816.5	0.46998	-1.33741	-0.03972	23.80744	10.09995	-0.36729	1.41814	25.86384	289.36	-1.60
73/ 5/18	2441820.5	0.52457	-1.31297	-0.04053	23.44866	11.05603	-0.33834	1.41446	25.92662	291.78	-1.64
73/ 5/22	2441824.5	0.57828	-1.28633	-0.04128	23.04776	12.00086	-0.30860	1.41095	25.98682	294.21	-1.68
73/ 5/26	2441828.5	0.63103	-1.25753	-0.04196	22.60494	12.93231	-0.27812	1.40760	26.04429	296.65	-1.71

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73/ 5/30	2441832.5	0.68270	-1.22659	-0.04256	22.12054	13.84822	-0.24695	1.40443	26.09890	299.10	-1.74
73/ 6/ 3	2441836.5	0.73320	-1.19356	-0.04310	21.59501	14.74644	-0.21516	1.40144	26.15050	301.56	-1.76
73/ 6/ 7	2441840.5	0.78244	-1.15847	-0.04356	21.02897	15.62481	-0.18279	1.39863	26.19896	304.04	-1.78
73/ 6/11	2441844.5	0.83033	-1.12138	-0.04394	20.42313	16.48118	-0.14992	1.39602	26.24417	306.52	-1.80
73/ 6/15	2441848.5	0.87677	-1.08234	-0.04425	19.77840	17.31344	-0.11661	1.39361	26.28600	309.01	-1.82
73/ 6/19	2441852.5	0.92168	-1.04141	-0.04448	19.09577	18.11948	-0.08294	1.39141	26.32434	311.51	-1.83
73/ 6/23	2441856.5	0.96497	-0.99865	-0.04463	18.37642	18.89727	-0.04896	1.38941	26.35910	314.02	-1.84
73/ 6/27	2441860.5	1.00656	-0.95412	-0.04470	17.62163	19.64483	-0.01475	1.38763	26.39017	316.53	-1.85
73/ 7/ 1	2441864.5	1.04637	-0.90791	-0.04470	16.83282	20.36023	0.01960	1.38606	26.41748	319.05	-1.85
73/ 7/ 5	2441868.5	1.08431	-0.86008	-0.04461	16.01156	21.04164	0.05403	1.38472	26.44095	321.58	-1.85
73/ 7/ 9	2441872.5	1.12032	-0.81071	-0.04445	15.15952	21.68732	0.08845	1.38360	26.46051	324.11	-1.84
73/ 7/13	2441876.5	1.15433	-0.75990	-0.04421	14.27850	22.29560	0.12279	1.38271	26.47611	326.64	-1.83
73/ 7/17	2441880.5	1.18627	-0.70773	-0.04388	13.37039	22.86496	0.15696	1.38204	26.48770	329.18	-1.82
73/ 7/21	2441884.5	1.21609	-0.65429	-0.04348	12.43722	23.39397	0.19090	1.38161	26.49526	331.72	-1.80
73/ 7/25	2441888.5	1.24372	-0.59967	-0.04300	11.48107	23.88135	0.22452	1.38141	26.49876	334.26	-1.78
73/ 7/29	2441892.5	1.26912	-0.54398	-0.04244	10.50412	24.32594	0.25774	1.38144	26.49820	336.80	-1.76
73/ 8/ 2	2441896.5	1.29224	-0.48731	-0.04181	9.50862	24.72672	0.29049	1.38170	26.49357	339.34	-1.73
73/ 8/ 6	2441900.5	1.31304	-0.42977	-0.04110	8.49688	25.08283	0.32269	1.38219	26.48489	341.88	-1.70
73/ 8/10	2441904.5	1.33148	-0.37146	-0.04032	7.47124	25.39353	0.35426	1.38292	26.47218	344.41	-1.67
73/ 8/14	2441908.5	1.34755	-0.31248	-0.03947	6.43410	25.65826	0.38515	1.38387	26.45548	346.94	-1.63
73/ 8/18	2441912.5	1.36121	-0.25294	-0.03854	5.38787	25.87662	0.41528	1.38504	26.43484	349.47	-1.59
73/ 8/22	2441916.5	1.37244	-0.19296	-0.03755	4.33497	26.04833	0.44459	1.38644	26.41032	352.00	-1.55
73/ 8/26	2441920.5	1.38123	-0.13263	-0.03649	3.27781	26.17329	0.47301	1.38806	26.38198	354.52	-1.51
73/ 8/30	2441924.5	1.38758	-0.07206	-0.03536	2.21880	26.25155	0.50050	1.38990	26.34990	357.03	-1.46
73/ 9/ 3	2441928.5	1.39148	-0.01137	-0.03418	1.16032	26.28330	0.52698	1.39195	26.31418	359.53	-1.41
73/ 9/ 7	2441932.5	1.39294	0.04934	-0.03293	0.10470	26.26889	0.55242	1.39421	26.27491	2.03	-1.35
73/ 9/11	2441936.5	1.39197	0.10997	-0.03162	-0.94576	26.20878	0.57677	1.39667	26.23218	4.52	-1.30
73/ 9/15	2441940.5	1.38858	0.17040	-0.03026	-1.98884	26.10360	0.59999	1.39932	26.18613	7.00	-1.24
73/ 9/19	2441944.5	1.38279	0.23054	-0.02885	-3.02235	25.95407	0.62204	1.40217	26.13686	9.47	-1.18
73/ 9/23	2441948.5	1.37462	0.29028	-0.02739	-4.04421	25.76105	0.64289	1.40521	26.08450	11.92	-1.12
73/ 9/27	2441952.5	1.36411	0.34953	-0.02588	-5.05241	25.52552	0.66250	1.40842	26.02918	14.37	-1.05
73/10/ 1	2441956.5	1.35129	0.40819	-0.02433	-6.04502	25.24855	0.68086	1.41181	25.97104	16.81	-0.99
73/10/ 5	2441960.5	1.33620	0.46616	-0.02274	-7.02021	24.93129	0.69794	1.41536	25.91022	19.23	-0.92
73/10/ 9	2441964.5	1.31887	0.52335	-0.02111	-7.97625	24.57500	0.71373	1.41907	25.84686	21.64	-0.85
73/10/13	2441968.5	1.29936	0.57967	-0.01944	-8.91152	24.18100	0.72822	1.42293	25.78112	24.04	-0.78
73/10/17	2441972.5	1.27771	0.63505	-0.01774	-9.82448	23.75069	0.74139	1.42694	25.71314	26.43	-0.71
73/10/21	2441976.5	1.25399	0.68938	-0.01602	-10.71373	23.28553	0.75325	1.43108	25.64307	28.80	-0.64
73/10/25	2441980.5	1.22823	0.74261	-0.01426	-11.57794	22.78700	0.76380	1.43535	25.57107	31.16	-0.57
73/10/29	2441984.5	1.20051	0.79464	-0.01249	-12.41593	22.25665	0.77303	1.43974	25.49728	33.50	-0.50
73/11/ 2	2441988.5	1.17089	0.84542	-0.01069	-13.22658	21.69604	0.78096	1.44424	25.42185	35.83	-0.42
73/11/ 6	2441992.5	1.13942	0.89486	-0.00888	-14.00893	21.10678	0.78759	1.44884	25.34495	38.14	-0.35
73/11/10	2441996.5	1.10618	0.94292	-0.00706	-14.76207	20.49047	0.79294	1.45354	25.26672	40.44	-0.28
73/11/14	2442000.5	1.07124	0.98952	-0.00522	-15.48523	19.84874	0.79701	1.45833	25.18730	42.73	-0.21
73/11/18	2442004.5	1.03466	1.03461	-0.00337	-16.17773	19.18320	0.79984	1.46320	25.10685	45.00	-0.13
73/11/22	2442008.5	0.99652	1.07813	-0.00152	-16.83897	18.49547	0.80144	1.46814	25.02550	47.25	-0.06

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73/11/26	2442012.5	0.95688	1.12005	0.00033	-17.46847	17.78716	0.80182	1.47314	24.94341	49.49	0.01
73/11/30	2442016.5	0.91583	1.16030	0.00218	-18.06582	17.05986	0.80103	1.47819	24.86070	51.72	0.08
73/12/ 4	2442020.5	0.87344	1.19886	0.00403	-18.63070	16.31515	0.79907	1.48330	24.77752	53.92	0.16
73/12/ 8	2442024.5	0.82978	1.23567	0.00587	-19.16288	15.55457	0.79598	1.48844	24.69401	56.12	0.23
73/12/12	2442028.5	0.78492	1.27071	0.00770	-19.66218	14.77964	0.79178	1.49361	24.61028	58.30	0.30
73/12/16	2442032.5	0.73895	1.30395	0.00953	-20.12851	13.99184	0.78651	1.49881	24.52646	60.46	0.36
73/12/20	2442036.5	0.69195	1.33535	0.01134	-20.56186	13.19265	0.78019	1.50402	24.44268	62.61	0.43
73/12/24	2442040.5	0.64398	1.36490	0.01313	-20.96226	12.38347	0.77286	1.50925	24.35906	64.74	0.50
73/12/28	2442044.5	0.59512	1.39256	0.01491	-21.32980	11.56568	0.76454	1.51447	24.27570	66.86	0.56
74/ 1/ 1	2442048.5	0.54545	1.41833	0.01666	-21.66464	10.74062	0.75528	1.51969	24.19273	68.96	0.63
74/ 1/ 5	2442052.5	0.49505	1.44218	0.01840	-21.96698	9.90959	0.74509	1.52489	24.11023	71.05	0.69
74/ 1/ 9	2442056.5	0.44398	1.46411	0.02011	-22.23706	9.07386	0.73402	1.53008	24.02833	73.13	0.75
74/ 1/13	2442060.5	0.39233	1.48410	0.02179	-22.47518	8.23463	0.72210	1.53524	23.94711	75.19	0.81
74/ 1/17	2442064.5	0.34016	1.50216	0.02344	-22.68165	7.39307	0.70935	1.54037	23.86667	77.24	0.87
74/ 1/21	2442068.5	0.28756	1.51826	0.02506	-22.85685	6.55031	0.69582	1.54546	23.78710	79.28	0.93
74/ 1/25	2442072.5	0.23458	1.53242	0.02666	-23.00116	5.70745	0.68153	1.55050	23.70849	81.30	0.99
74/ 1/29	2442076.5	0.18131	1.54463	0.02821	-23.11500	4.86551	0.66652	1.55549	23.63092	83.31	1.04
74/ 2/ 2	2442080.5	0.12780	1.55490	0.02973	-23.19882	4.02550	0.65082	1.56043	23.55447	85.30	1.09
74/ 2/ 6	2442084.5	0.07414	1.56323	0.03122	-23.25307	3.18839	0.63445	1.56530	23.47922	87.28	1.14
74/ 2/10	2442088.5	0.02039	1.56964	0.03267	-23.27826	2.35509	0.61746	1.57011	23.40524	89.26	1.19
74/ 2/14	2442092.5	-0.03339	1.57412	0.03407	-23.27487	1.52648	0.59987	1.57484	23.33259	91.22	1.24
74/ 2/18	2442096.5	-0.08713	1.57669	0.03544	-23.24343	0.70341	0.58171	1.57950	23.26134	93.16	1.29
74/ 2/22	2442100.5	-0.14076	1.57737	0.03676	-23.18445	-0.11332	0.56302	1.58407	23.19156	95.10	1.33
74/ 2/26	2442104.5	-0.19423	1.57618	0.03804	-23.09848	-0.92294	0.54382	1.58855	23.12330	97.02	1.37
74/ 3/ 2	2442108.5	-0.24746	1.57312	0.03927	-22.98606	-1.72472	0.52413	1.59294	23.05663	98.94	1.41
74/ 3/ 6	2442112.5	-0.30041	1.56821	0.04046	-22.84774	-2.51794	0.50400	1.59724	22.99159	100.84	1.45
74/ 3/10	2442116.5	-0.35301	1.56149	0.04160	-22.68408	-3.30196	0.48344	1.60143	22.92824	102.74	1.49
74/ 3/14	2442120.5	-0.40520	1.55296	0.04269	-22.49564	-4.07612	0.46249	1.60552	22.86662	104.62	1.52
74/ 3/18	2442124.5	-0.45693	1.54266	0.04374	-22.28298	-4.83981	0.44117	1.60951	22.80679	106.50	1.56
74/ 3/22	2442128.5	-0.50814	1.53061	0.04473	-22.04666	-5.59246	0.41950	1.61337	22.74878	108.37	1.59
74/ 3/26	2442132.5	-0.55877	1.51683	0.04567	-21.78724	-6.33352	0.39752	1.61713	22.69263	110.22	1.62
74/ 3/30	2442136.5	-0.60879	1.50136	0.04657	-21.50528	-7.06245	0.37524	1.62076	22.63838	112.07	1.65
74/ 4/ 3	2442140.5	-0.65812	1.48421	0.04741	-21.20135	-7.77874	0.35270	1.62427	22.58607	113.91	1.67
74/ 4/ 7	2442144.5	-0.70673	1.46543	0.04820	-20.87600	-8.48192	0.32990	1.62766	22.53573	115.75	1.70
74/ 4/11	2442148.5	-0.75456	1.44503	0.04893	-20.52979	-9.17153	0.30689	1.63091	22.48740	117.57	1.72
74/ 4/15	2442152.5	-0.80157	1.42306	0.04961	-20.16326	-9.84711	0.28368	1.63404	22.44111	119.39	1.74
74/ 4/19	2442156.5	-0.84770	1.39955	0.05024	-19.77697	-10.50826	0.26029	1.63703	22.39687	121.20	1.76
74/ 4/23	2442160.5	-0.89293	1.37452	0.05082	-19.37146	-11.15457	0.23674	1.63988	22.35473	123.01	1.78
74/ 4/27	2442164.5	-0.93719	1.34802	0.05134	-18.94726	-11.78565	0.21306	1.64260	22.31469	124.81	1.79
74/ 5/ 1	2442168.5	-0.98046	1.32008	0.05180	-18.50492	-12.40113	0.18927	1.64517	22.27680	126.60	1.80
74/ 5/ 5	2442172.5	-1.02268	1.29074	0.05221	-18.04496	-13.00065	0.16539	1.64760	22.24106	128.39	1.82
74/ 5/ 9	2442176.5	-1.06382	1.26002	0.05256	-17.56792	-13.58387	0.14143	1.64989	22.20750	130.17	1.83
74/ 5/13	2442180.5	-1.10384	1.22799	0.05286	-17.07430	-14.15046	0.11742	1.65203	22.17614	131.95	1.83
74/ 5/17	2442184.5	-1.14269	1.19466	0.05311	-16.56464	-14.70009	0.09338	1.65402	22.14698	133.73	1.84
74/ 5/21	2442188.5	-1.18036	1.16008	0.05330	-16.03945	-15.23247	0.06932	1.65586	22.12005	135.50	1.84

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74/ 5/25	2442192.5	-1.21679	1.12429	0.05343	-15.49923	-15.74728	0.04527	1.65755	22.09536	137.26	1.85
74/ 5/29	2442196.5	-1.25196	1.08734	0.05350	-14.94450	-16.24425	0.02124	1.65908	22.07293	139.03	1.85
74/ 6/ 2	2442200.5	-1.28583	1.04925	0.05353	-14.37576	-16.72309	-0.00274	1.66047	22.05275	140.79	1.85
74/ 6/ 6	2442204.5	-1.31837	1.01008	0.05349	-13.79350	-17.18353	-0.02667	1.66169	22.03486	142.54	1.84
74/ 6/10	2442208.5	-1.34955	0.96987	0.05340	-13.19824	-17.62530	-0.05052	1.66277	22.01925	144.30	1.84
74/ 6/14	2442212.5	-1.37934	0.92866	0.05326	-12.59047	-18.04814	-0.07428	1.66368	22.00593	146.05	1.83
74/ 6/18	2442216.5	-1.40771	0.88650	0.05306	-11.97067	-18.45181	-0.09792	1.66444	21.99490	147.80	1.83
74/ 6/22	2442220.5	-1.43464	0.84342	0.05281	-11.33935	-18.83605	-0.12144	1.66504	21.98619	149.55	1.82
74/ 6/26	2442224.5	-1.46010	0.79948	0.05250	-10.69700	-19.20062	-0.14480	1.66548	21.97978	151.30	1.81
74/ 6/30	2442228.5	-1.48406	0.75473	0.05214	-10.04410	-19.54528	-0.16801	1.66576	21.97568	153.04	1.79
74/ 7/ 4	2442232.5	-1.50650	0.70919	0.05172	-9.38116	-19.86981	-0.19103	1.66588	21.97389	154.79	1.78
74/ 7/ 8	2442236.5	-1.52739	0.66294	0.05125	-8.70866	-20.17395	-0.21386	1.66585	21.97442	156.54	1.76
74/ 7/12	2442240.5	-1.54673	0.61600	0.05073	-8.02711	-20.45750	-0.23647	1.66565	21.97726	158.28	1.75
74/ 7/16	2442244.5	-1.56447	0.56843	0.05016	-7.33698	-20.72023	-0.25885	1.66530	21.98241	160.03	1.73
74/ 7/20	2442248.5	-1.58062	0.52028	0.04954	-6.63880	-20.96192	-0.28099	1.66478	21.98987	161.78	1.71
74/ 7/24	2442252.5	-1.59514	0.47160	0.04886	-5.93305	-21.18234	-0.30285	1.66411	21.99964	163.53	1.68
74/ 7/28	2442256.5	-1.60803	0.42243	0.04814	-5.22025	-21.38128	-0.32444	1.66328	22.01171	165.28	1.66
74/ 8/ 1	2442260.5	-1.61926	0.37282	0.04737	-4.50091	-21.55854	-0.34573	1.66230	22.02608	167.03	1.63
74/ 8/ 5	2442264.5	-1.62882	0.32284	0.04654	-3.77554	-21.71389	-0.36670	1.66116	22.04273	168.79	1.61
74/ 8/ 9	2442268.5	-1.63670	0.27251	0.04567	-3.04466	-21.84714	-0.38734	1.65986	22.06167	170.55	1.58
74/ 8/13	2442272.5	-1.64288	0.22191	0.04475	-2.30880	-21.95807	-0.40763	1.65840	22.08288	172.31	1.55
74/ 8/17	2442276.5	-1.64736	0.17108	0.04379	-1.56851	-22.04648	-0.42755	1.65680	22.10634	174.07	1.51
74/ 8/21	2442280.5	-1.65013	0.12007	0.04278	-0.82432	-22.11218	-0.44709	1.65504	22.13205	175.84	1.48
74/ 8/25	2442284.5	-1.65117	0.06893	0.04172	-0.07678	-22.15496	-0.46622	1.65313	22.16000	177.61	1.45
74/ 8/29	2442288.5	-1.65048	0.01772	0.04062	0.67353	-22.17464	-0.48494	1.65107	22.19016	179.38	1.41
74/ 9/ 2	2442292.5	-1.64805	-0.03351	0.03948	1.42604	-22.17102	-0.50321	1.64887	22.22253	181.16	1.37
74/ 9/ 6	2442296.5	-1.64389	-0.08470	0.03830	2.18017	-22.14392	-0.52103	1.64651	22.25708	182.95	1.33
74/ 9/10	2442300.5	-1.63798	-0.13580	0.03708	2.93533	-22.09316	-0.53838	1.64402	22.29381	184.74	1.29
74/ 9/14	2442304.5	-1.63033	-0.18676	0.03581	3.69089	-22.01857	-0.55523	1.64138	22.33267	186.53	1.25
74/ 9/18	2442308.5	-1.62093	-0.23752	0.03451	4.44625	-21.91997	-0.57156	1.63860	22.37367	188.34	1.21
74/ 9/22	2442312.5	-1.60978	-0.28802	0.03317	5.20076	-21.79721	-0.58737	1.63568	22.41676	190.14	1.16
74/ 9/26	2442316.5	-1.59690	-0.33821	0.03180	5.95377	-21.65013	-0.60263	1.63263	22.46194	191.96	1.12
74/ 9/30	2442320.5	-1.58228	-0.38803	0.03039	6.70461	-21.47858	-0.61731	1.62944	22.50916	193.78	1.07
74/10/ 4	2442324.5	-1.56592	-0.43743	0.02895	7.45260	-21.28242	-0.63141	1.62613	22.55840	195.61	1.02
74/10/ 8	2442328.5	-1.54784	-0.48634	0.02747	8.19703	-21.06153	-0.64490	1.62269	22.60963	197.44	0.97
74/10/12	2442332.5	-1.52805	-0.53472	0.02597	8.93720	-20.81579	-0.65776	1.61912	22.66282	199.29	0.92
74/10/16	2442336.5	-1.50656	-0.58250	0.02443	9.67235	-20.54510	-0.66997	1.61543	22.71793	201.14	0.87
74/10/20	2442340.5	-1.48337	-0.62963	0.02287	10.40174	-20.24936	-0.68150	1.61162	22.77492	203.00	0.81
74/10/24	2442344.5	-1.45850	-0.67604	0.02128	11.12458	-19.92850	-0.69235	1.60770	22.83377	204.87	0.76
74/10/28	2442348.5	-1.43197	-0.72168	0.01967	11.84008	-19.58247	-0.70249	1.60367	22.89441	206.75	0.70
74/11/ 1	2442352.5	-1.40380	-0.76650	0.01804	12.54743	-19.21121	-0.71190	1.59953	22.95682	208.64	0.65
74/11/ 5	2442356.5	-1.37401	-0.81043	0.01638	13.24579	-18.81472	-0.72055	1.59529	23.02094	210.53	0.59
74/11/ 9	2442360.5	-1.34261	-0.85341	0.01471	13.93430	-18.39298	-0.72843	1.59095	23.08673	212.44	0.53
74/11/13	2442364.5	-1.30963	-0.89539	0.01302	14.61208	-17.94603	-0.73552	1.58652	23.15413	214.36	0.47
74/11/17	2442368.5	-1.27511	-0.93631	0.01131	15.27823	-17.47390	-0.74179	1.58199	23.22309	216.29	0.41

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74/11/21	2442372.5	-1.23905	-0.97611	0.00959	15.93183	-16.97668	-0.74722	1.57738	23.29354	218.23	0.35
74/11/25	2442376.5	-1.20151	-1.01473	0.00786	16.57192	-16.45448	-0.75180	1.57269	23.36544	220.18	0.29
74/11/29	2442380.5	-1.16250	-1.05211	0.00612	17.19756	-15.90742	-0.75550	1.56792	23.43870	222.15	0.22
74/12/ 3	2442384.5	-1.12206	-1.08821	0.00437	17.80775	-15.33568	-0.75830	1.56308	23.51328	224.12	0.16
74/12/ 7	2442388.5	-1.08023	-1.12295	0.00262	18.40149	-14.73948	-0.76018	1.55818	23.58909	226.11	0.10
74/12/11	2442392.5	-1.03705	-1.15629	0.00086	18.97776	-14.11905	-0.76113	1.55322	23.66606	228.11	0.03
74/12/15	2442396.5	-0.99256	-1.18817	-0.00090	19.53552	-13.47469	-0.76111	1.54820	23.74412	230.13	-0.03
74/12/19	2442400.5	-0.94680	-1.21853	-0.00266	20.07371	-12.80673	-0.76012	1.54313	23.82318	232.15	-0.10
74/12/23	2442404.5	-0.89983	-1.24732	-0.00441	20.59125	-12.11555	-0.75814	1.53802	23.90316	234.19	-0.16
74/12/27	2442408.5	-0.85168	-1.27449	-0.00616	21.08707	-11.40158	-0.75515	1.53288	23.98396	236.25	-0.23
74/12/31	2442412.5	-0.80242	-1.29998	-0.00790	21.56005	-10.66531	-0.75113	1.52771	24.06551	238.31	-0.30
75/ 1/ 4	2442416.5	-0.75209	-1.32375	-0.00963	22.00911	-9.90726	-0.74606	1.52251	24.14770	240.40	-0.36
75/ 1/ 8	2442420.5	-0.70075	-1.34574	-0.01134	22.43312	-9.12805	-0.73994	1.51730	24.23043	242.49	-0.43
75/ 1/12	2442424.5	-0.64846	-1.36591	-0.01305	22.83096	-8.32833	-0.73274	1.51208	24.31359	244.60	-0.49
75/ 1/16	2442428.5	-0.59528	-1.38421	-0.01473	23.20152	-7.50881	-0.72446	1.50685	24.39709	246.73	-0.56
75/ 1/20	2442432.5	-0.54128	-1.40059	-0.01639	23.54369	-6.67029	-0.71509	1.50163	24.48080	248.87	-0.63
75/ 1/24	2442436.5	-0.48652	-1.41501	-0.01803	23.85635	-5.81362	-0.70461	1.49642	24.56461	251.03	-0.69
75/ 1/28	2442440.5	-0.43108	-1.42744	-0.01965	24.13840	-4.93972	-0.69302	1.49124	24.64840	253.20	-0.75
75/ 2/ 1	2442444.5	-0.37502	-1.43782	-0.02123	24.38877	-4.04959	-0.68032	1.48608	24.73205	255.38	-0.82
75/ 2/ 5	2442448.5	-0.31842	-1.44613	-0.02279	24.60640	-3.14430	-0.66650	1.48095	24.81543	257.58	-0.88
75/ 2/ 9	2442452.5	-0.26136	-1.45234	-0.02431	24.79024	-2.22499	-0.65156	1.47587	24.89841	259.80	-0.94
75/ 2/13	2442456.5	-0.20391	-1.45640	-0.02580	24.93928	-1.29290	-0.63550	1.47084	24.98086	262.03	-1.01
75/ 2/17	2442460.5	-0.14615	-1.45830	-0.02725	25.05256	-0.34931	-0.61833	1.46586	25.06263	264.28	-1.07
75/ 2/21	2442464.5	-0.08818	-1.45801	-0.02866	25.12915	0.60440	-0.60004	1.46096	25.14358	266.54	-1.12
75/ 2/25	2442468.5	-0.03008	-1.45550	-0.03002	25.16818	1.56676	-0.58066	1.45612	25.22358	268.82	-1.18
75/ 3/ 1	2442472.5	0.02807	-1.45077	-0.03134	25.16881	2.53625	-0.56019	1.45138	25.30247	271.11	-1.24
75/ 3/ 5	2442476.5	0.08618	-1.44378	-0.03261	25.13028	3.51127	-0.53865	1.44672	25.38012	273.42	-1.29
75/ 3/ 9	2442480.5	0.14415	-1.43454	-0.03383	25.05192	4.49013	-0.51606	1.44216	25.45636	275.74	-1.34
75/ 3/13	2442484.5	0.20190	-1.42303	-0.03499	24.93309	5.47108	-0.49243	1.43771	25.53105	278.08	-1.39
75/ 3/17	2442488.5	0.25932	-1.40926	-0.03610	24.77328	6.45231	-0.46780	1.43338	25.60403	280.43	-1.44
75/ 3/21	2442492.5	0.31633	-1.39322	-0.03715	24.57203	7.43193	-0.44220	1.42917	25.67516	282.79	-1.49
75/ 3/25	2442496.5	0.37282	-1.37493	-0.03814	24.32901	8.40801	-0.41565	1.42509	25.74428	285.17	-1.53
75/ 3/29	2442500.5	0.42870	-1.35438	-0.03907	24.04397	9.37855	-0.38819	1.42115	25.81124	287.56	-1.58
75/ 4/ 2	2442504.5	0.48388	-1.33160	-0.03994	23.71678	10.34152	-0.35986	1.41735	25.87590	289.97	-1.61
75/ 4/ 6	2442508.5	0.53825	-1.30661	-0.04073	23.34742	11.29483	-0.33071	1.41372	25.93809	292.39	-1.65
75/ 4/10	2442512.5	0.59172	-1.27942	-0.04146	22.93600	12.23636	-0.30079	1.41024	25.99768	294.82	-1.68
75/ 4/14	2442516.5	0.64419	-1.25008	-0.04212	22.48276	13.16399	-0.27013	1.40693	26.05452	297.26	-1.72
75/ 4/18	2442520.5	0.69557	-1.21861	-0.04271	21.98806	14.07555	-0.23881	1.40380	26.10848	299.72	-1.74
75/ 4/22	2442524.5	0.74575	-1.18506	-0.04323	21.45238	14.96890	-0.20687	1.40085	26.15942	302.18	-1.77
75/ 4/26	2442528.5	0.79465	-1.14947	-0.04367	20.87638	15.84186	-0.17438	1.39809	26.20722	304.66	-1.79
75/ 4/30	2442532.5	0.84218	-1.11188	-0.04403	20.26081	16.69232	-0.14140	1.39552	26.25174	307.14	-1.81
75/ 5/ 4	2442536.5	0.88824	-1.07236	-0.04432	19.60659	17.51814	-0.10800	1.39316	26.29288	309.63	-1.82
75/ 5/ 8	2442540.5	0.93274	-1.03096	-0.04453	18.91478	18.31727	-0.07424	1.39100	26.33053	312.14	-1.83
75/ 5/12	2442544.5	0.97560	-0.98775	-0.04466	18.18655	19.08766	-0.04021	1.38904	26.36458	314.65	-1.84
75/ 5/16	2442548.5	1.01674	-0.94279	-0.04471	17.42324	19.82734	-0.00596	1.38731	26.39494	317.16	-1.85

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75/ 5/20	2442552.5	1.05608	-0.89617	-0.04469	16.62629	20.53443	0.02841	1.38579	26.42153	319.68	-1.85
75/ 5/24	2442556.5	1.09353	-0.84795	-0.04458	15.79730	21.20710	0.06284	1.38449	26.44427	322.21	-1.85
75/ 5/28	2442560.5	1.12904	-0.79821	-0.04440	14.93796	21.84362	0.09724	1.38342	26.46311	324.74	-1.84
75/ 6/ 1	2442564.5	1.16253	-0.74705	-0.04413	14.05011	22.44239	0.13155	1.38257	26.47798	327.27	-1.83
75/ 6/ 5	2442568.5	1.19394	-0.69455	-0.04379	13.13566	23.00187	0.16567	1.38196	26.48885	329.81	-1.82
75/ 6/ 9	2442572.5	1.22320	-0.64080	-0.04337	12.19665	23.52069	0.19953	1.38157	26.49568	332.35	-1.80
75/ 6/13	2442576.5	1.25027	-0.58591	-0.04287	11.23519	23.99759	0.23305	1.38142	26.49845	334.89	-1.78
75/ 6/17	2442580.5	1.27510	-0.52996	-0.04229	10.25348	24.43144	0.26616	1.38149	26.49717	337.43	-1.75
75/ 6/21	2442584.5	1.29763	-0.47306	-0.04164	9.25377	24.82125	0.29877	1.38180	26.49181	339.97	-1.73
75/ 6/25	2442588.5	1.31784	-0.41531	-0.04091	8.23839	25.16620	0.33082	1.38234	26.48241	342.51	-1.70
75/ 6/29	2442592.5	1.33569	-0.35682	-0.04011	7.20970	25.46560	0.36223	1.38311	26.46899	345.04	-1.66
75/ 7/ 3	2442596.5	1.35115	-0.29769	-0.03924	6.17009	25.71891	0.39294	1.38411	26.45159	347.58	-1.62
75/ 7/ 7	2442600.5	1.36419	-0.23802	-0.03830	5.12198	25.92575	0.42287	1.38533	26.43025	350.10	-1.58
75/ 7/11	2442604.5	1.37481	-0.17794	-0.03729	4.06779	26.08591	0.45196	1.38677	26.40504	352.63	-1.54
75/ 7/15	2442608.5	1.38298	-0.11753	-0.03621	3.00992	26.19931	0.48015	1.38844	26.37601	355.14	-1.49
75/ 7/19	2442612.5	1.38871	-0.05692	-0.03507	1.95080	26.26603	0.50739	1.39032	26.34326	357.65	-1.45
75/ 7/23	2442616.5	1.39200	0.00379	-0.03387	0.89277	26.28630	0.53362	1.39241	26.30687	0.16	-1.39
75/ 7/27	2442620.5	1.39284	0.06449	-0.03260	-0.16182	26.26049	0.55879	1.39471	26.26693	2.65	-1.34
75/ 7/31	2442624.5	1.39125	0.12509	-0.03128	-1.21069	26.18911	0.58286	1.39721	26.22356	5.14	-1.28
75/ 8/ 4	2442628.5	1.38725	0.18546	-0.02991	-2.25164	26.07281	0.60579	1.39991	26.17686	7.61	-1.22
75/ 8/ 8	2442632.5	1.38086	0.24552	-0.02849	-3.28249	25.91235	0.62753	1.40280	26.12697	10.08	-1.16
75/ 8/12	2442636.5	1.37209	0.30515	-0.02701	-4.30118	25.70862	0.64807	1.40588	26.07399	12.54	-1.10
75/ 8/16	2442640.5	1.36099	0.36427	-0.02549	-5.30572	25.46261	0.66737	1.40913	26.01808	14.98	-1.04
75/ 8/20	2442644.5	1.34759	0.42277	-0.02393	-6.29419	25.17542	0.68541	1.41255	25.95936	17.42	-0.97
75/ 8/24	2442648.5	1.33193	0.48056	-0.02233	-7.26481	24.84823	0.70216	1.41614	25.89797	19.84	-0.90
75/ 8/28	2442652.5	1.31404	0.53755	-0.02069	-8.21585	24.48231	0.71762	1.41989	25.83406	22.25	-0.83
75/ 9/ 1	2442656.5	1.29398	0.59365	-0.01901	-9.14571	24.07901	0.73178	1.42379	25.76778	24.64	-0.77
75/ 9/ 5	2442660.5	1.27180	0.64877	-0.01731	-10.05290	23.63974	0.74462	1.42783	25.69927	27.03	-0.69
75/ 9/ 9	2442664.5	1.24755	0.70284	-0.01557	-10.93602	23.16596	0.75615	1.43200	25.62870	29.40	-0.62
75/ 9/13	2442668.5	1.22129	0.75578	-0.01381	-11.79379	22.65919	0.76636	1.43630	25.55620	31.75	-0.55
75/ 9/17	2442672.5	1.19308	0.80751	-0.01203	-12.62503	22.12096	0.77526	1.44072	25.48194	34.09	-0.48
75/ 9/21	2442676.5	1.16298	0.85796	-0.01023	-13.42867	21.55287	0.78285	1.44525	25.40607	36.42	-0.41
75/ 9/25	2442680.5	1.13106	0.90707	-0.00842	-14.20375	20.95652	0.78915	1.44988	25.32873	38.73	-0.33
75/ 9/29	2442684.5	1.09738	0.95477	-0.00659	-14.94941	20.33351	0.79417	1.45460	25.25009	41.02	-0.26
75/10/ 3	2442688.5	1.06201	1.00100	-0.00475	-15.66489	19.68547	0.79793	1.45942	25.17028	43.31	-0.19
75/10/ 7	2442692.5	1.02503	1.04571	-0.00290	-16.34955	19.01402	0.80044	1.46430	25.08947	45.57	-0.11
75/10/11	2442696.5	0.98650	1.08884	-0.00105	-17.00280	18.32079	0.80172	1.46926	25.00778	47.82	-0.04
75/10/15	2442700.5	0.94649	1.13034	0.00080	-17.62419	17.60737	0.80180	1.47428	24.92538	50.06	0.03
75/10/19	2442704.5	0.90509	1.17017	0.00265	-18.21332	16.87536	0.80070	1.47936	24.84238	52.28	0.10
75/10/23	2442708.5	0.86236	1.20830	0.00450	-18.76990	16.12632	0.79845	1.48448	24.75894	54.48	0.17
75/10/27	2442712.5	0.81839	1.24467	0.00634	-19.29371	15.36180	0.79507	1.48963	24.67518	56.67	0.24
75/10/31	2442716.5	0.77325	1.27926	0.00817	-19.78460	14.58332	0.79059	1.49482	24.59123	58.85	0.31
75/11/ 4	2442720.5	0.72701	1.31204	0.00999	-20.24251	13.79234	0.78504	1.50003	24.50723	61.01	0.38
75/11/ 8	2442724.5	0.67974	1.34298	0.01180	-20.66742	12.99033	0.77846	1.50525	24.42329	63.15	0.45
75/11/12	2442728.5	0.63154	1.37205	0.01359	-21.05938	12.17869	0.77087	1.51048	24.33952	65.28	0.52

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MARS

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75/11/16	2442732.5	0.58247	1.39924	0.01536	-21.41852	11.35880	0.76230	1.51571	24.25606	67.40	0.58
75/11/20	2442736.5	0.53260	1.42453	0.01711	-21.74499	10.53197	0.75280	1.52094	24.17300	69.50	0.64
75/11/24	2442740.5	0.48202	1.44790	0.01884	-22.03902	9.69951	0.74238	1.52614	24.09045	71.59	0.71
75/11/28	2442744.5	0.43080	1.46934	0.02054	-22.30085	8.86265	0.73108	1.53133	24.00852	73.66	0.77
75/12/ 2	2442748.5	0.37901	1.48885	0.02221	-22.53079	8.02260	0.71894	1.53649	23.92730	75.72	0.83
75/12/ 6	2442752.5	0.32672	1.50641	0.02386	-22.72917	7.18053	0.70598	1.54162	23.84688	77.76	0.89
75/12/10	2442756.5	0.27402	1.52202	0.02548	-22.89637	6.33755	0.69225	1.54670	23.76737	79.79	0.94
75/12/14	2442760.5	0.22096	1.53569	0.02706	-23.03279	5.49474	0.67777	1.55174	23.68884	81.81	1.00
75/12/18	2442764.5	0.16762	1.54741	0.02861	-23.13885	4.65312	0.66257	1.55673	23.61137	83.82	1.05
75/12/22	2442768.5	0.11407	1.55719	0.03012	-23.21500	3.81369	0.64669	1.56165	23.53506	85.81	1.11
75/12/26	2442772.5	0.06038	1.56503	0.03159	-23.26172	2.97741	0.63016	1.56652	23.45996	87.79	1.16
75/12/30	2442776.5	0.00662	1.57095	0.03303	-23.27950	2.14517	0.61301	1.57131	23.38616	89.76	1.20
76/ 1/ 3	2442780.5	-0.04716	1.57495	0.03443	-23.26883	1.31785	0.59527	1.57603	23.31372	91.71	1.25
76/ 1/ 7	2442784.5	-0.10087	1.57704	0.03578	-23.23025	0.49628	0.57697	1.58067	23.24271	93.66	1.30
76/ 1/11	2442788.5	-0.15447	1.57725	0.03709	-23.16427	-0.31875	0.55814	1.58523	23.17318	95.59	1.34
76/ 1/15	2442792.5	-0.20788	1.57558	0.03836	-23.07144	-1.12647	0.53881	1.58969	23.10521	97.52	1.38
76/ 1/19	2442796.5	-0.26104	1.57205	0.03958	-22.95231	-1.92615	0.51901	1.59407	23.03883	99.43	1.42
76/ 1/23	2442800.5	-0.31391	1.56668	0.04076	-22.80742	-2.71712	0.49876	1.59834	22.97411	101.33	1.46
76/ 1/27	2442804.5	-0.36640	1.55950	0.04188	-22.63734	-3.49869	0.47810	1.60251	22.91110	103.22	1.50
76/ 1/31	2442808.5	-0.41848	1.55053	0.04296	-22.44262	-4.27025	0.45705	1.60658	22.84984	105.10	1.53
76/ 2/ 4	2442812.5	-0.47008	1.53978	0.04400	-22.22383	-5.03120	0.43564	1.61054	22.79038	106.98	1.57
76/ 2/ 8	2442816.5	-0.52114	1.52729	0.04498	-21.98153	-5.78095	0.41389	1.61438	22.73276	108.84	1.60
76/ 2/12	2442820.5	-0.57162	1.51308	0.04591	-21.71628	-6.51896	0.39183	1.61811	22.67702	110.70	1.63
76/ 2/16	2442824.5	-0.62146	1.49718	0.04679	-21.42864	-7.24472	0.36948	1.62171	22.62320	112.54	1.65
76/ 2/20	2442828.5	-0.67061	1.47962	0.04761	-21.11918	-7.95771	0.34687	1.62519	22.57134	114.38	1.68
76/ 2/24	2442832.5	-0.71902	1.46042	0.04839	-20.78844	-8.65748	0.32402	1.62855	22.52146	116.21	1.70
76/ 2/28	2442836.5	-0.76665	1.43963	0.04911	-20.43698	-9.34355	0.30095	1.63177	22.47360	118.04	1.72
76/ 3/ 3	2442840.5	-0.81343	1.41726	0.04978	-20.06536	-10.01550	0.27769	1.63486	22.42779	119.85	1.74
76/ 3/ 7	2442844.5	-0.85934	1.39336	0.05039	-19.67412	-10.67290	0.25426	1.63782	22.38406	121.66	1.76
76/ 3/11	2442848.5	-0.90432	1.36796	0.05095	-19.26379	-11.31537	0.23068	1.64064	22.34243	123.47	1.78
76/ 3/15	2442852.5	-0.94833	1.34109	0.05146	-18.83493	-11.94251	0.20697	1.64332	22.30293	125.27	1.79
76/ 3/19	2442856.5	-0.99133	1.31279	0.05191	-18.38806	-12.55396	0.18316	1.64586	22.26558	127.06	1.81
76/ 3/23	2442860.5	-1.03328	1.28310	0.05231	-17.92371	-13.14936	0.15926	1.64826	22.23039	128.84	1.82
76/ 3/27	2442864.5	-1.07413	1.25205	0.05265	-17.44241	-13.72839	0.13529	1.65050	22.19740	130.63	1.83
76/ 3/31	2442868.5	-1.11386	1.21968	0.05293	-16.94468	-14.29070	0.11127	1.65260	22.16661	132.40	1.84
76/ 4/ 4	2442872.5	-1.15241	1.18604	0.05316	-16.43104	-14.83599	0.08722	1.65456	22.13805	134.18	1.84
76/ 4/ 8	2442876.5	-1.18976	1.15115	0.05333	-15.90200	-15.36394	0.06317	1.65636	22.11172	135.94	1.85
76/ 4/12	2442880.5	-1.22587	1.11506	0.05345	-15.35806	-15.87427	0.03912	1.65801	22.08764	137.71	1.85
76/ 4/16	2442884.5	-1.26071	1.07782	0.05351	-14.79974	-16.36668	0.01510	1.65950	22.06583	139.47	1.85
76/ 4/20	2442888.5	-1.29424	1.03946	0.05352	-14.22754	-16.84090	-0.00887	1.66084	22.04629	141.23	1.85
76/ 4/24	2442892.5	-1.32643	1.00002	0.05347	-13.64195	-17.29666	-0.03278	1.66203	22.02903	142.99	1.84
76/ 4/28	2442896.5	-1.35726	0.95956	0.05337	-13.04348	-17.73368	-0.05660	1.66306	22.01406	144.74	1.84
76/ 5/ 2	2442900.5	-1.38669	0.91810	0.05321	-12.43262	-18.15172	-0.08033	1.66393	22.00139	146.49	1.83
76/ 5/ 6	2442904.5	-1.41470	0.87570	0.05300	-11.80986	-18.55052	-0.10394	1.66464	21.99103	148.24	1.82
76/ 5/10	2442908.5	-1.44125	0.83241	0.05273	-11.17570	-18.92984	-0.12742	1.66520	21.98298	149.99	1.81

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76/ 5/14	2442912.5	-1.46632	0.78826	0.05241	-10.53063	-19.28943	-0.15075	1.66559	21.97724	151.74	1.80
76/ 5/18	2442916.5	-1.48990	0.74330	0.05204	-9.87514	-19.62905	-0.17391	1.66583	21.97381	153.49	1.79
76/ 5/22	2442920.5	-1.51194	0.69758	0.05161	-9.20973	-19.94848	-0.19688	1.66591	21.97270	155.23	1.78
76/ 5/26	2442924.5	-1.53244	0.65114	0.05113	-8.53488	-20.24748	-0.21966	1.66583	21.97391	156.98	1.76
76/ 5/30	2442928.5	-1.55137	0.60404	0.05059	-7.85109	-20.52583	-0.24221	1.66558	21.97744	158.73	1.74
76/ 6/ 3	2442932.5	-1.56871	0.55632	0.05001	-7.15886	-20.78330	-0.26453	1.66519	21.98329	160.47	1.72
76/ 6/ 7	2442936.5	-1.58444	0.50803	0.04937	-6.45869	-21.01968	-0.28660	1.66463	21.99144	162.22	1.70
76/ 6/11	2442940.5	-1.59854	0.45922	0.04868	-5.75109	-21.23473	-0.30840	1.66391	22.00191	163.97	1.68
76/ 6/15	2442944.5	-1.61101	0.40994	0.04795	-5.03655	-21.42826	-0.32991	1.66304	22.01468	165.72	1.65
76/ 6/19	2442948.5	-1.62181	0.36023	0.04716	-4.31559	-21.60004	-0.35112	1.66200	22.02974	167.48	1.63
76/ 6/23	2442952.5	-1.63094	0.31016	0.04632	-3.58874	-21.74988	-0.37201	1.66082	22.04710	169.23	1.60
76/ 6/27	2442956.5	-1.63839	0.25976	0.04544	-2.85650	-21.87754	-0.39256	1.65947	22.06673	170.99	1.57
76/ 7/ 1	2442960.5	-1.64414	0.20909	0.04451	-2.11942	-21.98285	-0.41276	1.65797	22.08864	172.75	1.54
76/ 7/ 5	2442964.5	-1.64818	0.15821	0.04353	-1.37804	-22.06558	-0.43259	1.65632	22.11280	174.52	1.51
76/ 7/ 9	2442968.5	-1.65050	0.10716	0.04251	-0.63288	-22.12555	-0.45202	1.65452	22.13922	176.29	1.47
76/ 7/13	2442972.5	-1.65110	0.05600	0.04145	0.11547	-22.16256	-0.47105	1.65257	22.16787	178.06	1.44
76/ 7/17	2442976.5	-1.64996	0.00478	0.04034	0.86647	-22.17641	-0.48966	1.65046	22.19873	179.83	1.40
76/ 7/21	2442980.5	-1.64709	-0.04645	0.03918	1.61954	-22.16691	-0.50782	1.64821	22.23179	181.62	1.36
76/ 7/25	2442984.5	-1.64248	-0.09762	0.03799	2.37407	-22.13388	-0.52553	1.64582	22.26704	183.40	1.32
76/ 7/29	2442988.5	-1.63612	-0.14870	0.03676	3.12949	-22.07714	-0.54275	1.64328	22.30445	185.19	1.28
76/ 8/ 2	2442992.5	-1.62802	-0.19961	0.03548	3.88517	-21.99652	-0.55947	1.64060	22.34400	186.99	1.24
76/ 8/ 6	2442996.5	-1.61817	-0.25031	0.03417	4.64048	-21.89184	-0.57568	1.63777	22.38567	188.79	1.20
76/ 8/10	2443000.5	-1.60658	-0.30074	0.03282	5.39478	-21.76296	-0.59135	1.63482	22.42944	190.60	1.15
76/ 8/14	2443004.5	-1.59325	-0.35084	0.03144	6.14743	-21.60970	-0.60647	1.63172	22.47527	192.42	1.10
76/ 8/18	2443008.5	-1.57818	-0.40057	0.03002	6.89773	-21.43194	-0.62101	1.62850	22.52315	194.24	1.06
76/ 8/22	2443012.5	-1.56138	-0.44985	0.02857	7.64502	-21.22952	-0.63495	1.62514	22.57304	196.07	1.01
76/ 8/26	2443016.5	-1.54286	-0.49863	0.02709	8.38857	-21.00234	-0.64828	1.62166	22.62491	197.91	0.96
76/ 8/30	2443020.5	-1.52263	-0.54687	0.02558	9.12767	-20.75026	-0.66098	1.61806	22.67873	199.76	0.91
76/ 9/ 3	2443024.5	-1.50069	-0.59449	0.02404	9.86157	-20.47320	-0.67302	1.61433	22.73446	201.61	0.85
76/ 9/ 7	2443028.5	-1.47707	-0.64144	0.02247	10.58951	-20.17106	-0.68439	1.61049	22.79206	203.47	0.80
76/ 9/11	2443032.5	-1.45177	-0.68767	0.02087	11.31071	-19.84378	-0.69506	1.60653	22.85149	205.35	0.74
76/ 9/15	2443036.5	-1.42481	-0.73311	0.01926	12.02436	-19.49129	-0.70502	1.60247	22.91272	207.23	0.69
76/ 9/19	2443040.5	-1.39622	-0.77770	0.01762	12.72965	-19.11356	-0.71423	1.59830	22.97569	209.12	0.63
76/ 9/23	2443044.5	-1.36600	-0.82140	0.01596	13.42573	-18.71057	-0.72269	1.59403	23.04036	211.02	0.57
76/ 9/27	2443048.5	-1.33419	-0.86413	0.01428	14.11173	-18.28234	-0.73037	1.58966	23.10667	212.93	0.51
76/10/ 1	2443052.5	-1.30081	-0.90585	0.01258	14.78677	-17.82889	-0.73726	1.58519	23.17458	214.85	0.45
76/10/ 5	2443056.5	-1.26588	-0.94649	0.01087	15.44994	-17.35027	-0.74331	1.58064	23.24403	216.79	0.39
76/10/ 9	2443060.5	-1.22944	-0.98600	0.00915	16.10032	-16.84657	-0.74853	1.57600	23.31496	218.73	0.33
76/10/13	2443064.5	-1.19150	-1.02431	0.00741	16.73696	-16.31790	-0.75289	1.57129	23.38731	220.68	0.27
76/10/17	2443068.5	-1.15212	-1.06137	0.00567	17.35888	-15.76440	-0.75636	1.56650	23.46101	222.65	0.21
76/10/21	2443072.5	-1.11131	-1.09713	0.00392	17.96509	-15.18627	-0.75893	1.56164	23.53599	224.63	0.14
76/10/25	2443076.5	-1.06913	-1.13152	0.00217	18.55458	-14.58371	-0.76057	1.55672	23.61219	226.62	0.08
76/10/29	2443080.5	-1.02560	-1.16449	0.00041	19.12633	-13.95698	-0.76127	1.55174	23.68952	228.63	0.02
76/11/ 2	2443084.5	-0.98077	-1.19599	-0.00135	19.67929	-13.30639	-0.76101	1.54670	23.76790	230.65	-0.05
76/11/ 6	2443088.5	-0.93469	-1.22595	-0.00311	20.21239	-12.63227	-0.75977	1.54162	23.84727	232.68	-0.12

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MARS

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76/11/10	2443092.5	-0.88740	-1.25433	-0.00486	20.72455	-11.93504	-0.75752	1.53651	23.92752	234.72	-0.18
76/11/14	2443096.5	-0.83895	-1.28108	-0.00661	21.21470	-11.21512	-0.75427	1.53135	24.00857	236.78	-0.25
76/11/18	2443100.5	-0.78940	-1.30613	-0.00834	21.68172	-10.47302	-0.74997	1.52617	24.09032	238.85	-0.31
76/11/22	2443104.5	-0.73879	-1.32945	-0.01007	22.12451	-9.70929	-0.74464	1.52097	24.17268	240.94	-0.38
76/11/26	2443108.5	-0.68719	-1.35098	-0.01178	22.54194	-8.92455	-0.73823	1.51576	24.25555	243.04	-0.45
76/11/30	2443112.5	-0.63466	-1.37067	-0.01348	22.93291	-8.11946	-0.73076	1.51053	24.33882	245.15	-0.51
76/12/ 4	2443116.5	-0.58126	-1.38848	-0.01516	23.29629	-7.29477	-0.72219	1.50531	24.42238	247.28	-0.58
76/12/ 8	2443120.5	-0.52704	-1.40436	-0.01682	23.63097	-6.45129	-0.71253	1.50009	24.50611	249.43	-0.64
76/12/12	2443124.5	-0.47210	-1.41827	-0.01845	23.93584	-5.58988	-0.70177	1.49489	24.58991	251.59	-0.71
76/12/16	2443128.5	-0.41648	-1.43017	-0.02006	24.20980	-4.71148	-0.68989	1.48971	24.67364	253.76	-0.77
76/12/20	2443132.5	-0.36026	-1.44003	-0.02164	24.45178	-3.81713	-0.67689	1.48457	24.75719	255.95	-0.84
76/12/24	2443136.5	-0.30353	-1.44780	-0.02319	24.66072	-2.90791	-0.66278	1.47945	24.84042	258.16	-0.90
76/12/28	2443140.5	-0.24635	-1.45345	-0.02470	24.83559	-1.98499	-0.64754	1.47439	24.92320	260.38	-0.96
77/ 1/ 1	2443144.5	-0.18880	-1.45696	-0.02618	24.97539	-1.04961	-0.63119	1.46938	25.00540	262.62	-1.02
77/ 1/ 5	2443148.5	-0.13098	-1.45829	-0.02762	25.07917	-0.10310	-0.61372	1.46442	25.08689	264.87	-1.08
77/ 1/ 9	2443152.5	-0.07296	-1.45743	-0.02901	25.14600	0.85315	-0.59515	1.45954	25.16751	267.13	-1.14
77/ 1/13	2443156.5	-0.01483	-1.45435	-0.03036	25.17503	1.81767	-0.57548	1.45474	25.24712	269.42	-1.20
77/ 1/17	2443160.5	0.04333	-1.44903	-0.03167	25.16545	2.78889	-0.55473	1.45002	25.32558	271.71	-1.25
77/ 1/21	2443164.5	0.10142	-1.44146	-0.03293	25.11651	3.76519	-0.53291	1.44539	25.40275	274.02	-1.31
77/ 1/25	2443168.5	0.15935	-1.43163	-0.03413	25.02754	4.74488	-0.51004	1.44087	25.47846	276.35	-1.36
77/ 1/29	2443172.5	0.21702	-1.41953	-0.03528	24.89795	5.72617	-0.48614	1.43646	25.55256	278.69	-1.41
77/ 2/ 2	2443176.5	0.27435	-1.40517	-0.03638	24.72724	6.70725	-0.46125	1.43216	25.62492	281.05	-1.46
77/ 2/ 6	2443180.5	0.33124	-1.38854	-0.03741	24.51498	7.68620	-0.43540	1.42800	25.69536	283.42	-1.50
77/ 2/10	2443184.5	0.38759	-1.36966	-0.03839	24.26087	8.66107	-0.40860	1.42396	25.76375	285.80	-1.54
77/ 2/14	2443188.5	0.44330	-1.34853	-0.03930	23.96468	9.62986	-0.38091	1.42007	25.82993	288.20	-1.59
77/ 2/18	2443192.5	0.49828	-1.32517	-0.04015	23.62633	10.59052	-0.35236	1.41633	25.89375	290.61	-1.62
77/ 2/22	2443196.5	0.55243	-1.29961	-0.04093	23.24582	11.54094	-0.32301	1.41274	25.95507	293.03	-1.66
77/ 2/26	2443200.5	0.60565	-1.27186	-0.04164	22.82330	12.47902	-0.29288	1.40932	26.01374	295.46	-1.69
77/ 3/ 2	2443204.5	0.65785	-1.24196	-0.04228	22.35903	13.40261	-0.26205	1.40606	26.06962	297.91	-1.72
77/ 3/ 6	2443208.5	0.70893	-1.20995	-0.04285	21.85342	14.30956	-0.23056	1.40299	26.12257	300.37	-1.75
77/ 3/10	2443212.5	0.75879	-1.17586	-0.04334	21.30701	15.19770	-0.19847	1.40010	26.17247	302.83	-1.77
77/ 3/14	2443216.5	0.80734	-1.13974	-0.04377	20.72045	16.06489	-0.16585	1.39740	26.21917	305.31	-1.79
77/ 3/18	2443220.5	0.85449	-1.10165	-0.04411	20.09456	16.90899	-0.13275	1.39490	26.26258	307.80	-1.81
77/ 3/22	2443224.5	0.90016	-1.06164	-0.04438	19.43030	17.72789	-0.09925	1.39260	26.30256	310.29	-1.83
77/ 3/26	2443228.5	0.94424	-1.01976	-0.04457	18.72875	18.51955	-0.06542	1.39050	26.33902	312.80	-1.84
77/ 3/30	2443232.5	0.98666	-0.97609	-0.04468	17.99114	19.28193	-0.03133	1.38862	26.37186	315.31	-1.84
77/ 4/ 3	2443236.5	1.02734	-0.93070	-0.04471	17.21882	20.01309	0.00295	1.38695	26.40098	317.83	-1.85
77/ 4/ 7	2443240.5	1.06619	-0.88365	-0.04467	16.41330	20.71116	0.03734	1.38550	26.42632	320.35	-1.85
77/ 4/11	2443244.5	1.10315	-0.83503	-0.04454	15.57619	21.37435	0.07177	1.38427	26.44779	322.88	-1.84
77/ 4/15	2443248.5	1.13814	-0.78492	-0.04434	14.70922	22.00096	0.10614	1.38327	26.46535	325.41	-1.84
77/ 4/19	2443252.5	1.17109	-0.73341	-0.04405	13.81425	22.58940	0.14040	1.38249	26.47894	327.94	-1.83
77/ 4/23	2443256.5	1.20194	-0.68058	-0.04369	12.89323	23.13819	0.17445	1.38194	26.48852	330.48	-1.81
77/ 4/27	2443260.5	1.23064	-0.62653	-0.04324	11.94821	23.64598	0.20822	1.38163	26.49406	333.02	-1.79
77/ 5/ 1	2443264.5	1.25713	-0.57136	-0.04272	10.98133	24.11155	0.24163	1.38154	26.49556	335.56	-1.77
77/ 5/ 5	2443268.5	1.28136	-0.51516	-0.04213	9.99480	24.53381	0.27461	1.38169	26.49300	338.10	-1.75

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MARS

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77/ 5/ 9	2443272.5	1.30330	-0.45804	-0.04146	8.99089	24.91182	0.30708	1.38207	26.48639	340.64	-1.72
77/ 5/13	2443276.5	1.32289	-0.40010	-0.04071	7.97195	25.24478	0.33896	1.38267	26.47576	343.17	-1.69
77/ 5/17	2443280.5	1.34012	-0.34144	-0.03989	6.94033	25.53206	0.37018	1.38351	26.46113	345.71	-1.65
77/ 5/21	2443284.5	1.35495	-0.28217	-0.03900	5.89844	25.77316	0.40068	1.38457	26.44254	348.24	-1.61
77/ 5/25	2443288.5	1.36737	-0.22239	-0.03804	4.84869	25.96775	0.43039	1.38586	26.42005	350.76	-1.57
77/ 5/29	2443292.5	1.37735	-0.16222	-0.03701	3.79349	26.11564	0.45924	1.38737	26.39371	353.28	-1.53
77/ 6/ 2	2443296.5	1.38489	-0.10176	-0.03592	2.73527	26.21680	0.48718	1.38909	26.36361	355.80	-1.48
77/ 6/ 6	2443300.5	1.38999	-0.04113	-0.03476	1.67640	26.27136	0.51416	1.39103	26.32982	358.31	-1.43
77/ 6/10	2443304.5	1.39264	0.01958	-0.03354	0.61925	26.27959	0.54011	1.39318	26.29243	0.81	-1.38
77/ 6/14	2443308.5	1.39285	0.08026	-0.03227	-0.43387	26.24188	0.56499	1.39554	26.25155	3.30	-1.32
77/ 6/18	2443312.5	1.39064	0.14079	-0.03093	-1.48070	26.15879	0.58876	1.39809	26.20728	5.78	-1.27
77/ 6/22	2443316.5	1.38602	0.20109	-0.02955	-2.51903	26.03099	0.61138	1.40084	26.15974	8.26	-1.21
77/ 6/26	2443320.5	1.37901	0.26103	-0.02811	-3.54674	25.85928	0.63281	1.40378	26.10904	10.72	-1.15
77/ 6/30	2443324.5	1.36964	0.32053	-0.02663	-4.56176	25.64457	0.65302	1.40690	26.05533	13.17	-1.08
77/ 7/ 4	2443328.5	1.35794	0.37949	-0.02509	-5.56214	25.38789	0.67199	1.41020	25.99873	15.61	-1.02
77/ 7/ 8	2443332.5	1.34395	0.43780	-0.02352	-6.54600	25.09034	0.68969	1.41366	25.93937	18.04	-0.95
77/ 7/12	2443336.5	1.32771	0.49538	-0.02191	-7.51155	24.75315	0.70611	1.41729	25.87741	20.46	-0.89
77/ 7/16	2443340.5	1.30926	0.55214	-0.02026	-8.45713	24.37759	0.72124	1.42107	25.81299	22.87	-0.82
77/ 7/20	2443344.5	1.28866	0.60799	-0.01858	-9.38114	23.96504	0.73505	1.42500	25.74625	25.26	-0.75
77/ 7/24	2443348.5	1.26594	0.66284	-0.01686	-10.28213	23.51690	0.74755	1.42907	25.67734	27.64	-0.68
77/ 7/28	2443352.5	1.24117	0.71662	-0.01512	-11.15874	23.03466	0.75874	1.43327	25.60642	30.00	-0.60
77/ 8/ 1	2443356.5	1.21440	0.76924	-0.01336	-12.00969	22.51984	0.76861	1.43760	25.53364	32.35	-0.53
77/ 8/ 5	2443360.5	1.18570	0.82064	-0.01157	-12.83385	21.97399	0.77717	1.44204	25.45914	34.69	-0.46
77/ 8/ 9	2443364.5	1.15512	0.87075	-0.00977	-13.63018	21.39869	0.78443	1.44659	25.38308	37.01	-0.39
77/ 8/13	2443368.5	1.12274	0.91949	-0.00795	-14.39773	20.79555	0.79040	1.45124	25.30562	39.32	-0.31
77/ 8/17	2443372.5	1.08862	0.96681	-0.00612	-15.13569	20.16618	0.79510	1.45598	25.22689	41.61	-0.24
77/ 8/21	2443376.5	1.05284	1.01265	-0.00428	-15.84330	19.51221	0.79854	1.46080	25.14705	43.89	-0.17
77/ 8/25	2443380.5	1.01545	1.05695	-0.00243	-16.51995	18.83525	0.80073	1.46570	25.06624	46.15	-0.10
77/ 8/29	2443384.5	0.97653	1.09966	-0.00058	-17.16509	18.13692	0.80171	1.47067	24.98461	48.39	-0.02
77/ 9/ 2	2443388.5	0.93616	1.14073	0.00127	-17.77826	17.41882	0.80149	1.47569	24.90230	50.63	0.05
77/ 9/ 6	2443392.5	0.89441	1.18012	0.00312	-18.35912	16.68253	0.80009	1.48077	24.81943	52.84	0.12
77/ 9/10	2443396.5	0.85136	1.21780	0.00497	-18.90738	15.92961	0.79755	1.48589	24.73615	55.04	0.19
77/ 9/14	2443400.5	0.80708	1.25371	0.00681	-19.42283	15.16159	0.79389	1.49105	24.65259	57.23	0.26
77/ 9/18	2443404.5	0.76165	1.28784	0.00864	-19.90536	14.37998	0.78914	1.49623	24.56888	59.40	0.33
77/ 9/22	2443408.5	0.71514	1.32014	0.01045	-20.35489	13.58625	0.78333	1.50144	24.48513	61.56	0.40
77/ 9/26	2443412.5	0.66763	1.35060	0.01225	-20.77145	12.78183	0.77649	1.50665	24.40146	63.70	0.47
77/ 9/30	2443416.5	0.61919	1.37919	0.01404	-21.15509	11.96814	0.76865	1.51188	24.31800	65.82	0.53
77/10/ 4	2443420.5	0.56991	1.40589	0.01580	-21.50594	11.14653	0.75985	1.51710	24.23485	67.93	0.60
77/10/ 8	2443424.5	0.51985	1.43069	0.01755	-21.82419	10.31831	0.75011	1.52231	24.15213	70.03	0.66
77/10/12	2443428.5	0.46910	1.45356	0.01927	-22.11004	9.48478	0.73946	1.52751	24.06993	72.11	0.72
77/10/16	2443432.5	0.41772	1.47451	0.02096	-22.36378	8.64715	0.72795	1.53268	23.98837	74.18	0.78
77/10/20	2443436.5	0.36579	1.49351	0.02263	-22.58571	7.80663	0.71560	1.53782	23.90753	76.24	0.84
77/10/24	2443440.5	0.31339	1.51058	0.02427	-22.77617	6.96437	0.70245	1.54293	23.82750	78.28	0.90
77/10/28	2443444.5	0.26058	1.52569	0.02588	-22.93555	6.12147	0.68852	1.54800	23.74839	80.31	0.96
77/11/ 1	2443448.5	0.20744	1.53886	0.02745	-23.06424	5.27900	0.67386	1.55302	23.67026	82.32	1.01

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77/11/ 5	2443452.5	0.15404	1.55008	0.02899	-23.16269	4.43797	0.65849	1.55799	23.59320	84.32	1.07
77/11/ 9	2443456.5	0.10045	1.55937	0.03049	-23.23134	3.59938	0.64244	1.56290	23.51730	86.31	1.12
77/11/13	2443460.5	0.04673	1.56672	0.03196	-23.27068	2.76415	0.62576	1.56774	23.44262	88.29	1.17
77/11/17	2443464.5	-0.00705	1.57214	0.03338	-23.28119	1.93319	0.60845	1.57251	23.36924	90.26	1.22
77/11/21	2443468.5	-0.06082	1.57565	0.03477	-23.26339	1.10736	0.59057	1.57721	23.29722	92.21	1.26
77/11/25	2443472.5	-0.11451	1.57726	0.03611	-23.21780	0.28749	0.57213	1.58183	23.22663	94.15	1.31
77/11/29	2443476.5	-0.16807	1.57699	0.03741	-23.14495	-0.52564	0.55318	1.58636	23.15753	96.08	1.35
77/12/ 3	2443480.5	-0.22143	1.57484	0.03867	-23.04538	-1.33129	0.53373	1.59080	23.08997	98.00	1.39
77/12/ 7	2443484.5	-0.27453	1.57084	0.03988	-22.91964	-2.12872	0.51381	1.59515	23.02402	99.91	1.43
77/12/11	2443488.5	-0.32731	1.56501	0.04104	-22.76829	-2.91726	0.49346	1.59940	22.95972	101.81	1.47
77/12/15	2443492.5	-0.37971	1.55737	0.04216	-22.59188	-3.69626	0.47270	1.60355	22.89713	103.70	1.51
77/12/19	2443496.5	-0.43167	1.54794	0.04322	-22.39097	-4.46509	0.45155	1.60759	22.83630	105.58	1.54
77/12/23	2443500.5	-0.48314	1.53675	0.04424	-22.16613	-5.22315	0.43005	1.61152	22.77726	107.45	1.57
77/12/27	2443504.5	-0.53407	1.52382	0.04521	-21.91791	-5.96988	0.40822	1.61533	22.72005	109.31	1.60
77/12/31	2443508.5	-0.58439	1.50917	0.04613	-21.64688	-6.70474	0.38609	1.61903	22.66473	111.17	1.63
78/ 1/ 4	2443512.5	-0.63407	1.49285	0.04700	-21.35360	-7.42721	0.36367	1.62261	22.61133	113.01	1.66
78/ 1/ 8	2443516.5	-0.68304	1.47487	0.04781	-21.03864	-8.13680	0.34100	1.62606	22.55988	114.85	1.68
78/ 1/12	2443520.5	-0.73126	1.45526	0.04857	-20.70254	-8.83303	0.31809	1.62938	22.51042	116.68	1.71
78/ 1/16	2443524.5	-0.77868	1.43407	0.04928	-20.34587	-9.51546	0.29498	1.63258	22.46297	118.50	1.73
78/ 1/20	2443528.5	-0.82525	1.41131	0.04993	-19.96916	-10.18365	0.27167	1.63564	22.41758	120.32	1.75
78/ 1/24	2443532.5	-0.87093	1.38703	0.05053	-19.57297	-10.83720	0.24820	1.63857	22.37427	122.13	1.77
78/ 1/28	2443536.5	-0.91567	1.36125	0.05108	-19.15785	-11.47571	0.22459	1.64136	22.33305	123.93	1.78
78/ 2/ 1	2443540.5	-0.95943	1.33402	0.05157	-18.72431	-12.09879	0.20086	1.64401	22.29397	125.72	1.80
78/ 2/ 5	2443544.5	-1.00217	1.30536	0.05201	-18.27292	-12.70609	0.17702	1.64651	22.25703	127.51	1.81
78/ 2/ 9	2443548.5	-1.04384	1.27532	0.05239	-17.80418	-13.29726	0.15310	1.64888	22.22227	129.30	1.82
78/ 2/13	2443552.5	-1.08441	1.24394	0.05272	-17.31862	-13.87196	0.12912	1.65109	22.18970	131.08	1.83
78/ 2/17	2443556.5	-1.12385	1.21124	0.05299	-16.81677	-14.42986	0.10510	1.65316	22.15933	132.86	1.84
78/ 2/21	2443560.5	-1.16210	1.17728	0.05320	-16.29915	-14.97066	0.08105	1.65508	22.13119	134.63	1.84
78/ 2/25	2443564.5	-1.19914	1.14209	0.05336	-15.76626	-15.49405	0.05700	1.65685	22.10529	136.40	1.85
78/ 3/ 1	2443568.5	-1.23494	1.10570	0.05346	-15.21861	-15.99973	0.03297	1.65847	22.08164	138.16	1.85
78/ 3/ 5	2443572.5	-1.26945	1.06817	0.05351	-14.65671	-16.48743	0.00897	1.65993	22.06025	139.92	1.85
78/ 3/ 9	2443576.5	-1.30264	1.02954	0.05351	-14.08106	-16.95687	-0.01499	1.66123	22.04114	141.68	1.85
78/ 3/13	2443580.5	-1.33450	0.98984	0.05344	-13.49217	-17.40778	-0.03887	1.66239	22.02432	143.43	1.84
78/ 3/17	2443584.5	-1.36497	0.94912	0.05333	-12.89051	-17.83989	-0.06267	1.66338	22.00980	145.19	1.84
78/ 3/21	2443588.5	-1.39405	0.90743	0.05315	-12.27660	-18.25296	-0.08636	1.66422	21.99757	146.94	1.83
78/ 3/25	2443592.5	-1.42169	0.86480	0.05293	-11.65093	-18.64673	-0.10993	1.66490	21.98765	148.69	1.82
78/ 3/29	2443596.5	-1.44787	0.82129	0.05265	-11.01398	-19.02095	-0.13337	1.66542	21.98004	150.44	1.81
78/ 4/ 2	2443600.5	-1.47257	0.77694	0.05231	-10.36626	-19.37539	-0.15665	1.66578	21.97475	152.18	1.80
78/ 4/ 6	2443604.5	-1.49576	0.73179	0.05192	-9.70824	-19.70981	-0.17975	1.66598	21.97177	153.93	1.79
78/ 4/10	2443608.5	-1.51741	0.68589	0.05148	-9.04043	-20.02397	-0.20267	1.66602	21.97112	155.68	1.77
78/ 4/14	2443612.5	-1.53752	0.63928	0.05099	-8.36333	-20.31766	-0.22538	1.66591	21.97279	157.42	1.75
78/ 4/18	2443616.5	-1.55605	0.59203	0.05044	-7.67741	-20.59064	-0.24787	1.66563	21.97677	159.17	1.74
78/ 4/22	2443620.5	-1.57299	0.54416	0.04984	-6.98319	-20.84269	-0.27012	1.66520	21.98308	160.92	1.72
78/ 4/26	2443624.5	-1.58831	0.49574	0.04919	-6.28116	-21.07360	-0.29211	1.66460	21.99170	162.67	1.69
78/ 4/30	2443628.5	-1.60200	0.44681	0.04849	-5.57182	-21.28314	-0.31383	1.66385	22.00263	164.42	1.67

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78/ 5/ 4	2443632.5	-1.61405	0.39742	0.04774	-4.85569	-21.47110	-0.33526	1.66294	22.01587	166.17	1.65
78/ 5/ 8	2443636.5	-1.62443	0.34763	0.04694	-4.13328	-21.63728	-0.35638	1.66187	22.03141	167.92	1.62
78/ 5/12	2443640.5	-1.63314	0.29747	0.04610	-3.40510	-21.78146	-0.37718	1.66065	22.04924	169.68	1.59
78/ 5/16	2443644.5	-1.64016	0.24700	0.04520	-2.67169	-21.90343	-0.39764	1.65927	22.06935	171.44	1.56
78/ 5/20	2443648.5	-1.64548	0.19628	0.04426	-1.93357	-22.00299	-0.41773	1.65774	22.09174	173.20	1.53
78/ 5/24	2443652.5	-1.64909	0.14536	0.04327	-1.19128	-22.07995	-0.43745	1.65605	22.11639	174.96	1.50
78/ 5/28	2443656.5	-1.65098	0.09428	0.04224	-0.44538	-22.13409	-0.45678	1.65421	22.14328	176.73	1.46
78/ 6/ 1	2443660.5	-1.65115	0.04311	0.04116	0.30359	-22.16524	-0.47570	1.65222	22.17242	178.50	1.43
78/ 6/ 5	2443664.5	-1.64958	-0.00811	0.04004	1.05505	-22.17319	-0.49418	1.65008	22.20377	180.28	1.39
78/ 6/ 9	2443668.5	-1.64627	-0.05932	0.03888	1.80842	-22.15776	-0.51222	1.64780	22.23733	182.06	1.35
78/ 6/13	2443672.5	-1.64122	-0.11047	0.03767	2.56312	-22.11877	-0.52980	1.64536	22.27308	183.85	1.31
78/ 6/17	2443676.5	-1.63443	-0.16150	0.03643	3.31854	-22.05603	-0.54689	1.64279	22.31099	185.64	1.27
78/ 6/21	2443680.5	-1.62589	-0.21236	0.03515	4.07407	-21.96939	-0.56347	1.64007	22.35105	187.44	1.23
78/ 6/25	2443684.5	-1.61560	-0.26299	0.03383	4.82908	-21.85866	-0.57954	1.63722	22.39323	189.25	1.18
78/ 6/29	2443688.5	-1.60358	-0.31333	0.03247	5.58292	-21.72369	-0.59506	1.63422	22.43750	191.06	1.14
78/ 7/ 3	2443692.5	-1.58981	-0.36334	0.03108	6.33493	-21.56432	-0.61003	1.63110	22.48385	192.87	1.09
78/ 7/ 7	2443696.5	-1.57431	-0.41295	0.02965	7.08444	-21.38042	-0.62442	1.62784	22.53224	194.70	1.04
78/ 7/11	2443700.5	-1.55708	-0.46210	0.02819	7.83075	-21.17186	-0.63820	1.62445	22.58264	196.53	0.99
78/ 7/15	2443704.5	-1.53813	-0.51075	0.02670	8.57315	-20.93850	-0.65137	1.62093	22.63502	198.37	0.94
78/ 7/19	2443708.5	-1.51747	-0.55883	0.02518	9.31093	-20.68023	-0.66390	1.61730	22.68934	200.22	0.89
78/ 7/23	2443712.5	-1.49511	-0.60628	0.02364	10.04332	-20.39697	-0.67577	1.61354	22.74558	202.07	0.84
78/ 7/27	2443716.5	-1.47107	-0.65305	0.02206	10.76956	-20.08862	-0.68696	1.60966	22.80368	203.94	0.79
78/ 7/31	2443720.5	-1.44536	-0.69908	0.02046	11.48887	-19.75511	-0.69744	1.60568	22.86362	205.81	0.73
78/ 8/ 4	2443724.5	-1.41800	-0.74431	0.01884	12.20044	-19.39640	-0.70721	1.60158	22.92534	207.69	0.67
78/ 8/ 8	2443728.5	-1.38900	-0.78868	0.01720	12.90344	-19.01246	-0.71624	1.59738	22.98881	209.59	0.62
78/ 8/12	2443732.5	-1.35839	-0.83213	0.01553	13.59703	-18.60326	-0.72450	1.59308	23.05397	211.49	0.56
78/ 8/16	2443736.5	-1.32618	-0.87461	0.01385	14.28034	-18.16882	-0.73198	1.58868	23.12077	213.40	0.50
78/ 8/20	2443740.5	-1.29241	-0.91606	0.01215	14.95247	-17.70918	-0.73865	1.58418	23.18916	215.33	0.44
78/ 8/24	2443744.5	-1.25711	-0.95641	0.01044	15.61252	-17.22440	-0.74450	1.57960	23.25908	217.26	0.38
78/ 8/28	2443748.5	-1.22029	-0.99562	0.00871	16.25954	-16.71456	-0.74950	1.57494	23.33047	219.21	0.32
78/ 9/ 1	2443752.5	-1.18199	-1.03362	0.00698	16.89259	-16.17979	-0.75363	1.57020	23.40327	221.17	0.25
78/ 9/ 5	2443756.5	-1.14225	-1.07036	0.00523	17.51069	-15.62024	-0.75687	1.56538	23.47742	223.14	0.19
78/ 9/ 9	2443760.5	-1.10110	-1.10577	0.00348	18.11285	-15.03611	-0.75921	1.56050	23.55284	225.12	0.13
78/ 9/13	2443764.5	-1.05858	-1.13981	0.00172	18.69806	-14.42761	-0.76062	1.55556	23.62947	227.12	0.06
78/ 9/17	2443768.5	-1.01472	-1.17242	-0.00003	19.26527	-13.79501	-0.76108	1.55055	23.70722	229.12	-0.00
78/ 9/21	2443772.5	-0.96958	-1.20353	-0.00179	19.81344	-13.13862	-0.76058	1.54550	23.78601	231.14	-0.07
78/ 9/25	2443776.5	-0.92319	-1.23310	-0.00355	20.34150	-12.45881	-0.75908	1.54040	23.86577	233.18	-0.13
78/ 9/29	2443780.5	-0.87561	-1.26108	-0.00530	20.84838	-11.75597	-0.75659	1.53526	23.94640	235.23	-0.20
78/10/ 3	2443784.5	-0.82688	-1.28740	-0.00704	21.33297	-11.03055	-0.75308	1.53009	24.02781	237.29	-0.26
78/10/ 7	2443788.5	-0.77706	-1.31203	-0.00878	21.79417	-10.28308	-0.74853	1.52490	24.10991	239.36	-0.33
78/10/11	2443792.5	-0.72620	-1.33490	-0.01050	22.23087	-9.51412	-0.74292	1.51968	24.19260	241.45	-0.40
78/10/15	2443796.5	-0.67437	-1.35597	-0.01221	22.64195	-8.72429	-0.73626	1.51445	24.27577	243.56	-0.46
78/10/19	2443800.5	-0.62161	-1.37519	-0.01390	23.02629	-7.91428	-0.72851	1.50922	24.35932	245.68	-0.53
78/10/23	2443804.5	-0.56800	-1.39252	-0.01557	23.38278	-7.08485	-0.71968	1.50399	24.44314	247.81	-0.59
78/10/27	2443808.5	-0.51360	-1.40791	-0.01723	23.71029	-6.23681	-0.70974	1.49876	24.52712	249.96	-0.66

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78/10/31	2443812.5	-0.45847	-1.42132	-0.01885	24.00773	-5.37106	-0.69870	1.49356	24.61112	252.12	-0.72
78/11/ 4	2443816.5	-0.40270	-1.43271	-0.02045	24.27399	-4.48856	-0.68655	1.48837	24.69504	254.30	-0.79
78/11/ 8	2443820.5	-0.34634	-1.44205	-0.02202	24.50801	-3.59035	-0.67327	1.48322	24.77875	256.49	-0.85
78/11/12	2443824.5	-0.28949	-1.44929	-0.02356	24.70873	-2.67753	-0.65888	1.47811	24.86211	258.70	-0.91
78/11/16	2443828.5	-0.23221	-1.45441	-0.02507	24.87512	-1.75129	-0.64336	1.47304	24.94499	260.93	-0.98
78/11/20	2443832.5	-0.17458	-1.45737	-0.02653	25.00620	-0.81289	-0.62673	1.46803	25.02726	263.17	-1.04
78/11/24	2443836.5	-0.11670	-1.45816	-0.02796	25.10101	0.13632	-0.60899	1.46309	25.10877	265.42	-1.10
78/11/28	2443840.5	-0.05863	-1.45674	-0.02935	25.15865	1.09493	-0.59014	1.45821	25.18938	267.70	-1.15
78/12/ 2	2443844.5	-0.00048	-1.45309	-0.03069	25.17827	2.06144	-0.57020	1.45342	25.26895	269.98	-1.21
78/12/ 6	2443848.5	0.05767	-1.44721	-0.03198	25.15907	3.03427	-0.54917	1.44871	25.34733	272.28	-1.26
78/12/10	2443852.5	0.11573	-1.43907	-0.03322	25.10032	4.01179	-0.52709	1.44410	25.42437	274.60	-1.32
78/12/14	2443856.5	0.17361	-1.42867	-0.03442	25.00138	4.99228	-0.50396	1.43959	25.49992	276.93	-1.37
78/12/18	2443860.5	0.23121	-1.41600	-0.03555	24.86167	5.97394	-0.47982	1.43520	25.57383	279.27	-1.42
78/12/22	2443864.5	0.28845	-1.40107	-0.03663	24.68069	6.95494	-0.45468	1.43092	25.64594	281.63	-1.47
78/12/26	2443868.5	0.34521	-1.38387	-0.03765	24.45806	7.93334	-0.42858	1.42677	25.71611	284.01	-1.51
78/12/30	2443872.5	0.40142	-1.36442	-0.03861	24.19348	8.90718	-0.40155	1.42277	25.78417	286.39	-1.56
79/ 1/ 3	2443876.5	0.45696	-1.34272	-0.03951	23.88676	9.87444	-0.37364	1.41890	25.84998	288.79	-1.60
79/ 1/ 7	2443880.5	0.51175	-1.31880	-0.04034	23.53784	10.83305	-0.34488	1.41519	25.91339	291.21	-1.63
79/ 1/11	2443884.5	0.56569	-1.29268	-0.04110	23.14675	11.78092	-0.31532	1.41163	25.97425	293.63	-1.67
79/ 1/15	2443888.5	0.61867	-1.26438	-0.04179	22.71368	12.71590	-0.28501	1.40824	26.03242	296.07	-1.70
79/ 1/19	2443892.5	0.67060	-1.23394	-0.04242	22.23892	13.63586	-0.25400	1.40503	26.08775	298.52	-1.73
79/ 1/23	2443896.5	0.72139	-1.20139	-0.04297	21.72290	14.53863	-0.22235	1.40199	26.14011	300.98	-1.76
79/ 1/27	2443900.5	0.77093	-1.16678	-0.04344	21.16618	15.42206	-0.19011	1.39914	26.18937	303.45	-1.78
79/ 1/31	2443904.5	0.81915	-1.13015	-0.04384	20.56949	16.28398	-0.15736	1.39648	26.23541	305.94	-1.80
79/ 2/ 4	2443908.5	0.86594	-1.09156	-0.04417	19.93366	17.12227	-0.12415	1.39403	26.27809	308.43	-1.82
79/ 2/ 8	2443912.5	0.91122	-1.05106	-0.04442	19.25967	17.93483	-0.09055	1.39177	26.31732	310.92	-1.83
79/ 2/12	2443916.5	0.95490	-1.00871	-0.04459	18.54866	18.71961	-0.05664	1.38972	26.35298	313.43	-1.84
79/ 2/16	2443920.5	0.99690	-0.96459	-0.04468	17.80188	19.47460	-0.02248	1.38789	26.38499	315.94	-1.84
79/ 2/20	2443924.5	1.03713	-0.91876	-0.04469	17.02073	20.19787	0.01184	1.38627	26.41324	318.46	-1.85
79/ 2/24	2443928.5	1.07551	-0.87129	-0.04462	16.20674	20.88756	0.04625	1.38487	26.43767	320.99	-1.85
79/ 2/28	2443932.5	1.11198	-0.82228	-0.04448	15.36155	21.54189	0.08068	1.38370	26.45821	323.52	-1.84
79/ 3/ 4	2443936.5	1.14647	-0.77179	-0.04425	14.48695	22.15920	0.11504	1.38275	26.47480	326.05	-1.83
79/ 3/ 8	2443940.5	1.17890	-0.71992	-0.04395	13.58480	22.73791	0.14926	1.38203	26.48739	328.59	-1.82
79/ 3/12	2443944.5	1.20921	-0.66677	-0.04356	12.65709	23.27659	0.18325	1.38155	26.49595	331.13	-1.81
79/ 3/16	2443948.5	1.23736	-0.61241	-0.04310	11.70591	23.77390	0.21695	1.38129	26.50045	333.67	-1.79
79/ 3/20	2443952.5	1.26328	-0.55695	-0.04256	10.73341	24.22867	0.25026	1.38126	26.50088	336.21	-1.77
79/ 3/24	2443956.5	1.28694	-0.50050	-0.04194	9.74182	24.63983	0.28312	1.38147	26.49725	338.75	-1.74
79/ 3/28	2443960.5	1.30828	-0.44314	-0.04125	8.73343	25.00648	0.31545	1.38191	26.48956	341.29	-1.71
79/ 4/ 1	2443964.5	1.32728	-0.38500	-0.04049	7.71061	25.32787	0.34717	1.38258	26.47782	343.82	-1.68
79/ 4/ 5	2443968.5	1.34390	-0.32616	-0.03965	6.67572	25.60339	0.37822	1.38348	26.46209	346.36	-1.64
79/ 4/ 9	2443972.5	1.35811	-0.26673	-0.03874	5.63117	25.83260	0.40852	1.38460	26.44239	348.89	-1.60
79/ 4/13	2443976.5	1.36991	-0.20684	-0.03776	4.57939	26.01518	0.43802	1.38595	26.41879	351.41	-1.56
79/ 4/17	2443980.5	1.37927	-0.14657	-0.03672	3.52279	26.15101	0.46664	1.38752	26.39135	353.93	-1.52
79/ 4/21	2443984.5	1.38618	-0.08605	-0.03561	2.46379	26.24009	0.49434	1.38931	26.36014	356.45	-1.47
79/ 4/25	2443988.5	1.39065	-0.02537	-0.03443	1.40477	26.28259	0.52105	1.39131	26.32526	358.95	-1.42

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79/ 4/29	2443992.5	1.39267	0.03535	-0.03320	0.34808	26.27880	0.54673	1.39352	26.28679	1.45	-1.37
79/ 5/ 3	2443996.5	1.39226	0.09601	-0.03191	-0.70397	26.22918	0.57133	1.39593	26.24484	3.95	-1.31
79/ 5/ 7	2444000.5	1.38943	0.15651	-0.03056	-1.74913	26.13431	0.59480	1.39855	26.19953	6.43	-1.25
79/ 5/11	2444004.5	1.38419	0.21673	-0.02916	-2.78522	25.99489	0.61711	1.40136	26.15096	8.90	-1.19
79/ 5/15	2444008.5	1.37657	0.27658	-0.02771	-3.81012	25.81176	0.63823	1.40435	26.09926	11.36	-1.13
79/ 5/19	2444012.5	1.36659	0.33596	-0.02621	-4.82180	25.58587	0.65811	1.40753	26.04457	13.81	-1.07
79/ 5/23	2444016.5	1.35430	0.39476	-0.02467	-5.81831	25.31826	0.67675	1.41088	25.98701	16.25	-1.00
79/ 5/27	2444020.5	1.33972	0.45290	-0.02309	-6.79780	25.01007	0.69412	1.41440	25.92674	18.68	-0.94
79/ 5/31	2444024.5	1.32291	0.51029	-0.02147	-7.75852	24.66255	0.71019	1.41807	25.86388	21.09	-0.87
79/ 6/ 4	2444028.5	1.30389	0.56682	-0.01981	-8.69881	24.27699	0.72497	1.42191	25.79859	23.50	-0.80
79/ 6/ 8	2444032.5	1.28273	0.62243	-0.01812	-9.61712	23.85479	0.73843	1.42588	25.73102	25.88	-0.73
79/ 6/12	2444036.5	1.25948	0.67701	-0.01640	-10.51201	23.39739	0.75058	1.43000	25.66132	28.26	-0.66
79/ 6/16	2444040.5	1.23418	0.73051	-0.01465	-11.38215	22.90626	0.76141	1.43424	25.58965	30.62	-0.59
79/ 6/20	2444044.5	1.20691	0.78282	-0.01288	-12.22631	22.38296	0.77093	1.43861	25.51614	32.97	-0.51
79/ 6/24	2444048.5	1.17771	0.83390	-0.01109	-13.04336	21.82903	0.77915	1.44309	25.44097	35.30	-0.44
79/ 6/28	2444052.5	1.14666	0.88366	-0.00928	-13.83231	21.24608	0.78606	1.44768	25.36428	37.62	-0.37
79/ 7/ 2	2444056.5	1.11383	0.93204	-0.00746	-14.59223	20.63571	0.79169	1.45237	25.28621	39.92	-0.29
79/ 7/ 6	2444060.5	1.07927	0.97898	-0.00562	-15.32233	19.99954	0.79604	1.45714	25.20693	42.21	-0.22
79/ 7/10	2444064.5	1.04305	1.02443	-0.00378	-16.02189	19.33920	0.79914	1.46200	25.12657	44.48	-0.15
79/ 7/14	2444068.5	1.00526	1.06832	-0.00193	-16.69033	18.65631	0.80101	1.46692	25.04529	46.74	-0.08
79/ 7/18	2444072.5	0.96596	1.11061	-0.00008	-17.32711	17.95246	0.80166	1.47192	24.96322	48.98	-0.00
79/ 7/22	2444076.5	0.92523	1.15125	0.00177	-17.93182	17.22928	0.80112	1.47697	24.88051	51.21	0.07
79/ 7/26	2444080.5	0.88314	1.19020	0.00362	-18.50411	16.48832	0.79942	1.48207	24.79730	53.42	0.14
79/ 7/30	2444084.5	0.83976	1.22742	0.00546	-19.04374	15.73115	0.79657	1.48721	24.71371	55.62	0.21
79/ 8/ 3	2444088.5	0.79517	1.26287	0.00730	-19.55051	14.95929	0.79262	1.49238	24.62988	57.80	0.28
79/ 8/ 7	2444092.5	0.74945	1.29653	0.00912	-20.02434	14.17424	0.78758	1.49758	24.54595	59.97	0.35
79/ 8/11	2444096.5	0.70268	1.32836	0.01094	-20.46516	13.37747	0.78149	1.50280	24.46202	62.12	0.42
79/ 8/15	2444100.5	0.65492	1.35833	0.01273	-20.87302	12.57039	0.77438	1.50803	24.37822	64.26	0.48
79/ 8/19	2444104.5	0.60626	1.38643	0.01451	-21.24800	11.75441	0.76628	1.51326	24.29466	66.38	0.55
79/ 8/23	2444108.5	0.55678	1.41263	0.01627	-21.59023	10.93086	0.75722	1.51849	24.21147	68.49	0.61
79/ 8/27	2444112.5	0.50653	1.43693	0.01801	-21.89991	10.10106	0.74724	1.52370	24.12873	70.58	0.68
79/ 8/31	2444116.5	0.45562	1.45930	0.01973	-22.17727	9.26627	0.73636	1.52890	24.04656	72.66	0.74
79/ 9/ 4	2444120.5	0.40409	1.47974	0.02141	-22.42259	8.42772	0.72462	1.53407	23.96506	74.73	0.80
79/ 9/ 8	2444124.5	0.35204	1.49824	0.02307	-22.63620	7.58659	0.71206	1.53921	23.88432	76.78	0.86
79/ 9/12	2444128.5	0.29953	1.51479	0.02470	-22.81845	6.74402	0.69870	1.54432	23.80444	78.81	0.92
79/ 9/16	2444132.5	0.24663	1.52940	0.02630	-22.96972	5.90110	0.68457	1.54938	23.72550	80.84	0.97
79/ 9/20	2444136.5	0.19342	1.54206	0.02787	-23.09043	5.05889	0.66972	1.55439	23.64759	82.85	1.03
79/ 9/24	2444140.5	0.13997	1.55277	0.02940	-23.18102	4.21839	0.65417	1.55934	23.57079	84.85	1.08
79/ 9/28	2444144.5	0.08634	1.56155	0.03089	-23.24195	3.38058	0.63795	1.56424	23.49518	86.84	1.13
79/10/ 2	2444148.5	0.03261	1.56839	0.03234	-23.27370	2.54638	0.62110	1.56907	23.42082	88.81	1.18
79/10/ 6	2444152.5	-0.02117	1.57332	0.03376	-23.27677	1.71668	0.60364	1.57382	23.34779	90.77	1.23
79/10/10	2444156.5	-0.07492	1.57633	0.03513	-23.25167	0.89233	0.58561	1.57850	23.27616	92.72	1.28
79/10/14	2444160.5	-0.12858	1.57744	0.03646	-23.19893	0.07415	0.56704	1.58310	23.20598	94.66	1.32
79/10/18	2444164.5	-0.18208	1.57668	0.03775	-23.11909	-0.73710	0.54795	1.58761	23.13732	96.59	1.36
79/10/22	2444168.5	-0.23537	1.57405	0.03899	-23.01268	-1.54066	0.52838	1.59202	23.07024	98.50	1.40

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79/10/26	2444172.5	-0.28839	1.56957	0.04019	-22.88025	-2.33583	0.50835	1.59635	23.00479	100.41	1.44
79/10/30	2444176.5	-0.34107	1.56326	0.04134	-22.72236	-3.12193	0.48789	1.60057	22.94102	102.31	1.48
79/11/ 3	2444180.5	-0.39336	1.55515	0.04245	-22.53958	-3.89832	0.46703	1.60469	22.87898	104.19	1.52
79/11/ 7	2444184.5	-0.44519	1.54526	0.04350	-22.33245	-4.66439	0.44580	1.60870	22.81871	106.07	1.55
79/11/11	2444188.5	-0.49652	1.53361	0.04450	-22.10154	-5.41954	0.42421	1.61259	22.76026	107.94	1.58
79/11/15	2444192.5	-0.54729	1.52022	0.04546	-21.84742	-6.16322	0.40231	1.61638	22.70367	109.80	1.61
79/11/19	2444196.5	-0.59745	1.50514	0.04636	-21.57064	-6.89489	0.38010	1.62004	22.64898	111.65	1.64
79/11/23	2444200.5	-0.64694	1.48838	0.04722	-21.27176	-7.61405	0.35762	1.62358	22.59623	113.49	1.67
79/11/27	2444204.5	-0.69571	1.46997	0.04802	-20.95135	-8.32020	0.33489	1.62700	22.54544	115.33	1.69
79/12/ 1	2444208.5	-0.74372	1.44995	0.04876	-20.60995	-9.01288	0.31193	1.63029	22.49665	117.15	1.71
79/12/ 5	2444212.5	-0.79092	1.42834	0.04946	-20.24811	-9.69165	0.28877	1.63345	22.44989	118.97	1.74
79/12/ 9	2444216.5	-0.83726	1.40518	0.05010	-19.86639	-10.35607	0.26542	1.63647	22.40518	120.79	1.75
79/12/13	2444220.5	-0.88270	1.38050	0.05068	-19.46534	-11.00574	0.24192	1.63936	22.36256	122.60	1.77
79/12/17	2444224.5	-0.92718	1.35434	0.05121	-19.04548	-11.64028	0.21828	1.64211	22.32205	124.40	1.79
79/12/21	2444228.5	-0.97068	1.32673	0.05169	-18.60737	-12.25930	0.19452	1.64472	22.28368	126.19	1.80
79/12/25	2444232.5	-1.01314	1.29771	0.05211	-18.15152	-12.86244	0.17067	1.64719	22.24745	127.98	1.81
79/12/29	2444236.5	-1.05453	1.26731	0.05248	-17.67847	-13.44936	0.14673	1.64951	22.21340	129.76	1.82
80/ 1/ 2	2444240.5	-1.09481	1.23558	0.05279	-17.18874	-14.01973	0.12274	1.65168	22.18154	131.54	1.83
80/ 1/ 6	2444244.5	-1.13394	1.20255	0.05305	-16.68285	-14.57322	0.09872	1.65371	22.15188	133.32	1.84
80/ 1/10	2444248.5	-1.17188	1.16826	0.05325	-16.16131	-15.10953	0.07467	1.65559	22.12445	135.09	1.84
80/ 1/14	2444252.5	-1.20860	1.13275	0.05339	-15.62464	-15.62835	0.05063	1.65731	22.09926	136.86	1.85
80/ 1/18	2444256.5	-1.24406	1.09607	0.05348	-15.07335	-16.12939	0.02660	1.65889	22.07632	138.62	1.85
80/ 1/22	2444260.5	-1.27823	1.05824	0.05351	-14.50793	-16.61237	0.00262	1.66031	22.05563	140.38	1.85
80/ 1/26	2444264.5	-1.31108	1.01933	0.05349	-13.92889	-17.07702	-0.02132	1.66157	22.03722	142.14	1.84
80/ 1/30	2444268.5	-1.34258	0.97936	0.05342	-13.33673	-17.52307	-0.04517	1.66268	22.02109	143.89	1.84
80/ 2/ 3	2444272.5	-1.37269	0.93838	0.05328	-12.73194	-17.95025	-0.06894	1.66363	22.00724	145.64	1.84
80/ 2/ 7	2444276.5	-1.40139	0.89643	0.05310	-12.11502	-18.35832	-0.09260	1.66443	21.99569	147.39	1.83
80/ 2/11	2444280.5	-1.42866	0.85357	0.05286	-11.48647	-18.74703	-0.11614	1.66506	21.98644	149.14	1.82
80/ 2/15	2444284.5	-1.45446	0.80983	0.05256	-10.84677	-19.11613	-0.13953	1.66554	21.97950	150.89	1.81
80/ 2/19	2444288.5	-1.47877	0.76526	0.05221	-10.19642	-19.46538	-0.16276	1.66586	21.97486	152.64	1.80
80/ 2/23	2444292.5	-1.50156	0.71991	0.05181	-9.53590	-19.79455	-0.18582	1.66602	21.97253	154.39	1.78
80/ 2/27	2444296.5	-1.52282	0.67382	0.05135	-8.86572	-20.10340	-0.20868	1.66603	21.97251	156.13	1.77
80/ 3/ 2	2444300.5	-1.54252	0.62704	0.05085	-8.18636	-20.39171	-0.23133	1.66587	21.97480	157.88	1.75
80/ 3/ 6	2444304.5	-1.56064	0.57962	0.05029	-7.49833	-20.65926	-0.25376	1.66555	21.97940	159.63	1.73
80/ 3/10	2444308.5	-1.57716	0.53160	0.04967	-6.80211	-20.90581	-0.27594	1.66508	21.98631	161.37	1.71
80/ 3/14	2444312.5	-1.59206	0.48304	0.04901	-6.09822	-21.13116	-0.29786	1.66445	21.99552	163.12	1.69
80/ 3/18	2444316.5	-1.60533	0.43399	0.04830	-5.38716	-21.33508	-0.31950	1.66365	22.00703	164.87	1.66
80/ 3/22	2444320.5	-1.61694	0.38448	0.04753	-4.66944	-21.51737	-0.34085	1.66271	22.02083	166.62	1.64
80/ 3/26	2444324.5	-1.62690	0.33459	0.04672	-3.94557	-21.67781	-0.36188	1.66160	22.03692	168.38	1.61
80/ 3/30	2444328.5	-1.63517	0.28434	0.04586	-3.21608	-21.81619	-0.38259	1.66034	22.05529	170.14	1.58
80/ 4/ 3	2444332.5	-1.64175	0.23380	0.04496	-2.48149	-21.93232	-0.40295	1.65892	22.07593	171.89	1.55
80/ 4/ 7	2444336.5	-1.64663	0.18302	0.04400	-1.74233	-22.02598	-0.42295	1.65736	22.09883	173.66	1.52
80/ 4/11	2444340.5	-1.64980	0.13205	0.04300	-0.99915	-22.09697	-0.44256	1.65563	22.12398	175.42	1.49
80/ 4/15	2444344.5	-1.65124	0.08095	0.04196	-0.25251	-22.14511	-0.46178	1.65376	22.15136	177.19	1.45
80/ 4/19	2444348.5	-1.65096	0.02975	0.04087	0.49705	-22.17019	-0.48058	1.65174	22.18097	178.97	1.42

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80/ 4/23	2444352.5	-1.64895	-0.02147	0.03974	1.24895	-22.17203	-0.49894	1.64956	22.21279	180.75	1.38
80/ 4/27	2444356.5	-1.64519	-0.07267	0.03856	2.00260	-22.15045	-0.51686	1.64725	22.24679	182.53	1.34
80/ 5/ 1	2444360.5	-1.63969	-0.12379	0.03735	2.75741	-22.10525	-0.53430	1.64478	22.28297	184.32	1.30
80/ 5/ 5	2444364.5	-1.63245	-0.17479	0.03609	3.51279	-22.03627	-0.55126	1.64218	22.32130	186.11	1.26
80/ 5/ 9	2444368.5	-1.62346	-0.22559	0.03480	4.26810	-21.94333	-0.56770	1.63943	22.36177	187.91	1.22
80/ 5/13	2444372.5	-1.61273	-0.27615	0.03347	5.02271	-21.82627	-0.58362	1.63655	22.40434	189.72	1.17
80/ 5/17	2444376.5	-1.60026	-0.32642	0.03211	5.77599	-21.68494	-0.59900	1.63352	22.44900	191.53	1.13
80/ 5/21	2444380.5	-1.58604	-0.37633	0.03071	6.52726	-21.51919	-0.61381	1.63037	22.49572	193.35	1.08
80/ 5/25	2444384.5	-1.57010	-0.42583	0.02927	7.27584	-21.32887	-0.62803	1.62708	22.54447	195.17	1.03
80/ 5/29	2444388.5	-1.55243	-0.47486	0.02780	8.02104	-21.11386	-0.64165	1.62367	22.59521	197.01	0.98
80/ 6/ 2	2444392.5	-1.53304	-0.52336	0.02631	8.76214	-20.87403	-0.65465	1.62013	22.64793	198.85	0.93
80/ 6/ 6	2444396.5	-1.51195	-0.57128	0.02478	9.49841	-20.60927	-0.66700	1.61647	22.70257	200.70	0.88
80/ 6/10	2444400.5	-1.48916	-0.61856	0.02323	10.22910	-20.31951	-0.67869	1.61269	22.75912	202.56	0.83
80/ 6/14	2444404.5	-1.46469	-0.66515	0.02164	10.95344	-20.00464	-0.68969	1.60879	22.81752	204.42	0.77
80/ 6/18	2444408.5	-1.43856	-0.71097	0.02004	11.67063	-19.66462	-0.69999	1.60478	22.87774	206.30	0.72
80/ 6/22	2444412.5	-1.41078	-0.75598	0.01841	12.37987	-19.29940	-0.70955	1.60067	22.93973	208.19	0.66
80/ 6/26	2444416.5	-1.38137	-0.80012	0.01676	13.08032	-18.90894	-0.71838	1.59645	23.00346	210.08	0.60
80/ 6/30	2444420.5	-1.35035	-0.84333	0.01509	13.77114	-18.49326	-0.72643	1.59213	23.06886	211.99	0.54
80/ 7/ 4	2444424.5	-1.31775	-0.88555	0.01341	14.45144	-18.05235	-0.73370	1.58771	23.13589	213.90	0.48
80/ 7/ 8	2444428.5	-1.28359	-0.92672	0.01170	15.12033	-17.58627	-0.74015	1.58320	23.20450	215.83	0.42
80/ 7/12	2444432.5	-1.24789	-0.96678	0.00999	15.77690	-17.09508	-0.74577	1.57861	23.27463	217.77	0.36
80/ 7/16	2444436.5	-1.21070	-1.00568	0.00826	16.42021	-16.57888	-0.75055	1.57393	23.34622	219.72	0.30
80/ 7/20	2444440.5	-1.17204	-1.04336	0.00652	17.04929	-16.03781	-0.75445	1.56918	23.41920	221.68	0.24
80/ 7/24	2444444.5	-1.13194	-1.07977	0.00477	17.66318	-15.47202	-0.75745	1.56435	23.49351	223.65	0.17
80/ 7/28	2444448.5	-1.09044	-1.11483	0.00302	18.26087	-14.88171	-0.75955	1.55946	23.56908	225.63	0.11
80/ 8/ 1	2444452.5	-1.04758	-1.14851	0.00126	18.84134	-14.26712	-0.76071	1.55451	23.64583	227.63	0.05
80/ 8/ 5	2444456.5	-1.00340	-1.18073	-0.00049	19.40356	-13.62853	-0.76092	1.54950	23.72370	229.64	-0.02
80/ 8/ 9	2444460.5	-0.95794	-1.21146	-0.00225	19.94647	-12.96626	-0.76015	1.54444	23.80259	231.67	-0.08
80/ 8/13	2444464.5	-0.91126	-1.24062	-0.00401	20.46901	-12.28068	-0.75840	1.53933	23.88244	233.70	-0.15
80/ 8/17	2444468.5	-0.86339	-1.26818	-0.00575	20.97010	-11.57221	-0.75565	1.53419	23.96314	235.75	-0.21
80/ 8/21	2444472.5	-0.81439	-1.29407	-0.00750	21.44863	-10.84131	-0.75187	1.52902	24.04460	237.82	-0.28
80/ 8/25	2444476.5	-0.76431	-1.31825	-0.00923	21.90351	-10.08851	-0.74705	1.52382	24.12674	239.90	-0.35
80/ 8/29	2444480.5	-0.71320	-1.34067	-0.01095	22.33362	-9.31438	-0.74117	1.51861	24.20945	241.99	-0.41
80/ 9/ 2	2444484.5	-0.66114	-1.36127	-0.01265	22.73784	-8.51958	-0.73423	1.51338	24.29263	244.10	-0.48
80/ 9/ 6	2444488.5	-0.60817	-1.38002	-0.01434	23.11506	-7.70480	-0.72621	1.50815	24.37616	246.22	-0.54
80/ 9/10	2444492.5	-0.55436	-1.39686	-0.01601	23.46415	-6.87082	-0.71709	1.50292	24.45995	248.35	-0.61
80/ 9/14	2444496.5	-0.49978	-1.41175	-0.01765	23.78402	-6.01847	-0.70688	1.49771	24.54386	250.51	-0.68
80/ 9/18	2444500.5	-0.44449	-1.42465	-0.01927	24.07355	-5.14866	-0.69555	1.49251	24.62779	252.67	-0.74
80/ 9/22	2444504.5	-0.38857	-1.43552	-0.02086	24.33165	-4.26236	-0.68311	1.48733	24.71161	254.85	-0.80
80/ 9/26	2444508.5	-0.33210	-1.44433	-0.02243	24.55727	-3.36063	-0.66956	1.48219	24.79519	257.05	-0.87
80/ 9/30	2444512.5	-0.27514	-1.45104	-0.02396	24.74935	-2.44460	-0.65488	1.47709	24.87840	259.26	-0.93
80/10/ 4	2444516.5	-0.21777	-1.45562	-0.02545	24.90687	-1.51547	-0.63909	1.47204	24.96112	261.49	-0.99
80/10/ 8	2444520.5	-0.16008	-1.45803	-0.02691	25.02887	-0.57452	-0.62218	1.46704	25.04319	263.73	-1.05
80/10/12	2444524.5	-0.10216	-1.45826	-0.02832	25.11439	0.37689	-0.60416	1.46211	25.12449	265.99	-1.11
80/10/16	2444528.5	-0.04408	-1.45629	-0.02970	25.16256	1.33733	-0.58504	1.45726	25.20486	268.27	-1.17

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
80/10/20	2444532.5	0.01407	-1.45208	-0.03103	25.17252	2.30528	-0.56483	1.45248	25.28416	270.56	-1.22
80/10/24	2444536.5	0.07220	-1.44563	-0.03231	25.14350	3.27915	-0.54354	1.44779	25.36225	272.86	-1.28
80/10/28	2444540.5	0.13021	-1.43693	-0.03354	25.07479	4.25729	-0.52120	1.44320	25.43897	275.18	-1.33
80/11/ 1	2444544.5	0.18802	-1.42596	-0.03471	24.96576	5.23796	-0.49782	1.43872	25.51417	277.51	-1.38
80/11/ 5	2444548.5	0.24553	-1.41272	-0.03584	24.81585	6.21935	-0.47343	1.43435	25.58771	279.86	-1.43
80/11/ 9	2444552.5	0.30265	-1.39722	-0.03690	24.62460	7.19960	-0.44805	1.43010	25.65942	282.22	-1.48
80/11/13	2444556.5	0.35928	-1.37946	-0.03791	24.39164	8.17679	-0.42172	1.42598	25.72916	284.60	-1.52
80/11/17	2444560.5	0.41532	-1.35945	-0.03885	24.11670	9.14893	-0.39448	1.42200	25.79678	286.99	-1.57
80/11/21	2444564.5	0.47067	-1.33720	-0.03973	23.79962	10.11399	-0.36636	1.41817	25.86211	289.39	-1.61
80/11/25	2444568.5	0.52525	-1.31272	-0.04054	23.44035	11.06991	-0.33740	1.41449	25.92502	291.81	-1.64
80/11/29	2444572.5	0.57894	-1.28606	-0.04129	23.03898	12.01457	-0.30766	1.41096	25.98536	294.24	-1.68
80/12/ 3	2444576.5	0.63166	-1.25722	-0.04196	22.59569	12.94584	-0.27718	1.40761	26.04298	296.68	-1.71
80/12/ 7	2444580.5	0.68331	-1.22626	-0.04257	22.11083	13.86156	-0.24601	1.40443	26.09774	299.13	-1.74
80/12/11	2444584.5	0.73379	-1.19319	-0.04310	21.58485	14.75959	-0.21421	1.40143	26.14951	301.59	-1.76
80/12/15	2444588.5	0.78301	-1.15808	-0.04356	21.01835	15.63776	-0.18185	1.39862	26.19816	304.06	-1.78
80/12/19	2444592.5	0.83087	-1.12096	-0.04394	20.41207	16.49392	-0.14898	1.39600	26.24356	306.55	-1.80
80/12/23	2444596.5	0.87729	-1.08189	-0.04424	19.76689	17.32595	-0.11567	1.39358	26.28559	309.04	-1.82
80/12/27	2444600.5	0.92217	-1.04092	-0.04447	19.08383	18.13177	-0.08200	1.39137	26.32414	311.54	-1.83
80/12/31	2444604.5	0.96543	-0.99813	-0.04462	18.36404	18.90933	-0.04802	1.38936	26.35912	314.05	-1.84
81/ 1/ 4	2444608.5	1.00699	-0.95358	-0.04469	17.60882	19.65663	-0.01382	1.38757	26.39041	316.56	-1.85
81/ 1/ 8	2444612.5	1.04677	-0.90734	-0.04469	16.81959	20.37178	0.02052	1.38599	26.41795	319.08	-1.85
81/ 1/12	2444616.5	1.08468	-0.85948	-0.04460	15.99790	21.05292	0.05494	1.38464	26.44165	321.61	-1.85
81/ 1/16	2444620.5	1.12066	-0.81009	-0.04443	15.14543	21.69830	0.08936	1.38351	26.46145	324.14	-1.84
81/ 1/20	2444624.5	1.15464	-0.75926	-0.04419	14.26398	22.30628	0.12369	1.38261	26.47729	326.67	-1.83
81/ 1/24	2444628.5	1.18654	-0.70706	-0.04386	13.35546	22.87532	0.15786	1.38193	26.48912	329.21	-1.82
81/ 1/28	2444632.5	1.21632	-0.65360	-0.04346	12.42187	23.40400	0.19179	1.38149	26.49692	331.75	-1.80
81/ 2/ 1	2444636.5	1.24392	-0.59896	-0.04298	11.46530	23.89102	0.22539	1.38128	26.50066	334.29	-1.78
81/ 2/ 5	2444640.5	1.26928	-0.54324	-0.04242	10.48794	24.33523	0.25860	1.38130	26.50033	336.83	-1.76
81/ 2/ 9	2444644.5	1.29236	-0.48655	-0.04178	9.49203	24.73561	0.29134	1.38155	26.49592	339.37	-1.73
81/ 2/13	2444648.5	1.31312	-0.42899	-0.04107	8.47989	25.09129	0.32352	1.38203	26.48747	341.91	-1.70
81/ 2/17	2444652.5	1.33153	-0.37066	-0.04029	7.45386	25.40154	0.35508	1.38275	26.47498	344.44	-1.67
81/ 2/21	2444656.5	1.34756	-0.31166	-0.03943	6.41634	25.66580	0.38596	1.38369	26.45849	346.98	-1.63
81/ 2/25	2444660.5	1.36117	-0.25211	-0.03850	5.36974	25.88365	0.41607	1.38486	26.43805	349.51	-1.59
81/ 3/ 1	2444664.5	1.37236	-0.19211	-0.03751	4.31648	26.05483	0.44536	1.38625	26.41372	352.03	-1.55
81/ 3/ 5	2444668.5	1.38111	-0.13176	-0.03645	3.25898	26.17924	0.47376	1.38786	26.38557	354.55	-1.50
81/ 3/ 9	2444672.5	1.38742	-0.07119	-0.03532	2.19964	26.25692	0.50122	1.38969	26.35366	357.06	-1.46
81/ 3/13	2444676.5	1.39127	-0.01048	-0.03413	1.14085	26.28806	0.52769	1.39173	26.31809	359.57	-1.41
81/ 3/17	2444680.5	1.39269	0.05024	-0.03288	0.08494	26.27300	0.55311	1.39398	26.27896	2.07	-1.35
81/ 3/21	2444684.5	1.39167	0.11087	-0.03158	-0.96578	26.21223	0.57743	1.39644	26.23637	4.56	-1.30
81/ 3/25	2444688.5	1.38823	0.17131	-0.03022	-2.00908	26.10634	0.60062	1.39909	26.19042	7.03	-1.24
81/ 3/29	2444692.5	1.38240	0.23146	-0.02880	-3.04279	25.95609	0.62264	1.40193	26.14125	9.51	-1.18
81/ 4/ 2	2444696.5	1.37418	0.29121	-0.02734	-4.06482	25.76233	0.64346	1.40497	26.08897	11.96	-1.12
81/ 4/ 6	2444700.5	1.36363	0.35046	-0.02583	-5.07314	25.52603	0.66304	1.40818	26.03372	14.41	-1.05
81/ 4/10	2444704.5	1.35076	0.40911	-0.02428	-6.06584	25.24827	0.68137	1.41156	25.97564	16.85	-0.99
81/ 4/14	2444708.5	1.33561	0.46708	-0.02268	-7.04107	24.93020	0.69842	1.41511	25.91485	19.28	-0.92

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MARS

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81/ 4/18	2444712.5	1.31824	0.52427	-0.02105	-7.99712	24.57309	0.71417	1.41882	25.85152	21.69	-0.85
81/ 4/22	2444716.5	1.29868	0.58059	-0.01938	-8.93234	24.17827	0.72863	1.42268	25.78577	24.09	-0.78
81/ 4/26	2444720.5	1.27699	0.63595	-0.01769	-9.84521	23.74712	0.74177	1.42669	25.71778	26.47	-0.71
81/ 4/30	2444724.5	1.25321	0.69028	-0.01596	-10.73432	23.28110	0.75359	1.43083	25.64767	28.85	-0.64
81/ 5/ 4	2444728.5	1.22741	0.74350	-0.01421	-11.59835	22.78172	0.76410	1.43510	25.57561	31.21	-0.57
81/ 5/ 8	2444732.5	1.19964	0.79552	-0.01243	-12.43610	22.25051	0.77329	1.43949	25.50176	33.55	-0.49
81/ 5/12	2444736.5	1.16997	0.84628	-0.01063	-13.24647	21.68905	0.78118	1.44400	25.42625	35.88	-0.42
81/ 5/16	2444740.5	1.13846	0.89571	-0.00882	-14.02848	21.09895	0.78777	1.44861	25.34925	38.19	-0.35
81/ 5/20	2444744.5	1.10518	0.94374	-0.00699	-14.78124	20.48181	0.79307	1.45331	25.27090	40.49	-0.28
81/ 5/24	2444748.5	1.07019	0.99032	-0.00516	-15.50397	19.83926	0.79711	1.45810	25.19136	42.78	-0.20
81/ 5/28	2444752.5	1.03357	1.03539	-0.00331	-16.19600	19.17291	0.79990	1.46298	25.11077	45.05	-0.13
81/ 6/ 1	2444756.5	0.99538	1.07889	-0.00146	-16.85673	18.48440	0.80145	1.46792	25.02928	47.31	-0.06
81/ 6/ 5	2444760.5	0.95571	1.12078	0.00039	-17.48568	17.77533	0.80180	1.47293	24.94703	49.55	0.02
81/ 6/ 9	2444764.5	0.91462	1.16100	0.00224	-18.08244	17.04730	0.80096	1.47799	24.86416	51.77	0.09
81/ 6/13	2444768.5	0.87218	1.19953	0.00409	-18.64669	16.30188	0.79896	1.48310	24.78081	53.98	0.16
81/ 6/17	2444772.5	0.82849	1.23631	0.00593	-19.17820	15.54062	0.79583	1.48825	24.69712	56.17	0.23
81/ 6/21	2444776.5	0.78360	1.27132	0.00777	-19.67680	14.76504	0.79159	1.49343	24.61320	58.35	0.30
81/ 6/25	2444780.5	0.73760	1.30452	0.00959	-20.14241	13.97664	0.78628	1.49864	24.52919	60.52	0.37
81/ 6/29	2444784.5	0.69056	1.33589	0.01140	-20.57500	13.17686	0.77992	1.50386	24.44522	62.66	0.43
81/ 7/ 3	2444788.5	0.64256	1.36539	0.01319	-20.97461	12.36714	0.77255	1.50909	24.36139	64.80	0.50
81/ 7/ 7	2444792.5	0.59368	1.39302	0.01497	-21.34135	11.54885	0.76420	1.51433	24.27783	66.92	0.57
81/ 7/11	2444796.5	0.54398	1.41875	0.01672	-21.67536	10.72333	0.75490	1.51955	24.19464	69.02	0.63
81/ 7/15	2444800.5	0.49355	1.44256	0.01845	-21.97685	9.89188	0.74467	1.52477	24.11194	71.11	0.69
81/ 7/19	2444804.5	0.44246	1.46445	0.02016	-22.24607	9.05575	0.73357	1.52997	24.02983	73.19	0.76
81/ 7/23	2444808.5	0.39079	1.48440	0.02184	-22.48332	8.21618	0.72161	1.53514	23.94840	75.25	0.82
81/ 7/27	2444812.5	0.33861	1.50241	0.02349	-22.68891	7.37431	0.70883	1.54027	23.86775	77.30	0.87
81/ 7/31	2444816.5	0.28599	1.51847	0.02512	-22.86321	6.53129	0.69526	1.54537	23.78797	79.33	0.93
81/ 8/ 4	2444820.5	0.23300	1.53259	0.02671	-23.00662	5.68820	0.68094	1.55043	23.70915	81.36	0.99
81/ 8/ 8	2444824.5	0.17971	1.54475	0.02826	-23.11955	4.84608	0.66590	1.55543	23.63137	83.36	1.04
81/ 8/12	2444828.5	0.12620	1.55498	0.02978	-23.20247	4.00594	0.65017	1.56038	23.55472	85.36	1.09
81/ 8/16	2444832.5	0.07253	1.56326	0.03127	-23.25582	3.16873	0.63378	1.56526	23.47926	87.34	1.14
81/ 8/20	2444836.5	0.01877	1.56962	0.03271	-23.28011	2.33537	0.61676	1.57007	23.40508	89.31	1.19
81/ 8/24	2444840.5	-0.03501	1.57406	0.03411	-23.27583	1.50674	0.59914	1.57482	23.33224	91.27	1.24
81/ 8/28	2444844.5	-0.08875	1.57659	0.03548	-23.24350	0.68369	0.58096	1.57948	23.26081	93.22	1.29
81/ 9/ 1	2444848.5	-0.14238	1.57722	0.03680	-23.18365	-0.13299	0.56225	1.58406	23.19085	95.16	1.33
81/ 9/ 5	2444852.5	-0.19585	1.57598	0.03808	-23.09682	-0.94252	0.54302	1.58856	23.12242	97.08	1.37
81/ 9/ 9	2444856.5	-0.24908	1.57287	0.03931	-22.98356	-1.74417	0.52332	1.59296	23.05558	99.00	1.41
81/ 9/13	2444860.5	-0.30202	1.56793	0.04049	-22.84441	-2.53725	0.50317	1.59726	22.99038	100.90	1.45
81/ 9/17	2444864.5	-0.35461	1.56116	0.04163	-22.67993	-3.32108	0.48260	1.60147	22.92688	102.80	1.49
81/ 9/21	2444868.5	-0.40679	1.55259	0.04272	-22.49069	-4.09503	0.46163	1.60556	22.86512	104.68	1.52
81/ 9/25	2444872.5	-0.45850	1.54225	0.04376	-22.27725	-4.85848	0.44030	1.60955	22.80514	106.56	1.56
81/ 9/29	2444876.5	-0.50970	1.53015	0.04476	-22.04016	-5.61087	0.41862	1.61343	22.74700	108.42	1.59
81/10/ 3	2444880.5	-0.56032	1.51633	0.04570	-21.78000	-6.35163	0.39663	1.61719	22.69072	110.28	1.62
81/10/ 7	2444884.5	-0.61031	1.50081	0.04659	-21.49732	-7.08025	0.37434	1.62083	22.63636	112.13	1.65
81/10/11	2444888.5	-0.65963	1.48363	0.04743	-21.19269	-7.79620	0.35179	1.62435	22.58394	113.97	1.67

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81/10/15	2444892.5	-0.70821	1.32468	0.62705	-20.86665	-7.92822	-3.07978	1.62774	22.53351	118.13	22.66
81/10/19	2444896.5	-0.75602	1.30564	0.61959	-20.51978	-8.55139	-3.37512	1.63100	22.48508	120.07	22.33
81/10/23	2444900.5	-0.80301	1.28518	0.61146	-20.15261	-9.16160	-3.66507	1.63413	22.43870	122.00	21.97
81/10/27	2444904.5	-0.84912	1.26332	0.60266	-19.76570	-9.75848	-3.94943	1.63713	22.39439	123.91	21.60
81/10/31	2444908.5	-0.89432	1.24010	0.59322	-19.35959	-10.34166	-4.22801	1.63999	22.35218	125.80	21.21
81/11/ 4	2444912.5	-0.93855	1.21555	0.58313	-18.93482	-10.91081	-4.50066	1.64271	22.31208	127.67	20.79
81/11/ 8	2444916.5	-0.98179	1.18970	0.57243	-18.49192	-11.46559	-4.76719	1.64529	22.27413	129.53	20.36
81/11/12	2444920.5	-1.02398	1.16259	0.56111	-18.03143	-12.00568	-5.02745	1.64772	22.23835	131.37	19.91
81/11/16	2444924.5	-1.06509	1.13424	0.54920	-17.55388	-12.53077	-5.28128	1.65001	22.20475	133.20	19.44
81/11/20	2444928.5	-1.10507	1.10470	0.53672	-17.05978	-13.04057	-5.52854	1.65215	22.17335	135.01	18.96
81/11/24	2444932.5	-1.14390	1.07400	0.52366	-16.54966	-13.53480	-5.76908	1.65415	22.14417	136.80	18.46
81/11/28	2444936.5	-1.18152	1.04218	0.51007	-16.02402	-14.01318	-6.00276	1.65599	22.11723	138.59	17.94
81/12/ 2	2444940.5	-1.21792	1.00927	0.49594	-15.48339	-14.47545	-6.22945	1.65768	22.09253	140.35	17.41
81/12/ 6	2444944.5	-1.25305	0.97531	0.48129	-14.92827	-14.92134	-6.44901	1.65922	22.07010	142.10	16.86
81/12/10	2444948.5	-1.28688	0.94034	0.46614	-14.35915	-15.35062	-6.66132	1.66060	22.04994	143.84	16.30
81/12/14	2444952.5	-1.31939	0.90440	0.45052	-13.77655	-15.76304	-6.86625	1.66183	22.03207	145.57	15.73
81/12/18	2444956.5	-1.35053	0.86752	0.43443	-13.18096	-16.15835	-7.06368	1.66290	22.01648	147.28	15.14
81/12/22	2444960.5	-1.38028	0.82975	0.41789	-12.57288	-16.53634	-7.25349	1.66382	22.00320	148.99	14.55
81/12/26	2444964.5	-1.40861	0.79113	0.40092	-11.95279	-16.89678	-7.43556	1.66457	21.99222	150.68	13.94
81/12/30	2444968.5	-1.43549	0.75170	0.38354	-11.32120	-17.23944	-7.60979	1.66517	21.98355	152.36	13.32
82/ 1/ 3	2444972.5	-1.46091	0.71149	0.36576	-10.67860	-17.56411	-7.77605	1.66561	21.97720	154.03	12.69
82/ 1/ 7	2444976.5	-1.48483	0.67056	0.34762	-10.02547	-17.87058	-7.93424	1.66589	21.97317	155.70	12.04
82/ 1/11	2444980.5	-1.50722	0.62894	0.32911	-9.36232	-18.15865	-8.08425	1.66601	21.97145	157.35	11.39
82/ 1/15	2444984.5	-1.52807	0.58668	0.31027	-8.68962	-18.42811	-8.22597	1.66597	21.97205	159.00	10.73
82/ 1/19	2444988.5	-1.54736	0.54381	0.29111	-8.00789	-18.67875	-8.35930	1.66578	21.97498	160.64	10.06
82/ 1/23	2444992.5	-1.56507	0.50039	0.27165	-7.31761	-18.91038	-8.48413	1.66542	21.98022	162.27	9.39
82/ 1/27	2444996.5	-1.58117	0.45645	0.25192	-6.61928	-19.12280	-8.60036	1.66490	21.98778	163.90	8.70
82/ 1/31	2445000.5	-1.59565	0.41205	0.23192	-5.91340	-19.31582	-8.70789	1.66423	21.99765	165.52	8.01
82/ 2/ 4	2445004.5	-1.60848	0.36722	0.21169	-5.20049	-19.48925	-8.80661	1.66340	22.00982	167.14	7.31
82/ 2/ 8	2445008.5	-1.61967	0.32202	0.19124	-4.48104	-19.64290	-8.89643	1.66241	22.02430	168.76	6.61
82/ 2/12	2445012.5	-1.62918	0.27648	0.17059	-3.75559	-19.77658	-8.97724	1.66126	22.04106	170.37	5.89
82/ 2/16	2445016.5	-1.63702	0.23066	0.14977	-3.02465	-19.89011	-9.04895	1.65996	22.06011	171.98	5.18
82/ 2/20	2445020.5	-1.64315	0.18460	0.12879	-2.28875	-19.98330	-9.11146	1.65850	22.08143	173.59	4.45
82/ 2/24	2445024.5	-1.64759	0.13834	0.10768	-1.54843	-20.05599	-9.16468	1.65689	22.10501	175.20	3.73
82/ 2/28	2445028.5	-1.65031	0.09195	0.08645	-0.80422	-20.10799	-9.20850	1.65512	22.13085	176.81	2.99
82/ 3/ 4	2445032.5	-1.65130	0.04545	0.06514	-0.05670	-20.13913	-9.24284	1.65321	22.15892	178.42	2.26
82/ 3/ 8	2445036.5	-1.65057	-0.00109	0.04376	0.69359	-20.14924	-9.26760	1.65115	22.18922	180.04	1.52
82/ 3/12	2445040.5	-1.64809	-0.04763	0.02233	1.44607	-20.13816	-9.28268	1.64893	22.22172	181.66	0.78
82/ 3/16	2445044.5	-1.64388	-0.09412	0.00087	2.20014	-20.10572	-9.28801	1.64658	22.25641	183.28	0.03
82/ 3/20	2445048.5	-1.63793	-0.14051	-0.02058	2.95523	-20.05177	-9.28349	1.64407	22.29327	184.90	-0.72
82/ 3/24	2445052.5	-1.63023	-0.18675	-0.04201	3.71071	-19.97614	-9.26903	1.64143	22.33228	186.53	-1.47
82/ 3/28	2445056.5	-1.62078	-0.23279	-0.06340	4.46597	-19.87870	-9.24455	1.63864	22.37341	188.17	-2.22
82/ 4/ 1	2445060.5	-1.60959	-0.27858	-0.08472	5.22036	-19.75931	-9.20997	1.63572	22.41665	189.82	-2.97
82/ 4/ 5	2445064.5	-1.59666	-0.32406	-0.10594	5.97323	-19.61782	-9.16521	1.63266	22.46196	191.47	-3.72
82/ 4/ 9	2445068.5	-1.58200	-0.36920	-0.12705	6.72392	-19.45412	-9.11020	1.62947	22.50932	193.14	-4.47

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82/ 4/13	2445072.5	-1.56560	-0.41393	-0.14803	7.47174	-19.26807	-9.04485	1.62615	22.55870	194.81	-5.22
82/ 4/17	2445076.5	-1.54748	-0.45821	-0.16884	8.21599	-19.05959	-8.96910	1.62270	22.61007	196.49	-5.97
82/ 4/21	2445080.5	-1.52764	-0.50198	-0.18946	8.95595	-18.82856	-8.88289	1.61913	22.66339	198.19	-6.72
82/ 4/25	2445084.5	-1.50610	-0.54518	-0.20987	9.69088	-18.57489	-8.78616	1.61543	22.71863	199.90	-7.46
82/ 4/29	2445088.5	-1.48287	-0.58778	-0.23005	10.42003	-18.29852	-8.67884	1.61162	22.77576	201.62	-8.21
82/ 5/ 3	2445092.5	-1.45796	-0.62971	-0.24996	11.14262	-17.99937	-8.56090	1.60769	22.83472	203.36	-8.94
82/ 5/ 7	2445096.5	-1.43139	-0.67093	-0.26959	11.85786	-17.67741	-8.43229	1.60366	22.89548	205.11	-9.68
82/ 5/11	2445100.5	-1.40318	-0.71137	-0.28891	12.56492	-17.33261	-8.29297	1.59951	22.95800	206.88	-10.41
82/ 5/15	2445104.5	-1.37335	-0.75099	-0.30790	13.26296	-16.96494	-8.14292	1.59527	23.02222	208.67	-11.13
82/ 5/19	2445108.5	-1.34191	-0.78974	-0.32653	13.95114	-16.57444	-7.98212	1.59092	23.08810	210.48	-11.84
82/ 5/23	2445112.5	-1.30890	-0.82755	-0.34477	14.62857	-16.16111	-7.81055	1.58648	23.15558	212.30	-12.55
82/ 5/27	2445116.5	-1.27433	-0.86439	-0.36261	15.29434	-15.72502	-7.62822	1.58195	23.22462	214.15	-13.25
82/ 5/31	2445120.5	-1.23824	-0.90019	-0.38001	15.94754	-15.26625	-7.43515	1.57734	23.29514	216.02	-13.94
82/ 6/ 4	2445124.5	-1.20066	-0.93491	-0.39695	16.58722	-14.78489	-7.23134	1.57264	23.36710	217.91	-14.62
82/ 6/ 8	2445128.5	-1.16161	-0.96849	-0.41341	17.21242	-14.28109	-7.01685	1.56787	23.44042	219.82	-15.29
82/ 6/12	2445132.5	-1.12114	-1.00087	-0.42936	17.82216	-13.75502	-6.79171	1.56303	23.51504	221.76	-15.94
82/ 6/16	2445136.5	-1.07928	-1.03202	-0.44478	18.41542	-13.20687	-6.55600	1.55812	23.59089	223.72	-16.59
82/ 6/20	2445140.5	-1.03607	-1.06188	-0.45965	18.99119	-12.63687	-6.30980	1.55316	23.66789	225.70	-17.21
82/ 6/24	2445144.5	-0.99155	-1.09039	-0.47393	19.54842	-12.04531	-6.05319	1.54814	23.74597	227.72	-17.83
82/ 6/28	2445148.5	-0.94576	-1.11752	-0.48761	20.08606	-11.43249	-5.78631	1.54307	23.82505	229.76	-18.42
82/ 7/ 2	2445152.5	-0.89876	-1.14320	-0.50066	20.60304	-10.79878	-5.50928	1.53796	23.90504	231.83	-19.00
82/ 7/ 6	2445156.5	-0.85059	-1.16739	-0.51305	21.09826	-10.14457	-5.22226	1.53282	23.98585	233.92	-19.56
82/ 7/10	2445160.5	-0.80130	-1.19005	-0.52478	21.57064	-9.47032	-4.92543	1.52764	24.06739	236.05	-20.09
82/ 7/14	2445164.5	-0.75094	-1.21113	-0.53580	22.01906	-8.77654	-4.61898	1.52245	24.14956	238.20	-20.61
82/ 7/18	2445168.5	-0.69958	-1.23059	-0.54611	22.44241	-8.06376	-4.30315	1.51724	24.23227	240.38	-21.10
82/ 7/22	2445172.5	-0.64727	-1.24838	-0.55568	22.83957	-7.33261	-3.97819	1.51201	24.31541	242.59	-21.56
82/ 7/26	2445176.5	-0.59407	-1.26446	-0.56449	23.20944	-6.58375	-3.64436	1.50679	24.39888	244.83	-22.00
82/ 7/30	2445180.5	-0.54006	-1.27878	-0.57251	23.55089	-5.81790	-3.30197	1.50157	24.48255	247.10	-22.41
82/ 8/ 3	2445184.5	-0.48528	-1.29132	-0.57974	23.86281	-5.03586	-2.95136	1.49637	24.56632	249.40	-22.79
82/ 8/ 7	2445188.5	-0.42983	-1.30204	-0.58614	24.14410	-4.23848	-2.59288	1.49118	24.65006	251.73	-23.15
82/ 8/11	2445192.5	-0.37375	-1.31090	-0.59171	24.39369	-3.42667	-2.22693	1.48602	24.73365	254.09	-23.46
82/ 8/15	2445196.5	-0.31714	-1.31786	-0.59643	24.61051	-2.60143	-1.85394	1.48090	24.81697	256.47	-23.75
82/ 8/19	2445200.5	-0.26007	-1.32291	-0.60027	24.79353	-1.76380	-1.47435	1.47582	24.89988	258.88	-24.00
82/ 8/23	2445204.5	-0.20262	-1.32600	-0.60323	24.94173	-0.91490	-1.08867	1.47079	24.98224	261.31	-24.21
82/ 8/27	2445208.5	-0.14486	-1.32713	-0.60530	25.05416	-0.05594	-0.69740	1.46582	25.06393	263.77	-24.39
82/ 8/31	2445212.5	-0.08689	-1.32625	-0.60645	25.12988	0.81183	-0.30110	1.46092	25.14479	266.25	-24.53
82/ 9/ 4	2445216.5	-0.02878	-1.32337	-0.60668	25.16802	1.68707	0.09963	1.45609	25.22470	268.75	-24.62
82/ 9/ 8	2445220.5	0.02937	-1.31845	-0.60599	25.16776	2.56839	0.50419	1.45135	25.30349	271.28	-24.68
82/ 9/12	2445224.5	0.08747	-1.31150	-0.60435	25.12833	3.45431	0.91190	1.44669	25.38104	273.82	-24.69
82/ 9/16	2445228.5	0.14544	-1.30249	-0.60177	25.04906	4.34330	1.32209	1.44214	25.45717	276.37	-24.66
82/ 9/20	2445232.5	0.20318	-1.29143	-0.59824	24.92932	5.23376	1.73405	1.43770	25.53175	278.94	-24.59
82/ 9/24	2445236.5	0.26059	-1.27831	-0.59376	24.76859	6.12404	2.14702	1.43337	25.60462	281.52	-24.47
82/ 9/28	2445240.5	0.31759	-1.26314	-0.58832	24.56642	7.01242	2.56022	1.42916	25.67563	284.11	-24.31
82/10/ 2	2445244.5	0.37407	-1.24591	-0.58193	24.32249	7.89713	2.97287	1.42509	25.74463	286.71	-24.10
82/10/ 6	2445248.5	0.42993	-1.22665	-0.57459	24.03653	8.77636	3.38412	1.42115	25.81147	289.32	-23.85

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82/10/10	2445252.5	0.48509	-1.20537	-0.56630	23.70844	9.64825	3.79313	1.41736	25.87599	291.92	-23.55
82/10/14	2445256.5	0.53944	-1.18208	-0.55706	23.33820	10.51092	4.19904	1.41373	25.93806	294.53	-23.21
82/10/18	2445260.5	0.59289	-1.15681	-0.54690	22.92591	11.36243	4.60096	1.41026	25.99752	297.14	-22.82
82/10/22	2445264.5	0.64534	-1.12959	-0.53581	22.47181	12.20085	4.99799	1.40696	26.05423	299.74	-22.39
82/10/26	2445268.5	0.69668	-1.10045	-0.52381	21.97627	13.02424	5.38922	1.40383	26.10806	302.34	-21.91
82/10/30	2445272.5	0.74684	-1.06943	-0.51092	21.43979	13.83062	5.77375	1.40089	26.15888	304.93	-21.39
82/11/ 3	2445276.5	0.79571	-1.03657	-0.49714	20.86299	14.61806	6.15067	1.39813	26.20654	307.51	-20.83
82/11/ 7	2445280.5	0.84321	-1.00191	-0.48250	20.24666	15.38461	6.51906	1.39557	26.25094	310.08	-20.23
82/11/11	2445284.5	0.88923	-0.96550	-0.46703	19.59171	16.12837	6.87802	1.39321	26.29195	312.65	-19.59
82/11/15	2445288.5	0.93370	-0.92741	-0.45073	18.89919	16.84745	7.22666	1.39105	26.32947	315.19	-18.91
82/11/19	2445292.5	0.97652	-0.88768	-0.43365	18.17029	17.54004	7.56411	1.38911	26.36339	317.73	-18.19
82/11/23	2445296.5	1.01762	-0.84639	-0.41579	17.40635	18.20434	7.88952	1.38738	26.39362	320.25	-17.44
82/11/27	2445300.5	1.05692	-0.80359	-0.39720	16.60881	18.83865	8.20207	1.38586	26.42009	322.75	-16.66
82/12/ 1	2445304.5	1.09434	-0.75937	-0.37791	15.77926	19.44135	8.50096	1.38457	26.44272	325.24	-15.84
82/12/ 5	2445308.5	1.12980	-0.71379	-0.35794	14.91941	20.01087	8.78544	1.38350	26.46143	327.72	-14.99
82/12/ 9	2445312.5	1.16325	-0.66694	-0.33733	14.03108	20.54577	9.05478	1.38266	26.47620	330.17	-14.12
82/12/13	2445316.5	1.19461	-0.61889	-0.31611	13.11621	21.04469	9.30833	1.38205	26.48696	332.61	-13.22
82/12/17	2445320.5	1.22383	-0.56973	-0.29433	12.17681	21.50640	9.54545	1.38166	26.49369	335.04	-12.30
82/12/21	2445324.5	1.25085	-0.51955	-0.27202	11.21501	21.92977	9.76557	1.38151	26.49637	337.44	-11.36
82/12/25	2445328.5	1.27563	-0.46844	-0.24923	10.23300	22.31380	9.96818	1.38159	26.49499	339.84	-10.39
82/12/29	2445332.5	1.29812	-0.41649	-0.22598	9.23304	22.65763	10.15281	1.38190	26.48956	342.21	-9.41
83/ 1/ 2	2445336.5	1.31828	-0.36379	-0.20233	8.21745	22.96052	10.31907	1.38244	26.48009	344.57	-8.42
83/ 1/ 6	2445340.5	1.33608	-0.31043	-0.17832	7.18860	23.22187	10.46662	1.38321	26.46661	346.92	-7.41
83/ 1/10	2445344.5	1.35149	-0.25653	-0.15398	6.14887	23.44123	10.59519	1.38421	26.44915	349.25	-6.39
83/ 1/14	2445348.5	1.36448	-0.20216	-0.12938	5.10067	23.61827	10.70456	1.38543	26.42777	351.57	-5.36
83/ 1/18	2445352.5	1.37505	-0.14743	-0.10454	4.04644	23.75283	10.79459	1.38688	26.40253	353.88	-4.32
83/ 1/22	2445356.5	1.38317	-0.09245	-0.07952	2.98857	23.84485	10.86519	1.38854	26.37349	356.18	-3.28
83/ 1/26	2445360.5	1.38886	-0.03729	-0.05435	1.92948	23.89445	10.91635	1.39042	26.34073	358.46	-2.24
83/ 1/30	2445364.5	1.39209	0.01792	-0.02910	0.87152	23.90185	10.94811	1.39251	26.30436	0.74	-1.20
83/ 2/ 3	2445368.5	1.39288	0.07311	-0.00379	-0.18298	23.86742	10.96058	1.39481	26.26445	3.00	-0.16
83/ 2/ 7	2445372.5	1.39125	0.12817	0.02153	-1.23173	23.79163	10.95391	1.39731	26.22112	5.26	0.88
83/ 2/11	2445376.5	1.38720	0.18300	0.04681	-2.27252	23.67511	10.92832	1.40000	26.17448	7.52	1.92
83/ 2/15	2445380.5	1.38076	0.23752	0.07201	-3.30320	23.51856	10.88410	1.40289	26.12465	9.76	2.94
83/ 2/19	2445384.5	1.37195	0.29164	0.09708	-4.32168	23.32281	10.82155	1.40596	26.07176	12.00	3.96
83/ 2/23	2445388.5	1.36080	0.34525	0.12200	-5.32599	23.08879	10.74105	1.40921	26.01593	14.24	4.97
83/ 2/27	2445392.5	1.34735	0.39829	0.14670	-6.31422	22.81751	10.64302	1.41263	25.95731	16.47	5.96
83/ 3/ 3	2445396.5	1.33164	0.45065	0.17116	-7.28456	22.51006	10.52791	1.41621	25.89603	18.70	6.94
83/ 3/ 7	2445400.5	1.31371	0.50226	0.19533	-8.23532	22.16762	10.39622	1.41995	25.83225	20.92	7.91
83/ 3/11	2445404.5	1.29361	0.55305	0.21918	-9.16487	21.79142	10.24846	1.42384	25.76610	23.15	8.86
83/ 3/15	2445408.5	1.27138	0.60292	0.24267	-10.07174	21.38277	10.08519	1.42787	25.69774	25.37	9.78
83/ 3/19	2445412.5	1.24709	0.65182	0.26576	-10.95452	20.94299	9.90699	1.43204	25.62731	27.59	10.70
83/ 3/23	2445416.5	1.22079	0.69966	0.28843	-11.81193	20.47349	9.71446	1.43633	25.55497	29.82	11.58
83/ 3/27	2445420.5	1.19254	0.74639	0.31064	-12.64280	19.97568	9.50823	1.44074	25.48087	32.04	12.45
83/ 3/31	2445424.5	1.16240	0.79194	0.33235	-13.44606	19.45100	9.28893	1.44526	25.40516	34.27	13.29
83/ 4/ 4	2445428.5	1.13043	0.83624	0.35355	-14.22075	18.90092	9.05720	1.44989	25.32800	36.49	14.11

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83/ 4/ 8	2445432.5	1.09671	0.87925	0.37419	-14.96600	18.32692	8.81370	1.45460	25.24952	38.72	14.91
83/ 4/12	2445436.5	1.06131	0.92090	0.39426	-15.68107	17.73047	8.55909	1.45941	25.16989	40.95	15.67
83/ 4/16	2445440.5	1.02428	0.96115	0.41373	-16.36528	17.11307	8.29403	1.46429	25.08925	43.18	16.41
83/ 4/20	2445444.5	0.98572	0.99996	0.43257	-17.01809	16.47618	8.01918	1.46924	25.00774	45.41	17.12
83/ 4/24	2445448.5	0.94568	1.03726	0.45077	-17.63901	15.82127	7.73521	1.47425	24.92551	47.64	17.80
83/ 4/28	2445452.5	0.90424	1.07304	0.46831	-18.22768	15.14979	7.44277	1.47932	24.84268	49.88	18.46
83/ 5/ 2	2445456.5	0.86149	1.10725	0.48516	-18.78378	14.46316	7.14250	1.48443	24.75941	52.12	19.08
83/ 5/ 6	2445460.5	0.81748	1.13986	0.50130	-19.30710	13.76279	6.83504	1.48958	24.67583	54.35	19.67
83/ 5/10	2445464.5	0.77231	1.17083	0.51673	-19.79750	13.05006	6.52103	1.49476	24.59205	56.59	20.22
83/ 5/14	2445468.5	0.72604	1.20014	0.53143	-20.25489	12.32632	6.20108	1.49996	24.50821	58.83	20.75
83/ 5/18	2445472.5	0.67875	1.22777	0.54538	-20.67928	11.59287	5.87579	1.50518	24.42442	61.06	21.24
83/ 5/22	2445476.5	0.63052	1.25370	0.55857	-21.07072	10.85101	5.54575	1.51040	24.34081	63.30	21.70
83/ 5/26	2445480.5	0.58142	1.27790	0.57100	-21.42932	10.10197	5.21154	1.51563	24.25749	65.54	22.13
83/ 5/30	2445484.5	0.53153	1.30037	0.58265	-21.75525	9.34697	4.87372	1.52084	24.17457	67.77	22.53
83/ 6/ 3	2445488.5	0.48093	1.32109	0.59351	-22.04871	8.58718	4.53282	1.52605	24.09215	70.00	22.89
83/ 6/ 7	2445492.5	0.42968	1.34004	0.60359	-22.30998	7.82372	4.18938	1.53123	24.01034	72.22	23.22
83/ 6/11	2445496.5	0.37787	1.35723	0.61287	-22.53934	7.05769	3.84390	1.53638	23.92924	74.44	23.51
83/ 6/15	2445500.5	0.32557	1.37265	0.62135	-22.73714	6.29014	3.49688	1.54151	23.84893	76.66	23.77
83/ 6/19	2445504.5	0.27284	1.38630	0.62902	-22.90374	5.52208	3.14879	1.54659	23.76951	78.87	24.00
83/ 6/23	2445508.5	0.21977	1.39817	0.63590	-23.03955	4.75448	2.80009	1.55162	23.69106	81.07	24.19
83/ 6/27	2445512.5	0.16641	1.40826	0.64196	-23.14500	3.98829	2.45122	1.55660	23.61368	83.26	24.36
83/ 7/ 1	2445516.5	0.11285	1.41659	0.64722	-23.22053	3.22440	2.10260	1.56153	23.53743	85.45	24.49
83/ 7/ 5	2445520.5	0.05915	1.42316	0.65168	-23.26661	2.46366	1.75464	1.56639	23.46239	87.62	24.58
83/ 7/ 9	2445524.5	0.00537	1.42798	0.65533	-23.28375	1.70690	1.40772	1.57118	23.38863	89.78	24.65
83/ 7/13	2445528.5	-0.04841	1.43105	0.65818	-23.27243	0.95490	1.06224	1.57590	23.31622	91.94	24.69
83/ 7/17	2445532.5	-0.10213	1.43240	0.66024	-23.23319	0.20843	0.71854	1.58054	23.24523	94.08	24.69
83/ 7/21	2445536.5	-0.15573	1.43202	0.66150	-23.16656	-0.53181	0.37696	1.58510	23.17572	96.21	24.67
83/ 7/25	2445540.5	-0.20915	1.42995	0.66198	-23.07307	-1.26513	0.03785	1.58956	23.10775	98.32	24.61
83/ 7/29	2445544.5	-0.26232	1.42618	0.66168	-22.95327	-1.99087	-0.29849	1.59394	23.04138	100.42	24.53
83/ 8/ 2	2445548.5	-0.31518	1.42075	0.66061	-22.80772	-2.70841	-0.63176	1.59821	22.97665	102.51	24.41
83/ 8/ 6	2445552.5	-0.36768	1.41368	0.65876	-22.63697	-3.41715	-0.96167	1.60238	22.91363	104.58	24.27
83/ 8/10	2445556.5	-0.41975	1.40497	0.65617	-22.44159	-4.11653	-1.28794	1.60645	22.85234	106.63	24.11
83/ 8/14	2445560.5	-0.47135	1.39466	0.65282	-22.22214	-4.80600	-1.61031	1.61041	22.79285	108.67	23.91
83/ 8/18	2445564.5	-0.52241	1.38277	0.64873	-21.97918	-5.48506	-1.92852	1.61426	22.73520	110.70	23.70
83/ 8/22	2445568.5	-0.57288	1.36933	0.64391	-21.71327	-6.15320	-2.24234	1.61798	22.67942	112.70	23.45
83/ 8/26	2445572.5	-0.62271	1.35435	0.63837	-21.42497	-6.80996	-2.55154	1.62159	22.62555	114.69	23.18
83/ 8/30	2445576.5	-0.67186	1.33787	0.63212	-21.11486	-7.45489	-2.85589	1.62508	22.57363	116.66	22.89
83/ 9/ 3	2445580.5	-0.72026	1.31992	0.62518	-20.78347	-8.08757	-3.15519	1.62844	22.52369	118.62	22.58
83/ 9/ 7	2445584.5	-0.76787	1.30052	0.61755	-20.43138	-8.70757	-3.44922	1.63166	22.47577	120.56	22.24
83/ 9/11	2445588.5	-0.81464	1.27970	0.60925	-20.05912	-9.31453	-3.73781	1.63476	22.42989	122.48	21.88
83/ 9/15	2445592.5	-0.86053	1.25749	0.60028	-19.66725	-9.90805	-4.02075	1.63772	22.38608	124.38	21.50
83/ 9/19	2445596.5	-0.90550	1.23393	0.59067	-19.25630	-10.48779	-4.29788	1.64055	22.34437	126.27	21.10
83/ 9/23	2445600.5	-0.94949	1.20904	0.58043	-18.82683	-11.05340	-4.56902	1.64323	22.30478	128.14	20.68
83/ 9/27	2445604.5	-0.99247	1.18287	0.56957	-18.37936	-11.60455	-4.83401	1.64578	22.26733	130.00	20.25
83/10/ 1	2445608.5	-1.03439	1.15544	0.55810	-17.91442	-12.14093	-5.09269	1.64818	22.23205	131.84	19.79

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
83/10/ 5	2445612.5	-1.07523	1.12679	0.54604	-17.43255	-12.66223	-5.34490	1.65043	22.19896	133.66	19.32
83/10/ 9	2445616.5	-1.11493	1.09695	0.53341	-16.93425	-13.16817	-5.59049	1.65254	22.16806	135.47	18.83
83/10/13	2445620.5	-1.15346	1.06596	0.52022	-16.42005	-13.65845	-5.82933	1.65449	22.13938	137.26	18.33
83/10/17	2445624.5	-1.19078	1.03385	0.50648	-15.89047	-14.13281	-6.06127	1.65630	22.11294	139.04	17.81
83/10/21	2445628.5	-1.22686	1.00067	0.49222	-15.34601	-14.59098	-6.28617	1.65796	22.08874	140.80	17.27
83/10/25	2445632.5	-1.26167	0.96645	0.47744	-14.78718	-15.03271	-6.50392	1.65946	22.06681	142.55	16.72
83/10/29	2445636.5	-1.29518	0.93123	0.46217	-14.21449	-15.45775	-6.71438	1.66080	22.04714	144.28	16.16
83/11/ 2	2445640.5	-1.32734	0.89504	0.44643	-13.62843	-15.86586	-6.91742	1.66199	22.02976	146.01	15.58
83/11/ 6	2445644.5	-1.35813	0.85793	0.43022	-13.02950	-16.25681	-7.11293	1.66303	22.01467	147.72	14.99
83/11/10	2445648.5	-1.38753	0.81994	0.41357	-12.41821	-16.63036	-7.30079	1.66391	22.00187	149.42	14.39
83/11/14	2445652.5	-1.41550	0.78111	0.39649	-11.79504	-16.98630	-7.48088	1.66463	21.99138	151.11	13.78
83/11/18	2445656.5	-1.44202	0.74147	0.37901	-11.16049	-17.32440	-7.65308	1.66519	21.98320	152.79	13.16
83/11/22	2445660.5	-1.46706	0.70108	0.36114	-10.51505	-17.64445	-7.81730	1.66559	21.97733	154.46	12.52
83/11/26	2445664.5	-1.49059	0.65996	0.34290	-9.85921	-17.94624	-7.97341	1.66583	21.97377	156.12	11.88
83/11/30	2445668.5	-1.51260	0.61817	0.32431	-9.19346	-18.22956	-8.12131	1.66592	21.97254	157.77	11.23
83/12/ 4	2445672.5	-1.53306	0.57575	0.30538	-8.51831	-18.49422	-8.26089	1.66584	21.97362	159.42	10.56
83/12/ 8	2445676.5	-1.55195	0.53274	0.28614	-7.83424	-18.74000	-8.39205	1.66561	21.97702	161.05	9.89
83/12/12	2445680.5	-1.56925	0.48918	0.26661	-7.14175	-18.96672	-8.51468	1.66521	21.98274	162.69	9.21
83/12/16	2445684.5	-1.58495	0.44512	0.24681	-6.44135	-19.17418	-8.62869	1.66466	21.99078	164.31	8.53
83/12/20	2445688.5	-1.59901	0.40060	0.22675	-5.73353	-19.36218	-8.73396	1.66395	22.00112	165.94	7.83
83/12/24	2445692.5	-1.61143	0.35568	0.20646	-5.01881	-19.53054	-8.83040	1.66308	22.01378	167.55	7.13
83/12/28	2445696.5	-1.62219	0.31038	0.18596	-4.29769	-19.67907	-8.91791	1.66206	22.02873	169.17	6.42
84/ 1/ 1	2445700.5	-1.63128	0.26477	0.16527	-3.57069	-19.80758	-8.99639	1.66087	22.04598	170.78	5.71
84/ 1/ 5	2445704.5	-1.63869	0.21888	0.14440	-2.83834	-19.91589	-9.06574	1.65953	22.06550	172.39	4.99
84/ 1/ 9	2445708.5	-1.64439	0.17276	0.12339	-2.10117	-20.00382	-9.12587	1.65804	22.08731	174.00	4.27
84/ 1/13	2445712.5	-1.64839	0.12647	0.10224	-1.35972	-20.07119	-9.17667	1.65639	22.11137	175.61	3.54
84/ 1/17	2445716.5	-1.65067	0.08004	0.08099	-0.61453	-20.11783	-9.21805	1.65460	22.13768	177.22	2.81
84/ 1/21	2445720.5	-1.65123	0.03354	0.05966	0.13384	-20.14356	-9.24993	1.65265	22.16624	178.84	2.07
84/ 1/25	2445724.5	-1.65005	-0.01301	0.03826	0.88482	-20.14822	-9.27220	1.65055	22.19701	180.45	1.33
84/ 1/29	2445728.5	-1.64714	-0.05954	0.01683	1.63784	-20.13164	-9.28478	1.64830	22.22999	182.07	0.58
84/ 2/ 2	2445732.5	-1.64248	-0.10601	-0.00463	2.39231	-20.09366	-9.28757	1.64591	22.26516	183.69	-0.16
84/ 2/ 6	2445736.5	-1.63609	-0.15236	-0.02608	3.14763	-20.03412	-9.28049	1.64337	22.30249	185.32	-0.91
84/ 2/10	2445740.5	-1.62794	-0.19856	-0.04750	3.90319	-19.95288	-9.26345	1.64069	22.34198	186.95	-1.66
84/ 2/14	2445744.5	-1.61805	-0.24454	-0.06887	4.65836	-19.84979	-9.23637	1.63787	22.38359	188.59	-2.41
84/ 2/18	2445748.5	-1.60642	-0.29025	-0.09017	5.41250	-19.72470	-9.19917	1.63492	22.42730	190.24	-3.16
84/ 2/22	2445752.5	-1.59304	-0.33565	-0.11137	6.16495	-19.57749	-9.15177	1.63183	22.47308	191.90	-3.91
84/ 2/26	2445756.5	-1.57794	-0.38069	-0.13244	6.91504	-19.40803	-9.09409	1.62860	22.52092	193.56	-4.66
84/ 3/ 1	2445760.5	-1.56110	-0.42531	-0.15338	7.66209	-19.21620	-9.02607	1.62525	22.57077	195.24	-5.42
84/ 3/ 5	2445764.5	-1.54254	-0.46946	-0.17414	8.40539	-19.00190	-8.94762	1.62177	22.62262	196.93	-6.16
84/ 3/ 9	2445768.5	-1.52226	-0.51309	-0.19471	9.14421	-18.76503	-8.85870	1.61817	22.67641	198.63	-6.91
84/ 3/13	2445772.5	-1.50029	-0.55614	-0.21506	9.87781	-18.50551	-8.75924	1.61444	22.73213	200.34	-7.66
84/ 3/17	2445776.5	-1.47663	-0.59857	-0.23517	10.60544	-18.22327	-8.64919	1.61060	22.78972	202.07	-8.40
84/ 3/21	2445780.5	-1.45130	-0.64032	-0.25502	11.32630	-17.91825	-8.52851	1.60664	22.84916	203.81	-9.13
84/ 3/25	2445784.5	-1.42430	-0.68134	-0.27457	12.03961	-17.59040	-8.39714	1.60258	22.91040	205.56	-9.87
84/ 3/29	2445788.5	-1.39568	-0.72158	-0.29380	12.74453	-17.23971	-8.25506	1.59841	22.97339	207.34	-10.59

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — MARS

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84/ 4/ 2	2445792.5	-1.36543	-0.76098	-0.31270	13.44023	-16.86616	-8.10224	1.59413	23.03809	209.13	-11.31
84/ 4/ 6	2445796.5	-1.33358	-0.79949	-0.33123	14.12584	-16.46976	-7.93867	1.58976	23.10444	210.94	-12.03
84/ 4/10	2445800.5	-1.30017	-0.83706	-0.34937	14.80048	-16.05057	-7.76433	1.58530	23.17239	212.77	-12.73
84/ 4/14	2445804.5	-1.26521	-0.87363	-0.36710	15.46324	-15.60862	-7.57923	1.58074	23.24189	214.63	-13.43
84/ 4/18	2445808.5	-1.22873	-0.90916	-0.38438	16.11318	-15.14401	-7.38339	1.57610	23.31288	216.50	-14.12
84/ 4/22	2445812.5	-1.19077	-0.94358	-0.40120	16.74937	-14.65686	-7.17683	1.57139	23.38529	218.39	-14.79
84/ 4/26	2445816.5	-1.15136	-0.97686	-0.41753	17.37083	-14.14729	-6.95959	1.56659	23.45906	220.31	-15.46
84/ 4/30	2445820.5	-1.11052	-1.00893	-0.43335	17.97657	-13.61550	-6.73172	1.56173	23.53413	222.26	-16.11
84/ 5/ 4	2445824.5	-1.06831	-1.03975	-0.44863	18.56559	-13.06168	-6.49329	1.55680	23.61041	224.22	-16.75
84/ 5/ 8	2445828.5	-1.02476	-1.06926	-0.46334	19.13685	-12.48608	-6.24440	1.55182	23.68784	226.22	-17.37
84/ 5/12	2445832.5	-0.97991	-1.09742	-0.47747	19.68931	-11.88899	-5.98513	1.54678	23.76634	228.24	-17.98
84/ 5/16	2445836.5	-0.93380	-1.12418	-0.49099	20.22191	-11.27073	-5.71560	1.54170	23.84582	230.29	-18.57
84/ 5/20	2445840.5	-0.88649	-1.14948	-0.50387	20.73356	-10.63167	-5.43597	1.53658	23.92619	232.36	-19.14
84/ 5/24	2445844.5	-0.83802	-1.17329	-0.51610	21.22319	-9.97222	-5.14640	1.53142	24.00738	234.46	-19.69
84/ 5/28	2445848.5	-0.78845	-1.19554	-0.52764	21.68968	-9.29284	-4.84705	1.52623	24.08927	236.60	-20.23
84/ 6/ 1	2445852.5	-0.73783	-1.21621	-0.53849	22.13193	-8.59406	-4.53815	1.52103	24.17178	238.76	-20.73
84/ 6/ 5	2445856.5	-0.68621	-1.23524	-0.54860	22.54882	-7.87643	-4.21991	1.51580	24.25479	240.95	-21.22
84/ 6/ 9	2445860.5	-0.63367	-1.25259	-0.55798	22.93923	-7.14059	-3.89261	1.51058	24.33822	243.17	-21.68
84/ 6/13	2445864.5	-0.58025	-1.26821	-0.56658	23.30205	-6.38721	-3.55652	1.50535	24.42193	245.41	-22.11
84/ 6/17	2445868.5	-0.52602	-1.28208	-0.57440	23.63616	-5.61704	-3.21194	1.50013	24.50583	247.69	-22.51
84/ 6/21	2445872.5	-0.47106	-1.29415	-0.58142	23.94045	-4.83088	-2.85924	1.49492	24.58979	250.00	-22.89
84/ 6/25	2445876.5	-0.41543	-1.30439	-0.58761	24.21382	-4.02961	-2.49876	1.48973	24.67369	252.33	-23.23
84/ 6/29	2445880.5	-0.35921	-1.31276	-0.59296	24.45521	-3.21415	-2.13091	1.48458	24.75740	254.70	-23.54
84/ 7/ 3	2445884.5	-0.30247	-1.31923	-0.59745	24.66355	-2.38550	-1.75613	1.47946	24.84080	257.09	-23.82
84/ 7/ 7	2445888.5	-0.24528	-1.32377	-0.60106	24.83781	-1.54475	-1.37488	1.47439	24.92375	259.50	-24.06
84/ 7/11	2445892.5	-0.18774	-1.32636	-0.60379	24.97698	-0.69303	-0.98765	1.46937	25.00611	261.94	-24.26
84/ 7/15	2445896.5	-0.12991	-1.32697	-0.60562	25.08013	0.16845	-0.59497	1.46441	25.08775	264.41	-24.43
84/ 7/19	2445900.5	-0.07188	-1.32558	-0.60654	25.14631	1.03840	-0.19742	1.45952	25.16852	266.90	-24.56
84/ 7/23	2445904.5	-0.01375	-1.32217	-0.60653	25.17468	1.91548	0.20442	1.45471	25.24828	269.40	-24.64
84/ 7/27	2445908.5	0.04440	-1.31672	-0.60559	25.16443	2.79826	0.60991	1.44999	25.32687	271.93	-24.69
84/ 7/31	2445912.5	0.10249	-1.30923	-0.60371	25.11480	3.68526	1.01840	1.44536	25.40417	274.48	-24.69
84/ 8/ 4	2445916.5	0.16041	-1.29969	-0.60089	25.02514	4.57492	1.42918	1.44083	25.48000	277.04	-24.65
84/ 8/ 8	2445920.5	0.21808	-1.28810	-0.59711	24.89485	5.46563	1.84153	1.43641	25.55422	279.61	-24.56
84/ 8/12	2445924.5	0.27540	-1.27444	-0.59238	24.72342	6.35572	2.25470	1.43211	25.62668	282.19	-24.43
84/ 8/16	2445928.5	0.33228	-1.25873	-0.58669	24.51044	7.24345	2.66790	1.42794	25.69722	284.79	-24.26
84/ 8/20	2445932.5	0.38862	-1.24098	-0.58005	24.25559	8.12705	3.08032	1.42390	25.76570	287.39	-24.04
84/ 8/24	2445936.5	0.44432	-1.22119	-0.57246	23.95867	9.00468	3.49113	1.42001	25.83195	289.99	-23.77
84/ 8/28	2445940.5	0.49928	-1.19938	-0.56392	23.61956	9.87448	3.89948	1.41626	25.89584	292.60	-23.46
84/ 9/ 1	2445944.5	0.55341	-1.17557	-0.55444	23.23829	10.73454	4.30449	1.41267	25.95722	295.21	-23.11
84/ 9/ 5	2445948.5	0.60662	-1.14979	-0.54404	22.81501	11.58294	4.70527	1.40925	26.01593	297.82	-22.71
84/ 9/ 9	2445952.5	0.65879	-1.12206	-0.53271	22.34998	12.41774	5.10093	1.40599	26.07185	300.42	-22.26
84/ 9/13	2445956.5	0.70985	-1.09243	-0.52047	21.84361	13.23697	5.49055	1.40292	26.12483	303.02	-21.78
84/ 9/17	2445960.5	0.75969	-1.06092	-0.50735	21.29642	14.03868	5.87322	1.40003	26.17473	305.61	-21.25
84/ 9/21	2445964.5	0.80822	-1.02758	-0.49334	20.70911	14.82092	6.24803	1.39733	26.22145	308.19	-20.67
84/ 9/25	2445968.5	0.85534	-0.99246	-0.47848	20.08247	15.58175	6.61406	1.39482	26.26485	310.76	-20.06

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM MARS

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84/ 9/29	2445972.5	0.90097	-0.95560	-0.46279	19.41746	16.31929	6.97043	1.39252	26.30483	313.31	-19.41
84/10/ 3	2445976.5	0.94503	-0.91707	-0.44629	18.71518	17.03165	7.31625	1.39042	26.34127	315.86	-18.72
84/10/ 7	2445980.5	0.98742	-0.87693	-0.42900	17.97684	17.71702	7.65064	1.38854	26.37408	318.39	-18.00
84/10/11	2445984.5	1.02806	-0.83524	-0.41095	17.20382	18.37365	7.97277	1.38687	26.40317	320.91	-17.24
84/10/15	2445988.5	1.06688	-0.79206	-0.39217	16.39761	18.99983	8.28181	1.38542	26.42846	323.41	-16.44
84/10/19	2445992.5	1.10380	-0.74748	-0.37269	15.55982	19.59397	8.57699	1.38419	26.44988	325.89	-15.62
84/10/23	2445996.5	1.13875	-0.70156	-0.35255	14.69221	20.15453	8.85756	1.38319	26.46738	328.36	-14.77
84/10/27	2446000.5	1.17166	-0.65438	-0.33178	13.79661	20.68008	9.12281	1.38242	26.48090	330.82	-13.89
84/10/31	2446004.5	1.20247	-0.60604	-0.31041	12.87500	21.16932	9.37208	1.38188	26.49040	333.25	-12.98
84/11/ 4	2446008.5	1.23113	-0.55660	-0.28849	11.92942	21.62102	9.60476	1.38156	26.49587	335.67	-12.05
84/11/ 8	2446012.5	1.25758	-0.50617	-0.26605	10.96201	22.03410	9.82031	1.38148	26.49728	338.08	-11.10
84/11/12	2446016.5	1.28176	-0.45483	-0.24313	9.97500	22.40759	10.01821	1.38163	26.49462	340.46	-10.14
84/11/16	2446020.5	1.30365	-0.40267	-0.21978	8.97065	22.74067	10.19802	1.38201	26.48792	342.84	-9.15
84/11/20	2446024.5	1.32320	-0.34979	-0.19603	7.95129	23.03263	10.35936	1.38262	26.47719	345.19	-8.15
84/11/24	2446028.5	1.34038	-0.29628	-0.17193	6.91932	23.28292	10.50191	1.38346	26.46245	347.54	-7.14
84/11/28	2446032.5	1.35516	-0.24225	-0.14752	5.87711	23.49112	10.62541	1.38452	26.44376	349.86	-6.12
84/12/ 2	2446036.5	1.36753	-0.18778	-0.12285	4.82709	23.65694	10.72967	1.38581	26.42116	352.18	-5.09
84/12/ 6	2446040.5	1.37746	-0.13298	-0.09796	3.77168	23.78025	10.81456	1.38733	26.39471	354.49	-4.05
84/12/10	2446044.5	1.38495	-0.07794	-0.07290	2.71328	23.86105	10.88002	1.38906	26.36449	356.78	-3.01
84/12/14	2446048.5	1.39000	-0.02276	-0.04770	1.65430	23.89947	10.92604	1.39100	26.33059	359.06	-1.97
84/12/18	2446052.5	1.39260	0.03245	-0.02243	0.59709	23.89578	10.95268	1.39315	26.29308	1.34	-0.92
84/12/22	2446056.5	1.39276	0.08761	0.00289	-0.45605	23.85038	10.96007	1.39551	26.25209	3.60	0.12
84/12/26	2446060.5	1.39049	0.14262	0.02820	-1.50283	23.76379	10.94838	1.39807	26.20770	5.86	1.16
84/12/30	2446064.5	1.38582	0.19738	0.05346	-2.54107	23.63665	10.91785	1.40083	26.16004	8.11	2.19
85/ 1/ 3	2446068.5	1.37876	0.25180	0.07863	-3.56863	23.46971	10.86876	1.40377	26.10924	10.35	3.21
85/ 1/ 7	2446072.5	1.36934	0.30579	0.10366	-4.58347	23.26381	10.80145	1.40689	26.05541	12.59	4.23
85/ 1/11	2446076.5	1.35759	0.35926	0.12852	-5.58361	23.01991	10.71631	1.41019	25.99870	14.82	5.23
85/ 1/15	2446080.5	1.34356	0.41212	0.15316	-6.56719	22.73905	10.61375	1.41366	25.93923	17.05	6.22
85/ 1/19	2446084.5	1.32727	0.46429	0.17754	-7.53242	22.42233	10.49424	1.41729	25.87716	19.28	7.20
85/ 1/23	2446088.5	1.30877	0.51569	0.20163	-8.47763	22.07096	10.35829	1.42108	25.81263	21.51	8.16
85/ 1/27	2446092.5	1.28811	0.56624	0.22539	-9.40124	21.68619	10.20642	1.42501	25.74578	23.73	9.10
85/ 1/31	2446096.5	1.26535	0.61586	0.24878	-10.30178	21.26932	10.03921	1.42909	25.67676	25.95	10.03
85/ 2/ 4	2446100.5	1.24053	0.66449	0.27176	-11.17790	20.82170	9.85723	1.43329	25.60574	28.18	10.93
85/ 2/ 8	2446104.5	1.21372	0.71205	0.29431	-12.02834	20.34475	9.66109	1.43762	25.53285	30.40	11.81
85/ 2/12	2446108.5	1.18498	0.75847	0.31639	-12.85195	19.83987	9.45141	1.44207	25.45825	32.62	12.67
85/ 2/16	2446112.5	1.15436	0.80369	0.33797	-13.64770	19.30853	9.22884	1.44662	25.38209	34.85	13.51
85/ 2/20	2446116.5	1.12194	0.84766	0.35902	-14.41465	18.75218	8.99403	1.45127	25.30453	37.07	14.32
85/ 2/24	2446120.5	1.08779	0.89032	0.37952	-15.15198	18.17232	8.74762	1.45601	25.22571	39.30	15.11
85/ 2/28	2446124.5	1.05196	0.93161	0.39943	-15.85895	17.57041	8.49027	1.46084	25.14578	41.53	15.87
85/ 3/ 4	2446128.5	1.01454	0.97148	0.41874	-16.53492	16.94793	8.22266	1.46574	25.06488	43.76	16.60
85/ 3/ 8	2446132.5	0.97559	1.00990	0.43742	-17.17938	16.30636	7.94544	1.47071	24.98316	45.99	17.30
85/ 3/12	2446136.5	0.93519	1.04681	0.45544	-17.79186	15.64716	7.65927	1.47574	24.90077	48.22	17.98
85/ 3/16	2446140.5	0.89341	1.08218	0.47280	-18.37200	14.97177	7.36480	1.48082	24.81783	50.46	18.62
85/ 3/20	2446144.5	0.85033	1.11597	0.48946	-18.91953	14.28161	7.06267	1.48594	24.73448	52.69	19.23
85/ 3/24	2446148.5	0.80602	1.14816	0.50542	-19.43426	13.57807	6.75353	1.49110	24.65085	54.93	19.81

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85/ 3/28	2446152.5	0.76056	1.17870	0.52066	-19.91604	12.86254	6.43800	1.49629	24.56708	57.17	20.36
85/ 4/ 1	2446156.5	0.71402	1.20758	0.53517	-20.36484	12.13633	6.11668	1.50149	24.48328	59.40	20.88
85/ 4/ 5	2446160.5	0.66649	1.23477	0.54892	-20.78066	11.40077	5.79018	1.50671	24.39958	61.64	21.37
85/ 4/ 9	2446164.5	0.61804	1.26025	0.56192	-21.16357	10.65711	5.45909	1.51193	24.31609	63.88	21.82
85/ 4/13	2446168.5	0.56873	1.28400	0.57414	-21.51369	9.90661	5.12398	1.51715	24.23293	66.11	22.24
85/ 4/17	2446172.5	0.51866	1.30601	0.58559	-21.83121	9.15044	4.78539	1.52236	24.15020	68.34	22.62
85/ 4/21	2446176.5	0.46789	1.32628	0.59625	-22.11634	8.38977	4.44387	1.52756	24.06800	70.57	22.97
85/ 4/25	2446180.5	0.41650	1.34477	0.60612	-22.36936	7.62572	4.09993	1.53273	23.98644	72.79	23.29
85/ 4/29	2446184.5	0.36456	1.36151	0.61519	-22.59058	6.85937	3.75409	1.53788	23.90562	75.01	23.58
85/ 5/ 3	2446188.5	0.31215	1.37647	0.62346	-22.78035	6.09177	3.40683	1.54298	23.82562	77.22	23.83
85/ 5/ 7	2446192.5	0.25933	1.38965	0.63093	-22.93903	5.32391	3.05861	1.54805	23.74654	79.43	24.05
85/ 5/11	2446196.5	0.20618	1.40107	0.63759	-23.06704	4.55675	2.70990	1.55307	23.66846	81.63	24.24
85/ 5/15	2446200.5	0.15278	1.41071	0.64345	-23.16482	3.79122	2.36113	1.55803	23.59146	83.82	24.39
85/ 5/19	2446204.5	0.09918	1.41858	0.64850	-23.23281	3.02821	2.01271	1.56294	23.51562	86.00	24.51
85/ 5/23	2446208.5	0.04546	1.42470	0.65275	-23.27150	2.26857	1.66505	1.56778	23.44102	88.17	24.60
85/ 5/27	2446212.5	-0.00832	1.42907	0.65620	-23.28137	1.51310	1.31854	1.57255	23.36772	90.33	24.66
85/ 5/31	2446216.5	-0.06209	1.43170	0.65884	-23.26294	0.76258	0.97354	1.57724	23.29579	92.48	24.69
85/ 6/ 4	2446220.5	-0.11578	1.43260	0.66070	-23.21673	0.01776	0.63042	1.58185	23.22529	94.62	24.69
85/ 6/ 8	2446224.5	-0.16934	1.43178	0.66176	-23.14327	-0.72065	0.28950	1.58638	23.15630	96.75	24.65
85/ 6/12	2446228.5	-0.22269	1.42927	0.66204	-23.04310	-1.45198	-0.04888	1.59082	23.08885	98.86	24.59
85/ 6/16	2446232.5	-0.27579	1.42508	0.66153	-22.91677	-2.17558	-0.38442	1.59516	23.02302	100.95	24.50
85/ 6/20	2446236.5	-0.32856	1.41923	0.66026	-22.76483	-2.89083	-0.71681	1.59941	22.95884	103.03	24.38
85/ 6/24	2446240.5	-0.38095	1.41173	0.65823	-22.58785	-3.59715	-1.04577	1.60355	22.89638	105.10	24.24
85/ 6/28	2446244.5	-0.43290	1.40261	0.65543	-22.38638	-4.29397	-1.37102	1.60758	22.83567	107.15	24.06
85/ 7/ 2	2446248.5	-0.48436	1.39190	0.65189	-22.16098	-4.98076	-1.69232	1.61151	22.77677	109.19	23.86
85/ 7/ 6	2446252.5	-0.53528	1.37961	0.64762	-21.91223	-5.65701	-2.00940	1.61532	22.71971	111.21	23.64
85/ 7/10	2446256.5	-0.58559	1.36577	0.64261	-21.64067	-6.32223	-2.32203	1.61901	22.66453	113.21	23.39
85/ 7/14	2446260.5	-0.63525	1.35041	0.63689	-21.34687	-6.97596	-2.62998	1.62258	22.61127	115.19	23.11
85/ 7/18	2446264.5	-0.68420	1.33355	0.63047	-21.03139	-7.61776	-2.93304	1.62603	22.55997	117.16	22.81
85/ 7/22	2446268.5	-0.73240	1.31522	0.62334	-20.69479	-8.24720	-3.23099	1.62935	22.51066	119.11	22.49
85/ 7/26	2446272.5	-0.77980	1.29545	0.61554	-20.33761	-8.86388	-3.52363	1.63254	22.46337	121.05	22.15
85/ 7/30	2446276.5	-0.82635	1.27428	0.60707	-19.96042	-9.46742	-3.81078	1.63560	22.41812	122.96	21.79
85/ 8/ 3	2446280.5	-0.87201	1.25172	0.59794	-19.56374	-10.05744	-4.09224	1.63852	22.37496	124.86	21.40
85/ 8/ 7	2446284.5	-0.91673	1.22782	0.58817	-19.14814	-10.63359	-4.36785	1.64130	22.33389	126.75	21.00
85/ 8/11	2446288.5	-0.96047	1.20260	0.57776	-18.71413	-11.19554	-4.63743	1.64395	22.29495	128.61	20.58
85/ 8/15	2446292.5	-1.00318	1.17610	0.56674	-18.26227	-11.74295	-4.90081	1.64645	22.25815	130.46	20.13
85/ 8/19	2446296.5	-1.04483	1.14836	0.55512	-17.79307	-12.27551	-5.15785	1.64881	22.22352	132.30	19.67
85/ 8/23	2446300.5	-1.08538	1.11940	0.54292	-17.30706	-12.79293	-5.40838	1.65102	22.19108	134.12	19.20
85/ 8/27	2446304.5	-1.12479	1.08926	0.53014	-16.80476	-13.29491	-5.65226	1.65308	22.16084	135.92	18.71
85/ 8/31	2446308.5	-1.16301	1.05798	0.51681	-16.28669	-13.78118	-5.88935	1.65500	22.13282	137.71	18.20
85/ 9/ 4	2446312.5	-1.20002	1.02560	0.50293	-15.75337	-14.25145	-6.11952	1.65676	22.10703	139.48	17.67
85/ 9/ 8	2446316.5	-1.23579	0.99215	0.48854	-15.20529	-14.70548	-6.34262	1.65837	22.08349	141.24	17.13
85/ 9/12	2446320.5	-1.27027	0.95767	0.47363	-14.64296	-15.14301	-6.55852	1.65983	22.06221	142.99	16.58
85/ 9/16	2446324.5	-1.30343	0.92219	0.45824	-14.06689	-15.56379	-6.76711	1.66113	22.04320	144.72	16.01
85/ 9/20	2446328.5	-1.33525	0.88577	0.44237	-13.47758	-15.96757	-6.96825	1.66228	22.02646	146.44	15.43

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85/ 9/24	2446332.5	-1.36569	0.84843	0.42605	-12.87553	-16.35414	-7.16183	1.66327	22.01202	148.15	14.84
85/ 9/28	2446336.5	-1.39473	0.81022	0.40929	-12.26123	-16.72325	-7.34773	1.66411	21.99986	149.85	14.24
85/10/ 2	2446340.5	-1.42234	0.77118	0.39211	-11.63517	-17.07469	-7.52583	1.66478	21.99001	151.53	13.62
85/10/ 6	2446344.5	-1.44848	0.73134	0.37452	-10.99786	-17.40825	-7.69602	1.66530	21.98246	153.21	13.00
85/10/10	2446348.5	-1.47314	0.69076	0.35656	-10.34978	-17.72370	-7.85819	1.66566	21.97722	154.88	12.36
85/10/14	2446352.5	-1.49629	0.64947	0.33822	-9.69142	-18.02083	-8.01223	1.66586	21.97430	156.54	11.71
85/10/18	2446356.5	-1.51791	0.60751	0.31954	-9.02328	-18.29945	-8.15803	1.66590	21.97368	158.19	11.06
85/10/22	2446360.5	-1.53798	0.56493	0.30054	-8.34585	-18.55934	-8.29548	1.66578	21.97538	159.83	10.39
85/10/26	2446364.5	-1.55646	0.52177	0.28122	-7.65964	-18.80032	-8.42449	1.66551	21.97940	161.47	9.72
85/10/30	2446368.5	-1.57336	0.47808	0.26162	-6.96513	-19.02217	-8.54494	1.66507	21.98572	163.10	9.04
85/11/ 3	2446372.5	-1.58864	0.43390	0.24175	-6.26283	-19.22472	-8.65673	1.66448	21.99436	164.72	8.35
85/11/ 7	2446376.5	-1.60229	0.38927	0.22163	-5.55324	-19.40775	-8.75977	1.66373	22.00529	166.34	7.66
85/11/11	2446380.5	-1.61429	0.34425	0.20128	-4.83688	-19.57110	-8.85395	1.66282	22.01853	167.96	6.95
85/11/15	2446384.5	-1.62463	0.29886	0.18073	-4.11425	-19.71456	-8.93917	1.66175	22.03406	169.58	6.24
85/11/19	2446388.5	-1.63330	0.25317	0.15999	-3.38588	-19.83796	-9.01533	1.66053	22.05187	171.19	5.53
85/11/23	2446392.5	-1.64027	0.20722	0.13908	-2.65229	-19.94111	-9.08234	1.65915	22.07196	172.80	4.81
85/11/27	2446396.5	-1.64555	0.16105	0.11803	-1.91402	-20.02384	-9.14010	1.65762	22.09432	174.41	4.08
85/12/ 1	2446400.5	-1.64911	0.11472	0.09686	-1.17160	-20.08596	-9.18852	1.65593	22.11893	176.02	3.35
85/12/ 5	2446404.5	-1.65096	0.06827	0.07558	-0.42559	-20.12730	-9.22749	1.65410	22.14579	177.63	2.62
85/12/ 9	2446408.5	-1.65108	0.02174	0.05423	0.32346	-20.14769	-9.25693	1.65211	22.17487	179.25	1.88
85/12/13	2446412.5	-1.64946	-0.02481	0.03282	1.07498	-20.14696	-9.27674	1.64998	22.20616	180.86	1.14
85/12/17	2446416.5	-1.64611	-0.07133	0.01138	1.82839	-20.12496	-9.28683	1.64769	22.23965	182.48	0.40
85/12/21	2446420.5	-1.64101	-0.11778	-0.01008	2.58310	-20.08151	-9.28711	1.64527	22.27532	184.11	-0.35
85/12/25	2446424.5	-1.63417	-0.16410	-0.03153	3.33850	-20.01646	-9.27750	1.64269	22.31314	185.73	-1.10
85/12/29	2446428.5	-1.62559	-0.21024	-0.05294	4.09398	-19.92967	-9.25791	1.63998	22.35311	187.37	-1.85
86/ 1/ 2	2446432.5	-1.61526	-0.25616	-0.07429	4.84890	-19.82099	-9.22825	1.63713	22.39518	189.01	-2.60
86/ 1/ 6	2446436.5	-1.60319	-0.30181	-0.09557	5.60263	-19.69028	-9.18846	1.63414	22.43935	190.66	-3.35
86/ 1/10	2446440.5	-1.58937	-0.34712	-0.11674	6.35450	-19.53742	-9.13844	1.63102	22.48558	192.32	-4.10
86/ 1/14	2446444.5	-1.57383	-0.39206	-0.13778	7.10384	-19.36227	-9.07813	1.62777	22.53385	193.99	-4.86
86/ 1/18	2446448.5	-1.55655	-0.43656	-0.15868	7.84995	-19.16473	-9.00745	1.62439	22.58413	195.67	-5.61
86/ 1/22	2446452.5	-1.53756	-0.48059	-0.17939	8.59212	-18.94470	-8.92634	1.62088	22.63638	197.36	-6.35
86/ 1/26	2446456.5	-1.51686	-0.52408	-0.19991	9.32963	-18.70207	-8.83473	1.61725	22.69057	199.06	-7.10
86/ 1/30	2446460.5	-1.49446	-0.56698	-0.22020	10.06173	-18.43677	-8.73258	1.61350	22.74667	200.78	-7.84
86/ 2/ 3	2446464.5	-1.47038	-0.60924	-0.24025	10.78765	-18.14873	-8.61982	1.60963	22.80463	202.51	-8.58
86/ 2/ 7	2446468.5	-1.44462	-0.65082	-0.26002	11.50660	-17.83791	-8.49641	1.60565	22.86442	204.25	-9.32
86/ 2/11	2446472.5	-1.41722	-0.69164	-0.27950	12.21778	-17.50425	-8.36231	1.60156	22.92599	206.01	-10.05
86/ 2/15	2446476.5	-1.38818	-0.73168	-0.29865	12.92037	-17.14774	-8.21750	1.59737	22.98931	207.79	-10.78
86/ 2/19	2446480.5	-1.35753	-0.77086	-0.31746	13.61350	-16.76839	-8.06194	1.59307	23.05431	209.59	-11.49
86/ 2/23	2446484.5	-1.32529	-0.80913	-0.33589	14.29633	-16.36620	-7.89563	1.58868	23.12096	211.41	-12.21
86/ 2/27	2446488.5	-1.29148	-0.84646	-0.35393	14.96795	-15.94123	-7.71856	1.58420	23.18919	213.24	-12.91
86/ 3/ 3	2446492.5	-1.25614	-0.88277	-0.37155	15.62745	-15.49354	-7.53073	1.57963	23.25895	215.10	-13.60
86/ 3/ 7	2446496.5	-1.21929	-0.91802	-0.38872	16.27391	-15.02321	-7.33216	1.57497	23.33019	216.98	-14.29
86/ 3/11	2446500.5	-1.18096	-0.95217	-0.40542	16.90637	-14.53037	-7.12289	1.57024	23.40283	218.88	-14.96
86/ 3/15	2446504.5	-1.14119	-0.98514	-0.42162	17.52384	-14.01517	-6.90295	1.56543	23.47682	220.80	-15.62
86/ 3/19	2446508.5	-1.10000	-1.01690	-0.43730	18.12535	-13.47779	-6.67240	1.56056	23.55207	222.75	-16.27

1.4 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
86/ 3/23	2446512.5	-1.05745	-1.04740	-0.45244	18.70987	-12.91846	-6.43132	1.55562	23.62853	224.73	-16.91
86/ 3/27	2446516.5	-1.01357	-1.07657	-0.46701	19.27637	-12.33741	-6.17979	1.55063	23.70612	226.73	-17.53
86/ 3/31	2446520.5	-0.96840	-1.10438	-0.48098	19.82380	-11.73496	-5.91792	1.54558	23.78475	228.75	-18.13
86/ 4/ 4	2446524.5	-0.92200	-1.13078	-0.49434	20.35111	-11.11143	-5.64584	1.54049	23.86434	230.81	-18.72
86/ 4/ 8	2446528.5	-0.87439	-1.15571	-0.50706	20.85720	-10.46720	-5.36368	1.53536	23.94481	232.89	-19.28
86/ 4/12	2446532.5	-0.82564	-1.17912	-0.51912	21.34098	-9.80270	-5.07163	1.53020	24.02606	235.00	-19.83
86/ 4/16	2446536.5	-0.77581	-1.20098	-0.53049	21.80136	-9.11841	-4.76986	1.52501	24.10801	237.14	-20.36
86/ 4/20	2446540.5	-0.72493	-1.22124	-0.54115	22.23722	-8.41485	-4.45859	1.51980	24.19055	239.31	-20.86
86/ 4/24	2446544.5	-0.67308	-1.23985	-0.55108	22.64744	-7.69260	-4.13806	1.51458	24.27357	241.50	-21.34
86/ 4/28	2446548.5	-0.62032	-1.25677	-0.56026	23.03092	-6.95231	-3.80853	1.50935	24.35698	243.73	-21.79
86/ 5/ 2	2446552.5	-0.56669	-1.27196	-0.56867	23.38652	-6.19467	-3.47028	1.50413	24.44067	245.99	-22.21
86/ 5/ 6	2446556.5	-0.51228	-1.28538	-0.57629	23.71315	-5.42043	-3.12364	1.49891	24.52451	248.27	-22.61
86/ 5/10	2446560.5	-0.45715	-1.29699	-0.58310	24.00969	-4.63042	-2.76895	1.49371	24.60839	250.58	-22.98
86/ 5/14	2446564.5	-0.40137	-1.30676	-0.58908	24.27505	-3.82552	-2.40660	1.48853	24.69219	252.93	-23.31
86/ 5/18	2446568.5	-0.34502	-1.31465	-0.59421	24.50816	-3.00668	-2.03698	1.48339	24.77578	255.29	-23.61
86/ 5/22	2446572.5	-0.28816	-1.32064	-0.59848	24.70797	-2.17493	-1.66054	1.47828	24.85904	257.69	-23.88
86/ 5/26	2446576.5	-0.23089	-1.32469	-0.60188	24.87347	-1.33135	-1.27775	1.47322	24.94182	260.11	-24.11
86/ 5/30	2446580.5	-0.17327	-1.32678	-0.60438	25.00365	-0.47710	-0.88912	1.46822	25.02400	262.56	-24.31
86/ 6/ 3	2446584.5	-0.11539	-1.32689	-0.60598	25.09758	0.38660	-0.49518	1.46327	25.10544	265.03	-24.46
86/ 6/ 7	2446588.5	-0.05734	-1.32499	-0.60667	25.15435	1.25844	-0.09651	1.45840	25.18599	267.52	-24.58
86/ 6/11	2446592.5	0.00080	-1.32107	-0.60642	25.17310	2.13706	0.30630	1.45361	25.26551	270.03	-24.66
86/ 6/15	2446596.5	0.05894	-1.31511	-0.60525	25.15306	3.02103	0.71260	1.44890	25.34385	272.57	-24.69
86/ 6/19	2446600.5	0.11699	-1.30711	-0.60313	25.09348	3.90884	1.12172	1.44430	25.42086	275.11	-24.68
86/ 6/23	2446604.5	0.17485	-1.29705	-0.60006	24.99372	4.79893	1.53297	1.43979	25.49639	277.68	-24.63
86/ 6/27	2446608.5	0.23244	-1.28494	-0.59605	24.85321	5.68966	1.94560	1.43540	25.57029	280.25	-24.53
86/ 7/ 1	2446612.5	0.28965	-1.27076	-0.59107	24.67146	6.57935	2.35886	1.43112	25.64241	282.84	-24.39
86/ 7/ 5	2446616.5	0.34640	-1.25454	-0.58515	24.44808	7.46625	2.77196	1.42698	25.71259	285.44	-24.21
86/ 7/ 9	2446620.5	0.40258	-1.23627	-0.57827	24.18278	8.34858	3.18408	1.42297	25.78069	288.04	-23.98
86/ 7/13	2446624.5	0.45810	-1.21597	-0.57044	23.87537	9.22449	3.59439	1.41910	25.84655	290.64	-23.70
86/ 7/17	2446628.5	0.51286	-1.19366	-0.56166	23.52579	10.09210	4.00202	1.41538	25.91002	293.25	-23.38
86/ 7/21	2446632.5	0.56676	-1.16935	-0.55195	23.13407	10.94952	4.40609	1.41182	25.97096	295.86	-23.01
86/ 7/25	2446636.5	0.61971	-1.14308	-0.54131	22.70040	11.79480	4.80572	1.40843	26.02922	298.46	-22.60
86/ 7/29	2446640.5	0.67161	-1.11487	-0.52975	22.22506	12.62600	5.20001	1.40521	26.08466	301.07	-22.15
86/ 8/ 2	2446644.5	0.72237	-1.08475	-0.51729	21.70850	13.44116	5.58803	1.40217	26.13714	303.66	-21.65
86/ 8/ 6	2446648.5	0.77188	-1.05278	-0.50394	21.15129	14.23832	5.96888	1.39932	26.18652	306.25	-21.11
86/ 8/10	2446652.5	0.82006	-1.01898	-0.48971	20.55412	15.01553	6.34165	1.39666	26.23270	308.83	-20.53
86/ 8/14	2446656.5	0.86682	-0.98342	-0.47464	19.91784	15.77087	6.70542	1.39419	26.27553	311.39	-19.90
86/ 8/18	2446660.5	0.91206	-0.94613	-0.45874	19.24345	16.50244	7.05930	1.39193	26.31491	313.95	-19.24
86/ 8/22	2446664.5	0.95570	-0.90719	-0.44203	18.53206	17.20838	7.40242	1.38988	26.35073	316.49	-18.54
86/ 8/26	2446668.5	0.99766	-0.86665	-0.42455	17.78493	17.88689	7.73390	1.38803	26.38291	319.02	-17.81
86/ 8/30	2446672.5	1.03785	-0.82457	-0.40631	17.00346	18.53623	8.05290	1.38641	26.41134	321.53	-17.04
86/ 9/ 3	2446676.5	1.07620	-0.78103	-0.38735	16.18918	19.15472	8.35863	1.38501	26.43595	324.03	-16.24
86/ 9/ 7	2446680.5	1.11263	-0.73609	-0.36770	15.34374	19.74076	8.65029	1.38382	26.45667	326.51	-15.41
86/ 9/11	2446684.5	1.14707	-0.68984	-0.34739	14.46889	20.29286	8.92717	1.38287	26.47345	328.98	-14.55
86/ 9/15	2446688.5	1.17946	-0.64236	-0.32647	13.56653	20.80961	9.18855	1.38214	26.48623	331.43	-13.66

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86/ 9/19	2446692.5	1.20973	-0.59372	-0.30495	12.63864	21.28971	9.43380	1.38165	26.49497	333.86	-12.75
86/ 9/23	2446696.5	1.23783	-0.54402	-0.28289	11.68728	21.73199	9.66231	1.38138	26.49966	336.27	-11.82
86/ 9/27	2446700.5	1.26371	-0.49334	-0.26032	10.71463	22.13537	9.87354	1.38135	26.50028	338.67	-10.86
86/10/ 1	2446704.5	1.28732	-0.44178	-0.23729	9.72292	22.49893	10.06700	1.38155	26.49682	341.06	-9.89
86/10/ 5	2446708.5	1.30862	-0.38942	-0.21382	8.71444	22.82187	10.24227	1.38198	26.48930	343.43	-8.90
86/10/ 9	2446712.5	1.32758	-0.33637	-0.18998	7.69153	23.10352	10.39896	1.38264	26.47774	345.78	-7.90
86/10/13	2446716.5	1.34415	-0.28271	-0.16579	6.65658	23.34335	10.53679	1.38353	26.46217	348.12	-6.88
86/10/17	2446720.5	1.35832	-0.22854	-0.14131	5.61200	23.54098	10.65550	1.38465	26.44262	350.45	-5.86
86/10/21	2446724.5	1.37008	-0.17397	-0.11657	4.56021	23.69617	10.75493	1.38599	26.41917	352.76	-4.82
86/10/25	2446728.5	1.37939	-0.11909	-0.09163	3.50362	23.80880	10.83494	1.38755	26.39186	355.07	-3.79
86/10/29	2446732.5	1.38626	-0.06400	-0.06653	2.44464	23.87892	10.89551	1.38933	26.36078	357.36	-2.74
86/11/ 2	2446736.5	1.39069	-0.00880	-0.04131	1.38567	23.90668	10.93663	1.39133	26.32602	359.64	-1.70
86/11/ 6	2446740.5	1.39267	0.04642	-0.01601	0.32905	23.89239	10.95839	1.39353	26.28766	1.91	-0.66
86/11/10	2446744.5	1.39221	0.10156	0.00931	-0.72291	23.83648	10.96092	1.39594	26.24581	4.17	0.38
86/11/14	2446748.5	1.38933	0.15653	0.03462	-1.76796	23.73951	10.94441	1.39855	26.20057	6.43	1.42
86/11/18	2446752.5	1.38405	0.21122	0.05986	-2.80390	23.60213	10.90911	1.40135	26.15208	8.68	2.45
86/11/22	2446756.5	1.37638	0.26555	0.08501	-3.82864	23.42512	10.85533	1.40434	26.10044	10.92	3.47
86/11/26	2446760.5	1.36637	0.31942	0.11000	-4.84013	23.20938	10.78340	1.40751	26.04580	13.16	4.48
86/11/30	2446764.5	1.35403	0.37275	0.13482	-5.83644	22.95586	10.69373	1.41086	25.98829	15.39	5.48
86/12/ 4	2446768.5	1.33942	0.42546	0.15940	-6.81570	22.66563	10.58675	1.41437	25.92805	17.62	6.47
86/12/ 8	2446772.5	1.32256	0.47745	0.18372	-7.77616	22.33982	10.46294	1.41805	25.86522	19.85	7.44
86/12/12	2446776.5	1.30350	0.52865	0.20773	-8.71617	21.97966	10.32280	1.42188	25.79995	22.08	8.40
86/12/16	2446780.5	1.28230	0.57898	0.23140	-9.63419	21.58640	10.16689	1.42585	25.73239	24.30	9.34
86/12/20	2446784.5	1.25901	0.62836	0.25469	-10.52876	21.16137	9.99577	1.42997	25.66269	26.52	10.26
86/12/24	2446788.5	1.23367	0.67673	0.27757	-11.39856	20.70595	9.81002	1.43421	25.59101	28.75	11.16
86/12/28	2446792.5	1.20636	0.72401	0.30001	-12.24235	20.22152	9.61027	1.43858	25.51750	30.97	12.04

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MARS

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86/12/16	2446780.5	1.28230	0.62324	-0.01807	-9.63419	23.84938	0.73866	1.42585	25.73239	25.92	-0.73
86/12/20	2446784.5	1.25901	0.67782	-0.01635	-10.52876	23.39135	0.75077	1.42997	25.66269	28.30	-0.66
86/12/24	2446788.5	1.23367	0.73129	-0.01460	-11.39856	22.89962	0.76157	1.43421	25.59101	30.66	-0.58
86/12/28	2446792.5	1.20636	0.78360	-0.01283	-12.24235	22.37572	0.77106	1.43858	25.51749	33.01	-0.51
87/ 1/ 1	2446796.5	1.17713	0.83465	-0.01104	-13.05902	21.82121	0.77924	1.44306	25.44230	35.34	-0.44
87/ 1/ 5	2446800.5	1.14605	0.88440	-0.00923	-13.84756	21.23769	0.78611	1.44764	25.36558	37.66	-0.37
87/ 1/ 9	2446804.5	1.11317	0.93276	-0.00741	-14.60706	20.62677	0.79171	1.45233	25.28748	39.96	-0.29
87/ 1/13	2446808.5	1.07858	0.97968	-0.00557	-15.33672	19.99006	0.79603	1.45710	25.20816	42.25	-0.22
87/ 1/17	2446812.5	1.04234	1.02510	-0.00373	-16.03583	19.32920	0.79909	1.46195	25.12776	44.52	-0.15
87/ 1/21	2446816.5	1.00451	1.06897	-0.00188	-16.70378	18.64580	0.80093	1.46688	25.04643	46.78	-0.07
87/ 1/25	2446820.5	0.96518	1.11124	-0.00003	-17.34007	17.94148	0.80154	1.47188	24.96432	49.02	-0.00
87/ 1/29	2446824.5	0.92442	1.15185	0.00182	-17.94427	17.21783	0.80097	1.47693	24.88156	51.25	0.07
87/ 2/ 2	2446828.5	0.88230	1.19077	0.00367	-18.51604	16.47643	0.79923	1.48203	24.79829	53.46	0.14
87/ 2/ 6	2446832.5	0.83889	1.22797	0.00551	-19.05513	15.71884	0.79636	1.48717	24.71465	55.66	0.21
87/ 2/10	2446836.5	0.79428	1.26339	0.00735	-19.56136	14.94658	0.79237	1.49234	24.63077	57.84	0.28
87/ 2/14	2446840.5	0.74854	1.29701	0.00917	-20.03462	14.16115	0.78730	1.49755	24.54677	60.01	0.35
87/ 2/18	2446844.5	0.70174	1.32881	0.01098	-20.47487	13.36402	0.78118	1.50276	24.46278	62.16	0.42
87/ 2/22	2446848.5	0.65396	1.35875	0.01278	-20.88214	12.55662	0.77404	1.50799	24.37892	64.30	0.49
87/ 2/26	2446852.5	0.60528	1.38682	0.01456	-21.25652	11.74033	0.76591	1.51322	24.29530	66.42	0.55
87/ 3/ 2	2446856.5	0.55578	1.41299	0.01632	-21.59815	10.91650	0.75683	1.51845	24.21204	68.53	0.62
87/ 3/ 6	2446860.5	0.50552	1.43725	0.01806	-21.90722	10.08645	0.74682	1.52367	24.12925	70.62	0.68
87/ 3/10	2446864.5	0.45458	1.45959	0.01977	-22.18397	9.25144	0.73591	1.52887	24.04702	72.70	0.74
87/ 3/14	2446868.5	0.40304	1.47999	0.02146	-22.42868	8.41268	0.72415	1.53404	23.96546	74.77	0.80
87/ 3/18	2446872.5	0.35098	1.49846	0.02311	-22.64167	7.57138	0.71156	1.53919	23.88467	76.82	0.86
87/ 3/22	2446876.5	0.29846	1.51498	0.02474	-22.82330	6.72865	0.69818	1.54429	23.80473	78.86	0.92
87/ 3/26	2446880.5	0.24555	1.52955	0.02634	-22.97395	5.88560	0.68404	1.54936	23.72574	80.88	0.97
87/ 3/30	2446884.5	0.19233	1.54217	0.02790	-23.09404	5.04327	0.66916	1.55437	23.64777	82.89	1.03
87/ 4/ 3	2446888.5	0.13887	1.55285	0.02943	-23.18401	4.20268	0.65359	1.55932	23.57091	84.89	1.08
87/ 4/ 7	2446892.5	0.08524	1.56159	0.03092	-23.24432	3.36480	0.63736	1.56422	23.49525	86.88	1.13
87/ 4/11	2446896.5	0.03150	1.56840	0.03237	-23.27546	2.53055	0.62049	1.56905	23.42084	88.85	1.18
87/ 4/15	2446900.5	-0.02228	1.57329	0.03379	-23.27791	1.70083	0.60301	1.57381	23.34775	90.81	1.23
87/ 4/19	2446904.5	-0.07603	1.57626	0.03516	-23.25221	0.87648	0.58497	1.57849	23.27607	92.76	1.28
87/ 4/23	2446908.5	-0.12969	1.57734	0.03649	-23.19886	0.05831	0.56638	1.58308	23.20585	94.70	1.32
87/ 4/27	2446912.5	-0.18320	1.57654	0.03778	-23.11841	-0.75290	0.54728	1.58759	23.13714	96.63	1.36
87/ 5/ 1	2446916.5	-0.23649	1.57387	0.03902	-23.01140	-1.55641	0.52769	1.59201	23.07001	98.55	1.40
87/ 5/ 5	2446920.5	-0.28950	1.56935	0.04021	-22.87838	-2.35151	0.50765	1.59634	23.00452	100.45	1.44
87/ 5/ 9	2446924.5	-0.34218	1.56301	0.04136	-22.71991	-3.13752	0.48718	1.60056	22.94070	102.35	1.48
87/ 5/13	2446928.5	-0.39446	1.55486	0.04247	-22.53654	-3.91381	0.46631	1.60468	22.87862	104.24	1.52
87/ 5/17	2446932.5	-0.44628	1.54493	0.04352	-22.32884	-4.67976	0.44507	1.60869	22.81831	106.11	1.55
87/ 5/21	2446936.5	-0.49760	1.53325	0.04452	-22.09736	-5.43477	0.42347	1.61259	22.75982	107.98	1.58
87/ 5/25	2446940.5	-0.54836	1.51983	0.04547	-21.84267	-6.17830	0.40156	1.61637	22.70319	109.84	1.61
87/ 5/29	2446944.5	-0.59851	1.50471	0.04638	-21.56533	-6.90980	0.37934	1.62004	22.64846	111.69	1.64
87/ 6/ 2	2446948.5	-0.64799	1.48792	0.04723	-21.26591	-7.62876	0.35686	1.62358	22.59567	113.53	1.67
87/ 6/ 6	2446952.5	-0.69675	1.46947	0.04802	-20.94495	-8.33471	0.33412	1.62700	22.54485	115.37	1.69
87/ 6/10	2446956.5	-0.74474	1.44942	0.04877	-20.60302	-9.02718	0.31116	1.63029	22.49603	117.20	1.71

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87/ 6/14	2446960.5	-0.79192	1.42778	0.04946	-20.24067	-9.70571	0.28799	1.63344	22.44924	119.02	1.74
87/ 6/18	2446964.5	-0.83825	1.40458	0.05010	-19.85844	-10.36989	0.26465	1.63647	22.40452	120.83	1.75
87/ 6/22	2446968.5	-0.88366	1.37988	0.05069	-19.45689	-11.01931	0.24114	1.63936	22.36189	122.64	1.77
87/ 6/26	2446972.5	-0.92813	1.35368	0.05121	-19.03654	-11.65358	0.21750	1.64210	22.32137	124.44	1.79
87/ 6/30	2446976.5	-0.97160	1.32604	0.05169	-18.59795	-12.27233	0.19374	1.64471	22.28298	126.23	1.80
87/ 7/ 4	2446980.5	-1.01404	1.29699	0.05211	-18.14163	-12.87519	0.16989	1.64718	22.24675	128.02	1.81
87/ 7/ 8	2446984.5	-1.05541	1.26657	0.05247	-17.66812	-13.46182	0.14595	1.64950	22.21270	129.80	1.82
87/ 7/12	2446988.5	-1.09566	1.23481	0.05278	-17.17794	-14.03188	0.12197	1.65167	22.18085	131.58	1.83
87/ 7/16	2446992.5	-1.13477	1.20175	0.05304	-16.67161	-14.58506	0.09794	1.65370	22.15121	133.36	1.84
87/ 7/20	2446996.5	-1.17268	1.16743	0.05324	-16.14965	-15.12104	0.07390	1.65557	22.12380	135.13	1.84
87/ 7/24	2447000.5	-1.20937	1.13190	0.05338	-15.61256	-15.63953	0.04986	1.65729	22.09863	136.90	1.85
87/ 7/28	2447004.5	-1.24481	1.09519	0.05347	-15.06085	-16.14024	0.02584	1.65887	22.07572	138.66	1.85
87/ 8/ 1	2447008.5	-1.27895	1.05734	0.05350	-14.49504	-16.62288	0.00186	1.66028	22.05507	140.42	1.85
87/ 8/ 5	2447012.5	-1.31177	1.01840	0.05348	-13.91561	-17.08717	-0.02207	1.66154	22.03670	142.18	1.84
87/ 8/ 9	2447016.5	-1.34323	0.97840	0.05340	-13.32307	-17.53286	-0.04592	1.66265	22.02062	143.93	1.84
87/ 8/13	2447020.5	-1.37332	0.93740	0.05326	-12.71792	-17.95968	-0.06968	1.66360	22.00683	145.68	1.83
87/ 8/17	2447024.5	-1.40198	0.89544	0.05308	-12.10064	-18.36738	-0.09333	1.66439	21.99534	147.43	1.83
87/ 8/21	2447028.5	-1.42922	0.85255	0.05283	-11.47174	-18.75570	-0.11686	1.66502	21.98615	149.18	1.82
87/ 8/25	2447032.5	-1.45498	0.80880	0.05254	-10.83170	-19.12441	-0.14025	1.66550	21.97927	150.93	1.81
87/ 8/29	2447036.5	-1.47925	0.76421	0.05218	-10.18102	-19.47326	-0.16347	1.66581	21.97471	152.68	1.80
87/ 9/ 2	2447040.5	-1.50201	0.71884	0.05178	-9.52019	-19.80202	-0.18651	1.66597	21.97246	154.42	1.78
87/ 9/ 6	2447044.5	-1.52323	0.67273	0.05132	-8.84971	-20.11046	-0.20937	1.66597	21.97253	156.17	1.77
87/ 9/10	2447048.5	-1.54289	0.62594	0.05081	-8.17007	-20.39836	-0.23201	1.66580	21.97491	157.92	1.75
87/ 9/14	2447052.5	-1.56097	0.57850	0.05025	-7.48176	-20.66547	-0.25442	1.66548	21.97961	159.67	1.73
87/ 9/18	2447056.5	-1.57746	0.53047	0.04964	-6.78528	-20.91160	-0.27659	1.66500	21.98662	161.41	1.71
87/ 9/22	2447060.5	-1.59232	0.48190	0.04897	-6.08114	-21.13651	-0.29849	1.66436	21.99594	163.16	1.69
87/ 9/26	2447064.5	-1.60555	0.43283	0.04826	-5.36985	-21.33999	-0.32012	1.66357	22.00756	164.91	1.66
87/ 9/30	2447068.5	-1.61712	0.38332	0.04749	-4.65190	-21.52183	-0.34145	1.66261	22.02148	166.66	1.64
87/10/ 4	2447072.5	-1.62704	0.33341	0.04668	-3.92781	-21.68181	-0.36247	1.66150	22.03770	168.42	1.61
87/10/ 8	2447076.5	-1.63527	0.28316	0.04582	-3.19812	-21.81973	-0.38316	1.66023	22.05619	170.18	1.58
87/10/12	2447080.5	-1.64181	0.23261	0.04491	-2.46334	-21.93539	-0.40351	1.65881	22.07696	171.94	1.55
87/10/16	2447084.5	-1.64665	0.18182	0.04396	-1.72401	-22.02858	-0.42349	1.65724	22.09999	173.70	1.52
87/10/20	2447088.5	-1.64977	0.13085	0.04296	-0.98066	-22.09910	-0.44309	1.65551	22.12528	175.47	1.49
87/10/24	2447092.5	-1.65117	0.07974	0.04191	-0.23387	-22.14675	-0.46228	1.65363	22.15281	177.24	1.45
87/10/28	2447096.5	-1.65085	0.02854	0.04082	0.51583	-22.17134	-0.48107	1.65160	22.18255	179.01	1.42
87/11/ 1	2447100.5	-1.64879	-0.02269	0.03969	1.26785	-22.17268	-0.49942	1.64942	22.21451	180.79	1.38
87/11/ 5	2447104.5	-1.64499	-0.07389	0.03851	2.02161	-22.15059	-0.51731	1.64710	22.24867	182.57	1.34
87/11/ 9	2447108.5	-1.63945	-0.12501	0.03730	2.77653	-22.10488	-0.53474	1.64463	22.28499	184.36	1.30
87/11/13	2447112.5	-1.63216	-0.17600	0.03604	3.53199	-22.03538	-0.55167	1.64202	22.32347	186.15	1.26
87/11/17	2447116.5	-1.62313	-0.22680	0.03475	4.28738	-21.94191	-0.56810	1.63927	22.36407	187.95	1.21
87/11/21	2447120.5	-1.61235	-0.27736	0.03342	5.04205	-21.82431	-0.58400	1.63638	22.40678	189.76	1.17
87/11/25	2447124.5	-1.59983	-0.32762	0.03205	5.79537	-21.68243	-0.59935	1.63335	22.45158	191.57	1.12
87/11/29	2447128.5	-1.58558	-0.37752	0.03065	6.54666	-21.51612	-0.61414	1.63019	22.49843	193.39	1.08
87/12/ 3	2447132.5	-1.56959	-0.42701	0.02921	7.29524	-21.32523	-0.62834	1.62690	22.54730	195.22	1.03
87/12/ 7	2447136.5	-1.55187	-0.47604	0.02775	8.04043	-21.10964	-0.64194	1.62348	22.59817	197.05	0.98

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87/12/11	2447140.5	-1.53244	-0.52453	0.02625	8.78150	-20.86923	-0.65491	1.61994	22.65101	198.90	0.93
87/12/15	2447144.5	-1.51130	-0.57244	0.02472	9.51771	-20.60388	-0.66724	1.61627	22.70577	200.75	0.88
87/12/19	2447148.5	-1.48847	-0.61971	0.02317	10.24833	-20.31352	-0.67890	1.61249	22.76243	202.60	0.82
87/12/23	2447152.5	-1.46396	-0.66628	0.02158	10.97257	-19.99805	-0.68987	1.60859	22.82094	204.47	0.77
87/12/27	2447156.5	-1.43778	-0.71209	0.01998	11.68965	-19.65741	-0.70014	1.60458	22.88126	206.35	0.71
87/12/31	2447160.5	-1.40995	-0.75708	0.01835	12.39874	-19.29157	-0.70969	1.60046	22.94335	208.23	0.66
88/ 1/ 4	2447164.5	-1.38050	-0.80120	0.01670	13.09903	-18.90049	-0.71848	1.59624	23.00716	210.13	0.60
88/ 1/ 8	2447168.5	-1.34944	-0.84439	0.01503	13.78965	-18.48417	-0.72651	1.59192	23.07264	212.04	0.54
88/ 1/12	2447172.5	-1.31679	-0.88658	0.01334	14.46973	-18.04262	-0.73374	1.58750	23.13974	213.95	0.48
88/ 1/16	2447176.5	-1.28259	-0.92773	0.01164	15.13838	-17.57590	-0.74017	1.58299	23.20842	215.88	0.42
88/ 1/20	2447180.5	-1.24686	-0.96777	0.00993	15.79467	-17.08407	-0.74576	1.57840	23.27860	217.82	0.36
88/ 1/24	2447184.5	-1.20963	-1.00665	0.00820	16.43767	-16.56722	-0.75050	1.57372	23.35023	219.77	0.30
88/ 1/28	2447188.5	-1.17092	-1.04430	0.00646	17.06642	-16.02550	-0.75437	1.56897	23.42325	221.73	0.24
88/ 2/ 1	2447192.5	-1.13078	-1.08067	0.00471	17.67994	-15.45906	-0.75735	1.56414	23.49758	223.70	0.17
88/ 2/ 5	2447196.5	-1.08925	-1.11571	0.00296	18.27723	-14.86811	-0.75941	1.55925	23.57317	225.69	0.11
88/ 2/ 9	2447200.5	-1.04635	-1.14935	0.00120	18.85727	-14.25288	-0.76054	1.55430	23.64994	227.69	0.04
88/ 2/13	2447204.5	-1.00213	-1.18154	-0.00055	19.41902	-13.61365	-0.76072	1.54929	23.72780	229.70	-0.02
88/ 2/17	2447208.5	-0.95664	-1.21223	-0.00231	19.96144	-12.95074	-0.75992	1.54424	23.80668	231.72	-0.09
88/ 2/21	2447212.5	-0.90992	-1.24136	-0.00406	20.48344	-12.26453	-0.75814	1.53914	23.88649	233.76	-0.15
88/ 2/25	2447216.5	-0.86202	-1.26888	-0.00581	20.98394	-11.55543	-0.75535	1.53400	23.96715	235.81	-0.22
88/ 2/29	2447220.5	-0.81299	-1.29473	-0.00755	21.46186	-10.82393	-0.75153	1.52883	24.04857	237.87	-0.28
88/ 3/ 4	2447224.5	-0.76288	-1.31887	-0.00928	21.91608	-10.07053	-0.74668	1.52364	24.13064	239.95	-0.35
88/ 3/ 8	2447228.5	-0.71174	-1.34125	-0.01100	22.34549	-9.29584	-0.74077	1.51843	24.21326	242.05	-0.42
88/ 3/12	2447232.5	-0.65965	-1.36181	-0.01271	22.74897	-8.50048	-0.73379	1.51321	24.29635	244.15	-0.48
88/ 3/16	2447236.5	-0.60666	-1.38051	-0.01439	23.12542	-7.68517	-0.72573	1.50799	24.37977	246.28	-0.55
88/ 3/20	2447240.5	-0.55283	-1.39730	-0.01606	23.47370	-6.85069	-0.71658	1.50277	24.46344	248.41	-0.61
88/ 3/24	2447244.5	-0.49822	-1.41214	-0.01770	23.79271	-5.99787	-0.70633	1.49756	24.54723	250.57	-0.68
88/ 3/28	2447248.5	-0.44292	-1.42500	-0.01932	24.08135	-5.12761	-0.69498	1.49237	24.63101	252.73	-0.74
88/ 4/ 1	2447252.5	-0.38698	-1.43582	-0.02091	24.33853	-4.24091	-0.68250	1.48721	24.71467	254.92	-0.81
88/ 4/ 5	2447256.5	-0.33049	-1.44458	-0.02247	24.56319	-3.33882	-0.66891	1.48207	24.79809	257.11	-0.87
88/ 4/ 9	2447260.5	-0.27352	-1.45124	-0.02400	24.75427	-2.42246	-0.65421	1.47698	24.88112	259.33	-0.93
88/ 4/13	2447264.5	-0.21614	-1.45576	-0.02549	24.91078	-1.49305	-0.63838	1.47194	24.96365	261.55	-0.99
88/ 4/17	2447268.5	-0.15845	-1.45813	-0.02695	25.03172	-0.55187	-0.62144	1.46696	25.04552	263.80	-1.05
88/ 4/21	2447272.5	-0.10052	-1.45831	-0.02837	25.11617	0.39972	-0.60339	1.46204	25.12660	266.06	-1.11
88/ 4/25	2447276.5	-0.04243	-1.45627	-0.02974	25.16324	1.36028	-0.58424	1.45720	25.20675	268.33	-1.17
88/ 4/29	2447280.5	0.01572	-1.45201	-0.03106	25.17208	2.32830	-0.56400	1.45243	25.28582	270.62	-1.23
88/ 5/ 3	2447284.5	0.07384	-1.44551	-0.03234	25.14193	3.30219	-0.54269	1.44776	25.36367	272.92	-1.28
88/ 5/ 7	2447288.5	0.13185	-1.43675	-0.03357	25.07208	4.28028	-0.52032	1.44318	25.44014	275.24	-1.33
88/ 5/11	2447292.5	0.18965	-1.42573	-0.03475	24.96190	5.26084	-0.49691	1.43871	25.51509	277.58	-1.38
88/ 5/15	2447296.5	0.24715	-1.41245	-0.03587	24.81084	6.24206	-0.47250	1.43436	25.58836	279.93	-1.43
88/ 5/19	2447300.5	0.30426	-1.39689	-0.03693	24.61843	7.22208	-0.44711	1.43012	25.65981	282.29	-1.48
88/ 5/23	2447304.5	0.36087	-1.37908	-0.03793	24.38432	8.19897	-0.42076	1.42602	25.72927	284.66	-1.52
88/ 5/27	2447308.5	0.41689	-1.35902	-0.03887	24.10824	9.17075	-0.39350	1.42205	25.79660	287.05	-1.57
88/ 5/31	2447312.5	0.47222	-1.33671	-0.03975	23.79003	10.13539	-0.36537	1.41823	25.86165	289.46	-1.61
88/ 6/ 4	2447316.5	0.52677	-1.31219	-0.04056	23.42966	11.09081	-0.33640	1.41456	25.92427	291.87	-1.64

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88/ 6/ 8	2447320.5	0.58044	-1.28548	-0.04130	23.02719	12.03491	-0.30665	1.41106	25.98432	294.30	-1.68
88/ 6/12	2447324.5	0.63313	-1.25660	-0.04198	22.58285	12.96556	-0.27616	1.40772	26.04164	296.74	-1.71
88/ 6/16	2447328.5	0.68475	-1.22559	-0.04258	22.09697	13.88061	-0.24498	1.40455	26.09611	299.19	-1.74
88/ 6/20	2447332.5	0.73520	-1.19248	-0.04311	21.57000	14.77789	-0.21319	1.40156	26.14759	301.66	-1.76
88/ 6/24	2447336.5	0.78438	-1.15732	-0.04356	21.00257	15.65526	-0.18083	1.39877	26.19595	304.13	-1.78
88/ 6/28	2447340.5	0.83221	-1.12016	-0.04394	20.39540	16.51058	-0.14796	1.39616	26.24106	306.61	-1.80
88/ 7/ 2	2447344.5	0.87859	-1.08106	-0.04425	19.74938	17.34171	-0.11466	1.39376	26.28281	309.10	-1.82
88/ 7/ 6	2447348.5	0.92343	-1.04006	-0.04447	19.06554	18.14659	-0.08100	1.39155	26.32110	311.60	-1.83
88/ 7/10	2447352.5	0.96665	-0.99723	-0.04462	18.34503	18.92317	-0.04703	1.38956	26.35581	314.11	-1.84
88/ 7/14	2447356.5	1.00816	-0.95265	-0.04469	17.58914	19.66946	-0.01285	1.38778	26.38685	316.62	-1.85
88/ 7/18	2447360.5	1.04789	-0.90638	-0.04468	16.79931	20.38356	0.02148	1.38621	26.41414	319.14	-1.85
88/ 7/22	2447364.5	1.08575	-0.85850	-0.04459	15.97710	21.06363	0.05588	1.38487	26.43761	321.67	-1.85
88/ 7/26	2447368.5	1.12168	-0.80909	-0.04442	15.12417	21.70792	0.09027	1.38375	26.45719	324.20	-1.84
88/ 7/30	2447372.5	1.15561	-0.75823	-0.04417	14.24234	22.31480	0.12458	1.38286	26.47282	326.73	-1.83
88/ 8/ 3	2447376.5	1.18747	-0.70601	-0.04384	13.33350	22.88273	0.15872	1.38219	26.48446	329.27	-1.82
88/ 8/ 7	2447380.5	1.21720	-0.65253	-0.04344	12.39966	23.41030	0.19261	1.38176	26.49209	331.80	-1.80
88/ 8/11	2447384.5	1.24474	-0.59788	-0.04295	11.44291	23.89622	0.22619	1.38155	26.49567	334.34	-1.78
88/ 8/15	2447388.5	1.27005	-0.54216	-0.04239	10.46544	24.33934	0.25936	1.38158	26.49521	336.88	-1.76
88/ 8/19	2447392.5	1.29308	-0.48546	-0.04176	9.46948	24.73863	0.29206	1.38184	26.49069	339.42	-1.73
88/ 8/23	2447396.5	1.31379	-0.42789	-0.04104	8.45735	25.09325	0.32421	1.38233	26.48213	341.96	-1.70
88/ 8/27	2447400.5	1.33215	-0.36955	-0.04026	7.43140	25.40246	0.35574	1.38304	26.46955	344.50	-1.67
88/ 8/31	2447404.5	1.34812	-0.31056	-0.03940	6.39400	25.66571	0.38658	1.38399	26.45300	347.03	-1.63
88/ 9/ 4	2447408.5	1.36168	-0.25101	-0.03847	5.34758	25.88258	0.41665	1.38516	26.43252	349.56	-1.59
88/ 9/ 8	2447412.5	1.37282	-0.19101	-0.03748	4.29455	26.05282	0.44590	1.38655	26.40817	352.08	-1.55
88/ 9/12	2447416.5	1.38152	-0.13067	-0.03641	3.23732	26.17632	0.47427	1.38816	26.38001	354.60	-1.50
88/ 9/16	2447420.5	1.38778	-0.07010	-0.03529	2.17830	26.25312	0.50169	1.38999	26.34812	357.11	-1.45
88/ 9/20	2447424.5	1.39159	-0.00941	-0.03410	1.11987	26.28344	0.52812	1.39204	26.31259	359.61	-1.40
88/ 9/24	2447428.5	1.39295	0.05130	-0.03285	0.06435	26.26760	0.55349	1.39429	26.27351	2.11	-1.35
88/ 9/28	2447432.5	1.39189	0.11192	-0.03154	-0.98595	26.20609	0.57778	1.39674	26.23099	4.60	-1.29
88/10/ 2	2447436.5	1.38840	0.17235	-0.03018	-2.02881	26.09952	0.60093	1.39939	26.18515	7.08	-1.24
88/10/ 6	2447440.5	1.38252	0.23248	-0.02877	-3.06205	25.94862	0.62292	1.40223	26.13609	9.55	-1.18
88/10/10	2447444.5	1.37427	0.29221	-0.02730	-4.08358	25.75426	0.64369	1.40525	26.08394	12.00	-1.11
88/10/14	2447448.5	1.36366	0.35144	-0.02579	-5.09139	25.51741	0.66324	1.40846	26.02883	14.45	-1.05
88/10/18	2447452.5	1.35075	0.41008	-0.02424	-6.08357	25.23913	0.68153	1.41184	25.97090	16.89	-0.98
88/10/22	2447456.5	1.33557	0.46802	-0.02264	-7.05827	24.92059	0.69854	1.41538	25.91029	19.31	-0.92
88/10/26	2447460.5	1.31816	0.52519	-0.02101	-8.01378	24.56306	0.71426	1.41908	25.84714	21.72	-0.85
88/10/30	2447464.5	1.29856	0.58148	-0.01934	-8.94845	24.16784	0.72867	1.42294	25.78159	24.12	-0.78
88/11/ 3	2447468.5	1.27683	0.63682	-0.01765	-9.86078	23.73634	0.74178	1.42694	25.71379	26.51	-0.71
88/11/ 7	2447472.5	1.25302	0.69113	-0.01592	-10.74933	23.27001	0.75356	1.43107	25.64390	28.88	-0.64
88/11/11	2447476.5	1.22718	0.74431	-0.01417	-11.61282	22.77035	0.76404	1.43533	25.57206	31.24	-0.57
88/11/15	2447480.5	1.19938	0.79631	-0.01239	-12.45003	22.23890	0.77320	1.43972	25.49842	33.58	-0.49
88/11/19	2447484.5	1.16968	0.84704	-0.01059	-13.25987	21.67723	0.78106	1.44421	25.42314	35.91	-0.42
88/11/23	2447488.5	1.13814	0.89644	-0.00878	-14.04135	21.08693	0.78762	1.44881	25.34637	38.23	-0.35
88/11/27	2447492.5	1.10483	0.94445	-0.00696	-14.79360	20.46963	0.79289	1.45351	25.26826	40.53	-0.27
88/12/ 1	2447496.5	1.06981	0.99100	-0.00512	-15.51582	19.82693	0.79690	1.45829	25.18895	42.81	-0.20

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MARS

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88/12/ 5	2447500.5	1.03316	1.03604	-0.00327	-16.20735	19.16047	0.79966	1.46315	25.10859	45.08	-0.13
88/12/ 9	2447504.5	0.99495	1.07951	-0.00143	-16.86759	18.47186	0.80119	1.46809	25.02732	47.33	-0.06
88/12/13	2447508.5	0.95525	1.12137	0.00043	-17.49605	17.76270	0.80151	1.47308	24.94530	49.57	0.02
88/12/17	2447512.5	0.91414	1.16157	0.00228	-18.09234	17.03460	0.80065	1.47814	24.86265	51.80	0.09
88/12/21	2447516.5	0.87168	1.20006	0.00412	-18.65612	16.28912	0.79863	1.48324	24.77951	54.01	0.16
88/12/25	2447520.5	0.82797	1.23682	0.00597	-19.18717	15.52782	0.79547	1.48838	24.69602	56.20	0.23
88/12/29	2447524.5	0.78306	1.27180	0.00780	-19.68532	14.75221	0.79121	1.49355	24.61230	58.38	0.30
89/ 1/ 2	2447528.5	0.73704	1.30497	0.00962	-20.15048	13.96379	0.78588	1.49875	24.52849	60.54	0.37
89/ 1/ 6	2447532.5	0.68998	1.33631	0.01143	-20.58262	13.16400	0.77951	1.50397	24.44469	62.69	0.44
89/ 1/10	2447536.5	0.64196	1.36578	0.01322	-20.98180	12.35427	0.77212	1.50919	24.36104	64.82	0.50
89/ 1/14	2447540.5	0.59306	1.39338	0.01500	-21.34810	11.53598	0.76375	1.51442	24.27764	66.94	0.57
89/ 1/18	2447544.5	0.54335	1.41908	0.01675	-21.68169	10.71047	0.75442	1.51964	24.19460	69.05	0.63
89/ 1/22	2447548.5	0.49291	1.44286	0.01848	-21.98275	9.87904	0.74419	1.52484	24.11204	71.14	0.69
89/ 1/26	2447552.5	0.44181	1.46472	0.02019	-22.25154	9.04295	0.73306	1.53003	24.03005	73.21	0.76
89/ 1/30	2447556.5	0.39013	1.48464	0.02187	-22.48836	8.20341	0.72109	1.53520	23.94874	75.28	0.82
89/ 2/ 3	2447560.5	0.33793	1.50262	0.02352	-22.69353	7.36159	0.70830	1.54033	23.86820	77.33	0.87
89/ 2/ 7	2447564.5	0.28530	1.51865	0.02514	-22.86741	6.51862	0.69472	1.54542	23.78852	79.36	0.93
89/ 2/11	2447568.5	0.23230	1.53274	0.02673	-23.01040	5.67559	0.68038	1.55047	23.70978	81.38	0.99
89/ 2/15	2447572.5	0.17900	1.54488	0.02828	-23.12293	4.83354	0.66533	1.55547	23.63209	83.39	1.04
89/ 2/19	2447576.5	0.12549	1.55507	0.02980	-23.20543	3.99346	0.64959	1.56041	23.55550	85.39	1.09
89/ 2/23	2447580.5	0.07181	1.56333	0.03128	-23.25837	3.15633	0.63318	1.56529	23.48010	87.37	1.15
89/ 2/27	2447584.5	0.01805	1.56966	0.03273	-23.28225	2.32306	0.61616	1.57010	23.40597	89.34	1.19
89/ 3/ 3	2447588.5	-0.03574	1.57407	0.03413	-23.27757	1.49452	0.59853	1.57484	23.33317	91.30	1.24
89/ 3/ 7	2447592.5	-0.08948	1.57657	0.03549	-23.24483	0.67157	0.58034	1.57950	23.26177	93.25	1.29
89/ 3/11	2447596.5	-0.14312	1.57717	0.03681	-23.18458	-0.14501	0.56162	1.58408	23.19183	95.19	1.33
89/ 3/15	2447600.5	-0.19658	1.57590	0.03809	-23.09734	-0.95442	0.54239	1.58857	23.12342	97.11	1.37
89/ 3/19	2447604.5	-0.24982	1.57277	0.03932	-22.98368	-1.75596	0.52269	1.59297	23.05658	99.03	1.41
89/ 3/23	2447608.5	-0.30276	1.56780	0.04050	-22.84413	-2.54890	0.50253	1.59728	22.99138	100.93	1.45
89/ 3/27	2447612.5	-0.35534	1.56100	0.04164	-22.67926	-3.33260	0.48195	1.60148	22.92787	102.82	1.49
89/ 3/31	2447616.5	-0.40752	1.55241	0.04273	-22.48962	-4.10640	0.46098	1.60557	22.86609	104.71	1.52
89/ 4/ 4	2447620.5	-0.45924	1.54204	0.04377	-22.27578	-4.86970	0.43964	1.60956	22.80609	106.58	1.56
89/ 4/ 8	2447624.5	-0.51043	1.52992	0.04476	-22.03831	-5.62193	0.41797	1.61344	22.74792	108.45	1.59
89/ 4/12	2447628.5	-0.56104	1.51607	0.04570	-21.77776	-6.36252	0.39597	1.61720	22.69161	110.31	1.62
89/ 4/16	2447632.5	-0.61103	1.50053	0.04659	-21.49469	-7.09096	0.37368	1.62084	22.63721	112.16	1.65
89/ 4/20	2447636.5	-0.66034	1.48332	0.04742	-21.18968	-7.80673	0.35113	1.62435	22.58474	114.00	1.67
89/ 4/24	2447640.5	-0.70892	1.46447	0.04821	-20.86326	-8.50935	0.32833	1.62775	22.53425	115.83	1.70
89/ 4/28	2447644.5	-0.75672	1.44401	0.04894	-20.51601	-9.19837	0.30531	1.63101	22.48577	117.66	1.72
89/ 5/ 2	2447648.5	-0.80369	1.42198	0.04962	-20.14847	-9.87334	0.28210	1.63414	22.43933	119.47	1.74
89/ 5/ 6	2447652.5	-0.84980	1.39840	0.05024	-19.76120	-10.53385	0.25871	1.63714	22.39495	121.29	1.76
89/ 5/10	2447656.5	-0.89498	1.37332	0.05082	-19.35473	-11.17948	0.23516	1.63999	22.35267	123.09	1.78
89/ 5/14	2447660.5	-0.93921	1.34676	0.05133	-18.92961	-11.80987	0.21149	1.64272	22.31250	124.89	1.79
89/ 5/18	2447664.5	-0.98243	1.31877	0.05179	-18.48637	-12.42462	0.18770	1.64529	22.27448	126.68	1.80
89/ 5/22	2447668.5	-1.02461	1.28937	0.05220	-18.02555	-13.02340	0.16383	1.64773	22.23862	128.47	1.82
89/ 5/26	2447672.5	-1.06570	1.25861	0.05255	-17.54767	-13.60586	0.13988	1.65002	22.20495	130.26	1.83
89/ 5/30	2447676.5	-1.10567	1.22652	0.05284	-17.05326	-14.17166	0.11588	1.65216	22.17347	132.03	1.83

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89/ 6/ 3	2447680.5	-1.14448	1.19314	0.05308	-16.54283	-14.72049	0.09185	1.65416	22.14422	133.81	1.84
89/ 6/ 7	2447684.5	-1.18209	1.15852	0.05327	-16.01689	-15.25205	0.06781	1.65600	22.11720	135.58	1.84
89/ 6/11	2447688.5	-1.21847	1.12269	0.05340	-15.47597	-15.76603	0.04377	1.65769	22.09243	137.34	1.85
89/ 6/15	2447692.5	-1.25359	1.08569	0.05347	-14.92057	-16.26216	0.01976	1.65923	22.06992	139.11	1.85
89/ 6/19	2447696.5	-1.28740	1.04756	0.05349	-14.35119	-16.74014	-0.00420	1.66062	22.04969	140.86	1.85
89/ 6/23	2447700.5	-1.31988	1.00836	0.05345	-13.76833	-17.19970	-0.02811	1.66184	22.03174	142.62	1.84
89/ 6/27	2447704.5	-1.35100	0.96811	0.05336	-13.17249	-17.64059	-0.05194	1.66292	22.01608	144.38	1.84
89/ 7/ 1	2447708.5	-1.38073	0.92686	0.05321	-12.56417	-18.06255	-0.07567	1.66383	22.00272	146.13	1.83
89/ 7/ 5	2447712.5	-1.40905	0.88467	0.05301	-11.94386	-18.46532	-0.09929	1.66459	21.99167	147.88	1.82
89/ 7/ 9	2447716.5	-1.43591	0.84156	0.05275	-11.31206	-18.84866	-0.12278	1.66519	21.98294	149.63	1.82
89/ 7/13	2447720.5	-1.46130	0.79760	0.05244	-10.66925	-19.21232	-0.14612	1.66563	21.97652	151.37	1.80
89/ 7/17	2447724.5	-1.48520	0.75281	0.05208	-10.01594	-19.55606	-0.16929	1.66591	21.97242	153.12	1.79
89/ 7/21	2447728.5	-1.50757	0.70725	0.05166	-9.35260	-19.87966	-0.19229	1.66603	21.97064	154.87	1.78
89/ 7/25	2447732.5	-1.52840	0.66098	0.05119	-8.67974	-20.18288	-0.21508	1.66599	21.97118	156.61	1.76
89/ 7/29	2447736.5	-1.54767	0.61402	0.05067	-7.99785	-20.46550	-0.23766	1.66579	21.97405	158.36	1.74
89/ 8/ 2	2447740.5	-1.56535	0.56643	0.05009	-7.30742	-20.72729	-0.26001	1.66544	21.97923	160.11	1.72
89/ 8/ 6	2447744.5	-1.58143	0.51827	0.04947	-6.60896	-20.96804	-0.28211	1.66492	21.98674	161.85	1.70
89/ 8/10	2447748.5	-1.59588	0.46957	0.04879	-5.90297	-21.18752	-0.30394	1.66424	21.99655	163.60	1.68
89/ 8/14	2447752.5	-1.60869	0.42039	0.04806	-5.18996	-21.38552	-0.32549	1.66341	22.00868	165.35	1.66
89/ 8/18	2447756.5	-1.61985	0.37078	0.04729	-4.47043	-21.56183	-0.34674	1.66242	22.02311	167.11	1.63
89/ 8/22	2447760.5	-1.62934	0.32078	0.04646	-3.74490	-21.71624	-0.36767	1.66127	22.03983	168.86	1.60
89/ 8/26	2447764.5	-1.63715	0.27046	0.04559	-3.01389	-21.84854	-0.38827	1.65997	22.05885	170.62	1.57
89/ 8/30	2447768.5	-1.64327	0.21985	0.04467	-2.27793	-21.95853	-0.40852	1.65851	22.08014	172.38	1.54
89/ 9/ 3	2447772.5	-1.64767	0.16902	0.04370	-1.53756	-22.04600	-0.42840	1.65690	22.10371	174.14	1.51
89/ 9/ 7	2447776.5	-1.65037	0.11801	0.04269	-0.79333	-22.11076	-0.44789	1.65513	22.12953	175.91	1.48
89/ 9/11	2447780.5	-1.65134	0.06688	0.04163	-0.04578	-22.15262	-0.46698	1.65321	22.15759	177.68	1.44
89/ 9/15	2447784.5	-1.65058	0.01568	0.04053	0.70453	-22.17137	-0.48565	1.65115	22.18788	179.46	1.41
89/ 9/19	2447788.5	-1.64808	-0.03554	0.03939	1.45701	-22.16683	-0.50388	1.64893	22.22038	181.24	1.37
89/ 9/23	2447792.5	-1.64384	-0.08673	0.03820	2.21109	-22.13882	-0.52165	1.64657	22.25508	183.02	1.33
89/ 9/27	2447796.5	-1.63786	-0.13781	0.03698	2.96616	-22.08716	-0.53895	1.64407	22.29195	184.81	1.29
89/10/ 1	2447800.5	-1.63014	-0.18876	0.03571	3.72163	-22.01166	-0.55575	1.64142	22.33098	186.60	1.25
89/10/ 5	2447804.5	-1.62067	-0.23950	0.03441	4.47686	-21.91217	-0.57204	1.63863	22.37214	188.41	1.20
89/10/ 9	2447808.5	-1.60945	-0.28998	0.03307	5.23122	-21.78852	-0.58780	1.63570	22.41541	190.21	1.16
89/10/13	2447812.5	-1.59650	-0.34015	0.03169	5.98407	-21.64055	-0.60301	1.63264	22.46077	192.03	1.11
89/10/17	2447816.5	-1.58181	-0.38995	0.03028	6.73472	-21.46812	-0.61765	1.62945	22.50818	193.85	1.06
89/10/21	2447820.5	-1.56538	-0.43932	0.02884	7.48251	-21.27109	-0.63170	1.62612	22.55762	195.68	1.02
89/10/25	2447824.5	-1.54724	-0.48821	0.02737	8.22672	-21.04933	-0.64513	1.62267	22.60906	197.51	0.97
89/10/29	2447828.5	-1.52738	-0.53656	0.02586	8.96663	-20.80273	-0.65794	1.61909	22.66245	199.36	0.92
89/11/ 2	2447832.5	-1.50581	-0.58431	0.02433	9.70152	-20.53117	-0.67010	1.61539	22.71778	201.21	0.86
89/11/ 6	2447836.5	-1.48256	-0.63140	0.02276	10.43061	-20.23457	-0.68159	1.61157	22.77499	203.07	0.81
89/11/10	2447840.5	-1.45763	-0.67778	0.02118	11.15315	-19.91286	-0.69239	1.60764	22.83405	204.94	0.75
89/11/14	2447844.5	-1.43103	-0.72338	0.01957	11.86832	-19.56597	-0.70247	1.60360	22.89492	206.82	0.70
89/11/18	2447848.5	-1.40280	-0.76816	0.01793	12.57531	-19.19386	-0.71183	1.59945	22.95756	208.70	0.64
89/11/22	2447852.5	-1.37294	-0.81205	0.01628	13.27329	-18.79651	-0.72043	1.59519	23.02191	210.60	0.58
89/11/26	2447856.5	-1.34148	-0.85499	0.01460	13.96140	-18.37393	-0.72826	1.59084	23.08793	212.51	0.53

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89/11/30	2447860.5	-1.30844	-0.89692	0.01291	14.63876	-17.92613	-0.73529	1.58639	23.15556	214.43	0.47
89/12/ 4	2447864.5	-1.27385	-0.93779	0.01121	15.30445	-17.45316	-0.74151	1.58186	23.22475	216.36	0.41
89/12/ 8	2447868.5	-1.23774	-0.97754	0.00949	15.95757	-16.95510	-0.74689	1.57723	23.29544	218.30	0.34
89/12/12	2447872.5	-1.20013	-1.01611	0.00776	16.59717	-16.43206	-0.75141	1.57253	23.36757	220.25	0.28
89/12/16	2447876.5	-1.16106	-1.05344	0.00602	17.22228	-15.88417	-0.75506	1.56775	23.44108	222.22	0.22
89/12/20	2447880.5	-1.12057	-1.08948	0.00427	17.83192	-15.31161	-0.75781	1.56290	23.51589	224.19	0.16
89/12/24	2447884.5	-1.07869	-1.12417	0.00252	18.42509	-14.71457	-0.75964	1.55799	23.59194	226.18	0.09
89/12/28	2447888.5	-1.03545	-1.15745	0.00076	19.00075	-14.09332	-0.76053	1.55301	23.66915	228.18	0.03
90/ 1/ 1	2447892.5	-0.99091	-1.18927	-0.00100	19.55786	-13.44815	-0.76046	1.54799	23.74744	230.20	-0.04
90/ 1/ 5	2447896.5	-0.94510	-1.21957	-0.00275	20.09538	-12.77937	-0.75942	1.54291	23.82674	232.23	-0.10
90/ 1/ 9	2447900.5	-0.89808	-1.24830	-0.00450	20.61222	-12.08739	-0.75739	1.53779	23.90695	234.27	-0.17
90/ 1/13	2447904.5	-0.84988	-1.27540	-0.00625	21.10730	-11.37262	-0.75434	1.53264	23.98799	236.32	-0.23
90/ 1/17	2447908.5	-0.80057	-1.30082	-0.00799	21.57952	-10.63555	-0.75026	1.52746	24.06976	238.39	-0.30
90/ 1/21	2447912.5	-0.75020	-1.32452	-0.00972	22.02777	-9.87672	-0.74515	1.52225	24.15217	240.47	-0.37
90/ 1/25	2447916.5	-0.69882	-1.34644	-0.01143	22.45093	-9.09673	-0.73897	1.51703	24.23511	242.57	-0.43
90/ 1/29	2447920.5	-0.64649	-1.36654	-0.01313	22.84788	-8.29624	-0.73172	1.51180	24.31848	244.68	-0.50
90/ 2/ 2	2447924.5	-0.59327	-1.38476	-0.01481	23.21751	-7.47597	-0.72339	1.50657	24.40218	246.81	-0.56
90/ 2/ 6	2447928.5	-0.53924	-1.40106	-0.01647	23.55870	-6.63670	-0.71397	1.50134	24.48607	248.95	-0.63
90/ 2/10	2447932.5	-0.48444	-1.41541	-0.01811	23.87033	-5.77931	-0.70344	1.49613	24.57006	251.11	-0.69
90/ 2/14	2447936.5	-0.42897	-1.42775	-0.01972	24.15132	-4.90470	-0.69180	1.49093	24.65402	253.28	-0.76
90/ 2/18	2447940.5	-0.37288	-1.43806	-0.02130	24.40057	-4.01389	-0.67905	1.48577	24.73783	255.46	-0.82
90/ 2/22	2447944.5	-0.31626	-1.44629	-0.02286	24.61702	-3.10795	-0.66518	1.48064	24.82135	257.67	-0.88
90/ 2/26	2447948.5	-0.25917	-1.45241	-0.02438	24.79963	-2.18802	-0.65018	1.47555	24.90445	259.88	-0.95
90/ 3/ 2	2447952.5	-0.20170	-1.45639	-0.02586	24.94740	-1.25534	-0.63407	1.47051	24.98701	262.12	-1.01
90/ 3/ 6	2447956.5	-0.14393	-1.45820	-0.02731	25.05935	-0.31120	-0.61685	1.46554	25.06888	264.36	-1.07
90/ 3/10	2447960.5	-0.08594	-1.45782	-0.02871	25.13457	0.64300	-0.59852	1.46063	25.14991	266.63	-1.13
90/ 3/14	2447964.5	-0.02783	-1.45522	-0.03007	25.17216	1.60582	-0.57909	1.45580	25.22998	268.90	-1.18
90/ 3/18	2447968.5	0.03033	-1.45039	-0.03138	25.17131	2.57572	-0.55858	1.45105	25.30892	271.20	-1.24
90/ 3/22	2447972.5	0.08844	-1.44332	-0.03265	25.13126	3.55108	-0.53699	1.44639	25.38659	273.51	-1.29
90/ 3/26	2447976.5	0.14641	-1.43398	-0.03386	25.05132	4.53022	-0.51435	1.44183	25.46284	275.83	-1.35
90/ 3/30	2447980.5	0.20416	-1.42238	-0.03503	24.93088	5.51139	-0.49069	1.43739	25.53752	278.17	-1.40
90/ 4/ 3	2447984.5	0.26157	-1.40852	-0.03613	24.76941	6.49276	-0.46602	1.43305	25.61048	280.52	-1.44
90/ 4/ 7	2447988.5	0.31857	-1.39238	-0.03718	24.56647	7.47246	-0.44038	1.42885	25.68157	282.89	-1.49
90/ 4/11	2447992.5	0.37505	-1.37399	-0.03817	24.32172	8.44853	-0.41379	1.42477	25.75063	285.27	-1.53
90/ 4/15	2447996.5	0.43091	-1.35335	-0.03909	24.03492	9.41898	-0.38630	1.42084	25.81751	287.66	-1.58
90/ 4/19	2448000.5	0.48606	-1.33048	-0.03995	23.70594	10.38177	-0.35794	1.41705	25.88206	290.07	-1.62
90/ 4/23	2448004.5	0.54041	-1.30539	-0.04074	23.33478	11.33481	-0.32877	1.41342	25.94413	292.49	-1.65
90/ 4/27	2448008.5	0.59385	-1.27812	-0.04147	22.92154	12.27599	-0.29882	1.40995	26.00358	294.92	-1.69
90/ 5/ 1	2448012.5	0.64628	-1.24869	-0.04212	22.46647	13.20316	-0.26814	1.40665	26.06027	297.36	-1.72
90/ 5/ 5	2448016.5	0.69762	-1.21713	-0.04271	21.96992	14.11417	-0.23680	1.40353	26.11405	299.82	-1.74
90/ 5/ 9	2448020.5	0.74776	-1.18349	-0.04322	21.43242	15.00686	-0.20485	1.40059	26.16479	302.29	-1.77
90/ 5/13	2448024.5	0.79661	-1.14781	-0.04365	20.85459	15.87907	-0.17235	1.39784	26.21237	304.76	-1.79
90/ 5/17	2448028.5	0.84408	-1.11014	-0.04401	20.23721	16.72866	-0.13936	1.39528	26.25666	307.25	-1.81
90/ 5/21	2448032.5	0.89008	-1.07053	-0.04430	19.58121	17.55352	-0.10595	1.39293	26.29755	309.74	-1.82
90/ 5/25	2448036.5	0.93453	-1.02905	-0.04450	18.88764	18.35157	-0.07220	1.39078	26.33492	312.24	-1.83

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90/ 5/29	2448040.5	0.97732	-0.98577	-0.04463	18.15770	19.12078	-0.03817	1.38884	26.36869	314.75	-1.84
90/ 6/ 2	2448044.5	1.01839	-0.94073	-0.04468	17.39272	19.85919	-0.00394	1.38712	26.39875	317.27	-1.85
90/ 6/ 6	2448048.5	1.05766	-0.89403	-0.04465	16.59417	20.56490	0.03042	1.38562	26.42503	319.79	-1.85
90/ 6/10	2448052.5	1.09504	-0.84574	-0.04454	15.76363	21.23609	0.06483	1.38433	26.44745	322.32	-1.84
90/ 6/14	2448056.5	1.13047	-0.79594	-0.04435	14.90282	21.87104	0.09921	1.38328	26.46595	324.85	-1.84
90/ 6/18	2448060.5	1.16388	-0.74472	-0.04408	14.01357	22.46814	0.13348	1.38245	26.48047	327.39	-1.83
90/ 6/22	2448064.5	1.19520	-0.69216	-0.04373	13.09781	23.02589	0.16757	1.38185	26.49098	329.92	-1.81
90/ 6/26	2448068.5	1.22437	-0.63836	-0.04330	12.15758	23.54289	0.20139	1.38147	26.49745	332.46	-1.80
90/ 6/30	2448072.5	1.25135	-0.58342	-0.04280	11.19500	24.01790	0.23487	1.38134	26.49986	335.00	-1.78
90/ 7/ 4	2448076.5	1.27608	-0.52743	-0.04222	10.21227	24.44979	0.26793	1.38143	26.49820	337.54	-1.75
90/ 7/ 8	2448080.5	1.29852	-0.47049	-0.04156	9.21165	24.83760	0.30049	1.38175	26.49248	340.08	-1.72
90/ 7/12	2448084.5	1.31863	-0.41270	-0.04083	8.19546	25.18050	0.33249	1.38231	26.48271	342.62	-1.69
90/ 7/16	2448088.5	1.33638	-0.35418	-0.04003	7.16608	25.47781	0.36384	1.38309	26.46892	345.16	-1.66
90/ 7/20	2448092.5	1.35173	-0.29502	-0.03915	6.12589	25.72900	0.39447	1.38411	26.45116	347.69	-1.62
90/ 7/24	2448096.5	1.36467	-0.23534	-0.03821	5.07732	25.93371	0.42434	1.38534	26.42947	350.22	-1.58
90/ 7/28	2448100.5	1.37519	-0.17523	-0.03719	4.02278	26.09172	0.45336	1.38681	26.40390	352.74	-1.54
90/ 8/ 1	2448104.5	1.38326	-0.11482	-0.03611	2.96469	26.20297	0.48147	1.38849	26.37454	355.25	-1.49
90/ 8/ 5	2448108.5	1.38888	-0.05420	-0.03497	1.90544	26.26754	0.50864	1.39038	26.34147	357.77	-1.44
90/ 8/ 9	2448112.5	1.39206	0.00651	-0.03376	0.84741	26.28567	0.53478	1.39249	26.30476	0.27	-1.39
90/ 8/13	2448116.5	1.39280	0.06721	-0.03250	-0.20708	26.25775	0.55987	1.39480	26.26453	2.76	-1.34
90/ 8/17	2448120.5	1.39111	0.12779	-0.03118	-1.25575	26.18428	0.58386	1.39732	26.22088	5.25	-1.28
90/ 8/21	2448124.5	1.38701	0.18816	-0.02980	-2.29639	26.06593	0.60670	1.40003	26.17392	7.73	-1.22
90/ 8/25	2448128.5	1.38051	0.24819	-0.02837	-3.32683	25.90346	0.62836	1.40293	26.12378	10.19	-1.16
90/ 8/29	2448132.5	1.37164	0.30781	-0.02690	-4.34502	25.69776	0.64881	1.40601	26.07058	12.65	-1.10
90/ 9/ 2	2448136.5	1.36044	0.36689	-0.02538	-5.34896	25.44983	0.66802	1.40928	26.01445	15.09	-1.03
90/ 9/ 6	2448140.5	1.34694	0.42536	-0.02381	-6.33675	25.16078	0.68597	1.41271	25.95553	17.53	-0.97
90/ 9/10	2448144.5	1.33118	0.48311	-0.02221	-7.30660	24.83179	0.70264	1.41631	25.89397	19.95	-0.90
90/ 9/14	2448148.5	1.31320	0.54006	-0.02057	-8.25681	24.46414	0.71801	1.42006	25.82991	22.36	-0.83
90/ 9/18	2448152.5	1.29305	0.59612	-0.01889	-9.18576	24.05917	0.73207	1.42397	25.76350	24.75	-0.76
90/ 9/22	2448156.5	1.27078	0.65120	-0.01719	-10.09198	23.61830	0.74483	1.42801	25.69488	27.13	-0.69
90/ 9/26	2448160.5	1.24644	0.70522	-0.01545	-10.97406	23.14299	0.75626	1.43219	25.62421	29.50	-0.62
90/ 9/30	2448164.5	1.22009	0.75810	-0.01369	-11.83074	22.63476	0.76639	1.43650	25.55164	31.85	-0.55
90/10/ 4	2448168.5	1.19180	0.80977	-0.01191	-12.66084	22.09516	0.77520	1.44092	25.47733	34.19	-0.47
90/10/ 8	2448172.5	1.16161	0.86017	-0.01011	-13.46330	21.52577	0.78271	1.44545	25.40142	36.52	-0.40
90/10/12	2448176.5	1.12961	0.90921	-0.00830	-14.23716	20.92819	0.78893	1.45009	25.32407	38.83	-0.33
90/10/16	2448180.5	1.09586	0.95684	-0.00647	-14.98157	20.30404	0.79387	1.45481	25.24543	41.13	-0.25
90/10/20	2448184.5	1.06042	1.00300	-0.00463	-15.69577	19.65493	0.79754	1.45963	25.16564	43.41	-0.18
90/10/24	2448188.5	1.02336	1.04764	-0.00278	-16.37912	18.98249	0.79997	1.46452	25.08486	45.67	-0.11
90/10/28	2448192.5	0.98476	1.09069	-0.00093	-17.03105	18.28834	0.80118	1.46948	25.00323	47.92	-0.04
90/11/ 1	2448196.5	0.94470	1.13212	0.00092	-17.65109	17.57407	0.80119	1.47450	24.92090	50.16	0.04
90/11/ 5	2448200.5	0.90323	1.17187	0.00277	-18.23888	16.84129	0.80002	1.47957	24.83799	52.38	0.11
90/11/ 9	2448204.5	0.86045	1.20992	0.00461	-18.79410	16.09154	0.79770	1.48469	24.75464	54.58	0.18
90/11/13	2448208.5	0.81642	1.24621	0.00645	-19.31656	15.32638	0.79425	1.48984	24.67100	56.77	0.25
90/11/17	2448212.5	0.77123	1.28072	0.00828	-19.80609	14.54732	0.78971	1.49503	24.58718	58.94	0.32
90/11/21	2448216.5	0.72494	1.31342	0.01010	-20.26264	13.75583	0.78410	1.50023	24.50331	61.10	0.39

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90/11/25	2448220.5	0.67763	1.34427	0.01190	-20.68620	12.95336	0.77746	1.50545	24.41952	63.25	0.45
90/11/29	2448224.5	0.62938	1.37326	0.01369	-21.07682	12.14133	0.76981	1.51068	24.33592	65.38	0.52
90/12/ 3	2448228.5	0.58027	1.40036	0.01546	-21.43462	11.32109	0.76119	1.51590	24.25262	67.49	0.58
90/12/ 7	2448232.5	0.53037	1.42556	0.01721	-21.75977	10.49398	0.75163	1.52112	24.16974	69.59	0.65
90/12/11	2448236.5	0.47976	1.44884	0.01893	-22.05247	9.66129	0.74116	1.52633	24.08737	71.68	0.71
90/12/15	2448240.5	0.42851	1.47019	0.02063	-22.31300	8.82425	0.72982	1.53151	24.00562	73.75	0.77
90/12/19	2448244.5	0.37669	1.48961	0.02230	-22.54164	7.98407	0.71763	1.53666	23.92459	75.81	0.83
90/12/23	2448248.5	0.32438	1.50708	0.02395	-22.73874	7.14192	0.70464	1.54178	23.84437	77.85	0.89
90/12/27	2448252.5	0.27166	1.52261	0.02556	-22.90467	6.29890	0.69086	1.54686	23.76504	79.88	0.95
90/12/31	2448256.5	0.21858	1.53619	0.02714	-23.03982	5.45609	0.67634	1.55190	23.68670	81.90	1.00
91/ 1/ 4	2448260.5	0.16523	1.54782	0.02868	-23.14463	4.61452	0.66111	1.55688	23.60942	83.91	1.06
91/ 1/ 8	2448264.5	0.11167	1.55751	0.03019	-23.21955	3.77519	0.64520	1.56180	23.53329	85.90	1.11
91/ 1/12	2448268.5	0.05797	1.56526	0.03166	-23.26504	2.93903	0.62864	1.56666	23.45838	87.88	1.16
91/ 1/16	2448272.5	0.00420	1.57109	0.03310	-23.28161	2.10696	0.61146	1.57144	23.38475	89.85	1.21
91/ 1/20	2448276.5	-0.04958	1.57500	0.03449	-23.26976	1.27985	0.59369	1.57616	23.31249	91.80	1.25
91/ 1/24	2448280.5	-0.10330	1.57701	0.03584	-23.23000	0.45852	0.57537	1.58079	23.24165	93.75	1.30
91/ 1/28	2448284.5	-0.15689	1.57712	0.03715	-23.16287	-0.35622	0.55651	1.58534	23.17229	95.68	1.34
91/ 2/ 1	2448288.5	-0.21030	1.57537	0.03841	-23.06890	-1.16363	0.53716	1.58981	23.10447	97.60	1.38
91/ 2/ 5	2448292.5	-0.26346	1.57175	0.03963	-22.94864	-1.96297	0.51734	1.59417	23.03825	99.52	1.42
91/ 2/ 9	2448296.5	-0.31631	1.56630	0.04080	-22.80266	-2.75355	0.49708	1.59845	22.97369	101.42	1.46
91/ 2/13	2448300.5	-0.36879	1.55904	0.04192	-22.63149	-3.53471	0.47641	1.60261	22.91082	103.31	1.50
91/ 2/17	2448304.5	-0.42085	1.54998	0.04300	-22.43571	-4.30583	0.45534	1.60668	22.84969	105.19	1.53
91/ 2/21	2448308.5	-0.47244	1.53915	0.04403	-22.21587	-5.06631	0.43392	1.61063	22.79036	107.06	1.57
91/ 2/25	2448312.5	-0.52348	1.52658	0.04500	-21.97254	-5.81556	0.41216	1.61447	22.73286	108.93	1.60
91/ 3/ 1	2448316.5	-0.57394	1.51229	0.04593	-21.70628	-6.55304	0.39009	1.61819	22.67724	110.78	1.63
91/ 3/ 5	2448320.5	-0.62376	1.49631	0.04681	-21.41765	-7.27824	0.36774	1.62179	22.62352	112.63	1.65
91/ 3/ 9	2448324.5	-0.67288	1.47867	0.04763	-21.10721	-7.99065	0.34512	1.62527	22.57175	114.47	1.68
91/ 3/13	2448328.5	-0.72126	1.45940	0.04840	-20.77552	-8.68980	0.32227	1.62863	22.52196	116.30	1.70
91/ 3/17	2448332.5	-0.76885	1.43853	0.04912	-20.42313	-9.37523	0.29920	1.63185	22.47418	118.12	1.72
91/ 3/21	2448336.5	-0.81561	1.41610	0.04978	-20.05059	-10.04651	0.27595	1.63494	22.42843	119.94	1.74
91/ 3/25	2448340.5	-0.86148	1.39213	0.05039	-19.65844	-10.70321	0.25252	1.63790	22.38475	121.75	1.76
91/ 3/29	2448344.5	-0.90642	1.36666	0.05095	-19.24724	-11.34495	0.22894	1.64072	22.34316	123.55	1.78
91/ 4/ 2	2448348.5	-0.95039	1.33972	0.05145	-18.81752	-11.97134	0.20524	1.64340	22.30368	125.35	1.79
91/ 4/ 6	2448352.5	-0.99335	1.31136	0.05190	-18.36981	-12.58201	0.18143	1.64593	22.26634	127.14	1.81
91/ 4/10	2448356.5	-1.03526	1.28160	0.05229	-17.90464	-13.17661	0.15754	1.64833	22.23115	128.93	1.82
91/ 4/14	2448360.5	-1.07606	1.25049	0.05263	-17.42255	-13.75479	0.13358	1.65058	22.19814	130.71	1.83
91/ 4/18	2448364.5	-1.11574	1.21806	0.05291	-16.92406	-14.31624	0.10957	1.65268	22.16733	132.49	1.83
91/ 4/22	2448368.5	-1.15425	1.18436	0.05313	-16.40967	-14.86064	0.08554	1.65463	22.13873	134.26	1.84
91/ 4/26	2448372.5	-1.19155	1.14941	0.05330	-15.87992	-15.38768	0.06150	1.65644	22.11236	136.03	1.84
91/ 4/30	2448376.5	-1.22761	1.11327	0.05342	-15.33529	-15.89707	0.03748	1.65809	22.08822	137.80	1.85
91/ 5/ 4	2448380.5	-1.26239	1.07598	0.05347	-14.77632	-16.38852	0.01348	1.65958	22.06634	139.56	1.85
91/ 5/ 8	2448384.5	-1.29587	1.03757	0.05348	-14.20348	-16.86175	-0.01047	1.66093	22.04672	141.32	1.85
91/ 5/12	2448388.5	-1.32801	0.99808	0.05343	-13.61730	-17.31650	-0.03436	1.66212	22.02937	143.07	1.84
91/ 5/16	2448392.5	-1.35878	0.95757	0.05332	-13.01826	-17.75250	-0.05816	1.66315	22.01431	144.83	1.84
91/ 5/20	2448396.5	-1.38815	0.91608	0.05316	-12.40687	-18.16949	-0.08186	1.66402	22.00153	146.58	1.83

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91/ 5/24	2448400.5	-1.41609	0.87364	0.05294	-11.78361	-18.56723	-0.10544	1.66474	21.99105	148.33	1.82
91/ 5/28	2448404.5	-1.44258	0.83030	0.05267	-11.14898	-18.94546	-0.12889	1.66530	21.98288	150.08	1.81
91/ 6/ 1	2448408.5	-1.46759	0.78612	0.05235	-10.50348	-19.30395	-0.15219	1.66570	21.97700	151.82	1.80
91/ 6/ 5	2448412.5	-1.49110	0.74113	0.05197	-9.84759	-19.64247	-0.17531	1.66594	21.97344	153.57	1.79
91/ 6/ 9	2448416.5	-1.51309	0.69538	0.05154	-9.18181	-19.96077	-0.19825	1.66602	21.97219	155.32	1.77
91/ 6/13	2448420.5	-1.53352	0.64892	0.05105	-8.50663	-20.25864	-0.22099	1.66595	21.97326	157.06	1.76
91/ 6/17	2448424.5	-1.55238	0.60179	0.05052	-7.82255	-20.53584	-0.24351	1.66571	21.97663	158.81	1.74
91/ 6/21	2448428.5	-1.56966	0.55405	0.04993	-7.13006	-20.79215	-0.26579	1.66532	21.98231	160.56	1.72
91/ 6/25	2448432.5	-1.58532	0.50574	0.04929	-6.42967	-21.02736	-0.28781	1.66477	21.99031	162.31	1.70
91/ 6/29	2448436.5	-1.59936	0.45691	0.04860	-5.72188	-21.24125	-0.30957	1.66405	22.00060	164.06	1.67
91/ 7/ 3	2448440.5	-1.61175	0.40762	0.04786	-5.00719	-21.43360	-0.33104	1.66319	22.01320	165.81	1.65
91/ 7/ 7	2448444.5	-1.62249	0.35790	0.04707	-4.28613	-21.60420	-0.35220	1.66216	22.02809	167.56	1.62
91/ 7/11	2448448.5	-1.63155	0.30782	0.04623	-3.55920	-21.75285	-0.37305	1.66098	22.04526	169.32	1.59
91/ 7/15	2448452.5	-1.63893	0.25741	0.04534	-2.82694	-21.87934	-0.39355	1.65964	22.06472	171.07	1.57
91/ 7/19	2448456.5	-1.64461	0.20674	0.04441	-2.08987	-21.98346	-0.41370	1.65815	22.08645	172.83	1.53
91/ 7/23	2448460.5	-1.64858	0.15586	0.04343	-1.34853	-22.06501	-0.43347	1.65650	22.11043	174.60	1.50
91/ 7/27	2448464.5	-1.65084	0.10481	0.04241	-0.60347	-22.12381	-0.45286	1.65470	22.13667	176.37	1.47
91/ 7/31	2448468.5	-1.65137	0.05366	0.04134	0.14476	-22.15964	-0.47184	1.65275	22.16514	178.14	1.43
91/ 8/ 4	2448472.5	-1.65017	0.00244	0.04023	0.89559	-22.17233	-0.49039	1.65066	22.19583	179.92	1.40
91/ 8/ 8	2448476.5	-1.64723	-0.04877	0.03908	1.64844	-22.16169	-0.50849	1.64841	22.22873	181.70	1.36
91/ 8/12	2448480.5	-1.64255	-0.09993	0.03788	2.40273	-22.12752	-0.52614	1.64602	22.26381	183.48	1.32
91/ 8/16	2448484.5	-1.63612	-0.15099	0.03665	3.15786	-22.06966	-0.54330	1.64349	22.30106	185.27	1.28
91/ 8/20	2448488.5	-1.62796	-0.20188	0.03537	3.91321	-21.98794	-0.55997	1.64081	22.34046	187.07	1.24
91/ 8/24	2448492.5	-1.61804	-0.25256	0.03406	4.66815	-21.88218	-0.57611	1.63799	22.38198	188.87	1.19
91/ 8/28	2448496.5	-1.60639	-0.30297	0.03271	5.42206	-21.75222	-0.59172	1.63504	22.42561	190.68	1.15
91/ 9/ 1	2448500.5	-1.59299	-0.35305	0.03133	6.17427	-21.59792	-0.60678	1.63195	22.47132	192.50	1.10
91/ 9/ 5	2448504.5	-1.57786	-0.40274	0.02991	6.92411	-21.41914	-0.62126	1.62873	22.51907	194.32	1.05
91/ 9/ 9	2448508.5	-1.56100	-0.45199	0.02846	7.67090	-21.21573	-0.63514	1.62537	22.56885	196.15	1.00
91/ 9/13	2448512.5	-1.54242	-0.50074	0.02697	8.41392	-20.98757	-0.64841	1.62190	22.62062	197.99	0.95
91/ 9/17	2448516.5	-1.52213	-0.54894	0.02546	9.15246	-20.73455	-0.66105	1.61829	22.67435	199.83	0.90
91/ 9/21	2448520.5	-1.50014	-0.59653	0.02392	9.88578	-20.45656	-0.67303	1.61457	22.72999	201.69	0.85
91/ 9/25	2448524.5	-1.47646	-0.64344	0.02235	10.61311	-20.15353	-0.68434	1.61073	22.78752	203.55	0.80
91/ 9/29	2448528.5	-1.45111	-0.68962	0.02076	11.33367	-19.82537	-0.69494	1.60678	22.84689	205.42	0.74
91/10/ 3	2448532.5	-1.42410	-0.73502	0.01914	12.04666	-19.47204	-0.70484	1.60271	22.90806	207.30	0.68
91/10/ 7	2448536.5	-1.39546	-0.77957	0.01750	12.75126	-19.09350	-0.71399	1.59854	22.97099	209.19	0.63
91/10/11	2448540.5	-1.36519	-0.82322	0.01584	13.44663	-18.68973	-0.72239	1.59427	23.03562	211.09	0.57
91/10/15	2448544.5	-1.33334	-0.86591	0.01416	14.13191	-18.26074	-0.73001	1.58990	23.10192	213.00	0.51
91/10/19	2448548.5	-1.29991	-0.90757	0.01247	14.80620	-17.80657	-0.73683	1.58543	23.16982	214.92	0.45
91/10/23	2448552.5	-1.26494	-0.94816	0.01076	15.46861	-17.32726	-0.74283	1.58088	23.23927	216.85	0.39
91/10/27	2448556.5	-1.22845	-0.98761	0.00904	16.11821	-16.82289	-0.74799	1.57624	23.31021	218.80	0.33
91/10/31	2448560.5	-1.19047	-1.02587	0.00731	16.75404	-16.29359	-0.75228	1.57152	23.38258	220.75	0.27
91/11/ 4	2448564.5	-1.15105	-1.06287	0.00556	17.37515	-15.73951	-0.75569	1.56673	23.45632	222.72	0.20
91/11/ 8	2448568.5	-1.11021	-1.09857	0.00381	17.98053	-15.16081	-0.75820	1.56187	23.53135	224.70	0.14
91/11/12	2448572.5	-1.06799	-1.13290	0.00206	18.56919	-14.55771	-0.75979	1.55694	23.60761	226.69	0.08
91/11/16	2448576.5	-1.02442	-1.16581	0.00030	19.14009	-13.93049	-0.76044	1.55196	23.68501	228.69	0.01

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91/11/20	2448580.5	-0.97957	-1.19725	-0.00145	19.69219	-13.27943	-0.76012	1.54692	23.76349	230.71	-0.05
91/11/24	2448584.5	-0.93345	-1.22715	-0.00321	20.22443	-12.60488	-0.75882	1.54183	23.84296	232.74	-0.12
91/11/28	2448588.5	-0.88614	-1.25547	-0.00496	20.73573	-11.90725	-0.75653	1.53671	23.92333	234.78	-0.18
91/12/ 2	2448592.5	-0.83767	-1.28215	-0.00670	21.22501	-11.18696	-0.75322	1.53155	24.00451	236.84	-0.25
91/12/ 6	2448596.5	-0.78809	-1.30714	-0.00844	21.69116	-10.44451	-0.74888	1.52636	24.08640	238.91	-0.32
91/12/10	2448600.5	-0.73746	-1.33039	-0.01016	22.13307	-9.68047	-0.74349	1.52115	24.16893	241.00	-0.38
91/12/14	2448604.5	-0.68585	-1.35185	-0.01187	22.54963	-8.89544	-0.73704	1.51592	24.25197	243.10	-0.45
91/12/18	2448608.5	-0.63330	-1.37147	-0.01357	22.93972	-8.09009	-0.72952	1.51069	24.33542	245.21	-0.51
91/12/22	2448612.5	-0.57988	-1.38921	-0.01524	23.30223	-7.26517	-0.72091	1.50546	24.41918	247.34	-0.58
91/12/26	2448616.5	-0.52565	-1.40503	-0.01690	23.63603	-6.42147	-0.71121	1.50023	24.50312	249.49	-0.65
91/12/30	2448620.5	-0.47069	-1.41887	-0.01853	23.94002	-5.55986	-0.70040	1.49502	24.58714	251.65	-0.71
92/ 1/ 3	2448624.5	-0.41507	-1.43070	-0.02013	24.21311	-4.68130	-0.68848	1.48983	24.67110	253.82	-0.77
92/ 1/ 7	2448628.5	-0.35885	-1.44049	-0.02171	24.45421	-3.78680	-0.67545	1.48467	24.75489	256.01	-0.84
92/ 1/11	2448632.5	-0.30210	-1.44819	-0.02325	24.66228	-2.87745	-0.66129	1.47955	24.83838	258.22	-0.90
92/ 1/15	2448636.5	-0.24492	-1.45377	-0.02476	24.83627	-1.95442	-0.64602	1.47447	24.92142	260.44	-0.96
92/ 1/19	2448640.5	-0.18738	-1.45721	-0.02623	24.97519	-1.01895	-0.62964	1.46944	25.00389	262.67	-1.02
92/ 1/23	2448644.5	-0.12956	-1.45847	-0.02767	25.07808	-0.07236	-0.61214	1.46448	25.08565	264.92	-1.08
92/ 1/27	2448648.5	-0.07154	-1.45754	-0.02906	25.14403	0.88395	-0.59353	1.45958	25.16656	267.19	-1.14
92/ 1/31	2448652.5	-0.01341	-1.45438	-0.03041	25.17216	1.84850	-0.57383	1.45476	25.24646	269.47	-1.20
92/ 2/ 4	2448656.5	0.04474	-1.44899	-0.03171	25.16168	2.81974	-0.55305	1.45003	25.32522	271.77	-1.25
92/ 2/ 8	2448660.5	0.10281	-1.44135	-0.03296	25.11184	3.79604	-0.53120	1.44539	25.40269	274.08	-1.31
92/ 2/12	2448664.5	0.16073	-1.43145	-0.03417	25.02196	4.77571	-0.50831	1.44085	25.47870	276.41	-1.36
92/ 2/16	2448668.5	0.21839	-1.41928	-0.03531	24.89146	5.75697	-0.48439	1.43642	25.55312	278.75	-1.41
92/ 2/20	2448672.5	0.27571	-1.40485	-0.03640	24.71981	6.73799	-0.45948	1.43211	25.62579	281.10	-1.46
92/ 2/24	2448676.5	0.33258	-1.38815	-0.03743	24.50662	7.71687	-0.43360	1.42793	25.69655	283.47	-1.50
92/ 2/28	2448680.5	0.38890	-1.36920	-0.03841	24.25156	8.69164	-0.40679	1.42388	25.76525	285.86	-1.55
92/ 3/ 3	2448684.5	0.44459	-1.34800	-0.03931	23.95441	9.66031	-0.37908	1.41997	25.83175	288.25	-1.59
92/ 3/ 7	2448688.5	0.49955	-1.32457	-0.04016	23.61509	10.62082	-0.35052	1.41621	25.89589	290.66	-1.62
92/ 3/11	2448692.5	0.55367	-1.29893	-0.04093	23.23360	11.57108	-0.32115	1.41261	25.95753	293.09	-1.66
92/ 3/15	2448696.5	0.60686	-1.27112	-0.04164	22.81009	12.50896	-0.29101	1.40917	26.01651	295.52	-1.69
92/ 3/19	2448700.5	0.65903	-1.24115	-0.04228	22.34482	13.43233	-0.26017	1.40590	26.07271	297.97	-1.72
92/ 3/23	2448704.5	0.71007	-1.20907	-0.04284	21.83819	14.33902	-0.22867	1.40281	26.12597	300.43	-1.75
92/ 3/27	2448708.5	0.75990	-1.17491	-0.04333	21.29074	15.22687	-0.19658	1.39991	26.17617	302.89	-1.77
92/ 3/31	2448712.5	0.80841	-1.13873	-0.04375	20.70315	16.09373	-0.16395	1.39719	26.22318	305.37	-1.79
92/ 4/ 4	2448716.5	0.85552	-1.10057	-0.04409	20.07621	16.93746	-0.13085	1.39468	26.26687	307.86	-1.81
92/ 4/ 8	2448720.5	0.90114	-1.06049	-0.04435	19.41088	17.75595	-0.09736	1.39236	26.30714	310.36	-1.83
92/ 4/12	2448724.5	0.94518	-1.01855	-0.04454	18.70825	18.54715	-0.06353	1.39025	26.34387	312.86	-1.84
92/ 4/16	2448728.5	0.98755	-0.97482	-0.04465	17.96956	19.30903	-0.02944	1.38836	26.37697	315.37	-1.84
92/ 4/20	2448732.5	1.02818	-0.92936	-0.04468	17.19616	20.03963	0.00483	1.38667	26.40634	317.89	-1.85
92/ 4/24	2448736.5	1.06698	-0.88226	-0.04462	16.38954	20.73709	0.03921	1.38521	26.43190	320.41	-1.85
92/ 4/28	2448740.5	1.10388	-0.83358	-0.04449	15.55134	21.39961	0.07362	1.38397	26.45360	322.94	-1.84
92/ 5/ 2	2448744.5	1.13881	-0.78341	-0.04428	14.68328	22.02548	0.10799	1.38296	26.47135	325.48	-1.84
92/ 5/ 6	2448748.5	1.17170	-0.73184	-0.04400	13.78723	22.61313	0.14223	1.38218	26.48512	328.01	-1.82
92/ 5/10	2448752.5	1.20249	-0.67896	-0.04363	12.86514	23.16106	0.17626	1.38162	26.49486	330.55	-1.81
92/ 5/14	2448756.5	1.23112	-0.62486	-0.04318	11.91907	23.66792	0.21000	1.38130	26.50054	333.09	-1.79

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92/ 5/18	2448760.5	1.25754	-0.56964	-0.04266	10.95116	24.13250	0.24339	1.38120	26.50216	335.63	-1.77
92/ 5/22	2448764.5	1.28171	-0.51339	-0.04206	9.96363	24.55370	0.27634	1.38134	26.49970	338.17	-1.74
92/ 5/26	2448768.5	1.30357	-0.45623	-0.04138	8.95876	24.93058	0.30877	1.38172	26.49318	340.71	-1.72
92/ 5/30	2448772.5	1.32309	-0.39824	-0.04063	7.93889	25.26235	0.34061	1.38232	26.48260	343.25	-1.68
92/ 6/ 3	2448776.5	1.34024	-0.33954	-0.03981	6.90639	25.54837	0.37180	1.38315	26.46801	345.78	-1.65
92/ 6/ 7	2448780.5	1.35499	-0.28023	-0.03891	5.86367	25.78814	0.40225	1.38421	26.44944	348.32	-1.61
92/ 6/11	2448784.5	1.36732	-0.22043	-0.03795	4.81314	25.98135	0.43191	1.38550	26.42694	350.84	-1.57
92/ 6/15	2448788.5	1.37722	-0.16023	-0.03692	3.75724	26.12780	0.46072	1.38700	26.40058	353.36	-1.53
92/ 6/19	2448792.5	1.38468	-0.09974	-0.03582	2.69837	26.22747	0.48861	1.38873	26.37044	355.88	-1.48
92/ 6/23	2448796.5	1.38969	-0.03908	-0.03466	1.63892	26.28049	0.51552	1.39067	26.33659	358.39	-1.43
92/ 6/27	2448800.5	1.39225	0.02165	-0.03344	0.58126	26.28712	0.54141	1.39282	26.29912	0.89	-1.38
92/ 7/ 1	2448804.5	1.39238	0.08234	-0.03216	-0.47228	26.24779	0.56623	1.39518	26.25814	3.38	-1.32
92/ 7/ 5	2448808.5	1.39008	0.14289	-0.03083	-1.51946	26.16303	0.58994	1.39774	26.21376	5.87	-1.26
92/ 7/ 9	2448812.5	1.38537	0.20319	-0.02944	-2.55805	26.03354	0.61249	1.40050	26.16608	8.34	-1.20
92/ 7/13	2448816.5	1.37827	0.26314	-0.02800	-3.58593	25.86011	0.63385	1.40344	26.11524	10.81	-1.14
92/ 7/17	2448820.5	1.36881	0.32264	-0.02651	-4.60104	25.64366	0.65399	1.40657	26.06136	13.26	-1.08
92/ 7/21	2448824.5	1.35702	0.38159	-0.02498	-5.60142	25.38522	0.67289	1.40987	26.00458	15.71	-1.02
92/ 7/25	2448828.5	1.34294	0.43989	-0.02340	-6.58518	25.08592	0.69051	1.41334	25.94503	18.14	-0.95
92/ 7/29	2448832.5	1.32661	0.49746	-0.02179	-7.55055	24.74696	0.70685	1.41698	25.88286	20.56	-0.88
92/ 8/ 2	2448836.5	1.30807	0.55420	-0.02014	-8.49585	24.36964	0.72189	1.42077	25.81821	22.96	-0.81
92/ 8/ 6	2448840.5	1.28737	0.61003	-0.01845	-9.41950	23.95534	0.73563	1.42471	25.75124	25.35	-0.74
92/ 8/10	2448844.5	1.26457	0.66486	-0.01674	-10.32004	23.50547	0.74805	1.42879	25.68209	27.73	-0.67
92/ 8/14	2448848.5	1.23971	0.71861	-0.01500	-11.19609	23.02151	0.75915	1.43300	25.61091	30.10	-0.60
92/ 8/18	2448852.5	1.21286	0.77120	-0.01323	-12.04642	22.50500	0.76893	1.43734	25.53786	32.45	-0.53
92/ 8/22	2448856.5	1.18407	0.82256	-0.01144	-12.86986	21.95749	0.77741	1.44179	25.46309	34.79	-0.45
92/ 8/26	2448860.5	1.15341	0.87263	-0.00964	-13.66539	21.38057	0.78459	1.44635	25.38675	37.11	-0.38
92/ 8/30	2448864.5	1.12095	0.92133	-0.00782	-14.43206	20.77585	0.79047	1.45101	25.30899	39.42	-0.31
92/ 9/ 3	2448868.5	1.08676	0.96860	-0.00599	-15.16906	20.14495	0.79508	1.45577	25.22997	41.71	-0.24
92/ 9/ 7	2448872.5	1.05089	1.01439	-0.00415	-15.87565	19.48949	0.79843	1.46060	25.14983	43.99	-0.16
92/ 9/11	2448876.5	1.01343	1.05863	-0.00230	-16.55121	18.81111	0.80054	1.46552	25.06873	46.25	-0.09
92/ 9/15	2448880.5	0.97444	1.10128	-0.00045	-17.19519	18.11141	0.80144	1.47050	24.98679	48.50	-0.02
92/ 9/19	2448884.5	0.93400	1.14230	0.00140	-17.80715	17.39200	0.80113	1.47554	24.90418	50.73	0.05
92/ 9/23	2448888.5	0.89219	1.18163	0.00325	-18.38675	16.65446	0.79966	1.48063	24.82102	52.95	0.13
92/ 9/27	2448892.5	0.84908	1.21923	0.00509	-18.93369	15.90036	0.79703	1.48576	24.73745	55.15	0.20
92/10/ 1	2448896.5	0.80474	1.25508	0.00693	-19.44779	15.13122	0.79330	1.49093	24.65360	57.33	0.27
92/10/ 5	2448900.5	0.75925	1.28913	0.00876	-19.92893	14.34857	0.78847	1.49613	24.56960	59.50	0.34
92/10/ 9	2448904.5	0.71268	1.32137	0.01057	-20.37704	13.55386	0.78258	1.50135	24.48557	61.66	0.40
92/10/13	2448908.5	0.66512	1.35175	0.01237	-20.79214	12.74855	0.77567	1.50658	24.40164	63.80	0.47
92/10/17	2448912.5	0.61664	1.38026	0.01416	-21.17431	11.93402	0.76776	1.51181	24.31793	65.93	0.54
92/10/21	2448916.5	0.56732	1.40688	0.01592	-21.52367	11.11164	0.75889	1.51704	24.23454	68.04	0.60
92/10/25	2448920.5	0.51722	1.43160	0.01766	-21.84040	10.28272	0.74908	1.52227	24.15158	70.14	0.66
92/10/29	2448924.5	0.46643	1.45439	0.01938	-22.12474	9.44855	0.73837	1.52748	24.06916	72.22	0.73
92/11/ 2	2448928.5	0.41502	1.47525	0.02107	-22.37695	8.61036	0.72680	1.53266	23.98738	74.29	0.79
92/11/ 6	2448932.5	0.36307	1.49417	0.02274	-22.59734	7.76935	0.71439	1.53782	23.90634	76.34	0.85
92/11/10	2448936.5	0.31064	1.51115	0.02437	-22.78627	6.92665	0.70118	1.54294	23.82613	78.38	0.91

1.4 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
92/11/14	2448940.5	0.25781	1.52617	0.02598	-22.94412	6.08338	0.68720	1.54801	23.74683	80.41	0.96
92/11/18	2448944.5	0.20465	1.53925	0.02755	-23.07128	5.24060	0.67249	1.55304	23.66855	82.43	1.02
92/11/22	2448948.5	0.15123	1.55039	0.02908	-23.16821	4.39932	0.65707	1.55802	23.59135	84.43	1.07
92/11/26	2448952.5	0.09763	1.55958	0.03058	-23.23535	3.56054	0.64098	1.56293	23.51531	86.42	1.12
92/11/30	2448956.5	0.04390	1.56684	0.03205	-23.27318	2.72518	0.62424	1.56778	23.44051	88.40	1.17
92/12/ 4	2448960.5	-0.00988	1.57218	0.03347	-23.28221	1.89415	0.60690	1.57256	23.36701	90.36	1.22
92/12/ 8	2448964.5	-0.06365	1.57560	0.03485	-23.26294	1.06830	0.58898	1.57727	23.29490	92.31	1.27
92/12/12	2448968.5	-0.11734	1.57712	0.03619	-23.21589	0.24846	0.57050	1.58189	23.22423	94.26	1.31
92/12/16	2448972.5	-0.17089	1.57675	0.03748	-23.14160	-0.56459	0.55151	1.58643	23.15506	96.19	1.35
92/12/20	2448976.5	-0.22424	1.57451	0.03874	-23.04062	-1.37010	0.53203	1.59087	23.08745	98.11	1.40
92/12/24	2448980.5	-0.27733	1.57043	0.03994	-22.91350	-2.16735	0.51208	1.59523	23.02147	100.01	1.43
92/12/28	2448984.5	-0.33009	1.56451	0.04110	-22.76078	-2.95566	0.49171	1.59948	22.95715	101.91	1.47
93/ 1/ 1	2448988.5	-0.38247	1.55678	0.04221	-22.58303	-3.73438	0.47092	1.60363	22.89455	103.80	1.51
93/ 1/ 5	2448992.5	-0.43441	1.54726	0.04328	-22.38081	-4.50288	0.44975	1.60767	22.83372	105.68	1.54
93/ 1/ 9	2448996.5	-0.48586	1.53598	0.04429	-22.15468	-5.26058	0.42823	1.61160	22.77470	107.55	1.57
93/ 1/13	2449000.5	-0.53676	1.52296	0.04526	-21.90521	-6.00691	0.40639	1.61542	22.71753	109.41	1.61
93/ 1/17	2449004.5	-0.58705	1.50824	0.04617	-21.63296	-6.74133	0.38424	1.61912	22.66226	111.27	1.63
93/ 1/21	2449008.5	-0.63669	1.49183	0.04703	-21.33849	-7.46332	0.36181	1.62269	22.60892	113.11	1.66
93/ 1/25	2449012.5	-0.68563	1.47376	0.04784	-21.02235	-8.17240	0.33912	1.62615	22.55754	114.95	1.69
93/ 1/29	2449016.5	-0.73381	1.45408	0.04860	-20.68512	-8.86808	0.31621	1.62947	22.50815	116.78	1.71
93/ 2/ 2	2449020.5	-0.78118	1.43280	0.04930	-20.32733	-9.54993	0.29309	1.63266	22.46080	118.60	1.73
93/ 2/ 6	2449024.5	-0.82771	1.40996	0.04995	-19.94955	-10.21751	0.26978	1.63573	22.41550	120.41	1.75
93/ 2/10	2449028.5	-0.87334	1.38560	0.05055	-19.55231	-10.87042	0.24631	1.63865	22.37229	122.22	1.77
93/ 2/14	2449032.5	-0.91804	1.35975	0.05109	-19.13616	-11.50825	0.22270	1.64144	22.33119	124.03	1.78
93/ 2/18	2449036.5	-0.96175	1.33244	0.05158	-18.70163	-12.13064	0.19896	1.64409	22.29222	125.82	1.80
93/ 2/22	2449040.5	-1.00443	1.30371	0.05201	-18.24927	-12.73721	0.17513	1.64659	22.25541	127.61	1.81
93/ 2/26	2449044.5	-1.04605	1.27360	0.05239	-17.77959	-13.32763	0.15122	1.64895	22.22077	129.40	1.82
93/ 3/ 2	2449048.5	-1.08657	1.24215	0.05271	-17.29313	-13.90155	0.12724	1.65116	22.18832	131.18	1.83
93/ 3/ 6	2449052.5	-1.12594	1.20939	0.05297	-16.79039	-14.45865	0.10323	1.65323	22.15808	132.95	1.84
93/ 3/10	2449056.5	-1.16413	1.17536	0.05318	-16.27192	-14.99861	0.07919	1.65514	22.13007	134.73	1.84
93/ 3/14	2449060.5	-1.20111	1.14010	0.05334	-15.73820	-15.52114	0.05515	1.65691	22.10430	136.49	1.84
93/ 3/18	2449064.5	-1.23684	1.10366	0.05344	-15.18976	-16.02595	0.03113	1.65852	22.08078	138.26	1.85
93/ 3/22	2449068.5	-1.27128	1.06607	0.05348	-14.62710	-16.51274	0.00714	1.65997	22.05953	140.02	1.85
93/ 3/26	2449072.5	-1.30441	1.02738	0.05347	-14.05072	-16.98125	-0.01679	1.66128	22.04055	141.78	1.84
93/ 3/30	2449076.5	-1.33619	0.98762	0.05341	-13.46112	-17.43121	-0.04066	1.66242	22.02386	143.53	1.84
93/ 4/ 3	2449080.5	-1.36659	0.94685	0.05328	-12.85881	-17.86235	-0.06443	1.66341	22.00947	145.28	1.84
93/ 4/ 7	2449084.5	-1.39559	0.90511	0.05311	-12.24426	-18.27442	-0.08811	1.66425	21.99737	147.03	1.83
93/ 4/11	2449088.5	-1.42316	0.86243	0.05288	-11.61799	-18.66718	-0.11165	1.66492	21.98758	148.78	1.82
93/ 4/15	2449092.5	-1.44926	0.81888	0.05259	-10.98048	-19.04037	-0.13506	1.66544	21.98010	150.53	1.81
93/ 4/19	2449096.5	-1.47388	0.77448	0.05225	-10.33222	-19.39376	-0.15832	1.66579	21.97494	152.28	1.80
93/ 4/23	2449100.5	-1.49699	0.72928	0.05186	-9.67371	-19.72712	-0.18139	1.66599	21.97209	154.03	1.78
93/ 4/27	2449104.5	-1.51857	0.68335	0.05142	-9.00544	-20.04020	-0.20428	1.66603	21.97156	155.77	1.77
93/ 5/ 1	2449108.5	-1.53859	0.63671	0.05092	-8.32790	-20.33279	-0.22696	1.66591	21.97334	157.52	1.75
93/ 5/ 5	2449112.5	-1.55704	0.58942	0.05037	-7.64159	-20.60466	-0.24942	1.66563	21.97744	159.27	1.73
93/ 5/ 9	2449116.5	-1.57389	0.54152	0.04977	-6.94701	-20.85558	-0.27163	1.66519	21.98386	161.01	1.71

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93/ 5/13	2449120.5	-1.58913	0.49307	0.04911	-6.24465	-21.08535	-0.29359	1.66460	21.99259	162.76	1.69
93/ 5/17	2449124.5	-1.60274	0.44412	0.04841	-5.53503	-21.29374	-0.31527	1.66384	22.00362	164.51	1.67
93/ 5/21	2449128.5	-1.61470	0.39471	0.04766	-4.81865	-21.48054	-0.33666	1.66293	22.01695	166.26	1.64
93/ 5/25	2449132.5	-1.62500	0.34489	0.04685	-4.09602	-21.64554	-0.35774	1.66186	22.03258	168.02	1.62
93/ 5/29	2449136.5	-1.63362	0.29471	0.04600	-3.36766	-21.78852	-0.37850	1.66063	22.05049	169.77	1.59
93/ 6/ 2	2449140.5	-1.64056	0.24423	0.04511	-2.63411	-21.90930	-0.39891	1.65925	22.07068	171.53	1.56
93/ 6/ 6	2449144.5	-1.64579	0.19350	0.04416	-1.89588	-22.00765	-0.41896	1.65771	22.09313	173.29	1.53
93/ 6/10	2449148.5	-1.64931	0.14257	0.04317	-1.15353	-22.08338	-0.43863	1.65603	22.11783	175.06	1.49
93/ 6/14	2449152.5	-1.65112	0.09149	0.04213	-0.40760	-22.13629	-0.45791	1.65419	22.14478	176.83	1.46
93/ 6/18	2449156.5	-1.65119	0.04031	0.04105	0.34135	-22.16619	-0.47678	1.65220	22.17395	178.60	1.42
93/ 6/22	2449160.5	-1.64954	-0.01091	0.03993	1.09275	-22.17290	-0.49522	1.65006	22.20533	180.38	1.39
93/ 6/26	2449164.5	-1.64614	-0.06212	0.03877	1.84602	-22.15621	-0.51320	1.64777	22.23890	182.16	1.35
93/ 6/30	2449168.5	-1.64101	-0.11326	0.03756	2.60057	-22.11596	-0.53072	1.64534	22.27465	183.95	1.31
93/ 7/ 4	2449172.5	-1.63413	-0.16429	0.03631	3.35581	-22.05196	-0.54776	1.64277	22.31256	185.74	1.27
93/ 7/ 8	2449176.5	-1.62550	-0.21513	0.03503	4.11110	-21.96404	-0.56429	1.64005	22.35260	187.54	1.22
93/ 7/12	2449180.5	-1.61513	-0.26575	0.03371	4.86582	-21.85204	-0.58030	1.63720	22.39475	189.34	1.18
93/ 7/16	2449184.5	-1.60302	-0.31608	0.03235	5.61934	-21.71581	-0.59576	1.63421	22.43899	191.15	1.13
93/ 7/20	2449188.5	-1.58917	-0.36606	0.03096	6.37098	-21.55518	-0.61067	1.63108	22.48528	192.97	1.09
93/ 7/24	2449192.5	-1.57359	-0.41565	0.02953	7.12007	-21.37002	-0.62499	1.62782	22.53361	194.80	1.04
93/ 7/28	2449196.5	-1.55628	-0.46478	0.02807	7.86592	-21.16019	-0.63872	1.62444	22.58394	196.63	0.99
93/ 8/ 1	2449200.5	-1.53725	-0.51340	0.02658	8.60781	-20.92558	-0.65182	1.62093	22.63624	198.47	0.94
93/ 8/ 5	2449204.5	-1.51651	-0.56145	0.02506	9.34503	-20.66608	-0.66428	1.61730	22.69047	200.32	0.89
93/ 8/ 9	2449208.5	-1.49407	-0.60887	0.02351	10.07682	-20.38158	-0.67609	1.61354	22.74661	202.17	0.83
93/ 8/13	2449212.5	-1.46995	-0.65560	0.02193	10.80242	-20.07201	-0.68721	1.60968	22.80461	204.04	0.78
93/ 8/17	2449216.5	-1.44417	-0.70159	0.02033	11.52103	-19.73730	-0.69763	1.60570	22.86442	205.91	0.73
93/ 8/21	2449220.5	-1.41673	-0.74677	0.01871	12.23187	-19.37740	-0.70733	1.60161	22.92602	207.79	0.67
93/ 8/25	2449224.5	-1.38766	-0.79110	0.01707	12.93409	-18.99228	-0.71629	1.59741	22.98935	209.69	0.61
93/ 8/29	2449228.5	-1.35698	-0.83450	0.01540	13.62685	-18.58193	-0.72448	1.59312	23.05437	211.59	0.55
93/ 9/ 2	2449232.5	-1.32471	-0.87693	0.01372	14.30928	-18.14636	-0.73189	1.58872	23.12102	213.50	0.49
93/ 9/ 6	2449236.5	-1.29087	-0.91833	0.01202	14.98049	-17.68560	-0.73850	1.58424	23.18924	215.43	0.43
93/ 9/10	2449240.5	-1.25550	-0.95863	0.01031	15.63957	-17.19974	-0.74428	1.57967	23.25900	217.36	0.37
93/ 9/14	2449244.5	-1.21862	-0.99778	0.00858	16.28558	-16.68884	-0.74921	1.57501	23.33021	219.31	0.31
93/ 9/18	2449248.5	-1.18027	-1.03572	0.00685	16.91758	-16.15304	-0.75327	1.57028	23.40283	221.27	0.25
93/ 9/22	2449252.5	-1.14047	-1.07239	0.00510	17.53458	-15.59250	-0.75645	1.56548	23.47679	223.24	0.19
93/ 9/26	2449256.5	-1.09926	-1.10774	0.00335	18.13559	-15.00740	-0.75871	1.56060	23.55202	225.22	0.12
93/ 9/30	2449260.5	-1.05669	-1.14171	0.00160	18.71960	-14.39798	-0.76005	1.55567	23.62844	227.21	0.06
93/10/ 4	2449264.5	-1.01278	-1.17425	-0.00016	19.28559	-13.76450	-0.76044	1.55067	23.70598	229.22	-0.01
93/10/ 8	2449268.5	-0.96760	-1.20529	-0.00191	19.83248	-13.10728	-0.75987	1.54563	23.78457	231.24	-0.07
93/10/12	2449272.5	-0.92117	-1.23479	-0.00367	20.35924	-12.42668	-0.75831	1.54054	23.86411	233.28	-0.14
93/10/16	2449276.5	-0.87355	-1.26269	-0.00542	20.86476	-11.72310	-0.75575	1.53541	23.94453	235.32	-0.20
93/10/20	2449280.5	-0.82478	-1.28894	-0.00716	21.34797	-10.99700	-0.75217	1.53025	24.02573	237.39	-0.27
93/10/24	2449284.5	-0.77493	-1.31348	-0.00889	21.80776	-10.24889	-0.74755	1.52507	24.10761	239.46	-0.33
93/10/28	2449288.5	-0.72404	-1.33627	-0.01061	22.24301	-9.47935	-0.74188	1.51986	24.19008	241.55	-0.40
93/11/ 1	2449292.5	-0.67218	-1.35726	-0.01232	22.65263	-8.68901	-0.73515	1.51464	24.27304	243.65	-0.47
93/11/ 5	2449296.5	-0.61940	-1.37640	-0.01401	23.03547	-7.87854	-0.72735	1.50942	24.35639	245.77	-0.53

1.4 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — MARS

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93/11/ 9	2449300.5	-0.56577	-1.39365	-0.01568	23.39045	-7.04872	-0.71845	1.50419	24.44000	247.90	-0.60
93/11/13	2449304.5	-0.51135	-1.40896	-0.01733	23.71643	-6.20036	-0.70846	1.49898	24.52377	250.05	-0.66
93/11/17	2449308.5	-0.45621	-1.42228	-0.01895	24.01232	-5.33435	-0.69736	1.49378	24.60758	252.22	-0.73
93/11/21	2449312.5	-0.40043	-1.43359	-0.02055	24.27703	-4.45166	-0.68515	1.48860	24.69131	254.39	-0.79
93/11/25	2449316.5	-0.34407	-1.44284	-0.02212	24.50949	-3.55332	-0.67183	1.48346	24.77483	256.59	-0.85
93/11/29	2449320.5	-0.28721	-1.45000	-0.02365	24.70864	-2.64044	-0.65738	1.47836	24.85802	258.80	-0.92
93/12/ 3	2449324.5	-0.22993	-1.45503	-0.02515	24.87347	-1.71421	-0.64182	1.47330	24.94073	261.02	-0.98
93/12/ 7	2449328.5	-0.17231	-1.45791	-0.02662	25.00299	-0.77589	-0.62515	1.46830	25.02283	263.26	-1.04
93/12/11	2449332.5	-0.11444	-1.45861	-0.02804	25.09624	0.17318	-0.60736	1.46336	25.10419	265.51	-1.10
93/12/15	2449336.5	-0.05639	-1.45710	-0.02942	25.15234	1.13157	-0.58847	1.45849	25.18466	267.78	-1.16
93/12/19	2449340.5	0.00175	-1.45337	-0.03076	25.17043	2.09780	-0.56849	1.45370	25.26410	270.07	-1.21
93/12/23	2449344.5	0.05988	-1.44740	-0.03205	25.14972	3.07028	-0.54743	1.44899	25.34236	272.37	-1.27
93/12/27	2449348.5	0.11792	-1.43918	-0.03329	25.08949	4.04739	-0.52532	1.44439	25.41928	274.68	-1.32
93/12/31	2449352.5	0.17577	-1.42870	-0.03447	24.98909	5.02739	-0.50216	1.43988	25.49474	277.01	-1.37
94/ 1/ 4	2449356.5	0.23334	-1.41595	-0.03561	24.84795	6.00851	-0.47799	1.43549	25.56856	279.36	-1.42
94/ 1/ 8	2449360.5	0.29054	-1.40094	-0.03668	24.66557	6.98889	-0.45283	1.43122	25.64060	281.72	-1.47
94/ 1/12	2449364.5	0.34727	-1.38366	-0.03770	24.44158	7.96663	-0.42671	1.42708	25.71070	284.09	-1.51
94/ 1/16	2449368.5	0.40344	-1.36413	-0.03865	24.17569	8.93974	-0.39967	1.42307	25.77872	286.48	-1.56
94/ 1/20	2449372.5	0.45894	-1.34236	-0.03954	23.86770	9.90622	-0.37175	1.41920	25.84450	288.88	-1.60
94/ 1/24	2449376.5	0.51368	-1.31837	-0.04037	23.51755	10.86400	-0.34298	1.41549	25.90790	291.29	-1.63
94/ 1/28	2449380.5	0.56757	-1.29218	-0.04113	23.12529	11.81098	-0.31342	1.41193	25.96876	293.71	-1.67
94/ 2/ 1	2449384.5	0.62050	-1.26381	-0.04182	22.69110	12.74504	-0.28311	1.40854	26.02695	296.15	-1.70
94/ 2/ 5	2449388.5	0.67238	-1.23330	-0.04243	22.21526	13.66402	-0.25210	1.40532	26.08231	298.60	-1.73
94/ 2/ 9	2449392.5	0.72311	-1.20069	-0.04298	21.69823	14.56578	-0.22046	1.40228	26.13472	301.06	-1.76
94/ 2/13	2449396.5	0.77260	-1.16602	-0.04345	21.14056	15.44816	-0.18823	1.39943	26.18405	303.53	-1.78
94/ 2/17	2449400.5	0.82076	-1.12933	-0.04385	20.54297	16.30901	-0.15549	1.39676	26.23017	306.01	-1.80
94/ 2/21	2449404.5	0.86749	-1.09068	-0.04417	19.90630	17.14621	-0.12229	1.39430	26.27296	308.50	-1.82
94/ 2/25	2449408.5	0.91270	-1.05013	-0.04441	19.23153	17.95766	-0.08872	1.39204	26.31230	310.99	-1.83
94/ 3/ 1	2449412.5	0.95631	-1.00773	-0.04458	18.51980	18.74130	-0.05483	1.38998	26.34810	313.50	-1.84
94/ 3/ 5	2449416.5	0.99824	-0.96356	-0.04467	17.77235	19.49514	-0.02070	1.38814	26.38025	316.01	-1.84
94/ 3/ 9	2449420.5	1.03840	-0.91768	-0.04468	16.99059	20.21725	0.01360	1.38651	26.40867	318.53	-1.85
94/ 3/13	2449424.5	1.07672	-0.87018	-0.04460	16.17604	20.90578	0.04798	1.38511	26.43327	321.06	-1.85
94/ 3/17	2449428.5	1.11312	-0.82112	-0.04445	15.33035	21.55894	0.08237	1.38392	26.45400	323.58	-1.84
94/ 3/21	2449432.5	1.14753	-0.77059	-0.04422	14.45528	22.17508	0.11670	1.38296	26.47079	326.12	-1.83
94/ 3/25	2449436.5	1.17988	-0.71869	-0.04391	13.55272	22.75263	0.15088	1.38223	26.48360	328.65	-1.82
94/ 3/29	2449440.5	1.21013	-0.66550	-0.04353	12.62466	23.29014	0.18483	1.38173	26.49239	331.19	-1.81
94/ 4/ 2	2449444.5	1.23820	-0.61111	-0.04306	11.67315	23.78629	0.21849	1.38146	26.49713	333.73	-1.79
94/ 4/ 6	2449448.5	1.26404	-0.55563	-0.04252	10.70037	24.23990	0.25176	1.38143	26.49781	336.27	-1.76
94/ 4/10	2449452.5	1.28762	-0.49915	-0.04190	9.70854	24.64991	0.28457	1.38162	26.49443	338.81	-1.74
94/ 4/14	2449456.5	1.30889	-0.44177	-0.04120	8.69996	25.01542	0.31685	1.38205	26.48699	341.35	-1.71
94/ 4/18	2449460.5	1.32781	-0.38361	-0.04043	7.67697	25.33567	0.34852	1.38270	26.47553	343.89	-1.68
94/ 4/22	2449464.5	1.34435	-0.32475	-0.03959	6.64196	25.61006	0.37952	1.38358	26.46006	346.42	-1.64
94/ 4/26	2449468.5	1.35849	-0.26531	-0.03868	5.59732	25.83815	0.40978	1.38469	26.44064	348.95	-1.60
94/ 4/30	2449472.5	1.37020	-0.20540	-0.03770	4.54548	26.01962	0.43922	1.38603	26.41732	351.47	-1.56
94/ 5/ 4	2449476.5	1.37949	-0.14513	-0.03665	3.48886	26.15434	0.46779	1.38758	26.39016	353.99	-1.51

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94/ 5/ 8	2449480.5	1.38632	-0.08460	-0.03554	2.42986	26.24233	0.49543	1.38936	26.35924	356.51	-1.47
94/ 5/12	2449484.5	1.39071	-0.02392	-0.03436	1.37087	26.28374	0.52209	1.39134	26.32464	359.01	-1.42
94/ 5/16	2449488.5	1.39266	0.03681	-0.03313	0.31425	26.27888	0.54771	1.39354	26.28646	1.51	-1.36
94/ 5/20	2449492.5	1.39217	0.09746	-0.03184	-0.73771	26.22819	0.57225	1.39594	26.24480	4.00	-1.31
94/ 5/24	2449496.5	1.38926	0.15795	-0.03049	-1.78275	26.13225	0.59567	1.39854	26.19976	6.49	-1.25
94/ 5/28	2449500.5	1.38394	0.21817	-0.02908	-2.81868	25.99179	0.61792	1.40133	26.15148	8.96	-1.19
94/ 6/ 1	2449504.5	1.37624	0.27801	-0.02763	-3.84340	25.80761	0.63898	1.40431	26.10006	11.42	-1.13
94/ 6/ 5	2449508.5	1.36619	0.33738	-0.02613	-4.85488	25.58068	0.65881	1.40747	26.04564	13.87	-1.06
94/ 6/ 9	2449512.5	1.35382	0.39617	-0.02459	-5.85116	25.31204	0.67738	1.41081	25.98835	16.31	-1.00
94/ 6/13	2449516.5	1.33917	0.45430	-0.02300	-6.83039	25.00283	0.69469	1.41432	25.92833	18.74	-0.93
94/ 6/17	2449520.5	1.32228	0.51166	-0.02138	-7.79082	24.65429	0.71071	1.41798	25.86573	21.15	-0.86
94/ 6/21	2449524.5	1.30319	0.56818	-0.01972	-8.73079	24.26773	0.72542	1.42180	25.80069	23.56	-0.79
94/ 6/25	2449528.5	1.28195	0.62376	-0.01803	-9.64875	23.84453	0.73883	1.42577	25.73336	25.95	-0.72
94/ 6/29	2449532.5	1.25863	0.67832	-0.01631	-10.54327	23.38612	0.75092	1.42987	25.66389	28.32	-0.65
94/ 7/ 3	2449536.5	1.23326	0.73179	-0.01456	-11.41300	22.89401	0.76169	1.43410	25.59243	30.68	-0.58
94/ 7/ 7	2449540.5	1.20591	0.78408	-0.01279	-12.25672	22.36972	0.77115	1.43846	25.51913	33.03	-0.51
94/ 7/11	2449544.5	1.17665	0.83512	-0.01100	-13.07330	21.81482	0.77930	1.44293	25.44415	35.36	-0.44
94/ 7/15	2449548.5	1.14553	0.88485	-0.00919	-13.86174	21.23090	0.78616	1.44751	25.36764	37.68	-0.36
94/ 7/19	2449552.5	1.11263	0.93319	-0.00737	-14.62112	20.61957	0.79173	1.45218	25.28974	39.99	-0.29
94/ 7/23	2449556.5	1.07800	0.98010	-0.00553	-15.35065	19.98246	0.79603	1.45695	25.21061	42.28	-0.22
94/ 7/27	2449560.5	1.04172	1.02550	-0.00369	-16.04961	19.32119	0.79907	1.46180	25.13040	44.55	-0.14
94/ 7/31	2449564.5	1.00387	1.06935	-0.00184	-16.71740	18.63738	0.80087	1.46672	25.04925	46.81	-0.07
94/ 8/ 4	2449568.5	0.96451	1.11159	0.00001	-17.35351	17.93263	0.80147	1.47171	24.96730	49.05	0.00
94/ 8/ 8	2449572.5	0.92372	1.15219	0.00186	-17.95750	17.20856	0.80087	1.47675	24.88469	51.28	0.07
94/ 8/12	2449576.5	0.88156	1.19109	0.00371	-18.52905	16.46675	0.79911	1.48185	24.80157	53.49	0.14
94/ 8/16	2449580.5	0.83813	1.22826	0.00555	-19.06789	15.70874	0.79620	1.48698	24.71806	55.69	0.21
94/ 8/20	2449584.5	0.79349	1.26366	0.00739	-19.57384	14.93607	0.79219	1.49215	24.63431	57.87	0.28
94/ 8/24	2449588.5	0.74772	1.29726	0.00921	-20.04681	14.15024	0.78710	1.49735	24.55042	60.04	0.35
94/ 8/28	2449592.5	0.70089	1.32903	0.01102	-20.48675	13.35270	0.78096	1.50256	24.46654	62.19	0.42
94/ 9/ 1	2449596.5	0.65309	1.35895	0.01282	-20.89369	12.54490	0.77379	1.50779	24.38277	64.33	0.49
94/ 9/ 5	2449600.5	0.60438	1.38698	0.01460	-21.26771	11.72822	0.76564	1.51301	24.29924	66.45	0.55
94/ 9/ 9	2449604.5	0.55485	1.41313	0.01635	-21.60896	10.90401	0.75653	1.51824	24.21605	68.56	0.62
94/ 9/13	2449608.5	0.50456	1.43736	0.01809	-21.91763	10.07358	0.74649	1.52346	24.13331	70.66	0.68
94/ 9/17	2449612.5	0.45361	1.45967	0.01980	-22.19395	9.23820	0.73557	1.52865	24.05113	72.74	0.74
94/ 9/21	2449616.5	0.40204	1.48004	0.02149	-22.43822	8.39910	0.72378	1.53383	23.96961	74.80	0.80
94/ 9/25	2449620.5	0.34996	1.49847	0.02315	-22.65074	7.55745	0.71117	1.53897	23.88884	76.85	0.86
94/ 9/29	2449624.5	0.29741	1.51496	0.02477	-22.83188	6.71440	0.69776	1.54407	23.80892	78.89	0.92
94/10/ 3	2449628.5	0.24449	1.52949	0.02637	-22.98202	5.87104	0.68359	1.54914	23.72993	80.92	0.98
94/10/ 7	2449632.5	0.19125	1.54208	0.02793	-23.10157	5.02843	0.66870	1.55415	23.65195	82.93	1.03
94/10/11	2449636.5	0.13778	1.55273	0.02946	-23.19099	4.18757	0.65310	1.55911	23.57508	84.93	1.08
94/10/15	2449640.5	0.08413	1.56143	0.03095	-23.25073	3.34944	0.63685	1.56401	23.49938	86.92	1.13
94/10/19	2449644.5	0.03037	1.56821	0.03240	-23.28128	2.51496	0.61996	1.56884	23.42493	88.89	1.18
94/10/23	2449648.5	-0.02342	1.57306	0.03381	-23.28314	1.68503	0.60246	1.57360	23.35180	90.85	1.23
94/10/27	2449652.5	-0.07718	1.57600	0.03518	-23.25681	0.86049	0.58440	1.57828	23.28006	92.80	1.28
94/10/31	2449656.5	-0.13085	1.57704	0.03651	-23.20283	0.04216	0.56579	1.58288	23.20976	94.74	1.32

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94/11/ 4	2449660.5	-0.18437	1.57620	0.03780	-23.12173	-0.76919	0.54667	1.58739	23.14098	96.67	1.36
94/11/ 8	2449664.5	-0.23766	1.57349	0.03904	-23.01406	-1.57280	0.52706	1.59182	23.07376	98.59	1.41
94/11/12	2449668.5	-0.29068	1.56894	0.04023	-22.88037	-2.36798	0.50700	1.59614	23.00816	100.50	1.44
94/11/16	2449672.5	-0.34336	1.56256	0.04138	-22.72121	-3.15405	0.48652	1.60037	22.94424	102.39	1.48
94/11/20	2449676.5	-0.39564	1.55437	0.04248	-22.53716	-3.93036	0.46563	1.60450	22.88204	104.28	1.52
94/11/24	2449680.5	-0.44747	1.54441	0.04353	-22.32876	-4.69630	0.44437	1.60851	22.82162	106.16	1.55
94/11/28	2449684.5	-0.49879	1.53268	0.04453	-22.09659	-5.45128	0.42276	1.61242	22.76300	108.03	1.58
94/12/ 2	2449688.5	-0.54955	1.51923	0.04548	-21.84120	-6.19474	0.40083	1.61621	22.70624	109.89	1.61
94/12/ 6	2449692.5	-0.59969	1.50407	0.04639	-21.56317	-6.92615	0.37860	1.61988	22.65138	111.74	1.64
94/12/10	2449696.5	-0.64916	1.48724	0.04723	-21.26305	-7.64500	0.35611	1.62342	22.59845	113.58	1.67
94/12/14	2449700.5	-0.69791	1.46876	0.04803	-20.94140	-8.35080	0.33336	1.62685	22.54749	115.42	1.69
94/12/18	2449704.5	-0.74590	1.44866	0.04877	-20.59877	-9.04310	0.31039	1.63014	22.49852	117.24	1.71
94/12/22	2449708.5	-0.79307	1.42699	0.04946	-20.23574	-9.72143	0.28721	1.63331	22.45159	119.06	1.74
94/12/26	2449712.5	-0.83938	1.40376	0.05010	-19.85283	-10.38538	0.26386	1.63634	22.40671	120.88	1.75
94/12/30	2449716.5	-0.88478	1.37901	0.05068	-19.45060	-11.03455	0.24035	1.63923	22.36392	122.68	1.77
95/ 1/ 3	2449720.5	-0.92923	1.35279	0.05121	-19.02959	-11.66854	0.21670	1.64199	22.32324	124.49	1.79
95/ 1/ 7	2449724.5	-0.97269	1.32511	0.05168	-18.59034	-12.28698	0.19294	1.64460	22.28470	126.28	1.80
95/ 1/11	2449728.5	-1.01511	1.29603	0.05210	-18.13338	-12.88950	0.16908	1.64708	22.24832	128.07	1.81
95/ 1/15	2449732.5	-1.05646	1.26557	0.05247	-17.65925	-13.47578	0.14514	1.64940	22.21411	129.85	1.82
95/ 1/19	2449736.5	-1.09669	1.23378	0.05277	-17.16845	-14.04546	0.12115	1.65158	22.18210	131.63	1.83
95/ 1/23	2449740.5	-1.13577	1.20069	0.05303	-16.66152	-14.59824	0.09713	1.65362	22.15230	133.41	1.84
95/ 1/27	2449744.5	-1.17366	1.16634	0.05322	-16.13897	-15.13380	0.07309	1.65550	22.12473	135.18	1.84
95/ 1/31	2449748.5	-1.21033	1.13078	0.05336	-15.60131	-15.65184	0.04905	1.65723	22.09940	136.95	1.85
95/ 2/ 4	2449752.5	-1.24574	1.09404	0.05345	-15.04905	-16.15208	0.02503	1.65881	22.07633	138.71	1.85
95/ 2/ 8	2449756.5	-1.27985	1.05616	0.05348	-14.48270	-16.63423	0.00105	1.66023	22.05552	140.47	1.85
95/ 2/12	2449760.5	-1.31264	1.01720	0.05345	-13.90276	-17.09802	-0.02287	1.66150	22.03700	142.23	1.84
95/ 2/16	2449764.5	-1.34408	0.97718	0.05337	-13.30972	-17.54318	-0.04671	1.66261	22.02076	143.98	1.84
95/ 2/20	2449768.5	-1.37413	0.93616	0.05324	-12.70410	-17.96945	-0.07047	1.66356	22.00682	145.73	1.83
95/ 2/24	2449772.5	-1.40276	0.89417	0.05305	-12.08638	-18.37659	-0.09411	1.66436	21.99519	147.49	1.83
95/ 2/28	2449776.5	-1.42996	0.85126	0.05280	-11.45705	-18.76434	-0.11763	1.66500	21.98586	149.23	1.82
95/ 3/ 4	2449780.5	-1.45569	0.80749	0.05250	-10.81662	-19.13246	-0.14100	1.66548	21.97885	150.98	1.81
95/ 3/ 8	2449784.5	-1.47993	0.76288	0.05215	-10.16556	-19.48071	-0.16421	1.66580	21.97416	152.73	1.79
95/ 3/12	2449788.5	-1.50265	0.71749	0.05175	-9.50439	-19.80886	-0.18724	1.66596	21.97178	154.48	1.78
95/ 3/16	2449792.5	-1.52384	0.67137	0.05129	-8.83358	-20.11668	-0.21008	1.66597	21.97173	156.22	1.76
95/ 3/20	2449796.5	-1.54346	0.62456	0.05077	-8.15363	-20.40394	-0.23270	1.66581	21.97400	157.97	1.75
95/ 3/24	2449800.5	-1.56150	0.57711	0.05021	-7.46505	-20.67042	-0.25510	1.66549	21.97859	159.72	1.73
95/ 3/28	2449804.5	-1.57794	0.52908	0.04960	-6.76832	-20.91590	-0.27725	1.66502	21.98549	161.46	1.71
95/ 4/ 1	2449808.5	-1.59277	0.48049	0.04893	-6.06395	-21.14017	-0.29914	1.66438	21.99472	163.21	1.68
95/ 4/ 5	2449812.5	-1.60596	0.43142	0.04821	-5.35244	-21.34299	-0.32074	1.66359	22.00625	164.96	1.66
95/ 4/ 9	2449816.5	-1.61749	0.38190	0.04745	-4.63431	-21.52418	-0.34206	1.66264	22.02008	166.72	1.64
95/ 4/13	2449820.5	-1.62736	0.33198	0.04663	-3.91007	-21.68351	-0.36305	1.66154	22.03622	168.47	1.61
95/ 4/17	2449824.5	-1.63555	0.28173	0.04577	-3.18024	-21.82077	-0.38372	1.66027	22.05464	170.23	1.58
95/ 4/21	2449828.5	-1.64205	0.23118	0.04486	-2.44535	-21.93577	-0.40404	1.65885	22.07535	171.99	1.55
95/ 4/25	2449832.5	-1.64685	0.18039	0.04391	-1.70593	-22.02830	-0.42400	1.65728	22.09833	173.75	1.52
95/ 4/29	2449836.5	-1.64993	0.12942	0.04290	-0.96252	-22.09817	-0.44358	1.65556	22.12357	175.51	1.48

1.4 1 A.U.=149,599,000 KM.

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95/ 5/ 3	2449840.5	-1.65129	0.07831	0.04186	-0.21567	-22.14516	-0.46275	1.65368	22.15105	177.28	1.45
95/ 5/ 7	2449844.5	-1.65093	0.02712	0.04077	0.53405	-22.16910	-0.48151	1.65165	22.18076	179.06	1.41
95/ 5/11	2449848.5	-1.64882	-0.02410	0.03963	1.28607	-22.16979	-0.49983	1.64948	22.21269	180.84	1.38
95/ 5/15	2449852.5	-1.64498	-0.07529	0.03846	2.03982	-22.14705	-0.51770	1.64715	22.24682	182.62	1.34
95/ 5/19	2449856.5	-1.63940	-0.12641	0.03724	2.79469	-22.10070	-0.53510	1.64469	22.28312	184.41	1.30
95/ 5/23	2449860.5	-1.63207	-0.17739	0.03598	3.55009	-22.03056	-0.55200	1.64208	22.32159	186.20	1.26
95/ 5/27	2449864.5	-1.62300	-0.22818	0.03469	4.30539	-21.93646	-0.56840	1.63932	22.36219	188.00	1.21
95/ 5/31	2449868.5	-1.61218	-0.27872	0.03336	5.05995	-21.81824	-0.58427	1.63643	22.40491	189.81	1.17
95/ 6/ 4	2449872.5	-1.59962	-0.32897	0.03199	5.81314	-21.67574	-0.59960	1.63341	22.44972	191.62	1.12
95/ 6/ 8	2449876.5	-1.58532	-0.37886	0.03059	6.56429	-21.50882	-0.61436	1.63025	22.49659	193.44	1.08
95/ 6/12	2449880.5	-1.56929	-0.42833	0.02915	7.31271	-21.31733	-0.62853	1.62696	22.54550	195.27	1.03
95/ 6/16	2449884.5	-1.55154	-0.47733	0.02769	8.05771	-21.10115	-0.64210	1.62354	22.59641	197.10	0.98
95/ 6/20	2449888.5	-1.53207	-0.52580	0.02619	8.79858	-20.86016	-0.65504	1.61999	22.64928	198.94	0.93
95/ 6/24	2449892.5	-1.51089	-0.57369	0.02466	9.53457	-20.59424	-0.66733	1.61633	22.70410	200.79	0.87
95/ 6/28	2449896.5	-1.48802	-0.62094	0.02310	10.26495	-20.30331	-0.67897	1.61254	22.76082	202.65	0.82
95/ 7/ 2	2449900.5	-1.46346	-0.66748	0.02152	10.98894	-19.98729	-0.68991	1.60864	22.81939	204.52	0.77
95/ 7/ 6	2449904.5	-1.43725	-0.71327	0.01992	11.70574	-19.64612	-0.70015	1.60463	22.87978	206.39	0.71
95/ 7/10	2449908.5	-1.40939	-0.75823	0.01829	12.41455	-19.27974	-0.70966	1.60051	22.94195	208.28	0.65
95/ 7/14	2449912.5	-1.37990	-0.80233	0.01664	13.11453	-18.88814	-0.71843	1.59628	23.00585	210.18	0.60
95/ 7/18	2449916.5	-1.34880	-0.84548	0.01497	13.80483	-18.47132	-0.72642	1.59196	23.07142	212.08	0.54
95/ 7/22	2449920.5	-1.31612	-0.88765	0.01328	14.48458	-18.02928	-0.73363	1.58754	23.13863	214.00	0.48
95/ 7/26	2449924.5	-1.28189	-0.92877	0.01158	15.15287	-17.56207	-0.74002	1.58303	23.20740	215.92	0.42
95/ 7/30	2449928.5	-1.24612	-0.96877	0.00986	15.80880	-17.06976	-0.74559	1.57843	23.27769	217.86	0.36
95/ 8/ 3	2449932.5	-1.20885	-1.00762	0.00814	16.45143	-16.55245	-0.75030	1.57375	23.34943	219.81	0.30
95/ 8/ 7	2449936.5	-1.17012	-1.04523	0.00640	17.07978	-16.01027	-0.75414	1.56899	23.42256	221.77	0.23
95/ 8/11	2449940.5	-1.12995	-1.08157	0.00465	17.69289	-15.44339	-0.75708	1.56416	23.49701	223.75	0.17
95/ 8/15	2449944.5	-1.08838	-1.11657	0.00290	18.28975	-14.85200	-0.75911	1.55927	23.57272	225.73	0.11
95/ 8/19	2449948.5	-1.04546	-1.15017	0.00115	18.86934	-14.23634	-0.76021	1.55431	23.64960	227.73	0.04
95/ 8/23	2449952.5	-1.00122	-1.18233	-0.00061	19.43063	-13.59670	-0.76036	1.54930	23.72757	229.74	-0.02
95/ 8/27	2449956.5	-0.95570	-1.21298	-0.00237	19.97256	-12.93340	-0.75953	1.54424	23.80657	231.77	-0.09
95/ 8/31	2449960.5	-0.90895	-1.24207	-0.00412	20.49406	-12.24680	-0.75771	1.53913	23.88650	233.80	-0.15
95/ 9/ 4	2449964.5	-0.86102	-1.26954	-0.00587	20.99405	-11.53734	-0.75489	1.53399	23.96727	235.85	-0.22
95/ 9/ 8	2449968.5	-0.81197	-1.29535	-0.00761	21.47143	-10.80547	-0.75105	1.52882	24.04880	237.92	-0.29
95/ 9/12	2449972.5	-0.76184	-1.31945	-0.00934	21.92510	-10.05174	-0.74616	1.52362	24.13098	240.00	-0.35
95/ 9/16	2449976.5	-0.71069	-1.34178	-0.01105	22.35394	-9.27671	-0.74022	1.51841	24.21372	242.09	-0.42
95/ 9/20	2449980.5	-0.65857	-1.36230	-0.01276	22.75684	-8.48105	-0.73321	1.51319	24.29690	244.20	-0.48
95/ 9/24	2449984.5	-0.60556	-1.38095	-0.01444	23.13268	-7.66545	-0.72512	1.50796	24.38044	246.32	-0.55
95/ 9/28	2449988.5	-0.55171	-1.39770	-0.01610	23.48034	-6.83068	-0.71594	1.50273	24.46420	248.46	-0.61
95/10/ 2	2449992.5	-0.49710	-1.41250	-0.01775	23.79871	-5.97760	-0.70567	1.49752	24.54808	250.61	-0.68
95/10/ 6	2449996.5	-0.44178	-1.42530	-0.01936	24.08669	-5.10710	-0.69428	1.49233	24.63195	252.78	-0.74
95/10/10	2450000.5	-0.38583	-1.43608	-0.02095	24.34319	-4.22018	-0.68178	1.48716	24.71570	254.96	-0.81
95/10/14	2450004.5	-0.32933	-1.44479	-0.02251	24.56715	-3.31789	-0.66816	1.48202	24.79919	257.16	-0.87
95/10/18	2450008.5	-0.27235	-1.45140	-0.02404	24.75753	-2.40135	-0.65342	1.47693	24.88230	259.37	-0.93
95/10/22	2450012.5	-0.21497	-1.45588	-0.02553	24.91331	-1.47178	-0.63757	1.47188	24.96489	261.60	-0.99
95/10/26	2450016.5	-0.15727	-1.45819	-0.02699	25.03352	-0.53047	-0.62060	1.46690	25.04683	263.84	-1.05

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95/10/30	2450020.5	-0.09933	-1.45832	-0.02840	25.11721	0.42124	-0.60253	1.46197	25.12797	266.10	-1.11
95/11/ 3	2450024.5	-0.04125	-1.45624	-0.02977	25.16350	1.38189	-0.58335	1.45713	25.20817	268.38	-1.17
95/11/ 7	2450028.5	0.01690	-1.45193	-0.03109	25.17156	2.34997	-0.56309	1.45236	25.28728	270.67	-1.23
95/11/11	2450032.5	0.07502	-1.44538	-0.03237	25.14061	3.32389	-0.54175	1.44768	25.36517	272.97	-1.28
95/11/15	2450036.5	0.13303	-1.43657	-0.03360	25.06994	4.30199	-0.51936	1.44310	25.44167	275.29	-1.33
95/11/19	2450040.5	0.19083	-1.42550	-0.03477	24.95893	5.28252	-0.49594	1.43863	25.51665	277.62	-1.38
95/11/23	2450044.5	0.24832	-1.41216	-0.03589	24.80703	6.26368	-0.47150	1.43428	25.58993	279.97	-1.43
95/11/27	2450048.5	0.30541	-1.39656	-0.03695	24.61378	7.24361	-0.44609	1.43004	25.66139	282.34	-1.48
95/12/ 1	2450052.5	0.36201	-1.37869	-0.03795	24.37881	8.22036	-0.41973	1.42593	25.73086	284.71	-1.52
95/12/ 5	2450056.5	0.41802	-1.35858	-0.03888	24.10187	9.19197	-0.39245	1.42197	25.79819	287.10	-1.57
95/12/ 9	2450060.5	0.47334	-1.33623	-0.03976	23.78279	10.15640	-0.36430	1.41815	25.86323	289.51	-1.61
95/12/13	2450064.5	0.52787	-1.31166	-0.04057	23.42155	11.11158	-0.33532	1.41448	25.92583	291.92	-1.64
95/12/17	2450068.5	0.58152	-1.28490	-0.04131	23.01823	12.05539	-0.30556	1.41097	25.98586	294.35	-1.68
95/12/21	2450072.5	0.63419	-1.25597	-0.04198	22.57303	12.98571	-0.27506	1.40763	26.04316	296.79	-1.71
95/12/25	2450076.5	0.68578	-1.22491	-0.04258	22.08629	13.90039	-0.24388	1.40447	26.09759	299.24	-1.74
95/12/29	2450080.5	0.73620	-1.19176	-0.04310	21.55848	14.79726	-0.21208	1.40148	26.14903	301.71	-1.76
96/ 1/ 2	2450084.5	0.78536	-1.15656	-0.04356	20.99021	15.67418	-0.17971	1.39868	26.19734	304.18	-1.78
96/ 1/ 6	2450088.5	0.83316	-1.11936	-0.04393	20.38222	16.52899	-0.14685	1.39608	26.24241	306.66	-1.80
96/ 1/10	2450092.5	0.87950	-1.08021	-0.04424	19.73540	17.35959	-0.11355	1.39368	26.28411	309.15	-1.82
96/ 1/14	2450096.5	0.92431	-1.03917	-0.04446	19.05078	18.16388	-0.07988	1.39148	26.32233	311.65	-1.83
96/ 1/18	2450100.5	0.96750	-0.99631	-0.04460	18.32951	18.93983	-0.04593	1.38948	26.35698	314.16	-1.84
96/ 1/22	2450104.5	1.00897	-0.95168	-0.04467	17.57290	19.68546	-0.01175	1.38771	26.38796	316.67	-1.84
96/ 1/26	2450108.5	1.04866	-0.90538	-0.04466	16.78237	20.39886	0.02256	1.38614	26.41518	319.19	-1.85
96/ 1/30	2450112.5	1.08649	-0.85746	-0.04457	15.95948	21.07819	0.05695	1.38480	26.43858	321.72	-1.84
96/ 2/ 3	2450116.5	1.12238	-0.80802	-0.04440	15.10592	21.72171	0.09133	1.38369	26.45808	324.25	-1.84
96/ 2/ 7	2450120.5	1.15626	-0.75713	-0.04414	14.22349	22.32779	0.12562	1.38280	26.47364	326.78	-1.83
96/ 2/11	2450124.5	1.18807	-0.70488	-0.04381	13.31408	22.89488	0.15974	1.38214	26.48520	329.32	-1.82
96/ 2/15	2450128.5	1.21776	-0.65138	-0.04341	12.37972	23.42158	0.19361	1.38171	26.49274	331.86	-1.80
96/ 2/19	2450132.5	1.24526	-0.59670	-0.04292	11.42249	23.90660	0.22716	1.38150	26.49623	334.40	-1.78
96/ 2/23	2450136.5	1.27052	-0.54095	-0.04236	10.44458	24.34879	0.26031	1.38153	26.49567	336.94	-1.76
96/ 2/27	2450140.5	1.29350	-0.48423	-0.04172	9.44824	24.74715	0.29298	1.38180	26.49106	339.48	-1.73
96/ 3/ 2	2450144.5	1.31416	-0.42665	-0.04100	8.43577	25.10080	0.32510	1.38229	26.48240	342.01	-1.70
96/ 3/ 6	2450148.5	1.33246	-0.36829	-0.04022	7.40952	25.40903	0.35660	1.38301	26.46973	344.55	-1.67
96/ 3/10	2450152.5	1.34839	-0.30928	-0.03936	6.37189	25.67128	0.38740	1.38396	26.45308	347.08	-1.63
96/ 3/14	2450156.5	1.36190	-0.24972	-0.03843	5.32528	25.88714	0.41743	1.38514	26.43250	349.61	-1.59
96/ 3/18	2450160.5	1.37298	-0.18971	-0.03743	4.27212	26.05636	0.44664	1.38653	26.40804	352.13	-1.55
96/ 3/22	2450164.5	1.38163	-0.12937	-0.03636	3.21481	26.17884	0.47497	1.38815	26.37977	354.65	-1.50
96/ 3/26	2450168.5	1.38784	-0.06879	-0.03524	2.15576	26.25463	0.50235	1.38999	26.34777	357.16	-1.45
96/ 3/30	2450172.5	1.39159	-0.00810	-0.03404	1.09734	26.28392	0.52873	1.39203	26.31213	359.67	-1.40
96/ 4/ 3	2450176.5	1.39291	0.05261	-0.03279	0.04190	26.26707	0.55407	1.39429	26.27294	2.16	-1.35
96/ 4/ 7	2450180.5	1.39179	0.11323	-0.03148	-1.00828	26.20454	0.57831	1.39675	26.23031	4.65	-1.29
96/ 4/11	2450184.5	1.38826	0.17365	-0.03012	-2.05096	26.09696	0.60141	1.39940	26.18434	7.13	-1.23
96/ 4/15	2450188.5	1.38232	0.23377	-0.02871	-3.08398	25.94508	0.62335	1.40225	26.13516	9.60	-1.17
96/ 4/19	2450192.5	1.37402	0.29349	-0.02724	-4.10525	25.74975	0.64408	1.40528	26.08290	12.06	-1.11
96/ 4/23	2450196.5	1.36337	0.35271	-0.02573	-5.11275	25.51194	0.66357	1.40849	26.02768	14.50	-1.05

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96/ 4/27	2450200.5	1.35041	0.41134	-0.02418	-6.10458	25.23274	0.68182	1.41187	25.96963	16.94	-0.98
96/ 5/ 1	2450204.5	1.33517	0.46927	-0.02258	-7.07890	24.91330	0.69878	1.41542	25.90891	19.36	-0.91
96/ 5/ 5	2450208.5	1.31771	0.52641	-0.02095	-8.03399	24.55489	0.71445	1.41913	25.84565	21.78	-0.85
96/ 5/ 9	2450212.5	1.29807	0.58269	-0.01928	-8.96822	24.15882	0.72882	1.42299	25.78001	24.17	-0.78
96/ 5/13	2450216.5	1.27629	0.63801	-0.01758	-9.88007	23.72650	0.74188	1.42699	25.71212	26.56	-0.71
96/ 5/17	2450220.5	1.25244	0.69229	-0.01586	-10.76813	23.25938	0.75363	1.43113	25.64214	28.93	-0.63
96/ 5/21	2450224.5	1.22656	0.74545	-0.01410	-11.63109	22.75895	0.76405	1.43539	25.57021	31.29	-0.56
96/ 5/25	2450228.5	1.19872	0.79742	-0.01233	-12.46775	22.22677	0.77317	1.43978	25.49651	33.63	-0.49
96/ 5/29	2450232.5	1.16898	0.84812	-0.01053	-13.27702	21.66440	0.78099	1.44427	25.42116	35.96	-0.42
96/ 6/ 2	2450236.5	1.13740	0.89749	-0.00872	-14.05792	21.07344	0.78751	1.44888	25.34433	38.28	-0.34
96/ 6/ 6	2450240.5	1.10405	0.94547	-0.00689	-14.80956	20.45550	0.79274	1.45357	25.26617	40.58	-0.27
96/ 6/10	2450244.5	1.06899	0.99199	-0.00506	-15.53117	19.81221	0.79671	1.45836	25.18682	42.86	-0.20
96/ 6/14	2450248.5	1.03231	1.03699	-0.00321	-16.22208	19.14518	0.79943	1.46322	25.10643	45.13	-0.13
96/ 6/18	2450252.5	0.99407	1.08043	-0.00137	-16.88168	18.45603	0.80092	1.46816	25.02514	47.38	-0.05
96/ 6/22	2450256.5	0.95434	1.12225	0.00049	-17.50951	17.74637	0.80121	1.47316	24.94311	49.62	0.02
96/ 6/26	2450260.5	0.91319	1.16241	0.00234	-18.10515	17.01780	0.80031	1.47821	24.86046	51.85	0.09
96/ 6/30	2450264.5	0.87071	1.20086	0.00418	-18.66828	16.27188	0.79825	1.48331	24.77733	54.06	0.16
96/ 7/ 4	2450268.5	0.82696	1.23758	0.00602	-19.19868	15.51016	0.79507	1.48845	24.69386	56.25	0.23
96/ 7/ 8	2450272.5	0.78203	1.27251	0.00786	-19.69617	14.73417	0.79078	1.49363	24.61017	58.43	0.30
96/ 7/12	2450276.5	0.73599	1.30564	0.00968	-20.16067	13.94539	0.78541	1.49882	24.52639	60.59	0.37
96/ 7/16	2450280.5	0.68891	1.33694	0.01148	-20.59217	13.14528	0.77901	1.50404	24.44264	62.74	0.44
96/ 7/20	2450284.5	0.64087	1.36637	0.01327	-20.99069	12.33525	0.77159	1.50926	24.35904	64.87	0.50
96/ 7/24	2450288.5	0.59195	1.39392	0.01505	-21.35634	11.51670	0.76319	1.51448	24.27571	66.99	0.57
96/ 7/28	2450292.5	0.54222	1.41958	0.01680	-21.68928	10.69094	0.75385	1.51970	24.19276	69.10	0.63
96/ 8/ 1	2450296.5	0.49176	1.44332	0.01853	-21.98971	9.85929	0.74358	1.52490	24.11028	71.19	0.70
96/ 8/ 5	2450300.5	0.44064	1.46513	0.02024	-22.25787	9.02300	0.73244	1.53009	24.02840	73.26	0.76
96/ 8/ 9	2450304.5	0.38895	1.48500	0.02191	-22.49406	8.18329	0.72044	1.53525	23.94719	75.32	0.82
96/ 8/13	2450308.5	0.33674	1.50293	0.02356	-22.69861	7.34132	0.70763	1.54038	23.86676	77.37	0.88
96/ 8/17	2450312.5	0.28409	1.51892	0.02518	-22.87188	6.49822	0.69403	1.54547	23.78721	79.41	0.93
96/ 8/21	2450316.5	0.23109	1.53296	0.02677	-23.01426	5.65507	0.67967	1.55051	23.70860	81.43	0.99
96/ 8/25	2450320.5	0.17778	1.54505	0.02832	-23.12618	4.81292	0.66460	1.55550	23.63104	83.44	1.04
96/ 8/29	2450324.5	0.12426	1.55520	0.02984	-23.20808	3.97278	0.64884	1.56044	23.55459	85.43	1.10
96/ 9/ 2	2450328.5	0.07058	1.56341	0.03132	-23.26043	3.13558	0.63242	1.56531	23.47934	87.42	1.15
96/ 9/ 6	2450332.5	0.01681	1.56969	0.03276	-23.28372	2.30227	0.61538	1.57012	23.40536	89.39	1.20
96/ 9/10	2450336.5	-0.03698	1.57405	0.03416	-23.27845	1.47371	0.59774	1.57485	23.33271	91.35	1.24
96/ 9/14	2450340.5	-0.09072	1.57650	0.03552	-23.24514	0.65075	0.57954	1.57951	23.26146	93.29	1.29
96/ 9/18	2450344.5	-0.14436	1.57706	0.03684	-23.18431	-0.16581	0.56080	1.58408	23.19168	95.23	1.33
96/ 9/22	2450348.5	-0.19782	1.57574	0.03811	-23.09650	-0.97521	0.54156	1.58857	23.12342	97.16	1.37
96/ 9/26	2450352.5	-0.25105	1.57256	0.03934	-22.98226	-1.77670	0.52184	1.59296	23.05674	99.07	1.42
96/ 9/30	2450356.5	-0.30399	1.56754	0.04052	-22.84215	-2.56959	0.50168	1.59726	22.99170	100.98	1.45
96/10/ 4	2450360.5	-0.35657	1.56070	0.04166	-22.67671	-3.35321	0.48109	1.60145	22.92834	102.87	1.49
96/10/ 8	2450364.5	-0.40875	1.55205	0.04275	-22.48651	-4.12693	0.46011	1.60554	22.86671	104.75	1.53
96/10/12	2450368.5	-0.46045	1.54164	0.04378	-22.27211	-4.89013	0.43876	1.60953	22.80686	106.63	1.56
96/10/16	2450372.5	-0.51163	1.52947	0.04477	-22.03408	-5.64223	0.41707	1.61339	22.74883	108.50	1.59
96/10/20	2450376.5	-0.56224	1.51558	0.04571	-21.77297	-6.38268	0.39507	1.61715	22.69266	110.35	1.62

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96/10/24	2450380.5	-0.61221	1.49999	0.04660	-21.48936	-7.11095	0.37278	1.62078	22.63840	112.20	1.65
96/10/28	2450384.5	-0.66151	1.48273	0.04743	-21.18379	-7.82654	0.35022	1.62429	22.58607	114.04	1.67
96/11/ 1	2450388.5	-0.71007	1.46384	0.04822	-20.85684	-8.52897	0.32741	1.62768	22.53571	115.88	1.70
96/11/ 5	2450392.5	-0.75786	1.44333	0.04895	-20.50905	-9.21777	0.30439	1.63094	22.48735	117.70	1.72
96/11/ 9	2450396.5	-0.80482	1.42126	0.04962	-20.14098	-9.89251	0.28117	1.63406	22.44103	119.52	1.74
96/11/13	2450400.5	-0.85090	1.39764	0.05025	-19.75318	-10.55277	0.25778	1.63706	22.39677	121.33	1.76
96/11/17	2450404.5	-0.89607	1.37251	0.05081	-19.34619	-11.19814	0.23424	1.63991	22.35460	123.14	1.78
96/11/21	2450408.5	-0.94027	1.34591	0.05133	-18.92055	-11.82824	0.21056	1.64263	22.31454	124.94	1.79
96/11/25	2450412.5	-0.98347	1.31787	0.05179	-18.47680	-12.44269	0.18678	1.64520	22.27662	126.73	1.80
96/11/29	2450416.5	-1.02563	1.28843	0.05219	-18.01547	-13.04115	0.16290	1.64763	22.24085	128.52	1.82
96/12/ 3	2450420.5	-1.06670	1.25763	0.05254	-17.53709	-13.62326	0.13895	1.64992	22.20725	130.30	1.82
96/12/ 7	2450424.5	-1.10664	1.22550	0.05283	-17.04218	-14.18871	0.11496	1.65206	22.17586	132.08	1.83
96/12/11	2450428.5	-1.14543	1.19209	0.05307	-16.53127	-14.73716	0.09093	1.65405	22.14667	133.86	1.84
96/12/15	2450432.5	-1.18301	1.15742	0.05325	-16.00486	-15.26832	0.06689	1.65589	22.11971	135.63	1.84
96/12/19	2450436.5	-1.21936	1.12156	0.05338	-15.46347	-15.78189	0.04286	1.65758	22.09499	137.39	1.85
96/12/23	2450440.5	-1.25445	1.08452	0.05345	-14.90761	-16.27758	0.01886	1.65912	22.07253	139.16	1.85
96/12/27	2450444.5	-1.28823	1.04636	0.05347	-14.33777	-16.75511	-0.00510	1.66050	22.05233	140.91	1.85
96/12/31	2450448.5	-1.32068	1.00712	0.05343	-13.75447	-17.21421	-0.02900	1.66173	22.03441	142.67	1.84
97/ 1/ 4	2450452.5	-1.35177	0.96684	0.05333	-13.15820	-17.65461	-0.05282	1.66280	22.01877	144.43	1.84
97/ 1/ 8	2450456.5	-1.38147	0.92556	0.05318	-12.54946	-18.07606	-0.07655	1.66372	22.00542	146.18	1.83
97/ 1/12	2450460.5	-1.40975	0.88334	0.05298	-11.92874	-18.47830	-0.10016	1.66447	21.99437	147.93	1.82
97/ 1/16	2450464.5	-1.43658	0.84020	0.05272	-11.29653	-18.86109	-0.12363	1.66507	21.98562	149.68	1.81
97/ 1/20	2450468.5	-1.46193	0.79621	0.05241	-10.65334	-19.22418	-0.14696	1.66551	21.97918	151.43	1.80
97/ 1/24	2450472.5	-1.48579	0.75140	0.05204	-9.99966	-19.56734	-0.17013	1.66580	21.97506	153.17	1.79
97/ 1/28	2450476.5	-1.50813	0.70581	0.05162	-9.33597	-19.89034	-0.19311	1.66592	21.97324	154.92	1.78
97/ 2/ 1	2450480.5	-1.52892	0.65951	0.05115	-8.66278	-20.19295	-0.21589	1.66588	21.97374	156.67	1.76
97/ 2/ 5	2450484.5	-1.54814	0.61253	0.05062	-7.98057	-20.47493	-0.23845	1.66569	21.97656	158.41	1.74
97/ 2/ 9	2450488.5	-1.56578	0.56493	0.05005	-7.28984	-20.73608	-0.26078	1.66533	21.98169	160.16	1.72
97/ 2/13	2450492.5	-1.58182	0.51674	0.04942	-6.59110	-20.97616	-0.28286	1.66482	21.98913	161.91	1.70
97/ 2/17	2450496.5	-1.59623	0.46802	0.04874	-5.88484	-21.19497	-0.30468	1.66414	21.99888	163.66	1.68
97/ 2/21	2450500.5	-1.60900	0.41883	0.04801	-5.17158	-21.39228	-0.32621	1.66331	22.01094	165.41	1.65
97/ 2/25	2450504.5	-1.62012	0.36920	0.04723	-4.45183	-21.56789	-0.34744	1.66233	22.02529	167.16	1.63
97/ 3/ 1	2450508.5	-1.62957	0.31919	0.04641	-3.72609	-21.72159	-0.36835	1.66118	22.04193	168.92	1.60
97/ 3/ 5	2450512.5	-1.63733	0.26886	0.04553	-2.99490	-21.85317	-0.38893	1.65988	22.06086	170.67	1.57
97/ 3/ 9	2450516.5	-1.64340	0.21824	0.04461	-2.25879	-21.96242	-0.40915	1.65843	22.08206	172.44	1.54
97/ 3/13	2450520.5	-1.64777	0.16740	0.04364	-1.51828	-22.04915	-0.42901	1.65682	22.10553	174.20	1.51
97/ 3/17	2450524.5	-1.65041	0.11638	0.04263	-0.77394	-22.11317	-0.44848	1.65506	22.13125	175.97	1.48
97/ 3/21	2450528.5	-1.65134	0.06525	0.04157	-0.02630	-22.15426	-0.46754	1.65315	22.15921	177.74	1.44
97/ 3/25	2450532.5	-1.65053	0.01404	0.04047	0.72407	-22.17225	-0.48619	1.65109	22.18940	179.51	1.40
97/ 3/29	2450536.5	-1.64799	-0.03718	0.03932	1.47659	-22.16694	-0.50439	1.64888	22.22179	181.29	1.37
97/ 4/ 2	2450540.5	-1.64371	-0.08836	0.03814	2.23068	-22.13815	-0.52214	1.64652	22.25638	183.08	1.33
97/ 4/ 6	2450544.5	-1.63768	-0.13945	0.03691	2.98575	-22.08570	-0.53941	1.64403	22.29314	184.87	1.29
97/ 4/10	2450548.5	-1.62991	-0.19038	0.03565	3.74117	-22.00942	-0.55618	1.64138	22.33205	186.66	1.24
97/ 4/14	2450552.5	-1.62040	-0.24112	0.03434	4.49634	-21.90914	-0.57244	1.63860	22.37309	188.46	1.20
97/ 4/18	2450556.5	-1.60914	-0.29159	0.03300	5.25061	-21.78469	-0.58817	1.63568	22.41623	190.27	1.16

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97/ 4/22	2450560.5	-1.59614	-0.34175	0.03163	6.00332	-21.63593	-0.60335	1.63262	22.46146	192.09	1.11
97/ 4/26	2450564.5	-1.58140	-0.39154	0.03021	6.75382	-21.46270	-0.61796	1.62943	22.50874	193.91	1.06
97/ 4/30	2450568.5	-1.56494	-0.44090	0.02877	7.50141	-21.26488	-0.63197	1.62612	22.55805	195.73	1.01
97/ 5/ 4	2450572.5	-1.54675	-0.48977	0.02730	8.24540	-21.04233	-0.64538	1.62267	22.60935	197.57	0.96
97/ 5/ 8	2450576.5	-1.52684	-0.53810	0.02579	8.98506	-20.79493	-0.65815	1.61910	22.66261	199.41	0.91
97/ 5/12	2450580.5	-1.50524	-0.58583	0.02426	9.71966	-20.52260	-0.67027	1.61540	22.71779	201.27	0.86
97/ 5/16	2450584.5	-1.48194	-0.63291	0.02269	10.44845	-20.22523	-0.68173	1.61159	22.77487	203.13	0.81
97/ 5/20	2450588.5	-1.45697	-0.67926	0.02111	11.17064	-19.90275	-0.69249	1.60767	22.83380	205.00	0.75
97/ 5/24	2450592.5	-1.43033	-0.72484	0.01949	11.88544	-19.55511	-0.70254	1.60363	22.89453	206.87	0.70
97/ 5/28	2450596.5	-1.40206	-0.76959	0.01786	12.59203	-19.18226	-0.71186	1.59949	22.95703	208.76	0.64
97/ 6/ 1	2450600.5	-1.37216	-0.81345	0.01621	13.28958	-18.78418	-0.72042	1.59524	23.02124	210.66	0.58
97/ 6/ 5	2450604.5	-1.34066	-0.85636	0.01453	13.97722	-18.36089	-0.72821	1.59090	23.08712	212.57	0.52
97/ 6/ 9	2450608.5	-1.30759	-0.89827	0.01284	14.65409	-17.91239	-0.73521	1.58646	23.15462	214.49	0.46
97/ 6/13	2450612.5	-1.27297	-0.93911	0.01114	15.31926	-17.43874	-0.74139	1.58193	23.22368	216.42	0.40
97/ 6/17	2450616.5	-1.23682	-0.97882	0.00942	15.97184	-16.94002	-0.74673	1.57731	23.29424	218.36	0.34
97/ 6/21	2450620.5	-1.19918	-1.01736	0.00769	16.61086	-16.41634	-0.75122	1.57261	23.36624	220.31	0.28
97/ 6/25	2450624.5	-1.16008	-1.05465	0.00595	17.23538	-15.86783	-0.75483	1.56784	23.43963	222.27	0.22
97/ 6/29	2450628.5	-1.11956	-1.09065	0.00420	17.84439	-15.29467	-0.75754	1.56299	23.51432	224.25	0.15
97/ 7/ 3	2450632.5	-1.07765	-1.12530	0.00245	18.43691	-14.69707	-0.75933	1.55809	23.59025	226.24	0.09
97/ 7/ 7	2450636.5	-1.03439	-1.15854	0.00069	19.01190	-14.07527	-0.76019	1.55312	23.66735	228.24	0.03
97/ 7/11	2450640.5	-0.98982	-1.19031	-0.00106	19.56833	-13.42957	-0.76008	1.54809	23.74554	230.25	-0.04
97/ 7/15	2450644.5	-0.94399	-1.22057	-0.00282	20.10514	-12.76030	-0.75901	1.54302	23.82473	232.28	-0.10
97/ 7/19	2450648.5	-0.89694	-1.24925	-0.00457	20.62124	-12.06784	-0.75693	1.53791	23.90484	234.32	-0.17
97/ 7/23	2450652.5	-0.84873	-1.27631	-0.00632	21.11557	-11.35264	-0.75385	1.53276	23.98579	236.38	-0.24
97/ 7/27	2450656.5	-0.79940	-1.30169	-0.00805	21.58701	-10.61516	-0.74974	1.52758	24.06747	238.44	-0.30
97/ 7/31	2450660.5	-0.74901	-1.32534	-0.00978	22.03447	-9.85596	-0.74459	1.52238	24.14979	240.53	-0.37
97/ 8/ 4	2450664.5	-0.69761	-1.34721	-0.01149	22.45683	-9.07564	-0.73838	1.51716	24.23266	242.62	-0.43
97/ 8/ 8	2450668.5	-0.64527	-1.36726	-0.01319	22.85297	-8.27484	-0.73109	1.51193	24.31596	244.74	-0.50
97/ 8/12	2450672.5	-0.59204	-1.38543	-0.01487	23.22178	-7.45430	-0.72273	1.50670	24.39959	246.86	-0.57
97/ 8/16	2450676.5	-0.53800	-1.40168	-0.01653	23.56214	-6.61481	-0.71327	1.50148	24.48344	249.00	-0.63
97/ 8/20	2450680.5	-0.48320	-1.41598	-0.01816	23.87293	-5.75721	-0.70271	1.49626	24.56738	251.16	-0.70
97/ 8/24	2450684.5	-0.42772	-1.42827	-0.01977	24.15308	-4.88245	-0.69104	1.49107	24.65131	253.33	-0.76
97/ 8/28	2450688.5	-0.37163	-1.43852	-0.02136	24.40148	-3.99152	-0.67826	1.48591	24.73509	255.51	-0.82
97/ 9/ 1	2450692.5	-0.31500	-1.44670	-0.02291	24.61709	-3.08549	-0.66436	1.48077	24.81859	257.72	-0.89
97/ 9/ 5	2450696.5	-0.25792	-1.45277	-0.02442	24.79886	-2.16552	-0.64934	1.47569	24.90170	259.93	-0.95
97/ 9/ 9	2450700.5	-0.20045	-1.45670	-0.02591	24.94579	-1.23283	-0.63320	1.47065	24.98426	262.16	-1.01
97/ 9/13	2450704.5	-0.14269	-1.45846	-0.02735	25.05691	-0.28872	-0.61596	1.46567	25.06614	264.41	-1.07
97/ 9/17	2450708.5	-0.08471	-1.45802	-0.02875	25.13130	0.66542	-0.59760	1.46076	25.14721	266.67	-1.13
97/ 9/21	2450712.5	-0.02660	-1.45537	-0.03011	25.16808	1.62814	-0.57815	1.45593	25.22731	268.95	-1.19
97/ 9/25	2450716.5	0.03155	-1.45049	-0.03142	25.16643	2.59789	-0.55762	1.45118	25.30630	271.25	-1.24
97/ 9/29	2450720.5	0.08965	-1.44337	-0.03269	25.12559	3.57308	-0.53601	1.44652	25.38404	273.55	-1.29
97/10/ 3	2450724.5	0.14761	-1.43398	-0.03390	25.04487	4.55202	-0.51336	1.44196	25.46036	275.88	-1.35
97/10/ 7	2450728.5	0.20533	-1.42233	-0.03506	24.92367	5.53296	-0.48968	1.43751	25.53513	278.21	-1.40
97/10/11	2450732.5	0.26273	-1.40842	-0.03616	24.76145	6.51407	-0.46499	1.43317	25.60818	280.57	-1.45
97/10/15	2450736.5	0.31971	-1.39224	-0.03720	24.55778	7.49347	-0.43934	1.42896	25.67936	282.93	-1.49

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97/10/19	2450740.5	0.37616	-1.37380	-0.03819	24.31231	8.46922	-0.41274	1.42488	25.74852	285.31	-1.54
97/10/23	2450744.5	0.43201	-1.35311	-0.03911	24.02481	9.43932	-0.38524	1.42094	25.81551	287.71	-1.58
97/10/27	2450748.5	0.48714	-1.33019	-0.03997	23.69516	10.40172	-0.35688	1.41715	25.88018	290.11	-1.62
97/10/31	2450752.5	0.54145	-1.30506	-0.04076	23.32334	11.35435	-0.32769	1.41351	25.94238	292.53	-1.65
97/11/ 4	2450756.5	0.59486	-1.27774	-0.04148	22.90946	12.29509	-0.29774	1.41004	26.00195	294.96	-1.69
97/11/ 8	2450760.5	0.64727	-1.24826	-0.04213	22.45377	13.22180	-0.26706	1.40673	26.05877	297.41	-1.72
97/11/12	2450764.5	0.69858	-1.21666	-0.04271	21.95663	14.13233	-0.23572	1.40360	26.11268	299.86	-1.74
97/11/16	2450768.5	0.74869	-1.18298	-0.04322	21.41855	15.02451	-0.20376	1.40066	26.16356	302.33	-1.77
97/11/20	2450772.5	0.79751	-1.14726	-0.04366	20.84017	15.89619	-0.17126	1.39790	26.21127	304.80	-1.79
97/11/24	2450776.5	0.84495	-1.10955	-0.04401	20.22226	16.74523	-0.13828	1.39534	26.25570	307.29	-1.81
97/11/28	2450780.5	0.89091	-1.06991	-0.04429	19.56575	17.56951	-0.10488	1.39298	26.29672	309.78	-1.82
97/12/ 2	2450784.5	0.93532	-1.02840	-0.04450	18.87170	18.36697	-0.07113	1.39083	26.33423	312.29	-1.83
97/12/ 6	2450788.5	0.97808	-0.98507	-0.04462	18.14129	19.13557	-0.03711	1.38888	26.36812	314.80	-1.84
97/12/10	2450792.5	1.01911	-0.94001	-0.04467	17.37587	19.87334	-0.00288	1.38715	26.39831	317.31	-1.85
97/12/14	2450796.5	1.05833	-0.89327	-0.04464	16.57689	20.57840	0.03146	1.38564	26.42470	319.83	-1.85
97/12/18	2450800.5	1.09568	-0.84495	-0.04452	15.74596	21.24892	0.06586	1.38435	26.44724	322.36	-1.84
97/12/22	2450804.5	1.13106	-0.79512	-0.04433	14.88478	21.88320	0.10022	1.38329	26.46585	324.89	-1.84
97/12/26	2450808.5	1.16443	-0.74387	-0.04406	13.99519	22.47960	0.13448	1.38245	26.48048	327.43	-1.83
97/12/30	2450812.5	1.19571	-0.69129	-0.04371	13.07911	23.03664	0.16855	1.38185	26.49110	329.97	-1.81
98/ 1/ 3	2450816.5	1.22484	-0.63747	-0.04328	12.13858	23.55292	0.20235	1.38147	26.49766	332.51	-1.80
98/ 1/ 7	2450820.5	1.25177	-0.58250	-0.04278	11.17572	24.02720	0.23581	1.38133	26.50016	335.05	-1.77
98/ 1/11	2450824.5	1.27646	-0.52649	-0.04219	10.19274	24.45835	0.26885	1.38142	26.49859	337.59	-1.75
98/ 1/15	2450828.5	1.29885	-0.46953	-0.04153	9.19189	24.84541	0.30139	1.38174	26.49295	340.13	-1.72
98/ 1/19	2450832.5	1.31892	-0.41173	-0.04080	8.17551	25.18754	0.33336	1.38229	26.48325	342.66	-1.69
98/ 1/23	2450836.5	1.33662	-0.35319	-0.03999	7.14595	25.48408	0.36468	1.38307	26.46952	345.20	-1.66
98/ 1/27	2450840.5	1.35192	-0.29402	-0.03912	6.10561	25.73448	0.39530	1.38408	26.45181	347.73	-1.62
98/ 1/31	2450844.5	1.36482	-0.23432	-0.03817	5.05692	25.93840	0.42513	1.38531	26.43017	350.26	-1.58
98/ 2/ 4	2450848.5	1.37529	-0.17421	-0.03715	4.00228	26.09561	0.45412	1.38677	26.40464	352.78	-1.54
98/ 2/ 8	2450852.5	1.38331	-0.11379	-0.03607	2.94412	26.20605	0.48221	1.38845	26.37532	355.30	-1.49
98/ 2/12	2450856.5	1.38889	-0.05316	-0.03493	1.88484	26.26981	0.50934	1.39034	26.34227	357.81	-1.44
98/ 2/16	2450860.5	1.39202	0.00755	-0.03372	0.82680	26.28714	0.53546	1.39245	26.30559	0.31	-1.39
98/ 2/20	2450864.5	1.39271	0.06826	-0.03245	-0.22766	26.25840	0.56051	1.39476	26.26537	2.81	-1.33
98/ 2/24	2450868.5	1.39097	0.12884	-0.03113	-1.27628	26.18413	0.58446	1.39727	26.22173	5.29	-1.28
98/ 2/28	2450872.5	1.38682	0.18920	-0.02975	-2.31682	26.06496	0.60727	1.39998	26.17477	7.77	-1.22
98/ 3/ 4	2450876.5	1.38027	0.24924	-0.02832	-3.34715	25.90168	0.62890	1.40288	26.12463	10.24	-1.16
98/ 3/ 8	2450880.5	1.37136	0.30884	-0.02685	-4.36519	25.69518	0.64931	1.40597	26.07142	12.69	-1.09
98/ 3/12	2450884.5	1.36012	0.36792	-0.02533	-5.36896	25.44646	0.66848	1.40923	26.01528	15.14	-1.03
98/ 3/16	2450888.5	1.34657	0.42638	-0.02376	-6.35654	25.15662	0.68639	1.41266	25.95635	17.57	-0.96
98/ 3/20	2450892.5	1.33076	0.48413	-0.02216	-7.32615	24.82685	0.70302	1.41626	25.89477	19.99	-0.90
98/ 3/24	2450896.5	1.31274	0.54106	-0.02051	-8.27609	24.45843	0.71835	1.42002	25.83069	22.40	-0.83
98/ 3/28	2450900.5	1.29254	0.59710	-0.01884	-9.20474	24.05272	0.73238	1.42392	25.76425	24.80	-0.76
98/ 4/ 1	2450904.5	1.27022	0.65217	-0.01713	-10.11062	23.61111	0.74509	1.42796	25.69561	27.18	-0.69
98/ 4/ 5	2450908.5	1.24584	0.70617	-0.01540	-10.99235	23.13509	0.75649	1.43214	25.62492	29.55	-0.62
98/ 4/ 9	2450912.5	1.21945	0.75903	-0.01364	-11.84865	22.62616	0.76657	1.43645	25.55233	31.90	-0.54
98/ 4/13	2450916.5	1.19112	0.81069	-0.01185	-12.67834	22.08588	0.77535	1.44087	25.47799	34.24	-0.47

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98/ 4/17	2450920.5	1.16090	0.86106	-0.01005	-13.48037	21.51583	0.78282	1.44541	25.40205	36.56	-0.40
98/ 4/21	2450924.5	1.12886	0.91008	-0.00824	-14.25378	20.91761	0.78900	1.45004	25.32467	38.88	-0.33
98/ 4/25	2450928.5	1.09506	0.95768	-0.00641	-14.99771	20.29284	0.79390	1.45477	25.24600	41.17	-0.25
98/ 4/29	2450932.5	1.05959	1.00382	-0.00457	-15.71141	19.64313	0.79754	1.45959	25.16619	43.45	-0.18
98/ 5/ 3	2450936.5	1.02249	1.04842	-0.00273	-16.39423	18.97012	0.79993	1.46448	25.08537	45.72	-0.11
98/ 5/ 7	2450940.5	0.98386	1.09145	-0.00088	-17.04562	18.27541	0.80110	1.46944	25.00371	47.97	-0.03
98/ 5/11	2450944.5	0.94376	1.13285	0.00097	-17.66510	17.56062	0.80107	1.47446	24.92134	50.20	0.04
98/ 5/15	2450948.5	0.90227	1.17257	0.00282	-18.25231	16.82733	0.79986	1.47953	24.83839	52.42	0.11
98/ 5/19	2450952.5	0.85946	1.21058	0.00467	-18.80693	16.07711	0.79751	1.48465	24.75501	54.63	0.18
98/ 5/23	2450956.5	0.81540	1.24684	0.00651	-19.32877	15.31151	0.79403	1.48981	24.67132	56.82	0.25
98/ 5/27	2450960.5	0.77018	1.28131	0.00834	-19.81768	14.53202	0.78945	1.49499	24.58746	58.99	0.32
98/ 5/31	2450964.5	0.72386	1.31397	0.01015	-20.27359	13.74013	0.78381	1.50020	24.50355	61.15	0.39
98/ 6/ 4	2450968.5	0.67653	1.34479	0.01196	-20.69649	12.93729	0.77713	1.50542	24.41971	63.29	0.46
98/ 6/ 8	2450972.5	0.62826	1.37374	0.01374	-21.08644	12.12491	0.76945	1.51065	24.33605	65.42	0.52
98/ 6/12	2450976.5	0.57913	1.40081	0.01551	-21.44356	11.30435	0.76080	1.51588	24.25270	67.54	0.59
98/ 6/16	2450980.5	0.52921	1.42597	0.01726	-21.76802	10.47694	0.75121	1.52110	24.16976	69.64	0.65
98/ 6/20	2450984.5	0.47858	1.44921	0.01898	-22.06003	9.64397	0.74071	1.52630	24.08733	71.73	0.71
98/ 6/24	2450988.5	0.42731	1.47052	0.02068	-22.31984	8.80669	0.72934	1.53149	24.00553	73.80	0.77
98/ 6/28	2450992.5	0.37548	1.48990	0.02235	-22.54778	7.96630	0.71712	1.53664	23.92443	75.86	0.83
98/ 7/ 2	2450996.5	0.32315	1.50733	0.02399	-22.74417	7.12395	0.70410	1.54176	23.84415	77.90	0.89
98/ 7/ 6	2451000.5	0.27041	1.52281	0.02560	-22.90938	6.28077	0.69030	1.54685	23.76477	79.93	0.95
98/ 7/10	2451004.5	0.21733	1.53635	0.02718	-23.04382	5.43782	0.67576	1.55188	23.68637	81.95	1.00
98/ 7/14	2451008.5	0.16397	1.54794	0.02873	-23.14792	4.59613	0.66050	1.55686	23.60904	83.95	1.06
98/ 7/18	2451012.5	0.11040	1.55758	0.03023	-23.22213	3.75670	0.64456	1.56178	23.53286	85.95	1.11
98/ 7/22	2451016.5	0.05670	1.56530	0.03170	-23.26692	2.92047	0.62798	1.56664	23.45790	87.93	1.16
98/ 7/26	2451020.5	0.00292	1.57108	0.03313	-23.28278	2.08835	0.61078	1.57143	23.38423	89.89	1.21
98/ 7/30	2451024.5	-0.05086	1.57495	0.03452	-23.27023	1.26120	0.59299	1.57615	23.31192	91.85	1.26
98/ 8/ 3	2451028.5	-0.10457	1.57691	0.03587	-23.22977	0.43986	0.57465	1.58078	23.24104	93.79	1.30
98/ 8/ 7	2451032.5	-0.15817	1.57699	0.03718	-23.16195	-0.37487	0.55578	1.58533	23.17165	95.73	1.34
98/ 8/11	2451036.5	-0.21157	1.57519	0.03844	-23.06729	-1.18225	0.53641	1.58980	23.10380	97.65	1.39
98/ 8/15	2451040.5	-0.26473	1.57153	0.03966	-22.94636	-1.98154	0.51657	1.59416	23.03755	99.56	1.43
98/ 8/19	2451044.5	-0.31757	1.56604	0.04083	-22.79970	-2.77205	0.49629	1.59843	22.97296	101.46	1.46
98/ 8/23	2451048.5	-0.37005	1.55873	0.04195	-22.62787	-3.55313	0.47560	1.60260	22.91007	103.36	1.50
98/ 8/27	2451052.5	-0.42210	1.54963	0.04302	-22.43143	-4.32415	0.45453	1.60666	22.84894	105.24	1.53
98/ 8/31	2451056.5	-0.47367	1.53876	0.04405	-22.21095	-5.08450	0.43309	1.61062	22.78960	107.11	1.57
98/ 9/ 4	2451060.5	-0.52470	1.52614	0.04503	-21.96698	-5.83362	0.41132	1.61445	22.73210	108.97	1.60
98/ 9/ 8	2451064.5	-0.57515	1.51181	0.04595	-21.70008	-6.57095	0.38924	1.61817	22.67648	110.83	1.63
98/ 9/12	2451068.5	-0.62495	1.49579	0.04682	-21.41083	-7.29598	0.36688	1.62177	22.62277	112.68	1.65
98/ 9/16	2451072.5	-0.67406	1.47811	0.04765	-21.09978	-8.00821	0.34425	1.62525	22.57101	114.51	1.68
98/ 9/20	2451076.5	-0.72242	1.45880	0.04841	-20.76748	-8.70715	0.32139	1.62860	22.52123	116.35	1.70
98/ 9/24	2451080.5	-0.76999	1.43789	0.04913	-20.41450	-9.39236	0.29832	1.63182	22.47348	118.17	1.73
98/ 9/28	2451084.5	-0.81673	1.41542	0.04979	-20.04137	-10.06341	0.27505	1.63491	22.42776	119.99	1.75
98/10/ 2	2451088.5	-0.86258	1.39141	0.05040	-19.64866	-10.71987	0.25162	1.63786	22.38412	121.80	1.76
98/10/ 6	2451092.5	-0.90750	1.36590	0.05095	-19.23690	-11.36135	0.22804	1.64068	22.34258	123.60	1.78
98/10/10	2451096.5	-0.95144	1.33893	0.05145	-18.80663	-11.98747	0.20434	1.64336	22.30315	125.40	1.79

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98/10/14	2451100.5	-0.99438	1.31053	0.05190	-18.35839	-12.59786	0.18053	1.64589	22.26588	127.19	1.81
98/10/18	2451104.5	-1.03625	1.28073	0.05229	-17.89271	-13.19216	0.15663	1.64828	22.23076	128.98	1.82
98/10/22	2451108.5	-1.07703	1.24959	0.05262	-17.41011	-13.77005	0.13267	1.65053	22.19783	130.76	1.83
98/10/26	2451112.5	-1.11668	1.21712	0.05290	-16.91112	-14.33119	0.10867	1.65262	22.16711	132.54	1.83
98/10/30	2451116.5	-1.15516	1.18338	0.05312	-16.39625	-14.87526	0.08464	1.65457	22.13860	134.31	1.84
98/11/ 3	2451120.5	-1.19243	1.14841	0.05329	-15.86602	-15.40197	0.06060	1.65637	22.11232	136.08	1.84
98/11/ 7	2451124.5	-1.22845	1.11224	0.05340	-15.32093	-15.91101	0.03658	1.65802	22.08829	137.84	1.85
98/11/11	2451128.5	-1.26320	1.07491	0.05346	-14.76150	-16.40211	0.01258	1.65951	22.06652	139.60	1.85
98/11/15	2451132.5	-1.29665	1.03647	0.05346	-14.18823	-16.87499	-0.01136	1.66085	22.04702	141.36	1.84
98/11/19	2451136.5	-1.32875	0.99695	0.05341	-13.60162	-17.32936	-0.03524	1.66203	22.02980	143.12	1.84
98/11/23	2451140.5	-1.35948	0.95641	0.05330	-13.00216	-17.76499	-0.05904	1.66305	22.01487	144.87	1.84
98/11/27	2451144.5	-1.38881	0.91489	0.05314	-12.39036	-18.18159	-0.08273	1.66392	22.00223	146.62	1.83
98/12/ 1	2451148.5	-1.41672	0.87242	0.05292	-11.76670	-18.57894	-0.10631	1.66464	21.99190	148.38	1.82
98/12/ 5	2451152.5	-1.44317	0.82906	0.05264	-11.13168	-18.95677	-0.12975	1.66519	21.98386	150.12	1.81
98/12/ 9	2451156.5	-1.46814	0.78485	0.05232	-10.48580	-19.31485	-0.15304	1.66558	21.97814	151.87	1.80
98/12/13	2451160.5	-1.49161	0.73984	0.05194	-9.82954	-19.65294	-0.17616	1.66582	21.97473	153.62	1.79
98/12/17	2451164.5	-1.51355	0.69406	0.05150	-9.16339	-19.97081	-0.19909	1.66590	21.97363	155.37	1.77
98/12/21	2451168.5	-1.53394	0.64758	0.05102	-8.48786	-20.26823	-0.22181	1.66581	21.97485	157.11	1.76
98/12/25	2451172.5	-1.55276	0.60043	0.05048	-7.80344	-20.54497	-0.24432	1.66557	21.97838	158.86	1.74
98/12/29	2451176.5	-1.56999	0.55267	0.04989	-7.11063	-20.80081	-0.26659	1.66517	21.98422	160.61	1.72
99/ 1/ 2	2451180.5	-1.58561	0.50434	0.04925	-6.40992	-21.03554	-0.28860	1.66461	21.99237	162.36	1.70
99/ 1/ 6	2451184.5	-1.59960	0.45549	0.04856	-5.70183	-21.24893	-0.31034	1.66390	22.00282	164.11	1.67
99/ 1/10	2451188.5	-1.61195	0.40618	0.04781	-4.98685	-21.44077	-0.33180	1.66302	22.01557	165.86	1.65
99/ 1/14	2451192.5	-1.62264	0.35645	0.04702	-4.26551	-21.61086	-0.35295	1.66199	22.03062	167.61	1.62
99/ 1/18	2451196.5	-1.63165	0.30635	0.04618	-3.53832	-21.75897	-0.37377	1.66080	22.04795	169.37	1.59
99/ 1/22	2451200.5	-1.63898	0.25593	0.04530	-2.80580	-21.88491	-0.39426	1.65946	22.06756	171.12	1.56
99/ 1/26	2451204.5	-1.64461	0.20525	0.04436	-2.06849	-21.98848	-0.41440	1.65796	22.08944	172.89	1.53
99/ 1/30	2451208.5	-1.64853	0.15435	0.04338	-1.32693	-22.06946	-0.43415	1.65631	22.11357	174.65	1.50
99/ 2/ 3	2451212.5	-1.65074	0.10330	0.04236	-0.58165	-22.12766	-0.45352	1.65451	22.13995	176.42	1.47
99/ 2/ 7	2451216.5	-1.65122	0.05213	0.04129	0.16677	-22.16290	-0.47248	1.65256	22.16856	178.19	1.43
99/ 2/11	2451220.5	-1.64997	0.00091	0.04017	0.91778	-22.17497	-0.49101	1.65046	22.19938	179.97	1.39
99/ 2/15	2451224.5	-1.64698	-0.05030	0.03902	1.67079	-22.16369	-0.50910	1.64821	22.23240	181.75	1.36
99/ 2/19	2451228.5	-1.64225	-0.10147	0.03782	2.42523	-22.12888	-0.52672	1.64581	22.26761	183.54	1.32
99/ 2/23	2451232.5	-1.63577	-0.15253	0.03659	3.18048	-22.07036	-0.54387	1.64327	22.30497	185.33	1.28
99/ 2/27	2451236.5	-1.62755	-0.20343	0.03531	3.93594	-21.98795	-0.56051	1.64059	22.34448	187.12	1.23
99/ 3/ 3	2451240.5	-1.61759	-0.25410	0.03400	4.69098	-21.88150	-0.57663	1.63778	22.38611	188.93	1.19
99/ 3/ 7	2451244.5	-1.60588	-0.30451	0.03265	5.44495	-21.75083	-0.59222	1.63482	22.42983	190.74	1.14
99/ 3/11	2451248.5	-1.59243	-0.35458	0.03126	6.19721	-21.59581	-0.60725	1.63173	22.47561	192.55	1.10
99/ 3/15	2451252.5	-1.57725	-0.40427	0.02984	6.94708	-21.41628	-0.62171	1.62851	22.52344	194.38	1.05
99/ 3/19	2451256.5	-1.56033	-0.45351	0.02839	7.69386	-21.21210	-0.63557	1.62515	22.57328	196.21	1.00
99/ 3/23	2451260.5	-1.54170	-0.50226	0.02690	8.43686	-20.98317	-0.64881	1.62167	22.62509	198.04	0.95
99/ 3/27	2451264.5	-1.52136	-0.55044	0.02539	9.17534	-20.72935	-0.66142	1.61807	22.67885	199.89	0.90
99/ 3/31	2451268.5	-1.49931	-0.59801	0.02385	9.90856	-20.45056	-0.67337	1.61435	22.73452	201.75	0.85
99/ 4/ 4	2451272.5	-1.47558	-0.64491	0.02228	10.63577	-20.14671	-0.68465	1.61051	22.79206	203.61	0.79
99/ 4/ 8	2451276.5	-1.45018	-0.69108	0.02069	11.35618	-19.81773	-0.69523	1.60656	22.85144	205.48	0.74

1.4 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
99/ 4/12	2451280.5	-1.42312	-0.73646	0.01907	12.06898	-19.46356	-0.70509	1.60250	22.91261	207.36	0.68
99/ 4/16	2451284.5	-1.39442	-0.78099	0.01743	12.77336	-19.08417	-0.71421	1.59833	22.97552	209.25	0.62
99/ 4/20	2451288.5	-1.36411	-0.82461	0.01577	13.46847	-18.67955	-0.72258	1.59406	23.04013	211.15	0.57
99/ 4/24	2451292.5	-1.33220	-0.86728	0.01409	14.15345	-18.24971	-0.73016	1.58969	23.10639	213.06	0.51
99/ 4/28	2451296.5	-1.29872	-0.90891	0.01240	14.82741	-17.79467	-0.73695	1.58523	23.17424	214.99	0.45
99/ 5/ 2	2451300.5	-1.26370	-0.94947	0.01069	15.48944	-17.31450	-0.74291	1.58068	23.24363	216.92	0.39
99/ 5/ 6	2451304.5	-1.22716	-0.98889	0.00896	16.13862	-16.80927	-0.74803	1.57605	23.31451	218.86	0.33
99/ 5/10	2451308.5	-1.18914	-1.02712	0.00723	16.77399	-16.27912	-0.75229	1.57133	23.38680	220.82	0.26
99/ 5/14	2451312.5	-1.14967	-1.06409	0.00549	17.39459	-15.72417	-0.75567	1.56655	23.46044	222.79	0.20
99/ 5/18	2451316.5	-1.10879	-1.09975	0.00374	17.99943	-15.14463	-0.75814	1.56169	23.53538	224.77	0.14
99/ 5/22	2451320.5	-1.06652	-1.13405	0.00199	18.58749	-14.54071	-0.75968	1.55677	23.61152	226.76	0.07
99/ 5/26	2451324.5	-1.02292	-1.16692	0.00023	19.15775	-13.91266	-0.76029	1.55179	23.68881	228.76	0.01
99/ 5/30	2451328.5	-0.97802	-1.19831	-0.00152	19.70916	-13.26080	-0.75993	1.54676	23.76715	230.78	-0.06
99/ 6/ 3	2451332.5	-0.93187	-1.22817	-0.00328	20.24067	-12.58547	-0.75859	1.54168	23.84647	232.81	-0.12
99/ 6/ 7	2451336.5	-0.88452	-1.25644	-0.00503	20.75120	-11.88706	-0.75626	1.53657	23.92669	234.85	-0.19
99/ 6/11	2451340.5	-0.83601	-1.28307	-0.00677	21.23965	-11.16603	-0.75290	1.53142	24.00770	236.91	-0.25
99/ 6/15	2451344.5	-0.78640	-1.30801	-0.00851	21.70493	-10.42287	-0.74852	1.52624	24.08942	238.98	-0.32
99/ 6/19	2451348.5	-0.73575	-1.33121	-0.01023	22.14592	-9.65814	-0.74309	1.52104	24.17175	241.07	-0.39
99/ 6/23	2451352.5	-0.68410	-1.35262	-0.01194	22.56152	-8.87245	-0.73660	1.51582	24.25459	243.17	-0.45
99/ 6/27	2451356.5	-0.63152	-1.37219	-0.01363	22.95061	-8.06648	-0.72903	1.51060	24.33783	245.29	-0.52
99/ 7/ 1	2451360.5	-0.57808	-1.38988	-0.01531	23.31207	-7.24098	-0.72038	1.50538	24.42137	247.42	-0.58
99/ 7/ 5	2451364.5	-0.52384	-1.40563	-0.01696	23.64478	-6.39675	-0.71064	1.50017	24.50509	249.56	-0.65
99/ 7/ 9	2451368.5	-0.46886	-1.41942	-0.01859	23.94765	-5.53466	-0.69979	1.49496	24.58886	251.72	-0.71
99/ 7/13	2451372.5	-0.41321	-1.43119	-0.02019	24.21958	-4.65567	-0.68783	1.48979	24.67258	253.90	-0.78
99/ 7/17	2451376.5	-0.35698	-1.44092	-0.02177	24.45949	-3.76079	-0.67475	1.48464	24.75612	256.09	-0.84
99/ 7/21	2451380.5	-0.30023	-1.44856	-0.02331	24.66633	-2.85112	-0.66056	1.47953	24.83935	258.29	-0.90
99/ 7/25	2451384.5	-0.24304	-1.45408	-0.02482	24.83908	-1.92783	-0.64525	1.47446	24.92213	260.51	-0.96
99/ 7/29	2451388.5	-0.18549	-1.45745	-0.02629	24.97673	-0.99216	-0.62882	1.46945	25.00434	262.75	-1.03
99/ 8/ 2	2451392.5	-0.12766	-1.45866	-0.02772	25.07833	-0.04543	-0.61128	1.46449	25.08582	265.00	-1.08
99/ 8/ 6	2451396.5	-0.06965	-1.45766	-0.02911	25.14297	0.91094	-0.59264	1.45961	25.16645	267.26	-1.14
99/ 8/10	2451400.5	-0.01152	-1.45444	-0.03046	25.16980	1.87549	-0.57291	1.45480	25.24607	269.55	-1.20
99/ 8/14	2451404.5	0.04662	-1.44899	-0.03176	25.15799	2.84666	-0.55210	1.45008	25.32455	271.84	-1.25
99/ 8/18	2451408.5	0.10468	-1.44128	-0.03301	25.10683	3.82282	-0.53022	1.44546	25.40173	274.15	-1.31
99/ 8/22	2451412.5	0.16259	-1.43132	-0.03421	25.01563	4.80227	-0.50730	1.44093	25.47746	276.48	-1.36
99/ 8/26	2451416.5	0.22023	-1.41909	-0.03535	24.88382	5.78324	-0.48336	1.43652	25.55160	278.82	-1.41
99/ 8/30	2451420.5	0.27753	-1.40460	-0.03644	24.71089	6.76390	-0.45842	1.43222	25.62398	281.18	-1.46
99/ 9/ 3	2451424.5	0.33438	-1.38784	-0.03747	24.49642	7.74234	-0.43252	1.42805	25.69447	283.55	-1.50
99/ 9/ 7	2451428.5	0.39068	-1.36883	-0.03844	24.24011	8.71662	-0.40569	1.42401	25.76290	285.93	-1.55
99/ 9/11	2451432.5	0.44634	-1.34758	-0.03934	23.94175	9.68473	-0.37797	1.42012	25.82913	288.33	-1.59
99/ 9/15	2451436.5	0.50127	-1.32409	-0.04018	23.60124	10.64460	-0.34940	1.41637	25.89301	290.74	-1.63
99/ 9/19	2451440.5	0.55535	-1.29840	-0.04096	23.21860	11.59417	-0.32002	1.41278	25.95439	293.16	-1.66
99/ 9/23	2451444.5	0.60851	-1.27053	-0.04166	22.79398	12.53129	-0.28988	1.40935	26.01313	295.59	-1.69
99/ 9/27	2451448.5	0.66064	-1.24051	-0.04230	22.32765	13.45384	-0.25903	1.40610	26.06908	298.04	-1.72
99/10/ 1	2451452.5	0.71164	-1.20838	-0.04286	21.82001	14.35965	-0.22753	1.40302	26.12210	300.49	-1.75
99/10/ 5	2451456.5	0.76142	-1.17418	-0.04335	21.27161	15.24657	-0.19544	1.40012	26.17208	302.96	-1.77

1.4 1 A.U.=149,599,000 KM.

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MARS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
99/10/ 9	2451460.5	0.80989	-1.13795	-0.04376	20.68312	16.11246	-0.16282	1.39742	26.21887	305.44	-1.79
99/10/13	2451464.5	0.85696	-1.09975	-0.04410	20.05534	16.95518	-0.12973	1.39491	26.26236	307.93	-1.81
99/10/17	2451468.5	0.90253	-1.05964	-0.04436	19.38925	17.77262	-0.09624	1.39260	26.30244	310.42	-1.83
99/10/21	2451472.5	0.94651	-1.01766	-0.04454	18.68592	18.56273	-0.06242	1.39050	26.33900	312.93	-1.84
99/10/25	2451476.5	0.98883	-0.97389	-0.04465	17.94660	19.32350	-0.02835	1.38861	26.37193	315.44	-1.84
99/10/29	2451480.5	1.02941	-0.92840	-0.04467	17.17264	20.05298	0.00590	1.38694	26.40116	317.95	-1.85
99/11/ 2	2451484.5	1.06815	-0.88127	-0.04462	16.36554	20.74929	0.04026	1.38548	26.42660	320.48	-1.85
99/11/ 6	2451488.5	1.10500	-0.83256	-0.04449	15.52692	21.41065	0.07465	1.38425	26.44819	323.00	-1.84
99/11/10	2451492.5	1.13987	-0.78237	-0.04428	14.65852	22.03536	0.10899	1.38324	26.46585	325.54	-1.83
99/11/14	2451496.5	1.17270	-0.73078	-0.04398	13.76219	22.62184	0.14319	1.38246	26.47954	328.07	-1.82
99/11/18	2451500.5	1.20343	-0.67788	-0.04361	12.83990	23.16861	0.17720	1.38191	26.48923	330.61	-1.81
99/11/22	2451504.5	1.23201	-0.62376	-0.04317	11.89370	23.67433	0.21091	1.38159	26.49488	333.15	-1.79
99/11/26	2451508.5	1.25837	-0.56853	-0.04264	10.92573	24.13777	0.24426	1.38150	26.49648	335.69	-1.77
99/11/30	2451512.5	1.28247	-0.51227	-0.04204	9.93821	24.55786	0.27717	1.38164	26.49403	338.23	-1.74
99/12/ 4	2451516.5	1.30428	-0.45510	-0.04136	8.93340	24.93366	0.30957	1.38201	26.48753	340.76	-1.71
99/12/ 8	2451520.5	1.32374	-0.39710	-0.04061	7.91366	25.26438	0.34137	1.38261	26.47700	343.30	-1.68
99/12/12	2451524.5	1.34083	-0.33840	-0.03978	6.88133	25.54937	0.37252	1.38345	26.46246	345.84	-1.65
99/12/16	2451528.5	1.35552	-0.27909	-0.03889	5.83884	25.78816	0.40294	1.38450	26.44397	348.37	-1.61
99/12/20	2451532.5	1.36780	-0.21929	-0.03792	4.78858	25.98041	0.43256	1.38579	26.42157	350.89	-1.57
99/12/24	2451536.5	1.37765	-0.15909	-0.03689	3.73299	26.12595	0.46132	1.38729	26.39533	353.41	-1.52

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM JUPITER

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
64/12/31	2438760.5	2.86538	4.10930	-0.08060	-10.87012	8.09732	0.21220	5.01031	13.55622	55.11	-0.92
65/ 1/ 4	2438764.5	2.84021	4.12793	-0.08010	-10.91663	8.03016	0.21351	5.01129	13.55367	55.47	-0.92
65/ 1/ 8	2438768.5	2.81494	4.14640	-0.07961	-10.96270	7.96274	0.21481	5.01227	13.55109	55.83	-0.91
65/ 1/12	2438772.5	2.78956	4.16472	-0.07911	-11.00833	7.89506	0.21610	5.01326	13.54851	56.19	-0.90
65/ 1/16	2438776.5	2.76408	4.18288	-0.07861	-11.05352	7.82713	0.21738	5.01426	13.54590	56.54	-0.90
65/ 1/20	2438780.5	2.73849	4.20088	-0.07811	-11.09827	7.75894	0.21866	5.01526	13.54329	56.90	-0.89
65/ 1/24	2438784.5	2.71280	4.21873	-0.07760	-11.14258	7.69051	0.21992	5.01627	13.54065	57.26	-0.89
65/ 1/28	2438788.5	2.68701	4.23642	-0.07709	-11.18644	7.62182	0.22118	5.01729	13.53800	57.61	-0.88
65/ 2/ 1	2438792.5	2.66112	4.25394	-0.07658	-11.22986	7.55290	0.22243	5.01831	13.53534	57.97	-0.87
65/ 2/ 5	2438796.5	2.63512	4.27131	-0.07606	-11.27283	7.48373	0.22367	5.01934	13.53266	58.33	-0.87
65/ 2/ 9	2438800.5	2.60903	4.28852	-0.07555	-11.31535	7.41432	0.22490	5.02038	13.52996	58.68	-0.86
65/ 2/13	2438804.5	2.58284	4.30557	-0.07502	-11.35742	7.34469	0.22612	5.02142	13.52725	59.04	-0.86
65/ 2/17	2438808.5	2.55656	4.32246	-0.07450	-11.39905	7.27481	0.22733	5.02247	13.52453	59.40	-0.85
65/ 2/21	2438812.5	2.53018	4.33918	-0.07397	-11.44022	7.20472	0.22853	5.02352	13.52179	59.75	-0.84
65/ 2/25	2438816.5	2.50370	4.35574	-0.07344	-11.48094	7.13439	0.22972	5.02458	13.51903	60.11	-0.84
65/ 3/ 1	2438820.5	2.47713	4.37214	-0.07291	-11.52120	7.06385	0.23091	5.02565	13.51626	60.47	-0.83
65/ 3/ 5	2438824.5	2.45047	4.38838	-0.07238	-11.56102	6.99308	0.23208	5.02672	13.51348	60.82	-0.83
65/ 3/ 9	2438828.5	2.42372	4.40445	-0.07184	-11.60037	6.92210	0.23325	5.02780	13.51068	61.18	-0.82
65/ 3/13	2438832.5	2.39687	4.42036	-0.07130	-11.63927	6.85090	0.23440	5.02889	13.50786	61.53	-0.81
65/ 3/17	2438836.5	2.36994	4.43611	-0.07076	-11.67771	6.77949	0.23555	5.02998	13.50503	61.89	-0.81
65/ 3/21	2438840.5	2.34292	4.45169	-0.07021	-11.71568	6.70788	0.23669	5.03107	13.50218	62.24	-0.80
65/ 3/25	2438844.5	2.31581	4.46710	-0.06966	-11.75320	6.63606	0.23781	5.03218	13.49932	62.60	-0.79
65/ 3/29	2438848.5	2.28861	4.48235	-0.06911	-11.79025	6.56405	0.23893	5.03329	13.49644	62.95	-0.79
65/ 4/ 2	2438852.5	2.26133	4.49743	-0.06856	-11.82684	6.49183	0.24004	5.03440	13.49354	63.31	-0.78
65/ 4/ 6	2438856.5	2.23397	4.51234	-0.06800	-11.86297	6.41943	0.24113	5.03552	13.49064	63.66	-0.77
65/ 4/10	2438860.5	2.20652	4.52709	-0.06745	-11.89863	6.34684	0.24222	5.03665	13.48772	64.02	-0.77
65/ 4/14	2438864.5	2.17899	4.54167	-0.06688	-11.93383	6.27406	0.24330	5.03778	13.48478	64.37	-0.76
65/ 4/18	2438868.5	2.15138	4.55608	-0.06632	-11.96856	6.20109	0.24437	5.03892	13.48183	64.72	-0.75
65/ 4/22	2438872.5	2.12370	4.57032	-0.06576	-12.00283	6.12795	0.24543	5.04006	13.47887	65.08	-0.75
65/ 4/26	2438876.5	2.09593	4.58439	-0.06519	-12.03663	6.05463	0.24648	5.04121	13.47589	65.43	-0.74
65/ 4/30	2438880.5	2.06808	4.59829	-0.06462	-12.06996	5.98113	0.24752	5.04236	13.47290	65.78	-0.73
65/ 5/ 4	2438884.5	2.04016	4.61202	-0.06404	-12.10282	5.90746	0.24855	5.04352	13.46989	66.14	-0.73
65/ 5/ 8	2438888.5	2.01216	4.62559	-0.06347	-12.13521	5.83363	0.24957	5.04469	13.46688	66.49	-0.72
65/ 5/12	2438892.5	1.98409	4.63898	-0.06289	-12.16713	5.75963	0.25058	5.04586	13.46384	66.84	-0.71
65/ 5/16	2438896.5	1.95595	4.65220	-0.06231	-12.19858	5.68547	0.25157	5.04703	13.46080	67.20	-0.71
65/ 5/20	2438900.5	1.92773	4.66525	-0.06173	-12.22955	5.61115	0.25256	5.04822	13.45774	67.55	-0.70
65/ 5/24	2438904.5	1.89944	4.67812	-0.06114	-12.26006	5.53668	0.25354	5.04940	13.45467	67.90	-0.69
65/ 5/28	2438908.5	1.87109	4.69083	-0.06056	-12.29009	5.46206	0.25451	5.05059	13.45159	68.25	-0.69
65/ 6/ 1	2438912.5	1.84266	4.70336	-0.05997	-12.31965	5.38729	0.25547	5.05179	13.44849	68.61	-0.68
65/ 6/ 5	2438916.5	1.81416	4.71572	-0.05938	-12.34873	5.31237	0.25642	5.05299	13.44538	68.96	-0.67
65/ 6/ 9	2438920.5	1.78560	4.72791	-0.05878	-12.37734	5.23731	0.25736	5.05420	13.44225	69.31	-0.67
65/ 6/13	2438924.5	1.75698	4.73992	-0.05819	-12.40547	5.16211	0.25829	5.05541	13.43911	69.66	-0.66
65/ 6/17	2438928.5	1.72829	4.75176	-0.05759	-12.43312	5.08678	0.25921	5.05663	13.43596	70.01	-0.65
65/ 6/21	2438932.5	1.69953	4.76342	-0.05699	-12.46030	5.01132	0.26011	5.05785	13.43280	70.36	-0.65
65/ 6/25	2438936.5	1.67072	4.77491	-0.05639	-12.48700	4.93573	0.26101	5.05907	13.42962	70.72	-0.64

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65/ 6/29	2438940.5	1.64184	4.78622	-0.05578	-12.51323	4.86001	0.26190	5.06031	13.42643	71.07	-0.63
65/ 7/ 3	2438944.5	1.61290	4.79736	-0.05518	-12.53897	4.78418	0.26278	5.06154	13.42324	71.42	-0.62
65/ 7/ 7	2438948.5	1.58390	4.80833	-0.05457	-12.56424	4.70823	0.26364	5.06278	13.42003	71.77	-0.62
65/ 7/11	2438952.5	1.55485	4.81912	-0.05396	-12.58904	4.63216	0.26450	5.06403	13.41681	72.12	-0.61
65/ 7/15	2438956.5	1.52574	4.82973	-0.05335	-12.61335	4.55598	0.26535	5.06528	13.41358	72.47	-0.60
65/ 7/19	2438960.5	1.49657	4.84017	-0.05273	-12.63719	4.47970	0.26619	5.06653	13.41034	72.82	-0.60
65/ 7/23	2438964.5	1.46735	4.85043	-0.05212	-12.66055	4.40330	0.26701	5.06779	13.40709	73.17	-0.59
65/ 7/27	2438968.5	1.43808	4.86051	-0.05150	-12.68344	4.32681	0.26783	5.06905	13.40383	73.52	-0.58
65/ 7/31	2438972.5	1.40875	4.87042	-0.05088	-12.70584	4.25022	0.26863	5.07032	13.40056	73.87	-0.57
65/ 8/ 4	2438976.5	1.37937	4.88015	-0.05026	-12.72777	4.17353	0.26943	5.07159	13.39728	74.22	-0.57
65/ 8/ 8	2438980.5	1.34994	4.88970	-0.04964	-12.74922	4.09674	0.27021	5.07287	13.39399	74.57	-0.56
65/ 8/12	2438984.5	1.32047	4.89908	-0.04901	-12.77020	4.01987	0.27099	5.07415	13.39070	74.92	-0.55
65/ 8/16	2438988.5	1.29094	4.90828	-0.04838	-12.79069	3.94291	0.27175	5.07544	13.38739	75.26	-0.55
65/ 8/20	2438992.5	1.26137	4.91730	-0.04776	-12.81071	3.86587	0.27251	5.07672	13.38408	75.61	-0.54
65/ 8/24	2438996.5	1.23175	4.92614	-0.04712	-12.83025	3.78874	0.27325	5.07802	13.38076	75.96	-0.53
65/ 8/28	2439000.5	1.20209	4.93480	-0.04649	-12.84932	3.71154	0.27398	5.07932	13.37743	76.31	-0.52
65/ 9/ 1	2439004.5	1.17238	4.94329	-0.04586	-12.86790	3.63426	0.27471	5.08062	13.37409	76.66	-0.52
65/ 9/ 5	2439008.5	1.14263	4.95159	-0.04522	-12.88601	3.55690	0.27542	5.08192	13.37074	77.01	-0.51
65/ 9/ 9	2439012.5	1.11285	4.95972	-0.04459	-12.90364	3.47948	0.27612	5.08323	13.36738	77.35	-0.50
65/ 9/13	2439016.5	1.08302	4.96767	-0.04395	-12.92079	3.40199	0.27681	5.08454	13.36402	77.70	-0.50
65/ 9/17	2439020.5	1.05315	4.97544	-0.04331	-12.93746	3.32444	0.27749	5.08586	13.36064	78.05	-0.49
65/ 9/21	2439024.5	1.02324	4.98303	-0.04267	-12.95365	3.24683	0.27816	5.08718	13.35726	78.40	-0.48
65/ 9/25	2439028.5	0.99330	4.99044	-0.04202	-12.96936	3.16917	0.27882	5.08851	13.35386	78.74	-0.47
65/ 9/29	2439032.5	0.96332	4.99767	-0.04138	-12.98460	3.09145	0.27947	5.08983	13.35047	79.09	-0.47
65/10/ 3	2439036.5	0.93330	5.00472	-0.04073	-12.99936	3.01368	0.28011	5.09117	13.34706	79.44	-0.46
65/10/ 7	2439040.5	0.90326	5.01160	-0.04008	-13.01364	2.93586	0.28074	5.09250	13.34365	79.78	-0.45
65/10/11	2439044.5	0.87318	5.01829	-0.03943	-13.02744	2.85800	0.28136	5.09384	13.34022	80.13	-0.44
65/10/15	2439048.5	0.84307	5.02480	-0.03878	-13.04077	2.78009	0.28196	5.09518	13.33680	80.48	-0.44
65/10/19	2439052.5	0.81292	5.03113	-0.03813	-13.05362	2.70215	0.28256	5.09653	13.33336	80.82	-0.43
65/10/23	2439056.5	0.78275	5.03729	-0.03748	-13.06600	2.62417	0.28315	5.09788	13.32992	81.17	-0.42
65/10/27	2439060.5	0.75256	5.04326	-0.03682	-13.07790	2.54616	0.28372	5.09923	13.32647	81.51	-0.41
65/10/31	2439064.5	0.72233	5.04905	-0.03617	-13.08932	2.46812	0.28429	5.10059	13.32301	81.86	-0.41
65/11/ 4	2439068.5	0.69208	5.05466	-0.03551	-13.10026	2.39005	0.28484	5.10194	13.31955	82.20	-0.40
65/11/ 8	2439072.5	0.66180	5.06009	-0.03485	-13.11074	2.31195	0.28539	5.10331	13.31608	82.55	-0.39
65/11/12	2439076.5	0.63150	5.06534	-0.03419	-13.12073	2.23384	0.28592	5.10467	13.31260	82.89	-0.38
65/11/16	2439080.5	0.60118	5.07041	-0.03353	-13.13025	2.15570	0.28644	5.10604	13.30912	83.24	-0.38
65/11/20	2439084.5	0.57084	5.07530	-0.03287	-13.13929	2.07755	0.28695	5.10741	13.30562	83.58	-0.37
65/11/24	2439088.5	0.54047	5.08001	-0.03220	-13.14787	1.99939	0.28746	5.10878	13.30213	83.93	-0.36
65/11/28	2439092.5	0.51009	5.08454	-0.03154	-13.15596	1.92122	0.28795	5.11016	13.29862	84.27	-0.35
65/12/ 2	2439096.5	0.47969	5.08889	-0.03087	-13.16358	1.84304	0.28843	5.11154	13.29511	84.62	-0.35
65/12/ 6	2439100.5	0.44927	5.09306	-0.03021	-13.17073	1.76485	0.28890	5.11292	13.29158	84.96	-0.34
65/12/10	2439104.5	0.41883	5.09704	-0.02954	-13.17740	1.68667	0.28935	5.11431	13.28805	85.30	-0.33
65/12/14	2439108.5	0.38839	5.10085	-0.02887	-13.18359	1.60849	0.28980	5.11570	13.28451	85.65	-0.32
65/12/18	2439112.5	0.35792	5.10448	-0.02820	-13.18931	1.53031	0.29024	5.11709	13.28097	85.99	-0.32
65/12/22	2439116.5	0.32745	5.10792	-0.02753	-13.19456	1.45215	0.29067	5.11848	13.27741	86.33	-0.31

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65/12/26	2439120.5	0.29696	5.11119	-0.02686	-13.19934	1.37400	0.29108	5.11988	13.27385	86.67	-0.30
65/12/30	2439124.5	0.26646	5.11427	-0.02618	-13.20365	1.29587	0.29149	5.12127	13.27029	87.02	-0.29
66/ 1/ 3	2439128.5	0.23595	5.11717	-0.02551	-13.20748	1.21775	0.29188	5.12267	13.26671	87.36	-0.29
66/ 1/ 7	2439132.5	0.20544	5.11990	-0.02484	-13.21085	1.13965	0.29226	5.12408	13.26314	87.70	-0.28
66/ 1/11	2439136.5	0.17492	5.12244	-0.02416	-13.21375	1.06158	0.29264	5.12548	13.25955	88.04	-0.27
66/ 1/15	2439140.5	0.14439	5.12480	-0.02348	-13.21618	0.98354	0.29300	5.12689	13.25596	88.39	-0.26
66/ 1/19	2439144.5	0.11385	5.12698	-0.02281	-13.21814	0.90553	0.29335	5.12830	13.25236	88.73	-0.25
66/ 1/23	2439148.5	0.08331	5.12898	-0.02213	-13.21963	0.82755	0.29369	5.12971	13.24876	89.07	-0.25
66/ 1/27	2439152.5	0.05277	5.13081	-0.02145	-13.22066	0.74960	0.29402	5.13112	13.24516	89.41	-0.24
66/ 1/31	2439156.5	0.02223	5.13245	-0.02077	-13.22122	0.67170	0.29435	5.13254	13.24155	89.75	-0.23
66/ 2/ 4	2439160.5	-0.00831	5.13391	-0.02009	-13.22132	0.59384	0.29465	5.13396	13.23793	90.09	-0.22
66/ 2/ 8	2439164.5	-0.03886	5.13519	-0.01941	-13.22096	0.51602	0.29495	5.13538	13.23431	90.43	-0.22
66/ 2/12	2439168.5	-0.06940	5.13629	-0.01873	-13.22013	0.43825	0.29524	5.13680	13.23068	90.77	-0.21
66/ 2/16	2439172.5	-0.09994	5.13722	-0.01804	-13.21884	0.36053	0.29552	5.13822	13.22706	91.11	-0.20
66/ 2/20	2439176.5	-0.13047	5.13796	-0.01736	-13.21709	0.28286	0.29579	5.13965	13.22342	91.45	-0.19
66/ 2/24	2439180.5	-0.16100	5.13852	-0.01668	-13.21488	0.20525	0.29604	5.14107	13.21979	91.79	-0.19
66/ 2/28	2439184.5	-0.19153	5.13891	-0.01599	-13.21221	0.12769	0.29629	5.14250	13.21615	92.13	-0.18
66/ 3/ 4	2439188.5	-0.22205	5.13911	-0.01531	-13.20908	0.05020	0.29653	5.14393	13.21250	92.47	-0.17
66/ 3/ 8	2439192.5	-0.25256	5.13914	-0.01462	-13.20549	-0.02723	0.29675	5.14536	13.20885	92.81	-0.16
66/ 3/12	2439196.5	-0.28306	5.13899	-0.01394	-13.20145	-0.10459	0.29696	5.14680	13.20520	93.15	-0.16
66/ 3/16	2439200.5	-0.31356	5.13866	-0.01325	-13.19694	-0.18188	0.29717	5.14823	13.20154	93.49	-0.15
66/ 3/20	2439204.5	-0.34404	5.13815	-0.01256	-13.19199	-0.25910	0.29736	5.14967	13.19788	93.83	-0.14
66/ 3/24	2439208.5	-0.37451	5.13746	-0.01188	-13.18658	-0.33624	0.29754	5.15111	13.19422	94.17	-0.13
66/ 3/28	2439212.5	-0.40496	5.13659	-0.01119	-13.18072	-0.41331	0.29772	5.15254	13.19056	94.51	-0.12
66/ 4/ 1	2439216.5	-0.43541	5.13555	-0.01050	-13.17441	-0.49029	0.29788	5.15399	13.18690	94.85	-0.12
66/ 4/ 5	2439220.5	-0.46583	5.13433	-0.00981	-13.16765	-0.56719	0.29803	5.15543	13.18323	95.18	-0.11
66/ 4/ 9	2439224.5	-0.49624	5.13293	-0.00912	-13.16045	-0.64401	0.29817	5.15687	13.17957	95.52	-0.10
66/ 4/13	2439228.5	-0.52664	5.13135	-0.00844	-13.15279	-0.72073	0.29831	5.15831	13.17590	95.86	-0.09
66/ 4/17	2439232.5	-0.55702	5.12960	-0.00775	-13.14469	-0.79737	0.29843	5.15976	13.17223	96.20	-0.09
66/ 4/21	2439236.5	-0.58737	5.12767	-0.00706	-13.13615	-0.87392	0.29854	5.16121	13.16857	96.53	-0.08
66/ 4/25	2439240.5	-0.61771	5.12556	-0.00637	-13.12716	-0.95037	0.29864	5.16265	13.16490	96.87	-0.07
66/ 4/29	2439244.5	-0.64802	5.12328	-0.00568	-13.11772	-1.02672	0.29873	5.16410	13.16123	97.21	-0.06
66/ 5/ 3	2439248.5	-0.67832	5.12082	-0.00499	-13.10785	-1.10297	0.29881	5.16555	13.15757	97.55	-0.06
66/ 5/ 7	2439252.5	-0.70859	5.11818	-0.00430	-13.09754	-1.17912	0.29888	5.16700	13.15390	97.88	-0.05
66/ 5/11	2439256.5	-0.73883	5.11537	-0.00361	-13.08678	-1.25517	0.29894	5.16845	13.15024	98.22	-0.04
66/ 5/15	2439260.5	-0.76905	5.11238	-0.00291	-13.07559	-1.33111	0.29899	5.16990	13.14657	98.55	-0.03
66/ 5/19	2439264.5	-0.79924	5.10922	-0.00222	-13.06396	-1.40694	0.29902	5.17136	13.14291	98.89	-0.02
66/ 5/23	2439268.5	-0.82941	5.10588	-0.00153	-13.05190	-1.48266	0.29905	5.17281	13.13924	99.23	-0.02
66/ 5/27	2439272.5	-0.85955	5.10237	-0.00084	-13.03940	-1.55827	0.29907	5.17426	13.13558	99.56	-0.01
66/ 5/31	2439276.5	-0.88966	5.09868	-0.00015	-13.02646	-1.63376	0.29908	5.17572	13.13192	99.90	-0.00
66/ 6/ 4	2439280.5	-0.91974	5.09482	0.00054	-13.01309	-1.70914	0.29908	5.17717	13.12825	100.23	0.01
66/ 6/ 8	2439284.5	-0.94978	5.09079	0.00123	-12.99928	-1.78439	0.29906	5.17863	13.12459	100.57	0.01
66/ 6/12	2439288.5	-0.97980	5.08658	0.00192	-12.98505	-1.85952	0.29904	5.18008	13.12092	100.90	0.02
66/ 6/16	2439292.5	-1.00978	5.08219	0.00261	-12.97038	-1.93452	0.29901	5.18154	13.11726	101.24	0.03
66/ 6/20	2439296.5	-1.03972	5.07764	0.00330	-12.95529	-2.00939	0.29896	5.18300	13.11360	101.57	0.04

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66/ 6/24	2439300.5	-1.06963	5.07291	0.00399	-12.93976	-2.08413	0.29891	5.18445	13.10994	101.91	0.04
66/ 6/28	2439304.5	-1.09951	5.06801	0.00468	-12.92381	-2.15874	0.29885	5.18591	13.10628	102.24	0.05
66/ 7/ 2	2439308.5	-1.12935	5.06294	0.00537	-12.90744	-2.23321	0.29877	5.18737	13.10262	102.57	0.06
66/ 7/ 6	2439312.5	-1.15915	5.05769	0.00606	-12.89064	-2.30755	0.29869	5.18882	13.09896	102.91	0.07
66/ 7/10	2439316.5	-1.18891	5.05228	0.00675	-12.87342	-2.38174	0.29860	5.19028	13.09530	103.24	0.07
66/ 7/14	2439320.5	-1.21863	5.04669	0.00744	-12.85578	-2.45580	0.29849	5.19174	13.09165	103.58	0.08
66/ 7/18	2439324.5	-1.24830	5.04093	0.00813	-12.83772	-2.52970	0.29838	5.19320	13.08799	103.91	0.09
66/ 7/22	2439328.5	-1.27794	5.03500	0.00882	-12.81924	-2.60347	0.29826	5.19465	13.08434	104.24	0.10
66/ 7/26	2439332.5	-1.30753	5.02890	0.00951	-12.80034	-2.67708	0.29812	5.19611	13.08069	104.57	0.10
66/ 7/30	2439336.5	-1.33708	5.02263	0.01020	-12.78103	-2.75054	0.29798	5.19757	13.07704	104.91	0.11
66/ 8/ 3	2439340.5	-1.36659	5.01619	0.01089	-12.76130	-2.82385	0.29783	5.19902	13.07339	105.24	0.12
66/ 8/ 7	2439344.5	-1.39604	5.00958	0.01158	-12.74116	-2.89700	0.29766	5.20048	13.06975	105.57	0.13
66/ 8/11	2439348.5	-1.42545	5.00281	0.01226	-12.72060	-2.96999	0.29749	5.20194	13.06610	105.90	0.14
66/ 8/15	2439352.5	-1.45482	4.99586	0.01295	-12.69963	-3.04283	0.29731	5.20339	13.06246	106.24	0.14
66/ 8/19	2439356.5	-1.48413	4.98875	0.01364	-12.67825	-3.11550	0.29711	5.20485	13.05882	106.57	0.15
66/ 8/23	2439360.5	-1.51339	4.98147	0.01432	-12.65647	-3.18801	0.29691	5.20630	13.05518	106.90	0.16
66/ 8/27	2439364.5	-1.54261	4.97402	0.01501	-12.63427	-3.26035	0.29670	5.20776	13.05154	107.23	0.17
66/ 8/31	2439368.5	-1.57177	4.96640	0.01569	-12.61167	-3.33252	0.29647	5.20921	13.04790	107.56	0.17
66/ 9/ 4	2439372.5	-1.60088	4.95862	0.01638	-12.58866	-3.40452	0.29624	5.21066	13.04426	107.89	0.18
66/ 9/ 8	2439376.5	-1.62993	4.95067	0.01706	-12.56525	-3.47635	0.29600	5.21211	13.04063	108.22	0.19
66/ 9/12	2439380.5	-1.65893	4.94256	0.01775	-12.54143	-3.54799	0.29574	5.21356	13.03699	108.55	0.20
66/ 9/16	2439384.5	-1.68788	4.93428	0.01843	-12.51722	-3.61946	0.29548	5.21502	13.03336	108.88	0.20
66/ 9/20	2439388.5	-1.71677	4.92584	0.01911	-12.49260	-3.69074	0.29521	5.21647	13.02973	109.21	0.21
66/ 9/24	2439392.5	-1.74560	4.91723	0.01979	-12.46760	-3.76184	0.29493	5.21791	13.02610	109.54	0.22
66/ 9/28	2439396.5	-1.77437	4.90845	0.02047	-12.44219	-3.83276	0.29464	5.21936	13.02248	109.87	0.22
66/10/ 2	2439400.5	-1.80308	4.89952	0.02115	-12.41639	-3.90349	0.29434	5.22081	13.01886	110.20	0.23
66/10/ 6	2439404.5	-1.83174	4.89042	0.02183	-12.39020	-3.97403	0.29403	5.22225	13.01524	110.53	0.24
66/10/10	2439408.5	-1.86033	4.88116	0.02251	-12.36362	-4.04438	0.29371	5.22370	13.01163	110.86	0.25
66/10/14	2439412.5	-1.88886	4.87173	0.02319	-12.33665	-4.11453	0.29338	5.22514	13.00802	111.19	0.25
66/10/18	2439416.5	-1.91733	4.86215	0.02387	-12.30930	-4.18449	0.29304	5.22659	13.00441	111.52	0.26
66/10/22	2439420.5	-1.94574	4.85240	0.02455	-12.28156	-4.25425	0.29269	5.22803	13.00081	111.85	0.27
66/10/26	2439424.5	-1.97408	4.84249	0.02522	-12.25343	-4.32381	0.29233	5.22947	12.99721	112.18	0.28
66/10/30	2439428.5	-2.00235	4.83242	0.02590	-12.22493	-4.39318	0.29197	5.23091	12.99362	112.51	0.28
66/11/ 3	2439432.5	-2.03056	4.82219	0.02657	-12.19604	-4.46233	0.29159	5.23234	12.99003	112.84	0.29
66/11/ 7	2439436.5	-2.05870	4.81180	0.02724	-12.16677	-4.53129	0.29121	5.23378	12.98644	113.16	0.30
66/11/11	2439440.5	-2.08677	4.80126	0.02792	-12.13713	-4.60004	0.29081	5.23521	12.98287	113.49	0.31
66/11/15	2439444.5	-2.11478	4.79055	0.02859	-12.10711	-4.66858	0.29041	5.23665	12.97929	113.82	0.31
66/11/19	2439448.5	-2.14271	4.77969	0.02926	-12.07672	-4.73691	0.29000	5.23808	12.97573	114.15	0.32
66/11/23	2439452.5	-2.17058	4.76867	0.02993	-12.04595	-4.80503	0.28957	5.23951	12.97216	114.47	0.33
66/11/27	2439456.5	-2.19837	4.75749	0.03060	-12.01481	-4.87293	0.28914	5.24094	12.96860	114.80	0.33
66/12/ 1	2439460.5	-2.22609	4.74615	0.03126	-11.98330	-4.94062	0.28870	5.24237	12.96505	115.13	0.34
66/12/ 5	2439464.5	-2.25374	4.73466	0.03193	-11.95142	-5.00809	0.28825	5.24379	12.96150	115.45	0.35
66/12/ 9	2439468.5	-2.28131	4.72301	0.03259	-11.91917	-5.07534	0.28779	5.24521	12.95796	115.78	0.36
66/12/13	2439472.5	-2.30881	4.71121	0.03326	-11.88656	-5.14237	0.28732	5.24664	12.95442	116.11	0.36
66/12/17	2439476.5	-2.33623	4.69925	0.03392	-11.85359	-5.20917	0.28685	5.24806	12.95088	116.43	0.37

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66/12/21	2439480.5	-2.36357	4.68714	0.03458	-11.82026	-5.27575	0.28636	5.24947	12.94736	116.76	0.38
66/12/25	2439484.5	-2.39084	4.67488	0.03524	-11.78657	-5.34211	0.28587	5.25089	12.94384	117.09	0.38
66/12/29	2439488.5	-2.41803	4.66246	0.03590	-11.75252	-5.40823	0.28536	5.25230	12.94033	117.41	0.39
67/ 1/ 2	2439492.5	-2.44514	4.64989	0.03656	-11.71811	-5.47413	0.28485	5.25371	12.93682	117.74	0.40
67/ 1/ 6	2439496.5	-2.47217	4.63717	0.03722	-11.68335	-5.53979	0.28433	5.25512	12.93332	118.06	0.41
67/ 1/10	2439500.5	-2.49912	4.62429	0.03788	-11.64824	-5.60522	0.28380	5.25653	12.92983	118.39	0.41
67/ 1/14	2439504.5	-2.52599	4.61127	0.03853	-11.61278	-5.67042	0.28326	5.25794	12.92635	118.71	0.42
67/ 1/18	2439508.5	-2.55278	4.59809	0.03919	-11.57696	-5.73538	0.28272	5.25934	12.92287	119.04	0.43
67/ 1/22	2439512.5	-2.57948	4.58477	0.03984	-11.54080	-5.80010	0.28216	5.26074	12.91940	119.36	0.43
67/ 1/26	2439516.5	-2.60610	4.57130	0.04049	-11.50429	-5.86458	0.28160	5.26214	12.91593	119.69	0.44
67/ 1/30	2439520.5	-2.63263	4.55767	0.04114	-11.46744	-5.92882	0.28102	5.26354	12.91248	120.01	0.45
67/ 2/ 3	2439524.5	-2.65908	4.54390	0.04179	-11.43024	-5.99282	0.28044	5.26493	12.90903	120.34	0.45
67/ 2/ 7	2439528.5	-2.68545	4.52998	0.04244	-11.39271	-6.05658	0.27985	5.26633	12.90559	120.66	0.46
67/ 2/11	2439532.5	-2.71172	4.51592	0.04308	-11.35483	-6.12009	0.27925	5.26771	12.90216	120.98	0.47
67/ 2/15	2439536.5	-2.73791	4.50171	0.04373	-11.31661	-6.18335	0.27864	5.26910	12.89873	121.31	0.48
67/ 2/19	2439540.5	-2.76401	4.48735	0.04437	-11.27806	-6.24637	0.27802	5.27049	12.89531	121.63	0.48
67/ 2/23	2439544.5	-2.79002	4.47285	0.04501	-11.23917	-6.30913	0.27740	5.27187	12.89189	121.95	0.49
67/ 2/27	2439548.5	-2.81594	4.45820	0.04565	-11.19994	-6.37164	0.27676	5.27325	12.88849	122.28	0.50
67/ 3/ 3	2439552.5	-2.84176	4.44341	0.04629	-11.16038	-6.43390	0.27612	5.27462	12.88508	122.60	0.50
67/ 3/ 7	2439556.5	-2.86750	4.42847	0.04693	-11.12049	-6.49589	0.27547	5.27600	12.88169	122.92	0.51
67/ 3/11	2439560.5	-2.89314	4.41340	0.04756	-11.08027	-6.55763	0.27481	5.27737	12.87830	123.25	0.52
67/ 3/15	2439564.5	-2.91870	4.39818	0.04820	-11.03973	-6.61911	0.27414	5.27874	12.87492	123.57	0.52
67/ 3/19	2439568.5	-2.94415	4.38281	0.04883	-10.99886	-6.68033	0.27347	5.28010	12.87154	123.89	0.53
67/ 3/23	2439572.5	-2.96951	4.36731	0.04946	-10.95767	-6.74129	0.27278	5.28146	12.86817	124.21	0.54
67/ 3/27	2439576.5	-2.99478	4.35167	0.05009	-10.91616	-6.80198	0.27209	5.28282	12.86481	124.54	0.54
67/ 3/31	2439580.5	-3.01995	4.33588	0.05072	-10.87432	-6.86240	0.27139	5.28418	12.86146	124.86	0.55
67/ 4/ 4	2439584.5	-3.04502	4.31996	0.05134	-10.83217	-6.92256	0.27068	5.28553	12.85812	125.18	0.56
67/ 4/ 8	2439588.5	-3.07000	4.30390	0.05197	-10.78971	-6.98245	0.26996	5.28688	12.85478	125.50	0.56
67/ 4/12	2439592.5	-3.09488	4.28770	0.05259	-10.74693	-7.04207	0.26924	5.28823	12.85145	125.82	0.57
67/ 4/16	2439596.5	-3.11965	4.27136	0.05321	-10.70384	-7.10142	0.26850	5.28957	12.84813	126.14	0.58
67/ 4/20	2439600.5	-3.14433	4.25489	0.05383	-10.66043	-7.16049	0.26776	5.29091	12.84481	126.46	0.58
67/ 4/24	2439604.5	-3.16891	4.23828	0.05445	-10.61672	-7.21929	0.26701	5.29225	12.84151	126.79	0.59
67/ 4/28	2439608.5	-3.19338	4.22153	0.05506	-10.57271	-7.27781	0.26625	5.29359	12.83821	127.11	0.60
67/ 5/ 2	2439612.5	-3.21776	4.20465	0.05568	-10.52839	-7.33606	0.26549	5.29492	12.83492	127.43	0.60
67/ 5/ 6	2439616.5	-3.24203	4.18764	0.05629	-10.48376	-7.39403	0.26471	5.29625	12.83164	127.75	0.61
67/ 5/10	2439620.5	-3.26620	4.17049	0.05690	-10.43884	-7.45172	0.26393	5.29757	12.82837	128.07	0.62
67/ 5/14	2439624.5	-3.29026	4.15321	0.05751	-10.39361	-7.50912	0.26314	5.29889	12.82511	128.39	0.62
67/ 5/18	2439628.5	-3.31422	4.13579	0.05812	-10.34809	-7.56625	0.26235	5.30021	12.82185	128.71	0.63
67/ 5/22	2439632.5	-3.33807	4.11825	0.05872	-10.30227	-7.62309	0.26154	5.30152	12.81861	129.03	0.63
67/ 5/26	2439636.5	-3.36182	4.10057	0.05933	-10.25615	-7.67964	0.26073	5.30283	12.81537	129.35	0.64
67/ 5/30	2439640.5	-3.38546	4.08277	0.05993	-10.20975	-7.73591	0.25991	5.30414	12.81213	129.67	0.65
67/ 6/ 3	2439644.5	-3.40899	4.06483	0.06053	-10.16305	-7.79189	0.25908	5.30544	12.80891	129.99	0.65
67/ 6/ 7	2439648.5	-3.43241	4.04677	0.06112	-10.11607	-7.84757	0.25824	5.30674	12.80570	130.30	0.66
67/ 6/11	2439652.5	-3.45573	4.02857	0.06172	-10.06880	-7.90297	0.25740	5.30804	12.80250	130.62	0.67
67/ 6/15	2439656.5	-3.47893	4.01025	0.06231	-10.02125	-7.95807	0.25655	5.30933	12.79930	130.94	0.67

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67/ 6/19	2439660.5	-3.50203	3.99180	0.06290	-9.97342	-8.01288	0.25569	5.31062	12.79612	131.26	0.68
67/ 6/23	2439664.5	-3.52502	3.97323	0.06349	-9.92531	-8.06739	0.25483	5.31190	12.79295	131.58	0.68
67/ 6/27	2439668.5	-3.54789	3.95453	0.06408	-9.87692	-8.12161	0.25395	5.31318	12.78979	131.90	0.69
67/ 7/ 1	2439672.5	-3.57065	3.93571	0.06467	-9.82826	-8.17554	0.25307	5.31446	12.78664	132.22	0.70
67/ 7/ 5	2439676.5	-3.59330	3.91676	0.06525	-9.77932	-8.22916	0.25219	5.31573	12.78350	132.53	0.70
67/ 7/ 9	2439680.5	-3.61583	3.89768	0.06583	-9.73011	-8.28249	0.25129	5.31700	12.78037	132.85	0.71
67/ 7/13	2439684.5	-3.63825	3.87849	0.06641	-9.68063	-8.33552	0.25039	5.31827	12.77725	133.17	0.72
67/ 7/17	2439688.5	-3.66056	3.85917	0.06699	-9.63088	-8.38825	0.24948	5.31953	12.77415	133.49	0.72
67/ 7/21	2439692.5	-3.68275	3.83973	0.06757	-9.58087	-8.44068	0.24856	5.32079	12.77106	133.80	0.73
67/ 7/25	2439696.5	-3.70483	3.82017	0.06814	-9.53059	-8.49280	0.24764	5.32204	12.76798	134.12	0.73
67/ 7/29	2439700.5	-3.72679	3.80049	0.06871	-9.48005	-8.54462	0.24671	5.32329	12.76491	134.44	0.74
67/ 8/ 2	2439704.5	-3.74863	3.78069	0.06928	-9.42926	-8.59614	0.24577	5.32453	12.76185	134.76	0.75
67/ 8/ 6	2439708.5	-3.77035	3.76078	0.06984	-9.37820	-8.64736	0.24483	5.32577	12.75881	135.07	0.75
67/ 8/10	2439712.5	-3.79196	3.74074	0.07041	-9.32688	-8.69827	0.24388	5.32701	12.75578	135.39	0.76
67/ 8/14	2439716.5	-3.81345	3.72059	0.07097	-9.27531	-8.74887	0.24292	5.32824	12.75277	135.71	0.76
67/ 8/18	2439720.5	-3.83481	3.70032	0.07153	-9.22348	-8.79917	0.24195	5.32947	12.74976	136.02	0.77
67/ 8/22	2439724.5	-3.85606	3.67993	0.07209	-9.17140	-8.84915	0.24098	5.33069	12.74677	136.34	0.77
67/ 8/26	2439728.5	-3.87719	3.65943	0.07265	-9.11906	-8.89883	0.24000	5.33191	12.74379	136.66	0.78
67/ 8/30	2439732.5	-3.89820	3.63882	0.07320	-9.06648	-8.94819	0.23902	5.33313	12.74081	136.97	0.79
67/ 9/ 3	2439736.5	-3.91908	3.61809	0.07375	-9.01366	-8.99724	0.23802	5.33434	12.73786	137.29	0.79
67/ 9/ 7	2439740.5	-3.93984	3.59725	0.07430	-8.96059	-9.04598	0.23702	5.33555	12.73491	137.60	0.80
67/ 9/11	2439744.5	-3.96048	3.57629	0.07484	-8.90727	-9.09440	0.23602	5.33675	12.73198	137.92	0.80
67/ 9/15	2439748.5	-3.98100	3.55523	0.07539	-8.85372	-9.14251	0.23500	5.33794	12.72906	138.23	0.81
67/ 9/19	2439752.5	-4.00139	3.53405	0.07593	-8.79992	-9.19030	0.23399	5.33914	12.72615	138.55	0.81
67/ 9/23	2439756.5	-4.02165	3.51276	0.07647	-8.74589	-9.23778	0.23296	5.34032	12.72326	138.86	0.82
67/ 9/27	2439760.5	-4.04180	3.49137	0.07701	-8.69162	-9.28493	0.23193	5.34151	12.72038	139.18	0.83
67/10/ 1	2439764.5	-4.06181	3.46987	0.07754	-8.63712	-9.33177	0.23089	5.34269	12.71751	139.49	0.83
67/10/ 5	2439768.5	-4.08170	3.44825	0.07807	-8.58238	-9.37829	0.22984	5.34386	12.71466	139.81	0.84
67/10/ 9	2439772.5	-4.10147	3.42653	0.07860	-8.52741	-9.42449	0.22879	5.34503	12.71181	140.12	0.84
67/10/13	2439776.5	-4.12110	3.40471	0.07913	-8.47222	-9.47037	0.22773	5.34619	12.70898	140.44	0.85
67/10/17	2439780.5	-4.14061	3.38278	0.07966	-8.41680	-9.51593	0.22667	5.34735	12.70617	140.75	0.85
67/10/21	2439784.5	-4.15999	3.36074	0.08018	-8.36115	-9.56116	0.22560	5.34851	12.70337	141.07	0.86
67/10/25	2439788.5	-4.17924	3.33860	0.08070	-8.30528	-9.60607	0.22452	5.34966	12.70058	141.38	0.86
67/10/29	2439792.5	-4.19836	3.31636	0.08122	-8.24918	-9.65066	0.22343	5.35080	12.69780	141.69	0.87
67/11/ 2	2439796.5	-4.21736	3.29401	0.08173	-8.19287	-9.69492	0.22234	5.35194	12.69504	142.01	0.88
67/11/ 6	2439800.5	-4.23622	3.27157	0.08224	-8.13634	-9.73885	0.22125	5.35308	12.69229	142.32	0.88
67/11/10	2439804.5	-4.25495	3.24902	0.08275	-8.07959	-9.78246	0.22014	5.35421	12.68955	142.64	0.89
67/11/14	2439808.5	-4.27355	3.22637	0.08326	-8.02262	-9.82573	0.21903	5.35533	12.68682	142.95	0.89
67/11/18	2439812.5	-4.29202	3.20362	0.08376	-7.96544	-9.86868	0.21792	5.35645	12.68411	143.26	0.90
67/11/22	2439816.5	-4.31035	3.18077	0.08427	-7.90804	-9.91130	0.21680	5.35757	12.68140	143.57	0.90
67/11/26	2439820.5	-4.32855	3.15783	0.08477	-7.85044	-9.95358	0.21567	5.35868	12.67871	143.89	0.91
67/11/30	2439824.5	-4.34662	3.13478	0.08526	-7.79263	-9.99553	0.21454	5.35978	12.67603	144.20	0.91
67/12/ 4	2439828.5	-4.36456	3.11164	0.08576	-7.73462	-10.03714	0.21340	5.36088	12.67336	144.51	0.92
67/12/ 8	2439832.5	-4.38236	3.08841	0.08625	-7.67640	-10.07842	0.21225	5.36197	12.67070	144.83	0.92
67/12/12	2439836.5	-4.40003	3.06508	0.08674	-7.61798	-10.11936	0.21110	5.36306	12.66806	145.14	0.93

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67/12/16	2439840.5	-4.41756	3.04165	0.08722	-7.55936	-10.15997	0.20994	5.36415	12.66542	145.45	0.93
67/12/20	2439844.5	-4.43495	3.01813	0.08771	-7.50054	-10.20024	0.20878	5.36522	12.66280	145.76	0.94
67/12/24	2439848.5	-4.45221	2.99452	0.08819	-7.44153	-10.24017	0.20761	5.36630	12.66019	146.08	0.94
67/12/28	2439852.5	-4.46933	2.97082	0.08867	-7.38233	-10.27976	0.20644	5.36736	12.65760	146.39	0.95
68/ 1/ 1	2439856.5	-4.48632	2.94703	0.08914	-7.32293	-10.31901	0.20526	5.36843	12.65502	146.70	0.95
68/ 1/ 5	2439860.5	-4.50317	2.92314	0.08962	-7.26335	-10.35792	0.20408	5.36948	12.65245	147.01	0.96
68/ 1/ 9	2439864.5	-4.51988	2.89917	0.09009	-7.20357	-10.39649	0.20289	5.37053	12.64989	147.32	0.96
68/ 1/13	2439868.5	-4.53645	2.87511	0.09055	-7.14362	-10.43472	0.20169	5.37158	12.64735	147.63	0.97
68/ 1/17	2439872.5	-4.55289	2.85096	0.09102	-7.08348	-10.47261	0.20049	5.37262	12.64482	147.95	0.97
68/ 1/21	2439876.5	-4.56918	2.82672	0.09148	-7.02315	-10.51015	0.19928	5.37365	12.64230	148.26	0.98
68/ 1/25	2439880.5	-4.58533	2.80240	0.09194	-6.96265	-10.54736	0.19807	5.37468	12.63980	148.57	0.98
68/ 1/29	2439884.5	-4.60135	2.77799	0.09239	-6.90197	-10.58421	0.19685	5.37570	12.63731	148.88	0.98
68/ 2/ 2	2439888.5	-4.61722	2.75350	0.09285	-6.84112	-10.62073	0.19563	5.37672	12.63484	149.19	0.99
68/ 2/ 6	2439892.5	-4.63296	2.72892	0.09330	-6.78009	-10.65690	0.19440	5.37773	12.63238	149.50	0.99
68/ 2/10	2439896.5	-4.64855	2.70426	0.09375	-6.71889	-10.69272	0.19317	5.37874	12.62993	149.81	1.00
68/ 2/14	2439900.5	-4.66400	2.67952	0.09419	-6.65751	-10.72820	0.19193	5.37974	12.62749	150.12	1.00
68/ 2/18	2439904.5	-4.67931	2.65469	0.09463	-6.59597	-10.76333	0.19068	5.38073	12.62507	150.43	1.01
68/ 2/22	2439908.5	-4.69448	2.62979	0.09507	-6.53426	-10.79811	0.18944	5.38172	12.62266	150.74	1.01
68/ 2/26	2439912.5	-4.70950	2.60480	0.09551	-6.47239	-10.83254	0.18818	5.38270	12.62027	151.05	1.02
68/ 3/ 1	2439916.5	-4.72438	2.57974	0.09594	-6.41036	-10.86663	0.18692	5.38368	12.61789	151.36	1.02
68/ 3/ 5	2439920.5	-4.73912	2.55459	0.09637	-6.34816	-10.90036	0.18566	5.38465	12.61553	151.67	1.03
68/ 3/ 9	2439924.5	-4.75371	2.52937	0.09680	-6.28581	-10.93375	0.18439	5.38562	12.61318	151.98	1.03
68/ 3/13	2439928.5	-4.76816	2.50407	0.09722	-6.22330	-10.96678	0.18312	5.38658	12.61084	152.29	1.03
68/ 3/17	2439932.5	-4.78247	2.47870	0.09765	-6.16064	-10.99947	0.18184	5.38753	12.60852	152.60	1.04
68/ 3/21	2439936.5	-4.79663	2.45325	0.09806	-6.09783	-11.03180	0.18056	5.38848	12.60622	152.91	1.04
68/ 3/25	2439940.5	-4.81064	2.42773	0.09848	-6.03487	-11.06378	0.17927	5.38942	12.60393	153.22	1.05
68/ 3/29	2439944.5	-4.82451	2.40214	0.09889	-5.97175	-11.09541	0.17798	5.39035	12.60166	153.53	1.05
68/ 4/ 2	2439948.5	-4.83823	2.37647	0.09930	-5.90849	-11.12669	0.17668	5.39128	12.59940	153.84	1.06
68/ 4/ 6	2439952.5	-4.85181	2.35073	0.09971	-5.84509	-11.15762	0.17538	5.39221	12.59716	154.15	1.06
68/ 4/10	2439956.5	-4.86524	2.32492	0.10011	-5.78154	-11.18820	0.17407	5.39312	12.59493	154.46	1.06
68/ 4/14	2439960.5	-4.87852	2.29903	0.10051	-5.71785	-11.21842	0.17276	5.39404	12.59272	154.77	1.07
68/ 4/18	2439964.5	-4.89166	2.27308	0.10091	-5.65402	-11.24829	0.17145	5.39494	12.59053	155.08	1.07
68/ 4/22	2439968.5	-4.90464	2.24706	0.10130	-5.59006	-11.27781	0.17013	5.39584	12.58836	155.39	1.08
68/ 4/26	2439972.5	-4.91748	2.22098	0.10170	-5.52596	-11.30697	0.16880	5.39673	12.58620	155.69	1.08
68/ 4/30	2439976.5	-4.93018	2.19482	0.10208	-5.46172	-11.33579	0.16748	5.39762	12.58406	156.00	1.08
68/ 5/ 4	2439980.5	-4.94272	2.16860	0.10247	-5.39735	-11.36424	0.16614	5.39850	12.58193	156.31	1.09
68/ 5/ 8	2439984.5	-4.95511	2.14231	0.10285	-5.33284	-11.39234	0.16480	5.39937	12.57982	156.62	1.09
68/ 5/12	2439988.5	-4.96736	2.11596	0.10323	-5.26821	-11.42009	0.16346	5.40024	12.57772	156.93	1.10
68/ 5/16	2439992.5	-4.97945	2.08955	0.10361	-5.20345	-11.44748	0.16212	5.40110	12.57564	157.24	1.10
68/ 5/20	2439996.5	-4.99140	2.06307	0.10398	-5.13856	-11.47451	0.16076	5.40196	12.57358	157.54	1.10
68/ 5/24	2440000.5	-5.00320	2.03653	0.10435	-5.07355	-11.50118	0.15941	5.40281	12.57153	157.85	1.11
68/ 5/28	2440004.5	-5.01484	2.00993	0.10472	-5.00841	-11.52749	0.15805	5.40365	12.56950	158.16	1.11
68/ 6/ 1	2440008.5	-5.02634	1.98327	0.10508	-4.94316	-11.55345	0.15669	5.40449	12.56748	158.47	1.11
68/ 6/ 5	2440012.5	-5.03768	1.95655	0.10544	-4.87778	-11.57905	0.15532	5.40532	12.56548	158.77	1.12
68/ 6/ 9	2440016.5	-5.04887	1.92977	0.10580	-4.81229	-11.60429	0.15395	5.40614	12.56349	159.08	1.12

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					JUPITER		
68/ 6/13	2440020.5	-5.05991	1.90294	0.10615	-4.74669	-11.62917	0.15257	5.40696	12.56152	159.39	1.12
68/ 6/17	2440024.5	-5.07080	1.87604	0.10650	-4.68097	-11.65369	0.15119	5.40777	12.55957	159.70	1.13
68/ 6/21	2440028.5	-5.08154	1.84909	0.10685	-4.61514	-11.67785	0.14981	5.40857	12.55763	160.00	1.13
68/ 6/25	2440032.5	-5.09213	1.82209	0.10720	-4.54920	-11.70164	0.14842	5.40937	12.55571	160.31	1.14
68/ 6/29	2440036.5	-5.10256	1.79503	0.10754	-4.48316	-11.72508	0.14703	5.41016	12.55380	160.62	1.14
68/ 7/ 3	2440040.5	-5.11284	1.76791	0.10787	-4.41701	-11.74816	0.14564	5.41094	12.55191	160.93	1.14
68/ 7/ 7	2440044.5	-5.12297	1.74075	0.10821	-4.35075	-11.77088	0.14424	5.41172	12.55003	161.23	1.15
68/ 7/11	2440048.5	-5.13294	1.71353	0.10854	-4.28440	-11.79323	0.14284	5.41249	12.54818	161.54	1.15
68/ 7/15	2440052.5	-5.14276	1.68626	0.10887	-4.21794	-11.81522	0.14143	5.41326	12.54633	161.85	1.15
68/ 7/19	2440056.5	-5.15243	1.65894	0.10919	-4.15138	-11.83685	0.14002	5.41401	12.54451	162.15	1.16
68/ 7/23	2440060.5	-5.16195	1.63157	0.10952	-4.08473	-11.85812	0.13861	5.41477	12.54270	162.46	1.16
68/ 7/27	2440064.5	-5.17130	1.60415	0.10984	-4.01799	-11.87903	0.13719	5.41551	12.54091	162.77	1.16
68/ 7/31	2440068.5	-5.18051	1.57668	0.11015	-3.95115	-11.89957	0.13577	5.41625	12.53913	163.07	1.17
68/ 8/ 4	2440072.5	-5.18956	1.54917	0.11046	-3.88421	-11.91975	0.13434	5.41698	12.53737	163.38	1.17
68/ 8/ 8	2440076.5	-5.19846	1.52161	0.11077	-3.81719	-11.93957	0.13292	5.41770	12.53562	163.69	1.17
68/ 8/12	2440080.5	-5.20720	1.49401	0.11108	-3.75008	-11.95901	0.13148	5.41842	12.53389	163.99	1.17
68/ 8/16	2440084.5	-5.21578	1.46636	0.11138	-3.68289	-11.97810	0.13005	5.41913	12.53217	164.30	1.18
68/ 8/20	2440088.5	-5.22421	1.43866	0.11168	-3.61561	-11.99682	0.12861	5.41984	12.53047	164.60	1.18
68/ 8/24	2440092.5	-5.23249	1.41093	0.11197	-3.54825	-12.01517	0.12717	5.42053	12.52879	164.91	1.18
68/ 8/28	2440096.5	-5.24061	1.38315	0.11226	-3.48081	-12.03315	0.12573	5.42122	12.52712	165.22	1.19
68/ 9/ 1	2440100.5	-5.24857	1.35533	0.11255	-3.41330	-12.05078	0.12428	5.42191	12.52546	165.52	1.19
68/ 9/ 5	2440104.5	-5.25638	1.32747	0.11284	-3.34571	-12.06803	0.12283	5.42258	12.52383	165.83	1.19
68/ 9/ 9	2440108.5	-5.26403	1.29957	0.11312	-3.27804	-12.08492	0.12138	5.42325	12.52220	166.13	1.20
68/ 9/13	2440112.5	-5.27152	1.27163	0.11340	-3.21031	-12.10145	0.11992	5.42392	12.52060	166.44	1.20
68/ 9/17	2440116.5	-5.27886	1.24366	0.11368	-3.14250	-12.11760	0.11846	5.42457	12.51901	166.74	1.20
68/ 9/21	2440120.5	-5.28604	1.21565	0.11395	-3.07463	-12.13340	0.11700	5.42522	12.51744	167.05	1.20
68/ 9/25	2440124.5	-5.29307	1.18760	0.11422	-3.00669	-12.14882	0.11553	5.42586	12.51589	167.35	1.21
68/ 9/29	2440128.5	-5.29994	1.15951	0.11448	-2.93869	-12.16388	0.11406	5.42650	12.51435	167.66	1.21
68/10/ 3	2440132.5	-5.30665	1.13140	0.11474	-2.87063	-12.17858	0.11259	5.42713	12.51283	167.96	1.21
68/10/ 7	2440136.5	-5.31320	1.10325	0.11500	-2.80251	-12.19291	0.11112	5.42775	12.51133	168.27	1.21
68/10/11	2440140.5	-5.31959	1.07506	0.11526	-2.73433	-12.20687	0.10964	5.42836	12.50985	168.57	1.22
68/10/15	2440144.5	-5.32583	1.04685	0.11551	-2.66609	-12.22047	0.10816	5.42897	12.50838	168.88	1.22
68/10/19	2440148.5	-5.33191	1.01860	0.11576	-2.59779	-12.23371	0.10668	5.42957	12.50694	169.18	1.22
68/10/23	2440152.5	-5.33783	0.99032	0.11600	-2.52945	-12.24658	0.10520	5.43016	12.50551	169.49	1.22
68/10/27	2440156.5	-5.34360	0.96202	0.11624	-2.46104	-12.25908	0.10371	5.43075	12.50410	169.79	1.23
68/10/31	2440160.5	-5.34921	0.93368	0.11648	-2.39259	-12.27122	0.10222	5.43133	12.50271	170.10	1.23
68/11/ 4	2440164.5	-5.35465	0.90532	0.11671	-2.32409	-12.28299	0.10073	5.43190	12.50134	170.40	1.23
68/11/ 8	2440168.5	-5.35994	0.87693	0.11695	-2.25554	-12.29440	0.09923	5.43246	12.49998	170.71	1.23
68/11/12	2440172.5	-5.36507	0.84851	0.11717	-2.18695	-12.30544	0.09774	5.43302	12.49864	171.01	1.24
68/11/16	2440176.5	-5.37005	0.82007	0.11740	-2.11831	-12.31611	0.09624	5.43357	12.49732	171.32	1.24
68/11/20	2440180.5	-5.37486	0.79161	0.11762	-2.04963	-12.32641	0.09474	5.43412	12.49602	171.62	1.24
68/11/24	2440184.5	-5.37952	0.76312	0.11783	-1.98091	-12.33635	0.09323	5.43465	12.49473	171.93	1.24
68/11/28	2440188.5	-5.38401	0.73461	0.11805	-1.91216	-12.34593	0.09173	5.43518	12.49347	172.23	1.24
68/12/ 2	2440192.5	-5.38835	0.70608	0.11826	-1.84336	-12.35513	0.09022	5.43570	12.49222	172.53	1.25
68/12/ 6	2440196.5	-5.39253	0.67753	0.11847	-1.77454	-12.36398	0.08871	5.43622	12.49099	172.84	1.25

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68/12/10	2440200.5	-5.39655	0.64895	0.11867	-1.70568	-12.37245	0.08719	5.43673	12.48977	173.14	1.25
68/12/14	2440204.5	-5.40041	0.62036	0.11887	-1.63678	-12.38056	0.08568	5.43723	12.48858	173.45	1.25
68/12/18	2440208.5	-5.40411	0.59175	0.11906	-1.56786	-12.38830	0.08416	5.43772	12.48741	173.75	1.25
68/12/22	2440212.5	-5.40766	0.56312	0.11926	-1.49891	-12.39568	0.08264	5.43821	12.48625	174.05	1.26
68/12/26	2440216.5	-5.41104	0.53448	0.11945	-1.42994	-12.40269	0.08112	5.43868	12.48511	174.36	1.26
68/12/30	2440220.5	-5.41426	0.50582	0.11963	-1.36094	-12.40934	0.07960	5.43916	12.48399	174.66	1.26
69/ 1/ 3	2440224.5	-5.41733	0.47715	0.11981	-1.29191	-12.41561	0.07807	5.43962	12.48289	174.97	1.26
69/ 1/ 7	2440228.5	-5.42023	0.44846	0.11999	-1.22287	-12.42153	0.07654	5.44008	12.48181	175.27	1.26
69/ 1/11	2440232.5	-5.42298	0.41975	0.12017	-1.15380	-12.42707	0.07501	5.44053	12.48075	175.57	1.27
69/ 1/15	2440236.5	-5.42556	0.39104	0.12034	-1.08472	-12.43226	0.07348	5.44097	12.47970	175.88	1.27
69/ 1/19	2440240.5	-5.42799	0.36231	0.12051	-1.01562	-12.43707	0.07195	5.44140	12.47868	176.18	1.27
69/ 1/23	2440244.5	-5.43026	0.33358	0.12067	-0.94651	-12.44152	0.07042	5.44183	12.47767	176.48	1.27
69/ 1/27	2440248.5	-5.43236	0.30483	0.12083	-0.87738	-12.44560	0.06888	5.44225	12.47668	176.79	1.27
69/ 1/31	2440252.5	-5.43431	0.27607	0.12099	-0.80823	-12.44932	0.06734	5.44266	12.47571	177.09	1.27
69/ 2/ 4	2440256.5	-5.43610	0.24731	0.12114	-0.73908	-12.45267	0.06580	5.44307	12.47475	177.40	1.28
69/ 2/ 8	2440260.5	-5.43772	0.21854	0.12129	-0.66992	-12.45565	0.06426	5.44347	12.47381	177.70	1.28
69/ 2/12	2440264.5	-5.43919	0.18976	0.12144	-0.60075	-12.45826	0.06271	5.44386	12.47289	178.00	1.28
69/ 2/16	2440268.5	-5.44050	0.16098	0.12158	-0.53158	-12.46050	0.06117	5.44424	12.47199	178.31	1.28
69/ 2/20	2440272.5	-5.44165	0.13219	0.12172	-0.46241	-12.46238	0.05962	5.44461	12.47110	178.61	1.28
69/ 2/24	2440276.5	-5.44264	0.10340	0.12186	-0.39323	-12.46389	0.05807	5.44498	12.47022	178.91	1.28
69/ 2/28	2440280.5	-5.44347	0.07460	0.12199	-0.32406	-12.46503	0.05652	5.44534	12.46937	179.21	1.28
69/ 3/ 4	2440284.5	-5.44413	0.04580	0.12212	-0.25489	-12.46580	0.05497	5.44570	12.46853	179.52	1.28
69/ 3/ 8	2440288.5	-5.44464	0.01700	0.12225	-0.18573	-12.46621	0.05342	5.44604	12.46771	179.82	1.29
69/ 3/12	2440292.5	-5.44499	-0.01179	0.12237	-0.11658	-12.46625	0.05187	5.44638	12.46690	180.12	1.29
69/ 3/16	2440296.5	-5.44518	-0.04059	0.12248	-0.04743	-12.46592	0.05031	5.44671	12.46611	180.43	1.29
69/ 3/20	2440300.5	-5.44521	-0.06939	0.12260	0.02171	-12.46523	0.04876	5.44703	12.46534	180.73	1.29
69/ 3/24	2440304.5	-5.44508	-0.09819	0.12271	0.09083	-12.46417	0.04720	5.44735	12.46459	181.03	1.29
69/ 3/28	2440308.5	-5.44479	-0.12698	0.12282	0.15994	-12.46274	0.04564	5.44766	12.46385	181.34	1.29
69/ 4/ 1	2440312.5	-5.44434	-0.15577	0.12292	0.22903	-12.46094	0.04408	5.44796	12.46313	181.64	1.29
69/ 4/ 5	2440316.5	-5.44373	-0.18455	0.12302	0.29810	-12.45878	0.04252	5.44825	12.46242	181.94	1.29
69/ 4/ 9	2440320.5	-5.44296	-0.21333	0.12312	0.36715	-12.45626	0.04096	5.44854	12.46174	182.24	1.29
69/ 4/13	2440324.5	-5.44204	-0.24211	0.12321	0.43618	-12.45337	0.03940	5.44881	12.46107	182.55	1.30
69/ 4/17	2440328.5	-5.44095	-0.27087	0.12330	0.50519	-12.45012	0.03784	5.44908	12.46042	182.85	1.30
69/ 4/21	2440332.5	-5.43970	-0.29963	0.12339	0.57417	-12.44650	0.03627	5.44935	12.45979	183.15	1.30
69/ 4/25	2440336.5	-5.43830	-0.32838	0.12347	0.64313	-12.44251	0.03471	5.44960	12.45917	183.46	1.30
69/ 4/29	2440340.5	-5.43673	-0.35712	0.12355	0.71205	-12.43816	0.03314	5.44985	12.45857	183.76	1.30
69/ 5/ 3	2440344.5	-5.43501	-0.38585	0.12362	0.78095	-12.43345	0.03157	5.45009	12.45799	184.06	1.30
69/ 5/ 7	2440348.5	-5.43312	-0.41456	0.12369	0.84982	-12.42836	0.03001	5.45032	12.45742	184.36	1.30
69/ 5/11	2440352.5	-5.43108	-0.44327	0.12376	0.91864	-12.42292	0.02844	5.45054	12.45687	184.67	1.30
69/ 5/15	2440356.5	-5.42888	-0.47196	0.12382	0.98744	-12.41711	0.02687	5.45076	12.45634	184.97	1.30
69/ 5/19	2440360.5	-5.42652	-0.50064	0.12388	1.05619	-12.41094	0.02530	5.45097	12.45582	185.27	1.30
69/ 5/23	2440364.5	-5.42400	-0.52930	0.12394	1.12490	-12.40440	0.02373	5.45117	12.45533	185.57	1.30
69/ 5/27	2440368.5	-5.42132	-0.55795	0.12399	1.19358	-12.39750	0.02216	5.45137	12.45485	185.88	1.30
69/ 5/31	2440372.5	-5.41848	-0.58659	0.12404	1.26220	-12.39024	0.02059	5.45155	12.45438	186.18	1.30
69/ 6/ 4	2440376.5	-5.41549	-0.61520	0.12409	1.33078	-12.38262	0.01902	5.45173	12.45394	186.48	1.30

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					JUPITER		
69/ 6/ 8	2440380.5	-5.41234	-0.64380	0.12413	1.39932	-12.37464	0.01745	5.45190	12.45351	186.78	1.30
69/ 6/12	2440384.5	-5.40902	-0.67238	0.12417	1.46780	-12.36629	0.01588	5.45207	12.45311	187.09	1.30
69/ 6/16	2440388.5	-5.40555	-0.70093	0.12420	1.53624	-12.35759	0.01431	5.45222	12.45272	187.39	1.31
69/ 6/20	2440392.5	-5.40193	-0.72947	0.12423	1.60462	-12.34852	0.01274	5.45237	12.45235	187.69	1.31
69/ 6/24	2440396.5	-5.39814	-0.75799	0.12426	1.67295	-12.33910	0.01117	5.45251	12.45200	187.99	1.31
69/ 6/28	2440400.5	-5.39420	-0.78648	0.12429	1.74122	-12.32932	0.00960	5.45265	12.45167	188.30	1.31
69/ 7/ 2	2440404.5	-5.39009	-0.81495	0.12431	1.80944	-12.31918	0.00803	5.45277	12.45135	188.60	1.31
69/ 7/ 6	2440408.5	-5.38584	-0.84340	0.12432	1.87760	-12.30868	0.00645	5.45289	12.45106	188.90	1.31
69/ 7/10	2440412.5	-5.38142	-0.87182	0.12434	1.94569	-12.29782	0.00488	5.45300	12.45079	189.20	1.31
69/ 7/14	2440416.5	-5.37685	-0.90022	0.12435	2.01373	-12.28661	0.00331	5.45310	12.45054	189.50	1.31
69/ 7/18	2440420.5	-5.37212	-0.92859	0.12435	2.08171	-12.27504	0.00174	5.45320	12.45031	189.81	1.31
69/ 7/22	2440424.5	-5.36723	-0.95694	0.12435	2.14962	-12.26311	0.00016	5.45329	12.45009	190.11	1.31
69/ 7/26	2440428.5	-5.36218	-0.98525	0.12435	2.21746	-12.25083	-0.00141	5.45337	12.44990	190.41	1.31
69/ 7/30	2440432.5	-5.35698	-1.01354	0.12435	2.28524	-12.23819	-0.00298	5.45344	12.44973	190.71	1.31
69/ 8/ 3	2440436.5	-5.35163	-1.04180	0.12434	2.35295	-12.22519	-0.00455	5.45350	12.44957	191.02	1.31
69/ 8/ 7	2440440.5	-5.34611	-1.07002	0.12433	2.42059	-12.21184	-0.00613	5.45356	12.44943	191.32	1.31
69/ 8/11	2440444.5	-5.34044	-1.09822	0.12431	2.48816	-12.19813	-0.00770	5.45361	12.44931	191.62	1.31
69/ 8/15	2440448.5	-5.33462	-1.12638	0.12429	2.55565	-12.18407	-0.00927	5.45365	12.44921	191.92	1.31
69/ 8/19	2440452.5	-5.32863	-1.15451	0.12427	2.62306	-12.16965	-0.01084	5.45368	12.44913	192.22	1.31
69/ 8/23	2440456.5	-5.32250	-1.18261	0.12424	2.69040	-12.15488	-0.01241	5.45371	12.44907	192.53	1.31
69/ 8/27	2440460.5	-5.31620	-1.21067	0.12421	2.75766	-12.13975	-0.01398	5.45373	12.44903	192.83	1.31
69/ 8/31	2440464.5	-5.30975	-1.23870	0.12418	2.82484	-12.12427	-0.01555	5.45374	12.44901	193.13	1.30
69/ 9/ 4	2440468.5	-5.30315	-1.26669	0.12414	2.89193	-12.10843	-0.01712	5.45374	12.44900	193.43	1.30
69/ 9/ 8	2440472.5	-5.29639	-1.29464	0.12410	2.95894	-12.09224	-0.01869	5.45374	12.44902	193.74	1.30
69/ 9/12	2440476.5	-5.28948	-1.32256	0.12405	3.02587	-12.07570	-0.02026	5.45373	12.44905	194.04	1.30
69/ 9/16	2440480.5	-5.28241	-1.35044	0.12400	3.09271	-12.05881	-0.02183	5.45371	12.44911	194.34	1.30
69/ 9/20	2440484.5	-5.27519	-1.37828	0.12395	3.15946	-12.04157	-0.02340	5.45368	12.44918	194.64	1.30
69/ 9/24	2440488.5	-5.26781	-1.40607	0.12390	3.22612	-12.02397	-0.02496	5.45365	12.44927	194.94	1.30
69/ 9/28	2440492.5	-5.26028	-1.43383	0.12384	3.29269	-12.00602	-0.02653	5.45360	12.44938	195.25	1.30
69/10/ 2	2440496.5	-5.25260	-1.46155	0.12377	3.35916	-11.98773	-0.02810	5.45355	12.44951	195.55	1.30
69/10/ 6	2440500.5	-5.24476	-1.48922	0.12371	3.42554	-11.96908	-0.02966	5.45350	12.44966	195.85	1.30
69/10/10	2440504.5	-5.23677	-1.51685	0.12364	3.49182	-11.95008	-0.03123	5.45343	12.44983	196.15	1.30
69/10/14	2440508.5	-5.22863	-1.54443	0.12356	3.55801	-11.93073	-0.03279	5.45336	12.45002	196.46	1.30
69/10/18	2440512.5	-5.22033	-1.57197	0.12348	3.62409	-11.91104	-0.03435	5.45328	12.45022	196.76	1.30
69/10/22	2440516.5	-5.21189	-1.59946	0.12340	3.69008	-11.89099	-0.03591	5.45319	12.45045	197.06	1.30
69/10/26	2440520.5	-5.20329	-1.62691	0.12332	3.75596	-11.87059	-0.03748	5.45309	12.45069	197.36	1.30
69/10/30	2440524.5	-5.19453	-1.65431	0.12323	3.82173	-11.84985	-0.03904	5.45299	12.45095	197.67	1.29
69/11/ 3	2440528.5	-5.18563	-1.68166	0.12314	3.88740	-11.82875	-0.04060	5.45288	12.45122	197.97	1.29
69/11/ 7	2440532.5	-5.17657	-1.70896	0.12304	3.95296	-11.80731	-0.04215	5.45276	12.45152	198.27	1.29
69/11/11	2440536.5	-5.16736	-1.73622	0.12294	4.01841	-11.78552	-0.04371	5.45263	12.45183	198.57	1.29
69/11/15	2440540.5	-5.15801	-1.76342	0.12284	4.08375	-11.76338	-0.04527	5.45250	12.45215	198.87	1.29
69/11/19	2440544.5	-5.14850	-1.79057	0.12273	4.14897	-11.74089	-0.04682	5.45236	12.45250	199.18	1.29
69/11/23	2440548.5	-5.13884	-1.81766	0.12262	4.21407	-11.71806	-0.04837	5.45221	12.45286	199.48	1.29
69/11/27	2440552.5	-5.12903	-1.84471	0.12251	4.27906	-11.69489	-0.04992	5.45205	12.45324	199.78	1.29
69/12/ 1	2440556.5	-5.11906	-1.87170	0.12239	4.34392	-11.67137	-0.05147	5.45189	12.45364	200.08	1.29

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69/12/ 5	2440560.5	-5.10895	-1.89863	0.12227	4.40867	-11.64750	-0.05302	5.45171	12.45405	200.39	1.29
69/12/ 9	2440564.5	-5.09870	-1.92551	0.12215	4.47329	-11.62329	-0.05457	5.45153	12.45448	200.69	1.28
69/12/13	2440568.5	-5.08829	-1.95234	0.12202	4.53779	-11.59874	-0.05612	5.45135	12.45493	200.99	1.28
69/12/17	2440572.5	-5.07773	-1.97910	0.12189	4.60216	-11.57384	-0.05766	5.45115	12.45540	201.29	1.28
69/12/21	2440576.5	-5.06702	-2.00581	0.12175	4.66640	-11.54861	-0.05920	5.45095	12.45589	201.60	1.28
69/12/25	2440580.5	-5.05617	-2.03246	0.12162	4.73051	-11.52303	-0.06074	5.45074	12.45639	201.90	1.28

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69/12/17	2440572.5	-5.07773	-1.86420	-0.67562	4.60216	-10.59533	-4.65791	5.45115	12.45540	200.16	-7.12
69/12/21	2440576.5	-5.06702	-1.88865	-0.68637	4.66640	-10.57157	-4.64929	5.45095	12.45589	200.44	-7.23
69/12/25	2440580.5	-5.05617	-1.91304	-0.69710	4.73051	-10.54749	-4.64053	5.45074	12.45639	200.72	-7.35
69/12/29	2440584.5	-5.04517	-1.93738	-0.70781	4.79449	-10.52310	-4.63163	5.45052	12.45691	201.01	-7.46
70/ 1/ 2	2440588.5	-5.03402	-1.96166	-0.71850	4.85833	-10.49840	-4.62259	5.45029	12.45745	201.29	-7.58
70/ 1/ 6	2440592.5	-5.02272	-1.98589	-0.72917	4.92204	-10.47339	-4.61342	5.45006	12.45801	201.57	-7.69
70/ 1/10	2440596.5	-5.01128	-2.01005	-0.73982	4.98562	-10.44807	-4.60411	5.44982	12.45859	201.86	-7.80
70/ 1/14	2440600.5	-4.99968	-2.03416	-0.75044	5.04906	-10.42245	-4.59467	5.44957	12.45919	202.14	-7.92
70/ 1/18	2440604.5	-4.98795	-2.05821	-0.76105	5.11236	-10.39651	-4.58509	5.44932	12.45981	202.42	-8.03
70/ 1/22	2440608.5	-4.97606	-2.08220	-0.77163	5.17552	-10.37027	-4.57538	5.44905	12.46044	202.71	-8.14
70/ 1/26	2440612.5	-4.96403	-2.10612	-0.78219	5.23854	-10.34371	-4.56552	5.44878	12.46109	202.99	-8.25
70/ 1/30	2440616.5	-4.95186	-2.12999	-0.79272	5.30142	-10.31685	-4.55554	5.44850	12.46176	203.27	-8.37
70/ 2/ 3	2440620.5	-4.93954	-2.15379	-0.80324	5.36414	-10.28969	-4.54542	5.44822	12.46244	203.56	-8.48
70/ 2/ 7	2440624.5	-4.92708	-2.17753	-0.81372	5.42672	-10.26221	-4.53516	5.44792	12.46315	203.84	-8.59
70/ 2/11	2440628.5	-4.91447	-2.20121	-0.82419	5.48915	-10.23443	-4.52477	5.44762	12.46387	204.13	-8.70
70/ 2/15	2440632.5	-4.90171	-2.22482	-0.83463	5.55143	-10.20635	-4.51424	5.44731	12.46461	204.41	-8.81
70/ 2/19	2440636.5	-4.88882	-2.24836	-0.84505	5.61356	-10.17797	-4.50358	5.44700	12.46536	204.70	-8.92
70/ 2/23	2440640.5	-4.87578	-2.27184	-0.85544	5.67553	-10.14928	-4.49279	5.44667	12.46614	204.98	-9.04
70/ 2/27	2440644.5	-4.86259	-2.29525	-0.86580	5.73735	-10.12029	-4.48186	5.44634	12.46693	205.27	-9.15
70/ 3/ 3	2440648.5	-4.84927	-2.31860	-0.87615	5.79901	-10.09099	-4.47080	5.44600	12.46775	205.55	-9.26
70/ 3/ 7	2440652.5	-4.83580	-2.34188	-0.88646	5.86051	-10.06140	-4.45961	5.44566	12.46858	205.84	-9.37
70/ 3/11	2440656.5	-4.82219	-2.36509	-0.89675	5.92185	-10.03151	-4.44828	5.44530	12.46943	206.13	-9.48
70/ 3/15	2440660.5	-4.80844	-2.38823	-0.90701	5.98303	-10.00131	-4.43682	5.44494	12.47030	206.41	-9.59
70/ 3/19	2440664.5	-4.79455	-2.41130	-0.91725	6.04405	-9.97082	-4.42523	5.44457	12.47118	206.70	-9.70
70/ 3/23	2440668.5	-4.78051	-2.43430	-0.92746	6.10490	-9.94003	-4.41351	5.44420	12.47209	206.99	-9.81
70/ 3/27	2440672.5	-4.76634	-2.45722	-0.93764	6.16558	-9.90894	-4.40166	5.44382	12.47301	207.27	-9.92
70/ 3/31	2440676.5	-4.75203	-2.48008	-0.94780	6.22610	-9.87756	-4.38967	5.44343	12.47396	207.56	-10.03
70/ 4/ 4	2440680.5	-4.73757	-2.50286	-0.95792	6.28645	-9.84588	-4.37756	5.44303	12.47492	207.85	-10.14
70/ 4/ 8	2440684.5	-4.72298	-2.52557	-0.96802	6.34663	-9.81390	-4.36531	5.44262	12.47590	208.14	-10.25
70/ 4/12	2440688.5	-4.70825	-2.54820	-0.97809	6.40663	-9.78163	-4.35293	5.44221	12.47691	208.42	-10.35
70/ 4/16	2440692.5	-4.69338	-2.57076	-0.98813	6.46647	-9.74906	-4.34042	5.44179	12.47793	208.71	-10.46
70/ 4/20	2440696.5	-4.67837	-2.59325	-0.99815	6.52613	-9.71620	-4.32778	5.44136	12.47897	209.00	-10.57
70/ 4/24	2440700.5	-4.66323	-2.61566	-1.00813	6.58561	-9.68304	-4.31501	5.44093	12.48002	209.29	-10.68
70/ 4/28	2440704.5	-4.64795	-2.63799	-1.01808	6.64492	-9.64959	-4.30211	5.44048	12.48109	209.58	-10.79
70/ 5/ 2	2440708.5	-4.63253	-2.66024	-1.02801	6.70404	-9.61584	-4.28908	5.44004	12.48218	209.87	-10.89
70/ 5/ 6	2440712.5	-4.61697	-2.68242	-1.03790	6.76299	-9.58181	-4.27592	5.43958	12.48329	210.16	-11.00
70/ 5/10	2440716.5	-4.60128	-2.70451	-1.04776	6.82175	-9.54748	-4.26263	5.43911	12.48441	210.45	-11.11
70/ 5/14	2440720.5	-4.58545	-2.72653	-1.05760	6.88032	-9.51286	-4.24921	5.43864	12.48556	210.74	-11.21
70/ 5/18	2440724.5	-4.56949	-2.74846	-1.06740	6.93871	-9.47795	-4.23566	5.43816	12.48671	211.03	-11.32
70/ 5/22	2440728.5	-4.55339	-2.77032	-1.07717	6.99690	-9.44275	-4.22198	5.43768	12.48789	211.32	-11.43
70/ 5/26	2440732.5	-4.53716	-2.79209	-1.08690	7.05491	-9.40727	-4.20818	5.43719	12.48908	211.61	-11.53
70/ 5/30	2440736.5	-4.52080	-2.81378	-1.09661	7.11273	-9.37149	-4.19424	5.43668	12.49029	211.90	-11.64
70/ 6/ 3	2440740.5	-4.50430	-2.83539	-1.10628	7.17035	-9.33543	-4.18018	5.43618	12.49152	212.19	-11.74
70/ 6/ 7	2440744.5	-4.48767	-2.85692	-1.11592	7.22778	-9.29908	-4.16599	5.43566	12.49276	212.48	-11.85
70/ 6/11	2440748.5	-4.47090	-2.87836	-1.12553	7.28500	-9.26244	-4.15167	5.43514	12.49402	212.77	-11.95

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70/ 6/15	2440752.5	-4.45401	-2.89971	-1.13510	7.34203	-9.22552	-4.13723	5.43461	12.49530	213.07	-12.06
70/ 6/19	2440756.5	-4.43698	-2.92098	-1.14465	7.39886	-9.18832	-4.12266	5.43407	12.49659	213.36	-12.16
70/ 6/23	2440760.5	-4.41982	-2.94217	-1.15415	7.45549	-9.15083	-4.10796	5.43353	12.49790	213.65	-12.26
70/ 6/27	2440764.5	-4.40254	-2.96326	-1.16363	7.51191	-9.11307	-4.09314	5.43298	12.49922	213.94	-12.37
70/ 7/ 1	2440768.5	-4.38512	-2.98427	-1.17306	7.56813	-9.07502	-4.07819	5.43242	12.50057	214.24	-12.47
70/ 7/ 5	2440772.5	-4.36757	-3.00519	-1.18247	7.62414	-9.03669	-4.06311	5.43186	12.50193	214.53	-12.57
70/ 7/ 9	2440776.5	-4.34989	-3.02602	-1.19184	7.67995	-8.99808	-4.04792	5.43128	12.50331	214.82	-12.68
70/ 7/13	2440780.5	-4.33208	-3.04677	-1.20117	7.73555	-8.95919	-4.03259	5.43070	12.50470	215.12	-12.78
70/ 7/17	2440784.5	-4.31415	-3.06742	-1.21047	7.79093	-8.92002	-4.01714	5.43012	12.50611	215.41	-12.88
70/ 7/21	2440788.5	-4.29609	-3.08798	-1.21973	7.84610	-8.88057	-4.00157	5.42952	12.50754	215.71	-12.98
70/ 7/25	2440792.5	-4.27790	-3.10845	-1.22896	7.90106	-8.84085	-3.98587	5.42892	12.50898	216.00	-13.08
70/ 7/29	2440796.5	-4.25958	-3.12883	-1.23815	7.95580	-8.80085	-3.97005	5.42831	12.51043	216.30	-13.18
70/ 8/ 2	2440800.5	-4.24114	-3.14911	-1.24730	8.01032	-8.76058	-3.95410	5.42770	12.51191	216.59	-13.29
70/ 8/ 6	2440804.5	-4.22257	-3.16930	-1.25642	8.06462	-8.72003	-3.93803	5.42708	12.51339	216.89	-13.39
70/ 8/10	2440808.5	-4.20388	-3.18940	-1.26550	8.11869	-8.67921	-3.92184	5.42645	12.51490	217.19	-13.49
70/ 8/14	2440812.5	-4.18506	-3.20940	-1.27454	8.17255	-8.63811	-3.90553	5.42581	12.51642	217.48	-13.59
70/ 8/18	2440816.5	-4.16612	-3.22931	-1.28354	8.22618	-8.59675	-3.88910	5.42517	12.51795	217.78	-13.69
70/ 8/22	2440820.5	-4.14705	-3.24912	-1.29251	8.27958	-8.55512	-3.87254	5.42452	12.51950	218.08	-13.78
70/ 8/26	2440824.5	-4.12786	-3.26884	-1.30143	8.33275	-8.51322	-3.85586	5.42386	12.52107	218.38	-13.88
70/ 8/30	2440828.5	-4.10855	-3.28846	-1.31032	8.38570	-8.47105	-3.83907	5.42320	12.52266	218.67	-13.98
70/ 9/ 3	2440832.5	-4.08912	-3.30798	-1.31917	8.43841	-8.42861	-3.82215	5.42253	12.52426	218.97	-14.08
70/ 9/ 7	2440836.5	-4.06956	-3.32740	-1.32798	8.49089	-8.38591	-3.80511	5.42185	12.52588	219.27	-14.18
70/ 9/11	2440840.5	-4.04989	-3.34672	-1.33675	8.54313	-8.34294	-3.78796	5.42117	12.52751	219.57	-14.28
70/ 9/15	2440844.5	-4.03009	-3.36595	-1.34548	8.59515	-8.29972	-3.77068	5.42048	12.52916	219.87	-14.37
70/ 9/19	2440848.5	-4.01018	-3.38507	-1.35417	8.64692	-8.25623	-3.75329	5.41978	12.53083	220.17	-14.47
70/ 9/23	2440852.5	-3.99014	-3.40409	-1.36282	8.69845	-8.21248	-3.73578	5.41907	12.53251	220.47	-14.57
70/ 9/27	2440856.5	-3.96999	-3.42302	-1.37143	8.74975	-8.16847	-3.71816	5.41836	12.53422	220.77	-14.66
70/10/ 1	2440860.5	-3.94971	-3.44183	-1.38000	8.80081	-8.12420	-3.70041	5.41764	12.53594	221.07	-14.76
70/10/ 5	2440864.5	-3.92932	-3.46055	-1.38853	8.85163	-8.07967	-3.68255	5.41692	12.53768	221.37	-14.85
70/10/ 9	2440868.5	-3.90882	-3.47917	-1.39702	8.90220	-8.03488	-3.66458	5.41619	12.53944	221.67	-14.95
70/10/13	2440872.5	-3.88819	-3.49768	-1.40546	8.95253	-7.98984	-3.64648	5.41545	12.54122	221.97	-15.04
70/10/17	2440876.5	-3.86745	-3.51608	-1.41387	9.00261	-7.94454	-3.62827	5.41471	12.54301	222.28	-15.14
70/10/21	2440880.5	-3.84660	-3.53438	-1.42223	9.05245	-7.89898	-3.60995	5.41395	12.54482	222.58	-15.23
70/10/25	2440884.5	-3.82563	-3.55258	-1.43054	9.10203	-7.85317	-3.59151	5.41320	12.54664	222.88	-15.32
70/10/29	2440888.5	-3.80454	-3.57067	-1.43882	9.15137	-7.80711	-3.57295	5.41243	12.54849	223.18	-15.42
70/11/ 2	2440892.5	-3.78335	-3.58865	-1.44705	9.20045	-7.76080	-3.55428	5.41166	12.55035	223.49	-15.51
70/11/ 6	2440896.5	-3.76203	-3.60652	-1.45524	9.24928	-7.71423	-3.53550	5.41088	12.55222	223.79	-15.60
70/11/10	2440900.5	-3.74061	-3.62429	-1.46339	9.29786	-7.66741	-3.51660	5.41010	12.55412	224.10	-15.69
70/11/14	2440904.5	-3.71907	-3.64195	-1.47149	9.34617	-7.62035	-3.49759	5.40931	12.55603	224.40	-15.79
70/11/18	2440908.5	-3.69743	-3.65950	-1.47955	9.39423	-7.57304	-3.47847	5.40851	12.55796	224.70	-15.88
70/11/22	2440912.5	-3.67567	-3.67694	-1.48756	9.44204	-7.52548	-3.45923	5.40771	12.55990	225.01	-15.97
70/11/26	2440916.5	-3.65380	-3.69427	-1.49553	9.48958	-7.47767	-3.43989	5.40690	12.56186	225.32	-16.06
70/11/30	2440920.5	-3.63183	-3.71149	-1.50346	9.53686	-7.42962	-3.42043	5.40608	12.56384	225.62	-16.15
70/12/ 4	2440924.5	-3.60974	-3.72860	-1.51133	9.58387	-7.38132	-3.40086	5.40526	12.56584	225.93	-16.24
70/12/ 8	2440928.5	-3.58754	-3.74559	-1.51917	9.63062	-7.33278	-3.38118	5.40443	12.56785	226.23	-16.33

1.5 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — JUPITER

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
70/12/12	2440932.5	-3.56524	-3.76248	-1.52696	9.67710	-7.28400	-3.36139	5.40359	12.56988	226.54	-16.41
70/12/16	2440936.5	-3.54283	-3.77925	-1.53470	9.72332	-7.23498	-3.34149	5.40275	12.57193	226.85	-16.50
70/12/20	2440940.5	-3.52032	-3.79590	-1.54240	9.76927	-7.18572	-3.32148	5.40190	12.57399	227.16	-16.59
70/12/24	2440944.5	-3.49770	-3.81245	-1.55005	9.81494	-7.13622	-3.30136	5.40104	12.57608	227.47	-16.68
70/12/28	2440948.5	-3.47497	-3.82888	-1.55765	9.86035	-7.08648	-3.28113	5.40018	12.57818	227.77	-16.76
71/ 1/ 1	2440952.5	-3.45214	-3.84519	-1.56521	9.90548	-7.03650	-3.26079	5.39932	12.58029	228.08	-16.85
71/ 1/ 5	2440956.5	-3.42920	-3.86139	-1.57271	9.95034	-6.98629	-3.24035	5.39844	12.58242	228.39	-16.94
71/ 1/ 9	2440960.5	-3.40616	-3.87747	-1.58018	9.99493	-6.93584	-3.21979	5.39756	12.58457	228.70	-17.02
71/ 1/13	2440964.5	-3.38302	-3.89343	-1.58759	10.03923	-6.88515	-3.19913	5.39668	12.58674	229.01	-17.11
71/ 1/17	2440968.5	-3.35978	-3.90928	-1.59496	10.08326	-6.83423	-3.17837	5.39578	12.58891	229.32	-17.19
71/ 1/21	2440972.5	-3.33643	-3.92501	-1.60228	10.12700	-6.78307	-3.15749	5.39489	12.59111	229.63	-17.28
71/ 1/25	2440976.5	-3.31299	-3.94062	-1.60955	10.17046	-6.73169	-3.13651	5.39398	12.59331	229.95	-17.36
71/ 1/29	2440980.5	-3.28944	-3.95611	-1.61677	10.21364	-6.68007	-3.11542	5.39307	12.59554	230.26	-17.44
71/ 2/ 2	2440984.5	-3.26580	-3.97148	-1.62394	10.25652	-6.62822	-3.09423	5.39215	12.59777	230.57	-17.53
71/ 2/ 6	2440988.5	-3.24206	-3.98674	-1.63106	10.29912	-6.57615	-3.07293	5.39123	12.60002	230.88	-17.61
71/ 2/10	2440992.5	-3.21821	-4.00187	-1.63814	10.34144	-6.52385	-3.05152	5.39030	12.60229	231.19	-17.69
71/ 2/14	2440996.5	-3.19427	-4.01688	-1.64516	10.38345	-6.47132	-3.03002	5.38937	12.60457	231.51	-17.77
71/ 2/18	2441000.5	-3.17024	-4.03177	-1.65214	10.42518	-6.41857	-3.00840	5.38843	12.60686	231.82	-17.85
71/ 2/22	2441004.5	-3.14611	-4.04653	-1.65906	10.46661	-6.36559	-2.98669	5.38748	12.60916	232.14	-17.94
71/ 2/26	2441008.5	-3.12188	-4.06118	-1.66594	10.50775	-6.31239	-2.96487	5.38653	12.61148	232.45	-18.02
71/ 3/ 2	2441012.5	-3.09756	-4.07570	-1.67276	10.54858	-6.25898	-2.94295	5.38557	12.61382	232.76	-18.10
71/ 3/ 6	2441016.5	-3.07314	-4.09010	-1.67954	10.58912	-6.20534	-2.92093	5.38460	12.61616	233.08	-18.17
71/ 3/10	2441020.5	-3.04863	-4.10437	-1.68626	10.62936	-6.15148	-2.89881	5.38363	12.61852	233.40	-18.25
71/ 3/14	2441024.5	-3.02403	-4.11852	-1.69293	10.66929	-6.09741	-2.87659	5.38265	12.62090	233.71	-18.33
71/ 3/18	2441028.5	-2.99934	-4.13254	-1.69955	10.70893	-6.04312	-2.85427	5.38167	12.62328	234.03	-18.41
71/ 3/22	2441032.5	-2.97455	-4.14644	-1.70612	10.74825	-5.98862	-2.83185	5.38068	12.62569	234.35	-18.49
71/ 3/26	2441036.5	-2.94968	-4.16021	-1.71263	10.78728	-5.93391	-2.80933	5.37969	12.62810	234.66	-18.56
71/ 3/30	2441040.5	-2.92471	-4.17386	-1.71910	10.82599	-5.87899	-2.78672	5.37869	12.63053	234.98	-18.64
71/ 4/ 3	2441044.5	-2.89966	-4.18737	-1.72551	10.86440	-5.82385	-2.76400	5.37768	12.63298	235.30	-18.72
71/ 4/ 7	2441048.5	-2.87451	-4.20077	-1.73187	10.90250	-5.76851	-2.74119	5.37667	12.63544	235.62	-18.79
71/ 4/11	2441052.5	-2.84928	-4.21403	-1.73817	10.94028	-5.71296	-2.71828	5.37566	12.63791	235.94	-18.87
71/ 4/15	2441056.5	-2.82397	-4.22716	-1.74443	10.97775	-5.65720	-2.69528	5.37463	12.64039	236.25	-18.94
71/ 4/19	2441060.5	-2.79856	-4.24017	-1.75063	11.01491	-5.60123	-2.67218	5.37361	12.64289	236.57	-19.01
71/ 4/23	2441064.5	-2.77307	-4.25304	-1.75677	11.05175	-5.54507	-2.64898	5.37257	12.64540	236.89	-19.09
71/ 4/27	2441068.5	-2.74750	-4.26579	-1.76287	11.08827	-5.48870	-2.62569	5.37153	12.64792	237.22	-19.16
71/ 5/ 1	2441072.5	-2.72184	-4.27840	-1.76890	11.12448	-5.43213	-2.60231	5.37049	12.65045	237.54	-19.23
71/ 5/ 5	2441076.5	-2.69610	-4.29088	-1.77489	11.16036	-5.37536	-2.57883	5.36944	12.65300	237.86	-19.30
71/ 5/ 9	2441080.5	-2.67028	-4.30324	-1.78082	11.19592	-5.31839	-2.55526	5.36838	12.65556	238.18	-19.37
71/ 5/13	2441084.5	-2.64437	-4.31546	-1.78669	11.23116	-5.26123	-2.53160	5.36732	12.65814	238.50	-19.44
71/ 5/17	2441088.5	-2.61839	-4.32754	-1.79252	11.26607	-5.20387	-2.50784	5.36626	12.66072	238.82	-19.51
71/ 5/21	2441092.5	-2.59232	-4.33950	-1.79828	11.30066	-5.14632	-2.48400	5.36518	12.66332	239.15	-19.58
71/ 5/25	2441096.5	-2.56617	-4.35132	-1.80399	11.33492	-5.08858	-2.46007	5.36411	12.66594	239.47	-19.65
71/ 5/29	2441100.5	-2.53995	-4.36301	-1.80965	11.36885	-5.03065	-2.43604	5.36302	12.66856	239.79	-19.72
71/ 6/ 2	2441104.5	-2.51365	-4.37457	-1.81525	11.40245	-4.97253	-2.41193	5.36194	12.67120	240.12	-19.79
71/ 6/ 6	2441108.5	-2.48727	-4.38599	-1.82079	11.43573	-4.91422	-2.38773	5.36084	12.67386	240.44	-19.86

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
		HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM							JUPITER		
71/ 6/10	2441112.5	-2.46081	-4.39727	-1.82628	11.46867	-4.85573	-2.36344	5.35974	12.67652	240.77	-19.92
71/ 6/14	2441116.5	-2.43428	-4.40842	-1.83171	11.50127	-4.79705	-2.33906	5.35864	12.67920	241.09	-19.99
71/ 6/18	2441120.5	-2.40767	-4.41943	-1.83709	11.53355	-4.73819	-2.31460	5.35753	12.68190	241.42	-20.05
71/ 6/22	2441124.5	-2.38099	-4.43031	-1.84241	11.56549	-4.67915	-2.29005	5.35642	12.68461	241.75	-20.12
71/ 6/26	2441128.5	-2.35423	-4.44105	-1.84767	11.59710	-4.61993	-2.26542	5.35530	12.68734	242.07	-20.18
71/ 6/30	2441132.5	-2.32741	-4.45166	-1.85287	11.62836	-4.56053	-2.24070	5.35418	12.69008	242.40	-20.25
71/ 7/ 4	2441136.5	-2.30051	-4.46212	-1.85802	11.65930	-4.50095	-2.21590	5.35305	12.69283	242.73	-20.31
71/ 7/ 8	2441140.5	-2.27354	-4.47245	-1.86311	11.68989	-4.44119	-2.19101	5.35191	12.69560	243.05	-20.37
71/ 7/12	2441144.5	-2.24649	-4.48264	-1.86814	11.72013	-4.38126	-2.16604	5.35078	12.69837	243.38	-20.43
71/ 7/16	2441148.5	-2.21938	-4.49270	-1.87312	11.75004	-4.32115	-2.14098	5.34963	12.70117	243.71	-20.50
71/ 7/20	2441152.5	-2.19221	-4.50261	-1.87804	11.77960	-4.26087	-2.11585	5.34848	12.70397	244.04	-20.56
71/ 7/24	2441156.5	-2.16496	-4.51238	-1.88290	11.80882	-4.20042	-2.09063	5.34733	12.70679	244.37	-20.62
71/ 7/28	2441160.5	-2.13764	-4.52202	-1.88770	11.83769	-4.13980	-2.06533	5.34617	12.70962	244.70	-20.68
71/ 8/ 1	2441164.5	-2.11026	-4.53151	-1.89244	11.86621	-4.07902	-2.03995	5.34501	12.71246	245.03	-20.74
71/ 8/ 5	2441168.5	-2.08282	-4.54086	-1.89712	11.89438	-4.01806	-2.01449	5.34384	12.71532	245.36	-20.79
71/ 8/ 9	2441172.5	-2.05531	-4.55008	-1.90175	11.92220	-3.95694	-1.98895	5.34267	12.71818	245.69	-20.85
71/ 8/13	2441176.5	-2.02773	-4.55915	-1.90631	11.94967	-3.89566	-1.96333	5.34149	12.72106	246.02	-20.91
71/ 8/17	2441180.5	-2.00010	-4.56807	-1.91082	11.97679	-3.83421	-1.93763	5.34031	12.72396	246.35	-20.97
71/ 8/21	2441184.5	-1.97240	-4.57686	-1.91526	12.00355	-3.77261	-1.91186	5.33912	12.72686	246.69	-21.02
71/ 8/25	2441188.5	-1.94464	-4.58551	-1.91965	12.02996	-3.71084	-1.88600	5.33793	12.72978	247.02	-21.08
71/ 8/29	2441192.5	-1.91682	-4.59401	-1.92398	12.05600	-3.64892	-1.86008	5.33674	12.73270	247.35	-21.13
71/ 9/ 2	2441196.5	-1.88893	-4.60236	-1.92824	12.08169	-3.58684	-1.83407	5.33554	12.73564	247.69	-21.19
71/ 9/ 6	2441200.5	-1.86099	-4.61058	-1.93245	12.10702	-3.52461	-1.80799	5.33433	12.73859	248.02	-21.24
71/ 9/10	2441204.5	-1.83300	-4.61865	-1.93660	12.13199	-3.46223	-1.78184	5.33312	12.74156	248.35	-21.29
71/ 9/14	2441208.5	-1.80494	-4.62658	-1.94068	12.15660	-3.39970	-1.75562	5.33191	12.74453	248.69	-21.34
71/ 9/18	2441212.5	-1.77683	-4.63436	-1.94471	12.18084	-3.33701	-1.72932	5.33069	12.74752	249.02	-21.40
71/ 9/22	2441216.5	-1.74866	-4.64199	-1.94867	12.20473	-3.27418	-1.70295	5.32947	12.75052	249.36	-21.45
71/ 9/26	2441220.5	-1.72044	-4.64948	-1.95258	12.22824	-3.21120	-1.67651	5.32824	12.75353	249.69	-21.50
71/ 9/30	2441224.5	-1.69216	-4.65683	-1.95642	12.25139	-3.14808	-1.64999	5.32701	12.75655	250.03	-21.55
71/10/ 4	2441228.5	-1.66383	-4.66403	-1.96020	12.27418	-3.08481	-1.62341	5.32578	12.75958	250.37	-21.60
71/10/ 8	2441232.5	-1.63545	-4.67108	-1.96392	12.29659	-3.02140	-1.59675	5.32454	12.76262	250.70	-21.64
71/10/12	2441236.5	-1.60702	-4.67799	-1.96758	12.31863	-2.95785	-1.57003	5.32329	12.76567	251.04	-21.69
71/10/16	2441240.5	-1.57854	-4.68475	-1.97117	12.34029	-2.89416	-1.54324	5.32205	12.76874	251.38	-21.74
71/10/20	2441244.5	-1.55000	-4.69136	-1.97471	12.36159	-2.83034	-1.51638	5.32079	12.77181	251.72	-21.79
71/10/24	2441248.5	-1.52142	-4.69783	-1.97818	12.38251	-2.76638	-1.48945	5.31954	12.77489	252.06	-21.83
71/10/28	2441252.5	-1.49279	-4.70414	-1.98159	12.40305	-2.70229	-1.46246	5.31828	12.77798	252.39	-21.88
71/11/ 1	2441256.5	-1.46411	-4.71031	-1.98494	12.42321	-2.63807	-1.43540	5.31701	12.78108	252.73	-21.92
71/11/ 5	2441260.5	-1.43539	-4.71633	-1.98822	12.44300	-2.57372	-1.40828	5.31575	12.78419	253.07	-21.96
71/11/ 9	2441264.5	-1.40662	-4.72220	-1.99144	12.46241	-2.50924	-1.38109	5.31447	12.78731	253.41	-22.01
71/11/13	2441268.5	-1.37781	-4.72793	-1.99460	12.48143	-2.44464	-1.35384	5.31320	12.79044	253.75	-22.05
71/11/17	2441272.5	-1.34896	-4.73350	-1.99770	12.50008	-2.37991	-1.32653	5.31192	12.79357	254.09	-22.09
71/11/21	2441276.5	-1.32006	-4.73892	-2.00073	12.51834	-2.31506	-1.29915	5.31064	12.79672	254.43	-22.13
71/11/25	2441280.5	-1.29112	-4.74419	-2.00370	12.53622	-2.25009	-1.27172	5.30935	12.79988	254.78	-22.17
71/11/29	2441284.5	-1.26214	-4.74932	-2.00661	12.55371	-2.18501	-1.24422	5.30806	12.80304	255.12	-22.21
71/12/ 3	2441288.5	-1.23311	-4.75429	-2.00945	12.57081	-2.11981	-1.21667	5.30676	12.80622	255.46	-22.25

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				HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM					JUPITER		
71/12/ 7	2441292.5	-1.20405	-4.75911	-2.01223	12.58753	-2.05450	-1.18906	5.30546	12.80940	255.80	-22.29
71/12/11	2441296.5	-1.17496	-4.76378	-2.01494	12.60387	-1.98907	-1.16139	5.30416	12.81260	256.14	-22.33
71/12/15	2441300.5	-1.14582	-4.76830	-2.01760	12.61981	-1.92354	-1.13367	5.30286	12.81580	256.49	-22.36
71/12/19	2441304.5	-1.11665	-4.77267	-2.02018	12.63537	-1.85789	-1.10589	5.30155	12.81902	256.83	-22.40
71/12/23	2441308.5	-1.08744	-4.77689	-2.02270	12.65054	-1.79214	-1.07805	5.30024	12.82225	257.18	-22.43
71/12/27	2441312.5	-1.05820	-4.78095	-2.02516	12.66532	-1.72628	-1.05016	5.29892	12.82549	257.52	-22.47
71/12/31	2441316.5	-1.02892	-4.78486	-2.02756	12.67970	-1.66032	-1.02221	5.29760	12.82873	257.86	-22.50
72/ 1/ 4	2441320.5	-0.99961	-4.78862	-2.02989	12.69369	-1.59426	-0.99421	5.29628	12.83199	258.21	-22.54
72/ 1/ 8	2441324.5	-0.97027	-4.79223	-2.03215	12.70729	-1.52809	-0.96616	5.29495	12.83525	258.55	-22.57
72/ 1/12	2441328.5	-0.94090	-4.79568	-2.03435	12.72049	-1.46183	-0.93805	5.29362	12.83853	258.90	-22.60
72/ 1/16	2441332.5	-0.91150	-4.79898	-2.03648	12.73330	-1.39548	-0.90990	5.29229	12.84181	259.25	-22.63
72/ 1/20	2441336.5	-0.88207	-4.80213	-2.03855	12.74570	-1.32902	-0.88169	5.29095	12.84510	259.59	-22.66
72/ 1/24	2441340.5	-0.85261	-4.80512	-2.04056	12.75772	-1.26248	-0.85344	5.28961	12.84841	259.94	-22.69
72/ 1/28	2441344.5	-0.82313	-4.80796	-2.04250	12.76933	-1.19584	-0.82514	5.28827	12.85172	260.29	-22.72
72/ 2/ 1	2441348.5	-0.79361	-4.81065	-2.04437	12.78054	-1.12912	-0.79679	5.28693	12.85504	260.63	-22.75
72/ 2/ 5	2441352.5	-0.76408	-4.81318	-2.04618	12.79135	-1.06231	-0.76839	5.28558	12.85837	260.98	-22.78
72/ 2/ 9	2441356.5	-0.73451	-4.81556	-2.04792	12.80176	-0.99542	-0.73994	5.28423	12.86170	261.33	-22.80
72/ 2/13	2441360.5	-0.70493	-4.81778	-2.04960	12.81177	-0.92844	-0.71146	5.28287	12.86505	261.68	-22.83
72/ 2/17	2441364.5	-0.67532	-4.81984	-2.05121	12.82137	-0.86138	-0.68292	5.28152	12.86841	262.02	-22.85
72/ 2/21	2441368.5	-0.64569	-4.82176	-2.05275	12.83057	-0.79424	-0.65434	5.28016	12.87177	262.37	-22.88
72/ 2/25	2441372.5	-0.61604	-4.82351	-2.05423	12.83936	-0.72702	-0.62572	5.27879	12.87514	262.72	-22.90
72/ 2/29	2441376.5	-0.58637	-4.82512	-2.05564	12.84775	-0.65973	-0.59706	5.27743	12.87853	263.07	-22.92
72/ 3/ 4	2441380.5	-0.55668	-4.82656	-2.05699	12.85573	-0.59237	-0.56835	5.27606	12.88192	263.42	-22.95
72/ 3/ 8	2441384.5	-0.52697	-4.82785	-2.05827	12.86331	-0.52493	-0.53961	5.27469	12.88532	263.77	-22.97
72/ 3/12	2441388.5	-0.49724	-4.82899	-2.05948	12.87047	-0.45743	-0.51083	5.27331	12.88873	264.12	-22.99
72/ 3/16	2441392.5	-0.46750	-4.82997	-2.06063	12.87723	-0.38985	-0.48200	5.27194	12.89215	264.47	-23.01
72/ 3/20	2441396.5	-0.43775	-4.83079	-2.06171	12.88358	-0.32221	-0.45314	5.27056	12.89558	264.82	-23.03
72/ 3/24	2441400.5	-0.40798	-4.83146	-2.06272	12.88952	-0.25451	-0.42424	5.26918	12.89901	265.17	-23.05
72/ 3/28	2441404.5	-0.37819	-4.83197	-2.06367	12.89505	-0.18674	-0.39530	5.26779	12.90246	265.52	-23.06
72/ 4/ 1	2441408.5	-0.34840	-4.83232	-2.06455	12.90016	-0.11891	-0.36633	5.26641	12.90591	265.88	-23.08
72/ 4/ 5	2441412.5	-0.31859	-4.83251	-2.06536	12.90486	-0.05102	-0.33732	5.26502	12.90937	266.23	-23.10
72/ 4/ 9	2441416.5	-0.28877	-4.83255	-2.06611	12.90915	0.01693	-0.30827	5.26363	12.91284	266.58	-23.11
72/ 4/13	2441420.5	-0.25895	-4.83244	-2.06679	12.91302	0.08493	-0.27920	5.26223	12.91631	266.93	-23.13
72/ 4/17	2441424.5	-0.22911	-4.83216	-2.06740	12.91647	0.15299	-0.25009	5.26084	12.91979	267.29	-23.14
72/ 4/21	2441428.5	-0.19927	-4.83173	-2.06794	12.91950	0.22109	-0.22094	5.25944	12.92328	267.64	-23.15
72/ 4/25	2441432.5	-0.16942	-4.83114	-2.06842	12.92211	0.28925	-0.19177	5.25804	12.92677	267.99	-23.17
72/ 4/29	2441436.5	-0.13956	-4.83039	-2.06883	12.92431	0.35745	-0.16256	5.25664	12.93027	268.35	-23.18
72/ 5/ 3	2441440.5	-0.10970	-4.82949	-2.06917	12.92608	0.42569	-0.13333	5.25523	12.93377	268.70	-23.19
72/ 5/ 7	2441444.5	-0.07984	-4.82843	-2.06944	12.92743	0.49398	-0.10407	5.25382	12.93728	269.05	-23.20
72/ 5/11	2441448.5	-0.04997	-4.82721	-2.06965	12.92836	0.56230	-0.07478	5.25242	12.94080	269.41	-23.21
72/ 5/15	2441452.5	-0.02011	-4.82583	-2.06979	12.92886	0.63067	-0.04546	5.25100	12.94432	269.76	-23.21
72/ 5/19	2441456.5	0.00976	-4.82429	-2.06986	12.92894	0.69907	-0.01612	5.24959	12.94784	270.12	-23.22
72/ 5/23	2441460.5	0.03963	-4.82260	-2.06986	12.92860	0.76750	0.01325	5.24818	12.95137	270.47	-23.23
72/ 5/27	2441464.5	0.06950	-4.82075	-2.06980	12.92783	0.83596	0.04263	5.24676	12.95490	270.83	-23.23
72/ 5/31	2441468.5	0.09936	-4.81874	-2.06967	12.92663	0.90445	0.07205	5.24534	12.95843	271.18	-23.24

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72/ 6/ 4	2441472.5	0.12922	-4.81657	-2.06947	12.92501	0.97297	0.10148	5.24392	12.96198	271.54	-23.24
72/ 6/ 8	2441476.5	0.15908	-4.81424	-2.06920	12.92296	1.04151	0.13093	5.24250	12.96552	271.89	-23.25
72/ 6/12	2441480.5	0.18893	-4.81175	-2.06886	12.92049	1.11007	0.16041	5.24108	12.96908	272.25	-23.25
72/ 6/16	2441484.5	0.21877	-4.80911	-2.06846	12.91758	1.17865	0.18990	5.23965	12.97263	272.60	-23.25
72/ 6/20	2441488.5	0.24861	-4.80631	-2.06798	12.91425	1.24725	0.21941	5.23822	12.97619	272.96	-23.25
72/ 6/24	2441492.5	0.27844	-4.80335	-2.06744	12.91049	1.31587	0.24894	5.23679	12.97976	273.32	-23.25
72/ 6/28	2441496.5	0.30826	-4.80023	-2.06683	12.90629	1.38450	0.27848	5.23536	12.98333	273.67	-23.25
72/ 7/ 2	2441500.5	0.33807	-4.79695	-2.06616	12.90167	1.45313	0.30804	5.23393	12.98690	274.03	-23.25
72/ 7/ 6	2441504.5	0.36787	-4.79352	-2.06541	12.89661	1.52178	0.33762	5.23250	12.99047	274.39	-23.25
72/ 7/10	2441508.5	0.39766	-4.78992	-2.06460	12.89112	1.59044	0.36720	5.23106	12.99405	274.75	-23.25
72/ 7/14	2441512.5	0.42743	-4.78617	-2.06371	12.88520	1.65909	0.39680	5.22963	12.99763	275.10	-23.24
72/ 7/18	2441516.5	0.45719	-4.78225	-2.06276	12.87884	1.72775	0.42641	5.22819	13.00121	275.46	-23.24
72/ 7/22	2441520.5	0.48694	-4.77818	-2.06174	12.87205	1.79641	0.45603	5.22675	13.00480	275.82	-23.23
72/ 7/26	2441524.5	0.51667	-4.77395	-2.06066	12.86483	1.86506	0.48566	5.22531	13.00838	276.18	-23.23
72/ 7/30	2441528.5	0.54638	-4.76957	-2.05950	12.85717	1.93371	0.51530	5.22387	13.01198	276.54	-23.22
72/ 8/ 3	2441532.5	0.57607	-4.76502	-2.05828	12.84907	2.00235	0.54494	5.22243	13.01557	276.89	-23.21
72/ 8/ 7	2441536.5	0.60575	-4.76032	-2.05698	12.84054	2.07097	0.57459	5.22099	13.01916	277.25	-23.20
72/ 8/11	2441540.5	0.63540	-4.75545	-2.05562	12.83158	2.13959	0.60425	5.21954	13.02276	277.61	-23.19
72/ 8/15	2441544.5	0.66503	-4.75043	-2.05419	12.82218	2.20818	0.63391	5.21810	13.02636	277.97	-23.18
72/ 8/19	2441548.5	0.69464	-4.74525	-2.05269	12.81234	2.27676	0.66357	5.21665	13.02996	278.33	-23.17
72/ 8/23	2441552.5	0.72423	-4.73991	-2.05112	12.80206	2.34532	0.69323	5.21521	13.03357	278.69	-23.16
72/ 8/27	2441556.5	0.75379	-4.73441	-2.04949	12.79135	2.41386	0.72290	5.21376	13.03718	279.05	-23.15
72/ 8/31	2441560.5	0.78333	-4.72876	-2.04778	12.78020	2.48236	0.75256	5.21231	13.04079	279.41	-23.13
72/ 9/ 4	2441564.5	0.81284	-4.72294	-2.04601	12.76862	2.55085	0.78222	5.21086	13.04440	279.77	-23.12
72/ 9/ 8	2441568.5	0.84232	-4.71697	-2.04417	12.75660	2.61930	0.81188	5.20941	13.04802	280.12	-23.10
72/ 9/12	2441572.5	0.87178	-4.71084	-2.04226	12.74415	2.68772	0.84154	5.20796	13.05164	280.48	-23.09
72/ 9/16	2441576.5	0.90121	-4.70455	-2.04028	12.73126	2.75611	0.87119	5.20651	13.05527	280.84	-23.07
72/ 9/20	2441580.5	0.93060	-4.69811	-2.03824	12.71793	2.82446	0.90084	5.20506	13.05890	281.20	-23.05
72/ 9/24	2441584.5	0.95997	-4.69150	-2.03612	12.70416	2.89277	0.93048	5.20361	13.06253	281.56	-23.03
72/ 9/28	2441588.5	0.98930	-4.68474	-2.03394	12.68995	2.96104	0.96012	5.20215	13.06616	281.92	-23.02
72/10/ 2	2441592.5	1.01860	-4.67782	-2.03168	12.67531	3.02927	0.98975	5.20070	13.06980	282.28	-23.00
72/10/ 6	2441596.5	1.04786	-4.67075	-2.02936	12.66023	3.09746	1.01937	5.19925	13.07344	282.64	-22.97
72/10/10	2441600.5	1.07709	-4.66351	-2.02697	12.64471	3.16560	1.04898	5.19780	13.07708	283.01	-22.95
72/10/14	2441604.5	1.10629	-4.65612	-2.02452	12.62875	3.23368	1.07858	5.19634	13.08072	283.37	-22.93
72/10/18	2441608.5	1.13544	-4.64857	-2.02199	12.61235	3.30172	1.10816	5.19489	13.08437	283.73	-22.91
72/10/22	2441612.5	1.16456	-4.64086	-2.01940	12.59551	3.36970	1.13774	5.19344	13.08801	284.09	-22.88
72/10/26	2441616.5	1.19364	-4.63300	-2.01673	12.57823	3.43762	1.16730	5.19198	13.09166	284.45	-22.86
72/10/30	2441620.5	1.22268	-4.62498	-2.01400	12.56051	3.50549	1.19685	5.19053	13.09531	284.81	-22.83
72/11/ 3	2441624.5	1.25167	-4.61680	-2.01120	12.54235	3.57329	1.22638	5.18908	13.09897	285.17	-22.80
72/11/ 7	2441628.5	1.28062	-4.60847	-2.00834	12.52375	3.64103	1.25589	5.18762	13.10262	285.53	-22.78
72/11/11	2441632.5	1.30954	-4.59998	-2.00540	12.50471	3.70870	1.28539	5.18617	13.10628	285.89	-22.75
72/11/15	2441636.5	1.33840	-4.59134	-2.00240	12.48523	3.77630	1.31486	5.18472	13.10993	286.25	-22.72
72/11/19	2441640.5	1.36722	-4.58253	-1.99933	12.46531	3.84383	1.34432	5.18326	13.11359	286.61	-22.69
72/11/23	2441644.5	1.39599	-4.57358	-1.99619	12.44495	3.91129	1.37376	5.18181	13.11725	286.97	-22.66
72/11/27	2441648.5	1.42472	-4.56446	-1.99298	12.42415	3.97867	1.40317	5.18036	13.12091	287.33	-22.63

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72/12/ 1	2441652.5	1.45340	-4.55519	-1.98970	12.40291	4.04597	1.43256	5.17891	13.12457	287.79	-22.59
72/12/ 5	2441656.5	1.48203	-4.54577	-1.98636	12.38124	4.11319	1.46193	5.17746	13.12824	288.06	-22.56
72/12/ 9	2441660.5	1.51060	-4.53619	-1.98295	12.35912	4.18033	1.49127	5.17600	13.13190	288.42	-22.53
72/12/13	2441664.5	1.53913	-4.52645	-1.97947	12.33656	4.24738	1.52059	5.17455	13.13557	288.78	-22.49
72/12/17	2441668.5	1.56760	-4.51656	-1.97592	12.31356	4.31435	1.54988	5.17310	13.13923	289.14	-22.46
72/12/21	2441672.5	1.59602	-4.50652	-1.97231	12.29012	4.38123	1.57914	5.17166	13.14290	289.50	-22.42
72/12/25	2441676.5	1.62439	-4.49632	-1.96863	12.26624	4.44801	1.60837	5.17021	13.14657	289.86	-22.38
72/12/29	2441680.5	1.65270	-4.48597	-1.96488	12.24191	4.51470	1.63758	5.16876	13.15023	290.22	-22.34
73/ 1/ 2	2441684.5	1.68095	-4.47546	-1.96106	12.21715	4.58129	1.66675	5.16731	13.15390	290.59	-22.30
73/ 1/ 6	2441688.5	1.70914	-4.46480	-1.95718	12.19194	4.64778	1.69589	5.16587	13.15756	290.95	-22.26
73/ 1/10	2441692.5	1.73728	-4.45399	-1.95323	12.16630	4.71416	1.72500	5.16442	13.16122	291.31	-22.22
73/ 1/14	2441696.5	1.76536	-4.44302	-1.94921	12.14021	4.78045	1.75407	5.16298	13.16488	291.67	-22.18
73/ 1/18	2441700.5	1.79337	-4.43190	-1.94512	12.11368	4.84662	1.78311	5.16153	13.16854	292.03	-22.14
73/ 1/22	2441704.5	1.82132	-4.42063	-1.94097	12.08671	4.91268	1.81211	5.16009	13.17220	292.39	-22.10
73/ 1/26	2441708.5	1.84922	-4.40920	-1.93675	12.05930	4.97863	1.84107	5.15865	13.17585	292.75	-22.05
73/ 1/30	2441712.5	1.87704	-4.39763	-1.93246	12.03145	5.04446	1.86999	5.15721	13.17950	293.11	-22.01
73/ 2/ 3	2441716.5	1.90480	-4.38590	-1.92811	12.00316	5.11017	1.89888	5.15577	13.18315	293.48	-21.96
73/ 2/ 7	2441720.5	1.93250	-4.37401	-1.92369	11.97443	5.17576	1.92772	5.15433	13.18679	293.84	-21.91
73/ 2/11	2441724.5	1.96013	-4.36198	-1.91920	11.94526	5.24123	1.95651	5.15290	13.19043	294.20	-21.87
73/ 2/15	2441728.5	1.98769	-4.34980	-1.91465	11.91565	5.30656	1.98527	5.15146	13.19407	294.56	-21.82
73/ 2/19	2441732.5	2.01518	-4.33746	-1.91003	11.88560	5.37177	2.01398	5.15003	13.19771	294.92	-21.77
73/ 2/23	2441736.5	2.04261	-4.32498	-1.90534	11.85511	5.43684	2.04264	5.14859	13.20134	295.28	-21.72
73/ 2/27	2441740.5	2.06996	-4.31234	-1.90059	11.82419	5.50178	2.07126	5.14716	13.20497	295.64	-21.67
73/ 3/ 3	2441744.5	2.09724	-4.29956	-1.89577	11.79283	5.56659	2.09982	5.14573	13.20859	296.00	-21.62
73/ 3/ 7	2441748.5	2.12445	-4.28662	-1.89089	11.76103	5.63125	2.12834	5.14431	13.21222	296.36	-21.57
73/ 3/11	2441752.5	2.15158	-4.27354	-1.88594	11.72880	5.69577	2.15681	5.14288	13.21584	296.72	-21.51
73/ 3/15	2441756.5	2.17864	-4.26031	-1.88092	11.69613	5.76014	2.18522	5.14145	13.21946	297.08	-21.46
73/ 3/19	2441760.5	2.20562	-4.24693	-1.87584	11.66303	5.82437	2.21359	5.14003	13.22307	297.44	-21.40
73/ 3/23	2441764.5	2.23252	-4.23340	-1.87070	11.62949	5.88845	2.24190	5.13861	13.22668	297.81	-21.35
73/ 3/27	2441768.5	2.25935	-4.21972	-1.86549	11.59552	5.95238	2.27015	5.13719	13.23029	298.17	-21.29
73/ 3/31	2441772.5	2.28610	-4.20590	-1.86021	11.56111	6.01615	2.29835	5.13577	13.23389	298.53	-21.24
73/ 4/ 4	2441776.5	2.31277	-4.19192	-1.85487	11.52627	6.07976	2.32649	5.13436	13.23748	298.89	-21.18
73/ 4/ 8	2441780.5	2.33935	-4.17781	-1.84946	11.49100	6.14321	2.35458	5.13295	13.24108	299.25	-21.12
73/ 4/12	2441784.5	2.36586	-4.16354	-1.84399	11.45529	6.20650	2.38260	5.13153	13.24466	299.61	-21.06
73/ 4/16	2441788.5	2.39228	-4.14913	-1.83845	11.41916	6.26962	2.41056	5.13012	13.24825	299.97	-21.00
73/ 4/20	2441792.5	2.41862	-4.13457	-1.83285	11.38259	6.33257	2.43847	5.12872	13.25183	300.33	-20.94
73/ 4/24	2441796.5	2.44487	-4.11987	-1.82718	11.34559	6.39536	2.46630	5.12731	13.25540	300.69	-20.88
73/ 4/28	2441800.5	2.47104	-4.10502	-1.82145	11.30816	6.45796	2.49408	5.12591	13.25897	301.05	-20.81
73/ 5/ 2	2441804.5	2.49712	-4.09003	-1.81566	11.27031	6.52040	2.52179	5.12451	13.26253	301.41	-20.75
73/ 5/ 6	2441808.5	2.52311	-4.07490	-1.80980	11.23202	6.58265	2.54943	5.12311	13.26609	301.77	-20.69
73/ 5/10	2441812.5	2.54901	-4.05962	-1.80388	11.19331	6.64472	2.57700	5.12172	13.26964	302.12	-20.62
73/ 5/14	2441816.5	2.57483	-4.04420	-1.79790	11.15417	6.70660	2.60451	5.12032	13.27319	302.48	-20.56
73/ 5/18	2441820.5	2.60055	-4.02863	-1.79185	11.11461	6.76830	2.63195	5.11893	13.27673	302.84	-20.49
73/ 5/22	2441824.5	2.62618	-4.01292	-1.78574	11.07463	6.82981	2.65931	5.11754	13.28027	303.20	-20.42
73/ 5/26	2441828.5	2.65172	-3.99708	-1.77956	11.03422	6.89113	2.68660	5.11616	13.28380	303.56	-20.35

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73/ 5/30	2441832.5	2.67716	-3.98109	-1.77332	10.99339	6.95225	2.71382	5.11477	13.28733	303.92	-20.29
73/ 6/ 3	2441836.5	2.70251	-3.96495	-1.76702	10.95214	7.01318	2.74097	5.11339	13.29086	304.28	-20.22
73/ 6/ 7	2441840.5	2.72777	-3.94868	-1.76066	10.91047	7.07391	2.76804	5.11202	13.29438	304.64	-20.15
73/ 6/11	2441844.5	2.75292	-3.93227	-1.75423	10.86838	7.13443	2.79503	5.11064	13.29789	305.00	-20.08
73/ 6/15	2441848.5	2.77798	-3.91572	-1.74774	10.82586	7.19476	2.82195	5.10927	13.30140	305.35	-20.00
73/ 6/19	2441852.5	2.80294	-3.89903	-1.74119	10.78293	7.25488	2.84879	5.10790	13.30491	305.71	-19.93
73/ 6/23	2441856.5	2.82780	-3.88220	-1.73458	10.73959	7.31479	2.87555	5.10654	13.30840	306.07	-19.86
73/ 6/27	2441860.5	2.85256	-3.86523	-1.72791	10.69582	7.37449	2.90223	5.10517	13.31190	306.43	-19.78
73/ 7/ 1	2441864.5	2.87722	-3.84813	-1.72117	10.65164	7.43397	2.92883	5.10381	13.31538	306.79	-19.71
73/ 7/ 5	2441868.5	2.90178	-3.83088	-1.71438	10.60704	7.49324	2.95535	5.10246	13.31886	307.14	-19.63
73/ 7/ 9	2441872.5	2.92623	-3.81351	-1.70752	10.56203	7.55229	2.98178	5.10110	13.32233	307.50	-19.56
73/ 7/13	2441876.5	2.95058	-3.79599	-1.70060	10.51661	7.61112	3.00813	5.09975	13.32580	307.86	-19.48
73/ 7/17	2441880.5	2.97482	-3.77834	-1.69362	10.47077	7.66972	3.03439	5.09841	13.32926	308.21	-19.40
73/ 7/21	2441884.5	2.99895	-3.76055	-1.68658	10.42452	7.72809	3.06056	5.09706	13.33271	308.57	-19.32
73/ 7/25	2441888.5	3.02298	-3.74263	-1.67948	10.37786	7.78624	3.08664	5.09572	13.33615	308.93	-19.24
73/ 7/29	2441892.5	3.04690	-3.72458	-1.67232	10.33079	7.84415	3.11264	5.09438	13.33958	309.28	-19.16
73/ 8/ 2	2441896.5	3.07071	-3.70639	-1.66510	10.28332	7.90183	3.13854	5.09305	13.34301	309.64	-19.08
73/ 8/ 6	2441900.5	3.09441	-3.68807	-1.65782	10.23543	7.95927	3.16435	5.09172	13.34643	310.00	-19.00
73/ 8/10	2441904.5	3.11800	-3.66962	-1.65048	10.18714	8.01647	3.19007	5.09039	13.34984	310.35	-18.92
73/ 8/14	2441908.5	3.14148	-3.65103	-1.64308	10.13844	8.07342	3.21570	5.08907	13.35323	310.71	-18.84
73/ 8/18	2441912.5	3.16485	-3.63231	-1.63562	10.08935	8.13013	3.24122	5.08775	13.35662	311.07	-18.75
73/ 8/22	2441916.5	3.18810	-3.61347	-1.62810	10.03985	8.18659	3.26665	5.08644	13.36000	311.42	-18.67
73/ 8/26	2441920.5	3.21123	-3.59449	-1.62053	9.98995	8.24279	3.29199	5.08512	13.36338	311.78	-18.58
73/ 8/30	2441924.5	3.23426	-3.57538	-1.61289	9.93965	8.29875	3.31722	5.08382	13.36674	312.13	-18.50
73/ 9/ 3	2441928.5	3.25716	-3.55615	-1.60520	9.88895	8.35445	3.34235	5.08251	13.37010	312.49	-18.41
73/ 9/ 7	2441932.5	3.27995	-3.53678	-1.59745	9.83786	8.40989	3.36739	5.08121	13.37344	312.84	-18.32
73/ 9/11	2441936.5	3.30261	-3.51729	-1.58964	9.78637	8.46507	3.39232	5.07992	13.37678	313.20	-18.24
73/ 9/15	2441940.5	3.32516	-3.49767	-1.58178	9.73448	8.51999	3.41715	5.07862	13.38010	313.55	-18.15
73/ 9/19	2441944.5	3.34759	-3.47792	-1.57385	9.68220	8.57464	3.44187	5.07734	13.38342	313.91	-18.06
73/ 9/23	2441948.5	3.36990	-3.45805	-1.56587	9.62953	8.62902	3.46648	5.07605	13.38672	314.26	-17.97
73/ 9/27	2441952.5	3.39208	-3.43806	-1.55784	9.57647	8.68312	3.49099	5.07477	13.39002	314.61	-17.88
73/10/ 1	2441956.5	3.41414	-3.41793	-1.54974	9.52303	8.73696	3.51540	5.07350	13.39330	314.97	-17.79
73/10/ 5	2441960.5	3.43608	-3.39769	-1.54159	9.46919	8.79051	3.53969	5.07222	13.39657	315.32	-17.69
73/10/ 9	2441964.5	3.45789	-3.37732	-1.53339	9.41497	8.84379	3.56387	5.07096	13.39983	315.68	-17.60
73/10/13	2441968.5	3.47958	-3.35683	-1.52513	9.36036	8.89678	3.58794	5.06969	13.40307	316.03	-17.51
73/10/17	2441972.5	3.50114	-3.33621	-1.51681	9.30538	8.94949	3.61189	5.06843	13.40631	316.38	-17.41
73/10/21	2441976.5	3.52257	-3.31548	-1.50844	9.25001	9.00191	3.63574	5.06718	13.40953	316.73	-17.32
73/10/25	2441980.5	3.54388	-3.29462	-1.50001	9.19426	9.05404	3.65946	5.06593	13.41274	317.09	-17.22
73/10/29	2441984.5	3.56506	-3.27365	-1.49153	9.13814	9.10587	3.68307	5.06469	13.41594	317.44	-17.13
73/11/ 2	2441988.5	3.58610	-3.25255	-1.48300	9.08164	9.15741	3.70656	5.06344	13.41913	317.79	-17.03
73/11/ 6	2441992.5	3.60702	-3.23133	-1.47441	9.02476	9.20866	3.72994	5.06221	13.42230	318.14	-16.93
73/11/10	2441996.5	3.62780	-3.21000	-1.46576	8.96752	9.25960	3.75319	5.06098	13.42546	318.50	-16.84
73/11/14	2442000.5	3.64845	-3.18855	-1.45707	8.90991	9.31023	3.77632	5.05975	13.42861	318.85	-16.74
73/11/18	2442004.5	3.66896	-3.16699	-1.44832	8.85193	9.36056	3.79933	5.05853	13.43174	319.20	-16.64
73/11/22	2442008.5	3.68935	-3.14530	-1.43951	8.79359	9.41059	3.82222	5.05731	13.43487	319.55	-16.54

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73/11/26	2442012.5	3.70959	-3.12351	-1.43066	8.73488	9.46030	3.84498	5.05610	13.43798	319.90	-16.44
73/11/30	2442016.5	3.72970	-3.10159	-1.42175	8.67582	9.50970	3.86762	5.05489	13.44108	320.25	-16.34
73/12/ 4	2442020.5	3.74968	-3.07957	-1.41279	8.61639	9.55879	3.89013	5.05369	13.44417	320.60	-16.23
73/12/ 8	2442024.5	3.76952	-3.05743	-1.40377	8.55661	9.60756	3.91251	5.05249	13.44725	320.95	-16.13
73/12/12	2442028.5	3.78921	-3.03518	-1.39471	8.49647	9.65602	3.93477	5.05130	13.45032	321.31	-16.03
73/12/16	2442032.5	3.80877	-3.01282	-1.38559	8.43597	9.70415	3.95690	5.05012	13.45337	321.66	-15.92
73/12/20	2442036.5	3.82819	-2.99034	-1.37643	8.37513	9.75196	3.97889	5.04893	13.45641	322.01	-15.82
73/12/24	2442040.5	3.84747	-2.96776	-1.36721	8.31393	9.79944	4.00076	5.04776	13.45944	322.36	-15.72
73/12/28	2442044.5	3.86660	-2.94507	-1.35794	8.25239	9.84659	4.02249	5.04659	13.46246	322.70	-15.61
74/ 1/ 1	2442048.5	3.88560	-2.92226	-1.34862	8.19050	9.89342	4.04409	5.04542	13.46546	323.05	-15.50
74/ 1/ 5	2442052.5	3.90445	-2.89935	-1.33926	8.12827	9.93991	4.06556	5.04426	13.46845	323.40	-15.40
74/ 1/ 9	2442056.5	3.92315	-2.87634	-1.32984	8.06569	9.98606	4.08689	5.04311	13.47143	323.75	-15.29
74/ 1/13	2442060.5	3.94171	-2.85322	-1.32037	8.00278	10.03188	4.10808	5.04196	13.47440	324.10	-15.18
74/ 1/17	2442064.5	3.96013	-2.82999	-1.31086	7.93953	10.07736	4.12914	5.04081	13.47735	324.45	-15.07
74/ 1/21	2442068.5	3.97839	-2.80665	-1.30130	7.87594	10.12250	4.15006	5.03967	13.48030	324.80	-14.96
74/ 1/25	2442072.5	3.99652	-2.78322	-1.29168	7.81201	10.16729	4.17084	5.03854	13.48322	325.15	-14.85
74/ 1/29	2442076.5	4.01449	-2.75968	-1.28203	7.74776	10.21174	4.19147	5.03741	13.48614	325.49	-14.74
74/ 2/ 2	2442080.5	4.03231	-2.73604	-1.27232	7.68318	10.25584	4.21197	5.03629	13.48904	325.84	-14.63
74/ 2/ 6	2442084.5	4.04999	-2.71229	-1.26256	7.61827	10.29959	4.23233	5.03518	13.49193	326.19	-14.52
74/ 2/10	2442088.5	4.06751	-2.68845	-1.25276	7.55303	10.34298	4.25254	5.03407	13.49480	326.54	-14.41
74/ 2/14	2442092.5	4.08488	-2.66451	-1.24292	7.48747	10.38602	4.27260	5.03296	13.49766	326.88	-14.30
74/ 2/18	2442096.5	4.10211	-2.64046	-1.23302	7.42160	10.42870	4.29252	5.03186	13.50051	327.23	-14.18
74/ 2/22	2442100.5	4.11918	-2.61632	-1.22308	7.35541	10.47103	4.31230	5.03077	13.50334	327.58	-14.07
74/ 2/26	2442104.5	4.13609	-2.59208	-1.21310	7.28890	10.51299	4.33192	5.02969	13.50617	327.92	-13.96
74/ 3/ 2	2442108.5	4.15285	-2.56775	-1.20307	7.22207	10.55459	4.35140	5.02861	13.50898	328.27	-13.84
74/ 3/ 6	2442112.5	4.16946	-2.54332	-1.19299	7.15494	10.59583	4.37074	5.02753	13.51178	328.62	-13.73
74/ 3/10	2442116.5	4.18591	-2.51879	-1.18287	7.08749	10.63670	4.38992	5.02646	13.51456	328.96	-13.61
74/ 3/14	2442120.5	4.20221	-2.49417	-1.17271	7.01974	10.67720	4.40895	5.02540	13.51733	329.31	-13.49
74/ 3/18	2442124.5	4.21834	-2.46946	-1.16250	6.95168	10.71733	4.42783	5.02435	13.52008	329.65	-13.38
74/ 3/22	2442128.5	4.23432	-2.44465	-1.15225	6.88331	10.75709	4.44655	5.02330	13.52282	330.00	-13.26
74/ 3/26	2442132.5	4.25015	-2.41976	-1.14196	6.81465	10.79647	4.46512	5.02226	13.52555	330.35	-13.14
74/ 3/30	2442136.5	4.26581	-2.39477	-1.13162	6.74568	10.83547	4.48354	5.02122	13.52826	330.69	-13.02
74/ 4/ 3	2442140.5	4.28131	-2.36969	-1.12124	6.67642	10.87409	4.50180	5.02019	13.53095	331.04	-12.91
74/ 4/ 7	2442144.5	4.29666	-2.34453	-1.11082	6.60687	10.91232	4.51991	5.01916	13.53363	331.38	-12.79
74/ 4/11	2442148.5	4.31184	-2.31928	-1.10036	6.53702	10.95018	4.53785	5.01815	13.53629	331.72	-12.67
74/ 4/15	2442152.5	4.32686	-2.29394	-1.08986	6.46689	10.98764	4.55564	5.01714	13.53894	332.07	-12.55
74/ 4/19	2442156.5	4.34172	-2.26851	-1.07931	6.39647	11.02472	4.57327	5.01613	13.54156	332.41	-12.43
74/ 4/23	2442160.5	4.35641	-2.24300	-1.06873	6.32576	11.06140	4.59073	5.01513	13.54417	332.76	-12.30
74/ 4/27	2442164.5	4.37095	-2.21740	-1.05810	6.25478	11.09769	4.60804	5.01414	13.54677	333.10	-12.18
74/ 5/ 1	2442168.5	4.38531	-2.19172	-1.04744	6.18351	11.13358	4.62518	5.01316	13.54934	333.44	-12.06
74/ 5/ 5	2442172.5	4.39952	-2.16596	-1.03673	6.11197	11.16908	4.64215	5.01218	13.55190	333.79	-11.94
74/ 5/ 9	2442176.5	4.41355	-2.14012	-1.02599	6.04016	11.20417	4.65896	5.01121	13.55444	334.13	-11.81
74/ 5/13	2442180.5	4.42742	-2.11419	-1.01521	5.96807	11.23886	4.67561	5.01024	13.55696	334.47	-11.69
74/ 5/17	2442184.5	4.44113	-2.08819	-1.00439	5.89572	11.27315	4.69209	5.00929	13.55947	334.82	-11.57
74/ 5/21	2442188.5	4.45466	-2.06211	-0.99353	5.82311	11.30703	4.70840	5.00833	13.56195	335.16	-11.44

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74/ 5/25	2442192.5	4.46803	-2.03595	-0.98263	5.75024	11.34051	4.72454	5.00739	13.56442	335.50	-11.32
74/ 5/29	2442196.5	4.48123	-2.00971	-0.97170	5.67710	11.37357	4.74051	5.00645	13.56688	335.85	-11.19
74/ 6/ 2	2442200.5	4.49426	-1.98340	-0.96073	5.60371	11.40623	4.75632	5.00552	13.56931	336.19	-11.07
74/ 6/ 6	2442204.5	4.50712	-1.95701	-0.94972	5.53007	11.43847	4.77195	5.00460	13.57173	336.53	-10.94
74/ 6/10	2442208.5	4.51981	-1.93055	-0.93868	5.45617	11.47030	4.78741	5.00368	13.57412	336.87	-10.81
74/ 6/14	2442212.5	4.53233	-1.90402	-0.92760	5.38203	11.50171	4.80270	5.00277	13.57650	337.21	-10.69
74/ 6/18	2442216.5	4.54468	-1.87741	-0.91649	5.30764	11.53270	4.81781	5.00187	13.57886	337.55	-10.56
74/ 6/22	2442220.5	4.55685	-1.85073	-0.90534	5.23301	11.56327	4.83275	5.00098	13.58120	337.90	-10.43
74/ 6/26	2442224.5	4.56886	-1.82398	-0.89416	5.15814	11.59341	4.84751	5.00009	13.58352	338.24	-10.30
74/ 6/30	2442228.5	4.58069	-1.79717	-0.88295	5.08304	11.62313	4.86210	4.99921	13.58582	338.58	-10.17
74/ 7/ 4	2442232.5	4.59234	-1.77028	-0.87170	5.00770	11.65243	4.87651	4.99834	13.58810	338.92	-10.04
74/ 7/ 8	2442236.5	4.60382	-1.74333	-0.86041	4.93213	11.68130	4.89074	4.99747	13.59036	339.26	-9.91
74/ 7/12	2442240.5	4.61513	-1.71631	-0.84910	4.85634	11.70973	4.90479	4.99661	13.59260	339.60	-9.78
74/ 7/16	2442244.5	4.62626	-1.68922	-0.83775	4.78032	11.73774	4.91867	4.99576	13.59483	339.94	-9.65
74/ 7/20	2442248.5	4.63722	-1.66208	-0.82637	4.70408	11.76531	4.93236	4.99491	13.59703	340.28	-9.52
74/ 7/24	2442252.5	4.64800	-1.63487	-0.81496	4.62762	11.79245	4.94587	4.99408	13.59921	340.62	-9.39
74/ 7/28	2442256.5	4.65860	-1.60759	-0.80352	4.55095	11.81915	4.95920	4.99325	13.60137	340.96	-9.26
74/ 8/ 1	2442260.5	4.66902	-1.58026	-0.79205	4.47407	11.84542	4.97235	4.99243	13.60351	341.30	-9.13
74/ 8/ 5	2442264.5	4.67927	-1.55286	-0.78055	4.39698	11.87124	4.98531	4.99161	13.60563	341.64	-9.00
74/ 8/ 9	2442268.5	4.68934	-1.52541	-0.76902	4.31969	11.89662	4.99809	4.99081	13.60773	341.98	-8.86
74/ 8/13	2442272.5	4.69923	-1.49790	-0.75746	4.24220	11.92156	5.01068	4.99001	13.60980	342.32	-8.73
74/ 8/17	2442276.5	4.70894	-1.47033	-0.74587	4.16452	11.94606	5.02309	4.98922	13.61187	342.66	-8.60
74/ 8/21	2442280.5	4.71847	-1.44270	-0.73425	4.08663	11.97011	5.03531	4.98843	13.61391	343.00	-8.46
74/ 8/25	2442284.5	4.72782	-1.41502	-0.72260	4.00856	11.99372	5.04734	4.98766	13.61593	343.34	-8.33
74/ 8/29	2442288.5	4.73699	-1.38729	-0.71093	3.93030	12.01689	5.05919	4.98689	13.61794	343.68	-8.20
74/ 9/ 2	2442292.5	4.74598	-1.35950	-0.69923	3.85185	12.03960	5.07085	4.98613	13.61992	344.02	-8.06
74/ 9/ 6	2442296.5	4.75479	-1.33166	-0.68750	3.77322	12.06186	5.08233	4.98538	13.62189	344.35	-7.93
74/ 9/10	2442300.5	4.76341	-1.30377	-0.67574	3.69441	12.08368	5.09361	4.98463	13.62383	344.69	-7.79
74/ 9/14	2442304.5	4.77186	-1.27583	-0.66396	3.61542	12.10504	5.10471	4.98389	13.62576	345.03	-7.66
74/ 9/18	2442308.5	4.78012	-1.24784	-0.65216	3.53626	12.12595	5.11561	4.98317	13.62766	345.37	-7.52
74/ 9/22	2442312.5	4.78819	-1.21980	-0.64033	3.45693	12.14640	5.12632	4.98244	13.62955	345.71	-7.38
74/ 9/26	2442316.5	4.79609	-1.19172	-0.62847	3.37744	12.16640	5.13684	4.98173	13.63141	346.05	-7.25
74/ 9/30	2442320.5	4.80380	-1.16359	-0.61659	3.29778	12.18594	5.14717	4.98103	13.63326	346.38	-7.11
74/10/ 4	2442324.5	4.81133	-1.13542	-0.60469	3.21796	12.20502	5.15731	4.98033	13.63509	346.72	-6.97
74/10/ 8	2442328.5	4.81867	-1.10720	-0.59277	3.13799	12.22364	5.16725	4.97964	13.63689	347.06	-6.84
74/10/12	2442332.5	4.82582	-1.07894	-0.58082	3.05786	12.24180	5.17700	4.97896	13.63867	347.40	-6.70
74/10/16	2442336.5	4.83280	-1.05064	-0.56885	2.97758	12.25950	5.18656	4.97829	13.64044	347.73	-6.56
74/10/20	2442340.5	4.83958	-1.02230	-0.55685	2.89715	12.27673	5.19591	4.97762	13.64218	348.07	-6.42
74/10/24	2442344.5	4.84618	-0.99392	-0.54484	2.81658	12.29350	5.20508	4.97697	13.64390	348.41	-6.28
74/10/28	2442348.5	4.85260	-0.96550	-0.53280	2.73587	12.30980	5.21404	4.97632	13.64560	348.75	-6.15
74/11/ 1	2442352.5	4.85882	-0.93704	-0.52075	2.65502	12.32563	5.22281	4.97568	13.64727	349.08	-6.01
74/11/ 5	2442356.5	4.86486	-0.90855	-0.50867	2.57404	12.34100	5.23138	4.97505	13.64893	349.42	-5.87
74/11/ 9	2442360.5	4.87072	-0.88002	-0.49658	2.49293	12.35590	5.23975	4.97442	13.65056	349.76	-5.73
74/11/13	2442364.5	4.87638	-0.85146	-0.48446	2.41170	12.37032	5.24793	4.97381	13.65218	350.10	-5.59
74/11/17	2442368.5	4.88186	-0.82287	-0.47233	2.33034	12.38428	5.25591	4.97320	13.65377	350.43	-5.45

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74/11/21	2442372.5	4.88715	-0.79424	-0.46018	2.24887	12.39777	5.26368	4.97260	13.65535	350.77	-5.31
74/11/25	2442376.5	4.89225	-0.76558	-0.44801	2.16727	12.41079	5.27126	4.97201	13.65690	351.11	-5.17
74/11/29	2442380.5	4.89716	-0.73690	-0.43583	2.08557	12.42333	5.27864	4.97143	13.65843	351.44	-5.03
74/12/ 3	2442384.5	4.90188	-0.70818	-0.42362	2.00375	12.43539	5.28581	4.97086	13.65994	351.78	-4.89
74/12/ 7	2442388.5	4.90642	-0.67944	-0.41140	1.92183	12.44698	5.29279	4.97030	13.66142	352.12	-4.75
74/12/11	2442392.5	4.91076	-0.65068	-0.39917	1.83980	12.45810	5.29956	4.96974	13.66289	352.45	-4.61
74/12/15	2442396.5	4.91492	-0.62188	-0.38692	1.75768	12.46873	5.30613	4.96919	13.66433	352.79	-4.47
74/12/19	2442400.5	4.91888	-0.59307	-0.37465	1.67546	12.47889	5.31250	4.96865	13.66575	353.13	-4.32
74/12/23	2442404.5	4.92266	-0.56423	-0.36237	1.59314	12.48857	5.31867	4.96812	13.66714	353.46	-4.18
74/12/27	2442408.5	4.92625	-0.53536	-0.35008	1.51074	12.49777	5.32463	4.96760	13.66851	353.80	-4.04
74/12/31	2442412.5	4.92964	-0.50648	-0.33777	1.42825	12.50649	5.33038	4.96709	13.66986	354.13	-3.90
75/ 1/ 4	2442416.5	4.93284	-0.47758	-0.32545	1.34569	12.51473	5.33594	4.96658	13.67119	354.47	-3.76
75/ 1/ 8	2442420.5	4.93586	-0.44866	-0.31312	1.26304	12.52248	5.34128	4.96609	13.67249	354.81	-3.61
75/ 1/12	2442424.5	4.93868	-0.41972	-0.30077	1.18032	12.52975	5.34642	4.96560	13.67377	355.14	-3.47
75/ 1/16	2442428.5	4.94131	-0.39077	-0.28841	1.09753	12.53654	5.35136	4.96512	13.67503	355.48	-3.33
75/ 1/20	2442432.5	4.94375	-0.36180	-0.27605	1.01468	12.54284	5.35609	4.96465	13.67626	355.81	-3.19
75/ 1/24	2442436.5	4.94600	-0.33282	-0.26367	0.93176	12.54865	5.36061	4.96419	13.67746	356.15	-3.04
75/ 1/28	2442440.5	4.94806	-0.30382	-0.25128	0.84878	12.55398	5.36493	4.96374	13.67865	356.49	-2.90
75/ 2/ 1	2442444.5	4.94992	-0.27481	-0.23888	0.76575	12.55883	5.36903	4.96330	13.67980	356.82	-2.76
75/ 2/ 5	2442448.5	4.95159	-0.24580	-0.22647	0.68267	12.56318	5.37293	4.96286	13.68094	357.16	-2.62
75/ 2/ 9	2442452.5	4.95308	-0.21677	-0.21406	0.59954	12.56705	5.37663	4.96244	13.68205	357.49	-2.47
75/ 2/13	2442456.5	4.95436	-0.18773	-0.20163	0.51637	12.57044	5.38011	4.96202	13.68313	357.83	-2.33
75/ 2/17	2442460.5	4.95546	-0.15869	-0.18920	0.43316	12.57334	5.38339	4.96161	13.68420	358.17	-2.19
75/ 2/21	2442464.5	4.95637	-0.12964	-0.17676	0.34991	12.57575	5.38646	4.96121	13.68524	358.50	-2.04
75/ 2/25	2442468.5	4.95708	-0.10058	-0.16431	0.26663	12.57767	5.38932	4.96082	13.68626	358.84	-1.90
75/ 3/ 1	2442472.5	4.95760	-0.07153	-0.15186	0.18332	12.57911	5.39197	4.96044	13.68726	359.17	-1.75
75/ 3/ 5	2442476.5	4.95792	-0.04246	-0.13940	0.09999	12.58006	5.39442	4.96007	13.68823	359.51	-1.61
75/ 3/ 9	2442480.5	4.95806	-0.01340	-0.12693	0.01663	12.58052	5.39665	4.95970	13.68917	359.85	-1.47
75/ 3/13	2442484.5	4.95800	0.01566	-0.11446	-0.06675	12.58049	5.39868	4.95935	13.69010	0.18	-1.32
75/ 3/17	2442488.5	4.95775	0.04472	-0.10199	-0.15014	12.57997	5.40049	4.95900	13.69100	0.52	-1.18
75/ 3/21	2442492.5	4.95731	0.07378	-0.08951	-0.23354	12.57896	5.40210	4.95866	13.69188	0.85	-1.03
75/ 3/25	2442496.5	4.95667	0.10284	-0.07703	-0.31694	12.57747	5.40350	4.95834	13.69273	1.19	-0.89
75/ 3/29	2442500.5	4.95584	0.13190	-0.06455	-0.40035	12.57548	5.40468	4.95802	13.69356	1.52	-0.75
75/ 4/ 2	2442504.5	4.95482	0.16095	-0.05206	-0.48376	12.57301	5.40566	4.95771	13.69437	1.86	-0.60
75/ 4/ 6	2442508.5	4.95361	0.18999	-0.03957	-0.56717	12.57004	5.40643	4.95741	13.69515	2.20	-0.46
75/ 4/10	2442512.5	4.95220	0.21902	-0.02708	-0.65057	12.56659	5.40698	4.95712	13.69591	2.53	-0.31
75/ 4/14	2442516.5	4.95060	0.24805	-0.01459	-0.73396	12.56265	5.40733	4.95683	13.69664	2.87	-0.17
75/ 4/18	2442520.5	4.94881	0.27707	-0.00210	-0.81733	12.55822	5.40747	4.95656	13.69735	3.20	-0.02
75/ 4/22	2442524.5	4.94683	0.30607	0.01040	-0.90068	12.55329	5.40739	4.95630	13.69804	3.54	0.12
75/ 4/26	2442528.5	4.94465	0.33507	0.02289	-0.98401	12.54788	5.40711	4.95604	13.69870	3.88	0.26
75/ 4/30	2442532.5	4.94228	0.36405	0.03538	-1.06732	12.54198	5.40661	4.95580	13.69934	4.21	0.41
75/ 5/ 4	2442536.5	4.93972	0.39301	0.04787	-1.15059	12.53560	5.40591	4.95556	13.69996	4.55	0.55
75/ 5/ 8	2442540.5	4.93696	0.42197	0.06036	-1.23382	12.52872	5.40499	4.95533	13.70055	4.89	0.70
75/ 5/12	2442544.5	4.93402	0.45090	0.07284	-1.31702	12.52136	5.40387	4.95511	13.70112	5.22	0.84
75/ 5/16	2442548.5	4.93088	0.47982	0.08532	-1.40018	12.51351	5.40253	4.95490	13.70167	5.56	0.99

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75/ 5/20	2442552.5	4.92755	0.50872	0.09780	-1.48330	12.50518	5.40099	4.95470	13.70220	5.89	1.13
75/ 5/24	2442556.5	4.92402	0.53760	0.11028	-1.56637	12.49636	5.39923	4.95451	13.70271	6.23	1.28
75/ 5/28	2442560.5	4.92031	0.56646	0.12275	-1.64938	12.48705	5.39727	4.95433	13.70319	6.57	1.42
75/ 6/ 1	2442564.5	4.91640	0.59529	0.13522	-1.73235	12.47725	5.39510	4.95416	13.70365	6.90	1.56
75/ 6/ 5	2442568.5	4.91231	0.62410	0.14768	-1.81525	12.46697	5.39271	4.95400	13.70408	7.24	1.71
75/ 6/ 9	2442572.5	4.90802	0.65289	0.16013	-1.89809	12.45621	5.39012	4.95384	13.70450	7.58	1.85
75/ 6/13	2442576.5	4.90354	0.68166	0.17258	-1.98087	12.44496	5.38731	4.95370	13.70489	7.91	2.00
75/ 6/17	2442580.5	4.89887	0.71039	0.18502	-2.06358	12.43322	5.38430	4.95356	13.70525	8.25	2.14
75/ 6/21	2442584.5	4.89400	0.73910	0.19746	-2.14621	12.42100	5.38108	4.95344	13.70560	8.59	2.28
75/ 6/25	2442588.5	4.88895	0.76778	0.20988	-2.22877	12.40829	5.37764	4.95332	13.70591	8.93	2.43
75/ 6/29	2442592.5	4.88370	0.79643	0.22230	-2.31125	12.39510	5.37400	4.95321	13.70621	9.26	2.57
75/ 7/ 3	2442596.5	4.87827	0.82505	0.23471	-2.39365	12.38142	5.37015	4.95311	13.70648	9.60	2.72
75/ 7/ 7	2442600.5	4.87265	0.85364	0.24712	-2.47596	12.36726	5.36609	4.95302	13.70673	9.94	2.86
75/ 7/11	2442604.5	4.86683	0.88219	0.25951	-2.55818	12.35262	5.36181	4.95294	13.70695	10.27	3.00
75/ 7/15	2442608.5	4.86083	0.91071	0.27189	-2.64031	12.33749	5.35733	4.95287	13.70715	10.61	3.15
75/ 7/19	2442612.5	4.85463	0.93919	0.28426	-2.72233	12.32189	5.35264	4.95281	13.70732	10.95	3.29
75/ 7/23	2442616.5	4.84825	0.96764	0.29662	-2.80426	12.30580	5.34774	4.95276	13.70747	11.29	3.43
75/ 7/27	2442620.5	4.84167	0.99605	0.30897	-2.88607	12.28922	5.34263	4.95272	13.70759	11.62	3.58
75/ 7/31	2442624.5	4.83491	1.02442	0.32130	-2.96778	12.27217	5.33731	4.95268	13.70769	11.96	3.72
75/ 8/ 4	2442628.5	4.82796	1.05275	0.33363	-3.04937	12.25464	5.33179	4.95266	13.70776	12.30	3.86
75/ 8/ 8	2442632.5	4.82082	1.08104	0.34594	-3.13085	12.23663	5.32605	4.95264	13.70781	12.64	4.01
75/ 8/12	2442636.5	4.81350	1.10929	0.35824	-3.21220	12.21814	5.32011	4.95264	13.70784	12.98	4.15
75/ 8/16	2442640.5	4.80598	1.13749	0.37052	-3.29343	12.19918	5.31396	4.95264	13.70784	13.32	4.29
75/ 8/20	2442644.5	4.79828	1.16565	0.38279	-3.37454	12.17974	5.30760	4.95265	13.70782	13.65	4.43
75/ 8/24	2442648.5	4.79039	1.19377	0.39504	-3.45551	12.15982	5.30104	4.95267	13.70777	13.99	4.57
75/ 8/28	2442652.5	4.78231	1.22184	0.40728	-3.53635	12.13943	5.29427	4.95271	13.70769	14.33	4.72
75/ 9/ 1	2442656.5	4.77405	1.24986	0.41950	-3.61705	12.11857	5.28729	4.95275	13.70759	14.67	4.86
75/ 9/ 5	2442660.5	4.76560	1.27783	0.43171	-3.69760	12.09723	5.28010	4.95280	13.70747	15.01	5.00
75/ 9/ 9	2442664.5	4.75697	1.30575	0.44390	-3.77801	12.07542	5.27271	4.95285	13.70732	15.35	5.14
75/ 9/13	2442668.5	4.74815	1.33362	0.45607	-3.85827	12.05314	5.26511	4.95292	13.70714	15.69	5.28
75/ 9/17	2442672.5	4.73914	1.36144	0.46823	-3.93838	12.03038	5.25731	4.95300	13.70694	16.03	5.42
75/ 9/21	2442676.5	4.72995	1.38920	0.48036	-4.01833	12.00716	5.24930	4.95309	13.70672	16.37	5.57
75/ 9/25	2442680.5	4.72058	1.41692	0.49248	-4.09812	11.98347	5.24109	4.95318	13.70647	16.71	5.71
75/ 9/29	2442684.5	4.71102	1.44457	0.50458	-4.17774	11.95931	5.23267	4.95329	13.70619	17.05	5.85
75/10/ 3	2442688.5	4.70127	1.47217	0.51666	-4.25719	11.93469	5.22405	4.95340	13.70588	17.39	5.99
75/10/ 7	2442692.5	4.69135	1.49971	0.52871	-4.33648	11.90960	5.21523	4.95353	13.70555	17.73	6.13
75/10/11	2442696.5	4.68124	1.52720	0.54075	-4.41559	11.88405	5.20620	4.95366	13.70520	18.07	6.27
75/10/15	2442700.5	4.67095	1.55462	0.55277	-4.49451	11.85803	5.19697	4.95380	13.70482	18.41	6.41
75/10/19	2442704.5	4.66047	1.58199	0.56476	-4.57326	11.83155	5.18753	4.95395	13.70441	18.75	6.55
75/10/23	2442708.5	4.64982	1.60929	0.57674	-4.65182	11.80461	5.17789	4.95411	13.70397	19.09	6.69
75/10/27	2442712.5	4.63898	1.63653	0.58869	-4.73018	11.77721	5.16805	4.95428	13.70351	19.43	6.82
75/10/31	2442716.5	4.62796	1.66370	0.60061	-4.80835	11.74936	5.15802	4.95446	13.70302	19.77	6.96
75/11/ 4	2442720.5	4.61676	1.69081	0.61252	-4.88632	11.72105	5.14778	4.95465	13.70251	20.11	7.10
75/11/ 8	2442724.5	4.60538	1.71786	0.62440	-4.96409	11.69229	5.13734	4.95484	13.70198	20.46	7.24
75/11/12	2442728.5	4.59383	1.74484	0.63626	-5.04166	11.66308	5.12670	4.95505	13.70142	20.80	7.38

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75/11/16	2442732.5	4.58209	1.77174	0.64809	-5.11902	11.63342	5.11587	4.95526	13.70084	21.14	7.52
75/11/20	2442736.5	4.57017	1.79859	0.65989	-5.19617	11.60331	5.10484	4.95549	13.70023	21.48	7.65
75/11/24	2442740.5	4.55808	1.82536	0.67167	-5.27310	11.57275	5.09361	4.95572	13.69960	21.82	7.79
75/11/28	2442744.5	4.54581	1.85206	0.68343	-5.34982	11.54174	5.08218	4.95596	13.69894	22.17	7.93
75/12/ 2	2442748.5	4.53336	1.87868	0.69515	-5.42632	11.51030	5.07056	4.95622	13.69826	22.51	8.06
75/12/ 6	2442752.5	4.52074	1.90524	0.70685	-5.50259	11.47840	5.05874	4.95648	13.69756	22.85	8.20
75/12/10	2442756.5	4.50794	1.93172	0.71853	-5.57863	11.44607	5.04673	4.95675	13.69683	23.20	8.33
75/12/14	2442760.5	4.49496	1.95812	0.73017	-5.65445	11.41330	5.03452	4.95702	13.69608	23.54	8.47
75/12/18	2442764.5	4.48181	1.98445	0.74179	-5.73003	11.38009	5.02212	4.95731	13.69531	23.88	8.61
75/12/22	2442768.5	4.46849	2.01070	0.75338	-5.80537	11.34645	5.00953	4.95761	13.69451	24.23	8.74
75/12/26	2442772.5	4.45499	2.03687	0.76493	-5.88048	11.31237	4.99674	4.95792	13.69369	24.57	8.88
75/12/30	2442776.5	4.44132	2.06297	0.77646	-5.95534	11.27785	4.98377	4.95823	13.69284	24.91	9.01
76/ 1/ 3	2442780.5	4.42748	2.08898	0.78796	-6.02995	11.24291	4.97060	4.95856	13.69198	25.26	9.14
76/ 1/ 7	2442784.5	4.41346	2.11491	0.79943	-6.10432	11.20754	4.95724	4.95889	13.69109	25.60	9.28
76/ 1/11	2442788.5	4.39927	2.14076	0.81086	-6.17843	11.17173	4.94370	4.95923	13.69017	25.95	9.41
76/ 1/15	2442792.5	4.38491	2.16653	0.82227	-6.25229	11.13551	4.92996	4.95958	13.68923	26.29	9.54
76/ 1/19	2442796.5	4.37039	2.19221	0.83364	-6.32588	11.09885	4.91603	4.95994	13.68827	26.64	9.68
76/ 1/23	2442800.5	4.35569	2.21781	0.84498	-6.39922	11.06178	4.90192	4.96031	13.68729	26.98	9.81
76/ 1/27	2442804.5	4.34082	2.24332	0.85629	-6.47228	11.02429	4.88762	4.96069	13.68628	27.33	9.94
76/ 1/31	2442808.5	4.32578	2.26875	0.86756	-6.54508	10.98638	4.87314	4.96108	13.68525	27.68	10.07
76/ 2/ 4	2442812.5	4.31058	2.29408	0.87881	-6.61761	10.94805	4.85847	4.96147	13.68420	28.02	10.20
76/ 2/ 8	2442816.5	4.29521	2.31933	0.89001	-6.68986	10.90931	4.84361	4.96188	13.68313	28.37	10.33
76/ 2/12	2442820.5	4.27967	2.34449	0.90118	-6.76184	10.87016	4.82858	4.96229	13.68203	28.71	10.46
76/ 2/16	2442824.5	4.26397	2.36955	0.91232	-6.83354	10.83060	4.81336	4.96271	13.68092	29.06	10.59
76/ 2/20	2442828.5	4.24810	2.39453	0.92342	-6.90496	10.79062	4.79795	4.96314	13.67978	29.41	10.72
76/ 2/24	2442832.5	4.23206	2.41941	0.93449	-6.97609	10.75024	4.78237	4.96358	13.67862	29.76	10.85
76/ 2/28	2442836.5	4.21586	2.44420	0.94552	-7.04693	10.70946	4.76661	4.96403	13.67744	30.10	10.98
76/ 3/ 3	2442840.5	4.19950	2.46889	0.95651	-7.11748	10.66827	4.75066	4.96449	13.67623	30.45	11.11
76/ 3/ 7	2442844.5	4.18298	2.49349	0.96747	-7.18774	10.62668	4.73454	4.96496	13.67501	30.80	11.24
76/ 3/11	2442848.5	4.16629	2.51799	0.97839	-7.25770	10.58470	4.71823	4.96543	13.67376	31.15	11.36
76/ 3/15	2442852.5	4.14945	2.54239	0.98927	-7.32736	10.54231	4.70175	4.96592	13.67249	31.50	11.49
76/ 3/19	2442856.5	4.13244	2.56670	1.00011	-7.39672	10.49953	4.68510	4.96641	13.67120	31.84	11.62
76/ 3/23	2442860.5	4.11527	2.59090	1.01092	-7.46577	10.45635	4.66826	4.96691	13.66988	32.19	11.74
76/ 3/27	2442864.5	4.09794	2.61501	1.02168	-7.53451	10.41279	4.65125	4.96742	13.66855	32.54	11.87
76/ 3/31	2442868.5	4.08046	2.63901	1.03241	-7.60295	10.36883	4.63407	4.96794	13.66719	32.89	11.99
76/ 4/ 4	2442872.5	4.06282	2.66292	1.04309	-7.67106	10.32449	4.61671	4.96847	13.66581	33.24	12.12
76/ 4/ 8	2442876.5	4.04502	2.68672	1.05374	-7.73886	10.27976	4.59918	4.96900	13.66440	33.59	12.24
76/ 4/12	2442880.5	4.02706	2.71041	1.06434	-7.80634	10.23464	4.58148	4.96954	13.66297	33.94	12.37
76/ 4/16	2442884.5	4.00895	2.73400	1.07491	-7.87350	10.18915	4.56360	4.97010	13.66152	34.29	12.49
76/ 4/20	2442888.5	3.99068	2.75749	1.08543	-7.94033	10.14327	4.54555	4.97066	13.66004	34.64	12.61
76/ 4/24	2442892.5	3.97226	2.78087	1.09591	-8.00682	10.09702	4.52734	4.97123	13.65855	34.99	12.74
76/ 4/28	2442896.5	3.95369	2.80414	1.10634	-8.07299	10.05040	4.50895	4.97181	13.65703	35.35	12.86
76/ 5/ 2	2442900.5	3.93496	2.82731	1.11674	-8.13882	10.00341	4.49040	4.97239	13.65548	35.70	12.98
76/ 5/ 6	2442904.5	3.91608	2.85036	1.12709	-8.20431	9.95604	4.47169	4.97299	13.65392	36.05	13.10
76/ 5/10	2442908.5	3.89706	2.87331	1.13740	-8.26947	9.90832	4.45280	4.97359	13.65234	36.40	13.22

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76/ 5/14	2442912.5	3.87788	2.89614	1.14767	-8.33428	9.86022	4.43375	4.97420	13.65073	36.75	13.34
76/ 5/18	2442916.5	3.85855	2.91886	1.15789	-8.39875	9.81177	4.41454	4.97482	13.64910	37.11	13.46
76/ 5/22	2442920.5	3.83907	2.94147	1.16806	-8.46287	9.76295	4.39517	4.97545	13.64745	37.46	13.58
76/ 5/26	2442924.5	3.81945	2.96397	1.17819	-8.52664	9.71378	4.37563	4.97609	13.64578	37.81	13.70
76/ 5/30	2442928.5	3.79968	2.98635	1.18828	-8.59006	9.66425	4.35594	4.97673	13.64408	38.17	13.81
76/ 6/ 3	2442932.5	3.77976	3.00862	1.19832	-8.65312	9.61437	4.33608	4.97738	13.64237	38.52	13.93
76/ 6/ 7	2442936.5	3.75970	3.03078	1.20831	-8.71583	9.56414	4.31606	4.97805	13.64063	38.87	14.05
76/ 6/11	2442940.5	3.73949	3.05281	1.21826	-8.77817	9.51356	4.29589	4.97871	13.63887	39.23	14.16
76/ 6/15	2442944.5	3.71914	3.07473	1.22816	-8.84015	9.46264	4.27556	4.97939	13.63709	39.58	14.28
76/ 6/19	2442948.5	3.69864	3.09653	1.23801	-8.90177	9.41137	4.25507	4.98008	13.63529	39.94	14.39
76/ 6/23	2442952.5	3.67801	3.11822	1.24782	-8.96302	9.35977	4.23443	4.98077	13.63347	40.29	14.51
76/ 6/27	2442956.5	3.65723	3.13978	1.25758	-9.02390	9.30782	4.21363	4.98147	13.63162	40.65	14.62
76/ 7/ 1	2442960.5	3.63632	3.16122	1.26729	-9.08441	9.25554	4.19268	4.98218	13.62976	41.00	14.74
76/ 7/ 5	2442964.5	3.61526	3.18254	1.27695	-9.14455	9.20293	4.17158	4.98290	13.62787	41.36	14.85
76/ 7/ 9	2442968.5	3.59406	3.20374	1.28656	-9.20430	9.14999	4.15033	4.98362	13.62596	41.71	14.96
76/ 7/13	2442972.5	3.57273	3.22482	1.29613	-9.26368	9.09672	4.12893	4.98436	13.62403	42.07	15.07
76/ 7/17	2442976.5	3.55126	3.24577	1.30564	-9.32267	9.04313	4.10738	4.98510	13.62207	42.43	15.18
76/ 7/21	2442980.5	3.52966	3.26660	1.31510	-9.38128	8.98922	4.08568	4.98585	13.62010	42.78	15.29
76/ 7/25	2442984.5	3.50792	3.28730	1.32452	-9.43950	8.93499	4.06384	4.98660	13.61811	43.14	15.40
76/ 7/29	2442988.5	3.48605	3.30788	1.33388	-9.49733	8.88044	4.04185	4.98737	13.61610	43.50	15.51
76/ 8/ 2	2442992.5	3.46404	3.32833	1.34319	-9.55478	8.82558	4.01972	4.98814	13.61407	43.86	15.62
76/ 8/ 6	2442996.5	3.44190	3.34866	1.35245	-9.61183	8.77041	3.99745	4.98892	13.61202	44.21	15.73
76/ 8/10	2443000.5	3.41963	3.36886	1.36166	-9.66850	8.71494	3.97503	4.98971	13.60995	44.57	15.84
76/ 8/14	2443004.5	3.39723	3.38893	1.37082	-9.72476	8.65915	3.95248	4.99050	13.60787	44.93	15.94
76/ 8/18	2443008.5	3.37470	3.40887	1.37992	-9.78063	8.60307	3.92978	4.99131	13.60576	45.29	16.05
76/ 8/22	2443012.5	3.35204	3.42867	1.38898	-9.83610	8.54669	3.90695	4.99212	13.60364	45.65	16.15
76/ 8/26	2443016.5	3.32925	3.44835	1.39797	-9.89117	8.49001	3.88398	4.99293	13.60150	46.01	16.26
76/ 8/30	2443020.5	3.30634	3.46790	1.40692	-9.94583	8.43303	3.86087	4.99376	13.59933	46.37	16.36
76/ 9/ 3	2443024.5	3.28330	3.48732	1.41581	-10.00009	8.37576	3.83763	4.99459	13.59716	46.73	16.47
76/ 9/ 7	2443028.5	3.26013	3.50660	1.42465	-10.05395	8.31821	3.81425	4.99543	13.59496	47.09	16.57
76/ 9/11	2443032.5	3.23685	3.52575	1.43344	-10.10739	8.26036	3.79075	4.99628	13.59275	47.45	16.67
76/ 9/15	2443036.5	3.21343	3.54477	1.44217	-10.16043	8.20223	3.76710	4.99714	13.59051	47.81	16.77
76/ 9/19	2443040.5	3.18990	3.56365	1.45084	-10.21306	8.14383	3.74333	4.99800	13.58827	48.17	16.87
76/ 9/23	2443044.5	3.16625	3.58239	1.45946	-10.26527	8.08514	3.71943	4.99887	13.58600	48.53	16.98
76/ 9/27	2443048.5	3.14247	3.60100	1.46803	-10.31706	8.02617	3.69540	4.99975	13.58371	48.89	17.07
76/10/ 1	2443052.5	3.11858	3.61948	1.47654	-10.36844	7.96693	3.67124	5.00063	13.58141	49.25	17.17
76/10/ 5	2443056.5	3.09457	3.63781	1.48499	-10.41940	7.90742	3.64696	5.00152	13.57908	49.61	17.27
76/10/ 9	2443060.5	3.07044	3.65601	1.49339	-10.46993	7.84764	3.62255	5.00242	13.57674	49.98	17.37
76/10/13	2443064.5	3.04619	3.67407	1.50173	-10.52005	7.78760	3.59801	5.00333	13.57438	50.34	17.47
76/10/17	2443068.5	3.02183	3.69199	1.51001	-10.56973	7.72729	3.57336	5.00424	13.57200	50.70	17.56
76/10/21	2443072.5	2.99736	3.70977	1.51824	-10.61899	7.66673	3.54858	5.00516	13.56961	51.06	17.66
76/10/25	2443076.5	2.97277	3.72741	1.52641	-10.66783	7.60591	3.52368	5.00609	13.56719	51.43	17.75
76/10/29	2443080.5	2.94807	3.74492	1.53452	-10.71623	7.54484	3.49866	5.00702	13.56476	51.79	17.85
76/11/ 2	2443084.5	2.92326	3.76227	1.54257	-10.76420	7.48351	3.47353	5.00796	13.56232	52.15	17.94
76/11/ 6	2443088.5	2.89833	3.77949	1.55057	-10.81174	7.42194	3.44828	5.00891	13.55985	52.52	18.03

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76/11/10	2443092.5	2.87330	3.79657	1.55850	-10.85885	7.36012	3.42291	5.00986	13.55737	52.88	18.12
76/11/14	2443096.5	2.84816	3.81350	1.56638	-10.90552	7.29806	3.39742	5.01082	13.55487	53.25	18.22
76/11/18	2443100.5	2.82292	3.83029	1.57420	-10.95175	7.23576	3.37183	5.01179	13.55236	53.61	18.31
76/11/22	2443104.5	2.79756	3.84693	1.58196	-10.99755	7.17322	3.34612	5.01277	13.54982	53.97	18.40
76/11/26	2443108.5	2.77210	3.86343	1.58966	-11.04291	7.11045	3.32030	5.01375	13.54727	54.34	18.49
76/11/30	2443112.5	2.74654	3.87978	1.59730	-11.08782	7.04745	3.29437	5.01473	13.54471	54.70	18.57
76/12/ 4	2443116.5	2.72087	3.89599	1.60488	-11.13229	6.98421	3.26833	5.01573	13.54212	55.07	18.66
76/12/ 8	2443120.5	2.69511	3.91205	1.61240	-11.17632	6.92076	3.24218	5.01673	13.53952	55.44	18.75
76/12/12	2443124.5	2.66924	3.92797	1.61986	-11.21990	6.85707	3.21593	5.01774	13.53690	55.80	18.83
76/12/16	2443128.5	2.64327	3.94373	1.62726	-11.26303	6.79317	3.18957	5.01875	13.53427	56.17	18.92
76/12/20	2443132.5	2.61720	3.95935	1.63460	-11.30572	6.72906	3.16311	5.01977	13.53162	56.53	19.00
76/12/24	2443136.5	2.59103	3.97482	1.64187	-11.34795	6.66472	3.13654	5.02080	13.52895	56.90	19.09
76/12/28	2443140.5	2.56477	3.99015	1.64909	-11.38973	6.60018	3.10987	5.02183	13.52626	57.27	19.17
77/ 1/ 1	2443144.5	2.53841	4.00532	1.65624	-11.43106	6.53542	3.08310	5.02287	13.52355	57.64	19.25
77/ 1/ 5	2443148.5	2.51195	4.02034	1.66333	-11.47194	6.47047	3.05623	5.02392	13.52083	58.00	19.33
77/ 1/ 9	2443152.5	2.48540	4.03521	1.67036	-11.51235	6.40531	3.02927	5.02497	13.51809	58.37	19.42
77/ 1/13	2443156.5	2.45876	4.04994	1.67733	-11.55231	6.33995	3.00221	5.02602	13.51533	58.74	19.50
77/ 1/17	2443160.5	2.43203	4.06451	1.68424	-11.59181	6.27440	2.97505	5.02709	13.51255	59.11	19.57
77/ 1/21	2443164.5	2.40520	4.07893	1.69108	-11.63086	6.20865	2.94780	5.02816	13.50976	59.47	19.65
77/ 1/25	2443168.5	2.37829	4.09319	1.69785	-11.66944	6.14272	2.92046	5.02923	13.50696	59.84	19.73
77/ 1/29	2443172.5	2.35129	4.10731	1.70457	-11.70756	6.07660	2.89302	5.03032	13.50413	60.21	19.81
77/ 2/ 2	2443176.5	2.32420	4.12127	1.71122	-11.74522	6.01030	2.86550	5.03140	13.50130	60.58	19.88
77/ 2/ 6	2443180.5	2.29702	4.13508	1.71781	-11.78242	5.94382	2.83789	5.03250	13.49845	60.95	19.96
77/ 2/10	2443184.5	2.26976	4.14873	1.72433	-11.81916	5.87716	2.81019	5.03360	13.49558	61.32	20.03
77/ 2/14	2443188.5	2.24241	4.16223	1.73079	-11.85543	5.81033	2.78241	5.03470	13.49270	61.69	20.11
77/ 2/18	2443192.5	2.21498	4.17558	1.73719	-11.89123	5.74333	2.75454	5.03581	13.48980	62.06	20.18
77/ 2/22	2443196.5	2.18747	4.18877	1.74352	-11.92657	5.67615	2.72658	5.03693	13.48689	62.43	20.25
77/ 2/26	2443200.5	2.15988	4.20180	1.74979	-11.96145	5.60882	2.69855	5.03805	13.48396	62.80	20.32
77/ 3/ 2	2443204.5	2.13220	4.21468	1.75599	-11.99585	5.54132	2.67043	5.03918	13.48102	63.17	20.39
77/ 3/ 6	2443208.5	2.10445	4.22741	1.76213	-12.02979	5.47367	2.64224	5.04031	13.47807	63.54	20.46
77/ 3/10	2443212.5	2.07662	4.23997	1.76820	-12.06326	5.40586	2.61397	5.04145	13.47510	63.91	20.53
77/ 3/14	2443216.5	2.04872	4.25238	1.77420	-12.09626	5.33789	2.58562	5.04260	13.47212	64.28	20.60
77/ 3/18	2443220.5	2.02073	4.26464	1.78014	-12.12880	5.26978	2.55719	5.04375	13.46913	64.65	20.67
77/ 3/22	2443224.5	1.99268	4.27673	1.78602	-12.16086	5.20152	2.52869	5.04490	13.46613	65.02	20.73
77/ 3/26	2443228.5	1.96455	4.28867	1.79183	-12.19245	5.13311	2.50011	5.04606	13.46311	65.39	20.80
77/ 3/30	2443232.5	1.93634	4.30045	1.79757	-12.22357	5.06456	2.47147	5.04723	13.46007	65.76	20.86
77/ 4/ 3	2443236.5	1.90807	4.31207	1.80325	-12.25422	4.99588	2.44275	5.04840	13.45703	66.13	20.93
77/ 4/ 7	2443240.5	1.87972	4.32353	1.80886	-12.28439	4.92706	2.41396	5.04958	13.45397	66.50	20.99
77/ 4/11	2443244.5	1.85131	4.33483	1.81440	-12.31409	4.85810	2.38511	5.05076	13.45090	66.87	21.05
77/ 4/15	2443248.5	1.82283	4.34598	1.81988	-12.34331	4.78902	2.35619	5.05195	13.44781	67.25	21.11
77/ 4/19	2443252.5	1.79428	4.35696	1.82529	-12.37206	4.71982	2.32720	5.05314	13.44472	67.62	21.18
77/ 4/23	2443256.5	1.76567	4.36778	1.83063	-12.40034	4.65049	2.29815	5.05434	13.44162	67.99	21.23
77/ 4/27	2443260.5	1.73699	4.37845	1.83590	-12.42815	4.58105	2.26904	5.05554	13.43850	68.36	21.29
77/ 5/ 1	2443264.5	1.70824	4.38895	1.84111	-12.45548	4.51148	2.23986	5.05674	13.43538	68.73	21.35
77/ 5/ 5	2443268.5	1.67944	4.39929	1.84625	-12.48233	4.44180	2.21063	5.05796	13.43224	69.11	21.41

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77/ 5/ 9	2443272.5	1.65057	4.40947	1.85133	-12.50871	4.37201	2.18133	5.05917	13.42910	69.48	21.47
77/ 5/13	2443276.5	1.62165	4.41949	1.85633	-12.53462	4.30211	2.15198	5.06039	13.42594	69.85	21.52
77/ 5/17	2443280.5	1.59266	4.42935	1.86127	-12.56005	4.23211	2.12257	5.06162	13.42278	70.22	21.58
77/ 5/21	2443284.5	1.56361	4.43904	1.86614	-12.58500	4.16200	2.09310	5.06285	13.41960	70.60	21.63
77/ 5/25	2443288.5	1.53451	4.44858	1.87094	-12.60948	4.09179	2.06358	5.06409	13.41642	70.97	21.68
77/ 5/29	2443292.5	1.50535	4.45795	1.87567	-12.63349	4.02149	2.03401	5.06533	13.41322	71.34	21.73
77/ 6/ 2	2443296.5	1.47614	4.46716	1.88034	-12.65701	3.95108	2.00438	5.06657	13.41002	71.71	21.79
77/ 6/ 6	2443300.5	1.44687	4.47621	1.88493	-12.68006	3.88059	1.97470	5.06782	13.40681	72.09	21.84
77/ 6/10	2443304.5	1.41755	4.48509	1.88946	-12.70264	3.81001	1.94497	5.06908	13.40358	72.46	21.88
77/ 6/14	2443308.5	1.38818	4.49381	1.89392	-12.72473	3.73934	1.91520	5.07034	13.40035	72.83	21.93
77/ 6/18	2443312.5	1.35876	4.50237	1.89831	-12.74635	3.66858	1.88537	5.07160	13.39711	73.21	21.98
77/ 6/22	2443316.5	1.32929	4.51076	1.90263	-12.76749	3.59774	1.85550	5.07287	13.39386	73.58	22.03
77/ 6/26	2443320.5	1.29977	4.51899	1.90688	-12.78816	3.52683	1.82558	5.07414	13.39060	73.95	22.07
77/ 6/30	2443324.5	1.27021	4.52705	1.91107	-12.80834	3.45583	1.79562	5.07541	13.38733	74.33	22.12
77/ 7/ 4	2443328.5	1.24059	4.53496	1.91518	-12.82804	3.38477	1.76561	5.07669	13.38405	74.70	22.16
77/ 7/ 8	2443332.5	1.21094	4.54269	1.91922	-12.84726	3.31364	1.73557	5.07798	13.38075	75.07	22.21
77/ 7/12	2443336.5	1.18124	4.55027	1.92320	-12.86601	3.24244	1.70548	5.07926	13.37745	75.45	22.25
77/ 7/16	2443340.5	1.15149	4.55767	1.92710	-12.88427	3.17117	1.67536	5.08056	13.37414	75.82	22.29
77/ 7/20	2443344.5	1.12171	4.56492	1.93094	-12.90206	3.09985	1.64519	5.08185	13.37082	76.19	22.33
77/ 7/24	2443348.5	1.09188	4.57200	1.93470	-12.91937	3.02847	1.61499	5.08315	13.36749	76.57	22.37
77/ 7/28	2443352.5	1.06201	4.57891	1.93840	-12.93620	2.95703	1.58476	5.08446	13.36416	76.94	22.41
77/ 8/ 1	2443356.5	1.03211	4.58566	1.94203	-12.95255	2.88554	1.55449	5.08576	13.36081	77.32	22.45
77/ 8/ 5	2443360.5	1.00217	4.59224	1.94558	-12.96842	2.81400	1.52419	5.08707	13.35746	77.69	22.49
77/ 8/ 9	2443364.5	0.97219	4.59866	1.94907	-12.98381	2.74242	1.49385	5.08839	13.35409	78.06	22.52
77/ 8/13	2443368.5	0.94218	4.60491	1.95248	-12.99873	2.67079	1.46349	5.08971	13.35072	78.44	22.56
77/ 8/17	2443372.5	0.91213	4.61100	1.95583	-13.01316	2.59912	1.43309	5.09103	13.34734	78.81	22.59
77/ 8/21	2443376.5	0.88205	4.61692	1.95911	-13.02712	2.52741	1.40267	5.09236	13.34395	79.18	22.63
77/ 8/25	2443380.5	0.85194	4.62268	1.96231	-13.04060	2.45566	1.37222	5.09368	13.34056	79.56	22.66
77/ 8/29	2443384.5	0.82180	4.62827	1.96545	-13.05360	2.38388	1.34175	5.09502	13.33715	79.93	22.69
77/ 9/ 2	2443388.5	0.79163	4.63369	1.96851	-13.06612	2.31207	1.31125	5.09635	13.33374	80.31	22.72
77/ 9/ 6	2443392.5	0.76143	4.63895	1.97150	-13.07816	2.24024	1.28072	5.09769	13.33031	80.68	22.75
77/ 9/10	2443396.5	0.73121	4.64404	1.97443	-13.08973	2.16838	1.25018	5.09904	13.32688	81.05	22.78
77/ 9/14	2443400.5	0.70095	4.64897	1.97728	-13.10082	2.09650	1.21961	5.10038	13.32345	81.43	22.81
77/ 9/18	2443404.5	0.67068	4.65373	1.98006	-13.11143	2.02460	1.18903	5.10173	13.32000	81.80	22.84
77/ 9/22	2443408.5	0.64038	4.65832	1.98277	-13.12156	1.95268	1.15842	5.10308	13.31654	82.17	22.86
77/ 9/26	2443412.5	0.61005	4.66275	1.98542	-13.13122	1.88075	1.12780	5.10444	13.31308	82.55	22.89
77/ 9/30	2443416.5	0.57971	4.66701	1.98799	-13.14040	1.80881	1.09716	5.10580	13.30960	82.92	22.91
77/10/ 4	2443420.5	0.54934	4.67111	1.99048	-13.14910	1.73686	1.06651	5.10716	13.30612	83.29	22.94
77/10/ 8	2443424.5	0.51895	4.67504	1.99291	-13.15732	1.66491	1.03584	5.10852	13.30263	83.67	22.96
77/10/12	2443428.5	0.48855	4.67880	1.99527	-13.16507	1.59297	1.00516	5.10989	13.29913	84.04	22.98
77/10/16	2443432.5	0.45813	4.68240	1.99756	-13.17235	1.52102	0.97447	5.11126	13.29563	84.41	23.01
77/10/20	2443436.5	0.42769	4.68583	1.99977	-13.17915	1.44908	0.94378	5.11263	13.29212	84.78	23.03
77/10/24	2443440.5	0.39723	4.68909	2.00192	-13.18548	1.37714	0.91307	5.11401	13.28860	85.16	23.05
77/10/28	2443444.5	0.36677	4.69219	2.00399	-13.19133	1.30522	0.88236	5.11538	13.28508	85.53	23.06
77/11/ 1	2443448.5	0.33628	4.69512	2.00599	-13.19672	1.23330	0.85164	5.11677	13.28155	85.90	23.08

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77/11/ 5	2443452.5	0.30579	4.69789	2.00793	-13.20163	1.16141	0.82091	5.11815	13.27802	86.28	23.10
77/11/ 9	2443456.5	0.27529	4.70049	2.00979	-13.20607	1.08953	0.79019	5.11953	13.27448	86.65	23.11
77/11/13	2443460.5	0.24478	4.70292	2.01158	-13.21004	1.01767	0.75946	5.12092	13.27093	87.02	23.13
77/11/17	2443464.5	0.21425	4.70519	2.01330	-13.21355	0.94583	0.72872	5.12231	13.26739	87.39	23.14
77/11/21	2443468.5	0.18373	4.70729	2.01494	-13.21658	0.87403	0.69799	5.12371	13.26383	87.76	23.16
77/11/25	2443472.5	0.15319	4.70923	2.01652	-13.21915	0.80225	0.66726	5.12510	13.26027	88.14	23.17
77/11/29	2443476.5	0.12265	4.71100	2.01803	-13.22125	0.73050	0.63653	5.12650	13.25671	88.51	23.18
77/12/ 3	2443480.5	0.09210	4.71261	2.01946	-13.22289	0.65878	0.60580	5.12790	13.25314	88.88	23.19
77/12/ 7	2443484.5	0.06155	4.71404	2.02083	-13.22406	0.58710	0.57508	5.12930	13.24957	89.25	23.20
77/12/11	2443488.5	0.03100	4.71532	2.02212	-13.22477	0.51545	0.54436	5.13071	13.24600	89.62	23.21
77/12/15	2443492.5	0.00045	4.71643	2.02334	-13.22501	0.44385	0.51365	5.13211	13.24242	89.99	23.22
77/12/19	2443496.5	-0.03010	4.71737	2.02449	-13.22479	0.37229	0.48295	5.13352	13.23884	90.37	23.23
77/12/23	2443500.5	-0.06065	4.71815	2.02557	-13.22410	0.30078	0.45225	5.13493	13.23525	90.74	23.23
77/12/27	2443504.5	-0.09120	4.71876	2.02658	-13.22295	0.22931	0.42156	5.13634	13.23166	91.11	23.24
77/12/31	2443508.5	-0.12175	4.71921	2.02752	-13.22134	0.15790	0.39089	5.13776	13.22806	91.48	23.24
78/ 1/ 4	2443512.5	-0.15229	4.71949	2.02839	-13.21927	0.08654	0.36022	5.13918	13.22446	91.85	23.25
78/ 1/ 8	2443516.5	-0.18282	4.71961	2.02918	-13.21674	0.01524	0.32957	5.14059	13.22086	92.22	23.25
78/ 1/12	2443520.5	-0.21335	4.71956	2.02991	-13.21375	-0.05601	0.29894	5.14201	13.21725	92.59	23.25
78/ 1/16	2443524.5	-0.24387	4.71935	2.03057	-13.21031	-0.12719	0.26832	5.14343	13.21365	92.96	23.25
78/ 1/20	2443528.5	-0.27439	4.71897	2.03115	-13.20641	-0.19831	0.23771	5.14486	13.21004	93.33	23.25
78/ 1/24	2443532.5	-0.30489	4.71843	2.03166	-13.20205	-0.26936	0.20712	5.14628	13.20643	93.70	23.25
78/ 1/28	2443536.5	-0.33539	4.71773	2.03211	-13.19724	-0.34034	0.17655	5.14771	13.20281	94.07	23.25
78/ 2/ 1	2443540.5	-0.36587	4.71686	2.03248	-13.19198	-0.41126	0.14600	5.14913	13.19920	94.44	23.25
78/ 2/ 5	2443544.5	-0.39634	4.71583	2.03278	-13.18626	-0.48210	0.11547	5.15056	13.19558	94.80	23.25
78/ 2/ 9	2443548.5	-0.42679	4.71463	2.03301	-13.18009	-0.55287	0.08496	5.15199	13.19196	95.17	23.24
78/ 2/13	2443552.5	-0.45723	4.71327	2.03317	-13.17348	-0.62355	0.05448	5.15343	13.18834	95.54	23.24
78/ 2/17	2443556.5	-0.48766	4.71175	2.03327	-13.16641	-0.69416	0.02402	5.15486	13.18471	95.91	23.23
78/ 2/21	2443560.5	-0.51807	4.71007	2.03329	-13.15889	-0.76469	-0.00642	5.15629	13.18109	96.28	23.22
78/ 2/25	2443564.5	-0.54846	4.70822	2.03324	-13.15092	-0.83513	-0.03684	5.15773	13.17746	96.64	23.22
78/ 3/ 1	2443568.5	-0.57883	4.70621	2.03312	-13.14251	-0.90549	-0.06722	5.15916	13.17384	97.01	23.21
78/ 3/ 5	2443572.5	-0.60918	4.70403	2.03293	-13.13365	-0.97575	-0.09758	5.16060	13.17021	97.38	23.20
78/ 3/ 9	2443576.5	-0.63951	4.70170	2.03266	-13.12435	-1.04593	-0.12792	5.16204	13.16658	97.75	23.19
78/ 3/13	2443580.5	-0.66982	4.69920	2.03233	-13.11460	-1.11601	-0.15822	5.16348	13.16295	98.11	23.18
78/ 3/17	2443584.5	-0.70010	4.69654	2.03193	-13.10441	-1.18600	-0.18849	5.16492	13.15932	98.48	23.17
78/ 3/21	2443588.5	-0.73037	4.69372	2.03146	-13.09377	-1.25589	-0.21874	5.16636	13.15568	98.84	23.15
78/ 3/25	2443592.5	-0.76060	4.69074	2.03092	-13.08269	-1.32567	-0.24894	5.16780	13.15204	99.21	23.14
78/ 3/29	2443596.5	-0.79081	4.68760	2.03031	-13.07117	-1.39535	-0.27912	5.16925	13.14840	99.58	23.13
78/ 4/ 2	2443600.5	-0.82099	4.68429	2.02963	-13.05921	-1.46493	-0.30926	5.17069	13.14476	99.94	23.11
78/ 4/ 6	2443604.5	-0.85115	4.68083	2.02888	-13.04681	-1.53440	-0.33936	5.17213	13.14111	100.31	23.10
78/ 4/10	2443608.5	-0.88127	4.67720	2.02807	-13.03397	-1.60375	-0.36943	5.17358	13.13746	100.67	23.08
78/ 4/14	2443612.5	-0.91137	4.67342	2.02718	-13.02070	-1.67299	-0.39946	5.17502	13.13382	101.03	23.06
78/ 4/18	2443616.5	-0.94143	4.66947	2.02622	-13.00700	-1.74212	-0.42945	5.17647	13.13017	101.40	23.04
78/ 4/22	2443620.5	-0.97147	4.66537	2.02519	-12.99286	-1.81113	-0.45940	5.17792	13.12652	101.76	23.02
78/ 4/26	2443624.5	-1.00147	4.66111	2.02410	-12.97829	-1.88002	-0.48931	5.17936	13.12288	102.13	23.00
78/ 4/30	2443628.5	-1.03143	4.65668	2.02293	-12.96329	-1.94878	-0.51918	5.18081	13.11923	102.49	22.98

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78/ 5/ 4	2443632.5	-1.06136	4.65210	2.02170	-12.94786	-2.01743	-0.54900	5.18226	13.11558	102.85	22.96
78/ 5/ 8	2443636.5	-1.09125	4.64736	2.02040	-12.93200	-2.08594	-0.57878	5.18371	13.11193	103.21	22.94
78/ 5/12	2443640.5	-1.12111	4.64246	2.01902	-12.91571	-2.15433	-0.60852	5.18515	13.10828	103.58	22.92
78/ 5/16	2443644.5	-1.15093	4.63741	2.01758	-12.89900	-2.22258	-0.63821	5.18660	13.10463	103.94	22.89
78/ 5/20	2443648.5	-1.18071	4.63219	2.01608	-12.88186	-2.29071	-0.66785	5.18805	13.10098	104.30	22.87
78/ 5/24	2443652.5	-1.21045	4.62682	2.01450	-12.86430	-2.35869	-0.69745	5.18950	13.09734	104.66	22.84
78/ 5/28	2443656.5	-1.24015	4.62130	2.01285	-12.84633	-2.42654	-0.72700	5.19095	13.09369	105.02	22.82
78/ 6/ 1	2443660.5	-1.26980	4.61561	2.01114	-12.82793	-2.49425	-0.75649	5.19239	13.09004	105.38	22.79
78/ 6/ 5	2443664.5	-1.29941	4.60977	2.00936	-12.80911	-2.56182	-0.78594	5.19384	13.08640	105.74	22.76
78/ 6/ 9	2443668.5	-1.32898	4.60378	2.00751	-12.78987	-2.62925	-0.81534	5.19529	13.08276	106.10	22.73
78/ 6/13	2443672.5	-1.35851	4.59762	2.00559	-12.77022	-2.69653	-0.84468	5.19674	13.07912	106.46	22.70
78/ 6/17	2443676.5	-1.38799	4.59132	2.00361	-12.75015	-2.76366	-0.87397	5.19819	13.07547	106.82	22.67
78/ 6/21	2443680.5	-1.41742	4.58486	2.00155	-12.72967	-2.83064	-0.90321	5.19963	13.07183	107.18	22.64
78/ 6/25	2443684.5	-1.44680	4.57824	1.99943	-12.70878	-2.89747	-0.93239	5.20108	13.06819	107.54	22.61
78/ 6/29	2443688.5	-1.47614	4.57147	1.99725	-12.68747	-2.96415	-0.96151	5.20253	13.06455	107.90	22.58
78/ 7/ 3	2443692.5	-1.50542	4.56454	1.99499	-12.66576	-3.03066	-0.99058	5.20397	13.06092	108.25	22.54
78/ 7/ 7	2443696.5	-1.53466	4.55747	1.99267	-12.64364	-3.09702	-1.01959	5.20542	13.05728	108.61	22.51
78/ 7/11	2443700.5	-1.56384	4.55023	1.99028	-12.62111	-3.16322	-1.04854	5.20687	13.05365	108.97	22.47
78/ 7/15	2443704.5	-1.59297	4.54285	1.98782	-12.59819	-3.22925	-1.07743	5.20831	13.05003	109.32	22.44
78/ 7/19	2443708.5	-1.62205	4.53531	1.98530	-12.57486	-3.29513	-1.10626	5.20975	13.04640	109.68	22.40
78/ 7/23	2443712.5	-1.65107	4.52763	1.98271	-12.55113	-3.36083	-1.13503	5.21120	13.04278	110.04	22.36
78/ 7/27	2443716.5	-1.68004	4.51979	1.98006	-12.52700	-3.42637	-1.16373	5.21264	13.03917	110.39	22.32
78/ 7/31	2443720.5	-1.70895	4.51180	1.97734	-12.50247	-3.49174	-1.19237	5.21408	13.03556	110.75	22.29
78/ 8/ 4	2443724.5	-1.73780	4.50365	1.97455	-12.47755	-3.55694	-1.22095	5.21552	13.03195	111.10	22.25
78/ 8/ 8	2443728.5	-1.76660	4.49536	1.97169	-12.45223	-3.62196	-1.24947	5.21697	13.02835	111.45	22.21
78/ 8/12	2443732.5	-1.79534	4.48692	1.96878	-12.42652	-3.68681	-1.27792	5.21840	13.02475	111.81	22.17
78/ 8/16	2443736.5	-1.82401	4.47833	1.96579	-12.40042	-3.75149	-1.30630	5.21984	13.02116	112.16	22.12
78/ 8/20	2443740.5	-1.85263	4.46959	1.96274	-12.37393	-3.81598	-1.33461	5.22128	13.01757	112.51	22.08
78/ 8/24	2443744.5	-1.88119	4.46070	1.95962	-12.34705	-3.88030	-1.36286	5.22272	13.01399	112.87	22.04
78/ 8/28	2443748.5	-1.90968	4.45166	1.95644	-12.31979	-3.94444	-1.39104	5.22415	13.01041	113.22	21.99
78/ 9/ 1	2443752.5	-1.93811	4.44247	1.95320	-12.29214	-4.00839	-1.41916	5.22559	13.00684	113.57	21.95
78/ 9/ 5	2443756.5	-1.96647	4.43314	1.94989	-12.26410	-4.07216	-1.44720	5.22702	13.00327	113.92	21.90
78/ 9/ 9	2443760.5	-1.99477	4.42366	1.94651	-12.23569	-4.13574	-1.47517	5.22846	12.99971	114.27	21.86
78/ 9/13	2443764.5	-2.02300	4.41403	1.94307	-12.20688	-4.19914	-1.50307	5.22989	12.99616	114.62	21.81
78/ 9/17	2443768.5	-2.05117	4.40426	1.93957	-12.17770	-4.26235	-1.53090	5.23132	12.99260	114.97	21.76
78/ 9/21	2443772.5	-2.07927	4.39434	1.93600	-12.14814	-4.32536	-1.55866	5.23275	12.98905	115.32	21.71
78/ 9/25	2443776.5	-2.10730	4.38427	1.93236	-12.11820	-4.38818	-1.58634	5.23417	12.98551	115.67	21.67
78/ 9/29	2443780.5	-2.13526	4.37406	1.92867	-12.08789	-4.45080	-1.61394	5.23560	12.98197	116.02	21.62
78/10/ 3	2443784.5	-2.16315	4.36371	1.92491	-12.05720	-4.51323	-1.64147	5.23702	12.97844	116.37	21.57
78/10/ 7	2443788.5	-2.19097	4.35321	1.92108	-12.02614	-4.57546	-1.66893	5.23845	12.97491	116.72	21.51
78/10/11	2443792.5	-2.21871	4.34257	1.91720	-11.99471	-4.63748	-1.69631	5.23987	12.97139	117.06	21.46
78/10/15	2443796.5	-2.24639	4.33178	1.91325	-11.96292	-4.69931	-1.72361	5.24129	12.96787	117.41	21.41
78/10/19	2443800.5	-2.27399	4.32085	1.90923	-11.93075	-4.76093	-1.75083	5.24271	12.96436	117.76	21.36
78/10/23	2443804.5	-2.30151	4.30978	1.90516	-11.89822	-4.82235	-1.77797	5.24412	12.96086	118.10	21.30
78/10/27	2443808.5	-2.32896	4.29857	1.90102	-11.86532	-4.88356	-1.80503	5.24554	12.95736	118.45	21.25

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78/10/31	2443812.5	-2.35633	4.28722	1.89682	-11.83206	-4.94456	-1.83201	5.24695	12.95386	118.79	21.19
78/11/ 4	2443816.5	-2.38363	4.27573	1.89255	-11.79844	-5.00535	-1.85891	5.24836	12.95037	119.14	21.14
78/11/ 8	2443820.5	-2.41085	4.26409	1.88823	-11.76446	-5.06593	-1.88573	5.24977	12.94689	119.48	21.08
78/11/12	2443824.5	-2.43798	4.25232	1.88384	-11.73012	-5.12629	-1.91247	5.25118	12.94342	119.83	21.02
78/11/16	2443828.5	-2.46504	4.24041	1.87939	-11.69542	-5.18644	-1.93912	5.25258	12.93995	120.17	20.97
78/11/20	2443832.5	-2.49202	4.22836	1.87488	-11.66037	-5.24638	-1.96569	5.25399	12.93648	120.51	20.91
78/11/24	2443836.5	-2.51892	4.21617	1.87031	-11.62496	-5.30609	-1.99217	5.25539	12.93302	120.86	20.85
78/11/28	2443840.5	-2.54573	4.20384	1.86568	-11.58920	-5.36559	-2.01857	5.25679	12.92957	121.20	20.79
78/12/ 2	2443844.5	-2.57246	4.19138	1.86098	-11.55309	-5.42487	-2.04488	5.25818	12.92612	121.54	20.73
78/12/ 6	2443848.5	-2.59911	4.17878	1.85623	-11.51663	-5.48392	-2.07111	5.25958	12.92268	121.88	20.67
78/12/10	2443852.5	-2.62567	4.16604	1.85141	-11.47983	-5.54275	-2.09724	5.26097	12.91924	122.22	20.60
78/12/14	2443856.5	-2.65215	4.15317	1.84654	-11.44267	-5.60135	-2.12329	5.26236	12.91581	122.56	20.54
78/12/18	2443860.5	-2.67854	4.14016	1.84160	-11.40517	-5.65972	-2.14925	5.26375	12.91238	122.90	20.48
78/12/22	2443864.5	-2.70485	4.12702	1.83661	-11.36733	-5.71786	-2.17512	5.26513	12.90896	123.24	20.42
78/12/26	2443868.5	-2.73106	4.11374	1.83155	-11.32914	-5.77577	-2.20089	5.26652	12.90554	123.58	20.35
78/12/30	2443872.5	-2.75719	4.10033	1.82644	-11.29062	-5.83344	-2.22658	5.26790	12.90213	123.92	20.29
79/ 1/ 3	2443876.5	-2.78323	4.08679	1.82127	-11.25177	-5.89088	-2.25217	5.26927	12.89872	124.26	20.22
79/ 1/ 7	2443880.5	-2.80918	4.07312	1.81603	-11.21257	-5.94808	-2.27767	5.27065	12.89532	124.59	20.15
79/ 1/11	2443884.5	-2.83504	4.05931	1.81074	-11.17305	-6.00504	-2.30307	5.27202	12.89192	124.93	20.09
79/ 1/15	2443888.5	-2.86080	4.04537	1.80539	-11.13319	-6.06176	-2.32838	5.27339	12.88853	125.27	20.02
79/ 1/19	2443892.5	-2.88647	4.03130	1.79999	-11.09300	-6.11825	-2.35359	5.27476	12.88515	125.60	19.95
79/ 1/23	2443896.5	-2.91205	4.01710	1.79452	-11.05249	-6.17449	-2.37871	5.27612	12.88177	125.94	19.88
79/ 1/27	2443900.5	-2.93754	4.00277	1.78899	-11.01165	-6.23048	-2.40373	5.27748	12.87841	126.27	19.82
79/ 1/31	2443904.5	-2.96293	3.98832	1.78341	-10.97049	-6.28623	-2.42865	5.27884	12.87504	126.61	19.75
79/ 2/ 4	2443908.5	-2.98823	3.97373	1.77777	-10.92901	-6.34174	-2.45348	5.28020	12.87169	126.94	19.68
79/ 2/ 8	2443912.5	-3.01343	3.95901	1.77208	-10.88721	-6.39699	-2.47820	5.28155	12.86834	127.28	19.60
79/ 2/12	2443916.5	-3.03853	3.94417	1.76632	-10.84509	-6.45200	-2.50283	5.28290	12.86501	127.61	19.53
79/ 2/16	2443920.5	-3.06354	3.92920	1.76051	-10.80265	-6.50676	-2.52736	5.28425	12.86168	127.94	19.46
79/ 2/20	2443924.5	-3.08844	3.91411	1.75465	-10.75990	-6.56126	-2.55179	5.28559	12.85835	128.28	19.39
79/ 2/24	2443928.5	-3.11325	3.89889	1.74872	-10.71684	-6.61551	-2.57611	5.28694	12.85504	128.61	19.32
79/ 2/28	2443932.5	-3.13796	3.88354	1.74274	-10.67347	-6.66951	-2.60034	5.28827	12.85174	128.94	19.24
79/ 3/ 4	2443936.5	-3.16257	3.86807	1.73671	-10.62979	-6.72326	-2.62446	5.28961	12.84844	129.27	19.17
79/ 3/ 8	2443940.5	-3.18707	3.85248	1.73062	-10.58580	-6.77675	-2.64848	5.29094	12.84515	129.60	19.09
79/ 3/12	2443944.5	-3.21148	3.83676	1.72447	-10.54151	-6.82998	-2.67240	5.29227	12.84187	129.93	19.02
79/ 3/16	2443948.5	-3.23578	3.82092	1.71827	-10.49691	-6.88295	-2.69622	5.29360	12.83860	130.26	18.94
79/ 3/20	2443952.5	-3.25997	3.80496	1.71201	-10.45201	-6.93566	-2.71993	5.29492	12.83534	130.59	18.86
79/ 3/24	2443956.5	-3.28407	3.78888	1.70570	-10.40681	-6.98811	-2.74353	5.29624	12.83208	130.92	18.79
79/ 3/28	2443960.5	-3.30806	3.77267	1.69934	-10.36132	-7.04029	-2.76703	5.29755	12.82884	131.25	18.71
79/ 4/ 1	2443964.5	-3.33194	3.75635	1.69292	-10.31553	-7.09221	-2.79042	5.29886	12.82560	131.57	18.63
79/ 4/ 5	2443968.5	-3.35572	3.73991	1.68645	-10.26945	-7.14387	-2.81371	5.30017	12.82238	131.90	18.55
79/ 4/ 9	2443972.5	-3.37939	3.72334	1.67992	-10.22307	-7.19526	-2.83689	5.30148	12.81916	132.23	18.47
79/ 4/13	2443976.5	-3.40295	3.70666	1.67334	-10.17641	-7.24638	-2.85996	5.30278	12.81596	132.55	18.39
79/ 4/17	2443980.5	-3.42641	3.68986	1.66670	-10.12946	-7.29723	-2.88292	5.30408	12.81276	132.88	18.31
79/ 4/21	2443984.5	-3.44975	3.67295	1.66002	-10.08223	-7.34782	-2.90578	5.30537	12.80958	133.21	18.23
79/ 4/25	2443988.5	-3.47299	3.65591	1.65328	-10.03471	-7.39814	-2.92852	5.30667	12.80641	133.53	18.15

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79/ 4/29	2443992.5	-3.49612	3.63876	1.64649	-9.98691	-7.44818	-2.95116	5.30795	12.80324	133.85	18.07
79/ 5/ 3	2443996.5	-3.51913	3.62150	1.63964	-9.93882	-7.49796	-2.97369	5.30924	12.80009	134.18	17.99
79/ 5/ 7	2444000.5	-3.54204	3.60412	1.63275	-9.89046	-7.54746	-2.99611	5.31052	12.79695	134.50	17.91
79/ 5/11	2444004.5	-3.56483	3.58663	1.62580	-9.84183	-7.59669	-3.01841	5.31179	12.79383	134.83	17.82
79/ 5/15	2444008.5	-3.58751	3.56902	1.61880	-9.79291	-7.64564	-3.04061	5.31307	12.79071	135.15	17.74
79/ 5/19	2444012.5	-3.61008	3.55130	1.61175	-9.74373	-7.69432	-3.06269	5.31433	12.78761	135.47	17.65
79/ 5/23	2444016.5	-3.63253	3.53347	1.60465	-9.69427	-7.74272	-3.08466	5.31560	12.78451	135.79	17.57
79/ 5/27	2444020.5	-3.65487	3.51553	1.59750	-9.64455	-7.79085	-3.10652	5.31686	12.78143	136.11	17.49
79/ 5/31	2444024.5	-3.67709	3.49748	1.59030	-9.59455	-7.83869	-3.12827	5.31812	12.77836	136.43	17.40
79/ 6/ 4	2444028.5	-3.69920	3.47931	1.58305	-9.54429	-7.88626	-3.14991	5.31937	12.77531	136.75	17.31
79/ 6/ 8	2444032.5	-3.72119	3.46104	1.57574	-9.49376	-7.93355	-3.17143	5.32062	12.77226	137.07	17.23
79/ 6/12	2444036.5	-3.74306	3.44266	1.56839	-9.44296	-7.98055	-3.19283	5.32187	12.76922	137.39	17.14
79/ 6/16	2444040.5	-3.76482	3.42417	1.56099	-9.39191	-8.02727	-3.21412	5.32311	12.76619	137.71	17.05
79/ 6/20	2444044.5	-3.78646	3.40557	1.55354	-9.34059	-8.07371	-3.23530	5.32434	12.76317	138.03	16.96
79/ 6/24	2444048.5	-3.80797	3.38686	1.54604	-9.28902	-8.11986	-3.25636	5.32558	12.76016	138.35	16.88
79/ 6/28	2444052.5	-3.82937	3.36805	1.53850	-9.23719	-8.16572	-3.27730	5.32681	12.75717	138.67	16.79
79/ 7/ 2	2444056.5	-3.85065	3.34913	1.53090	-9.18511	-8.21129	-3.29812	5.32803	12.75418	138.98	16.70
79/ 7/ 6	2444060.5	-3.87181	3.33011	1.52326	-9.13278	-8.25658	-3.31883	5.32925	12.75121	139.30	16.61
79/ 7/10	2444064.5	-3.89285	3.31099	1.51557	-9.08019	-8.30158	-3.33942	5.33047	12.74825	139.62	16.52
79/ 7/14	2444068.5	-3.91377	3.29176	1.50783	-9.02736	-8.34629	-3.35989	5.33168	12.74530	139.93	16.43
79/ 7/18	2444072.5	-3.93456	3.27242	1.50004	-8.97428	-8.39071	-3.38024	5.33288	12.74236	140.25	16.34
79/ 7/22	2444076.5	-3.95523	3.25299	1.49221	-8.92096	-8.43483	-3.40048	5.33409	12.73943	140.56	16.25
79/ 7/26	2444080.5	-3.97578	3.23345	1.48433	-8.86739	-8.47866	-3.42059	5.33528	12.73651	140.88	16.15
79/ 7/30	2444084.5	-3.99620	3.21381	1.47641	-8.81358	-8.52220	-3.44058	5.33648	12.73361	141.19	16.06
79/ 8/ 3	2444088.5	-4.01650	3.19408	1.46844	-8.75954	-8.56545	-3.46045	5.33767	12.73071	141.51	15.97
79/ 8/ 7	2444092.5	-4.03667	3.17424	1.46042	-8.70525	-8.60839	-3.48021	5.33885	12.72783	141.82	15.88
79/ 8/11	2444096.5	-4.05672	3.15430	1.45236	-8.65073	-8.65105	-3.49984	5.34003	12.72496	142.13	15.78
79/ 8/15	2444100.5	-4.07664	3.13427	1.44425	-8.59598	-8.69340	-3.51934	5.34121	12.72210	142.45	15.69
79/ 8/19	2444104.5	-4.09644	3.11414	1.43610	-8.54100	-8.73546	-3.53873	5.34238	12.71926	142.76	15.59
79/ 8/23	2444108.5	-4.11610	3.09391	1.42790	-8.48579	-8.77722	-3.55799	5.34355	12.71642	143.07	15.50
79/ 8/27	2444112.5	-4.13564	3.07358	1.41966	-8.43035	-8.81867	-3.57713	5.34471	12.71360	143.38	15.40
79/ 8/31	2444116.5	-4.15505	3.05316	1.41137	-8.37468	-8.85983	-3.59615	5.34586	12.71079	143.69	15.31
79/ 9/ 4	2444120.5	-4.17434	3.03265	1.40304	-8.31878	-8.90069	-3.61505	5.34702	12.70799	144.00	15.21
79/ 9/ 8	2444124.5	-4.19349	3.01204	1.39467	-8.26267	-8.94124	-3.63382	5.34816	12.70520	144.31	15.12
79/ 9/12	2444128.5	-4.21251	2.99134	1.38625	-8.20633	-8.98149	-3.65246	5.34930	12.70242	144.62	15.02
79/ 9/16	2444132.5	-4.23141	2.97054	1.37779	-8.14978	-9.02143	-3.67098	5.35044	12.69965	144.93	14.92
79/ 9/20	2444136.5	-4.25017	2.94965	1.36929	-8.09301	-9.06107	-3.68937	5.35157	12.69690	145.24	14.82
79/ 9/24	2444140.5	-4.26880	2.92868	1.36075	-8.03602	-9.10040	-3.70763	5.35270	12.69415	145.55	14.73
79/ 9/28	2444144.5	-4.28730	2.90761	1.35216	-7.97883	-9.13942	-3.72577	5.35382	12.69142	145.86	14.63
79/10/ 2	2444148.5	-4.30566	2.88645	1.34353	-7.92143	-9.17814	-3.74379	5.35494	12.68870	146.16	14.53
79/10/ 6	2444152.5	-4.32390	2.86520	1.33486	-7.86381	-9.21655	-3.76167	5.35606	12.68600	146.47	14.43
79/10/10	2444156.5	-4.34200	2.84387	1.32615	-7.80600	-9.25465	-3.77943	5.35716	12.68330	146.78	14.33
79/10/14	2444160.5	-4.35996	2.82244	1.31740	-7.74797	-9.29244	-3.79706	5.35827	12.68063	147.08	14.23
79/10/18	2444164.5	-4.37780	2.80093	1.30861	-7.68975	-9.32992	-3.81456	5.35936	12.67796	147.39	14.13
79/10/22	2444168.5	-4.39549	2.77933	1.29978	-7.63133	-9.36710	-3.83194	5.36045	12.67531	147.69	14.03

1.5 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — JUPITER

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79/10/26	2444172.5	-4.41305	2.75765	1.29090	-7.57271	-9.40396	-3.84918	5.36154	12.67267	148.00	13.93
79/10/30	2444176.5	-4.43048	2.73589	1.28199	-7.51389	-9.44051	-3.86630	5.36262	12.67004	148.30	13.83
79/11/ 3	2444180.5	-4.44777	2.71403	1.27304	-7.45488	-9.47674	-3.88329	5.36370	12.66743	148.61	13.73
79/11/ 7	2444184.5	-4.46492	2.69210	1.26405	-7.39568	-9.51267	-3.90015	5.36477	12.66484	148.91	13.63
79/11/11	2444188.5	-4.48194	2.67008	1.25502	-7.33629	-9.54828	-3.91687	5.36584	12.66226	149.22	13.53
79/11/15	2444192.5	-4.49882	2.64798	1.24595	-7.27670	-9.58358	-3.93347	5.36690	12.65969	149.52	13.42
79/11/19	2444196.5	-4.51556	2.62580	1.23685	-7.21694	-9.61857	-3.94994	5.36795	12.65714	149.82	13.32
79/11/23	2444200.5	-4.53217	2.60354	1.22770	-7.15698	-9.65325	-3.96628	5.36900	12.65460	150.12	13.22
79/11/27	2444204.5	-4.54863	2.58120	1.21852	-7.09684	-9.68761	-3.98249	5.37005	12.65208	150.43	13.12
79/12/ 1	2444208.5	-4.56496	2.55878	1.20930	-7.03652	-9.72165	-3.99857	5.37109	12.64957	150.73	13.01
79/12/ 5	2444212.5	-4.58114	2.53629	1.20005	-6.97602	-9.75538	-4.01452	5.37212	12.64708	151.03	12.91
79/12/ 9	2444216.5	-4.59719	2.51371	1.19075	-6.91533	-9.78878	-4.03033	5.37315	12.64459	151.33	12.80
79/12/13	2444220.5	-4.61309	2.49106	1.18143	-6.85448	-9.82187	-4.04602	5.37417	12.64213	151.63	12.70
79/12/17	2444224.5	-4.62886	2.46833	1.17206	-6.79345	-9.85465	-4.06157	5.37519	12.63967	151.93	12.59
79/12/21	2444228.5	-4.64448	2.44553	1.16266	-6.73224	-9.88710	-4.07698	5.37620	12.63723	152.23	12.49
79/12/25	2444232.5	-4.65996	2.42265	1.15322	-6.67087	-9.91924	-4.09227	5.37721	12.63481	152.53	12.38
79/12/29	2444236.5	-4.67530	2.39970	1.14375	-6.60933	-9.95105	-4.10742	5.37821	12.63240	152.83	12.28
80/ 1/ 2	2444240.5	-4.69050	2.37667	1.13425	-6.54762	-9.98255	-4.12244	5.37921	12.63000	153.13	12.17
80/ 1/ 6	2444244.5	-4.70555	2.35357	1.12470	-6.48574	-10.01372	-4.13733	5.38020	12.62762	153.43	12.07
80/ 1/10	2444248.5	-4.72047	2.33040	1.11513	-6.42370	-10.04457	-4.15208	5.38118	12.62526	153.73	11.96
80/ 1/14	2444252.5	-4.73523	2.30716	1.10552	-6.36150	-10.07511	-4.16669	5.38216	12.62291	154.02	11.85
80/ 1/18	2444256.5	-4.74986	2.28385	1.09588	-6.29914	-10.10532	-4.18118	5.38313	12.62057	154.32	11.75
80/ 1/22	2444260.5	-4.76434	2.26047	1.08620	-6.23663	-10.13521	-4.19553	5.38410	12.61825	154.62	11.64
80/ 1/26	2444264.5	-4.77867	2.23703	1.07649	-6.17395	-10.16477	-4.20974	5.38506	12.61595	154.91	11.53
80/ 1/30	2444268.5	-4.79286	2.21351	1.06675	-6.11112	-10.19401	-4.22382	5.38601	12.61366	155.21	11.42
80/ 2/ 3	2444272.5	-4.80691	2.18993	1.05698	-6.04814	-10.22293	-4.23776	5.38696	12.61138	155.51	11.32
80/ 2/ 7	2444276.5	-4.82081	2.16628	1.04717	-5.98501	-10.25152	-4.25157	5.38790	12.60912	155.80	11.21
80/ 2/11	2444280.5	-4.83456	2.14256	1.03733	-5.92173	-10.27979	-4.26525	5.38884	12.60688	156.10	11.10
80/ 2/15	2444284.5	-4.84817	2.11878	1.02747	-5.85831	-10.30774	-4.27878	5.38977	12.60465	156.39	10.99
80/ 2/19	2444288.5	-4.86163	2.09494	1.01757	-5.79473	-10.33536	-4.29219	5.39070	12.60243	156.69	10.88
80/ 2/23	2444292.5	-4.87494	2.07103	1.00763	-5.73101	-10.36265	-4.30545	5.39162	12.60023	156.98	10.77
80/ 2/27	2444296.5	-4.88811	2.04706	0.99767	-5.66715	-10.38961	-4.31858	5.39253	12.59805	157.28	10.66
80/ 3/ 2	2444300.5	-4.90113	2.02302	0.98768	-5.60314	-10.41625	-4.33157	5.39344	12.59587	157.57	10.55
80/ 3/ 6	2444304.5	-4.91400	1.99893	0.97766	-5.53900	-10.44256	-4.34442	5.39434	12.59371	157.86	10.44
80/ 3/10	2444308.5	-4.92672	1.97478	0.96761	-5.47472	-10.46853	-4.35714	5.39523	12.59156	158.16	10.33
80/ 3/14	2444312.5	-4.93929	1.95056	0.95753	-5.41031	-10.49418	-4.36971	5.39612	12.58943	158.45	10.22
80/ 3/18	2444316.5	-4.95172	1.92629	0.94742	-5.34577	-10.51950	-4.38215	5.39701	12.58731	158.74	10.11
80/ 3/22	2444320.5	-4.96399	1.90196	0.93728	-5.28109	-10.54448	-4.39445	5.39788	12.58520	159.04	10.00
80/ 3/26	2444324.5	-4.97612	1.87757	0.92712	-5.21629	-10.56914	-4.40661	5.39875	12.58311	159.33	9.89
80/ 3/30	2444328.5	-4.98809	1.85313	0.91692	-5.15136	-10.59346	-4.41863	5.39962	12.58103	159.62	9.78
80/ 4/ 3	2444332.5	-4.99992	1.82863	0.90670	-5.08631	-10.61745	-4.43052	5.40048	12.57896	159.91	9.67
80/ 4/ 7	2444336.5	-5.01159	1.80407	0.89645	-5.02113	-10.64111	-4.44226	5.40133	12.57691	160.20	9.55
80/ 4/11	2444340.5	-5.02312	1.77946	0.88617	-4.95583	-10.66444	-4.45386	5.40217	12.57488	160.49	9.44
80/ 4/15	2444344.5	-5.03449	1.75480	0.87587	-4.89042	-10.68744	-4.46532	5.40301	12.57285	160.78	9.33
80/ 4/19	2444348.5	-5.04571	1.73008	0.86554	-4.82489	-10.71010	-4.47665	5.40385	12.57085	161.07	9.22

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80/ 4/23	2444352.5	-5.05678	1.70531	0.85519	-4.75925	-10.73243	-4.48783	5.40467	12.56885	161.36	9.10
80/ 4/27	2444356.5	-5.06770	1.68049	0.84481	-4.69349	-10.75442	-4.49887	5.40549	12.56688	161.65	8.99
80/ 5/ 1	2444360.5	-5.07847	1.65562	0.83440	-4.62763	-10.77609	-4.50977	5.40631	12.56491	161.94	8.88
80/ 5/ 5	2444364.5	-5.08908	1.63070	0.82397	-4.56165	-10.79741	-4.52054	5.40711	12.56296	162.23	8.77
80/ 5/ 9	2444368.5	-5.09954	1.60574	0.81352	-4.49557	-10.81841	-4.53116	5.40791	12.56103	162.52	8.65
80/ 5/13	2444372.5	-5.10985	1.58072	0.80304	-4.42939	-10.83907	-4.54164	5.40871	12.55912	162.81	8.54
80/ 5/17	2444376.5	-5.12001	1.55566	0.79253	-4.36310	-10.85940	-4.55198	5.40950	12.55722	163.10	8.42
80/ 5/21	2444380.5	-5.13001	1.53055	0.78200	-4.29671	-10.87939	-4.56218	5.41028	12.55533	163.39	8.31
80/ 5/25	2444384.5	-5.13986	1.50539	0.77145	-4.23022	-10.89905	-4.57224	5.41105	12.55346	163.68	8.20
80/ 5/29	2444388.5	-5.14956	1.48019	0.76088	-4.16363	-10.91837	-4.58215	5.41182	12.55160	163.96	8.08
80/ 6/ 2	2444392.5	-5.15910	1.45494	0.75028	-4.09694	-10.93736	-4.59193	5.41259	12.54976	164.25	7.97
80/ 6/ 6	2444396.5	-5.16849	1.42965	0.73966	-4.03017	-10.95601	-4.60156	5.41334	12.54793	164.54	7.85
80/ 6/10	2444400.5	-5.17772	1.40432	0.72902	-3.96330	-10.97432	-4.61105	5.41409	12.54612	164.83	7.74
80/ 6/14	2444404.5	-5.18680	1.37895	0.71836	-3.89634	-10.99230	-4.62040	5.41483	12.54433	165.11	7.62
80/ 6/18	2444408.5	-5.19572	1.35353	0.70767	-3.82930	-11.00994	-4.62960	5.41557	12.54255	165.40	7.51
80/ 6/22	2444412.5	-5.20449	1.32808	0.69697	-3.76217	-11.02725	-4.63867	5.41630	12.54079	165.68	7.39
80/ 6/26	2444416.5	-5.21310	1.30259	0.68624	-3.69496	-11.04422	-4.64759	5.41702	12.53904	165.97	7.28
80/ 6/30	2444420.5	-5.22156	1.27705	0.67549	-3.62767	-11.06085	-4.65637	5.41774	12.53731	166.26	7.16
80/ 7/ 4	2444424.5	-5.22987	1.25148	0.66473	-3.56030	-11.07715	-4.66500	5.41845	12.53560	166.54	7.05
80/ 7/ 8	2444428.5	-5.23801	1.22587	0.65394	-3.49285	-11.09311	-4.67350	5.41915	12.53390	166.83	6.93
80/ 7/12	2444432.5	-5.24600	1.20023	0.64313	-3.42532	-11.10874	-4.68185	5.41984	12.53222	167.11	6.81
80/ 7/16	2444436.5	-5.25384	1.17455	0.63231	-3.35772	-11.12403	-4.69006	5.42053	12.53056	167.40	6.70
80/ 7/20	2444440.5	-5.26152	1.14883	0.62147	-3.29004	-11.13898	-4.69813	5.42122	12.52892	167.68	6.58
80/ 7/24	2444444.5	-5.26904	1.12308	0.61060	-3.22230	-11.15360	-4.70606	5.42189	12.52729	167.97	6.47
80/ 7/28	2444448.5	-5.27641	1.09730	0.59972	-3.15449	-11.16789	-4.71384	5.42256	12.52568	168.25	6.35
80/ 8/ 1	2444452.5	-5.28361	1.07148	0.58882	-3.08660	-11.18183	-4.72148	5.42322	12.52409	168.54	6.23
80/ 8/ 5	2444456.5	-5.29067	1.04563	0.57791	-3.01866	-11.19545	-4.72898	5.42388	12.52252	168.82	6.12
80/ 8/ 9	2444460.5	-5.29756	1.01975	0.56697	-2.95065	-11.20872	-4.73634	5.42453	12.52097	169.10	6.00
80/ 8/13	2444464.5	-5.30430	0.99384	0.55602	-2.88257	-11.22167	-4.74355	5.42517	12.51944	169.39	5.88
80/ 8/17	2444468.5	-5.31088	0.96791	0.54506	-2.81443	-11.23427	-4.75063	5.42581	12.51792	169.67	5.77
80/ 8/21	2444472.5	-5.31730	0.94194	0.53407	-2.74624	-11.24654	-4.75755	5.42643	12.51642	169.95	5.65
80/ 8/25	2444476.5	-5.32357	0.91594	0.52308	-2.67798	-11.25847	-4.76434	5.42706	12.51494	170.24	5.53
80/ 8/29	2444480.5	-5.32968	0.88992	0.51206	-2.60967	-11.27007	-4.77098	5.42767	12.51348	170.52	5.41
80/ 9/ 2	2444484.5	-5.33563	0.86387	0.50103	-2.54130	-11.28132	-4.77748	5.42828	12.51203	170.80	5.30
80/ 9/ 6	2444488.5	-5.34142	0.83780	0.48999	-2.47288	-11.29224	-4.78384	5.42888	12.51060	171.09	5.18
80/ 9/10	2444492.5	-5.34705	0.81170	0.47893	-2.40441	-11.30283	-4.79005	5.42947	12.50918	171.37	5.06
80/ 9/14	2444496.5	-5.35253	0.78557	0.46786	-2.33589	-11.31307	-4.79612	5.43006	12.50779	171.65	4.94
80/ 9/18	2444500.5	-5.35784	0.75943	0.45677	-2.26732	-11.32298	-4.80205	5.43064	12.50641	171.93	4.82
80/ 9/22	2444504.5	-5.36300	0.73326	0.44567	-2.19871	-11.33255	-4.80783	5.43121	12.50505	172.21	4.71
80/ 9/26	2444508.5	-5.36800	0.70707	0.43456	-2.13005	-11.34178	-4.81347	5.43178	12.50370	172.50	4.59
80/ 9/30	2444512.5	-5.37284	0.68086	0.42343	-2.06135	-11.35068	-4.81896	5.43234	12.50238	172.78	4.47
80/10/ 4	2444516.5	-5.37753	0.65462	0.41229	-1.99261	-11.35924	-4.82431	5.43289	12.50107	173.06	4.35
80/10/ 8	2444520.5	-5.38205	0.62837	0.40114	-1.92384	-11.36746	-4.82952	5.43344	12.49978	173.34	4.23
80/10/12	2444524.5	-5.38642	0.60210	0.38998	-1.85502	-11.37534	-4.83458	5.43398	12.49850	173.62	4.12
80/10/16	2444528.5	-5.39062	0.57581	0.37880	-1.78617	-11.38288	-4.83950	5.43451	12.49725	173.90	4.00

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80/10/20	2444532.5	-5.39467	0.54951	0.36762	-1.71729	-11.39009	-4.84427	5.43503	12.49601	174.18	3.88
80/10/24	2444536.5	-5.39856	0.52319	0.35642	-1.64837	-11.39696	-4.84890	5.43555	12.49478	174.46	3.76
80/10/28	2444540.5	-5.40228	0.49685	0.34521	-1.57943	-11.40349	-4.85339	5.43606	12.49358	174.75	3.64
80/11/ 1	2444544.5	-5.40585	0.47050	0.33400	-1.51045	-11.40968	-4.85773	5.43656	12.49239	175.03	3.52
80/11/ 5	2444548.5	-5.40926	0.44414	0.32277	-1.44145	-11.41554	-4.86193	5.43705	12.49122	175.31	3.40
80/11/ 9	2444552.5	-5.41251	0.41776	0.31153	-1.37243	-11.42106	-4.86598	5.43754	12.49007	175.59	3.28
80/11/13	2444556.5	-5.41560	0.39137	0.30029	-1.30338	-11.42624	-4.86989	5.43802	12.48894	175.87	3.17
80/11/17	2444560.5	-5.41854	0.36496	0.28903	-1.23430	-11.43108	-4.87366	5.43850	12.48782	176.15	3.05
80/11/21	2444564.5	-5.42131	0.33855	0.27777	-1.16521	-11.43558	-4.87728	5.43897	12.48671	176.43	2.93
80/11/25	2444568.5	-5.42392	0.31213	0.26650	-1.09610	-11.43974	-4.88075	5.43943	12.48563	176.71	2.81
80/11/29	2444572.5	-5.42637	0.28570	0.25522	-1.02698	-11.44356	-4.88408	5.43988	12.48455	176.99	2.69
80/12/ 3	2444576.5	-5.42866	0.25926	0.24393	-0.95784	-11.44705	-4.88726	5.44032	12.48350	177.27	2.57
80/12/ 7	2444580.5	-5.43080	0.23281	0.23264	-0.88869	-11.45019	-4.89030	5.44076	12.48246	177.55	2.45
80/12/11	2444584.5	-5.43277	0.20635	0.22134	-0.81952	-11.45300	-4.89320	5.44119	12.48143	177.82	2.33
80/12/15	2444588.5	-5.43458	0.17989	0.21003	-0.75036	-11.45546	-4.89594	5.44161	12.48042	178.10	2.21
80/12/19	2444592.5	-5.43624	0.15342	0.19872	-0.68118	-11.45759	-4.89855	5.44203	12.47943	178.38	2.09
80/12/23	2444596.5	-5.43773	0.12695	0.18740	-0.61201	-11.45938	-4.90100	5.44244	12.47845	178.66	1.97
80/12/27	2444600.5	-5.43907	0.10048	0.17607	-0.54283	-11.46083	-4.90332	5.44284	12.47750	178.94	1.85
80/12/31	2444604.5	-5.44024	0.07400	0.16474	-0.47365	-11.46195	-4.90548	5.44324	12.47655	179.22	1.73
81/ 1/ 4	2444608.5	-5.44125	0.04752	0.15341	-0.40447	-11.46272	-4.90751	5.44362	12.47563	179.50	1.61
81/ 1/ 8	2444612.5	-5.44211	0.02104	0.14207	-0.33529	-11.46316	-4.90938	5.44400	12.47472	179.78	1.50
81/ 1/12	2444616.5	-5.44280	-0.00544	0.13072	-0.26612	-11.46326	-4.91112	5.44437	12.47382	180.06	1.38
81/ 1/16	2444620.5	-5.44334	-0.03193	0.11938	-0.19696	-11.46303	-4.91271	5.44474	12.47295	180.34	1.26
81/ 1/20	2444624.5	-5.44371	-0.05841	0.10802	-0.12781	-11.46245	-4.91415	5.44510	12.47209	180.61	1.14
81/ 1/24	2444628.5	-5.44393	-0.08489	0.09667	-0.05867	-11.46155	-4.91545	5.44545	12.47125	180.89	1.02
81/ 1/28	2444632.5	-5.44398	-0.11136	0.08531	0.01046	-11.46030	-4.91660	5.44579	12.47043	181.17	0.90
81/ 2/ 1	2444636.5	-5.44388	-0.13784	0.07395	0.07958	-11.45872	-4.91761	5.44613	12.46962	181.45	0.78
81/ 2/ 5	2444640.5	-5.44362	-0.16431	0.06259	0.14868	-11.45681	-4.91848	5.44645	12.46884	181.73	0.66
81/ 2/ 9	2444644.5	-5.44319	-0.19077	0.05123	0.21777	-11.45456	-4.91920	5.44678	12.46807	182.01	0.54
81/ 2/13	2444648.5	-5.44261	-0.21723	0.03986	0.28683	-11.45197	-4.91978	5.44709	12.46732	182.29	0.42
81/ 2/17	2444652.5	-5.44187	-0.24368	0.02850	0.35588	-11.44905	-4.92021	5.44740	12.46659	182.56	0.30
81/ 2/21	2444656.5	-5.44097	-0.27013	0.01713	0.42491	-11.44579	-4.92050	5.44769	12.46587	182.84	0.18
81/ 2/25	2444660.5	-5.43990	-0.29657	0.00576	0.49391	-11.44219	-4.92064	5.44799	12.46517	183.12	0.06
81/ 3/ 1	2444664.5	-5.43868	-0.32299	-0.00560	0.56288	-11.43826	-4.92064	5.44827	12.46449	183.40	-0.06
81/ 3/ 5	2444668.5	-5.43730	-0.34941	-0.01697	0.63183	-11.43400	-4.92049	5.44855	12.46382	183.68	-0.18
81/ 3/ 9	2444672.5	-5.43576	-0.37582	-0.02834	0.70075	-11.42940	-4.92020	5.44881	12.46317	183.96	-0.30
81/ 3/13	2444676.5	-5.43407	-0.40222	-0.03970	0.76963	-11.42447	-4.91977	5.44908	12.46254	184.23	-0.42
81/ 3/17	2444680.5	-5.43221	-0.42861	-0.05107	0.83848	-11.41920	-4.91919	5.44933	12.46193	184.51	-0.54
81/ 3/21	2444684.5	-5.43019	-0.45498	-0.06243	0.90730	-11.41361	-4.91847	5.44958	12.46134	184.79	-0.66
81/ 3/25	2444688.5	-5.42802	-0.48134	-0.07379	0.97608	-11.40767	-4.91760	5.44982	12.46076	185.07	-0.78
81/ 3/29	2444692.5	-5.42568	-0.50769	-0.08515	1.04483	-11.40141	-4.91660	5.45005	12.46020	185.35	-0.90
81/ 4/ 2	2444696.5	-5.42319	-0.53402	-0.09651	1.11353	-11.39481	-4.91544	5.45027	12.45967	185.62	-1.01
81/ 4/ 6	2444700.5	-5.42054	-0.56034	-0.10786	1.18219	-11.38788	-4.91415	5.45049	12.45914	185.90	-1.13
81/ 4/10	2444704.5	-5.41773	-0.58664	-0.11922	1.25081	-11.38062	-4.91271	5.45070	12.45864	186.18	-1.25
81/ 4/14	2444708.5	-5.41476	-0.61292	-0.13056	1.31939	-11.37303	-4.91112	5.45090	12.45816	186.46	-1.37

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM JUPITER

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
81/ 4/18	2444712.5	-5.41163	-0.63918	-0.14191	1.38792	-11.36511	-4.90940	5.45110	12.45769	186.74	-1.49
81/ 4/22	2444716.5	-5.40835	-0.66543	-0.15325	1.45640	-11.35685	-4.90753	5.45128	12.45725	187.01	-1.61
81/ 4/26	2444720.5	-5.40490	-0.69166	-0.16458	1.52483	-11.34827	-4.90552	5.45146	12.45682	187.29	-1.73
81/ 4/30	2444724.5	-5.40130	-0.71786	-0.17591	1.59321	-11.33935	-4.90336	5.45163	12.45641	187.57	-1.85
81/ 5/ 4	2444728.5	-5.39754	-0.74405	-0.18724	1.66154	-11.33011	-4.90107	5.45180	12.45602	187.85	-1.97
81/ 5/ 8	2444732.5	-5.39362	-0.77021	-0.19856	1.72982	-11.32053	-4.89863	5.45196	12.45565	188.13	-2.09
81/ 5/12	2444736.5	-5.38955	-0.79635	-0.20987	1.79804	-11.31063	-4.89605	5.45211	12.45530	188.41	-2.21
81/ 5/16	2444740.5	-5.38532	-0.82247	-0.22118	1.86621	-11.30039	-4.89332	5.45225	12.45497	188.68	-2.32
81/ 5/20	2444744.5	-5.38093	-0.84856	-0.23248	1.93431	-11.28983	-4.89045	5.45238	12.45465	188.96	-2.44
81/ 5/24	2444748.5	-5.37638	-0.87463	-0.24377	2.00236	-11.27893	-4.88744	5.45251	12.45435	189.24	-2.56
81/ 5/28	2444752.5	-5.37167	-0.90068	-0.25506	2.07035	-11.26771	-4.88428	5.45263	12.45407	189.52	-2.68
81/ 6/ 1	2444756.5	-5.36681	-0.92669	-0.26634	2.13827	-11.25615	-4.88099	5.45274	12.45380	189.80	-2.80
81/ 6/ 5	2444760.5	-5.36179	-0.95268	-0.27761	2.20612	-11.24427	-4.87754	5.45285	12.45355	190.08	-2.92
81/ 6/ 9	2444764.5	-5.35662	-0.97865	-0.28888	2.27390	-11.23205	-4.87396	5.45294	12.45332	190.35	-3.04
81/ 6/13	2444768.5	-5.35129	-1.00458	-0.30013	2.34162	-11.21951	-4.87024	5.45303	12.45310	190.63	-3.16
81/ 6/17	2444772.5	-5.34580	-1.03048	-0.31138	2.40927	-11.20664	-4.86637	5.45311	12.45291	190.91	-3.27
81/ 6/21	2444776.5	-5.34016	-1.05636	-0.32261	2.47684	-11.19344	-4.86236	5.45319	12.45273	191.19	-3.39
81/ 6/25	2444780.5	-5.33436	-1.08220	-0.33384	2.54434	-11.17992	-4.85820	5.45325	12.45256	191.47	-3.51
81/ 6/29	2444784.5	-5.32840	-1.10801	-0.34506	2.61176	-11.16607	-4.85391	5.45331	12.45242	191.75	-3.63
81/ 7/ 3	2444788.5	-5.32229	-1.13379	-0.35627	2.67910	-11.15189	-4.84947	5.45336	12.45229	192.03	-3.75
81/ 7/ 7	2444792.5	-5.31602	-1.15954	-0.36747	2.74636	-11.13738	-4.84489	5.45341	12.45218	192.30	-3.86
81/ 7/11	2444796.5	-5.30960	-1.18525	-0.37865	2.81354	-11.12255	-4.84017	5.45344	12.45208	192.58	-3.98
81/ 7/15	2444800.5	-5.30302	-1.21093	-0.38983	2.88063	-11.10740	-4.83531	5.45347	12.45201	192.86	-4.10
81/ 7/19	2444804.5	-5.29629	-1.23657	-0.40100	2.94764	-11.09191	-4.83030	5.45349	12.45195	193.14	-4.22
81/ 7/23	2444808.5	-5.28940	-1.26218	-0.41215	3.01456	-11.07611	-4.82516	5.45351	12.45190	193.42	-4.33
81/ 7/27	2444812.5	-5.28236	-1.28775	-0.42329	3.08140	-11.05998	-4.81987	5.45351	12.45188	193.70	-4.45
81/ 7/31	2444816.5	-5.27517	-1.31328	-0.43442	3.14814	-11.04353	-4.81444	5.45351	12.45188	193.98	-4.57
81/ 8/ 4	2444820.5	-5.26782	-1.33877	-0.44553	3.21479	-11.02676	-4.80888	5.45350	12.45189	194.26	-4.69
81/ 8/ 8	2444824.5	-5.26031	-1.36422	-0.45664	3.28135	-11.00966	-4.80317	5.45349	12.45192	194.54	-4.80
81/ 8/12	2444828.5	-5.25266	-1.38964	-0.46773	3.34782	-10.99224	-4.79732	5.45346	12.45196	194.82	-4.92
81/ 8/16	2444832.5	-5.24485	-1.41501	-0.47880	3.41418	-10.97449	-4.79133	5.45343	12.45203	195.10	-5.04
81/ 8/20	2444836.5	-5.23688	-1.44034	-0.48986	3.48045	-10.95643	-4.78520	5.45339	12.45211	195.38	-5.15
81/ 8/24	2444840.5	-5.22877	-1.46563	-0.50091	3.54662	-10.93804	-4.77893	5.45335	12.45220	195.66	-5.27
81/ 8/28	2444844.5	-5.22050	-1.49088	-0.51194	3.61268	-10.91933	-4.77251	5.45329	12.45231	195.94	-5.39
81/ 9/ 1	2444848.5	-5.21207	-1.51609	-0.52296	3.67864	-10.90030	-4.76596	5.45323	12.45244	196.22	-5.50
81/ 9/ 5	2444852.5	-5.20350	-1.54124	-0.53396	3.74449	-10.88095	-4.75927	5.45316	12.45259	196.50	-5.62
81/ 9/ 9	2444856.5	-5.19477	-1.56636	-0.54495	3.81023	-10.86129	-4.75244	5.45308	12.45276	196.78	-5.74
81/ 9/13	2444860.5	-5.18589	-1.59143	-0.55592	3.87587	-10.84130	-4.74547	5.45300	12.45294	197.06	-5.85
81/ 9/17	2444864.5	-5.17686	-1.61645	-0.56688	3.94139	-10.82100	-4.73836	5.45291	12.45314	197.34	-5.97
81/ 9/21	2444868.5	-5.16768	-1.64142	-0.57781	4.00680	-10.80038	-4.73111	5.45281	12.45336	197.62	-6.08
81/ 9/25	2444872.5	-5.15835	-1.66635	-0.58874	4.07209	-10.77945	-4.72373	5.45270	12.45359	197.90	-6.20
81/ 9/29	2444876.5	-5.14887	-1.69123	-0.59964	4.13727	-10.75820	-4.71620	5.45258	12.45385	198.18	-6.31
81/10/ 3	2444880.5	-5.13924	-1.71606	-0.61053	4.20233	-10.73663	-4.70854	5.45246	12.45412	198.46	-6.43
81/10/ 7	2444884.5	-5.12945	-1.74084	-0.62139	4.26727	-10.71475	-4.70074	5.45233	12.45441	198.75	-6.54
81/10/11	2444888.5	-5.11952	-1.76556	-0.63224	4.33209	-10.69256	-4.69280	5.45220	12.45472	199.03	-6.66

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				HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM					JUPITER		
81/10/15	2444892.5	-5.10944	-1.79024	-0.64308	4.39679	-10.67005	-4.68472	5.45205	12.45505	199.31	-6.77
81/10/19	2444896.5	-5.09921	-1.81486	-0.65389	4.46136	-10.64723	-4.67651	5.45190	12.45540	199.59	-6.89
81/10/23	2444900.5	-5.08882	-1.83943	-0.66468	4.52581	-10.62410	-4.66816	5.45174	12.45577	199.87	-7.00
81/10/27	2444904.5	-5.07830	-1.86395	-0.67546	4.59013	-10.60066	-4.65968	5.45157	12.45616	200.16	-7.12
81/10/31	2444908.5	-5.06762	-1.88841	-0.68621	4.65432	-10.57691	-4.65106	5.45140	12.45657	200.44	-7.23
81/11/ 4	2444912.5	-5.05679	-1.91282	-0.69695	4.71839	-10.55285	-4.64230	5.45121	12.45700	200.72	-7.35
81/11/ 8	2444916.5	-5.04582	-1.93717	-0.70766	4.78233	-10.52848	-4.63341	5.45102	12.45744	201.00	-7.46
81/11/12	2444920.5	-5.03469	-1.96146	-0.71836	4.84613	-10.50379	-4.62438	5.45083	12.45791	201.29	-7.57
81/11/16	2444924.5	-5.02343	-1.98570	-0.72903	4.90980	-10.47880	-4.61521	5.45062	12.45839	201.57	-7.69
81/11/20	2444928.5	-5.01201	-2.00988	-0.73968	4.97334	-10.45350	-4.60591	5.45041	12.45889	201.85	-7.80
81/11/24	2444932.5	-5.00045	-2.03400	-0.75031	5.03673	-10.42789	-4.59647	5.45019	12.45941	202.13	-7.91
81/11/28	2444936.5	-4.98874	-2.05806	-0.76092	5.09999	-10.40197	-4.58690	5.44996	12.45995	202.42	-8.03
81/12/ 2	2444940.5	-4.97688	-2.08206	-0.77150	5.16311	-10.37574	-4.57719	5.44973	12.46051	202.70	-8.14
81/12/ 6	2444944.5	-4.96488	-2.10600	-0.78206	5.22608	-10.34921	-4.56734	5.44949	12.46109	202.99	-8.25
81/12/10	2444948.5	-4.95274	-2.12988	-0.79260	5.28891	-10.32237	-4.55737	5.44924	12.46169	203.27	-8.36
81/12/14	2444952.5	-4.94045	-2.15369	-0.80312	5.35160	-10.29523	-4.54725	5.44898	12.46230	203.55	-8.48
81/12/18	2444956.5	-4.92801	-2.17744	-0.81361	5.41414	-10.26778	-4.53701	5.44872	12.46293	203.84	-8.59
81/12/22	2444960.5	-4.91543	-2.20113	-0.82408	5.47653	-10.24003	-4.52662	5.44845	12.46358	204.12	-8.70
81/12/26	2444964.5	-4.90271	-2.22476	-0.83453	5.53877	-10.21197	-4.51611	5.44817	12.46425	204.41	-8.81
81/12/30	2444968.5	-4.88984	-2.24831	-0.84495	5.60086	-10.18361	-4.50546	5.44788	12.46494	204.69	-8.92
82/ 1/ 3	2444972.5	-4.87683	-2.27181	-0.85535	5.66280	-10.15495	-4.49468	5.44759	12.46565	204.98	-9.03
82/ 1/ 7	2444976.5	-4.86368	-2.29523	-0.86572	5.72458	-10.12599	-4.48376	5.44728	12.46638	205.26	-9.14
82/ 1/11	2444980.5	-4.85038	-2.31859	-0.87606	5.78621	-10.09672	-4.47271	5.44698	12.46712	205.55	-9.26
82/ 1/15	2444984.5	-4.83694	-2.34188	-0.88638	5.84768	-10.06715	-4.46153	5.44666	12.46788	205.83	-9.37
82/ 1/19	2444988.5	-4.82336	-2.36511	-0.89668	5.90899	-10.03729	-4.45021	5.44634	12.46867	206.12	-9.48
82/ 1/23	2444992.5	-4.80964	-2.38826	-0.90694	5.97014	-10.00712	-4.43877	5.44600	12.46947	206.41	-9.59
82/ 1/27	2444996.5	-4.79578	-2.41134	-0.91718	6.03113	-9.97665	-4.42719	5.44567	12.47029	206.69	-9.70
82/ 1/31	2445000.5	-4.78177	-2.43435	-0.92740	6.09195	-9.94588	-4.41547	5.44532	12.47112	206.98	-9.81
82/ 2/ 4	2445004.5	-4.76763	-2.45730	-0.93758	6.15261	-9.91482	-4.40363	5.44497	12.47198	207.27	-9.92
82/ 2/ 8	2445008.5	-4.75335	-2.48016	-0.94774	6.21311	-9.88345	-4.39165	5.44461	12.47285	207.55	-10.02
82/ 2/12	2445012.5	-4.73892	-2.50296	-0.95788	6.27343	-9.85179	-4.37954	5.44424	12.47374	207.84	-10.13
82/ 2/16	2445016.5	-4.72436	-2.52568	-0.96798	6.33359	-9.81983	-4.36730	5.44386	12.47464	208.13	-10.24
82/ 2/20	2445020.5	-4.70966	-2.54833	-0.97805	6.39357	-9.78757	-4.35493	5.44348	12.47556	208.42	-10.35
82/ 2/24	2445024.5	-4.69482	-2.57090	-0.98810	6.45337	-9.75501	-4.34242	5.44309	12.47649	208.71	-10.46
82/ 2/28	2445028.5	-4.67984	-2.59340	-0.99812	6.51300	-9.72216	-4.32979	5.44269	12.47745	208.99	-10.57
82/ 3/ 4	2445032.5	-4.66473	-2.61582	-1.00811	6.57245	-9.68902	-4.31702	5.44229	12.47841	209.28	-10.67
82/ 3/ 8	2445036.5	-4.64948	-2.63817	-1.01806	6.63172	-9.65558	-4.30413	5.44188	12.47940	209.57	-10.78
82/ 3/12	2445040.5	-4.63409	-2.66044	-1.02799	6.69081	-9.62185	-4.29110	5.44146	12.48040	209.86	-10.89
82/ 3/16	2445044.5	-4.61856	-2.68262	-1.03789	6.74971	-9.58782	-4.27794	5.44103	12.48141	210.15	-11.00
82/ 3/20	2445048.5	-4.60290	-2.70473	-1.04776	6.80843	-9.55351	-4.26466	5.44060	12.48245	210.44	-11.10
82/ 3/24	2445052.5	-4.58711	-2.72676	-1.05759	6.86696	-9.51890	-4.25124	5.44016	12.48350	210.73	-11.21
82/ 3/28	2445056.5	-4.57118	-2.74872	-1.06740	6.92531	-9.48400	-4.23769	5.43971	12.48456	211.02	-11.32
82/ 4/ 1	2445060.5	-4.55511	-2.77058	-1.07717	6.98346	-9.44882	-4.22402	5.43925	12.48564	211.31	-11.42
82/ 4/ 5	2445064.5	-4.53891	-2.79237	-1.08692	7.04142	-9.41335	-4.21022	5.43879	12.48674	211.60	-11.53
82/ 4/ 9	2445068.5	-4.52258	-2.81408	-1.09663	7.09919	-9.37759	-4.19629	5.43832	12.48785	211.89	-11.63

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
82/ 4/13	2445072.5	-4.50611	-2.83570	-1.10630	7.15676	-9.34154	-4.18223	5.43784	12.48898	212.18	-11.74
82/ 4/17	2445076.5	-4.48951	-2.85724	-1.11595	7.21413	-9.30521	-4.16805	5.43736	12.49013	212.47	-11.84
82/ 4/21	2445080.5	-4.47278	-2.87869	-1.12556	7.27131	-9.26860	-4.15374	5.43686	12.49129	212.77	-11.95
82/ 4/25	2445084.5	-4.45591	-2.90006	-1.13514	7.32829	-9.23170	-4.13930	5.43637	12.49248	213.06	-12.05
82/ 4/29	2445088.5	-4.43892	-2.92135	-1.14469	7.38507	-9.19452	-4.12474	5.43586	12.49368	213.35	-12.16
82/ 5/ 3	2445092.5	-4.42179	-2.94254	-1.15420	7.44164	-9.15706	-4.11005	5.43535	12.49489	213.64	-12.26
82/ 5/ 7	2445096.5	-4.40454	-2.96365	-1.16368	7.49802	-9.11932	-4.09524	5.43483	12.49612	213.94	-12.36
82/ 5/11	2445100.5	-4.38715	-2.98468	-1.17312	7.55418	-9.08129	-4.08030	5.43430	12.49737	214.23	-12.47
82/ 5/15	2445104.5	-4.36963	-3.00561	-1.18253	7.61014	-9.04299	-4.06523	5.43376	12.49864	214.52	-12.57
82/ 5/19	2445108.5	-4.35199	-3.02646	-1.19190	7.66589	-9.00440	-4.05004	5.43322	12.49992	214.82	-12.67
82/ 5/23	2445112.5	-4.33421	-3.04722	-1.20124	7.72142	-8.96554	-4.03473	5.43267	12.50121	215.11	-12.77
82/ 5/27	2445116.5	-4.31631	-3.06788	-1.21054	7.77675	-8.92640	-4.01929	5.43212	12.50253	215.40	-12.88
82/ 5/31	2445120.5	-4.29828	-3.08846	-1.21981	7.83186	-8.88699	-4.00373	5.43155	12.50385	215.70	-12.98
82/ 6/ 4	2445124.5	-4.28013	-3.10894	-1.22904	7.88675	-8.84730	-3.98804	5.43098	12.50520	215.99	-13.08
82/ 6/ 8	2445128.5	-4.26184	-3.12934	-1.23824	7.94143	-8.80734	-3.97223	5.43040	12.50656	216.29	-13.18
82/ 6/12	2445132.5	-4.24343	-3.14964	-1.24740	7.99589	-8.76710	-3.95630	5.42982	12.50795	216.58	-13.28
82/ 6/16	2445136.5	-4.22490	-3.16984	-1.25652	8.05013	-8.72660	-3.94025	5.42923	12.50934	216.88	-13.38
82/ 6/20	2445140.5	-4.20624	-3.18996	-1.26560	8.10415	-8.68582	-3.92408	5.42863	12.51076	217.18	-13.48
82/ 6/24	2445144.5	-4.18746	-3.20997	-1.27465	8.15794	-8.64477	-3.90778	5.42802	12.51219	217.47	-13.58
82/ 6/28	2445148.5	-4.16855	-3.22990	-1.28366	8.21151	-8.60346	-3.89137	5.42741	12.51364	217.77	-13.68
82/ 7/ 2	2445152.5	-4.14952	-3.24973	-1.29263	8.26486	-8.56187	-3.87483	5.42679	12.51511	218.07	-13.78
82/ 7/ 6	2445156.5	-4.13036	-3.26946	-1.30156	8.31798	-8.52002	-3.85817	5.42617	12.51659	218.36	-13.88
82/ 7/10	2445160.5	-4.11108	-3.28909	-1.31045	8.37087	-8.47791	-3.84140	5.42553	12.51809	218.66	-13.98
82/ 7/14	2445164.5	-4.09169	-3.30863	-1.31931	8.42353	-8.43553	-3.82451	5.42489	12.51961	218.96	-14.08
82/ 7/18	2445168.5	-4.07216	-3.32807	-1.32812	8.47596	-8.39288	-3.80749	5.42425	12.52115	219.26	-14.17
82/ 7/22	2445172.5	-4.05252	-3.34741	-1.33690	8.52816	-8.34997	-3.79036	5.42359	12.52271	219.56	-14.27
82/ 7/26	2445176.5	-4.03276	-3.36665	-1.34564	8.58012	-8.30680	-3.77311	5.42293	12.52429	219.86	-14.37
82/ 7/30	2445180.5	-4.01288	-3.38579	-1.35433	8.63186	-8.26337	-3.75574	5.42227	12.52589	220.16	-14.46
82/ 8/ 3	2445184.5	-3.99288	-3.40482	-1.36299	8.68335	-8.21967	-3.73826	5.42159	12.52750	220.46	-14.56
82/ 8/ 7	2445188.5	-3.97276	-3.42376	-1.37161	8.73461	-8.17572	-3.72065	5.42091	12.52913	220.76	-14.66
82/ 8/11	2445192.5	-3.95252	-3.44260	-1.38018	8.78563	-8.13150	-3.70293	5.42022	12.53077	221.06	-14.75
82/ 8/15	2445196.5	-3.93217	-3.46133	-1.38871	8.83641	-8.08702	-3.68509	5.41953	12.53243	221.36	-14.85
82/ 8/19	2445200.5	-3.91170	-3.47996	-1.39721	8.88694	-8.04229	-3.66714	5.41883	12.53411	221.66	-14.94
82/ 8/23	2445204.5	-3.89111	-3.49849	-1.40566	8.93723	-7.99730	-3.64907	5.41812	12.53581	221.96	-15.04
82/ 8/27	2445208.5	-3.87040	-3.51691	-1.41407	8.98727	-7.95205	-3.63088	5.41741	12.53752	222.26	-15.13
82/ 8/31	2445212.5	-3.84958	-3.53523	-1.42243	9.03707	-7.90655	-3.61258	5.41668	12.53925	222.56	-15.22
82/ 9/ 4	2445216.5	-3.82865	-3.55345	-1.43076	9.08662	-7.86079	-3.59416	5.41596	12.54100	222.87	-15.32
82/ 9/ 8	2445220.5	-3.80760	-3.57155	-1.43904	9.13591	-7.81478	-3.57563	5.41522	12.54276	223.17	-15.41
82/ 9/12	2445224.5	-3.78644	-3.58955	-1.44728	9.18496	-7.76852	-3.55698	5.41448	12.54454	223.47	-15.50
82/ 9/16	2445228.5	-3.76516	-3.60744	-1.45547	9.23375	-7.72200	-3.53822	5.41373	12.54633	223.77	-15.60
82/ 9/20	2445232.5	-3.74377	-3.62523	-1.46363	9.28228	-7.67524	-3.51934	5.41298	12.54814	224.08	-15.69
82/ 9/24	2445236.5	-3.72228	-3.64291	-1.47173	9.33056	-7.62823	-3.50035	5.41222	12.54997	224.38	-15.78
82/ 9/28	2445240.5	-3.70066	-3.66047	-1.47980	9.37858	-7.58097	-3.48125	5.41145	12.55181	224.69	-15.87
82/10/ 2	2445244.5	-3.67894	-3.67793	-1.48782	9.42634	-7.53346	-3.46204	5.41068	12.55367	224.99	-15.96
82/10/ 6	2445248.5	-3.65711	-3.69528	-1.49579	9.47384	-7.48570	-3.44272	5.40990	12.55554	225.30	-16.05

1.5 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — JUPITER

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82/10/10	2445252.5	-3.63517	-3.71252	-1.50373	9.52108	-7.43770	-3.42328	5.40911	12.55744	225.60	-16.14
82/10/14	2445256.5	-3.61312	-3.72965	-1.51161	9.56805	-7.38946	-3.40373	5.40832	12.55935	225.91	-16.23
82/10/18	2445260.5	-3.59096	-3.74666	-1.51945	9.61476	-7.34098	-3.38408	5.40752	12.56127	226.22	-16.32
82/10/22	2445264.5	-3.56870	-3.76356	-1.52725	9.66120	-7.29225	-3.36431	5.40671	12.56321	226.52	-16.41
82/10/26	2445268.5	-3.54633	-3.78035	-1.53500	9.70738	-7.24328	-3.34443	5.40590	12.56517	226.83	-16.50
82/10/30	2445272.5	-3.52385	-3.79703	-1.54270	9.75328	-7.19407	-3.32444	5.40508	12.56714	227.14	-16.58
82/11/ 3	2445276.5	-3.50126	-3.81359	-1.55036	9.79892	-7.14462	-3.30434	5.40425	12.56913	227.44	-16.67
82/11/ 7	2445280.5	-3.47857	-3.83004	-1.55797	9.84427	-7.09493	-3.28414	5.40342	12.57113	227.75	-16.76
82/11/11	2445284.5	-3.45578	-3.84637	-1.56553	9.88936	-7.04500	-3.26382	5.40258	12.57315	228.06	-16.84
82/11/15	2445288.5	-3.43288	-3.86259	-1.57305	9.93416	-6.99484	-3.24340	5.40174	12.57518	228.37	-16.93
82/11/19	2445292.5	-3.40988	-3.87869	-1.58052	9.97869	-6.94445	-3.22287	5.40088	12.57722	228.68	-17.02
82/11/23	2445296.5	-3.38678	-3.89468	-1.58794	10.02294	-6.89382	-3.20223	5.40003	12.57928	228.99	-17.10
82/11/27	2445300.5	-3.36357	-3.91054	-1.59531	10.06691	-6.84296	-3.18148	5.39916	12.58135	229.30	-17.19
82/12/ 1	2445304.5	-3.34026	-3.92629	-1.60264	10.11059	-6.79186	-3.16063	5.39829	12.58344	229.61	-17.27
82/12/ 5	2445308.5	-3.31686	-3.94192	-1.60991	10.15399	-6.74054	-3.13968	5.39742	12.58555	229.92	-17.35
82/12/ 9	2445312.5	-3.29335	-3.95744	-1.61714	10.19710	-6.68899	-3.11862	5.39654	12.58767	230.23	-17.44
82/12/13	2445316.5	-3.26974	-3.97283	-1.62432	10.23993	-6.63722	-3.09745	5.39565	12.58980	230.54	-17.52
82/12/17	2445320.5	-3.24604	-3.98810	-1.63145	10.28247	-6.58522	-3.07619	5.39475	12.59195	230.86	-17.60
82/12/21	2445324.5	-3.22223	-4.00326	-1.63854	10.32471	-6.53299	-3.05481	5.39385	12.59411	231.17	-17.68
82/12/25	2445328.5	-3.19833	-4.01829	-1.64557	10.36667	-6.48054	-3.03334	5.39295	12.59629	231.48	-17.77
82/12/29	2445332.5	-3.17434	-4.03320	-1.65255	10.40833	-6.42787	-3.01176	5.39203	12.59848	231.80	-17.85
83/ 1/ 2	2445336.5	-3.15024	-4.04799	-1.65948	10.44970	-6.37499	-2.99008	5.39111	12.60069	232.11	-17.93
83/ 1/ 6	2445340.5	-3.12605	-4.06265	-1.66637	10.49078	-6.32188	-2.96831	5.39019	12.60291	232.42	-18.01
83/ 1/10	2445344.5	-3.10177	-4.07720	-1.67320	10.53156	-6.26855	-2.94643	5.38926	12.60515	232.74	-18.09
83/ 1/14	2445348.5	-3.07740	-4.09162	-1.67998	10.57204	-6.21501	-2.92445	5.38832	12.60741	233.05	-18.17
83/ 1/18	2445352.5	-3.05293	-4.10591	-1.68671	10.61222	-6.16126	-2.90237	5.38738	12.60968	233.37	-18.25
83/ 1/22	2445356.5	-3.02836	-4.12008	-1.69339	10.65211	-6.10728	-2.88019	5.38643	12.61197	233.68	-18.32
83/ 1/26	2445360.5	-3.00371	-4.13413	-1.70002	10.69169	-6.05310	-2.85791	5.38548	12.61427	234.00	-18.40
83/ 1/30	2445364.5	-2.97896	-4.14805	-1.70659	10.73097	-5.99870	-2.83554	5.38452	12.61659	234.32	-18.48
83/ 2/ 3	2445368.5	-2.95413	-4.16184	-1.71312	10.76995	-5.94409	-2.81306	5.38355	12.61893	234.63	-18.55
83/ 2/ 7	2445372.5	-2.92920	-4.17551	-1.71959	10.80862	-5.88927	-2.79049	5.38258	12.62127	234.95	-18.63
83/ 2/11	2445376.5	-2.90419	-4.18906	-1.72601	10.84698	-5.83424	-2.76782	5.38160	12.62364	235.27	-18.71
83/ 2/15	2445380.5	-2.87909	-4.20247	-1.73238	10.88504	-5.77900	-2.74505	5.38062	12.62601	235.59	-18.78
83/ 2/19	2445384.5	-2.85390	-4.21576	-1.73869	10.92278	-5.72356	-2.72219	5.37963	12.62840	235.90	-18.86
83/ 2/23	2445388.5	-2.82862	-4.22891	-1.74496	10.96021	-5.66791	-2.69924	5.37863	12.63081	236.22	-18.93
83/ 2/27	2445392.5	-2.80326	-4.24194	-1.75117	10.99734	-5.61206	-2.67618	5.37763	12.63323	236.54	-19.00
83/ 3/ 3	2445396.5	-2.77781	-4.25484	-1.75732	11.03414	-5.55601	-2.65304	5.37662	12.63567	236.86	-19.08
83/ 3/ 7	2445400.5	-2.75228	-4.26761	-1.76342	11.07063	-5.49976	-2.62980	5.37561	12.63812	237.18	-19.15
83/ 3/11	2445404.5	-2.72666	-4.28025	-1.76947	11.10681	-5.44331	-2.60646	5.37460	12.64059	237.50	-19.22
83/ 3/15	2445408.5	-2.70096	-4.29276	-1.77547	11.14267	-5.38666	-2.58304	5.37357	12.64307	237.82	-19.29
83/ 3/19	2445412.5	-2.67518	-4.30514	-1.78141	11.17821	-5.32981	-2.55952	5.37254	12.64557	238.14	-19.36
83/ 3/23	2445416.5	-2.64931	-4.31739	-1.78729	11.21342	-5.27277	-2.53591	5.37151	12.64808	238.47	-19.43
83/ 3/27	2445420.5	-2.62337	-4.32950	-1.79312	11.24832	-5.21553	-2.51221	5.37047	12.65060	238.79	-19.50
83/ 3/31	2445424.5	-2.59734	-4.34149	-1.79890	11.28289	-5.15810	-2.48842	5.36942	12.65314	239.11	-19.57
83/ 4/ 4	2445428.5	-2.57124	-4.35334	-1.80462	11.31714	-5.10048	-2.46454	5.36837	12.65570	239.43	-19.64

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM JUPITER

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83/ 4/ 8	2445432.5	-2.54505	-4.36505	-1.81029	11.35107	-5.04267	-2.44057	5.36732	12.65827	239.76	-19.71
83/ 4/12	2445436.5	-2.51879	-4.37664	-1.81590	11.38467	-4.98468	-2.41651	5.36626	12.66085	240.08	-19.78
83/ 4/16	2445440.5	-2.49245	-4.38808	-1.82145	11.41794	-4.92649	-2.39236	5.36519	12.66345	240.40	-19.85
83/ 4/20	2445444.5	-2.46604	-4.39940	-1.82695	11.45088	-4.86811	-2.36813	5.36412	12.66607	240.73	-19.91
83/ 4/24	2445448.5	-2.43954	-4.41058	-1.83239	11.48350	-4.80955	-2.34380	5.36304	12.66870	241.05	-19.98
83/ 4/28	2445452.5	-2.41298	-4.42162	-1.83778	11.51578	-4.75080	-2.31939	5.36196	12.67134	241.38	-20.04
83/ 5/ 2	2445456.5	-2.38634	-4.43253	-1.84311	11.54772	-4.69187	-2.29489	5.36087	12.67399	241.70	-20.11
83/ 5/ 6	2445460.5	-2.35962	-4.44330	-1.84838	11.57933	-4.63276	-2.27031	5.35978	12.67666	242.03	-20.17
83/ 5/10	2445464.5	-2.33284	-4.45393	-1.85360	11.61060	-4.57347	-2.24564	5.35868	12.67934	242.36	-20.24
83/ 5/14	2445468.5	-2.30598	-4.46443	-1.85876	11.64154	-4.51400	-2.22088	5.35758	12.68203	242.68	-20.30
83/ 5/18	2445472.5	-2.27905	-4.47479	-1.86386	11.67213	-4.45435	-2.19604	5.35647	12.68474	243.01	-20.36
83/ 5/22	2445476.5	-2.25205	-4.48501	-1.86890	11.70239	-4.39453	-2.17112	5.35536	12.68745	243.34	-20.42
83/ 5/26	2445480.5	-2.22498	-4.49509	-1.87389	11.73230	-4.33453	-2.14611	5.35424	12.69018	243.67	-20.49
83/ 5/30	2445484.5	-2.19784	-4.50504	-1.87882	11.76186	-4.27436	-2.12102	5.35311	12.69292	243.99	-20.55
83/ 6/ 3	2445488.5	-2.17064	-4.51484	-1.88369	11.79108	-4.21401	-2.09585	5.35198	12.69567	244.32	-20.61
83/ 6/ 7	2445492.5	-2.14336	-4.52451	-1.88850	11.81995	-4.15350	-2.07060	5.35085	12.69844	244.65	-20.67
83/ 6/11	2445496.5	-2.11602	-4.53403	-1.89326	11.84848	-4.09282	-2.04526	5.34971	12.70121	244.98	-20.73
83/ 6/15	2445500.5	-2.08862	-4.54342	-1.89795	11.87665	-4.03198	-2.01985	5.34857	12.70400	245.31	-20.78
83/ 6/19	2445504.5	-2.06115	-4.55266	-1.90259	11.90448	-3.97096	-1.99436	5.34742	12.70679	245.64	-20.84
83/ 6/23	2445508.5	-2.03362	-4.56176	-1.90717	11.93195	-3.90979	-1.96879	5.34627	12.70960	245.97	-20.90
83/ 6/27	2445512.5	-2.00602	-4.57072	-1.91169	11.95906	-3.84846	-1.94314	5.34511	12.71242	246.30	-20.96
83/ 7/ 1	2445516.5	-1.97836	-4.57954	-1.91615	11.98583	-3.78697	-1.91741	5.34395	12.71525	246.64	-21.01
83/ 7/ 5	2445520.5	-1.95064	-4.58822	-1.92055	12.01223	-3.72532	-1.89161	5.34278	12.71809	246.97	-21.07
83/ 7/ 9	2445524.5	-1.92286	-4.59676	-1.92489	12.03828	-3.66351	-1.86574	5.34161	12.72095	247.30	-21.12
83/ 7/13	2445528.5	-1.89502	-4.60515	-1.92917	12.06398	-3.60155	-1.83978	5.34043	12.72382	247.63	-21.18
83/ 7/17	2445532.5	-1.86712	-4.61340	-1.93339	12.08931	-3.53943	-1.81376	5.33925	12.72670	247.97	-21.23
83/ 7/21	2445536.5	-1.83916	-4.62150	-1.93755	12.11429	-3.47716	-1.78766	5.33806	12.72959	248.30	-21.28
83/ 7/25	2445540.5	-1.81115	-4.62946	-1.94165	12.13890	-3.41475	-1.76148	5.33687	12.73249	248.63	-21.33
83/ 7/29	2445544.5	-1.78308	-4.63728	-1.94568	12.16315	-3.35218	-1.73523	5.33567	12.73540	248.97	-21.39
83/ 8/ 2	2445548.5	-1.75495	-4.64495	-1.94966	12.18703	-3.28947	-1.70891	5.33447	12.73832	249.30	-21.44
83/ 8/ 6	2445552.5	-1.72677	-4.65248	-1.95358	12.21055	-3.22661	-1.68252	5.33327	12.74125	249.64	-21.49
83/ 8/10	2445556.5	-1.69854	-4.65986	-1.95744	12.23370	-3.16361	-1.65606	5.33206	12.74419	249.97	-21.54
83/ 8/14	2445560.5	-1.67025	-4.66709	-1.96123	12.25648	-3.10047	-1.62953	5.33085	12.74714	250.31	-21.59
83/ 8/18	2445564.5	-1.64191	-4.67418	-1.96497	12.27890	-3.03718	-1.60294	5.32963	12.75011	250.65	-21.63
83/ 8/22	2445568.5	-1.61351	-4.68113	-1.96864	12.30094	-2.97377	-1.57627	5.32841	12.75308	250.98	-21.68
83/ 8/26	2445572.5	-1.58507	-4.68792	-1.97225	12.32261	-2.91021	-1.54953	5.32718	12.75606	251.32	-21.73
83/ 8/30	2445576.5	-1.55658	-4.69457	-1.97580	12.34391	-2.84652	-1.52273	5.32595	12.75906	251.66	-21.78
83/ 9/ 3	2445580.5	-1.52804	-4.70107	-1.97928	12.36484	-2.78270	-1.49587	5.32471	12.76206	251.99	-21.82
83/ 9/ 7	2445584.5	-1.49945	-4.70743	-1.98271	12.38539	-2.71875	-1.46893	5.32347	12.76508	252.33	-21.87
83/ 9/11	2445588.5	-1.47081	-4.71364	-1.98607	12.40557	-2.65467	-1.44194	5.32223	12.76811	252.67	-21.91
83/ 9/15	2445592.5	-1.44213	-4.71969	-1.98937	12.42537	-2.59046	-1.41488	5.32098	12.77114	253.01	-21.95
83/ 9/19	2445596.5	-1.41341	-4.72560	-1.99261	12.44479	-2.52613	-1.38776	5.31973	12.77419	253.35	-22.00
83/ 9/23	2445600.5	-1.38463	-4.73137	-1.99578	12.46383	-2.46168	-1.36057	5.31848	12.77725	253.69	-22.04
83/ 9/27	2445604.5	-1.35582	-4.73698	-1.99889	12.48250	-2.39710	-1.33333	5.31722	12.78032	254.03	-22.08
83/10/ 1	2445608.5	-1.32696	-4.74244	-2.00194	12.50078	-2.33241	-1.30602	5.31595	12.78340	254.37	-22.12

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83/10/ 5	2445612.5	-1.29806	-4.74775	-2.00493	12.51869	-2.26759	-1.27865	5.31468	12.78650	254.71	-22.16
83/10/ 9	2445616.5	-1.26912	-4.75292	-2.00785	12.53622	-2.20266	-1.25123	5.31341	12.78961	255.05	-22.20
83/10/13	2445620.5	-1.24014	-4.75793	-2.01071	12.55336	-2.13761	-1.22375	5.31214	12.79273	255.39	-22.24
83/10/17	2445624.5	-1.21112	-4.76279	-2.01350	12.57012	-2.07245	-1.19620	5.31086	12.79586	255.73	-22.28
83/10/21	2445628.5	-1.18206	-4.76751	-2.01624	12.58650	-2.00718	-1.16860	5.30958	12.79900	256.07	-22.32
83/10/25	2445632.5	-1.15297	-4.77207	-2.01890	12.60249	-1.94180	-1.14095	5.30829	12.80215	256.42	-22.35
83/10/29	2445636.5	-1.12383	-4.77648	-2.02151	12.61810	-1.87630	-1.11323	5.30700	12.80532	256.76	-22.39
83/11/ 2	2445640.5	-1.09467	-4.78074	-2.02405	12.63331	-1.81070	-1.08546	5.30571	12.80849	257.10	-22.43
83/11/ 6	2445644.5	-1.06546	-4.78484	-2.02652	12.64814	-1.74500	-1.05764	5.30441	12.81168	257.45	-22.46
83/11/10	2445648.5	-1.03623	-4.78880	-2.02893	12.66258	-1.67919	-1.02976	5.30311	12.81487	257.79	-22.49
83/11/14	2445652.5	-1.00696	-4.79260	-2.03128	12.67663	-1.61328	-1.00183	5.30180	12.81808	258.13	-22.53
83/11/18	2445656.5	-0.97766	-4.79625	-2.03356	12.69028	-1.54727	-0.97385	5.30049	12.82130	258.48	-22.56
83/11/22	2445660.5	-0.94833	-4.79975	-2.03578	12.70354	-1.48116	-0.94581	5.29918	12.82452	258.82	-22.59
83/11/26	2445664.5	-0.91896	-4.80310	-2.03793	12.71641	-1.41495	-0.91773	5.29787	12.82776	259.17	-22.62
83/11/30	2445668.5	-0.88957	-4.80629	-2.04002	12.72889	-1.34865	-0.88959	5.29655	12.83101	259.51	-22.65
83/12/ 4	2445672.5	-0.86015	-4.80933	-2.04204	12.74097	-1.28226	-0.86141	5.29523	12.83427	259.86	-22.68
83/12/ 8	2445676.5	-0.83070	-4.81221	-2.04400	12.75265	-1.21577	-0.83317	5.29390	12.83754	260.21	-22.71
83/12/12	2445680.5	-0.80123	-4.81495	-2.04589	12.76393	-1.14920	-0.80489	5.29257	12.84081	260.55	-22.74
83/12/16	2445684.5	-0.77173	-4.81752	-2.04772	12.77482	-1.08254	-0.77656	5.29124	12.84410	260.90	-22.77
83/12/20	2445688.5	-0.74221	-4.81995	-2.04948	12.78530	-1.01579	-0.74818	5.28991	12.84739	261.25	-22.79
83/12/24	2445692.5	-0.71266	-4.82222	-2.05118	12.79539	-0.94896	-0.71976	5.28857	12.85070	261.59	-22.82
83/12/28	2445696.5	-0.68309	-4.82433	-2.05281	12.80507	-0.88205	-0.69130	5.28723	12.85402	261.94	-22.85
84/ 1/ 1	2445700.5	-0.65349	-4.82629	-2.05437	12.81435	-0.81506	-0.66279	5.28589	12.85734	262.29	-22.87
84/ 1/ 5	2445704.5	-0.62388	-4.82810	-2.05587	12.82323	-0.74799	-0.63423	5.28454	12.86068	262.64	-22.89
84/ 1/ 9	2445708.5	-0.59425	-4.82975	-2.05730	12.83171	-0.68085	-0.60564	5.28319	12.86402	262.99	-22.92
84/ 1/13	2445712.5	-0.56459	-4.83124	-2.05867	12.83978	-0.61363	-0.57700	5.28184	12.86738	263.33	-22.94
84/ 1/17	2445716.5	-0.53492	-4.83258	-2.05997	12.84744	-0.54633	-0.54832	5.28048	12.87074	263.68	-22.96
84/ 1/21	2445720.5	-0.50523	-4.83377	-2.06120	12.85470	-0.47896	-0.51960	5.27912	12.87411	264.03	-22.98
84/ 1/25	2445724.5	-0.47553	-4.83480	-2.06237	12.86155	-0.41153	-0.49084	5.27776	12.87749	264.38	-23.00
84/ 1/29	2445728.5	-0.44581	-4.83567	-2.06347	12.86798	-0.34403	-0.46204	5.27639	12.88087	264.73	-23.02
84/ 2/ 2	2445732.5	-0.41608	-4.83639	-2.06450	12.87401	-0.27646	-0.43320	5.27503	12.88426	265.08	-23.04
84/ 2/ 6	2445736.5	-0.38633	-4.83695	-2.06547	12.87962	-0.20883	-0.40433	5.27366	12.88766	265.43	-23.06
84/ 2/10	2445740.5	-0.35657	-4.83735	-2.06637	12.88482	-0.14114	-0.37542	5.27228	12.89107	265.78	-23.07
84/ 2/14	2445744.5	-0.32680	-4.83760	-2.06720	12.88961	-0.07339	-0.34647	5.27091	12.89448	266.14	-23.09
84/ 2/18	2445748.5	-0.29701	-4.83769	-2.06797	12.89399	-0.00559	-0.31749	5.26953	12.89789	266.49	-23.11
84/ 2/22	2445752.5	-0.26722	-4.83762	-2.06867	12.89794	0.06227	-0.28848	5.26815	12.90132	266.84	-23.12
84/ 2/26	2445756.5	-0.23742	-4.83740	-2.06930	12.90148	0.13018	-0.25943	5.26677	12.90475	267.19	-23.13
84/ 3/ 1	2445760.5	-0.20761	-4.83702	-2.06987	12.90461	0.19814	-0.23036	5.26538	12.90818	267.54	-23.15
84/ 3/ 5	2445764.5	-0.17780	-4.83649	-2.07037	12.90731	0.26615	-0.20125	5.26399	12.91163	267.89	-23.16
84/ 3/ 9	2445768.5	-0.14798	-4.83579	-2.07080	12.90960	0.33420	-0.17211	5.26260	12.91507	268.25	-23.17
84/ 3/13	2445772.5	-0.11815	-4.83494	-2.07116	12.91147	0.40229	-0.14295	5.26121	12.91853	268.60	-23.18
84/ 3/17	2445776.5	-0.08832	-4.83393	-2.07146	12.91292	0.47043	-0.11375	5.25982	12.92198	268.95	-23.19
84/ 3/21	2445780.5	-0.05849	-4.83277	-2.07169	12.91395	0.53860	-0.08453	5.25842	12.92545	269.31	-23.20
84/ 3/25	2445784.5	-0.02865	-4.83145	-2.07185	12.91455	0.60681	-0.05529	5.25702	12.92892	269.66	-23.21
84/ 3/29	2445788.5	0.00118	-4.82996	-2.07194	12.91474	0.67505	-0.02602	5.25562	12.93240	270.01	-23.22

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84/ 4/ 2	2445792.5	0.03102	-4.82833	-2.07197	12.91451	0.74333	0.00328	5.25421	12.93588	270.37	-23.23
84/ 4/ 6	2445796.5	0.06085	-4.82653	-2.07193	12.91385	0.81163	0.03259	5.25281	12.93937	270.72	-23.23
84/ 4/10	2445800.5	0.09068	-4.82458	-2.07182	12.91277	0.87997	0.06193	5.25140	12.94287	271.08	-23.24
84/ 4/14	2445804.5	0.12051	-4.82246	-2.07164	12.91127	0.94833	0.09130	5.24999	12.94637	271.43	-23.24
84/ 4/18	2445808.5	0.15034	-4.82019	-2.07140	12.90934	1.01671	0.12068	5.24858	12.94988	271.79	-23.24
84/ 4/22	2445812.5	0.18016	-4.81777	-2.07109	12.90699	1.08512	0.15008	5.24716	12.95339	272.14	-23.25
84/ 4/26	2445816.5	0.20997	-4.81518	-2.07070	12.90421	1.15355	0.17950	5.24575	12.95691	272.50	-23.25
84/ 4/30	2445820.5	0.23978	-4.81244	-2.07026	12.90101	1.22199	0.20894	5.24433	12.96043	272.85	-23.25
84/ 5/ 4	2445824.5	0.26958	-4.80954	-2.06974	12.89737	1.29045	0.23840	5.24291	12.96396	273.21	-23.25
84/ 5/ 8	2445828.5	0.29937	-4.80647	-2.06915	12.89331	1.35892	0.26787	5.24149	12.96749	273.56	-23.25
84/ 5/12	2445832.5	0.32915	-4.80326	-2.06850	12.88882	1.42740	0.29736	5.24007	12.97103	273.92	-23.25
84/ 5/16	2445836.5	0.35892	-4.79988	-2.06778	12.88391	1.49589	0.32686	5.23864	12.97457	274.28	-23.25
84/ 5/20	2445840.5	0.38868	-4.79634	-2.06699	12.87856	1.56439	0.35637	5.23722	12.97812	274.63	-23.25
84/ 5/24	2445844.5	0.41842	-4.79265	-2.06613	12.87279	1.63289	0.38590	5.23579	12.98167	274.99	-23.24
84/ 5/28	2445848.5	0.44815	-4.78880	-2.06521	12.86658	1.70139	0.41544	5.23436	12.98523	275.35	-23.24
84/ 6/ 1	2445852.5	0.47787	-4.78479	-2.06421	12.85994	1.76989	0.44498	5.23293	12.98879	275.70	-23.23
84/ 6/ 5	2445856.5	0.50757	-4.78062	-2.06315	12.85288	1.83839	0.47454	5.23150	12.99236	276.06	-23.23
84/ 6/ 9	2445860.5	0.53725	-4.77630	-2.06202	12.84538	1.90688	0.50411	5.23007	12.99593	276.42	-23.22
84/ 6/13	2445864.5	0.56692	-4.77181	-2.06082	12.83745	1.97536	0.53368	5.22863	12.99950	276.78	-23.21
84/ 6/17	2445868.5	0.59657	-4.76717	-2.05956	12.82909	2.04384	0.56325	5.22720	13.00308	277.13	-23.20
84/ 6/21	2445872.5	0.62620	-4.76237	-2.05822	12.82030	2.11230	0.59284	5.22576	13.00667	277.49	-23.19
84/ 6/25	2445876.5	0.65580	-4.75741	-2.05682	12.81108	2.18074	0.62242	5.22432	13.01026	277.85	-23.18
84/ 6/29	2445880.5	0.68539	-4.75229	-2.05534	12.80142	2.24918	0.65201	5.22288	13.01385	278.21	-23.17
84/ 7/ 3	2445884.5	0.71495	-4.74702	-2.05380	12.79134	2.31759	0.68161	5.22144	13.01746	278.56	-23.16
84/ 7/ 7	2445888.5	0.74449	-4.74159	-2.05220	12.78082	2.38599	0.71120	5.22000	13.02106	278.92	-23.15
84/ 7/11	2445892.5	0.77400	-4.73599	-2.05052	12.76986	2.45436	0.74080	5.21856	13.02467	279.28	-23.14
84/ 7/15	2445896.5	0.80349	-4.73025	-2.04877	12.75848	2.52271	0.77040	5.21711	13.02829	279.64	-23.12
84/ 7/19	2445900.5	0.83295	-4.72434	-2.04696	12.74665	2.59103	0.80000	5.21567	13.03191	280.00	-23.11
84/ 7/23	2445904.5	0.86238	-4.71827	-2.04508	12.73439	2.65933	0.82959	5.21423	13.03553	280.36	-23.09
84/ 7/27	2445908.5	0.89179	-4.71205	-2.04313	12.72170	2.72759	0.85919	5.21278	13.03915	280.72	-23.08
84/ 7/31	2445912.5	0.92116	-4.70567	-2.04111	12.70856	2.79582	0.88878	5.21133	13.04278	281.08	-23.06
84/ 8/ 4	2445916.5	0.95050	-4.69913	-2.03902	12.69500	2.86401	0.91836	5.20989	13.04641	281.44	-23.04
84/ 8/ 8	2445920.5	0.97981	-4.69244	-2.03686	12.68099	2.93217	0.94794	5.20844	13.05005	281.79	-23.02
84/ 8/12	2445924.5	1.00909	-4.68559	-2.03464	12.66654	3.00028	0.97751	5.20699	13.05368	282.15	-23.00
84/ 8/16	2445928.5	1.03834	-4.67858	-2.03235	12.65166	3.06835	1.00707	5.20554	13.05732	282.51	-22.98
84/ 8/20	2445932.5	1.06755	-4.67141	-2.02999	12.63634	3.13638	1.03663	5.20409	13.06096	282.87	-22.96
84/ 8/24	2445936.5	1.09672	-4.66409	-2.02756	12.62058	3.20436	1.06617	5.20264	13.06460	283.23	-22.94
84/ 8/28	2445940.5	1.12586	-4.65660	-2.02506	12.60439	3.27228	1.09571	5.20119	13.06824	283.59	-22.91
84/ 9/ 1	2445944.5	1.15496	-4.64897	-2.02250	12.58775	3.34016	1.12523	5.19974	13.07189	283.95	-22.89
84/ 9/ 5	2445948.5	1.18402	-4.64117	-2.01986	12.57067	3.40798	1.15474	5.19829	13.07553	284.31	-22.87
84/ 9/ 9	2445952.5	1.21304	-4.63322	-2.01716	12.55315	3.47573	1.18423	5.19684	13.07918	284.67	-22.84
84/ 9/13	2445956.5	1.24202	-4.62511	-2.01439	12.53520	3.54343	1.21371	5.19539	13.08282	285.03	-22.81
84/ 9/17	2445960.5	1.27096	-4.61685	-2.01155	12.51680	3.61107	1.24318	5.19393	13.08647	285.39	-22.79
84/ 9/21	2445964.5	1.29985	-4.60843	-2.00865	12.49797	3.67863	1.27262	5.19248	13.09012	285.75	-22.76
84/ 9/25	2445968.5	1.32870	-4.59985	-2.00567	12.47870	3.74613	1.30205	5.19103	13.09377	286.11	-22.73

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84/ 9/29	2445972.5	1.35751	-4.59112	-2.00263	12.45899	3.81357	1.33145	5.18958	13.09742	286.47	-22.70
84/10/ 3	2445976.5	1.38627	-4.58223	-1.99952	12.43884	3.88093	1.36084	5.18813	13.10108	286.83	-22.67
84/10/ 7	2445980.5	1.41498	-4.57319	-1.99634	12.41825	3.94821	1.39021	5.18667	13.10473	287.19	-22.64
84/10/11	2445984.5	1.44364	-4.56399	-1.99310	12.39722	4.01542	1.41955	5.18522	13.10838	287.55	-22.61
84/10/15	2445988.5	1.47226	-4.55464	-1.98978	12.37575	4.08254	1.44887	5.18377	13.11204	287.91	-22.57
84/10/19	2445992.5	1.50082	-4.54513	-1.98640	12.35383	4.14959	1.47817	5.18232	13.11569	288.27	-22.54
84/10/23	2445996.5	1.52934	-4.53546	-1.98295	12.33148	4.21655	1.50744	5.18087	13.11934	288.63	-22.50
84/10/27	2446000.5	1.55780	-4.52565	-1.97944	12.30869	4.28342	1.53668	5.17942	13.12299	288.99	-22.47
84/10/31	2446004.5	1.58621	-4.51567	-1.97585	12.28545	4.35020	1.56589	5.17797	13.12664	289.35	-22.43
84/11/ 4	2446008.5	1.61456	-4.50555	-1.97220	12.26178	4.41688	1.59508	5.17652	13.13029	289.72	-22.40
84/11/ 8	2446012.5	1.64286	-4.49527	-1.96848	12.23767	4.48347	1.62424	5.17507	13.13393	290.08	-22.36
84/11/12	2446016.5	1.67110	-4.48483	-1.96470	12.21312	4.54997	1.65336	5.17362	13.13758	290.44	-22.32
84/11/16	2446020.5	1.69929	-4.47424	-1.96085	12.18812	4.61636	1.68245	5.17217	13.14122	290.80	-22.28
84/11/20	2446024.5	1.72741	-4.46350	-1.95693	12.16269	4.68264	1.71151	5.17072	13.14487	291.16	-22.24
84/11/24	2446028.5	1.75548	-4.45261	-1.95294	12.13682	4.74883	1.74053	5.16927	13.14851	291.52	-22.20
84/11/28	2446032.5	1.78349	-4.44156	-1.94888	12.11052	4.81490	1.76952	5.16783	13.15215	291.88	-22.16
84/12/ 2	2446036.5	1.81144	-4.43036	-1.94476	12.08377	4.88086	1.79847	5.16638	13.15579	292.24	-22.11
84/12/ 6	2446040.5	1.83932	-4.41901	-1.94057	12.05658	4.94670	1.82738	5.16494	13.15942	292.60	-22.07
84/12/10	2446044.5	1.86714	-4.40751	-1.93632	12.02896	5.01243	1.85625	5.16349	13.16306	292.96	-22.02
84/12/14	2446048.5	1.89490	-4.39585	-1.93200	12.00091	5.07804	1.88508	5.16205	13.16669	293.32	-21.98
84/12/18	2446052.5	1.92259	-4.38404	-1.92761	11.97241	5.14353	1.91387	5.16061	13.17033	293.68	-21.93
84/12/22	2446056.5	1.95022	-4.37209	-1.92315	11.94349	5.20890	1.94261	5.15917	13.17396	294.04	-21.89
84/12/26	2446060.5	1.97777	-4.35998	-1.91863	11.91412	5.27414	1.97132	5.15773	13.17759	294.40	-21.84
84/12/30	2446064.5	2.00526	-4.34772	-1.91405	11.88433	5.33925	1.99998	5.15629	13.18123	294.76	-21.79
85/ 1/ 3	2446068.5	2.03268	-4.33531	-1.90939	11.85410	5.40423	2.02859	5.15485	13.18486	295.12	-21.74
85/ 1/ 7	2446072.5	2.06003	-4.32275	-1.90467	11.82343	5.46908	2.05716	5.15341	13.18849	295.48	-21.69
85/ 1/11	2446076.5	2.08731	-4.31004	-1.89989	11.79233	5.53380	2.08568	5.15198	13.19212	295.84	-21.64
85/ 1/15	2446080.5	2.11452	-4.29718	-1.89504	11.76080	5.59837	2.11415	5.15054	13.19575	296.20	-21.59
85/ 1/19	2446084.5	2.14165	-4.28417	-1.89012	11.72883	5.66281	2.14258	5.14911	13.19937	296.56	-21.54
85/ 1/23	2446088.5	2.16871	-4.27102	-1.88514	11.69643	5.72710	2.17095	5.14768	13.20300	296.92	-21.48
85/ 1/27	2446092.5	2.19569	-4.25771	-1.88009	11.66359	5.79125	2.19927	5.14625	13.20662	297.28	-21.43
85/ 1/31	2446096.5	2.22260	-4.24426	-1.87498	11.63033	5.85525	2.22753	5.14482	13.21024	297.64	-21.37
85/ 2/ 4	2446100.5	2.24943	-4.23066	-1.86980	11.59663	5.91910	2.25575	5.14340	13.21386	298.00	-21.32
85/ 2/ 8	2446104.5	2.27618	-4.21691	-1.86455	11.56251	5.98280	2.28391	5.14197	13.21748	298.36	-21.26
85/ 2/12	2446108.5	2.30285	-4.20302	-1.85925	11.52795	6.04634	2.31201	5.14055	13.22109	298.72	-21.20
85/ 2/16	2446112.5	2.32944	-4.18897	-1.85387	11.49296	6.10973	2.34005	5.13913	13.22470	299.08	-21.15
85/ 2/20	2446116.5	2.35595	-4.17479	-1.84843	11.45754	6.17295	2.36804	5.13771	13.22831	299.44	-21.09
85/ 2/24	2446120.5	2.38238	-4.16045	-1.84293	11.42170	6.23601	2.39597	5.13629	13.23192	299.80	-21.03
85/ 2/28	2446124.5	2.40872	-4.14597	-1.83736	11.38542	6.29891	2.42384	5.13488	13.23552	300.16	-20.97
85/ 3/ 4	2446128.5	2.43498	-4.13135	-1.83173	11.34872	6.36164	2.45164	5.13346	13.23912	300.51	-20.91
85/ 3/ 8	2446132.5	2.46116	-4.11658	-1.82604	11.31159	6.42419	2.47938	5.13205	13.24272	300.87	-20.84
85/ 3/12	2446136.5	2.48725	-4.10167	-1.82028	11.27403	6.48658	2.50706	5.13064	13.24631	301.23	-20.78
85/ 3/16	2446140.5	2.51325	-4.08661	-1.81445	11.23605	6.54878	2.53467	5.12923	13.24991	301.59	-20.72
85/ 3/20	2446144.5	2.53916	-4.07141	-1.80857	11.19765	6.61081	2.56222	5.12783	13.25350	301.95	-20.65
85/ 3/24	2446148.5	2.56498	-4.05607	-1.80261	11.15882	6.67267	2.58970	5.12643	13.25708	302.31	-20.59

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM JUPITER

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
85/ 3/28	2446152.5	2.59072	-4.04058	-1.79660	11.11956	6.73434	2.61712	5.12502	13.26067	302.67	-20.52
85/ 4/ 1	2446156.5	2.61636	-4.02495	-1.79052	11.07989	6.79582	2.64446	5.12363	13.26425	303.03	-20.45
85/ 4/ 5	2446160.5	2.64191	-4.00918	-1.78438	11.03979	6.85712	2.67173	5.12223	13.26782	303.38	-20.39
85/ 4/ 9	2446164.5	2.66737	-3.99327	-1.77818	10.99926	6.91823	2.69894	5.12084	13.27139	303.74	-20.32
85/ 4/13	2446168.5	2.69273	-3.97722	-1.77191	10.95831	6.97914	2.72607	5.11945	13.27496	304.10	-20.25
85/ 4/17	2446172.5	2.71800	-3.96102	-1.76558	10.91695	7.03986	2.75313	5.11806	13.27852	304.46	-20.18
85/ 4/21	2446176.5	2.74317	-3.94469	-1.75919	10.87516	7.10038	2.78011	5.11667	13.28208	304.82	-20.11
85/ 4/25	2446180.5	2.76824	-3.92822	-1.75274	10.83295	7.16070	2.80702	5.11529	13.28562	305.17	-20.04
85/ 4/29	2446184.5	2.79322	-3.91161	-1.74622	10.79032	7.22082	2.83385	5.11391	13.28917	305.53	-19.97
85/ 5/ 3	2446188.5	2.81810	-3.89485	-1.73964	10.74727	7.28073	2.86060	5.11253	13.29270	305.89	-19.89
85/ 5/ 7	2446192.5	2.84288	-3.87797	-1.73300	10.70381	7.34043	2.88727	5.11115	13.29623	306.24	-19.82
85/ 5/11	2446196.5	2.86755	-3.86094	-1.72630	10.65993	7.39992	2.91386	5.10978	13.29976	306.60	-19.75
85/ 5/15	2446200.5	2.89213	-3.84378	-1.71954	10.61563	7.45920	2.94037	5.10841	13.30327	306.96	-19.67
85/ 5/19	2446204.5	2.91660	-3.82648	-1.71272	10.57092	7.51825	2.96680	5.10704	13.30678	307.32	-19.59
85/ 5/23	2446208.5	2.94097	-3.80904	-1.70583	10.52579	7.57709	2.99314	5.10568	13.31028	307.67	-19.52
85/ 5/27	2446212.5	2.96523	-3.79147	-1.69889	10.48026	7.63570	3.01940	5.10432	13.31377	308.03	-19.44
85/ 5/31	2446216.5	2.98939	-3.77376	-1.69188	10.43431	7.69409	3.04557	5.10296	13.31725	308.38	-19.36
85/ 6/ 4	2446220.5	3.01344	-3.75592	-1.68482	10.38795	7.75225	3.07165	5.10161	13.32073	308.74	-19.28
85/ 6/ 8	2446224.5	3.03739	-3.73794	-1.67769	10.34118	7.81017	3.09764	5.10025	13.32419	309.10	-19.20
85/ 6/12	2446228.5	3.06122	-3.71983	-1.67051	10.29400	7.86786	3.12354	5.09891	13.32765	309.45	-19.12
85/ 6/16	2446232.5	3.08495	-3.70159	-1.66326	10.24642	7.92532	3.14935	5.09756	13.33110	309.81	-19.04
85/ 6/20	2446236.5	3.10857	-3.68321	-1.65595	10.19844	7.98254	3.17507	5.09622	13.33455	310.16	-18.96
85/ 6/24	2446240.5	3.13207	-3.66471	-1.64859	10.15005	8.03952	3.20070	5.09488	13.33798	310.52	-18.88
85/ 6/28	2446244.5	3.15546	-3.64607	-1.64117	10.10126	8.09625	3.22623	5.09354	13.34141	310.87	-18.80
85/ 7/ 2	2446248.5	3.17874	-3.62730	-1.63368	10.05206	8.15274	3.25166	5.09221	13.34483	311.23	-18.71
85/ 7/ 6	2446252.5	3.20191	-3.60840	-1.62614	10.00247	8.20898	3.27700	5.09088	13.34824	311.58	-18.63
85/ 7/10	2446256.5	3.22496	-3.58937	-1.61854	9.95247	8.26497	3.30224	5.08956	13.35164	311.94	-18.54
85/ 7/14	2446260.5	3.24789	-3.57021	-1.61089	9.90208	8.32070	3.32738	5.08824	13.35503	312.29	-18.46
85/ 7/18	2446264.5	3.27071	-3.55093	-1.60317	9.85129	8.37618	3.35242	5.08692	13.35841	312.65	-18.37
85/ 7/22	2446268.5	3.29341	-3.53151	-1.59540	9.80011	8.43139	3.37735	5.08561	13.36178	313.00	-18.28
85/ 7/26	2446272.5	3.31599	-3.51197	-1.58756	9.74854	8.48635	3.40219	5.08430	13.36514	313.36	-18.19
85/ 7/30	2446276.5	3.33845	-3.49230	-1.57968	9.69657	8.54104	3.42692	5.08299	13.36849	313.71	-18.11
85/ 8/ 3	2446280.5	3.36079	-3.47251	-1.57173	9.64421	8.59546	3.45154	5.08169	13.37183	314.06	-18.02
85/ 8/ 7	2446284.5	3.38301	-3.45259	-1.56373	9.59146	8.64961	3.47606	5.08039	13.37516	314.42	-17.93
85/ 8/11	2446288.5	3.40510	-3.43255	-1.55567	9.53833	8.70349	3.50047	5.07910	13.37848	314.77	-17.84
85/ 8/15	2446292.5	3.42708	-3.41238	-1.54756	9.48481	8.75710	3.52478	5.07780	13.38179	315.12	-17.74
85/ 8/19	2446296.5	3.44893	-3.39209	-1.53939	9.43090	8.81043	3.54897	5.07652	13.38509	315.48	-17.65
85/ 8/23	2446300.5	3.47065	-3.37167	-1.53116	9.37662	8.86347	3.57305	5.07524	13.38838	315.83	-17.56
85/ 8/27	2446304.5	3.49225	-3.35113	-1.52288	9.32195	8.91624	3.59702	5.07396	13.39166	316.18	-17.47
85/ 8/31	2446308.5	3.51372	-3.33047	-1.51454	9.26690	8.96871	3.62088	5.07268	13.39493	316.53	-17.37
85/ 9/ 4	2446312.5	3.53507	-3.30969	-1.50615	9.21148	9.02091	3.64462	5.07141	13.39819	316.89	-17.28
85/ 9/ 8	2446316.5	3.55628	-3.28879	-1.49770	9.15568	9.07281	3.66825	5.07015	13.40143	317.24	-17.18
85/ 9/12	2446320.5	3.57737	-3.26778	-1.48920	9.09952	9.12442	3.69176	5.06889	13.40467	317.59	-17.09
85/ 9/16	2446324.5	3.59832	-3.24664	-1.48064	9.04298	9.17573	3.71515	5.06763	13.40790	317.94	-16.99
85/ 9/20	2446328.5	3.61915	-3.22538	-1.47203	8.98607	9.22675	3.73843	5.06638	13.41112	318.29	-16.89

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — JUPITER

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85/ 9/24	2446332.5	3.63984	-3.20401	-1.46337	8.92879	9.27748	3.76159	5.06513	13.41434	318.64	-16.79
85/ 9/28	2446336.5	3.66040	-3.18252	-1.45465	8.87114	9.32790	3.78463	5.06389	13.41754	318.99	-16.69
85/10/ 2	2446340.5	3.68083	-3.16091	-1.44588	8.81313	9.37802	3.80754	5.06265	13.42073	319.35	-16.59
85/10/ 6	2446344.5	3.70112	-3.13919	-1.43706	8.75476	9.42784	3.83034	5.06142	13.42391	319.70	-16.49
85/10/10	2446348.5	3.72128	-3.11735	-1.42819	8.69602	9.47734	3.85301	5.06019	13.42708	320.05	-16.39
85/10/14	2446352.5	3.74130	-3.09540	-1.41926	8.63692	9.52654	3.87556	5.05896	13.43024	320.40	-16.29
85/10/18	2446356.5	3.76118	-3.07333	-1.41028	8.57747	9.57542	3.89798	5.05774	13.43339	320.75	-16.19
85/10/22	2446360.5	3.78093	-3.05116	-1.40125	8.51765	9.62399	3.92027	5.05653	13.43652	321.10	-16.09
85/10/26	2446364.5	3.80054	-3.02887	-1.39217	8.45748	9.67224	3.94244	5.05532	13.43965	321.45	-15.99
85/10/30	2446368.5	3.82001	-3.00647	-1.38303	8.39696	9.72017	3.96448	5.05412	13.44276	321.80	-15.88
85/11/ 3	2446372.5	3.83934	-2.98396	-1.37385	8.33609	9.76778	3.98639	5.05292	13.44586	322.15	-15.78
85/11/ 7	2446376.5	3.85852	-2.96134	-1.36462	8.27487	9.81507	4.00817	5.05172	13.44896	322.49	-15.67
85/11/11	2446380.5	3.87757	-2.93861	-1.35533	8.21330	9.86202	4.02982	5.05053	13.45203	322.84	-15.57
85/11/15	2446384.5	3.89647	-2.91577	-1.34600	8.15138	9.90865	4.05133	5.04935	13.45510	323.19	-15.46
85/11/19	2446388.5	3.91523	-2.89283	-1.33661	8.08912	9.95495	4.07272	5.04817	13.45815	323.54	-15.35
85/11/23	2446392.5	3.93385	-2.86978	-1.32718	8.02652	10.00091	4.09396	5.04699	13.46119	323.89	-15.25
85/11/27	2446396.5	3.95232	-2.84662	-1.31770	7.96358	10.04653	4.11507	5.04583	13.46422	324.24	-15.14
85/12/ 1	2446400.5	3.97064	-2.82336	-1.30817	7.90030	10.09182	4.13604	5.04466	13.46723	324.58	-15.03
85/12/ 5	2446404.5	3.98882	-2.79999	-1.29859	7.83669	10.13676	4.15688	5.04350	13.47024	324.93	-14.92
85/12/ 9	2446408.5	4.00685	-2.77652	-1.28896	7.77275	10.18136	4.17757	5.04235	13.47323	325.28	-14.81
85/12/13	2446412.5	4.02473	-2.75295	-1.27929	7.70847	10.22562	4.19813	5.04121	13.47620	325.63	-14.70
85/12/17	2446416.5	4.04246	-2.72928	-1.26956	7.64387	10.26953	4.21854	5.04006	13.47917	325.97	-14.59
85/12/21	2446420.5	4.06005	-2.70550	-1.25979	7.57893	10.31309	4.23881	5.03893	13.48212	326.32	-14.48
85/12/25	2446424.5	4.07748	-2.68163	-1.24998	7.51368	10.35630	4.25894	5.03780	13.48506	326.67	-14.37
85/12/29	2446428.5	4.09476	-2.65765	-1.24012	7.44810	10.39915	4.27893	5.03667	13.48798	327.01	-14.25
86/ 1/ 2	2446432.5	4.11189	-2.63358	-1.23021	7.38219	10.44165	4.29877	5.03556	13.49089	327.36	-14.14
86/ 1/ 6	2446436.5	4.12887	-2.60941	-1.22025	7.31597	10.48379	4.31846	5.03444	13.49379	327.71	-14.03
86/ 1/10	2446440.5	4.14569	-2.58514	-1.21026	7.24944	10.52556	4.33801	5.03333	13.49667	328.05	-13.91
86/ 1/14	2446444.5	4.16237	-2.56078	-1.20021	7.18259	10.56697	4.35741	5.03223	13.49954	328.40	-13.80
86/ 1/18	2446448.5	4.17888	-2.53632	-1.19012	7.11542	10.60802	4.37666	5.03114	13.50239	328.74	-13.68
86/ 1/22	2446452.5	4.19524	-2.51176	-1.17999	7.04795	10.64870	4.39576	5.03005	13.50522	329.09	-13.57
86/ 1/26	2446456.5	4.21144	-2.48712	-1.16981	6.98017	10.68900	4.41470	5.02896	13.50804	329.44	-13.45
86/ 1/30	2446460.5	4.22749	-2.46238	-1.15959	6.91209	10.72894	4.43350	5.02789	13.51085	329.78	-13.33
86/ 2/ 3	2446464.5	4.24338	-2.43755	-1.14933	6.84370	10.76850	4.45214	5.02681	13.51364	330.13	-13.22
86/ 2/ 7	2446468.5	4.25911	-2.41262	-1.13902	6.77501	10.80768	4.47063	5.02575	13.51641	330.47	-13.10
86/ 2/11	2446472.5	4.27468	-2.38761	-1.12867	6.70603	10.84648	4.48896	5.02469	13.51916	330.81	-12.98
86/ 2/15	2446476.5	4.29010	-2.36251	-1.11828	6.63675	10.88490	4.50713	5.02364	13.52190	331.16	-12.86
86/ 2/19	2446480.5	4.30535	-2.33732	-1.10785	6.56718	10.92294	4.52515	5.02259	13.52462	331.50	-12.74
86/ 2/23	2446484.5	4.32044	-2.31204	-1.09737	6.49732	10.96059	4.54301	5.02155	13.52733	331.85	-12.62
86/ 2/27	2446488.5	4.33537	-2.28668	-1.08686	6.42718	10.99785	4.56071	5.02051	13.53002	332.19	-12.50
86/ 3/ 3	2446492.5	4.35013	-2.26123	-1.07630	6.35675	11.03472	4.57824	5.01949	13.53269	332.53	-12.38
86/ 3/ 7	2446496.5	4.36474	-2.23569	-1.06571	6.28604	11.07120	4.59562	5.01846	13.53534	332.88	-12.26
86/ 3/11	2446500.5	4.37918	-2.21008	-1.05507	6.21506	11.10729	4.61284	5.01745	13.53798	333.22	-12.14
86/ 3/15	2446504.5	4.39345	-2.18437	-1.04439	6.14380	11.14298	4.62989	5.01644	13.54061	333.56	-12.02
86/ 3/19	2446508.5	4.40756	-2.15859	-1.03368	6.07227	11.17828	4.64678	5.01544	13.54322	333.91	-11.89

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM JUPITER

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86/ 3/23	2446512.5	4.42151	-2.13273	-1.02292	6.00046	11.21317	4.66350	5.01444	13.54581	334.25	-11.77
86/ 3/27	2446516.5	4.43529	-2.10678	-1.01213	5.92839	11.24767	4.68006	5.01345	13.54839	334.59	-11.65
86/ 3/31	2446520.5	4.44890	-2.08076	-1.00130	5.85605	11.28176	4.69645	5.01247	13.55095	334.93	-11.52
86/ 4/ 4	2446524.5	4.46234	-2.05466	-0.99043	5.78345	11.31545	4.71268	5.01150	13.55349	335.28	-11.40
86/ 4/ 8	2446528.5	4.47562	-2.02848	-0.97953	5.71059	11.34873	4.72874	5.01053	13.55602	335.62	-11.27
86/ 4/12	2446532.5	4.48873	-2.00222	-0.96858	5.63748	11.38161	4.74463	5.00956	13.55853	335.96	-11.15
86/ 4/16	2446536.5	4.50167	-1.97589	-0.95760	5.56411	11.41407	4.76035	5.00861	13.56102	336.30	-11.02
86/ 4/20	2446540.5	4.51444	-1.94949	-0.94659	5.49049	11.44612	4.77589	5.00766	13.56349	336.64	-10.90
86/ 4/24	2446544.5	4.52704	-1.92301	-0.93554	5.41662	11.47776	4.79127	5.00672	13.56595	336.99	-10.77
86/ 4/28	2446548.5	4.53946	-1.89646	-0.92445	5.34250	11.50898	4.80648	5.00578	13.56839	337.33	-10.64
86/ 5/ 2	2446552.5	4.55172	-1.86983	-0.91333	5.26814	11.53979	4.82151	5.00486	13.57081	337.67	-10.51
86/ 5/ 6	2446556.5	4.56380	-1.84314	-0.90217	5.19355	11.57017	4.83636	5.00394	13.57322	338.01	-10.39
86/ 5/10	2446560.5	4.57572	-1.81637	-0.89098	5.11871	11.60014	4.85105	5.00302	13.57561	338.35	-10.26
86/ 5/14	2446564.5	4.58745	-1.78954	-0.87976	5.04364	11.62968	4.86555	5.00212	13.57797	338.69	-10.13
86/ 5/18	2446568.5	4.59902	-1.76264	-0.86850	4.96834	11.65880	4.87989	5.00122	13.58033	339.03	-10.00
86/ 5/22	2446572.5	4.61041	-1.73567	-0.85721	4.89281	11.68749	4.89404	5.00033	13.58266	339.37	-9.87
86/ 5/26	2446576.5	4.62162	-1.70864	-0.84589	4.81706	11.71575	4.90801	4.99944	13.58497	339.71	-9.74
86/ 5/30	2446580.5	4.63267	-1.68154	-0.83454	4.74108	11.74359	4.92181	4.99856	13.58727	340.05	-9.61
86/ 6/ 3	2446584.5	4.64353	-1.65438	-0.82315	4.66489	11.77099	4.93543	4.99769	13.58955	340.39	-9.48
86/ 6/ 7	2446588.5	4.65422	-1.62716	-0.81173	4.58848	11.79797	4.94886	4.99683	13.59182	340.73	-9.35
86/ 6/11	2446592.5	4.66473	-1.59987	-0.80029	4.51186	11.82451	4.96212	4.99597	13.59406	341.07	-9.22
86/ 6/15	2446596.5	4.67506	-1.57252	-0.78881	4.43503	11.85062	4.97520	4.99513	13.59629	341.41	-9.09
86/ 6/19	2446600.5	4.68522	-1.54512	-0.77730	4.35799	11.87629	4.98809	4.99429	13.59851	341.75	-8.95
86/ 6/23	2446604.5	4.69520	-1.51765	-0.76576	4.28074	11.90153	5.00081	4.99345	13.60070	342.09	-8.82
86/ 6/27	2446608.5	4.70500	-1.49013	-0.75419	4.20329	11.92632	5.01333	4.99263	13.60288	342.43	-8.69
86/ 7/ 1	2446612.5	4.71462	-1.46255	-0.74260	4.12564	11.95067	5.02568	4.99181	13.60504	342.77	-8.56
86/ 7/ 5	2446616.5	4.72406	-1.43491	-0.73097	4.04780	11.97459	5.03784	4.99100	13.60717	343.10	-8.42
86/ 7/ 9	2446620.5	4.73332	-1.40722	-0.71932	3.96976	11.99805	5.04981	4.99019	13.60929	343.44	-8.29
86/ 7/13	2446624.5	4.74240	-1.37948	-0.70764	3.89153	12.02108	5.06160	4.98940	13.61139	343.78	-8.15
86/ 7/17	2446628.5	4.75130	-1.35168	-0.69594	3.81312	12.04365	5.07320	4.98861	13.61347	344.12	-8.02
86/ 7/21	2446632.5	4.76002	-1.32383	-0.68420	3.73452	12.06578	5.08461	4.98783	13.61554	344.46	-7.88
86/ 7/25	2446636.5	4.76856	-1.29593	-0.67244	3.65574	12.08745	5.09583	4.98706	13.61758	344.80	-7.75
86/ 7/29	2446640.5	4.77691	-1.26798	-0.66066	3.57678	12.10868	5.10687	4.98630	13.61960	345.13	-7.61
86/ 8/ 2	2446644.5	4.78508	-1.23999	-0.64885	3.49765	12.12945	5.11771	4.98554	13.62160	345.47	-7.48
86/ 8/ 6	2446648.5	4.79307	-1.21194	-0.63701	3.41834	12.14976	5.12836	4.98479	13.62358	345.81	-7.34
86/ 8/10	2446652.5	4.80088	-1.18385	-0.62515	3.33887	12.16962	5.13883	4.98405	13.62554	346.15	-7.21
86/ 8/14	2446656.5	4.80850	-1.15572	-0.61327	3.25923	12.18902	5.14909	4.98332	13.62747	346.49	-7.07
86/ 8/18	2446660.5	4.81594	-1.12753	-0.60136	3.17943	12.20796	5.15917	4.98259	13.62939	346.82	-6.93
86/ 8/22	2446664.5	4.82319	-1.09931	-0.58943	3.09948	12.22644	5.16905	4.98187	13.63128	347.16	-6.79
86/ 8/26	2446668.5	4.83026	-1.07104	-0.57748	3.01937	12.24446	5.17874	4.98116	13.63315	347.50	-6.66
86/ 8/30	2446672.5	4.83714	-1.04274	-0.56551	2.93911	12.26202	5.18823	4.98046	13.63500	347.83	-6.52
86/ 9/ 3	2446676.5	4.84384	-1.01439	-0.55351	2.85871	12.27911	5.19753	4.97977	13.63683	348.17	-6.38
86/ 9/ 7	2446680.5	4.85035	-0.98600	-0.54149	2.77816	12.29574	5.20663	4.97908	13.63864	348.51	-6.24
86/ 9/11	2446684.5	4.85667	-0.95758	-0.52945	2.69747	12.31191	5.21553	4.97841	13.64042	348.85	-6.10
86/ 9/15	2446688.5	4.86281	-0.92912	-0.51739	2.61665	12.32760	5.22424	4.97774	13.64219	349.18	-5.97

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86/ 9/19	2446692.5	4.86876	-0.90062	-0.50531	2.53569	12.34283	5.23275	4.97708	13.64393	349.52	-5.83
86/ 9/23	2446696.5	4.87453	-0.87209	-0.49322	2.45460	12.35759	5.24107	4.97643	13.64565	349.86	-5.69
86/ 9/27	2446700.5	4.88010	-0.84353	-0.48110	2.37338	12.37188	5.24918	4.97578	13.64735	350.19	-5.55
86/10/ 1	2446704.5	4.88549	-0.81493	-0.46896	2.29204	12.38570	5.25710	4.97514	13.64903	350.53	-5.41
86/10/ 5	2446708.5	4.89069	-0.78630	-0.45681	2.21058	12.39904	5.26481	4.97452	13.65068	350.87	-5.27
86/10/ 9	2446712.5	4.89571	-0.75764	-0.44464	2.12900	12.41191	5.27233	4.97390	13.65231	351.20	-5.13
86/10/13	2446716.5	4.90053	-0.72895	-0.43245	2.04731	12.42431	5.27964	4.97329	13.65392	351.54	-4.99
86/10/17	2446720.5	4.90516	-0.70024	-0.42024	1.96551	12.43623	5.28675	4.97268	13.65550	351.88	-4.85
86/10/21	2446724.5	4.90961	-0.67149	-0.40802	1.88361	12.44767	5.29366	4.97209	13.65706	352.21	-4.71
86/10/25	2446728.5	4.91387	-0.64272	-0.39579	1.80160	12.45864	5.30037	4.97150	13.65860	352.55	-4.57
86/10/29	2446732.5	4.91793	-0.61393	-0.38353	1.71950	12.46912	5.30688	4.97092	13.66011	352.88	-4.43
86/11/ 2	2446736.5	4.92181	-0.58511	-0.37127	1.63730	12.47913	5.31318	4.97036	13.66160	353.22	-4.28
86/11/ 6	2446740.5	4.92550	-0.55627	-0.35899	1.55501	12.48866	5.31928	4.96979	13.66307	353.56	-4.14
86/11/10	2446744.5	4.92900	-0.52741	-0.34669	1.47264	12.49771	5.32517	4.96924	13.66451	353.89	-4.00
86/11/14	2446748.5	4.93230	-0.49853	-0.33438	1.39018	12.50628	5.33086	4.96870	13.66593	354.23	-3.86
86/11/18	2446752.5	4.93542	-0.46963	-0.32206	1.30764	12.51436	5.33635	4.96816	13.66732	354.56	-3.72
86/11/22	2446756.5	4.93835	-0.44071	-0.30973	1.22503	12.52196	5.34163	4.96764	13.66869	354.90	-3.57
86/11/26	2446760.5	4.94108	-0.41177	-0.29738	1.14235	12.52908	5.34670	4.96712	13.67004	355.24	-3.43
86/11/30	2446764.5	4.94362	-0.38282	-0.28502	1.05960	12.53572	5.35157	4.96661	13.67137	355.57	-3.29
86/12/ 4	2446768.5	4.94598	-0.35385	-0.27265	0.97679	12.54188	5.35623	4.96611	13.67267	355.91	-3.15
86/12/ 8	2446772.5	4.94814	-0.32487	-0.26027	0.89391	12.54755	5.36069	4.96562	13.67396	356.24	-3.00
86/12/12	2446776.5	4.95011	-0.29588	-0.24789	0.81098	12.55274	5.36494	4.96513	13.67522	356.58	-2.86
86/12/16	2446780.5	4.95188	-0.26688	-0.23549	0.72799	12.55744	5.36899	4.96466	13.67645	356.92	-2.72
86/12/20	2446784.5	4.95347	-0.23786	-0.22308	0.64496	12.56166	5.37283	4.96419	13.67767	357.25	-2.58
86/12/24	2446788.5	4.95486	-0.20884	-0.21066	0.56187	12.56540	5.37646	4.96373	13.67886	357.59	-2.43
86/12/28	2446792.5	4.95607	-0.17980	-0.19824	0.47874	12.56865	5.37989	4.96329	13.68003	357.92	-2.29

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86/12/16	2446780.5	4.95188	-0.33854	-0.10986	0.72799	13.65688	-0.07066	4.96466	13.67645	356.09	-1.27
86/12/20	2446784.5	4.95347	-0.30698	-0.11002	0.64496	13.66228	-0.06882	4.96419	13.67767	356.45	-1.27
86/12/24	2446788.5	4.95486	-0.27541	-0.11018	0.56187	13.66715	-0.06697	4.96373	13.67886	356.82	-1.27
86/12/28	2446792.5	4.95607	-0.24383	-0.11033	0.47874	13.67150	-0.06512	4.96329	13.68003	357.18	-1.27
87/ 1/ 1	2446796.5	4.95707	-0.21225	-0.11048	0.39558	13.67532	-0.06327	4.96285	13.68118	357.55	-1.28
87/ 1/ 5	2446800.5	4.95789	-0.18065	-0.11062	0.31237	13.67861	-0.06142	4.96242	13.68231	357.91	-1.28
87/ 1/ 9	2446804.5	4.95852	-0.14905	-0.11076	0.22914	13.68136	-0.05956	4.96199	13.68341	358.28	-1.28
87/ 1/13	2446808.5	4.95895	-0.11744	-0.11090	0.14587	13.68360	-0.05770	4.96158	13.68449	358.64	-1.28
87/ 1/17	2446812.5	4.95919	-0.08582	-0.11103	0.06258	13.68530	-0.05583	4.96118	13.68555	359.01	-1.28
87/ 1/21	2446816.5	4.95924	-0.05421	-0.11116	-0.02073	13.68647	-0.05397	4.96078	13.68659	359.37	-1.28
87/ 1/25	2446820.5	4.95910	-0.02259	-0.11128	-0.10407	13.68711	-0.05210	4.96040	13.68761	359.74	-1.29
87/ 1/29	2446824.5	4.95876	0.00903	-0.11140	-0.18741	13.68722	-0.05023	4.96002	13.68860	0.10	-1.29
87/ 2/ 2	2446828.5	4.95823	0.04065	-0.11151	-0.27077	13.68680	-0.04835	4.95965	13.68957	0.47	-1.29
87/ 2/ 6	2446832.5	4.95751	0.07227	-0.11162	-0.35414	13.68585	-0.04648	4.95929	13.69051	0.84	-1.29
87/ 2/10	2446836.5	4.95659	0.10388	-0.11173	-0.43751	13.68437	-0.04460	4.95894	13.69143	1.20	-1.29
87/ 2/14	2446840.5	4.95549	0.13550	-0.11183	-0.52088	13.68235	-0.04272	4.95860	13.69233	1.57	-1.29
87/ 2/18	2446844.5	4.95419	0.16710	-0.11192	-0.60424	13.67981	-0.04084	4.95827	13.69321	1.93	-1.29
87/ 2/22	2446848.5	4.95270	0.19870	-0.11201	-0.68760	13.67673	-0.03895	4.95795	13.69406	2.30	-1.29
87/ 2/26	2446852.5	4.95101	0.23029	-0.11210	-0.77095	13.67312	-0.03707	4.95763	13.69489	2.66	-1.30
87/ 3/ 2	2446856.5	4.94913	0.26187	-0.11219	-0.85428	13.66899	-0.03518	4.95733	13.69570	3.03	-1.30
87/ 3/ 6	2446860.5	4.94706	0.29345	-0.11226	-0.93759	13.66432	-0.03329	4.95703	13.69649	3.39	-1.30
87/ 3/10	2446864.5	4.94480	0.32501	-0.11234	-1.02089	13.65912	-0.03140	4.95674	13.69725	3.76	-1.30
87/ 3/14	2446868.5	4.94235	0.35656	-0.11241	-1.10416	13.65339	-0.02951	4.95647	13.69800	4.13	-1.30
87/ 3/18	2446872.5	4.93970	0.38809	-0.11248	-1.18740	13.64713	-0.02761	4.95620	13.69871	4.49	-1.30
87/ 3/22	2446876.5	4.93686	0.41961	-0.11254	-1.27061	13.64034	-0.02572	4.95594	13.69941	4.86	-1.30
87/ 3/26	2446880.5	4.93383	0.45111	-0.11259	-1.35378	13.63301	-0.02382	4.95569	13.70008	5.22	-1.30
87/ 3/30	2446884.5	4.93061	0.48260	-0.11265	-1.43692	13.62516	-0.02192	4.95545	13.70073	5.59	-1.30
87/ 4/ 3	2446888.5	4.92719	0.51407	-0.11270	-1.52001	13.61677	-0.02002	4.95522	13.70136	5.96	-1.30
87/ 4/ 7	2446892.5	4.92358	0.54551	-0.11274	-1.60306	13.60785	-0.01812	4.95499	13.70196	6.32	-1.30
87/ 4/11	2446896.5	4.91978	0.57694	-0.11278	-1.68606	13.59840	-0.01622	4.95478	13.70254	6.69	-1.30
87/ 4/15	2446900.5	4.91579	0.60834	-0.11282	-1.76900	13.58842	-0.01432	4.95458	13.70309	7.05	-1.30
87/ 4/19	2446904.5	4.91161	0.63972	-0.11285	-1.85189	13.57791	-0.01241	4.95438	13.70362	7.42	-1.31
87/ 4/23	2446908.5	4.90724	0.67108	-0.11287	-1.93471	13.56687	-0.01051	4.95420	13.70413	7.79	-1.31
87/ 4/27	2446912.5	4.90267	0.70241	-0.11289	-2.01747	13.55529	-0.00860	4.95402	13.70461	8.15	-1.31
87/ 5/ 1	2446916.5	4.89791	0.73371	-0.11291	-2.10016	13.54319	-0.00670	4.95385	13.70506	8.52	-1.31
87/ 5/ 5	2446920.5	4.89297	0.76498	-0.11293	-2.18278	13.53055	-0.00479	4.95369	13.70549	8.89	-1.31
87/ 5/ 9	2446924.5	4.88783	0.79622	-0.11293	-2.26532	13.51739	-0.00288	4.95354	13.70589	9.25	-1.31
87/ 5/13	2446928.5	4.88250	0.82743	-0.11294	-2.34778	13.50369	-0.00098	4.95340	13.70627	9.62	-1.31
87/ 5/17	2446932.5	4.87698	0.85861	-0.11294	-2.43016	13.48947	0.00093	4.95327	13.70662	9.98	-1.31
87/ 5/21	2446936.5	4.87127	0.88976	-0.11293	-2.51244	13.47472	0.00284	4.95315	13.70695	10.35	-1.31
87/ 5/25	2446940.5	4.86537	0.92087	-0.11293	-2.59463	13.45944	0.00474	4.95304	13.70725	10.72	-1.31
87/ 5/29	2446944.5	4.85928	0.95195	-0.11291	-2.67673	13.44364	0.00665	4.95294	13.70753	11.08	-1.31
87/ 6/ 2	2446948.5	4.85301	0.98298	-0.11290	-2.75873	13.42731	0.00856	4.95285	13.70778	11.45	-1.31
87/ 6/ 6	2446952.5	4.84654	1.01398	-0.11287	-2.84062	13.41045	0.01046	4.95276	13.70801	11.82	-1.31
87/ 6/10	2446956.5	4.83988	1.04495	-0.11285	-2.92241	13.39307	0.01237	4.95269	13.70821	12.18	-1.31

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87/ 6/14	2446960.5	4.83304	1.07587	-0.11282	-3.00409	13.37517	0.01427	4.95262	13.70839	12.55	-1.31
87/ 6/18	2446964.5	4.82600	1.10674	-0.11278	-3.08565	13.35675	0.01618	4.95256	13.70854	12.92	-1.30
87/ 6/22	2446968.5	4.81878	1.13758	-0.11274	-3.16710	13.33780	0.01808	4.95252	13.70867	13.28	-1.30
87/ 6/26	2446972.5	4.81137	1.16837	-0.11270	-3.24842	13.31833	0.01999	4.95248	13.70878	13.65	-1.30
87/ 6/30	2446976.5	4.80377	1.19911	-0.11265	-3.32962	13.29834	0.02189	4.95245	13.70886	14.02	-1.30
87/ 7/ 4	2446980.5	4.79599	1.22981	-0.11260	-3.41069	13.27783	0.02379	4.95243	13.70891	14.38	-1.30
87/ 7/ 8	2446984.5	4.78801	1.26046	-0.11254	-3.49163	13.25680	0.02569	4.95242	13.70894	14.75	-1.30
87/ 7/12	2446988.5	4.77985	1.29106	-0.11248	-3.57243	13.23526	0.02759	4.95242	13.70894	15.12	-1.30
87/ 7/16	2446992.5	4.77151	1.32161	-0.11241	-3.65309	13.21319	0.02949	4.95243	13.70892	15.48	-1.30
87/ 7/20	2446996.5	4.76297	1.35211	-0.11234	-3.73361	13.19062	0.03139	4.95245	13.70887	15.85	-1.30
87/ 7/24	2447000.5	4.75426	1.38256	-0.11227	-3.81398	13.16752	0.03329	4.95248	13.70880	16.21	-1.30
87/ 7/28	2447004.5	4.74535	1.41295	-0.11219	-3.89420	13.14392	0.03518	4.95251	13.70870	16.58	-1.30
87/ 8/ 1	2447008.5	4.73626	1.44329	-0.11210	-3.97426	13.11980	0.03708	4.95256	13.70858	16.95	-1.30
87/ 8/ 5	2447012.5	4.72699	1.47357	-0.11202	-4.05417	13.09516	0.03897	4.95261	13.70843	17.31	-1.30
87/ 8/ 9	2447016.5	4.71753	1.50379	-0.11192	-4.13391	13.07002	0.04086	4.95268	13.70826	17.68	-1.29
87/ 8/13	2447020.5	4.70789	1.53395	-0.11183	-4.21349	13.04437	0.04275	4.95275	13.70806	18.05	-1.29
87/ 8/17	2447024.5	4.69806	1.56406	-0.11173	-4.29290	13.01821	0.04463	4.95283	13.70783	18.41	-1.29
87/ 8/21	2447028.5	4.68806	1.59410	-0.11162	-4.37213	12.99155	0.04652	4.95293	13.70759	18.78	-1.29
87/ 8/25	2447032.5	4.67786	1.62408	-0.11151	-4.45119	12.96438	0.04840	4.95303	13.70732	19.15	-1.29
87/ 8/29	2447036.5	4.66749	1.65400	-0.11140	-4.53007	12.93671	0.05028	4.95314	13.70702	19.51	-1.29
87/ 9/ 2	2447040.5	4.65693	1.68386	-0.11128	-4.60877	12.90854	0.05216	4.95326	13.70671	19.88	-1.29
87/ 9/ 6	2447044.5	4.64620	1.71364	-0.11116	-4.68728	12.87987	0.05404	4.95339	13.70637	20.25	-1.29
87/ 9/10	2447048.5	4.63528	1.74336	-0.11103	-4.76561	12.85070	0.05591	4.95353	13.70600	20.61	-1.28
87/ 9/14	2447052.5	4.62418	1.77302	-0.11090	-4.84374	12.82103	0.05778	4.95368	13.70562	20.98	-1.28
87/ 9/18	2447056.5	4.61290	1.80260	-0.11076	-4.92167	12.79087	0.05965	4.95383	13.70521	21.34	-1.28
87/ 9/22	2447060.5	4.60144	1.83212	-0.11062	-4.99941	12.76021	0.06152	4.95400	13.70477	21.71	-1.28
87/ 9/26	2447064.5	4.58980	1.86156	-0.11048	-5.07694	12.72906	0.06339	4.95418	13.70432	22.08	-1.28
87/ 9/30	2447068.5	4.57798	1.89093	-0.11033	-5.15427	12.69741	0.06525	4.95436	13.70383	22.44	-1.28
87/10/ 4	2447072.5	4.56598	1.92022	-0.11018	-5.23139	12.66528	0.06711	4.95455	13.70333	22.81	-1.27
87/10/ 8	2447076.5	4.55381	1.94945	-0.11002	-5.30830	12.63265	0.06896	4.95476	13.70280	23.18	-1.27
87/10/12	2447080.5	4.54146	1.97859	-0.10986	-5.38499	12.59954	0.07082	4.95497	13.70225	23.54	-1.27
87/10/16	2447084.5	4.52893	2.00766	-0.10969	-5.46147	12.56594	0.07267	4.95519	13.70167	23.91	-1.27
87/10/20	2447088.5	4.51622	2.03665	-0.10952	-5.53772	12.53186	0.07452	4.95542	13.70107	24.27	-1.27
87/10/24	2447092.5	4.50334	2.06556	-0.10935	-5.61375	12.49729	0.07636	4.95566	13.70045	24.64	-1.26
87/10/28	2447096.5	4.49029	2.09439	-0.10917	-5.68954	12.46224	0.07820	4.95591	13.69980	25.01	-1.26
87/11/ 1	2447100.5	4.47706	2.12314	-0.10899	-5.76511	12.42671	0.08004	4.95617	13.69913	25.37	-1.26
87/11/ 5	2447104.5	4.46365	2.15181	-0.10880	-5.84044	12.39070	0.08188	4.95644	13.69843	25.74	-1.26
87/11/ 9	2447108.5	4.45007	2.18039	-0.10861	-5.91552	12.35422	0.08371	4.95672	13.69770	26.10	-1.26
87/11/13	2447112.5	4.43632	2.20889	-0.10841	-5.99037	12.31726	0.08553	4.95700	13.69696	26.47	-1.25
87/11/17	2447116.5	4.42239	2.23730	-0.10821	-6.06497	12.27982	0.08736	4.95730	13.69618	26.83	-1.25
87/11/21	2447120.5	4.40830	2.26562	-0.10801	-6.13932	12.24192	0.08918	4.95760	13.69539	27.20	-1.25
87/11/25	2447124.5	4.39403	2.29386	-0.10780	-6.21341	12.20355	0.09100	4.95791	13.69457	27.57	-1.25
87/11/29	2447128.5	4.37959	2.32201	-0.10759	-6.28725	12.16471	0.09281	4.95823	13.69373	27.93	-1.24
87/12/ 3	2447132.5	4.36498	2.35007	-0.10737	-6.36084	12.12540	0.09462	4.95857	13.69286	28.30	-1.24
87/12/ 7	2447136.5	4.35020	2.37803	-0.10715	-6.43416	12.08563	0.09642	4.95891	13.69198	28.66	-1.24

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87/12/11	2447140.5	4.33525	2.40591	-0.10693	-6.50722	12.04540	0.09822	4.95926	13.69106	29.03	-1.24
87/12/15	2447144.5	4.32013	2.43369	-0.10670	-6.58001	12.00471	0.10002	4.95961	13.69012	29.39	-1.23
87/12/19	2447148.5	4.30485	2.46137	-0.10646	-6.65253	11.96356	0.10181	4.95998	13.68916	29.76	-1.23
87/12/23	2447152.5	4.28940	2.48896	-0.10623	-6.72477	11.92195	0.10360	4.96036	13.68818	30.12	-1.23
87/12/27	2447156.5	4.27378	2.51645	-0.10599	-6.79674	11.87989	0.10539	4.96074	13.68717	30.49	-1.22
87/12/31	2447160.5	4.25799	2.54385	-0.10574	-6.86842	11.83738	0.10716	4.96114	13.68613	30.86	-1.22
88/ 1/ 4	2447164.5	4.24204	2.57115	-0.10549	-6.93982	11.79442	0.10894	4.96154	13.68508	31.22	-1.22
88/ 1/ 8	2447168.5	4.22593	2.59834	-0.10524	-7.01094	11.75101	0.11071	4.96195	13.68399	31.59	-1.22
88/ 1/12	2447172.5	4.20965	2.62544	-0.10498	-7.08176	11.70715	0.11247	4.96237	13.68289	31.95	-1.21
88/ 1/16	2447176.5	4.19321	2.65243	-0.10472	-7.15230	11.66285	0.11424	4.96280	13.68175	32.32	-1.21
88/ 1/20	2447180.5	4.17661	2.67933	-0.10445	-7.22253	11.61811	0.11599	4.96324	13.68060	32.68	-1.21
88/ 1/24	2447184.5	4.15984	2.70611	-0.10418	-7.29247	11.57292	0.11774	4.96368	13.67942	33.05	-1.20
88/ 1/28	2447188.5	4.14291	2.73280	-0.10391	-7.36210	11.52730	0.11949	4.96414	13.67821	33.41	-1.20
88/ 2/ 1	2447192.5	4.12582	2.75937	-0.10363	-7.43143	11.48125	0.12123	4.96461	13.67698	33.77	-1.20
88/ 2/ 5	2447196.5	4.10858	2.78584	-0.10335	-7.50045	11.43476	0.12296	4.96508	13.67573	34.14	-1.19
88/ 2/ 9	2447200.5	4.09117	2.81221	-0.10306	-7.56915	11.38784	0.12469	4.96556	13.67445	34.50	-1.19
88/ 2/13	2447204.5	4.07360	2.83846	-0.10277	-7.63754	11.34050	0.12641	4.96605	13.67314	34.87	-1.19
88/ 2/17	2447208.5	4.05588	2.86460	-0.10248	-7.70561	11.29273	0.12813	4.96655	13.67182	35.23	-1.18
88/ 2/21	2447212.5	4.03800	2.89064	-0.10218	-7.77336	11.24454	0.12985	4.96706	13.67047	35.60	-1.18
88/ 2/25	2447216.5	4.01997	2.91656	-0.10188	-7.84079	11.19593	0.13155	4.96758	13.66910	35.96	-1.18
88/ 2/29	2447220.5	4.00178	2.94236	-0.10157	-7.90790	11.14691	0.13326	4.96810	13.66770	36.33	-1.17
88/ 3/ 4	2447224.5	3.98343	2.96806	-0.10126	-7.97467	11.09747	0.13495	4.96863	13.66629	36.69	-1.17
88/ 3/ 8	2447228.5	3.96493	2.99364	-0.10095	-8.04112	11.04762	0.13664	4.96918	13.66485	37.05	-1.16
88/ 3/12	2447232.5	3.94628	3.01910	-0.10063	-8.10723	10.99736	0.13833	4.96973	13.66339	37.42	-1.16
88/ 3/16	2447236.5	3.92747	3.04445	-0.10031	-8.17301	10.94669	0.14001	4.97029	13.66191	37.78	-1.16
88/ 3/20	2447240.5	3.90851	3.06968	-0.09998	-8.23844	10.89562	0.14168	4.97086	13.66040	38.15	-1.15
88/ 3/24	2447244.5	3.88941	3.09479	-0.09965	-8.30354	10.84415	0.14334	4.97143	13.65888	38.51	-1.15
88/ 3/28	2447248.5	3.87015	3.11978	-0.09932	-8.36829	10.79228	0.14500	4.97202	13.65733	38.87	-1.14
88/ 4/ 1	2447252.5	3.85074	3.14465	-0.09898	-8.43270	10.74001	0.14666	4.97261	13.65576	39.24	-1.14
88/ 4/ 5	2447256.5	3.83119	3.16941	-0.09864	-8.49676	10.68735	0.14831	4.97321	13.65417	39.60	-1.14
88/ 4/ 9	2447260.5	3.81149	3.19403	-0.09830	-8.56047	10.63429	0.14995	4.97382	13.65256	39.96	-1.13
88/ 4/13	2447264.5	3.79164	3.21854	-0.09795	-8.62382	10.58085	0.15158	4.97444	13.65092	40.33	-1.13
88/ 4/17	2447268.5	3.77164	3.24292	-0.09760	-8.68682	10.52702	0.15321	4.97507	13.64927	40.69	-1.12
88/ 4/21	2447272.5	3.75150	3.26718	-0.09724	-8.74946	10.47281	0.15483	4.97571	13.64760	41.05	-1.12
88/ 4/25	2447276.5	3.73122	3.29131	-0.09688	-8.81175	10.41822	0.15645	4.97635	13.64590	41.42	-1.12
88/ 4/29	2447280.5	3.71079	3.31531	-0.09652	-8.87366	10.36325	0.15806	4.97700	13.64418	41.78	-1.11
88/ 5/ 3	2447284.5	3.69022	3.33919	-0.09615	-8.93521	10.30790	0.15966	4.97766	13.64244	42.14	-1.11
88/ 5/ 7	2447288.5	3.66950	3.36294	-0.09578	-8.99639	10.25218	0.16126	4.97833	13.64068	42.50	-1.10
88/ 5/11	2447292.5	3.64865	3.38656	-0.09541	-9.05721	10.19609	0.16284	4.97901	13.63890	42.87	-1.10
88/ 5/15	2447296.5	3.62766	3.41005	-0.09503	-9.11765	10.13963	0.16443	4.97969	13.63711	43.23	-1.09
88/ 5/19	2447300.5	3.60652	3.43341	-0.09465	-9.17771	10.08281	0.16600	4.98039	13.63529	43.59	-1.09
88/ 5/23	2447304.5	3.58525	3.45663	-0.09426	-9.23740	10.02563	0.16757	4.98109	13.63345	43.95	-1.08
88/ 5/27	2447308.5	3.56384	3.47973	-0.09387	-9.29671	9.96809	0.16913	4.98180	13.63159	44.32	-1.08
88/ 5/31	2447312.5	3.54230	3.50269	-0.09348	-9.35564	9.91020	0.17068	4.98251	13.62972	44.68	-1.08
88/ 6/ 4	2447316.5	3.52062	3.52552	-0.09309	-9.41419	9.85195	0.17223	4.98324	13.62783	45.04	-1.07

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88/ 6/ 8	2447320.5	3.49880	3.54821	-0.09269	-9.47236	9.79335	0.17377	4.98397	13.62591	45.40	-1.07
88/ 6/12	2447324.5	3.47685	3.57077	-0.09228	-9.53014	9.73440	0.17530	4.98471	13.62398	45.76	-1.06
88/ 6/16	2447328.5	3.45477	3.59318	-0.09188	-9.58753	9.67511	0.17683	4.98546	13.62203	46.13	-1.06
88/ 6/20	2447332.5	3.43255	3.61547	-0.09147	-9.64452	9.61547	0.17834	4.98622	13.62006	46.49	-1.05
88/ 6/24	2447336.5	3.41021	3.63761	-0.09105	-9.70113	9.55549	0.17985	4.98699	13.61807	46.85	-1.05
88/ 6/28	2447340.5	3.38773	3.65962	-0.09063	-9.75734	9.49518	0.18136	4.98776	13.61606	47.21	-1.04
88/ 7/ 2	2447344.5	3.36513	3.68148	-0.09021	-9.81316	9.43453	0.18285	4.98854	13.61403	47.57	-1.04
88/ 7/ 6	2447348.5	3.34239	3.70321	-0.08979	-9.86857	9.37355	0.18434	4.98933	13.61198	47.93	-1.03
88/ 7/10	2447352.5	3.31953	3.72479	-0.08936	-9.92358	9.31224	0.18582	4.99012	13.60991	48.29	-1.03
88/ 7/14	2447356.5	3.29654	3.74623	-0.08893	-9.97819	9.25060	0.18729	4.99093	13.60783	48.65	-1.02
88/ 7/18	2447360.5	3.27343	3.76753	-0.08850	-10.03240	9.18863	0.18875	4.99174	13.60572	49.01	-1.02
88/ 7/22	2447364.5	3.25019	3.78869	-0.08806	-10.08620	9.12635	0.19021	4.99256	13.60360	49.37	-1.01
88/ 7/26	2447368.5	3.22683	3.80970	-0.08762	-10.13958	9.06375	0.19166	4.99338	13.60145	49.74	-1.01
88/ 7/30	2447372.5	3.20334	3.83056	-0.08717	-10.19256	9.00083	0.19310	4.99422	13.59928	50.10	-1.00
88/ 8/ 3	2447376.5	3.17973	3.85129	-0.08673	-10.24512	8.93760	0.19453	4.99506	13.59709	50.46	-0.99
88/ 8/ 7	2447380.5	3.15601	3.87186	-0.08627	-10.29726	8.87406	0.19595	4.99591	13.59488	50.82	-0.99
88/ 8/11	2447384.5	3.13216	3.89229	-0.08582	-10.34898	8.81022	0.19737	4.99677	13.59266	51.18	-0.98
88/ 8/15	2447388.5	3.10819	3.91257	-0.08536	-10.40029	8.74607	0.19878	4.99763	13.59041	51.54	-0.98
88/ 8/19	2447392.5	3.08410	3.93270	-0.08490	-10.45117	8.68163	0.20018	4.99850	13.58815	51.90	-0.97
88/ 8/23	2447396.5	3.05990	3.95268	-0.08444	-10.50163	8.61689	0.20157	4.99938	13.58586	52.26	-0.97
88/ 8/27	2447400.5	3.03558	3.97251	-0.08397	-10.55167	8.55185	0.20295	5.00026	13.58356	52.61	-0.96
88/ 8/31	2447404.5	3.01115	3.99219	-0.08350	-10.60128	8.48653	0.20432	5.00116	13.58124	52.97	-0.96
88/ 9/ 4	2447408.5	2.98660	4.01172	-0.08303	-10.65047	8.42092	0.20569	5.00206	13.57890	53.33	-0.95
88/ 9/ 8	2447412.5	2.96194	4.03110	-0.08255	-10.69922	8.35502	0.20705	5.00296	13.57654	53.69	-0.95
88/ 9/12	2447416.5	2.93717	4.05032	-0.08207	-10.74754	8.28884	0.20839	5.00388	13.57416	54.05	-0.94
88/ 9/16	2447420.5	2.91228	4.06939	-0.08159	-10.79543	8.22238	0.20973	5.00480	13.57177	54.41	-0.93
88/ 9/20	2447424.5	2.88729	4.08831	-0.08110	-10.84288	8.15565	0.21106	5.00573	13.56935	54.77	-0.93
88/ 9/24	2447428.5	2.86219	4.10708	-0.08061	-10.88990	8.08865	0.21239	5.00666	13.56691	55.13	-0.92
88/ 9/28	2447432.5	2.83698	4.12568	-0.08012	-10.93647	8.02138	0.21370	5.00761	13.56446	55.49	-0.92
88/10/ 2	2447436.5	2.81166	4.14414	-0.07962	-10.98261	7.95384	0.21501	5.00856	13.56199	55.84	-0.91
88/10/ 6	2447440.5	2.78623	4.16243	-0.07913	-11.02831	7.88604	0.21630	5.00951	13.55950	56.20	-0.91
88/10/10	2447444.5	2.76070	4.18057	-0.07863	-11.07356	7.81798	0.21759	5.01047	13.55699	56.56	-0.90
88/10/14	2447448.5	2.73507	4.19856	-0.07812	-11.11838	7.74966	0.21887	5.01144	13.55446	56.92	-0.89
88/10/18	2447452.5	2.70933	4.21638	-0.07761	-11.16274	7.68109	0.22013	5.01242	13.55191	57.28	-0.89
88/10/22	2447456.5	2.68349	4.23404	-0.07710	-11.20666	7.61227	0.22139	5.01340	13.54935	57.63	-0.88
88/10/26	2447460.5	2.65755	4.25155	-0.07659	-11.25012	7.54321	0.22264	5.01439	13.54676	57.99	-0.88
88/10/30	2447464.5	2.63151	4.26890	-0.07608	-11.29314	7.47390	0.22388	5.01539	13.54416	58.35	-0.87
88/11/ 3	2447468.5	2.60538	4.28608	-0.07556	-11.33570	7.40435	0.22512	5.01639	13.54154	58.71	-0.86
88/11/ 7	2447472.5	2.57914	4.30311	-0.07504	-11.37781	7.33457	0.22634	5.01740	13.53890	59.06	-0.86
88/11/11	2447476.5	2.55281	4.31997	-0.07451	-11.41947	7.26456	0.22755	5.01842	13.53624	59.42	-0.85
88/11/15	2447480.5	2.52638	4.33667	-0.07398	-11.46067	7.19432	0.22876	5.01944	13.53357	59.78	-0.84
88/11/19	2447484.5	2.49985	4.35321	-0.07345	-11.50142	7.12386	0.22995	5.02047	13.53089	60.13	-0.84
88/11/23	2447488.5	2.47324	4.36959	-0.07292	-11.54171	7.05317	0.23114	5.02150	13.52818	60.49	-0.83
88/11/27	2447492.5	2.44653	4.38580	-0.07239	-11.58155	6.98226	0.23231	5.02255	13.52546	60.85	-0.83
88/12/ 1	2447496.5	2.41973	4.40185	-0.07185	-11.62092	6.91114	0.23348	5.02359	13.52273	61.20	-0.82

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88/12/ 5	2447500.5	2.39284	4.41773	-0.07131	-11.65984	6.83980	0.23464	5.02465	13.51998	61.56	-0.81
88/12/ 9	2447504.5	2.36586	4.43345	-0.07076	-11.69830	6.76826	0.23578	5.02571	13.51722	61.91	-0.81
88/12/13	2447508.5	2.33879	4.44900	-0.07022	-11.73630	6.69651	0.23692	5.02678	13.51444	62.27	-0.80
88/12/17	2447512.5	2.31163	4.46439	-0.06967	-11.77383	6.62455	0.23805	5.02785	13.51164	62.63	-0.79
88/12/21	2447516.5	2.28439	4.47961	-0.06912	-11.81090	6.55240	0.23917	5.02893	13.50883	62.98	-0.79
88/12/25	2447520.5	2.25706	4.49466	-0.06856	-11.84751	6.48005	0.24028	5.03001	13.50601	63.34	-0.78
88/12/29	2447524.5	2.22965	4.50955	-0.06801	-11.88366	6.40750	0.24138	5.03110	13.50317	63.69	-0.77
89/ 1/ 2	2447528.5	2.20215	4.52427	-0.06745	-11.91934	6.33477	0.24247	5.03220	13.50032	64.05	-0.77
89/ 1/ 6	2447532.5	2.17458	4.53882	-0.06689	-11.95455	6.26185	0.24355	5.03330	13.49745	64.40	-0.76
89/ 1/10	2447536.5	2.14692	4.55320	-0.06632	-11.98930	6.18874	0.24462	5.03441	13.49457	64.76	-0.75
89/ 1/14	2447540.5	2.11918	4.56741	-0.06576	-12.02357	6.11545	0.24568	5.03553	13.49168	65.11	-0.75
89/ 1/18	2447544.5	2.09137	4.58146	-0.06519	-12.05738	6.04198	0.24674	5.03665	13.48877	65.46	-0.74
89/ 1/22	2447548.5	2.06347	4.59533	-0.06462	-12.09072	5.96834	0.24778	5.03777	13.48585	65.82	-0.73
89/ 1/26	2447552.5	2.03550	4.60903	-0.06404	-12.12359	5.89453	0.24881	5.03890	13.48291	66.17	-0.73
89/ 1/30	2447556.5	2.00746	4.62256	-0.06347	-12.15599	5.82055	0.24983	5.04004	13.47995	66.53	-0.72
89/ 2/ 3	2447560.5	1.97934	4.63592	-0.06289	-12.18791	5.74640	0.25084	5.04118	13.47699	66.88	-0.71
89/ 2/ 7	2447564.5	1.95115	4.64911	-0.06231	-12.21937	5.67210	0.25184	5.04233	13.47401	67.23	-0.71
89/ 2/11	2447568.5	1.92288	4.66213	-0.06173	-12.25035	5.59763	0.25284	5.04349	13.47102	67.59	-0.70
89/ 2/15	2447572.5	1.89455	4.67498	-0.06114	-12.28086	5.52301	0.25382	5.04464	13.46802	67.94	-0.69
89/ 2/19	2447576.5	1.86614	4.68765	-0.06055	-12.31089	5.44824	0.25479	5.04581	13.46500	68.29	-0.69
89/ 2/23	2447580.5	1.83767	4.70015	-0.05996	-12.34045	5.37332	0.25575	5.04698	13.46198	68.65	-0.68
89/ 2/27	2447584.5	1.80912	4.71248	-0.05937	-12.36954	5.29826	0.25671	5.04816	13.45894	69.00	-0.67
89/ 3/ 3	2447588.5	1.78051	4.72463	-0.05878	-12.39815	5.22305	0.25765	5.04934	13.45588	69.35	-0.67
89/ 3/ 7	2447592.5	1.75184	4.73661	-0.05818	-12.42629	5.14770	0.25858	5.05052	13.45282	69.70	-0.66
89/ 3/11	2447596.5	1.72310	4.74841	-0.05758	-12.45395	5.07222	0.25950	5.05171	13.44974	70.06	-0.65
89/ 3/15	2447600.5	1.69430	4.76004	-0.05698	-12.48113	4.99660	0.26041	5.05291	13.44665	70.41	-0.65
89/ 3/19	2447604.5	1.66543	4.77150	-0.05638	-12.50784	4.92085	0.26132	5.05411	13.44355	70.76	-0.64
89/ 3/23	2447608.5	1.63651	4.78278	-0.05577	-12.53407	4.84498	0.26221	5.05532	13.44044	71.11	-0.63
89/ 3/27	2447612.5	1.60752	4.79388	-0.05517	-12.55982	4.76898	0.26309	5.05653	13.43732	71.46	-0.63
89/ 3/31	2447616.5	1.57848	4.80481	-0.05456	-12.58510	4.69286	0.26396	5.05775	13.43418	71.81	-0.62
89/ 4/ 4	2447620.5	1.54938	4.81557	-0.05395	-12.60989	4.61662	0.26482	5.05897	13.43103	72.16	-0.61
89/ 4/ 8	2447624.5	1.52022	4.82614	-0.05334	-12.63421	4.54026	0.26567	5.06019	13.42787	72.52	-0.60
89/ 4/12	2447628.5	1.49100	4.83654	-0.05272	-12.65804	4.46380	0.26651	5.06142	13.42470	72.87	-0.60
89/ 4/16	2447632.5	1.46173	4.84677	-0.05210	-12.68140	4.38722	0.26734	5.06266	13.42151	73.22	-0.59
89/ 4/20	2447636.5	1.43241	4.85681	-0.05149	-12.70427	4.31054	0.26816	5.06390	13.41831	73.57	-0.58
89/ 4/24	2447640.5	1.40303	4.86668	-0.05087	-12.72666	4.23376	0.26897	5.06515	13.41510	73.92	-0.58
89/ 4/28	2447644.5	1.37361	4.87638	-0.05024	-12.74857	4.15688	0.26976	5.06640	13.41187	74.27	-0.57
89/ 5/ 2	2447648.5	1.34413	4.88589	-0.04962	-12.76999	4.07991	0.27055	5.06765	13.40864	74.62	-0.56
89/ 5/ 6	2447652.5	1.31461	4.89523	-0.04899	-12.79094	4.00285	0.27133	5.06891	13.40539	74.97	-0.55
89/ 5/10	2447656.5	1.28503	4.90438	-0.04837	-12.81140	3.92570	0.27209	5.07017	13.40213	75.32	-0.55
89/ 5/14	2447660.5	1.25541	4.91336	-0.04774	-12.83139	3.84847	0.27285	5.07144	13.39886	75.67	-0.54
89/ 5/18	2447664.5	1.22575	4.92217	-0.04710	-12.85089	3.77115	0.27360	5.07271	13.39559	76.02	-0.53
89/ 5/22	2447668.5	1.19604	4.93079	-0.04647	-12.86991	3.69376	0.27433	5.07399	13.39230	76.37	-0.52
89/ 5/26	2447672.5	1.16628	4.93923	-0.04584	-12.88845	3.61629	0.27505	5.07527	13.38900	76.71	-0.52
89/ 5/30	2447676.5	1.13649	4.94750	-0.04520	-12.90650	3.53875	0.27577	5.07655	13.38568	77.06	-0.51

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89/ 6/ 3	2447680.5	1.10665	4.95558	-0.04456	-12.92408	3.46114	0.27647	5.07784	13.38236	77.41	-0.50
89/ 6/ 7	2447684.5	1.07678	4.96349	-0.04392	-12.94117	3.38346	0.27716	5.07913	13.37903	77.76	-0.50
89/ 6/11	2447688.5	1.04686	4.97122	-0.04328	-12.95778	3.30572	0.27785	5.08043	13.37569	78.11	-0.49
89/ 6/15	2447692.5	1.01691	4.97876	-0.04264	-12.97392	3.22792	0.27852	5.08173	13.37234	78.46	-0.48
89/ 6/19	2447696.5	0.98692	4.98613	-0.04200	-12.98957	3.15007	0.27918	5.08304	13.36898	78.80	-0.47
89/ 6/23	2447700.5	0.95689	4.99332	-0.04135	-13.00474	3.07216	0.27983	5.08434	13.36562	79.15	-0.47
89/ 6/27	2447704.5	0.92683	5.00032	-0.04070	-13.01943	2.99421	0.28047	5.08566	13.36224	79.50	-0.46
89/ 7/ 1	2447708.5	0.89674	5.00715	-0.04005	-13.03364	2.91620	0.28110	5.08697	13.35885	79.85	-0.45
89/ 7/ 5	2447712.5	0.86661	5.01380	-0.03940	-13.04737	2.83815	0.28172	5.08829	13.35546	80.19	-0.44
89/ 7/ 9	2447716.5	0.83645	5.02026	-0.03875	-13.06062	2.76007	0.28232	5.08962	13.35206	80.54	-0.44
89/ 7/13	2447720.5	0.80627	5.02655	-0.03810	-13.07339	2.68194	0.28292	5.09095	13.34864	80.89	-0.43
89/ 7/17	2447724.5	0.77605	5.03266	-0.03745	-13.08568	2.60377	0.28351	5.09228	13.34522	81.23	-0.42
89/ 7/21	2447728.5	0.74581	5.03858	-0.03679	-13.09749	2.52558	0.28408	5.09361	13.34179	81.58	-0.41
89/ 7/25	2447732.5	0.71554	5.04432	-0.03613	-13.10882	2.44736	0.28465	5.09495	13.33835	81.93	-0.41
89/ 7/29	2447736.5	0.68524	5.04989	-0.03547	-13.11967	2.36912	0.28520	5.09629	13.33491	82.27	-0.40
89/ 8/ 2	2447740.5	0.65492	5.05527	-0.03481	-13.13004	2.29085	0.28575	5.09764	13.33145	82.62	-0.39
89/ 8/ 6	2447744.5	0.62457	5.06047	-0.03415	-13.13994	2.21257	0.28628	5.09898	13.32799	82.96	-0.38
89/ 8/10	2447748.5	0.59421	5.06549	-0.03349	-13.14936	2.13427	0.28680	5.10034	13.32453	83.31	-0.38
89/ 8/14	2447752.5	0.56382	5.07033	-0.03283	-13.15831	2.05596	0.28731	5.10169	13.32106	83.65	-0.37
89/ 8/18	2447756.5	0.53341	5.07499	-0.03216	-13.16678	1.97763	0.28782	5.10305	13.31758	84.00	-0.36
89/ 8/22	2447760.5	0.50299	5.07947	-0.03150	-13.17477	1.89930	0.28831	5.10441	13.31410	84.34	-0.35
89/ 8/26	2447764.5	0.47254	5.08377	-0.03083	-13.18230	1.82097	0.28879	5.10578	13.31061	84.69	-0.35
89/ 8/30	2447768.5	0.44208	5.08788	-0.03016	-13.18934	1.74263	0.28926	5.10714	13.30711	85.03	-0.34
89/ 9/ 3	2447772.5	0.41160	5.09182	-0.02950	-13.19592	1.66429	0.28972	5.10851	13.30361	85.38	-0.33
89/ 9/ 7	2447776.5	0.38111	5.09557	-0.02883	-13.20202	1.58596	0.29016	5.10989	13.30011	85.72	-0.32
89/ 9/11	2447780.5	0.35060	5.09915	-0.02816	-13.20765	1.50764	0.29060	5.11126	13.29660	86.07	-0.32
89/ 9/15	2447784.5	0.32009	5.10254	-0.02748	-13.21281	1.42932	0.29103	5.11264	13.29308	86.41	-0.31
89/ 9/19	2447788.5	0.28956	5.10575	-0.02681	-13.21750	1.35101	0.29145	5.11403	13.28956	86.75	-0.30
89/ 9/23	2447792.5	0.25902	5.10878	-0.02614	-13.22171	1.27273	0.29185	5.11541	13.28603	87.10	-0.29
89/ 9/27	2447796.5	0.22847	5.11163	-0.02546	-13.22546	1.19445	0.29225	5.11680	13.28250	87.44	-0.29
89/10/ 1	2447800.5	0.19791	5.11430	-0.02479	-13.22874	1.11620	0.29263	5.11819	13.27897	87.78	-0.28
89/10/ 5	2447804.5	0.16735	5.11679	-0.02411	-13.23155	1.03797	0.29301	5.11958	13.27543	88.13	-0.27
89/10/ 9	2447808.5	0.13678	5.11910	-0.02343	-13.23388	0.95976	0.29337	5.12098	13.27188	88.47	-0.26
89/10/13	2447812.5	0.10620	5.12122	-0.02275	-13.23575	0.88158	0.29373	5.12238	13.26833	88.81	-0.25
89/10/17	2447816.5	0.07562	5.12317	-0.02208	-13.23715	0.80344	0.29407	5.12378	13.26477	89.15	-0.25
89/10/21	2447820.5	0.04504	5.12494	-0.02140	-13.23808	0.72533	0.29440	5.12518	13.26121	89.50	-0.24
89/10/25	2447824.5	0.01446	5.12652	-0.02072	-13.23855	0.64726	0.29472	5.12658	13.25764	89.84	-0.23
89/10/29	2447828.5	-0.01612	5.12793	-0.02003	-13.23855	0.56923	0.29503	5.12799	13.25407	90.18	-0.22
89/11/ 2	2447832.5	-0.04671	5.12915	-0.01935	-13.23809	0.49124	0.29533	5.12940	13.25049	90.52	-0.22
89/11/ 6	2447836.5	-0.07729	5.13020	-0.01867	-13.23716	0.41330	0.29562	5.13081	13.24691	90.86	-0.21
89/11/10	2447840.5	-0.10787	5.13106	-0.01799	-13.23576	0.33541	0.29590	5.13223	13.24332	91.20	-0.20
89/11/14	2447844.5	-0.13844	5.13175	-0.01730	-13.23391	0.25757	0.29617	5.13364	13.23973	91.55	-0.19
89/11/18	2447848.5	-0.16901	5.13225	-0.01662	-13.23159	0.17978	0.29642	5.13506	13.23613	91.89	-0.19
89/11/22	2447852.5	-0.19958	5.13258	-0.01593	-13.22881	0.10206	0.29667	5.13648	13.23253	92.23	-0.18
89/11/26	2447856.5	-0.23013	5.13272	-0.01525	-13.22558	0.02439	0.29691	5.13790	13.22893	92.57	-0.17

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89/11/30	2447860.5	-0.26068	5.13269	-0.01456	-13.22188	-0.05322	0.29713	5.13933	13.22532	92.91	-0.16
89/12/ 4	2447864.5	-0.29122	5.13248	-0.01387	-13.21772	-0.13076	0.29735	5.14075	13.22171	93.25	-0.15
89/12/ 8	2447868.5	-0.32175	5.13209	-0.01319	-13.21310	-0.20824	0.29755	5.14218	13.21809	93.59	-0.15
89/12/12	2447872.5	-0.35227	5.13151	-0.01250	-13.20803	-0.28564	0.29775	5.14361	13.21447	93.93	-0.14
89/12/16	2447876.5	-0.38278	5.13077	-0.01181	-13.20250	-0.36297	0.29793	5.14504	13.21085	94.27	-0.13
89/12/20	2447880.5	-0.41327	5.12984	-0.01112	-13.19651	-0.44022	0.29810	5.14647	13.20722	94.61	-0.12
89/12/24	2447884.5	-0.44375	5.12873	-0.01043	-13.19007	-0.51740	0.29827	5.14790	13.20359	94.95	-0.12
89/12/28	2447888.5	-0.47421	5.12745	-0.00975	-13.18318	-0.59449	0.29842	5.14934	13.19995	95.28	-0.11
90/ 1/ 1	2447892.5	-0.50466	5.12598	-0.00906	-13.17583	-0.67150	0.29856	5.15078	13.19631	95.62	-0.10
90/ 1/ 5	2447896.5	-0.53509	5.12434	-0.00837	-13.16803	-0.74842	0.29869	5.15221	13.19267	95.96	-0.09
90/ 1/ 9	2447900.5	-0.56550	5.12253	-0.00768	-13.15978	-0.82525	0.29881	5.15365	13.18902	96.30	-0.09
90/ 1/13	2447904.5	-0.59589	5.12053	-0.00699	-13.15108	-0.90199	0.29892	5.15509	13.18536	96.64	-0.08
90/ 1/17	2447908.5	-0.62626	5.11836	-0.00629	-13.14192	-0.97863	0.29902	5.15653	13.18170	96.98	-0.07
90/ 1/21	2447912.5	-0.65661	5.11601	-0.00560	-13.13232	-1.05517	0.29911	5.15798	13.17804	97.31	-0.06
90/ 1/25	2447916.5	-0.68694	5.11348	-0.00491	-13.12227	-1.13161	0.29918	5.15942	13.17437	97.65	-0.05
90/ 1/29	2447920.5	-0.71724	5.11078	-0.00422	-13.11178	-1.20795	0.29925	5.16087	13.17070	97.99	-0.05
90/ 2/ 2	2447924.5	-0.74752	5.10790	-0.00353	-13.10084	-1.28418	0.29931	5.16231	13.16703	98.33	-0.04
90/ 2/ 6	2447928.5	-0.77777	5.10485	-0.00284	-13.08946	-1.36029	0.29935	5.16376	13.16336	98.66	-0.03
90/ 2/10	2447932.5	-0.80800	5.10162	-0.00215	-13.07764	-1.43630	0.29939	5.16521	13.15968	99.00	-0.02
90/ 2/14	2447936.5	-0.83820	5.09821	-0.00146	-13.06538	-1.51219	0.29942	5.16666	13.15600	99.34	-0.02
90/ 2/18	2447940.5	-0.86836	5.09463	-0.00076	-13.05268	-1.58796	0.29943	5.16811	13.15232	99.67	-0.01
90/ 2/22	2447944.5	-0.89850	5.09088	-0.00007	-13.03954	-1.66362	0.29944	5.16956	13.14864	100.01	-0.00
90/ 2/26	2447948.5	-0.92861	5.08695	0.00062	-13.02596	-1.73915	0.29944	5.17101	13.14496	100.35	0.01
90/ 3/ 2	2447952.5	-0.95869	5.08284	0.00131	-13.01196	-1.81456	0.29942	5.17246	13.14128	100.68	0.01
90/ 3/ 6	2447956.5	-0.98873	5.07856	0.00200	-12.99751	-1.88984	0.29940	5.17391	13.13760	101.02	0.02
90/ 3/10	2447960.5	-1.01874	5.07411	0.00270	-12.98264	-1.96499	0.29936	5.17537	13.13392	101.35	0.03
90/ 3/14	2447964.5	-1.04871	5.06948	0.00339	-12.96734	-2.04001	0.29932	5.17682	13.13023	101.69	0.04
90/ 3/18	2447968.5	-1.07865	5.06468	0.00408	-12.95160	-2.11489	0.29926	5.17827	13.12655	102.02	0.05
90/ 3/22	2447972.5	-1.10856	5.05971	0.00477	-12.93544	-2.18964	0.29919	5.17973	13.12287	102.36	0.05
90/ 3/26	2447976.5	-1.13842	5.05457	0.00546	-12.91886	-2.26425	0.29912	5.18118	13.11919	102.69	0.06
90/ 3/30	2447980.5	-1.16824	5.04925	0.00615	-12.90184	-2.33872	0.29903	5.18264	13.11551	103.03	0.07
90/ 4/ 3	2447984.5	-1.19803	5.04376	0.00684	-12.88441	-2.41305	0.29894	5.18410	13.11183	103.36	0.08
90/ 4/ 7	2447988.5	-1.22777	5.03810	0.00753	-12.86655	-2.48723	0.29883	5.18555	13.10815	103.70	0.08
90/ 4/11	2447992.5	-1.25748	5.03227	0.00822	-12.84826	-2.56127	0.29871	5.18701	13.10447	104.03	0.09
90/ 4/15	2447996.5	-1.28714	5.02627	0.00891	-12.82956	-2.63515	0.29859	5.18846	13.10079	104.36	0.10
90/ 4/19	2448000.5	-1.31675	5.02009	0.00960	-12.81044	-2.70888	0.29845	5.18992	13.09711	104.70	0.11
90/ 4/23	2448004.5	-1.34633	5.01375	0.01029	-12.79090	-2.78246	0.29831	5.19138	13.09344	105.03	0.11
90/ 4/27	2448008.5	-1.37585	5.00724	0.01098	-12.77094	-2.85588	0.29815	5.19283	13.08976	105.36	0.12
90/ 5/ 1	2448012.5	-1.40533	5.00056	0.01167	-12.75058	-2.92914	0.29798	5.19429	13.08609	105.70	0.13
90/ 5/ 5	2448016.5	-1.43476	4.99370	0.01236	-12.72980	-3.00224	0.29781	5.19575	13.08242	106.03	0.14
90/ 5/ 9	2448020.5	-1.46415	4.98668	0.01305	-12.70861	-3.07517	0.29762	5.19720	13.07876	106.36	0.14
90/ 5/13	2448024.5	-1.49348	4.97950	0.01373	-12.68701	-3.14794	0.29743	5.19866	13.07509	106.70	0.15
90/ 5/17	2448028.5	-1.52277	4.97214	0.01442	-12.66500	-3.22055	0.29722	5.20012	13.07143	107.03	0.16
90/ 5/21	2448032.5	-1.55200	4.96462	0.01511	-12.64258	-3.29298	0.29701	5.20157	13.06778	107.36	0.17
90/ 5/25	2448036.5	-1.58118	4.95693	0.01579	-12.61976	-3.36524	0.29678	5.20303	13.06412	107.69	0.17

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90/ 5/29	2448040.5	-1.61031	4.94907	0.01648	-12.59654	-3.43733	0.29655	5.20448	13.06047	108.02	0.18
90/ 6/ 2	2448044.5	-1.63938	4.94104	0.01716	-12.57291	-3.50925	0.29631	5.20594	13.05683	108.36	0.19
90/ 6/ 6	2448048.5	-1.66840	4.93285	0.01785	-12.54888	-3.58099	0.29605	5.20739	13.05318	108.69	0.20
90/ 6/10	2448052.5	-1.69736	4.92450	0.01853	-12.52446	-3.65254	0.29579	5.20884	13.04954	109.02	0.20
90/ 6/14	2448056.5	-1.72626	4.91598	0.01921	-12.49963	-3.72392	0.29552	5.21030	13.04591	109.35	0.21
90/ 6/18	2448060.5	-1.75511	4.90729	0.01989	-12.47441	-3.79512	0.29523	5.21175	13.04228	109.68	0.22
90/ 6/22	2448064.5	-1.78390	4.89844	0.02058	-12.44879	-3.86613	0.29494	5.21320	13.03865	110.01	0.23
90/ 6/26	2448068.5	-1.81263	4.88943	0.02126	-12.42278	-3.93695	0.29464	5.21465	13.03502	110.34	0.23
90/ 6/30	2448072.5	-1.84130	4.88025	0.02194	-12.39637	-4.00759	0.29433	5.21610	13.03140	110.67	0.24
90/ 7/ 4	2448076.5	-1.86990	4.87091	0.02262	-12.36957	-4.07803	0.29401	5.21755	13.02778	111.00	0.25
90/ 7/ 8	2448080.5	-1.89845	4.86141	0.02330	-12.34238	-4.14828	0.29367	5.21900	13.02416	111.33	0.26
90/ 7/12	2448084.5	-1.92693	4.85175	0.02397	-12.31480	-4.21834	0.29333	5.22045	13.02055	111.66	0.26
90/ 7/16	2448088.5	-1.95535	4.84192	0.02465	-12.28683	-4.28819	0.29298	5.22190	13.01693	111.99	0.27
90/ 7/20	2448092.5	-1.98370	4.83193	0.02533	-12.25847	-4.35785	0.29262	5.22334	13.01333	112.32	0.28
90/ 7/24	2448096.5	-2.01199	4.82179	0.02600	-12.22974	-4.42730	0.29225	5.22479	13.00972	112.65	0.29
90/ 7/28	2448100.5	-2.04020	4.81148	0.02668	-12.20061	-4.49655	0.29187	5.22623	13.00612	112.98	0.29
90/ 8/ 1	2448104.5	-2.06836	4.80101	0.02735	-12.17111	-4.56559	0.29149	5.22767	13.00252	113.31	0.30
90/ 8/ 5	2448108.5	-2.09644	4.79038	0.02803	-12.14123	-4.63442	0.29109	5.22911	12.99893	113.64	0.31
90/ 8/ 9	2448112.5	-2.12445	4.77960	0.02870	-12.11097	-4.70305	0.29068	5.23055	12.99534	113.96	0.31
90/ 8/13	2448116.5	-2.15240	4.76866	0.02937	-12.08033	-4.77146	0.29027	5.23199	12.99175	114.29	0.32
90/ 8/17	2448120.5	-2.18027	4.75755	0.03004	-12.04932	-4.83966	0.28984	5.23343	12.98817	114.62	0.33
90/ 8/21	2448124.5	-2.20807	4.74629	0.03071	-12.01794	-4.90764	0.28941	5.23487	12.98459	114.95	0.34
90/ 8/25	2448128.5	-2.23579	4.73488	0.03138	-11.98618	-4.97540	0.28896	5.23630	12.98101	115.28	0.34
90/ 8/29	2448132.5	-2.26345	4.72331	0.03204	-11.95406	-5.04295	0.28851	5.23773	12.97744	115.60	0.35
90/ 9/ 2	2448136.5	-2.29103	4.71158	0.03271	-11.92156	-5.11027	0.28805	5.23916	12.97388	115.93	0.36
90/ 9/ 6	2448140.5	-2.31853	4.69970	0.03337	-11.88870	-5.17737	0.28758	5.24059	12.97032	116.26	0.36
90/ 9/10	2448144.5	-2.34596	4.68766	0.03404	-11.85548	-5.24425	0.28710	5.24202	12.96676	116.59	0.37
90/ 9/14	2448148.5	-2.37331	4.67547	0.03470	-11.82189	-5.31090	0.28661	5.24345	12.96321	116.91	0.38
90/ 9/18	2448152.5	-2.40058	4.66312	0.03536	-11.78794	-5.37732	0.28611	5.24487	12.95967	117.24	0.39
90/ 9/22	2448156.5	-2.42777	4.65062	0.03602	-11.75363	-5.44351	0.28560	5.24630	12.95612	117.57	0.39
90/ 9/26	2448160.5	-2.45488	4.63797	0.03668	-11.71896	-5.50946	0.28508	5.24772	12.95259	117.89	0.40
90/ 9/30	2448164.5	-2.48192	4.62516	0.03734	-11.68393	-5.57519	0.28456	5.24914	12.94905	118.22	0.41
90/10/ 4	2448168.5	-2.50887	4.61221	0.03800	-11.64855	-5.64067	0.28402	5.25056	12.94553	118.54	0.41
90/10/ 8	2448172.5	-2.53574	4.59910	0.03865	-11.61281	-5.70592	0.28348	5.25197	12.94200	118.87	0.42
90/10/12	2448176.5	-2.56252	4.58585	0.03931	-11.57673	-5.77093	0.28293	5.25338	12.93848	119.20	0.43
90/10/16	2448180.5	-2.58922	4.57244	0.03996	-11.54029	-5.83569	0.28236	5.25480	12.93497	119.52	0.44
90/10/20	2448184.5	-2.61584	4.55888	0.04061	-11.50351	-5.90021	0.28179	5.25621	12.93146	119.85	0.44
90/10/24	2448188.5	-2.64237	4.54518	0.04126	-11.46638	-5.96449	0.28122	5.25761	12.92795	120.17	0.45
90/10/28	2448192.5	-2.66882	4.53133	0.04191	-11.42890	-6.02851	0.28063	5.25902	12.92446	120.50	0.46
90/11/ 1	2448196.5	-2.69518	4.51733	0.04256	-11.39109	-6.09229	0.28003	5.26042	12.92097	120.82	0.46
90/11/ 5	2448200.5	-2.72145	4.50318	0.04320	-11.35294	-6.15582	0.27943	5.26182	12.91749	121.15	0.47
90/11/ 9	2448204.5	-2.74763	4.48888	0.04385	-11.31444	-6.21910	0.27882	5.26322	12.91401	121.47	0.48
90/11/13	2448208.5	-2.77373	4.47444	0.04449	-11.27562	-6.28213	0.27819	5.26462	12.91054	121.79	0.48
90/11/17	2448212.5	-2.79973	4.45986	0.04513	-11.23645	-6.34490	0.27756	5.26601	12.90708	122.12	0.49
90/11/21	2448216.5	-2.82564	4.44513	0.04577	-11.19696	-6.40741	0.27693	5.26740	12.90363	122.44	0.50

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90/11/25	2448220.5	-2.85146	4.43025	0.04641	-11.15713	-6.46967	0.27628	5.26879	12.90018	122.77	0.50
90/11/29	2448224.5	-2.87719	4.41524	0.04705	-11.11698	-6.53167	0.27562	5.27018	12.89674	123.09	0.51
90/12/ 3	2448228.5	-2.90283	4.40007	0.04769	-11.07650	-6.59341	0.27496	5.27156	12.89331	123.41	0.52
90/12/ 7	2448232.5	-2.92837	4.38477	0.04832	-11.03569	-6.65489	0.27429	5.27294	12.88989	123.74	0.53
90/12/11	2448236.5	-2.95382	4.36933	0.04895	-10.99456	-6.71611	0.27361	5.27432	12.88648	124.06	0.53
90/12/15	2448240.5	-2.97917	4.35374	0.04958	-10.95311	-6.77706	0.27292	5.27570	12.88307	124.38	0.54
90/12/19	2448244.5	-3.00442	4.33802	0.05021	-10.91134	-6.83775	0.27223	5.27707	12.87968	124.71	0.55
90/12/23	2448248.5	-3.02958	4.32215	0.05084	-10.86924	-6.89817	0.27152	5.27844	12.87629	125.03	0.55
90/12/27	2448252.5	-3.05464	4.30614	0.05147	-10.82683	-6.95832	0.27081	5.27981	12.87291	125.35	0.56
90/12/31	2448256.5	-3.07961	4.29000	0.05209	-10.78410	-7.01820	0.27009	5.28117	12.86954	125.67	0.57
91/ 1/ 4	2448260.5	-3.10447	4.27372	0.05272	-10.74106	-7.07781	0.26936	5.28253	12.86617	126.00	0.57
91/ 1/ 8	2448264.5	-3.12923	4.25730	0.05334	-10.69771	-7.13715	0.26862	5.28389	12.86281	126.32	0.58
91/ 1/12	2448268.5	-3.15390	4.24074	0.05396	-10.65404	-7.19621	0.26787	5.28525	12.85947	126.64	0.58
91/ 1/16	2448272.5	-3.17846	4.22405	0.05458	-10.61007	-7.25500	0.26712	5.28660	12.85612	126.96	0.59
91/ 1/20	2448276.5	-3.20292	4.20722	0.05519	-10.56579	-7.31351	0.26636	5.28795	12.85279	127.28	0.60
91/ 1/24	2448280.5	-3.22728	4.19026	0.05581	-10.52121	-7.37174	0.26559	5.28930	12.84947	127.60	0.60
91/ 1/28	2448284.5	-3.25153	4.17316	0.05642	-10.47632	-7.42968	0.26481	5.29064	12.84616	127.92	0.61
91/ 2/ 1	2448288.5	-3.27568	4.15593	0.05703	-10.43114	-7.48735	0.26403	5.29198	12.84285	128.24	0.62
91/ 2/ 5	2448292.5	-3.29972	4.13857	0.05764	-10.38565	-7.54474	0.26324	5.29332	12.83956	128.57	0.62
91/ 2/ 9	2448296.5	-3.32366	4.12107	0.05825	-10.33987	-7.60184	0.26243	5.29465	12.83627	128.89	0.63
91/ 2/13	2448300.5	-3.34750	4.10344	0.05885	-10.29379	-7.65866	0.26163	5.29599	12.83299	129.21	0.64
91/ 2/17	2448304.5	-3.37123	4.08569	0.05946	-10.24742	-7.71519	0.26081	5.29731	12.82972	129.53	0.64
91/ 2/21	2448308.5	-3.39484	4.06780	0.06006	-10.20075	-7.77143	0.25999	5.29864	12.82646	129.85	0.65
91/ 2/25	2448312.5	-3.41836	4.04978	0.06066	-10.15380	-7.82739	0.25916	5.29996	12.82321	130.17	0.66
91/ 3/ 1	2448316.5	-3.44176	4.03163	0.06125	-10.10656	-7.88305	0.25832	5.30127	12.81997	130.49	0.66
91/ 3/ 5	2448320.5	-3.46505	4.01336	0.06185	-10.05903	-7.93842	0.25747	5.30259	12.81674	130.81	0.67
91/ 3/ 9	2448324.5	-3.48823	3.99495	0.06244	-10.01121	-7.99351	0.25662	5.30390	12.81352	131.13	0.67
91/ 3/13	2448328.5	-3.51131	3.97642	0.06304	-9.96311	-8.04829	0.25575	5.30520	12.81031	131.45	0.68
91/ 3/17	2448332.5	-3.53427	3.95777	0.06363	-9.91473	-8.10279	0.25488	5.30651	12.80711	131.76	0.69
91/ 3/21	2448336.5	-3.55712	3.93899	0.06421	-9.86607	-8.15698	0.25401	5.30781	12.80391	132.08	0.69
91/ 3/25	2448340.5	-3.57985	3.92008	0.06480	-9.81713	-8.21088	0.25312	5.30910	12.80073	132.40	0.70
91/ 3/29	2448344.5	-3.60247	3.90105	0.06538	-9.76791	-8.26448	0.25223	5.31039	12.79755	132.72	0.71
91/ 4/ 2	2448348.5	-3.62498	3.88190	0.06596	-9.71842	-8.31777	0.25133	5.31168	12.79438	133.04	0.71
91/ 4/ 6	2448352.5	-3.64738	3.86262	0.06654	-9.66865	-8.37077	0.25042	5.31297	12.79122	133.36	0.72
91/ 4/10	2448356.5	-3.66966	3.84322	0.06712	-9.61862	-8.42345	0.24951	5.31425	12.78807	133.68	0.72
91/ 4/14	2448360.5	-3.69182	3.82370	0.06770	-9.56831	-8.47584	0.24859	5.31552	12.78492	133.99	0.73
91/ 4/18	2448364.5	-3.71386	3.80406	0.06827	-9.51774	-8.52791	0.24766	5.31680	12.78179	134.31	0.74
91/ 4/22	2448368.5	-3.73579	3.78430	0.06884	-9.46691	-8.57968	0.24672	5.31806	12.77866	134.63	0.74
91/ 4/26	2448372.5	-3.75760	3.76442	0.06941	-9.41581	-8.63115	0.24578	5.31933	12.77555	134.95	0.75
91/ 4/30	2448376.5	-3.77930	3.74442	0.06998	-9.36446	-8.68230	0.24483	5.32059	12.77244	135.27	0.75
91/ 5/ 4	2448380.5	-3.80087	3.72430	0.07054	-9.31284	-8.73314	0.24387	5.32184	12.76935	135.58	0.76
91/ 5/ 8	2448384.5	-3.82233	3.70407	0.07110	-9.26097	-8.78367	0.24291	5.32310	12.76626	135.90	0.77
91/ 5/12	2448388.5	-3.84366	3.68372	0.07166	-9.20885	-8.83388	0.24194	5.32434	12.76318	136.22	0.77
91/ 5/16	2448392.5	-3.86487	3.66325	0.07222	-9.15647	-8.88378	0.24096	5.32559	12.76012	136.53	0.78
91/ 5/20	2448396.5	-3.88597	3.64267	0.07278	-9.10384	-8.93337	0.23997	5.32683	12.75706	136.85	0.78

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91/ 5/24	2448400.5	-3.90694	3.62198	0.07333	-9.05097	-8.98264	0.23898	5.32806	12.75402	137.17	0.79
91/ 5/28	2448404.5	-3.92778	3.60117	0.07388	-8.99785	-9.03160	0.23798	5.32929	12.75099	137.48	0.79
91/ 6/ 1	2448408.5	-3.94851	3.58025	0.07443	-8.94448	-9.08024	0.23698	5.33052	12.74796	137.80	0.80
91/ 6/ 5	2448412.5	-3.96911	3.55922	0.07498	-8.89087	-9.12856	0.23597	5.33174	12.74495	138.12	0.81
91/ 6/ 9	2448416.5	-3.98959	3.53807	0.07552	-8.83703	-9.17656	0.23495	5.33296	12.74196	138.43	0.81
91/ 6/13	2448420.5	-4.00994	3.51682	0.07606	-8.78294	-9.22424	0.23392	5.33418	12.73897	138.75	0.82
91/ 6/17	2448424.5	-4.03017	3.49545	0.07660	-8.72862	-9.27160	0.23289	5.33538	12.73600	139.06	0.82
91/ 6/21	2448428.5	-4.05027	3.47398	0.07714	-8.67406	-9.31864	0.23185	5.33659	12.73303	139.38	0.83
91/ 6/25	2448432.5	-4.07025	3.45240	0.07767	-8.61927	-9.36536	0.23081	5.33779	12.73008	139.70	0.83
91/ 6/29	2448436.5	-4.09009	3.43071	0.07820	-8.56424	-9.41175	0.22976	5.33898	12.72714	140.01	0.84
91/ 7/ 3	2448440.5	-4.10981	3.40891	0.07873	-8.50899	-9.45782	0.22870	5.34018	12.72421	140.33	0.84
91/ 7/ 7	2448444.5	-4.12941	3.38701	0.07926	-8.45351	-9.50356	0.22763	5.34136	12.72129	140.64	0.85
91/ 7/11	2448448.5	-4.14887	3.36500	0.07979	-8.39781	-9.54897	0.22656	5.34254	12.71839	140.96	0.86
91/ 7/15	2448452.5	-4.16821	3.34289	0.08031	-8.34189	-9.59405	0.22549	5.34372	12.71549	141.27	0.86
91/ 7/19	2448456.5	-4.18742	3.32068	0.08083	-8.28574	-9.63881	0.22441	5.34489	12.71262	141.59	0.87
91/ 7/23	2448460.5	-4.20649	3.29836	0.08134	-8.22938	-9.68324	0.22332	5.34606	12.70975	141.90	0.87
91/ 7/27	2448464.5	-4.22544	3.27594	0.08186	-8.17280	-9.72734	0.22222	5.34722	12.70690	142.21	0.88
91/ 7/31	2448468.5	-4.24425	3.25341	0.08237	-8.11600	-9.77111	0.22112	5.34838	12.70406	142.53	0.88
91/ 8/ 4	2448472.5	-4.26294	3.23079	0.08288	-8.05900	-9.81455	0.22001	5.34953	12.70123	142.84	0.89
91/ 8/ 8	2448476.5	-4.28149	3.20807	0.08339	-8.00178	-9.85766	0.21890	5.35068	12.69842	143.16	0.89
91/ 8/12	2448480.5	-4.29991	3.18525	0.08389	-7.94435	-9.90044	0.21778	5.35182	12.69562	143.47	0.90
91/ 8/16	2448484.5	-4.31819	3.16232	0.08439	-7.88671	-9.94289	0.21666	5.35296	12.69284	143.78	0.90
91/ 8/20	2448488.5	-4.33635	3.13931	0.08489	-7.82887	-9.98500	0.21553	5.35410	12.69007	144.10	0.91
91/ 8/24	2448492.5	-4.35437	3.11619	0.08539	-7.77083	-10.02678	0.21439	5.35522	12.68732	144.41	0.91
91/ 8/28	2448496.5	-4.37225	3.09298	0.08588	-7.71258	-10.06823	0.21325	5.35635	12.68458	144.72	0.92
91/ 9/ 1	2448500.5	-4.39000	3.06967	0.08637	-7.65413	-10.10934	0.21210	5.35747	12.68185	145.04	0.92
91/ 9/ 5	2448504.5	-4.40761	3.04627	0.08686	-7.59549	-10.15011	0.21094	5.35858	12.67915	145.35	0.93
91/ 9/ 9	2448508.5	-4.42509	3.02278	0.08735	-7.53665	-10.19055	0.20978	5.35969	12.67645	145.66	0.93
91/ 9/13	2448512.5	-4.44244	2.99919	0.08783	-7.47761	-10.23066	0.20862	5.36079	12.67377	145.98	0.94
91/ 9/17	2448516.5	-4.45964	2.97551	0.08831	-7.41837	-10.27043	0.20744	5.36189	12.67111	146.29	0.94
91/ 9/21	2448520.5	-4.47671	2.95173	0.08879	-7.35894	-10.30985	0.20627	5.36298	12.66845	146.60	0.95
91/ 9/25	2448524.5	-4.49364	2.92787	0.08927	-7.29933	-10.34894	0.20508	5.36407	12.66581	146.91	0.95
91/ 9/29	2448528.5	-4.51044	2.90392	0.08974	-7.23952	-10.38769	0.20389	5.36515	12.66319	147.23	0.96
91/10/ 3	2448532.5	-4.52709	2.87988	0.09021	-7.17953	-10.42609	0.20270	5.36623	12.66057	147.54	0.96
91/10/ 7	2448536.5	-4.54361	2.85575	0.09068	-7.11935	-10.46416	0.20150	5.36730	12.65797	147.85	0.97
91/10/11	2448540.5	-4.55999	2.83153	0.09114	-7.05899	-10.50188	0.20029	5.36836	12.65539	148.16	0.97
91/10/15	2448544.5	-4.57622	2.80722	0.09160	-6.99845	-10.53925	0.19908	5.36943	12.65282	148.47	0.98
91/10/19	2448548.5	-4.59232	2.78283	0.09206	-6.93773	-10.57629	0.19787	5.37048	12.65026	148.79	0.98
91/10/23	2448552.5	-4.60828	2.75836	0.09251	-6.87683	-10.61298	0.19664	5.37153	12.64772	149.10	0.99
91/10/27	2448556.5	-4.62409	2.73380	0.09297	-6.81576	-10.64932	0.19542	5.37257	12.64519	149.41	0.99
91/10/31	2448560.5	-4.63977	2.70916	0.09342	-6.75451	-10.68532	0.19419	5.37361	12.64267	149.72	1.00
91/11/ 4	2448564.5	-4.65530	2.68443	0.09386	-6.69309	-10.72097	0.19295	5.37465	12.64017	150.03	1.00
91/11/ 8	2448568.5	-4.67069	2.65962	0.09431	-6.63150	-10.75628	0.19170	5.37567	12.63769	150.34	1.01
91/11/12	2448572.5	-4.68594	2.63473	0.09475	-6.56975	-10.79124	0.19046	5.37669	12.63521	150.65	1.01
91/11/16	2448576.5	-4.70105	2.60976	0.09519	-6.50782	-10.82584	0.18920	5.37771	12.63275	150.96	1.01

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91/11/20	2448580.5	-4.71601	2.58471	0.09562	-6.44574	-10.86010	0.18795	5.37872	12.63031	151.27	1.02
91/11/24	2448584.5	-4.73083	2.55958	0.09606	-6.38349	-10.89401	0.18668	5.37973	12.62788	151.58	1.02
91/11/28	2448588.5	-4.74550	2.53438	0.09649	-6.32108	-10.92757	0.18541	5.38073	12.62546	151.90	1.03
91/12/ 2	2448592.5	-4.76004	2.50910	0.09691	-6.25851	-10.96078	0.18414	5.38172	12.62306	152.21	1.03
91/12/ 6	2448596.5	-4.77442	2.48374	0.09734	-6.19579	-10.99364	0.18286	5.38271	12.62067	152.52	1.04
91/12/10	2448600.5	-4.78866	2.45830	0.09776	-6.13290	-11.02615	0.18158	5.38369	12.61830	152.83	1.04
91/12/14	2448604.5	-4.80276	2.43279	0.09818	-6.06987	-11.05830	0.18029	5.38466	12.61594	153.14	1.04
91/12/18	2448608.5	-4.81671	2.40721	0.09859	-6.00668	-11.09010	0.17900	5.38563	12.61359	153.45	1.05
91/12/22	2448612.5	-4.83051	2.38155	0.09900	-5.94334	-11.12155	0.17770	5.38660	12.61125	153.76	1.05
91/12/26	2448616.5	-4.84417	2.35582	0.09941	-5.87985	-11.15263	0.17640	5.38755	12.60893	154.07	1.06
91/12/30	2448620.5	-4.85768	2.33002	0.09982	-5.81622	-11.18337	0.17509	5.38851	12.60662	154.37	1.06
92/ 1/ 3	2448624.5	-4.87104	2.30415	0.10022	-5.75245	-11.21374	0.17378	5.38945	12.60432	154.68	1.07
92/ 1/ 7	2448628.5	-4.88426	2.27821	0.10062	-5.68854	-11.24376	0.17246	5.39039	12.60204	154.99	1.07
92/ 1/11	2448632.5	-4.89732	2.25220	0.10102	-5.62448	-11.27342	0.17114	5.39133	12.59977	155.30	1.07
92/ 1/15	2448636.5	-4.91024	2.22613	0.10141	-5.56030	-11.30272	0.16982	5.39225	12.59751	155.61	1.08
92/ 1/19	2448640.5	-4.92301	2.19998	0.10180	-5.49597	-11.33167	0.16849	5.39318	12.59527	155.92	1.08
92/ 1/23	2448644.5	-4.93564	2.17377	0.10219	-5.43151	-11.36026	0.16715	5.39409	12.59304	156.23	1.09
92/ 1/27	2448648.5	-4.94811	2.14749	0.10258	-5.36693	-11.38848	0.16581	5.39500	12.59083	156.54	1.09
92/ 1/31	2448652.5	-4.96043	2.12115	0.10296	-5.30221	-11.41635	0.16447	5.39590	12.58863	156.85	1.09
92/ 2/ 4	2448656.5	-4.97261	2.09475	0.10334	-5.23737	-11.44386	0.16313	5.39680	12.58645	157.16	1.10
92/ 2/ 8	2448660.5	-4.98463	2.06828	0.10371	-5.17240	-11.47101	0.16177	5.39769	12.58428	157.46	1.10
92/ 2/12	2448664.5	-4.99650	2.04175	0.10408	-5.10731	-11.49781	0.16042	5.39858	12.58213	157.77	1.10
92/ 2/16	2448668.5	-5.00823	2.01515	0.10445	-5.04210	-11.52424	0.15906	5.39945	12.57999	158.08	1.11
92/ 2/20	2448672.5	-5.01980	1.98850	0.10482	-4.97677	-11.55031	0.15770	5.40033	12.57787	158.39	1.11
92/ 2/24	2448676.5	-5.03122	1.96179	0.10518	-4.91132	-11.57602	0.15633	5.40119	12.57576	158.70	1.12
92/ 2/28	2448680.5	-5.04249	1.93501	0.10554	-4.84576	-11.60137	0.15496	5.40205	12.57367	159.01	1.12
92/ 3/ 3	2448684.5	-5.05361	1.90818	0.10590	-4.78009	-11.62636	0.15359	5.40290	12.57160	159.31	1.12
92/ 3/ 7	2448688.5	-5.06458	1.88130	0.10625	-4.71430	-11.65100	0.15221	5.40375	12.56954	159.62	1.13
92/ 3/11	2448692.5	-5.07539	1.85435	0.10660	-4.64840	-11.67527	0.15082	5.40459	12.56750	159.93	1.13
92/ 3/15	2448696.5	-5.08606	1.82735	0.10695	-4.58239	-11.69917	0.14944	5.40542	12.56548	160.24	1.13
92/ 3/19	2448700.5	-5.09657	1.80030	0.10729	-4.51627	-11.72272	0.14804	5.40625	12.56347	160.54	1.14
92/ 3/23	2448704.5	-5.10692	1.77319	0.10763	-4.45005	-11.74590	0.14665	5.40707	12.56147	160.85	1.14
92/ 3/27	2448708.5	-5.11713	1.74603	0.10797	-4.38373	-11.76872	0.14525	5.40789	12.55949	161.16	1.14
92/ 3/31	2448712.5	-5.12718	1.71882	0.10830	-4.31730	-11.79117	0.14385	5.40870	12.55753	161.47	1.15
92/ 4/ 4	2448716.5	-5.13707	1.69155	0.10863	-4.25078	-11.81327	0.14244	5.40950	12.55558	161.77	1.15
92/ 4/ 8	2448720.5	-5.14682	1.66423	0.10896	-4.18416	-11.83500	0.14104	5.41029	12.55365	162.08	1.15
92/ 4/12	2448724.5	-5.15641	1.63687	0.10928	-4.11745	-11.85636	0.13962	5.41108	12.55174	162.39	1.16
92/ 4/16	2448728.5	-5.16584	1.60945	0.10961	-4.05064	-11.87736	0.13821	5.41186	12.54984	162.70	1.16
92/ 4/20	2448732.5	-5.17512	1.58199	0.10992	-3.98374	-11.89800	0.13679	5.41264	12.54796	163.00	1.16
92/ 4/24	2448736.5	-5.18425	1.55448	0.11024	-3.91676	-11.91828	0.13536	5.41341	12.54610	163.31	1.17
92/ 4/28	2448740.5	-5.19322	1.52692	0.11055	-3.84968	-11.93819	0.13394	5.41417	12.54426	163.62	1.17
92/ 5/ 2	2448744.5	-5.20203	1.49932	0.11086	-3.78252	-11.95774	0.13251	5.41492	12.54243	163.92	1.17
92/ 5/ 6	2448748.5	-5.21069	1.47168	0.11116	-3.71527	-11.97692	0.13107	5.41567	12.54062	164.23	1.18
92/ 5/10	2448752.5	-5.21920	1.44399	0.11146	-3.64794	-11.99574	0.12964	5.41642	12.53882	164.53	1.18
92/ 5/14	2448756.5	-5.22755	1.41625	0.11176	-3.58053	-12.01420	0.12820	5.41715	12.53705	164.84	1.18

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92/ 5/18	2448760.5	-5.23574	1.38848	0.11205	-3.51304	-12.03229	0.12675	5.41788	12.53529	165.15	1.19
92/ 5/22	2448764.5	-5.24378	1.36066	0.11235	-3.44547	-12.05001	0.12531	5.41860	12.53355	165.45	1.19
92/ 5/26	2448768.5	-5.25166	1.33280	0.11263	-3.37783	-12.06737	0.12386	5.41932	12.53182	165.76	1.19
92/ 5/30	2448772.5	-5.25939	1.30490	0.11292	-3.31011	-12.08437	0.12241	5.42003	12.53012	166.07	1.19
92/ 6/ 3	2448776.5	-5.26696	1.27697	0.11320	-3.24232	-12.10100	0.12095	5.42073	12.52843	166.37	1.20
92/ 6/ 7	2448780.5	-5.27437	1.24899	0.11348	-3.17445	-12.11727	0.11949	5.42142	12.52676	166.68	1.20
92/ 6/11	2448784.5	-5.28162	1.22098	0.11375	-3.10652	-12.13317	0.11803	5.42211	12.52510	166.98	1.20
92/ 6/15	2448788.5	-5.28872	1.19293	0.11402	-3.03852	-12.14870	0.11656	5.42279	12.52346	167.29	1.20
92/ 6/19	2448792.5	-5.29566	1.16485	0.11429	-2.97045	-12.16387	0.11509	5.42346	12.52184	167.59	1.21
92/ 6/23	2448796.5	-5.30245	1.13673	0.11455	-2.90232	-12.17866	0.11362	5.42413	12.52023	167.90	1.21
92/ 6/27	2448800.5	-5.30907	1.10858	0.11481	-2.83412	-12.19309	0.11215	5.42479	12.51864	168.21	1.21
92/ 7/ 1	2448804.5	-5.31554	1.08040	0.11507	-2.76587	-12.20715	0.11067	5.42545	12.51706	168.51	1.22
92/ 7/ 5	2448808.5	-5.32185	1.05218	0.11533	-2.69756	-12.22085	0.10919	5.42609	12.51550	168.82	1.22
92/ 7/ 9	2448812.5	-5.32800	1.02393	0.11558	-2.62919	-12.23417	0.10771	5.42673	12.51396	169.12	1.22
92/ 7/13	2448816.5	-5.33400	0.99565	0.11582	-2.56077	-12.24713	0.10622	5.42736	12.51243	169.43	1.22
92/ 7/17	2448820.5	-5.33984	0.96735	0.11607	-2.49230	-12.25972	0.10473	5.42799	12.51092	169.73	1.23
92/ 7/21	2448824.5	-5.34551	0.93901	0.11631	-2.42378	-12.27194	0.10324	5.42861	12.50943	170.04	1.23
92/ 7/25	2448828.5	-5.35103	0.91065	0.11654	-2.35520	-12.28379	0.10175	5.42922	12.50795	170.34	1.23
92/ 7/29	2448832.5	-5.35640	0.88226	0.11678	-2.28658	-12.29528	0.10025	5.42982	12.50649	170.65	1.23
92/ 8/ 2	2448836.5	-5.36160	0.85384	0.11701	-2.21792	-12.30639	0.09876	5.43042	12.50505	170.95	1.23
92/ 8/ 6	2448840.5	-5.36664	0.82540	0.11723	-2.14922	-12.31714	0.09726	5.43101	12.50362	171.26	1.24
92/ 8/10	2448844.5	-5.37153	0.79693	0.11746	-2.08047	-12.32752	0.09575	5.43159	12.50221	171.56	1.24
92/ 8/14	2448848.5	-5.37626	0.76844	0.11768	-2.01168	-12.33753	0.09425	5.43217	12.50082	171.87	1.24
92/ 8/18	2448852.5	-5.38082	0.73993	0.11789	-1.94286	-12.34718	0.09274	5.43274	12.49944	172.17	1.24
92/ 8/22	2448856.5	-5.38523	0.71139	0.11810	-1.87400	-12.35645	0.09123	5.43330	12.49808	172.47	1.25
92/ 8/26	2448860.5	-5.38948	0.68283	0.11831	-1.80511	-12.36536	0.08972	5.43385	12.49674	172.78	1.25
92/ 8/30	2448864.5	-5.39357	0.65426	0.11852	-1.73618	-12.37390	0.08821	5.43440	12.49542	173.08	1.25
92/ 9/ 3	2448868.5	-5.39750	0.62566	0.11872	-1.66723	-12.38207	0.08669	5.43494	12.49411	173.39	1.25
92/ 9/ 7	2448872.5	-5.40128	0.59705	0.11892	-1.59824	-12.38988	0.08517	5.43547	12.49282	173.69	1.25
92/ 9/11	2448876.5	-5.40489	0.56842	0.11911	-1.52923	-12.39731	0.08365	5.43600	12.49155	174.00	1.26
92/ 9/15	2448880.5	-5.40834	0.53977	0.11931	-1.46019	-12.40438	0.08213	5.43652	12.49029	174.30	1.26
92/ 9/19	2448884.5	-5.41163	0.51111	0.11949	-1.39113	-12.41107	0.08060	5.43703	12.48905	174.60	1.26
92/ 9/23	2448888.5	-5.41477	0.48243	0.11968	-1.32205	-12.41740	0.07908	5.43753	12.48783	174.91	1.26
92/ 9/27	2448892.5	-5.41774	0.45373	0.11986	-1.25295	-12.42336	0.07755	5.43803	12.48662	175.21	1.26
92/10/ 1	2448896.5	-5.42056	0.42503	0.12004	-1.18384	-12.42895	0.07602	5.43852	12.48543	175.52	1.26
92/10/ 5	2448900.5	-5.42321	0.39631	0.12021	-1.11471	-12.43417	0.07449	5.43900	12.48426	175.82	1.27
92/10/ 9	2448904.5	-5.42571	0.36758	0.12038	-1.04556	-12.43903	0.07295	5.43948	12.48311	176.12	1.27
92/10/13	2448908.5	-5.42804	0.33883	0.12055	-0.97641	-12.44352	0.07142	5.43994	12.48198	176.43	1.27
92/10/17	2448912.5	-5.43022	0.31008	0.12071	-0.90724	-12.44764	0.06988	5.44040	12.48086	176.73	1.27
92/10/21	2448916.5	-5.43224	0.28132	0.12087	-0.83807	-12.45140	0.06834	5.44086	12.47976	177.04	1.27
92/10/25	2448920.5	-5.43409	0.25255	0.12103	-0.76889	-12.45479	0.06680	5.44130	12.47868	177.34	1.27
92/10/29	2448924.5	-5.43579	0.22378	0.12118	-0.69971	-12.45781	0.06526	5.44174	12.47762	177.64	1.28
92/11/ 2	2448928.5	-5.43732	0.19499	0.12133	-0.63052	-12.46047	0.06372	5.44217	12.47658	177.95	1.28
92/11/ 6	2448932.5	-5.43870	0.16621	0.12147	-0.56133	-12.46276	0.06217	5.44260	12.47555	178.25	1.28
92/11/10	2448936.5	-5.43992	0.13741	0.12162	-0.49214	-12.46469	0.06063	5.44301	12.47455	178.55	1.28

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92/11/14	2448940.5	-5.44098	0.10861	0.12175	-0.42296	-12.46625	0.05908	5.44342	12.47356	178.86	1.28
92/11/18	2448944.5	-5.44187	0.07981	0.12189	-0.35377	-12.46745	0.05753	5.44382	12.47260	179.16	1.28
92/11/22	2448948.5	-5.44261	0.05101	0.12202	-0.28460	-12.46828	0.05598	5.44422	12.47166	179.46	1.28
92/11/26	2448952.5	-5.44319	0.02221	0.12215	-0.21542	-12.46875	0.05443	5.44460	12.47073	179.77	1.29
92/11/30	2448956.5	-5.44360	-0.00660	0.12227	-0.14626	-12.46886	0.05288	5.44498	12.46983	180.07	1.29
92/12/ 4	2448960.5	-5.44386	-0.03540	0.12239	-0.07710	-12.46859	0.05133	5.44535	12.46894	180.37	1.29
92/12/ 8	2448964.5	-5.44396	-0.06421	0.12251	-0.00795	-12.46797	0.04977	5.44572	12.46807	180.68	1.29
92/12/12	2448968.5	-5.44390	-0.09301	0.12262	0.06118	-12.46698	0.04821	5.44607	12.46722	180.98	1.29
92/12/16	2448972.5	-5.44368	-0.12181	0.12273	0.13030	-12.46562	0.04666	5.44642	12.46639	181.28	1.29
92/12/20	2448976.5	-5.44330	-0.15061	0.12284	0.19941	-12.46390	0.04510	5.44677	12.46557	181.58	1.29
92/12/24	2448980.5	-5.44276	-0.17940	0.12294	0.26849	-12.46181	0.04354	5.44710	12.46478	181.89	1.29
92/12/28	2448984.5	-5.44206	-0.20818	0.12304	0.33756	-12.45936	0.04198	5.44743	12.46400	182.19	1.29
93/ 1/ 1	2448988.5	-5.44120	-0.23696	0.12313	0.40660	-12.45654	0.04042	5.44775	12.46324	182.49	1.30
93/ 1/ 5	2448992.5	-5.44018	-0.26574	0.12322	0.47562	-12.45336	0.03885	5.44806	12.46250	182.80	1.30
93/ 1/ 9	2448996.5	-5.43900	-0.29450	0.12331	0.54462	-12.44982	0.03729	5.44836	12.46178	183.10	1.30
93/ 1/13	2449000.5	-5.43766	-0.32326	0.12340	0.61359	-12.44591	0.03573	5.44866	12.46108	183.40	1.30
93/ 1/17	2449004.5	-5.43616	-0.35201	0.12348	0.68253	-12.44164	0.03416	5.44895	12.46039	183.70	1.30
93/ 1/21	2449008.5	-5.43451	-0.38074	0.12355	0.75144	-12.43701	0.03260	5.44923	12.45973	184.01	1.30
93/ 1/25	2449012.5	-5.43269	-0.40947	0.12363	0.82033	-12.43201	0.03103	5.44950	12.45908	184.31	1.30
93/ 1/29	2449016.5	-5.43072	-0.43818	0.12370	0.88917	-12.42665	0.02946	5.44977	12.45845	184.61	1.30
93/ 2/ 2	2449020.5	-5.42858	-0.46688	0.12376	0.95799	-12.42092	0.02789	5.45003	12.45784	184.92	1.30
93/ 2/ 6	2449024.5	-5.42629	-0.49557	0.12383	1.02676	-12.41484	0.02632	5.45028	12.45725	185.22	1.30
93/ 2/10	2449028.5	-5.42384	-0.52424	0.12389	1.09550	-12.40839	0.02476	5.45053	12.45668	185.52	1.30
93/ 2/14	2449032.5	-5.42123	-0.55290	0.12394	1.16420	-12.40158	0.02319	5.45076	12.45612	185.82	1.30
93/ 2/18	2449036.5	-5.41846	-0.58154	0.12399	1.23285	-12.39440	0.02162	5.45099	12.45559	186.13	1.30
93/ 2/22	2449040.5	-5.41553	-0.61017	0.12404	1.30147	-12.38687	0.02004	5.45121	12.45507	186.43	1.30
93/ 2/26	2449044.5	-5.41245	-0.63878	0.12409	1.37004	-12.37897	0.01847	5.45142	12.45457	186.73	1.30
93/ 3/ 2	2449048.5	-5.40920	-0.66736	0.12413	1.43856	-12.37071	0.01690	5.45163	12.45408	187.03	1.30
93/ 3/ 6	2449052.5	-5.40580	-0.69593	0.12416	1.50704	-12.36209	0.01533	5.45183	12.45362	187.34	1.31
93/ 3/10	2449056.5	-5.40224	-0.72448	0.12420	1.57547	-12.35310	0.01375	5.45202	12.45317	187.64	1.31
93/ 3/14	2449060.5	-5.39852	-0.75301	0.12423	1.64384	-12.34375	0.01218	5.45220	12.45273	187.94	1.31
93/ 3/18	2449064.5	-5.39465	-0.78151	0.12425	1.71216	-12.33404	0.01061	5.45238	12.45232	188.24	1.31
93/ 3/22	2449068.5	-5.39061	-0.81000	0.12428	1.78042	-12.32397	0.00903	5.45254	12.45191	188.55	1.31
93/ 3/26	2449072.5	-5.38642	-0.83845	0.12430	1.84862	-12.31353	0.00746	5.45270	12.45153	188.85	1.31
93/ 3/30	2449076.5	-5.38207	-0.86689	0.12431	1.91677	-12.30274	0.00589	5.45286	12.45116	189.15	1.31
93/ 4/ 3	2449080.5	-5.37756	-0.89530	0.12432	1.98485	-12.29159	0.00431	5.45300	12.45081	189.45	1.31
93/ 4/ 7	2449084.5	-5.37290	-0.92368	0.12433	2.05287	-12.28007	0.00274	5.45314	12.45048	189.75	1.31
93/ 4/11	2449088.5	-5.36808	-0.95203	0.12434	2.12082	-12.26820	0.00117	5.45327	12.45016	190.06	1.31
93/ 4/15	2449092.5	-5.36310	-0.98036	0.12434	2.18870	-12.25596	-0.00040	5.45339	12.44986	190.36	1.31
93/ 4/19	2449096.5	-5.35797	-1.00866	0.12433	2.25652	-12.24337	-0.00198	5.45350	12.44958	190.66	1.31
93/ 4/23	2449100.5	-5.35268	-1.03693	0.12433	2.32426	-12.23042	-0.00355	5.45361	12.44931	190.96	1.31
93/ 4/27	2449104.5	-5.34723	-1.06517	0.12432	2.39193	-12.21711	-0.00512	5.45370	12.44907	191.27	1.31
93/ 5/ 1	2449108.5	-5.34162	-1.09338	0.12430	2.45952	-12.20345	-0.00669	5.45379	12.44884	191.57	1.31
93/ 5/ 5	2449112.5	-5.33586	-1.12155	0.12429	2.52704	-12.18943	-0.00827	5.45388	12.44862	191.87	1.31
93/ 5/ 9	2449116.5	-5.32995	-1.14970	0.12427	2.59448	-12.17505	-0.00984	5.45395	12.44843	192.17	1.31

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93/ 5/13	2449120.5	-5.32388	-1.17781	0.12424	2.66184	-12.16032	-0.01141	5.45402	12.44825	192.47	1.31
93/ 5/17	2449124.5	-5.31765	-1.20588	0.12421	2.72912	-12.14524	-0.01298	5.45408	12.44810	192.78	1.30
93/ 5/21	2449128.5	-5.31127	-1.23392	0.12418	2.79632	-12.12980	-0.01455	5.45413	12.44796	193.08	1.30
93/ 5/25	2449132.5	-5.30473	-1.26192	0.12415	2.86343	-12.11401	-0.01612	5.45417	12.44784	193.38	1.30
93/ 5/29	2449136.5	-5.29804	-1.28989	0.12411	2.93046	-12.09786	-0.01769	5.45421	12.44774	193.68	1.30
93/ 6/ 2	2449140.5	-5.29119	-1.31782	0.12406	2.99740	-12.08136	-0.01926	5.45424	12.44765	193.99	1.30
93/ 6/ 6	2449144.5	-5.28419	-1.34571	0.12402	3.06425	-12.06451	-0.02083	5.45426	12.44759	194.29	1.30
93/ 6/10	2449148.5	-5.27703	-1.37356	0.12397	3.13101	-12.04730	-0.02239	5.45427	12.44754	194.59	1.30
93/ 6/14	2449152.5	-5.26972	-1.40137	0.12391	3.19768	-12.02974	-0.02396	5.45428	12.44751	194.89	1.30
93/ 6/18	2449156.5	-5.26226	-1.42914	0.12386	3.26425	-12.01183	-0.02553	5.45428	12.44749	195.19	1.30
93/ 6/22	2449160.5	-5.25464	-1.45687	0.12380	3.33072	-11.99357	-0.02709	5.45427	12.44750	195.50	1.30
93/ 6/26	2449164.5	-5.24687	-1.48456	0.12373	3.39710	-11.97496	-0.02865	5.45425	12.44752	195.80	1.30
93/ 6/30	2449168.5	-5.23894	-1.51220	0.12366	3.46338	-11.95600	-0.03022	5.45423	12.44757	196.10	1.30
93/ 7/ 4	2449172.5	-5.23087	-1.53980	0.12359	3.52955	-11.93670	-0.03178	5.45419	12.44763	196.40	1.30
93/ 7/ 8	2449176.5	-5.22264	-1.56735	0.12352	3.59563	-11.91704	-0.03334	5.45415	12.44771	196.70	1.30
93/ 7/12	2449180.5	-5.21425	-1.59486	0.12344	3.66159	-11.89704	-0.03490	5.45410	12.44781	197.01	1.30
93/ 7/16	2449184.5	-5.20572	-1.62232	0.12336	3.72746	-11.87669	-0.03646	5.45405	12.44793	197.31	1.30
93/ 7/20	2449188.5	-5.19703	-1.64973	0.12327	3.79321	-11.85599	-0.03802	5.45399	12.44807	197.61	1.30
93/ 7/24	2449192.5	-5.18819	-1.67710	0.12318	3.85886	-11.83495	-0.03958	5.45391	12.44823	197.91	1.29
93/ 7/28	2449196.5	-5.17920	-1.70442	0.12309	3.92439	-11.81356	-0.04113	5.45384	12.44841	198.22	1.29
93/ 8/ 1	2449200.5	-5.17006	-1.73168	0.12299	3.98981	-11.79183	-0.04269	5.45375	12.44860	198.52	1.29
93/ 8/ 5	2449204.5	-5.16077	-1.75890	0.12289	4.05512	-11.76976	-0.04424	5.45366	12.44882	198.82	1.29
93/ 8/ 9	2449208.5	-5.15133	-1.78606	0.12279	4.12032	-11.74734	-0.04580	5.45355	12.44906	199.12	1.29
93/ 8/13	2449212.5	-5.14173	-1.81317	0.12268	4.18540	-11.72458	-0.04735	5.45344	12.44932	199.42	1.29
93/ 8/17	2449216.5	-5.13199	-1.84023	0.12257	4.25036	-11.70148	-0.04890	5.45333	12.44960	199.73	1.29
93/ 8/21	2449220.5	-5.12209	-1.86724	0.12245	4.31520	-11.67803	-0.05045	5.45320	12.44990	200.03	1.29
93/ 8/25	2449224.5	-5.11205	-1.89419	0.12233	4.37993	-11.65424	-0.05200	5.45307	12.45022	200.33	1.29
93/ 8/29	2449228.5	-5.10186	-1.92109	0.12221	4.44453	-11.63012	-0.05354	5.45293	12.45055	200.63	1.28
93/ 9/ 2	2449232.5	-5.09151	-1.94792	0.12209	4.50901	-11.60564	-0.05509	5.45278	12.45091	200.94	1.28
93/ 9/ 6	2449236.5	-5.08102	-1.97471	0.12196	4.57336	-11.58083	-0.05663	5.45263	12.45128	201.24	1.28
93/ 9/10	2449240.5	-5.07038	-2.00143	0.12182	4.63759	-11.55568	-0.05818	5.45246	12.45168	201.54	1.28
93/ 9/14	2449244.5	-5.05960	-2.02810	0.12169	4.70168	-11.53018	-0.05972	5.45229	12.45209	201.84	1.28
93/ 9/18	2449248.5	-5.04866	-2.05471	0.12155	4.76565	-11.50435	-0.06126	5.45212	12.45252	202.15	1.28
93/ 9/22	2449252.5	-5.03758	-2.08125	0.12141	4.82948	-11.47818	-0.06280	5.45193	12.45297	202.45	1.28
93/ 9/26	2449256.5	-5.02635	-2.10774	0.12126	4.89318	-11.45166	-0.06433	5.45174	12.45343	202.75	1.27
93/ 9/30	2449260.5	-5.01497	-2.13416	0.12111	4.95675	-11.42482	-0.06587	5.45153	12.45392	203.05	1.27
93/10/ 4	2449264.5	-5.00344	-2.16052	0.12095	5.02018	-11.39763	-0.06740	5.45133	12.45442	203.36	1.27
93/10/ 8	2449268.5	-4.99177	-2.18682	0.12080	5.08347	-11.37011	-0.06893	5.45111	12.45495	203.66	1.27
93/10/12	2449272.5	-4.97996	-2.21306	0.12064	5.14661	-11.34225	-0.07046	5.45089	12.45549	203.96	1.27
93/10/16	2449276.5	-4.96800	-2.23923	0.12047	5.20962	-11.31405	-0.07199	5.45065	12.45604	204.26	1.27
93/10/20	2449280.5	-4.95589	-2.26533	0.12030	5.27248	-11.28552	-0.07351	5.45042	12.45662	204.57	1.26
93/10/24	2449284.5	-4.94363	-2.29137	0.12013	5.33520	-11.25665	-0.07504	5.45017	12.45722	204.87	1.26
93/10/28	2449288.5	-4.93124	-2.31734	0.11996	5.39776	-11.22746	-0.07656	5.44991	12.45783	205.17	1.26
93/11/ 1	2449292.5	-4.91870	-2.34325	0.11978	5.46018	-11.19792	-0.07808	5.44965	12.45846	205.47	1.26
93/11/ 5	2449296.5	-4.90601	-2.36908	0.11960	5.52245	-11.16806	-0.07959	5.44938	12.45911	205.78	1.26

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93/11/ 9	2449300.5	-4.89318	-2.39485	0.11941	5.58457	-11.13787	-0.08111	5.44911	12.45978	206.08	1.26
93/11/13	2449304.5	-4.88021	-2.42054	0.11922	5.64654	-11.10734	-0.08262	5.44882	12.46047	206.38	1.25
93/11/17	2449308.5	-4.86709	-2.44617	0.11903	5.70835	-11.07648	-0.08413	5.44853	12.46117	206.68	1.25
93/11/21	2449312.5	-4.85383	-2.47172	0.11883	5.77000	-11.04530	-0.08564	5.44823	12.46189	206.99	1.25
93/11/25	2449316.5	-4.84043	-2.49720	0.11863	5.83150	-11.01378	-0.08715	5.44792	12.46263	207.29	1.25
93/11/29	2449320.5	-4.82689	-2.52261	0.11843	5.89283	-10.98193	-0.08865	5.44761	12.46339	207.59	1.25
93/12/ 3	2449324.5	-4.81320	-2.54794	0.11822	5.95401	-10.94975	-0.09016	5.44728	12.46417	207.90	1.24
93/12/ 7	2449328.5	-4.79938	-2.57320	0.11801	6.01502	-10.91725	-0.09166	5.44695	12.46496	208.20	1.24
93/12/11	2449332.5	-4.78541	-2.59838	0.11780	6.07586	-10.88442	-0.09315	5.44662	12.46576	208.50	1.24
93/12/15	2449336.5	-4.77131	-2.62349	0.11758	6.13654	-10.85126	-0.09465	5.44627	12.46659	208.80	1.24
93/12/19	2449340.5	-4.75706	-2.64852	0.11736	6.19704	-10.81777	-0.09614	5.44592	12.46743	209.11	1.23
93/12/23	2449344.5	-4.74267	-2.67347	0.11714	6.25738	-10.78397	-0.09763	5.44556	12.46829	209.41	1.23
93/12/27	2449348.5	-4.72815	-2.69834	0.11691	6.31754	-10.74983	-0.09912	5.44519	12.46917	209.71	1.23
93/12/31	2449352.5	-4.71349	-2.72314	0.11668	6.37753	-10.71538	-0.10060	5.44482	12.47006	210.02	1.23
94/ 1/ 4	2449356.5	-4.69868	-2.74785	0.11645	6.43735	-10.68060	-0.10208	5.44443	12.47097	210.32	1.23
94/ 1/ 8	2449360.5	-4.68374	-2.77248	0.11621	6.49698	-10.64551	-0.10356	5.44404	12.47190	210.62	1.22
94/ 1/12	2449364.5	-4.66866	-2.79704	0.11597	6.55644	-10.61009	-0.10503	5.44365	12.47285	210.93	1.22
94/ 1/16	2449368.5	-4.65345	-2.82151	0.11572	6.61572	-10.57435	-0.10651	5.44324	12.47381	211.23	1.22
94/ 1/20	2449372.5	-4.63810	-2.84589	0.11548	6.67481	-10.53830	-0.10798	5.44283	12.47479	211.53	1.22
94/ 1/24	2449376.5	-4.62261	-2.87020	0.11522	6.73372	-10.50193	-0.10944	5.44241	12.47579	211.84	1.21
94/ 1/28	2449380.5	-4.60699	-2.89442	0.11497	6.79245	-10.46524	-0.11091	5.44198	12.47681	212.14	1.21
94/ 2/ 1	2449384.5	-4.59123	-2.91855	0.11471	6.85099	-10.42823	-0.11237	5.44155	12.47785	212.44	1.21
94/ 2/ 5	2449388.5	-4.57533	-2.94260	0.11445	6.90934	-10.39092	-0.11383	5.44111	12.47891	212.75	1.21
94/ 2/ 9	2449392.5	-4.55930	-2.96656	0.11419	6.96751	-10.35329	-0.11528	5.44066	12.47998	213.05	1.20
94/ 2/13	2449396.5	-4.54314	-2.99043	0.11392	7.02548	-10.31534	-0.11674	5.44020	12.48108	213.35	1.20
94/ 2/17	2449400.5	-4.52684	-3.01422	0.11365	7.08327	-10.27708	-0.11819	5.43974	12.48219	213.66	1.20
94/ 2/21	2449404.5	-4.51041	-3.03792	0.11337	7.14086	-10.23851	-0.11963	5.43927	12.48332	213.96	1.19
94/ 2/25	2449408.5	-4.49385	-3.06152	0.11309	7.19825	-10.19963	-0.12108	5.43879	12.48447	214.27	1.19
94/ 3/ 1	2449412.5	-4.47715	-3.08504	0.11281	7.25545	-10.16044	-0.12252	5.43830	12.48564	214.57	1.19
94/ 3/ 5	2449416.5	-4.46033	-3.10847	0.11253	7.31245	-10.12093	-0.12395	5.43781	12.48682	214.87	1.19
94/ 3/ 9	2449420.5	-4.44337	-3.13180	0.11224	7.36925	-10.08112	-0.12539	5.43731	12.48802	215.18	1.18
94/ 3/13	2449424.5	-4.42628	-3.15505	0.11195	7.42585	-10.04100	-0.12682	5.43680	12.48924	215.48	1.18
94/ 3/17	2449428.5	-4.40906	-3.17820	0.11165	7.48225	-10.00058	-0.12824	5.43629	12.49048	215.79	1.18
94/ 3/21	2449432.5	-4.39171	-3.20125	0.11136	7.53844	-9.95984	-0.12967	5.43576	12.49173	216.09	1.17
94/ 3/25	2449436.5	-4.37423	-3.22421	0.11105	7.59443	-9.91880	-0.13109	5.43523	12.49301	216.39	1.17
94/ 3/29	2449440.5	-4.35662	-3.24708	0.11075	7.65021	-9.87746	-0.13250	5.43470	12.49430	216.70	1.17
94/ 4/ 2	2449444.5	-4.33888	-3.26985	0.11044	7.70578	-9.83581	-0.13392	5.43415	12.49561	217.00	1.16
94/ 4/ 6	2449448.5	-4.32102	-3.29253	0.11013	7.76114	-9.79386	-0.13533	5.43360	12.49693	217.31	1.16
94/ 4/10	2449452.5	-4.30302	-3.31510	0.10982	7.81629	-9.75161	-0.13673	5.43304	12.49828	217.61	1.16
94/ 4/14	2449456.5	-4.28490	-3.33758	0.10950	7.87122	-9.70906	-0.13813	5.43248	12.49964	217.92	1.15
94/ 4/18	2449460.5	-4.26666	-3.35996	0.10918	7.92594	-9.66620	-0.13953	5.43191	12.50102	218.22	1.15
94/ 4/22	2449464.5	-4.24828	-3.38224	0.10886	7.98044	-9.62305	-0.14093	5.43133	12.50242	218.52	1.15
94/ 4/26	2449468.5	-4.22978	-3.40442	0.10853	8.03473	-9.57960	-0.14232	5.43074	12.50383	218.83	1.15
94/ 4/30	2449472.5	-4.21116	-3.42650	0.10820	8.08879	-9.53585	-0.14371	5.43015	12.50527	219.13	1.14
94/ 5/ 4	2449476.5	-4.19241	-3.44848	0.10786	8.14264	-9.49181	-0.14509	5.42955	12.50672	219.44	1.14

1.5 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					JUPITER		
94/ 5/ 8	2449480.5	-4.17354	-3.47036	0.10753	8.19626	-9.44747	-0.14647	5.42894	12.50819	219.74	1.13
94/ 5/12	2449484.5	-4.15454	-3.49213	0.10719	8.24966	-9.40284	-0.14785	5.42832	12.50968	220.05	1.13
94/ 5/16	2449488.5	-4.13542	-3.51380	0.10684	8.30284	-9.35791	-0.14923	5.42770	12.51119	220.35	1.13
94/ 5/20	2449492.5	-4.11618	-3.53537	0.10650	8.35579	-9.31268	-0.15059	5.42707	12.51271	220.66	1.12
94/ 5/24	2449496.5	-4.09681	-3.55683	0.10615	8.40851	-9.26716	-0.15196	5.42644	12.51425	220.96	1.12
94/ 5/28	2449500.5	-4.07733	-3.57819	0.10580	8.46100	-9.22135	-0.15332	5.42579	12.51581	221.27	1.12
94/ 6/ 1	2449504.5	-4.05772	-3.59944	0.10544	8.51326	-9.17525	-0.15468	5.42514	12.51738	221.57	1.11
94/ 6/ 5	2449508.5	-4.03799	-3.62058	0.10508	8.56529	-9.12886	-0.15603	5.42448	12.51897	221.88	1.11
94/ 6/ 9	2449512.5	-4.01815	-3.64161	0.10472	8.61708	-9.08217	-0.15738	5.42382	12.52057	222.19	1.11
94/ 6/13	2449516.5	-3.99818	-3.66254	0.10435	8.66863	-9.03520	-0.15873	5.42315	12.52219	222.49	1.10
94/ 6/17	2449520.5	-3.97810	-3.68336	0.10399	8.71994	-8.98794	-0.16007	5.42247	12.52382	222.80	1.10
94/ 6/21	2449524.5	-3.95789	-3.70407	0.10361	8.77101	-8.94040	-0.16140	5.42179	12.52547	223.10	1.10
94/ 6/25	2449528.5	-3.93757	-3.72467	0.10324	8.82184	-8.89257	-0.16273	5.42109	12.52714	223.41	1.09
94/ 6/29	2449532.5	-3.91713	-3.74516	0.10286	8.87243	-8.84445	-0.16406	5.42040	12.52882	223.71	1.09
94/ 7/ 3	2449536.5	-3.89658	-3.76553	0.10248	8.92277	-8.79606	-0.16538	5.41969	12.53052	224.02	1.08
94/ 7/ 7	2449540.5	-3.87591	-3.78580	0.10210	8.97287	-8.74738	-0.16670	5.41898	12.53223	224.33	1.08
94/ 7/11	2449544.5	-3.85512	-3.80595	0.10171	9.02271	-8.69842	-0.16802	5.41826	12.53396	224.63	1.08
94/ 7/15	2449548.5	-3.83422	-3.82599	0.10132	9.07230	-8.64918	-0.16933	5.41753	12.53570	224.94	1.07
94/ 7/19	2449552.5	-3.81320	-3.84591	0.10093	9.12165	-8.59967	-0.17063	5.41680	12.53746	225.24	1.07
94/ 7/23	2449556.5	-3.79207	-3.86572	0.10053	9.17074	-8.54987	-0.17193	5.41606	12.53923	225.55	1.06
94/ 7/27	2449560.5	-3.77083	-3.88541	0.10013	9.21957	-8.49981	-0.17323	5.41531	12.54102	225.86	1.06
94/ 7/31	2449564.5	-3.74948	-3.90499	0.09973	9.26815	-8.44947	-0.17452	5.41456	12.54283	226.16	1.06
94/ 8/ 4	2449568.5	-3.72801	-3.92445	0.09933	9.31647	-8.39885	-0.17581	5.41380	12.54465	226.47	1.05
94/ 8/ 8	2449572.5	-3.70643	-3.94380	0.09892	9.36454	-8.34797	-0.17709	5.41303	12.54649	226.78	1.05
94/ 8/12	2449576.5	-3.68474	-3.96302	0.09851	9.41234	-8.29681	-0.17837	5.41226	12.54835	227.08	1.04
94/ 8/16	2449580.5	-3.66294	-3.98213	0.09810	9.45988	-8.24538	-0.17964	5.41148	12.55022	227.39	1.04
94/ 8/20	2449584.5	-3.64103	-4.00112	0.09768	9.50716	-8.19368	-0.18091	5.41069	12.55210	227.70	1.03
94/ 8/24	2449588.5	-3.61902	-4.01999	0.09726	9.55418	-8.14172	-0.18217	5.40990	12.55401	228.00	1.03
94/ 8/28	2449592.5	-3.59689	-4.03874	0.09684	9.60093	-8.08948	-0.18342	5.40910	12.55592	228.31	1.03
94/ 9/ 1	2449596.5	-3.57466	-4.05736	0.09641	9.64741	-8.03699	-0.18468	5.40830	12.55785	228.62	1.02
94/ 9/ 5	2449600.5	-3.55232	-4.07587	0.09599	9.69362	-7.98423	-0.18592	5.40748	12.55980	228.93	1.02
94/ 9/ 9	2449604.5	-3.52987	-4.09425	0.09555	9.73956	-7.93120	-0.18717	5.40666	12.56177	229.23	1.01
94/ 9/13	2449608.5	-3.50732	-4.11251	0.09512	9.78522	-7.87792	-0.18840	5.40584	12.56374	229.54	1.01
94/ 9/17	2449612.5	-3.48466	-4.13065	0.09468	9.83062	-7.82437	-0.18964	5.40501	12.56574	229.85	1.00
94/ 9/21	2449616.5	-3.46190	-4.14867	0.09424	9.87574	-7.77057	-0.19086	5.40417	12.56775	230.16	1.00
94/ 9/25	2449620.5	-3.43903	-4.16655	0.09380	9.92058	-7.71651	-0.19208	5.40332	12.56978	230.46	0.99
94/ 9/29	2449624.5	-3.41606	-4.18432	0.09336	9.96514	-7.66219	-0.19330	5.40247	12.57182	230.77	0.99
94/10/ 3	2449628.5	-3.39299	-4.20196	0.09291	10.00943	-7.60762	-0.19451	5.40161	12.57388	231.08	0.99
94/10/ 7	2449632.5	-3.36981	-4.21947	0.09246	10.05343	-7.55280	-0.19572	5.40075	12.57595	231.39	0.98
94/10/11	2449636.5	-3.34654	-4.23685	0.09200	10.09715	-7.49772	-0.19692	5.39988	12.57804	231.70	0.98
94/10/15	2449640.5	-3.32316	-4.25411	0.09155	10.14059	-7.44240	-0.19811	5.39900	12.58015	232.00	0.97
94/10/19	2449644.5	-3.29968	-4.27124	0.09109	10.18375	-7.38682	-0.19930	5.39812	12.58227	232.31	0.97
94/10/23	2449648.5	-3.27611	-4.28824	0.09063	10.22662	-7.33100	-0.20049	5.39723	12.58441	232.62	0.96
94/10/27	2449652.5	-3.25243	-4.30511	0.09016	10.26920	-7.27493	-0.20167	5.39633	12.58657	232.93	0.96
94/10/31	2449656.5	-3.22866	-4.32185	0.08970	10.31150	-7.21861	-0.20284	5.39543	12.58875	233.24	0.95

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM JUPITER

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94/11/ 4	2449660.5	-3.20479	-4.33846	0.08923	10.35351	-7.16205	-0.20401	5.39453	12.59094	233.55	0.95
94/11/ 8	2449664.5	-3.18082	-4.35494	0.08875	10.39523	-7.10525	-0.20517	5.39361	12.59316	233.86	0.94
94/11/12	2449668.5	-3.15676	-4.37129	0.08828	10.43666	-7.04820	-0.20633	5.39269	12.59538	234.16	0.94
94/11/16	2449672.5	-3.13260	-4.38751	0.08780	10.47780	-6.99091	-0.20748	5.39177	12.59763	234.47	0.93
94/11/20	2449676.5	-3.10835	-4.40359	0.08732	10.51864	-6.93338	-0.20863	5.39083	12.59989	234.78	0.93
94/11/24	2449680.5	-3.08400	-4.41954	0.08684	10.55919	-6.87561	-0.20977	5.38990	12.60216	235.09	0.92
94/11/28	2449684.5	-3.05956	-4.43536	0.08635	10.59944	-6.81760	-0.21090	5.38895	12.60446	235.40	0.92
94/12/ 2	2449688.5	-3.03503	-4.45104	0.08586	10.63939	-6.75936	-0.21203	5.38800	12.60676	235.71	0.91
94/12/ 6	2449692.5	-3.01041	-4.46659	0.08537	10.67904	-6.70088	-0.21316	5.38704	12.60909	236.02	0.91
94/12/10	2449696.5	-2.98569	-4.48200	0.08488	10.71839	-6.64216	-0.21427	5.38608	12.61143	236.33	0.90
94/12/14	2449700.5	-2.96088	-4.49728	0.08438	10.75744	-6.58321	-0.21539	5.38512	12.61378	236.64	0.90
94/12/18	2449704.5	-2.93599	-4.51242	0.08388	10.79618	-6.52403	-0.21649	5.38414	12.61615	236.95	0.89
94/12/22	2449708.5	-2.91100	-4.52742	0.08338	10.83462	-6.46462	-0.21759	5.38316	12.61854	237.26	0.89
94/12/26	2449712.5	-2.88593	-4.54229	0.08288	10.87275	-6.40498	-0.21868	5.38218	12.62094	237.57	0.88
94/12/30	2449716.5	-2.86077	-4.55701	0.08237	10.91057	-6.34511	-0.21977	5.38118	12.62336	237.88	0.88
95/ 1/ 3	2449720.5	-2.83552	-4.57160	0.08186	10.94808	-6.28501	-0.22085	5.38019	12.62579	238.19	0.87
95/ 1/ 7	2449724.5	-2.81018	-4.58605	0.08135	10.98528	-6.22469	-0.22193	5.37918	12.62824	238.50	0.87
95/ 1/11	2449728.5	-2.78476	-4.60036	0.08084	11.02216	-6.16415	-0.22300	5.37818	12.63070	238.81	0.86
95/ 1/15	2449732.5	-2.75926	-4.61453	0.08032	11.05874	-6.10338	-0.22406	5.37716	12.63317	239.12	0.86
95/ 1/19	2449736.5	-2.73367	-4.62856	0.07980	11.09499	-6.04239	-0.22512	5.37614	12.63566	239.43	0.85
95/ 1/23	2449740.5	-2.70799	-4.64245	0.07928	11.13093	-5.98118	-0.22617	5.37512	12.63817	239.74	0.85
95/ 1/27	2449744.5	-2.68224	-4.65620	0.07876	11.16655	-5.91975	-0.22721	5.37408	12.64069	240.06	0.84
95/ 1/31	2449748.5	-2.65640	-4.66980	0.07823	11.20186	-5.85811	-0.22825	5.37305	12.64323	240.37	0.83
95/ 2/ 4	2449752.5	-2.63048	-4.68326	0.07770	11.23684	-5.79625	-0.22928	5.37201	12.64578	240.68	0.83
95/ 2/ 8	2449756.5	-2.60448	-4.69658	0.07717	11.27150	-5.73417	-0.23031	5.37096	12.64834	240.99	0.82
95/ 2/12	2449760.5	-2.57840	-4.70976	0.07664	11.30584	-5.67188	-0.23133	5.36990	12.65092	241.30	0.82
95/ 2/16	2449764.5	-2.55225	-4.72279	0.07610	11.33985	-5.60938	-0.23234	5.36884	12.65351	241.61	0.81
95/ 2/20	2449768.5	-2.52601	-4.73568	0.07556	11.37353	-5.54666	-0.23335	5.36778	12.65611	241.92	0.81
95/ 2/24	2449772.5	-2.49970	-4.74842	0.07502	11.40688	-5.48374	-0.23435	5.36671	12.65873	242.24	0.80
95/ 2/28	2449776.5	-2.47331	-4.76101	0.07448	11.43991	-5.42061	-0.23534	5.36563	12.66135	242.55	0.80
95/ 3/ 4	2449780.5	-2.44684	-4.77346	0.07394	11.47260	-5.35727	-0.23633	5.36455	12.66399	242.86	0.79
95/ 3/ 8	2449784.5	-2.42030	-4.78576	0.07339	11.50495	-5.29373	-0.23731	5.36347	12.66664	243.17	0.78
95/ 3/12	2449788.5	-2.39368	-4.79792	0.07284	11.53698	-5.22999	-0.23828	5.36237	12.66931	243.49	0.78
95/ 3/16	2449792.5	-2.36699	-4.80993	0.07229	11.56866	-5.16605	-0.23924	5.36128	12.67199	243.80	0.77
95/ 3/20	2449796.5	-2.34023	-4.82179	0.07173	11.60001	-5.10190	-0.24020	5.36018	12.67467	244.11	0.77
95/ 3/24	2449800.5	-2.31340	-4.83350	0.07118	11.63102	-5.03756	-0.24115	5.35907	12.67737	244.42	0.76
95/ 3/28	2449804.5	-2.28649	-4.84506	0.07062	11.66169	-4.97303	-0.24210	5.35796	12.68009	244.74	0.76
95/ 4/ 1	2449808.5	-2.25952	-4.85648	0.07006	11.69201	-4.90830	-0.24304	5.35684	12.68281	245.05	0.75
95/ 4/ 5	2449812.5	-2.23247	-4.86774	0.06950	11.72200	-4.84338	-0.24397	5.35571	12.68555	245.36	0.74
95/ 4/ 9	2449816.5	-2.20536	-4.87886	0.06893	11.75164	-4.77827	-0.24489	5.35459	12.68829	245.68	0.74
95/ 4/13	2449820.5	-2.17818	-4.88982	0.06837	11.78093	-4.71297	-0.24581	5.35345	12.69105	245.99	0.73
95/ 4/17	2449824.5	-2.15093	-4.90063	0.06780	11.80988	-4.64748	-0.24672	5.35231	12.69382	246.30	0.73
95/ 4/21	2449828.5	-2.12361	-4.91129	0.06723	11.83848	-4.58181	-0.24762	5.35117	12.69661	246.62	0.72
95/ 4/25	2449832.5	-2.09623	-4.92180	0.06665	11.86673	-4.51596	-0.24852	5.35002	12.69941	246.93	0.71
95/ 4/29	2449836.5	-2.06878	-4.93216	0.06608	11.89463	-4.44993	-0.24941	5.34887	12.70222	247.24	0.71

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					JUPITER		
95/ 5/ 3	2449840.5	-2.04127	-4.94236	0.06550	11.92219	-4.38371	-0.25029	5.34771	12.70504	247.56	0.70
95/ 5/ 7	2449844.5	-2.01370	-4.95241	0.06492	11.94939	-4.31732	-0.25116	5.34655	12.70788	247.87	0.70
95/ 5/11	2449848.5	-1.98606	-4.96231	0.06434	11.97624	-4.25075	-0.25203	5.34538	12.71073	248.19	0.69
95/ 5/15	2449852.5	-1.95836	-4.97205	0.06376	12.00273	-4.18400	-0.25289	5.34421	12.71359	248.50	0.68
95/ 5/19	2449856.5	-1.93060	-4.98164	0.06317	12.02887	-4.11708	-0.25374	5.34303	12.71646	248.82	0.68
95/ 5/23	2449860.5	-1.90279	-4.99107	0.06258	12.05465	-4.04999	-0.25459	5.34185	12.71934	249.13	0.67
95/ 5/27	2449864.5	-1.87491	-5.00035	0.06199	12.08007	-3.98272	-0.25543	5.34066	12.72224	249.45	0.67
95/ 5/31	2449868.5	-1.84697	-5.00948	0.06140	12.10513	-3.91529	-0.25626	5.33947	12.72515	249.76	0.66
95/ 6/ 4	2449872.5	-1.81898	-5.01844	0.06081	12.12983	-3.84769	-0.25708	5.33827	12.72807	250.08	0.65
95/ 6/ 8	2449876.5	-1.79093	-5.02725	0.06022	12.15417	-3.77993	-0.25790	5.33707	12.73100	250.39	0.65
95/ 6/12	2449880.5	-1.76282	-5.03591	0.05962	12.17815	-3.71201	-0.25870	5.33586	12.73394	250.71	0.64
95/ 6/16	2449884.5	-1.73466	-5.04440	0.05902	12.20176	-3.64392	-0.25951	5.33465	12.73690	251.02	0.63
95/ 6/20	2449888.5	-1.70645	-5.05274	0.05842	12.22501	-3.57567	-0.26030	5.33344	12.73986	251.34	0.63
95/ 6/24	2449892.5	-1.67818	-5.06092	0.05782	12.24789	-3.50727	-0.26108	5.33222	12.74284	251.65	0.62
95/ 6/28	2449896.5	-1.64986	-5.06895	0.05721	12.27041	-3.43871	-0.26186	5.33100	12.74583	251.97	0.61
95/ 7/ 2	2449900.5	-1.62148	-5.07681	0.05661	12.29256	-3.37000	-0.26263	5.32977	12.74884	252.29	0.61
95/ 7/ 6	2449904.5	-1.59306	-5.08452	0.05600	12.31433	-3.30113	-0.26340	5.32854	12.75185	252.60	0.60
95/ 7/10	2449908.5	-1.56459	-5.09206	0.05539	12.33574	-3.23212	-0.26415	5.32730	12.75488	252.92	0.60
95/ 7/14	2449912.5	-1.53607	-5.09945	0.05478	12.35678	-3.16295	-0.26490	5.32606	12.75791	253.24	0.59
95/ 7/18	2449916.5	-1.50750	-5.10668	0.05417	12.37744	-3.09364	-0.26564	5.32481	12.76096	253.55	0.58
95/ 7/22	2449920.5	-1.47888	-5.11374	0.05355	12.39773	-3.02419	-0.26637	5.32356	12.76403	253.87	0.58
95/ 7/26	2449924.5	-1.45021	-5.12065	0.05294	12.41765	-2.95459	-0.26709	5.32231	12.76710	254.19	0.57
95/ 7/30	2449928.5	-1.42150	-5.12740	0.05232	12.43719	-2.88485	-0.26781	5.32105	12.77019	254.50	0.56
95/ 8/ 3	2449932.5	-1.39275	-5.13398	0.05170	12.45636	-2.81496	-0.26852	5.31979	12.77330	254.82	0.56
95/ 8/ 7	2449936.5	-1.36395	-5.14040	0.05108	12.47515	-2.74494	-0.26922	5.31852	12.77641	255.14	0.55
95/ 8/11	2449940.5	-1.33511	-5.14666	0.05045	12.49356	-2.67478	-0.26992	5.31725	12.77953	255.46	0.54
95/ 8/15	2449944.5	-1.30623	-5.15276	0.04983	12.51159	-2.60448	-0.27060	5.31598	12.78267	255.78	0.54
95/ 8/19	2449948.5	-1.27730	-5.15870	0.04920	12.52924	-2.53405	-0.27128	5.31470	12.78581	256.09	0.53
95/ 8/23	2449952.5	-1.24834	-5.16447	0.04858	12.54651	-2.46349	-0.27195	5.31342	12.78896	256.41	0.52
95/ 8/27	2449956.5	-1.21933	-5.17008	0.04795	12.56339	-2.39280	-0.27261	5.31214	12.79213	256.73	0.52
95/ 8/31	2449960.5	-1.19029	-5.17552	0.04732	12.57989	-2.32198	-0.27326	5.31085	12.79530	257.05	0.51
95/ 9/ 4	2449964.5	-1.16121	-5.18081	0.04669	12.59600	-2.25103	-0.27390	5.30955	12.79849	257.37	0.50
95/ 9/ 8	2449968.5	-1.13209	-5.18592	0.04605	12.61172	-2.17996	-0.27454	5.30825	12.80168	257.69	0.50
95/ 9/12	2449972.5	-1.10294	-5.19088	0.04542	12.62706	-2.10877	-0.27517	5.30695	12.80489	258.00	0.49
95/ 9/16	2449976.5	-1.07375	-5.19567	0.04478	12.64200	-2.03746	-0.27579	5.30565	12.80810	258.32	0.48
95/ 9/20	2449980.5	-1.04453	-5.20029	0.04414	12.65655	-1.96603	-0.27640	5.30434	12.81132	258.64	0.48
95/ 9/24	2449984.5	-1.01528	-5.20475	0.04350	12.67072	-1.89449	-0.27700	5.30303	12.81456	258.96	0.47
95/ 9/28	2449988.5	-0.98599	-5.20905	0.04286	12.68448	-1.82283	-0.27760	5.30171	12.81780	259.28	0.46
95/10/ 2	2449992.5	-0.95667	-5.21317	0.04222	12.69786	-1.75106	-0.27818	5.30039	12.82104	259.60	0.46
95/10/ 6	2449996.5	-0.92732	-5.21714	0.04158	12.71084	-1.67918	-0.27876	5.29907	12.82430	259.92	0.45
95/10/10	2450000.5	-0.89794	-5.22093	0.04093	12.72342	-1.60719	-0.27933	5.29774	12.82757	260.24	0.44
95/10/14	2450004.5	-0.86853	-5.22456	0.04029	12.73561	-1.53510	-0.27989	5.29642	12.83084	260.56	0.44
95/10/18	2450008.5	-0.83910	-5.22802	0.03964	12.74740	-1.46291	-0.28044	5.29508	12.83413	260.88	0.43
95/10/22	2450012.5	-0.80964	-5.23132	0.03899	12.75879	-1.39061	-0.28098	5.29375	12.83743	261.20	0.42
95/10/26	2450016.5	-0.78015	-5.23445	0.03834	12.76978	-1.31822	-0.28152	5.29241	12.84073	261.52	0.42

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95/10/30	2450020.5	-0.75064	-5.23741	0.03769	12.78038	-1.24572	-0.28205	5.29106	12.84404	261.84	0.41
95/11/ 3	2450024.5	-0.72110	-5.24020	0.03704	12.79057	-1.17313	-0.28256	5.28972	12.84736	262.16	0.40
95/11/ 7	2450028.5	-0.69154	-5.24283	0.03639	12.80036	-1.10045	-0.28307	5.28837	12.85069	262.49	0.39
95/11/11	2450032.5	-0.66196	-5.24529	0.03573	12.80975	-1.02768	-0.28357	5.28701	12.85403	262.81	0.39
95/11/15	2450036.5	-0.63235	-5.24758	0.03508	12.81873	-0.95482	-0.28406	5.28566	12.85738	263.13	0.38
95/11/19	2450040.5	-0.60273	-5.24970	0.03442	12.82730	-0.88187	-0.28455	5.28430	12.86073	263.45	0.37
95/11/23	2450044.5	-0.57309	-5.25165	0.03376	12.83547	-0.80883	-0.28502	5.28294	12.86409	263.77	0.37
95/11/27	2450048.5	-0.54343	-5.25344	0.03310	12.84323	-0.73572	-0.28549	5.28157	12.86745	264.09	0.36
95/12/ 1	2450052.5	-0.51375	-5.25505	0.03244	12.85058	-0.66252	-0.28594	5.28021	12.87083	264.42	0.35
95/12/ 5	2450056.5	-0.48405	-5.25650	0.03178	12.85753	-0.58925	-0.28639	5.27883	12.87421	264.74	0.34
95/12/ 9	2450060.5	-0.45434	-5.25778	0.03112	12.86406	-0.51590	-0.28683	5.27746	12.87760	265.06	0.34
95/12/13	2450064.5	-0.42462	-5.25888	0.03046	12.87019	-0.44248	-0.28726	5.27608	12.88100	265.38	0.33
95/12/17	2450068.5	-0.39488	-5.25982	0.02979	12.87590	-0.36899	-0.28768	5.27471	12.88440	265.71	0.32
95/12/21	2450072.5	-0.36513	-5.26059	0.02913	12.88120	-0.29543	-0.28809	5.27332	12.88781	266.03	0.32
95/12/25	2450076.5	-0.33536	-5.26118	0.02846	12.88609	-0.22180	-0.28849	5.27194	12.89123	266.35	0.31
95/12/29	2450080.5	-0.30559	-5.26161	0.02779	12.89057	-0.14811	-0.28888	5.27055	12.89466	266.68	0.30
96/ 1/ 2	2450084.5	-0.27580	-5.26187	0.02713	12.89463	-0.07436	-0.28927	5.26916	12.89809	267.00	0.29
96/ 1/ 6	2450088.5	-0.24601	-5.26196	0.02646	12.89828	-0.00055	-0.28964	5.26777	12.90153	267.32	0.29
96/ 1/10	2450092.5	-0.21621	-5.26187	0.02579	12.90151	0.07331	-0.29001	5.26637	12.90498	267.65	0.28
96/ 1/14	2450096.5	-0.18640	-5.26162	0.02512	12.90433	0.14723	-0.29036	5.26498	12.90844	267.97	0.27
96/ 1/18	2450100.5	-0.15659	-5.26119	0.02445	12.90673	0.22121	-0.29071	5.26358	12.91190	268.30	0.27
96/ 1/22	2450104.5	-0.12677	-5.26059	0.02377	12.90872	0.29523	-0.29105	5.26218	12.91538	268.62	0.26
96/ 1/26	2450108.5	-0.09694	-5.25983	0.02310	12.91029	0.36931	-0.29138	5.26077	12.91886	268.94	0.25
96/ 1/30	2450112.5	-0.06712	-5.25889	0.02243	12.91145	0.44343	-0.29170	5.25936	12.92235	269.27	0.24
96/ 2/ 3	2450116.5	-0.03729	-5.25778	0.02175	12.91218	0.51760	-0.29201	5.25796	12.92585	269.59	0.24
96/ 2/ 7	2450120.5	-0.00746	-5.25650	0.02108	12.91250	0.59182	-0.29232	5.25654	12.92936	269.92	0.23
96/ 2/11	2450124.5	0.02237	-5.25504	0.02040	12.91239	0.66607	-0.29261	5.25513	12.93287	270.24	0.22
96/ 2/15	2450128.5	0.05220	-5.25342	0.01973	12.91187	0.74036	-0.29289	5.25372	12.93639	270.57	0.22
96/ 2/19	2450132.5	0.08203	-5.25162	0.01905	12.91092	0.81469	-0.29317	5.25230	12.93992	270.89	0.21
96/ 2/23	2450136.5	0.11185	-5.24966	0.01837	12.90955	0.88905	-0.29343	5.25088	12.94345	271.22	0.20
96/ 2/27	2450140.5	0.14167	-5.24752	0.01769	12.90775	0.96344	-0.29369	5.24946	12.94699	271.55	0.19
96/ 3/ 2	2450144.5	0.17149	-5.24520	0.01701	12.90554	1.03786	-0.29393	5.24803	12.95054	271.87	0.19
96/ 3/ 6	2450148.5	0.20130	-5.24272	0.01634	12.90290	1.11231	-0.29417	5.24661	12.95409	272.20	0.18
96/ 3/10	2450152.5	0.23111	-5.24006	0.01566	12.89983	1.18679	-0.29440	5.24518	12.95765	272.53	0.17
96/ 3/14	2450156.5	0.26090	-5.23724	0.01497	12.89634	1.26128	-0.29462	5.24375	12.96122	272.85	0.16
96/ 3/18	2450160.5	0.29069	-5.23424	0.01429	12.89242	1.33580	-0.29482	5.24232	12.96479	273.18	0.16
96/ 3/22	2450164.5	0.32047	-5.23106	0.01361	12.88808	1.41034	-0.29502	5.24089	12.96837	273.51	0.15
96/ 3/26	2450168.5	0.35024	-5.22772	0.01293	12.88330	1.48489	-0.29521	5.23946	12.97195	273.83	0.14
96/ 3/30	2450172.5	0.38000	-5.22420	0.01225	12.87810	1.55945	-0.29539	5.23802	12.97554	274.16	0.13
96/ 4/ 3	2450176.5	0.40974	-5.22052	0.01157	12.87247	1.63402	-0.29556	5.23658	12.97914	274.49	0.13
96/ 4/ 7	2450180.5	0.43947	-5.21665	0.01088	12.86642	1.70860	-0.29572	5.23514	12.98274	274.82	0.12
96/ 4/11	2450184.5	0.46919	-5.21262	0.01020	12.85993	1.78319	-0.29588	5.23370	12.98634	275.14	0.11
96/ 4/15	2450188.5	0.49889	-5.20842	0.00952	12.85302	1.85778	-0.29602	5.23226	12.98996	275.47	0.10
96/ 4/19	2450192.5	0.52857	-5.20404	0.00883	12.84567	1.93237	-0.29615	5.23082	12.99358	275.80	0.10
96/ 4/23	2450196.5	0.55824	-5.19949	0.00815	12.83789	2.00697	-0.29627	5.22937	12.99720	276.13	0.09

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96/ 4/27	2450200.5	0.58789	-5.19476	0.00746	12.82968	2.08156	-0.29639	5.22793	13.00083	276.46	0.08
96/ 5/ 1	2450204.5	0.61752	-5.18987	0.00678	12.82104	2.15614	-0.29649	5.22648	13.00446	276.79	0.07
96/ 5/ 5	2450208.5	0.64713	-5.18480	0.00609	12.81197	2.23072	-0.29658	5.22503	13.00810	277.11	0.07
96/ 5/ 9	2450212.5	0.67671	-5.17956	0.00541	12.80246	2.30529	-0.29666	5.22358	13.01174	277.44	0.06
96/ 5/13	2450216.5	0.70628	-5.17415	0.00472	12.79251	2.37985	-0.29674	5.22213	13.01538	277.77	0.05
96/ 5/17	2450220.5	0.73582	-5.16857	0.00404	12.78213	2.45438	-0.29680	5.22068	13.01902	278.10	0.04
96/ 5/21	2450224.5	0.76533	-5.16281	0.00335	12.77132	2.52891	-0.29685	5.21923	13.02267	278.43	0.04
96/ 5/25	2450228.5	0.79483	-5.15688	0.00267	12.76006	2.60340	-0.29690	5.21778	13.02632	278.76	0.03
96/ 5/29	2450232.5	0.82429	-5.15078	0.00198	12.74837	2.67788	-0.29693	5.21632	13.02997	279.09	0.02
96/ 6/ 2	2450236.5	0.85373	-5.14451	0.00129	12.73625	2.75233	-0.29696	5.21487	13.03363	279.42	0.01
96/ 6/ 6	2450240.5	0.88314	-5.13807	0.00061	12.72368	2.82675	-0.29697	5.21341	13.03728	279.75	0.01
96/ 6/10	2450244.5	0.91251	-5.13145	-0.00008	12.71068	2.90114	-0.29697	5.21195	13.04094	280.08	-0.00
96/ 6/14	2450248.5	0.94186	-5.12466	-0.00076	12.69724	2.97549	-0.29697	5.21050	13.04460	280.41	-0.01
96/ 6/18	2450252.5	0.97118	-5.11770	-0.00145	12.68336	3.04981	-0.29695	5.20904	13.04826	280.75	-0.02
96/ 6/22	2450256.5	1.00046	-5.11057	-0.00214	12.66904	3.12408	-0.29692	5.20758	13.05192	281.08	-0.02
96/ 6/26	2450260.5	1.02971	-5.10327	-0.00282	12.65428	3.19832	-0.29689	5.20612	13.05558	281.41	-0.03
96/ 6/30	2450264.5	1.05893	-5.09579	-0.00351	12.63909	3.27250	-0.29684	5.20466	13.05925	281.74	-0.04
96/ 7/ 4	2450268.5	1.08811	-5.08815	-0.00419	12.62345	3.34664	-0.29678	5.20320	13.06291	282.07	-0.05
96/ 7/ 8	2450272.5	1.11726	-5.08033	-0.00488	12.60738	3.42073	-0.29672	5.20173	13.06658	282.40	-0.05
96/ 7/12	2450276.5	1.14636	-5.07234	-0.00556	12.59087	3.49476	-0.29664	5.20027	13.07024	282.74	-0.06
96/ 7/16	2450280.5	1.17543	-5.06418	-0.00625	12.57392	3.56874	-0.29655	5.19881	13.07391	283.07	-0.07
96/ 7/20	2450284.5	1.20446	-5.05585	-0.00694	12.55653	3.64265	-0.29646	5.19735	13.07758	283.40	-0.08
96/ 7/24	2450288.5	1.23344	-5.04735	-0.00762	12.53870	3.71651	-0.29635	5.19588	13.08126	283.73	-0.08
96/ 7/28	2450292.5	1.26239	-5.03868	-0.00830	12.52043	3.79031	-0.29623	5.19442	13.08493	284.07	-0.09
96/ 8/ 1	2450296.5	1.29129	-5.02984	-0.00899	12.50172	3.86404	-0.29611	5.19296	13.08860	284.40	-0.10
96/ 8/ 5	2450300.5	1.32015	-5.02083	-0.00967	12.48257	3.93769	-0.29597	5.19149	13.09228	284.73	-0.11
96/ 8/ 9	2450304.5	1.34897	-5.01165	-0.01036	12.46299	4.01128	-0.29582	5.19003	13.09595	285.07	-0.11
96/ 8/13	2450308.5	1.37774	-5.00230	-0.01104	12.44296	4.08479	-0.29567	5.18857	13.09962	285.40	-0.12
96/ 8/17	2450312.5	1.40646	-4.99277	-0.01172	12.42249	4.15823	-0.29550	5.18710	13.10330	285.73	-0.13
96/ 8/21	2450316.5	1.43513	-4.98308	-0.01240	12.40158	4.23158	-0.29532	5.18564	13.10697	286.07	-0.14
96/ 8/25	2450320.5	1.46376	-4.97322	-0.01309	12.38023	4.30485	-0.29513	5.18418	13.11065	286.40	-0.14
96/ 8/29	2450324.5	1.49233	-4.96319	-0.01377	12.35845	4.37804	-0.29493	5.18271	13.11432	286.73	-0.15
96/ 9/ 2	2450328.5	1.52086	-4.95299	-0.01445	12.33622	4.45113	-0.29472	5.18125	13.11799	287.07	-0.16
96/ 9/ 6	2450332.5	1.54933	-4.94263	-0.01513	12.31355	4.52414	-0.29451	5.17979	13.12167	287.40	-0.17
96/ 9/10	2450336.5	1.57775	-4.93209	-0.01581	12.29045	4.59705	-0.29428	5.17833	13.12534	287.74	-0.17
96/ 9/14	2450340.5	1.60612	-4.92139	-0.01649	12.26691	4.66986	-0.29404	5.17686	13.12902	288.07	-0.18
96/ 9/18	2450344.5	1.63443	-4.91052	-0.01717	12.24292	4.74258	-0.29379	5.17540	13.13269	288.41	-0.19
96/ 9/22	2450348.5	1.66268	-4.89947	-0.01785	12.21850	4.81519	-0.29353	5.17394	13.13636	288.75	-0.20
96/ 9/26	2450352.5	1.69088	-4.88827	-0.01852	12.19364	4.88770	-0.29326	5.17248	13.14003	289.08	-0.21
96/ 9/30	2450356.5	1.71902	-4.87689	-0.01920	12.16835	4.96010	-0.29298	5.17102	13.14371	289.42	-0.21
96/10/ 4	2450360.5	1.74710	-4.86535	-0.01988	12.14261	5.03239	-0.29269	5.16956	13.14738	289.75	-0.22
96/10/ 8	2450364.5	1.77512	-4.85364	-0.02055	12.11644	5.10457	-0.29239	5.16811	13.15106	290.09	-0.23
96/10/12	2450368.5	1.80308	-4.84177	-0.02123	12.08984	5.17663	-0.29208	5.16665	13.15473	290.43	-0.24
96/10/16	2450372.5	1.83098	-4.82972	-0.02190	12.06280	5.24858	-0.29176	5.16519	13.15841	290.76	-0.24
96/10/20	2450376.5	1.85882	-4.81751	-0.02258	12.03532	5.32040	-0.29143	5.16374	13.16209	291.10	-0.25

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96/10/24	2450380.5	1.88659	-4.80514	-0.02325	12.00741	5.39211	-0.29109	5.16228	13.16577	291.44	-0.26
96/10/28	2450384.5	1.91430	-4.79260	-0.02392	11.97906	5.46369	-0.29074	5.16083	13.16944	291.77	-0.27
96/11/ 1	2450388.5	1.94194	-4.77990	-0.02459	11.95027	5.53515	-0.29037	5.15937	13.17312	292.11	-0.27
96/11/ 5	2450392.5	1.96951	-4.76703	-0.02526	11.92105	5.60647	-0.29000	5.15792	13.17680	292.45	-0.28
96/11/ 9	2450396.5	1.99702	-4.75399	-0.02593	11.89139	5.67766	-0.28962	5.15647	13.18047	292.79	-0.29
96/11/13	2450400.5	2.02445	-4.74079	-0.02660	11.86129	5.74872	-0.28923	5.15502	13.18415	293.12	-0.30
96/11/17	2450404.5	2.05182	-4.72743	-0.02727	11.83076	5.81964	-0.28882	5.15357	13.18782	293.46	-0.30
96/11/21	2450408.5	2.07911	-4.71391	-0.02794	11.79980	5.89041	-0.28841	5.15213	13.19149	293.80	-0.31
96/11/25	2450412.5	2.10634	-4.70022	-0.02860	11.76840	5.96105	-0.28799	5.15068	13.19516	294.14	-0.32
96/11/29	2450416.5	2.13349	-4.68636	-0.02927	11.73657	6.03153	-0.28755	5.14924	13.19883	294.48	-0.33
96/12/ 3	2450420.5	2.16056	-4.67235	-0.02993	11.70430	6.10187	-0.28711	5.14779	13.20249	294.82	-0.33
96/12/ 7	2450424.5	2.18756	-4.65817	-0.03059	11.67160	6.17206	-0.28665	5.14635	13.20616	295.16	-0.34
96/12/11	2450428.5	2.21449	-4.64383	-0.03126	11.63846	6.24209	-0.28619	5.14491	13.20982	295.49	-0.35
96/12/15	2450432.5	2.24134	-4.62933	-0.03192	11.60489	6.31196	-0.28571	5.14347	13.21348	295.83	-0.36
96/12/19	2450436.5	2.26811	-4.61467	-0.03258	11.57089	6.38167	-0.28523	5.14204	13.21713	296.17	-0.36
96/12/23	2450440.5	2.29480	-4.59985	-0.03323	11.53646	6.45121	-0.28473	5.14060	13.22078	296.51	-0.37
96/12/27	2450444.5	2.32141	-4.58486	-0.03389	11.50159	6.52059	-0.28422	5.13917	13.22443	296.85	-0.38
96/12/31	2450448.5	2.34794	-4.56972	-0.03455	11.46630	6.58980	-0.28371	5.13774	13.22808	297.19	-0.39
97/ 1/ 4	2450452.5	2.37439	-4.55441	-0.03520	11.43057	6.65884	-0.28318	5.13631	13.23172	297.53	-0.39
97/ 1/ 8	2450456.5	2.40075	-4.53895	-0.03586	11.39442	6.72771	-0.28264	5.13488	13.23536	297.88	-0.40
97/ 1/12	2450460.5	2.42703	-4.52333	-0.03651	11.35784	6.79639	-0.28209	5.13345	13.23900	298.22	-0.41
97/ 1/16	2450464.5	2.45323	-4.50755	-0.03716	11.32083	6.86490	-0.28154	5.13203	13.24263	298.56	-0.41
97/ 1/20	2450468.5	2.47934	-4.49161	-0.03781	11.28339	6.93323	-0.28097	5.13061	13.24626	298.90	-0.42
97/ 1/24	2450472.5	2.50536	-4.47552	-0.03846	11.24552	7.00137	-0.28039	5.12919	13.24989	299.24	-0.43
97/ 1/28	2450476.5	2.53130	-4.45926	-0.03910	11.20723	7.06932	-0.27980	5.12777	13.25351	299.58	-0.44
97/ 2/ 1	2450480.5	2.55714	-4.44285	-0.03975	11.16851	7.13708	-0.27920	5.12636	13.25713	299.92	-0.44
97/ 2/ 5	2450484.5	2.58290	-4.42629	-0.04039	11.12936	7.20465	-0.27859	5.12494	13.26074	300.27	-0.45
97/ 2/ 9	2450488.5	2.60857	-4.40957	-0.04104	11.08978	7.27201	-0.27797	5.12353	13.26434	300.61	-0.46
97/ 2/13	2450492.5	2.63414	-4.39269	-0.04168	11.04979	7.33918	-0.27733	5.12212	13.26794	300.95	-0.47
97/ 2/17	2450496.5	2.65962	-4.37566	-0.04232	11.00936	7.40614	-0.27669	5.12072	13.27153	301.29	-0.47
97/ 2/21	2450500.5	2.68501	-4.35847	-0.04296	10.96852	7.47290	-0.27604	5.11931	13.27512	301.63	-0.48
97/ 2/25	2450504.5	2.71030	-4.34113	-0.04359	10.92725	7.53945	-0.27538	5.11791	13.27870	301.98	-0.49
97/ 3/ 1	2450508.5	2.73549	-4.32364	-0.04423	10.88556	7.60578	-0.27470	5.11651	13.28228	302.32	-0.50
97/ 3/ 5	2450512.5	2.76059	-4.30599	-0.04486	10.84346	7.67190	-0.27402	5.11512	13.28585	302.66	-0.50
97/ 3/ 9	2450516.5	2.78559	-4.28819	-0.04549	10.80093	7.73780	-0.27333	5.11372	13.28941	303.01	-0.51
97/ 3/13	2450520.5	2.81050	-4.27024	-0.04613	10.75798	7.80348	-0.27262	5.11233	13.29296	303.35	-0.52
97/ 3/17	2450524.5	2.83530	-4.25213	-0.04675	10.71462	7.86894	-0.27191	5.11094	13.29651	303.70	-0.52
97/ 3/21	2450528.5	2.86000	-4.23388	-0.04738	10.67084	7.93417	-0.27119	5.10956	13.30005	304.04	-0.53
97/ 3/25	2450532.5	2.88460	-4.21548	-0.04801	10.62664	7.99916	-0.27045	5.10818	13.30358	304.38	-0.54
97/ 3/29	2450536.5	2.90910	-4.19692	-0.04863	10.58204	8.06393	-0.26971	5.10680	13.30711	304.73	-0.55
97/ 4/ 2	2450540.5	2.93349	-4.17822	-0.04925	10.53702	8.12845	-0.26895	5.10542	13.31063	305.07	-0.55
97/ 4/ 6	2450544.5	2.95778	-4.15937	-0.04987	10.49159	8.19275	-0.26819	5.10405	13.31414	305.42	-0.56
97/ 4/10	2450548.5	2.98197	-4.14036	-0.05049	10.44575	8.25680	-0.26741	5.10268	13.31765	305.76	-0.57
97/ 4/14	2450552.5	3.00605	-4.12122	-0.05111	10.39950	8.32060	-0.26663	5.10131	13.32116	306.11	-0.57
97/ 4/18	2450556.5	3.03002	-4.10192	-0.05172	10.35284	8.38417	-0.26583	5.09994	13.32465	306.45	-0.58

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					JUPITER		
97/ 4/22	2450560.5	3.05388	-4.08248	-0.05234	10.30578	8.44748	-0.26503	5.09858	13.32814	306.80	-0.59
97/ 4/26	2450564.5	3.07763	-4.06289	-0.05295	10.25831	8.51054	-0.26421	5.09723	13.33162	307.14	-0.60
97/ 4/30	2450568.5	3.10128	-4.04316	-0.05356	10.21044	8.57335	-0.26339	5.09587	13.33509	307.49	-0.60
97/ 5/ 4	2450572.5	3.12481	-4.02328	-0.05417	10.16216	8.63590	-0.26255	5.09452	13.33856	307.84	-0.61
97/ 5/ 8	2450576.5	3.14823	-4.00326	-0.05477	10.11348	8.69819	-0.26171	5.09317	13.34202	308.18	-0.62
97/ 5/12	2450580.5	3.17154	-3.98309	-0.05538	10.06439	8.76022	-0.26085	5.09183	13.34547	308.53	-0.62
97/ 5/16	2450584.5	3.19473	-3.96278	-0.05598	10.01491	8.82199	-0.25999	5.09049	13.34891	308.88	-0.63
97/ 5/20	2450588.5	3.21781	-3.94233	-0.05658	9.96503	8.88348	-0.25911	5.08915	13.35235	309.22	-0.64
97/ 5/24	2450592.5	3.24077	-3.92174	-0.05717	9.91475	8.94470	-0.25822	5.08782	13.35578	309.57	-0.64
97/ 5/28	2450596.5	3.26362	-3.90100	-0.05777	9.86408	9.00565	-0.25733	5.08649	13.35920	309.92	-0.65
97/ 6/ 1	2450600.5	3.28635	-3.88013	-0.05836	9.81301	9.06633	-0.25642	5.08516	13.36261	310.26	-0.66
97/ 6/ 5	2450604.5	3.30896	-3.85911	-0.05895	9.76155	9.12672	-0.25551	5.08384	13.36601	310.61	-0.66
97/ 6/ 9	2450608.5	3.33145	-3.83796	-0.05954	9.70970	9.18683	-0.25458	5.08252	13.36940	310.96	-0.67
97/ 6/13	2450612.5	3.35382	-3.81667	-0.06013	9.65745	9.24666	-0.25365	5.08121	13.37279	311.31	-0.68
97/ 6/17	2450616.5	3.37607	-3.79524	-0.06072	9.60482	9.30620	-0.25270	5.07990	13.37616	311.65	-0.68
97/ 6/21	2450620.5	3.39820	-3.77367	-0.06130	9.55180	9.36545	-0.25175	5.07859	13.37953	312.00	-0.69
97/ 6/25	2450624.5	3.42020	-3.75196	-0.06188	9.49839	9.42440	-0.25078	5.07729	13.38289	312.35	-0.70
97/ 6/29	2450628.5	3.44208	-3.73013	-0.06246	9.44460	9.48306	-0.24981	5.07599	13.38624	312.70	-0.71
97/ 7/ 3	2450632.5	3.46384	-3.70815	-0.06303	9.39043	9.54142	-0.24883	5.07469	13.38958	313.05	-0.71
97/ 7/ 7	2450636.5	3.48547	-3.68604	-0.06361	9.33587	9.59949	-0.24783	5.07340	13.39291	313.40	-0.72
97/ 7/11	2450640.5	3.50697	-3.66380	-0.06418	9.28094	9.65725	-0.24683	5.07212	13.39624	313.75	-0.72
97/ 7/15	2450644.5	3.52835	-3.64142	-0.06475	9.22563	9.71470	-0.24582	5.07084	13.39955	314.10	-0.73
97/ 7/19	2450648.5	3.54960	-3.61891	-0.06531	9.16994	9.77185	-0.24480	5.06956	13.40286	314.45	-0.74
97/ 7/23	2450652.5	3.57072	-3.59627	-0.06588	9.11387	9.82869	-0.24376	5.06829	13.40616	314.80	-0.74
97/ 7/27	2450656.5	3.59171	-3.57350	-0.06644	9.05742	9.88521	-0.24272	5.06702	13.40944	315.15	-0.75
97/ 7/31	2450660.5	3.61257	-3.55060	-0.06700	9.00061	9.94141	-0.24167	5.06575	13.41272	315.50	-0.76
97/ 8/ 4	2450664.5	3.63329	-3.52757	-0.06756	8.94342	9.99730	-0.24061	5.06450	13.41598	315.85	-0.76
97/ 8/ 8	2450668.5	3.65389	-3.50441	-0.06811	8.88586	10.05286	-0.23954	5.06324	13.41924	316.20	-0.77
97/ 8/12	2450672.5	3.67435	-3.48112	-0.06866	8.82794	10.10810	-0.23845	5.06199	13.42248	316.55	-0.78
97/ 8/16	2450676.5	3.69468	-3.45771	-0.06921	8.76964	10.16301	-0.23736	5.06075	13.42571	316.90	-0.78
97/ 8/20	2450680.5	3.71487	-3.43416	-0.06976	8.71098	10.21759	-0.23626	5.05950	13.42893	317.25	-0.79
97/ 8/24	2450684.5	3.73492	-3.41050	-0.07030	8.65196	10.27183	-0.23515	5.05827	13.43214	317.60	-0.80
97/ 8/28	2450688.5	3.75484	-3.38670	-0.07085	8.59258	10.32574	-0.23404	5.05704	13.43533	317.95	-0.80
97/ 9/ 1	2450692.5	3.77462	-3.36279	-0.07139	8.53283	10.37931	-0.23291	5.05581	13.43851	318.30	-0.81
97/ 9/ 5	2450696.5	3.79427	-3.33875	-0.07192	8.47273	10.43254	-0.23177	5.05459	13.44168	318.65	-0.82
97/ 9/ 9	2450700.5	3.81377	-3.31459	-0.07246	8.41227	10.48542	-0.23062	5.05337	13.44483	319.01	-0.82
97/ 9/13	2450704.5	3.83313	-3.29030	-0.07299	8.35146	10.53795	-0.22946	5.05216	13.44797	319.36	-0.83
97/ 9/17	2450708.5	3.85236	-3.26590	-0.07352	8.29030	10.59013	-0.22830	5.05095	13.45110	319.71	-0.83
97/ 9/21	2450712.5	3.87144	-3.24137	-0.07404	8.22879	10.64196	-0.22712	5.04975	13.45421	320.06	-0.84
97/ 9/25	2450716.5	3.89038	-3.21673	-0.07457	8.16693	10.69343	-0.22594	5.04856	13.45731	320.41	-0.85
97/ 9/29	2450720.5	3.90917	-3.19197	-0.07509	8.10473	10.74454	-0.22475	5.04737	13.46040	320.77	-0.85
97/10/ 3	2450724.5	3.92782	-3.16709	-0.07560	8.04218	10.79530	-0.22354	5.04618	13.46347	321.12	-0.86
97/10/ 7	2450728.5	3.94633	-3.14209	-0.07612	7.97929	10.84569	-0.22233	5.04500	13.46654	321.47	-0.86
97/10/11	2450732.5	3.96469	-3.11697	-0.07663	7.91607	10.89572	-0.22111	5.04382	13.46958	321.83	-0.87
97/10/15	2450736.5	3.98290	-3.09175	-0.07714	7.85250	10.94538	-0.21988	5.04265	13.47262	322.18	-0.88

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97/10/19	2450740.5	4.00097	-3.06640	-0.07765	7.78860	10.99466	-0.21864	5.04149	13.47564	322.53	-0.88
97/10/23	2450744.5	4.01889	-3.04095	-0.07815	7.72437	11.04358	-0.21740	5.04033	13.47864	322.89	-0.89
97/10/27	2450748.5	4.03666	-3.01538	-0.07865	7.65981	11.09211	-0.21614	5.03918	13.48163	323.24	-0.89
97/10/31	2450752.5	4.05428	-2.98970	-0.07915	7.59492	11.14027	-0.21487	5.03803	13.48460	323.59	-0.90
97/11/ 4	2450756.5	4.07175	-2.96391	-0.07965	7.52970	11.18805	-0.21360	5.03689	13.48756	323.95	-0.91
97/11/ 8	2450760.5	4.08907	-2.93801	-0.08014	7.46416	11.23544	-0.21231	5.03575	13.49051	324.30	-0.91
97/11/12	2450764.5	4.10624	-2.91200	-0.08063	7.39830	11.28244	-0.21102	5.03462	13.49344	324.66	-0.92
97/11/16	2450768.5	4.12325	-2.88588	-0.08111	7.33212	11.32906	-0.20972	5.03350	13.49635	325.01	-0.92
97/11/20	2450772.5	4.14011	-2.85965	-0.08159	7.26562	11.37529	-0.20841	5.03238	13.49925	325.37	-0.93
97/11/24	2450776.5	4.15682	-2.83332	-0.08207	7.19881	11.42112	-0.20709	5.03126	13.50214	325.72	-0.93
97/11/28	2450780.5	4.17337	-2.80688	-0.08255	7.13168	11.46656	-0.20577	5.03015	13.50500	326.08	-0.94
97/12/ 2	2450784.5	4.18977	-2.78034	-0.08303	7.06425	11.51159	-0.20443	5.02905	13.50786	326.43	-0.95
97/12/ 6	2450788.5	4.20601	-2.75370	-0.08350	6.99651	11.55623	-0.20309	5.02796	13.51069	326.79	-0.95
97/12/10	2450792.5	4.22210	-2.72695	-0.08396	6.92847	11.60046	-0.20174	5.02687	13.51351	327.14	-0.96
97/12/14	2450796.5	4.23803	-2.70010	-0.08443	6.86012	11.64429	-0.20038	5.02578	13.51632	327.50	-0.96
97/12/18	2450800.5	4.25379	-2.67315	-0.08489	6.79148	11.68770	-0.19901	5.02471	13.51911	327.85	-0.97
97/12/22	2450804.5	4.26940	-2.64610	-0.08535	6.72254	11.73071	-0.19763	5.02364	13.52188	328.21	-0.97
97/12/26	2450808.5	4.28485	-2.61895	-0.08580	6.65332	11.77331	-0.19625	5.02257	13.52464	328.57	-0.98
97/12/30	2450812.5	4.30014	-2.59170	-0.08625	6.58380	11.81550	-0.19485	5.02151	13.52739	328.92	-0.98
98/ 1/ 3	2450816.5	4.31527	-2.56436	-0.08670	6.51399	11.85727	-0.19345	5.02046	13.53012	329.28	-0.99
98/ 1/ 7	2450820.5	4.33024	-2.53692	-0.08715	6.44389	11.89862	-0.19204	5.01941	13.53284	329.64	-0.99
98/ 1/11	2450824.5	4.34505	-2.50938	-0.08759	6.37351	11.93955	-0.19063	5.01838	13.53554	329.99	-1.00
98/ 1/15	2450828.5	4.35969	-2.48175	-0.08803	6.30285	11.98007	-0.18920	5.01734	13.53823	330.35	-1.01
98/ 1/19	2450832.5	4.37417	-2.45403	-0.08846	6.23191	12.02016	-0.18777	5.01632	13.54091	330.71	-1.01
98/ 1/23	2450836.5	4.38848	-2.42621	-0.08890	6.16070	12.05982	-0.18633	5.01530	13.54356	331.06	-1.02
98/ 1/27	2450840.5	4.40263	-2.39831	-0.08933	6.08921	12.09905	-0.18488	5.01428	13.54621	331.42	-1.02
98/ 1/31	2450844.5	4.41662	-2.37031	-0.08975	6.01744	12.13786	-0.18342	5.01328	13.54883	331.78	-1.03
98/ 2/ 4	2450848.5	4.43043	-2.34223	-0.09017	5.94541	12.17623	-0.18196	5.01228	13.55144	332.14	-1.03
98/ 2/ 8	2450852.5	4.44409	-2.31405	-0.09059	5.87312	12.21417	-0.18048	5.01128	13.55404	332.49	-1.04
98/ 2/12	2450856.5	4.45757	-2.28579	-0.09101	5.80056	12.25167	-0.17900	5.01030	13.55662	332.85	-1.04
98/ 2/16	2450860.5	4.47089	-2.25745	-0.09142	5.72774	12.28873	-0.17752	5.00932	13.55918	333.21	-1.05
98/ 2/20	2450864.5	4.48403	-2.22902	-0.09183	5.65466	12.32536	-0.17602	5.00834	13.56173	333.57	-1.05
98/ 2/24	2450868.5	4.49701	-2.20050	-0.09223	5.58132	12.36154	-0.17452	5.00738	13.56426	333.93	-1.06
98/ 2/28	2450872.5	4.50982	-2.17190	-0.09263	5.50773	12.39727	-0.17301	5.00642	13.56678	334.28	-1.06
98/ 3/ 4	2450876.5	4.52246	-2.14322	-0.09303	5.43390	12.43256	-0.17149	5.00547	13.56927	334.64	-1.06
98/ 3/ 8	2450880.5	4.53493	-2.11446	-0.09343	5.35981	12.46740	-0.16997	5.00452	13.57175	335.00	-1.07
98/ 3/12	2450884.5	4.54722	-2.08562	-0.09382	5.28548	12.50179	-0.16843	5.00358	13.57422	335.36	-1.07
98/ 3/16	2450888.5	4.55935	-2.05670	-0.09420	5.21091	12.53572	-0.16690	5.00265	13.57666	335.72	-1.08
98/ 3/20	2450892.5	4.57130	-2.02770	-0.09459	5.13610	12.56920	-0.16535	5.00173	13.57909	336.08	-1.08
98/ 3/24	2450896.5	4.58308	-1.99862	-0.09497	5.06105	12.60223	-0.16380	5.00081	13.58150	336.44	-1.09
98/ 3/28	2450900.5	4.59468	-1.96947	-0.09534	4.98578	12.63479	-0.16224	4.99990	13.58390	336.80	-1.09
98/ 4/ 1	2450904.5	4.60611	-1.94025	-0.09572	4.91027	12.66690	-0.16067	4.99900	13.58628	337.16	-1.10
98/ 4/ 5	2450908.5	4.61737	-1.91095	-0.09609	4.83453	12.69855	-0.15909	4.99811	13.58864	337.52	-1.10
98/ 4/ 9	2450912.5	4.62845	-1.88157	-0.09645	4.75857	12.72973	-0.15751	4.99722	13.59098	337.88	-1.11
98/ 4/13	2450916.5	4.63936	-1.85213	-0.09681	4.68238	12.76045	-0.15592	4.99634	13.59331	338.24	-1.11

1.5 1 A.U.=149,599,000 KM.

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					JUPITER		
98/ 4/17	2450920.5	4.65009	-1.82262	-0.09717	4.60598	12.79069	-0.15433	4.99547	13.59561	338.60	-1.11
98/ 4/21	2450924.5	4.66064	-1.79303	-0.09753	4.52936	12.82047	-0.15273	4.99460	13.59790	338.96	-1.12
98/ 4/25	2450928.5	4.67101	-1.76338	-0.09788	4.45252	12.84978	-0.15112	4.99374	13.60017	339.32	-1.12
98/ 4/29	2450932.5	4.68121	-1.73366	-0.09823	4.37548	12.87861	-0.14950	4.99289	13.60242	339.68	-1.13
98/ 5/ 3	2450936.5	4.69123	-1.70388	-0.09857	4.29823	12.90697	-0.14788	4.99205	13.60465	340.04	-1.13
98/ 5/ 7	2450940.5	4.70107	-1.67403	-0.09891	4.22077	12.93485	-0.14625	4.99121	13.60686	340.40	-1.14
98/ 5/11	2450944.5	4.71073	-1.64412	-0.09925	4.14311	12.96225	-0.14462	4.99039	13.60905	340.76	-1.14
98/ 5/15	2450948.5	4.72021	-1.61414	-0.09958	4.06526	12.98917	-0.14297	4.98957	13.61122	341.12	-1.14
98/ 5/19	2450952.5	4.72951	-1.58410	-0.09991	3.98721	13.01561	-0.14133	4.98875	13.61337	341.48	-1.15
98/ 5/23	2450956.5	4.73863	-1.55400	-0.10023	3.90896	13.04156	-0.13967	4.98795	13.61550	341.84	-1.15
98/ 5/27	2450960.5	4.74757	-1.52385	-0.10055	3.83053	13.06703	-0.13801	4.98715	13.61761	342.20	-1.16
98/ 5/31	2450964.5	4.75633	-1.49363	-0.10087	3.75192	13.09200	-0.13634	4.98636	13.61969	342.57	-1.16
98/ 6/ 4	2450968.5	4.76491	-1.46336	-0.10118	3.67312	13.11649	-0.13467	4.98558	13.62176	342.93	-1.16
98/ 6/ 8	2450972.5	4.77330	-1.43303	-0.10149	3.59414	13.14048	-0.13299	4.98481	13.62380	343.29	-1.17
98/ 6/12	2450976.5	4.78152	-1.40264	-0.10180	3.51499	13.16398	-0.13131	4.98404	13.62582	343.65	-1.17
98/ 6/16	2450980.5	4.78954	-1.37221	-0.10210	3.43568	13.18699	-0.12962	4.98328	13.62782	344.01	-1.17
98/ 6/20	2450984.5	4.79739	-1.34171	-0.10239	3.35619	13.20950	-0.12793	4.98253	13.62979	344.37	-1.18
98/ 6/24	2450988.5	4.80505	-1.31117	-0.10269	3.27654	13.23152	-0.12623	4.98179	13.63175	344.74	-1.18
98/ 6/28	2450992.5	4.81253	-1.28058	-0.10298	3.19673	13.25303	-0.12452	4.98106	13.63369	345.10	-1.18
98/ 7/ 2	2450996.5	4.81982	-1.24994	-0.10326	3.11676	13.27405	-0.12281	4.98033	13.63561	345.46	-1.19
98/ 7/ 6	2451000.5	4.82693	-1.21925	-0.10354	3.03664	13.29457	-0.12109	4.97961	13.63750	345.82	-1.19
98/ 7/10	2451004.5	4.83385	-1.18851	-0.10382	2.95636	13.31459	-0.11937	4.97890	13.63937	346.19	-1.19
98/ 7/14	2451008.5	4.84059	-1.15773	-0.10410	2.87594	13.33410	-0.11764	4.97820	13.64123	346.55	-1.20
98/ 7/18	2451012.5	4.84714	-1.12691	-0.10437	2.79537	13.35311	-0.11590	4.97751	13.64306	346.91	-1.20
98/ 7/22	2451016.5	4.85350	-1.09604	-0.10463	2.71467	13.37161	-0.11417	4.97682	13.64486	347.27	-1.20
98/ 7/26	2451020.5	4.85968	-1.06513	-0.10489	2.63382	13.38960	-0.11242	4.97614	13.64665	347.64	-1.21
98/ 7/30	2451024.5	4.86567	-1.03417	-0.10515	2.55284	13.40709	-0.11067	4.97547	13.64842	348.00	-1.21
98/ 8/ 3	2451028.5	4.87148	-1.00318	-0.10541	2.47174	13.42406	-0.10892	4.97481	13.65016	348.36	-1.21
98/ 8/ 7	2451032.5	4.87709	-0.97215	-0.10565	2.39050	13.44053	-0.10716	4.97416	13.65188	348.73	-1.22
98/ 8/11	2451036.5	4.88252	-0.94108	-0.10590	2.30914	13.45648	-0.10540	4.97352	13.65358	349.09	-1.22
98/ 8/15	2451040.5	4.88776	-0.90998	-0.10614	2.22766	13.47192	-0.10363	4.97288	13.65525	349.45	-1.22
98/ 8/19	2451044.5	4.89281	-0.87884	-0.10638	2.14607	13.48685	-0.10186	4.97225	13.65691	349.82	-1.23
98/ 8/23	2451048.5	4.89768	-0.84766	-0.10661	2.06436	13.50126	-0.10008	4.97163	13.65854	350.18	-1.23
98/ 8/27	2451052.5	4.90235	-0.81646	-0.10684	1.98254	13.51516	-0.09830	4.97102	13.66015	350.54	-1.23
98/ 8/31	2451056.5	4.90684	-0.78522	-0.10707	1.90061	13.52854	-0.09651	4.97042	13.66173	350.91	-1.23
98/ 9/ 4	2451060.5	4.91113	-0.75395	-0.10729	1.81859	13.54140	-0.09472	4.96983	13.66330	351.27	-1.24
98/ 9/ 8	2451064.5	4.91524	-0.72265	-0.10750	1.73647	13.55374	-0.09293	4.96924	13.66484	351.64	-1.24
98/ 9/12	2451068.5	4.91916	-0.69133	-0.10772	1.65425	13.56556	-0.09113	4.96866	13.66636	352.00	-1.24
98/ 9/16	2451072.5	4.92288	-0.65998	-0.10793	1.57194	13.57687	-0.08933	4.96810	13.66785	352.36	-1.24
98/ 9/20	2451076.5	4.92642	-0.62860	-0.10813	1.48955	13.58765	-0.08752	4.96754	13.66933	352.73	-1.25
98/ 9/24	2451080.5	4.92976	-0.59720	-0.10833	1.40707	13.59791	-0.08571	4.96699	13.67079	353.09	-1.25
98/ 9/28	2451084.5	4.93292	-0.56577	-0.10853	1.32451	13.60766	-0.08390	4.96644	13.67222	353.46	-1.25
98/10/ 2	2451088.5	4.93588	-0.53432	-0.10872	1.24187	13.61688	-0.08208	4.96591	13.67364	353.82	-1.25
98/10/ 6	2451092.5	4.93866	-0.50286	-0.10890	1.15916	13.62558	-0.08026	4.96539	13.67503	354.19	-1.26
98/10/10	2451096.5	4.94124	-0.47137	-0.10909	1.07638	13.63375	-0.07843	4.96487	13.67640	354.55	-1.26

1.5 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM JUPITER

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
98/10/14	2451100.5	4.94363	-0.43986	-0.10927	0.99353	13.64140	-0.07660	4.96436	13.67775	354.92	-1.26
98/10/18	2451104.5	4.94583	-0.40834	-0.10944	0.91061	13.64852	-0.07477	4.96386	13.67907	355.28	-1.26
98/10/22	2451108.5	4.94784	-0.37680	-0.10961	0.82763	13.65512	-0.07294	4.96338	13.68037	355.65	-1.27
98/10/26	2451112.5	4.94965	-0.34525	-0.10978	0.74460	13.66119	-0.07110	4.96289	13.68165	356.01	-1.27
98/10/30	2451116.5	4.95128	-0.31368	-0.10994	0.66152	13.66674	-0.06925	4.96242	13.68291	356.37	-1.27
98/11/ 3	2451120.5	4.95271	-0.28211	-0.11010	0.57838	13.67175	-0.06741	4.96196	13.68415	356.74	-1.27
98/11/ 7	2451124.5	4.95395	-0.25052	-0.11025	0.49520	13.67624	-0.06556	4.96151	13.68536	357.11	-1.27
98/11/11	2451128.5	4.95500	-0.21892	-0.11040	0.41197	13.68020	-0.06370	4.96106	13.68655	357.47	-1.28
98/11/15	2451132.5	4.95585	-0.18731	-0.11055	0.32871	13.68363	-0.06185	4.96062	13.68771	357.84	-1.28
98/11/19	2451136.5	4.95652	-0.15569	-0.11069	0.24541	13.68653	-0.05999	4.96020	13.68886	358.20	-1.28
98/11/23	2451140.5	4.95699	-0.12407	-0.11082	0.16208	13.68889	-0.05813	4.95978	13.68997	358.57	-1.28
98/11/27	2451144.5	4.95727	-0.09245	-0.11096	0.07872	13.69073	-0.05626	4.95937	13.69107	358.93	-1.28
98/12/ 1	2451148.5	4.95735	-0.06082	-0.11108	-0.00466	13.69203	-0.05440	4.95897	13.69214	359.30	-1.28
98/12/ 5	2451152.5	4.95724	-0.02919	-0.11121	-0.08806	13.69280	-0.05253	4.95858	13.69318	359.66	-1.29
98/12/ 9	2451156.5	4.95694	0.00245	-0.11133	-0.17148	13.69303	-0.05066	4.95820	13.69420	0.03	-1.29
98/12/13	2451160.5	4.95645	0.03408	-0.11144	-0.25491	13.69274	-0.04878	4.95782	13.69520	0.39	-1.29
98/12/17	2451164.5	4.95577	0.06571	-0.11155	-0.33835	13.69191	-0.04690	4.95746	13.69617	0.76	-1.29
98/12/21	2451168.5	4.95489	0.09734	-0.11166	-0.42179	13.69055	-0.04503	4.95710	13.69712	1.13	-1.29
98/12/25	2451172.5	4.95382	0.12897	-0.11176	-0.50523	13.68866	-0.04315	4.95676	13.69805	1.49	-1.29
98/12/29	2451176.5	4.95255	0.16059	-0.11186	-0.58868	13.68623	-0.04126	4.95642	13.69895	1.86	-1.29
99/ 1/ 2	2451180.5	4.95110	0.19220	-0.11195	-0.67211	13.68328	-0.03938	4.95609	13.69983	2.22	-1.29
99/ 1/ 6	2451184.5	4.94945	0.22381	-0.11204	-0.75554	13.67978	-0.03749	4.95577	13.70068	2.59	-1.30
99/ 1/10	2451188.5	4.94761	0.25541	-0.11212	-0.83896	13.67576	-0.03560	4.95546	13.70151	2.96	-1.30
99/ 1/14	2451192.5	4.94557	0.28699	-0.11220	-0.92235	13.67120	-0.03371	4.95516	13.70232	3.32	-1.30
99/ 1/18	2451196.5	4.94335	0.31857	-0.11228	-1.00573	13.66610	-0.03182	4.95487	13.70310	3.69	-1.30
99/ 1/22	2451200.5	4.94093	0.35014	-0.11235	-1.08908	13.66048	-0.02992	4.95459	13.70385	4.05	-1.30
99/ 1/26	2451204.5	4.93831	0.38169	-0.11242	-1.17241	13.65431	-0.02803	4.95432	13.70458	4.42	-1.30
99/ 1/30	2451208.5	4.93551	0.41322	-0.11248	-1.25570	13.64762	-0.02613	4.95405	13.70529	4.79	-1.30
99/ 2/ 3	2451212.5	4.93251	0.44474	-0.11254	-1.33895	13.64039	-0.02423	4.95380	13.70597	5.15	-1.30
99/ 2/ 7	2451216.5	4.92932	0.47625	-0.11259	-1.42217	13.63263	-0.02233	4.95356	13.70662	5.52	-1.30
99/ 2/11	2451220.5	4.92594	0.50773	-0.11264	-1.50534	13.62433	-0.02043	4.95332	13.70725	5.88	-1.30
99/ 2/15	2451224.5	4.92237	0.53920	-0.11269	-1.58847	13.61550	-0.01853	4.95309	13.70786	6.25	-1.30
99/ 2/19	2451228.5	4.91860	0.57064	-0.11273	-1.67154	13.60614	-0.01663	4.95288	13.70844	6.62	-1.30
99/ 2/23	2451232.5	4.91464	0.60206	-0.11276	-1.75456	13.59624	-0.01472	4.95267	13.70899	6.98	-1.30
99/ 2/27	2451236.5	4.91050	0.63346	-0.11280	-1.83752	13.58581	-0.01282	4.95247	13.70952	7.35	-1.31
99/ 3/ 3	2451240.5	4.90615	0.66483	-0.11282	-1.92041	13.57484	-0.01091	4.95228	13.71002	7.72	-1.31
99/ 3/ 7	2451244.5	4.90162	0.69618	-0.11285	-2.00324	13.56335	-0.00901	4.95210	13.71049	8.08	-1.31
99/ 3/11	2451248.5	4.89690	0.72750	-0.11286	-2.08600	13.55133	-0.00710	4.95193	13.71094	8.45	-1.31
99/ 3/15	2451252.5	4.89198	0.75879	-0.11288	-2.16868	13.53877	-0.00520	4.95177	13.71137	8.82	-1.31
99/ 3/19	2451256.5	4.88688	0.79005	-0.11289	-2.25128	13.52569	-0.00329	4.95162	13.71177	9.18	-1.31
99/ 3/23	2451260.5	4.88158	0.82128	-0.11289	-2.33380	13.51208	-0.00139	4.95147	13.71215	9.55	-1.31
99/ 3/27	2451264.5	4.87610	0.85248	-0.11289	-2.41623	13.49795	0.00052	4.95134	13.71250	9.92	-1.31
99/ 3/31	2451268.5	4.87042	0.88365	-0.11289	-2.49858	13.48328	0.00243	4.95122	13.71283	10.28	-1.31
99/ 4/ 4	2451272.5	4.86455	0.91478	-0.11288	-2.58084	13.46809	0.00434	4.95110	13.71314	10.65	-1.31
99/ 4/ 8	2451276.5	4.85849	0.94587	-0.11287	-2.66299	13.45238	0.00624	4.95100	13.71342	11.02	-1.31

1.5 1 A.U.=149,599,000 KM.

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
99/ 4/12	2451280.5	4.85225	0.97693	-0.11285	-2.74505	13.43613	0.00815	4.95090	13.71368	11.38	-1.31
99/ 4/16	2451284.5	4.84581	1.00795	-0.11283	-2.82701	13.41937	0.01005	4.95082	13.71392	11.75	-1.31
99/ 4/20	2451288.5	4.83919	1.03894	-0.11281	-2.90886	13.40208	0.01196	4.95074	13.71413	12.12	-1.31
99/ 4/24	2451292.5	4.83237	1.06988	-0.11278	-2.99060	13.38426	0.01387	4.95067	13.71431	12.48	-1.31
99/ 4/28	2451296.5	4.82537	1.10077	-0.11274	-3.07222	13.36593	0.01577	4.95062	13.71447	12.85	-1.30
99/ 5/ 2	2451300.5	4.81818	1.13163	-0.11271	-3.15373	13.34707	0.01768	4.95057	13.71461	13.22	-1.30
99/ 5/ 6	2451304.5	4.81080	1.16244	-0.11266	-3.23511	13.32769	0.01958	4.95053	13.71473	13.58	-1.30
99/ 5/10	2451308.5	4.80323	1.19321	-0.11262	-3.31637	13.30779	0.02148	4.95050	13.71482	13.95	-1.30
99/ 5/14	2451312.5	4.79547	1.22393	-0.11256	-3.39751	13.28738	0.02339	4.95048	13.71488	14.32	-1.30
99/ 5/18	2451316.5	4.78753	1.25460	-0.11251	-3.47851	13.26644	0.02529	4.95047	13.71492	14.68	-1.30
99/ 5/22	2451320.5	4.77940	1.28522	-0.11245	-3.55938	13.24499	0.02719	4.95047	13.71494	15.05	-1.30
99/ 5/26	2451324.5	4.77109	1.31580	-0.11238	-3.64010	13.22302	0.02909	4.95048	13.71493	15.42	-1.30
99/ 5/30	2451328.5	4.76258	1.34632	-0.11231	-3.72069	13.20053	0.03099	4.95049	13.71490	15.78	-1.30
99/ 6/ 3	2451332.5	4.75390	1.37679	-0.11224	-3.80112	13.17753	0.03288	4.95052	13.71484	16.15	-1.30
99/ 6/ 7	2451336.5	4.74502	1.40720	-0.11216	-3.88141	13.15402	0.03478	4.95056	13.71476	16.52	-1.30
99/ 6/11	2451340.5	4.73596	1.43756	-0.11208	-3.96154	13.13000	0.03667	4.95061	13.71466	16.89	-1.30
99/ 6/15	2451344.5	4.72672	1.46787	-0.11199	-4.04152	13.10546	0.03856	4.95066	13.71453	17.25	-1.30
99/ 6/19	2451348.5	4.71729	1.49811	-0.11190	-4.12133	13.08042	0.04045	4.95073	13.71438	17.62	-1.30
99/ 6/23	2451352.5	4.70768	1.52830	-0.11180	-4.20099	13.05487	0.04234	4.95080	13.71421	17.99	-1.29
99/ 6/27	2451356.5	4.69788	1.55843	-0.11170	-4.28047	13.02881	0.04423	4.95088	13.71402	18.35	-1.29
99/ 7/ 1	2451360.5	4.68790	1.58850	-0.11160	-4.35979	13.00224	0.04612	4.95098	13.71380	18.72	-1.29
99/ 7/ 5	2451364.5	4.67774	1.61851	-0.11149	-4.43893	12.97517	0.04800	4.95108	13.71355	19.09	-1.29
99/ 7/ 9	2451368.5	4.66739	1.64845	-0.11138	-4.51790	12.94760	0.04988	4.95119	13.71328	19.45	-1.29
99/ 7/13	2451372.5	4.65686	1.67833	-0.11126	-4.59669	12.91952	0.05177	4.95132	13.71299	19.82	-1.29
99/ 7/17	2451376.5	4.64615	1.70814	-0.11114	-4.67529	12.89094	0.05364	4.95145	13.71267	20.19	-1.29
99/ 7/21	2451380.5	4.63526	1.73789	-0.11101	-4.75370	12.86185	0.05552	4.95159	13.71233	20.55	-1.28
99/ 7/25	2451384.5	4.62419	1.76757	-0.11088	-4.83193	12.83227	0.05739	4.95174	13.71197	20.92	-1.28
99/ 7/29	2451388.5	4.61294	1.79718	-0.11075	-4.90996	12.80219	0.05926	4.95190	13.71158	21.29	-1.28
99/ 8/ 2	2451392.5	4.60150	1.82672	-0.11061	-4.98779	12.77161	0.06113	4.95207	13.71116	21.65	-1.28
99/ 8/ 6	2451396.5	4.58989	1.85619	-0.11046	-5.06542	12.74054	0.06300	4.95224	13.71072	22.02	-1.28
99/ 8/10	2451400.5	4.57810	1.88558	-0.11032	-5.14285	12.70897	0.06486	4.95243	13.71025	22.39	-1.28
99/ 8/14	2451404.5	4.56613	1.91491	-0.11017	-5.22007	12.67691	0.06673	4.95263	13.70976	22.75	-1.27
99/ 8/18	2451408.5	4.55398	1.94416	-0.11001	-5.29708	12.64435	0.06858	4.95284	13.70924	23.12	-1.27
99/ 8/22	2451412.5	4.54165	1.97333	-0.10985	-5.37387	12.61131	0.07044	4.95305	13.70870	23.48	-1.27
99/ 8/26	2451416.5	4.52915	2.00242	-0.10968	-5.45043	12.57777	0.07229	4.95328	13.70813	23.85	-1.27
99/ 8/30	2451420.5	4.51647	2.03144	-0.10951	-5.52678	12.54375	0.07414	4.95351	13.70753	24.22	-1.27
99/ 9/ 3	2451424.5	4.50362	2.06038	-0.10934	-5.60290	12.50924	0.07599	4.95375	13.70691	24.58	-1.26
99/ 9/ 7	2451428.5	4.49058	2.08924	-0.10916	-5.67879	12.47425	0.07783	4.95401	13.70626	24.95	-1.26
99/ 9/11	2451432.5	4.47738	2.11801	-0.10898	-5.75444	12.43878	0.07967	4.95427	13.70559	25.32	-1.26
99/ 9/15	2451436.5	4.46400	2.14671	-0.10880	-5.82986	12.40283	0.08150	4.95454	13.70489	25.68	-1.26
99/ 9/19	2451440.5	4.45044	2.17532	-0.10860	-5.90504	12.36640	0.08334	4.95482	13.70417	26.05	-1.26
99/ 9/23	2451444.5	4.43671	2.20385	-0.10841	-5.97998	12.32949	0.08516	4.95511	13.70342	26.41	-1.25
99/ 9/27	2451448.5	4.42281	2.23229	-0.10821	-6.05467	12.29211	0.08699	4.95541	13.70265	26.78	-1.25
99/10/ 1	2451452.5	4.40874	2.26064	-0.10801	-6.12911	12.25426	0.08881	4.95572	13.70185	27.15	-1.25
99/10/ 5	2451456.5	4.39449	2.28890	-0.10780	-6.20330	12.21594	0.09063	4.95604	13.70103	27.51	-1.25

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99/10/ 9	2451460.5	4.38008	2.31708	-0.10759	-6.27723	12.17714	0.09244	4.95636	13.70018	27.88	-1.24
99/10/13	2451464.5	4.36549	2.34517	-0.10737	-6.35090	12.13788	0.09425	4.95670	13.69930	28.24	-1.24
99/10/17	2451468.5	4.35074	2.37316	-0.10715	-6.42431	12.09816	0.09606	4.95704	13.69840	28.61	-1.24
99/10/21	2451472.5	4.33581	2.40106	-0.10693	-6.49745	12.05797	0.09786	4.95740	13.69748	28.98	-1.24
99/10/25	2451476.5	4.32071	2.42887	-0.10670	-6.57032	12.01732	0.09966	4.95776	13.69653	29.34	-1.23
99/10/29	2451480.5	4.30545	2.45659	-0.10647	-6.64292	11.97621	0.10145	4.95813	13.69555	29.71	-1.23
99/11/ 2	2451484.5	4.29002	2.48421	-0.10623	-6.71524	11.93464	0.10324	4.95851	13.69455	30.07	-1.23
99/11/ 6	2451488.5	4.27443	2.51173	-0.10599	-6.78729	11.89262	0.10502	4.95890	13.69353	30.44	-1.22
99/11/10	2451492.5	4.25866	2.53916	-0.10575	-6.85905	11.85014	0.10680	4.95930	13.69248	30.80	-1.22
99/11/14	2451496.5	4.24273	2.56648	-0.10550	-6.93053	11.80722	0.10858	4.95971	13.69140	31.17	-1.22
99/11/18	2451500.5	4.22664	2.59371	-0.10525	-7.00172	11.76384	0.11035	4.96013	13.69030	31.54	-1.22
99/11/22	2451504.5	4.21038	2.62083	-0.10499	-7.07261	11.72002	0.11211	4.96056	13.68917	31.90	-1.21
99/11/26	2451508.5	4.19396	2.64786	-0.10473	-7.14321	11.67576	0.11387	4.96099	13.68802	32.27	-1.21
99/11/30	2451512.5	4.17738	2.67478	-0.10446	-7.21351	11.63105	0.11563	4.96144	13.68684	32.63	-1.21
99/12/ 4	2451516.5	4.16064	2.70160	-0.10419	-7.28351	11.58591	0.11738	4.96189	13.68564	33.00	-1.20
99/12/ 8	2451520.5	4.14373	2.72831	-0.10392	-7.35321	11.54033	0.11912	4.96235	13.68441	33.36	-1.20
99/12/12	2451524.5	4.12666	2.75492	-0.10364	-7.42260	11.49432	0.12086	4.96283	13.68317	33.73	-1.20
99/12/16	2451528.5	4.10943	2.78142	-0.10336	-7.49168	11.44788	0.12260	4.96331	13.68190	34.09	-1.19
99/12/20	2451532.5	4.09205	2.80781	-0.10308	-7.56045	11.40101	0.12432	4.96380	13.68061	34.46	-1.19
99/12/24	2451536.5	4.07450	2.83409	-0.10279	-7.62891	11.35372	0.12605	4.96430	13.67929	34.82	-1.19

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64/12/31	2438760.5	8.87053	-4.03305	-0.28526	3.45568	8.78811	-0.28869	9.74850	9.44754	335.55	-1.68
65/ 1/ 4	2438764.5	8.87849	-4.01274	-0.28593	3.43599	8.79697	-0.28805	9.74738	9.44858	335.68	-1.68
65/ 1/ 8	2438768.5	8.88641	-3.99241	-0.28659	3.41628	8.80578	-0.28742	9.74627	9.44963	335.81	-1.69
65/ 1/12	2438772.5	8.89428	-3.97205	-0.28726	3.39655	8.81455	-0.28678	9.74515	9.45067	335.94	-1.69
65/ 1/16	2438776.5	8.90210	-3.95168	-0.28792	3.37679	8.82329	-0.28614	9.74403	9.45172	336.06	-1.69
65/ 1/20	2438780.5	8.90988	-3.93129	-0.28858	3.35701	8.83198	-0.28550	9.74291	9.45277	336.19	-1.70
65/ 1/24	2438784.5	8.91761	-3.91087	-0.28924	3.33720	8.84062	-0.28486	9.74179	9.45382	336.32	-1.70
65/ 1/28	2438788.5	8.92530	-3.89044	-0.28989	3.31736	8.84923	-0.28422	9.74066	9.45487	336.45	-1.71
65/ 2/ 1	2438792.5	8.93294	-3.86999	-0.29055	3.29751	8.85779	-0.28357	9.73954	9.45592	336.58	-1.71
65/ 2/ 5	2438796.5	8.94053	-3.84951	-0.29121	3.27763	8.86631	-0.28292	9.73841	9.45698	336.70	-1.71
65/ 2/ 9	2438800.5	8.94808	-3.82902	-0.29186	3.25772	8.87479	-0.28228	9.73729	9.45803	336.83	-1.72
65/ 2/13	2438804.5	8.95559	-3.80851	-0.29251	3.23779	8.88323	-0.28162	9.73616	9.45909	336.96	-1.72
65/ 2/17	2438808.5	8.96304	-3.78798	-0.29316	3.21783	8.89162	-0.28097	9.73503	9.46014	337.09	-1.73
65/ 2/21	2438812.5	8.97045	-3.76743	-0.29381	3.19786	8.89997	-0.28032	9.73390	9.46120	337.22	-1.73
65/ 2/25	2438816.5	8.97782	-3.74686	-0.29445	3.17785	8.90828	-0.27966	9.73277	9.46226	337.35	-1.73
65/ 3/ 1	2438820.5	8.98514	-3.72627	-0.29510	3.15783	8.91654	-0.27900	9.73164	9.46332	337.48	-1.74
65/ 3/ 5	2438824.5	8.99241	-3.70566	-0.29574	3.13778	8.92476	-0.27834	9.73051	9.46437	337.60	-1.74
65/ 3/ 9	2438828.5	8.99963	-3.68503	-0.29639	3.11770	8.93293	-0.27768	9.72937	9.46543	337.73	-1.75
65/ 3/13	2438832.5	9.00681	-3.66439	-0.29703	3.09761	8.94106	-0.27702	9.72824	9.46649	337.86	-1.75
65/ 3/17	2438836.5	9.01395	-3.64372	-0.29767	3.07749	8.94914	-0.27636	9.72710	9.46754	337.99	-1.75
65/ 3/21	2438840.5	9.02103	-3.62304	-0.29830	3.05735	8.95718	-0.27569	9.72597	9.46860	338.12	-1.76
65/ 3/25	2438844.5	9.02807	-3.60234	-0.29894	3.03719	8.96517	-0.27502	9.72483	9.46966	338.25	-1.76
65/ 3/29	2438848.5	9.03506	-3.58162	-0.29957	3.01700	8.97313	-0.27436	9.72369	9.47072	338.38	-1.77
65/ 4/ 2	2438852.5	9.04201	-3.56088	-0.30021	2.99680	8.98104	-0.27368	9.72255	9.47179	338.50	-1.77
65/ 4/ 6	2438856.5	9.04891	-3.54012	-0.30084	2.97657	8.98890	-0.27301	9.72141	9.47285	338.63	-1.77
65/ 4/10	2438860.5	9.05576	-3.51935	-0.30147	2.95632	8.99672	-0.27234	9.72026	9.47391	338.76	-1.78
65/ 4/14	2438864.5	9.06257	-3.49855	-0.30210	2.93605	9.00450	-0.27166	9.71912	9.47498	338.89	-1.78
65/ 4/18	2438868.5	9.06933	-3.47774	-0.30272	2.91576	9.01224	-0.27099	9.71798	9.47605	339.02	-1.79
65/ 4/22	2438872.5	9.07604	-3.45691	-0.30335	2.89544	9.01992	-0.27031	9.71683	9.47711	339.15	-1.79
65/ 4/26	2438876.5	9.08271	-3.43607	-0.30397	2.87511	9.02757	-0.26963	9.71568	9.47818	339.28	-1.79
65/ 4/30	2438880.5	9.08933	-3.41520	-0.30459	2.85475	9.03517	-0.26894	9.71454	9.47925	339.41	-1.80
65/ 5/ 4	2438884.5	9.09590	-3.39432	-0.30522	2.83437	9.04272	-0.26826	9.71339	9.48032	339.54	-1.80
65/ 5/ 8	2438888.5	9.10242	-3.37342	-0.30583	2.81397	9.05023	-0.26758	9.71224	9.48139	339.66	-1.80
65/ 5/12	2438892.5	9.10890	-3.35251	-0.30645	2.79355	9.05770	-0.26689	9.71109	9.48246	339.79	-1.81
65/ 5/16	2438896.5	9.11533	-3.33157	-0.30707	2.77311	9.06512	-0.26620	9.70994	9.48353	339.92	-1.81
65/ 5/20	2438900.5	9.12171	-3.31062	-0.30768	2.75264	9.07250	-0.26551	9.70879	9.48461	340.05	-1.82
65/ 5/24	2438904.5	9.12805	-3.28965	-0.30829	2.73216	9.07983	-0.26482	9.70763	9.48568	340.18	-1.82
65/ 5/28	2438908.5	9.13434	-3.26867	-0.30890	2.71165	9.08712	-0.26413	9.70648	9.48676	340.31	-1.82
65/ 6/ 1	2438912.5	9.14058	-3.24767	-0.30951	2.69113	9.09436	-0.26343	9.70532	9.48783	340.44	-1.83
65/ 6/ 5	2438916.5	9.14677	-3.22665	-0.31012	2.67058	9.10156	-0.26274	9.70417	9.48891	340.57	-1.83
65/ 6/ 9	2438920.5	9.15291	-3.20562	-0.31073	2.65002	9.10871	-0.26204	9.70301	9.48999	340.70	-1.84
65/ 6/13	2438924.5	9.15901	-3.18457	-0.31133	2.62943	9.11581	-0.26134	9.70185	9.49106	340.83	-1.84
65/ 6/17	2438928.5	9.16506	-3.16350	-0.31194	2.60883	9.12288	-0.26064	9.70069	9.49214	340.96	-1.84
65/ 6/21	2438932.5	9.17107	-3.14241	-0.31254	2.58821	9.12989	-0.25994	9.69953	9.49323	341.09	-1.85
65/ 6/25	2438936.5	9.17702	-3.12131	-0.31314	2.56757	9.13687	-0.25923	9.69837	9.49431	341.22	-1.85

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65/ 6/29	2438940.5	9.18293	-3.10020	-0.31373	2.54691	9.14380	-0.25853	9.69721	9.49540	341.35	-1.85
65/ 7/ 3	2438944.5	9.18879	-3.07907	-0.31433	2.52623	9.15069	-0.25782	9.69605	9.49650	341.47	-1.86
65/ 7/ 7	2438948.5	9.19460	-3.05792	-0.31493	2.50553	9.15753	-0.25711	9.69488	9.49759	341.60	-1.86
65/ 7/11	2438952.5	9.20037	-3.03676	-0.31552	2.48481	9.16433	-0.25640	9.69372	9.49869	341.73	-1.87
65/ 7/15	2438956.5	9.20608	-3.01558	-0.31611	2.46407	9.17109	-0.25569	9.69255	9.49978	341.86	-1.87
65/ 7/19	2438960.5	9.21175	-2.99438	-0.31670	2.44330	9.17780	-0.25498	9.69139	9.50088	341.99	-1.87
65/ 7/23	2438964.5	9.21737	-2.97317	-0.31729	2.42252	9.18447	-0.25426	9.69022	9.50199	342.12	-1.88
65/ 7/27	2438968.5	9.22294	-2.95195	-0.31788	2.40172	9.19109	-0.25355	9.68905	9.50309	342.25	-1.88
65/ 7/31	2438972.5	9.22847	-2.93071	-0.31846	2.38089	9.19767	-0.25283	9.68788	9.50419	342.38	-1.88
65/ 8/ 4	2438976.5	9.23394	-2.90945	-0.31904	2.36005	9.20420	-0.25211	9.68671	9.50530	342.51	-1.89
65/ 8/ 8	2438980.5	9.23937	-2.88818	-0.31963	2.33919	9.21069	-0.25139	9.68554	9.50641	342.64	-1.89
65/ 8/12	2438984.5	9.24475	-2.86689	-0.32021	2.31830	9.21713	-0.25067	9.68437	9.50752	342.77	-1.89
65/ 8/16	2438988.5	9.25008	-2.84559	-0.32078	2.29739	9.22353	-0.24994	9.68320	9.50863	342.90	-1.90
65/ 8/20	2438992.5	9.25537	-2.82428	-0.32136	2.27647	9.22988	-0.24922	9.68203	9.50974	343.03	-1.90
65/ 8/24	2438996.5	9.26060	-2.80295	-0.32193	2.25552	9.23619	-0.24849	9.68085	9.51085	343.16	-1.91
65/ 8/28	2439000.5	9.26579	-2.78160	-0.32251	2.23455	9.24245	-0.24776	9.67968	9.51196	343.29	-1.91
65/ 9/ 1	2439004.5	9.27093	-2.76024	-0.32308	2.21357	9.24866	-0.24703	9.67850	9.51308	343.42	-1.91
65/ 9/ 5	2439008.5	9.27602	-2.73887	-0.32365	2.19256	9.25482	-0.24630	9.67733	9.51419	343.55	-1.92
65/ 9/ 9	2439012.5	9.28106	-2.71748	-0.32422	2.17153	9.26094	-0.24556	9.67615	9.51530	343.68	-1.92
65/ 9/13	2439016.5	9.28605	-2.69608	-0.32478	2.15049	9.26701	-0.24483	9.67497	9.51641	343.81	-1.92
65/ 9/17	2439020.5	9.29099	-2.67467	-0.32535	2.12943	9.27304	-0.24409	9.67379	9.51752	343.94	-1.93
65/ 9/21	2439024.5	9.29589	-2.65324	-0.32591	2.10835	9.27902	-0.24335	9.67261	9.51864	344.07	-1.93
65/ 9/25	2439028.5	9.30073	-2.63180	-0.32647	2.08725	9.28495	-0.24261	9.67143	9.51975	344.20	-1.93
65/ 9/29	2439032.5	9.30553	-2.61034	-0.32703	2.06613	9.29083	-0.24187	9.67025	9.52087	344.33	-1.94
65/10/ 3	2439036.5	9.31028	-2.58887	-0.32759	2.04499	9.29667	-0.24113	9.66907	9.52199	344.46	-1.94
65/10/ 7	2439040.5	9.31498	-2.56738	-0.32815	2.02383	9.30246	-0.24038	9.66788	9.52310	344.59	-1.95
65/10/11	2439044.5	9.31963	-2.54589	-0.32870	2.00266	9.30821	-0.23963	9.66670	9.52422	344.72	-1.95
65/10/15	2439048.5	9.32423	-2.52438	-0.32925	1.98146	9.31390	-0.23889	9.66552	9.52534	344.85	-1.95
65/10/19	2439052.5	9.32879	-2.50285	-0.32980	1.96025	9.31955	-0.23814	9.66433	9.52645	344.98	-1.96
65/10/23	2439056.5	9.33329	-2.48132	-0.33035	1.93901	9.32515	-0.23738	9.66315	9.52757	345.11	-1.96
65/10/27	2439060.5	9.33775	-2.45977	-0.33090	1.91776	9.33071	-0.23663	9.66196	9.52869	345.24	-1.96
65/10/31	2439064.5	9.34215	-2.43821	-0.33145	1.89649	9.33621	-0.23588	9.66077	9.52980	345.37	-1.97
65/11/ 4	2439068.5	9.34651	-2.41663	-0.33199	1.87521	9.34166	-0.23512	9.65958	9.53092	345.50	-1.97
65/11/ 8	2439072.5	9.35081	-2.39505	-0.33253	1.85390	9.34707	-0.23436	9.65839	9.53203	345.63	-1.97
65/11/12	2439076.5	9.35507	-2.37345	-0.33307	1.83258	9.35243	-0.23360	9.65720	9.53315	345.76	-1.98
65/11/16	2439080.5	9.35928	-2.35183	-0.33361	1.81124	9.35774	-0.23284	9.65601	9.53426	345.89	-1.98
65/11/20	2439084.5	9.36344	-2.33021	-0.33415	1.78989	9.36300	-0.23208	9.65482	9.53537	346.03	-1.98
65/11/24	2439088.5	9.36755	-2.30857	-0.33469	1.76852	9.36821	-0.23132	9.65363	9.53648	346.16	-1.99
65/11/28	2439092.5	9.37161	-2.28693	-0.33522	1.74713	9.37337	-0.23055	9.65244	9.53759	346.29	-1.99
65/12/ 2	2439096.5	9.37562	-2.26527	-0.33575	1.72572	9.37848	-0.22979	9.65124	9.53870	346.42	-1.99
65/12/ 6	2439100.5	9.37959	-2.24359	-0.33628	1.70431	9.38354	-0.22902	9.65005	9.53981	346.55	-2.00
65/12/10	2439104.5	9.38350	-2.22191	-0.33681	1.68288	9.38855	-0.22825	9.64885	9.54092	346.68	-2.00
65/12/14	2439108.5	9.38736	-2.20021	-0.33734	1.66143	9.39352	-0.22748	9.64766	9.54203	346.81	-2.00
65/12/18	2439112.5	9.39118	-2.17851	-0.33786	1.63997	9.39844	-0.22671	9.64646	9.54314	346.94	-2.01
65/12/22	2439116.5	9.39494	-2.15679	-0.33838	1.61850	9.40331	-0.22594	9.64526	9.54425	347.07	-2.01

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

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65/12/26	2439120.5	9.39865	-2.13506	-0.33890	1.59701	9.40813	-0.22516	9.64407	9.54537	347.20	-2.01
65/12/30	2439124.5	9.40232	-2.11332	-0.33942	1.57550	9.41291	-0.22439	9.64287	9.54648	347.33	-2.02
66/ 1/ 3	2439128.5	9.40593	-2.09157	-0.33994	1.55399	9.41763	-0.22361	9.64167	9.54760	347.46	-2.02
66/ 1/ 7	2439132.5	9.40950	-2.06981	-0.34046	1.53245	9.42231	-0.22283	9.64047	9.54872	347.59	-2.02
66/ 1/11	2439136.5	9.41301	-2.04804	-0.34097	1.51090	9.42694	-0.22205	9.63927	9.54984	347.73	-2.03
66/ 1/15	2439140.5	9.41648	-2.02625	-0.34148	1.48934	9.43153	-0.22127	9.63807	9.55096	347.86	-2.03
66/ 1/19	2439144.5	9.41989	-2.00446	-0.34199	1.46777	9.43607	-0.22049	9.63687	9.55208	347.99	-2.03
66/ 1/23	2439148.5	9.42326	-1.98266	-0.34250	1.44618	9.44055	-0.21970	9.63567	9.55321	348.12	-2.04
66/ 1/27	2439152.5	9.42658	-1.96084	-0.34301	1.42457	9.44500	-0.21891	9.63446	9.55433	348.25	-2.04
66/ 1/31	2439156.5	9.42984	-1.93902	-0.34351	1.40295	9.44939	-0.21813	9.63326	9.55546	348.38	-2.04
66/ 2/ 4	2439160.5	9.43306	-1.91718	-0.34402	1.38132	9.45374	-0.21734	9.63206	9.55659	348.51	-2.05
66/ 2/ 8	2439164.5	9.43622	-1.89534	-0.34452	1.35967	9.45804	-0.21655	9.63085	9.55772	348.64	-2.05
66/ 2/12	2439168.5	9.43934	-1.87348	-0.34502	1.33801	9.46229	-0.21576	9.62965	9.55886	348.77	-2.05
66/ 2/16	2439172.5	9.44241	-1.85162	-0.34551	1.31633	9.46649	-0.21496	9.62844	9.55999	348.91	-2.06
66/ 2/20	2439176.5	9.44542	-1.82974	-0.34601	1.29464	9.47065	-0.21417	9.62724	9.56113	349.04	-2.06
66/ 2/24	2439180.5	9.44839	-1.80786	-0.34650	1.27293	9.47476	-0.21337	9.62603	9.56226	349.17	-2.06
66/ 2/28	2439184.5	9.45130	-1.78597	-0.34699	1.25121	9.47881	-0.21258	9.62482	9.56340	349.30	-2.07
66/ 3/ 4	2439188.5	9.45417	-1.76406	-0.34749	1.22948	9.48283	-0.21178	9.62362	9.56454	349.43	-2.07
66/ 3/ 8	2439192.5	9.45698	-1.74215	-0.34797	1.20774	9.48679	-0.21098	9.62241	9.56568	349.56	-2.07
66/ 3/12	2439196.5	9.45975	-1.72023	-0.34846	1.18598	9.49071	-0.21018	9.62120	9.56683	349.69	-2.08
66/ 3/16	2439200.5	9.46246	-1.69830	-0.34894	1.16421	9.49458	-0.20937	9.61999	9.56798	349.83	-2.08
66/ 3/20	2439204.5	9.46513	-1.67636	-0.34943	1.14242	9.49840	-0.20857	9.61878	9.56913	349.96	-2.08
66/ 3/24	2439208.5	9.46774	-1.65442	-0.34991	1.12062	9.50218	-0.20776	9.61757	9.57028	350.09	-2.09
66/ 3/28	2439212.5	9.47031	-1.63246	-0.35039	1.09881	9.50591	-0.20696	9.61636	9.57144	350.22	-2.09
66/ 4/ 1	2439216.5	9.47282	-1.61050	-0.35086	1.07698	9.50959	-0.20615	9.61515	9.57260	350.35	-2.09
66/ 4/ 5	2439220.5	9.47528	-1.58852	-0.35134	1.05513	9.51322	-0.20534	9.61394	9.57376	350.48	-2.09
66/ 4/ 9	2439224.5	9.47769	-1.56654	-0.35181	1.03327	9.51681	-0.20453	9.61273	9.57492	350.61	-2.10
66/ 4/13	2439228.5	9.48006	-1.54455	-0.35228	1.01140	9.52034	-0.20371	9.61151	9.57608	350.75	-2.10
66/ 4/17	2439232.5	9.48237	-1.52255	-0.35275	0.98951	9.52383	-0.20290	9.61030	9.57725	350.88	-2.10
66/ 4/21	2439236.5	9.48463	-1.50055	-0.35322	0.96760	9.52727	-0.20208	9.60909	9.57842	351.01	-2.11
66/ 4/25	2439240.5	9.48684	-1.47854	-0.35369	0.94568	9.53066	-0.20127	9.60787	9.57958	351.14	-2.11
66/ 4/29	2439244.5	9.48900	-1.45651	-0.35415	0.92375	9.53401	-0.20045	9.60666	9.58075	351.27	-2.11
66/ 5/ 3	2439248.5	9.49111	-1.43448	-0.35461	0.90180	9.53730	-0.19963	9.60545	9.58192	351.41	-2.12
66/ 5/ 7	2439252.5	9.49316	-1.41245	-0.35507	0.87984	9.54054	-0.19880	9.60423	9.58309	351.54	-2.12
66/ 5/11	2439256.5	9.49517	-1.39040	-0.35553	0.85787	9.54373	-0.19798	9.60302	9.58426	351.67	-2.12
66/ 5/15	2439260.5	9.49713	-1.36835	-0.35599	0.83587	9.54688	-0.19716	9.60180	9.58543	351.80	-2.12
66/ 5/19	2439264.5	9.49903	-1.34629	-0.35644	0.81387	9.54997	-0.19633	9.60058	9.58659	351.93	-2.13
66/ 5/23	2439268.5	9.50089	-1.32423	-0.35690	0.79185	9.55301	-0.19550	9.59937	9.58776	352.07	-2.13
66/ 5/27	2439272.5	9.50269	-1.30216	-0.35735	0.76982	9.55599	-0.19467	9.59815	9.58893	352.20	-2.13
66/ 5/31	2439276.5	9.50444	-1.28008	-0.35780	0.74778	9.55893	-0.19384	9.59693	9.59009	352.33	-2.14
66/ 6/ 4	2439280.5	9.50615	-1.25799	-0.35824	0.72572	9.56182	-0.19301	9.59571	9.59126	352.46	-2.14
66/ 6/ 8	2439284.5	9.50780	-1.23590	-0.35869	0.70366	9.56465	-0.19218	9.59447	9.59243	352.59	-2.14
66/ 6/12	2439288.5	9.50940	-1.21380	-0.35913	0.68158	9.56744	-0.19135	9.59328	9.59359	352.73	-2.15
66/ 6/16	2439292.5	9.51095	-1.19169	-0.35957	0.65949	9.57017	-0.19051	9.59206	9.59476	352.86	-2.15
66/ 6/20	2439296.5	9.51244	-1.16958	-0.36001	0.63739	9.57286	-0.18967	9.59084	9.59593	352.99	-2.15

1.6 1 A.U.=149,599,000 KM.

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66/ 6/24	2439300.5	9.51389	-1.14746	-0.36045	0.61527	9.57549	-0.18884	9.58962	9.59710	353.12	-2.15
66/ 6/28	2439304.5	9.51529	-1.12534	-0.36088	0.59315	9.57808	-0.18800	9.58840	9.59827	353.26	-2.16
66/ 7/ 2	2439308.5	9.51663	-1.10321	-0.36132	0.57101	9.58061	-0.18716	9.58717	9.59943	353.39	-2.16
66/ 7/ 6	2439312.5	9.51793	-1.08107	-0.36175	0.54886	9.58309	-0.18631	9.58595	9.60060	353.52	-2.16
66/ 7/10	2439316.5	9.51917	-1.05893	-0.36218	0.52670	9.58552	-0.18547	9.58473	9.60177	353.65	-2.17
66/ 7/14	2439320.5	9.52036	-1.03678	-0.36260	0.50452	9.58790	-0.18463	9.58351	9.60294	353.78	-2.17
66/ 7/18	2439324.5	9.52150	-1.01463	-0.36303	0.48234	9.59022	-0.18378	9.58229	9.60410	353.92	-2.17
66/ 7/22	2439328.5	9.52259	-0.99247	-0.36345	0.46015	9.59250	-0.18293	9.58106	9.60527	354.05	-2.17
66/ 7/26	2439332.5	9.52363	-0.97031	-0.36388	0.43794	9.59472	-0.18208	9.57984	9.60643	354.18	-2.18
66/ 7/30	2439336.5	9.52461	-0.94814	-0.36430	0.41573	9.59689	-0.18123	9.57862	9.60760	354.32	-2.18
66/ 8/ 3	2439340.5	9.52555	-0.92597	-0.36471	0.39350	9.59901	-0.18038	9.57739	9.60877	354.45	-2.18
66/ 8/ 7	2439344.5	9.52643	-0.90379	-0.36513	0.37127	9.60108	-0.17953	9.57617	9.60993	354.58	-2.19
66/ 8/11	2439348.5	9.52726	-0.88161	-0.36554	0.34902	9.60309	-0.17868	9.57495	9.61109	354.71	-2.19
66/ 8/15	2439352.5	9.52804	-0.85942	-0.36595	0.32677	9.60506	-0.17782	9.57372	9.61226	354.85	-2.19
66/ 8/19	2439356.5	9.52877	-0.83723	-0.36636	0.30451	9.60697	-0.17697	9.57250	9.61342	354.98	-2.19
66/ 8/23	2439360.5	9.52945	-0.81504	-0.36677	0.28223	9.60883	-0.17611	9.57127	9.61458	355.11	-2.20
66/ 8/27	2439364.5	9.53008	-0.79284	-0.36718	0.25996	9.61063	-0.17525	9.57004	9.61575	355.24	-2.20
66/ 8/31	2439368.5	9.53065	-0.77063	-0.36758	0.23767	9.61239	-0.17439	9.56882	9.61691	355.38	-2.20
66/ 9/ 4	2439372.5	9.53117	-0.74842	-0.36798	0.21538	9.61409	-0.17353	9.56759	9.61807	355.51	-2.20
66/ 9/ 8	2439376.5	9.53165	-0.72621	-0.36838	0.19307	9.61575	-0.17267	9.56637	9.61924	355.64	-2.21
66/ 9/12	2439380.5	9.53207	-0.70399	-0.36878	0.17076	9.61735	-0.17181	9.56514	9.62040	355.78	-2.21
66/ 9/16	2439384.5	9.53243	-0.68178	-0.36918	0.14844	9.61891	-0.17095	9.56391	9.62157	355.91	-2.21
66/ 9/20	2439388.5	9.53275	-0.65955	-0.36957	0.12612	9.62041	-0.17008	9.56268	9.62274	356.04	-2.21
66/ 9/24	2439392.5	9.53302	-0.63733	-0.36996	0.10378	9.62187	-0.16921	9.56146	9.62391	356.18	-2.22
66/ 9/28	2439396.5	9.53323	-0.61510	-0.37035	0.08144	9.62327	-0.16835	9.56023	9.62509	356.31	-2.22
66/10/ 2	2439400.5	9.53339	-0.59286	-0.37074	0.05908	9.62462	-0.16748	9.55900	9.62626	356.44	-2.22
66/10/ 6	2439404.5	9.53350	-0.57063	-0.37113	0.03672	9.62593	-0.16661	9.55777	9.62744	356.57	-2.23
66/10/10	2439408.5	9.53356	-0.54839	-0.37151	0.01435	9.62718	-0.16573	9.55655	9.62861	356.71	-2.23
66/10/14	2439412.5	9.53357	-0.52615	-0.37189	-0.00803	9.62838	-0.16486	9.55532	9.62979	356.84	-2.23
66/10/18	2439416.5	9.53353	-0.50390	-0.37227	-0.03042	9.62953	-0.16399	9.55409	9.63097	356.97	-2.23
66/10/22	2439420.5	9.53343	-0.48165	-0.37265	-0.05281	9.63062	-0.16311	9.55286	9.63215	357.11	-2.24
66/10/26	2439424.5	9.53328	-0.45940	-0.37303	-0.07522	9.63167	-0.16224	9.55163	9.63333	357.24	-2.24
66/10/30	2439428.5	9.53308	-0.43715	-0.37340	-0.09763	9.63267	-0.16136	9.55040	9.63451	357.37	-2.24
66/11/ 3	2439432.5	9.53283	-0.41490	-0.37377	-0.12005	9.63361	-0.16048	9.54917	9.63569	357.51	-2.24
66/11/ 7	2439436.5	9.53253	-0.39264	-0.37414	-0.14248	9.63450	-0.15960	9.54794	9.63688	357.64	-2.25
66/11/11	2439440.5	9.53217	-0.37038	-0.37451	-0.16492	9.63534	-0.15872	9.54671	9.63806	357.77	-2.25
66/11/15	2439444.5	9.53177	-0.34812	-0.37487	-0.18737	9.63613	-0.15783	9.54548	9.63924	357.91	-2.25
66/11/19	2439448.5	9.53131	-0.32586	-0.37524	-0.20982	9.63686	-0.15695	9.54425	9.64043	358.04	-2.25
66/11/23	2439452.5	9.53080	-0.30360	-0.37560	-0.23228	9.63755	-0.15606	9.54302	9.64161	358.18	-2.26
66/11/27	2439456.5	9.53023	-0.28133	-0.37596	-0.25474	9.63818	-0.15518	9.54179	9.64279	358.31	-2.26
66/12/ 1	2439460.5	9.52962	-0.25907	-0.37632	-0.27722	9.63875	-0.15429	9.54056	9.64397	358.44	-2.26
66/12/ 5	2439464.5	9.52895	-0.23680	-0.37667	-0.29970	9.63928	-0.15340	9.53933	9.64516	358.58	-2.26
66/12/ 9	2439468.5	9.52823	-0.21453	-0.37703	-0.32218	9.63976	-0.15251	9.53810	9.64635	358.71	-2.27
66/12/13	2439472.5	9.52746	-0.19226	-0.37738	-0.34468	9.64018	-0.15162	9.53687	9.64753	358.84	-2.27
66/12/17	2439476.5	9.52664	-0.16999	-0.37773	-0.36718	9.64055	-0.15073	9.53564	9.64872	358.98	-2.27

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66/12/21	2439480.5	9.52577	-0.14772	-0.37807	-0.38969	9.64087	-0.14983	9.53441	9.64991	359.11	-2.27
66/12/25	2439484.5	9.52484	-0.12544	-0.37842	-0.41220	9.64114	-0.14894	9.53318	9.65110	359.25	-2.27
66/12/29	2439488.5	9.52386	-0.10317	-0.37876	-0.43472	9.64136	-0.14804	9.53195	9.65229	359.38	-2.28
67/ 1/ 2	2439492.5	9.52283	-0.08090	-0.37910	-0.45725	9.64152	-0.14715	9.53072	9.65348	359.51	-2.28
67/ 1/ 6	2439496.5	9.52175	-0.05862	-0.37944	-0.47979	9.64163	-0.14625	9.52949	9.65467	359.65	-2.28
67/ 1/10	2439500.5	9.52062	-0.03635	-0.37978	-0.50233	9.64168	-0.14535	9.52826	9.65585	359.78	-2.28
67/ 1/14	2439504.5	9.51943	-0.01408	-0.38011	-0.52488	9.64169	-0.14445	9.52703	9.65704	359.92	-2.29
67/ 1/18	2439508.5	9.51819	0.00820	-0.38045	-0.54743	9.64163	-0.14354	9.52579	9.65823	0.05	-2.29
67/ 1/22	2439512.5	9.51690	0.03047	-0.38078	-0.56999	9.64153	-0.14264	9.52456	9.65942	0.18	-2.29
67/ 1/26	2439516.5	9.51556	0.05275	-0.38110	-0.59256	9.64137	-0.14174	9.52333	9.66060	0.32	-2.29
67/ 1/30	2439520.5	9.51416	0.07502	-0.38143	-0.61513	9.64116	-0.14083	9.52210	9.66179	0.45	-2.30
67/ 2/ 3	2439524.5	9.51272	0.09729	-0.38176	-0.63771	9.64089	-0.13992	9.52087	9.66298	0.59	-2.30
67/ 2/ 7	2439528.5	9.51122	0.11956	-0.38208	-0.66029	9.64057	-0.13901	9.51964	9.66416	0.72	-2.30
67/ 2/11	2439532.5	9.50966	0.14183	-0.38240	-0.68287	9.64020	-0.13811	9.51841	9.66534	0.85	-2.30
67/ 2/15	2439536.5	9.50806	0.16410	-0.38272	-0.70546	9.63977	-0.13720	9.51717	9.66652	0.99	-2.30
67/ 2/19	2439540.5	9.50640	0.18637	-0.38303	-0.72806	9.63929	-0.13629	9.51594	9.66770	1.12	-2.31
67/ 2/23	2439544.5	9.50470	0.20864	-0.38335	-0.75065	9.63875	-0.13537	9.51471	9.66888	1.26	-2.31
67/ 2/27	2439548.5	9.50294	0.23091	-0.38366	-0.77325	9.63816	-0.13446	9.51348	9.67006	1.39	-2.31
67/ 3/ 3	2439552.5	9.50112	0.25317	-0.38397	-0.79585	9.63752	-0.13355	9.51225	9.67124	1.53	-2.31
67/ 3/ 7	2439556.5	9.49926	0.27544	-0.38427	-0.81845	9.63682	-0.13263	9.51102	9.67242	1.66	-2.32
67/ 3/11	2439560.5	9.49734	0.29770	-0.38458	-0.84105	9.63607	-0.13172	9.50979	9.67361	1.80	-2.32
67/ 3/15	2439564.5	9.49537	0.31996	-0.38488	-0.86366	9.63527	-0.13080	9.50856	9.67479	1.93	-2.32
67/ 3/19	2439568.5	9.49335	0.34222	-0.38518	-0.88628	9.63442	-0.12988	9.50732	9.67597	2.06	-2.32
67/ 3/23	2439572.5	9.49128	0.36447	-0.38548	-0.90889	9.63351	-0.12896	9.50609	9.67715	2.20	-2.32
67/ 3/27	2439576.5	9.48915	0.38673	-0.38578	-0.93151	9.63256	-0.12804	9.50486	9.67834	2.33	-2.33
67/ 3/31	2439580.5	9.48697	0.40898	-0.38607	-0.95413	9.63154	-0.12712	9.50363	9.67952	2.47	-2.33
67/ 4/ 4	2439584.5	9.48474	0.43123	-0.38637	-0.97675	9.63048	-0.12620	9.50240	9.68071	2.60	-2.33
67/ 4/ 8	2439588.5	9.48246	0.45347	-0.38666	-0.99938	9.62936	-0.12528	9.50117	9.68189	2.74	-2.33
67/ 4/12	2439592.5	9.48013	0.47572	-0.38695	-1.02200	9.62819	-0.12435	9.49994	9.68308	2.87	-2.33
67/ 4/16	2439596.5	9.47774	0.49796	-0.38723	-1.04463	9.62697	-0.12343	9.49871	9.68427	3.01	-2.34
67/ 4/20	2439600.5	9.47530	0.52020	-0.38752	-1.06727	9.62570	-0.12250	9.49748	9.68546	3.14	-2.34
67/ 4/24	2439604.5	9.47281	0.54243	-0.38780	-1.08990	9.62437	-0.12157	9.49625	9.68665	3.28	-2.34
67/ 4/28	2439608.5	9.47026	0.56467	-0.38808	-1.11254	9.62299	-0.12064	9.49502	9.68784	3.41	-2.34
67/ 5/ 2	2439612.5	9.46767	0.58690	-0.38836	-1.13518	9.62155	-0.11971	9.49379	9.68903	3.55	-2.34
67/ 5/ 6	2439616.5	9.46502	0.60912	-0.38863	-1.15782	9.62007	-0.11878	9.49256	9.69022	3.68	-2.35
67/ 5/10	2439620.5	9.46232	0.63134	-0.38890	-1.18046	9.61853	-0.11785	9.49133	9.69141	3.82	-2.35
67/ 5/14	2439624.5	9.45957	0.65356	-0.38918	-1.20311	9.61693	-0.11692	9.49010	9.69260	3.95	-2.35
67/ 5/18	2439628.5	9.45676	0.67578	-0.38944	-1.22575	9.61529	-0.11599	9.48887	9.69380	4.09	-2.35
67/ 5/22	2439632.5	9.45390	0.69799	-0.38971	-1.24840	9.61359	-0.11506	9.48764	9.69499	4.22	-2.35
67/ 5/26	2439636.5	9.45099	0.72020	-0.38998	-1.27104	9.61184	-0.11412	9.48641	9.69618	4.36	-2.36
67/ 5/30	2439640.5	9.44803	0.74240	-0.39024	-1.29369	9.61004	-0.11318	9.48518	9.69738	4.49	-2.36
67/ 6/ 3	2439644.5	9.44501	0.76460	-0.39050	-1.31634	9.60818	-0.11225	9.48395	9.69858	4.63	-2.36
67/ 6/ 7	2439648.5	9.44195	0.78679	-0.39076	-1.33899	9.60628	-0.11131	9.48273	9.69979	4.76	-2.36
67/ 6/11	2439652.5	9.43883	0.80898	-0.39101	-1.36165	9.60432	-0.11037	9.48150	9.70099	4.90	-2.36
67/ 6/15	2439656.5	9.43566	0.83117	-0.39127	-1.38430	9.60231	-0.10943	9.48027	9.70220	5.03	-2.37

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67/ 6/19	2439660.5	9.43243	0.85335	-0.39152	-1.40696	9.60024	-0.10849	9.47904	9.70340	5.17	-2.37
67/ 6/23	2439664.5	9.42916	0.87552	-0.39177	-1.42962	9.59813	-0.10755	9.47782	9.70461	5.30	-2.37
67/ 6/27	2439668.5	9.42583	0.89769	-0.39202	-1.45229	9.59596	-0.10660	9.47659	9.70582	5.44	-2.37
67/ 7/ 1	2439672.5	9.42245	0.91986	-0.39226	-1.47495	9.59374	-0.10566	9.47536	9.70703	5.58	-2.37
67/ 7/ 5	2439676.5	9.41901	0.94202	-0.39250	-1.49762	9.59146	-0.10472	9.47414	9.70824	5.71	-2.37
67/ 7/ 9	2439680.5	9.41553	0.96418	-0.39274	-1.52029	9.58913	-0.10377	9.47291	9.70945	5.85	-2.38
67/ 7/13	2439684.5	9.41199	0.98633	-0.39298	-1.54296	9.58675	-0.10282	9.47168	9.71066	5.98	-2.38
67/ 7/17	2439688.5	9.40840	1.00847	-0.39322	-1.56563	9.58431	-0.10187	9.47046	9.71188	6.12	-2.38
67/ 7/21	2439692.5	9.40475	1.03061	-0.39345	-1.58830	9.58182	-0.10092	9.46923	9.71309	6.25	-2.38
67/ 7/25	2439696.5	9.40106	1.05274	-0.39369	-1.61098	9.57927	-0.09997	9.46801	9.71430	6.39	-2.38
67/ 7/29	2439700.5	9.39731	1.07487	-0.39392	-1.63366	9.57667	-0.09902	9.46678	9.71551	6.53	-2.38
67/ 8/ 2	2439704.5	9.39351	1.09699	-0.39414	-1.65633	9.57401	-0.09807	9.46556	9.71672	6.66	-2.39
67/ 8/ 6	2439708.5	9.38966	1.11910	-0.39437	-1.67901	9.57130	-0.09712	9.46433	9.71793	6.80	-2.39
67/ 8/10	2439712.5	9.38575	1.14121	-0.39459	-1.70169	9.56853	-0.09616	9.46311	9.71914	6.93	-2.39
67/ 8/14	2439716.5	9.38180	1.16331	-0.39481	-1.72437	9.56570	-0.09521	9.46188	9.72035	7.07	-2.39
67/ 8/18	2439720.5	9.37779	1.18541	-0.39503	-1.74704	9.56282	-0.09425	9.46066	9.72155	7.20	-2.39
67/ 8/22	2439724.5	9.37372	1.20750	-0.39525	-1.76972	9.55988	-0.09330	9.45944	9.72276	7.34	-2.39
67/ 8/26	2439728.5	9.36961	1.22958	-0.39546	-1.79239	9.55689	-0.09234	9.45821	9.72396	7.48	-2.40
67/ 8/30	2439732.5	9.36544	1.25165	-0.39568	-1.81507	9.55385	-0.09138	9.45699	9.72517	7.61	-2.40
67/ 9/ 3	2439736.5	9.36122	1.27372	-0.39589	-1.83774	9.55075	-0.09042	9.45577	9.72637	7.75	-2.40
67/ 9/ 7	2439740.5	9.35695	1.29578	-0.39609	-1.86041	9.54759	-0.08946	9.45455	9.72757	7.88	-2.40
67/ 9/11	2439744.5	9.35263	1.31783	-0.39630	-1.88308	9.54438	-0.08850	9.45333	9.72877	8.02	-2.40
67/ 9/15	2439748.5	9.34825	1.33988	-0.39650	-1.90575	9.54112	-0.08754	9.45210	9.72998	8.16	-2.40
67/ 9/19	2439752.5	9.34382	1.36192	-0.39670	-1.92841	9.53779	-0.08657	9.45088	9.73118	8.29	-2.41
67/ 9/23	2439756.5	9.33934	1.38395	-0.39690	-1.95108	9.53442	-0.08561	9.44966	9.73237	8.43	-2.41
67/ 9/27	2439760.5	9.33481	1.40597	-0.39710	-1.97374	9.53098	-0.08465	9.44844	9.73357	8.57	-2.41
67/10/ 1	2439764.5	9.33022	1.42798	-0.39729	-1.99640	9.52749	-0.08368	9.44722	9.73477	8.70	-2.41
67/10/ 5	2439768.5	9.32558	1.44999	-0.39749	-2.01906	9.52395	-0.08271	9.44600	9.73596	8.84	-2.41
67/10/ 9	2439772.5	9.32089	1.47199	-0.39768	-2.04171	9.52034	-0.08175	9.44478	9.73716	8.97	-2.41
67/10/13	2439776.5	9.31615	1.49398	-0.39786	-2.06436	9.51669	-0.08078	9.44356	9.73835	9.11	-2.41
67/10/17	2439780.5	9.31135	1.51596	-0.39805	-2.08701	9.51297	-0.07981	9.44235	9.73954	9.25	-2.42
67/10/21	2439784.5	9.30651	1.53793	-0.39823	-2.10965	9.50920	-0.07884	9.44113	9.74073	9.38	-2.42
67/10/25	2439788.5	9.30161	1.55989	-0.39841	-2.13229	9.50538	-0.07787	9.43991	9.74191	9.52	-2.42
67/10/29	2439792.5	9.29665	1.58185	-0.39859	-2.15493	9.50149	-0.07690	9.43869	9.74310	9.66	-2.42
67/11/ 2	2439796.5	9.29165	1.60379	-0.39877	-2.17756	9.49755	-0.07593	9.43748	9.74428	9.79	-2.42
67/11/ 6	2439800.5	9.28659	1.62573	-0.39894	-2.20018	9.49356	-0.07496	9.43626	9.74546	9.93	-2.42
67/11/10	2439804.5	9.28148	1.64766	-0.39911	-2.22280	9.48951	-0.07398	9.43504	9.74664	10.07	-2.42
67/11/14	2439808.5	9.27632	1.66957	-0.39928	-2.24541	9.48540	-0.07301	9.43383	9.74782	10.20	-2.43
67/11/18	2439812.5	9.27111	1.69148	-0.39945	-2.26802	9.48124	-0.07204	9.43261	9.74900	10.34	-2.43
67/11/22	2439816.5	9.26584	1.71338	-0.39962	-2.29062	9.47702	-0.07106	9.43140	9.75018	10.48	-2.43
67/11/26	2439820.5	9.26053	1.73527	-0.39978	-2.31321	9.47276	-0.07009	9.43018	9.75136	10.61	-2.43
67/11/30	2439824.5	9.25516	1.75715	-0.39994	-2.33580	9.46843	-0.06911	9.42897	9.75253	10.75	-2.43
67/12/ 4	2439828.5	9.24973	1.77902	-0.40010	-2.35838	9.46406	-0.06813	9.42776	9.75371	10.89	-2.43
67/12/ 8	2439832.5	9.24426	1.80088	-0.40026	-2.38095	9.45963	-0.06715	9.42654	9.75489	11.02	-2.43
67/12/12	2439836.5	9.23873	1.82272	-0.40041	-2.40352	9.45514	-0.06617	9.42533	9.75608	11.16	-2.43

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67/12/16	2439840.5	9.23316	1.84456	-0.40056	-2.42609	9.45060	-0.06520	9.42412	9.75726	11.30	-2.44
67/12/20	2439844.5	9.22752	1.86639	-0.40071	-2.44864	9.44601	-0.06422	9.42291	9.75844	11.43	-2.44
67/12/24	2439848.5	9.22184	1.88821	-0.40086	-2.47120	9.44136	-0.06323	9.42170	9.75962	11.57	-2.44
67/12/28	2439852.5	9.21611	1.91001	-0.40100	-2.49374	9.43666	-0.06225	9.42049	9.76080	11.71	-2.44
68/ 1/ 1	2439856.5	9.21032	1.93181	-0.40115	-2.51628	9.43191	-0.06127	9.41928	9.76199	11.85	-2.44
68/ 1/ 5	2439860.5	9.20448	1.95359	-0.40129	-2.53882	9.42710	-0.06029	9.41807	9.76317	11.98	-2.44
68/ 1/ 9	2439864.5	9.19859	1.97536	-0.40142	-2.56134	9.42224	-0.05930	9.41686	9.76436	12.12	-2.44
68/ 1/13	2439868.5	9.19265	1.99712	-0.40156	-2.58387	9.41733	-0.05832	9.41565	9.76554	12.26	-2.44
68/ 1/17	2439872.5	9.18665	2.01887	-0.40169	-2.60638	9.41236	-0.05733	9.41444	9.76673	12.39	-2.45
68/ 1/21	2439876.5	9.18060	2.04061	-0.40183	-2.62889	9.40733	-0.05635	9.41324	9.76791	12.53	-2.45
68/ 1/25	2439880.5	9.17450	2.06234	-0.40195	-2.65140	9.40225	-0.05536	9.41203	9.76910	12.67	-2.45
68/ 1/29	2439884.5	9.16835	2.08405	-0.40208	-2.67390	9.39712	-0.05437	9.41083	9.77029	12.81	-2.45
68/ 2/ 2	2439888.5	9.16215	2.10576	-0.40221	-2.69639	9.39193	-0.05338	9.40962	9.77147	12.94	-2.45
68/ 2/ 6	2439892.5	9.15590	2.12745	-0.40233	-2.71887	9.38669	-0.05239	9.40842	9.77266	13.08	-2.45
68/ 2/10	2439896.5	9.14959	2.14913	-0.40245	-2.74135	9.38139	-0.05140	9.40721	9.77385	13.22	-2.45
68/ 2/14	2439900.5	9.14323	2.17079	-0.40256	-2.76382	9.37604	-0.05041	9.40601	9.77503	13.36	-2.45
68/ 2/18	2439904.5	9.13682	2.19245	-0.40268	-2.78628	9.37063	-0.04942	9.40481	9.77622	13.49	-2.45
68/ 2/22	2439908.5	9.13036	2.21409	-0.40279	-2.80873	9.36517	-0.04843	9.40361	9.77741	13.63	-2.45
68/ 2/26	2439912.5	9.12384	2.23572	-0.40290	-2.83118	9.35966	-0.04744	9.40241	9.77860	13.77	-2.46
68/ 3/ 1	2439916.5	9.11727	2.25733	-0.40301	-2.85362	9.35409	-0.04645	9.40121	9.77980	13.91	-2.46
68/ 3/ 5	2439920.5	9.11066	2.27894	-0.40312	-2.87606	9.34847	-0.04545	9.40001	9.78099	14.04	-2.46
68/ 3/ 9	2439924.5	9.10399	2.30053	-0.40322	-2.89849	9.34280	-0.04446	9.39881	9.78218	14.18	-2.46
68/ 3/13	2439928.5	9.09726	2.32210	-0.40332	-2.92091	9.33707	-0.04346	9.39761	9.78337	14.32	-2.46
68/ 3/17	2439932.5	9.09049	2.34367	-0.40342	-2.94332	9.33128	-0.04247	9.39641	9.78457	14.46	-2.46
68/ 3/21	2439936.5	9.08367	2.36522	-0.40352	-2.96573	9.32544	-0.04147	9.39521	9.78576	14.59	-2.46
68/ 3/25	2439940.5	9.07679	2.38675	-0.40361	-2.98813	9.31955	-0.04047	9.39402	9.78696	14.73	-2.46
68/ 3/29	2439944.5	9.06986	2.40828	-0.40371	-3.01052	9.31360	-0.03947	9.39282	9.78815	14.87	-2.46
68/ 4/ 2	2439948.5	9.06288	2.42979	-0.40380	-3.03291	9.30759	-0.03848	9.39163	9.78934	15.01	-2.46
68/ 4/ 6	2439952.5	9.05585	2.45128	-0.40389	-3.05528	9.30153	-0.03748	9.39043	9.79053	15.15	-2.47
68/ 4/10	2439956.5	9.04876	2.47276	-0.40397	-3.07765	9.29541	-0.03648	9.38924	9.79172	15.28	-2.47
68/ 4/14	2439960.5	9.04163	2.49423	-0.40405	-3.10001	9.28923	-0.03548	9.38805	9.79292	15.42	-2.47
68/ 4/18	2439964.5	9.03444	2.51568	-0.40413	-3.12236	9.28300	-0.03447	9.38686	9.79410	15.56	-2.47
68/ 4/22	2439968.5	9.02720	2.53712	-0.40421	-3.14471	9.27672	-0.03347	9.38566	9.79529	15.70	-2.47
68/ 4/26	2439972.5	9.01991	2.55854	-0.40429	-3.16704	9.27037	-0.03247	9.38447	9.79648	15.84	-2.47
68/ 4/30	2439976.5	9.01257	2.57995	-0.40436	-3.18937	9.26397	-0.03147	9.38328	9.79766	15.97	-2.47
68/ 5/ 4	2439980.5	9.00517	2.60135	-0.40443	-3.21168	9.25751	-0.03046	9.38210	9.79884	16.11	-2.47
68/ 5/ 8	2439984.5	8.99773	2.62273	-0.40450	-3.23398	9.25100	-0.02946	9.38091	9.80002	16.25	-2.47
68/ 5/12	2439988.5	8.99023	2.64409	-0.40457	-3.25627	9.24443	-0.02846	9.37972	9.80120	16.39	-2.47
68/ 5/16	2439992.5	8.98268	2.66544	-0.40464	-3.27855	9.23780	-0.02745	9.37853	9.80238	16.53	-2.47
68/ 5/20	2439996.5	8.97508	2.68677	-0.40470	-3.30082	9.23112	-0.02645	9.37735	9.80356	16.67	-2.47
68/ 5/24	2440000.5	8.96743	2.70809	-0.40476	-3.32308	9.22439	-0.02544	9.37616	9.80474	16.80	-2.47
68/ 5/28	2440004.5	8.95973	2.72939	-0.40481	-3.34532	9.21760	-0.02444	9.37498	9.80591	16.94	-2.47
68/ 6/ 1	2440008.5	8.95197	2.75068	-0.40487	-3.36756	9.21075	-0.02343	9.37379	9.80709	17.08	-2.48
68/ 6/ 5	2440012.5	8.94417	2.77195	-0.40492	-3.38979	9.20385	-0.02242	9.37261	9.80826	17.22	-2.48
68/ 6/ 9	2440016.5	8.93631	2.79320	-0.40497	-3.41200	9.19690	-0.02141	9.37143	9.80944	17.36	-2.48

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
68/ 6/13	2440020.5	8.92841	2.81444	-0.40502	-3.43420	9.18988	-0.02041	9.37025	9.81061	17.50	-2.48
68/ 6/17	2440024.5	8.92045	2.83566	-0.40507	-3.45639	9.18282	-0.01940	9.36907	9.81179	17.63	-2.48
68/ 6/21	2440028.5	8.91244	2.85687	-0.40511	-3.47857	9.17570	-0.01839	9.36789	9.81296	17.77	-2.48
68/ 6/25	2440032.5	8.90437	2.87806	-0.40515	-3.50073	9.16852	-0.01738	9.36671	9.81413	17.91	-2.48
68/ 6/29	2440036.5	8.89626	2.89923	-0.40519	-3.52289	9.16128	-0.01637	9.36553	9.81530	18.05	-2.48
68/ 7/ 3	2440040.5	8.88810	2.92039	-0.40523	-3.54503	9.15400	-0.01536	9.36435	9.81647	18.19	-2.48
68/ 7/ 7	2440044.5	8.87988	2.94153	-0.40526	-3.56716	9.14665	-0.01435	9.36318	9.81764	18.33	-2.48
68/ 7/11	2440048.5	8.87162	2.96265	-0.40529	-3.58927	9.13926	-0.01334	9.36200	9.81881	18.47	-2.48
68/ 7/15	2440052.5	8.86330	2.98375	-0.40532	-3.61138	9.13180	-0.01232	9.36083	9.81998	18.61	-2.48
68/ 7/19	2440056.5	8.85493	3.00484	-0.40535	-3.63347	9.12429	-0.01131	9.35965	9.82115	18.74	-2.48
68/ 7/23	2440060.5	8.84651	3.02591	-0.40538	-3.65554	9.11673	-0.01030	9.35848	9.82231	18.88	-2.48
68/ 7/27	2440064.5	8.83804	3.04696	-0.40540	-3.67761	9.10911	-0.00929	9.35731	9.82348	19.02	-2.48
68/ 7/31	2440068.5	8.82952	3.06800	-0.40542	-3.69966	9.10143	-0.00828	9.35614	9.82464	19.16	-2.48
68/ 8/ 4	2440072.5	8.82095	3.08901	-0.40544	-3.72169	9.09370	-0.00726	9.35497	9.82581	19.30	-2.48
68/ 8/ 8	2440076.5	8.81232	3.11001	-0.40545	-3.74371	9.08592	-0.00625	9.35380	9.82697	19.44	-2.48
68/ 8/12	2440080.5	8.80365	3.13099	-0.40547	-3.76572	9.07808	-0.00523	9.35263	9.82813	19.58	-2.48
68/ 8/16	2440084.5	8.79492	3.15196	-0.40548	-3.78771	9.07019	-0.00422	9.35147	9.82930	19.72	-2.49
68/ 8/20	2440088.5	8.78615	3.17290	-0.40549	-3.80969	9.06225	-0.00321	9.35030	9.83047	19.86	-2.49
68/ 8/24	2440092.5	8.77732	3.19383	-0.40549	-3.83165	9.05425	-0.00219	9.34914	9.83163	20.00	-2.49
68/ 8/28	2440096.5	8.76844	3.21473	-0.40550	-3.85361	9.04620	-0.00117	9.34797	9.83280	20.13	-2.49
68/ 9/ 1	2440100.5	8.75952	3.23562	-0.40550	-3.87554	9.03809	-0.00016	9.34681	9.83397	20.27	-2.49
68/ 9/ 5	2440104.5	8.75054	3.25649	-0.40550	-3.89747	9.02993	0.00086	9.34565	9.83514	20.41	-2.49
68/ 9/ 9	2440108.5	8.74151	3.27735	-0.40549	-3.91938	9.02171	0.00188	9.34448	9.83630	20.55	-2.49
68/ 9/13	2440112.5	8.73243	3.29818	-0.40549	-3.94128	9.01344	0.00289	9.34332	9.83747	20.69	-2.49
68/ 9/17	2440116.5	8.72330	3.31899	-0.40548	-3.96317	9.00512	0.00391	9.34217	9.83864	20.83	-2.49
68/ 9/21	2440120.5	8.71412	3.33978	-0.40547	-3.98504	8.99674	0.00493	9.34101	9.83981	20.97	-2.49
68/ 9/25	2440124.5	8.70489	3.36056	-0.40546	-4.00690	8.98831	0.00595	9.33985	9.84098	21.11	-2.49
68/ 9/29	2440128.5	8.69560	3.38131	-0.40544	-4.02874	8.97982	0.00697	9.33869	9.84215	21.25	-2.49
68/10/ 3	2440132.5	8.68627	3.40205	-0.40543	-4.05057	8.97127	0.00799	9.33754	9.84332	21.39	-2.49
68/10/ 7	2440136.5	8.67689	3.42276	-0.40541	-4.07238	8.96267	0.00901	9.33638	9.84448	21.53	-2.49
68/10/11	2440140.5	8.66746	3.44346	-0.40538	-4.09419	8.95401	0.01003	9.33523	9.84565	21.67	-2.49
68/10/15	2440144.5	8.65797	3.46413	-0.40536	-4.11597	8.94530	0.01105	9.33408	9.84682	21.81	-2.49
68/10/19	2440148.5	8.64844	3.48479	-0.40533	-4.13774	8.93653	0.01207	9.33293	9.84798	21.95	-2.49
68/10/23	2440152.5	8.63886	3.50542	-0.40530	-4.15950	8.92771	0.01309	9.33178	9.84914	22.09	-2.49
68/10/27	2440156.5	8.62922	3.52604	-0.40527	-4.18124	8.91882	0.01412	9.33063	9.85030	22.23	-2.49
68/10/31	2440160.5	8.61954	3.54663	-0.40524	-4.20296	8.90988	0.01514	9.32948	9.85145	22.37	-2.49
68/11/ 4	2440164.5	8.60980	3.56721	-0.40520	-4.22467	8.90089	0.01616	9.32833	9.85261	22.51	-2.49
68/11/ 8	2440168.5	8.60002	3.58776	-0.40516	-4.24635	8.89184	0.01718	9.32719	9.85377	22.64	-2.49
68/11/12	2440172.5	8.59018	3.60829	-0.40512	-4.26803	8.88274	0.01821	9.32604	9.85492	22.78	-2.49
68/11/16	2440176.5	8.58030	3.62880	-0.40508	-4.28968	8.87358	0.01923	9.32490	9.85607	22.92	-2.49
68/11/20	2440180.5	8.57036	3.64929	-0.40503	-4.31132	8.86437	0.02025	9.32376	9.85723	23.06	-2.49
68/11/24	2440184.5	8.56038	3.66976	-0.40499	-4.33294	8.85510	0.02128	9.32262	9.85838	23.20	-2.49
68/11/28	2440188.5	8.55034	3.69020	-0.40494	-4.35455	8.84577	0.02230	9.32148	9.85953	23.34	-2.49
68/12/ 2	2440192.5	8.54026	3.71063	-0.40488	-4.37613	8.83639	0.02332	9.32034	9.86067	23.48	-2.49
68/12/ 6	2440196.5	8.53012	3.73103	-0.40483	-4.39770	8.82695	0.02435	9.31920	9.86182	23.62	-2.49

1.6 1 A.U.=149,599,000 KM.

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68/12/10	2440200.5	8.51994	3.75141	-0.40477	-4.41925	8.81746	0.02537	9.31806	9.86296	23.76	-2.49
68/12/14	2440204.5	8.50970	3.77177	-0.40471	-4.44079	8.80791	0.02640	9.31693	9.86411	23.90	-2.49
68/12/18	2440208.5	8.49942	3.79210	-0.40465	-4.46230	8.79831	0.02743	9.31579	9.86525	24.04	-2.49
68/12/22	2440212.5	8.48909	3.81242	-0.40458	-4.48380	8.78864	0.02845	9.31466	9.86638	24.18	-2.49
68/12/26	2440216.5	8.47870	3.83271	-0.40452	-4.50528	8.77893	0.02948	9.31352	9.86752	24.32	-2.49
68/12/30	2440220.5	8.46827	3.85298	-0.40445	-4.52673	8.76916	0.03050	9.31239	9.86865	24.47	-2.49
69/ 1/ 3	2440224.5	8.45779	3.87323	-0.40438	-4.54817	8.75933	0.03153	9.31126	9.86979	24.61	-2.49
69/ 1/ 7	2440228.5	8.44726	3.89345	-0.40430	-4.56959	8.74944	0.03256	9.31013	9.87092	24.75	-2.49
69/ 1/11	2440232.5	8.43668	3.91365	-0.40423	-4.59099	8.73950	0.03358	9.30901	9.87204	24.89	-2.49
69/ 1/15	2440236.5	8.42605	3.93383	-0.40415	-4.61237	8.72951	0.03461	9.30788	9.87317	25.03	-2.49
69/ 1/19	2440240.5	8.41537	3.95399	-0.40407	-4.63373	8.71945	0.03564	9.30675	9.87429	25.17	-2.49
69/ 1/23	2440244.5	8.40464	3.97412	-0.40398	-4.65506	8.70935	0.03666	9.30563	9.87541	25.31	-2.49
69/ 1/27	2440248.5	8.39386	3.99423	-0.40390	-4.67637	8.69918	0.03769	9.30451	9.87652	25.45	-2.49
69/ 1/31	2440252.5	8.38303	4.01431	-0.40381	-4.69766	8.68897	0.03871	9.30338	9.87764	25.59	-2.49
69/ 2/ 4	2440256.5	8.37215	4.03437	-0.40372	-4.71893	8.67870	0.03974	9.30226	9.87875	25.73	-2.49
69/ 2/ 8	2440260.5	8.36123	4.05441	-0.40362	-4.74018	8.66838	0.04077	9.30114	9.87986	25.87	-2.49
69/ 2/12	2440264.5	8.35025	4.07442	-0.40353	-4.76140	8.65800	0.04179	9.30002	9.88098	26.01	-2.49
69/ 2/16	2440268.5	8.33923	4.09441	-0.40343	-4.78261	8.64757	0.04282	9.29891	9.88209	26.15	-2.49
69/ 2/20	2440272.5	8.32815	4.11438	-0.40333	-4.80379	8.63709	0.04385	9.29779	9.88320	26.29	-2.49
69/ 2/24	2440276.5	8.31703	4.13432	-0.40323	-4.82495	8.62656	0.04488	9.29668	9.88431	26.43	-2.49
69/ 2/28	2440280.5	8.30586	4.15424	-0.40312	-4.84609	8.61597	0.04590	9.29556	9.88543	26.57	-2.49
69/ 3/ 4	2440284.5	8.29464	4.17413	-0.40302	-4.86721	8.60533	0.04693	9.29445	9.88654	26.71	-2.49
69/ 3/ 8	2440288.5	8.28337	4.19400	-0.40291	-4.88830	8.59464	0.04796	9.29334	9.88765	26.85	-2.48
69/ 3/12	2440292.5	8.27206	4.21384	-0.40280	-4.90938	8.58389	0.04899	9.29223	9.88876	26.99	-2.48
69/ 3/16	2440296.5	8.26069	4.23366	-0.40268	-4.93043	8.57309	0.05001	9.29112	9.88987	27.14	-2.48
69/ 3/20	2440300.5	8.24928	4.25345	-0.40256	-4.95146	8.56224	0.05104	9.29002	9.89098	27.28	-2.48
69/ 3/24	2440304.5	8.23781	4.27322	-0.40245	-4.97247	8.55133	0.05207	9.28891	9.89209	27.42	-2.48
69/ 3/28	2440308.5	8.22630	4.29296	-0.40232	-4.99346	8.54038	0.05310	9.28781	9.89320	27.56	-2.48
69/ 4/ 1	2440312.5	8.21474	4.31268	-0.40220	-5.01443	8.52937	0.05412	9.28671	9.89432	27.70	-2.48
69/ 4/ 5	2440316.5	8.20313	4.33237	-0.40207	-5.03537	8.51830	0.05515	9.28560	9.89543	27.84	-2.48
69/ 4/ 9	2440320.5	8.19148	4.35203	-0.40194	-5.05630	8.50719	0.05618	9.28450	9.89654	27.98	-2.48
69/ 4/13	2440324.5	8.17977	4.37167	-0.40181	-5.07720	8.49601	0.05721	9.28341	9.89765	28.12	-2.48
69/ 4/17	2440328.5	8.16802	4.39129	-0.40168	-5.09808	8.48479	0.05824	9.28231	9.89876	28.26	-2.48
69/ 4/21	2440332.5	8.15622	4.41088	-0.40154	-5.11893	8.47351	0.05926	9.28121	9.89987	28.40	-2.48
69/ 4/25	2440336.5	8.14437	4.43044	-0.40141	-5.13977	8.46218	0.06029	9.28012	9.90098	28.55	-2.48
69/ 4/29	2440340.5	8.13247	4.44998	-0.40127	-5.16057	8.45080	0.06132	9.27903	9.90209	28.69	-2.48
69/ 5/ 3	2440344.5	8.12052	4.46948	-0.40112	-5.18136	8.43937	0.06235	9.27793	9.90320	28.83	-2.48
69/ 5/ 7	2440348.5	8.10853	4.48897	-0.40098	-5.20213	8.42788	0.06338	9.27684	9.90431	28.97	-2.48
69/ 5/11	2440352.5	8.09649	4.50842	-0.40083	-5.22287	8.41634	0.06440	9.27576	9.90542	29.11	-2.48
69/ 5/15	2440356.5	8.08440	4.52785	-0.40068	-5.24359	8.40475	0.06543	9.27467	9.90653	29.25	-2.48
69/ 5/19	2440360.5	8.07226	4.54726	-0.40053	-5.26429	8.39311	0.06646	9.27358	9.90764	29.39	-2.48
69/ 5/23	2440364.5	8.06007	4.56663	-0.40037	-5.28496	8.38141	0.06749	9.27250	9.90876	29.53	-2.47
69/ 5/27	2440368.5	8.04784	4.58598	-0.40022	-5.30562	8.36966	0.06852	9.27142	9.90987	29.68	-2.47
69/ 5/31	2440372.5	8.03556	4.60530	-0.40006	-5.32625	8.35786	0.06955	9.27033	9.91098	29.82	-2.47
69/ 6/ 4	2440376.5	8.02323	4.62460	-0.39990	-5.34685	8.34600	0.07058	9.26925	9.91209	29.96	-2.47

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — SATURN

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69/ 6/ 8	2440380.5	8.01086	4.64387	-0.39973	-5.36744	8.33409	0.07160	9.26818	9.91320	30.10	-2.47
69/ 6/12	2440384.5	7.99843	4.66311	-0.39956	-5.38800	8.32213	0.07263	9.26710	9.91431	30.24	-2.47
69/ 6/16	2440388.5	7.98596	4.68232	-0.39940	-5.40854	8.31011	0.07366	9.26602	9.91542	30.38	-2.47
69/ 6/20	2440392.5	7.97344	4.70150	-0.39922	-5.42906	8.29804	0.07469	9.26495	9.91653	30.53	-2.47
69/ 6/24	2440396.5	7.96088	4.72066	-0.39905	-5.44955	8.28591	0.07572	9.26388	9.91764	30.67	-2.47
69/ 6/28	2440400.5	7.94826	4.73978	-0.39887	-5.47002	8.27373	0.07675	9.26281	9.91875	30.81	-2.47
69/ 7/ 2	2440404.5	7.93560	4.75888	-0.39870	-5.49046	8.26149	0.07778	9.26174	9.91985	30.95	-2.47
69/ 7/ 6	2440408.5	7.92290	4.77796	-0.39851	-5.51088	8.24920	0.07880	9.26067	9.92096	31.09	-2.47
69/ 7/10	2440412.5	7.91014	4.79700	-0.39833	-5.53128	8.23686	0.07983	9.25960	9.92206	31.23	-2.47
69/ 7/14	2440416.5	7.89734	4.81601	-0.39815	-5.55165	8.22446	0.08086	9.25854	9.92316	31.38	-2.46
69/ 7/18	2440420.5	7.88449	4.83500	-0.39796	-5.57199	8.21200	0.08189	9.25747	9.92425	31.52	-2.46
69/ 7/22	2440424.5	7.87160	4.85395	-0.39777	-5.59231	8.19949	0.08292	9.25641	9.92534	31.66	-2.46
69/ 7/26	2440428.5	7.85865	4.87288	-0.39757	-5.61259	8.18693	0.08394	9.25535	9.92643	31.80	-2.46
69/ 7/30	2440432.5	7.84566	4.89178	-0.39738	-5.63285	8.17431	0.08497	9.25429	9.92752	31.94	-2.46
69/ 8/ 3	2440436.5	7.83263	4.91065	-0.39718	-5.65309	8.16164	0.08600	9.25323	9.92860	32.09	-2.46
69/ 8/ 7	2440440.5	7.81954	4.92949	-0.39698	-5.67330	8.14892	0.08702	9.25218	9.92969	32.23	-2.46
69/ 8/11	2440444.5	7.80641	4.94830	-0.39678	-5.69348	8.13614	0.08805	9.25112	9.93077	32.37	-2.46
69/ 8/15	2440448.5	7.79324	4.96708	-0.39658	-5.71363	8.12331	0.08908	9.25007	9.93185	32.51	-2.46
69/ 8/19	2440452.5	7.78002	4.98583	-0.39637	-5.73376	8.11042	0.09010	9.24902	9.93293	32.65	-2.46
69/ 8/23	2440456.5	7.76675	5.00456	-0.39616	-5.75386	8.09749	0.09113	9.24797	9.93401	32.80	-2.46
69/ 8/27	2440460.5	7.75343	5.02325	-0.39595	-5.77393	8.08450	0.09215	9.24692	9.93508	32.94	-2.45
69/ 8/31	2440464.5	7.74007	5.04191	-0.39573	-5.79397	8.07145	0.09318	9.24587	9.93615	33.08	-2.45
69/ 9/ 4	2440468.5	7.72666	5.06054	-0.39552	-5.81399	8.05835	0.09420	9.24482	9.93722	33.22	-2.45
69/ 9/ 8	2440472.5	7.71321	5.07914	-0.39530	-5.83397	8.04520	0.09523	9.24378	9.93829	33.36	-2.45
69/ 9/12	2440476.5	7.69971	5.09771	-0.39508	-5.85393	8.03200	0.09625	9.24274	9.93935	33.51	-2.45
69/ 9/16	2440480.5	7.68616	5.11625	-0.39485	-5.87386	8.01874	0.09728	9.24170	9.94042	33.65	-2.45
69/ 9/20	2440484.5	7.67257	5.13476	-0.39463	-5.89376	8.00543	0.09830	9.24066	9.94148	33.79	-2.45
69/ 9/24	2440488.5	7.65893	5.15324	-0.39440	-5.91363	7.99207	0.09933	9.23962	9.94254	33.93	-2.45
69/ 9/28	2440492.5	7.64524	5.17169	-0.39417	-5.93347	7.97866	0.10035	9.23859	9.94359	34.08	-2.45
69/10/ 2	2440496.5	7.63151	5.19010	-0.39394	-5.95328	7.96519	0.10137	9.23755	9.94465	34.22	-2.44
69/10/ 6	2440500.5	7.61774	5.20849	-0.39370	-5.97306	7.95167	0.10240	9.23652	9.94570	34.36	-2.44
69/10/10	2440504.5	7.60392	5.22684	-0.39346	-5.99281	7.93809	0.10342	9.23549	9.94675	34.50	-2.44
69/10/14	2440508.5	7.59005	5.24517	-0.39322	-6.01253	7.92446	0.10444	9.23446	9.94779	34.65	-2.44
69/10/18	2440512.5	7.57614	5.26346	-0.39298	-6.03222	7.91079	0.10546	9.23343	9.94884	34.79	-2.44
69/10/22	2440516.5	7.56218	5.28172	-0.39274	-6.05188	7.89706	0.10648	9.23240	9.94988	34.93	-2.44
69/10/26	2440520.5	7.54817	5.29994	-0.39249	-6.07150	7.88328	0.10751	9.23138	9.95092	35.07	-2.44
69/10/30	2440524.5	7.53412	5.31814	-0.39224	-6.09109	7.86945	0.10853	9.23036	9.95196	35.22	-2.44
69/11/ 3	2440528.5	7.52003	5.33630	-0.39199	-6.11066	7.85557	0.10955	9.22934	9.95300	35.36	-2.43
69/11/ 7	2440532.5	7.50589	5.35444	-0.39173	-6.13019	7.84164	0.11057	9.22832	9.95404	35.50	-2.43
69/11/11	2440536.5	7.49171	5.37253	-0.39148	-6.14970	7.82766	0.11159	9.22730	9.95507	35.65	-2.43
69/11/15	2440540.5	7.47748	5.39060	-0.39122	-6.16917	7.81363	0.11261	9.22628	9.95611	35.79	-2.43
69/11/19	2440544.5	7.46320	5.40864	-0.39096	-6.18861	7.79955	0.11363	9.22527	9.95715	35.93	-2.43
69/11/23	2440548.5	7.44888	5.42664	-0.39069	-6.20802	7.78542	0.11464	9.22426	9.95818	36.07	-2.43
69/11/27	2440552.5	7.43452	5.44461	-0.39043	-6.22740	7.77124	0.11566	9.22325	9.95922	36.22	-2.43
69/12/ 1	2440556.5	7.42011	5.46254	-0.39016	-6.24675	7.75700	0.11668	9.22224	9.96025	36.36	-2.42

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69/12/ 5	2440560.5	7.40566	5.48045	-0.38989	-6.26607	7.74272	0.11770	9.22123	9.96129	36.50	-2.42
69/12/ 9	2440564.5	7.39116	5.49832	-0.38961	-6.28536	7.72839	0.11872	9.22022	9.96232	36.65	-2.42
69/12/13	2440568.5	7.37662	5.51616	-0.38934	-6.30462	7.71400	0.11974	9.21922	9.96335	36.79	-2.42
69/12/17	2440572.5	7.36203	5.53396	-0.38906	-6.32385	7.69957	0.12075	9.21822	9.96438	36.93	-2.42
69/12/21	2440576.5	7.34740	5.55173	-0.38878	-6.34304	7.68508	0.12177	9.21722	9.96542	37.07	-2.42
69/12/25	2440580.5	7.33272	5.56947	-0.38850	-6.36221	7.67054	0.12279	9.21622	9.96644	37.22	-2.42

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69/12/17	2440572.5	7.36203	5.23186	1.84492	-6.32385	7.01582	3.17430	9.21822	9.96438	35.40	11.55
69/12/21	2440576.5	7.34740	5.24805	1.85225	-6.34304	7.00213	3.16947	9.21722	9.96542	35.54	11.59
69/12/25	2440580.5	7.33272	5.26421	1.85956	-6.36221	6.98838	3.16461	9.21622	9.96644	35.67	11.64
69/12/29	2440584.5	7.31800	5.28034	1.86687	-6.38134	6.97460	3.15974	9.21522	9.96747	35.81	11.69
70/ 1/ 2	2440588.5	7.30324	5.29644	1.87416	-6.40045	6.96076	3.15485	9.21423	9.96850	35.95	11.74
70/ 1/ 6	2440592.5	7.28843	5.31250	1.88145	-6.41952	6.94688	3.14993	9.21324	9.96952	36.09	11.78
70/ 1/10	2440596.5	7.27358	5.32853	1.88872	-6.43855	6.93295	3.14500	9.21225	9.97054	36.23	11.83
70/ 1/14	2440600.5	7.25868	5.34453	1.89598	-6.45756	6.91897	3.14004	9.21126	9.97156	36.36	11.88
70/ 1/18	2440604.5	7.24374	5.36050	1.90323	-6.47653	6.90495	3.13507	9.21027	9.97258	36.50	11.93
70/ 1/22	2440608.5	7.22876	5.37644	1.91046	-6.49546	6.89088	3.13007	9.20928	9.97360	36.64	11.97
70/ 1/26	2440612.5	7.21373	5.39234	1.91769	-6.51437	6.87677	3.12506	9.20830	9.97461	36.78	12.02
70/ 1/30	2440616.5	7.19866	5.40821	1.92490	-6.53324	6.86261	3.12002	9.20732	9.97563	36.92	12.07
70/ 2/ 3	2440620.5	7.18355	5.42405	1.93210	-6.55208	6.84841	3.11496	9.20634	9.97664	37.06	12.11
70/ 2/ 7	2440624.5	7.16839	5.43985	1.93929	-6.57088	6.83416	3.10988	9.20536	9.97765	37.19	12.16
70/ 2/11	2440628.5	7.15319	5.45562	1.94647	-6.58965	6.81986	3.10479	9.20438	9.97866	37.33	12.21
70/ 2/15	2440632.5	7.13794	5.47136	1.95364	-6.60839	6.80552	3.09967	9.20341	9.97967	37.47	12.26
70/ 2/19	2440636.5	7.12265	5.48707	1.96079	-6.62710	6.79113	3.09453	9.20243	9.98068	37.61	12.30
70/ 2/23	2440640.5	7.10732	5.50274	1.96794	-6.64577	6.77669	3.08937	9.20146	9.98169	37.75	12.35
70/ 2/27	2440644.5	7.09195	5.51838	1.97507	-6.66441	6.76221	3.08419	9.20049	9.98269	37.89	12.40
70/ 3/ 3	2440648.5	7.07653	5.53398	1.98219	-6.68301	6.74769	3.07899	9.19953	9.98369	38.03	12.44
70/ 3/ 7	2440652.5	7.06107	5.54955	1.98929	-6.70158	6.73311	3.07377	9.19856	9.98469	38.17	12.49
70/ 3/11	2440656.5	7.04557	5.56509	1.99639	-6.72011	6.71850	3.06853	9.19760	9.98569	38.30	12.54
70/ 3/15	2440660.5	7.03002	5.58060	2.00347	-6.73861	6.70383	3.06327	9.19664	9.98668	38.44	12.58
70/ 3/19	2440664.5	7.01443	5.59607	2.01054	-6.75708	6.68912	3.05799	9.19568	9.98768	38.58	12.63
70/ 3/23	2440668.5	6.99880	5.61150	2.01760	-6.77551	6.67436	3.05268	9.19472	9.98867	38.72	12.68
70/ 3/27	2440672.5	6.98313	5.62690	2.02465	-6.79390	6.65956	3.04736	9.19376	9.98966	38.86	12.72
70/ 3/31	2440676.5	6.96741	5.64227	2.03168	-6.81226	6.64471	3.04202	9.19281	9.99064	39.00	12.77
70/ 4/ 4	2440680.5	6.95165	5.65761	2.03870	-6.83058	6.62982	3.03665	9.19186	9.99162	39.14	12.81
70/ 4/ 8	2440684.5	6.93585	5.67290	2.04571	-6.84886	6.61488	3.03126	9.19091	9.99260	39.28	12.86
70/ 4/12	2440688.5	6.92001	5.68817	2.05271	-6.86710	6.59989	3.02586	9.18996	9.99357	39.42	12.91
70/ 4/16	2440692.5	6.90412	5.70340	2.05969	-6.88531	6.58486	3.02043	9.18901	9.99454	39.56	12.95
70/ 4/20	2440696.5	6.88819	5.71859	2.06666	-6.90348	6.56979	3.01499	9.18807	9.99551	39.70	13.00
70/ 4/24	2440700.5	6.87222	5.73375	2.07362	-6.92161	6.55467	3.00952	9.18713	9.99648	39.84	13.04
70/ 4/28	2440704.5	6.85621	5.74888	2.08057	-6.93970	6.53951	3.00404	9.18619	9.99744	39.98	13.09
70/ 5/ 2	2440708.5	6.84016	5.76397	2.08750	-6.95776	6.52431	2.99853	9.18525	9.99841	40.12	13.14
70/ 5/ 6	2440712.5	6.82407	5.77902	2.09442	-6.97578	6.50906	2.99301	9.18431	9.99937	40.26	13.18
70/ 5/10	2440716.5	6.80793	5.79404	2.10133	-6.99376	6.49377	2.98747	9.18338	10.00033	40.40	13.23
70/ 5/14	2440720.5	6.79175	5.80903	2.10822	-7.01170	6.47843	2.98190	9.18245	10.00129	40.54	13.27
70/ 5/18	2440724.5	6.77553	5.82397	2.11511	-7.02961	6.46306	2.97632	9.18151	10.00225	40.68	13.32
70/ 5/22	2440728.5	6.75927	5.83889	2.12198	-7.04748	6.44764	2.97072	9.18059	10.00321	40.82	13.36
70/ 5/26	2440732.5	6.74297	5.85376	2.12883	-7.06531	6.43217	2.96510	9.17966	10.00416	40.96	13.41
70/ 5/30	2440736.5	6.72663	5.86861	2.13568	-7.08310	6.41667	2.95946	9.17874	10.00512	41.10	13.45
70/ 6/ 3	2440740.5	6.71025	5.88341	2.14251	-7.10086	6.40112	2.95380	9.17781	10.00607	41.24	13.50
70/ 6/ 7	2440744.5	6.69382	5.89818	2.14932	-7.11858	6.38553	2.94812	9.17689	10.00702	41.38	13.55
70/ 6/11	2440748.5	6.67736	5.91291	2.15613	-7.13626	6.36989	2.94242	9.17598	10.00797	41.53	13.59

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70/ 6/15	2440752.5	6.66085	5.92761	2.16292	-7.15390	6.35421	2.93670	9.17506	10.00892	41.67	13.64
70/ 6/19	2440756.5	6.64430	5.94227	2.16970	-7.17150	6.33849	2.93096	9.17415	10.00987	41.81	13.68
70/ 6/23	2440760.5	6.62771	5.95690	2.17646	-7.18907	6.32273	2.92521	9.17323	10.01082	41.95	13.73
70/ 6/27	2440764.5	6.61109	5.97149	2.18321	-7.20660	6.30692	2.91943	9.17232	10.01177	42.09	13.77
70/ 7/ 1	2440768.5	6.59442	5.98604	2.18995	-7.22409	6.29107	2.91364	9.17142	10.01271	42.23	13.81
70/ 7/ 5	2440772.5	6.57771	6.00055	2.19667	-7.24154	6.27518	2.90782	9.17051	10.01365	42.37	13.86
70/ 7/ 9	2440776.5	6.56096	6.01503	2.20338	-7.25895	6.25925	2.90199	9.16961	10.01459	42.51	13.90
70/ 7/13	2440780.5	6.54417	6.02947	2.21008	-7.27632	6.24327	2.89613	9.16871	10.01553	42.66	13.95
70/ 7/17	2440784.5	6.52734	6.04388	2.21677	-7.29365	6.22725	2.89026	9.16781	10.01647	42.80	13.99
70/ 7/21	2440788.5	6.51047	6.05825	2.22344	-7.31095	6.21120	2.88437	9.16691	10.01741	42.94	14.04
70/ 7/25	2440792.5	6.49356	6.07258	2.23009	-7.32820	6.19509	2.87846	9.16601	10.01835	43.08	14.08
70/ 7/29	2440796.5	6.47661	6.08687	2.23674	-7.34542	6.17895	2.87253	9.16512	10.01929	43.22	14.13
70/ 8/ 2	2440800.5	6.45962	6.10113	2.24336	-7.36260	6.16277	2.86658	9.16423	10.02022	43.37	14.17
70/ 8/ 6	2440804.5	6.44259	6.11534	2.24998	-7.37974	6.14654	2.86062	9.16334	10.02116	43.51	14.21
70/ 8/10	2440808.5	6.42553	6.12952	2.25658	-7.39684	6.13027	2.85463	9.16246	10.02210	43.65	14.26
70/ 8/14	2440812.5	6.40842	6.14367	2.26317	-7.41390	6.11396	2.84863	9.16157	10.02303	43.79	14.30
70/ 8/18	2440816.5	6.39127	6.15777	2.26974	-7.43093	6.09761	2.84260	9.16069	10.02397	43.93	14.35
70/ 8/22	2440820.5	6.37408	6.17184	2.27630	-7.44791	6.08121	2.83656	9.15981	10.02490	44.08	14.39
70/ 8/26	2440824.5	6.35686	6.18587	2.28285	-7.46486	6.06478	2.83050	9.15893	10.02583	44.22	14.43
70/ 8/30	2440828.5	6.33959	6.19986	2.28938	-7.48176	6.04830	2.82442	9.15806	10.02676	44.36	14.48
70/ 9/ 3	2440832.5	6.32229	6.21382	2.29590	-7.49863	6.03177	2.81832	9.15718	10.02769	44.50	14.52
70/ 9/ 7	2440836.5	6.30495	6.22773	2.30240	-7.51546	6.01521	2.81220	9.15631	10.02862	44.65	14.56
70/ 9/11	2440840.5	6.28757	6.24161	2.30889	-7.53225	5.99860	2.80606	9.15544	10.02955	44.79	14.61
70/ 9/15	2440844.5	6.27015	6.25545	2.31537	-7.54899	5.98195	2.79990	9.15458	10.03047	44.93	14.65
70/ 9/19	2440848.5	6.25269	6.26925	2.32183	-7.56570	5.96525	2.79372	9.15371	10.03139	45.08	14.69
70/ 9/23	2440852.5	6.23519	6.28301	2.32828	-7.58236	5.94851	2.78752	9.15285	10.03231	45.22	14.74
70/ 9/27	2440856.5	6.21765	6.29673	2.33471	-7.59899	5.93173	2.78130	9.15199	10.03323	45.36	14.78
70/10/ 1	2440860.5	6.20008	6.31041	2.34113	-7.61557	5.91490	2.77506	9.15113	10.03414	45.51	14.82
70/10/ 5	2440864.5	6.18247	6.32406	2.34753	-7.63210	5.89804	2.76880	9.15027	10.03504	45.65	14.87
70/10/ 9	2440868.5	6.16482	6.33767	2.35392	-7.64860	5.88113	2.76253	9.14942	10.03595	45.79	14.91
70/10/13	2440872.5	6.14713	6.35123	2.36029	-7.66505	5.86418	2.75623	9.14857	10.03685	45.94	14.95
70/10/17	2440876.5	6.12940	6.36476	2.36665	-7.68146	5.84719	2.74992	9.14772	10.03775	46.08	14.99
70/10/21	2440880.5	6.11164	6.37825	2.37300	-7.69782	5.83015	2.74358	9.14687	10.03864	46.22	15.04
70/10/25	2440884.5	6.09384	6.39170	2.37933	-7.71414	5.81308	2.73723	9.14603	10.03954	46.37	15.08
70/10/29	2440888.5	6.07600	6.40511	2.38565	-7.73042	5.79596	2.73086	9.14519	10.04043	46.51	15.12
70/11/ 2	2440892.5	6.05812	6.41848	2.39195	-7.74666	5.77881	2.72447	9.14435	10.04131	46.65	15.16
70/11/ 6	2440896.5	6.04020	6.43181	2.39823	-7.76285	5.76161	2.71806	9.14351	10.04220	46.80	15.21
70/11/10	2440900.5	6.02225	6.44510	2.40451	-7.77899	5.74437	2.71163	9.14267	10.04308	46.94	15.25
70/11/14	2440904.5	6.00426	6.45835	2.41076	-7.79510	5.72709	2.70518	9.14184	10.04396	47.09	15.29
70/11/18	2440908.5	5.98623	6.47156	2.41700	-7.81115	5.70977	2.69871	9.14101	10.04483	47.23	15.33
70/11/22	2440912.5	5.96817	6.48473	2.42323	-7.82717	5.69240	2.69223	9.14018	10.04570	47.38	15.37
70/11/26	2440916.5	5.95007	6.49786	2.42944	-7.84314	5.67500	2.68572	9.13935	10.04657	47.52	15.42
70/11/30	2440920.5	5.93193	6.51095	2.43564	-7.85906	5.65756	2.67920	9.13852	10.04743	47.66	15.46
70/12/ 4	2440924.5	5.91376	6.52400	2.44182	-7.87494	5.64007	2.67266	9.13770	10.04829	47.81	15.50
70/12/ 8	2440928.5	5.89555	6.53701	2.44799	-7.89077	5.62255	2.66610	9.13688	10.04915	47.95	15.54

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
70/12/12	2440932.5	5.87730	6.54998	2.45414	-7.90656	5.60499	2.65952	9.13606	10.05001	48.10	15.58
70/12/16	2440936.5	5.85902	6.56291	2.46028	-7.92230	5.58739	2.65293	9.13525	10.05086	48.24	15.62
70/12/20	2440940.5	5.84070	6.57579	2.46640	-7.93799	5.56974	2.64631	9.13444	10.05170	48.39	15.66
70/12/24	2440944.5	5.82234	6.58864	2.47250	-7.95364	5.55206	2.63968	9.13362	10.05254	48.53	15.71
70/12/28	2440948.5	5.80395	6.60145	2.47859	-7.96924	5.53434	2.63302	9.13282	10.05338	48.68	15.75
71/ 1/ 1	2440952.5	5.78552	6.61421	2.48467	-7.98479	5.51658	2.62635	9.13201	10.05422	48.82	15.79
71/ 1/ 5	2440956.5	5.76706	6.62693	2.49073	-8.00030	5.49878	2.61967	9.13121	10.05505	48.97	15.83
71/ 1/ 9	2440960.5	5.74856	6.63962	2.49677	-8.01575	5.48095	2.61296	9.13040	10.05588	49.11	15.87
71/ 1/13	2440964.5	5.73002	6.65226	2.50280	-8.03116	5.46307	2.60624	9.12960	10.05670	49.26	15.91
71/ 1/17	2440968.5	5.71145	6.66486	2.50881	-8.04653	5.44517	2.59950	9.12881	10.05753	49.41	15.95
71/ 1/21	2440972.5	5.69284	6.67742	2.51481	-8.06185	5.42722	2.59274	9.12801	10.05835	49.55	15.99
71/ 1/25	2440976.5	5.67420	6.68993	2.52079	-8.07712	5.40924	2.58597	9.12722	10.05917	49.70	16.03
71/ 1/29	2440980.5	5.65552	6.70241	2.52676	-8.09234	5.39122	2.57918	9.12643	10.05999	49.84	16.07
71/ 2/ 2	2440984.5	5.63681	6.71484	2.53271	-8.10752	5.37317	2.57237	9.12564	10.06081	49.99	16.11
71/ 2/ 6	2440988.5	5.61806	6.72723	2.53865	-8.12265	5.35508	2.56555	9.12486	10.06163	50.13	16.15
71/ 2/10	2440992.5	5.59928	6.73958	2.54456	-8.13774	5.33695	2.55871	9.12408	10.06244	50.28	16.19
71/ 2/14	2440996.5	5.58046	6.75189	2.55047	-8.15278	5.31878	2.55185	9.12330	10.06326	50.43	16.23
71/ 2/18	2441000.5	5.56161	6.76416	2.55636	-8.16777	5.30058	2.54497	9.12252	10.06407	50.57	16.27
71/ 2/22	2441004.5	5.54273	6.77638	2.56223	-8.18272	5.28234	2.53808	9.12174	10.06489	50.72	16.31
71/ 2/26	2441008.5	5.52381	6.78857	2.56808	-8.19762	5.26407	2.53117	9.12097	10.06570	50.87	16.35
71/ 3/ 2	2441012.5	5.50485	6.80071	2.57392	-8.21248	5.24576	2.52424	9.12020	10.06651	51.01	16.39
71/ 3/ 6	2441016.5	5.48586	6.81280	2.57974	-8.22729	5.22741	2.51730	9.11943	10.06732	51.16	16.43
71/ 3/10	2441020.5	5.46684	6.82486	2.58555	-8.24205	5.20903	2.51034	9.11867	10.06813	51.30	16.47
71/ 3/14	2441024.5	5.44778	6.83687	2.59134	-8.25677	5.19061	2.50336	9.11790	10.06893	51.45	16.51
71/ 3/18	2441028.5	5.42869	6.84884	2.59712	-8.27144	5.17215	2.49636	9.11714	10.06974	51.60	16.55
71/ 3/22	2441032.5	5.40956	6.86077	2.60288	-8.28606	5.15366	2.48935	9.11639	10.07054	51.75	16.59
71/ 3/26	2441036.5	5.39040	6.87265	2.60862	-8.30063	5.13513	2.48232	9.11563	10.07134	51.89	16.63
71/ 3/30	2441040.5	5.37121	6.88449	2.61435	-8.31516	5.11656	2.47527	9.11488	10.07214	52.04	16.67
71/ 4/ 3	2441044.5	5.35199	6.89629	2.62006	-8.32964	5.09796	2.46821	9.11413	10.07294	52.19	16.71
71/ 4/ 7	2441048.5	5.33273	6.90805	2.62575	-8.34407	5.07932	2.46113	9.11338	10.07373	52.33	16.75
71/ 4/11	2441052.5	5.31343	6.91976	2.63143	-8.35845	5.06065	2.45403	9.11263	10.07453	52.48	16.78
71/ 4/15	2441056.5	5.29411	6.93143	2.63709	-8.37278	5.04194	2.44692	9.11189	10.07532	52.63	16.82
71/ 4/19	2441060.5	5.27475	6.94306	2.64273	-8.38707	5.02319	2.43979	9.11115	10.07611	52.78	16.86
71/ 4/23	2441064.5	5.25536	6.95464	2.64836	-8.40131	5.00441	2.43264	9.11041	10.07690	52.92	16.90
71/ 4/27	2441068.5	5.23593	6.96618	2.65397	-8.41551	4.98560	2.42548	9.10968	10.07769	53.07	16.94
71/ 5/ 1	2441072.5	5.21647	6.97767	2.65957	-8.42965	4.96675	2.41830	9.10894	10.07848	53.22	16.98
71/ 5/ 5	2441076.5	5.19698	6.98913	2.66515	-8.44375	4.94786	2.41110	9.10821	10.07927	53.37	17.01
71/ 5/ 9	2441080.5	5.17746	7.00053	2.67071	-8.45780	4.92894	2.40388	9.10748	10.08005	53.51	17.05
71/ 5/13	2441084.5	5.15791	7.01190	2.67625	-8.47180	4.90998	2.39665	9.10676	10.08084	53.66	17.09
71/ 5/17	2441088.5	5.13832	7.02322	2.68178	-8.48576	4.89098	2.38940	9.10604	10.08162	53.81	17.13
71/ 5/21	2441092.5	5.11870	7.03450	2.68729	-8.49966	4.87195	2.38214	9.10532	10.08240	53.96	17.17
71/ 5/25	2441096.5	5.09905	7.04573	2.69279	-8.51352	4.85288	2.37485	9.10460	10.08317	54.11	17.20
71/ 5/29	2441100.5	5.07936	7.05692	2.69827	-8.52732	4.83378	2.36756	9.10388	10.08395	54.25	17.24
71/ 6/ 2	2441104.5	5.05965	7.06806	2.70373	-8.54108	4.81464	2.36024	9.10317	10.08472	54.40	17.28
71/ 6/ 6	2441108.5	5.03990	7.07917	2.70917	-8.55479	4.79547	2.35291	9.10246	10.08549	54.55	17.32

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — SATURN

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71/ 6/10	2441112.5	5.02012	7.09022	2.71460	-8.56844	4.77626	2.34555	9.10175	10.08625	54.70	17.35
71/ 6/14	2441116.5	5.00031	7.10123	2.72001	-8.58205	4.75701	2.33819	9.10105	10.08702	54.85	17.39
71/ 6/18	2441120.5	4.98047	7.11220	2.72540	-8.59561	4.73773	2.33080	9.10034	10.08777	55.00	17.43
71/ 6/22	2441124.5	4.96060	7.12312	2.73078	-8.60911	4.71841	2.32340	9.09964	10.08853	55.15	17.46
71/ 6/26	2441128.5	4.94069	7.13400	2.73614	-8.62256	4.69906	2.31598	9.09895	10.08928	55.30	17.50
71/ 6/30	2441132.5	4.92076	7.14483	2.74148	-8.63596	4.67967	2.30854	9.09825	10.09002	55.44	17.54
71/ 7/ 4	2441136.5	4.90079	7.15562	2.74680	-8.64931	4.66026	2.30109	9.09756	10.09077	55.59	17.57
71/ 7/ 8	2441140.5	4.88079	7.16637	2.75211	-8.66260	4.64080	2.29362	9.09687	10.09151	55.74	17.61
71/ 7/12	2441144.5	4.86077	7.17706	2.75740	-8.67585	4.62132	2.28614	9.09618	10.09224	55.89	17.65
71/ 7/16	2441148.5	4.84071	7.18772	2.76267	-8.68904	4.60180	2.27864	9.09550	10.09298	56.04	17.68
71/ 7/20	2441152.5	4.82062	7.19833	2.76793	-8.70218	4.58225	2.27113	9.09482	10.09371	56.19	17.72
71/ 7/24	2441156.5	4.80050	7.20889	2.77317	-8.71527	4.56266	2.26360	9.09414	10.09444	56.34	17.75
71/ 7/28	2441160.5	4.78035	7.21941	2.77839	-8.72831	4.54304	2.25605	9.09346	10.09516	56.49	17.79
71/ 8/ 1	2441164.5	4.76017	7.22988	2.78359	-8.74129	4.52339	2.24849	9.09279	10.09589	56.64	17.83
71/ 8/ 5	2441168.5	4.73996	7.24031	2.78878	-8.75422	4.50371	2.24091	9.09212	10.09661	56.79	17.86
71/ 8/ 9	2441172.5	4.71973	7.25069	2.79394	-8.76710	4.48399	2.23331	9.09145	10.09732	56.94	17.90
71/ 8/13	2441176.5	4.69946	7.26103	2.79909	-8.77993	4.46424	2.22570	9.09078	10.09804	57.09	17.93
71/ 8/17	2441180.5	4.67916	7.27132	2.80423	-8.79270	4.44446	2.21808	9.09012	10.09875	57.24	17.97
71/ 8/21	2441184.5	4.65883	7.28156	2.80934	-8.80543	4.42465	2.21044	9.08946	10.09946	57.39	18.00
71/ 8/25	2441188.5	4.63848	7.29176	2.81444	-8.81809	4.40481	2.20278	9.08880	10.10017	57.54	18.04
71/ 8/29	2441192.5	4.61809	7.30191	2.81952	-8.83071	4.38493	2.19511	9.08814	10.10087	57.69	18.07
71/ 9/ 2	2441196.5	4.59767	7.31202	2.82458	-8.84328	4.36503	2.18742	9.08749	10.10158	57.84	18.11
71/ 9/ 6	2441200.5	4.57723	7.32208	2.82963	-8.85579	4.34509	2.17972	9.08684	10.10228	57.99	18.14
71/ 9/10	2441204.5	4.55676	7.33209	2.83465	-8.86825	4.32512	2.17200	9.08619	10.10297	58.14	18.18
71/ 9/14	2441208.5	4.53626	7.34206	2.83966	-8.88065	4.30511	2.16427	9.08555	10.10367	58.29	18.21
71/ 9/18	2441212.5	4.51573	7.35199	2.84465	-8.89301	4.28508	2.15652	9.08491	10.10436	58.44	18.25
71/ 9/22	2441216.5	4.49517	7.36186	2.84963	-8.90530	4.26501	2.14876	9.08427	10.10504	58.59	18.28
71/ 9/26	2441220.5	4.47458	7.37169	2.85458	-8.91754	4.24492	2.14098	9.08363	10.10573	58.74	18.32
71/ 9/30	2441224.5	4.45397	7.38147	2.85952	-8.92973	4.22480	2.13318	9.08300	10.10641	58.89	18.35
71/10/ 4	2441228.5	4.43332	7.39121	2.86444	-8.94187	4.20464	2.12538	9.08236	10.10709	59.04	18.38
71/10/ 8	2441232.5	4.41265	7.40090	2.86934	-8.95395	4.18446	2.11755	9.08174	10.10777	59.20	18.42
71/10/12	2441236.5	4.39195	7.41055	2.87422	-8.96598	4.16425	2.10972	9.08111	10.10845	59.35	18.45
71/10/16	2441240.5	4.37122	7.42014	2.87909	-8.97796	4.14400	2.10187	9.08049	10.10912	59.50	18.49
71/10/20	2441244.5	4.35047	7.42969	2.88393	-8.98988	4.12373	2.09400	9.07987	10.10980	59.65	18.52
71/10/24	2441248.5	4.32969	7.43920	2.88876	-9.00176	4.10343	2.08612	9.07925	10.11047	59.80	18.55
71/10/28	2441252.5	4.30888	7.44865	2.89357	-9.01357	4.08310	2.07823	9.07863	10.11114	59.95	18.59
71/11/ 1	2441256.5	4.28804	7.45806	2.89836	-9.02534	4.06273	2.07032	9.07802	10.11181	60.10	18.62
71/11/ 5	2441260.5	4.26718	7.46742	2.90314	-9.03705	4.04234	2.06239	9.07741	10.11248	60.25	18.65
71/11/ 9	2441264.5	4.24629	7.47674	2.90789	-9.04871	4.02192	2.05445	9.07681	10.11315	60.41	18.69
71/11/13	2441268.5	4.22537	7.48601	2.91263	-9.06031	4.00147	2.04650	9.07620	10.11381	60.56	18.72
71/11/17	2441272.5	4.20443	7.49523	2.91735	-9.07186	3.98098	2.03853	9.07560	10.11447	60.71	18.75
71/11/21	2441276.5	4.18346	7.50440	2.92205	-9.08336	3.96047	2.03055	9.07500	10.11513	60.86	18.78
71/11/25	2441280.5	4.16246	7.51352	2.92673	-9.09480	3.93993	2.02255	9.07441	10.11579	61.01	18.82
71/11/29	2441284.5	4.14143	7.52260	2.93139	-9.10619	3.91936	2.01454	9.07381	10.11645	61.17	18.85
71/12/ 3	2441288.5	4.12038	7.53163	2.93604	-9.11753	3.89876	2.00651	9.07322	10.11710	61.32	18.88

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71/12/ 7	2441292.5	4.09931	7.54062	2.94066	-9.12881	3.87812	1.99847	9.07264	10.11775	61.47	18.91
71/12/11	2441296.5	4.07821	7.54955	2.94527	-9.14003	3.85746	1.99041	9.07205	10.11840	61.62	18.94
71/12/15	2441300.5	4.05708	7.55844	2.94986	-9.15120	3.83677	1.98234	9.07147	10.11904	61.77	18.98
71/12/19	2441304.5	4.03592	7.56728	2.95443	-9.16231	3.81605	1.97425	9.07089	10.11967	61.93	19.01
71/12/23	2441308.5	4.01475	7.57607	2.95898	-9.17336	3.79530	1.96615	9.07031	10.12031	62.08	19.04
71/12/27	2441312.5	3.99354	7.58481	2.96351	-9.18436	3.77452	1.95804	9.06974	10.12094	62.23	19.07
71/12/31	2441316.5	3.97231	7.59351	2.96803	-9.19530	3.75371	1.94991	9.06917	10.12157	62.39	19.10
72/ 1/ 4	2441320.5	3.95105	7.60216	2.97252	-9.20619	3.73288	1.94177	9.06860	10.12219	62.54	19.13
72/ 1/ 8	2441324.5	3.92977	7.61076	2.97700	-9.21702	3.71202	1.93361	9.06804	10.12281	62.69	19.17
72/ 1/12	2441328.5	3.90847	7.61931	2.98146	-9.22779	3.69113	1.92544	9.06747	10.12343	62.84	19.20
72/ 1/16	2441332.5	3.88714	7.62781	2.98590	-9.23850	3.67021	1.91726	9.06691	10.12404	63.00	19.23
72/ 1/20	2441336.5	3.86578	7.63627	2.99032	-9.24916	3.64926	1.90906	9.06636	10.12466	63.15	19.26
72/ 1/24	2441340.5	3.84440	7.64467	2.99472	-9.25977	3.62829	1.90085	9.06580	10.12526	63.30	19.29
72/ 1/28	2441344.5	3.82300	7.65303	2.99910	-9.27031	3.60729	1.89262	9.06525	10.12587	63.46	19.32
72/ 2/ 1	2441348.5	3.80157	7.66134	3.00346	-9.28080	3.58626	1.88438	9.06470	10.12647	63.61	19.35
72/ 2/ 5	2441352.5	3.78012	7.66960	3.00780	-9.29123	3.56521	1.87613	9.06416	10.12707	63.76	19.38
72/ 2/ 9	2441356.5	3.75864	7.67781	3.01213	-9.30160	3.54413	1.86786	9.06362	10.12766	63.92	19.41
72/ 2/13	2441360.5	3.73714	7.68597	3.01643	-9.31191	3.52302	1.85958	9.06308	10.12825	64.07	19.44
72/ 2/17	2441364.5	3.71562	7.69409	3.02072	-9.32217	3.50189	1.85129	9.06254	10.12884	64.22	19.47
72/ 2/21	2441368.5	3.69407	7.70215	3.02499	-9.33237	3.48073	1.84298	9.06200	10.12942	64.38	19.50
72/ 2/25	2441372.5	3.67250	7.71017	3.02924	-9.34251	3.45954	1.83466	9.06147	10.13000	64.53	19.53
72/ 2/29	2441376.5	3.65091	7.71814	3.03347	-9.35259	3.43833	1.82632	9.06094	10.13057	64.68	19.56
72/ 3/ 4	2441380.5	3.62929	7.72606	3.03767	-9.36262	3.41709	1.81798	9.06042	10.13114	64.84	19.59
72/ 3/ 8	2441384.5	3.60765	7.73393	3.04186	-9.37258	3.39582	1.80961	9.05989	10.13171	64.99	19.62
72/ 3/12	2441388.5	3.58598	7.74175	3.04604	-9.38248	3.37453	1.80124	9.05937	10.13227	65.15	19.65
72/ 3/16	2441392.5	3.56430	7.74952	3.05019	-9.39233	3.35322	1.79285	9.05886	10.13283	65.30	19.68
72/ 3/20	2441396.5	3.54259	7.75724	3.05432	-9.40211	3.33188	1.78445	9.05834	10.13338	65.45	19.71
72/ 3/24	2441400.5	3.52086	7.76491	3.05843	-9.41184	3.31052	1.77604	9.05783	10.13393	65.61	19.73
72/ 3/28	2441404.5	3.49910	7.77254	3.06253	-9.42150	3.28914	1.76762	9.05732	10.13448	65.76	19.76
72/ 4/ 1	2441408.5	3.47733	7.78011	3.06660	-9.43111	3.26773	1.75919	9.05682	10.13502	65.92	19.79
72/ 4/ 5	2441412.5	3.45553	7.78763	3.07065	-9.44066	3.24630	1.75074	9.05631	10.13556	66.07	19.82
72/ 4/ 9	2441416.5	3.43371	7.79511	3.07469	-9.45015	3.22485	1.74228	9.05581	10.13610	66.23	19.85
72/ 4/13	2441420.5	3.41186	7.80253	3.07870	-9.45958	3.20338	1.73381	9.05532	10.13663	66.38	19.88
72/ 4/17	2441424.5	3.39000	7.80991	3.08270	-9.46895	3.18188	1.72533	9.05482	10.13717	66.54	19.90
72/ 4/21	2441428.5	3.36811	7.81724	3.08667	-9.47827	3.16036	1.71683	9.05433	10.13770	66.69	19.93
72/ 4/25	2441432.5	3.34621	7.82451	3.09063	-9.48753	3.13882	1.70833	9.05384	10.13823	66.85	19.96
72/ 4/29	2441436.5	3.32428	7.83174	3.09457	-9.49673	3.11725	1.69981	9.05336	10.13876	67.00	19.99
72/ 5/ 3	2441440.5	3.30233	7.83891	3.09848	-9.50587	3.09567	1.69128	9.05288	10.13929	67.16	20.01
72/ 5/ 7	2441444.5	3.28036	7.84604	3.10238	-9.51495	3.07406	1.68274	9.05240	10.13981	67.31	20.04
72/ 5/11	2441448.5	3.25837	7.85312	3.10626	-9.52398	3.05243	1.67419	9.05192	10.14033	67.47	20.07
72/ 5/15	2441452.5	3.23635	7.86014	3.11012	-9.53294	3.03078	1.66563	9.05145	10.14085	67.62	20.10
72/ 5/19	2441456.5	3.21432	7.86712	3.11396	-9.54185	3.00911	1.65705	9.05098	10.14137	67.78	20.12
72/ 5/23	2441460.5	3.19227	7.87405	3.11777	-9.55070	2.98741	1.64846	9.05051	10.14189	67.93	20.15
72/ 5/27	2441464.5	3.17019	7.88092	3.12157	-9.55950	2.96569	1.63987	9.05004	10.14241	68.09	20.18
72/ 5/31	2441468.5	3.14810	7.88775	3.12535	-9.56823	2.94395	1.63126	9.04958	10.14293	68.24	20.20

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72/ 6/ 4	2441472.5	3.12598	7.89453	3.12911	-9.57691	2.92219	1.62263	9.04912	10.14344	68.40	20.23
72/ 6/ 8	2441476.5	3.10385	7.90125	3.13285	-9.58553	2.90040	1.61400	9.04867	10.14395	68.55	20.26
72/ 6/12	2441480.5	3.08170	7.90793	3.13657	-9.59409	2.87860	1.60535	9.04822	10.14446	68.71	20.28
72/ 6/16	2441484.5	3.05952	7.91455	3.14026	-9.60259	2.85677	1.59670	9.04777	10.14496	68.87	20.31
72/ 6/20	2441488.5	3.03733	7.92113	3.14394	-9.61103	2.83492	1.58803	9.04732	10.14546	69.02	20.33
72/ 6/24	2441492.5	3.01512	7.92765	3.14760	-9.61941	2.81305	1.57935	9.04688	10.14596	69.18	20.36
72/ 6/28	2441496.5	2.99288	7.93412	3.15124	-9.62773	2.79117	1.57066	9.04643	10.14647	69.33	20.39
72/ 7/ 2	2441500.5	2.97063	7.94055	3.15486	-9.63599	2.76926	1.56196	9.04600	10.14696	69.49	20.41
72/ 7/ 6	2441504.5	2.94836	7.94692	3.15846	-9.64420	2.74732	1.55325	9.04556	10.14746	69.64	20.44
72/ 7/10	2441508.5	2.92607	7.95324	3.16204	-9.65235	2.72537	1.54452	9.04513	10.14796	69.80	20.46
72/ 7/14	2441512.5	2.90377	7.95951	3.16559	-9.66044	2.70340	1.53579	9.04470	10.14845	69.96	20.49
72/ 7/18	2441516.5	2.88144	7.96573	3.16913	-9.66847	2.68141	1.52704	9.04428	10.14894	70.11	20.51
72/ 7/22	2441520.5	2.85909	7.97190	3.17265	-9.67644	2.65939	1.51829	9.04385	10.14944	70.27	20.54
72/ 7/26	2441524.5	2.83673	7.97802	3.17615	-9.68435	2.63735	1.50952	9.04343	10.14992	70.43	20.56
72/ 7/30	2441528.5	2.81435	7.98408	3.17962	-9.69221	2.61530	1.50074	9.04302	10.15041	70.58	20.59
72/ 8/ 3	2441532.5	2.79195	7.99010	3.18308	-9.70000	2.59322	1.49195	9.04260	10.15089	70.74	20.61
72/ 8/ 7	2441536.5	2.76953	7.99607	3.18652	-9.70773	2.57112	1.48315	9.04219	10.15138	70.90	20.63
72/ 8/11	2441540.5	2.74710	8.00198	3.18993	-9.71541	2.54900	1.47433	9.04179	10.15186	71.05	20.66
72/ 8/15	2441544.5	2.72464	8.00784	3.19333	-9.72302	2.52686	1.46551	9.04138	10.15233	71.21	20.68
72/ 8/19	2441548.5	2.70217	8.01366	3.19670	-9.73057	2.50470	1.45667	9.04098	10.15281	71.37	20.71
72/ 8/23	2441552.5	2.67968	8.01942	3.20006	-9.73807	2.48251	1.44783	9.04058	10.15328	71.52	20.73
72/ 8/27	2441556.5	2.65718	8.02513	3.20339	-9.74550	2.46031	1.43897	9.04019	10.15374	71.68	20.75
72/ 8/31	2441560.5	2.63466	8.03078	3.20671	-9.75287	2.43809	1.43010	9.03979	10.15421	71.84	20.78
72/ 9/ 4	2441564.5	2.61212	8.03639	3.21000	-9.76018	2.41584	1.42121	9.03940	10.15466	71.99	20.80
72/ 9/ 8	2441568.5	2.58956	8.04195	3.21327	-9.76742	2.39358	1.41232	9.03902	10.15512	72.15	20.82
72/ 9/12	2441572.5	2.56699	8.04745	3.21653	-9.77460	2.37129	1.40342	9.03863	10.15556	72.31	20.85
72/ 9/16	2441576.5	2.54440	8.05290	3.21976	-9.78172	2.34899	1.39450	9.03825	10.15601	72.47	20.87
72/ 9/20	2441580.5	2.52179	8.05830	3.22297	-9.78878	2.32667	1.38558	9.03788	10.15645	72.62	20.89
72/ 9/24	2441584.5	2.49917	8.06365	3.22616	-9.79578	2.30433	1.37665	9.03750	10.15689	72.78	20.91
72/ 9/28	2441588.5	2.47653	8.06895	3.22933	-9.80271	2.28198	1.36770	9.03713	10.15732	72.94	20.94
72/10/ 2	2441592.5	2.45388	8.07420	3.23248	-9.80958	2.25960	1.35875	9.03676	10.15775	73.10	20.96
72/10/ 6	2441596.5	2.43121	8.07939	3.23561	-9.81639	2.23721	1.34979	9.03640	10.15817	73.25	20.98
72/10/10	2441600.5	2.40852	8.08453	3.23872	-9.82313	2.21480	1.34081	9.03604	10.15859	73.41	21.00
72/10/14	2441604.5	2.38582	8.08962	3.24180	-9.82981	2.19238	1.33183	9.03568	10.15901	73.57	21.03
72/10/18	2441608.5	2.36311	8.09466	3.24487	-9.83643	2.16993	1.32283	9.03532	10.15942	73.73	21.05
72/10/22	2441612.5	2.34038	8.09965	3.24792	-9.84299	2.14747	1.31383	9.03497	10.15983	73.88	21.07
72/10/26	2441616.5	2.31763	8.10458	3.25094	-9.84948	2.12500	1.30482	9.03462	10.16024	74.04	21.09
72/10/30	2441620.5	2.29487	8.10947	3.25394	-9.85591	2.10251	1.29580	9.03427	10.16064	74.20	21.11
72/11/ 3	2441624.5	2.27209	8.11430	3.25693	-9.86228	2.08000	1.28676	9.03393	10.16104	74.36	21.13
72/11/ 7	2441628.5	2.24930	8.11908	3.25989	-9.86858	2.05747	1.27772	9.03358	10.16143	74.52	21.15
72/11/11	2441632.5	2.22650	8.12380	3.26283	-9.87482	2.03493	1.26867	9.03325	10.16182	74.67	21.17
72/11/15	2441636.5	2.20368	8.12848	3.26575	-9.88100	2.01238	1.25961	9.03291	10.16221	74.83	21.19
72/11/19	2441640.5	2.18084	8.13310	3.26865	-9.88712	1.98980	1.25055	9.03258	10.16259	74.99	21.22
72/11/23	2441644.5	2.15799	8.13767	3.27153	-9.89317	1.96722	1.24147	9.03225	10.16297	75.15	21.24
72/11/27	2441648.5	2.13513	8.14219	3.27439	-9.89916	1.94461	1.23238	9.03193	10.16335	75.31	21.26

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72/12/ 1	2441652.5	2.11226	8.14666	3.27722	-9.90508	1.92200	1.22328	9.03160	10.16372	75.46	21.28
72/12/ 5	2441656.5	2.08937	8.15107	3.28004	-9.91094	1.89937	1.21418	9.03128	10.16408	75.62	21.30
72/12/ 9	2441660.5	2.06646	8.15543	3.28283	-9.91673	1.87672	1.20507	9.03097	10.16444	75.78	21.32
72/12/13	2441664.5	2.04355	8.15974	3.28561	-9.92247	1.85406	1.19595	9.03065	10.16480	75.94	21.34
72/12/17	2441668.5	2.02062	8.16400	3.28836	-9.92813	1.83139	1.18682	9.03034	10.16515	76.10	21.36
72/12/21	2441672.5	1.99768	8.16820	3.29109	-9.93374	1.80871	1.17768	9.03004	10.16551	76.26	21.37
72/12/25	2441676.5	1.97472	8.17236	3.29380	-9.93928	1.78602	1.16854	9.02973	10.16586	76.42	21.39
72/12/29	2441680.5	1.95175	8.17646	3.29649	-9.94476	1.76331	1.15938	9.02943	10.16620	76.57	21.41
73/ 1/ 2	2441684.5	1.92877	8.18050	3.29916	-9.95018	1.74059	1.15022	9.02913	10.16655	76.73	21.43
73/ 1/ 6	2441688.5	1.90578	8.18450	3.30180	-9.95553	1.71785	1.14106	9.02884	10.16689	76.89	21.45
73/ 1/10	2441692.5	1.88278	8.18844	3.30443	-9.96083	1.69511	1.13188	9.02855	10.16723	77.05	21.47
73/ 1/14	2441696.5	1.85976	8.19233	3.30703	-9.96606	1.67235	1.12270	9.02826	10.16757	77.21	21.49
73/ 1/18	2441700.5	1.83673	8.19617	3.30962	-9.97122	1.64958	1.11351	9.02797	10.16791	77.37	21.51
73/ 1/22	2441704.5	1.81369	8.19995	3.31218	-9.97633	1.62680	1.10431	9.02769	10.16824	77.53	21.52
73/ 1/26	2441708.5	1.79063	8.20368	3.31472	-9.98137	1.60400	1.09510	9.02741	10.16857	77.69	21.54
73/ 1/30	2441712.5	1.76757	8.20736	3.31724	-9.98635	1.58119	1.08589	9.02714	10.16890	77.85	21.56
73/ 2/ 3	2441716.5	1.74449	8.21099	3.31974	-9.99127	1.55837	1.07666	9.02686	10.16923	78.01	21.58
73/ 2/ 7	2441720.5	1.72141	8.21456	3.32221	-9.99613	1.53554	1.06743	9.02659	10.16955	78.16	21.60
73/ 2/11	2441724.5	1.69831	8.21808	3.32467	-10.00092	1.51269	1.05820	9.02633	10.16988	78.32	21.61
73/ 2/15	2441728.5	1.67520	8.22155	3.32710	-10.00565	1.48984	1.04895	9.02606	10.17020	78.48	21.63
73/ 2/19	2441732.5	1.65208	8.22497	3.32951	-10.01032	1.46697	1.03970	9.02580	10.17052	78.64	21.65
73/ 2/23	2441736.5	1.62895	8.22833	3.33191	-10.01492	1.44408	1.03043	9.02555	10.17083	78.80	21.66
73/ 2/27	2441740.5	1.60581	8.23164	3.33427	-10.01946	1.42119	1.02116	9.02529	10.17114	78.96	21.68
73/ 3/ 3	2441744.5	1.58265	8.23490	3.33662	-10.02394	1.39828	1.01189	9.02504	10.17145	79.12	21.70
73/ 3/ 7	2441748.5	1.55949	8.23810	3.33895	-10.02835	1.37536	1.00260	9.02479	10.17175	79.28	21.71
73/ 3/11	2441752.5	1.53632	8.24125	3.34126	-10.03270	1.35244	0.99331	9.02455	10.17206	79.44	21.73
73/ 3/15	2441756.5	1.51314	8.24435	3.34354	-10.03698	1.32950	0.98401	9.02431	10.17235	79.60	21.75
73/ 3/19	2441760.5	1.48995	8.24739	3.34580	-10.04120	1.30655	0.97471	9.02407	10.17265	79.76	21.76
73/ 3/23	2441764.5	1.46674	8.25039	3.34804	-10.04536	1.28359	0.96539	9.02384	10.17294	79.92	21.78
73/ 3/27	2441768.5	1.44353	8.25333	3.35026	-10.04945	1.26062	0.95607	9.02360	10.17323	80.08	21.79
73/ 3/31	2441772.5	1.42031	8.25621	3.35246	-10.05348	1.23764	0.94675	9.02337	10.17352	80.24	21.81
73/ 4/ 4	2441776.5	1.39708	8.25904	3.35464	-10.05744	1.21465	0.93741	9.02315	10.17380	80.40	21.83
73/ 4/ 8	2441780.5	1.37384	8.26182	3.35679	-10.06135	1.19165	0.92807	9.02293	10.17409	80.56	21.84
73/ 4/12	2441784.5	1.35060	8.26455	3.35892	-10.06518	1.16864	0.91872	9.02271	10.17436	80.72	21.86
73/ 4/16	2441788.5	1.32734	8.26722	3.36104	-10.06896	1.14562	0.90937	9.02249	10.17464	80.88	21.87
73/ 4/20	2441792.5	1.30407	8.26984	3.36313	-10.07267	1.12259	0.90001	9.02228	10.17491	81.04	21.89
73/ 4/24	2441796.5	1.28080	8.27241	3.36519	-10.07631	1.09955	0.89064	9.02207	10.17518	81.20	21.90
73/ 4/28	2441800.5	1.25752	8.27492	3.36724	-10.07989	1.07650	0.88126	9.02186	10.17545	81.36	21.92
73/ 5/ 2	2441804.5	1.23423	8.27738	3.36927	-10.08341	1.05344	0.87188	9.02166	10.17571	81.52	21.93
73/ 5/ 6	2441808.5	1.21093	8.27979	3.37127	-10.08686	1.03038	0.86249	9.02146	10.17597	81.68	21.94
73/ 5/10	2441812.5	1.18762	8.28214	3.37325	-10.09025	1.00730	0.85310	9.02126	10.17622	81.84	21.96
73/ 5/14	2441816.5	1.16431	8.28444	3.37521	-10.09357	0.98421	0.84370	9.02107	10.17647	82.00	21.97
73/ 5/18	2441820.5	1.14099	8.28669	3.37715	-10.09682	0.96112	0.83429	9.02088	10.17672	82.16	21.99
73/ 5/22	2441824.5	1.11766	8.28888	3.37907	-10.10002	0.93802	0.82487	9.02069	10.17696	82.32	22.00
73/ 5/26	2441828.5	1.09432	8.29103	3.38096	-10.10314	0.91490	0.81545	9.02051	10.17720	82.48	22.01

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73/ 5/30	2441832.5	1.07098	8.29311	3.38283	-10.10620	0.89179	0.80602	9.02032	10.17743	82.64	22.03
73/ 6/ 3	2441836.5	1.04763	8.29515	3.38468	-10.10919	0.86866	0.79659	9.02015	10.17766	82.80	22.04
73/ 6/ 7	2441840.5	1.02427	8.29713	3.38651	-10.11211	0.84553	0.78715	9.01997	10.17788	82.96	22.05
73/ 6/11	2441844.5	1.00091	8.29905	3.38832	-10.11497	0.82239	0.77771	9.01980	10.17810	83.12	22.06
73/ 6/15	2441848.5	0.97753	8.30093	3.39011	-10.11777	0.79925	0.76826	9.01963	10.17832	83.28	22.08
73/ 6/19	2441852.5	0.95416	8.30274	3.39187	-10.12049	0.77611	0.75881	9.01947	10.17853	83.44	22.09
73/ 6/23	2441856.5	0.93077	8.30451	3.39361	-10.12316	0.75295	0.74935	9.01930	10.17874	83.60	22.10
73/ 6/27	2441860.5	0.90739	8.30622	3.39533	-10.12576	0.72979	0.73989	9.01915	10.17895	83.77	22.11
73/ 7/ 1	2441864.5	0.88399	8.30788	3.39703	-10.12829	0.70663	0.73042	9.01899	10.17915	83.93	22.13
73/ 7/ 5	2441868.5	0.86059	8.30949	3.39871	-10.13076	0.68346	0.72094	9.01884	10.17936	84.09	22.14
73/ 7/ 9	2441872.5	0.83718	8.31104	3.40036	-10.13317	0.66029	0.71147	9.01869	10.17955	84.25	22.15
73/ 7/13	2441876.5	0.81377	8.31254	3.40200	-10.13551	0.63711	0.70198	9.01854	10.17975	84.41	22.16
73/ 7/17	2441880.5	0.79035	8.31398	3.40361	-10.13779	0.61393	0.69250	9.01840	10.17994	84.57	22.17
73/ 7/21	2441884.5	0.76693	8.31538	3.40520	-10.14000	0.59074	0.68300	9.01826	10.18013	84.73	22.18
73/ 7/25	2441888.5	0.74350	8.31671	3.40676	-10.14215	0.56755	0.67351	9.01812	10.18032	84.89	22.20
73/ 7/29	2441892.5	0.72007	8.31800	3.40831	-10.14423	0.54435	0.66401	9.01799	10.18051	85.05	22.21
73/ 8/ 2	2441896.5	0.69663	8.31923	3.40983	-10.14625	0.52115	0.65450	9.01786	10.18069	85.21	22.22
73/ 8/ 6	2441900.5	0.67319	8.32041	3.41133	-10.14821	0.49795	0.64499	9.01773	10.18087	85.37	22.23
73/ 8/10	2441904.5	0.64974	8.32153	3.41281	-10.15010	0.47474	0.63548	9.01761	10.18105	85.54	22.24
73/ 8/14	2441908.5	0.62629	8.32260	3.41427	-10.15193	0.45152	0.62596	9.01749	10.18123	85.70	22.25
73/ 8/18	2441912.5	0.60284	8.32362	3.41570	-10.15369	0.42831	0.61643	9.01737	10.18140	85.86	22.26
73/ 8/22	2441916.5	0.57938	8.32458	3.41712	-10.15539	0.40508	0.60690	9.01726	10.18157	86.02	22.27
73/ 8/26	2441920.5	0.55592	8.32549	3.41851	-10.15702	0.38186	0.59737	9.01715	10.18174	86.18	22.28
73/ 8/30	2441924.5	0.53245	8.32634	3.41988	-10.15859	0.35863	0.58783	9.01704	10.18190	86.34	22.29
73/ 9/ 3	2441928.5	0.50898	8.32714	3.42122	-10.16009	0.33540	0.57829	9.01694	10.18206	86.50	22.30
73/ 9/ 7	2441932.5	0.48551	8.32789	3.42255	-10.16153	0.31216	0.56874	9.01684	10.18222	86.66	22.31
73/ 9/11	2441936.5	0.46203	8.32859	3.42385	-10.16291	0.28892	0.55919	9.01674	10.18238	86.82	22.32
73/ 9/15	2441940.5	0.43855	8.32923	3.42513	-10.16422	0.26569	0.54964	9.01664	10.18253	86.99	22.33
73/ 9/19	2441944.5	0.41507	8.32981	3.42639	-10.16546	0.24244	0.54008	9.01655	10.18269	87.15	22.33
73/ 9/23	2441948.5	0.39158	8.33035	3.42763	-10.16665	0.21920	0.53052	9.01647	10.18284	87.31	22.34
73/ 9/27	2441952.5	0.36810	8.33083	3.42884	-10.16777	0.19595	0.52096	9.01638	10.18299	87.47	22.35
73/10/ 1	2441956.5	0.34461	8.33125	3.43003	-10.16882	0.17270	0.51139	9.01630	10.18314	87.63	22.36
73/10/ 5	2441960.5	0.32111	8.33162	3.43120	-10.16981	0.14944	0.50182	9.01622	10.18328	87.79	22.37
73/10/ 9	2441964.5	0.29762	8.33194	3.43235	-10.17074	0.12619	0.49224	9.01615	10.18342	87.95	22.38
73/10/13	2441968.5	0.27412	8.33221	3.43348	-10.17160	0.10293	0.48266	9.01607	10.18357	88.12	22.38
73/10/17	2441972.5	0.25062	8.33242	3.43458	-10.17240	0.07966	0.47308	9.01601	10.18370	88.28	22.39
73/10/21	2441976.5	0.22712	8.33258	3.43566	-10.17313	0.05640	0.46349	9.01594	10.18384	88.44	22.40
73/10/25	2441980.5	0.20362	8.33268	3.43672	-10.17380	0.03313	0.45390	9.01588	10.18397	88.60	22.41
73/10/29	2441984.5	0.18011	8.33273	3.43776	-10.17440	0.00986	0.44430	9.01582	10.18410	88.76	22.41
73/11/ 2	2441988.5	0.15661	8.33273	3.43878	-10.17494	-0.01341	0.43470	9.01576	10.18423	88.92	22.42
73/11/ 6	2441992.5	0.13310	8.33267	3.43977	-10.17542	-0.03669	0.42510	9.01571	10.18436	89.08	22.43
73/11/10	2441996.5	0.10959	8.33256	3.44074	-10.17582	-0.05996	0.41549	9.01566	10.18448	89.25	22.44
73/11/14	2442000.5	0.08609	8.33239	3.44169	-10.17616	-0.08324	0.40588	9.01562	10.18460	89.41	22.44
73/11/18	2442004.5	0.06258	8.33217	3.44262	-10.17644	-0.10653	0.39626	9.01557	10.18471	89.57	22.45
73/11/22	2442008.5	0.03907	8.33190	3.44352	-10.17664	-0.12981	0.38664	9.01554	10.18481	89.73	22.45

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73/11/26	2442012.5	0.01556	8.33157	3.44440	-10.17678	-0.15309	0.37702	9.01550	10.18491	89.89	22.46
73/11/30	2442016.5	-0.00795	8.33119	3.44526	-10.17685	-0.17638	0.36739	9.01547	10.18501	90.05	22.47
73/12/ 4	2442020.5	-0.03146	8.33076	3.44610	-10.17686	-0.19966	0.35776	9.01544	10.18510	90.22	22.47
73/12/ 8	2442024.5	-0.05497	8.33027	3.44692	-10.17680	-0.22294	0.34813	9.01541	10.18519	90.38	22.48
73/12/12	2442028.5	-0.07848	8.32973	3.44771	-10.17667	-0.24622	0.33850	9.01539	10.18528	90.54	22.48
73/12/16	2442032.5	-0.10199	8.32913	3.44848	-10.17648	-0.26950	0.32887	9.01537	10.18536	90.70	22.49
73/12/20	2442036.5	-0.12550	8.32848	3.44923	-10.17622	-0.29278	0.31923	9.01535	10.18543	90.86	22.49
73/12/24	2442040.5	-0.14901	8.32778	3.44995	-10.17589	-0.31606	0.30959	9.01534	10.18551	91.03	22.50
73/12/28	2442044.5	-0.17252	8.32702	3.45066	-10.17550	-0.33934	0.29994	9.01532	10.18557	91.19	22.50
74/ 1/ 1	2442048.5	-0.19603	8.32621	3.45134	-10.17504	-0.36262	0.29030	9.01532	10.18564	91.35	22.51
74/ 1/ 5	2442052.5	-0.21953	8.32535	3.45200	-10.17451	-0.38589	0.28065	9.01531	10.18569	91.51	22.51
74/ 1/ 9	2442056.5	-0.24304	8.32443	3.45264	-10.17392	-0.40916	0.27100	9.01531	10.18575	91.67	22.52
74/ 1/13	2442060.5	-0.26654	8.32345	3.45325	-10.17326	-0.43243	0.26135	9.01531	10.18580	91.83	22.52
74/ 1/17	2442064.5	-0.29004	8.32243	3.45384	-10.17253	-0.45569	0.25170	9.01532	10.18584	92.00	22.53
74/ 1/21	2442068.5	-0.31354	8.32135	3.45441	-10.17174	-0.47896	0.24205	9.01533	10.18588	92.16	22.53
74/ 1/25	2442072.5	-0.33704	8.32022	3.45496	-10.17088	-0.50222	0.23239	9.01534	10.18592	92.32	22.53
74/ 1/29	2442076.5	-0.36053	8.31903	3.45549	-10.16995	-0.52547	0.22273	9.01535	10.18595	92.48	22.54
74/ 2/ 2	2442080.5	-0.38402	8.31779	3.45599	-10.16896	-0.54873	0.21308	9.01537	10.18598	92.64	22.54
74/ 2/ 6	2442084.5	-0.40752	8.31649	3.45647	-10.16790	-0.57198	0.20342	9.01539	10.18601	92.81	22.54
74/ 2/10	2442088.5	-0.43100	8.31515	3.45693	-10.16677	-0.59522	0.19375	9.01542	10.18603	92.97	22.55
74/ 2/14	2442092.5	-0.45449	8.31374	3.45737	-10.16558	-0.61846	0.18409	9.01545	10.18604	93.13	22.55
74/ 2/18	2442096.5	-0.47797	8.31229	3.45778	-10.16432	-0.64170	0.17443	9.01548	10.18605	93.29	22.55
74/ 2/22	2442100.5	-0.50145	8.31078	3.45817	-10.16299	-0.66493	0.16476	9.01551	10.18605	93.45	22.56
74/ 2/26	2442104.5	-0.52493	8.30922	3.45854	-10.16160	-0.68815	0.15510	9.01555	10.18605	93.61	22.56
74/ 3/ 2	2442108.5	-0.54840	8.30760	3.45889	-10.16014	-0.71137	0.14544	9.01559	10.18605	93.78	22.56
74/ 3/ 6	2442112.5	-0.57187	8.30593	3.45922	-10.15861	-0.73458	0.13577	9.01563	10.18604	93.94	22.56
74/ 3/10	2442116.5	-0.59534	8.30421	3.45952	-10.15702	-0.75778	0.12611	9.01568	10.18603	94.10	22.56
74/ 3/14	2442120.5	-0.61880	8.30243	3.45980	-10.15536	-0.78098	0.11644	9.01573	10.18602	94.26	22.57
74/ 3/18	2442124.5	-0.64226	8.30060	3.46006	-10.15364	-0.80417	0.10678	9.01579	10.18600	94.42	22.57
74/ 3/22	2442128.5	-0.66571	8.29871	3.46029	-10.15186	-0.82735	0.09712	9.01584	10.18598	94.59	22.57
74/ 3/26	2442132.5	-0.68917	8.29677	3.46050	-10.15001	-0.85053	0.08745	9.01590	10.18596	94.75	22.57
74/ 3/30	2442136.5	-0.71261	8.29478	3.46070	-10.14810	-0.87370	0.07779	9.01597	10.18594	94.91	22.57
74/ 4/ 3	2442140.5	-0.73605	8.29274	3.46086	-10.14612	-0.89686	0.06812	9.01603	10.18591	95.07	22.57
74/ 4/ 7	2442144.5	-0.75949	8.29064	3.46101	-10.14408	-0.92002	0.05846	9.01610	10.18588	95.23	22.57
74/ 4/11	2442148.5	-0.78292	8.28849	3.46113	-10.14198	-0.94317	0.04880	9.01618	10.18585	95.40	22.57
74/ 4/15	2442152.5	-0.80635	8.28628	3.46124	-10.13981	-0.96631	0.03913	9.01625	10.18582	95.56	22.57
74/ 4/19	2442156.5	-0.82977	8.28402	3.46131	-10.13757	-0.98945	0.02947	9.01633	10.18579	95.72	22.58
74/ 4/23	2442160.5	-0.85319	8.28171	3.46137	-10.13528	-1.01258	0.01981	9.01641	10.18575	95.88	22.58
74/ 4/27	2442164.5	-0.87660	8.27934	3.46141	-10.13292	-1.03570	0.01015	9.01650	10.18572	96.04	22.58
74/ 5/ 1	2442168.5	-0.90001	8.27692	3.46142	-10.13050	-1.05882	0.00048	9.01659	10.18568	96.21	22.58
74/ 5/ 5	2442172.5	-0.92341	8.27445	3.46141	-10.12801	-1.08193	-0.00918	9.01668	10.18564	96.37	22.57
74/ 5/ 9	2442176.5	-0.94680	8.27193	3.46138	-10.12546	-1.10503	-0.01885	9.01678	10.18560	96.53	22.57
74/ 5/13	2442180.5	-0.97019	8.26935	3.46132	-10.12284	-1.12813	-0.02851	9.01688	10.18555	96.69	22.57
74/ 5/17	2442184.5	-0.99357	8.26671	3.46124	-10.12016	-1.15122	-0.03817	9.01698	10.18550	96.85	22.57
74/ 5/21	2442188.5	-1.01695	8.26403	3.46114	-10.11741	-1.17430	-0.04784	9.01709	10.18545	97.02	22.57

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74/ 5/25	2442192.5	-1.04032	8.26129	3.46102	-10.11460	-1.19737	-0.05750	9.01720	10.18539	97.18	22.57
74/ 5/29	2442196.5	-1.06368	8.25849	3.46088	-10.11173	-1.22043	-0.06716	9.01731	10.18533	97.34	22.57
74/ 6/ 2	2442200.5	-1.08704	8.25565	3.46071	-10.10879	-1.24349	-0.07682	9.01742	10.18527	97.50	22.57
74/ 6/ 6	2442204.5	-1.11039	8.25275	3.46052	-10.10578	-1.26654	-0.08648	9.01754	10.18521	97.66	22.57
74/ 6/10	2442208.5	-1.13373	8.24980	3.46031	-10.10272	-1.28957	-0.09614	9.01766	10.18514	97.82	22.56
74/ 6/14	2442212.5	-1.15707	8.24679	3.46008	-10.09959	-1.31261	-0.10580	9.01779	10.18508	97.99	22.56
74/ 6/18	2442216.5	-1.18039	8.24373	3.45982	-10.09639	-1.33563	-0.11546	9.01792	10.18501	98.15	22.56
74/ 6/22	2442220.5	-1.20371	8.24062	3.45955	-10.09313	-1.35864	-0.12512	9.01805	10.18494	98.31	22.56
74/ 6/26	2442224.5	-1.22703	8.23745	3.45925	-10.08981	-1.38165	-0.13477	9.01818	10.18486	98.47	22.56
74/ 6/30	2442228.5	-1.25033	8.23424	3.45892	-10.08642	-1.40464	-0.14443	9.01832	10.18479	98.63	22.55
74/ 7/ 4	2442232.5	-1.27363	8.23096	3.45858	-10.08297	-1.42763	-0.15408	9.01846	10.18471	98.80	22.55
74/ 7/ 8	2442236.5	-1.29692	8.22764	3.45821	-10.07946	-1.45061	-0.16374	9.01861	10.18462	98.96	22.55
74/ 7/12	2442240.5	-1.32020	8.22426	3.45782	-10.07588	-1.47358	-0.17339	9.01876	10.18454	99.12	22.54
74/ 7/16	2442244.5	-1.34347	8.22083	3.45741	-10.07223	-1.49654	-0.18305	9.01891	10.18445	99.28	22.54
74/ 7/20	2442248.5	-1.36674	8.21735	3.45698	-10.06852	-1.51950	-0.19270	9.01906	10.18436	99.44	22.54
74/ 7/24	2442252.5	-1.38999	8.21381	3.45652	-10.06475	-1.54244	-0.20235	9.01922	10.18427	99.60	22.53
74/ 7/28	2442256.5	-1.41324	8.21022	3.45604	-10.06091	-1.56537	-0.21200	9.01938	10.18417	99.77	22.53
74/ 8/ 1	2442260.5	-1.43648	8.20658	3.45554	-10.05701	-1.58830	-0.22165	9.01954	10.18407	99.93	22.53
74/ 8/ 5	2442264.5	-1.45971	8.20288	3.45502	-10.05304	-1.61121	-0.23130	9.01971	10.18396	100.09	22.52
74/ 8/ 9	2442268.5	-1.48293	8.19913	3.45447	-10.04900	-1.63412	-0.24094	9.01988	10.18385	100.25	22.52
74/ 8/13	2442272.5	-1.50614	8.19533	3.45390	-10.04490	-1.65701	-0.25059	9.02005	10.18374	100.41	22.51
74/ 8/17	2442276.5	-1.52934	8.19148	3.45331	-10.04073	-1.67989	-0.26023	9.02023	10.18361	100.58	22.51
74/ 8/21	2442280.5	-1.55253	8.18757	3.45270	-10.03649	-1.70276	-0.26987	9.02041	10.18349	100.74	22.51
74/ 8/25	2442284.5	-1.57571	8.18361	3.45207	-10.03219	-1.72562	-0.27951	9.02059	10.18336	100.90	22.50
74/ 8/29	2442288.5	-1.59888	8.17960	3.45141	-10.02783	-1.74846	-0.28915	9.02078	10.18322	101.06	22.50
74/ 9/ 2	2442292.5	-1.62204	8.17553	3.45073	-10.02340	-1.77129	-0.29878	9.02097	10.18309	101.22	22.49
74/ 9/ 6	2442296.5	-1.64519	8.17141	3.45003	-10.01890	-1.79411	-0.30841	9.02116	10.18295	101.38	22.48
74/ 9/10	2442300.5	-1.66833	8.16724	3.44931	-10.01434	-1.81691	-0.31804	9.02136	10.18280	101.55	22.48
74/ 9/14	2442304.5	-1.69146	8.16302	3.44856	-10.00972	-1.83971	-0.32767	9.02156	10.18265	101.71	22.47
74/ 9/18	2442308.5	-1.71458	8.15874	3.44779	-10.00503	-1.86248	-0.33729	9.02176	10.18250	101.87	22.47
74/ 9/22	2442312.5	-1.73769	8.15441	3.44700	-10.00028	-1.88525	-0.34691	9.02196	10.18234	102.03	22.46
74/ 9/26	2442316.5	-1.76079	8.15003	3.44619	-9.99546	-1.90800	-0.35653	9.02217	10.18218	102.19	22.46
74/ 9/30	2442320.5	-1.78387	8.14560	3.44536	-9.99058	-1.93074	-0.36614	9.02239	10.18202	102.35	22.45
74/10/ 4	2442324.5	-1.80695	8.14111	3.44450	-9.98563	-1.95346	-0.37575	9.02260	10.18185	102.51	22.44
74/10/ 8	2442328.5	-1.83001	8.13657	3.44362	-9.98063	-1.97617	-0.38536	9.02282	10.18168	102.68	22.44
74/10/12	2442332.5	-1.85306	8.13198	3.44272	-9.97555	-1.99886	-0.39497	9.02304	10.18151	102.84	22.43
74/10/16	2442336.5	-1.87610	8.12734	3.44179	-9.97042	-2.02154	-0.40457	9.02326	10.18133	103.00	22.42
74/10/20	2442340.5	-1.89913	8.12264	3.44085	-9.96522	-2.04421	-0.41417	9.02349	10.18115	103.16	22.42
74/10/24	2442344.5	-1.92214	8.11789	3.43988	-9.95995	-2.06686	-0.42376	9.02372	10.18097	103.32	22.41
74/10/28	2442348.5	-1.94515	8.11309	3.43889	-9.95463	-2.08949	-0.43335	9.02396	10.18079	103.48	22.40
74/11/ 1	2442352.5	-1.96814	8.10824	3.43788	-9.94924	-2.11212	-0.44294	9.02419	10.18060	103.64	22.39
74/11/ 5	2442356.5	-1.99111	8.10333	3.43684	-9.94378	-2.13473	-0.45253	9.02443	10.18040	103.80	22.39
74/11/ 9	2442360.5	-2.01408	8.09837	3.43579	-9.93826	-2.15732	-0.46211	9.02468	10.18021	103.97	22.38
74/11/13	2442364.5	-2.03703	8.09336	3.43471	-9.93268	-2.17989	-0.47169	9.02493	10.18001	104.13	22.37
74/11/17	2442368.5	-2.05997	8.08830	3.43361	-9.92703	-2.20245	-0.48126	9.02518	10.17980	104.29	22.36

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74/11/21	2442372.5	-2.08290	8.08319	3.43249	-9.92132	-2.22499	-0.49083	9.02543	10.17959	104.45	22.35
74/11/25	2442376.5	-2.10581	8.07802	3.43134	-9.91555	-2.24752	-0.50040	9.02568	10.17938	104.61	22.34
74/11/29	2442380.5	-2.12871	8.07280	3.43017	-9.90971	-2.27003	-0.50996	9.02594	10.17917	104.77	22.34
74/12/ 3	2442384.5	-2.15160	8.06753	3.42898	-9.90382	-2.29252	-0.51952	9.02621	10.17895	104.93	22.33
74/12/ 7	2442388.5	-2.17447	8.06221	3.42777	-9.89786	-2.31500	-0.52907	9.02647	10.17874	105.09	22.32
74/12/11	2442392.5	-2.19733	8.05684	3.42654	-9.89183	-2.33746	-0.53862	9.02674	10.17852	105.26	22.31
74/12/15	2442396.5	-2.22017	8.05141	3.42528	-9.88575	-2.35990	-0.54816	9.02701	10.17829	105.42	22.30
74/12/19	2442400.5	-2.24301	8.04593	3.42401	-9.87960	-2.38233	-0.55770	9.02729	10.17807	105.58	22.29
74/12/23	2442404.5	-2.26582	8.04041	3.42271	-9.87340	-2.40474	-0.56724	9.02757	10.17784	105.74	22.28
74/12/27	2442408.5	-2.28862	8.03482	3.42139	-9.86713	-2.42713	-0.57677	9.02785	10.17761	105.90	22.27
74/12/31	2442412.5	-2.31141	8.02919	3.42004	-9.86079	-2.44951	-0.58630	9.02813	10.17738	106.06	22.26
75/ 1/ 4	2442416.5	-2.33418	8.02351	3.41868	-9.85440	-2.47187	-0.59582	9.02842	10.17715	106.22	22.25
75/ 1/ 8	2442420.5	-2.35694	8.01777	3.41729	-9.84794	-2.49421	-0.60534	9.02871	10.17691	106.38	22.24
75/ 1/12	2442424.5	-2.37969	8.01198	3.41588	-9.84142	-2.51654	-0.61485	9.02901	10.17667	106.54	22.23
75/ 1/16	2442428.5	-2.40241	8.00614	3.41445	-9.83484	-2.53885	-0.62436	9.02931	10.17643	106.70	22.22
75/ 1/20	2442432.5	-2.42513	8.00025	3.41300	-9.82820	-2.56114	-0.63387	9.02961	10.17619	106.86	22.21
75/ 1/24	2442436.5	-2.44782	7.99431	3.41152	-9.82149	-2.58342	-0.64337	9.02991	10.17594	107.02	22.20
75/ 1/28	2442440.5	-2.47050	7.98832	3.41002	-9.81472	-2.60568	-0.65287	9.03022	10.17569	107.18	22.19
75/ 2/ 1	2442444.5	-2.49317	7.98227	3.40850	-9.80789	-2.62792	-0.66237	9.03053	10.17543	107.35	22.18
75/ 2/ 5	2442448.5	-2.51582	7.97617	3.40696	-9.80099	-2.65015	-0.67186	9.03084	10.17517	107.51	22.16
75/ 2/ 9	2442452.5	-2.53845	7.97003	3.40540	-9.79403	-2.67235	-0.68134	9.03116	10.17491	107.67	22.15
75/ 2/13	2442456.5	-2.56107	7.96383	3.40381	-9.78701	-2.69454	-0.69082	9.03148	10.17464	107.83	22.14
75/ 2/17	2442460.5	-2.58367	7.95758	3.40221	-9.77992	-2.71670	-0.70029	9.03180	10.17437	107.99	22.13
75/ 2/21	2442464.5	-2.60626	7.95127	3.40058	-9.77277	-2.73885	-0.70976	9.03213	10.17409	108.15	22.12
75/ 2/25	2442468.5	-2.62883	7.94492	3.39893	-9.76556	-2.76098	-0.71922	9.03245	10.17381	108.31	22.10
75/ 3/ 1	2442472.5	-2.65138	7.93852	3.39726	-9.75828	-2.78308	-0.72868	9.03279	10.17353	108.47	22.09
75/ 3/ 5	2442476.5	-2.67391	7.93206	3.39556	-9.75095	-2.80517	-0.73813	9.03312	10.17324	108.63	22.08
75/ 3/ 9	2442480.5	-2.69643	7.92556	3.39385	-9.74355	-2.82724	-0.74758	9.03346	10.17295	108.79	22.07
75/ 3/13	2442484.5	-2.71893	7.91900	3.39211	-9.73609	-2.84929	-0.75702	9.03380	10.17265	108.95	22.05
75/ 3/17	2442488.5	-2.74142	7.91239	3.39035	-9.72856	-2.87132	-0.76646	9.03414	10.17236	109.11	22.04
75/ 3/21	2442492.5	-2.76388	7.90573	3.38857	-9.72097	-2.89332	-0.77588	9.03449	10.17205	109.27	22.03
75/ 3/25	2442496.5	-2.78633	7.89902	3.38676	-9.71333	-2.91531	-0.78531	9.03484	10.17175	109.43	22.02
75/ 3/29	2442500.5	-2.80876	7.89226	3.38494	-9.70561	-2.93727	-0.79473	9.03520	10.17144	109.59	22.00
75/ 4/ 2	2442504.5	-2.83117	7.88545	3.38309	-9.69784	-2.95922	-0.80414	9.03555	10.17112	109.75	21.99
75/ 4/ 6	2442508.5	-2.85357	7.87859	3.38122	-9.69001	-2.98114	-0.81354	9.03591	10.17080	109.91	21.97
75/ 4/10	2442512.5	-2.87594	7.87168	3.37933	-9.68211	-3.00304	-0.82294	9.03628	10.17048	110.07	21.96
75/ 4/14	2442516.5	-2.89830	7.86472	3.37742	-9.67415	-3.02492	-0.83233	9.03664	10.17016	110.23	21.95
75/ 4/18	2442520.5	-2.92064	7.85770	3.37549	-9.66613	-3.04678	-0.84172	9.03701	10.16983	110.39	21.93
75/ 4/22	2442524.5	-2.94296	7.85064	3.37353	-9.65805	-3.06861	-0.85110	9.03738	10.16949	110.55	21.92
75/ 4/26	2442528.5	-2.96527	7.84352	3.37155	-9.64990	-3.09043	-0.86047	9.03776	10.16916	110.71	21.90
75/ 4/30	2442532.5	-2.98755	7.83636	3.36956	-9.64169	-3.11222	-0.86984	9.03814	10.16881	110.87	21.89
75/ 5/ 4	2442536.5	-3.00981	7.82915	3.36754	-9.63342	-3.13399	-0.87920	9.03852	10.16847	111.03	21.87
75/ 5/ 8	2442540.5	-3.03206	7.82188	3.36549	-9.62509	-3.15573	-0.88855	9.03890	10.16811	111.19	21.86
75/ 5/12	2442544.5	-3.05429	7.81456	3.36343	-9.61670	-3.17745	-0.89790	9.03929	10.16776	111.35	21.84
75/ 5/16	2442548.5	-3.07649	7.80720	3.36134	-9.60824	-3.19914	-0.90724	9.03968	10.16739	111.51	21.83

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75/ 5/20	2442552.5	-3.09868	7.79978	3.35924	-9.59973	-3.22081	-0.91657	9.04007	10.16703	111.67	21.81
75/ 5/24	2442556.5	-3.12085	7.79232	3.35711	-9.59115	-3.24245	-0.92589	9.04047	10.16666	111.83	21.80
75/ 5/28	2442560.5	-3.14299	7.78480	3.35496	-9.58252	-3.26407	-0.93520	9.04087	10.16629	111.99	21.78
75/ 6/ 1	2442564.5	-3.16512	7.77724	3.35279	-9.57382	-3.28567	-0.94451	9.04127	10.16592	112.14	21.77
75/ 6/ 5	2442568.5	-3.18723	7.76962	3.35060	-9.56507	-3.30724	-0.95381	9.04168	10.16554	112.30	21.75
75/ 6/ 9	2442572.5	-3.20931	7.76196	3.34838	-9.55626	-3.32879	-0.96310	9.04209	10.16516	112.46	21.73
75/ 6/13	2442576.5	-3.23138	7.75424	3.34615	-9.54739	-3.35031	-0.97239	9.04250	10.16478	112.62	21.72
75/ 6/17	2442580.5	-3.25343	7.74648	3.34389	-9.53846	-3.37180	-0.98166	9.04291	10.16439	112.78	21.70
75/ 6/21	2442584.5	-3.27545	7.73866	3.34161	-9.52947	-3.39328	-0.99093	9.04333	10.16401	112.94	21.69
75/ 6/25	2442588.5	-3.29746	7.73080	3.33931	-9.52042	-3.41472	-1.00019	9.04375	10.16362	113.10	21.67
75/ 6/29	2442592.5	-3.31944	7.72288	3.33699	-9.51132	-3.43614	-1.00944	9.04418	10.16323	113.26	21.65
75/ 7/ 3	2442596.5	-3.34140	7.71492	3.33465	-9.50215	-3.45754	-1.01869	9.04460	10.16284	113.42	21.63
75/ 7/ 7	2442600.5	-3.36334	7.70691	3.33228	-9.49293	-3.47891	-1.02793	9.04503	10.16244	113.58	21.62
75/ 7/11	2442604.5	-3.38526	7.69885	3.32990	-9.48365	-3.50026	-1.03716	9.04547	10.16205	113.74	21.60
75/ 7/15	2442608.5	-3.40716	7.69074	3.32749	-9.47432	-3.52158	-1.04638	9.04590	10.16165	113.89	21.58
75/ 7/19	2442612.5	-3.42904	7.68258	3.32506	-9.46492	-3.54288	-1.05559	9.04634	10.16125	114.05	21.57
75/ 7/23	2442616.5	-3.45089	7.67437	3.32261	-9.45547	-3.56416	-1.06480	9.04679	10.16085	114.21	21.55
75/ 7/27	2442620.5	-3.47272	7.66611	3.32014	-9.44596	-3.58541	-1.07400	9.04723	10.16045	114.37	21.53
75/ 7/31	2442624.5	-3.49454	7.65780	3.31765	-9.43638	-3.60663	-1.08319	9.04768	10.16004	114.53	21.51
75/ 8/ 4	2442628.5	-3.51632	7.64945	3.31514	-9.42675	-3.62783	-1.09238	9.04813	10.15963	114.69	21.49
75/ 8/ 8	2442632.5	-3.53809	7.64104	3.31260	-9.41707	-3.64901	-1.10155	9.04859	10.15922	114.85	21.47
75/ 8/12	2442636.5	-3.55983	7.63259	3.31005	-9.40732	-3.67015	-1.11072	9.04904	10.15881	115.00	21.46
75/ 8/16	2442640.5	-3.58156	7.62408	3.30747	-9.39751	-3.69127	-1.11988	9.04951	10.15839	115.16	21.44
75/ 8/20	2442644.5	-3.60325	7.61553	3.30487	-9.38765	-3.71237	-1.12903	9.04997	10.15797	115.32	21.42
75/ 8/24	2442648.5	-3.62493	7.60693	3.30226	-9.37773	-3.73344	-1.13817	9.05044	10.15755	115.48	21.40
75/ 8/28	2442652.5	-3.64658	7.59828	3.29962	-9.36776	-3.75448	-1.14731	9.05091	10.15713	115.64	21.38
75/ 9/ 1	2442656.5	-3.66821	7.58958	3.29695	-9.35772	-3.77550	-1.15643	9.05138	10.15671	115.80	21.36
75/ 9/ 5	2442660.5	-3.68982	7.58084	3.29427	-9.34763	-3.79649	-1.16555	9.05186	10.15628	115.95	21.34
75/ 9/ 9	2442664.5	-3.71140	7.57204	3.29157	-9.33748	-3.81746	-1.17466	9.05233	10.15586	116.11	21.32
75/ 9/13	2442668.5	-3.73296	7.56320	3.28885	-9.32728	-3.83840	-1.18376	9.05282	10.15543	116.27	21.30
75/ 9/17	2442672.5	-3.75450	7.55431	3.28610	-9.31701	-3.85931	-1.19286	9.05330	10.15500	116.43	21.28
75/ 9/21	2442676.5	-3.77601	7.54537	3.28333	-9.30669	-3.88020	-1.20194	9.05379	10.15456	116.59	21.26
75/ 9/25	2442680.5	-3.79750	7.53638	3.28055	-9.29631	-3.90106	-1.21102	9.05428	10.15413	116.74	21.24
75/ 9/29	2442684.5	-3.81896	7.52734	3.27774	-9.28587	-3.92190	-1.22009	9.05477	10.15369	116.90	21.22
75/10/ 3	2442688.5	-3.84040	7.51826	3.27491	-9.27538	-3.94271	-1.22915	9.05527	10.15325	117.06	21.20
75/10/ 7	2442692.5	-3.86182	7.50913	3.27206	-9.26483	-3.96349	-1.23820	9.05577	10.15280	117.22	21.18
75/10/11	2442696.5	-3.88321	7.49995	3.26919	-9.25422	-3.98425	-1.24724	9.05627	10.15236	117.37	21.16
75/10/15	2442700.5	-3.90457	7.49072	3.26630	-9.24355	-4.00498	-1.25628	9.05678	10.15191	117.53	21.14
75/10/19	2442704.5	-3.92592	7.48144	3.26338	-9.23282	-4.02568	-1.26531	9.05729	10.15145	117.69	21.12
75/10/23	2442708.5	-3.94723	7.47212	3.26045	-9.22203	-4.04636	-1.27433	9.05780	10.15100	117.85	21.10
75/10/27	2442712.5	-3.96852	7.46275	3.25750	-9.21118	-4.06701	-1.28334	9.05831	10.15053	118.00	21.08
75/10/31	2442716.5	-3.98979	7.45333	3.25452	-9.20027	-4.08762	-1.29234	9.05883	10.15007	118.16	21.06
75/11/ 4	2442720.5	-4.01103	7.44386	3.25153	-9.18931	-4.10821	-1.30133	9.05935	10.14959	118.32	21.03
75/11/ 8	2442724.5	-4.03225	7.43435	3.24851	-9.17828	-4.12877	-1.31031	9.05988	10.14912	118.47	21.01
75/11/12	2442728.5	-4.05344	7.42478	3.24547	-9.16720	-4.14930	-1.31928	9.06040	10.14863	118.63	20.99

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75/11/16	2442732.5	-4.07460	7.41517	3.24241	-9.15606	-4.16980	-1.32824	9.06093	10.14815	118.79	20.97
75/11/20	2442736.5	-4.09574	7.40552	3.23933	-9.14486	-4.19027	-1.33719	9.06146	10.14766	118.95	20.95
75/11/24	2442740.5	-4.11686	7.39581	3.23623	-9.13361	-4.21071	-1.34613	9.06200	10.14716	119.10	20.92
75/11/28	2442744.5	-4.13794	7.38606	3.23311	-9.12229	-4.23112	-1.35506	9.06253	10.14667	119.26	20.90
75/12/ 2	2442748.5	-4.15901	7.37626	3.22997	-9.11092	-4.25150	-1.36398	9.06308	10.14616	119.42	20.88
75/12/ 6	2442752.5	-4.18004	7.36642	3.22681	-9.09950	-4.27185	-1.37289	9.06362	10.14566	119.57	20.86
75/12/10	2442756.5	-4.20105	7.35653	3.22363	-9.08801	-4.29217	-1.38179	9.06417	10.14515	119.73	20.83
75/12/14	2442760.5	-4.22203	7.34659	3.22043	-9.07647	-4.31245	-1.39068	9.06471	10.14463	119.89	20.81
75/12/18	2442764.5	-4.24298	7.33660	3.21721	-9.06487	-4.33271	-1.39956	9.06527	10.14411	120.04	20.79
75/12/22	2442768.5	-4.26391	7.32657	3.21396	-9.05322	-4.35293	-1.40843	9.06582	10.14359	120.20	20.76
75/12/26	2442772.5	-4.28481	7.31649	3.21070	-9.04151	-4.37312	-1.41728	9.06638	10.14306	120.35	20.74
75/12/30	2442776.5	-4.30569	7.30636	3.20741	-9.02974	-4.39328	-1.42613	9.06694	10.14253	120.51	20.72
76/ 1/ 3	2442780.5	-4.32653	7.29619	3.20411	-9.01792	-4.41341	-1.43497	9.06750	10.14200	120.67	20.69
76/ 1/ 7	2442784.5	-4.34735	7.28597	3.20078	-9.00604	-4.43350	-1.44379	9.06807	10.14146	120.82	20.67
76/ 1/11	2442788.5	-4.36815	7.27571	3.19744	-8.99411	-4.45357	-1.45261	9.06864	10.14092	120.98	20.65
76/ 1/15	2442792.5	-4.38891	7.26540	3.19407	-8.98212	-4.47360	-1.46141	9.06921	10.14038	121.14	20.62
76/ 1/19	2442796.5	-4.40965	7.25504	3.19069	-8.97008	-4.49360	-1.47020	9.06979	10.13983	121.29	20.60
76/ 1/23	2442800.5	-4.43035	7.24463	3.18728	-8.95798	-4.51356	-1.47898	9.07036	10.13928	121.45	20.57
76/ 1/27	2442804.5	-4.45103	7.23418	3.18385	-8.94582	-4.53350	-1.48775	9.07094	10.13872	121.60	20.55
76/ 1/31	2442808.5	-4.47169	7.22369	3.18041	-8.93361	-4.55340	-1.49651	9.07153	10.13816	121.76	20.52
76/ 2/ 4	2442812.5	-4.49231	7.21315	3.17694	-8.92134	-4.57326	-1.50526	9.07211	10.13759	121.91	20.50
76/ 2/ 8	2442816.5	-4.51291	7.20256	3.17345	-8.90902	-4.59309	-1.51399	9.07270	10.13702	122.07	20.47
76/ 2/12	2442820.5	-4.53347	7.19192	3.16994	-8.89664	-4.61289	-1.52272	9.07330	10.13645	122.23	20.45
76/ 2/16	2442824.5	-4.55401	7.18124	3.16641	-8.88422	-4.63265	-1.53143	9.07389	10.13588	122.38	20.42
76/ 2/20	2442828.5	-4.57452	7.17052	3.16287	-8.87174	-4.65238	-1.54013	9.07449	10.13530	122.54	20.40
76/ 2/24	2442832.5	-4.59500	7.15975	3.15930	-8.85920	-4.67207	-1.54881	9.07509	10.13472	122.69	20.37
76/ 2/28	2442836.5	-4.61545	7.14893	3.15571	-8.84662	-4.69174	-1.55749	9.07569	10.13414	122.85	20.35
76/ 3/ 3	2442840.5	-4.63588	7.13807	3.15210	-8.83398	-4.71136	-1.56615	9.07630	10.13356	123.00	20.32
76/ 3/ 7	2442844.5	-4.65627	7.12716	3.14847	-8.82129	-4.73096	-1.57480	9.07691	10.13297	123.16	20.30
76/ 3/11	2442848.5	-4.67663	7.11621	3.14483	-8.80854	-4.75052	-1.58344	9.07752	10.13238	123.31	20.27
76/ 3/15	2442852.5	-4.69697	7.10522	3.14116	-8.79575	-4.77005	-1.59207	9.07813	10.13179	123.47	20.24
76/ 3/19	2442856.5	-4.71727	7.09417	3.13747	-8.78290	-4.78954	-1.60069	9.07875	10.13120	123.62	20.22
76/ 3/23	2442860.5	-4.73755	7.08309	3.13376	-8.77000	-4.80900	-1.60930	9.07937	10.13061	123.78	20.19
76/ 3/27	2442864.5	-4.75779	7.07195	3.13004	-8.75705	-4.82843	-1.61789	9.07999	10.13001	123.93	20.16
76/ 3/31	2442868.5	-4.77801	7.06078	3.12629	-8.74404	-4.84782	-1.62647	9.08062	10.12941	124.09	20.14
76/ 4/ 4	2442872.5	-4.79819	7.04956	3.12252	-8.73099	-4.86718	-1.63504	9.08125	10.12882	124.24	20.11
76/ 4/ 8	2442876.5	-4.81835	7.03829	3.11873	-8.71788	-4.88650	-1.64360	9.08188	10.12822	124.40	20.08
76/ 4/12	2442880.5	-4.83847	7.02698	3.11493	-8.70472	-4.90580	-1.65215	9.08251	10.12761	124.55	20.06
76/ 4/16	2442884.5	-4.85857	7.01562	3.11110	-8.69150	-4.92506	-1.66069	9.08315	10.12701	124.70	20.03
76/ 4/20	2442888.5	-4.87863	7.00422	3.10725	-8.67824	-4.94428	-1.66921	9.08379	10.12640	124.86	20.00
76/ 4/24	2442892.5	-4.89867	6.99278	3.10339	-8.66491	-4.96347	-1.67773	9.08443	10.12579	125.01	19.98
76/ 4/28	2442896.5	-4.91867	6.98129	3.09950	-8.65154	-4.98263	-1.68623	9.08508	10.12517	125.17	19.95
76/ 5/ 2	2442900.5	-4.93864	6.96976	3.09560	-8.63812	-5.00175	-1.69471	9.08572	10.12455	125.32	19.92
76/ 5/ 6	2442904.5	-4.95858	6.95818	3.09167	-8.62464	-5.02083	-1.70319	9.08637	10.12393	125.47	19.69
76/ 5/10	2442908.5	-4.97849	6.94656	3.08773	-8.61111	-5.03988	-1.71165	9.08703	10.12331	125.63	19.86

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76/ 5/14	2442912.5	-4.99836	6.93489	3.08376	-8.59753	-5.05889	-1.72010	9.08768	10.12268	125.78	19.84
76/ 5/18	2442916.5	-5.01821	6.92319	3.07978	-8.58390	-5.07787	-1.72854	9.08834	10.12205	125.94	19.81
76/ 5/22	2442920.5	-5.03803	6.91143	3.07578	-8.57021	-5.09682	-1.73697	9.08900	10.12142	126.09	19.78
76/ 5/26	2442924.5	-5.05781	6.89964	3.07175	-8.55648	-5.11572	-1.74538	9.08967	10.12079	126.24	19.75
76/ 5/30	2442928.5	-5.07756	6.88780	3.06771	-8.54269	-5.13460	-1.75378	9.09034	10.12015	126.40	19.72
76/ 6/ 3	2442932.5	-5.09728	6.87591	3.06365	-8.52885	-5.15343	-1.76217	9.09101	10.11951	126.55	19.69
76/ 6/ 7	2442936.5	-5.11697	6.86399	3.05957	-8.51496	-5.17223	-1.77055	9.09168	10.11886	126.70	19.67
76/ 6/11	2442940.5	-5.13662	6.85202	3.05547	-8.50102	-5.19100	-1.77891	9.09235	10.11822	126.86	19.64
76/ 6/15	2442944.5	-5.15624	6.84000	3.05135	-8.48703	-5.20972	-1.78726	9.09303	10.11757	127.01	19.61
76/ 6/19	2442948.5	-5.17583	6.82794	3.04721	-8.47299	-5.22841	-1.79560	9.09371	10.11692	127.16	19.58
76/ 6/23	2442952.5	-5.19539	6.81584	3.04306	-8.45890	-5.24707	-1.80392	9.09439	10.11626	127.32	19.55
76/ 6/27	2442956.5	-5.21492	6.80370	3.03888	-8.44475	-5.26569	-1.81224	9.09508	10.11561	127.47	19.52
76/ 7/ 1	2442960.5	-5.23441	6.79151	3.03468	-8.43056	-5.28427	-1.82054	9.09577	10.11495	127.62	19.49
76/ 7/ 5	2442964.5	-5.25387	6.77929	3.03047	-8.41631	-5.30281	-1.82882	9.09646	10.11428	127.78	19.46
76/ 7/ 9	2442968.5	-5.27330	6.76701	3.02623	-8.40201	-5.32132	-1.83710	9.09715	10.11361	127.93	19.43
76/ 7/13	2442972.5	-5.29269	6.75470	3.02198	-8.38766	-5.33979	-1.84536	9.09785	10.11294	128.08	19.40
76/ 7/17	2442976.5	-5.31205	6.74234	3.01771	-8.37326	-5.35823	-1.85360	9.09855	10.11227	128.23	19.37
76/ 7/21	2442980.5	-5.33138	6.72994	3.01341	-8.35881	-5.37662	-1.86184	9.09925	10.11159	128.39	19.34
76/ 7/25	2442984.5	-5.35067	6.71750	3.00910	-8.34430	-5.39498	-1.87006	9.09996	10.11090	128.54	19.31
76/ 7/29	2442988.5	-5.36993	6.70502	3.00477	-8.32975	-5.41329	-1.87826	9.10066	10.11021	128.69	19.28
76/ 8/ 2	2442992.5	-5.38916	6.69249	3.00043	-8.31515	-5.43157	-1.88645	9.10137	10.10952	128.84	19.25
76/ 8/ 6	2442996.5	-5.40835	6.67992	2.99606	-8.30050	-5.44980	-1.89463	9.10208	10.10882	129.00	19.22
76/ 8/10	2443000.5	-5.42751	6.66731	2.99167	-8.28580	-5.46800	-1.90279	9.10280	10.10812	129.15	19.19
76/ 8/14	2443004.5	-5.44663	6.65466	2.98727	-8.27105	-5.48616	-1.91094	9.10352	10.10742	129.30	19.16
76/ 8/18	2443008.5	-5.46572	6.64196	2.98284	-8.25625	-5.50428	-1.91907	9.10424	10.10671	129.45	19.13
76/ 8/22	2443012.5	-5.48478	6.62922	2.97840	-8.24141	-5.52236	-1.92719	9.10496	10.10600	129.60	19.09
76/ 8/26	2443016.5	-5.50380	6.61645	2.97394	-8.22652	-5.54040	-1.93530	9.10568	10.10529	129.75	19.06
76/ 8/30	2443020.5	-5.52279	6.60363	2.96946	-8.21157	-5.55840	-1.94339	9.10641	10.10458	129.91	19.03
76/ 9/ 3	2443024.5	-5.54174	6.59076	2.96496	-8.19659	-5.57636	-1.95147	9.10714	10.10386	130.06	19.00
76/ 9/ 7	2443028.5	-5.56066	6.57786	2.96044	-8.18155	-5.59428	-1.95953	9.10788	10.10314	130.21	18.97
76/ 9/11	2443032.5	-5.57954	6.56492	2.95591	-8.16647	-5.61216	-1.96758	9.10861	10.10242	130.36	18.94
76/ 9/15	2443036.5	-5.59839	6.55193	2.95135	-8.15134	-5.63001	-1.97561	9.10935	10.10170	130.51	18.90
76/ 9/19	2443040.5	-5.61720	6.53890	2.94678	-8.13617	-5.64781	-1.98363	9.11009	10.10098	130.66	18.87
76/ 9/23	2443044.5	-5.63598	6.52584	2.94219	-8.12094	-5.66557	-1.99163	9.11083	10.10025	130.82	18.84
76/ 9/27	2443048.5	-5.65473	6.51273	2.93758	-8.10568	-5.68330	-1.99963	9.11158	10.09952	130.97	18.81
76/10/ 1	2443052.5	-5.67343	6.49958	2.93295	-8.09036	-5.70099	-2.00760	9.11233	10.09880	131.12	18.78
76/10/ 5	2443056.5	-5.69211	6.48639	2.92830	-8.07500	-5.71864	-2.01557	9.11308	10.09807	131.27	18.74
76/10/ 9	2443060.5	-5.71074	6.47316	2.92363	-8.05959	-5.73625	-2.02352	9.11383	10.09733	131.42	18.71
76/10/13	2443064.5	-5.72934	6.45988	2.91895	-8.04413	-5.75381	-2.03145	9.11459	10.09660	131.57	18.68
76/10/17	2443068.5	-5.74791	6.44657	2.91425	-8.02863	-5.77134	-2.03937	9.11535	10.09586	131.72	18.65
76/10/21	2443072.5	-5.76644	6.43322	2.90953	-8.01308	-5.78883	-2.04728	9.11611	10.09512	131.87	18.61
76/10/25	2443076.5	-5.78493	6.41982	2.90479	-7.99748	-5.80628	-2.05517	9.11687	10.09437	132.02	18.58
76/10/29	2443080.5	-5.80339	6.40639	2.90003	-7.98184	-5.82369	-2.06305	9.11764	10.09363	132.17	18.55
76/11/ 2	2443084.5	-5.82181	6.39292	2.89526	-7.96615	-5.84105	-2.07091	9.11841	10.09288	132.32	18.51
76/11/ 6	2443088.5	-5.84020	6.37940	2.89046	-7.95042	-5.85838	-2.07875	9.11918	10.09213	132.47	18.48

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76/11/10	2443092.5	-5.85855	6.36585	2.88565	-7.93464	-5.87567	-2.08659	9.11996	10.09138	132.62	18.45
76/11/14	2443096.5	-5.87686	6.35226	2.88082	-7.91882	-5.89292	-2.09440	9.12073	10.09063	132.77	18.41
76/11/18	2443100.5	-5.89513	6.33862	2.87598	-7.90295	-5.91012	-2.10221	9.12151	10.08987	132.92	18.38
76/11/22	2443104.5	-5.91337	6.32495	2.87111	-7.88704	-5.92729	-2.10999	9.12229	10.08911	133.07	18.34
76/11/26	2443108.5	-5.93157	6.31124	2.86623	-7.87108	-5.94442	-2.11777	9.12308	10.08836	133.22	18.31
76/11/30	2443112.5	-5.94974	6.29748	2.86132	-7.85507	-5.96151	-2.12553	9.12386	10.08760	133.37	18.28
76/12/ 4	2443116.5	-5.96787	6.28369	2.85641	-7.83903	-5.97855	-2.13327	9.12465	10.08684	133.52	18.24
76/12/ 8	2443120.5	-5.98596	6.26986	2.85147	-7.82293	-5.99556	-2.14100	9.12544	10.08607	133.67	18.21
76/12/12	2443124.5	-6.00401	6.25599	2.84651	-7.80679	-6.01253	-2.14871	9.12624	10.08531	133.82	18.17
76/12/16	2443128.5	-6.02203	6.24208	2.84154	-7.79061	-6.02945	-2.15641	9.12703	10.08454	133.97	18.14
76/12/20	2443132.5	-6.04001	6.22813	2.83655	-7.77438	-6.04634	-2.16410	9.12783	10.08377	134.12	18.10
76/12/24	2443136.5	-6.05795	6.21414	2.83154	-7.75810	-6.06318	-2.17177	9.12863	10.08300	134.27	18.07
76/12/28	2443140.5	-6.07585	6.20012	2.82652	-7.74178	-6.07999	-2.17943	9.12944	10.08223	134.42	18.04
77/ 1/ 1	2443144.5	-6.09372	6.18605	2.82147	-7.72541	-6.09675	-2.18707	9.13024	10.08145	134.57	18.00
77/ 1/ 5	2443148.5	-6.11155	6.17195	2.81641	-7.70900	-6.11348	-2.19470	9.13105	10.08067	134.72	17.97
77/ 1/ 9	2443152.5	-6.12934	6.15781	2.81133	-7.69254	-6.13016	-2.20231	9.13186	10.07989	134.87	17.93
77/ 1/13	2443156.5	-6.14709	6.14363	2.80624	-7.67603	-6.14680	-2.20990	9.13268	10.07910	135.02	17.90
77/ 1/17	2443160.5	-6.16480	6.12941	2.80112	-7.65948	-6.16339	-2.21748	9.13349	10.07831	135.16	17.86
77/ 1/21	2443164.5	-6.18248	6.11515	2.79599	-7.64288	-6.17995	-2.22505	9.13431	10.07751	135.31	17.82
77/ 1/25	2443168.5	-6.20012	6.10085	2.79084	-7.62624	-6.19645	-2.23260	9.13513	10.07671	135.46	17.79
77/ 1/29	2443172.5	-6.21771	6.08652	2.78567	-7.60955	-6.21292	-2.24013	9.13595	10.07590	135.61	17.75
77/ 2/ 2	2443176.5	-6.23527	6.07215	2.78049	-7.59282	-6.22934	-2.24764	9.13678	10.07509	135.76	17.72
77/ 2/ 6	2443180.5	-6.25280	6.05774	2.77529	-7.57604	-6.24572	-2.25514	9.13761	10.07428	135.91	17.68
77/ 2/10	2443184.5	-6.27028	6.04329	2.77007	-7.55922	-6.26206	-2.26263	9.13844	10.07347	136.06	17.65
77/ 2/14	2443188.5	-6.28772	6.02880	2.76484	-7.54236	-6.27835	-2.27009	9.13927	10.07265	136.20	17.61
77/ 2/18	2443192.5	-6.30513	6.01428	2.75958	-7.52545	-6.29460	-2.27755	9.14010	10.07182	136.35	17.57
77/ 2/22	2443196.5	-6.32249	5.99972	2.75431	-7.50850	-6.31080	-2.28498	9.14094	10.07099	136.50	17.54
77/ 2/26	2443200.5	-6.33982	5.98512	2.74903	-7.49151	-6.32696	-2.29240	9.14178	10.07016	136.65	17.50
77/ 3/ 2	2443204.5	-6.35711	5.97049	2.74372	-7.47447	-6.34307	-2.29980	9.14262	10.06933	136.80	17.46
77/ 3/ 6	2443208.5	-6.37435	5.95582	2.73840	-7.45739	-6.35914	-2.30718	9.14346	10.06849	136.94	17.43
77/ 3/10	2443212.5	-6.39156	5.94111	2.73306	-7.44027	-6.37517	-2.31455	9.14431	10.06765	137.09	17.39
77/ 3/14	2443216.5	-6.40873	5.92636	2.72771	-7.42311	-6.39115	-2.32190	9.14516	10.06680	137.24	17.35
77/ 3/18	2443220.5	-6.42586	5.91158	2.72233	-7.40590	-6.40708	-2.32924	9.14601	10.06595	137.39	17.32
77/ 3/22	2443224.5	-6.44295	5.89676	2.71694	-7.38865	-6.42297	-2.33656	9.14686	10.06510	137.53	17.28
77/ 3/26	2443228.5	-6.46000	5.88190	2.71154	-7.37137	-6.43882	-2.34386	9.14772	10.06425	137.68	17.24
77/ 3/30	2443232.5	-6.47701	5.86701	2.70611	-7.35403	-6.45462	-2.35114	9.14858	10.06339	137.83	17.21
77/ 4/ 3	2443236.5	-6.49397	5.85208	2.70067	-7.33666	-6.47038	-2.35841	9.14944	10.06253	137.98	17.17
77/ 4/ 7	2443240.5	-6.51090	5.83711	2.69522	-7.31925	-6.48609	-2.36566	9.15030	10.06166	138.12	17.13
77/ 4/11	2443244.5	-6.52779	5.82211	2.68974	-7.30179	-6.50175	-2.37289	9.15116	10.06079	138.27	17.09
77/ 4/15	2443248.5	-6.54464	5.80707	2.68425	-7.28429	-6.51737	-2.38011	9.15203	10.05992	138.42	17.06
77/ 4/19	2443252.5	-6.56145	5.79200	2.67875	-7.26675	-6.53294	-2.38731	9.15290	10.05904	138.56	17.02
77/ 4/23	2443256.5	-6.57822	5.77689	2.67322	-7.24918	-6.54847	-2.39449	9.15377	10.05816	138.71	16.98
77/ 4/27	2443260.5	-6.59494	5.76174	2.66768	-7.23156	-6.56394	-2.40165	9.15464	10.05728	138.86	16.94
77/ 5/ 1	2443264.5	-6.61163	5.74656	2.66213	-7.21391	-6.57938	-2.40880	9.15552	10.05639	139.00	16.90
77/ 5/ 5	2443268.5	-6.62827	5.73134	2.65655	-7.19622	-6.59476	-2.41592	9.15639	10.05550	139.15	16.87

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
77/ 5/ 9	2443272.5	-6.64488	5.71609	2.65096	-7.17848	-6.61010	-2.42304	9.15727	10.05461	139.30	16.83
77/ 5/13	2443276.5	-6.66144	5.70080	2.64536	-7.16071	-6.62540	-2.43013	9.15816	10.05372	139.44	16.79
77/ 5/17	2443280.5	-6.67796	5.68548	2.63974	-7.14291	-6.64065	-2.43720	9.15904	10.05282	139.59	16.75
77/ 5/21	2443284.5	-6.69444	5.67012	2.63410	-7.12506	-6.65585	-2.44426	9.15993	10.05193	139.74	16.71
77/ 5/25	2443288.5	-6.71088	5.65473	2.62844	-7.10718	-6.67101	-2.45130	9.16082	10.05103	139.88	16.67
77/ 5/29	2443292.5	-6.72728	5.63930	2.62277	-7.08926	-6.68612	-2.45833	9.16171	10.05013	140.03	16.64
77/ 6/ 2	2443296.5	-6.74364	5.62383	2.61708	-7.07130	-6.70119	-2.46534	9.16260	10.04924	140.17	16.60
77/ 6/ 6	2443300.5	-6.75995	5.60834	2.61138	-7.05331	-6.71621	-2.47233	9.16350	10.04834	140.32	16.56
77/ 6/10	2443304.5	-6.77623	5.59280	2.60566	-7.03528	-6.73119	-2.47930	9.16440	10.04743	140.47	16.52
77/ 6/14	2443308.5	-6.79246	5.57723	2.59993	-7.01721	-6.74612	-2.48626	9.16530	10.04653	140.61	16.48
77/ 6/18	2443312.5	-6.80865	5.56163	2.59417	-6.99911	-6.76101	-2.49319	9.16620	10.04563	140.76	16.44
77/ 6/22	2443316.5	-6.82480	5.54600	2.58841	-6.98096	-6.77585	-2.50012	9.16710	10.04473	140.90	16.40
77/ 6/26	2443320.5	-6.84090	5.53033	2.58262	-6.96279	-6.79065	-2.50702	9.16801	10.04383	141.05	16.36
77/ 6/30	2443324.5	-6.85697	5.51462	2.57682	-6.94457	-6.80540	-2.51391	9.16892	10.04292	141.19	16.32
77/ 7/ 4	2443328.5	-6.87299	5.49888	2.57101	-6.92631	-6.82011	-2.52079	9.16983	10.04201	141.34	16.28
77/ 7/ 8	2443332.5	-6.88897	5.48311	2.56518	-6.90802	-6.83477	-2.52764	9.17074	10.04110	141.48	16.24
77/ 7/12	2443336.5	-6.90491	5.46730	2.55933	-6.88968	-6.84939	-2.53448	9.17166	10.04019	141.63	16.20
77/ 7/16	2443340.5	-6.92080	5.45146	2.55347	-6.87132	-6.86396	-2.54130	9.17257	10.03928	141.77	16.16
77/ 7/20	2443344.5	-6.93665	5.43559	2.54759	-6.85291	-6.87848	-2.54810	9.17349	10.03836	141.92	16.12
77/ 7/24	2443348.5	-6.95246	5.41968	2.54169	-6.83447	-6.89296	-2.55489	9.17442	10.03745	142.06	16.08
77/ 7/28	2443352.5	-6.96823	5.40374	2.53578	-6.81599	-6.90739	-2.56165	9.17534	10.03653	142.21	16.04
77/ 8/ 1	2443356.5	-6.98396	5.38777	2.52986	-6.79748	-6.92178	-2.56841	9.17627	10.03561	142.35	16.00
77/ 8/ 5	2443360.5	-6.99964	5.37176	2.52392	-6.77893	-6.93612	-2.57514	9.17719	10.03469	142.50	15.96
77/ 8/ 9	2443364.5	-7.01528	5.35572	2.51796	-6.76034	-6.95042	-2.58185	9.17812	10.03377	142.64	15.92
77/ 8/13	2443368.5	-7.03087	5.33965	2.51199	-6.74172	-6.96467	-2.58855	9.17906	10.03284	142.78	15.88
77/ 8/17	2443372.5	-7.04643	5.32354	2.50600	-6.72306	-6.97887	-2.59523	9.17999	10.03192	142.93	15.84
77/ 8/21	2443376.5	-7.06194	5.30740	2.50000	-6.70436	-6.99303	-2.60190	9.18093	10.03099	143.07	15.80
77/ 8/25	2443380.5	-7.07740	5.29123	2.49398	-6.68563	-7.00714	-2.60854	9.18187	10.03006	143.22	15.76
77/ 8/29	2443384.5	-7.09283	5.27503	2.48794	-6.66686	-7.02120	-2.61517	9.18281	10.02913	143.36	15.72
77/ 9/ 2	2443388.5	-7.10821	5.25879	2.48189	-6.64806	-7.03522	-2.62178	9.18375	10.02820	143.51	15.68
77/ 9/ 6	2443392.5	-7.12354	5.24252	2.47583	-6.62922	-7.04919	-2.62838	9.18470	10.02726	143.65	15.64
77/ 9/10	2443396.5	-7.13884	5.22622	2.46975	-6.61034	-7.06312	-2.63495	9.18564	10.02633	143.79	15.60
77/ 9/14	2443400.5	-7.15408	5.20989	2.46366	-6.59143	-7.07700	-2.64151	9.18659	10.02539	143.94	15.56
77/ 9/18	2443404.5	-7.16929	5.19352	2.45755	-6.57248	-7.09083	-2.64805	9.18754	10.02445	144.08	15.51
77/ 9/22	2443408.5	-7.18445	5.17713	2.45142	-6.55350	-7.10462	-2.65457	9.18850	10.02351	144.22	15.47
77/ 9/26	2443412.5	-7.19957	5.16070	2.44528	-6.53448	-7.11836	-2.66108	9.18945	10.02256	144.37	15.43
77/ 9/30	2443416.5	-7.21464	5.14424	2.43913	-6.51542	-7.13205	-2.66757	9.19041	10.02161	144.51	15.39
77/10/ 4	2443420.5	-7.22967	5.12774	2.43296	-6.49632	-7.14569	-2.67404	9.19137	10.02066	144.65	15.35
77/10/ 8	2443424.5	-7.24466	5.11122	2.42677	-6.47719	-7.15929	-2.68049	9.19233	10.01970	144.80	15.31
77/10/12	2443428.5	-7.25960	5.09467	2.42057	-6.45803	-7.17283	-2.68692	9.19329	10.01874	144.94	15.27
77/10/16	2443432.5	-7.27450	5.07808	2.41436	-6.43883	-7.18633	-2.69333	9.19425	10.01777	145.08	15.22
77/10/20	2443436.5	-7.28935	5.06146	2.40813	-6.41959	-7.19977	-2.69972	9.19522	10.01681	145.23	15.18
77/10/24	2443440.5	-7.30416	5.04482	2.40188	-6.40032	-7.21317	-2.70610	9.19619	10.01584	145.37	15.14
77/10/28	2443444.5	-7.31892	5.02814	2.39562	-6.38102	-7.22652	-2.71245	9.19716	10.01486	145.51	15.10
77/11/ 1	2443448.5	-7.33364	5.01143	2.38935	-6.36169	-7.23982	-2.71879	9.19813	10.01388	145.65	15.06

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77/11/ 5	2443452.5	-7.34831	4.99469	2.38306	-6.34232	-7.25307	-2.72511	9.19911	10.01290	145.80	15.01
77/11/ 9	2443456.5	-7.36294	4.97791	2.37676	-6.32291	-7.26627	-2.73141	9.20008	10.01192	145.94	14.97
77/11/13	2443460.5	-7.37753	4.96111	2.37044	-6.30348	-7.27943	-2.73769	9.20106	10.01094	146.08	14.93
77/11/17	2443464.5	-7.39207	4.94428	2.36411	-6.28401	-7.29253	-2.74395	9.20204	10.00995	146.22	14.89
77/11/21	2443468.5	-7.40656	4.92742	2.35776	-6.26451	-7.30558	-2.75019	9.20303	10.00896	146.37	14.84
77/11/25	2443472.5	-7.42101	4.91053	2.35140	-6.24498	-7.31859	-2.75641	9.20401	10.00796	146.51	14.80
77/11/29	2443476.5	-7.43542	4.89360	2.34503	-6.22542	-7.33154	-2.76262	9.20500	10.00697	146.65	14.76
77/12/ 3	2443480.5	-7.44978	4.87665	2.33864	-6.20582	-7.34445	-2.76880	9.20598	10.00597	146.79	14.72
77/12/ 7	2443484.5	-7.46409	4.85967	2.33224	-6.18620	-7.35731	-2.77497	9.20697	10.00497	146.93	14.67
77/12/11	2443488.5	-7.47836	4.84266	2.32582	-6.16654	-7.37012	-2.78112	9.20796	10.00397	147.07	14.63
77/12/15	2443492.5	-7.49258	4.82562	2.31939	-6.14685	-7.38288	-2.78725	9.20896	10.00297	147.22	14.59
77/12/19	2443496.5	-7.50676	4.80855	2.31294	-6.12713	-7.39559	-2.79336	9.20995	10.00197	147.36	14.54
77/12/23	2443500.5	-7.52089	4.79145	2.30648	-6.10738	-7.40825	-2.79945	9.21095	10.00096	147.50	14.50
77/12/27	2443504.5	-7.53498	4.77432	2.30001	-6.08759	-7.42087	-2.80552	9.21195	9.99995	147.64	14.46
77/12/31	2443508.5	-7.54902	4.75716	2.29352	-6.06777	-7.43343	-2.81157	9.21295	9.99894	147.78	14.42
78/ 1/ 4	2443512.5	-7.56301	4.73997	2.28702	-6.04793	-7.44595	-2.81761	9.21395	9.99792	147.92	14.37
78/ 1/ 8	2443516.5	-7.57696	4.72276	2.28050	-6.02805	-7.45841	-2.82362	9.21496	9.99690	148.06	14.33
78/ 1/12	2443520.5	-7.59086	4.70551	2.27397	-6.00814	-7.47082	-2.82961	9.21596	9.99588	148.21	14.28
78/ 1/16	2443524.5	-7.60472	4.68824	2.26743	-5.98821	-7.48319	-2.83559	9.21697	9.99486	148.35	14.24
78/ 1/20	2443528.5	-7.61853	4.67094	2.26087	-5.96824	-7.49550	-2.84154	9.21798	9.99384	148.49	14.20
78/ 1/24	2443532.5	-7.63230	4.65361	2.25430	-5.94825	-7.50777	-2.84748	9.21899	9.99281	148.63	14.15
78/ 1/28	2443536.5	-7.64601	4.63625	2.24771	-5.92822	-7.51998	-2.85340	9.22001	9.99179	148.77	14.11
78/ 2/ 1	2443540.5	-7.65969	4.61886	2.24111	-5.90817	-7.53215	-2.85930	9.22102	9.99076	148.91	14.07
78/ 2/ 5	2443544.5	-7.67331	4.60145	2.23450	-5.88809	-7.54426	-2.86517	9.22204	9.98973	149.05	14.02
78/ 2/ 9	2443548.5	-7.68689	4.58401	2.22787	-5.86797	-7.55633	-2.87103	9.22306	9.98870	149.19	13.98
78/ 2/13	2443552.5	-7.70042	4.56654	2.22124	-5.84783	-7.56835	-2.87687	9.22408	9.98767	149.33	13.93
78/ 2/17	2443556.5	-7.71391	4.54904	2.21458	-5.82766	-7.58032	-2.88270	9.22510	9.98663	149.47	13.89
78/ 2/21	2443560.5	-7.72735	4.53151	2.20792	-5.80747	-7.59224	-2.88850	9.22613	9.98560	149.61	13.85
78/ 2/25	2443564.5	-7.74074	4.51396	2.20124	-5.78724	-7.60411	-2.89428	9.22715	9.98457	149.75	13.80
78/ 3/ 1	2443568.5	-7.75409	4.49638	2.19454	-5.76699	-7.61593	-2.90005	9.22818	9.98353	149.89	13.76
78/ 3/ 5	2443572.5	-7.76739	4.47877	2.18784	-5.74670	-7.62771	-2.90579	9.22921	9.98249	150.03	13.71
78/ 3/ 9	2443576.5	-7.78064	4.46114	2.18112	-5.72639	-7.63943	-2.91152	9.23024	9.98145	150.17	13.67
78/ 3/13	2443580.5	-7.79385	4.44347	2.17438	-5.70605	-7.65111	-2.91723	9.23128	9.98042	150.31	13.62
78/ 3/17	2443584.5	-7.80700	4.42579	2.16764	-5.68569	-7.66274	-2.92291	9.23231	9.97938	150.45	13.58
78/ 3/21	2443588.5	-7.82012	4.40807	2.16088	-5.66529	-7.67431	-2.92859	9.23335	9.97833	150.59	13.53
78/ 3/25	2443592.5	-7.83318	4.39033	2.15411	-5.64486	-7.68584	-2.93424	9.23439	9.97729	150.73	13.49
78/ 3/29	2443596.5	-7.84620	4.37256	2.14732	-5.62440	-7.69732	-2.93987	9.23542	9.97624	150.87	13.44
78/ 4/ 2	2443600.5	-7.85917	4.35476	2.14052	-5.60391	-7.70874	-2.94548	9.23647	9.97519	151.01	13.40
78/ 4/ 6	2443604.5	-7.87209	4.33694	2.13371	-5.58340	-7.72012	-2.95107	9.23751	9.97414	151.15	13.35
78/ 4/10	2443608.5	-7.88496	4.31909	2.12689	-5.56286	-7.73144	-2.95664	9.23855	9.97308	151.29	13.31
78/ 4/14	2443612.5	-7.89779	4.30122	2.12005	-5.54229	-7.74272	-2.96219	9.23960	9.97202	151.43	13.26
78/ 4/18	2443616.5	-7.91057	4.28332	2.11320	-5.52169	-7.75394	-2.96772	9.24065	9.97096	151.57	13.22
78/ 4/22	2443620.5	-7.92330	4.26539	2.10634	-5.50106	-7.76511	-2.97324	9.24170	9.96989	151.70	13.17
78/ 4/26	2443624.5	-7.93599	4.24744	2.09947	-5.48041	-7.77623	-2.97873	9.24275	9.96883	151.84	13.13
78/ 4/30	2443628.5	-7.94863	4.22946	2.09258	-5.45973	-7.78730	-2.98420	9.24380	9.96776	151.98	13.08

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78/ 5/ 4	2443632.5	-7.96121	4.21146	2.08568	-5.43903	-7.79832	-2.98965	9.24486	9.96669	152.12	13.04
78/ 5/ 8	2443636.5	-7.97376	4.19343	2.07877	-5.41830	-7.80929	-2.99508	9.24591	9.96561	152.26	12.99
78/ 5/12	2443640.5	-7.98625	4.17538	2.07184	-5.39754	-7.82021	-3.00049	9.24697	9.96454	152.40	12.95
78/ 5/16	2443644.5	-7.99869	4.15730	2.06490	-5.37675	-7.83107	-3.00589	9.24803	9.96346	152.54	12.90
78/ 5/20	2443648.5	-8.01109	4.13920	2.05795	-5.35594	-7.84188	-3.01126	9.24909	9.96237	152.68	12.86
78/ 5/24	2443652.5	-8.02344	4.12107	2.05099	-5.33511	-7.85264	-3.01661	9.25015	9.96129	152.81	12.81
78/ 5/28	2443656.5	-8.03574	4.10292	2.04401	-5.31424	-7.86335	-3.02194	9.25122	9.96020	152.95	12.76
78/ 6/ 1	2443660.5	-8.04799	4.08474	2.03703	-5.29336	-7.87401	-3.02725	9.25228	9.95912	153.09	12.72
78/ 6/ 5	2443664.5	-8.06020	4.06654	2.03003	-5.27245	-7.88462	-3.03254	9.25335	9.95802	153.23	12.67
78/ 6/ 9	2443668.5	-8.07235	4.04831	2.02302	-5.25151	-7.89518	-3.03781	9.25442	9.95693	153.37	12.63
78/ 6/13	2443672.5	-8.08446	4.03006	2.01599	-5.23055	-7.90568	-3.04306	9.25549	9.95584	153.50	12.58
78/ 6/17	2443676.5	-8.09652	4.01178	2.00896	-5.20956	-7.91614	-3.04829	9.25656	9.95474	153.64	12.53
78/ 6/21	2443680.5	-8.10853	3.99348	2.00191	-5.18855	-7.92654	-3.05351	9.25764	9.95364	153.78	12.49
78/ 6/25	2443684.5	-8.12049	3.97516	1.99485	-5.16751	-7.93689	-3.05869	9.25871	9.95253	153.92	12.44
78/ 6/29	2443688.5	-8.13241	3.95681	1.98777	-5.14645	-7.94718	-3.06386	9.25979	9.95143	154.05	12.40
78/ 7/ 3	2443692.5	-8.14427	3.93844	1.98069	-5.12536	-7.95742	-3.06901	9.26086	9.95031	154.19	12.35
78/ 7/ 7	2443696.5	-8.15609	3.92004	1.97359	-5.10425	-7.96761	-3.07414	9.26194	9.94920	154.33	12.30
78/ 7/11	2443700.5	-8.16786	3.90163	1.96649	-5.08312	-7.97775	-3.07924	9.26302	9.94808	154.47	12.26
78/ 7/15	2443704.5	-8.17957	3.88318	1.95937	-5.06197	-7.98784	-3.08433	9.26411	9.94697	154.60	12.21
78/ 7/19	2443708.5	-8.19124	3.86472	1.95224	-5.04080	-7.99787	-3.08939	9.26519	9.94585	154.74	12.16
78/ 7/23	2443712.5	-8.20286	3.84623	1.94509	-5.01960	-8.00785	-3.09444	9.26628	9.94473	154.88	12.12
78/ 7/27	2443716.5	-8.21444	3.82772	1.93794	-4.99838	-8.01778	-3.09946	9.26736	9.94360	155.02	12.07
78/ 7/31	2443720.5	-8.22596	3.80919	1.93077	-4.97714	-8.02766	-3.10446	9.26845	9.94248	155.15	12.02
78/ 8/ 4	2443724.5	-8.23743	3.79063	1.92360	-4.95588	-8.03748	-3.10944	9.26954	9.94135	155.29	11.98
78/ 8/ 8	2443728.5	-8.24886	3.77205	1.91641	-4.93460	-8.04726	-3.11440	9.27063	9.94023	155.43	11.93
78/ 8/12	2443732.5	-8.26023	3.75345	1.90921	-4.91330	-8.05698	-3.11935	9.27172	9.93910	155.56	11.88
78/ 8/16	2443736.5	-8.27156	3.73482	1.90199	-4.89198	-8.06665	-3.12427	9.27282	9.93797	155.70	11.84
78/ 8/20	2443740.5	-8.28283	3.71618	1.89477	-4.87063	-8.07627	-3.12917	9.27391	9.93685	155.84	11.79
78/ 8/24	2443744.5	-8.29406	3.69751	1.88754	-4.84927	-8.08584	-3.13405	9.27501	9.93572	155.97	11.74
78/ 8/28	2443748.5	-8.30524	3.67882	1.88029	-4.82789	-8.09536	-3.13891	9.27611	9.93459	156.11	11.70
78/ 9/ 1	2443752.5	-8.31637	3.66011	1.87303	-4.80648	-8.10483	-3.14375	9.27721	9.93346	156.25	11.65
78/ 9/ 5	2443756.5	-8.32745	3.64137	1.86576	-4.78506	-8.11425	-3.14857	9.27831	9.93234	156.38	11.60
78/ 9/ 9	2443760.5	-8.33848	3.62262	1.85849	-4.76362	-8.12362	-3.15337	9.27941	9.93121	156.52	11.55
78/ 9/13	2443764.5	-8.34946	3.60384	1.85120	-4.74215	-8.13293	-3.15815	9.28052	9.93008	156.65	11.51
78/ 9/17	2443768.5	-8.36039	3.58504	1.84389	-4.72066	-8.14220	-3.16292	9.28162	9.92895	156.79	11.46
78/ 9/21	2443772.5	-8.37127	3.56622	1.83658	-4.69915	-8.15142	-3.16766	9.28273	9.92782	156.93	11.41
78/ 9/25	2443776.5	-8.38210	3.54738	1.82926	-4.67762	-8.16058	-3.17238	9.28384	9.92669	157.06	11.36
78/ 9/29	2443780.5	-8.39288	3.52851	1.82192	-4.65607	-8.16970	-3.17708	9.28495	9.92556	157.20	11.32
78/10/ 3	2443784.5	-8.40361	3.50963	1.81458	-4.63450	-8.17876	-3.18176	9.28606	9.92443	157.33	11.27
78/10/ 7	2443788.5	-8.41429	3.49072	1.80722	-4.61291	-8.18777	-3.18642	9.28717	9.92329	157.47	11.22
78/10/11	2443792.5	-8.42493	3.47180	1.79986	-4.59130	-8.19673	-3.19106	9.28828	9.92216	157.60	11.17
78/10/15	2443796.5	-8.43551	3.45285	1.79248	-4.56967	-8.20564	-3.19568	9.28940	9.92103	157.74	11.13
78/10/19	2443800.5	-8.44604	3.43389	1.78509	-4.54802	-8.21450	-3.20028	9.29052	9.91989	157.87	11.08
78/10/23	2443804.5	-8.45652	3.41490	1.77769	-4.52635	-8.22331	-3.20486	9.29163	9.91876	158.01	11.03
78/10/27	2443808.5	-8.46695	3.39589	1.77028	-4.50467	-8.23206	-3.20941	9.29275	9.91762	158.15	10.98

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78/10/31	2443812.5	-8.47733	3.37686	1.76286	-4.48296	-8.24077	-3.21395	9.29387	9.91649	158.28	10.93
78/11/ 4	2443816.5	-8.48766	3.35782	1.75543	-4.46123	-8.24942	-3.21847	9.29500	9.91535	158.42	10.89
78/11/ 8	2443820.5	-8.49795	3.33875	1.74799	-4.43948	-8.25803	-3.22297	9.29612	9.91421	158.55	10.84
78/11/12	2443824.5	-8.50818	3.31966	1.74054	-4.41772	-8.26658	-3.22745	9.29724	9.91307	158.69	10.79
78/11/16	2443828.5	-8.51836	3.30055	1.73308	-4.39593	-8.27508	-3.23191	9.29837	9.91193	158.82	10.74
78/11/20	2443832.5	-8.52849	3.28143	1.72561	-4.37412	-8.28354	-3.23634	9.29949	9.91079	158.96	10.69
78/11/24	2443836.5	-8.53857	3.26228	1.71813	-4.35230	-8.29194	-3.24076	9.30062	9.90965	159.09	10.65
78/11/28	2443840.5	-8.54860	3.24312	1.71064	-4.33045	-8.30029	-3.24516	9.30175	9.90851	159.22	10.60
78/12/ 2	2443844.5	-8.55858	3.22393	1.70314	-4.30859	-8.30859	-3.24954	9.30288	9.90737	159.36	10.55
78/12/ 6	2443848.5	-8.56850	3.20473	1.69562	-4.28670	-8.31683	-3.25389	9.30401	9.90623	159.49	10.50
78/12/10	2443852.5	-8.57838	3.18550	1.68810	-4.26480	-8.32503	-3.25823	9.30515	9.90508	159.63	10.45
78/12/14	2443856.5	-8.58821	3.16626	1.68057	-4.24287	-8.33317	-3.26255	9.30628	9.90394	159.76	10.40
78/12/18	2443860.5	-8.59799	3.14700	1.67303	-4.22093	-8.34126	-3.26684	9.30742	9.90279	159.90	10.36
78/12/22	2443864.5	-8.60771	3.12772	1.66548	-4.19896	-8.34930	-3.27112	9.30855	9.90163	160.03	10.31
78/12/26	2443868.5	-8.61739	3.10843	1.65791	-4.17698	-8.35728	-3.27537	9.30969	9.90047	160.16	10.26
78/12/30	2443872.5	-8.62701	3.08911	1.65034	-4.15498	-8.36521	-3.27960	9.31083	9.89931	160.30	10.21
79/ 1/ 3	2443876.5	-8.63658	3.06978	1.64276	-4.13296	-8.37309	-3.28381	9.31197	9.89815	160.43	10.16
79/ 1/ 7	2443880.5	-8.64611	3.05042	1.63517	-4.11092	-8.38091	-3.28800	9.31311	9.89698	160.57	10.11
79/ 1/11	2443884.5	-8.65558	3.03105	1.62757	-4.08886	-8.38868	-3.29216	9.31425	9.89581	160.70	10.06
79/ 1/15	2443888.5	-8.66500	3.01166	1.61996	-4.06679	-8.39640	-3.29631	9.31539	9.89464	160.83	10.01
79/ 1/19	2443892.5	-8.67437	2.99226	1.61234	-4.04470	-8.40406	-3.30043	9.31654	9.89347	160.97	9.97
79/ 1/23	2443896.5	-8.68369	2.97283	1.60471	-4.02260	-8.41167	-3.30453	9.31768	9.89229	161.10	9.92
79/ 1/27	2443900.5	-8.69295	2.95339	1.59707	-4.00047	-8.41922	-3.30862	9.31883	9.89111	161.24	9.87
79/ 1/31	2443904.5	-8.70217	2.93393	1.58942	-3.97834	-8.42673	-3.31267	9.31998	9.88993	161.37	9.82
79/ 2/ 4	2443908.5	-8.71133	2.91446	1.58176	-3.95618	-8.43417	-3.31671	9.32113	9.88874	161.50	9.77
79/ 2/ 8	2443912.5	-8.72045	2.89497	1.57410	-3.93401	-8.44157	-3.32073	9.32228	9.88756	161.64	9.72
79/ 2/12	2443916.5	-8.72951	2.87546	1.56642	-3.91183	-8.44891	-3.32472	9.32343	9.88637	161.77	9.67
79/ 2/16	2443920.5	-8.73852	2.85593	1.55874	-3.88963	-8.45620	-3.32870	9.32458	9.88518	161.90	9.62
79/ 2/20	2443924.5	-8.74748	2.83639	1.55104	-3.86742	-8.46343	-3.33265	9.32573	9.88399	162.03	9.57
79/ 2/24	2443928.5	-8.75639	2.81683	1.54334	-3.84519	-8.47062	-3.33658	9.32688	9.88279	162.17	9.52
79/ 2/28	2443932.5	-8.76525	2.79725	1.53563	-3.82295	-8.47774	-3.34049	9.32804	9.88160	162.30	9.48
79/ 3/ 4	2443936.5	-8.77405	2.77766	1.52790	-3.80069	-8.48482	-3.34438	9.32920	9.88040	162.43	9.43
79/ 3/ 8	2443940.5	-8.78281	2.75805	1.52017	-3.77842	-8.49185	-3.34824	9.33035	9.87920	162.57	9.38
79/ 3/12	2443944.5	-8.79151	2.73842	1.51243	-3.75614	-8.49882	-3.35209	9.33151	9.87800	162.70	9.33
79/ 3/16	2443948.5	-8.80016	2.71878	1.50469	-3.73383	-8.50573	-3.35591	9.33267	9.87680	162.83	9.28
79/ 3/20	2443952.5	-8.80876	2.69912	1.49693	-3.71152	-8.51259	-3.35971	9.33383	9.87559	162.96	9.23
79/ 3/24	2443956.5	-8.81731	2.67945	1.48916	-3.68919	-8.51940	-3.36349	9.33499	9.87438	163.10	9.18
79/ 3/28	2443960.5	-8.82581	2.65976	1.48139	-3.66685	-8.52616	-3.36725	9.33615	9.87317	163.23	9.13
79/ 4/ 1	2443964.5	-8.83425	2.64005	1.47361	-3.64450	-8.53286	-3.37099	9.33731	9.87196	163.36	9.08
79/ 4/ 5	2443968.5	-8.84265	2.62033	1.46581	-3.62214	-8.53951	-3.37470	9.33848	9.87075	163.49	9.03
79/ 4/ 9	2443972.5	-8.85099	2.60060	1.45801	-3.59976	-8.54610	-3.37840	9.33964	9.86954	163.63	8.98
79/ 4/13	2443976.5	-8.85928	2.58085	1.45020	-3.57737	-8.55265	-3.38207	9.34081	9.86832	163.76	8.93
79/ 4/17	2443980.5	-8.86752	2.56108	1.44239	-3.55498	-8.55914	-3.38572	9.34198	9.86711	163.89	8.88
79/ 4/21	2443984.5	-8.87571	2.54130	1.43456	-3.53257	-8.56557	-3.38935	9.34314	9.86589	164.02	8.83
79/ 4/25	2443988.5	-8.88384	2.52151	1.42673	-3.51014	-8.57196	-3.39296	9.34431	9.86467	164.15	8.78

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79/ 4/29	2443992.5	-8.89192	2.50170	1.41888	-3.48771	-8.57829	-3.39655	9.34548	9.86346	164.29	8.73
79/ 5/ 3	2443996.5	-8.89995	2.48187	1.41103	-3.46527	-8.58458	-3.40012	9.34665	9.86224	164.42	8.68
79/ 5/ 7	2444000.5	-8.90793	2.46203	1.40317	-3.44281	-8.59081	-3.40366	9.34782	9.86102	164.55	8.63
79/ 5/11	2444004.5	-8.91586	2.44218	1.39531	-3.42034	-8.59698	-3.40719	9.34899	9.85981	164.68	8.58
79/ 5/15	2444008.5	-8.92374	2.42231	1.38743	-3.39787	-8.60311	-3.41069	9.35017	9.85859	164.81	8.53
79/ 5/19	2444012.5	-8.93156	2.40243	1.37955	-3.37538	-8.60919	-3.41418	9.35134	9.85738	164.94	8.48
79/ 5/23	2444016.5	-8.93933	2.38253	1.37166	-3.35288	-8.61521	-3.41764	9.35252	9.85616	165.08	8.43
79/ 5/27	2444020.5	-8.94705	2.36262	1.36376	-3.33037	-8.62118	-3.42108	9.35369	9.85495	165.21	8.38
79/ 5/31	2444024.5	-8.95472	2.34270	1.35585	-3.30785	-8.62711	-3.42451	9.35487	9.85374	165.34	8.33
79/ 6/ 4	2444028.5	-8.96234	2.32276	1.34794	-3.28531	-8.63298	-3.42791	9.35605	9.85252	165.47	8.28
79/ 6/ 8	2444032.5	-8.96990	2.30281	1.34001	-3.26277	-8.63880	-3.43129	9.35723	9.85131	165.60	8.23
79/ 6/12	2444036.5	-8.97741	2.28285	1.33208	-3.24021	-8.64457	-3.43465	9.35841	9.85009	165.73	8.18
79/ 6/16	2444040.5	-8.98487	2.26287	1.32414	-3.21764	-8.65028	-3.43799	9.35959	9.84887	165.86	8.13
79/ 6/20	2444044.5	-8.99228	2.24288	1.31620	-3.19506	-8.65594	-3.44131	9.36077	9.84766	165.99	8.08
79/ 6/24	2444048.5	-8.99963	2.22288	1.30824	-3.17247	-8.66155	-3.44460	9.36195	9.84644	166.13	8.03
79/ 6/28	2444052.5	-9.00694	2.20286	1.30028	-3.14986	-8.66711	-3.44788	9.36313	9.84522	166.26	7.98
79/ 7/ 2	2444056.5	-9.01419	2.18283	1.29231	-3.12725	-8.67262	-3.45113	9.36431	9.84400	166.39	7.93
79/ 7/ 6	2444060.5	-9.02138	2.16279	1.28434	-3.10463	-8.67807	-3.45437	9.36550	9.84278	166.52	7.88
79/ 7/10	2444064.5	-9.02853	2.14274	1.27635	-3.08199	-8.68347	-3.45758	9.36668	9.84155	166.65	7.83
79/ 7/14	2444068.5	-9.03562	2.12267	1.26836	-3.05935	-8.68882	-3.46077	9.36787	9.84033	166.78	7.78
79/ 7/18	2444072.5	-9.04267	2.10259	1.26036	-3.03670	-8.69412	-3.46394	9.36906	9.83911	166.91	7.73
79/ 7/22	2444076.5	-9.04965	2.08250	1.25236	-3.01403	-8.69936	-3.46709	9.37024	9.83788	167.04	7.68
79/ 7/26	2444080.5	-9.05659	2.06240	1.24434	-2.99136	-8.70455	-3.47021	9.37143	9.83666	167.17	7.63
79/ 7/30	2444084.5	-9.06348	2.04228	1.23632	-2.96868	-8.70969	-3.47332	9.37262	9.83543	167.30	7.58
79/ 8/ 3	2444088.5	-9.07031	2.02216	1.22830	-2.94599	-8.71478	-3.47640	9.37381	9.83420	167.43	7.53
79/ 8/ 7	2444092.5	-9.07709	2.00202	1.22026	-2.92329	-8.71981	-3.47947	9.37500	9.83298	167.56	7.48
79/ 8/11	2444096.5	-9.08381	1.98187	1.21222	-2.90058	-8.72479	-3.48251	9.37619	9.83175	167.69	7.43
79/ 8/15	2444100.5	-9.09049	1.96171	1.20417	-2.87786	-8.72972	-3.48553	9.37738	9.83052	167.82	7.38
79/ 8/19	2444104.5	-9.09711	1.94153	1.19611	-2.85513	-8.73460	-3.48853	9.37858	9.82929	167.95	7.33
79/ 8/23	2444108.5	-9.10368	1.92135	1.18805	-2.83239	-8.73943	-3.49151	9.37977	9.82806	168.08	7.28
79/ 8/27	2444112.5	-9.11020	1.90115	1.17998	-2.80965	-8.74420	-3.49447	9.38096	9.82682	168.21	7.23
79/ 8/31	2444116.5	-9.11666	1.88095	1.17191	-2.78689	-8.74892	-3.49741	9.38216	9.82559	168.34	7.18
79/ 9/ 4	2444120.5	-9.12307	1.86073	1.16382	-2.76413	-8.75359	-3.50032	9.38335	9.82436	168.47	7.12
79/ 9/ 8	2444124.5	-9.12943	1.84050	1.15573	-2.74135	-8.75821	-3.50321	9.38455	9.82312	168.60	7.07
79/ 9/12	2444128.5	-9.13574	1.82027	1.14764	-2.71857	-8.76277	-3.50609	9.38574	9.82188	168.73	7.02
79/ 9/16	2444132.5	-9.14199	1.80002	1.13953	-2.69578	-8.76727	-3.50894	9.38694	9.82064	168.86	6.97
79/ 9/20	2444136.5	-9.14820	1.77976	1.13142	-2.67298	-8.77173	-3.51176	9.38814	9.81939	168.99	6.92
79/ 9/24	2444140.5	-9.15434	1.75949	1.12331	-2.65018	-8.77613	-3.51457	9.38934	9.81815	169.12	6.87
79/ 9/28	2444144.5	-9.16044	1.73921	1.11519	-2.62737	-8.78047	-3.51735	9.39054	9.81690	169.25	6.82
79/10/ 2	2444148.5	-9.16648	1.71892	1.10706	-2.60456	-8.78477	-3.52011	9.39174	9.81565	169.38	6.77
79/10/ 6	2444152.5	-9.17247	1.69862	1.09892	-2.58173	-8.78901	-3.52286	9.39294	9.81440	169.51	6.72
79/10/10	2444156.5	-9.17841	1.67831	1.09078	-2.55891	-8.79320	-3.52557	9.39414	9.81315	169.64	6.67
79/10/14	2444160.5	-9.18430	1.65799	1.08263	-2.53607	-8.79733	-3.52827	9.39534	9.81190	169.77	6.62
79/10/18	2444164.5	-9.19013	1.63766	1.07448	-2.51324	-8.80142	-3.53095	9.39654	9.81065	169.90	6.57
79/10/22	2444168.5	-9.19591	1.61733	1.06632	-2.49039	-8.80545	-3.53360	9.39774	9.80940	170.03	6.52

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79/10/26	2444172.5	-9.20164	1.59698	1.05815	-2.46755	-8.80943	-3.53624	9.39894	9.80815	170.15	6.46
79/10/30	2444176.5	-9.20731	1.57662	1.04998	-2.44469	-8.81335	-3.53885	9.40015	9.80689	170.28	6.41
79/11/ 3	2444180.5	-9.21293	1.55626	1.04180	-2.42184	-8.81723	-3.54144	9.40135	9.80564	170.41	6.36
79/11/ 7	2444184.5	-9.21850	1.53589	1.03362	-2.39897	-8.82105	-3.54401	9.40256	9.80439	170.54	6.31
79/11/11	2444188.5	-9.22402	1.51550	1.02543	-2.37611	-8.82482	-3.54655	9.40376	9.80313	170.67	6.26
79/11/15	2444192.5	-9.22948	1.49511	1.01723	-2.35324	-8.82854	-3.54908	9.40497	9.80188	170.80	6.21
79/11/19	2444196.5	-9.23489	1.47471	1.00903	-2.33036	-8.83222	-3.55159	9.40617	9.80063	170.93	6.16
79/11/23	2444200.5	-9.24025	1.45430	1.00082	-2.30748	-8.83584	-3.55408	9.40738	9.79938	171.06	6.11
79/11/27	2444204.5	-9.24555	1.43389	0.99261	-2.28460	-8.83941	-3.55654	9.40859	9.79814	171.18	6.06
79/12/ 1	2444208.5	-9.25080	1.41346	0.98439	-2.26170	-8.84292	-3.55899	9.40979	9.79689	171.31	6.00
79/12/ 5	2444212.5	-9.25600	1.39303	0.97616	-2.23881	-8.84639	-3.56141	9.41100	9.79564	171.44	5.95
79/12/ 9	2444216.5	-9.26115	1.37259	0.96793	-2.21591	-8.84980	-3.56381	9.41221	9.79439	171.57	5.90
79/12/13	2444220.5	-9.26624	1.35214	0.95970	-2.19300	-8.85316	-3.56619	9.41342	9.79313	171.70	5.85
79/12/17	2444224.5	-9.27128	1.33169	0.95146	-2.17009	-8.85647	-3.56855	9.41463	9.79188	171.83	5.80
79/12/21	2444228.5	-9.27626	1.31122	0.94321	-2.14718	-8.85973	-3.57089	9.41584	9.79063	171.95	5.75
79/12/25	2444232.5	-9.28120	1.29075	0.93496	-2.12426	-8.86294	-3.57321	9.41705	9.78938	172.08	5.70
79/12/29	2444236.5	-9.28608	1.27027	0.92670	-2.10134	-8.86610	-3.57550	9.41826	9.78813	172.21	5.65
80/ 1/ 2	2444240.5	-9.29091	1.24979	0.91844	-2.07842	-8.86920	-3.57778	9.41947	9.78688	172.34	5.60
80/ 1/ 6	2444244.5	-9.29568	1.22929	0.91017	-2.05549	-8.87225	-3.58003	9.42068	9.78563	172.47	5.54
80/ 1/10	2444248.5	-9.30040	1.20879	0.90190	-2.03256	-8.87526	-3.58226	9.42190	9.78438	172.59	5.49
80/ 1/14	2444252.5	-9.30507	1.18829	0.89362	-2.00962	-8.87821	-3.58448	9.42311	9.78313	172.72	5.44
80/ 1/18	2444256.5	-9.30969	1.16777	0.88534	-1.98668	-8.88111	-3.58667	9.42432	9.78188	172.85	5.39
80/ 1/22	2444260.5	-9.31425	1.14725	0.87705	-1.96374	-8.88396	-3.58884	9.42553	9.78063	172.98	5.34
80/ 1/26	2444264.5	-9.31876	1.12673	0.86875	-1.94080	-8.88676	-3.59099	9.42675	9.77938	173.11	5.29
80/ 1/30	2444268.5	-9.32322	1.10619	0.86046	-1.91785	-8.88951	-3.59312	9.42796	9.77814	173.23	5.24
80/ 2/ 3	2444272.5	-9.32762	1.08565	0.85215	-1.89490	-8.89220	-3.59522	9.42918	9.77689	173.36	5.19
80/ 2/ 7	2444276.5	-9.33198	1.06511	0.84384	-1.87194	-8.89485	-3.59731	9.43039	9.77564	173.49	5.13
80/ 2/11	2444280.5	-9.33627	1.04456	0.83553	-1.84898	-8.89745	-3.59938	9.43161	9.77440	173.62	5.08
80/ 2/15	2444284.5	-9.34052	1.02400	0.82721	-1.82602	-8.89999	-3.60142	9.43282	9.77315	173.74	5.03
80/ 2/19	2444288.5	-9.34471	1.00343	0.81889	-1.80306	-8.90249	-3.60345	9.43404	9.77190	173.87	4.98
80/ 2/23	2444292.5	-9.34885	0.98287	0.81057	-1.78009	-8.90493	-3.60545	9.43525	9.77066	174.00	4.93
80/ 2/27	2444296.5	-9.35293	0.96229	0.80223	-1.75711	-8.90732	-3.60744	9.43647	9.76941	174.13	4.88
80/ 3/ 2	2444300.5	-9.35697	0.94171	0.79390	-1.73413	-8.90966	-3.60940	9.43769	9.76816	174.25	4.83
80/ 3/ 6	2444304.5	-9.36095	0.92112	0.78556	-1.71115	-8.91195	-3.61134	9.43890	9.76691	174.38	4.77
80/ 3/10	2444308.5	-9.36487	0.90053	0.77721	-1.68817	-8.91418	-3.61325	9.44012	9.76566	174.51	4.72
80/ 3/14	2444312.5	-9.36875	0.87994	0.76886	-1.66518	-8.91636	-3.61515	9.44134	9.76440	174.63	4.67
80/ 3/18	2444316.5	-9.37257	0.85934	0.76051	-1.64219	-8.91849	-3.61702	9.44256	9.76315	174.76	4.62
80/ 3/22	2444320.5	-9.37633	0.83873	0.75215	-1.61921	-8.92056	-3.61888	9.44377	9.76189	174.89	4.57
80/ 3/26	2444324.5	-9.38005	0.81812	0.74379	-1.59621	-8.92259	-3.62071	9.44499	9.76063	175.02	4.52
80/ 3/30	2444328.5	-9.38371	0.79751	0.73542	-1.57322	-8.92456	-3.62252	9.44621	9.75937	175.14	4.47
80/ 4/ 3	2444332.5	-9.38732	0.77689	0.72705	-1.55023	-8.92647	-3.62430	9.44743	9.75811	175.27	4.41
80/ 4/ 7	2444336.5	-9.39087	0.75626	0.71868	-1.52724	-8.92834	-3.62607	9.44865	9.75685	175.40	4.36
80/ 4/11	2444340.5	-9.39437	0.73563	0.71030	-1.50424	-8.93015	-3.62781	9.44986	9.75558	175.52	4.31
80/ 4/15	2444344.5	-9.39782	0.71500	0.70191	-1.48125	-8.93191	-3.62954	9.45108	9.75432	175.65	4.26
80/ 4/19	2444348.5	-9.40122	0.69437	0.69353	-1.45826	-8.93362	-3.63124	9.45230	9.75305	175.78	4.21

1.6 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — SATURN

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80/ 4/23	2444352.5	-9.40456	0.67373	0.68514	-1.43526	-8.93527	-3.63292	9.45352	9.75178	175.90	4.16
80/ 4/27	2444356.5	-9.40785	0.65308	0.67674	-1.41227	-8.93688	-3.63457	9.45474	9.75051	176.03	4.10
80/ 5/ 1	2444360.5	-9.41109	0.63243	0.66834	-1.38928	-8.93843	-3.63621	9.45596	9.74924	176.16	4.05
80/ 5/ 5	2444364.5	-9.41427	0.61178	0.65994	-1.36629	-8.93993	-3.63782	9.45718	9.74797	176.28	4.00
80/ 5/ 9	2444368.5	-9.41740	0.59113	0.65154	-1.34331	-8.94138	-3.63942	9.45840	9.74669	176.41	3.95
80/ 5/13	2444372.5	-9.42047	0.57047	0.64313	-1.32032	-8.94277	-3.64099	9.45962	9.74542	176.53	3.90
80/ 5/17	2444376.5	-9.42350	0.54981	0.63471	-1.29734	-8.94412	-3.64254	9.46084	9.74415	176.66	3.85
80/ 5/21	2444380.5	-9.42647	0.52915	0.62630	-1.27435	-8.94541	-3.64407	9.46206	9.74288	176.79	3.80
80/ 5/25	2444384.5	-9.42939	0.50848	0.61788	-1.25137	-8.94666	-3.64558	9.46328	9.74160	176.91	3.74
80/ 5/29	2444388.5	-9.43225	0.48781	0.60945	-1.22839	-8.94785	-3.64706	9.46450	9.74033	177.04	3.69
80/ 6/ 2	2444392.5	-9.43506	0.46714	0.60103	-1.20541	-8.94899	-3.64853	9.46572	9.73905	177.17	3.64
80/ 6/ 6	2444396.5	-9.43782	0.44646	0.59260	-1.18243	-8.95007	-3.64997	9.46694	9.73777	177.29	3.59
80/ 6/10	2444400.5	-9.44053	0.42578	0.58416	-1.15946	-8.95111	-3.65139	9.46816	9.73649	177.42	3.54
80/ 6/14	2444404.5	-9.44318	0.40510	0.57572	-1.13649	-8.95209	-3.65279	9.46938	9.73521	177.54	3.49
80/ 6/18	2444408.5	-9.44578	0.38442	0.56728	-1.11353	-8.95302	-3.65417	9.47060	9.73393	177.67	3.43
80/ 6/22	2444412.5	-9.44832	0.36374	0.55884	-1.09057	-8.95390	-3.65553	9.47182	9.73265	177.80	3.38
80/ 6/26	2444416.5	-9.45081	0.34305	0.55039	-1.06761	-8.95473	-3.65686	9.47304	9.73137	177.92	3.33
80/ 6/30	2444420.5	-9.45325	0.32236	0.54194	-1.04466	-8.95551	-3.65818	9.47426	9.73010	178.05	3.28
80/ 7/ 4	2444424.5	-9.45564	0.30168	0.53349	-1.02171	-8.95624	-3.65947	9.47548	9.72882	178.17	3.23
80/ 7/ 8	2444428.5	-9.45798	0.28098	0.52504	-0.99876	-8.95692	-3.66074	9.47670	9.72754	178.30	3.18
80/ 7/12	2444432.5	-9.46026	0.26029	0.51658	-0.97582	-8.95755	-3.66200	9.47792	9.72626	178.42	3.12
80/ 7/16	2444436.5	-9.46248	0.23960	0.50812	-0.95289	-8.95813	-3.66323	9.47915	9.72499	178.55	3.07
80/ 7/20	2444440.5	-9.46466	0.21890	0.49965	-0.92996	-8.95866	-3.66444	9.48037	9.72371	178.68	3.02
80/ 7/24	2444444.5	-9.46678	0.19820	0.49119	-0.90703	-8.95914	-3.66563	9.48159	9.72244	178.80	2.97
80/ 7/28	2444448.5	-9.46885	0.17751	0.48272	-0.88411	-8.95958	-3.66680	9.48281	9.72117	178.93	2.92
80/ 8/ 1	2444452.5	-9.47087	0.15681	0.47424	-0.86119	-8.95996	-3.66795	9.48403	9.71990	179.05	2.87
80/ 8/ 5	2444456.5	-9.47283	0.13611	0.46577	-0.83828	-8.96030	-3.66908	9.48525	9.71863	179.18	2.81
80/ 8/ 9	2444460.5	-9.47474	0.11541	0.45729	-0.81537	-8.96059	-3.67019	9.48647	9.71737	179.30	2.76
80/ 8/13	2444464.5	-9.47660	0.09471	0.44881	-0.79247	-8.96083	-3.67128	9.48769	9.71611	179.43	2.71
80/ 8/17	2444468.5	-9.47840	0.07401	0.44033	-0.76957	-8.96102	-3.67235	9.48891	9.71485	179.55	2.66
80/ 8/21	2444472.5	-9.48015	0.05330	0.43184	-0.74667	-8.96116	-3.67340	9.49013	9.71359	179.68	2.61
80/ 8/25	2444476.5	-9.48185	0.03260	0.42336	-0.72377	-8.96125	-3.67443	9.49135	9.71233	179.80	2.56
80/ 8/29	2444480.5	-9.48350	0.01190	0.41487	-0.70088	-8.96130	-3.67544	9.49257	9.71107	179.93	2.50
80/ 9/ 2	2444484.5	-9.48509	-0.00880	0.40637	-0.67800	-8.96129	-3.67643	9.49379	9.70982	180.05	2.45
80/ 9/ 6	2444488.5	-9.48663	-0.02950	0.39788	-0.65512	-8.96124	-3.67740	9.49501	9.70856	180.18	2.40
80/ 9/10	2444492.5	-9.48812	-0.05021	0.38938	-0.63224	-8.96113	-3.67835	9.49623	9.70731	180.30	2.35
80/ 9/14	2444496.5	-9.48955	-0.07091	0.38089	-0.60937	-8.96098	-3.67927	9.49746	9.70606	180.43	2.30
80/ 9/18	2444500.5	-9.49093	-0.09161	0.37238	-0.58650	-8.96078	-3.68018	9.49868	9.70480	180.55	2.25
80/ 9/22	2444504.5	-9.49226	-0.11231	0.36388	-0.56364	-8.96053	-3.68107	9.49990	9.70355	180.68	2.20
80/ 9/26	2444508.5	-9.49354	-0.13301	0.35538	-0.54078	-8.96023	-3.68193	9.50112	9.70230	180.80	2.14
80/ 9/30	2444512.5	-9.49476	-0.15371	0.34687	-0.51792	-8.95988	-3.68278	9.50233	9.70106	180.93	2.09
80/10/ 4	2444516.5	-9.49593	-0.17441	0.33836	-0.49507	-8.95948	-3.68360	9.50355	9.69981	181.05	2.04
80/10/ 8	2444520.5	-9.49705	-0.19510	0.32985	-0.47223	-8.95903	-3.68441	9.50477	9.69856	181.18	1.99
80/10/12	2444524.5	-9.49811	-0.21580	0.32134	-0.44939	-8.95854	-3.68519	9.50599	9.69732	181.30	1.94
80/10/16	2444528.5	-9.49912	-0.23650	0.31282	-0.42656	-8.95799	-3.68595	9.50721	9.69607	181.43	1.89

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM SATURN

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80/10/20	2444532.5	-9.50008	-0.25719	0.30431	-0.40373	-8.95740	-3.68670	9.50843	9.69483	181.55	1.83
80/10/24	2444536.5	-9.50099	-0.27788	0.29579	-0.38091	-8.95676	-3.68742	9.50965	9.69359	181.68	1.78
80/10/28	2444540.5	-9.50184	-0.29857	0.28727	-0.35809	-8.95606	-3.68812	9.51087	9.69234	181.80	1.73
80/11/ 1	2444544.5	-9.50264	-0.31926	0.27875	-0.33528	-8.95532	-3.68880	9.51209	9.69110	181.92	1.68
80/11/ 5	2444548.5	-9.50339	-0.33995	0.27023	-0.31247	-8.95454	-3.68947	9.51331	9.68987	182.05	1.63
80/11/ 9	2444552.5	-9.50409	-0.36064	0.26170	-0.28967	-8.95370	-3.69011	9.51452	9.68863	182.17	1.58
80/11/13	2444556.5	-9.50473	-0.38132	0.25318	-0.26687	-8.95281	-3.69073	9.51574	9.68739	182.30	1.52
80/11/17	2444560.5	-9.50532	-0.40200	0.24465	-0.24408	-8.95188	-3.69133	9.51696	9.68615	182.42	1.47
80/11/21	2444564.5	-9.50586	-0.42268	0.23612	-0.22129	-8.95089	-3.69191	9.51818	9.68491	182.55	1.42
80/11/25	2444568.5	-9.50634	-0.44336	0.22759	-0.19851	-8.94985	-3.69247	9.51939	9.68367	182.67	1.37
80/11/29	2444572.5	-9.50677	-0.46403	0.21906	-0.17573	-8.94876	-3.69300	9.52061	9.68243	182.79	1.32
80/12/ 3	2444576.5	-9.50715	-0.48470	0.21053	-0.15297	-8.94763	-3.69352	9.52183	9.68119	182.92	1.27
80/12/ 7	2444580.5	-9.50748	-0.50537	0.20200	-0.13021	-8.94644	-3.69401	9.52304	9.67995	183.04	1.22
80/12/11	2444584.5	-9.50775	-0.52604	0.19346	-0.10745	-8.94520	-3.69449	9.52426	9.67871	183.17	1.16
80/12/15	2444588.5	-9.50798	-0.54670	0.18493	-0.08471	-8.94391	-3.69494	9.52548	9.67746	183.29	1.11
80/12/19	2444592.5	-9.50815	-0.56736	0.17639	-0.06197	-8.94257	-3.69537	9.52669	9.67622	183.41	1.06
80/12/23	2444596.5	-9.50826	-0.58802	0.16785	-0.03925	-8.94119	-3.69578	9.52791	9.67498	183.54	1.01
80/12/27	2444600.5	-9.50833	-0.60867	0.15931	-0.01653	-8.93975	-3.69617	9.52912	9.67373	183.66	0.96
80/12/31	2444604.5	-9.50834	-0.62932	0.15077	0.00618	-8.93826	-3.69654	9.53034	9.67249	183.79	0.91
81/ 1/ 4	2444608.5	-9.50830	-0.64997	0.14223	0.02888	-8.93673	-3.69689	9.53155	9.67124	183.91	0.86
81/ 1/ 8	2444612.5	-9.50821	-0.67062	0.13369	0.05158	-8.93514	-3.69721	9.53276	9.67000	184.03	0.80
81/ 1/12	2444616.5	-9.50806	-0.69126	0.12515	0.07426	-8.93351	-3.69752	9.53398	9.66875	184.16	0.75
81/ 1/16	2444620.5	-9.50786	-0.71189	0.11661	0.09693	-8.93183	-3.69780	9.53519	9.66751	184.28	0.70
81/ 1/20	2444624.5	-9.50761	-0.73252	0.10807	0.11959	-8.93010	-3.69807	9.53640	9.66626	184.41	0.65
81/ 1/24	2444628.5	-9.50731	-0.75315	0.09952	0.14224	-8.92832	-3.69831	9.53761	9.66502	184.53	0.60
81/ 1/28	2444632.5	-9.50696	-0.77378	0.09098	0.16489	-8.92649	-3.69854	9.53883	9.66378	184.65	0.55
81/ 2/ 1	2444636.5	-9.50655	-0.79440	0.08244	0.18752	-8.92462	-3.69874	9.54004	9.66254	184.78	0.50
81/ 2/ 5	2444640.5	-9.50609	-0.81501	0.07389	0.21014	-8.92270	-3.69893	9.54125	9.66130	184.90	0.44
81/ 2/ 9	2444644.5	-9.50558	-0.83562	0.06534	0.23275	-8.92073	-3.69909	9.54246	9.66006	185.02	0.39
81/ 2/13	2444648.5	-9.50501	-0.85623	0.05680	0.25536	-8.91871	-3.69924	9.54367	9.65883	185.15	0.34
81/ 2/17	2444652.5	-9.50440	-0.87683	0.04825	0.27795	-8.91664	-3.69936	9.54488	9.65759	185.27	0.29
81/ 2/21	2444656.5	-9.50373	-0.89743	0.03971	0.30054	-8.91453	-3.69946	9.54609	9.65635	185.39	0.24
81/ 2/25	2444660.5	-9.50301	-0.91802	0.03116	0.32311	-8.91236	-3.69955	9.54730	9.65512	185.52	0.19
81/ 3/ 1	2444664.5	-9.50224	-0.93860	0.02261	0.34568	-8.91015	-3.69961	9.54851	9.65388	185.64	0.14
81/ 3/ 5	2444668.5	-9.50141	-0.95918	0.01407	0.36823	-8.90789	-3.69965	9.54971	9.65265	185.76	0.08
81/ 3/ 9	2444672.5	-9.50053	-0.97976	0.00552	0.39077	-8.90559	-3.69967	9.55092	9.65141	185.89	0.03
81/ 3/13	2444676.5	-9.49961	-1.00033	-0.00303	0.41330	-8.90323	-3.69967	9.55213	9.65018	186.01	-0.02
81/ 3/17	2444680.5	-9.49863	-1.02090	-0.01157	0.43581	-8.90083	-3.69965	9.55334	9.64895	186.13	-0.07
81/ 3/21	2444684.5	-9.49759	-1.04146	-0.02012	0.45832	-8.89838	-3.69962	9.55454	9.64772	186.26	-0.12
81/ 3/25	2444688.5	-9.49651	-1.06201	-0.02867	0.48081	-8.89589	-3.69956	9.55575	9.64649	186.38	-0.17
81/ 3/29	2444692.5	-9.49537	-1.08256	-0.03721	0.50330	-8.89334	-3.69948	9.55695	9.64526	186.50	-0.22
81/ 4/ 2	2444696.5	-9.49418	-1.10310	-0.04576	0.52577	-8.89075	-3.69938	9.55816	9.64403	186.63	-0.27
81/ 4/ 6	2444700.5	-9.49294	-1.12364	-0.05431	0.54823	-8.88812	-3.69926	9.55936	9.64281	186.75	-0.33
81/ 4/10	2444704.5	-9.49165	-1.14417	-0.06285	0.57068	-8.88543	-3.69912	9.56057	9.64158	186.87	-0.38
81/ 4/14	2444708.5	-9.49031	-1.16469	-0.07140	0.59311	-8.88270	-3.69897	9.56177	9.64036	187.00	-0.43

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — SATURN

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81/ 4/18	2444712.5	-9.48891	-1.18521	-0.07994	0.61554	-8.87993	-3.69879	9.56298	9.63914	187.12	-0.48
81/ 4/22	2444716.5	-9.48746	-1.20572	-0.08849	0.63795	-8.87711	-3.69859	9.56418	9.63792	187.24	-0.53
81/ 4/26	2444720.5	-9.48596	-1.22622	-0.09703	0.66035	-8.87424	-3.69838	9.56538	9.63671	187.37	-0.58
81/ 4/30	2444724.5	-9.48441	-1.24672	-0.10557	0.68274	-8.87133	-3.69814	9.56658	9.63550	187.49	-0.63
81/ 5/ 4	2444728.5	-9.48281	-1.26721	-0.11412	0.70512	-8.86837	-3.69789	9.56778	9.63429	187.61	-0.68
81/ 5/ 8	2444732.5	-9.48115	-1.28770	-0.12266	0.72749	-8.86536	-3.69761	9.56898	9.63308	187.73	-0.73
81/ 5/12	2444736.5	-9.47945	-1.30817	-0.13120	0.74984	-8.86231	-3.69732	9.57018	9.63187	187.86	-0.79
81/ 5/16	2444740.5	-9.47769	-1.32864	-0.13974	0.77219	-8.85921	-3.69701	9.57138	9.63066	187.98	-0.84
81/ 5/20	2444744.5	-9.47588	-1.34911	-0.14828	0.79453	-8.85606	-3.69667	9.57258	9.62946	188.10	-0.89
81/ 5/24	2444748.5	-9.47402	-1.36956	-0.15682	0.81685	-8.85286	-3.69632	9.57378	9.62825	188.23	-0.94
81/ 5/28	2444752.5	-9.47210	-1.39001	-0.16536	0.83916	-8.84962	-3.69594	9.57498	9.62704	188.35	-0.99
81/ 6/ 1	2444756.5	-9.47014	-1.41045	-0.17390	0.86146	-8.84633	-3.69555	9.57618	9.62584	188.47	-1.04
81/ 6/ 5	2444760.5	-9.46812	-1.43088	-0.18244	0.88375	-8.84299	-3.69513	9.57737	9.62463	188.59	-1.09
81/ 6/ 9	2444764.5	-9.46606	-1.45131	-0.19097	0.90602	-8.83960	-3.69470	9.57857	9.62342	188.72	-1.14
81/ 6/13	2444768.5	-9.46394	-1.47172	-0.19951	0.92828	-8.83617	-3.69424	9.57976	9.62222	188.84	-1.19
81/ 6/17	2444772.5	-9.46177	-1.49213	-0.20804	0.95053	-8.83269	-3.69377	9.58096	9.62101	188.96	-1.24
81/ 6/21	2444776.5	-9.45955	-1.51253	-0.21657	0.97276	-8.82917	-3.69327	9.58215	9.61981	189.08	-1.30
81/ 6/25	2444780.5	-9.45727	-1.53293	-0.22511	0.99498	-8.82559	-3.69275	9.58335	9.61860	189.21	-1.35
81/ 6/29	2444784.5	-9.45495	-1.55331	-0.23364	1.01719	-8.82197	-3.69222	9.58454	9.61740	189.33	-1.40
81/ 7/ 3	2444788.5	-9.45257	-1.57369	-0.24216	1.03938	-8.81830	-3.69166	9.58573	9.61619	189.45	-1.45
81/ 7/ 7	2444792.5	-9.45015	-1.59406	-0.25069	1.06156	-8.81459	-3.69109	9.58692	9.61499	189.57	-1.50
81/ 7/11	2444796.5	-9.44767	-1.61441	-0.25922	1.08372	-8.81083	-3.69049	9.58812	9.61378	189.70	-1.55
81/ 7/15	2444800.5	-9.44514	-1.63476	-0.26774	1.10587	-8.80702	-3.68988	9.58931	9.61258	189.82	-1.60
81/ 7/19	2444804.5	-9.44256	-1.65511	-0.27627	1.12800	-8.80316	-3.68924	9.59050	9.61138	189.94	-1.65
81/ 7/23	2444808.5	-9.43993	-1.67544	-0.28479	1.15012	-8.79926	-3.68859	9.59169	9.61018	190.06	-1.70
81/ 7/27	2444812.5	-9.43724	-1.69576	-0.29331	1.17222	-8.79532	-3.68791	9.59287	9.60898	190.19	-1.75
81/ 7/31	2444816.5	-9.43451	-1.71608	-0.30183	1.19431	-8.79133	-3.68722	9.59406	9.60778	190.31	-1.80
81/ 8/ 4	2444820.5	-9.43173	-1.73638	-0.31035	1.21638	-8.78729	-3.68650	9.59525	9.60658	190.43	-1.85
81/ 8/ 8	2444824.5	-9.42889	-1.75668	-0.31886	1.23844	-8.78320	-3.68577	9.59644	9.60538	190.55	-1.90
81/ 8/12	2444828.5	-9.42600	-1.77696	-0.32738	1.26048	-8.77907	-3.68502	9.59762	9.60418	190.68	-1.95
81/ 8/16	2444832.5	-9.42307	-1.79724	-0.33589	1.28251	-8.77489	-3.68424	9.59881	9.60298	190.80	-2.01
81/ 8/20	2444836.5	-9.42008	-1.81750	-0.34440	1.30453	-8.77067	-3.68345	9.59999	9.60178	190.92	-2.06
81/ 8/24	2444840.5	-9.41704	-1.83776	-0.35291	1.32652	-8.76640	-3.68264	9.60117	9.60058	191.04	-2.11
81/ 8/28	2444844.5	-9.41395	-1.85801	-0.36141	1.34850	-8.76208	-3.68180	9.60236	9.59938	191.16	-2.16
81/ 9/ 1	2444848.5	-9.41081	-1.87825	-0.36992	1.37046	-8.75771	-3.68095	9.60354	9.59818	191.29	-2.21
81/ 9/ 5	2444852.5	-9.40762	-1.89847	-0.37842	1.39241	-8.75331	-3.68008	9.60472	9.59698	191.41	-2.26
81/ 9/ 9	2444856.5	-9.40438	-1.91869	-0.38692	1.41433	-8.74885	-3.67918	9.60590	9.59579	191.53	-2.31
81/ 9/13	2444860.5	-9.40108	-1.93890	-0.39542	1.43624	-8.74435	-3.67827	9.60708	9.59459	191.65	-2.36
81/ 9/17	2444864.5	-9.39774	-1.95909	-0.40392	1.45813	-8.73981	-3.67734	9.60826	9.59340	191.78	-2.41
81/ 9/21	2444868.5	-9.39435	-1.97928	-0.41241	1.48001	-8.73522	-3.67639	9.60944	9.59220	191.90	-2.46
81/ 9/25	2444872.5	-9.39090	-1.99945	-0.42090	1.50187	-8.73059	-3.67542	9.61062	9.59101	192.02	-2.51
81/ 9/29	2444876.5	-9.38741	-2.01961	-0.42939	1.52371	-8.72591	-3.67443	9.61180	9.58982	192.14	-2.56
81/10/ 3	2444880.5	-9.38386	-2.03977	-0.43788	1.54553	-8.72119	-3.67342	9.61297	9.58863	192.26	-2.61
81/10/ 7	2444884.5	-9.38027	-2.05991	-0.44636	1.56733	-8.71642	-3.67240	9.61415	9.58744	192.39	-2.66
81/10/11	2444888.5	-9.37662	-2.08004	-0.45485	1.58912	-8.71162	-3.67135	9.61532	9.58626	192.51	-2.71

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81/10/15	2444892.5	-9.37292	-2.10016	-0.46333	1.61088	-8.70676	-3.67029	9.61650	9.58508	192.63	-2.76
81/10/19	2444896.5	-9.36918	-2.12027	-0.47181	1.63263	-8.70187	-3.66921	9.61767	9.58390	192.75	-2.81
81/10/23	2444900.5	-9.36538	-2.14037	-0.48028	1.65437	-8.69693	-3.66811	9.61885	9.58272	192.87	-2.86
81/10/27	2444904.5	-9.36153	-2.16045	-0.48875	1.67608	-8.69195	-3.66699	9.62002	9.58155	193.00	-2.91
81/10/31	2444908.5	-9.35764	-2.18053	-0.49722	1.69779	-8.68693	-3.66585	9.62119	9.58038	193.12	-2.96
81/11/ 4	2444912.5	-9.35369	-2.20059	-0.50569	1.71947	-8.68187	-3.66469	9.62236	9.57922	193.24	-3.01
81/11/ 8	2444916.5	-9.34969	-2.22064	-0.51416	1.74114	-8.67676	-3.66352	9.62353	9.57805	193.36	-3.06
81/11/12	2444920.5	-9.34564	-2.24068	-0.52262	1.76279	-8.67160	-3.66233	9.62470	9.57689	193.48	-3.11
81/11/16	2444924.5	-9.34155	-2.26070	-0.53108	1.78442	-8.66640	-3.66111	9.62587	9.57572	193.60	-3.16
81/11/20	2444928.5	-9.33740	-2.28072	-0.53953	1.80604	-8.66116	-3.65988	9.62704	9.57456	193.73	-3.21
81/11/24	2444932.5	-9.33320	-2.30072	-0.54799	1.82764	-8.65588	-3.65863	9.62820	9.57341	193.85	-3.26
81/11/28	2444936.5	-9.32896	-2.32071	-0.55644	1.84922	-8.65055	-3.65736	9.62937	9.57225	193.97	-3.31
81/12/ 2	2444940.5	-9.32466	-2.34069	-0.56488	1.87079	-8.64518	-3.65608	9.63053	9.57109	194.09	-3.36
81/12/ 6	2444944.5	-9.32031	-2.36066	-0.57333	1.89234	-8.63976	-3.65477	9.63170	9.56994	194.21	-3.41
81/12/10	2444948.5	-9.31592	-2.38061	-0.58177	1.91387	-8.63431	-3.65345	9.63286	9.56879	194.33	-3.46
81/12/14	2444952.5	-9.31147	-2.40055	-0.59021	1.93538	-8.62880	-3.65210	9.63403	9.56764	194.46	-3.51
81/12/18	2444956.5	-9.30697	-2.42048	-0.59865	1.95687	-8.62326	-3.65074	9.63519	9.56650	194.58	-3.56
81/12/22	2444960.5	-9.30243	-2.44039	-0.60708	1.97835	-8.61767	-3.64936	9.63635	9.56535	194.70	-3.61
81/12/26	2444964.5	-9.29783	-2.46029	-0.61551	1.99981	-8.61204	-3.64796	9.63751	9.56421	194.82	-3.66
81/12/30	2444968.5	-9.29319	-2.48018	-0.62393	2.02125	-8.60637	-3.64654	9.63867	9.56307	194.94	-3.71
82/ 1/ 3	2444972.5	-9.28849	-2.50006	-0.63235	2.04268	-8.60065	-3.64510	9.63983	9.56193	195.06	-3.76
82/ 1/ 7	2444976.5	-9.28375	-2.51992	-0.64077	2.06408	-8.59489	-3.64365	9.64099	9.56079	195.19	-3.81
82/ 1/11	2444980.5	-9.27896	-2.53977	-0.64919	2.08547	-8.58908	-3.64217	9.64214	9.55965	195.31	-3.86
82/ 1/15	2444984.5	-9.27411	-2.55961	-0.65760	2.10684	-8.58323	-3.64068	9.64330	9.55852	195.43	-3.91
82/ 1/19	2444988.5	-9.26922	-2.57943	-0.66601	2.12820	-8.57734	-3.63917	9.64445	9.55738	195.55	-3.96
82/ 1/23	2444992.5	-9.26428	-2.59924	-0.67442	2.14953	-8.57141	-3.63764	9.64561	9.55625	195.67	-4.01
82/ 1/27	2444996.5	-9.25929	-2.61903	-0.68282	2.17085	-8.56543	-3.63609	9.64676	9.55512	195.79	-4.06
82/ 1/31	2445000.5	-9.25425	-2.63881	-0.69122	2.19216	-8.55941	-3.63452	9.64792	9.55399	195.92	-4.11
82/ 2/ 4	2445004.5	-9.24916	-2.65858	-0.69961	2.21344	-8.55334	-3.63294	9.64907	9.55286	196.04	-4.16
82/ 2/ 8	2445008.5	-9.24402	-2.67833	-0.70800	2.23471	-8.54723	-3.63133	9.65022	9.55173	196.16	-4.21
82/ 2/12	2445012.5	-9.23884	-2.69807	-0.71639	2.25595	-8.54107	-3.62970	9.65137	9.55060	196.28	-4.26
82/ 2/16	2445016.5	-9.23360	-2.71779	-0.72477	2.27718	-8.53487	-3.62806	9.65252	9.54947	196.40	-4.31
82/ 2/20	2445020.5	-9.22832	-2.73750	-0.73315	2.29839	-8.52862	-3.62639	9.65367	9.54833	196.52	-4.36
82/ 2/24	2445024.5	-9.22298	-2.75720	-0.74153	2.31958	-8.52233	-3.62471	9.65481	9.54720	196.64	-4.40
82/ 2/28	2445028.5	-9.21760	-2.77688	-0.74990	2.34075	-8.51599	-3.62300	9.65596	9.54607	196.77	-4.45
82/ 3/ 4	2445032.5	-9.21217	-2.79655	-0.75827	2.36189	-8.50961	-3.62128	9.65710	9.54493	196.89	-4.50
82/ 3/ 8	2445036.5	-9.20669	-2.81620	-0.76663	2.38302	-8.50319	-3.61954	9.65825	9.54380	197.01	-4.55
82/ 3/12	2445040.5	-9.20116	-2.83583	-0.77499	2.40412	-8.49672	-3.61778	9.65939	9.54266	197.13	-4.60
82/ 3/16	2445044.5	-9.19558	-2.85545	-0.78335	2.42521	-8.49021	-3.61599	9.66053	9.54153	197.25	-4.65
82/ 3/20	2445048.5	-9.18995	-2.87506	-0.79170	2.44627	-8.48366	-3.61419	9.66167	9.54039	197.37	-4.70
82/ 3/24	2445052.5	-9.18428	-2.89465	-0.80004	2.46731	-8.47706	-3.61238	9.66282	9.53925	197.49	-4.75
82/ 3/28	2445056.5	-9.17855	-2.91423	-0.80839	2.48833	-8.47041	-3.61054	9.66395	9.53812	197.61	-4.80
82/ 4/ 1	2445060.5	-9.17278	-2.93379	-0.81673	2.50933	-8.46373	-3.60868	9.66509	9.53698	197.74	-4.85
82/ 4/ 5	2445064.5	-9.16696	-2.95333	-0.82506	2.53030	-8.45700	-3.60681	9.66623	9.53584	197.86	-4.90
82/ 4/ 9	2445068.5	-9.16109	-2.97286	-0.83339	2.55125	-8.45023	-3.60491	9.66737	9.53471	197.98	-4.95

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82/ 4/13	2445072.5	-9.15517	-2.99238	-0.84172	2.57218	-8.44341	-3.60300	9.66850	9.53357	198.10	-4.99
82/ 4/17	2445076.5	-9.14920	-3.01187	-0.85004	2.59308	-8.43656	-3.60107	9.66964	9.53244	198.22	-5.04
82/ 4/21	2445080.5	-9.14319	-3.03136	-0.85836	2.61397	-8.42966	-3.59912	9.67077	9.53130	198.34	-5.09
82/ 4/25	2445084.5	-9.13713	-3.05082	-0.86667	2.63483	-8.42273	-3.59715	9.67190	9.53017	198.46	-5.14
82/ 4/29	2445088.5	-9.13102	-3.07027	-0.87498	2.65567	-8.41575	-3.59517	9.67303	9.52904	198.59	-5.19
82/ 5/ 3	2445092.5	-9.12486	-3.08971	-0.88328	2.67649	-8.40872	-3.59316	9.67416	9.52791	198.71	-5.24
82/ 5/ 7	2445096.5	-9.11865	-3.10912	-0.89158	2.69729	-8.40165	-3.59114	9.67529	9.52678	198.83	-5.29
82/ 5/11	2445100.5	-9.11239	-3.12852	-0.89987	2.71806	-8.39455	-3.58910	9.67642	9.52564	198.95	-5.34
82/ 5/15	2445104.5	-9.10609	-3.14791	-0.90816	2.73881	-8.38740	-3.58704	9.67755	9.52451	199.07	-5.38
82/ 5/19	2445108.5	-9.09974	-3.16728	-0.91644	2.75954	-8.38020	-3.58496	9.67868	9.52338	199.19	-5.43
82/ 5/23	2445112.5	-9.09334	-3.18663	-0.92472	2.78024	-8.37297	-3.58286	9.67980	9.52225	199.31	-5.48
82/ 5/27	2445116.5	-9.08689	-3.20596	-0.93300	2.80092	-8.36570	-3.58075	9.68093	9.52112	199.43	-5.53
82/ 5/31	2445120.5	-9.08040	-3.22528	-0.94127	2.82157	-8.35838	-3.57862	9.68205	9.51999	199.55	-5.58
82/ 6/ 4	2445124.5	-9.07386	-3.24458	-0.94953	2.84220	-8.35102	-3.57647	9.68317	9.51887	199.68	-5.63
82/ 6/ 8	2445128.5	-9.06727	-3.26387	-0.95779	2.86281	-8.34363	-3.57430	9.68429	9.51774	199.80	-5.68
82/ 6/12	2445132.5	-9.06063	-3.28313	-0.96605	2.88339	-8.33619	-3.57211	9.68541	9.51662	199.92	-5.72
82/ 6/16	2445136.5	-9.05394	-3.30238	-0.97430	2.90395	-8.32871	-3.56991	9.68653	9.51550	200.04	-5.77
82/ 6/20	2445140.5	-9.04721	-3.32161	-0.98254	2.92449	-8.32119	-3.56769	9.68765	9.51437	200.16	-5.82
82/ 6/24	2445144.5	-9.04043	-3.34083	-0.99078	2.94500	-8.31364	-3.56545	9.68877	9.51326	200.28	-5.87
82/ 6/28	2445148.5	-9.03361	-3.36003	-0.99902	2.96549	-8.30604	-3.56320	9.68988	9.51214	200.40	-5.92
82/ 7/ 2	2445152.5	-9.02673	-3.37920	-1.00724	2.98595	-8.29840	-3.56092	9.69100	9.51102	200.52	-5.97
82/ 7/ 6	2445156.5	-9.01981	-3.39837	-1.01547	3.00640	-8.29073	-3.55863	9.69211	9.50991	200.64	-6.01
82/ 7/10	2445160.5	-9.01284	-3.41751	-1.02369	3.02681	-8.28301	-3.55632	9.69322	9.50880	200.77	-6.06
82/ 7/14	2445164.5	-9.00582	-3.43664	-1.03190	3.04721	-8.27526	-3.55400	9.69434	9.50770	200.89	-6.11
82/ 7/18	2445168.5	-8.99876	-3.45575	-1.04011	3.06758	-8.26747	-3.55166	9.69545	9.50660	201.01	-6.16
82/ 7/22	2445172.5	-8.99165	-3.47484	-1.04831	3.08793	-8.25964	-3.54930	9.69656	9.50550	201.13	-6.21
82/ 7/26	2445176.5	-8.98449	-3.49391	-1.05651	3.10826	-8.25176	-3.54693	9.69767	9.50440	201.25	-6.25
82/ 7/30	2445180.5	-8.97729	-3.51296	-1.06470	3.12857	-8.24385	-3.54453	9.69877	9.50330	201.37	-6.30
82/ 8/ 3	2445184.5	-8.97004	-3.53200	-1.07288	3.14885	-8.23590	-3.54212	9.69988	9.50221	201.49	-6.35
82/ 8/ 7	2445188.5	-8.96274	-3.55101	-1.08106	3.16911	-8.22791	-3.53969	9.70099	9.50111	201.61	-6.40
82/ 8/11	2445192.5	-8.95540	-3.57001	-1.08924	3.18935	-8.21987	-3.53725	9.70209	9.50002	201.73	-6.45
82/ 8/15	2445196.5	-8.94801	-3.58899	-1.09741	3.20956	-8.21180	-3.53478	9.70319	9.49893	201.86	-6.49
82/ 8/19	2445200.5	-8.94057	-3.60795	-1.10557	3.22975	-8.20369	-3.53230	9.70430	9.49784	201.98	-6.54
82/ 8/23	2445204.5	-8.93308	-3.62690	-1.11373	3.24992	-8.19553	-3.52980	9.70540	9.49675	202.10	-6.59
82/ 8/27	2445208.5	-8.92555	-3.64582	-1.12188	3.27006	-8.18734	-3.52728	9.70650	9.49566	202.22	-6.64
82/ 8/31	2445212.5	-8.91797	-3.66473	-1.13002	3.29018	-8.17911	-3.52475	9.70760	9.49457	202.34	-6.68
82/ 9/ 4	2445216.5	-8.91035	-3.68361	-1.13816	3.31028	-8.17083	-3.52220	9.70869	9.49349	202.46	-6.73
82/ 9/ 8	2445220.5	-8.90268	-3.70248	-1.14630	3.33035	-8.16252	-3.51963	9.70979	9.49240	202.58	-6.78
82/ 9/12	2445224.5	-8.89496	-3.72132	-1.15443	3.35039	-8.15416	-3.51704	9.71089	9.49132	202.70	-6.83
82/ 9/16	2445228.5	-8.88720	-3.74015	-1.16255	3.37042	-8.14577	-3.51444	9.71198	9.49023	202.82	-6.87
82/ 9/20	2445232.5	-8.87939	-3.75896	-1.17066	3.39041	-8.13734	-3.51181	9.71307	9.48915	202.94	-6.92
82/ 9/24	2445236.5	-8.87153	-3.77775	-1.17877	3.41039	-8.12887	-3.50917	9.71417	9.48807	203.07	-6.97
82/ 9/28	2445240.5	-8.86363	-3.79652	-1.18688	3.43033	-8.12035	-3.50652	9.71526	9.48699	203.19	-7.02
82/10/ 2	2445244.5	-8.85569	-3.81527	-1.19498	3.45026	-8.11180	-3.50384	9.71635	9.48591	203.31	-7.06
82/10/ 6	2445248.5	-8.84769	-3.83400	-1.20307	3.47015	-8.10321	-3.50115	9.71744	9.48483	203.43	-7.11

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82/10/10	2445252.5	-8.83965	-3.85271	-1.21115	3.49003	-8.09458	-3.49844	9.71852	9.48376	203.55	-7.16
82/10/14	2445256.5	-8.83157	-3.87140	-1.21923	3.50987	-8.08591	-3.49572	9.71961	9.48268	203.67	-7.21
82/10/18	2445260.5	-8.82344	-3.89007	-1.22730	3.52970	-8.07721	-3.49297	9.72069	9.48161	203.79	-7.25
82/10/22	2445264.5	-8.81526	-3.90872	-1.23537	3.54950	-8.06846	-3.49021	9.72178	9.48054	203.91	-7.30
82/10/26	2445268.5	-8.80704	-3.92735	-1.24343	3.56928	-8.05967	-3.48743	9.72286	9.47946	204.03	-7.35
82/10/30	2445272.5	-8.79877	-3.94596	-1.25148	3.58903	-8.05084	-3.48464	9.72394	9.47839	204.15	-7.39
82/11/ 3	2445276.5	-8.79045	-3.96455	-1.25953	3.60875	-8.04197	-3.48182	9.72502	9.47732	204.28	-7.44
82/11/ 7	2445280.5	-8.78209	-3.98311	-1.26757	3.62845	-8.03307	-3.47899	9.72610	9.47624	204.40	-7.49
82/11/11	2445284.5	-8.77369	-4.00166	-1.27560	3.64812	-8.02412	-3.47614	9.72718	9.47517	204.52	-7.54
82/11/15	2445288.5	-8.76524	-4.02019	-1.28363	3.66776	-8.01513	-3.47327	9.72826	9.47410	204.64	-7.58
82/11/19	2445292.5	-8.75674	-4.03869	-1.29165	3.68738	-8.00611	-3.47039	9.72933	9.47302	204.76	-7.63
82/11/23	2445296.5	-8.74820	-4.05718	-1.29967	3.70697	-7.99704	-3.46749	9.73041	9.47195	204.88	-7.68
82/11/27	2445300.5	-8.73961	-4.07564	-1.30767	3.72653	-7.98794	-3.46457	9.73148	9.47088	205.00	-7.72
82/12/ 1	2445304.5	-8.73098	-4.09409	-1.31567	3.74607	-7.97880	-3.46163	9.73255	9.46981	205.12	-7.77
82/12/ 5	2445308.5	-8.72231	-4.11251	-1.32367	3.76558	-7.96962	-3.45868	9.73362	9.46874	205.24	-7.82
82/12/ 9	2445312.5	-8.71358	-4.13091	-1.33165	3.78506	-7.96041	-3.45571	9.73469	9.46767	205.36	-7.86
82/12/13	2445316.5	-8.70482	-4.14929	-1.33963	3.80451	-7.95115	-3.45273	9.73576	9.46660	205.49	-7.91
82/12/17	2445320.5	-8.69601	-4.16764	-1.34761	3.82394	-7.94186	-3.44972	9.73683	9.46553	205.61	-7.96
82/12/21	2445324.5	-8.68715	-4.18598	-1.35557	3.84334	-7.93253	-3.44670	9.73789	9.46446	205.73	-8.00
82/12/25	2445328.5	-8.67825	-4.20430	-1.36353	3.86271	-7.92317	-3.44367	9.73896	9.46340	205.85	-8.05
82/12/29	2445332.5	-8.66930	-4.22259	-1.37148	3.88206	-7.91376	-3.44061	9.74002	9.46234	205.97	-8.09
83/ 1/ 2	2445336.5	-8.66031	-4.24086	-1.37943	3.90137	-7.90432	-3.43754	9.74108	9.46128	206.09	-8.14
83/ 1/ 6	2445340.5	-8.65128	-4.25911	-1.38737	3.92066	-7.89485	-3.43446	9.74215	9.46022	206.21	-8.19
83/ 1/10	2445344.5	-8.64220	-4.27734	-1.39530	3.93992	-7.88534	-3.43136	9.74320	9.45916	206.33	-8.23
83/ 1/14	2445348.5	-8.63307	-4.29554	-1.40322	3.95916	-7.87579	-3.42824	9.74426	9.45811	206.45	-8.28
83/ 1/18	2445352.5	-8.62390	-4.31373	-1.41114	3.97837	-7.86620	-3.42511	9.74532	9.45706	206.57	-8.33
83/ 1/22	2445356.5	-8.61469	-4.33189	-1.41904	3.99756	-7.85658	-3.42196	9.74638	9.45601	206.70	-8.37
83/ 1/26	2445360.5	-8.60543	-4.35003	-1.42695	4.01672	-7.84692	-3.41879	9.74743	9.45496	206.82	-8.42
83/ 1/30	2445364.5	-8.59613	-4.36814	-1.43484	4.03585	-7.83722	-3.41561	9.74848	9.45392	206.94	-8.46
83/ 2/ 3	2445368.5	-8.58679	-4.38624	-1.44273	4.05495	-7.82749	-3.41241	9.74954	9.45287	207.06	-8.51
83/ 2/ 7	2445372.5	-8.57740	-4.40431	-1.45061	4.07403	-7.81772	-3.40919	9.75059	9.45183	207.18	-8.56
83/ 2/11	2445376.5	-8.56796	-4.42236	-1.45848	4.09308	-7.80791	-3.40596	9.75164	9.45078	207.30	-8.60
83/ 2/15	2445380.5	-8.55849	-4.44038	-1.46634	4.11210	-7.79807	-3.40271	9.75268	9.44974	207.42	-8.65
83/ 2/19	2445384.5	-8.54896	-4.45839	-1.47420	4.13109	-7.78819	-3.39944	9.75373	9.44870	207.54	-8.69
83/ 2/23	2445388.5	-8.53940	-4.47637	-1.48205	4.15006	-7.77827	-3.39616	9.75478	9.44767	207.66	-8.74
83/ 2/27	2445392.5	-8.52979	-4.49433	-1.48989	4.16900	-7.76832	-3.39286	9.75582	9.44663	207.78	-8.78
83/ 3/ 3	2445396.5	-8.52014	-4.51226	-1.49773	4.18791	-7.75833	-3.38955	9.75686	9.44560	207.91	-8.83
83/ 3/ 7	2445400.5	-8.51044	-4.53017	-1.50555	4.20680	-7.74830	-3.38622	9.75791	9.44457	208.03	-8.88
83/ 3/11	2445404.5	-8.50070	-4.54806	-1.51337	4.22566	-7.73824	-3.38287	9.75895	9.44353	208.15	-8.92
83/ 3/15	2445408.5	-8.49092	-4.56593	-1.52118	4.24449	-7.72814	-3.37951	9.75999	9.44251	208.27	-8.97
83/ 3/19	2445412.5	-8.48109	-4.58377	-1.52899	4.26329	-7.71801	-3.37613	9.76102	9.44148	208.39	-9.01
83/ 3/23	2445416.5	-8.47122	-4.60159	-1.53678	4.28206	-7.70784	-3.37274	9.76206	9.44045	208.51	-9.06
83/ 3/27	2445420.5	-8.46130	-4.61938	-1.54457	4.30081	-7.69763	-3.36933	9.76310	9.43943	208.63	-9.10
83/ 3/31	2445424.5	-8.45135	-4.63715	-1.55235	4.31953	-7.68739	-3.36590	9.76413	9.43841	208.75	-9.15
83/ 4/ 4	2445428.5	-8.44135	-4.65490	-1.56012	4.33822	-7.67711	-3.36246	9.76516	9.43739	208.87	-9.19

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — SATURN

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83/ 4/ 8	2445432.5	-8.43130	-4.67262	-1.56789	4.35689	-7.66680	-3.35900	9.76619	9.43637	209.00	-9.24
83/ 4/12	2445436.5	-8.42122	-4.69032	-1.57564	4.37552	-7.65645	-3.35552	9.76722	9.43535	209.12	-9.28
83/ 4/16	2445440.5	-8.41109	-4.70800	-1.58339	4.39414	-7.64606	-3.35203	9.76825	9.43434	209.24	-9.33
83/ 4/20	2445444.5	-8.40091	-4.72565	-1.59113	4.41272	-7.63563	-3.34853	9.76928	9.43333	209.36	-9.37
83/ 4/24	2445448.5	-8.39070	-4.74328	-1.59886	4.43128	-7.62517	-3.34500	9.77030	9.43231	209.48	-9.42
83/ 4/28	2445452.5	-8.38044	-4.76088	-1.60658	4.44981	-7.61467	-3.34146	9.77133	9.43130	209.60	-9.46
83/ 5/ 2	2445456.5	-8.37014	-4.77846	-1.61430	4.46831	-7.60414	-3.33790	9.77235	9.43028	209.72	-9.51
83/ 5/ 6	2445460.5	-8.35979	-4.79601	-1.62201	4.48678	-7.59356	-3.33433	9.77337	9.42927	209.84	-9.55
83/ 5/10	2445464.5	-8.34941	-4.81354	-1.62970	4.50522	-7.58295	-3.33074	9.77439	9.42826	209.96	-9.60
83/ 5/14	2445468.5	-8.33898	-4.83105	-1.63740	4.52364	-7.57230	-3.32713	9.77541	9.42724	210.09	-9.64
83/ 5/18	2445472.5	-8.32851	-4.84853	-1.64508	4.54202	-7.56162	-3.32350	9.77643	9.42623	210.21	-9.69
83/ 5/22	2445476.5	-8.31799	-4.86599	-1.65275	4.56037	-7.55090	-3.31986	9.77744	9.42521	210.33	-9.73
83/ 5/26	2445480.5	-8.30744	-4.88342	-1.66042	4.57869	-7.54014	-3.31621	9.77846	9.42419	210.45	-9.78
83/ 5/30	2445484.5	-8.29684	-4.90082	-1.66807	4.59699	-7.52935	-3.31253	9.77947	9.42318	210.57	-9.82
83/ 6/ 3	2445488.5	-8.28620	-4.91821	-1.67572	4.61525	-7.51852	-3.30884	9.78048	9.42216	210.69	-9.87
83/ 6/ 7	2445492.5	-8.27551	-4.93556	-1.68336	4.63348	-7.50766	-3.30514	9.78149	9.42115	210.81	-9.91
83/ 6/11	2445496.5	-8.26479	-4.95289	-1.69099	4.65168	-7.49676	-3.30142	9.78250	9.42013	210.93	-9.95
83/ 6/15	2445500.5	-8.25402	-4.97020	-1.69861	4.66985	-7.48582	-3.29768	9.78351	9.41911	211.05	-10.00
83/ 6/19	2445504.5	-8.24321	-4.98748	-1.70623	4.68799	-7.47485	-3.29392	9.78452	9.41810	211.18	-10.04
83/ 6/23	2445508.5	-8.23236	-5.00474	-1.71383	4.70610	-7.46384	-3.29015	9.78552	9.41708	211.30	-10.09
83/ 6/27	2445512.5	-8.22147	-5.02197	-1.72143	4.72417	-7.45280	-3.28637	9.78652	9.41607	211.42	-10.13
83/ 7/ 1	2445516.5	-8.21053	-5.03917	-1.72902	4.74222	-7.44173	-3.28257	9.78752	9.41505	211.54	-10.18
83/ 7/ 5	2445520.5	-8.19956	-5.05635	-1.73660	4.76023	-7.43062	-3.27875	9.78852	9.41404	211.66	-10.22
83/ 7/ 9	2445524.5	-8.18854	-5.07350	-1.74417	4.77821	-7.41948	-3.27492	9.78952	9.41303	211.78	-10.26
83/ 7/13	2445528.5	-8.17748	-5.09063	-1.75173	4.79617	-7.40830	-3.27108	9.79052	9.41202	211.90	-10.31
83/ 7/17	2445532.5	-8.16638	-5.10773	-1.75928	4.81409	-7.39709	-3.26721	9.79152	9.41101	212.02	-10.35
83/ 7/21	2445536.5	-8.15524	-5.12481	-1.76682	4.83198	-7.38585	-3.26334	9.79251	9.41000	212.15	-10.39
83/ 7/25	2445540.5	-8.14406	-5.14186	-1.77436	4.84984	-7.37456	-3.25944	9.79350	9.40899	212.27	-10.44
83/ 7/29	2445544.5	-8.13283	-5.15888	-1.78188	4.86767	-7.36325	-3.25553	9.79449	9.40798	212.39	-10.48
83/ 8/ 2	2445548.5	-8.12156	-5.17588	-1.78940	4.88546	-7.35190	-3.25161	9.79548	9.40697	212.51	-10.53
83/ 8/ 6	2445552.5	-8.11026	-5.19285	-1.79691	4.90322	-7.34052	-3.24767	9.79647	9.40596	212.63	-10.57
83/ 8/10	2445556.5	-8.09891	-5.20979	-1.80441	4.92095	-7.32910	-3.24371	9.79746	9.40496	212.75	-10.61
83/ 8/14	2445560.5	-8.08752	-5.22671	-1.81189	4.93865	-7.31765	-3.23974	9.79844	9.40395	212.87	-10.66
83/ 8/18	2445564.5	-8.07609	-5.24360	-1.81937	4.95632	-7.30617	-3.23576	9.79943	9.40295	212.99	-10.70
83/ 8/22	2445568.5	-8.06462	-5.26047	-1.82684	4.97395	-7.29466	-3.23176	9.80041	9.40194	213.12	-10.74
83/ 8/26	2445572.5	-8.05311	-5.27731	-1.83431	4.99156	-7.28311	-3.22774	9.80139	9.40094	213.24	-10.79
83/ 8/30	2445576.5	-8.04156	-5.29412	-1.84176	5.00913	-7.27154	-3.22371	9.80237	9.39994	213.36	-10.83
83/ 9/ 3	2445580.5	-8.02997	-5.31091	-1.84920	5.02667	-7.25993	-3.21967	9.80335	9.39894	213.48	-10.87
83/ 9/ 7	2445584.5	-8.01833	-5.32766	-1.85663	5.04417	-7.24828	-3.21561	9.80432	9.39795	213.60	-10.92
83/ 9/11	2445588.5	-8.00666	-5.34439	-1.86406	5.06165	-7.23661	-3.21154	9.80530	9.39695	213.72	-10.96
83/ 9/15	2445592.5	-7.99495	-5.36110	-1.87147	5.07909	-7.22491	-3.20745	9.80627	9.39596	213.84	-11.00
83/ 9/19	2445596.5	-7.98319	-5.37778	-1.87888	5.09650	-7.21317	-3.20335	9.80724	9.39498	213.97	-11.05
83/ 9/23	2445600.5	-7.97140	-5.39443	-1.88627	5.11388	-7.20140	-3.19923	9.80821	9.39399	214.09	-11.09
83/ 9/27	2445604.5	-7.95957	-5.41105	-1.89366	5.13123	-7.18961	-3.19510	9.80918	9.39301	214.21	-11.13
83/10/ 1	2445608.5	-7.94769	-5.42765	-1.90104	5.14855	-7.17778	-3.19096	9.81015	9.39203	214.33	-11.17

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
83/10/ 5	2445612.5	-7.93578	-5.44421	-1.90840	5.16583	-7.16592	-3.18681	9.81112	9.39106	214.45	-11.22
83/10/ 9	2445616.5	-7.92382	-5.46075	-1.91576	5.18309	-7.15403	-3.18263	9.81208	9.39009	214.57	-11.26
83/10/13	2445620.5	-7.91183	-5.47727	-1.92311	5.20032	-7.14211	-3.17845	9.81305	9.38912	214.69	-11.30
83/10/17	2445624.5	-7.89980	-5.49375	-1.93044	5.21752	-7.13015	-3.17425	9.81401	9.38815	214.82	-11.34
83/10/21	2445628.5	-7.88772	-5.51021	-1.93777	5.23469	-7.11816	-3.17003	9.81497	9.38719	214.94	-11.39
83/10/25	2445632.5	-7.87561	-5.52664	-1.94509	5.25183	-7.10614	-3.16580	9.81593	9.38623	215.06	-11.43
83/10/29	2445636.5	-7.86346	-5.54304	-1.95240	5.26893	-7.09409	-3.16156	9.81688	9.38527	215.18	-11.47
83/11/ 2	2445640.5	-7.85127	-5.55942	-1.95970	5.28601	-7.08201	-3.15730	9.81784	9.38431	215.30	-11.51
83/11/ 6	2445644.5	-7.83903	-5.57577	-1.96699	5.30305	-7.06990	-3.15303	9.81879	9.38336	215.42	-11.56
83/11/10	2445648.5	-7.82676	-5.59208	-1.97427	5.32007	-7.05775	-3.14874	9.81974	9.38240	215.55	-11.60
83/11/14	2445652.5	-7.81445	-5.60837	-1.98154	5.33705	-7.04557	-3.14444	9.82069	9.38145	215.67	-11.64
83/11/18	2445656.5	-7.80211	-5.62464	-1.98880	5.35400	-7.03336	-3.14012	9.82164	9.38050	215.79	-11.68
83/11/22	2445660.5	-7.78972	-5.64087	-1.99604	5.37092	-7.02112	-3.13579	9.82259	9.37955	215.91	-11.72
83/11/26	2445664.5	-7.77729	-5.65708	-2.00328	5.38781	-7.00884	-3.13144	9.82354	9.37861	216.03	-11.77
83/11/30	2445668.5	-7.76482	-5.67325	-2.01051	5.40467	-6.99654	-3.12708	9.82448	9.37766	216.15	-11.81
83/12/ 4	2445672.5	-7.75232	-5.68940	-2.01773	5.42149	-6.98420	-3.12271	9.82543	9.37672	216.27	-11.85
83/12/ 8	2445676.5	-7.73977	-5.70552	-2.02494	5.43829	-6.97183	-3.11832	9.82637	9.37578	216.40	-11.89
83/12/12	2445680.5	-7.72719	-5.72162	-2.03214	5.45505	-6.95943	-3.11391	9.82731	9.37484	216.52	-11.93
83/12/16	2445684.5	-7.71457	-5.73768	-2.03933	5.47178	-6.94700	-3.10949	9.82825	9.37390	216.64	-11.98
83/12/20	2445688.5	-7.70191	-5.75371	-2.04651	5.48848	-6.93453	-3.10506	9.82918	9.37297	216.76	-12.02
83/12/24	2445692.5	-7.68921	-5.76972	-2.05367	5.50514	-6.92204	-3.10061	9.83012	9.37203	216.88	-12.06
83/12/28	2445696.5	-7.67647	-5.78570	-2.06083	5.52178	-6.90951	-3.09615	9.83105	9.37110	217.01	-12.10
84/ 1/ 1	2445700.5	-7.66370	-5.80164	-2.06798	5.53838	-6.89695	-3.09168	9.83198	9.37017	217.13	-12.14
84/ 1/ 5	2445704.5	-7.65089	-5.81756	-2.07512	5.55496	-6.88436	-3.08719	9.83291	9.36924	217.25	-12.18
84/ 1/ 9	2445708.5	-7.63803	-5.83345	-2.08224	5.57150	-6.87174	-3.08268	9.83384	9.36832	217.37	-12.22
84/ 1/13	2445712.5	-7.62514	-5.84931	-2.08936	5.58801	-6.85909	-3.07816	9.83477	9.36739	217.49	-12.27
84/ 1/17	2445716.5	-7.61221	-5.86514	-2.09647	5.60448	-6.84640	-3.07362	9.83569	9.36646	217.61	-12.31
84/ 1/21	2445720.5	-7.59925	-5.88094	-2.10356	5.62093	-6.83368	-3.06907	9.83662	9.36553	217.74	-12.35
84/ 1/25	2445724.5	-7.58624	-5.89672	-2.11065	5.63734	-6.82092	-3.06451	9.83754	9.36460	217.86	-12.39
84/ 1/29	2445728.5	-7.57320	-5.91246	-2.11772	5.65371	-6.80814	-3.05993	9.83846	9.36367	217.98	-12.43
84/ 2/ 2	2445732.5	-7.56012	-5.92817	-2.12478	5.67005	-6.79532	-3.05534	9.83938	9.36275	218.10	-12.47
84/ 2/ 6	2445736.5	-7.54700	-5.94386	-2.13184	5.68636	-6.78248	-3.05073	9.84030	9.36182	218.22	-12.51
84/ 2/10	2445740.5	-7.53385	-5.95951	-2.13888	5.70263	-6.76960	-3.04610	9.84121	9.36089	218.35	-12.55
84/ 2/14	2445744.5	-7.52066	-5.97513	-2.14591	5.71887	-6.75669	-3.04147	9.84213	9.35996	218.47	-12.59
84/ 2/18	2445748.5	-7.50743	-5.99073	-2.15293	5.73508	-6.74375	-3.03681	9.84304	9.35903	218.59	-12.63
84/ 2/22	2445752.5	-7.49416	-6.00629	-2.15994	5.75125	-6.73078	-3.03215	9.84395	9.35811	218.71	-12.67
84/ 2/26	2445756.5	-7.48085	-6.02183	-2.16694	5.76738	-6.71778	-3.02747	9.84486	9.35718	218.83	-12.72
84/ 3/ 1	2445760.5	-7.46751	-6.03733	-2.17393	5.78348	-6.70475	-3.02277	9.84576	9.35625	218.95	-12.76
84/ 3/ 5	2445764.5	-7.45413	-6.05281	-2.18091	5.79955	-6.69169	-3.01806	9.84667	9.35533	219.08	-12.80
84/ 3/ 9	2445768.5	-7.44071	-6.06825	-2.18788	5.81558	-6.67860	-3.01334	9.84757	9.35440	219.20	-12.84
84/ 3/13	2445772.5	-7.42726	-6.08366	-2.19483	5.83157	-6.66548	-3.00861	9.84847	9.35348	219.32	-12.88
84/ 3/17	2445776.5	-7.41377	-6.09905	-2.20178	5.84753	-6.65233	-3.00386	9.84937	9.35255	219.44	-12.92
84/ 3/21	2445780.5	-7.40024	-6.11440	-2.20871	5.86345	-6.63915	-2.99910	9.85027	9.35163	219.56	-12.96
84/ 3/25	2445784.5	-7.38668	-6.12972	-2.21563	5.87934	-6.62595	-2.99432	9.85117	9.35072	219.69	-13.00
84/ 3/29	2445788.5	-7.37308	-6.14501	-2.22254	5.89520	-6.61272	-2.98953	9.85206	9.34980	219.81	-13.04

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — SATURN

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84/ 4/ 2	2445792.5	-7.35944	-6.16027	-2.22945	5.91103	-6.59945	-2.98473	9.85296	9.34889	219.93	-13.08
84/ 4/ 6	2445796.5	-7.34577	-6.17550	-2.23634	5.92682	-6.58616	-2.97992	9.85385	9.34797	220.05	-13.12
84/ 4/10	2445800.5	-7.33206	-6.19070	-2.24321	5.94257	-6.57284	-2.97509	9.85474	9.34706	220.18	-13.16
84/ 4/14	2445804.5	-7.31831	-6.20587	-2.25008	5.95829	-6.55949	-2.97024	9.85563	9.34615	220.30	-13.20
84/ 4/18	2445808.5	-7.30453	-6.22101	-2.25694	5.97398	-6.54611	-2.96539	9.85651	9.34524	220.42	-13.24
84/ 4/22	2445812.5	-7.29071	-6.23612	-2.26378	5.98963	-6.53270	-2.96052	9.85740	9.34433	220.54	-13.28
84/ 4/26	2445816.5	-7.27685	-6.25120	-2.27062	6.00524	-6.51926	-2.95564	9.85828	9.34342	220.66	-13.32
84/ 4/30	2445820.5	-7.26296	-6.26624	-2.27744	6.02082	-6.50580	-2.95074	9.85916	9.34252	220.79	-13.36
84/ 5/ 4	2445824.5	-7.24904	-6.28125	-2.28425	6.03637	-6.49231	-2.94583	9.86004	9.34161	220.91	-13.40
84/ 5/ 8	2445828.5	-7.23507	-6.29624	-2.29105	6.05188	-6.47878	-2.94091	9.86092	9.34071	221.03	-13.43
84/ 5/12	2445832.5	-7.22107	-6.31119	-2.29784	6.06736	-6.46524	-2.93597	9.86180	9.33981	221.15	-13.47
84/ 5/16	2445836.5	-7.20704	-6.32611	-2.30461	6.08280	-6.45166	-2.93102	9.86267	9.33891	221.28	-13.51
84/ 5/20	2445840.5	-7.19297	-6.34100	-2.31138	6.09820	-6.43805	-2.92606	9.86355	9.33801	221.40	-13.55
84/ 5/24	2445844.5	-7.17886	-6.35585	-2.31813	6.11357	-6.42442	-2.92109	9.86442	9.33712	221.52	-13.59
84/ 5/28	2445848.5	-7.16472	-6.37068	-2.32488	6.12891	-6.41076	-2.91610	9.86529	9.33623	221.64	-13.63
84/ 6/ 1	2445852.5	-7.15055	-6.38547	-2.33161	6.14421	-6.39708	-2.91110	9.86615	9.33533	221.77	-13.67
84/ 6/ 5	2445856.5	-7.13633	-6.40024	-2.33833	6.15948	-6.38336	-2.90609	9.86702	9.33445	221.89	-13.71
84/ 6/ 9	2445860.5	-7.12209	-6.41497	-2.34503	6.17471	-6.36962	-2.90107	9.86788	9.33356	222.01	-13.75
84/ 6/13	2445864.5	-7.10780	-6.42967	-2.35173	6.18991	-6.35585	-2.89603	9.86875	9.33268	222.13	-13.79
84/ 6/17	2445868.5	-7.09349	-6.44433	-2.35841	6.20507	-6.34206	-2.89098	9.86961	9.33180	222.25	-13.83
84/ 6/21	2445872.5	-7.07914	-6.45897	-2.36509	6.22020	-6.32824	-2.88592	9.87047	9.33092	222.38	-13.86
84/ 6/25	2445876.5	-7.06475	-6.47357	-2.37175	6.23530	-6.31439	-2.88084	9.87132	9.33004	222.50	-13.90
84/ 6/29	2445880.5	-7.05033	-6.48814	-2.37840	6.25036	-6.30051	-2.87576	9.87218	9.32917	222.62	-13.94
84/ 7/ 3	2445884.5	-7.03587	-6.50268	-2.38504	6.26539	-6.28661	-2.87065	9.87303	9.32830	222.74	-13.98
84/ 7/ 7	2445888.5	-7.02138	-6.51719	-2.39166	6.28039	-6.27267	-2.86554	9.87388	9.32744	222.87	-14.02
84/ 7/11	2445892.5	-7.00685	-6.53167	-2.39828	6.29535	-6.25871	-2.86041	9.87473	9.32657	222.99	-14.06
84/ 7/15	2445896.5	-6.99229	-6.54611	-2.40488	6.31028	-6.24472	-2.85527	9.87558	9.32570	223.11	-14.09
84/ 7/19	2445900.5	-6.97770	-6.56052	-2.41147	6.32517	-6.23070	-2.85012	9.87643	9.32484	223.23	-14.13
84/ 7/23	2445904.5	-6.96307	-6.57490	-2.41805	6.34002	-6.21665	-2.84495	9.87727	9.32397	223.36	-14.17
84/ 7/27	2445908.5	-6.94840	-6.58924	-2.42461	6.35484	-6.20258	-2.83977	9.87811	9.32311	223.48	-14.21
84/ 7/31	2445912.5	-6.93370	-6.60355	-2.43117	6.36963	-6.18848	-2.83458	9.87896	9.32224	223.60	-14.25
84/ 8/ 4	2445916.5	-6.91897	-6.61783	-2.43771	6.38437	-6.17435	-2.82937	9.87979	9.32138	223.73	-14.28
84/ 8/ 8	2445920.5	-6.90421	-6.63208	-2.44424	6.39908	-6.16019	-2.82415	9.88063	9.32052	223.85	-14.32
84/ 8/12	2445924.5	-6.88941	-6.64630	-2.45076	6.41376	-6.14601	-2.81892	9.88147	9.31966	223.97	-14.36
84/ 8/16	2445928.5	-6.87457	-6.66048	-2.45726	6.42840	-6.13180	-2.81368	9.88230	9.31880	224.09	-14.40
84/ 8/20	2445932.5	-6.85971	-6.67463	-2.46376	6.44300	-6.11756	-2.80842	9.88313	9.31794	224.22	-14.44
84/ 8/24	2445936.5	-6.84480	-6.68874	-2.47024	6.45757	-6.10329	-2.80315	9.88396	9.31708	224.34	-14.47
84/ 8/28	2445940.5	-6.82987	-6.70283	-2.47671	6.47210	-6.08900	-2.79787	9.88479	9.31622	224.46	-14.51
84/ 9/ 1	2445944.5	-6.81490	-6.71688	-2.48317	6.48659	-6.07468	-2.79257	9.88562	9.31537	224.58	-14.55
84/ 9/ 5	2445948.5	-6.79990	-6.73089	-2.48961	6.50104	-6.06033	-2.78726	9.88644	9.31451	224.71	-14.59
84/ 9/ 9	2445952.5	-6.78486	-6.74488	-2.49605	6.51546	-6.04596	-2.78194	9.88726	9.31365	224.83	-14.62
84/ 9/13	2445956.5	-6.76980	-6.75883	-2.50247	6.52984	-6.03157	-2.77661	9.88809	9.31280	224.95	-14.66
84/ 9/17	2445960.5	-6.75469	-6.77275	-2.50887	6.54419	-6.01715	-2.77127	9.88890	9.31195	225.08	-14.70
84/ 9/21	2445964.5	-6.73956	-6.78663	-2.51527	6.55850	-6.00270	-2.76591	9.88972	9.31110	225.20	-14.73
84/ 9/25	2445968.5	-6.72439	-6.80048	-2.52165	6.57277	-5.98823	-2.76054	9.89054	9.31025	225.32	-14.77

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84/ 9/29	2445972.5	-6.70919	-6.81430	-2.52802	6.58701	-5.97373	-2.75516	9.89135	9.30941	225.45	-14.81
84/10/ 3	2445976.5	-6.69396	-6.82808	-2.53438	6.60121	-5.95920	-2.74977	9.89216	9.30856	225.57	-14.84
84/10/ 7	2445980.5	-6.67869	-6.84183	-2.54073	6.61537	-5.94465	-2.74436	9.89297	9.30771	225.69	-14.88
84/10/11	2445984.5	-6.66339	-6.85555	-2.54706	6.62950	-5.93007	-2.73894	9.89378	9.30687	225.81	-14.92
84/10/15	2445988.5	-6.64806	-6.86923	-2.55338	6.64359	-5.91547	-2.73351	9.89458	9.30602	225.94	-14.95
84/10/19	2445992.5	-6.63270	-6.88288	-2.55969	6.65764	-5.90084	-2.72807	9.89539	9.30518	226.06	-14.99
84/10/23	2445996.5	-6.61730	-6.89649	-2.56599	6.67165	-5.88619	-2.72261	9.89619	9.30434	226.18	-15.03
84/10/27	2446000.5	-6.60187	-6.91008	-2.57227	6.68562	-5.87151	-2.71715	9.89699	9.30350	226.31	-15.06
84/10/31	2446004.5	-6.58641	-6.92362	-2.57854	6.69956	-5.85681	-2.71167	9.89779	9.30266	226.43	-15.10
84/11/ 4	2446008.5	-6.57092	-6.93714	-2.58480	6.71346	-5.84208	-2.70618	9.89859	9.30182	226.55	-15.14
84/11/ 8	2446012.5	-6.55539	-6.95061	-2.59105	6.72732	-5.82733	-2.70068	9.89938	9.30099	226.68	-15.17
84/11/12	2446016.5	-6.53983	-6.96406	-2.59728	6.74115	-5.81256	-2.69517	9.90017	9.30015	226.80	-15.21
84/11/16	2446020.5	-6.52424	-6.97747	-2.60350	6.75493	-5.79776	-2.68964	9.90096	9.29932	226.92	-15.25
84/11/20	2446024.5	-6.50862	-6.99085	-2.60971	6.76868	-5.78294	-2.68411	9.90175	9.29849	227.05	-15.28
84/11/24	2446028.5	-6.49297	-7.00419	-2.61590	6.78240	-5.76810	-2.67856	9.90254	9.29766	227.17	-15.32
84/11/28	2446032.5	-6.47729	-7.01750	-2.62208	6.79607	-5.75323	-2.67300	9.90332	9.29684	227.29	-15.35
84/12/ 2	2446036.5	-6.46157	-7.03077	-2.62825	6.80971	-5.73834	-2.66743	9.90411	9.29601	227.42	-15.39
84/12/ 6	2446040.5	-6.44582	-7.04401	-2.63441	6.82331	-5.72343	-2.66186	9.90489	9.29520	227.54	-15.42
84/12/10	2446044.5	-6.43004	-7.05722	-2.64055	6.83687	-5.70850	-2.65627	9.90567	9.29438	227.66	-15.46
84/12/14	2446048.5	-6.41423	-7.07039	-2.64668	6.85040	-5.69354	-2.65067	9.90645	9.29357	227.79	-15.50
84/12/18	2446052.5	-6.39839	-7.08352	-2.65280	6.86390	-5.67856	-2.64505	9.90722	9.29276	227.91	-15.53
84/12/22	2446056.5	-6.38252	-7.09662	-2.65890	6.87736	-5.66356	-2.63943	9.90800	9.29196	228.03	-15.57
84/12/26	2446060.5	-6.36662	-7.10969	-2.66499	6.89078	-5.64853	-2.63380	9.90877	9.29116	228.16	-15.60
84/12/30	2446064.5	-6.35068	-7.12272	-2.67107	6.90417	-5.63348	-2.62815	9.90954	9.29036	228.28	-15.64
85/ 1/ 3	2446068.5	-6.33472	-7.13572	-2.67713	6.91752	-5.61840	-2.62250	9.91031	9.28957	228.40	-15.67
85/ 1/ 7	2446072.5	-6.31872	-7.14868	-2.68319	6.93084	-5.60331	-2.61683	9.91107	9.28877	228.53	-15.71
85/ 1/11	2446076.5	-6.30269	-7.16161	-2.68923	6.94411	-5.58818	-2.61115	9.91184	9.28798	228.65	-15.74
85/ 1/15	2446080.5	-6.28664	-7.17450	-2.69525	6.95736	-5.57304	-2.60546	9.91260	9.28719	228.77	-15.78
85/ 1/19	2446084.5	-6.27055	-7.18736	-2.70126	6.97056	-5.55787	-2.59975	9.91336	9.28641	228.90	-15.81
85/ 1/23	2446088.5	-6.25443	-7.20018	-2.70726	6.98373	-5.54268	-2.59404	9.91412	9.28563	229.02	-15.85
85/ 1/27	2446092.5	-6.23828	-7.21297	-2.71325	6.99687	-5.52746	-2.58832	9.91488	9.28485	229.14	-15.88
85/ 1/31	2446096.5	-6.22210	-7.22572	-2.71922	7.00996	-5.51222	-2.58258	9.91563	9.28407	229.27	-15.92
85/ 2/ 4	2446100.5	-6.20589	-7.23843	-2.72518	7.02303	-5.49696	-2.57683	9.91638	9.28329	229.39	-15.95
85/ 2/ 8	2446104.5	-6.18965	-7.25112	-2.73113	7.03605	-5.48167	-2.57107	9.91713	9.28252	229.52	-15.99
85/ 2/12	2446108.5	-6.17338	-7.26376	-2.73706	7.04904	-5.46637	-2.56530	9.91788	9.28175	229.64	-16.02
85/ 2/16	2446112.5	-6.15709	-7.27637	-2.74298	7.06199	-5.45103	-2.55952	9.91863	9.28098	229.76	-16.05
85/ 2/20	2446116.5	-6.14076	-7.28895	-2.74889	7.07490	-5.43568	-2.55373	9.91938	9.28021	229.89	-16.09
85/ 2/24	2446120.5	-6.12440	-7.30149	-2.75478	7.08778	-5.42030	-2.54793	9.92012	9.27945	230.01	-16.12
85/ 2/28	2446124.5	-6.10801	-7.31399	-2.76066	7.10062	-5.40489	-2.54211	9.92086	9.27868	230.13	-16.16
85/ 3/ 4	2446128.5	-6.09159	-7.32646	-2.76652	7.11342	-5.38947	-2.53628	9.92160	9.27792	230.26	-16.19
85/ 3/ 8	2446132.5	-6.07514	-7.33889	-2.77238	7.12619	-5.37402	-2.53045	9.92234	9.27716	230.38	-16.22
85/ 3/12	2446136.5	-6.05866	-7.35129	-2.77822	7.13892	-5.35855	-2.52460	9.92307	9.27641	230.51	-16.26
85/ 3/16	2446140.5	-6.04216	-7.36365	-2.78404	7.15161	-5.34305	-2.51874	9.92380	9.27565	230.63	-16.29
85/ 3/20	2446144.5	-6.02562	-7.37598	-2.78985	7.16427	-5.32753	-2.51287	9.92454	9.27490	230.75	-16.33
85/ 3/24	2446148.5	-6.00906	-7.38827	-2.79565	7.17689	-5.31199	-2.50699	9.92527	9.27415	230.88	-16.36

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
85/ 3/28	2446152.5	-5.99246	-7.40052	-2.80144	7.18947	-5.29642	-2.50109	9.92599	9.27340	231.00	-16.39
85/ 4/ 1	2446156.5	-5.97584	-7.41274	-2.80721	7.20201	-5.28083	-2.49519	9.92672	9.27265	231.13	-16.43
85/ 4/ 5	2446160.5	-5.95919	-7.42492	-2.81297	7.21452	-5.26521	-2.48927	9.92744	9.27190	231.25	-16.46
85/ 4/ 9	2446164.5	-5.94250	-7.43706	-2.81871	7.22699	-5.24957	-2.48334	9.92816	9.27115	231.37	-16.49
85/ 4/13	2446168.5	-5.92579	-7.44917	-2.82444	7.23941	-5.23391	-2.47740	9.92888	9.27041	231.50	-16.53
85/ 4/17	2446172.5	-5.90906	-7.46125	-2.83016	7.25180	-5.21822	-2.47145	9.92960	9.26966	231.62	-16.56
85/ 4/21	2446176.5	-5.89229	-7.47328	-2.83586	7.26415	-5.20251	-2.46548	9.93031	9.26891	231.75	-16.59
85/ 4/25	2446180.5	-5.87549	-7.48528	-2.84155	7.27646	-5.18678	-2.45951	9.93103	9.26816	231.87	-16.63
85/ 4/29	2446184.5	-5.85867	-7.49725	-2.84722	7.28873	-5.17103	-2.45352	9.93174	9.26741	231.99	-16.66
85/ 5/ 3	2446188.5	-5.84182	-7.50918	-2.85288	7.30096	-5.15525	-2.44753	9.93245	9.26666	232.12	-16.69
85/ 5/ 7	2446192.5	-5.82494	-7.52107	-2.85853	7.31315	-5.13945	-2.44152	9.93315	9.26591	232.24	-16.72
85/ 5/11	2446196.5	-5.80803	-7.53292	-2.86416	7.32530	-5.12363	-2.43550	9.93386	9.26516	232.37	-16.76
85/ 5/15	2446200.5	-5.79109	-7.54474	-2.86978	7.33741	-5.10779	-2.42947	9.93456	9.26442	232.49	-16.79
85/ 5/19	2446204.5	-5.77413	-7.55652	-2.87539	7.34948	-5.09192	-2.42343	9.93526	9.26367	232.62	-16.82
85/ 5/23	2446208.5	-5.75713	-7.56827	-2.88098	7.36151	-5.07604	-2.41738	9.93596	9.26292	232.74	-16.86
85/ 5/27	2446212.5	-5.74011	-7.57998	-2.88656	7.37350	-5.06013	-2.41132	9.93666	9.26218	232.86	-16.89
85/ 5/31	2446216.5	-5.72307	-7.59165	-2.89212	7.38545	-5.04421	-2.40525	9.93735	9.26143	232.99	-16.92
85/ 6/ 4	2446220.5	-5.70599	-7.60328	-2.89767	7.39735	-5.02827	-2.39918	9.93804	9.26069	233.11	-16.95
85/ 6/ 8	2446224.5	-5.68889	-7.61488	-2.90321	7.40922	-5.01230	-2.39309	9.93873	9.25995	233.24	-16.98
85/ 6/12	2446228.5	-5.67176	-7.62644	-2.90873	7.42105	-4.99632	-2.38699	9.93942	9.25921	233.36	-17.02
85/ 6/16	2446232.5	-5.65460	-7.63796	-2.91424	7.43285	-4.98031	-2.38088	9.94011	9.25847	233.49	-17.05
85/ 6/20	2446236.5	-5.63741	-7.64945	-2.91973	7.44460	-4.96429	-2.37476	9.94079	9.25774	233.61	-17.08
85/ 6/24	2446240.5	-5.62020	-7.66090	-2.92521	7.45631	-4.94824	-2.36863	9.94147	9.25700	233.74	-17.11
85/ 6/28	2446244.5	-5.60296	-7.67231	-2.93067	7.46799	-4.93217	-2.36249	9.94215	9.25627	233.86	-17.14
85/ 7/ 2	2446248.5	-5.58570	-7.68369	-2.93612	7.47962	-4.91609	-2.35634	9.94283	9.25554	233.98	-17.18
85/ 7/ 6	2446252.5	-5.56840	-7.69503	-2.94156	7.49122	-4.89998	-2.35018	9.94351	9.25481	234.11	-17.21
85/ 7/10	2446256.5	-5.55109	-7.70633	-2.94698	7.50277	-4.88386	-2.34401	9.94418	9.25408	234.23	-17.24
85/ 7/14	2446260.5	-5.53374	-7.71759	-2.95239	7.51428	-4.86771	-2.33783	9.94485	9.25335	234.36	-17.27
85/ 7/18	2446264.5	-5.51637	-7.72882	-2.95778	7.52576	-4.85155	-2.33164	9.94552	9.25263	234.48	-17.30
85/ 7/22	2446268.5	-5.49897	-7.74001	-2.96316	7.53719	-4.83537	-2.32544	9.94619	9.25190	234.61	-17.33
85/ 7/26	2446272.5	-5.48154	-7.75116	-2.96853	7.54859	-4.81917	-2.31924	9.94686	9.25118	234.73	-17.36
85/ 7/30	2446276.5	-5.46409	-7.76227	-2.97388	7.55994	-4.80295	-2.31302	9.94752	9.25046	234.86	-17.39
85/ 8/ 3	2446280.5	-5.44661	-7.77335	-2.97921	7.57126	-4.78671	-2.30679	9.94818	9.24975	234.98	-17.43
85/ 8/ 7	2446284.5	-5.42911	-7.78439	-2.98454	7.58253	-4.77045	-2.30056	9.94884	9.24903	235.11	-17.46
85/ 8/11	2446288.5	-5.41158	-7.79539	-2.98984	7.59377	-4.75418	-2.29431	9.94950	9.24832	235.23	-17.49
85/ 8/15	2446292.5	-5.39402	-7.80636	-2.99514	7.60497	-4.73788	-2.28806	9.95015	9.24761	235.36	-17.52
85/ 8/19	2446296.5	-5.37644	-7.81728	-3.00042	7.61613	-4.72157	-2.28180	9.95081	9.24690	235.48	-17.55
85/ 8/23	2446300.5	-5.35883	-7.82817	-3.00568	7.62725	-4.70524	-2.27553	9.95146	9.24620	235.61	-17.58
85/ 8/27	2446304.5	-5.34120	-7.83902	-3.01093	7.63833	-4.68890	-2.26925	9.95211	9.24550	235.73	-17.61
85/ 8/31	2446308.5	-5.32354	-7.84984	-3.01616	7.64937	-4.67254	-2.26296	9.95275	9.24480	235.86	-17.64
85/ 9/ 4	2446312.5	-5.30586	-7.86061	-3.02139	7.66037	-4.65615	-2.25666	9.95340	9.24411	235.98	-17.67
85/ 9/ 8	2446316.5	-5.28815	-7.87135	-3.02659	7.67134	-4.63976	-2.25035	9.95404	9.24343	236.11	-17.70
85/ 9/12	2446320.5	-5.27041	-7.88205	-3.03178	7.68227	-4.62334	-2.24404	9.95468	9.24274	236.23	-17.73
85/ 9/16	2446324.5	-5.25265	-7.89271	-3.03696	7.69317	-4.60690	-2.23771	9.95532	9.24206	236.36	-17.76
85/ 9/20	2446328.5	-5.23487	-7.90333	-3.04212	7.70402	-4.59044	-2.23138	9.95596	9.24138	236.48	-17.79

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85/ 9/24	2446332.5	-5.21706	-7.91392	-3.04727	7.71484	-4.57397	-2.22503	9.95659	9.24071	236.61	-17.82
85/ 9/28	2446336.5	-5.19922	-7.92447	-3.05240	7.72562	-4.55747	-2.21868	9.95722	9.24003	236.73	-17.85
85/10/ 2	2446340.5	-5.18136	-7.93498	-3.05752	7.73635	-4.54096	-2.21231	9.95785	9.23936	236.86	-17.88
85/10/ 6	2446344.5	-5.16348	-7.94545	-3.06262	7.74705	-4.52443	-2.20594	9.95848	9.23869	236.98	-17.91
85/10/10	2446348.5	-5.14557	-7.95588	-3.06771	7.75772	-4.50788	-2.19956	9.95911	9.23803	237.11	-17.94
85/10/14	2446352.5	-5.12764	-7.96628	-3.07279	7.76834	-4.49131	-2.19316	9.95973	9.23736	237.23	-17.97
85/10/18	2446356.5	-5.10968	-7.97663	-3.07785	7.77892	-4.47472	-2.18676	9.96035	9.23670	237.36	-18.00
85/10/22	2446360.5	-5.09169	-7.98695	-3.08289	7.78946	-4.45811	-2.18035	9.96097	9.23604	237.48	-18.03
85/10/26	2446364.5	-5.07369	-7.99723	-3.08792	7.79997	-4.44149	-2.17393	9.96159	9.23538	237.61	-18.06
85/10/30	2446368.5	-5.05566	-8.00747	-3.09293	7.81043	-4.42484	-2.16750	9.96220	9.23472	237.73	-18.09
85/11/ 3	2446372.5	-5.03760	-8.01768	-3.09793	7.82086	-4.40818	-2.16106	9.96282	9.23407	237.86	-18.12
85/11/ 7	2446376.5	-5.01952	-8.02784	-3.10292	7.83124	-4.39150	-2.15461	9.96343	9.23342	237.98	-18.15
85/11/11	2446380.5	-5.00142	-8.03797	-3.10789	7.84159	-4.37480	-2.14815	9.96404	9.23276	238.11	-18.17
85/11/15	2446384.5	-4.98329	-8.04805	-3.11284	7.85189	-4.35808	-2.14169	9.96464	9.23211	238.23	-18.20
85/11/19	2446388.5	-4.96514	-8.05810	-3.11778	7.86216	-4.34135	-2.13521	9.96525	9.23146	238.36	-18.23
85/11/23	2446392.5	-4.94696	-8.06811	-3.12271	7.87238	-4.32460	-2.12873	9.96585	9.23082	238.49	-18.26
85/11/27	2446396.5	-4.92877	-8.07808	-3.12762	7.88257	-4.30783	-2.12223	9.96645	9.23017	238.61	-18.29
85/12/ 1	2446400.5	-4.91054	-8.08801	-3.13252	7.89271	-4.29104	-2.11573	9.96705	9.22953	238.74	-18.32
85/12/ 5	2446404.5	-4.89230	-8.09791	-3.13740	7.90282	-4.27424	-2.10922	9.96765	9.22889	238.86	-18.35
85/12/ 9	2446408.5	-4.87403	-8.10776	-3.14226	7.91289	-4.25742	-2.10270	9.96824	9.22826	238.99	-18.37
85/12/13	2446412.5	-4.85574	-8.11758	-3.14711	7.92291	-4.24058	-2.09617	9.96883	9.22762	239.11	-18.40
85/12/17	2446416.5	-4.83742	-8.12736	-3.15195	7.93290	-4.22372	-2.08963	9.96942	9.22699	239.24	-18.43
85/12/21	2446420.5	-4.81909	-8.13709	-3.15677	7.94285	-4.20684	-2.08308	9.97001	9.22635	239.36	-18.46
85/12/25	2446424.5	-4.80072	-8.14679	-3.16157	7.95276	-4.18995	-2.07652	9.97059	9.22572	239.49	-18.49
85/12/29	2446428.5	-4.78234	-8.15645	-3.16636	7.96262	-4.17304	-2.06996	9.97118	9.22509	239.62	-18.51
86/ 1/ 2	2446432.5	-4.76393	-8.16607	-3.17113	7.97245	-4.15611	-2.06338	9.97176	9.22446	239.74	-18.54
86/ 1/ 6	2446436.5	-4.74551	-8.17566	-3.17589	7.98223	-4.13917	-2.05680	9.97234	9.22383	239.87	-18.57
86/ 1/10	2446440.5	-4.72705	-8.18520	-3.18064	7.99197	-4.12221	-2.05020	9.97291	9.22320	239.99	-18.60
86/ 1/14	2446444.5	-4.70858	-8.19470	-3.18537	8.00167	-4.10523	-2.04360	9.97349	9.22258	240.12	-18.63
86/ 1/18	2446448.5	-4.69008	-8.20417	-3.19008	8.01133	-4.08823	-2.03699	9.97406	9.22195	240.24	-18.65
86/ 1/22	2446452.5	-4.67156	-8.21359	-3.19478	8.02095	-4.07122	-2.03037	9.97463	9.22133	240.37	-18.68
86/ 1/26	2446456.5	-4.65302	-8.22298	-3.19946	8.03053	-4.05420	-2.02375	9.97520	9.22071	240.50	-18.71
86/ 1/30	2446460.5	-4.63446	-8.23232	-3.20413	8.04006	-4.03716	-2.01711	9.97576	9.22009	240.62	-18.73
86/ 2/ 3	2446464.5	-4.61588	-8.24163	-3.20878	8.04956	-4.02010	-2.01047	9.97632	9.21947	240.75	-18.76
86/ 2/ 7	2446468.5	-4.59727	-8.25090	-3.21342	8.05901	-4.00303	-2.00382	9.97689	9.21885	240.87	-18.79
86/ 2/11	2446472.5	-4.57864	-8.26013	-3.21804	8.06843	-3.98594	-1.99716	9.97744	9.21824	241.00	-18.82
86/ 2/15	2446476.5	-4.55999	-8.26931	-3.22264	8.07780	-3.96884	-1.99049	9.97800	9.21762	241.13	-18.84
86/ 2/19	2446480.5	-4.54132	-8.27846	-3.22724	8.08713	-3.95172	-1.98382	9.97856	9.21701	241.25	-18.87
86/ 2/23	2446484.5	-4.52262	-8.28757	-3.23181	8.09642	-3.93460	-1.97713	9.97911	9.21640	241.38	-18.90
86/ 2/27	2446488.5	-4.50391	-8.29664	-3.23637	8.10567	-3.91745	-1.97044	9.97966	9.21580	241.50	-18.92
86/ 3/ 3	2446492.5	-4.48517	-8.30567	-3.24091	8.11488	-3.90029	-1.96375	9.98021	9.21520	241.63	-18.95
86/ 3/ 7	2446496.5	-4.46642	-8.31466	-3.24544	8.12406	-3.88312	-1.95704	9.98075	9.21460	241.76	-18.98
86/ 3/11	2446500.5	-4.44764	-8.32361	-3.24996	8.13319	-3.86593	-1.95033	9.98129	9.21401	241.88	-19.00
86/ 3/15	2446504.5	-4.42884	-8.33252	-3.25445	8.14229	-3.84872	-1.94361	9.98184	9.21342	242.01	-19.03
86/ 3/19	2446508.5	-4.41002	-8.34140	-3.25894	8.15134	-3.83150	-1.93688	9.98237	9.21283	242.14	-19.05

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86/ 3/23	2446512.5	-4.39118	-8.35023	-3.26340	8.16035	-3.81427	-1.93014	9.98291	9.21225	242.26	-19.08
86/ 3/27	2446516.5	-4.37231	-8.35902	-3.26786	8.16933	-3.79702	-1.92340	9.98345	9.21166	242.39	-19.11
86/ 3/31	2446520.5	-4.35343	-8.36777	-3.27229	8.17826	-3.77975	-1.91664	9.98398	9.21108	242.51	-19.13
86/ 4/ 4	2446524.5	-4.33453	-8.37648	-3.27671	8.18715	-3.76247	-1.90988	9.98451	9.21050	242.64	-19.16
86/ 4/ 8	2446528.5	-4.31560	-8.38515	-3.28112	8.19601	-3.74517	-1.90311	9.98504	9.20992	242.77	-19.18
86/ 4/12	2446532.5	-4.29666	-8.39379	-3.28550	8.20482	-3.72786	-1.89633	9.98556	9.20935	242.89	-19.21
86/ 4/16	2446536.5	-4.27769	-8.40238	-3.28988	8.21359	-3.71054	-1.88955	9.98609	9.20878	243.02	-19.24
86/ 4/20	2446540.5	-4.25871	-8.41093	-3.29423	8.22232	-3.69320	-1.88276	9.98661	9.20821	243.15	-19.26
86/ 4/24	2446544.5	-4.23970	-8.41944	-3.29858	8.23102	-3.67585	-1.87596	9.98713	9.20764	243.27	-19.29
86/ 4/28	2446548.5	-4.22068	-8.42791	-3.30290	8.23967	-3.65848	-1.86915	9.98764	9.20708	243.40	-19.31
86/ 5/ 2	2446552.5	-4.20163	-8.43635	-3.30721	8.24828	-3.64109	-1.86233	9.98816	9.20652	243.52	-19.34
86/ 5/ 6	2446556.5	-4.18257	-8.44474	-3.31151	8.25685	-3.62370	-1.85551	9.98867	9.20596	243.65	-19.36
86/ 5/10	2446560.5	-4.16348	-8.45309	-3.31578	8.26538	-3.60628	-1.84868	9.98918	9.20540	243.78	-19.39
86/ 5/14	2446564.5	-4.14438	-8.46140	-3.32005	8.27387	-3.58886	-1.84184	9.98969	9.20484	243.90	-19.41
86/ 5/18	2446568.5	-4.12526	-8.46967	-3.32429	8.28232	-3.57142	-1.83499	9.99020	9.20429	244.03	-19.44
86/ 5/22	2446572.5	-4.10611	-8.47790	-3.32853	8.29073	-3.55396	-1.82814	9.99070	9.20374	244.16	-19.46
86/ 5/26	2446576.5	-4.08695	-8.48609	-3.33274	8.29909	-3.53650	-1.82128	9.99120	9.20320	244.28	-19.49
86/ 5/30	2446580.5	-4.06777	-8.49424	-3.33694	8.30742	-3.51901	-1.81441	9.99170	9.20265	244.41	-19.51
86/ 6/ 3	2446584.5	-4.04857	-8.50235	-3.34112	8.31572	-3.50152	-1.80753	9.99220	9.20212	244.54	-19.53
86/ 6/ 7	2446588.5	-4.02935	-8.51042	-3.34529	8.32397	-3.48400	-1.80065	9.99269	9.20158	244.66	-19.56
86/ 6/11	2446592.5	-4.01011	-8.51845	-3.34944	8.33218	-3.46648	-1.79376	9.99318	9.20104	244.79	-19.58
86/ 6/15	2446596.5	-3.99085	-8.52644	-3.35358	8.34034	-3.44893	-1.78686	9.99367	9.20051	244.92	-19.61
86/ 6/19	2446600.5	-3.97157	-8.53438	-3.35770	8.34847	-3.43137	-1.77995	9.99416	9.19997	245.04	-19.63
86/ 6/23	2446604.5	-3.95228	-8.54229	-3.36180	8.35656	-3.41380	-1.77303	9.99465	9.19944	245.17	-19.66
86/ 6/27	2446608.5	-3.93296	-8.55016	-3.36589	8.36460	-3.39621	-1.76611	9.99513	9.19891	245.30	-19.68
86/ 7/ 1	2446612.5	-3.91363	-8.55798	-3.36996	8.37260	-3.37861	-1.75917	9.99561	9.19838	245.43	-19.70
86/ 7/ 5	2446616.5	-3.89428	-8.56577	-3.37402	8.38056	-3.36099	-1.75223	9.99609	9.19785	245.55	-19.73
86/ 7/ 9	2446620.5	-3.87491	-8.57351	-3.37806	8.38848	-3.34336	-1.74528	9.99656	9.19732	245.68	-19.75
86/ 7/13	2446624.5	-3.85552	-8.58121	-3.38208	8.39635	-3.32572	-1.73833	9.99704	9.19679	245.81	-19.77
86/ 7/17	2446628.5	-3.83611	-8.58888	-3.38609	8.40418	-3.30806	-1.73137	9.99751	9.19626	245.93	-19.80
86/ 7/21	2446632.5	-3.81669	-8.59650	-3.39008	8.41197	-3.29039	-1.72440	9.99798	9.19573	246.06	-19.82
86/ 7/25	2446636.5	-3.79725	-8.60408	-3.39406	8.41972	-3.27271	-1.71742	9.99845	9.19520	246.19	-19.84
86/ 7/29	2446640.5	-3.77779	-8.61162	-3.39802	8.42742	-3.25501	-1.71043	9.99891	9.19468	246.31	-19.87
86/ 8/ 2	2446644.5	-3.75831	-8.61912	-3.40196	8.43508	-3.23731	-1.70344	9.99937	9.19415	246.44	-19.89
86/ 8/ 6	2446648.5	-3.73881	-8.62658	-3.40589	8.44270	-3.21958	-1.69644	9.99983	9.19363	246.57	-19.91
86/ 8/10	2446652.5	-3.71930	-8.63399	-3.40980	8.45027	-3.20185	-1.68944	10.00029	9.19310	246.69	-19.94
86/ 8/14	2446656.5	-3.69977	-8.64137	-3.41370	8.45780	-3.18411	-1.68243	10.00075	9.19258	246.82	-19.96
86/ 8/18	2446660.5	-3.68022	-8.64871	-3.41757	8.46529	-3.16635	-1.67541	10.00120	9.19206	246.95	-19.98
86/ 8/22	2446664.5	-3.66066	-8.65600	-3.42144	8.47274	-3.14859	-1.66839	10.00165	9.19154	247.08	-20.00
86/ 8/26	2446668.5	-3.64108	-8.66325	-3.42528	8.48014	-3.13081	-1.66136	10.00210	9.19103	247.20	-20.03
86/ 8/30	2446672.5	-3.62148	-8.67047	-3.42911	8.48751	-3.11302	-1.65432	10.00254	9.19051	247.33	-20.05
86/ 9/ 3	2446676.5	-3.60186	-8.67764	-3.43293	8.49483	-3.09522	-1.64728	10.00299	9.19000	247.46	-20.07
86/ 9/ 7	2446680.5	-3.58223	-8.68477	-3.43672	8.50211	-3.07741	-1.64023	10.00343	9.18949	247.59	-20.09
86/ 9/11	2446684.5	-3.56258	-8.69186	-3.44050	8.50935	-3.05959	-1.63317	10.00387	9.18898	247.71	-20.12
86/ 9/15	2446688.5	-3.54291	-8.69890	-3.44427	8.51655	-3.04175	-1.62611	10.00431	9.18848	247.84	-20.14

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
86/ 9/19	2446692.5	-3.52323	-8.70591	-3.44802	8.52370	-3.02391	-1.61904	10.00474	9.18797	247.97	-20.16
86/ 9/23	2446696.5	-3.50353	-8.71287	-3.45175	8.53081	-3.00605	-1.61196	10.00517	9.18747	248.09	-20.18
86/ 9/27	2446700.5	-3.48381	-8.71980	-3.45547	8.53788	-2.98818	-1.60488	10.00560	9.18697	248.22	-20.20
86/10/ 1	2446704.5	-3.46408	-8.72668	-3.45916	8.54491	-2.97031	-1.59779	10.00603	9.18647	248.35	-20.23
86/10/ 5	2446708.5	-3.44433	-8.73352	-3.46285	8.55190	-2.95242	-1.59070	10.00646	9.18597	248.48	-20.25
86/10/ 9	2446712.5	-3.42457	-8.74032	-3.46651	8.55884	-2.93452	-1.58360	10.00688	9.18547	248.60	-20.27
86/10/13	2446716.5	-3.40479	-8.74708	-3.47016	8.56574	-2.91662	-1.57649	10.00730	9.18498	248.73	-20.29
86/10/17	2446720.5	-3.38499	-8.75380	-3.47380	8.57260	-2.89870	-1.56938	10.00772	9.18449	248.86	-20.31
86/10/21	2446724.5	-3.36518	-8.76047	-3.47742	8.57942	-2.88078	-1.56226	10.00813	9.18400	248.99	-20.33
86/10/25	2446728.5	-3.34535	-8.76711	-3.48102	8.58619	-2.86284	-1.55514	10.00855	9.18352	249.11	-20.35
86/10/29	2446732.5	-3.32551	-8.77370	-3.48460	8.59293	-2.84490	-1.54801	10.00896	9.18304	249.24	-20.37
86/11/ 2	2446736.5	-3.30565	-8.78025	-3.48817	8.59962	-2.82694	-1.54088	10.00937	9.18256	249.37	-20.40
86/11/ 6	2446740.5	-3.28578	-8.78676	-3.49172	8.60628	-2.80898	-1.53374	10.00978	9.18209	249.50	-20.42
86/11/10	2446744.5	-3.26589	-8.79323	-3.49525	8.61289	-2.79101	-1.52659	10.01018	9.18161	249.62	-20.44
86/11/14	2446748.5	-3.24598	-8.79966	-3.49877	8.61946	-2.77303	-1.51944	10.01058	9.18115	249.75	-20.46
86/11/18	2446752.5	-3.22606	-8.80604	-3.50228	8.62599	-2.75504	-1.51229	10.01098	9.18069	249.88	-20.48
86/11/22	2446756.5	-3.20613	-8.81239	-3.50576	8.63249	-2.73704	-1.50513	10.01138	9.18023	250.01	-20.50
86/11/26	2446760.5	-3.18618	-8.81869	-3.50923	8.63894	-2.71903	-1.49796	10.01178	9.17978	250.14	-20.52
86/11/30	2446764.5	-3.16621	-8.82495	-3.51268	8.64536	-2.70101	-1.49079	10.01217	9.17933	250.26	-20.54
86/12/ 4	2446768.5	-3.14623	-8.83117	-3.51612	8.65173	-2.68298	-1.48361	10.01256	9.17889	250.39	-20.56
86/12/ 8	2446772.5	-3.12624	-8.83735	-3.51954	8.65807	-2.66494	-1.47643	10.01295	9.17845	250.52	-20.58
86/12/12	2446776.5	-3.10623	-8.84348	-3.52294	8.66436	-2.64689	-1.46923	10.01334	9.17801	250.65	-20.60
86/12/16	2446780.5	-3.08621	-8.84958	-3.52632	8.67062	-2.62883	-1.46204	10.01372	9.17757	250.77	-20.62
86/12/20	2446784.5	-3.06617	-8.85563	-3.52969	8.67683	-2.61076	-1.45483	10.01410	9.17714	250.90	-20.64
86/12/24	2446788.5	-3.04612	-8.86164	-3.53305	8.68300	-2.59267	-1.44762	10.01448	9.17671	251.03	-20.66
86/12/28	2446792.5	-3.02605	-8.86761	-3.53638	8.68913	-2.57458	-1.44041	10.01486	9.17629	251.16	-20.68

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

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86/12/16	2446780.5	-3.08621	-9.52199	0.28590	8.67062	-2.99350	-0.29537	10.01372	9.17757	252.04	1.64
86/12/20	2446784.5	-3.06617	-9.52888	0.28522	8.67683	-2.97405	-0.29595	10.01410	9.17714	252.16	1.63
86/12/24	2446788.5	-3.04612	-9.53573	0.28453	8.68300	-2.95460	-0.29653	10.01448	9.17671	252.28	1.63
86/12/28	2446792.5	-3.02605	-9.54253	0.28385	8.68913	-2.93513	-0.29711	10.01486	9.17629	252.41	1.62
87/ 1/ 1	2446796.5	-3.00597	-9.54929	0.28316	8.69523	-2.91565	-0.29769	10.01524	9.17587	252.53	1.62
87/ 1/ 5	2446800.5	-2.98587	-9.55600	0.28247	8.70128	-2.89615	-0.29826	10.01561	9.17545	252.65	1.62
87/ 1/ 9	2446804.5	-2.96577	-9.56267	0.28178	8.70729	-2.87665	-0.29884	10.01598	9.17503	252.77	1.61
87/ 1/13	2446808.5	-2.94564	-9.56929	0.28109	8.71326	-2.85713	-0.29941	10.01635	9.17462	252.89	1.61
87/ 1/17	2446812.5	-2.92551	-9.57587	0.28040	8.71918	-2.83760	-0.29998	10.01671	9.17421	253.01	1.60
87/ 1/21	2446816.5	-2.90536	-9.58240	0.27970	8.72507	-2.81806	-0.30055	10.01708	9.17380	253.13	1.60
87/ 1/25	2446820.5	-2.88519	-9.58889	0.27901	8.73091	-2.79850	-0.30112	10.01744	9.17339	253.25	1.60
87/ 1/29	2446824.5	-2.86502	-9.59533	0.27831	8.73672	-2.77894	-0.30169	10.01779	9.17299	253.38	1.59
87/ 2/ 2	2446828.5	-2.84483	-9.60173	0.27761	8.74248	-2.75936	-0.30225	10.01815	9.17259	253.50	1.59
87/ 2/ 6	2446832.5	-2.82462	-9.60808	0.27692	8.74820	-2.73978	-0.30282	10.01850	9.17219	253.62	1.58
87/ 2/10	2446836.5	-2.80441	-9.61439	0.27622	8.75387	-2.72018	-0.30338	10.01886	9.17179	253.74	1.58
87/ 2/14	2446840.5	-2.78418	-9.62065	0.27551	8.75951	-2.70057	-0.30394	10.01921	9.17140	253.86	1.58
87/ 2/18	2446844.5	-2.76394	-9.62687	0.27481	8.76511	-2.68096	-0.30450	10.01955	9.17101	253.98	1.57
87/ 2/22	2446848.5	-2.74368	-9.63304	0.27411	8.77066	-2.66132	-0.30506	10.01990	9.17062	254.10	1.57
87/ 2/26	2446852.5	-2.72341	-9.63916	0.27340	8.77618	-2.64168	-0.30562	10.02024	9.17023	254.22	1.56
87/ 3/ 2	2446856.5	-2.70313	-9.64524	0.27270	8.78165	-2.62203	-0.30617	10.02058	9.16985	254.34	1.56
87/ 3/ 6	2446860.5	-2.68284	-9.65128	0.27199	8.78708	-2.60236	-0.30673	10.02092	9.16946	254.47	1.56
87/ 3/10	2446864.5	-2.66253	-9.65727	0.27128	8.79246	-2.58268	-0.30728	10.02125	9.16908	254.59	1.55
87/ 3/14	2446868.5	-2.64221	-9.66321	0.27057	8.79780	-2.56299	-0.30783	10.02158	9.16870	254.71	1.55
87/ 3/18	2446872.5	-2.62188	-9.66911	0.26986	8.80310	-2.54329	-0.30838	10.02191	9.16832	254.83	1.54
87/ 3/22	2446876.5	-2.60154	-9.67496	0.26914	8.80836	-2.52358	-0.30893	10.02224	9.16794	254.95	1.54
87/ 3/26	2446880.5	-2.58119	-9.68077	0.26843	8.81357	-2.50386	-0.30947	10.02257	9.16756	255.07	1.53
87/ 3/30	2446884.5	-2.56082	-9.68653	0.26771	8.81874	-2.48413	-0.31002	10.02289	9.16718	255.19	1.53
87/ 4/ 3	2446888.5	-2.54044	-9.69225	0.26700	8.82387	-2.46439	-0.31056	10.02321	9.16681	255.31	1.53
87/ 4/ 7	2446892.5	-2.52005	-9.69792	0.26628	8.82895	-2.44464	-0.31110	10.02353	9.16643	255.43	1.52
87/ 4/11	2446896.5	-2.49965	-9.70354	0.26556	8.83399	-2.42489	-0.31164	10.02385	9.16605	255.55	1.52
87/ 4/15	2446900.5	-2.47923	-9.70912	0.26484	8.83898	-2.40512	-0.31218	10.02416	9.16568	255.68	1.51
87/ 4/19	2446904.5	-2.45881	-9.71465	0.26412	8.84394	-2.38534	-0.31271	10.02447	9.16531	255.80	1.51
87/ 4/23	2446908.5	-2.43837	-9.72014	0.26339	8.84885	-2.36556	-0.31325	10.02478	9.16494	255.92	1.51
87/ 4/27	2446912.5	-2.41792	-9.72558	0.26267	8.85371	-2.34577	-0.31378	10.02508	9.16457	256.04	1.50
87/ 5/ 1	2446916.5	-2.39746	-9.73098	0.26194	8.85853	-2.32597	-0.31431	10.02539	9.16420	256.16	1.50
87/ 5/ 5	2446920.5	-2.37699	-9.73633	0.26122	8.86331	-2.30616	-0.31484	10.02569	9.16383	256.28	1.49
87/ 5/ 9	2446924.5	-2.35651	-9.74164	0.26049	8.86805	-2.28635	-0.31537	10.02599	9.16346	256.40	1.49
87/ 5/13	2446928.5	-2.33602	-9.74689	0.25976	8.87274	-2.26652	-0.31590	10.02629	9.16310	256.52	1.48
87/ 5/17	2446932.5	-2.31552	-9.75211	0.25903	8.87739	-2.24670	-0.31642	10.02658	9.16274	256.64	1.48
87/ 5/21	2446936.5	-2.29500	-9.75727	0.25830	8.88201	-2.22686	-0.31695	10.02687	9.16239	256.76	1.48
87/ 5/25	2446940.5	-2.27448	-9.76240	0.25756	8.88658	-2.20702	-0.31747	10.02716	9.16204	256.88	1.47
87/ 5/29	2446944.5	-2.25394	-9.76747	0.25683	8.89110	-2.18716	-0.31799	10.02745	9.16169	257.01	1.47
87/ 6/ 2	2446948.5	-2.23340	-9.77250	0.25610	8.89559	-2.16730	-0.31851	10.02773	9.16134	257.13	1.46
87/ 6/ 6	2446952.5	-2.21284	-9.77749	0.25536	8.90003	-2.14744	-0.31903	10.02802	9.16100	257.25	1.46
87/ 6/10	2446956.5	-2.19228	-9.78242	0.25462	8.90443	-2.12756	-0.31955	10.02830	9.16065	257.37	1.45

1.6 1 A.U.=149,599,000 KM.

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87/ 6/14	2446960.5	-2.17170	-9.78732	0.25388	8.90879	-2.10768	-0.32006	10.02857	9.16031	257.49	1.45
87/ 6/18	2446964.5	-2.15112	-9.79216	0.25314	8.91311	-2.08779	-0.32058	10.02885	9.15997	257.61	1.45
87/ 6/22	2446968.5	-2.13052	-9.79696	0.25240	8.91738	-2.06789	-0.32109	10.02912	9.15964	257.73	1.44
87/ 6/26	2446972.5	-2.10992	-9.80172	0.25166	8.92161	-2.04799	-0.32160	10.02939	9.15930	257.85	1.44
87/ 6/30	2446976.5	-2.08930	-9.80642	0.25092	8.92580	-2.02807	-0.32211	10.02966	9.15897	257.97	1.43
87/ 7/ 4	2446980.5	-2.06867	-9.81109	0.25017	8.92995	-2.00816	-0.32261	10.02993	9.15865	258.09	1.43
87/ 7/ 8	2446984.5	-2.04804	-9.81570	0.24942	8.93406	-1.98823	-0.32312	10.03019	9.15832	258.21	1.42
87/ 7/12	2446988.5	-2.02740	-9.82027	0.24868	8.93812	-1.96830	-0.32362	10.03045	9.15800	258.34	1.42
87/ 7/16	2446992.5	-2.00674	-9.82480	0.24793	8.94214	-1.94836	-0.32413	10.03071	9.15768	258.46	1.42
87/ 7/20	2446996.5	-1.98608	-9.82928	0.24718	8.94612	-1.92842	-0.32463	10.03097	9.15736	258.58	1.41
87/ 7/24	2447000.5	-1.96541	-9.83371	0.24643	8.95006	-1.90847	-0.32513	10.03122	9.15705	258.70	1.41
87/ 7/28	2447004.5	-1.94473	-9.83809	0.24568	8.95396	-1.88851	-0.32563	10.03147	9.15674	258.82	1.40
87/ 8/ 1	2447008.5	-1.92404	-9.84243	0.24493	8.95781	-1.86855	-0.32612	10.03172	9.15643	258.94	1.40
87/ 8/ 5	2447012.5	-1.90334	-9.84673	0.24417	8.96163	-1.84858	-0.32662	10.03197	9.15613	259.06	1.39
87/ 8/ 9	2447016.5	-1.88263	-9.85097	0.24342	8.96540	-1.82860	-0.32711	10.03221	9.15583	259.18	1.39
87/ 8/13	2447020.5	-1.86192	-9.85518	0.24266	8.96913	-1.80862	-0.32761	10.03245	9.15553	259.30	1.39
87/ 8/17	2447024.5	-1.84119	-9.85933	0.24190	8.97283	-1.78863	-0.32810	10.03269	9.15524	259.42	1.38
87/ 8/21	2447028.5	-1.82046	-9.86344	0.24114	8.97648	-1.76863	-0.32859	10.03293	9.15495	259.54	1.38
87/ 8/25	2447032.5	-1.79972	-9.86750	0.24038	8.98009	-1.74863	-0.32908	10.03316	9.15467	259.66	1.37
87/ 8/29	2447036.5	-1.77897	-9.87152	0.23962	8.98366	-1.72861	-0.32956	10.03340	9.15439	259.78	1.37
87/ 9/ 2	2447040.5	-1.75821	-9.87549	0.23886	8.98718	-1.70859	-0.33005	10.03363	9.15411	259.90	1.36
87/ 9/ 6	2447044.5	-1.73744	-9.87941	0.23810	8.99067	-1.68856	-0.33053	10.03385	9.15383	260.03	1.36
87/ 9/10	2447048.5	-1.71667	-9.88329	0.23733	8.99411	-1.66853	-0.33101	10.03408	9.15355	260.15	1.36
87/ 9/14	2447052.5	-1.69589	-9.88712	0.23657	8.99750	-1.64849	-0.33149	10.03430	9.15328	260.27	1.35
87/ 9/18	2447056.5	-1.67510	-9.89091	0.23580	9.00086	-1.62844	-0.33197	10.03452	9.15300	260.39	1.35
87/ 9/22	2447060.5	-1.65430	-9.89465	0.23504	9.00417	-1.60838	-0.33245	10.03474	9.15273	260.51	1.34
87/ 9/26	2447064.5	-1.63350	-9.89834	0.23427	9.00744	-1.58832	-0.33292	10.03495	9.15246	260.63	1.34
87/ 9/30	2447068.5	-1.61268	-9.90198	0.23350	9.01067	-1.56825	-0.33339	10.03517	9.15220	260.75	1.33
87/10/ 4	2447072.5	-1.59186	-9.90558	0.23273	9.01385	-1.54818	-0.33387	10.03538	9.15193	260.87	1.33
87/10/ 8	2447076.5	-1.57104	-9.90914	0.23195	9.01699	-1.52810	-0.33434	10.03558	9.15167	260.99	1.32
87/10/12	2447080.5	-1.55020	-9.91264	0.23118	9.02009	-1.50801	-0.33480	10.03579	9.15140	261.11	1.32
87/10/16	2447084.5	-1.52936	-9.91611	0.23041	9.02314	-1.48792	-0.33527	10.03599	9.15114	261.23	1.32
87/10/20	2447088.5	-1.50851	-9.91952	0.22963	9.02615	-1.46783	-0.33574	10.03619	9.15088	261.35	1.31
87/10/24	2447092.5	-1.48766	-9.92289	0.22886	9.02912	-1.44773	-0.33620	10.03639	9.15062	261.47	1.31
87/10/28	2447096.5	-1.46679	-9.92621	0.22808	9.03204	-1.42762	-0.33666	10.03659	9.15037	261.59	1.30
87/11/ 1	2447100.5	-1.44593	-9.92948	0.22730	9.03492	-1.40751	-0.33712	10.03678	9.15011	261.71	1.30
87/11/ 5	2447104.5	-1.42505	-9.93271	0.22652	9.03776	-1.38740	-0.33758	10.03697	9.14986	261.84	1.29
87/11/ 9	2447108.5	-1.40417	-9.93589	0.22574	9.04056	-1.36728	-0.33804	10.03716	9.14961	261.96	1.29
87/11/13	2447112.5	-1.38328	-9.93903	0.22496	9.04331	-1.34716	-0.33849	10.03735	9.14937	262.08	1.28
87/11/17	2447116.5	-1.36238	-9.94212	0.22418	9.04603	-1.32704	-0.33895	10.03753	9.14913	262.20	1.28
87/11/21	2447120.5	-1.34148	-9.94516	0.22339	9.04870	-1.30690	-0.33940	10.03771	9.14888	262.32	1.28
87/11/25	2447124.5	-1.32058	-9.94816	0.22261	9.05132	-1.28677	-0.33985	10.03789	9.14865	262.44	1.27
87/11/29	2447128.5	-1.29966	-9.95111	0.22182	9.05391	-1.26663	-0.34030	10.03807	9.14841	262.56	1.27
87/12/ 3	2447132.5	-1.27874	-9.95401	0.22104	9.05645	-1.24648	-0.34074	10.03824	9.14817	262.68	1.26
87/12/ 7	2447136.5	-1.25782	-9.95686	0.22025	9.05895	-1.22633	-0.34119	10.03841	9.14794	262.80	1.26

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
87/12/11	2447140.5	-1.23689	-9.95967	0.21946	9.06140	-1.20618	-0.34163	10.03858	9.14771	262.92	1.25
87/12/15	2447144.5	-1.21595	-9.96244	0.21867	9.06381	-1.18602	-0.34208	10.03875	9.14748	263.04	1.25
87/12/19	2447148.5	-1.19501	-9.96515	0.21788	9.06618	-1.16587	-0.34252	10.03892	9.14725	263.16	1.24
87/12/23	2447152.5	-1.17406	-9.96782	0.21709	9.06851	-1.14570	-0.34295	10.03908	9.14703	263.28	1.24
87/12/27	2447156.5	-1.15311	-9.97045	0.21630	9.07079	-1.12554	-0.34339	10.03924	9.14681	263.40	1.23
87/12/31	2447160.5	-1.13215	-9.97302	0.21550	9.07304	-1.10537	-0.34383	10.03939	9.14659	263.52	1.23
88/ 1/ 4	2447164.5	-1.11119	-9.97556	0.21471	9.07523	-1.08520	-0.34426	10.03955	9.14637	263.64	1.23
88/ 1/ 8	2447168.5	-1.09022	-9.97804	0.21391	9.07739	-1.06503	-0.34469	10.03970	9.14615	263.76	1.22
88/ 1/12	2447172.5	-1.06925	-9.98048	0.21311	9.07951	-1.04485	-0.34512	10.03985	9.14594	263.88	1.22
88/ 1/16	2447176.5	-1.04827	-9.98287	0.21232	9.08158	-1.02467	-0.34555	10.04000	9.14573	264.01	1.21
88/ 1/20	2447180.5	-1.02729	-9.98521	0.21152	9.08361	-1.00449	-0.34598	10.04014	9.14553	264.13	1.21
88/ 1/24	2447184.5	-1.00630	-9.98751	0.21072	9.08560	-0.98431	-0.34640	10.04029	9.14533	264.25	1.20
88/ 1/28	2447188.5	-0.98531	-9.98976	0.20992	9.08755	-0.96413	-0.34683	10.04043	9.14513	264.37	1.20
88/ 2/ 1	2447192.5	-0.96431	-9.99196	0.20912	9.08946	-0.94394	-0.34725	10.04056	9.14493	264.49	1.19
88/ 2/ 5	2447196.5	-0.94331	-9.99412	0.20831	9.09132	-0.92375	-0.34767	10.04070	9.14475	264.61	1.19
88/ 2/ 9	2447200.5	-0.92231	-9.99623	0.20751	9.09315	-0.90356	-0.34809	10.04083	9.14456	264.73	1.18
88/ 2/13	2447204.5	-0.90130	-9.99829	0.20670	9.09494	-0.88337	-0.34851	10.04096	9.14438	264.85	1.18
88/ 2/17	2447208.5	-0.88029	-10.00031	0.20590	9.09669	-0.86317	-0.34893	10.04109	9.14421	264.97	1.17
88/ 2/21	2447212.5	-0.85927	-10.00228	0.20509	9.09839	-0.84297	-0.34934	10.04122	9.14404	265.09	1.17
88/ 2/25	2447216.5	-0.83825	-10.00421	0.20428	9.10006	-0.82276	-0.34976	10.04134	9.14387	265.21	1.17
88/ 2/29	2447220.5	-0.81723	-10.00608	0.20348	9.10168	-0.80255	-0.35017	10.04146	9.14370	265.33	1.16
88/ 3/ 4	2447224.5	-0.79620	-10.00791	0.20267	9.10326	-0.78234	-0.35058	10.04158	9.14354	265.45	1.16
88/ 3/ 8	2447228.5	-0.77517	-10.00970	0.20186	9.10480	-0.76212	-0.35099	10.04170	9.14338	265.57	1.15
88/ 3/12	2447232.5	-0.75413	-10.01144	0.20105	9.10630	-0.74191	-0.35139	10.04181	9.14323	265.69	1.15
88/ 3/16	2447236.5	-0.73309	-10.01313	0.20023	9.10776	-0.72168	-0.35180	10.04192	9.14308	265.81	1.14
88/ 3/20	2447240.5	-0.71205	-10.01477	0.19942	9.10918	-0.70146	-0.35220	10.04203	9.14293	265.93	1.14
88/ 3/24	2447244.5	-0.69100	-10.01637	0.19861	9.11055	-0.68123	-0.35260	10.04214	9.14278	266.05	1.13
88/ 3/28	2447248.5	-0.66995	-10.01792	0.19779	9.11188	-0.66100	-0.35300	10.04224	9.14264	266.17	1.13
88/ 4/ 1	2447252.5	-0.64890	-10.01942	0.19697	9.11317	-0.64076	-0.35340	10.04234	9.14250	266.29	1.12
88/ 4/ 5	2447256.5	-0.62785	-10.02088	0.19616	9.11442	-0.62052	-0.35380	10.04244	9.14236	266.41	1.12
88/ 4/ 9	2447260.5	-0.60679	-10.02229	0.19534	9.11562	-0.60028	-0.35419	10.04254	9.14223	266.54	1.11
88/ 4/13	2447264.5	-0.58573	-10.02365	0.19452	9.11679	-0.58003	-0.35459	10.04263	9.14210	266.66	1.11
88/ 4/17	2447268.5	-0.56467	-10.02497	0.19370	9.11790	-0.55979	-0.35498	10.04273	9.14197	266.78	1.11
88/ 4/21	2447272.5	-0.54360	-10.02624	0.19288	9.11898	-0.53954	-0.35537	10.04282	9.14184	266.90	1.10
88/ 4/25	2447276.5	-0.52254	-10.02746	0.19206	9.12002	-0.51929	-0.35576	10.04290	9.14171	267.02	1.10
88/ 4/29	2447280.5	-0.50147	-10.02864	0.19124	9.12101	-0.49903	-0.35614	10.04299	9.14159	267.14	1.09
88/ 5/ 3	2447284.5	-0.48039	-10.02977	0.19041	9.12196	-0.47878	-0.35653	10.04307	9.14147	267.26	1.09
88/ 5/ 7	2447288.5	-0.45932	-10.03085	0.18959	9.12287	-0.45852	-0.35691	10.04315	9.14136	267.38	1.08
88/ 5/11	2447292.5	-0.43824	-10.03189	0.18877	9.12374	-0.43825	-0.35730	10.04323	9.14125	267.50	1.08
88/ 5/15	2447296.5	-0.41716	-10.03287	0.18794	9.12457	-0.41799	-0.35768	10.04330	9.14113	267.62	1.07
88/ 5/19	2447300.5	-0.39608	-10.03382	0.18711	9.12535	-0.39772	-0.35806	10.04337	9.14103	267.74	1.07
88/ 5/23	2447304.5	-0.37500	-10.03471	0.18629	9.12609	-0.37745	-0.35843	10.04344	9.14092	267.86	1.06
88/ 5/27	2447308.5	-0.35392	-10.03556	0.18546	9.12678	-0.35717	-0.35881	10.04351	9.14081	267.98	1.06
88/ 5/31	2447312.5	-0.33283	-10.03636	0.18463	9.12743	-0.33690	-0.35918	10.04358	9.14070	268.10	1.05
88/ 6/ 4	2447316.5	-0.31175	-10.03712	0.18380	9.12804	-0.31662	-0.35955	10.04364	9.14060	268.22	1.05

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

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88/ 6/ 8	2447320.5	-0.29066	-10.03783	0.18297	9.12860	-0.29634	-0.35992	10.04370	9.14050	268.34	1.04
88/ 6/12	2447324.5	-0.26957	-10.03849	0.18213	9.12912	-0.27606	-0.36029	10.04376	9.14039	268.46	1.04
88/ 6/16	2447328.5	-0.24848	-10.03910	0.18130	9.12959	-0.25578	-0.36066	10.04381	9.14029	268.58	1.03
88/ 6/20	2447332.5	-0.22739	-10.03967	0.18047	9.13002	-0.23550	-0.36102	10.04386	9.14019	268.70	1.03
88/ 6/24	2447336.5	-0.20630	-10.04019	0.17963	9.13040	-0.21521	-0.36138	10.04391	9.14009	268.82	1.02
88/ 6/28	2447340.5	-0.18520	-10.04066	0.17880	9.13075	-0.19493	-0.36175	10.04396	9.13999	268.94	1.02
88/ 7/ 2	2447344.5	-0.16411	-10.04109	0.17796	9.13104	-0.17465	-0.36210	10.04401	9.13989	269.06	1.02
88/ 7/ 6	2447348.5	-0.14301	-10.04147	0.17712	9.13130	-0.15437	-0.36246	10.04405	9.13979	269.18	1.01
88/ 7/10	2447352.5	-0.12192	-10.04180	0.17629	9.13151	-0.13409	-0.36282	10.04409	9.13969	269.30	1.01
88/ 7/14	2447356.5	-0.10082	-10.04209	0.17545	9.13167	-0.11381	-0.36317	10.04413	9.13960	269.42	1.00
88/ 7/18	2447360.5	-0.07973	-10.04233	0.17461	9.13179	-0.09353	-0.36352	10.04416	9.13950	269.55	1.00
88/ 7/22	2447364.5	-0.05863	-10.04252	0.17377	9.13187	-0.07325	-0.36387	10.04420	9.13941	269.67	0.99
88/ 7/26	2447368.5	-0.03753	-10.04267	0.17293	9.13191	-0.05298	-0.36422	10.04423	9.13932	269.79	0.99
88/ 7/30	2447372.5	-0.01644	-10.04277	0.17209	9.13190	-0.03271	-0.36457	10.04425	9.13923	269.91	0.98
88/ 8/ 3	2447376.5	0.00466	-10.04282	0.17124	9.13185	-0.01244	-0.36492	10.04428	9.13915	270.03	0.98
88/ 8/ 7	2447380.5	0.02575	-10.04282	0.17040	9.13176	0.00783	-0.36526	10.04430	9.13907	270.15	0.97
88/ 8/11	2447384.5	0.04685	-10.04278	0.16956	9.13163	0.02810	-0.36560	10.04432	9.13899	270.27	0.97
88/ 8/15	2447388.5	0.06795	-10.04269	0.16871	9.13146	0.04837	-0.36594	10.04434	9.13891	270.39	0.96
88/ 8/19	2447392.5	0.08904	-10.04256	0.16787	9.13124	0.06864	-0.36628	10.04436	9.13884	270.51	0.96
88/ 8/23	2447396.5	0.11014	-10.04238	0.16702	9.13098	0.08890	-0.36662	10.04437	9.13877	270.63	0.95
88/ 8/27	2447400.5	0.13123	-10.04215	0.16617	9.13067	0.10917	-0.36696	10.04438	9.13870	270.75	0.95
88/ 8/31	2447404.5	0.15232	-10.04187	0.16532	9.13033	0.12943	-0.36729	10.04439	9.13863	270.87	0.94
88/ 9/ 4	2447408.5	0.17341	-10.04155	0.16447	9.12994	0.14969	-0.36762	10.04439	9.13856	270.99	0.94
88/ 9/ 8	2447412.5	0.19451	-10.04118	0.16362	9.12951	0.16994	-0.36795	10.04440	9.13850	271.11	0.93
88/ 9/12	2447416.5	0.21560	-10.04076	0.16277	9.12904	0.19020	-0.36828	10.04440	9.13844	271.23	0.93
88/ 9/16	2447420.5	0.23668	-10.04030	0.16192	9.12852	0.21045	-0.36861	10.04440	9.13839	271.35	0.92
88/ 9/20	2447424.5	0.25777	-10.03979	0.16107	9.12797	0.23070	-0.36893	10.04439	9.13833	271.47	0.92
88/ 9/24	2447428.5	0.27886	-10.03924	0.16022	9.12737	0.25095	-0.36926	10.04439	9.13828	271.59	0.91
88/ 9/28	2447432.5	0.29994	-10.03863	0.15936	9.12673	0.27119	-0.36958	10.04438	9.13823	271.71	0.91
88/10/ 2	2447436.5	0.32103	-10.03798	0.15851	9.12605	0.29143	-0.36990	10.04437	9.13819	271.83	0.90
88/10/ 6	2447440.5	0.34211	-10.03729	0.15766	9.12533	0.31167	-0.37022	10.04435	9.13815	271.95	0.90
88/10/10	2447444.5	0.36319	-10.03654	0.15680	9.12456	0.33191	-0.37053	10.04434	9.13811	272.07	0.89
88/10/14	2447448.5	0.38427	-10.03575	0.15594	9.12376	0.35214	-0.37085	10.04432	9.13808	272.19	0.89
88/10/18	2447452.5	0.40535	-10.03492	0.15509	9.12291	0.37237	-0.37116	10.04430	9.13805	272.31	0.88
88/10/22	2447456.5	0.42642	-10.03403	0.15423	9.12202	0.39260	-0.37148	10.04427	9.13802	272.43	0.88
88/10/26	2447460.5	0.44749	-10.03310	0.15337	9.12110	0.41283	-0.37179	10.04425	9.13800	272.55	0.87
88/10/30	2447464.5	0.46856	-10.03212	0.15251	9.12013	0.43305	-0.37210	10.04422	9.13799	272.67	0.87
88/11/ 3	2447468.5	0.48963	-10.03110	0.15165	9.11913	0.45327	-0.37240	10.04419	9.13798	272.79	0.87
88/11/ 7	2447472.5	0.51070	-10.03003	0.15079	9.11808	0.47350	-0.37271	10.04416	9.13797	272.91	0.86
88/11/11	2447476.5	0.53176	-10.02891	0.14993	9.11699	0.49372	-0.37301	10.04412	9.13797	273.04	0.86
88/11/15	2447480.5	0.55282	-10.02775	0.14907	9.11586	0.51394	-0.37331	10.04408	9.13797	273.16	0.85
88/11/19	2447484.5	0.57388	-10.02654	0.14820	9.11469	0.53416	-0.37361	10.04404	9.13797	273.28	0.85
88/11/23	2447488.5	0.59493	-10.02528	0.14734	9.11348	0.55438	-0.37391	10.04400	9.13798	273.40	0.84
88/11/27	2447492.5	0.61598	-10.02398	0.14648	9.11222	0.57459	-0.37421	10.04395	9.13799	273.52	0.84
88/12/ 1	2447496.5	0.63703	-10.02263	0.14561	9.11093	0.59481	-0.37451	10.04391	9.13800	273.64	0.83

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

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88/12/ 5	2447500.5	0.65808	-10.02123	0.14475	9.10959	0.61502	-0.37480	10.04386	9.13802	273.76	0.83
88/12/ 9	2447504.5	0.67912	-10.01978	0.14388	9.10821	0.63523	-0.37509	10.04380	9.13803	273.88	0.82
88/12/13	2447508.5	0.70016	-10.01829	0.14301	9.10679	0.65544	-0.37538	10.04375	9.13806	274.00	0.82
88/12/17	2447512.5	0.72120	-10.01676	0.14215	9.10532	0.67564	-0.37567	10.04369	9.13808	274.12	0.81
88/12/21	2447516.5	0.74223	-10.01517	0.14128	9.10381	0.69585	-0.37595	10.04363	9.13810	274.24	0.81
88/12/25	2447520.5	0.76326	-10.01354	0.14041	9.10226	0.71605	-0.37624	10.04357	9.13813	274.36	0.80
88/12/29	2447524.5	0.78429	-10.01186	0.13954	9.10067	0.73625	-0.37652	10.04351	9.13816	274.48	0.80
89/ 1/ 2	2447528.5	0.80531	-10.01014	0.13867	9.09903	0.75645	-0.37680	10.04344	9.13819	274.60	0.79
89/ 1/ 6	2447532.5	0.82633	-10.00837	0.13780	9.09735	0.77664	-0.37708	10.04337	9.13823	274.72	0.79
89/ 1/10	2447536.5	0.84734	-10.00655	0.13693	9.09563	0.79683	-0.37736	10.04330	9.13826	274.84	0.78
89/ 1/14	2447540.5	0.86835	-10.00469	0.13605	9.09387	0.81702	-0.37763	10.04322	9.13830	274.96	0.78
89/ 1/18	2447544.5	0.88936	-10.00278	0.13518	9.09206	0.83720	-0.37791	10.04315	9.13834	275.08	0.77
89/ 1/22	2447548.5	0.91036	-10.00082	0.13431	9.09022	0.85738	-0.37818	10.04307	9.13839	275.20	0.77
89/ 1/26	2447552.5	0.93136	-9.99881	0.13343	9.08833	0.87756	-0.37845	10.04298	9.13844	275.32	0.76
89/ 1/30	2447556.5	0.95235	-9.99676	0.13256	9.08640	0.89773	-0.37872	10.04290	9.13849	275.44	0.76
89/ 2/ 3	2447560.5	0.97334	-9.99467	0.13168	9.08443	0.91790	-0.37898	10.04281	9.13854	275.56	0.75
89/ 2/ 7	2447564.5	0.99433	-9.99252	0.13081	9.08241	0.93807	-0.37925	10.04272	9.13860	275.68	0.75
89/ 2/11	2447568.5	1.01531	-9.99033	0.12993	9.08035	0.95824	-0.37951	10.04263	9.13866	275.80	0.74
89/ 2/15	2447572.5	1.03628	-9.98810	0.12906	9.07825	0.97840	-0.37977	10.04254	9.13871	275.92	0.74
89/ 2/19	2447576.5	1.05725	-9.98581	0.12818	9.07610	0.99856	-0.38003	10.04244	9.13878	276.04	0.73
89/ 2/23	2447580.5	1.07822	-9.98348	0.12730	9.07392	1.01871	-0.38029	10.04234	9.13884	276.16	0.73
89/ 2/27	2447584.5	1.09918	-9.98111	0.12642	9.07169	1.03886	-0.38054	10.04224	9.13890	276.28	0.72
89/ 3/ 3	2447588.5	1.12013	-9.97868	0.12554	9.06941	1.05900	-0.38080	10.04214	9.13897	276.40	0.72
89/ 3/ 7	2447592.5	1.14108	-9.97621	0.12466	9.06709	1.07914	-0.38105	10.04203	9.13903	276.53	0.71
89/ 3/11	2447596.5	1.16202	-9.97370	0.12378	9.06474	1.09928	-0.38130	10.04192	9.13910	276.65	0.71
89/ 3/15	2447600.5	1.18296	-9.97113	0.12290	9.06233	1.11940	-0.38155	10.04181	9.13918	276.77	0.70
89/ 3/19	2447604.5	1.20390	-9.96852	0.12202	9.05989	1.13953	-0.38180	10.04170	9.13925	276.89	0.70
89/ 3/23	2447608.5	1.22482	-9.96587	0.12114	9.05740	1.15965	-0.38204	10.04158	9.13932	277.01	0.69
89/ 3/27	2447612.5	1.24574	-9.96317	0.12025	9.05487	1.17976	-0.38228	10.04147	9.13940	277.13	0.69
89/ 3/31	2447616.5	1.26666	-9.96042	0.11937	9.05230	1.19987	-0.38252	10.04134	9.13948	277.25	0.68
89/ 4/ 4	2447620.5	1.28757	-9.95762	0.11849	9.04968	1.21997	-0.38276	10.04122	9.13956	277.37	0.68
89/ 4/ 8	2447624.5	1.30847	-9.95478	0.11760	9.04702	1.24006	-0.38300	10.04110	9.13964	277.49	0.67
89/ 4/12	2447628.5	1.32937	-9.95189	0.11672	9.04432	1.26015	-0.38324	10.04097	9.13973	277.61	0.67
89/ 4/16	2447632.5	1.35026	-9.94896	0.11583	9.04159	1.28023	-0.38347	10.04084	9.13982	277.73	0.66
89/ 4/20	2447636.5	1.37114	-9.94598	0.11494	9.03881	1.30030	-0.38370	10.04070	9.13991	277.85	0.66
89/ 4/24	2447640.5	1.39202	-9.94295	0.11406	9.03599	1.32037	-0.38394	10.04057	9.14001	277.97	0.65
89/ 4/28	2447644.5	1.41289	-9.93988	0.11317	9.03313	1.34043	-0.38417	10.04043	9.14011	278.09	0.65
89/ 5/ 2	2447648.5	1.43376	-9.93676	0.11228	9.03022	1.36049	-0.38439	10.04029	9.14022	278.21	0.64
89/ 5/ 6	2447652.5	1.45462	-9.93359	0.11139	9.02728	1.38055	-0.38462	10.04015	9.14033	278.33	0.64
89/ 5/10	2447656.5	1.47547	-9.93038	0.11051	9.02430	1.40059	-0.38484	10.04000	9.14044	278.45	0.63
89/ 5/14	2447660.5	1.49631	-9.92712	0.10962	9.02127	1.42064	-0.38507	10.03985	9.14056	278.57	0.63
89/ 5/18	2447664.5	1.51715	-9.92382	0.10873	9.01820	1.44067	-0.38529	10.03970	9.14068	278.69	0.62
89/ 5/22	2447668.5	1.53798	-9.92046	0.10784	9.01509	1.46071	-0.38551	10.03955	9.14080	278.81	0.62
89/ 5/26	2447672.5	1.55880	-9.91707	0.10695	9.01194	1.48073	-0.38572	10.03940	9.14092	278.93	0.61
89/ 5/30	2447676.5	1.57962	-9.91362	0.10605	9.00875	1.50075	-0.38594	10.03924	9.14105	279.05	0.61

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89/ 6/ 3	2447680.5	1.60043	-9.91013	0.10516	9.00552	1.52077	-0.38615	10.03908	9.14118	279.17	0.60
89/ 6/ 7	2447684.5	1.62123	-9.90660	0.10427	9.00224	1.54078	-0.38636	10.03892	9.14131	279.29	0.60
89/ 6/11	2447688.5	1.64202	-9.90301	0.10338	8.99892	1.56078	-0.38657	10.03875	9.14145	279.41	0.59
89/ 6/15	2447692.5	1.66280	-9.89938	0.10248	8.99557	1.58078	-0.38678	10.03859	9.14159	279.53	0.58
89/ 6/19	2447696.5	1.68358	-9.89571	0.10159	8.99217	1.60077	-0.38699	10.03842	9.14173	279.66	0.58
89/ 6/23	2447700.5	1.70435	-9.89199	0.10070	8.98872	1.62075	-0.38719	10.03825	9.14188	279.78	0.57
89/ 6/27	2447704.5	1.72511	-9.88822	0.09980	8.98524	1.64073	-0.38740	10.03807	9.14202	279.90	0.57
89/ 7/ 1	2447708.5	1.74587	-9.88441	0.09891	8.98171	1.66071	-0.38760	10.03790	9.14217	280.02	0.56
89/ 7/ 5	2447712.5	1.76661	-9.88055	0.09801	8.97814	1.68067	-0.38780	10.03772	9.14233	280.14	0.56
89/ 7/ 9	2447716.5	1.78735	-9.87664	0.09711	8.97453	1.70063	-0.38799	10.03753	9.14248	280.26	0.55
89/ 7/13	2447720.5	1.80808	-9.87269	0.09622	8.97088	1.72058	-0.38819	10.03735	9.14264	280.38	0.55
89/ 7/17	2447724.5	1.82880	-9.86869	0.09532	8.96719	1.74053	-0.38838	10.03716	9.14280	280.50	0.54
89/ 7/21	2447728.5	1.84951	-9.86465	0.09442	8.96346	1.76047	-0.38858	10.03698	9.14297	280.62	0.54
89/ 7/25	2447732.5	1.87021	-9.86056	0.09352	8.95969	1.78040	-0.38877	10.03678	9.14314	280.74	0.53
89/ 7/29	2447736.5	1.89091	-9.85642	0.09263	8.95587	1.80033	-0.38896	10.03659	9.14331	280.86	0.53
89/ 8/ 2	2447740.5	1.91159	-9.85224	0.09173	8.95201	1.82026	-0.38914	10.03640	9.14349	280.98	0.52
89/ 8/ 6	2447744.5	1.93227	-9.84801	0.09083	8.94811	1.84018	-0.38933	10.03620	9.14366	281.10	0.52
89/ 8/10	2447748.5	1.95293	-9.84374	0.08993	8.94417	1.86009	-0.38951	10.03600	9.14384	281.22	0.51
89/ 8/14	2447752.5	1.97359	-9.83942	0.08903	8.94018	1.87999	-0.38969	10.03579	9.14402	281.34	0.51
89/ 8/18	2447756.5	1.99424	-9.83505	0.08813	8.93615	1.89989	-0.38987	10.03559	9.14420	281.46	0.50
89/ 8/22	2447760.5	2.01488	-9.83064	0.08723	8.93208	1.91978	-0.39005	10.03538	9.14438	281.58	0.50
89/ 8/26	2447764.5	2.03551	-9.82618	0.08633	8.92796	1.93966	-0.39023	10.03517	9.14456	281.70	0.49
89/ 8/30	2447768.5	2.05613	-9.82168	0.08542	8.92380	1.95954	-0.39040	10.03496	9.14475	281.82	0.49
89/ 9/ 3	2447772.5	2.07674	-9.81713	0.08452	8.91960	1.97941	-0.39057	10.03474	9.14494	281.94	0.48
89/ 9/ 7	2447776.5	2.09734	-9.81253	0.08362	8.91535	1.99926	-0.39074	10.03452	9.14512	282.06	0.48
89/ 9/11	2447780.5	2.11793	-9.80789	0.08272	8.91106	2.01912	-0.39091	10.03430	9.14531	282.19	0.47
89/ 9/15	2447784.5	2.13851	-9.80320	0.08181	8.90673	2.03896	-0.39108	10.03408	9.14550	282.31	0.47
89/ 9/19	2447788.5	2.15909	-9.79847	0.08091	8.90236	2.05879	-0.39124	10.03385	9.14569	282.43	0.46
89/ 9/23	2447792.5	2.17965	-9.79369	0.08001	8.89794	2.07861	-0.39140	10.03363	9.14588	282.55	0.46
89/ 9/27	2447796.5	2.20020	-9.78887	0.07910	8.89348	2.09843	-0.39157	10.03340	9.14607	282.67	0.45
89/10/ 1	2447800.5	2.22074	-9.78400	0.07820	8.88897	2.11823	-0.39172	10.03316	9.14627	282.79	0.45
89/10/ 5	2447804.5	2.24127	-9.77908	0.07729	8.88443	2.13802	-0.39188	10.03293	9.14646	282.91	0.44
89/10/ 9	2447808.5	2.26179	-9.77412	0.07639	8.87984	2.15781	-0.39204	10.03269	9.14666	283.03	0.44
89/10/13	2447812.5	2.28229	-9.76911	0.07548	8.87521	2.17758	-0.39219	10.03245	9.14686	283.15	0.43
89/10/17	2447816.5	2.30279	-9.76406	0.07457	8.87054	2.19734	-0.39234	10.03221	9.14706	283.27	0.43
89/10/21	2447820.5	2.32328	-9.75896	0.07367	8.86583	2.21709	-0.39249	10.03196	9.14727	283.39	0.42
89/10/25	2447824.5	2.34376	-9.75381	0.07276	8.86108	2.23684	-0.39264	10.03172	9.14748	283.51	0.42
89/10/29	2447828.5	2.36422	-9.74862	0.07185	8.85629	2.25657	-0.39279	10.03147	9.14769	283.63	0.41
89/11/ 2	2447832.5	2.38467	-9.74339	0.07095	8.85145	2.27630	-0.39293	10.03122	9.14790	283.75	0.41
89/11/ 6	2447836.5	2.40512	-9.73810	0.07004	8.84657	2.29601	-0.39307	10.03096	9.14812	283.87	0.40
89/11/10	2447840.5	2.42555	-9.73278	0.06913	8.84165	2.31572	-0.39321	10.03070	9.14833	283.99	0.39
89/11/14	2447844.5	2.44597	-9.72741	0.06822	8.83669	2.33541	-0.39335	10.03045	9.14855	284.11	0.39
89/11/18	2447848.5	2.46638	-9.72199	0.06731	8.83169	2.35509	-0.39349	10.03018	9.14878	284.24	0.38
89/11/22	2447852.5	2.48677	-9.71652	0.06640	8.82665	2.37477	-0.39362	10.02992	9.14900	284.36	0.38
89/11/26	2447856.5	2.50716	-9.71101	0.06549	8.82157	2.39443	-0.39376	10.02965	9.14923	284.48	0.37

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89/11/30	2447860.5	2.52753	-9.70546	0.06458	8.81644	2.41408	-0.39389	10.02938	9.14946	284.60	0.37
89/12/ 4	2447864.5	2.54790	-9.69986	0.06367	8.81128	2.43372	-0.39402	10.02911	9.14969	284.72	0.36
89/12/ 8	2447868.5	2.56824	-9.69422	0.06276	8.80607	2.45335	-0.39415	10.02884	9.14993	284.84	0.36
89/12/12	2447872.5	2.58858	-9.68853	0.06185	8.80083	2.47297	-0.39427	10.02856	9.15017	284.96	0.35
89/12/16	2447876.5	2.60891	-9.68279	0.06094	8.79554	2.49258	-0.39440	10.02829	9.15041	285.08	0.35
89/12/20	2447880.5	2.62922	-9.67701	0.06003	8.79022	2.51217	-0.39452	10.02801	9.15066	285.20	0.34
89/12/24	2447884.5	2.64952	-9.67118	0.05912	8.78485	2.53176	-0.39464	10.02772	9.15091	285.32	0.34
89/12/28	2447888.5	2.66981	-9.66531	0.05821	8.77944	2.55133	-0.39476	10.02744	9.15116	285.44	0.33
90/ 1/ 1	2447892.5	2.69009	-9.65939	0.05729	8.77400	2.57090	-0.39488	10.02715	9.15142	285.56	0.33
90/ 1/ 5	2447896.5	2.71035	-9.65343	0.05638	8.76851	2.59045	-0.39499	10.02686	9.15168	285.68	0.32
90/ 1/ 9	2447900.5	2.73060	-9.64743	0.05547	8.76299	2.60999	-0.39511	10.02657	9.15195	285.80	0.32
90/ 1/13	2447904.5	2.75084	-9.64137	0.05456	8.75743	2.62952	-0.39522	10.02627	9.15222	285.92	0.31
90/ 1/17	2447908.5	2.77106	-9.63528	0.05364	8.75183	2.64905	-0.39533	10.02598	9.15250	286.04	0.31
90/ 1/21	2447912.5	2.79127	-9.62913	0.05273	8.74619	2.66856	-0.39544	10.02568	9.15278	286.17	0.30
90/ 1/25	2447916.5	2.81147	-9.62295	0.05182	8.74050	2.68806	-0.39555	10.02538	9.15306	286.29	0.30
90/ 1/29	2447920.5	2.83166	-9.61671	0.05090	8.73478	2.70756	-0.39565	10.02507	9.15335	286.41	0.29
90/ 2/ 2	2447924.5	2.85183	-9.61044	0.04999	8.72902	2.72705	-0.39575	10.02477	9.15365	286.53	0.29
90/ 2/ 6	2447928.5	2.87199	-9.60411	0.04907	8.72322	2.74652	-0.39586	10.02446	9.15394	286.65	0.28
90/ 2/10	2447932.5	2.89213	-9.59775	0.04816	8.71738	2.76599	-0.39596	10.02415	9.15424	286.77	0.28
90/ 2/14	2447936.5	2.91227	-9.59134	0.04724	8.71150	2.78545	-0.39605	10.02383	9.15455	286.89	0.27
90/ 2/18	2447940.5	2.93238	-9.58488	0.04633	8.70557	2.80489	-0.39615	10.02352	9.15486	287.01	0.26
90/ 2/22	2447944.5	2.95249	-9.57838	0.04541	8.69961	2.82433	-0.39624	10.02320	9.15517	287.13	0.26
90/ 2/26	2447948.5	2.97258	-9.57183	0.04450	8.69360	2.84376	-0.39633	10.02288	9.15548	287.25	0.25
90/ 3/ 2	2447952.5	2.99266	-9.56524	0.04358	8.68756	2.86318	-0.39642	10.02256	9.15580	287.37	0.25
90/ 3/ 6	2447956.5	3.01272	-9.55860	0.04267	8.68147	2.88259	-0.39651	10.02223	9.15611	287.49	0.24
90/ 3/10	2447960.5	3.03277	-9.55192	0.04175	8.67534	2.90199	-0.39660	10.02190	9.15644	287.61	0.24
90/ 3/14	2447964.5	3.05280	-9.54519	0.04084	8.66917	2.92137	-0.39668	10.02157	9.15676	287.74	0.23
90/ 3/18	2447968.5	3.07282	-9.53842	0.03992	8.66295	2.94075	-0.39677	10.02124	9.15708	287.86	0.23
90/ 3/22	2447972.5	3.09283	-9.53160	0.03900	8.65670	2.96012	-0.39685	10.02091	9.15741	287.98	0.22
90/ 3/26	2447976.5	3.11282	-9.52474	0.03809	8.65040	2.97947	-0.39693	10.02057	9.15774	288.10	0.22
90/ 3/30	2447980.5	3.13280	-9.51784	0.03717	8.64406	2.99881	-0.39700	10.02023	9.15807	288.22	0.21
90/ 4/ 3	2447984.5	3.15276	-9.51089	0.03625	8.63768	3.01814	-0.39708	10.01989	9.15840	288.34	0.21
90/ 4/ 7	2447988.5	3.17270	-9.50389	0.03533	8.63126	3.03746	-0.39715	10.01955	9.15874	288.46	0.20
90/ 4/11	2447992.5	3.19264	-9.49685	0.03442	8.62480	3.05677	-0.39722	10.01920	9.15908	288.58	0.20
90/ 4/15	2447996.5	3.21255	-9.48977	0.03350	8.61830	3.07607	-0.39729	10.01885	9.15943	288.70	0.19
90/ 4/19	2448000.5	3.23246	-9.48264	0.03258	8.61175	3.09536	-0.39736	10.01850	9.15977	288.82	0.19
90/ 4/23	2448004.5	3.25234	-9.47547	0.03166	8.60517	3.11463	-0.39743	10.01815	9.16012	288.94	0.18
90/ 4/27	2448008.5	3.27222	-9.46825	0.03074	8.59854	3.13390	-0.39749	10.01779	9.16047	289.07	0.18
90/ 5/ 1	2448012.5	3.29207	-9.46099	0.02983	8.59186	3.15315	-0.39755	10.01743	9.16082	289.19	0.17
90/ 5/ 5	2448016.5	3.31191	-9.45368	0.02891	8.58515	3.17239	-0.39761	10.01707	9.16117	289.31	0.17
90/ 5/ 9	2448020.5	3.33174	-9.44633	0.02799	8.57839	3.19162	-0.39767	10.01671	9.16152	289.43	0.16
90/ 5/13	2448024.5	3.35155	-9.43894	0.02707	8.57160	3.21083	-0.39773	10.01634	9.16187	289.55	0.15
90/ 5/17	2448028.5	3.37134	-9.43150	0.02615	8.56475	3.23003	-0.39778	10.01597	9.16222	289.67	0.15
90/ 5/21	2448032.5	3.39112	-9.42401	0.02523	8.55787	3.24922	-0.39783	10.01560	9.16258	289.79	0.14
90/ 5/25	2448036.5	3.41088	-9.41648	0.02431	8.55095	3.26840	-0.39788	10.01523	9.16294	289.91	0.14

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90/ 5/29	2448040.5	3.43063	-9.40891	0.02339	8.54398	3.28756	-0.39793	10.01486	9.16329	290.03	0.13
90/ 6/ 2	2448044.5	3.45036	-9.40129	0.02247	8.53697	3.30670	-0.39798	10.01448	9.16365	290.15	0.13
90/ 6/ 6	2448048.5	3.47007	-9.39363	0.02155	8.52992	3.32584	-0.39802	10.01410	9.16401	290.27	0.12
90/ 6/10	2448052.5	3.48977	-9.38593	0.02064	8.52282	3.34496	-0.39806	10.01372	9.16437	290.40	0.12
90/ 6/14	2448056.5	3.50945	-9.37818	0.01972	8.51569	3.36406	-0.39810	10.01333	9.16473	290.52	0.11
90/ 6/18	2448060.5	3.52911	-9.37038	0.01880	8.50851	3.38315	-0.39814	10.01295	9.16509	290.64	0.11
90/ 6/22	2448064.5	3.54876	-9.36255	0.01788	8.50129	3.40222	-0.39818	10.01256	9.16546	290.76	0.10
90/ 6/26	2448068.5	3.56839	-9.35466	0.01696	8.49403	3.42128	-0.39821	10.01217	9.16582	290.88	0.10
90/ 6/30	2448072.5	3.58801	-9.34674	0.01604	8.48673	3.44032	-0.39825	10.01177	9.16619	291.00	0.09
90/ 7/ 4	2448076.5	3.60761	-9.33877	0.01512	8.47940	3.45934	-0.39828	10.01138	9.16656	291.12	0.09
90/ 7/ 8	2448080.5	3.62719	-9.33076	0.01420	8.47202	3.47836	-0.39831	10.01098	9.16694	291.24	0.08
90/ 7/12	2448084.5	3.64675	-9.32270	0.01328	8.46460	3.49735	-0.39834	10.01058	9.16731	291.36	0.08
90/ 7/16	2448088.5	3.66630	-9.31460	0.01236	8.45715	3.51634	-0.39837	10.01017	9.16770	291.48	0.07
90/ 7/20	2448092.5	3.68582	-9.30645	0.01144	8.44965	3.53531	-0.39839	10.00977	9.16808	291.61	0.07
90/ 7/24	2448096.5	3.70534	-9.29826	0.01051	8.44211	3.55426	-0.39841	10.00936	9.16847	291.73	0.06
90/ 7/28	2448100.5	3.72483	-9.29003	0.00959	8.43453	3.57320	-0.39843	10.00895	9.16885	291.85	0.05
90/ 8/ 1	2448104.5	3.74431	-9.28175	0.00867	8.42692	3.59213	-0.39845	10.00854	9.16925	291.97	0.05
90/ 8/ 5	2448108.5	3.76377	-9.27343	0.00775	8.41926	3.61104	-0.39847	10.00812	9.16964	292.09	0.04
90/ 8/ 9	2448112.5	3.78321	-9.26507	0.00683	8.41156	3.62993	-0.39848	10.00771	9.17004	292.21	0.04
90/ 8/13	2448116.5	3.80263	-9.25666	0.00591	8.40382	3.64881	-0.39850	10.00729	9.17043	292.33	0.03
90/ 8/17	2448120.5	3.82203	-9.24821	0.00499	8.39605	3.66768	-0.39851	10.00687	9.17084	292.45	0.03
90/ 8/21	2448124.5	3.84142	-9.23971	0.00407	8.38823	3.68653	-0.39852	10.00644	9.17124	292.58	0.02
90/ 8/25	2448128.5	3.86079	-9.23118	0.00315	8.38037	3.70536	-0.39853	10.00601	9.17165	292.70	0.02
90/ 8/29	2448132.5	3.88014	-9.22259	0.00223	8.37247	3.72418	-0.39853	10.00559	9.17206	292.82	0.01
90/ 9/ 2	2448136.5	3.89947	-9.21397	0.00131	8.36454	3.74299	-0.39854	10.00516	9.17247	292.94	0.01
90/ 9/ 6	2448140.5	3.91879	-9.20530	0.00039	8.35656	3.76178	-0.39854	10.00472	9.17289	293.06	0.00
90/ 9/10	2448144.5	3.93809	-9.19659	-0.00053	8.34854	3.78055	-0.39854	10.00429	9.17331	293.18	-0.00
90/ 9/14	2448148.5	3.95736	-9.18783	-0.00145	8.34049	3.79931	-0.39854	10.00385	9.17373	293.30	-0.01
90/ 9/18	2448152.5	3.97662	-9.17903	-0.00237	8.33239	3.81806	-0.39854	10.00341	9.17415	293.42	-0.01
90/ 9/22	2448156.5	3.99586	-9.17019	-0.00329	8.32426	3.83678	-0.39853	10.00297	9.17458	293.54	-0.02
90/ 9/26	2448160.5	4.01508	-9.16131	-0.00422	8.31608	3.85549	-0.39852	10.00252	9.17501	293.67	-0.02
90/ 9/30	2448164.5	4.03428	-9.15238	-0.00514	8.30787	3.87419	-0.39852	10.00208	9.17545	293.79	-0.03
90/10/ 4	2448168.5	4.05347	-9.14341	-0.00606	8.29962	3.89287	-0.39851	10.00163	9.17589	293.91	-0.03
90/10/ 8	2448172.5	4.07263	-9.13439	-0.00698	8.29133	3.91154	-0.39849	10.00117	9.17633	294.03	-0.04
90/10/12	2448176.5	4.09178	-9.12533	-0.00790	8.28300	3.93019	-0.39848	10.00072	9.17678	294.15	-0.05
90/10/16	2448180.5	4.11090	-9.11623	-0.00882	8.27463	3.94883	-0.39846	10.00027	9.17723	294.27	-0.05
90/10/20	2448184.5	4.13001	-9.10709	-0.00974	8.26622	3.96746	-0.39845	9.99981	9.17768	294.39	-0.06
90/10/24	2448188.5	4.14909	-9.09790	-0.01066	8.25777	3.98607	-0.39843	9.99935	9.17814	294.52	-0.06
90/10/28	2448192.5	4.16816	-9.08867	-0.01158	8.24927	4.00466	-0.39840	9.99888	9.17859	294.64	-0.07
90/11/ 1	2448196.5	4.18721	-9.07940	-0.01250	8.24074	4.02324	-0.39838	9.99842	9.17905	294.76	-0.07
90/11/ 5	2448200.5	4.20624	-9.07008	-0.01342	8.23217	4.04180	-0.39836	9.99795	9.17951	294.88	-0.08
90/11/ 9	2448204.5	4.22524	-9.06072	-0.01434	8.22356	4.06035	-0.39833	9.99748	9.17998	295.00	-0.08
90/11/13	2448208.5	4.24423	-9.05132	-0.01526	8.21490	4.07888	-0.39830	9.99701	9.18044	295.12	-0.09
90/11/17	2448212.5	4.26320	-9.04188	-0.01618	8.20621	4.09740	-0.39827	9.99654	9.18091	295.24	-0.09
90/11/21	2448216.5	4.28215	-9.03239	-0.01710	8.19747	4.11590	-0.39823	9.99606	9.18138	295.37	-0.10

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90/11/25	2448220.5	4.30108	-9.02286	-0.01802	8.18870	4.13438	-0.39820	9.99558	9.18185	295.49	-0.10
90/11/29	2448224.5	4.31998	-9.01329	-0.01894	8.17988	4.15285	-0.39816	9.99510	9.18232	295.61	-0.11
90/12/ 3	2448228.5	4.33887	-9.00367	-0.01986	8.17102	4.17129	-0.39812	9.99462	9.18280	295.73	-0.11
90/12/ 7	2448232.5	4.35774	-8.99402	-0.02078	8.16212	4.18973	-0.39808	9.99413	9.18327	295.85	-0.12
90/12/11	2448236.5	4.37658	-8.98432	-0.02170	8.15318	4.20814	-0.39803	9.99364	9.18375	295.97	-0.12
90/12/15	2448240.5	4.39541	-8.97457	-0.02262	8.14420	4.22653	-0.39799	9.99315	9.18422	296.09	-0.13
90/12/19	2448244.5	4.41421	-8.96479	-0.02354	8.13518	4.24491	-0.39794	9.99266	9.18470	296.22	-0.13
90/12/23	2448248.5	4.43299	-8.95496	-0.02446	8.12612	4.26327	-0.39789	9.99216	9.18518	296.34	-0.14
90/12/27	2448252.5	4.45176	-8.94509	-0.02538	8.11702	4.28161	-0.39784	9.99167	9.18567	296.46	-0.15
90/12/31	2448256.5	4.47050	-8.93518	-0.02630	8.10789	4.29993	-0.39779	9.99117	9.18615	296.58	-0.15
91/ 1/ 4	2448260.5	4.48922	-8.92522	-0.02721	8.09871	4.31823	-0.39774	9.99067	9.18665	296.70	-0.16
91/ 1/ 8	2448264.5	4.50792	-8.91523	-0.02813	8.08950	4.33652	-0.39768	9.99016	9.18714	296.82	-0.16
91/ 1/12	2448268.5	4.52659	-8.90519	-0.02905	8.08024	4.35479	-0.39762	9.98966	9.18763	296.94	-0.17
91/ 1/16	2448272.5	4.54525	-8.89511	-0.02997	8.07095	4.37304	-0.39756	9.98915	9.18813	297.07	-0.17
91/ 1/20	2448276.5	4.56388	-8.88498	-0.03089	8.06161	4.39128	-0.39750	9.98864	9.18863	297.19	-0.18
91/ 1/24	2448280.5	4.58250	-8.87482	-0.03181	8.05224	4.40950	-0.39743	9.98813	9.18913	297.31	-0.18
91/ 1/28	2448284.5	4.60109	-8.86461	-0.03273	8.04282	4.42769	-0.39737	9.98761	9.18963	297.43	-0.19
91/ 2/ 1	2448288.5	4.61966	-8.85436	-0.03364	8.03337	4.44587	-0.39730	9.98709	9.19014	297.55	-0.19
91/ 2/ 5	2448292.5	4.63820	-8.84407	-0.03456	8.02388	4.46403	-0.39723	9.98657	9.19064	297.67	-0.20
91/ 2/ 9	2448296.5	4.65673	-8.83373	-0.03548	8.01434	4.48217	-0.39716	9.98605	9.19115	297.80	-0.20
91/ 2/13	2448300.5	4.67523	-8.82336	-0.03640	8.00477	4.50030	-0.39708	9.98553	9.19167	297.92	-0.21
91/ 2/17	2448304.5	4.69372	-8.81294	-0.03731	7.99516	4.51840	-0.39701	9.98500	9.19218	298.04	-0.21
91/ 2/21	2448308.5	4.71217	-8.80248	-0.03823	7.98551	4.53649	-0.39693	9.98447	9.19270	298.16	-0.22
91/ 2/25	2448312.5	4.73061	-8.79198	-0.03915	7.97582	4.55455	-0.39685	9.98394	9.19322	298.28	-0.22
91/ 3/ 1	2448316.5	4.74903	-8.78144	-0.04006	7.96610	4.57260	-0.39677	9.98341	9.19374	298.40	-0.23
91/ 3/ 5	2448320.5	4.76742	-8.77085	-0.04098	7.95633	4.59063	-0.39669	9.98288	9.19426	298.53	-0.24
91/ 3/ 9	2448324.5	4.78579	-8.76023	-0.04190	7.94653	4.60863	-0.39660	9.98234	9.19479	298.65	-0.24
91/ 3/13	2448328.5	4.80413	-8.74956	-0.04281	7.93669	4.62662	-0.39651	9.98180	9.19532	298.77	-0.25
91/ 3/17	2448332.5	4.82246	-8.73885	-0.04373	7.92681	4.64459	-0.39643	9.98126	9.19585	298.89	-0.25
91/ 3/21	2448336.5	4.84076	-8.72810	-0.04464	7.91689	4.66254	-0.39634	9.98071	9.19638	299.01	-0.26
91/ 3/25	2448340.5	4.85904	-8.71731	-0.04556	7.90693	4.68047	-0.39624	9.98017	9.19692	299.14	-0.26
91/ 3/29	2448344.5	4.87729	-8.70648	-0.04648	7.89694	4.69838	-0.39615	9.97962	9.19747	299.26	-0.27
91/ 4/ 2	2448348.5	4.89552	-8.69560	-0.04739	7.88692	4.71627	-0.39605	9.97907	9.19802	299.38	-0.27
91/ 4/ 6	2448352.5	4.91373	-8.68468	-0.04831	7.87685	4.73415	-0.39596	9.97852	9.19857	299.50	-0.28
91/ 4/10	2448356.5	4.93192	-8.67373	-0.04922	7.86675	4.75200	-0.39586	9.97796	9.19913	299.62	-0.28
91/ 4/14	2448360.5	4.95008	-8.66273	-0.05013	7.85660	4.76984	-0.39576	9.97741	9.19969	299.74	-0.29
91/ 4/18	2448364.5	4.96822	-8.65169	-0.05105	7.84642	4.78767	-0.39565	9.97685	9.20025	299.87	-0.29
91/ 4/22	2448368.5	4.98633	-8.64061	-0.05196	7.83620	4.80547	-0.39555	9.97629	9.20082	299.99	-0.30
91/ 4/26	2448372.5	5.00442	-8.62949	-0.05288	7.82595	4.82325	-0.39544	9.97572	9.20139	300.11	-0.30
91/ 4/30	2448376.5	5.02249	-8.61832	-0.05379	7.81565	4.84102	-0.39533	9.97516	9.20196	300.23	-0.31
91/ 5/ 4	2448380.5	5.04053	-8.60712	-0.05470	7.80531	4.85877	-0.39522	9.97459	9.20254	300.35	-0.31
91/ 5/ 8	2448384.5	5.05855	-8.59587	-0.05562	7.79494	4.87650	-0.39511	9.97402	9.20312	300.48	-0.32
91/ 5/12	2448388.5	5.07655	-8.58459	-0.05653	7.78453	4.89421	-0.39499	9.97345	9.20370	300.60	-0.32
91/ 5/16	2448392.5	5.09452	-8.57326	-0.05744	7.77407	4.91190	-0.39488	9.97287	9.20429	300.72	-0.33
91/ 5/20	2448396.5	5.11247	-8.56189	-0.05835	7.76358	4.92958	-0.39476	9.97230	9.20488	300.84	-0.34

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91/ 5/24	2448400.5	5.13039	-8.55048	-0.05926	7.75305	4.94723	-0.39464	9.97172	9.20547	300.96	-0.34
91/ 5/28	2448404.5	5.14829	-8.53903	-0.06018	7.74248	4.96487	-0.39452	9.97114	9.20606	301.09	-0.35
91/ 6/ 1	2448408.5	5.16616	-8.52754	-0.06109	7.73187	4.98248	-0.39439	9.97056	9.20666	301.21	-0.35
91/ 6/ 5	2448412.5	5.18401	-8.51601	-0.06200	7.72122	5.00008	-0.39427	9.96997	9.20725	301.33	-0.36
91/ 6/ 9	2448416.5	5.20184	-8.50444	-0.06291	7.71053	5.01765	-0.39414	9.96938	9.20785	301.45	-0.36
91/ 6/13	2448420.5	5.21964	-8.49283	-0.06382	7.69980	5.03521	-0.39401	9.96879	9.20845	301.57	-0.37
91/ 6/17	2448424.5	5.23741	-8.48118	-0.06473	7.68904	5.05274	-0.39388	9.96820	9.20905	301.70	-0.37
91/ 6/21	2448428.5	5.25516	-8.46949	-0.06564	7.67823	5.07025	-0.39374	9.96761	9.20965	301.82	-0.38
91/ 6/25	2448432.5	5.27289	-8.45775	-0.06655	7.66739	5.08775	-0.39361	9.96701	9.21026	301.94	-0.38
91/ 6/29	2448436.5	5.29059	-8.44598	-0.06746	7.65650	5.10522	-0.39347	9.96642	9.21087	302.06	-0.39
91/ 7/ 3	2448440.5	5.30827	-8.43416	-0.06837	7.64558	5.12268	-0.39333	9.96582	9.21149	302.19	-0.39
91/ 7/ 7	2448444.5	5.32592	-8.42231	-0.06928	7.63462	5.14011	-0.39319	9.96521	9.21210	302.31	-0.40
91/ 7/11	2448448.5	5.34354	-8.41041	-0.07018	7.62362	5.15753	-0.39305	9.96461	9.21272	302.43	-0.40
91/ 7/15	2448452.5	5.36114	-8.39848	-0.07109	7.61258	5.17492	-0.39290	9.96400	9.21333	302.55	-0.41
91/ 7/19	2448456.5	5.37871	-8.38651	-0.07200	7.60149	5.19230	-0.39275	9.96339	9.21395	302.67	-0.41
91/ 7/23	2448460.5	5.39626	-8.37449	-0.07291	7.59037	5.20965	-0.39260	9.96278	9.21457	302.80	-0.42
91/ 7/27	2448464.5	5.41378	-8.36243	-0.07381	7.57921	5.22698	-0.39245	9.96217	9.21519	302.92	-0.42
91/ 7/31	2448468.5	5.43128	-8.35034	-0.07472	7.56801	5.24429	-0.39230	9.96155	9.21581	303.04	-0.43
91/ 8/ 4	2448472.5	5.44875	-8.33820	-0.07563	7.55677	5.26157	-0.39214	9.96094	9.21643	303.16	-0.44
91/ 8/ 8	2448476.5	5.46619	-8.32603	-0.07653	7.54548	5.27884	-0.39199	9.96032	9.21705	303.29	-0.44
91/ 8/12	2448480.5	5.48361	-8.31381	-0.07744	7.53416	5.29608	-0.39183	9.95969	9.21768	303.41	-0.45
91/ 8/16	2448484.5	5.50100	-8.30156	-0.07834	7.52280	5.31330	-0.39167	9.95907	9.21830	303.53	-0.45
91/ 8/20	2448488.5	5.51837	-8.28926	-0.07925	7.51140	5.33049	-0.39150	9.95844	9.21892	303.65	-0.46
91/ 8/24	2448492.5	5.53571	-8.27693	-0.08015	7.49996	5.34766	-0.39134	9.95782	9.21955	303.78	-0.46
91/ 8/28	2448496.5	5.55302	-8.26456	-0.08105	7.48848	5.36481	-0.39117	9.95718	9.22017	303.90	-0.47
91/ 9/ 1	2448500.5	5.57031	-8.25214	-0.08196	7.47697	5.38193	-0.39100	9.95655	9.22080	304.02	-0.47
91/ 9/ 5	2448504.5	5.58757	-8.23969	-0.08286	7.46541	5.39903	-0.39083	9.95592	9.22142	304.14	-0.48
91/ 9/ 9	2448508.5	5.60480	-8.22720	-0.08376	7.45382	5.41610	-0.39066	9.95528	9.22205	304.26	-0.48
91/ 9/13	2448512.5	5.62201	-8.21467	-0.08467	7.44219	5.43315	-0.39048	9.95464	9.22268	304.39	-0.49
91/ 9/17	2448516.5	5.63919	-8.20209	-0.08557	7.43052	5.45018	-0.39031	9.95400	9.22331	304.51	-0.49
91/ 9/21	2448520.5	5.65634	-8.18948	-0.08647	7.41882	5.46718	-0.39013	9.95336	9.22394	304.63	-0.50
91/ 9/25	2448524.5	5.67347	-8.17683	-0.08737	7.40708	5.48416	-0.38995	9.95271	9.22458	304.75	-0.50
91/ 9/29	2448528.5	5.69056	-8.16415	-0.08827	7.39530	5.50111	-0.38977	9.95206	9.22522	304.88	-0.51
91/10/ 3	2448532.5	5.70763	-8.15142	-0.08917	7.38348	5.51805	-0.38958	9.95141	9.22586	305.00	-0.51
91/10/ 7	2448536.5	5.72468	-8.13865	-0.09007	7.37163	5.53495	-0.38940	9.95076	9.22650	305.12	-0.52
91/10/11	2448540.5	5.74169	-8.12584	-0.09097	7.35974	5.55184	-0.38921	9.95011	9.22714	305.24	-0.52
91/10/15	2448544.5	5.75868	-8.11300	-0.09187	7.34781	5.56870	-0.38902	9.94945	9.22779	305.37	-0.53
91/10/19	2448548.5	5.77564	-8.10011	-0.09277	7.33585	5.58553	-0.38883	9.94879	9.22844	305.49	-0.53
91/10/23	2448552.5	5.79258	-8.08719	-0.09367	7.32385	5.60235	-0.38864	9.94813	9.22909	305.61	-0.54
91/10/27	2448556.5	5.80948	-8.07423	-0.09456	7.31181	5.61914	-0.38844	9.94747	9.22975	305.74	-0.54
91/10/31	2448560.5	5.82636	-8.06123	-0.09546	7.29974	5.63590	-0.38825	9.94681	9.23040	305.86	-0.55
91/11/ 4	2448564.5	5.84321	-8.04819	-0.09636	7.28763	5.65264	-0.38805	9.94614	9.23106	305.98	-0.56
91/11/ 8	2448568.5	5.86003	-8.03511	-0.09725	7.27549	5.66936	-0.38785	9.94547	9.23172	306.10	-0.56
91/11/12	2448572.5	5.87682	-8.02200	-0.09815	7.26330	5.68605	-0.38764	9.94480	9.23239	306.23	-0.57
91/11/16	2448576.5	5.89359	-8.00884	-0.09904	7.25109	5.70272	-0.38744	9.94413	9.23306	306.35	-0.57

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

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91/11/20	2448580.5	5.91033	-7.99565	-0.09994	7.23883	5.71936	-0.38723	9.94346	9.23373	306.47	-0.58
91/11/24	2448584.5	5.92704	-7.98242	-0.10083	7.22654	5.73598	-0.38702	9.94278	9.23440	306.59	-0.58
91/11/28	2448588.5	5.94372	-7.96914	-0.10173	7.21421	5.75258	-0.38681	9.94210	9.23508	306.72	-0.59
91/12/ 2	2448592.5	5.96037	-7.95584	-0.10262	7.20185	5.76915	-0.38660	9.94142	9.23575	306.84	-0.59
91/12/ 6	2448596.5	5.97699	-7.94249	-0.10351	7.18945	5.78570	-0.38639	9.94074	9.23644	306.96	-0.60
91/12/10	2448600.5	5.99359	-7.92910	-0.10441	7.17701	5.80222	-0.38617	9.94005	9.23712	307.09	-0.60
91/12/14	2448604.5	6.01015	-7.91568	-0.10530	7.16455	5.81872	-0.38596	9.93937	9.23781	307.21	-0.61
91/12/18	2448608.5	6.02669	-7.90222	-0.10619	7.15204	5.83519	-0.38574	9.93868	9.23851	307.33	-0.61
91/12/22	2448612.5	6.04320	-7.88872	-0.10708	7.13950	5.85165	-0.38552	9.93799	9.23921	307.45	-0.62
91/12/26	2448616.5	6.05968	-7.87518	-0.10797	7.12693	5.86808	-0.38529	9.93730	9.23991	307.58	-0.62
91/12/30	2448620.5	6.07613	-7.86161	-0.10886	7.11432	5.88449	-0.38507	9.93660	9.24062	307.70	-0.63
92/ 1/ 3	2448624.5	6.09255	-7.84799	-0.10975	7.10167	5.90087	-0.38484	9.93590	9.24133	307.82	-0.63
92/ 1/ 7	2448628.5	6.10894	-7.83434	-0.11064	7.08899	5.91723	-0.38462	9.93521	9.24204	307.95	-0.64
92/ 1/11	2448632.5	6.12530	-7.82066	-0.11153	7.07626	5.93357	-0.38438	9.93450	9.24276	308.07	-0.64
92/ 1/15	2448636.5	6.14163	-7.80693	-0.11241	7.06351	5.94989	-0.38415	9.93380	9.24348	308.19	-0.65
92/ 1/19	2448640.5	6.15794	-7.79316	-0.11330	7.05071	5.96618	-0.38392	9.93310	9.24420	308.31	-0.65
92/ 1/23	2448644.5	6.17421	-7.77936	-0.11419	7.03788	5.98245	-0.38368	9.93239	9.24492	308.44	-0.66
92/ 1/27	2448648.5	6.19045	-7.76552	-0.11507	7.02501	5.99869	-0.38344	9.93168	9.24565	308.56	-0.66
92/ 1/31	2448652.5	6.20667	-7.75165	-0.11596	7.01210	6.01491	-0.38320	9.93097	9.24638	308.68	-0.67
92/ 2/ 4	2448656.5	6.22285	-7.73773	-0.11684	6.99916	6.03111	-0.38296	9.93026	9.24711	308.81	-0.67
92/ 2/ 8	2448660.5	6.23901	-7.72378	-0.11773	6.98617	6.04728	-0.38272	9.92954	9.24785	308.93	-0.68
92/ 2/12	2448664.5	6.25513	-7.70979	-0.11861	6.97315	6.06343	-0.38247	9.92883	9.24858	309.05	-0.68
92/ 2/16	2448668.5	6.27122	-7.69577	-0.11950	6.96010	6.07955	-0.38222	9.92811	9.24932	309.18	-0.69
92/ 2/20	2448672.5	6.28729	-7.68170	-0.12038	6.94700	6.09564	-0.38197	9.92739	9.25006	309.30	-0.69
92/ 2/24	2448676.5	6.30332	-7.66760	-0.12126	6.93387	6.11171	-0.38172	9.92667	9.25080	309.42	-0.70
92/ 2/28	2448680.5	6.31932	-7.65346	-0.12214	6.92070	6.12776	-0.38146	9.92594	9.25154	309.55	-0.71
92/ 3/ 3	2448684.5	6.33530	-7.63929	-0.12302	6.90749	6.14377	-0.38121	9.92521	9.25228	309.67	-0.71
92/ 3/ 7	2448688.5	6.35124	-7.62508	-0.12390	6.89425	6.15976	-0.38095	9.92449	9.25303	309.79	-0.72
92/ 3/11	2448692.5	6.36715	-7.61083	-0.12478	6.88097	6.17573	-0.38069	9.92375	9.25377	309.92	-0.72
92/ 3/15	2448696.5	6.38303	-7.59654	-0.12566	6.86766	6.19167	-0.38043	9.92302	9.25452	310.04	-0.73
92/ 3/19	2448700.5	6.39888	-7.58222	-0.12654	6.85430	6.20758	-0.38016	9.92229	9.25527	310.16	-0.73
92/ 3/23	2448704.5	6.41470	-7.56786	-0.12742	6.84092	6.22347	-0.37990	9.92155	9.25603	310.29	-0.74
92/ 3/27	2448708.5	6.43049	-7.55347	-0.12830	6.82749	6.23933	-0.37963	9.92081	9.25678	310.41	-0.74
92/ 3/31	2448712.5	6.44625	-7.53903	-0.12917	6.81403	6.25517	-0.37936	9.92007	9.25754	310.53	-0.75
92/ 4/ 4	2448716.5	6.46197	-7.52457	-0.13005	6.80053	6.27098	-0.37909	9.91933	9.25830	310.66	-0.75
92/ 4/ 8	2448720.5	6.47767	-7.51006	-0.13092	6.78699	6.28676	-0.37882	9.91859	9.25906	310.78	-0.76
92/ 4/12	2448724.5	6.49333	-7.49552	-0.13180	6.77342	6.30252	-0.37854	9.91784	9.25982	310.90	-0.76
92/ 4/16	2448728.5	6.50896	-7.48094	-0.13267	6.75981	6.31825	-0.37826	9.91709	9.26058	311.03	-0.77
92/ 4/20	2448732.5	6.52456	-7.46633	-0.13355	6.74616	6.33395	-0.37799	9.91634	9.26135	311.15	-0.77
92/ 4/24	2448736.5	6.54013	-7.45168	-0.13442	6.73248	6.34963	-0.37770	9.91559	9.26211	311.27	-0.78
92/ 4/28	2448740.5	6.55567	-7.43699	-0.13529	6.71876	6.36527	-0.37742	9.91483	9.26288	311.40	-0.78
92/ 5/ 2	2448744.5	6.57118	-7.42227	-0.13616	6.70501	6.38089	-0.37714	9.91408	9.26365	311.52	-0.79
92/ 5/ 6	2448748.5	6.58665	-7.40751	-0.13703	6.69122	6.39648	-0.37685	9.91332	9.26441	311.64	-0.79
92/ 5/10	2448752.5	6.60209	-7.39271	-0.13791	6.67739	6.41205	-0.37656	9.91256	9.26518	311.77	-0.80
92/ 5/14	2448756.5	6.61750	-7.37788	-0.13877	6.66353	6.42758	-0.37627	9.91180	9.26596	311.89	-0.80

1.6 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM SATURN

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92/ 5/18	2448760.5	6.63288	-7.36301	-0.13964	6.64963	6.44309	-0.37598	9.91103	9.26673	312.01	-0.81
92/ 5/22	2448764.5	6.64823	-7.34811	-0.14051	6.63569	6.45856	-0.37568	9.91027	9.26750	312.14	-0.81
92/ 5/26	2448768.5	6.66354	-7.33317	-0.14138	6.62172	6.47401	-0.37539	9.90950	9.26828	312.26	-0.82
92/ 5/30	2448772.5	6.67882	-7.31820	-0.14225	6.60772	6.48943	-0.37509	9.90873	9.26905	312.38	-0.82
92/ 6/ 3	2448776.5	6.69407	-7.30319	-0.14311	6.59368	6.50482	-0.37479	9.90796	9.26983	312.51	-0.83
92/ 6/ 7	2448780.5	6.70929	-7.28814	-0.14398	6.57961	6.52018	-0.37449	9.90718	9.27061	312.63	-0.83
92/ 6/11	2448784.5	6.72447	-7.27306	-0.14484	6.56550	6.53552	-0.37419	9.90641	9.27140	312.76	-0.84
92/ 6/15	2448788.5	6.73962	-7.25795	-0.14571	6.55136	6.55082	-0.37388	9.90563	9.27219	312.88	-0.84
92/ 6/19	2448792.5	6.75474	-7.24280	-0.14657	6.53719	6.56610	-0.37357	9.90485	9.27298	313.00	-0.85
92/ 6/23	2448796.5	6.76982	-7.22761	-0.14743	6.52298	6.58136	-0.37327	9.90407	9.27377	313.13	-0.85
92/ 6/27	2448800.5	6.78488	-7.21239	-0.14829	6.50874	6.59658	-0.37296	9.90329	9.27457	313.25	-0.86
92/ 7/ 1	2448804.5	6.79990	-7.19713	-0.14916	6.49446	6.61178	-0.37264	9.90250	9.27537	313.37	-0.86
92/ 7/ 5	2448808.5	6.81488	-7.18184	-0.15002	6.48015	6.62695	-0.37233	9.90172	9.27617	313.50	-0.87
92/ 7/ 9	2448812.5	6.82984	-7.16651	-0.15088	6.46580	6.64209	-0.37201	9.90093	9.27698	313.62	-0.87
92/ 7/13	2448816.5	6.84476	-7.15115	-0.15174	6.45142	6.65721	-0.37169	9.90014	9.27779	313.75	-0.88
92/ 7/17	2448820.5	6.85965	-7.13575	-0.15259	6.43700	6.67229	-0.37137	9.89934	9.27860	313.87	-0.88
92/ 7/21	2448824.5	6.87450	-7.12032	-0.15345	6.42255	6.68735	-0.37105	9.89855	9.27941	313.99	-0.89
92/ 7/25	2448828.5	6.88932	-7.10486	-0.15431	6.40807	6.70238	-0.37073	9.89775	9.28023	314.12	-0.89
92/ 7/29	2448832.5	6.90411	-7.08936	-0.15516	6.39355	6.71738	-0.37040	9.89696	9.28105	314.24	-0.90
92/ 8/ 2	2448836.5	6.91886	-7.07382	-0.15602	6.37899	6.73236	-0.37008	9.89616	9.28187	314.37	-0.90
92/ 8/ 6	2448840.5	6.93358	-7.05825	-0.15687	6.36440	6.74730	-0.36975	9.89535	9.28269	314.49	-0.91
92/ 8/10	2448844.5	6.94827	-7.04265	-0.15773	6.34977	6.76222	-0.36942	9.89455	9.28352	314.61	-0.91
92/ 8/14	2448848.5	6.96292	-7.02701	-0.15858	6.33511	6.77711	-0.36908	9.89375	9.28434	314.74	-0.92
92/ 8/18	2448852.5	6.97754	-7.01133	-0.15943	6.32041	6.79197	-0.36875	9.89294	9.28517	314.86	-0.92
92/ 8/22	2448856.5	6.99212	-6.99563	-0.16028	6.30568	6.80680	-0.36841	9.89213	9.28600	314.99	-0.93
92/ 8/26	2448860.5	7.00667	-6.97988	-0.16114	6.29091	6.82160	-0.36807	9.89132	9.28683	315.11	-0.93
92/ 8/30	2448864.5	7.02119	-6.96411	-0.16199	6.27611	6.83637	-0.36773	9.89050	9.28767	315.23	-0.94
92/ 9/ 3	2448868.5	7.03567	-6.94830	-0.16283	6.26128	6.85111	-0.36739	9.88969	9.28850	315.36	-0.94
92/ 9/ 7	2448872.5	7.05012	-6.93245	-0.16368	6.24641	6.86582	-0.36704	9.88887	9.28934	315.48	-0.95
92/ 9/11	2448876.5	7.06453	-6.91657	-0.16453	6.23151	6.88051	-0.36670	9.88806	9.29019	315.61	-0.95
92/ 9/15	2448880.5	7.07891	-6.90066	-0.16538	6.21657	6.89516	-0.36635	9.88724	9.29103	315.73	-0.96
92/ 9/19	2448884.5	7.09325	-6.88472	-0.16622	6.20160	6.90979	-0.36600	9.88641	9.29188	315.85	-0.96
92/ 9/23	2448888.5	7.10756	-6.86874	-0.16707	6.18659	6.92439	-0.36565	9.88559	9.29273	315.98	-0.97
92/ 9/27	2448892.5	7.12184	-6.85272	-0.16791	6.17155	6.93896	-0.36529	9.88476	9.29358	316.10	-0.97
92/10/ 1	2448896.5	7.13608	-6.83668	-0.16876	6.15647	6.95350	-0.36494	9.88394	9.29443	316.23	-0.98
92/10/ 5	2448900.5	7.15028	-6.82060	-0.16960	6.14136	6.96801	-0.36458	9.88311	9.29528	316.35	-0.98
92/10/ 9	2448904.5	7.16445	-6.80448	-0.17044	6.12621	6.98248	-0.36422	9.88228	9.29614	316.48	-0.99
92/10/13	2448908.5	7.17859	-6.78833	-0.17128	6.11102	6.99693	-0.36386	9.88144	9.29699	316.60	-0.99
92/10/17	2448912.5	7.19269	-6.77215	-0.17212	6.09580	7.01135	-0.36349	9.88061	9.29785	316.72	-1.00
92/10/21	2448916.5	7.20675	-6.75594	-0.17296	6.08055	7.02573	-0.36313	9.87977	9.29870	316.85	-1.00
92/10/25	2448920.5	7.22078	-6.73969	-0.17380	6.06526	7.04009	-0.36276	9.87893	9.29956	316.97	-1.01
92/10/29	2448924.5	7.23477	-6.72341	-0.17464	6.04994	7.05441	-0.36239	9.87809	9.30042	317.10	-1.01
92/11/ 2	2448928.5	7.24873	-6.70710	-0.17547	6.03458	7.06870	-0.36202	9.87725	9.30127	317.22	-1.02
92/11/ 6	2448932.5	7.26266	-6.69075	-0.17631	6.01918	7.08296	-0.36165	9.87641	9.30213	317.35	-1.02
92/11/10	2448936.5	7.27654	-6.67437	-0.17714	6.00376	7.09719	-0.36127	9.87556	9.30299	317.47	-1.03

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				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					SATURN		
92/11/14	2448940.5	7.29040	-6.65796	-0.17798	5.98829	7.11138	-0.36089	9.87471	9.30385	317.60	-1.03
92/11/18	2448944.5	7.30421	-6.64152	-0.17881	5.97280	7.12554	-0.36051	9.87386	9.30471	317.72	-1.04
92/11/22	2448948.5	7.31799	-6.62504	-0.17964	5.95727	7.13967	-0.36013	9.87301	9.30557	317.85	-1.04
92/11/26	2448952.5	7.33174	-6.60853	-0.18048	5.94171	7.15376	-0.35975	9.87216	9.30643	317.97	-1.05
92/11/30	2448956.5	7.34544	-6.59198	-0.18131	5.92612	7.16782	-0.35937	9.87131	9.30729	318.09	-1.05
92/12/ 4	2448960.5	7.35912	-6.57541	-0.18214	5.91049	7.18185	-0.35898	9.87045	9.30815	318.22	-1.06
92/12/ 8	2448964.5	7.37275	-6.55880	-0.18297	5.89483	7.19585	-0.35859	9.86959	9.30902	318.34	-1.06
92/12/12	2448968.5	7.38635	-6.54216	-0.18379	5.87914	7.20981	-0.35820	9.86873	9.30989	318.47	-1.07
92/12/16	2448972.5	7.39992	-6.52549	-0.18462	5.86342	7.22375	-0.35781	9.86787	9.31076	318.59	-1.07
92/12/20	2448976.5	7.41344	-6.50879	-0.18545	5.84767	7.23765	-0.35741	9.86701	9.31163	318.72	-1.08
92/12/24	2448980.5	7.42694	-6.49205	-0.18627	5.83188	7.25152	-0.35702	9.86614	9.31251	318.84	-1.08
92/12/28	2448984.5	7.44039	-6.47528	-0.18710	5.81606	7.26536	-0.35662	9.86528	9.31339	318.97	-1.09
93/ 1/ 1	2448988.5	7.45381	-6.45848	-0.18792	5.80021	7.27916	-0.35622	9.86441	9.31426	319.09	-1.09
93/ 1/ 5	2448992.5	7.46719	-6.44165	-0.18874	5.78433	7.29293	-0.35582	9.86354	9.31515	319.22	-1.10
93/ 1/ 9	2448996.5	7.48053	-6.42479	-0.18956	5.76841	7.30667	-0.35542	9.86267	9.31603	319.34	-1.10
93/ 1/13	2449000.5	7.49384	-6.40789	-0.19038	5.75247	7.32038	-0.35501	9.86179	9.31691	319.47	-1.11
93/ 1/17	2449004.5	7.50711	-6.39096	-0.19120	5.73649	7.33405	-0.35461	9.86092	9.31780	319.59	-1.11
93/ 1/21	2449008.5	7.52035	-6.37400	-0.19202	5.72048	7.34770	-0.35420	9.86004	9.31869	319.72	-1.12
93/ 1/25	2449012.5	7.53354	-6.35701	-0.19284	5.70444	7.36131	-0.35379	9.85916	9.31958	319.84	-1.12
93/ 1/29	2449016.5	7.54670	-6.33999	-0.19366	5.68836	7.37488	-0.35337	9.85828	9.32048	319.97	-1.13
93/ 2/ 2	2449020.5	7.55982	-6.32294	-0.19447	5.67226	7.38843	-0.35296	9.85740	9.32137	320.09	-1.13
93/ 2/ 6	2449024.5	7.57291	-6.30586	-0.19529	5.65612	7.40194	-0.35254	9.85652	9.32227	320.22	-1.14
93/ 2/10	2449028.5	7.58596	-6.28874	-0.19610	5.63996	7.41542	-0.35213	9.85563	9.32317	320.34	-1.14
93/ 2/14	2449032.5	7.59897	-6.27159	-0.19691	5.62376	7.42887	-0.35171	9.85474	9.32408	320.47	-1.14
93/ 2/18	2449036.5	7.61194	-6.25442	-0.19773	5.60753	7.44228	-0.35129	9.85386	9.32498	320.59	-1.15
93/ 2/22	2449040.5	7.62488	-6.23721	-0.19854	5.59127	7.45566	-0.35086	9.85296	9.32589	320.72	-1.15
93/ 2/26	2449044.5	7.63777	-6.21997	-0.19935	5.57498	7.46901	-0.35044	9.85207	9.32680	320.84	-1.16
93/ 3/ 2	2449048.5	7.65064	-6.20270	-0.20016	5.55866	7.48232	-0.35001	9.85118	9.32772	320.97	-1.16
93/ 3/ 6	2449052.5	7.66346	-6.18540	-0.20097	5.54231	7.49561	-0.34958	9.85028	9.32865	321.09	-1.17
93/ 3/10	2449056.5	7.67624	-6.16807	-0.20177	5.52593	7.50887	-0.34916	9.84939	9.32957	321.22	-1.17
93/ 3/14	2449060.5	7.68899	-6.15070	-0.20258	5.50952	7.52209	-0.34872	9.84849	9.33050	321.34	-1.18
93/ 3/18	2449064.5	7.70170	-6.13331	-0.20338	5.49308	7.53528	-0.34829	9.84759	9.33144	321.47	-1.18
93/ 3/22	2449068.5	7.71437	-6.11589	-0.20419	5.47660	7.54844	-0.34785	9.84669	9.33237	321.59	-1.19
93/ 3/26	2449072.5	7.72700	-6.09843	-0.20499	5.46009	7.56157	-0.34742	9.84579	9.33331	321.72	-1.19
93/ 3/30	2449076.5	7.73960	-6.08095	-0.20579	5.44355	7.57467	-0.34698	9.84488	9.33426	321.84	-1.20
93/ 4/ 3	2449080.5	7.75215	-6.06344	-0.20659	5.42698	7.58774	-0.34654	9.84397	9.33520	321.97	-1.20
93/ 4/ 7	2449084.5	7.76467	-6.04589	-0.20739	5.41038	7.60077	-0.34609	9.84307	9.33615	322.09	-1.21
93/ 4/11	2449088.5	7.77715	-6.02832	-0.20819	5.39374	7.61377	-0.34565	9.84216	9.33710	322.22	-1.21
93/ 4/15	2449092.5	7.78959	-6.01071	-0.20899	5.37707	7.62674	-0.34520	9.84125	9.33805	322.34	-1.22
93/ 4/19	2449096.5	7.80200	-5.99308	-0.20979	5.36037	7.63968	-0.34475	9.84033	9.33901	322.47	-1.22
93/ 4/23	2449100.5	7.81436	-5.97542	-0.21058	5.34364	7.65258	-0.34430	9.83942	9.33997	322.60	-1.23
93/ 4/27	2449104.5	7.82668	-5.95772	-0.21138	5.32687	7.66545	-0.34385	9.83850	9.34093	322.72	-1.23
93/ 5/ 1	2449108.5	7.83897	-5.94000	-0.21217	5.31007	7.67829	-0.34339	9.83759	9.34189	322.85	-1.24
93/ 5/ 5	2449112.5	7.85122	-5.92225	-0.21297	5.29323	7.69109	-0.34294	9.83667	9.34285	322.97	-1.24
93/ 5/ 9	2449116.5	7.86343	-5.90446	-0.21376	5.27637	7.70386	-0.34248	9.83575	9.34381	323.10	-1.25

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — SATURN

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93/ 5/13	2449120.5	7.87560	-5.88665	-0.21455	5.25947	7.71659	-0.34202	9.83482	9.34477	323.22	-1.25
93/ 5/17	2449124.5	7.88773	-5.86881	-0.21534	5.24254	7.72929	-0.34156	9.83390	9.34574	323.35	-1.25
93/ 5/21	2449128.5	7.89982	-5.85094	-0.21613	5.22558	7.74195	-0.34109	9.83297	9.34670	323.47	-1.26
93/ 5/25	2449132.5	7.91187	-5.83304	-0.21691	5.20859	7.75458	-0.34063	9.83205	9.34767	323.60	-1.26
93/ 5/29	2449136.5	7.92389	-5.81511	-0.21770	5.19156	7.76717	-0.34016	9.83112	9.34864	323.73	-1.27
93/ 6/ 2	2449140.5	7.93586	-5.79715	-0.21848	5.17451	7.77973	-0.33969	9.83019	9.34961	323.85	-1.27
93/ 6/ 6	2449144.5	7.94779	-5.77917	-0.21927	5.15742	7.79226	-0.33922	9.82926	9.35058	323.98	-1.28
93/ 6/10	2449148.5	7.95969	-5.76115	-0.22005	5.14030	7.80475	-0.33874	9.82832	9.35156	324.10	-1.28
93/ 6/14	2449152.5	7.97154	-5.74311	-0.22083	5.12315	7.81721	-0.33827	9.82739	9.35253	324.23	-1.29
93/ 6/18	2449156.5	7.98336	-5.72503	-0.22161	5.10597	7.82963	-0.33779	9.82645	9.35351	324.35	-1.29
93/ 6/22	2449160.5	7.99513	-5.70693	-0.22239	5.08875	7.84201	-0.33731	9.82551	9.35448	324.48	-1.30
93/ 6/26	2449164.5	8.00687	-5.68880	-0.22317	5.07150	7.85436	-0.33683	9.82457	9.35546	324.61	-1.30
93/ 6/30	2449168.5	8.01857	-5.67064	-0.22395	5.05422	7.86668	-0.33635	9.82363	9.35644	324.73	-1.31
93/ 7/ 4	2449172.5	8.03022	-5.65245	-0.22473	5.03691	7.87895	-0.33587	9.82269	9.35741	324.86	-1.31
93/ 7/ 8	2449176.5	8.04184	-5.63424	-0.22550	5.01957	7.89119	-0.33538	9.82174	9.35839	324.98	-1.32
93/ 7/12	2449180.5	8.05342	-5.61599	-0.22628	5.00220	7.90340	-0.33489	9.82080	9.35937	325.11	-1.32
93/ 7/16	2449184.5	8.06495	-5.59772	-0.22705	4.98479	7.91556	-0.33440	9.81985	9.36035	325.24	-1.32
93/ 7/20	2449188.5	8.07645	-5.57942	-0.22782	4.96736	7.92769	-0.33391	9.81890	9.36133	325.36	-1.33
93/ 7/24	2449192.5	8.08790	-5.56109	-0.22859	4.94989	7.93979	-0.33341	9.81795	9.36231	325.49	-1.33
93/ 7/28	2449196.5	8.09932	-5.54273	-0.22936	4.93240	7.95184	-0.33292	9.81700	9.36329	325.61	-1.34
93/ 8/ 1	2449200.5	8.11069	-5.52435	-0.23013	4.91487	7.96386	-0.33242	9.81604	9.36427	325.74	-1.34
93/ 8/ 5	2449204.5	8.12203	-5.50594	-0.23090	4.89731	7.97584	-0.33192	9.81509	9.36525	325.87	-1.35
93/ 8/ 9	2449208.5	8.13332	-5.48750	-0.23166	4.87972	7.98778	-0.33142	9.81413	9.36622	325.99	-1.35
93/ 8/13	2449212.5	8.14457	-5.46903	-0.23243	4.86211	7.99968	-0.33092	9.81317	9.36720	326.12	-1.36
93/ 8/17	2449216.5	8.15578	-5.45054	-0.23319	4.84446	8.01155	-0.33042	9.81221	9.36818	326.25	-1.36
93/ 8/21	2449220.5	8.16695	-5.43202	-0.23396	4.82679	8.02337	-0.32991	9.81125	9.36917	326.37	-1.37
93/ 8/25	2449224.5	8.17808	-5.41347	-0.23472	4.80909	8.03516	-0.32940	9.81029	9.37015	326.50	-1.37
93/ 8/29	2449228.5	8.18917	-5.39489	-0.23548	4.79137	8.04691	-0.32889	9.80933	9.37114	326.62	-1.38
93/ 9/ 2	2449232.5	8.20022	-5.37629	-0.23624	4.77361	8.05863	-0.32838	9.80836	9.37213	326.75	-1.38
93/ 9/ 6	2449236.5	8.21123	-5.35766	-0.23700	4.75583	8.07031	-0.32787	9.80739	9.37312	326.88	-1.38
93/ 9/10	2449240.5	8.22220	-5.33900	-0.23775	4.73801	8.08196	-0.32736	9.80642	9.37411	327.00	-1.39
93/ 9/14	2449244.5	8.23312	-5.32032	-0.23851	4.72017	8.09356	-0.32684	9.80545	9.37511	327.13	-1.39
93/ 9/18	2449248.5	8.24400	-5.30161	-0.23926	4.70230	8.10513	-0.32632	9.80448	9.37610	327.26	-1.40
93/ 9/22	2449252.5	8.25485	-5.28287	-0.24002	4.68440	8.11667	-0.32580	9.80351	9.37710	327.38	-1.40
93/ 9/26	2449256.5	8.26565	-5.26410	-0.24077	4.66648	8.12816	-0.32528	9.80254	9.37810	327.51	-1.41
93/ 9/30	2449260.5	8.27641	-5.24531	-0.24152	4.64852	8.13962	-0.32476	9.80156	9.37911	327.63	-1.41
93/10/ 4	2449264.5	8.28713	-5.22650	-0.24227	4.63054	8.15104	-0.32423	9.80058	9.38011	327.76	-1.42
93/10/ 8	2449268.5	8.29780	-5.20765	-0.24302	4.61253	8.16243	-0.32370	9.79960	9.38112	327.89	-1.42
93/10/12	2449272.5	8.30844	-5.18878	-0.24376	4.59449	8.17377	-0.32317	9.79862	9.38213	328.01	-1.43
93/10/16	2449276.5	8.31903	-5.16989	-0.24451	4.57642	8.18508	-0.32264	9.79764	9.38314	328.14	-1.43
93/10/20	2449280.5	8.32958	-5.15096	-0.24525	4.55832	8.19636	-0.32211	9.79666	9.38415	328.27	-1.43
93/10/24	2449284.5	8.34009	-5.13202	-0.24600	4.54020	8.20759	-0.32158	9.79567	9.38517	328.39	-1.44
93/10/28	2449288.5	8.35056	-5.11304	-0.24674	4.52205	8.21879	-0.32104	9.79469	9.38619	328.52	-1.44
93/11/ 1	2449292.5	8.36099	-5.09404	-0.24748	4.50386	8.22995	-0.32050	9.79370	9.38721	328.65	-1.45
93/11/ 5	2449296.5	8.37137	-5.07502	-0.24822	4.48565	8.24107	-0.31996	9.79271	9.38823	328.77	-1.45

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93/11/ 9	2449300.5	8.38171	-5.05597	-0.24896	4.46742	8.25216	-0.31942	9.79172	9.38925	328.90	-1.46
93/11/13	2449304.5	8.39201	-5.03689	-0.24970	4.44915	8.26320	-0.31888	9.79073	9.39027	329.03	-1.46
93/11/17	2449308.5	8.40227	-5.01779	-0.25043	4.43086	8.27421	-0.31834	9.78974	9.39130	329.15	-1.47
93/11/21	2449312.5	8.41248	-4.99866	-0.25117	4.41255	8.28518	-0.31779	9.78875	9.39233	329.28	-1.47
93/11/25	2449316.5	8.42265	-4.97951	-0.25190	4.39420	8.29612	-0.31724	9.78775	9.39336	329.41	-1.47
93/11/29	2449320.5	8.43279	-4.96033	-0.25263	4.37583	8.30702	-0.31669	9.78675	9.39440	329.54	-1.48
93/12/ 3	2449324.5	8.44287	-4.94113	-0.25336	4.35743	8.31788	-0.31614	9.78576	9.39544	329.66	-1.48
93/12/ 7	2449328.5	8.45292	-4.92190	-0.25409	4.33899	8.32871	-0.31559	9.78476	9.39648	329.79	-1.49
93/12/11	2449332.5	8.46292	-4.90264	-0.25482	4.32054	8.33949	-0.31503	9.78376	9.39752	329.92	-1.49
93/12/15	2449336.5	8.47288	-4.88337	-0.25555	4.30205	8.35024	-0.31447	9.78275	9.39857	330.04	-1.50
93/12/19	2449340.5	8.48280	-4.86406	-0.25628	4.28353	8.36095	-0.31391	9.78175	9.39961	330.17	-1.50
93/12/23	2449344.5	8.49267	-4.84474	-0.25700	4.26499	8.37162	-0.31335	9.78075	9.40066	330.30	-1.51
93/12/27	2449348.5	8.50250	-4.82538	-0.25772	4.24642	8.38226	-0.31279	9.77974	9.40171	330.42	-1.51
93/12/31	2449352.5	8.51229	-4.80601	-0.25845	4.22782	8.39285	-0.31223	9.77873	9.40276	330.55	-1.51
94/ 1/ 4	2449356.5	8.52204	-4.78661	-0.25917	4.20919	8.40341	-0.31166	9.77772	9.40381	330.68	-1.52
94/ 1/ 8	2449360.5	8.53174	-4.76718	-0.25989	4.19053	8.41393	-0.31109	9.77671	9.40487	330.81	-1.52
94/ 1/12	2449364.5	8.54140	-4.74773	-0.26060	4.17184	8.42441	-0.31052	9.77570	9.40592	330.93	-1.53
94/ 1/16	2449368.5	8.55101	-4.72826	-0.26132	4.15313	8.43485	-0.30995	9.77469	9.40697	331.06	-1.53
94/ 1/20	2449372.5	8.56059	-4.70876	-0.26204	4.13439	8.44524	-0.30937	9.77368	9.40803	331.19	-1.54
94/ 1/24	2449376.5	8.57012	-4.68924	-0.26275	4.11562	8.45560	-0.30880	9.77266	9.40909	331.31	-1.54
94/ 1/28	2449380.5	8.57960	-4.66969	-0.26346	4.09682	8.46592	-0.30822	9.77164	9.41014	331.44	-1.54
94/ 2/ 1	2449384.5	8.58905	-4.65012	-0.26417	4.07800	8.47620	-0.30764	9.77063	9.41120	331.57	-1.55
94/ 2/ 5	2449388.5	8.59844	-4.63053	-0.26488	4.05914	8.48643	-0.30706	9.76961	9.41225	331.70	-1.55
94/ 2/ 9	2449392.5	8.60780	-4.61091	-0.26559	4.04027	8.49663	-0.30648	9.76859	9.41331	331.82	-1.56
94/ 2/13	2449396.5	8.61711	-4.59127	-0.26630	4.02136	8.50678	-0.30589	9.76756	9.41437	331.95	-1.56
94/ 2/17	2449400.5	8.62638	-4.57161	-0.26701	4.00243	8.51690	-0.30531	9.76654	9.41543	332.08	-1.57
94/ 2/21	2449404.5	8.63561	-4.55192	-0.26771	3.98348	8.52697	-0.30472	9.76552	9.41649	332.21	-1.57
94/ 2/25	2449408.5	8.64479	-4.53221	-0.26841	3.96450	8.53701	-0.30413	9.76449	9.41755	332.33	-1.58
94/ 3/ 1	2449412.5	8.65392	-4.51247	-0.26912	3.94549	8.54700	-0.30354	9.76346	9.41862	332.46	-1.58
94/ 3/ 5	2449416.5	8.66302	-4.49272	-0.26982	3.92646	8.55696	-0.30295	9.76244	9.41968	332.59	-1.58
94/ 3/ 9	2449420.5	8.67206	-4.47294	-0.27052	3.90740	8.56687	-0.30235	9.76141	9.42075	332.72	-1.59
94/ 3/13	2449424.5	8.68107	-4.45314	-0.27121	3.88831	8.57675	-0.30176	9.76038	9.42182	332.84	-1.59
94/ 3/17	2449428.5	8.69003	-4.43331	-0.27191	3.86920	8.58658	-0.30116	9.75934	9.42289	332.97	-1.60
94/ 3/21	2449432.5	8.69895	-4.41346	-0.27260	3.85006	8.59638	-0.30056	9.75831	9.42396	333.10	-1.60
94/ 3/25	2449436.5	8.70782	-4.39359	-0.27330	3.83090	8.60613	-0.29996	9.75728	9.42503	333.23	-1.61
94/ 3/29	2449440.5	8.71665	-4.37370	-0.27399	3.81171	8.61584	-0.29935	9.75624	9.42610	333.35	-1.61
94/ 4/ 2	2449444.5	8.72543	-4.35378	-0.27468	3.79250	8.62551	-0.29875	9.75520	9.42718	333.48	-1.61
94/ 4/ 6	2449448.5	8.73417	-4.33385	-0.27537	3.77326	8.63514	-0.29814	9.75417	9.42826	333.61	-1.62
94/ 4/10	2449452.5	8.74286	-4.31389	-0.27606	3.75399	8.64473	-0.29753	9.75313	9.42933	333.74	-1.62
94/ 4/14	2449456.5	8.75151	-4.29391	-0.27675	3.73470	8.65428	-0.29692	9.75209	9.43041	333.87	-1.63
94/ 4/18	2449460.5	8.76012	-4.27390	-0.27743	3.71539	8.66378	-0.29631	9.75105	9.43149	333.99	-1.63
94/ 4/22	2449464.5	8.76868	-4.25388	-0.27811	3.69605	8.67325	-0.29570	9.75000	9.43257	334.12	-1.63
94/ 4/26	2449468.5	8.77720	-4.23383	-0.27880	3.67668	8.68267	-0.29508	9.74896	9.43365	334.25	-1.64
94/ 4/30	2449472.5	8.78567	-4.21376	-0.27948	3.65729	8.69205	-0.29446	9.74791	9.43474	334.38	-1.64
94/ 5/ 4	2449476.5	8.79409	-4.19367	-0.28016	3.63788	8.70139	-0.29385	9.74687	9.43582	334.50	-1.65

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94/ 5/ 8	2449480.5	8.80248	-4.17356	-0.28084	3.61844	8.71069	-0.29323	9.74582	9.43691	334.63	-1.65
94/ 5/12	2449484.5	8.81081	-4.15342	-0.28151	3.59898	8.71995	-0.29261	9.74477	9.43800	334.76	-1.66
94/ 5/16	2449488.5	8.81910	-4.13327	-0.28219	3.57950	8.72917	-0.29198	9.74372	9.43909	334.89	-1.66
94/ 5/20	2449492.5	8.82735	-4.11309	-0.28286	3.56000	8.73834	-0.29136	9.74267	9.44019	335.02	-1.66
94/ 5/24	2449496.5	8.83555	-4.09289	-0.28353	3.54047	8.74748	-0.29073	9.74162	9.44129	335.15	-1.67
94/ 5/28	2449500.5	8.84371	-4.07267	-0.28420	3.52091	8.75658	-0.29010	9.74057	9.44239	335.27	-1.67
94/ 6/ 1	2449504.5	8.85182	-4.05243	-0.28487	3.50133	8.76564	-0.28947	9.73951	9.44349	335.40	-1.68
94/ 6/ 5	2449508.5	8.85989	-4.03217	-0.28554	3.48173	8.77466	-0.28884	9.73846	9.44460	335.53	-1.68
94/ 6/ 9	2449512.5	8.86791	-4.01189	-0.28621	3.46210	8.78363	-0.28821	9.73740	9.44571	335.66	-1.68
94/ 6/13	2449516.5	8.87588	-3.99159	-0.28687	3.44244	8.79257	-0.28757	9.73634	9.44682	335.79	-1.69
94/ 6/17	2449520.5	8.88381	-3.97127	-0.28754	3.42277	8.80147	-0.28694	9.73528	9.44794	335.91	-1.69
94/ 6/21	2449524.5	8.89170	-3.95092	-0.28820	3.40306	8.81032	-0.28630	9.73422	9.44905	336.04	-1.70
94/ 6/25	2449528.5	8.89954	-3.93056	-0.28886	3.38333	8.81914	-0.28566	9.73316	9.45017	336.17	-1.70
94/ 6/29	2449532.5	8.90733	-3.91018	-0.28952	3.36358	8.82791	-0.28502	9.73210	9.45129	336.30	-1.70
94/ 7/ 3	2449536.5	8.91508	-3.88977	-0.29018	3.34380	8.83664	-0.28437	9.73104	9.45241	336.43	-1.71
94/ 7/ 7	2449540.5	8.92278	-3.86935	-0.29083	3.32400	8.84533	-0.28373	9.72997	9.45354	336.56	-1.71
94/ 7/11	2449544.5	8.93043	-3.84890	-0.29149	3.30417	8.85398	-0.28308	9.72891	9.45466	336.68	-1.72
94/ 7/15	2449548.5	8.93804	-3.82844	-0.29214	3.28431	8.86259	-0.28243	9.72784	9.45579	336.81	-1.72
94/ 7/19	2449552.5	8.94561	-3.80796	-0.29279	3.26443	8.87115	-0.28178	9.72678	9.45692	336.94	-1.72
94/ 7/23	2449556.5	8.95313	-3.78745	-0.29344	3.24453	8.87967	-0.28113	9.72571	9.45804	337.07	-1.73
94/ 7/27	2449560.5	8.96060	-3.76693	-0.29409	3.22460	8.88815	-0.28048	9.72464	9.45917	337.20	-1.73
94/ 7/31	2449564.5	8.96803	-3.74639	-0.29474	3.20464	8.89659	-0.27982	9.72357	9.46030	337.33	-1.74
94/ 8/ 4	2449568.5	8.97541	-3.72582	-0.29538	3.18466	8.90498	-0.27916	9.72250	9.46143	337.46	-1.74
94/ 8/ 8	2449572.5	8.98274	-3.70524	-0.29603	3.16466	8.91332	-0.27851	9.72142	9.46256	337.58	-1.74
94/ 8/12	2449576.5	8.99003	-3.68464	-0.29667	3.14464	8.92163	-0.27785	9.72035	9.46369	337.71	-1.75
94/ 8/16	2449580.5	8.99727	-3.66402	-0.29731	3.12459	8.92989	-0.27718	9.71927	9.46482	337.84	-1.75
94/ 8/20	2449584.5	9.00447	-3.64338	-0.29795	3.10452	8.93811	-0.27652	9.71820	9.46596	337.97	-1.76
94/ 8/24	2449588.5	9.01161	-3.62272	-0.29859	3.08442	8.94629	-0.27585	9.71712	9.46709	338.10	-1.76
94/ 8/28	2449592.5	9.01872	-3.60205	-0.29923	3.06430	8.95442	-0.27519	9.71604	9.46823	338.23	-1.76
94/ 9/ 1	2449596.5	9.02577	-3.58135	-0.29986	3.04416	8.96251	-0.27452	9.71497	9.46937	338.36	-1.77
94/ 9/ 5	2449600.5	9.03278	-3.56064	-0.30050	3.02399	8.97056	-0.27385	9.71389	9.47050	338.49	-1.77
94/ 9/ 9	2449604.5	9.03974	-3.53990	-0.30113	3.00379	8.97856	-0.27317	9.71280	9.47164	338.62	-1.78
94/ 9/13	2449608.5	9.04666	-3.51915	-0.30176	2.98358	8.98652	-0.27250	9.71172	9.47278	338.74	-1.78
94/ 9/17	2449612.5	9.05353	-3.49838	-0.30239	2.96334	8.99443	-0.27182	9.71064	9.47391	338.87	-1.78
94/ 9/21	2449616.5	9.06035	-3.47759	-0.30301	2.94307	9.00230	-0.27115	9.70955	9.47505	339.00	-1.79
94/ 9/25	2449620.5	9.06713	-3.45679	-0.30364	2.92278	9.01012	-0.27047	9.70847	9.47619	339.13	-1.79
94/ 9/29	2449624.5	9.07386	-3.43596	-0.30426	2.90247	9.01790	-0.26979	9.70738	9.47732	339.26	-1.80
94/10/ 3	2449628.5	9.08054	-3.41512	-0.30489	2.88214	9.02563	-0.26910	9.70630	9.47846	339.39	-1.80
94/10/ 7	2449632.5	9.08717	-3.39426	-0.30551	2.86179	9.03332	-0.26842	9.70521	9.47959	339.52	-1.80
94/10/11	2449636.5	9.09376	-3.37339	-0.30613	2.84141	9.04096	-0.26773	9.70412	9.48073	339.65	-1.81
94/10/15	2449640.5	9.10030	-3.35249	-0.30674	2.82101	9.04855	-0.26704	9.70303	9.48186	339.78	-1.81
94/10/19	2449644.5	9.10679	-3.33158	-0.30736	2.80059	9.05610	-0.26636	9.70194	9.48299	339.91	-1.82
94/10/23	2449648.5	9.11324	-3.31065	-0.30797	2.78014	9.06360	-0.26566	9.70084	9.48412	340.03	-1.82
94/10/27	2449652.5	9.11964	-3.28970	-0.30859	2.75968	9.07105	-0.26497	9.69975	9.48525	340.16	-1.82
94/10/31	2449656.5	9.12599	-3.26874	-0.30920	2.73919	9.07846	-0.26428	9.69866	9.48639	340.29	-1.83

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94/11/ 4	2449660.5	9.13230	-3.24776	-0.30981	2.71869	9.08582	-0.26358	9.69756	9.48752	340.42	-1.83
94/11/ 8	2449664.5	9.13855	-3.22676	-0.31042	2.69817	9.09314	-0.26289	9.69647	9.48865	340.55	-1.83
94/11/12	2449668.5	9.14476	-3.20574	-0.31102	2.67763	9.10041	-0.26219	9.69537	9.48978	340.68	-1.84
94/11/16	2449672.5	9.15092	-3.18471	-0.31163	2.65707	9.10764	-0.26149	9.69427	9.49092	340.81	-1.84
94/11/20	2449676.5	9.15704	-3.16366	-0.31223	2.63649	9.11482	-0.26079	9.69317	9.49205	340.94	-1.85
94/11/24	2449680.5	9.16311	-3.14260	-0.31283	2.61588	9.12196	-0.26009	9.69207	9.49319	341.07	-1.85
94/11/28	2449684.5	9.16912	-3.12152	-0.31343	2.59526	9.12906	-0.25938	9.69097	9.49433	341.20	-1.85
94/12/ 2	2449688.5	9.17510	-3.10042	-0.31403	2.57462	9.13610	-0.25868	9.68987	9.49547	341.33	-1.86
94/12/ 6	2449692.5	9.18102	-3.07930	-0.31463	2.55396	9.14311	-0.25797	9.68877	9.49661	341.46	-1.86
94/12/10	2449696.5	9.18690	-3.05817	-0.31522	2.53328	9.15006	-0.25726	9.68766	9.49776	341.59	-1.86
94/12/14	2449700.5	9.19272	-3.03703	-0.31582	2.51258	9.15698	-0.25655	9.68656	9.49890	341.72	-1.87
94/12/18	2449704.5	9.19851	-3.01586	-0.31641	2.49187	9.16385	-0.25584	9.68546	9.50005	341.85	-1.87
94/12/22	2449708.5	9.20424	-2.99469	-0.31700	2.47113	9.17067	-0.25512	9.68435	9.50120	341.98	-1.88
94/12/26	2449712.5	9.20992	-2.97349	-0.31759	2.45037	9.17745	-0.25441	9.68324	9.50235	342.11	-1.88
94/12/30	2449716.5	9.21556	-2.95228	-0.31817	2.42959	9.18418	-0.25369	9.68214	9.50350	342.24	-1.88
95/ 1/ 3	2449720.5	9.22115	-2.93106	-0.31876	2.40880	9.19087	-0.25297	9.68103	9.50465	342.37	-1.89
95/ 1/ 7	2449724.5	9.22669	-2.90982	-0.31934	2.38798	9.19751	-0.25225	9.67992	9.50581	342.50	-1.89
95/ 1/11	2449728.5	9.23218	-2.88856	-0.31992	2.36715	9.20411	-0.25153	9.67881	9.50696	342.63	-1.89
95/ 1/15	2449732.5	9.23763	-2.86729	-0.32050	2.34630	9.21066	-0.25081	9.67770	9.50812	342.76	-1.90
95/ 1/19	2449736.5	9.24302	-2.84601	-0.32108	2.32542	9.21717	-0.25008	9.67659	9.50928	342.89	-1.90
95/ 1/23	2449740.5	9.24837	-2.82471	-0.32166	2.30453	9.22363	-0.24935	9.67547	9.51044	343.02	-1.91
95/ 1/27	2449744.5	9.25367	-2.80339	-0.32224	2.28362	9.23005	-0.24863	9.67436	9.51160	343.15	-1.91
95/ 1/31	2449748.5	9.25892	-2.78206	-0.32281	2.26270	9.23642	-0.24790	9.67325	9.51277	343.28	-1.91
95/ 2/ 4	2449752.5	9.26412	-2.76071	-0.32338	2.24175	9.24275	-0.24717	9.67213	9.51394	343.41	-1.92
95/ 2/ 8	2449756.5	9.26928	-2.73935	-0.32395	2.22079	9.24904	-0.24644	9.67102	9.51511	343.54	-1.92
95/ 2/12	2449760.5	9.27439	-2.71798	-0.32452	2.19981	9.25528	-0.24570	9.66990	9.51628	343.67	-1.92
95/ 2/16	2449764.5	9.27944	-2.69659	-0.32509	2.17881	9.26147	-0.24497	9.66878	9.51746	343.80	-1.93
95/ 2/20	2449768.5	9.28445	-2.67519	-0.32565	2.15779	9.26762	-0.24423	9.66766	9.51864	343.93	-1.93
95/ 2/24	2449772.5	9.28941	-2.65377	-0.32621	2.13675	9.27373	-0.24349	9.66655	9.51983	344.06	-1.93
95/ 2/28	2449776.5	9.29432	-2.63234	-0.32678	2.11568	9.27980	-0.24275	9.66543	9.52101	344.19	-1.94
95/ 3/ 4	2449780.5	9.29919	-2.61090	-0.32734	2.09460	9.28581	-0.24201	9.66431	9.52220	344.32	-1.94
95/ 3/ 8	2449784.5	9.30400	-2.58944	-0.32789	2.07350	9.29178	-0.24127	9.66319	9.52339	344.45	-1.94
95/ 3/12	2449788.5	9.30877	-2.56797	-0.32845	2.05238	9.29771	-0.24052	9.66206	9.52458	344.58	-1.95
95/ 3/16	2449792.5	9.31349	-2.54648	-0.32901	2.03124	9.30359	-0.23977	9.66094	9.52577	344.71	-1.95
95/ 3/20	2449796.5	9.31815	-2.52498	-0.32956	2.01009	9.30943	-0.23902	9.65982	9.52696	344.84	-1.96
95/ 3/24	2449800.5	9.32277	-2.50347	-0.33011	1.98891	9.31522	-0.23827	9.65870	9.52816	344.97	-1.96
95/ 3/28	2449804.5	9.32734	-2.48194	-0.33066	1.96771	9.32096	-0.23752	9.65757	9.52935	345.10	-1.96
95/ 4/ 1	2449808.5	9.33186	-2.46040	-0.33121	1.94649	9.32665	-0.23677	9.65645	9.53055	345.23	-1.97
95/ 4/ 5	2449812.5	9.33634	-2.43885	-0.33175	1.92525	9.33230	-0.23601	9.65532	9.53174	345.36	-1.97
95/ 4/ 9	2449816.5	9.34076	-2.41728	-0.33230	1.90399	9.33790	-0.23526	9.65419	9.53294	345.49	-1.97
95/ 4/13	2449820.5	9.34513	-2.39570	-0.33284	1.88272	9.34346	-0.23450	9.65307	9.53414	345.62	-1.98
95/ 4/17	2449824.5	9.34946	-2.37411	-0.33338	1.86142	9.34896	-0.23374	9.65194	9.53533	345.75	-1.98
95/ 4/21	2449828.5	9.35373	-2.35251	-0.33392	1.84011	9.35442	-0.23298	9.65081	9.53653	345.88	-1.98
95/ 4/25	2449832.5	9.35796	-2.33089	-0.33446	1.81878	9.35982	-0.23222	9.64968	9.53772	346.01	-1.99
95/ 4/29	2449836.5	9.36214	-2.30926	-0.33499	1.79743	9.36518	-0.23145	9.64855	9.53892	346.14	-1.99

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95/ 5/ 3	2449840.5	9.36626	-2.28762	-0.33553	1.77606	9.37050	-0.23069	9.64742	9.54012	346.27	-1.99
95/ 5/ 7	2449844.5	9.37034	-2.26597	-0.33606	1.75468	9.37576	-0.22992	9.64629	9.54132	346.41	-2.00
95/ 5/11	2449848.5	9.37437	-2.24430	-0.33659	1.73328	9.38098	-0.22915	9.64516	9.54252	346.54	-2.00
95/ 5/15	2449852.5	9.37835	-2.22262	-0.33712	1.71186	9.38615	-0.22838	9.64402	9.54371	346.67	-2.00
95/ 5/19	2449856.5	9.38228	-2.20093	-0.33764	1.69043	9.39128	-0.22761	9.64289	9.54492	346.80	-2.01
95/ 5/23	2449860.5	9.38616	-2.17923	-0.33817	1.66898	9.39635	-0.22684	9.64176	9.54612	346.93	-2.01
95/ 5/27	2449864.5	9.38999	-2.15752	-0.33869	1.64750	9.40138	-0.22607	9.64062	9.54732	347.06	-2.01
95/ 5/31	2449868.5	9.39377	-2.13580	-0.33921	1.62602	9.40635	-0.22529	9.63949	9.54852	347.19	-2.02
95/ 6/ 4	2449872.5	9.39751	-2.11406	-0.33973	1.60451	9.41128	-0.22451	9.63835	9.54972	347.32	-2.02
95/ 6/ 8	2449876.5	9.40119	-2.09231	-0.34025	1.58299	9.41616	-0.22373	9.63721	9.55092	347.45	-2.02
95/ 6/12	2449880.5	9.40482	-2.07055	-0.34077	1.56145	9.42100	-0.22295	9.63608	9.55212	347.58	-2.03
95/ 6/16	2449884.5	9.40840	-2.04878	-0.34128	1.53990	9.42578	-0.22217	9.63494	9.55332	347.71	-2.03
95/ 6/20	2449888.5	9.41193	-2.02700	-0.34179	1.51832	9.43051	-0.22139	9.63380	9.55452	347.85	-2.03
95/ 6/24	2449892.5	9.41542	-2.00521	-0.34230	1.49674	9.43520	-0.22060	9.63266	9.55572	347.98	-2.04
95/ 6/28	2449896.5	9.41885	-1.98341	-0.34281	1.47513	9.43983	-0.21982	9.63152	9.55692	348.11	-2.04
95/ 7/ 2	2449900.5	9.42223	-1.96160	-0.34332	1.45352	9.44442	-0.21903	9.63038	9.55812	348.24	-2.04
95/ 7/ 6	2449904.5	9.42557	-1.93977	-0.34383	1.43188	9.44896	-0.21824	9.62924	9.55932	348.37	-2.05
95/ 7/10	2449908.5	9.42885	-1.91794	-0.34433	1.41023	9.45344	-0.21745	9.62810	9.56052	348.50	-2.05
95/ 7/14	2449912.5	9.43208	-1.89609	-0.34483	1.38857	9.45788	-0.21666	9.62695	9.56172	348.63	-2.05
95/ 7/18	2449916.5	9.43526	-1.87424	-0.34533	1.36689	9.46227	-0.21587	9.62581	9.56292	348.76	-2.06
95/ 7/22	2449920.5	9.43840	-1.85238	-0.34583	1.34519	9.46661	-0.21507	9.62467	9.56412	348.90	-2.06
95/ 7/26	2449924.5	9.44148	-1.83050	-0.34632	1.32349	9.47090	-0.21428	9.62352	9.56532	349.03	-2.06
95/ 7/30	2449928.5	9.44451	-1.80862	-0.34682	1.30177	9.47514	-0.21348	9.62238	9.56652	349.16	-2.07
95/ 8/ 3	2449932.5	9.44749	-1.78672	-0.34731	1.28004	9.47933	-0.21268	9.62123	9.56773	349.29	-2.07
95/ 8/ 7	2449936.5	9.45043	-1.76482	-0.34780	1.25829	9.48348	-0.21188	9.62009	9.56894	349.42	-2.07
95/ 8/11	2449940.5	9.45331	-1.74291	-0.34829	1.23653	9.48757	-0.21108	9.61894	9.57014	349.55	-2.08
95/ 8/15	2449944.5	9.45614	-1.72098	-0.34878	1.21475	9.49163	-0.21028	9.61780	9.57135	349.69	-2.08
95/ 8/19	2449948.5	9.45892	-1.69905	-0.34926	1.19296	9.49563	-0.20948	9.61665	9.57256	349.82	-2.08
95/ 8/23	2449952.5	9.46165	-1.67711	-0.34974	1.17116	9.49958	-0.20867	9.61550	9.57378	349.95	-2.08
95/ 8/27	2449956.5	9.46433	-1.65516	-0.35022	1.14934	9.50349	-0.20787	9.61435	9.57499	350.08	-2.09
95/ 8/31	2449960.5	9.46696	-1.63320	-0.35070	1.12750	9.50734	-0.20706	9.61320	9.57621	350.21	-2.09
95/ 9/ 4	2449964.5	9.46954	-1.61123	-0.35118	1.10566	9.51115	-0.20625	9.61206	9.57742	350.34	-2.09
95/ 9/ 8	2449968.5	9.47207	-1.58926	-0.35166	1.08379	9.51491	-0.20544	9.61091	9.57864	350.48	-2.10
95/ 9/12	2449972.5	9.47455	-1.56727	-0.35213	1.06192	9.51862	-0.20462	9.60976	9.57986	350.61	-2.10
95/ 9/16	2449976.5	9.47698	-1.54528	-0.35260	1.04003	9.52228	-0.20381	9.60860	9.58108	350.74	-2.10
95/ 9/20	2449980.5	9.47935	-1.52327	-0.35307	1.01812	9.52590	-0.20300	9.60745	9.58230	350.87	-2.11
95/ 9/24	2449984.5	9.48168	-1.50126	-0.35354	0.99620	9.52946	-0.20218	9.60630	9.58352	351.00	-2.11
95/ 9/28	2449988.5	9.48396	-1.47924	-0.35401	0.97427	9.53298	-0.20136	9.60515	9.58475	351.13	-2.11
95/10/ 2	2449992.5	9.48618	-1.45722	-0.35447	0.95232	9.53644	-0.20054	9.60400	9.58597	351.27	-2.12
95/10/ 6	2449996.5	9.48836	-1.43518	-0.35493	0.93035	9.53986	-0.19972	9.60285	9.58720	351.40	-2.12
95/10/10	2450000.5	9.49048	-1.41314	-0.35539	0.90837	9.54322	-0.19890	9.60169	9.58842	351.53	-2.12
95/10/14	2450004.5	9.49255	-1.39109	-0.35585	0.88638	9.54654	-0.19807	9.60054	9.58964	351.66	-2.12
95/10/18	2450008.5	9.49458	-1.36903	-0.35631	0.86438	9.54980	-0.19725	9.59938	9.59087	351.80	-2.13
95/10/22	2450012.5	9.49655	-1.34697	-0.35676	0.84236	9.55301	-0.19642	9.59823	9.59209	351.93	-2.13
95/10/26	2450016.5	9.49847	-1.32489	-0.35722	0.82034	9.55618	-0.19560	9.59707	9.59332	352.06	-2.13

1.6 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — SATURN

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
95/10/30	2450020.5	9.50034	-1.30281	-0.35767	0.79829	9.55929	-0.19477	9.59592	9.59455	352.19	-2.14
95/11/ 3	2450024.5	9.50216	-1.28073	-0.35812	0.77624	9.56236	-0.19394	9.59476	9.59577	352.32	-2.14
95/11/ 7	2450028.5	9.50392	-1.25863	-0.35856	0.75417	9.56538	-0.19311	9.59361	9.59700	352.46	-2.14
95/11/11	2450032.5	9.50564	-1.23653	-0.35901	0.73209	9.56834	-0.19227	9.59245	9.59823	352.59	-2.14
95/11/15	2450036.5	9.50731	-1.21442	-0.35945	0.70999	9.57126	-0.19144	9.59129	9.59946	352.72	-2.15
95/11/19	2450040.5	9.50892	-1.19231	-0.35989	0.68789	9.57412	-0.19060	9.59014	9.60070	352.85	-2.15
95/11/23	2450044.5	9.51048	-1.17019	-0.36033	0.66577	9.57694	-0.18976	9.58898	9.60193	352.99	-2.15
95/11/27	2450048.5	9.51200	-1.14806	-0.36077	0.64363	9.57970	-0.18892	9.58782	9.60316	353.12	-2.16
95/12/ 1	2450052.5	9.51346	-1.12593	-0.36120	0.62148	9.58241	-0.18808	9.58666	9.60439	353.25	-2.16
95/12/ 5	2450056.5	9.51487	-1.10379	-0.36164	0.59932	9.58507	-0.18724	9.58550	9.60562	353.38	-2.16
95/12/ 9	2450060.5	9.51623	-1.08164	-0.36207	0.57715	9.58768	-0.18640	9.58434	9.60685	353.52	-2.16
95/12/13	2450064.5	9.51754	-1.05949	-0.36250	0.55497	9.59024	-0.18555	9.58318	9.60808	353.65	-2.17
95/12/17	2450068.5	9.51879	-1.03733	-0.36293	0.53277	9.59275	-0.18471	9.58202	9.60930	353.78	-2.17
95/12/21	2450072.5	9.52000	-1.01517	-0.36335	0.51057	9.59520	-0.18386	9.58086	9.61053	353.91	-2.17
95/12/25	2450076.5	9.52115	-0.99300	-0.36378	0.48835	9.59760	-0.18301	9.57970	9.61176	354.05	-2.18
95/12/29	2450080.5	9.52225	-0.97082	-0.36420	0.46612	9.59995	-0.18216	9.57854	9.61299	354.18	-2.18
96/ 1/ 2	2450084.5	9.52330	-0.94864	-0.36462	0.44388	9.60225	-0.18131	9.57738	9.61421	354.31	-2.18
96/ 1/ 6	2450088.5	9.52430	-0.92646	-0.36504	0.42162	9.60449	-0.18046	9.57622	9.61543	354.44	-2.18
96/ 1/10	2450092.5	9.52525	-0.90426	-0.36545	0.39936	9.60668	-0.17960	9.57506	9.61666	354.58	-2.19
96/ 1/14	2450096.5	9.52615	-0.88207	-0.36587	0.37709	9.60882	-0.17875	9.57389	9.61788	354.71	-2.19
96/ 1/18	2450100.5	9.52699	-0.85987	-0.36628	0.35481	9.61090	-0.17789	9.57273	9.61910	354.84	-2.19
96/ 1/22	2450104.5	9.52779	-0.83766	-0.36669	0.33252	9.61294	-0.17704	9.57157	9.62032	354.98	-2.20
96/ 1/26	2450108.5	9.52853	-0.81545	-0.36710	0.31023	9.61492	-0.17618	9.57040	9.62154	355.11	-2.20
96/ 1/30	2450112.5	9.52922	-0.79324	-0.36750	0.28792	9.61685	-0.17532	9.56924	9.62276	355.24	-2.20
96/ 2/ 3	2450116.5	9.52986	-0.77102	-0.36791	0.26561	9.61874	-0.17446	9.56808	9.62398	355.37	-2.20
96/ 2/ 7	2450120.5	9.53045	-0.74880	-0.36831	0.24329	9.62057	-0.17360	9.56691	9.62521	355.51	-2.21
96/ 2/11	2450124.5	9.53099	-0.72657	-0.36871	0.22095	9.62235	-0.17273	9.56575	9.62643	355.64	-2.21
96/ 2/15	2450128.5	9.53147	-0.70434	-0.36911	0.19861	9.62407	-0.17187	9.56458	9.62766	355.77	-2.21
96/ 2/19	2450132.5	9.53190	-0.68210	-0.36950	0.17626	9.62575	-0.17100	9.56342	9.62888	355.91	-2.21
96/ 2/23	2450136.5	9.53228	-0.65986	-0.36990	0.15390	9.62737	-0.17014	9.56225	9.63011	356.04	-2.22
96/ 2/27	2450140.5	9.53261	-0.63762	-0.37029	0.13154	9.62895	-0.16927	9.56109	9.63133	356.17	-2.22
96/ 3/ 2	2450144.5	9.53289	-0.61538	-0.37068	0.10916	9.63047	-0.16840	9.55992	9.63256	356.31	-2.22
96/ 3/ 6	2450148.5	9.53312	-0.59313	-0.37107	0.08678	9.63194	-0.16753	9.55876	9.63379	356.44	-2.22
96/ 3/10	2450152.5	9.53329	-0.57087	-0.37145	0.06438	9.63336	-0.16665	9.55759	9.63502	356.57	-2.23
96/ 3/14	2450156.5	9.53342	-0.54862	-0.37184	0.04198	9.63473	-0.16578	9.55642	9.63625	356.71	-2.23
96/ 3/18	2450160.5	9.53349	-0.52636	-0.37222	0.01958	9.63605	-0.16491	9.55526	9.63748	356.84	-2.23
96/ 3/22	2450164.5	9.53351	-0.50409	-0.37260	-0.00284	9.63732	-0.16403	9.55409	9.63871	356.97	-2.24
96/ 3/26	2450168.5	9.53347	-0.48183	-0.37298	-0.02527	9.63853	-0.16315	9.55293	9.63994	357.11	-2.24
96/ 3/30	2450172.5	9.53339	-0.45956	-0.37335	-0.04770	9.63969	-0.16228	9.55176	9.64118	357.24	-2.24
96/ 4/ 3	2450176.5	9.53325	-0.43729	-0.37373	-0.07014	9.64081	-0.16140	9.55059	9.64241	357.37	-2.24
96/ 4/ 7	2450180.5	9.53307	-0.41502	-0.37410	-0.09259	9.64187	-0.16052	9.54943	9.64365	357.51	-2.25
96/ 4/11	2450184.5	9.53283	-0.39274	-0.37447	-0.11504	9.64287	-0.15964	9.54826	9.64488	357.64	-2.25
96/ 4/15	2450188.5	9.53253	-0.37046	-0.37484	-0.13751	9.64383	-0.15875	9.54709	9.64612	357.77	-2.25
96/ 4/19	2450192.5	9.53219	-0.34818	-0.37520	-0.15997	9.64474	-0.15787	9.54592	9.64736	357.91	-2.25
96/ 4/23	2450196.5	9.53179	-0.32590	-0.37556	-0.18245	9.64560	-0.15699	9.54476	9.64860	358.04	-2.26

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
				HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM					SATURN		
96/ 4/27	2450200.5	9.53135	-0.30362	-0.37593	-0.20493	9.64640	-0.15610	9.54359	9.64984	358.18	-2.26
96/ 5/ 1	2450204.5	9.53085	-0.28133	-0.37629	-0.22742	9.64716	-0.15521	9.54242	9.65109	358.31	-2.26
96/ 5/ 5	2450208.5	9.53030	-0.25904	-0.37664	-0.24992	9.64787	-0.15433	9.54125	9.65234	358.44	-2.26
96/ 5/ 9	2450212.5	9.52969	-0.23676	-0.37700	-0.27243	9.64853	-0.15344	9.54009	9.65359	358.58	-2.26
96/ 5/13	2450216.5	9.52904	-0.21446	-0.37735	-0.29495	9.64913	-0.15254	9.53892	9.65484	358.71	-2.27
96/ 5/17	2450220.5	9.52833	-0.19217	-0.37770	-0.31747	9.64968	-0.15165	9.53775	9.65610	358.84	-2.27
96/ 5/21	2450224.5	9.52757	-0.16988	-0.37805	-0.34001	9.65019	-0.15076	9.53658	9.65735	358.98	-2.27
96/ 5/25	2450228.5	9.52676	-0.14759	-0.37840	-0.36255	9.65064	-0.14986	9.53541	9.65861	359.11	-2.27
96/ 5/29	2450232.5	9.52590	-0.12529	-0.37875	-0.38510	9.65104	-0.14897	9.53425	9.65986	359.25	-2.28
96/ 6/ 2	2450236.5	9.52498	-0.10299	-0.37909	-0.40766	9.65138	-0.14807	9.53308	9.66112	359.38	-2.28
96/ 6/ 6	2450240.5	9.52401	-0.08070	-0.37943	-0.43022	9.65168	-0.14717	9.53191	9.66238	359.51	-2.28
96/ 6/10	2450244.5	9.52299	-0.05840	-0.37977	-0.45280	9.65192	-0.14627	9.53074	9.66364	359.65	-2.28
96/ 6/14	2450248.5	9.52192	-0.03610	-0.38011	-0.47538	9.65211	-0.14537	9.52957	9.66490	359.78	-2.29
96/ 6/18	2450252.5	9.52080	-0.01380	-0.38044	-0.49797	9.65224	-0.14447	9.52840	9.66616	359.92	-2.29
96/ 6/22	2450256.5	9.51962	0.00849	-0.38077	-0.52057	9.65233	-0.14357	9.52724	9.66742	0.05	-2.29
96/ 6/26	2450260.5	9.51839	0.03079	-0.38110	-0.54318	9.65235	-0.14266	9.52607	9.66868	0.19	-2.29
96/ 6/30	2450264.5	9.51711	0.05309	-0.38143	-0.56579	9.65233	-0.14176	9.52490	9.66994	0.32	-2.30
96/ 7/ 4	2450268.5	9.51578	0.07539	-0.38176	-0.58841	9.65225	-0.14085	9.52373	9.67119	0.45	-2.30
96/ 7/ 8	2450272.5	9.51439	0.09769	-0.38208	-0.61103	9.65211	-0.13994	9.52256	9.67245	0.59	-2.30
96/ 7/12	2450276.5	9.51295	0.11999	-0.38241	-0.63367	9.65192	-0.13903	9.52139	9.67370	0.72	-2.30
96/ 7/16	2450280.5	9.51146	0.14228	-0.38273	-0.65630	9.65168	-0.13812	9.52022	9.67496	0.86	-2.30
96/ 7/20	2450284.5	9.50992	0.16458	-0.38304	-0.67894	9.65139	-0.13721	9.51905	9.67621	0.99	-2.31
96/ 7/24	2450288.5	9.50833	0.18688	-0.38336	-0.70159	9.65104	-0.13630	9.51789	9.67747	1.13	-2.31
96/ 7/28	2450292.5	9.50668	0.20917	-0.38367	-0.72424	9.65064	-0.13539	9.51672	9.67872	1.26	-2.31
96/ 8/ 1	2450296.5	9.50498	0.23147	-0.38398	-0.74690	9.65018	-0.13447	9.51555	9.67998	1.39	-2.31
96/ 8/ 5	2450300.5	9.50323	0.25376	-0.38429	-0.76957	9.64967	-0.13356	9.51438	9.68123	1.53	-2.31
96/ 8/ 9	2450304.5	9.50142	0.27605	-0.38460	-0.79224	9.64911	-0.13264	9.51321	9.68248	1.66	-2.32
96/ 8/13	2450308.5	9.49957	0.29834	-0.38491	-0.81492	9.64849	-0.13172	9.51204	9.68373	1.80	-2.32
96/ 8/17	2450312.5	9.49766	0.32063	-0.38521	-0.83760	9.64781	-0.13080	9.51087	9.68498	1.93	-2.32
96/ 8/21	2450316.5	9.49570	0.34292	-0.38551	-0.86028	9.64708	-0.12988	9.50971	9.68623	2.07	-2.32
96/ 8/25	2450320.5	9.49368	0.36520	-0.38581	-0.88297	9.64630	-0.12896	9.50854	9.68748	2.20	-2.33
96/ 8/29	2450324.5	9.49162	0.38749	-0.38611	-0.90566	9.64546	-0.12804	9.50737	9.68873	2.34	-2.33
96/ 9/ 2	2450328.5	9.48950	0.40977	-0.38640	-0.92836	9.64456	-0.12712	9.50620	9.68998	2.47	-2.33
96/ 9/ 6	2450332.5	9.48733	0.43205	-0.38669	-0.95106	9.64362	-0.12619	9.50503	9.69122	2.61	-2.33
96/ 9/10	2450336.5	9.48511	0.45432	-0.38699	-0.97377	9.64261	-0.12527	9.50386	9.69246	2.74	-2.33
96/ 9/14	2450340.5	9.48283	0.47660	-0.38727	-0.99648	9.64155	-0.12434	9.50269	9.69371	2.88	-2.34
96/ 9/18	2450344.5	9.48050	0.49887	-0.38756	-1.01919	9.64044	-0.12341	9.50153	9.69495	3.01	-2.34
96/ 9/22	2450348.5	9.47812	0.52114	-0.38784	-1.04190	9.63927	-0.12249	9.50036	9.69618	3.15	-2.34
96/ 9/26	2450352.5	9.47569	0.54341	-0.38813	-1.06462	9.63804	-0.12156	9.49919	9.69742	3.28	-2.34
96/ 9/30	2450356.5	9.47320	0.56567	-0.38841	-1.08734	9.63676	-0.12063	9.49802	9.69865	3.42	-2.34
96/10/ 4	2450360.5	9.47066	0.58793	-0.38868	-1.11005	9.63542	-0.11970	9.49685	9.69989	3.55	-2.35
96/10/ 8	2450364.5	9.46807	0.61019	-0.38896	-1.13277	9.63402	-0.11877	9.49568	9.70112	3.69	-2.35
96/10/12	2450368.5	9.46543	0.63245	-0.38923	-1.15549	9.63258	-0.11783	9.49452	9.70235	3.82	-2.35
96/10/16	2450372.5	9.46273	0.65470	-0.38950	-1.17821	9.63108	-0.11690	9.49335	9.70358	3.96	-2.35
96/10/20	2450376.5	9.45999	0.67695	-0.38977	-1.20093	9.62953	-0.11597	9.49218	9.70482	4.09	-2.35

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96/10/24	2450380.5	9.45719	0.69919	-0.39004	-1.22365	9.62792	-0.11503	9.49101	9.70605	4.23	-2.36
96/10/28	2450384.5	9.45433	0.72143	-0.39030	-1.24637	9.62626	-0.11409	9.48985	9.70728	4.36	-2.36
96/11/ 1	2450388.5	9.45143	0.74367	-0.39057	-1.26909	9.62455	-0.11316	9.48868	9.70852	4.50	-2.36
96/11/ 5	2450392.5	9.44847	0.76590	-0.39083	-1.29182	9.62278	-0.11222	9.48751	9.70975	4.63	-2.36
96/11/ 9	2450396.5	9.44546	0.78813	-0.39108	-1.31454	9.62096	-0.11128	9.48635	9.71098	4.77	-2.36
96/11/13	2450400.5	9.44240	0.81035	-0.39134	-1.33727	9.61908	-0.11034	9.48518	9.71222	4.91	-2.36
96/11/17	2450404.5	9.43928	0.83257	-0.39159	-1.35999	9.61715	-0.10940	9.48401	9.71345	5.04	-2.37
96/11/21	2450408.5	9.43611	0.85479	-0.39185	-1.38272	9.61517	-0.10845	9.48285	9.71469	5.18	-2.37
96/11/25	2450412.5	9.43289	0.87700	-0.39210	-1.40545	9.61314	-0.10751	9.48168	9.71593	5.31	-2.37
96/11/29	2450416.5	9.42962	0.89920	-0.39234	-1.42818	9.61105	-0.10657	9.48052	9.71716	5.45	-2.37
96/12/ 3	2450420.5	9.42629	0.92140	-0.39259	-1.45090	9.60890	-0.10562	9.47935	9.71840	5.58	-2.37
96/12/ 7	2450424.5	9.42291	0.94360	-0.39283	-1.47364	9.60671	-0.10467	9.47819	9.71964	5.72	-2.38
96/12/11	2450428.5	9.41948	0.96579	-0.39307	-1.49637	9.60446	-0.10373	9.47702	9.72088	5.85	-2.38
96/12/15	2450432.5	9.41600	0.98797	-0.39331	-1.51910	9.60215	-0.10278	9.47586	9.72212	5.99	-2.38
96/12/19	2450436.5	9.41246	1.01015	-0.39355	-1.54183	9.59979	-0.10183	9.47469	9.72336	6.13	-2.38
96/12/23	2450440.5	9.40888	1.03233	-0.39378	-1.56456	9.59738	-0.10088	9.47353	9.72460	6.26	-2.38
96/12/27	2450444.5	9.40524	1.05450	-0.39401	-1.58729	9.59491	-0.09993	9.47236	9.72583	6.40	-2.38
96/12/31	2450448.5	9.40154	1.07666	-0.39424	-1.61003	9.59239	-0.09898	9.47120	9.72707	6.53	-2.39
97/ 1/ 4	2450452.5	9.39780	1.09882	-0.39447	-1.63276	9.58981	-0.09802	9.47004	9.72831	6.67	-2.39
97/ 1/ 8	2450456.5	9.39400	1.12097	-0.39469	-1.65548	9.58718	-0.09707	9.46887	9.72955	6.80	-2.39
97/ 1/12	2450460.5	9.39015	1.14311	-0.39492	-1.67821	9.58450	-0.09612	9.46771	9.73079	6.94	-2.39
97/ 1/16	2450464.5	9.38625	1.16525	-0.39514	-1.70094	9.58176	-0.09516	9.46655	9.73203	7.08	-2.39
97/ 1/20	2450468.5	9.38229	1.18738	-0.39536	-1.72367	9.57897	-0.09420	9.46539	9.73327	7.21	-2.39
97/ 1/24	2450472.5	9.37828	1.20951	-0.39557	-1.74640	9.57613	-0.09325	9.46422	9.73452	7.35	-2.40
97/ 1/28	2450476.5	9.37422	1.23163	-0.39579	-1.76912	9.57323	-0.09229	9.46306	9.73576	7.48	-2.40
97/ 2/ 1	2450480.5	9.37011	1.25374	-0.39600	-1.79185	9.57028	-0.09133	9.46190	9.73701	7.62	-2.40
97/ 2/ 5	2450484.5	9.36594	1.27585	-0.39621	-1.81458	9.56727	-0.09037	9.46074	9.73825	7.76	-2.40
97/ 2/ 9	2450488.5	9.36172	1.29795	-0.39642	-1.83731	9.56421	-0.08941	9.45958	9.73949	7.89	-2.40
97/ 2/13	2450492.5	9.35745	1.32004	-0.39662	-1.86004	9.56109	-0.08844	9.45842	9.74074	8.03	-2.40
97/ 2/17	2450496.5	9.35313	1.34212	-0.39683	-1.88276	9.55792	-0.08748	9.45726	9.74198	8.17	-2.40
97/ 2/21	2450500.5	9.34875	1.36420	-0.39703	-1.90549	9.55469	-0.08652	9.45610	9.74323	8.30	-2.41
97/ 2/25	2450504.5	9.34433	1.38627	-0.39723	-1.92821	9.55141	-0.08555	9.45494	9.74447	8.44	-2.41
97/ 3/ 1	2450508.5	9.33984	1.40833	-0.39742	-1.95094	9.54807	-0.08458	9.45378	9.74572	8.57	-2.41
97/ 3/ 5	2450512.5	9.33531	1.43038	-0.39762	-1.97366	9.54468	-0.08362	9.45263	9.74696	8.71	-2.41
97/ 3/ 9	2450516.5	9.33073	1.45243	-0.39781	-1.99638	9.54123	-0.08265	9.45147	9.74820	8.85	-2.41
97/ 3/13	2450520.5	9.32609	1.47447	-0.39800	-2.01910	9.53772	-0.08168	9.45031	9.74944	8.98	-2.41
97/ 3/17	2450524.5	9.32140	1.49650	-0.39819	-2.04182	9.53416	-0.08071	9.44915	9.75068	9.12	-2.42
97/ 3/21	2450528.5	9.31665	1.51852	-0.39837	-2.06453	9.53054	-0.07974	9.44800	9.75192	9.26	-2.42
97/ 3/25	2450532.5	9.31186	1.54053	-0.39856	-2.08724	9.52687	-0.07877	9.44684	9.75315	9.39	-2.42
97/ 3/29	2450536.5	9.30701	1.56254	-0.39874	-2.10995	9.52314	-0.07780	9.44568	9.75439	9.53	-2.42
97/ 4/ 2	2450540.5	9.30211	1.58453	-0.39891	-2.13266	9.51935	-0.07682	9.44453	9.75562	9.67	-2.42
97/ 4/ 6	2450544.5	9.29716	1.60652	-0.39909	-2.15535	9.51550	-0.07585	9.44337	9.75685	9.80	-2.42
97/ 4/10	2450548.5	9.29215	1.62850	-0.39926	-2.17805	9.51160	-0.07488	9.44222	9.75808	9.94	-2.42
97/ 4/14	2450552.5	9.28709	1.65046	-0.39944	-2.20074	9.50765	-0.07390	9.44106	9.75931	10.08	-2.42
97/ 4/18	2450556.5	9.28198	1.67242	-0.39961	-2.22343	9.50364	-0.07293	9.43991	9.76054	10.21	-2.43

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97/ 4/22	2450560.5	9.27682	1.69437	-0.39977	-2.24611	9.49958	-0.07195	9.43876	9.76177	10.35	-2.43
97/ 4/26	2450564.5	9.27160	1.71632	-0.39994	-2.26879	9.49546	-0.07097	9.43760	9.76300	10.49	-2.43
97/ 4/30	2450568.5	9.26634	1.73825	-0.40010	-2.29146	9.49129	-0.07000	9.43645	9.76423	10.62	-2.43
97/ 5/ 4	2450572.5	9.26102	1.76017	-0.40026	-2.31413	9.48705	-0.06902	9.43530	9.76546	10.76	-2.43
97/ 5/ 8	2450576.5	9.25564	1.78208	-0.40042	-2.33680	9.48277	-0.06804	9.43415	9.76669	10.90	-2.43
97/ 5/12	2450580.5	9.25022	1.80398	-0.40058	-2.35946	9.47843	-0.06706	9.43299	9.76791	11.04	-2.43
97/ 5/16	2450584.5	9.24474	1.82587	-0.40073	-2.38211	9.47403	-0.06608	9.43184	9.76914	11.17	-2.44
97/ 5/20	2450588.5	9.23921	1.84776	-0.40088	-2.40476	9.46958	-0.06510	9.43069	9.77036	11.31	-2.44
97/ 5/24	2450592.5	9.23363	1.86963	-0.40103	-2.42741	9.46507	-0.06411	9.42954	9.77159	11.45	-2.44
97/ 5/28	2450596.5	9.22800	1.89149	-0.40118	-2.45005	9.46051	-0.06313	9.42839	9.77282	11.58	-2.44
97/ 6/ 1	2450600.5	9.22231	1.91334	-0.40132	-2.47268	9.45589	-0.06215	9.42725	9.77404	11.72	-2.44
97/ 6/ 5	2450604.5	9.21657	1.93518	-0.40147	-2.49531	9.45122	-0.06116	9.42610	9.77526	11.86	-2.44
97/ 6/ 9	2450608.5	9.21078	1.95701	-0.40161	-2.51793	9.44649	-0.06018	9.42495	9.77649	12.00	-2.44
97/ 6/13	2450612.5	9.20494	1.97882	-0.40174	-2.54055	9.44170	-0.05919	9.42380	9.77771	12.13	-2.44
97/ 6/17	2450616.5	9.19904	2.00063	-0.40188	-2.56316	9.43686	-0.05821	9.42266	9.77893	12.27	-2.44
97/ 6/21	2450620.5	9.19310	2.02242	-0.40201	-2.58577	9.43196	-0.05722	9.42151	9.78015	12.41	-2.45
97/ 6/25	2450624.5	9.18710	2.04421	-0.40214	-2.60836	9.42701	-0.05623	9.42036	9.78137	12.54	-2.45
97/ 6/29	2450628.5	9.18105	2.06598	-0.40227	-2.63095	9.42200	-0.05524	9.41922	9.78259	12.68	-2.45
97/ 7/ 3	2450632.5	9.17494	2.08774	-0.40240	-2.65353	9.41694	-0.05426	9.41808	9.78381	12.82	-2.45
97/ 7/ 7	2450636.5	9.16879	2.10949	-0.40252	-2.67611	9.41183	-0.05327	9.41693	9.78503	12.96	-2.45
97/ 7/11	2450640.5	9.16258	2.13123	-0.40264	-2.69868	9.40666	-0.05228	9.41579	9.78625	13.09	-2.45
97/ 7/15	2450644.5	9.15632	2.15295	-0.40276	-2.72124	9.40143	-0.05129	9.41465	9.78748	13.23	-2.45
97/ 7/19	2450648.5	9.15000	2.17467	-0.40288	-2.74379	9.39616	-0.05029	9.41350	9.78870	13.37	-2.45
97/ 7/23	2450652.5	9.14364	2.19637	-0.40300	-2.76634	9.39082	-0.04930	9.41236	9.78993	13.51	-2.45
97/ 7/27	2450656.5	9.13722	2.21805	-0.40311	-2.78889	9.38544	-0.04831	9.41122	9.79115	13.64	-2.45
97/ 7/31	2450660.5	9.13075	2.23973	-0.40322	-2.81142	9.38000	-0.04732	9.41008	9.79238	13.78	-2.46
97/ 8/ 4	2450664.5	9.12423	2.26139	-0.40333	-2.83395	9.37450	-0.04632	9.40894	9.79361	13.92	-2.46
97/ 8/ 8	2450668.5	9.11766	2.28304	-0.40343	-2.85648	9.36895	-0.04533	9.40780	9.79483	14.06	-2.46
97/ 8/12	2450672.5	9.11103	2.30468	-0.40354	-2.87900	9.36334	-0.04433	9.40667	9.79606	14.20	-2.46
97/ 8/16	2450676.5	9.10436	2.32631	-0.40364	-2.90151	9.35768	-0.04333	9.40553	9.79729	14.33	-2.46
97/ 8/20	2450680.5	9.09763	2.34792	-0.40374	-2.92401	9.35196	-0.04234	9.40439	9.79851	14.47	-2.46
97/ 8/24	2450684.5	9.09085	2.36951	-0.40383	-2.94651	9.34619	-0.04134	9.40325	9.79974	14.61	-2.46
97/ 8/28	2450688.5	9.08402	2.39110	-0.40393	-2.96900	9.34036	-0.04034	9.40212	9.80097	14.75	-2.46
97/ 9/ 1	2450692.5	9.07713	2.41267	-0.40402	-2.99149	9.33448	-0.03934	9.40098	9.80220	14.88	-2.46
97/ 9/ 5	2450696.5	9.07019	2.43423	-0.40411	-3.01396	9.32854	-0.03834	9.39985	9.80342	15.02	-2.46
97/ 9/ 9	2450700.5	9.06320	2.45577	-0.40420	-3.03644	9.32254	-0.03734	9.39872	9.80465	15.16	-2.46
97/ 9/13	2450704.5	9.05616	2.47730	-0.40428	-3.05890	9.31648	-0.03634	9.39758	9.80587	15.30	-2.47
97/ 9/17	2450708.5	9.04907	2.49882	-0.40437	-3.08135	9.31037	-0.03534	9.39645	9.80709	15.44	-2.47
97/ 9/21	2450712.5	9.04193	2.52032	-0.40445	-3.10380	9.30420	-0.03434	9.39532	9.80831	15.58	-2.47
97/ 9/25	2450716.5	9.03473	2.54181	-0.40452	-3.12623	9.29797	-0.03333	9.39419	9.80952	15.71	-2.47
97/ 9/29	2450720.5	9.02748	2.56328	-0.40460	-3.14866	9.29169	-0.03233	9.39306	9.81074	15.85	-2.47
97/10/ 3	2450724.5	9.02018	2.58474	-0.40467	-3.17108	9.28535	-0.03133	9.39193	9.81195	15.99	-2.47
97/10/ 7	2450728.5	9.01283	2.60618	-0.40474	-3.19349	9.27896	-0.03032	9.39080	9.81317	16.13	-2.47
97/10/11	2450732.5	9.00543	2.62761	-0.40481	-3.21588	9.27250	-0.02932	9.38967	9.81438	16.27	-2.47
97/10/15	2450736.5	8.99797	2.64902	-0.40488	-3.23827	9.26600	-0.02831	9.38854	9.81559	16.40	-2.47

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97/10/19	2450740.5	8.99047	2.67042	-0.40494	-3.26065	9.25943	-0.02731	9.38742	9.81681	16.54	-2.47
97/10/23	2450744.5	8.98291	2.69180	-0.40501	-3.28303	9.25281	-0.02630	9.38629	9.81802	16.68	-2.47
97/10/27	2450748.5	8.97530	2.71317	-0.40507	-3.30539	9.24613	-0.02529	9.38517	9.81922	16.82	-2.47
97/10/31	2450752.5	8.96764	2.73452	-0.40512	-3.32774	9.23939	-0.02428	9.38404	9.82043	16.96	-2.47
97/11/ 4	2450756.5	8.95992	2.75586	-0.40518	-3.35008	9.23260	-0.02327	9.38292	9.82163	17.10	-2.47
97/11/ 8	2450760.5	8.95216	2.77718	-0.40523	-3.37241	9.22575	-0.02227	9.38179	9.82284	17.24	-2.48
97/11/12	2450764.5	8.94434	2.79849	-0.40528	-3.39473	9.21884	-0.02126	9.38067	9.82404	17.37	-2.48
97/11/16	2450768.5	8.93647	2.81978	-0.40533	-3.41703	9.21188	-0.02025	9.37955	9.82523	17.51	-2.48
97/11/20	2450772.5	8.92855	2.84105	-0.40537	-3.43933	9.20485	-0.01923	9.37843	9.82643	17.65	-2.48
97/11/24	2450776.5	8.92058	2.86231	-0.40542	-3.46161	9.19777	-0.01822	9.37731	9.82762	17.79	-2.48
97/11/28	2450780.5	8.91256	2.88355	-0.40546	-3.48388	9.19064	-0.01721	9.37619	9.82881	17.93	-2.48
97/12/ 2	2450784.5	8.90448	2.90477	-0.40550	-3.50614	9.18344	-0.01620	9.37507	9.83000	18.07	-2.48
97/12/ 6	2450788.5	8.89636	2.92598	-0.40553	-3.52839	9.17619	-0.01519	9.37395	9.83119	18.21	-2.48
97/12/10	2450792.5	8.88818	2.94717	-0.40557	-3.55063	9.16888	-0.01417	9.37284	9.83237	18.34	-2.48
97/12/14	2450796.5	8.87995	2.96834	-0.40560	-3.57285	9.16151	-0.01316	9.37172	9.83355	18.48	-2.48
97/12/18	2450800.5	8.87167	2.98950	-0.40563	-3.59505	9.15408	-0.01215	9.37060	9.83472	18.62	-2.48
97/12/22	2450804.5	8.86334	3.01064	-0.40566	-3.61724	9.14660	-0.01113	9.36949	9.83590	18.76	-2.48
97/12/26	2450808.5	8.85496	3.03176	-0.40568	-3.63941	9.13906	-0.01012	9.36838	9.83707	18.90	-2.48
97/12/30	2450812.5	8.84653	3.05286	-0.40570	-3.66157	9.13147	-0.00911	9.36726	9.83824	19.04	-2.48
98/ 1/ 3	2450816.5	8.83804	3.07395	-0.40572	-3.68372	9.12382	-0.00809	9.36615	9.83941	19.18	-2.48
98/ 1/ 7	2450820.5	8.82951	3.09502	-0.40574	-3.70585	9.11612	-0.00708	9.36504	9.84058	19.32	-2.48
98/ 1/11	2450824.5	8.82092	3.11607	-0.40575	-3.72797	9.10836	-0.00606	9.36393	9.84175	19.46	-2.48
98/ 1/15	2450828.5	8.81228	3.13710	-0.40577	-3.75007	9.10055	-0.00505	9.36282	9.84292	19.60	-2.48
98/ 1/19	2450832.5	8.80359	3.15811	-0.40578	-3.77215	9.09268	-0.00403	9.36171	9.84409	19.73	-2.48
98/ 1/23	2450836.5	8.79485	3.17911	-0.40579	-3.79423	9.08476	-0.00301	9.36060	9.84525	19.87	-2.48
98/ 1/27	2450840.5	8.78606	3.20009	-0.40579	-3.81628	9.07678	-0.00199	9.35950	9.84642	20.01	-2.48
98/ 1/31	2450844.5	8.77722	3.22105	-0.40580	-3.83833	9.06875	-0.00098	9.35839	9.84759	20.15	-2.49
98/ 2/ 4	2450848.5	8.76833	3.24199	-0.40580	-3.86035	9.06066	0.00004	9.35728	9.84875	20.29	-2.49
98/ 2/ 8	2450852.5	8.75939	3.26291	-0.40580	-3.88237	9.05252	0.00106	9.35618	9.84992	20.43	-2.49
98/ 2/12	2450856.5	8.75039	3.28382	-0.40579	-3.90437	9.04432	0.00208	9.35508	9.85108	20.57	-2.49
98/ 2/16	2450860.5	8.74135	3.30470	-0.40579	-3.92635	9.03607	0.00310	9.35397	9.85225	20.71	-2.49
98/ 2/20	2450864.5	8.73225	3.32557	-0.40578	-3.94832	9.02776	0.00412	9.35287	9.85341	20.85	-2.49
98/ 2/24	2450868.5	8.72310	3.34641	-0.40577	-3.97027	9.01940	0.00514	9.35177	9.85458	20.99	-2.49
98/ 2/28	2450872.5	8.71391	3.36724	-0.40575	-3.99221	9.01099	0.00616	9.35067	9.85574	21.13	-2.49
98/ 3/ 4	2450876.5	8.70466	3.38805	-0.40574	-4.01414	9.00252	0.00718	9.34958	9.85691	21.27	-2.49
98/ 3/ 8	2450880.5	8.69536	3.40883	-0.40572	-4.03605	8.99399	0.00820	9.34848	9.85807	21.41	-2.49
98/ 3/12	2450884.5	8.68601	3.42960	-0.40570	-4.05794	8.98541	0.00922	9.34738	9.85924	21.55	-2.49
98/ 3/16	2450888.5	8.67661	3.45035	-0.40568	-4.07982	8.97677	0.01024	9.34629	9.86040	21.69	-2.49
98/ 3/20	2450892.5	8.66716	3.47108	-0.40565	-4.10168	8.96808	0.01126	9.34519	9.86156	21.83	-2.49
98/ 3/24	2450896.5	8.65766	3.49178	-0.40563	-4.12352	8.95934	0.01228	9.34410	9.86272	21.97	-2.49
98/ 3/28	2450900.5	8.64811	3.51247	-0.40560	-4.14535	8.95054	0.01331	9.34300	9.86389	22.10	-2.49
98/ 4/ 1	2450904.5	8.63851	3.53314	-0.40556	-4.16716	8.94169	0.01433	9.34191	9.86505	22.24	-2.49
98/ 4/ 5	2450908.5	8.62885	3.55379	-0.40553	-4.18896	8.93278	0.01535	9.34082	9.86621	22.38	-2.49
98/ 4/ 9	2450912.5	8.61915	3.57441	-0.40549	-4.21075	8.92382	0.01637	9.33973	9.86738	22.52	-2.49
98/ 4/13	2450916.5	8.60940	3.59502	-0.40545	-4.23251	8.91480	0.01740	9.33865	9.86855	22.66	-2.49

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98/ 4/17	2450920.5	8.59960	3.61560	-0.40541	-4.25427	8.90573	0.01842	9.33756	9.86971	22.80	-2.49
98/ 4/21	2450924.5	8.58974	3.63616	-0.40537	-4.27600	8.89661	0.01945	9.33647	9.87088	22.94	-2.49
98/ 4/25	2450928.5	8.57984	3.65671	-0.40532	-4.29772	8.88743	0.02047	9.33539	9.87204	23.08	-2.49
98/ 4/29	2450932.5	8.56989	3.67723	-0.40527	-4.31943	8.87819	0.02150	9.33430	9.87321	23.22	-2.49
98/ 5/ 3	2450936.5	8.55988	3.69773	-0.40522	-4.34112	8.86890	0.02252	9.33322	9.87437	23.36	-2.49
98/ 5/ 7	2450940.5	8.54983	3.71820	-0.40517	-4.36279	8.85956	0.02355	9.33214	9.87554	23.50	-2.49
98/ 5/11	2450944.5	8.53972	3.73866	-0.40512	-4.38445	8.85015	0.02458	9.33106	9.87670	23.64	-2.49
98/ 5/15	2450948.5	8.52957	3.75910	-0.40506	-4.40610	8.84070	0.02560	9.32998	9.87787	23.78	-2.49
98/ 5/19	2450952.5	8.51937	3.77951	-0.40500	-4.42772	8.83118	0.02663	9.32890	9.87903	23.92	-2.49
98/ 5/23	2450956.5	8.50911	3.79990	-0.40493	-4.44933	8.82161	0.02766	9.32782	9.88019	24.06	-2.49
98/ 5/27	2450960.5	8.49881	3.82027	-0.40487	-4.47092	8.81198	0.02868	9.32674	9.88135	24.20	-2.49
98/ 5/31	2450964.5	8.48846	3.84061	-0.40480	-4.49250	8.80230	0.02971	9.32567	9.88250	24.34	-2.49
98/ 6/ 4	2450968.5	8.47805	3.86094	-0.40473	-4.51406	8.79256	0.03074	9.32459	9.88366	24.48	-2.49
98/ 6/ 8	2450972.5	8.46760	3.88124	-0.40466	-4.53560	8.78276	0.03177	9.32352	9.88481	24.62	-2.49
98/ 6/12	2450976.5	8.45710	3.90152	-0.40458	-4.55712	8.77290	0.03279	9.32245	9.88596	24.77	-2.49
98/ 6/16	2450980.5	8.44654	3.92177	-0.40451	-4.57862	8.76299	0.03382	9.32137	9.88710	24.91	-2.49
98/ 6/20	2450984.5	8.43594	3.94200	-0.40443	-4.60010	8.75302	0.03485	9.32030	9.88825	25.05	-2.49
98/ 6/24	2450988.5	8.42529	3.96221	-0.40435	-4.62156	8.74300	0.03588	9.31924	9.88939	25.19	-2.49
98/ 6/28	2450992.5	8.41459	3.98240	-0.40426	-4.64300	8.73292	0.03691	9.31817	9.89053	25.33	-2.49
98/ 7/ 2	2450996.5	8.40384	4.00256	-0.40418	-4.66442	8.72278	0.03794	9.31710	9.89167	25.47	-2.49
98/ 7/ 6	2451000.5	8.39304	4.02270	-0.40409	-4.68582	8.71259	0.03896	9.31603	9.89281	25.61	-2.49
98/ 7/10	2451004.5	8.38219	4.04282	-0.40400	-4.70721	8.70234	0.03999	9.31497	9.89395	25.75	-2.49
98/ 7/14	2451008.5	8.37129	4.06291	-0.40390	-4.72857	8.69204	0.04102	9.31391	9.89508	25.89	-2.49
98/ 7/18	2451012.5	8.36034	4.08298	-0.40381	-4.74991	8.68168	0.04205	9.31284	9.89621	26.03	-2.49
98/ 7/22	2451016.5	8.34934	4.10302	-0.40371	-4.77123	8.67127	0.04308	9.31178	9.89734	26.17	-2.48
98/ 7/26	2451020.5	8.33830	4.12304	-0.40361	-4.79254	8.66080	0.04411	9.31072	9.89847	26.31	-2.48
98/ 7/30	2451024.5	8.32720	4.14304	-0.40350	-4.81382	8.65027	0.04514	9.30966	9.89960	26.45	-2.48
98/ 8/ 3	2451028.5	8.31605	4.16301	-0.40340	-4.83508	8.63969	0.04617	9.30861	9.90072	26.59	-2.48
98/ 8/ 7	2451032.5	8.30486	4.18296	-0.40329	-4.85632	8.62905	0.04720	9.30755	9.90185	26.73	-2.48
98/ 8/11	2451036.5	8.29362	4.20288	-0.40318	-4.87753	8.61836	0.04823	9.30649	9.90296	26.87	-2.48
98/ 8/15	2451040.5	8.28232	4.22278	-0.40307	-4.89873	8.60761	0.04926	9.30544	9.90408	27.01	-2.48
98/ 8/19	2451044.5	8.27098	4.24265	-0.40295	-4.91990	8.59680	0.05029	9.30439	9.90520	27.16	-2.48
98/ 8/23	2451048.5	8.25959	4.26250	-0.40284	-4.94105	8.58594	0.05132	9.30333	9.90631	27.30	-2.48
98/ 8/27	2451052.5	8.24815	4.28232	-0.40272	-4.96218	8.57503	0.05235	9.30228	9.90742	27.44	-2.48
98/ 8/31	2451056.5	8.23666	4.30212	-0.40259	-4.98329	8.56405	0.05338	9.30123	9.90853	27.58	-2.48
98/ 9/ 4	2451060.5	8.22513	4.32189	-0.40247	-5.00437	8.55302	0.05441	9.30018	9.90964	27.72	-2.48
98/ 9/ 8	2451064.5	8.21354	4.34163	-0.40234	-5.02543	8.54194	0.05544	9.29914	9.91074	27.86	-2.48
98/ 9/12	2451068.5	8.20191	4.36135	-0.40221	-5.04646	8.53080	0.05646	9.29809	9.91184	28.00	-2.48
98/ 9/16	2451072.5	8.19023	4.38105	-0.40208	-5.06747	8.51961	0.05749	9.29705	9.91294	28.14	-2.48
98/ 9/20	2451076.5	8.17850	4.40072	-0.40195	-5.08846	8.50837	0.05852	9.29600	9.91404	28.28	-2.48
98/ 9/24	2451080.5	8.16672	4.42036	-0.40181	-5.10942	8.49707	0.05955	9.29496	9.91513	28.43	-2.48
98/ 9/28	2451084.5	8.15489	4.43998	-0.40167	-5.13036	8.48571	0.06058	9.29392	9.91623	28.57	-2.48
98/10/ 2	2451088.5	8.14301	4.45957	-0.40153	-5.15128	8.47431	0.06161	9.29288	9.91733	28.71	-2.48
98/10/ 6	2451092.5	8.13109	4.47913	-0.40139	-5.17217	8.46285	0.06264	9.29184	9.91842	28.85	-2.48
98/10/10	2451096.5	8.11911	4.49867	-0.40124	-5.19304	8.45134	0.06367	9.29080	9.91952	28.99	-2.48

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98/10/14	2451100.5	8.10709	4.51818	-0.40109	-5.21389	8.43977	0.06470	9.28977	9.92061	29.13	-2.47
98/10/18	2451104.5	8.09502	4.53766	-0.40094	-5.23472	8.42815	0.06573	9.28873	9.92171	29.27	-2.47
98/10/22	2451108.5	8.08291	4.55712	-0.40079	-5.25552	8.41648	0.06676	9.28770	9.92280	29.41	-2.47
98/10/26	2451112.5	8.07074	4.57655	-0.40063	-5.27629	8.40475	0.06779	9.28667	9.92390	29.56	-2.47
98/10/30	2451116.5	8.05853	4.59595	-0.40048	-5.29705	8.39297	0.06882	9.28564	9.92499	29.70	-2.47
98/11/ 3	2451120.5	8.04627	4.61533	-0.40032	-5.31778	8.38113	0.06985	9.28461	9.92608	29.84	-2.47
98/11/ 7	2451124.5	8.03396	4.63468	-0.40015	-5.33848	8.36924	0.07088	9.28358	9.92717	29.98	-2.47
98/11/11	2451128.5	8.02160	4.65400	-0.39999	-5.35917	8.35730	0.07191	9.28255	9.92826	30.12	-2.47
98/11/15	2451132.5	8.00920	4.67329	-0.39982	-5.37983	8.34530	0.07294	9.28153	9.92935	30.26	-2.47
98/11/19	2451136.5	7.99675	4.69256	-0.39965	-5.40046	8.33325	0.07397	9.28050	9.93043	30.40	-2.47
98/11/23	2451140.5	7.98425	4.71179	-0.39948	-5.42107	8.32114	0.07500	9.27948	9.93152	30.55	-2.47
98/11/27	2451144.5	7.97170	4.73100	-0.39931	-5.44166	8.30898	0.07603	9.27846	9.93260	30.69	-2.47
98/12/ 1	2451148.5	7.95910	4.75018	-0.39913	-5.46222	8.29676	0.07706	9.27744	9.93368	30.83	-2.47
98/12/ 5	2451152.5	7.94646	4.76934	-0.39895	-5.48276	8.28449	0.07809	9.27642	9.93476	30.97	-2.46
98/12/ 9	2451156.5	7.93377	4.78846	-0.39877	-5.50327	8.27216	0.07912	9.27540	9.93584	31.11	-2.46
98/12/13	2451160.5	7.92103	4.80756	-0.39858	-5.52375	8.25978	0.08015	9.27439	9.93691	31.26	-2.46
98/12/17	2451164.5	7.90825	4.82662	-0.39840	-5.54421	8.24735	0.08118	9.27337	9.93798	31.40	-2.46
98/12/21	2451168.5	7.89542	4.84566	-0.39821	-5.56464	8.23486	0.08221	9.27236	9.93906	31.54	-2.46
98/12/25	2451172.5	7.88254	4.86467	-0.39802	-5.58504	8.22232	0.08323	9.27135	9.94013	31.68	-2.46
98/12/29	2451176.5	7.86961	4.88365	-0.39782	-5.60542	8.20972	0.08426	9.27034	9.94120	31.82	-2.46
99/ 1/ 2	2451180.5	7.85664	4.90260	-0.39763	-5.62578	8.19708	0.08529	9.26933	9.94227	31.96	-2.46
99/ 1/ 6	2451184.5	7.84362	4.92153	-0.39743	-5.64610	8.18437	0.08632	9.26832	9.94333	32.11	-2.46
99/ 1/10	2451188.5	7.83055	4.94042	-0.39723	-5.66640	8.17162	0.08735	9.26731	9.94440	32.25	-2.46
99/ 1/14	2451192.5	7.81744	4.95928	-0.39703	-5.68668	8.15880	0.08838	9.26631	9.94546	32.39	-2.46
99/ 1/18	2451196.5	7.80428	4.97812	-0.39682	-5.70693	8.14594	0.08941	9.26530	9.94652	32.53	-2.45
99/ 1/22	2451200.5	7.79107	4.99692	-0.39661	-5.72715	8.13302	0.09044	9.26430	9.94758	32.67	-2.45
99/ 1/26	2451204.5	7.77782	5.01569	-0.39640	-5.74734	8.12004	0.09146	9.26330	9.94864	32.82	-2.45
99/ 1/30	2451208.5	7.76452	5.03444	-0.39619	-5.76751	8.10702	0.09249	9.26230	9.94969	32.96	-2.45
99/ 2/ 3	2451212.5	7.75117	5.05315	-0.39598	-5.78765	8.09393	0.09352	9.26130	9.95075	33.10	-2.45
99/ 2/ 7	2451216.5	7.73778	5.07183	-0.39576	-5.80776	8.08080	0.09455	9.26031	9.95180	33.24	-2.45
99/ 2/11	2451220.5	7.72434	5.09049	-0.39554	-5.82784	8.06761	0.09558	9.25931	9.95284	33.39	-2.45
99/ 2/15	2451224.5	7.71085	5.10911	-0.39532	-5.84789	8.05436	0.09660	9.25832	9.95389	33.53	-2.45
99/ 2/19	2451228.5	7.69732	5.12770	-0.39509	-5.86792	8.04106	0.09763	9.25733	9.95493	33.67	-2.45
99/ 2/23	2451232.5	7.68374	5.14626	-0.39487	-5.88791	8.02771	0.09866	9.25633	9.95597	33.81	-2.44
99/ 2/27	2451236.5	7.67011	5.16479	-0.39464	-5.90788	8.01430	0.09968	9.25535	9.95700	33.95	-2.44
99/ 3/ 3	2451240.5	7.65644	5.18329	-0.39441	-5.92781	8.00083	0.10071	9.25436	9.95803	34.10	-2.44
99/ 3/ 7	2451244.5	7.64272	5.20176	-0.39417	-5.94772	7.98731	0.10174	9.25337	9.95906	34.24	-2.44
99/ 3/11	2451248.5	7.62896	5.22019	-0.39394	-5.96759	7.97375	0.10276	9.25239	9.96009	34.38	-2.44
99/ 3/15	2451252.5	7.61515	5.23860	-0.39370	-5.98743	7.96013	0.10379	9.25140	9.96111	34.52	-2.44
99/ 3/19	2451256.5	7.60130	5.25697	-0.39346	-6.00724	7.94645	0.10481	9.25042	9.96213	34.67	-2.44
99/ 3/23	2451260.5	7.58740	5.27531	-0.39321	-6.02702	7.93273	0.10583	9.24944	9.96315	34.81	-2.44
99/ 3/27	2451264.5	7.57345	5.29362	-0.39297	-6.04677	7.91895	0.10686	9.24846	9.96417	34.95	-2.44
99/ 3/31	2451268.5	7.55946	5.31190	-0.39272	-6.06649	7.90512	0.10788	9.24748	9.96518	35.10	-2.43
99/ 4/ 4	2451272.5	7.54542	5.33015	-0.39247	-6.08618	7.89124	0.10891	9.24651	9.96620	35.24	-2.43
99/ 4/ 8	2451276.5	7.53134	5.34836	-0.39222	-6.10584	7.87731	0.10993	9.24553	9.96721	35.38	-2.43

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — SATURN

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99/ 4/12	2451280.5	7.51721	5.36654	-0.39196	-6.12546	7.86333	0.11095	9.24456	9.96823	35.52	-2.43
99/ 4/16	2451284.5	7.50304	5.38469	-0.39170	-6.14506	7.84929	0.11197	9.24359	9.96924	35.67	-2.43
99/ 4/20	2451288.5	7.48882	5.40281	-0.39144	-6.16462	7.83521	0.11300	9.24262	9.97025	35.81	-2.43
99/ 4/24	2451292.5	7.47455	5.42090	-0.39118	-6.18416	7.82107	0.11402	9.24165	9.97126	35.95	-2.43
99/ 4/28	2451296.5	7.46024	5.43895	-0.39092	-6.20366	7.80688	0.11504	9.24068	9.97226	36.09	-2.42
99/ 5/ 2	2451300.5	7.44589	5.45697	-0.39065	-6.22313	7.79264	0.11606	9.23972	9.97327	36.24	-2.42
99/ 5/ 6	2451304.5	7.43149	5.47495	-0.39038	-6.24257	7.77835	0.11708	9.23875	9.97428	36.38	-2.42
99/ 5/10	2451308.5	7.41705	5.49290	-0.39011	-6.26198	7.76401	0.11810	9.23779	9.97528	36.52	-2.42
99/ 5/14	2451312.5	7.40256	5.51082	-0.38984	-6.28136	7.74962	0.11912	9.23683	9.97629	36.67	-2.42
99/ 5/18	2451316.5	7.38802	5.52871	-0.38956	-6.30071	7.73518	0.12014	9.23587	9.97729	36.81	-2.42
99/ 5/22	2451320.5	7.37345	5.54656	-0.38928	-6.32003	7.72068	0.12116	9.23491	9.97829	36.95	-2.42
99/ 5/26	2451324.5	7.35882	5.56438	-0.38900	-6.33931	7.70613	0.12218	9.23396	9.97929	37.09	-2.41
99/ 5/30	2451328.5	7.34416	5.58217	-0.38872	-6.35856	7.69154	0.12320	9.23300	9.98029	37.24	-2.41
99/ 6/ 3	2451332.5	7.32945	5.59992	-0.38843	-6.37778	7.67689	0.12421	9.23205	9.98129	37.38	-2.41
99/ 6/ 7	2451336.5	7.31469	5.61764	-0.38814	-6.39697	7.66219	0.12523	9.23110	9.98228	37.52	-2.41
99/ 6/11	2451340.5	7.29989	5.63532	-0.38785	-6.41612	7.64744	0.12625	9.23015	9.98328	37.67	-2.41
99/ 6/15	2451344.5	7.28504	5.65297	-0.38756	-6.43524	7.63264	0.12727	9.22920	9.98428	37.81	-2.41
99/ 6/19	2451348.5	7.27016	5.67059	-0.38726	-6.45433	7.61780	0.12828	9.22826	9.98527	37.95	-2.41
99/ 6/23	2451352.5	7.25522	5.68817	-0.38697	-6.47339	7.60290	0.12930	9.22731	9.98627	38.10	-2.40
99/ 6/27	2451356.5	7.24025	5.70572	-0.38667	-6.49242	7.58795	0.13031	9.22637	9.98726	38.24	-2.40
99/ 7/ 1	2451360.5	7.22523	5.72323	-0.38636	-6.51141	7.57295	0.13133	9.22543	9.98826	38.38	-2.40
99/ 7/ 5	2451364.5	7.21016	5.74071	-0.38606	-6.53038	7.55790	0.13234	9.22449	9.98926	38.53	-2.40
99/ 7/ 9	2451368.5	7.19505	5.75815	-0.38575	-6.54931	7.54281	0.13336	9.22355	9.99025	38.67	-2.40
99/ 7/13	2451372.5	7.17990	5.77556	-0.38544	-6.56821	7.52766	0.13437	9.22261	9.99125	38.81	-2.40
99/ 7/17	2451376.5	7.16471	5.79293	-0.38513	-6.58708	7.51245	0.13539	9.22168	9.99224	38.96	-2.39
99/ 7/21	2451380.5	7.14947	5.81027	-0.38482	-6.60591	7.49720	0.13640	9.22075	9.99323	39.10	-2.39
99/ 7/25	2451384.5	7.13418	5.82757	-0.38450	-6.62472	7.48190	0.13741	9.21981	9.99423	39.24	-2.39
99/ 7/29	2451388.5	7.11886	5.84483	-0.38418	-6.64349	7.46655	0.13843	9.21888	9.99522	39.39	-2.39
99/ 8/ 2	2451392.5	7.10349	5.86207	-0.38386	-6.66222	7.45114	0.13944	9.21796	9.99621	39.53	-2.39
99/ 8/ 6	2451396.5	7.08808	5.87926	-0.38354	-6.68093	7.43568	0.14045	9.21703	9.99720	39.67	-2.38
99/ 8/10	2451400.5	7.07262	5.89642	-0.38321	-6.69960	7.42017	0.14146	9.21611	9.99818	39.82	-2.38
99/ 8/14	2451404.5	7.05712	5.91355	-0.38288	-6.71824	7.40461	0.14247	9.21518	9.99917	39.96	-2.38
99/ 8/18	2451408.5	7.04158	5.93063	-0.38255	-6.73685	7.38900	0.14348	9.21426	10.00015	40.11	-2.38
99/ 8/22	2451412.5	7.02600	5.94769	-0.38222	-6.75542	7.37333	0.14449	9.21334	10.00113	40.25	-2.38
99/ 8/26	2451416.5	7.01037	5.96470	-0.38189	-6.77395	7.35762	0.14550	9.21242	10.00210	40.39	-2.38
99/ 8/30	2451420.5	6.99470	5.98168	-0.38155	-6.79245	7.34185	0.14651	9.21151	10.00307	40.54	-2.37
99/ 9/ 3	2451424.5	6.97898	5.99862	-0.38121	-6.81091	7.32603	0.14752	9.21059	10.00404	40.68	-2.37
99/ 9/ 7	2451428.5	6.96323	6.01553	-0.38087	-6.82933	7.31016	0.14852	9.20968	10.00501	40.82	-2.37
99/ 9/11	2451432.5	6.94743	6.03240	-0.38052	-6.84772	7.29424	0.14953	9.20877	10.00598	40.97	-2.37
99/ 9/15	2451436.5	6.93159	6.04923	-0.38018	-6.86608	7.27826	0.15054	9.20786	10.00694	41.11	-2.37
99/ 9/19	2451440.5	6.91571	6.06603	-0.37983	-6.88440	7.26224	0.15154	9.20695	10.00790	41.26	-2.36
99/ 9/23	2451444.5	6.89978	6.08278	-0.37948	-6.90268	7.24617	0.15255	9.20604	10.00886	41.40	-2.36
99/ 9/27	2451448.5	6.88381	6.09951	-0.37912	-6.92093	7.23005	0.15355	9.20514	10.00981	41.54	-2.36
99/10/ 1	2451452.5	6.86780	6.11619	-0.37877	-6.93913	7.21387	0.15456	9.20424	10.01077	41.69	-2.36
99/10/ 5	2451456.5	6.85175	6.13284	-0.37841	-6.95731	7.19765	0.15556	9.20334	10.01172	41.83	-2.36

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99/10/ 9	2451460.5	6.83566	6.14945	-0.37805	-6.97544	7.18138	0.15656	9.20244	10.01266	41.97	-2.35
99/10/13	2451464.5	6.81952	6.16602	-0.37769	-6.99354	7.16505	0.15756	9.20154	10.01361	42.12	-2.35
99/10/17	2451468.5	6.80335	6.18255	-0.37732	-7.01160	7.14868	0.15856	9.20064	10.01455	42.26	-2.35
99/10/21	2451472.5	6.78713	6.19905	-0.37695	-7.02962	7.13225	0.15957	9.19975	10.01549	42.41	-2.35
99/10/25	2451476.5	6.77087	6.21550	-0.37658	-7.04760	7.11578	0.16057	9.19886	10.01642	42.55	-2.35
99/10/29	2451480.5	6.75457	6.23192	-0.37621	-7.06555	7.09925	0.16156	9.19797	10.01736	42.70	-2.34
99/11/ 2	2451484.5	6.73822	6.24831	-0.37584	-7.08345	7.08268	0.16256	9.19708	10.01829	42.84	-2.34
99/11/ 6	2451488.5	6.72184	6.26465	-0.37546	-7.10132	7.06605	0.16356	9.19619	10.01921	42.98	-2.34
99/11/10	2451492.5	6.70541	6.28095	-0.37508	-7.11915	7.04938	0.16456	9.19530	10.02014	43.13	-2.34
99/11/14	2451496.5	6.68894	6.29722	-0.37470	-7.13694	7.03266	0.16555	9.19442	10.02105	43.27	-2.34
99/11/18	2451500.5	6.67244	6.31345	-0.37432	-7.15469	7.01588	0.16655	9.19354	10.02197	43.42	-2.33
99/11/22	2451504.5	6.65589	6.32963	-0.37393	-7.17239	6.99906	0.16754	9.19266	10.02288	43.56	-2.33
99/11/26	2451508.5	6.63930	6.34578	-0.37354	-7.19006	6.98219	0.16854	9.19178	10.02379	43.71	-2.33
99/11/30	2451512.5	6.62267	6.36189	-0.37315	-7.20768	6.96528	0.16953	9.19090	10.02469	43.85	-2.33
99/12/ 4	2451516.5	6.60600	6.37797	-0.37276	-7.22527	6.94831	0.17052	9.19003	10.02560	43.99	-2.32
99/12/ 8	2451520.5	6.58928	6.39400	-0.37236	-7.24281	6.93130	0.17151	9.18915	10.02650	44.14	-2.32
99/12/12	2451524.5	6.57253	6.40999	-0.37197	-7.26031	6.91425	0.17250	9.18828	10.02740	44.28	-2.32
99/12/16	2451528.5	6.55574	6.42594	-0.37157	-7.27778	6.89715	0.17349	9.18741	10.02830	44.43	-2.32
99/12/20	2451532.5	6.53891	6.44186	-0.37116	-7.29520	6.88000	0.17448	9.18654	10.02919	44.57	-2.32
99/12/24	2451536.5	6.52203	6.45773	-0.37076	-7.31258	6.86280	0.17547	9.18568	10.03009	44.72	-2.31

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64/12/31	2438760.5	-17.37189	5.71670	0.24632	-2.19188	-6.77705	0.00282	18.28999	7.12270	161.78	0.77
65/ 1/ 4	2438764.5	-17.37694	5.70104	0.24633	-2.18609	-6.77903	0.00273	18.28991	7.12280	161.84	0.77
65/ 1/ 8	2438768.5	-17.38199	5.68538	0.24634	-2.18031	-6.78100	0.00265	18.28982	7.12290	161.89	0.77
65/ 1/12	2438772.5	-17.38702	5.66971	0.24634	-2.17452	-6.78296	0.00257	18.28974	7.12300	161.94	0.77
65/ 1/16	2438776.5	-17.39203	5.65404	0.24635	-2.16872	-6.78492	0.00249	18.28966	7.12309	161.99	0.77
65/ 1/20	2438780.5	-17.39704	5.63836	0.24635	-2.16293	-6.78687	0.00241	18.28958	7.12319	162.04	0.77
65/ 1/24	2438784.5	-17.40203	5.62268	0.24636	-2.15714	-6.78881	0.00233	18.28950	7.12329	162.09	0.77
65/ 1/28	2438788.5	-17.40700	5.60700	0.24637	-2.15134	-6.79075	0.00225	18.28942	7.12338	162.15	0.77
65/ 2/ 1	2438792.5	-17.41197	5.59131	0.24637	-2.14555	-6.79269	0.00217	18.28934	7.12348	162.20	0.77
65/ 2/ 5	2438796.5	-17.41692	5.57561	0.24638	-2.13975	-6.79461	0.00208	18.28926	7.12357	162.25	0.77
65/ 2/ 9	2438800.5	-17.42185	5.55991	0.24638	-2.13395	-6.79654	0.00200	18.28918	7.12367	162.30	0.77
65/ 2/13	2438804.5	-17.42678	5.54421	0.24638	-2.12815	-6.79846	0.00192	18.28911	7.12377	162.35	0.77
65/ 2/17	2438808.5	-17.43169	5.52850	0.24639	-2.12235	-6.80037	0.00184	18.28903	7.12386	162.40	0.77
65/ 2/21	2438812.5	-17.43658	5.51279	0.24639	-2.11655	-6.80228	0.00176	18.28896	7.12396	162.46	0.77
65/ 2/25	2438816.5	-17.44146	5.49707	0.24640	-2.11075	-6.80418	0.00168	18.28888	7.12405	162.51	0.77
65/ 3/ 1	2438820.5	-17.44633	5.48135	0.24640	-2.10495	-6.80608	0.00160	18.28881	7.12415	162.56	0.77
65/ 3/ 5	2438824.5	-17.45119	5.46563	0.24640	-2.09914	-6.80798	0.00152	18.28873	7.12425	162.61	0.77
65/ 3/ 9	2438828.5	-17.45603	5.44990	0.24641	-2.09333	-6.80987	0.00144	18.28866	7.12435	162.66	0.77
65/ 3/13	2438832.5	-17.46086	5.43416	0.24641	-2.08753	-6.81176	0.00136	18.28859	7.12445	162.71	0.77
65/ 3/17	2438836.5	-17.46568	5.41842	0.24641	-2.08171	-6.81364	0.00128	18.28852	7.12455	162.76	0.77
65/ 3/21	2438840.5	-17.47048	5.40268	0.24642	-2.07590	-6.81552	0.00120	18.28845	7.12465	162.82	0.77
65/ 3/25	2438844.5	-17.47527	5.38693	0.24642	-2.07008	-6.81740	0.00111	18.28838	7.12476	162.87	0.77
65/ 3/29	2438848.5	-17.48004	5.37118	0.24642	-2.06426	-6.81927	0.00103	18.28831	7.12486	162.92	0.77
65/ 4/ 2	2438852.5	-17.48481	5.35543	0.24642	-2.05844	-6.82113	0.00095	18.28824	7.12496	162.97	0.77
65/ 4/ 6	2438856.5	-17.48956	5.33967	0.24643	-2.05262	-6.82299	0.00087	18.28817	7.12506	163.02	0.77
65/ 4/10	2438860.5	-17.49429	5.32390	0.24643	-2.04679	-6.82484	0.00079	18.28811	7.12516	163.07	0.77
65/ 4/14	2438864.5	-17.49901	5.30813	0.24643	-2.04096	-6.82669	0.00071	18.28804	7.12525	163.13	0.77
65/ 4/18	2438868.5	-17.50372	5.29236	0.24643	-2.03513	-6.82854	0.00063	18.28798	7.12535	163.18	0.77
65/ 4/22	2438872.5	-17.50842	5.27658	0.24643	-2.02930	-6.83038	0.00055	18.28791	7.12545	163.23	0.77
65/ 4/26	2438876.5	-17.51310	5.26080	0.24643	-2.02346	-6.83221	0.00047	18.28785	7.12555	163.28	0.77
65/ 4/30	2438880.5	-17.51776	5.24502	0.24644	-2.01763	-6.83404	0.00038	18.28778	7.12566	163.33	0.77
65/ 5/ 4	2438884.5	-17.52242	5.22923	0.24644	-2.01179	-6.83587	0.00030	18.28772	7.12576	163.38	0.77
65/ 5/ 8	2438888.5	-17.52706	5.21343	0.24644	-2.00595	-6.83769	0.00022	18.28766	7.12586	163.43	0.77
65/ 5/12	2438892.5	-17.53169	5.19763	0.24644	-2.00010	-6.83950	0.00014	18.28760	7.12596	163.49	0.77
65/ 5/16	2438896.5	-17.53630	5.18183	0.24644	-1.99426	-6.84132	0.00006	18.28754	7.12606	163.54	0.77
65/ 5/20	2438900.5	-17.54090	5.16602	0.24644	-1.98841	-6.84312	-0.00002	18.28748	7.12616	163.59	0.77
65/ 5/24	2438904.5	-17.54549	5.15021	0.24644	-1.98256	-6.84492	-0.00010	18.28742	7.12625	163.64	0.77
65/ 5/28	2438908.5	-17.55006	5.13440	0.24644	-1.97671	-6.84672	-0.00018	18.28736	7.12635	163.69	0.77
65/ 6/ 1	2438912.5	-17.55462	5.11858	0.24644	-1.97085	-6.84851	-0.00027	18.28730	7.12645	163.74	0.77
65/ 6/ 5	2438916.5	-17.55917	5.10276	0.24644	-1.96499	-6.85030	-0.00035	18.28724	7.12656	163.80	0.77
65/ 6/ 9	2438920.5	-17.56370	5.08693	0.24643	-1.95913	-6.85208	-0.00043	18.28718	7.12666	163.85	0.77
65/ 6/13	2438924.5	-17.56822	5.07110	0.24643	-1.95327	-6.85386	-0.00051	18.28713	7.12676	163.90	0.77
65/ 6/17	2438928.5	-17.57273	5.05526	0.24643	-1.94740	-6.85563	-0.00059	18.28707	7.12685	163.95	0.77
65/ 6/21	2438932.5	-17.57722	5.03942	0.24643	-1.94152	-6.85740	-0.00068	18.28702	7.12695	164.00	0.77
65/ 6/25	2438936.5	-17.58170	5.02358	0.24643	-1.93565	-6.85916	-0.00076	18.28696	7.12704	164.05	0.77

1.7 1 A.U.=149,599,000 KM.

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65/ 6/29	2438940.5	-17.58616	5.00773	0.24643	-1.92977	-6.86091	-0.00084	18.28691	7.12714	164.11	0.77
65/ 7/ 3	2438944.5	-17.59061	4.99188	0.24643	-1.92389	-6.86265	-0.00092	18.28686	7.12723	164.16	0.77
65/ 7/ 7	2438948.5	-17.59505	4.97602	0.24642	-1.91801	-6.86439	-0.00101	18.28681	7.12732	164.21	0.77
65/ 7/11	2438952.5	-17.59947	4.96016	0.24642	-1.91212	-6.86612	-0.00109	18.28675	7.12740	164.26	0.77
65/ 7/15	2438956.5	-17.60388	4.94430	0.24642	-1.90624	-6.86785	-0.00117	18.28670	7.12749	164.31	0.77
65/ 7/19	2438960.5	-17.60828	4.92843	0.24642	-1.90035	-6.86957	-0.00125	18.28665	7.12757	164.36	0.77
65/ 7/23	2438964.5	-17.61266	4.91256	0.24641	-1.89446	-6.87128	-0.00133	18.28660	7.12766	164.42	0.77
65/ 7/27	2438968.5	-17.61703	4.89668	0.24641	-1.88857	-6.87299	-0.00142	18.28656	7.12774	164.47	0.77
65/ 7/31	2438972.5	-17.62139	4.88080	0.24641	-1.88268	-6.87469	-0.00150	18.28651	7.12782	164.52	0.77
65/ 8/ 4	2438976.5	-17.62573	4.86492	0.24640	-1.87679	-6.87638	-0.00158	18.28646	7.12790	164.57	0.77
65/ 8/ 8	2438980.5	-17.63006	4.84903	0.24640	-1.87090	-6.87807	-0.00166	18.28641	7.12798	164.62	0.77
65/ 8/12	2438984.5	-17.63438	4.83314	0.24639	-1.86501	-6.87975	-0.00174	18.28637	7.12806	164.67	0.77
65/ 8/16	2438988.5	-17.63868	4.81724	0.24639	-1.85911	-6.88143	-0.00183	18.28632	7.12814	164.72	0.77
65/ 8/20	2438992.5	-17.64297	4.80134	0.24639	-1.85322	-6.88310	-0.00191	18.28628	7.12822	164.78	0.77
65/ 8/24	2438996.5	-17.64724	4.78544	0.24638	-1.84733	-6.88477	-0.00199	18.28623	7.12830	164.83	0.77
65/ 8/28	2439000.5	-17.65150	4.76953	0.24638	-1.84143	-6.88643	-0.00207	18.28619	7.12838	164.88	0.77
65/ 9/ 1	2439004.5	-17.65575	4.75362	0.24637	-1.83554	-6.88809	-0.00215	18.28615	7.12846	164.93	0.77
65/ 9/ 5	2439008.5	-17.65998	4.73771	0.24637	-1.82964	-6.88974	-0.00224	18.28610	7.12855	164.98	0.77
65/ 9/ 9	2439012.5	-17.66420	4.72179	0.24636	-1.82374	-6.89139	-0.00232	18.28606	7.12863	165.03	0.77
65/ 9/13	2439016.5	-17.66841	4.70587	0.24636	-1.81784	-6.89304	-0.00240	18.28602	7.12871	165.09	0.77
65/ 9/17	2439020.5	-17.67260	4.68994	0.24635	-1.81194	-6.89468	-0.00248	18.28598	7.12879	165.14	0.77
65/ 9/21	2439024.5	-17.67678	4.67401	0.24634	-1.80603	-6.89631	-0.00256	18.28594	7.12888	165.19	0.77
65/ 9/25	2439028.5	-17.68095	4.65808	0.24634	-1.80013	-6.89794	-0.00265	18.28590	7.12896	165.24	0.77
65/ 9/29	2439032.5	-17.68510	4.64214	0.24633	-1.79422	-6.89956	-0.00273	18.28586	7.12904	165.29	0.77
65/10/ 3	2439036.5	-17.68924	4.62620	0.24633	-1.78832	-6.90118	-0.00281	18.28583	7.12912	165.34	0.77
65/10/ 7	2439040.5	-17.69336	4.61026	0.24632	-1.78241	-6.90279	-0.00289	18.28579	7.12920	165.40	0.77
65/10/11	2439044.5	-17.69747	4.59431	0.24631	-1.77650	-6.90440	-0.00297	18.28575	7.12929	165.45	0.77
65/10/15	2439048.5	-17.70157	4.57835	0.24631	-1.77059	-6.90601	-0.00305	18.28572	7.12937	165.50	0.77
65/10/19	2439052.5	-17.70565	4.56240	0.24630	-1.76468	-6.90761	-0.00313	18.28568	7.12945	165.55	0.77
65/10/23	2439056.5	-17.70972	4.54644	0.24629	-1.75877	-6.90920	-0.00322	18.28565	7.12954	165.60	0.77
65/10/27	2439060.5	-17.71378	4.53048	0.24628	-1.75286	-6.91079	-0.00330	18.28562	7.12963	165.65	0.77
65/10/31	2439064.5	-17.71782	4.51451	0.24628	-1.74694	-6.91238	-0.00338	18.28559	7.12971	165.71	0.77
65/11/ 4	2439068.5	-17.72185	4.49854	0.24627	-1.74103	-6.91396	-0.00346	18.28555	7.12980	165.76	0.77
65/11/ 8	2439072.5	-17.72587	4.48256	0.24626	-1.73511	-6.91554	-0.00354	18.28552	7.12989	165.81	0.77
65/11/12	2439076.5	-17.72987	4.46659	0.24625	-1.72919	-6.91712	-0.00362	18.28549	7.12998	165.86	0.77
65/11/16	2439080.5	-17.73385	4.45060	0.24624	-1.72327	-6.91869	-0.00370	18.28546	7.13008	165.91	0.77
65/11/20	2439084.5	-17.73783	4.43462	0.24623	-1.71735	-6.92026	-0.00378	18.28543	7.13017	165.96	0.77
65/11/24	2439088.5	-17.74179	4.41863	0.24623	-1.71143	-6.92183	-0.00386	18.28540	7.13027	166.01	0.77
65/11/28	2439092.5	-17.74574	4.40264	0.24622	-1.70550	-6.92339	-0.00395	18.28538	7.13036	166.07	0.77
65/12/ 2	2439096.5	-17.74967	4.38664	0.24621	-1.69957	-6.92495	-0.00403	18.28535	7.13046	166.12	0.77
65/12/ 6	2439100.5	-17.75359	4.37064	0.24620	-1.69364	-6.92651	-0.00411	18.28532	7.13056	166.17	0.77
65/12/10	2439104.5	-17.75749	4.35464	0.24619	-1.68770	-6.92806	-0.00419	18.28530	7.13066	166.22	0.77
65/12/14	2439108.5	-17.76139	4.33863	0.24618	-1.68175	-6.92961	-0.00427	18.28527	7.13076	166.27	0.77
65/12/18	2439112.5	-17.76527	4.32262	0.24617	-1.67581	-6.93115	-0.00436	18.28525	7.13086	166.32	0.77
65/12/22	2439116.5	-17.76913	4.30661	0.24616	-1.66986	-6.93268	-0.00444	18.28522	7.13096	166.38	0.77

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
65/12/26	2439120.5	-17.77298	4.29059	0.24615	-1.66391	-6.93421	-0.00452	18.28520	7.13105	166.43	0.77
65/12/30	2439124.5	-17.77682	4.27457	0.24614	-1.65795	-6.93573	-0.00460	18.28518	7.13115	166.48	0.77
66/ 1/ 3	2439128.5	-17.78064	4.25855	0.24613	-1.65199	-6.93725	-0.00468	18.28516	7.13124	166.53	0.77
66/ 1/ 7	2439132.5	-17.78445	4.24252	0.24612	-1.64603	-6.93877	-0.00477	18.28514	7.13133	166.58	0.77
66/ 1/11	2439136.5	-17.78825	4.22649	0.24611	-1.64007	-6.94027	-0.00485	18.28512	7.13142	166.63	0.77
66/ 1/15	2439140.5	-17.79203	4.21045	0.24609	-1.63410	-6.94177	-0.00493	18.28510	7.13152	166.69	0.77
66/ 1/19	2439144.5	-17.79580	4.19441	0.24608	-1.62813	-6.94327	-0.00501	18.28508	7.13161	166.74	0.77
66/ 1/23	2439148.5	-17.79955	4.17837	0.24607	-1.62215	-6.94476	-0.00510	18.28506	7.13169	166.79	0.77
66/ 1/27	2439152.5	-17.80329	4.16232	0.24606	-1.61618	-6.94624	-0.00518	18.28504	7.13178	166.84	0.77
66/ 1/31	2439156.5	-17.80702	4.14628	0.24605	-1.61020	-6.94772	-0.00526	18.28502	7.13187	166.89	0.77
66/ 2/ 4	2439160.5	-17.81073	4.13022	0.24603	-1.60422	-6.94919	-0.00534	18.28500	7.13195	166.94	0.77
66/ 2/ 8	2439164.5	-17.81443	4.11417	0.24602	-1.59823	-6.95065	-0.00542	18.28499	7.13203	167.00	0.77
66/ 2/12	2439168.5	-17.81811	4.09811	0.24601	-1.59225	-6.95211	-0.00551	18.28497	7.13212	167.05	0.77
66/ 2/16	2439172.5	-17.82179	4.08205	0.24600	-1.58626	-6.95356	-0.00559	18.28496	7.13220	167.10	0.77
66/ 2/20	2439176.5	-17.82544	4.06598	0.24598	-1.58027	-6.95500	-0.00567	18.28494	7.13228	167.15	0.77
66/ 2/24	2439180.5	-17.82909	4.04991	0.24597	-1.57428	-6.95644	-0.00575	18.28493	7.13236	167.20	0.77
66/ 2/28	2439184.5	-17.83272	4.03384	0.24596	-1.56829	-6.95788	-0.00584	18.28492	7.13243	167.25	0.77
66/ 3/ 4	2439188.5	-17.83633	4.01776	0.24594	-1.56229	-6.95930	-0.00592	18.28490	7.13251	167.31	0.77
66/ 3/ 8	2439192.5	-17.83994	4.00169	0.24593	-1.55629	-6.96072	-0.00600	18.28489	7.13258	167.36	0.77
66/ 3/12	2439196.5	-17.84352	3.98560	0.24592	-1.55028	-6.96214	-0.00609	18.28488	7.13266	167.41	0.77
66/ 3/16	2439200.5	-17.84710	3.96952	0.24590	-1.54428	-6.96354	-0.00617	18.28487	7.13272	167.46	0.77
66/ 3/20	2439204.5	-17.85066	3.95343	0.24589	-1.53827	-6.96494	-0.00625	18.28486	7.13279	167.51	0.77
66/ 3/24	2439208.5	-17.85421	3.93734	0.24587	-1.53226	-6.96633	-0.00633	18.28485	7.13285	167.56	0.77
66/ 3/28	2439212.5	-17.85774	3.92124	0.24586	-1.52626	-6.96771	-0.00642	18.28484	7.13292	167.62	0.77
66/ 4/ 1	2439216.5	-17.86126	3.90514	0.24584	-1.52025	-6.96909	-0.00650	18.28483	7.13298	167.67	0.77
66/ 4/ 5	2439220.5	-17.86476	3.88904	0.24583	-1.51424	-6.97046	-0.00658	18.28483	7.13304	167.72	0.77
66/ 4/ 9	2439224.5	-17.86825	3.87294	0.24581	-1.50823	-6.97182	-0.00666	18.28482	7.13309	167.77	0.77
66/ 4/13	2439228.5	-17.87173	3.85683	0.24580	-1.50222	-6.97317	-0.00675	18.28481	7.13315	167.82	0.77
66/ 4/17	2439232.5	-17.87520	3.84072	0.24578	-1.49621	-6.97452	-0.00683	18.28481	7.13321	167.87	0.77
66/ 4/21	2439236.5	-17.87864	3.82461	0.24577	-1.49020	-6.97586	-0.00691	18.28480	7.13326	167.93	0.77
66/ 4/25	2439240.5	-17.88208	3.80849	0.24575	-1.48419	-6.97720	-0.00699	18.28480	7.13332	167.98	0.77
66/ 4/29	2439244.5	-17.88550	3.79237	0.24573	-1.47818	-6.97853	-0.00707	18.28479	7.13337	168.03	0.77
66/ 5/ 3	2439248.5	-17.88891	3.77625	0.24572	-1.47217	-6.97986	-0.00716	18.28479	7.13343	168.08	0.77
66/ 5/ 7	2439252.5	-17.89230	3.76012	0.24570	-1.46616	-6.98118	-0.00724	18.28479	7.13348	168.13	0.77
66/ 5/11	2439256.5	-17.89568	3.74399	0.24568	-1.46015	-6.98249	-0.00732	18.28478	7.13353	168.18	0.77
66/ 5/15	2439260.5	-17.89905	3.72786	0.24567	-1.45414	-6.98380	-0.00740	18.28478	7.13359	168.24	0.77
66/ 5/19	2439264.5	-17.90240	3.71172	0.24565	-1.44814	-6.98511	-0.00748	18.28478	7.13365	168.29	0.77
66/ 5/23	2439268.5	-17.90574	3.69558	0.24563	-1.44213	-6.98641	-0.00756	18.28478	7.13370	168.34	0.77
66/ 5/27	2439272.5	-17.90907	3.67944	0.24561	-1.43612	-6.98771	-0.00765	18.28478	7.13376	168.39	0.77
66/ 5/31	2439276.5	-17.91238	3.66330	0.24560	-1.43010	-6.98900	-0.00773	18.28478	7.13382	168.44	0.77
66/ 6/ 4	2439280.5	-17.91567	3.64715	0.24558	-1.42409	-6.99029	-0.00781	18.28479	7.13388	168.49	0.77
66/ 6/ 8	2439284.5	-17.91896	3.63100	0.24556	-1.41807	-6.99158	-0.00789	18.28479	7.13394	168.54	0.77
66/ 6/12	2439288.5	-17.92223	3.61485	0.24554	-1.41206	-6.99285	-0.00797	18.28479	7.13400	168.60	0.77
66/ 6/16	2439292.5	-17.92548	3.59869	0.24552	-1.40604	-6.99413	-0.00806	18.28480	7.13406	168.65	0.77
66/ 6/20	2439296.5	-17.92872	3.58253	0.24550	-1.40002	-6.99539	-0.00814	18.28480	7.13412	168.70	0.77

1.7 1 A.U.=149,599,000 KM.

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66/ 6/24	2439300.5	-17.93195	3.56637	0.24549	-1.39400	-6.99666	-0.00822	18.28480	7.13418	168.75	0.77
66/ 6/28	2439304.5	-17.93516	3.55021	0.24547	-1.38798	-6.99791	-0.00830	18.28481	7.13424	168.80	0.77
66/ 7/ 2	2439308.5	-17.93836	3.53404	0.24545	-1.38196	-6.99917	-0.00838	18.28482	7.13430	168.85	0.77
66/ 7/ 6	2439312.5	-17.94155	3.51787	0.24543	-1.37593	-7.00041	-0.00846	18.28482	7.13436	168.91	0.77
66/ 7/10	2439316.5	-17.94472	3.50169	0.24541	-1.36991	-7.00166	-0.00855	18.28483	7.13442	168.96	0.77
66/ 7/14	2439320.5	-17.94788	3.48552	0.24539	-1.36388	-7.00290	-0.00863	18.28484	7.13448	169.01	0.77
66/ 7/18	2439324.5	-17.95102	3.46934	0.24537	-1.35786	-7.00413	-0.00871	18.28485	7.13454	169.06	0.77
66/ 7/22	2439328.5	-17.95415	3.45316	0.24535	-1.35183	-7.00536	-0.00879	18.28486	7.13461	169.11	0.77
66/ 7/26	2439332.5	-17.95727	3.43697	0.24533	-1.34580	-7.00659	-0.00887	18.28487	7.13467	169.16	0.77
66/ 7/30	2439336.5	-17.96037	3.42078	0.24531	-1.33977	-7.00781	-0.00896	18.28488	7.13473	169.22	0.77
66/ 8/ 3	2439340.5	-17.96346	3.40459	0.24529	-1.33374	-7.00902	-0.00904	18.28489	7.13480	169.27	0.77
66/ 8/ 7	2439344.5	-17.96653	3.38840	0.24527	-1.32770	-7.01023	-0.00912	18.28490	7.13486	169.32	0.77
66/ 8/11	2439348.5	-17.96959	3.37220	0.24524	-1.32167	-7.01144	-0.00920	18.28492	7.13493	169.37	0.77
66/ 8/15	2439352.5	-17.97264	3.35600	0.24522	-1.31563	-7.01264	-0.00928	18.28493	7.13499	169.42	0.77
66/ 8/19	2439356.5	-17.97567	3.33980	0.24520	-1.30959	-7.01384	-0.00937	18.28494	7.13506	169.47	0.77
66/ 8/23	2439360.5	-17.97869	3.32360	0.24518	-1.30354	-7.01504	-0.00945	18.28496	7.13513	169.53	0.77
66/ 8/27	2439364.5	-17.98169	3.30739	0.24516	-1.29750	-7.01623	-0.00953	18.28497	7.13519	169.58	0.77
66/ 8/31	2439368.5	-17.98468	3.29118	0.24514	-1.29145	-7.01741	-0.00961	18.28499	7.13526	169.63	0.77
66/ 9/ 4	2439372.5	-17.98766	3.27497	0.24511	-1.28539	-7.01859	-0.00970	18.28500	7.13533	169.68	0.77
66/ 9/ 8	2439376.5	-17.99062	3.25875	0.24509	-1.27934	-7.01976	-0.00978	18.28502	7.13539	169.73	0.77
66/ 9/12	2439380.5	-17.99357	3.24253	0.24507	-1.27328	-7.02092	-0.00986	18.28504	7.13545	169.78	0.77
66/ 9/16	2439384.5	-17.99651	3.22631	0.24505	-1.26722	-7.02208	-0.00995	18.28506	7.13551	169.84	0.77
66/ 9/20	2439388.5	-17.99943	3.21009	0.24502	-1.26115	-7.02323	-0.01003	18.28508	7.13557	169.89	0.77
66/ 9/24	2439392.5	-18.00233	3.19386	0.24500	-1.25509	-7.02437	-0.01011	18.28510	7.13563	169.94	0.77
66/ 9/28	2439396.5	-18.00523	3.17763	0.24498	-1.24902	-7.02551	-0.01019	18.28512	7.13568	169.99	0.77
66/10/ 2	2439400.5	-18.00810	3.16140	0.24495	-1.24296	-7.02664	-0.01028	18.28514	7.13574	170.04	0.77
66/10/ 6	2439404.5	-18.01097	3.14517	0.24493	-1.23689	-7.02777	-0.01036	18.28516	7.13579	170.09	0.77
66/10/10	2439408.5	-18.01382	3.12893	0.24490	-1.23082	-7.02889	-0.01044	18.28518	7.13585	170.15	0.77
66/10/14	2439412.5	-18.01666	3.11269	0.24488	-1.22475	-7.03000	-0.01053	18.28520	7.13590	170.20	0.77
66/10/18	2439416.5	-18.01948	3.09645	0.24486	-1.21868	-7.03111	-0.01061	18.28523	7.13595	170.25	0.77
66/10/22	2439420.5	-18.02229	3.08021	0.24483	-1.21260	-7.03221	-0.01069	18.28525	7.13600	170.30	0.77
66/10/26	2439424.5	-18.02508	3.06396	0.24481	-1.20653	-7.03330	-0.01077	18.28527	7.13605	170.35	0.77
66/10/30	2439428.5	-18.02786	3.04771	0.24478	-1.20046	-7.03439	-0.01086	18.28530	7.13609	170.40	0.77
66/11/ 3	2439432.5	-18.03063	3.03146	0.24476	-1.19438	-7.03547	-0.01094	18.28533	7.13614	170.46	0.77
66/11/ 7	2439436.5	-18.03338	3.01520	0.24473	-1.18831	-7.03655	-0.01102	18.28535	7.13619	170.51	0.77
66/11/11	2439440.5	-18.03612	2.99895	0.24470	-1.18223	-7.03762	-0.01110	18.28538	7.13623	170.56	0.77
66/11/15	2439444.5	-18.03884	2.98269	0.24468	-1.17615	-7.03868	-0.01118	18.28541	7.13628	170.61	0.77
66/11/19	2439448.5	-18.04155	2.96642	0.24465	-1.17007	-7.03974	-0.01127	18.28543	7.13633	170.66	0.77
66/11/23	2439452.5	-18.04425	2.95016	0.24463	-1.16400	-7.04080	-0.01135	18.28546	7.13638	170.71	0.77
66/11/27	2439456.5	-18.04693	2.93389	0.24460	-1.15791	-7.04185	-0.01143	18.28549	7.13642	170.77	0.77
66/12/ 1	2439460.5	-18.04960	2.91762	0.24457	-1.15183	-7.04289	-0.01152	18.28552	7.13647	170.82	0.77
66/12/ 5	2439464.5	-18.05225	2.90135	0.24455	-1.14574	-7.04393	-0.01160	18.28555	7.13651	170.87	0.77
66/12/ 9	2439468.5	-18.05489	2.88508	0.24452	-1.13966	-7.04496	-0.01168	18.28558	7.13656	170.92	0.77
66/12/13	2439472.5	-18.05752	2.86880	0.24449	-1.13357	-7.04599	-0.01176	18.28561	7.13660	170.97	0.77
66/12/17	2439476.5	-18.06013	2.85252	0.24447	-1.12749	-7.04701	-0.01184	18.28565	7.13664	171.02	0.77

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66/12/21	2439480.5	-18.06273	2.83624	0.24444	-1.12140	-7.04802	-0.01193	18.28568	7.13668	171.08	0.77
66/12/25	2439484.5	-18.06531	2.81996	0.24441	-1.11531	-7.04903	-0.01201	18.28571	7.13672	171.13	0.77
66/12/29	2439488.5	-18.06788	2.80367	0.24438	-1.10923	-7.05003	-0.01209	18.28575	7.13676	171.18	0.77
67/ 1/ 2	2439492.5	-18.07043	2.78739	0.24436	-1.10314	-7.05102	-0.01217	18.28578	7.13681	171.23	0.77
67/ 1/ 6	2439496.5	-18.07298	2.77110	0.24433	-1.09705	-7.05202	-0.01225	18.28582	7.13685	171.28	0.77
67/ 1/10	2439500.5	-18.07550	2.75480	0.24430	-1.09096	-7.05300	-0.01234	18.28585	7.13689	171.33	0.77
67/ 1/14	2439504.5	-18.07802	2.73851	0.24427	-1.08487	-7.05398	-0.01242	18.28589	7.13693	171.39	0.77
67/ 1/18	2439508.5	-18.08052	2.72221	0.24424	-1.07878	-7.05496	-0.01250	18.28593	7.13697	171.44	0.77
67/ 1/22	2439512.5	-18.08300	2.70591	0.24421	-1.07269	-7.05593	-0.01258	18.28597	7.13701	171.49	0.77
67/ 1/26	2439516.5	-18.08547	2.68961	0.24418	-1.06660	-7.05690	-0.01266	18.28600	7.13706	171.54	0.77
67/ 1/30	2439520.5	-18.08793	2.67331	0.24415	-1.06050	-7.05786	-0.01274	18.28604	7.13710	171.59	0.77
67/ 2/ 3	2439524.5	-18.09037	2.65700	0.24412	-1.05441	-7.05882	-0.01282	18.28608	7.13715	171.64	0.76
67/ 2/ 7	2439528.5	-18.09280	2.64069	0.24409	-1.04831	-7.05977	-0.01291	18.28612	7.13719	171.70	0.76
67/ 2/11	2439532.5	-18.09522	2.62438	0.24406	-1.04222	-7.06072	-0.01299	18.28616	7.13724	171.75	0.76
67/ 2/15	2439536.5	-18.09762	2.60807	0.24403	-1.03612	-7.06167	-0.01307	18.28621	7.13729	171.80	0.76
67/ 2/19	2439540.5	-18.10000	2.59175	0.24400	-1.03002	-7.06261	-0.01315	18.28625	7.13734	171.85	0.76
67/ 2/23	2439544.5	-18.10238	2.57544	0.24397	-1.02391	-7.06355	-0.01323	18.28629	7.13738	171.90	0.76
67/ 2/27	2439548.5	-18.10473	2.55912	0.24394	-1.01780	-7.06448	-0.01332	18.28633	7.13743	171.95	0.76
67/ 3/ 3	2439552.5	-18.10708	2.54280	0.24391	-1.01169	-7.06540	-0.01340	18.28638	7.13748	172.01	0.76
67/ 3/ 7	2439556.5	-18.10941	2.52647	0.24388	-1.00558	-7.06632	-0.01348	18.28642	7.13752	172.06	0.76
67/ 3/11	2439560.5	-18.11172	2.51015	0.24385	-0.99947	-7.06723	-0.01356	18.28647	7.13757	172.11	0.76
67/ 3/15	2439564.5	-18.11403	2.49382	0.24382	-0.99335	-7.06814	-0.01364	18.28651	7.13761	172.16	0.76
67/ 3/19	2439568.5	-18.11631	2.47749	0.24379	-0.98723	-7.06903	-0.01373	18.28656	7.13765	172.21	0.76
67/ 3/23	2439572.5	-18.11859	2.46116	0.24376	-0.98111	-7.06993	-0.01381	18.28661	7.13769	172.26	0.76
67/ 3/27	2439576.5	-18.12085	2.44483	0.24372	-0.97499	-7.07081	-0.01389	18.28665	7.13773	172.32	0.76
67/ 3/31	2439580.5	-18.12309	2.42849	0.24369	-0.96887	-7.07170	-0.01397	18.28670	7.13777	172.37	0.76
67/ 4/ 4	2439584.5	-18.12532	2.41215	0.24366	-0.96274	-7.07257	-0.01406	18.28675	7.13781	172.42	0.76
67/ 4/ 8	2439588.5	-18.12754	2.39581	0.24363	-0.95662	-7.07344	-0.01414	18.28680	7.13785	172.47	0.76
67/ 4/12	2439592.5	-18.12974	2.37947	0.24359	-0.95049	-7.07430	-0.01422	18.28685	7.13788	172.52	0.76
67/ 4/16	2439596.5	-18.13193	2.36313	0.24356	-0.94436	-7.07516	-0.01430	18.28690	7.13792	172.57	0.76
67/ 4/20	2439600.5	-18.13411	2.34678	0.24353	-0.93823	-7.07601	-0.01439	18.28695	7.13795	172.63	0.76
67/ 4/24	2439604.5	-18.13627	2.33043	0.24349	-0.93209	-7.07685	-0.01447	18.28700	7.13798	172.68	0.76
67/ 4/28	2439608.5	-18.13841	2.31408	0.24346	-0.92596	-7.07768	-0.01455	18.28705	7.13801	172.73	0.76
67/ 5/ 2	2439612.5	-18.14055	2.29773	0.24343	-0.91983	-7.07851	-0.01463	18.28710	7.13804	172.78	0.76
67/ 5/ 6	2439616.5	-18.14266	2.28138	0.24339	-0.91369	-7.07934	-0.01472	18.28716	7.13807	172.83	0.76
67/ 5/10	2439620.5	-18.14477	2.26502	0.24336	-0.90755	-7.08015	-0.01480	18.28721	7.13810	172.88	0.76
67/ 5/14	2439624.5	-18.14686	2.24867	0.24332	-0.90141	-7.08097	-0.01488	18.28727	7.13813	172.94	0.76
67/ 5/18	2439628.5	-18.14893	2.23231	0.24329	-0.89527	-7.08177	-0.01496	18.28732	7.13815	172.99	0.76
67/ 5/22	2439632.5	-18.15099	2.21594	0.24326	-0.88913	-7.08257	-0.01505	18.28738	7.13818	173.04	0.76
67/ 5/26	2439636.5	-18.15304	2.19958	0.24322	-0.88299	-7.08336	-0.01513	18.28743	7.13820	173.09	0.76
67/ 5/30	2439640.5	-18.15507	2.18322	0.24319	-0.87684	-7.08414	-0.01521	18.28749	7.13822	173.14	0.76
67/ 6/ 3	2439644.5	-18.15709	2.16685	0.24315	-0.87069	-7.08492	-0.01530	18.28755	7.13823	173.19	0.76
67/ 6/ 7	2439648.5	-18.15910	2.15048	0.24311	-0.86455	-7.08568	-0.01538	18.28760	7.13825	173.25	0.76
67/ 6/11	2439652.5	-18.16109	2.13411	0.24308	-0.85840	-7.08644	-0.01546	18.28766	7.13826	173.30	0.76
67/ 6/15	2439656.5	-18.16306	2.11774	0.24304	-0.85226	-7.08719	-0.01554	18.28772	7.13827	173.35	0.76

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67/ 6/19	2439660.5	-18.16502	2.10137	0.24301	-0.84611	-7.08794	-0.01563	18.28778	7.13828	173.40	0.76
67/ 6/23	2439664.5	-18.16697	2.08499	0.24297	-0.83997	-7.08868	-0.01571	18.28784	7.13829	173.45	0.76
67/ 6/27	2439668.5	-18.16890	2.06862	0.24293	-0.83382	-7.08941	-0.01579	18.28790	7.13829	173.50	0.76
67/ 7/ 1	2439672.5	-18.17082	2.05224	0.24290	-0.82768	-7.09014	-0.01587	18.28796	7.13830	173.56	0.76
67/ 7/ 5	2439676.5	-18.17273	2.03586	0.24286	-0.82154	-7.09086	-0.01595	18.28802	7.13831	173.61	0.76
67/ 7/ 9	2439680.5	-18.17462	2.01947	0.24282	-0.81540	-7.09157	-0.01604	18.28808	7.13831	173.66	0.76
67/ 7/13	2439684.5	-18.17650	2.00309	0.24279	-0.80925	-7.09228	-0.01612	18.28815	7.13831	173.71	0.76
67/ 7/17	2439688.5	-18.17836	1.98671	0.24275	-0.80311	-7.09298	-0.01620	18.28821	7.13832	173.76	0.76
67/ 7/21	2439692.5	-18.18021	1.97032	0.24271	-0.79698	-7.09367	-0.01628	18.28827	7.13832	173.81	0.76
67/ 7/25	2439696.5	-18.18204	1.95393	0.24267	-0.79084	-7.09436	-0.01636	18.28834	7.13833	173.87	0.76
67/ 7/29	2439700.5	-18.18386	1.93754	0.24264	-0.78470	-7.09505	-0.01645	18.28840	7.13833	173.92	0.76
67/ 8/ 2	2439704.5	-18.18567	1.92115	0.24260	-0.77857	-7.09573	-0.01653	18.28847	7.13834	173.97	0.76
67/ 8/ 6	2439708.5	-18.18746	1.90476	0.24256	-0.77243	-7.09641	-0.01661	18.28854	7.13834	174.02	0.76
67/ 8/10	2439712.5	-18.18923	1.88836	0.24252	-0.76630	-7.09708	-0.01669	18.28860	7.13835	174.07	0.76
67/ 8/14	2439716.5	-18.19100	1.87196	0.24248	-0.76016	-7.09775	-0.01677	18.28867	7.13836	174.12	0.76
67/ 8/18	2439720.5	-18.19275	1.85557	0.24244	-0.75402	-7.09842	-0.01685	18.28874	7.13837	174.18	0.76
67/ 8/22	2439724.5	-18.19448	1.83917	0.24241	-0.74788	-7.09908	-0.01694	18.28881	7.13838	174.23	0.76
67/ 8/26	2439728.5	-18.19620	1.82277	0.24237	-0.74174	-7.09973	-0.01702	18.28888	7.13839	174.28	0.76
67/ 8/30	2439732.5	-18.19791	1.80636	0.24233	-0.73560	-7.10038	-0.01710	18.28895	7.13840	174.33	0.76
67/ 9/ 3	2439736.5	-18.19960	1.78996	0.24229	-0.72947	-7.10102	-0.01718	18.28902	7.13841	174.38	0.76
67/ 9/ 7	2439740.5	-18.20128	1.77355	0.24225	-0.72333	-7.10166	-0.01726	18.28909	7.13842	174.43	0.76
67/ 9/11	2439744.5	-18.20294	1.75715	0.24221	-0.71719	-7.10229	-0.01734	18.28916	7.13843	174.49	0.76
67/ 9/15	2439748.5	-18.20459	1.74074	0.24217	-0.71105	-7.10292	-0.01742	18.28923	7.13844	174.54	0.76
67/ 9/19	2439752.5	-18.20623	1.72433	0.24213	-0.70491	-7.10354	-0.01751	18.28931	7.13846	174.59	0.76
67/ 9/23	2439756.5	-18.20785	1.70792	0.24209	-0.69877	-7.10416	-0.01759	18.28938	7.13847	174.64	0.76
67/ 9/27	2439760.5	-18.20946	1.69151	0.24205	-0.69263	-7.10478	-0.01767	18.28945	7.13848	174.69	0.76
67/10/ 1	2439764.5	-18.21105	1.67509	0.24200	-0.68649	-7.10539	-0.01775	18.28953	7.13850	174.74	0.76
67/10/ 5	2439768.5	-18.21263	1.65868	0.24196	-0.68034	-7.10600	-0.01783	18.28960	7.13851	174.80	0.76
67/10/ 9	2439772.5	-18.21419	1.64226	0.24192	-0.67420	-7.10660	-0.01791	18.28968	7.13853	174.85	0.76
67/10/13	2439776.5	-18.21574	1.62584	0.24188	-0.66806	-7.10720	-0.01799	18.28976	7.13855	174.90	0.76
67/10/17	2439780.5	-18.21728	1.60942	0.24184	-0.66191	-7.10779	-0.01808	18.28983	7.13857	174.95	0.76
67/10/21	2439784.5	-18.21880	1.59300	0.24180	-0.65576	-7.10838	-0.01816	18.28991	7.13859	175.00	0.76
67/10/25	2439788.5	-18.22031	1.57658	0.24176	-0.64962	-7.10896	-0.01824	18.28999	7.13861	175.05	0.76
67/10/29	2439792.5	-18.22180	1.56016	0.24171	-0.64347	-7.10954	-0.01832	18.29007	7.13863	175.11	0.76
67/11/ 2	2439796.5	-18.22328	1.54373	0.24167	-0.63732	-7.11012	-0.01840	18.29015	7.13865	175.16	0.76
67/11/ 6	2439800.5	-18.22475	1.52730	0.24163	-0.63116	-7.11069	-0.01848	18.29023	7.13867	175.21	0.76
67/11/10	2439804.5	-18.22620	1.51088	0.24159	-0.62501	-7.11126	-0.01857	18.29031	7.13870	175.26	0.76
67/11/14	2439808.5	-18.22764	1.49445	0.24154	-0.61884	-7.11182	-0.01865	18.29039	7.13872	175.31	0.76
67/11/18	2439812.5	-18.22906	1.47802	0.24150	-0.61268	-7.11238	-0.01873	18.29047	7.13874	175.36	0.76
67/11/22	2439816.5	-18.23047	1.46159	0.24146	-0.60651	-7.11293	-0.01881	18.29056	7.13876	175.42	0.76
67/11/26	2439820.5	-18.23186	1.44515	0.24141	-0.60035	-7.11347	-0.01890	18.29064	7.13878	175.47	0.76
67/11/30	2439824.5	-18.23324	1.42872	0.24137	-0.59418	-7.11400	-0.01898	18.29072	7.13880	175.52	0.76
67/12/ 4	2439828.5	-18.23461	1.41228	0.24132	-0.58800	-7.11453	-0.01906	18.29081	7.13882	175.57	0.76
67/12/ 8	2439832.5	-18.23596	1.39585	0.24128	-0.58183	-7.11505	-0.01914	18.29089	7.13883	175.62	0.76
67/12/12	2439836.5	-18.23729	1.37941	0.24124	-0.57566	-7.11557	-0.01922	18.29098	7.13884	175.67	0.76

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67/12/16	2439840.5	-18.23862	1.36297	0.24119	-0.56948	-7.11608	-0.01931	18.29106	7.13885	175.73	0.76
67/12/20	2439844.5	-18.23993	1.34653	0.24115	-0.56330	-7.11658	-0.01939	18.29115	7.13886	175.78	0.76
67/12/24	2439848.5	-18.24122	1.33009	0.24110	-0.55712	-7.11707	-0.01947	18.29124	7.13887	175.83	0.76
67/12/28	2439852.5	-18.24250	1.31365	0.24106	-0.55094	-7.11756	-0.01955	18.29133	7.13888	175.88	0.76
68/ 1/ 1	2439856.5	-18.24377	1.29720	0.24101	-0.54476	-7.11804	-0.01964	18.29141	7.13889	175.93	0.75
68/ 1/ 5	2439860.5	-18.24502	1.28076	0.24097	-0.53858	-7.11852	-0.01972	18.29150	7.13889	175.98	0.75
68/ 1/ 9	2439864.5	-18.24625	1.26431	0.24092	-0.53240	-7.11898	-0.01980	18.29159	7.13889	176.04	0.75
68/ 1/13	2439868.5	-18.24748	1.24787	0.24087	-0.52622	-7.11944	-0.01988	18.29168	7.13889	176.09	0.75
68/ 1/17	2439872.5	-18.24869	1.23142	0.24083	-0.52003	-7.11990	-0.01996	18.29177	7.13889	176.14	0.75
68/ 1/21	2439876.5	-18.24988	1.21497	0.24078	-0.51385	-7.12034	-0.02004	18.29186	7.13889	176.19	0.75
68/ 1/25	2439880.5	-18.25106	1.19852	0.24074	-0.50767	-7.12078	-0.02013	18.29195	7.13889	176.24	0.75
68/ 1/29	2439884.5	-18.25223	1.18207	0.24069	-0.50149	-7.12122	-0.02021	18.29205	7.13888	176.29	0.75
68/ 2/ 2	2439888.5	-18.25338	1.16562	0.24064	-0.49530	-7.12165	-0.02029	18.29214	7.13888	176.35	0.75
68/ 2/ 6	2439892.5	-18.25451	1.14917	0.24060	-0.48912	-7.12207	-0.02037	18.29223	7.13888	176.40	0.75
68/ 2/10	2439896.5	-18.25564	1.13271	0.24055	-0.48293	-7.12249	-0.02045	18.29233	7.13887	176.45	0.75
68/ 2/14	2439900.5	-18.25674	1.11626	0.24050	-0.47674	-7.12290	-0.02054	18.29242	7.13886	176.50	0.75
68/ 2/18	2439904.5	-18.25784	1.09980	0.24045	-0.47056	-7.12330	-0.02062	18.29251	7.13885	176.55	0.75
68/ 2/22	2439908.5	-18.25892	1.08335	0.24041	-0.46437	-7.12369	-0.02070	18.29261	7.13884	176.60	0.75
68/ 2/26	2439912.5	-18.25998	1.06689	0.24036	-0.45818	-7.12408	-0.02078	18.29271	7.13883	176.66	0.75
68/ 3/ 1	2439916.5	-18.26104	1.05043	0.24031	-0.45200	-7.12446	-0.02086	18.29280	7.13881	176.71	0.75
68/ 3/ 5	2439920.5	-18.26207	1.03397	0.24026	-0.44581	-7.12483	-0.02094	18.29290	7.13880	176.76	0.75
68/ 3/ 9	2439924.5	-18.26310	1.01751	0.24021	-0.43963	-7.12520	-0.02103	18.29300	7.13878	176.81	0.75
68/ 3/13	2439928.5	-18.26410	1.00105	0.24016	-0.43344	-7.12556	-0.02111	18.29309	7.13876	176.86	0.75
68/ 3/17	2439932.5	-18.26510	0.98459	0.24012	-0.42726	-7.12591	-0.02119	18.29319	7.13874	176.91	0.75
68/ 3/21	2439936.5	-18.26608	0.96813	0.24007	-0.42108	-7.12626	-0.02127	18.29329	7.13872	176.97	0.75
68/ 3/25	2439940.5	-18.26704	0.95166	0.24002	-0.41490	-7.12661	-0.02135	18.29339	7.13871	177.02	0.75
68/ 3/29	2439944.5	-18.26800	0.93520	0.23997	-0.40872	-7.12694	-0.02143	18.29349	7.13869	177.07	0.75
68/ 4/ 2	2439948.5	-18.26893	0.91873	0.23992	-0.40254	-7.12728	-0.02151	18.29359	7.13867	177.12	0.75
68/ 4/ 6	2439952.5	-18.26986	0.90227	0.23987	-0.39636	-7.12760	-0.02159	18.29369	7.13865	177.17	0.75
68/ 4/10	2439956.5	-18.27076	0.88580	0.23982	-0.39018	-7.12792	-0.02167	18.29380	7.13863	177.22	0.75
68/ 4/14	2439960.5	-18.27166	0.86933	0.23977	-0.38400	-7.12824	-0.02175	18.29390	7.13861	177.28	0.75
68/ 4/18	2439964.5	-18.27254	0.85287	0.23972	-0.37783	-7.12855	-0.02183	18.29400	7.13859	177.33	0.75
68/ 4/22	2439968.5	-18.27340	0.83640	0.23967	-0.37165	-7.12886	-0.02191	18.29410	7.13858	177.38	0.75
68/ 4/26	2439972.5	-18.27426	0.81993	0.23962	-0.36547	-7.12916	-0.02200	18.29421	7.13856	177.43	0.75
68/ 4/30	2439976.5	-18.27509	0.80346	0.23957	-0.35930	-7.12946	-0.02208	18.29431	7.13855	177.48	0.75
68/ 5/ 4	2439980.5	-18.27592	0.78699	0.23951	-0.35312	-7.12976	-0.02216	18.29442	7.13853	177.53	0.75
68/ 5/ 8	2439984.5	-18.27672	0.77052	0.23946	-0.34694	-7.13005	-0.02224	18.29453	7.13852	177.59	0.75
68/ 5/12	2439988.5	-18.27752	0.75404	0.23941	-0.34076	-7.13033	-0.02232	18.29463	7.13851	177.64	0.75
68/ 5/16	2439992.5	-18.27830	0.73757	0.23936	-0.33457	-7.13061	-0.02240	18.29474	7.13849	177.69	0.75
68/ 5/20	2439996.5	-18.27906	0.72110	0.23931	-0.32839	-7.13088	-0.02248	18.29485	7.13848	177.74	0.75
68/ 5/24	2440000.5	-18.27982	0.70462	0.23926	-0.32221	-7.13115	-0.02256	18.29496	7.13846	177.79	0.75
68/ 5/28	2440004.5	-18.28055	0.68815	0.23920	-0.31602	-7.13141	-0.02264	18.29506	7.13845	177.84	0.75
68/ 6/ 1	2440008.5	-18.28128	0.67167	0.23915	-0.30984	-7.13167	-0.02272	18.29517	7.13843	177.90	0.75
68/ 6/ 5	2440012.5	-18.28198	0.65520	0.23910	-0.30365	-7.13191	-0.02281	18.29528	7.13841	177.95	0.75
68/ 6/ 9	2440016.5	-18.28268	0.63872	0.23905	-0.29747	-7.13216	-0.02289	18.29539	7.13840	178.00	0.75

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68/ 6/13	2440020.5	-18.28336	0.62225	0.23899	-0.29128	-7.13240	-0.02297	18.29551	7.13838	178.05	0.75
68/ 6/17	2440024.5	-18.28402	0.60577	0.23894	-0.28510	-7.13263	-0.02305	18.29562	7.13836	178.10	0.75
68/ 6/21	2440028.5	-18.28468	0.58929	0.23889	-0.27891	-7.13285	-0.02313	18.29573	7.13834	178.15	0.75
68/ 6/25	2440032.5	-18.28531	0.57281	0.23883	-0.27272	-7.13307	-0.02321	18.29584	7.13832	178.21	0.75
68/ 6/29	2440036.5	-18.28594	0.55633	0.23878	-0.26653	-7.13329	-0.02329	18.29596	7.13830	178.26	0.75
68/ 7/ 3	2440040.5	-18.28654	0.53985	0.23873	-0.26034	-7.13350	-0.02337	18.29607	7.13828	178.31	0.75
68/ 7/ 7	2440044.5	-18.28714	0.52337	0.23867	-0.25415	-7.13370	-0.02345	18.29618	7.13826	178.36	0.75
68/ 7/11	2440048.5	-18.28772	0.50689	0.23862	-0.24796	-7.13390	-0.02354	18.29630	7.13824	178.41	0.75
68/ 7/15	2440052.5	-18.28828	0.49041	0.23856	-0.24177	-7.13409	-0.02362	18.29641	7.13822	178.46	0.75
68/ 7/19	2440056.5	-18.28884	0.47393	0.23851	-0.23558	-7.13427	-0.02370	18.29653	7.13820	178.52	0.75
68/ 7/23	2440060.5	-18.28937	0.45745	0.23845	-0.22939	-7.13445	-0.02378	18.29665	7.13818	178.57	0.75
68/ 7/27	2440064.5	-18.28990	0.44097	0.23840	-0.22320	-7.13463	-0.02386	18.29676	7.13816	178.62	0.75
68/ 7/31	2440068.5	-18.29040	0.42449	0.23834	-0.21701	-7.13480	-0.02394	18.29688	7.13814	178.67	0.75
68/ 8/ 4	2440072.5	-18.29090	0.40800	0.23829	-0.21081	-7.13496	-0.02402	18.29700	7.13811	178.72	0.75
68/ 8/ 8	2440076.5	-18.29138	0.39152	0.23823	-0.20461	-7.13511	-0.02411	18.29712	7.13809	178.77	0.75
68/ 8/12	2440080.5	-18.29184	0.37504	0.23818	-0.19842	-7.13526	-0.02419	18.29724	7.13806	178.83	0.75
68/ 8/16	2440084.5	-18.29230	0.35855	0.23812	-0.19222	-7.13540	-0.02427	18.29736	7.13803	178.88	0.75
68/ 8/20	2440088.5	-18.29273	0.34207	0.23806	-0.18602	-7.13553	-0.02435	18.29748	7.13800	178.93	0.75
68/ 8/24	2440092.5	-18.29315	0.32558	0.23801	-0.17983	-7.13566	-0.02443	18.29760	7.13797	178.98	0.75
68/ 8/28	2440096.5	-18.29356	0.30910	0.23795	-0.17363	-7.13578	-0.02451	18.29772	7.13793	179.03	0.75
68/ 9/ 1	2440100.5	-18.29396	0.29261	0.23789	-0.16743	-7.13589	-0.02460	18.29784	7.13790	179.08	0.74
68/ 9/ 5	2440104.5	-18.29434	0.27613	0.23784	-0.16124	-7.13599	-0.02468	18.29797	7.13786	179.14	0.74
68/ 9/ 9	2440108.5	-18.29470	0.25964	0.23778	-0.15505	-7.13609	-0.02476	18.29809	7.13782	179.19	0.74
68/ 9/13	2440112.5	-18.29505	0.24316	0.23772	-0.14885	-7.13618	-0.02484	18.29821	7.13778	179.24	0.74
68/ 9/17	2440116.5	-18.29539	0.22667	0.23767	-0.14266	-7.13627	-0.02492	18.29834	7.13774	179.29	0.74
68/ 9/21	2440120.5	-18.29571	0.21019	0.23761	-0.13647	-7.13635	-0.02500	18.29846	7.13770	179.34	0.74
68/ 9/25	2440124.5	-18.29602	0.19370	0.23755	-0.13028	-7.13642	-0.02508	18.29859	7.13766	179.39	0.74
68/ 9/29	2440128.5	-18.29631	0.17721	0.23749	-0.12410	-7.13649	-0.02516	18.29871	7.13762	179.45	0.74
68/10/ 3	2440132.5	-18.29659	0.16073	0.23743	-0.11791	-7.13656	-0.02524	18.29884	7.13757	179.50	0.74
68/10/ 7	2440136.5	-18.29686	0.14424	0.23738	-0.11173	-7.13661	-0.02532	18.29897	7.13753	179.55	0.74
68/10/11	2440140.5	-18.29711	0.12775	0.23732	-0.10554	-7.13666	-0.02540	18.29909	7.13749	179.60	0.74
68/10/15	2440144.5	-18.29735	0.11127	0.23726	-0.09936	-7.13671	-0.02548	18.29922	7.13745	179.65	0.74
68/10/19	2440148.5	-18.29757	0.09478	0.23720	-0.09318	-7.13676	-0.02556	18.29935	7.13741	179.70	0.74
68/10/23	2440152.5	-18.29778	0.07829	0.23714	-0.08700	-7.13680	-0.02564	18.29948	7.13737	179.75	0.74
68/10/27	2440156.5	-18.29797	0.06180	0.23708	-0.08082	-7.13683	-0.02572	18.29961	7.13733	179.81	0.74
68/10/31	2440160.5	-18.29815	0.04532	0.23702	-0.07463	-7.13686	-0.02580	18.29974	7.13730	179.86	0.74
68/11/ 4	2440164.5	-18.29832	0.02883	0.23696	-0.06845	-7.13689	-0.02589	18.29987	7.13726	179.91	0.74
68/11/ 8	2440168.5	-18.29847	0.01234	0.23690	-0.06227	-7.13690	-0.02597	18.30000	7.13722	179.96	0.74
68/11/12	2440172.5	-18.29860	-0.00415	0.23684	-0.05608	-7.13692	-0.02605	18.30014	7.13718	180.01	0.74
68/11/16	2440176.5	-18.29873	-0.02063	0.23678	-0.04990	-7.13692	-0.02613	18.30027	7.13715	180.06	0.74
68/11/20	2440180.5	-18.29883	-0.03712	0.23672	-0.04372	-7.13693	-0.02621	18.30040	7.13711	180.12	0.74
68/11/24	2440184.5	-18.29893	-0.05361	0.23666	-0.03754	-7.13692	-0.02629	18.30054	7.13707	180.17	0.74
68/11/28	2440188.5	-18.29901	-0.07010	0.23660	-0.03136	-7.13691	-0.02637	18.30067	7.13703	180.22	0.74
68/12/ 2	2440192.5	-18.29907	-0.08658	0.23654	-0.02518	-7.13690	-0.02645	18.30081	7.13700	180.27	0.74
68/12/ 6	2440196.5	-18.29912	-0.10307	0.23648	-0.01900	-7.13688	-0.02653	18.30094	7.13696	180.32	0.74

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68/12/10	2440200.5	-18.29916	-0.11956	0.23642	-0.01282	-7.13686	-0.02660	18.30108	7.13692	180.37	0.74
68/12/14	2440204.5	-18.29918	-0.13605	0.23635	-0.00664	-7.13684	-0.02668	18.30121	7.13689	180.43	0.74
68/12/18	2440208.5	-18.29919	-0.15253	0.23629	-0.00046	-7.13680	-0.02676	18.30135	7.13685	180.48	0.74
68/12/22	2440212.5	-18.29919	-0.16902	0.23623	0.00572	-7.13677	-0.02684	18.30149	7.13682	180.53	0.74
68/12/26	2440216.5	-18.29916	-0.18551	0.23617	0.01191	-7.13673	-0.02692	18.30163	7.13679	180.58	0.74
68/12/30	2440220.5	-18.29913	-0.20199	0.23611	0.01809	-7.13668	-0.02700	18.30177	7.13675	180.63	0.74
69/ 1/ 3	2440224.5	-18.29908	-0.21848	0.23604	0.02427	-7.13663	-0.02708	18.30191	7.13672	180.68	0.74
69/ 1/ 7	2440228.5	-18.29902	-0.23497	0.23598	0.03045	-7.13658	-0.02716	18.30205	7.13669	180.74	0.74
69/ 1/11	2440232.5	-18.29894	-0.25146	0.23592	0.03664	-7.13652	-0.02724	18.30219	7.13666	180.79	0.74
69/ 1/15	2440236.5	-18.29885	-0.26794	0.23586	0.04282	-7.13645	-0.02732	18.30233	7.13663	180.84	0.74
69/ 1/19	2440240.5	-18.29874	-0.28443	0.23579	0.04901	-7.13638	-0.02740	18.30247	7.13660	180.89	0.74
69/ 1/23	2440244.5	-18.29862	-0.30091	0.23573	0.05520	-7.13631	-0.02748	18.30261	7.13658	180.94	0.74
69/ 1/27	2440248.5	-18.29849	-0.31740	0.23567	0.06139	-7.13623	-0.02756	18.30276	7.13655	180.99	0.74
69/ 1/31	2440252.5	-18.29834	-0.33389	0.23560	0.06758	-7.13615	-0.02764	18.30290	7.13652	181.05	0.74
69/ 2/ 4	2440256.5	-18.29818	-0.35037	0.23554	0.07378	-7.13605	-0.02772	18.30304	7.13649	181.10	0.74
69/ 2/ 8	2440260.5	-18.29800	-0.36686	0.23547	0.07998	-7.13595	-0.02780	18.30319	7.13645	181.15	0.74
69/ 2/12	2440264.5	-18.29781	-0.38334	0.23541	0.08618	-7.13584	-0.02788	18.30333	7.13642	181.20	0.74
69/ 2/16	2440268.5	-18.29760	-0.39983	0.23534	0.09238	-7.13573	-0.02797	18.30348	7.13638	181.25	0.74
69/ 2/20	2440272.5	-18.29738	-0.41631	0.23528	0.09858	-7.13561	-0.02805	18.30363	7.13634	181.30	0.74
69/ 2/24	2440276.5	-18.29714	-0.43280	0.23522	0.10478	-7.13548	-0.02813	18.30377	7.13631	181.36	0.74
69/ 2/28	2440280.5	-18.29689	-0.44928	0.23515	0.11098	-7.13535	-0.02821	18.30392	7.13626	181.41	0.74
69/ 3/ 4	2440284.5	-18.29663	-0.46576	0.23508	0.11718	-7.13520	-0.02829	18.30407	7.13622	181.46	0.74
69/ 3/ 8	2440288.5	-18.29635	-0.48225	0.23502	0.12338	-7.13505	-0.02837	18.30422	7.13618	181.51	0.74
69/ 3/12	2440292.5	-18.29606	-0.49873	0.23495	0.12958	-7.13490	-0.02845	18.30436	7.13613	181.56	0.74
69/ 3/16	2440296.5	-18.29575	-0.51521	0.23489	0.13579	-7.13473	-0.02853	18.30451	7.13608	181.61	0.74
69/ 3/20	2440300.5	-18.29543	-0.53170	0.23482	0.14199	-7.13456	-0.02861	18.30466	7.13603	181.66	0.74
69/ 3/24	2440304.5	-18.29510	-0.54818	0.23476	0.14819	-7.13438	-0.02869	18.30481	7.13598	181.72	0.73
69/ 3/28	2440308.5	-18.29475	-0.56466	0.23469	0.15439	-7.13419	-0.02877	18.30497	7.13592	181.77	0.73
69/ 4/ 1	2440312.5	-18.29439	-0.58114	0.23462	0.16059	-7.13400	-0.02885	18.30512	7.13587	181.82	0.73
69/ 4/ 5	2440316.5	-18.29401	-0.59762	0.23456	0.16679	-7.13380	-0.02893	18.30527	7.13581	181.87	0.73
69/ 4/ 9	2440320.5	-18.29361	-0.61410	0.23449	0.17299	-7.13360	-0.02901	18.30542	7.13575	181.92	0.73
69/ 4/13	2440324.5	-18.29321	-0.63058	0.23442	0.17918	-7.13338	-0.02909	18.30557	7.13569	181.97	0.73
69/ 4/17	2440328.5	-18.29279	-0.64706	0.23435	0.18538	-7.13316	-0.02917	18.30573	7.13563	182.03	0.73
69/ 4/21	2440332.5	-18.29235	-0.66354	0.23429	0.19158	-7.13294	-0.02925	18.30588	7.13557	182.08	0.73
69/ 4/25	2440336.5	-18.29190	-0.68002	0.23422	0.19777	-7.13271	-0.02933	18.30604	7.13551	182.13	0.73
69/ 4/29	2440340.5	-18.29144	-0.69649	0.23415	0.20397	-7.13247	-0.02941	18.30619	7.13545	182.18	0.73
69/ 5/ 3	2440344.5	-18.29096	-0.71297	0.23408	0.21017	-7.13222	-0.02949	18.30635	7.13538	182.23	0.73
69/ 5/ 7	2440348.5	-18.29047	-0.72945	0.23402	0.21636	-7.13197	-0.02957	18.30650	7.13531	182.28	0.73
69/ 5/11	2440352.5	-18.28996	-0.74592	0.23395	0.22255	-7.13170	-0.02965	18.30666	7.13524	182.34	0.73
69/ 5/15	2440356.5	-18.28944	-0.76240	0.23388	0.22874	-7.13143	-0.02973	18.30682	7.13516	182.39	0.73
69/ 5/19	2440360.5	-18.28890	-0.77887	0.23381	0.23493	-7.13116	-0.02981	18.30697	7.13509	182.44	0.73
69/ 5/23	2440364.5	-18.28835	-0.79535	0.23374	0.24112	-7.13088	-0.02989	18.30713	7.13501	182.49	0.73
69/ 5/27	2440368.5	-18.28779	-0.81182	0.23367	0.24730	-7.13059	-0.02997	18.30729	7.13494	182.54	0.73
69/ 5/31	2440372.5	-18.28721	-0.82829	0.23360	0.25349	-7.13029	-0.03004	18.30745	7.13486	182.59	0.73
69/ 6/ 4	2440376.5	-18.28662	-0.84476	0.23353	0.25967	-7.12999	-0.03012	18.30761	7.13478	182.64	0.73

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69/ 6/ 8	2440380.5	-18.28601	-0.86124	0.23346	0.26585	-7.12969	-0.03020	18.30777	7.13471	182.70	0.73
69/ 6/12	2440384.5	-18.28539	-0.87771	0.23339	0.27202	-7.12938	-0.03028	18.30793	7.13463	182.75	0.73
69/ 6/16	2440388.5	-18.28475	-0.89418	0.23332	0.27820	-7.12906	-0.03036	18.30809	7.13455	182.80	0.73
69/ 6/20	2440392.5	-18.28410	-0.91064	0.23325	0.28437	-7.12874	-0.03044	18.30825	7.13447	182.85	0.73
69/ 6/24	2440396.5	-18.28344	-0.92711	0.23318	0.29054	-7.12841	-0.03052	18.30842	7.13439	182.90	0.73
69/ 6/28	2440400.5	-18.28276	-0.94358	0.23311	0.29671	-7.12808	-0.03060	18.30858	7.13432	182.95	0.73
69/ 7/ 2	2440404.5	-18.28207	-0.96005	0.23304	0.30287	-7.12774	-0.03067	18.30874	7.13424	183.01	0.73
69/ 7/ 6	2440408.5	-18.28136	-0.97651	0.23297	0.30904	-7.12740	-0.03075	18.30891	7.13417	183.06	0.73
69/ 7/10	2440412.5	-18.28064	-0.99298	0.23290	0.31520	-7.12706	-0.03083	18.30907	7.13409	183.11	0.73
69/ 7/14	2440416.5	-18.27991	-1.00944	0.23283	0.32136	-7.12671	-0.03091	18.30924	7.13402	183.16	0.73
69/ 7/18	2440420.5	-18.27916	-1.02591	0.23276	0.32752	-7.12636	-0.03099	18.30940	7.13395	183.21	0.73
69/ 7/22	2440424.5	-18.27839	-1.04237	0.23268	0.33369	-7.12601	-0.03107	18.30957	7.13388	183.26	0.73
69/ 7/26	2440428.5	-18.27761	-1.05883	0.23261	0.33985	-7.12565	-0.03115	18.30974	7.13381	183.32	0.73
69/ 7/30	2440432.5	-18.27682	-1.07529	0.23254	0.34602	-7.12528	-0.03122	18.30990	7.13374	183.37	0.73
69/ 8/ 3	2440436.5	-18.27602	-1.09175	0.23247	0.35218	-7.12491	-0.03130	18.31007	7.13367	183.42	0.73
69/ 8/ 7	2440440.5	-18.27519	-1.10821	0.23240	0.35834	-7.12453	-0.03138	18.31024	7.13361	183.47	0.73
69/ 8/11	2440444.5	-18.27436	-1.12467	0.23232	0.36450	-7.12415	-0.03146	18.31041	7.13354	183.52	0.73
69/ 8/15	2440448.5	-18.27351	-1.14113	0.23225	0.37067	-7.12376	-0.03154	18.31058	7.13347	183.57	0.73
69/ 8/19	2440452.5	-18.27265	-1.15758	0.23218	0.37683	-7.12337	-0.03162	18.31075	7.13340	183.62	0.73
69/ 8/23	2440456.5	-18.27177	-1.17404	0.23210	0.38299	-7.12297	-0.03170	18.31092	7.13333	183.68	0.73
69/ 8/27	2440460.5	-18.27088	-1.19049	0.23203	0.38915	-7.12257	-0.03177	18.31109	7.13326	183.73	0.73
69/ 8/31	2440464.5	-18.26997	-1.20695	0.23196	0.39531	-7.12216	-0.03185	18.31126	7.13320	183.78	0.73
69/ 9/ 4	2440468.5	-18.26905	-1.22340	0.23188	0.40147	-7.12175	-0.03193	18.31144	7.13313	183.83	0.73
69/ 9/ 8	2440472.5	-18.26812	-1.23985	0.23181	0.40763	-7.12133	-0.03201	18.31161	7.13306	183.88	0.73
69/ 9/12	2440476.5	-18.26717	-1.25630	0.23174	0.41379	-7.12091	-0.03209	18.31178	7.13300	183.93	0.73
69/ 9/16	2440480.5	-18.26621	-1.27275	0.23166	0.41995	-7.12048	-0.03217	18.31196	7.13293	183.99	0.72
69/ 9/20	2440484.5	-18.26523	-1.28920	0.23159	0.42611	-7.12005	-0.03225	18.31213	7.13286	184.04	0.72
69/ 9/24	2440488.5	-18.26424	-1.30565	0.23151	0.43227	-7.11961	-0.03232	18.31231	7.13280	184.09	0.72
69/ 9/28	2440492.5	-18.26323	-1.32210	0.23144	0.43843	-7.11917	-0.03240	18.31248	7.13273	184.14	0.72
69/10/ 2	2440496.5	-18.26221	-1.33854	0.23136	0.44459	-7.11872	-0.03248	18.31266	7.13267	184.19	0.72
69/10/ 6	2440500.5	-18.26118	-1.35499	0.23129	0.45075	-7.11827	-0.03256	18.31284	7.13260	184.24	0.72
69/10/10	2440504.5	-18.26013	-1.37143	0.23121	0.45691	-7.11781	-0.03264	18.31302	7.13254	184.30	0.72
69/10/14	2440508.5	-18.25907	-1.38788	0.23114	0.46308	-7.11735	-0.03272	18.31319	7.13247	184.35	0.72
69/10/18	2440512.5	-18.25799	-1.40432	0.23106	0.46924	-7.11688	-0.03280	18.31337	7.13241	184.40	0.72
69/10/22	2440516.5	-18.25690	-1.42076	0.23099	0.47541	-7.11640	-0.03288	18.31355	7.13234	184.45	0.72
69/10/26	2440520.5	-18.25579	-1.43720	0.23091	0.48157	-7.11592	-0.03296	18.31373	7.13227	184.50	0.72
69/10/30	2440524.5	-18.25467	-1.45364	0.23083	0.48774	-7.11543	-0.03304	18.31391	7.13220	184.55	0.72
69/11/ 3	2440528.5	-18.25354	-1.47007	0.23076	0.49391	-7.11493	-0.03311	18.31409	7.13213	184.60	0.72
69/11/ 7	2440532.5	-18.25239	-1.48651	0.23068	0.50007	-7.11442	-0.03319	18.31428	7.13205	184.66	0.72
69/11/11	2440536.5	-18.25123	-1.50295	0.23060	0.50624	-7.11391	-0.03327	18.31446	7.13198	184.71	0.72
69/11/15	2440540.5	-18.25005	-1.51938	0.23053	0.51240	-7.11339	-0.03335	18.31464	7.13190	184.76	0.72
69/11/19	2440544.5	-18.24886	-1.53581	0.23045	0.51857	-7.11287	-0.03343	18.31482	7.13182	184.81	0.72
69/11/23	2440548.5	-18.24766	-1.55224	0.23037	0.52473	-7.11234	-0.03351	18.31501	7.13174	184.86	0.72
69/11/27	2440552.5	-18.24644	-1.56867	0.23030	0.53089	-7.11180	-0.03359	18.31519	7.13166	184.91	0.72
69/12/ 1	2440556.5	-18.24520	-1.58510	0.23022	0.53705	-7.11125	-0.03366	18.31537	7.13158	184.97	0.72

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
69/12/ 5	2440560.5	-18.24395	-1.60153	0.23014	0.54321	-7.11070	-0.03374	18.31556	7.13150	185.02	0.72
69/12/ 9	2440564.5	-18.24269	-1.61796	0.23006	0.54937	-7.11014	-0.03382	18.31575	7.13141	185.07	0.72
69/12/13	2440568.5	-18.24142	-1.63438	0.22998	0.55552	-7.10958	-0.03390	18.31593	7.13133	185.12	0.72
69/12/17	2440572.5	-18.24013	-1.65081	0.22990	0.56168	-7.10901	-0.03398	18.31612	7.13124	185.17	0.72
69/12/21	2440576.5	-18.23882	-1.66723	0.22983	0.56783	-7.10843	-0.03405	18.31631	7.13115	185.22	0.72
69/12/25	2440580.5	-18.23750	-1.68365	0.22975	0.57398	-7.10785	-0.03413	18.31649	7.13107	185.27	0.72

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
69/12/17	2440572.5	-18.24013	-1.60598	-0.44590	0.56168	-6.50855	-2.85971	18.31612	7.13124	185.03	-1.39
69/12/21	2440576.5	-18.23882	-1.62102	-0.45251	0.56783	-6.50799	-2.85955	18.31631	7.13115	185.08	-1.42
69/12/25	2440580.5	-18.23750	-1.63605	-0.45911	0.57398	-6.50742	-2.85939	18.31649	7.13107	185.13	-1.44
69/12/29	2440584.5	-18.23617	-1.65109	-0.46572	0.58013	-6.50685	-2.85923	18.31668	7.13098	185.17	-1.46
70/ 1/ 2	2440588.5	-18.23482	-1.66612	-0.47232	0.58628	-6.50628	-2.85907	18.31687	7.13089	185.22	-1.48
70/ 1/ 6	2440592.5	-18.23346	-1.68115	-0.47893	0.59243	-6.50570	-2.85890	18.31706	7.13081	185.27	-1.50
70/ 1/10	2440596.5	-18.23208	-1.69618	-0.48553	0.59858	-6.50512	-2.85873	18.31725	7.13072	185.32	-1.52
70/ 1/14	2440600.5	-18.23069	-1.71120	-0.49214	0.60472	-6.50453	-2.85856	18.31744	7.13064	185.36	-1.54
70/ 1/18	2440604.5	-18.22929	-1.72623	-0.49874	0.61087	-6.50393	-2.85839	18.31763	7.13055	185.41	-1.56
70/ 1/22	2440608.5	-18.22787	-1.74125	-0.50534	0.61702	-6.50333	-2.85821	18.31782	7.13046	185.46	-1.58
70/ 1/26	2440612.5	-18.22644	-1.75628	-0.51195	0.62316	-6.50273	-2.85804	18.31802	7.13037	185.50	-1.60
70/ 1/30	2440616.5	-18.22499	-1.77130	-0.51855	0.62930	-6.50212	-2.85786	18.31821	7.13028	185.55	-1.62
70/ 2/ 3	2440620.5	-18.22353	-1.78632	-0.52515	0.63545	-6.50150	-2.85767	18.31840	7.13019	185.60	-1.64
70/ 2/ 7	2440624.5	-18.22206	-1.80134	-0.53175	0.64159	-6.50088	-2.85749	18.31860	7.13010	185.65	-1.66
70/ 2/11	2440628.5	-18.22057	-1.81636	-0.53835	0.64773	-6.50025	-2.85730	18.31879	7.13001	185.69	-1.68
70/ 2/15	2440632.5	-18.21906	-1.83137	-0.54495	0.65386	-6.49962	-2.85711	18.31898	7.12991	185.74	-1.70
70/ 2/19	2440636.5	-18.21755	-1.84639	-0.55155	0.66000	-6.49898	-2.85692	18.31918	7.12982	185.79	-1.73
70/ 2/23	2440640.5	-18.21601	-1.86140	-0.55815	0.66614	-6.49834	-2.85672	18.31938	7.12973	185.83	-1.75
70/ 2/27	2440644.5	-18.21447	-1.87641	-0.56475	0.67227	-6.49770	-2.85653	18.31957	7.12964	185.88	-1.77
70/ 3/ 3	2440648.5	-18.21291	-1.89142	-0.57135	0.67840	-6.49705	-2.85633	18.31977	7.12955	185.93	-1.79
70/ 3/ 7	2440652.5	-18.21133	-1.90643	-0.57795	0.68453	-6.49639	-2.85613	18.31997	7.12946	185.98	-1.81
70/ 3/11	2440656.5	-18.20975	-1.92144	-0.58455	0.69067	-6.49573	-2.85592	18.32017	7.12936	186.02	-1.83
70/ 3/15	2440660.5	-18.20814	-1.93644	-0.59115	0.69679	-6.49507	-2.85572	18.32036	7.12927	186.07	-1.85
70/ 3/19	2440664.5	-18.20653	-1.95145	-0.59774	0.70292	-6.49440	-2.85551	18.32056	7.12918	186.12	-1.87
70/ 3/23	2440668.5	-18.20490	-1.96645	-0.60434	0.70905	-6.49372	-2.85530	18.32076	7.12909	186.17	-1.89
70/ 3/27	2440672.5	-18.20325	-1.98145	-0.61094	0.71518	-6.49305	-2.85509	18.32096	7.12900	186.21	-1.91
70/ 3/31	2440676.5	-18.20159	-1.99645	-0.61753	0.72131	-6.49237	-2.85488	18.32116	7.12892	186.26	-1.93
70/ 4/ 4	2440680.5	-18.19992	-2.01145	-0.62413	0.72743	-6.49168	-2.85467	18.32137	7.12883	186.31	-1.95
70/ 4/ 8	2440684.5	-18.19823	-2.02644	-0.63072	0.73356	-6.49099	-2.85445	18.32157	7.12874	186.35	-1.97
70/ 4/12	2440688.5	-18.19653	-2.04144	-0.63731	0.73969	-6.49030	-2.85424	18.32177	7.12866	186.40	-1.99
70/ 4/16	2440692.5	-18.19481	-2.05643	-0.64391	0.74582	-6.48960	-2.85402	18.32197	7.12857	186.45	-2.01
70/ 4/20	2440696.5	-18.19308	-2.07142	-0.65050	0.75196	-6.48889	-2.85379	18.32218	7.12848	186.50	-2.03
70/ 4/24	2440700.5	-18.19134	-2.08641	-0.65709	0.75809	-6.48818	-2.85357	18.32238	7.12839	186.54	-2.06
70/ 4/28	2440704.5	-18.18958	-2.10140	-0.66369	0.76422	-6.48746	-2.85334	18.32259	7.12830	186.59	-2.08
70/ 5/ 2	2440708.5	-18.18781	-2.11638	-0.67028	0.77035	-6.48673	-2.85311	18.32279	7.12821	186.64	-2.10
70/ 5/ 6	2440712.5	-18.18602	-2.13137	-0.67687	0.77648	-6.48600	-2.85288	18.32300	7.12812	186.68	-2.12
70/ 5/10	2440716.5	-18.18422	-2.14635	-0.68346	0.78261	-6.48526	-2.85264	18.32320	7.12802	186.73	-2.14
70/ 5/14	2440720.5	-18.18240	-2.16133	-0.69005	0.78874	-6.48452	-2.85240	18.32341	7.12792	186.78	-2.16
70/ 5/18	2440724.5	-18.18058	-2.17631	-0.69664	0.79487	-6.48377	-2.85216	18.32362	7.12783	186.83	-2.18
70/ 5/22	2440728.5	-18.17873	-2.19129	-0.70323	0.80099	-6.48301	-2.85192	18.32383	7.12773	186.87	-2.20
70/ 5/26	2440732.5	-18.17687	-2.20627	-0.70981	0.80712	-6.48225	-2.85167	18.32403	7.12763	186.92	-2.22
70/ 5/30	2440736.5	-18.17500	-2.22124	-0.71640	0.81325	-6.48149	-2.85142	18.32424	7.12753	186.97	-2.24
70/ 6/ 3	2440740.5	-18.17312	-2.23621	-0.72299	0.81937	-6.48071	-2.85117	18.32445	7.12742	187.02	-2.26
70/ 6/ 7	2440744.5	-18.17122	-2.25118	-0.72958	0.82549	-6.47993	-2.85092	18.32466	7.12732	187.06	-2.28
70/ 6/11	2440748.5	-18.16930	-2.26615	-0.73616	0.83162	-6.47914	-2.85066	18.32487	7.12721	187.11	-2.30

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70/ 6/15	2440752.5	-18.16737	-2.28112	-0.74275	0.83774	-6.47835	-2.85040	18.32508	7.12711	187.16	-2.32
70/ 6/19	2440756.5	-18.16543	-2.29609	-0.74933	0.84385	-6.47755	-2.85014	18.32529	7.12700	187.20	-2.34
70/ 6/23	2440760.5	-18.16348	-2.31105	-0.75591	0.84997	-6.47675	-2.84987	18.32551	7.12689	187.25	-2.36
70/ 6/27	2440764.5	-18.16150	-2.32601	-0.76250	0.85609	-6.47594	-2.84961	18.32572	7.12678	187.30	-2.38
70/ 7/ 1	2440768.5	-18.15952	-2.34097	-0.76908	0.86220	-6.47513	-2.84934	18.32593	7.12667	187.35	-2.41
70/ 7/ 5	2440772.5	-18.15752	-2.35593	-0.77566	0.86831	-6.47431	-2.84907	18.32615	7.12656	187.39	-2.43
70/ 7/ 9	2440776.5	-18.15551	-2.37088	-0.78224	0.87443	-6.47349	-2.84879	18.32636	7.12645	187.44	-2.45
70/ 7/13	2440780.5	-18.15348	-2.38584	-0.78883	0.88054	-6.47265	-2.84852	18.32657	7.12633	187.49	-2.47
70/ 7/17	2440784.5	-18.15144	-2.40079	-0.79541	0.88665	-6.47181	-2.84824	18.32679	7.12622	187.53	-2.49
70/ 7/21	2440788.5	-18.14938	-2.41574	-0.80199	0.89276	-6.47097	-2.84795	18.32701	7.12610	187.58	-2.51
70/ 7/25	2440792.5	-18.14732	-2.43069	-0.80856	0.89887	-6.47012	-2.84767	18.32722	7.12598	187.63	-2.53
70/ 7/29	2440796.5	-18.14523	-2.44563	-0.81514	0.90497	-6.46926	-2.84738	18.32744	7.12586	187.68	-2.55
70/ 8/ 2	2440800.5	-18.14313	-2.46058	-0.82172	0.91107	-6.46840	-2.84709	18.32766	7.12574	187.72	-2.57
70/ 8/ 6	2440804.5	-18.14102	-2.47552	-0.82830	0.91717	-6.46753	-2.84679	18.32787	7.12561	187.77	-2.59
70/ 8/10	2440808.5	-18.13890	-2.49046	-0.83487	0.92326	-6.46665	-2.84650	18.32809	7.12549	187.82	-2.61
70/ 8/14	2440812.5	-18.13676	-2.50540	-0.84145	0.92936	-6.46577	-2.84620	18.32831	7.12536	187.87	-2.63
70/ 8/18	2440816.5	-18.13460	-2.52033	-0.84802	0.93545	-6.46489	-2.84590	18.32853	7.12524	187.91	-2.65
70/ 8/22	2440820.5	-18.13243	-2.53527	-0.85460	0.94153	-6.46400	-2.84560	18.32875	7.12511	187.96	-2.67
70/ 8/26	2440824.5	-18.13025	-2.55020	-0.86117	0.94762	-6.46311	-2.84529	18.32897	7.12499	188.01	-2.69
70/ 8/30	2440828.5	-18.12806	-2.56513	-0.86774	0.95370	-6.46221	-2.84498	18.32919	7.12486	188.05	-2.71
70/ 9/ 3	2440832.5	-18.12585	-2.58006	-0.87432	0.95978	-6.46131	-2.84467	18.32941	7.12473	188.10	-2.73
70/ 9/ 7	2440836.5	-18.12362	-2.59498	-0.88089	0.96585	-6.46040	-2.84436	18.32964	7.12461	188.15	-2.75
70/ 9/11	2440840.5	-18.12138	-2.60991	-0.88746	0.97193	-6.45949	-2.84405	18.32986	7.12448	188.20	-2.78
70/ 9/15	2440844.5	-18.11913	-2.62483	-0.89403	0.97800	-6.45857	-2.84373	18.33008	7.12436	188.24	-2.80
70/ 9/19	2440848.5	-18.11686	-2.63975	-0.90060	0.98407	-6.45766	-2.84342	18.33031	7.12424	188.29	-2.82
70/ 9/23	2440852.5	-18.11458	-2.65467	-0.90717	0.99013	-6.45674	-2.84310	18.33053	7.12412	188.34	-2.84
70/ 9/27	2440856.5	-18.11229	-2.66958	-0.91373	0.99620	-6.45581	-2.84278	18.33076	7.12400	188.38	-2.86
70/10/ 1	2440860.5	-18.10998	-2.68449	-0.92030	1.00227	-6.45489	-2.84246	18.33098	7.12388	188.43	-2.88
70/10/ 5	2440864.5	-18.10766	-2.69940	-0.92687	1.00833	-6.45395	-2.84214	18.33121	7.12376	188.48	-2.90
70/10/ 9	2440868.5	-18.10532	-2.71431	-0.93343	1.01440	-6.45302	-2.84182	18.33143	7.12365	188.53	-2.92
70/10/13	2440872.5	-18.10297	-2.72922	-0.94000	1.02046	-6.45208	-2.84149	18.33166	7.12353	188.57	-2.94
70/10/17	2440876.5	-18.10061	-2.74412	-0.94656	1.02652	-6.45113	-2.84116	18.33189	7.12342	188.62	-2.96
70/10/21	2440880.5	-18.09823	-2.75903	-0.95312	1.03259	-6.45018	-2.84083	18.33212	7.12330	188.67	-2.98
70/10/25	2440884.5	-18.09584	-2.77393	-0.95969	1.03865	-6.44923	-2.84050	18.33235	7.12319	188.72	-3.00
70/10/29	2440888.5	-18.09343	-2.78882	-0.96625	1.04471	-6.44827	-2.84017	18.33258	7.12307	188.76	-3.02
70/11/ 2	2440892.5	-18.09101	-2.80372	-0.97281	1.05077	-6.44731	-2.83983	18.33281	7.12296	188.81	-3.04
70/11/ 6	2440896.5	-18.08858	-2.81861	-0.97937	1.05682	-6.44634	-2.83949	18.33304	7.12285	188.86	-3.06
70/11/10	2440900.5	-18.08613	-2.83350	-0.98593	1.06288	-6.44537	-2.83915	18.33327	7.12274	188.90	-3.08
70/11/14	2440904.5	-18.08366	-2.84839	-0.99249	1.06894	-6.44440	-2.83881	18.33350	7.12262	188.95	-3.10
70/11/18	2440908.5	-18.08119	-2.86328	-0.99904	1.07500	-6.44342	-2.83847	18.33373	7.12251	189.00	-3.12
70/11/22	2440912.5	-18.07870	-2.87816	-1.00560	1.08105	-6.44244	-2.83813	18.33397	7.12240	189.05	-3.14
70/11/26	2440916.5	-18.07619	-2.89305	-1.01216	1.08711	-6.44145	-2.83778	18.33420	7.12229	189.09	-3.16
70/11/30	2440920.5	-18.07367	-2.90793	-1.01871	1.09316	-6.44046	-2.83743	18.33444	7.12218	189.14	-3.19
70/12/ 4	2440924.5	-18.07114	-2.92280	-1.02527	1.09922	-6.43946	-2.83708	18.33467	7.12207	189.19	-3.21
70/12/ 8	2440928.5	-18.06860	-2.93768	-1.03182	1.10527	-6.43846	-2.83673	18.33491	7.12196	189.23	-3.23

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
70/12/12	2440932.5	-18.06604	-2.95255	-1.03837	1.11133	-6.43745	-2.83637	18.33514	7.12186	189.28	-3.25
70/12/16	2440936.5	-18.06346	-2.96742	-1.04493	1.11738	-6.43644	-2.83601	18.33538	7.12175	189.33	-3.27
70/12/20	2440940.5	-18.06087	-2.98229	-1.05148	1.12344	-6.43543	-2.83566	18.33561	7.12164	189.38	-3.29
70/12/24	2440944.5	-18.05827	-2.99716	-1.05803	1.12949	-6.43441	-2.83530	18.33585	7.12153	189.42	-3.31
70/12/28	2440948.5	-18.05565	-3.01202	-1.06458	1.13555	-6.43338	-2.83493	18.33609	7.12143	189.47	-3.33
71/ 1/ 1	2440952.5	-18.05302	-3.02688	-1.07113	1.14161	-6.43235	-2.83457	18.33633	7.12132	189.52	-3.35
71/ 1/ 5	2440956.5	-18.05038	-3.04174	-1.07767	1.14767	-6.43131	-2.83420	18.33657	7.12121	189.57	-3.37
71/ 1/ 9	2440960.5	-18.04772	-3.05659	-1.08422	1.15373	-6.43027	-2.83383	18.33681	7.12110	189.61	-3.39
71/ 1/13	2440964.5	-18.04505	-3.07145	-1.09077	1.15979	-6.42922	-2.83346	18.33705	7.12099	189.66	-3.41
71/ 1/17	2440968.5	-18.04236	-3.08630	-1.09731	1.16585	-6.42816	-2.83308	18.33729	7.12087	189.71	-3.43
71/ 1/21	2440972.5	-18.03966	-3.10115	-1.10386	1.17191	-6.42710	-2.83270	18.33753	7.12075	189.75	-3.45
71/ 1/25	2440976.5	-18.03695	-3.11600	-1.11040	1.17796	-6.42602	-2.83232	18.33777	7.12063	189.80	-3.47
71/ 1/29	2440980.5	-18.03422	-3.13084	-1.11694	1.18402	-6.42495	-2.83193	18.33801	7.12051	189.85	-3.49
71/ 2/ 2	2440984.5	-18.03148	-3.14568	-1.12349	1.19007	-6.42386	-2.83154	18.33826	7.12039	189.90	-3.51
71/ 2/ 6	2440988.5	-18.02872	-3.16052	-1.13003	1.19613	-6.42277	-2.83115	18.33850	7.12026	189.94	-3.53
71/ 2/10	2440992.5	-18.02595	-3.17536	-1.13657	1.20218	-6.42168	-2.83076	18.33874	7.12014	189.99	-3.55
71/ 2/14	2440996.5	-18.02317	-3.19019	-1.14311	1.20823	-6.42057	-2.83036	18.33899	7.12001	190.04	-3.57
71/ 2/18	2441000.5	-18.02037	-3.20502	-1.14964	1.21428	-6.41946	-2.82996	18.33923	7.11988	190.08	-3.59
71/ 2/22	2441004.5	-18.01756	-3.21985	-1.15618	1.22032	-6.41835	-2.82956	18.33948	7.11974	190.13	-3.61
71/ 2/26	2441008.5	-18.01473	-3.23468	-1.16272	1.22636	-6.41722	-2.82915	18.33973	7.11961	190.18	-3.63
71/ 3/ 2	2441012.5	-18.01189	-3.24950	-1.16925	1.23240	-6.41610	-2.82874	18.33997	7.11947	190.23	-3.66
71/ 3/ 6	2441016.5	-18.00904	-3.26432	-1.17579	1.23844	-6.41496	-2.82833	18.34022	7.11934	190.27	-3.68
71/ 3/10	2441020.5	-18.00617	-3.27914	-1.18232	1.24448	-6.41382	-2.82792	18.34047	7.11920	190.32	-3.70
71/ 3/14	2441024.5	-18.00329	-3.29396	-1.18885	1.25051	-6.41268	-2.82750	18.34071	7.11906	190.37	-3.72
71/ 3/18	2441028.5	-18.00039	-3.30877	-1.19539	1.25654	-6.41153	-2.82709	18.34096	7.11892	190.42	-3.74
71/ 3/22	2441032.5	-17.99748	-3.32358	-1.20192	1.26257	-6.41038	-2.82667	18.34121	7.11878	190.46	-3.76
71/ 3/26	2441036.5	-17.99456	-3.33839	-1.20845	1.26860	-6.40922	-2.82624	18.34146	7.11864	190.51	-3.78
71/ 3/30	2441040.5	-17.99162	-3.35319	-1.21497	1.27462	-6.40805	-2.82582	18.34171	7.11850	190.56	-3.80
71/ 4/ 3	2441044.5	-17.98867	-3.36799	-1.22150	1.28065	-6.40688	-2.82539	18.34196	7.11836	190.60	-3.82
71/ 4/ 7	2441048.5	-17.98570	-3.38279	-1.22803	1.28667	-6.40570	-2.82496	18.34221	7.11821	190.65	-3.84
71/ 4/11	2441052.5	-17.98272	-3.39759	-1.23455	1.29269	-6.40452	-2.82453	18.34247	7.11807	190.70	-3.86
71/ 4/15	2441056.5	-17.97973	-3.41238	-1.24108	1.29871	-6.40333	-2.82409	18.34272	7.11792	190.75	-3.88
71/ 4/19	2441060.5	-17.97672	-3.42718	-1.24760	1.30472	-6.40214	-2.82366	18.34297	7.11777	190.79	-3.90
71/ 4/23	2441064.5	-17.97370	-3.44196	-1.25412	1.31073	-6.40094	-2.82321	18.34322	7.11762	190.84	-3.92
71/ 4/27	2441068.5	-17.97067	-3.45675	-1.26065	1.31674	-6.39973	-2.82277	18.34348	7.11747	190.89	-3.94
71/ 5/ 1	2441072.5	-17.96762	-3.47153	-1.26717	1.32274	-6.39852	-2.82233	18.34373	7.11732	190.94	-3.96
71/ 5/ 5	2441076.5	-17.96455	-3.48631	-1.27369	1.32875	-6.39731	-2.82188	18.34399	7.11717	190.98	-3.98
71/ 5/ 9	2441080.5	-17.96148	-3.50109	-1.28021	1.33475	-6.39609	-2.82143	18.34424	7.11702	191.03	-4.00
71/ 5/13	2441084.5	-17.95839	-3.51587	-1.28672	1.34074	-6.39487	-2.82098	18.34450	7.11687	191.08	-4.02
71/ 5/17	2441088.5	-17.95528	-3.53064	-1.29324	1.34674	-6.39364	-2.82053	18.34476	7.11672	191.12	-4.04
71/ 5/21	2441092.5	-17.95217	-3.54541	-1.29975	1.35273	-6.39241	-2.82007	18.34501	7.11657	191.17	-4.06
71/ 5/25	2441096.5	-17.94903	-3.56017	-1.30627	1.35872	-6.39118	-2.81962	18.34527	7.11642	191.22	-4.08
71/ 5/29	2441100.5	-17.94589	-3.57494	-1.31278	1.36471	-6.38994	-2.81916	18.34553	7.11627	191.27	-4.10
71/ 6/ 2	2441104.5	-17.94273	-3.58970	-1.31929	1.37069	-6.38869	-2.81870	18.34579	7.11613	191.31	-4.12
71/ 6/ 6	2441108.5	-17.93955	-3.60445	-1.32581	1.37667	-6.38745	-2.81823	18.34605	7.11598	191.36	-4.14

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71/ 6/10	2441112.5	-17.93637	-3.61921	-1.33232	1.38265	-6.38620	-2.81777	18.34631	7.11583	191.41	-4.16
71/ 6/14	2441116.5	-17.93317	-3.63396	-1.33882	1.38863	-6.38494	-2.81731	18.34657	7.11569	191.46	-4.18
71/ 6/18	2441120.5	-17.92995	-3.64871	-1.34533	1.39461	-6.38369	-2.81684	18.34683	7.11554	191.50	-4.21
71/ 6/22	2441124.5	-17.92672	-3.66346	-1.35184	1.40059	-6.38242	-2.81637	18.34709	7.11540	191.55	-4.23
71/ 6/26	2441128.5	-17.92348	-3.67820	-1.35835	1.40656	-6.38116	-2.81590	18.34735	7.11526	191.60	-4.25
71/ 6/30	2441132.5	-17.92022	-3.69294	-1.36485	1.41254	-6.37989	-2.81543	18.34762	7.11512	191.64	-4.27
71/ 7/ 4	2441136.5	-17.91695	-3.70768	-1.37135	1.41852	-6.37861	-2.81496	18.34788	7.11498	191.69	-4.29
71/ 7/ 8	2441140.5	-17.91367	-3.72241	-1.37786	1.42450	-6.37733	-2.81448	18.34814	7.11483	191.74	-4.31
71/ 7/12	2441144.5	-17.91037	-3.73714	-1.38436	1.43047	-6.37605	-2.81400	18.34841	7.11469	191.79	-4.33
71/ 7/16	2441148.5	-17.90706	-3.75187	-1.39086	1.43644	-6.37475	-2.81352	18.34867	7.11455	191.83	-4.35
71/ 7/20	2441152.5	-17.90373	-3.76660	-1.39736	1.44242	-6.37346	-2.81304	18.34894	7.11440	191.88	-4.37
71/ 7/24	2441156.5	-17.90040	-3.78132	-1.40385	1.44839	-6.37216	-2.81256	18.34921	7.11426	191.93	-4.39
71/ 7/28	2441160.5	-17.89704	-3.79604	-1.41035	1.45436	-6.37085	-2.81207	18.34947	7.11411	191.98	-4.41
71/ 8/ 1	2441164.5	-17.89368	-3.81075	-1.41685	1.46032	-6.36954	-2.81158	18.34974	7.11397	192.02	-4.43
71/ 8/ 5	2441168.5	-17.89030	-3.82547	-1.42334	1.46629	-6.36822	-2.81109	18.35001	7.11382	192.07	-4.45
71/ 8/ 9	2441172.5	-17.88690	-3.84018	-1.42984	1.47226	-6.36690	-2.81059	18.35028	7.11368	192.12	-4.47
71/ 8/13	2441176.5	-17.88349	-3.85488	-1.43633	1.47822	-6.36557	-2.81010	18.35054	7.11353	192.16	-4.49
71/ 8/17	2441180.5	-17.88007	-3.86959	-1.44282	1.48418	-6.36424	-2.80960	18.35081	7.11338	192.21	-4.51
71/ 8/21	2441184.5	-17.87664	-3.88429	-1.44931	1.49014	-6.36290	-2.80910	18.35108	7.11323	192.26	-4.53
71/ 8/25	2441188.5	-17.87319	-3.89899	-1.45580	1.49610	-6.36156	-2.80859	18.35136	7.11308	192.31	-4.55
71/ 8/29	2441192.5	-17.86972	-3.91368	-1.46229	1.50206	-6.36021	-2.80809	18.35163	7.11293	192.35	-4.57
71/ 9/ 2	2441196.5	-17.86625	-3.92837	-1.46877	1.50802	-6.35886	-2.80758	18.35190	7.11278	192.40	-4.59
71/ 9/ 6	2441200.5	-17.86276	-3.94306	-1.47526	1.51397	-6.35750	-2.80707	18.35217	7.11263	192.45	-4.61
71/ 9/10	2441204.5	-17.85925	-3.95775	-1.48174	1.51992	-6.35614	-2.80656	18.35244	7.11248	192.50	-4.63
71/ 9/14	2441208.5	-17.85573	-3.97243	-1.48823	1.52587	-6.35477	-2.80604	18.35272	7.11233	192.54	-4.65
71/ 9/18	2441212.5	-17.85220	-3.98711	-1.49471	1.53182	-6.35340	-2.80553	18.35299	7.11218	192.59	-4.67
71/ 9/22	2441216.5	-17.84866	-4.00178	-1.50119	1.53777	-6.35202	-2.80501	18.35327	7.11203	192.64	-4.69
71/ 9/26	2441220.5	-17.84510	-4.01646	-1.50767	1.54372	-6.35063	-2.80449	18.35354	7.11188	192.68	-4.71
71/ 9/30	2441224.5	-17.84152	-4.03113	-1.51415	1.54967	-6.34924	-2.80396	18.35382	7.11172	192.73	-4.73
71/10/ 4	2441228.5	-17.83794	-4.04579	-1.52062	1.55561	-6.34785	-2.80344	18.35409	7.11156	192.78	-4.75
71/10/ 8	2441232.5	-17.83434	-4.06046	-1.52710	1.56155	-6.34644	-2.80291	18.35437	7.11141	192.83	-4.77
71/10/12	2441236.5	-17.83072	-4.07512	-1.53357	1.56749	-6.34504	-2.80237	18.35465	7.11125	192.87	-4.79
71/10/16	2441240.5	-17.82709	-4.08977	-1.54005	1.57343	-6.34362	-2.80184	18.35492	7.11108	192.92	-4.81
71/10/20	2441244.5	-17.82345	-4.10443	-1.54652	1.57936	-6.34220	-2.80130	18.35520	7.11092	192.97	-4.83
71/10/24	2441248.5	-17.81980	-4.11908	-1.55299	1.58529	-6.34078	-2.80076	18.35548	7.11076	193.02	-4.85
71/10/28	2441252.5	-17.81613	-4.13372	-1.55946	1.59122	-6.33935	-2.80022	18.35576	7.11060	193.06	-4.87
71/11/ 1	2441256.5	-17.81244	-4.14837	-1.56593	1.59714	-6.33792	-2.79968	18.35604	7.11043	193.11	-4.89
71/11/ 5	2441260.5	-17.80875	-4.16301	-1.57239	1.60307	-6.33648	-2.79913	18.35632	7.11027	193.16	-4.91
71/11/ 9	2441264.5	-17.80504	-4.17764	-1.57886	1.60898	-6.33503	-2.79858	18.35660	7.11010	193.20	-4.93
71/11/13	2441268.5	-17.80131	-4.19228	-1.58532	1.61490	-6.33358	-2.79803	18.35688	7.10993	193.25	-4.95
71/11/17	2441272.5	-17.79758	-4.20691	-1.59179	1.62081	-6.33213	-2.79748	18.35717	7.10977	193.30	-4.97
71/11/21	2441276.5	-17.79382	-4.22153	-1.59825	1.62672	-6.33068	-2.79692	18.35745	7.10960	193.35	-4.99
71/11/25	2441280.5	-17.79006	-4.23616	-1.60471	1.63263	-6.32921	-2.79637	18.35773	7.10944	193.39	-5.01
71/11/29	2441284.5	-17.78628	-4.25078	-1.61117	1.63853	-6.32775	-2.79581	18.35802	7.10927	193.44	-5.03
71/12/ 3	2441288.5	-17.78249	-4.26539	-1.61763	1.64444	-6.32628	-2.79525	18.35830	7.10911	193.49	-5.06

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71/12/ 7	2441292.5	-17.77868	-4.28000	-1.62409	1.65034	-6.32481	-2.79469	18.35859	7.10895	193.54	-5.08
71/12/11	2441296.5	-17.77486	-4.29461	-1.63054	1.65623	-6.32334	-2.79413	18.35887	7.10879	193.58	-5.10
71/12/15	2441300.5	-17.77103	-4.30922	-1.63700	1.66213	-6.32186	-2.79356	18.35916	7.10863	193.63	-5.12
71/12/19	2441304.5	-17.76718	-4.32382	-1.64345	1.66803	-6.32038	-2.79300	18.35944	7.10847	193.68	-5.14
71/12/23	2441308.5	-17.76332	-4.33842	-1.64990	1.67392	-6.31889	-2.79243	18.35973	7.10831	193.72	-5.16
71/12/27	2441312.5	-17.75945	-4.35302	-1.65635	1.67982	-6.31740	-2.79186	18.36002	7.10815	193.77	-5.18
71/12/31	2441316.5	-17.75556	-4.36761	-1.66280	1.68571	-6.31591	-2.79129	18.36031	7.10799	193.82	-5.20
72/ 1/ 4	2441320.5	-17.75166	-4.38220	-1.66925	1.69160	-6.31441	-2.79071	18.36060	7.10783	193.87	-5.22
72/ 1/ 8	2441324.5	-17.74775	-4.39679	-1.67569	1.69749	-6.31290	-2.79014	18.36089	7.10767	193.91	-5.24
72/ 1/12	2441328.5	-17.74382	-4.41137	-1.68214	1.70337	-6.31139	-2.78956	18.36118	7.10752	193.96	-5.26
72/ 1/16	2441332.5	-17.73988	-4.42595	-1.68858	1.70926	-6.30988	-2.78898	18.36147	7.10736	194.01	-5.28
72/ 1/20	2441336.5	-17.73592	-4.44052	-1.69502	1.71514	-6.30836	-2.78840	18.36176	7.10720	194.06	-5.30
72/ 1/24	2441340.5	-17.73195	-4.45509	-1.70147	1.72103	-6.30684	-2.78781	18.36205	7.10704	194.10	-5.32
72/ 1/28	2441344.5	-17.72797	-4.46966	-1.70791	1.72691	-6.30531	-2.78723	18.36235	7.10688	194.15	-5.34
72/ 2/ 1	2441348.5	-17.72397	-4.48423	-1.71434	1.73279	-6.30378	-2.78664	18.36264	7.10673	194.20	-5.36
72/ 2/ 5	2441352.5	-17.71996	-4.49879	-1.72078	1.73867	-6.30225	-2.78605	18.36293	7.10657	194.25	-5.38
72/ 2/ 9	2441356.5	-17.71594	-4.51335	-1.72722	1.74454	-6.30071	-2.78546	18.36323	7.10641	194.29	-5.40
72/ 2/13	2441360.5	-17.71190	-4.52790	-1.73365	1.75042	-6.29916	-2.78487	18.36352	7.10626	194.34	-5.42
72/ 2/17	2441364.5	-17.70785	-4.54245	-1.74008	1.75629	-6.29762	-2.78427	18.36382	7.10610	194.39	-5.44
72/ 2/21	2441368.5	-17.70379	-4.55700	-1.74651	1.76217	-6.29606	-2.78367	18.36411	7.10595	194.43	-5.46
72/ 2/25	2441372.5	-17.69971	-4.57154	-1.75294	1.76804	-6.29450	-2.78307	18.36441	7.10579	194.48	-5.48
72/ 2/29	2441376.5	-17.69562	-4.58608	-1.75937	1.77391	-6.29294	-2.78247	18.36471	7.10564	194.53	-5.50
72/ 3/ 4	2441380.5	-17.69151	-4.60062	-1.76580	1.77978	-6.29138	-2.78187	18.36500	7.10548	194.58	-5.52
72/ 3/ 8	2441384.5	-17.68740	-4.61515	-1.77223	1.78565	-6.28981	-2.78127	18.36530	7.10533	194.62	-5.54
72/ 3/12	2441388.5	-17.68326	-4.62968	-1.77865	1.79153	-6.28823	-2.78066	18.36560	7.10517	194.67	-5.56
72/ 3/16	2441392.5	-17.67912	-4.64420	-1.78507	1.79740	-6.28665	-2.78005	18.36590	7.10502	194.72	-5.58
72/ 3/20	2441396.5	-17.67496	-4.65872	-1.79150	1.80327	-6.28506	-2.77944	18.36620	7.10486	194.77	-5.60
72/ 3/24	2441400.5	-17.67079	-4.67324	-1.79792	1.80914	-6.28347	-2.77882	18.36650	7.10471	194.81	-5.62
72/ 3/28	2441404.5	-17.66660	-4.68776	-1.80434	1.81501	-6.28187	-2.77821	18.36680	7.10455	194.86	-5.64
72/ 4/ 1	2441408.5	-17.66240	-4.70227	-1.81075	1.82088	-6.28026	-2.77759	18.36710	7.10438	194.91	-5.66
72/ 4/ 5	2441412.5	-17.65819	-4.71677	-1.81717	1.82674	-6.27865	-2.77696	18.36741	7.10422	194.96	-5.68
72/ 4/ 9	2441416.5	-17.65396	-4.73128	-1.82358	1.83261	-6.27703	-2.77634	18.36771	7.10405	195.00	-5.70
72/ 4/13	2441420.5	-17.64972	-4.74577	-1.83000	1.83847	-6.27540	-2.77571	18.36801	7.10389	195.05	-5.72
72/ 4/17	2441424.5	-17.64547	-4.76027	-1.83641	1.84433	-6.27377	-2.77508	18.36832	7.10372	195.10	-5.74
72/ 4/21	2441428.5	-17.64120	-4.77476	-1.84282	1.85019	-6.27213	-2.77444	18.36862	7.10355	195.14	-5.76
72/ 4/25	2441432.5	-17.63692	-4.78925	-1.84923	1.85604	-6.27049	-2.77381	18.36893	7.10337	195.19	-5.78
72/ 4/29	2441436.5	-17.63262	-4.80373	-1.85563	1.86190	-6.26884	-2.77317	18.36923	7.10320	195.24	-5.80
72/ 5/ 3	2441440.5	-17.62832	-4.81821	-1.86204	1.86775	-6.26718	-2.77252	18.36954	7.10302	195.29	-5.82
72/ 5/ 7	2441444.5	-17.62399	-4.83269	-1.86844	1.87359	-6.26552	-2.77188	18.36984	7.10284	195.33	-5.84
72/ 5/11	2441448.5	-17.61966	-4.84716	-1.87485	1.87944	-6.26385	-2.77123	18.37015	7.10266	195.38	-5.86
72/ 5/15	2441452.5	-17.61531	-4.86163	-1.88125	1.88528	-6.26218	-2.77058	18.37046	7.10248	195.43	-5.88
72/ 5/19	2441456.5	-17.61095	-4.87610	-1.88765	1.89111	-6.26050	-2.76993	18.37076	7.10230	195.48	-5.90
72/ 5/23	2441460.5	-17.60657	-4.89056	-1.89405	1.89695	-6.25881	-2.76927	18.37107	7.10211	195.52	-5.92
72/ 5/27	2441464.5	-17.60218	-4.90501	-1.90044	1.90278	-6.25712	-2.76861	18.37138	7.10193	195.57	-5.94
72/ 5/31	2441468.5	-17.59778	-4.91947	-1.90684	1.90860	-6.25543	-2.76795	18.37169	7.10174	195.62	-5.96

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
72/ 6/ 4	2441472.5	-17.59337	-4.93392	-1.91323	1.91443	-6.25373	-2.76729	18.37200	7.10155	195.67	-5.98
72/ 6/ 8	2441476.5	-17.58894	-4.94836	-1.91962	1.92025	-6.25203	-2.76663	18.37231	7.10137	195.71	-6.00
72/ 6/12	2441480.5	-17.58449	-4.96280	-1.92601	1.92607	-6.25032	-2.76596	18.37262	7.10118	195.76	-6.02
72/ 6/16	2441484.5	-17.58004	-4.97724	-1.93240	1.93188	-6.24861	-2.76530	18.37294	7.10099	195.81	-6.04
72/ 6/20	2441488.5	-17.57557	-4.99167	-1.93879	1.93770	-6.24689	-2.76462	18.37325	7.10080	195.86	-6.06
72/ 6/24	2441492.5	-17.57108	-5.00610	-1.94518	1.94351	-6.24516	-2.76395	18.37356	7.10061	195.90	-6.08
72/ 6/28	2441496.5	-17.56659	-5.02053	-1.95156	1.94931	-6.24343	-2.76328	18.37387	7.10042	195.95	-6.10
72/ 7/ 2	2441500.5	-17.56208	-5.03495	-1.95794	1.95512	-6.24169	-2.76260	18.37419	7.10022	196.00	-6.12
72/ 7/ 6	2441504.5	-17.55755	-5.04937	-1.96433	1.96091	-6.23996	-2.76192	18.37450	7.10003	196.04	-6.14
72/ 7/10	2441508.5	-17.55302	-5.06378	-1.97071	1.96671	-6.23821	-2.76124	18.37482	7.09983	196.09	-6.16
72/ 7/14	2441512.5	-17.54847	-5.07819	-1.97708	1.97250	-6.23646	-2.76055	18.37513	7.09964	196.14	-6.18
72/ 7/18	2441516.5	-17.54390	-5.09259	-1.98346	1.97829	-6.23471	-2.75987	18.37545	7.09944	196.19	-6.20
72/ 7/22	2441520.5	-17.53933	-5.10700	-1.98984	1.98407	-6.23295	-2.75918	18.37577	7.09925	196.23	-6.22
72/ 7/26	2441524.5	-17.53474	-5.12139	-1.99621	1.98985	-6.23120	-2.75849	18.37608	7.09905	196.28	-6.24
72/ 7/30	2441528.5	-17.53013	-5.13579	-2.00258	1.99563	-6.22943	-2.75780	18.37640	7.09886	196.33	-6.26
72/ 8/ 3	2441532.5	-17.52552	-5.15018	-2.00895	2.00140	-6.22766	-2.75710	18.37672	7.09866	196.38	-6.28
72/ 8/ 7	2441536.5	-17.52089	-5.16456	-2.01532	2.00717	-6.22589	-2.75641	18.37704	7.09847	196.42	-6.30
72/ 8/11	2441540.5	-17.51624	-5.17894	-2.02169	2.01293	-6.22412	-2.75571	18.37736	7.09828	196.47	-6.32
72/ 8/15	2441544.5	-17.51159	-5.19332	-2.02805	2.01870	-6.22234	-2.75502	18.37768	7.09808	196.52	-6.34
72/ 8/19	2441548.5	-17.50692	-5.20769	-2.03442	2.02446	-6.22056	-2.75432	18.37800	7.09789	196.57	-6.36
72/ 8/23	2441552.5	-17.50223	-5.22206	-2.04078	2.03021	-6.21878	-2.75362	18.37832	7.09770	196.61	-6.38
72/ 8/27	2441556.5	-17.49753	-5.23642	-2.04714	2.03597	-6.21700	-2.75292	18.37865	7.09752	196.66	-6.40
72/ 8/31	2441560.5	-17.49282	-5.25078	-2.05350	2.04172	-6.21521	-2.75221	18.37897	7.09733	196.71	-6.42
72/ 9/ 4	2441564.5	-17.48810	-5.26514	-2.05985	2.04748	-6.21342	-2.75151	18.37929	7.09715	196.76	-6.43
72/ 9/ 8	2441568.5	-17.48336	-5.27949	-2.06621	2.05323	-6.21163	-2.75081	18.37962	7.09697	196.80	-6.45
72/ 9/12	2441572.5	-17.47861	-5.29384	-2.07256	2.05898	-6.20983	-2.75010	18.37994	7.09679	196.85	-6.47
72/ 9/16	2441576.5	-17.47385	-5.30818	-2.07892	2.06473	-6.20803	-2.74939	18.38027	7.09661	196.90	-6.49
72/ 9/20	2441580.5	-17.46907	-5.32252	-2.08527	2.07048	-6.20622	-2.74868	18.38059	7.09643	196.95	-6.51
72/ 9/24	2441584.5	-17.46428	-5.33686	-2.09162	2.07623	-6.20441	-2.74797	18.38092	7.09625	196.99	-6.53
72/ 9/28	2441588.5	-17.45948	-5.35119	-2.09796	2.08198	-6.20259	-2.74726	18.38125	7.09607	197.04	-6.55
72/10/ 2	2441592.5	-17.45467	-5.36552	-2.10431	2.08772	-6.20077	-2.74654	18.38157	7.09589	197.09	-6.57
72/10/ 6	2441596.5	-17.44984	-5.37984	-2.11065	2.09346	-6.19895	-2.74582	18.38190	7.09571	197.13	-6.59
72/10/10	2441600.5	-17.44499	-5.39416	-2.11700	2.09920	-6.19712	-2.74510	18.38223	7.09553	197.18	-6.61
72/10/14	2441604.5	-17.44014	-5.40847	-2.12334	2.10494	-6.19529	-2.74438	18.38256	7.09535	197.23	-6.63
72/10/18	2441608.5	-17.43527	-5.42278	-2.12968	2.11068	-6.19345	-2.74366	18.38289	7.09517	197.28	-6.65
72/10/22	2441612.5	-17.43038	-5.43709	-2.13601	2.11642	-6.19161	-2.74293	18.38322	7.09500	197.32	-6.67
72/10/26	2441616.5	-17.42549	-5.45139	-2.14235	2.12215	-6.18977	-2.74221	18.38355	7.09482	197.37	-6.69
72/10/30	2441620.5	-17.42058	-5.46569	-2.14868	2.12789	-6.18792	-2.74148	18.38388	7.09464	197.42	-6.71
72/11/ 3	2441624.5	-17.41566	-5.47998	-2.15502	2.13362	-6.18606	-2.74075	18.38422	7.09446	197.47	-6.73
72/11/ 7	2441628.5	-17.41072	-5.49427	-2.16135	2.13935	-6.18420	-2.74001	18.38455	7.09428	197.51	-6.75
72/11/11	2441632.5	-17.40577	-5.50855	-2.16768	2.14508	-6.18234	-2.73928	18.38488	7.09411	197.56	-6.77
72/11/15	2441636.5	-17.40081	-5.52283	-2.17400	2.15081	-6.18047	-2.73854	18.38522	7.09393	197.61	-6.79
72/11/19	2441640.5	-17.39584	-5.53711	-2.18033	2.15653	-6.17860	-2.73780	18.38555	7.09375	197.66	-6.81
72/11/23	2441644.5	-17.39085	-5.55138	-2.18665	2.16226	-6.17672	-2.73706	18.38589	7.09357	197.70	-6.83
72/11/27	2441648.5	-17.38584	-5.56565	-2.19297	2.16798	-6.17484	-2.73632	18.38622	7.09339	197.75	-6.85

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

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72/12/ 1	2441652.5	-17.38083	-5.57991	-2.19930	2.17371	-6.17295	-2.73557	18.38656	7.09321	197.80	-6.87
72/12/ 5	2441656.5	-17.37580	-5.59417	-2.20561	2.17943	-6.17106	-2.73483	18.38690	7.09304	197.85	-6.89
72/12/ 9	2441660.5	-17.37076	-5.60842	-2.21193	2.18515	-6.16916	-2.73408	18.38723	7.09286	197.89	-6.91
72/12/13	2441664.5	-17.36571	-5.62267	-2.21825	2.19087	-6.16726	-2.73332	18.38757	7.09267	197.94	-6.93
72/12/17	2441668.5	-17.36064	-5.63692	-2.22456	2.19659	-6.16535	-2.73257	18.38791	7.09249	197.99	-6.95
72/12/21	2441672.5	-17.35556	-5.65116	-2.23087	2.20230	-6.16343	-2.73181	18.38825	7.09231	198.04	-6.97
72/12/25	2441676.5	-17.35046	-5.66540	-2.23718	2.20802	-6.16151	-2.73105	18.38859	7.09212	198.08	-6.99
72/12/29	2441680.5	-17.34535	-5.67963	-2.24349	2.21373	-6.15958	-2.73028	18.38893	7.09193	198.13	-7.01
73/ 1/ 2	2441684.5	-17.34023	-5.69385	-2.24980	2.21943	-6.15765	-2.72952	18.38927	7.09174	198.18	-7.03
73/ 1/ 6	2441688.5	-17.33510	-5.70808	-2.25610	2.22514	-6.15571	-2.72875	18.38961	7.09155	198.23	-7.05
73/ 1/10	2441692.5	-17.32995	-5.72230	-2.26240	2.23084	-6.15376	-2.72798	18.38995	7.09135	198.27	-7.07
73/ 1/14	2441696.5	-17.32479	-5.73651	-2.26871	2.23653	-6.15181	-2.72721	18.39030	7.09116	198.32	-7.09
73/ 1/18	2441700.5	-17.31962	-5.75072	-2.27501	2.24223	-6.14986	-2.72643	18.39064	7.09097	198.37	-7.11
73/ 1/22	2441704.5	-17.31443	-5.76492	-2.28130	2.24792	-6.14790	-2.72565	18.39098	7.09077	198.42	-7.13
73/ 1/26	2441708.5	-17.30923	-5.77913	-2.28760	2.25361	-6.14594	-2.72487	18.39133	7.09057	198.46	-7.15
73/ 1/30	2441712.5	-17.30402	-5.79332	-2.29389	2.25929	-6.14397	-2.72409	18.39167	7.09037	198.51	-7.16
73/ 2/ 3	2441716.5	-17.29879	-5.80751	-2.30019	2.26497	-6.14199	-2.72330	18.39202	7.09017	198.56	-7.18
73/ 2/ 7	2441720.5	-17.29356	-5.82170	-2.30648	2.27065	-6.14002	-2.72252	18.39236	7.08997	198.61	-7.20
73/ 2/11	2441724.5	-17.28830	-5.83588	-2.31276	2.27632	-6.13803	-2.72173	18.39271	7.08977	198.65	-7.22
73/ 2/15	2441728.5	-17.28304	-5.85006	-2.31905	2.28199	-6.13605	-2.72094	18.39306	7.08958	198.70	-7.24
73/ 2/19	2441732.5	-17.27776	-5.86423	-2.32534	2.28765	-6.13406	-2.72015	18.39341	7.08938	198.75	-7.26
73/ 2/23	2441736.5	-17.27247	-5.87840	-2.33162	2.29332	-6.13207	-2.71935	18.39375	7.08918	198.80	-7.28
73/ 2/27	2441740.5	-17.26716	-5.89256	-2.33790	2.29898	-6.13007	-2.71856	18.39410	7.08898	198.84	-7.30
73/ 3/ 3	2441744.5	-17.26185	-5.90672	-2.34418	2.30464	-6.12807	-2.71776	18.39445	7.08878	198.89	-7.32
73/ 3/ 7	2441748.5	-17.25652	-5.92088	-2.35046	2.31030	-6.12607	-2.71696	18.39480	7.08859	198.94	-7.34
73/ 3/11	2441752.5	-17.25117	-5.93503	-2.35673	2.31596	-6.12406	-2.71616	18.39515	7.08839	198.99	-7.36
73/ 3/15	2441756.5	-17.24582	-5.94917	-2.36301	2.32161	-6.12204	-2.71536	18.39550	7.08819	199.03	-7.38
73/ 3/19	2441760.5	-17.24045	-5.96331	-2.36928	2.32726	-6.12002	-2.71455	18.39586	7.08799	199.08	-7.40
73/ 3/23	2441764.5	-17.23506	-5.97745	-2.37555	2.33291	-6.11800	-2.71375	18.39621	7.08779	199.13	-7.42
73/ 3/27	2441768.5	-17.22967	-5.99158	-2.38182	2.33855	-6.11597	-2.71294	18.39656	7.08759	199.18	-7.44
73/ 3/31	2441772.5	-17.22426	-6.00571	-2.38808	2.34419	-6.11394	-2.71213	18.39692	7.08739	199.22	-7.46
73/ 4/ 4	2441776.5	-17.21884	-6.01983	-2.39435	2.34983	-6.11190	-2.71131	18.39727	7.08719	199.27	-7.48
73/ 4/ 8	2441780.5	-17.21340	-6.03395	-2.40061	2.35546	-6.10987	-2.71050	18.39762	7.08699	199.32	-7.50
73/ 4/12	2441784.5	-17.20795	-6.04806	-2.40687	2.36109	-6.10782	-2.70968	18.39798	7.08679	199.36	-7.52
73/ 4/16	2441788.5	-17.20249	-6.06217	-2.41313	2.36672	-6.10577	-2.70886	18.39834	7.08659	199.41	-7.54
73/ 4/20	2441792.5	-17.19702	-6.07627	-2.41939	2.37235	-6.10372	-2.70804	18.39869	7.08640	199.46	-7.56
73/ 4/24	2441796.5	-17.19153	-6.09037	-2.42564	2.37798	-6.10167	-2.70722	18.39905	7.08620	199.51	-7.58
73/ 4/28	2441800.5	-17.18603	-6.10446	-2.43190	2.38360	-6.09961	-2.70640	18.39941	7.08600	199.55	-7.60
73/ 5/ 2	2441804.5	-17.18052	-6.11855	-2.43815	2.38922	-6.09755	-2.70557	18.39977	7.08580	199.60	-7.61
73/ 5/ 6	2441808.5	-17.17499	-6.13264	-2.44440	2.39484	-6.09548	-2.70475	18.40013	7.08560	199.65	-7.63
73/ 5/10	2441812.5	-17.16945	-6.14671	-2.45064	2.40045	-6.09341	-2.70392	18.40048	7.08541	199.70	-7.65
73/ 5/14	2441816.5	-17.16390	-6.16079	-2.45689	2.40606	-6.09134	-2.70309	18.40084	7.08521	199.75	-7.67
73/ 5/18	2441820.5	-17.15834	-6.17486	-2.46313	2.41167	-6.08926	-2.70226	18.40121	7.08502	199.79	-7.69
73/ 5/22	2441824.5	-17.15276	-6.18892	-2.46938	2.41728	-6.08718	-2.70143	18.40157	7.08482	199.84	-7.71
73/ 5/26	2441828.5	-17.14717	-6.20298	-2.47561	2.42289	-6.08510	-2.70059	18.40193	7.08463	199.89	-7.73

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
73/ 5/30	2441832.5	-17.14156	-6.21704	-2.48185	2.42850	-6.08301	-2.69976	18.40229	7.08444	199.94	-7.75
73/ 6/ 3	2441836.5	-17.13595	-6.23109	-2.48809	2.43411	-6.08091	-2.69892	18.40265	7.08425	199.98	-7.77
73/ 6/ 7	2441840.5	-17.13032	-6.24514	-2.49432	2.43972	-6.07881	-2.69808	18.40302	7.08405	200.03	-7.79
73/ 6/11	2441844.5	-17.12467	-6.25918	-2.50055	2.44532	-6.07671	-2.69724	18.40338	7.08386	200.08	-7.81
73/ 6/15	2441848.5	-17.11902	-6.27321	-2.50678	2.45092	-6.07460	-2.69639	18.40375	7.08366	200.13	-7.83
73/ 6/19	2441852.5	-17.11335	-6.28724	-2.51301	2.45652	-6.07248	-2.69554	18.40411	7.08346	200.17	-7.85
73/ 6/23	2441856.5	-17.10767	-6.30127	-2.51924	2.46212	-6.07036	-2.69469	18.40448	7.08327	200.22	-7.87
73/ 6/27	2441860.5	-17.10197	-6.31529	-2.52546	2.46772	-6.06823	-2.69384	18.40485	7.08307	200.27	-7.89
73/ 7/ 1	2441864.5	-17.09627	-6.32931	-2.53169	2.47331	-6.06610	-2.69299	18.40521	7.08287	200.32	-7.91
73/ 7/ 5	2441868.5	-17.09055	-6.34332	-2.53791	2.47890	-6.06396	-2.69213	18.40558	7.08266	200.36	-7.93
73/ 7/ 9	2441872.5	-17.08481	-6.35732	-2.54412	2.48448	-6.06182	-2.69127	18.40595	7.08246	200.41	-7.95
73/ 7/13	2441876.5	-17.07907	-6.37132	-2.55034	2.49007	-6.05967	-2.69041	18.40632	7.08226	200.46	-7.96
73/ 7/17	2441880.5	-17.07331	-6.38532	-2.55656	2.49565	-6.05752	-2.68954	18.40669	7.08205	200.51	-7.98
73/ 7/21	2441884.5	-17.06754	-6.39931	-2.56277	2.50123	-6.05536	-2.68868	18.40706	7.08184	200.55	-8.00
73/ 7/25	2441888.5	-17.06175	-6.41330	-2.56898	2.50680	-6.05320	-2.68781	18.40743	7.08163	200.60	-8.02
73/ 7/29	2441892.5	-17.05595	-6.42728	-2.57519	2.51237	-6.05103	-2.68694	18.40780	7.08143	200.65	-8.04
73/ 8/ 2	2441896.5	-17.05014	-6.44126	-2.58139	2.51793	-6.04886	-2.68606	18.40817	7.08122	200.70	-8.06
73/ 8/ 6	2441900.5	-17.04432	-6.45523	-2.58760	2.52350	-6.04668	-2.68519	18.40854	7.08100	200.74	-8.08
73/ 8/10	2441904.5	-17.03848	-6.46919	-2.59380	2.52905	-6.04450	-2.68431	18.40892	7.08079	200.79	-8.10
73/ 8/14	2441908.5	-17.03263	-6.48316	-2.60000	2.53461	-6.04232	-2.68343	18.40929	7.08058	200.84	-8.12
73/ 8/18	2441912.5	-17.02677	-6.49711	-2.60620	2.54016	-6.04013	-2.68255	18.40966	7.08037	200.89	-8.14
73/ 8/22	2441916.5	-17.02090	-6.51106	-2.61239	2.54571	-6.03794	-2.68167	18.41004	7.08016	200.93	-8.16
73/ 8/26	2441920.5	-17.01501	-6.52501	-2.61859	2.55126	-6.03574	-2.68079	18.41041	7.07995	200.98	-8.18
73/ 8/30	2441924.5	-17.00911	-6.53895	-2.62478	2.55680	-6.03354	-2.67990	18.41079	7.07974	201.03	-8.20
73/ 9/ 3	2441928.5	-17.00320	-6.55289	-2.63097	2.56234	-6.03133	-2.67901	18.41117	7.07953	201.08	-8.22
73/ 9/ 7	2441932.5	-16.99727	-6.56682	-2.63716	2.56788	-6.02912	-2.67812	18.41154	7.07931	201.12	-8.24
73/ 9/11	2441936.5	-16.99133	-6.58074	-2.64334	2.57341	-6.02690	-2.67723	18.41192	7.07909	201.17	-8.25
73/ 9/15	2441940.5	-16.98538	-6.59466	-2.64953	2.57894	-6.02468	-2.67634	18.41230	7.07888	201.22	-8.27
73/ 9/19	2441944.5	-16.97942	-6.60858	-2.65571	2.58447	-6.02246	-2.67544	18.41268	7.07866	201.27	-8.29
73/ 9/23	2441948.5	-16.97344	-6.62249	-2.66189	2.58999	-6.02023	-2.67454	18.41306	7.07845	201.31	-8.31
73/ 9/27	2441952.5	-16.96745	-6.63640	-2.66807	2.59551	-6.01800	-2.67364	18.41344	7.07823	201.36	-8.33
73/10/ 1	2441956.5	-16.96145	-6.65030	-2.67424	2.60102	-6.01576	-2.67274	18.41382	7.07801	201.41	-8.35
73/10/ 5	2441960.5	-16.95543	-6.66419	-2.68042	2.60653	-6.01352	-2.67183	18.41420	7.07779	201.46	-8.37
73/10/ 9	2441964.5	-16.94941	-6.67808	-2.68659	2.61203	-6.01128	-2.67093	18.41458	7.07758	201.50	-8.39
73/10/13	2441968.5	-16.94336	-6.69196	-2.69276	2.61754	-6.00904	-2.67002	18.41496	7.07736	201.55	-8.41
73/10/17	2441972.5	-16.93731	-6.70584	-2.69892	2.62304	-6.00679	-2.66911	18.41535	7.07715	201.60	-8.43
73/10/21	2441976.5	-16.93125	-6.71972	-2.70509	2.62853	-6.00454	-2.66820	18.41573	7.07693	201.65	-8.45
73/10/25	2441980.5	-16.92517	-6.73359	-2.71125	2.63402	-6.00229	-2.66729	18.41612	7.07672	201.69	-8.47
73/10/29	2441984.5	-16.91908	-6.74745	-2.71741	2.63951	-6.00003	-2.66638	18.41650	7.07651	201.74	-8.49
73/11/ 2	2441988.5	-16.91297	-6.76131	-2.72357	2.64499	-5.99777	-2.66547	18.41689	7.07630	201.79	-8.50
73/11/ 6	2441992.5	-16.90685	-6.77516	-2.72973	2.65047	-5.99551	-2.66456	18.41727	7.07609	201.84	-8.52
73/11/10	2441996.5	-16.90073	-6.78901	-2.73588	2.65595	-5.99325	-2.66364	18.41766	7.07588	201.89	-8.54
73/11/14	2442000.5	-16.89458	-6.80285	-2.74203	2.66143	-5.99099	-2.66273	18.41805	7.07568	201.93	-8.56
73/11/18	2442004.5	-16.88843	-6.81669	-2.74818	2.66691	-5.98872	-2.66181	18.41844	7.07548	201.98	-8.58
73/11/22	2442008.5	-16.88226	-6.83052	-2.75433	2.67239	-5.98645	-2.66089	18.41883	7.07528	202.03	-8.60

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73/11/26	2442012.5	-16.87608	-6.84435	-2.76048	2.67786	-5.98418	-2.65997	18.41921	7.07508	202.08	-8.62
73/11/30	2442016.5	-16.86989	-6.85817	-2.76662	2.68334	-5.98190	-2.65905	18.41961	7.07488	202.12	-8.64
73/12/ 4	2442020.5	-16.86368	-6.87199	-2.77276	2.68881	-5.97962	-2.65813	18.42000	7.07468	202.17	-8.66
73/12/ 8	2442024.5	-16.85747	-6.88580	-2.77890	2.69428	-5.97733	-2.65721	18.42039	7.07449	202.22	-8.68
73/12/12	2442028.5	-16.85123	-6.89961	-2.78504	2.69975	-5.97504	-2.65628	18.42078	7.07429	202.27	-8.70
73/12/16	2442032.5	-16.84499	-6.91341	-2.79118	2.70521	-5.97275	-2.65535	18.42117	7.07409	202.31	-8.72
73/12/20	2442036.5	-16.83874	-6.92720	-2.79731	2.71068	-5.97045	-2.65442	18.42157	7.07390	202.36	-8.73
73/12/24	2442040.5	-16.83247	-6.94099	-2.80344	2.71614	-5.96815	-2.65349	18.42196	7.07371	202.41	-8.75
73/12/28	2442044.5	-16.82619	-6.95478	-2.80957	2.72160	-5.96585	-2.65256	18.42235	7.07351	202.46	-8.77
74/ 1/ 1	2442048.5	-16.81989	-6.96856	-2.81570	2.72707	-5.96354	-2.65162	18.42275	7.07332	202.50	-8.79
74/ 1/ 5	2442052.5	-16.81359	-6.98233	-2.82182	2.73252	-5.96123	-2.65069	18.42315	7.07312	202.55	-8.81
74/ 1/ 9	2442056.5	-16.80727	-6.99610	-2.82794	2.73798	-5.95891	-2.64975	18.42354	7.07293	202.60	-8.83
74/ 1/13	2442060.5	-16.80094	-7.00986	-2.83406	2.74344	-5.95659	-2.64881	18.42394	7.07274	202.65	-8.85
74/ 1/17	2442064.5	-16.79459	-7.02362	-2.84018	2.74889	-5.95427	-2.64787	18.42434	7.07255	202.70	-8.87
74/ 1/21	2442068.5	-16.78823	-7.03737	-2.84630	2.75435	-5.95194	-2.64692	18.42474	7.07235	202.74	-8.89
74/ 1/25	2442072.5	-16.78187	-7.05112	-2.85241	2.75980	-5.94960	-2.64598	18.42513	7.07216	202.79	-8.91
74/ 1/29	2442076.5	-16.77548	-7.06486	-2.85852	2.76525	-5.94727	-2.64503	18.42553	7.07197	202.84	-8.92
74/ 2/ 2	2442080.5	-16.76909	-7.07860	-2.86463	2.77069	-5.94492	-2.64408	18.42593	7.07178	202.89	-8.94
74/ 2/ 6	2442084.5	-16.76268	-7.09233	-2.87074	2.77614	-5.94258	-2.64313	18.42633	7.07158	202.93	-8.96
74/ 2/10	2442088.5	-16.75626	-7.10606	-2.87685	2.78158	-5.94023	-2.64217	18.42674	7.07139	202.98	-8.98
74/ 2/14	2442092.5	-16.74983	-7.11978	-2.88295	2.78703	-5.93787	-2.64122	18.42714	7.07120	203.03	-9.00
74/ 2/18	2442096.5	-16.74339	-7.13349	-2.88905	2.79247	-5.93551	-2.64026	18.42754	7.07101	203.08	-9.02
74/ 2/22	2442100.5	-16.73693	-7.14720	-2.89515	2.79791	-5.93314	-2.63930	18.42794	7.07082	203.12	-9.04
74/ 2/26	2442104.5	-16.73046	-7.16091	-2.90124	2.80335	-5.93077	-2.63834	18.42835	7.07062	203.17	-9.06
74/ 3/ 2	2442108.5	-16.72398	-7.17460	-2.90734	2.80879	-5.92839	-2.63737	18.42875	7.07042	203.22	-9.08
74/ 3/ 6	2442112.5	-16.71748	-7.18830	-2.91343	2.81422	-5.92601	-2.63641	18.42916	7.07022	203.27	-9.10
74/ 3/10	2442116.5	-16.71097	-7.20198	-2.91952	2.81966	-5.92361	-2.63544	18.42956	7.07002	203.31	-9.11
74/ 3/14	2442120.5	-16.70445	-7.21567	-2.92561	2.82508	-5.92122	-2.63446	18.42997	7.06982	203.36	-9.13
74/ 3/18	2442124.5	-16.69792	-7.22934	-2.93169	2.83051	-5.91882	-2.63349	18.43037	7.06961	203.41	-9.15
74/ 3/22	2442128.5	-16.69137	-7.24301	-2.93777	2.83593	-5.91641	-2.63251	18.43078	7.06940	203.46	-9.17
74/ 3/26	2442132.5	-16.68482	-7.25668	-2.94385	2.84135	-5.91400	-2.63153	18.43119	7.06920	203.51	-9.19
74/ 3/30	2442136.5	-16.67825	-7.27034	-2.94993	2.84676	-5.91158	-2.63054	18.43160	7.06898	203.55	-9.21
74/ 4/ 3	2442140.5	-16.67166	-7.28399	-2.95601	2.85217	-5.90915	-2.62956	18.43201	7.06877	203.60	-9.23
74/ 4/ 7	2442144.5	-16.66507	-7.29764	-2.96208	2.85757	-5.90673	-2.62857	18.43242	7.06856	203.65	-9.25
74/ 4/11	2442148.5	-16.65846	-7.31128	-2.96815	2.86298	-5.90429	-2.62758	18.43283	7.06834	203.70	-9.27
74/ 4/15	2442152.5	-16.65184	-7.32492	-2.97422	2.86837	-5.90186	-2.62659	18.43324	7.06813	203.74	-9.29
74/ 4/19	2442156.5	-16.64521	-7.33855	-2.98029	2.87376	-5.89942	-2.62559	18.43365	7.06791	203.79	-9.30
74/ 4/23	2442160.5	-16.63856	-7.35218	-2.98635	2.87915	-5.89697	-2.62460	18.43406	7.06769	203.84	-9.32
74/ 4/27	2442164.5	-16.63191	-7.36580	-2.99242	2.88454	-5.89452	-2.62360	18.43447	7.06747	203.89	-9.34
74/ 5/ 1	2442168.5	-16.62524	-7.37941	-2.99848	2.88991	-5.89207	-2.62260	18.43489	7.06726	203.93	-9.36
74/ 5/ 5	2442172.5	-16.61855	-7.39302	-3.00453	2.89529	-5.88961	-2.62160	18.43530	7.06704	203.98	-9.38
74/ 5/ 9	2442176.5	-16.61186	-7.40662	-3.01059	2.90066	-5.88716	-2.62060	18.43571	7.06682	204.03	-9.40
74/ 5/13	2442180.5	-16.60515	-7.42022	-3.01664	2.90603	-5.88469	-2.61959	18.43613	7.06660	204.08	-9.42
74/ 5/17	2442184.5	-16.59843	-7.43381	-3.02269	2.91140	-5.88223	-2.61859	18.43654	7.06639	204.13	-9.44
74/ 5/21	2442188.5	-16.59170	-7.44740	-3.02874	2.91676	-5.87976	-2.61758	18.43696	7.06617	204.17	-9.46

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74/ 5/25	2442192.5	-16.58495	-7.46098	-3.03479	2.92212	-5.87728	-2.61657	18.43738	7.06595	204.22	-9.47
74/ 5/29	2442196.5	-16.57820	-7.47455	-3.04083	2.92747	-5.87481	-2.61556	18.43779	7.06573	204.27	-9.49
74/ 6/ 2	2442200.5	-16.57143	-7.48812	-3.04687	2.93283	-5.87232	-2.61455	18.43821	7.06552	204.32	-9.51
74/ 6/ 6	2442204.5	-16.56465	-7.50169	-3.05291	2.93817	-5.86984	-2.61353	18.43863	7.06530	204.36	-9.53
74/ 6/10	2442208.5	-16.55785	-7.51524	-3.05895	2.94352	-5.86735	-2.61252	18.43905	7.06508	204.41	-9.55
74/ 6/14	2442212.5	-16.55105	-7.52880	-3.06498	2.94886	-5.86486	-2.61150	18.43947	7.06486	204.46	-9.57
74/ 6/18	2442216.5	-16.54423	-7.54234	-3.07101	2.95419	-5.86236	-2.61048	18.43989	7.06464	204.51	-9.59
74/ 6/22	2442220.5	-16.53740	-7.55588	-3.07704	2.95953	-5.85986	-2.60946	18.44031	7.06442	204.56	-9.61
74/ 6/26	2442224.5	-16.53055	-7.56942	-3.08307	2.96486	-5.85736	-2.60844	18.44073	7.06420	204.60	-9.62
74/ 6/30	2442228.5	-16.52370	-7.58295	-3.08909	2.97018	-5.85486	-2.60741	18.44115	7.06399	204.65	-9.64
74/ 7/ 4	2442232.5	-16.51683	-7.59647	-3.09512	2.97550	-5.85235	-2.60639	18.44158	7.06377	204.70	-9.66
74/ 7/ 8	2442236.5	-16.50995	-7.60998	-3.10114	2.98082	-5.84984	-2.60536	18.44200	7.06356	204.75	-9.68
74/ 7/12	2442240.5	-16.50306	-7.62350	-3.10715	2.98614	-5.84733	-2.60434	18.44242	7.06334	204.79	-9.70
74/ 7/16	2442244.5	-16.49615	-7.63700	-3.11317	2.99145	-5.84481	-2.60331	18.44285	7.06313	204.84	-9.72
74/ 7/20	2442248.5	-16.48924	-7.65050	-3.11918	2.99676	-5.84229	-2.60228	18.44327	7.06292	204.89	-9.74
74/ 7/24	2442252.5	-16.48231	-7.66400	-3.12519	3.00207	-5.83977	-2.60125	18.44370	7.06271	204.94	-9.76
74/ 7/28	2442256.5	-16.47537	-7.67748	-3.13120	3.00737	-5.83725	-2.60022	18.44413	7.06250	204.99	-9.77
74/ 8/ 1	2442260.5	-16.46841	-7.69097	-3.13721	3.01268	-5.83472	-2.59918	18.44456	7.06229	205.03	-9.79
74/ 8/ 5	2442264.5	-16.46145	-7.70444	-3.14321	3.01798	-5.83220	-2.59815	18.44498	7.06209	205.08	-9.81
74/ 8/ 9	2442268.5	-16.45447	-7.71791	-3.14921	3.02328	-5.82967	-2.59712	18.44541	7.06189	205.13	-9.83
74/ 8/13	2442272.5	-16.44748	-7.73138	-3.15521	3.02858	-5.82713	-2.59608	18.44584	7.06168	205.18	-9.85
74/ 8/17	2442276.5	-16.44048	-7.74484	-3.16120	3.03388	-5.82459	-2.59504	18.44627	7.06148	205.22	-9.87
74/ 8/21	2442280.5	-16.43346	-7.75829	-3.16720	3.03917	-5.82205	-2.59401	18.44670	7.06128	205.27	-9.89
74/ 8/25	2442284.5	-16.42643	-7.77174	-3.17319	3.04447	-5.81950	-2.59296	18.44713	7.06108	205.32	-9.91
74/ 8/29	2442288.5	-16.41939	-7.78518	-3.17918	3.04976	-5.81695	-2.59192	18.44756	7.06088	205.37	-9.92
74/ 9/ 2	2442292.5	-16.41234	-7.79861	-3.18517	3.05505	-5.81440	-2.59088	18.44800	7.06068	205.42	-9.94
74/ 9/ 6	2442296.5	-16.40528	-7.81204	-3.19115	3.06034	-5.81184	-2.58983	18.44843	7.06048	205.46	-9.96
74/ 9/10	2442300.5	-16.39820	-7.82546	-3.19713	3.06563	-5.80927	-2.58878	18.44886	7.06028	205.51	-9.98
74/ 9/14	2442304.5	-16.39111	-7.83888	-3.20311	3.07091	-5.80670	-2.58773	18.44930	7.06007	205.56	-10.00
74/ 9/18	2442308.5	-16.38401	-7.85229	-3.20909	3.07619	-5.80413	-2.58668	18.44973	7.05987	205.61	-10.02
74/ 9/22	2442312.5	-16.37690	-7.86570	-3.21506	3.08147	-5.80156	-2.58562	18.45017	7.05967	205.65	-10.04
74/ 9/26	2442316.5	-16.36978	-7.87910	-3.22103	3.08674	-5.79897	-2.58456	18.45061	7.05947	205.70	-10.05
74/ 9/30	2442320.5	-16.36264	-7.89249	-3.22700	3.09202	-5.79639	-2.58351	18.45104	7.05926	205.75	-10.07
74/10/ 4	2442324.5	-16.35549	-7.90588	-3.23297	3.09729	-5.79380	-2.58244	18.45148	7.05906	205.80	-10.09
74/10/ 8	2442328.5	-16.34833	-7.91926	-3.23894	3.10255	-5.79121	-2.58138	18.45192	7.05886	205.85	-10.11
74/10/12	2442332.5	-16.34116	-7.93264	-3.24490	3.10782	-5.78861	-2.58032	18.45236	7.05865	205.89	-10.13
74/10/16	2442336.5	-16.33397	-7.94601	-3.25086	3.11308	-5.78601	-2.57925	18.45280	7.05845	205.94	-10.15
74/10/20	2442340.5	-16.32677	-7.95937	-3.25681	3.11834	-5.78340	-2.57818	18.45324	7.05824	205.99	-10.17
74/10/24	2442344.5	-16.31956	-7.97273	-3.26277	3.12359	-5.78079	-2.57711	18.45368	7.05804	206.04	-10.18
74/10/28	2442348.5	-16.31234	-7.98608	-3.26872	3.12884	-5.77818	-2.57604	18.45412	7.05783	206.09	-10.20
74/11/ 1	2442352.5	-16.30511	-7.99943	-3.27467	3.13409	-5.77556	-2.57497	18.45456	7.05763	206.13	-10.22
74/11/ 5	2442356.5	-16.29786	-8.01277	-3.28062	3.13934	-5.77294	-2.57390	18.45500	7.05743	206.18	-10.24
74/11/ 9	2442360.5	-16.29060	-8.02610	-3.28656	3.14458	-5.77032	-2.57282	18.45544	7.05722	206.23	-10.26
74/11/13	2442364.5	-16.28333	-8.03943	-3.29251	3.14983	-5.76769	-2.57174	18.45589	7.05702	206.28	-10.28
74/11/17	2442368.5	-16.27605	-8.05275	-3.29845	3.15507	-5.76506	-2.57066	18.45633	7.05681	206.32	-10.29

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
74/11/21	2442372.5	-16.26875	-8.06606	-3.30438	3.16030	-5.76242	-2.56958	18.45678	7.05661	206.37	-10.31
74/11/25	2442376.5	-16.26145	-8.07937	-3.31032	3.16553	-5.75977	-2.56850	18.45722	7.05640	206.42	-10.33
74/11/29	2442380.5	-16.25413	-8.09267	-3.31625	3.17076	-5.75713	-2.56741	18.45767	7.05619	206.47	-10.35
74/12/ 3	2442384.5	-16.24680	-8.10597	-3.32218	3.17599	-5.75448	-2.56632	18.45812	7.05598	206.52	-10.37
74/12/ 7	2442388.5	-16.23945	-8.11926	-3.32811	3.18121	-5.75182	-2.56523	18.45856	7.05577	206.56	-10.39
74/12/11	2442392.5	-16.23210	-8.13255	-3.33403	3.18643	-5.74916	-2.56414	18.45901	7.05556	206.61	-10.41
74/12/15	2442396.5	-16.22473	-8.14583	-3.33996	3.19164	-5.74650	-2.56304	18.45946	7.05536	206.66	-10.42
74/12/19	2442400.5	-16.21735	-8.15910	-3.34588	3.19685	-5.74384	-2.56195	18.45991	7.05515	206.71	-10.44
74/12/23	2442404.5	-16.20996	-8.17236	-3.35179	3.20206	-5.74117	-2.56085	18.46036	7.05494	206.76	-10.46
74/12/27	2442408.5	-16.20256	-8.18562	-3.35771	3.20726	-5.73849	-2.55975	18.46081	7.05473	206.80	-10.48
74/12/31	2442412.5	-16.19514	-8.19888	-3.36362	3.21246	-5.73582	-2.55865	18.46126	7.05452	206.85	-10.50
75/ 1/ 4	2442416.5	-16.18771	-8.21213	-3.36953	3.21765	-5.73314	-2.55755	18.46171	7.05431	206.90	-10.52
75/ 1/ 8	2442420.5	-16.18027	-8.22537	-3.37544	3.22285	-5.73046	-2.55645	18.46216	7.05410	206.95	-10.53
75/ 1/12	2442424.5	-16.17282	-8.23860	-3.38134	3.22803	-5.72778	-2.55534	18.46262	7.05389	206.99	-10.55
75/ 1/16	2442428.5	-16.16536	-8.25183	-3.38724	3.23322	-5.72509	-2.55424	18.46307	7.05369	207.04	-10.57
75/ 1/20	2442432.5	-16.15788	-8.26505	-3.39314	3.23840	-5.72240	-2.55313	18.46353	7.05348	207.09	-10.59
75/ 1/24	2442436.5	-16.15040	-8.27827	-3.39904	3.24358	-5.71971	-2.55203	18.46398	7.05328	207.14	-10.61
75/ 1/28	2442440.5	-16.14290	-8.29148	-3.40493	3.24876	-5.71702	-2.55092	18.46444	7.05308	207.19	-10.63
75/ 2/ 1	2442444.5	-16.13539	-8.30469	-3.41083	3.25393	-5.71433	-2.54981	18.46489	7.05288	207.23	-10.64
75/ 2/ 5	2442448.5	-16.12786	-8.31788	-3.41672	3.25911	-5.71163	-2.54870	18.46535	7.05268	207.28	-10.66
75/ 2/ 9	2442452.5	-16.12033	-8.33108	-3.42260	3.26428	-5.70893	-2.54759	18.46581	7.05249	207.33	-10.68
75/ 2/13	2442456.5	-16.11278	-8.34426	-3.42849	3.26945	-5.70622	-2.54647	18.46626	7.05229	207.38	-10.70
75/ 2/17	2442460.5	-16.10522	-8.35744	-3.43437	3.27462	-5.70351	-2.54536	18.46672	7.05209	207.43	-10.72
75/ 2/21	2442464.5	-16.09765	-8.37061	-3.44025	3.27978	-5.70080	-2.54424	18.46718	7.05190	207.47	-10.74
75/ 2/25	2442468.5	-16.09007	-8.38378	-3.44612	3.28495	-5.69808	-2.54312	18.46764	7.05170	207.52	-10.75
75/ 3/ 1	2442472.5	-16.08247	-8.39694	-3.45200	3.29011	-5.69536	-2.54200	18.46810	7.05151	207.57	-10.77
75/ 3/ 5	2442476.5	-16.07487	-8.41009	-3.45787	3.29527	-5.69264	-2.54088	18.46856	7.05131	207.62	-10.79
75/ 3/ 9	2442480.5	-16.06725	-8.42324	-3.46374	3.30043	-5.68991	-2.53976	18.46903	7.05112	207.67	-10.81
75/ 3/13	2442484.5	-16.05962	-8.43638	-3.46960	3.30558	-5.68718	-2.53863	18.46949	7.05092	207.71	-10.83
75/ 3/17	2442488.5	-16.05198	-8.44952	-3.47547	3.31073	-5.68444	-2.53751	18.46995	7.05073	207.76	-10.85
75/ 3/21	2442492.5	-16.04432	-8.46265	-3.48133	3.31588	-5.68171	-2.53638	18.47042	7.05054	207.81	-10.86
75/ 3/25	2442496.5	-16.03666	-8.47577	-3.48718	3.32103	-5.67896	-2.53525	18.47088	7.05034	207.86	-10.88
75/ 3/29	2442500.5	-16.02898	-8.48889	-3.49304	3.32618	-5.67622	-2.53412	18.47135	7.05015	207.91	-10.90
75/ 4/ 2	2442504.5	-16.02129	-8.50200	-3.49889	3.33132	-5.67347	-2.53298	18.47181	7.04996	207.95	-10.92
75/ 4/ 6	2442508.5	-16.01359	-8.51510	-3.50474	3.33646	-5.67071	-2.53185	18.47228	7.04977	208.00	-10.94
75/ 4/10	2442512.5	-16.00587	-8.52820	-3.51059	3.34160	-5.66796	-2.53071	18.47275	7.04958	208.05	-10.96
75/ 4/14	2442516.5	-15.99815	-8.54129	-3.51644	3.34674	-5.66519	-2.52957	18.47321	7.04938	208.10	-10.97
75/ 4/18	2442520.5	-15.99041	-8.55437	-3.52228	3.35187	-5.66243	-2.52843	18.47368	7.04919	208.15	-10.99
75/ 4/22	2442524.5	-15.98266	-8.56745	-3.52812	3.35700	-5.65966	-2.52729	18.47415	7.04900	208.19	-11.01
75/ 4/26	2442528.5	-15.97490	-8.58052	-3.53396	3.36213	-5.65689	-2.52615	18.47462	7.04881	208.24	-11.03
75/ 4/30	2442532.5	-15.96712	-8.59359	-3.53979	3.36726	-5.65411	-2.52500	18.47509	7.04862	208.29	-11.05
75/ 5/ 4	2442536.5	-15.95934	-8.60665	-3.54562	3.37239	-5.65133	-2.52386	18.47556	7.04844	208.34	-11.06
75/ 5/ 8	2442540.5	-15.95154	-8.61970	-3.55145	3.37752	-5.64854	-2.52271	18.47603	7.04825	208.39	-11.08
75/ 5/12	2442544.5	-15.94373	-8.63274	-3.55728	3.38264	-5.64575	-2.52156	18.47650	7.04805	208.43	-11.10
75/ 5/16	2442548.5	-15.93591	-8.64578	-3.56310	3.38777	-5.64295	-2.52040	18.47698	7.04786	208.48	-11.12

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
75/ 5/20	2442552.5	-15.92808	-8.65882	-3.56892	3.39288	-5.64015	-2.51925	18.47745	7.04767	208.53	-11.14
75/ 5/24	2442556.5	-15.92024	-8.67184	-3.57474	3.39800	-5.63734	-2.51809	18.47792	7.04747	208.58	-11.15
75/ 5/28	2442560.5	-15.91238	-8.68486	-3.58056	3.40311	-5.63453	-2.51693	18.47840	7.04727	208.63	-11.17
75/ 6/ 1	2442564.5	-15.90451	-8.69788	-3.58637	3.40822	-5.63171	-2.51576	18.47887	7.04707	208.67	-11.19
75/ 6/ 5	2442568.5	-15.89663	-8.71088	-3.59218	3.41332	-5.62889	-2.51460	18.47935	7.04687	208.72	-11.21
75/ 6/ 9	2442572.5	-15.88874	-8.72388	-3.59799	3.41842	-5.62606	-2.51343	18.47982	7.04667	208.77	-11.23
75/ 6/13	2442576.5	-15.88084	-8.73688	-3.60379	3.42352	-5.62323	-2.51226	18.48030	7.04646	208.82	-11.25
75/ 6/17	2442580.5	-15.87293	-8.74987	-3.60960	3.42861	-5.62039	-2.51109	18.48078	7.04626	208.87	-11.26
75/ 6/21	2442584.5	-15.86500	-8.76285	-3.61540	3.43370	-5.61755	-2.50992	18.48125	7.04605	208.91	-11.28
75/ 6/25	2442588.5	-15.85706	-8.77582	-3.62119	3.43878	-5.61471	-2.50874	18.48173	7.04584	208.96	-11.30
75/ 6/29	2442592.5	-15.84911	-8.78879	-3.62699	3.44386	-5.61186	-2.50756	18.48221	7.04563	209.01	-11.32
75/ 7/ 3	2442596.5	-15.84115	-8.80175	-3.63278	3.44893	-5.60900	-2.50638	18.48269	7.04543	209.06	-11.34
75/ 7/ 7	2442600.5	-15.83318	-8.81470	-3.63857	3.45400	-5.60615	-2.50520	18.48317	7.04522	209.11	-11.35
75/ 7/11	2442604.5	-15.82519	-8.82765	-3.64435	3.45906	-5.60329	-2.50402	18.48365	7.04500	209.15	-11.37
75/ 7/15	2442608.5	-15.81719	-8.84059	-3.65014	3.46412	-5.60043	-2.50284	18.48413	7.04479	209.20	-11.39
75/ 7/19	2442612.5	-15.80918	-8.85353	-3.65592	3.46918	-5.59756	-2.50165	18.48462	7.04458	209.25	-11.41
75/ 7/23	2442616.5	-15.80116	-8.86646	-3.66170	3.47423	-5.59470	-2.50047	18.48510	7.04438	209.30	-11.43
75/ 7/27	2442620.5	-15.79313	-8.87938	-3.66747	3.47928	-5.59183	-2.49928	18.48558	7.04417	209.35	-11.44
75/ 7/31	2442624.5	-15.78509	-8.89229	-3.67324	3.48433	-5.58895	-2.49809	18.48607	7.04396	209.39	-11.46
75/ 8/ 4	2442628.5	-15.77703	-8.90520	-3.67901	3.48937	-5.58608	-2.49690	18.48655	7.04375	209.44	-11.48
75/ 8/ 8	2442632.5	-15.76897	-8.91810	-3.68478	3.49441	-5.58320	-2.49571	18.48703	7.04355	209.49	-11.50
75/ 8/12	2442636.5	-15.76089	-8.93100	-3.69054	3.49944	-5.58031	-2.49452	18.48752	7.04334	209.54	-11.51
75/ 8/16	2442640.5	-15.75280	-8.94388	-3.69631	3.50447	-5.57743	-2.49332	18.48801	7.04313	209.59	-11.53
75/ 8/20	2442644.5	-15.74470	-8.95677	-3.70206	3.50950	-5.57454	-2.49212	18.48849	7.04292	209.63	-11.55
75/ 8/24	2442648.5	-15.73658	-8.96964	-3.70782	3.51452	-5.57164	-2.49093	18.48898	7.04271	209.68	-11.57
75/ 8/28	2442652.5	-15.72846	-8.98251	-3.71357	3.51954	-5.56875	-2.48973	18.48947	7.04250	209.73	-11.59
75/ 9/ 1	2442656.5	-15.72032	-8.99537	-3.71932	3.52456	-5.56585	-2.48853	18.48996	7.04230	209.78	-11.60
75/ 9/ 5	2442660.5	-15.71217	-9.00823	-3.72507	3.52957	-5.56295	-2.48733	18.49045	7.04209	209.83	-11.62
75/ 9/ 9	2442664.5	-15.70401	-9.02107	-3.73082	3.53457	-5.56005	-2.48612	18.49094	7.04189	209.87	-11.64
75/ 9/13	2442668.5	-15.69584	-9.03391	-3.73656	3.53958	-5.55714	-2.48492	18.49143	7.04168	209.92	-11.66
75/ 9/17	2442672.5	-15.68766	-9.04675	-3.74230	3.54458	-5.55424	-2.48371	18.49192	7.04148	209.97	-11.68
75/ 9/21	2442676.5	-15.67947	-9.05958	-3.74803	3.54958	-5.55133	-2.48251	18.49241	7.04128	210.02	-11.69
75/ 9/25	2442680.5	-15.67126	-9.07240	-3.75377	3.55457	-5.54842	-2.48130	18.49291	7.04108	210.07	-11.71
75/ 9/29	2442684.5	-15.66304	-9.08521	-3.75950	3.55956	-5.54550	-2.48010	18.49340	7.04088	210.12	-11.73
75/10/ 3	2442688.5	-15.65481	-9.09802	-3.76523	3.56455	-5.54259	-2.47889	18.49389	7.04068	210.16	-11.75
75/10/ 7	2442692.5	-15.64657	-9.11082	-3.77095	3.56954	-5.53967	-2.47768	18.49439	7.04049	210.21	-11.76
75/10/11	2442696.5	-15.63832	-9.12362	-3.77667	3.57452	-5.53676	-2.47647	18.49488	7.04029	210.26	-11.78
75/10/15	2442700.5	-15.63006	-9.13640	-3.78239	3.57950	-5.53384	-2.47526	18.49538	7.04010	210.31	-11.80
75/10/19	2442704.5	-15.62178	-9.14918	-3.78811	3.58448	-5.53092	-2.47405	18.49588	7.03992	210.36	-11.82
75/10/23	2442708.5	-15.61350	-9.16196	-3.79382	3.58946	-5.52799	-2.47284	18.49637	7.03973	210.40	-11.84
75/10/27	2442712.5	-15.60520	-9.17473	-3.79954	3.59444	-5.52507	-2.47163	18.49687	7.03955	210.45	-11.85
75/10/31	2442716.5	-15.59689	-9.18749	-3.80524	3.59942	-5.52214	-2.47041	18.49737	7.03937	210.50	-11.87
75/11/ 4	2442720.5	-15.58857	-9.20024	-3.81095	3.60440	-5.51920	-2.46920	18.49787	7.03919	210.55	-11.89
75/11/ 8	2442724.5	-15.58023	-9.21299	-3.81665	3.60937	-5.51627	-2.46798	18.49837	7.03901	210.60	-11.91
75/11/12	2442728.5	-15.57189	-9.22573	-3.82235	3.61435	-5.51333	-2.46676	18.49887	7.03883	210.65	-11.92

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
75/11/16	2442732.5	-15.56353	-9.23846	-3.82805	3.61932	-5.51038	-2.46554	18.49937	7.03865	210.69	-11.94
75/11/20	2442736.5	-15.55517	-9.25119	-3.83374	3.62429	-5.50743	-2.46432	18.49987	7.03848	210.74	-11.96
75/11/24	2442740.5	-15.54679	-9.26391	-3.83944	3.62926	-5.50448	-2.46309	18.50038	7.03830	210.79	-11.98
75/11/28	2442744.5	-15.53840	-9.27662	-3.84512	3.63422	-5.50153	-2.46187	18.50088	7.03812	210.84	-12.00
75/12/ 2	2442748.5	-15.53000	-9.28933	-3.85081	3.63919	-5.49857	-2.46064	18.50138	7.03795	210.89	-12.01
75/12/ 6	2442752.5	-15.52158	-9.30202	-3.85649	3.64415	-5.49560	-2.45941	18.50189	7.03777	210.93	-12.03
75/12/10	2442756.5	-15.51316	-9.31472	-3.86217	3.64911	-5.49264	-2.45818	18.50239	7.03759	210.98	-12.05
75/12/14	2442760.5	-15.50472	-9.32740	-3.86785	3.65407	-5.48966	-2.45695	18.50290	7.03742	211.03	-12.07
75/12/18	2442764.5	-15.49628	-9.34008	-3.87353	3.65903	-5.48669	-2.45571	18.50340	7.03724	211.08	-12.08
75/12/22	2442768.5	-15.48782	-9.35275	-3.87920	3.66398	-5.48371	-2.45447	18.50391	7.03706	211.13	-12.10
75/12/26	2442772.5	-15.47935	-9.36542	-3.88487	3.66894	-5.48072	-2.45324	18.50442	7.03689	211.18	-12.12
75/12/30	2442776.5	-15.47087	-9.37808	-3.89053	3.67389	-5.47773	-2.45200	18.50493	7.03671	211.22	-12.14
76/ 1/ 3	2442780.5	-15.46237	-9.39073	-3.89620	3.67883	-5.47474	-2.45075	18.50543	7.03653	211.27	-12.15
76/ 1/ 7	2442784.5	-15.45387	-9.40337	-3.90186	3.68378	-5.47174	-2.44951	18.50594	7.03636	211.32	-12.17
76/ 1/11	2442788.5	-15.44535	-9.41601	-3.90751	3.68872	-5.46875	-2.44826	18.50645	7.03618	211.37	-12.19
76/ 1/15	2442792.5	-15.43683	-9.42864	-3.91317	3.69366	-5.46574	-2.44702	18.50696	7.03600	211.42	-12.21
76/ 1/19	2442796.5	-15.42829	-9.44126	-3.91882	3.69860	-5.46273	-2.44577	18.50747	7.03583	211.46	-12.22
76/ 1/23	2442800.5	-15.41974	-9.45388	-3.92447	3.70353	-5.45972	-2.44452	18.50799	7.03565	211.51	-12.24
76/ 1/27	2442804.5	-15.41118	-9.46649	-3.93011	3.70847	-5.45670	-2.44327	18.50850	7.03547	211.56	-12.26
76/ 1/31	2442808.5	-15.40260	-9.47909	-3.93576	3.71340	-5.45368	-2.44201	18.50901	7.03530	211.61	-12.28
76/ 2/ 4	2442812.5	-15.39402	-9.49169	-3.94140	3.71833	-5.45065	-2.44075	18.50952	7.03512	211.66	-12.29
76/ 2/ 8	2442816.5	-15.38542	-9.50427	-3.94703	3.72325	-5.44762	-2.43949	18.51004	7.03493	211.71	-12.31
76/ 2/12	2442820.5	-15.37682	-9.51686	-3.95267	3.72817	-5.44458	-2.43823	18.51055	7.03475	211.75	-12.33
76/ 2/16	2442824.5	-15.36820	-9.52943	-3.95830	3.73309	-5.44154	-2.43696	18.51107	7.03457	211.80	-12.35
76/ 2/20	2442828.5	-15.35957	-9.54200	-3.96393	3.73800	-5.43850	-2.43570	18.51158	7.03438	211.85	-12.36
76/ 2/24	2442832.5	-15.35093	-9.55456	-3.96955	3.74291	-5.43544	-2.43443	18.51210	7.03419	211.90	-12.38
76/ 2/28	2442836.5	-15.34227	-9.56711	-3.97518	3.74781	-5.43239	-2.43316	18.51262	7.03401	211.95	-12.40
76/ 3/ 3	2442840.5	-15.33361	-9.57966	-3.98079	3.75271	-5.42933	-2.43189	18.51313	7.03382	212.00	-12.42
76/ 3/ 7	2442844.5	-15.32494	-9.59220	-3.98641	3.75761	-5.42627	-2.43061	18.51365	7.03363	212.04	-12.43
76/ 3/11	2442848.5	-15.31625	-9.60473	-3.99203	3.76250	-5.42321	-2.42934	18.51417	7.03344	212.09	-12.45
76/ 3/15	2442852.5	-15.30755	-9.61725	-3.99764	3.76739	-5.42014	-2.42806	18.51469	7.03325	212.14	-12.47
76/ 3/19	2442856.5	-15.29884	-9.62977	-4.00324	3.77227	-5.41706	-2.42678	18.51521	7.03306	212.19	-12.49
76/ 3/23	2442860.5	-15.29012	-9.64228	-4.00885	3.77715	-5.41399	-2.42550	18.51573	7.03287	212.24	-12.50
76/ 3/27	2442864.5	-15.28139	-9.65479	-4.01445	3.78203	-5.41091	-2.42422	18.51625	7.03268	212.28	-12.52
76/ 3/31	2442868.5	-15.27265	-9.66728	-4.02005	3.78690	-5.40783	-2.42294	18.51677	7.03249	212.33	-12.54
76/ 4/ 4	2442872.5	-15.26389	-9.67977	-4.02565	3.79177	-5.40475	-2.42165	18.51730	7.03230	212.38	-12.56
76/ 4/ 8	2442876.5	-15.25513	-9.69225	-4.03124	3.79663	-5.40166	-2.42037	18.51782	7.03211	212.43	-12.57
76/ 4/12	2442880.5	-15.24635	-9.70473	-4.03683	3.80149	-5.39858	-2.41908	18.51834	7.03192	212.48	-12.59
76/ 4/16	2442884.5	-15.23756	-9.71720	-4.04242	3.80635	-5.39549	-2.41780	18.51887	7.03174	212.53	-12.61
76/ 4/20	2442888.5	-15.22877	-9.72966	-4.04800	3.81121	-5.39239	-2.41651	18.51939	7.03155	212.57	-12.63
76/ 4/24	2442892.5	-15.21996	-9.74211	-4.05358	3.81606	-5.38930	-2.41522	18.51992	7.03137	212.62	-12.64
76/ 4/28	2442896.5	-15.21113	-9.75456	-4.05916	3.82091	-5.38620	-2.41393	18.52044	7.03118	212.67	-12.66
76/ 5/ 2	2442900.5	-15.20230	-9.76700	-4.06473	3.82576	-5.38309	-2.41264	18.52097	7.03100	212.72	-12.68
76/ 5/ 6	2442904.5	-15.19346	-9.77943	-4.07031	3.83061	-5.37999	-2.41134	18.52150	7.03082	212.77	-12.70
76/ 5/10	2442908.5	-15.18460	-9.79186	-4.07587	3.83545	-5.37688	-2.41005	18.52202	7.03063	212.82	-12.71

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76/ 5/14	2442912.5	-15.17574	-9.80427	-4.08144	3.84029	-5.37376	-2.40875	18.52255	7.03045	212.86	-12.73
76/ 5/18	2442916.5	-15.16686	-9.81668	-4.08700	3.84512	-5.37065	-2.40745	18.52308	7.03027	212.91	-12.75
76/ 5/22	2442920.5	-15.15797	-9.82909	-4.09256	3.84996	-5.36753	-2.40615	18.52361	7.03009	212.96	-12.76
76/ 5/26	2442924.5	-15.14907	-9.84148	-4.09812	3.85479	-5.36441	-2.40485	18.52414	7.02991	213.01	-12.78
76/ 5/30	2442928.5	-15.14016	-9.85387	-4.10368	3.85961	-5.36128	-2.40355	18.52467	7.02972	213.06	-12.80
76/ 6/ 3	2442932.5	-15.13124	-9.86626	-4.10923	3.86444	-5.35816	-2.40224	18.52520	7.02955	213.11	-12.82
76/ 6/ 7	2442936.5	-15.12231	-9.87863	-4.11477	3.86926	-5.35503	-2.40094	18.52573	7.02937	213.15	-12.83
76/ 6/11	2442940.5	-15.11336	-9.89100	-4.12032	3.87408	-5.35189	-2.39963	18.52627	7.02919	213.20	-12.85
76/ 6/15	2442944.5	-15.10441	-9.90336	-4.12586	3.87890	-5.34875	-2.39833	18.52680	7.02901	213.25	-12.87
76/ 6/19	2442948.5	-15.09544	-9.91571	-4.13140	3.88371	-5.34561	-2.39702	18.52733	7.02883	213.30	-12.88
76/ 6/23	2442952.5	-15.08646	-9.92806	-4.13694	3.88852	-5.34247	-2.39571	18.52787	7.02866	213.35	-12.90
76/ 6/27	2442956.5	-15.07747	-9.94039	-4.14247	3.89333	-5.33933	-2.39439	18.52840	7.02848	213.40	-12.92
76/ 7/ 1	2442960.5	-15.06847	-9.95273	-4.14800	3.89813	-5.33618	-2.39308	18.52894	7.02830	213.44	-12.94
76/ 7/ 5	2442964.5	-15.05946	-9.96505	-4.15353	3.90294	-5.33303	-2.39177	18.52947	7.02813	213.49	-12.95
76/ 7/ 9	2442968.5	-15.05044	-9.97737	-4.15905	3.90774	-5.32987	-2.39045	18.53001	7.02796	213.54	-12.97
76/ 7/13	2442972.5	-15.04141	-9.98968	-4.16457	3.91254	-5.32671	-2.38914	18.53055	7.02779	213.59	-12.99
76/ 7/17	2442976.5	-15.03236	-10.00198	-4.17009	3.91734	-5.32355	-2.38782	18.53109	7.02762	213.64	-13.00
76/ 7/21	2442980.5	-15.02331	-10.01427	-4.17560	3.92214	-5.32038	-2.38650	18.53162	7.02745	213.69	-13.02
76/ 7/25	2442984.5	-15.01424	-10.02656	-4.18112	3.92693	-5.31721	-2.38518	18.53216	7.02728	213.74	-13.04
76/ 7/29	2442988.5	-15.00516	-10.03884	-4.18662	3.93173	-5.31404	-2.38385	18.53270	7.02711	213.78	-13.06
76/ 8/ 2	2442992.5	-14.99607	-10.05111	-4.19213	3.93652	-5.31086	-2.38253	18.53324	7.02693	213.83	-13.07
76/ 8/ 6	2442996.5	-14.98698	-10.06338	-4.19763	3.94131	-5.30767	-2.38120	18.53378	7.02676	213.88	-13.09
76/ 8/10	2443000.5	-14.97786	-10.07564	-4.20313	3.94609	-5.30448	-2.37987	18.53432	7.02658	213.93	-13.11
76/ 8/14	2443004.5	-14.96874	-10.08789	-4.20863	3.95087	-5.30129	-2.37853	18.53487	7.02641	213.98	-13.12
76/ 8/18	2443008.5	-14.95961	-10.10013	-4.21412	3.95565	-5.29809	-2.37720	18.53541	7.02623	214.03	-13.14
76/ 8/22	2443012.5	-14.95047	-10.11237	-4.21961	3.96042	-5.29488	-2.37586	18.53595	7.02606	214.07	-13.16
76/ 8/26	2443016.5	-14.94131	-10.12459	-4.22510	3.96519	-5.29168	-2.37453	18.53650	7.02588	214.12	-13.18
76/ 8/30	2443020.5	-14.93215	-10.13681	-4.23058	3.96995	-5.28847	-2.37319	18.53704	7.02570	214.17	-13.19
76/ 9/ 3	2443024.5	-14.92297	-10.14903	-4.23606	3.97472	-5.28525	-2.37184	18.53758	7.02552	214.22	-13.21
76/ 9/ 7	2443028.5	-14.91378	-10.16123	-4.24154	3.97947	-5.28203	-2.37050	18.53813	7.02534	214.27	-13.23
76/ 9/11	2443032.5	-14.90458	-10.17343	-4.24702	3.98423	-5.27881	-2.36915	18.53867	7.02516	214.32	-13.24
76/ 9/15	2443036.5	-14.89537	-10.18562	-4.25249	3.98898	-5.27559	-2.36781	18.53922	7.02497	214.36	-13.26
76/ 9/19	2443040.5	-14.88615	-10.19781	-4.25796	3.99372	-5.27236	-2.36646	18.53977	7.02479	214.41	-13.28
76/ 9/23	2443044.5	-14.87692	-10.20998	-4.26342	3.99846	-5.26913	-2.36511	18.54032	7.02461	214.46	-13.29
76/ 9/27	2443048.5	-14.86768	-10.22215	-4.26888	4.00320	-5.26589	-2.36376	18.54086	7.02443	214.51	-13.31
76/10/ 1	2443052.5	-14.85842	-10.23431	-4.27434	4.00793	-5.26265	-2.36240	18.54141	7.02424	214.56	-13.33
76/10/ 5	2443056.5	-14.84916	-10.24647	-4.27980	4.01266	-5.25942	-2.36105	18.54196	7.02406	214.61	-13.35
76/10/ 9	2443060.5	-14.83988	-10.25862	-4.28525	4.01739	-5.25617	-2.35970	18.54251	7.02388	214.66	-13.36
76/10/13	2443064.5	-14.83060	-10.27075	-4.29070	4.02211	-5.25293	-2.35834	18.54306	7.02370	214.70	-13.38
76/10/17	2443068.5	-14.82130	-10.28289	-4.29615	4.02683	-5.24968	-2.35698	18.54361	7.02352	214.75	-13.40
76/10/21	2443072.5	-14.81199	-10.29501	-4.30159	4.03155	-5.24643	-2.35562	18.54416	7.02334	214.80	-13.41
76/10/25	2443076.5	-14.80267	-10.30713	-4.30703	4.03626	-5.24317	-2.35426	18.54472	7.02316	214.85	-13.43
76/10/29	2443080.5	-14.79334	-10.31923	-4.31247	4.04097	-5.23991	-2.35290	18.54527	7.02298	214.90	-13.45
76/11/ 2	2443084.5	-14.78400	-10.33134	-4.31790	4.04568	-5.23665	-2.35154	18.54582	7.02280	214.95	-13.46
76/11/ 6	2443088.5	-14.77465	-10.34343	-4.32333	4.05038	-5.23339	-2.35017	18.54638	7.02262	215.00	-13.48

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76/11/10	2443092.5	-14.76529	-10.35552	-4.32876	4.05508	-5.23012	-2.34881	18.54693	7.02244	215.04	-13.50
76/11/14	2443096.5	-14.75592	-10.36759	-4.33419	4.05977	-5.22685	-2.34744	18.54749	7.02226	215.09	-13.51
76/11/18	2443100.5	-14.74653	-10.37967	-4.33961	4.06446	-5.22358	-2.34607	18.54804	7.02208	215.14	-13.53
76/11/22	2443104.5	-14.73714	-10.39173	-4.34503	4.06915	-5.22030	-2.34470	18.54860	7.02191	215.19	-13.55
76/11/26	2443108.5	-14.72773	-10.40379	-4.35044	4.07384	-5.21703	-2.34333	18.54915	7.02173	215.24	-13.56
76/11/30	2443112.5	-14.71831	-10.41583	-4.35585	4.07852	-5.21375	-2.34196	18.54971	7.02155	215.29	-13.58
76/12/ 4	2443116.5	-14.70889	-10.42788	-4.36126	4.08319	-5.21047	-2.34058	18.55027	7.02138	215.33	-13.60
76/12/ 8	2443120.5	-14.69945	-10.43991	-4.36667	4.08787	-5.20718	-2.33921	18.55083	7.02121	215.38	-13.61
76/12/12	2443124.5	-14.69000	-10.45193	-4.37207	4.09254	-5.20390	-2.33783	18.55139	7.02103	215.43	-13.63
76/12/16	2443128.5	-14.68054	-10.46395	-4.37747	4.09721	-5.20061	-2.33646	18.55195	7.02086	215.48	-13.65
76/12/20	2443132.5	-14.67107	-10.47596	-4.38287	4.10188	-5.19732	-2.33508	18.55251	7.02069	215.53	-13.66
76/12/24	2443136.5	-14.66159	-10.48797	-4.38826	4.10654	-5.19403	-2.33370	18.55307	7.02052	215.58	-13.68
76/12/28	2443140.5	-14.65209	-10.49996	-4.39365	4.11120	-5.19074	-2.33232	18.55363	7.02036	215.63	-13.70
77/ 1/ 1	2443144.5	-14.64259	-10.51195	-4.39903	4.11586	-5.18744	-2.33094	18.55419	7.02020	215.67	-13.71
77/ 1/ 5	2443148.5	-14.63308	-10.52393	-4.40442	4.12052	-5.18415	-2.32957	18.55475	7.02004	215.72	-13.73
77/ 1/ 9	2443152.5	-14.62355	-10.53590	-4.40980	4.12518	-5.18085	-2.32818	18.55532	7.01988	215.77	-13.75
77/ 1/13	2443156.5	-14.61402	-10.54787	-4.41517	4.12984	-5.17754	-2.32680	18.55588	7.01973	215.82	-13.76
77/ 1/17	2443160.5	-14.60447	-10.55982	-4.42055	4.13450	-5.17424	-2.32542	18.55645	7.01957	215.87	-13.78
77/ 1/21	2443164.5	-14.59492	-10.57177	-4.42592	4.13915	-5.17093	-2.32403	18.55701	7.01941	215.92	-13.80
77/ 1/25	2443168.5	-14.58535	-10.58371	-4.43129	4.14381	-5.16761	-2.32264	18.55758	7.01926	215.97	-13.81
77/ 1/29	2443172.5	-14.57577	-10.59565	-4.43665	4.14846	-5.16429	-2.32125	18.55814	7.01911	216.01	-13.83
77/ 2/ 2	2443176.5	-14.56618	-10.60758	-4.44201	4.15311	-5.16097	-2.31986	18.55871	7.01895	216.06	-13.85
77/ 2/ 6	2443180.5	-14.55658	-10.61949	-4.44737	4.15776	-5.15764	-2.31847	18.55928	7.01880	216.11	-13.86
77/ 2/10	2443184.5	-14.54697	-10.63141	-4.45272	4.16240	-5.15431	-2.31708	18.55985	7.01864	216.16	-13.88
77/ 2/14	2443188.5	-14.53735	-10.64331	-4.45807	4.16705	-5.15098	-2.31568	18.56041	7.01849	216.21	-13.90
77/ 2/18	2443192.5	-14.52772	-10.65521	-4.46342	4.17169	-5.14764	-2.31428	18.56098	7.01834	216.26	-13.91
77/ 2/22	2443196.5	-14.51807	-10.66709	-4.46877	4.17633	-5.14429	-2.31288	18.56155	7.01818	216.31	-13.93
77/ 2/26	2443200.5	-14.50842	-10.67897	-4.47411	4.18097	-5.14095	-2.31148	18.56212	7.01803	216.36	-13.95
77/ 3/ 2	2443204.5	-14.49876	-10.69085	-4.47945	4.18560	-5.13759	-2.31008	18.56269	7.01788	216.40	-13.96
77/ 3/ 6	2443208.5	-14.48908	-10.70271	-4.48478	4.19023	-5.13424	-2.30867	18.56326	7.01772	216.45	-13.98
77/ 3/10	2443212.5	-14.47940	-10.71457	-4.49011	4.19486	-5.13088	-2.30726	18.56384	7.01757	216.50	-14.00
77/ 3/14	2443216.5	-14.46970	-10.72642	-4.49544	4.19949	-5.12751	-2.30585	18.56441	7.01741	216.55	-14.01
77/ 3/18	2443220.5	-14.45999	-10.73826	-4.50077	4.20411	-5.12414	-2.30444	18.56498	7.01725	216.60	-14.03
77/ 3/22	2443224.5	-14.45028	-10.75009	-4.50609	4.20873	-5.12077	-2.30303	18.56555	7.01710	216.65	-14.05
77/ 3/26	2443228.5	-14.44055	-10.76192	-4.51141	4.21335	-5.11739	-2.30161	18.56613	7.01694	216.70	-14.06
77/ 3/30	2443232.5	-14.43081	-10.77374	-4.51672	4.21797	-5.11401	-2.30020	18.56670	7.01679	216.74	-14.08
77/ 4/ 3	2443236.5	-14.42106	-10.78555	-4.52204	4.22258	-5.11063	-2.29878	18.56728	7.01663	216.79	-14.10
77/ 4/ 7	2443240.5	-14.41130	-10.79735	-4.52735	4.22719	-5.10724	-2.29736	18.56785	7.01647	216.84	-14.11
77/ 4/11	2443244.5	-14.40153	-10.80914	-4.53265	4.23180	-5.10384	-2.29593	18.56843	7.01631	216.89	-14.13
77/ 4/15	2443248.5	-14.39175	-10.82093	-4.53795	4.23641	-5.10044	-2.29451	18.56900	7.01615	216.94	-14.15
77/ 4/19	2443252.5	-14.38195	-10.83271	-4.54325	4.24101	-5.09704	-2.29308	18.56958	7.01599	216.99	-14.16
77/ 4/23	2443256.5	-14.37215	-10.84448	-4.54855	4.24560	-5.09363	-2.29165	18.57016	7.01583	217.04	-14.18
77/ 4/27	2443260.5	-14.36234	-10.85624	-4.55384	4.25020	-5.09021	-2.29022	18.57074	7.01566	217.09	-14.19
77/ 5/ 1	2443264.5	-14.35251	-10.86800	-4.55913	4.25479	-5.08679	-2.28878	18.57132	7.01550	217.13	-14.21
77/ 5/ 5	2443268.5	-14.34268	-10.87975	-4.56442	4.25937	-5.08337	-2.28735	18.57189	7.01533	217.18	-14.23

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
77/ 5/ 9	2443272.5	-14.33283	-10.89149	-4.56970	4.26395	-5.07994	-2.28591	18.57247	7.01516	217.23	-14.24
77/ 5/13	2443276.5	-14.32298	-10.90322	-4.57498	4.26852	-5.07650	-2.28447	18.57305	7.01498	217.28	-14.26
77/ 5/17	2443280.5	-14.31311	-10.91494	-4.58025	4.27309	-5.07307	-2.28303	18.57363	7.01481	217.33	-14.28
77/ 5/21	2443284.5	-14.30324	-10.92666	-4.58553	4.27766	-5.06963	-2.28158	18.57421	7.01463	217.38	-14.29
77/ 5/25	2443288.5	-14.29335	-10.93837	-4.59080	4.28222	-5.06618	-2.28014	18.57480	7.01446	217.43	-14.31
77/ 5/29	2443292.5	-14.28345	-10.95007	-4.59606	4.28677	-5.06274	-2.27869	18.57538	7.01428	217.47	-14.33
77/ 6/ 2	2443296.5	-14.27354	-10.96176	-4.60132	4.29132	-5.05929	-2.27724	18.57596	7.01410	217.52	-14.34
77/ 6/ 6	2443300.5	-14.26362	-10.97344	-4.60658	4.29587	-5.05583	-2.27579	18.57654	7.01393	217.57	-14.36
77/ 6/10	2443304.5	-14.25369	-10.98512	-4.61184	4.30041	-5.05238	-2.27434	18.57713	7.01375	217.62	-14.37
77/ 6/14	2443308.5	-14.24375	-10.99679	-4.61709	4.30494	-5.04892	-2.27289	18.57771	7.01357	217.67	-14.39
77/ 6/18	2443312.5	-14.23380	-11.00844	-4.62234	4.30947	-5.04546	-2.27143	18.57829	7.01339	217.72	-14.41
77/ 6/22	2443316.5	-14.22384	-11.02010	-4.62759	4.31400	-5.04200	-2.26998	18.57888	7.01321	217.77	-14.42
77/ 6/26	2443320.5	-14.21387	-11.03174	-4.63283	4.31852	-5.03853	-2.26853	18.57946	7.01304	217.82	-14.44
77/ 6/30	2443324.5	-14.20389	-11.04338	-4.63807	4.32304	-5.03507	-2.26707	18.58005	7.01286	217.86	-14.46
77/ 7/ 4	2443328.5	-14.19390	-11.05500	-4.64330	4.32756	-5.03160	-2.26561	18.58064	7.01269	217.91	-14.47
77/ 7/ 8	2443332.5	-14.18389	-11.06662	-4.64854	4.33208	-5.02813	-2.26416	18.58122	7.01251	217.96	-14.49
77/ 7/12	2443336.5	-14.17388	-11.07824	-4.65376	4.33659	-5.02465	-2.26270	18.58181	7.01234	218.01	-14.50
77/ 7/16	2443340.5	-14.16386	-11.08984	-4.65899	4.34110	-5.02118	-2.26123	18.58240	7.01217	218.06	-14.52
77/ 7/20	2443344.5	-14.15382	-11.10144	-4.66421	4.34560	-5.01769	-2.25977	18.58299	7.01199	218.11	-14.54
77/ 7/24	2443348.5	-14.14378	-11.11302	-4.66943	4.35010	-5.01421	-2.25831	18.58358	7.01182	218.16	-14.55
77/ 7/28	2443352.5	-14.13372	-11.12460	-4.67465	4.35460	-5.01073	-2.25684	18.58417	7.01165	218.21	-14.57
77/ 8/ 1	2443356.5	-14.12366	-11.13617	-4.67986	4.35909	-5.00724	-2.25538	18.58476	7.01148	218.25	-14.58
77/ 8/ 5	2443360.5	-14.11358	-11.14774	-4.68507	4.36358	-5.00375	-2.25391	18.58535	7.01131	218.30	-14.60
77/ 8/ 9	2443364.5	-14.10350	-11.15929	-4.69027	4.36806	-5.00026	-2.25244	18.58594	7.01114	218.35	-14.62
77/ 8/13	2443368.5	-14.09340	-11.17084	-4.69547	4.37255	-4.99676	-2.25097	18.58653	7.01097	218.40	-14.63
77/ 8/17	2443372.5	-14.08330	-11.18238	-4.70067	4.37703	-4.99326	-2.24950	18.58712	7.01080	218.45	-14.65
77/ 8/21	2443376.5	-14.07318	-11.19391	-4.70587	4.38150	-4.98976	-2.24803	18.58772	7.01063	218.50	-14.67
77/ 8/25	2443380.5	-14.06305	-11.20544	-4.71106	4.38598	-4.98626	-2.24656	18.58831	7.01046	218.55	-14.68
77/ 8/29	2443384.5	-14.05291	-11.21695	-4.71625	4.39045	-4.98276	-2.24509	18.58890	7.01030	218.60	-14.70
77/ 9/ 2	2443388.5	-14.04277	-11.22846	-4.72143	4.39491	-4.97925	-2.24361	18.58950	7.01014	218.65	-14.71
77/ 9/ 6	2443392.5	-14.03261	-11.23996	-4.72661	4.39938	-4.97574	-2.24214	18.59009	7.00997	218.69	-14.73
77/ 9/10	2443396.5	-14.02244	-11.25145	-4.73179	4.40384	-4.97223	-2.24066	18.59069	7.00981	218.74	-14.75
77/ 9/14	2443400.5	-14.01226	-11.26293	-4.73697	4.40830	-4.96872	-2.23918	18.59128	7.00965	218.79	-14.76
77/ 9/18	2443404.5	-14.00207	-11.27440	-4.74214	4.41276	-4.96520	-2.23771	18.59188	7.00949	218.84	-14.78
77/ 9/22	2443408.5	-13.99187	-11.28587	-4.74730	4.41722	-4.96168	-2.23623	18.59248	7.00934	218.89	-14.79
77/ 9/26	2443412.5	-13.98166	-11.29733	-4.75247	4.42167	-4.95816	-2.23475	18.59308	7.00918	218.94	-14.81
77/ 9/30	2443416.5	-13.97144	-11.30878	-4.75763	4.42613	-4.95464	-2.23327	18.59367	7.00903	218.99	-14.83
77/10/ 4	2443420.5	-13.96121	-11.32022	-4.76279	4.43058	-4.95111	-2.23178	18.59427	7.00888	219.04	-14.84
77/10/ 8	2443424.5	-13.95097	-11.33165	-4.76794	4.43503	-4.94758	-2.23030	18.59487	7.00873	219.09	-14.86
77/10/12	2443428.5	-13.94072	-11.34308	-4.77309	4.43948	-4.94404	-2.22881	18.59547	7.00858	219.13	-14.87
77/10/16	2443432.5	-13.93046	-11.35450	-4.77824	4.44393	-4.94050	-2.22732	18.59607	7.00843	219.18	-14.89
77/10/20	2443436.5	-13.92019	-11.36591	-4.78338	4.44837	-4.93695	-2.22583	18.59667	7.00827	219.23	-14.91
77/10/24	2443440.5	-13.90991	-11.37731	-4.78852	4.45282	-4.93341	-2.22434	18.59727	7.00812	219.28	-14.92
77/10/28	2443444.5	-13.89961	-11.38870	-4.79366	4.45725	-4.92985	-2.22285	18.59788	7.00797	219.33	-14.94
77/11/ 1	2443448.5	-13.88931	-11.40009	-4.79879	4.46169	-4.92629	-2.22135	18.59848	7.00781	219.38	-14.95

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
77/11/ 5	2443452.5	-13.87900	-11.41146	-4.80392	4.46612	-4.92273	-2.21985	18.59908	7.00766	219.43	-14.97
77/11/ 9	2443456.5	-13.86868	-11.42283	-4.80905	4.47055	-4.91917	-2.21835	18.59968	7.00750	219.48	-14.98
77/11/13	2443460.5	-13.85834	-11.43419	-4.81417	4.47498	-4.91560	-2.21685	18.60029	7.00735	219.53	-15.00
77/11/17	2443464.5	-13.84800	-11.44554	-4.81929	4.47940	-4.91202	-2.21535	18.60089	7.00719	219.57	-15.02
77/11/21	2443468.5	-13.83765	-11.45689	-4.82441	4.48382	-4.90845	-2.21384	18.60150	7.00704	219.62	-15.03
77/11/25	2443472.5	-13.82728	-11.46822	-4.82952	4.48823	-4.90486	-2.21233	18.60210	7.00688	219.67	-15.05
77/11/29	2443476.5	-13.81691	-11.47955	-4.83463	4.49264	-4.90128	-2.21082	18.60271	7.00672	219.72	-15.06
77/12/ 3	2443480.5	-13.80653	-11.49087	-4.83974	4.49705	-4.89769	-2.20931	18.60331	7.00656	219.77	-15.08
77/12/ 7	2443484.5	-13.79613	-11.50218	-4.84484	4.50145	-4.89410	-2.20780	18.60392	7.00640	219.82	-15.10
77/12/11	2443488.5	-13.78573	-11.51348	-4.84994	4.50585	-4.89050	-2.20629	18.60453	7.00624	219.87	-15.11
77/12/15	2443492.5	-13.77531	-11.52477	-4.85503	4.51025	-4.88690	-2.20477	18.60513	7.00608	219.92	-15.13
77/12/19	2443496.5	-13.76489	-11.53606	-4.86012	4.51464	-4.88330	-2.20326	18.60574	7.00592	219.97	-15.14
77/12/23	2443500.5	-13.75445	-11.54734	-4.86521	4.51903	-4.87970	-2.20174	18.60635	7.00577	220.01	-15.16
77/12/27	2443504.5	-13.74401	-11.55860	-4.87030	4.52342	-4.87609	-2.20022	18.60696	7.00561	220.06	-15.17
77/12/31	2443508.5	-13.73355	-11.56987	-4.87538	4.52781	-4.87248	-2.19870	18.60757	7.00545	220.11	-15.19
78/ 1/ 4	2443512.5	-13.72309	-11.58112	-4.88046	4.53219	-4.86886	-2.19718	18.60818	7.00529	220.16	-15.21
78/ 1/ 8	2443516.5	-13.71261	-11.59236	-4.88553	4.53657	-4.86524	-2.19565	18.60879	7.00513	220.21	-15.22
78/ 1/12	2443520.5	-13.70213	-11.60360	-4.89060	4.54094	-4.86162	-2.19412	18.60940	7.00497	220.26	-15.24
78/ 1/16	2443524.5	-13.69163	-11.61482	-4.89567	4.54531	-4.85799	-2.19260	18.61001	7.00481	220.31	-15.25
78/ 1/20	2443528.5	-13.68113	-11.62604	-4.90073	4.54967	-4.85436	-2.19107	18.61062	7.00465	220.36	-15.27
78/ 1/24	2443532.5	-13.67061	-11.63725	-4.90579	4.55403	-4.85073	-2.18953	18.61124	7.00449	220.41	-15.28
78/ 1/28	2443536.5	-13.66009	-11.64845	-4.91085	4.55839	-4.84709	-2.18800	18.61185	7.00432	220.46	-15.30
78/ 2/ 1	2443540.5	-13.64955	-11.65965	-4.91590	4.56274	-4.84345	-2.18647	18.61246	7.00416	220.50	-15.31
78/ 2/ 5	2443544.5	-13.63901	-11.67083	-4.92095	4.56709	-4.83980	-2.18493	18.61307	7.00400	220.55	-15.33
78/ 2/ 9	2443548.5	-13.62845	-11.68201	-4.92600	4.57144	-4.83616	-2.18339	18.61369	7.00383	220.60	-15.35
78/ 2/13	2443552.5	-13.61788	-11.69318	-4.93104	4.57578	-4.83251	-2.18185	18.61430	7.00367	220.65	-15.36
78/ 2/17	2443556.5	-13.60731	-11.70434	-4.93608	4.58011	-4.82886	-2.18031	18.61492	7.00350	220.70	-15.38
78/ 2/21	2443560.5	-13.59672	-11.71549	-4.94111	4.58445	-4.82520	-2.17877	18.61553	7.00334	220.75	-15.39
78/ 2/25	2443564.5	-13.58613	-11.72663	-4.94614	4.58878	-4.82155	-2.17723	18.61615	7.00318	220.80	-15.41
78/ 3/ 1	2443568.5	-13.57552	-11.73777	-4.95117	4.59310	-4.81789	-2.17569	18.61677	7.00302	220.85	-15.42
78/ 3/ 5	2443572.5	-13.56490	-11.74889	-4.95620	4.59742	-4.81423	-2.17414	18.61738	7.00285	220.90	-15.44
78/ 3/ 9	2443576.5	-13.55428	-11.76001	-4.96122	4.60174	-4.81056	-2.17260	18.61800	7.00269	220.95	-15.45
78/ 3/13	2443580.5	-13.54364	-11.77112	-4.96623	4.60606	-4.80690	-2.17105	18.61862	7.00254	220.99	-15.47
78/ 3/17	2443584.5	-13.53300	-11.78222	-4.97125	4.61037	-4.80323	-2.16951	18.61924	7.00238	221.04	-15.49
78/ 3/21	2443588.5	-13.52234	-11.79331	-4.97626	4.61468	-4.79956	-2.16796	18.61986	7.00222	221.09	-15.50
78/ 3/25	2443592.5	-13.51168	-11.80439	-4.98126	4.61899	-4.79589	-2.16641	18.62048	7.00207	221.14	-15.52
78/ 3/29	2443596.5	-13.50100	-11.81547	-4.98627	4.62330	-4.79221	-2.16486	18.62109	7.00192	221.19	-15.53
78/ 4/ 2	2443600.5	-13.49031	-11.82654	-4.99127	4.62761	-4.78853	-2.16331	18.62172	7.00177	221.24	-15.55
78/ 4/ 6	2443604.5	-13.47962	-11.83759	-4.99626	4.63191	-4.78485	-2.16175	18.62234	7.00161	221.29	-15.56
78/ 4/10	2443608.5	-13.46891	-11.84864	-5.00125	4.63621	-4.78116	-2.16020	18.62296	7.00146	221.34	-15.58
78/ 4/14	2443612.5	-13.45820	-11.85968	-5.00624	4.64051	-4.77747	-2.15864	18.62358	7.00131	221.39	-15.59
78/ 4/18	2443616.5	-13.44747	-11.87072	-5.01123	4.64481	-4.77378	-2.15708	18.62420	7.00116	221.44	-15.61
78/ 4/22	2443620.5	-13.43674	-11.88174	-5.01621	4.64910	-4.77008	-2.15552	18.62482	7.00100	221.49	-15.62
78/ 4/26	2443624.5	-13.42599	-11.89276	-5.02119	4.65339	-4.76638	-2.15396	18.62545	7.00085	221.53	-15.64
78/ 4/30	2443628.5	-13.41524	-11.90376	-5.02616	4.65767	-4.76267	-2.15240	18.62607	7.00070	221.58	-15.66

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
78/ 5/ 4	2443632.5	-13.40447	-11.91476	-5.03113	4.66196	-4.75896	-2.15083	18.62669	7.00055	221.63	-15.67
78/ 5/ 8	2443636.5	-13.39370	-11.92575	-5.03610	4.66624	-4.75525	-2.14927	18.62732	7.00039	221.68	-15.69
78/ 5/12	2443640.5	-13.38291	-11.93673	-5.04106	4.67052	-4.75153	-2.14770	18.62794	7.00024	221.73	-15.70
78/ 5/16	2443644.5	-13.37212	-11.94771	-5.04602	4.67479	-4.74781	-2.14613	18.62857	7.00009	221.78	-15.72
78/ 5/20	2443648.5	-13.36131	-11.95867	-5.05098	4.67906	-4.74409	-2.14455	18.62919	6.99993	221.83	-15.73
78/ 5/24	2443652.5	-13.35050	-11.96962	-5.05593	4.68333	-4.74036	-2.14298	18.62982	6.99978	221.88	-15.75
78/ 5/28	2443656.5	-13.33967	-11.98057	-5.06088	4.68759	-4.73663	-2.14141	18.63045	6.99963	221.93	-15.76
78/ 6/ 1	2443660.5	-13.32884	-11.99151	-5.06583	4.69185	-4.73289	-2.13983	18.63107	6.99947	221.98	-15.78
78/ 6/ 5	2443664.5	-13.31800	-12.00244	-5.07077	4.69611	-4.72915	-2.13825	18.63170	6.99932	222.03	-15.79
78/ 6/ 9	2443668.5	-13.30714	-12.01336	-5.07570	4.70036	-4.72541	-2.13667	18.63233	6.99916	222.07	-15.81
78/ 6/13	2443672.5	-13.29628	-12.02427	-5.08064	4.70462	-4.72166	-2.13509	18.63296	6.99901	222.12	-15.82
78/ 6/17	2443676.5	-13.28541	-12.03518	-5.08557	4.70886	-4.71791	-2.13351	18.63358	6.99885	222.17	-15.84
78/ 6/21	2443680.5	-13.27452	-12.04607	-5.09050	4.71311	-4.71416	-2.13192	18.63421	6.99870	222.22	-15.85
78/ 6/25	2443684.5	-13.26363	-12.05696	-5.09542	4.71735	-4.71040	-2.13034	18.63484	6.99854	222.27	-15.87
78/ 6/29	2443688.5	-13.25273	-12.06783	-5.10034	4.72159	-4.70663	-2.12875	18.63547	6.99839	222.32	-15.88
78/ 7/ 3	2443692.5	-13.24181	-12.07870	-5.10526	4.72583	-4.70286	-2.12716	18.63610	6.99823	222.37	-15.90
78/ 7/ 7	2443696.5	-13.23089	-12.08956	-5.11017	4.73006	-4.69909	-2.12556	18.63673	6.99806	222.42	-15.91
78/ 7/11	2443700.5	-13.21996	-12.10041	-5.11508	4.73429	-4.69531	-2.12397	18.63736	6.99790	222.47	-15.93
78/ 7/15	2443704.5	-13.20902	-12.11126	-5.11998	4.73851	-4.69153	-2.12237	18.63800	6.99774	222.52	-15.94
78/ 7/19	2443708.5	-13.19807	-12.12209	-5.12488	4.74273	-4.68774	-2.12077	18.63863	6.99757	222.57	-15.96
78/ 7/23	2443712.5	-13.18710	-12.13292	-5.12978	4.74694	-4.68395	-2.11917	18.63926	6.99740	222.62	-15.97
78/ 7/27	2443716.5	-13.17613	-12.14373	-5.13467	4.75114	-4.68015	-2.11756	18.63989	6.99723	222.67	-15.99
78/ 7/31	2443720.5	-13.16515	-12.15454	-5.13956	4.75535	-4.67636	-2.11596	18.64053	6.99706	222.71	-16.00
78/ 8/ 4	2443724.5	-13.15416	-12.16534	-5.14445	4.75954	-4.67255	-2.11435	18.64116	6.99689	222.76	-16.02
78/ 8/ 8	2443728.5	-13.14316	-12.17613	-5.14933	4.76373	-4.66875	-2.11274	18.64179	6.99672	222.81	-16.04
78/ 8/12	2443732.5	-13.13215	-12.18691	-5.15421	4.76792	-4.66494	-2.11113	18.64243	6.99654	222.86	-16.05
78/ 8/16	2443736.5	-13.12113	-12.19768	-5.15909	4.77210	-4.66113	-2.10952	18.64306	6.99637	222.91	-16.07
78/ 8/20	2443740.5	-13.11010	-12.20845	-5.16396	4.77628	-4.65732	-2.10791	18.64370	6.99619	222.96	-16.08
78/ 8/24	2443744.5	-13.09906	-12.21920	-5.16883	4.78045	-4.65350	-2.10630	18.64433	6.99602	223.01	-16.10
78/ 8/28	2443748.5	-13.08802	-12.22995	-5.17369	4.78461	-4.64969	-2.10468	18.64497	6.99584	223.06	-16.11
78/ 9/ 1	2443752.5	-13.07696	-12.24068	-5.17855	4.78877	-4.64587	-2.10307	18.64560	6.99566	223.11	-16.13
78/ 9/ 5	2443756.5	-13.06589	-12.25141	-5.18341	4.79293	-4.64205	-2.10145	18.64624	6.99549	223.16	-16.14
78/ 9/ 9	2443760.5	-13.05481	-12.26213	-5.18826	4.79708	-4.63822	-2.09984	18.64688	6.99531	223.21	-16.16
78/ 9/13	2443764.5	-13.04373	-12.27284	-5.19311	4.80123	-4.63440	-2.09822	18.64752	6.99514	223.26	-16.17
78/ 9/17	2443768.5	-13.03263	-12.28354	-5.19795	4.80537	-4.63057	-2.09660	18.64815	6.99497	223.31	-16.18
78/ 9/21	2443772.5	-13.02152	-12.29424	-5.20280	4.80951	-4.62674	-2.09498	18.64879	6.99479	223.35	-16.20
78/ 9/25	2443776.5	-13.01041	-12.30492	-5.20763	4.81365	-4.62291	-2.09336	18.64943	6.99462	223.40	-16.21
78/ 9/29	2443780.5	-12.99928	-12.31560	-5.21247	4.81779	-4.61908	-2.09174	18.65007	6.99445	223.45	-16.23
78/10/ 3	2443784.5	-12.98815	-12.32626	-5.21730	4.82192	-4.61524	-2.09011	18.65071	6.99428	223.50	-16.24
78/10/ 7	2443788.5	-12.97700	-12.33692	-5.22213	4.82604	-4.61140	-2.08849	18.65135	6.99411	223.55	-16.26
78/10/11	2443792.5	-12.96585	-12.34757	-5.22695	4.83017	-4.60756	-2.08686	18.65199	6.99393	223.60	-16.27
78/10/15	2443796.5	-12.95469	-12.35821	-5.23177	4.83429	-4.60371	-2.08524	18.65263	6.99376	223.65	-16.29
78/10/19	2443800.5	-12.94351	-12.36884	-5.23658	4.83840	-4.59987	-2.08361	18.65327	6.99359	223.70	-16.30
78/10/23	2443804.5	-12.93233	-12.37946	-5.24139	4.84251	-4.59602	-2.08198	18.65391	6.99342	223.75	-16.32
78/10/27	2443808.5	-12.92114	-12.39008	-5.24620	4.84662	-4.59217	-2.08035	18.65456	6.99326	223.80	-16.33

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78/10/31	2443812.5	-12.90994	-12.40068	-5.25101	4.85072	-4.58832	-2.07872	18.65520	6.99309	223.85	-16.35
78/11/ 4	2443816.5	-12.89873	-12.41128	-5.25581	4.85483	-4.58447	-2.07709	18.65584	6.99292	223.90	-16.36
78/11/ 8	2443820.5	-12.88751	-12.42186	-5.26060	4.85893	-4.58061	-2.07546	18.65649	6.99276	223.95	-16.38
78/11/12	2443824.5	-12.87628	-12.43244	-5.26540	4.86302	-4.57675	-2.07383	18.65713	6.99260	224.00	-16.39
78/11/16	2443828.5	-12.86504	-12.44301	-5.27019	4.86711	-4.57289	-2.07219	18.65777	6.99243	224.04	-16.41
78/11/20	2443832.5	-12.85379	-12.45357	-5.27497	4.87120	-4.56903	-2.07056	18.65842	6.99227	224.09	-16.42
78/11/24	2443836.5	-12.84253	-12.46412	-5.27975	4.87529	-4.56517	-2.06892	18.65906	6.99211	224.14	-16.44
78/11/28	2443840.5	-12.83126	-12.47466	-5.28453	4.87937	-4.56130	-2.06729	18.65971	6.99196	224.19	-16.45
78/12/ 2	2443844.5	-12.81999	-12.48519	-5.28930	4.88346	-4.55744	-2.06565	18.66036	6.99180	224.24	-16.47
78/12/ 6	2443848.5	-12.80870	-12.49572	-5.29407	4.88754	-4.55357	-2.06401	18.66100	6.99165	224.29	-16.48
78/12/10	2443852.5	-12.79741	-12.50623	-5.29884	4.89162	-4.54969	-2.06237	18.66165	6.99150	224.34	-16.50
78/12/14	2443856.5	-12.78610	-12.51674	-5.30360	4.89570	-4.54582	-2.06073	18.66230	6.99135	224.39	-16.51
78/12/18	2443860.5	-12.77479	-12.52724	-5.30836	4.89978	-4.54194	-2.05909	18.66294	6.99120	224.44	-16.52
78/12/22	2443864.5	-12.76346	-12.53772	-5.31312	4.90385	-4.53806	-2.05745	18.66359	6.99105	224.49	-16.54
78/12/26	2443868.5	-12.75213	-12.54820	-5.31787	4.90793	-4.53417	-2.05580	18.66424	6.99091	224.54	-16.55
78/12/30	2443872.5	-12.74079	-12.55867	-5.32261	4.91200	-4.53027	-2.05416	18.66489	6.99076	224.59	-16.57
79/ 1/ 3	2443876.5	-12.72943	-12.56913	-5.32736	4.91607	-4.52638	-2.05251	18.66554	6.99061	224.64	-16.58
79/ 1/ 7	2443880.5	-12.71807	-12.57959	-5.33210	4.92014	-4.52248	-2.05085	18.66619	6.99046	224.69	-16.60
79/ 1/11	2443884.5	-12.70670	-12.59003	-5.33683	4.92420	-4.51857	-2.04920	18.66684	6.99031	224.74	-16.61
79/ 1/15	2443888.5	-12.69532	-12.60046	-5.34157	4.92826	-4.51466	-2.04755	18.66749	6.99016	224.79	-16.63
79/ 1/19	2443892.5	-12.68393	-12.61089	-5.34629	4.93232	-4.51075	-2.04589	18.66814	6.99001	224.83	-16.64
79/ 1/23	2443896.5	-12.67253	-12.62131	-5.35102	4.93637	-4.50683	-2.04423	18.66879	6.98986	224.88	-16.66
79/ 1/27	2443900.5	-12.66112	-12.63171	-5.35574	4.94042	-4.50291	-2.04257	18.66944	6.98971	224.93	-16.67
79/ 1/31	2443904.5	-12.64970	-12.64211	-5.36046	4.94447	-4.49898	-2.04091	18.67010	6.98956	224.98	-16.69
79/ 2/ 4	2443908.5	-12.63828	-12.65250	-5.36517	4.94851	-4.49505	-2.03924	18.67075	6.98940	225.03	-16.70
79/ 2/ 8	2443912.5	-12.62684	-12.66288	-5.36988	4.95255	-4.49111	-2.03757	18.67140	6.98925	225.08	-16.71
79/ 2/12	2443916.5	-12.61539	-12.67325	-5.37458	4.95659	-4.48717	-2.03590	18.67205	6.98909	225.13	-16.73
79/ 2/16	2443920.5	-12.60394	-12.68361	-5.37928	4.96062	-4.48323	-2.03423	18.67271	6.98893	225.18	-16.74
79/ 2/20	2443924.5	-12.59247	-12.69396	-5.38398	4.96465	-4.47928	-2.03256	18.67336	6.98878	225.23	-16.76
79/ 2/24	2443928.5	-12.58100	-12.70431	-5.38868	4.96867	-4.47533	-2.03089	18.67401	6.98862	225.28	-16.77
79/ 2/28	2443932.5	-12.56952	-12.71464	-5.39337	4.97269	-4.47138	-2.02921	18.67467	6.98846	225.33	-16.79
79/ 3/ 4	2443936.5	-12.55803	-12.72497	-5.39805	4.97670	-4.46742	-2.02753	18.67532	6.98830	225.38	-16.80
79/ 3/ 8	2443940.5	-12.54652	-12.73528	-5.40273	4.98071	-4.46346	-2.02586	18.67598	6.98814	225.43	-16.82
79/ 3/12	2443944.5	-12.53501	-12.74559	-5.40741	4.98472	-4.45950	-2.02418	18.67663	6.98798	225.48	-16.83
79/ 3/16	2443948.5	-12.52349	-12.75589	-5.41209	4.98873	-4.45553	-2.02249	18.67729	6.98782	225.53	-16.84
79/ 3/20	2443952.5	-12.51196	-12.76618	-5.41676	4.99273	-4.45155	-2.02081	18.67795	6.98765	225.58	-16.86
79/ 3/24	2443956.5	-12.50042	-12.77645	-5.42142	4.99672	-4.44757	-2.01912	18.67860	6.98749	225.63	-16.87
79/ 3/28	2443960.5	-12.48888	-12.78672	-5.42609	5.00071	-4.44359	-2.01743	18.67926	6.98732	225.68	-16.89
79/ 4/ 1	2443964.5	-12.47732	-12.79699	-5.43074	5.00470	-4.43960	-2.01574	18.67992	6.98715	225.72	-16.90
79/ 4/ 5	2443968.5	-12.46575	-12.80724	-5.43540	5.00868	-4.43561	-2.01405	18.68057	6.98698	225.77	-16.92
79/ 4/ 9	2443972.5	-12.45418	-12.81748	-5.44005	5.01265	-4.43162	-2.01236	18.68123	6.98681	225.82	-16.93
79/ 4/13	2443976.5	-12.44259	-12.82771	-5.44470	5.01662	-4.42762	-2.01066	18.68189	6.98664	225.87	-16.94
79/ 4/17	2443980.5	-12.43100	-12.83794	-5.44934	5.02058	-4.42362	-2.00896	18.68255	6.98646	225.92	-16.96
79/ 4/21	2443984.5	-12.41940	-12.84815	-5.45398	5.02454	-4.41962	-2.00727	18.68321	6.98629	225.97	-16.97
79/ 4/25	2443988.5	-12.40778	-12.85836	-5.45861	5.02850	-4.41561	-2.00557	18.68387	6.98611	226.02	-16.99

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79/ 4/29	2443992.5	-12.39616	-12.86855	-5.46325	5.03245	-4.41161	-2.00387	18.68453	6.98593	226.07	-17.00
79/ 5/ 3	2443996.5	-12.38453	-12.87874	-5.46787	5.03639	-4.40759	-2.00216	18.68519	6.98576	226.12	-17.02
79/ 5/ 7	2444000.5	-12.37289	-12.88892	-5.47250	5.04033	-4.40358	-2.00046	18.68585	6.98558	226.17	-17.03
79/ 5/11	2444004.5	-12.36124	-12.89909	-5.47712	5.04426	-4.39957	-1.99876	18.68651	6.98540	226.22	-17.04
79/ 5/15	2444008.5	-12.34959	-12.90925	-5.48173	5.04819	-4.39555	-1.99705	18.68717	6.98522	226.27	-17.06
79/ 5/19	2444012.5	-12.33792	-12.91940	-5.48634	5.05212	-4.39153	-1.99534	18.68783	6.98504	226.32	-17.07
79/ 5/23	2444016.5	-12.32624	-12.92954	-5.49095	5.05604	-4.38751	-1.99364	18.68849	6.98486	226.37	-17.09
79/ 5/27	2444020.5	-12.31456	-12.93967	-5.49555	5.05995	-4.38349	-1.99193	18.68915	6.98469	226.42	-17.10
79/ 5/31	2444024.5	-12.30286	-12.94979	-5.50015	5.06386	-4.37946	-1.99022	18.68982	6.98451	226.47	-17.11
79/ 6/ 4	2444028.5	-12.29116	-12.95990	-5.50475	5.06777	-4.37544	-1.98851	18.69048	6.98434	226.52	-17.13
79/ 6/ 8	2444032.5	-12.27945	-12.97001	-5.50934	5.07168	-4.37141	-1.98680	18.69114	6.98417	226.57	-17.14
79/ 6/12	2444036.5	-12.26773	-12.98010	-5.51393	5.07558	-4.36738	-1.98509	18.69180	6.98399	226.62	-17.16
79/ 6/16	2444040.5	-12.25600	-12.99018	-5.51851	5.07948	-4.36335	-1.98338	18.69247	6.98382	226.67	-17.17
79/ 6/20	2444044.5	-12.24426	-13.00026	-5.52309	5.08338	-4.35931	-1.98167	18.69313	6.98365	226.72	-17.19
79/ 6/24	2444048.5	-12.23251	-13.01033	-5.52767	5.08728	-4.35527	-1.97995	18.69380	6.98348	226.76	-17.20
79/ 6/28	2444052.5	-12.22075	-13.02038	-5.53224	5.09117	-4.35123	-1.97824	18.69446	6.98331	226.81	-17.21
79/ 7/ 2	2444056.5	-12.20899	-13.03043	-5.53681	5.09505	-4.34718	-1.97652	18.69513	6.98313	226.86	-17.23
79/ 7/ 6	2444060.5	-12.19721	-13.04047	-5.54137	5.09893	-4.34313	-1.97480	18.69579	6.98296	226.91	-17.24
79/ 7/10	2444064.5	-12.18543	-13.05050	-5.54593	5.10281	-4.33908	-1.97308	18.69646	6.98279	226.96	-17.26
79/ 7/14	2444068.5	-12.17364	-13.06052	-5.55049	5.10669	-4.33503	-1.97136	18.69712	6.98262	227.01	-17.27
79/ 7/18	2444072.5	-12.16184	-13.07053	-5.55504	5.11056	-4.33097	-1.96964	18.69779	6.98245	227.06	-17.28
79/ 7/22	2444076.5	-12.15002	-13.08053	-5.55959	5.11443	-4.32692	-1.96791	18.69846	6.98228	227.11	-17.30
79/ 7/26	2444080.5	-12.13820	-13.09052	-5.56413	5.11829	-4.32285	-1.96619	18.69912	6.98211	227.16	-17.31
79/ 7/30	2444084.5	-12.12638	-13.10050	-5.56867	5.12216	-4.31879	-1.96446	18.69979	6.98194	227.21	-17.33
79/ 8/ 3	2444088.5	-12.11454	-13.11047	-5.57321	5.12601	-4.31472	-1.96274	18.70046	6.98177	227.26	-17.34
79/ 8/ 7	2444092.5	-12.10269	-13.12044	-5.57774	5.12987	-4.31065	-1.96101	18.70113	6.98160	227.31	-17.35
79/ 8/11	2444096.5	-12.09084	-13.13039	-5.58227	5.13372	-4.30658	-1.95928	18.70180	6.98143	227.36	-17.37
79/ 8/15	2444100.5	-12.07897	-13.14033	-5.58680	5.13756	-4.30250	-1.95755	18.70247	6.98126	227.41	-17.38
79/ 8/19	2444104.5	-12.06710	-13.15027	-5.59132	5.14141	-4.29842	-1.95581	18.70313	6.98110	227.46	-17.39
79/ 8/23	2444108.5	-12.05522	-13.16019	-5.59583	5.14525	-4.29434	-1.95408	18.70380	6.98093	227.51	-17.41
79/ 8/27	2444112.5	-12.04333	-13.17011	-5.60034	5.14909	-4.29025	-1.95235	18.70447	6.98076	227.56	-17.42
79/ 8/31	2444116.5	-12.03143	-13.18002	-5.60485	5.15292	-4.28617	-1.95061	18.70514	6.98059	227.61	-17.44
79/ 9/ 4	2444120.5	-12.01952	-13.18991	-5.60936	5.15675	-4.28208	-1.94887	18.70581	6.98043	227.66	-17.45
79/ 9/ 8	2444124.5	-12.00760	-13.19980	-5.61386	5.16058	-4.27798	-1.94713	18.70649	6.98026	227.71	-17.46
79/ 9/12	2444128.5	-11.99567	-13.20968	-5.61835	5.16441	-4.27388	-1.94539	18.70716	6.98009	227.76	-17.48
79/ 9/16	2444132.5	-11.98374	-13.21955	-5.62285	5.16823	-4.26977	-1.94365	18.70783	6.97993	227.81	-17.49
79/ 9/20	2444136.5	-11.97180	-13.22941	-5.62733	5.17205	-4.26567	-1.94190	18.70850	6.97976	227.86	-17.51
79/ 9/24	2444140.5	-11.95984	-13.23926	-5.63182	5.17586	-4.26155	-1.94016	18.70917	6.97958	227.91	-17.52
79/ 9/28	2444144.5	-11.94788	-13.24910	-5.63630	5.17967	-4.25744	-1.93841	18.70984	6.97941	227.96	-17.53
79/10/ 2	2444148.5	-11.93591	-13.25893	-5.64077	5.18348	-4.25332	-1.93666	18.71052	6.97924	228.01	-17.55
79/10/ 6	2444152.5	-11.92393	-13.26875	-5.64525	5.18728	-4.24919	-1.93490	18.71119	6.97906	228.06	-17.56
79/10/10	2444156.5	-11.91194	-13.27856	-5.64971	5.19107	-4.24507	-1.93315	18.71186	6.97889	228.11	-17.57
79/10/14	2444160.5	-11.89995	-13.28836	-5.65418	5.19486	-4.24094	-1.93139	18.71254	6.97871	228.16	-17.59
79/10/18	2444164.5	-11.88794	-13.29815	-5.65864	5.19864	-4.23680	-1.92964	18.71321	6.97853	228.20	-17.60
79/10/22	2444168.5	-11.87593	-13.30794	-5.66309	5.20242	-4.23267	-1.92788	18.71388	6.97835	228.25	-17.61

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
79/10/26	2444172.5	-11.86390	-13.31771	-5.66754	5.20620	-4.22853	-1.92612	18.71456	6.97817	228.30	-17.63
79/10/30	2444176.5	-11.85187	-13.32747	-5.67199	5.20997	-4.22438	-1.92436	18.71523	6.97799	228.35	-17.64
79/11/ 3	2444180.5	-11.83983	-13.33723	-5.67644	5.21373	-4.22024	-1.92259	18.71591	6.97781	228.40	-17.66
79/11/ 7	2444184.5	-11.82778	-13.34697	-5.68088	5.21749	-4.21609	-1.92083	18.71658	6.97762	228.45	-17.67
79/11/11	2444188.5	-11.81573	-13.35671	-5.68531	5.22124	-4.21194	-1.91907	18.71726	6.97744	228.50	-17.68
79/11/15	2444192.5	-11.80366	-13.36643	-5.68974	5.22499	-4.20779	-1.91730	18.71794	6.97726	228.55	-17.70
79/11/19	2444196.5	-11.79159	-13.37615	-5.69417	5.22874	-4.20364	-1.91553	18.71861	6.97707	228.60	-17.71
79/11/23	2444200.5	-11.77950	-13.38586	-5.69859	5.23248	-4.19949	-1.91377	18.71929	6.97689	228.65	-17.72
79/11/27	2444204.5	-11.76741	-13.39555	-5.70301	5.23621	-4.19533	-1.91200	18.71997	6.97671	228.70	-17.74
79/12/ 1	2444208.5	-11.75531	-13.40524	-5.70743	5.23995	-4.19117	-1.91023	18.72064	6.97653	228.75	-17.75
79/12/ 5	2444212.5	-11.74320	-13.41492	-5.71184	5.24368	-4.18701	-1.90846	18.72132	6.97635	228.80	-17.76
79/12/ 9	2444216.5	-11.73108	-13.42459	-5.71624	5.24741	-4.18285	-1.90669	18.72200	6.97617	228.85	-17.78
79/12/13	2444220.5	-11.71895	-13.43424	-5.72065	5.25113	-4.17868	-1.90492	18.72268	6.97599	228.90	-17.79
79/12/17	2444224.5	-11.70682	-13.44389	-5.72505	5.25485	-4.17451	-1.90314	18.72335	6.97581	228.95	-17.80
79/12/21	2444228.5	-11.69467	-13.45353	-5.72944	5.25856	-4.17034	-1.90137	18.72403	6.97563	229.00	-17.82
79/12/25	2444232.5	-11.68252	-13.46316	-5.73383	5.26227	-4.16617	-1.89959	18.72471	6.97545	229.05	-17.83
79/12/29	2444236.5	-11.67036	-13.47278	-5.73822	5.26598	-4.16199	-1.89781	18.72539	6.97527	229.10	-17.84
80/ 1/ 2	2444240.5	-11.65819	-13.48239	-5.74260	5.26968	-4.15781	-1.89604	18.72607	6.97509	229.15	-17.86
80/ 1/ 6	2444244.5	-11.64601	-13.49199	-5.74698	5.27337	-4.15363	-1.89426	18.72675	6.97491	229.20	-17.87
80/ 1/10	2444248.5	-11.63383	-13.50158	-5.75135	5.27707	-4.14945	-1.89248	18.72743	6.97473	229.25	-17.89
80/ 1/14	2444252.5	-11.62163	-13.51116	-5.75572	5.28076	-4.14526	-1.89069	18.72811	6.97455	229.30	-17.90
80/ 1/18	2444256.5	-11.60943	-13.52074	-5.76009	5.28444	-4.14108	-1.88891	18.72879	6.97437	229.35	-17.91
80/ 1/22	2444260.5	-11.59722	-13.53030	-5.76445	5.28813	-4.13689	-1.88713	18.72947	6.97419	229.40	-17.93
80/ 1/26	2444264.5	-11.58499	-13.53985	-5.76881	5.29181	-4.13270	-1.88534	18.73016	6.97402	229.45	-17.94
80/ 1/30	2444268.5	-11.57277	-13.54939	-5.77316	5.29548	-4.12850	-1.88356	18.73084	6.97384	229.50	-17.95
80/ 2/ 3	2444272.5	-11.56053	-13.55892	-5.77751	5.29915	-4.12431	-1.88177	18.73152	6.97367	229.55	-17.97
80/ 2/ 7	2444276.5	-11.54828	-13.56845	-5.78185	5.30282	-4.12011	-1.87998	18.73220	6.97349	229.60	-17.98
80/ 2/11	2444280.5	-11.53603	-13.57796	-5.78620	5.30649	-4.11591	-1.87820	18.73289	6.97332	229.65	-17.99
80/ 2/15	2444284.5	-11.52376	-13.58746	-5.79053	5.31015	-4.11171	-1.87641	18.73357	6.97315	229.70	-18.00
80/ 2/19	2444288.5	-11.51149	-13.59696	-5.79487	5.31381	-4.10751	-1.87462	18.73425	6.97298	229.75	-18.02
80/ 2/23	2444292.5	-11.49921	-13.60644	-5.79919	5.31747	-4.10331	-1.87283	18.73494	6.97281	229.80	-18.03
80/ 2/27	2444296.5	-11.48692	-13.61592	-5.80352	5.32113	-4.09910	-1.87104	18.73562	6.97265	229.85	-18.04
80/ 3/ 2	2444300.5	-11.47463	-13.62538	-5.80784	5.32479	-4.09489	-1.86924	18.73630	6.97248	229.90	-18.06
80/ 3/ 6	2444304.5	-11.46232	-13.63484	-5.81215	5.32844	-4.09067	-1.86745	18.73699	6.97232	229.95	-18.07
80/ 3/10	2444308.5	-11.45001	-13.64428	-5.81647	5.33209	-4.08645	-1.86565	18.73767	6.97215	230.00	-18.08
80/ 3/14	2444312.5	-11.43769	-13.65372	-5.82077	5.33574	-4.08222	-1.86385	18.73836	6.97199	230.05	-18.10
80/ 3/18	2444316.5	-11.42535	-13.66314	-5.82508	5.33938	-4.07799	-1.86205	18.73904	6.97182	230.10	-18.11
80/ 3/22	2444320.5	-11.41302	-13.67256	-5.82938	5.34302	-4.07376	-1.86025	18.73973	6.97165	230.15	-18.12
80/ 3/26	2444324.5	-11.40067	-13.68197	-5.83367	5.34666	-4.06952	-1.85845	18.74041	6.97149	230.20	-18.14
80/ 3/30	2444328.5	-11.38831	-13.69136	-5.83796	5.35029	-4.06528	-1.85664	18.74110	6.97132	230.25	-18.15
80/ 4/ 3	2444332.5	-11.37595	-13.70075	-5.84225	5.35392	-4.06104	-1.85483	18.74179	6.97115	230.30	-18.16
80/ 4/ 7	2444336.5	-11.36357	-13.71013	-5.84653	5.35755	-4.05679	-1.85302	18.74247	6.97098	230.35	-18.18
80/ 4/11	2444340.5	-11.35119	-13.71949	-5.85081	5.36117	-4.05254	-1.85121	18.74316	6.97081	230.40	-18.19
80/ 4/15	2444344.5	-11.33880	-13.72885	-5.85509	5.36479	-4.04828	-1.84940	18.74385	6.97064	230.45	-18.20
80/ 4/19	2444348.5	-11.32641	-13.73820	-5.85936	5.36840	-4.04402	-1.84758	18.74454	6.97046	230.50	-18.22

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80/ 4/23	2444352.5	-11.31400	-13.74753	-5.86362	5.37201	-4.03975	-1.84577	18.74522	6.97029	230.55	-18.23
80/ 4/27	2444356.5	-11.30159	-13.75686	-5.86789	5.37561	-4.03548	-1.84395	18.74591	6.97011	230.60	-18.24
80/ 5/ 1	2444360.5	-11.28916	-13.76618	-5.87214	5.37921	-4.03121	-1.84213	18.74660	6.96993	230.65	-18.25
80/ 5/ 5	2444364.5	-11.27673	-13.77549	-5.87640	5.38280	-4.02693	-1.84030	18.74729	6.96975	230.70	-18.27
80/ 5/ 9	2444368.5	-11.26429	-13.78479	-5.88065	5.38639	-4.02265	-1.83848	18.74798	6.96957	230.75	-18.28
80/ 5/13	2444372.5	-11.25185	-13.79407	-5.88489	5.38997	-4.01837	-1.83666	18.74866	6.96939	230.80	-18.29
80/ 5/17	2444376.5	-11.23939	-13.80335	-5.88913	5.39355	-4.01409	-1.83483	18.74935	6.96921	230.85	-18.31
80/ 5/21	2444380.5	-11.22693	-13.81262	-5.89337	5.39713	-4.00980	-1.83300	18.75004	6.96903	230.90	-18.32
80/ 5/25	2444384.5	-11.21445	-13.82188	-5.89760	5.40070	-4.00551	-1.83117	18.75073	6.96885	230.95	-18.33
80/ 5/29	2444388.5	-11.20197	-13.83113	-5.90183	5.40427	-4.00121	-1.82934	18.75142	6.96866	231.00	-18.35
80/ 6/ 2	2444392.5	-11.18948	-13.84037	-5.90605	5.40783	-3.99691	-1.82751	18.75211	6.96848	231.05	-18.36
80/ 6/ 6	2444396.5	-11.17699	-13.84959	-5.91027	5.41139	-3.99260	-1.82567	18.75280	6.96829	231.10	-18.37
80/ 6/10	2444400.5	-11.16448	-13.85881	-5.91449	5.41494	-3.98829	-1.82384	18.75349	6.96810	231.15	-18.38
80/ 6/14	2444404.5	-11.15197	-13.86802	-5.91870	5.41848	-3.98398	-1.82200	18.75418	6.96791	231.20	-18.40
80/ 6/18	2444408.5	-11.13945	-13.87722	-5.92291	5.42202	-3.97966	-1.82016	18.75487	6.96771	231.25	-18.41
80/ 6/22	2444412.5	-11.12692	-13.88641	-5.92711	5.42556	-3.97535	-1.81832	18.75557	6.96752	231.30	-18.42
80/ 6/26	2444416.5	-11.11438	-13.89559	-5.93131	5.42908	-3.97102	-1.81647	18.75626	6.96732	231.35	-18.44
80/ 6/30	2444420.5	-11.10183	-13.90476	-5.93550	5.43261	-3.96670	-1.81463	18.75695	6.96712	231.40	-18.45
80/ 7/ 4	2444424.5	-11.08928	-13.91392	-5.93969	5.43612	-3.96237	-1.81278	18.75764	6.96692	231.45	-18.46
80/ 7/ 8	2444428.5	-11.07671	-13.92306	-5.94388	5.43963	-3.95805	-1.81094	18.75833	6.96672	231.50	-18.47
80/ 7/12	2444432.5	-11.06414	-13.93220	-5.94806	5.44313	-3.95371	-1.80909	18.75902	6.96652	231.55	-18.49
80/ 7/16	2444436.5	-11.05156	-13.94133	-5.95224	5.44663	-3.94938	-1.80724	18.75972	6.96631	231.60	-18.50
80/ 7/20	2444440.5	-11.03898	-13.95045	-5.95641	5.45012	-3.94505	-1.80539	18.76041	6.96611	231.65	-18.51
80/ 7/24	2444444.5	-11.02638	-13.95956	-5.96058	5.45361	-3.94071	-1.80354	18.76110	6.96590	231.70	-18.52
80/ 7/28	2444448.5	-11.01378	-13.96866	-5.96474	5.45709	-3.93637	-1.80169	18.76179	6.96570	231.75	-18.54
80/ 8/ 1	2444452.5	-11.00117	-13.97775	-5.96890	5.46057	-3.93204	-1.79984	18.76249	6.96549	231.80	-18.55
80/ 8/ 5	2444456.5	-10.98855	-13.98682	-5.97306	5.46404	-3.92770	-1.79798	18.76318	6.96529	231.85	-18.56
80/ 8/ 9	2444460.5	-10.97592	-13.99589	-5.97721	5.46750	-3.92336	-1.79613	18.76387	6.96508	231.90	-18.58
80/ 8/13	2444464.5	-10.96329	-14.00495	-5.98136	5.47096	-3.91902	-1.79428	18.76457	6.96488	231.95	-18.59
80/ 8/17	2444468.5	-10.95065	-14.01400	-5.98550	5.47442	-3.91467	-1.79243	18.76526	6.96468	232.00	-18.60
80/ 8/21	2444472.5	-10.93800	-14.02304	-5.98964	5.47788	-3.91033	-1.79057	18.76596	6.96448	232.05	-18.61
80/ 8/25	2444476.5	-10.92534	-14.03207	-5.99377	5.48133	-3.90599	-1.78872	18.76665	6.96428	232.10	-18.63
80/ 8/29	2444480.5	-10.91267	-14.04109	-5.99790	5.48478	-3.90164	-1.78686	18.76735	6.96408	232.15	-18.64
80/ 9/ 2	2444484.5	-10.89999	-14.05009	-6.00203	5.48822	-3.89729	-1.78501	18.76804	6.96388	232.20	-18.65
80/ 9/ 6	2444488.5	-10.88731	-14.05909	-6.00615	5.49166	-3.89294	-1.78315	18.76874	6.96368	232.25	-18.66
80/ 9/10	2444492.5	-10.87462	-14.06808	-6.01027	5.49510	-3.88858	-1.78129	18.76943	6.96349	232.30	-18.68
80/ 9/14	2444496.5	-10.86192	-14.07706	-6.01438	5.49853	-3.88423	-1.77943	18.77013	6.96329	232.35	-18.69
80/ 9/18	2444500.5	-10.84922	-14.08603	-6.01849	5.50196	-3.87987	-1.77757	18.77083	6.96309	232.40	-18.70
80/ 9/22	2444504.5	-10.83650	-14.09499	-6.02259	5.50538	-3.87551	-1.77571	18.77152	6.96290	232.45	-18.71
80/ 9/26	2444508.5	-10.82378	-14.10393	-6.02670	5.50880	-3.87115	-1.77385	18.77222	6.96270	232.50	-18.73
80/ 9/30	2444512.5	-10.81105	-14.11287	-6.03079	5.51222	-3.86679	-1.77198	18.77292	6.96251	232.55	-18.74
80/10/ 4	2444516.5	-10.79831	-14.12180	-6.03488	5.51563	-3.86242	-1.77012	18.77361	6.96231	232.60	-18.75
80/10/ 8	2444520.5	-10.78557	-14.13072	-6.03897	5.51904	-3.85805	-1.76826	18.77431	6.96212	232.65	-18.76
80/10/12	2444524.5	-10.77281	-14.13963	-6.04305	5.52245	-3.85368	-1.76639	18.77501	6.96193	232.70	-18.78
80/10/16	2444528.5	-10.76005	-14.14852	-6.04713	5.52585	-3.84931	-1.76452	18.77571	6.96173	232.75	-18.79

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
80/10/20	2444532.5	-10.74728	-14.15741	-6.05120	5.52925	-3.84494	-1.76266	18.77641	6.96154	232.80	-18.80
80/10/24	2444536.5	-10.73450	-14.16629	-6.05527	5.53264	-3.84056	-1.76079	18.77710	6.96135	232.85	-18.81
80/10/28	2444540.5	-10.72172	-14.17516	-6.05934	5.53604	-3.83618	-1.75892	18.77780	6.96116	232.90	-18.83
80/11/ 1	2444544.5	-10.70892	-14.18401	-6.06340	5.53942	-3.83180	-1.75705	18.77850	6.96097	232.95	-18.84
80/11/ 5	2444548.5	-10.69612	-14.19286	-6.06746	5.54281	-3.82742	-1.75518	18.77920	6.96079	233.00	-18.85
80/11/ 9	2444552.5	-10.68331	-14.20170	-6.07151	5.54619	-3.82304	-1.75331	18.77990	6.96060	233.05	-18.86
80/11/13	2444556.5	-10.67050	-14.21052	-6.07556	5.54958	-3.81865	-1.75143	18.78060	6.96042	233.10	-18.87
80/11/17	2444560.5	-10.65767	-14.21934	-6.07960	5.55295	-3.81426	-1.74956	18.78130	6.96023	233.15	-18.89
80/11/21	2444564.5	-10.64484	-14.22815	-6.08364	5.55633	-3.80987	-1.74768	18.78200	6.96005	233.20	-18.90
80/11/25	2444568.5	-10.63200	-14.23694	-6.08768	5.55971	-3.80547	-1.74580	18.78270	6.95987	233.25	-18.91
80/11/29	2444572.5	-10.61915	-14.24573	-6.09171	5.56308	-3.80107	-1.74392	18.78340	6.95968	233.30	-18.92
80/12/ 3	2444576.5	-10.60630	-14.25451	-6.09574	5.56644	-3.79666	-1.74204	18.78410	6.95950	233.35	-18.94
80/12/ 7	2444580.5	-10.59343	-14.26327	-6.09976	5.56980	-3.79225	-1.74016	18.78480	6.95931	233.40	-18.95
80/12/11	2444584.5	-10.58056	-14.27203	-6.10378	5.57316	-3.78784	-1.73827	18.78550	6.95913	233.45	-18.96
80/12/15	2444588.5	-10.56768	-14.28077	-6.10779	5.57652	-3.78342	-1.73639	18.78621	6.95894	233.50	-18.97
80/12/19	2444592.5	-10.55480	-14.28951	-6.11180	5.57986	-3.77900	-1.73450	18.78691	6.95875	233.55	-18.99
80/12/23	2444596.5	-10.54190	-14.29823	-6.11580	5.58321	-3.77457	-1.73261	18.78761	6.95856	233.60	-19.00
80/12/27	2444600.5	-10.52900	-14.30695	-6.11980	5.58655	-3.77014	-1.73072	18.78831	6.95837	233.65	-19.01
80/12/31	2444604.5	-10.51609	-14.31565	-6.12380	5.58988	-3.76571	-1.72882	18.78901	6.95817	233.70	-19.02
81/ 1/ 4	2444608.5	-10.50317	-14.32435	-6.12779	5.59321	-3.76128	-1.72693	18.78972	6.95798	233.75	-19.03
81/ 1/ 8	2444612.5	-10.49025	-14.33303	-6.13178	5.59654	-3.75684	-1.72503	18.79042	6.95779	233.80	-19.05
81/ 1/12	2444616.5	-10.47732	-14.34170	-6.13576	5.59986	-3.75240	-1.72313	18.79112	6.95759	233.85	-19.06
81/ 1/16	2444620.5	-10.46438	-14.35037	-6.13974	5.60317	-3.74795	-1.72123	18.79182	6.95739	233.90	-19.07
81/ 1/20	2444624.5	-10.45143	-14.35902	-6.14371	5.60648	-3.74351	-1.71933	18.79253	6.95719	233.95	-19.08
81/ 1/24	2444628.5	-10.43847	-14.36766	-6.14768	5.60978	-3.73906	-1.71743	18.79323	6.95699	234.00	-19.09
81/ 1/28	2444632.5	-10.42551	-14.37630	-6.15165	5.61308	-3.73461	-1.71553	18.79393	6.95679	234.05	-19.11
81/ 2/ 1	2444636.5	-10.41254	-14.38492	-6.15561	5.61637	-3.73016	-1.71362	18.79464	6.95659	234.10	-19.12
81/ 2/ 5	2444640.5	-10.39956	-14.39353	-6.15957	5.61966	-3.72570	-1.71172	18.79534	6.95639	234.15	-19.13
81/ 2/ 9	2444644.5	-10.38657	-14.40213	-6.16352	5.62294	-3.72124	-1.70981	18.79605	6.95619	234.20	-19.14
81/ 2/13	2444648.5	-10.37358	-14.41073	-6.16747	5.62623	-3.71678	-1.70790	18.79675	6.95599	234.25	-19.15
81/ 2/17	2444652.5	-10.36058	-14.41931	-6.17141	5.62950	-3.71232	-1.70600	18.79745	6.95579	234.30	-19.17
81/ 2/21	2444656.5	-10.34757	-14.42788	-6.17535	5.63277	-3.70786	-1.70409	18.79816	6.95559	234.35	-19.18
81/ 2/25	2444660.5	-10.33455	-14.43644	-6.17928	5.63604	-3.70339	-1.70217	18.79886	6.95539	234.40	-19.19
81/ 3/ 1	2444664.5	-10.32153	-14.44499	-6.18321	5.63930	-3.69891	-1.70026	18.79957	6.95518	234.45	-19.20
81/ 3/ 5	2444668.5	-10.30850	-14.45353	-6.18714	5.64256	-3.69444	-1.69835	18.80027	6.95498	234.50	-19.21
81/ 3/ 9	2444672.5	-10.29546	-14.46206	-6.19106	5.64581	-3.68996	-1.69643	18.80098	6.95477	234.55	-19.23
81/ 3/13	2444676.5	-10.28241	-14.47058	-6.19498	5.64906	-3.68548	-1.69452	18.80168	6.95457	234.60	-19.24
81/ 3/17	2444680.5	-10.26936	-14.47909	-6.19889	5.65230	-3.68100	-1.69260	18.80239	6.95436	234.65	-19.25
81/ 3/21	2444684.5	-10.25630	-14.48758	-6.20280	5.65553	-3.67652	-1.69068	18.80310	6.95415	234.70	-19.26
81/ 3/25	2444688.5	-10.24323	-14.49607	-6.20670	5.65877	-3.67203	-1.68876	18.80380	6.95395	234.75	-19.27
81/ 3/29	2444692.5	-10.23015	-14.50455	-6.21060	5.66199	-3.66755	-1.68684	18.80451	6.95374	234.80	-19.29
81/ 4/ 2	2444696.5	-10.21707	-14.51302	-6.21450	5.66521	-3.66306	-1.68492	18.80521	6.95353	234.85	-19.30
81/ 4/ 6	2444700.5	-10.20397	-14.52148	-6.21839	5.66843	-3.65857	-1.68300	18.80592	6.95332	234.90	-19.31
81/ 4/10	2444704.5	-10.19088	-14.52992	-6.22227	5.67164	-3.65407	-1.68107	18.80663	6.95311	234.96	-19.32
81/ 4/14	2444708.5	-10.17777	-14.53836	-6.22615	5.67485	-3.64958	-1.67915	18.80734	6.95291	235.01	-19.33

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
81/ 4/18	2444712.5	-10.16466	-14.54678	-6.23003	5.67805	-3.64508	-1.67723	18.80804	6.95270	235.06	-19.34
81/ 4/22	2444716.5	-10.15154	-14.55520	-6.23390	5.68125	-3.64059	-1.67530	18.80875	6.95249	235.11	-19.36
81/ 4/26	2444720.5	-10.13841	-14.56361	-6.23777	5.68444	-3.63609	-1.67338	18.80946	6.95228	235.16	-19.37
81/ 4/30	2444724.5	-10.12527	-14.57200	-6.24163	5.68764	-3.63159	-1.67145	18.81016	6.95208	235.21	-19.38
81/ 5/ 4	2444728.5	-10.11213	-14.58038	-6.24549	5.69082	-3.62709	-1.66952	18.81087	6.95187	235.26	-19.39
81/ 5/ 8	2444732.5	-10.09898	-14.58876	-6.24935	5.69401	-3.62259	-1.66760	18.81158	6.95167	235.31	-19.40
81/ 5/12	2444736.5	-10.08582	-14.59712	-6.25320	5.69719	-3.61808	-1.66567	18.81229	6.95147	235.36	-19.41
81/ 5/16	2444740.5	-10.07265	-14.60548	-6.25704	5.70037	-3.61357	-1.66374	18.81300	6.95127	235.41	-19.43
81/ 5/20	2444744.5	-10.05948	-14.61382	-6.26089	5.70355	-3.60906	-1.66181	18.81371	6.95107	235.46	-19.44
81/ 5/24	2444748.5	-10.04630	-14.62215	-6.26472	5.70672	-3.60455	-1.65988	18.81441	6.95087	235.51	-19.45
81/ 5/28	2444752.5	-10.03311	-14.63047	-6.26855	5.70989	-3.60003	-1.65794	18.81512	6.95067	235.56	-19.46
81/ 6/ 1	2444756.5	-10.01992	-14.63878	-6.27238	5.71305	-3.59551	-1.65601	18.81583	6.95047	235.61	-19.47
81/ 6/ 5	2444760.5	-10.00672	-14.64709	-6.27621	5.71621	-3.59098	-1.65407	18.81654	6.95027	235.66	-19.48
81/ 6/ 9	2444764.5	-9.99351	-14.65538	-6.28002	5.71937	-3.58646	-1.65213	18.81725	6.95007	235.71	-19.50
81/ 6/13	2444768.5	-9.98029	-14.66366	-6.28384	5.72252	-3.58193	-1.65019	18.81796	6.94986	235.76	-19.51
81/ 6/17	2444772.5	-9.96707	-14.67193	-6.28765	5.72567	-3.57739	-1.64825	18.81867	6.94966	235.81	-19.52
81/ 6/21	2444776.5	-9.95384	-14.68018	-6.29145	5.72881	-3.57286	-1.64631	18.81938	6.94946	235.86	-19.53
81/ 6/25	2444780.5	-9.94060	-14.68843	-6.29526	5.73195	-3.56832	-1.64437	18.82009	6.94925	235.91	-19.54
81/ 6/29	2444784.5	-9.92735	-14.69667	-6.29905	5.73509	-3.56377	-1.64242	18.82080	6.94905	235.96	-19.55
81/ 7/ 3	2444788.5	-9.91410	-14.70490	-6.30284	5.73822	-3.55923	-1.64048	18.82151	6.94884	236.01	-19.56
81/ 7/ 7	2444792.5	-9.90084	-14.71312	-6.30663	5.74134	-3.55468	-1.63853	18.82222	6.94863	236.06	-19.58
81/ 7/11	2444796.5	-9.88758	-14.72132	-6.31041	5.74446	-3.55013	-1.63658	18.82293	6.94843	236.11	-19.59
81/ 7/15	2444800.5	-9.87430	-14.72952	-6.31419	5.74758	-3.54557	-1.63463	18.82364	6.94822	236.16	-19.60
81/ 7/19	2444804.5	-9.86102	-14.73770	-6.31797	5.75069	-3.54101	-1.63268	18.82436	6.94801	236.21	-19.61
81/ 7/23	2444808.5	-9.84773	-14.74588	-6.32174	5.75379	-3.53645	-1.63073	18.82507	6.94780	236.26	-19.62
81/ 7/27	2444812.5	-9.83443	-14.75404	-6.32550	5.75689	-3.53189	-1.62877	18.82578	6.94759	236.31	-19.63
81/ 7/31	2444816.5	-9.82113	-14.76220	-6.32926	5.75999	-3.52733	-1.62682	18.82649	6.94737	236.36	-19.64
81/ 8/ 4	2444820.5	-9.80782	-14.77034	-6.33302	5.76308	-3.52276	-1.62486	18.82720	6.94716	236.41	-19.66
81/ 8/ 8	2444824.5	-9.79450	-14.77847	-6.33677	5.76616	-3.51819	-1.62290	18.82791	6.94695	236.47	-19.67
81/ 8/12	2444828.5	-9.78118	-14.78660	-6.34052	5.76925	-3.51362	-1.62095	18.82862	6.94674	236.52	-19.68
81/ 8/16	2444832.5	-9.76785	-14.79471	-6.34426	5.77233	-3.50904	-1.61898	18.82934	6.94653	236.57	-19.69
81/ 8/20	2444836.5	-9.75451	-14.80281	-6.34800	5.77540	-3.50446	-1.61702	18.83005	6.94631	236.62	-19.70
81/ 8/24	2444840.5	-9.74116	-14.81090	-6.35173	5.77846	-3.49988	-1.61506	18.83076	6.94609	236.67	-19.71
81/ 8/28	2444844.5	-9.72781	-14.81898	-6.35546	5.78152	-3.49529	-1.61309	18.83147	6.94587	236.72	-19.72
81/ 9/ 1	2444848.5	-9.71445	-14.82705	-6.35918	5.78458	-3.49070	-1.61113	18.83219	6.94565	236.77	-19.74
81/ 9/ 5	2444852.5	-9.70108	-14.83511	-6.36290	5.78763	-3.48611	-1.60916	18.83290	6.94543	236.82	-19.75
81/ 9/ 9	2444856.5	-9.68771	-14.84316	-6.36662	5.79067	-3.48151	-1.60719	18.83361	6.94520	236.87	-19.76
81/ 9/13	2444860.5	-9.67433	-14.85119	-6.37033	5.79371	-3.47692	-1.60522	18.83432	6.94498	236.92	-19.77
81/ 9/17	2444864.5	-9.66094	-14.85922	-6.37403	5.79674	-3.47232	-1.60325	18.83504	6.94475	236.97	-19.78
81/ 9/21	2444868.5	-9.64755	-14.86724	-6.37774	5.79976	-3.46772	-1.60128	18.83575	6.94452	237.02	-19.79
81/ 9/25	2444872.5	-9.63414	-14.87524	-6.38143	5.80278	-3.46312	-1.59930	18.83646	6.94429	237.07	-19.80
81/ 9/29	2444876.5	-9.62074	-14.88324	-6.38513	5.80579	-3.45852	-1.59733	18.83718	6.94406	237.12	-19.81
81/10/ 3	2444880.5	-9.60732	-14.89122	-6.38881	5.80880	-3.45391	-1.59536	18.83789	6.94383	237.17	-19.82
81/10/ 7	2444884.5	-9.59390	-14.89920	-6.39250	5.81180	-3.44931	-1.59338	18.83860	6.94360	237.22	-19.84
81/10/11	2444888.5	-9.58047	-14.90716	-6.39618	5.81479	-3.44470	-1.59141	18.83932	6.94337	237.27	-19.85

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
81/10/15	2444892.5	-9.56703	-14.91511	-6.39985	5.81778	-3.44009	-1.58943	18.84003	6.94314	237.32	-19.86
81/10/19	2444896.5	-9.55359	-14.92306	-6.40352	5.82077	-3.43549	-1.58745	18.84074	6.94290	237.37	-19.87
81/10/23	2444900.5	-9.54014	-14.93099	-6.40718	5.82375	-3.43088	-1.58548	18.84146	6.94267	237.42	-19.88
81/10/27	2444904.5	-9.52668	-14.93891	-6.41084	5.82672	-3.42627	-1.58350	18.84217	6.94244	237.47	-19.89
81/10/31	2444908.5	-9.51322	-14.94682	-6.41450	5.82970	-3.42167	-1.58153	18.84289	6.94222	237.52	-19.90
81/11/ 4	2444912.5	-9.49974	-14.95472	-6.41815	5.83267	-3.41706	-1.57955	18.84360	6.94199	237.57	-19.91
81/11/ 8	2444916.5	-9.48627	-14.96260	-6.42180	5.83563	-3.41245	-1.57757	18.84432	6.94177	237.63	-19.92
81/11/12	2444920.5	-9.47278	-14.97048	-6.42544	5.83859	-3.40783	-1.57559	18.84503	6.94154	237.68	-19.94
81/11/16	2444924.5	-9.45929	-14.97835	-6.42908	5.84155	-3.40322	-1.57362	18.84575	6.94132	237.73	-19.95
81/11/20	2444928.5	-9.44579	-14.98621	-6.43271	5.84450	-3.39860	-1.57164	18.84646	6.94109	237.78	-19.96
81/11/24	2444932.5	-9.43229	-14.99405	-6.43634	5.84745	-3.39399	-1.56965	18.84718	6.94087	237.83	-19.97
81/11/28	2444936.5	-9.41877	-15.00189	-6.43996	5.85040	-3.38937	-1.56767	18.84789	6.94065	237.88	-19.98
81/12/ 2	2444940.5	-9.40526	-15.00971	-6.44358	5.85334	-3.38475	-1.56569	18.84861	6.94042	237.93	-19.99
81/12/ 6	2444944.5	-9.39173	-15.01753	-6.44720	5.85628	-3.38013	-1.56371	18.84933	6.94020	237.98	-20.00
81/12/10	2444948.5	-9.37820	-15.02533	-6.45081	5.85921	-3.37550	-1.56172	18.85004	6.93998	238.03	-20.01
81/12/14	2444952.5	-9.36466	-15.03312	-6.45441	5.86214	-3.37088	-1.55974	18.85076	6.93976	238.08	-20.02
81/12/18	2444956.5	-9.35111	-15.04091	-6.45801	5.86507	-3.36625	-1.55776	18.85147	6.93954	238.13	-20.03
81/12/22	2444960.5	-9.33756	-15.04868	-6.46161	5.86799	-3.36162	-1.55577	18.85219	6.93933	238.18	-20.04
81/12/26	2444964.5	-9.32400	-15.05644	-6.46520	5.87091	-3.35699	-1.55378	18.85291	6.93911	238.23	-20.06
81/12/30	2444968.5	-9.31043	-15.06419	-6.46879	5.87383	-3.35236	-1.55180	18.85362	6.93889	238.28	-20.07
82/ 1/ 3	2444972.5	-9.29686	-15.07193	-6.47237	5.87674	-3.34773	-1.54981	18.85434	6.93868	238.33	-20.08
82/ 1/ 7	2444976.5	-9.28328	-15.07965	-6.47595	5.87965	-3.34309	-1.54782	18.85506	6.93846	238.38	-20.09
82/ 1/11	2444980.5	-9.26969	-15.08737	-6.47952	5.88255	-3.33846	-1.54583	18.85578	6.93825	238.43	-20.10
82/ 1/15	2444984.5	-9.25610	-15.09508	-6.48309	5.88545	-3.33382	-1.54384	18.85649	6.93804	238.48	-20.11
82/ 1/19	2444988.5	-9.24250	-15.10278	-6.48666	5.88835	-3.32918	-1.54185	18.85721	6.93783	238.53	-20.12
82/ 1/23	2444992.5	-9.22890	-15.11046	-6.49022	5.89125	-3.32453	-1.53985	18.85793	6.93762	238.58	-20.13
82/ 1/27	2444996.5	-9.21528	-15.11814	-6.49377	5.89415	-3.31989	-1.53786	18.85865	6.93741	238.64	-20.14
82/ 1/31	2445000.5	-9.20166	-15.12580	-6.49732	5.89704	-3.31524	-1.53587	18.85936	6.93720	238.69	-20.15
82/ 2/ 4	2445004.5	-9.18804	-15.13345	-6.50087	5.89993	-3.31059	-1.53387	18.86008	6.93700	238.74	-20.16
82/ 2/ 8	2445008.5	-9.17440	-15.14110	-6.50441	5.90282	-3.30593	-1.53187	18.86080	6.93679	238.79	-20.17
82/ 2/12	2445012.5	-9.16076	-15.14873	-6.50795	5.90570	-3.30127	-1.52987	18.86152	6.93658	238.84	-20.18
82/ 2/16	2445016.5	-9.14712	-15.15635	-6.51148	5.90858	-3.29661	-1.52787	18.86224	6.93637	238.89	-20.19
82/ 2/20	2445020.5	-9.13346	-15.16396	-6.51501	5.91145	-3.29194	-1.52587	18.86296	6.93616	238.94	-20.21
82/ 2/24	2445024.5	-9.11980	-15.17156	-6.51853	5.91432	-3.28726	-1.52386	18.86367	6.93595	238.99	-20.22
82/ 2/28	2445028.5	-9.10614	-15.17915	-6.52205	5.91719	-3.28259	-1.52186	18.86439	6.93574	239.04	-20.23
82/ 3/ 4	2445032.5	-9.09246	-15.18673	-6.52556	5.92005	-3.27791	-1.51985	18.86511	6.93553	239.09	-20.24
82/ 3/ 8	2445036.5	-9.07878	-15.19429	-6.52907	5.92290	-3.27323	-1.51784	18.86583	6.93532	239.14	-20.25
82/ 3/12	2445040.5	-9.06510	-15.20185	-6.53257	5.92575	-3.26854	-1.51583	18.86655	6.93510	239.19	-20.26
82/ 3/16	2445044.5	-9.05140	-15.20940	-6.53607	5.92860	-3.26385	-1.51381	18.86727	6.93488	239.24	-20.27
82/ 3/20	2445048.5	-9.03771	-15.21693	-6.53957	5.93144	-3.25916	-1.51180	18.86799	6.93466	239.29	-20.28
82/ 3/24	2445052.5	-9.02400	-15.22445	-6.54306	5.93427	-3.25446	-1.50978	18.86871	6.93444	239.34	-20.29
82/ 3/28	2445056.5	-9.01029	-15.23197	-6.54654	5.93710	-3.24976	-1.50776	18.86943	6.93422	239.39	-20.30
82/ 4/ 1	2445060.5	-8.99657	-15.23947	-6.55002	5.93992	-3.24506	-1.50574	18.87015	6.93400	239.44	-20.31
82/ 4/ 5	2445064.5	-8.98284	-15.24696	-6.55350	5.94274	-3.24035	-1.50372	18.87087	6.93377	239.50	-20.32
82/ 4/ 9	2445068.5	-8.96911	-15.25444	-6.55697	5.94555	-3.23564	-1.50170	18.87159	6.93354	239.55	-20.33

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
82/ 4/13	2445072.5	-8.95537	-15.26191	-6.56044	5.94835	-3.23093	-1.49968	18.87231	6.93331	239.60	-20.34
82/ 4/17	2445076.5	-8.94163	-15.26937	-6.56390	5.95115	-3.22622	-1.49765	18.87303	6.93308	239.65	-20.35
82/ 4/21	2445080.5	-8.92788	-15.27682	-6.56736	5.95394	-3.22151	-1.49563	18.87375	6.93285	239.70	-20.36
82/ 4/25	2445084.5	-8.91412	-15.28425	-6.57081	5.95673	-3.21680	-1.49360	18.87446	6.93262	239.75	-20.37
82/ 4/29	2445088.5	-8.90035	-15.29168	-6.57426	5.95951	-3.21208	-1.49158	18.87518	6.93239	239.80	-20.38
82/ 5/ 3	2445092.5	-8.88658	-15.29909	-6.57770	5.96229	-3.20736	-1.48955	18.87590	6.93216	239.85	-20.39
82/ 5/ 7	2445096.5	-8.87281	-15.30650	-6.58114	5.96506	-3.20263	-1.48752	18.87662	6.93192	239.90	-20.40
82/ 5/11	2445100.5	-8.85902	-15.31389	-6.58457	5.96783	-3.19791	-1.48549	18.87734	6.93169	239.95	-20.41
82/ 5/15	2445104.5	-8.84523	-15.32127	-6.58800	5.97059	-3.19318	-1.48346	18.87807	6.93145	240.00	-20.42
82/ 5/19	2445108.5	-8.83144	-15.32864	-6.59143	5.97335	-3.18845	-1.48142	18.87879	6.93121	240.05	-20.44
82/ 5/23	2445112.5	-8.81763	-15.33600	-6.59485	5.97609	-3.18372	-1.47939	18.87951	6.93097	240.10	-20.45
82/ 5/27	2445116.5	-8.80382	-15.34335	-6.59826	5.97884	-3.17898	-1.47735	18.88023	6.93073	240.15	-20.46
82/ 5/31	2445120.5	-8.79001	-15.35069	-6.60167	5.98157	-3.17425	-1.47532	18.88095	6.93049	240.20	-20.47
82/ 6/ 4	2445124.5	-8.77619	-15.35802	-6.60508	5.98430	-3.16951	-1.47328	18.88167	6.93024	240.25	-20.48
82/ 6/ 8	2445128.5	-8.76236	-15.36534	-6.60848	5.98703	-3.16477	-1.47124	18.88239	6.93000	240.31	-20.49
82/ 6/12	2445132.5	-8.74853	-15.37264	-6.61188	5.98975	-3.16003	-1.46921	18.88311	6.92975	240.36	-20.50
82/ 6/16	2445136.5	-8.73468	-15.37994	-6.61527	5.99246	-3.15529	-1.46717	18.88383	6.92950	240.41	-20.51
82/ 6/20	2445140.5	-8.72084	-15.38722	-6.61866	5.99517	-3.15055	-1.46513	18.88455	6.92926	240.46	-20.52
82/ 6/24	2445144.5	-8.70698	-15.39449	-6.62204	5.99787	-3.14581	-1.46309	18.88527	6.92901	240.51	-20.53
82/ 6/28	2445148.5	-8.69313	-15.40176	-6.62542	6.00056	-3.14107	-1.46105	18.88599	6.92876	240.56	-20.54
82/ 7/ 2	2445152.5	-8.67926	-15.40901	-6.62879	6.00326	-3.13632	-1.45901	18.88671	6.92851	240.61	-20.55
82/ 7/ 6	2445156.5	-8.66539	-15.41625	-6.63216	6.00594	-3.13158	-1.45697	18.88743	6.92827	240.66	-20.56
82/ 7/10	2445160.5	-8.65151	-15.42348	-6.63552	6.00862	-3.12683	-1.45493	18.88815	6.92802	240.71	-20.57
82/ 7/14	2445164.5	-8.63763	-15.43069	-6.63888	6.01130	-3.12209	-1.45289	18.88888	6.92777	240.76	-20.58
82/ 7/18	2445168.5	-8.62374	-15.43790	-6.64223	6.01397	-3.11734	-1.45085	18.88960	6.92753	240.81	-20.59
82/ 7/22	2445172.5	-8.60984	-15.44510	-6.64558	6.01664	-3.11260	-1.44881	18.89032	6.92729	240.86	-20.60
82/ 7/26	2445176.5	-8.59594	-15.45228	-6.64893	6.01931	-3.10785	-1.44677	18.89104	6.92704	240.91	-20.61
82/ 7/30	2445180.5	-8.58203	-15.45946	-6.65227	6.02197	-3.10310	-1.44472	18.89176	6.92680	240.96	-20.62
82/ 8/ 3	2445184.5	-8.56811	-15.46662	-6.65560	6.02463	-3.09835	-1.44268	18.89248	6.92656	241.01	-20.63
82/ 8/ 7	2445188.5	-8.55419	-15.47377	-6.65893	6.02729	-3.09360	-1.44064	18.89321	6.92632	241.07	-20.64
82/ 8/11	2445192.5	-8.54027	-15.48091	-6.66226	6.02994	-3.08884	-1.43859	18.89393	6.92609	241.12	-20.65
82/ 8/15	2445196.5	-8.52633	-15.48804	-6.66558	6.03259	-3.08409	-1.43655	18.89465	6.92585	241.17	-20.66
82/ 8/19	2445200.5	-8.51239	-15.49516	-6.66890	6.03523	-3.07933	-1.43450	18.89537	6.92561	241.22	-20.67
82/ 8/23	2445204.5	-8.49845	-15.50227	-6.67221	6.03787	-3.07457	-1.43245	18.89609	6.92537	241.27	-20.68
82/ 8/27	2445208.5	-8.48450	-15.50937	-6.67552	6.04050	-3.06980	-1.43041	18.89682	6.92513	241.32	-20.69
82/ 8/31	2445212.5	-8.47054	-15.51646	-6.67882	6.04313	-3.06504	-1.42836	18.89754	6.92489	241.37	-20.70
82/ 9/ 4	2445216.5	-8.45657	-15.52353	-6.68212	6.04576	-3.06027	-1.42631	18.89826	6.92465	241.42	-20.71
82/ 9/ 8	2445220.5	-8.44260	-15.53059	-6.68541	6.04838	-3.05550	-1.42425	18.89898	6.92441	241.47	-20.72
82/ 9/12	2445224.5	-8.42863	-15.53765	-6.68870	6.05100	-3.05073	-1.42220	18.89971	6.92417	241.52	-20.73
82/ 9/16	2445228.5	-8.41465	-15.54469	-6.69198	6.05361	-3.04596	-1.42015	18.90043	6.92393	241.57	-20.74
82/ 9/20	2445232.5	-8.40066	-15.55172	-6.69526	6.05622	-3.04118	-1.41809	18.90115	6.92370	241.62	-20.75
82/ 9/24	2445236.5	-8.38666	-15.55874	-6.69853	6.05882	-3.03641	-1.41604	18.90188	6.92346	241.67	-20.76
82/ 9/28	2445240.5	-8.37266	-15.56575	-6.70180	6.06142	-3.03163	-1.41398	18.90260	6.92322	241.72	-20.77
82/10/ 2	2445244.5	-8.35866	-15.57275	-6.70506	6.06401	-3.02685	-1.41193	18.90332	6.92298	241.78	-20.78
82/10/ 6	2445248.5	-8.34465	-15.57974	-6.70832	6.06660	-3.02206	-1.40987	18.90404	6.92273	241.83	-20.78

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82/10/10	2445252.5	-8.33063	-15.58671	-6.71158	6.06919	-3.01728	-1.40781	18.90477	6.92249	241.88	-20.79
82/10/14	2445256.5	-8.31661	-15.59368	-6.71483	6.07177	-3.01249	-1.40575	18.90549	6.92225	241.93	-20.80
82/10/18	2445260.5	-8.30258	-15.60063	-6.71807	6.07434	-3.00771	-1.40369	18.90621	6.92202	241.98	-20.81
82/10/22	2445264.5	-8.28854	-15.60757	-6.72131	6.07692	-3.00292	-1.40163	18.90694	6.92178	242.03	-20.82
82/10/26	2445268.5	-8.27450	-15.61450	-6.72455	6.07949	-2.99812	-1.39957	18.90766	6.92154	242.08	-20.83
82/10/30	2445272.5	-8.26045	-15.62143	-6.72778	6.08205	-2.99332	-1.39751	18.90838	6.92130	242.13	-20.84
82/11/ 3	2445276.5	-8.24640	-15.62834	-6.73101	6.08461	-2.98852	-1.39544	18.90911	6.92106	242.18	-20.85
82/11/ 7	2445280.5	-8.23234	-15.63523	-6.73423	6.08717	-2.98372	-1.39337	18.90983	6.92082	242.23	-20.86
82/11/11	2445284.5	-8.21827	-15.64212	-6.73744	6.08972	-2.97892	-1.39130	18.91056	6.92057	242.28	-20.87
82/11/15	2445288.5	-8.20420	-15.64900	-6.74066	6.09226	-2.97411	-1.38924	18.91128	6.92033	242.33	-20.88
82/11/19	2445292.5	-8.19012	-15.65586	-6.74386	6.09480	-2.96930	-1.38716	18.91200	6.92008	242.38	-20.89
82/11/23	2445296.5	-8.17604	-15.66272	-6.74707	6.09733	-2.96449	-1.38509	18.91273	6.91983	242.44	-20.90
82/11/27	2445300.5	-8.16195	-15.66956	-6.75026	6.09985	-2.95967	-1.38302	18.91345	6.91958	242.49	-20.91
82/12/ 1	2445304.5	-8.14786	-15.67639	-6.75346	6.10237	-2.95486	-1.38095	18.91417	6.91933	242.54	-20.92
82/12/ 5	2445308.5	-8.13376	-15.68321	-6.75664	6.10489	-2.95004	-1.37887	18.91490	6.91908	242.59	-20.93
82/12/ 9	2445312.5	-8.11965	-15.69002	-6.75983	6.10740	-2.94522	-1.37680	18.91562	6.91883	242.64	-20.94
82/12/13	2445316.5	-8.10554	-15.69682	-6.76300	6.10990	-2.94040	-1.37472	18.91635	6.91858	242.69	-20.95
82/12/17	2445320.5	-8.09142	-15.70361	-6.76618	6.11240	-2.93558	-1.37264	18.91707	6.91832	242.74	-20.96
82/12/21	2445324.5	-8.07730	-15.71038	-6.76935	6.11489	-2.93076	-1.37057	18.91779	6.91807	242.79	-20.97
82/12/25	2445328.5	-8.06317	-15.71715	-6.77251	6.11737	-2.92593	-1.36849	18.91852	6.91781	242.84	-20.98
82/12/29	2445332.5	-8.04903	-15.72390	-6.77567	6.11985	-2.92111	-1.36641	18.91924	6.91755	242.89	-20.99
83/ 1/ 2	2445336.5	-8.03489	-15.73064	-6.77882	6.12233	-2.91628	-1.36433	18.91997	6.91730	242.94	-21.00
83/ 1/ 6	2445340.5	-8.02075	-15.73738	-6.78197	6.12480	-2.91146	-1.36225	18.92069	6.91704	242.99	-21.00
83/ 1/10	2445344.5	-8.00659	-15.74410	-6.78512	6.12726	-2.90664	-1.36017	18.92141	6.91679	243.04	-21.01
83/ 1/14	2445348.5	-7.99244	-15.75081	-6.78826	6.12972	-2.90181	-1.35810	18.92214	6.91653	243.10	-21.02
83/ 1/18	2445352.5	-7.97827	-15.75750	-6.79139	6.13218	-2.89698	-1.35602	18.92286	6.91628	243.15	-21.03
83/ 1/22	2445356.5	-7.96410	-15.76419	-6.79452	6.13464	-2.89215	-1.35394	18.92359	6.91603	243.20	-21.04
83/ 1/26	2445360.5	-7.94993	-15.77087	-6.79765	6.13708	-2.88732	-1.35185	18.92431	6.91578	243.25	-21.05
83/ 1/30	2445364.5	-7.93575	-15.77753	-6.80077	6.13953	-2.88249	-1.34977	18.92504	6.91552	243.30	-21.06
83/ 2/ 3	2445368.5	-7.92156	-15.78418	-6.80388	6.14197	-2.87766	-1.34769	18.92576	6.91527	243.35	-21.07
83/ 2/ 7	2445372.5	-7.90737	-15.79083	-6.80700	6.14441	-2.87282	-1.34561	18.92649	6.91502	243.40	-21.08
83/ 2/11	2445376.5	-7.89317	-15.79746	-6.81010	6.14684	-2.86799	-1.34352	18.92721	6.91477	243.45	-21.09
83/ 2/15	2445380.5	-7.87897	-15.80408	-6.81320	6.14926	-2.86315	-1.34144	18.92794	6.91451	243.50	-21.10
83/ 2/19	2445384.5	-7.86476	-15.81069	-6.81630	6.15168	-2.85831	-1.33935	18.92866	6.91426	243.55	-21.11
83/ 2/23	2445388.5	-7.85055	-15.81728	-6.81939	6.15410	-2.85347	-1.33727	18.92939	6.91401	243.60	-21.12
83/ 2/27	2445392.5	-7.83633	-15.82387	-6.82248	6.15651	-2.84863	-1.33518	18.93011	6.91376	243.65	-21.12
83/ 3/ 3	2445396.5	-7.82210	-15.83045	-6.82556	6.15892	-2.84379	-1.33309	18.93084	6.91351	243.71	-21.13
83/ 3/ 7	2445400.5	-7.80787	-15.83701	-6.82864	6.16133	-2.83894	-1.33100	18.93156	6.91326	243.76	-21.14
83/ 3/11	2445404.5	-7.79363	-15.84356	-6.83171	6.16373	-2.83410	-1.32891	18.93229	6.91301	243.81	-21.15
83/ 3/15	2445408.5	-7.77939	-15.85011	-6.83478	6.16612	-2.82925	-1.32682	18.93301	6.91276	243.86	-21.16
83/ 3/19	2445412.5	-7.76514	-15.85664	-6.83784	6.16852	-2.82440	-1.32473	18.93374	6.91251	243.91	-21.17
83/ 3/23	2445416.5	-7.75089	-15.86315	-6.84090	6.17090	-2.81955	-1.32264	18.93446	6.91226	243.96	-21.18
83/ 3/27	2445420.5	-7.73663	-15.86966	-6.84395	6.17329	-2.81470	-1.32055	18.93519	6.91201	244.01	-21.19
83/ 3/31	2445424.5	-7.72237	-15.87616	-6.84700	6.17566	-2.80985	-1.31846	18.93591	6.91176	244.06	-21.20
83/ 4/ 4	2445428.5	-7.70810	-15.88265	-6.85004	6.17804	-2.80499	-1.31637	18.93664	6.91151	244.11	-21.21

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83/ 4/ 8	2445432.5	-7.69382	-15.88912	-6.85308	6.18041	-2.80014	-1.31428	18.93736	6.91127	244.16	-21.22
83/ 4/12	2445436.5	-7.67954	-15.89558	-6.85612	6.18278	-2.79528	-1.31218	18.93809	6.91102	244.21	-21.22
83/ 4/16	2445440.5	-7.66526	-15.90203	-6.85914	6.18515	-2.79042	-1.31009	18.93882	6.91078	244.26	-21.23
83/ 4/20	2445444.5	-7.65096	-15.90848	-6.86217	6.18751	-2.78556	-1.30799	18.93954	6.91054	244.32	-21.24
83/ 4/24	2445448.5	-7.63667	-15.91491	-6.86519	6.18987	-2.78069	-1.30590	18.94027	6.91029	244.37	-21.25
83/ 4/28	2445452.5	-7.62236	-15.92132	-6.86820	6.19223	-2.77582	-1.30380	18.94099	6.91005	244.42	-21.26
83/ 5/ 2	2445456.5	-7.60806	-15.92773	-6.87121	6.19458	-2.77095	-1.30170	18.94172	6.90981	244.47	-21.27
83/ 5/ 6	2445460.5	-7.59374	-15.93413	-6.87422	6.19693	-2.76608	-1.29960	18.94244	6.90956	244.52	-21.28
83/ 5/10	2445464.5	-7.57942	-15.94051	-6.87722	6.19927	-2.76120	-1.29749	18.94317	6.90931	244.57	-21.29
83/ 5/14	2445468.5	-7.56510	-15.94688	-6.88021	6.20160	-2.75632	-1.29539	18.94390	6.90907	244.62	-21.30
83/ 5/18	2445472.5	-7.55077	-15.95325	-6.88320	6.20393	-2.75143	-1.29328	18.94462	6.90882	244.67	-21.31
83/ 5/22	2445476.5	-7.53644	-15.95960	-6.88619	6.20626	-2.74654	-1.29118	18.94535	6.90857	244.72	-21.31
83/ 5/26	2445480.5	-7.52210	-15.96594	-6.88917	6.20858	-2.74165	-1.28907	18.94607	6.90832	244.77	-21.32
83/ 5/30	2445484.5	-7.50775	-15.97226	-6.89214	6.21089	-2.73676	-1.28696	18.94680	6.90806	244.82	-21.33
83/ 6/ 3	2445488.5	-7.49340	-15.97858	-6.89511	6.21320	-2.73187	-1.28485	18.94752	6.90781	244.88	-21.34
83/ 6/ 7	2445492.5	-7.47904	-15.98489	-6.89808	6.21550	-2.72697	-1.28273	18.94825	6.90755	244.93	-21.35
83/ 6/11	2445496.5	-7.46468	-15.99118	-6.90104	6.21780	-2.72207	-1.28062	18.94898	6.90729	244.98	-21.36
83/ 6/15	2445500.5	-7.45032	-15.99746	-6.90400	6.22009	-2.71717	-1.27850	18.94970	6.90703	245.03	-21.37
83/ 6/19	2445504.5	-7.43594	-16.00373	-6.90695	6.22237	-2.71226	-1.27639	18.95043	6.90677	245.08	-21.38
83/ 6/23	2445508.5	-7.42157	-16.00999	-6.90989	6.22465	-2.70736	-1.27427	18.95115	6.90650	245.13	-21.38
83/ 6/27	2445512.5	-7.40718	-16.01624	-6.91284	6.22692	-2.70245	-1.27216	18.95188	6.90624	245.18	-21.39
83/ 7/ 1	2445516.5	-7.39279	-16.02248	-6.91577	6.22918	-2.69754	-1.27004	18.95260	6.90597	245.23	-21.40
83/ 7/ 5	2445520.5	-7.37840	-16.02871	-6.91870	6.23144	-2.69263	-1.26792	18.95333	6.90571	245.28	-21.41
83/ 7/ 9	2445524.5	-7.36400	-16.03492	-6.92163	6.23370	-2.68772	-1.26580	18.95406	6.90544	245.33	-21.42
83/ 7/13	2445528.5	-7.34960	-16.04113	-6.92455	6.23595	-2.68281	-1.26368	18.95478	6.90517	245.38	-21.43
83/ 7/17	2445532.5	-7.33519	-16.04732	-6.92747	6.23819	-2.67789	-1.26156	18.95551	6.90490	245.43	-21.44
83/ 7/21	2445536.5	-7.32078	-16.05350	-6.93038	6.24043	-2.67298	-1.25944	18.95623	6.90463	245.49	-21.44
83/ 7/25	2445540.5	-7.30636	-16.05967	-6.93329	6.24266	-2.66806	-1.25732	18.95696	6.90436	245.54	-21.45
83/ 7/29	2445544.5	-7.29193	-16.06583	-6.93619	6.24488	-2.66314	-1.25519	18.95768	6.90408	245.59	-21.46
83/ 8/ 2	2445548.5	-7.27750	-16.07197	-6.93909	6.24710	-2.65822	-1.25307	18.95841	6.90381	245.64	-21.47
83/ 8/ 6	2445552.5	-7.26307	-16.07811	-6.94198	6.24931	-2.65329	-1.25094	18.95913	6.90353	245.69	-21.48
83/ 8/10	2445556.5	-7.24863	-16.08423	-6.94487	6.25152	-2.64837	-1.24882	18.95986	6.90325	245.74	-21.49
83/ 8/14	2445560.5	-7.23419	-16.09034	-6.94775	6.25372	-2.64345	-1.24669	18.96059	6.90297	245.79	-21.50
83/ 8/18	2445564.5	-7.21974	-16.09644	-6.95063	6.25591	-2.63852	-1.24457	18.96131	6.90269	245.84	-21.50
83/ 8/22	2445568.5	-7.20528	-16.10253	-6.95350	6.25810	-2.63360	-1.24244	18.96204	6.90241	245.89	-21.51
83/ 8/26	2445572.5	-7.19082	-16.10861	-6.95637	6.26028	-2.62867	-1.24031	18.96276	6.90213	245.94	-21.52
83/ 8/30	2445576.5	-7.17636	-16.11468	-6.95923	6.26245	-2.62375	-1.23819	18.96349	6.90184	246.00	-21.53
83/ 9/ 3	2445580.5	-7.16189	-16.12074	-6.96209	6.26462	-2.61882	-1.23606	18.96421	6.90156	246.05	-21.54
83/ 9/ 7	2445584.5	-7.14741	-16.12678	-6.96494	6.26678	-2.61389	-1.23393	18.96494	6.90127	246.10	-21.55
83/ 9/11	2445588.5	-7.13293	-16.13281	-6.96779	6.26894	-2.60897	-1.23180	18.96567	6.90099	246.15	-21.55
83/ 9/15	2445592.5	-7.11845	-16.13883	-6.97063	6.27109	-2.60404	-1.22968	18.96639	6.90070	246.20	-21.56
83/ 9/19	2445596.5	-7.10396	-16.14484	-6.97347	6.27323	-2.59912	-1.22755	18.96712	6.90042	246.25	-21.57
83/ 9/23	2445600.5	-7.08946	-16.15084	-6.97630	6.27538	-2.59420	-1.22542	18.96784	6.90013	246.30	-21.58
83/ 9/27	2445604.5	-7.07496	-16.15683	-6.97913	6.27751	-2.58927	-1.22330	18.96857	6.89985	246.35	-21.59
83/10/ 1	2445608.5	-7.06046	-16.16281	-6.98196	6.27964	-2.58435	-1.22117	18.96929	6.89957	246.40	-21.60

1.7 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
83/10/ 5	2445612.5	-7.04595	-16.16877	-6.98478	6.28177	-2.57943	-1.21904	18.97002	6.89929	246.45	-21.60
83/10/ 9	2445616.5	-7.03143	-16.17472	-6.98759	6.28390	-2.57451	-1.21692	18.97075	6.89901	246.50	-21.61
83/10/13	2445620.5	-7.01692	-16.18067	-6.99040	6.28603	-2.56958	-1.21479	18.97147	6.89874	246.56	-21.62
83/10/17	2445624.5	-7.00239	-16.18660	-6.99320	6.28815	-2.56466	-1.21267	18.97220	6.89846	246.61	-21.63
83/10/21	2445628.5	-6.98786	-16.19252	-6.99600	6.29026	-2.55973	-1.21054	18.97292	6.89819	246.66	-21.64
83/10/25	2445632.5	-6.97333	-16.19842	-6.99879	6.29237	-2.55480	-1.20841	18.97365	6.89792	246.71	-21.65
83/10/29	2445636.5	-6.95879	-16.20432	-7.00158	6.29448	-2.54988	-1.20628	18.97437	6.89764	246.76	-21.65
83/11/ 2	2445640.5	-6.94425	-16.21020	-7.00437	6.29658	-2.54495	-1.20415	18.97510	6.89737	246.81	-21.66
83/11/ 6	2445644.5	-6.92970	-16.21608	-7.00715	6.29868	-2.54002	-1.20202	18.97583	6.89710	246.86	-21.67
83/11/10	2445648.5	-6.91514	-16.22194	-7.00992	6.30078	-2.53509	-1.19989	18.97655	6.89683	246.91	-21.68
83/11/14	2445652.5	-6.90058	-16.22779	-7.01269	6.30287	-2.53015	-1.19776	18.97728	6.89656	246.96	-21.69
83/11/18	2445656.5	-6.88602	-16.23363	-7.01546	6.30496	-2.52522	-1.19563	18.97801	6.89629	247.01	-21.69
83/11/22	2445660.5	-6.87145	-16.23946	-7.01822	6.30704	-2.52028	-1.19350	18.97873	6.89602	247.07	-21.70
83/11/26	2445664.5	-6.85688	-16.24528	-7.02097	6.30912	-2.51535	-1.19137	18.97946	6.89575	247.12	-21.71
83/11/30	2445668.5	-6.84230	-16.25108	-7.02372	6.31120	-2.51041	-1.18923	18.98018	6.89548	247.17	-21.72
83/12/ 4	2445672.5	-6.82772	-16.25687	-7.02647	6.31327	-2.50547	-1.18710	18.98091	6.89522	247.22	-21.73
83/12/ 8	2445676.5	-6.81313	-16.26266	-7.02921	6.31534	-2.50053	-1.18496	18.98164	6.89495	247.27	-21.74
83/12/12	2445680.5	-6.79854	-16.26843	-7.03194	6.31740	-2.49559	-1.18283	18.98236	6.89468	247.32	-21.74
83/12/16	2445684.5	-6.78394	-16.27419	-7.03467	6.31946	-2.49064	-1.18069	18.98309	6.89441	247.37	-21.75
83/12/20	2445688.5	-6.76934	-16.27994	-7.03740	6.32152	-2.48570	-1.17855	18.98381	6.89415	247.42	-21.76
83/12/24	2445692.5	-6.75474	-16.28567	-7.04012	6.32357	-2.48075	-1.17642	18.98454	6.89388	247.47	-21.77
83/12/28	2445696.5	-6.74013	-16.29140	-7.04283	6.32562	-2.47580	-1.17428	18.98527	6.89362	247.52	-21.78
84/ 1/ 1	2445700.5	-6.72551	-16.29711	-7.04554	6.32766	-2.47085	-1.17214	18.98599	6.89335	247.57	-21.78
84/ 1/ 5	2445704.5	-6.71089	-16.30281	-7.04825	6.32970	-2.46590	-1.17000	18.98672	6.89309	247.63	-21.79
84/ 1/ 9	2445708.5	-6.69627	-16.30850	-7.05095	6.33174	-2.46094	-1.16786	18.98745	6.89283	247.68	-21.80
84/ 1/13	2445712.5	-6.68164	-16.31418	-7.05364	6.33378	-2.45599	-1.16572	18.98817	6.89257	247.73	-21.81
84/ 1/17	2445716.5	-6.66700	-16.31985	-7.05633	6.33580	-2.45102	-1.16357	18.98890	6.89230	247.78	-21.81
84/ 1/21	2445720.5	-6.65236	-16.32551	-7.05902	6.33783	-2.44606	-1.16143	18.98963	6.89204	247.83	-21.82
84/ 1/25	2445724.5	-6.63772	-16.33115	-7.06170	6.33984	-2.44109	-1.15928	18.99035	6.89177	247.88	-21.83
84/ 1/29	2445728.5	-6.62307	-16.33679	-7.06437	6.34186	-2.43612	-1.15713	18.99108	6.89150	247.93	-21.84
84/ 2/ 2	2445732.5	-6.60842	-16.34241	-7.06705	6.34386	-2.43115	-1.15498	18.99180	6.89123	247.98	-21.85
84/ 2/ 6	2445736.5	-6.59376	-16.34802	-7.06971	6.34586	-2.42618	-1.15283	18.99253	6.89096	248.03	-21.85
84/ 2/10	2445740.5	-6.57910	-16.35362	-7.07237	6.34786	-2.42120	-1.15068	18.99326	6.89069	248.08	-21.86
84/ 2/14	2445744.5	-6.56443	-16.35921	-7.07503	6.34985	-2.41622	-1.14853	18.99398	6.89041	248.14	-21.87
84/ 2/18	2445748.5	-6.54976	-16.36478	-7.07768	6.35183	-2.41124	-1.14638	18.99471	6.89014	248.19	-21.88
84/ 2/22	2445752.5	-6.53508	-16.37035	-7.08032	6.35381	-2.40626	-1.14422	18.99544	6.88986	248.24	-21.88
84/ 2/26	2445756.5	-6.52040	-16.37590	-7.08297	6.35578	-2.40128	-1.14207	18.99616	6.88958	248.29	-21.89
84/ 3/ 1	2445760.5	-6.50572	-16.38144	-7.08560	6.35774	-2.39629	-1.13991	18.99689	6.88930	248.34	-21.90
84/ 3/ 5	2445764.5	-6.49103	-16.38697	-7.08823	6.35970	-2.39130	-1.13775	18.99761	6.88902	248.39	-21.91
84/ 3/ 9	2445768.5	-6.47633	-16.39249	-7.09086	6.36165	-2.38632	-1.13560	18.99834	6.88873	248.44	-21.92
84/ 3/13	2445772.5	-6.46163	-16.39800	-7.09348	6.36359	-2.38133	-1.13344	18.99907	6.88845	248.49	-21.92
84/ 3/17	2445776.5	-6.44693	-16.40349	-7.09610	6.36553	-2.37634	-1.13128	18.99979	6.88816	248.54	-21.93
84/ 3/21	2445780.5	-6.43222	-16.40898	-7.09871	6.36746	-2.37135	-1.12912	19.00052	6.88788	248.60	-21.94
84/ 3/25	2445784.5	-6.41751	-16.41445	-7.10131	6.36939	-2.36637	-1.12696	19.00124	6.88759	248.65	-21.95
84/ 3/29	2445788.5	-6.40279	-16.41991	-7.10391	6.37132	-2.36138	-1.12481	19.00197	6.88730	248.70	-21.95

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
84/ 4/ 2	2445792.5	-6.38807	-16.42536	-7.10651	6.37323	-2.35639	-1.12265	19.00269	6.88702	248.75	-21.96
84/ 4/ 6	2445796.5	-6.37335	-16.43080	-7.10910	6.37515	-2.35140	-1.12049	19.00342	6.88673	248.80	-21.97
84/ 4/10	2445800.5	-6.35862	-16.43622	-7.11169	6.37706	-2.34640	-1.11833	19.00415	6.88645	248.85	-21.98
84/ 4/14	2445804.5	-6.34388	-16.44164	-7.11427	6.37896	-2.34141	-1.11617	19.00487	6.88616	248.90	-21.98
84/ 4/18	2445808.5	-6.32914	-16.44704	-7.11684	6.38086	-2.33642	-1.11400	19.00560	6.88587	248.95	-21.99
84/ 4/22	2445812.5	-6.31440	-16.45243	-7.11941	6.38275	-2.33142	-1.11184	19.00632	6.88558	249.00	-22.00
84/ 4/26	2445816.5	-6.29965	-16.45781	-7.12198	6.38464	-2.32642	-1.10968	19.00705	6.88529	249.05	-22.01
84/ 4/30	2445820.5	-6.28490	-16.46318	-7.12454	6.38652	-2.32143	-1.10752	19.00777	6.88500	249.11	-22.01
84/ 5/ 4	2445824.5	-6.27015	-16.46854	-7.12710	6.38839	-2.31643	-1.10535	19.00850	6.88471	249.16	-22.02
84/ 5/ 8	2445828.5	-6.25538	-16.47389	-7.12965	6.39026	-2.31143	-1.10319	19.00923	6.88441	249.21	-22.03
84/ 5/12	2445832.5	-6.24062	-16.47922	-7.13219	6.39212	-2.30643	-1.10103	19.00995	6.88412	249.26	-22.04
84/ 5/16	2445836.5	-6.22585	-16.48454	-7.13474	6.39398	-2.30143	-1.09886	19.01068	6.88383	249.31	-22.04
84/ 5/20	2445840.5	-6.21108	-16.48985	-7.13727	6.39584	-2.29643	-1.09670	19.01140	6.88354	249.36	-22.05
84/ 5/24	2445844.5	-6.19630	-16.49515	-7.13980	6.39769	-2.29143	-1.09453	19.01213	6.88324	249.41	-22.06
84/ 5/28	2445848.5	-6.18152	-16.50044	-7.14233	6.39953	-2.28643	-1.09237	19.01285	6.88295	249.46	-22.06
84/ 6/ 1	2445852.5	-6.16673	-16.50572	-7.14485	6.40137	-2.28143	-1.09020	19.01358	6.88266	249.51	-22.07
84/ 6/ 5	2445856.5	-6.15194	-16.51098	-7.14737	6.40320	-2.27643	-1.08804	19.01430	6.88237	249.56	-22.08
84/ 6/ 9	2445860.5	-6.13715	-16.51623	-7.14988	6.40503	-2.27143	-1.08587	19.01503	6.88207	249.62	-22.09
84/ 6/13	2445864.5	-6.12235	-16.52148	-7.15238	6.40686	-2.26643	-1.08371	19.01575	6.88178	249.67	-22.09
84/ 6/17	2445868.5	-6.10754	-16.52671	-7.15488	6.40868	-2.26143	-1.08154	19.01648	6.88149	249.72	-22.10
84/ 6/21	2445872.5	-6.09274	-16.53193	-7.15738	6.41049	-2.25643	-1.07938	19.01720	6.88120	249.77	-22.11
84/ 6/25	2445876.5	-6.07793	-16.53713	-7.15987	6.41231	-2.25143	-1.07722	19.01793	6.88091	249.82	-22.12
84/ 6/29	2445880.5	-6.06311	-16.54233	-7.16236	6.41412	-2.24642	-1.07505	19.01866	6.88063	249.87	-22.12
84/ 7/ 3	2445884.5	-6.04829	-16.54751	-7.16484	6.41592	-2.24142	-1.07288	19.01938	6.88034	249.92	-22.13
84/ 7/ 7	2445888.5	-6.03347	-16.55268	-7.16731	6.41773	-2.23641	-1.07072	19.02011	6.88006	249.97	-22.14
84/ 7/11	2445892.5	-6.01864	-16.55784	-7.16979	6.41953	-2.23140	-1.06855	19.02083	6.87977	250.02	-22.14
84/ 7/15	2445896.5	-6.00381	-16.56299	-7.17225	6.42132	-2.22639	-1.06638	19.02156	6.87949	250.08	-22.15
84/ 7/19	2445900.5	-5.98897	-16.56813	-7.17471	6.42311	-2.22138	-1.06421	19.02228	6.87920	250.13	-22.16
84/ 7/23	2445904.5	-5.97413	-16.57326	-7.17717	6.42489	-2.21636	-1.06204	19.02301	6.87891	250.18	-22.17
84/ 7/27	2445908.5	-5.95928	-16.57837	-7.17962	6.42667	-2.21134	-1.05986	19.02373	6.87862	250.23	-22.17
84/ 7/31	2445912.5	-5.94444	-16.58347	-7.18207	6.42845	-2.20633	-1.05769	19.02446	6.87833	250.28	-22.18
84/ 8/ 4	2445916.5	-5.92958	-16.58857	-7.18451	6.43021	-2.20131	-1.05552	19.02518	6.87805	250.33	-22.19
84/ 8/ 8	2445920.5	-5.91473	-16.59365	-7.18694	6.43198	-2.19628	-1.05334	19.02591	6.87775	250.38	-22.19
84/ 8/12	2445924.5	-5.89986	-16.59871	-7.18937	6.43373	-2.19126	-1.05117	19.02663	6.87746	250.43	-22.20
84/ 8/16	2445928.5	-5.88500	-16.60377	-7.19180	6.43549	-2.18623	-1.04899	19.02736	6.87717	250.48	-22.21
84/ 8/20	2445932.5	-5.87013	-16.60881	-7.19422	6.43723	-2.18121	-1.04682	19.02808	6.87688	250.53	-22.22
84/ 8/24	2445936.5	-5.85526	-16.61385	-7.19664	6.43897	-2.17618	-1.04464	19.02881	6.87658	250.59	-22.22
84/ 8/28	2445940.5	-5.84038	-16.61887	-7.19905	6.44071	-2.17115	-1.04246	19.02953	6.87629	250.64	-22.23
84/ 9/ 1	2445944.5	-5.82550	-16.62388	-7.20145	6.44243	-2.16612	-1.04028	19.03026	6.87599	250.69	-22.24
84/ 9/ 5	2445948.5	-5.81061	-16.62888	-7.20385	6.44415	-2.16109	-1.03810	19.03098	6.87569	250.74	-22.24
84/ 9/ 9	2445952.5	-5.79572	-16.63386	-7.20625	6.44587	-2.15606	-1.03592	19.03171	6.87539	250.79	-22.25
84/ 9/13	2445956.5	-5.78083	-16.63884	-7.20864	6.44758	-2.15103	-1.03374	19.03243	6.87509	250.84	-22.26
84/ 9/17	2445960.5	-5.76593	-16.64380	-7.21102	6.44929	-2.14599	-1.03156	19.03316	6.87479	250.89	-22.26
84/ 9/21	2445964.5	-5.75103	-16.64875	-7.21341	6.45099	-2.14096	-1.02938	19.03388	6.87449	250.94	-22.27
84/ 9/25	2445968.5	-5.73613	-16.65369	-7.21578	6.45268	-2.13593	-1.02720	19.03461	6.87419	250.99	-22.28

1.7 1 A.U.=149,599,000 KM.

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84/ 9/29	2445972.5	-5.72122	-16.65862	-7.21815	6.45437	-2.13089	-1.02502	19.03533	6.87388	251.05	-22.28
84/10/ 3	2445976.5	-5.70631	-16.66354	-7.22052	6.45606	-2.12585	-1.02284	19.03605	6.87358	251.10	-22.29
84/10/ 7	2445980.5	-5.69139	-16.66845	-7.22288	6.45774	-2.12082	-1.02065	19.03678	6.87328	251.15	-22.30
84/10/11	2445984.5	-5.67647	-16.67334	-7.22523	6.45941	-2.11578	-1.01847	19.03750	6.87297	251.20	-22.30
84/10/15	2445988.5	-5.66155	-16.67822	-7.22758	6.46107	-2.11074	-1.01628	19.03823	6.87266	251.25	-22.31
84/10/19	2445992.5	-5.64662	-16.68309	-7.22993	6.46273	-2.10570	-1.01410	19.03895	6.87236	251.30	-22.32
84/10/23	2445996.5	-5.63169	-16.68795	-7.23227	6.46439	-2.10065	-1.01191	19.03968	6.87205	251.35	-22.32
84/10/27	2446000.5	-5.61675	-16.69280	-7.23460	6.46603	-2.09561	-1.00973	19.04040	6.87173	251.40	-22.33
84/10/31	2446004.5	-5.60181	-16.69763	-7.23693	6.46767	-2.09057	-1.00754	19.04112	6.87142	251.45	-22.34
84/11/ 4	2446008.5	-5.58687	-16.70246	-7.23926	6.46931	-2.08553	-1.00536	19.04185	6.87111	251.51	-22.34
84/11/ 8	2446012.5	-5.57192	-16.70727	-7.24158	6.47094	-2.08049	-1.00317	19.04257	6.87080	251.56	-22.35
84/11/12	2446016.5	-5.55697	-16.71207	-7.24389	6.47256	-2.07545	-1.00099	19.04330	6.87048	251.61	-22.36
84/11/16	2446020.5	-5.54201	-16.71686	-7.24620	6.47418	-2.07041	-0.99880	19.04402	6.87017	251.66	-22.36
84/11/20	2446024.5	-5.52706	-16.72163	-7.24851	6.47579	-2.06537	-0.99661	19.04474	6.86985	251.71	-22.37
84/11/24	2446028.5	-5.51209	-16.72640	-7.25081	6.47740	-2.06033	-0.99443	19.04547	6.86954	251.76	-22.38
84/11/28	2446032.5	-5.49713	-16.73115	-7.25310	6.47900	-2.05529	-0.99224	19.04619	6.86922	251.81	-22.38
84/12/ 2	2446036.5	-5.48216	-16.73590	-7.25539	6.48060	-2.05026	-0.99006	19.04692	6.86891	251.86	-22.39
84/12/ 6	2446040.5	-5.46719	-16.74063	-7.25768	6.48219	-2.04522	-0.98787	19.04764	6.86859	251.91	-22.40
84/12/10	2446044.5	-5.45221	-16.74535	-7.25996	6.48377	-2.04019	-0.98569	19.04836	6.86828	251.96	-22.40
84/12/14	2446048.5	-5.43723	-16.75005	-7.26223	6.48536	-2.03515	-0.98351	19.04909	6.86797	252.02	-22.41
84/12/18	2446052.5	-5.42224	-16.75475	-7.26450	6.48694	-2.03012	-0.98133	19.04981	6.86766	252.07	-22.42
84/12/22	2446056.5	-5.40726	-16.75943	-7.26677	6.48851	-2.02509	-0.97914	19.05054	6.86735	252.12	-22.42
84/12/26	2446060.5	-5.39227	-16.76411	-7.26903	6.49009	-2.02005	-0.97696	19.05126	6.86705	252.17	-22.43
84/12/30	2446064.5	-5.37727	-16.76877	-7.27128	6.49166	-2.01502	-0.97478	19.05198	6.86674	252.22	-22.44
85/ 1/ 3	2446068.5	-5.36227	-16.77342	-7.27353	6.49322	-2.00998	-0.97259	19.05271	6.86644	252.27	-22.44
85/ 1/ 7	2446072.5	-5.34727	-16.77805	-7.27577	6.49479	-2.00495	-0.97041	19.05343	6.86613	252.32	-22.45
85/ 1/11	2446076.5	-5.33226	-16.78268	-7.27801	6.49634	-1.99991	-0.96822	19.05415	6.86583	252.37	-22.46
85/ 1/15	2446080.5	-5.31725	-16.78729	-7.28025	6.49790	-1.99487	-0.96604	19.05488	6.86553	252.42	-22.46
85/ 1/19	2446084.5	-5.30224	-16.79190	-7.28248	6.49945	-1.98984	-0.96385	19.05560	6.86522	252.48	-22.47
85/ 1/23	2446088.5	-5.28722	-16.79649	-7.28470	6.50099	-1.98480	-0.96167	19.05633	6.86492	252.53	-22.47
85/ 1/27	2446092.5	-5.27220	-16.80107	-7.28692	6.50254	-1.97976	-0.95948	19.05705	6.86462	252.58	-22.48
85/ 1/31	2446096.5	-5.25718	-16.80563	-7.28913	6.50408	-1.97472	-0.95730	19.05777	6.86432	252.63	-22.49
85/ 2/ 4	2446100.5	-5.24215	-16.81019	-7.29134	6.50561	-1.96968	-0.95511	19.05850	6.86402	252.68	-22.49
85/ 2/ 8	2446104.5	-5.22712	-16.81474	-7.29355	6.50714	-1.96464	-0.95292	19.05922	6.86373	252.73	-22.50
85/ 2/12	2446108.5	-5.21209	-16.81927	-7.29575	6.50867	-1.95959	-0.95073	19.05995	6.86343	252.78	-22.51
85/ 2/16	2446112.5	-5.19705	-16.82379	-7.29794	6.51019	-1.95455	-0.94855	19.06067	6.86313	252.83	-22.51
85/ 2/20	2446116.5	-5.18201	-16.82830	-7.30013	6.51171	-1.94951	-0.94636	19.06139	6.86283	252.88	-22.52
85/ 2/24	2446120.5	-5.16696	-16.83280	-7.30231	6.51322	-1.94446	-0.94417	19.06212	6.86254	252.94	-22.52
85/ 2/28	2446124.5	-5.15191	-16.83728	-7.30449	6.51473	-1.93941	-0.94198	19.06284	6.86224	252.99	-22.53
85/ 3/ 4	2446128.5	-5.13686	-16.84176	-7.30666	6.51623	-1.93436	-0.93979	19.06356	6.86194	253.04	-22.54
85/ 3/ 8	2446132.5	-5.12181	-16.84622	-7.30883	6.51773	-1.92931	-0.93760	19.06429	6.86165	253.09	-22.54
85/ 3/12	2446136.5	-5.10675	-16.85067	-7.31100	6.51923	-1.92426	-0.93541	19.06501	6.86135	253.14	-22.55
85/ 3/16	2446140.5	-5.09169	-16.85511	-7.31315	6.52073	-1.91921	-0.93321	19.06574	6.86106	253.19	-22.56
85/ 3/20	2446144.5	-5.07662	-16.85954	-7.31531	6.52222	-1.91416	-0.93102	19.06646	6.86077	253.24	-22.56
85/ 3/24	2446148.5	-5.06155	-16.86396	-7.31746	6.52370	-1.90910	-0.92883	19.06718	6.86047	253.29	-22.57

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85/ 3/28	2446152.5	-5.04648	-16.86836	-7.31960	6.52518	-1.90404	-0.92663	19.06791	6.86018	253.34	-22.57
85/ 4/ 1	2446156.5	-5.03140	-16.87275	-7.32174	6.52666	-1.89898	-0.92444	19.06863	6.85988	253.40	-22.58
85/ 4/ 5	2446160.5	-5.01632	-16.87713	-7.32387	6.52813	-1.89391	-0.92224	19.06935	6.85959	253.45	-22.59
85/ 4/ 9	2446164.5	-5.00124	-16.88150	-7.32600	6.52960	-1.88885	-0.92004	19.07008	6.85929	253.50	-22.59
85/ 4/13	2446168.5	-4.98615	-16.88586	-7.32812	6.53106	-1.88378	-0.91784	19.07080	6.85899	253.55	-22.60
85/ 4/17	2446172.5	-4.97106	-16.89021	-7.33024	6.53251	-1.87871	-0.91564	19.07152	6.85869	253.60	-22.60
85/ 4/21	2446176.5	-4.95597	-16.89454	-7.33235	6.53396	-1.87363	-0.91344	19.07225	6.85839	253.65	-22.61
85/ 4/25	2446180.5	-4.94088	-16.89886	-7.33446	6.53540	-1.86856	-0.91123	19.07297	6.85808	253.70	-22.62
85/ 4/29	2446184.5	-4.92578	-16.90317	-7.33656	6.53683	-1.86348	-0.90903	19.07369	6.85778	253.75	-22.62
85/ 5/ 3	2446188.5	-4.91067	-16.90747	-7.33866	6.53826	-1.85841	-0.90683	19.07441	6.85747	253.80	-22.63
85/ 5/ 7	2446192.5	-4.89557	-16.91176	-7.34075	6.53968	-1.85333	-0.90462	19.07514	6.85716	253.86	-22.63
85/ 5/11	2446196.5	-4.88046	-16.91604	-7.34284	6.54110	-1.84825	-0.90242	19.07586	6.85685	253.91	-22.64
85/ 5/15	2446200.5	-4.86534	-16.92030	-7.34492	6.54251	-1.84317	-0.90021	19.07658	6.85653	253.96	-22.65
85/ 5/19	2446204.5	-4.85023	-16.92455	-7.34700	6.54391	-1.83809	-0.89800	19.07731	6.85622	254.01	-22.65
85/ 5/23	2446208.5	-4.83511	-16.92879	-7.34907	6.54530	-1.83301	-0.89580	19.07803	6.85590	254.06	-22.66
85/ 5/27	2446212.5	-4.81999	-16.93302	-7.35114	6.54669	-1.82793	-0.89359	19.07875	6.85558	254.11	-22.66
85/ 5/31	2446216.5	-4.80486	-16.93724	-7.35320	6.54807	-1.82284	-0.89138	19.07947	6.85526	254.16	-22.67
85/ 6/ 4	2446220.5	-4.78973	-16.94144	-7.35526	6.54944	-1.81776	-0.88918	19.08020	6.85493	254.21	-22.67
85/ 6/ 8	2446224.5	-4.77460	-16.94564	-7.35731	6.55081	-1.81269	-0.88697	19.08092	6.85461	254.26	-22.68
85/ 6/12	2446228.5	-4.75947	-16.94982	-7.35935	6.55218	-1.80761	-0.88476	19.08164	6.85429	254.32	-22.69
85/ 6/16	2446232.5	-4.74433	-16.95399	-7.36140	6.55354	-1.80253	-0.88256	19.08236	6.85397	254.37	-22.69
85/ 6/20	2446236.5	-4.72919	-16.95815	-7.36343	6.55489	-1.79745	-0.88035	19.08308	6.85364	254.42	-22.70
85/ 6/24	2446240.5	-4.71404	-16.96229	-7.36546	6.55624	-1.79237	-0.87814	19.08381	6.85332	254.47	-22.70
85/ 6/28	2446244.5	-4.69889	-16.96643	-7.36749	6.55758	-1.78728	-0.87594	19.08453	6.85299	254.52	-22.71
85/ 7/ 2	2446248.5	-4.68374	-16.97055	-7.36951	6.55892	-1.78220	-0.87373	19.08525	6.85267	254.57	-22.71
85/ 7/ 6	2446252.5	-4.66859	-16.97466	-7.37153	6.56025	-1.77712	-0.87152	19.08597	6.85234	254.62	-22.72
85/ 7/10	2446256.5	-4.65343	-16.97876	-7.37354	6.56157	-1.77204	-0.86931	19.08669	6.85201	254.67	-22.73
85/ 7/14	2446260.5	-4.63827	-16.98285	-7.37554	6.56289	-1.76696	-0.86710	19.08741	6.85168	254.72	-22.73
85/ 7/18	2446264.5	-4.62311	-16.98693	-7.37754	6.56420	-1.76188	-0.86490	19.08814	6.85135	254.78	-22.74
85/ 7/22	2446268.5	-4.60794	-16.99099	-7.37954	6.56551	-1.75680	-0.86269	19.08886	6.85102	254.83	-22.74
85/ 7/26	2446272.5	-4.59277	-16.99504	-7.38153	6.56681	-1.75172	-0.86048	19.08958	6.85069	254.88	-22.75
85/ 7/30	2446276.5	-4.57760	-16.99908	-7.38351	6.56810	-1.74665	-0.85827	19.09030	6.85036	254.93	-22.75
85/ 8/ 3	2446280.5	-4.56243	-17.00311	-7.38549	6.56939	-1.74157	-0.85607	19.09102	6.85002	254.98	-22.76
85/ 8/ 7	2446284.5	-4.54725	-17.00713	-7.38747	6.57068	-1.73649	-0.85386	19.09174	6.84969	255.03	-22.76
85/ 8/11	2446288.5	-4.53207	-17.01114	-7.38944	6.57196	-1.73142	-0.85166	19.09247	6.84936	255.08	-22.77
85/ 8/15	2446292.5	-4.51689	-17.01513	-7.39140	6.57323	-1.72634	-0.84945	19.09319	6.84903	255.13	-22.78
85/ 8/19	2446296.5	-4.50170	-17.01911	-7.39336	6.57450	-1.72127	-0.84724	19.09391	6.84870	255.18	-22.78
85/ 8/23	2446300.5	-4.48651	-17.02308	-7.39532	6.57576	-1.71620	-0.84504	19.09463	6.84836	255.24	-22.79
85/ 8/27	2446304.5	-4.47132	-17.02704	-7.39727	6.57702	-1.71113	-0.84283	19.09535	6.84803	255.29	-22.79
85/ 8/31	2446308.5	-4.45612	-17.03099	-7.39921	6.57828	-1.70606	-0.84063	19.09607	6.84770	255.34	-22.80
85/ 9/ 4	2446312.5	-4.44092	-17.03493	-7.40115	6.57953	-1.70099	-0.83843	19.09679	6.84738	255.39	-22.80
85/ 9/ 8	2446316.5	-4.42572	-17.03885	-7.40309	6.58078	-1.69592	-0.83623	19.09752	6.84705	255.44	-22.81
85/ 9/12	2446320.5	-4.41052	-17.04276	-7.40502	6.58203	-1.69086	-0.83402	19.09824	6.84673	255.49	-22.81
85/ 9/16	2446324.5	-4.39531	-17.04666	-7.40694	6.58327	-1.68579	-0.83182	19.09896	6.84641	255.54	-22.82
85/ 9/20	2446328.5	-4.38010	-17.05055	-7.40886	6.58452	-1.68072	-0.82962	19.09968	6.84609	255.59	-22.82

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85/ 9/24	2446332.5	-4.36489	-17.05443	-7.41077	6.58575	-1.67565	-0.82741	19.10040	6.84577	255.64	-22.83
85/ 9/28	2446336.5	-4.34967	-17.05829	-7.41268	6.58698	-1.67058	-0.82521	19.10112	6.84545	255.70	-22.83
85/10/ 2	2446340.5	-4.33445	-17.06215	-7.41459	6.58821	-1.66550	-0.82300	19.10184	6.84513	255.75	-22.84
85/10/ 6	2446344.5	-4.31923	-17.06599	-7.41649	6.58944	-1.66043	-0.82080	19.10256	6.84481	255.80	-22.85
85/10/10	2446348.5	-4.30401	-17.06982	-7.41838	6.59066	-1.65536	-0.81859	19.10328	6.84449	255.85	-22.85
85/10/14	2446352.5	-4.28878	-17.07364	-7.42027	6.59187	-1.65028	-0.81639	19.10401	6.84417	255.90	-22.86
85/10/18	2446356.5	-4.27355	-17.07744	-7.42215	6.59308	-1.64521	-0.81418	19.10473	6.84385	255.95	-22.86
85/10/22	2446360.5	-4.25832	-17.08124	-7.42403	6.59429	-1.64013	-0.81198	19.10545	6.84353	256.00	-22.87
85/10/26	2446364.5	-4.24308	-17.08502	-7.42590	6.59549	-1.63506	-0.80977	19.10617	6.84322	256.05	-22.87
85/10/30	2446368.5	-4.22784	-17.08879	-7.42777	6.59669	-1.62998	-0.80756	19.10689	6.84290	256.10	-22.88
85/11/ 3	2446372.5	-4.21260	-17.09255	-7.42963	6.59788	-1.62490	-0.80535	19.10761	6.84258	256.15	-22.88
85/11/ 7	2446376.5	-4.19736	-17.09630	-7.43149	6.59906	-1.61982	-0.80314	19.10833	6.84226	256.21	-22.89
85/11/11	2446380.5	-4.18211	-17.10004	-7.43334	6.60024	-1.61474	-0.80094	19.10905	6.84194	256.26	-22.89
85/11/15	2446384.5	-4.16686	-17.10376	-7.43519	6.60142	-1.60966	-0.79873	19.10977	6.84162	256.31	-22.90
85/11/19	2446388.5	-4.15161	-17.10747	-7.43704	6.60259	-1.60458	-0.79652	19.11049	6.84130	256.36	-22.90
85/11/23	2446392.5	-4.13636	-17.11117	-7.43887	6.60376	-1.59950	-0.79431	19.11122	6.84097	256.41	-22.91
85/11/27	2446396.5	-4.12110	-17.11486	-7.44071	6.60492	-1.59442	-0.79210	19.11194	6.84065	256.46	-22.91
85/12/ 1	2446400.5	-4.10584	-17.11854	-7.44253	6.60608	-1.58934	-0.78989	19.11266	6.84033	256.51	-22.92
85/12/ 5	2446404.5	-4.09058	-17.12221	-7.44435	6.60723	-1.58426	-0.78768	19.11338	6.84001	256.56	-22.92
85/12/ 9	2446408.5	-4.07531	-17.12586	-7.44617	6.60838	-1.57918	-0.78547	19.11410	6.83969	256.61	-22.93
85/12/13	2446412.5	-4.06005	-17.12950	-7.44798	6.60952	-1.57409	-0.78326	19.11482	6.83937	256.67	-22.93
85/12/17	2446416.5	-4.04477	-17.13313	-7.44979	6.61066	-1.56901	-0.78105	19.11554	6.83905	256.72	-22.94
85/12/21	2446420.5	-4.02950	-17.13675	-7.45159	6.61180	-1.56392	-0.77883	19.11626	6.83873	256.77	-22.94
85/12/25	2446424.5	-4.01423	-17.14036	-7.45339	6.61292	-1.55884	-0.77662	19.11698	6.83841	256.82	-22.95
85/12/29	2446428.5	-3.99895	-17.14395	-7.45518	6.61405	-1.55375	-0.77441	19.11770	6.83809	256.87	-22.95
86/ 1/ 2	2446432.5	-3.98367	-17.14754	-7.45697	6.61516	-1.54866	-0.77219	19.11842	6.83776	256.92	-22.96
86/ 1/ 6	2446436.5	-3.96838	-17.15111	-7.45875	6.61627	-1.54357	-0.76998	19.11914	6.83744	256.97	-22.96
86/ 1/10	2446440.5	-3.95310	-17.15467	-7.46052	6.61738	-1.53848	-0.76776	19.11986	6.83711	257.02	-22.97
86/ 1/14	2446444.5	-3.93781	-17.15822	-7.46230	6.61848	-1.53339	-0.76555	19.12058	6.83678	257.07	-22.97
86/ 1/18	2446448.5	-3.92252	-17.16175	-7.46406	6.61957	-1.52831	-0.76333	19.12130	6.83645	257.13	-22.98
86/ 1/22	2446452.5	-3.90722	-17.16528	-7.46582	6.62066	-1.52322	-0.76112	19.12202	6.83612	257.18	-22.98
86/ 1/26	2446456.5	-3.89193	-17.16879	-7.46758	6.62174	-1.51813	-0.75890	19.12274	6.83579	257.23	-22.99
86/ 1/30	2446460.5	-3.87663	-17.17229	-7.46933	6.62281	-1.51304	-0.75669	19.12346	6.83546	257.28	-22.99
86/ 2/ 3	2446464.5	-3.86133	-17.17578	-7.47107	6.62388	-1.50795	-0.75447	19.12418	6.83513	257.33	-23.00
86/ 2/ 7	2446468.5	-3.84602	-17.17926	-7.47282	6.62495	-1.50287	-0.75226	19.12490	6.83479	257.38	-23.00
86/ 2/11	2446472.5	-3.83072	-17.18273	-7.47455	6.62601	-1.49778	-0.75004	19.12562	6.83446	257.43	-23.01
86/ 2/15	2446476.5	-3.81541	-17.18618	-7.47628	6.62706	-1.49269	-0.74783	19.12634	6.83413	257.48	-23.01
86/ 2/19	2446480.5	-3.80010	-17.18962	-7.47801	6.62811	-1.48761	-0.74562	19.12706	6.83379	257.53	-23.01
86/ 2/23	2446484.5	-3.78479	-17.19305	-7.47973	6.62915	-1.48253	-0.74340	19.12778	6.83346	257.59	-23.02
86/ 2/27	2446488.5	-3.76947	-17.19647	-7.48144	6.63019	-1.47745	-0.74119	19.12850	6.83313	257.64	-23.02
86/ 3/ 3	2446492.5	-3.75415	-17.19988	-7.48315	6.63123	-1.47237	-0.73898	19.12922	6.83280	257.69	-23.03
86/ 3/ 7	2446496.5	-3.73883	-17.20328	-7.48485	6.63226	-1.46729	-0.73677	19.12994	6.83247	257.74	-23.03
86/ 3/11	2446500.5	-3.72351	-17.20666	-7.48655	6.63329	-1.46221	-0.73455	19.13066	6.83214	257.79	-23.04
86/ 3/15	2446504.5	-3.70818	-17.21003	-7.48825	6.63431	-1.45712	-0.73234	19.13138	6.83181	257.84	-23.04
86/ 3/19	2446508.5	-3.69286	-17.21339	-7.48994	6.63533	-1.45204	-0.73013	19.13210	6.83148	257.89	-23.05

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86/ 3/23	2446512.5	-3.67753	-17.21674	-7.49162	6.63635	-1.44696	-0.72792	19.13282	6.83115	257.94	-23.05
86/ 3/27	2446516.5	-3.66219	-17.22008	-7.49330	6.63736	-1.44188	-0.72570	19.13354	6.83083	257.99	-23.06
86/ 3/31	2446520.5	-3.64686	-17.22340	-7.49498	6.63837	-1.43680	-0.72349	19.13426	6.83050	258.04	-23.06
86/ 4/ 4	2446524.5	-3.63152	-17.22672	-7.49664	6.63937	-1.43172	-0.72128	19.13498	6.83017	258.10	-23.07
86/ 4/ 8	2446528.5	-3.61618	-17.23002	-7.49831	6.64037	-1.42664	-0.71906	19.13570	6.82985	258.15	-23.07
86/ 4/12	2446532.5	-3.60084	-17.23331	-7.49997	6.64136	-1.42156	-0.71685	19.13642	6.82952	258.20	-23.07
86/ 4/16	2446536.5	-3.58550	-17.23659	-7.50162	6.64235	-1.41647	-0.71464	19.13714	6.82919	258.25	-23.08
86/ 4/20	2446540.5	-3.57015	-17.23985	-7.50327	6.64333	-1.41139	-0.71242	19.13786	6.82887	258.30	-23.08
86/ 4/24	2446544.5	-3.55480	-17.24311	-7.50491	6.64431	-1.40631	-0.71021	19.13858	6.82854	258.35	-23.09
86/ 4/28	2446548.5	-3.53945	-17.24635	-7.50655	6.64529	-1.40123	-0.70800	19.13929	6.82822	258.40	-23.09
86/ 5/ 2	2446552.5	-3.52410	-17.24958	-7.50818	6.64626	-1.39615	-0.70578	19.14001	6.82789	258.45	-23.10
86/ 5/ 6	2446556.5	-3.50874	-17.25280	-7.50981	6.64723	-1.39106	-0.70357	19.14073	6.82757	258.50	-23.10
86/ 5/10	2446560.5	-3.49339	-17.25601	-7.51143	6.64819	-1.38598	-0.70136	19.14145	6.82724	258.56	-23.10
86/ 5/14	2446564.5	-3.47803	-17.25921	-7.51305	6.64915	-1.38090	-0.69914	19.14217	6.82692	258.61	-23.11
86/ 5/18	2446568.5	-3.46267	-17.26239	-7.51466	6.65010	-1.37582	-0.69693	19.14289	6.82660	258.66	-23.11
86/ 5/22	2446572.5	-3.44730	-17.26556	-7.51627	6.65105	-1.37073	-0.69472	19.14361	6.82627	258.71	-23.12
86/ 5/26	2446576.5	-3.43194	-17.26872	-7.51787	6.65199	-1.36565	-0.69250	19.14433	6.82595	258.76	-23.12
86/ 5/30	2446580.5	-3.41657	-17.27187	-7.51947	6.65294	-1.36057	-0.69029	19.14505	6.82563	258.81	-23.13
86/ 6/ 3	2446584.5	-3.40120	-17.27501	-7.52106	6.65388	-1.35548	-0.68807	19.14577	6.82531	258.86	-23.13
86/ 6/ 7	2446588.5	-3.38582	-17.27813	-7.52265	6.65481	-1.35040	-0.68586	19.14649	6.82499	258.91	-23.14
86/ 6/11	2446592.5	-3.37045	-17.28125	-7.52423	6.65574	-1.34531	-0.68364	19.14721	6.82467	258.96	-23.14
86/ 6/15	2446596.5	-3.35507	-17.28435	-7.52581	6.65667	-1.34022	-0.68143	19.14793	6.82435	259.01	-23.14
86/ 6/19	2446600.5	-3.33969	-17.28744	-7.52738	6.65759	-1.33513	-0.67921	19.14864	6.82403	259.07	-23.15
86/ 6/23	2446604.5	-3.32431	-17.29052	-7.52895	6.65850	-1.33004	-0.67699	19.14936	6.82371	259.12	-23.15
86/ 6/27	2446608.5	-3.30893	-17.29359	-7.53051	6.65941	-1.32494	-0.67477	19.15008	6.82338	259.17	-23.16
86/ 7/ 1	2446612.5	-3.29354	-17.29664	-7.53206	6.66032	-1.31985	-0.67255	19.15080	6.82306	259.22	-23.16
86/ 7/ 5	2446616.5	-3.27815	-17.29968	-7.53362	6.66121	-1.31475	-0.67033	19.15152	6.82273	259.27	-23.16
86/ 7/ 9	2446620.5	-3.26277	-17.30272	-7.53516	6.66211	-1.30966	-0.66811	19.15224	6.82241	259.32	-23.17
86/ 7/13	2446624.5	-3.24737	-17.30573	-7.53670	6.66299	-1.30456	-0.66589	19.15296	6.82208	259.37	-23.17
86/ 7/17	2446628.5	-3.23198	-17.30874	-7.53824	6.66387	-1.29946	-0.66367	19.15368	6.82175	259.42	-23.18
86/ 7/21	2446632.5	-3.21658	-17.31174	-7.53977	6.66474	-1.29436	-0.66145	19.15439	6.82141	259.47	-23.18
86/ 7/25	2446636.5	-3.20119	-17.31472	-7.54129	6.66561	-1.28927	-0.65922	19.15511	6.82108	259.53	-23.18
86/ 7/29	2446640.5	-3.18579	-17.31770	-7.54281	6.66647	-1.28417	-0.65700	19.15583	6.82074	259.58	-23.19
86/ 8/ 2	2446644.5	-3.17039	-17.32066	-7.54433	6.66732	-1.27907	-0.65478	19.15655	6.82041	259.63	-23.19
86/ 8/ 6	2446648.5	-3.15498	-17.32361	-7.54584	6.66817	-1.27397	-0.65256	19.15727	6.82007	259.68	-23.20
86/ 8/10	2446652.5	-3.13958	-17.32654	-7.54735	6.66901	-1.26888	-0.65033	19.15799	6.81973	259.73	-23.20
86/ 8/14	2446656.5	-3.12417	-17.32947	-7.54884	6.66984	-1.26378	-0.64811	19.15870	6.81939	259.78	-23.20
86/ 8/18	2446660.5	-3.10876	-17.33238	-7.55034	6.67067	-1.25869	-0.64589	19.15942	6.81904	259.83	-23.21
86/ 8/22	2446664.5	-3.09335	-17.33528	-7.55183	6.67150	-1.25359	-0.64367	19.16014	6.81870	259.88	-23.21
86/ 8/26	2446668.5	-3.07793	-17.33817	-7.55331	6.67232	-1.24850	-0.64145	19.16086	6.81836	259.93	-23.22
86/ 8/30	2446672.5	-3.06252	-17.34105	-7.55479	6.67313	-1.24341	-0.63923	19.16158	6.81802	259.98	-23.22
86/ 9/ 3	2446676.5	-3.04710	-17.34392	-7.55627	6.67394	-1.23832	-0.63701	19.16229	6.81767	260.04	-23.22
86/ 9/ 7	2446680.5	-3.03168	-17.34677	-7.55774	6.67474	-1.23323	-0.63479	19.16301	6.81733	260.09	-23.23
86/ 9/11	2446684.5	-3.01626	-17.34962	-7.55920	6.67554	-1.22814	-0.63257	19.16373	6.81699	260.14	-23.23
86/ 9/15	2446688.5	-3.00084	-17.35245	-7.56066	6.67633	-1.22305	-0.63035	19.16445	6.81664	260.19	-23.24

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86/ 9/19	2446692.5	-2.98542	-17.35527	-7.56211	6.67712	-1.21796	-0.62813	19.16517	6.81630	260.24	-23.24
86/ 9/23	2446696.5	-2.96999	-17.35808	-7.56356	6.67790	-1.21287	-0.62591	19.16588	6.81595	260.29	-23.24
86/ 9/27	2446700.5	-2.95456	-17.36087	-7.56500	6.67867	-1.20779	-0.62370	19.16660	6.81560	260.34	-23.25
86/10/ 1	2446704.5	-2.93913	-17.36366	-7.56644	6.67944	-1.20270	-0.62148	19.16732	6.81525	260.39	-23.25
86/10/ 5	2446708.5	-2.92370	-17.36643	-7.56788	6.68021	-1.19762	-0.61926	19.16804	6.81491	260.44	-23.25
86/10/ 9	2446712.5	-2.90827	-17.36919	-7.56930	6.68097	-1.19254	-0.61704	19.16875	6.81456	260.49	-23.26
86/10/13	2446716.5	-2.89283	-17.37194	-7.57073	6.68172	-1.18746	-0.61483	19.16947	6.81421	260.55	-23.26
86/10/17	2446720.5	-2.87739	-17.37468	-7.57214	6.68247	-1.18238	-0.61261	19.17019	6.81386	260.60	-23.27
86/10/21	2446724.5	-2.86196	-17.37740	-7.57356	6.68321	-1.17730	-0.61039	19.17091	6.81351	260.65	-23.27
86/10/25	2446728.5	-2.84652	-17.38012	-7.57496	6.68395	-1.17223	-0.60818	19.17162	6.81317	260.70	-23.27
86/10/29	2446732.5	-2.83107	-17.38282	-7.57637	6.68469	-1.16715	-0.60597	19.17234	6.81282	260.75	-23.28
86/11/ 2	2446736.5	-2.81563	-17.38551	-7.57776	6.68542	-1.16208	-0.60375	19.17306	6.81247	260.80	-23.28
86/11/ 6	2446740.5	-2.80018	-17.38819	-7.57916	6.68615	-1.15701	-0.60154	19.17378	6.81213	260.85	-23.28
86/11/10	2446744.5	-2.78474	-17.39085	-7.58054	6.68687	-1.15194	-0.59933	19.17449	6.81178	260.90	-23.29
86/11/14	2446748.5	-2.76929	-17.39351	-7.58193	6.68759	-1.14688	-0.59712	19.17521	6.81144	260.95	-23.29
86/11/18	2446752.5	-2.75384	-17.39615	-7.58330	6.68831	-1.14182	-0.59491	19.17593	6.81110	261.00	-23.29
86/11/22	2446756.5	-2.73839	-17.39878	-7.58467	6.68902	-1.13675	-0.59270	19.17665	6.81076	261.06	-23.30
86/11/26	2446760.5	-2.72293	-17.40141	-7.58604	6.68973	-1.13169	-0.59049	19.17736	6.81043	261.11	-23.30
86/11/30	2446764.5	-2.70748	-17.40401	-7.58740	6.69045	-1.12663	-0.58828	19.17808	6.81010	261.16	-23.31
86/12/ 4	2446768.5	-2.69202	-17.40661	-7.58876	6.69115	-1.12157	-0.58608	19.17880	6.80977	261.21	-23.31
86/12/ 8	2446772.5	-2.67656	-17.40920	-7.59011	6.69186	-1.11650	-0.58387	19.17952	6.80944	261.26	-23.31
86/12/12	2446776.5	-2.66110	-17.41177	-7.59146	6.69256	-1.11144	-0.58166	19.18023	6.80911	261.31	-23.32
86/12/16	2446780.5	-2.64564	-17.41433	-7.59280	6.69326	-1.10638	-0.57945	19.18095	6.80878	261.36	-23.32
86/12/20	2446784.5	-2.63018	-17.41688	-7.59413	6.69395	-1.10131	-0.57724	19.18167	6.80846	261.41	-23.32
86/12/24	2446788.5	-2.61471	-17.41942	-7.59547	6.69464	-1.09625	-0.57503	19.18239	6.80813	261.46	-23.33
86/12/28	2446792.5	-2.59925	-17.42195	-7.59679	6.69533	-1.09119	-0.57282	19.18310	6.80781	261.51	-23.33

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86/12/16	2446780.5	-2.64564	-18.99758	-0.03708	6.69326	-1.24558	-0.09140	19.18095	6.80878	262.07	-0.11
86/12/20	2446784.5	-2.63018	-19.00045	-0.03729	6.69395	-1.24006	-0.09139	19.18167	6.80846	262.12	-0.11
86/12/24	2446788.5	-2.61471	-19.00331	-0.03750	6.69464	-1.23454	-0.09138	19.18239	6.80813	262.17	-0.11
86/12/28	2446792.5	-2.59925	-19.00616	-0.03771	6.69533	-1.22901	-0.09136	19.18310	6.80781	262.21	-0.11
87/ 1/ 1	2446796.5	-2.58378	-19.00899	-0.03792	6.69601	-1.22348	-0.09135	19.18382	6.80749	262.26	-0.11
87/ 1/ 5	2446800.5	-2.56831	-19.01181	-0.03813	6.69670	-1.21796	-0.09134	19.18454	6.80716	262.31	-0.11
87/ 1/ 9	2446804.5	-2.55284	-19.01462	-0.03835	6.69737	-1.21243	-0.09133	19.18526	6.80684	262.35	-0.11
87/ 1/13	2446808.5	-2.53736	-19.01741	-0.03856	6.69804	-1.20690	-0.09131	19.18598	6.80652	262.40	-0.12
87/ 1/17	2446812.5	-2.52189	-19.02019	-0.03877	6.69871	-1.20138	-0.09130	19.18669	6.80620	262.45	-0.12
87/ 1/21	2446816.5	-2.50641	-19.02296	-0.03898	6.69938	-1.19585	-0.09129	19.18741	6.80588	262.49	-0.12
87/ 1/25	2446820.5	-2.49094	-19.02572	-0.03919	6.70004	-1.19032	-0.09128	19.18813	6.80556	262.54	-0.12
87/ 1/29	2446824.5	-2.47546	-19.02846	-0.03940	6.70069	-1.18479	-0.09126	19.18885	6.80524	262.59	-0.12
87/ 2/ 2	2446828.5	-2.45998	-19.03119	-0.03961	6.70134	-1.17926	-0.09125	19.18956	6.80492	262.63	-0.12
87/ 2/ 6	2446832.5	-2.44449	-19.03391	-0.03982	6.70199	-1.17373	-0.09124	19.19028	6.80460	262.68	-0.12
87/ 2/10	2446836.5	-2.42901	-19.03662	-0.04003	6.70263	-1.16820	-0.09122	19.19100	6.80428	262.73	-0.12
87/ 2/14	2446840.5	-2.41353	-19.03931	-0.04024	6.70327	-1.16267	-0.09121	19.19172	6.80396	262.78	-0.12
87/ 2/18	2446844.5	-2.39804	-19.04199	-0.04045	6.70390	-1.15713	-0.09120	19.19243	6.80365	262.82	-0.12
87/ 2/22	2446848.5	-2.38255	-19.04465	-0.04066	6.70454	-1.15160	-0.09119	19.19315	6.80333	262.87	-0.12
87/ 2/26	2446852.5	-2.36706	-19.04731	-0.04088	6.70516	-1.14607	-0.09117	19.19387	6.80301	262.92	-0.12
87/ 3/ 2	2446856.5	-2.35157	-19.04995	-0.04109	6.70578	-1.14053	-0.09116	19.19459	6.80270	262.96	-0.12
87/ 3/ 6	2446860.5	-2.33608	-19.05258	-0.04130	6.70640	-1.13499	-0.09115	19.19530	6.80238	263.01	-0.12
87/ 3/10	2446864.5	-2.32058	-19.05519	-0.04151	6.70701	-1.12945	-0.09113	19.19602	6.80206	263.06	-0.12
87/ 3/14	2446868.5	-2.30509	-19.05780	-0.04172	6.70762	-1.12391	-0.09112	19.19674	6.80174	263.10	-0.12
87/ 3/18	2446872.5	-2.28959	-19.06039	-0.04193	6.70822	-1.11837	-0.09110	19.19746	6.80141	263.15	-0.13
87/ 3/22	2446876.5	-2.27410	-19.06296	-0.04214	6.70881	-1.11283	-0.09109	19.19817	6.80109	263.20	-0.13
87/ 3/26	2446880.5	-2.25860	-19.06553	-0.04235	6.70940	-1.10729	-0.09108	19.19889	6.80077	263.24	-0.13
87/ 3/30	2446884.5	-2.24310	-19.06808	-0.04256	6.70998	-1.10175	-0.09106	19.19961	6.80044	263.29	-0.13
87/ 4/ 3	2446888.5	-2.22759	-19.07062	-0.04277	6.71056	-1.09621	-0.09105	19.20033	6.80011	263.34	-0.13
87/ 4/ 7	2446892.5	-2.21209	-19.07314	-0.04298	6.71113	-1.09066	-0.09103	19.20104	6.79978	263.38	-0.13
87/ 4/11	2446896.5	-2.19659	-19.07566	-0.04319	6.71169	-1.08512	-0.09102	19.20176	6.79945	263.43	-0.13
87/ 4/15	2446900.5	-2.18108	-19.07816	-0.04340	6.71225	-1.07958	-0.09100	19.20248	6.79912	263.48	-0.13
87/ 4/19	2446904.5	-2.16557	-19.08065	-0.04361	6.71280	-1.07404	-0.09099	19.20319	6.79879	263.52	-0.13
87/ 4/23	2446908.5	-2.15006	-19.08312	-0.04382	6.71335	-1.06850	-0.09097	19.20391	6.79846	263.57	-0.13
87/ 4/27	2446912.5	-2.13455	-19.08558	-0.04403	6.71389	-1.06297	-0.09096	19.20463	6.79812	263.62	-0.13
87/ 5/ 1	2446916.5	-2.11904	-19.08803	-0.04424	6.71442	-1.05743	-0.09094	19.20535	6.79779	263.67	-0.13
87/ 5/ 5	2446920.5	-2.10353	-19.09047	-0.04445	6.71495	-1.05189	-0.09093	19.20606	6.79745	263.71	-0.13
87/ 5/ 9	2446924.5	-2.08802	-19.09289	-0.04466	6.71547	-1.04636	-0.09091	19.20678	6.79711	263.76	-0.13
87/ 5/13	2446928.5	-2.07250	-19.09530	-0.04487	6.71599	-1.04083	-0.09090	19.20750	6.79678	263.81	-0.13
87/ 5/17	2446932.5	-2.05699	-19.09770	-0.04508	6.71651	-1.03530	-0.09088	19.20821	6.79644	263.85	-0.13
87/ 5/21	2446936.5	-2.04147	-19.10009	-0.04529	6.71702	-1.02978	-0.09086	19.20893	6.79611	263.90	-0.14
87/ 5/25	2446940.5	-2.02595	-19.10246	-0.04550	6.71753	-1.02425	-0.09085	19.20965	6.79578	263.95	-0.14
87/ 5/29	2446944.5	-2.01043	-19.10482	-0.04571	6.71804	-1.01872	-0.09083	19.21036	6.79544	263.99	-0.14
87/ 6/ 2	2446948.5	-1.99491	-19.10717	-0.04592	6.71853	-1.01319	-0.09082	19.21108	6.79511	264.04	-0.14
87/ 6/ 6	2446952.5	-1.97939	-19.10950	-0.04613	6.71903	-1.00767	-0.09080	19.21180	6.79478	264.09	-0.14
87/ 6/10	2446956.5	-1.96387	-19.11182	-0.04634	6.71952	-1.00214	-0.09079	19.21251	6.79444	264.13	-0.14

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
87/ 6/14	2446960.5	-1.94835	-19.11413	-0.04655	6.72000	-0.99662	-0.09077	19.21323	6.79411	264.18	-0.14
87/ 6/18	2446964.5	-1.93282	-19.11643	-0.04676	6.72048	-0.99110	-0.09076	19.21395	6.79378	264.23	-0.14
87/ 6/22	2446968.5	-1.91729	-19.11871	-0.04697	6.72096	-0.98557	-0.09074	19.21466	6.79344	264.27	-0.14
87/ 6/26	2446972.5	-1.90177	-19.12098	-0.04718	6.72143	-0.98005	-0.09072	19.21538	6.79311	264.32	-0.14
87/ 6/30	2446976.5	-1.88624	-19.12324	-0.04739	6.72190	-0.97453	-0.09071	19.21610	6.79278	264.37	-0.14
87/ 7/ 4	2446980.5	-1.87071	-19.12548	-0.04760	6.72236	-0.96902	-0.09069	19.21681	6.79245	264.41	-0.14
87/ 7/ 8	2446984.5	-1.85518	-19.12772	-0.04781	6.72282	-0.96350	-0.09068	19.21753	6.79211	264.46	-0.14
87/ 7/12	2446988.5	-1.83965	-19.12994	-0.04802	6.72327	-0.95798	-0.09066	19.21825	6.79178	264.51	-0.14
87/ 7/16	2446992.5	-1.82412	-19.13214	-0.04823	6.72372	-0.95247	-0.09065	19.21896	6.79145	264.55	-0.14
87/ 7/20	2446996.5	-1.80858	-19.13434	-0.04844	6.72417	-0.94695	-0.09063	19.21968	6.79112	264.60	-0.14
87/ 7/24	2447000.5	-1.79305	-19.13652	-0.04864	6.72461	-0.94144	-0.09061	19.22040	6.79079	264.65	-0.15
87/ 7/28	2447004.5	-1.77751	-19.13869	-0.04885	6.72505	-0.93592	-0.09060	19.22111	6.79047	264.69	-0.15
87/ 8/ 1	2447008.5	-1.76198	-19.14084	-0.04906	6.72548	-0.93041	-0.09058	19.22183	6.79014	264.74	-0.15
87/ 8/ 5	2447012.5	-1.74644	-19.14298	-0.04927	6.72591	-0.92490	-0.09057	19.22255	6.78981	264.79	-0.15
87/ 8/ 9	2447016.5	-1.73090	-19.14511	-0.04948	6.72634	-0.91939	-0.09055	19.22326	6.78949	264.83	-0.15
87/ 8/13	2447020.5	-1.71536	-19.14723	-0.04969	6.72677	-0.91389	-0.09053	19.22398	6.78917	264.88	-0.15
87/ 8/17	2447024.5	-1.69982	-19.14934	-0.04990	6.72719	-0.90838	-0.09052	19.22470	6.78885	264.93	-0.15
87/ 8/21	2447028.5	-1.68428	-19.15143	-0.05011	6.72761	-0.90287	-0.09050	19.22541	6.78853	264.97	-0.15
87/ 8/25	2447032.5	-1.66874	-19.15351	-0.05032	6.72803	-0.89736	-0.09049	19.22613	6.78821	265.02	-0.15
87/ 8/29	2447036.5	-1.65319	-19.15558	-0.05053	6.72844	-0.89185	-0.09047	19.22685	6.78789	265.07	-0.15
87/ 9/ 2	2447040.5	-1.63765	-19.15763	-0.05074	6.72885	-0.88633	-0.09046	19.22756	6.78757	265.11	-0.15
87/ 9/ 6	2447044.5	-1.62210	-19.15967	-0.05095	6.72925	-0.88082	-0.09044	19.22828	6.78725	265.16	-0.15
87/ 9/10	2447048.5	-1.60656	-19.16170	-0.05115	6.72965	-0.87531	-0.09043	19.22900	6.78694	265.21	-0.15
87/ 9/14	2447052.5	-1.59101	-19.16371	-0.05136	6.73004	-0.86979	-0.09041	19.22971	6.78662	265.25	-0.15
87/ 9/18	2447056.5	-1.57546	-19.16572	-0.05157	6.73043	-0.86428	-0.09039	19.23043	6.78630	265.30	-0.15
87/ 9/22	2447060.5	-1.55991	-19.16771	-0.05178	6.73081	-0.85876	-0.09038	19.23115	6.78598	265.35	-0.15
87/ 9/26	2447064.5	-1.54436	-19.16969	-0.05199	6.73119	-0.85325	-0.09036	19.23186	6.78566	265.39	-0.15
87/ 9/30	2447068.5	-1.52881	-19.17165	-0.05220	6.73157	-0.84774	-0.09034	19.23258	6.78534	265.44	-0.16
87/10/ 4	2447072.5	-1.51326	-19.17360	-0.05241	6.73193	-0.84222	-0.09033	19.23330	6.78502	265.49	-0.16
87/10/ 8	2447076.5	-1.49771	-19.17554	-0.05262	6.73230	-0.83671	-0.09031	19.23401	6.78469	265.53	-0.16
87/10/12	2447080.5	-1.48215	-19.17747	-0.05282	6.73266	-0.83119	-0.09029	19.23473	6.78437	265.58	-0.16
87/10/16	2447084.5	-1.46660	-19.17938	-0.05303	6.73301	-0.82568	-0.09028	19.23545	6.78405	265.63	-0.16
87/10/20	2447088.5	-1.45105	-19.18128	-0.05324	6.73335	-0.82017	-0.09026	19.23616	6.78372	265.67	-0.16
87/10/24	2447092.5	-1.43549	-19.18317	-0.05345	6.73370	-0.81465	-0.09024	19.23688	6.78340	265.72	-0.16
87/10/28	2447096.5	-1.41993	-19.18505	-0.05366	6.73403	-0.80914	-0.09022	19.23760	6.78307	265.77	-0.16
87/11/ 1	2447100.5	-1.40438	-19.18691	-0.05387	6.73436	-0.80364	-0.09021	19.23831	6.78274	265.81	-0.16
87/11/ 5	2447104.5	-1.38882	-19.18876	-0.05408	6.73469	-0.79813	-0.09019	19.23903	6.78242	265.86	-0.16
87/11/ 9	2447108.5	-1.37326	-19.19060	-0.05428	6.73501	-0.79262	-0.09017	19.23975	6.78209	265.91	-0.16
87/11/13	2447112.5	-1.35770	-19.19242	-0.05449	6.73533	-0.78712	-0.09015	19.24046	6.78177	265.95	-0.16
87/11/17	2447116.5	-1.34214	-19.19423	-0.05470	6.73565	-0.78161	-0.09014	19.24118	6.78145	266.00	-0.16
87/11/21	2447120.5	-1.32658	-19.19603	-0.05491	6.73596	-0.77611	-0.09012	19.24190	6.78112	266.05	-0.16
87/11/25	2447124.5	-1.31102	-19.19782	-0.05512	6.73627	-0.77060	-0.09010	19.24261	6.78080	266.09	-0.16
87/11/29	2447128.5	-1.29546	-19.19959	-0.05532	6.73657	-0.76510	-0.09008	19.24333	6.78047	266.14	-0.16
87/12/ 3	2447132.5	-1.27989	-19.20136	-0.05553	6.73686	-0.75960	-0.09007	19.24404	6.78015	266.19	-0.17
87/12/ 7	2447136.5	-1.26433	-19.20310	-0.05574	6.73715	-0.75410	-0.09005	19.24476	6.77982	266.23	-0.17

1.7 1 A.U.=149,599,000 KM.

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87/12/11	2447140.5	-1.24876	-19.20484	-0.05595	6.73744	-0.74860	-0.09003	19.24548	6.77950	266.28	-0.17
87/12/15	2447144.5	-1.23320	-19.20656	-0.05616	6.73772	-0.74310	-0.09001	19.24619	6.77917	266.33	-0.17
87/12/19	2447148.5	-1.21763	-19.20827	-0.05636	6.73800	-0.73760	-0.08999	19.24691	6.77885	266.37	-0.17
87/12/23	2447152.5	-1.20207	-19.20997	-0.05657	6.73827	-0.73210	-0.08997	19.24763	6.77852	266.42	-0.17
87/12/27	2447156.5	-1.18650	-19.21166	-0.05678	6.73854	-0.72661	-0.08995	19.24834	6.77820	266.47	-0.17
87/12/31	2447160.5	-1.17093	-19.21333	-0.05699	6.73880	-0.72111	-0.08994	19.24906	6.77787	266.51	-0.17
88/ 1/ 4	2447164.5	-1.15536	-19.21499	-0.05720	6.73906	-0.71562	-0.08992	19.24978	6.77755	266.56	-0.17
88/ 1/ 8	2447168.5	-1.13980	-19.21663	-0.05740	6.73932	-0.71013	-0.08990	19.25049	6.77722	266.61	-0.17
88/ 1/12	2447172.5	-1.12423	-19.21827	-0.05761	6.73957	-0.70465	-0.08988	19.25121	6.77690	266.65	-0.17
88/ 1/16	2447176.5	-1.10866	-19.21989	-0.05782	6.73981	-0.69916	-0.08986	19.25193	6.77658	266.70	-0.17
88/ 1/20	2447180.5	-1.09309	-19.22150	-0.05803	6.74006	-0.69368	-0.08984	19.25264	6.77625	266.75	-0.17
88/ 1/24	2447184.5	-1.07752	-19.22309	-0.05823	6.74029	-0.68819	-0.08982	19.25336	6.77593	266.79	-0.17
88/ 1/28	2447188.5	-1.06194	-19.22468	-0.05844	6.74053	-0.68271	-0.08980	19.25407	6.77561	266.84	-0.17
88/ 2/ 1	2447192.5	-1.04637	-19.22625	-0.05865	6.74077	-0.67724	-0.08978	19.25479	6.77530	266.88	-0.17
88/ 2/ 5	2447196.5	-1.03080	-19.22781	-0.05886	6.74100	-0.67176	-0.08976	19.25551	6.77498	266.93	-0.18
88/ 2/ 9	2447200.5	-1.01523	-19.22935	-0.05906	6.74123	-0.66629	-0.08975	19.25622	6.77467	266.98	-0.18
88/ 2/13	2447204.5	-0.99965	-19.23089	-0.05927	6.74146	-0.66081	-0.08973	19.25694	6.77436	267.02	-0.18
88/ 2/17	2447208.5	-0.98408	-19.23241	-0.05948	6.74168	-0.65533	-0.08971	19.25766	6.77405	267.07	-0.18
88/ 2/21	2447212.5	-0.96850	-19.23391	-0.05969	6.74191	-0.64986	-0.08969	19.25837	6.77375	267.12	-0.18
88/ 2/25	2447216.5	-0.95293	-19.23541	-0.05989	6.74213	-0.64438	-0.08967	19.25909	6.77344	267.16	-0.18
88/ 2/29	2447220.5	-0.93735	-19.23689	-0.06010	6.74234	-0.63890	-0.08965	19.25981	6.77314	267.21	-0.18
88/ 3/ 4	2447224.5	-0.92178	-19.23836	-0.06031	6.74256	-0.63343	-0.08963	19.26053	6.77284	267.26	-0.18
88/ 3/ 8	2447228.5	-0.90620	-19.23982	-0.06051	6.74277	-0.62795	-0.08962	19.26124	6.77254	267.30	-0.18
88/ 3/12	2447232.5	-0.89062	-19.24126	-0.06072	6.74297	-0.62247	-0.08960	19.26196	6.77224	267.35	-0.18
88/ 3/16	2447236.5	-0.87504	-19.24269	-0.06093	6.74317	-0.61700	-0.08958	19.26268	6.77194	267.40	-0.18
88/ 3/20	2447240.5	-0.85947	-19.24411	-0.06113	6.74337	-0.61152	-0.08956	19.26339	6.77164	267.44	-0.18
88/ 3/24	2447244.5	-0.84389	-19.24552	-0.06134	6.74357	-0.60604	-0.08954	19.26411	6.77134	267.49	-0.18
88/ 3/28	2447248.5	-0.82831	-19.24691	-0.06155	6.74376	-0.60056	-0.08952	19.26483	6.77104	267.54	-0.18
88/ 4/ 1	2447252.5	-0.81273	-19.24829	-0.06176	6.74395	-0.59508	-0.08950	19.26554	6.77075	267.58	-0.18
88/ 4/ 5	2447256.5	-0.79715	-19.24966	-0.06196	6.74413	-0.58960	-0.08948	19.26626	6.77045	267.63	-0.18
88/ 4/ 9	2447260.5	-0.78157	-19.25102	-0.06217	6.74431	-0.58412	-0.08946	19.26698	6.77015	267.68	-0.18
88/ 4/13	2447264.5	-0.76599	-19.25236	-0.06238	6.74449	-0.57864	-0.08944	19.26769	6.76986	267.72	-0.19
88/ 4/17	2447268.5	-0.75041	-19.25369	-0.06258	6.74466	-0.57316	-0.08943	19.26841	6.76956	267.77	-0.19
88/ 4/21	2447272.5	-0.73483	-19.25501	-0.06279	6.74483	-0.56767	-0.08941	19.26913	6.76926	267.81	-0.19
88/ 4/25	2447276.5	-0.71924	-19.25631	-0.06299	6.74499	-0.56219	-0.08939	19.26985	6.76897	267.86	-0.19
88/ 4/29	2447280.5	-0.70366	-19.25761	-0.06320	6.74515	-0.55671	-0.08937	19.27056	6.76868	267.91	-0.19
88/ 5/ 3	2447284.5	-0.68808	-19.25889	-0.06341	6.74531	-0.55123	-0.08935	19.27128	6.76838	267.95	-0.19
88/ 5/ 7	2447288.5	-0.67250	-19.26015	-0.06361	6.74546	-0.54575	-0.08933	19.27200	6.76809	268.00	-0.19
88/ 5/11	2447292.5	-0.65691	-19.26141	-0.06382	6.74561	-0.54027	-0.08931	19.27271	6.76780	268.05	-0.19
88/ 5/15	2447296.5	-0.64133	-19.26265	-0.06403	6.74575	-0.53478	-0.08929	19.27343	6.76751	268.09	-0.19
88/ 5/19	2447300.5	-0.62574	-19.26388	-0.06423	6.74589	-0.52929	-0.08927	19.27415	6.76721	268.14	-0.19
88/ 5/23	2447304.5	-0.61016	-19.26510	-0.06444	6.74602	-0.52381	-0.08925	19.27486	6.76692	268.19	-0.19
88/ 5/27	2447308.5	-0.59458	-19.26630	-0.06465	6.74615	-0.51832	-0.08923	19.27558	6.76662	268.23	-0.19
88/ 5/31	2447312.5	-0.57899	-19.26749	-0.06485	6.74627	-0.51283	-0.08921	19.27630	6.76632	268.28	-0.19
88/ 6/ 4	2447316.5	-0.56341	-19.26867	-0.06506	6.74639	-0.50734	-0.08919	19.27701	6.76603	268.33	-0.19

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88/ 6/ 8	2447320.5	-0.54782	-19.26983	-0.06526	6.74650	-0.50185	-0.08917	19.27773	6.76573	268.37	-0.19
88/ 6/12	2447324.5	-0.53223	-19.27099	-0.06547	6.74660	-0.49636	-0.08915	19.27845	6.76542	268.42	-0.19
88/ 6/16	2447328.5	-0.51665	-19.27213	-0.06568	6.74670	-0.49087	-0.08913	19.27916	6.76512	268.46	-0.20
88/ 6/20	2447332.5	-0.50106	-19.27326	-0.06588	6.74679	-0.48538	-0.08911	19.27988	6.76482	268.51	-0.20
88/ 6/24	2447336.5	-0.48548	-19.27437	-0.06609	6.74688	-0.47990	-0.08909	19.28060	6.76451	268.56	-0.20
88/ 6/28	2447340.5	-0.46989	-19.27547	-0.06629	6.74696	-0.47441	-0.08907	19.28131	6.76421	268.60	-0.20
88/ 7/ 2	2447344.5	-0.45430	-19.27656	-0.06650	6.74704	-0.46892	-0.08905	19.28203	6.76390	268.65	-0.20
88/ 7/ 6	2447348.5	-0.43872	-19.27764	-0.06670	6.74710	-0.46344	-0.08903	19.28275	6.76359	268.70	-0.20
88/ 7/10	2447352.5	-0.42313	-19.27870	-0.06691	6.74717	-0.45796	-0.08901	19.28346	6.76328	268.74	-0.20
88/ 7/14	2447356.5	-0.40754	-19.27976	-0.06712	6.74722	-0.45248	-0.08898	19.28418	6.76296	268.79	-0.20
88/ 7/18	2447360.5	-0.39195	-19.28079	-0.06732	6.74728	-0.44700	-0.08896	19.28489	6.76265	268.84	-0.20
88/ 7/22	2447364.5	-0.37637	-19.28182	-0.06753	6.74732	-0.44152	-0.08894	19.28561	6.76234	268.88	-0.20
88/ 7/26	2447368.5	-0.36078	-19.28283	-0.06773	6.74737	-0.43605	-0.08892	19.28633	6.76203	268.93	-0.20
88/ 7/30	2447372.5	-0.34519	-19.28384	-0.06794	6.74741	-0.43058	-0.08890	19.28704	6.76171	268.97	-0.20
88/ 8/ 3	2447376.5	-0.32960	-19.28482	-0.06814	6.74744	-0.42511	-0.08888	19.28776	6.76140	269.02	-0.20
88/ 8/ 7	2447380.5	-0.31402	-19.28580	-0.06835	6.74747	-0.41964	-0.08886	19.28848	6.76109	269.07	-0.20
88/ 8/11	2447384.5	-0.29843	-19.28676	-0.06855	6.74750	-0.41418	-0.08884	19.28919	6.76078	269.11	-0.20
88/ 8/15	2447388.5	-0.28284	-19.28771	-0.06876	6.74752	-0.40871	-0.08881	19.28991	6.76047	269.16	-0.20
88/ 8/19	2447392.5	-0.26725	-19.28865	-0.06896	6.74754	-0.40324	-0.08879	19.29063	6.76016	269.21	-0.20
88/ 8/23	2447396.5	-0.25166	-19.28958	-0.06917	6.74756	-0.39778	-0.08877	19.29134	6.75985	269.25	-0.21
88/ 8/27	2447400.5	-0.23608	-19.29049	-0.06937	6.74757	-0.39232	-0.08875	19.29206	6.75954	269.30	-0.21
88/ 8/31	2447404.5	-0.22049	-19.29139	-0.06958	6.74757	-0.38686	-0.08873	19.29277	6.75923	269.35	-0.21
88/ 9/ 4	2447408.5	-0.20490	-19.29228	-0.06978	6.74757	-0.38140	-0.08871	19.29349	6.75892	269.39	-0.21
88/ 9/ 8	2447412.5	-0.18931	-19.29315	-0.06999	6.74757	-0.37595	-0.08868	19.29421	6.75862	269.44	-0.21
88/ 9/12	2447416.5	-0.17372	-19.29401	-0.07019	6.74756	-0.37049	-0.08866	19.29492	6.75831	269.48	-0.21
88/ 9/16	2447420.5	-0.15814	-19.29486	-0.07040	6.74755	-0.36504	-0.08864	19.29564	6.75800	269.53	-0.21
88/ 9/20	2447424.5	-0.14255	-19.29570	-0.07060	6.74754	-0.35959	-0.08862	19.29636	6.75769	269.58	-0.21
88/ 9/24	2447428.5	-0.12696	-19.29652	-0.07081	6.74752	-0.35414	-0.08860	19.29707	6.75739	269.62	-0.21
88/ 9/28	2447432.5	-0.11137	-19.29734	-0.07101	6.74750	-0.34870	-0.08858	19.29779	6.75708	269.67	-0.21
88/10/ 2	2447436.5	-0.09578	-19.29814	-0.07122	6.74748	-0.34325	-0.08855	19.29850	6.75678	269.72	-0.21
88/10/ 6	2447440.5	-0.08020	-19.29892	-0.07142	6.74745	-0.33781	-0.08853	19.29922	6.75648	269.76	-0.21
88/10/10	2447444.5	-0.06461	-19.29970	-0.07163	6.74742	-0.33236	-0.08851	19.29994	6.75618	269.81	-0.21
88/10/14	2447448.5	-0.04902	-19.30046	-0.07183	6.74738	-0.32693	-0.08849	19.30065	6.75588	269.85	-0.21
88/10/18	2447452.5	-0.03343	-19.30121	-0.07204	6.74735	-0.32149	-0.08847	19.30137	6.75558	269.90	-0.21
88/10/22	2447456.5	-0.01785	-19.30194	-0.07224	6.74731	-0.31605	-0.08844	19.30209	6.75529	269.95	-0.21
88/10/26	2447460.5	-0.00226	-19.30267	-0.07244	6.74727	-0.31062	-0.08842	19.30280	6.75499	269.99	-0.22
88/10/30	2447464.5	0.01333	-19.30338	-0.07265	6.74723	-0.30518	-0.08840	19.30352	6.75470	270.04	-0.22
88/11/ 3	2447468.5	0.02892	-19.30408	-0.07285	6.74718	-0.29975	-0.08838	19.30424	6.75442	270.09	-0.22
88/11/ 7	2447472.5	0.04450	-19.30476	-0.07306	6.74714	-0.29431	-0.08836	19.30495	6.75413	270.13	-0.22
88/11/11	2447476.5	0.06009	-19.30544	-0.07326	6.74709	-0.28887	-0.08834	19.30567	6.75385	270.18	-0.22
88/11/15	2447480.5	0.07568	-19.30610	-0.07346	6.74704	-0.28344	-0.08832	19.30639	6.75357	270.22	-0.22
88/11/19	2447484.5	0.09126	-19.30675	-0.07367	6.74698	-0.27800	-0.08830	19.30710	6.75328	270.27	-0.22
88/11/23	2447488.5	0.10685	-19.30738	-0.07387	6.74692	-0.27256	-0.08827	19.30782	6.75300	270.32	-0.22
88/11/27	2447492.5	0.12244	-19.30801	-0.07408	6.74686	-0.26712	-0.08825	19.30854	6.75272	270.36	-0.22
88/12/ 1	2447496.5	0.13802	-19.30862	-0.07428	6.74679	-0.26168	-0.08823	19.30925	6.75244	270.41	-0.22

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88/12/ 5	2447500.5	0.15361	-19.30922	-0.07448	6.74672	-0.25625	-0.08821	19.30997	6.75216	270.46	-0.22
88/12/ 9	2447504.5	0.16920	-19.30980	-0.07469	6.74665	-0.25081	-0.08819	19.31069	6.75189	270.50	-0.22
88/12/13	2447508.5	0.18478	-19.31037	-0.07489	6.74657	-0.24537	-0.08816	19.31140	6.75161	270.55	-0.22
88/12/17	2447512.5	0.20037	-19.31093	-0.07510	6.74649	-0.23993	-0.08814	19.31212	6.75133	270.59	-0.22
88/12/21	2447516.5	0.21595	-19.31148	-0.07530	6.74640	-0.23449	-0.08812	19.31284	6.75105	270.64	-0.22
88/12/25	2447520.5	0.23154	-19.31202	-0.07550	6.74631	-0.22905	-0.08810	19.31355	6.75077	270.69	-0.22
88/12/29	2447524.5	0.24712	-19.31254	-0.07571	6.74622	-0.22361	-0.08807	19.31427	6.75049	270.73	-0.22
89/ 1/ 2	2447528.5	0.26271	-19.31305	-0.07591	6.74611	-0.21817	-0.08805	19.31499	6.75022	270.78	-0.23
89/ 1/ 6	2447532.5	0.27829	-19.31355	-0.07611	6.74601	-0.21273	-0.08803	19.31570	6.74994	270.83	-0.23
89/ 1/10	2447536.5	0.29388	-19.31403	-0.07632	6.74590	-0.20729	-0.08801	19.31642	6.74966	270.87	-0.23
89/ 1/14	2447540.5	0.30946	-19.31451	-0.07652	6.74579	-0.20185	-0.08798	19.31714	6.74938	270.92	-0.23
89/ 1/18	2447544.5	0.32505	-19.31497	-0.07672	6.74567	-0.19641	-0.08796	19.31785	6.74910	270.96	-0.23
89/ 1/22	2447548.5	0.34063	-19.31541	-0.07693	6.74555	-0.19098	-0.08794	19.31857	6.74882	271.01	-0.23
89/ 1/26	2447552.5	0.35621	-19.31585	-0.07713	6.74542	-0.18554	-0.08792	19.31929	6.74855	271.06	-0.23
89/ 1/30	2447556.5	0.37179	-19.31627	-0.07733	6.74530	-0.18010	-0.08789	19.32000	6.74827	271.10	-0.23
89/ 2/ 3	2447560.5	0.38738	-19.31668	-0.07753	6.74516	-0.17467	-0.08787	19.32072	6.74800	271.15	-0.23
89/ 2/ 7	2447564.5	0.40296	-19.31708	-0.07774	6.74503	-0.16923	-0.08785	19.32144	6.74772	271.20	-0.23
89/ 2/11	2447568.5	0.41854	-19.31746	-0.07794	6.74489	-0.16379	-0.08782	19.32215	6.74745	271.24	-0.23
89/ 2/15	2447572.5	0.43412	-19.31784	-0.07814	6.74474	-0.15835	-0.08780	19.32287	6.74717	271.29	-0.23
89/ 2/19	2447576.5	0.44971	-19.31819	-0.07835	6.74459	-0.15292	-0.08778	19.32359	6.74689	271.33	-0.23
89/ 2/23	2447580.5	0.46529	-19.31854	-0.07855	6.74443	-0.14748	-0.08775	19.32430	6.74661	271.38	-0.23
89/ 2/27	2447584.5	0.48087	-19.31888	-0.07875	6.74427	-0.14204	-0.08773	19.32502	6.74633	271.43	-0.23
89/ 3/ 3	2447588.5	0.49645	-19.31920	-0.07895	6.74410	-0.13661	-0.08770	19.32574	6.74606	271.47	-0.23
89/ 3/ 7	2447592.5	0.51203	-19.31951	-0.07916	6.74393	-0.13118	-0.08768	19.32645	6.74578	271.52	-0.23
89/ 3/11	2447596.5	0.52761	-19.31980	-0.07936	6.74375	-0.12574	-0.08766	19.32717	6.74550	271.56	-0.24
89/ 3/15	2447600.5	0.54319	-19.32009	-0.07956	6.74357	-0.12031	-0.08763	19.32789	6.74522	271.61	-0.24
89/ 3/19	2447604.5	0.55876	-19.32036	-0.07976	6.74339	-0.11488	-0.08761	19.32860	6.74494	271.66	-0.24
89/ 3/23	2447608.5	0.57434	-19.32062	-0.07997	6.74320	-0.10945	-0.08758	19.32932	6.74466	271.70	-0.24
89/ 3/27	2447612.5	0.58992	-19.32087	-0.08017	6.74300	-0.10403	-0.08756	19.33004	6.74437	271.75	-0.24
89/ 3/31	2447616.5	0.60550	-19.32110	-0.08037	6.74281	-0.09860	-0.08753	19.33075	6.74409	271.79	-0.24
89/ 4/ 4	2447620.5	0.62107	-19.32132	-0.08057	6.74260	-0.09318	-0.08751	19.33147	6.74381	271.84	-0.24
89/ 4/ 8	2447624.5	0.63665	-19.32153	-0.08078	6.74239	-0.08775	-0.08749	19.33218	6.74353	271.89	-0.24
89/ 4/12	2447628.5	0.65223	-19.32173	-0.08098	6.74218	-0.08234	-0.08746	19.33290	6.74325	271.93	-0.24
89/ 4/16	2447632.5	0.66780	-19.32191	-0.08118	6.74197	-0.07692	-0.08744	19.33362	6.74298	271.98	-0.24
89/ 4/20	2447636.5	0.68338	-19.32208	-0.08138	6.74176	-0.07150	-0.08741	19.33433	6.74270	272.03	-0.24
89/ 4/24	2447640.5	0.69895	-19.32224	-0.08158	6.74154	-0.06609	-0.08739	19.33505	6.74243	272.07	-0.24
89/ 4/28	2447644.5	0.71452	-19.32239	-0.08179	6.74132	-0.06068	-0.08736	19.33577	6.74216	272.12	-0.24
89/ 5/ 2	2447648.5	0.73010	-19.32252	-0.08199	6.74109	-0.05526	-0.08734	19.33648	6.74189	272.16	-0.24
89/ 5/ 6	2447652.5	0.74567	-19.32264	-0.08219	6.74087	-0.04985	-0.08732	19.33720	6.74162	272.21	-0.24
89/ 5/10	2447656.5	0.76124	-19.32275	-0.08239	6.74064	-0.04443	-0.08729	19.33792	6.74135	272.26	-0.24
89/ 5/14	2447660.5	0.77682	-19.32285	-0.08259	6.74040	-0.03902	-0.08727	19.33863	6.74108	272.30	-0.24
89/ 5/18	2447664.5	0.79239	-19.32293	-0.08279	6.74017	-0.03361	-0.08724	19.33935	6.74081	272.35	-0.25
89/ 5/22	2447668.5	0.80796	-19.32300	-0.08300	6.73992	-0.02819	-0.08722	19.34007	6.74055	272.39	-0.25
89/ 5/26	2447672.5	0.82353	-19.32306	-0.08320	6.73968	-0.02278	-0.08720	19.34078	6.74028	272.44	-0.25
89/ 5/30	2447676.5	0.83910	-19.32311	-0.08340	6.73943	-0.01737	-0.08717	19.34150	6.74002	272.49	-0.25

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89/ 6/ 3	2447680.5	0.85467	-19.32314	-0.08360	6.73918	-0.01196	-0.08715	19.34221	6.73975	272.53	-0.25
89/ 6/ 7	2447684.5	0.87023	-19.32316	-0.08380	6.73892	-0.00655	-0.08712	19.34293	6.73949	272.58	-0.25
89/ 6/11	2447688.5	0.88580	-19.32317	-0.08400	6.73867	-0.00113	-0.08710	19.34365	6.73923	272.62	-0.25
89/ 6/15	2447692.5	0.90137	-19.32317	-0.08420	6.73840	0.00428	-0.08707	19.34436	6.73897	272.67	-0.25
89/ 6/19	2447696.5	0.91694	-19.32315	-0.08440	6.73814	0.00969	-0.08705	19.34508	6.73871	272.72	-0.25
89/ 6/23	2447700.5	0.93250	-19.32312	-0.08461	6.73787	0.01510	-0.08703	19.34580	6.73844	272.76	-0.25
89/ 6/27	2447704.5	0.94807	-19.32308	-0.08481	6.73759	0.02051	-0.08700	19.34651	6.73818	272.81	-0.25
89/ 7/ 1	2447708.5	0.96363	-19.32303	-0.08501	6.73731	0.02592	-0.08698	19.34723	6.73792	272.85	-0.25
89/ 7/ 5	2447712.5	0.97920	-19.32296	-0.08521	6.73703	0.03133	-0.08695	19.34795	6.73766	272.90	-0.25
89/ 7/ 9	2447716.5	0.99476	-19.32288	-0.08541	6.73674	0.03674	-0.08693	19.34866	6.73740	272.95	-0.25
89/ 7/13	2447720.5	1.01032	-19.32279	-0.08561	6.73645	0.04215	-0.08690	19.34938	6.73715	272.99	-0.25
89/ 7/17	2447724.5	1.02588	-19.32269	-0.08581	6.73616	0.04756	-0.08688	19.35009	6.73689	273.04	-0.25
89/ 7/21	2447728.5	1.04145	-19.32257	-0.08601	6.73587	0.05297	-0.08686	19.35081	6.73663	273.09	-0.25
89/ 7/25	2447732.5	1.05701	-19.32245	-0.08621	6.73557	0.05838	-0.08683	19.35153	6.73638	273.13	-0.26
89/ 7/29	2447736.5	1.07257	-19.32230	-0.08641	6.73526	0.06379	-0.08681	19.35224	6.73613	273.18	-0.26
89/ 8/ 2	2447740.5	1.08813	-19.32215	-0.08661	6.73496	0.06920	-0.08678	19.35296	6.73587	273.22	-0.26
89/ 8/ 6	2447744.5	1.10368	-19.32198	-0.08681	6.73464	0.07461	-0.08676	19.35367	6.73562	273.27	-0.26
89/ 8/10	2447748.5	1.11924	-19.32181	-0.08701	6.73432	0.08003	-0.08673	19.35439	6.73536	273.32	-0.26
89/ 8/14	2447752.5	1.13480	-19.32161	-0.08721	6.73400	0.08544	-0.08671	19.35511	6.73510	273.36	-0.26
89/ 8/18	2447756.5	1.15036	-19.32141	-0.08741	6.73367	0.09085	-0.08668	19.35582	6.73484	273.41	-0.26
89/ 8/22	2447760.5	1.16591	-19.32119	-0.08762	6.73334	0.09627	-0.08666	19.35654	6.73458	273.45	-0.26
89/ 8/26	2447764.5	1.18147	-19.32097	-0.08782	6.73300	0.10168	-0.08663	19.35725	6.73432	273.50	-0.26
89/ 8/30	2447768.5	1.19702	-19.32073	-0.08802	6.73265	0.10709	-0.08661	19.35797	6.73406	273.55	-0.26
89/ 9/ 3	2447772.5	1.21257	-19.32047	-0.08822	6.73230	0.11250	-0.08658	19.35869	6.73380	273.59	-0.26
89/ 9/ 7	2447776.5	1.22813	-19.32021	-0.08842	6.73195	0.11792	-0.08656	19.35940	6.73354	273.64	-0.26
89/ 9/11	2447780.5	1.24368	-19.31993	-0.08862	6.73159	0.12332	-0.08653	19.36012	6.73327	273.68	-0.26
89/ 9/15	2447784.5	1.25923	-19.31964	-0.08882	6.73122	0.12873	-0.08650	19.36083	6.73301	273.73	-0.26
89/ 9/19	2447788.5	1.27478	-19.31933	-0.08902	6.73085	0.13414	-0.08648	19.36155	6.73274	273.78	-0.26
89/ 9/23	2447792.5	1.29033	-19.31902	-0.08921	6.73047	0.13955	-0.08645	19.36226	6.73247	273.82	-0.26
89/ 9/27	2447796.5	1.30587	-19.31869	-0.08941	6.73009	0.14495	-0.08643	19.36298	6.73220	273.87	-0.26
89/10/ 1	2447800.5	1.32142	-19.31835	-0.08961	6.72970	0.15035	-0.08640	19.36369	6.73193	273.91	-0.27
89/10/ 5	2447804.5	1.33697	-19.31799	-0.08981	6.72931	0.15575	-0.08637	19.36441	6.73167	273.96	-0.27
89/10/ 9	2447808.5	1.35251	-19.31763	-0.09001	6.72891	0.16114	-0.08635	19.36513	6.73140	274.00	-0.27
89/10/13	2447812.5	1.36806	-19.31725	-0.09021	6.72851	0.16653	-0.08632	19.36584	6.73113	274.05	-0.27
89/10/17	2447816.5	1.38360	-19.31686	-0.09041	6.72811	0.17192	-0.08630	19.36656	6.73086	274.10	-0.27
89/10/21	2447820.5	1.39914	-19.31645	-0.09061	6.72771	0.17732	-0.08627	19.36727	6.73060	274.14	-0.27
89/10/25	2447824.5	1.41469	-19.31604	-0.09081	6.72730	0.18270	-0.08624	19.36799	6.73033	274.19	-0.27
89/10/29	2447828.5	1.43023	-19.31561	-0.09101	6.72688	0.18809	-0.08622	19.36870	6.73007	274.23	-0.27
89/11/ 2	2447832.5	1.44577	-19.31517	-0.09121	6.72647	0.19348	-0.08619	19.36942	6.72980	274.28	-0.27
89/11/ 6	2447836.5	1.46131	-19.31472	-0.09141	6.72604	0.19886	-0.08616	19.37013	6.72953	274.33	-0.27
89/11/10	2447840.5	1.47684	-19.31425	-0.09161	6.72562	0.20425	-0.08614	19.37085	6.72927	274.37	-0.27
89/11/14	2447844.5	1.49238	-19.31377	-0.09181	6.72519	0.20963	-0.08611	19.37156	6.72901	274.42	-0.27
89/11/18	2447848.5	1.50792	-19.31328	-0.09200	6.72475	0.21501	-0.08608	19.37228	6.72874	274.46	-0.27
89/11/22	2447852.5	1.52345	-19.31278	-0.09220	6.72432	0.22039	-0.08606	19.37299	6.72848	274.51	-0.27
89/11/26	2447856.5	1.53898	-19.31226	-0.09240	6.72388	0.22576	-0.08603	19.37371	6.72822	274.56	-0.27

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
89/11/30	2447860.5	1.55452	-19.31174	-0.09260	6.72343	0.23113	-0.08600	19.37442	6.72795	274.60	-0.27
89/12/ 4	2447864.5	1.57005	-19.31119	-0.09280	6.72299	0.23651	-0.08598	19.37514	6.72769	274.65	-0.27
89/12/ 8	2447868.5	1.58558	-19.31064	-0.09300	6.72254	0.24188	-0.08595	19.37585	6.72744	274.69	-0.28
89/12/12	2447872.5	1.60111	-19.31008	-0.09320	6.72208	0.24725	-0.08592	19.37657	6.72718	274.74	-0.28
89/12/16	2447876.5	1.61664	-19.30950	-0.09340	6.72163	0.25261	-0.08589	19.37728	6.72692	274.79	-0.28
89/12/20	2447880.5	1.63217	-19.30891	-0.09359	6.72117	0.25798	-0.08587	19.37800	6.72667	274.83	-0.28
89/12/24	2447884.5	1.64769	-19.30831	-0.09379	6.72071	0.26334	-0.08584	19.37871	6.72641	274.88	-0.28
89/12/28	2447888.5	1.66322	-19.30769	-0.09399	6.72024	0.26870	-0.08581	19.37943	6.72616	274.92	-0.28
90/ 1/ 1	2447892.5	1.67874	-19.30707	-0.09419	6.71978	0.27406	-0.08579	19.38014	6.72591	274.97	-0.28
90/ 1/ 5	2447896.5	1.69427	-19.30643	-0.09439	6.71931	0.27942	-0.08576	19.38086	6.72566	275.02	-0.28
90/ 1/ 9	2447900.5	1.70979	-19.30578	-0.09458	6.71884	0.28478	-0.08573	19.38157	6.72542	275.06	-0.28
90/ 1/13	2447904.5	1.72531	-19.30511	-0.09478	6.71837	0.29014	-0.08571	19.38229	6.72518	275.11	-0.28
90/ 1/17	2447908.5	1.74083	-19.30444	-0.09498	6.71790	0.29549	-0.08568	19.38300	6.72494	275.15	-0.28
90/ 1/21	2447912.5	1.75635	-19.30375	-0.09518	6.71742	0.30085	-0.08566	19.38372	6.72470	275.20	-0.28
90/ 1/25	2447916.5	1.77187	-19.30305	-0.09538	6.71695	0.30621	-0.08563	19.38443	6.72447	275.24	-0.28
90/ 1/29	2447920.5	1.78738	-19.30233	-0.09557	6.71647	0.31157	-0.08560	19.38515	6.72424	275.29	-0.28
90/ 2/ 2	2447924.5	1.80290	-19.30161	-0.09577	6.71599	0.31694	-0.08558	19.38586	6.72400	275.34	-0.28
90/ 2/ 6	2447928.5	1.81841	-19.30087	-0.09597	6.71550	0.32230	-0.08555	19.38658	6.72377	275.38	-0.28
90/ 2/10	2447932.5	1.83393	-19.30012	-0.09617	6.71501	0.32766	-0.08552	19.38729	6.72354	275.43	-0.28
90/ 2/14	2447936.5	1.84944	-19.29935	-0.09637	6.71452	0.33302	-0.08550	19.38801	6.72332	275.47	-0.28
90/ 2/18	2447940.5	1.86495	-19.29858	-0.09656	6.71402	0.33839	-0.08547	19.38872	6.72309	275.52	-0.29
90/ 2/22	2447944.5	1.88046	-19.29779	-0.09676	6.71352	0.34375	-0.08544	19.38943	6.72286	275.57	-0.29
90/ 2/26	2447948.5	1.89597	-19.29699	-0.09696	6.71302	0.34912	-0.08542	19.39015	6.72263	275.61	-0.29
90/ 3/ 2	2447952.5	1.91148	-19.29618	-0.09715	6.71251	0.35449	-0.08539	19.39086	6.72241	275.66	-0.29
90/ 3/ 6	2447956.5	1.92698	-19.29535	-0.09735	6.71200	0.35986	-0.08536	19.39158	6.72218	275.70	-0.29
90/ 3/10	2447960.5	1.94249	-19.29451	-0.09755	6.71148	0.36522	-0.08533	19.39229	6.72195	275.75	-0.29
90/ 3/14	2447964.5	1.95799	-19.29366	-0.09775	6.71096	0.37059	-0.08531	19.39301	6.72173	275.79	-0.29
90/ 3/18	2447968.5	1.97350	-19.29280	-0.09794	6.71043	0.37596	-0.08528	19.39372	6.72150	275.84	-0.29
90/ 3/22	2447972.5	1.98900	-19.29193	-0.09814	6.70990	0.38133	-0.08525	19.39444	6.72127	275.89	-0.29
90/ 3/26	2447976.5	2.00450	-19.29104	-0.09834	6.70937	0.38670	-0.08522	19.39515	6.72104	275.93	-0.29
90/ 3/30	2447980.5	2.02000	-19.29014	-0.09853	6.70883	0.39207	-0.08520	19.39587	6.72081	275.98	-0.29
90/ 4/ 3	2447984.5	2.03549	-19.28923	-0.09873	6.70828	0.39743	-0.08517	19.39658	6.72059	276.02	-0.29
90/ 4/ 7	2447988.5	2.05099	-19.28830	-0.09893	6.70774	0.40280	-0.08514	19.39729	6.72036	276.07	-0.29
90/ 4/11	2447992.5	2.06649	-19.28737	-0.09912	6.70719	0.40817	-0.08512	19.39801	6.72013	276.12	-0.29
90/ 4/15	2447996.5	2.08198	-19.28642	-0.09932	6.70663	0.41354	-0.08509	19.39872	6.71991	276.16	-0.29
90/ 4/19	2448000.5	2.09747	-19.28546	-0.09952	6.70607	0.41891	-0.08506	19.39944	6.71968	276.21	-0.29
90/ 4/23	2448004.5	2.11297	-19.28448	-0.09971	6.70550	0.42428	-0.08503	19.40015	6.71945	276.25	-0.29
90/ 4/27	2448008.5	2.12846	-19.28350	-0.09991	6.70493	0.42965	-0.08500	19.40086	6.71922	276.30	-0.30
90/ 5/ 1	2448012.5	2.14394	-19.28250	-0.10011	6.70436	0.43502	-0.08498	19.40158	6.71899	276.34	-0.30
90/ 5/ 5	2448016.5	2.15943	-19.28149	-0.10030	6.70377	0.44039	-0.08495	19.40229	6.71876	276.39	-0.30
90/ 5/ 9	2448020.5	2.17492	-19.28046	-0.10050	6.70319	0.44576	-0.08492	19.40301	6.71853	276.44	-0.30
90/ 5/13	2448024.5	2.19040	-19.27943	-0.10070	6.70259	0.45113	-0.08489	19.40372	6.71829	276.48	-0.30
90/ 5/17	2448028.5	2.20589	-19.27838	-0.10089	6.70200	0.45649	-0.08486	19.40443	6.71806	276.53	-0.30
90/ 5/21	2448032.5	2.22137	-19.27732	-0.10109	6.70139	0.46186	-0.08483	19.40515	6.71782	276.57	-0.30
90/ 5/25	2448036.5	2.23685	-19.27624	-0.10128	6.70078	0.46722	-0.08480	19.40586	6.71759	276.62	-0.30

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — URANUS

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90/ 5/29	2448040.5	2.25233	-19.27516	-0.10148	6.70017	0.47259	-0.08478	19.40657	6.71735	276.66	-0.30
90/ 6/ 2	2448044.5	2.26781	-19.27406	-0.10167	6.69955	0.47795	-0.08475	19.40728	6.71711	276.71	-0.30
90/ 6/ 6	2448048.5	2.28328	-19.27295	-0.10187	6.69892	0.48331	-0.08472	19.40800	6.71687	276.76	-0.30
90/ 6/10	2448052.5	2.29876	-19.27183	-0.10207	6.69829	0.48867	-0.08469	19.40871	6.71663	276.80	-0.30
90/ 6/14	2448056.5	2.31423	-19.27069	-0.10226	6.69766	0.49403	-0.08466	19.40942	6.71639	276.85	-0.30
90/ 6/18	2448060.5	2.32970	-19.26955	-0.10246	6.69702	0.49938	-0.08463	19.41014	6.71614	276.89	-0.30
90/ 6/22	2448064.5	2.34517	-19.26839	-0.10265	6.69637	0.50473	-0.08460	19.41085	6.71590	276.94	-0.30
90/ 6/26	2448068.5	2.36064	-19.26721	-0.10285	6.69572	0.51008	-0.08457	19.41156	6.71566	276.99	-0.30
90/ 6/30	2448072.5	2.37611	-19.26603	-0.10304	6.69507	0.51542	-0.08454	19.41227	6.71542	277.03	-0.30
90/ 7/ 4	2448076.5	2.39158	-19.26483	-0.10324	6.69442	0.52077	-0.08451	19.41299	6.71518	277.08	-0.30
90/ 7/ 8	2448080.5	2.40704	-19.26362	-0.10343	6.69376	0.52611	-0.08448	19.41370	6.71494	277.12	-0.31
90/ 7/12	2448084.5	2.42250	-19.26240	-0.10363	6.69310	0.53145	-0.08446	19.41441	6.71470	277.17	-0.31
90/ 7/16	2448088.5	2.43797	-19.26117	-0.10382	6.69244	0.53679	-0.08443	19.41512	6.71446	277.21	-0.31
90/ 7/20	2448092.5	2.45343	-19.25992	-0.10402	6.69177	0.54213	-0.08440	19.41584	6.71423	277.26	-0.31
90/ 7/24	2448096.5	2.46888	-19.25866	-0.10421	6.69110	0.54747	-0.08437	19.41655	6.71399	277.31	-0.31
90/ 7/28	2448100.5	2.48434	-19.25739	-0.10441	6.69043	0.55281	-0.08434	19.41726	6.71376	277.35	-0.31
90/ 8/ 1	2448104.5	2.49980	-19.25611	-0.10460	6.68975	0.55814	-0.08431	19.41797	6.71352	277.40	-0.31
90/ 8/ 5	2448108.5	2.51525	-19.25481	-0.10480	6.68907	0.56348	-0.08428	19.41868	6.71329	277.44	-0.31
90/ 8/ 9	2448112.5	2.53070	-19.25350	-0.10499	6.68838	0.56881	-0.08425	19.41939	6.71306	277.49	-0.31
90/ 8/13	2448116.5	2.54615	-19.25218	-0.10519	6.68770	0.57414	-0.08422	19.42011	6.71282	277.53	-0.31
90/ 8/17	2448120.5	2.56160	-19.25085	-0.10538	6.68700	0.57947	-0.08419	19.42082	6.71259	277.58	-0.31
90/ 8/21	2448124.5	2.57705	-19.24951	-0.10558	6.68631	0.58480	-0.08416	19.42153	6.71236	277.63	-0.31
90/ 8/25	2448128.5	2.59249	-19.24815	-0.10577	6.68561	0.59013	-0.08414	19.42224	6.71213	277.67	-0.31
90/ 8/29	2448132.5	2.60794	-19.24678	-0.10597	6.68491	0.59546	-0.08411	19.42295	6.71190	277.72	-0.31
90/ 9/ 2	2448136.5	2.62338	-19.24540	-0.10616	6.68420	0.60079	-0.08408	19.42366	6.71168	277.76	-0.31
90/ 9/ 6	2448140.5	2.63882	-19.24400	-0.10635	6.68349	0.60612	-0.08405	19.42438	6.71145	277.81	-0.31
90/ 9/10	2448144.5	2.65426	-19.24260	-0.10655	6.68278	0.61144	-0.08402	19.42509	6.71122	277.85	-0.31
90/ 9/14	2448148.5	2.66970	-19.24118	-0.10674	6.68207	0.61677	-0.08399	19.42580	6.71099	277.90	-0.31
90/ 9/18	2448152.5	2.68513	-19.23975	-0.10694	6.68135	0.62209	-0.08396	19.42651	6.71077	277.94	-0.32
90/ 9/22	2448156.5	2.70057	-19.23831	-0.10713	6.68062	0.62741	-0.08393	19.42722	6.71055	277.99	-0.32
90/ 9/26	2448160.5	2.71600	-19.23685	-0.10732	6.67990	0.63273	-0.08390	19.42793	6.71032	278.04	-0.32
90/ 9/30	2448164.5	2.73143	-19.23538	-0.10752	6.67917	0.63805	-0.08387	19.42864	6.71010	278.08	-0.32
90/10/ 4	2448168.5	2.74686	-19.23390	-0.10771	6.67844	0.64337	-0.08384	19.42935	6.70988	278.13	-0.32
90/10/ 8	2448172.5	2.76229	-19.23241	-0.10791	6.67771	0.64869	-0.08382	19.43007	6.70967	278.17	-0.32
90/10/12	2448176.5	2.77771	-19.23090	-0.10810	6.67698	0.65401	-0.08379	19.43078	6.70945	278.22	-0.32
90/10/16	2448180.5	2.79314	-19.22939	-0.10829	6.67624	0.65934	-0.08376	19.43149	6.70924	278.26	-0.32
90/10/20	2448184.5	2.80856	-19.22786	-0.10849	6.67549	0.66466	-0.08373	19.43220	6.70902	278.31	-0.32
90/10/24	2448188.5	2.82398	-19.22632	-0.10868	6.67474	0.66998	-0.08370	19.43291	6.70881	278.36	-0.32
90/10/28	2448192.5	2.83940	-19.22476	-0.10887	6.67399	0.67531	-0.08367	19.43362	6.70859	278.40	-0.32
90/11/ 1	2448196.5	2.85482	-19.22320	-0.10907	6.67323	0.68063	-0.08364	19.43433	6.70837	278.45	-0.32
90/11/ 5	2448200.5	2.87023	-19.22162	-0.10926	6.67247	0.68595	-0.08361	19.43504	6.70816	278.49	-0.32
90/11/ 9	2448204.5	2.88565	-19.22003	-0.10945	6.67170	0.69128	-0.08358	19.43575	6.70794	278.54	-0.32
90/11/13	2448208.5	2.90106	-19.21842	-0.10965	6.67093	0.69660	-0.08355	19.43646	6.70772	278.58	-0.32
90/11/17	2448212.5	2.91647	-19.21681	-0.10984	6.67016	0.70192	-0.08352	19.43717	6.70751	278.63	-0.32
90/11/21	2448216.5	2.93188	-19.21518	-0.11003	6.66937	0.70724	-0.08349	19.43788	6.70729	278.68	-0.32

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — URANUS

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90/11/25	2448220.5	2.94728	-19.21354	-0.11022	6.66859	0.71256	-0.08346	19.43859	6.70707	278.72	-0.32
90/11/29	2448224.5	2.96269	-19.21189	-0.11042	6.66780	0.71788	-0.08343	19.43930	6.70685	278.77	-0.33
90/12/ 3	2448228.5	2.97809	-19.21022	-0.11061	6.66700	0.72320	-0.08340	19.44001	6.70663	278.81	-0.33
90/12/ 7	2448232.5	2.99349	-19.20855	-0.11080	6.66620	0.72852	-0.08337	19.44072	6.70641	278.86	-0.33
90/12/11	2448236.5	3.00889	-19.20686	-0.11099	6.66540	0.73383	-0.08334	19.44143	6.70619	278.90	-0.33
90/12/15	2448240.5	3.02429	-19.20516	-0.11119	6.66458	0.73915	-0.08331	19.44214	6.70596	278.95	-0.33
90/12/19	2448244.5	3.03968	-19.20344	-0.11138	6.66377	0.74446	-0.08328	19.44285	6.70574	278.99	-0.33
90/12/23	2448248.5	3.05508	-19.20172	-0.11157	6.66295	0.74977	-0.08324	19.44356	6.70552	279.04	-0.33
90/12/27	2448252.5	3.07047	-19.19998	-0.11176	6.66213	0.75507	-0.08321	19.44426	6.70530	279.09	-0.33
90/12/31	2448256.5	3.08586	-19.19823	-0.11196	6.66131	0.76038	-0.08318	19.44497	6.70508	279.13	-0.33
91/ 1/ 4	2448260.5	3.10125	-19.19647	-0.11215	6.66048	0.76569	-0.08315	19.44568	6.70486	279.18	-0.33
91/ 1/ 8	2448264.5	3.11663	-19.19469	-0.11234	6.65965	0.77099	-0.08312	19.44639	6.70465	279.22	-0.33
91/ 1/12	2448268.5	3.13202	-19.19290	-0.11253	6.65882	0.77629	-0.08309	19.44710	6.70443	279.27	-0.33
91/ 1/16	2448272.5	3.14740	-19.19110	-0.11272	6.65798	0.78160	-0.08306	19.44781	6.70421	279.31	-0.33
91/ 1/20	2448276.5	3.16278	-19.18929	-0.11292	6.65713	0.78690	-0.08303	19.44852	6.70399	279.36	-0.33
91/ 1/24	2448280.5	3.17816	-19.18747	-0.11311	6.65628	0.79220	-0.08300	19.44923	6.70377	279.40	-0.33
91/ 1/28	2448284.5	3.19353	-19.18563	-0.11330	6.65543	0.79750	-0.08296	19.44993	6.70356	279.45	-0.33
91/ 2/ 1	2448288.5	3.20891	-19.18378	-0.11349	6.65458	0.80280	-0.08293	19.45064	6.70334	279.50	-0.33
91/ 2/ 5	2448292.5	3.22428	-19.18192	-0.11368	6.65372	0.80809	-0.08290	19.45135	6.70312	279.54	-0.33
91/ 2/ 9	2448296.5	3.23965	-19.18005	-0.11387	6.65285	0.81339	-0.08287	19.45206	6.70290	279.59	-0.34
91/ 2/13	2448300.5	3.25502	-19.17816	-0.11407	6.65199	0.81868	-0.08284	19.45277	6.70269	279.63	-0.34
91/ 2/17	2448304.5	3.27039	-19.17627	-0.11426	6.65112	0.82397	-0.08281	19.45347	6.70247	279.68	-0.34
91/ 2/21	2448308.5	3.28575	-19.17436	-0.11445	6.65024	0.82926	-0.08277	19.45418	6.70226	279.72	-0.34
91/ 2/25	2448312.5	3.30111	-19.17244	-0.11464	6.64936	0.83455	-0.08274	19.45489	6.70204	279.77	-0.34
91/ 3/ 1	2448316.5	3.31647	-19.17050	-0.11483	6.64848	0.83984	-0.08271	19.45560	6.70183	279.81	-0.34
91/ 3/ 5	2448320.5	3.33183	-19.16855	-0.11502	6.64760	0.84513	-0.08268	19.45631	6.70161	279.86	-0.34
91/ 3/ 9	2448324.5	3.34719	-19.16660	-0.11521	6.64671	0.85041	-0.08265	19.45701	6.70140	279.91	-0.34
91/ 3/13	2448328.5	3.36254	-19.16463	-0.11540	6.64582	0.85569	-0.08262	19.45772	6.70119	279.95	-0.34
91/ 3/17	2448332.5	3.37789	-19.16264	-0.11559	6.64492	0.86097	-0.08258	19.45843	6.70098	280.00	-0.34
91/ 3/21	2448336.5	3.39324	-19.16065	-0.11579	6.64403	0.86625	-0.08255	19.45913	6.70077	280.04	-0.34
91/ 3/25	2448340.5	3.40859	-19.15864	-0.11598	6.64313	0.87153	-0.08252	19.45984	6.70057	280.09	-0.34
91/ 3/29	2448344.5	3.42394	-19.15662	-0.11617	6.64224	0.87681	-0.08249	19.46055	6.70036	280.13	-0.34
91/ 4/ 2	2448348.5	3.43928	-19.15459	-0.11636	6.64134	0.88208	-0.08246	19.46126	6.70016	280.18	-0.34
91/ 4/ 6	2448352.5	3.45462	-19.15255	-0.11655	6.64043	0.88736	-0.08243	19.46196	6.69997	280.22	-0.34
91/ 4/10	2448356.5	3.46996	-19.15049	-0.11674	6.63953	0.89264	-0.08240	19.46267	6.69977	280.27	-0.34
91/ 4/14	2448360.5	3.48530	-19.14842	-0.11693	6.63862	0.89792	-0.08237	19.46338	6.69957	280.32	-0.34
91/ 4/18	2448364.5	3.50063	-19.14634	-0.11712	6.63770	0.90320	-0.08234	19.46408	6.69938	280.36	-0.34
91/ 4/22	2448368.5	3.51597	-19.14425	-0.11731	6.63679	0.90848	-0.08230	19.46479	6.69918	280.41	-0.35
91/ 4/26	2448372.5	3.53130	-19.14214	-0.11750	6.63587	0.91376	-0.08227	19.46550	6.69899	280.45	-0.35
91/ 4/30	2448376.5	3.54663	-19.14003	-0.11769	6.63494	0.91905	-0.08224	19.46620	6.69880	280.50	-0.35
91/ 5/ 4	2448380.5	3.56195	-19.13790	-0.11788	6.63402	0.92433	-0.08221	19.46691	6.69860	280.54	-0.35
91/ 5/ 8	2448384.5	3.57728	-19.13576	-0.11807	6.63308	0.92961	-0.08218	19.46761	6.69841	280.59	-0.35
91/ 5/12	2448388.5	3.59260	-19.13360	-0.11826	6.63215	0.93489	-0.08215	19.46832	6.69822	280.63	-0.35
91/ 5/16	2448392.5	3.60792	-19.13144	-0.11845	6.63121	0.94018	-0.08211	19.46903	6.69803	280.68	-0.35
91/ 5/20	2448396.5	3.62324	-19.12926	-0.11864	6.63026	0.94546	-0.08208	19.46973	6.69784	280.73	-0.35

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91/ 5/24	2448400.5	3.63856	-19.12707	-0.11883	6.62931	0.95074	-0.08205	19.47044	6.69764	280.77	-0.35
91/ 5/28	2448404.5	3.65387	-19.12486	-0.11902	6.62836	0.95603	-0.08202	19.47114	6.69745	280.82	-0.35
91/ 6/ 1	2448408.5	3.66918	-19.12265	-0.11921	6.62740	0.96131	-0.08199	19.47185	6.69726	280.86	-0.35
91/ 6/ 5	2448412.5	3.68449	-19.12042	-0.11940	6.62644	0.96659	-0.08196	19.47255	6.69706	280.91	-0.35
91/ 6/ 9	2448416.5	3.69980	-19.11818	-0.11958	6.62547	0.97188	-0.08192	19.47326	6.69687	280.95	-0.35
91/ 6/13	2448420.5	3.71510	-19.11593	-0.11977	6.62449	0.97716	-0.08189	19.47396	6.69667	281.00	-0.35
91/ 6/17	2448424.5	3.73040	-19.11367	-0.11996	6.62352	0.98244	-0.08186	19.47467	6.69648	281.04	-0.35
91/ 6/21	2448428.5	3.74570	-19.11139	-0.12015	6.62254	0.98772	-0.08183	19.47537	6.69629	281.09	-0.35
91/ 6/25	2448432.5	3.76100	-19.10911	-0.12034	6.62155	0.99300	-0.08180	19.47608	6.69609	281.13	-0.35
91/ 6/29	2448436.5	3.77630	-19.10681	-0.12053	6.62056	0.99828	-0.08176	19.47678	6.69590	281.18	-0.35
91/ 7/ 3	2448440.5	3.79159	-19.10449	-0.12072	6.61957	1.00356	-0.08173	19.47748	6.69571	281.23	-0.36
91/ 7/ 7	2448444.5	3.80688	-19.10217	-0.12091	6.61857	1.00885	-0.08170	19.47819	6.69551	281.27	-0.36
91/ 7/11	2448448.5	3.82217	-19.09983	-0.12110	6.61756	1.01413	-0.08167	19.47889	6.69532	281.32	-0.36
91/ 7/15	2448452.5	3.83746	-19.09748	-0.12129	6.61655	1.01941	-0.08163	19.47960	6.69512	281.36	-0.36
91/ 7/19	2448456.5	3.85274	-19.09512	-0.12147	6.61553	1.02469	-0.08160	19.48030	6.69492	281.41	-0.36
91/ 7/23	2448460.5	3.86802	-19.09275	-0.12166	6.61451	1.02997	-0.08157	19.48100	6.69472	281.45	-0.36
91/ 7/27	2448464.5	3.88330	-19.09036	-0.12185	6.61348	1.03525	-0.08153	19.48171	6.69452	281.50	-0.36
91/ 7/31	2448468.5	3.89858	-19.08797	-0.12204	6.61245	1.04052	-0.08150	19.48241	6.69431	281.54	-0.36
91/ 8/ 4	2448472.5	3.91386	-19.08556	-0.12223	6.61141	1.04580	-0.08147	19.48311	6.69411	281.59	-0.36
91/ 8/ 8	2448476.5	3.92913	-19.08313	-0.12242	6.61037	1.05107	-0.08143	19.48381	6.69390	281.63	-0.36
91/ 8/12	2448480.5	3.94440	-19.08070	-0.12260	6.60932	1.05635	-0.08140	19.48452	6.69369	281.68	-0.36
91/ 8/16	2448484.5	3.95967	-19.07825	-0.12279	6.60826	1.06162	-0.08137	19.48522	6.69349	281.73	-0.36
91/ 8/20	2448488.5	3.97493	-19.07579	-0.12298	6.60720	1.06688	-0.08133	19.48592	6.69328	281.77	-0.36
91/ 8/24	2448492.5	3.99019	-19.07332	-0.12317	6.60613	1.07215	-0.08130	19.48662	6.69306	281.82	-0.36
91/ 8/28	2448496.5	4.00545	-19.07084	-0.12336	6.60506	1.07741	-0.08127	19.48732	6.69285	281.86	-0.36
91/ 9/ 1	2448500.5	4.02071	-19.06835	-0.12354	6.60399	1.08267	-0.08123	19.48803	6.69264	281.91	-0.36
91/ 9/ 5	2448504.5	4.03597	-19.06584	-0.12373	6.60291	1.08793	-0.08120	19.48873	6.69242	281.95	-0.36
91/ 9/ 9	2448508.5	4.05122	-19.06332	-0.12392	6.60182	1.09318	-0.08116	19.48943	6.69221	282.00	-0.36
91/ 9/13	2448512.5	4.06647	-19.06079	-0.12411	6.60073	1.09843	-0.08113	19.49013	6.69200	282.04	-0.36
91/ 9/17	2448516.5	4.08172	-19.05824	-0.12429	6.59964	1.10368	-0.08110	19.49083	6.69179	282.09	-0.37
91/ 9/21	2448520.5	4.09696	-19.05569	-0.12448	6.59855	1.10892	-0.08106	19.49153	6.69157	282.13	-0.37
91/ 9/25	2448524.5	4.11220	-19.05312	-0.12467	6.59746	1.11417	-0.08103	19.49223	6.69137	282.18	-0.37
91/ 9/29	2448528.5	4.12744	-19.05054	-0.12485	6.59636	1.11941	-0.08100	19.49293	6.69116	282.22	-0.37
91/10/ 3	2448532.5	4.14268	-19.04795	-0.12504	6.59526	1.12465	-0.08096	19.49363	6.69095	282.27	-0.37
91/10/ 7	2448536.5	4.15792	-19.04534	-0.12523	6.59415	1.12989	-0.08093	19.49433	6.69074	282.32	-0.37
91/10/11	2448540.5	4.17315	-19.04273	-0.12542	6.59304	1.13513	-0.08089	19.49503	6.69053	282.36	-0.37
91/10/15	2448544.5	4.18838	-19.04010	-0.12560	6.59193	1.14036	-0.08086	19.49573	6.69033	282.41	-0.37
91/10/19	2448548.5	4.20361	-19.03746	-0.12579	6.59081	1.14560	-0.08083	19.49643	6.69012	282.45	-0.37
91/10/23	2448552.5	4.21883	-19.03481	-0.12598	6.58969	1.15083	-0.08079	19.49713	6.68991	282.50	-0.37
91/10/27	2448556.5	4.23405	-19.03214	-0.12616	6.58857	1.15606	-0.08076	19.49783	6.68971	282.54	-0.37
91/10/31	2448560.5	4.24927	-19.02946	-0.12635	6.58744	1.16129	-0.08072	19.49853	6.68951	282.59	-0.37
91/11/ 4	2448564.5	4.26449	-19.02678	-0.12654	6.58631	1.16651	-0.08069	19.49923	6.68931	282.63	-0.37
91/11/ 8	2448568.5	4.27970	-19.02408	-0.12672	6.58518	1.17174	-0.08066	19.49993	6.68910	282.68	-0.37
91/11/12	2448572.5	4.29491	-19.02136	-0.12691	6.58405	1.17696	-0.08062	19.50063	6.68890	282.72	-0.37
91/11/16	2448576.5	4.31012	-19.01864	-0.12709	6.58291	1.18218	-0.08059	19.50133	6.68871	282.77	-0.37

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91/11/20	2448580.5	4.32533	-19.01590	-0.12728	6.58177	1.18741	-0.08055	19.50203	6.68851	282.81	-0.37
91/11/24	2448584.5	4.34053	-19.01315	-0.12747	6.58063	1.19263	-0.08052	19.50273	6.68831	282.86	-0.37
91/11/28	2448588.5	4.35574	-19.01039	-0.12765	6.57948	1.19784	-0.08049	19.50343	6.68812	282.91	-0.38
91/12/ 2	2448592.5	4.37093	-19.00762	-0.12784	6.57833	1.20306	-0.08045	19.50412	6.68792	282.95	-0.38
91/12/ 6	2448596.5	4.38613	-19.00483	-0.12802	6.57718	1.20828	-0.08042	19.50482	6.68773	283.00	-0.38
91/12/10	2448600.5	4.40132	-19.00203	-0.12821	6.57603	1.21349	-0.08038	19.50552	6.68754	283.04	-0.38
91/12/14	2448604.5	4.41651	-18.99922	-0.12840	6.57488	1.21870	-0.08035	19.50622	6.68735	283.09	-0.38
91/12/18	2448608.5	4.43170	-18.99640	-0.12858	6.57372	1.22392	-0.08032	19.50692	6.68717	283.13	-0.38
91/12/22	2448612.5	4.44689	-18.99357	-0.12877	6.57256	1.22913	-0.08028	19.50762	6.68699	283.18	-0.38
91/12/26	2448616.5	4.46207	-18.99072	-0.12895	6.57140	1.23435	-0.08025	19.50831	6.68681	283.22	-0.38
91/12/30	2448620.5	4.47725	-18.98787	-0.12914	6.57024	1.23957	-0.08022	19.50901	6.68663	283.27	-0.38
92/ 1/ 3	2448624.5	4.49243	-18.98500	-0.12932	6.56907	1.24478	-0.08018	19.50971	6.68645	283.31	-0.38
92/ 1/ 7	2448628.5	4.50760	-18.98212	-0.12951	6.56790	1.25000	-0.08015	19.51041	6.68627	283.36	-0.38
92/ 1/11	2448632.5	4.52277	-18.97922	-0.12969	6.56672	1.25522	-0.08011	19.51110	6.68609	283.40	-0.38
92/ 1/15	2448636.5	4.53794	-18.97632	-0.12988	6.56554	1.26044	-0.08008	19.51180	6.68591	283.45	-0.38
92/ 1/19	2448640.5	4.55311	-18.97340	-0.13006	6.56435	1.26566	-0.08005	19.51250	6.68573	283.49	-0.38
92/ 1/23	2448644.5	4.56827	-18.97047	-0.13025	6.56316	1.27088	-0.08001	19.51319	6.68556	283.54	-0.38
92/ 1/27	2448648.5	4.58343	-18.96753	-0.13043	6.56197	1.27610	-0.07998	19.51389	6.68538	283.58	-0.38
92/ 1/31	2448652.5	4.59859	-18.96457	-0.13062	6.56077	1.28132	-0.07994	19.51459	6.68520	283.63	-0.38
92/ 2/ 4	2448656.5	4.61374	-18.96161	-0.13080	6.55957	1.28654	-0.07991	19.51528	6.68502	283.68	-0.38
92/ 2/ 8	2448660.5	4.62890	-18.95863	-0.13099	6.55836	1.29176	-0.07987	19.51598	6.68484	283.72	-0.38
92/ 2/12	2448664.5	4.64405	-18.95564	-0.13117	6.55715	1.29698	-0.07984	19.51667	6.68466	283.77	-0.39
92/ 2/16	2448668.5	4.65919	-18.95264	-0.13136	6.55593	1.30220	-0.07980	19.51737	6.68448	283.81	-0.39
92/ 2/20	2448672.5	4.67434	-18.94962	-0.13154	6.55471	1.30741	-0.07977	19.51806	6.68430	283.86	-0.39
92/ 2/24	2448676.5	4.68948	-18.94659	-0.13172	6.55348	1.31263	-0.07973	19.51876	6.68412	283.90	-0.39
92/ 2/28	2448680.5	4.70462	-18.94356	-0.13191	6.55225	1.31784	-0.07970	19.51945	6.68393	283.95	-0.39
92/ 3/ 3	2448684.5	4.71975	-18.94051	-0.13209	6.55101	1.32306	-0.07966	19.52015	6.68375	283.99	-0.39
92/ 3/ 7	2448688.5	4.73488	-18.93744	-0.13228	6.54977	1.32827	-0.07962	19.52084	6.68357	284.04	-0.39
92/ 3/11	2448692.5	4.75001	-18.93437	-0.13246	6.54852	1.33348	-0.07959	19.52154	6.68339	284.08	-0.39
92/ 3/15	2448696.5	4.76514	-18.93128	-0.13264	6.54727	1.33869	-0.07955	19.52223	6.68320	284.13	-0.39
92/ 3/19	2448700.5	4.78026	-18.92818	-0.13283	6.54602	1.34390	-0.07952	19.52293	6.68302	284.17	-0.39
92/ 3/23	2448704.5	4.79538	-18.92507	-0.13301	6.54476	1.34911	-0.07948	19.52362	6.68284	284.22	-0.39
92/ 3/27	2448708.5	4.81050	-18.92195	-0.13319	6.54350	1.35432	-0.07945	19.52431	6.68266	284.26	-0.39
92/ 3/31	2448712.5	4.82562	-18.91881	-0.13338	6.54223	1.35952	-0.07941	19.52501	6.68247	284.31	-0.39
92/ 4/ 4	2448716.5	4.84073	-18.91567	-0.13356	6.54096	1.36473	-0.07938	19.52570	6.68229	284.35	-0.39
92/ 4/ 8	2448720.5	4.85584	-18.91251	-0.13375	6.53968	1.36994	-0.07934	19.52639	6.68210	284.40	-0.39
92/ 4/12	2448724.5	4.87095	-18.90934	-0.13393	6.53840	1.37514	-0.07930	19.52709	6.68192	284.45	-0.39
92/ 4/16	2448728.5	4.88605	-18.90616	-0.13411	6.53712	1.38034	-0.07927	19.52778	6.68173	284.49	-0.39
92/ 4/20	2448732.5	4.90115	-18.90296	-0.13429	6.53582	1.38554	-0.07923	19.52847	6.68154	284.54	-0.39
92/ 4/24	2448736.5	4.91625	-18.89975	-0.13448	6.53453	1.39074	-0.07919	19.52916	6.68135	284.58	-0.39
92/ 4/28	2448740.5	4.93134	-18.89654	-0.13466	6.53323	1.39594	-0.07916	19.52986	6.68117	284.63	-0.40
92/ 5/ 2	2448744.5	4.94643	-18.89330	-0.13484	6.53192	1.40113	-0.07912	19.53055	6.68098	284.67	-0.40
92/ 5/ 6	2448748.5	4.96152	-18.89006	-0.13503	6.53061	1.40633	-0.07908	19.53124	6.68079	284.72	-0.40
92/ 5/10	2448752.5	4.97661	-18.88681	-0.13521	6.52930	1.41152	-0.07905	19.53193	6.68060	284.76	-0.40
92/ 5/14	2448756.5	4.99169	-18.88354	-0.13539	6.52798	1.41671	-0.07901	19.53262	6.68041	284.81	-0.40

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92/ 5/18	2448760.5	5.00677	-18.88026	-0.13557	6.52666	1.42189	-0.07897	19.53331	6.68022	284.85	-0.40
92/ 5/22	2448764.5	5.02184	-18.87697	-0.13576	6.52533	1.42708	-0.07894	19.53400	6.68003	284.90	-0.40
92/ 5/26	2448768.5	5.03692	-18.87367	-0.13594	6.52400	1.43226	-0.07890	19.53470	6.67984	284.94	-0.40
92/ 5/30	2448772.5	5.05199	-18.87035	-0.13612	6.52267	1.43744	-0.07886	19.53539	6.67965	284.99	-0.40
92/ 6/ 3	2448776.5	5.06705	-18.86703	-0.13630	6.52134	1.44262	-0.07883	19.53608	6.67946	285.03	-0.40
92/ 6/ 7	2448780.5	5.08212	-18.86369	-0.13648	6.52000	1.44779	-0.07879	19.53677	6.67927	285.08	-0.40
92/ 6/11	2448784.5	5.09718	-18.86034	-0.13667	6.51866	1.45296	-0.07876	19.53746	6.67909	285.12	-0.40
92/ 6/15	2448788.5	5.11224	-18.85697	-0.13685	6.51732	1.45814	-0.07872	19.53815	6.67891	285.17	-0.40
92/ 6/19	2448792.5	5.12729	-18.85360	-0.13703	6.51597	1.46331	-0.07868	19.53884	6.67873	285.21	-0.40
92/ 6/23	2448796.5	5.14234	-18.85021	-0.13721	6.51463	1.46848	-0.07865	19.53952	6.67855	285.26	-0.40
92/ 6/27	2448800.5	5.15739	-18.84681	-0.13739	6.51327	1.47366	-0.07861	19.54021	6.67837	285.30	-0.40
92/ 7/ 1	2448804.5	5.17244	-18.84340	-0.13758	6.51192	1.47883	-0.07858	19.54090	6.67819	285.35	-0.40
92/ 7/ 5	2448808.5	5.18748	-18.83998	-0.13776	6.51056	1.48400	-0.07854	19.54159	6.67801	285.39	-0.40
92/ 7/ 9	2448812.5	5.20252	-18.83655	-0.13794	6.50920	1.48917	-0.07850	19.54228	6.67783	285.44	-0.40
92/ 7/13	2448816.5	5.21755	-18.83310	-0.13812	6.50783	1.49434	-0.07847	19.54297	6.67766	285.48	-0.40
92/ 7/17	2448820.5	5.23259	-18.82964	-0.13830	6.50646	1.49951	-0.07843	19.54366	6.67748	285.53	-0.41
92/ 7/21	2448824.5	5.24762	-18.82617	-0.13848	6.50509	1.50468	-0.07839	19.54435	6.67730	285.58	-0.41
92/ 7/25	2448828.5	5.26264	-18.82269	-0.13866	6.50371	1.50985	-0.07836	19.54503	6.67713	285.62	-0.41
92/ 7/29	2448832.5	5.27767	-18.81920	-0.13884	6.50233	1.51502	-0.07832	19.54572	6.67695	285.67	-0.41
92/ 8/ 2	2448836.5	5.29268	-18.81569	-0.13903	6.50094	1.52018	-0.07829	19.54641	6.67678	285.71	-0.41
92/ 8/ 6	2448840.5	5.30770	-18.81217	-0.13921	6.49955	1.52535	-0.07825	19.54710	6.67660	285.76	-0.41
92/ 8/10	2448844.5	5.32272	-18.80864	-0.13939	6.49816	1.53052	-0.07821	19.54778	6.67642	285.80	-0.41
92/ 8/14	2448848.5	5.33773	-18.80510	-0.13957	6.49676	1.53568	-0.07818	19.54847	6.67625	285.85	-0.41
92/ 8/18	2448852.5	5.35273	-18.80155	-0.13975	6.49535	1.54085	-0.07814	19.54916	6.67607	285.89	-0.41
92/ 8/22	2448856.5	5.36774	-18.79798	-0.13993	6.49394	1.54601	-0.07810	19.54984	6.67589	285.94	-0.41
92/ 8/26	2448860.5	5.38274	-18.79440	-0.14011	6.49253	1.55117	-0.07806	19.55053	6.67572	285.98	-0.41
92/ 8/30	2448864.5	5.39773	-18.79082	-0.14029	6.49112	1.55633	-0.07803	19.55121	6.67554	286.03	-0.41
92/ 9/ 3	2448868.5	5.41273	-18.78721	-0.14047	6.48970	1.56149	-0.07799	19.55190	6.67536	286.07	-0.41
92/ 9/ 7	2448872.5	5.42772	-18.78360	-0.14065	6.48827	1.56665	-0.07796	19.55258	6.67519	286.12	-0.41
92/ 9/11	2448876.5	5.44271	-18.77998	-0.14083	6.48685	1.57181	-0.07792	19.55327	6.67502	286.16	-0.41
92/ 9/15	2448880.5	5.45769	-18.77634	-0.14101	6.48542	1.57697	-0.07788	19.55395	6.67484	286.21	-0.41
92/ 9/19	2448884.5	5.47267	-18.77269	-0.14119	6.48398	1.58213	-0.07784	19.55464	6.67467	286.25	-0.41
92/ 9/23	2448888.5	5.48765	-18.76903	-0.14137	6.48254	1.58729	-0.07781	19.55532	6.67449	286.30	-0.41
92/ 9/27	2448892.5	5.50262	-18.76536	-0.14155	6.48109	1.59245	-0.07777	19.55601	6.67431	286.34	-0.41
92/10/ 1	2448896.5	5.51759	-18.76167	-0.14173	6.47964	1.59760	-0.07773	19.55669	6.67414	286.39	-0.42
92/10/ 5	2448900.5	5.53256	-18.75797	-0.14191	6.47818	1.60276	-0.07770	19.55738	6.67396	286.43	-0.42
92/10/ 9	2448904.5	5.54752	-18.75427	-0.14209	6.47672	1.60791	-0.07766	19.55806	6.67378	286.48	-0.42
92/10/13	2448908.5	5.56249	-18.75055	-0.14227	6.47525	1.61307	-0.07762	19.55874	6.67360	286.52	-0.42
92/10/17	2448912.5	5.57744	-18.74681	-0.14245	6.47378	1.61822	-0.07758	19.55943	6.67341	286.57	-0.42
92/10/21	2448916.5	5.59240	-18.74307	-0.14263	6.47230	1.62337	-0.07754	19.56011	6.67323	286.61	-0.42
92/10/25	2448920.5	5.60735	-18.73931	-0.14280	6.47082	1.62851	-0.07750	19.56079	6.67304	286.66	-0.42
92/10/29	2448924.5	5.62229	-18.73554	-0.14298	6.46933	1.63366	-0.07747	19.56147	6.67286	286.70	-0.42
92/11/ 2	2448928.5	5.63724	-18.73176	-0.14316	6.46784	1.63880	-0.07743	19.56216	6.67267	286.75	-0.42
92/11/ 6	2448932.5	5.65218	-18.72797	-0.14334	6.46634	1.64394	-0.07739	19.56284	6.67248	286.79	-0.42
92/11/10	2448936.5	5.66711	-18.72417	-0.14352	6.46483	1.64908	-0.07735	19.56352	6.67230	286.84	-0.42

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92/11/14	2448940.5	5.68205	-18.72035	-0.14370	6.46333	1.65421	-0.07731	19.56420	6.67210	286.88	-0.42
92/11/18	2448944.5	5.69698	-18.71653	-0.14388	6.46182	1.65934	-0.07727	19.56488	6.67191	286.93	-0.42
92/11/22	2448948.5	5.71190	-18.71269	-0.14406	6.46030	1.66447	-0.07723	19.56556	6.67172	286.97	-0.42
92/11/26	2448952.5	5.72683	-18.70884	-0.14423	6.45878	1.66959	-0.07720	19.56624	6.67153	287.02	-0.42
92/11/30	2448956.5	5.74175	-18.70497	-0.14441	6.45726	1.67471	-0.07716	19.56692	6.67134	287.06	-0.42
92/12/ 4	2448960.5	5.75666	-18.70110	-0.14459	6.45574	1.67983	-0.07712	19.56760	6.67116	287.11	-0.42
92/12/ 8	2448964.5	5.77157	-18.69721	-0.14477	6.45421	1.68495	-0.07708	19.56828	6.67097	287.15	-0.42
92/12/12	2448968.5	5.78648	-18.69331	-0.14495	6.45268	1.69006	-0.07704	19.56896	6.67079	287.20	-0.42
92/12/16	2448972.5	5.80139	-18.68940	-0.14512	6.45115	1.69518	-0.07700	19.56964	6.67060	287.24	-0.42
92/12/20	2448976.5	5.81629	-18.68548	-0.14530	6.44962	1.70029	-0.07696	19.57032	6.67042	287.29	-0.43
92/12/24	2448980.5	5.83119	-18.68155	-0.14548	6.44808	1.70540	-0.07693	19.57100	6.67023	287.34	-0.43
92/12/28	2448984.5	5.84608	-18.67760	-0.14566	6.44653	1.71051	-0.07689	19.57168	6.67005	287.38	-0.43
93/ 1/ 1	2448988.5	5.86097	-18.67364	-0.14584	6.44499	1.71562	-0.07685	19.57236	6.66987	287.43	-0.43
93/ 1/ 5	2448992.5	5.87586	-18.66967	-0.14601	6.44344	1.72072	-0.07681	19.57304	6.66969	287.47	-0.43
93/ 1/ 9	2448996.5	5.89074	-18.66569	-0.14619	6.44189	1.72583	-0.07677	19.57371	6.66951	287.52	-0.43
93/ 1/13	2449000.5	5.90562	-18.66170	-0.14637	6.44033	1.73093	-0.07673	19.57439	6.66933	287.56	-0.43
93/ 1/17	2449004.5	5.92050	-18.65769	-0.14654	6.43878	1.73603	-0.07669	19.57507	6.66915	287.61	-0.43
93/ 1/21	2449008.5	5.93537	-18.65368	-0.14672	6.43722	1.74113	-0.07665	19.57575	6.66897	287.65	-0.43
93/ 1/25	2449012.5	5.95024	-18.64965	-0.14690	6.43565	1.74622	-0.07661	19.57642	6.66879	287.70	-0.43
93/ 1/29	2449016.5	5.96511	-18.64561	-0.14708	6.43409	1.75132	-0.07658	19.57710	6.66862	287.74	-0.43
93/ 2/ 2	2449020.5	5.97997	-18.64156	-0.14725	6.43252	1.75641	-0.07654	19.57778	6.66844	287.79	-0.43
93/ 2/ 6	2449024.5	5.99483	-18.63750	-0.14743	6.43095	1.76151	-0.07650	19.57846	6.66827	287.83	-0.43
93/ 2/10	2449028.5	6.00968	-18.63342	-0.14761	6.42937	1.76660	-0.07646	19.57913	6.66810	287.88	-0.43
93/ 2/14	2449032.5	6.02453	-18.62933	-0.14778	6.42780	1.77169	-0.07642	19.57981	6.66793	287.92	-0.43
93/ 2/18	2449036.5	6.03938	-18.62523	-0.14796	6.42622	1.77678	-0.07638	19.58048	6.66776	287.97	-0.43
93/ 2/22	2449040.5	6.05422	-18.62112	-0.14814	6.42463	1.78186	-0.07634	19.58116	6.66759	288.01	-0.43
93/ 2/26	2449044.5	6.06906	-18.61700	-0.14831	6.42305	1.78695	-0.07630	19.58184	6.66743	288.06	-0.43
93/ 3/ 2	2449048.5	6.08390	-18.61287	-0.14849	6.42147	1.79204	-0.07627	19.58251	6.66727	288.10	-0.43
93/ 3/ 6	2449052.5	6.09873	-18.60872	-0.14866	6.41988	1.79713	-0.07623	19.58319	6.66711	288.15	-0.43
93/ 3/10	2449056.5	6.11356	-18.60456	-0.14884	6.41829	1.80222	-0.07619	19.58386	6.66695	288.19	-0.44
93/ 3/14	2449060.5	6.12839	-18.60039	-0.14902	6.41670	1.80731	-0.07615	19.58454	6.66679	288.24	-0.44
93/ 3/18	2449064.5	6.14321	-18.59621	-0.14919	6.41510	1.81240	-0.07611	19.58521	6.66664	288.28	-0.44
93/ 3/22	2449068.5	6.15803	-18.59202	-0.14937	6.41350	1.81749	-0.07607	19.58588	6.66648	288.33	-0.44
93/ 3/26	2449072.5	6.17284	-18.58782	-0.14954	6.41189	1.82258	-0.07603	19.58656	6.66633	288.37	-0.44
93/ 3/30	2449076.5	6.18765	-18.58360	-0.14972	6.41028	1.82767	-0.07599	19.58723	6.66617	288.42	-0.44
93/ 4/ 3	2449080.5	6.20246	-18.57937	-0.14989	6.40867	1.83277	-0.07596	19.58791	6.66602	288.46	-0.44
93/ 4/ 7	2449084.5	6.21726	-18.57513	-0.15007	6.40705	1.83786	-0.07592	19.58858	6.66586	288.51	-0.44
93/ 4/11	2449088.5	6.23206	-18.57088	-0.15025	6.40542	1.84295	-0.07588	19.58925	6.66571	288.55	-0.44
93/ 4/15	2449092.5	6.24686	-18.56662	-0.15042	6.40380	1.84805	-0.07584	19.58992	6.66555	288.60	-0.44
93/ 4/19	2449096.5	6.26165	-18.56234	-0.15060	6.40216	1.85314	-0.07580	19.59060	6.66540	288.64	-0.44
93/ 4/23	2449100.5	6.27644	-18.55805	-0.15077	6.40052	1.85823	-0.07576	19.59127	6.66524	288.69	-0.44
93/ 4/27	2449104.5	6.29122	-18.55376	-0.15095	6.39888	1.86332	-0.07572	19.59194	6.66508	288.73	-0.44
93/ 5/ 1	2449108.5	6.30601	-18.54945	-0.15112	6.39723	1.86842	-0.07568	19.59261	6.66492	288.78	-0.44
93/ 5/ 5	2449112.5	6.32078	-18.54512	-0.15130	6.39557	1.87351	-0.07564	19.59328	6.66476	288.82	-0.44
93/ 5/ 9	2449116.5	6.33556	-18.54079	-0.15147	6.39391	1.87859	-0.07560	19.59395	6.66460	288.87	-0.44

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93/ 5/13	2449120.5	6.35032	-18.53644	-0.15164	6.39224	1.88368	-0.07556	19.59462	6.66444	288.91	-0.44
93/ 5/17	2449124.5	6.36509	-18.53209	-0.15182	6.39057	1.88877	-0.07552	19.59530	6.66428	288.96	-0.44
93/ 5/21	2449128.5	6.37985	-18.52772	-0.15199	6.38890	1.89385	-0.07548	19.59597	6.66411	289.00	-0.44
93/ 5/25	2449132.5	6.39461	-18.52334	-0.15217	6.38722	1.89893	-0.07544	19.59664	6.66395	289.05	-0.44
93/ 5/29	2449136.5	6.40936	-18.51894	-0.15234	6.38553	1.90401	-0.07540	19.59730	6.66378	289.09	-0.45
93/ 6/ 2	2449140.5	6.42411	-18.51454	-0.15252	6.38385	1.90909	-0.07536	19.59797	6.66362	289.14	-0.45
93/ 6/ 6	2449144.5	6.43886	-18.51012	-0.15269	6.38215	1.91418	-0.07532	19.59864	6.66345	289.18	-0.45
93/ 6/10	2449148.5	6.45360	-18.50569	-0.15286	6.38045	1.91925	-0.07528	19.59931	6.66329	289.23	-0.45
93/ 6/14	2449152.5	6.46834	-18.50125	-0.15304	6.37875	1.92433	-0.07524	19.59998	6.66312	289.27	-0.45
93/ 6/18	2449156.5	6.48307	-18.49680	-0.15321	6.37704	1.92941	-0.07520	19.60065	6.66295	289.32	-0.45
93/ 6/22	2449160.5	6.49780	-18.49234	-0.15339	6.37533	1.93448	-0.07516	19.60132	6.66278	289.36	-0.45
93/ 6/26	2449164.5	6.51253	-18.48786	-0.15356	6.37361	1.93956	-0.07511	19.60198	6.66261	289.41	-0.45
93/ 6/30	2449168.5	6.52725	-18.48338	-0.15373	6.37188	1.94463	-0.07507	19.60265	6.66244	289.45	-0.45
93/ 7/ 4	2449172.5	6.54197	-18.47888	-0.15391	6.37015	1.94969	-0.07503	19.60332	6.66226	289.50	-0.45
93/ 7/ 8	2449176.5	6.55668	-18.47437	-0.15408	6.36841	1.95476	-0.07499	19.60398	6.66209	289.54	-0.45
93/ 7/12	2449180.5	6.57139	-18.46985	-0.15425	6.36667	1.95982	-0.07495	19.60465	6.66191	289.59	-0.45
93/ 7/16	2449184.5	6.58610	-18.46532	-0.15443	6.36493	1.96488	-0.07491	19.60532	6.66173	289.63	-0.45
93/ 7/20	2449188.5	6.60080	-18.46077	-0.15460	6.36318	1.96994	-0.07487	19.60598	6.66155	289.67	-0.45
93/ 7/24	2449192.5	6.61550	-18.45621	-0.15477	6.36142	1.97499	-0.07482	19.60665	6.66137	289.72	-0.45
93/ 7/28	2449196.5	6.63019	-18.45164	-0.15494	6.35966	1.98005	-0.07478	19.60731	6.66119	289.76	-0.45
93/ 8/ 1	2449200.5	6.64488	-18.44706	-0.15512	6.35790	1.98510	-0.07474	19.60798	6.66101	289.81	-0.45
93/ 8/ 5	2449204.5	6.65957	-18.44247	-0.15529	6.35613	1.99014	-0.07470	19.60864	6.66083	289.85	-0.45
93/ 8/ 9	2449208.5	6.67425	-18.43787	-0.15546	6.35436	1.99518	-0.07466	19.60930	6.66065	289.90	-0.45
93/ 8/13	2449212.5	6.68893	-18.43325	-0.15563	6.35258	2.00022	-0.07462	19.60997	6.66046	289.94	-0.45
93/ 8/17	2449216.5	6.70360	-18.42863	-0.15581	6.35081	2.00525	-0.07458	19.61063	6.66028	289.99	-0.46
93/ 8/21	2449220.5	6.71827	-18.42399	-0.15598	6.34903	2.01029	-0.07453	19.61129	6.66010	290.03	-0.46
93/ 8/25	2449224.5	6.73294	-18.41934	-0.15615	6.34725	2.01532	-0.07449	19.61196	6.65992	290.08	-0.46
93/ 8/29	2449228.5	6.74760	-18.41468	-0.15632	6.34546	2.02035	-0.07445	19.61262	6.65975	290.12	-0.46
93/ 9/ 2	2449232.5	6.76225	-18.41000	-0.15650	6.34368	2.02537	-0.07441	19.61328	6.65957	290.17	-0.46
93/ 9/ 6	2449236.5	6.77691	-18.40532	-0.15667	6.34189	2.03040	-0.07437	19.61394	6.65940	290.21	-0.46
93/ 9/10	2449240.5	6.79156	-18.40062	-0.15684	6.34009	2.03542	-0.07433	19.61461	6.65922	290.26	-0.46
93/ 9/14	2449244.5	6.80620	-18.39592	-0.15701	6.33830	2.04045	-0.07429	19.61527	6.65905	290.30	-0.46
93/ 9/18	2449248.5	6.82084	-18.39120	-0.15718	6.33650	2.04547	-0.07425	19.61593	6.65888	290.35	-0.46
93/ 9/22	2449252.5	6.83548	-18.38646	-0.15735	6.33469	2.05049	-0.07421	19.61659	6.65871	290.39	-0.46
93/ 9/26	2449256.5	6.85011	-18.38172	-0.15753	6.33289	2.05551	-0.07416	19.61725	6.65853	290.44	-0.46
93/ 9/30	2449260.5	6.86474	-18.37697	-0.15770	6.33108	2.06053	-0.07412	19.61791	6.65836	290.48	-0.46
93/10/ 4	2449264.5	6.87936	-18.37220	-0.15787	6.32927	2.06554	-0.07408	19.61857	6.65820	290.53	-0.46
93/10/ 8	2449268.5	6.89398	-18.36742	-0.15804	6.32745	2.07056	-0.07404	19.61923	6.65803	290.57	-0.46
93/10/12	2449272.5	6.90860	-18.36264	-0.15821	6.32563	2.07557	-0.07400	19.61989	6.65786	290.62	-0.46
93/10/16	2449276.5	6.92321	-18.35783	-0.15838	6.32381	2.08058	-0.07396	19.62055	6.65769	290.66	-0.46
93/10/20	2449280.5	6.93781	-18.35302	-0.15855	6.32198	2.08560	-0.07392	19.62121	6.65752	290.71	-0.46
93/10/24	2449284.5	6.95242	-18.34820	-0.15872	6.32015	2.09061	-0.07388	19.62187	6.65736	290.75	-0.46
93/10/28	2449288.5	6.96702	-18.34336	-0.15889	6.31832	2.09561	-0.07383	19.62253	6.65719	290.80	-0.46
93/11/ 1	2449292.5	6.98161	-18.33852	-0.15906	6.31648	2.10062	-0.07379	19.62318	6.65702	290.84	-0.46
93/11/ 5	2449296.5	6.99620	-18.33366	-0.15923	6.31464	2.10563	-0.07375	19.62384	6.65686	290.89	-0.46

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
93/11/ 9	2449300.5	7.01079	-18.32879	-0.15940	6.31279	2.11063	-0.07371	19.62450	6.65669	290.93	-0.47
93/11/13	2449304.5	7.02537	-18.32391	-0.15957	6.31095	2.11563	-0.07367	19.62516	6.65653	290.98	-0.47
93/11/17	2449308.5	7.03995	-18.31901	-0.15974	6.30910	2.12063	-0.07363	19.62581	6.65637	291.02	-0.47
93/11/21	2449312.5	7.05452	-18.31411	-0.15991	6.30724	2.12564	-0.07359	19.62647	6.65620	291.07	-0.47
93/11/25	2449316.5	7.06909	-18.30919	-0.16008	6.30539	2.13064	-0.07354	19.62713	6.65604	291.11	-0.47
93/11/29	2449320.5	7.08365	-18.30426	-0.16025	6.30353	2.13564	-0.07350	19.62778	6.65589	291.16	-0.47
93/12/ 3	2449324.5	7.09821	-18.29932	-0.16042	6.30166	2.14064	-0.07346	19.62844	6.65573	291.20	-0.47
93/12/ 7	2449328.5	7.11277	-18.29437	-0.16059	6.29979	2.14564	-0.07342	19.62909	6.65557	291.25	-0.47
93/12/11	2449332.5	7.12732	-18.28941	-0.16076	6.29792	2.15064	-0.07338	19.62975	6.65541	291.29	-0.47
93/12/15	2449336.5	7.14187	-18.28444	-0.16093	6.29604	2.15564	-0.07333	19.63040	6.65525	291.34	-0.47
93/12/19	2449340.5	7.15641	-18.27945	-0.16110	6.29416	2.16064	-0.07329	19.63106	6.65509	291.38	-0.47
93/12/23	2449344.5	7.17095	-18.27445	-0.16127	6.29227	2.16564	-0.07325	19.63171	6.65493	291.43	-0.47
93/12/27	2449348.5	7.18548	-18.26944	-0.16144	6.29038	2.17063	-0.07321	19.63237	6.65476	291.47	-0.47
93/12/31	2449352.5	7.20001	-18.26442	-0.16161	6.28848	2.17563	-0.07316	19.63302	6.65460	291.51	-0.47
94/ 1/ 4	2449356.5	7.21454	-18.25939	-0.16178	6.28658	2.18062	-0.07312	19.63367	6.65444	291.56	-0.47
94/ 1/ 8	2449360.5	7.22906	-18.25435	-0.16195	6.28467	2.18561	-0.07308	19.63433	6.65427	291.60	-0.47
94/ 1/12	2449364.5	7.24357	-18.24929	-0.16212	6.28276	2.19060	-0.07303	19.63498	6.65411	291.65	-0.47
94/ 1/16	2449368.5	7.25809	-18.24423	-0.16228	6.28085	2.19559	-0.07299	19.63563	6.65394	291.69	-0.47
94/ 1/20	2449372.5	7.27259	-18.23915	-0.16245	6.27892	2.20058	-0.07295	19.63628	6.65378	291.74	-0.47
94/ 1/24	2449376.5	7.28710	-18.23406	-0.16262	6.27700	2.20556	-0.07290	19.63693	6.65361	291.78	-0.47
94/ 1/28	2449380.5	7.30160	-18.22896	-0.16279	6.27507	2.21054	-0.07286	19.63758	6.65344	291.83	-0.47
94/ 2/ 1	2449384.5	7.31609	-18.22385	-0.16296	6.27313	2.21552	-0.07282	19.63824	6.65327	291.87	-0.48
94/ 2/ 5	2449388.5	7.33058	-18.21872	-0.16313	6.27119	2.22049	-0.07277	19.63889	6.65310	291.92	-0.48
94/ 2/ 9	2449392.5	7.34506	-18.21359	-0.16329	6.26925	2.22546	-0.07273	19.63954	6.65293	291.96	-0.48
94/ 2/13	2449396.5	7.35955	-18.20844	-0.16346	6.26730	2.23043	-0.07269	19.64019	6.65276	292.01	-0.48
94/ 2/17	2449400.5	7.37402	-18.20328	-0.16363	6.26535	2.23540	-0.07264	19.64084	6.65259	292.05	-0.48
94/ 2/21	2449404.5	7.38849	-18.19811	-0.16380	6.26340	2.24037	-0.07260	19.64148	6.65242	292.10	-0.48
94/ 2/25	2449408.5	7.40296	-18.19293	-0.16397	6.26145	2.24533	-0.07256	19.64213	6.65226	292.14	-0.48
94/ 3/ 1	2449412.5	7.41742	-18.18774	-0.16413	6.25949	2.25030	-0.07251	19.64278	6.65209	292.19	-0.48
94/ 3/ 5	2449416.5	7.43188	-18.18253	-0.16430	6.25752	2.25526	-0.07247	19.64343	6.65192	292.23	-0.48
94/ 3/ 9	2449420.5	7.44634	-18.17732	-0.16447	6.25556	2.26022	-0.07243	19.64408	6.65175	292.28	-0.48
94/ 3/13	2449424.5	7.46078	-18.17209	-0.16464	6.25359	2.26518	-0.07238	19.64473	6.65159	292.32	-0.48
94/ 3/17	2449428.5	7.47523	-18.16685	-0.16480	6.25161	2.27013	-0.07234	19.64537	6.65142	292.37	-0.48
94/ 3/21	2449432.5	7.48967	-18.16160	-0.16497	6.24963	2.27509	-0.07229	19.64602	6.65125	292.41	-0.48
94/ 3/25	2449436.5	7.50410	-18.15634	-0.16514	6.24765	2.28004	-0.07225	19.64667	6.65109	292.46	-0.48
94/ 3/29	2449440.5	7.51854	-18.15107	-0.16530	6.24566	2.28499	-0.07221	19.64731	6.65092	292.50	-0.48
94/ 4/ 2	2449444.5	7.53296	-18.14578	-0.16547	6.24368	2.28994	-0.07216	19.64796	6.65075	292.55	-0.48
94/ 4/ 6	2449448.5	7.54738	-18.14049	-0.16564	6.24168	2.29489	-0.07212	19.64860	6.65059	292.59	-0.48
94/ 4/10	2449452.5	7.56180	-18.13518	-0.16580	6.23969	2.29983	-0.07207	19.64925	6.65042	292.63	-0.48
94/ 4/14	2449456.5	7.57621	-18.12986	-0.16597	6.23769	2.30477	-0.07203	19.64989	6.65026	292.68	-0.48
94/ 4/18	2449460.5	7.59062	-18.12453	-0.16614	6.23568	2.30971	-0.07199	19.65054	6.65009	292.72	-0.48
94/ 4/22	2449464.5	7.60502	-18.11919	-0.16630	6.23368	2.31465	-0.07194	19.65118	6.64993	292.77	-0.48
94/ 4/26	2449468.5	7.61942	-18.11384	-0.16647	6.23167	2.31959	-0.07190	19.65183	6.64976	292.81	-0.49
94/ 4/30	2449472.5	7.63382	-18.10847	-0.16664	6.22965	2.32452	-0.07185	19.65247	6.64960	292.86	-0.49
94/ 5/ 4	2449476.5	7.64821	-18.10310	-0.16680	6.22764	2.32946	-0.07181	19.65312	6.64943	292.90	-0.49

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/ 5/ 8	2449480.5	7.66259	-18.09771	-0.16697	6.22562	2.33439	-0.07177	19.65376	6.64927	292.95	-0.49
94/ 5/12	2449484.5	7.67697	-18.09231	-0.16713	6.22360	2.33931	-0.07172	19.65440	6.64911	292.99	-0.49
94/ 5/16	2449488.5	7.69135	-18.08690	-0.16730	6.22158	2.34424	-0.07168	19.65504	6.64896	293.04	-0.49
94/ 5/20	2449492.5	7.70572	-18.08148	-0.16746	6.21955	2.34917	-0.07164	19.65569	6.64880	293.08	-0.49
94/ 5/24	2449496.5	7.72008	-18.07605	-0.16763	6.21752	2.35410	-0.07159	19.65633	6.64865	293.13	-0.49
94/ 5/28	2449500.5	7.73444	-18.07060	-0.16779	6.21549	2.35903	-0.07155	19.65697	6.64850	293.17	-0.49
94/ 6/ 1	2449504.5	7.74880	-18.06515	-0.16796	6.21346	2.36396	-0.07151	19.65761	6.64834	293.22	-0.49
94/ 6/ 5	2449508.5	7.76315	-18.05968	-0.16812	6.21142	2.36889	-0.07146	19.65825	6.64819	293.26	-0.49
94/ 6/ 9	2449512.5	7.77750	-18.05420	-0.16829	6.20937	2.37382	-0.07142	19.65889	6.64804	293.31	-0.49
94/ 6/13	2449516.5	7.79184	-18.04871	-0.16845	6.20733	2.37875	-0.07137	19.65953	6.64789	293.35	-0.49
94/ 6/17	2449520.5	7.80618	-18.04321	-0.16862	6.20527	2.38368	-0.07133	19.66017	6.64774	293.40	-0.49
94/ 6/21	2449524.5	7.82051	-18.03770	-0.16878	6.20322	2.38860	-0.07129	19.66081	6.64759	293.44	-0.49
94/ 6/25	2449528.5	7.83484	-18.03217	-0.16895	6.20115	2.39353	-0.07124	19.66145	6.64743	293.48	-0.49
94/ 6/29	2449532.5	7.84916	-18.02664	-0.16911	6.19909	2.39846	-0.07120	19.66209	6.64728	293.53	-0.49
94/ 7/ 3	2449536.5	7.86348	-18.02109	-0.16928	6.19702	2.40338	-0.07115	19.66273	6.64713	293.57	-0.49
94/ 7/ 7	2449540.5	7.87780	-18.01553	-0.16944	6.19494	2.40831	-0.07111	19.66336	6.64697	293.62	-0.49
94/ 7/11	2449544.5	7.89210	-18.00997	-0.16961	6.19286	2.41323	-0.07106	19.66400	6.64682	293.66	-0.49
94/ 7/15	2449548.5	7.90641	-18.00438	-0.16977	6.19077	2.41815	-0.07102	19.66464	6.64666	293.71	-0.49
94/ 7/19	2449552.5	7.92071	-17.99879	-0.16993	6.18868	2.42307	-0.07098	19.66527	6.64650	293.75	-0.50
94/ 7/23	2449556.5	7.93500	-17.99319	-0.17010	6.18658	2.42799	-0.07093	19.66591	6.64635	293.80	-0.50
94/ 7/27	2449560.5	7.94929	-17.98757	-0.17026	6.18447	2.43291	-0.07089	19.66655	6.64619	293.84	-0.50
94/ 7/31	2449564.5	7.96358	-17.98195	-0.17043	6.18236	2.43782	-0.07084	19.66718	6.64602	293.89	-0.50
94/ 8/ 4	2449568.5	7.97786	-17.97631	-0.17059	6.18025	2.44273	-0.07080	19.66782	6.64586	293.93	-0.50
94/ 8/ 8	2449572.5	7.99213	-17.97066	-0.17075	6.17814	2.44764	-0.07075	19.66845	6.64570	293.98	-0.50
94/ 8/12	2449576.5	8.00640	-17.96500	-0.17092	6.17602	2.45255	-0.07071	19.66909	6.64554	294.02	-0.50
94/ 8/16	2449580.5	8.02067	-17.95933	-0.17108	6.17389	2.45746	-0.07066	19.66972	6.64538	294.07	-0.50
94/ 8/20	2449584.5	8.03493	-17.95365	-0.17124	6.17176	2.46236	-0.07062	19.67035	6.64521	294.11	-0.50
94/ 8/24	2449588.5	8.04918	-17.94795	-0.17141	6.16963	2.46727	-0.07057	19.67099	6.64505	294.15	-0.50
94/ 8/28	2449592.5	8.06343	-17.94225	-0.17157	6.16749	2.47217	-0.07053	19.67162	6.64488	294.20	-0.50
94/ 9/ 1	2449596.5	8.07768	-17.93653	-0.17173	6.16534	2.47707	-0.07048	19.67225	6.64472	294.24	-0.50
94/ 9/ 5	2449600.5	8.09192	-17.93080	-0.17189	6.16319	2.48197	-0.07043	19.67288	6.64455	294.29	-0.50
94/ 9/ 9	2449604.5	8.10616	-17.92506	-0.17206	6.16103	2.48686	-0.07039	19.67352	6.64438	294.33	-0.50
94/ 9/13	2449608.5	8.12039	-17.91931	-0.17222	6.15887	2.49176	-0.07034	19.67415	6.64421	294.38	-0.50
94/ 9/17	2449612.5	8.13461	-17.91355	-0.17238	6.15670	2.49665	-0.07030	19.67478	6.64403	294.42	-0.50
94/ 9/21	2449616.5	8.14883	-17.90778	-0.17254	6.15453	2.50153	-0.07025	19.67541	6.64386	294.47	-0.50
94/ 9/25	2449620.5	8.16305	-17.90199	-0.17271	6.15236	2.50642	-0.07020	19.67604	6.64368	294.51	-0.50
94/ 9/29	2449624.5	8.17726	-17.89620	-0.17287	6.15018	2.51130	-0.07016	19.67667	6.64351	294.56	-0.50
94/10/ 3	2449628.5	8.19146	-17.89039	-0.17303	6.14799	2.51617	-0.07011	19.67730	6.64333	294.60	-0.50
94/10/ 7	2449632.5	8.20566	-17.88457	-0.17319	6.14580	2.52105	-0.07006	19.67793	6.64315	294.65	-0.50
94/10/11	2449636.5	8.21986	-17.87874	-0.17336	6.14361	2.52592	-0.07002	19.67856	6.64297	294.69	-0.50
94/10/15	2449640.5	8.23405	-17.87290	-0.17352	6.14141	2.53078	-0.06997	19.67918	6.64279	294.74	-0.51
94/10/19	2449644.5	8.24823	-17.86705	-0.17368	6.13921	2.53565	-0.06992	19.67981	6.64261	294.78	-0.51
94/10/23	2449648.5	8.26241	-17.86119	-0.17384	6.13700	2.54050	-0.06988	19.68044	6.64243	294.82	-0.51
94/10/27	2449652.5	8.27659	-17.85531	-0.17400	6.13479	2.54536	-0.06983	19.68107	6.64224	294.87	-0.51
94/10/31	2449656.5	8.29076	-17.84942	-0.17416	6.13258	2.55021	-0.06979	19.68169	6.64206	294.91	-0.51

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94/11/ 4	2449660.5	8.30492	-17.84353	-0.17432	6.13037	2.55505	-0.06974	19.68232	6.64188	294.96	-0.51
94/11/ 8	2449664.5	8.31908	-17.83762	-0.17448	6.12816	2.55990	-0.06969	19.68294	6.64170	295.00	-0.51
94/11/12	2449668.5	8.33324	-17.83170	-0.17465	6.12594	2.56474	-0.06965	19.68357	6.64153	295.05	-0.51
94/11/16	2449672.5	8.34739	-17.82577	-0.17481	6.12372	2.56958	-0.06960	19.68419	6.64135	295.09	-0.51
94/11/20	2449676.5	8.36153	-17.81983	-0.17497	6.12150	2.57442	-0.06956	19.68482	6.64118	295.14	-0.51
94/11/24	2449680.5	8.37567	-17.81387	-0.17513	6.11928	2.57926	-0.06951	19.68544	6.64101	295.18	-0.51
94/11/28	2449684.5	8.38981	-17.80791	-0.17529	6.11705	2.58409	-0.06946	19.68607	6.64083	295.23	-0.51
94/12/ 2	2449688.5	8.40393	-17.80194	-0.17545	6.11482	2.58892	-0.06942	19.68669	6.64066	295.27	-0.51
94/12/ 6	2449692.5	8.41806	-17.79595	-0.17561	6.11259	2.59375	-0.06937	19.68731	6.64049	295.32	-0.51
94/12/10	2449696.5	8.43218	-17.78995	-0.17577	6.11035	2.59858	-0.06932	19.68794	6.64032	295.36	-0.51
94/12/14	2449700.5	8.44629	-17.78394	-0.17593	6.10812	2.60341	-0.06928	19.68856	6.64015	295.40	-0.51
94/12/18	2449704.5	8.46040	-17.77792	-0.17609	6.10588	2.60824	-0.06923	19.68918	6.63999	295.45	-0.51
94/12/22	2449708.5	8.47450	-17.77189	-0.17625	6.10363	2.61306	-0.06919	19.68980	6.63982	295.49	-0.51
94/12/26	2449712.5	8.48860	-17.76585	-0.17641	6.10139	2.61788	-0.06914	19.69042	6.63966	295.54	-0.51
94/12/30	2449716.5	8.50269	-17.75980	-0.17657	6.09914	2.62271	-0.06909	19.69105	6.63949	295.58	-0.51
95/ 1/ 3	2449720.5	8.51678	-17.75373	-0.17673	6.09689	2.62753	-0.06905	19.69167	6.63933	295.63	-0.51
95/ 1/ 7	2449724.5	8.53086	-17.74766	-0.17689	6.09463	2.63235	-0.06900	19.69229	6.63917	295.67	-0.51
95/ 1/11	2449728.5	8.54494	-17.74157	-0.17705	6.09237	2.63716	-0.06895	19.69291	6.63901	295.72	-0.52
95/ 1/15	2449732.5	8.55901	-17.73547	-0.17721	6.09011	2.64198	-0.06891	19.69353	6.63885	295.76	-0.52
95/ 1/19	2449736.5	8.57308	-17.72936	-0.17737	6.08785	2.64679	-0.06886	19.69415	6.63869	295.81	-0.52
95/ 1/23	2449740.5	8.58714	-17.72324	-0.17752	6.08558	2.65161	-0.06881	19.69477	6.63853	295.85	-0.52
95/ 1/27	2449744.5	8.60119	-17.71711	-0.17768	6.08331	2.65642	-0.06877	19.69538	6.63837	295.90	-0.52
95/ 1/31	2449748.5	8.61525	-17.71097	-0.17784	6.08104	2.66123	-0.06872	19.69600	6.63822	295.94	-0.52
95/ 2/ 4	2449752.5	8.62929	-17.70482	-0.17800	6.07877	2.66604	-0.06868	19.69662	6.63806	295.98	-0.52
95/ 2/ 8	2449756.5	8.64333	-17.69865	-0.17816	6.07649	2.67085	-0.06863	19.69724	6.63791	296.03	-0.52
95/ 2/12	2449760.5	8.65737	-17.69247	-0.17832	6.07421	2.67566	-0.06858	19.69785	6.63776	296.07	-0.52
95/ 2/16	2449764.5	8.67140	-17.68629	-0.17848	6.07193	2.68047	-0.06854	19.69847	6.63761	296.12	-0.52
95/ 2/20	2449768.5	8.68542	-17.68009	-0.17863	6.06964	2.68529	-0.06849	19.69909	6.63746	296.16	-0.52
95/ 2/24	2449772.5	8.69944	-17.67388	-0.17879	6.06734	2.69010	-0.06844	19.69970	6.63732	296.21	-0.52
95/ 2/28	2449776.5	8.71345	-17.66766	-0.17895	6.06504	2.69491	-0.06840	19.70032	6.63717	296.25	-0.52
95/ 3/ 4	2449780.5	8.72746	-17.66143	-0.17911	6.06274	2.69972	-0.06835	19.70093	6.63702	296.30	-0.52
95/ 3/ 8	2449784.5	8.74147	-17.65519	-0.17927	6.06043	2.70453	-0.06830	19.70155	6.63687	296.34	-0.52
95/ 3/12	2449788.5	8.75546	-17.64893	-0.17942	6.05812	2.70934	-0.06825	19.70216	6.63671	296.39	-0.52
95/ 3/16	2449792.5	8.76946	-17.64267	-0.17958	6.05580	2.71415	-0.06821	19.70278	6.63656	296.43	-0.52
95/ 3/20	2449796.5	8.78344	-17.63639	-0.17974	6.05348	2.71895	-0.06816	19.70339	6.63641	296.47	-0.52
95/ 3/24	2449800.5	8.79743	-17.63011	-0.17990	6.05115	2.72376	-0.06811	19.70400	6.63626	296.52	-0.52
95/ 3/28	2449804.5	8.81140	-17.62381	-0.18005	6.04881	2.72856	-0.06806	19.70462	6.63610	296.56	-0.52
95/ 4/ 1	2449808.5	8.82537	-17.61750	-0.18021	6.04647	2.73336	-0.06801	19.70523	6.63594	296.61	-0.52
95/ 4/ 5	2449812.5	8.83934	-17.61118	-0.18037	6.04413	2.73816	-0.06797	19.70584	6.63579	296.65	-0.52
95/ 4/ 9	2449816.5	8.85330	-17.60485	-0.18053	6.04178	2.74296	-0.06792	19.70645	6.63563	296.70	-0.52
95/ 4/13	2449820.5	8.86725	-17.59851	-0.18068	6.03942	2.74776	-0.06787	19.70706	6.63546	296.74	-0.53
95/ 4/17	2449824.5	8.88120	-17.59215	-0.18084	6.03706	2.75255	-0.06782	19.70767	6.63530	296.79	-0.53
95/ 4/21	2449828.5	8.89515	-17.58579	-0.18100	6.03470	2.75734	-0.06777	19.70828	6.63514	296.83	-0.53
95/ 4/25	2449832.5	8.90909	-17.57941	-0.18115	6.03233	2.76212	-0.06772	19.70889	6.63497	296.88	-0.53
95/ 4/29	2449836.5	8.92302	-17.57303	-0.18131	6.02996	2.76690	-0.06768	19.70950	6.63481	296.92	-0.53

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95/ 5/ 3	2449840.5	8.93695	-17.56663	-0.18146	6.02758	2.77169	-0.06763	19.71011	6.63465	296.96	-0.53
95/ 5/ 7	2449844.5	8.95087	-17.56022	-0.18162	6.02520	2.77647	-0.06758	19.71072	6.63448	297.01	-0.53
95/ 5/11	2449848.5	8.96479	-17.55380	-0.18178	6.02282	2.78124	-0.06753	19.71133	6.63432	297.05	-0.53
95/ 5/15	2449852.5	8.97870	-17.54737	-0.18193	6.02043	2.78602	-0.06748	19.71193	6.63415	297.10	-0.53
95/ 5/19	2449856.5	8.99260	-17.54093	-0.18209	6.01803	2.79079	-0.06743	19.71254	6.63399	297.14	-0.53
95/ 5/23	2449860.5	9.00650	-17.53448	-0.18224	6.01563	2.79556	-0.06739	19.71315	6.63382	297.19	-0.53
95/ 5/27	2449864.5	9.02040	-17.52801	-0.18240	6.01323	2.80033	-0.06734	19.71375	6.63365	297.23	-0.53
95/ 5/31	2449868.5	9.03429	-17.52154	-0.18256	6.01082	2.80510	-0.06729	19.71436	6.63348	297.28	-0.53
95/ 6/ 4	2449872.5	9.04817	-17.51505	-0.18271	6.00841	2.80986	-0.06724	19.71496	6.63331	297.32	-0.53
95/ 6/ 8	2449876.5	9.06205	-17.50855	-0.18287	6.00600	2.81462	-0.06719	19.71557	6.63314	297.37	-0.53
95/ 6/12	2449880.5	9.07592	-17.50205	-0.18302	6.00358	2.81938	-0.06714	19.71617	6.63297	297.41	-0.53
95/ 6/16	2449884.5	9.08979	-17.49553	-0.18318	6.00115	2.82413	-0.06709	19.71678	6.63280	297.45	-0.53
95/ 6/20	2449888.5	9.10365	-17.48900	-0.18333	5.99873	2.82888	-0.06704	19.71738	6.63263	297.50	-0.53
95/ 6/24	2449892.5	9.11750	-17.48246	-0.18349	5.99629	2.83363	-0.06699	19.71798	6.63246	297.54	-0.53
95/ 6/28	2449896.5	9.13135	-17.47591	-0.18364	5.99386	2.83838	-0.06694	19.71858	6.63229	297.59	-0.53
95/ 7/ 2	2449900.5	9.14520	-17.46934	-0.18380	5.99142	2.84312	-0.06690	19.71919	6.63211	297.63	-0.53
95/ 7/ 6	2449904.5	9.15903	-17.46277	-0.18395	5.98898	2.84786	-0.06685	19.71979	6.63194	297.68	-0.53
95/ 7/10	2449908.5	9.17287	-17.45619	-0.18410	5.98653	2.85260	-0.06680	19.72039	6.63177	297.72	-0.53
95/ 7/14	2449912.5	9.18669	-17.44959	-0.18426	5.98408	2.85733	-0.06675	19.72099	6.63159	297.77	-0.54
95/ 7/18	2449916.5	9.20051	-17.44298	-0.18441	5.98163	2.86206	-0.06670	19.72159	6.63142	297.81	-0.54
95/ 7/22	2449920.5	9.21433	-17.43637	-0.18457	5.97918	2.86679	-0.06665	19.72219	6.63125	297.85	-0.54
95/ 7/26	2449924.5	9.22814	-17.42974	-0.18472	5.97672	2.87151	-0.06660	19.72279	6.63108	297.90	-0.54
95/ 7/30	2449928.5	9.24195	-17.42310	-0.18487	5.97426	2.87624	-0.06655	19.72339	6.63091	297.94	-0.54
95/ 8/ 3	2449932.5	9.25574	-17.41645	-0.18503	5.97180	2.88096	-0.06651	19.72399	6.63074	297.99	-0.54
95/ 8/ 7	2449936.5	9.26954	-17.40979	-0.18518	5.96934	2.88568	-0.06646	19.72459	6.63058	298.03	-0.54
95/ 8/11	2449940.5	9.28332	-17.40312	-0.18534	5.96687	2.89040	-0.06641	19.72518	6.63041	298.08	-0.54
95/ 8/15	2449944.5	9.29711	-17.39643	-0.18549	5.96440	2.89512	-0.06636	19.72578	6.63025	298.12	-0.54
95/ 8/19	2449948.5	9.31088	-17.38974	-0.18564	5.96193	2.89984	-0.06631	19.72638	6.63009	298.17	-0.54
95/ 8/23	2449952.5	9.32465	-17.38303	-0.18580	5.95945	2.90456	-0.06626	19.72697	6.62992	298.21	-0.54
95/ 8/27	2449956.5	9.33842	-17.37632	-0.18595	5.95697	2.90927	-0.06621	19.72757	6.62976	298.25	-0.54
95/ 8/31	2449960.5	9.35218	-17.36959	-0.18610	5.95448	2.91399	-0.06617	19.72817	6.62960	298.30	-0.54
95/ 9/ 4	2449964.5	9.36593	-17.36286	-0.18625	5.95199	2.91870	-0.06612	19.72876	6.62943	298.34	-0.54
95/ 9/ 8	2449968.5	9.37968	-17.35611	-0.18641	5.94950	2.92341	-0.06607	19.72936	6.62927	298.39	-0.54
95/ 9/12	2449972.5	9.39342	-17.34935	-0.18656	5.94700	2.92812	-0.06602	19.72995	6.62911	298.43	-0.54
95/ 9/16	2449976.5	9.40715	-17.34258	-0.18671	5.94450	2.93283	-0.06597	19.73054	6.62895	298.48	-0.54
95/ 9/20	2449980.5	9.42088	-17.33580	-0.18686	5.94199	2.93754	-0.06592	19.73114	6.62878	298.52	-0.54
95/ 9/24	2449984.5	9.43461	-17.32901	-0.18702	5.93948	2.94224	-0.06587	19.73173	6.62862	298.57	-0.54
95/ 9/28	2449988.5	9.44833	-17.32220	-0.18717	5.93697	2.94695	-0.06582	19.73232	6.62845	298.61	-0.54
95/10/ 2	2449992.5	9.46204	-17.31539	-0.18732	5.93445	2.95165	-0.06577	19.73292	6.62829	298.65	-0.54
95/10/ 6	2449996.5	9.47574	-17.30857	-0.18747	5.93192	2.95635	-0.06572	19.73351	6.62812	298.70	-0.54
95/10/10	2450000.5	9.48945	-17.30173	-0.18762	5.92939	2.96105	-0.06567	19.73410	6.62795	298.74	-0.54
95/10/14	2450004.5	9.50314	-17.29488	-0.18778	5.92686	2.96574	-0.06562	19.73469	6.62779	298.79	-0.55
95/10/18	2450008.5	9.51683	-17.28803	-0.18793	5.92432	2.97043	-0.06557	19.73528	6.62762	298.83	-0.55
95/10/22	2450012.5	9.53051	-17.28116	-0.18808	5.92178	2.97512	-0.06552	19.73587	6.62745	298.88	-0.55
95/10/26	2450016.5	9.54419	-17.27428	-0.18823	5.91923	2.97980	-0.06547	19.73646	6.62728	298.92	-0.55

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95/10/30	2450020.5	9.55786	-17.26739	-0.18838	5.91669	2.98449	-0.06542	19.73705	6.62711	298.97	-0.55
95/11/ 3	2450024.5	9.57153	-17.26049	-0.18853	5.91413	2.98918	-0.06537	19.73764	6.62695	299.01	-0.55
95/11/ 7	2450028.5	9.58519	-17.25358	-0.18868	5.91158	2.99386	-0.06532	19.73822	6.62678	299.05	-0.55
95/11/11	2450032.5	9.59884	-17.24666	-0.18883	5.90902	2.99854	-0.06527	19.73881	6.62661	299.10	-0.55
95/11/15	2450036.5	9.61249	-17.23973	-0.18898	5.90645	3.00322	-0.06522	19.73940	6.62644	299.14	-0.55
95/11/19	2450040.5	9.62613	-17.23278	-0.18914	5.90388	3.00789	-0.06517	19.73998	6.62627	299.19	-0.55
95/11/23	2450044.5	9.63977	-17.22583	-0.18929	5.90130	3.01257	-0.06512	19.74057	6.62610	299.23	-0.55
95/11/27	2450048.5	9.65340	-17.21886	-0.18944	5.89872	3.01724	-0.06507	19.74116	6.62592	299.28	-0.55
95/12/ 1	2450052.5	9.66702	-17.21189	-0.18959	5.89613	3.02191	-0.06502	19.74174	6.62575	299.32	-0.55
95/12/ 5	2450056.5	9.68064	-17.20490	-0.18974	5.89354	3.02657	-0.06497	19.74233	6.62557	299.37	-0.55
95/12/ 9	2450060.5	9.69425	-17.19791	-0.18989	5.89095	3.03123	-0.06492	19.74291	6.62539	299.41	-0.55
95/12/13	2450064.5	9.70786	-17.19090	-0.19004	5.88835	3.03589	-0.06487	19.74349	6.62522	299.45	-0.55
95/12/17	2450068.5	9.72146	-17.18388	-0.19019	5.88575	3.04055	-0.06482	19.74408	6.62504	299.50	-0.55
95/12/21	2450072.5	9.73505	-17.17685	-0.19034	5.88314	3.04520	-0.06476	19.74466	6.62486	299.54	-0.55
95/12/25	2450076.5	9.74864	-17.16981	-0.19049	5.88053	3.04985	-0.06471	19.74524	6.62468	299.59	-0.55
95/12/29	2450080.5	9.76222	-17.16276	-0.19064	5.87791	3.05449	-0.06466	19.74582	6.62450	299.63	-0.55
96/ 1/ 2	2450084.5	9.77580	-17.15570	-0.19078	5.87529	3.05913	-0.06461	19.74640	6.62431	299.68	-0.55
96/ 1/ 6	2450088.5	9.78937	-17.14862	-0.19093	5.87267	3.06377	-0.06456	19.74699	6.62413	299.72	-0.55
96/ 1/10	2450092.5	9.80293	-17.14154	-0.19108	5.87004	3.06840	-0.06451	19.74757	6.62394	299.76	-0.55
96/ 1/14	2450096.5	9.81649	-17.13445	-0.19123	5.86742	3.07303	-0.06445	19.74815	6.62376	299.81	-0.55
96/ 1/18	2450100.5	9.83004	-17.12734	-0.19138	5.86479	3.07765	-0.06440	19.74873	6.62358	299.85	-0.56
96/ 1/22	2450104.5	9.84359	-17.12023	-0.19153	5.86216	3.08227	-0.06435	19.74930	6.62340	299.90	-0.56
96/ 1/26	2450108.5	9.85713	-17.11310	-0.19168	5.85952	3.08689	-0.06430	19.74988	6.62322	299.94	-0.56
96/ 1/30	2450112.5	9.87066	-17.10596	-0.19183	5.85689	3.09151	-0.06425	19.75046	6.62304	299.99	-0.56
96/ 2/ 3	2450116.5	9.88419	-17.09882	-0.19197	5.85425	3.09613	-0.06420	19.75104	6.62287	300.03	-0.56
96/ 2/ 7	2450120.5	9.89771	-17.09166	-0.19212	5.85161	3.10074	-0.06415	19.75162	6.62269	300.07	-0.56
96/ 2/11	2450124.5	9.91122	-17.08449	-0.19227	5.84896	3.10536	-0.06410	19.75219	6.62252	300.12	-0.56
96/ 2/15	2450128.5	9.92473	-17.07731	-0.19242	5.84632	3.10997	-0.06405	19.75277	6.62234	300.16	-0.56
96/ 2/19	2450132.5	9.93824	-17.07012	-0.19257	5.84367	3.11457	-0.06399	19.75334	6.62217	300.21	-0.56
96/ 2/23	2450136.5	9.95173	-17.06292	-0.19271	5.84101	3.11918	-0.06394	19.75392	6.62199	300.25	-0.56
96/ 2/27	2450140.5	9.96522	-17.05571	-0.19286	5.83836	3.12378	-0.06389	19.75450	6.62182	300.30	-0.56
96/ 3/ 2	2450144.5	9.97871	-17.04849	-0.19301	5.83570	3.12839	-0.06384	19.75507	6.62165	300.34	-0.56
96/ 3/ 6	2450148.5	9.99219	-17.04125	-0.19316	5.83304	3.13299	-0.06379	19.75564	6.62148	300.39	-0.56
96/ 3/10	2450152.5	10.00566	-17.03401	-0.19330	5.83037	3.13759	-0.06374	19.75622	6.62131	300.43	-0.56
96/ 3/14	2450156.5	10.01912	-17.02676	-0.19345	5.82771	3.14218	-0.06369	19.75679	6.62114	300.47	-0.56
96/ 3/18	2450160.5	10.03258	-17.01949	-0.19360	5.82504	3.14678	-0.06363	19.75736	6.62098	300.52	-0.56
96/ 3/22	2450164.5	10.04604	-17.01222	-0.19375	5.82236	3.15137	-0.06358	19.75794	6.62081	300.56	-0.56
96/ 3/26	2450168.5	10.05949	-17.00493	-0.19389	5.81968	3.15597	-0.06353	19.75851	6.62064	300.61	-0.56
96/ 3/30	2450172.5	10.07293	-16.99764	-0.19404	5.81700	3.16056	-0.06348	19.75908	6.62047	300.65	-0.56
96/ 4/ 3	2450176.5	10.08636	-16.99033	-0.19419	5.81432	3.16514	-0.06343	19.75965	6.62031	300.70	-0.56
96/ 4/ 7	2450180.5	10.09979	-16.98301	-0.19433	5.81163	3.16973	-0.06338	19.76022	6.62014	300.74	-0.56
96/ 4/11	2450184.5	10.11321	-16.97568	-0.19448	5.80894	3.17432	-0.06333	19.76079	6.61998	300.78	-0.56
96/ 4/15	2450188.5	10.12663	-16.96835	-0.19462	5.80625	3.17890	-0.06327	19.76136	6.61982	300.83	-0.56
96/ 4/19	2450192.5	10.14004	-16.96100	-0.19477	5.80356	3.18348	-0.06322	19.76193	6.61966	300.87	-0.56
96/ 4/23	2450196.5	10.15345	-16.95364	-0.19492	5.80086	3.18807	-0.06317	19.76250	6.61950	300.92	-0.57

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96/ 4/27	2450200.5	10.16684	-16.94627	-0.19506	5.79816	3.19265	-0.06312	19.76306	6.61934	300.96	-0.57
96/ 5/ 1	2450204.5	10.18024	-16.93889	-0.19521	5.79546	3.19723	-0.06307	19.76363	6.61919	301.01	-0.57
96/ 5/ 5	2450208.5	10.19362	-16.93150	-0.19535	5.79275	3.20182	-0.06302	19.76420	6.61903	301.05	-0.57
96/ 5/ 9	2450212.5	10.20700	-16.92409	-0.19550	5.79003	3.20640	-0.06297	19.76477	6.61887	301.09	-0.57
96/ 5/13	2450216.5	10.22037	-16.91668	-0.19565	5.78732	3.21098	-0.06292	19.76533	6.61871	301.14	-0.57
96/ 5/17	2450220.5	10.23374	-16.90926	-0.19579	5.78459	3.21556	-0.06286	19.76590	6.61855	301.18	-0.57
96/ 5/21	2450224.5	10.24710	-16.90182	-0.19594	5.78186	3.22014	-0.06281	19.76646	6.61840	301.23	-0.57
96/ 5/25	2450228.5	10.26045	-16.89438	-0.19608	5.77913	3.22471	-0.06276	19.76703	6.61824	301.27	-0.57
96/ 5/29	2450232.5	10.27380	-16.88692	-0.19623	5.77639	3.22929	-0.06271	19.76759	6.61807	301.32	-0.57
96/ 6/ 2	2450236.5	10.28714	-16.87946	-0.19637	5.77364	3.23386	-0.06265	19.76816	6.61791	301.36	-0.57
96/ 6/ 6	2450240.5	10.30048	-16.87198	-0.19652	5.77089	3.23844	-0.06260	19.76872	6.61775	301.40	-0.57
96/ 6/10	2450244.5	10.31381	-16.86450	-0.19666	5.76814	3.24301	-0.06255	19.76928	6.61758	301.45	-0.57
96/ 6/14	2450248.5	10.32713	-16.85700	-0.19680	5.76538	3.24757	-0.06250	19.76984	6.61742	301.49	-0.57
96/ 6/18	2450252.5	10.34044	-16.84949	-0.19695	5.76261	3.25214	-0.06244	19.77040	6.61725	301.54	-0.57
96/ 6/22	2450256.5	10.35375	-16.84197	-0.19709	5.75984	3.25670	-0.06239	19.77097	6.61708	301.58	-0.57
96/ 6/26	2450260.5	10.36706	-16.83444	-0.19724	5.75706	3.26126	-0.06234	19.77153	6.61690	301.63	-0.57
96/ 6/30	2450264.5	10.38035	-16.82690	-0.19738	5.75427	3.26582	-0.06228	19.77209	6.61673	301.67	-0.57
96/ 7/ 4	2450268.5	10.39364	-16.81935	-0.19752	5.75149	3.27037	-0.06223	19.77265	6.61655	301.71	-0.57
96/ 7/ 8	2450272.5	10.40693	-16.81179	-0.19767	5.74869	3.27492	-0.06218	19.77320	6.61638	301.76	-0.57
96/ 7/12	2450276.5	10.42020	-16.80422	-0.19781	5.74590	3.27946	-0.06212	19.77376	6.61620	301.80	-0.57
96/ 7/16	2450280.5	10.43347	-16.79664	-0.19796	5.74310	3.28400	-0.06207	19.77432	6.61602	301.85	-0.57
96/ 7/20	2450284.5	10.44674	-16.78905	-0.19810	5.74030	3.28854	-0.06202	19.77488	6.61584	301.89	-0.57
96/ 7/24	2450288.5	10.46000	-16.78145	-0.19824	5.73749	3.29308	-0.06197	19.77543	6.61566	301.94	-0.57
96/ 7/28	2450292.5	10.47325	-16.77383	-0.19839	5.73468	3.29761	-0.06191	19.77599	6.61548	301.98	-0.57
96/ 8/ 1	2450296.5	10.48649	-16.76621	-0.19853	5.73186	3.30214	-0.06186	19.77655	6.61530	302.02	-0.58
96/ 8/ 5	2450300.5	10.49973	-16.75858	-0.19867	5.72904	3.30667	-0.06180	19.77710	6.61512	302.07	-0.58
96/ 8/ 9	2450304.5	10.51296	-16.75093	-0.19881	5.72621	3.31119	-0.06175	19.77766	6.61493	302.11	-0.58
96/ 8/13	2450308.5	10.52619	-16.74328	-0.19896	5.72338	3.31571	-0.06170	19.77821	6.61475	302.16	-0.58
96/ 8/17	2450312.5	10.53941	-16.73561	-0.19910	5.72055	3.32023	-0.06164	19.77876	6.61456	302.20	-0.58
96/ 8/21	2450316.5	10.55262	-16.72794	-0.19924	5.71771	3.32474	-0.06159	19.77932	6.61437	302.25	-0.58
96/ 8/25	2450320.5	10.56583	-16.72025	-0.19938	5.71486	3.32925	-0.06154	19.77987	6.61418	302.29	-0.58
96/ 8/29	2450324.5	10.57902	-16.71256	-0.19953	5.71202	3.33376	-0.06148	19.78042	6.61399	302.33	-0.58
96/ 9/ 2	2450328.5	10.59222	-16.70485	-0.19967	5.70917	3.33826	-0.06143	19.78097	6.61380	302.38	-0.58
96/ 9/ 6	2450332.5	10.60540	-16.69713	-0.19981	5.70631	3.34276	-0.06137	19.78152	6.61361	302.42	-0.58
96/ 9/10	2450336.5	10.61858	-16.68940	-0.19995	5.70345	3.34725	-0.06132	19.78207	6.61341	302.47	-0.58
96/ 9/14	2450340.5	10.63175	-16.68167	-0.20009	5.70059	3.35174	-0.06126	19.78262	6.61322	302.51	-0.58
96/ 9/18	2450344.5	10.64492	-16.67392	-0.20023	5.69773	3.35623	-0.06121	19.78317	6.61302	302.55	-0.58
96/ 9/22	2450348.5	10.65808	-16.66616	-0.20038	5.69486	3.36071	-0.06116	19.78372	6.61283	302.60	-0.58
96/ 9/26	2450352.5	10.67123	-16.65839	-0.20052	5.69199	3.36518	-0.06110	19.78427	6.61263	302.64	-0.58
96/ 9/30	2450356.5	10.68438	-16.65061	-0.20066	5.68911	3.36966	-0.06105	19.78482	6.61244	302.69	-0.58
96/10/ 4	2450360.5	10.69752	-16.64282	-0.20080	5.68624	3.37412	-0.06100	19.78537	6.61224	302.73	-0.58
96/10/ 8	2450364.5	10.71065	-16.63502	-0.20094	5.68336	3.37859	-0.06094	19.78591	6.61205	302.78	-0.58
96/10/12	2450368.5	10.72378	-16.62721	-0.20108	5.68049	3.38305	-0.06089	19.78646	6.61186	302.82	-0.58
96/10/16	2450372.5	10.73690	-16.61939	-0.20122	5.67761	3.38751	-0.06084	19.78701	6.61167	302.86	-0.58
96/10/20	2450376.5	10.75001	-16.61156	-0.20136	5.67473	3.39197	-0.06078	19.78755	6.61148	302.91	-0.58

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96/10/24	2450380.5	10.76312	-16.60372	-0.20150	5.67185	3.39643	-0.06073	19.78810	6.61130	302.95	-0.58
96/10/28	2450384.5	10.77622	-16.59587	-0.20164	5.66896	3.40088	-0.06068	19.78864	6.61111	303.00	-0.58
96/11/ 1	2450388.5	10.78931	-16.58801	-0.20178	5.66607	3.40534	-0.06062	19.78918	6.61093	303.04	-0.58
96/11/ 5	2450392.5	10.80240	-16.58013	-0.20192	5.66318	3.40979	-0.06057	19.78973	6.61074	303.09	-0.58
96/11/ 9	2450396.5	10.81548	-16.57225	-0.20206	5.66028	3.41424	-0.06051	19.79027	6.61056	303.13	-0.59
96/11/13	2450400.5	10.82855	-16.56436	-0.20220	5.65739	3.41869	-0.06046	19.79081	6.61038	303.17	-0.59
96/11/17	2450404.5	10.84161	-16.55646	-0.20234	5.65449	3.42313	-0.06041	19.79136	6.61020	303.22	-0.59
96/11/21	2450408.5	10.85467	-16.54854	-0.20248	5.65158	3.42757	-0.06035	19.79190	6.61001	303.26	-0.59
96/11/25	2450412.5	10.86773	-16.54062	-0.20262	5.64868	3.43202	-0.06030	19.79244	6.60983	303.31	-0.59
96/11/29	2450416.5	10.88077	-16.53269	-0.20276	5.64576	3.43646	-0.06025	19.79298	6.60965	303.35	-0.59
96/12/ 3	2450420.5	10.89381	-16.52474	-0.20290	5.64285	3.44090	-0.06019	19.79352	6.60947	303.39	-0.59
96/12/ 7	2450424.5	10.90684	-16.51679	-0.20304	5.63993	3.44533	-0.06014	19.79406	6.60929	303.44	-0.59
96/12/11	2450428.5	10.91987	-16.50882	-0.20318	5.63701	3.44977	-0.06008	19.79460	6.60912	303.48	-0.59
96/12/15	2450432.5	10.93289	-16.50085	-0.20331	5.63409	3.45420	-0.06003	19.79514	6.60894	303.53	-0.59
96/12/19	2450436.5	10.94590	-16.49286	-0.20345	5.63116	3.45863	-0.05997	19.79567	6.60876	303.57	-0.59
96/12/23	2450440.5	10.95891	-16.48487	-0.20359	5.62823	3.46306	-0.05992	19.79621	6.60858	303.62	-0.59
96/12/27	2450444.5	10.97191	-16.47686	-0.20373	5.62529	3.46748	-0.05987	19.79675	6.60840	303.66	-0.59
96/12/31	2450448.5	10.98490	-16.46885	-0.20387	5.62235	3.47190	-0.05981	19.79728	6.60822	303.70	-0.59
97/ 1/ 4	2450452.5	10.99788	-16.46082	-0.20401	5.61941	3.47632	-0.05976	19.79782	6.60804	303.75	-0.59
97/ 1/ 8	2450456.5	11.01086	-16.45279	-0.20414	5.61647	3.48074	-0.05970	19.79836	6.60786	303.79	-0.59
97/ 1/12	2450460.5	11.02383	-16.44474	-0.20428	5.61352	3.48516	-0.05965	19.79889	6.60768	303.84	-0.59
97/ 1/16	2450464.5	11.03680	-16.43668	-0.20442	5.61057	3.48957	-0.05959	19.79942	6.60751	303.88	-0.59
97/ 1/20	2450468.5	11.04976	-16.42862	-0.20456	5.60761	3.49399	-0.05954	19.79996	6.60733	303.92	-0.59
97/ 1/24	2450472.5	11.06271	-16.42054	-0.20470	5.60465	3.49840	-0.05948	19.80049	6.60716	303.97	-0.59
97/ 1/28	2450476.5	11.07565	-16.41245	-0.20483	5.60169	3.50281	-0.05943	19.80102	6.60698	304.01	-0.59
97/ 2/ 1	2450480.5	11.08859	-16.40435	-0.20497	5.59872	3.50722	-0.05937	19.80156	6.60680	304.06	-0.59
97/ 2/ 5	2450484.5	11.10152	-16.39625	-0.20511	5.59575	3.51163	-0.05932	19.80209	6.60662	304.10	-0.59
97/ 2/ 9	2450488.5	11.11444	-16.38813	-0.20524	5.59277	3.51604	-0.05926	19.80262	6.60644	304.15	-0.59
97/ 2/13	2450492.5	11.12736	-16.38000	-0.20538	5.58979	3.52044	-0.05921	19.80315	6.60626	304.19	-0.59
97/ 2/17	2450496.5	11.14027	-16.37186	-0.20552	5.58680	3.52484	-0.05915	19.80368	6.60608	304.23	-0.59
97/ 2/21	2450500.5	11.15317	-16.36372	-0.20565	5.58381	3.52923	-0.05910	19.80421	6.60590	304.28	-0.59
97/ 2/25	2450504.5	11.16607	-16.35556	-0.20579	5.58081	3.53363	-0.05904	19.80474	6.60571	304.32	-0.60
97/ 3/ 1	2450508.5	11.17896	-16.34739	-0.20593	5.57781	3.53802	-0.05898	19.80527	6.60553	304.37	-0.60
97/ 3/ 5	2450512.5	11.19184	-16.33921	-0.20606	5.57480	3.54240	-0.05893	19.80580	6.60534	304.41	-0.60
97/ 3/ 9	2450516.5	11.20472	-16.33102	-0.20620	5.57179	3.54679	-0.05887	19.80632	6.60515	304.45	-0.60
97/ 3/13	2450520.5	11.21758	-16.32282	-0.20634	5.56878	3.55117	-0.05882	19.80685	6.60496	304.50	-0.60
97/ 3/17	2450524.5	11.23045	-16.31461	-0.20647	5.56576	3.55554	-0.05876	19.80738	6.60477	304.54	-0.60
97/ 3/21	2450528.5	11.24330	-16.30640	-0.20661	5.56274	3.55991	-0.05870	19.80790	6.60458	304.59	-0.60
97/ 3/25	2450532.5	11.25615	-16.29817	-0.20674	5.55971	3.56428	-0.05865	19.80843	6.60439	304.63	-0.60
97/ 3/29	2450536.5	11.26899	-16.28993	-0.20688	5.55668	3.56864	-0.05859	19.80895	6.60419	304.67	-0.60
97/ 4/ 2	2450540.5	11.28182	-16.28168	-0.20701	5.55365	3.57300	-0.05854	19.80948	6.60400	304.72	-0.60
97/ 4/ 6	2450544.5	11.29465	-16.27342	-0.20715	5.55062	3.57736	-0.05848	19.81000	6.60381	304.76	-0.60
97/ 4/10	2450548.5	11.30747	-16.26515	-0.20728	5.54759	3.58171	-0.05842	19.81052	6.60362	304.81	-0.60
97/ 4/14	2450552.5	11.32028	-16.25687	-0.20742	5.54455	3.58607	-0.05837	19.81105	6.60343	304.85	-0.60
97/ 4/18	2450556.5	11.33309	-16.24858	-0.20755	5.54151	3.59042	-0.05831	19.81157	6.60324	304.90	-0.60

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97/ 4/22	2450560.5	11.34588	-16.24028	-0.20769	5.53846	3.59476	-0.05826	19.81209	6.60305	304.94	-0.60
97/ 4/26	2450564.5	11.35867	-16.23197	-0.20782	5.53541	3.59911	-0.05820	19.81261	6.60286	304.98	-0.60
97/ 4/30	2450568.5	11.37146	-16.22365	-0.20796	5.53236	3.60345	-0.05814	19.81313	6.60267	305.03	-0.60
97/ 5/ 4	2450572.5	11.38424	-16.21532	-0.20809	5.52931	3.60778	-0.05809	19.81365	6.60248	305.07	-0.60
97/ 5/ 8	2450576.5	11.39701	-16.20698	-0.20822	5.52625	3.61212	-0.05803	19.81417	6.60229	305.12	-0.60
97/ 5/12	2450580.5	11.40977	-16.19863	-0.20836	5.52319	3.61645	-0.05797	19.81469	6.60210	305.16	-0.60
97/ 5/16	2450584.5	11.42253	-16.19027	-0.20849	5.52012	3.62078	-0.05792	19.81521	6.60191	305.20	-0.60
97/ 5/20	2450588.5	11.43527	-16.18190	-0.20863	5.51706	3.62511	-0.05786	19.81573	6.60172	305.25	-0.60
97/ 5/24	2450592.5	11.44802	-16.17352	-0.20876	5.51399	3.62943	-0.05781	19.81624	6.60153	305.29	-0.60
97/ 5/28	2450596.5	11.46075	-16.16513	-0.20889	5.51091	3.63375	-0.05775	19.81676	6.60134	305.34	-0.60
97/ 6/ 1	2450600.5	11.47348	-16.15673	-0.20903	5.50784	3.63807	-0.05769	19.81728	6.60115	305.38	-0.60
97/ 6/ 5	2450604.5	11.48620	-16.14833	-0.20916	5.50476	3.64239	-0.05764	19.81779	6.60096	305.42	-0.60
97/ 6/ 9	2450608.5	11.49891	-16.13991	-0.20929	5.50167	3.64670	-0.05758	19.81831	6.60077	305.47	-0.61
97/ 6/13	2450612.5	11.51162	-16.13148	-0.20943	5.49859	3.65101	-0.05752	19.81882	6.60058	305.51	-0.61
97/ 6/17	2450616.5	11.52432	-16.12304	-0.20956	5.49550	3.65532	-0.05747	19.81934	6.60039	305.56	-0.61
97/ 6/21	2450620.5	11.53701	-16.11459	-0.20969	5.49240	3.65962	-0.05741	19.81985	6.60020	305.60	-0.61
97/ 6/25	2450624.5	11.54969	-16.10613	-0.20982	5.48931	3.66392	-0.05736	19.82036	6.60001	305.64	-0.61
97/ 6/29	2450628.5	11.56237	-16.09766	-0.20996	5.48621	3.66822	-0.05730	19.82088	6.59983	305.69	-0.61
97/ 7/ 3	2450632.5	11.57504	-16.08918	-0.21009	5.48312	3.67252	-0.05725	19.82139	6.59964	305.73	-0.61
97/ 7/ 7	2450636.5	11.58771	-16.08069	-0.21022	5.48002	3.67682	-0.05719	19.82190	6.59946	305.78	-0.61
97/ 7/11	2450640.5	11.60036	-16.07219	-0.21035	5.47691	3.68111	-0.05713	19.82241	6.59927	305.82	-0.61
97/ 7/15	2450644.5	11.61301	-16.06368	-0.21048	5.47380	3.68541	-0.05708	19.82292	6.59909	305.86	-0.61
97/ 7/19	2450648.5	11.62565	-16.05516	-0.21062	5.47069	3.68970	-0.05702	19.82343	6.59891	305.91	-0.61
97/ 7/23	2450652.5	11.63829	-16.04663	-0.21075	5.46757	3.69399	-0.05697	19.82394	6.59873	305.95	-0.61
97/ 7/27	2450656.5	11.65092	-16.03810	-0.21088	5.46445	3.69828	-0.05691	19.82445	6.59854	306.00	-0.61
97/ 7/31	2450660.5	11.66354	-16.02955	-0.21101	5.46133	3.70257	-0.05685	19.82496	6.59836	306.04	-0.61
97/ 8/ 4	2450664.5	11.67615	-16.02099	-0.21114	5.45820	3.70686	-0.05680	19.82547	6.59818	306.08	-0.61
97/ 8/ 8	2450668.5	11.68875	-16.01242	-0.21127	5.45506	3.71114	-0.05674	19.82597	6.59799	306.13	-0.61
97/ 8/12	2450672.5	11.70135	-16.00384	-0.21140	5.45192	3.71542	-0.05668	19.82648	6.59781	306.17	-0.61
97/ 8/16	2450676.5	11.71394	-15.99525	-0.21154	5.44878	3.71970	-0.05663	19.82699	6.59762	306.22	-0.61
97/ 8/20	2450680.5	11.72653	-15.98666	-0.21167	5.44563	3.72398	-0.05657	19.82749	6.59743	306.26	-0.61
97/ 8/24	2450684.5	11.73910	-15.97805	-0.21180	5.44248	3.72825	-0.05651	19.82800	6.59724	306.30	-0.61
97/ 8/28	2450688.5	11.75167	-15.96943	-0.21193	5.43932	3.73253	-0.05645	19.82850	6.59705	306.35	-0.61
97/ 9/ 1	2450692.5	11.76424	-15.96080	-0.21206	5.43616	3.73679	-0.05640	19.82901	6.59686	306.39	-0.61
97/ 9/ 5	2450696.5	11.77679	-15.95216	-0.21219	5.43299	3.74106	-0.05634	19.82951	6.59667	306.44	-0.61
97/ 9/ 9	2450700.5	11.78934	-15.94352	-0.21232	5.42981	3.74532	-0.05628	19.83001	6.59647	306.48	-0.61
97/ 9/13	2450704.5	11.80188	-15.93486	-0.21245	5.42663	3.74957	-0.05622	19.83051	6.59627	306.52	-0.61
97/ 9/17	2450708.5	11.81441	-15.92619	-0.21258	5.42345	3.75382	-0.05617	19.83101	6.59607	306.57	-0.61
97/ 9/21	2450712.5	11.82694	-15.91752	-0.21271	5.42027	3.75807	-0.05611	19.83152	6.59587	306.61	-0.61
97/ 9/25	2450716.5	11.83946	-15.90883	-0.21284	5.41708	3.76231	-0.05605	19.83202	6.59567	306.66	-0.61
97/ 9/29	2450720.5	11.85197	-15.90013	-0.21297	5.41389	3.76655	-0.05599	19.83252	6.59547	306.70	-0.62
97/10/ 3	2450724.5	11.86447	-15.89143	-0.21310	5.41069	3.77079	-0.05594	19.83301	6.59527	306.74	-0.62
97/10/ 7	2450728.5	11.87697	-15.88271	-0.21323	5.40749	3.77502	-0.05588	19.83351	6.59507	306.79	-0.62
97/10/11	2450732.5	11.88945	-15.87398	-0.21335	5.40429	3.77925	-0.05582	19.83401	6.59486	306.83	-0.62
97/10/15	2450736.5	11.90194	-15.86525	-0.21348	5.40108	3.78348	-0.05576	19.83451	6.59466	306.88	-0.62

1.7 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM URANUS

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
97/10/19	2450740.5	11.91441	-15.85650	-0.21361	5.39787	3.78770	-0.05570	19.83501	6.59445	306.92	-0.62
97/10/23	2450744.5	11.92688	-15.84775	-0.21374	5.39465	3.79192	-0.05565	19.83550	6.59424	306.96	-0.62
97/10/27	2450748.5	11.93933	-15.83898	-0.21387	5.39143	3.79614	-0.05559	19.83600	6.59403	307.01	-0.62
97/10/31	2450752.5	11.95179	-15.83021	-0.21400	5.38821	3.80035	-0.05553	19.83649	6.59382	307.05	-0.62
97/11/ 4	2450756.5	11.96423	-15.82142	-0.21413	5.38498	3.80455	-0.05547	19.83699	6.59361	307.10	-0.62
97/11/ 8	2450760.5	11.97667	-15.81263	-0.21425	5.38175	3.80876	-0.05541	19.83748	6.59340	307.14	-0.62
97/11/12	2450764.5	11.98909	-15.80383	-0.21438	5.37852	3.81295	-0.05535	19.83798	6.59319	307.18	-0.62
97/11/16	2450768.5	12.00152	-15.79501	-0.21451	5.37528	3.81715	-0.05530	19.83847	6.59297	307.23	-0.62
97/11/20	2450772.5	12.01393	-15.78619	-0.21464	5.37204	3.82133	-0.05524	19.83896	6.59276	307.27	-0.62
97/11/24	2450776.5	12.02634	-15.77736	-0.21476	5.36880	3.82552	-0.05518	19.83945	6.59254	307.32	-0.62
97/11/28	2450780.5	12.03874	-15.76851	-0.21489	5.36555	3.82970	-0.05512	19.83994	6.59233	307.36	-0.62
97/12/ 2	2450784.5	12.05113	-15.75966	-0.21502	5.36230	3.83387	-0.05506	19.84044	6.59211	307.40	-0.62
97/12/ 6	2450788.5	12.06351	-15.75080	-0.21515	5.35905	3.83804	-0.05500	19.84093	6.59189	307.45	-0.62
97/12/10	2450792.5	12.07589	-15.74193	-0.21527	5.35580	3.84221	-0.05494	19.84142	6.59167	307.49	-0.62
97/12/14	2450796.5	12.08826	-15.73305	-0.21540	5.35254	3.84637	-0.05489	19.84191	6.59145	307.54	-0.62
97/12/18	2450800.5	12.10062	-15.72416	-0.21553	5.34929	3.85052	-0.05483	19.84239	6.59124	307.58	-0.62
97/12/22	2450804.5	12.11297	-15.71526	-0.21565	5.34603	3.85468	-0.05477	19.84288	6.59102	307.62	-0.62
97/12/26	2450808.5	12.12532	-15.70635	-0.21578	5.34277	3.85883	-0.05471	19.84337	6.59081	307.67	-0.62
97/12/30	2450812.5	12.13766	-15.69743	-0.21591	5.33952	3.86297	-0.05465	19.84386	6.59060	307.71	-0.62
98/ 1/ 3	2450816.5	12.14999	-15.68850	-0.21603	5.33626	3.86712	-0.05460	19.84434	6.59039	307.76	-0.62
98/ 1/ 7	2450820.5	12.16231	-15.67956	-0.21616	5.33300	3.87126	-0.05454	19.84483	6.59018	307.80	-0.62
98/ 1/11	2450824.5	12.17463	-15.67061	-0.21628	5.32973	3.87540	-0.05448	19.84531	6.58997	307.84	-0.62
98/ 1/15	2450828.5	12.18694	-15.66166	-0.21641	5.32647	3.87954	-0.05442	19.84580	6.58977	307.89	-0.62
98/ 1/19	2450832.5	12.19924	-15.65269	-0.21654	5.32320	3.88368	-0.05436	19.84628	6.58956	307.93	-0.63
98/ 1/23	2450836.5	12.21153	-15.64371	-0.21666	5.31993	3.88781	-0.05431	19.84677	6.58936	307.98	-0.63
98/ 1/27	2450840.5	12.22382	-15.63473	-0.21679	5.31666	3.89194	-0.05425	19.84725	6.58916	308.02	-0.63
98/ 1/31	2450844.5	12.23610	-15.62573	-0.21691	5.31339	3.89607	-0.05419	19.84774	6.58896	308.06	-0.63
98/ 2/ 4	2450848.5	12.24837	-15.61672	-0.21704	5.31011	3.90020	-0.05413	19.84822	6.58876	308.11	-0.63
98/ 2/ 8	2450852.5	12.26063	-15.60771	-0.21716	5.30683	3.90433	-0.05407	19.84870	6.58856	308.15	-0.63
98/ 2/12	2450856.5	12.27289	-15.59868	-0.21729	5.30355	3.90845	-0.05401	19.84918	6.58836	308.20	-0.63
98/ 2/16	2450860.5	12.28514	-15.58965	-0.21741	5.30026	3.91257	-0.05396	19.84966	6.58817	308.24	-0.63
98/ 2/20	2450864.5	12.29738	-15.58061	-0.21754	5.29697	3.91669	-0.05390	19.85014	6.58797	308.28	-0.63
98/ 2/24	2450868.5	12.30961	-15.57155	-0.21766	5.29368	3.92081	-0.05384	19.85062	6.58777	308.33	-0.63
98/ 2/28	2450872.5	12.32184	-15.56249	-0.21779	5.29039	3.92493	-0.05378	19.85110	6.58758	308.37	-0.63
98/ 3/ 4	2450876.5	12.33406	-15.55342	-0.21791	5.28709	3.92904	-0.05372	19.85158	6.58738	308.41	-0.63
98/ 3/ 8	2450880.5	12.34627	-15.54434	-0.21803	5.28379	3.93315	-0.05366	19.85206	6.58718	308.46	-0.63
98/ 3/12	2450884.5	12.35847	-15.53525	-0.21816	5.28048	3.93726	-0.05360	19.85254	6.58699	308.50	-0.63
98/ 3/16	2450888.5	12.37066	-15.52615	-0.21828	5.27718	3.94137	-0.05355	19.85301	6.58679	308.55	-0.63
98/ 3/20	2450892.5	12.38285	-15.51704	-0.21840	5.27387	3.94547	-0.05349	19.85349	6.58660	308.59	-0.63
98/ 3/24	2450896.5	12.39503	-15.50792	-0.21853	5.27056	3.94957	-0.05343	19.85397	6.58641	308.63	-0.63
98/ 3/28	2450900.5	12.40720	-15.49879	-0.21865	5.26724	3.95368	-0.05337	19.85444	6.58622	308.68	-0.63
98/ 4/ 1	2450904.5	12.41937	-15.48965	-0.21877	5.26392	3.95778	-0.05331	19.85492	6.58602	308.72	-0.63
98/ 4/ 5	2450908.5	12.43152	-15.48050	-0.21890	5.26060	3.96188	-0.05325	19.85539	6.58583	308.77	-0.63
98/ 4/ 9	2450912.5	12.44367	-15.47134	-0.21902	5.25727	3.96597	-0.05319	19.85587	6.58564	308.81	-0.63
98/ 4/13	2450916.5	12.45581	-15.46218	-0.21914	5.25394	3.97007	-0.05314	19.85634	6.58545	308.85	-0.63

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98/ 4/17	2450920.5	12.46795	-15.45300	-0.21927	5.25060	3.97416	-0.05308	19.85681	6.58526	308.90	-0.63
98/ 4/21	2450924.5	12.48007	-15.44382	-0.21939	5.24726	3.97825	-0.05302	19.85729	6.58506	308.94	-0.63
98/ 4/25	2450928.5	12.49219	-15.43462	-0.21951	5.24392	3.98234	-0.05296	19.85776	6.58487	308.99	-0.63
98/ 4/29	2450932.5	12.50430	-15.42542	-0.21963	5.24056	3.98643	-0.05290	19.85823	6.58467	309.03	-0.63
98/ 5/ 3	2450936.5	12.51641	-15.41620	-0.21976	5.23721	3.99051	-0.05284	19.85870	6.58447	309.07	-0.63
98/ 5/ 7	2450940.5	12.52850	-15.40698	-0.21988	5.23385	3.99459	-0.05278	19.85917	6.58428	309.12	-0.63
98/ 5/11	2450944.5	12.54059	-15.39775	-0.22000	5.23048	3.99866	-0.05272	19.85964	6.58407	309.16	-0.63
98/ 5/15	2450948.5	12.55267	-15.38850	-0.22012	5.22711	4.00274	-0.05266	19.86011	6.58387	309.20	-0.64
98/ 5/19	2450952.5	12.56474	-15.37925	-0.22024	5.22374	4.00680	-0.05260	19.86058	6.58367	309.25	-0.64
98/ 5/23	2450956.5	12.57680	-15.36999	-0.22036	5.22036	4.01087	-0.05254	19.86105	6.58346	309.29	-0.64
98/ 5/27	2450960.5	12.58886	-15.36072	-0.22049	5.21698	4.01493	-0.05248	19.86151	6.58325	309.34	-0.64
98/ 5/31	2450964.5	12.60091	-15.35144	-0.22061	5.21359	4.01898	-0.05242	19.86198	6.58304	309.38	-0.64
98/ 6/ 4	2450968.5	12.61295	-15.34215	-0.22073	5.21020	4.02303	-0.05236	19.86245	6.58283	309.42	-0.64
98/ 6/ 8	2450972.5	12.62498	-15.33285	-0.22085	5.20680	4.02708	-0.05230	19.86291	6.58262	309.47	-0.64
98/ 6/12	2450976.5	12.63700	-15.32354	-0.22097	5.20340	4.03112	-0.05224	19.86338	6.58240	309.51	-0.64
98/ 6/16	2450980.5	12.64902	-15.31423	-0.22109	5.20000	4.03516	-0.05218	19.86384	6.58219	309.56	-0.64
98/ 6/20	2450984.5	12.66103	-15.30490	-0.22121	5.19660	4.03919	-0.05212	19.86430	6.58198	309.60	-0.64
98/ 6/24	2450988.5	12.67303	-15.29556	-0.22133	5.19319	4.04322	-0.05206	19.86477	6.58176	309.64	-0.64
98/ 6/28	2450992.5	12.68502	-15.28622	-0.22145	5.18979	4.04724	-0.05200	19.86523	6.58155	309.69	-0.64
98/ 7/ 2	2450996.5	12.69701	-15.27686	-0.22157	5.18637	4.05127	-0.05194	19.86569	6.58133	309.73	-0.64
98/ 7/ 6	2451000.5	12.70899	-15.26750	-0.22169	5.18296	4.05528	-0.05188	19.86615	6.58112	309.77	-0.64
98/ 7/10	2451004.5	12.72096	-15.25813	-0.22181	5.17954	4.05930	-0.05181	19.86662	6.58090	309.82	-0.64
98/ 7/14	2451008.5	12.73292	-15.24875	-0.22193	5.17612	4.06331	-0.05175	19.86708	6.58068	309.86	-0.64
98/ 7/18	2451012.5	12.74487	-15.23935	-0.22205	5.17269	4.06732	-0.05169	19.86754	6.58046	309.91	-0.64
98/ 7/22	2451016.5	12.75682	-15.22995	-0.22217	5.16927	4.07132	-0.05163	19.86800	6.58024	309.95	-0.64
98/ 7/26	2451020.5	12.76876	-15.22054	-0.22229	5.16584	4.07532	-0.05157	19.86845	6.58003	309.99	-0.64
98/ 7/30	2451024.5	12.78069	-15.21112	-0.22241	5.16240	4.07931	-0.05151	19.86891	6.57981	310.04	-0.64
98/ 8/ 3	2451028.5	12.79261	-15.20170	-0.22253	5.15897	4.08330	-0.05145	19.86937	6.57959	310.08	-0.64
98/ 8/ 7	2451032.5	12.80452	-15.19226	-0.22265	5.15553	4.08729	-0.05139	19.86983	6.57937	310.13	-0.64
98/ 8/11	2451036.5	12.81643	-15.18281	-0.22276	5.15209	4.09127	-0.05133	19.87028	6.57915	310.17	-0.64
98/ 8/15	2451040.5	12.82833	-15.17335	-0.22288	5.14865	4.09525	-0.05127	19.87074	6.57893	310.21	-0.64
98/ 8/19	2451044.5	12.84022	-15.16389	-0.22300	5.14520	4.09923	-0.05121	19.87120	6.57871	310.26	-0.64
98/ 8/23	2451048.5	12.85210	-15.15441	-0.22312	5.14175	4.10320	-0.05115	19.87165	6.57848	310.30	-0.64
98/ 8/27	2451052.5	12.86397	-15.14493	-0.22324	5.13830	4.10717	-0.05109	19.87211	6.57826	310.34	-0.64
98/ 8/31	2451056.5	12.87584	-15.13544	-0.22335	5.13485	4.11113	-0.05103	19.87256	6.57804	310.39	-0.64
98/ 9/ 4	2451060.5	12.88770	-15.12594	-0.22347	5.13139	4.11509	-0.05097	19.87301	6.57782	310.43	-0.64
98/ 9/ 8	2451064.5	12.89955	-15.11642	-0.22359	5.12794	4.11904	-0.05091	19.87347	6.57760	310.48	-0.64
98/ 9/12	2451068.5	12.91139	-15.10690	-0.22371	5.12448	4.12299	-0.05085	19.87392	6.57738	310.52	-0.64
98/ 9/16	2451072.5	12.92323	-15.09738	-0.22383	5.12102	4.12694	-0.05079	19.87437	6.57717	310.56	-0.65
98/ 9/20	2451076.5	12.93505	-15.08784	-0.22394	5.11756	4.13089	-0.05073	19.87482	6.57695	310.61	-0.65
98/ 9/24	2451080.5	12.94687	-15.07829	-0.22406	5.11410	4.13484	-0.05067	19.87527	6.57674	310.65	-0.65
98/ 9/28	2451084.5	12.95868	-15.06873	-0.22418	5.11064	4.13878	-0.05061	19.87572	6.57653	310.69	-0.65
98/10/ 2	2451088.5	12.97048	-15.05917	-0.22429	5.10717	4.14272	-0.05055	19.87617	6.57631	310.74	-0.65
98/10/ 6	2451092.5	12.98228	-15.04959	-0.22441	5.10370	4.14666	-0.05049	19.87662	6.57610	310.78	-0.65
98/10/10	2451096.5	12.99407	-15.04001	-0.22453	5.10023	4.15060	-0.05043	19.87707	6.57589	310.83	-0.65

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98/10/14	2451100.5	13.00584	-15.03041	-0.22464	5.09675	4.15454	-0.05037	19.87752	6.57568	310.87	-0.65
98/10/18	2451104.5	13.01761	-15.02081	-0.22476	5.09327	4.15847	-0.05031	19.87797	6.57547	310.91	-0.65
98/10/22	2451108.5	13.02938	-15.01120	-0.22488	5.08979	4.16240	-0.05025	19.87841	6.57526	310.96	-0.65
98/10/26	2451112.5	13.04113	-15.00158	-0.22499	5.08630	4.16632	-0.05019	19.87886	6.57505	311.00	-0.65
98/10/30	2451116.5	13.05288	-14.99195	-0.22511	5.08281	4.17025	-0.05013	19.87931	6.57484	311.04	-0.65
98/11/ 3	2451120.5	13.06462	-14.98231	-0.22522	5.07932	4.17417	-0.05007	19.87975	6.57462	311.09	-0.65
98/11/ 7	2451124.5	13.07635	-14.97266	-0.22534	5.07582	4.17809	-0.05001	19.88020	6.57441	311.13	-0.65
98/11/11	2451128.5	13.08807	-14.96301	-0.22545	5.07232	4.18200	-0.04995	19.88064	6.57420	311.18	-0.65
98/11/15	2451132.5	13.09978	-14.95334	-0.22557	5.06882	4.18592	-0.04989	19.88109	6.57399	311.22	-0.65
98/11/19	2451136.5	13.11149	-14.94367	-0.22568	5.06531	4.18983	-0.04983	19.88153	6.57377	311.26	-0.65
98/11/23	2451140.5	13.12318	-14.93398	-0.22580	5.06179	4.19373	-0.04976	19.88197	6.57355	311.31	-0.65
98/11/27	2451144.5	13.13487	-14.92429	-0.22591	5.05828	4.19763	-0.04970	19.88241	6.57334	311.35	-0.65
98/12/ 1	2451148.5	13.14656	-14.91459	-0.22603	5.05476	4.20153	-0.04964	19.88286	6.57312	311.39	-0.65
98/12/ 5	2451152.5	13.15823	-14.90488	-0.22614	5.05124	4.20542	-0.04958	19.88330	6.57290	311.44	-0.65
98/12/ 9	2451156.5	13.16989	-14.89516	-0.22626	5.04772	4.20930	-0.04952	19.88374	6.57268	311.48	-0.65
98/12/13	2451160.5	13.18155	-14.88543	-0.22637	5.04419	4.21319	-0.04946	19.88418	6.57246	311.53	-0.65
98/12/17	2451164.5	13.19320	-14.87569	-0.22649	5.04066	4.21707	-0.04940	19.88462	6.57225	311.57	-0.65
98/12/21	2451168.5	13.20484	-14.86595	-0.22660	5.03713	4.22095	-0.04934	19.88506	6.57203	311.61	-0.65
98/12/25	2451172.5	13.21647	-14.85619	-0.22672	5.03360	4.22483	-0.04928	19.88550	6.57181	311.66	-0.65
98/12/29	2451176.5	13.22810	-14.84643	-0.22683	5.03006	4.22870	-0.04921	19.88593	6.57159	311.70	-0.65
99/ 1/ 2	2451180.5	13.23971	-14.83665	-0.22694	5.02652	4.23257	-0.04915	19.88637	6.57137	311.74	-0.65
99/ 1/ 6	2451184.5	13.25132	-14.82687	-0.22706	5.02297	4.23644	-0.04909	19.88681	6.57115	311.79	-0.65
99/ 1/10	2451188.5	13.26292	-14.81708	-0.22717	5.01942	4.24030	-0.04903	19.88724	6.57093	311.83	-0.65
99/ 1/14	2451192.5	13.27451	-14.80728	-0.22728	5.01587	4.24415	-0.04897	19.88768	6.57071	311.88	-0.65
99/ 1/18	2451196.5	13.28610	-14.79747	-0.22740	5.01232	4.24801	-0.04890	19.88812	6.57049	311.92	-0.66
99/ 1/22	2451200.5	13.29767	-14.78765	-0.22751	5.00876	4.25186	-0.04884	19.88855	6.57026	311.96	-0.66
99/ 1/26	2451204.5	13.30924	-14.77782	-0.22762	5.00520	4.25570	-0.04878	19.88898	6.57004	312.01	-0.66
99/ 1/30	2451208.5	13.32080	-14.76799	-0.22773	5.00164	4.25954	-0.04872	19.88942	6.56981	312.05	-0.66
99/ 2/ 3	2451212.5	13.33235	-14.75814	-0.22785	4.99807	4.26338	-0.04866	19.88985	6.56959	312.09	-0.66
99/ 2/ 7	2451216.5	13.34389	-14.74829	-0.22796	4.99450	4.26721	-0.04859	19.89028	6.56936	312.14	-0.66
99/ 2/11	2451220.5	13.35542	-14.73843	-0.22807	4.99093	4.27104	-0.04853	19.89072	6.56914	312.18	-0.66
99/ 2/15	2451224.5	13.36695	-14.72856	-0.22818	4.98736	4.27487	-0.04847	19.89115	6.56891	312.23	-0.66
99/ 2/19	2451228.5	13.37847	-14.71868	-0.22829	4.98378	4.27869	-0.04841	19.89158	6.56868	312.27	-0.66
99/ 2/23	2451232.5	13.38998	-14.70879	-0.22841	4.98020	4.28250	-0.04834	19.89201	6.56845	312.31	-0.66
99/ 2/27	2451236.5	13.40148	-14.69889	-0.22852	4.97662	4.28631	-0.04828	19.89244	6.56822	312.36	-0.66
99/ 3/ 3	2451240.5	13.41297	-14.68898	-0.22863	4.97304	4.29011	-0.04822	19.89287	6.56799	312.40	-0.66
99/ 3/ 7	2451244.5	13.42446	-14.67907	-0.22874	4.96946	4.29391	-0.04816	19.89330	6.56777	312.44	-0.66
99/ 3/11	2451248.5	13.43593	-14.66914	-0.22885	4.96588	4.29771	-0.04810	19.89373	6.56754	312.49	-0.66
99/ 3/15	2451252.5	13.44740	-14.65921	-0.22896	4.96230	4.30151	-0.04804	19.89416	6.56732	312.53	-0.66
99/ 3/19	2451256.5	13.45886	-14.64927	-0.22907	4.95872	4.30530	-0.04797	19.89458	6.56710	312.57	-0.66
99/ 3/23	2451260.5	13.47031	-14.63932	-0.22918	4.95513	4.30909	-0.04791	19.89501	6.56688	312.62	-0.66
99/ 3/27	2451264.5	13.48175	-14.62936	-0.22930	4.95155	4.31288	-0.04785	19.89544	6.56666	312.66	-0.66
99/ 3/31	2451268.5	13.49319	-14.61939	-0.22941	4.94796	4.31667	-0.04779	19.89586	6.56644	312.71	-0.66
99/ 4/ 4	2451272.5	13.50462	-14.60941	-0.22952	4.94437	4.32045	-0.04773	19.89629	6.56623	312.75	-0.66
99/ 4/ 8	2451276.5	13.51603	-14.59943	-0.22963	4.94077	4.32423	-0.04767	19.89671	6.56601	312.79	-0.66

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99/ 4/12	2451280.5	13.52744	-14.58944	-0.22974	4.93718	4.32801	-0.04761	19.89714	6.56580	312.84	-0.66
99/ 4/16	2451284.5	13.53884	-14.57943	-0.22985	4.93358	4.33179	-0.04754	19.89756	6.56558	312.88	-0.66
99/ 4/20	2451288.5	13.55024	-14.56942	-0.22996	4.92998	4.33556	-0.04748	19.89799	6.56537	312.92	-0.66
99/ 4/24	2451292.5	13.56162	-14.55940	-0.23007	4.92638	4.33933	-0.04742	19.89841	6.56516	312.97	-0.66
99/ 4/28	2451296.5	13.57300	-14.54937	-0.23018	4.92278	4.34310	-0.04736	19.89883	6.56495	313.01	-0.66
99/ 5/ 2	2451300.5	13.58437	-14.53933	-0.23028	4.91917	4.34687	-0.04730	19.89925	6.56474	313.06	-0.66
99/ 5/ 6	2451304.5	13.59573	-14.52929	-0.23039	4.91556	4.35064	-0.04724	19.89968	6.56453	313.10	-0.66
99/ 5/10	2451308.5	13.60708	-14.51923	-0.23050	4.91195	4.35440	-0.04717	19.90010	6.56432	313.14	-0.66
99/ 5/14	2451312.5	13.61842	-14.50917	-0.23061	4.90833	4.35816	-0.04711	19.90052	6.56411	313.19	-0.66
99/ 5/18	2451316.5	13.62976	-14.49910	-0.23072	4.90472	4.36191	-0.04705	19.90094	6.56390	313.23	-0.66
99/ 5/22	2451320.5	13.64108	-14.48902	-0.23083	4.90110	4.36567	-0.04699	19.90136	6.56369	313.27	-0.66
99/ 5/26	2451324.5	13.65240	-14.47893	-0.23094	4.89747	4.36942	-0.04693	19.90178	6.56348	313.32	-0.66
99/ 5/30	2451328.5	13.66371	-14.46883	-0.23105	4.89385	4.37317	-0.04686	19.90219	6.56327	313.36	-0.67
99/ 6/ 3	2451332.5	13.67501	-14.45872	-0.23115	4.89022	4.37691	-0.04680	19.90261	6.56306	313.40	-0.67
99/ 6/ 7	2451336.5	13.68631	-14.44860	-0.23126	4.88659	4.38066	-0.04674	19.90303	6.56286	313.45	-0.67
99/ 6/11	2451340.5	13.69759	-14.43848	-0.23137	4.88296	4.38440	-0.04668	19.90345	6.56265	313.49	-0.67
99/ 6/15	2451344.5	13.70887	-14.42835	-0.23148	4.87932	4.38814	-0.04662	19.90386	6.56245	313.54	-0.67
99/ 6/19	2451348.5	13.72014	-14.41820	-0.23159	4.87568	4.39188	-0.04656	19.90428	6.56224	313.58	-0.67
99/ 6/23	2451352.5	13.73140	-14.40805	-0.23169	4.87204	4.39562	-0.04650	19.90470	6.56204	313.62	-0.67
99/ 6/27	2451356.5	13.74265	-14.39790	-0.23180	4.86839	4.39935	-0.04643	19.90511	6.56184	313.67	-0.67
99/ 7/ 1	2451360.5	13.75389	-14.38773	-0.23191	4.86474	4.40308	-0.04637	19.90553	6.56163	313.71	-0.67
99/ 7/ 5	2451364.5	13.76512	-14.37755	-0.23201	4.86108	4.40681	-0.04631	19.90594	6.56142	313.75	-0.67
99/ 7/ 9	2451368.5	13.77635	-14.36737	-0.23212	4.85742	4.41054	-0.04625	19.90635	6.56122	313.80	-0.67
99/ 7/13	2451372.5	13.78757	-14.35717	-0.23223	4.85376	4.41426	-0.04618	19.90677	6.56101	313.84	-0.67
99/ 7/17	2451376.5	13.79878	-14.34697	-0.23233	4.85009	4.41798	-0.04612	19.90718	6.56080	313.88	-0.67
99/ 7/21	2451380.5	13.80998	-14.33676	-0.23244	4.84642	4.42170	-0.04606	19.90759	6.56059	313.93	-0.67
99/ 7/25	2451384.5	13.82117	-14.32654	-0.23255	4.84274	4.42541	-0.04599	19.90800	6.56037	313.97	-0.67
99/ 7/29	2451388.5	13.83235	-14.31631	-0.23265	4.83906	4.42912	-0.04593	19.90841	6.56016	314.02	-0.67
99/ 8/ 2	2451392.5	13.84353	-14.30608	-0.23276	4.83537	4.43282	-0.04587	19.90882	6.55994	314.06	-0.67
99/ 8/ 6	2451396.5	13.85469	-14.29583	-0.23287	4.83168	4.43652	-0.04581	19.90923	6.55972	314.10	-0.67
99/ 8/10	2451400.5	13.86585	-14.28558	-0.23297	4.82799	4.44022	-0.04574	19.90964	6.55950	314.15	-0.67
99/ 8/14	2451404.5	13.87700	-14.27532	-0.23308	4.82429	4.44391	-0.04568	19.91005	6.55928	314.19	-0.67
99/ 8/18	2451408.5	13.88814	-14.26505	-0.23318	4.82059	4.44759	-0.04562	19.91046	6.55906	314.23	-0.67
99/ 8/22	2451412.5	13.89927	-14.25477	-0.23329	4.81688	4.45127	-0.04555	19.91087	6.55883	314.28	-0.67
99/ 8/26	2451416.5	13.91040	-14.24448	-0.23339	4.81318	4.45494	-0.04549	19.91127	6.55860	314.32	-0.67
99/ 8/30	2451420.5	13.92151	-14.23418	-0.23350	4.80947	4.45861	-0.04543	19.91168	6.55837	314.36	-0.67
99/ 9/ 3	2451424.5	13.93262	-14.22388	-0.23360	4.80576	4.46228	-0.04536	19.91209	6.55815	314.41	-0.67
99/ 9/ 7	2451428.5	13.94371	-14.21357	-0.23371	4.80205	4.46594	-0.04530	19.91249	6.55792	314.45	-0.67
99/ 9/11	2451432.5	13.95480	-14.20325	-0.23381	4.79833	4.46959	-0.04524	19.91290	6.55769	314.49	-0.67
99/ 9/15	2451436.5	13.96588	-14.19292	-0.23392	4.79462	4.47325	-0.04517	19.91330	6.55746	314.54	-0.67
99/ 9/19	2451440.5	13.97696	-14.18258	-0.23402	4.79090	4.47689	-0.04511	19.91370	6.55723	314.58	-0.67
99/ 9/23	2451444.5	13.98802	-14.17223	-0.23413	4.78717	4.48054	-0.04505	19.91411	6.55700	314.63	-0.67
99/ 9/27	2451448.5	13.99907	-14.16188	-0.23423	4.78345	4.48418	-0.04498	19.91451	6.55677	314.67	-0.67
99/10/ 1	2451452.5	14.01012	-14.15151	-0.23433	4.77972	4.48781	-0.04492	19.91491	6.55654	314.71	-0.67
99/10/ 5	2451456.5	14.02116	-14.14114	-0.23444	4.77599	4.49144	-0.04486	19.91531	6.55631	314.76	-0.67

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99/10/ 9	2451460.5	14.03219	-14.13076	-0.23454	4.77226	4.49507	-0.04479	19.91571	6.55607	314.80	-0.67
99/10/13	2451464.5	14.04321	-14.12037	-0.23464	4.76853	4.49869	-0.04473	19.91612	6.55584	314.84	-0.68
99/10/17	2451468.5	14.05422	-14.10998	-0.23475	4.76479	4.50230	-0.04467	19.91652	6.55561	314.89	-0.68
99/10/21	2451472.5	14.06522	-14.09957	-0.23485	4.76106	4.50592	-0.04460	19.91692	6.55537	314.93	-0.68
99/10/25	2451476.5	14.07622	-14.08916	-0.23495	4.75732	4.50952	-0.04454	19.91732	6.55514	314.97	-0.68
99/10/29	2451480.5	14.08720	-14.07873	-0.23506	4.75358	4.51313	-0.04448	19.91771	6.55491	315.02	-0.68
99/11/ 2	2451484.5	14.09818	-14.06830	-0.23516	4.74984	4.51673	-0.04441	19.91811	6.55467	315.06	-0.68
99/11/ 6	2451488.5	14.10915	-14.05787	-0.23526	4.74610	4.52032	-0.04435	19.91851	6.55444	315.10	-0.68
99/11/10	2451492.5	14.12011	-14.04742	-0.23536	4.74235	4.52391	-0.04429	19.91891	6.55421	315.15	-0.68
99/11/14	2451496.5	14.13106	-14.03696	-0.23547	4.73861	4.52750	-0.04423	19.91930	6.55397	315.19	-0.68
99/11/18	2451500.5	14.14200	-14.02650	-0.23557	4.73486	4.53108	-0.04416	19.91970	6.55374	315.23	-0.68
99/11/22	2451504.5	14.15294	-14.01603	-0.23567	4.73112	4.53465	-0.04410	19.92010	6.55351	315.28	-0.68
99/11/26	2451508.5	14.16386	-14.00555	-0.23577	4.72737	4.53823	-0.04404	19.92049	6.55328	315.32	-0.68
99/11/30	2451512.5	14.17478	-13.99506	-0.23587	4.72363	4.54180	-0.04398	19.92089	6.55305	315.37	-0.68
99/12/ 4	2451516.5	14.18569	-13.98456	-0.23597	4.71988	4.54537	-0.04391	19.92128	6.55283	315.41	-0.68
99/12/ 8	2451520.5	14.19659	-13.97406	-0.23608	4.71614	4.54893	-0.04385	19.92168	6.55261	315.45	-0.68
99/12/12	2451524.5	14.20748	-13.96355	-0.23618	4.71239	4.55250	-0.04379	19.92207	6.55239	315.50	-0.68
99/12/16	2451528.5	14.21836	-13.95302	-0.23628	4.70864	4.55606	-0.04373	19.92246	6.55217	315.54	-0.68
99/12/20	2451532.5	14.22923	-13.94250	-0.23638	4.70489	4.55962	-0.04366	19.92285	6.55195	315.58	-0.68
99/12/24	2451536.5	14.24010	-13.93196	-0.23648	4.70114	4.56318	-0.04360	19.92325	6.55174	315.63	-0.68

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64/12/31	2438760.5	-20.41023	-22.40539	0.93307	3.97558	-3.61816	-0.01863	30.32243	5.37556	227.67	1.76
65/ 1/ 4	2438764.5	-20.40104	-22.41375	0.93303	3.97703	-3.61658	-0.01869	30.32242	5.37557	227.69	1.76
65/ 1/ 8	2438768.5	-20.39185	-22.42210	0.93298	3.97848	-3.61499	-0.01876	30.32241	5.37557	227.71	1.76
65/ 1/12	2438772.5	-20.38266	-22.43045	0.93294	3.97993	-3.61340	-0.01883	30.32241	5.37558	227.74	1.76
65/ 1/16	2438776.5	-20.37346	-22.43880	0.93290	3.98138	-3.61181	-0.01890	30.32240	5.37559	227.76	1.76
65/ 1/20	2438780.5	-20.36426	-22.44714	0.93285	3.98283	-3.61022	-0.01896	30.32239	5.37559	227.79	1.76
65/ 1/24	2438784.5	-20.35506	-22.45548	0.93281	3.98428	-3.60863	-0.01903	30.32239	5.37560	227.81	1.76
65/ 1/28	2438788.5	-20.34585	-22.46381	0.93276	3.98573	-3.60704	-0.01910	30.32238	5.37561	227.83	1.76
65/ 2/ 1	2438792.5	-20.33665	-22.47214	0.93272	3.98718	-3.60545	-0.01917	30.32237	5.37562	227.86	1.76
65/ 2/ 5	2438796.5	-20.32743	-22.48047	0.93267	3.98863	-3.60386	-0.01923	30.32237	5.37563	227.88	1.76
65/ 2/ 9	2438800.5	-20.31822	-22.48880	0.93263	3.99008	-3.60227	-0.01930	30.32236	5.37564	227.90	1.76
65/ 2/13	2438804.5	-20.30900	-22.49712	0.93259	3.99153	-3.60068	-0.01937	30.32236	5.37565	227.93	1.76
65/ 2/17	2438808.5	-20.29977	-22.50543	0.93254	3.99298	-3.59909	-0.01943	30.32235	5.37566	227.95	1.76
65/ 2/21	2438812.5	-20.29055	-22.51374	0.93250	3.99443	-3.59750	-0.01950	30.32234	5.37567	227.97	1.76
65/ 2/25	2438816.5	-20.28132	-22.52205	0.93245	3.99588	-3.59591	-0.01957	30.32234	5.37568	228.00	1.76
65/ 3/ 1	2438820.5	-20.27209	-22.53036	0.93241	3.99733	-3.59431	-0.01964	30.32233	5.37569	228.02	1.76
65/ 3/ 5	2438824.5	-20.26285	-22.53866	0.93236	3.99877	-3.59272	-0.01970	30.32233	5.37571	228.04	1.76
65/ 3/ 9	2438828.5	-20.25361	-22.54696	0.93231	4.00022	-3.59113	-0.01977	30.32232	5.37572	228.07	1.76
65/ 3/13	2438832.5	-20.24437	-22.55525	0.93227	4.00167	-3.58953	-0.01984	30.32232	5.37573	228.09	1.76
65/ 3/17	2438836.5	-20.23512	-22.56354	0.93222	4.00312	-3.58794	-0.01991	30.32231	5.37575	228.11	1.76
65/ 3/21	2438840.5	-20.22587	-22.57183	0.93218	4.00456	-3.58634	-0.01997	30.32231	5.37576	228.14	1.76
65/ 3/25	2438844.5	-20.21662	-22.58011	0.93213	4.00601	-3.58475	-0.02004	30.32230	5.37577	228.16	1.76
65/ 3/29	2438848.5	-20.20736	-22.58839	0.93208	4.00746	-3.58315	-0.02011	30.32230	5.37579	228.18	1.76
65/ 4/ 2	2438852.5	-20.19810	-22.59667	0.93204	4.00890	-3.58156	-0.02018	30.32229	5.37580	228.21	1.76
65/ 4/ 6	2438856.5	-20.18884	-22.60494	0.93199	4.01035	-3.57996	-0.02024	30.32229	5.37582	228.23	1.76
65/ 4/10	2438860.5	-20.17957	-22.61321	0.93194	4.01179	-3.57837	-0.02031	30.32229	5.37584	228.25	1.76
65/ 4/14	2438864.5	-20.17030	-22.62147	0.93190	4.01324	-3.57677	-0.02038	30.32228	5.37585	228.28	1.76
65/ 4/18	2438868.5	-20.16103	-22.62974	0.93185	4.01468	-3.57517	-0.02044	30.32228	5.37587	228.30	1.76
65/ 4/22	2438872.5	-20.15175	-22.63799	0.93180	4.01613	-3.57357	-0.02051	30.32227	5.37589	228.33	1.76
65/ 4/26	2438876.5	-20.14248	-22.64625	0.93176	4.01757	-3.57197	-0.02058	30.32227	5.37590	228.35	1.76
65/ 4/30	2438880.5	-20.13319	-22.65450	0.93171	4.01902	-3.57038	-0.02065	30.32226	5.37592	228.37	1.76
65/ 5/ 4	2438884.5	-20.12391	-22.66274	0.93166	4.02046	-3.56878	-0.02071	30.32226	5.37594	228.40	1.76
65/ 5/ 8	2438888.5	-20.11462	-22.67099	0.93161	4.02191	-3.56718	-0.02078	30.32226	5.37596	228.42	1.76
65/ 5/12	2438892.5	-20.10532	-22.67923	0.93156	4.02335	-3.56558	-0.02085	30.32225	5.37598	228.44	1.76
65/ 5/16	2438896.5	-20.09603	-22.68746	0.93152	4.02479	-3.56398	-0.02092	30.32225	5.37600	228.47	1.76
65/ 5/20	2438900.5	-20.08673	-22.69569	0.93147	4.02624	-3.56238	-0.02098	30.32225	5.37602	228.49	1.76
65/ 5/24	2438904.5	-20.07742	-22.70392	0.93142	4.02768	-3.56077	-0.02105	30.32224	5.37604	228.51	1.76
65/ 5/28	2438908.5	-20.06812	-22.71214	0.93137	4.02912	-3.55917	-0.02112	30.32224	5.37606	228.54	1.76
65/ 6/ 1	2438912.5	-20.05881	-22.72036	0.93132	4.03057	-3.55757	-0.02119	30.32224	5.37608	228.56	1.76
65/ 6/ 5	2438916.5	-20.04950	-22.72858	0.93127	4.03201	-3.55597	-0.02125	30.32223	5.37610	228.58	1.76
65/ 6/ 9	2438920.5	-20.04018	-22.73679	0.93122	4.03345	-3.55436	-0.02132	30.32223	5.37612	228.61	1.76
65/ 6/13	2438924.5	-20.03086	-22.74500	0.93117	4.03489	-3.55276	-0.02139	30.32223	5.37614	228.63	1.76
65/ 6/17	2438928.5	-20.02154	-22.75321	0.93112	4.03633	-3.55116	-0.02146	30.32223	5.37617	228.65	1.76
65/ 6/21	2438932.5	-20.01221	-22.76141	0.93107	4.03778	-3.54955	-0.02152	30.32222	5.37619	228.68	1.76
65/ 6/25	2438936.5	-20.00288	-22.76961	0.93102	4.03922	-3.54795	-0.02159	30.32222	5.37621	228.70	1.76

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65/ 6/29	2438940.5	-19.99355	-22.77780	0.93097	4.04066	-3.54634	-0.02166	30.32222	5.37624	228.72	1.76
65/ 7/ 3	2438944.5	-19.98421	-22.78599	0.93092	4.04210	-3.54473	-0.02173	30.32222	5.37626	228.75	1.76
65/ 7/ 7	2438948.5	-19.97487	-22.79418	0.93087	4.04354	-3.54313	-0.02179	30.32222	5.37629	228.77	1.76
65/ 7/11	2438952.5	-19.96553	-22.80237	0.93082	4.04498	-3.54152	-0.02186	30.32221	5.37631	228.79	1.76
65/ 7/15	2438956.5	-19.95618	-22.81054	0.93077	4.04642	-3.53991	-0.02193	30.32221	5.37634	228.82	1.76
65/ 7/19	2438960.5	-19.94683	-22.81872	0.93072	4.04786	-3.53831	-0.02200	30.32221	5.37636	228.84	1.76
65/ 7/23	2438964.5	-19.93748	-22.82689	0.93067	4.04930	-3.53670	-0.02206	30.32221	5.37639	228.87	1.76
65/ 7/27	2438968.5	-19.92812	-22.83506	0.93062	4.05074	-3.53509	-0.02213	30.32221	5.37641	228.89	1.76
65/ 7/31	2438972.5	-19.91876	-22.84323	0.93057	4.05218	-3.53348	-0.02220	30.32220	5.37644	228.91	1.76
65/ 8/ 4	2438976.5	-19.90940	-22.85139	0.93052	4.05362	-3.53187	-0.02227	30.32220	5.37647	228.94	1.76
65/ 8/ 8	2438980.5	-19.90003	-22.85954	0.93047	4.05505	-3.53026	-0.02233	30.32220	5.37649	228.96	1.76
65/ 8/12	2438984.5	-19.89067	-22.86770	0.93041	4.05649	-3.52865	-0.02240	30.32220	5.37652	228.98	1.76
65/ 8/16	2438988.5	-19.88129	-22.87585	0.93036	4.05793	-3.52704	-0.02247	30.32220	5.37655	229.01	1.76
65/ 8/20	2438992.5	-19.87192	-22.88399	0.93031	4.05937	-3.52542	-0.02254	30.32220	5.37658	229.03	1.76
65/ 8/24	2438996.5	-19.86254	-22.89214	0.93026	4.06081	-3.52381	-0.02260	30.32220	5.37661	229.05	1.76
65/ 8/28	2439000.5	-19.85315	-22.90028	0.93021	4.06224	-3.52220	-0.02267	30.32220	5.37664	229.08	1.76
65/ 9/ 1	2439004.5	-19.84377	-22.90841	0.93015	4.06368	-3.52059	-0.02274	30.32220	5.37667	229.10	1.76
65/ 9/ 5	2439008.5	-19.83438	-22.91654	0.93010	4.06512	-3.51897	-0.02281	30.32220	5.37670	229.12	1.76
65/ 9/ 9	2439012.5	-19.82499	-22.92467	0.93005	4.06655	-3.51736	-0.02287	30.32220	5.37673	229.15	1.76
65/ 9/13	2439016.5	-19.81559	-22.93279	0.93000	4.06799	-3.51574	-0.02294	30.32219	5.37676	229.17	1.76
65/ 9/17	2439020.5	-19.80619	-22.94091	0.92994	4.06943	-3.51413	-0.02301	30.32219	5.37679	229.19	1.76
65/ 9/21	2439024.5	-19.79679	-22.94903	0.92989	4.07086	-3.51251	-0.02308	30.32219	5.37682	229.22	1.76
65/ 9/25	2439028.5	-19.78738	-22.95714	0.92984	4.07230	-3.51089	-0.02314	30.32219	5.37685	229.24	1.76
65/ 9/29	2439032.5	-19.77797	-22.96525	0.92978	4.07373	-3.50928	-0.02321	30.32219	5.37688	229.26	1.76
65/10/ 3	2439036.5	-19.76856	-22.97336	0.92973	4.07517	-3.50766	-0.02328	30.32219	5.37691	229.29	1.76
65/10/ 7	2439040.5	-19.75914	-22.98146	0.92967	4.07660	-3.50604	-0.02335	30.32219	5.37695	229.31	1.76
65/10/11	2439044.5	-19.74972	-22.98956	0.92962	4.07804	-3.50442	-0.02341	30.32219	5.37698	229.33	1.76
65/10/15	2439048.5	-19.74030	-22.99765	0.92957	4.07947	-3.50280	-0.02348	30.32219	5.37701	229.36	1.76
65/10/19	2439052.5	-19.73088	-23.00574	0.92951	4.08091	-3.50118	-0.02355	30.32220	5.37705	229.38	1.76
65/10/23	2439056.5	-19.72145	-23.01383	0.92946	4.08234	-3.49956	-0.02362	30.32220	5.37708	229.41	1.76
65/10/27	2439060.5	-19.71201	-23.02191	0.92940	4.08377	-3.49794	-0.02368	30.32220	5.37711	229.43	1.76
65/10/31	2439064.5	-19.70258	-23.02999	0.92935	4.08521	-3.49632	-0.02375	30.32220	5.37715	229.45	1.76
65/11/ 4	2439068.5	-19.69314	-23.03806	0.92929	4.08664	-3.49470	-0.02382	30.32220	5.37718	229.48	1.76
65/11/ 8	2439072.5	-19.68370	-23.04614	0.92924	4.08807	-3.49307	-0.02389	30.32220	5.37722	229.50	1.76
65/11/12	2439076.5	-19.67425	-23.05420	0.92918	4.08951	-3.49145	-0.02396	30.32220	5.37725	229.52	1.76
65/11/16	2439080.5	-19.66480	-23.06227	0.92913	4.09094	-3.48983	-0.02402	30.32220	5.37729	229.55	1.76
65/11/20	2439084.5	-19.65535	-23.07033	0.92907	4.09237	-3.48820	-0.02409	30.32220	5.37733	229.57	1.76
65/11/24	2439088.5	-19.64589	-23.07838	0.92902	4.09380	-3.48658	-0.02416	30.32220	5.37736	229.59	1.76
65/11/28	2439092.5	-19.63643	-23.08644	0.92896	4.09523	-3.48495	-0.02423	30.32220	5.37740	229.62	1.76
65/12/ 2	2439096.5	-19.62697	-23.09449	0.92890	4.09667	-3.48333	-0.02429	30.32220	5.37744	229.64	1.76
65/12/ 6	2439100.5	-19.61751	-23.10253	0.92885	4.09810	-3.48170	-0.02436	30.32221	5.37747	229.66	1.76
65/12/10	2439104.5	-19.60804	-23.11057	0.92879	4.09953	-3.48007	-0.02443	30.32221	5.37751	229.69	1.76
65/12/14	2439108.5	-19.59856	-23.11861	0.92874	4.10096	-3.47844	-0.02450	30.32221	5.37755	229.71	1.76
65/12/18	2439112.5	-19.58909	-23.12664	0.92868	4.10239	-3.47682	-0.02456	30.32221	5.37759	229.73	1.76
65/12/22	2439116.5	-19.57961	-23.13467	0.92862	4.10382	-3.47519	-0.02463	30.32221	5.37763	229.76	1.75

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65/12/26	2439120.5	-19.57013	-23.14270	0.92857	4.10525	-3.47356	-0.02470	30.32221	5.37767	229.78	1.75
65/12/30	2439124.5	-19.56064	-23.15072	0.92851	4.10668	-3.47193	-0.02477	30.32222	5.37771	229.80	1.75
66/ 1/ 3	2439128.5	-19.55115	-23.15874	0.92845	4.10811	-3.47030	-0.02484	30.32222	5.37774	229.83	1.75
66/ 1/ 7	2439132.5	-19.54166	-23.16676	0.92839	4.10954	-3.46867	-0.02490	30.32222	5.37778	229.85	1.75
66/ 1/11	2439136.5	-19.53217	-23.17477	0.92834	4.11097	-3.46703	-0.02497	30.32222	5.37782	229.88	1.75
66/ 1/15	2439140.5	-19.52267	-23.18278	0.92828	4.11240	-3.46540	-0.02504	30.32222	5.37786	229.90	1.75
66/ 1/19	2439144.5	-19.51316	-23.19078	0.92822	4.11382	-3.46377	-0.02511	30.32223	5.37791	229.92	1.75
66/ 1/23	2439148.5	-19.50366	-23.19878	0.92816	4.11525	-3.46213	-0.02517	30.32223	5.37795	229.95	1.75
66/ 1/27	2439152.5	-19.49415	-23.20678	0.92810	4.11668	-3.46050	-0.02524	30.32223	5.37799	229.97	1.75
66/ 1/31	2439156.5	-19.48464	-23.21477	0.92805	4.11811	-3.45886	-0.02531	30.32223	5.37803	229.99	1.75
66/ 2/ 4	2439160.5	-19.47512	-23.22276	0.92799	4.11954	-3.45723	-0.02538	30.32224	5.37807	230.02	1.75
66/ 2/ 8	2439164.5	-19.46561	-23.23074	0.92793	4.12096	-3.45559	-0.02545	30.32224	5.37811	230.04	1.75
66/ 2/12	2439168.5	-19.45608	-23.23872	0.92787	4.12239	-3.45396	-0.02551	30.32224	5.37816	230.06	1.75
66/ 2/16	2439172.5	-19.44656	-23.24670	0.92781	4.12382	-3.45232	-0.02558	30.32224	5.37820	230.09	1.75
66/ 2/20	2439176.5	-19.43703	-23.25467	0.92775	4.12524	-3.45068	-0.02565	30.32225	5.37824	230.11	1.75
66/ 2/24	2439180.5	-19.42750	-23.26264	0.92769	4.12667	-3.44904	-0.02572	30.32225	5.37828	230.13	1.75
66/ 2/28	2439184.5	-19.41796	-23.27061	0.92763	4.12809	-3.44740	-0.02578	30.32225	5.37833	230.16	1.75
66/ 3/ 4	2439188.5	-19.40843	-23.27857	0.92757	4.12952	-3.44576	-0.02585	30.32226	5.37837	230.18	1.75
66/ 3/ 8	2439192.5	-19.39888	-23.28653	0.92751	4.13094	-3.44412	-0.02592	30.32226	5.37842	230.20	1.75
66/ 3/12	2439196.5	-19.38934	-23.29449	0.92745	4.13237	-3.44248	-0.02599	30.32226	5.37846	230.23	1.75
66/ 3/16	2439200.5	-19.37979	-23.30244	0.92739	4.13379	-3.44084	-0.02606	30.32227	5.37850	230.25	1.75
66/ 3/20	2439204.5	-19.37024	-23.31038	0.92733	4.13522	-3.43920	-0.02612	30.32227	5.37855	230.27	1.75
66/ 3/24	2439208.5	-19.36068	-23.31833	0.92727	4.13664	-3.43755	-0.02619	30.32227	5.37859	230.30	1.75
66/ 3/28	2439212.5	-19.35113	-23.32627	0.92721	4.13807	-3.43591	-0.02626	30.32228	5.37864	230.32	1.75
66/ 4/ 1	2439216.5	-19.34156	-23.33420	0.92715	4.13949	-3.43426	-0.02633	30.32228	5.37868	230.34	1.75
66/ 4/ 5	2439220.5	-19.33200	-23.34213	0.92709	4.14091	-3.43262	-0.02639	30.32228	5.37873	230.37	1.75
66/ 4/ 9	2439224.5	-19.32243	-23.35006	0.92703	4.14234	-3.43097	-0.02646	30.32229	5.37878	230.39	1.75
66/ 4/13	2439228.5	-19.31286	-23.35799	0.92697	4.14376	-3.42933	-0.02653	30.32229	5.37882	230.42	1.75
66/ 4/17	2439232.5	-19.30329	-23.36591	0.92691	4.14518	-3.42768	-0.02660	30.32230	5.37887	230.44	1.75
66/ 4/21	2439236.5	-19.29371	-23.37382	0.92684	4.14660	-3.42603	-0.02667	30.32230	5.37892	230.46	1.75
66/ 4/25	2439240.5	-19.28413	-23.38174	0.92678	4.14803	-3.42438	-0.02673	30.32230	5.37896	230.49	1.75
66/ 4/29	2439244.5	-19.27454	-23.38964	0.92672	4.14945	-3.42273	-0.02680	30.32231	5.37901	230.51	1.75
66/ 5/ 3	2439248.5	-19.26496	-23.39755	0.92666	4.15087	-3.42108	-0.02687	30.32231	5.37906	230.53	1.75
66/ 5/ 7	2439252.5	-19.25537	-23.40545	0.92660	4.15229	-3.41943	-0.02694	30.32232	5.37910	230.56	1.75
66/ 5/11	2439256.5	-19.24577	-23.41335	0.92653	4.15371	-3.41778	-0.02701	30.32232	5.37915	230.58	1.75
66/ 5/15	2439260.5	-19.23617	-23.42124	0.92647	4.15513	-3.41613	-0.02707	30.32232	5.37920	230.60	1.75
66/ 5/19	2439264.5	-19.22657	-23.42913	0.92641	4.15655	-3.41448	-0.02714	30.32233	5.37925	230.63	1.75
66/ 5/23	2439268.5	-19.21697	-23.43702	0.92635	4.15797	-3.41283	-0.02721	30.32233	5.37930	230.65	1.75
66/ 5/27	2439272.5	-19.20736	-23.44490	0.92628	4.15939	-3.41117	-0.02728	30.32234	5.37935	230.67	1.75
66/ 5/31	2439276.5	-19.19775	-23.45278	0.92622	4.16081	-3.40952	-0.02734	30.32234	5.37940	230.70	1.75
66/ 6/ 4	2439280.5	-19.18814	-23.46065	0.92616	4.16223	-3.40786	-0.02741	30.32235	5.37945	230.72	1.75
66/ 6/ 8	2439284.5	-19.17852	-23.46852	0.92609	4.16365	-3.40621	-0.02748	30.32235	5.37949	230.74	1.75
66/ 6/12	2439288.5	-19.16890	-23.47639	0.92603	4.16507	-3.40455	-0.02755	30.32236	5.37954	230.77	1.75
66/ 6/16	2439292.5	-19.15928	-23.48426	0.92597	4.16648	-3.40289	-0.02762	30.32236	5.37959	230.79	1.75
66/ 6/20	2439296.5	-19.14965	-23.49211	0.92590	4.16790	-3.40124	-0.02768	30.32236	5.37964	230.81	1.75

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66/ 6/24	2439300.5	-19.14002	-23.49997	0.92584	4.16932	-3.39958	-0.02775	30.32237	5.37969	230.84	1.75
66/ 6/28	2439304.5	-19.13039	-23.50782	0.92577	4.17074	-3.39792	-0.02782	30.32237	5.37975	230.86	1.75
66/ 7/ 2	2439308.5	-19.12075	-23.51567	0.92571	4.17215	-3.39626	-0.02789	30.32238	5.37980	230.89	1.75
66/ 7/ 6	2439312.5	-19.11111	-23.52351	0.92565	4.17357	-3.39460	-0.02796	30.32238	5.37985	230.91	1.75
66/ 7/10	2439316.5	-19.10147	-23.53135	0.92558	4.17499	-3.39294	-0.02802	30.32239	5.37990	230.93	1.75
66/ 7/14	2439320.5	-19.09182	-23.53919	0.92552	4.17640	-3.39127	-0.02809	30.32239	5.37995	230.96	1.75
66/ 7/18	2439324.5	-19.08217	-23.54702	0.92545	4.17782	-3.38961	-0.02816	30.32240	5.38000	230.98	1.75
66/ 7/22	2439328.5	-19.07252	-23.55485	0.92539	4.17923	-3.38795	-0.02823	30.32240	5.38005	231.00	1.75
66/ 7/26	2439332.5	-19.06286	-23.56268	0.92532	4.18065	-3.38628	-0.02830	30.32241	5.38011	231.03	1.75
66/ 7/30	2439336.5	-19.05320	-23.57050	0.92526	4.18206	-3.38462	-0.02836	30.32241	5.38016	231.05	1.75
66/ 8/ 3	2439340.5	-19.04354	-23.57831	0.92519	4.18348	-3.38295	-0.02843	30.32242	5.38021	231.07	1.75
66/ 8/ 7	2439344.5	-19.03387	-23.58613	0.92512	4.18489	-3.38129	-0.02850	30.32243	5.38026	231.10	1.75
66/ 8/11	2439348.5	-19.02420	-23.59394	0.92506	4.18630	-3.37962	-0.02857	30.32243	5.38032	231.12	1.75
66/ 8/15	2439352.5	-19.01453	-23.60174	0.92499	4.18772	-3.37795	-0.02864	30.32244	5.38037	231.14	1.75
66/ 8/19	2439356.5	-19.00485	-23.60954	0.92493	4.18913	-3.37628	-0.02870	30.32244	5.38042	231.17	1.75
66/ 8/23	2439360.5	-18.99517	-23.61734	0.92486	4.19054	-3.37461	-0.02877	30.32245	5.38047	231.19	1.75
66/ 8/27	2439364.5	-18.98549	-23.62514	0.92479	4.19196	-3.37294	-0.02884	30.32245	5.38053	231.21	1.75
66/ 8/31	2439368.5	-18.97580	-23.63293	0.92473	4.19337	-3.37127	-0.02891	30.32246	5.38058	231.24	1.75
66/ 9/ 4	2439372.5	-18.96612	-23.64071	0.92466	4.19478	-3.36960	-0.02898	30.32246	5.38064	231.26	1.75
66/ 9/ 8	2439376.5	-18.95642	-23.64850	0.92459	4.19619	-3.36793	-0.02904	30.32247	5.38069	231.28	1.75
66/ 9/12	2439380.5	-18.94673	-23.65627	0.92452	4.19760	-3.36626	-0.02911	30.32248	5.38074	231.31	1.75
66/ 9/16	2439384.5	-18.93703	-23.66405	0.92446	4.19901	-3.36458	-0.02918	30.32248	5.38080	231.33	1.75
66/ 9/20	2439388.5	-18.92733	-23.67182	0.92439	4.20042	-3.36291	-0.02925	30.32249	5.38085	231.36	1.75
66/ 9/24	2439392.5	-18.91762	-23.67959	0.92432	4.20183	-3.36123	-0.02932	30.32249	5.38091	231.38	1.75
66/ 9/28	2439396.5	-18.90791	-23.68735	0.92425	4.20324	-3.35956	-0.02938	30.32250	5.38096	231.40	1.75
66/10/ 2	2439400.5	-18.89820	-23.69511	0.92419	4.20465	-3.35788	-0.02945	30.32250	5.38102	231.43	1.75
66/10/ 6	2439404.5	-18.88849	-23.70286	0.92412	4.20606	-3.35621	-0.02952	30.32251	5.38107	231.45	1.75
66/10/10	2439408.5	-18.87877	-23.71062	0.92405	4.20747	-3.35453	-0.02959	30.32252	5.38113	231.47	1.75
66/10/14	2439412.5	-18.86905	-23.71836	0.92398	4.20888	-3.35285	-0.02966	30.32252	5.38118	231.50	1.75
66/10/18	2439416.5	-18.85932	-23.72611	0.92391	4.21029	-3.35117	-0.02972	30.32253	5.38124	231.52	1.75
66/10/22	2439420.5	-18.84959	-23.73385	0.92384	4.21169	-3.34949	-0.02979	30.32253	5.38129	231.54	1.75
66/10/26	2439424.5	-18.83986	-23.74158	0.92378	4.21310	-3.34781	-0.02986	30.32254	5.38135	231.57	1.75
66/10/30	2439428.5	-18.83013	-23.74931	0.92371	4.21451	-3.34613	-0.02993	30.32255	5.38141	231.59	1.75
66/11/ 3	2439432.5	-18.82039	-23.75704	0.92364	4.21592	-3.34444	-0.03000	30.32255	5.38146	231.61	1.75
66/11/ 7	2439436.5	-18.81065	-23.76477	0.92357	4.21732	-3.34276	-0.03007	30.32256	5.38152	231.64	1.75
66/11/11	2439440.5	-18.80090	-23.77249	0.92350	4.21873	-3.34108	-0.03013	30.32257	5.38158	231.66	1.75
66/11/15	2439444.5	-18.79116	-23.78020	0.92343	4.22013	-3.33939	-0.03020	30.32257	5.38163	231.68	1.75
66/11/19	2439448.5	-18.78141	-23.78792	0.92336	4.22154	-3.33771	-0.03027	30.32258	5.38169	231.71	1.74
66/11/23	2439452.5	-18.77165	-23.79563	0.92329	4.22294	-3.33602	-0.03034	30.32258	5.38175	231.73	1.74
66/11/27	2439456.5	-18.76189	-23.80333	0.92322	4.22435	-3.33433	-0.03041	30.32259	5.38180	231.75	1.74
66/12/ 1	2439460.5	-18.75213	-23.81103	0.92315	4.22575	-3.33265	-0.03047	30.32260	5.38186	231.78	1.74
66/12/ 5	2439464.5	-18.74237	-23.81873	0.92308	4.22715	-3.33096	-0.03054	30.32260	5.38192	231.80	1.74
66/12/ 9	2439468.5	-18.73260	-23.82642	0.92301	4.22856	-3.32927	-0.03061	30.32261	5.38198	231.83	1.74
66/12/13	2439472.5	-18.72283	-23.83411	0.92294	4.22996	-3.32758	-0.03068	30.32262	5.38203	231.85	1.74
66/12/17	2439476.5	-18.71306	-23.84180	0.92287	4.23136	-3.32589	-0.03075	30.32262	5.38209	231.87	1.74

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66/12/21	2439480.5	-18.70328	-23.84948	0.92279	4.23277	-3.32420	-0.03081	30.32263	5.38215	231.90	1.74
66/12/25	2439484.5	-18.69350	-23.85716	0.92272	4.23417	-3.32250	-0.03088	30.32264	5.38221	231.92	1.74
66/12/29	2439488.5	-18.68372	-23.86483	0.92265	4.23557	-3.32081	-0.03095	30.32264	5.38227	231.94	1.74
67/ 1/ 2	2439492.5	-18.67393	-23.87250	0.92258	4.23697	-3.31912	-0.03102	30.32265	5.38232	231.97	1.74
67/ 1/ 6	2439496.5	-18.66414	-23.88016	0.92251	4.23837	-3.31742	-0.03109	30.32266	5.38238	231.99	1.74
67/ 1/10	2439500.5	-18.65435	-23.88783	0.92244	4.23977	-3.31573	-0.03116	30.32266	5.38244	232.01	1.74
67/ 1/14	2439504.5	-18.64455	-23.89548	0.92236	4.24117	-3.31403	-0.03122	30.32267	5.38250	232.04	1.74
67/ 1/18	2439508.5	-18.63475	-23.90314	0.92229	4.24257	-3.31234	-0.03129	30.32268	5.38256	232.06	1.74
67/ 1/22	2439512.5	-18.62495	-23.91079	0.92222	4.24397	-3.31064	-0.03136	30.32268	5.38262	232.08	1.74
67/ 1/26	2439516.5	-18.61514	-23.91843	0.92215	4.24537	-3.30894	-0.03143	30.32269	5.38268	232.11	1.74
67/ 1/30	2439520.5	-18.60534	-23.92608	0.92207	4.24677	-3.30724	-0.03150	30.32270	5.38274	232.13	1.74
67/ 2/ 3	2439524.5	-18.59552	-23.93372	0.92200	4.24816	-3.30554	-0.03156	30.32270	5.38280	232.15	1.74
67/ 2/ 7	2439528.5	-18.58571	-23.94135	0.92193	4.24956	-3.30384	-0.03163	30.32271	5.38285	232.18	1.74
67/ 2/11	2439532.5	-18.57589	-23.94898	0.92186	4.25096	-3.30214	-0.03170	30.32272	5.38291	232.20	1.74
67/ 2/15	2439536.5	-18.56607	-23.95661	0.92178	4.25235	-3.30044	-0.03177	30.32272	5.38297	232.22	1.74
67/ 2/19	2439540.5	-18.55624	-23.96423	0.92171	4.25375	-3.29873	-0.03184	30.32273	5.38303	232.25	1.74
67/ 2/23	2439544.5	-18.54641	-23.97185	0.92164	4.25515	-3.29703	-0.03190	30.32274	5.38309	232.27	1.74
67/ 2/27	2439548.5	-18.53658	-23.97946	0.92156	4.25654	-3.29532	-0.03197	30.32274	5.38315	232.30	1.74
67/ 3/ 3	2439552.5	-18.52675	-23.98707	0.92149	4.25794	-3.29362	-0.03204	30.32275	5.38321	232.32	1.74
67/ 3/ 7	2439556.5	-18.51691	-23.99468	0.92141	4.25933	-3.29191	-0.03211	30.32276	5.38327	232.34	1.74
67/ 3/11	2439560.5	-18.50707	-24.00228	0.92134	4.26073	-3.29020	-0.03218	30.32276	5.38333	232.37	1.74
67/ 3/15	2439564.5	-18.49722	-24.00988	0.92126	4.26212	-3.28850	-0.03225	30.32277	5.38339	232.39	1.74
67/ 3/19	2439568.5	-18.48737	-24.01748	0.92119	4.26351	-3.28679	-0.03231	30.32278	5.38345	232.41	1.74
67/ 3/23	2439572.5	-18.47752	-24.02507	0.92112	4.26491	-3.28508	-0.03238	30.32278	5.38351	232.44	1.74
67/ 3/27	2439576.5	-18.46767	-24.03266	0.92104	4.26630	-3.28337	-0.03245	30.32279	5.38357	232.46	1.74
67/ 3/31	2439580.5	-18.45781	-24.04024	0.92097	4.26769	-3.28166	-0.03252	30.32280	5.38363	232.48	1.74
67/ 4/ 4	2439584.5	-18.44795	-24.04782	0.92089	4.26908	-3.27994	-0.03259	30.32280	5.38369	232.51	1.74
67/ 4/ 8	2439588.5	-18.43809	-24.05539	0.92082	4.27047	-3.27823	-0.03265	30.32281	5.38376	232.53	1.74
67/ 4/12	2439592.5	-18.42822	-24.06296	0.92074	4.27187	-3.27652	-0.03272	30.32282	5.38382	232.55	1.74
67/ 4/16	2439596.5	-18.41835	-24.07053	0.92066	4.27326	-3.27480	-0.03279	30.32282	5.38388	232.58	1.74
67/ 4/20	2439600.5	-18.40847	-24.07810	0.92059	4.27465	-3.27309	-0.03286	30.32283	5.38394	232.60	1.74
67/ 4/24	2439604.5	-18.39860	-24.08565	0.92051	4.27604	-3.27137	-0.03293	30.32284	5.38400	232.62	1.74
67/ 4/28	2439608.5	-18.38872	-24.09321	0.92044	4.27742	-3.26966	-0.03300	30.32284	5.38406	232.65	1.74
67/ 5/ 2	2439612.5	-18.37883	-24.10076	0.92036	4.27881	-3.26794	-0.03306	30.32285	5.38412	232.67	1.74
67/ 5/ 6	2439616.5	-18.36895	-24.10831	0.92028	4.28020	-3.26622	-0.03313	30.32286	5.38418	232.69	1.74
67/ 5/10	2439620.5	-18.35906	-24.11585	0.92021	4.28159	-3.26450	-0.03320	30.32287	5.38424	232.72	1.74
67/ 5/14	2439624.5	-18.34917	-24.12339	0.92013	4.28298	-3.26278	-0.03327	30.32287	5.38431	232.74	1.74
67/ 5/18	2439628.5	-18.33927	-24.13093	0.92005	4.28436	-3.26106	-0.03334	30.32288	5.38437	232.77	1.74
67/ 5/22	2439632.5	-18.32937	-24.13846	0.91998	4.28575	-3.25934	-0.03340	30.32289	5.38443	232.79	1.74
67/ 5/26	2439636.5	-18.31947	-24.14599	0.91990	4.28714	-3.25762	-0.03347	30.32289	5.38449	232.81	1.74
67/ 5/30	2439640.5	-18.30956	-24.15351	0.91982	4.28852	-3.25589	-0.03354	30.32290	5.38455	232.84	1.74
67/ 6/ 3	2439644.5	-18.29965	-24.16103	0.91974	4.28991	-3.25417	-0.03361	30.32291	5.38461	232.86	1.74
67/ 6/ 7	2439648.5	-18.28974	-24.16855	0.91967	4.29129	-3.25245	-0.03368	30.32291	5.38467	232.88	1.74
67/ 6/11	2439652.5	-18.27983	-24.17606	0.91959	4.29268	-3.25072	-0.03375	30.32292	5.38474	232.91	1.74
67/ 6/15	2439656.5	-18.26991	-24.18357	0.91951	4.29406	-3.24899	-0.03381	30.32293	5.38480	232.93	1.74

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67/ 6/19	2439660.5	-18.25999	-24.19107	0.91943	4.29544	-3.24727	-0.03388	30.32293	5.38486	232.95	1.74
67/ 6/23	2439664.5	-18.25006	-24.19857	0.91935	4.29683	-3.24554	-0.03395	30.32294	5.38492	232.98	1.74
67/ 6/27	2439668.5	-18.24013	-24.20606	0.91927	4.29821	-3.24381	-0.03402	30.32295	5.38498	233.00	1.74
67/ 7/ 1	2439672.5	-18.23020	-24.21356	0.91920	4.29959	-3.24208	-0.03409	30.32295	5.38505	233.02	1.74
67/ 7/ 5	2439676.5	-18.22027	-24.22104	0.91912	4.30097	-3.24035	-0.03416	30.32296	5.38511	233.05	1.74
67/ 7/ 9	2439680.5	-18.21033	-24.22853	0.91904	4.30235	-3.23862	-0.03422	30.32297	5.38517	233.07	1.74
67/ 7/13	2439684.5	-18.20039	-24.23601	0.91896	4.30373	-3.23689	-0.03429	30.32297	5.38523	233.09	1.74
67/ 7/17	2439688.5	-18.19045	-24.24348	0.91888	4.30511	-3.23515	-0.03436	30.32298	5.38529	233.12	1.74
67/ 7/21	2439692.5	-18.18050	-24.25096	0.91880	4.30649	-3.23342	-0.03443	30.32299	5.38536	233.14	1.74
67/ 7/25	2439696.5	-18.17055	-24.25842	0.91872	4.30787	-3.23168	-0.03450	30.32299	5.38542	233.17	1.74
67/ 7/29	2439700.5	-18.16059	-24.26589	0.91864	4.30925	-3.22995	-0.03456	30.32300	5.38548	233.19	1.74
67/ 8/ 2	2439704.5	-18.15064	-24.27335	0.91856	4.31063	-3.22821	-0.03463	30.32301	5.38554	233.21	1.74
67/ 8/ 6	2439708.5	-18.14068	-24.28080	0.91848	4.31201	-3.22648	-0.03470	30.32301	5.38560	233.24	1.74
67/ 8/10	2439712.5	-18.13072	-24.28825	0.91840	4.31338	-3.22474	-0.03477	30.32302	5.38567	233.26	1.74
67/ 8/14	2439716.5	-18.12075	-24.29570	0.91832	4.31476	-3.22300	-0.03484	30.32303	5.38573	233.28	1.74
67/ 8/18	2439720.5	-18.11078	-24.30315	0.91824	4.31613	-3.22126	-0.03491	30.32303	5.38579	233.31	1.74
67/ 8/22	2439724.5	-18.10081	-24.31059	0.91816	4.31751	-3.21952	-0.03497	30.32304	5.38585	233.33	1.74
67/ 8/26	2439728.5	-18.09083	-24.31802	0.91808	4.31889	-3.21778	-0.03504	30.32305	5.38592	233.35	1.73
67/ 8/30	2439732.5	-18.08085	-24.32545	0.91800	4.32026	-3.21604	-0.03511	30.32305	5.38598	233.38	1.73
67/ 9/ 3	2439736.5	-18.07087	-24.33288	0.91792	4.32163	-3.21429	-0.03518	30.32306	5.38604	233.40	1.73
67/ 9/ 7	2439740.5	-18.06088	-24.34030	0.91783	4.32301	-3.21255	-0.03525	30.32307	5.38610	233.42	1.73
67/ 9/11	2439744.5	-18.05090	-24.34772	0.91775	4.32438	-3.21080	-0.03531	30.32307	5.38617	233.45	1.73
67/ 9/15	2439748.5	-18.04090	-24.35514	0.91767	4.32575	-3.20906	-0.03538	30.32308	5.38623	233.47	1.73
67/ 9/19	2439752.5	-18.03091	-24.36255	0.91759	4.32713	-3.20731	-0.03545	30.32309	5.38629	233.49	1.73
67/ 9/23	2439756.5	-18.02091	-24.36996	0.91751	4.32850	-3.20557	-0.03552	30.32309	5.38635	233.52	1.73
67/ 9/27	2439760.5	-18.01091	-24.37736	0.91743	4.32987	-3.20382	-0.03559	30.32310	5.38642	233.54	1.73
67/10/ 1	2439764.5	-18.00091	-24.38476	0.91734	4.33124	-3.20207	-0.03566	30.32310	5.38648	233.57	1.73
67/10/ 5	2439768.5	-17.99090	-24.39216	0.91726	4.33261	-3.20032	-0.03572	30.32311	5.38654	233.59	1.73
67/10/ 9	2439772.5	-17.98089	-24.39955	0.91718	4.33398	-3.19857	-0.03579	30.32312	5.38660	233.61	1.73
67/10/13	2439776.5	-17.97087	-24.40693	0.91710	4.33535	-3.19682	-0.03586	30.32312	5.38667	233.64	1.73
67/10/17	2439780.5	-17.96086	-24.41432	0.91701	4.33672	-3.19506	-0.03593	30.32313	5.38673	233.66	1.73
67/10/21	2439784.5	-17.95084	-24.42170	0.91693	4.33808	-3.19331	-0.03600	30.32314	5.38679	233.68	1.73
67/10/25	2439788.5	-17.94081	-24.42907	0.91685	4.33945	-3.19156	-0.03607	30.32314	5.38685	233.71	1.73
67/10/29	2439792.5	-17.93079	-24.43644	0.91676	4.34082	-3.18980	-0.03613	30.32315	5.38692	233.73	1.73
67/11/ 2	2439796.5	-17.92076	-24.44381	0.91668	4.34219	-3.18805	-0.03620	30.32315	5.38698	233.75	1.73
67/11/ 6	2439800.5	-17.91072	-24.45117	0.91660	4.34355	-3.18629	-0.03627	30.32316	5.38704	233.78	1.73
67/11/10	2439804.5	-17.90069	-24.45853	0.91651	4.34492	-3.18453	-0.03634	30.32317	5.38710	233.80	1.73
67/11/14	2439808.5	-17.89065	-24.46589	0.91643	4.34628	-3.18278	-0.03641	30.32317	5.38717	233.82	1.73
67/11/18	2439812.5	-17.88061	-24.47324	0.91634	4.34765	-3.18102	-0.03647	30.32318	5.38723	233.85	1.73
67/11/22	2439816.5	-17.87056	-24.48058	0.91626	4.34901	-3.17926	-0.03654	30.32318	5.38729	233.87	1.73
67/11/26	2439820.5	-17.86051	-24.48793	0.91617	4.35037	-3.17750	-0.03661	30.32319	5.38735	233.89	1.73
67/11/30	2439824.5	-17.85046	-24.49527	0.91609	4.35174	-3.17574	-0.03668	30.32320	5.38742	233.92	1.73
67/12/ 4	2439828.5	-17.84041	-24.50260	0.91601	4.35310	-3.17397	-0.03675	30.32320	5.38748	233.94	1.73
67/12/ 8	2439832.5	-17.83035	-24.50993	0.91592	4.35446	-3.17221	-0.03682	30.32321	5.38754	233.97	1.73
67/12/12	2439836.5	-17.82029	-24.51726	0.91584	4.35582	-3.17045	-0.03688	30.32321	5.38760	233.99	1.73

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67/12/16	2439840.5	-17.81022	-24.52458	0.91575	4.35718	-3.16868	-0.03695	30.32322	5.38767	234.01	1.73
67/12/20	2439844.5	-17.80016	-24.53190	0.91566	4.35854	-3.16692	-0.03702	30.32322	5.38773	234.04	1.73
67/12/24	2439848.5	-17.79009	-24.53921	0.91558	4.35990	-3.16515	-0.03709	30.32323	5.38779	234.06	1.73
67/12/28	2439852.5	-17.78001	-24.54652	0.91549	4.36126	-3.16338	-0.03716	30.32324	5.38785	234.08	1.73
68/ 1/ 1	2439856.5	-17.76993	-24.55383	0.91541	4.36262	-3.16161	-0.03723	30.32324	5.38791	234.11	1.73
68/ 1/ 5	2439860.5	-17.75985	-24.56113	0.91532	4.36398	-3.15985	-0.03729	30.32325	5.38798	234.13	1.73
68/ 1/ 9	2439864.5	-17.74977	-24.56843	0.91523	4.36533	-3.15808	-0.03736	30.32325	5.38804	234.15	1.73
68/ 1/13	2439868.5	-17.73969	-24.57572	0.91515	4.36669	-3.15631	-0.03743	30.32326	5.38810	234.18	1.73
68/ 1/17	2439872.5	-17.72960	-24.58301	0.91506	4.36804	-3.15453	-0.03750	30.32326	5.38816	234.20	1.73
68/ 1/21	2439876.5	-17.71950	-24.59029	0.91498	4.36940	-3.15276	-0.03757	30.32327	5.38823	234.22	1.73
68/ 1/25	2439880.5	-17.70941	-24.59758	0.91489	4.37076	-3.15099	-0.03763	30.32327	5.38829	234.25	1.73
68/ 1/29	2439884.5	-17.69931	-24.60485	0.91480	4.37211	-3.14921	-0.03770	30.32328	5.38835	234.27	1.73
68/ 2/ 2	2439888.5	-17.68921	-24.61213	0.91471	4.37346	-3.14744	-0.03777	30.32328	5.38841	234.29	1.73
68/ 2/ 6	2439892.5	-17.67910	-24.61940	0.91463	4.37482	-3.14566	-0.03784	30.32329	5.38847	234.32	1.73
68/ 2/10	2439896.5	-17.66899	-24.62666	0.91454	4.37617	-3.14389	-0.03791	30.32329	5.38854	234.34	1.73
68/ 2/14	2439900.5	-17.65888	-24.63392	0.91445	4.37752	-3.14211	-0.03798	30.32330	5.38860	234.37	1.73
68/ 2/18	2439904.5	-17.64877	-24.64118	0.91436	4.37887	-3.14033	-0.03804	30.32330	5.38866	234.39	1.73
68/ 2/22	2439908.5	-17.63865	-24.64843	0.91428	4.38022	-3.13855	-0.03811	30.32331	5.38872	234.41	1.73
68/ 2/26	2439912.5	-17.62853	-24.65568	0.91419	4.38157	-3.13677	-0.03818	30.32331	5.38878	234.44	1.73
68/ 3/ 1	2439916.5	-17.61841	-24.66292	0.91410	4.38292	-3.13499	-0.03825	30.32332	5.38884	234.46	1.73
68/ 3/ 5	2439920.5	-17.60828	-24.67016	0.91401	4.38427	-3.13321	-0.03832	30.32332	5.38891	234.48	1.73
68/ 3/ 9	2439924.5	-17.59815	-24.67740	0.91392	4.38562	-3.13143	-0.03838	30.32333	5.38897	234.51	1.73
68/ 3/13	2439928.5	-17.58802	-24.68463	0.91383	4.38697	-3.12964	-0.03845	30.32333	5.38903	234.53	1.73
68/ 3/17	2439932.5	-17.57788	-24.69186	0.91374	4.38832	-3.12786	-0.03852	30.32334	5.38909	234.55	1.73
68/ 3/21	2439936.5	-17.56774	-24.69908	0.91366	4.38966	-3.12607	-0.03859	30.32334	5.38915	234.58	1.73
68/ 3/25	2439940.5	-17.55760	-24.70630	0.91357	4.39101	-3.12429	-0.03866	30.32335	5.38921	234.60	1.73
68/ 3/29	2439944.5	-17.54745	-24.71352	0.91348	4.39235	-3.12250	-0.03873	30.32335	5.38927	234.62	1.73
68/ 4/ 2	2439948.5	-17.53730	-24.72073	0.91339	4.39370	-3.12071	-0.03879	30.32336	5.38934	234.65	1.73
68/ 4/ 6	2439952.5	-17.52715	-24.72794	0.91330	4.39504	-3.11892	-0.03886	30.32336	5.38940	234.67	1.73
68/ 4/10	2439956.5	-17.51700	-24.73514	0.91321	4.39639	-3.11713	-0.03893	30.32336	5.38946	234.69	1.73
68/ 4/14	2439960.5	-17.50684	-24.74234	0.91312	4.39773	-3.11534	-0.03900	30.32337	5.38952	234.72	1.73
68/ 4/18	2439964.5	-17.49668	-24.74954	0.91303	4.39907	-3.11355	-0.03907	30.32337	5.38958	234.74	1.73
68/ 4/22	2439968.5	-17.48651	-24.75673	0.91294	4.40041	-3.11176	-0.03913	30.32338	5.38964	234.77	1.73
68/ 4/26	2439972.5	-17.47635	-24.76391	0.91285	4.40176	-3.10997	-0.03920	30.32338	5.38970	234.79	1.73
68/ 4/30	2439976.5	-17.46618	-24.77110	0.91276	4.40310	-3.10817	-0.03927	30.32338	5.38976	234.81	1.72
68/ 5/ 4	2439980.5	-17.45600	-24.77827	0.91267	4.40444	-3.10638	-0.03934	30.32339	5.38982	234.84	1.72
68/ 5/ 8	2439984.5	-17.44583	-24.78545	0.91257	4.40578	-3.10458	-0.03941	30.32339	5.38989	234.86	1.72
68/ 5/12	2439988.5	-17.43565	-24.79262	0.91248	4.40711	-3.10279	-0.03948	30.32340	5.38995	234.88	1.72
68/ 5/16	2439992.5	-17.42546	-24.79978	0.91239	4.40845	-3.10099	-0.03954	30.32340	5.39001	234.91	1.72
68/ 5/20	2439996.5	-17.41528	-24.80695	0.91230	4.40979	-3.09919	-0.03961	30.32340	5.39007	234.93	1.72
68/ 5/24	2440000.5	-17.40509	-24.81410	0.91221	4.41113	-3.09739	-0.03968	30.32341	5.39013	234.95	1.72
68/ 5/28	2440004.5	-17.39490	-24.82126	0.91212	4.41246	-3.09559	-0.03975	30.32341	5.39019	234.98	1.72
68/ 6/ 1	2440008.5	-17.38470	-24.82841	0.91203	4.41380	-3.09379	-0.03982	30.32341	5.39025	235.00	1.72
68/ 6/ 5	2440012.5	-17.37450	-24.83555	0.91193	4.41513	-3.09199	-0.03988	30.32342	5.39031	235.02	1.72
68/ 6/ 9	2440016.5	-17.36430	-24.84269	0.91184	4.41647	-3.09019	-0.03995	30.32342	5.39037	235.05	1.72

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68/ 6/13	2440020.5	-17.35410	-24.84983	0.91175	4.41780	-3.08839	-0.04002	30.32342	5.39043	235.07	1.72
68/ 6/17	2440024.5	-17.34389	-24.85696	0.91166	4.41914	-3.08658	-0.04009	30.32343	5.39049	235.09	1.72
68/ 6/21	2440028.5	-17.33368	-24.86409	0.91156	4.42047	-3.08478	-0.04016	30.32343	5.39055	235.12	1.72
68/ 6/25	2440032.5	-17.32347	-24.87121	0.91147	4.42180	-3.08297	-0.04022	30.32343	5.39061	235.14	1.72
68/ 6/29	2440036.5	-17.31325	-24.87833	0.91138	4.42313	-3.08117	-0.04029	30.32344	5.39067	235.17	1.72
68/ 7/ 3	2440040.5	-17.30303	-24.88545	0.91128	4.42446	-3.07936	-0.04036	30.32344	5.39073	235.19	1.72
68/ 7/ 7	2440044.5	-17.29281	-24.89256	0.91119	4.42579	-3.07755	-0.04043	30.32344	5.39079	235.21	1.72
68/ 7/11	2440048.5	-17.28258	-24.89967	0.91110	4.42712	-3.07574	-0.04050	30.32344	5.39085	235.24	1.72
68/ 7/15	2440052.5	-17.27235	-24.90677	0.91100	4.42845	-3.07393	-0.04057	30.32345	5.39091	235.26	1.72
68/ 7/19	2440056.5	-17.26212	-24.91387	0.91091	4.42978	-3.07212	-0.04063	30.32345	5.39096	235.28	1.72
68/ 7/23	2440060.5	-17.25189	-24.92097	0.91082	4.43110	-3.07031	-0.04070	30.32345	5.39102	235.31	1.72
68/ 7/27	2440064.5	-17.24165	-24.92806	0.91072	4.43243	-3.06850	-0.04077	30.32346	5.39108	235.33	1.72
68/ 7/31	2440068.5	-17.23141	-24.93515	0.91063	4.43376	-3.06668	-0.04084	30.32346	5.39114	235.35	1.72
68/ 8/ 4	2440072.5	-17.22116	-24.94223	0.91053	4.43508	-3.06487	-0.04091	30.32346	5.39120	235.38	1.72
68/ 8/ 8	2440076.5	-17.21091	-24.94931	0.91044	4.43641	-3.06305	-0.04097	30.32346	5.39126	235.40	1.72
68/ 8/12	2440080.5	-17.20066	-24.95638	0.91034	4.43773	-3.06124	-0.04104	30.32346	5.39132	235.42	1.72
68/ 8/16	2440084.5	-17.19041	-24.96345	0.91025	4.43905	-3.05942	-0.04111	30.32347	5.39138	235.45	1.72
68/ 8/20	2440088.5	-17.18015	-24.97052	0.91015	4.44038	-3.05760	-0.04118	30.32347	5.39144	235.47	1.72
68/ 8/24	2440092.5	-17.16989	-24.97758	0.91006	4.44170	-3.05578	-0.04125	30.32347	5.39149	235.49	1.72
68/ 8/28	2440096.5	-17.15963	-24.98463	0.90996	4.44302	-3.05397	-0.04131	30.32347	5.39155	235.52	1.72
68/ 9/ 1	2440100.5	-17.14937	-24.99169	0.90987	4.44434	-3.05215	-0.04138	30.32347	5.39161	235.54	1.72
68/ 9/ 5	2440104.5	-17.13910	-24.99874	0.90977	4.44566	-3.05032	-0.04145	30.32348	5.39167	235.57	1.72
68/ 9/ 9	2440108.5	-17.12883	-25.00578	0.90968	4.44698	-3.04850	-0.04152	30.32348	5.39173	235.59	1.72
68/ 9/13	2440112.5	-17.11855	-25.01282	0.90958	4.44830	-3.04668	-0.04159	30.32348	5.39178	235.61	1.72
68/ 9/17	2440116.5	-17.10827	-25.01986	0.90948	4.44962	-3.04486	-0.04165	30.32348	5.39184	235.64	1.72
68/ 9/21	2440120.5	-17.09799	-25.02689	0.90939	4.45093	-3.04303	-0.04172	30.32348	5.39190	235.66	1.72
68/ 9/25	2440124.5	-17.08771	-25.03392	0.90929	4.45225	-3.04121	-0.04179	30.32348	5.39196	235.68	1.72
68/ 9/29	2440128.5	-17.07742	-25.04094	0.90920	4.45357	-3.03938	-0.04186	30.32348	5.39201	235.71	1.72
68/10/ 3	2440132.5	-17.06713	-25.04796	0.90910	4.45488	-3.03755	-0.04193	30.32349	5.39207	235.73	1.72
68/10/ 7	2440136.5	-17.05684	-25.05498	0.90900	4.45619	-3.03572	-0.04199	30.32349	5.39213	235.75	1.72
68/10/11	2440140.5	-17.04654	-25.06199	0.90890	4.45751	-3.03390	-0.04206	30.32349	5.39219	235.78	1.72
68/10/15	2440144.5	-17.03624	-25.06899	0.90881	4.45882	-3.03207	-0.04213	30.32349	5.39224	235.80	1.72
68/10/19	2440148.5	-17.02594	-25.07600	0.90871	4.46013	-3.03024	-0.04220	30.32349	5.39230	235.82	1.72
68/10/23	2440152.5	-17.01564	-25.08299	0.90861	4.46145	-3.02840	-0.04227	30.32349	5.39236	235.85	1.72
68/10/27	2440156.5	-17.00533	-25.08999	0.90851	4.46276	-3.02657	-0.04233	30.32349	5.39241	235.87	1.72
68/10/31	2440160.5	-16.99502	-25.09698	0.90842	4.46407	-3.02474	-0.04240	30.32349	5.39247	235.90	1.72
68/11/ 4	2440164.5	-16.98470	-25.10396	0.90832	4.46538	-3.02291	-0.04247	30.32349	5.39253	235.92	1.72
68/11/ 8	2440168.5	-16.97438	-25.11095	0.90822	4.46669	-3.02107	-0.04254	30.32349	5.39258	235.94	1.72
68/11/12	2440172.5	-16.96406	-25.11792	0.90812	4.46799	-3.01923	-0.04261	30.32349	5.39264	235.97	1.72
68/11/16	2440176.5	-16.95374	-25.12490	0.90802	4.46930	-3.01740	-0.04267	30.32349	5.39270	235.99	1.72
68/11/20	2440180.5	-16.94341	-25.13186	0.90792	4.47061	-3.01556	-0.04274	30.32349	5.39275	236.01	1.72
68/11/24	2440184.5	-16.93308	-25.13883	0.90783	4.47191	-3.01372	-0.04281	30.32349	5.39281	236.04	1.72
68/11/28	2440188.5	-16.92275	-25.14579	0.90773	4.47322	-3.01188	-0.04288	30.32349	5.39286	236.06	1.72
68/12/ 2	2440192.5	-16.91242	-25.15274	0.90763	4.47452	-3.01004	-0.04295	30.32349	5.39292	236.08	1.72
68/12/ 6	2440196.5	-16.90208	-25.15970	0.90753	4.47583	-3.00820	-0.04301	30.32349	5.39297	236.11	1.72

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM NEPTUNE

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68/12/10	2440200.5	-16.89174	-25.16664	0.90743	4.47713	-3.00636	-0.04308	30.32349	5.39303	236.13	1.71
68/12/14	2440204.5	-16.88139	-25.17359	0.90733	4.47843	-3.00452	-0.04315	30.32349	5.39308	236.15	1.71
68/12/18	2440208.5	-16.87105	-25.18052	0.90723	4.47973	-3.00268	-0.04322	30.32349	5.39314	236.18	1.71
68/12/22	2440212.5	-16.86069	-25.18746	0.90713	4.48103	-3.00083	-0.04329	30.32349	5.39319	236.20	1.71
68/12/26	2440216.5	-16.85034	-25.19439	0.90703	4.48233	-2.99899	-0.04335	30.32349	5.39325	236.22	1.71
68/12/30	2440220.5	-16.83998	-25.20132	0.90693	4.48363	-2.99714	-0.04342	30.32349	5.39330	236.25	1.71
69/ 1/ 3	2440224.5	-16.82963	-25.20824	0.90683	4.48493	-2.99529	-0.04349	30.32349	5.39336	236.27	1.71
69/ 1/ 7	2440228.5	-16.81926	-25.21516	0.90673	4.48623	-2.99345	-0.04356	30.32349	5.39341	236.30	1.71
69/ 1/11	2440232.5	-16.80890	-25.22207	0.90663	4.48753	-2.99160	-0.04363	30.32348	5.39347	236.32	1.71
69/ 1/15	2440236.5	-16.79853	-25.22898	0.90653	4.48882	-2.98975	-0.04369	30.32348	5.39352	236.34	1.71
69/ 1/19	2440240.5	-16.78816	-25.23588	0.90643	4.49012	-2.98790	-0.04376	30.32348	5.39357	236.37	1.71
69/ 1/23	2440244.5	-16.77778	-25.24278	0.90632	4.49142	-2.98605	-0.04383	30.32348	5.39363	236.39	1.71
69/ 1/27	2440248.5	-16.76741	-25.24968	0.90622	4.49271	-2.98420	-0.04390	30.32348	5.39368	236.41	1.71
69/ 1/31	2440252.5	-16.75703	-25.25657	0.90612	4.49400	-2.98234	-0.04397	30.32348	5.39373	236.44	1.71
69/ 2/ 4	2440256.5	-16.74664	-25.26346	0.90602	4.49530	-2.98049	-0.04403	30.32348	5.39379	236.46	1.71
69/ 2/ 8	2440260.5	-16.73626	-25.27034	0.90592	4.49659	-2.97864	-0.04410	30.32347	5.39384	236.48	1.71
69/ 2/12	2440264.5	-16.72587	-25.27722	0.90582	4.49788	-2.97678	-0.04417	30.32347	5.39389	236.51	1.71
69/ 2/16	2440268.5	-16.71547	-25.28410	0.90571	4.49917	-2.97493	-0.04424	30.32347	5.39395	236.53	1.71
69/ 2/20	2440272.5	-16.70508	-25.29097	0.90561	4.50046	-2.97307	-0.04430	30.32347	5.39400	236.55	1.71
69/ 2/24	2440276.5	-16.69468	-25.29783	0.90551	4.50175	-2.97121	-0.04437	30.32347	5.39405	236.58	1.71
69/ 2/28	2440280.5	-16.68428	-25.30469	0.90541	4.50304	-2.96935	-0.04444	30.32346	5.39411	236.60	1.71
69/ 3/ 4	2440284.5	-16.67387	-25.31155	0.90530	4.50432	-2.96749	-0.04451	30.32346	5.39416	236.63	1.71
69/ 3/ 8	2440288.5	-16.66347	-25.31840	0.90520	4.50561	-2.96563	-0.04458	30.32346	5.39421	236.65	1.71
69/ 3/12	2440292.5	-16.65306	-25.32525	0.90510	4.50690	-2.96377	-0.04464	30.32346	5.39426	236.67	1.71
69/ 3/16	2440296.5	-16.64264	-25.33210	0.90500	4.50818	-2.96191	-0.04471	30.32345	5.39431	236.70	1.71
69/ 3/20	2440300.5	-16.63223	-25.33894	0.90489	4.50947	-2.96005	-0.04478	30.32345	5.39437	236.72	1.71
69/ 3/24	2440304.5	-16.62181	-25.34577	0.90479	4.51075	-2.95818	-0.04485	30.32345	5.39442	236.74	1.71
69/ 3/28	2440308.5	-16.61139	-25.35261	0.90468	4.51203	-2.95632	-0.04491	30.32344	5.39447	236.77	1.71
69/ 4/ 1	2440312.5	-16.60096	-25.35943	0.90458	4.51332	-2.95445	-0.04498	30.32344	5.39452	236.79	1.71
69/ 4/ 5	2440316.5	-16.59053	-25.36626	0.90448	4.51460	-2.95259	-0.04505	30.32344	5.39457	236.81	1.71
69/ 4/ 9	2440320.5	-16.58010	-25.37308	0.90437	4.51588	-2.95072	-0.04512	30.32343	5.39462	236.84	1.71
69/ 4/13	2440324.5	-16.56967	-25.37989	0.90427	4.51716	-2.94885	-0.04519	30.32343	5.39467	236.86	1.71
69/ 4/17	2440328.5	-16.55923	-25.38670	0.90416	4.51844	-2.94699	-0.04525	30.32343	5.39472	236.88	1.71
69/ 4/21	2440332.5	-16.54879	-25.39351	0.90406	4.51971	-2.94512	-0.04532	30.32342	5.39477	236.91	1.71
69/ 4/25	2440336.5	-16.53835	-25.40031	0.90395	4.52099	-2.94325	-0.04539	30.32342	5.39482	236.93	1.71
69/ 4/29	2440340.5	-16.52790	-25.40711	0.90385	4.52227	-2.94137	-0.04546	30.32342	5.39487	236.96	1.71
69/ 5/ 3	2440344.5	-16.51745	-25.41390	0.90374	4.52354	-2.93950	-0.04552	30.32341	5.39492	236.98	1.71
69/ 5/ 7	2440348.5	-16.50700	-25.42069	0.90364	4.52482	-2.93763	-0.04559	30.32341	5.39497	237.00	1.71
69/ 5/11	2440352.5	-16.49655	-25.42747	0.90353	4.52609	-2.93576	-0.04566	30.32340	5.39502	237.03	1.71
69/ 5/15	2440356.5	-16.48609	-25.43425	0.90343	4.52737	-2.93388	-0.04573	30.32340	5.39507	237.05	1.71
69/ 5/19	2440360.5	-16.47563	-25.44103	0.90332	4.52864	-2.93201	-0.04580	30.32339	5.39512	237.07	1.71
69/ 5/23	2440364.5	-16.46517	-25.44780	0.90322	4.52991	-2.93013	-0.04586	30.32339	5.39517	237.10	1.71
69/ 5/27	2440368.5	-16.45470	-25.45457	0.90311	4.53118	-2.92825	-0.04593	30.32338	5.39522	237.12	1.71
69/ 5/31	2440372.5	-16.44423	-25.46133	0.90300	4.53245	-2.92638	-0.04600	30.32338	5.39527	237.14	1.71
69/ 6/ 4	2440376.5	-16.43376	-25.46809	0.90290	4.53372	-2.92450	-0.04607	30.32337	5.39532	237.17	1.71

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69/ 6/ 8	2440380.5	-16.42328	-25.47484	0.90279	4.53499	-2.92262	-0.04613	30.32337	5.39537	237.19	1.71
69/ 6/12	2440384.5	-16.41281	-25.48159	0.90268	4.53626	-2.92074	-0.04620	30.32336	5.39541	237.21	1.71
69/ 6/16	2440388.5	-16.40232	-25.48833	0.90258	4.53753	-2.91886	-0.04627	30.32336	5.39546	237.24	1.71
69/ 6/20	2440392.5	-16.39184	-25.49508	0.90247	4.53879	-2.91697	-0.04634	30.32335	5.39551	237.26	1.71
69/ 6/24	2440396.5	-16.38135	-25.50181	0.90236	4.54006	-2.91509	-0.04640	30.32335	5.39556	237.28	1.71
69/ 6/28	2440400.5	-16.37086	-25.50854	0.90226	4.54132	-2.91321	-0.04647	30.32334	5.39560	237.31	1.71
69/ 7/ 2	2440404.5	-16.36037	-25.51527	0.90215	4.54259	-2.91132	-0.04654	30.32334	5.39565	237.33	1.70
69/ 7/ 6	2440408.5	-16.34987	-25.52200	0.90204	4.54385	-2.90944	-0.04661	30.32333	5.39570	237.36	1.70
69/ 7/10	2440412.5	-16.33938	-25.52872	0.90193	4.54511	-2.90755	-0.04668	30.32332	5.39575	237.38	1.70
69/ 7/14	2440416.5	-16.32888	-25.53543	0.90183	4.54637	-2.90567	-0.04674	30.32332	5.39579	237.40	1.70
69/ 7/18	2440420.5	-16.31837	-25.54214	0.90172	4.54763	-2.90378	-0.04681	30.32331	5.39584	237.43	1.70
69/ 7/22	2440424.5	-16.30786	-25.54885	0.90161	4.54889	-2.90189	-0.04688	30.32331	5.39589	237.45	1.70
69/ 7/26	2440428.5	-16.29735	-25.55555	0.90150	4.55015	-2.90000	-0.04695	30.32330	5.39593	237.47	1.70
69/ 7/30	2440432.5	-16.28684	-25.56225	0.90139	4.55141	-2.89811	-0.04701	30.32329	5.39598	237.50	1.70
69/ 8/ 3	2440436.5	-16.27632	-25.56894	0.90128	4.55267	-2.89622	-0.04708	30.32329	5.39602	237.52	1.70
69/ 8/ 7	2440440.5	-16.26581	-25.57563	0.90118	4.55392	-2.89433	-0.04715	30.32328	5.39607	237.54	1.70
69/ 8/11	2440444.5	-16.25528	-25.58231	0.90107	4.55518	-2.89243	-0.04722	30.32327	5.39612	237.57	1.70
69/ 8/15	2440448.5	-16.24476	-25.58899	0.90096	4.55643	-2.89054	-0.04728	30.32326	5.39616	237.59	1.70
69/ 8/19	2440452.5	-16.23423	-25.59567	0.90085	4.55769	-2.88865	-0.04735	30.32326	5.39621	237.61	1.70
69/ 8/23	2440456.5	-16.22370	-25.60234	0.90074	4.55894	-2.88675	-0.04742	30.32325	5.39625	237.64	1.70
69/ 8/27	2440460.5	-16.21317	-25.60900	0.90063	4.56019	-2.88486	-0.04749	30.32324	5.39630	237.66	1.70
69/ 8/31	2440464.5	-16.20263	-25.61567	0.90052	4.56144	-2.88296	-0.04755	30.32323	5.39634	237.69	1.70
69/ 9/ 4	2440468.5	-16.19209	-25.62232	0.90041	4.56269	-2.88106	-0.04762	30.32323	5.39638	237.71	1.70
69/ 9/ 8	2440472.5	-16.18155	-25.62898	0.90030	4.56394	-2.87916	-0.04769	30.32322	5.39643	237.73	1.70
69/ 9/12	2440476.5	-16.17100	-25.63563	0.90019	4.56519	-2.87726	-0.04776	30.32321	5.39647	237.76	1.70
69/ 9/16	2440480.5	-16.16046	-25.64227	0.90008	4.56644	-2.87536	-0.04782	30.32320	5.39652	237.78	1.70
69/ 9/20	2440484.5	-16.14991	-25.64891	0.89997	4.56769	-2.87346	-0.04789	30.32319	5.39656	237.80	1.70
69/ 9/24	2440488.5	-16.13935	-25.65555	0.89986	4.56893	-2.87156	-0.04796	30.32319	5.39660	237.83	1.70
69/ 9/28	2440492.5	-16.12880	-25.66218	0.89975	4.57018	-2.86966	-0.04803	30.32318	5.39665	237.85	1.70
69/10/ 2	2440496.5	-16.11824	-25.66881	0.89964	4.57142	-2.86776	-0.04809	30.32317	5.39669	237.87	1.70
69/10/ 6	2440500.5	-16.10767	-25.67543	0.89952	4.57267	-2.86585	-0.04816	30.32316	5.39673	237.90	1.70
69/10/10	2440504.5	-16.09711	-25.68205	0.89941	4.57391	-2.86395	-0.04823	30.32315	5.39678	237.92	1.70
69/10/14	2440508.5	-16.08654	-25.68866	0.89930	4.57515	-2.86204	-0.04830	30.32314	5.39682	237.94	1.70
69/10/18	2440512.5	-16.07597	-25.69527	0.89919	4.57639	-2.86013	-0.04836	30.32313	5.39686	237.97	1.70
69/10/22	2440516.5	-16.06540	-25.70188	0.89908	4.57763	-2.85823	-0.04843	30.32312	5.39690	237.99	1.70
69/10/26	2440520.5	-16.05482	-25.70848	0.89897	4.57887	-2.85632	-0.04850	30.32311	5.39694	238.02	1.70
69/10/30	2440524.5	-16.04424	-25.71507	0.89885	4.58011	-2.85441	-0.04856	30.32310	5.39699	238.04	1.70
69/11/ 3	2440528.5	-16.03366	-25.72167	0.89874	4.58135	-2.85250	-0.04863	30.32309	5.39703	238.06	1.70
69/11/ 7	2440532.5	-16.02307	-25.72825	0.89863	4.58259	-2.85059	-0.04870	30.32308	5.39707	238.09	1.70
69/11/11	2440536.5	-16.01249	-25.73484	0.89852	4.58382	-2.84868	-0.04877	30.32307	5.39711	238.11	1.70
69/11/15	2440540.5	-16.00189	-25.74142	0.89840	4.58506	-2.84677	-0.04883	30.32306	5.39715	238.13	1.70
69/11/19	2440544.5	-15.99130	-25.74799	0.89829	4.58629	-2.84485	-0.04890	30.32305	5.39719	238.16	1.70
69/11/23	2440548.5	-15.98070	-25.75456	0.89818	4.58753	-2.84294	-0.04897	30.32304	5.39723	238.18	1.70
69/11/27	2440552.5	-15.97010	-25.76113	0.89806	4.58876	-2.84103	-0.04904	30.32303	5.39727	238.20	1.70
69/12/ 1	2440556.5	-15.95950	-25.76769	0.89795	4.58999	-2.83911	-0.04910	30.32302	5.39731	238.23	1.70

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69/12/ 5	2440560.5	-15.94890	-25.77424	0.89784	4.59122	-2.83719	-0.04917	30.32301	5.39735	238.25	1.70
69/12/ 9	2440564.5	-15.93829	-25.78080	0.89772	4.59245	-2.83528	-0.04924	30.32300	5.39739	238.27	1.70
69/12/13	2440568.5	-15.92768	-25.78734	0.89761	4.59368	-2.83336	-0.04931	30.32299	5.39743	238.30	1.70
69/12/17	2440572.5	-15.91707	-25.79389	0.89750	4.59491	-2.83144	-0.04937	30.32298	5.39747	238.32	1.70
69/12/21	2440576.5	-15.90645	-25.80043	0.89738	4.59613	-2.82952	-0.04944	30.32297	5.39751	238.35	1.70
69/12/25	2440580.5	-15.89583	-25.80696	0.89727	4.59736	-2.82760	-0.04951	30.32296	5.39755	238.37	1.70

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69/12/17	2440572.5	-15.91707	-24.02136	-9.43951	4.59491	-2.57802	-1.17187	30.32298	5.39747	236.47	-18.14
69/12/21	2440576.5	-15.90645	-24.02732	-9.44221	4.59613	-2.57624	-1.17117	30.32297	5.39751	236.49	-18.14
69/12/25	2440580.5	-15.89583	-24.03326	-9.44492	4.59736	-2.57445	-1.17047	30.32296	5.39755	236.52	-18.15
69/12/29	2440584.5	-15.88521	-24.03921	-9.44762	4.59859	-2.57266	-1.16977	30.32294	5.39758	236.54	-18.15
70/ 1/ 2	2440588.5	-15.87458	-24.04515	-9.45032	4.59981	-2.57087	-1.16906	30.32293	5.39762	236.57	-18.16
70/ 1/ 6	2440592.5	-15.86395	-24.05109	-9.45302	4.60103	-2.56908	-1.16836	30.32292	5.39766	236.59	-18.16
70/ 1/10	2440596.5	-15.85332	-24.05702	-9.45572	4.60226	-2.56729	-1.16766	30.32291	5.39770	236.62	-18.17
70/ 1/14	2440600.5	-15.84269	-24.06295	-9.45842	4.60348	-2.56549	-1.16695	30.32290	5.39774	236.64	-18.18
70/ 1/18	2440604.5	-15.83205	-24.06888	-9.46111	4.60470	-2.56370	-1.16625	30.32288	5.39777	236.66	-18.18
70/ 1/22	2440608.5	-15.82141	-24.07480	-9.46381	4.60592	-2.56191	-1.16554	30.32287	5.39781	236.69	-18.19
70/ 1/26	2440612.5	-15.81077	-24.08071	-9.46650	4.60714	-2.56011	-1.16484	30.32286	5.39785	236.71	-18.19
70/ 1/30	2440616.5	-15.80013	-24.08662	-9.46919	4.60836	-2.55832	-1.16413	30.32285	5.39788	236.74	-18.20
70/ 2/ 3	2440620.5	-15.78948	-24.09253	-9.47188	4.60957	-2.55652	-1.16343	30.32283	5.39792	236.76	-18.20
70/ 2/ 7	2440624.5	-15.77883	-24.09844	-9.47456	4.61079	-2.55473	-1.16272	30.32282	5.39796	236.78	-18.21
70/ 2/11	2440628.5	-15.76818	-24.10434	-9.47725	4.61201	-2.55293	-1.16202	30.32281	5.39799	236.81	-18.21
70/ 2/15	2440632.5	-15.75752	-24.11023	-9.47993	4.61322	-2.55113	-1.16131	30.32279	5.39803	236.83	-18.22
70/ 2/19	2440636.5	-15.74686	-24.11612	-9.48261	4.61443	-2.54933	-1.16060	30.32278	5.39806	236.86	-18.22
70/ 2/23	2440640.5	-15.73620	-24.12201	-9.48529	4.61565	-2.54754	-1.15990	30.32277	5.39810	236.88	-18.23
70/ 2/27	2440644.5	-15.72554	-24.12789	-9.48797	4.61686	-2.54574	-1.15919	30.32275	5.39813	236.91	-18.23
70/ 3/ 3	2440648.5	-15.71487	-24.13377	-9.49065	4.61807	-2.54393	-1.15848	30.32274	5.39817	236.93	-18.24
70/ 3/ 7	2440652.5	-15.70420	-24.13965	-9.49333	4.61928	-2.54213	-1.15777	30.32273	5.39820	236.95	-18.24
70/ 3/11	2440656.5	-15.69353	-24.14552	-9.49600	4.62049	-2.54033	-1.15706	30.32271	5.39824	236.98	-18.25
70/ 3/15	2440660.5	-15.68285	-24.15138	-9.49867	4.62170	-2.53853	-1.15635	30.32270	5.39827	237.00	-18.26
70/ 3/19	2440664.5	-15.67217	-24.15725	-9.50134	4.62290	-2.53672	-1.15565	30.32268	5.39831	237.03	-18.26
70/ 3/23	2440668.5	-15.66149	-24.16311	-9.50401	4.62411	-2.53492	-1.15494	30.32267	5.39834	237.05	-18.27
70/ 3/27	2440672.5	-15.65081	-24.16896	-9.50668	4.62531	-2.53312	-1.15423	30.32265	5.39837	237.07	-18.27
70/ 3/31	2440676.5	-15.64012	-24.17481	-9.50934	4.62652	-2.53131	-1.15352	30.32264	5.39841	237.10	-18.28
70/ 4/ 4	2440680.5	-15.62943	-24.18065	-9.51201	4.62772	-2.52950	-1.15281	30.32262	5.39844	237.12	-18.28
70/ 4/ 8	2440684.5	-15.61874	-24.18650	-9.51467	4.62892	-2.52770	-1.15210	30.32261	5.39847	237.15	-18.29
70/ 4/12	2440688.5	-15.60804	-24.19233	-9.51733	4.63013	-2.52589	-1.15138	30.32259	5.39851	237.17	-18.29
70/ 4/16	2440692.5	-15.59735	-24.19817	-9.51999	4.63133	-2.52408	-1.15067	30.32258	5.39854	237.20	-18.30
70/ 4/20	2440696.5	-15.58665	-24.20400	-9.52265	4.63253	-2.52227	-1.14996	30.32256	5.39857	237.22	-18.30
70/ 4/24	2440700.5	-15.57594	-24.20982	-9.52530	4.63372	-2.52046	-1.14925	30.32255	5.39860	237.24	-18.31
70/ 4/28	2440704.5	-15.56524	-24.21564	-9.52796	4.63492	-2.51865	-1.14854	30.32253	5.39863	237.27	-18.31
70/ 5/ 2	2440708.5	-15.55453	-24.22146	-9.53061	4.63612	-2.51684	-1.14783	30.32251	5.39867	237.29	-18.32
70/ 5/ 6	2440712.5	-15.54382	-24.22727	-9.53326	4.63732	-2.51503	-1.14711	30.32250	5.39870	237.32	-18.32
70/ 5/10	2440716.5	-15.53310	-24.23308	-9.53591	4.63851	-2.51322	-1.14640	30.32248	5.39873	237.34	-18.33
70/ 5/14	2440720.5	-15.52238	-24.23888	-9.53856	4.63970	-2.51140	-1.14569	30.32247	5.39876	237.36	-18.33
70/ 5/18	2440724.5	-15.51166	-24.24468	-9.54120	4.64090	-2.50959	-1.14497	30.32245	5.39879	237.39	-18.34
70/ 5/22	2440728.5	-15.50094	-24.25048	-9.54385	4.64209	-2.50777	-1.14426	30.32243	5.39882	237.41	-18.35
70/ 5/26	2440732.5	-15.49022	-24.25627	-9.54649	4.64328	-2.50596	-1.14354	30.32241	5.39885	237.44	-18.35
70/ 5/30	2440736.5	-15.47949	-24.26206	-9.54913	4.64447	-2.50414	-1.14283	30.32240	5.39888	237.46	-18.36
70/ 6/ 3	2440740.5	-15.46876	-24.26784	-9.55177	4.64566	-2.50233	-1.14211	30.32238	5.39891	237.49	-18.36
70/ 6/ 7	2440744.5	-15.45802	-24.27362	-9.55441	4.64685	-2.50051	-1.14140	30.32236	5.39894	237.51	-18.37
70/ 6/11	2440748.5	-15.44729	-24.27939	-9.55704	4.64804	-2.49869	-1.14068	30.32235	5.39897	237.53	-18.37

1.8 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — NEPTUNE

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
70/ 6/15	2440752.5	-15.43655	-24.28516	-9.55968	4.64922	-2.49687	-1.13997	30.32233	5.39900	237.56	-18.38
70/ 6/19	2440756.5	-15.42581	-24.29093	-9.56231	4.65041	-2.49505	-1.13925	30.32231	5.39902	237.58	-18.38
70/ 6/23	2440760.5	-15.41506	-24.29669	-9.56494	4.65159	-2.49323	-1.13853	30.32229	5.39905	237.61	-18.39
70/ 6/27	2440764.5	-15.40431	-24.30245	-9.56757	4.65277	-2.49141	-1.13782	30.32227	5.39908	237.63	-18.39
70/ 7/ 1	2440768.5	-15.39356	-24.30820	-9.57020	4.65396	-2.48959	-1.13710	30.32226	5.39911	237.66	-18.40
70/ 7/ 5	2440772.5	-15.38281	-24.31395	-9.57283	4.65514	-2.48777	-1.13638	30.32224	5.39914	237.68	-18.40
70/ 7/ 9	2440776.5	-15.37206	-24.31970	-9.57545	4.65632	-2.48594	-1.13566	30.32222	5.39916	237.70	-18.41
70/ 7/13	2440780.5	-15.36130	-24.32544	-9.57807	4.65750	-2.48412	-1.13495	30.32220	5.39919	237.73	-18.41
70/ 7/17	2440784.5	-15.35054	-24.33117	-9.58069	4.65868	-2.48230	-1.13423	30.32218	5.39922	237.75	-18.42
70/ 7/21	2440788.5	-15.33977	-24.33691	-9.58331	4.65985	-2.48047	-1.13351	30.32216	5.39924	237.78	-18.42
70/ 7/25	2440792.5	-15.32901	-24.34263	-9.58593	4.66103	-2.47864	-1.13279	30.32214	5.39927	237.80	-18.43
70/ 7/29	2440796.5	-15.31824	-24.34836	-9.58855	4.66221	-2.47682	-1.13207	30.32212	5.39929	237.82	-18.43
70/ 8/ 2	2440800.5	-15.30747	-24.35408	-9.59116	4.66338	-2.47499	-1.13135	30.32210	5.39932	237.85	-18.44
70/ 8/ 6	2440804.5	-15.29669	-24.35979	-9.59377	4.66456	-2.47316	-1.13063	30.32208	5.39935	237.87	-18.45
70/ 8/10	2440808.5	-15.28591	-24.36550	-9.59639	4.66573	-2.47134	-1.12991	30.32206	5.39937	237.90	-18.45
70/ 8/14	2440812.5	-15.27513	-24.37121	-9.59900	4.66690	-2.46951	-1.12919	30.32204	5.39940	237.92	-18.46
70/ 8/18	2440816.5	-15.26435	-24.37691	-9.60160	4.66807	-2.46768	-1.12847	30.32202	5.39942	237.95	-18.46
70/ 8/22	2440820.5	-15.25357	-24.38261	-9.60421	4.66924	-2.46585	-1.12775	30.32200	5.39945	237.97	-18.47
70/ 8/26	2440824.5	-15.24278	-24.38831	-9.60681	4.67041	-2.46402	-1.12703	30.32198	5.39947	237.99	-18.47
70/ 8/30	2440828.5	-15.23199	-24.39400	-9.60942	4.67158	-2.46218	-1.12630	30.32196	5.39949	238.02	-18.48
70/ 9/ 3	2440832.5	-15.22119	-24.39968	-9.61202	4.67274	-2.46035	-1.12558	30.32194	5.39952	238.04	-18.48
70/ 9/ 7	2440836.5	-15.21040	-24.40537	-9.61462	4.67391	-2.45852	-1.12486	30.32192	5.39954	238.07	-18.49
70/ 9/11	2440840.5	-15.19960	-24.41104	-9.61721	4.67507	-2.45668	-1.12414	30.32190	5.39956	238.09	-18.49
70/ 9/15	2440844.5	-15.18880	-24.41672	-9.61981	4.67624	-2.45485	-1.12341	30.32188	5.39959	238.12	-18.50
70/ 9/19	2440848.5	-15.17799	-24.42238	-9.62241	4.67740	-2.45301	-1.12269	30.32186	5.39961	238.14	-18.50
70/ 9/23	2440852.5	-15.16719	-24.42805	-9.62500	4.67856	-2.45118	-1.12197	30.32184	5.39963	238.16	-18.51
70/ 9/27	2440856.5	-15.15638	-24.43371	-9.62759	4.67972	-2.44934	-1.12124	30.32181	5.39965	238.19	-18.51
70/10/ 1	2440860.5	-15.14556	-24.43937	-9.63018	4.68088	-2.44751	-1.12052	30.32179	5.39968	238.21	-18.52
70/10/ 5	2440864.5	-15.13475	-24.44502	-9.63277	4.68204	-2.44567	-1.11979	30.32177	5.39970	238.24	-18.52
70/10/ 9	2440868.5	-15.12393	-24.45067	-9.63535	4.68320	-2.44383	-1.11907	30.32175	5.39972	238.26	-18.53
70/10/13	2440872.5	-15.11311	-24.45631	-9.63794	4.68435	-2.44199	-1.11834	30.32173	5.39974	238.29	-18.53
70/10/17	2440876.5	-15.10229	-24.46195	-9.64052	4.68551	-2.44015	-1.11762	30.32170	5.39976	238.31	-18.54
70/10/21	2440880.5	-15.09146	-24.46758	-9.64310	4.68667	-2.43831	-1.11689	30.32168	5.39978	238.33	-18.54
70/10/25	2440884.5	-15.08063	-24.47322	-9.64568	4.68782	-2.43647	-1.11617	30.32166	5.39980	238.36	-18.55
70/10/29	2440888.5	-15.06980	-24.47884	-9.64826	4.68897	-2.43463	-1.11544	30.32163	5.39982	238.38	-18.55
70/11/ 2	2440892.5	-15.05897	-24.48446	-9.65083	4.69012	-2.43279	-1.11471	30.32161	5.39984	238.41	-18.56
70/11/ 6	2440896.5	-15.04813	-24.49008	-9.65341	4.69127	-2.43094	-1.11399	30.32159	5.39986	238.43	-18.56
70/11/10	2440900.5	-15.03729	-24.49570	-9.65598	4.69242	-2.42910	-1.11326	30.32156	5.39988	238.46	-18.57
70/11/14	2440904.5	-15.02645	-24.50131	-9.65855	4.69357	-2.42726	-1.11253	30.32154	5.39990	238.48	-18.57
70/11/18	2440908.5	-15.01561	-24.50691	-9.66112	4.69472	-2.42541	-1.11180	30.32152	5.39992	238.50	-18.58
70/11/22	2440912.5	-15.00476	-24.51251	-9.66369	4.69587	-2.42357	-1.11108	30.32149	5.39994	238.53	-18.58
70/11/26	2440916.5	-14.99391	-24.51811	-9.66625	4.69701	-2.42172	-1.11035	30.32147	5.39995	238.55	-18.59
70/11/30	2440920.5	-14.98306	-24.52370	-9.66882	4.69816	-2.41987	-1.10962	30.32144	5.39997	238.58	-18.60
70/12/ 4	2440924.5	-14.97220	-24.52929	-9.67138	4.69930	-2.41803	-1.10889	30.32142	5.39999	238.60	-18.60
70/12/ 8	2440928.5	-14.96135	-24.53487	-9.67394	4.70044	-2.41618	-1.10816	30.32140	5.40001	238.63	-18.61

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM NEPTUNE

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
70/12/12	2440932.5	-14.95049	-24.54045	-9.67650	4.70158	-2.41433	-1.10743	30.32137	5.40002	238.65	-18.61
70/12/16	2440936.5	-14.93962	-24.54603	-9.67906	4.70272	-2.41248	-1.10670	30.32135	5.40004	238.67	-18.62
70/12/20	2440940.5	-14.92876	-24.55160	-9.68161	4.70386	-2.41063	-1.10597	30.32132	5.40006	238.70	-18.62
70/12/24	2440944.5	-14.91789	-24.55717	-9.68417	4.70500	-2.40878	-1.10524	30.32130	5.40007	238.72	-18.63
70/12/28	2440948.5	-14.90702	-24.56273	-9.68672	4.70614	-2.40693	-1.10451	30.32127	5.40009	238.75	-18.63
71/ 1/ 1	2440952.5	-14.89615	-24.56829	-9.68927	4.70727	-2.40508	-1.10378	30.32124	5.40010	238.77	-18.64
71/ 1/ 5	2440956.5	-14.88527	-24.57384	-9.69182	4.70841	-2.40322	-1.10305	30.32122	5.40012	238.80	-18.64
71/ 1/ 9	2440960.5	-14.87439	-24.57939	-9.69437	4.70954	-2.40137	-1.10232	30.32119	5.40014	238.82	-18.65
71/ 1/13	2440964.5	-14.86351	-24.58494	-9.69691	4.71067	-2.39952	-1.10158	30.32117	5.40015	238.84	-18.65
71/ 1/17	2440968.5	-14.85263	-24.59048	-9.69946	4.71181	-2.39766	-1.10085	30.32114	5.40016	238.87	-18.66
71/ 1/21	2440972.5	-14.84174	-24.59601	-9.70200	4.71294	-2.39581	-1.10012	30.32111	5.40018	238.89	-18.66
71/ 1/25	2440976.5	-14.83085	-24.60155	-9.70454	4.71407	-2.39395	-1.09939	30.32109	5.40019	238.92	-18.67
71/ 1/29	2440980.5	-14.81996	-24.60707	-9.70708	4.71520	-2.39210	-1.09865	30.32106	5.40021	238.94	-18.67
71/ 2/ 2	2440984.5	-14.80906	-24.61260	-9.70962	4.71632	-2.39024	-1.09792	30.32103	5.40022	238.97	-18.68
71/ 2/ 6	2440988.5	-14.79817	-24.61812	-9.71215	4.71745	-2.38838	-1.09719	30.32101	5.40023	238.99	-18.68
71/ 2/10	2440992.5	-14.78727	-24.62363	-9.71469	4.71858	-2.38652	-1.09645	30.32098	5.40025	239.01	-18.69
71/ 2/14	2440996.5	-14.77637	-24.62915	-9.71722	4.71970	-2.38466	-1.09572	30.32095	5.40026	239.04	-18.69
71/ 2/18	2441000.5	-14.76546	-24.63465	-9.71975	4.72082	-2.38281	-1.09498	30.32092	5.40027	239.06	-18.70
71/ 2/22	2441004.5	-14.75455	-24.64015	-9.72228	4.72195	-2.38095	-1.09425	30.32090	5.40028	239.09	-18.70
71/ 2/26	2441008.5	-14.74364	-24.64565	-9.72481	4.72307	-2.37908	-1.09352	30.32087	5.40029	239.11	-18.71
71/ 3/ 2	2441012.5	-14.73273	-24.65115	-9.72733	4.72419	-2.37722	-1.09278	30.32084	5.40031	239.14	-18.71
71/ 3/ 6	2441016.5	-14.72182	-24.65664	-9.72985	4.72531	-2.37536	-1.09204	30.32081	5.40032	239.16	-18.72
71/ 3/10	2441020.5	-14.71090	-24.66212	-9.73238	4.72642	-2.37350	-1.09131	30.32078	5.40033	239.18	-18.72
71/ 3/14	2441024.5	-14.69998	-24.66760	-9.73490	4.72754	-2.37164	-1.09057	30.32076	5.40034	239.21	-18.73
71/ 3/18	2441028.5	-14.68906	-24.67308	-9.73742	4.72866	-2.36977	-1.08984	30.32073	5.40035	239.23	-18.73
71/ 3/22	2441032.5	-14.67813	-24.67855	-9.73993	4.72977	-2.36791	-1.08910	30.32070	5.40036	239.26	-18.74
71/ 3/26	2441036.5	-14.66720	-24.68402	-9.74245	4.73089	-2.36604	-1.08836	30.32067	5.40037	239.28	-18.74
71/ 3/30	2441040.5	-14.65627	-24.68948	-9.74496	4.73200	-2.36418	-1.08763	30.32064	5.40038	239.31	-18.75
71/ 4/ 3	2441044.5	-14.64534	-24.69494	-9.74747	4.73311	-2.36231	-1.08689	30.32061	5.40039	239.33	-18.75
71/ 4/ 7	2441048.5	-14.63440	-24.70040	-9.74998	4.73422	-2.36045	-1.08615	30.32058	5.40040	239.35	-18.76
71/ 4/11	2441052.5	-14.62347	-24.70585	-9.75249	4.73533	-2.35858	-1.08541	30.32055	5.40041	239.38	-18.76
71/ 4/15	2441056.5	-14.61253	-24.71130	-9.75500	4.73644	-2.35671	-1.08467	30.32052	5.40041	239.40	-18.77
71/ 4/19	2441060.5	-14.60158	-24.71674	-9.75750	4.73755	-2.35484	-1.08394	30.32049	5.40042	239.43	-18.77
71/ 4/23	2441064.5	-14.59064	-24.72218	-9.76001	4.73865	-2.35297	-1.08320	30.32046	5.40043	239.45	-18.78
71/ 4/27	2441068.5	-14.57969	-24.72761	-9.76251	4.73976	-2.35111	-1.08246	30.32043	5.40044	239.48	-18.78
71/ 5/ 1	2441072.5	-14.56874	-24.73304	-9.76501	4.74086	-2.34924	-1.08172	30.32040	5.40044	239.50	-18.79
71/ 5/ 5	2441076.5	-14.55778	-24.73846	-9.76751	4.74196	-2.34736	-1.08098	30.32037	5.40045	239.52	-18.79
71/ 5/ 9	2441080.5	-14.54683	-24.74389	-9.77000	4.74307	-2.34549	-1.08024	30.32034	5.40046	239.55	-18.80
71/ 5/13	2441084.5	-14.53587	-24.74930	-9.77250	4.74417	-2.34362	-1.07950	30.32031	5.40046	239.57	-18.80
71/ 5/17	2441088.5	-14.52491	-24.75471	-9.77499	4.74527	-2.34175	-1.07876	30.32028	5.40047	239.60	-18.81
71/ 5/21	2441092.5	-14.51394	-24.76012	-9.77748	4.74637	-2.33988	-1.07802	30.32025	5.40047	239.62	-18.81
71/ 5/25	2441096.5	-14.50298	-24.76552	-9.77997	4.74746	-2.33800	-1.07728	30.32021	5.40048	239.65	-18.82
71/ 5/29	2441100.5	-14.49201	-24.77092	-9.78246	4.74856	-2.33613	-1.07653	30.32018	5.40049	239.67	-18.82
71/ 6/ 2	2441104.5	-14.48104	-24.77632	-9.78494	4.74965	-2.33425	-1.07579	30.32015	5.40049	239.69	-18.83
71/ 6/ 6	2441108.5	-14.47006	-24.78171	-9.78743	4.75075	-2.33238	-1.07505	30.32012	5.40049	239.72	-18.83

1.8 1 A.U.=149,599,000 KM.

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
71/ 6/10	2441112.5	-14.45909	-24.78709	-9.78991	4.75184	-2.33050	-1.07431	30.32009	5.40050	239.74	-18.84
71/ 6/14	2441116.5	-14.44811	-24.79248	-9.79239	4.75293	-2.32863	-1.07357	30.32005	5.40050	239.77	-18.84
71/ 6/18	2441120.5	-14.43713	-24.79785	-9.79487	4.75402	-2.32675	-1.07282	30.32002	5.40051	239.79	-18.85
71/ 6/22	2441124.5	-14.42614	-24.80323	-9.79735	4.75511	-2.32487	-1.07208	30.31999	5.40051	239.82	-18.85
71/ 6/26	2441128.5	-14.41516	-24.80860	-9.79982	4.75620	-2.32299	-1.07134	30.31996	5.40051	239.84	-18.86
71/ 6/30	2441132.5	-14.40417	-24.81396	-9.80230	4.75729	-2.32112	-1.07060	30.31992	5.40052	239.87	-18.86
71/ 7/ 4	2441136.5	-14.39318	-24.81932	-9.80477	4.75838	-2.31924	-1.06985	30.31989	5.40052	239.89	-18.87
71/ 7/ 8	2441140.5	-14.38218	-24.82468	-9.80724	4.75946	-2.31736	-1.06911	30.31986	5.40052	239.91	-18.87
71/ 7/12	2441144.5	-14.37119	-24.83003	-9.80971	4.76055	-2.31548	-1.06836	30.31982	5.40052	239.94	-18.88
71/ 7/16	2441148.5	-14.36019	-24.83537	-9.81218	4.76163	-2.31360	-1.06762	30.31979	5.40052	239.96	-18.88
71/ 7/20	2441152.5	-14.34919	-24.84072	-9.81464	4.76271	-2.31171	-1.06687	30.31976	5.40052	239.99	-18.89
71/ 7/24	2441156.5	-14.33818	-24.84605	-9.81711	4.76379	-2.30983	-1.06613	30.31972	5.40053	240.01	-18.89
71/ 7/28	2441160.5	-14.32718	-24.85139	-9.81957	4.76487	-2.30795	-1.06538	30.31969	5.40053	240.04	-18.90
71/ 8/ 1	2441164.5	-14.31617	-24.85672	-9.82203	4.76595	-2.30607	-1.06464	30.31965	5.40053	240.06	-18.90
71/ 8/ 5	2441168.5	-14.30516	-24.86204	-9.82449	4.76703	-2.30418	-1.06389	30.31962	5.40053	240.08	-18.91
71/ 8/ 9	2441172.5	-14.29414	-24.86736	-9.82695	4.76810	-2.30230	-1.06315	30.31958	5.40053	240.11	-18.91
71/ 8/13	2441176.5	-14.28313	-24.87268	-9.82940	4.76918	-2.30041	-1.06240	30.31955	5.40053	240.13	-18.92
71/ 8/17	2441180.5	-14.27211	-24.87799	-9.83185	4.77025	-2.29853	-1.06166	30.31951	5.40052	240.16	-18.92
71/ 8/21	2441184.5	-14.26109	-24.88330	-9.83431	4.77133	-2.29664	-1.06091	30.31948	5.40052	240.18	-18.93
71/ 8/25	2441188.5	-14.25006	-24.88860	-9.83676	4.77240	-2.29476	-1.06016	30.31944	5.40052	240.21	-18.93
71/ 8/29	2441192.5	-14.23903	-24.89390	-9.83920	4.77347	-2.29287	-1.05941	30.31941	5.40052	240.23	-18.94
71/ 9/ 2	2441196.5	-14.22801	-24.89920	-9.84165	4.77454	-2.29098	-1.05867	30.31937	5.40052	240.26	-18.94
71/ 9/ 6	2441200.5	-14.21697	-24.90449	-9.84410	4.77561	-2.28909	-1.05792	30.31934	5.40052	240.28	-18.95
71/ 9/10	2441204.5	-14.20594	-24.90977	-9.84654	4.77667	-2.28721	-1.05717	30.31930	5.40051	240.30	-18.95
71/ 9/14	2441208.5	-14.19490	-24.91506	-9.84898	4.77774	-2.28532	-1.05642	30.31926	5.40051	240.33	-18.96
71/ 9/18	2441212.5	-14.18387	-24.92033	-9.85142	4.77881	-2.28343	-1.05567	30.31923	5.40051	240.35	-18.96
71/ 9/22	2441216.5	-14.17283	-24.92561	-9.85386	4.77987	-2.28154	-1.05493	30.31919	5.40050	240.38	-18.97
71/ 9/26	2441220.5	-14.16178	-24.93088	-9.85629	4.78093	-2.27965	-1.05418	30.31915	5.40050	240.40	-18.97
71/ 9/30	2441224.5	-14.15074	-24.93614	-9.85873	4.78199	-2.27776	-1.05343	30.31912	5.40049	240.43	-18.98
71/10/ 4	2441228.5	-14.13969	-24.94140	-9.86116	4.78305	-2.27586	-1.05268	30.31908	5.40049	240.45	-18.98
71/10/ 8	2441232.5	-14.12864	-24.94665	-9.86359	4.78411	-2.27397	-1.05193	30.31904	5.40049	240.47	-18.99
71/10/12	2441236.5	-14.11758	-24.95191	-9.86602	4.78517	-2.27208	-1.05118	30.31901	5.40048	240.50	-18.99
71/10/16	2441240.5	-14.10653	-24.95715	-9.86845	4.78623	-2.27019	-1.05043	30.31897	5.40048	240.52	-19.00
71/10/20	2441244.5	-14.09547	-24.96239	-9.87087	4.78728	-2.26829	-1.04968	30.31893	5.40047	240.55	-19.00
71/10/24	2441248.5	-14.08441	-24.96763	-9.87330	4.78834	-2.26640	-1.04893	30.31889	5.40046	240.57	-19.00
71/10/28	2441252.5	-14.07334	-24.97287	-9.87572	4.78939	-2.26450	-1.04818	30.31885	5.40046	240.60	-19.01
71/11/ 1	2441256.5	-14.06228	-24.97810	-9.87814	4.79044	-2.26261	-1.04743	30.31882	5.40045	240.62	-19.01
71/11/ 5	2441260.5	-14.05121	-24.98332	-9.88056	4.79150	-2.26071	-1.04667	30.31878	5.40044	240.65	-19.02
71/11/ 9	2441264.5	-14.04014	-24.98854	-9.88298	4.79255	-2.25882	-1.04592	30.31874	5.40044	240.67	-19.02
71/11/13	2441268.5	-14.02907	-24.99376	-9.88539	4.79360	-2.25692	-1.04517	30.31870	5.40043	240.69	-19.03
71/11/17	2441272.5	-14.01799	-24.99897	-9.88781	4.79464	-2.25502	-1.04442	30.31866	5.40042	240.72	-19.03
71/11/21	2441276.5	-14.00692	-25.00418	-9.89022	4.79569	-2.25313	-1.04367	30.31862	5.40041	240.74	-19.04
71/11/25	2441280.5	-13.99584	-25.00938	-9.89263	4.79673	-2.25123	-1.04291	30.31858	5.40040	240.77	-19.04
71/11/29	2441284.5	-13.98475	-25.01458	-9.89504	4.79778	-2.24933	-1.04216	30.31854	5.40040	240.79	-19.05
71/12/ 3	2441288.5	-13.97367	-25.01977	-9.89744	4.79882	-2.24743	-1.04141	30.31851	5.40039	240.82	-19.05

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71/12/ 7	2441292.5	-13.96258	-25.02496	-9.89985	4.79986	-2.24553	-1.04066	30.31847	5.40038	240.84	-19.06
71/12/11	2441296.5	-13.95149	-25.03015	-9.90225	4.80091	-2.24363	-1.03990	30.31843	5.40037	240.87	-19.06
71/12/15	2441300.5	-13.94040	-25.03533	-9.90465	4.80194	-2.24173	-1.03915	30.31839	5.40036	240.89	-19.07
71/12/19	2441304.5	-13.92930	-25.04050	-9.90705	4.80298	-2.23983	-1.03839	30.31835	5.40035	240.91	-19.07
71/12/23	2441308.5	-13.91821	-25.04568	-9.90945	4.80402	-2.23793	-1.03764	30.31831	5.40034	240.94	-19.08
71/12/27	2441312.5	-13.90711	-25.05084	-9.91185	4.80506	-2.23603	-1.03689	30.31826	5.40032	240.96	-19.08
71/12/31	2441316.5	-13.89601	-25.05601	-9.91424	4.80609	-2.23412	-1.03613	30.31822	5.40031	240.99	-19.09
72/ 1/ 4	2441320.5	-13.88490	-25.06117	-9.91664	4.80713	-2.23222	-1.03538	30.31818	5.40030	241.01	-19.09
72/ 1/ 8	2441324.5	-13.87380	-25.06632	-9.91903	4.80816	-2.23032	-1.03462	30.31814	5.40029	241.04	-19.10
72/ 1/12	2441328.5	-13.86269	-25.07147	-9.92142	4.80919	-2.22841	-1.03387	30.31810	5.40028	241.06	-19.10
72/ 1/16	2441332.5	-13.85158	-25.07662	-9.92380	4.81022	-2.22651	-1.03311	30.31806	5.40027	241.09	-19.11
72/ 1/20	2441336.5	-13.84046	-25.08176	-9.92619	4.81125	-2.22460	-1.03236	30.31802	5.40025	241.11	-19.11
72/ 1/24	2441340.5	-13.82935	-25.08690	-9.92857	4.81228	-2.22270	-1.03160	30.31798	5.40024	241.13	-19.12
72/ 1/28	2441344.5	-13.81823	-25.09203	-9.93096	4.81330	-2.22079	-1.03084	30.31793	5.40023	241.16	-19.12
72/ 2/ 1	2441348.5	-13.80711	-25.09716	-9.93334	4.81433	-2.21889	-1.03009	30.31789	5.40021	241.18	-19.13
72/ 2/ 5	2441352.5	-13.79598	-25.10228	-9.93571	4.81535	-2.21698	-1.02933	30.31785	5.40020	241.21	-19.13
72/ 2/ 9	2441356.5	-13.78486	-25.10740	-9.93809	4.81638	-2.21507	-1.02857	30.31781	5.40018	241.23	-19.14
72/ 2/13	2441360.5	-13.77373	-25.11251	-9.94047	4.81740	-2.21316	-1.02782	30.31777	5.40017	241.26	-19.14
72/ 2/17	2441364.5	-13.76260	-25.11763	-9.94284	4.81842	-2.21126	-1.02706	30.31772	5.40015	241.28	-19.14
72/ 2/21	2441368.5	-13.75147	-25.12273	-9.94521	4.81944	-2.20935	-1.02630	30.31768	5.40014	241.30	-19.15
72/ 2/25	2441372.5	-13.74033	-25.12783	-9.94758	4.82046	-2.20744	-1.02554	30.31764	5.40012	241.33	-19.15
72/ 2/29	2441376.5	-13.72919	-25.13293	-9.94995	4.82147	-2.20553	-1.02479	30.31759	5.40011	241.35	-19.16
72/ 3/ 4	2441380.5	-13.71806	-25.13802	-9.95232	4.82249	-2.20362	-1.02403	30.31755	5.40009	241.38	-19.16
72/ 3/ 8	2441384.5	-13.70691	-25.14311	-9.95468	4.82351	-2.20171	-1.02327	30.31751	5.40007	241.40	-19.17
72/ 3/12	2441388.5	-13.69577	-25.14820	-9.95704	4.82452	-2.19980	-1.02251	30.31746	5.40006	241.43	-19.17
72/ 3/16	2441392.5	-13.68462	-25.15328	-9.95941	4.82553	-2.19789	-1.02175	30.31742	5.40004	241.45	-19.18
72/ 3/20	2441396.5	-13.67347	-25.15835	-9.96177	4.82654	-2.19598	-1.02099	30.31738	5.40002	241.48	-19.18
72/ 3/24	2441400.5	-13.66232	-25.16342	-9.96412	4.82755	-2.19406	-1.02024	30.31733	5.40001	241.50	-19.19
72/ 3/28	2441404.5	-13.65117	-25.16849	-9.96648	4.82856	-2.19215	-1.01948	30.31729	5.39999	241.52	-19.19
72/ 4/ 1	2441408.5	-13.64001	-25.17355	-9.96883	4.82957	-2.19024	-1.01872	30.31724	5.39997	241.55	-19.20
72/ 4/ 5	2441412.5	-13.62885	-25.17861	-9.97119	4.83058	-2.18832	-1.01796	30.31720	5.39995	241.57	-19.20
72/ 4/ 9	2441416.5	-13.61769	-25.18366	-9.97354	4.83158	-2.18641	-1.01720	30.31715	5.39993	241.60	-19.21
72/ 4/13	2441420.5	-13.60653	-25.18871	-9.97589	4.83259	-2.18450	-1.01644	30.31711	5.39991	241.62	-19.21
72/ 4/17	2441424.5	-13.59537	-25.19375	-9.97823	4.83359	-2.18258	-1.01568	30.31706	5.39989	241.65	-19.22
72/ 4/21	2441428.5	-13.58420	-25.19879	-9.98058	4.83459	-2.18067	-1.01492	30.31702	5.39987	241.67	-19.22
72/ 4/25	2441432.5	-13.57303	-25.20383	-9.98292	4.83559	-2.17875	-1.01416	30.31697	5.39985	241.70	-19.23
72/ 4/29	2441436.5	-13.56186	-25.20886	-9.98526	4.83659	-2.17684	-1.01339	30.31693	5.39983	241.72	-19.23
72/ 5/ 3	2441440.5	-13.55068	-25.21389	-9.98761	4.83759	-2.17492	-1.01263	30.31688	5.39981	241.75	-19.23
72/ 5/ 7	2441444.5	-13.53950	-25.21891	-9.98994	4.83859	-2.17300	-1.01187	30.31684	5.39979	241.77	-19.24
72/ 5/11	2441448.5	-13.52832	-25.22393	-9.99228	4.83958	-2.17109	-1.01111	30.31679	5.39977	241.79	-19.24
72/ 5/15	2441452.5	-13.51714	-25.22894	-9.99462	4.84058	-2.16917	-1.01035	30.31674	5.39975	241.82	-19.25
72/ 5/19	2441456.5	-13.50596	-25.23395	-9.99695	4.84157	-2.16725	-1.00959	30.31670	5.39972	241.84	-19.25
72/ 5/23	2441460.5	-13.49477	-25.23895	-9.99928	4.84256	-2.16533	-1.00882	30.31665	5.39970	241.87	-19.26
72/ 5/27	2441464.5	-13.48359	-25.24395	-10.00161	4.84355	-2.16341	-1.00806	30.31660	5.39968	241.89	-19.26
72/ 5/31	2441468.5	-13.47239	-25.24895	-10.00394	4.84454	-2.16149	-1.00730	30.31656	5.39966	241.92	-19.27

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72/ 6/ 4	2441472.5	-13.46120	-25.25394	-10.00626	4.84553	-2.15958	-1.00654	30.31651	5.39963	241.94	-19.27
72/ 6/ 8	2441476.5	-13.45001	-25.25893	-10.00859	4.84652	-2.15766	-1.00577	30.31646	5.39961	241.97	-19.28
72/ 6/12	2441480.5	-13.43881	-25.26391	-10.01091	4.84750	-2.15574	-1.00501	30.31642	5.39959	241.99	-19.28
72/ 6/16	2441484.5	-13.42761	-25.26889	-10.01323	4.84849	-2.15381	-1.00425	30.31637	5.39956	242.01	-19.29
72/ 6/20	2441488.5	-13.41641	-25.27386	-10.01555	4.84947	-2.15189	-1.00348	30.31632	5.39954	242.04	-19.29
72/ 6/24	2441492.5	-13.40520	-25.27883	-10.01787	4.85045	-2.14997	-1.00272	30.31627	5.39951	242.06	-19.30
72/ 6/28	2441496.5	-13.39400	-25.28380	-10.02018	4.85144	-2.14805	-1.00196	30.31623	5.39949	242.09	-19.30
72/ 7/ 2	2441500.5	-13.38279	-25.28876	-10.02250	4.85242	-2.14613	-1.00119	30.31618	5.39946	242.11	-19.31
72/ 7/ 6	2441504.5	-13.37158	-25.29371	-10.02481	4.85339	-2.14421	-1.00043	30.31613	5.39944	242.14	-19.31
72/ 7/10	2441508.5	-13.36036	-25.29866	-10.02712	4.85437	-2.14228	-0.99966	30.31608	5.39941	242.16	-19.31
72/ 7/14	2441512.5	-13.34915	-25.30361	-10.02943	4.85535	-2.14036	-0.99890	30.31603	5.39938	242.19	-19.32
72/ 7/18	2441516.5	-13.33793	-25.30855	-10.03174	4.85632	-2.13844	-0.99814	30.31598	5.39936	242.21	-19.32
72/ 7/22	2441520.5	-13.32671	-25.31349	-10.03404	4.85730	-2.13651	-0.99737	30.31594	5.39933	242.23	-19.33
72/ 7/26	2441524.5	-13.31549	-25.31842	-10.03634	4.85827	-2.13459	-0.99661	30.31589	5.39930	242.26	-19.33
72/ 7/30	2441528.5	-13.30426	-25.32335	-10.03864	4.85924	-2.13266	-0.99584	30.31584	5.39928	242.28	-19.34
72/ 8/ 3	2441532.5	-13.29304	-25.32828	-10.04094	4.86021	-2.13074	-0.99507	30.31579	5.39925	242.31	-19.34
72/ 8/ 7	2441536.5	-13.28181	-25.33320	-10.04324	4.86118	-2.12881	-0.99431	30.31574	5.39922	242.33	-19.35
72/ 8/11	2441540.5	-13.27058	-25.33811	-10.04554	4.86215	-2.12689	-0.99354	30.31569	5.39919	242.36	-19.35
72/ 8/15	2441544.5	-13.25934	-25.34302	-10.04783	4.86312	-2.12496	-0.99278	30.31564	5.39916	242.38	-19.36
72/ 8/19	2441548.5	-13.24811	-25.34793	-10.05013	4.86408	-2.12303	-0.99201	30.31559	5.39913	242.41	-19.36
72/ 8/23	2441552.5	-13.23687	-25.35283	-10.05242	4.86504	-2.12111	-0.99125	30.31554	5.39910	242.43	-19.37
72/ 8/27	2441556.5	-13.22563	-25.35773	-10.05471	4.86601	-2.11918	-0.99048	30.31549	5.39907	242.46	-19.37
72/ 8/31	2441560.5	-13.21439	-25.36263	-10.05699	4.86697	-2.11725	-0.98971	30.31544	5.39904	242.48	-19.37
72/ 9/ 4	2441564.5	-13.20314	-25.36751	-10.05928	4.86793	-2.11533	-0.98895	30.31539	5.39901	242.50	-19.38
72/ 9/ 8	2441568.5	-13.19189	-25.37240	-10.06156	4.86889	-2.11340	-0.98818	30.31534	5.39898	242.53	-19.38
72/ 9/12	2441572.5	-13.18065	-25.37728	-10.06384	4.86985	-2.11147	-0.98741	30.31529	5.39895	242.55	-19.39
72/ 9/16	2441576.5	-13.16939	-25.38215	-10.06612	4.87080	-2.10954	-0.98664	30.31524	5.39892	242.58	-19.39
72/ 9/20	2441580.5	-13.15814	-25.38703	-10.06840	4.87176	-2.10761	-0.98588	30.31519	5.39889	242.60	-19.40
72/ 9/24	2441584.5	-13.14688	-25.39189	-10.07068	4.87271	-2.10568	-0.98511	30.31513	5.39886	242.63	-19.40
72/ 9/28	2441588.5	-13.13563	-25.39675	-10.07295	4.87367	-2.10375	-0.98434	30.31508	5.39883	242.65	-19.41
72/10/ 2	2441592.5	-13.12437	-25.40161	-10.07523	4.87462	-2.10182	-0.98357	30.31503	5.39879	242.68	-19.41
72/10/ 6	2441596.5	-13.11310	-25.40647	-10.07750	4.87557	-2.09989	-0.98281	30.31498	5.39876	242.70	-19.42
72/10/10	2441600.5	-13.10184	-25.41131	-10.07977	4.87652	-2.09796	-0.98204	30.31493	5.39873	242.72	-19.42
72/10/14	2441604.5	-13.09057	-25.41616	-10.08204	4.87747	-2.09603	-0.98127	30.31488	5.39870	242.75	-19.43
72/10/18	2441608.5	-13.07930	-25.42100	-10.08430	4.87841	-2.09410	-0.98050	30.31482	5.39866	242.77	-19.43
72/10/22	2441612.5	-13.06803	-25.42583	-10.08657	4.87936	-2.09217	-0.97973	30.31477	5.39863	242.80	-19.43
72/10/26	2441616.5	-13.05676	-25.43067	-10.08883	4.88030	-2.09024	-0.97896	30.31472	5.39859	242.82	-19.44
72/10/30	2441620.5	-13.04548	-25.43549	-10.09109	4.88125	-2.08830	-0.97819	30.31467	5.39856	242.85	-19.44
72/11/ 3	2441624.5	-13.03421	-25.44031	-10.09335	4.88219	-2.08637	-0.97742	30.31461	5.39853	242.87	-19.45
72/11/ 7	2441628.5	-13.02293	-25.44513	-10.09561	4.88313	-2.08444	-0.97666	30.31456	5.39849	242.90	-19.45
72/11/11	2441632.5	-13.01165	-25.44994	-10.09786	4.88407	-2.08250	-0.97589	30.31451	5.39846	242.92	-19.46
72/11/15	2441636.5	-13.00036	-25.45475	-10.10011	4.88501	-2.08057	-0.97512	30.31445	5.39842	242.95	-19.46
72/11/19	2441640.5	-12.98907	-25.45956	-10.10237	4.88595	-2.07864	-0.97435	30.31440	5.39838	242.97	-19.47
72/11/23	2441644.5	-12.97779	-25.46436	-10.10462	4.88688	-2.07670	-0.97358	30.31435	5.39835	242.99	-19.47
72/11/27	2441648.5	-12.96650	-25.46915	-10.10686	4.88782	-2.07477	-0.97281	30.31429	5.39831	243.02	-19.48

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC ECUATORIAL COORDINATE SYSTEM NEPTUNE

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
72/12/ 1	2441652.5	-12.95520	-25.47394	-10.10911	4.88875	-2.07284	-0.97204	30.31424	5.39828	243.04	-19.48
72/12/ 5	2441656.5	-12.94391	-25.47873	-10.11136	4.88968	-2.07090	-0.97127	30.31419	5.39824	243.07	-19.48
72/12/ 9	2441660.5	-12.93261	-25.48351	-10.11360	4.89061	-2.06897	-0.97050	30.31413	5.39820	243.09	-19.49
72/12/13	2441664.5	-12.92131	-25.48829	-10.11584	4.89154	-2.06703	-0.96972	30.31408	5.39816	243.12	-19.49
72/12/17	2441668.5	-12.91001	-25.49306	-10.11808	4.89247	-2.06509	-0.96895	30.31402	5.39813	243.14	-19.50
72/12/21	2441672.5	-12.89871	-25.49783	-10.12032	4.89340	-2.06316	-0.96818	30.31397	5.39809	243.17	-19.50
72/12/25	2441676.5	-12.88740	-25.50260	-10.12255	4.89433	-2.06122	-0.96741	30.31392	5.39805	243.19	-19.51
72/12/29	2441680.5	-12.87609	-25.50735	-10.12479	4.89525	-2.05929	-0.96664	30.31386	5.39801	243.22	-19.51
73/ 1/ 2	2441684.5	-12.86478	-25.51211	-10.12702	4.89617	-2.05735	-0.96587	30.31381	5.39797	243.24	-19.52
73/ 1/ 6	2441688.5	-12.85347	-25.51686	-10.12925	4.89710	-2.05541	-0.96510	30.31375	5.39793	243.26	-19.52
73/ 1/10	2441692.5	-12.84216	-25.52161	-10.13148	4.89802	-2.05348	-0.96433	30.31370	5.39789	243.29	-19.53
73/ 1/14	2441696.5	-12.83084	-25.52635	-10.13370	4.89894	-2.05154	-0.96355	30.31364	5.39785	243.31	-19.53
73/ 1/18	2441700.5	-12.81952	-25.53109	-10.13593	4.89986	-2.04960	-0.96278	30.31359	5.39781	243.34	-19.53
73/ 1/22	2441704.5	-12.80820	-25.53582	-10.13815	4.90077	-2.04766	-0.96201	30.31353	5.39777	243.36	-19.54
73/ 1/26	2441708.5	-12.79688	-25.54055	-10.14037	4.90169	-2.04572	-0.96124	30.31348	5.39773	243.39	-19.54
73/ 1/30	2441712.5	-12.78555	-25.54527	-10.14259	4.90260	-2.04379	-0.96047	30.31342	5.39769	243.41	-19.55
73/ 2/ 3	2441716.5	-12.77423	-25.54999	-10.14481	4.90352	-2.04185	-0.95969	30.31336	5.39765	243.44	-19.55
73/ 2/ 7	2441720.5	-12.76290	-25.55470	-10.14703	4.90443	-2.03991	-0.95892	30.31331	5.39761	243.46	-19.56
73/ 2/11	2441724.5	-12.75157	-25.55941	-10.14924	4.90534	-2.03797	-0.95815	30.31325	5.39757	243.49	-19.56
73/ 2/15	2441728.5	-12.74023	-25.56412	-10.15146	4.90625	-2.03603	-0.95738	30.31320	5.39753	243.51	-19.57
73/ 2/19	2441732.5	-12.72890	-25.56882	-10.15367	4.90716	-2.03409	-0.95660	30.31314	5.39749	243.53	-19.57
73/ 2/23	2441736.5	-12.71756	-25.57352	-10.15587	4.90807	-2.03215	-0.95583	30.31308	5.39744	243.56	-19.57
73/ 2/27	2441740.5	-12.70622	-25.57821	-10.15808	4.90898	-2.03021	-0.95506	30.31303	5.39740	243.58	-19.58
73/ 3/ 3	2441744.5	-12.69488	-25.58290	-10.16029	4.90988	-2.02827	-0.95428	30.31297	5.39736	243.61	-19.58
73/ 3/ 7	2441748.5	-12.68354	-25.58758	-10.16249	4.91078	-2.02633	-0.95351	30.31291	5.39731	243.63	-19.59
73/ 3/11	2441752.5	-12.67219	-25.59226	-10.16469	4.91169	-2.02439	-0.95274	30.31286	5.39727	243.66	-19.59
73/ 3/15	2441756.5	-12.66084	-25.59694	-10.16689	4.91259	-2.02245	-0.95196	30.31280	5.39723	243.68	-19.60
73/ 3/19	2441760.5	-12.64949	-25.60161	-10.16909	4.91349	-2.02051	-0.95119	30.31274	5.39718	243.71	-19.60
73/ 3/23	2441764.5	-12.63814	-25.60627	-10.17129	4.91439	-2.01857	-0.95042	30.31268	5.39714	243.73	-19.61
73/ 3/27	2441768.5	-12.62679	-25.61093	-10.17348	4.91529	-2.01662	-0.94964	30.31263	5.39709	243.76	-19.61
73/ 3/31	2441772.5	-12.61543	-25.61559	-10.17568	4.91618	-2.01468	-0.94887	30.31257	5.39705	243.78	-19.61
73/ 4/ 4	2441776.5	-12.60407	-25.62024	-10.17787	4.91708	-2.01274	-0.94810	30.31251	5.39700	243.80	-19.62
73/ 4/ 8	2441780.5	-12.59271	-25.62489	-10.18006	4.91797	-2.01080	-0.94732	30.31245	5.39696	243.83	-19.62
73/ 4/12	2441784.5	-12.58135	-25.62953	-10.18224	4.91886	-2.00886	-0.94655	30.31239	5.39691	243.85	-19.63
73/ 4/16	2441788.5	-12.56998	-25.63417	-10.18443	4.91976	-2.00691	-0.94577	30.31234	5.39687	243.88	-19.63
73/ 4/20	2441792.5	-12.55862	-25.63880	-10.18661	4.92065	-2.00497	-0.94500	30.31228	5.39682	243.90	-19.64
73/ 4/24	2441796.5	-12.54725	-25.64343	-10.18880	4.92154	-2.00303	-0.94422	30.31222	5.39678	243.93	-19.64
73/ 4/28	2441800.5	-12.53588	-25.64806	-10.19098	4.92242	-2.00109	-0.94345	30.31216	5.39673	243.95	-19.65
73/ 5/ 2	2441804.5	-12.52451	-25.65268	-10.19316	4.92331	-1.99914	-0.94267	30.31210	5.39668	243.98	-19.65
73/ 5/ 6	2441808.5	-12.51313	-25.65730	-10.19533	4.92420	-1.99720	-0.94190	30.31204	5.39664	244.00	-19.65
73/ 5/10	2441812.5	-12.50175	-25.66191	-10.19751	4.92508	-1.99526	-0.94112	30.31199	5.39659	244.03	-19.66
73/ 5/14	2441816.5	-12.49038	-25.66651	-10.19968	4.92596	-1.99331	-0.94035	30.31193	5.39654	244.05	-19.66
73/ 5/18	2441820.5	-12.47899	-25.67112	-10.20185	4.92684	-1.99137	-0.93957	30.31187	5.39649	244.08	-19.67
73/ 5/22	2441824.5	-12.46761	-25.67571	-10.20402	4.92773	-1.98942	-0.93880	30.31181	5.39645	244.10	-19.67
73/ 5/26	2441828.5	-12.45623	-25.68031	-10.20619	4.92860	-1.98748	-0.93802	30.31175	5.39640	244.12	-19.68

1.8 1 A.U.=149,599,000 KM.

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
73/ 5/30	2441832.5	-12.44484	-25.68490	-10.20836	4.92948	-1.98554	-0.93725	30.31169	5.39635	244.15	-19.68
73/ 6/ 3	2441836.5	-12.43345	-25.68948	-10.21052	4.93036	-1.98359	-0.93647	30.31163	5.39630	244.17	-19.69
73/ 6/ 7	2441840.5	-12.42206	-25.69406	-10.21268	4.93124	-1.98165	-0.93570	30.31157	5.39625	244.20	-19.69
73/ 6/11	2441844.5	-12.41067	-25.69864	-10.21484	4.93211	-1.97970	-0.93492	30.31151	5.39620	244.22	-19.69
73/ 6/15	2441848.5	-12.39927	-25.70321	-10.21700	4.93298	-1.97776	-0.93414	30.31145	5.39615	244.25	-19.70
73/ 6/19	2441852.5	-12.38787	-25.70778	-10.21916	4.93386	-1.97581	-0.93337	30.31139	5.39610	244.27	-19.70
73/ 6/23	2441856.5	-12.37648	-25.71234	-10.22131	4.93473	-1.97387	-0.93259	30.31133	5.39605	244.30	-19.71
73/ 6/27	2441860.5	-12.36507	-25.71690	-10.22347	4.93560	-1.97192	-0.93182	30.31127	5.39600	244.32	-19.71
73/ 7/ 1	2441864.5	-12.35367	-25.72145	-10.22562	4.93646	-1.96998	-0.93104	30.31121	5.39595	244.35	-19.72
73/ 7/ 5	2441868.5	-12.34227	-25.72600	-10.22777	4.93733	-1.96803	-0.93026	30.31115	5.39590	244.37	-19.72
73/ 7/ 9	2441872.5	-12.33086	-25.73054	-10.22992	4.93820	-1.96608	-0.92949	30.31109	5.39585	244.39	-19.72
73/ 7/13	2441876.5	-12.31945	-25.73508	-10.23206	4.93906	-1.96414	-0.92871	30.31103	5.39580	244.42	-19.73
73/ 7/17	2441880.5	-12.30804	-25.73962	-10.23421	4.93993	-1.96219	-0.92794	30.31097	5.39575	244.44	-19.73
73/ 7/21	2441884.5	-12.29663	-25.74415	-10.23635	4.94079	-1.96025	-0.92716	30.31091	5.39570	244.47	-19.74
73/ 7/25	2441888.5	-12.28521	-25.74867	-10.23849	4.94165	-1.95830	-0.92638	30.31085	5.39565	244.49	-19.74
73/ 7/29	2441892.5	-12.27379	-25.75320	-10.24063	4.94251	-1.95635	-0.92561	30.31078	5.39560	244.52	-19.75
73/ 8/ 2	2441896.5	-12.26237	-25.75771	-10.24277	4.94337	-1.95441	-0.92483	30.31072	5.39554	244.54	-19.75
73/ 8/ 6	2441900.5	-12.25095	-25.76223	-10.24490	4.94423	-1.95246	-0.92405	30.31066	5.39549	244.57	-19.75
73/ 8/10	2441904.5	-12.23953	-25.76673	-10.24704	4.94508	-1.95051	-0.92328	30.31060	5.39544	244.59	-19.76
73/ 8/14	2441908.5	-12.22811	-25.77124	-10.24917	4.94594	-1.94857	-0.92250	30.31054	5.39539	244.62	-19.76
73/ 8/18	2441912.5	-12.21668	-25.77574	-10.25130	4.94679	-1.94662	-0.92172	30.31048	5.39534	244.64	-19.77
73/ 8/22	2441916.5	-12.20525	-25.78023	-10.25343	4.94764	-1.94467	-0.92094	30.31042	5.39528	244.67	-19.77
73/ 8/26	2441920.5	-12.19382	-25.78472	-10.25556	4.94850	-1.94273	-0.92017	30.31035	5.39523	244.69	-19.78
73/ 8/30	2441924.5	-12.18239	-25.78921	-10.25768	4.94935	-1.94078	-0.91939	30.31029	5.39518	244.71	-19.78
73/ 9/ 3	2441928.5	-12.17095	-25.79369	-10.25980	4.95019	-1.93883	-0.91861	30.31023	5.39512	244.74	-19.79
73/ 9/ 7	2441932.5	-12.15951	-25.79817	-10.26193	4.95104	-1.93688	-0.91783	30.31017	5.39507	244.76	-19.79
73/ 9/11	2441936.5	-12.14808	-25.80264	-10.26404	4.95189	-1.93494	-0.91706	30.31011	5.39501	244.79	-19.79
73/ 9/15	2441940.5	-12.13663	-25.80711	-10.26616	4.95273	-1.93299	-0.91628	30.31004	5.39496	244.81	-19.80
73/ 9/19	2441944.5	-12.12519	-25.81157	-10.26828	4.95358	-1.93104	-0.91550	30.30998	5.39491	244.84	-19.80
73/ 9/23	2441948.5	-12.11375	-25.81603	-10.27039	4.95442	-1.92909	-0.91472	30.30992	5.39485	244.86	-19.81
73/ 9/27	2441952.5	-12.10230	-25.82048	-10.27250	4.95526	-1.92715	-0.91395	30.30986	5.39480	244.89	-19.81
73/10/ 1	2441956.5	-12.09085	-25.82493	-10.27462	4.95611	-1.92520	-0.91317	30.30979	5.39474	244.91	-19.82
73/10/ 5	2441960.5	-12.07940	-25.82938	-10.27672	4.95694	-1.92325	-0.91239	30.30973	5.39469	244.94	-19.82
73/10/ 9	2441964.5	-12.06795	-25.83382	-10.27883	4.95778	-1.92130	-0.91161	30.30967	5.39463	244.96	-19.82
73/10/13	2441968.5	-12.05650	-25.83826	-10.28094	4.95862	-1.91935	-0.91084	30.30960	5.39458	244.99	-19.83
73/10/17	2441972.5	-12.04504	-25.84269	-10.28304	4.95946	-1.91741	-0.91006	30.30954	5.39452	245.01	-19.83
73/10/21	2441976.5	-12.03358	-25.84711	-10.28514	4.96029	-1.91546	-0.90928	30.30948	5.39447	245.03	-19.84
73/10/25	2441980.5	-12.02212	-25.85154	-10.28724	4.96112	-1.91351	-0.90850	30.30942	5.39441	245.06	-19.84
73/10/29	2441984.5	-12.01066	-25.85596	-10.28934	4.96196	-1.91156	-0.90772	30.30935	5.39435	245.08	-19.85
73/11/ 2	2441988.5	-11.99919	-25.86037	-10.29143	4.96279	-1.90961	-0.90695	30.30929	5.39430	245.11	-19.85
73/11/ 6	2441992.5	-11.98773	-25.86478	-10.29353	4.96362	-1.90766	-0.90617	30.30923	5.39424	245.13	-19.85
73/11/10	2441996.5	-11.97626	-25.86918	-10.29562	4.96445	-1.90572	-0.90539	30.30916	5.39418	245.16	-19.86
73/11/14	2442000.5	-11.96479	-25.87358	-10.29771	4.96527	-1.90377	-0.90461	30.30910	5.39413	245.18	-19.86
73/11/18	2442004.5	-11.95332	-25.87798	-10.29980	4.96610	-1.90182	-0.90383	30.30903	5.39407	245.21	-19.87
73/11/22	2442008.5	-11.94185	-25.88237	-10.30189	4.96693	-1.89987	-0.90305	30.30897	5.39401	245.23	-19.87

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73/11/26	2442012.5	-11.93037	-25.88676	-10.30397	4.96775	-1.89792	-0.90228	30.30891	5.39396	245.26	-19.87
73/11/30	2442016.5	-11.91889	-25.89114	-10.30606	4.96857	-1.89597	-0.90150	30.30884	5.39390	245.28	-19.88
73/12/ 4	2442020.5	-11.90741	-25.89552	-10.30814	4.96940	-1.89402	-0.90072	30.30878	5.39384	245.31	-19.88
73/12/ 8	2442024.5	-11.89593	-25.89989	-10.31022	4.97022	-1.89207	-0.89994	30.30871	5.39378	245.33	-19.89
73/12/12	2442028.5	-11.88445	-25.90426	-10.31230	4.97104	-1.89013	-0.89916	30.30865	5.39373	245.36	-19.89
73/12/16	2442032.5	-11.87297	-25.90862	-10.31437	4.97185	-1.88818	-0.89838	30.30859	5.39367	245.38	-19.90
73/12/20	2442036.5	-11.86148	-25.91298	-10.31645	4.97267	-1.88623	-0.89761	30.30852	5.39361	245.40	-19.90
73/12/24	2442040.5	-11.84999	-25.91734	-10.31852	4.97349	-1.88428	-0.89683	30.30846	5.39355	245.43	-19.90
73/12/28	2442044.5	-11.83850	-25.92169	-10.32059	4.97430	-1.88233	-0.89605	30.30839	5.39349	245.45	-19.91
74/ 1/ 1	2442048.5	-11.82701	-25.92604	-10.32266	4.97512	-1.88038	-0.89527	30.30833	5.39343	245.48	-19.91
74/ 1/ 5	2442052.5	-11.81551	-25.93038	-10.32473	4.97593	-1.87843	-0.89449	30.30826	5.39338	245.50	-19.92
74/ 1/ 9	2442056.5	-11.80402	-25.93471	-10.32679	4.97674	-1.87648	-0.89371	30.30820	5.39332	245.53	-19.92
74/ 1/13	2442060.5	-11.79252	-25.93905	-10.32886	4.97755	-1.87454	-0.89293	30.30813	5.39326	245.55	-19.93
74/ 1/17	2442064.5	-11.78102	-25.94338	-10.33092	4.97836	-1.87259	-0.89215	30.30807	5.39320	245.58	-19.93
74/ 1/21	2442068.5	-11.76952	-25.94770	-10.33298	4.97917	-1.87064	-0.89138	30.30800	5.39314	245.60	-19.93
74/ 1/25	2442072.5	-11.75801	-25.95202	-10.33504	4.97997	-1.86869	-0.89060	30.30794	5.39308	245.63	-19.94
74/ 1/29	2442076.5	-11.74651	-25.95633	-10.33709	4.98078	-1.86674	-0.88982	30.30787	5.39302	245.65	-19.94
74/ 2/ 2	2442080.5	-11.73500	-25.96064	-10.33915	4.98159	-1.86479	-0.88904	30.30781	5.39296	245.68	-19.95
74/ 2/ 6	2442084.5	-11.72349	-25.96495	-10.34120	4.98239	-1.86284	-0.88826	30.30774	5.39290	245.70	-19.95
74/ 2/10	2442088.5	-11.71198	-25.96925	-10.34325	4.98319	-1.86089	-0.88748	30.30768	5.39284	245.72	-19.95
74/ 2/14	2442092.5	-11.70047	-25.97355	-10.34530	4.98399	-1.85894	-0.88670	30.30761	5.39278	245.75	-19.96
74/ 2/18	2442096.5	-11.68895	-25.97784	-10.34735	4.98479	-1.85699	-0.88592	30.30755	5.39272	245.77	-19.96
74/ 2/22	2442100.5	-11.67743	-25.98213	-10.34939	4.98559	-1.85505	-0.88515	30.30748	5.39266	245.80	-19.97
74/ 2/26	2442104.5	-11.66592	-25.98641	-10.35144	4.98639	-1.85310	-0.88437	30.30742	5.39260	245.82	-19.97
74/ 3/ 2	2442108.5	-11.65440	-25.99069	-10.35348	4.98719	-1.85115	-0.88359	30.30735	5.39254	245.85	-19.98
74/ 3/ 6	2442112.5	-11.64287	-25.99496	-10.35552	4.98798	-1.84920	-0.88281	30.30728	5.39248	245.87	-19.98
74/ 3/10	2442116.5	-11.63135	-25.99923	-10.35756	4.98878	-1.84725	-0.88203	30.30722	5.39242	245.90	-19.98
74/ 3/14	2442120.5	-11.61982	-26.00350	-10.35960	4.98957	-1.84530	-0.88125	30.30715	5.39236	245.92	-19.99
74/ 3/18	2442124.5	-11.60830	-26.00776	-10.36163	4.99036	-1.84335	-0.88047	30.30709	5.39230	245.95	-19.99
74/ 3/22	2442128.5	-11.59677	-26.01202	-10.36366	4.99115	-1.84140	-0.87969	30.30702	5.39224	245.97	-20.00
74/ 3/26	2442132.5	-11.58524	-26.01627	-10.36570	4.99194	-1.83946	-0.87891	30.30695	5.39218	246.00	-20.00
74/ 3/30	2442136.5	-11.57370	-26.02051	-10.36773	4.99273	-1.83751	-0.87813	30.30689	5.39212	246.02	-20.00
74/ 4/ 3	2442140.5	-11.56217	-26.02476	-10.36975	4.99352	-1.83556	-0.87736	30.30682	5.39205	246.05	-20.01
74/ 4/ 7	2442144.5	-11.55063	-26.02900	-10.37178	4.99430	-1.83361	-0.87658	30.30676	5.39199	246.07	-20.01
74/ 4/11	2442148.5	-11.53909	-26.03323	-10.37380	4.99509	-1.83166	-0.87580	30.30669	5.39193	246.09	-20.02
74/ 4/15	2442152.5	-11.52755	-26.03746	-10.37583	4.99587	-1.82971	-0.87502	30.30662	5.39187	246.12	-20.02
74/ 4/19	2442156.5	-11.51601	-26.04168	-10.37785	4.99666	-1.82777	-0.87424	30.30656	5.39181	246.14	-20.02
74/ 4/23	2442160.5	-11.50446	-26.04590	-10.37987	4.99744	-1.82582	-0.87346	30.30649	5.39175	246.17	-20.03
74/ 4/27	2442164.5	-11.49292	-26.05012	-10.38188	4.99822	-1.82387	-0.87268	30.30642	5.39169	246.19	-20.03
74/ 5/ 1	2442168.5	-11.48137	-26.05433	-10.38390	4.99900	-1.82192	-0.87190	30.30636	5.39162	246.22	-20.04
74/ 5/ 5	2442172.5	-11.46982	-26.05854	-10.38591	4.99978	-1.81997	-0.87112	30.30629	5.39156	246.24	-20.04
74/ 5/ 9	2442176.5	-11.45827	-26.06274	-10.38792	5.00056	-1.81802	-0.87034	30.30622	5.39150	246.27	-20.05
74/ 5/13	2442180.5	-11.44672	-26.06694	-10.38993	5.00133	-1.81608	-0.86957	30.30616	5.39144	246.29	-20.05
74/ 5/17	2442184.5	-11.43516	-26.07113	-10.39194	5.00211	-1.81413	-0.86879	30.30609	5.39138	246.32	-20.05
74/ 5/21	2442188.5	-11.42361	-26.07532	-10.39395	5.00288	-1.81218	-0.86801	30.30602	5.39132	246.34	-20.06

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74/ 5/25	2442192.5	-11.41205	-26.07950	-10.39595	5.00366	-1.81023	-0.86723	30.30596	5.39125	246.37	-20.06
74/ 5/29	2442196.5	-11.40049	-26.08368	-10.39795	5.00443	-1.80828	-0.86645	30.30589	5.39119	246.39	-20.07
74/ 6/ 2	2442200.5	-11.38893	-26.08786	-10.39995	5.00520	-1.80634	-0.86567	30.30582	5.39113	246.42	-20.07
74/ 6/ 6	2442204.5	-11.37736	-26.09203	-10.40195	5.00597	-1.80439	-0.86489	30.30576	5.39107	246.44	-20.07
74/ 6/10	2442208.5	-11.36580	-26.09619	-10.40395	5.00674	-1.80244	-0.86411	30.30569	5.39101	246.47	-20.08
74/ 6/14	2442212.5	-11.35423	-26.10036	-10.40595	5.00751	-1.80049	-0.86333	30.30562	5.39094	246.49	-20.08
74/ 6/18	2442216.5	-11.34266	-26.10451	-10.40794	5.00828	-1.79855	-0.86255	30.30556	5.39088	246.51	-20.09
74/ 6/22	2442220.5	-11.33109	-26.10867	-10.40993	5.00904	-1.79660	-0.86178	30.30549	5.39082	246.54	-20.09
74/ 6/26	2442224.5	-11.31952	-26.11281	-10.41192	5.00981	-1.79465	-0.86100	30.30542	5.39076	246.56	-20.09
74/ 6/30	2442228.5	-11.30794	-26.11696	-10.41391	5.01057	-1.79270	-0.86022	30.30535	5.39069	246.59	-20.10
74/ 7/ 4	2442232.5	-11.29637	-26.12110	-10.41589	5.01133	-1.79076	-0.85944	30.30529	5.39063	246.61	-20.10
74/ 7/ 8	2442236.5	-11.28479	-26.12523	-10.41788	5.01210	-1.78881	-0.85866	30.30522	5.39057	246.64	-20.11
74/ 7/12	2442240.5	-11.27321	-26.12936	-10.41986	5.01286	-1.78686	-0.85788	30.30515	5.39051	246.66	-20.11
74/ 7/16	2442244.5	-11.26163	-26.13349	-10.42184	5.01362	-1.78492	-0.85710	30.30509	5.39044	246.69	-20.11
74/ 7/20	2442248.5	-11.25004	-26.13761	-10.42382	5.01437	-1.78297	-0.85632	30.30502	5.39038	246.71	-20.12
74/ 7/24	2442252.5	-11.23846	-26.14173	-10.42580	5.01513	-1.78102	-0.85555	30.30495	5.39032	246.74	-20.12
74/ 7/28	2442256.5	-11.22687	-26.14584	-10.42778	5.01589	-1.77908	-0.85477	30.30488	5.39026	246.76	-20.13
74/ 8/ 1	2442260.5	-11.21528	-26.14995	-10.42975	5.01664	-1.77713	-0.85399	30.30482	5.39020	246.79	-20.13
74/ 8/ 5	2442264.5	-11.20369	-26.15405	-10.43172	5.01740	-1.77518	-0.85321	30.30475	5.39013	246.81	-20.13
74/ 8/ 9	2442268.5	-11.19210	-26.15815	-10.43369	5.01815	-1.77324	-0.85243	30.30468	5.39007	246.84	-20.14
74/ 8/13	2442272.5	-11.18051	-26.16224	-10.43566	5.01890	-1.77129	-0.85165	30.30461	5.39001	246.86	-20.14
74/ 8/17	2442276.5	-11.16891	-26.16633	-10.43763	5.01966	-1.76935	-0.85087	30.30455	5.38995	246.89	-20.15
74/ 8/21	2442280.5	-11.15731	-26.17042	-10.43959	5.02041	-1.76740	-0.85009	30.30448	5.38988	246.91	-20.15
74/ 8/25	2442284.5	-11.14572	-26.17450	-10.44155	5.02116	-1.76545	-0.84932	30.30441	5.38982	246.93	-20.15
74/ 8/29	2442288.5	-11.13411	-26.17857	-10.44351	5.02190	-1.76351	-0.84854	30.30434	5.38976	246.96	-20.16
74/ 9/ 2	2442292.5	-11.12251	-26.18265	-10.44547	5.02265	-1.76156	-0.84776	30.30428	5.38970	246.98	-20.16
74/ 9/ 6	2442296.5	-11.11091	-26.18671	-10.44743	5.02340	-1.75962	-0.84698	30.30421	5.38963	247.01	-20.17
74/ 9/10	2442300.5	-11.09930	-26.19078	-10.44939	5.02414	-1.75767	-0.84620	30.30414	5.38957	247.03	-20.17
74/ 9/14	2442304.5	-11.08770	-26.19483	-10.45134	5.02489	-1.75573	-0.84542	30.30407	5.38951	247.06	-20.17
74/ 9/18	2442308.5	-11.07609	-26.19889	-10.45329	5.02563	-1.75378	-0.84465	30.30401	5.38945	247.08	-20.18
74/ 9/22	2442312.5	-11.06448	-26.20294	-10.45524	5.02637	-1.75184	-0.84387	30.30394	5.38938	247.11	-20.18
74/ 9/26	2442316.5	-11.05286	-26.20698	-10.45719	5.02711	-1.74989	-0.84309	30.30387	5.38932	247.13	-20.19
74/ 9/30	2442320.5	-11.04125	-26.21102	-10.45914	5.02785	-1.74795	-0.84231	30.30380	5.38926	247.16	-20.19
74/10/ 4	2442324.5	-11.02963	-26.21506	-10.46108	5.02859	-1.74600	-0.84153	30.30374	5.38920	247.18	-20.19
74/10/ 8	2442328.5	-11.01801	-26.21909	-10.46303	5.02933	-1.74406	-0.84075	30.30367	5.38914	247.21	-20.20
74/10/12	2442332.5	-11.00639	-26.22312	-10.46497	5.03007	-1.74211	-0.83998	30.30360	5.38907	247.23	-20.20
74/10/16	2442336.5	-10.99477	-26.22714	-10.46691	5.03081	-1.74017	-0.83920	30.30353	5.38901	247.26	-20.21
74/10/20	2442340.5	-10.98315	-26.23116	-10.46885	5.03154	-1.73823	-0.83842	30.30346	5.38895	247.28	-20.21
74/10/24	2442344.5	-10.97153	-26.23517	-10.47078	5.03228	-1.73628	-0.83764	30.30340	5.38889	247.31	-20.21
74/10/28	2442348.5	-10.95990	-26.23918	-10.47272	5.03301	-1.73434	-0.83686	30.30333	5.38883	247.33	-20.22
74/11/ 1	2442352.5	-10.94827	-26.24318	-10.47465	5.03374	-1.73239	-0.83609	30.30326	5.38876	247.35	-20.22
74/11/ 5	2442356.5	-10.93664	-26.24718	-10.47658	5.03447	-1.73045	-0.83531	30.30319	5.38870	247.38	-20.23
74/11/ 9	2442360.5	-10.92501	-26.25118	-10.47851	5.03520	-1.72851	-0.83453	30.30312	5.38864	247.40	-20.23
74/11/13	2442364.5	-10.91338	-26.25517	-10.48044	5.03593	-1.72656	-0.83375	30.30306	5.38858	247.43	-20.23
74/11/17	2442368.5	-10.90174	-26.25916	-10.48236	5.03666	-1.72462	-0.83297	30.30299	5.38852	247.45	-20.24

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74/11/21	2442372.5	-10.89011	-26.26314	-10.48428	5.03739	-1.72268	-0.83220	30.30292	5.38846	247.48	-20.24
74/11/25	2442376.5	-10.87847	-26.26712	-10.48621	5.03812	-1.72074	-0.83142	30.30285	5.38840	247.50	-20.25
74/11/29	2442380.5	-10.86683	-26.27109	-10.48813	5.03884	-1.71879	-0.83064	30.30279	5.38833	247.53	-20.25
74/12/ 3	2442384.5	-10.85519	-26.27506	-10.49004	5.03957	-1.71685	-0.82986	30.30272	5.38827	247.55	-20.25
74/12/ 7	2442388.5	-10.84354	-26.27902	-10.49196	5.04029	-1.71491	-0.82909	30.30265	5.38821	247.58	-20.26
74/12/11	2442392.5	-10.83190	-26.28298	-10.49387	5.04101	-1.71297	-0.82831	30.30258	5.38815	247.60	-20.26
74/12/15	2442396.5	-10.82025	-26.28694	-10.49579	5.04174	-1.71102	-0.82753	30.30251	5.38809	247.63	-20.27
74/12/19	2442400.5	-10.80860	-26.29089	-10.49770	5.04246	-1.70908	-0.82675	30.30245	5.38803	247.65	-20.27
74/12/23	2442404.5	-10.79695	-26.29483	-10.49961	5.04318	-1.70714	-0.82598	30.30238	5.38797	247.68	-20.27
74/12/27	2442408.5	-10.78530	-26.29877	-10.50151	5.04390	-1.70520	-0.82520	30.30231	5.38791	247.70	-20.28
74/12/31	2442412.5	-10.77365	-26.30271	-10.50342	5.04462	-1.70326	-0.82442	30.30224	5.38785	247.73	-20.28
75/ 1/ 4	2442416.5	-10.76200	-26.30664	-10.50532	5.04533	-1.70132	-0.82364	30.30218	5.38779	247.75	-20.28
75/ 1/ 8	2442420.5	-10.75034	-26.31057	-10.50723	5.04605	-1.69937	-0.82287	30.30211	5.38773	247.78	-20.29
75/ 1/12	2442424.5	-10.73868	-26.31449	-10.50913	5.04677	-1.69743	-0.82209	30.30204	5.38767	247.80	-20.29
75/ 1/16	2442428.5	-10.72702	-26.31841	-10.51102	5.04748	-1.69549	-0.82131	30.30197	5.38761	247.82	-20.30
75/ 1/20	2442432.5	-10.71536	-26.32233	-10.51292	5.04819	-1.69355	-0.82054	30.30190	5.38755	247.85	-20.30
75/ 1/24	2442436.5	-10.70370	-26.32624	-10.51481	5.04891	-1.69161	-0.81976	30.30184	5.38749	247.87	-20.30
75/ 1/28	2442440.5	-10.69203	-26.33014	-10.51671	5.04962	-1.68967	-0.81898	30.30177	5.38743	247.90	-20.31
75/ 2/ 1	2442444.5	-10.68037	-26.33405	-10.51860	5.05033	-1.68773	-0.81821	30.30170	5.38737	247.92	-20.31
75/ 2/ 5	2442448.5	-10.66870	-26.33794	-10.52049	5.05104	-1.68579	-0.81743	30.30163	5.38731	247.95	-20.32
75/ 2/ 9	2442452.5	-10.65703	-26.34183	-10.52238	5.05175	-1.68385	-0.81665	30.30157	5.38725	247.97	-20.32
75/ 2/13	2442456.5	-10.64536	-26.34572	-10.52426	5.05246	-1.68191	-0.81588	30.30150	5.38719	248.00	-20.32
75/ 2/17	2442460.5	-10.63368	-26.34961	-10.52615	5.05317	-1.67997	-0.81510	30.30143	5.38713	248.02	-20.33
75/ 2/21	2442464.5	-10.62201	-26.35348	-10.52803	5.05387	-1.67803	-0.81432	30.30136	5.38707	248.05	-20.33
75/ 2/25	2442468.5	-10.61033	-26.35736	-10.52991	5.05458	-1.67609	-0.81355	30.30129	5.38701	248.07	-20.33
75/ 3/ 1	2442472.5	-10.59866	-26.36123	-10.53179	5.05528	-1.67415	-0.81277	30.30123	5.38695	248.10	-20.34
75/ 3/ 5	2442476.5	-10.58698	-26.36509	-10.53366	5.05599	-1.67221	-0.81199	30.30116	5.38690	248.12	-20.34
75/ 3/ 9	2442480.5	-10.57530	-26.36895	-10.53554	5.05669	-1.67028	-0.81122	30.30109	5.38684	248.15	-20.35
75/ 3/13	2442484.5	-10.56361	-26.37281	-10.53741	5.05739	-1.66834	-0.81044	30.30102	5.38678	248.17	-20.35
75/ 3/17	2442488.5	-10.55193	-26.37666	-10.53928	5.05809	-1.66640	-0.80966	30.30096	5.38672	248.20	-20.35
75/ 3/21	2442492.5	-10.54024	-26.38051	-10.54115	5.05880	-1.66446	-0.80889	30.30089	5.38666	248.22	-20.36
75/ 3/25	2442496.5	-10.52855	-26.38435	-10.54302	5.05950	-1.66252	-0.80811	30.30082	5.38661	248.25	-20.36
75/ 3/29	2442500.5	-10.51687	-26.38819	-10.54489	5.06019	-1.66058	-0.80733	30.30075	5.38655	248.27	-20.37
75/ 4/ 2	2442504.5	-10.50517	-26.39203	-10.54675	5.06089	-1.65865	-0.80656	30.30069	5.38649	248.30	-20.37
75/ 4/ 6	2442508.5	-10.49348	-26.39586	-10.54861	5.06159	-1.65671	-0.80578	30.30062	5.38643	248.32	-20.37
75/ 4/10	2442512.5	-10.48179	-26.39968	-10.55047	5.06229	-1.65477	-0.80501	30.30055	5.38638	248.34	-20.38
75/ 4/14	2442516.5	-10.47009	-26.40350	-10.55233	5.06298	-1.65283	-0.80423	30.30049	5.38632	248.37	-20.38
75/ 4/18	2442520.5	-10.45840	-26.40732	-10.55419	5.06368	-1.65090	-0.80346	30.30042	5.38626	248.39	-20.38
75/ 4/22	2442524.5	-10.44670	-26.41113	-10.55604	5.06437	-1.64896	-0.80268	30.30035	5.38621	248.42	-20.39
75/ 4/26	2442528.5	-10.43500	-26.41494	-10.55790	5.06506	-1.64702	-0.80190	30.30028	5.38615	248.44	-20.39
75/ 4/30	2442532.5	-10.42329	-26.41874	-10.55975	5.06576	-1.64509	-0.80113	30.30022	5.38609	248.47	-20.40
75/ 5/ 4	2442536.5	-10.41159	-26.42254	-10.56160	5.06645	-1.64315	-0.80035	30.30015	5.38604	248.49	-20.40
75/ 5/ 8	2442540.5	-10.39989	-26.42633	-10.56345	5.06714	-1.64121	-0.79958	30.30008	5.38598	248.52	-20.40
75/ 5/12	2442544.5	-10.38818	-26.43012	-10.56529	5.06783	-1.63928	-0.79880	30.30001	5.38593	248.54	-20.41
75/ 5/16	2442548.5	-10.37647	-26.43390	-10.56714	5.06852	-1.63734	-0.79803	30.29995	5.38587	248.57	-20.41

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75/ 5/20	2442552.5	-10.36476	-26.43768	-10.56898	5.06921	-1.63540	-0.79725	30.29988	5.38582	248.59	-20.41
75/ 5/24	2442556.5	-10.35305	-26.44146	-10.57082	5.06989	-1.63347	-0.79648	30.29981	5.38576	248.62	-20.42
75/ 5/28	2442560.5	-10.34134	-26.44523	-10.57266	5.07058	-1.63153	-0.79570	30.29975	5.38571	248.64	-20.42
75/ 6/ 1	2442564.5	-10.32962	-26.44900	-10.57450	5.07127	-1.62960	-0.79492	30.29968	5.38565	248.67	-20.43
75/ 6/ 5	2442568.5	-10.31791	-26.45276	-10.57633	5.07195	-1.62766	-0.79415	30.29961	5.38560	248.69	-20.43
75/ 6/ 9	2442572.5	-10.30619	-26.45652	-10.57817	5.07264	-1.62573	-0.79337	30.29955	5.38554	248.72	-20.43
75/ 6/13	2442576.5	-10.29447	-26.46027	-10.58000	5.07332	-1.62379	-0.79260	30.29948	5.38549	248.74	-20.44
75/ 6/17	2442580.5	-10.28275	-26.46402	-10.58183	5.07400	-1.62186	-0.79182	30.29941	5.38544	248.77	-20.44
75/ 6/21	2442584.5	-10.27102	-26.46777	-10.58366	5.07468	-1.61992	-0.79105	30.29935	5.38538	248.79	-20.44
75/ 6/25	2442588.5	-10.25930	-26.47151	-10.58548	5.07537	-1.61799	-0.79027	30.29928	5.38533	248.82	-20.45
75/ 6/29	2442592.5	-10.24757	-26.47524	-10.58731	5.07605	-1.61606	-0.78950	30.29921	5.38528	248.84	-20.45
75/ 7/ 3	2442596.5	-10.23585	-26.47897	-10.58913	5.07673	-1.61412	-0.78873	30.29915	5.38522	248.87	-20.46
75/ 7/ 7	2442600.5	-10.22412	-26.48270	-10.59095	5.07741	-1.61219	-0.78795	30.29908	5.38517	248.89	-20.46
75/ 7/11	2442604.5	-10.21239	-26.48642	-10.59277	5.07808	-1.61025	-0.78718	30.29901	5.38512	248.91	-20.46
75/ 7/15	2442608.5	-10.20066	-26.49014	-10.59459	5.07876	-1.60832	-0.78640	30.29895	5.38507	248.94	-20.47
75/ 7/19	2442612.5	-10.18892	-26.49385	-10.59641	5.07944	-1.60639	-0.78563	30.29888	5.38501	248.96	-20.47
75/ 7/23	2442616.5	-10.17719	-26.49756	-10.59822	5.08011	-1.60445	-0.78485	30.29881	5.38496	248.99	-20.47
75/ 7/27	2442620.5	-10.16545	-26.50127	-10.60003	5.08079	-1.60252	-0.78408	30.29875	5.38491	249.01	-20.48
75/ 7/31	2442624.5	-10.15371	-26.50497	-10.60184	5.08146	-1.60059	-0.78330	30.29868	5.38486	249.04	-20.48
75/ 8/ 4	2442628.5	-10.14197	-26.50866	-10.60365	5.08214	-1.59866	-0.78253	30.29862	5.38481	249.06	-20.49
75/ 8/ 8	2442632.5	-10.13023	-26.51235	-10.60546	5.08281	-1.59672	-0.78176	30.29855	5.38476	249.09	-20.49
75/ 8/12	2442636.5	-10.11849	-26.51604	-10.60726	5.08348	-1.59479	-0.78098	30.29848	5.38471	249.11	-20.49
75/ 8/16	2442640.5	-10.10674	-26.51972	-10.60907	5.08415	-1.59286	-0.78021	30.29842	5.38466	249.14	-20.50
75/ 8/20	2442644.5	-10.09500	-26.52340	-10.61087	5.08482	-1.59093	-0.77943	30.29835	5.38461	249.16	-20.50
75/ 8/24	2442648.5	-10.08325	-26.52707	-10.61267	5.08549	-1.58900	-0.77866	30.29829	5.38456	249.19	-20.50
75/ 8/28	2442652.5	-10.07150	-26.53074	-10.61447	5.08616	-1.58706	-0.77789	30.29822	5.38451	249.21	-20.51
75/ 9/ 1	2442656.5	-10.05975	-26.53440	-10.61626	5.08683	-1.58513	-0.77711	30.29815	5.38446	249.24	-20.51
75/ 9/ 5	2442660.5	-10.04800	-26.53806	-10.61806	5.08750	-1.58320	-0.77634	30.29809	5.38441	249.26	-20.52
75/ 9/ 9	2442664.5	-10.03624	-26.54172	-10.61985	5.08817	-1.58127	-0.77556	30.29802	5.38436	249.29	-20.52
75/ 9/13	2442668.5	-10.02449	-26.54537	-10.62164	5.08883	-1.57934	-0.77479	30.29796	5.38432	249.31	-20.52
75/ 9/17	2442672.5	-10.01273	-26.54902	-10.62343	5.08950	-1.57741	-0.77402	30.29789	5.38427	249.34	-20.53
75/ 9/21	2442676.5	-10.00097	-26.55266	-10.62522	5.09017	-1.57548	-0.77324	30.29783	5.38422	249.36	-20.53
75/ 9/25	2442680.5	-9.98921	-26.55630	-10.62700	5.09083	-1.57355	-0.77247	30.29776	5.38417	249.39	-20.53
75/ 9/29	2442684.5	-9.97745	-26.55993	-10.62878	5.09149	-1.57162	-0.77170	30.29770	5.38413	249.41	-20.54
75/10/ 3	2442688.5	-9.96569	-26.56356	-10.63057	5.09216	-1.56969	-0.77092	30.29763	5.38408	249.44	-20.54
75/10/ 7	2442692.5	-9.95392	-26.56718	-10.63235	5.09282	-1.56776	-0.77015	30.29757	5.38403	249.46	-20.54
75/10/11	2442696.5	-9.94216	-26.57080	-10.63412	5.09348	-1.56583	-0.76938	30.29750	5.38399	249.49	-20.55
75/10/15	2442700.5	-9.93039	-26.57442	-10.63590	5.09414	-1.56390	-0.76860	30.29744	5.38394	249.51	-20.55
75/10/19	2442704.5	-9.91862	-26.57803	-10.63768	5.09480	-1.56197	-0.76783	30.29737	5.38389	249.53	-20.56
75/10/23	2442708.5	-9.90685	-26.58163	-10.63945	5.09546	-1.56004	-0.76706	30.29731	5.38385	249.56	-20.56
75/10/27	2442712.5	-9.89508	-26.58523	-10.64122	5.09612	-1.55811	-0.76628	30.29724	5.38380	249.58	-20.56
75/10/31	2442716.5	-9.88330	-26.58883	-10.64299	5.09678	-1.55618	-0.76551	30.29718	5.38376	249.61	-20.57
75/11/ 4	2442720.5	-9.87153	-26.59242	-10.64476	5.09744	-1.55425	-0.76474	30.29711	5.38371	249.63	-20.57
75/11/ 8	2442724.5	-9.85975	-26.59601	-10.64652	5.09809	-1.55232	-0.76396	30.29705	5.38367	249.66	-20.57
75/11/12	2442728.5	-9.84797	-26.59960	-10.64829	5.09875	-1.55039	-0.76319	30.29698	5.38363	249.68	-20.58

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75/11/16	2442732.5	-9.83619	-26.60318	-10.65005	5.09941	-1.54846	-0.76242	30.29692	5.38358	249.71	-20.58
75/11/20	2442736.5	-9.82441	-26.60675	-10.65181	5.10006	-1.54654	-0.76165	30.29685	5.38354	249.73	-20.58
75/11/24	2442740.5	-9.81263	-26.61032	-10.65357	5.10072	-1.54461	-0.76087	30.29679	5.38350	249.76	-20.59
75/11/28	2442744.5	-9.80085	-26.61389	-10.65533	5.10137	-1.54268	-0.76010	30.29673	5.38345	249.78	-20.59
75/12/ 2	2442748.5	-9.78906	-26.61745	-10.65708	5.10202	-1.54075	-0.75933	30.29666	5.38341	249.81	-20.59
75/12/ 6	2442752.5	-9.77727	-26.62101	-10.65883	5.10268	-1.53882	-0.75855	30.29660	5.38337	249.83	-20.60
75/12/10	2442756.5	-9.76548	-26.62456	-10.66059	5.10333	-1.53690	-0.75778	30.29653	5.38333	249.86	-20.60
75/12/14	2442760.5	-9.75369	-26.62811	-10.66233	5.10398	-1.53497	-0.75701	30.29647	5.38329	249.88	-20.61
75/12/18	2442764.5	-9.74190	-26.63165	-10.66408	5.10463	-1.53304	-0.75624	30.29641	5.38325	249.91	-20.61
75/12/22	2442768.5	-9.73011	-26.63519	-10.66583	5.10528	-1.53111	-0.75547	30.29634	5.38321	249.93	-20.61
75/12/26	2442772.5	-9.71831	-26.63873	-10.66757	5.10593	-1.52919	-0.75469	30.29628	5.38317	249.96	-20.62
75/12/30	2442776.5	-9.70652	-26.64226	-10.66932	5.10658	-1.52726	-0.75392	30.29621	5.38313	249.98	-20.62
76/ 1/ 3	2442780.5	-9.69472	-26.64578	-10.67106	5.10723	-1.52533	-0.75315	30.29615	5.38309	250.01	-20.62
76/ 1/ 7	2442784.5	-9.68292	-26.64930	-10.67280	5.10787	-1.52341	-0.75238	30.29609	5.38305	250.03	-20.63
76/ 1/11	2442788.5	-9.67112	-26.65282	-10.67453	5.10852	-1.52148	-0.75160	30.29602	5.38301	250.06	-20.63
76/ 1/15	2442792.5	-9.65932	-26.65633	-10.67627	5.10917	-1.51955	-0.75083	30.29596	5.38297	250.08	-20.63
76/ 1/19	2442796.5	-9.64751	-26.65984	-10.67800	5.10981	-1.51763	-0.75006	30.29590	5.38293	250.11	-20.64
76/ 1/23	2442800.5	-9.63571	-26.66335	-10.67973	5.11046	-1.51570	-0.74929	30.29583	5.38289	250.13	-20.64
76/ 1/27	2442804.5	-9.62390	-26.66684	-10.68146	5.11110	-1.51377	-0.74852	30.29577	5.38286	250.16	-20.64
76/ 1/31	2442808.5	-9.61209	-26.67034	-10.68319	5.11174	-1.51185	-0.74774	30.29571	5.38282	250.18	-20.65
76/ 2/ 4	2442812.5	-9.60028	-26.67383	-10.68492	5.11239	-1.50992	-0.74697	30.29564	5.38278	250.21	-20.65
76/ 2/ 8	2442816.5	-9.58847	-26.67732	-10.68664	5.11303	-1.50800	-0.74620	30.29558	5.38275	250.23	-20.66
76/ 2/12	2442820.5	-9.57666	-26.68080	-10.68837	5.11367	-1.50607	-0.74543	30.29552	5.38271	250.26	-20.66
76/ 2/16	2442824.5	-9.56484	-26.68427	-10.69009	5.11431	-1.50414	-0.74466	30.29546	5.38267	250.28	-20.66
76/ 2/20	2442828.5	-9.55303	-26.68775	-10.69181	5.11496	-1.50222	-0.74388	30.29539	5.38264	250.30	-20.67
76/ 2/24	2442832.5	-9.54121	-26.69122	-10.69352	5.11560	-1.50029	-0.74311	30.29533	5.38260	250.33	-20.67
76/ 2/28	2442836.5	-9.52939	-26.69468	-10.69524	5.11624	-1.49837	-0.74234	30.29527	5.38257	250.35	-20.67
76/ 3/ 3	2442840.5	-9.51757	-26.69814	-10.69695	5.11687	-1.49644	-0.74157	30.29521	5.38253	250.38	-20.68
76/ 3/ 7	2442844.5	-9.50575	-26.70159	-10.69867	5.11751	-1.49452	-0.74080	30.29515	5.38250	250.40	-20.68
76/ 3/11	2442848.5	-9.49393	-26.70504	-10.70038	5.11815	-1.49259	-0.74003	30.29508	5.38247	250.43	-20.68
76/ 3/15	2442852.5	-9.48210	-26.70849	-10.70209	5.11879	-1.49067	-0.73925	30.29502	5.38243	250.45	-20.69
76/ 3/19	2442856.5	-9.47028	-26.71193	-10.70379	5.11943	-1.48874	-0.73848	30.29496	5.38240	250.48	-20.69
76/ 3/23	2442860.5	-9.45845	-26.71537	-10.70550	5.12006	-1.48682	-0.73771	30.29490	5.38237	250.50	-20.69
76/ 3/27	2442864.5	-9.44662	-26.71880	-10.70720	5.12070	-1.48489	-0.73694	30.29484	5.38234	250.53	-20.70
76/ 3/31	2442868.5	-9.43479	-26.72223	-10.70890	5.12133	-1.48297	-0.73617	30.29477	5.38230	250.55	-20.70
76/ 4/ 4	2442872.5	-9.42296	-26.72565	-10.71060	5.12197	-1.48105	-0.73540	30.29471	5.38227	250.58	-20.70
76/ 4/ 8	2442876.5	-9.41113	-26.72907	-10.71230	5.12260	-1.47912	-0.73463	30.29465	5.38224	250.60	-20.71
76/ 4/12	2442880.5	-9.39929	-26.73249	-10.71400	5.12324	-1.47720	-0.73386	30.29459	5.38221	250.63	-20.71
76/ 4/16	2442884.5	-9.38745	-26.73590	-10.71569	5.12387	-1.47527	-0.73308	30.29453	5.38218	250.65	-20.71
76/ 4/20	2442888.5	-9.37562	-26.73930	-10.71738	5.12450	-1.47335	-0.73231	30.29447	5.38215	250.68	-20.72
76/ 4/24	2442892.5	-9.36378	-26.74270	-10.71907	5.12513	-1.47143	-0.73154	30.29441	5.38212	250.70	-20.72
76/ 4/28	2442896.5	-9.35194	-26.74610	-10.72076	5.12576	-1.46950	-0.73077	30.29435	5.38209	250.73	-20.73
76/ 5/ 2	2442900.5	-9.34009	-26.74949	-10.72245	5.12640	-1.46758	-0.73000	30.29429	5.38206	250.75	-20.73
76/ 5/ 6	2442904.5	-9.32825	-26.75288	-10.72414	5.12703	-1.46565	-0.72923	30.29422	5.38204	250.78	-20.73
76/ 5/10	2442908.5	-9.31641	-26.75627	-10.72582	5.12766	-1.46373	-0.72846	30.29416	5.38201	250.80	-20.74

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
76/ 5/14	2442912.5	-9.30456	-26.75964	-10.72750	5.12828	-1.46181	-0.72769	30.29410	5.38198	250.83	-20.74
76/ 5/18	2442916.5	-9.29271	-26.76302	-10.72918	5.12891	-1.45988	-0.72692	30.29404	5.38195	250.85	-20.74
76/ 5/22	2442920.5	-9.28086	-26.76639	-10.73086	5.12954	-1.45796	-0.72614	30.29398	5.38193	250.88	-20.75
76/ 5/26	2442924.5	-9.26901	-26.76976	-10.73254	5.13017	-1.45604	-0.72537	30.29392	5.38190	250.90	-20.75
76/ 5/30	2442928.5	-9.25716	-26.77312	-10.73421	5.13080	-1.45411	-0.72460	30.29386	5.38187	250.93	-20.75
76/ 6/ 3	2442932.5	-9.24530	-26.77647	-10.73589	5.13142	-1.45219	-0.72383	30.29380	5.38185	250.95	-20.76
76/ 6/ 7	2442936.5	-9.23345	-26.77983	-10.73756	5.13205	-1.45027	-0.72306	30.29374	5.38182	250.98	-20.76
76/ 6/11	2442940.5	-9.22159	-26.78318	-10.73923	5.13267	-1.44834	-0.72229	30.29368	5.38180	251.00	-20.76
76/ 6/15	2442944.5	-9.20973	-26.78652	-10.74089	5.13330	-1.44642	-0.72152	30.29362	5.38177	251.03	-20.77
76/ 6/19	2442948.5	-9.19788	-26.78986	-10.74256	5.13392	-1.44450	-0.72075	30.29356	5.38175	251.05	-20.77
76/ 6/23	2442952.5	-9.18601	-26.79319	-10.74422	5.13455	-1.44258	-0.71998	30.29350	5.38173	251.08	-20.77
76/ 6/27	2442956.5	-9.17415	-26.79652	-10.74589	5.13517	-1.44065	-0.71921	30.29345	5.38170	251.10	-20.78
76/ 7/ 1	2442960.5	-9.16229	-26.79985	-10.74755	5.13580	-1.43873	-0.71843	30.29339	5.38168	251.13	-20.78
76/ 7/ 5	2442964.5	-9.15042	-26.80317	-10.74921	5.13642	-1.43681	-0.71766	30.29333	5.38166	251.15	-20.78
76/ 7/ 9	2442968.5	-9.13856	-26.80649	-10.75086	5.13704	-1.43489	-0.71689	30.29327	5.38164	251.18	-20.79
76/ 7/13	2442972.5	-9.12669	-26.80980	-10.75252	5.13766	-1.43296	-0.71612	30.29321	5.38161	251.20	-20.79
76/ 7/17	2442976.5	-9.11482	-26.81311	-10.75417	5.13828	-1.43104	-0.71535	30.29315	5.38159	251.23	-20.79
76/ 7/21	2442980.5	-9.10295	-26.81641	-10.75582	5.13890	-1.42912	-0.71458	30.29309	5.38157	251.25	-20.80
76/ 7/25	2442984.5	-9.09107	-26.81971	-10.75747	5.13952	-1.42719	-0.71381	30.29303	5.38155	251.27	-20.80
76/ 7/29	2442988.5	-9.07920	-26.82301	-10.75912	5.14014	-1.42527	-0.71304	30.29297	5.38153	251.30	-20.80
76/ 8/ 2	2442992.5	-9.06733	-26.82630	-10.76077	5.14076	-1.42335	-0.71227	30.29292	5.38151	251.32	-20.81
76/ 8/ 6	2442996.5	-9.05545	-26.82958	-10.76241	5.14138	-1.42143	-0.71150	30.29286	5.38149	251.35	-20.81
76/ 8/10	2443000.5	-9.04357	-26.83286	-10.76406	5.14200	-1.41951	-0.71073	30.29280	5.38148	251.37	-20.81
76/ 8/14	2443004.5	-9.03169	-26.83614	-10.76570	5.14262	-1.41758	-0.70996	30.29274	5.38146	251.40	-20.82
76/ 8/18	2443008.5	-9.01981	-26.83941	-10.76734	5.14323	-1.41566	-0.70919	30.29268	5.38144	251.42	-20.82
76/ 8/22	2443012.5	-9.00793	-26.84268	-10.76897	5.14385	-1.41374	-0.70841	30.29263	5.38142	251.45	-20.82
76/ 8/26	2443016.5	-8.99604	-26.84595	-10.77061	5.14447	-1.41182	-0.70764	30.29257	5.38140	251.47	-20.83
76/ 8/30	2443020.5	-8.98416	-26.84921	-10.77224	5.14508	-1.40989	-0.70687	30.29251	5.38139	251.50	-20.83
76/ 9/ 3	2443024.5	-8.97227	-26.85246	-10.77387	5.14570	-1.40797	-0.70610	30.29245	5.38137	251.52	-20.83
76/ 9/ 7	2443028.5	-8.96038	-26.85571	-10.77551	5.14631	-1.40605	-0.70533	30.29239	5.38136	251.55	-20.84
76/ 9/11	2443032.5	-8.94849	-26.85896	-10.77713	5.14693	-1.40413	-0.70456	30.29234	5.38134	251.57	-20.84
76/ 9/15	2443036.5	-8.93660	-26.86220	-10.77876	5.14754	-1.40221	-0.70379	30.29228	5.38133	251.60	-20.84
76/ 9/19	2443040.5	-8.92471	-26.86544	-10.78039	5.14815	-1.40028	-0.70302	30.29222	5.38131	251.62	-20.85
76/ 9/23	2443044.5	-8.91282	-26.86867	-10.78201	5.14877	-1.39836	-0.70225	30.29217	5.38130	251.65	-20.85
76/ 9/27	2443048.5	-8.90092	-26.87190	-10.78363	5.14938	-1.39644	-0.70148	30.29211	5.38128	251.67	-20.85
76/10/ 1	2443052.5	-8.88902	-26.87512	-10.78525	5.14999	-1.39452	-0.70071	30.29205	5.38127	251.70	-20.86
76/10/ 5	2443056.5	-8.87713	-26.87834	-10.78687	5.15060	-1.39259	-0.69994	30.29200	5.38126	251.72	-20.86
76/10/ 9	2443060.5	-8.86523	-26.88155	-10.78848	5.15121	-1.39067	-0.69917	30.29194	5.38125	251.75	-20.86
76/10/13	2443064.5	-8.85333	-26.88477	-10.79010	5.15182	-1.38875	-0.69840	30.29188	5.38123	251.77	-20.87
76/10/17	2443068.5	-8.84142	-26.88797	-10.79171	5.15243	-1.38683	-0.69762	30.29183	5.38122	251.80	-20.87
76/10/21	2443072.5	-8.82952	-26.89117	-10.79332	5.15304	-1.38491	-0.69685	30.29177	5.38121	251.82	-20.87
76/10/25	2443076.5	-8.81761	-26.89437	-10.79493	5.15365	-1.38298	-0.69608	30.29171	5.38120	251.85	-20.88
76/10/29	2443080.5	-8.80571	-26.89756	-10.79654	5.15426	-1.38106	-0.69531	30.29166	5.38119	251.87	-20.88
76/11/ 2	2443084.5	-8.79380	-26.90075	-10.79814	5.15487	-1.37914	-0.69454	30.29160	5.38118	251.90	-20.88
76/11/ 6	2443088.5	-8.78189	-26.90393	-10.79975	5.15548	-1.37722	-0.69377	30.29155	5.38117	251.92	-20.89

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM NEPTUNE

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76/11/10	2443092.5	-8.76998	-26.90711	-10.80135	5.15609	-1.37529	-0.69300	30.29149	5.38116	251.95	-20.89
76/11/14	2443096.5	-8.75807	-26.91029	-10.80295	5.15669	-1.37337	-0.69223	30.29144	5.38115	251.97	-20.89
76/11/18	2443100.5	-8.74615	-26.91346	-10.80455	5.15730	-1.37145	-0.69146	30.29138	5.38114	252.00	-20.90
76/11/22	2443104.5	-8.73424	-26.91663	-10.80614	5.15790	-1.36953	-0.69069	30.29133	5.38114	252.02	-20.90
76/11/26	2443108.5	-8.72232	-26.91979	-10.80774	5.15851	-1.36761	-0.68992	30.29127	5.38113	252.05	-20.90
76/11/30	2443112.5	-8.71041	-26.92294	-10.80933	5.15912	-1.36568	-0.68914	30.29122	5.38112	252.07	-20.91
76/12/ 4	2443116.5	-8.69849	-26.92610	-10.81092	5.15972	-1.36376	-0.68837	30.29116	5.38112	252.10	-20.91
76/12/ 8	2443120.5	-8.68657	-26.92925	-10.81251	5.16032	-1.36184	-0.68760	30.29111	5.38111	252.12	-20.91
76/12/12	2443124.5	-8.67464	-26.93239	-10.81410	5.16093	-1.35992	-0.68683	30.29105	5.38110	252.15	-20.92
76/12/16	2443128.5	-8.66272	-26.93553	-10.81568	5.16153	-1.35799	-0.68606	30.29100	5.38110	252.17	-20.92
76/12/20	2443132.5	-8.65080	-26.93866	-10.81727	5.16213	-1.35607	-0.68529	30.29094	5.38110	252.20	-20.92
76/12/24	2443136.5	-8.63887	-26.94179	-10.81885	5.16274	-1.35415	-0.68452	30.29089	5.38109	252.22	-20.93
76/12/28	2443140.5	-8.62694	-26.94492	-10.82043	5.16334	-1.35222	-0.68375	30.29083	5.38109	252.25	-20.93
77/ 1/ 1	2443144.5	-8.61501	-26.94804	-10.82201	5.16394	-1.35030	-0.68298	30.29078	5.38108	252.27	-20.93
77/ 1/ 5	2443148.5	-8.60308	-26.95116	-10.82359	5.16454	-1.34838	-0.68220	30.29073	5.38108	252.30	-20.94
77/ 1/ 9	2443152.5	-8.59115	-26.95427	-10.82516	5.16514	-1.34646	-0.68143	30.29067	5.38108	252.32	-20.94
77/ 1/13	2443156.5	-8.57922	-26.95738	-10.82674	5.16574	-1.34453	-0.68066	30.29062	5.38108	252.35	-20.94
77/ 1/17	2443160.5	-8.56728	-26.96048	-10.82831	5.16634	-1.34261	-0.67989	30.29056	5.38107	252.37	-20.95
77/ 1/21	2443164.5	-8.55535	-26.96358	-10.82988	5.16694	-1.34069	-0.67912	30.29051	5.38107	252.40	-20.95
77/ 1/25	2443168.5	-8.54341	-26.96668	-10.83144	5.16754	-1.33876	-0.67835	30.29046	5.38107	252.42	-20.95
77/ 1/29	2443172.5	-8.53147	-26.96977	-10.83301	5.16814	-1.33684	-0.67758	30.29040	5.38107	252.45	-20.96
77/ 2/ 2	2443176.5	-8.51953	-26.97286	-10.83458	5.16874	-1.33492	-0.67681	30.29035	5.38107	252.47	-20.96
77/ 2/ 6	2443180.5	-8.50759	-26.97594	-10.83614	5.16934	-1.33299	-0.67603	30.29030	5.38107	252.50	-20.96
77/ 2/10	2443184.5	-8.49565	-26.97901	-10.83770	5.16993	-1.33107	-0.67526	30.29025	5.38107	252.52	-20.96
77/ 2/14	2443188.5	-8.48370	-26.98209	-10.83926	5.17053	-1.32915	-0.67449	30.29019	5.38107	252.55	-20.97
77/ 2/18	2443192.5	-8.47176	-26.98516	-10.84082	5.17113	-1.32722	-0.67372	30.29014	5.38108	252.57	-20.97
77/ 2/22	2443196.5	-8.45981	-26.98822	-10.84237	5.17172	-1.32530	-0.67295	30.29009	5.38108	252.60	-20.97
77/ 2/26	2443200.5	-8.44786	-26.99128	-10.84392	5.17232	-1.32337	-0.67218	30.29003	5.38108	252.62	-20.98
77/ 3/ 2	2443204.5	-8.43591	-26.99433	-10.84548	5.17291	-1.32145	-0.67140	30.28998	5.38108	252.65	-20.98
77/ 3/ 6	2443208.5	-8.42396	-26.99738	-10.84703	5.17351	-1.31953	-0.67063	30.28993	5.38109	252.67	-20.98
77/ 3/10	2443212.5	-8.41201	-27.00043	-10.84858	5.17410	-1.31760	-0.66986	30.28988	5.38109	252.70	-20.99
77/ 3/14	2443216.5	-8.40006	-27.00347	-10.85012	5.17470	-1.31568	-0.66909	30.28983	5.38110	252.72	-20.99
77/ 3/18	2443220.5	-8.38810	-27.00651	-10.85167	5.17529	-1.31375	-0.66832	30.28977	5.38110	252.75	-20.99
77/ 3/22	2443224.5	-8.37614	-27.00954	-10.85321	5.17588	-1.31183	-0.66754	30.28972	5.38111	252.77	-21.00
77/ 3/26	2443228.5	-8.36419	-27.01257	-10.85475	5.17648	-1.30990	-0.66677	30.28967	5.38111	252.80	-21.00
77/ 3/30	2443232.5	-8.35223	-27.01559	-10.85629	5.17707	-1.30798	-0.66600	30.28962	5.38112	252.82	-21.00
77/ 4/ 3	2443236.5	-8.34027	-27.01861	-10.85783	5.17766	-1.30605	-0.66523	30.28957	5.38112	252.85	-21.01
77/ 4/ 7	2443240.5	-8.32830	-27.02163	-10.85936	5.17825	-1.30413	-0.66446	30.28952	5.38113	252.87	-21.01
77/ 4/11	2443244.5	-8.31634	-27.02464	-10.86090	5.17884	-1.30221	-0.66368	30.28947	5.38114	252.90	-21.01
77/ 4/15	2443248.5	-8.30438	-27.02765	-10.86243	5.17943	-1.30028	-0.66291	30.28941	5.38115	252.92	-21.02
77/ 4/19	2443252.5	-8.29241	-27.03065	-10.86396	5.18002	-1.29835	-0.66214	30.28936	5.38115	252.95	-21.02
77/ 4/23	2443256.5	-8.28044	-27.03364	-10.86549	5.18061	-1.29643	-0.66137	30.28931	5.38116	252.97	-21.02
77/ 4/27	2443260.5	-8.26847	-27.03664	-10.86702	5.18120	-1.29450	-0.66059	30.28926	5.38117	253.00	-21.02
77/ 5/ 1	2443264.5	-8.25650	-27.03963	-10.86854	5.18179	-1.29258	-0.65982	30.28921	5.38118	253.02	-21.03
77/ 5/ 5	2443268.5	-8.24453	-27.04261	-10.87007	5.18238	-1.29065	-0.65905	30.28916	5.38119	253.05	-21.03

1.8 1 A.U.=149,599,000 KM.

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77/ 5/ 9	2443272.5	-8.23256	-27.04559	-10.87159	5.18297	-1.28873	-0.65828	30.28911	5.38120	253.07	-21.03
77/ 5/13	2443276.5	-8.22058	-27.04856	-10.87311	5.18356	-1.28680	-0.65750	30.28906	5.38121	253.09	-21.04
77/ 5/17	2443280.5	-8.20861	-27.05153	-10.87462	5.18414	-1.28487	-0.65673	30.28901	5.38122	253.12	-21.04
77/ 5/21	2443284.5	-8.19663	-27.05450	-10.87614	5.18473	-1.28295	-0.65596	30.28896	5.38123	253.14	-21.04
77/ 5/25	2443288.5	-8.18465	-27.05746	-10.87766	5.18532	-1.28102	-0.65518	30.28891	5.38125	253.17	-21.05
77/ 5/29	2443292.5	-8.17267	-27.06042	-10.87917	5.18590	-1.27909	-0.65441	30.28886	5.38126	253.19	-21.05
77/ 6/ 2	2443296.5	-8.16069	-27.06337	-10.88068	5.18649	-1.27717	-0.65364	30.28881	5.38127	253.22	-21.05
77/ 6/ 6	2443300.5	-8.14871	-27.06632	-10.88219	5.18707	-1.27524	-0.65286	30.28876	5.38128	253.24	-21.06
77/ 6/10	2443304.5	-8.13673	-27.06926	-10.88370	5.18766	-1.27331	-0.65209	30.28871	5.38130	253.27	-21.06
77/ 6/14	2443308.5	-8.12474	-27.07220	-10.88520	5.18824	-1.27139	-0.65132	30.28866	5.38131	253.29	-21.06
77/ 6/18	2443312.5	-8.11276	-27.07514	-10.88670	5.18883	-1.26946	-0.65054	30.28862	5.38133	253.32	-21.07
77/ 6/22	2443316.5	-8.10077	-27.07807	-10.88821	5.18941	-1.26753	-0.64977	30.28857	5.38134	253.34	-21.07
77/ 6/26	2443320.5	-8.08878	-27.08099	-10.88971	5.18999	-1.26560	-0.64900	30.28852	5.38136	253.37	-21.07
77/ 6/30	2443324.5	-8.07679	-27.08392	-10.89121	5.19058	-1.26368	-0.64822	30.28847	5.38137	253.39	-21.07
77/ 7/ 4	2443328.5	-8.06480	-27.08683	-10.89270	5.19116	-1.26175	-0.64745	30.28842	5.38139	253.42	-21.08
77/ 7/ 8	2443332.5	-8.05280	-27.08975	-10.89420	5.19174	-1.25982	-0.64668	30.28837	5.38140	253.44	-21.08
77/ 7/12	2443336.5	-8.04081	-27.09265	-10.89569	5.19232	-1.25789	-0.64590	30.28832	5.38142	253.47	-21.08
77/ 7/16	2443340.5	-8.02881	-27.09556	-10.89718	5.19290	-1.25596	-0.64513	30.28828	5.38144	253.49	-21.09
77/ 7/20	2443344.5	-8.01682	-27.09846	-10.89867	5.19348	-1.25403	-0.64435	30.28823	5.38146	253.52	-21.09
77/ 7/24	2443348.5	-8.00482	-27.10135	-10.90016	5.19406	-1.25210	-0.64358	30.28818	5.38147	253.54	-21.09
77/ 7/28	2443352.5	-7.99282	-27.10424	-10.90164	5.19464	-1.25017	-0.64281	30.28813	5.38149	253.57	-21.10
77/ 8/ 1	2443356.5	-7.98082	-27.10713	-10.90313	5.19522	-1.24825	-0.64203	30.28808	5.38151	253.59	-21.10
77/ 8/ 5	2443360.5	-7.96881	-27.11001	-10.90461	5.19580	-1.24632	-0.64126	30.28804	5.38153	253.62	-21.10
77/ 8/ 9	2443364.5	-7.95681	-27.11289	-10.90609	5.19638	-1.24439	-0.64048	30.28799	5.38155	253.64	-21.11
77/ 8/13	2443368.5	-7.94480	-27.11576	-10.90757	5.19696	-1.24246	-0.63971	30.28794	5.38157	253.67	-21.11
77/ 8/17	2443372.5	-7.93280	-27.11863	-10.90905	5.19754	-1.24053	-0.63893	30.28789	5.38159	253.69	-21.11
77/ 8/21	2443376.5	-7.92079	-27.12149	-10.91052	5.19811	-1.23860	-0.63816	30.28785	5.38161	253.72	-21.11
77/ 8/25	2443380.5	-7.90878	-27.12435	-10.91200	5.19869	-1.23666	-0.63738	30.28780	5.38163	253.74	-21.12
77/ 8/29	2443384.5	-7.89677	-27.12720	-10.91347	5.19927	-1.23473	-0.63661	30.28775	5.38166	253.77	-21.12
77/ 9/ 2	2443388.5	-7.88476	-27.13005	-10.91494	5.19984	-1.23280	-0.63583	30.28771	5.38168	253.79	-21.12
77/ 9/ 6	2443392.5	-7.87275	-27.13290	-10.91640	5.20042	-1.23087	-0.63506	30.28766	5.38170	253.82	-21.13
77/ 9/10	2443396.5	-7.86073	-27.13574	-10.91787	5.20099	-1.22894	-0.63428	30.28761	5.38172	253.84	-21.13
77/ 9/14	2443400.5	-7.84871	-27.13858	-10.91934	5.20157	-1.22701	-0.63351	30.28757	5.38175	253.87	-21.13
77/ 9/18	2443404.5	-7.83670	-27.14141	-10.92080	5.20214	-1.22508	-0.63273	30.28752	5.38177	253.89	-21.14
77/ 9/22	2443408.5	-7.82468	-27.14424	-10.92226	5.20272	-1.22314	-0.63196	30.28747	5.38180	253.92	-21.14
77/ 9/26	2443412.5	-7.81266	-27.14706	-10.92372	5.20329	-1.22121	-0.63118	30.28743	5.38182	253.94	-21.14
77/ 9/30	2443416.5	-7.80064	-27.14988	-10.92518	5.20386	-1.21928	-0.63041	30.28738	5.38184	253.97	-21.14
77/10/ 4	2443420.5	-7.78862	-27.15270	-10.92663	5.20444	-1.21735	-0.62963	30.28733	5.38187	253.99	-21.15
77/10/ 8	2443424.5	-7.77659	-27.15551	-10.92808	5.20501	-1.21541	-0.62885	30.28729	5.38190	254.02	-21.15
77/10/12	2443428.5	-7.76457	-27.15831	-10.92954	5.20558	-1.21348	-0.62808	30.28724	5.38192	254.04	-21.15
77/10/16	2443432.5	-7.75254	-27.16111	-10.93099	5.20615	-1.21155	-0.62730	30.28720	5.38195	254.07	-21.16
77/10/20	2443436.5	-7.74051	-27.16391	-10.93243	5.20672	-1.20961	-0.62653	30.28715	5.38198	254.09	-21.16
77/10/24	2443440.5	-7.72848	-27.16670	-10.93388	5.20729	-1.20768	-0.62575	30.28711	5.38200	254.12	-21.16
77/10/28	2443444.5	-7.71645	-27.16949	-10.93533	5.20786	-1.20575	-0.62497	30.28706	5.38203	254.14	-21.17
77/11/ 1	2443448.5	-7.70442	-27.17227	-10.93677	5.20843	-1.20381	-0.62420	30.28702	5.38206	254.17	-21.17

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77/11/ 5	2443452.5	-7.69239	-27.17505	-10.93821	5.20900	-1.20188	-0.62342	30.28697	5.38209	254.19	-21.17
77/11/ 9	2443456.5	-7.68035	-27.17783	-10.93965	5.20957	-1.19994	-0.62264	30.28693	5.38212	254.22	-21.17
77/11/13	2443460.5	-7.66832	-27.18060	-10.94109	5.21014	-1.19801	-0.62187	30.28688	5.38215	254.24	-21.18
77/11/17	2443464.5	-7.65628	-27.18336	-10.94252	5.21071	-1.19607	-0.62109	30.28684	5.38218	254.27	-21.18
77/11/21	2443468.5	-7.64424	-27.18612	-10.94396	5.21128	-1.19414	-0.62031	30.28679	5.38221	254.29	-21.18
77/11/25	2443472.5	-7.63220	-27.18888	-10.94539	5.21184	-1.19220	-0.61953	30.28675	5.38224	254.32	-21.19
77/11/29	2443476.5	-7.62016	-27.19163	-10.94682	5.21241	-1.19026	-0.61876	30.28670	5.38227	254.35	-21.19
77/12/ 3	2443480.5	-7.60812	-27.19438	-10.94825	5.21297	-1.18833	-0.61798	30.28666	5.38230	254.37	-21.19
77/12/ 7	2443484.5	-7.59608	-27.19712	-10.94967	5.21354	-1.18639	-0.61720	30.28662	5.38233	254.40	-21.19
77/12/11	2443488.5	-7.58403	-27.19986	-10.95110	5.21411	-1.18445	-0.61642	30.28657	5.38236	254.42	-21.20
77/12/15	2443492.5	-7.57199	-27.20259	-10.95252	5.21467	-1.18252	-0.61565	30.28653	5.38239	254.45	-21.20
77/12/19	2443496.5	-7.55994	-27.20532	-10.95394	5.21524	-1.18058	-0.61487	30.28648	5.38243	254.47	-21.20
77/12/23	2443500.5	-7.54789	-27.20805	-10.95536	5.21580	-1.17864	-0.61409	30.28644	5.38246	254.50	-21.21
77/12/27	2443504.5	-7.53584	-27.21077	-10.95678	5.21636	-1.17670	-0.61331	30.28640	5.38249	254.52	-21.21
77/12/31	2443508.5	-7.52379	-27.21348	-10.95820	5.21693	-1.17477	-0.61253	30.28635	5.38253	254.55	-21.21
78/ 1/ 4	2443512.5	-7.51173	-27.21620	-10.95961	5.21749	-1.17283	-0.61175	30.28631	5.38256	254.57	-21.21
78/ 1/ 8	2443516.5	-7.49968	-27.21890	-10.96102	5.21805	-1.17089	-0.61098	30.28627	5.38259	254.60	-21.22
78/ 1/12	2443520.5	-7.48763	-27.22161	-10.96243	5.21861	-1.16895	-0.61020	30.28622	5.38263	254.62	-21.22
78/ 1/16	2443524.5	-7.47557	-27.22430	-10.96384	5.21917	-1.16701	-0.60942	30.28618	5.38267	254.65	-21.22
78/ 1/20	2443528.5	-7.46351	-27.22700	-10.96525	5.21974	-1.16507	-0.60864	30.28614	5.38270	254.67	-21.23
78/ 1/24	2443532.5	-7.45145	-27.22969	-10.96665	5.22030	-1.16313	-0.60786	30.28609	5.38274	254.70	-21.23
78/ 1/28	2443536.5	-7.43939	-27.23237	-10.96806	5.22086	-1.16119	-0.60708	30.28605	5.38277	254.72	-21.23
78/ 2/ 1	2443540.5	-7.42733	-27.23505	-10.96946	5.22142	-1.15925	-0.60630	30.28601	5.38281	254.75	-21.24
78/ 2/ 5	2443544.5	-7.41527	-27.23773	-10.97086	5.22197	-1.15731	-0.60552	30.28597	5.38285	254.77	-21.24
78/ 2/ 9	2443548.5	-7.40320	-27.24040	-10.97226	5.22253	-1.15537	-0.60474	30.28592	5.38288	254.80	-21.24
78/ 2/13	2443552.5	-7.39114	-27.24307	-10.97365	5.22309	-1.15343	-0.60396	30.28588	5.38292	254.82	-21.24
78/ 2/17	2443556.5	-7.37907	-27.24573	-10.97505	5.22365	-1.15149	-0.60318	30.28584	5.38296	254.85	-21.25
78/ 2/21	2443560.5	-7.36700	-27.24839	-10.97644	5.22421	-1.14954	-0.60240	30.28580	5.38300	254.87	-21.25
78/ 2/25	2443564.5	-7.35493	-27.25104	-10.97783	5.22476	-1.14760	-0.60162	30.28576	5.38304	254.90	-21.25
78/ 3/ 1	2443568.5	-7.34286	-27.25369	-10.97922	5.22532	-1.14566	-0.60084	30.28571	5.38308	254.92	-21.26
78/ 3/ 5	2443572.5	-7.33079	-27.25633	-10.98061	5.22588	-1.14372	-0.60006	30.28567	5.38312	254.95	-21.26
78/ 3/ 9	2443576.5	-7.31872	-27.25897	-10.98199	5.22643	-1.14177	-0.59928	30.28563	5.38316	254.97	-21.26
78/ 3/13	2443580.5	-7.30664	-27.26161	-10.98338	5.22699	-1.13983	-0.59850	30.28559	5.38320	255.00	-21.26
78/ 3/17	2443584.5	-7.29457	-27.26424	-10.98476	5.22754	-1.13789	-0.59772	30.28555	5.38324	255.02	-21.27
78/ 3/21	2443588.5	-7.28249	-27.26687	-10.98614	5.22809	-1.13594	-0.59694	30.28551	5.38328	255.05	-21.27
78/ 3/25	2443592.5	-7.27041	-27.26949	-10.98752	5.22865	-1.13400	-0.59616	30.28546	5.38332	255.07	-21.27
78/ 3/29	2443596.5	-7.25833	-27.27211	-10.98889	5.22920	-1.13205	-0.59538	30.28542	5.38336	255.10	-21.27
78/ 4/ 2	2443600.5	-7.24625	-27.27472	-10.99027	5.22975	-1.13011	-0.59459	30.28538	5.38340	255.12	-21.28
78/ 4/ 6	2443604.5	-7.23417	-27.27733	-10.99164	5.23031	-1.12816	-0.59381	30.28534	5.38344	255.15	-21.28
78/ 4/10	2443608.5	-7.22208	-27.27993	-10.99301	5.23086	-1.12622	-0.59303	30.28530	5.38349	255.17	-21.28
78/ 4/14	2443612.5	-7.21000	-27.28253	-10.99438	5.23141	-1.12427	-0.59225	30.28526	5.38353	255.20	-21.29
78/ 4/18	2443616.5	-7.19791	-27.28513	-10.99575	5.23196	-1.12232	-0.59147	30.28522	5.38357	255.22	-21.29
78/ 4/22	2443620.5	-7.18583	-27.28772	-10.99711	5.23251	-1.12038	-0.59068	30.28518	5.38362	255.25	-21.29
78/ 4/26	2443624.5	-7.17374	-27.29030	-10.99848	5.23306	-1.11843	-0.58990	30.28514	5.38366	255.27	-21.29
78/ 4/30	2443628.5	-7.16165	-27.29288	-10.99984	5.23361	-1.11648	-0.58912	30.28510	5.38370	255.30	-21.30

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78/ 5/ 4	2443632.5	-7.14956	-27.29546	-11.00120	5.23416	-1.11453	-0.58834	30.28506	5.38375	255.32	-21.30
78/ 5/ 8	2443636.5	-7.13746	-27.29803	-11.00256	5.23471	-1.11259	-0.58755	30.28502	5.38379	255.35	-21.30
78/ 5/12	2443640.5	-7.12537	-27.30060	-11.00391	5.23526	-1.11064	-0.58677	30.28498	5.38384	255.37	-21.31
78/ 5/16	2443644.5	-7.11327	-27.30316	-11.00527	5.23580	-1.10869	-0.58599	30.28494	5.38388	255.40	-21.31
78/ 5/20	2443648.5	-7.10118	-27.30572	-11.00662	5.23635	-1.10674	-0.58520	30.28490	5.38393	255.42	-21.31
78/ 5/24	2443652.5	-7.08908	-27.30828	-11.00797	5.23690	-1.10479	-0.58442	30.28486	5.38398	255.45	-21.31
78/ 5/28	2443656.5	-7.07698	-27.31083	-11.00932	5.23744	-1.10284	-0.58364	30.28482	5.38402	255.47	-21.32
78/ 6/ 1	2443660.5	-7.06488	-27.31337	-11.01067	5.23799	-1.10089	-0.58285	30.28478	5.38407	255.50	-21.32
78/ 6/ 5	2443664.5	-7.05278	-27.31591	-11.01201	5.23853	-1.09894	-0.58207	30.28474	5.38412	255.52	-21.32
78/ 6/ 9	2443668.5	-7.04068	-27.31845	-11.01336	5.23908	-1.09699	-0.58129	30.28470	5.38416	255.55	-21.33
78/ 6/13	2443672.5	-7.02857	-27.32098	-11.01470	5.23962	-1.09504	-0.58050	30.28466	5.38421	255.57	-21.33
78/ 6/17	2443676.5	-7.01647	-27.32351	-11.01604	5.24017	-1.09309	-0.57972	30.28462	5.38426	255.60	-21.33
78/ 6/21	2443680.5	-7.00436	-27.32603	-11.01738	5.24071	-1.09114	-0.57893	30.28458	5.38431	255.62	-21.33
78/ 6/25	2443684.5	-6.99225	-27.32855	-11.01871	5.24125	-1.08918	-0.57815	30.28454	5.38436	255.65	-21.34
78/ 6/29	2443688.5	-6.98015	-27.33107	-11.02005	5.24179	-1.08723	-0.57736	30.28450	5.38441	255.67	-21.34
78/ 7/ 3	2443692.5	-6.96804	-27.33358	-11.02138	5.24234	-1.08528	-0.57658	30.28446	5.38445	255.70	-21.34
78/ 7/ 7	2443696.5	-6.95592	-27.33608	-11.02271	5.24288	-1.08332	-0.57579	30.28442	5.38450	255.72	-21.34
78/ 7/11	2443700.5	-6.94381	-27.33858	-11.02404	5.24342	-1.08137	-0.57501	30.28439	5.38455	255.75	-21.35
78/ 7/15	2443704.5	-6.93170	-27.34108	-11.02537	5.24396	-1.07942	-0.57422	30.28435	5.38460	255.77	-21.35
78/ 7/19	2443708.5	-6.91958	-27.34357	-11.02670	5.24450	-1.07746	-0.57344	30.28431	5.38465	255.80	-21.35
78/ 7/23	2443712.5	-6.90747	-27.34606	-11.02802	5.24504	-1.07551	-0.57265	30.28427	5.38471	255.82	-21.36
78/ 7/27	2443716.5	-6.89535	-27.34854	-11.02934	5.24557	-1.07355	-0.57187	30.28423	5.38476	255.85	-21.36
78/ 7/31	2443720.5	-6.88323	-27.35102	-11.03066	5.24611	-1.07160	-0.57108	30.28419	5.38481	255.87	-21.36
78/ 8/ 4	2443724.5	-6.87111	-27.35349	-11.03198	5.24665	-1.06964	-0.57029	30.28416	5.38486	255.90	-21.36
78/ 8/ 8	2443728.5	-6.85899	-27.35596	-11.03330	5.24719	-1.06769	-0.56951	30.28412	5.38491	255.92	-21.37
78/ 8/12	2443732.5	-6.84687	-27.35842	-11.03461	5.24772	-1.06573	-0.56872	30.28408	5.38496	255.95	-21.37
78/ 8/16	2443736.5	-6.83474	-27.36088	-11.03592	5.24826	-1.06377	-0.56793	30.28404	5.38502	255.97	-21.37
78/ 8/20	2443740.5	-6.82262	-27.36334	-11.03723	5.24880	-1.06182	-0.56715	30.28400	5.38507	256.00	-21.37
78/ 8/24	2443744.5	-6.81049	-27.36579	-11.03854	5.24933	-1.05986	-0.56636	30.28397	5.38512	256.02	-21.38
78/ 8/28	2443748.5	-6.79836	-27.36823	-11.03985	5.24987	-1.05790	-0.56557	30.28393	5.38517	256.05	-21.38
78/ 9/ 1	2443752.5	-6.78624	-27.37068	-11.04116	5.25040	-1.05594	-0.56478	30.28389	5.38523	256.07	-21.38
78/ 9/ 5	2443756.5	-6.77411	-27.37311	-11.04246	5.25093	-1.05398	-0.56400	30.28385	5.38528	256.10	-21.38
78/ 9/ 9	2443760.5	-6.76197	-27.37555	-11.04376	5.25147	-1.05202	-0.56321	30.28381	5.38534	256.13	-21.39
78/ 9/13	2443764.5	-6.74984	-27.37797	-11.04506	5.25200	-1.05006	-0.56242	30.28378	5.38539	256.15	-21.39
78/ 9/17	2443768.5	-6.73771	-27.38040	-11.04636	5.25253	-1.04810	-0.56163	30.28374	5.38545	256.18	-21.39
78/ 9/21	2443772.5	-6.72557	-27.38282	-11.04766	5.25306	-1.04614	-0.56084	30.28370	5.38550	256.20	-21.40
78/ 9/25	2443776.5	-6.71344	-27.38523	-11.04895	5.25359	-1.04418	-0.56005	30.28367	5.38556	256.23	-21.40
78/ 9/29	2443780.5	-6.70130	-27.38764	-11.05025	5.25412	-1.04222	-0.55927	30.28363	5.38561	256.25	-21.40
78/10/ 3	2443784.5	-6.68916	-27.39005	-11.05154	5.25465	-1.04026	-0.55848	30.28359	5.38567	256.28	-21.40
78/10/ 7	2443788.5	-6.67702	-27.39245	-11.05283	5.25518	-1.03830	-0.55769	30.28355	5.38572	256.30	-21.41
78/10/11	2443792.5	-6.66488	-27.39484	-11.05411	5.25571	-1.03634	-0.55690	30.28352	5.38578	256.33	-21.41
78/10/15	2443796.5	-6.65274	-27.39723	-11.05540	5.25624	-1.03437	-0.55611	30.28348	5.38584	256.35	-21.41
78/10/19	2443800.5	-6.64059	-27.39962	-11.05668	5.25677	-1.03241	-0.55532	30.28344	5.38589	256.38	-21.41
78/10/23	2443804.5	-6.62845	-27.40200	-11.05797	5.25729	-1.03045	-0.55453	30.28341	5.38595	256.40	-21.42
78/10/27	2443808.5	-6.61630	-27.40438	-11.05925	5.25782	-1.02848	-0.55374	30.28337	5.38601	256.43	-21.42

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78/10/31	2443812.5	-6.60416	-27.40676	-11.06052	5.25835	-1.02652	-0.55295	30.28333	5.38606	256.45	-21.42
78/11/ 4	2443816.5	-6.59201	-27.40913	-11.06180	5.25887	-1.02455	-0.55216	30.28330	5.38612	256.48	-21.42
78/11/ 8	2443820.5	-6.57986	-27.41149	-11.06307	5.25940	-1.02259	-0.55137	30.28326	5.38618	256.50	-21.43
78/11/12	2443824.5	-6.56771	-27.41385	-11.06435	5.25992	-1.02062	-0.55058	30.28323	5.38624	256.53	-21.43
78/11/16	2443828.5	-6.55556	-27.41621	-11.06562	5.26044	-1.01866	-0.54979	30.28319	5.38630	256.55	-21.43
78/11/20	2443832.5	-6.54340	-27.41856	-11.06689	5.26097	-1.01669	-0.54900	30.28315	5.38636	256.58	-21.44
78/11/24	2443836.5	-6.53125	-27.42090	-11.06816	5.26149	-1.01472	-0.54820	30.28312	5.38642	256.60	-21.44
78/11/28	2443840.5	-6.51909	-27.42325	-11.06942	5.26201	-1.01276	-0.54741	30.28308	5.38648	256.63	-21.44
78/12/ 2	2443844.5	-6.50694	-27.42558	-11.07068	5.26253	-1.01079	-0.54662	30.28305	5.38653	256.65	-21.44
78/12/ 6	2443848.5	-6.49478	-27.42792	-11.07195	5.26306	-1.00882	-0.54583	30.28301	5.38659	256.68	-21.45
78/12/10	2443852.5	-6.48262	-27.43024	-11.07321	5.26358	-1.00685	-0.54504	30.28297	5.38665	256.70	-21.45
78/12/14	2443856.5	-6.47046	-27.43257	-11.07446	5.26410	-1.00488	-0.54425	30.28294	5.38671	256.73	-21.45
78/12/18	2443860.5	-6.45830	-27.43489	-11.07572	5.26461	-1.00291	-0.54345	30.28290	5.38678	256.75	-21.45
78/12/22	2443864.5	-6.44613	-27.43720	-11.07698	5.26513	-1.00095	-0.54266	30.28287	5.38684	256.78	-21.46
78/12/26	2443868.5	-6.43397	-27.43951	-11.07823	5.26565	-0.99898	-0.54187	30.28283	5.38690	256.80	-21.46
78/12/30	2443872.5	-6.42181	-27.44182	-11.07948	5.26617	-0.99700	-0.54107	30.28280	5.38696	256.83	-21.46
79/ 1/ 3	2443876.5	-6.40964	-27.44412	-11.08073	5.26669	-0.99503	-0.54028	30.28276	5.38702	256.85	-21.46
79/ 1/ 7	2443880.5	-6.39747	-27.44641	-11.08198	5.26720	-0.99306	-0.53949	30.28273	5.38708	256.88	-21.47
79/ 1/11	2443884.5	-6.38530	-27.44871	-11.08322	5.26772	-0.99109	-0.53869	30.28269	5.38714	256.90	-21.47
79/ 1/15	2443888.5	-6.37313	-27.45099	-11.08446	5.26823	-0.98912	-0.53790	30.28266	5.38721	256.93	-21.47
79/ 1/19	2443892.5	-6.36096	-27.45328	-11.08571	5.26875	-0.98715	-0.53711	30.28262	5.38727	256.95	-21.47
79/ 1/23	2443896.5	-6.34879	-27.45555	-11.08695	5.26926	-0.98517	-0.53631	30.28259	5.38733	256.98	-21.48
79/ 1/27	2443900.5	-6.33662	-27.45783	-11.08818	5.26978	-0.98320	-0.53552	30.28255	5.38739	257.00	-21.48
79/ 1/31	2443904.5	-6.32444	-27.46010	-11.08942	5.27029	-0.98123	-0.53472	30.28252	5.38746	257.03	-21.48
79/ 2/ 4	2443908.5	-6.31227	-27.46236	-11.09065	5.27080	-0.97925	-0.53393	30.28248	5.38752	257.06	-21.48
79/ 2/ 8	2443912.5	-6.30009	-27.46462	-11.09189	5.27131	-0.97728	-0.53313	30.28245	5.38758	257.08	-21.49
79/ 2/12	2443916.5	-6.28791	-27.46688	-11.09312	5.27182	-0.97530	-0.53234	30.28241	5.38765	257.11	-21.49
79/ 2/16	2443920.5	-6.27573	-27.46913	-11.09435	5.27234	-0.97333	-0.53154	30.28238	5.38771	257.13	-21.49
79/ 2/20	2443924.5	-6.26355	-27.47137	-11.09557	5.27285	-0.97135	-0.53075	30.28234	5.38777	257.16	-21.49
79/ 2/24	2443928.5	-6.25137	-27.47362	-11.09680	5.27335	-0.96937	-0.52995	30.28231	5.38784	257.18	-21.50
79/ 2/28	2443932.5	-6.23919	-27.47585	-11.09802	5.27386	-0.96740	-0.52916	30.28227	5.38790	257.21	-21.50
79/ 3/ 4	2443936.5	-6.22700	-27.47809	-11.09924	5.27437	-0.96542	-0.52836	30.28224	5.38797	257.23	-21.50
79/ 3/ 8	2443940.5	-6.21482	-27.48031	-11.10046	5.27488	-0.96344	-0.52756	30.28220	5.38803	257.26	-21.50
79/ 3/12	2443944.5	-6.20263	-27.48254	-11.10168	5.27539	-0.96146	-0.52677	30.28217	5.38810	257.28	-21.51
79/ 3/16	2443948.5	-6.19044	-27.48476	-11.10290	5.27589	-0.95949	-0.52597	30.28214	5.38816	257.31	-21.51
79/ 3/20	2443952.5	-6.17825	-27.48697	-11.10411	5.27640	-0.95751	-0.52517	30.28210	5.38823	257.33	-21.51
79/ 3/24	2443956.5	-6.16606	-27.48918	-11.10532	5.27690	-0.95553	-0.52438	30.28207	5.38829	257.36	-21.51
79/ 3/28	2443960.5	-6.15387	-27.49139	-11.10653	5.27741	-0.95355	-0.52358	30.28203	5.38836	257.38	-21.52
79/ 4/ 1	2443964.5	-6.14168	-27.49359	-11.10774	5.27791	-0.95157	-0.52278	30.28200	5.38843	257.41	-21.52
79/ 4/ 5	2443968.5	-6.12949	-27.49578	-11.10895	5.27842	-0.94959	-0.52199	30.28196	5.38849	257.43	-21.52
79/ 4/ 9	2443972.5	-6.11729	-27.49797	-11.11015	5.27892	-0.94761	-0.52119	30.28193	5.38856	257.46	-21.52
79/ 4/13	2443976.5	-6.10510	-27.50016	-11.11136	5.27942	-0.94562	-0.52039	30.28190	5.38863	257.48	-21.53
79/ 4/17	2443980.5	-6.09290	-27.50234	-11.11256	5.27992	-0.94364	-0.51959	30.28186	5.38869	257.51	-21.53
79/ 4/21	2443984.5	-6.08070	-27.50452	-11.11376	5.28042	-0.94166	-0.51879	30.28183	5.38876	257.53	-21.53
79/ 4/25	2443988.5	-6.06850	-27.50669	-11.11496	5.28092	-0.93968	-0.51799	30.28180	5.38883	257.56	-21.53

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79/ 4/29	2443992.5	-6.05630	-27.50886	-11.11615	5.28142	-0.93769	-0.51720	30.28176	5.38889	257.58	-21.54
79/ 5/ 3	2443996.5	-6.04410	-27.51103	-11.11735	5.28192	-0.93571	-0.51640	30.28173	5.38896	257.61	-21.54
79/ 5/ 7	2444000.5	-6.03190	-27.51319	-11.11854	5.28242	-0.93373	-0.51560	30.28169	5.38903	257.63	-21.54
79/ 5/11	2444004.5	-6.01969	-27.51534	-11.11973	5.28292	-0.93174	-0.51480	30.28166	5.38910	257.66	-21.54
79/ 5/15	2444008.5	-6.00749	-27.51749	-11.12092	5.28341	-0.92976	-0.51400	30.28163	5.38917	257.68	-21.55
79/ 5/19	2444012.5	-5.99528	-27.51964	-11.12210	5.28391	-0.92777	-0.51320	30.28159	5.38923	257.71	-21.55
79/ 5/23	2444016.5	-5.98307	-27.52178	-11.12329	5.28441	-0.92578	-0.51240	30.28156	5.38930	257.74	-21.55
79/ 5/27	2444020.5	-5.97087	-27.52391	-11.12447	5.28490	-0.92380	-0.51160	30.28153	5.38937	257.76	-21.55
79/ 5/31	2444024.5	-5.95866	-27.52605	-11.12565	5.28540	-0.92181	-0.51080	30.28149	5.38944	257.79	-21.56
79/ 6/ 4	2444028.5	-5.94644	-27.52817	-11.12683	5.28589	-0.91982	-0.51000	30.28146	5.38951	257.81	-21.56
79/ 6/ 8	2444032.5	-5.93423	-27.53030	-11.12801	5.28638	-0.91784	-0.50920	30.28143	5.38958	257.84	-21.56
79/ 6/12	2444036.5	-5.92202	-27.53241	-11.12918	5.28688	-0.91585	-0.50839	30.28139	5.38965	257.86	-21.56
79/ 6/16	2444040.5	-5.90981	-27.53453	-11.13036	5.28737	-0.91386	-0.50759	30.28136	5.38972	257.89	-21.57
79/ 6/20	2444044.5	-5.89759	-27.53664	-11.13153	5.28786	-0.91187	-0.50679	30.28133	5.38979	257.91	-21.57
79/ 6/24	2444048.5	-5.88537	-27.53874	-11.13270	5.28835	-0.90988	-0.50599	30.28129	5.38986	257.94	-21.57
79/ 6/28	2444052.5	-5.87316	-27.54084	-11.13387	5.28884	-0.90789	-0.50519	30.28126	5.38993	257.96	-21.57
79/ 7/ 2	2444056.5	-5.86094	-27.54293	-11.13503	5.28933	-0.90590	-0.50439	30.28123	5.39000	257.99	-21.58
79/ 7/ 6	2444060.5	-5.84872	-27.54503	-11.13620	5.28982	-0.90391	-0.50358	30.28119	5.39007	258.01	-21.58
79/ 7/10	2444064.5	-5.83650	-27.54711	-11.13736	5.29031	-0.90192	-0.50278	30.28116	5.39014	258.04	-21.58
79/ 7/14	2444068.5	-5.82427	-27.54919	-11.13852	5.29079	-0.89992	-0.50198	30.28113	5.39021	258.06	-21.58
79/ 7/18	2444072.5	-5.81205	-27.55127	-11.13968	5.29128	-0.89793	-0.50117	30.28110	5.39028	258.09	-21.58
79/ 7/22	2444076.5	-5.79983	-27.55334	-11.14084	5.29177	-0.89594	-0.50037	30.28106	5.39035	258.11	-21.59
79/ 7/26	2444080.5	-5.78760	-27.55541	-11.14199	5.29225	-0.89395	-0.49957	30.28103	5.39042	258.14	-21.59
79/ 7/30	2444084.5	-5.77538	-27.55747	-11.14314	5.29274	-0.89195	-0.49876	30.28100	5.39049	258.16	-21.59
79/ 8/ 3	2444088.5	-5.76315	-27.55953	-11.14429	5.29322	-0.88996	-0.49796	30.28096	5.39056	258.19	-21.59
79/ 8/ 7	2444092.5	-5.75092	-27.56158	-11.14544	5.29370	-0.88796	-0.49716	30.28093	5.39063	258.21	-21.60
79/ 8/11	2444096.5	-5.73869	-27.56363	-11.14659	5.29419	-0.88597	-0.49635	30.28090	5.39071	258.24	-21.60
79/ 8/15	2444100.5	-5.72646	-27.56568	-11.14774	5.29467	-0.88397	-0.49555	30.28087	5.39078	258.26	-21.60
79/ 8/19	2444104.5	-5.71423	-27.56772	-11.14888	5.29515	-0.88198	-0.49474	30.28083	5.39085	258.29	-21.60
79/ 8/23	2444108.5	-5.70199	-27.56975	-11.15002	5.29563	-0.87998	-0.49394	30.28080	5.39092	258.31	-21.61
79/ 8/27	2444112.5	-5.68976	-27.57178	-11.15116	5.29611	-0.87798	-0.49313	30.28077	5.39099	258.34	-21.61
79/ 8/31	2444116.5	-5.67752	-27.57381	-11.15230	5.29659	-0.87599	-0.49233	30.28074	5.39107	258.37	-21.61
79/ 9/ 4	2444120.5	-5.66529	-27.57583	-11.15344	5.29707	-0.87399	-0.49152	30.28070	5.39114	258.39	-21.61
79/ 9/ 8	2444124.5	-5.65305	-27.57785	-11.15457	5.29754	-0.87199	-0.49072	30.28067	5.39121	258.42	-21.62
79/ 9/12	2444128.5	-5.64081	-27.57986	-11.15571	5.29802	-0.86999	-0.48991	30.28064	5.39128	258.44	-21.62
79/ 9/16	2444132.5	-5.62857	-27.58187	-11.15684	5.29850	-0.86799	-0.48910	30.28061	5.39136	258.47	-21.62
79/ 9/20	2444136.5	-5.61633	-27.58387	-11.15797	5.29897	-0.86599	-0.48830	30.28057	5.39143	258.49	-21.62
79/ 9/24	2444140.5	-5.60409	-27.58587	-11.15909	5.29945	-0.86399	-0.48749	30.28054	5.39150	258.52	-21.62
79/ 9/28	2444144.5	-5.59184	-27.58786	-11.16022	5.29992	-0.86199	-0.48668	30.28051	5.39157	258.54	-21.63
79/10/ 2	2444148.5	-5.57960	-27.58985	-11.16134	5.30040	-0.85999	-0.48588	30.28048	5.39165	258.57	-21.63
79/10/ 6	2444152.5	-5.56735	-27.59183	-11.16246	5.30087	-0.85799	-0.48507	30.28044	5.39172	258.59	-21.63
79/10/10	2444156.5	-5.55511	-27.59381	-11.16358	5.30134	-0.85599	-0.48426	30.28041	5.39179	258.62	-21.63
79/10/14	2444160.5	-5.54286	-27.59579	-11.16470	5.30181	-0.85398	-0.48346	30.28038	5.39187	258.64	-21.64
79/10/18	2444164.5	-5.53061	-27.59776	-11.16582	5.30228	-0.85198	-0.48265	30.28035	5.39194	258.67	-21.64
79/10/22	2444168.5	-5.51836	-27.59973	-11.16693	5.30275	-0.84998	-0.48184	30.28032	5.39202	258.69	-21.64

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79/10/26	2444172.5	-5.50611	-27.60169	-11.16804	5.30322	-0.84797	-0.48103	30.28028	5.39209	258.72	-21.64
79/10/30	2444176.5	-5.49386	-27.60364	-11.16915	5.30369	-0.84597	-0.48022	30.28025	5.39216	258.74	-21.65
79/11/ 3	2444180.5	-5.48160	-27.60560	-11.17026	5.30416	-0.84396	-0.47941	30.28022	5.39224	258.77	-21.65
79/11/ 7	2444184.5	-5.46935	-27.60754	-11.17137	5.30463	-0.84196	-0.47861	30.28019	5.39231	258.79	-21.65
79/11/11	2444188.5	-5.45710	-27.60949	-11.17247	5.30509	-0.83995	-0.47780	30.28015	5.39239	258.82	-21.65
79/11/15	2444192.5	-5.44484	-27.61142	-11.17358	5.30556	-0.83795	-0.47699	30.28012	5.39246	258.84	-21.65
79/11/19	2444196.5	-5.43258	-27.61336	-11.17468	5.30602	-0.83594	-0.47618	30.28009	5.39254	258.87	-21.66
79/11/23	2444200.5	-5.42032	-27.61529	-11.17578	5.30649	-0.83393	-0.47537	30.28006	5.39261	258.90	-21.66
79/11/27	2444204.5	-5.40806	-27.61721	-11.17687	5.30695	-0.83193	-0.47456	30.28003	5.39269	258.92	-21.66
79/12/ 1	2444208.5	-5.39580	-27.61913	-11.17797	5.30742	-0.82992	-0.47375	30.27999	5.39276	258.95	-21.66
79/12/ 5	2444212.5	-5.38354	-27.62105	-11.17906	5.30788	-0.82791	-0.47294	30.27996	5.39283	258.97	-21.67
79/12/ 9	2444216.5	-5.37128	-27.62296	-11.18015	5.30834	-0.82590	-0.47213	30.27993	5.39291	259.00	-21.67
79/12/13	2444220.5	-5.35902	-27.62486	-11.18124	5.30880	-0.82389	-0.47132	30.27990	5.39299	259.02	-21.67
79/12/17	2444224.5	-5.34675	-27.62676	-11.18233	5.30926	-0.82188	-0.47050	30.27987	5.39306	259.05	-21.67
79/12/21	2444228.5	-5.33449	-27.62866	-11.18342	5.30972	-0.81987	-0.46969	30.27983	5.39314	259.07	-21.67
79/12/25	2444232.5	-5.32222	-27.63055	-11.18450	5.31018	-0.81786	-0.46888	30.27980	5.39321	259.10	-21.68
79/12/29	2444236.5	-5.30995	-27.63244	-11.18558	5.31064	-0.81585	-0.46807	30.27977	5.39329	259.12	-21.68
80/ 1/ 2	2444240.5	-5.29768	-27.63432	-11.18666	5.31109	-0.81384	-0.46726	30.27974	5.39336	259.15	-21.68
80/ 1/ 6	2444244.5	-5.28541	-27.63620	-11.18774	5.31155	-0.81182	-0.46645	30.27971	5.39344	259.17	-21.68
80/ 1/10	2444248.5	-5.27314	-27.63807	-11.18882	5.31200	-0.80981	-0.46563	30.27967	5.39351	259.20	-21.69
80/ 1/14	2444252.5	-5.26087	-27.63994	-11.18989	5.31246	-0.80780	-0.46482	30.27964	5.39359	259.22	-21.69
80/ 1/18	2444256.5	-5.24859	-27.64180	-11.19097	5.31291	-0.80578	-0.46401	30.27961	5.39367	259.25	-21.69
80/ 1/22	2444260.5	-5.23632	-27.64366	-11.19204	5.31337	-0.80377	-0.46319	30.27958	5.39374	259.27	-21.69
80/ 1/26	2444264.5	-5.22404	-27.64552	-11.19311	5.31382	-0.80175	-0.46238	30.27955	5.39382	259.30	-21.69
80/ 1/30	2444268.5	-5.21177	-27.64737	-11.19417	5.31427	-0.79974	-0.46157	30.27951	5.39389	259.32	-21.70
80/ 2/ 3	2444272.5	-5.19949	-27.64921	-11.19524	5.31472	-0.79772	-0.46075	30.27948	5.39397	259.35	-21.70
80/ 2/ 7	2444276.5	-5.18721	-27.65105	-11.19630	5.31517	-0.79571	-0.45994	30.27945	5.39405	259.38	-21.70
80/ 2/11	2444280.5	-5.17493	-27.65289	-11.19736	5.31562	-0.79369	-0.45913	30.27942	5.39412	259.40	-21.70
80/ 2/15	2444284.5	-5.16265	-27.65472	-11.19842	5.31607	-0.79167	-0.45831	30.27939	5.39420	259.43	-21.71
80/ 2/19	2444288.5	-5.15037	-27.65655	-11.19948	5.31652	-0.78966	-0.45750	30.27935	5.39428	259.45	-21.71
80/ 2/23	2444292.5	-5.13809	-27.65837	-11.20054	5.31696	-0.78764	-0.45668	30.27932	5.39435	259.48	-21.71
80/ 2/27	2444296.5	-5.12580	-27.66019	-11.20159	5.31741	-0.78562	-0.45587	30.27929	5.39443	259.50	-21.71
80/ 3/ 2	2444300.5	-5.11352	-27.66200	-11.20264	5.31786	-0.78360	-0.45505	30.27926	5.39451	259.53	-21.71
80/ 3/ 6	2444304.5	-5.10123	-27.66381	-11.20369	5.31830	-0.78158	-0.45424	30.27923	5.39458	259.55	-21.72
80/ 3/10	2444308.5	-5.08895	-27.66561	-11.20474	5.31874	-0.77956	-0.45342	30.27919	5.39466	259.58	-21.72
80/ 3/14	2444312.5	-5.07666	-27.66741	-11.20579	5.31919	-0.77754	-0.45260	30.27916	5.39474	259.60	-21.72
80/ 3/18	2444316.5	-5.06437	-27.66920	-11.20683	5.31963	-0.77552	-0.45179	30.27913	5.39481	259.63	-21.72
80/ 3/22	2444320.5	-5.05208	-27.67099	-11.20788	5.32007	-0.77350	-0.45097	30.27910	5.39489	259.65	-21.73
80/ 3/26	2444324.5	-5.03979	-27.67278	-11.20892	5.32051	-0.77148	-0.45016	30.27907	5.39497	259.68	-21.73
80/ 3/30	2444328.5	-5.02750	-27.67456	-11.20996	5.32095	-0.76946	-0.44934	30.27903	5.39504	259.70	-21.73
80/ 4/ 3	2444332.5	-5.01521	-27.67633	-11.21099	5.32139	-0.76743	-0.44852	30.27900	5.39512	259.73	-21.73
80/ 4/ 7	2444336.5	-5.00291	-27.67810	-11.21203	5.32183	-0.76541	-0.44770	30.27897	5.39520	259.75	-21.73
80/ 4/11	2444340.5	-4.99062	-27.67987	-11.21306	5.32227	-0.76339	-0.44689	30.27894	5.39528	259.78	-21.74
80/ 4/15	2444344.5	-4.97832	-27.68163	-11.21409	5.32270	-0.76136	-0.44607	30.27890	5.39535	259.80	-21.74
80/ 4/19	2444348.5	-4.96602	-27.68338	-11.21512	5.32314	-0.75934	-0.44525	30.27887	5.39543	259.83	-21.74

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80/ 4/23	2444352.5	-4.95373	-27.68514	-11.21615	5.32358	-0.75731	-0.44443	30.27884	5.39551	259.86	-21.74
80/ 4/27	2444356.5	-4.94143	-27.68688	-11.21718	5.32401	-0.75529	-0.44362	30.27881	5.39558	259.88	-21.74
80/ 5/ 1	2444360.5	-4.92913	-27.68863	-11.21820	5.32444	-0.75326	-0.44280	30.27878	5.39566	259.91	-21.75
80/ 5/ 5	2444364.5	-4.91683	-27.69036	-11.21922	5.32488	-0.75123	-0.44198	30.27874	5.39574	259.93	-21.75
80/ 5/ 9	2444368.5	-4.90452	-27.69210	-11.22024	5.32531	-0.74921	-0.44116	30.27871	5.39582	259.96	-21.75
80/ 5/13	2444372.5	-4.89222	-27.69383	-11.22126	5.32574	-0.74718	-0.44034	30.27868	5.39589	259.98	-21.75
80/ 5/17	2444376.5	-4.87992	-27.69555	-11.22228	5.32617	-0.74515	-0.43952	30.27865	5.39597	260.01	-21.75
80/ 5/21	2444380.5	-4.86761	-27.69727	-11.22329	5.32660	-0.74312	-0.43870	30.27862	5.39605	260.03	-21.76
80/ 5/25	2444384.5	-4.85531	-27.69898	-11.22430	5.32703	-0.74110	-0.43788	30.27858	5.39613	260.06	-21.76
80/ 5/29	2444388.5	-4.84300	-27.70069	-11.22531	5.32746	-0.73907	-0.43706	30.27855	5.39621	260.08	-21.76
80/ 6/ 2	2444392.5	-4.83069	-27.70240	-11.22632	5.32788	-0.73704	-0.43624	30.27852	5.39628	260.11	-21.76
80/ 6/ 6	2444396.5	-4.81838	-27.70410	-11.22733	5.32831	-0.73501	-0.43542	30.27849	5.39636	260.13	-21.77
80/ 6/10	2444400.5	-4.80607	-27.70579	-11.22834	5.32874	-0.73298	-0.43460	30.27846	5.39644	260.16	-21.77
80/ 6/14	2444404.5	-4.79376	-27.70748	-11.22934	5.32916	-0.73094	-0.43378	30.27842	5.39652	260.18	-21.77
80/ 6/18	2444408.5	-4.78145	-27.70917	-11.23034	5.32958	-0.72891	-0.43296	30.27839	5.39659	260.21	-21.77
80/ 6/22	2444412.5	-4.76914	-27.71085	-11.23134	5.33001	-0.72688	-0.43214	30.27836	5.39667	260.23	-21.77
80/ 6/26	2444416.5	-4.75682	-27.71253	-11.23234	5.33043	-0.72485	-0.43131	30.27833	5.39675	260.26	-21.78
80/ 6/30	2444420.5	-4.74451	-27.71420	-11.23333	5.33085	-0.72281	-0.43049	30.27829	5.39683	260.29	-21.78
80/ 7/ 4	2444424.5	-4.73219	-27.71587	-11.23433	5.33127	-0.72078	-0.42967	30.27826	5.39691	260.31	-21.78
80/ 7/ 8	2444428.5	-4.71988	-27.71753	-11.23532	5.33169	-0.71875	-0.42885	30.27823	5.39698	260.34	-21.78
80/ 7/12	2444432.5	-4.70756	-27.71919	-11.23631	5.33211	-0.71671	-0.42803	30.27820	5.39706	260.36	-21.78
80/ 7/16	2444436.5	-4.69524	-27.72084	-11.23729	5.33253	-0.71468	-0.42720	30.27816	5.39714	260.39	-21.79
80/ 7/20	2444440.5	-4.68292	-27.72249	-11.23828	5.33295	-0.71264	-0.42638	30.27813	5.39722	260.41	-21.79
80/ 7/24	2444444.5	-4.67060	-27.72414	-11.23926	5.33336	-0.71061	-0.42556	30.27810	5.39730	260.44	-21.79
80/ 7/28	2444448.5	-4.65828	-27.72578	-11.24025	5.33378	-0.70857	-0.42473	30.27807	5.39737	260.46	-21.79
80/ 8/ 1	2444452.5	-4.64596	-27.72741	-11.24123	5.33419	-0.70653	-0.42391	30.27803	5.39745	260.49	-21.79
80/ 8/ 5	2444456.5	-4.63363	-27.72904	-11.24221	5.33461	-0.70450	-0.42309	30.27800	5.39753	260.51	-21.80
80/ 8/ 9	2444460.5	-4.62131	-27.73066	-11.24318	5.33502	-0.70246	-0.42226	30.27797	5.39761	260.54	-21.80
80/ 8/13	2444464.5	-4.60898	-27.73229	-11.24416	5.33543	-0.70042	-0.42144	30.27794	5.39769	260.56	-21.80
80/ 8/17	2444468.5	-4.59666	-27.73390	-11.24513	5.33584	-0.69838	-0.42061	30.27790	5.39776	260.59	-21.80
80/ 8/21	2444472.5	-4.58433	-27.73551	-11.24610	5.33625	-0.69634	-0.41979	30.27787	5.39784	260.61	-21.80
80/ 8/25	2444476.5	-4.57200	-27.73712	-11.24707	5.33666	-0.69430	-0.41896	30.27784	5.39792	260.64	-21.81
80/ 8/29	2444480.5	-4.55967	-27.73872	-11.24804	5.33707	-0.69226	-0.41814	30.27781	5.39800	260.67	-21.81
80/ 9/ 2	2444484.5	-4.54734	-27.74032	-11.24900	5.33748	-0.69022	-0.41731	30.27777	5.39808	260.69	-21.81
80/ 9/ 6	2444488.5	-4.53501	-27.74191	-11.24996	5.33789	-0.68818	-0.41649	30.27774	5.39815	260.72	-21.81
80/ 9/10	2444492.5	-4.52268	-27.74350	-11.25092	5.33829	-0.68614	-0.41566	30.27771	5.39823	260.74	-21.81
80/ 9/14	2444496.5	-4.51035	-27.74508	-11.25188	5.33870	-0.68410	-0.41484	30.27767	5.39831	260.77	-21.82
80/ 9/18	2444500.5	-4.49801	-27.74666	-11.25284	5.33910	-0.68206	-0.41401	30.27764	5.39839	260.79	-21.82
80/ 9/22	2444504.5	-4.48568	-27.74823	-11.25380	5.33950	-0.68001	-0.41318	30.27761	5.39847	260.82	-21.82
80/ 9/26	2444508.5	-4.47334	-27.74980	-11.25475	5.33991	-0.67797	-0.41236	30.27758	5.39855	260.84	-21.82
80/ 9/30	2444512.5	-4.46101	-27.75136	-11.25570	5.34031	-0.67593	-0.41153	30.27754	5.39862	260.87	-21.82
80/10/ 4	2444516.5	-4.44867	-27.75292	-11.25665	5.34071	-0.67388	-0.41070	30.27751	5.39870	260.89	-21.83
80/10/ 8	2444520.5	-4.43633	-27.75448	-11.25760	5.34111	-0.67184	-0.40988	30.27748	5.39878	260.92	-21.83
80/10/12	2444524.5	-4.42399	-27.75603	-11.25855	5.34151	-0.66979	-0.40905	30.27744	5.39886	260.94	-21.83
80/10/16	2444528.5	-4.41165	-27.75757	-11.25949	5.34191	-0.66775	-0.40822	30.27741	5.39894	260.97	-21.83

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80/10/20	2444532.5	-4.39931	-27.75911	-11.26043	5.34230	-0.66570	-0.40739	30.27738	5.39901	260.99	-21.83
80/10/24	2444536.5	-4.38697	-27.76065	-11.26137	5.34270	-0.66365	-0.40656	30.27734	5.39909	261.02	-21.84
80/10/28	2444540.5	-4.37463	-27.76218	-11.26231	5.34310	-0.66161	-0.40574	30.27731	5.39917	261.05	-21.84
80/11/ 1	2444544.5	-4.36228	-27.76370	-11.26325	5.34349	-0.65956	-0.40491	30.27728	5.39925	261.07	-21.84
80/11/ 5	2444548.5	-4.34994	-27.76523	-11.26418	5.34388	-0.65751	-0.40408	30.27724	5.39932	261.10	-21.84
80/11/ 9	2444552.5	-4.33759	-27.76674	-11.26511	5.34428	-0.65546	-0.40325	30.27721	5.39940	261.12	-21.84
80/11/13	2444556.5	-4.32524	-27.76825	-11.26604	5.34467	-0.65341	-0.40242	30.27718	5.39948	261.15	-21.85
80/11/17	2444560.5	-4.31290	-27.76976	-11.26697	5.34506	-0.65136	-0.40159	30.27714	5.39956	261.17	-21.85
80/11/21	2444564.5	-4.30055	-27.77126	-11.26790	5.34545	-0.64932	-0.40076	30.27711	5.39964	261.20	-21.85
80/11/25	2444568.5	-4.28820	-27.77276	-11.26882	5.34584	-0.64726	-0.39993	30.27708	5.39971	261.22	-21.85
80/11/29	2444572.5	-4.27585	-27.77425	-11.26975	5.34623	-0.64521	-0.39910	30.27704	5.39979	261.25	-21.85
80/12/ 3	2444576.5	-4.26350	-27.77574	-11.27067	5.34662	-0.64316	-0.39827	30.27701	5.39987	261.27	-21.85
80/12/ 7	2444580.5	-4.25115	-27.77723	-11.27159	5.34700	-0.64111	-0.39744	30.27697	5.39995	261.30	-21.86
80/12/11	2444584.5	-4.23879	-27.77870	-11.27250	5.34739	-0.63906	-0.39661	30.27694	5.40002	261.32	-21.86
80/12/15	2444588.5	-4.22644	-27.78018	-11.27342	5.34777	-0.63701	-0.39578	30.27691	5.40010	261.35	-21.86
80/12/19	2444592.5	-4.21408	-27.78165	-11.27433	5.34816	-0.63495	-0.39495	30.27687	5.40018	261.37	-21.86
80/12/23	2444596.5	-4.20173	-27.78311	-11.27524	5.34854	-0.63290	-0.39412	30.27684	5.40026	261.40	-21.86
80/12/27	2444600.5	-4.18937	-27.78457	-11.27615	5.34892	-0.63085	-0.39328	30.27680	5.40033	261.43	-21.87
80/12/31	2444604.5	-4.17701	-27.78603	-11.27706	5.34930	-0.62879	-0.39245	30.27677	5.40041	261.45	-21.87
81/ 1/ 4	2444608.5	-4.16466	-27.78748	-11.27797	5.34968	-0.62674	-0.39162	30.27674	5.40049	261.48	-21.87
81/ 1/ 8	2444612.5	-4.15230	-27.78892	-11.27887	5.35006	-0.62468	-0.39079	30.27670	5.40057	261.50	-21.87
81/ 1/12	2444616.5	-4.13994	-27.79036	-11.27977	5.35044	-0.62263	-0.38996	30.27667	5.40064	261.53	-21.87
81/ 1/16	2444620.5	-4.12758	-27.79180	-11.28067	5.35082	-0.62057	-0.38912	30.27663	5.40072	261.55	-21.88
81/ 1/20	2444624.5	-4.11521	-27.79323	-11.28157	5.35120	-0.61851	-0.38829	30.27660	5.40080	261.58	-21.88
81/ 1/24	2444628.5	-4.10285	-27.79466	-11.28247	5.35157	-0.61646	-0.38746	30.27656	5.40088	261.60	-21.88
81/ 1/28	2444632.5	-4.09049	-27.79608	-11.28336	5.35195	-0.61440	-0.38662	30.27653	5.40095	261.63	-21.88
81/ 2/ 1	2444636.5	-4.07812	-27.79750	-11.28425	5.35232	-0.61234	-0.38579	30.27650	5.40103	261.65	-21.88
81/ 2/ 5	2444640.5	-4.06576	-27.79891	-11.28514	5.35269	-0.61028	-0.38496	30.27646	5.40111	261.68	-21.88
81/ 2/ 9	2444644.5	-4.05339	-27.80032	-11.28603	5.35306	-0.60822	-0.38412	30.27643	5.40118	261.70	-21.89
81/ 2/13	2444648.5	-4.04103	-27.80172	-11.28692	5.35344	-0.60617	-0.38329	30.27639	5.40126	261.73	-21.89
81/ 2/17	2444652.5	-4.02866	-27.80312	-11.28780	5.35381	-0.60411	-0.38245	30.27636	5.40134	261.76	-21.89
81/ 2/21	2444656.5	-4.01629	-27.80451	-11.28869	5.35417	-0.60205	-0.38162	30.27632	5.40141	261.78	-21.89
81/ 2/25	2444660.5	-4.00392	-27.80590	-11.28957	5.35454	-0.59998	-0.38078	30.27629	5.40149	261.81	-21.89
81/ 3/ 1	2444664.5	-3.99155	-27.80728	-11.29045	5.35491	-0.59792	-0.37995	30.27625	5.40157	261.83	-21.90
81/ 3/ 5	2444668.5	-3.97918	-27.80866	-11.29132	5.35528	-0.59586	-0.37911	30.27622	5.40164	261.86	-21.90
81/ 3/ 9	2444672.5	-3.96681	-27.81003	-11.29220	5.35564	-0.59380	-0.37828	30.27618	5.40172	261.88	-21.90
81/ 3/13	2444676.5	-3.95443	-27.81140	-11.29307	5.35601	-0.59174	-0.37744	30.27615	5.40180	261.91	-21.90
81/ 3/17	2444680.5	-3.94206	-27.81277	-11.29394	5.35637	-0.58967	-0.37661	30.27611	5.40187	261.93	-21.90
81/ 3/21	2444684.5	-3.92968	-27.81413	-11.29481	5.35673	-0.58761	-0.37577	30.27608	5.40195	261.96	-21.90
81/ 3/25	2444688.5	-3.91731	-27.81548	-11.29568	5.35709	-0.58555	-0.37493	30.27604	5.40203	261.98	-21.91
81/ 3/29	2444692.5	-3.90493	-27.81683	-11.29654	5.35745	-0.58348	-0.37410	30.27601	5.40210	262.01	-21.91
81/ 4/ 2	2444696.5	-3.89256	-27.81818	-11.29741	5.35781	-0.58142	-0.37326	30.27597	5.40218	262.03	-21.91
81/ 4/ 6	2444700.5	-3.88018	-27.81952	-11.29827	5.35817	-0.57935	-0.37242	30.27594	5.40225	262.06	-21.91
81/ 4/10	2444704.5	-3.86780	-27.82086	-11.29913	5.35853	-0.57729	-0.37159	30.27590	5.40233	262.09	-21.91
81/ 4/14	2444708.5	-3.85542	-27.82219	-11.29998	5.35889	-0.57522	-0.37075	30.27586	5.40241	262.11	-21.92

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81/ 4/18	2444712.5	-3.84304	-27.82351	-11.30084	5.35924	-0.57316	-0.36991	30.27583	5.40248	262.14	-21.92
81/ 4/22	2444716.5	-3.83066	-27.82484	-11.30169	5.35960	-0.57109	-0.36907	30.27579	5.40256	262.16	-21.92
81/ 4/26	2444720.5	-3.81828	-27.82615	-11.30254	5.35995	-0.56902	-0.36824	30.27576	5.40263	262.19	-21.92
81/ 4/30	2444724.5	-3.80589	-27.82746	-11.30339	5.36030	-0.56695	-0.36740	30.27572	5.40271	262.21	-21.92
81/ 5/ 4	2444728.5	-3.79351	-27.82877	-11.30424	5.36066	-0.56489	-0.36656	30.27569	5.40279	262.24	-21.92
81/ 5/ 8	2444732.5	-3.78112	-27.83007	-11.30509	5.36101	-0.56282	-0.36572	30.27565	5.40286	262.26	-21.93
81/ 5/12	2444736.5	-3.76874	-27.83137	-11.30593	5.36136	-0.56075	-0.36488	30.27561	5.40294	262.29	-21.93
81/ 5/16	2444740.5	-3.75635	-27.83267	-11.30677	5.36171	-0.55868	-0.36404	30.27558	5.40301	262.31	-21.93
81/ 5/20	2444744.5	-3.74397	-27.83395	-11.30761	5.36205	-0.55661	-0.36320	30.27554	5.40309	262.34	-21.93
81/ 5/24	2444748.5	-3.73158	-27.83524	-11.30845	5.36240	-0.55454	-0.36236	30.27550	5.40316	262.36	-21.93
81/ 5/28	2444752.5	-3.71919	-27.83652	-11.30929	5.36275	-0.55247	-0.36152	30.27547	5.40324	262.39	-21.93
81/ 6/ 1	2444756.5	-3.70680	-27.83779	-11.31012	5.36309	-0.55040	-0.36068	30.27543	5.40331	262.42	-21.94
81/ 6/ 5	2444760.5	-3.69441	-27.83906	-11.31095	5.36344	-0.54833	-0.35984	30.27540	5.40339	262.44	-21.94
81/ 6/ 9	2444764.5	-3.68202	-27.84032	-11.31178	5.36378	-0.54625	-0.35900	30.27536	5.40346	262.47	-21.94
81/ 6/13	2444768.5	-3.66963	-27.84158	-11.31261	5.36412	-0.54418	-0.35816	30.27532	5.40354	262.49	-21.94
81/ 6/17	2444772.5	-3.65724	-27.84284	-11.31344	5.36446	-0.54211	-0.35732	30.27529	5.40361	262.52	-21.94
81/ 6/21	2444776.5	-3.64484	-27.84409	-11.31426	5.36480	-0.54003	-0.35648	30.27525	5.40369	262.54	-21.94
81/ 6/25	2444780.5	-3.63245	-27.84533	-11.31509	5.36514	-0.53796	-0.35564	30.27521	5.40376	262.57	-21.95
81/ 6/29	2444784.5	-3.62005	-27.84657	-11.31591	5.36548	-0.53589	-0.35480	30.27517	5.40383	262.59	-21.95
81/ 7/ 3	2444788.5	-3.60766	-27.84781	-11.31673	5.36582	-0.53381	-0.35396	30.27514	5.40391	262.62	-21.95
81/ 7/ 7	2444792.5	-3.59526	-27.84904	-11.31754	5.36615	-0.53174	-0.35312	30.27510	5.40398	262.64	-21.95
81/ 7/11	2444796.5	-3.58286	-27.85027	-11.31836	5.36649	-0.52966	-0.35227	30.27506	5.40406	262.67	-21.95
81/ 7/15	2444800.5	-3.57047	-27.85149	-11.31917	5.36682	-0.52759	-0.35143	30.27503	5.40413	262.69	-21.95
81/ 7/19	2444804.5	-3.55807	-27.85270	-11.31998	5.36716	-0.52551	-0.35059	30.27499	5.40420	262.72	-21.96
81/ 7/23	2444808.5	-3.54567	-27.85391	-11.32079	5.36749	-0.52343	-0.34975	30.27495	5.40428	262.75	-21.96
81/ 7/27	2444812.5	-3.53327	-27.85512	-11.32160	5.36782	-0.52136	-0.34890	30.27491	5.40435	262.77	-21.96
81/ 7/31	2444816.5	-3.52087	-27.85632	-11.32240	5.36815	-0.51928	-0.34806	30.27487	5.40443	262.80	-21.96
81/ 8/ 4	2444820.5	-3.50847	-27.85752	-11.32321	5.36848	-0.51720	-0.34722	30.27484	5.40450	262.82	-21.96
81/ 8/ 8	2444824.5	-3.49606	-27.85871	-11.32401	5.36881	-0.51512	-0.34637	30.27480	5.40457	262.85	-21.97
81/ 8/12	2444828.5	-3.48366	-27.85990	-11.32481	5.36913	-0.51304	-0.34553	30.27476	5.40465	262.87	-21.97
81/ 8/16	2444832.5	-3.47126	-27.86108	-11.32560	5.36946	-0.51096	-0.34469	30.27472	5.40472	262.90	-21.97
81/ 8/20	2444836.5	-3.45885	-27.86226	-11.32640	5.36978	-0.50888	-0.34384	30.27468	5.40479	262.92	-21.97
81/ 8/24	2444840.5	-3.44645	-27.86343	-11.32719	5.37011	-0.50680	-0.34300	30.27465	5.40486	262.95	-21.97
81/ 8/28	2444844.5	-3.43404	-27.86460	-11.32798	5.37043	-0.50472	-0.34215	30.27461	5.40494	262.97	-21.97
81/ 9/ 1	2444848.5	-3.42163	-27.86577	-11.32877	5.37075	-0.50264	-0.34131	30.27457	5.40501	263.00	-21.97
81/ 9/ 5	2444852.5	-3.40922	-27.86693	-11.32956	5.37107	-0.50056	-0.34047	30.27453	5.40508	263.03	-21.98
81/ 9/ 9	2444856.5	-3.39682	-27.86808	-11.33035	5.37139	-0.49848	-0.33962	30.27449	5.40516	263.05	-21.98
81/ 9/13	2444860.5	-3.38441	-27.86923	-11.33113	5.37171	-0.49640	-0.33877	30.27445	5.40523	263.08	-21.98
81/ 9/17	2444864.5	-3.37200	-27.87037	-11.33191	5.37203	-0.49431	-0.33793	30.27442	5.40530	263.10	-21.98
81/ 9/21	2444868.5	-3.35959	-27.87151	-11.33269	5.37235	-0.49223	-0.33708	30.27438	5.40537	263.13	-21.98
81/ 9/25	2444872.5	-3.34717	-27.87265	-11.33347	5.37266	-0.49015	-0.33624	30.27434	5.40544	263.15	-21.98
81/ 9/29	2444876.5	-3.33476	-27.87378	-11.33424	5.37298	-0.48806	-0.33539	30.27430	5.40552	263.18	-21.99
81/10/ 3	2444880.5	-3.32235	-27.87490	-11.33502	5.37329	-0.48598	-0.33455	30.27426	5.40559	263.20	-21.99
81/10/ 7	2444884.5	-3.30994	-27.87602	-11.33579	5.37361	-0.48389	-0.33370	30.27422	5.40566	263.23	-21.99
81/10/11	2444888.5	-3.29752	-27.87714	-11.33656	5.37392	-0.48181	-0.33285	30.27418	5.40573	263.25	-21.99

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM NEPTUNE

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
81/10/15	2444892.5	-3.28511	-27.87825	-11.33733	5.37423	-0.47972	-0.33201	30.27414	5.40580	263.28	-21.99
81/10/19	2444896.5	-3.27269	-27.87935	-11.33809	5.37454	-0.47764	-0.33116	30.27410	5.40587	263.30	-21.99
81/10/23	2444900.5	-3.26027	-27.88046	-11.33886	5.37485	-0.47555	-0.33031	30.27406	5.40594	263.33	-22.00
81/10/27	2444904.5	-3.24786	-27.88155	-11.33962	5.37515	-0.47346	-0.32946	30.27402	5.40601	263.36	-22.00
81/10/31	2444908.5	-3.23544	-27.88264	-11.34038	5.37546	-0.47138	-0.32862	30.27398	5.40609	263.38	-22.00
81/11/ 4	2444912.5	-3.22302	-27.88373	-11.34114	5.37577	-0.46929	-0.32777	30.27394	5.40616	263.41	-22.00
81/11/ 8	2444916.5	-3.21060	-27.88481	-11.34189	5.37607	-0.46720	-0.32692	30.27390	5.40623	263.43	-22.00
81/11/12	2444920.5	-3.19818	-27.88589	-11.34265	5.37637	-0.46511	-0.32607	30.27386	5.40630	263.46	-22.00
81/11/16	2444924.5	-3.18576	-27.88696	-11.34340	5.37668	-0.46302	-0.32522	30.27382	5.40637	263.48	-22.01
81/11/20	2444928.5	-3.17334	-27.88803	-11.34415	5.37698	-0.46094	-0.32438	30.27378	5.40644	263.51	-22.01
81/11/24	2444932.5	-3.16092	-27.88909	-11.34490	5.37728	-0.45885	-0.32353	30.27374	5.40651	263.53	-22.01
81/11/28	2444936.5	-3.14849	-27.89015	-11.34565	5.37758	-0.45676	-0.32268	30.27370	5.40658	263.56	-22.01
81/12/ 2	2444940.5	-3.13607	-27.89120	-11.34639	5.37787	-0.45467	-0.32183	30.27366	5.40665	263.58	-22.01
81/12/ 6	2444944.5	-3.12365	-27.89225	-11.34713	5.37817	-0.45258	-0.32098	30.27362	5.40672	263.61	-22.01
81/12/10	2444948.5	-3.11122	-27.89329	-11.34787	5.37847	-0.45048	-0.32013	30.27358	5.40679	263.64	-22.01
81/12/14	2444952.5	-3.09880	-27.89433	-11.34861	5.37876	-0.44839	-0.31928	30.27354	5.40686	263.66	-22.02
81/12/18	2444956.5	-3.08637	-27.89536	-11.34935	5.37906	-0.44630	-0.31843	30.27350	5.40692	263.69	-22.02
81/12/22	2444960.5	-3.07394	-27.89639	-11.35008	5.37935	-0.44421	-0.31758	30.27346	5.40699	263.71	-22.02
81/12/26	2444964.5	-3.06152	-27.89742	-11.35082	5.37964	-0.44212	-0.31673	30.27342	5.40706	263.74	-22.02
81/12/30	2444968.5	-3.04909	-27.89843	-11.35155	5.37993	-0.44002	-0.31588	30.27337	5.40713	263.76	-22.02
82/ 1/ 3	2444972.5	-3.03666	-27.89945	-11.35228	5.38022	-0.43793	-0.31503	30.27333	5.40720	263.79	-22.02
82/ 1/ 7	2444976.5	-3.02423	-27.90046	-11.35300	5.38051	-0.43584	-0.31418	30.27329	5.40727	263.81	-22.03
82/ 1/11	2444980.5	-3.01180	-27.90146	-11.35373	5.38080	-0.43374	-0.31333	30.27325	5.40734	263.84	-22.03
82/ 1/15	2444984.5	-2.99937	-27.90246	-11.35445	5.38108	-0.43165	-0.31247	30.27321	5.40740	263.86	-22.03
82/ 1/19	2444988.5	-2.98694	-27.90346	-11.35517	5.38137	-0.42955	-0.31162	30.27317	5.40747	263.89	-22.03
82/ 1/23	2444992.5	-2.97450	-27.90445	-11.35589	5.38165	-0.42746	-0.31077	30.27312	5.40754	263.92	-22.03
82/ 1/27	2444996.5	-2.96207	-27.90543	-11.35661	5.38194	-0.42536	-0.30992	30.27308	5.40761	263.94	-22.03
82/ 1/31	2445000.5	-2.94964	-27.90641	-11.35732	5.38222	-0.42326	-0.30907	30.27304	5.40768	263.97	-22.03
82/ 2/ 4	2445004.5	-2.93720	-27.90739	-11.35803	5.38250	-0.42117	-0.30822	30.27300	5.40774	263.99	-22.04
82/ 2/ 8	2445008.5	-2.92477	-27.90836	-11.35875	5.38278	-0.41907	-0.30736	30.27296	5.40781	264.02	-22.04
82/ 2/12	2445012.5	-2.91233	-27.90932	-11.35945	5.38306	-0.41697	-0.30651	30.27291	5.40788	264.04	-22.04
82/ 2/16	2445016.5	-2.89990	-27.91028	-11.36016	5.38334	-0.41488	-0.30566	30.27287	5.40794	264.07	-22.04
82/ 2/20	2445020.5	-2.88746	-27.91124	-11.36087	5.38361	-0.41278	-0.30480	30.27283	5.40801	264.09	-22.04
82/ 2/24	2445024.5	-2.87502	-27.91219	-11.36157	5.38389	-0.41068	-0.30395	30.27278	5.40808	264.12	-22.04
82/ 2/28	2445028.5	-2.86258	-27.91314	-11.36227	5.38416	-0.40858	-0.30310	30.27274	5.40814	264.14	-22.04
82/ 3/ 4	2445032.5	-2.85015	-27.91408	-11.36297	5.38444	-0.40648	-0.30224	30.27270	5.40821	264.17	-22.05
82/ 3/ 8	2445036.5	-2.83771	-27.91502	-11.36367	5.38471	-0.40438	-0.30139	30.27266	5.40828	264.20	-22.05
82/ 3/12	2445040.5	-2.82527	-27.91595	-11.36436	5.38498	-0.40228	-0.30054	30.27261	5.40834	264.22	-22.05
82/ 3/16	2445044.5	-2.81283	-27.91687	-11.36506	5.38525	-0.40018	-0.29968	30.27257	5.40841	264.25	-22.05
82/ 3/20	2445048.5	-2.80038	-27.91780	-11.36575	5.38552	-0.39808	-0.29883	30.27252	5.40847	264.27	-22.05
82/ 3/24	2445052.5	-2.78794	-27.91871	-11.36644	5.38579	-0.39598	-0.29797	30.27248	5.40854	264.30	-22.05
82/ 3/28	2445056.5	-2.77550	-27.91963	-11.36712	5.38605	-0.39388	-0.29712	30.27244	5.40860	264.32	-22.05
82/ 4/ 1	2445060.5	-2.76306	-27.92053	-11.36781	5.38632	-0.39178	-0.29626	30.27239	5.40867	264.35	-22.06
82/ 4/ 5	2445064.5	-2.75061	-27.92144	-11.36849	5.38658	-0.38967	-0.29541	30.27235	5.40873	264.37	-22.06
82/ 4/ 9	2445068.5	-2.73817	-27.92233	-11.36917	5.38685	-0.38757	-0.29455	30.27231	5.40880	264.40	-22.06

1.8 1 A.U.=149,599,000 KM.

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82/ 4/13	2445072.5	-2.72572	-27.92323	-11.36985	5.38711	-0.38547	-0.29370	30.27226	5.40886	264.42	-22.06
82/ 4/17	2445076.5	-2.71328	-27.92412	-11.37053	5.38737	-0.38336	-0.29284	30.27222	5.40893	264.45	-22.06
82/ 4/21	2445080.5	-2.70083	-27.92500	-11.37121	5.38763	-0.38126	-0.29199	30.27217	5.40899	264.48	-22.06
82/ 4/25	2445084.5	-2.68839	-27.92588	-11.37188	5.38789	-0.37916	-0.29113	30.27213	5.40905	264.50	-22.06
82/ 4/29	2445088.5	-2.67594	-27.92675	-11.37255	5.38815	-0.37705	-0.29027	30.27208	5.40912	264.53	-22.07
82/ 5/ 3	2445092.5	-2.66349	-27.92762	-11.37322	5.38840	-0.37495	-0.28942	30.27204	5.40918	264.55	-22.07
82/ 5/ 7	2445096.5	-2.65104	-27.92848	-11.37389	5.38866	-0.37284	-0.28856	30.27199	5.40924	264.58	-22.07
82/ 5/11	2445100.5	-2.63859	-27.92934	-11.37456	5.38891	-0.37074	-0.28770	30.27195	5.40931	264.60	-22.07
82/ 5/15	2445104.5	-2.62614	-27.93020	-11.37522	5.38917	-0.36863	-0.28685	30.27190	5.40937	264.63	-22.07
82/ 5/19	2445108.5	-2.61369	-27.93105	-11.37588	5.38942	-0.36653	-0.28599	30.27186	5.40943	264.65	-22.07
82/ 5/23	2445112.5	-2.60124	-27.93189	-11.37654	5.38967	-0.36442	-0.28513	30.27181	5.40950	264.68	-22.07
82/ 5/27	2445116.5	-2.58879	-27.93273	-11.37720	5.38992	-0.36231	-0.28428	30.27177	5.40956	264.70	-22.08
82/ 5/31	2445120.5	-2.57634	-27.93356	-11.37785	5.39017	-0.36021	-0.28342	30.27172	5.40962	264.73	-22.08
82/ 6/ 4	2445124.5	-2.56389	-27.93439	-11.37851	5.39042	-0.35810	-0.28256	30.27167	5.40968	264.76	-22.08
82/ 6/ 8	2445128.5	-2.55143	-27.93522	-11.37916	5.39066	-0.35599	-0.28170	30.27163	5.40974	264.78	-22.08
82/ 6/12	2445132.5	-2.53898	-27.93604	-11.37981	5.39091	-0.35388	-0.28084	30.27158	5.40981	264.81	-22.08
82/ 6/16	2445136.5	-2.52653	-27.93685	-11.38046	5.39115	-0.35177	-0.27999	30.27154	5.40987	264.83	-22.08
82/ 6/20	2445140.5	-2.51407	-27.93766	-11.38110	5.39140	-0.34966	-0.27913	30.27149	5.40993	264.86	-22.08
82/ 6/24	2445144.5	-2.50162	-27.93847	-11.38175	5.39164	-0.34755	-0.27827	30.27144	5.40999	264.88	-22.09
82/ 6/28	2445148.5	-2.48916	-27.93927	-11.38239	5.39188	-0.34544	-0.27741	30.27140	5.41005	264.91	-22.09
82/ 7/ 2	2445152.5	-2.47670	-27.94006	-11.38303	5.39212	-0.34333	-0.27655	30.27135	5.41011	264.93	-22.09
82/ 7/ 6	2445156.5	-2.46425	-27.94086	-11.38367	5.39236	-0.34122	-0.27569	30.27130	5.41017	264.96	-22.09
82/ 7/10	2445160.5	-2.45179	-27.94164	-11.38430	5.39260	-0.33911	-0.27483	30.27126	5.41023	264.99	-22.09
82/ 7/14	2445164.5	-2.43933	-27.94242	-11.38494	5.39283	-0.33700	-0.27397	30.27121	5.41029	265.01	-22.09
82/ 7/18	2445168.5	-2.42687	-27.94320	-11.38557	5.39307	-0.33489	-0.27311	30.27116	5.41035	265.04	-22.09
82/ 7/22	2445172.5	-2.41441	-27.94397	-11.38620	5.39330	-0.33278	-0.27225	30.27111	5.41041	265.06	-22.09
82/ 7/26	2445176.5	-2.40195	-27.94474	-11.38683	5.39353	-0.33067	-0.27139	30.27107	5.41047	265.09	-22.10
82/ 7/30	2445180.5	-2.38949	-27.94550	-11.38745	5.39377	-0.32856	-0.27053	30.27102	5.41053	265.11	-22.10
82/ 8/ 3	2445184.5	-2.37703	-27.94625	-11.38808	5.39400	-0.32644	-0.26967	30.27097	5.41059	265.14	-22.10
82/ 8/ 7	2445188.5	-2.36457	-27.94701	-11.38870	5.39423	-0.32433	-0.26881	30.27092	5.41065	265.16	-22.10
82/ 8/11	2445192.5	-2.35211	-27.94775	-11.38932	5.39445	-0.32222	-0.26795	30.27087	5.41071	265.19	-22.10
82/ 8/15	2445196.5	-2.33965	-27.94849	-11.38994	5.39468	-0.32010	-0.26709	30.27083	5.41077	265.21	-22.10
82/ 8/19	2445200.5	-2.32718	-27.94923	-11.39055	5.39491	-0.31799	-0.26623	30.27078	5.41082	265.24	-22.10
82/ 8/23	2445204.5	-2.31472	-27.94996	-11.39117	5.39513	-0.31587	-0.26537	30.27073	5.41088	265.27	-22.11
82/ 8/27	2445208.5	-2.30226	-27.95069	-11.39178	5.39535	-0.31376	-0.26451	30.27068	5.41094	265.29	-22.11
82/ 8/31	2445212.5	-2.28979	-27.95141	-11.39239	5.39558	-0.31164	-0.26365	30.27063	5.41100	265.32	-22.11
82/ 9/ 4	2445216.5	-2.27733	-27.95213	-11.39300	5.39580	-0.30953	-0.26278	30.27058	5.41105	265.34	-22.11
82/ 9/ 8	2445220.5	-2.26486	-27.95284	-11.39360	5.39602	-0.30741	-0.26192	30.27053	5.41111	265.37	-22.11
82/ 9/12	2445224.5	-2.25240	-27.95355	-11.39421	5.39624	-0.30530	-0.26106	30.27048	5.41117	265.39	-22.11
82/ 9/16	2445228.5	-2.23993	-27.95425	-11.39481	5.39646	-0.30318	-0.26020	30.27044	5.41122	265.42	-22.11
82/ 9/20	2445232.5	-2.22746	-27.95495	-11.39541	5.39667	-0.30107	-0.25934	30.27039	5.41128	265.44	-22.11
82/ 9/24	2445236.5	-2.21499	-27.95564	-11.39601	5.39689	-0.29895	-0.25847	30.27034	5.41134	265.47	-22.12
82/ 9/28	2445240.5	-2.20253	-27.95633	-11.39660	5.39710	-0.29683	-0.25761	30.27029	5.41139	265.50	-22.12
82/10/ 2	2445244.5	-2.19006	-27.95702	-11.39720	5.39732	-0.29471	-0.25675	30.27024	5.41145	265.52	-22.12
82/10/ 6	2445248.5	-2.17759	-27.95769	-11.39779	5.39753	-0.29260	-0.25588	30.27019	5.41151	265.55	-22.12

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM NEPTUNE

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82/10/10	2445252.5	-2.16512	-27.95837	-11.39838	5.39774	-0.29048	-0.25502	30.27014	5.41156	265.57	-22.12
82/10/14	2445256.5	-2.15265	-27.95904	-11.39897	5.39795	-0.28836	-0.25416	30.27009	5.41162	265.60	-22.12
82/10/18	2445260.5	-2.14018	-27.95970	-11.39955	5.39816	-0.28624	-0.25329	30.27004	5.41167	265.62	-22.12
82/10/22	2445264.5	-2.12771	-27.96036	-11.40014	5.39836	-0.28412	-0.25243	30.26998	5.41172	265.65	-22.12
82/10/26	2445268.5	-2.11524	-27.96101	-11.40072	5.39857	-0.28200	-0.25157	30.26993	5.41178	265.67	-22.13
82/10/30	2445272.5	-2.10277	-27.96166	-11.40130	5.39877	-0.27988	-0.25070	30.26988	5.41183	265.70	-22.13
82/11/ 3	2445276.5	-2.09029	-27.96231	-11.40188	5.39898	-0.27776	-0.24984	30.26983	5.41189	265.72	-22.13
82/11/ 7	2445280.5	-2.07782	-27.96295	-11.40245	5.39918	-0.27564	-0.24897	30.26978	5.41194	265.75	-22.13
82/11/11	2445284.5	-2.06535	-27.96358	-11.40303	5.39938	-0.27352	-0.24811	30.26973	5.41199	265.78	-22.13
82/11/15	2445288.5	-2.05287	-27.96421	-11.40360	5.39958	-0.27140	-0.24725	30.26968	5.41205	265.80	-22.13
82/11/19	2445292.5	-2.04040	-27.96483	-11.40417	5.39978	-0.26928	-0.24638	30.26963	5.41210	265.83	-22.13
82/11/23	2445296.5	-2.02792	-27.96545	-11.40474	5.39998	-0.26716	-0.24552	30.26957	5.41215	265.85	-22.13
82/11/27	2445300.5	-2.01545	-27.96607	-11.40531	5.40017	-0.26504	-0.24465	30.26952	5.41221	265.88	-22.14
82/12/ 1	2445304.5	-2.00297	-27.96668	-11.40587	5.40037	-0.26291	-0.24379	30.26947	5.41226	265.90	-22.14
82/12/ 5	2445308.5	-1.99050	-27.96728	-11.40643	5.40056	-0.26079	-0.24292	30.26942	5.41231	265.93	-22.14
82/12/ 9	2445312.5	-1.97802	-27.96788	-11.40699	5.40076	-0.25867	-0.24205	30.26937	5.41236	265.95	-22.14
82/12/13	2445316.5	-1.96554	-27.96848	-11.40755	5.40095	-0.25655	-0.24119	30.26931	5.41241	265.98	-22.14
82/12/17	2445320.5	-1.95307	-27.96907	-11.40811	5.40114	-0.25442	-0.24032	30.26926	5.41247	266.01	-22.14
82/12/21	2445324.5	-1.94059	-27.96965	-11.40866	5.40133	-0.25230	-0.23946	30.26921	5.41252	266.03	-22.14
82/12/25	2445328.5	-1.92811	-27.97023	-11.40921	5.40152	-0.25018	-0.23859	30.26915	5.41257	266.06	-22.14
82/12/29	2445332.5	-1.91563	-27.97081	-11.40976	5.40170	-0.24805	-0.23772	30.26910	5.41262	266.08	-22.14
83/ 1/ 2	2445336.5	-1.90315	-27.97138	-11.41031	5.40189	-0.24593	-0.23686	30.26905	5.41267	266.11	-22.15
83/ 1/ 6	2445340.5	-1.89067	-27.97195	-11.41086	5.40207	-0.24380	-0.23599	30.26899	5.41272	266.13	-22.15
83/ 1/10	2445344.5	-1.87819	-27.97251	-11.41140	5.40226	-0.24168	-0.23513	30.26894	5.41277	266.16	-22.15
83/ 1/14	2445348.5	-1.86571	-27.97306	-11.41194	5.40244	-0.23955	-0.23426	30.26889	5.41282	266.18	-22.15
83/ 1/18	2445352.5	-1.85323	-27.97361	-11.41248	5.40262	-0.23743	-0.23339	30.26883	5.41287	266.21	-22.15
83/ 1/22	2445356.5	-1.84075	-27.97416	-11.41302	5.40280	-0.23530	-0.23252	30.26878	5.41292	266.24	-22.15
83/ 1/26	2445360.5	-1.82827	-27.97470	-11.41356	5.40298	-0.23318	-0.23166	30.26873	5.41297	266.26	-22.15
83/ 1/30	2445364.5	-1.81579	-27.97524	-11.41409	5.40315	-0.23105	-0.23079	30.26867	5.41301	266.29	-22.15
83/ 2/ 3	2445368.5	-1.80330	-27.97577	-11.41462	5.40333	-0.22892	-0.22992	30.26862	5.41306	266.31	-22.15
83/ 2/ 7	2445372.5	-1.79082	-27.97629	-11.41515	5.40350	-0.22680	-0.22905	30.26856	5.41311	266.34	-22.16
83/ 2/11	2445376.5	-1.77834	-27.97682	-11.41568	5.40368	-0.22467	-0.22819	30.26851	5.41316	266.36	-22.16
83/ 2/15	2445380.5	-1.76586	-27.97733	-11.41621	5.40385	-0.22254	-0.22732	30.26845	5.41321	266.39	-22.16
83/ 2/19	2445384.5	-1.75337	-27.97784	-11.41673	5.40402	-0.22042	-0.22645	30.26840	5.41325	266.41	-22.16
83/ 2/23	2445388.5	-1.74089	-27.97835	-11.41726	5.40419	-0.21829	-0.22558	30.26834	5.41330	266.44	-22.16
83/ 2/27	2445392.5	-1.72840	-27.97885	-11.41778	5.40436	-0.21616	-0.22471	30.26829	5.41335	266.47	-22.16
83/ 3/ 3	2445396.5	-1.71592	-27.97935	-11.41829	5.40453	-0.21403	-0.22384	30.26823	5.41339	266.49	-22.16
83/ 3/ 7	2445400.5	-1.70343	-27.97984	-11.41881	5.40469	-0.21190	-0.22298	30.26818	5.41344	266.52	-22.16
83/ 3/11	2445404.5	-1.69094	-27.98033	-11.41932	5.40486	-0.20977	-0.22211	30.26812	5.41349	266.54	-22.16
83/ 3/15	2445408.5	-1.67846	-27.98081	-11.41984	5.40502	-0.20764	-0.22124	30.26806	5.41353	266.57	-22.17
83/ 3/19	2445412.5	-1.66597	-27.98129	-11.42035	5.40518	-0.20552	-0.22037	30.26801	5.41358	266.59	-22.17
83/ 3/23	2445416.5	-1.65348	-27.98176	-11.42085	5.40535	-0.20339	-0.21950	30.26795	5.41362	266.62	-22.17
83/ 3/27	2445420.5	-1.64100	-27.98223	-11.42136	5.40551	-0.20126	-0.21863	30.26789	5.41367	266.64	-22.17
83/ 3/31	2445424.5	-1.62851	-27.98269	-11.42186	5.40566	-0.19913	-0.21776	30.26784	5.41371	266.67	-22.17
83/ 4/ 4	2445428.5	-1.61602	-27.98315	-11.42237	5.40582	-0.19700	-0.21689	30.26778	5.41376	266.69	-22.17

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83/ 4/ 8	2445432.5	-1.60353	-27.98360	-11.42287	5.40598	-0.19486	-0.21602	30.26772	5.41380	266.72	-22.17
83/ 4/12	2445436.5	-1.59104	-27.98405	-11.42336	5.40613	-0.19273	-0.21515	30.26767	5.41384	266.75	-22.17
83/ 4/16	2445440.5	-1.57855	-27.98449	-11.42386	5.40629	-0.19060	-0.21428	30.26761	5.41389	266.77	-22.17
83/ 4/20	2445444.5	-1.56606	-27.98493	-11.42435	5.40644	-0.18847	-0.21341	30.26755	5.41393	266.80	-22.18
83/ 4/24	2445448.5	-1.55357	-27.98536	-11.42485	5.40659	-0.18634	-0.21254	30.26749	5.41397	266.82	-22.18
83/ 4/28	2445452.5	-1.54108	-27.98579	-11.42534	5.40674	-0.18421	-0.21167	30.26744	5.41402	266.85	-22.18
83/ 5/ 2	2445456.5	-1.52859	-27.98621	-11.42582	5.40689	-0.18208	-0.21080	30.26738	5.41406	266.87	-22.18
83/ 5/ 6	2445460.5	-1.51610	-27.98663	-11.42631	5.40704	-0.17994	-0.20993	30.26732	5.41410	266.90	-22.18
83/ 5/10	2445464.5	-1.50361	-27.98704	-11.42679	5.40718	-0.17781	-0.20906	30.26726	5.41414	266.92	-22.18
83/ 5/14	2445468.5	-1.49112	-27.98745	-11.42728	5.40733	-0.17568	-0.20819	30.26720	5.41419	266.95	-22.18
83/ 5/18	2445472.5	-1.47863	-27.98786	-11.42776	5.40747	-0.17355	-0.20732	30.26714	5.41423	266.98	-22.18
83/ 5/22	2445476.5	-1.46614	-27.98825	-11.42823	5.40761	-0.17141	-0.20644	30.26709	5.41427	267.00	-22.18
83/ 5/26	2445480.5	-1.45364	-27.98865	-11.42871	5.40776	-0.16928	-0.20557	30.26703	5.41431	267.03	-22.18
83/ 5/30	2445484.5	-1.44115	-27.98904	-11.42918	5.40790	-0.16715	-0.20470	30.26697	5.41435	267.05	-22.19
83/ 6/ 3	2445488.5	-1.42866	-27.98942	-11.42966	5.40803	-0.16501	-0.20383	30.26691	5.41439	267.08	-22.19
83/ 6/ 7	2445492.5	-1.41616	-27.98980	-11.43013	5.40817	-0.16288	-0.20296	30.26685	5.41443	267.10	-22.19
83/ 6/11	2445496.5	-1.40367	-27.99017	-11.43059	5.40831	-0.16074	-0.20209	30.26679	5.41447	267.13	-22.19
83/ 6/15	2445500.5	-1.39117	-27.99054	-11.43106	5.40844	-0.15861	-0.20121	30.26673	5.41451	267.15	-22.19
83/ 6/19	2445504.5	-1.37868	-27.99091	-11.43152	5.40858	-0.15648	-0.20034	30.26667	5.41455	267.18	-22.19
83/ 6/23	2445508.5	-1.36618	-27.99126	-11.43198	5.40871	-0.15434	-0.19947	30.26661	5.41459	267.21	-22.19
83/ 6/27	2445512.5	-1.35369	-27.99162	-11.43244	5.40884	-0.15221	-0.19860	30.26655	5.41462	267.23	-22.19
83/ 7/ 1	2445516.5	-1.34119	-27.99197	-11.43290	5.40897	-0.15007	-0.19773	30.26649	5.41466	267.26	-22.19
83/ 7/ 5	2445520.5	-1.32870	-27.99231	-11.43336	5.40910	-0.14794	-0.19685	30.26643	5.41470	267.28	-22.19
83/ 7/ 9	2445524.5	-1.31620	-27.99265	-11.43381	5.40923	-0.14580	-0.19598	30.26637	5.41474	267.31	-22.20
83/ 7/13	2445528.5	-1.30371	-27.99299	-11.43426	5.40935	-0.14366	-0.19511	30.26631	5.41478	267.33	-22.20
83/ 7/17	2445532.5	-1.29121	-27.99332	-11.43471	5.40948	-0.14153	-0.19423	30.26625	5.41481	267.36	-22.20
83/ 7/21	2445536.5	-1.27871	-27.99364	-11.43516	5.40960	-0.13939	-0.19336	30.26618	5.41485	267.38	-22.20
83/ 7/25	2445540.5	-1.26621	-27.99396	-11.43561	5.40972	-0.13726	-0.19249	30.26612	5.41489	267.41	-22.20
83/ 7/29	2445544.5	-1.25372	-27.99427	-11.43605	5.40984	-0.13512	-0.19161	30.26606	5.41492	267.44	-22.20
83/ 8/ 2	2445548.5	-1.24122	-27.99458	-11.43649	5.40996	-0.13298	-0.19074	30.26600	5.41496	267.46	-22.20
83/ 8/ 6	2445552.5	-1.22872	-27.99489	-11.43693	5.41008	-0.13084	-0.18987	30.26594	5.41499	267.49	-22.20
83/ 8/10	2445556.5	-1.21622	-27.99519	-11.43737	5.41020	-0.12871	-0.18899	30.26587	5.41503	267.51	-22.20
83/ 8/14	2445560.5	-1.20372	-27.99548	-11.43781	5.41031	-0.12657	-0.18812	30.26581	5.41506	267.54	-22.20
83/ 8/18	2445564.5	-1.19123	-27.99577	-11.43824	5.41043	-0.12443	-0.18725	30.26575	5.41510	267.56	-22.21
83/ 8/22	2445568.5	-1.17873	-27.99606	-11.43867	5.41054	-0.12230	-0.18637	30.26569	5.41513	267.59	-22.21
83/ 8/26	2445572.5	-1.16623	-27.99634	-11.43910	5.41065	-0.12016	-0.18550	30.26562	5.41517	267.61	-22.21
83/ 8/30	2445576.5	-1.15373	-27.99661	-11.43953	5.41076	-0.11802	-0.18462	30.26556	5.41520	267.64	-22.21
83/ 9/ 3	2445580.5	-1.14123	-27.99688	-11.43995	5.41087	-0.11588	-0.18375	30.26550	5.41523	267.67	-22.21
83/ 9/ 7	2445584.5	-1.12873	-27.99715	-11.44038	5.41098	-0.11374	-0.18288	30.26543	5.41527	267.69	-22.21
83/ 9/11	2445588.5	-1.11623	-27.99741	-11.44080	5.41109	-0.11160	-0.18200	30.26537	5.41530	267.72	-22.21
83/ 9/15	2445592.5	-1.10373	-27.99766	-11.44122	5.41119	-0.10947	-0.18113	30.26531	5.41533	267.74	-22.21
83/ 9/19	2445596.5	-1.09122	-27.99791	-11.44163	5.41130	-0.10733	-0.18025	30.26524	5.41536	267.77	-22.21
83/ 9/23	2445600.5	-1.07872	-27.99816	-11.44205	5.41140	-0.10519	-0.17938	30.26518	5.41540	267.79	-22.21
83/ 9/27	2445604.5	-1.06622	-27.99840	-11.44246	5.41150	-0.10305	-0.17850	30.26512	5.41543	267.82	-22.21
83/10/ 1	2445608.5	-1.05372	-27.99864	-11.44287	5.41160	-0.10091	-0.17763	30.26505	5.41546	267.84	-22.22

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83/10/ 5	2445612.5	-1.04122	-27.99887	-11.44328	5.41170	-0.09877	-0.17675	30.26499	5.41549	267.87	-22.22
83/10/ 9	2445616.5	-1.02872	-27.99909	-11.44369	5.41180	-0.09663	-0.17588	30.26492	5.41552	267.90	-22.22
83/10/13	2445620.5	-1.01621	-27.99931	-11.44410	5.41190	-0.09449	-0.17500	30.26486	5.41555	267.92	-22.22
83/10/17	2445624.5	-1.00371	-27.99953	-11.44450	5.41199	-0.09235	-0.17413	30.26479	5.41558	267.95	-22.22
83/10/21	2445628.5	-0.99121	-27.99974	-11.44490	5.41209	-0.09021	-0.17325	30.26473	5.41561	267.97	-22.22
83/10/25	2445632.5	-0.97871	-27.99995	-11.44530	5.41218	-0.08807	-0.17238	30.26466	5.41564	268.00	-22.22
83/10/29	2445636.5	-0.96620	-28.00015	-11.44570	5.41227	-0.08593	-0.17150	30.26460	5.41567	268.02	-22.22
83/11/ 2	2445640.5	-0.95370	-28.00034	-11.44609	5.41236	-0.08379	-0.17062	30.26453	5.41570	268.05	-22.22
83/11/ 6	2445644.5	-0.94120	-28.00053	-11.44649	5.41245	-0.08165	-0.16975	30.26446	5.41573	268.07	-22.22
83/11/10	2445648.5	-0.92869	-28.00072	-11.44688	5.41254	-0.07951	-0.16887	30.26440	5.41575	268.10	-22.22
83/11/14	2445652.5	-0.91619	-28.00090	-11.44727	5.41262	-0.07737	-0.16800	30.26433	5.41578	268.13	-22.22
83/11/18	2445656.5	-0.90368	-28.00108	-11.44765	5.41271	-0.07522	-0.16712	30.26427	5.41581	268.15	-22.23
83/11/22	2445660.5	-0.89118	-28.00125	-11.44804	5.41279	-0.07308	-0.16624	30.26420	5.41584	268.18	-22.23
83/11/26	2445664.5	-0.87867	-28.00142	-11.44842	5.41287	-0.07094	-0.16537	30.26413	5.41586	268.20	-22.23
83/11/30	2445668.5	-0.86617	-28.00158	-11.44880	5.41295	-0.06880	-0.16449	30.26406	5.41589	268.23	-22.23
83/12/ 4	2445672.5	-0.85366	-28.00173	-11.44918	5.41303	-0.06666	-0.16362	30.26400	5.41592	268.25	-22.23
83/12/ 8	2445676.5	-0.84116	-28.00188	-11.44956	5.41311	-0.06452	-0.16274	30.26393	5.41594	268.28	-22.23
83/12/12	2445680.5	-0.82865	-28.00203	-11.44993	5.41319	-0.06238	-0.16186	30.26386	5.41597	268.30	-22.23
83/12/16	2445684.5	-0.81615	-28.00217	-11.45031	5.41326	-0.06023	-0.16099	30.26380	5.41599	268.33	-22.23
83/12/20	2445688.5	-0.80364	-28.00231	-11.45068	5.41334	-0.05809	-0.16011	30.26373	5.41602	268.36	-22.23
83/12/24	2445692.5	-0.79114	-28.00244	-11.45105	5.41341	-0.05595	-0.15923	30.26366	5.41604	268.38	-22.23
83/12/28	2445696.5	-0.77863	-28.00257	-11.45141	5.41348	-0.05381	-0.15836	30.26359	5.41607	268.41	-22.23
84/ 1/ 1	2445700.5	-0.76613	-28.00269	-11.45178	5.41355	-0.05166	-0.15748	30.26352	5.41609	268.43	-22.23
84/ 1/ 5	2445704.5	-0.75362	-28.00281	-11.45214	5.41362	-0.04952	-0.15660	30.26345	5.41611	268.46	-22.24
84/ 1/ 9	2445708.5	-0.74111	-28.00292	-11.45250	5.41369	-0.04738	-0.15572	30.26339	5.41614	268.48	-22.24
84/ 1/13	2445712.5	-0.72861	-28.00303	-11.45286	5.41376	-0.04524	-0.15485	30.26332	5.41616	268.51	-22.24
84/ 1/17	2445716.5	-0.71610	-28.00313	-11.45322	5.41382	-0.04309	-0.15397	30.26325	5.41618	268.54	-22.24
84/ 1/21	2445720.5	-0.70359	-28.00322	-11.45357	5.41389	-0.04095	-0.15309	30.26318	5.41620	268.56	-22.24
84/ 1/25	2445724.5	-0.69108	-28.00332	-11.45392	5.41395	-0.03881	-0.15221	30.26311	5.41623	268.59	-22.24
84/ 1/29	2445728.5	-0.67858	-28.00340	-11.45427	5.41401	-0.03666	-0.15134	30.26304	5.41625	268.61	-22.24
84/ 2/ 2	2445732.5	-0.66607	-28.00349	-11.45462	5.41407	-0.03452	-0.15046	30.26297	5.41627	268.64	-22.24
84/ 2/ 6	2445736.5	-0.65356	-28.00356	-11.45497	5.41413	-0.03238	-0.14958	30.26290	5.41629	268.66	-22.24
84/ 2/10	2445740.5	-0.64105	-28.00364	-11.45531	5.41418	-0.03023	-0.14870	30.26283	5.41631	268.69	-22.24
84/ 2/14	2445744.5	-0.62855	-28.00370	-11.45566	5.41424	-0.02809	-0.14783	30.26276	5.41633	268.71	-22.24
84/ 2/18	2445748.5	-0.61604	-28.00377	-11.45600	5.41429	-0.02595	-0.14695	30.26269	5.41635	268.74	-22.24
84/ 2/22	2445752.5	-0.60353	-28.00382	-11.45634	5.41435	-0.02380	-0.14607	30.26262	5.41637	268.77	-22.24
84/ 2/26	2445756.5	-0.59102	-28.00388	-11.45667	5.41440	-0.02166	-0.14519	30.26255	5.41639	268.79	-22.25
84/ 3/ 1	2445760.5	-0.57851	-28.00392	-11.45701	5.41445	-0.01952	-0.14431	30.26248	5.41641	268.82	-22.25
84/ 3/ 5	2445764.5	-0.56601	-28.00397	-11.45734	5.41450	-0.01737	-0.14344	30.26240	5.41643	268.84	-22.25
84/ 3/ 9	2445768.5	-0.55350	-28.00400	-11.45767	5.41455	-0.01523	-0.14256	30.26233	5.41644	268.87	-22.25
84/ 3/13	2445772.5	-0.54099	-28.00404	-11.45800	5.41459	-0.01308	-0.14168	30.26226	5.41646	268.89	-22.25
84/ 3/17	2445776.5	-0.52848	-28.00406	-11.45832	5.41464	-0.01094	-0.14080	30.26219	5.41648	268.92	-22.25
84/ 3/21	2445780.5	-0.51597	-28.00409	-11.45865	5.41468	-0.00880	-0.13992	30.26212	5.41650	268.94	-22.25
84/ 3/25	2445784.5	-0.50346	-28.00410	-11.45897	5.41472	-0.00665	-0.13904	30.26204	5.41651	268.97	-22.25
84/ 3/29	2445788.5	-0.49095	-28.00412	-11.45929	5.41477	-0.00451	-0.13817	30.26197	5.41653	269.00	-22.25

1.8 1 A.U.=149,599,000 KM.

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
84/ 4/ 2	2445792.5	-0.47844	-28.00413	-11.45961	5.41481	-0.00236	-0.13729	30.26190	5.41655	269.02	-22.25
84/ 4/ 6	2445796.5	-0.46594	-28.00413	-11.45993	5.41484	-0.00022	-0.13641	30.26183	5.41656	269.05	-22.25
84/ 4/10	2445800.5	-0.45343	-28.00413	-11.46024	5.41488	0.00193	-0.13553	30.26175	5.41658	269.07	-22.25
84/ 4/14	2445804.5	-0.44092	-28.00412	-11.46055	5.41492	0.00407	-0.13465	30.26168	5.41659	269.10	-22.25
84/ 4/18	2445808.5	-0.42841	-28.00411	-11.46086	5.41495	0.00621	-0.13377	30.26161	5.41661	269.12	-22.25
84/ 4/22	2445812.5	-0.41590	-28.00409	-11.46117	5.41498	0.00836	-0.13289	30.26153	5.41662	269.15	-22.26
84/ 4/26	2445816.5	-0.40339	-28.00407	-11.46148	5.41502	0.01050	-0.13201	30.26146	5.41664	269.17	-22.26
84/ 4/30	2445820.5	-0.39088	-28.00404	-11.46178	5.41505	0.01265	-0.13114	30.26139	5.41665	269.20	-22.26
84/ 5/ 4	2445824.5	-0.37837	-28.00401	-11.46208	5.41508	0.01479	-0.13026	30.26131	5.41666	269.23	-22.26
84/ 5/ 8	2445828.5	-0.36586	-28.00397	-11.46238	5.41510	0.01694	-0.12938	30.26124	5.41668	269.25	-22.26
84/ 5/12	2445832.5	-0.35335	-28.00393	-11.46268	5.41513	0.01908	-0.12850	30.26116	5.41669	269.28	-22.26
84/ 5/16	2445836.5	-0.34084	-28.00389	-11.46297	5.41516	0.02123	-0.12762	30.26109	5.41670	269.30	-22.26
84/ 5/20	2445840.5	-0.32833	-28.00383	-11.46327	5.41518	0.02337	-0.12674	30.26102	5.41671	269.33	-22.26
84/ 5/24	2445844.5	-0.31582	-28.00378	-11.46356	5.41520	0.02552	-0.12586	30.26094	5.41672	269.35	-22.26
84/ 5/28	2445848.5	-0.30331	-28.00372	-11.46385	5.41522	0.02766	-0.12498	30.26087	5.41673	269.38	-22.26
84/ 6/ 1	2445852.5	-0.29080	-28.00365	-11.46414	5.41524	0.02981	-0.12410	30.26079	5.41675	269.41	-22.26
84/ 6/ 5	2445856.5	-0.27829	-28.00358	-11.46442	5.41526	0.03195	-0.12322	30.26072	5.41676	269.43	-22.26
84/ 6/ 9	2445860.5	-0.26578	-28.00350	-11.46471	5.41528	0.03410	-0.12234	30.26064	5.41677	269.46	-22.26
84/ 6/13	2445864.5	-0.25327	-28.00342	-11.46499	5.41529	0.03624	-0.12146	30.26056	5.41678	269.48	-22.26
84/ 6/17	2445868.5	-0.24076	-28.00333	-11.46527	5.41531	0.03839	-0.12058	30.26049	5.41679	269.51	-22.26
84/ 6/21	2445872.5	-0.22825	-28.00324	-11.46555	5.41532	0.04053	-0.11971	30.26041	5.41679	269.53	-22.27
84/ 6/25	2445876.5	-0.21574	-28.00315	-11.46582	5.41533	0.04268	-0.11883	30.26034	5.41680	269.56	-22.27
84/ 6/29	2445880.5	-0.20323	-28.00305	-11.46610	5.41534	0.04482	-0.11795	30.26026	5.41681	269.58	-22.27
84/ 7/ 3	2445884.5	-0.19072	-28.00294	-11.46637	5.41535	0.04697	-0.11707	30.26018	5.41682	269.61	-22.27
84/ 7/ 7	2445888.5	-0.17821	-28.00283	-11.46664	5.41536	0.04911	-0.11619	30.26011	5.41683	269.64	-22.27
84/ 7/11	2445892.5	-0.16570	-28.00271	-11.46690	5.41536	0.05126	-0.11531	30.26003	5.41683	269.66	-22.27
84/ 7/15	2445896.5	-0.15319	-28.00259	-11.46717	5.41537	0.05340	-0.11443	30.25995	5.41684	269.69	-22.27
84/ 7/19	2445900.5	-0.14067	-28.00247	-11.46743	5.41537	0.05555	-0.11355	30.25987	5.41685	269.71	-22.27
84/ 7/23	2445904.5	-0.12816	-28.00234	-11.46769	5.41538	0.05769	-0.11267	30.25980	5.41685	269.74	-22.27
84/ 7/27	2445908.5	-0.11565	-28.00220	-11.46795	5.41538	0.05984	-0.11179	30.25972	5.41686	269.76	-22.27
84/ 7/31	2445912.5	-0.10314	-28.00206	-11.46821	5.41538	0.06198	-0.11091	30.25964	5.41687	269.79	-22.27
84/ 8/ 4	2445916.5	-0.09063	-28.00191	-11.46847	5.41537	0.06413	-0.11003	30.25956	5.41687	269.81	-22.27
84/ 8/ 8	2445920.5	-0.07812	-28.00176	-11.46872	5.41537	0.06627	-0.10915	30.25948	5.41688	269.84	-22.27
84/ 8/12	2445924.5	-0.06561	-28.00161	-11.46897	5.41537	0.06841	-0.10827	30.25941	5.41688	269.87	-22.27
84/ 8/16	2445928.5	-0.05310	-28.00145	-11.46922	5.41536	0.07056	-0.10739	30.25933	5.41688	269.89	-22.27
84/ 8/20	2445932.5	-0.04059	-28.00128	-11.46947	5.41535	0.07270	-0.10651	30.25925	5.41689	269.92	-22.27
84/ 8/24	2445936.5	-0.02808	-28.00111	-11.46971	5.41534	0.07485	-0.10563	30.25917	5.41689	269.94	-22.27
84/ 8/28	2445940.5	-0.01557	-28.00094	-11.46995	5.41533	0.07699	-0.10475	30.25909	5.41689	269.97	-22.28
84/ 9/ 1	2445944.5	-0.00306	-28.00076	-11.47019	5.41532	0.07914	-0.10387	30.25901	5.41690	269.99	-22.28
84/ 9/ 5	2445948.5	0.00945	-28.00057	-11.47043	5.41531	0.08128	-0.10299	30.25893	5.41690	270.02	-22.28
84/ 9/ 9	2445952.5	0.02196	-28.00038	-11.47067	5.41530	0.08343	-0.10211	30.25885	5.41690	270.04	-22.28
84/ 9/13	2445956.5	0.03447	-28.00019	-11.47091	5.41528	0.08557	-0.10123	30.25877	5.41690	270.07	-22.28
84/ 9/17	2445960.5	0.04698	-27.99998	-11.47114	5.41526	0.08772	-0.10035	30.25869	5.41690	270.10	-22.28
84/ 9/21	2445964.5	0.05949	-27.99978	-11.47137	5.41525	0.08986	-0.09947	30.25861	5.41691	270.12	-22.28
84/ 9/25	2445968.5	0.07200	-27.99957	-11.47160	5.41523	0.09200	-0.09859	30.25853	5.41691	270.15	-22.28

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84/ 9/29	2445972.5	0.08451	-27.99935	-11.47182	5.41521	0.09415	-0.09771	30.25845	5.41691	270.17	-22.28
84/10/ 3	2445976.5	0.09702	-27.99913	-11.47205	5.41518	0.09629	-0.09683	30.25837	5.41691	270.20	-22.28
84/10/ 7	2445980.5	0.10953	-27.99891	-11.47227	5.41516	0.09844	-0.09595	30.25829	5.41690	270.22	-22.28
84/10/11	2445984.5	0.12204	-27.99868	-11.47249	5.41514	0.10058	-0.09507	30.25821	5.41690	270.25	-22.28
84/10/15	2445988.5	0.13455	-27.99845	-11.47271	5.41511	0.10273	-0.09419	30.25812	5.41690	270.28	-22.28
84/10/19	2445992.5	0.14706	-27.99821	-11.47293	5.41508	0.10487	-0.09331	30.25804	5.41690	270.30	-22.28
84/10/23	2445996.5	0.15957	-27.99796	-11.47314	5.41505	0.10701	-0.09243	30.25796	5.41690	270.33	-22.28
84/10/27	2446000.5	0.17208	-27.99771	-11.47335	5.41502	0.10916	-0.09155	30.25788	5.41690	270.35	-22.28
84/10/31	2446004.5	0.18459	-27.99746	-11.47357	5.41499	0.11130	-0.09067	30.25780	5.41689	270.38	-22.28
84/11/ 4	2446008.5	0.19710	-27.99720	-11.47377	5.41496	0.11344	-0.08979	30.25771	5.41689	270.40	-22.28
84/11/ 8	2446012.5	0.20961	-27.99693	-11.47398	5.41492	0.11559	-0.08891	30.25763	5.41689	270.43	-22.28
84/11/12	2446016.5	0.22212	-27.99666	-11.47418	5.41489	0.11773	-0.08803	30.25755	5.41688	270.45	-22.29
84/11/16	2446020.5	0.23463	-27.99639	-11.47439	5.41485	0.11987	-0.08715	30.25747	5.41688	270.48	-22.29
84/11/20	2446024.5	0.24714	-27.99611	-11.47459	5.41481	0.12202	-0.08627	30.25738	5.41687	270.51	-22.29
84/11/24	2446028.5	0.25965	-27.99582	-11.47479	5.41477	0.12416	-0.08539	30.25730	5.41687	270.53	-22.29
84/11/28	2446032.5	0.27216	-27.99553	-11.47498	5.41473	0.12630	-0.08451	30.25722	5.41686	270.56	-22.29
84/12/ 2	2446036.5	0.28466	-27.99524	-11.47518	5.41469	0.12845	-0.08363	30.25713	5.41686	270.58	-22.29
84/12/ 6	2446040.5	0.29717	-27.99494	-11.47537	5.41465	0.13059	-0.08275	30.25705	5.41685	270.61	-22.29
84/12/10	2446044.5	0.30968	-27.99464	-11.47556	5.41460	0.13273	-0.08187	30.25697	5.41685	270.63	-22.29
84/12/14	2446048.5	0.32219	-27.99433	-11.47575	5.41455	0.13487	-0.08099	30.25688	5.41684	270.66	-22.29
84/12/18	2446052.5	0.33470	-27.99401	-11.47593	5.41451	0.13702	-0.08011	30.25680	5.41683	270.68	-22.29
84/12/22	2446056.5	0.34721	-27.99370	-11.47612	5.41446	0.13916	-0.07923	30.25671	5.41682	270.71	-22.29
84/12/26	2446060.5	0.35972	-27.99337	-11.47630	5.41441	0.14130	-0.07835	30.25663	5.41682	270.74	-22.29
84/12/30	2446064.5	0.37222	-27.99304	-11.47648	5.41435	0.14344	-0.07747	30.25654	5.41681	270.76	-22.29
85/ 1/ 3	2446068.5	0.38473	-27.99271	-11.47666	5.41430	0.14559	-0.07659	30.25646	5.41680	270.79	-22.29
85/ 1/ 7	2446072.5	0.39724	-27.99237	-11.47683	5.41425	0.14773	-0.07571	30.25638	5.41679	270.81	-22.29
85/ 1/11	2446076.5	0.40975	-27.99203	-11.47701	5.41419	0.14987	-0.07483	30.25629	5.41678	270.84	-22.29
85/ 1/15	2446080.5	0.42226	-27.99168	-11.47718	5.41413	0.15201	-0.07395	30.25620	5.41677	270.86	-22.29
85/ 1/19	2446084.5	0.43476	-27.99132	-11.47735	5.41407	0.15415	-0.07307	30.25612	5.41676	270.89	-22.29
85/ 1/23	2446088.5	0.44727	-27.99096	-11.47752	5.41401	0.15629	-0.07219	30.25603	5.41675	270.92	-22.29
85/ 1/27	2446092.5	0.45978	-27.99060	-11.47768	5.41395	0.15843	-0.07131	30.25595	5.41674	270.94	-22.29
85/ 1/31	2446096.5	0.47228	-27.99023	-11.47785	5.41389	0.16058	-0.07043	30.25586	5.41673	270.97	-22.29
85/ 2/ 4	2446100.5	0.48479	-27.98986	-11.47801	5.41383	0.16272	-0.06955	30.25577	5.41672	270.99	-22.29
85/ 2/ 8	2446104.5	0.49730	-27.98948	-11.47817	5.41376	0.16486	-0.06867	30.25569	5.41671	271.02	-22.29
85/ 2/12	2446108.5	0.50981	-27.98910	-11.47832	5.41369	0.16700	-0.06779	30.25560	5.41669	271.04	-22.30
85/ 2/16	2446112.5	0.52231	-27.98871	-11.47848	5.41363	0.16914	-0.06691	30.25551	5.41668	271.07	-22.30
85/ 2/20	2446116.5	0.53482	-27.98832	-11.47863	5.41356	0.17128	-0.06603	30.25543	5.41667	271.09	-22.30
85/ 2/24	2446120.5	0.54732	-27.98792	-11.47878	5.41349	0.17342	-0.06515	30.25534	5.41665	271.12	-22.30
85/ 2/28	2446124.5	0.55983	-27.98751	-11.47893	5.41341	0.17556	-0.06427	30.25525	5.41664	271.15	-22.30
85/ 3/ 4	2446128.5	0.57234	-27.98711	-11.47908	5.41334	0.17770	-0.06339	30.25517	5.41663	271.17	-22.30
85/ 3/ 8	2446132.5	0.58484	-27.98669	-11.47923	5.41326	0.17984	-0.06251	30.25508	5.41661	271.20	-22.30
85/ 3/12	2446136.5	0.59735	-27.98628	-11.47937	5.41319	0.18198	-0.06163	30.25499	5.41660	271.22	-22.30
85/ 3/16	2446140.5	0.60985	-27.98585	-11.47951	5.41311	0.18412	-0.06076	30.25490	5.41658	271.25	-22.30
85/ 3/20	2446144.5	0.62236	-27.98543	-11.47965	5.41303	0.18626	-0.05988	30.25481	5.41657	271.27	-22.30
85/ 3/24	2446148.5	0.63486	-27.98499	-11.47979	5.41295	0.18839	-0.05900	30.25473	5.41655	271.30	-22.30

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
85/ 3/28	2446152.5	0.64737	-27.98456	-11.47992	5.41287	0.19053	-0.05812	30.25464	5.41653	271.33	-22.30
85/ 4/ 1	2446156.5	0.65987	-27.98411	-11.48006	5.41279	0.19267	-0.05724	30.25455	5.41652	271.35	-22.30
85/ 4/ 5	2446160.5	0.67238	-27.98366	-11.48019	5.41270	0.19481	-0.05636	30.25446	5.41650	271.38	-22.30
85/ 4/ 9	2446164.5	0.68488	-27.98321	-11.48032	5.41262	0.19695	-0.05548	30.25437	5.41648	271.40	-22.30
85/ 4/13	2446168.5	0.69738	-27.98275	-11.48044	5.41253	0.19909	-0.05460	30.25428	5.41647	271.43	-22.30
85/ 4/17	2446172.5	0.70989	-27.98229	-11.48057	5.41244	0.20122	-0.05372	30.25419	5.41645	271.45	-22.30
85/ 4/21	2446176.5	0.72239	-27.98183	-11.48069	5.41235	0.20336	-0.05284	30.25410	5.41643	271.48	-22.30
85/ 4/25	2446180.5	0.73490	-27.98135	-11.48081	5.41226	0.20550	-0.05196	30.25401	5.41641	271.50	-22.30
85/ 4/29	2446184.5	0.74740	-27.98088	-11.48093	5.41217	0.20764	-0.05109	30.25392	5.41639	271.53	-22.30
85/ 5/ 3	2446188.5	0.75990	-27.98039	-11.48105	5.41208	0.20977	-0.05021	30.25383	5.41637	271.56	-22.30
85/ 5/ 7	2446192.5	0.77240	-27.97991	-11.48116	5.41198	0.21191	-0.04933	30.25374	5.41635	271.58	-22.30
85/ 5/11	2446196.5	0.78491	-27.97941	-11.48128	5.41188	0.21405	-0.04845	30.25365	5.41633	271.61	-22.30
85/ 5/15	2446200.5	0.79741	-27.97892	-11.48139	5.41179	0.21618	-0.04757	30.25356	5.41631	271.63	-22.30
85/ 5/19	2446204.5	0.80991	-27.97842	-11.48150	5.41169	0.21832	-0.04669	30.25347	5.41629	271.66	-22.30
85/ 5/23	2446208.5	0.82241	-27.97791	-11.48160	5.41159	0.22045	-0.04581	30.25338	5.41627	271.68	-22.30
85/ 5/27	2446212.5	0.83491	-27.97740	-11.48171	5.41149	0.22259	-0.04494	30.25329	5.41625	271.71	-22.30
85/ 5/31	2446216.5	0.84742	-27.97688	-11.48181	5.41138	0.22472	-0.04406	30.25320	5.41623	271.73	-22.30
85/ 6/ 4	2446220.5	0.85992	-27.97636	-11.48191	5.41128	0.22686	-0.04318	30.25311	5.41620	271.76	-22.30
85/ 6/ 8	2446224.5	0.87242	-27.97583	-11.48201	5.41117	0.22899	-0.04230	30.25301	5.41618	271.79	-22.30
85/ 6/12	2446228.5	0.88492	-27.97530	-11.48211	5.41107	0.23113	-0.04142	30.25292	5.41616	271.81	-22.31
85/ 6/16	2446232.5	0.89742	-27.97476	-11.48220	5.41096	0.23326	-0.04055	30.25283	5.41614	271.84	-22.31
85/ 6/20	2446236.5	0.90992	-27.97422	-11.48230	5.41085	0.23540	-0.03967	30.25274	5.41611	271.86	-22.31
85/ 6/24	2446240.5	0.92242	-27.97368	-11.48239	5.41074	0.23753	-0.03879	30.25265	5.41609	271.89	-22.31
85/ 6/28	2446244.5	0.93492	-27.97313	-11.48247	5.41063	0.23967	-0.03791	30.25255	5.41606	271.91	-22.31
85/ 7/ 2	2446248.5	0.94742	-27.97257	-11.48256	5.41051	0.24180	-0.03703	30.25246	5.41604	271.94	-22.31
85/ 7/ 6	2446252.5	0.95992	-27.97201	-11.48265	5.41040	0.24393	-0.03616	30.25237	5.41601	271.97	-22.31
85/ 7/10	2446256.5	0.97242	-27.97144	-11.48273	5.41028	0.24606	-0.03528	30.25228	5.41599	271.99	-22.31
85/ 7/14	2446260.5	0.98491	-27.97087	-11.48281	5.41016	0.24820	-0.03440	30.25218	5.41596	272.02	-22.31
85/ 7/18	2446264.5	0.99741	-27.97030	-11.48289	5.41005	0.25033	-0.03352	30.25209	5.41594	272.04	-22.31
85/ 7/22	2446268.5	1.00991	-27.96971	-11.48296	5.40993	0.25246	-0.03265	30.25200	5.41591	272.07	-22.31
85/ 7/26	2446272.5	1.02241	-27.96913	-11.48304	5.40980	0.25459	-0.03177	30.25190	5.41588	272.09	-22.31
85/ 7/30	2446276.5	1.03491	-27.96854	-11.48311	5.40968	0.25673	-0.03089	30.25181	5.41586	272.12	-22.31
85/ 8/ 3	2446280.5	1.04740	-27.96794	-11.48318	5.40956	0.25886	-0.03002	30.25172	5.41583	272.14	-22.31
85/ 8/ 7	2446284.5	1.05990	-27.96734	-11.48325	5.40943	0.26099	-0.02914	30.25162	5.41580	272.17	-22.31
85/ 8/11	2446288.5	1.07240	-27.96674	-11.48332	5.40931	0.26312	-0.02826	30.25153	5.41577	272.20	-22.31
85/ 8/15	2446292.5	1.08489	-27.96613	-11.48338	5.40918	0.26525	-0.02738	30.25143	5.41575	272.22	-22.31
85/ 8/19	2446296.5	1.09739	-27.96551	-11.48344	5.40905	0.26738	-0.02651	30.25134	5.41572	272.25	-22.31
85/ 8/23	2446300.5	1.10988	-27.96489	-11.48350	5.40892	0.26951	-0.02563	30.25124	5.41569	272.27	-22.31
85/ 8/27	2446304.5	1.12238	-27.96427	-11.48356	5.40879	0.27164	-0.02475	30.25115	5.41566	272.30	-22.31
85/ 8/31	2446308.5	1.13488	-27.96364	-11.48362	5.40865	0.27377	-0.02388	30.25106	5.41563	272.32	-22.31
85/ 9/ 4	2446312.5	1.14737	-27.96300	-11.48367	5.40852	0.27590	-0.02300	30.25096	5.41560	272.35	-22.31
85/ 9/ 8	2446316.5	1.15986	-27.96236	-11.48372	5.40838	0.27802	-0.02213	30.25086	5.41557	272.38	-22.31
85/ 9/12	2446320.5	1.17236	-27.96172	-11.48377	5.40825	0.28015	-0.02125	30.25077	5.41554	272.40	-22.31
85/ 9/16	2446324.5	1.18485	-27.96107	-11.48382	5.40811	0.28228	-0.02037	30.25067	5.41551	272.43	-22.31
85/ 9/20	2446328.5	1.19735	-27.96041	-11.48387	5.40797	0.28441	-0.01950	30.25058	5.41548	272.45	-22.31

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM NEPTUNE

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85/ 9/24	2446332.5	1.20984	-27.95975	-11.48391	5.40783	0.28654	-0.01862	30.25048	5.41544	272.48	-22.31
85/ 9/28	2446336.5	1.22233	-27.95909	-11.48395	5.40768	0.28866	-0.01775	30.25039	5.41541	272.50	-22.31
85/10/ 2	2446340.5	1.23482	-27.95842	-11.48399	5.40754	0.29079	-0.01687	30.25029	5.41538	272.53	-22.31
85/10/ 6	2446344.5	1.24732	-27.95775	-11.48403	5.40740	0.29292	-0.01599	30.25019	5.41535	272.55	-22.31
85/10/10	2446348.5	1.25981	-27.95707	-11.48407	5.40725	0.29504	-0.01512	30.25010	5.41531	272.58	-22.31
85/10/14	2446352.5	1.27230	-27.95638	-11.48410	5.40710	0.29717	-0.01424	30.25000	5.41528	272.61	-22.31
85/10/18	2446356.5	1.28479	-27.95569	-11.48413	5.40695	0.29929	-0.01337	30.24990	5.41525	272.63	-22.31
85/10/22	2446360.5	1.29728	-27.95500	-11.48416	5.40680	0.30142	-0.01249	30.24981	5.41521	272.66	-22.31
85/10/26	2446364.5	1.30977	-27.95430	-11.48419	5.40665	0.30354	-0.01162	30.24971	5.41518	272.68	-22.31
85/10/30	2446368.5	1.32226	-27.95360	-11.48422	5.40650	0.30567	-0.01074	30.24961	5.41515	272.71	-22.31
85/11/ 3	2446372.5	1.33475	-27.95289	-11.48424	5.40635	0.30779	-0.00987	30.24952	5.41511	272.73	-22.31
85/11/ 7	2446376.5	1.34724	-27.95217	-11.48426	5.40619	0.30992	-0.00899	30.24942	5.41508	272.76	-22.31
85/11/11	2446380.5	1.35973	-27.95146	-11.48428	5.40604	0.31204	-0.00812	30.24932	5.41504	272.79	-22.31
85/11/15	2446384.5	1.37222	-27.95073	-11.48430	5.40588	0.31416	-0.00724	30.24922	5.41500	272.81	-22.31
85/11/19	2446388.5	1.38471	-27.95000	-11.48432	5.40572	0.31629	-0.00637	30.24913	5.41497	272.84	-22.31
85/11/23	2446392.5	1.39720	-27.94927	-11.48433	5.40556	0.31841	-0.00550	30.24903	5.41493	272.86	-22.31
85/11/27	2446396.5	1.40968	-27.94853	-11.48434	5.40540	0.32053	-0.00462	30.24893	5.41490	272.89	-22.31
85/12/ 1	2446400.5	1.42217	-27.94779	-11.48435	5.40524	0.32265	-0.00375	30.24883	5.41486	272.91	-22.31
85/12/ 5	2446404.5	1.43466	-27.94704	-11.48436	5.40507	0.32477	-0.00287	30.24873	5.41482	272.94	-22.31
85/12/ 9	2446408.5	1.44714	-27.94629	-11.48436	5.40491	0.32690	-0.00200	30.24864	5.41478	272.96	-22.31
85/12/13	2446412.5	1.45963	-27.94553	-11.48437	5.40474	0.32902	-0.00113	30.24854	5.41475	272.99	-22.31
85/12/17	2446416.5	1.47212	-27.94477	-11.48437	5.40457	0.33114	-0.00025	30.24844	5.41471	273.02	-22.31
85/12/21	2446420.5	1.48460	-27.94400	-11.48437	5.40440	0.33326	0.00062	30.24834	5.41467	273.04	-22.31
85/12/25	2446424.5	1.49709	-27.94323	-11.48437	5.40423	0.33538	0.00149	30.24824	5.41463	273.07	-22.31
85/12/29	2446428.5	1.50957	-27.94245	-11.48436	5.40406	0.33749	0.00237	30.24814	5.41459	273.09	-22.31
86/ 1/ 2	2446432.5	1.52206	-27.94167	-11.48436	5.40389	0.33961	0.00324	30.24804	5.41455	273.12	-22.31
86/ 1/ 6	2446436.5	1.53454	-27.94088	-11.48435	5.40372	0.34173	0.00411	30.24794	5.41451	273.14	-22.31
86/ 1/10	2446440.5	1.54702	-27.94009	-11.48434	5.40354	0.34385	0.00498	30.24784	5.41447	273.17	-22.31
86/ 1/14	2446444.5	1.55950	-27.93929	-11.48432	5.40336	0.34597	0.00586	30.24774	5.41443	273.19	-22.31
86/ 1/18	2446448.5	1.57199	-27.93849	-11.48431	5.40319	0.34808	0.00673	30.24764	5.41439	273.22	-22.31
86/ 1/22	2446452.5	1.58447	-27.93769	-11.48429	5.40301	0.35020	0.00760	30.24754	5.41435	273.25	-22.31
86/ 1/26	2446456.5	1.59695	-27.93688	-11.48427	5.40283	0.35232	0.00847	30.24744	5.41431	273.27	-22.31
86/ 1/30	2446460.5	1.60943	-27.93606	-11.48425	5.40265	0.35443	0.00935	30.24734	5.41427	273.30	-22.31
86/ 2/ 3	2446464.5	1.62191	-27.93524	-11.48423	5.40246	0.35655	0.01022	30.24724	5.41423	273.32	-22.31
86/ 2/ 7	2446468.5	1.63439	-27.93441	-11.48421	5.40228	0.35867	0.01109	30.24714	5.41419	273.35	-22.31
86/ 2/11	2446472.5	1.64687	-27.93358	-11.48418	5.40210	0.36078	0.01196	30.24704	5.41414	273.37	-22.31
86/ 2/15	2446476.5	1.65935	-27.93274	-11.48415	5.40191	0.36289	0.01283	30.24694	5.41410	273.40	-22.31
86/ 2/19	2446480.5	1.67183	-27.93190	-11.48412	5.40172	0.36501	0.01370	30.24684	5.41406	273.43	-22.31
86/ 2/23	2446484.5	1.68431	-27.93106	-11.48409	5.40153	0.36712	0.01458	30.24674	5.41402	273.45	-22.31
86/ 2/27	2446488.5	1.69679	-27.93021	-11.48405	5.40134	0.36924	0.01545	30.24664	5.41397	273.48	-22.31
86/ 3/ 3	2446492.5	1.70927	-27.92935	-11.48402	5.40115	0.37135	0.01632	30.24654	5.41393	273.50	-22.31
86/ 3/ 7	2446496.5	1.72174	-27.92849	-11.48398	5.40096	0.37346	0.01719	30.24643	5.41389	273.53	-22.31
86/ 3/11	2446500.5	1.73422	-27.92763	-11.48394	5.40077	0.37557	0.01806	30.24633	5.41384	273.55	-22.31
86/ 3/15	2446504.5	1.74670	-27.92676	-11.48389	5.40057	0.37768	0.01893	30.24623	5.41380	273.58	-22.31
86/ 3/19	2446508.5	1.75917	-27.92588	-11.48385	5.40038	0.37980	0.01980	30.24613	5.41375	273.60	-22.31

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86/ 3/23	2446512.5	1.77165	-27.92500	-11.48380	5.40018	0.38191	0.02067	30.24603	5.41371	273.63	-22.31
86/ 3/27	2446516.5	1.78413	-27.92412	-11.48375	5.39998	0.38402	0.02154	30.24593	5.41366	273.66	-22.31
86/ 3/31	2446520.5	1.79660	-27.92323	-11.48370	5.39978	0.38613	0.02241	30.24582	5.41362	273.68	-22.31
86/ 4/ 4	2446524.5	1.80907	-27.92233	-11.48365	5.39958	0.38824	0.02328	30.24572	5.41357	273.71	-22.31
86/ 4/ 8	2446528.5	1.82155	-27.92143	-11.48360	5.39938	0.39035	0.02415	30.24562	5.41353	273.73	-22.31
86/ 4/12	2446532.5	1.83402	-27.92053	-11.48354	5.39918	0.39245	0.02502	30.24552	5.41348	273.76	-22.31
86/ 4/16	2446536.5	1.84649	-27.91962	-11.48348	5.39897	0.39456	0.02589	30.24541	5.41343	273.78	-22.31
86/ 4/20	2446540.5	1.85897	-27.91871	-11.48342	5.39877	0.39667	0.02676	30.24531	5.41339	273.81	-22.31
86/ 4/24	2446544.5	1.87144	-27.91779	-11.48336	5.39856	0.39878	0.02763	30.24521	5.41334	273.84	-22.31
86/ 4/28	2446548.5	1.88391	-27.91686	-11.48329	5.39835	0.40088	0.02849	30.24510	5.41329	273.86	-22.31
86/ 5/ 2	2446552.5	1.89638	-27.91594	-11.48322	5.39815	0.40299	0.02936	30.24500	5.41325	273.89	-22.31
86/ 5/ 6	2446556.5	1.90885	-27.91500	-11.48316	5.39794	0.40510	0.03023	30.24490	5.41320	273.91	-22.31
86/ 5/10	2446560.5	1.92132	-27.91406	-11.48309	5.39772	0.40720	0.03110	30.24480	5.41315	273.94	-22.31
86/ 5/14	2446564.5	1.93379	-27.91312	-11.48301	5.39751	0.40931	0.03197	30.24469	5.41310	273.96	-22.31
86/ 5/18	2446568.5	1.94626	-27.91217	-11.48294	5.39730	0.41141	0.03284	30.24459	5.41306	273.99	-22.31
86/ 5/22	2446572.5	1.95873	-27.91122	-11.48286	5.39708	0.41352	0.03370	30.24448	5.41301	274.01	-22.31
86/ 5/26	2446576.5	1.97120	-27.91026	-11.48278	5.39687	0.41562	0.03457	30.24438	5.41296	274.04	-22.31
86/ 5/30	2446580.5	1.98366	-27.90930	-11.48270	5.39665	0.41772	0.03544	30.24428	5.41291	274.07	-22.31
86/ 6/ 3	2446584.5	1.99613	-27.90833	-11.48262	5.39643	0.41983	0.03631	30.24417	5.41286	274.09	-22.31
86/ 6/ 7	2446588.5	2.00860	-27.90736	-11.48253	5.39621	0.42193	0.03717	30.24407	5.41281	274.12	-22.31
86/ 6/11	2446592.5	2.02106	-27.90638	-11.48245	5.39599	0.42403	0.03804	30.24397	5.41276	274.14	-22.31
86/ 6/15	2446596.5	2.03353	-27.90540	-11.48236	5.39577	0.42613	0.03891	30.24386	5.41271	274.17	-22.31
86/ 6/19	2446600.5	2.04599	-27.90441	-11.48227	5.39555	0.42823	0.03977	30.24376	5.41266	274.19	-22.31
86/ 6/23	2446604.5	2.05846	-27.90342	-11.48217	5.39533	0.43033	0.04064	30.24365	5.41261	274.22	-22.31
86/ 6/27	2446608.5	2.07092	-27.90243	-11.48208	5.39510	0.43243	0.04151	30.24355	5.41256	274.24	-22.31
86/ 7/ 1	2446612.5	2.08338	-27.90142	-11.48198	5.39488	0.43453	0.04237	30.24344	5.41251	274.27	-22.31
86/ 7/ 5	2446616.5	2.09585	-27.90042	-11.48188	5.39465	0.43663	0.04324	30.24334	5.41246	274.30	-22.31
86/ 7/ 9	2446620.5	2.10831	-27.89941	-11.48178	5.39442	0.43873	0.04410	30.24323	5.41241	274.32	-22.31
86/ 7/13	2446624.5	2.12077	-27.89839	-11.48168	5.39419	0.44083	0.04497	30.24313	5.41236	274.35	-22.31
86/ 7/17	2446628.5	2.13323	-27.89737	-11.48157	5.39396	0.44293	0.04583	30.24302	5.41231	274.37	-22.31
86/ 7/21	2446632.5	2.14569	-27.89634	-11.48147	5.39373	0.44502	0.04670	30.24292	5.41226	274.40	-22.31
86/ 7/25	2446636.5	2.15815	-27.89531	-11.48136	5.39350	0.44712	0.04757	30.24281	5.41221	274.42	-22.31
86/ 7/29	2446640.5	2.17061	-27.89428	-11.48125	5.39326	0.44922	0.04843	30.24271	5.41215	274.45	-22.31
86/ 8/ 2	2446644.5	2.18307	-27.89324	-11.48113	5.39303	0.45131	0.04929	30.24260	5.41210	274.48	-22.31
86/ 8/ 6	2446648.5	2.19553	-27.89219	-11.48102	5.39279	0.45341	0.05016	30.24250	5.41205	274.50	-22.31
86/ 8/10	2446652.5	2.20799	-27.89114	-11.48090	5.39255	0.45550	0.05102	30.24239	5.41200	274.53	-22.31
86/ 8/14	2446656.5	2.22045	-27.89009	-11.48078	5.39232	0.45760	0.05189	30.24228	5.41195	274.55	-22.31
86/ 8/18	2446660.5	2.23290	-27.88903	-11.48066	5.39208	0.45969	0.05275	30.24218	5.41189	274.58	-22.31
86/ 8/22	2446664.5	2.24536	-27.88796	-11.48054	5.39184	0.46178	0.05362	30.24207	5.41184	274.60	-22.31
86/ 8/26	2446668.5	2.25782	-27.88689	-11.48042	5.39160	0.46387	0.05448	30.24197	5.41179	274.63	-22.31
86/ 8/30	2446672.5	2.27027	-27.88582	-11.48029	5.39135	0.46597	0.05534	30.24186	5.41173	274.65	-22.31
86/ 9/ 3	2446676.5	2.28273	-27.88474	-11.48016	5.39111	0.46806	0.05621	30.24175	5.41168	274.68	-22.31
86/ 9/ 7	2446680.5	2.29518	-27.88366	-11.48003	5.39086	0.47015	0.05707	30.24165	5.41163	274.71	-22.31
86/ 9/11	2446684.5	2.30763	-27.88257	-11.47990	5.39062	0.47224	0.05793	30.24154	5.41157	274.73	-22.31
86/ 9/15	2446688.5	2.32009	-27.88148	-11.47976	5.39037	0.47433	0.05879	30.24144	5.41152	274.76	-22.31

1.8 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM NEPTUNE

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
86/ 9/19	2446692.5	2.33254	-27.88038	-11.47962	5.39012	0.47642	0.05966	30.24133	5.41147	274.78	-22.31
86/ 9/23	2446696.5	2.34499	-27.87928	-11.47949	5.38987	0.47851	0.06052	30.24122	5.41141	274.81	-22.31
86/ 9/27	2446700.5	2.35744	-27.87817	-11.47934	5.38962	0.48060	0.06138	30.24112	5.41136	274.83	-22.31
86/10/ 1	2446704.5	2.36989	-27.87705	-11.47920	5.38937	0.48269	0.06224	30.24101	5.41130	274.86	-22.31
86/10/ 5	2446708.5	2.38234	-27.87594	-11.47906	5.38912	0.48477	0.06310	30.24090	5.41125	274.88	-22.31
86/10/ 9	2446712.5	2.39479	-27.87481	-11.47891	5.38887	0.48686	0.06397	30.24080	5.41119	274.91	-22.31
86/10/13	2446716.5	2.40724	-27.87369	-11.47876	5.38861	0.48895	0.06483	30.24069	5.41114	274.94	-22.31
86/10/17	2446720.5	2.41969	-27.87256	-11.47861	5.38836	0.49103	0.06569	30.24058	5.41109	274.96	-22.31
86/10/21	2446724.5	2.43214	-27.87142	-11.47846	5.38810	0.49312	0.06655	30.24047	5.41103	274.99	-22.31
86/10/25	2446728.5	2.44458	-27.87028	-11.47830	5.38785	0.49521	0.06741	30.24037	5.41097	275.01	-22.31
86/10/29	2446732.5	2.45703	-27.86913	-11.47815	5.38759	0.49729	0.06827	30.24026	5.41092	275.04	-22.31
86/11/ 2	2446736.5	2.46948	-27.86798	-11.47799	5.38733	0.49937	0.06913	30.24015	5.41086	275.06	-22.31
86/11/ 6	2446740.5	2.48192	-27.86682	-11.47783	5.38707	0.50146	0.06999	30.24004	5.41081	275.09	-22.31
86/11/10	2446744.5	2.49437	-27.86566	-11.47766	5.38681	0.50354	0.07085	30.23994	5.41075	275.12	-22.31
86/11/14	2446748.5	2.50681	-27.86450	-11.47750	5.38654	0.50562	0.07171	30.23983	5.41070	275.14	-22.31
86/11/18	2446752.5	2.51925	-27.86333	-11.47733	5.38628	0.50771	0.07257	30.23972	5.41064	275.17	-22.31
86/11/22	2446756.5	2.53170	-27.86215	-11.47716	5.38602	0.50979	0.07343	30.23961	5.41059	275.19	-22.31
86/11/26	2446760.5	2.54414	-27.86097	-11.47699	5.38575	0.51187	0.07429	30.23951	5.41053	275.22	-22.30
86/11/30	2446764.5	2.55658	-27.85979	-11.47682	5.38548	0.51395	0.07515	30.23940	5.41047	275.24	-22.30
86/12/ 4	2446768.5	2.56902	-27.85860	-11.47665	5.38522	0.51603	0.07601	30.23929	5.41042	275.27	-22.30
86/12/ 8	2446772.5	2.58146	-27.85740	-11.47647	5.38495	0.51811	0.07687	30.23918	5.41036	275.29	-22.30
86/12/12	2446776.5	2.59390	-27.85620	-11.47629	5.38468	0.52019	0.07772	30.23907	5.41030	275.32	-22.30
86/12/16	2446780.5	2.60634	-27.85500	-11.47611	5.38441	0.52226	0.07858	30.23897	5.41025	275.35	-22.30
86/12/20	2446784.5	2.61878	-27.85379	-11.47593	5.38414	0.52434	0.07944	30.23886	5.41019	275.37	-22.30
86/12/24	2446788.5	2.63122	-27.85258	-11.47574	5.38386	0.52642	0.08030	30.23875	5.41013	275.40	-22.30
86/12/28	2446792.5	2.64366	-27.85136	-11.47556	5.38359	0.52850	0.08115	30.23864	5.41008	275.42	-22.30

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86/12/16	2446780.5	2.60634	-30.12133	0.55437	5.38441	0.51041	-0.13571	30.23897	5.41025	274.95	1.05
86/12/20	2446784.5	2.61878	-30.12015	0.55406	5.38414	0.51266	-0.13575	30.23886	5.41019	274.97	1.05
86/12/24	2446788.5	2.63122	-30.11896	0.55374	5.38386	0.51491	-0.13578	30.23875	5.41013	274.99	1.05
86/12/28	2446792.5	2.64366	-30.11777	0.55343	5.38359	0.51715	-0.13582	30.23864	5.41008	275.02	1.05
87/ 1/ 1	2446796.5	2.65609	-30.11658	0.55312	5.38332	0.51940	-0.13586	30.23853	5.41002	275.04	1.05
87/ 1/ 5	2446800.5	2.66853	-30.11537	0.55280	5.38304	0.52164	-0.13590	30.23842	5.40996	275.06	1.05
87/ 1/ 9	2446804.5	2.68096	-30.11417	0.55249	5.38276	0.52389	-0.13594	30.23832	5.40991	275.09	1.05
87/ 1/13	2446808.5	2.69340	-30.11295	0.55217	5.38249	0.52613	-0.13598	30.23821	5.40985	275.11	1.05
87/ 1/17	2446812.5	2.70583	-30.11173	0.55186	5.38221	0.52838	-0.13602	30.23810	5.40979	275.13	1.05
87/ 1/21	2446816.5	2.71827	-30.11051	0.55155	5.38193	0.53062	-0.13606	30.23799	5.40973	275.16	1.05
87/ 1/25	2446820.5	2.73070	-30.10928	0.55123	5.38165	0.53286	-0.13610	30.23788	5.40968	275.18	1.04
87/ 1/29	2446824.5	2.74313	-30.10805	0.55092	5.38137	0.53510	-0.13614	30.23777	5.40962	275.21	1.04
87/ 2/ 2	2446828.5	2.75556	-30.10681	0.55060	5.38109	0.53734	-0.13618	30.23766	5.40956	275.23	1.04
87/ 2/ 6	2446832.5	2.76799	-30.10557	0.55029	5.38080	0.53959	-0.13622	30.23756	5.40951	275.25	1.04
87/ 2/10	2446836.5	2.78042	-30.10432	0.54997	5.38052	0.54183	-0.13626	30.23745	5.40945	275.28	1.04
87/ 2/14	2446840.5	2.79285	-30.10306	0.54966	5.38023	0.54407	-0.13630	30.23734	5.40939	275.30	1.04
87/ 2/18	2446844.5	2.80528	-30.10180	0.54934	5.37995	0.54630	-0.13634	30.23723	5.40933	275.32	1.04
87/ 2/22	2446848.5	2.81771	-30.10054	0.54903	5.37966	0.54854	-0.13637	30.23712	5.40927	275.35	1.04
87/ 2/26	2446852.5	2.83014	-30.09927	0.54871	5.37937	0.55078	-0.13641	30.23701	5.40922	275.37	1.04
87/ 3/ 2	2446856.5	2.84257	-30.09799	0.54840	5.37908	0.55302	-0.13645	30.23690	5.40916	275.40	1.04
87/ 3/ 6	2446860.5	2.85499	-30.09671	0.54808	5.37880	0.55525	-0.13649	30.23679	5.40910	275.42	1.04
87/ 3/10	2446864.5	2.86742	-30.09543	0.54777	5.37850	0.55749	-0.13653	30.23668	5.40904	275.44	1.04
87/ 3/14	2446868.5	2.87984	-30.09414	0.54745	5.37821	0.55973	-0.13657	30.23657	5.40899	275.47	1.04
87/ 3/18	2446872.5	2.89227	-30.09284	0.54714	5.37792	0.56196	-0.13661	30.23646	5.40893	275.49	1.04
87/ 3/22	2446876.5	2.90469	-30.09154	0.54682	5.37763	0.56420	-0.13665	30.23635	5.40887	275.51	1.04
87/ 3/26	2446880.5	2.91711	-30.09024	0.54651	5.37733	0.56643	-0.13669	30.23624	5.40881	275.54	1.04
87/ 3/30	2446884.5	2.92954	-30.08892	0.54619	5.37704	0.56866	-0.13673	30.23614	5.40875	275.56	1.04
87/ 4/ 3	2446888.5	2.94196	-30.08761	0.54587	5.37674	0.57090	-0.13677	30.23603	5.40870	275.58	1.03
87/ 4/ 7	2446892.5	2.95438	-30.08629	0.54556	5.37645	0.57313	-0.13680	30.23592	5.40864	275.61	1.03
87/ 4/11	2446896.5	2.96680	-30.08496	0.54524	5.37615	0.57536	-0.13684	30.23581	5.40858	275.63	1.03
87/ 4/15	2446900.5	2.97922	-30.08363	0.54493	5.37585	0.57759	-0.13688	30.23570	5.40852	275.66	1.03
87/ 4/19	2446904.5	2.99164	-30.08229	0.54461	5.37555	0.57982	-0.13692	30.23559	5.40846	275.68	1.03
87/ 4/23	2446908.5	3.00406	-30.08095	0.54429	5.37525	0.58205	-0.13696	30.23548	5.40841	275.70	1.03
87/ 4/27	2446912.5	3.01647	-30.07960	0.54398	5.37495	0.58428	-0.13700	30.23537	5.40835	275.73	1.03
87/ 5/ 1	2446916.5	3.02889	-30.07825	0.54366	5.37465	0.58651	-0.13704	30.23526	5.40829	275.75	1.03
87/ 5/ 5	2446920.5	3.04131	-30.07689	0.54334	5.37434	0.58874	-0.13708	30.23515	5.40823	275.77	1.03
87/ 5/ 9	2446924.5	3.05372	-30.07553	0.54303	5.37404	0.59096	-0.13711	30.23504	5.40817	275.80	1.03
87/ 5/13	2446928.5	3.06614	-30.07416	0.54271	5.37374	0.59319	-0.13715	30.23493	5.40812	275.82	1.03
87/ 5/17	2446932.5	3.07855	-30.07279	0.54239	5.37343	0.59542	-0.13719	30.23482	5.40806	275.85	1.03
87/ 5/21	2446936.5	3.09096	-30.07141	0.54208	5.37312	0.59764	-0.13723	30.23471	5.40800	275.87	1.03
87/ 5/25	2446940.5	3.10338	-30.07003	0.54176	5.37282	0.59987	-0.13727	30.23460	5.40794	275.89	1.03
87/ 5/29	2446944.5	3.11579	-30.06864	0.54144	5.37251	0.60209	-0.13731	30.23449	5.40788	275.92	1.03
87/ 6/ 2	2446948.5	3.12820	-30.06725	0.54112	5.37220	0.60432	-0.13735	30.23438	5.40783	275.94	1.03
87/ 6/ 6	2446952.5	3.14061	-30.06585	0.54081	5.37189	0.60654	-0.13738	30.23427	5.40777	275.96	1.02
87/ 6/10	2446956.5	3.15302	-30.06444	0.54049	5.37158	0.60876	-0.13742	30.23416	5.40771	275.99	1.02

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87/ 6/14	2446960.5	3.16543	-30.06303	0.54017	5.37127	0.61098	-0.13746	30.23405	5.40765	276.01	1.02
87/ 6/18	2446964.5	3.17784	-30.06162	0.53985	5.37096	0.61321	-0.13750	30.23394	5.40760	276.03	1.02
87/ 6/22	2446968.5	3.19024	-30.06020	0.53954	5.37064	0.61543	-0.13754	30.23383	5.40754	276.06	1.02
87/ 6/26	2446972.5	3.20265	-30.05878	0.53922	5.37033	0.61765	-0.13758	30.23372	5.40748	276.08	1.02
87/ 6/30	2446976.5	3.21506	-30.05735	0.53890	5.37001	0.61987	-0.13762	30.23361	5.40742	276.11	1.02
87/ 7/ 4	2446980.5	3.22746	-30.05591	0.53858	5.36970	0.62209	-0.13765	30.23350	5.40737	276.13	1.02
87/ 7/ 8	2446984.5	3.23987	-30.05447	0.53827	5.36938	0.62431	-0.13769	30.23339	5.40731	276.15	1.02
87/ 7/12	2446988.5	3.25227	-30.05303	0.53795	5.36907	0.62652	-0.13773	30.23328	5.40725	276.18	1.02
87/ 7/16	2446992.5	3.26467	-30.05158	0.53763	5.36875	0.62874	-0.13777	30.23317	5.40719	276.20	1.02
87/ 7/20	2446996.5	3.27707	-30.05012	0.53731	5.36843	0.63096	-0.13781	30.23306	5.40714	276.22	1.02
87/ 7/24	2447000.5	3.28948	-30.04866	0.53699	5.36811	0.63317	-0.13785	30.23295	5.40708	276.25	1.02
87/ 7/28	2447004.5	3.30188	-30.04720	0.53667	5.36779	0.63539	-0.13788	30.23284	5.40702	276.27	1.02
87/ 8/ 1	2447008.5	3.31428	-30.04573	0.53636	5.36747	0.63761	-0.13792	30.23273	5.40697	276.29	1.02
87/ 8/ 5	2447012.5	3.32668	-30.04425	0.53604	5.36715	0.63982	-0.13796	30.23262	5.40691	276.32	1.02
87/ 8/ 9	2447016.5	3.33908	-30.04277	0.53572	5.36682	0.64204	-0.13800	30.23251	5.40685	276.34	1.02
87/ 8/13	2447020.5	3.35147	-30.04129	0.53540	5.36650	0.64425	-0.13804	30.23240	5.40679	276.37	1.01
87/ 8/17	2447024.5	3.36387	-30.03979	0.53508	5.36618	0.64646	-0.13807	30.23229	5.40674	276.39	1.01
87/ 8/21	2447028.5	3.37627	-30.03830	0.53476	5.36585	0.64867	-0.13811	30.23218	5.40668	276.41	1.01
87/ 8/25	2447032.5	3.38866	-30.03680	0.53444	5.36552	0.65089	-0.13815	30.23207	5.40663	276.44	1.01
87/ 8/29	2447036.5	3.40106	-30.03529	0.53412	5.36520	0.65310	-0.13819	30.23196	5.40657	276.46	1.01
87/ 9/ 2	2447040.5	3.41345	-30.03378	0.53380	5.36487	0.65531	-0.13823	30.23185	5.40651	276.48	1.01
87/ 9/ 6	2447044.5	3.42585	-30.03226	0.53348	5.36454	0.65752	-0.13826	30.23174	5.40646	276.51	1.01
87/ 9/10	2447048.5	3.43824	-30.03074	0.53316	5.36421	0.65973	-0.13830	30.23163	5.40640	276.53	1.01
87/ 9/14	2447052.5	3.45063	-30.02922	0.53284	5.36388	0.66194	-0.13834	30.23152	5.40634	276.56	1.01
87/ 9/18	2447056.5	3.46302	-30.02768	0.53253	5.36355	0.66415	-0.13838	30.23141	5.40629	276.58	1.01
87/ 9/22	2447060.5	3.47541	-30.02615	0.53221	5.36322	0.66635	-0.13842	30.23130	5.40623	276.60	1.01
87/ 9/26	2447064.5	3.48780	-30.02460	0.53189	5.36289	0.66856	-0.13845	30.23118	5.40618	276.63	1.01
87/ 9/30	2447068.5	3.50019	-30.02306	0.53157	5.36256	0.67077	-0.13849	30.23107	5.40612	276.65	1.01
87/10/ 4	2447072.5	3.51258	-30.02151	0.53125	5.36223	0.67297	-0.13853	30.23096	5.40607	276.67	1.01
87/10/ 8	2447076.5	3.52497	-30.01995	0.53093	5.36189	0.67518	-0.13857	30.23085	5.40601	276.70	1.01
87/10/12	2447080.5	3.53735	-30.01839	0.53061	5.36156	0.67738	-0.13861	30.23074	5.40596	276.72	1.01
87/10/16	2447084.5	3.54974	-30.01682	0.53029	5.36122	0.67959	-0.13864	30.23063	5.40590	276.74	1.01
87/10/20	2447088.5	3.56212	-30.01525	0.52997	5.36089	0.68179	-0.13868	30.23052	5.40585	276.77	1.00
87/10/24	2447092.5	3.57451	-30.01367	0.52964	5.36055	0.68400	-0.13872	30.23041	5.40579	276.79	1.00
87/10/28	2447096.5	3.58689	-30.01209	0.52932	5.36021	0.68620	-0.13876	30.23030	5.40574	276.82	1.00
87/11/ 1	2447100.5	3.59927	-30.01050	0.52900	5.35987	0.68840	-0.13879	30.23019	5.40568	276.84	1.00
87/11/ 5	2447104.5	3.61165	-30.00891	0.52868	5.35953	0.69060	-0.13883	30.23008	5.40563	276.86	1.00
87/11/ 9	2447108.5	3.62404	-30.00731	0.52836	5.35919	0.69281	-0.13887	30.22997	5.40557	276.89	1.00
87/11/13	2447112.5	3.63642	-30.00570	0.52804	5.35885	0.69501	-0.13891	30.22986	5.40552	276.91	1.00
87/11/17	2447116.5	3.64880	-30.00410	0.52772	5.35851	0.69721	-0.13895	30.22975	5.40547	276.93	1.00
87/11/21	2447120.5	3.66117	-30.00248	0.52740	5.35817	0.69941	-0.13898	30.22964	5.40541	276.96	1.00
87/11/25	2447124.5	3.67355	-30.00086	0.52708	5.35783	0.70161	-0.13902	30.22953	5.40536	276.98	1.00
87/11/29	2447128.5	3.68593	-29.99924	0.52676	5.35748	0.70380	-0.13906	30.22942	5.40530	277.00	1.00
87/12/ 3	2447132.5	3.69831	-29.99761	0.52644	5.35714	0.70600	-0.13910	30.22931	5.40525	277.03	1.00
87/12/ 7	2447136.5	3.71068	-29.99598	0.52611	5.35680	0.70820	-0.13913	30.22920	5.40520	277.05	1.00

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87/12/11	2447140.5	3.72306	-29.99434	0.52579	5.35645	0.71040	-0.13917	30.22909	5.40515	277.08	1.00
87/12/15	2447144.5	3.73543	-29.99270	0.52547	5.35610	0.71259	-0.13921	30.22898	5.40509	277.10	1.00
87/12/19	2447148.5	3.74780	-29.99105	0.52515	5.35576	0.71479	-0.13925	30.22887	5.40504	277.12	1.00
87/12/23	2447152.5	3.76018	-29.98939	0.52483	5.35541	0.71698	-0.13928	30.22876	5.40499	277.15	0.99
87/12/27	2447156.5	3.77255	-29.98774	0.52451	5.35506	0.71918	-0.13932	30.22865	5.40494	277.17	0.99
87/12/31	2447160.5	3.78492	-29.98607	0.52418	5.35471	0.72137	-0.13936	30.22854	5.40488	277.19	0.99
88/ 1/ 4	2447164.5	3.79729	-29.98440	0.52386	5.35436	0.72357	-0.13940	30.22843	5.40483	277.22	0.99
88/ 1/ 8	2447168.5	3.80966	-29.98273	0.52354	5.35401	0.72576	-0.13943	30.22832	5.40478	277.24	0.99
88/ 1/12	2447172.5	3.82202	-29.98105	0.52322	5.35366	0.72795	-0.13947	30.22821	5.40473	277.26	0.99
88/ 1/16	2447176.5	3.83439	-29.97937	0.52290	5.35331	0.73014	-0.13951	30.22810	5.40468	277.29	0.99
88/ 1/20	2447180.5	3.84676	-29.97768	0.52257	5.35296	0.73234	-0.13954	30.22799	5.40463	277.31	0.99
88/ 1/24	2447184.5	3.85912	-29.97598	0.52225	5.35261	0.73453	-0.13958	30.22789	5.40458	277.34	0.99
88/ 1/28	2447188.5	3.87149	-29.97428	0.52193	5.35226	0.73672	-0.13962	30.22778	5.40452	277.36	0.99
88/ 2/ 1	2447192.5	3.88385	-29.97258	0.52161	5.35190	0.73891	-0.13966	30.22767	5.40447	277.38	0.99
88/ 2/ 5	2447196.5	3.89622	-29.97087	0.52128	5.35155	0.74110	-0.13969	30.22756	5.40442	277.41	0.99
88/ 2/ 9	2447200.5	3.90858	-29.96915	0.52096	5.35119	0.74329	-0.13973	30.22745	5.40437	277.43	0.99
88/ 2/13	2447204.5	3.92094	-29.96743	0.52064	5.35084	0.74548	-0.13977	30.22734	5.40432	277.45	0.99
88/ 2/17	2447208.5	3.93330	-29.96571	0.52031	5.35048	0.74766	-0.13981	30.22723	5.40427	277.48	0.99
88/ 2/21	2447212.5	3.94566	-29.96398	0.51999	5.35012	0.74985	-0.13984	30.22712	5.40422	277.50	0.99
88/ 2/25	2447216.5	3.95802	-29.96224	0.51967	5.34976	0.75204	-0.13988	30.22701	5.40418	277.53	0.99
88/ 2/29	2447220.5	3.97038	-29.96050	0.51935	5.34941	0.75422	-0.13992	30.22690	5.40413	277.55	0.98
88/ 3/ 4	2447224.5	3.98274	-29.95876	0.51902	5.34905	0.75641	-0.13995	30.22679	5.40408	277.57	0.98
88/ 3/ 8	2447228.5	3.99510	-29.95701	0.51870	5.34869	0.75860	-0.13999	30.22668	5.40403	277.60	0.98
88/ 3/12	2447232.5	4.00745	-29.95525	0.51838	5.34833	0.76078	-0.14003	30.22657	5.40398	277.62	0.98
88/ 3/16	2447236.5	4.01981	-29.95349	0.51805	5.34797	0.76297	-0.14007	30.22646	5.40393	277.64	0.98
88/ 3/20	2447240.5	4.03216	-29.95173	0.51773	5.34761	0.76515	-0.14010	30.22635	5.40388	277.67	0.98
88/ 3/24	2447244.5	4.04451	-29.94996	0.51740	5.34724	0.76733	-0.14014	30.22624	5.40384	277.69	0.98
88/ 3/28	2447248.5	4.05687	-29.94818	0.51708	5.34688	0.76952	-0.14018	30.22614	5.40379	277.71	0.98
88/ 4/ 1	2447252.5	4.06922	-29.94640	0.51676	5.34652	0.77170	-0.14021	30.22603	5.40374	277.74	0.98
88/ 4/ 5	2447256.5	4.08157	-29.94462	0.51643	5.34615	0.77388	-0.14025	30.22592	5.40370	277.76	0.98
88/ 4/ 9	2447260.5	4.09392	-29.94283	0.51611	5.34579	0.77606	-0.14029	30.22581	5.40365	277.79	0.98
88/ 4/13	2447264.5	4.10627	-29.94103	0.51578	5.34542	0.77824	-0.14032	30.22570	5.40360	277.81	0.98
88/ 4/17	2447268.5	4.11862	-29.93923	0.51546	5.34506	0.78042	-0.14036	30.22559	5.40356	277.83	0.98
88/ 4/21	2447272.5	4.13097	-29.93743	0.51514	5.34469	0.78260	-0.14040	30.22548	5.40351	277.86	0.98
88/ 4/25	2447276.5	4.14331	-29.93562	0.51481	5.34433	0.78478	-0.14044	30.22537	5.40346	277.88	0.98
88/ 4/29	2447280.5	4.15566	-29.93380	0.51449	5.34396	0.78696	-0.14047	30.22526	5.40342	277.90	0.98
88/ 5/ 3	2447284.5	4.16800	-29.93198	0.51416	5.34359	0.78914	-0.14051	30.22516	5.40337	277.93	0.97
88/ 5/ 7	2447288.5	4.18035	-29.93015	0.51384	5.34322	0.79132	-0.14055	30.22505	5.40333	277.95	0.97
88/ 5/11	2447292.5	4.19269	-29.92832	0.51351	5.34285	0.79350	-0.14058	30.22494	5.40328	277.97	0.97
88/ 5/15	2447296.5	4.20503	-29.92649	0.51319	5.34248	0.79568	-0.14062	30.22483	5.40324	278.00	0.97
88/ 5/19	2447300.5	4.21737	-29.92465	0.51286	5.34211	0.79785	-0.14066	30.22472	5.40320	278.02	0.97
88/ 5/23	2447304.5	4.22972	-29.92280	0.51254	5.34174	0.80003	-0.14069	30.22461	5.40315	278.05	0.97
88/ 5/27	2447308.5	4.24206	-29.92095	0.51221	5.34137	0.80221	-0.14073	30.22451	5.40311	278.07	0.97
88/ 5/31	2447312.5	4.25439	-29.91910	0.51189	5.34100	0.80438	-0.14077	30.22440	5.40306	278.09	0.97
88/ 6/ 4	2447316.5	4.26673	-29.91723	0.51156	5.34063	0.80656	-0.14080	30.22429	5.40302	278.12	0.97

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88/ 6/ 8	2447320.5	4.27907	-29.91537	0.51124	5.34025	0.80873	-0.14084	30.22418	5.40298	278.14	0.97
88/ 6/12	2447324.5	4.29141	-29.91350	0.51091	5.33988	0.81090	-0.14088	30.22407	5.40294	278.16	0.97
88/ 6/16	2447328.5	4.30374	-29.91162	0.51059	5.33951	0.81308	-0.14091	30.22396	5.40289	278.19	0.97
88/ 6/20	2447332.5	4.31608	-29.90974	0.51026	5.33913	0.81525	-0.14095	30.22386	5.40285	278.21	0.97
88/ 6/24	2447336.5	4.32841	-29.90786	0.50994	5.33876	0.81742	-0.14099	30.22375	5.40281	278.23	0.97
88/ 6/28	2447340.5	4.34074	-29.90597	0.50961	5.33838	0.81960	-0.14102	30.22364	5.40277	278.26	0.97
88/ 7/ 2	2447344.5	4.35308	-29.90407	0.50928	5.33800	0.82177	-0.14106	30.22353	5.40273	278.28	0.97
88/ 7/ 6	2447348.5	4.36541	-29.90217	0.50896	5.33763	0.82394	-0.14110	30.22343	5.40269	278.31	0.96
88/ 7/10	2447352.5	4.37774	-29.90026	0.50863	5.33725	0.82611	-0.14113	30.22332	5.40265	278.33	0.96
88/ 7/14	2447356.5	4.39007	-29.89835	0.50831	5.33687	0.82828	-0.14117	30.22321	5.40261	278.35	0.96
88/ 7/18	2447360.5	4.40240	-29.89644	0.50798	5.33649	0.83045	-0.14121	30.22310	5.40257	278.38	0.96
88/ 7/22	2447364.5	4.41472	-29.89451	0.50765	5.33611	0.83262	-0.14124	30.22300	5.40253	278.40	0.96
88/ 7/26	2447368.5	4.42705	-29.89259	0.50733	5.33573	0.83479	-0.14128	30.22289	5.40249	278.42	0.96
88/ 7/30	2447372.5	4.43938	-29.89066	0.50700	5.33535	0.83696	-0.14131	30.22278	5.40245	278.45	0.96
88/ 8/ 3	2447376.5	4.45170	-29.88872	0.50667	5.33497	0.83913	-0.14135	30.22267	5.40241	278.47	0.96
88/ 8/ 7	2447380.5	4.46403	-29.88678	0.50635	5.33459	0.84130	-0.14139	30.22257	5.40237	278.50	0.96
88/ 8/11	2447384.5	4.47635	-29.88483	0.50602	5.33421	0.84346	-0.14142	30.22246	5.40233	278.52	0.96
88/ 8/15	2447388.5	4.48867	-29.88288	0.50569	5.33383	0.84563	-0.14146	30.22235	5.40230	278.54	0.96
88/ 8/19	2447392.5	4.50099	-29.88093	0.50537	5.33344	0.84780	-0.14150	30.22225	5.40226	278.57	0.96
88/ 8/23	2447396.5	4.51331	-29.87897	0.50504	5.33306	0.84997	-0.14153	30.22214	5.40222	278.59	0.96
88/ 8/27	2447400.5	4.52563	-29.87700	0.50471	5.33268	0.85213	-0.14157	30.22203	5.40218	278.61	0.96
88/ 8/31	2447404.5	4.53795	-29.87503	0.50439	5.33229	0.85430	-0.14161	30.22193	5.40215	278.64	0.96
88/ 9/ 4	2447408.5	4.55027	-29.87305	0.50406	5.33191	0.85646	-0.14164	30.22182	5.40211	278.66	0.96
88/ 9/ 8	2447412.5	4.56259	-29.87107	0.50373	5.33152	0.85863	-0.14168	30.22171	5.40208	278.68	0.96
88/ 9/12	2447416.5	4.57490	-29.86909	0.50340	5.33113	0.86079	-0.14172	30.22161	5.40204	278.71	0.95
88/ 9/16	2447420.5	4.58722	-29.86709	0.50308	5.33075	0.86296	-0.14175	30.22150	5.40200	278.73	0.95
88/ 9/20	2447424.5	4.59953	-29.86510	0.50275	5.33036	0.86512	-0.14179	30.22139	5.40197	278.76	0.95
88/ 9/24	2447428.5	4.61185	-29.86310	0.50242	5.32997	0.86728	-0.14182	30.22129	5.40194	278.78	0.95
88/ 9/28	2447432.5	4.62416	-29.86109	0.50209	5.32958	0.86945	-0.14186	30.22118	5.40190	278.80	0.95
88/10/ 2	2447436.5	4.63647	-29.85908	0.50177	5.32920	0.87161	-0.14190	30.22107	5.40187	278.83	0.95
88/10/ 6	2447440.5	4.64878	-29.85706	0.50144	5.32881	0.87377	-0.14193	30.22097	5.40183	278.85	0.95
88/10/10	2447444.5	4.66109	-29.85504	0.50111	5.32842	0.87593	-0.14197	30.22086	5.40180	278.87	0.95
88/10/14	2447448.5	4.67340	-29.85302	0.50078	5.32803	0.87809	-0.14200	30.22076	5.40177	278.90	0.95
88/10/18	2447452.5	4.68571	-29.85099	0.50045	5.32764	0.88026	-0.14204	30.22065	5.40173	278.92	0.95
88/10/22	2447456.5	4.69802	-29.84895	0.50013	5.32724	0.88242	-0.14208	30.22054	5.40170	278.94	0.95
88/10/26	2447460.5	4.71033	-29.84691	0.49980	5.32685	0.88458	-0.14211	30.22044	5.40167	278.97	0.95
88/10/30	2447464.5	4.72263	-29.84486	0.49947	5.32646	0.88674	-0.14215	30.22033	5.40164	278.99	0.95
88/11/ 3	2447468.5	4.73494	-29.84281	0.49914	5.32607	0.88890	-0.14219	30.22023	5.40161	279.02	0.95
88/11/ 7	2447472.5	4.74724	-29.84076	0.49881	5.32567	0.89106	-0.14222	30.22012	5.40158	279.04	0.95
88/11/11	2447476.5	4.75954	-29.83869	0.49848	5.32528	0.89321	-0.14226	30.22002	5.40154	279.06	0.95
88/11/15	2447480.5	4.77184	-29.83663	0.49816	5.32489	0.89537	-0.14229	30.21991	5.40151	279.09	0.94
88/11/19	2447484.5	4.78414	-29.83456	0.49783	5.32449	0.89753	-0.14233	30.21981	5.40148	279.11	0.94
88/11/23	2447488.5	4.79644	-29.83248	0.49750	5.32410	0.89969	-0.14237	30.21970	5.40146	279.13	0.94
88/11/27	2447492.5	4.80874	-29.83040	0.49717	5.32370	0.90185	-0.14240	30.21960	5.40143	279.16	0.94
88/12/ 1	2447496.5	4.82104	-29.82832	0.49684	5.32330	0.90400	-0.14244	30.21949	5.40140	279.18	0.94

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88/12/ 5	2447500.5	4.83334	-29.82622	0.49651	5.32291	0.90616	-0.14247	30.21939	5.40137	279.20	0.94
88/12/ 9	2447504.5	4.84564	-29.82413	0.49618	5.32251	0.90832	-0.14251	30.21928	5.40134	279.23	0.94
88/12/13	2447508.5	4.85793	-29.82203	0.49585	5.32211	0.91047	-0.14255	30.21918	5.40131	279.25	0.94
88/12/17	2447512.5	4.87023	-29.81992	0.49552	5.32172	0.91263	-0.14258	30.21907	5.40128	279.28	0.94
88/12/21	2447516.5	4.88252	-29.81781	0.49519	5.32132	0.91479	-0.14262	30.21897	5.40126	279.30	0.94
88/12/25	2447520.5	4.89481	-29.81569	0.49486	5.32092	0.91694	-0.14265	30.21886	5.40123	279.32	0.94
88/12/29	2447524.5	4.90710	-29.81357	0.49453	5.32052	0.91910	-0.14269	30.21876	5.40120	279.35	0.94
89/ 1/ 2	2447528.5	4.91939	-29.81145	0.49421	5.32012	0.92125	-0.14272	30.21865	5.40118	279.37	0.94
89/ 1/ 6	2447532.5	4.93168	-29.80932	0.49388	5.31972	0.92340	-0.14276	30.21855	5.40115	279.39	0.94
89/ 1/10	2447536.5	4.94397	-29.80718	0.49355	5.31932	0.92556	-0.14280	30.21845	5.40113	279.42	0.94
89/ 1/14	2447540.5	4.95626	-29.80504	0.49322	5.31891	0.92771	-0.14283	30.21834	5.40110	279.44	0.94
89/ 1/18	2447544.5	4.96855	-29.80290	0.49289	5.31851	0.92987	-0.14287	30.21824	5.40108	279.46	0.93
89/ 1/22	2447548.5	4.98084	-29.80075	0.49256	5.31811	0.93202	-0.14290	30.21814	5.40105	279.49	0.93
89/ 1/26	2447552.5	4.99312	-29.79859	0.49223	5.31771	0.93417	-0.14294	30.21803	5.40103	279.51	0.93
89/ 1/30	2447556.5	5.00540	-29.79643	0.49190	5.31730	0.93632	-0.14297	30.21793	5.40101	279.54	0.93
89/ 2/ 3	2447560.5	5.01769	-29.79426	0.49156	5.31690	0.93848	-0.14301	30.21782	5.40098	279.56	0.93
89/ 2/ 7	2447564.5	5.02997	-29.79209	0.49123	5.31649	0.94063	-0.14305	30.21772	5.40096	279.58	0.93
89/ 2/11	2447568.5	5.04225	-29.78992	0.49090	5.31609	0.94278	-0.14308	30.21762	5.40094	279.61	0.93
89/ 2/15	2447572.5	5.05453	-29.78774	0.49057	5.31568	0.94493	-0.14312	30.21751	5.40091	279.63	0.93
89/ 2/19	2447576.5	5.06681	-29.78555	0.49024	5.31528	0.94708	-0.14315	30.21741	5.40089	279.65	0.93
89/ 2/23	2447580.5	5.07909	-29.78336	0.48991	5.31487	0.94923	-0.14319	30.21731	5.40087	279.68	0.93
89/ 2/27	2447584.5	5.09137	-29.78117	0.48958	5.31447	0.95138	-0.14322	30.21721	5.40085	279.70	0.93
89/ 3/ 3	2447588.5	5.10365	-29.77896	0.48925	5.31406	0.95353	-0.14326	30.21710	5.40083	279.73	0.93
89/ 3/ 7	2447592.5	5.11592	-29.77676	0.48892	5.31365	0.95568	-0.14330	30.21700	5.40081	279.75	0.93
89/ 3/11	2447596.5	5.12820	-29.77455	0.48859	5.31324	0.95783	-0.14333	30.21690	5.40079	279.77	0.93
89/ 3/15	2447600.5	5.14047	-29.77233	0.48826	5.31283	0.95998	-0.14337	30.21680	5.40077	279.80	0.93
89/ 3/19	2447604.5	5.15274	-29.77011	0.48793	5.31242	0.96213	-0.14340	30.21669	5.40075	279.82	0.93
89/ 3/23	2447608.5	5.16502	-29.76789	0.48759	5.31201	0.96428	-0.14344	30.21659	5.40073	279.84	0.92
89/ 3/27	2447612.5	5.17729	-29.76566	0.48726	5.31160	0.96643	-0.14347	30.21649	5.40071	279.87	0.92
89/ 3/31	2447616.5	5.18956	-29.76342	0.48693	5.31119	0.96858	-0.14351	30.21639	5.40070	279.89	0.92
89/ 4/ 4	2447620.5	5.20183	-29.76118	0.48660	5.31078	0.97072	-0.14354	30.21628	5.40068	279.91	0.92
89/ 4/ 8	2447624.5	5.21410	-29.75894	0.48627	5.31037	0.97287	-0.14358	30.21618	5.40066	279.94	0.92
89/ 4/12	2447628.5	5.22636	-29.75669	0.48594	5.30996	0.97502	-0.14362	30.21608	5.40064	279.96	0.92
89/ 4/16	2447632.5	5.23863	-29.75443	0.48560	5.30955	0.97717	-0.14365	30.21598	5.40063	279.99	0.92
89/ 4/20	2447636.5	5.25090	-29.75217	0.48527	5.30913	0.97931	-0.14369	30.21588	5.40061	280.01	0.92
89/ 4/24	2447640.5	5.26316	-29.74991	0.48494	5.30872	0.98146	-0.14372	30.21578	5.40059	280.03	0.92
89/ 4/28	2447644.5	5.27542	-29.74764	0.48461	5.30831	0.98361	-0.14376	30.21567	5.40058	280.06	0.92
89/ 5/ 2	2447648.5	5.28769	-29.74536	0.48428	5.30789	0.98575	-0.14379	30.21557	5.40056	280.08	0.92
89/ 5/ 6	2447652.5	5.29995	-29.74308	0.48394	5.30748	0.98790	-0.14383	30.21547	5.40055	280.10	0.92
89/ 5/10	2447656.5	5.31221	-29.74080	0.48361	5.30706	0.99004	-0.14386	30.21537	5.40054	280.13	0.92
89/ 5/14	2447660.5	5.32447	-29.73851	0.48328	5.30665	0.99219	-0.14390	30.21527	5.40052	280.15	0.92
89/ 5/18	2447664.5	5.33673	-29.73622	0.48295	5.30623	0.99434	-0.14393	30.21517	5.40051	280.17	0.92
89/ 5/22	2447668.5	5.34898	-29.73392	0.48261	5.30581	0.99648	-0.14397	30.21507	5.40049	280.20	0.92
89/ 5/26	2447672.5	5.36124	-29.73161	0.48228	5.30540	0.99863	-0.14400	30.21497	5.40048	280.22	0.91
89/ 5/30	2447676.5	5.37350	-29.72930	0.48195	5.30498	1.00077	-0.14404	30.21487	5.40047	280.25	0.91

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89/ 6/ 3	2447680.5	5.38575	-29.72699	0.48162	5.30456	1.00292	-0.14408	30.21477	5.40046	280.27	0.91
89/ 6/ 7	2447684.5	5.39801	-29.72467	0.48128	5.30414	1.00506	-0.14411	30.21466	5.40045	280.29	0.91
89/ 6/11	2447688.5	5.41026	-29.72234	0.48095	5.30372	1.00720	-0.14415	30.21456	5.40044	280.32	0.91
89/ 6/15	2447692.5	5.42251	-29.72001	0.48062	5.30330	1.00935	-0.14418	30.21446	5.40042	280.34	0.91
89/ 6/19	2447696.5	5.43476	-29.71768	0.48028	5.30288	1.01149	-0.14422	30.21436	5.40041	280.36	0.91
89/ 6/23	2447700.5	5.44701	-29.71534	0.47995	5.30246	1.01363	-0.14425	30.21426	5.40040	280.39	0.91
89/ 6/27	2447704.5	5.45926	-29.71300	0.47962	5.30204	1.01578	-0.14429	30.21416	5.40039	280.41	0.91
89/ 7/ 1	2447708.5	5.47151	-29.71065	0.47928	5.30162	1.01792	-0.14432	30.21406	5.40038	280.43	0.91
89/ 7/ 5	2447712.5	5.48376	-29.70829	0.47895	5.30120	1.02006	-0.14436	30.21397	5.40038	280.46	0.91
89/ 7/ 9	2447716.5	5.49600	-29.70593	0.47862	5.30077	1.02221	-0.14439	30.21387	5.40037	280.48	0.91
89/ 7/13	2447720.5	5.50825	-29.70357	0.47828	5.30035	1.02435	-0.14443	30.21377	5.40036	280.51	0.91
89/ 7/17	2447724.5	5.52049	-29.70120	0.47795	5.29993	1.02649	-0.14446	30.21367	5.40035	280.53	0.91
89/ 7/21	2447728.5	5.53274	-29.69883	0.47762	5.29950	1.02863	-0.14450	30.21357	5.40034	280.55	0.91
89/ 7/25	2447732.5	5.54498	-29.69645	0.47728	5.29908	1.03077	-0.14453	30.21347	5.40034	280.58	0.91
89/ 7/29	2447736.5	5.55722	-29.69407	0.47695	5.29866	1.03292	-0.14457	30.21337	5.40033	280.60	0.90
89/ 8/ 2	2447740.5	5.56946	-29.69168	0.47661	5.29823	1.03506	-0.14460	30.21327	5.40032	280.62	0.90
89/ 8/ 6	2447744.5	5.58170	-29.68928	0.47628	5.29780	1.03720	-0.14464	30.21317	5.40032	280.65	0.90
89/ 8/10	2447748.5	5.59394	-29.68688	0.47595	5.29738	1.03934	-0.14467	30.21307	5.40031	280.67	0.90
89/ 8/14	2447752.5	5.60618	-29.68448	0.47561	5.29695	1.04148	-0.14471	30.21297	5.40031	280.69	0.90
89/ 8/18	2447756.5	5.61841	-29.68207	0.47528	5.29652	1.04362	-0.14474	30.21288	5.40030	280.72	0.90
89/ 8/22	2447760.5	5.63065	-29.67966	0.47494	5.29610	1.04576	-0.14478	30.21278	5.40030	280.74	0.90
89/ 8/26	2447764.5	5.64288	-29.67724	0.47461	5.29567	1.04790	-0.14481	30.21268	5.40029	280.77	0.90
89/ 8/30	2447768.5	5.65511	-29.67482	0.47427	5.29524	1.05004	-0.14485	30.21258	5.40029	280.79	0.90
89/ 9/ 3	2447772.5	5.66735	-29.67239	0.47394	5.29481	1.05218	-0.14488	30.21248	5.40029	280.81	0.90
89/ 9/ 7	2447776.5	5.67958	-29.66996	0.47360	5.29438	1.05432	-0.14492	30.21238	5.40029	280.84	0.90
89/ 9/11	2447780.5	5.69181	-29.66752	0.47327	5.29395	1.05646	-0.14495	30.21229	5.40028	280.86	0.90
89/ 9/15	2447784.5	5.70404	-29.66507	0.47294	5.29352	1.05860	-0.14499	30.21219	5.40028	280.88	0.90
89/ 9/19	2447788.5	5.71627	-29.66263	0.47260	5.29309	1.06074	-0.14502	30.21209	5.40028	280.91	0.90
89/ 9/23	2447792.5	5.72849	-29.66017	0.47227	5.29266	1.06288	-0.14506	30.21199	5.40028	280.93	0.90
89/ 9/27	2447796.5	5.74072	-29.65772	0.47193	5.29223	1.06502	-0.14509	30.21190	5.40028	280.96	0.90
89/10/ 1	2447800.5	5.75295	-29.65525	0.47159	5.29180	1.06716	-0.14513	30.21180	5.40028	280.98	0.89
89/10/ 5	2447804.5	5.76517	-29.65279	0.47126	5.29136	1.06930	-0.14516	30.21170	5.40028	281.00	0.89
89/10/ 9	2447808.5	5.77739	-29.65031	0.47092	5.29093	1.07144	-0.14520	30.21161	5.40028	281.03	0.89
89/10/13	2447812.5	5.78962	-29.64783	0.47059	5.29050	1.07358	-0.14523	30.21151	5.40028	281.05	0.89
89/10/17	2447816.5	5.80184	-29.64535	0.47025	5.29006	1.07571	-0.14527	30.21141	5.40028	281.07	0.89
89/10/21	2447820.5	5.81406	-29.64286	0.46992	5.28963	1.07785	-0.14530	30.21131	5.40028	281.10	0.89
89/10/25	2447824.5	5.82628	-29.64037	0.46958	5.28919	1.07999	-0.14534	30.21122	5.40028	281.12	0.89
89/10/29	2447828.5	5.83850	-29.63787	0.46925	5.28876	1.08213	-0.14537	30.21112	5.40028	281.14	0.89
89/11/ 2	2447832.5	5.85071	-29.63537	0.46891	5.28832	1.08427	-0.14540	30.21102	5.40029	281.17	0.89
89/11/ 6	2447836.5	5.86293	-29.63286	0.46857	5.28788	1.08641	-0.14544	30.21093	5.40029	281.19	0.89
89/11/10	2447840.5	5.87515	-29.63035	0.46824	5.28745	1.08854	-0.14547	30.21083	5.40029	281.22	0.89
89/11/14	2447844.5	5.88736	-29.62784	0.46790	5.28701	1.09068	-0.14551	30.21074	5.40030	281.24	0.89
89/11/18	2447848.5	5.89957	-29.62531	0.46757	5.28657	1.09282	-0.14554	30.21064	5.40030	281.26	0.89
89/11/22	2447852.5	5.91179	-29.62279	0.46723	5.28613	1.09496	-0.14558	30.21054	5.40031	281.29	0.89
89/11/26	2447856.5	5.92400	-29.62025	0.46689	5.28569	1.09709	-0.14561	30.21045	5.40031	281.31	0.89

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89/11/30	2447860.5	5.93621	-29.61772	0.46656	5.28525	1.09923	-0.14565	30.21035	5.40032	281.33	0.88
89/12/ 4	2447864.5	5.94842	-29.61518	0.46622	5.28481	1.10137	-0.14568	30.21026	5.40032	281.36	0.88
89/12/ 8	2447868.5	5.96063	-29.61263	0.46588	5.28437	1.10350	-0.14572	30.21016	5.40033	281.38	0.88
89/12/12	2447872.5	5.97283	-29.61008	0.46555	5.28393	1.10564	-0.14575	30.21007	5.40034	281.40	0.88
89/12/16	2447876.5	5.98504	-29.60752	0.46521	5.28349	1.10778	-0.14579	30.20997	5.40034	281.43	0.88
89/12/20	2447880.5	5.99724	-29.60496	0.46487	5.28305	1.10991	-0.14582	30.20988	5.40035	281.45	0.88
89/12/24	2447884.5	6.00945	-29.60239	0.46454	5.28261	1.11205	-0.14585	30.20978	5.40036	281.48	0.88
89/12/28	2447888.5	6.02165	-29.59982	0.46420	5.28216	1.11419	-0.14589	30.20969	5.40036	281.50	0.88
90/ 1/ 1	2447892.5	6.03385	-29.59724	0.46386	5.28172	1.11632	-0.14592	30.20959	5.40037	281.52	0.88
90/ 1/ 5	2447896.5	6.04606	-29.59466	0.46353	5.28128	1.11846	-0.14596	30.20950	5.40038	281.55	0.88
90/ 1/ 9	2447900.5	6.05826	-29.59208	0.46319	5.28083	1.12060	-0.14599	30.20940	5.40039	281.57	0.88
90/ 1/13	2447904.5	6.07045	-29.58948	0.46285	5.28039	1.12273	-0.14603	30.20931	5.40040	281.59	0.88
90/ 1/17	2447908.5	6.08265	-29.58689	0.46251	5.27994	1.12487	-0.14606	30.20921	5.40041	281.62	0.88
90/ 1/21	2447912.5	6.09485	-29.58429	0.46218	5.27949	1.12700	-0.14610	30.20912	5.40042	281.64	0.88
90/ 1/25	2447916.5	6.10705	-29.58168	0.46184	5.27905	1.12914	-0.14613	30.20903	5.40043	281.66	0.88
90/ 1/29	2447920.5	6.11924	-29.57907	0.46150	5.27860	1.13128	-0.14616	30.20893	5.40044	281.69	0.88
90/ 2/ 2	2447924.5	6.13144	-29.57645	0.46116	5.27815	1.13341	-0.14620	30.20884	5.40045	281.71	0.87
90/ 2/ 6	2447928.5	6.14363	-29.57383	0.46083	5.27771	1.13555	-0.14623	30.20874	5.40047	281.74	0.87
90/ 2/10	2447932.5	6.15582	-29.57121	0.46049	5.27726	1.13768	-0.14627	30.20865	5.40048	281.76	0.87
90/ 2/14	2447936.5	6.16801	-29.56858	0.46015	5.27681	1.13982	-0.14630	30.20856	5.40049	281.78	0.87
90/ 2/18	2447940.5	6.18020	-29.56594	0.45981	5.27636	1.14195	-0.14634	30.20846	5.40050	281.81	0.87
90/ 2/22	2447944.5	6.19239	-29.56330	0.45947	5.27591	1.14409	-0.14637	30.20837	5.40052	281.83	0.87
90/ 2/26	2447948.5	6.20458	-29.56066	0.45914	5.27546	1.14623	-0.14640	30.20828	5.40053	281.85	0.87
90/ 3/ 2	2447952.5	6.21676	-29.55801	0.45880	5.27501	1.14836	-0.14644	30.20818	5.40054	281.88	0.87
90/ 3/ 6	2447956.5	6.22895	-29.55535	0.45846	5.27456	1.15050	-0.14647	30.20809	5.40056	281.90	0.87
90/ 3/10	2447960.5	6.24113	-29.55269	0.45812	5.27410	1.15263	-0.14651	30.20800	5.40057	281.92	0.87
90/ 3/14	2447964.5	6.25332	-29.55002	0.45778	5.27365	1.15477	-0.14654	30.20790	5.40059	281.95	0.87
90/ 3/18	2447968.5	6.26550	-29.54735	0.45744	5.27320	1.15690	-0.14658	30.20781	5.40060	281.97	0.87
90/ 3/22	2447972.5	6.27768	-29.54468	0.45710	5.27274	1.15904	-0.14661	30.20772	5.40062	282.00	0.87
90/ 3/26	2447976.5	6.28986	-29.54200	0.45677	5.27229	1.16117	-0.14664	30.20763	5.40064	282.02	0.87
90/ 3/30	2447980.5	6.30204	-29.53931	0.45643	5.27184	1.16331	-0.14668	30.20753	5.40065	282.04	0.87
90/ 4/ 3	2447984.5	6.31422	-29.53662	0.45609	5.27138	1.16544	-0.14671	30.20744	5.40067	282.07	0.87
90/ 4/ 7	2447988.5	6.32640	-29.53393	0.45575	5.27092	1.16758	-0.14675	30.20735	5.40069	282.09	0.86
90/ 4/11	2447992.5	6.33857	-29.53123	0.45541	5.27047	1.16971	-0.14678	30.20726	5.40070	282.11	0.86
90/ 4/15	2447996.5	6.35075	-29.52852	0.45507	5.27001	1.17184	-0.14681	30.20717	5.40072	282.14	0.86
90/ 4/19	2448000.5	6.36292	-29.52582	0.45473	5.26955	1.17398	-0.14685	30.20707	5.40074	282.16	0.86
90/ 4/23	2448004.5	6.37510	-29.52310	0.45439	5.26910	1.17611	-0.14688	30.20698	5.40076	282.19	0.86
90/ 4/27	2448008.5	6.38727	-29.52038	0.45405	5.26864	1.17825	-0.14692	30.20689	5.40078	282.21	0.86
90/ 5/ 1	2448012.5	6.39944	-29.51766	0.45371	5.26818	1.18038	-0.14695	30.20680	5.40080	282.23	0.86
90/ 5/ 5	2448016.5	6.41161	-29.51493	0.45337	5.26772	1.18252	-0.14698	30.20671	5.40082	282.26	0.86
90/ 5/ 9	2448020.5	6.42378	-29.51219	0.45303	5.26726	1.18465	-0.14702	30.20662	5.40084	282.28	0.86
90/ 5/13	2448024.5	6.43595	-29.50945	0.45269	5.26680	1.18679	-0.14705	30.20653	5.40086	282.30	0.86
90/ 5/17	2448028.5	6.44811	-29.50671	0.45235	5.26634	1.18892	-0.14709	30.20643	5.40088	282.33	0.86
90/ 5/21	2448032.5	6.46028	-29.50396	0.45202	5.26588	1.19106	-0.14712	30.20634	5.40090	282.35	0.86
90/ 5/25	2448036.5	6.47244	-29.50121	0.45168	5.26542	1.19319	-0.14715	30.20625	5.40092	282.37	0.86

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90/ 5/29	2448040.5	6.48461	-29.49845	0.45134	5.26495	1.19532	-0.14719	30.20616	5.40094	282.40	0.86
90/ 6/ 2	2448044.5	6.49677	-29.49568	0.45100	5.26449	1.19746	-0.14722	30.20607	5.40097	282.42	0.86
90/ 6/ 6	2448048.5	6.50893	-29.49291	0.45065	5.26403	1.19959	-0.14726	30.20598	5.40099	282.45	0.85
90/ 6/10	2448052.5	6.52109	-29.49014	0.45031	5.26356	1.20173	-0.14729	30.20589	5.40101	282.47	0.85
90/ 6/14	2448056.5	6.53325	-29.48736	0.44997	5.26310	1.20386	-0.14732	30.20580	5.40104	282.49	0.85
90/ 6/18	2448060.5	6.54541	-29.48458	0.44963	5.26263	1.20600	-0.14736	30.20571	5.40106	282.52	0.85
90/ 6/22	2448064.5	6.55756	-29.48179	0.44929	5.26217	1.20813	-0.14739	30.20562	5.40108	282.54	0.85
90/ 6/26	2448068.5	6.56972	-29.47900	0.44895	5.26170	1.21026	-0.14743	30.20553	5.40111	282.56	0.85
90/ 6/30	2448072.5	6.58188	-29.47620	0.44861	5.26123	1.21240	-0.14746	30.20544	5.40113	282.59	0.85
90/ 7/ 4	2448076.5	6.59403	-29.47340	0.44827	5.26077	1.21453	-0.14749	30.20535	5.40116	282.61	0.85
90/ 7/ 8	2448080.5	6.60618	-29.47059	0.44793	5.26030	1.21667	-0.14753	30.20526	5.40118	282.63	0.85
90/ 7/12	2448084.5	6.61833	-29.46777	0.44759	5.25983	1.21880	-0.14756	30.20517	5.40121	282.66	0.85
90/ 7/16	2448088.5	6.63048	-29.46496	0.44725	5.25936	1.22093	-0.14759	30.20508	5.40124	282.68	0.85
90/ 7/20	2448092.5	6.64263	-29.46213	0.44691	5.25889	1.22307	-0.14763	30.20499	5.40126	282.71	0.85
90/ 7/24	2448096.5	6.65478	-29.45930	0.44657	5.25842	1.22520	-0.14766	30.20490	5.40129	282.73	0.85
90/ 7/28	2448100.5	6.66693	-29.45647	0.44623	5.25795	1.22734	-0.14769	30.20481	5.40132	282.75	0.85
90/ 8/ 1	2448104.5	6.67908	-29.45363	0.44588	5.25748	1.22947	-0.14773	30.20473	5.40134	282.78	0.85
90/ 8/ 5	2448108.5	6.69122	-29.45079	0.44554	5.25701	1.23161	-0.14776	30.20464	5.40137	282.80	0.85
90/ 8/ 9	2448112.5	6.70336	-29.44794	0.44520	5.25654	1.23374	-0.14780	30.20455	5.40140	282.82	0.84
90/ 8/13	2448116.5	6.71551	-29.44509	0.44486	5.25606	1.23587	-0.14783	30.20446	5.40143	282.85	0.84
90/ 8/17	2448120.5	6.72765	-29.44223	0.44452	5.25559	1.23801	-0.14786	30.20437	5.40146	282.87	0.84
90/ 8/21	2448124.5	6.73979	-29.43937	0.44418	5.25512	1.24014	-0.14790	30.20428	5.40149	282.89	0.84
90/ 8/25	2448128.5	6.75193	-29.43650	0.44384	5.25464	1.24228	-0.14793	30.20419	5.40152	282.92	0.84
90/ 8/29	2448132.5	6.76407	-29.43363	0.44349	5.25417	1.24441	-0.14796	30.20410	5.40155	282.94	0.84
90/ 9/ 2	2448136.5	6.77621	-29.43075	0.44315	5.25369	1.24654	-0.14800	30.20402	5.40158	282.97	0.84
90/ 9/ 6	2448140.5	6.78834	-29.42787	0.44281	5.25321	1.24868	-0.14803	30.20393	5.40161	282.99	0.84
90/ 9/10	2448144.5	6.80048	-29.42498	0.44247	5.25274	1.25081	-0.14806	30.20384	5.40164	283.01	0.84
90/ 9/14	2448148.5	6.81261	-29.42209	0.44213	5.25226	1.25295	-0.14810	30.20375	5.40167	283.04	0.84
90/ 9/18	2448152.5	6.82475	-29.41920	0.44178	5.25178	1.25508	-0.14813	30.20366	5.40170	283.06	0.84
90/ 9/22	2448156.5	6.83688	-29.41629	0.44144	5.25130	1.25722	-0.14816	30.20358	5.40173	283.08	0.84
90/ 9/26	2448160.5	6.84901	-29.41339	0.44110	5.25082	1.25935	-0.14820	30.20349	5.40177	283.11	0.84
90/ 9/30	2448164.5	6.86114	-29.41048	0.44076	5.25034	1.26148	-0.14823	30.20340	5.40180	283.13	0.84
90/10/ 4	2448168.5	6.87327	-29.40756	0.44041	5.24986	1.26362	-0.14826	30.20332	5.40183	283.16	0.84
90/10/ 8	2448172.5	6.88539	-29.40464	0.44007	5.24938	1.26575	-0.14830	30.20323	5.40186	283.18	0.83
90/10/12	2448176.5	6.89752	-29.40171	0.43973	5.24890	1.26789	-0.14833	30.20314	5.40190	283.20	0.83
90/10/16	2448180.5	6.90965	-29.39878	0.43939	5.24842	1.27002	-0.14836	30.20305	5.40193	283.23	0.83
90/10/20	2448184.5	6.92177	-29.39584	0.43904	5.24794	1.27216	-0.14840	30.20297	5.40197	283.25	0.83
90/10/24	2448188.5	6.93389	-29.39290	0.43870	5.24745	1.27429	-0.14843	30.20288	5.40200	283.27	0.83
90/10/28	2448192.5	6.94602	-29.38995	0.43836	5.24697	1.27643	-0.14846	30.20279	5.40204	283.30	0.83
90/11/ 1	2448196.5	6.95814	-29.38700	0.43801	5.24648	1.27856	-0.14850	30.20271	5.40207	283.32	0.83
90/11/ 5	2448200.5	6.97026	-29.38405	0.43767	5.24600	1.28069	-0.14853	30.20262	5.40211	283.34	0.83
90/11/ 9	2448204.5	6.98237	-29.38109	0.43733	5.24551	1.28283	-0.14856	30.20253	5.40214	283.37	0.83
90/11/13	2448208.5	6.99449	-29.37812	0.43699	5.24503	1.28496	-0.14860	30.20245	5.40218	283.39	0.83
90/11/17	2448212.5	7.00661	-29.37515	0.43664	5.24454	1.28710	-0.14863	30.20236	5.40221	283.42	0.83
90/11/21	2448216.5	7.01872	-29.37217	0.43630	5.24405	1.28923	-0.14866	30.20227	5.40225	283.44	0.83

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90/11/25	2448220.5	7.03084	-29.36919	0.43596	5.24356	1.29137	-0.14870	30.20219	5.40229	283.46	0.83
90/11/29	2448224.5	7.04295	-29.36621	0.43561	5.24308	1.29350	-0.14873	30.20210	5.40232	283.49	0.83
90/12/ 3	2448228.5	7.05506	-29.36322	0.43527	5.24259	1.29564	-0.14876	30.20202	5.40236	283.51	0.83
90/12/ 7	2448232.5	7.06717	-29.36022	0.43492	5.24210	1.29777	-0.14880	30.20193	5.40240	283.53	0.83
90/12/11	2448236.5	7.07928	-29.35722	0.43458	5.24161	1.29991	-0.14883	30.20184	5.40244	283.56	0.82
90/12/15	2448240.5	7.09139	-29.35421	0.43424	5.24112	1.30204	-0.14886	30.20176	5.40248	283.58	0.82
90/12/19	2448244.5	7.10350	-29.35120	0.43389	5.24062	1.30418	-0.14889	30.20167	5.40252	283.60	0.82
90/12/23	2448248.5	7.11560	-29.34819	0.43355	5.24013	1.30631	-0.14893	30.20159	5.40256	283.63	0.82
90/12/27	2448252.5	7.12771	-29.34517	0.43320	5.23964	1.30845	-0.14896	30.20150	5.40259	283.65	0.82
90/12/31	2448256.5	7.13981	-29.34214	0.43286	5.23914	1.31058	-0.14899	30.20142	5.40263	283.68	0.82
91/ 1/ 4	2448260.5	7.15192	-29.33911	0.43252	5.23865	1.31272	-0.14903	30.20133	5.40267	283.70	0.82
91/ 1/ 8	2448264.5	7.16402	-29.33608	0.43217	5.23816	1.31485	-0.14906	30.20125	5.40272	283.72	0.82
91/ 1/12	2448268.5	7.17612	-29.33304	0.43183	5.23766	1.31699	-0.14909	30.20116	5.40276	283.75	0.82
91/ 1/16	2448272.5	7.18822	-29.32999	0.43148	5.23716	1.31912	-0.14913	30.20108	5.40280	283.77	0.82
91/ 1/20	2448276.5	7.20032	-29.32694	0.43114	5.23667	1.32126	-0.14916	30.20099	5.40284	283.79	0.82
91/ 1/24	2448280.5	7.21241	-29.32389	0.43079	5.23617	1.32339	-0.14919	30.20091	5.40288	283.82	0.82
91/ 1/28	2448284.5	7.22451	-29.32083	0.43045	5.23567	1.32553	-0.14922	30.20082	5.40292	283.84	0.82
91/ 2/ 1	2448288.5	7.23660	-29.31776	0.43010	5.23517	1.32767	-0.14926	30.20074	5.40296	283.87	0.82
91/ 2/ 5	2448292.5	7.24870	-29.31469	0.42976	5.23467	1.32980	-0.14929	30.20066	5.40301	283.89	0.82
91/ 2/ 9	2448296.5	7.26079	-29.31162	0.42941	5.23417	1.33194	-0.14932	30.20057	5.40305	283.91	0.81
91/ 2/13	2448300.5	7.27288	-29.30854	0.42907	5.23367	1.33407	-0.14936	30.20049	5.40309	283.94	0.81
91/ 2/17	2448304.5	7.28497	-29.30546	0.42872	5.23317	1.33621	-0.14939	30.20040	5.40314	283.96	0.81
91/ 2/21	2448308.5	7.29706	-29.30237	0.42838	5.23267	1.33834	-0.14942	30.20032	5.40318	283.98	0.81
91/ 2/25	2448312.5	7.30915	-29.29927	0.42803	5.23217	1.34048	-0.14945	30.20023	5.40322	284.01	0.81
91/ 3/ 1	2448316.5	7.32123	-29.29617	0.42769	5.23167	1.34262	-0.14949	30.20015	5.40327	284.03	0.81
91/ 3/ 5	2448320.5	7.33332	-29.29307	0.42734	5.23116	1.34475	-0.14952	30.20007	5.40331	284.05	0.81
91/ 3/ 9	2448324.5	7.34540	-29.28996	0.42700	5.23066	1.34689	-0.14955	30.19998	5.40336	284.08	0.81
91/ 3/13	2448328.5	7.35749	-29.28685	0.42665	5.23015	1.34902	-0.14958	30.19990	5.40340	284.10	0.81
91/ 3/17	2448332.5	7.36957	-29.28373	0.42631	5.22965	1.35116	-0.14962	30.19982	5.40345	284.13	0.81
91/ 3/21	2448336.5	7.38165	-29.28060	0.42596	5.22914	1.35330	-0.14965	30.19973	5.40349	284.15	0.81
91/ 3/25	2448340.5	7.39373	-29.27747	0.42562	5.22863	1.35543	-0.14968	30.19965	5.40354	284.17	0.81
91/ 3/29	2448344.5	7.40581	-29.27434	0.42527	5.22813	1.35757	-0.14971	30.19957	5.40358	284.20	0.81
91/ 4/ 2	2448348.5	7.41789	-29.27120	0.42492	5.22762	1.35971	-0.14975	30.19948	5.40363	284.22	0.81
91/ 4/ 6	2448352.5	7.42996	-29.26806	0.42458	5.22711	1.36184	-0.14978	30.19940	5.40368	284.24	0.81
91/ 4/10	2448356.5	7.44204	-29.26491	0.42423	5.22660	1.36398	-0.14981	30.19932	5.40372	284.27	0.80
91/ 4/14	2448360.5	7.45411	-29.26176	0.42389	5.22609	1.36612	-0.14984	30.19923	5.40377	284.29	0.80
91/ 4/18	2448364.5	7.46618	-29.25860	0.42354	5.22558	1.36825	-0.14988	30.19915	5.40382	284.32	0.80
91/ 4/22	2448368.5	7.47825	-29.25543	0.42319	5.22507	1.37039	-0.14991	30.19907	5.40387	284.34	0.80
91/ 4/26	2448372.5	7.49033	-29.25227	0.42285	5.22456	1.37253	-0.14994	30.19899	5.40391	284.36	0.80
91/ 4/30	2448376.5	7.50239	-29.24909	0.42250	5.22404	1.37466	-0.14997	30.19890	5.40396	284.39	0.80
91/ 5/ 4	2448380.5	7.51446	-29.24591	0.42215	5.22353	1.37680	-0.15001	30.19882	5.40401	284.41	0.80
91/ 5/ 8	2448384.5	7.52653	-29.24273	0.42181	5.22301	1.37894	-0.15004	30.19874	5.40406	284.43	0.80
91/ 5/12	2448388.5	7.53859	-29.23954	0.42146	5.22250	1.38107	-0.15007	30.19866	5.40411	284.46	0.80
91/ 5/16	2448392.5	7.55066	-29.23635	0.42111	5.22198	1.38321	-0.15010	30.19858	5.40416	284.48	0.80
91/ 5/20	2448396.5	7.56272	-29.23315	0.42077	5.22147	1.38535	-0.15014	30.19849	5.40421	284.50	0.80

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91/ 5/24	2448400.5	7.57478	-29.22995	0.42042	5.22095	1.38749	-0.15017	30.19841	5.40426	284.53	0.80
91/ 5/28	2448404.5	7.58684	-29.22674	0.42007	5.22043	1.38962	-0.15020	30.19833	5.40431	284.55	0.80
91/ 6/ 1	2448408.5	7.59890	-29.22353	0.41973	5.21992	1.39176	-0.15023	30.19825	5.40436	284.58	0.80
91/ 6/ 5	2448412.5	7.61096	-29.22031	0.41938	5.21940	1.39390	-0.15027	30.19817	5.40441	284.60	0.80
91/ 6/ 9	2448416.5	7.62302	-29.21709	0.41903	5.21888	1.39604	-0.15030	30.19808	5.40446	284.62	0.80
91/ 6/13	2448420.5	7.63508	-29.21386	0.41868	5.21836	1.39817	-0.15033	30.19800	5.40451	284.65	0.79
91/ 6/17	2448424.5	7.64713	-29.21063	0.41834	5.21784	1.40031	-0.15036	30.19792	5.40456	284.67	0.79
91/ 6/21	2448428.5	7.65918	-29.20739	0.41799	5.21731	1.40245	-0.15039	30.19784	5.40461	284.69	0.79
91/ 6/25	2448432.5	7.67124	-29.20415	0.41764	5.21679	1.40459	-0.15043	30.19776	5.40466	284.72	0.79
91/ 6/29	2448436.5	7.68329	-29.20090	0.41729	5.21627	1.40673	-0.15046	30.19768	5.40472	284.74	0.79
91/ 7/ 3	2448440.5	7.69534	-29.19765	0.41695	5.21574	1.40886	-0.15049	30.19759	5.40477	284.77	0.79
91/ 7/ 7	2448444.5	7.70739	-29.19439	0.41660	5.21522	1.41100	-0.15052	30.19751	5.40482	284.79	0.79
91/ 7/11	2448448.5	7.71943	-29.19113	0.41625	5.21469	1.41314	-0.15055	30.19743	5.40487	284.81	0.79
91/ 7/15	2448452.5	7.73148	-29.18786	0.41590	5.21417	1.41528	-0.15059	30.19735	5.40493	284.84	0.79
91/ 7/19	2448456.5	7.74352	-29.18459	0.41556	5.21364	1.41742	-0.15062	30.19727	5.40498	284.86	0.79
91/ 7/23	2448460.5	7.75557	-29.18131	0.41521	5.21311	1.41956	-0.15065	30.19719	5.40503	284.88	0.79
91/ 7/27	2448464.5	7.76761	-29.17803	0.41486	5.21259	1.42169	-0.15068	30.19711	5.40509	284.91	0.79
91/ 7/31	2448468.5	7.77965	-29.17474	0.41451	5.21206	1.42383	-0.15071	30.19703	5.40514	284.93	0.79
91/ 8/ 4	2448472.5	7.79169	-29.17145	0.41416	5.21153	1.42597	-0.15075	30.19695	5.40520	284.95	0.79
91/ 8/ 8	2448476.5	7.80373	-29.16816	0.41382	5.21100	1.42811	-0.15078	30.19687	5.40525	284.98	0.79
91/ 8/12	2448480.5	7.81577	-29.16485	0.41347	5.21047	1.43025	-0.15081	30.19679	5.40531	285.00	0.78
91/ 8/16	2448484.5	7.82781	-29.16155	0.41312	5.20994	1.43239	-0.15084	30.19671	5.40536	285.03	0.78
91/ 8/20	2448488.5	7.83984	-29.15824	0.41277	5.20940	1.43453	-0.15087	30.19663	5.40542	285.05	0.78
91/ 8/24	2448492.5	7.85187	-29.15492	0.41242	5.20887	1.43667	-0.15091	30.19655	5.40547	285.07	0.78
91/ 8/28	2448496.5	7.86391	-29.15160	0.41207	5.20834	1.43881	-0.15094	30.19647	5.40553	285.10	0.78
91/ 9/ 1	2448500.5	7.87594	-29.14827	0.41172	5.20780	1.44095	-0.15097	30.19639	5.40558	285.12	0.78
91/ 9/ 5	2448504.5	7.88797	-29.14494	0.41138	5.20727	1.44309	-0.15100	30.19631	5.40564	285.14	0.78
91/ 9/ 9	2448508.5	7.90000	-29.14160	0.41103	5.20673	1.44522	-0.15103	30.19623	5.40570	285.17	0.78
91/ 9/13	2448512.5	7.91203	-29.13826	0.41068	5.20620	1.44736	-0.15106	30.19615	5.40575	285.19	0.78
91/ 9/17	2448516.5	7.92405	-29.13492	0.41033	5.20566	1.44950	-0.15110	30.19607	5.40581	285.22	0.78
91/ 9/21	2448520.5	7.93608	-29.13157	0.40998	5.20512	1.45164	-0.15113	30.19599	5.40587	285.24	0.78
91/ 9/25	2448524.5	7.94810	-29.12821	0.40963	5.20458	1.45378	-0.15116	30.19591	5.40592	285.26	0.78
91/ 9/29	2448528.5	7.96013	-29.12485	0.40928	5.20404	1.45592	-0.15119	30.19583	5.40598	285.29	0.78
91/10/ 3	2448532.5	7.97215	-29.12148	0.40893	5.20350	1.45806	-0.15122	30.19575	5.40604	285.31	0.78
91/10/ 7	2448536.5	7.98417	-29.11811	0.40858	5.20296	1.46020	-0.15125	30.19567	5.40610	285.33	0.78
91/10/11	2448540.5	7.99619	-29.11474	0.40823	5.20242	1.46234	-0.15129	30.19559	5.40615	285.36	0.77
91/10/15	2448544.5	8.00820	-29.11136	0.40788	5.20188	1.46448	-0.15132	30.19551	5.40621	285.38	0.77
91/10/19	2448548.5	8.02022	-29.10797	0.40753	5.20133	1.46662	-0.15135	30.19543	5.40627	285.40	0.77
91/10/23	2448552.5	8.03224	-29.10458	0.40718	5.20079	1.46876	-0.15138	30.19535	5.40633	285.43	0.77
91/10/27	2448556.5	8.04425	-29.10118	0.40683	5.20024	1.47091	-0.15141	30.19527	5.40639	285.45	0.77
91/10/31	2448560.5	8.05626	-29.09778	0.40648	5.19970	1.47305	-0.15144	30.19519	5.40645	285.48	0.77
91/11/ 4	2448564.5	8.06827	-29.09438	0.40613	5.19915	1.47519	-0.15148	30.19511	5.40651	285.50	0.77
91/11/ 8	2448568.5	8.08028	-29.09097	0.40578	5.19861	1.47733	-0.15151	30.19503	5.40657	285.52	0.77
91/11/12	2448572.5	8.09229	-29.08755	0.40543	5.19806	1.47947	-0.15154	30.19495	5.40663	285.55	0.77
91/11/16	2448576.5	8.10430	-29.08413	0.40508	5.19751	1.48161	-0.15157	30.19488	5.40669	285.57	0.77

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91/11/20	2448580.5	8.11631	-29.08071	0.40473	5.19696	1.48375	-0.15160	30.19480	5.40675	285.59	0.77
91/11/24	2448584.5	8.12831	-29.07728	0.40438	5.19641	1.48589	-0.15163	30.19472	5.40681	285.62	0.77
91/11/28	2448588.5	8.14032	-29.07384	0.40403	5.19586	1.48803	-0.15166	30.19464	5.40687	285.64	0.77
91/12/ 2	2448592.5	8.15232	-29.07040	0.40368	5.19531	1.49017	-0.15169	30.19456	5.40693	285.67	0.77
91/12/ 6	2448596.5	8.16432	-29.06696	0.40333	5.19476	1.49232	-0.15173	30.19448	5.40699	285.69	0.77
91/12/10	2448600.5	8.17632	-29.06351	0.40298	5.19420	1.49446	-0.15176	30.19440	5.40705	285.71	0.76
91/12/14	2448604.5	8.18832	-29.06005	0.40263	5.19365	1.49660	-0.15179	30.19433	5.40711	285.74	0.76
91/12/18	2448608.5	8.20032	-29.05659	0.40228	5.19310	1.49874	-0.15182	30.19425	5.40717	285.76	0.76
91/12/22	2448612.5	8.21231	-29.05313	0.40193	5.19254	1.50088	-0.15185	30.19417	5.40723	285.78	0.76
91/12/26	2448616.5	8.22431	-29.04966	0.40158	5.19198	1.50302	-0.15188	30.19409	5.40730	285.81	0.76
91/12/30	2448620.5	8.23630	-29.04618	0.40123	5.19143	1.50517	-0.15191	30.19401	5.40736	285.83	0.76
92/ 1/ 3	2448624.5	8.24830	-29.04270	0.40088	5.19087	1.50731	-0.15194	30.19393	5.40742	285.85	0.76
92/ 1/ 7	2448628.5	8.26029	-29.03922	0.40053	5.19031	1.50945	-0.15198	30.19386	5.40748	285.88	0.76
92/ 1/11	2448632.5	8.27228	-29.03573	0.40018	5.18975	1.51159	-0.15201	30.19378	5.40754	285.90	0.76
92/ 1/15	2448636.5	8.28427	-29.03223	0.39982	5.18919	1.51374	-0.15204	30.19370	5.40761	285.93	0.76
92/ 1/19	2448640.5	8.29625	-29.02873	0.39947	5.18863	1.51588	-0.15207	30.19362	5.40767	285.95	0.76
92/ 1/23	2448644.5	8.30824	-29.02523	0.39912	5.18807	1.51802	-0.15210	30.19354	5.40773	285.97	0.76
92/ 1/27	2448648.5	8.32022	-29.02172	0.39877	5.18751	1.52016	-0.15213	30.19347	5.40780	286.00	0.76
92/ 1/31	2448652.5	8.33221	-29.01821	0.39842	5.18694	1.52231	-0.15216	30.19339	5.40786	286.02	0.76
92/ 2/ 4	2448656.5	8.34419	-29.01469	0.39807	5.18638	1.52445	-0.15219	30.19331	5.40792	286.04	0.76
92/ 2/ 8	2448660.5	8.35617	-29.01116	0.39772	5.18582	1.52659	-0.15222	30.19323	5.40799	286.07	0.75
92/ 2/12	2448664.5	8.36815	-29.00763	0.39736	5.18525	1.52873	-0.15225	30.19315	5.40805	286.09	0.75
92/ 2/16	2448668.5	8.38013	-29.00410	0.39701	5.18468	1.53088	-0.15229	30.19308	5.40812	286.12	0.75
92/ 2/20	2448672.5	8.39210	-29.00056	0.39666	5.18412	1.53302	-0.15232	30.19300	5.40818	286.14	0.75
92/ 2/24	2448676.5	8.40408	-28.99702	0.39631	5.18355	1.53516	-0.15235	30.19292	5.40825	286.16	0.75
92/ 2/28	2448680.5	8.41605	-28.99347	0.39596	5.18298	1.53731	-0.15238	30.19284	5.40831	286.19	0.75
92/ 3/ 3	2448684.5	8.42803	-28.98991	0.39560	5.18241	1.53945	-0.15241	30.19277	5.40838	286.21	0.75
92/ 3/ 7	2448688.5	8.44000	-28.98635	0.39525	5.18184	1.54159	-0.15244	30.19269	5.40844	286.23	0.75
92/ 3/11	2448692.5	8.45197	-28.98279	0.39490	5.18127	1.54374	-0.15247	30.19261	5.40851	286.26	0.75
92/ 3/15	2448696.5	8.46394	-28.97922	0.39455	5.18070	1.54588	-0.15250	30.19254	5.40857	286.28	0.75
92/ 3/19	2448700.5	8.47591	-28.97565	0.39419	5.18013	1.54802	-0.15253	30.19246	5.40864	286.31	0.75
92/ 3/23	2448704.5	8.48787	-28.97207	0.39384	5.17955	1.55017	-0.15256	30.19238	5.40870	286.33	0.75
92/ 3/27	2448708.5	8.49984	-28.96849	0.39349	5.17898	1.55231	-0.15259	30.19230	5.40877	286.35	0.75
92/ 3/31	2448712.5	8.51180	-28.96490	0.39314	5.17840	1.55446	-0.15262	30.19223	5.40883	286.38	0.75
92/ 4/ 4	2448716.5	8.52376	-28.96130	0.39278	5.17783	1.55660	-0.15265	30.19215	5.40890	286.40	0.75
92/ 4/ 8	2448720.5	8.53572	-28.95771	0.39243	5.17725	1.55874	-0.15268	30.19207	5.40897	286.42	0.74
92/ 4/12	2448724.5	8.54768	-28.95410	0.39208	5.17667	1.56089	-0.15272	30.19200	5.40903	286.45	0.74
92/ 4/16	2448728.5	8.55964	-28.95049	0.39173	5.17609	1.56303	-0.15275	30.19192	5.40910	286.47	0.74
92/ 4/20	2448732.5	8.57160	-28.94688	0.39137	5.17551	1.56518	-0.15278	30.19184	5.40917	286.49	0.74
92/ 4/24	2448736.5	8.58355	-28.94326	0.39102	5.17494	1.56732	-0.15281	30.19177	5.40923	286.52	0.74
92/ 4/28	2448740.5	8.59551	-28.93964	0.39067	5.17435	1.56947	-0.15284	30.19169	5.40930	286.54	0.74
92/ 5/ 2	2448744.5	8.60746	-28.93601	0.39031	5.17377	1.57161	-0.15287	30.19161	5.40937	286.57	0.74
92/ 5/ 6	2448748.5	8.61941	-28.93238	0.38996	5.17319	1.57376	-0.15290	30.19154	5.40943	286.59	0.74
92/ 5/10	2448752.5	8.63136	-28.92874	0.38961	5.17261	1.57590	-0.15293	30.19146	5.40950	286.61	0.74
92/ 5/14	2448756.5	8.64331	-28.92510	0.38925	5.17202	1.57805	-0.15296	30.19138	5.40957	286.64	0.74

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92/ 5/18	2448760.5	8.65526	-28.92145	0.38890	5.17144	1.58019	-0.15299	30.19131	5.40964	286.66	0.74
92/ 5/22	2448764.5	8.66721	-28.91779	0.38855	5.17085	1.58234	-0.15302	30.19123	5.40971	286.68	0.74
92/ 5/26	2448768.5	8.67915	-28.91414	0.38819	5.17027	1.58448	-0.15305	30.19115	5.40977	286.71	0.74
92/ 5/30	2448772.5	8.69110	-28.91047	0.38784	5.16968	1.58663	-0.15308	30.19108	5.40984	286.73	0.74
92/ 6/ 3	2448776.5	8.70304	-28.90681	0.38749	5.16909	1.58877	-0.15311	30.19100	5.40991	286.76	0.74
92/ 6/ 7	2448780.5	8.71498	-28.90313	0.38713	5.16850	1.59092	-0.15314	30.19092	5.40998	286.78	0.73
92/ 6/11	2448784.5	8.72692	-28.89946	0.38678	5.16791	1.59306	-0.15317	30.19085	5.41005	286.80	0.73
92/ 6/15	2448788.5	8.73886	-28.89577	0.38643	5.16732	1.59521	-0.15320	30.19077	5.41012	286.83	0.73
92/ 6/19	2448792.5	8.75079	-28.89209	0.38607	5.16673	1.59736	-0.15323	30.19069	5.41019	286.85	0.73
92/ 6/23	2448796.5	8.76273	-28.88839	0.38572	5.16614	1.59950	-0.15326	30.19062	5.41025	286.87	0.73
92/ 6/27	2448800.5	8.77466	-28.88469	0.38536	5.16554	1.60165	-0.15329	30.19054	5.41032	286.90	0.73
92/ 7/ 1	2448804.5	8.78659	-28.88099	0.38501	5.16495	1.60379	-0.15332	30.19046	5.41039	286.92	0.73
92/ 7/ 5	2448808.5	8.79853	-28.87728	0.38466	5.16435	1.60594	-0.15335	30.19039	5.41046	286.95	0.73
92/ 7/ 9	2448812.5	8.81046	-28.87357	0.38430	5.16376	1.60809	-0.15338	30.19031	5.41053	286.97	0.73
92/ 7/13	2448816.5	8.82238	-28.86985	0.38395	5.16316	1.61023	-0.15341	30.19024	5.41060	286.99	0.73
92/ 7/17	2448820.5	8.83431	-28.86613	0.38359	5.16256	1.61238	-0.15344	30.19016	5.41067	287.02	0.73
92/ 7/21	2448824.5	8.84624	-28.86240	0.38324	5.16196	1.61452	-0.15347	30.19008	5.41074	287.04	0.73
92/ 7/25	2448828.5	8.85816	-28.85867	0.38288	5.16137	1.61667	-0.15350	30.19001	5.41081	287.06	0.73
92/ 7/29	2448832.5	8.87008	-28.85494	0.38253	5.16076	1.61882	-0.15353	30.18993	5.41088	287.09	0.73
92/ 8/ 2	2448836.5	8.88201	-28.85119	0.38217	5.16016	1.62096	-0.15356	30.18986	5.41095	287.11	0.73
92/ 8/ 6	2448840.5	8.89393	-28.84745	0.38182	5.15956	1.62311	-0.15359	30.18978	5.41102	287.13	0.72
92/ 8/10	2448844.5	8.90585	-28.84369	0.38146	5.15896	1.62526	-0.15362	30.18970	5.41109	287.16	0.72
92/ 8/14	2448848.5	8.91776	-28.83994	0.38111	5.15836	1.62740	-0.15365	30.18963	5.41116	287.18	0.72
92/ 8/18	2448852.5	8.92968	-28.83617	0.38075	5.15775	1.62955	-0.15368	30.18955	5.41123	287.21	0.72
92/ 8/22	2448856.5	8.94159	-28.83241	0.38040	5.15715	1.63170	-0.15371	30.18948	5.41130	287.23	0.72
92/ 8/26	2448860.5	8.95351	-28.82864	0.38004	5.15654	1.63385	-0.15374	30.18940	5.41138	287.25	0.72
92/ 8/30	2448864.5	8.96542	-28.82486	0.37969	5.15593	1.63599	-0.15377	30.18933	5.41145	287.28	0.72
92/ 9/ 3	2448868.5	8.97733	-28.82108	0.37933	5.15532	1.63814	-0.15380	30.18925	5.41152	287.30	0.72
92/ 9/ 7	2448872.5	8.98924	-28.81729	0.37898	5.15472	1.64029	-0.15383	30.18917	5.41159	287.32	0.72
92/ 9/11	2448876.5	9.00115	-28.81350	0.37862	5.15411	1.64243	-0.15386	30.18910	5.41166	287.35	0.72
92/ 9/15	2448880.5	9.01305	-28.80970	0.37827	5.15349	1.64458	-0.15389	30.18902	5.41173	287.37	0.72
92/ 9/19	2448884.5	9.02496	-28.80590	0.37791	5.15288	1.64673	-0.15392	30.18895	5.41180	287.40	0.72
92/ 9/23	2448888.5	9.03686	-28.80209	0.37756	5.15227	1.64888	-0.15395	30.18887	5.41188	287.42	0.72
92/ 9/27	2448892.5	9.04876	-28.79828	0.37720	5.15166	1.65103	-0.15398	30.18880	5.41195	287.44	0.72
92/10/ 1	2448896.5	9.06066	-28.79446	0.37684	5.15104	1.65317	-0.15401	30.18872	5.41202	287.47	0.72
92/10/ 5	2448900.5	9.07256	-28.79064	0.37649	5.15043	1.65532	-0.15404	30.18864	5.41209	287.49	0.71
92/10/ 9	2448904.5	9.08446	-28.78682	0.37613	5.14981	1.65747	-0.15407	30.18857	5.41216	287.51	0.71
92/10/13	2448908.5	9.09636	-28.78298	0.37578	5.14920	1.65962	-0.15410	30.18849	5.41224	287.54	0.71
92/10/17	2448912.5	9.10825	-28.77915	0.37542	5.14858	1.66177	-0.15412	30.18842	5.41231	287.56	0.71
92/10/21	2448916.5	9.12014	-28.77531	0.37506	5.14796	1.66391	-0.15415	30.18834	5.41238	287.59	0.71
92/10/25	2448920.5	9.13204	-28.77146	0.37471	5.14734	1.66606	-0.15418	30.18827	5.41245	287.61	0.71
92/10/29	2448924.5	9.14393	-28.76761	0.37435	5.14672	1.66821	-0.15421	30.18819	5.41252	287.63	0.71
92/11/ 2	2448928.5	9.15581	-28.76375	0.37400	5.14610	1.67036	-0.15424	30.18812	5.41260	287.66	0.71
92/11/ 6	2448932.5	9.16770	-28.75989	0.37364	5.14548	1.67251	-0.15427	30.18804	5.41267	287.68	0.71
92/11/10	2448936.5	9.17959	-28.75603	0.37328	5.14485	1.67466	-0.15430	30.18796	5.41274	287.70	0.71

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92/11/14	2448940.5	9.19147	-28.75215	0.37293	5.14423	1.67680	-0.15433	30.18789	5.41282	287.73	0.71
92/11/18	2448944.5	9.20336	-28.74828	0.37257	5.14360	1.67895	-0.15436	30.18781	5.41289	287.75	0.71
92/11/22	2448948.5	9.21524	-28.74440	0.37221	5.14298	1.68110	-0.15439	30.18774	5.41296	287.78	0.71
92/11/26	2448952.5	9.22712	-28.74051	0.37186	5.14235	1.68325	-0.15442	30.18766	5.41304	287.80	0.71
92/11/30	2448956.5	9.23900	-28.73662	0.37150	5.14172	1.68540	-0.15445	30.18759	5.41311	287.82	0.71
92/12/ 4	2448960.5	9.25088	-28.73272	0.37114	5.14110	1.68755	-0.15448	30.18751	5.41318	287.85	0.70
92/12/ 8	2448964.5	9.26275	-28.72882	0.37079	5.14047	1.68970	-0.15451	30.18744	5.41326	287.87	0.70
92/12/12	2448968.5	9.27463	-28.72492	0.37043	5.13984	1.69185	-0.15453	30.18736	5.41333	287.89	0.70
92/12/16	2448972.5	9.28650	-28.72101	0.37007	5.13920	1.69400	-0.15456	30.18728	5.41340	287.92	0.70
92/12/20	2448976.5	9.29837	-28.71709	0.36972	5.13857	1.69614	-0.15459	30.18721	5.41348	287.94	0.70
92/12/24	2448980.5	9.31024	-28.71317	0.36936	5.13794	1.69829	-0.15462	30.18713	5.41355	287.97	0.70
92/12/28	2448984.5	9.32211	-28.70924	0.36900	5.13730	1.70044	-0.15465	30.18706	5.41362	287.99	0.70
93/ 1/ 1	2448988.5	9.33398	-28.70531	0.36864	5.13667	1.70259	-0.15468	30.18698	5.41370	288.01	0.70
93/ 1/ 5	2448992.5	9.34584	-28.70138	0.36829	5.13603	1.70474	-0.15471	30.18691	5.41377	288.04	0.70
93/ 1/ 9	2448996.5	9.35771	-28.69744	0.36793	5.13540	1.70689	-0.15474	30.18683	5.41385	288.06	0.70
93/ 1/13	2449000.5	9.36957	-28.69349	0.36757	5.13476	1.70904	-0.15477	30.18676	5.41392	288.08	0.70
93/ 1/17	2449004.5	9.38143	-28.68954	0.36721	5.13412	1.71119	-0.15479	30.18668	5.41399	288.11	0.70
93/ 1/21	2449008.5	9.39329	-28.68558	0.36686	5.13348	1.71334	-0.15482	30.18661	5.41407	288.13	0.70
93/ 1/25	2449012.5	9.40515	-28.68162	0.36650	5.13284	1.71549	-0.15485	30.18653	5.41414	288.16	0.70
93/ 1/29	2449016.5	9.41701	-28.67766	0.36614	5.13220	1.71764	-0.15488	30.18646	5.41422	288.18	0.69
93/ 2/ 2	2449020.5	9.42886	-28.67369	0.36578	5.13156	1.71979	-0.15491	30.18638	5.41429	288.20	0.69
93/ 2/ 6	2449024.5	9.44072	-28.66971	0.36542	5.13091	1.72194	-0.15494	30.18631	5.41436	288.23	0.69
93/ 2/10	2449028.5	9.45257	-28.66573	0.36507	5.13027	1.72409	-0.15497	30.18623	5.41444	288.25	0.69
93/ 2/14	2449032.5	9.46442	-28.66175	0.36471	5.12962	1.72624	-0.15500	30.18615	5.41451	288.27	0.69
93/ 2/18	2449036.5	9.47627	-28.65776	0.36435	5.12898	1.72839	-0.15502	30.18608	5.41459	288.30	0.69
93/ 2/22	2449040.5	9.48812	-28.65376	0.36399	5.12833	1.73054	-0.15505	30.18600	5.41466	288.32	0.69
93/ 2/26	2449044.5	9.49997	-28.64976	0.36363	5.12768	1.73269	-0.15508	30.18593	5.41474	288.34	0.69
93/ 3/ 2	2449048.5	9.51181	-28.64575	0.36328	5.12703	1.73484	-0.15511	30.18585	5.41481	288.37	0.69
93/ 3/ 6	2449052.5	9.52365	-28.64174	0.36292	5.12638	1.73699	-0.15514	30.18578	5.41489	288.39	0.69
93/ 3/10	2449056.5	9.53550	-28.63773	0.36256	5.12573	1.73914	-0.15517	30.18570	5.41496	288.42	0.69
93/ 3/14	2449060.5	9.54734	-28.63371	0.36220	5.12508	1.74129	-0.15520	30.18563	5.41504	288.44	0.69
93/ 3/18	2449064.5	9.55918	-28.62968	0.36184	5.12443	1.74344	-0.15522	30.18555	5.41511	288.46	0.69
93/ 3/22	2449068.5	9.57101	-28.62565	0.36148	5.12377	1.74559	-0.15525	30.18548	5.41519	288.49	0.69
93/ 3/26	2449072.5	9.58285	-28.62162	0.36112	5.12312	1.74774	-0.15528	30.18540	5.41526	288.51	0.69
93/ 3/30	2449076.5	9.59468	-28.61758	0.36077	5.12246	1.74989	-0.15531	30.18533	5.41534	288.53	0.68
93/ 4/ 3	2449080.5	9.60652	-28.61353	0.36041	5.12181	1.75204	-0.15534	30.18525	5.41541	288.56	0.68
93/ 4/ 7	2449084.5	9.61835	-28.60948	0.36005	5.12115	1.75419	-0.15537	30.18517	5.41549	288.58	0.68
93/ 4/11	2449088.5	9.63018	-28.60543	0.35969	5.12049	1.75635	-0.15539	30.18510	5.41556	288.61	0.68
93/ 4/15	2449092.5	9.64201	-28.60137	0.35933	5.11983	1.75850	-0.15542	30.18502	5.41564	288.63	0.68
93/ 4/19	2449096.5	9.65383	-28.59730	0.35897	5.11917	1.76065	-0.15545	30.18495	5.41571	288.65	0.68
93/ 4/23	2449100.5	9.66566	-28.59323	0.35861	5.11851	1.76280	-0.15548	30.18487	5.41579	288.68	0.68
93/ 4/27	2449104.5	9.67748	-28.58916	0.35825	5.11785	1.76495	-0.15551	30.18480	5.41586	288.70	0.68
93/ 5/ 1	2449108.5	9.68931	-28.58508	0.35789	5.11718	1.76710	-0.15553	30.18472	5.41594	288.72	0.68
93/ 5/ 5	2449112.5	9.70113	-28.58099	0.35753	5.11652	1.76925	-0.15556	30.18465	5.41601	288.75	0.68
93/ 5/ 9	2449116.5	9.71295	-28.57690	0.35717	5.11585	1.77140	-0.15559	30.18457	5.41609	288.77	0.68

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93/ 5/13	2449120.5	9.72476	-28.57281	0.35682	5.11519	1.77355	-0.15562	30.18450	5.41617	288.80	0.68
93/ 5/17	2449124.5	9.73658	-28.56871	0.35646	5.11452	1.77570	-0.15565	30.18442	5.41624	288.82	0.68
93/ 5/21	2449128.5	9.74839	-28.56460	0.35610	5.11385	1.77786	-0.15568	30.18434	5.41632	288.84	0.68
93/ 5/25	2449132.5	9.76021	-28.56049	0.35574	5.11318	1.78001	-0.15570	30.18427	5.41639	288.87	0.68
93/ 5/29	2449136.5	9.77202	-28.55638	0.35538	5.11251	1.78216	-0.15573	30.18419	5.41647	288.89	0.67
93/ 6/ 2	2449140.5	9.78383	-28.55226	0.35502	5.11184	1.78431	-0.15576	30.18412	5.41654	288.91	0.67
93/ 6/ 6	2449144.5	9.79564	-28.54814	0.35466	5.11117	1.78646	-0.15579	30.18404	5.41662	288.94	0.67
93/ 6/10	2449148.5	9.80744	-28.54401	0.35430	5.11050	1.78861	-0.15581	30.18397	5.41669	288.96	0.67
93/ 6/14	2449152.5	9.81925	-28.53987	0.35394	5.10982	1.79076	-0.15584	30.18389	5.41677	288.99	0.67
93/ 6/18	2449156.5	9.83105	-28.53573	0.35358	5.10915	1.79291	-0.15587	30.18381	5.41685	289.01	0.67
93/ 6/22	2449160.5	9.84286	-28.53159	0.35322	5.10847	1.79507	-0.15590	30.18374	5.41692	289.03	0.67
93/ 6/26	2449164.5	9.85466	-28.52744	0.35286	5.10779	1.79722	-0.15593	30.18366	5.41700	289.06	0.67
93/ 6/30	2449168.5	9.86646	-28.52328	0.35250	5.10712	1.79937	-0.15595	30.18359	5.41707	289.08	0.67
93/ 7/ 4	2449172.5	9.87825	-28.51913	0.35214	5.10644	1.80152	-0.15598	30.18351	5.41715	289.10	0.67
93/ 7/ 8	2449176.5	9.89005	-28.51496	0.35178	5.10576	1.80367	-0.15601	30.18344	5.41722	289.13	0.67
93/ 7/12	2449180.5	9.90184	-28.51079	0.35142	5.10508	1.80582	-0.15604	30.18336	5.41730	289.15	0.67
93/ 7/16	2449184.5	9.91364	-28.50662	0.35106	5.10439	1.80798	-0.15606	30.18328	5.41738	289.18	0.67
93/ 7/20	2449188.5	9.92543	-28.50244	0.35069	5.10371	1.81013	-0.15609	30.18321	5.41745	289.20	0.67
93/ 7/24	2449192.5	9.93722	-28.49825	0.35033	5.10303	1.81228	-0.15612	30.18313	5.41753	289.22	0.67
93/ 7/28	2449196.5	9.94901	-28.49406	0.34997	5.10234	1.81443	-0.15615	30.18306	5.41760	289.25	0.66
93/ 8/ 1	2449200.5	9.96079	-28.48987	0.34961	5.10165	1.81658	-0.15617	30.18298	5.41768	289.27	0.66
93/ 8/ 5	2449204.5	9.97258	-28.48567	0.34925	5.10097	1.81873	-0.15620	30.18290	5.41775	289.29	0.66
93/ 8/ 9	2449208.5	9.98436	-28.48147	0.34889	5.10028	1.82089	-0.15623	30.18283	5.41783	289.32	0.66
93/ 8/13	2449212.5	9.99614	-28.47726	0.34853	5.09959	1.82304	-0.15626	30.18275	5.41791	289.34	0.66
93/ 8/17	2449216.5	10.00792	-28.47304	0.34817	5.09890	1.82519	-0.15628	30.18268	5.41798	289.37	0.66
93/ 8/21	2449220.5	10.01970	-28.46883	0.34781	5.09821	1.82734	-0.15631	30.18260	5.41806	289.39	0.66
93/ 8/25	2449224.5	10.03148	-28.46460	0.34745	5.09752	1.82949	-0.15634	30.18252	5.41813	289.41	0.66
93/ 8/29	2449228.5	10.04325	-28.46037	0.34709	5.09682	1.83165	-0.15637	30.18245	5.41821	289.44	0.66
93/ 9/ 2	2449232.5	10.05503	-28.45614	0.34672	5.09613	1.83380	-0.15639	30.18237	5.41829	289.46	0.66
93/ 9/ 6	2449236.5	10.06680	-28.45190	0.34636	5.09544	1.83595	-0.15642	30.18230	5.41836	289.48	0.66
93/ 9/10	2449240.5	10.07857	-28.44766	0.34600	5.09474	1.83810	-0.15645	30.18222	5.41844	289.51	0.66
93/ 9/14	2449244.5	10.09034	-28.44341	0.34564	5.09404	1.84025	-0.15647	30.18214	5.41851	289.53	0.66
93/ 9/18	2449248.5	10.10211	-28.43915	0.34528	5.09334	1.84241	-0.15650	30.18207	5.41859	289.56	0.66
93/ 9/22	2449252.5	10.11387	-28.43489	0.34492	5.09264	1.84456	-0.15653	30.18199	5.41866	289.58	0.65
93/ 9/26	2449256.5	10.12564	-28.43063	0.34456	5.09194	1.84671	-0.15656	30.18191	5.41874	289.60	0.65
93/ 9/30	2449260.5	10.13740	-28.42636	0.34419	5.09124	1.84886	-0.15658	30.18184	5.41882	289.63	0.65
93/10/ 4	2449264.5	10.14916	-28.42209	0.34383	5.09054	1.85101	-0.15661	30.18176	5.41889	289.65	0.65
93/10/ 8	2449268.5	10.16092	-28.41781	0.34347	5.08984	1.85317	-0.15664	30.18169	5.41897	289.67	0.65
93/10/12	2449272.5	10.17268	-28.41353	0.34311	5.08913	1.85532	-0.15666	30.18161	5.41904	289.70	0.65
93/10/16	2449276.5	10.18443	-28.40924	0.34275	5.08843	1.85747	-0.15669	30.18153	5.41912	289.72	0.65
93/10/20	2449280.5	10.19619	-28.40494	0.34238	5.08772	1.85962	-0.15672	30.18146	5.41919	289.75	0.65
93/10/24	2449284.5	10.20794	-28.40065	0.34202	5.08701	1.86177	-0.15675	30.18138	5.41927	289.77	0.65
93/10/28	2449288.5	10.21969	-28.39634	0.34166	5.08631	1.86393	-0.15677	30.18130	5.41934	289.79	0.65
93/11/ 1	2449292.5	10.23144	-28.39203	0.34130	5.08560	1.86608	-0.15680	30.18123	5.41942	289.82	0.65
93/11/ 5	2449296.5	10.24319	-28.38772	0.34094	5.08489	1.86823	-0.15683	30.18115	5.41950	289.84	0.65

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93/11/ 9	2449300.5	10.25493	-28.38340	0.34057	5.08417	1.87038	-0.15685	30.18107	5.41957	289.86	0.65
93/11/13	2449304.5	10.26668	-28.37908	0.34021	5.08346	1.87253	-0.15688	30.18100	5.41965	289.89	0.65
93/11/17	2449308.5	10.27842	-28.37475	0.33985	5.08275	1.87469	-0.15691	30.18092	5.41972	289.91	0.65
93/11/21	2449312.5	10.29016	-28.37042	0.33949	5.08203	1.87684	-0.15693	30.18084	5.41980	289.94	0.64
93/11/25	2449316.5	10.30190	-28.36608	0.33912	5.08132	1.87899	-0.15696	30.18076	5.41987	289.96	0.64
93/11/29	2449320.5	10.31364	-28.36173	0.33876	5.08060	1.88114	-0.15699	30.18069	5.41995	289.98	0.64
93/12/ 3	2449324.5	10.32538	-28.35739	0.33840	5.07988	1.88329	-0.15701	30.18061	5.42002	290.01	0.64
93/12/ 7	2449328.5	10.33711	-28.35303	0.33803	5.07916	1.88545	-0.15704	30.18053	5.42010	290.03	0.64
93/12/11	2449332.5	10.34884	-28.34868	0.33767	5.07844	1.88760	-0.15707	30.18046	5.42017	290.05	0.64
93/12/15	2449336.5	10.36057	-28.34431	0.33731	5.07772	1.88975	-0.15709	30.18038	5.42025	290.08	0.64
93/12/19	2449340.5	10.37230	-28.33994	0.33695	5.07700	1.89190	-0.15712	30.18030	5.42032	290.10	0.64
93/12/23	2449344.5	10.38403	-28.33557	0.33658	5.07628	1.89405	-0.15714	30.18022	5.42040	290.13	0.64
93/12/27	2449348.5	10.39576	-28.33119	0.33622	5.07555	1.89621	-0.15717	30.18015	5.42047	290.15	0.64
93/12/31	2449352.5	10.40748	-28.32681	0.33586	5.07483	1.89836	-0.15720	30.18007	5.42055	290.17	0.64
94/ 1/ 4	2449356.5	10.41921	-28.32242	0.33549	5.07410	1.90051	-0.15722	30.17999	5.42062	290.20	0.64
94/ 1/ 8	2449360.5	10.43093	-28.31803	0.33513	5.07337	1.90266	-0.15725	30.17991	5.42070	290.22	0.64
94/ 1/12	2449364.5	10.44265	-28.31363	0.33477	5.07265	1.90481	-0.15728	30.17984	5.42077	290.25	0.64
94/ 1/16	2449368.5	10.45436	-28.30923	0.33440	5.07192	1.90697	-0.15730	30.17976	5.42085	290.27	0.63
94/ 1/20	2449372.5	10.46608	-28.30482	0.33404	5.07119	1.90912	-0.15733	30.17968	5.42092	290.29	0.63
94/ 1/24	2449376.5	10.47780	-28.30041	0.33368	5.07046	1.91127	-0.15736	30.17960	5.42100	290.32	0.63
94/ 1/28	2449380.5	10.48951	-28.29599	0.33331	5.06972	1.91342	-0.15738	30.17953	5.42107	290.34	0.63
94/ 2/ 1	2449384.5	10.50122	-28.29157	0.33295	5.06899	1.91557	-0.15741	30.17945	5.42115	290.36	0.63
94/ 2/ 5	2449388.5	10.51293	-28.28714	0.33259	5.06825	1.91773	-0.15743	30.17937	5.42122	290.39	0.63
94/ 2/ 9	2449392.5	10.52464	-28.28271	0.33222	5.06752	1.91988	-0.15746	30.17929	5.42130	290.41	0.63
94/ 2/13	2449396.5	10.53634	-28.27827	0.33186	5.06678	1.92203	-0.15749	30.17922	5.42137	290.44	0.63
94/ 2/17	2449400.5	10.54805	-28.27382	0.33150	5.06604	1.92418	-0.15751	30.17914	5.42145	290.46	0.63
94/ 2/21	2449404.5	10.55975	-28.26938	0.33113	5.06530	1.92633	-0.15754	30.17906	5.42152	290.48	0.63
94/ 2/25	2449408.5	10.57145	-28.26492	0.33077	5.06456	1.92848	-0.15756	30.17898	5.42159	290.51	0.63
94/ 3/ 1	2449412.5	10.58315	-28.26047	0.33040	5.06382	1.93064	-0.15759	30.17890	5.42167	290.53	0.63
94/ 3/ 5	2449416.5	10.59485	-28.25600	0.33004	5.06308	1.93279	-0.15762	30.17883	5.42174	290.55	0.63
94/ 3/ 9	2449420.5	10.60654	-28.25154	0.32967	5.06234	1.93494	-0.15764	30.17875	5.42182	290.58	0.63
94/ 3/13	2449424.5	10.61824	-28.24706	0.32931	5.06159	1.93709	-0.15767	30.17867	5.42189	290.60	0.63
94/ 3/17	2449428.5	10.62993	-28.24259	0.32895	5.06085	1.93924	-0.15769	30.17859	5.42197	290.63	0.62
94/ 3/21	2449432.5	10.64162	-28.23810	0.32858	5.06010	1.94139	-0.15772	30.17851	5.42204	290.65	0.62
94/ 3/25	2449436.5	10.65331	-28.23362	0.32822	5.05935	1.94355	-0.15774	30.17843	5.42211	290.67	0.62
94/ 3/29	2449440.5	10.66500	-28.22912	0.32785	5.05860	1.94570	-0.15777	30.17835	5.42219	290.70	0.62
94/ 4/ 2	2449444.5	10.67668	-28.22463	0.32749	5.05785	1.94785	-0.15780	30.17828	5.42226	290.72	0.62
94/ 4/ 6	2449448.5	10.68836	-28.22012	0.32712	5.05710	1.95000	-0.15782	30.17820	5.42233	290.74	0.62
94/ 4/10	2449452.5	10.70005	-28.21562	0.32676	5.05635	1.95215	-0.15785	30.17812	5.42241	290.77	0.62
94/ 4/14	2449456.5	10.71173	-28.21111	0.32639	5.05560	1.95430	-0.15787	30.17804	5.42248	290.79	0.62
94/ 4/18	2449460.5	10.72341	-28.20659	0.32603	5.05484	1.95645	-0.15790	30.17796	5.42255	290.82	0.62
94/ 4/22	2449464.5	10.73508	-28.20207	0.32567	5.05409	1.95860	-0.15792	30.17788	5.42263	290.84	0.62
94/ 4/26	2449468.5	10.74676	-28.19754	0.32530	5.05333	1.96076	-0.15795	30.17780	5.42270	290.86	0.62
94/ 4/30	2449472.5	10.75843	-28.19301	0.32494	5.05258	1.96291	-0.15798	30.17772	5.42277	290.89	0.62
94/ 5/ 4	2449476.5	10.77010	-28.18847	0.32457	5.05182	1.96506	-0.15800	30.17764	5.42285	290.91	0.62

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94/ 5/ 8	2449480.5	10.78177	-28.18393	0.32421	5.05106	1.96721	-0.15803	30.17757	5.42292	290.93	0.62
94/ 5/12	2449484.5	10.79344	-28.17938	0.32384	5.05030	1.96936	-0.15805	30.17749	5.42299	290.96	0.61
94/ 5/16	2449488.5	10.80511	-28.17483	0.32348	5.04953	1.97151	-0.15808	30.17741	5.42307	290.98	0.61
94/ 5/20	2449492.5	10.81677	-28.17027	0.32311	5.04877	1.97366	-0.15810	30.17733	5.42314	291.01	0.61
94/ 5/24	2449496.5	10.82843	-28.16571	0.32274	5.04801	1.97581	-0.15813	30.17725	5.42321	291.03	0.61
94/ 5/28	2449500.5	10.84009	-28.16114	0.32238	5.04724	1.97796	-0.15815	30.17717	5.42328	291.05	0.61
94/ 6/ 1	2449504.5	10.85175	-28.15657	0.32201	5.04648	1.98011	-0.15818	30.17709	5.42336	291.08	0.61
94/ 6/ 5	2449508.5	10.86341	-28.15199	0.32165	5.04571	1.98226	-0.15820	30.17701	5.42343	291.10	0.61
94/ 6/ 9	2449512.5	10.87507	-28.14741	0.32128	5.04494	1.98441	-0.15823	30.17693	5.42350	291.12	0.61
94/ 6/13	2449516.5	10.88672	-28.14282	0.32092	5.04417	1.98657	-0.15825	30.17685	5.42357	291.15	0.61
94/ 6/17	2449520.5	10.89837	-28.13823	0.32055	5.04340	1.98872	-0.15828	30.17677	5.42364	291.17	0.61
94/ 6/21	2449524.5	10.91002	-28.13364	0.32019	5.04263	1.99087	-0.15830	30.17669	5.42372	291.20	0.61
94/ 6/25	2449528.5	10.92167	-28.12903	0.31982	5.04185	1.99302	-0.15833	30.17661	5.42379	291.22	0.61
94/ 6/29	2449532.5	10.93332	-28.12443	0.31945	5.04108	1.99517	-0.15835	30.17653	5.42386	291.24	0.61
94/ 7/ 3	2449536.5	10.94496	-28.11982	0.31909	5.04031	1.99732	-0.15838	30.17645	5.42393	291.27	0.61
94/ 7/ 7	2449540.5	10.95660	-28.11520	0.31872	5.03953	1.99947	-0.15840	30.17637	5.42400	291.29	0.61
94/ 7/11	2449544.5	10.96825	-28.11058	0.31836	5.03875	2.00162	-0.15843	30.17629	5.42407	291.31	0.60
94/ 7/15	2449548.5	10.97989	-28.10595	0.31799	5.03797	2.00377	-0.15845	30.17621	5.42415	291.34	0.60
94/ 7/19	2449552.5	10.99152	-28.10132	0.31762	5.03719	2.00592	-0.15848	30.17613	5.42422	291.36	0.60
94/ 7/23	2449556.5	11.00316	-28.09668	0.31726	5.03641	2.00807	-0.15850	30.17605	5.42429	291.39	0.60
94/ 7/27	2449560.5	11.01479	-28.09204	0.31689	5.03563	2.01022	-0.15853	30.17596	5.42436	291.41	0.60
94/ 7/31	2449564.5	11.02643	-28.08739	0.31653	5.03485	2.01237	-0.15855	30.17588	5.42443	291.43	0.60
94/ 8/ 4	2449568.5	11.03806	-28.08274	0.31616	5.03406	2.01452	-0.15858	30.17580	5.42450	291.46	0.60
94/ 8/ 8	2449572.5	11.04968	-28.07809	0.31579	5.03328	2.01667	-0.15860	30.17572	5.42457	291.48	0.60
94/ 8/12	2449576.5	11.06131	-28.07343	0.31543	5.03249	2.01881	-0.15863	30.17564	5.42464	291.51	0.60
94/ 8/16	2449580.5	11.07294	-28.06876	0.31506	5.03170	2.02096	-0.15865	30.17556	5.42471	291.53	0.60
94/ 8/20	2449584.5	11.08456	-28.06409	0.31469	5.03092	2.02311	-0.15868	30.17548	5.42478	291.55	0.60
94/ 8/24	2449588.5	11.09618	-28.05941	0.31433	5.03013	2.02526	-0.15870	30.17540	5.42485	291.58	0.60
94/ 8/28	2449592.5	11.10780	-28.05473	0.31396	5.02933	2.02741	-0.15872	30.17532	5.42492	291.60	0.60
94/ 9/ 1	2449596.5	11.11942	-28.05004	0.31359	5.02854	2.02956	-0.15875	30.17523	5.42499	291.62	0.60
94/ 9/ 5	2449600.5	11.13103	-28.04535	0.31323	5.02775	2.03171	-0.15877	30.17515	5.42506	291.65	0.59
94/ 9/ 9	2449604.5	11.14265	-28.04066	0.31286	5.02695	2.03386	-0.15880	30.17507	5.42513	291.67	0.59
94/ 9/13	2449608.5	11.15426	-28.03596	0.31249	5.02616	2.03601	-0.15882	30.17499	5.42520	291.70	0.59
94/ 9/17	2449612.5	11.16587	-28.03125	0.31213	5.02536	2.03816	-0.15885	30.17491	5.42527	291.72	0.59
94/ 9/21	2449616.5	11.17748	-28.02654	0.31176	5.02456	2.04030	-0.15887	30.17483	5.42534	291.74	0.59
94/ 9/25	2449620.5	11.18909	-28.02182	0.31139	5.02377	2.04245	-0.15890	30.17474	5.42541	291.77	0.59
94/ 9/29	2449624.5	11.20069	-28.01710	0.31103	5.02297	2.04460	-0.15892	30.17466	5.42548	291.79	0.59
94/10/ 3	2449628.5	11.21229	-28.01238	0.31066	5.02216	2.04675	-0.15894	30.17458	5.42555	291.81	0.59
94/10/ 7	2449632.5	11.22390	-28.00765	0.31029	5.02136	2.04890	-0.15897	30.17450	5.42562	291.84	0.59
94/10/11	2449636.5	11.23549	-28.00291	0.30992	5.02056	2.05104	-0.15899	30.17442	5.42569	291.86	0.59
94/10/15	2449640.5	11.24709	-27.99817	0.30956	5.01975	2.05319	-0.15902	30.17433	5.42575	291.89	0.59
94/10/19	2449644.5	11.25869	-27.99342	0.30919	5.01895	2.05534	-0.15904	30.17425	5.42582	291.91	0.59
94/10/23	2449648.5	11.27028	-27.98867	0.30882	5.01814	2.05749	-0.15906	30.17417	5.42589	291.93	0.59
94/10/27	2449652.5	11.28187	-27.98392	0.30845	5.01733	2.05964	-0.15909	30.17409	5.42596	291.96	0.59
94/10/31	2449656.5	11.29346	-27.97916	0.30809	5.01652	2.06178	-0.15911	30.17400	5.42603	291.98	0.59

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94/11/ 4	2449660.5	11.30505	-27.97439	0.30772	5.01571	2.06393	-0.15914	30.17392	5.42609	292.00	0.58
94/11/ 8	2449664.5	11.31664	-27.96962	0.30735	5.01490	2.06608	-0.15916	30.17384	5.42616	292.03	0.58
94/11/12	2449668.5	11.32822	-27.96485	0.30698	5.01409	2.06822	-0.15918	30.17375	5.42623	292.05	0.58
94/11/16	2449672.5	11.33980	-27.96006	0.30662	5.01327	2.07037	-0.15921	30.17367	5.42630	292.08	0.58
94/11/20	2449676.5	11.35138	-27.95528	0.30625	5.01246	2.07252	-0.15923	30.17359	5.42636	292.10	0.58
94/11/24	2449680.5	11.36296	-27.95049	0.30588	5.01164	2.07467	-0.15926	30.17350	5.42643	292.12	0.58
94/11/28	2449684.5	11.37454	-27.94569	0.30551	5.01083	2.07681	-0.15928	30.17342	5.42650	292.15	0.58
94/12/ 2	2449688.5	11.38612	-27.94089	0.30514	5.01001	2.07896	-0.15930	30.17334	5.42657	292.17	0.58
94/12/ 6	2449692.5	11.39769	-27.93609	0.30478	5.00919	2.08111	-0.15933	30.17325	5.42663	292.20	0.58
94/12/10	2449696.5	11.40926	-27.93128	0.30441	5.00837	2.08325	-0.15935	30.17317	5.42670	292.22	0.58
94/12/14	2449700.5	11.42083	-27.92646	0.30404	5.00754	2.08540	-0.15937	30.17309	5.42676	292.24	0.58
94/12/18	2449704.5	11.43240	-27.92164	0.30367	5.00672	2.08754	-0.15940	30.17300	5.42683	292.27	0.58
94/12/22	2449708.5	11.44396	-27.91682	0.30330	5.00590	2.08969	-0.15942	30.17292	5.42690	292.29	0.58
94/12/26	2449712.5	11.45553	-27.91199	0.30294	5.00507	2.09183	-0.15945	30.17283	5.42696	292.31	0.58
94/12/30	2449716.5	11.46709	-27.90715	0.30257	5.00424	2.09398	-0.15947	30.17275	5.42703	292.34	0.57
95/ 1/ 3	2449720.5	11.47865	-27.90231	0.30220	5.00342	2.09613	-0.15949	30.17266	5.42709	292.36	0.57
95/ 1/ 7	2449724.5	11.49020	-27.89747	0.30183	5.00259	2.09827	-0.15952	30.17258	5.42716	292.39	0.57
95/ 1/11	2449728.5	11.50176	-27.89262	0.30146	5.00176	2.10042	-0.15954	30.17250	5.42722	292.41	0.57
95/ 1/15	2449732.5	11.51331	-27.88776	0.30109	5.00092	2.10256	-0.15956	30.17241	5.42729	292.43	0.57
95/ 1/19	2449736.5	11.52487	-27.88290	0.30072	5.00009	2.10471	-0.15959	30.17233	5.42735	292.46	0.57
95/ 1/23	2449740.5	11.53642	-27.87804	0.30036	4.99926	2.10685	-0.15961	30.17224	5.42742	292.48	0.57
95/ 1/27	2449744.5	11.54796	-27.87317	0.29999	4.99842	2.10900	-0.15963	30.17216	5.42748	292.50	0.57
95/ 1/31	2449748.5	11.55951	-27.86829	0.29962	4.99759	2.11114	-0.15966	30.17207	5.42755	292.53	0.57
95/ 2/ 4	2449752.5	11.57106	-27.86341	0.29925	4.99675	2.11328	-0.15968	30.17199	5.42761	292.55	0.57
95/ 2/ 8	2449756.5	11.58260	-27.85853	0.29888	4.99591	2.11543	-0.15970	30.17190	5.42768	292.58	0.57
95/ 2/12	2449760.5	11.59414	-27.85364	0.29851	4.99507	2.11757	-0.15972	30.17182	5.42774	292.60	0.57
95/ 2/16	2449764.5	11.60568	-27.84875	0.29814	4.99423	2.11972	-0.15975	30.17173	5.42780	292.62	0.57
95/ 2/20	2449768.5	11.61721	-27.84385	0.29777	4.99339	2.12186	-0.15977	30.17164	5.42787	292.65	0.57
95/ 2/24	2449772.5	11.62875	-27.83894	0.29740	4.99254	2.12400	-0.15979	30.17156	5.42793	292.67	0.56
95/ 2/28	2449776.5	11.64028	-27.83403	0.29703	4.99170	2.12615	-0.15982	30.17147	5.42799	292.69	0.56
95/ 3/ 4	2449780.5	11.65181	-27.82912	0.29667	4.99085	2.12829	-0.15984	30.17139	5.42806	292.72	0.56
95/ 3/ 8	2449784.5	11.66334	-27.82420	0.29630	4.99001	2.13043	-0.15986	30.17130	5.42812	292.74	0.56
95/ 3/12	2449788.5	11.67487	-27.81928	0.29593	4.98916	2.13258	-0.15989	30.17121	5.42818	292.77	0.56
95/ 3/16	2449792.5	11.68639	-27.81435	0.29556	4.98831	2.13472	-0.15991	30.17113	5.42824	292.79	0.56
95/ 3/20	2449796.5	11.69791	-27.80941	0.29519	4.98746	2.13686	-0.15993	30.17104	5.42831	292.81	0.56
95/ 3/24	2449800.5	11.70944	-27.80447	0.29482	4.98661	2.13900	-0.15995	30.17096	5.42837	292.84	0.56
95/ 3/28	2449804.5	11.72095	-27.79953	0.29445	4.98575	2.14115	-0.15998	30.17087	5.42843	292.86	0.56
95/ 4/ 1	2449808.5	11.73247	-27.79458	0.29408	4.98490	2.14329	-0.16000	30.17078	5.42849	292.89	0.56
95/ 4/ 5	2449812.5	11.74399	-27.78963	0.29371	4.98405	2.14543	-0.16002	30.17069	5.42855	292.91	0.56
95/ 4/ 9	2449816.5	11.75550	-27.78467	0.29334	4.98319	2.14757	-0.16005	30.17061	5.42861	292.93	0.56
95/ 4/13	2449820.5	11.76701	-27.77970	0.29297	4.98233	2.14971	-0.16007	30.17052	5.42867	292.96	0.56
95/ 4/17	2449824.5	11.77852	-27.77474	0.29260	4.98147	2.15185	-0.16009	30.17043	5.42874	292.98	0.56
95/ 4/21	2449828.5	11.79003	-27.76976	0.29223	4.98061	2.15399	-0.16011	30.17035	5.42880	293.00	0.55
95/ 4/25	2449832.5	11.80153	-27.76478	0.29186	4.97975	2.15614	-0.16014	30.17026	5.42886	293.03	0.55
95/ 4/29	2449836.5	11.81303	-27.75980	0.29149	4.97889	2.15828	-0.16016	30.17017	5.42892	293.05	0.55

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95/ 5/ 3	2449840.5	11.82454	-27.75481	0.29112	4.97802	2.16042	-0.16018	30.17008	5.42898	293.08	0.55
95/ 5/ 7	2449844.5	11.83604	-27.74982	0.29075	4.97716	2.16256	-0.16020	30.17000	5.42904	293.10	0.55
95/ 5/11	2449848.5	11.84753	-27.74482	0.29038	4.97629	2.16470	-0.16023	30.16991	5.42910	293.12	0.55
95/ 5/15	2449852.5	11.85903	-27.73982	0.29001	4.97543	2.16684	-0.16025	30.16982	5.42915	293.15	0.55
95/ 5/19	2449856.5	11.87052	-27.73481	0.28964	4.97456	2.16898	-0.16027	30.16973	5.42921	293.17	0.55
95/ 5/23	2449860.5	11.88201	-27.72979	0.28927	4.97369	2.17112	-0.16029	30.16964	5.42927	293.19	0.55
95/ 5/27	2449864.5	11.89350	-27.72478	0.28890	4.97282	2.17326	-0.16031	30.16955	5.42933	293.22	0.55
95/ 5/31	2449868.5	11.90499	-27.71975	0.28853	4.97194	2.17539	-0.16034	30.16947	5.42939	293.24	0.55
95/ 6/ 4	2449872.5	11.91647	-27.71473	0.28816	4.97107	2.17753	-0.16036	30.16938	5.42945	293.27	0.55
95/ 6/ 8	2449876.5	11.92796	-27.70969	0.28779	4.97020	2.17967	-0.16038	30.16929	5.42951	293.29	0.55
95/ 6/12	2449880.5	11.93944	-27.70465	0.28742	4.96932	2.18181	-0.16040	30.16920	5.42956	293.31	0.55
95/ 6/16	2449884.5	11.95092	-27.69961	0.28705	4.96844	2.18395	-0.16042	30.16911	5.42962	293.34	0.55
95/ 6/20	2449888.5	11.96239	-27.69456	0.28668	4.96757	2.18609	-0.16045	30.16902	5.42968	293.36	0.54
95/ 6/24	2449892.5	11.97387	-27.68951	0.28631	4.96669	2.18822	-0.16047	30.16893	5.42974	293.39	0.54
95/ 6/28	2449896.5	11.98534	-27.68445	0.28594	4.96581	2.19036	-0.16049	30.16884	5.42979	293.41	0.54
95/ 7/ 2	2449900.5	11.99681	-27.67939	0.28556	4.96492	2.19250	-0.16051	30.16875	5.42985	293.43	0.54
95/ 7/ 6	2449904.5	12.00828	-27.67432	0.28519	4.96404	2.19464	-0.16053	30.16866	5.42991	293.46	0.54
95/ 7/10	2449908.5	12.01975	-27.66925	0.28482	4.96316	2.19677	-0.16056	30.16857	5.42996	293.48	0.54
95/ 7/14	2449912.5	12.03121	-27.66417	0.28445	4.96227	2.19891	-0.16058	30.16848	5.43002	293.50	0.54
95/ 7/18	2449916.5	12.04267	-27.65909	0.28408	4.96138	2.20105	-0.16060	30.16839	5.43008	293.53	0.54
95/ 7/22	2449920.5	12.05414	-27.65400	0.28371	4.96049	2.20318	-0.16062	30.16830	5.43013	293.55	0.54
95/ 7/26	2449924.5	12.06559	-27.64891	0.28334	4.95961	2.20532	-0.16064	30.16821	5.43019	293.58	0.54
95/ 7/30	2449928.5	12.07705	-27.64381	0.28297	4.95872	2.20745	-0.16067	30.16812	5.43024	293.60	0.54
95/ 8/ 3	2449932.5	12.08850	-27.63871	0.28260	4.95782	2.20959	-0.16069	30.16803	5.43030	293.62	0.54
95/ 8/ 7	2449936.5	12.09996	-27.63361	0.28223	4.95693	2.21172	-0.16071	30.16794	5.43035	293.65	0.54
95/ 8/11	2449940.5	12.11141	-27.62849	0.28185	4.95604	2.21386	-0.16073	30.16785	5.43041	293.67	0.54
95/ 8/15	2449944.5	12.12286	-27.62338	0.28148	4.95514	2.21599	-0.16075	30.16776	5.43046	293.69	0.53
95/ 8/19	2449948.5	12.13430	-27.61826	0.28111	4.95424	2.21813	-0.16077	30.16767	5.43051	293.72	0.53
95/ 8/23	2449952.5	12.14575	-27.61313	0.28074	4.95335	2.22026	-0.16079	30.16758	5.43057	293.74	0.53
95/ 8/27	2449956.5	12.15719	-27.60800	0.28037	4.95245	2.22240	-0.16082	30.16749	5.43062	293.77	0.53
95/ 8/31	2449960.5	12.16863	-27.60286	0.28000	4.95155	2.22453	-0.16084	30.16740	5.43067	293.79	0.53
95/ 9/ 4	2449964.5	12.18007	-27.59772	0.27962	4.95065	2.22666	-0.16086	30.16730	5.43073	293.81	0.53
95/ 9/ 8	2449968.5	12.19150	-27.59257	0.27925	4.94974	2.22880	-0.16088	30.16721	5.43078	293.84	0.53
95/ 9/12	2449972.5	12.20294	-27.58742	0.27888	4.94884	2.23093	-0.16090	30.16712	5.43083	293.86	0.53
95/ 9/16	2449976.5	12.21437	-27.58226	0.27851	4.94793	2.23306	-0.16092	30.16703	5.43088	293.89	0.53
95/ 9/20	2449980.5	12.22580	-27.57710	0.27814	4.94703	2.23520	-0.16094	30.16694	5.43094	293.91	0.53
95/ 9/24	2449984.5	12.23722	-27.57194	0.27777	4.94612	2.23733	-0.16096	30.16684	5.43099	293.93	0.53
95/ 9/28	2449988.5	12.24865	-27.56677	0.27739	4.94521	2.23946	-0.16099	30.16675	5.43104	293.96	0.53
95/10/ 2	2449992.5	12.26007	-27.56159	0.27702	4.94430	2.24159	-0.16101	30.16666	5.43109	293.98	0.53
95/10/ 6	2449996.5	12.27149	-27.55641	0.27665	4.94339	2.24372	-0.16103	30.16657	5.43114	294.00	0.53
95/10/10	2450000.5	12.28291	-27.55122	0.27628	4.94247	2.24585	-0.16105	30.16647	5.43119	294.03	0.52
95/10/14	2450004.5	12.29433	-27.54603	0.27591	4.94156	2.24798	-0.16107	30.16638	5.43124	294.05	0.52
95/10/18	2450008.5	12.30574	-27.54084	0.27553	4.94065	2.25012	-0.16109	30.16629	5.43129	294.08	0.52
95/10/22	2450012.5	12.31716	-27.53564	0.27516	4.93973	2.25225	-0.16111	30.16619	5.43134	294.10	0.52
95/10/26	2450016.5	12.32857	-27.53043	0.27479	4.93881	2.25438	-0.16113	30.16610	5.43139	294.12	0.52

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95/10/30	2450020.5	12.33998	-27.52522	0.27442	4.93789	2.25651	-0.16115	30.16601	5.43144	294.15	0.52
95/11/ 3	2450024.5	12.35138	-27.52000	0.27405	4.93697	2.25863	-0.16117	30.16591	5.43149	294.17	0.52
95/11/ 7	2450028.5	12.36279	-27.51478	0.27367	4.93605	2.26076	-0.16120	30.16582	5.43154	294.20	0.52
95/11/11	2450032.5	12.37419	-27.50956	0.27330	4.93513	2.26289	-0.16122	30.16573	5.43159	294.22	0.52
95/11/15	2450036.5	12.38559	-27.50433	0.27293	4.93420	2.26502	-0.16124	30.16563	5.43164	294.24	0.52
95/11/19	2450040.5	12.39699	-27.49909	0.27256	4.93328	2.26715	-0.16126	30.16554	5.43169	294.27	0.52
95/11/23	2450044.5	12.40838	-27.49385	0.27218	4.93235	2.26928	-0.16128	30.16544	5.43173	294.29	0.52
95/11/27	2450048.5	12.41978	-27.48861	0.27181	4.93142	2.27140	-0.16130	30.16535	5.43178	294.31	0.52
95/12/ 1	2450052.5	12.43117	-27.48336	0.27144	4.93050	2.27353	-0.16132	30.16526	5.43183	294.34	0.52
95/12/ 5	2450056.5	12.44256	-27.47810	0.27106	4.92957	2.27566	-0.16134	30.16516	5.43187	294.36	0.51
95/12/ 9	2450060.5	12.45394	-27.47284	0.27069	4.92863	2.27779	-0.16136	30.16507	5.43192	294.39	0.51
95/12/13	2450064.5	12.46533	-27.46758	0.27032	4.92770	2.27991	-0.16138	30.16497	5.43197	294.41	0.51
95/12/17	2450068.5	12.47671	-27.46231	0.26995	4.92677	2.28204	-0.16140	30.16488	5.43201	294.43	0.51
95/12/21	2450072.5	12.48809	-27.45704	0.26957	4.92583	2.28416	-0.16142	30.16478	5.43206	294.46	0.51
95/12/25	2450076.5	12.49947	-27.45176	0.26920	4.92489	2.28629	-0.16144	30.16468	5.43211	294.48	0.51
95/12/29	2450080.5	12.51085	-27.44647	0.26883	4.92396	2.28841	-0.16146	30.16459	5.43215	294.50	0.51
96/ 1/ 2	2450084.5	12.52222	-27.44118	0.26845	4.92302	2.29054	-0.16148	30.16449	5.43220	294.53	0.51
96/ 1/ 6	2450088.5	12.53359	-27.43589	0.26808	4.92208	2.29266	-0.16150	30.16440	5.43224	294.55	0.51
96/ 1/10	2450092.5	12.54496	-27.43059	0.26771	4.92114	2.29479	-0.16152	30.16430	5.43229	294.58	0.51
96/ 1/14	2450096.5	12.55633	-27.42529	0.26734	4.92019	2.29691	-0.16154	30.16421	5.43233	294.60	0.51
96/ 1/18	2450100.5	12.56770	-27.41998	0.26696	4.91925	2.29903	-0.16156	30.16411	5.43237	294.62	0.51
96/ 1/22	2450104.5	12.57906	-27.41466	0.26659	4.91830	2.30116	-0.16158	30.16401	5.43242	294.65	0.51
96/ 1/26	2450108.5	12.59042	-27.40935	0.26622	4.91736	2.30328	-0.16160	30.16392	5.43246	294.67	0.51
96/ 1/30	2450112.5	12.60178	-27.40402	0.26584	4.91641	2.30540	-0.16162	30.16382	5.43250	294.70	0.50
96/ 2/ 3	2450116.5	12.61314	-27.39869	0.26547	4.91546	2.30752	-0.16164	30.16372	5.43255	294.72	0.50
96/ 2/ 7	2450120.5	12.62449	-27.39336	0.26510	4.91451	2.30965	-0.16166	30.16362	5.43259	294.74	0.50
96/ 2/11	2450124.5	12.63584	-27.38802	0.26472	4.91356	2.31177	-0.16168	30.16353	5.43263	294.77	0.50
96/ 2/15	2450128.5	12.64719	-27.38268	0.26435	4.91261	2.31389	-0.16170	30.16343	5.43267	294.79	0.50
96/ 2/19	2450132.5	12.65854	-27.37733	0.26397	4.91165	2.31601	-0.16172	30.16333	5.43271	294.81	0.50
96/ 2/23	2450136.5	12.66989	-27.37198	0.26360	4.91070	2.31813	-0.16174	30.16323	5.43275	294.84	0.50
96/ 2/27	2450140.5	12.68123	-27.36662	0.26323	4.90974	2.32025	-0.16176	30.16314	5.43280	294.86	0.50
96/ 3/ 2	2450144.5	12.69257	-27.36126	0.26285	4.90878	2.32237	-0.16178	30.16304	5.43284	294.89	0.50
96/ 3/ 6	2450148.5	12.70391	-27.35589	0.26248	4.90782	2.32449	-0.16180	30.16294	5.43288	294.91	0.50
96/ 3/10	2450152.5	12.71525	-27.35052	0.26211	4.90686	2.32661	-0.16182	30.16284	5.43292	294.93	0.50
96/ 3/14	2450156.5	12.72658	-27.34514	0.26173	4.90590	2.32872	-0.16184	30.16274	5.43296	294.96	0.50
96/ 3/18	2450160.5	12.73791	-27.33976	0.26136	4.90494	2.33084	-0.16186	30.16265	5.43300	294.98	0.50
96/ 3/22	2450164.5	12.74924	-27.33437	0.26098	4.90397	2.33296	-0.16188	30.16255	5.43303	295.01	0.50
96/ 3/26	2450168.5	12.76057	-27.32898	0.26061	4.90301	2.33508	-0.16190	30.16245	5.43307	295.03	0.50
96/ 3/30	2450172.5	12.77190	-27.32358	0.26024	4.90204	2.33719	-0.16192	30.16235	5.43311	295.05	0.49
96/ 4/ 3	2450176.5	12.78322	-27.31818	0.25986	4.90107	2.33931	-0.16194	30.16225	5.43315	295.08	0.49
96/ 4/ 7	2450180.5	12.79454	-27.31278	0.25949	4.90010	2.34143	-0.16196	30.16215	5.43319	295.10	0.49
96/ 4/11	2450184.5	12.80586	-27.30736	0.25911	4.89913	2.34354	-0.16198	30.16205	5.43322	295.12	0.49
96/ 4/15	2450188.5	12.81718	-27.30195	0.25874	4.89816	2.34566	-0.16200	30.16195	5.43326	295.15	0.49
96/ 4/19	2450192.5	12.82849	-27.29653	0.25837	4.89719	2.34777	-0.16202	30.16185	5.43330	295.17	0.49
96/ 4/23	2450196.5	12.83980	-27.29110	0.25799	4.89621	2.34989	-0.16203	30.16175	5.43334	295.20	0.49

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96/ 4/27	2450200.5	12.85111	-27.28567	0.25762	4.89524	2.35200	-0.16205	30.16165	5.43337	295.22	0.49
96/ 5/ 1	2450204.5	12.86242	-27.28023	0.25724	4.89426	2.35412	-0.16207	30.16155	5.43341	295.24	0.49
96/ 5/ 5	2450208.5	12.87373	-27.27479	0.25687	4.89328	2.35623	-0.16209	30.16145	5.43344	295.27	0.49
96/ 5/ 9	2450212.5	12.88503	-27.26935	0.25649	4.89230	2.35834	-0.16211	30.16135	5.43348	295.29	0.49
96/ 5/13	2450216.5	12.89633	-27.26390	0.25612	4.89132	2.36045	-0.16213	30.16125	5.43351	295.32	0.49
96/ 5/17	2450220.5	12.90763	-27.25844	0.25574	4.89034	2.36257	-0.16215	30.16115	5.43355	295.34	0.49
96/ 5/21	2450224.5	12.91893	-27.25298	0.25537	4.88936	2.36468	-0.16217	30.16105	5.43358	295.36	0.49
96/ 5/25	2450228.5	12.93022	-27.24751	0.25500	4.88837	2.36679	-0.16219	30.16095	5.43362	295.39	0.48
96/ 5/29	2450232.5	12.94151	-27.24204	0.25462	4.88739	2.36890	-0.16221	30.16084	5.43365	295.41	0.48
96/ 6/ 2	2450236.5	12.95280	-27.23657	0.25425	4.88640	2.37101	-0.16223	30.16074	5.43368	295.43	0.48
96/ 6/ 6	2450240.5	12.96409	-27.23109	0.25387	4.88541	2.37312	-0.16224	30.16064	5.43372	295.46	0.48
96/ 6/10	2450244.5	12.97537	-27.22560	0.25350	4.88442	2.37523	-0.16226	30.16054	5.43375	295.48	0.48
96/ 6/14	2450248.5	12.98666	-27.22011	0.25312	4.88343	2.37734	-0.16228	30.16044	5.43378	295.51	0.48
96/ 6/18	2450252.5	12.99794	-27.21462	0.25275	4.88244	2.37945	-0.16230	30.16034	5.43381	295.53	0.48
96/ 6/22	2450256.5	13.00922	-27.20912	0.25237	4.88145	2.38156	-0.16232	30.16023	5.43384	295.55	0.48
96/ 6/26	2450260.5	13.02049	-27.20362	0.25200	4.88045	2.38366	-0.16234	30.16013	5.43388	295.58	0.48
96/ 6/30	2450264.5	13.03177	-27.19811	0.25162	4.87945	2.38577	-0.16236	30.16003	5.43391	295.60	0.48
96/ 7/ 4	2450268.5	13.04304	-27.19259	0.25125	4.87846	2.38788	-0.16237	30.15992	5.43394	295.62	0.48
96/ 7/ 8	2450272.5	13.05431	-27.18707	0.25087	4.87746	2.38998	-0.16239	30.15982	5.43397	295.65	0.48
96/ 7/12	2450276.5	13.06557	-27.18155	0.25050	4.87646	2.39209	-0.16241	30.15972	5.43400	295.67	0.48
96/ 7/16	2450280.5	13.07684	-27.17602	0.25012	4.87546	2.39419	-0.16243	30.15962	5.43403	295.70	0.48
96/ 7/20	2450284.5	13.08810	-27.17049	0.24975	4.87446	2.39630	-0.16245	30.15951	5.43406	295.72	0.47
96/ 7/24	2450288.5	13.09936	-27.16495	0.24937	4.87345	2.39840	-0.16247	30.15941	5.43408	295.74	0.47
96/ 7/28	2450292.5	13.11062	-27.15941	0.24899	4.87245	2.40051	-0.16249	30.15930	5.43411	295.77	0.47
96/ 8/ 1	2450296.5	13.12187	-27.15386	0.24862	4.87144	2.40261	-0.16250	30.15920	5.43414	295.79	0.47
96/ 8/ 5	2450300.5	13.13312	-27.14831	0.24824	4.87043	2.40472	-0.16252	30.15910	5.43417	295.82	0.47
96/ 8/ 9	2450304.5	13.14437	-27.14275	0.24787	4.86942	2.40682	-0.16254	30.15899	5.43420	295.84	0.47
96/ 8/13	2450308.5	13.15562	-27.13719	0.24749	4.86841	2.40892	-0.16256	30.15889	5.43422	295.86	0.47
96/ 8/17	2450312.5	13.16687	-27.13162	0.24712	4.86740	2.41102	-0.16258	30.15878	5.43425	295.89	0.47
96/ 8/21	2450316.5	13.17811	-27.12605	0.24674	4.86639	2.41312	-0.16259	30.15868	5.43428	295.91	0.47
96/ 8/25	2450320.5	13.18935	-27.12047	0.24637	4.86538	2.41522	-0.16261	30.15857	5.43430	295.93	0.47
96/ 8/29	2450324.5	13.20059	-27.11489	0.24599	4.86436	2.41732	-0.16263	30.15847	5.43433	295.96	0.47
96/ 9/ 2	2450328.5	13.21183	-27.10930	0.24561	4.86335	2.41942	-0.16265	30.15836	5.43435	295.98	0.47
96/ 9/ 6	2450332.5	13.22306	-27.10371	0.24524	4.86233	2.42152	-0.16267	30.15826	5.43438	296.01	0.47
96/ 9/10	2450336.5	13.23429	-27.09811	0.24486	4.86131	2.42362	-0.16268	30.15815	5.43440	296.03	0.47
96/ 9/14	2450340.5	13.24552	-27.09251	0.24449	4.86029	2.42572	-0.16270	30.15805	5.43443	296.05	0.46
96/ 9/18	2450344.5	13.25675	-27.08690	0.24411	4.85927	2.42782	-0.16272	30.15794	5.43445	296.08	0.46
96/ 9/22	2450348.5	13.26797	-27.08129	0.24374	4.85825	2.42991	-0.16274	30.15783	5.43448	296.10	0.46
96/ 9/26	2450352.5	13.27920	-27.07568	0.24336	4.85722	2.43201	-0.16276	30.15773	5.43450	296.13	0.46
96/ 9/30	2450356.5	13.29042	-27.07006	0.24298	4.85620	2.43411	-0.16277	30.15762	5.43452	296.15	0.46
96/10/ 4	2450360.5	13.30163	-27.06443	0.24261	4.85517	2.43620	-0.16279	30.15751	5.43454	296.17	0.46
96/10/ 8	2450364.5	13.31285	-27.05880	0.24223	4.85414	2.43830	-0.16281	30.15741	5.43457	296.20	0.46
96/10/12	2450368.5	13.32406	-27.05316	0.24186	4.85311	2.44039	-0.16283	30.15730	5.43459	296.22	0.46
96/10/16	2450372.5	13.33527	-27.04752	0.24148	4.85208	2.44249	-0.16284	30.15719	5.43461	296.24	0.46
96/10/20	2450376.5	13.34648	-27.04188	0.24110	4.85105	2.44458	-0.16286	30.15709	5.43463	296.27	0.46

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96/10/24	2450380.5	13.35769	-27.03623	0.24073	4.85002	2.44667	-0.16288	30.15698	5.43465	296.29	0.46
96/10/28	2450384.5	13.36889	-27.03058	0.24035	4.84898	2.44877	-0.16290	30.15687	5.43467	296.32	0.46
96/11/ 1	2450388.5	13.38009	-27.02492	0.23997	4.84795	2.45086	-0.16291	30.15676	5.43469	296.34	0.46
96/11/ 5	2450392.5	13.39129	-27.01925	0.23960	4.84691	2.45295	-0.16293	30.15666	5.43471	296.36	0.46
96/11/ 9	2450396.5	13.40248	-27.01358	0.23922	4.84588	2.45504	-0.16295	30.15655	5.43473	296.39	0.45
96/11/13	2450400.5	13.41368	-27.00791	0.23884	4.84484	2.45713	-0.16297	30.15644	5.43475	296.41	0.45
96/11/17	2450404.5	13.42487	-27.00223	0.23847	4.84380	2.45922	-0.16298	30.15633	5.43477	296.44	0.45
96/11/21	2450408.5	13.43606	-26.99655	0.23809	4.84275	2.46131	-0.16300	30.15622	5.43478	296.46	0.45
96/11/25	2450412.5	13.44724	-26.99086	0.23772	4.84171	2.46340	-0.16302	30.15611	5.43480	296.48	0.45
96/11/29	2450416.5	13.45843	-26.98516	0.23734	4.84067	2.46549	-0.16303	30.15601	5.43482	296.51	0.45
96/12/ 3	2450420.5	13.46961	-26.97947	0.23696	4.83962	2.46757	-0.16305	30.15590	5.43484	296.53	0.45
96/12/ 7	2450424.5	13.48079	-26.97376	0.23659	4.83858	2.46966	-0.16307	30.15579	5.43485	296.55	0.45
96/12/11	2450428.5	13.49197	-26.96806	0.23621	4.83753	2.47175	-0.16309	30.15568	5.43487	296.58	0.45
96/12/15	2450432.5	13.50314	-26.96234	0.23583	4.83648	2.47383	-0.16310	30.15557	5.43488	296.60	0.45
96/12/19	2450436.5	13.51431	-26.95663	0.23545	4.83543	2.47592	-0.16312	30.15546	5.43490	296.63	0.45
96/12/23	2450440.5	13.52548	-26.95090	0.23508	4.83438	2.47800	-0.16314	30.15535	5.43492	296.65	0.45
96/12/27	2450444.5	13.53665	-26.94518	0.23470	4.83332	2.48009	-0.16315	30.15524	5.43493	296.67	0.45
96/12/31	2450448.5	13.54781	-26.93944	0.23432	4.83227	2.48217	-0.16317	30.15513	5.43494	296.70	0.45
97/ 1/ 4	2450452.5	13.55897	-26.93371	0.23395	4.83121	2.48425	-0.16319	30.15502	5.43496	296.72	0.44
97/ 1/ 8	2450456.5	13.57013	-26.92797	0.23357	4.83016	2.48634	-0.16320	30.15491	5.43497	296.75	0.44
97/ 1/12	2450460.5	13.58129	-26.92222	0.23319	4.82910	2.48842	-0.16322	30.15480	5.43498	296.77	0.44
97/ 1/16	2450464.5	13.59245	-26.91647	0.23282	4.82804	2.49050	-0.16324	30.15469	5.43500	296.79	0.44
97/ 1/20	2450468.5	13.60360	-26.91071	0.23244	4.82698	2.49258	-0.16325	30.15458	5.43501	296.82	0.44
97/ 1/24	2450472.5	13.61475	-26.90495	0.23206	4.82592	2.49466	-0.16327	30.15446	5.43502	296.84	0.44
97/ 1/28	2450476.5	13.62590	-26.89919	0.23168	4.82485	2.49674	-0.16329	30.15435	5.43503	296.86	0.44
97/ 2/ 1	2450480.5	13.63704	-26.89342	0.23131	4.82379	2.49882	-0.16330	30.15424	5.43504	296.89	0.44
97/ 2/ 5	2450484.5	13.64818	-26.88764	0.23093	4.82273	2.50090	-0.16332	30.15413	5.43506	296.91	0.44
97/ 2/ 9	2450488.5	13.65932	-26.88186	0.23055	4.82166	2.50297	-0.16334	30.15402	5.43507	296.94	0.44
97/ 2/13	2450492.5	13.67046	-26.87608	0.23018	4.82059	2.50505	-0.16335	30.15391	5.43508	296.96	0.44
97/ 2/17	2450496.5	13.68160	-26.87029	0.22980	4.81952	2.50713	-0.16337	30.15379	5.43509	296.98	0.44
97/ 2/21	2450500.5	13.69273	-26.86449	0.22942	4.81845	2.50920	-0.16339	30.15368	5.43510	297.01	0.44
97/ 2/25	2450504.5	13.70386	-26.85869	0.22904	4.81738	2.51128	-0.16340	30.15357	5.43510	297.03	0.44
97/ 3/ 1	2450508.5	13.71499	-26.85289	0.22867	4.81631	2.51335	-0.16342	30.15346	5.43511	297.06	0.43
97/ 3/ 5	2450512.5	13.72611	-26.84708	0.22829	4.81523	2.51543	-0.16343	30.15334	5.43512	297.08	0.43
97/ 3/ 9	2450516.5	13.73724	-26.84127	0.22791	4.81416	2.51750	-0.16345	30.15323	5.43513	297.10	0.43
97/ 3/13	2450520.5	13.74836	-26.83545	0.22753	4.81308	2.51957	-0.16347	30.15312	5.43514	297.13	0.43
97/ 3/17	2450524.5	13.75947	-26.82963	0.22715	4.81200	2.52164	-0.16348	30.15300	5.43514	297.15	0.43
97/ 3/21	2450528.5	13.77059	-26.82380	0.22678	4.81092	2.52371	-0.16350	30.15289	5.43515	297.17	0.43
97/ 3/25	2450532.5	13.78170	-26.81797	0.22640	4.80984	2.52578	-0.16351	30.15278	5.43516	297.20	0.43
97/ 3/29	2450536.5	13.79281	-26.81213	0.22602	4.80876	2.52785	-0.16353	30.15266	5.43516	297.22	0.43
97/ 4/ 2	2450540.5	13.80392	-26.80629	0.22564	4.80768	2.52992	-0.16355	30.15255	5.43517	297.25	0.43
97/ 4/ 6	2450544.5	13.81503	-26.80044	0.22527	4.80659	2.53199	-0.16356	30.15243	5.43517	297.27	0.43
97/ 4/10	2450548.5	13.82613	-26.79459	0.22489	4.80551	2.53406	-0.16358	30.15232	5.43518	297.29	0.43
97/ 4/14	2450552.5	13.83723	-26.78873	0.22451	4.80442	2.53613	-0.16359	30.15220	5.43518	297.32	0.43
97/ 4/18	2450556.5	13.84833	-26.78287	0.22413	4.80334	2.53819	-0.16361	30.15209	5.43518	297.34	0.43

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97/ 4/22	2450560.5	13.85942	-26.77700	0.22375	4.80225	2.54026	-0.16363	30.15197	5.43519	297.37	0.43
97/ 4/26	2450564.5	13.87051	-26.77113	0.22338	4.80116	2.54233	-0.16364	30.15186	5.43519	297.39	0.42
97/ 4/30	2450568.5	13.88160	-26.76526	0.22300	4.80006	2.54439	-0.16366	30.15174	5.43519	297.41	0.42
97/ 5/ 4	2450572.5	13.89269	-26.75938	0.22262	4.79897	2.54645	-0.16367	30.15163	5.43520	297.44	0.42
97/ 5/ 8	2450576.5	13.90378	-26.75349	0.22224	4.79788	2.54852	-0.16369	30.15151	5.43520	297.46	0.42
97/ 5/12	2450580.5	13.91486	-26.74760	0.22186	4.79678	2.55058	-0.16370	30.15140	5.43520	297.48	0.42
97/ 5/16	2450584.5	13.92594	-26.74171	0.22149	4.79569	2.55264	-0.16372	30.15128	5.43520	297.51	0.42
97/ 5/20	2450588.5	13.93702	-26.73581	0.22111	4.79459	2.55470	-0.16374	30.15117	5.43520	297.53	0.42
97/ 5/24	2450592.5	13.94809	-26.72990	0.22073	4.79349	2.55676	-0.16375	30.15105	5.43520	297.56	0.42
97/ 5/28	2450596.5	13.95917	-26.72399	0.22035	4.79239	2.55882	-0.16377	30.15093	5.43520	297.58	0.42
97/ 6/ 1	2450600.5	13.97024	-26.71808	0.21997	4.79129	2.56088	-0.16378	30.15082	5.43520	297.60	0.42
97/ 6/ 5	2450604.5	13.98130	-26.71216	0.21959	4.79019	2.56294	-0.16380	30.15070	5.43520	297.63	0.42
97/ 6/ 9	2450608.5	13.99237	-26.70624	0.21922	4.78908	2.56500	-0.16381	30.15058	5.43520	297.65	0.42
97/ 6/13	2450612.5	14.00343	-26.70031	0.21884	4.78798	2.56705	-0.16383	30.15047	5.43520	297.68	0.42
97/ 6/17	2450616.5	14.01449	-26.69438	0.21846	4.78687	2.56911	-0.16384	30.15035	5.43519	297.70	0.42
97/ 6/21	2450620.5	14.02555	-26.68844	0.21808	4.78577	2.57117	-0.16386	30.15023	5.43519	297.72	0.41
97/ 6/25	2450624.5	14.03660	-26.68250	0.21770	4.78466	2.57322	-0.16387	30.15011	5.43519	297.75	0.41
97/ 6/29	2450628.5	14.04765	-26.67655	0.21732	4.78355	2.57527	-0.16389	30.15000	5.43518	297.77	0.41
97/ 7/ 3	2450632.5	14.05870	-26.67060	0.21694	4.78244	2.57733	-0.16390	30.14988	5.43518	297.79	0.41
97/ 7/ 7	2450636.5	14.06975	-26.66464	0.21657	4.78133	2.57938	-0.16392	30.14976	5.43518	297.82	0.41
97/ 7/11	2450640.5	14.08080	-26.65868	0.21619	4.78021	2.58143	-0.16393	30.14964	5.43517	297.84	0.41
97/ 7/15	2450644.5	14.09184	-26.65272	0.21581	4.77910	2.58348	-0.16395	30.14952	5.43517	297.87	0.41
97/ 7/19	2450648.5	14.10288	-26.64675	0.21543	4.77798	2.58553	-0.16396	30.14940	5.43516	297.89	0.41
97/ 7/23	2450652.5	14.11391	-26.64077	0.21505	4.77687	2.58758	-0.16398	30.14929	5.43516	297.91	0.41
97/ 7/27	2450656.5	14.12495	-26.63479	0.21467	4.77575	2.58963	-0.16399	30.14917	5.43515	297.94	0.41
97/ 7/31	2450660.5	14.13598	-26.62881	0.21429	4.77463	2.59168	-0.16401	30.14905	5.43514	297.96	0.41
97/ 8/ 4	2450664.5	14.14701	-26.62282	0.21391	4.77351	2.59373	-0.16402	30.14893	5.43514	297.99	0.41
97/ 8/ 8	2450668.5	14.15803	-26.61682	0.21354	4.77239	2.59578	-0.16404	30.14881	5.43513	298.01	0.41
97/ 8/12	2450672.5	14.16906	-26.61082	0.21316	4.77126	2.59782	-0.16405	30.14869	5.43512	298.03	0.41
97/ 8/16	2450676.5	14.18008	-26.60482	0.21278	4.77014	2.59987	-0.16407	30.14857	5.43511	298.06	0.40
97/ 8/20	2450680.5	14.19110	-26.59881	0.21240	4.76902	2.60191	-0.16408	30.14845	5.43511	298.08	0.40
97/ 8/24	2450684.5	14.20211	-26.59280	0.21202	4.76789	2.60395	-0.16410	30.14833	5.43510	298.10	0.40
97/ 8/28	2450688.5	14.21313	-26.58678	0.21164	4.76676	2.60600	-0.16411	30.14821	5.43509	298.13	0.40
97/ 9/ 1	2450692.5	14.22414	-26.58076	0.21126	4.76563	2.60804	-0.16413	30.14809	5.43508	298.15	0.40
97/ 9/ 5	2450696.5	14.23515	-26.57473	0.21088	4.76450	2.61008	-0.16414	30.14797	5.43507	298.18	0.40
97/ 9/ 9	2450700.5	14.24615	-26.56870	0.21050	4.76337	2.61212	-0.16415	30.14785	5.43506	298.20	0.40
97/ 9/13	2450704.5	14.25715	-26.56266	0.21012	4.76224	2.61416	-0.16417	30.14773	5.43505	298.22	0.40
97/ 9/17	2450708.5	14.26815	-26.55662	0.20974	4.76111	2.61620	-0.16418	30.14761	5.43503	298.25	0.40
97/ 9/21	2450712.5	14.27915	-26.55057	0.20936	4.75997	2.61824	-0.16420	30.14749	5.43502	298.27	0.40
97/ 9/25	2450716.5	14.29015	-26.54452	0.20899	4.75884	2.62028	-0.16421	30.14736	5.43501	298.30	0.40
97/ 9/29	2450720.5	14.30114	-26.53847	0.20861	4.75770	2.62231	-0.16423	30.14724	5.43500	298.32	0.40
97/10/ 3	2450724.5	14.31213	-26.53241	0.20823	4.75656	2.62435	-0.16424	30.14712	5.43499	298.34	0.40
97/10/ 7	2450728.5	14.32312	-26.52634	0.20785	4.75542	2.62638	-0.16425	30.14700	5.43497	298.37	0.40
97/10/11	2450732.5	14.33410	-26.52027	0.20747	4.75428	2.62842	-0.16427	30.14688	5.43496	298.39	0.39
97/10/15	2450736.5	14.34508	-26.51420	0.20709	4.75314	2.63045	-0.16428	30.14676	5.43494	298.41	0.39

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97/10/19	2450740.5	14.35606	-26.50812	0.20671	4.75200	2.63248	-0.16430	30.14663	5.43493	298.44	0.39
97/10/23	2450744.5	14.36704	-26.50203	0.20633	4.75086	2.63452	-0.16431	30.14651	5.43492	298.46	0.39
97/10/27	2450748.5	14.37801	-26.49594	0.20595	4.74971	2.63655	-0.16432	30.14639	5.43490	298.49	0.39
97/10/31	2450752.5	14.38898	-26.48985	0.20557	4.74857	2.63858	-0.16434	30.14627	5.43488	298.51	0.39
97/11/ 4	2450756.5	14.39995	-26.48375	0.20519	4.74742	2.64061	-0.16435	30.14614	5.43487	298.53	0.39
97/11/ 8	2450760.5	14.41092	-26.47765	0.20481	4.74627	2.64263	-0.16437	30.14602	5.43485	298.56	0.39
97/11/12	2450764.5	14.42188	-26.47154	0.20443	4.74512	2.64466	-0.16438	30.14590	5.43484	298.58	0.39
97/11/16	2450768.5	14.43284	-26.46543	0.20405	4.74397	2.64669	-0.16439	30.14577	5.43482	298.61	0.39
97/11/20	2450772.5	14.44380	-26.45932	0.20367	4.74282	2.64872	-0.16441	30.14565	5.43480	298.63	0.39
97/11/24	2450776.5	14.45476	-26.45319	0.20329	4.74167	2.65074	-0.16442	30.14553	5.43478	298.65	0.39
97/11/28	2450780.5	14.46571	-26.44707	0.20291	4.74051	2.65277	-0.16444	30.14540	5.43476	298.68	0.39
97/12/ 2	2450784.5	14.47666	-26.44094	0.20253	4.73936	2.65479	-0.16445	30.14528	5.43475	298.70	0.38
97/12/ 6	2450788.5	14.48761	-26.43480	0.20215	4.73820	2.65681	-0.16446	30.14515	5.43473	298.72	0.38
97/12/10	2450792.5	14.49855	-26.42866	0.20177	4.73704	2.65883	-0.16448	30.14503	5.43471	298.75	0.38
97/12/14	2450796.5	14.50949	-26.42252	0.20139	4.73589	2.66085	-0.16449	30.14491	5.43469	298.77	0.38
97/12/18	2450800.5	14.52043	-26.41637	0.20101	4.73473	2.66287	-0.16450	30.14478	5.43467	298.80	0.38
97/12/22	2450804.5	14.53137	-26.41021	0.20063	4.73357	2.66489	-0.16452	30.14466	5.43465	298.82	0.38
97/12/26	2450808.5	14.54230	-26.40405	0.20025	4.73240	2.66691	-0.16453	30.14453	5.43463	298.84	0.38
97/12/30	2450812.5	14.55324	-26.39789	0.19987	4.73124	2.66893	-0.16454	30.14441	5.43460	298.87	0.38
98/ 1/ 3	2450816.5	14.56416	-26.39172	0.19949	4.73008	2.67095	-0.16456	30.14428	5.43458	298.89	0.38
98/ 1/ 7	2450820.5	14.57509	-26.38555	0.19911	4.72891	2.67296	-0.16457	30.14416	5.43456	298.92	0.38
98/ 1/11	2450824.5	14.58601	-26.37937	0.19873	4.72775	2.67498	-0.16458	30.14403	5.43454	298.94	0.38
98/ 1/15	2450828.5	14.59693	-26.37319	0.19835	4.72658	2.67699	-0.16460	30.14391	5.43451	298.96	0.38
98/ 1/19	2450832.5	14.60785	-26.36700	0.19797	4.72541	2.67901	-0.16461	30.14378	5.43449	298.99	0.38
98/ 1/23	2450836.5	14.61877	-26.36081	0.19759	4.72424	2.68102	-0.16462	30.14365	5.43447	299.01	0.38
98/ 1/27	2450840.5	14.62968	-26.35462	0.19721	4.72307	2.68303	-0.16464	30.14353	5.43444	299.04	0.37
98/ 1/31	2450844.5	14.64059	-26.34842	0.19683	4.72190	2.68504	-0.16465	30.14340	5.43442	299.06	0.37
98/ 2/ 4	2450848.5	14.65150	-26.34221	0.19645	4.72073	2.68705	-0.16466	30.14328	5.43439	299.08	0.37
98/ 2/ 8	2450852.5	14.66240	-26.33600	0.19607	4.71955	2.68906	-0.16468	30.14315	5.43437	299.11	0.37
98/ 2/12	2450856.5	14.67330	-26.32979	0.19569	4.71838	2.69107	-0.16469	30.14302	5.43434	299.13	0.37
98/ 2/16	2450860.5	14.68420	-26.32357	0.19531	4.71720	2.69308	-0.16470	30.14290	5.43432	299.15	0.37
98/ 2/20	2450864.5	14.69510	-26.31734	0.19493	4.71603	2.69508	-0.16472	30.14277	5.43429	299.18	0.37
98/ 2/24	2450868.5	14.70599	-26.31112	0.19455	4.71485	2.69709	-0.16473	30.14264	5.43426	299.20	0.37
98/ 2/28	2450872.5	14.71688	-26.30488	0.19417	4.71367	2.69909	-0.16474	30.14251	5.43424	299.23	0.37
98/ 3/ 4	2450876.5	14.72777	-26.29865	0.19379	4.71249	2.70110	-0.16475	30.14239	5.43421	299.25	0.37
98/ 3/ 8	2450880.5	14.73865	-26.29240	0.19341	4.71131	2.70310	-0.16477	30.14226	5.43418	299.27	0.37
98/ 3/12	2450884.5	14.74954	-26.28616	0.19302	4.71013	2.70510	-0.16478	30.14213	5.43415	299.30	0.37
98/ 3/16	2450888.5	14.76042	-26.27990	0.19264	4.70894	2.70710	-0.16479	30.14200	5.43413	299.32	0.37
98/ 3/20	2450892.5	14.77129	-26.27365	0.19226	4.70776	2.70910	-0.16480	30.14188	5.43410	299.35	0.37
98/ 3/24	2450896.5	14.78217	-26.26739	0.19188	4.70657	2.71110	-0.16482	30.14175	5.43407	299.37	0.36
98/ 3/28	2450900.5	14.79304	-26.26112	0.19150	4.70539	2.71310	-0.16483	30.14162	5.43404	299.39	0.36
98/ 4/ 1	2450904.5	14.80391	-26.25485	0.19112	4.70420	2.71510	-0.16484	30.14149	5.43401	299.42	0.36
98/ 4/ 5	2450908.5	14.81478	-26.24858	0.19074	4.70301	2.71709	-0.16486	30.14136	5.43398	299.44	0.36
98/ 4/ 9	2450912.5	14.82564	-26.24230	0.19036	4.70182	2.71909	-0.16487	30.14123	5.43395	299.46	0.36
98/ 4/13	2450916.5	14.83650	-26.23601	0.18998	4.70063	2.72109	-0.16488	30.14111	5.43392	299.49	0.36

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98/ 4/17	2450920.5	14.84736	-26.22973	0.18960	4.69944	2.72308	-0.16489	30.14098	5.43388	299.51	0.36
98/ 4/21	2450924.5	14.85821	-26.22343	0.18922	4.69825	2.72507	-0.16491	30.14085	5.43385	299.54	0.36
98/ 4/25	2450928.5	14.86906	-26.21713	0.18884	4.69705	2.72706	-0.16492	30.14072	5.43382	299.56	0.36
98/ 4/29	2450932.5	14.87991	-26.21083	0.18845	4.69586	2.72905	-0.16493	30.14059	5.43379	299.58	0.36
98/ 5/ 3	2450936.5	14.89076	-26.20453	0.18807	4.69466	2.73105	-0.16494	30.14046	5.43375	299.61	0.36
98/ 5/ 7	2450940.5	14.90161	-26.19821	0.18769	4.69347	2.73303	-0.16495	30.14033	5.43372	299.63	0.36
98/ 5/11	2450944.5	14.91245	-26.19190	0.18731	4.69227	2.73502	-0.16497	30.14020	5.43369	299.66	0.36
98/ 5/15	2450948.5	14.92329	-26.18558	0.18693	4.69107	2.73701	-0.16498	30.14007	5.43365	299.68	0.36
98/ 5/19	2450952.5	14.93412	-26.17925	0.18655	4.68987	2.73900	-0.16499	30.13994	5.43362	299.70	0.35
98/ 5/23	2450956.5	14.94495	-26.17292	0.18617	4.68867	2.74098	-0.16500	30.13981	5.43359	299.73	0.35
98/ 5/27	2450960.5	14.95578	-26.16659	0.18579	4.68747	2.74297	-0.16502	30.13968	5.43355	299.75	0.35
98/ 5/31	2450964.5	14.96661	-26.16025	0.18541	4.68627	2.74495	-0.16503	30.13955	5.43352	299.77	0.35
98/ 6/ 4	2450968.5	14.97744	-26.15391	0.18502	4.68506	2.74693	-0.16504	30.13942	5.43348	299.80	0.35
98/ 6/ 8	2450972.5	14.98826	-26.14756	0.18464	4.68386	2.74891	-0.16505	30.13929	5.43344	299.82	0.35
98/ 6/12	2450976.5	14.99908	-26.14120	0.18426	4.68265	2.75090	-0.16506	30.13916	5.43341	299.85	0.35
98/ 6/16	2450980.5	15.00989	-26.13485	0.18388	4.68145	2.75288	-0.16508	30.13903	5.43337	299.87	0.35
98/ 6/20	2450984.5	15.02071	-26.12848	0.18350	4.68024	2.75485	-0.16509	30.13890	5.43333	299.89	0.35
98/ 6/24	2450988.5	15.03152	-26.12212	0.18312	4.67903	2.75683	-0.16510	30.13876	5.43330	299.92	0.35
98/ 6/28	2450992.5	15.04233	-26.11575	0.18274	4.67782	2.75881	-0.16511	30.13863	5.43326	299.94	0.35
98/ 7/ 2	2450996.5	15.05313	-26.10937	0.18235	4.67661	2.76079	-0.16512	30.13850	5.43322	299.97	0.35
98/ 7/ 6	2451000.5	15.06393	-26.10299	0.18197	4.67540	2.76276	-0.16513	30.13837	5.43318	299.99	0.35
98/ 7/10	2451004.5	15.07473	-26.09661	0.18159	4.67419	2.76474	-0.16515	30.13824	5.43315	300.01	0.35
98/ 7/14	2451008.5	15.08553	-26.09022	0.18121	4.67297	2.76671	-0.16516	30.13811	5.43311	300.04	0.34
98/ 7/18	2451012.5	15.09632	-26.08382	0.18083	4.67176	2.76868	-0.16517	30.13798	5.43307	300.06	0.34
98/ 7/22	2451016.5	15.10712	-26.07743	0.18045	4.67055	2.77065	-0.16518	30.13784	5.43303	300.08	0.34
98/ 7/26	2451020.5	15.11790	-26.07102	0.18007	4.66933	2.77262	-0.16519	30.13771	5.43299	300.11	0.34
98/ 7/30	2451024.5	15.12869	-26.06461	0.17968	4.66811	2.77459	-0.16520	30.13758	5.43295	300.13	0.34
98/ 8/ 3	2451028.5	15.13947	-26.05820	0.17930	4.66689	2.77656	-0.16522	30.13745	5.43291	300.16	0.34
98/ 8/ 7	2451032.5	15.15025	-26.05179	0.17892	4.66567	2.77853	-0.16523	30.13731	5.43287	300.18	0.34
98/ 8/11	2451036.5	15.16103	-26.04536	0.17854	4.66445	2.78049	-0.16524	30.13718	5.43283	300.20	0.34
98/ 8/15	2451040.5	15.17180	-26.03894	0.17816	4.66323	2.78246	-0.16525	30.13705	5.43278	300.23	0.34
98/ 8/19	2451044.5	15.18258	-26.03251	0.17777	4.66201	2.78443	-0.16526	30.13692	5.43274	300.25	0.34
98/ 8/23	2451048.5	15.19334	-26.02607	0.17739	4.66079	2.78639	-0.16527	30.13678	5.43270	300.28	0.34
98/ 8/27	2451052.5	15.20411	-26.01963	0.17701	4.65957	2.78835	-0.16528	30.13665	5.43266	300.30	0.34
98/ 8/31	2451056.5	15.21487	-26.01319	0.17663	4.65834	2.79031	-0.16530	30.13652	5.43262	300.32	0.34
98/ 9/ 4	2451060.5	15.22563	-26.00674	0.17625	4.65712	2.79227	-0.16531	30.13638	5.43257	300.35	0.34
98/ 9/ 8	2451064.5	15.23639	-26.00029	0.17587	4.65589	2.79423	-0.16532	30.13625	5.43253	300.37	0.33
98/ 9/12	2451068.5	15.24714	-25.99383	0.17548	4.65466	2.79619	-0.16533	30.13612	5.43249	300.39	0.33
98/ 9/16	2451072.5	15.25790	-25.98737	0.17510	4.65343	2.79815	-0.16534	30.13598	5.43244	300.42	0.33
98/ 9/20	2451076.5	15.26865	-25.98090	0.17472	4.65221	2.80011	-0.16535	30.13585	5.43240	300.44	0.33
98/ 9/24	2451080.5	15.27939	-25.97443	0.17434	4.65098	2.80206	-0.16536	30.13572	5.43235	300.47	0.33
98/ 9/28	2451084.5	15.29013	-25.96796	0.17396	4.64974	2.80402	-0.16537	30.13558	5.43231	300.49	0.33
98/10/ 2	2451088.5	15.30087	-25.96148	0.17357	4.64851	2.80597	-0.16539	30.13545	5.43227	300.51	0.33
98/10/ 6	2451092.5	15.31161	-25.95499	0.17319	4.64728	2.80792	-0.16540	30.13531	5.43222	300.54	0.33
98/10/10	2451096.5	15.32235	-25.94850	0.17281	4.64605	2.80988	-0.16541	30.13518	5.43217	300.56	0.33

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98/10/14	2451100.5	15.33308	-25.94201	0.17243	4.64481	2.81183	-0.16542	30.13504	5.43213	300.59	0.33
98/10/18	2451104.5	15.34381	-25.93551	0.17205	4.64358	2.81378	-0.16543	30.13491	5.43208	300.61	0.33
98/10/22	2451108.5	15.35453	-25.92901	0.17166	4.64234	2.81573	-0.16544	30.13478	5.43204	300.63	0.33
98/10/26	2451112.5	15.36526	-25.92250	0.17128	4.64110	2.81767	-0.16545	30.13464	5.43199	300.66	0.33
98/10/30	2451116.5	15.37598	-25.91599	0.17090	4.63987	2.81962	-0.16546	30.13451	5.43194	300.68	0.32
98/11/ 3	2451120.5	15.38669	-25.90947	0.17052	4.63863	2.82157	-0.16547	30.13437	5.43190	300.70	0.32
98/11/ 7	2451124.5	15.39741	-25.90295	0.17013	4.63739	2.82351	-0.16548	30.13424	5.43185	300.73	0.32
98/11/11	2451128.5	15.40812	-25.89643	0.16975	4.63615	2.82546	-0.16549	30.13410	5.43180	300.75	0.32
98/11/15	2451132.5	15.41883	-25.88990	0.16937	4.63491	2.82740	-0.16550	30.13397	5.43175	300.78	0.32
98/11/19	2451136.5	15.42954	-25.88337	0.16899	4.63367	2.82934	-0.16552	30.13383	5.43171	300.80	0.32
98/11/23	2451140.5	15.44024	-25.87683	0.16860	4.63242	2.83128	-0.16553	30.13369	5.43166	300.82	0.32
98/11/27	2451144.5	15.45094	-25.87028	0.16822	4.63118	2.83322	-0.16554	30.13356	5.43161	300.85	0.32
98/12/ 1	2451148.5	15.46164	-25.86374	0.16784	4.62993	2.83516	-0.16555	30.13342	5.43156	300.87	0.32
98/12/ 5	2451152.5	15.47233	-25.85718	0.16746	4.62869	2.83710	-0.16556	30.13329	5.43151	300.90	0.32
98/12/ 9	2451156.5	15.48302	-25.85063	0.16707	4.62744	2.83904	-0.16557	30.13315	5.43146	300.92	0.32
98/12/13	2451160.5	15.49371	-25.84407	0.16669	4.62620	2.84097	-0.16558	30.13302	5.43141	300.94	0.32
98/12/17	2451164.5	15.50440	-25.83750	0.16631	4.62495	2.84291	-0.16559	30.13288	5.43136	300.97	0.32
98/12/21	2451168.5	15.51508	-25.83093	0.16593	4.62370	2.84484	-0.16560	30.13274	5.43131	300.99	0.32
98/12/25	2451172.5	15.52576	-25.82436	0.16554	4.62245	2.84678	-0.16561	30.13261	5.43126	301.01	0.31
98/12/29	2451176.5	15.53644	-25.81778	0.16516	4.62120	2.84871	-0.16562	30.13247	5.43121	301.04	0.31
99/ 1/ 2	2451180.5	15.54711	-25.81120	0.16478	4.61995	2.85064	-0.16563	30.13234	5.43116	301.06	0.31
99/ 1/ 6	2451184.5	15.55778	-25.80461	0.16440	4.61870	2.85257	-0.16564	30.13220	5.43111	301.09	0.31
99/ 1/10	2451188.5	15.56845	-25.79802	0.16401	4.61744	2.85450	-0.16565	30.13206	5.43106	301.11	0.31
99/ 1/14	2451192.5	15.57912	-25.79142	0.16363	4.61619	2.85643	-0.16566	30.13193	5.43101	301.13	0.31
99/ 1/18	2451196.5	15.58978	-25.78482	0.16325	4.61494	2.85835	-0.16567	30.13179	5.43096	301.16	0.31
99/ 1/22	2451200.5	15.60044	-25.77821	0.16287	4.61368	2.86028	-0.16568	30.13165	5.43090	301.18	0.31
99/ 1/26	2451204.5	15.61110	-25.77160	0.16248	4.61243	2.86221	-0.16569	30.13152	5.43085	301.21	0.31
99/ 1/30	2451208.5	15.62175	-25.76499	0.16210	4.61117	2.86413	-0.16570	30.13138	5.43080	301.23	0.31
99/ 2/ 3	2451212.5	15.63240	-25.75837	0.16172	4.60991	2.86605	-0.16571	30.13124	5.43075	301.25	0.31
99/ 2/ 7	2451216.5	15.64305	-25.75175	0.16133	4.60865	2.86798	-0.16572	30.13110	5.43069	301.28	0.31
99/ 2/11	2451220.5	15.65370	-25.74512	0.16095	4.60739	2.86990	-0.16573	30.13097	5.43064	301.30	0.31
99/ 2/15	2451224.5	15.66434	-25.73849	0.16057	4.60614	2.87182	-0.16574	30.13083	5.43059	301.32	0.31
99/ 2/19	2451228.5	15.67498	-25.73185	0.16019	4.60487	2.87374	-0.16575	30.13069	5.43053	301.35	0.30
99/ 2/23	2451232.5	15.68561	-25.72521	0.15980	4.60361	2.87565	-0.16576	30.13056	5.43048	301.37	0.30
99/ 2/27	2451236.5	15.69625	-25.71856	0.15942	4.60235	2.87757	-0.16577	30.13042	5.43043	301.40	0.30
99/ 3/ 3	2451240.5	15.70688	-25.71191	0.15904	4.60109	2.87949	-0.16578	30.13028	5.43037	301.42	0.30
99/ 3/ 7	2451244.5	15.71751	-25.70526	0.15865	4.59983	2.88140	-0.16579	30.13014	5.43032	301.44	0.30
99/ 3/11	2451248.5	15.72813	-25.69860	0.15827	4.59856	2.88332	-0.16580	30.13001	5.43026	301.47	0.30
99/ 3/15	2451252.5	15.73875	-25.69194	0.15789	4.59730	2.88523	-0.16581	30.12987	5.43021	301.49	0.30
99/ 3/19	2451256.5	15.74937	-25.68527	0.15751	4.59603	2.88714	-0.16582	30.12973	5.43016	301.52	0.30
99/ 3/23	2451260.5	15.75999	-25.67860	0.15712	4.59477	2.88905	-0.16583	30.12959	5.43010	301.54	0.30
99/ 3/27	2451264.5	15.77060	-25.67192	0.15674	4.59350	2.89096	-0.16584	30.12945	5.43005	301.56	0.30
99/ 3/31	2451268.5	15.78121	-25.66524	0.15636	4.59223	2.89287	-0.16585	30.12932	5.42999	301.59	0.30
99/ 4/ 4	2451272.5	15.79182	-25.65855	0.15597	4.59096	2.89478	-0.16586	30.12918	5.42994	301.61	0.30
99/ 4/ 8	2451276.5	15.80242	-25.65186	0.15559	4.58969	2.89669	-0.16587	30.12904	5.42988	301.63	0.30

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99/ 4/12	2451280.5	15.81303	-25.64517	0.15521	4.58842	2.89859	-0.16588	30.12890	5.42982	301.66	0.30
99/ 4/16	2451284.5	15.82363	-25.63847	0.15482	4.58715	2.90050	-0.16589	30.12876	5.42977	301.68	0.29
99/ 4/20	2451288.5	15.83422	-25.63177	0.15444	4.58588	2.90240	-0.16590	30.12862	5.42971	301.71	0.29
99/ 4/24	2451292.5	15.84481	-25.62506	0.15406	4.58461	2.90431	-0.16591	30.12849	5.42966	301.73	0.29
99/ 4/28	2451296.5	15.85540	-25.61835	0.15367	4.58334	2.90621	-0.16592	30.12835	5.42960	301.75	0.29
99/ 5/ 2	2451300.5	15.86599	-25.61163	0.15329	4.58206	2.90811	-0.16593	30.12821	5.42954	301.78	0.29
99/ 5/ 6	2451304.5	15.87657	-25.60491	0.15291	4.58079	2.91001	-0.16594	30.12807	5.42949	301.80	0.29
99/ 5/10	2451308.5	15.88715	-25.59819	0.15252	4.57951	2.91191	-0.16595	30.12793	5.42943	301.83	0.29
99/ 5/14	2451312.5	15.89773	-25.59146	0.15214	4.57824	2.91381	-0.16595	30.12779	5.42937	301.85	0.29
99/ 5/18	2451316.5	15.90831	-25.58473	0.15176	4.57696	2.91571	-0.16596	30.12765	5.42932	301.87	0.29
99/ 5/22	2451320.5	15.91888	-25.57799	0.15137	4.57569	2.91760	-0.16597	30.12751	5.42926	301.90	0.29
99/ 5/26	2451324.5	15.92945	-25.57125	0.15099	4.57441	2.91950	-0.16598	30.12738	5.42920	301.92	0.29
99/ 5/30	2451328.5	15.94002	-25.56450	0.15061	4.57313	2.92139	-0.16599	30.12724	5.42914	301.94	0.29
99/ 6/ 3	2451332.5	15.95058	-25.55775	0.15022	4.57185	2.92328	-0.16600	30.12710	5.42909	301.97	0.29
99/ 6/ 7	2451336.5	15.96114	-25.55099	0.14984	4.57057	2.92518	-0.16601	30.12696	5.42903	301.99	0.28
99/ 6/11	2451340.5	15.97170	-25.54423	0.14946	4.56929	2.92707	-0.16602	30.12682	5.42897	302.02	0.28
99/ 6/15	2451344.5	15.98225	-25.53747	0.14907	4.56801	2.92896	-0.16603	30.12668	5.42891	302.04	0.28
99/ 6/19	2451348.5	15.99280	-25.53070	0.14869	4.56673	2.93085	-0.16604	30.12654	5.42886	302.06	0.28
99/ 6/23	2451352.5	16.00335	-25.52393	0.14831	4.56545	2.93274	-0.16605	30.12640	5.42880	302.09	0.28
99/ 6/27	2451356.5	16.01390	-25.51715	0.14792	4.56417	2.93462	-0.16606	30.12626	5.42874	302.11	0.28
99/ 7/ 1	2451360.5	16.02444	-25.51037	0.14754	4.56288	2.93651	-0.16607	30.12612	5.42868	302.14	0.28
99/ 7/ 5	2451364.5	16.03498	-25.50358	0.14715	4.56160	2.93840	-0.16607	30.12598	5.42862	302.16	0.28
99/ 7/ 9	2451368.5	16.04551	-25.49679	0.14677	4.56032	2.94028	-0.16608	30.12584	5.42856	302.18	0.28
99/ 7/13	2451372.5	16.05605	-25.49000	0.14639	4.55903	2.94216	-0.16609	30.12570	5.42851	302.21	0.28
99/ 7/17	2451376.5	16.06658	-25.48320	0.14600	4.55774	2.94405	-0.16610	30.12556	5.42845	302.23	0.28
99/ 7/21	2451380.5	16.07711	-25.47639	0.14562	4.55646	2.94593	-0.16611	30.12542	5.42839	302.25	0.28
99/ 7/25	2451384.5	16.08763	-25.46959	0.14524	4.55517	2.94781	-0.16612	30.12529	5.42833	302.28	0.28
99/ 7/29	2451388.5	16.09815	-25.46277	0.14485	4.55388	2.94969	-0.16613	30.12515	5.42827	302.30	0.28
99/ 8/ 2	2451392.5	16.10867	-25.45596	0.14447	4.55260	2.95157	-0.16614	30.12501	5.42821	302.33	0.27
99/ 8/ 6	2451396.5	16.11919	-25.44914	0.14408	4.55131	2.95344	-0.16615	30.12487	5.42815	302.35	0.27
99/ 8/10	2451400.5	16.12970	-25.44231	0.14370	4.55002	2.95532	-0.16615	30.12473	5.42809	302.37	0.27
99/ 8/14	2451404.5	16.14021	-25.43548	0.14332	4.54873	2.95720	-0.16616	30.12459	5.42803	302.40	0.27
99/ 8/18	2451408.5	16.15072	-25.42865	0.14293	4.54744	2.95907	-0.16617	30.12445	5.42797	302.42	0.27
99/ 8/22	2451412.5	16.16122	-25.42181	0.14255	4.54615	2.96094	-0.16618	30.12431	5.42791	302.45	0.27
99/ 8/26	2451416.5	16.17172	-25.41497	0.14216	4.54485	2.96282	-0.16619	30.12417	5.42785	302.47	0.27
99/ 8/30	2451420.5	16.18222	-25.40812	0.14178	4.54356	2.96469	-0.16620	30.12403	5.42779	302.49	0.27
99/ 9/ 3	2451424.5	16.19272	-25.40127	0.14140	4.54227	2.96656	-0.16621	30.12389	5.42774	302.52	0.27
99/ 9/ 7	2451428.5	16.20321	-25.39441	0.14101	4.54098	2.96843	-0.16621	30.12375	5.42768	302.54	0.27
99/ 9/11	2451432.5	16.21370	-25.38755	0.14063	4.53968	2.97030	-0.16622	30.12361	5.42762	302.56	0.27
99/ 9/15	2451436.5	16.22418	-25.38069	0.14024	4.53839	2.97216	-0.16623	30.12347	5.42756	302.59	0.27
99/ 9/19	2451440.5	16.23467	-25.37382	0.13986	4.53709	2.97403	-0.16624	30.12333	5.42750	302.61	0.27
99/ 9/23	2451444.5	16.24515	-25.36695	0.13948	4.53580	2.97590	-0.16625	30.12319	5.42744	302.64	0.27
99/ 9/27	2451448.5	16.25562	-25.36007	0.13909	4.53450	2.97776	-0.16626	30.12305	5.42738	302.66	0.26
99/10/ 1	2451452.5	16.26610	-25.35319	0.13871	4.53320	2.97963	-0.16627	30.12291	5.42732	302.68	0.26
99/10/ 5	2451456.5	16.27657	-25.34631	0.13832	4.53191	2.98149	-0.16627	30.12277	5.42726	302.71	0.26

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99/10/ 9	2451460.5	16.28703	-25.33942	0.13794	4.53061	2.98335	-0.16628	30.12262	5.42720	302.73	0.26
99/10/13	2451464.5	16.29750	-25.33252	0.13756	4.52931	2.98521	-0.16629	30.12248	5.42714	302.75	0.26
99/10/17	2451468.5	16.30796	-25.32562	0.13717	4.52801	2.98707	-0.16630	30.12234	5.42708	302.78	0.26
99/10/21	2451472.5	16.31842	-25.31872	0.13679	4.52671	2.98893	-0.16631	30.12220	5.42702	302.80	0.26
99/10/25	2451476.5	16.32888	-25.31181	0.13640	4.52541	2.99079	-0.16632	30.12206	5.42696	302.83	0.26
99/10/29	2451480.5	16.33933	-25.30490	0.13602	4.52411	2.99265	-0.16632	30.12192	5.42689	302.85	0.26
99/11/ 2	2451484.5	16.34978	-25.29799	0.13564	4.52281	2.99450	-0.16633	30.12178	5.42683	302.87	0.26
99/11/ 6	2451488.5	16.36023	-25.29107	0.13525	4.52151	2.99636	-0.16634	30.12164	5.42677	302.90	0.26
99/11/10	2451492.5	16.37067	-25.28414	0.13487	4.52021	2.99821	-0.16635	30.12150	5.42671	302.92	0.26
99/11/14	2451496.5	16.38111	-25.27721	0.13448	4.51890	3.00007	-0.16636	30.12136	5.42665	302.95	0.26
99/11/18	2451500.5	16.39155	-25.27028	0.13410	4.51760	3.00192	-0.16636	30.12122	5.42659	302.97	0.26
99/11/22	2451504.5	16.40198	-25.26334	0.13371	4.51630	3.00377	-0.16637	30.12108	5.42653	302.99	0.25
99/11/26	2451508.5	16.41242	-25.25640	0.13333	4.51499	3.00562	-0.16638	30.12094	5.42647	303.02	0.25
99/11/30	2451512.5	16.42285	-25.24946	0.13294	4.51369	3.00747	-0.16639	30.12080	5.42641	303.04	0.25
99/12/ 4	2451516.5	16.43327	-25.24251	0.13256	4.51238	3.00932	-0.16640	30.12066	5.42635	303.06	0.25
99/12/ 8	2451520.5	16.44369	-25.23555	0.13218	4.51108	3.01117	-0.16641	30.12052	5.42629	303.09	0.25
99/12/12	2451524.5	16.45411	-25.22859	0.13179	4.50977	3.01302	-0.16641	30.12038	5.42623	303.11	0.25
99/12/16	2451528.5	16.46453	-25.22163	0.13141	4.50846	3.01486	-0.16642	30.12024	5.42617	303.14	0.25
99/12/20	2451532.5	16.47495	-25.21466	0.13102	4.50716	3.01671	-0.16643	30.12010	5.42611	303.16	0.25
99/12/24	2451536.5	16.48536	-25.20769	0.13064	4.50585	3.01855	-0.16644	30.11996	5.42605	303.18	0.25

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64/12/31	2438760.5	-30.53427	8.49912	7.99156	-0.28967	-5.58727	0.66161	32.68703	5.63375	164.45	14.15
65/ 1/ 4	2438764.5	-30.53494	8.48622	7.99309	-0.28792	-5.58783	0.66114	32.68467	5.63416	164.47	14.16
65/ 1/ 8	2438768.5	-30.53560	8.47331	7.99462	-0.28616	-5.58839	0.66067	32.68231	5.63457	164.49	14.16
65/ 1/12	2438772.5	-30.53626	8.46040	7.99614	-0.28441	-5.58894	0.66020	32.67996	5.63498	164.51	14.16
65/ 1/16	2438776.5	-30.53691	8.44748	7.99767	-0.28265	-5.58950	0.65973	32.67760	5.63539	164.54	14.17
65/ 1/20	2438780.5	-30.53756	8.43457	7.99919	-0.28089	-5.59005	0.65926	32.67525	5.63580	164.56	14.17
65/ 1/24	2438784.5	-30.53821	8.42166	8.00071	-0.27914	-5.59061	0.65879	32.67289	5.63621	164.58	14.17
65/ 1/28	2438788.5	-30.53885	8.40874	8.00224	-0.27738	-5.59116	0.65832	32.67054	5.63661	164.61	14.18
65/ 2/ 1	2438792.5	-30.53949	8.39582	8.00376	-0.27563	-5.59171	0.65785	32.66819	5.63702	164.63	14.18
65/ 2/ 5	2438796.5	-30.54013	8.38290	8.00528	-0.27387	-5.59226	0.65738	32.66584	5.63742	164.65	14.19
65/ 2/ 9	2438800.5	-30.54076	8.36998	8.00679	-0.27212	-5.59281	0.65691	32.66349	5.63783	164.67	14.19
65/ 2/13	2438804.5	-30.54138	8.35706	8.00831	-0.27036	-5.59336	0.65644	32.66113	5.63824	164.70	14.19
65/ 2/17	2438808.5	-30.54201	8.34414	8.00983	-0.26861	-5.59391	0.65597	32.65878	5.63864	164.72	14.20
65/ 2/21	2438812.5	-30.54263	8.33122	8.01134	-0.26685	-5.59446	0.65550	32.65644	5.63905	164.74	14.20
65/ 2/25	2438816.5	-30.54324	8.31829	8.01285	-0.26510	-5.59501	0.65503	32.65409	5.63946	164.77	14.20
65/ 3/ 1	2438820.5	-30.54385	8.30537	8.01437	-0.26334	-5.59556	0.65456	32.65174	5.63987	164.79	14.21
65/ 3/ 5	2438824.5	-30.54446	8.29244	8.01588	-0.26159	-5.59611	0.65409	32.64939	5.64028	164.81	14.21
65/ 3/ 9	2438828.5	-30.54506	8.27951	8.01739	-0.25983	-5.59666	0.65362	32.64704	5.64069	164.83	14.22
65/ 3/13	2438832.5	-30.54566	8.26658	8.01890	-0.25808	-5.59721	0.65315	32.64470	5.64110	164.86	14.22
65/ 3/17	2438836.5	-30.54625	8.25365	8.02041	-0.25632	-5.59777	0.65268	32.64235	5.64151	164.88	14.22
65/ 3/21	2438840.5	-30.54684	8.24072	8.02191	-0.25456	-5.59832	0.65221	32.64001	5.64193	164.90	14.23
65/ 3/25	2438844.5	-30.54743	8.22778	8.02342	-0.25280	-5.59887	0.65174	32.63766	5.64234	164.93	14.23
65/ 3/29	2438848.5	-30.54801	8.21485	8.02493	-0.25104	-5.59943	0.65126	32.63532	5.64276	164.95	14.23
65/ 4/ 2	2438852.5	-30.54859	8.20191	8.02643	-0.24928	-5.59998	0.65079	32.63298	5.64317	164.97	14.24
65/ 4/ 6	2438856.5	-30.54916	8.18897	8.02793	-0.24752	-5.60053	0.65032	32.63063	5.64359	164.99	14.24
65/ 4/10	2438860.5	-30.54973	8.17604	8.02943	-0.24575	-5.60108	0.64985	32.62829	5.64400	165.02	14.25
65/ 4/14	2438864.5	-30.55030	8.16310	8.03094	-0.24399	-5.60163	0.64937	32.62595	5.64442	165.04	14.25
65/ 4/18	2438868.5	-30.55086	8.15015	8.03243	-0.24222	-5.60218	0.64890	32.62361	5.64483	165.06	14.25
65/ 4/22	2438872.5	-30.55142	8.13721	8.03393	-0.24046	-5.60273	0.64843	32.62127	5.64525	165.09	14.26
65/ 4/26	2438876.5	-30.55197	8.12427	8.03543	-0.23869	-5.60328	0.64795	32.61893	5.64566	165.11	14.26
65/ 4/30	2438880.5	-30.55252	8.11132	8.03693	-0.23692	-5.60383	0.64748	32.61659	5.64608	165.13	14.26
65/ 5/ 4	2438884.5	-30.55306	8.09838	8.03842	-0.23515	-5.60437	0.64701	32.61426	5.64650	165.15	14.27
65/ 5/ 8	2438888.5	-30.55361	8.08543	8.03992	-0.23338	-5.60492	0.64653	32.61192	5.64691	165.18	14.27
65/ 5/12	2438892.5	-30.55414	8.07248	8.04141	-0.23161	-5.60547	0.64606	32.60958	5.64733	165.20	14.28
65/ 5/16	2438896.5	-30.55468	8.05953	8.04290	-0.22983	-5.60602	0.64558	32.60725	5.64775	165.22	14.28
65/ 5/20	2438900.5	-30.55520	8.04658	8.04439	-0.22806	-5.60657	0.64511	32.60491	5.64817	165.25	14.28
65/ 5/24	2438904.5	-30.55573	8.03363	8.04588	-0.22629	-5.60712	0.64463	32.60258	5.64859	165.27	14.29
65/ 5/28	2438908.5	-30.55625	8.02067	8.04737	-0.22451	-5.60767	0.64416	32.60024	5.64900	165.29	14.29
65/ 6/ 1	2438912.5	-30.55677	8.00772	8.04886	-0.22273	-5.60821	0.64368	32.59791	5.64942	165.32	14.29
65/ 6/ 5	2438916.5	-30.55728	7.99476	8.05034	-0.22095	-5.60876	0.64320	32.59558	5.64984	165.34	14.30
65/ 6/ 9	2438920.5	-30.55779	7.98180	8.05183	-0.21917	-5.60931	0.64273	32.59324	5.65027	165.36	14.30
65/ 6/13	2438924.5	-30.55829	7.96884	8.05331	-0.21739	-5.60986	0.64225	32.59091	5.65069	165.38	14.31
65/ 6/17	2438928.5	-30.55879	7.95588	8.05480	-0.21560	-5.61041	0.64177	32.58858	5.65111	165.41	14.31
65/ 6/21	2438932.5	-30.55929	7.94292	8.05628	-0.21381	-5.61095	0.64130	32.58625	5.65153	165.43	14.31
65/ 6/25	2438936.5	-30.55978	7.92996	8.05776	-0.21202	-5.61149	0.64082	32.58392	5.65194	165.45	14.32

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65/ 6/29	2438940.5	-30.56027	7.91699	8.05924	-0.21023	-5.61203	0.64034	32.58159	5.65236	165.48	14.32
65/ 7/ 3	2438944.5	-30.56075	7.90403	8.06072	-0.20843	-5.61257	0.63986	32.57926	5.65277	165.50	14.32
65/ 7/ 7	2438948.5	-30.56123	7.89106	8.06220	-0.20664	-5.61311	0.63938	32.57693	5.65318	165.52	14.33
65/ 7/11	2438952.5	-30.56171	7.87809	8.06367	-0.20485	-5.61364	0.63891	32.57461	5.65359	165.55	14.33
65/ 7/15	2438956.5	-30.56218	7.86512	8.06515	-0.20305	-5.61417	0.63843	32.57228	5.65400	165.57	14.34
65/ 7/19	2438960.5	-30.56264	7.85215	8.06662	-0.20126	-5.61471	0.63795	32.56995	5.65441	165.59	14.34
65/ 7/23	2438964.5	-30.56311	7.83918	8.06810	-0.19946	-5.61523	0.63747	32.56763	5.65482	165.61	14.34
65/ 7/27	2438968.5	-30.56357	7.82621	8.06957	-0.19767	-5.61576	0.63699	32.56530	5.65523	165.64	14.35
65/ 7/31	2438972.5	-30.56402	7.81324	8.07104	-0.19587	-5.61629	0.63651	32.56298	5.65563	165.66	14.35
65/ 8/ 4	2438976.5	-30.56447	7.80026	8.07251	-0.19407	-5.61681	0.63603	32.56066	5.65604	165.68	14.35
65/ 8/ 8	2438980.5	-30.56492	7.78728	8.07398	-0.19228	-5.61734	0.63555	32.55833	5.65645	165.71	14.36
65/ 8/12	2438984.5	-30.56536	7.77431	8.07545	-0.19049	-5.61786	0.63507	32.55601	5.65685	165.73	14.36
65/ 8/16	2438988.5	-30.56580	7.76133	8.07691	-0.18869	-5.61838	0.63459	32.55369	5.65725	165.75	14.37
65/ 8/20	2438992.5	-30.56623	7.74835	8.07838	-0.18690	-5.61890	0.63411	32.55137	5.65766	165.78	14.37
65/ 8/24	2438996.5	-30.56666	7.73537	8.07984	-0.18511	-5.61942	0.63363	32.54905	5.65806	165.80	14.37
65/ 8/28	2439000.5	-30.56709	7.72238	8.08131	-0.18331	-5.61994	0.63315	32.54673	5.65847	165.82	14.38
65/ 9/ 1	2439004.5	-30.56751	7.70940	8.08277	-0.18152	-5.62046	0.63267	32.54441	5.65887	165.84	14.38
65/ 9/ 5	2439008.5	-30.56792	7.69641	8.08423	-0.17973	-5.62099	0.63219	32.54209	5.65928	165.87	14.38
65/ 9/ 9	2439012.5	-30.56834	7.68343	8.08569	-0.17794	-5.62151	0.63171	32.53977	5.65969	165.89	14.39
65/ 9/13	2439016.5	-30.56875	7.67044	8.08715	-0.17614	-5.62203	0.63123	32.53745	5.66010	165.91	14.39
65/ 9/17	2439020.5	-30.56915	7.65745	8.08861	-0.17435	-5.62255	0.63075	32.53514	5.66050	165.94	14.40
65/ 9/21	2439024.5	-30.56955	7.64446	8.09006	-0.17255	-5.62307	0.63027	32.53282	5.66091	165.96	14.40
65/ 9/25	2439028.5	-30.56995	7.63147	8.09152	-0.17076	-5.62359	0.62979	32.53051	5.66132	165.98	14.40
65/ 9/29	2439032.5	-30.57034	7.61848	8.09297	-0.16896	-5.62411	0.62931	32.52819	5.66173	166.01	14.41
65/10/ 3	2439036.5	-30.57073	7.60549	8.09442	-0.16717	-5.62462	0.62882	32.52588	5.66213	166.03	14.41
65/10/ 7	2439040.5	-30.57111	7.59249	8.09588	-0.16537	-5.62514	0.62834	32.52356	5.66254	166.05	14.41
65/10/11	2439044.5	-30.57149	7.57950	8.09733	-0.16358	-5.62566	0.62786	32.52125	5.66295	166.08	14.42
65/10/15	2439048.5	-30.57187	7.56650	8.09878	-0.16178	-5.62618	0.62738	32.51894	5.66336	166.10	14.42
65/10/19	2439052.5	-30.57224	7.55350	8.10023	-0.15999	-5.62670	0.62690	32.51663	5.66377	166.12	14.42
65/10/23	2439056.5	-30.57261	7.54050	8.10167	-0.15820	-5.62722	0.62641	32.51432	5.66418	166.14	14.43
65/10/27	2439060.5	-30.57297	7.52750	8.10312	-0.15640	-5.62774	0.62593	32.51201	5.66460	166.17	14.43
65/10/31	2439064.5	-30.57333	7.51450	8.10457	-0.15461	-5.62826	0.62545	32.50970	5.66501	166.19	14.44
65/11/ 4	2439068.5	-30.57369	7.50150	8.10601	-0.15281	-5.62878	0.62497	32.50739	5.66543	166.21	14.44
65/11/ 8	2439072.5	-30.57404	7.48849	8.10745	-0.15102	-5.62930	0.62448	32.50508	5.66584	166.24	14.44
65/11/12	2439076.5	-30.57438	7.47549	8.10890	-0.14922	-5.62982	0.62400	32.50277	5.66626	166.26	14.45
65/11/16	2439080.5	-30.57473	7.46248	8.11034	-0.14742	-5.63035	0.62352	32.50046	5.66668	166.28	14.45
65/11/20	2439084.5	-30.57507	7.44947	8.11178	-0.14562	-5.63087	0.62303	32.49816	5.66711	166.31	14.45
65/11/24	2439088.5	-30.57540	7.43647	8.11322	-0.14382	-5.63140	0.62255	32.49585	5.66753	166.33	14.46
65/11/28	2439092.5	-30.57573	7.42346	8.11465	-0.14202	-5.63193	0.62207	32.49355	5.66796	166.35	14.46
65/12/ 2	2439096.5	-30.57606	7.41044	8.11609	-0.14022	-5.63246	0.62158	32.49124	5.66839	166.38	14.47
65/12/ 6	2439100.5	-30.57638	7.39743	8.11753	-0.13841	-5.63299	0.62110	32.48894	5.66882	166.40	14.47
65/12/10	2439104.5	-30.57670	7.38442	8.11896	-0.13660	-5.63352	0.62061	32.48663	5.66925	166.42	14.47
65/12/14	2439108.5	-30.57701	7.37140	8.12039	-0.13479	-5.63405	0.62012	32.48433	5.66968	166.45	14.48
65/12/18	2439112.5	-30.57732	7.35839	8.12182	-0.13297	-5.63458	0.61964	32.48203	5.67011	166.47	14.48
65/12/22	2439116.5	-30.57762	7.34537	8.12326	-0.13116	-5.63511	0.61915	32.47973	5.67054	166.49	14.48

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65/12/26	2439120.5	-30.57792	7.33235	8.12469	-0.12934	-5.63564	0.61867	32.47743	5.67097	166.52	14.49
65/12/30	2439124.5	-30.57822	7.31933	8.12611	-0.12751	-5.63616	0.61818	32.47513	5.67140	166.54	14.49
66/ 1/ 3	2439128.5	-30.57851	7.30631	8.12754	-0.12569	-5.63669	0.61769	32.47283	5.67183	166.56	14.49
66/ 1/ 7	2439132.5	-30.57880	7.29329	8.12897	-0.12386	-5.63721	0.61721	32.47053	5.67225	166.59	14.50
66/ 1/11	2439136.5	-30.57909	7.28026	8.13039	-0.12203	-5.63774	0.61672	32.46823	5.67268	166.61	14.50
66/ 1/15	2439140.5	-30.57937	7.26724	8.13182	-0.12020	-5.63826	0.61623	32.46593	5.67311	166.63	14.51
66/ 1/19	2439144.5	-30.57964	7.25421	8.13324	-0.11837	-5.63878	0.61574	32.46364	5.67354	166.65	14.51
66/ 1/23	2439148.5	-30.57991	7.24119	8.13466	-0.11653	-5.63930	0.61526	32.46134	5.67396	166.68	14.51
66/ 1/27	2439152.5	-30.58018	7.22816	8.13608	-0.11470	-5.63982	0.61477	32.45904	5.67439	166.70	14.52
66/ 1/31	2439156.5	-30.58044	7.21513	8.13750	-0.11286	-5.64034	0.61428	32.45675	5.67481	166.72	14.52
66/ 2/ 4	2439160.5	-30.58070	7.20210	8.13892	-0.11102	-5.64085	0.61379	32.45445	5.67524	166.75	14.52
66/ 2/ 8	2439164.5	-30.58096	7.18906	8.14034	-0.10918	-5.64137	0.61330	32.45216	5.67566	166.77	14.53
66/ 2/12	2439168.5	-30.58121	7.17603	8.14176	-0.10734	-5.64188	0.61281	32.44986	5.67608	166.79	14.53
66/ 2/16	2439172.5	-30.58145	7.16300	8.14317	-0.10549	-5.64239	0.61233	32.44757	5.67650	166.82	14.53
66/ 2/20	2439176.5	-30.58169	7.14996	8.14458	-0.10365	-5.64290	0.61184	32.44528	5.67692	166.84	14.54
66/ 2/24	2439180.5	-30.58193	7.13692	8.14600	-0.10180	-5.64341	0.61135	32.44299	5.67734	166.86	14.54
66/ 2/28	2439184.5	-30.58216	7.12389	8.14741	-0.09995	-5.64391	0.61086	32.44070	5.67776	166.89	14.55
66/ 3/ 4	2439188.5	-30.58239	7.11085	8.14882	-0.09810	-5.64442	0.61037	32.43841	5.67817	166.91	14.55
66/ 3/ 8	2439192.5	-30.58262	7.09781	8.15023	-0.09625	-5.64492	0.60988	32.43611	5.67859	166.93	14.55
66/ 3/12	2439196.5	-30.58284	7.08477	8.15164	-0.09440	-5.64542	0.60938	32.43383	5.67900	166.96	14.56
66/ 3/16	2439200.5	-30.58305	7.07172	8.15304	-0.09254	-5.64592	0.60889	32.43154	5.67941	166.98	14.56
66/ 3/20	2439204.5	-30.58326	7.05868	8.15445	-0.09069	-5.64641	0.60840	32.42925	5.67982	167.00	14.56
66/ 3/24	2439208.5	-30.58347	7.04564	8.15586	-0.08883	-5.64691	0.60791	32.42696	5.68023	167.03	14.57
66/ 3/28	2439212.5	-30.58367	7.03259	8.15726	-0.08697	-5.64739	0.60742	32.42467	5.68063	167.05	14.57
66/ 4/ 1	2439216.5	-30.58387	7.01954	8.15866	-0.08512	-5.64788	0.60693	32.42239	5.68104	167.07	14.57
66/ 4/ 5	2439220.5	-30.58407	7.00649	8.16006	-0.08326	-5.64837	0.60644	32.42010	5.68144	167.10	14.58
66/ 4/ 9	2439224.5	-30.58426	6.99345	8.16146	-0.08141	-5.64885	0.60595	32.41781	5.68184	167.12	14.58
66/ 4/13	2439228.5	-30.58444	6.98039	8.16286	-0.07955	-5.64933	0.60546	32.41553	5.68224	167.14	14.59
66/ 4/17	2439232.5	-30.58463	6.96734	8.16426	-0.07770	-5.64981	0.60496	32.41324	5.68264	167.17	14.59
66/ 4/21	2439236.5	-30.58480	6.95429	8.16566	-0.07585	-5.65029	0.60447	32.41096	5.68303	167.19	14.59
66/ 4/25	2439240.5	-30.58498	6.94124	8.16705	-0.07400	-5.65076	0.60398	32.40868	5.68343	167.21	14.60
66/ 4/29	2439244.5	-30.58515	6.92818	8.16845	-0.07214	-5.65124	0.60349	32.40639	5.68383	167.24	14.60
66/ 5/ 3	2439248.5	-30.58531	6.91513	8.16984	-0.07029	-5.65171	0.60300	32.40411	5.68422	167.26	14.60
66/ 5/ 7	2439252.5	-30.58547	6.90207	8.17124	-0.06844	-5.65218	0.60250	32.40183	5.68462	167.28	14.61
66/ 5/11	2439256.5	-30.58563	6.88901	8.17263	-0.06660	-5.65266	0.60201	32.39955	5.68501	167.31	14.61
66/ 5/15	2439260.5	-30.58578	6.87595	8.17402	-0.06475	-5.65313	0.60152	32.39727	5.68541	167.33	14.61
66/ 5/19	2439264.5	-30.58593	6.86289	8.17541	-0.06290	-5.65360	0.60103	32.39499	5.68581	167.35	14.62
66/ 5/23	2439268.5	-30.58607	6.84983	8.17679	-0.06106	-5.65408	0.60053	32.39271	5.68621	167.38	14.62
66/ 5/27	2439272.5	-30.58621	6.83677	8.17818	-0.05921	-5.65455	0.60004	32.39043	5.68661	167.40	14.62
66/ 5/31	2439276.5	-30.58634	6.82370	8.17957	-0.05736	-5.65503	0.59955	32.38815	5.68701	167.42	14.63
66/ 6/ 4	2439280.5	-30.58647	6.81064	8.18095	-0.05551	-5.65551	0.59905	32.38588	5.68741	167.45	14.63
66/ 6/ 8	2439284.5	-30.58660	6.79757	8.18233	-0.05366	-5.65598	0.59856	32.38360	5.68782	167.47	14.64
66/ 6/12	2439288.5	-30.58672	6.78451	8.18372	-0.05181	-5.65645	0.59806	32.38132	5.68822	167.49	14.64
66/ 6/16	2439292.5	-30.58684	6.77144	8.18510	-0.04996	-5.65693	0.59757	32.37905	5.68862	167.52	14.64
66/ 6/20	2439296.5	-30.58695	6.75837	8.18648	-0.04811	-5.65740	0.59707	32.37677	5.68902	167.54	14.65

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66/ 6/24	2439300.5	-30.58706	6.74530	8.18786	-0.04626	-5.65787	0.59658	32.37450	5.68943	167.56	14.65
66/ 6/28	2439304.5	-30.58716	6.73223	8.18923	-0.04441	-5.65834	0.59609	32.37223	5.68983	167.59	14.65
66/ 7/ 2	2439308.5	-30.58727	6.71916	8.19061	-0.04256	-5.65882	0.59559	32.36995	5.69023	167.61	14.66
66/ 7/ 6	2439312.5	-30.58736	6.70608	8.19199	-0.04070	-5.65929	0.59509	32.36768	5.69064	167.63	14.66
66/ 7/10	2439316.5	-30.58745	6.69301	8.19336	-0.03885	-5.65976	0.59460	32.36541	5.69104	167.66	14.66
66/ 7/14	2439320.5	-30.58754	6.67993	8.19473	-0.03700	-5.66023	0.59410	32.36314	5.69145	167.68	14.67
66/ 7/18	2439324.5	-30.58762	6.66686	8.19610	-0.03514	-5.66071	0.59361	32.36087	5.69185	167.70	14.67
66/ 7/22	2439328.5	-30.58770	6.65378	8.19748	-0.03329	-5.66118	0.59311	32.35860	5.69226	167.73	14.67
66/ 7/26	2439332.5	-30.58778	6.64070	8.19884	-0.03143	-5.66165	0.59262	32.35633	5.69267	167.75	14.68
66/ 7/30	2439336.5	-30.58785	6.62762	8.20021	-0.02958	-5.66213	0.59212	32.35406	5.69308	167.77	14.68
66/ 8/ 3	2439340.5	-30.58791	6.61454	8.20158	-0.02772	-5.66260	0.59162	32.35179	5.69349	167.80	14.69
66/ 8/ 7	2439344.5	-30.58798	6.60146	8.20295	-0.02586	-5.66307	0.59113	32.34953	5.69390	167.82	14.69
66/ 8/11	2439348.5	-30.58803	6.58837	8.20431	-0.02400	-5.66355	0.59063	32.34726	5.69431	167.84	14.69
66/ 8/15	2439352.5	-30.58809	6.57529	8.20568	-0.02214	-5.66402	0.59013	32.34499	5.69472	167.87	14.70
66/ 8/19	2439356.5	-30.58814	6.56220	8.20704	-0.02028	-5.66449	0.58963	32.34273	5.69514	167.89	14.70
66/ 8/23	2439360.5	-30.58818	6.54912	8.20840	-0.01842	-5.66497	0.58913	32.34046	5.69555	167.92	14.70
66/ 8/27	2439364.5	-30.58822	6.53603	8.20976	-0.01655	-5.66545	0.58864	32.33820	5.69597	167.94	14.71
66/ 8/31	2439368.5	-30.58826	6.52294	8.21112	-0.01468	-5.66592	0.58814	32.33594	5.69638	167.96	14.71
66/ 9/ 4	2439372.5	-30.58829	6.50985	8.21248	-0.01280	-5.66639	0.58764	32.33367	5.69680	167.99	14.71
66/ 9/ 8	2439376.5	-30.58832	6.49676	8.21384	-0.01093	-5.66686	0.58714	32.33141	5.69721	168.01	14.72
66/ 9/12	2439380.5	-30.58834	6.48367	8.21519	-0.00905	-5.66733	0.58664	32.32915	5.69762	168.03	14.72
66/ 9/16	2439384.5	-30.58836	6.47057	8.21655	-0.00717	-5.66780	0.58614	32.32689	5.69803	168.06	14.72
66/ 9/20	2439388.5	-30.58837	6.45748	8.21790	-0.00529	-5.66826	0.58564	32.32463	5.69844	168.08	14.73
66/ 9/24	2439392.5	-30.58838	6.44439	8.21925	-0.00341	-5.66873	0.58514	32.32237	5.69885	168.10	14.73
66/ 9/28	2439396.5	-30.58839	6.43129	8.22060	-0.00153	-5.66919	0.58464	32.32011	5.69926	168.13	14.74
66/10/ 2	2439400.5	-30.58839	6.41819	8.22195	0.00035	-5.66965	0.58414	32.31785	5.69966	168.15	14.74
66/10/ 6	2439404.5	-30.58839	6.40509	8.22330	0.00223	-5.67011	0.58364	32.31559	5.70007	168.17	14.74
66/10/10	2439408.5	-30.58838	6.39199	8.22465	0.00412	-5.67056	0.58313	32.31333	5.70047	168.20	14.75
66/10/14	2439412.5	-30.58837	6.37889	8.22600	0.00600	-5.67102	0.58263	32.31107	5.70087	168.22	14.75
66/10/18	2439416.5	-30.58835	6.36579	8.22734	0.00789	-5.67147	0.58213	32.30882	5.70128	168.24	14.75
66/10/22	2439420.5	-30.58833	6.35269	8.22869	0.00977	-5.67193	0.58163	32.30656	5.70168	168.27	14.76
66/10/26	2439424.5	-30.58831	6.33959	8.23003	0.01166	-5.67238	0.58113	32.30431	5.70208	168.29	14.76
66/10/30	2439428.5	-30.58828	6.32648	8.23137	0.01354	-5.67283	0.58063	32.30205	5.70248	168.31	14.76
66/11/ 3	2439432.5	-30.58824	6.31337	8.23271	0.01543	-5.67327	0.58013	32.29980	5.70288	168.34	14.77
66/11/ 7	2439436.5	-30.58821	6.30027	8.23405	0.01732	-5.67372	0.57962	32.29754	5.70328	168.36	14.77
66/11/11	2439440.5	-30.58816	6.28716	8.23539	0.01920	-5.67417	0.57912	32.29529	5.70368	168.39	14.77
66/11/15	2439444.5	-30.58812	6.27405	8.23673	0.02109	-5.67461	0.57862	32.29304	5.70408	168.41	14.78
66/11/19	2439448.5	-30.58807	6.26094	8.23806	0.02297	-5.67506	0.57812	32.29079	5.70448	168.43	14.78
66/11/23	2439452.5	-30.58801	6.24783	8.23940	0.02486	-5.67551	0.57761	32.28854	5.70488	168.46	14.78
66/11/27	2439456.5	-30.58795	6.23472	8.24073	0.02675	-5.67595	0.57711	32.28628	5.70528	168.48	14.79
66/12/ 1	2439460.5	-30.58789	6.22161	8.24206	0.02864	-5.67639	0.57661	32.28403	5.70568	168.50	14.79
66/12/ 5	2439464.5	-30.58782	6.20849	8.24340	0.03054	-5.67684	0.57610	32.28179	5.70608	168.53	14.79
66/12/ 9	2439468.5	-30.58775	6.19538	8.24473	0.03243	-5.67728	0.57560	32.27954	5.70647	168.55	14.80
66/12/13	2439472.5	-30.58767	6.18226	8.24606	0.03432	-5.67771	0.57510	32.27729	5.70687	168.57	14.80
66/12/17	2439476.5	-30.58759	6.16914	8.24738	0.03621	-5.67815	0.57459	32.27504	5.70726	168.60	14.81

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66/12/21	2439480.5	-30.58750	6.15603	8.24871	0.03810	-5.67859	0.57409	32.27279	5.70766	168.62	14.81
66/12/25	2439484.5	-30.58741	6.14291	8.25004	0.03999	-5.67902	0.57359	32.27055	5.70806	168.64	14.81
66/12/29	2439488.5	-30.58732	6.12979	8.25136	0.04189	-5.67946	0.57308	32.26830	5.70845	168.67	14.82
67/ 1/ 2	2439492.5	-30.58722	6.11667	8.25268	0.04378	-5.67989	0.57258	32.26606	5.70885	168.69	14.82
67/ 1/ 6	2439496.5	-30.58712	6.10354	8.25401	0.04567	-5.68033	0.57207	32.26381	5.70924	168.72	14.82
67/ 1/10	2439500.5	-30.58701	6.09042	8.25533	0.04756	-5.68076	0.57157	32.26157	5.70964	168.74	14.83
67/ 1/14	2439504.5	-30.58690	6.07730	8.25665	0.04945	-5.68119	0.57106	32.25932	5.71004	168.76	14.83
67/ 1/18	2439508.5	-30.58678	6.06417	8.25796	0.05134	-5.68162	0.57056	32.25708	5.71043	168.79	14.83
67/ 1/22	2439512.5	-30.58666	6.05105	8.25928	0.05324	-5.68206	0.57006	32.25484	5.71083	168.81	14.84
67/ 1/26	2439516.5	-30.58653	6.03792	8.26060	0.05513	-5.68249	0.56955	32.25260	5.71123	168.83	14.84
67/ 1/30	2439520.5	-30.58640	6.02479	8.26191	0.05702	-5.68292	0.56905	32.25036	5.71163	168.86	14.84
67/ 2/ 3	2439524.5	-30.58627	6.01166	8.26323	0.05892	-5.68336	0.56854	32.24811	5.71203	168.88	14.85
67/ 2/ 7	2439528.5	-30.58613	5.99853	8.26454	0.06081	-5.68379	0.56803	32.24587	5.71243	168.90	14.85
67/ 2/11	2439532.5	-30.58599	5.98540	8.26585	0.06271	-5.68423	0.56753	32.24364	5.71283	168.93	14.85
67/ 2/15	2439536.5	-30.58584	5.97227	8.26716	0.06460	-5.68466	0.56702	32.24140	5.71324	168.95	14.86
67/ 2/19	2439540.5	-30.58569	5.95913	8.26847	0.06651	-5.68510	0.56652	32.23916	5.71364	168.97	14.86
67/ 2/23	2439544.5	-30.58553	5.94600	8.26978	0.06841	-5.68553	0.56601	32.23692	5.71405	169.00	14.86
67/ 2/27	2439548.5	-30.58537	5.93287	8.27109	0.07031	-5.68597	0.56550	32.23468	5.71445	169.02	14.87
67/ 3/ 3	2439552.5	-30.58521	5.91973	8.27239	0.07222	-5.68640	0.56499	32.23245	5.71486	169.05	14.87
67/ 3/ 7	2439556.5	-30.58504	5.90659	8.27370	0.07413	-5.68683	0.56449	32.23021	5.71526	169.07	14.87
67/ 3/11	2439560.5	-30.58487	5.89345	8.27500	0.07604	-5.68726	0.56398	32.22798	5.71566	169.09	14.88
67/ 3/15	2439564.5	-30.58469	5.88032	8.27630	0.07795	-5.68769	0.56347	32.22574	5.71607	169.12	14.88
67/ 3/19	2439568.5	-30.58451	5.86718	8.27760	0.07987	-5.68812	0.56296	32.22351	5.71647	169.14	14.89
67/ 3/23	2439572.5	-30.58432	5.85403	8.27890	0.08178	-5.68854	0.56245	32.22128	5.71687	169.16	14.89
67/ 3/27	2439576.5	-30.58413	5.84089	8.28020	0.08370	-5.68897	0.56194	32.21904	5.71727	169.19	14.89
67/ 3/31	2439580.5	-30.58393	5.82775	8.28150	0.08562	-5.68939	0.56144	32.21681	5.71767	169.21	14.90
67/ 4/ 4	2439584.5	-30.58373	5.81461	8.28280	0.08754	-5.68981	0.56093	32.21458	5.71807	169.24	14.90
67/ 4/ 8	2439588.5	-30.58353	5.80146	8.28409	0.08946	-5.69023	0.56042	32.21235	5.71846	169.26	14.90
67/ 4/12	2439592.5	-30.58332	5.78831	8.28539	0.09138	-5.69065	0.55991	32.21012	5.71886	169.28	14.91
67/ 4/16	2439596.5	-30.58311	5.77517	8.28668	0.09330	-5.69107	0.55940	32.20789	5.71926	169.31	14.91
67/ 4/20	2439600.5	-30.58289	5.76202	8.28797	0.09523	-5.69148	0.55889	32.20566	5.71965	169.33	14.91
67/ 4/24	2439604.5	-30.58267	5.74887	8.28926	0.09715	-5.69190	0.55838	32.20343	5.72004	169.35	14.92
67/ 4/28	2439608.5	-30.58244	5.73572	8.29055	0.09908	-5.69231	0.55787	32.20120	5.72044	169.38	14.92
67/ 5/ 2	2439612.5	-30.58221	5.72257	8.29184	0.10100	-5.69272	0.55736	32.19897	5.72083	169.40	14.92
67/ 5/ 6	2439616.5	-30.58197	5.70942	8.29313	0.10293	-5.69312	0.55684	32.19675	5.72122	169.43	14.93
67/ 5/10	2439620.5	-30.58173	5.69627	8.29441	0.10486	-5.69353	0.55633	32.19452	5.72161	169.45	14.93
67/ 5/14	2439624.5	-30.58149	5.68311	8.29570	0.10679	-5.69394	0.55582	32.19229	5.72200	169.47	14.93
67/ 5/18	2439628.5	-30.58124	5.66996	8.29698	0.10872	-5.69434	0.55531	32.19007	5.72239	169.50	14.94
67/ 5/22	2439632.5	-30.58099	5.65680	8.29826	0.11065	-5.69474	0.55480	32.18784	5.72278	169.52	14.94
67/ 5/26	2439636.5	-30.58073	5.64365	8.29954	0.11259	-5.69514	0.55429	32.18562	5.72316	169.54	14.94
67/ 5/30	2439640.5	-30.58047	5.63049	8.30082	0.11452	-5.69554	0.55377	32.18340	5.72354	169.57	14.95
67/ 6/ 3	2439644.5	-30.58020	5.61733	8.30210	0.11646	-5.69593	0.55326	32.18117	5.72392	169.59	14.95
67/ 6/ 7	2439648.5	-30.57993	5.60417	8.30338	0.11840	-5.69632	0.55275	32.17895	5.72430	169.62	14.95
67/ 6/11	2439652.5	-30.57965	5.59101	8.30466	0.12033	-5.69671	0.55223	32.17673	5.72468	169.64	14.96
67/ 6/15	2439656.5	-30.57937	5.57785	8.30593	0.12227	-5.69709	0.55172	32.17451	5.72505	169.66	14.96

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67/ 6/19	2439660.5	-30.57909	5.56469	8.30721	0.12420	-5.69748	0.55121	32.17229	5.72543	169.69	14.96
67/ 6/23	2439664.5	-30.57880	5.55153	8.30848	0.12613	-5.69786	0.55069	32.17007	5.72580	169.71	14.97
67/ 6/27	2439668.5	-30.57851	5.53836	8.30975	0.12806	-5.69824	0.55018	32.16785	5.72617	169.73	14.97
67/ 7/ 1	2439672.5	-30.57821	5.52520	8.31102	0.13000	-5.69861	0.54967	32.16563	5.72654	169.76	14.97
67/ 7/ 5	2439676.5	-30.57790	5.51203	8.31229	0.13193	-5.69899	0.54915	32.16341	5.72691	169.78	14.98
67/ 7/ 9	2439680.5	-30.57760	5.49887	8.31356	0.13385	-5.69936	0.54864	32.16119	5.72727	169.81	14.98
67/ 7/13	2439684.5	-30.57729	5.48570	8.31482	0.13578	-5.69974	0.54813	32.15897	5.72764	169.83	14.98
67/ 7/17	2439688.5	-30.57697	5.47253	8.31609	0.13771	-5.70011	0.54761	32.15676	5.72801	169.85	14.99
67/ 7/21	2439692.5	-30.57665	5.45936	8.31735	0.13964	-5.70048	0.54710	32.15454	5.72838	169.88	14.99
67/ 7/25	2439696.5	-30.57632	5.44619	8.31862	0.14156	-5.70085	0.54659	32.15233	5.72874	169.90	14.99
67/ 7/29	2439700.5	-30.57600	5.43302	8.31988	0.14348	-5.70122	0.54607	32.15011	5.72911	169.92	15.00
67/ 8/ 2	2439704.5	-30.57566	5.41985	8.32114	0.14540	-5.70159	0.54556	32.14790	5.72948	169.95	15.00
67/ 8/ 6	2439708.5	-30.57532	5.40668	8.32240	0.14733	-5.70196	0.54504	32.14568	5.72985	169.97	15.00
67/ 8/10	2439712.5	-30.57498	5.39351	8.32366	0.14925	-5.70234	0.54453	32.14347	5.73022	170.00	15.01
67/ 8/14	2439716.5	-30.57463	5.38033	8.32492	0.15117	-5.70271	0.54401	32.14126	5.73059	170.02	15.01
67/ 8/18	2439720.5	-30.57428	5.36716	8.32617	0.15309	-5.70308	0.54350	32.13905	5.73097	170.04	15.01
67/ 8/22	2439724.5	-30.57393	5.35398	8.32743	0.15502	-5.70346	0.54298	32.13684	5.73134	170.07	15.02
67/ 8/26	2439728.5	-30.57357	5.34081	8.32868	0.15694	-5.70383	0.54247	32.13462	5.73172	170.09	15.02
67/ 8/30	2439732.5	-30.57320	5.32763	8.32993	0.15886	-5.70420	0.54195	32.13242	5.73209	170.11	15.02
67/ 9/ 3	2439736.5	-30.57283	5.31445	8.33119	0.16079	-5.70457	0.54143	32.13021	5.73246	170.14	15.03
67/ 9/ 7	2439740.5	-30.57246	5.30127	8.33244	0.16271	-5.70494	0.54092	32.12800	5.73284	170.16	15.03
67/ 9/11	2439744.5	-30.57208	5.28809	8.33368	0.16464	-5.70531	0.54040	32.12579	5.73321	170.19	15.03
67/ 9/15	2439748.5	-30.57170	5.27491	8.33493	0.16656	-5.70568	0.53988	32.12358	5.73359	170.21	15.04
67/ 9/19	2439752.5	-30.57131	5.26173	8.33618	0.16848	-5.70605	0.53937	32.12138	5.73396	170.23	15.04
67/ 9/23	2439756.5	-30.57092	5.24855	8.33742	0.17041	-5.70642	0.53885	32.11917	5.73434	170.26	15.05
67/ 9/27	2439760.5	-30.57052	5.23537	8.33867	0.17233	-5.70680	0.53833	32.11696	5.73472	170.28	15.05
67/10/ 1	2439764.5	-30.57012	5.22218	8.33991	0.17426	-5.70717	0.53782	32.11476	5.73510	170.31	15.05
67/10/ 5	2439768.5	-30.56972	5.20900	8.34115	0.17618	-5.70754	0.53730	32.11256	5.73548	170.33	15.06
67/10/ 9	2439772.5	-30.56931	5.19581	8.34239	0.17811	-5.70791	0.53678	32.11035	5.73586	170.35	15.06
67/10/13	2439776.5	-30.56890	5.18262	8.34363	0.18004	-5.70828	0.53626	32.10815	5.73625	170.38	15.06
67/10/17	2439780.5	-30.56848	5.16944	8.34487	0.18197	-5.70866	0.53575	32.10595	5.73663	170.40	15.07
67/10/21	2439784.5	-30.56806	5.15625	8.34611	0.18390	-5.70903	0.53523	32.10374	5.73701	170.43	15.07
67/10/25	2439788.5	-30.56763	5.14306	8.34735	0.18583	-5.70941	0.53471	32.10154	5.73740	170.45	15.07
67/10/29	2439792.5	-30.56720	5.12987	8.34858	0.18776	-5.70978	0.53419	32.09934	5.73779	170.47	15.08
67/11/ 2	2439796.5	-30.56676	5.11668	8.34981	0.18970	-5.71016	0.53367	32.09714	5.73818	170.50	15.08
67/11/ 6	2439800.5	-30.56632	5.10349	8.35105	0.19163	-5.71053	0.53315	32.09494	5.73857	170.52	15.08
67/11/10	2439804.5	-30.56588	5.09029	8.35228	0.19357	-5.71091	0.53263	32.09275	5.73896	170.55	15.09
67/11/14	2439808.5	-30.56543	5.07710	8.35351	0.19552	-5.71128	0.53211	32.09055	5.73935	170.57	15.09
67/11/18	2439812.5	-30.56497	5.06390	8.35474	0.19746	-5.71166	0.53159	32.08835	5.73974	170.59	15.09
67/11/22	2439816.5	-30.56451	5.05071	8.35596	0.19941	-5.71203	0.53107	32.08615	5.74013	170.62	15.10
67/11/26	2439820.5	-30.56405	5.03751	8.35719	0.20136	-5.71240	0.53055	32.08396	5.74052	170.64	15.10
67/11/30	2439824.5	-30.56358	5.02432	8.35841	0.20332	-5.71277	0.53003	32.08176	5.74090	170.66	15.10
67/12/ 4	2439828.5	-30.56311	5.01112	8.35964	0.20527	-5.71313	0.52951	32.07957	5.74129	170.69	15.11
67/12/ 8	2439832.5	-30.56263	4.99792	8.36086	0.20723	-5.71350	0.52899	32.07737	5.74167	170.71	15.11
67/12/12	2439836.5	-30.56215	4.98472	8.36208	0.20918	-5.71386	0.52846	32.07518	5.74206	170.74	15.11

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67/12/16	2439840.5	-30.56167	4.97152	8.36330	0.21114	-5.71422	0.52794	32.07298	5.74244	170.76	15.12
67/12/20	2439844.5	-30.56118	4.95832	8.36452	0.21310	-5.71458	0.52742	32.07079	5.74282	170.78	15.12
67/12/24	2439848.5	-30.56068	4.94512	8.36574	0.21507	-5.71493	0.52690	32.06860	5.74320	170.81	15.12
67/12/28	2439852.5	-30.56018	4.93191	8.36696	0.21703	-5.71529	0.52638	32.06641	5.74358	170.83	15.13
68/ 1/ 1	2439856.5	-30.55968	4.91871	8.36817	0.21899	-5.71564	0.52585	32.06422	5.74395	170.86	15.13
68/ 1/ 5	2439860.5	-30.55917	4.90550	8.36939	0.22095	-5.71599	0.52533	32.06203	5.74433	170.88	15.13
68/ 1/ 9	2439864.5	-30.55866	4.89230	8.37060	0.22292	-5.71633	0.52481	32.05984	5.74470	170.90	15.13
68/ 1/13	2439868.5	-30.55814	4.87909	8.37181	0.22488	-5.71668	0.52428	32.05765	5.74507	170.93	15.14
68/ 1/17	2439872.5	-30.55762	4.86589	8.37302	0.22685	-5.71702	0.52376	32.05546	5.74544	170.95	15.14
68/ 1/21	2439876.5	-30.55709	4.85268	8.37423	0.22881	-5.71736	0.52324	32.05327	5.74581	170.98	15.14
68/ 1/25	2439880.5	-30.55656	4.83947	8.37544	0.23078	-5.71770	0.52271	32.05108	5.74618	171.00	15.15
68/ 1/29	2439884.5	-30.55603	4.82626	8.37665	0.23274	-5.71804	0.52219	32.04890	5.74655	171.02	15.15
68/ 2/ 2	2439888.5	-30.55549	4.81305	8.37785	0.23471	-5.71838	0.52167	32.04671	5.74692	171.05	15.15
68/ 2/ 6	2439892.5	-30.55494	4.79984	8.37906	0.23668	-5.71871	0.52114	32.04453	5.74729	171.07	15.16
68/ 2/10	2439896.5	-30.55439	4.78663	8.38026	0.23865	-5.71905	0.52062	32.04234	5.74765	171.10	15.16
68/ 2/14	2439900.5	-30.55384	4.77342	8.38146	0.24062	-5.71938	0.52009	32.04016	5.74802	171.12	15.16
68/ 2/18	2439904.5	-30.55328	4.76020	8.38266	0.24259	-5.71971	0.51957	32.03797	5.74838	171.14	15.17
68/ 2/22	2439908.5	-30.55272	4.74699	8.38386	0.24456	-5.72004	0.51904	32.03579	5.74874	171.17	15.17
68/ 2/26	2439912.5	-30.55215	4.73377	8.38506	0.24653	-5.72036	0.51852	32.03361	5.74910	171.19	15.17
68/ 3/ 1	2439916.5	-30.55158	4.72056	8.38626	0.24850	-5.72068	0.51799	32.03142	5.74946	171.22	15.18
68/ 3/ 5	2439920.5	-30.55100	4.70734	8.38745	0.25047	-5.72100	0.51747	32.02924	5.74981	171.24	15.18
68/ 3/ 9	2439924.5	-30.55042	4.69413	8.38865	0.25243	-5.72132	0.51694	32.02706	5.75017	171.26	15.18
68/ 3/13	2439928.5	-30.54984	4.68091	8.38984	0.25440	-5.72164	0.51642	32.02488	5.75052	171.29	15.19
68/ 3/17	2439932.5	-30.54925	4.66769	8.39103	0.25637	-5.72195	0.51589	32.02270	5.75088	171.31	15.19
68/ 3/21	2439936.5	-30.54865	4.65447	8.39223	0.25833	-5.72227	0.51537	32.02052	5.75123	171.34	15.19
68/ 3/25	2439940.5	-30.54805	4.64125	8.39342	0.26030	-5.72258	0.51484	32.01834	5.75158	171.36	15.20
68/ 3/29	2439944.5	-30.54745	4.62803	8.39460	0.26226	-5.72289	0.51432	32.01616	5.75194	171.39	15.20
68/ 4/ 2	2439948.5	-30.54684	4.61481	8.39579	0.26423	-5.72320	0.51379	32.01399	5.75229	171.41	15.20
68/ 4/ 6	2439952.5	-30.54623	4.60159	8.39698	0.26619	-5.72351	0.51327	32.01181	5.75264	171.43	15.21
68/ 4/10	2439956.5	-30.54561	4.58836	8.39816	0.26815	-5.72383	0.51274	32.00963	5.75300	171.46	15.21
68/ 4/14	2439960.5	-30.54499	4.57514	8.39935	0.27011	-5.72414	0.51221	32.00746	5.75335	171.48	15.21
68/ 4/18	2439964.5	-30.54437	4.56192	8.40053	0.27207	-5.72445	0.51169	32.00528	5.75371	171.51	15.22
68/ 4/22	2439968.5	-30.54373	4.54869	8.40171	0.27403	-5.72476	0.51116	32.00311	5.75406	171.53	15.22
68/ 4/26	2439972.5	-30.54310	4.53547	8.40289	0.27600	-5.72507	0.51063	32.00094	5.75442	171.55	15.22
68/ 4/30	2439976.5	-30.54246	4.52224	8.40407	0.27796	-5.72538	0.51011	31.99876	5.75478	171.58	15.23
68/ 5/ 4	2439980.5	-30.54181	4.50901	8.40525	0.27992	-5.72570	0.50958	31.99659	5.75514	171.60	15.23
68/ 5/ 8	2439984.5	-30.54117	4.49579	8.40643	0.28189	-5.72601	0.50905	31.99442	5.75550	171.63	15.23
68/ 5/12	2439988.5	-30.54051	4.48256	8.40760	0.28385	-5.72632	0.50852	31.99225	5.75586	171.65	15.24
68/ 5/16	2439992.5	-30.53985	4.46933	8.40877	0.28582	-5.72663	0.50799	31.99008	5.75622	171.67	15.24
68/ 5/20	2439996.5	-30.53919	4.45610	8.40995	0.28779	-5.72694	0.50747	31.98791	5.75658	171.70	15.24
68/ 5/24	2440000.5	-30.53852	4.44287	8.41112	0.28976	-5.72725	0.50694	31.98574	5.75693	171.72	15.25
68/ 5/28	2440004.5	-30.53785	4.42964	8.41229	0.29173	-5.72755	0.50641	31.98357	5.75729	171.75	15.25
68/ 6/ 1	2440008.5	-30.53718	4.41640	8.41346	0.29370	-5.72786	0.50588	31.98140	5.75765	171.77	15.25
68/ 6/ 5	2440012.5	-30.53650	4.40317	8.41463	0.29567	-5.72816	0.50535	31.97923	5.75801	171.79	15.26
68/ 6/ 9	2440016.5	-30.53581	4.38994	8.41579	0.29764	-5.72847	0.50482	31.97707	5.75837	171.82	15.26

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68/ 6/13	2440020.5	-30.53512	4.37670	8.41696	0.29962	-5.72877	0.50429	31.97490	5.75872	171.84	15.26
68/ 6/17	2440024.5	-30.53443	4.36347	8.41812	0.30159	-5.72907	0.50376	31.97274	5.75908	171.87	15.27
68/ 6/21	2440028.5	-30.53373	4.35023	8.41929	0.30357	-5.72937	0.50323	31.97057	5.75944	171.89	15.27
68/ 6/25	2440032.5	-30.53302	4.33700	8.42045	0.30554	-5.72967	0.50270	31.96841	5.75979	171.92	15.27
68/ 6/29	2440036.5	-30.53232	4.32376	8.42161	0.30752	-5.72997	0.50217	31.96624	5.76015	171.94	15.28
68/ 7/ 3	2440040.5	-30.53160	4.31052	8.42277	0.30949	-5.73027	0.50164	31.96408	5.76050	171.96	15.28
68/ 7/ 7	2440044.5	-30.53089	4.29728	8.42393	0.31147	-5.73057	0.50111	31.96192	5.76086	171.99	15.28
68/ 7/11	2440048.5	-30.53016	4.28405	8.42508	0.31345	-5.73086	0.50058	31.95976	5.76121	172.01	15.28
68/ 7/15	2440052.5	-30.52944	4.27081	8.42624	0.31543	-5.73115	0.50005	31.95759	5.76157	172.04	15.29
68/ 7/19	2440056.5	-30.52871	4.25757	8.42739	0.31741	-5.73145	0.49951	31.95543	5.76192	172.06	15.29
68/ 7/23	2440060.5	-30.52797	4.24432	8.42855	0.31939	-5.73174	0.49898	31.95327	5.76228	172.08	15.29
68/ 7/27	2440064.5	-30.52723	4.23108	8.42970	0.32137	-5.73203	0.49845	31.95111	5.76263	172.11	15.30
68/ 7/31	2440068.5	-30.52649	4.21784	8.43085	0.32335	-5.73232	0.49792	31.94896	5.76299	172.13	15.30
68/ 8/ 4	2440072.5	-30.52574	4.20460	8.43200	0.32534	-5.73261	0.49738	31.94680	5.76334	172.16	15.30
68/ 8/ 8	2440076.5	-30.52498	4.19135	8.43315	0.32733	-5.73290	0.49685	31.94464	5.76369	172.18	15.31
68/ 8/12	2440080.5	-30.52422	4.17811	8.43430	0.32932	-5.73318	0.49632	31.94248	5.76404	172.21	15.31
68/ 8/16	2440084.5	-30.52346	4.16486	8.43544	0.33130	-5.73346	0.49578	31.94033	5.76439	172.23	15.31
68/ 8/20	2440088.5	-30.52269	4.15162	8.43659	0.33329	-5.73374	0.49525	31.93817	5.76473	172.25	15.32
68/ 8/24	2440092.5	-30.52192	4.13837	8.43773	0.33528	-5.73402	0.49472	31.93602	5.76508	172.28	15.32
68/ 8/28	2440096.5	-30.52114	4.12513	8.43887	0.33727	-5.73429	0.49418	31.93386	5.76542	172.30	15.32
68/ 9/ 1	2440100.5	-30.52036	4.11188	8.44001	0.33926	-5.73456	0.49365	31.93171	5.76576	172.33	15.33
68/ 9/ 5	2440104.5	-30.51958	4.09863	8.44115	0.34124	-5.73483	0.49311	31.92955	5.76610	172.35	15.33
68/ 9/ 9	2440108.5	-30.51879	4.08538	8.44229	0.34323	-5.73510	0.49258	31.92740	5.76644	172.38	15.33
68/ 9/13	2440112.5	-30.51799	4.07213	8.44343	0.34521	-5.73537	0.49205	31.92525	5.76678	172.40	15.34
68/ 9/17	2440116.5	-30.51719	4.05888	8.44457	0.34720	-5.73563	0.49151	31.92310	5.76711	172.42	15.34
68/ 9/21	2440120.5	-30.51639	4.04563	8.44570	0.34918	-5.73589	0.49098	31.92095	5.76745	172.45	15.34
68/ 9/25	2440124.5	-30.51558	4.03238	8.44683	0.35117	-5.73616	0.49044	31.91880	5.76778	172.47	15.35
68/ 9/29	2440128.5	-30.51476	4.01913	8.44797	0.35315	-5.73642	0.48991	31.91665	5.76812	172.50	15.35
68/10/ 3	2440132.5	-30.51395	4.00588	8.44910	0.35513	-5.73668	0.48937	31.91450	5.76846	172.52	15.35
68/10/ 7	2440136.5	-30.51312	3.99262	8.45023	0.35711	-5.73694	0.48884	31.91235	5.76879	172.55	15.35
68/10/11	2440140.5	-30.51230	3.97937	8.45136	0.35909	-5.73720	0.48830	31.91020	5.76913	172.57	15.36
68/10/15	2440144.5	-30.51146	3.96611	8.45248	0.36107	-5.73746	0.48777	31.90806	5.76946	172.59	15.36
68/10/19	2440148.5	-30.51063	3.95286	8.45361	0.36304	-5.73772	0.48723	31.90591	5.76980	172.62	15.36
68/10/23	2440152.5	-30.50979	3.93960	8.45474	0.36502	-5.73798	0.48670	31.90376	5.77014	172.64	15.37
68/10/27	2440156.5	-30.50894	3.92635	8.45586	0.36700	-5.73824	0.48616	31.90162	5.77048	172.67	15.37
68/10/31	2440160.5	-30.50809	3.91309	8.45698	0.36898	-5.73850	0.48563	31.89947	5.77082	172.69	15.37
68/11/ 4	2440164.5	-30.50724	3.89983	8.45810	0.37096	-5.73876	0.48509	31.89733	5.77116	172.72	15.38
68/11/ 8	2440168.5	-30.50638	3.88658	8.45922	0.37294	-5.73902	0.48455	31.89519	5.77150	172.74	15.38
68/11/12	2440172.5	-30.50551	3.87332	8.46034	0.37492	-5.73928	0.48402	31.89305	5.77184	172.76	15.38
68/11/16	2440176.5	-30.50465	3.86006	8.46146	0.37691	-5.73953	0.48348	31.89090	5.77218	172.79	15.39
68/11/20	2440180.5	-30.50377	3.84680	8.46258	0.37889	-5.73979	0.48294	31.88876	5.77252	172.81	15.39
68/11/24	2440184.5	-30.50289	3.83354	8.46369	0.38087	-5.74005	0.48241	31.88662	5.77286	172.84	15.39
68/11/28	2440188.5	-30.50201	3.82028	8.46480	0.38285	-5.74030	0.48187	31.88448	5.77320	172.86	15.40
68/12/ 2	2440192.5	-30.50113	3.80702	8.46592	0.38483	-5.74056	0.48133	31.88234	5.77354	172.89	15.40
68/12/ 6	2440196.5	-30.50023	3.79376	8.46703	0.38681	-5.74081	0.48080	31.88020	5.77388	172.91	15.40

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68/12/10	2440200.5	-30.49934	3.78049	8.46814	0.38879	-5.74107	0.48026	31.87807	5.77423	172.93	15.41
68/12/14	2440204.5	-30.49844	3.76723	8.46925	0.39078	-5.74132	0.47972	31.87593	5.77457	172.96	15.41
68/12/18	2440208.5	-30.49753	3.75397	8.47035	0.39276	-5.74158	0.47918	31.87379	5.77491	172.98	15.41
68/12/22	2440212.5	-30.49662	3.74070	8.47146	0.39474	-5.74184	0.47865	31.87166	5.77526	173.01	15.41
68/12/26	2440216.5	-30.49571	3.72744	8.47257	0.39673	-5.74209	0.47811	31.86952	5.77560	173.03	15.42
68/12/30	2440220.5	-30.49479	3.71417	8.47367	0.39871	-5.74235	0.47757	31.86739	5.77595	173.06	15.42
69/ 1/ 3	2440224.5	-30.49387	3.70090	8.47477	0.40070	-5.74260	0.47703	31.86525	5.77630	173.08	15.42
69/ 1/ 7	2440228.5	-30.49294	3.68764	8.47587	0.40269	-5.74286	0.47649	31.86312	5.77665	173.10	15.43
69/ 1/11	2440232.5	-30.49201	3.67437	8.47697	0.40468	-5.74311	0.47595	31.86099	5.77699	173.13	15.43
69/ 1/15	2440236.5	-30.49107	3.66110	8.47807	0.40667	-5.74337	0.47541	31.85886	5.77734	173.15	15.43
69/ 1/19	2440240.5	-30.49013	3.64783	8.47917	0.40866	-5.74363	0.47487	31.85672	5.77770	173.18	15.44
69/ 1/23	2440244.5	-30.48918	3.63457	8.48027	0.41066	-5.74388	0.47433	31.85459	5.77805	173.20	15.44
69/ 1/27	2440248.5	-30.48823	3.62130	8.48136	0.41266	-5.74414	0.47379	31.85246	5.77840	173.23	15.44
69/ 1/31	2440252.5	-30.48727	3.60803	8.48246	0.41466	-5.74439	0.47325	31.85033	5.77875	173.25	15.45
69/ 2/ 4	2440256.5	-30.48631	3.59475	8.48355	0.41667	-5.74464	0.47271	31.84821	5.77910	173.28	15.45
69/ 2/ 8	2440260.5	-30.48535	3.58148	8.48464	0.41867	-5.74489	0.47217	31.84608	5.77945	173.30	15.45
69/ 2/12	2440264.5	-30.48438	3.56821	8.48573	0.42068	-5.74514	0.47163	31.84395	5.77979	173.32	15.45
69/ 2/16	2440268.5	-30.48341	3.55494	8.48682	0.42269	-5.74538	0.47109	31.84182	5.78014	173.35	15.46
69/ 2/20	2440272.5	-30.48243	3.54167	8.48791	0.42470	-5.74562	0.47055	31.83970	5.78048	173.37	15.46
69/ 2/24	2440276.5	-30.48144	3.52839	8.48899	0.42671	-5.74586	0.47000	31.83757	5.78082	173.40	15.46
69/ 2/28	2440280.5	-30.48046	3.51512	8.49008	0.42872	-5.74610	0.46946	31.83545	5.78116	173.42	15.47
69/ 3/ 4	2440284.5	-30.47946	3.50184	8.49116	0.43074	-5.74633	0.46892	31.83332	5.78150	173.45	15.47
69/ 3/ 8	2440288.5	-30.47847	3.48857	8.49225	0.43275	-5.74656	0.46838	31.83120	5.78184	173.47	15.47
69/ 3/12	2440292.5	-30.47746	3.47529	8.49333	0.43477	-5.74679	0.46783	31.82907	5.78217	173.49	15.48
69/ 3/16	2440296.5	-30.47646	3.46202	8.49441	0.43678	-5.74702	0.46729	31.82695	5.78251	173.52	15.48
69/ 3/20	2440300.5	-30.47544	3.44874	8.49549	0.43880	-5.74724	0.46675	31.82483	5.78284	173.54	15.48
69/ 3/24	2440304.5	-30.47443	3.43546	8.49656	0.44082	-5.74747	0.46621	31.82271	5.78317	173.57	15.49
69/ 3/28	2440308.5	-30.47341	3.42218	8.49764	0.44283	-5.74768	0.46566	31.82059	5.78350	173.59	15.49
69/ 4/ 1	2440312.5	-30.47238	3.40890	8.49872	0.44485	-5.74790	0.46512	31.81847	5.78382	173.62	15.49
69/ 4/ 5	2440316.5	-30.47135	3.39563	8.49979	0.44687	-5.74812	0.46458	31.81635	5.78415	173.64	15.49
69/ 4/ 9	2440320.5	-30.47032	3.38235	8.50086	0.44888	-5.74833	0.46403	31.81423	5.78447	173.67	15.50
69/ 4/13	2440324.5	-30.46928	3.36907	8.50193	0.45090	-5.74854	0.46349	31.81211	5.78479	173.69	15.50
69/ 4/17	2440328.5	-30.46823	3.35579	8.50300	0.45291	-5.74875	0.46294	31.80999	5.78512	173.71	15.50
69/ 4/21	2440332.5	-30.46719	3.34251	8.50407	0.45493	-5.74896	0.46240	31.80788	5.78544	173.74	15.51
69/ 4/25	2440336.5	-30.46613	3.32922	8.50514	0.45694	-5.74916	0.46186	31.80576	5.78576	173.76	15.51
69/ 4/29	2440340.5	-30.46508	3.31594	8.50621	0.45896	-5.74937	0.46131	31.80364	5.78608	173.79	15.51
69/ 5/ 3	2440344.5	-30.46401	3.30266	8.50727	0.46098	-5.74957	0.46077	31.80153	5.78639	173.81	15.52
69/ 5/ 7	2440348.5	-30.46294	3.28938	8.50833	0.46300	-5.74976	0.46022	31.79941	5.78670	173.84	15.52
69/ 5/11	2440352.5	-30.46187	3.27609	8.50940	0.46501	-5.74996	0.45968	31.79730	5.78702	173.86	15.52
69/ 5/15	2440356.5	-30.46080	3.26281	8.51046	0.46703	-5.75015	0.45913	31.79519	5.78732	173.89	15.53
69/ 5/19	2440360.5	-30.45972	3.24953	8.51152	0.46904	-5.75034	0.45859	31.79308	5.78763	173.91	15.53
69/ 5/23	2440364.5	-30.45863	3.23624	8.51258	0.47105	-5.75053	0.45804	31.79096	5.78794	173.94	15.53
69/ 5/27	2440368.5	-30.45754	3.22296	8.51364	0.47306	-5.75071	0.45749	31.78885	5.78825	173.96	15.53
69/ 5/31	2440372.5	-30.45644	3.20967	8.51469	0.47507	-5.75090	0.45695	31.78674	5.78855	173.98	15.54
69/ 6/ 4	2440376.5	-30.45534	3.19639	8.51575	0.47707	-5.75108	0.45640	31.78463	5.78886	174.01	15.54

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69/ 6/ 8	2440380.5	-30.45424	3.18310	8.51680	0.47908	-5.75127	0.45586	31.78252	5.78916	174.03	15.54
69/ 6/12	2440384.5	-30.45313	3.16981	8.51785	0.48108	-5.75145	0.45531	31.78041	5.78947	174.06	15.55
69/ 6/16	2440388.5	-30.45202	3.15653	8.51890	0.48308	-5.75163	0.45477	31.77831	5.78977	174.08	15.55
69/ 6/20	2440392.5	-30.45090	3.14324	8.51995	0.48509	-5.75181	0.45422	31.77620	5.79008	174.11	15.55
69/ 6/24	2440396.5	-30.44978	3.12995	8.52100	0.48709	-5.75199	0.45368	31.77409	5.79038	174.13	15.56
69/ 6/28	2440400.5	-30.44865	3.11666	8.52205	0.48908	-5.75218	0.45313	31.77199	5.79069	174.16	15.56
69/ 7/ 2	2440404.5	-30.44752	3.10337	8.52310	0.49108	-5.75236	0.45258	31.76988	5.79099	174.18	15.56
69/ 7/ 6	2440408.5	-30.44638	3.09008	8.52414	0.49308	-5.75254	0.45204	31.76778	5.79130	174.20	15.56
69/ 7/10	2440412.5	-30.44524	3.07679	8.52518	0.49507	-5.75272	0.45149	31.76567	5.79161	174.23	15.57
69/ 7/14	2440416.5	-30.44409	3.06350	8.52623	0.49707	-5.75291	0.45094	31.76357	5.79192	174.25	15.57
69/ 7/18	2440420.5	-30.44294	3.05021	8.52727	0.49907	-5.75309	0.45040	31.76147	5.79224	174.28	15.57
69/ 7/22	2440424.5	-30.44179	3.03692	8.52831	0.50107	-5.75328	0.44985	31.75936	5.79255	174.30	15.58
69/ 7/26	2440428.5	-30.44063	3.02363	8.52935	0.50307	-5.75346	0.44930	31.75726	5.79286	174.33	15.58
69/ 7/30	2440432.5	-30.43946	3.01034	8.53038	0.50507	-5.75365	0.44875	31.75516	5.79318	174.35	15.58
69/ 8/ 3	2440436.5	-30.43829	2.99705	8.53142	0.50707	-5.75383	0.44820	31.75306	5.79349	174.38	15.59
69/ 8/ 7	2440440.5	-30.43712	2.98376	8.53245	0.50907	-5.75401	0.44765	31.75096	5.79381	174.40	15.59
69/ 8/11	2440444.5	-30.43594	2.97046	8.53349	0.51107	-5.75419	0.44711	31.74887	5.79412	174.43	15.59
69/ 8/15	2440448.5	-30.43476	2.95717	8.53452	0.51307	-5.75437	0.44656	31.74677	5.79443	174.45	15.59
69/ 8/19	2440452.5	-30.43357	2.94387	8.53555	0.51507	-5.75455	0.44601	31.74467	5.79475	174.47	15.60
69/ 8/23	2440456.5	-30.43238	2.93058	8.53658	0.51707	-5.75474	0.44546	31.74258	5.79507	174.50	15.60
69/ 8/27	2440460.5	-30.43118	2.91729	8.53761	0.51907	-5.75492	0.44491	31.74048	5.79538	174.52	15.60
69/ 8/31	2440464.5	-30.42998	2.90399	8.53864	0.52108	-5.75510	0.44436	31.73839	5.79570	174.55	15.61
69/ 9/ 4	2440468.5	-30.42877	2.89070	8.53966	0.52308	-5.75528	0.44381	31.73629	5.79602	174.57	15.61
69/ 9/ 8	2440472.5	-30.42756	2.87740	8.54069	0.52509	-5.75546	0.44326	31.73420	5.79633	174.60	15.61
69/ 9/12	2440476.5	-30.42635	2.86410	8.54171	0.52709	-5.75564	0.44271	31.73211	5.79665	174.62	15.62
69/ 9/16	2440480.5	-30.42513	2.85081	8.54273	0.52910	-5.75581	0.44216	31.73001	5.79697	174.65	15.62
69/ 9/20	2440484.5	-30.42390	2.83751	8.54375	0.53110	-5.75599	0.44161	31.72792	5.79729	174.67	15.62
69/ 9/24	2440488.5	-30.42267	2.82421	8.54477	0.53311	-5.75617	0.44106	31.72583	5.79760	174.70	15.62
69/ 9/28	2440492.5	-30.42144	2.81091	8.54579	0.53512	-5.75635	0.44051	31.72374	5.79792	174.72	15.63
69/10/ 2	2440496.5	-30.42020	2.79762	8.54681	0.53713	-5.75652	0.43996	31.72165	5.79824	174.75	15.63
69/10/ 6	2440500.5	-30.41896	2.78432	8.54782	0.53914	-5.75670	0.43941	31.71956	5.79856	174.77	15.63
69/10/10	2440504.5	-30.41771	2.77102	8.54884	0.54115	-5.75687	0.43885	31.71748	5.79888	174.79	15.64
69/10/14	2440508.5	-30.41646	2.75772	8.54985	0.54317	-5.75705	0.43830	31.71539	5.79920	174.82	15.64
69/10/18	2440512.5	-30.41520	2.74442	8.55086	0.54519	-5.75722	0.43775	31.71330	5.79952	174.84	15.64
69/10/22	2440516.5	-30.41394	2.73112	8.55187	0.54721	-5.75740	0.43720	31.71122	5.79984	174.87	15.65
69/10/26	2440520.5	-30.41267	2.71782	8.55288	0.54923	-5.75756	0.43664	31.70913	5.80016	174.89	15.65
69/10/30	2440524.5	-30.41140	2.70452	8.55389	0.55125	-5.75773	0.43609	31.70705	5.80047	174.92	15.65
69/11/ 3	2440528.5	-30.41012	2.69121	8.55490	0.55327	-5.75789	0.43554	31.70496	5.80079	174.94	15.65
69/11/ 7	2440532.5	-30.40884	2.67791	8.55590	0.55529	-5.75805	0.43498	31.70288	5.80110	174.97	15.66
69/11/11	2440536.5	-30.40756	2.66461	8.55691	0.55732	-5.75821	0.43443	31.70080	5.80141	174.99	15.66
69/11/15	2440540.5	-30.40627	2.65131	8.55791	0.55934	-5.75837	0.43388	31.69871	5.80172	175.02	15.66
69/11/19	2440544.5	-30.40497	2.63800	8.55891	0.56136	-5.75852	0.43332	31.69663	5.80202	175.04	15.67
69/11/23	2440548.5	-30.40368	2.62470	8.55991	0.56339	-5.75868	0.43277	31.69455	5.80233	175.07	15.67
69/11/27	2440552.5	-30.40237	2.61140	8.56091	0.56541	-5.75883	0.43222	31.69247	5.80264	175.09	15.67
69/12/ 1	2440556.5	-30.40106	2.59809	8.56191	0.56743	-5.75898	0.43166	31.69039	5.80294	175.12	15.67

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69/12/ 5	2440560.5	-30.39975	2.58479	8.56291	0.56945	-5.75912	0.43111	31.68831	5.80324	175.14	15.68
69/12/ 9	2440564.5	-30.39843	2.57148	8.56390	0.57147	-5.75927	0.43055	31.68624	5.80354	175.16	15.68
69/12/13	2440568.5	-30.39711	2.55818	8.56490	0.57350	-5.75941	0.43000	31.68416	5.80385	175.19	15.68
69/12/17	2440572.5	-30.39578	2.54487	8.56589	0.57552	-5.75955	0.42945	31.68208	5.80415	175.21	15.69
69/12/21	2440576.5	-30.39445	2.53157	8.56688	0.57754	-5.75969	0.42889	31.68001	5.80444	175.24	15.69
69/12/25	2440580.5	-30.39311	2.51826	8.56787	0.57955	-5.75983	0.42834	31.67793	5.80474	175.26	15.69

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69/12/17	2440572.5	-30.39578	-1.07345	8.87122	0.57552	-5.45490	-1.89763	31.68208	5.80415	182.02	16.26
69/12/21	2440576.5	-30.39445	-1.08605	8.86684	0.57754	-5.45480	-1.89819	31.68001	5.80444	182.05	16.25
69/12/25	2440580.5	-30.39311	-1.09865	8.86245	0.57955	-5.45471	-1.89876	31.67793	5.80474	182.07	16.25
69/12/29	2440584.5	-30.39177	-1.11125	8.85806	0.58157	-5.45462	-1.89932	31.67586	5.80504	182.09	16.24
70/ 1/ 2	2440588.5	-30.39043	-1.12385	8.85367	0.58359	-5.45453	-1.89989	31.67378	5.80534	182.12	16.23
70/ 1/ 6	2440592.5	-30.38908	-1.13645	8.84929	0.58561	-5.45443	-1.90045	31.67171	5.80564	182.14	16.22
70/ 1/10	2440596.5	-30.38772	-1.14905	8.84489	0.58763	-5.45434	-1.90102	31.66964	5.80594	182.17	16.22
70/ 1/14	2440600.5	-30.38636	-1.16165	8.84050	0.58965	-5.45425	-1.90158	31.66757	5.80625	182.19	16.21
70/ 1/18	2440604.5	-30.38500	-1.17425	8.83611	0.59167	-5.45415	-1.90214	31.66550	5.80654	182.21	16.20
70/ 1/22	2440608.5	-30.38363	-1.18685	8.83171	0.59369	-5.45405	-1.90271	31.66343	5.80684	182.24	16.20
70/ 1/26	2440612.5	-30.38225	-1.19945	8.82732	0.59571	-5.45395	-1.90327	31.66136	5.80714	182.26	16.19
70/ 1/30	2440616.5	-30.38088	-1.21205	8.82292	0.59773	-5.45385	-1.90383	31.65929	5.80744	182.28	16.18
70/ 2/ 3	2440620.5	-30.37949	-1.22465	8.81852	0.59975	-5.45375	-1.90439	31.65722	5.80773	182.31	16.17
70/ 2/ 7	2440624.5	-30.37810	-1.23725	8.81412	0.60177	-5.45364	-1.90495	31.65515	5.80803	182.33	16.17
70/ 2/11	2440628.5	-30.37671	-1.24985	8.80972	0.60379	-5.45354	-1.90552	31.65309	5.80832	182.36	16.16
70/ 2/15	2440632.5	-30.37531	-1.26245	8.80532	0.60580	-5.45343	-1.90608	31.65102	5.80862	182.38	16.15
70/ 2/19	2440636.5	-30.37391	-1.27505	8.80091	0.60782	-5.45333	-1.90664	31.64895	5.80892	182.40	16.15
70/ 2/23	2440640.5	-30.37251	-1.28764	8.79651	0.60984	-5.45322	-1.90720	31.64689	5.80921	182.43	16.14
70/ 2/27	2440644.5	-30.37109	-1.30024	8.79210	0.61186	-5.45312	-1.90776	31.64483	5.80951	182.45	16.13
70/ 3/ 3	2440648.5	-30.36968	-1.31284	8.78769	0.61387	-5.45301	-1.90832	31.64276	5.80980	182.48	16.12
70/ 3/ 7	2440652.5	-30.36826	-1.32544	8.78328	0.61589	-5.45290	-1.90888	31.64070	5.81010	182.50	16.12
70/ 3/11	2440656.5	-30.36683	-1.33803	8.77887	0.61791	-5.45279	-1.90944	31.63864	5.81040	182.52	16.11
70/ 3/15	2440660.5	-30.36540	-1.35063	8.77446	0.61993	-5.45268	-1.91000	31.63658	5.81069	182.55	16.10
70/ 3/19	2440664.5	-30.36397	-1.36323	8.77005	0.62194	-5.45258	-1.91056	31.63452	5.81099	182.57	16.09
70/ 3/23	2440668.5	-30.36253	-1.37582	8.76563	0.62396	-5.45247	-1.91112	31.63246	5.81129	182.59	16.09
70/ 3/27	2440672.5	-30.36109	-1.38842	8.76122	0.62598	-5.45236	-1.91168	31.63040	5.81159	182.62	16.08
70/ 3/31	2440676.5	-30.35964	-1.40101	8.75680	0.62800	-5.45225	-1.91224	31.62834	5.81189	182.64	16.07
70/ 4/ 4	2440680.5	-30.35818	-1.41361	8.75238	0.63002	-5.45214	-1.91280	31.62628	5.81219	182.67	16.07
70/ 4/ 8	2440684.5	-30.35673	-1.42621	8.74796	0.63204	-5.45203	-1.91337	31.62423	5.81249	182.69	16.06
70/ 4/12	2440688.5	-30.35526	-1.43880	8.74354	0.63407	-5.45192	-1.91393	31.62217	5.81280	182.71	16.05
70/ 4/16	2440692.5	-30.35380	-1.45140	8.73912	0.63609	-5.45181	-1.91449	31.62012	5.81310	182.74	16.04
70/ 4/20	2440696.5	-30.35233	-1.46399	8.73470	0.63812	-5.45169	-1.91505	31.61806	5.81340	182.76	16.04
70/ 4/24	2440700.5	-30.35085	-1.47658	8.73027	0.64015	-5.45158	-1.91561	31.61601	5.81370	182.79	16.03
70/ 4/28	2440704.5	-30.34937	-1.48918	8.72585	0.64218	-5.45146	-1.91617	31.61396	5.81399	182.81	16.02
70/ 5/ 2	2440708.5	-30.34788	-1.50177	8.72142	0.64421	-5.45134	-1.91673	31.61190	5.81429	182.83	16.02
70/ 5/ 6	2440712.5	-30.34639	-1.51437	8.71699	0.64624	-5.45122	-1.91729	31.60985	5.81459	182.86	16.01
70/ 5/10	2440716.5	-30.34490	-1.52696	8.71256	0.64828	-5.45109	-1.91784	31.60780	5.81488	182.88	16.00
70/ 5/14	2440720.5	-30.34340	-1.53955	8.70813	0.65031	-5.45097	-1.91840	31.60575	5.81517	182.90	15.99
70/ 5/18	2440724.5	-30.34189	-1.55214	8.70370	0.65234	-5.45084	-1.91896	31.60370	5.81546	182.93	15.99
70/ 5/22	2440728.5	-30.34038	-1.56474	8.69926	0.65438	-5.45071	-1.91951	31.60165	5.81575	182.95	15.98
70/ 5/26	2440732.5	-30.33887	-1.57733	8.69483	0.65641	-5.45058	-1.92007	31.59960	5.81604	182.98	15.97
70/ 5/30	2440736.5	-30.33735	-1.58992	8.69039	0.65844	-5.45045	-1.92062	31.59755	5.81633	183.00	15.96
70/ 6/ 3	2440740.5	-30.33583	-1.60251	8.68595	0.66048	-5.45031	-1.92118	31.59551	5.81662	183.02	15.96
70/ 6/ 7	2440744.5	-30.33430	-1.61510	8.68151	0.66251	-5.45017	-1.92173	31.59346	5.81690	183.05	15.95
70/ 6/11	2440748.5	-30.33276	-1.62769	8.67707	0.66455	-5.45003	-1.92228	31.59142	5.81719	183.07	15.94

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70/ 6/15	2440752.5	-30.33123	-1.64028	8.67263	0.66658	-5.44989	-1.92283	31.58937	5.81747	183.10	15.93
70/ 6/19	2440756.5	-30.32968	-1.65287	8.66819	0.66861	-5.44975	-1.92338	31.58733	5.81775	183.12	15.93
70/ 6/23	2440760.5	-30.32814	-1.66546	8.66375	0.67064	-5.44961	-1.92393	31.58528	5.81803	183.14	15.92
70/ 6/27	2440764.5	-30.32659	-1.67805	8.65930	0.67268	-5.44946	-1.92448	31.58324	5.81831	183.17	15.91
70/ 7/ 1	2440768.5	-30.32503	-1.69064	8.65485	0.67471	-5.44931	-1.92503	31.58120	5.81859	183.19	15.91
70/ 7/ 5	2440772.5	-30.32347	-1.70323	8.65041	0.67674	-5.44917	-1.92558	31.57916	5.81887	183.21	15.90
70/ 7/ 9	2440776.5	-30.32190	-1.71582	8.64596	0.67877	-5.44902	-1.92613	31.57712	5.81915	183.24	15.89
70/ 7/13	2440780.5	-30.32033	-1.72841	8.64151	0.68081	-5.44886	-1.92668	31.57508	5.81943	183.26	15.88
70/ 7/17	2440784.5	-30.31876	-1.74099	8.63706	0.68284	-5.44871	-1.92723	31.57304	5.81970	183.29	15.88
70/ 7/21	2440788.5	-30.31718	-1.75358	8.63260	0.68487	-5.44855	-1.92778	31.57100	5.81997	183.31	15.87
70/ 7/25	2440792.5	-30.31559	-1.76617	8.62815	0.68690	-5.44839	-1.92832	31.56896	5.82024	183.33	15.86
70/ 7/29	2440796.5	-30.31400	-1.77875	8.62369	0.68893	-5.44823	-1.92887	31.56693	5.82051	183.36	15.85
70/ 8/ 2	2440800.5	-30.31241	-1.79134	8.61924	0.69096	-5.44807	-1.92941	31.56489	5.82078	183.38	15.85
70/ 8/ 6	2440804.5	-30.31081	-1.80393	8.61478	0.69299	-5.44790	-1.92995	31.56286	5.82105	183.41	15.84
70/ 8/10	2440808.5	-30.30921	-1.81651	8.61032	0.69501	-5.44774	-1.93050	31.56082	5.82131	183.43	15.83
70/ 8/14	2440812.5	-30.30760	-1.82910	8.60586	0.69703	-5.44757	-1.93104	31.55879	5.82158	183.45	15.82
70/ 8/18	2440816.5	-30.30599	-1.84168	8.60140	0.69906	-5.44740	-1.93158	31.55675	5.82184	183.48	15.82
70/ 8/22	2440820.5	-30.30437	-1.85427	8.59693	0.70108	-5.44723	-1.93212	31.55472	5.82211	183.50	15.81
70/ 8/26	2440824.5	-30.30275	-1.86685	8.59247	0.70309	-5.44706	-1.93266	31.55269	5.82238	183.53	15.80
70/ 8/30	2440828.5	-30.30112	-1.87943	8.58800	0.70511	-5.44690	-1.93321	31.55066	5.82264	183.55	15.80
70/ 9/ 3	2440832.5	-30.29949	-1.89202	8.58354	0.70713	-5.44673	-1.93375	31.54863	5.82291	183.57	15.79
70/ 9/ 7	2440836.5	-30.29785	-1.90460	8.57907	0.70914	-5.44656	-1.93429	31.54660	5.82317	183.60	15.78
70/ 9/11	2440840.5	-30.29621	-1.91718	8.57460	0.71115	-5.44639	-1.93483	31.54457	5.82344	183.62	15.77
70/ 9/15	2440844.5	-30.29457	-1.92976	8.57013	0.71317	-5.44622	-1.93537	31.54254	5.82371	183.64	15.77
70/ 9/19	2440848.5	-30.29292	-1.94235	8.56566	0.71518	-5.44605	-1.93592	31.54052	5.82398	183.67	15.76
70/ 9/23	2440852.5	-30.29126	-1.95493	8.56119	0.71719	-5.44588	-1.93646	31.53849	5.82425	183.69	15.75
70/ 9/27	2440856.5	-30.28961	-1.96751	8.55671	0.71920	-5.44571	-1.93701	31.53646	5.82452	183.72	15.74
70/10/ 1	2440860.5	-30.28794	-1.98009	8.55224	0.72121	-5.44555	-1.93755	31.53444	5.82480	183.74	15.74
70/10/ 5	2440864.5	-30.28627	-1.99267	8.54776	0.72322	-5.44538	-1.93810	31.53242	5.82507	183.76	15.73
70/10/ 9	2440868.5	-30.28460	-2.00525	8.54328	0.72523	-5.44522	-1.93864	31.53039	5.82535	183.79	15.72
70/10/13	2440872.5	-30.28292	-2.01783	8.53880	0.72725	-5.44505	-1.93919	31.52837	5.82563	183.81	15.71
70/10/17	2440876.5	-30.28124	-2.03040	8.53432	0.72926	-5.44488	-1.93973	31.52635	5.82590	183.84	15.71
70/10/21	2440880.5	-30.27955	-2.04298	8.52984	0.73128	-5.44472	-1.94028	31.52433	5.82618	183.86	15.70
70/10/25	2440884.5	-30.27786	-2.05556	8.52536	0.73329	-5.44455	-1.94082	31.52231	5.82646	183.88	15.69
70/10/29	2440888.5	-30.27616	-2.06814	8.52087	0.73531	-5.44438	-1.94137	31.52029	5.82674	183.91	15.68
70/11/ 2	2440892.5	-30.27446	-2.08072	8.51639	0.73732	-5.44421	-1.94191	31.51827	5.82702	183.93	15.68
70/11/ 6	2440896.5	-30.27276	-2.09329	8.51190	0.73934	-5.44404	-1.94246	31.51625	5.82730	183.96	15.67
70/11/10	2440900.5	-30.27105	-2.10587	8.50741	0.74135	-5.44388	-1.94300	31.51424	5.82758	183.98	15.66
70/11/14	2440904.5	-30.26933	-2.11845	8.50292	0.74337	-5.44371	-1.94355	31.51222	5.82786	184.00	15.65
70/11/18	2440908.5	-30.26761	-2.13102	8.49843	0.74539	-5.44354	-1.94410	31.51020	5.82814	184.03	15.65
70/11/22	2440912.5	-30.26589	-2.14360	8.49394	0.74741	-5.44337	-1.94464	31.50819	5.82842	184.05	15.64
70/11/26	2440916.5	-30.26416	-2.15617	8.48945	0.74943	-5.44320	-1.94519	31.50618	5.82871	184.08	15.63
70/11/30	2440920.5	-30.26243	-2.16875	8.48495	0.75145	-5.44303	-1.94573	31.50416	5.82899	184.10	15.62
70/12/ 4	2440924.5	-30.26069	-2.18132	8.48046	0.75347	-5.44286	-1.94628	31.50215	5.82928	184.12	15.62
70/12/ 8	2440928.5	-30.25894	-2.19389	8.47596	0.75550	-5.44269	-1.94682	31.50014	5.82956	184.15	15.61

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70/12/12	2440932.5	-30.25720	-2.20647	8.47146	0.75752	-5.44252	-1.94737	31.49813	5.82984	184.17	15.60
70/12/16	2440936.5	-30.25544	-2.21904	8.46696	0.75955	-5.44235	-1.94792	31.49612	5.83013	184.19	15.59
70/12/20	2440940.5	-30.25369	-2.23161	8.46246	0.76157	-5.44217	-1.94846	31.49411	5.83042	184.22	15.59
70/12/24	2440944.5	-30.25193	-2.24419	8.45796	0.76360	-5.44200	-1.94901	31.49210	5.83070	184.24	15.58
70/12/28	2440948.5	-30.25016	-2.25676	8.45346	0.76564	-5.44183	-1.94956	31.49009	5.83099	184.27	15.57
71/ 1/ 1	2440952.5	-30.24839	-2.26933	8.44895	0.76767	-5.44165	-1.95010	31.48809	5.83128	184.29	15.56
71/ 1/ 5	2440956.5	-30.24661	-2.28190	8.44445	0.76971	-5.44147	-1.95065	31.48608	5.83156	184.31	15.56
71/ 1/ 9	2440960.5	-30.24483	-2.29447	8.43994	0.77175	-5.44129	-1.95119	31.48408	5.83184	184.34	15.55
71/ 1/13	2440964.5	-30.24305	-2.30704	8.43543	0.77379	-5.44111	-1.95173	31.48207	5.83212	184.36	15.54
71/ 1/17	2440968.5	-30.24126	-2.31961	8.43092	0.77583	-5.44092	-1.95228	31.48007	5.83240	184.39	15.53
71/ 1/21	2440972.5	-30.23946	-2.33218	8.42641	0.77787	-5.44073	-1.95282	31.47806	5.83268	184.41	15.53
71/ 1/25	2440976.5	-30.23766	-2.34475	8.42190	0.77991	-5.44054	-1.95336	31.47606	5.83295	184.43	15.52
71/ 1/29	2440980.5	-30.23586	-2.35732	8.41739	0.78195	-5.44035	-1.95390	31.47406	5.83323	184.46	15.51
71/ 2/ 2	2440984.5	-30.23405	-2.36988	8.41287	0.78400	-5.44015	-1.95443	31.47206	5.83350	184.48	15.50
71/ 2/ 6	2440988.5	-30.23224	-2.38245	8.40836	0.78604	-5.43995	-1.95497	31.47006	5.83377	184.51	15.50
71/ 2/10	2440992.5	-30.23042	-2.39502	8.40384	0.78808	-5.43975	-1.95551	31.46806	5.83403	184.53	15.49
71/ 2/14	2440996.5	-30.22860	-2.40759	8.39932	0.79012	-5.43955	-1.95604	31.46606	5.83430	184.55	15.48
71/ 2/18	2441000.5	-30.22677	-2.42015	8.39480	0.79217	-5.43934	-1.95658	31.46406	5.83456	184.58	15.47
71/ 2/22	2441004.5	-30.22494	-2.43272	8.39028	0.79421	-5.43913	-1.95711	31.46207	5.83482	184.60	15.47
71/ 2/26	2441008.5	-30.22310	-2.44528	8.38576	0.79625	-5.43892	-1.95764	31.46007	5.83509	184.63	15.46
71/ 3/ 2	2441012.5	-30.22126	-2.45785	8.38124	0.79828	-5.43871	-1.95817	31.45807	5.83534	184.65	15.45
71/ 3/ 6	2441016.5	-30.21941	-2.47041	8.37671	0.80032	-5.43849	-1.95870	31.45608	5.83560	184.67	15.44
71/ 3/10	2441020.5	-30.21756	-2.48297	8.37219	0.80236	-5.43828	-1.95924	31.45409	5.83586	184.70	15.44
71/ 3/14	2441024.5	-30.21570	-2.49554	8.36766	0.80439	-5.43806	-1.95977	31.45209	5.83611	184.72	15.43
71/ 3/18	2441028.5	-30.21384	-2.50810	8.36313	0.80643	-5.43784	-1.96030	31.45010	5.83637	184.75	15.42
71/ 3/22	2441032.5	-30.21198	-2.52066	8.35860	0.80846	-5.43762	-1.96083	31.44811	5.83663	184.77	15.41
71/ 3/26	2441036.5	-30.21011	-2.53322	8.35407	0.81050	-5.43741	-1.96136	31.44612	5.83688	184.79	15.41
71/ 3/30	2441040.5	-30.20823	-2.54579	8.34954	0.81253	-5.43718	-1.96189	31.44413	5.83714	184.82	15.40
71/ 4/ 3	2441044.5	-30.20635	-2.55835	8.34501	0.81456	-5.43696	-1.96241	31.44214	5.83739	184.84	15.39
71/ 4/ 7	2441048.5	-30.20447	-2.57091	8.34047	0.81660	-5.43674	-1.96294	31.44015	5.83764	184.87	15.38
71/ 4/11	2441052.5	-30.20258	-2.58347	8.33594	0.81863	-5.43651	-1.96347	31.43816	5.83789	184.89	15.38
71/ 4/15	2441056.5	-30.20069	-2.59602	8.33140	0.82066	-5.43628	-1.96399	31.43617	5.83814	184.91	15.37
71/ 4/19	2441060.5	-30.19879	-2.60858	8.32686	0.82269	-5.43605	-1.96452	31.43419	5.83839	184.94	15.36
71/ 4/23	2441064.5	-30.19688	-2.62114	8.32232	0.82472	-5.43582	-1.96505	31.43220	5.83864	184.96	15.35
71/ 4/27	2441068.5	-30.19498	-2.63370	8.31778	0.82675	-5.43558	-1.96557	31.43022	5.83888	184.98	15.35
71/ 5/ 1	2441072.5	-30.19306	-2.64626	8.31324	0.82877	-5.43535	-1.96610	31.42823	5.83913	185.01	15.34
71/ 5/ 5	2441076.5	-30.19115	-2.65881	8.30870	0.83080	-5.43512	-1.96662	31.42625	5.83938	185.03	15.33
71/ 5/ 9	2441080.5	-30.18923	-2.67137	8.30416	0.83282	-5.43488	-1.96714	31.42427	5.83962	185.06	15.32
71/ 5/13	2441084.5	-30.18730	-2.68392	8.29961	0.83484	-5.43465	-1.96767	31.42229	5.83987	185.08	15.32
71/ 5/17	2441088.5	-30.18537	-2.69648	8.29507	0.83686	-5.43441	-1.96819	31.42031	5.84012	185.10	15.31
71/ 5/21	2441092.5	-30.18343	-2.70903	8.29052	0.83888	-5.43418	-1.96872	31.41833	5.84036	185.13	15.30
71/ 5/25	2441096.5	-30.18149	-2.72159	8.28597	0.84090	-5.43394	-1.96924	31.41635	5.84061	185.15	15.29
71/ 5/29	2441100.5	-30.17955	-2.73414	8.28142	0.84292	-5.43371	-1.96977	31.41437	5.84086	185.18	15.28
71/ 6/ 2	2441104.5	-30.17760	-2.74669	8.27687	0.84494	-5.43347	-1.97029	31.41239	5.84111	185.20	15.28
71/ 6/ 6	2441108.5	-30.17564	-2.75924	8.27232	0.84695	-5.43323	-1.97082	31.41041	5.84136	185.22	15.27

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71/ 6/10	2441112.5	-30.17369	-2.77179	8.26776	0.84897	-5.43300	-1.97134	31.40844	5.84161	185.25	15.26
71/ 6/14	2441116.5	-30.17172	-2.78435	8.26321	0.85099	-5.43277	-1.97187	31.40646	5.84187	185.27	15.25
71/ 6/18	2441120.5	-30.16975	-2.79690	8.25865	0.85300	-5.43253	-1.97239	31.40449	5.84212	185.30	15.25
71/ 6/22	2441124.5	-30.16778	-2.80945	8.25409	0.85502	-5.43230	-1.97292	31.40252	5.84238	185.32	15.24
71/ 6/26	2441128.5	-30.16580	-2.82199	8.24954	0.85704	-5.43207	-1.97345	31.40054	5.84263	185.34	15.23
71/ 6/30	2441132.5	-30.16382	-2.83454	8.24498	0.85907	-5.43183	-1.97398	31.39857	5.84289	185.37	15.22
71/ 7/ 4	2441136.5	-30.16183	-2.84709	8.24042	0.86109	-5.43160	-1.97450	31.39660	5.84315	185.39	15.22
71/ 7/ 8	2441140.5	-30.15984	-2.85964	8.23585	0.86311	-5.43136	-1.97503	31.39463	5.84340	185.42	15.21
71/ 7/12	2441144.5	-30.15785	-2.87219	8.23129	0.86514	-5.43112	-1.97556	31.39266	5.84366	185.44	15.20
71/ 7/16	2441148.5	-30.15584	-2.88473	8.22673	0.86716	-5.43088	-1.97608	31.39069	5.84391	185.46	15.19
71/ 7/20	2441152.5	-30.15384	-2.89728	8.22216	0.86918	-5.43064	-1.97661	31.38873	5.84417	185.49	15.19
71/ 7/24	2441156.5	-30.15183	-2.90982	8.21759	0.87121	-5.43040	-1.97713	31.38676	5.84442	185.51	15.18
71/ 7/28	2441160.5	-30.14981	-2.92237	8.21302	0.87323	-5.43015	-1.97766	31.38479	5.84468	185.54	15.17
71/ 8/ 1	2441164.5	-30.14779	-2.93491	8.20846	0.87526	-5.42991	-1.97818	31.38283	5.84493	185.56	15.16
71/ 8/ 5	2441168.5	-30.14577	-2.94746	8.20388	0.87728	-5.42966	-1.97871	31.38086	5.84518	185.58	15.15
71/ 8/ 9	2441172.5	-30.14374	-2.96000	8.19931	0.87931	-5.42942	-1.97923	31.37890	5.84544	185.61	15.15
71/ 8/13	2441176.5	-30.14171	-2.97254	8.19474	0.88134	-5.42917	-1.97975	31.37694	5.84569	185.63	15.14
71/ 8/17	2441180.5	-30.13967	-2.98509	8.19017	0.88336	-5.42892	-1.98028	31.37498	5.84594	185.66	15.13
71/ 8/21	2441184.5	-30.13763	-2.99763	8.18559	0.88539	-5.42867	-1.98080	31.37302	5.84619	185.68	15.12
71/ 8/25	2441188.5	-30.13558	-3.01017	8.18101	0.88741	-5.42842	-1.98132	31.37106	5.84644	185.70	15.12
71/ 8/29	2441192.5	-30.13353	-3.02271	8.17644	0.88944	-5.42816	-1.98184	31.36910	5.84669	185.73	15.11
71/ 9/ 2	2441196.5	-30.13147	-3.03525	8.17186	0.89146	-5.42791	-1.98237	31.36714	5.84694	185.75	15.10
71/ 9/ 6	2441200.5	-30.12941	-3.04779	8.16728	0.89349	-5.42765	-1.98289	31.36518	5.84719	185.78	15.09
71/ 9/10	2441204.5	-30.12734	-3.06033	8.16270	0.89552	-5.42740	-1.98341	31.36322	5.84744	185.80	15.09
71/ 9/14	2441208.5	-30.12527	-3.07286	8.15811	0.89754	-5.42714	-1.98393	31.36127	5.84769	185.82	15.08
71/ 9/18	2441212.5	-30.12319	-3.08540	8.15353	0.89957	-5.42688	-1.98445	31.35931	5.84794	185.85	15.07
71/ 9/22	2441216.5	-30.12111	-3.09794	8.14894	0.90160	-5.42663	-1.98497	31.35736	5.84818	185.87	15.06
71/ 9/26	2441220.5	-30.11903	-3.11047	8.14436	0.90363	-5.42636	-1.98549	31.35541	5.84843	185.90	15.05
71/ 9/30	2441224.5	-30.11694	-3.12301	8.13977	0.90565	-5.42610	-1.98601	31.35345	5.84868	185.92	15.05
71/10/ 4	2441228.5	-30.11484	-3.13554	8.13518	0.90768	-5.42583	-1.98653	31.35150	5.84892	185.94	15.04
71/10/ 8	2441232.5	-30.11274	-3.14808	8.13059	0.90971	-5.42557	-1.98705	31.34955	5.84916	185.97	15.03
71/10/12	2441236.5	-30.11064	-3.16061	8.12600	0.91174	-5.42530	-1.98757	31.34760	5.84940	185.99	15.02
71/10/16	2441240.5	-30.10853	-3.17315	8.12141	0.91376	-5.42502	-1.98808	31.34565	5.84964	186.02	15.02
71/10/20	2441244.5	-30.10642	-3.18568	8.11682	0.91579	-5.42475	-1.98860	31.34370	5.84988	186.04	15.01
71/10/24	2441248.5	-30.10430	-3.19821	8.11222	0.91781	-5.42448	-1.98911	31.34175	5.85012	186.06	15.00
71/10/28	2441252.5	-30.10218	-3.21074	8.10762	0.91983	-5.42420	-1.98963	31.33981	5.85036	186.09	14.99
71/11/ 1	2441256.5	-30.10005	-3.22327	8.10303	0.92185	-5.42393	-1.99014	31.33786	5.85059	186.11	14.99
71/11/ 5	2441260.5	-30.09792	-3.23580	8.09843	0.92387	-5.42365	-1.99065	31.33592	5.85083	186.14	14.98
71/11/ 9	2441264.5	-30.09578	-3.24833	8.09383	0.92589	-5.42337	-1.99117	31.33397	5.85107	186.16	14.97
71/11/13	2441268.5	-30.09364	-3.26086	8.08923	0.92791	-5.42309	-1.99168	31.33203	5.85130	186.18	14.96
71/11/17	2441272.5	-30.09149	-3.27339	8.08463	0.92992	-5.42281	-1.99220	31.33009	5.85154	186.21	14.95
71/11/21	2441276.5	-30.08934	-3.28591	8.08003	0.93194	-5.42253	-1.99271	31.32814	5.85177	186.23	14.95
71/11/25	2441280.5	-30.08719	-3.29844	8.07542	0.93395	-5.42226	-1.99322	31.32620	5.85201	186.26	14.94
71/11/29	2441284.5	-30.08503	-3.31097	8.07082	0.93596	-5.42198	-1.99374	31.32426	5.85225	186.28	14.93
71/12/ 3	2441288.5	-30.08286	-3.32349	8.06621	0.93797	-5.42170	-1.99425	31.32232	5.85249	186.30	14.92

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71/12/ 7	2441292.5	-30.08069	-3.33602	8.06160	0.93998	-5.42142	-1.99476	31.32039	5.85273	186.33	14.92
71/12/11	2441296.5	-30.07852	-3.34854	8.05699	0.94199	-5.42114	-1.99528	31.31845	5.85297	186.35	14.91
71/12/15	2441300.5	-30.07634	-3.36106	8.05238	0.94401	-5.42087	-1.99580	31.31651	5.85322	186.38	14.90
71/12/19	2441304.5	-30.07416	-3.37359	8.04777	0.94602	-5.42059	-1.99631	31.31458	5.85346	186.40	14.89
71/12/23	2441308.5	-30.07197	-3.38611	8.04316	0.94803	-5.42031	-1.99683	31.31264	5.85371	186.42	14.88
71/12/27	2441312.5	-30.06978	-3.39863	8.03855	0.95005	-5.42004	-1.99734	31.31071	5.85395	186.45	14.88
71/12/31	2441316.5	-30.06758	-3.41115	8.03393	0.95206	-5.41976	-1.99786	31.30878	5.85420	186.47	14.87
72/ 1/ 4	2441320.5	-30.06538	-3.42367	8.02931	0.95408	-5.41948	-1.99837	31.30684	5.85444	186.50	14.86
72/ 1/ 8	2441324.5	-30.06317	-3.43619	8.02470	0.95609	-5.41920	-1.99889	31.30491	5.85469	186.52	14.85
72/ 1/12	2441328.5	-30.06096	-3.44871	8.02008	0.95811	-5.41891	-1.99940	31.30298	5.85493	186.54	14.85
72/ 1/16	2441332.5	-30.05875	-3.46123	8.01546	0.96012	-5.41863	-1.99992	31.30105	5.85518	186.57	14.84
72/ 1/20	2441336.5	-30.05653	-3.47375	8.01084	0.96214	-5.41835	-2.00043	31.29913	5.85542	186.59	14.83
72/ 1/24	2441340.5	-30.05430	-3.48626	8.00622	0.96416	-5.41807	-2.00095	31.29720	5.85567	186.62	14.82
72/ 1/28	2441344.5	-30.05207	-3.49878	8.00159	0.96617	-5.41779	-2.00146	31.29527	5.85592	186.64	14.81
72/ 2/ 1	2441348.5	-30.04984	-3.51130	7.99697	0.96819	-5.41750	-2.00198	31.29334	5.85616	186.66	14.81
72/ 2/ 5	2441352.5	-30.04760	-3.52381	7.99234	0.97021	-5.41722	-2.00249	31.29142	5.85641	186.69	14.80
72/ 2/ 9	2441356.5	-30.04535	-3.53633	7.98772	0.97222	-5.41694	-2.00301	31.28950	5.85666	186.71	14.79
72/ 2/13	2441360.5	-30.04311	-3.54884	7.98309	0.97424	-5.41665	-2.00352	31.28757	5.85691	186.74	14.78
72/ 2/17	2441364.5	-30.04085	-3.56135	7.97846	0.97626	-5.41637	-2.00403	31.28565	5.85716	186.76	14.77
72/ 2/21	2441368.5	-30.03860	-3.57386	7.97383	0.97828	-5.41608	-2.00455	31.28373	5.85741	186.78	14.77
72/ 2/25	2441372.5	-30.03633	-3.58638	7.96920	0.98030	-5.41580	-2.00506	31.28181	5.85765	186.81	14.76
72/ 2/29	2441376.5	-30.03407	-3.59889	7.96457	0.98233	-5.41551	-2.00558	31.27989	5.85790	186.83	14.75
72/ 3/ 4	2441380.5	-30.03179	-3.61140	7.95993	0.98435	-5.41522	-2.00609	31.27797	5.85815	186.86	14.74
72/ 3/ 8	2441384.5	-30.02952	-3.62391	7.95530	0.98637	-5.41493	-2.00661	31.27605	5.85840	186.88	14.74
72/ 3/12	2441388.5	-30.02724	-3.63642	7.95066	0.98840	-5.41464	-2.00712	31.27413	5.85866	186.91	14.73
72/ 3/16	2441392.5	-30.02495	-3.64893	7.94602	0.99043	-5.41435	-2.00764	31.27222	5.85891	186.93	14.72
72/ 3/20	2441396.5	-30.02266	-3.66143	7.94138	0.99246	-5.41406	-2.00815	31.27030	5.85915	186.95	14.71
72/ 3/24	2441400.5	-30.02037	-3.67394	7.93675	0.99449	-5.41376	-2.00866	31.26839	5.85940	186.98	14.70
72/ 3/28	2441404.5	-30.01807	-3.68645	7.93210	0.99653	-5.41347	-2.00917	31.26648	5.85965	187.00	14.70
72/ 4/ 1	2441408.5	-30.01576	-3.69895	7.92746	0.99856	-5.41316	-2.00968	31.26456	5.85989	187.03	14.69
72/ 4/ 5	2441412.5	-30.01345	-3.71146	7.92282	1.00059	-5.41286	-2.01019	31.26265	5.86013	187.05	14.68
72/ 4/ 9	2441416.5	-30.01114	-3.72396	7.91817	1.00263	-5.41255	-2.01070	31.26074	5.86037	187.07	14.67
72/ 4/13	2441420.5	-30.00882	-3.73647	7.91353	1.00466	-5.41224	-2.01121	31.25883	5.86061	187.10	14.66
72/ 4/17	2441424.5	-30.00650	-3.74897	7.90888	1.00669	-5.41193	-2.01172	31.25692	5.86084	187.12	14.66
72/ 4/21	2441428.5	-30.00417	-3.76147	7.90423	1.00873	-5.41162	-2.01222	31.25501	5.86107	187.15	14.65
72/ 4/25	2441432.5	-30.00184	-3.77397	7.89958	1.01076	-5.41130	-2.01273	31.25310	5.86131	187.17	14.64
72/ 4/29	2441436.5	-29.99950	-3.78647	7.89493	1.01279	-5.41099	-2.01323	31.25120	5.86154	187.19	14.63
72/ 5/ 3	2441440.5	-29.99716	-3.79897	7.89028	1.01482	-5.41067	-2.01373	31.24929	5.86176	187.22	14.63
72/ 5/ 7	2441444.5	-29.99481	-3.81147	7.88563	1.01685	-5.41034	-2.01423	31.24739	5.86199	187.24	14.62
72/ 5/11	2441448.5	-29.99246	-3.82397	7.88098	1.01888	-5.41002	-2.01474	31.24548	5.86222	187.27	14.61
72/ 5/15	2441452.5	-29.99010	-3.83647	7.87632	1.02090	-5.40969	-2.01524	31.24358	5.86244	187.29	14.60
72/ 5/19	2441456.5	-29.98774	-3.84896	7.87167	1.02293	-5.40936	-2.01574	31.24168	5.86266	187.31	14.59
72/ 5/23	2441460.5	-29.98538	-3.86146	7.86701	1.02495	-5.40904	-2.01624	31.23977	5.86288	187.34	14.59
72/ 5/27	2441464.5	-29.98301	-3.87396	7.86235	1.02697	-5.40870	-2.01674	31.23787	5.86310	187.36	14.58
72/ 5/31	2441468.5	-29.98063	-3.88645	7.85769	1.02900	-5.40837	-2.01724	31.23597	5.86333	187.39	14.57

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72/ 6/ 4	2441472.5	-29.97825	-3.89895	7.85303	1.03102	-5.40804	-2.01774	31.23407	5.86355	187.41	14.56
72/ 6/ 8	2441476.5	-29.97587	-3.91144	7.84837	1.03303	-5.40771	-2.01823	31.23218	5.86377	187.43	14.55
72/ 6/12	2441480.5	-29.97348	-3.92393	7.84370	1.03505	-5.40738	-2.01873	31.23028	5.86399	187.46	14.55
72/ 6/16	2441484.5	-29.97109	-3.93642	7.83904	1.03707	-5.40704	-2.01923	31.22838	5.86421	187.48	14.54
72/ 6/20	2441488.5	-29.96869	-3.94891	7.83437	1.03909	-5.40670	-2.01973	31.22649	5.86442	187.51	14.53
72/ 6/24	2441492.5	-29.96628	-3.96140	7.82971	1.04111	-5.40636	-2.02023	31.22459	5.86464	187.53	14.52
72/ 6/28	2441496.5	-29.96388	-3.97389	7.82504	1.04312	-5.40602	-2.02072	31.22270	5.86485	187.55	14.51
72/ 7/ 2	2441500.5	-29.96146	-3.98638	7.82037	1.04513	-5.40568	-2.02122	31.22081	5.86507	187.58	14.51
72/ 7/ 6	2441504.5	-29.95905	-3.99887	7.81570	1.04714	-5.40534	-2.02171	31.21892	5.86528	187.60	14.50
72/ 7/10	2441508.5	-29.95663	-4.01136	7.81103	1.04915	-5.40500	-2.02221	31.21702	5.86550	187.63	14.49
72/ 7/14	2441512.5	-29.95420	-4.02384	7.80636	1.05116	-5.40465	-2.02270	31.21513	5.86571	187.65	14.48
72/ 7/18	2441516.5	-29.95177	-4.03633	7.80168	1.05317	-5.40431	-2.02320	31.21325	5.86592	187.67	14.47
72/ 7/22	2441520.5	-29.94933	-4.04881	7.79701	1.05517	-5.40397	-2.02369	31.21136	5.86614	187.70	14.47
72/ 7/26	2441524.5	-29.94689	-4.06130	7.79233	1.05717	-5.40362	-2.02419	31.20947	5.86635	187.72	14.46
72/ 7/30	2441528.5	-29.94445	-4.07378	7.78766	1.05917	-5.40328	-2.02468	31.20758	5.86657	187.75	14.45
72/ 8/ 3	2441532.5	-29.94200	-4.08626	7.78298	1.06117	-5.40294	-2.02518	31.20570	5.86678	187.77	14.44
72/ 8/ 7	2441536.5	-29.93955	-4.09874	7.77830	1.06317	-5.40259	-2.02567	31.20382	5.86700	187.80	14.43
72/ 8/11	2441540.5	-29.93709	-4.11122	7.77362	1.06517	-5.40225	-2.02617	31.20193	5.86722	187.82	14.43
72/ 8/15	2441544.5	-29.93463	-4.12370	7.76894	1.06716	-5.40191	-2.02667	31.20005	5.86744	187.84	14.42
72/ 8/19	2441548.5	-29.93216	-4.13618	7.76426	1.06916	-5.40157	-2.02716	31.19817	5.86766	187.87	14.41
72/ 8/23	2441552.5	-29.92969	-4.14866	7.75957	1.07115	-5.40123	-2.02766	31.19629	5.86788	187.89	14.40
72/ 8/27	2441556.5	-29.92721	-4.16114	7.75489	1.07314	-5.40089	-2.02816	31.19441	5.86811	187.92	14.39
72/ 8/31	2441560.5	-29.92473	-4.17361	7.75020	1.07514	-5.40055	-2.02866	31.19253	5.86834	187.94	14.39
72/ 9/ 4	2441564.5	-29.92224	-4.18609	7.74552	1.07714	-5.40022	-2.02916	31.19065	5.86856	187.96	14.38
72/ 9/ 8	2441568.5	-29.91975	-4.19856	7.74083	1.07913	-5.39988	-2.02966	31.18878	5.86880	187.99	14.37
72/ 9/12	2441572.5	-29.91726	-4.21104	7.73614	1.08113	-5.39954	-2.03016	31.18690	5.86903	188.01	14.36
72/ 9/16	2441576.5	-29.91476	-4.22351	7.73145	1.08313	-5.39921	-2.03066	31.18503	5.86926	188.04	14.35
72/ 9/20	2441580.5	-29.91225	-4.23598	7.72676	1.08513	-5.39887	-2.03116	31.18315	5.86949	188.06	14.35
72/ 9/24	2441584.5	-29.90974	-4.24846	7.72206	1.08713	-5.39853	-2.03166	31.18128	5.86972	188.08	14.34
72/ 9/28	2441588.5	-29.90723	-4.26093	7.71737	1.08914	-5.39819	-2.03216	31.17941	5.86996	188.11	14.33
72/10/ 2	2441592.5	-29.90471	-4.27340	7.71267	1.09114	-5.39785	-2.03266	31.17754	5.87019	188.13	14.32
72/10/ 6	2441596.5	-29.90219	-4.28587	7.70798	1.09314	-5.39751	-2.03317	31.17567	5.87042	188.16	14.31
72/10/10	2441600.5	-29.89966	-4.29834	7.70328	1.09514	-5.39717	-2.03367	31.17380	5.87066	188.18	14.31
72/10/14	2441604.5	-29.89713	-4.31080	7.69858	1.09715	-5.39683	-2.03417	31.17193	5.87089	188.20	14.30
72/10/18	2441608.5	-29.89459	-4.32327	7.69388	1.09915	-5.39649	-2.03467	31.17006	5.87112	188.23	14.29
72/10/22	2441612.5	-29.89205	-4.33574	7.68918	1.10116	-5.39615	-2.03517	31.16820	5.87136	188.25	14.28
72/10/26	2441616.5	-29.88950	-4.34820	7.68448	1.10316	-5.39581	-2.03567	31.16633	5.87159	188.28	14.27
72/10/30	2441620.5	-29.88695	-4.36067	7.67977	1.10517	-5.39546	-2.03617	31.16447	5.87183	188.30	14.27
72/11/ 3	2441624.5	-29.88440	-4.37313	7.67507	1.10718	-5.39512	-2.03667	31.16261	5.87206	188.33	14.26
72/11/ 7	2441628.5	-29.88184	-4.38560	7.67036	1.10918	-5.39477	-2.03716	31.16074	5.87230	188.35	14.25
72/11/11	2441632.5	-29.87927	-4.39806	7.66566	1.11119	-5.39442	-2.03766	31.15888	5.87253	188.37	14.24
72/11/15	2441636.5	-29.87670	-4.41052	7.66095	1.11320	-5.39408	-2.03816	31.15702	5.87277	188.40	14.23
72/11/19	2441640.5	-29.87413	-4.42298	7.65624	1.11521	-5.39373	-2.03866	31.15516	5.87300	188.42	14.23
72/11/23	2441644.5	-29.87155	-4.43544	7.65153	1.11722	-5.39338	-2.03916	31.15331	5.87324	188.45	14.22
72/11/27	2441648.5	-29.86897	-4.44790	7.64682	1.11923	-5.39303	-2.03966	31.15145	5.87347	188.47	14.21

1.9 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM — PLUTO

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72/12/ 1	2441652.5	-29.86638	-4.46036	7.64211	1.12124	-5.39268	-2.04016	31.14959	5.87371	188.49	14.20
72/12/ 5	2441656.5	-29.86379	-4.47282	7.63739	1.12326	-5.39233	-2.04066	31.14774	5.87394	188.52	14.19
72/12/ 9	2441660.5	-29.86119	-4.48527	7.63268	1.12527	-5.39198	-2.04115	31.14588	5.87418	188.54	14.19
72/12/13	2441664.5	-29.85859	-4.49773	7.62796	1.12729	-5.39162	-2.04165	31.14403	5.87441	188.57	14.18
72/12/17	2441668.5	-29.85598	-4.51018	7.62324	1.12930	-5.39126	-2.04214	31.14218	5.87464	188.59	14.17
72/12/21	2441672.5	-29.85337	-4.52264	7.61853	1.13132	-5.39090	-2.04264	31.14032	5.87486	188.61	14.16
72/12/25	2441676.5	-29.85075	-4.53509	7.61381	1.13333	-5.39053	-2.04313	31.13847	5.87509	188.64	14.15
72/12/29	2441680.5	-29.84813	-4.54754	7.60909	1.13535	-5.39017	-2.04362	31.13662	5.87531	188.66	14.15
73/ 1/ 2	2441684.5	-29.84551	-4.56000	7.60436	1.13736	-5.38980	-2.04412	31.13477	5.87554	188.69	14.14
73/ 1/ 6	2441688.5	-29.84288	-4.57245	7.59964	1.13938	-5.38943	-2.04461	31.13293	5.87576	188.71	14.13
73/ 1/10	2441692.5	-29.84024	-4.58490	7.59492	1.14139	-5.38906	-2.04510	31.13108	5.87598	188.74	14.12
73/ 1/14	2441696.5	-29.83760	-4.59735	7.59019	1.14340	-5.38868	-2.04559	31.12923	5.87620	188.76	14.11
73/ 1/18	2441700.5	-29.83496	-4.60980	7.58547	1.14541	-5.38831	-2.04608	31.12739	5.87642	188.78	14.10
73/ 1/22	2441704.5	-29.83231	-4.62224	7.58074	1.14742	-5.38794	-2.04657	31.12554	5.87664	188.81	14.10
73/ 1/26	2441708.5	-29.82966	-4.63469	7.57601	1.14943	-5.38756	-2.04706	31.12370	5.87685	188.83	14.09
73/ 1/30	2441712.5	-29.82700	-4.64714	7.57128	1.15143	-5.38718	-2.04754	31.12186	5.87707	188.86	14.08
73/ 2/ 3	2441716.5	-29.82434	-4.65958	7.56655	1.15344	-5.38680	-2.04803	31.12002	5.87729	188.88	14.07
73/ 2/ 7	2441720.5	-29.82167	-4.67202	7.56182	1.15544	-5.38642	-2.04852	31.11818	5.87750	188.90	14.06
73/ 2/11	2441724.5	-29.81900	-4.68447	7.55708	1.15744	-5.38604	-2.04901	31.11634	5.87772	188.93	14.06
73/ 2/15	2441728.5	-29.81632	-4.69691	7.55235	1.15944	-5.38567	-2.04949	31.11450	5.87794	188.95	14.05
73/ 2/19	2441732.5	-29.81364	-4.70935	7.54762	1.16144	-5.38529	-2.04998	31.11266	5.87815	188.98	14.04
73/ 2/23	2441736.5	-29.81096	-4.72179	7.54288	1.16344	-5.38491	-2.05047	31.11083	5.87837	189.00	14.03
73/ 2/27	2441740.5	-29.80827	-4.73423	7.53814	1.16544	-5.38453	-2.05096	31.10899	5.87859	189.02	14.02
73/ 3/ 3	2441744.5	-29.80557	-4.74667	7.53340	1.16745	-5.38415	-2.05145	31.10716	5.87881	189.05	14.01
73/ 3/ 7	2441748.5	-29.80287	-4.75911	7.52866	1.16945	-5.38377	-2.05193	31.10532	5.87903	189.07	14.01
73/ 3/11	2441752.5	-29.80017	-4.77154	7.52392	1.17145	-5.38339	-2.05242	31.10349	5.87925	189.10	14.00
73/ 3/15	2441756.5	-29.79746	-4.78398	7.51918	1.17345	-5.38300	-2.05291	31.10166	5.87947	189.12	13.99
73/ 3/19	2441760.5	-29.79475	-4.79642	7.51444	1.17545	-5.38262	-2.05340	31.09983	5.87969	189.15	13.98
73/ 3/23	2441764.5	-29.79203	-4.80885	7.50969	1.17745	-5.38224	-2.05388	31.09800	5.87990	189.17	13.97
73/ 3/27	2441768.5	-29.78931	-4.82128	7.50495	1.17944	-5.38185	-2.05437	31.09617	5.88012	189.19	13.97
73/ 3/31	2441772.5	-29.78658	-4.83372	7.50020	1.18144	-5.38146	-2.05486	31.09434	5.88034	189.22	13.96
73/ 4/ 4	2441776.5	-29.78385	-4.84615	7.49545	1.18344	-5.38108	-2.05534	31.09252	5.88056	189.24	13.95
73/ 4/ 8	2441780.5	-29.78111	-4.85858	7.49070	1.18543	-5.38069	-2.05583	31.09069	5.88078	189.27	13.94
73/ 4/12	2441784.5	-29.77837	-4.87101	7.48595	1.18743	-5.38031	-2.05632	31.08887	5.88100	189.29	13.93
73/ 4/16	2441788.5	-29.77563	-4.88344	7.48120	1.18943	-5.37992	-2.05680	31.08704	5.88122	189.31	13.93
73/ 4/20	2441792.5	-29.77288	-4.89587	7.47645	1.19142	-5.37953	-2.05729	31.08522	5.88144	189.34	13.92
73/ 4/24	2441796.5	-29.77012	-4.90829	7.47170	1.19342	-5.37915	-2.05778	31.08340	5.88166	189.36	13.91
73/ 4/28	2441800.5	-29.76736	-4.92072	7.46694	1.19541	-5.37876	-2.05826	31.08158	5.88188	189.39	13.90
73/ 5/ 2	2441804.5	-29.76460	-4.93314	7.46219	1.19741	-5.37837	-2.05875	31.07976	5.88210	189.41	13.89
73/ 5/ 6	2441808.5	-29.76183	-4.94557	7.45743	1.19940	-5.37798	-2.05924	31.07794	5.88232	189.43	13.88
73/ 5/10	2441812.5	-29.75906	-4.95799	7.45267	1.20139	-5.37760	-2.05972	31.07612	5.88255	189.46	13.88
73/ 5/14	2441816.5	-29.75628	-4.97042	7.44792	1.20339	-5.37721	-2.06021	31.07431	5.88277	189.48	13.87
73/ 5/18	2441820.5	-29.75350	-4.98284	7.44315	1.20538	-5.37682	-2.06070	31.07249	5.88300	189.51	13.86
73/ 5/22	2441824.5	-29.75071	-4.99526	7.43839	1.20738	-5.37643	-2.06119	31.07068	5.88322	189.53	13.85
73/ 5/26	2441828.5	-29.74792	-5.00768	7.43363	1.20938	-5.37605	-2.06168	31.06886	5.88345	189.56	13.84

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73/ 5/30	2441832.5	-29.74512	-5.02010	7.42887	1.21138	-5.37566	-2.06217	31.06705	5.88368	189.58	13.83
73/ 6/ 3	2441836.5	-29.74232	-5.03252	7.42410	1.21338	-5.37527	-2.06265	31.06524	5.88391	189.60	13.83
73/ 6/ 7	2441840.5	-29.73951	-5.04493	7.41934	1.21538	-5.37488	-2.06314	31.06343	5.88413	189.63	13.82
73/ 6/11	2441844.5	-29.73670	-5.05735	7.41457	1.21739	-5.37448	-2.06363	31.06162	5.88436	189.65	13.81
73/ 6/15	2441848.5	-29.73389	-5.06977	7.40980	1.21939	-5.37409	-2.06411	31.05981	5.88458	189.68	13.80
73/ 6/19	2441852.5	-29.73107	-5.08218	7.40503	1.22139	-5.37369	-2.06460	31.05800	5.88480	189.70	13.79
73/ 6/23	2441856.5	-29.72825	-5.09459	7.40026	1.22340	-5.37329	-2.06508	31.05620	5.88502	189.72	13.79
73/ 6/27	2441860.5	-29.72542	-5.10701	7.39549	1.22540	-5.37289	-2.06557	31.05439	5.88524	189.75	13.78
73/ 7/ 1	2441864.5	-29.72258	-5.11942	7.39072	1.22740	-5.37248	-2.06605	31.05259	5.88546	189.77	13.77
73/ 7/ 5	2441868.5	-29.71975	-5.13183	7.38595	1.22940	-5.37208	-2.06653	31.05078	5.88568	189.80	13.76
73/ 7/ 9	2441872.5	-29.71690	-5.14424	7.38117	1.23140	-5.37167	-2.06702	31.04898	5.88590	189.82	13.75
73/ 7/13	2441876.5	-29.71406	-5.15665	7.37640	1.23341	-5.37126	-2.06750	31.04718	5.88611	189.85	13.74
73/ 7/17	2441880.5	-29.71121	-5.16906	7.37162	1.23541	-5.37086	-2.06798	31.04538	5.88633	189.87	13.74
73/ 7/21	2441884.5	-29.70835	-5.18146	7.36684	1.23740	-5.37044	-2.06846	31.04358	5.88654	189.89	13.73
73/ 7/25	2441888.5	-29.70549	-5.19387	7.36206	1.23940	-5.37003	-2.06894	31.04178	5.88675	189.92	13.72
73/ 7/29	2441892.5	-29.70262	-5.20628	7.35728	1.24140	-5.36962	-2.06942	31.03999	5.88697	189.94	13.71
73/ 8/ 2	2441896.5	-29.69975	-5.21868	7.35250	1.24339	-5.36920	-2.06990	31.03819	5.88718	189.97	13.70
73/ 8/ 6	2441900.5	-29.69688	-5.23108	7.34772	1.24539	-5.36879	-2.07038	31.03639	5.88739	189.99	13.69
73/ 8/10	2441904.5	-29.69400	-5.24349	7.34294	1.24738	-5.36837	-2.07086	31.03460	5.88760	190.01	13.69
73/ 8/14	2441908.5	-29.69111	-5.25589	7.33815	1.24937	-5.36796	-2.07134	31.03281	5.88781	190.04	13.68
73/ 8/18	2441912.5	-29.68823	-5.26829	7.33337	1.25136	-5.36754	-2.07182	31.03101	5.88802	190.06	13.67
73/ 8/22	2441916.5	-29.68533	-5.28069	7.32858	1.25336	-5.36712	-2.07230	31.02922	5.88824	190.09	13.66
73/ 8/26	2441920.5	-29.68244	-5.29308	7.32379	1.25535	-5.36671	-2.07277	31.02743	5.88845	190.11	13.65
73/ 8/30	2441924.5	-29.67953	-5.30548	7.31900	1.25734	-5.36629	-2.07325	31.02564	5.88866	190.14	13.64
73/ 9/ 3	2441928.5	-29.67663	-5.31788	7.31421	1.25933	-5.36587	-2.07373	31.02386	5.88887	190.16	13.64
73/ 9/ 7	2441932.5	-29.67371	-5.33027	7.30942	1.26132	-5.36545	-2.07421	31.02207	5.88908	190.18	13.63
73/ 9/11	2441936.5	-29.67080	-5.34267	7.30463	1.26330	-5.36502	-2.07469	31.02028	5.88929	190.21	13.62
73/ 9/15	2441940.5	-29.66788	-5.35506	7.29983	1.26529	-5.36460	-2.07516	31.01850	5.88950	190.23	13.61
73/ 9/19	2441944.5	-29.66495	-5.36746	7.29504	1.26727	-5.36417	-2.07564	31.01671	5.88970	190.26	13.60
73/ 9/23	2441948.5	-29.66202	-5.37985	7.29024	1.26926	-5.36375	-2.07612	31.01493	5.88991	190.28	13.59
73/ 9/27	2441952.5	-29.65909	-5.39224	7.28545	1.27124	-5.36333	-2.07659	31.01315	5.89012	190.30	13.59
73/10/ 1	2441956.5	-29.65615	-5.40463	7.28065	1.27322	-5.36290	-2.07707	31.01137	5.89033	190.33	13.58
73/10/ 5	2441960.5	-29.65321	-5.41702	7.27585	1.27519	-5.36248	-2.07754	31.00959	5.89054	190.35	13.57
73/10/ 9	2441964.5	-29.65026	-5.42940	7.27105	1.27717	-5.36205	-2.07802	31.00781	5.89075	190.38	13.56
73/10/13	2441968.5	-29.64730	-5.44179	7.26625	1.27915	-5.36163	-2.07850	31.00603	5.89096	190.40	13.55
73/10/17	2441972.5	-29.64435	-5.45418	7.26145	1.28112	-5.36121	-2.07898	31.00426	5.89118	190.43	13.54
73/10/21	2441976.5	-29.64138	-5.46656	7.25664	1.28309	-5.36078	-2.07945	31.00248	5.89139	190.45	13.54
73/10/25	2441980.5	-29.63842	-5.47895	7.25184	1.28506	-5.36036	-2.07993	31.00071	5.89160	190.47	13.53
73/10/29	2441984.5	-29.63545	-5.49133	7.24703	1.28704	-5.35994	-2.08041	30.99893	5.89182	190.50	13.52
73/11/ 2	2441988.5	-29.63247	-5.50371	7.24223	1.28901	-5.35952	-2.08089	30.99716	5.89204	190.52	13.51
73/11/ 6	2441992.5	-29.62949	-5.51609	7.23742	1.29098	-5.35910	-2.08137	30.99539	5.89226	190.55	13.50
73/11/10	2441996.5	-29.62651	-5.52847	7.23261	1.29295	-5.35869	-2.08185	30.99362	5.89248	190.57	13.49
73/11/14	2442000.5	-29.62352	-5.54085	7.22780	1.29492	-5.35827	-2.08233	30.99185	5.89271	190.59	13.49
73/11/18	2442004.5	-29.62052	-5.55323	7.22299	1.29689	-5.35786	-2.08282	30.99008	5.89294	190.62	13.48
73/11/22	2442008.5	-29.61753	-5.56561	7.21818	1.29887	-5.35745	-2.08330	30.98832	5.89317	190.64	13.47

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73/11/26	2442012.5	-29.61452	-5.57798	7.21336	1.30084	-5.35703	-2.08378	30.98655	5.89340	190.67	13.46
73/11/30	2442016.5	-29.61152	-5.59036	7.20855	1.30282	-5.35662	-2.08427	30.98479	5.89363	190.69	13.45
73/12/ 4	2442020.5	-29.60850	-5.60273	7.20373	1.30480	-5.35620	-2.08475	30.98303	5.89386	190.72	13.44
73/12/ 8	2442024.5	-29.60549	-5.61510	7.19892	1.30678	-5.35579	-2.08523	30.98126	5.89409	190.74	13.44
73/12/12	2442028.5	-29.60247	-5.62748	7.19410	1.30876	-5.35537	-2.08572	30.97950	5.89433	190.76	13.43
73/12/16	2442032.5	-29.59944	-5.63985	7.18928	1.31074	-5.35496	-2.08620	30.97774	5.89456	190.79	13.42
73/12/20	2442036.5	-29.59641	-5.65222	7.18446	1.31272	-5.35454	-2.08668	30.97598	5.89479	190.81	13.41
73/12/24	2442040.5	-29.59337	-5.66459	7.17964	1.31470	-5.35413	-2.08717	30.97422	5.89503	190.84	13.40
73/12/28	2442044.5	-29.59034	-5.67696	7.17482	1.31669	-5.35371	-2.08765	30.97247	5.89527	190.86	13.39
74/ 1/ 1	2442048.5	-29.58729	-5.68932	7.16999	1.31867	-5.35329	-2.08813	30.97071	5.89550	190.88	13.39
74/ 1/ 5	2442052.5	-29.58424	-5.70169	7.16517	1.32066	-5.35287	-2.08862	30.96896	5.89574	190.91	13.38
74/ 1/ 9	2442056.5	-29.58119	-5.71406	7.16034	1.32265	-5.35246	-2.08910	30.96720	5.89597	190.93	13.37
74/ 1/13	2442060.5	-29.57813	-5.72642	7.15552	1.32463	-5.35204	-2.08958	30.96545	5.89621	190.96	13.36
74/ 1/17	2442064.5	-29.57507	-5.73878	7.15069	1.32662	-5.35162	-2.09007	30.96370	5.89645	190.98	13.35
74/ 1/21	2442068.5	-29.57200	-5.75115	7.14586	1.32861	-5.35120	-2.09055	30.96195	5.89669	191.01	13.34
74/ 1/25	2442072.5	-29.56893	-5.76351	7.14103	1.33060	-5.35077	-2.09103	30.96020	5.89692	191.03	13.34
74/ 1/29	2442076.5	-29.56585	-5.77587	7.13620	1.33259	-5.35035	-2.09151	30.95845	5.89716	191.05	13.33
74/ 2/ 2	2442080.5	-29.56277	-5.78823	7.13137	1.33459	-5.34993	-2.09199	30.95670	5.89740	191.08	13.32
74/ 2/ 6	2442084.5	-29.55969	-5.80059	7.12653	1.33658	-5.34950	-2.09248	30.95496	5.89763	191.10	13.31
74/ 2/10	2442088.5	-29.55660	-5.81295	7.12170	1.33857	-5.34908	-2.09296	30.95321	5.89787	191.13	13.30
74/ 2/14	2442092.5	-29.55350	-5.82530	7.11686	1.34057	-5.34865	-2.09344	30.95147	5.89811	191.15	13.29
74/ 2/18	2442096.5	-29.55040	-5.83766	7.11203	1.34257	-5.34822	-2.09392	30.94973	5.89834	191.17	13.28
74/ 2/22	2442100.5	-29.54730	-5.85001	7.10719	1.34457	-5.34779	-2.09440	30.94798	5.89858	191.20	13.28
74/ 2/26	2442104.5	-29.54419	-5.86237	7.10235	1.34657	-5.34736	-2.09488	30.94624	5.89881	191.22	13.27
74/ 3/ 2	2442108.5	-29.54108	-5.87472	7.09751	1.34857	-5.34692	-2.09536	30.94450	5.89904	191.25	13.26
74/ 3/ 6	2442112.5	-29.53796	-5.88707	7.09267	1.35057	-5.34648	-2.09583	30.94276	5.89927	191.27	13.25
74/ 3/10	2442116.5	-29.53484	-5.89942	7.08783	1.35257	-5.34604	-2.09631	30.94103	5.89950	191.30	13.24
74/ 3/14	2442120.5	-29.53171	-5.91177	7.08298	1.35457	-5.34559	-2.09679	30.93929	5.89972	191.32	13.23
74/ 3/18	2442124.5	-29.52858	-5.92412	7.07814	1.35657	-5.34515	-2.09726	30.93755	5.89995	191.34	13.23
74/ 3/22	2442128.5	-29.52544	-5.93647	7.07329	1.35856	-5.34470	-2.09773	30.93582	5.90017	191.37	13.22
74/ 3/26	2442132.5	-29.52230	-5.94882	7.06844	1.36056	-5.34425	-2.09821	30.93409	5.90039	191.39	13.21
74/ 3/30	2442136.5	-29.51916	-5.96116	7.06360	1.36255	-5.34380	-2.09868	30.93235	5.90061	191.42	13.20
74/ 4/ 3	2442140.5	-29.51601	-5.97351	7.05875	1.36455	-5.34334	-2.09915	30.93062	5.90082	191.44	13.19
74/ 4/ 7	2442144.5	-29.51285	-5.98585	7.05390	1.36654	-5.34289	-2.09962	30.92889	5.90104	191.47	13.18
74/ 4/11	2442148.5	-29.50969	-5.99819	7.04905	1.36853	-5.34243	-2.10009	30.92716	5.90126	191.49	13.17
74/ 4/15	2442152.5	-29.50653	-6.01053	7.04420	1.37052	-5.34198	-2.10056	30.92543	5.90147	191.51	13.17
74/ 4/19	2442156.5	-29.50336	-6.02287	7.03934	1.37251	-5.34152	-2.10103	30.92371	5.90169	191.54	13.16
74/ 4/23	2442160.5	-29.50019	-6.03521	7.03449	1.37449	-5.34106	-2.10150	30.92198	5.90190	191.56	13.15
74/ 4/27	2442164.5	-29.49701	-6.04755	7.02963	1.37647	-5.34060	-2.10196	30.92026	5.90211	191.59	13.14
74/ 5/ 1	2442168.5	-29.49383	-6.05989	7.02478	1.37846	-5.34014	-2.10243	30.91853	5.90233	191.61	13.13
74/ 5/ 5	2442172.5	-29.49064	-6.07222	7.01992	1.38044	-5.33968	-2.10290	30.91681	5.90254	191.63	13.12
74/ 5/ 9	2442176.5	-29.48745	-6.08456	7.01506	1.38242	-5.33922	-2.10337	30.91509	5.90276	191.66	13.12
74/ 5/13	2442180.5	-29.48425	-6.09689	7.01020	1.38439	-5.33877	-2.10384	30.91337	5.90298	191.68	13.11
74/ 5/17	2442184.5	-29.48105	-6.10923	7.00534	1.38637	-5.33831	-2.10431	30.91165	5.90319	191.71	13.10
74/ 5/21	2442188.5	-29.47785	-6.12156	7.00048	1.38835	-5.33785	-2.10478	30.90993	5.90341	191.73	13.09

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
74/ 5/25	2442192.5	-29.47464	-6.13389	6.99561	1.39033	-5.33739	-2.10525	30.90821	5.90363	191.76	13.08
74/ 5/29	2442196.5	-29.47142	-6.14622	6.99075	1.39231	-5.33692	-2.10572	30.90650	5.90384	191.78	13.07
74/ 6/ 2	2442200.5	-29.46821	-6.15855	6.98589	1.39429	-5.33646	-2.10619	30.90478	5.90406	191.80	13.06
74/ 6/ 6	2442204.5	-29.46498	-6.17088	6.98102	1.39626	-5.33600	-2.10666	30.90307	5.90427	191.83	13.06
74/ 6/10	2442208.5	-29.46175	-6.18320	6.97615	1.39823	-5.33554	-2.10713	30.90135	5.90449	191.85	13.05
74/ 6/14	2442212.5	-29.45852	-6.19553	6.97128	1.40021	-5.33508	-2.10760	30.89964	5.90471	191.88	13.04
74/ 6/18	2442216.5	-29.45529	-6.20785	6.96641	1.40218	-5.33461	-2.10807	30.89793	5.90493	191.90	13.03
74/ 6/22	2442220.5	-29.45204	-6.22018	6.96154	1.40415	-5.33415	-2.10853	30.89622	5.90514	191.93	13.02
74/ 6/26	2442224.5	-29.44880	-6.23250	6.95667	1.40612	-5.33369	-2.10900	30.89451	5.90536	191.95	13.01
74/ 6/30	2442228.5	-29.44555	-6.24482	6.95180	1.40809	-5.33323	-2.10947	30.89281	5.90558	191.97	13.00
74/ 7/ 4	2442232.5	-29.44229	-6.25714	6.94693	1.41006	-5.33277	-2.10994	30.89110	5.90581	192.00	13.00
74/ 7/ 8	2442236.5	-29.43903	-6.26946	6.94205	1.41202	-5.33231	-2.11042	30.88940	5.90603	192.02	12.99
74/ 7/12	2442240.5	-29.43577	-6.28178	6.93717	1.41399	-5.33185	-2.11089	30.88769	5.90625	192.05	12.98
74/ 7/16	2442244.5	-29.43250	-6.29409	6.93230	1.41596	-5.33139	-2.11136	30.88599	5.90648	192.07	12.97
74/ 7/20	2442248.5	-29.42923	-6.30641	6.92742	1.41793	-5.33093	-2.11183	30.88429	5.90671	192.10	12.96
74/ 7/24	2442252.5	-29.42595	-6.31872	6.92254	1.41989	-5.33048	-2.11230	30.88259	5.90694	192.12	12.95
74/ 7/28	2442256.5	-29.42267	-6.33104	6.91766	1.42186	-5.33002	-2.11278	30.88089	5.90717	192.14	12.94
74/ 8/ 1	2442260.5	-29.41938	-6.34335	6.91278	1.42383	-5.32956	-2.11325	30.87919	5.90740	192.17	12.94
74/ 8/ 5	2442264.5	-29.41609	-6.35566	6.90790	1.42580	-5.32911	-2.11372	30.87749	5.90763	192.19	12.93
74/ 8/ 9	2442268.5	-29.41279	-6.36797	6.90301	1.42777	-5.32866	-2.11420	30.87580	5.90787	192.22	12.92
74/ 8/13	2442272.5	-29.40949	-6.38028	6.89813	1.42974	-5.32820	-2.11468	30.87410	5.90811	192.24	12.91
74/ 8/17	2442276.5	-29.40618	-6.39259	6.89324	1.43172	-5.32775	-2.11515	30.87241	5.90835	192.26	12.90
74/ 8/21	2442280.5	-29.40287	-6.40490	6.88835	1.43369	-5.32729	-2.11563	30.87072	5.90859	192.29	12.89
74/ 8/25	2442284.5	-29.39956	-6.41721	6.88347	1.43567	-5.32683	-2.11610	30.86903	5.90882	192.31	12.88
74/ 8/29	2442288.5	-29.39624	-6.42951	6.87858	1.43765	-5.32638	-2.11658	30.86734	5.90906	192.34	12.88
74/ 9/ 2	2442292.5	-29.39292	-6.44181	6.87369	1.43963	-5.32592	-2.11705	30.86565	5.90930	192.36	12.87
74/ 9/ 6	2442296.5	-29.38959	-6.45412	6.86880	1.44160	-5.32546	-2.11752	30.86396	5.90954	192.39	12.86
74/ 9/10	2442300.5	-29.38626	-6.46642	6.86390	1.44358	-5.32500	-2.11800	30.86227	5.90977	192.41	12.85
74/ 9/14	2442304.5	-29.38292	-6.47872	6.85901	1.44556	-5.32453	-2.11847	30.86059	5.91001	192.43	12.84
74/ 9/18	2442308.5	-29.37958	-6.49102	6.85412	1.44754	-5.32407	-2.11894	30.85890	5.91025	192.46	12.83
74/ 9/22	2442312.5	-29.37623	-6.50332	6.84922	1.44952	-5.32361	-2.11942	30.85722	5.91049	192.48	12.82
74/ 9/26	2442316.5	-29.37288	-6.51562	6.84432	1.45150	-5.32314	-2.11989	30.85554	5.91072	192.51	12.82
74/ 9/30	2442320.5	-29.36953	-6.52792	6.83943	1.45348	-5.32268	-2.12036	30.85386	5.91096	192.53	12.81
74/10/ 4	2442324.5	-29.36617	-6.54021	6.83453	1.45546	-5.32221	-2.12083	30.85218	5.91119	192.56	12.80
74/10/ 8	2442328.5	-29.36280	-6.55251	6.82963	1.45744	-5.32174	-2.12130	30.85050	5.91143	192.58	12.79
74/10/12	2442332.5	-29.35943	-6.56480	6.82472	1.45942	-5.32127	-2.12178	30.84882	5.91167	192.60	12.78
74/10/16	2442336.5	-29.35606	-6.57709	6.81982	1.46140	-5.32080	-2.12225	30.84714	5.91190	192.63	12.77
74/10/20	2442340.5	-29.35268	-6.58938	6.81492	1.46338	-5.32033	-2.12272	30.84547	5.91214	192.65	12.76
74/10/24	2442344.5	-29.34930	-6.60167	6.81002	1.46536	-5.31986	-2.12319	30.84379	5.91237	192.68	12.76
74/10/28	2442348.5	-29.34591	-6.61396	6.80511	1.46733	-5.31939	-2.12366	30.84212	5.91261	192.70	12.75
74/11/ 1	2442352.5	-29.34252	-6.62625	6.80020	1.46931	-5.31892	-2.12413	30.84045	5.91284	192.73	12.74
74/11/ 5	2442356.5	-29.33912	-6.63854	6.79530	1.47129	-5.31845	-2.12460	30.83878	5.91308	192.75	12.73
74/11/ 9	2442360.5	-29.33572	-6.65082	6.79039	1.47327	-5.31798	-2.12507	30.83711	5.91332	192.77	12.72
74/11/13	2442364.5	-29.33231	-6.66311	6.78548	1.47525	-5.31750	-2.12554	30.83544	5.91356	192.80	12.71
74/11/17	2442368.5	-29.32890	-6.67539	6.78057	1.47724	-5.31703	-2.12601	30.83377	5.91379	192.82	12.70

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74/11/21	2442372.5	-29.32549	-6.68768	6.77565	1.47922	-5.31655	-2.12648	30.83211	5.91403	192.85	12.69
74/11/25	2442376.5	-29.32207	-6.69996	6.77074	1.48120	-5.31607	-2.12695	30.83044	5.91426	192.87	12.69
74/11/29	2442380.5	-29.31864	-6.71224	6.76583	1.48317	-5.31559	-2.12742	30.82878	5.91449	192.90	12.68
74/12/ 3	2442384.5	-29.31522	-6.72452	6.76091	1.48515	-5.31511	-2.12788	30.82711	5.91473	192.92	12.67
74/12/ 7	2442388.5	-29.31178	-6.73680	6.75599	1.48713	-5.31463	-2.12835	30.82545	5.91496	192.94	12.66
74/12/11	2442392.5	-29.30834	-6.74907	6.75108	1.48910	-5.31415	-2.12882	30.82379	5.91519	192.97	12.65
74/12/15	2442396.5	-29.30490	-6.76135	6.74616	1.49108	-5.31367	-2.12929	30.82213	5.91543	192.99	12.64
74/12/19	2442400.5	-29.30146	-6.77362	6.74124	1.49305	-5.31319	-2.12975	30.82047	5.91566	193.02	12.63
74/12/23	2442404.5	-29.29800	-6.78590	6.73632	1.49503	-5.31271	-2.13022	30.81882	5.91589	193.04	12.63
74/12/27	2442408.5	-29.29455	-6.79817	6.73140	1.49700	-5.31223	-2.13069	30.81716	5.91613	193.06	12.62
74/12/31	2442412.5	-29.29109	-6.81044	6.72647	1.49897	-5.31174	-2.13116	30.81550	5.91636	193.09	12.61
75/ 1/ 4	2442416.5	-29.28762	-6.82271	6.72155	1.50094	-5.31126	-2.13162	30.81385	5.91660	193.11	12.60
75/ 1/ 8	2442420.5	-29.28415	-6.83498	6.71663	1.50291	-5.31078	-2.13209	30.81220	5.91684	193.14	12.59
75/ 1/12	2442424.5	-29.28068	-6.84725	6.71170	1.50488	-5.31030	-2.13256	30.81055	5.91707	193.16	12.58
75/ 1/16	2442428.5	-29.27720	-6.85952	6.70677	1.50685	-5.30982	-2.13303	30.80890	5.91731	193.19	12.57
75/ 1/20	2442432.5	-29.27372	-6.87178	6.70184	1.50882	-5.30934	-2.13350	30.80725	5.91755	193.21	12.56
75/ 1/24	2442436.5	-29.27023	-6.88405	6.69691	1.51079	-5.30886	-2.13397	30.80560	5.91780	193.23	12.56
75/ 1/28	2442440.5	-29.26674	-6.89631	6.69198	1.51276	-5.30839	-2.13444	30.80395	5.91804	193.26	12.55
75/ 2/ 1	2442444.5	-29.26324	-6.90857	6.68705	1.51473	-5.30791	-2.13491	30.80231	5.91829	193.28	12.54
75/ 2/ 5	2442448.5	-29.25974	-6.92084	6.68212	1.51670	-5.30744	-2.13538	30.80066	5.91854	193.31	12.53
75/ 2/ 9	2442452.5	-29.25623	-6.93310	6.67719	1.51868	-5.30696	-2.13585	30.79902	5.91879	193.33	12.52
75/ 2/13	2442456.5	-29.25272	-6.94536	6.67225	1.52066	-5.30648	-2.13632	30.79738	5.91904	193.36	12.51
75/ 2/17	2442460.5	-29.24920	-6.95762	6.66732	1.52263	-5.30600	-2.13679	30.79574	5.91929	193.38	12.50
75/ 2/21	2442464.5	-29.24568	-6.96987	6.66238	1.52461	-5.30553	-2.13726	30.79410	5.91954	193.40	12.49
75/ 2/25	2442468.5	-29.24216	-6.98213	6.65744	1.52659	-5.30505	-2.13773	30.79246	5.91979	193.43	12.49
75/ 3/ 1	2442472.5	-29.23863	-6.99438	6.65250	1.52856	-5.30457	-2.13820	30.79082	5.92004	193.45	12.48
75/ 3/ 5	2442476.5	-29.23510	-7.00664	6.64756	1.53054	-5.30409	-2.13867	30.78919	5.92029	193.48	12.47
75/ 3/ 9	2442480.5	-29.23156	-7.01889	6.64262	1.53252	-5.30361	-2.13915	30.78755	5.92054	193.50	12.46
75/ 3/13	2442484.5	-29.22802	-7.03114	6.63768	1.53450	-5.30313	-2.13962	30.78592	5.92079	193.53	12.45
75/ 3/17	2442488.5	-29.22447	-7.04339	6.63274	1.53648	-5.30265	-2.14009	30.78428	5.92105	193.55	12.44
75/ 3/21	2442492.5	-29.22092	-7.05564	6.62779	1.53847	-5.30216	-2.14056	30.78265	5.92130	193.57	12.43
75/ 3/25	2442496.5	-29.21736	-7.06789	6.62284	1.54045	-5.30168	-2.14103	30.78102	5.92155	193.60	12.42
75/ 3/29	2442500.5	-29.21380	-7.08014	6.61790	1.54243	-5.30120	-2.14150	30.77939	5.92181	193.62	12.42
75/ 4/ 2	2442504.5	-29.21023	-7.09238	6.61295	1.54442	-5.30071	-2.14197	30.77777	5.92206	193.65	12.41
75/ 4/ 6	2442508.5	-29.20666	-7.10463	6.60800	1.54640	-5.30023	-2.14244	30.77614	5.92232	193.67	12.40
75/ 4/10	2442512.5	-29.20309	-7.11687	6.60305	1.54839	-5.29974	-2.14291	30.77451	5.92257	193.70	12.39
75/ 4/14	2442516.5	-29.19951	-7.12912	6.59810	1.55037	-5.29926	-2.14338	30.77289	5.92282	193.72	12.38
75/ 4/18	2442520.5	-29.19593	-7.14136	6.59315	1.55236	-5.29877	-2.14385	30.77126	5.92308	193.74	12.37
75/ 4/22	2442524.5	-29.19234	-7.15360	6.58820	1.55435	-5.29828	-2.14432	30.76964	5.92334	193.77	12.36
75/ 4/26	2442528.5	-29.18875	-7.16584	6.58324	1.55634	-5.29780	-2.14479	30.76802	5.92359	193.79	12.35
75/ 4/30	2442532.5	-29.18515	-7.17808	6.57829	1.55833	-5.29731	-2.14526	30.76640	5.92385	193.82	12.35
75/ 5/ 4	2442536.5	-29.18155	-7.19031	6.57333	1.56032	-5.29682	-2.14572	30.76478	5.92410	193.84	12.34
75/ 5/ 8	2442540.5	-29.17794	-7.20255	6.56837	1.56231	-5.29633	-2.14619	30.76316	5.92436	193.87	12.33
75/ 5/12	2442544.5	-29.17433	-7.21478	6.56341	1.56431	-5.29583	-2.14666	30.76155	5.92461	193.89	12.32
75/ 5/16	2442548.5	-29.17071	-7.22702	6.55845	1.56630	-5.29533	-2.14713	30.75993	5.92486	193.91	12.31

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
75/ 5/20	2442552.5	-29.16709	-7.23925	6.55349	1.56830	-5.29483	-2.14759	30.75832	5.92511	193.94	12.30
75/ 5/24	2442556.5	-29.16346	-7.25148	6.54853	1.57029	-5.29433	-2.14806	30.75670	5.92536	193.96	12.29
75/ 5/28	2442560.5	-29.15983	-7.26371	6.54357	1.57229	-5.29383	-2.14852	30.75509	5.92561	193.99	12.28
75/ 6/ 1	2442564.5	-29.15620	-7.27594	6.53860	1.57428	-5.29332	-2.14898	30.75348	5.92585	194.01	12.28
75/ 6/ 5	2442568.5	-29.15256	-7.28817	6.53364	1.57627	-5.29281	-2.14945	30.75187	5.92610	194.04	12.27
75/ 6/ 9	2442572.5	-29.14892	-7.30040	6.52867	1.57826	-5.29230	-2.14991	30.75026	5.92634	194.06	12.26
75/ 6/13	2442576.5	-29.14527	-7.31262	6.52371	1.58025	-5.29179	-2.15037	30.74866	5.92658	194.08	12.25
75/ 6/17	2442580.5	-29.14162	-7.32485	6.51874	1.58224	-5.29128	-2.15083	30.74705	5.92682	194.11	12.24
75/ 6/21	2442584.5	-29.13796	-7.33707	6.51377	1.58423	-5.29077	-2.15129	30.74544	5.92706	194.13	12.23
75/ 6/25	2442588.5	-29.13430	-7.34929	6.50880	1.58622	-5.29025	-2.15175	30.74384	5.92730	194.16	12.22
75/ 6/29	2442592.5	-29.13063	-7.36151	6.50383	1.58820	-5.28974	-2.15221	30.74224	5.92754	194.18	12.21
75/ 7/ 3	2442596.5	-29.12696	-7.37373	6.49885	1.59018	-5.28922	-2.15267	30.74064	5.92778	194.21	12.20
75/ 7/ 7	2442600.5	-29.12328	-7.38595	6.49388	1.59217	-5.28871	-2.15313	30.73903	5.92802	194.23	12.20
75/ 7/11	2442604.5	-29.11960	-7.39817	6.48891	1.59415	-5.28819	-2.15359	30.73744	5.92825	194.26	12.19
75/ 7/15	2442608.5	-29.11592	-7.41038	6.48393	1.59612	-5.28767	-2.15404	30.73584	5.92849	194.28	12.18
75/ 7/19	2442612.5	-29.11223	-7.42260	6.47895	1.59810	-5.28716	-2.15450	30.73424	5.92873	194.30	12.17
75/ 7/23	2442616.5	-29.10853	-7.43481	6.47397	1.60008	-5.28664	-2.15496	30.73264	5.92897	194.33	12.16
75/ 7/27	2442620.5	-29.10483	-7.44702	6.46900	1.60206	-5.28613	-2.15543	30.73105	5.92922	194.35	12.15
75/ 7/31	2442624.5	-29.10113	-7.45923	6.46402	1.60403	-5.28562	-2.15589	30.72946	5.92946	194.38	12.14
75/ 8/ 4	2442628.5	-29.09742	-7.47144	6.45904	1.60601	-5.28510	-2.15635	30.72786	5.92970	194.40	12.13
75/ 8/ 8	2442632.5	-29.09371	-7.48365	6.45405	1.60799	-5.28458	-2.15681	30.72627	5.92995	194.43	12.13
75/ 8/12	2442636.5	-29.08999	-7.49586	6.44907	1.60996	-5.28407	-2.15727	30.72468	5.93019	194.45	12.12
75/ 8/16	2442640.5	-29.08627	-7.50807	6.44409	1.61194	-5.28355	-2.15773	30.72309	5.93043	194.47	12.11
75/ 8/20	2442644.5	-29.08255	-7.52027	6.43910	1.61391	-5.28303	-2.15819	30.72151	5.93068	194.50	12.10
75/ 8/24	2442648.5	-29.07881	-7.53248	6.43411	1.61588	-5.28252	-2.15865	30.71992	5.93092	194.52	12.09
75/ 8/28	2442652.5	-29.07508	-7.54468	6.42913	1.61785	-5.28200	-2.15911	30.71833	5.93117	194.55	12.08
75/ 9/ 1	2442656.5	-29.07134	-7.55688	6.42414	1.61982	-5.28149	-2.15957	30.71675	5.93141	194.57	12.07
75/ 9/ 5	2442660.5	-29.06760	-7.56908	6.41915	1.62179	-5.28097	-2.16003	30.71517	5.93166	194.60	12.06
75/ 9/ 9	2442664.5	-29.06385	-7.58128	6.41416	1.62376	-5.28046	-2.16049	30.71359	5.93191	194.62	12.05
75/ 9/13	2442668.5	-29.06009	-7.59348	6.40917	1.62573	-5.27994	-2.16095	30.71201	5.93216	194.64	12.05
75/ 9/17	2442672.5	-29.05633	-7.60568	6.40417	1.62770	-5.27943	-2.16141	30.71043	5.93241	194.67	12.04
75/ 9/21	2442676.5	-29.05257	-7.61787	6.39918	1.62967	-5.27892	-2.16188	30.70885	5.93267	194.69	12.03
75/ 9/25	2442680.5	-29.04881	-7.63007	6.39419	1.63164	-5.27841	-2.16234	30.70727	5.93292	194.72	12.02
75/ 9/29	2442684.5	-29.04503	-7.64226	6.38919	1.63361	-5.27790	-2.16280	30.70570	5.93318	194.74	12.01
75/10/ 3	2442688.5	-29.04126	-7.65445	6.38419	1.63558	-5.27739	-2.16327	30.70412	5.93344	194.77	12.00
75/10/ 7	2442692.5	-29.03748	-7.66664	6.37919	1.63755	-5.27688	-2.16373	30.70255	5.93370	194.79	11.99
75/10/11	2442696.5	-29.03369	-7.67883	6.37420	1.63952	-5.27638	-2.16420	30.70098	5.93396	194.81	11.98
75/10/15	2442700.5	-29.02990	-7.69102	6.36919	1.64149	-5.27587	-2.16467	30.69941	5.93423	194.84	11.97
75/10/19	2442704.5	-29.02611	-7.70321	6.36419	1.64346	-5.27537	-2.16514	30.69784	5.93450	194.86	11.97
75/10/23	2442708.5	-29.02231	-7.71540	6.35919	1.64544	-5.27487	-2.16560	30.69627	5.93477	194.89	11.96
75/10/27	2442712.5	-29.01850	-7.72758	6.35419	1.64742	-5.27437	-2.16607	30.69470	5.93505	194.91	11.95
75/10/31	2442716.5	-29.01470	-7.73977	6.34918	1.64940	-5.27386	-2.16654	30.69314	5.93532	194.94	11.94
75/11/ 4	2442720.5	-29.01088	-7.75195	6.34418	1.65138	-5.27336	-2.16701	30.69157	5.93560	194.96	11.93
75/11/ 8	2442724.5	-29.00707	-7.76413	6.33917	1.65337	-5.27286	-2.16748	30.69001	5.93587	194.98	11.92
75/11/12	2442728.5	-29.00324	-7.77631	6.33416	1.65535	-5.27235	-2.16795	30.68845	5.93615	195.01	11.91

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75/11/16	2442732.5	-28.99942	-7.78849	6.32915	1.65734	-5.27185	-2.16842	30.68689	5.93643	195.03	11.90
75/11/20	2442736.5	-28.99559	-7.80067	6.32414	1.65933	-5.27134	-2.16889	30.68533	5.93670	195.06	11.89
75/11/24	2442740.5	-28.99175	-7.81285	6.31913	1.66132	-5.27083	-2.16935	30.68377	5.93698	195.08	11.88
75/11/28	2442744.5	-28.98791	-7.82502	6.31412	1.66331	-5.27032	-2.16982	30.68221	5.93726	195.11	11.88
75/12/ 2	2442748.5	-28.98407	-7.83720	6.30911	1.66531	-5.26981	-2.17029	30.68066	5.93754	195.13	11.87
75/12/ 6	2442752.5	-28.98022	-7.84937	6.30409	1.66730	-5.26930	-2.17076	30.67910	5.93781	195.16	11.86
75/12/10	2442756.5	-28.97636	-7.86154	6.29908	1.66930	-5.26879	-2.17122	30.67755	5.93809	195.18	11.85
75/12/14	2442760.5	-28.97250	-7.87372	6.29406	1.67129	-5.26828	-2.17169	30.67599	5.93837	195.20	11.84
75/12/18	2442764.5	-28.96864	-7.88589	6.28904	1.67329	-5.26776	-2.17215	30.67444	5.93864	195.23	11.83
75/12/22	2442768.5	-28.96477	-7.89805	6.28403	1.67529	-5.26725	-2.17262	30.67289	5.93892	195.25	11.82
75/12/26	2442772.5	-28.96090	-7.91022	6.27901	1.67729	-5.26673	-2.17308	30.67134	5.93920	195.28	11.81
75/12/30	2442776.5	-28.95702	-7.92239	6.27399	1.67929	-5.26621	-2.17355	30.66980	5.93947	195.30	11.80
76/ 1/ 3	2442780.5	-28.95314	-7.93455	6.26896	1.68129	-5.26570	-2.17401	30.66825	5.93975	195.33	11.80
76/ 1/ 7	2442784.5	-28.94926	-7.94672	6.26394	1.68329	-5.26518	-2.17448	30.66670	5.94002	195.35	11.79
76/ 1/11	2442788.5	-28.94536	-7.95888	6.25892	1.68529	-5.26466	-2.17494	30.66516	5.94030	195.37	11.78
76/ 1/15	2442792.5	-28.94147	-7.97104	6.25389	1.68729	-5.26413	-2.17540	30.66361	5.94058	195.40	11.77
76/ 1/19	2442796.5	-28.93757	-7.98320	6.24887	1.68930	-5.26361	-2.17587	30.66207	5.94085	195.42	11.76
76/ 1/23	2442800.5	-28.93366	-7.99536	6.24384	1.69130	-5.26309	-2.17633	30.66053	5.94113	195.45	11.75
76/ 1/27	2442804.5	-28.92975	-8.00752	6.23881	1.69331	-5.26256	-2.17679	30.65899	5.94140	195.47	11.74
76/ 1/31	2442808.5	-28.92584	-8.01968	6.23378	1.69532	-5.26203	-2.17725	30.65745	5.94168	195.50	11.73
76/ 2/ 4	2442812.5	-28.92192	-8.03183	6.22875	1.69733	-5.26150	-2.17771	30.65592	5.94195	195.52	11.72
76/ 2/ 8	2442816.5	-28.91800	-8.04399	6.22372	1.69933	-5.26097	-2.17817	30.65438	5.94222	195.54	11.71
76/ 2/12	2442820.5	-28.91407	-8.05614	6.21869	1.70134	-5.26043	-2.17863	30.65284	5.94249	195.57	11.71
76/ 2/16	2442824.5	-28.91014	-8.06829	6.21365	1.70335	-5.25989	-2.17909	30.65131	5.94275	195.59	11.70
76/ 2/20	2442828.5	-28.90620	-8.08044	6.20862	1.70535	-5.25936	-2.17955	30.64978	5.94302	195.62	11.69
76/ 2/24	2442832.5	-28.90226	-8.09259	6.20358	1.70736	-5.25882	-2.18000	30.64825	5.94328	195.64	11.68
76/ 2/28	2442836.5	-28.89831	-8.10474	6.19855	1.70936	-5.25828	-2.18046	30.64671	5.94355	195.67	11.67
76/ 3/ 3	2442840.5	-28.89436	-8.11689	6.19351	1.71136	-5.25774	-2.18091	30.64519	5.94381	195.69	11.66
76/ 3/ 7	2442844.5	-28.89040	-8.12903	6.18847	1.71336	-5.25719	-2.18137	30.64366	5.94408	195.72	11.65
76/ 3/11	2442848.5	-28.88644	-8.14118	6.18343	1.71536	-5.25665	-2.18183	30.64213	5.94434	195.74	11.64
76/ 3/15	2442852.5	-28.88248	-8.15332	6.17839	1.71736	-5.25611	-2.18228	30.64060	5.94461	195.76	11.63
76/ 3/19	2442856.5	-28.87851	-8.16546	6.17335	1.71936	-5.25556	-2.18273	30.63908	5.94487	195.79	11.62
76/ 3/23	2442860.5	-28.87453	-8.17760	6.16830	1.72136	-5.25502	-2.18319	30.63756	5.94513	195.81	11.61
76/ 3/27	2442864.5	-28.87056	-8.18974	6.16326	1.72336	-5.25447	-2.18364	30.63603	5.94540	195.84	11.61
76/ 3/31	2442868.5	-28.86657	-8.20188	6.15821	1.72535	-5.25393	-2.18410	30.63451	5.94566	195.86	11.60
76/ 4/ 4	2442872.5	-28.86258	-8.21402	6.15317	1.72735	-5.25338	-2.18455	30.63299	5.94593	195.89	11.59
76/ 4/ 8	2442876.5	-28.85859	-8.22615	6.14812	1.72934	-5.25284	-2.18501	30.63147	5.94620	195.91	11.58
76/ 4/12	2442880.5	-28.85459	-8.23829	6.14307	1.73134	-5.25230	-2.18547	30.62996	5.94647	195.93	11.57
76/ 4/16	2442884.5	-28.85059	-8.25042	6.13802	1.73333	-5.25176	-2.18592	30.62844	5.94674	195.96	11.56
76/ 4/20	2442888.5	-28.84658	-8.26255	6.13297	1.73533	-5.25122	-2.18638	30.62693	5.94701	195.98	11.55
76/ 4/24	2442892.5	-28.84257	-8.27468	6.12792	1.73733	-5.25067	-2.18684	30.62541	5.94728	196.01	11.54
76/ 4/28	2442896.5	-28.83856	-8.28681	6.12287	1.73933	-5.25013	-2.18729	30.62390	5.94755	196.03	11.53
76/ 5/ 2	2442900.5	-28.83454	-8.29894	6.11782	1.74133	-5.24959	-2.18775	30.62239	5.94783	196.06	11.52
76/ 5/ 6	2442904.5	-28.83051	-8.31107	6.11276	1.74333	-5.24904	-2.18821	30.62088	5.94810	196.08	11.52
76/ 5/10	2442908.5	-28.82648	-8.32319	6.10770	1.74533	-5.24850	-2.18866	30.61937	5.94837	196.11	11.51

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76/ 5/14	2442912.5	-28.82245	-8.33532	6.10265	1.74733	-5.24795	-2.18912	30.61786	5.94864	196.13	11.50
76/ 5/18	2442916.5	-28.81841	-8.34744	6.09759	1.74933	-5.24740	-2.18957	30.61635	5.94892	196.15	11.49
76/ 5/22	2442920.5	-28.81437	-8.35956	6.09253	1.75133	-5.24686	-2.19003	30.61485	5.94919	196.18	11.48
76/ 5/26	2442924.5	-28.81032	-8.37168	6.08747	1.75333	-5.24631	-2.19049	30.61334	5.94947	196.20	11.47
76/ 5/30	2442928.5	-28.80626	-8.38380	6.08241	1.75533	-5.24577	-2.19094	30.61184	5.94975	196.23	11.46
76/ 6/ 3	2442932.5	-28.80221	-8.39592	6.07735	1.75733	-5.24522	-2.19140	30.61034	5.95002	196.25	11.45
76/ 6/ 7	2442936.5	-28.79815	-8.40804	6.07229	1.75934	-5.24467	-2.19186	30.60884	5.95030	196.28	11.44
76/ 6/11	2442940.5	-28.79408	-8.42015	6.06722	1.76134	-5.24413	-2.19231	30.60734	5.95058	196.30	11.43
76/ 6/15	2442944.5	-28.79001	-8.43227	6.06216	1.76334	-5.24358	-2.19277	30.60584	5.95086	196.32	11.42
76/ 6/19	2442948.5	-28.78593	-8.44438	6.05709	1.76535	-5.24303	-2.19322	30.60434	5.95114	196.35	11.42
76/ 6/23	2442952.5	-28.78185	-8.45649	6.05202	1.76735	-5.24248	-2.19368	30.60284	5.95142	196.37	11.41
76/ 6/27	2442956.5	-28.77777	-8.46860	6.04695	1.76936	-5.24193	-2.19414	30.60135	5.95170	196.40	11.40
76/ 7/ 1	2442960.5	-28.77368	-8.48071	6.04189	1.77136	-5.24139	-2.19459	30.59986	5.95198	196.42	11.39
76/ 7/ 5	2442964.5	-28.76958	-8.49282	6.03681	1.77337	-5.24084	-2.19505	30.59836	5.95227	196.45	11.38
76/ 7/ 9	2442968.5	-28.76548	-8.50492	6.03174	1.77538	-5.24029	-2.19551	30.59687	5.95255	196.47	11.37
76/ 7/13	2442972.5	-28.76138	-8.51703	6.02667	1.77739	-5.23974	-2.19597	30.59538	5.95284	196.50	11.36
76/ 7/17	2442976.5	-28.75727	-8.52913	6.02160	1.77941	-5.23919	-2.19642	30.59389	5.95312	196.52	11.35
76/ 7/21	2442980.5	-28.75316	-8.54124	6.01652	1.78142	-5.23864	-2.19688	30.59241	5.95341	196.54	11.34
76/ 7/25	2442984.5	-28.74904	-8.55334	6.01145	1.78344	-5.23808	-2.19734	30.59092	5.95369	196.57	11.33
76/ 7/29	2442988.5	-28.74492	-8.56544	6.00637	1.78546	-5.23753	-2.19779	30.58943	5.95397	196.59	11.32
76/ 8/ 2	2442992.5	-28.74079	-8.57754	6.00129	1.78747	-5.23697	-2.19825	30.58795	5.95426	196.62	11.31
76/ 8/ 6	2442996.5	-28.73666	-8.58964	5.99621	1.78949	-5.23641	-2.19870	30.58647	5.95454	196.64	11.31
76/ 8/10	2443000.5	-28.73252	-8.60173	5.99113	1.79151	-5.23584	-2.19915	30.58498	5.95482	196.67	11.30
76/ 8/14	2443004.5	-28.72838	-8.61383	5.98605	1.79353	-5.23528	-2.19960	30.58350	5.95510	196.69	11.29
76/ 8/18	2443008.5	-28.72423	-8.62592	5.98097	1.79555	-5.23472	-2.20005	30.58202	5.95537	196.72	11.28
76/ 8/22	2443012.5	-28.72008	-8.63801	5.97589	1.79756	-5.23415	-2.20051	30.58054	5.95565	196.74	11.27
76/ 8/26	2443016.5	-28.71593	-8.65010	5.97080	1.79958	-5.23358	-2.20096	30.57907	5.95593	196.76	11.26
76/ 8/30	2443020.5	-28.71177	-8.66219	5.96572	1.80160	-5.23301	-2.20141	30.57759	5.95620	196.79	11.25
76/ 9/ 3	2443024.5	-28.70761	-8.67428	5.96063	1.80361	-5.23244	-2.20185	30.57612	5.95648	196.81	11.24
76/ 9/ 7	2443028.5	-28.70344	-8.68637	5.95555	1.80563	-5.23187	-2.20230	30.57464	5.95675	196.84	11.23
76/ 9/11	2443032.5	-28.69926	-8.69846	5.95046	1.80764	-5.23130	-2.20275	30.57317	5.95702	196.86	11.22
76/ 9/15	2443036.5	-28.69508	-8.71054	5.94537	1.80966	-5.23072	-2.20320	30.57170	5.95730	196.89	11.21
76/ 9/19	2443040.5	-28.69090	-8.72262	5.94028	1.81167	-5.23015	-2.20365	30.57023	5.95757	196.91	11.20
76/ 9/23	2443044.5	-28.68671	-8.73471	5.93519	1.81368	-5.22957	-2.20410	30.56876	5.95784	196.93	11.20
76/ 9/27	2443048.5	-28.68252	-8.74679	5.93009	1.81569	-5.22900	-2.20454	30.56729	5.95812	196.96	11.19
76/10/ 1	2443052.5	-28.67832	-8.75887	5.92500	1.81770	-5.22843	-2.20499	30.56582	5.95839	196.98	11.18
76/10/ 5	2443056.5	-28.67412	-8.77094	5.91991	1.81971	-5.22785	-2.20544	30.56436	5.95867	197.01	11.17
76/10/ 9	2443060.5	-28.66992	-8.78302	5.91481	1.82173	-5.22728	-2.20589	30.56289	5.95895	197.03	11.16
76/10/13	2443064.5	-28.66571	-8.79509	5.90971	1.82374	-5.22670	-2.20634	30.56143	5.95923	197.06	11.15
76/10/17	2443068.5	-28.66149	-8.80717	5.90462	1.82575	-5.22613	-2.20679	30.55997	5.95950	197.08	11.14
76/10/21	2443072.5	-28.65727	-8.81924	5.89952	1.82776	-5.22555	-2.20724	30.55851	5.95978	197.11	11.13
76/10/25	2443076.5	-28.65305	-8.83131	5.89442	1.82978	-5.22498	-2.20768	30.55705	5.96006	197.13	11.12
76/10/29	2443080.5	-28.64882	-8.84338	5.88932	1.83179	-5.22440	-2.20813	30.55559	5.96034	197.15	11.11
76/11/ 2	2443084.5	-28.64458	-8.85545	5.88422	1.83380	-5.22382	-2.20858	30.55413	5.96061	197.18	11.10
76/11/ 6	2443088.5	-28.64034	-8.86752	5.87911	1.83581	-5.22324	-2.20903	30.55268	5.96089	197.20	11.09

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HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

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76/11/10	2443092.5	-28.63610	-8.87958	5.87401	1.83782	-5.22266	-2.20947	30.55122	5.96117	197.23	11.09
76/11/14	2443096.5	-28.63185	-8.89165	5.86890	1.83983	-5.22209	-2.20992	30.54977	5.96145	197.25	11.08
76/11/18	2443100.5	-28.62760	-8.90371	5.86380	1.84184	-5.22151	-2.21037	30.54832	5.96173	197.28	11.07
76/11/22	2443104.5	-28.62334	-8.91577	5.85869	1.84385	-5.22093	-2.21082	30.54687	5.96201	197.30	11.06
76/11/26	2443108.5	-28.61908	-8.92783	5.85358	1.84586	-5.22035	-2.21126	30.54542	5.96230	197.33	11.05
76/11/30	2443112.5	-28.61481	-8.93989	5.84847	1.84787	-5.21978	-2.21171	30.54397	5.96258	197.35	11.04
76/12/ 4	2443116.5	-28.61054	-8.95195	5.84337	1.84988	-5.21920	-2.21216	30.54252	5.96287	197.37	11.03
76/12/ 8	2443120.5	-28.60627	-8.96401	5.83825	1.85189	-5.21862	-2.21261	30.54107	5.96315	197.40	11.02
76/12/12	2443124.5	-28.60199	-8.97606	5.83314	1.85391	-5.21805	-2.21306	30.53963	5.96344	197.42	11.01
76/12/16	2443128.5	-28.59770	-8.98812	5.82803	1.85592	-5.21747	-2.21351	30.53818	5.96373	197.45	11.00
76/12/20	2443132.5	-28.59341	-9.00017	5.82291	1.85793	-5.21690	-2.21396	30.53674	5.96402	197.47	10.99
76/12/24	2443136.5	-28.58912	-9.01222	5.81780	1.85994	-5.21633	-2.21441	30.53530	5.96432	197.50	10.98
76/12/28	2443140.5	-28.58482	-9.02427	5.81268	1.86196	-5.21576	-2.21486	30.53386	5.96461	197.52	10.97
77/ 1/ 1	2443144.5	-28.58051	-9.03632	5.80757	1.86398	-5.21518	-2.21531	30.53242	5.96491	197.55	10.97
77/ 1/ 5	2443148.5	-28.57621	-9.04837	5.80245	1.86600	-5.21461	-2.21576	30.53098	5.96521	197.57	10.96
77/ 1/ 9	2443152.5	-28.57189	-9.06041	5.79733	1.86802	-5.21404	-2.21622	30.52955	5.96551	197.59	10.95
77/ 1/13	2443156.5	-28.56757	-9.07246	5.79221	1.87005	-5.21347	-2.21667	30.52811	5.96582	197.62	10.94
77/ 1/17	2443160.5	-28.56325	-9.08450	5.78709	1.87208	-5.21290	-2.21712	30.52667	5.96612	197.64	10.93
77/ 1/21	2443164.5	-28.55892	-9.09654	5.78196	1.87411	-5.21232	-2.21757	30.52524	5.96642	197.67	10.92
77/ 1/25	2443168.5	-28.55459	-9.10858	5.77684	1.87614	-5.21174	-2.21802	30.52381	5.96672	197.69	10.91
77/ 1/29	2443172.5	-28.55026	-9.12062	5.77172	1.87817	-5.21117	-2.21847	30.52238	5.96703	197.72	10.90
77/ 2/ 2	2443176.5	-28.54591	-9.13266	5.76659	1.88021	-5.21059	-2.21892	30.52095	5.96733	197.74	10.89
77/ 2/ 6	2443180.5	-28.54157	-9.14470	5.76146	1.88224	-5.21001	-2.21937	30.51952	5.96763	197.77	10.88
77/ 2/10	2443184.5	-28.53722	-9.15673	5.75634	1.88428	-5.20942	-2.21982	30.51809	5.96793	197.79	10.87
77/ 2/14	2443188.5	-28.53286	-9.16877	5.75121	1.88632	-5.20884	-2.22027	30.51667	5.96824	197.81	10.86
77/ 2/18	2443192.5	-28.52850	-9.18080	5.74608	1.88836	-5.20826	-2.22072	30.51524	5.96854	197.84	10.85
77/ 2/22	2443196.5	-28.52414	-9.19283	5.74095	1.89040	-5.20767	-2.22117	30.51382	5.96884	197.86	10.84
77/ 2/26	2443200.5	-28.51977	-9.20486	5.73582	1.89245	-5.20708	-2.22161	30.51239	5.96914	197.89	10.84
77/ 3/ 2	2443204.5	-28.51539	-9.21689	5.73068	1.89449	-5.20649	-2.22206	30.51097	5.96944	197.91	10.83
77/ 3/ 6	2443208.5	-28.51102	-9.22892	5.72555	1.89654	-5.20590	-2.22251	30.50955	5.96974	197.94	10.82
77/ 3/10	2443212.5	-28.50663	-9.24094	5.72041	1.89858	-5.20530	-2.22295	30.50813	5.97003	197.96	10.81
77/ 3/14	2443216.5	-28.50224	-9.25297	5.71528	1.90063	-5.20471	-2.22339	30.50672	5.97033	197.99	10.80
77/ 3/18	2443220.5	-28.49785	-9.26499	5.71014	1.90268	-5.20411	-2.22384	30.50530	5.97063	198.01	10.79
77/ 3/22	2443224.5	-28.49345	-9.27701	5.70500	1.90472	-5.20351	-2.22428	30.50388	5.97092	198.03	10.78
77/ 3/26	2443228.5	-28.48905	-9.28903	5.69986	1.90677	-5.20291	-2.22472	30.50247	5.97122	198.06	10.77
77/ 3/30	2443232.5	-28.48464	-9.30105	5.69472	1.90882	-5.20231	-2.22517	30.50105	5.97151	198.08	10.76
77/ 4/ 3	2443236.5	-28.48023	-9.31307	5.68958	1.91087	-5.20171	-2.22561	30.49964	5.97181	198.11	10.75
77/ 4/ 7	2443240.5	-28.47581	-9.32509	5.68444	1.91292	-5.20110	-2.22605	30.49823	5.97210	198.13	10.74
77/ 4/11	2443244.5	-28.47139	-9.33710	5.67930	1.91498	-5.20049	-2.22649	30.49682	5.97240	198.16	10.73
77/ 4/15	2443248.5	-28.46697	-9.34911	5.67415	1.91703	-5.19988	-2.22693	30.49541	5.97269	198.18	10.72
77/ 4/19	2443252.5	-28.46253	-9.36113	5.66901	1.91908	-5.19927	-2.22737	30.49400	5.97297	198.21	10.71
77/ 4/23	2443256.5	-28.45810	-9.37314	5.66386	1.92114	-5.19865	-2.22780	30.49260	5.97326	198.23	10.70
77/ 4/27	2443260.5	-28.45366	-9.38515	5.65872	1.92319	-5.19803	-2.22824	30.49119	5.97354	198.25	10.70
77/ 5/ 1	2443264.5	-28.44921	-9.39715	5.65357	1.92524	-5.19741	-2.22867	30.48979	5.97382	198.28	10.69
77/ 5/ 5	2443268.5	-28.44476	-9.40916	5.64842	1.92729	-5.19679	-2.22911	30.48838	5.97411	198.30	10.68

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77/ 5/ 9	2443272.5	-28.44031	-9.42116	5.64327	1.92934	-5.19616	-2.22954	30.48698	5.97438	198.33	10.67
77/ 5/13	2443276.5	-28.43585	-9.43317	5.63812	1.93138	-5.19554	-2.22997	30.48558	5.97466	198.35	10.66
77/ 5/17	2443280.5	-28.43138	-9.44517	5.63296	1.93343	-5.19491	-2.23040	30.48418	5.97494	198.38	10.65
77/ 5/21	2443284.5	-28.42692	-9.45717	5.62781	1.93547	-5.19428	-2.23083	30.48278	5.97522	198.40	10.64
77/ 5/25	2443288.5	-28.42244	-9.46917	5.62266	1.93752	-5.19365	-2.23127	30.48138	5.97549	198.43	10.63
77/ 5/29	2443292.5	-28.41796	-9.48117	5.61750	1.93956	-5.19302	-2.23170	30.47998	5.97577	198.45	10.62
77/ 6/ 2	2443296.5	-28.41348	-9.49316	5.61235	1.94160	-5.19239	-2.23213	30.47859	5.97604	198.47	10.61
77/ 6/ 6	2443300.5	-28.40899	-9.50516	5.60719	1.94364	-5.19175	-2.23256	30.47720	5.97632	198.50	10.60
77/ 6/10	2443304.5	-28.40450	-9.51715	5.60203	1.94568	-5.19112	-2.23299	30.47580	5.97659	198.52	10.59
77/ 6/14	2443308.5	-28.40000	-9.52914	5.59687	1.94771	-5.19049	-2.23342	30.47441	5.97687	198.55	10.58
77/ 6/18	2443312.5	-28.39550	-9.54113	5.59171	1.94975	-5.18986	-2.23385	30.47302	5.97714	198.57	10.57
77/ 6/22	2443316.5	-28.39099	-9.55312	5.58655	1.95178	-5.18923	-2.23428	30.47163	5.97742	198.60	10.56
77/ 6/26	2443320.5	-28.38648	-9.56511	5.58139	1.95382	-5.18860	-2.23471	30.47024	5.97770	198.62	10.55
77/ 6/30	2443324.5	-28.38197	-9.57709	5.57623	1.95586	-5.18797	-2.23514	30.46885	5.97798	198.65	10.55
77/ 7/ 4	2443328.5	-28.37745	-9.58908	5.57106	1.95789	-5.18734	-2.23557	30.46747	5.97826	198.67	10.54
77/ 7/ 8	2443332.5	-28.37292	-9.60106	5.56590	1.95993	-5.18671	-2.23600	30.46608	5.97854	198.70	10.53
77/ 7/12	2443336.5	-28.36839	-9.61304	5.56073	1.96197	-5.18608	-2.23644	30.46470	5.97882	198.72	10.52
77/ 7/16	2443340.5	-28.36386	-9.62502	5.55556	1.96401	-5.18544	-2.23687	30.46332	5.97911	198.74	10.51
77/ 7/20	2443344.5	-28.35932	-9.63700	5.55040	1.96604	-5.18481	-2.23730	30.46194	5.97939	198.77	10.50
77/ 7/24	2443348.5	-28.35477	-9.64898	5.54523	1.96808	-5.18418	-2.23773	30.46056	5.97967	198.79	10.49
77/ 7/28	2443352.5	-28.35022	-9.66095	5.54006	1.97012	-5.18355	-2.23816	30.45918	5.97995	198.82	10.48
77/ 8/ 1	2443356.5	-28.34567	-9.67293	5.53489	1.97215	-5.18291	-2.23859	30.45780	5.98024	198.84	10.47
77/ 8/ 5	2443360.5	-28.34111	-9.68490	5.52971	1.97419	-5.18228	-2.23902	30.45642	5.98052	198.87	10.46
77/ 8/ 9	2443364.5	-28.33655	-9.69687	5.52454	1.97623	-5.18165	-2.23945	30.45505	5.98081	198.89	10.45
77/ 8/13	2443368.5	-28.33198	-9.70884	5.51937	1.97827	-5.18101	-2.23989	30.45367	5.98110	198.92	10.44
77/ 8/17	2443372.5	-28.32741	-9.72081	5.51419	1.98030	-5.18038	-2.24032	30.45230	5.98139	198.94	10.43
77/ 8/21	2443376.5	-28.32283	-9.73278	5.50902	1.98234	-5.17975	-2.24075	30.45093	5.98168	198.96	10.42
77/ 8/25	2443380.5	-28.31825	-9.74474	5.50384	1.98438	-5.17912	-2.24118	30.44956	5.98197	198.99	10.41
77/ 8/29	2443384.5	-28.31366	-9.75671	5.49866	1.98642	-5.17848	-2.24161	30.44819	5.98226	199.01	10.40
77/ 9/ 2	2443388.5	-28.30907	-9.76867	5.49348	1.98846	-5.17785	-2.24205	30.44682	5.98255	199.04	10.39
77/ 9/ 6	2443392.5	-28.30447	-9.78063	5.48830	1.99051	-5.17722	-2.24248	30.44545	5.98284	199.06	10.39
77/ 9/10	2443396.5	-28.29987	-9.79259	5.48312	1.99255	-5.17659	-2.24291	30.44408	5.98314	199.09	10.38
77/ 9/14	2443400.5	-28.29527	-9.80455	5.47794	1.99459	-5.17596	-2.24335	30.44272	5.98344	199.11	10.37
77/ 9/18	2443404.5	-28.29066	-9.81650	5.47275	1.99664	-5.17532	-2.24378	30.44136	5.98373	199.14	10.36
77/ 9/22	2443408.5	-28.28604	-9.82846	5.46757	1.99869	-5.17469	-2.24421	30.43999	5.98404	199.16	10.35
77/ 9/26	2443412.5	-28.28142	-9.84041	5.46239	2.00074	-5.17406	-2.24465	30.43863	5.98434	199.19	10.34
77/ 9/30	2443416.5	-28.27680	-9.85237	5.45720	2.00279	-5.17343	-2.24508	30.43727	5.98464	199.21	10.33
77/10/ 4	2443420.5	-28.27217	-9.86432	5.45201	2.00485	-5.17279	-2.24551	30.43591	5.98494	199.23	10.32
77/10/ 8	2443424.5	-28.26754	-9.87627	5.44682	2.00690	-5.17215	-2.24595	30.43455	5.98524	199.26	10.31
77/10/12	2443428.5	-28.26290	-9.88821	5.44164	2.00896	-5.17152	-2.24638	30.43320	5.98554	199.28	10.30
77/10/16	2443432.5	-28.25825	-9.90016	5.43645	2.01102	-5.17087	-2.24681	30.43184	5.98584	199.31	10.29
77/10/20	2443436.5	-28.25361	-9.91210	5.43125	2.01308	-5.17023	-2.24724	30.43049	5.98614	199.33	10.28
77/10/24	2443440.5	-28.24895	-9.92405	5.42606	2.01515	-5.16959	-2.24767	30.42913	5.98644	199.36	10.27
77/10/28	2443444.5	-28.24429	-9.93599	5.42087	2.01721	-5.16894	-2.24810	30.42778	5.98674	199.38	10.26
77/11/ 1	2443448.5	-28.23963	-9.94793	5.41568	2.01927	-5.16829	-2.24853	30.42643	5.98703	199.41	10.25

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77/11/ 5	2443452.5	-28.23497	-9.95987	5.41048	2.02134	-5.16764	-2.24895	30.42508	5.98733	199.43	10.24
77/11/ 9	2443456.5	-28.23029	-9.97181	5.40528	2.02340	-5.16699	-2.24938	30.42373	5.98762	199.45	10.23
77/11/13	2443460.5	-28.22562	-9.98374	5.40009	2.02546	-5.16634	-2.24981	30.42238	5.98792	199.48	10.22
77/11/17	2443464.5	-28.22093	-9.99568	5.39489	2.02753	-5.16568	-2.25023	30.42104	5.98821	199.50	10.21
77/11/21	2443468.5	-28.21625	-10.00761	5.38969	2.02959	-5.16502	-2.25066	30.41969	5.98850	199.53	10.21
77/11/25	2443472.5	-28.21156	-10.01954	5.38449	2.03166	-5.16437	-2.25108	30.41835	5.98880	199.55	10.20
77/11/29	2443476.5	-28.20686	-10.03147	5.37929	2.03372	-5.16371	-2.25150	30.41701	5.98909	199.58	10.19
77/12/ 3	2443480.5	-28.20216	-10.04340	5.37409	2.03579	-5.16304	-2.25193	30.41566	5.98938	199.60	10.18
77/12/ 7	2443484.5	-28.19746	-10.05533	5.36889	2.03785	-5.16238	-2.25235	30.41432	5.98967	199.63	10.17
77/12/11	2443488.5	-28.19275	-10.06725	5.36368	2.03991	-5.16172	-2.25277	30.41298	5.98996	199.65	10.16
77/12/15	2443492.5	-28.18803	-10.07918	5.35848	2.04198	-5.16106	-2.25319	30.41164	5.99025	199.68	10.15
77/12/19	2443496.5	-28.18331	-10.09110	5.35327	2.04404	-5.16039	-2.25362	30.41031	5.99054	199.70	10.14
77/12/23	2443500.5	-28.17859	-10.10302	5.34806	2.04611	-5.15973	-2.25404	30.40897	5.99083	199.72	10.13
77/12/27	2443504.5	-28.17386	-10.11494	5.34286	2.04818	-5.15906	-2.25446	30.40763	5.99112	199.75	10.12
77/12/31	2443508.5	-28.16912	-10.12685	5.33765	2.05024	-5.15839	-2.25488	30.40630	5.99141	199.77	10.11
78/ 1/ 4	2443512.5	-28.16438	-10.13877	5.33244	2.05231	-5.15772	-2.25530	30.40497	5.99170	199.80	10.10
78/ 1/ 8	2443516.5	-28.15964	-10.15069	5.32723	2.05438	-5.15705	-2.25572	30.40364	5.99199	199.82	10.09
78/ 1/12	2443520.5	-28.15489	-10.16260	5.32202	2.05645	-5.15638	-2.25614	30.40231	5.99227	199.85	10.08
78/ 1/16	2443524.5	-28.15014	-10.17451	5.31680	2.05851	-5.15570	-2.25656	30.40098	5.99256	199.87	10.07
78/ 1/20	2443528.5	-28.14538	-10.18642	5.31159	2.06058	-5.15503	-2.25697	30.39965	5.99285	199.90	10.06
78/ 1/24	2443532.5	-28.14062	-10.19833	5.30638	2.06265	-5.15435	-2.25739	30.39832	5.99313	199.92	10.05
78/ 1/28	2443536.5	-28.13585	-10.21023	5.30116	2.06471	-5.15367	-2.25781	30.39699	5.99342	199.95	10.04
78/ 2/ 1	2443540.5	-28.13108	-10.22214	5.29594	2.06678	-5.15299	-2.25822	30.39567	5.99370	199.97	10.03
78/ 2/ 5	2443544.5	-28.12630	-10.23404	5.29073	2.06884	-5.15231	-2.25864	30.39435	5.99399	199.99	10.02
78/ 2/ 9	2443548.5	-28.12152	-10.24594	5.28551	2.07090	-5.15163	-2.25905	30.39302	5.99427	200.02	10.01
78/ 2/13	2443552.5	-28.11673	-10.25785	5.28029	2.07297	-5.15095	-2.25947	30.39170	5.99456	200.04	10.01
78/ 2/17	2443556.5	-28.11194	-10.26974	5.27507	2.07503	-5.15027	-2.25988	30.39038	5.99484	200.07	10.00
78/ 2/21	2443560.5	-28.10715	-10.28164	5.26985	2.07710	-5.14959	-2.26030	30.38906	5.99513	200.09	9.99
78/ 2/25	2443564.5	-28.10234	-10.29354	5.26463	2.07916	-5.14891	-2.26072	30.38774	5.99541	200.12	9.98
78/ 3/ 1	2443568.5	-28.09754	-10.30543	5.25940	2.08122	-5.14823	-2.26113	30.38643	5.99570	200.14	9.97
78/ 3/ 5	2443572.5	-28.09273	-10.31732	5.25418	2.08329	-5.14754	-2.26155	30.38511	5.99599	200.17	9.96
78/ 3/ 9	2443576.5	-28.08791	-10.32921	5.24895	2.08535	-5.14686	-2.26196	30.38380	5.99628	200.19	9.95
78/ 3/13	2443580.5	-28.08309	-10.34110	5.24373	2.08742	-5.14618	-2.26238	30.38248	5.99657	200.22	9.94
78/ 3/17	2443584.5	-28.07827	-10.35299	5.23850	2.08948	-5.14550	-2.26279	30.38117	5.99686	200.24	9.93
78/ 3/21	2443588.5	-28.07344	-10.36488	5.23327	2.09155	-5.14482	-2.26321	30.37986	5.99716	200.26	9.92
78/ 3/25	2443592.5	-28.06861	-10.37676	5.22804	2.09362	-5.14414	-2.26363	30.37855	5.99745	200.29	9.91
78/ 3/29	2443596.5	-28.06377	-10.38865	5.22281	2.09570	-5.14345	-2.26404	30.37724	5.99775	200.31	9.90
78/ 4/ 2	2443600.5	-28.05892	-10.40053	5.21758	2.09777	-5.14277	-2.26446	30.37593	5.99804	200.34	9.89
78/ 4/ 6	2443604.5	-28.05407	-10.41241	5.21235	2.09985	-5.14208	-2.26487	30.37463	5.99834	200.36	9.88
78/ 4/10	2443608.5	-28.04922	-10.42429	5.20712	2.10192	-5.14139	-2.26529	30.37332	5.99863	200.39	9.87
78/ 4/14	2443612.5	-28.04436	-10.43616	5.20188	2.10400	-5.14070	-2.26570	30.37202	5.99892	200.41	9.86
78/ 4/18	2443616.5	-28.03950	-10.44804	5.19665	2.10608	-5.14001	-2.26612	30.37071	5.99922	200.44	9.85
78/ 4/22	2443620.5	-28.03463	-10.45991	5.19141	2.10816	-5.13932	-2.26653	30.36941	5.99951	200.46	9.84
78/ 4/26	2443624.5	-28.02976	-10.47178	5.18618	2.11024	-5.13863	-2.26694	30.36811	5.99980	200.49	9.83
78/ 4/30	2443628.5	-28.02488	-10.48365	5.18094	2.11232	-5.13793	-2.26735	30.36681	6.00009	200.51	9.82

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
78/ 5/ 4	2443632.5	-28.02000	-10.49552	5.17570	2.11440	-5.13723	-2.26776	30.36551	6.00038	200.53	9.81
78/ 5/ 8	2443636.5	-28.01511	-10.50739	5.17046	2.11648	-5.13653	-2.26817	30.36421	6.00068	200.56	9.80
78/ 5/12	2443640.5	-28.01022	-10.51925	5.16522	2.11857	-5.13583	-2.26858	30.36292	6.00097	200.58	9.79
78/ 5/16	2443644.5	-28.00532	-10.53112	5.15998	2.12065	-5.13513	-2.26899	30.36162	6.00126	200.61	9.78
78/ 5/20	2443648.5	-28.00042	-10.54298	5.15474	2.12273	-5.13443	-2.26940	30.36033	6.00154	200.63	9.78
78/ 5/24	2443652.5	-27.99552	-10.55484	5.14949	2.12482	-5.13372	-2.26981	30.35903	6.00183	200.66	9.77
78/ 5/28	2443656.5	-27.99060	-10.56670	5.14425	2.12690	-5.13301	-2.27022	30.35774	6.00212	200.68	9.76
78/ 6/ 1	2443660.5	-27.98569	-10.57856	5.13901	2.12899	-5.13230	-2.27062	30.35645	6.00241	200.71	9.75
78/ 6/ 5	2443664.5	-27.98077	-10.59041	5.13376	2.13107	-5.13159	-2.27103	30.35516	6.00269	200.73	9.74
78/ 6/ 9	2443668.5	-27.97584	-10.60227	5.12851	2.13316	-5.13088	-2.27144	30.35387	6.00298	200.76	9.73
78/ 6/13	2443672.5	-27.97091	-10.61412	5.12326	2.13525	-5.13017	-2.27184	30.35258	6.00326	200.78	9.72
78/ 6/17	2443676.5	-27.96598	-10.62597	5.11802	2.13733	-5.12946	-2.27225	30.35130	6.00355	200.80	9.71
78/ 6/21	2443680.5	-27.96104	-10.63782	5.11277	2.13942	-5.12874	-2.27265	30.35001	6.00384	200.83	9.70
78/ 6/25	2443684.5	-27.95609	-10.64967	5.10752	2.14151	-5.12802	-2.27306	30.34873	6.00412	200.85	9.69
78/ 6/29	2443688.5	-27.95114	-10.66151	5.10226	2.14361	-5.12729	-2.27346	30.34744	6.00440	200.88	9.68
78/ 7/ 3	2443692.5	-27.94619	-10.67336	5.09701	2.14570	-5.12657	-2.27386	30.34616	6.00468	200.90	9.67
78/ 7/ 7	2443696.5	-27.94123	-10.68520	5.09176	2.14779	-5.12584	-2.27426	30.34488	6.00495	200.93	9.66
78/ 7/11	2443700.5	-27.93626	-10.69704	5.08650	2.14987	-5.12511	-2.27466	30.34360	6.00523	200.95	9.65
78/ 7/15	2443704.5	-27.93130	-10.70888	5.08125	2.15196	-5.12438	-2.27506	30.34232	6.00550	200.98	9.64
78/ 7/19	2443708.5	-27.92632	-10.72072	5.07599	2.15405	-5.12364	-2.27545	30.34104	6.00577	201.00	9.63
78/ 7/23	2443712.5	-27.92134	-10.73255	5.07073	2.15613	-5.12291	-2.27585	30.33977	6.00604	201.03	9.62
78/ 7/27	2443716.5	-27.91636	-10.74439	5.06548	2.15822	-5.12217	-2.27624	30.33849	6.00631	201.05	9.61
78/ 7/31	2443720.5	-27.91137	-10.75622	5.06022	2.16030	-5.12143	-2.27664	30.33722	6.00658	201.08	9.60
78/ 8/ 4	2443724.5	-27.90638	-10.76805	5.05496	2.16238	-5.12069	-2.27703	30.33594	6.00685	201.10	9.59
78/ 8/ 8	2443728.5	-27.90138	-10.77988	5.04970	2.16446	-5.11994	-2.27743	30.33467	6.00711	201.12	9.58
78/ 8/12	2443732.5	-27.89638	-10.79170	5.04444	2.16654	-5.11920	-2.27782	30.33340	6.00738	201.15	9.57
78/ 8/16	2443736.5	-27.89137	-10.80353	5.03917	2.16862	-5.11846	-2.27821	30.33213	6.00764	201.17	9.56
78/ 8/20	2443740.5	-27.88636	-10.81535	5.03391	2.17069	-5.11771	-2.27861	30.33086	6.00791	201.20	9.55
78/ 8/24	2443744.5	-27.88134	-10.82718	5.02864	2.17277	-5.11697	-2.27900	30.32959	6.00817	201.22	9.54
78/ 8/28	2443748.5	-27.87632	-10.83900	5.02338	2.17484	-5.11622	-2.27939	30.32833	6.00844	201.25	9.53
78/ 9/ 1	2443752.5	-27.87129	-10.85081	5.01811	2.17691	-5.11548	-2.27978	30.32706	6.00870	201.27	9.52
78/ 9/ 5	2443756.5	-27.86626	-10.86263	5.01285	2.17898	-5.11474	-2.28018	30.32580	6.00897	201.30	9.51
78/ 9/ 9	2443760.5	-27.86122	-10.87445	5.00758	2.18105	-5.11399	-2.28057	30.32453	6.00924	201.32	9.50
78/ 9/13	2443764.5	-27.85618	-10.88626	5.00231	2.18312	-5.11325	-2.28096	30.32327	6.00951	201.35	9.50
78/ 9/17	2443768.5	-27.85114	-10.89807	4.99704	2.18520	-5.11251	-2.28136	30.32201	6.00978	201.37	9.49
78/ 9/21	2443772.5	-27.84609	-10.90988	4.99177	2.18727	-5.11176	-2.28175	30.32075	6.01005	201.39	9.48
78/ 9/25	2443776.5	-27.84103	-10.92169	4.98650	2.18934	-5.11102	-2.28215	30.31949	6.01032	201.42	9.47
78/ 9/29	2443780.5	-27.83597	-10.93350	4.98122	2.19142	-5.11027	-2.28254	30.31823	6.01059	201.44	9.46
78/10/ 3	2443784.5	-27.83091	-10.94530	4.97595	2.19349	-5.10952	-2.28293	30.31698	6.01086	201.47	9.45
78/10/ 7	2443788.5	-27.82584	-10.95710	4.97068	2.19556	-5.10878	-2.28332	30.31572	6.01113	201.49	9.44
78/10/11	2443792.5	-27.82076	-10.96891	4.96540	2.19763	-5.10803	-2.28372	30.31447	6.01140	201.52	9.43
78/10/15	2443796.5	-27.81568	-10.98070	4.96012	2.19971	-5.10728	-2.28411	30.31321	6.01167	201.54	9.42
78/10/19	2443800.5	-27.81060	-10.99250	4.95485	2.20178	-5.10654	-2.28450	30.31196	6.01195	201.57	9.41
78/10/23	2443804.5	-27.80551	-11.00430	4.94957	2.20385	-5.10579	-2.28490	30.31071	6.01222	201.59	9.40
78/10/27	2443808.5	-27.80042	-11.01609	4.94429	2.20592	-5.10505	-2.28529	30.30946	6.01250	201.62	9.39

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
78/10/31	2443812.5	-27.79532	-11.02789	4.93901	2.20800	-5.10430	-2.28568	30.30821	6.01278	201.64	9.38
78/11/ 4	2443816.5	-27.79021	-11.03968	4.93373	2.21007	-5.10355	-2.28608	30.30697	6.01305	201.67	9.37
78/11/ 8	2443820.5	-27.78511	-11.05147	4.92845	2.21215	-5.10281	-2.28647	30.30572	6.01333	201.69	9.36
78/11/12	2443824.5	-27.77999	-11.06325	4.92317	2.21422	-5.10206	-2.28686	30.30447	6.01361	201.71	9.35
78/11/16	2443828.5	-27.77488	-11.07504	4.91788	2.21630	-5.10131	-2.28726	30.30323	6.01389	201.74	9.34
78/11/20	2443832.5	-27.76975	-11.08682	4.91260	2.21838	-5.10056	-2.28765	30.30199	6.01418	201.76	9.33
78/11/24	2443836.5	-27.76463	-11.09861	4.90731	2.22046	-5.09982	-2.28804	30.30075	6.01446	201.79	9.32
78/11/28	2443840.5	-27.75949	-11.11039	4.90203	2.22254	-5.09907	-2.28844	30.29951	6.01474	201.81	9.31
78/12/ 2	2443844.5	-27.75436	-11.12217	4.89674	2.22462	-5.09832	-2.28883	30.29827	6.01503	201.84	9.30
78/12/ 6	2443848.5	-27.74922	-11.13394	4.89145	2.22671	-5.09758	-2.28923	30.29703	6.01532	201.86	9.29
78/12/10	2443852.5	-27.74407	-11.14572	4.88616	2.22879	-5.09683	-2.28962	30.29579	6.01561	201.89	9.28
78/12/14	2443856.5	-27.73892	-11.15749	4.88087	2.23088	-5.09608	-2.29002	30.29456	6.01590	201.91	9.27
78/12/18	2443860.5	-27.73376	-11.16926	4.87558	2.23298	-5.09533	-2.29041	30.29332	6.01619	201.94	9.26
78/12/22	2443864.5	-27.72860	-11.18103	4.87029	2.23507	-5.09458	-2.29080	30.29209	6.01648	201.96	9.25
78/12/26	2443868.5	-27.72344	-11.19280	4.86500	2.23717	-5.09382	-2.29120	30.29085	6.01677	201.99	9.24
78/12/30	2443872.5	-27.71826	-11.20457	4.85970	2.23927	-5.09306	-2.29159	30.28962	6.01706	202.01	9.23
79/ 1/ 3	2443876.5	-27.71309	-11.21633	4.85441	2.24137	-5.09230	-2.29198	30.28839	6.01735	202.03	9.22
79/ 1/ 7	2443880.5	-27.70791	-11.22810	4.84911	2.24347	-5.09154	-2.29236	30.28716	6.01763	202.06	9.21
79/ 1/11	2443884.5	-27.70272	-11.23986	4.84382	2.24557	-5.09078	-2.29275	30.28593	6.01792	202.08	9.20
79/ 1/15	2443888.5	-27.69753	-11.25162	4.83852	2.24768	-5.09001	-2.29314	30.28471	6.01820	202.11	9.19
79/ 1/19	2443892.5	-27.69234	-11.26338	4.83322	2.24978	-5.08924	-2.29353	30.28348	6.01848	202.13	9.18
79/ 1/23	2443896.5	-27.68714	-11.27513	4.82792	2.25188	-5.08847	-2.29391	30.28226	6.01876	202.16	9.17
79/ 1/27	2443900.5	-27.68193	-11.28689	4.82262	2.25399	-5.08769	-2.29429	30.28103	6.01904	202.18	9.16
79/ 1/31	2443904.5	-27.67672	-11.29864	4.81732	2.25609	-5.08691	-2.29468	30.27981	6.01932	202.21	9.15
79/ 2/ 4	2443908.5	-27.67151	-11.31039	4.81202	2.25820	-5.08613	-2.29506	30.27859	6.01959	202.23	9.14
79/ 2/ 8	2443912.5	-27.66629	-11.32214	4.80672	2.26030	-5.08535	-2.29544	30.27737	6.01987	202.26	9.13
79/ 2/12	2443916.5	-27.66107	-11.33389	4.80142	2.26241	-5.08457	-2.29582	30.27615	6.02014	202.28	9.12
79/ 2/16	2443920.5	-27.65584	-11.34563	4.79611	2.26451	-5.08378	-2.29620	30.27493	6.02041	202.31	9.12
79/ 2/20	2443924.5	-27.65060	-11.35738	4.79081	2.26662	-5.08299	-2.29658	30.27371	6.02068	202.33	9.11
79/ 2/24	2443928.5	-27.64536	-11.36912	4.78550	2.26872	-5.08220	-2.29696	30.27250	6.02095	202.35	9.10
79/ 2/28	2443932.5	-27.64012	-11.38086	4.78019	2.27082	-5.08141	-2.29733	30.27128	6.02122	202.38	9.09
79/ 3/ 4	2443936.5	-27.63487	-11.39259	4.77489	2.27293	-5.08062	-2.29771	30.27007	6.02149	202.40	9.08
79/ 3/ 8	2443940.5	-27.62962	-11.40433	4.76958	2.27503	-5.07983	-2.29809	30.26885	6.02176	202.43	9.07
79/ 3/12	2443944.5	-27.62436	-11.41607	4.76427	2.27714	-5.07903	-2.29846	30.26764	6.02203	202.45	9.06
79/ 3/16	2443948.5	-27.61910	-11.42780	4.75896	2.27924	-5.07823	-2.29884	30.26643	6.02229	202.48	9.05
79/ 3/20	2443952.5	-27.61383	-11.43953	4.75365	2.28135	-5.07743	-2.29921	30.26522	6.02256	202.50	9.04
79/ 3/24	2443956.5	-27.60856	-11.45126	4.74833	2.28345	-5.07662	-2.29958	30.26401	6.02282	202.53	9.03
79/ 3/28	2443960.5	-27.60328	-11.46298	4.74302	2.28555	-5.07582	-2.29995	30.26280	6.02308	202.55	9.02
79/ 4/ 1	2443964.5	-27.59800	-11.47471	4.73771	2.28766	-5.07501	-2.30032	30.26160	6.02333	202.58	9.01
79/ 4/ 5	2443968.5	-27.59271	-11.48643	4.73239	2.28976	-5.07420	-2.30069	30.26039	6.02359	202.60	9.00
79/ 4/ 9	2443972.5	-27.58742	-11.49815	4.72708	2.29185	-5.07338	-2.30106	30.25919	6.02384	202.63	8.99
79/ 4/13	2443976.5	-27.58212	-11.50987	4.72176	2.29395	-5.07257	-2.30143	30.25798	6.02410	202.65	8.98
79/ 4/17	2443980.5	-27.57682	-11.52159	4.71644	2.29605	-5.07176	-2.30179	30.25678	6.02435	202.68	8.97
79/ 4/21	2443984.5	-27.57151	-11.53331	4.71113	2.29814	-5.07094	-2.30216	30.25558	6.02460	202.70	8.96
79/ 4/25	2443988.5	-27.56620	-11.54502	4.70581	2.30024	-5.07012	-2.30253	30.25438	6.02485	202.72	8.95

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
79/ 4/29	2443992.5	-27.56088	-11.55673	4.70049	2.30233	-5.06930	-2.30289	30.25318	6.02510	202.75	8.94
79/ 5/ 3	2443996.5	-27.55556	-11.56844	4.69517	2.30442	-5.06849	-2.30326	30.25198	6.02536	202.77	8.93
79/ 5/ 7	2444000.5	-27.55024	-11.58015	4.68985	2.30651	-5.06767	-2.30362	30.25079	6.02561	202.80	8.92
79/ 5/11	2444004.5	-27.54491	-11.59186	4.68452	2.30860	-5.06685	-2.30399	30.24959	6.02586	202.82	8.91
79/ 5/15	2444008.5	-27.53957	-11.60356	4.67920	2.31069	-5.06603	-2.30435	30.24840	6.02611	202.85	8.90
79/ 5/19	2444012.5	-27.53423	-11.61526	4.67388	2.31278	-5.06521	-2.30472	30.24720	6.02636	202.87	8.89
79/ 5/23	2444016.5	-27.52889	-11.62696	4.66855	2.31486	-5.06439	-2.30509	30.24601	6.02661	202.90	8.88
79/ 5/27	2444020.5	-27.52354	-11.63866	4.66323	2.31695	-5.06357	-2.30545	30.24482	6.02687	202.92	8.87
79/ 5/31	2444024.5	-27.51818	-11.65036	4.65790	2.31904	-5.06275	-2.30582	30.24363	6.02712	202.95	8.86
79/ 6/ 4	2444028.5	-27.51282	-11.66205	4.65257	2.32112	-5.06193	-2.30619	30.24244	6.02738	202.97	8.85
79/ 6/ 8	2444032.5	-27.50746	-11.67375	4.64724	2.32321	-5.06111	-2.30655	30.24125	6.02764	203.00	8.84
79/ 6/12	2444036.5	-27.50209	-11.68544	4.64192	2.32531	-5.06029	-2.30692	30.24007	6.02789	203.02	8.83
79/ 6/16	2444040.5	-27.49671	-11.69713	4.63659	2.32740	-5.05947	-2.30728	30.23888	6.02815	203.04	8.82
79/ 6/20	2444044.5	-27.49133	-11.70882	4.63126	2.32949	-5.05865	-2.30765	30.23770	6.02841	203.07	8.81
79/ 6/24	2444048.5	-27.48595	-11.72050	4.62592	2.33158	-5.05783	-2.30802	30.23651	6.02867	203.09	8.80
79/ 6/28	2444052.5	-27.48056	-11.73218	4.62059	2.33367	-5.05700	-2.30838	30.23533	6.02892	203.12	8.79
79/ 7/ 2	2444056.5	-27.47517	-11.74387	4.61526	2.33577	-5.05617	-2.30874	30.23415	6.02918	203.14	8.78
79/ 7/ 6	2444060.5	-27.46977	-11.75555	4.60992	2.33786	-5.05535	-2.30911	30.23297	6.02944	203.17	8.77
79/ 7/10	2444064.5	-27.46436	-11.76722	4.60459	2.33995	-5.05452	-2.30947	30.23179	6.02969	203.19	8.76
79/ 7/14	2444068.5	-27.45896	-11.77890	4.59925	2.34205	-5.05369	-2.30983	30.23061	6.02995	203.22	8.75
79/ 7/18	2444072.5	-27.45354	-11.79057	4.59392	2.34414	-5.05286	-2.31020	30.22943	6.03021	203.24	8.74
79/ 7/22	2444076.5	-27.44813	-11.80225	4.58858	2.34624	-5.05203	-2.31056	30.22826	6.03047	203.27	8.73
79/ 7/26	2444080.5	-27.44270	-11.81392	4.58324	2.34833	-5.05120	-2.31092	30.22708	6.03072	203.29	8.72
79/ 7/30	2444084.5	-27.43728	-11.82558	4.57790	2.35043	-5.05036	-2.31128	30.22591	6.03098	203.32	8.71
79/ 8/ 3	2444088.5	-27.43184	-11.83725	4.57256	2.35252	-5.04953	-2.31165	30.22474	6.03124	203.34	8.70
79/ 8/ 7	2444092.5	-27.42641	-11.84891	4.56722	2.35462	-5.04869	-2.31201	30.22357	6.03149	203.37	8.69
79/ 8/11	2444096.5	-27.42096	-11.86058	4.56188	2.35672	-5.04785	-2.31237	30.22240	6.03175	203.39	8.68
79/ 8/15	2444100.5	-27.41552	-11.87224	4.55654	2.35881	-5.04702	-2.31273	30.22123	6.03200	203.41	8.67
79/ 8/19	2444104.5	-27.41007	-11.88390	4.55119	2.36091	-5.04618	-2.31309	30.22006	6.03226	203.44	8.66
79/ 8/23	2444108.5	-27.40461	-11.89555	4.54585	2.36301	-5.04534	-2.31345	30.21889	6.03252	203.46	8.65
79/ 8/27	2444112.5	-27.39915	-11.90721	4.54051	2.36511	-5.04450	-2.31381	30.21773	6.03278	203.49	8.64
79/ 8/31	2444116.5	-27.39368	-11.91886	4.53516	2.36721	-5.04365	-2.31417	30.21656	6.03303	203.51	8.63
79/ 9/ 4	2444120.5	-27.38821	-11.93051	4.52981	2.36931	-5.04281	-2.31452	30.21540	6.03329	203.54	8.62
79/ 9/ 8	2444124.5	-27.38273	-11.94216	4.52447	2.37142	-5.04196	-2.31488	30.21424	6.03355	203.56	8.61
79/ 9/12	2444128.5	-27.37725	-11.95381	4.51912	2.37352	-5.04111	-2.31524	30.21307	6.03380	203.59	8.60
79/ 9/16	2444132.5	-27.37177	-11.96545	4.51377	2.37562	-5.04026	-2.31559	30.21191	6.03405	203.61	8.59
79/ 9/20	2444136.5	-27.36628	-11.97709	4.50842	2.37773	-5.03940	-2.31595	30.21076	6.03430	203.64	8.58
79/ 9/24	2444140.5	-27.36078	-11.98873	4.50307	2.37983	-5.03855	-2.31630	30.20960	6.03455	203.66	8.57
79/ 9/28	2444144.5	-27.35528	-12.00037	4.49772	2.38193	-5.03769	-2.31665	30.20844	6.03480	203.69	8.56
79/10/ 2	2444148.5	-27.34978	-12.01201	4.49236	2.38404	-5.03683	-2.31700	30.20728	6.03504	203.71	8.55
79/10/ 6	2444152.5	-27.34427	-12.02365	4.48701	2.38614	-5.03596	-2.31735	30.20613	6.03529	203.74	8.54
79/10/10	2444156.5	-27.33875	-12.03528	4.48166	2.38824	-5.03510	-2.31770	30.20498	6.03553	203.76	8.53
79/10/14	2444160.5	-27.33323	-12.04691	4.47630	2.39034	-5.03423	-2.31805	30.20382	6.03577	203.79	8.52
79/10/18	2444164.5	-27.32771	-12.05854	4.47095	2.39243	-5.03336	-2.31840	30.20267	6.03601	203.81	8.51
79/10/22	2444168.5	-27.32218	-12.07017	4.46559	2.39453	-5.03249	-2.31875	30.20152	6.03625	203.83	8.50

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79/10/26	2444172.5	-27.31664	-12.08179	4.46023	2.39663	-5.03162	-2.31909	30.20037	6.03649	203.86	8.49
79/10/30	2444176.5	-27.31110	-12.09341	4.45488	2.39872	-5.03075	-2.31944	30.19922	6.03673	203.88	8.48
79/11/ 3	2444180.5	-27.30556	-12.10503	4.44952	2.40082	-5.02988	-2.31979	30.19807	6.03697	203.91	8.47
79/11/ 7	2444184.5	-27.30001	-12.11665	4.44416	2.40291	-5.02900	-2.32013	30.19693	6.03721	203.93	8.46
79/11/11	2444188.5	-27.29446	-12.12827	4.43880	2.40500	-5.02813	-2.32048	30.19578	6.03744	203.96	8.45
79/11/15	2444192.5	-27.28890	-12.13988	4.43344	2.40709	-5.02726	-2.32082	30.19464	6.03768	203.98	8.44
79/11/19	2444196.5	-27.28334	-12.15150	4.42807	2.40918	-5.02638	-2.32117	30.19350	6.03792	204.01	8.43
79/11/23	2444200.5	-27.27777	-12.16311	4.42271	2.41127	-5.02551	-2.32151	30.19235	6.03816	204.03	8.42
79/11/27	2444204.5	-27.27220	-12.17472	4.41735	2.41336	-5.02463	-2.32186	30.19121	6.03840	204.06	8.41
79/12/ 1	2444208.5	-27.26662	-12.18632	4.41198	2.41545	-5.02376	-2.32221	30.19007	6.03864	204.08	8.40
79/12/ 5	2444212.5	-27.26104	-12.19793	4.40662	2.41755	-5.02288	-2.32255	30.18894	6.03889	204.11	8.39
79/12/ 9	2444216.5	-27.25545	-12.20953	4.40125	2.41964	-5.02201	-2.32290	30.18780	6.03913	204.13	8.38
79/12/13	2444220.5	-27.24986	-12.22113	4.39589	2.42173	-5.02113	-2.32324	30.18666	6.03937	204.16	8.37
79/12/17	2444224.5	-27.24426	-12.23273	4.39052	2.42382	-5.02025	-2.32358	30.18553	6.03961	204.18	8.36
79/12/21	2444228.5	-27.23866	-12.24433	4.38515	2.42591	-5.01937	-2.32393	30.18439	6.03985	204.20	8.35
79/12/25	2444232.5	-27.23305	-12.25592	4.37978	2.42800	-5.01849	-2.32427	30.18326	6.04009	204.23	8.34
79/12/29	2444236.5	-27.22744	-12.26751	4.37441	2.43010	-5.01760	-2.32461	30.18213	6.04033	204.25	8.33
80/ 1/ 2	2444240.5	-27.22182	-12.27911	4.36904	2.43219	-5.01672	-2.32496	30.18100	6.04057	204.28	8.32
80/ 1/ 6	2444244.5	-27.21620	-12.29069	4.36367	2.43428	-5.01584	-2.32530	30.17987	6.04081	204.30	8.31
80/ 1/10	2444248.5	-27.21058	-12.30228	4.35830	2.43637	-5.01496	-2.32564	30.17874	6.04105	204.33	8.30
80/ 1/14	2444252.5	-27.20494	-12.31386	4.35292	2.43846	-5.01407	-2.32598	30.17761	6.04129	204.35	8.29
80/ 1/18	2444256.5	-27.19931	-12.32545	4.34755	2.44055	-5.01319	-2.32632	30.17648	6.04153	204.38	8.28
80/ 1/22	2444260.5	-27.19367	-12.33703	4.34218	2.44264	-5.01230	-2.32667	30.17536	6.04178	204.40	8.27
80/ 1/26	2444264.5	-27.18802	-12.34861	4.33680	2.44474	-5.01142	-2.32701	30.17424	6.04202	204.43	8.26
80/ 1/30	2444268.5	-27.18237	-12.36018	4.33142	2.44683	-5.01053	-2.32735	30.17311	6.04227	204.45	8.25
80/ 2/ 3	2444272.5	-27.17672	-12.37176	4.32605	2.44892	-5.00965	-2.32769	30.17199	6.04251	204.48	8.24
80/ 2/ 7	2444276.5	-27.17106	-12.38333	4.32067	2.45102	-5.00876	-2.32803	30.17087	6.04276	204.50	8.23
80/ 2/11	2444280.5	-27.16539	-12.39490	4.31529	2.45311	-5.00787	-2.32837	30.16975	6.04300	204.53	8.22
80/ 2/15	2444284.5	-27.15972	-12.40647	4.30991	2.45521	-5.00699	-2.32872	30.16863	6.04325	204.55	8.21
80/ 2/19	2444288.5	-27.15405	-12.41803	4.30453	2.45731	-5.00610	-2.32906	30.16751	6.04350	204.58	8.20
80/ 2/23	2444292.5	-27.14837	-12.42960	4.29915	2.45941	-5.00521	-2.32940	30.16640	6.04375	204.60	8.19
80/ 2/27	2444296.5	-27.14269	-12.44116	4.29377	2.46151	-5.00432	-2.32974	30.16528	6.04400	204.62	8.18
80/ 3/ 2	2444300.5	-27.13700	-12.45272	4.28839	2.46362	-5.00343	-2.33008	30.16417	6.04425	204.65	8.17
80/ 3/ 6	2444304.5	-27.13130	-12.46428	4.28300	2.46573	-5.00253	-2.33042	30.16305	6.04450	204.67	8.16
80/ 3/10	2444308.5	-27.12560	-12.47583	4.27762	2.46784	-5.00163	-2.33076	30.16194	6.04475	204.70	8.15
80/ 3/14	2444312.5	-27.11990	-12.48738	4.27223	2.46995	-5.00073	-2.33109	30.16083	6.04499	204.72	8.14
80/ 3/18	2444316.5	-27.11419	-12.49894	4.26685	2.47206	-4.99983	-2.33143	30.15972	6.04524	204.75	8.13
80/ 3/22	2444320.5	-27.10848	-12.51049	4.26146	2.47417	-4.99892	-2.33176	30.15861	6.04548	204.77	8.12
80/ 3/26	2444324.5	-27.10276	-12.52203	4.25607	2.47628	-4.99801	-2.33210	30.15751	6.04572	204.80	8.11
80/ 3/30	2444328.5	-27.09704	-12.53358	4.25069	2.47839	-4.99710	-2.33243	30.15640	6.04596	204.82	8.10
80/ 4/ 3	2444332.5	-27.09131	-12.54512	4.24530	2.48050	-4.99619	-2.33276	30.15529	6.04620	204.85	8.09
80/ 4/ 7	2444336.5	-27.08558	-12.55666	4.23991	2.48261	-4.99527	-2.33309	30.15419	6.04644	204.87	8.08
80/ 4/11	2444340.5	-27.07984	-12.56820	4.23452	2.48472	-4.99436	-2.33342	30.15308	6.04668	204.90	8.07
80/ 4/15	2444344.5	-27.07410	-12.57974	4.22913	2.48684	-4.99344	-2.33375	30.15198	6.04691	204.92	8.06
80/ 4/19	2444348.5	-27.06835	-12.59127	4.22374	2.48895	-4.99251	-2.33408	30.15088	6.04714	204.95	8.05

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80/ 4/23	2444352.5	-27.06260	-12.60281	4.21834	2.49106	-4.99159	-2.33440	30.14978	6.04737	204.97	8.04
80/ 4/27	2444356.5	-27.05684	-12.61434	4.21295	2.49317	-4.99066	-2.33473	30.14868	6.04760	205.00	8.03
80/ 5/ 1	2444360.5	-27.05108	-12.62586	4.20756	2.49528	-4.98973	-2.33505	30.14758	6.04783	205.02	8.02
80/ 5/ 5	2444364.5	-27.04531	-12.63739	4.20216	2.49739	-4.98879	-2.33538	30.14649	6.04805	205.05	8.01
80/ 5/ 9	2444368.5	-27.03954	-12.64891	4.19677	2.49949	-4.98786	-2.33570	30.14539	6.04828	205.07	8.00
80/ 5/13	2444372.5	-27.03376	-12.66044	4.19137	2.50160	-4.98692	-2.33602	30.14429	6.04850	205.09	7.99
80/ 5/17	2444376.5	-27.02798	-12.67196	4.18597	2.50370	-4.98599	-2.33634	30.14320	6.04873	205.12	7.98
80/ 5/21	2444380.5	-27.02219	-12.68347	4.18057	2.50581	-4.98505	-2.33666	30.14211	6.04895	205.14	7.97
80/ 5/25	2444384.5	-27.01640	-12.69499	4.17518	2.50792	-4.98410	-2.33699	30.14102	6.04917	205.17	7.96
80/ 5/29	2444388.5	-27.01061	-12.70650	4.16978	2.51002	-4.98316	-2.33730	30.13993	6.04939	205.19	7.95
80/ 6/ 2	2444392.5	-27.00481	-12.71801	4.16438	2.51213	-4.98221	-2.33762	30.13884	6.04960	205.22	7.94
80/ 6/ 6	2444396.5	-26.99900	-12.72952	4.15898	2.51423	-4.98126	-2.33794	30.13775	6.04982	205.24	7.93
80/ 6/10	2444400.5	-26.99319	-12.74103	4.15358	2.51634	-4.98031	-2.33825	30.13666	6.05003	205.27	7.92
80/ 6/14	2444404.5	-26.98737	-12.75253	4.14817	2.51844	-4.97936	-2.33857	30.13557	6.05024	205.29	7.91
80/ 6/18	2444408.5	-26.98155	-12.76403	4.14277	2.52053	-4.97840	-2.33888	30.13449	6.05045	205.32	7.90
80/ 6/22	2444412.5	-26.97573	-12.77553	4.13737	2.52263	-4.97744	-2.33919	30.13340	6.05065	205.34	7.89
80/ 6/26	2444416.5	-26.96990	-12.78703	4.13196	2.52472	-4.97648	-2.33951	30.13232	6.05086	205.37	7.88
80/ 6/30	2444420.5	-26.96406	-12.79853	4.12656	2.52682	-4.97552	-2.33982	30.13124	6.05106	205.39	7.87
80/ 7/ 4	2444424.5	-26.95822	-12.81002	4.12115	2.52891	-4.97456	-2.34013	30.13016	6.05127	205.42	7.86
80/ 7/ 8	2444428.5	-26.95238	-12.82151	4.11574	2.53100	-4.97360	-2.34044	30.12908	6.05147	205.44	7.85
80/ 7/12	2444432.5	-26.94653	-12.83300	4.11034	2.53308	-4.97264	-2.34075	30.12800	6.05167	205.47	7.84
80/ 7/16	2444436.5	-26.94067	-12.84449	4.10493	2.53517	-4.97167	-2.34106	30.12692	6.05188	205.49	7.83
80/ 7/20	2444440.5	-26.93482	-12.85597	4.09952	2.53725	-4.97071	-2.34137	30.12584	6.05208	205.52	7.82
80/ 7/24	2444444.5	-26.92895	-12.86745	4.09411	2.53933	-4.96975	-2.34168	30.12477	6.05228	205.54	7.81
80/ 7/28	2444448.5	-26.92308	-12.87893	4.08870	2.54142	-4.96878	-2.34199	30.12369	6.05248	205.56	7.80
80/ 8/ 1	2444452.5	-26.91721	-12.89041	4.08329	2.54349	-4.96782	-2.34230	30.12262	6.05268	205.59	7.79
80/ 8/ 5	2444456.5	-26.91133	-12.90189	4.07788	2.54557	-4.96686	-2.34261	30.12154	6.05289	205.61	7.78
80/ 8/ 9	2444460.5	-26.90545	-12.91336	4.07247	2.54765	-4.96590	-2.34292	30.12047	6.05309	205.64	7.77
80/ 8/13	2444464.5	-26.89956	-12.92483	4.06705	2.54973	-4.96493	-2.34324	30.11940	6.05330	205.66	7.76
80/ 8/17	2444468.5	-26.89367	-12.93630	4.06164	2.55181	-4.96397	-2.34355	30.11833	6.05351	205.69	7.75
80/ 8/21	2444472.5	-26.88777	-12.94776	4.05623	2.55389	-4.96301	-2.34386	30.11727	6.05372	205.71	7.74
80/ 8/25	2444476.5	-26.88187	-12.95923	4.05081	2.55597	-4.96205	-2.34417	30.11620	6.05393	205.74	7.73
80/ 8/29	2444480.5	-26.87596	-12.97069	4.04540	2.55805	-4.96109	-2.34448	30.11513	6.05414	205.76	7.72
80/ 9/ 2	2444484.5	-26.87005	-12.98215	4.03998	2.56013	-4.96012	-2.34479	30.11407	6.05435	205.79	7.71
80/ 9/ 6	2444488.5	-26.86413	-12.99361	4.03456	2.56221	-4.95916	-2.34510	30.11301	6.05456	205.81	7.70
80/ 9/10	2444492.5	-26.85821	-13.00506	4.02914	2.56429	-4.95819	-2.34542	30.11194	6.05477	205.84	7.69
80/ 9/14	2444496.5	-26.85228	-13.01652	4.02373	2.56637	-4.95723	-2.34573	30.11088	6.05498	205.86	7.68
80/ 9/18	2444500.5	-26.84635	-13.02797	4.01831	2.56845	-4.95626	-2.34604	30.10982	6.05519	205.89	7.67
80/ 9/22	2444504.5	-26.84042	-13.03942	4.01289	2.57053	-4.95530	-2.34635	30.10876	6.05540	205.91	7.66
80/ 9/26	2444508.5	-26.83448	-13.05086	4.00746	2.57261	-4.95433	-2.34666	30.10770	6.05562	205.94	7.65
80/ 9/30	2444512.5	-26.82853	-13.06231	4.00204	2.57469	-4.95336	-2.34697	30.10665	6.05583	205.96	7.64
80/10/ 4	2444516.5	-26.82258	-13.07375	3.99662	2.57677	-4.95239	-2.34728	30.10559	6.05604	205.99	7.63
80/10/ 8	2444520.5	-26.81662	-13.08519	3.99120	2.57886	-4.95142	-2.34758	30.10454	6.05626	206.01	7.62
80/10/12	2444524.5	-26.81066	-13.09663	3.98577	2.58094	-4.95046	-2.34789	30.10348	6.05647	206.03	7.61
80/10/16	2444528.5	-26.80470	-13.10806	3.98035	2.58303	-4.94948	-2.34820	30.10243	6.05669	206.06	7.60

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
80/10/20	2444532.5	-26.79873	-13.11950	3.97492	2.58511	-4.94851	-2.34851	30.10138	6.05690	206.08	7.59
80/10/24	2444536.5	-26.79276	-13.13093	3.96950	2.58720	-4.94754	-2.34882	30.10033	6.05712	206.11	7.58
80/10/28	2444540.5	-26.78678	-13.14235	3.96407	2.58928	-4.94657	-2.34913	30.09928	6.05733	206.13	7.57
80/11/ 1	2444544.5	-26.78079	-13.15378	3.95865	2.59137	-4.94559	-2.34944	30.09823	6.05755	206.16	7.56
80/11/ 5	2444548.5	-26.77480	-13.16521	3.95322	2.59346	-4.94462	-2.34974	30.09719	6.05777	206.18	7.55
80/11/ 9	2444552.5	-26.76881	-13.17663	3.94779	2.59554	-4.94364	-2.35005	30.09614	6.05799	206.21	7.54
80/11/13	2444556.5	-26.76281	-13.18805	3.94236	2.59764	-4.94267	-2.35036	30.09510	6.05821	206.23	7.53
80/11/17	2444560.5	-26.75681	-13.19946	3.93693	2.59973	-4.94169	-2.35067	30.09405	6.05843	206.26	7.52
80/11/21	2444564.5	-26.75080	-13.21088	3.93150	2.60183	-4.94071	-2.35097	30.09301	6.05864	206.28	7.51
80/11/25	2444568.5	-26.74479	-13.22229	3.92607	2.60392	-4.93972	-2.35128	30.09197	6.05886	206.31	7.50
80/11/29	2444572.5	-26.73877	-13.23370	3.92063	2.60602	-4.93874	-2.35158	30.09093	6.05907	206.33	7.49
80/12/ 3	2444576.5	-26.73275	-13.24511	3.91520	2.60812	-4.93775	-2.35188	30.08989	6.05929	206.36	7.48
80/12/ 7	2444580.5	-26.72672	-13.25652	3.90977	2.61021	-4.93675	-2.35218	30.08885	6.05950	206.38	7.47
80/12/11	2444584.5	-26.72069	-13.26792	3.90433	2.61231	-4.93576	-2.35248	30.08781	6.05971	206.41	7.46
80/12/15	2444588.5	-26.71465	-13.27932	3.89890	2.61441	-4.93476	-2.35278	30.08678	6.05991	206.43	7.45
80/12/19	2444592.5	-26.70861	-13.29072	3.89346	2.61650	-4.93376	-2.35308	30.08574	6.06012	206.46	7.44
80/12/23	2444596.5	-26.70256	-13.30212	3.88803	2.61860	-4.93276	-2.35337	30.08471	6.06032	206.48	7.43
80/12/27	2444600.5	-26.69651	-13.31351	3.88259	2.62069	-4.93176	-2.35367	30.08368	6.06053	206.51	7.42
80/12/31	2444604.5	-26.69045	-13.32490	3.87715	2.62278	-4.93075	-2.35396	30.08264	6.06073	206.53	7.41
81/ 1/ 4	2444608.5	-26.68439	-13.33629	3.87171	2.62488	-4.92974	-2.35426	30.08161	6.06093	206.55	7.39
81/ 1/ 8	2444612.5	-26.67832	-13.34768	3.86627	2.62697	-4.92873	-2.35455	30.08058	6.06113	206.58	7.38
81/ 1/12	2444616.5	-26.67225	-13.35907	3.86083	2.62906	-4.92772	-2.35484	30.07956	6.06132	206.60	7.37
81/ 1/16	2444620.5	-26.66618	-13.37045	3.85539	2.63115	-4.92671	-2.35513	30.07853	6.06152	206.63	7.36
81/ 1/20	2444624.5	-26.66009	-13.38183	3.84995	2.63324	-4.92569	-2.35542	30.07750	6.06171	206.65	7.35
81/ 1/24	2444628.5	-26.65401	-13.39321	3.84451	2.63532	-4.92468	-2.35571	30.07648	6.06191	206.68	7.34
81/ 1/28	2444632.5	-26.64792	-13.40458	3.83907	2.63741	-4.92366	-2.35600	30.07545	6.06210	206.70	7.33
81/ 2/ 1	2444636.5	-26.64182	-13.41596	3.83363	2.63949	-4.92264	-2.35629	30.07443	6.06230	206.73	7.32
81/ 2/ 5	2444640.5	-26.63572	-13.42733	3.82818	2.64158	-4.92162	-2.35658	30.07341	6.06249	206.75	7.31
81/ 2/ 9	2444644.5	-26.62962	-13.43870	3.82274	2.64367	-4.92060	-2.35687	30.07239	6.06268	206.78	7.30
81/ 2/13	2444648.5	-26.62351	-13.45006	3.81729	2.64575	-4.91958	-2.35716	30.07137	6.06288	206.80	7.29
81/ 2/17	2444652.5	-26.61739	-13.46143	3.81185	2.64784	-4.91856	-2.35745	30.07035	6.06307	206.83	7.28
81/ 2/21	2444656.5	-26.61127	-13.47279	3.80640	2.64992	-4.91754	-2.35773	30.06933	6.06326	206.85	7.27
81/ 2/25	2444660.5	-26.60515	-13.48415	3.80095	2.65201	-4.91651	-2.35802	30.06831	6.06345	206.88	7.26
81/ 3/ 1	2444664.5	-26.59902	-13.49550	3.79551	2.65409	-4.91548	-2.35830	30.06730	6.06364	206.90	7.25
81/ 3/ 5	2444668.5	-26.59289	-13.50686	3.79006	2.65617	-4.91445	-2.35859	30.06628	6.06383	206.93	7.24
81/ 3/ 9	2444672.5	-26.58675	-13.51821	3.78461	2.65825	-4.91342	-2.35887	30.06527	6.06401	206.95	7.23
81/ 3/13	2444676.5	-26.58061	-13.52956	3.77916	2.66033	-4.91239	-2.35915	30.06426	6.06420	206.98	7.22
81/ 3/17	2444680.5	-26.57446	-13.54091	3.77371	2.66241	-4.91136	-2.35944	30.06325	6.06439	207.00	7.21
81/ 3/21	2444684.5	-26.56830	-13.55225	3.76826	2.66449	-4.91032	-2.35972	30.06224	6.06457	207.03	7.20
81/ 3/25	2444688.5	-26.56215	-13.56359	3.76280	2.66656	-4.90929	-2.36000	30.06123	6.06476	207.05	7.19
81/ 3/29	2444692.5	-26.55598	-13.57493	3.75735	2.66864	-4.90825	-2.36028	30.06022	6.06494	207.08	7.18
81/ 4/ 2	2444696.5	-26.54982	-13.58627	3.75190	2.67072	-4.90722	-2.36057	30.05921	6.06513	207.10	7.17
81/ 4/ 6	2444700.5	-26.54364	-13.59761	3.74645	2.67279	-4.90618	-2.36085	30.05821	6.06531	207.12	7.16
81/ 4/10	2444704.5	-26.53747	-13.60894	3.74099	2.67486	-4.90515	-2.36113	30.05720	6.06550	207.15	7.15
81/ 4/14	2444708.5	-26.53129	-13.62027	3.73554	2.67694	-4.90411	-2.36141	30.05620	6.06568	207.17	7.14

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DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
81/ 4/18	2444712.5	-26.52510	-13.63160	3.73008	2.67901	-4.90307	-2.36169	30.05520	6.06587	207.20	7.13
81/ 4/22	2444716.5	-26.51891	-13.64292	3.72462	2.68108	-4.90203	-2.36197	30.05420	6.06606	207.22	7.12
81/ 4/26	2444720.5	-26.51271	-13.65425	3.71917	2.68316	-4.90099	-2.36225	30.05319	6.06624	207.25	7.11
81/ 4/30	2444724.5	-26.50651	-13.66557	3.71371	2.68523	-4.89996	-2.36253	30.05220	6.06643	207.27	7.10
81/ 5/ 4	2444728.5	-26.50030	-13.67689	3.70825	2.68730	-4.89892	-2.36281	30.05120	6.06662	207.30	7.09
81/ 5/ 8	2444732.5	-26.49409	-13.68820	3.70279	2.68938	-4.89788	-2.36310	30.05020	6.06681	207.32	7.08
81/ 5/12	2444736.5	-26.48788	-13.69952	3.69733	2.69146	-4.89684	-2.36338	30.04921	6.06700	207.35	7.07
81/ 5/16	2444740.5	-26.48166	-13.71083	3.69187	2.69354	-4.89580	-2.36366	30.04821	6.06719	207.37	7.06
81/ 5/20	2444744.5	-26.47543	-13.72214	3.68641	2.69562	-4.89475	-2.36394	30.04722	6.06738	207.40	7.05
81/ 5/24	2444748.5	-26.46920	-13.73344	3.68095	2.69770	-4.89371	-2.36421	30.04622	6.06757	207.42	7.04
81/ 5/28	2444752.5	-26.46297	-13.74475	3.67549	2.69978	-4.89266	-2.36449	30.04523	6.06776	207.45	7.03
81/ 6/ 1	2444756.5	-26.45673	-13.75605	3.67003	2.70186	-4.89161	-2.36477	30.04424	6.06795	207.47	7.02
81/ 6/ 5	2444760.5	-26.45049	-13.76735	3.66456	2.70394	-4.89055	-2.36505	30.04325	6.06813	207.50	7.01
81/ 6/ 9	2444764.5	-26.44424	-13.77865	3.65910	2.70602	-4.88950	-2.36532	30.04227	6.06832	207.52	7.00
81/ 6/13	2444768.5	-26.43798	-13.78994	3.65363	2.70810	-4.88844	-2.36559	30.04128	6.06850	207.55	6.99
81/ 6/17	2444772.5	-26.43172	-13.80123	3.64817	2.71018	-4.88738	-2.36587	30.04029	6.06868	207.57	6.98
81/ 6/21	2444776.5	-26.42546	-13.81252	3.64270	2.71226	-4.88632	-2.36614	30.03931	6.06887	207.60	6.97
81/ 6/25	2444780.5	-26.41919	-13.82381	3.63724	2.71434	-4.88526	-2.36641	30.03832	6.06905	207.62	6.95
81/ 6/29	2444784.5	-26.41292	-13.83509	3.63177	2.71642	-4.88420	-2.36668	30.03734	6.06923	207.65	6.94
81/ 7/ 3	2444788.5	-26.40664	-13.84638	3.62630	2.71850	-4.88313	-2.36695	30.03636	6.06940	207.67	6.93
81/ 7/ 7	2444792.5	-26.40036	-13.85766	3.62083	2.72058	-4.88206	-2.36722	30.03538	6.06958	207.70	6.92
81/ 7/11	2444796.5	-26.39407	-13.86893	3.61536	2.72265	-4.88099	-2.36749	30.03440	6.06975	207.72	6.91
81/ 7/15	2444800.5	-26.38778	-13.88021	3.60990	2.72473	-4.87992	-2.36776	30.03342	6.06993	207.74	6.90
81/ 7/19	2444804.5	-26.38148	-13.89148	3.60442	2.72681	-4.87884	-2.36803	30.03244	6.07010	207.77	6.89
81/ 7/23	2444808.5	-26.37518	-13.90275	3.59895	2.72888	-4.87777	-2.36829	30.03147	6.07027	207.79	6.88
81/ 7/27	2444812.5	-26.36887	-13.91402	3.59348	2.73095	-4.87669	-2.36856	30.03049	6.07044	207.82	6.87
81/ 7/31	2444816.5	-26.36256	-13.92528	3.58801	2.73303	-4.87562	-2.36882	30.02952	6.07062	207.84	6.86
81/ 8/ 4	2444820.5	-26.35625	-13.93654	3.58254	2.73510	-4.87454	-2.36909	30.02855	6.07079	207.87	6.85
81/ 8/ 8	2444824.5	-26.34993	-13.94780	3.57706	2.73717	-4.87345	-2.36935	30.02757	6.07096	207.89	6.84
81/ 8/12	2444828.5	-26.34360	-13.95906	3.57159	2.73925	-4.87237	-2.36962	30.02660	6.07112	207.92	6.83
81/ 8/16	2444832.5	-26.33727	-13.97032	3.56612	2.74132	-4.87128	-2.36988	30.02563	6.07129	207.94	6.82
81/ 8/20	2444836.5	-26.33093	-13.98157	3.56064	2.74339	-4.87020	-2.37014	30.02466	6.07145	207.97	6.81
81/ 8/24	2444840.5	-26.32459	-13.99282	3.55517	2.74546	-4.86910	-2.37040	30.02370	6.07162	207.99	6.80
81/ 8/28	2444844.5	-26.31825	-14.00406	3.54969	2.74753	-4.86801	-2.37066	30.02273	6.07178	208.02	6.79
81/ 9/ 1	2444848.5	-26.31190	-14.01531	3.54421	2.74959	-4.86692	-2.37092	30.02176	6.07193	208.04	6.78
81/ 9/ 5	2444852.5	-26.30554	-14.02655	3.53873	2.75166	-4.86582	-2.37117	30.02080	6.07209	208.07	6.77
81/ 9/ 9	2444856.5	-26.29919	-14.03779	3.53326	2.75372	-4.86472	-2.37143	30.01984	6.07225	208.09	6.76
81/ 9/13	2444860.5	-26.29282	-14.04903	3.52778	2.75578	-4.86363	-2.37169	30.01888	6.07240	208.12	6.75
81/ 9/17	2444864.5	-26.28645	-14.06026	3.52230	2.75784	-4.86253	-2.37194	30.01791	6.07256	208.14	6.74
81/ 9/21	2444868.5	-26.28008	-14.07149	3.51682	2.75989	-4.86143	-2.37220	30.01695	6.07271	208.17	6.73
81/ 9/25	2444872.5	-26.27370	-14.08272	3.51134	2.76195	-4.86033	-2.37245	30.01600	6.07286	208.19	6.72
81/ 9/29	2444876.5	-26.26732	-14.09395	3.50586	2.76400	-4.85923	-2.37271	30.01504	6.07302	208.22	6.71
81/10/ 3	2444880.5	-26.26093	-14.10518	3.50038	2.76605	-4.85813	-2.37296	30.01408	6.07317	208.24	6.70
81/10/ 7	2444884.5	-26.25454	-14.11640	3.49489	2.76810	-4.85703	-2.37322	30.01313	6.07332	208.27	6.69
81/10/11	2444888.5	-26.24814	-14.12762	3.48941	2.77015	-4.85593	-2.37347	30.01217	6.07348	208.29	6.68

1.9 1 A.U.=149,599,000 KM.

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81/10/15	2444892.5	-26.24174	-14.13883	3.48393	2.77219	-4.85483	-2.37373	30.01122	6.07363	208.32	6.67
81/10/19	2444896.5	-26.23533	-14.15005	3.47844	2.77424	-4.85373	-2.37398	30.01027	6.07378	208.34	6.66
81/10/23	2444900.5	-26.22892	-14.16126	3.47296	2.77628	-4.85263	-2.37424	30.00932	6.07394	208.37	6.65
81/10/27	2444904.5	-26.22251	-14.17247	3.46747	2.77833	-4.85153	-2.37450	30.00837	6.07410	208.39	6.64
81/10/31	2444908.5	-26.21608	-14.18368	3.46199	2.78037	-4.85043	-2.37475	30.00742	6.07426	208.41	6.63
81/11/ 4	2444912.5	-26.20966	-14.19488	3.45650	2.78242	-4.84933	-2.37501	30.00647	6.07442	208.44	6.61
81/11/ 8	2444916.5	-26.20323	-14.20608	3.45101	2.78447	-4.84824	-2.37527	30.00552	6.07458	208.46	6.60
81/11/12	2444920.5	-26.19679	-14.21728	3.44553	2.78652	-4.84714	-2.37552	30.00458	6.07474	208.49	6.59
81/11/16	2444924.5	-26.19035	-14.22848	3.44004	2.78856	-4.84604	-2.37578	30.00363	6.07491	208.51	6.58
81/11/20	2444928.5	-26.18391	-14.23967	3.43455	2.79061	-4.84493	-2.37603	30.00269	6.07507	208.54	6.57
81/11/24	2444932.5	-26.17746	-14.25086	3.42906	2.79266	-4.84383	-2.37629	30.00175	6.07523	208.56	6.56
81/11/28	2444936.5	-26.17101	-14.26205	3.42357	2.79471	-4.84273	-2.37654	30.00081	6.07539	208.59	6.55
81/12/ 2	2444940.5	-26.16455	-14.27324	3.41808	2.79676	-4.84163	-2.37680	29.99987	6.07556	208.61	6.54
81/12/ 6	2444944.5	-26.15808	-14.28442	3.41259	2.79880	-4.84053	-2.37705	29.99893	6.07572	208.64	6.53
81/12/10	2444948.5	-26.15162	-14.29560	3.40710	2.80085	-4.83942	-2.37731	29.99799	6.07588	208.66	6.52
81/12/14	2444952.5	-26.14514	-14.30678	3.40160	2.80290	-4.83832	-2.37756	29.99706	6.07605	208.69	6.51
81/12/18	2444956.5	-26.13867	-14.31796	3.39611	2.80495	-4.83721	-2.37781	29.99612	6.07622	208.71	6.50
81/12/22	2444960.5	-26.13218	-14.32913	3.39062	2.80700	-4.83611	-2.37807	29.99519	6.07638	208.74	6.49
81/12/26	2444964.5	-26.12570	-14.34030	3.38512	2.80905	-4.83500	-2.37832	29.99425	6.07655	208.76	6.48
81/12/30	2444968.5	-26.11920	-14.35147	3.37963	2.81110	-4.83390	-2.37857	29.99332	6.07671	208.79	6.47
82/ 1/ 3	2444972.5	-26.11271	-14.36264	3.37413	2.81316	-4.83279	-2.37883	29.99239	6.07688	208.81	6.46
82/ 1/ 7	2444976.5	-26.10621	-14.37380	3.36864	2.81521	-4.83168	-2.37908	29.99146	6.07705	208.84	6.45
82/ 1/11	2444980.5	-26.09970	-14.38496	3.36314	2.81726	-4.83057	-2.37933	29.99053	6.07722	208.86	6.44
82/ 1/15	2444984.5	-26.09319	-14.39612	3.35764	2.81932	-4.82946	-2.37958	29.98961	6.07739	208.89	6.43
82/ 1/19	2444988.5	-26.08667	-14.40727	3.35215	2.82137	-4.82834	-2.37983	29.98868	6.07755	208.91	6.42
82/ 1/23	2444992.5	-26.08015	-14.41843	3.34665	2.82343	-4.82723	-2.38008	29.98776	6.07772	208.94	6.41
82/ 1/27	2444996.5	-26.07363	-14.42958	3.34115	2.82549	-4.82612	-2.38034	29.98683	6.07789	208.96	6.40
82/ 1/31	2445000.5	-26.06710	-14.44072	3.33565	2.82755	-4.82500	-2.38058	29.98591	6.07806	208.99	6.39
82/ 2/ 4	2445004.5	-26.06057	-14.45187	3.33015	2.82962	-4.82388	-2.38083	29.98499	6.07823	209.01	6.38
82/ 2/ 8	2445008.5	-26.05403	-14.46301	3.32465	2.83168	-4.82276	-2.38108	29.98407	6.07840	209.04	6.37
82/ 2/12	2445012.5	-26.04748	-14.47415	3.31915	2.83375	-4.82163	-2.38133	29.98315	6.07856	209.06	6.36
82/ 2/16	2445016.5	-26.04093	-14.48529	3.31365	2.83581	-4.82050	-2.38157	29.98223	6.07873	209.09	6.35
82/ 2/20	2445020.5	-26.03438	-14.49643	3.30815	2.83787	-4.81937	-2.38181	29.98131	6.07889	209.11	6.33
82/ 2/24	2445024.5	-26.02782	-14.50756	3.30264	2.83994	-4.81823	-2.38206	29.98040	6.07905	209.13	6.32
82/ 2/28	2445028.5	-26.02126	-14.51869	3.29714	2.84200	-4.81709	-2.38230	29.97948	6.07920	209.16	6.31
82/ 3/ 4	2445032.5	-26.01469	-14.52981	3.29164	2.84406	-4.81595	-2.38253	29.97857	6.07936	209.18	6.30
82/ 3/ 8	2445036.5	-26.00812	-14.54094	3.28613	2.84613	-4.81481	-2.38277	29.97765	6.07951	209.21	6.29
82/ 3/12	2445040.5	-26.00154	-14.55206	3.28063	2.84819	-4.81366	-2.38301	29.97674	6.07966	209.23	6.28
82/ 3/16	2445044.5	-25.99496	-14.56318	3.27512	2.85025	-4.81251	-2.38325	29.97583	6.07981	209.26	6.27
82/ 3/20	2445048.5	-25.98837	-14.57430	3.26962	2.85230	-4.81136	-2.38348	29.97492	6.07995	209.28	6.26
82/ 3/24	2445052.5	-25.98178	-14.58541	3.26411	2.85436	-4.81021	-2.38371	29.97401	6.08010	209.31	6.25
82/ 3/28	2445056.5	-25.97518	-14.59652	3.25860	2.85642	-4.80905	-2.38395	29.97310	6.08024	209.33	6.24
82/ 4/ 1	2445060.5	-25.96858	-14.60763	3.25309	2.85847	-4.80789	-2.38418	29.97220	6.08038	209.36	6.23
82/ 4/ 5	2445064.5	-25.96198	-14.61873	3.24759	2.86052	-4.80673	-2.38441	29.97129	6.08052	209.38	6.22
82/ 4/ 9	2445068.5	-25.95536	-14.62984	3.24208	2.86257	-4.80557	-2.38464	29.97039	6.08065	209.41	6.21

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
82/ 4/13	2445072.5	-25.94875	-14.64094	3.23657	2.86462	-4.80441	-2.38487	29.96949	6.08079	209.43	6.20
82/ 4/17	2445076.5	-25.94213	-14.65204	3.23106	2.86666	-4.80325	-2.38510	29.96858	6.08092	209.46	6.19
82/ 4/21	2445080.5	-25.93550	-14.66313	3.22555	2.86871	-4.80208	-2.38532	29.96768	6.08106	209.48	6.18
82/ 4/25	2445084.5	-25.92887	-14.67422	3.22004	2.87076	-4.80092	-2.38555	29.96678	6.08119	209.51	6.17
82/ 4/29	2445088.5	-25.92224	-14.68531	3.21453	2.87280	-4.79975	-2.38578	29.96588	6.08133	209.53	6.16
82/ 5/ 3	2445092.5	-25.91560	-14.69640	3.20901	2.87484	-4.79858	-2.38601	29.96498	6.08146	209.56	6.15
82/ 5/ 7	2445096.5	-25.90896	-14.70748	3.20350	2.87689	-4.79741	-2.38623	29.96409	6.08159	209.58	6.14
82/ 5/11	2445100.5	-25.90231	-14.71857	3.19799	2.87893	-4.79624	-2.38646	29.96319	6.08172	209.61	6.13
82/ 5/15	2445104.5	-25.89566	-14.72964	3.19248	2.88096	-4.79506	-2.38668	29.96230	6.08184	209.63	6.12
82/ 5/19	2445108.5	-25.88900	-14.74072	3.18696	2.88300	-4.79388	-2.38690	29.96140	6.08197	209.66	6.11
82/ 5/23	2445112.5	-25.88234	-14.75179	3.18145	2.88503	-4.79271	-2.38713	29.96051	6.08209	209.68	6.10
82/ 5/27	2445116.5	-25.87567	-14.76286	3.17593	2.88707	-4.79153	-2.38735	29.95962	6.08221	209.71	6.09
82/ 5/31	2445120.5	-25.86900	-14.77393	3.17042	2.88910	-4.79035	-2.38757	29.95873	6.08234	209.73	6.07
82/ 6/ 4	2445124.5	-25.86232	-14.78500	3.16490	2.89113	-4.78917	-2.38779	29.95784	6.08246	209.76	6.06
82/ 6/ 8	2445128.5	-25.85564	-14.79606	3.15938	2.89315	-4.78799	-2.38801	29.95695	6.08258	209.78	6.05
82/ 6/12	2445132.5	-25.84895	-14.80712	3.15387	2.89518	-4.78681	-2.38823	29.95607	6.08270	209.81	6.04
82/ 6/16	2445136.5	-25.84226	-14.81818	3.14835	2.89720	-4.78563	-2.38845	29.95518	6.08282	209.83	6.03
82/ 6/20	2445140.5	-25.83557	-14.82923	3.14283	2.89922	-4.78445	-2.38868	29.95430	6.08294	209.86	6.02
82/ 6/24	2445144.5	-25.82887	-14.84028	3.13731	2.90124	-4.78327	-2.38890	29.95341	6.08306	209.88	6.01
82/ 6/28	2445148.5	-25.82216	-14.85133	3.13179	2.90326	-4.78208	-2.38912	29.95253	6.08319	209.90	6.00
82/ 7/ 2	2445152.5	-25.81545	-14.86238	3.12628	2.90528	-4.78090	-2.38934	29.95165	6.08331	209.93	5.99
82/ 7/ 6	2445156.5	-25.80874	-14.87342	3.12076	2.90730	-4.77972	-2.38956	29.95077	6.08343	209.95	5.98
82/ 7/10	2445160.5	-25.80202	-14.88446	3.11523	2.90932	-4.77854	-2.38978	29.94989	6.08355	209.98	5.97
82/ 7/14	2445164.5	-25.79530	-14.89550	3.10971	2.91133	-4.77736	-2.39000	29.94901	6.08368	210.00	5.96
82/ 7/18	2445168.5	-25.78857	-14.90653	3.10419	2.91335	-4.77618	-2.39022	29.94814	6.08381	210.03	5.95
82/ 7/22	2445172.5	-25.78184	-14.91757	3.09867	2.91537	-4.77500	-2.39045	29.94726	6.08393	210.05	5.94
82/ 7/26	2445176.5	-25.77510	-14.92860	3.09315	2.91739	-4.77382	-2.39067	29.94639	6.08406	210.08	5.93
82/ 7/30	2445180.5	-25.76836	-14.93962	3.08762	2.91941	-4.77264	-2.39089	29.94552	6.08419	210.10	5.92
82/ 8/ 3	2445184.5	-25.76161	-14.95065	3.08210	2.92143	-4.77146	-2.39111	29.94464	6.08432	210.13	5.91
82/ 8/ 7	2445188.5	-25.75486	-14.96167	3.07658	2.92345	-4.77028	-2.39133	29.94377	6.08445	210.15	5.90
82/ 8/11	2445192.5	-25.74810	-14.97269	3.07105	2.92547	-4.76909	-2.39155	29.94290	6.08458	210.18	5.89
82/ 8/15	2445196.5	-25.74134	-14.98370	3.06553	2.92749	-4.76791	-2.39177	29.94204	6.08471	210.20	5.88
82/ 8/19	2445200.5	-25.73458	-14.99472	3.06000	2.92951	-4.76672	-2.39199	29.94117	6.08484	210.23	5.87
82/ 8/23	2445204.5	-25.72781	-15.00573	3.05447	2.93153	-4.76553	-2.39221	29.94030	6.08496	210.25	5.86
82/ 8/27	2445208.5	-25.72103	-15.01674	3.04895	2.93355	-4.76434	-2.39243	29.93944	6.08509	210.28	5.84
82/ 8/31	2445212.5	-25.71425	-15.02774	3.04342	2.93557	-4.76315	-2.39264	29.93857	6.08522	210.30	5.83
82/ 9/ 4	2445216.5	-25.70747	-15.03874	3.03789	2.93759	-4.76195	-2.39286	29.93771	6.08535	210.33	5.82
82/ 9/ 8	2445220.5	-25.70068	-15.04974	3.03236	2.93961	-4.76076	-2.39308	29.93685	6.08547	210.35	5.81
82/ 9/12	2445224.5	-25.69389	-15.06074	3.02684	2.94163	-4.75957	-2.39329	29.93599	6.08560	210.38	5.80
82/ 9/16	2445228.5	-25.68709	-15.07173	3.02131	2.94365	-4.75837	-2.39351	29.93513	6.08572	210.40	5.79
82/ 9/20	2445232.5	-25.68029	-15.08273	3.01578	2.94567	-4.75717	-2.39372	29.93427	6.08585	210.43	5.78
82/ 9/24	2445236.5	-25.67348	-15.09371	3.01025	2.94769	-4.75597	-2.39394	29.93341	6.08597	210.45	5.77
82/ 9/28	2445240.5	-25.66667	-15.10470	3.00472	2.94971	-4.75477	-2.39415	29.93256	6.08609	210.48	5.76
82/10/ 2	2445244.5	-25.65985	-15.11568	2.99919	2.95172	-4.75357	-2.39436	29.93170	6.08622	210.50	5.75
82/10/ 6	2445248.5	-25.65303	-15.12666	2.99365	2.95374	-4.75236	-2.39457	29.93085	6.08634	210.53	5.74

1.9 1 A.U.=149,599,000 KM.

HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
82/10/10	2445252.5	-25.64620	-15.13764	2.98812	2.95576	-4.75116	-2.39479	29.93000	6.08646	210.55	5.73
82/10/14	2445256.5	-25.63937	-15.14861	2.98259	2.95777	-4.74995	-2.39500	29.92914	6.08658	210.58	5.72
82/10/18	2445260.5	-25.63254	-15.15959	2.97706	2.95979	-4.74875	-2.39521	29.92829	6.08671	210.60	5.71
82/10/22	2445264.5	-25.62570	-15.17056	2.97152	2.96181	-4.74754	-2.39542	29.92745	6.08683	210.63	5.70
82/10/26	2445268.5	-25.61885	-15.18152	2.96599	2.96383	-4.74633	-2.39563	29.92660	6.08695	210.65	5.69
82/10/30	2445272.5	-25.61200	-15.19249	2.96045	2.96584	-4.74511	-2.39584	29.92575	6.08707	210.68	5.68
82/11/ 3	2445276.5	-25.60515	-15.20345	2.95492	2.96786	-4.74390	-2.39604	29.92490	6.08718	210.70	5.67
82/11/ 7	2445280.5	-25.59829	-15.21440	2.94938	2.96988	-4.74268	-2.39625	29.92406	6.08730	210.73	5.66
82/11/11	2445284.5	-25.59143	-15.22536	2.94385	2.97189	-4.74146	-2.39645	29.92322	6.08741	210.75	5.65
82/11/15	2445288.5	-25.58456	-15.23631	2.93831	2.97390	-4.74024	-2.39666	29.92237	6.08752	210.77	5.64
82/11/19	2445292.5	-25.57769	-15.24726	2.93277	2.97591	-4.73901	-2.39686	29.92153	6.08763	210.80	5.62
82/11/23	2445296.5	-25.57081	-15.25821	2.92724	2.97792	-4.73779	-2.39706	29.92069	6.08774	210.82	5.61
82/11/27	2445300.5	-25.56393	-15.26915	2.92170	2.97993	-4.73656	-2.39727	29.91985	6.08785	210.85	5.60
82/12/ 1	2445304.5	-25.55704	-15.28009	2.91616	2.98194	-4.73533	-2.39747	29.91902	6.08795	210.87	5.59
82/12/ 5	2445308.5	-25.55015	-15.29103	2.91062	2.98394	-4.73411	-2.39767	29.91818	6.08806	210.90	5.58
82/12/ 9	2445312.5	-25.54325	-15.30196	2.90508	2.98595	-4.73288	-2.39787	29.91734	6.08817	210.92	5.57
82/12/13	2445316.5	-25.53635	-15.31290	2.89954	2.98795	-4.73165	-2.39807	29.91651	6.08827	210.95	5.56
82/12/17	2445320.5	-25.52945	-15.32383	2.89400	2.98995	-4.73042	-2.39827	29.91567	6.08837	210.97	5.55
82/12/21	2445324.5	-25.52254	-15.33475	2.88846	2.99194	-4.72918	-2.39847	29.91484	6.08848	211.00	5.54
82/12/25	2445328.5	-25.51562	-15.34568	2.88292	2.99394	-4.72795	-2.39866	29.91401	6.08858	211.02	5.53
82/12/29	2445332.5	-25.50871	-15.35660	2.87738	2.99594	-4.72672	-2.39886	29.91318	6.08868	211.05	5.52
83/ 1/ 2	2445336.5	-25.50178	-15.36752	2.87184	2.99793	-4.72549	-2.39906	29.91235	6.08879	211.07	5.51
83/ 1/ 6	2445340.5	-25.49485	-15.37843	2.86629	2.99992	-4.72426	-2.39926	29.91153	6.08889	211.10	5.50
83/ 1/10	2445344.5	-25.48792	-15.38934	2.86075	3.00192	-4.72303	-2.39946	29.91070	6.08900	211.12	5.49
83/ 1/14	2445348.5	-25.48098	-15.40025	2.85521	3.00391	-4.72180	-2.39966	29.90987	6.08911	211.15	5.48
83/ 1/18	2445352.5	-25.47404	-15.41116	2.84966	3.00590	-4.72057	-2.39986	29.90905	6.08921	211.17	5.47
83/ 1/22	2445356.5	-25.46710	-15.42206	2.84412	3.00790	-4.71933	-2.40006	29.90823	6.08932	211.20	5.46
83/ 1/26	2445360.5	-25.46014	-15.43297	2.83858	3.00989	-4.71810	-2.40026	29.90740	6.08943	211.22	5.45
83/ 1/30	2445364.5	-25.45319	-15.44386	2.83303	3.01189	-4.71686	-2.40045	29.90658	6.08953	211.25	5.44
83/ 2/ 3	2445368.5	-25.44623	-15.45476	2.82748	3.01388	-4.71563	-2.40065	29.90576	6.08964	211.27	5.43
83/ 2/ 7	2445372.5	-25.43926	-15.46565	2.82194	3.01587	-4.71439	-2.40085	29.90495	6.08975	211.30	5.41
83/ 2/11	2445376.5	-25.43229	-15.47654	2.81639	3.01787	-4.71315	-2.40104	29.90413	6.08985	211.32	5.40
83/ 2/15	2445380.5	-25.42532	-15.48743	2.81084	3.01986	-4.71191	-2.40124	29.90331	6.08996	211.35	5.39
83/ 2/19	2445384.5	-25.41834	-15.49831	2.80530	3.02185	-4.71067	-2.40143	29.90250	6.09007	211.37	5.38
83/ 2/23	2445388.5	-25.41136	-15.50919	2.79975	3.02384	-4.70943	-2.40163	29.90168	6.09017	211.40	5.37
83/ 2/27	2445392.5	-25.40437	-15.52007	2.79420	3.02583	-4.70819	-2.40182	29.90087	6.09028	211.42	5.36
83/ 3/ 3	2445396.5	-25.39738	-15.53095	2.78865	3.02782	-4.70695	-2.40202	29.90006	6.09038	211.45	5.35
83/ 3/ 7	2445400.5	-25.39038	-15.54182	2.78310	3.02981	-4.70571	-2.40221	29.89925	6.09049	211.47	5.34
83/ 3/11	2445404.5	-25.38338	-15.55269	2.77755	3.03180	-4.70446	-2.40241	29.89844	6.09060	211.50	5.33
83/ 3/15	2445408.5	-25.37637	-15.56355	2.77200	3.03379	-4.70322	-2.40260	29.89763	6.09070	211.52	5.32
83/ 3/19	2445412.5	-25.36936	-15.57442	2.76645	3.03578	-4.70197	-2.40279	29.89683	6.09081	211.55	5.31
83/ 3/23	2445416.5	-25.36235	-15.58528	2.76090	3.03778	-4.70073	-2.40299	29.89602	6.09092	211.57	5.30
83/ 3/27	2445420.5	-25.35533	-15.59614	2.75535	3.03977	-4.69948	-2.40318	29.89522	6.09102	211.60	5.29
83/ 3/31	2445424.5	-25.34830	-15.60699	2.74980	3.04176	-4.69823	-2.40337	29.89441	6.09113	211.62	5.28
83/ 4/ 4	2445428.5	-25.34127	-15.61785	2.74424	3.04375	-4.69699	-2.40356	29.89361	6.09124	211.65	5.27

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
83/ 4/ 8	2445432.5	-25.33424	-15.62869	2.73869	3.04574	-4.69574	-2.40375	29.89281	6.09135	211.67	5.26
83/ 4/12	2445436.5	-25.32720	-15.63954	2.73314	3.04773	-4.69449	-2.40395	29.89201	6.09146	211.70	5.25
83/ 4/16	2445440.5	-25.32016	-15.65038	2.72758	3.04973	-4.69323	-2.40414	29.89121	6.09157	211.72	5.24
83/ 4/20	2445444.5	-25.31311	-15.66123	2.72203	3.05173	-4.69198	-2.40433	29.89041	6.09167	211.75	5.22
83/ 4/24	2445448.5	-25.30606	-15.67206	2.71648	3.05372	-4.69072	-2.40452	29.88962	6.09178	211.77	5.21
83/ 4/28	2445452.5	-25.29900	-15.68290	2.71092	3.05572	-4.68946	-2.40470	29.88882	6.09188	211.79	5.20
83/ 5/ 2	2445456.5	-25.29194	-15.69373	2.70537	3.05772	-4.68819	-2.40489	29.88803	6.09198	211.82	5.19
83/ 5/ 6	2445460.5	-25.28487	-15.70456	2.69981	3.05971	-4.68693	-2.40507	29.88724	6.09208	211.84	5.18
83/ 5/10	2445464.5	-25.27780	-15.71539	2.69425	3.06171	-4.68566	-2.40526	29.88644	6.09218	211.87	5.17
83/ 5/14	2445468.5	-25.27073	-15.72621	2.68870	3.06370	-4.68438	-2.40544	29.88565	6.09228	211.89	5.16
83/ 5/18	2445472.5	-25.26365	-15.73703	2.68314	3.06569	-4.68311	-2.40562	29.88486	6.09237	211.92	5.15
83/ 5/22	2445476.5	-25.25656	-15.74785	2.67758	3.06768	-4.68183	-2.40580	29.88408	6.09246	211.94	5.14
83/ 5/26	2445480.5	-25.24947	-15.75866	2.67202	3.06967	-4.68055	-2.40598	29.88329	6.09255	211.97	5.13
83/ 5/30	2445484.5	-25.24238	-15.76947	2.66646	3.07166	-4.67927	-2.40616	29.88250	6.09264	211.99	5.12
83/ 6/ 3	2445488.5	-25.23528	-15.78028	2.66091	3.07365	-4.67799	-2.40633	29.88172	6.09273	212.02	5.11
83/ 6/ 7	2445492.5	-25.22818	-15.79109	2.65535	3.07563	-4.67670	-2.40651	29.88093	6.09281	212.04	5.10
83/ 6/11	2445496.5	-25.22107	-15.80189	2.64979	3.07761	-4.67542	-2.40668	29.88015	6.09289	212.07	5.09
83/ 6/15	2445500.5	-25.21396	-15.81269	2.64423	3.07959	-4.67413	-2.40686	29.87937	6.09297	212.09	5.08
83/ 6/19	2445504.5	-25.20684	-15.82348	2.63867	3.08157	-4.67284	-2.40703	29.87859	6.09305	212.12	5.07
83/ 6/23	2445508.5	-25.19972	-15.83428	2.63311	3.08355	-4.67155	-2.40720	29.87781	6.09313	212.14	5.06
83/ 6/27	2445512.5	-25.19259	-15.84507	2.62754	3.08552	-4.67025	-2.40738	29.87703	6.09321	212.17	5.05
83/ 7/ 1	2445516.5	-25.18546	-15.85586	2.62198	3.08749	-4.66896	-2.40755	29.87625	6.09328	212.19	5.03
83/ 7/ 5	2445520.5	-25.17833	-15.86664	2.61642	3.08947	-4.66767	-2.40772	29.87548	6.09336	212.22	5.02
83/ 7/ 9	2445524.5	-25.17119	-15.87742	2.61086	3.09144	-4.66637	-2.40789	29.87470	6.09343	212.24	5.01
83/ 7/13	2445528.5	-25.16404	-15.88820	2.60530	3.09341	-4.66508	-2.40806	29.87393	6.09351	212.27	5.00
83/ 7/17	2445532.5	-25.15690	-15.89898	2.59973	3.09537	-4.66378	-2.40823	29.87316	6.09358	212.29	4.99
83/ 7/21	2445536.5	-25.14974	-15.90975	2.59417	3.09734	-4.66248	-2.40840	29.87239	6.09365	212.32	4.98
83/ 7/25	2445540.5	-25.14259	-15.92052	2.58860	3.09930	-4.66118	-2.40857	29.87161	6.09372	212.34	4.97
83/ 7/29	2445544.5	-25.13542	-15.93129	2.58304	3.10127	-4.65987	-2.40874	29.87085	6.09379	212.37	4.96
83/ 8/ 2	2445548.5	-25.12826	-15.94205	2.57748	3.10322	-4.65857	-2.40891	29.87008	6.09386	212.39	4.95
83/ 8/ 6	2445552.5	-25.12108	-15.95281	2.57191	3.10518	-4.65726	-2.40907	29.86931	6.09392	212.42	4.94
83/ 8/10	2445556.5	-25.11391	-15.96357	2.56634	3.10714	-4.65596	-2.40924	29.86855	6.09399	212.44	4.93
83/ 8/14	2445560.5	-25.10673	-15.97432	2.56078	3.10909	-4.65465	-2.40941	29.86778	6.09405	212.47	4.92
83/ 8/18	2445564.5	-25.09954	-15.98507	2.55521	3.11104	-4.65335	-2.40957	29.86702	6.09412	212.49	4.91
83/ 8/22	2445568.5	-25.09235	-15.99582	2.54965	3.11299	-4.65204	-2.40974	29.86626	6.09418	212.52	4.90
83/ 8/26	2445572.5	-25.08516	-16.00657	2.54408	3.11493	-4.65074	-2.40990	29.86550	6.09424	212.54	4.89
83/ 8/30	2445576.5	-25.07796	-16.01731	2.53851	3.11688	-4.64943	-2.41007	29.86474	6.09431	212.57	4.88
83/ 9/ 3	2445580.5	-25.07076	-16.02805	2.53294	3.11882	-4.64813	-2.41023	29.86398	6.09437	212.59	4.87
83/ 9/ 7	2445584.5	-25.06355	-16.03879	2.52737	3.12076	-4.64682	-2.41040	29.86322	6.09444	212.62	4.85
83/ 9/11	2445588.5	-25.05634	-16.04952	2.52181	3.12270	-4.64552	-2.41057	29.86246	6.09450	212.64	4.84
83/ 9/15	2445592.5	-25.04912	-16.06025	2.51624	3.12464	-4.64422	-2.41073	29.86171	6.09457	212.67	4.83
83/ 9/19	2445596.5	-25.04190	-16.07098	2.51067	3.12658	-4.64291	-2.41090	29.86096	6.09463	212.69	4.82
83/ 9/23	2445600.5	-25.03468	-16.08170	2.50510	3.12851	-4.64161	-2.41107	29.86020	6.09470	212.72	4.81
83/ 9/27	2445604.5	-25.02745	-16.09242	2.49953	3.13045	-4.64031	-2.41123	29.85945	6.09477	212.74	4.80
83/10/ 1	2445608.5	-25.02022	-16.10314	2.49396	3.13239	-4.63901	-2.41140	29.85870	6.09485	212.77	4.79

1.9 1 A.U.=149,599,000 KM.

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83/10/ 5	2445612.5	-25.01298	-16.11386	2.48839	3.13433	-4.63771	-2.41157	29.85795	6.09492	212.79	4.78
83/10/ 9	2445616.5	-25.00573	-16.12457	2.48281	3.13626	-4.63642	-2.41174	29.85721	6.09500	212.82	4.77
83/10/13	2445620.5	-24.99849	-16.13528	2.47724	3.13820	-4.63512	-2.41191	29.85646	6.09508	212.84	4.76
83/10/17	2445624.5	-24.99123	-16.14599	2.47167	3.14015	-4.63382	-2.41208	29.85572	6.09515	212.87	4.75
83/10/21	2445628.5	-24.98398	-16.15669	2.46610	3.14209	-4.63251	-2.41225	29.85497	6.09523	212.89	4.74
83/10/25	2445632.5	-24.97672	-16.16739	2.46053	3.14403	-4.63121	-2.41241	29.85423	6.09531	212.91	4.73
83/10/29	2445636.5	-24.96945	-16.17809	2.45495	3.14597	-4.62991	-2.41258	29.85349	6.09538	212.94	4.72
83/11/ 2	2445640.5	-24.96218	-16.18878	2.44938	3.14791	-4.62861	-2.41275	29.85275	6.09546	212.96	4.71
83/11/ 6	2445644.5	-24.95491	-16.19947	2.44380	3.14985	-4.62730	-2.41291	29.85201	6.09554	212.99	4.70
83/11/10	2445648.5	-24.94763	-16.21016	2.43823	3.15179	-4.62600	-2.41308	29.85127	6.09562	213.01	4.69
83/11/14	2445652.5	-24.94034	-16.22085	2.43266	3.15373	-4.62469	-2.41325	29.85053	6.09570	213.04	4.67
83/11/18	2445656.5	-24.93306	-16.23153	2.42708	3.15567	-4.62338	-2.41341	29.84980	6.09578	213.06	4.66
83/11/22	2445660.5	-24.92576	-16.24221	2.42150	3.15762	-4.62208	-2.41358	29.84907	6.09586	213.09	4.65
83/11/26	2445664.5	-24.91847	-16.25288	2.41593	3.15956	-4.62077	-2.41374	29.84833	6.09594	213.11	4.64
83/11/30	2445668.5	-24.91117	-16.26356	2.41035	3.16150	-4.61946	-2.41391	29.84760	6.09602	213.14	4.63
83/12/ 4	2445672.5	-24.90386	-16.27423	2.40478	3.16345	-4.61814	-2.41407	29.84687	6.09609	213.16	4.62
83/12/ 8	2445676.5	-24.89655	-16.28490	2.39920	3.16539	-4.61683	-2.41423	29.84614	6.09617	213.19	4.61
83/12/12	2445680.5	-24.88923	-16.29556	2.39362	3.16733	-4.61552	-2.41439	29.84541	6.09625	213.21	4.60
83/12/16	2445684.5	-24.88191	-16.30622	2.38804	3.16927	-4.61420	-2.41455	29.84469	6.09633	213.24	4.59
83/12/20	2445688.5	-24.87459	-16.31688	2.38246	3.17122	-4.61288	-2.41472	29.84396	6.09641	213.26	4.58
83/12/24	2445692.5	-24.86726	-16.32753	2.37689	3.17316	-4.61157	-2.41488	29.84324	6.09648	213.29	4.57
83/12/28	2445696.5	-24.85993	-16.33819	2.37131	3.17510	-4.61025	-2.41504	29.84251	6.09656	213.31	4.56
84/ 1/ 1	2445700.5	-24.85259	-16.34883	2.36573	3.17705	-4.60893	-2.41520	29.84179	6.09664	213.34	4.55
84/ 1/ 5	2445704.5	-24.84525	-16.35948	2.36015	3.17899	-4.60760	-2.41536	29.84107	6.09672	213.36	4.54
84/ 1/ 9	2445708.5	-24.83790	-16.37012	2.35457	3.18094	-4.60628	-2.41551	29.84035	6.09679	213.39	4.53
84/ 1/13	2445712.5	-24.83055	-16.38076	2.34899	3.18289	-4.60495	-2.41567	29.83963	6.09687	213.41	4.52
84/ 1/17	2445716.5	-24.82320	-16.39140	2.34341	3.18483	-4.60362	-2.41583	29.83891	6.09694	213.44	4.50
84/ 1/21	2445720.5	-24.81584	-16.40203	2.33783	3.18677	-4.60228	-2.41598	29.83820	6.09701	213.46	4.49
84/ 1/25	2445724.5	-24.80847	-16.41266	2.33224	3.18872	-4.60095	-2.41613	29.83748	6.09707	213.49	4.48
84/ 1/29	2445728.5	-24.80111	-16.42329	2.32666	3.19066	-4.59961	-2.41628	29.83677	6.09714	213.51	4.47
84/ 2/ 2	2445732.5	-24.79373	-16.43392	2.32108	3.19260	-4.59827	-2.41643	29.83605	6.09720	213.54	4.46
84/ 2/ 6	2445736.5	-24.78635	-16.44454	2.31550	3.19454	-4.59692	-2.41658	29.83534	6.09726	213.56	4.45
84/ 2/10	2445740.5	-24.77897	-16.45516	2.30991	3.19647	-4.59558	-2.41673	29.83463	6.09732	213.59	4.44
84/ 2/14	2445744.5	-24.77159	-16.46577	2.30433	3.19841	-4.59423	-2.41688	29.83392	6.09738	213.61	4.43
84/ 2/18	2445748.5	-24.76419	-16.47638	2.29875	3.20034	-4.59288	-2.41702	29.83322	6.09744	213.64	4.42
84/ 2/22	2445752.5	-24.75680	-16.48699	2.29316	3.20227	-4.59153	-2.41717	29.83251	6.09749	213.66	4.41
84/ 2/26	2445756.5	-24.74940	-16.49760	2.28758	3.20420	-4.59018	-2.41731	29.83180	6.09755	213.69	4.40
84/ 3/ 1	2445760.5	-24.74199	-16.50820	2.28199	3.20613	-4.58883	-2.41746	29.83110	6.09760	213.71	4.39
84/ 3/ 5	2445764.5	-24.73459	-16.51880	2.27641	3.20805	-4.58748	-2.41760	29.83040	6.09765	213.74	4.38
84/ 3/ 9	2445768.5	-24.72717	-16.52940	2.27082	3.20997	-4.58612	-2.41775	29.82969	6.09770	213.76	4.37
84/ 3/13	2445772.5	-24.71975	-16.53999	2.26524	3.21189	-4.58477	-2.41789	29.82899	6.09775	213.79	4.36
84/ 3/17	2445776.5	-24.71233	-16.55058	2.25965	3.21381	-4.58341	-2.41803	29.82829	6.09780	213.81	4.34
84/ 3/21	2445780.5	-24.70491	-16.56117	2.25407	3.21573	-4.58206	-2.41817	29.82759	6.09785	213.84	4.33
84/ 3/25	2445784.5	-24.69747	-16.57175	2.24848	3.21764	-4.58071	-2.41832	29.82690	6.09790	213.86	4.32
84/ 3/29	2445788.5	-24.69004	-16.58233	2.24289	3.21956	-4.57935	-2.41846	29.82620	6.09795	213.89	4.31

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84/ 4/ 2	2445792.5	-24.68260	-16.59291	2.23731	3.22147	-4.57799	-2.41860	29.82551	6.09800	213.91	4.30
84/ 4/ 6	2445796.5	-24.67515	-16.60348	2.23172	3.22339	-4.57664	-2.41875	29.82481	6.09805	213.94	4.29
84/ 4/10	2445800.5	-24.66771	-16.61405	2.22613	3.22530	-4.57528	-2.41889	29.82412	6.09809	213.96	4.28
84/ 4/14	2445804.5	-24.66025	-16.62462	2.22054	3.22721	-4.57392	-2.41903	29.82343	6.09814	213.99	4.27
84/ 4/18	2445808.5	-24.65280	-16.63519	2.21495	3.22912	-4.57256	-2.41917	29.82274	6.09819	214.01	4.26
84/ 4/22	2445812.5	-24.64533	-16.64575	2.20937	3.23103	-4.57120	-2.41931	29.82205	6.09823	214.04	4.25
84/ 4/26	2445816.5	-24.63787	-16.65631	2.20378	3.23294	-4.56983	-2.41945	29.82136	6.09828	214.06	4.24
84/ 4/30	2445820.5	-24.63040	-16.66686	2.19819	3.23484	-4.56847	-2.41959	29.82068	6.09832	214.09	4.23
84/ 5/ 4	2445824.5	-24.62292	-16.67741	2.19260	3.23675	-4.56711	-2.41973	29.81999	6.09837	214.11	4.22
84/ 5/ 8	2445828.5	-24.61544	-16.68796	2.18701	3.23865	-4.56575	-2.41986	29.81931	6.09841	214.14	4.21
84/ 5/12	2445832.5	-24.60796	-16.69851	2.18142	3.24055	-4.56438	-2.42000	29.81862	6.09846	214.16	4.20
84/ 5/16	2445836.5	-24.60047	-16.70905	2.17583	3.24245	-4.56302	-2.42014	29.81794	6.09850	214.19	4.18
84/ 5/20	2445840.5	-24.59298	-16.71959	2.17023	3.24435	-4.56166	-2.42028	29.81726	6.09855	214.21	4.17
84/ 5/24	2445844.5	-24.58548	-16.73013	2.16464	3.24625	-4.56029	-2.42042	29.81658	6.09859	214.23	4.16
84/ 5/28	2445848.5	-24.57798	-16.74066	2.15905	3.24815	-4.55893	-2.42056	29.81591	6.09864	214.26	4.15
84/ 6/ 1	2445852.5	-24.57047	-16.75119	2.15346	3.25005	-4.55756	-2.42069	29.81523	6.09868	214.28	4.14
84/ 6/ 5	2445856.5	-24.56296	-16.76172	2.14787	3.25194	-4.55620	-2.42083	29.81455	6.09873	214.31	4.13
84/ 6/ 9	2445860.5	-24.55545	-16.77224	2.14227	3.25384	-4.55483	-2.42097	29.81388	6.09877	214.33	4.12
84/ 6/13	2445864.5	-24.54793	-16.78277	2.13668	3.25574	-4.55347	-2.42111	29.81321	6.09882	214.36	4.11
84/ 6/17	2445868.5	-24.54040	-16.79328	2.13109	3.25763	-4.55210	-2.42124	29.81254	6.09887	214.38	4.10
84/ 6/21	2445872.5	-24.53288	-16.80380	2.12549	3.25953	-4.55074	-2.42138	29.81186	6.09892	214.41	4.09
84/ 6/25	2445876.5	-24.52534	-16.81431	2.11990	3.26143	-4.54937	-2.42152	29.81120	6.09897	214.43	4.08
84/ 6/29	2445880.5	-24.51781	-16.82482	2.11431	3.26332	-4.54800	-2.42166	29.81053	6.09902	214.46	4.07
84/ 7/ 3	2445884.5	-24.51026	-16.83532	2.10871	3.26522	-4.54664	-2.42180	29.80986	6.09907	214.48	4.06
84/ 7/ 7	2445888.5	-24.50272	-16.84582	2.10312	3.26712	-4.54526	-2.42193	29.80920	6.09912	214.51	4.05
84/ 7/11	2445892.5	-24.49517	-16.85632	2.09752	3.26902	-4.54389	-2.42207	29.80853	6.09917	214.53	4.04
84/ 7/15	2445896.5	-24.48762	-16.86682	2.09193	3.27092	-4.54252	-2.42220	29.80787	6.09922	214.56	4.02
84/ 7/19	2445900.5	-24.48006	-16.87731	2.08633	3.27282	-4.54114	-2.42233	29.80721	6.09926	214.58	4.01
84/ 7/23	2445904.5	-24.47249	-16.88780	2.08073	3.27471	-4.53976	-2.42247	29.80655	6.09931	214.61	4.00
84/ 7/27	2445908.5	-24.46493	-16.89829	2.07514	3.27661	-4.53838	-2.42260	29.80589	6.09935	214.63	3.99
84/ 7/31	2445912.5	-24.45735	-16.90877	2.06954	3.27850	-4.53700	-2.42273	29.80523	6.09939	214.66	3.98
84/ 8/ 4	2445916.5	-24.44978	-16.91925	2.06394	3.28040	-4.53562	-2.42286	29.80457	6.09943	214.68	3.97
84/ 8/ 8	2445920.5	-24.44220	-16.92973	2.05835	3.28229	-4.53423	-2.42299	29.80392	6.09947	214.71	3.96
84/ 8/12	2445924.5	-24.43461	-16.94020	2.05275	3.28418	-4.53284	-2.42312	29.80326	6.09951	214.73	3.95
84/ 8/16	2445928.5	-24.42702	-16.95067	2.04715	3.28607	-4.53145	-2.42325	29.80261	6.09955	214.76	3.94
84/ 8/20	2445932.5	-24.41943	-16.96114	2.04155	3.28796	-4.53007	-2.42337	29.80196	6.09958	214.78	3.93
84/ 8/24	2445936.5	-24.41183	-16.97160	2.03595	3.28985	-4.52867	-2.42350	29.80131	6.09962	214.81	3.92
84/ 8/28	2445940.5	-24.40423	-16.98206	2.03035	3.29173	-4.52728	-2.42362	29.80066	6.09965	214.83	3.91
84/ 9/ 1	2445944.5	-24.39662	-16.99252	2.02475	3.29361	-4.52589	-2.42375	29.80001	6.09968	214.86	3.90
84/ 9/ 5	2445948.5	-24.38901	-17.00297	2.01916	3.29549	-4.52449	-2.42387	29.79936	6.09971	214.88	3.89
84/ 9/ 9	2445952.5	-24.38140	-17.01342	2.01356	3.29737	-4.52310	-2.42400	29.79872	6.09974	214.91	3.87
84/ 9/13	2445956.5	-24.37378	-17.02387	2.00796	3.29925	-4.52170	-2.42412	29.79807	6.09977	214.93	3.86
84/ 9/17	2445960.5	-24.36615	-17.03431	2.00236	3.30112	-4.52031	-2.42425	29.79743	6.09980	214.96	3.85
84/ 9/21	2445964.5	-24.35853	-17.04475	1.99675	3.30300	-4.51891	-2.42437	29.79679	6.09983	214.98	3.84
84/ 9/25	2445968.5	-24.35089	-17.05519	1.99115	3.30487	-4.51752	-2.42450	29.79614	6.09986	215.01	3.83

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84/ 9/29	2445972.5	-24.34326	-17.06563	1.98555	3.30675	-4.51612	-2.42462	29.79551	6.09989	215.03	3.82
84/10/ 3	2445976.5	-24.33561	-17.07606	1.97995	3.30862	-4.51472	-2.42474	29.79487	6.09992	215.06	3.81
84/10/ 7	2445980.5	-24.32797	-17.08649	1.97435	3.31049	-4.51332	-2.42486	29.79423	6.09995	215.08	3.80
84/10/11	2445984.5	-24.32032	-17.09691	1.96875	3.31236	-4.51191	-2.42498	29.79359	6.09997	215.11	3.79
84/10/15	2445988.5	-24.31266	-17.10733	1.96315	3.31423	-4.51051	-2.42510	29.79296	6.09999	215.13	3.78
84/10/19	2445992.5	-24.30501	-17.11775	1.95754	3.31609	-4.50911	-2.42522	29.79233	6.10002	215.16	3.77
84/10/23	2445996.5	-24.29734	-17.12817	1.95194	3.31795	-4.50770	-2.42534	29.79169	6.10004	215.18	3.76
84/10/27	2446000.5	-24.28968	-17.13858	1.94634	3.31981	-4.50630	-2.42546	29.79106	6.10006	215.21	3.75
84/10/31	2446004.5	-24.28200	-17.14899	1.94073	3.32167	-4.50490	-2.42558	29.79043	6.10008	215.23	3.74
84/11/ 4	2446008.5	-24.27433	-17.15939	1.93513	3.32353	-4.50349	-2.42570	29.78981	6.10010	215.26	3.72
84/11/ 8	2446012.5	-24.26665	-17.16980	1.92953	3.32538	-4.50209	-2.42582	29.78918	6.10013	215.28	3.71
84/11/12	2446016.5	-24.25896	-17.18019	1.92392	3.32723	-4.50068	-2.42594	29.78855	6.10015	215.31	3.70
84/11/16	2446020.5	-24.25128	-17.19059	1.91832	3.32908	-4.49928	-2.42605	29.78793	6.10017	215.33	3.69
84/11/20	2446024.5	-24.24358	-17.20098	1.91271	3.33093	-4.49788	-2.42617	29.78731	6.10019	215.36	3.68
84/11/24	2446028.5	-24.23589	-17.21137	1.90711	3.33278	-4.49647	-2.42629	29.78668	6.10021	215.38	3.67
84/11/28	2446032.5	-24.22818	-17.22176	1.90150	3.33463	-4.49507	-2.42641	29.78606	6.10024	215.41	3.66
84/12/ 2	2446036.5	-24.22048	-17.23214	1.89590	3.33647	-4.49367	-2.42653	29.78544	6.10026	215.43	3.65
84/12/ 6	2446040.5	-24.21277	-17.24252	1.89029	3.33832	-4.49227	-2.42665	29.78483	6.10029	215.46	3.64
84/12/10	2446044.5	-24.20505	-17.25290	1.88468	3.34016	-4.49088	-2.42677	29.78421	6.10032	215.48	3.63
84/12/14	2446048.5	-24.19734	-17.26327	1.87908	3.34201	-4.48948	-2.42689	29.78359	6.10035	215.51	3.62
84/12/18	2446052.5	-24.18961	-17.27364	1.87347	3.34386	-4.48808	-2.42702	29.78298	6.10038	215.53	3.61
84/12/22	2446056.5	-24.18189	-17.28401	1.86786	3.34571	-4.48668	-2.42714	29.78237	6.10042	215.56	3.60
84/12/26	2446060.5	-24.17415	-17.29437	1.86226	3.34755	-4.48529	-2.42726	29.78176	6.10045	215.58	3.59
84/12/30	2446064.5	-24.16642	-17.30473	1.85665	3.34940	-4.48389	-2.42738	29.78115	6.10049	215.61	3.57
85/ 1/ 3	2446068.5	-24.15868	-17.31509	1.85104	3.35125	-4.48249	-2.42750	29.78054	6.10052	215.63	3.56
85/ 1/ 7	2446072.5	-24.15093	-17.32544	1.84543	3.35310	-4.48109	-2.42762	29.77993	6.10056	215.65	3.55
85/ 1/11	2446076.5	-24.14319	-17.33579	1.83983	3.35495	-4.47969	-2.42774	29.77932	6.10059	215.68	3.54
85/ 1/15	2446080.5	-24.13543	-17.34614	1.83422	3.35680	-4.47829	-2.42786	29.77872	6.10063	215.70	3.53
85/ 1/19	2446084.5	-24.12768	-17.35648	1.82861	3.35865	-4.47689	-2.42798	29.77811	6.10067	215.73	3.52
85/ 1/23	2446088.5	-24.11992	-17.36682	1.82300	3.36050	-4.47548	-2.42810	29.77751	6.10070	215.75	3.51
85/ 1/27	2446092.5	-24.11215	-17.37716	1.81739	3.36235	-4.47408	-2.42822	29.77691	6.10074	215.78	3.50
85/ 1/31	2446096.5	-24.10438	-17.38749	1.81178	3.36420	-4.47268	-2.42834	29.77631	6.10078	215.80	3.49
85/ 2/ 4	2446100.5	-24.09661	-17.39783	1.80617	3.36605	-4.47127	-2.42845	29.77571	6.10082	215.83	3.48
85/ 2/ 8	2446104.5	-24.08883	-17.40815	1.80056	3.36790	-4.46986	-2.42857	29.77511	6.10085	215.85	3.47
85/ 2/12	2446108.5	-24.08105	-17.41848	1.79495	3.36976	-4.46846	-2.42869	29.77452	6.10089	215.88	3.46
85/ 2/16	2446112.5	-24.07326	-17.42880	1.78934	3.37161	-4.46705	-2.42880	29.77392	6.10093	215.90	3.45
85/ 2/20	2446116.5	-24.06547	-17.43912	1.78373	3.37346	-4.46564	-2.42892	29.77333	6.10096	215.93	3.43
85/ 2/24	2446120.5	-24.05767	-17.44943	1.77812	3.37531	-4.46422	-2.42903	29.77274	6.10100	215.95	3.42
85/ 2/28	2446124.5	-24.04987	-17.45974	1.77250	3.37716	-4.46281	-2.42915	29.77215	6.10103	215.98	3.41
85/ 3/ 4	2446128.5	-24.04207	-17.47005	1.76689	3.37901	-4.46140	-2.42926	29.77156	6.10107	216.00	3.40
85/ 3/ 8	2446132.5	-24.03426	-17.48036	1.76128	3.38086	-4.45998	-2.42937	29.77097	6.10111	216.03	3.39
85/ 3/12	2446136.5	-24.02645	-17.49066	1.75567	3.38271	-4.45857	-2.42949	29.77038	6.10114	216.05	3.38
85/ 3/16	2446140.5	-24.01863	-17.50096	1.75005	3.38456	-4.45715	-2.42960	29.76980	6.10118	216.08	3.37
85/ 3/20	2446144.5	-24.01081	-17.51125	1.74444	3.38641	-4.45573	-2.42971	29.76921	6.10121	216.10	3.36
85/ 3/24	2446148.5	-24.00298	-17.52154	1.73883	3.38827	-4.45430	-2.42982	29.76863	6.10125	216.13	3.35

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85/ 3/28	2446152.5	-23.99515	-17.53183	1.73322	3.39012	-4.45288	-2.42993	29.76805	6.10128	216.15	3.34
85/ 4/ 1	2446156.5	-23.98732	-17.54212	1.72760	3.39197	-4.45145	-2.43004	29.76747	6.10131	216.18	3.33
85/ 4/ 5	2446160.5	-23.97948	-17.55240	1.72199	3.39382	-4.45002	-2.43014	29.76689	6.10133	216.20	3.32
85/ 4/ 9	2446164.5	-23.97164	-17.56268	1.71637	3.39567	-4.44858	-2.43025	29.76631	6.10136	216.23	3.31
85/ 4/13	2446168.5	-23.96379	-17.57295	1.71076	3.39751	-4.44715	-2.43035	29.76573	6.10138	216.25	3.29
85/ 4/17	2446172.5	-23.95594	-17.58323	1.70514	3.39936	-4.44571	-2.43046	29.76516	6.10140	216.28	3.28
85/ 4/21	2446176.5	-23.94809	-17.59349	1.69953	3.40120	-4.44427	-2.43056	29.76458	6.10142	216.30	3.27
85/ 4/25	2446180.5	-23.94023	-17.60376	1.69391	3.40304	-4.44283	-2.43066	29.76401	6.10143	216.33	3.26
85/ 4/29	2446184.5	-23.93236	-17.61402	1.68830	3.40488	-4.44138	-2.43076	29.76344	6.10145	216.35	3.25
85/ 5/ 3	2446188.5	-23.92450	-17.62428	1.68268	3.40671	-4.43994	-2.43086	29.76287	6.10146	216.38	3.24
85/ 5/ 7	2446192.5	-23.91662	-17.63454	1.67707	3.40855	-4.43849	-2.43096	29.76230	6.10147	216.40	3.23
85/ 5/11	2446196.5	-23.90875	-17.64479	1.67145	3.41038	-4.43704	-2.43105	29.76173	6.10148	216.43	3.22
85/ 5/15	2446200.5	-23.90087	-17.65504	1.66584	3.41221	-4.43559	-2.43115	29.76116	6.10149	216.45	3.21
85/ 5/19	2446204.5	-23.89298	-17.66528	1.66022	3.41403	-4.43414	-2.43125	29.76060	6.10149	216.48	3.20
85/ 5/23	2446208.5	-23.88509	-17.67552	1.65460	3.41585	-4.43269	-2.43134	29.76003	6.10150	216.50	3.19
85/ 5/27	2446212.5	-23.87720	-17.68576	1.64898	3.41767	-4.43124	-2.43144	29.75947	6.10150	216.53	3.18
85/ 5/31	2446216.5	-23.86930	-17.69600	1.64337	3.41949	-4.42979	-2.43154	29.75891	6.10150	216.55	3.17
85/ 6/ 4	2446220.5	-23.86140	-17.70623	1.63775	3.42130	-4.42834	-2.43163	29.75835	6.10151	216.58	3.15
85/ 6/ 8	2446224.5	-23.85349	-17.71646	1.63213	3.42312	-4.42689	-2.43173	29.75779	6.10151	216.60	3.14
85/ 6/12	2446228.5	-23.84558	-17.72668	1.62651	3.42493	-4.42544	-2.43182	29.75723	6.10151	216.63	3.13
85/ 6/16	2446232.5	-23.83767	-17.73691	1.62090	3.42674	-4.42399	-2.43192	29.75667	6.10152	216.65	3.12
85/ 6/20	2446236.5	-23.82975	-17.74712	1.61528	3.42855	-4.42254	-2.43202	29.75612	6.10152	216.68	3.11
85/ 6/24	2446240.5	-23.82183	-17.75734	1.60966	3.43036	-4.42109	-2.43211	29.75556	6.10153	216.70	3.10
85/ 6/28	2446244.5	-23.81390	-17.76755	1.60404	3.43217	-4.41964	-2.43221	29.75501	6.10153	216.73	3.09
85/ 7/ 2	2446248.5	-23.80597	-17.77776	1.59842	3.43398	-4.41819	-2.43230	29.75446	6.10153	216.75	3.08
85/ 7/ 6	2446252.5	-23.79804	-17.78796	1.59280	3.43578	-4.41673	-2.43240	29.75391	6.10153	216.78	3.07
85/ 7/10	2446256.5	-23.79010	-17.79817	1.58718	3.43758	-4.41528	-2.43249	29.75336	6.10153	216.80	3.06
85/ 7/14	2446260.5	-23.78215	-17.80837	1.58156	3.43938	-4.41383	-2.43258	29.75282	6.10153	216.83	3.05
85/ 7/18	2446264.5	-23.77421	-17.81856	1.57594	3.44118	-4.41238	-2.43268	29.75227	6.10153	216.85	3.04
85/ 7/22	2446268.5	-23.76625	-17.82875	1.57032	3.44297	-4.41093	-2.43277	29.75172	6.10153	216.88	3.03
85/ 7/26	2446272.5	-23.75830	-17.83894	1.56470	3.44477	-4.40948	-2.43287	29.75118	6.10154	216.90	3.01
85/ 7/30	2446276.5	-23.75034	-17.84913	1.55908	3.44656	-4.40803	-2.43296	29.75064	6.10154	216.93	3.00
85/ 8/ 3	2446280.5	-23.74237	-17.85931	1.55346	3.44835	-4.40658	-2.43306	29.75010	6.10154	216.95	2.99
85/ 8/ 7	2446284.5	-23.73440	-17.86949	1.54784	3.45014	-4.40513	-2.43315	29.74956	6.10154	216.98	2.98
85/ 8/11	2446288.5	-23.72643	-17.87966	1.54222	3.45193	-4.40368	-2.43325	29.74902	6.10155	217.00	2.97
85/ 8/15	2446292.5	-23.71846	-17.88983	1.53660	3.45372	-4.40223	-2.43334	29.74848	6.10155	217.03	2.96
85/ 8/19	2446296.5	-23.71047	-17.90000	1.53098	3.45551	-4.40078	-2.43344	29.74795	6.10156	217.05	2.95
85/ 8/23	2446300.5	-23.70249	-17.91016	1.52536	3.45730	-4.39933	-2.43353	29.74742	6.10157	217.08	2.94
85/ 8/27	2446304.5	-23.69450	-17.92033	1.51973	3.45908	-4.39789	-2.43363	29.74688	6.10158	217.10	2.93
85/ 8/31	2446308.5	-23.68651	-17.93048	1.51411	3.46087	-4.39645	-2.43373	29.74635	6.10159	217.13	2.92
85/ 9/ 4	2446312.5	-23.67851	-17.94064	1.50849	3.46266	-4.39500	-2.43383	29.74582	6.10160	217.15	2.91
85/ 9/ 8	2446316.5	-23.67051	-17.95079	1.50287	3.46445	-4.39356	-2.43393	29.74529	6.10162	217.18	2.90
85/ 9/12	2446320.5	-23.66250	-17.96094	1.49724	3.46624	-4.39212	-2.43402	29.74477	6.10164	217.20	2.89
85/ 9/16	2446324.5	-23.65449	-17.97108	1.49162	3.46803	-4.39067	-2.43412	29.74424	6.10165	217.23	2.87
85/ 9/20	2446328.5	-23.64648	-17.98123	1.48600	3.46982	-4.38922	-2.43422	29.74372	6.10167	217.25	2.86

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85/ 9/24	2446332.5	-23.63846	-17.99136	1.48037	3.47161	-4.38778	-2.43431	29.74319	6.10169	217.27	2.85
85/ 9/28	2446336.5	-23.63044	-18.00150	1.47475	3.47341	-4.38633	-2.43441	29.74267	6.10170	217.30	2.84
85/10/ 2	2446340.5	-23.62241	-18.01163	1.46913	3.47520	-4.38488	-2.43450	29.74215	6.10172	217.32	2.83
85/10/ 6	2446344.5	-23.61438	-18.02176	1.46350	3.47699	-4.38343	-2.43460	29.74163	6.10174	217.35	2.82
85/10/10	2446348.5	-23.60635	-18.03188	1.45788	3.47878	-4.38198	-2.43469	29.74111	6.10175	217.37	2.81
85/10/14	2446352.5	-23.59831	-18.04200	1.45225	3.48057	-4.38052	-2.43479	29.74060	6.10177	217.40	2.80
85/10/18	2446356.5	-23.59027	-18.05212	1.44663	3.48236	-4.37907	-2.43488	29.74008	6.10178	217.42	2.79
85/10/22	2446360.5	-23.58222	-18.06224	1.44100	3.48415	-4.37762	-2.43497	29.73957	6.10180	217.45	2.78
85/10/26	2446364.5	-23.57417	-18.07235	1.43538	3.48594	-4.37616	-2.43507	29.73906	6.10181	217.47	2.77
85/10/30	2446368.5	-23.56611	-18.08246	1.42975	3.48773	-4.37470	-2.43516	29.73855	6.10183	217.50	2.76
85/11/ 3	2446372.5	-23.55805	-18.09256	1.42413	3.48952	-4.37325	-2.43525	29.73804	6.10184	217.52	2.74
85/11/ 7	2446376.5	-23.54999	-18.10266	1.41850	3.49131	-4.37179	-2.43534	29.73753	6.10185	217.55	2.73
85/11/11	2446380.5	-23.54192	-18.11276	1.41287	3.49309	-4.37033	-2.43543	29.73702	6.10186	217.57	2.72
85/11/15	2446384.5	-23.53385	-18.12286	1.40725	3.49488	-4.36886	-2.43552	29.73652	6.10188	217.60	2.71
85/11/19	2446388.5	-23.52578	-18.13295	1.40162	3.49666	-4.36740	-2.43561	29.73601	6.10189	217.62	2.70
85/11/23	2446392.5	-23.51770	-18.14303	1.39599	3.49844	-4.36594	-2.43569	29.73551	6.10190	217.65	2.69
85/11/27	2446396.5	-23.50961	-18.15312	1.39037	3.50023	-4.36448	-2.43578	29.73501	6.10191	217.67	2.68
85/12/ 1	2446400.5	-23.50152	-18.16320	1.38474	3.50201	-4.36302	-2.43587	29.73451	6.10192	217.70	2.67
85/12/ 5	2446404.5	-23.49343	-18.17328	1.37911	3.50379	-4.36155	-2.43596	29.73401	6.10193	217.72	2.66
85/12/ 9	2446408.5	-23.48534	-18.18335	1.37349	3.50557	-4.36009	-2.43605	29.73351	6.10195	217.75	2.65
85/12/13	2446412.5	-23.47723	-18.19342	1.36786	3.50736	-4.35862	-2.43613	29.73302	6.10196	217.77	2.64
85/12/17	2446416.5	-23.46913	-18.20349	1.36223	3.50914	-4.35715	-2.43622	29.73252	6.10197	217.80	2.63
85/12/21	2446420.5	-23.46102	-18.21355	1.35660	3.51092	-4.35568	-2.43630	29.73203	6.10197	217.82	2.62
85/12/25	2446424.5	-23.45291	-18.22361	1.35097	3.51269	-4.35421	-2.43639	29.73153	6.10198	217.85	2.60
85/12/29	2446428.5	-23.44479	-18.23367	1.34534	3.51447	-4.35274	-2.43647	29.73104	6.10198	217.87	2.59
86/ 1/ 2	2446432.5	-23.43667	-18.24373	1.33972	3.51624	-4.35126	-2.43655	29.73055	6.10199	217.90	2.58
86/ 1/ 6	2446436.5	-23.42854	-18.25378	1.33409	3.51802	-4.34979	-2.43663	29.73007	6.10199	217.92	2.57
86/ 1/10	2446440.5	-23.42042	-18.26382	1.32846	3.51979	-4.34832	-2.43672	29.72958	6.10199	217.95	2.56
86/ 1/14	2446444.5	-23.41228	-18.27387	1.32283	3.52156	-4.34684	-2.43680	29.72909	6.10200	217.97	2.55
86/ 1/18	2446448.5	-23.40414	-18.28391	1.31720	3.52332	-4.34537	-2.43688	29.72861	6.10200	218.00	2.54
86/ 1/22	2446452.5	-23.39600	-18.29394	1.31157	3.52509	-4.34389	-2.43696	29.72813	6.10200	218.02	2.53
86/ 1/26	2446456.5	-23.38786	-18.30398	1.30594	3.52685	-4.34241	-2.43704	29.72765	6.10200	218.05	2.52
86/ 1/30	2446460.5	-23.37971	-18.31401	1.30031	3.52861	-4.34094	-2.43712	29.72717	6.10200	218.07	2.51
86/ 2/ 3	2446464.5	-23.37155	-18.32403	1.29468	3.53037	-4.33946	-2.43720	29.72669	6.10200	218.10	2.50
86/ 2/ 7	2446468.5	-23.36340	-18.33406	1.28905	3.53213	-4.33799	-2.43728	29.72621	6.10200	218.12	2.49
86/ 2/11	2446472.5	-23.35523	-18.34408	1.28342	3.53389	-4.33651	-2.43736	29.72573	6.10200	218.15	2.47
86/ 2/15	2446476.5	-23.34707	-18.35409	1.27779	3.53565	-4.33503	-2.43744	29.72526	6.10200	218.17	2.46
86/ 2/19	2446480.5	-23.33890	-18.36411	1.27216	3.53740	-4.33356	-2.43752	29.72479	6.10200	218.20	2.45
86/ 2/23	2446484.5	-23.33072	-18.37412	1.26652	3.53915	-4.33209	-2.43760	29.72432	6.10201	218.22	2.44
86/ 2/27	2446488.5	-23.32255	-18.38412	1.26089	3.54091	-4.33062	-2.43768	29.72385	6.10201	218.25	2.43
86/ 3/ 3	2446492.5	-23.31436	-18.39413	1.25526	3.54266	-4.32915	-2.43777	29.72338	6.10202	218.27	2.42
86/ 3/ 7	2446496.5	-23.30618	-18.40412	1.24963	3.54442	-4.32767	-2.43785	29.72291	6.10203	218.30	2.41
86/ 3/11	2446500.5	-23.29799	-18.41412	1.24400	3.54618	-4.32620	-2.43793	29.72244	6.10204	218.32	2.40
86/ 3/15	2446504.5	-23.28979	-18.42411	1.23837	3.54793	-4.32473	-2.43801	29.72198	6.10205	218.35	2.39
86/ 3/19	2446508.5	-23.28160	-18.43410	1.23273	3.54969	-4.32325	-2.43809	29.72151	6.10206	218.37	2.38

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC EQUATORIAL COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	RA	DEC
86/ 3/23	2446512.5	-23.27339	-18.44409	1.22710	3.55144	-4.32178	-2.43817	29.72105	6.10206	218.40	2.37
86/ 3/27	2446516.5	-23.26519	-18.45407	1.22147	3.55320	-4.32030	-2.43825	29.72059	6.10207	218.42	2.36
86/ 3/31	2446520.5	-23.25698	-18.46405	1.21584	3.55495	-4.31883	-2.43833	29.72013	6.10208	218.45	2.34
86/ 4/ 4	2446524.5	-23.24876	-18.47403	1.21020	3.55670	-4.31735	-2.43841	29.71967	6.10209	218.47	2.33
86/ 4/ 8	2446528.5	-23.24054	-18.48400	1.20457	3.55846	-4.31587	-2.43849	29.71922	6.10210	218.50	2.32
86/ 4/12	2446532.5	-23.23232	-18.49397	1.19894	3.56021	-4.31440	-2.43857	29.71876	6.10211	218.52	2.31
86/ 4/16	2446536.5	-23.22409	-18.50393	1.19330	3.56196	-4.31292	-2.43865	29.71831	6.10212	218.55	2.30
86/ 4/20	2446540.5	-23.21586	-18.51389	1.18767	3.56371	-4.31144	-2.43873	29.71786	6.10213	218.57	2.29
86/ 4/24	2446544.5	-23.20763	-18.52385	1.18203	3.56546	-4.30996	-2.43880	29.71741	6.10214	218.60	2.28
86/ 4/28	2446548.5	-23.19939	-18.53381	1.17640	3.56722	-4.30848	-2.43888	29.71696	6.10215	218.62	2.27
86/ 5/ 2	2446552.5	-23.19115	-18.54376	1.17077	3.56897	-4.30700	-2.43896	29.71651	6.10216	218.65	2.26
86/ 5/ 6	2446556.5	-23.18290	-18.55371	1.16513	3.57072	-4.30552	-2.43904	29.71606	6.10217	218.67	2.25
86/ 5/10	2446560.5	-23.17465	-18.56365	1.15950	3.57247	-4.30404	-2.43911	29.71562	6.10218	218.70	2.24
86/ 5/14	2446564.5	-23.16639	-18.57359	1.15386	3.57422	-4.30256	-2.43919	29.71517	6.10219	218.72	2.23
86/ 5/18	2446568.5	-23.15813	-18.58353	1.14823	3.57597	-4.30108	-2.43927	29.71473	6.10220	218.75	2.21
86/ 5/22	2446572.5	-23.14987	-18.59347	1.14259	3.57772	-4.29959	-2.43934	29.71429	6.10221	218.77	2.20
86/ 5/26	2446576.5	-23.14160	-18.60340	1.13696	3.57947	-4.29811	-2.43942	29.71385	6.10222	218.80	2.19
86/ 5/30	2446580.5	-23.13333	-18.61332	1.13132	3.58122	-4.29663	-2.43949	29.71341	6.10223	218.82	2.18
86/ 6/ 3	2446584.5	-23.12506	-18.62325	1.12568	3.58297	-4.29514	-2.43957	29.71297	6.10224	218.85	2.17
86/ 6/ 7	2446588.5	-23.11678	-18.63317	1.12005	3.58472	-4.29365	-2.43964	29.71254	6.10226	218.87	2.16
86/ 6/11	2446592.5	-23.10849	-18.64309	1.11441	3.58647	-4.29216	-2.43972	29.71210	6.10226	218.90	2.15
86/ 6/15	2446596.5	-23.10021	-18.65300	1.10878	3.58822	-4.29067	-2.43979	29.71167	6.10227	218.92	2.14
86/ 6/19	2446600.5	-23.09192	-18.66291	1.10314	3.58997	-4.28917	-2.43986	29.71124	6.10228	218.95	2.13
86/ 6/23	2446604.5	-23.08362	-18.67282	1.09750	3.59172	-4.28767	-2.43993	29.71081	6.10228	218.97	2.12
86/ 6/27	2446608.5	-23.07532	-18.68272	1.09187	3.59346	-4.28618	-2.44000	29.71038	6.10228	219.00	2.11
86/ 7/ 1	2446612.5	-23.06702	-18.69262	1.08623	3.59521	-4.28468	-2.44007	29.70995	6.10228	219.02	2.10
86/ 7/ 5	2446616.5	-23.05871	-18.70252	1.08059	3.59695	-4.28317	-2.44013	29.70953	6.10228	219.04	2.08
86/ 7/ 9	2446620.5	-23.05040	-18.71241	1.07496	3.59869	-4.28167	-2.44020	29.70910	6.10228	219.07	2.07
86/ 7/13	2446624.5	-23.04208	-18.72230	1.06932	3.60043	-4.28017	-2.44026	29.70868	6.10228	219.09	2.06
86/ 7/17	2446628.5	-23.03376	-18.73219	1.06368	3.60216	-4.27866	-2.44033	29.70826	6.10227	219.12	2.05
86/ 7/21	2446632.5	-23.02544	-18.74207	1.05804	3.60390	-4.27716	-2.44039	29.70784	6.10227	219.14	2.04
86/ 7/25	2446636.5	-23.01711	-18.75195	1.05240	3.60563	-4.27565	-2.44046	29.70742	6.10226	219.17	2.03
86/ 7/29	2446640.5	-23.00878	-18.76182	1.04677	3.60735	-4.27414	-2.44052	29.70700	6.10225	219.19	2.02
86/ 8/ 2	2446644.5	-23.00044	-18.77170	1.04113	3.60908	-4.27264	-2.44059	29.70658	6.10224	219.22	2.01
86/ 8/ 6	2446648.5	-22.99210	-18.78157	1.03549	3.61080	-4.27113	-2.44065	29.70617	6.10223	219.24	2.00
86/ 8/10	2446652.5	-22.98376	-18.79143	1.02985	3.61253	-4.26962	-2.44071	29.70575	6.10222	219.27	1.99
86/ 8/14	2446656.5	-22.97541	-18.80129	1.02421	3.61424	-4.26811	-2.44078	29.70534	6.10221	219.29	1.98
86/ 8/18	2446660.5	-22.96706	-18.81115	1.01857	3.61596	-4.26661	-2.44084	29.70493	6.10220	219.32	1.97
86/ 8/22	2446664.5	-22.95871	-18.82101	1.01294	3.61768	-4.26510	-2.44090	29.70452	6.10219	219.34	1.95
86/ 8/26	2446668.5	-22.95035	-18.83086	1.00730	3.61939	-4.26360	-2.44097	29.70411	6.10218	219.37	1.94
86/ 8/30	2446672.5	-22.94198	-18.84071	1.00166	3.62111	-4.26209	-2.44103	29.70370	6.10217	219.39	1.93
86/ 9/ 3	2446676.5	-22.93362	-18.85055	0.99602	3.62282	-4.26059	-2.44110	29.70330	6.10216	219.42	1.92
86/ 9/ 7	2446680.5	-22.92524	-18.86039	0.99038	3.62453	-4.25908	-2.44116	29.70290	6.10216	219.44	1.91
86/ 9/11	2446684.5	-22.91687	-18.87023	0.98474	3.62624	-4.25758	-2.44122	29.70249	6.10215	219.47	1.90
86/ 9/15	2446688.5	-22.90849	-18.88006	0.97910	3.62795	-4.25607	-2.44129	29.70209	6.10214	219.49	1.89

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86/ 9/19	2446692.5	-22.90011	-18.88989	0.97346	3.62966	-4.25457	-2.44135	29.70169	6.10213	219.52	1.88
86/ 9/23	2446696.5	-22.89172	-18.89972	0.96782	3.63137	-4.25306	-2.44141	29.70129	6.10212	219.54	1.87
86/ 9/27	2446700.5	-22.88333	-18.90954	0.96218	3.63307	-4.25156	-2.44148	29.70090	6.10211	219.57	1.86
86/10/ 1	2446704.5	-22.87493	-18.91936	0.95654	3.63477	-4.25006	-2.44154	29.70050	6.10210	219.59	1.85
86/10/ 5	2446708.5	-22.86653	-18.92918	0.95090	3.63647	-4.24855	-2.44161	29.70011	6.10210	219.62	1.83
86/10/ 9	2446712.5	-22.85813	-18.93899	0.94526	3.63817	-4.24705	-2.44167	29.69972	6.10209	219.64	1.82
86/10/13	2446716.5	-22.84973	-18.94880	0.93962	3.63987	-4.24555	-2.44173	29.69933	6.10209	219.67	1.81
86/10/17	2446720.5	-22.84131	-18.95861	0.93398	3.64157	-4.24405	-2.44180	29.69894	6.10208	219.69	1.80
86/10/21	2446724.5	-22.83290	-18.96841	0.92834	3.64327	-4.24256	-2.44186	29.69855	6.10208	219.72	1.79
86/10/25	2446728.5	-22.82448	-18.97821	0.92269	3.64496	-4.24106	-2.44193	29.69816	6.10208	219.74	1.78
86/10/29	2446732.5	-22.81606	-18.98801	0.91705	3.64666	-4.23956	-2.44200	29.69778	6.10208	219.77	1.77
86/11/ 2	2446736.5	-22.80763	-18.99780	0.91141	3.64835	-4.23807	-2.44206	29.69739	6.10208	219.79	1.76
86/11/ 6	2446740.5	-22.79920	-19.00759	0.90577	3.65005	-4.23658	-2.44213	29.69701	6.10208	219.82	1.75
86/11/10	2446744.5	-22.79077	-19.01737	0.90013	3.65175	-4.23508	-2.44220	29.69663	6.10209	219.84	1.74
86/11/14	2446748.5	-22.78233	-19.02716	0.89449	3.65344	-4.23359	-2.44227	29.69625	6.10210	219.87	1.73
86/11/18	2446752.5	-22.77389	-19.03694	0.88884	3.65514	-4.23210	-2.44233	29.69587	6.10211	219.89	1.72
86/11/22	2446756.5	-22.76544	-19.04671	0.88320	3.65684	-4.23062	-2.44240	29.69550	6.10213	219.92	1.70
86/11/26	2446760.5	-22.75699	-19.05648	0.87756	3.65854	-4.22913	-2.44247	29.69512	6.10214	219.94	1.69
86/11/30	2446764.5	-22.74854	-19.06625	0.87192	3.66025	-4.22764	-2.44254	29.69475	6.10216	219.97	1.68
86/12/ 4	2446768.5	-22.74008	-19.07602	0.86627	3.66195	-4.22615	-2.44261	29.69438	6.10218	219.99	1.67
86/12/ 8	2446772.5	-22.73162	-19.08578	0.86063	3.66366	-4.22466	-2.44268	29.69401	6.10220	220.02	1.66
86/12/12	2446776.5	-22.72315	-19.09553	0.85499	3.66536	-4.22316	-2.44275	29.69364	6.10221	220.04	1.65
86/12/16	2446780.5	-22.71468	-19.10529	0.84934	3.66707	-4.22167	-2.44282	29.69327	6.10223	220.07	1.64
86/12/20	2446784.5	-22.70621	-19.11504	0.84370	3.66878	-4.22018	-2.44288	29.69290	6.10225	220.09	1.63
86/12/24	2446788.5	-22.69773	-19.12479	0.83806	3.67048	-4.21868	-2.44295	29.69254	6.10227	220.12	1.62
86/12/28	2446792.5	-22.68925	-19.13453	0.83241	3.67219	-4.21719	-2.44302	29.69218	6.10229	220.14	1.61

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

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86/12/16	2446780.5	-22.71468	-17.18996	8.38086	3.66707	-4.84507	-0.56141	29.69327	6.10223	217.12	16.39
86/12/20	2446784.5	-22.70621	-17.20115	8.37956	3.66878	-4.84372	-0.56206	29.69290	6.10225	217.15	16.39
86/12/24	2446788.5	-22.69773	-17.21234	8.37826	3.67048	-4.84238	-0.56272	29.69254	6.10227	217.17	16.39
86/12/28	2446792.5	-22.68925	-17.22352	8.37696	3.67219	-4.84103	-0.56337	29.69218	6.10229	217.20	16.39
87/ 1/ 1	2446796.5	-22.68077	-17.23471	8.37566	3.67390	-4.83969	-0.56403	29.69181	6.10231	217.23	16.38
87/ 1/ 5	2446800.5	-22.67228	-17.24589	8.37435	3.67561	-4.83834	-0.56468	29.69145	6.10233	217.26	16.38
87/ 1/ 9	2446804.5	-22.66378	-17.25706	8.37305	3.67732	-4.83699	-0.56534	29.69109	6.10235	217.29	16.38
87/ 1/13	2446808.5	-22.65529	-17.26823	8.37174	3.67903	-4.83564	-0.56599	29.69074	6.10237	217.32	16.38
87/ 1/17	2446812.5	-22.64678	-17.27940	8.37043	3.68074	-4.83428	-0.56665	29.69038	6.10239	217.34	16.38
87/ 1/21	2446816.5	-22.63828	-17.29057	8.36912	3.68245	-4.83293	-0.56731	29.69003	6.10241	217.37	16.37
87/ 1/25	2446820.5	-22.62977	-17.30173	8.36781	3.68415	-4.83157	-0.56796	29.68967	6.10243	217.40	16.37
87/ 1/29	2446824.5	-22.62126	-17.31289	8.36650	3.68586	-4.83021	-0.56861	29.68932	6.10245	217.43	16.37
87/ 2/ 2	2446828.5	-22.61274	-17.32405	8.36518	3.68757	-4.82886	-0.56927	29.68897	6.10247	217.46	16.37
87/ 2/ 6	2446832.5	-22.60422	-17.33520	8.36387	3.68928	-4.82750	-0.56992	29.68862	6.10248	217.48	16.36
87/ 2/10	2446836.5	-22.59569	-17.34636	8.36255	3.69098	-4.82614	-0.57058	29.68828	6.10250	217.51	16.36
87/ 2/14	2446840.5	-22.58717	-17.35750	8.36123	3.69269	-4.82478	-0.57123	29.68793	6.10252	217.54	16.36
87/ 2/18	2446844.5	-22.57863	-17.36865	8.35991	3.69440	-4.82342	-0.57189	29.68758	6.10254	217.57	16.36
87/ 2/22	2446848.5	-22.57010	-17.37979	8.35859	3.69610	-4.82205	-0.57254	29.68724	6.10255	217.60	16.35
87/ 2/26	2446852.5	-22.56156	-17.39093	8.35726	3.69781	-4.82068	-0.57320	29.68690	6.10257	217.63	16.35
87/ 3/ 2	2446856.5	-22.55301	-17.40206	8.35594	3.69952	-4.81931	-0.57385	29.68656	6.10258	217.65	16.35
87/ 3/ 6	2446860.5	-22.54446	-17.41319	8.35461	3.70122	-4.81794	-0.57451	29.68622	6.10260	217.68	16.35
87/ 3/10	2446864.5	-22.53591	-17.42432	8.35329	3.70293	-4.81657	-0.57516	29.68588	6.10261	217.71	16.34
87/ 3/14	2446868.5	-22.52735	-17.43545	8.35196	3.70463	-4.81519	-0.57582	29.68555	6.10262	217.74	16.34
87/ 3/18	2446872.5	-22.51879	-17.44657	8.35063	3.70633	-4.81382	-0.57647	29.68521	6.10262	217.77	16.34
87/ 3/22	2446876.5	-22.51023	-17.45769	8.34929	3.70803	-4.81244	-0.57712	29.68488	6.10263	217.80	16.34
87/ 3/26	2446880.5	-22.50166	-17.46881	8.34796	3.70972	-4.81106	-0.57778	29.68455	6.10263	217.82	16.33
87/ 3/30	2446884.5	-22.49309	-17.47992	8.34662	3.71142	-4.80968	-0.57843	29.68422	6.10264	217.85	16.33
87/ 4/ 3	2446888.5	-22.48451	-17.49103	8.34529	3.71311	-4.80830	-0.57908	29.68389	6.10264	217.88	16.33
87/ 4/ 7	2446892.5	-22.47593	-17.50214	8.34395	3.71480	-4.80692	-0.57973	29.68356	6.10264	217.91	16.33
87/ 4/11	2446896.5	-22.46735	-17.51324	8.34261	3.71648	-4.80553	-0.58039	29.68323	6.10264	217.94	16.32
87/ 4/15	2446900.5	-22.45876	-17.52434	8.34127	3.71817	-4.80415	-0.58104	29.68291	6.10264	217.96	16.32
87/ 4/19	2446904.5	-22.45017	-17.53543	8.33992	3.71985	-4.80277	-0.58169	29.68259	6.10264	217.99	16.32
87/ 4/23	2446908.5	-22.44157	-17.54653	8.33858	3.72154	-4.80139	-0.58234	29.68226	6.10264	218.02	16.32
87/ 4/27	2446912.5	-22.43298	-17.55762	8.33723	3.72322	-4.80000	-0.58300	29.68194	6.10264	218.05	16.31
87/ 5/ 1	2446916.5	-22.42437	-17.56871	8.33588	3.72489	-4.79862	-0.58365	29.68163	6.10264	218.08	16.31
87/ 5/ 5	2446920.5	-22.41576	-17.57979	8.33454	3.72657	-4.79724	-0.58430	29.68131	6.10264	218.11	16.31
87/ 5/ 9	2446924.5	-22.40715	-17.59087	8.33318	3.72824	-4.79586	-0.58495	29.68099	6.10265	218.13	16.31
87/ 5/13	2446928.5	-22.39854	-17.60195	8.33183	3.72992	-4.79449	-0.58560	29.68068	6.10265	218.16	16.30
87/ 5/17	2446932.5	-22.38992	-17.61302	8.33048	3.73160	-4.79311	-0.58626	29.68036	6.10265	218.19	16.30
87/ 5/21	2446936.5	-22.38130	-17.62410	8.32912	3.73327	-4.79173	-0.58691	29.68005	6.10266	218.22	16.30
87/ 5/25	2446940.5	-22.37267	-17.63516	8.32777	3.73495	-4.79035	-0.58756	29.67974	6.10267	218.25	16.30
87/ 5/29	2446944.5	-22.36404	-17.64623	8.32641	3.73662	-4.78898	-0.58821	29.67943	6.10267	218.28	16.29
87/ 6/ 2	2446948.5	-22.35541	-17.65729	8.32505	3.73829	-4.78760	-0.58886	29.67913	6.10268	218.30	16.29
87/ 6/ 6	2446952.5	-22.34677	-17.66835	8.32369	3.73997	-4.78622	-0.58951	29.67882	6.10269	218.33	16.29
87/ 6/10	2446956.5	-22.33813	-17.67940	8.32233	3.74164	-4.78484	-0.59017	29.67852	6.10269	218.36	16.29

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87/ 6/14	2446960.5	-22.32948	-17.69046	8.32096	3.74331	-4.78346	-0.59082	29.67821	6.10270	218.39	16.28
87/ 6/18	2446964.5	-22.32083	-17.70151	8.31960	3.74498	-4.78208	-0.59147	29.67791	6.10271	218.42	16.28
87/ 6/22	2446968.5	-22.31218	-17.71255	8.31823	3.74665	-4.78071	-0.59212	29.67761	6.10272	218.44	16.28
87/ 6/26	2446972.5	-22.30352	-17.72359	8.31686	3.74832	-4.77933	-0.59277	29.67731	6.10273	218.47	16.27
87/ 6/30	2446976.5	-22.29486	-17.73463	8.31549	3.74999	-4.77795	-0.59342	29.67702	6.10274	218.50	16.27
87/ 7/ 4	2446980.5	-22.28619	-17.74567	8.31412	3.75166	-4.77657	-0.59407	29.67672	6.10275	218.53	16.27
87/ 7/ 8	2446984.5	-22.27753	-17.75670	8.31275	3.75333	-4.77520	-0.59472	29.67643	6.10276	218.56	16.27
87/ 7/12	2446988.5	-22.26885	-17.76773	8.31137	3.75500	-4.77382	-0.59537	29.67614	6.10277	218.59	16.26
87/ 7/16	2446992.5	-22.26018	-17.77876	8.30999	3.75667	-4.77244	-0.59602	29.67584	6.10279	218.61	16.26
87/ 7/20	2446996.5	-22.25150	-17.78978	8.30862	3.75834	-4.77106	-0.59668	29.67555	6.10280	218.64	16.26
87/ 7/24	2447000.5	-22.24281	-17.80080	8.30724	3.76000	-4.76969	-0.59733	29.67527	6.10281	218.67	16.26
87/ 7/28	2447004.5	-22.23412	-17.81182	8.30586	3.76167	-4.76831	-0.59798	29.67498	6.10283	218.70	16.25
87/ 8/ 1	2447008.5	-22.22543	-17.82283	8.30447	3.76334	-4.76693	-0.59863	29.67469	6.10285	218.73	16.25
87/ 8/ 5	2447012.5	-22.21673	-17.83385	8.30309	3.76501	-4.76556	-0.59928	29.67441	6.10287	218.75	16.25
87/ 8/ 9	2447016.5	-22.20804	-17.84485	8.30171	3.76668	-4.76418	-0.59993	29.67413	6.10289	218.78	16.25
87/ 8/13	2447020.5	-22.19933	-17.85586	8.30032	3.76835	-4.76281	-0.60058	29.67385	6.10291	218.81	16.24
87/ 8/17	2447024.5	-22.19062	-17.86686	8.29893	3.77002	-4.76143	-0.60123	29.67357	6.10293	218.84	16.24
87/ 8/21	2447028.5	-22.18191	-17.87786	8.29754	3.77169	-4.76005	-0.60188	29.67329	6.10295	218.87	16.24
87/ 8/25	2447032.5	-22.17320	-17.88885	8.29615	3.77337	-4.75867	-0.60253	29.67301	6.10297	218.90	16.24
87/ 8/29	2447036.5	-22.16448	-17.89984	8.29476	3.77504	-4.75729	-0.60318	29.67274	6.10299	218.92	16.23
87/ 9/ 2	2447040.5	-22.15576	-17.91083	8.29336	3.77671	-4.75590	-0.60383	29.67247	6.10301	218.95	16.23
87/ 9/ 6	2447044.5	-22.14703	-17.92182	8.29197	3.77839	-4.75452	-0.60449	29.67219	6.10303	218.98	16.23
87/ 9/10	2447048.5	-22.13830	-17.93280	8.29057	3.78006	-4.75313	-0.60514	29.67192	6.10305	219.01	16.22
87/ 9/14	2447052.5	-22.12956	-17.94378	8.28917	3.78173	-4.75174	-0.60579	29.67166	6.10307	219.04	16.22
87/ 9/18	2447056.5	-22.12083	-17.95475	8.28777	3.78340	-4.75035	-0.60644	29.67139	6.10309	219.07	16.22
87/ 9/22	2447060.5	-22.11208	-17.96573	8.28637	3.78507	-4.74896	-0.60709	29.67112	6.10310	219.09	16.22
87/ 9/26	2447064.5	-22.10334	-17.97670	8.28497	3.78673	-4.74756	-0.60774	29.67086	6.10312	219.12	16.21
87/ 9/30	2447068.5	-22.09459	-17.98766	8.28356	3.78840	-4.74617	-0.60838	29.67059	6.10313	219.15	16.21
87/10/ 4	2447072.5	-22.08583	-17.99863	8.28216	3.79006	-4.74478	-0.60903	29.67033	6.10315	219.18	16.21
87/10/ 8	2447076.5	-22.07708	-18.00959	8.28075	3.79173	-4.74338	-0.60968	29.67007	6.10316	219.21	16.21
87/10/12	2447080.5	-22.06831	-18.02054	8.27934	3.79339	-4.74198	-0.61033	29.66981	6.10317	219.23	16.20
87/10/16	2447084.5	-22.05955	-18.03149	8.27793	3.79505	-4.74059	-0.61098	29.66956	6.10319	219.26	16.20
87/10/20	2447088.5	-22.05078	-18.04244	8.27652	3.79671	-4.73919	-0.61163	29.66930	6.10320	219.29	16.20
87/10/24	2447092.5	-22.04201	-18.05339	8.27510	3.79836	-4.73780	-0.61228	29.66905	6.10321	219.32	16.20
87/10/28	2447096.5	-22.03323	-18.06434	8.27369	3.80002	-4.73640	-0.61293	29.66879	6.10322	219.35	16.19
87/11/ 1	2447100.5	-22.02445	-18.07528	8.27227	3.80167	-4.73500	-0.61358	29.66854	6.10323	219.38	16.19
87/11/ 5	2447104.5	-22.01566	-18.08621	8.27085	3.80333	-4.73361	-0.61422	29.66829	6.10325	219.40	16.19
87/11/ 9	2447108.5	-22.00688	-18.09715	8.26943	3.80498	-4.73222	-0.61487	29.66804	6.10327	219.43	16.18
87/11/13	2447112.5	-21.99808	-18.10808	8.26801	3.80664	-4.73082	-0.61552	29.66780	6.10328	219.46	16.18
87/11/17	2447116.5	-21.98929	-18.11900	8.26659	3.80829	-4.72943	-0.61617	29.66755	6.10330	219.49	16.18
87/11/21	2447120.5	-21.98049	-18.12993	8.26516	3.80995	-4.72803	-0.61682	29.66731	6.10331	219.52	16.18
87/11/25	2447124.5	-21.97169	-18.14085	8.26374	3.81160	-4.72663	-0.61746	29.66706	6.10333	219.54	16.17
87/11/29	2447128.5	-21.96288	-18.15177	8.26231	3.81325	-4.72523	-0.61811	29.66682	6.10334	219.57	16.17
87/12/ 3	2447132.5	-21.95407	-18.16268	8.26088	3.81490	-4.72384	-0.61876	29.66658	6.10336	219.60	16.17
87/12/ 7	2447136.5	-21.94525	-18.17359	8.25945	3.81655	-4.72244	-0.61941	29.66635	6.10337	219.63	16.17

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87/12/11	2447140.5	-21.93643	-18.18450	8.25802	3.81820	-4.72104	-0.62005	29.66611	6.10339	219.66	16.16
87/12/15	2447144.5	-21.92761	-18.19541	8.25659	3.81985	-4.71965	-0.62070	29.66587	6.10341	219.69	16.16
87/12/19	2447148.5	-21.91878	-18.20631	8.25515	3.82149	-4.71825	-0.62135	29.66564	6.10342	219.71	16.16
87/12/23	2447152.5	-21.90995	-18.21721	8.25372	3.82314	-4.71685	-0.62199	29.66541	6.10344	219.74	16.15
87/12/27	2447156.5	-21.90112	-18.22810	8.25228	3.82478	-4.71546	-0.62264	29.66518	6.10346	219.77	16.15
87/12/31	2447160.5	-21.89228	-18.23899	8.25084	3.82643	-4.71406	-0.62329	29.66495	6.10348	219.80	16.15
88/ 1/ 4	2447164.5	-21.88344	-18.24988	8.24940	3.82807	-4.71267	-0.62393	29.66472	6.10350	219.83	16.15
88/ 1/ 8	2447168.5	-21.87459	-18.26077	8.24796	3.82972	-4.71128	-0.62458	29.66450	6.10352	219.85	16.14
88/ 1/12	2447172.5	-21.86575	-18.27165	8.24651	3.83136	-4.70988	-0.62523	29.66427	6.10354	219.88	16.14
88/ 1/16	2447176.5	-21.85689	-18.28253	8.24507	3.83300	-4.70849	-0.62587	29.66405	6.10357	219.91	16.14
88/ 1/20	2447180.5	-21.84804	-18.29340	8.24362	3.83465	-4.70710	-0.62652	29.66383	6.10359	219.94	16.13
88/ 1/24	2447184.5	-21.83917	-18.30428	8.24217	3.83629	-4.70571	-0.62716	29.66361	6.10362	219.97	16.13
88/ 1/28	2447188.5	-21.83031	-18.31515	8.24072	3.83794	-4.70432	-0.62781	29.66339	6.10365	220.00	16.13
88/ 2/ 1	2447192.5	-21.82144	-18.32601	8.23927	3.83958	-4.70293	-0.62846	29.66317	6.10368	220.02	16.13
88/ 2/ 5	2447196.5	-21.81257	-18.33688	8.23782	3.84123	-4.70155	-0.62910	29.66296	6.10372	220.05	16.12
88/ 2/ 9	2447200.5	-21.80369	-18.34774	8.23637	3.84288	-4.70016	-0.62975	29.66274	6.10376	220.08	16.12
88/ 2/13	2447204.5	-21.79481	-18.35859	8.23491	3.84454	-4.69877	-0.63039	29.66253	6.10379	220.11	16.12
88/ 2/17	2447208.5	-21.78593	-18.36945	8.23345	3.84619	-4.69738	-0.63104	29.66232	6.10383	220.14	16.12
88/ 2/21	2447212.5	-21.77704	-18.38030	8.23199	3.84784	-4.69599	-0.63169	29.66211	6.10387	220.17	16.11
88/ 2/25	2447216.5	-21.76815	-18.39114	8.23053	3.84950	-4.69460	-0.63233	29.66190	6.10391	220.19	16.11
88/ 2/29	2447220.5	-21.75926	-18.40199	8.22907	3.85115	-4.69320	-0.63298	29.66169	6.10395	220.22	16.11
88/ 3/ 4	2447224.5	-21.75036	-18.41283	8.22761	3.85281	-4.69181	-0.63362	29.66149	6.10399	220.25	16.10
88/ 3/ 8	2447228.5	-21.74146	-18.42366	8.22615	3.85447	-4.69041	-0.63427	29.66128	6.10403	220.28	16.10
88/ 3/12	2447232.5	-21.73255	-18.43450	8.22468	3.85612	-4.68901	-0.63492	29.66108	6.10407	220.31	16.10
88/ 3/16	2447236.5	-21.72364	-18.44533	8.22321	3.85778	-4.68761	-0.63556	29.66088	6.10411	220.33	16.10
88/ 3/20	2447240.5	-21.71473	-18.45616	8.22174	3.85944	-4.68621	-0.63621	29.66068	6.10415	220.36	16.09
88/ 3/24	2447244.5	-21.70581	-18.46698	8.22027	3.86110	-4.68481	-0.63685	29.66048	6.10418	220.39	16.09
88/ 3/28	2447248.5	-21.69689	-18.47780	8.21880	3.86276	-4.68340	-0.63750	29.66029	6.10422	220.42	16.09
88/ 4/ 1	2447252.5	-21.68796	-18.48862	8.21733	3.86441	-4.68200	-0.63814	29.66009	6.10426	220.45	16.08
88/ 4/ 5	2447256.5	-21.67903	-18.49943	8.21585	3.86607	-4.68059	-0.63879	29.65990	6.10430	220.48	16.08
88/ 4/ 9	2447260.5	-21.67010	-18.51025	8.21438	3.86773	-4.67918	-0.63943	29.65971	6.10434	220.50	16.08
88/ 4/13	2447264.5	-21.66116	-18.52105	8.21290	3.86939	-4.67777	-0.64008	29.65952	6.10437	220.53	16.08
88/ 4/17	2447268.5	-21.65222	-18.53186	8.21142	3.87104	-4.67636	-0.64072	29.65933	6.10441	220.56	16.07
88/ 4/21	2447272.5	-21.64328	-18.54266	8.20994	3.87270	-4.67494	-0.64137	29.65914	6.10444	220.59	16.07
88/ 4/25	2447276.5	-21.63433	-18.55346	8.20845	3.87435	-4.67353	-0.64201	29.65896	6.10448	220.62	16.07
88/ 4/29	2447280.5	-21.62537	-18.56425	8.20697	3.87601	-4.67211	-0.64266	29.65877	6.10452	220.64	16.06
88/ 5/ 3	2447284.5	-21.61642	-18.57505	8.20549	3.87767	-4.67070	-0.64330	29.65859	6.10455	220.67	16.06
88/ 5/ 7	2447288.5	-21.60746	-18.58583	8.20400	3.87932	-4.66928	-0.64395	29.65841	6.10459	220.70	16.06
88/ 5/11	2447292.5	-21.59849	-18.59662	8.20251	3.88098	-4.66786	-0.64459	29.65823	6.10462	220.73	16.06
88/ 5/15	2447296.5	-21.58953	-18.60740	8.20102	3.88263	-4.66643	-0.64524	29.65805	6.10465	220.76	16.05
88/ 5/19	2447300.5	-21.58056	-18.61818	8.19953	3.88429	-4.66501	-0.64588	29.65787	6.10468	220.79	16.05
88/ 5/23	2447304.5	-21.57158	-18.62896	8.19804	3.88594	-4.66358	-0.64652	29.65769	6.10471	220.81	16.05
88/ 5/27	2447308.5	-21.56260	-18.63973	8.19654	3.88759	-4.66215	-0.64717	29.65752	6.10474	220.84	16.04
88/ 5/31	2447312.5	-21.55362	-18.65050	8.19505	3.88924	-4.66071	-0.64781	29.65735	6.10476	220.87	16.04
88/ 6/ 4	2447316.5	-21.54463	-18.66126	8.19355	3.89089	-4.65928	-0.64845	29.65718	6.10478	220.90	16.04

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88/ 6/ 8	2447320.5	-21.53564	-18.67202	8.19205	3.89253	-4.65785	-0.64910	29.65701	6.10481	220.93	16.04
88/ 6/12	2447324.5	-21.52665	-18.68278	8.19055	3.89417	-4.65641	-0.64974	29.65684	6.10483	220.95	16.03
88/ 6/16	2447328.5	-21.51765	-18.69354	8.18905	3.89582	-4.65497	-0.65038	29.65667	6.10485	220.98	16.03
88/ 6/20	2447332.5	-21.50865	-18.70429	8.18754	3.89745	-4.65354	-0.65103	29.65650	6.10487	221.01	16.03
88/ 6/24	2447336.5	-21.49964	-18.71504	8.18604	3.89909	-4.65210	-0.65167	29.65634	6.10488	221.04	16.02
88/ 6/28	2447340.5	-21.49063	-18.72578	8.18453	3.90073	-4.65066	-0.65231	29.65618	6.10490	221.07	16.02
88/ 7/ 2	2447344.5	-21.48162	-18.73653	8.18303	3.90236	-4.64922	-0.65295	29.65602	6.10492	221.10	16.02
88/ 7/ 6	2447348.5	-21.47260	-18.74727	8.18152	3.90399	-4.64779	-0.65359	29.65586	6.10493	221.12	16.01
88/ 7/10	2447352.5	-21.46358	-18.75800	8.18001	3.90562	-4.64635	-0.65424	29.65570	6.10495	221.15	16.01
88/ 7/14	2447356.5	-21.45456	-18.76873	8.17849	3.90724	-4.64491	-0.65488	29.65554	6.10496	221.18	16.01
88/ 7/18	2447360.5	-21.44553	-18.77946	8.17698	3.90887	-4.64348	-0.65552	29.65538	6.10498	221.21	16.01
88/ 7/22	2447364.5	-21.43650	-18.79019	8.17547	3.91049	-4.64204	-0.65616	29.65523	6.10500	221.24	16.00
88/ 7/26	2447368.5	-21.42746	-18.80091	8.17395	3.91211	-4.64061	-0.65680	29.65508	6.10502	221.26	16.00
88/ 7/30	2447372.5	-21.41842	-18.81163	8.17243	3.91373	-4.63918	-0.65744	29.65493	6.10504	221.29	16.00
88/ 8/ 3	2447376.5	-21.40938	-18.82234	8.17091	3.91536	-4.63775	-0.65808	29.65478	6.10506	221.32	15.99
88/ 8/ 7	2447380.5	-21.40033	-18.83306	8.16939	3.91698	-4.63632	-0.65873	29.65463	6.10509	221.35	15.99
88/ 8/11	2447384.5	-21.39128	-18.84377	8.16787	3.91860	-4.63488	-0.65937	29.65448	6.10511	221.38	15.99
88/ 8/15	2447388.5	-21.38222	-18.85447	8.16634	3.92023	-4.63345	-0.66001	29.65434	6.10513	221.41	15.98
88/ 8/19	2447392.5	-21.37317	-18.86517	8.16482	3.92185	-4.63202	-0.66065	29.65419	6.10516	221.43	15.98
88/ 8/23	2447396.5	-21.36410	-18.87587	8.16329	3.92347	-4.63059	-0.66129	29.65405	6.10518	221.46	15.98
88/ 8/27	2447400.5	-21.35504	-18.88657	8.16176	3.92509	-4.62916	-0.66193	29.65391	6.10521	221.49	15.98
88/ 8/31	2447404.5	-21.34597	-18.89726	8.16023	3.92671	-4.62773	-0.66257	29.65377	6.10524	221.52	15.97
88/ 9/ 4	2447408.5	-21.33690	-18.90795	8.15870	3.92833	-4.62630	-0.66321	29.65364	6.10526	221.55	15.97
88/ 9/ 8	2447412.5	-21.32782	-18.91864	8.15717	3.92995	-4.62487	-0.66385	29.65350	6.10529	221.57	15.97
88/ 9/12	2447416.5	-21.31874	-18.92932	8.15563	3.93156	-4.62344	-0.66449	29.65337	6.10532	221.60	15.96
88/ 9/16	2447420.5	-21.30965	-18.94000	8.15410	3.93318	-4.62201	-0.66513	29.65323	6.10535	221.63	15.96
88/ 9/20	2447424.5	-21.30057	-18.95067	8.15256	3.93480	-4.62059	-0.66577	29.65310	6.10539	221.66	15.96
88/ 9/24	2447428.5	-21.29147	-18.96135	8.15102	3.93642	-4.61916	-0.66641	29.65297	6.10542	221.69	15.95
88/ 9/28	2447432.5	-21.28238	-18.97202	8.14948	3.93804	-4.61773	-0.66705	29.65284	6.10546	221.72	15.95
88/10/ 2	2447436.5	-21.27328	-18.98268	8.14794	3.93966	-4.61631	-0.66769	29.65272	6.10549	221.74	15.95
88/10/ 6	2447440.5	-21.26417	-18.99335	8.14640	3.94128	-4.61488	-0.66833	29.65259	6.10553	221.77	15.95
88/10/10	2447444.5	-21.25507	-19.00400	8.14485	3.94290	-4.61346	-0.66897	29.65247	6.10557	221.80	15.94
88/10/14	2447448.5	-21.24596	-19.01466	8.14331	3.94452	-4.61203	-0.66961	29.65234	6.10561	221.83	15.94
88/10/18	2447452.5	-21.23684	-19.02531	8.14176	3.94615	-4.61061	-0.67025	29.65222	6.10566	221.86	15.94
88/10/22	2447456.5	-21.22772	-19.03596	8.14021	3.94777	-4.60919	-0.67089	29.65210	6.10570	221.88	15.93
88/10/26	2447460.5	-21.21860	-19.04661	8.13866	3.94940	-4.60777	-0.67153	29.65199	6.10575	221.91	15.93
88/10/30	2447464.5	-21.20948	-19.05725	8.13711	3.95103	-4.60634	-0.67217	29.65187	6.10580	221.94	15.93
88/11/ 3	2447468.5	-21.20035	-19.06789	8.13555	3.95266	-4.60491	-0.67281	29.65175	6.10585	221.97	15.92
88/11/ 7	2447472.5	-21.19121	-19.07853	8.13400	3.95429	-4.60349	-0.67345	29.65164	6.10590	222.00	15.92
88/11/11	2447476.5	-21.18208	-19.08916	8.13244	3.95592	-4.60206	-0.67409	29.65153	6.10595	222.02	15.92
88/11/15	2447480.5	-21.17294	-19.09979	8.13088	3.95756	-4.60062	-0.67473	29.65142	6.10600	222.05	15.92
88/11/19	2447484.5	-21.16379	-19.11042	8.12932	3.95919	-4.59919	-0.67537	29.65131	6.10605	222.08	15.91
88/11/23	2447488.5	-21.15464	-19.12104	8.12776	3.96082	-4.59776	-0.67601	29.65120	6.10610	222.11	15.91
88/11/27	2447492.5	-21.14549	-19.13166	8.12620	3.96246	-4.59632	-0.67665	29.65110	6.10615	222.14	15.91
88/12/ 1	2447496.5	-21.13634	-19.14228	8.12464	3.96409	-4.59488	-0.67729	29.65099	6.10620	222.17	15.90

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88/12/ 5	2447500.5	-21.12718	-19.15289	8.12307	3.96573	-4.59344	-0.67793	29.65089	6.10625	222.19	15.90
88/12/ 9	2447504.5	-21.11801	-19.16350	8.12150	3.96736	-4.59200	-0.67857	29.65079	6.10630	222.22	15.90
88/12/13	2447508.5	-21.10885	-19.17411	8.11994	3.96899	-4.59056	-0.67921	29.65069	6.10634	222.25	15.89
88/12/17	2447512.5	-21.09967	-19.18471	8.11837	3.97063	-4.58911	-0.67984	29.65059	6.10639	222.28	15.89
88/12/21	2447516.5	-21.09050	-19.19531	8.11680	3.97226	-4.58767	-0.68048	29.65049	6.10644	222.31	15.89
88/12/25	2447520.5	-21.08132	-19.20591	8.11522	3.97389	-4.58622	-0.68112	29.65039	6.10648	222.33	15.88
88/12/29	2447524.5	-21.07214	-19.21650	8.11365	3.97552	-4.58477	-0.68176	29.65030	6.10653	222.36	15.88
89/ 1/ 2	2447528.5	-21.06295	-19.22709	8.11207	3.97715	-4.58332	-0.68240	29.65021	6.10657	222.39	15.88
89/ 1/ 6	2447532.5	-21.05376	-19.23768	8.11050	3.97878	-4.58187	-0.68303	29.65012	6.10661	222.42	15.88
89/ 1/10	2447536.5	-21.04457	-19.24826	8.10892	3.98041	-4.58042	-0.68367	29.65003	6.10666	222.45	15.87
89/ 1/14	2447540.5	-21.03537	-19.25884	8.10734	3.98203	-4.57896	-0.68431	29.64994	6.10670	222.48	15.87
89/ 1/18	2447544.5	-21.02617	-19.26942	8.10575	3.98366	-4.57751	-0.68495	29.64985	6.10674	222.50	15.87
89/ 1/22	2447548.5	-21.01697	-19.27999	8.10417	3.98529	-4.57606	-0.68558	29.64977	6.10679	222.53	15.86
89/ 1/26	2447552.5	-21.00776	-19.29056	8.10259	3.98692	-4.57461	-0.68622	29.64968	6.10683	222.56	15.86
89/ 1/30	2447556.5	-20.99855	-19.30113	8.10100	3.98855	-4.57315	-0.68686	29.64960	6.10688	222.59	15.86
89/ 2/ 3	2447560.5	-20.98933	-19.31169	8.09941	3.99017	-4.57169	-0.68750	29.64952	6.10692	222.62	15.85
89/ 2/ 7	2447564.5	-20.98011	-19.32225	8.09782	3.99180	-4.57023	-0.68813	29.64944	6.10696	222.64	15.85
89/ 2/11	2447568.5	-20.97089	-19.33281	8.09623	3.99343	-4.56877	-0.68877	29.64936	6.10700	222.67	15.85
89/ 2/15	2447572.5	-20.96166	-19.34336	8.09464	3.99505	-4.56731	-0.68940	29.64928	6.10704	222.70	15.84
89/ 2/19	2447576.5	-20.95243	-19.35391	8.09305	3.99667	-4.56584	-0.69004	29.64921	6.10708	222.73	15.84
89/ 2/23	2447580.5	-20.94319	-19.36446	8.09145	3.99829	-4.56438	-0.69068	29.64913	6.10712	222.76	15.84
89/ 2/27	2447584.5	-20.93395	-19.37500	8.08986	3.99992	-4.56291	-0.69131	29.64906	6.10716	222.79	15.83
89/ 3/ 3	2447588.5	-20.92471	-19.38554	8.08826	4.00153	-4.56145	-0.69195	29.64899	6.10720	222.81	15.83
89/ 3/ 7	2447592.5	-20.91547	-19.39607	8.08666	4.00315	-4.55998	-0.69258	29.64892	6.10724	222.84	15.83
89/ 3/11	2447596.5	-20.90622	-19.40661	8.08506	4.00477	-4.55852	-0.69322	29.64885	6.10728	222.87	15.82
89/ 3/15	2447600.5	-20.89696	-19.41714	8.08346	4.00639	-4.55705	-0.69385	29.64879	6.10731	222.90	15.82
89/ 3/19	2447604.5	-20.88770	-19.42766	8.08185	4.00800	-4.55559	-0.69449	29.64872	6.10735	222.93	15.82
89/ 3/23	2447608.5	-20.87844	-19.43818	8.08025	4.00962	-4.55412	-0.69512	29.64866	6.10739	222.95	15.82
89/ 3/27	2447612.5	-20.86918	-19.44870	8.07864	4.01123	-4.55265	-0.69576	29.64859	6.10743	222.98	15.81
89/ 3/31	2447616.5	-20.85991	-19.45922	8.07703	4.01284	-4.55119	-0.69639	29.64853	6.10747	223.01	15.81
89/ 4/ 4	2447620.5	-20.85064	-19.46973	8.07542	4.01445	-4.54972	-0.69703	29.64847	6.10751	223.04	15.81
89/ 4/ 8	2447624.5	-20.84136	-19.48024	8.07381	4.01606	-4.54826	-0.69766	29.64842	6.10755	223.07	15.80
89/ 4/12	2447628.5	-20.83208	-19.49075	8.07220	4.01768	-4.54680	-0.69829	29.64836	6.10759	223.09	15.80
89/ 4/16	2447632.5	-20.82280	-19.50125	8.07059	4.01929	-4.54534	-0.69893	29.64831	6.10764	223.12	15.80
89/ 4/20	2447636.5	-20.81351	-19.51175	8.06897	4.02090	-4.54387	-0.69956	29.64825	6.10769	223.15	15.79
89/ 4/24	2447640.5	-20.80422	-19.52224	8.06736	4.02252	-4.54241	-0.70020	29.64820	6.10774	223.18	15.79
89/ 4/28	2447644.5	-20.79493	-19.53274	8.06574	4.02414	-4.54095	-0.70083	29.64815	6.10779	223.21	15.79
89/ 5/ 2	2447648.5	-20.78563	-19.54322	8.06412	4.02576	-4.53948	-0.70147	29.64810	6.10784	223.24	15.78
89/ 5/ 6	2447652.5	-20.77633	-19.55371	8.06250	4.02737	-4.53801	-0.70210	29.64805	6.10788	223.26	15.78
89/ 5/10	2447656.5	-20.76702	-19.56419	8.06087	4.02899	-4.53655	-0.70274	29.64801	6.10793	223.29	15.78
89/ 5/14	2447660.5	-20.75771	-19.57467	8.05925	4.03061	-4.53508	-0.70337	29.64796	6.10798	223.32	15.77
89/ 5/18	2447664.5	-20.74840	-19.58514	8.05762	4.03223	-4.53361	-0.70400	29.64792	6.10803	223.35	15.77
89/ 5/22	2447668.5	-20.73908	-19.59562	8.05600	4.03385	-4.53214	-0.70464	29.64788	6.10808	223.38	15.77
89/ 5/26	2447672.5	-20.72976	-19.60609	8.05437	4.03546	-4.53066	-0.70527	29.64784	6.10813	223.40	15.76
89/ 5/30	2447676.5	-20.72044	-19.61655	8.05274	4.03708	-4.52919	-0.70591	29.64780	6.10818	223.43	15.76

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89/ 6/ 3	2447680.5	-20.71111	-19.62701	8.05111	4.03870	-4.52772	-0.70654	29.64776	6.10823	223.46	15.76
89/ 6/ 7	2447684.5	-20.70177	-19.63747	8.04947	4.04032	-4.52624	-0.70717	29.64773	6.10828	223.49	15.75
89/ 6/11	2447688.5	-20.69244	-19.64792	8.04784	4.04194	-4.52476	-0.70781	29.64769	6.10833	223.52	15.75
89/ 6/15	2447692.5	-20.68310	-19.65838	8.04620	4.04356	-4.52328	-0.70844	29.64766	6.10838	223.54	15.75
89/ 6/19	2447696.5	-20.67376	-19.66882	8.04457	4.04518	-4.52181	-0.70907	29.64763	6.10843	223.57	15.74
89/ 6/23	2447700.5	-20.66441	-19.67927	8.04293	4.04679	-4.52032	-0.70971	29.64760	6.10848	223.60	15.74
89/ 6/27	2447704.5	-20.65506	-19.68971	8.04129	4.04841	-4.51884	-0.71034	29.64757	6.10853	223.63	15.74
89/ 7/ 1	2447708.5	-20.64570	-19.70015	8.03964	4.05003	-4.51736	-0.71097	29.64754	6.10858	223.66	15.73
89/ 7/ 5	2447712.5	-20.63635	-19.71058	8.03800	4.05164	-4.51587	-0.71160	29.64752	6.10863	223.69	15.73
89/ 7/ 9	2447716.5	-20.62698	-19.72101	8.03636	4.05326	-4.51439	-0.71224	29.64749	6.10868	223.71	15.73
89/ 7/13	2447720.5	-20.61762	-19.73144	8.03471	4.05488	-4.51290	-0.71287	29.64747	6.10873	223.74	15.72
89/ 7/17	2447724.5	-20.60825	-19.74186	8.03306	4.05650	-4.51142	-0.71350	29.64745	6.10878	223.77	15.72
89/ 7/21	2447728.5	-20.59888	-19.75228	8.03141	4.05812	-4.50993	-0.71414	29.64743	6.10883	223.80	15.72
89/ 7/25	2447732.5	-20.58950	-19.76270	8.02976	4.05974	-4.50844	-0.71477	29.64741	6.10887	223.83	15.71
89/ 7/29	2447736.5	-20.58012	-19.77311	8.02811	4.06135	-4.50694	-0.71540	29.64739	6.10892	223.85	15.71
89/ 8/ 2	2447740.5	-20.57073	-19.78352	8.02646	4.06297	-4.50544	-0.71603	29.64738	6.10897	223.88	15.71
89/ 8/ 6	2447744.5	-20.56135	-19.79393	8.02480	4.06459	-4.50395	-0.71667	29.64736	6.10901	223.91	15.70
89/ 8/10	2447748.5	-20.55195	-19.80433	8.02315	4.06620	-4.50244	-0.71730	29.64735	6.10905	223.94	15.70
89/ 8/14	2447752.5	-20.54256	-19.81473	8.02149	4.06781	-4.50094	-0.71793	29.64734	6.10909	223.97	15.70
89/ 8/18	2447756.5	-20.53316	-19.82513	8.01983	4.06942	-4.49944	-0.71856	29.64733	6.10913	223.99	15.69
89/ 8/22	2447760.5	-20.52376	-19.83552	8.01817	4.07103	-4.49793	-0.71919	29.64732	6.10917	224.02	15.69
89/ 8/26	2447764.5	-20.51435	-19.84591	8.01651	4.07264	-4.49643	-0.71982	29.64731	6.10921	224.05	15.69
89/ 8/30	2447768.5	-20.50494	-19.85630	8.01484	4.07425	-4.49492	-0.72045	29.64731	6.10924	224.08	15.68
89/ 9/ 3	2447772.5	-20.49553	-19.86668	8.01318	4.07585	-4.49341	-0.72108	29.64730	6.10928	224.11	15.68
89/ 9/ 7	2447776.5	-20.48611	-19.87706	8.01151	4.07745	-4.49190	-0.72171	29.64730	6.10931	224.14	15.68
89/ 9/11	2447780.5	-20.47669	-19.88743	8.00984	4.07905	-4.49039	-0.72234	29.64730	6.10934	224.16	15.67
89/ 9/15	2447784.5	-20.46726	-19.89781	8.00817	4.08065	-4.48888	-0.72297	29.64730	6.10938	224.19	15.67
89/ 9/19	2447788.5	-20.45783	-19.90817	8.00650	4.08225	-4.48738	-0.72360	29.64730	6.10941	224.22	15.67
89/ 9/23	2447792.5	-20.44840	-19.91854	8.00483	4.08384	-4.48587	-0.72423	29.64730	6.10944	224.25	15.66
89/ 9/27	2447796.5	-20.43896	-19.92890	8.00316	4.08543	-4.48436	-0.72486	29.64731	6.10947	224.28	15.66
89/10/ 1	2447800.5	-20.42952	-19.93926	8.00148	4.08702	-4.48285	-0.72549	29.64731	6.10951	224.30	15.66
89/10/ 5	2447804.5	-20.42008	-19.94961	7.99981	4.08862	-4.48134	-0.72612	29.64732	6.10954	224.33	15.65
89/10/ 9	2447808.5	-20.41063	-19.95996	7.99813	4.09021	-4.47984	-0.72675	29.64733	6.10958	224.36	15.65
89/10/13	2447812.5	-20.40118	-19.97031	7.99645	4.09180	-4.47834	-0.72738	29.64734	6.10961	224.39	15.65
89/10/17	2447816.5	-20.39173	-19.98066	7.99477	4.09339	-4.47683	-0.72801	29.64735	6.10965	224.42	15.64
89/10/21	2447820.5	-20.38227	-19.99100	7.99308	4.09498	-4.47533	-0.72864	29.64736	6.10969	224.44	15.64
89/10/25	2447824.5	-20.37281	-20.00133	7.99140	4.09657	-4.47382	-0.72927	29.64738	6.10973	224.47	15.64
89/10/29	2447828.5	-20.36334	-20.01167	7.98971	4.09816	-4.47231	-0.72990	29.64739	6.10977	224.50	15.63
89/11/ 2	2447832.5	-20.35387	-20.02200	7.98803	4.09975	-4.47081	-0.73052	29.64741	6.10981	224.53	15.63
89/11/ 6	2447836.5	-20.34440	-20.03232	7.98634	4.10134	-4.46930	-0.73115	29.64743	6.10985	224.56	15.63
89/11/10	2447840.5	-20.33492	-20.04265	7.98465	4.10293	-4.46780	-0.73178	29.64745	6.10989	224.59	15.62
89/11/14	2447844.5	-20.32544	-20.05297	7.98296	4.10452	-4.46629	-0.73241	29.64747	6.10993	224.61	15.62
89/11/18	2447848.5	-20.31596	-20.06328	7.98126	4.10611	-4.46479	-0.73304	29.64750	6.10998	224.64	15.62
89/11/22	2447852.5	-20.30647	-20.07359	7.97957	4.10770	-4.46328	-0.73366	29.64752	6.11002	224.67	15.61
89/11/26	2447856.5	-20.29698	-20.08390	7.97788	4.10929	-4.46178	-0.73429	29.64755	6.11007	224.70	15.61

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
89/11/30	2447860.5	-20.28748	-20.09421	7.97618	4.11088	-4.46027	-0.73492	29.64758	6.11011	224.73	15.61
89/12/ 4	2447864.5	-20.27799	-20.10451	7.97448	4.11247	-4.45877	-0.73555	29.64760	6.11016	224.75	15.60
89/12/ 8	2447868.5	-20.26848	-20.11481	7.97278	4.11406	-4.45727	-0.73617	29.64763	6.11021	224.78	15.60
89/12/12	2447872.5	-20.25898	-20.12511	7.97108	4.11565	-4.45576	-0.73680	29.64767	6.11026	224.81	15.60
89/12/16	2447876.5	-20.24947	-20.13540	7.96938	4.11724	-4.45426	-0.73743	29.64770	6.11031	224.84	15.59
89/12/20	2447880.5	-20.23995	-20.14569	7.96767	4.11883	-4.45276	-0.73805	29.64773	6.11036	224.87	15.59
89/12/24	2447884.5	-20.23044	-20.15597	7.96597	4.12042	-4.45125	-0.73868	29.64777	6.11042	224.89	15.59
89/12/28	2447888.5	-20.22092	-20.16625	7.96426	4.12202	-4.44975	-0.73931	29.64781	6.11047	224.92	15.58
90/ 1/ 1	2447892.5	-20.21139	-20.17653	7.96255	4.12361	-4.44825	-0.73994	29.64785	6.11053	224.95	15.58
90/ 1/ 5	2447896.5	-20.20186	-20.18681	7.96084	4.12521	-4.44674	-0.74056	29.64789	6.11059	224.98	15.58
90/ 1/ 9	2447900.5	-20.19233	-20.19708	7.95913	4.12681	-4.44524	-0.74119	29.64793	6.11065	225.01	15.57
90/ 1/13	2447904.5	-20.18280	-20.20734	7.95741	4.12841	-4.44374	-0.74182	29.64798	6.11072	225.03	15.57
90/ 1/17	2447908.5	-20.17326	-20.21761	7.95570	4.13002	-4.44223	-0.74244	29.64802	6.11078	225.06	15.57
90/ 1/21	2447912.5	-20.16371	-20.22787	7.95398	4.13162	-4.44072	-0.74307	29.64807	6.11085	225.09	15.56
90/ 1/25	2447916.5	-20.15417	-20.23813	7.95227	4.13323	-4.43921	-0.74370	29.64812	6.11091	225.12	15.56
90/ 1/29	2447920.5	-20.14462	-20.24838	7.95055	4.13484	-4.43769	-0.74432	29.64816	6.11097	225.15	15.55
90/ 2/ 2	2447924.5	-20.13506	-20.25863	7.94883	4.13645	-4.43617	-0.74495	29.64822	6.11104	225.18	15.55
90/ 2/ 6	2447928.5	-20.12551	-20.26888	7.94711	4.13805	-4.43465	-0.74558	29.64827	6.11110	225.20	15.55
90/ 2/10	2447932.5	-20.11594	-20.27912	7.94538	4.13966	-4.43313	-0.74620	29.64832	6.11116	225.23	15.54
90/ 2/14	2447936.5	-20.10638	-20.28936	7.94366	4.14127	-4.43161	-0.74683	29.64838	6.11122	225.26	15.54
90/ 2/18	2447940.5	-20.09681	-20.29959	7.94193	4.14288	-4.43008	-0.74746	29.64843	6.11128	225.29	15.54
90/ 2/22	2447944.5	-20.08724	-20.30983	7.94020	4.14449	-4.42855	-0.74808	29.64849	6.11134	225.32	15.53
90/ 2/26	2447948.5	-20.07766	-20.32006	7.93848	4.14609	-4.42702	-0.74871	29.64855	6.11140	225.34	15.53
90/ 3/ 2	2447952.5	-20.06808	-20.33028	7.93675	4.14770	-4.42549	-0.74933	29.64861	6.11145	225.37	15.53
90/ 3/ 6	2447956.5	-20.05850	-20.34050	7.93501	4.14931	-4.42395	-0.74996	29.64867	6.11151	225.40	15.52
90/ 3/10	2447960.5	-20.04891	-20.35072	7.93328	4.15091	-4.42241	-0.75058	29.64874	6.11156	225.43	15.52
90/ 3/14	2447964.5	-20.03932	-20.36094	7.93155	4.15252	-4.42087	-0.75121	29.64880	6.11161	225.46	15.52
90/ 3/18	2447968.5	-20.02972	-20.37115	7.92981	4.15412	-4.41933	-0.75183	29.64887	6.11166	225.48	15.51
90/ 3/22	2447972.5	-20.02013	-20.38136	7.92807	4.15572	-4.41778	-0.75246	29.64894	6.11171	225.51	15.51
90/ 3/26	2447976.5	-20.01052	-20.39156	7.92633	4.15732	-4.41624	-0.75308	29.64900	6.11176	225.54	15.51
90/ 3/30	2447980.5	-20.00092	-20.40176	7.92459	4.15892	-4.41469	-0.75370	29.64907	6.11181	225.57	15.50
90/ 4/ 3	2447984.5	-19.99131	-20.41196	7.92285	4.16052	-4.41314	-0.75433	29.64915	6.11186	225.60	15.50
90/ 4/ 7	2447988.5	-19.98169	-20.42215	7.92111	4.16212	-4.41159	-0.75495	29.64922	6.11191	225.62	15.50
90/ 4/11	2447992.5	-19.97208	-20.43234	7.91936	4.16372	-4.41004	-0.75558	29.64929	6.11195	225.65	15.49
90/ 4/15	2447996.5	-19.96246	-20.44253	7.91762	4.16532	-4.40849	-0.75620	29.64937	6.11200	225.68	15.49
90/ 4/19	2448000.5	-19.95283	-20.45271	7.91587	4.16692	-4.40693	-0.75683	29.64945	6.11204	225.71	15.48
90/ 4/23	2448004.5	-19.94320	-20.46289	7.91412	4.16851	-4.40537	-0.75745	29.64953	6.11208	225.74	15.48
90/ 4/27	2448008.5	-19.93357	-20.47306	7.91237	4.17011	-4.40381	-0.75807	29.64961	6.11212	225.76	15.48
90/ 5/ 1	2448012.5	-19.92394	-20.48323	7.91062	4.17170	-4.40225	-0.75869	29.64969	6.11216	225.79	15.47
90/ 5/ 5	2448016.5	-19.91430	-20.49340	7.90886	4.17329	-4.40069	-0.75932	29.64977	6.11220	225.82	15.47
90/ 5/ 9	2448020.5	-19.90465	-20.50357	7.90711	4.17487	-4.39912	-0.75994	29.64985	6.11223	225.85	15.47
90/ 5/13	2448024.5	-19.89501	-20.51373	7.90535	4.17646	-4.39756	-0.76056	29.64994	6.11226	225.88	15.46
90/ 5/17	2448028.5	-19.88536	-20.52389	7.90359	4.17804	-4.39599	-0.76118	29.65003	6.11230	225.91	15.46
90/ 5/21	2448032.5	-19.87570	-20.53404	7.90184	4.17962	-4.39442	-0.76181	29.65012	6.11233	225.93	15.46
90/ 5/25	2448036.5	-19.86605	-20.54419	7.90007	4.18120	-4.39286	-0.76243	29.65021	6.11236	225.96	15.45

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HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
90/ 5/29	2448040.5	-19.85638	-20.55434	7.89831	4.18278	-4.39129	-0.76305	29.65030	6.11239	225.99	15.45
90/ 6/ 2	2448044.5	-19.84672	-20.56448	7.89655	4.18436	-4.38972	-0.76367	29.65039	6.11242	226.02	15.45
90/ 6/ 6	2448048.5	-19.83705	-20.57462	7.89478	4.18593	-4.38815	-0.76429	29.65048	6.11245	226.05	15.44
90/ 6/10	2448052.5	-19.82738	-20.58475	7.89302	4.18751	-4.38659	-0.76491	29.65058	6.11248	226.07	15.44
90/ 6/14	2448056.5	-19.81770	-20.59489	7.89125	4.18908	-4.38502	-0.76553	29.65067	6.11251	226.10	15.43
90/ 6/18	2448060.5	-19.80802	-20.60501	7.88948	4.19065	-4.38345	-0.76615	29.65077	6.11254	226.13	15.43
90/ 6/22	2448064.5	-19.79834	-20.61514	7.88771	4.19222	-4.38189	-0.76677	29.65087	6.11257	226.16	15.43
90/ 6/26	2448068.5	-19.78866	-20.62526	7.88594	4.19378	-4.38033	-0.76739	29.65097	6.11261	226.19	15.42
90/ 6/30	2448072.5	-19.77896	-20.63538	7.88416	4.19535	-4.37876	-0.76801	29.65108	6.11264	226.21	15.42
90/ 7/ 4	2448076.5	-19.76927	-20.64549	7.88239	4.19692	-4.37720	-0.76864	29.65118	6.11268	226.24	15.42
90/ 7/ 8	2448080.5	-19.75957	-20.65560	7.88061	4.19849	-4.37564	-0.76926	29.65128	6.11272	226.27	15.41
90/ 7/12	2448084.5	-19.74987	-20.66571	7.87884	4.20007	-4.37407	-0.76988	29.65139	6.11276	226.30	15.41
90/ 7/16	2448088.5	-19.74017	-20.67581	7.87706	4.20164	-4.37251	-0.77050	29.65150	6.11279	226.33	15.41
90/ 7/20	2448092.5	-19.73046	-20.68591	7.87528	4.20321	-4.37094	-0.77112	29.65161	6.11283	226.35	15.40
90/ 7/24	2448096.5	-19.72075	-20.69601	7.87349	4.20478	-4.36938	-0.77174	29.65172	6.11287	226.38	15.40
90/ 7/28	2448100.5	-19.71103	-20.70610	7.87171	4.20635	-4.36781	-0.77236	29.65183	6.11291	226.41	15.39
90/ 8/ 1	2448104.5	-19.70131	-20.71619	7.86992	4.20792	-4.36624	-0.77298	29.65195	6.11295	226.44	15.39
90/ 8/ 5	2448108.5	-19.69159	-20.72627	7.86814	4.20949	-4.36468	-0.77360	29.65206	6.11299	226.47	15.39
90/ 8/ 9	2448112.5	-19.68186	-20.73635	7.86635	4.21106	-4.36311	-0.77422	29.65218	6.11303	226.49	15.38
90/ 8/13	2448116.5	-19.67213	-20.74643	7.86456	4.21263	-4.36154	-0.77484	29.65229	6.11307	226.52	15.38
90/ 8/17	2448120.5	-19.66240	-20.75651	7.86277	4.21420	-4.35997	-0.77546	29.65241	6.11311	226.55	15.38
90/ 8/21	2448124.5	-19.65266	-20.76658	7.86098	4.21577	-4.35840	-0.77607	29.65253	6.11316	226.58	15.37
90/ 8/25	2448128.5	-19.64292	-20.77664	7.85918	4.21734	-4.35683	-0.77669	29.65266	6.11320	226.61	15.37
90/ 8/29	2448132.5	-19.63318	-20.78671	7.85739	4.21891	-4.35526	-0.77731	29.65278	6.11324	226.63	15.37
90/ 9/ 2	2448136.5	-19.62343	-20.79677	7.85559	4.22048	-4.35368	-0.77793	29.65290	6.11328	226.66	15.36
90/ 9/ 6	2448140.5	-19.61368	-20.80682	7.85380	4.22205	-4.35211	-0.77855	29.65303	6.11333	226.69	15.36
90/ 9/10	2448144.5	-19.60392	-20.81687	7.85200	4.22363	-4.35054	-0.77917	29.65316	6.11337	226.72	15.35
90/ 9/14	2448148.5	-19.59416	-20.82692	7.85020	4.22520	-4.34896	-0.77979	29.65329	6.11341	226.75	15.35
90/ 9/18	2448152.5	-19.58440	-20.83697	7.84839	4.22677	-4.34739	-0.78041	29.65342	6.11346	226.77	15.35
90/ 9/22	2448156.5	-19.57463	-20.84701	7.84659	4.22834	-4.34581	-0.78102	29.65355	6.11350	226.80	15.34
90/ 9/26	2448160.5	-19.56486	-20.85705	7.84478	4.22991	-4.34423	-0.78164	29.65368	6.11355	226.83	15.34
90/ 9/30	2448164.5	-19.55509	-20.86708	7.84298	4.23148	-4.34266	-0.78226	29.65382	6.11359	226.86	15.34
90/10/ 4	2448168.5	-19.54531	-20.87711	7.84117	4.23306	-4.34108	-0.78288	29.65395	6.11364	226.89	15.33
90/10/ 8	2448172.5	-19.53553	-20.88714	7.83936	4.23463	-4.33949	-0.78350	29.65409	6.11369	226.92	15.33
90/10/12	2448176.5	-19.52575	-20.89716	7.83755	4.23621	-4.33791	-0.78412	29.65423	6.11373	226.94	15.33
90/10/16	2448180.5	-19.51596	-20.90718	7.83574	4.23778	-4.33632	-0.78474	29.65437	6.11378	226.97	15.32
90/10/20	2448184.5	-19.50617	-20.91720	7.83392	4.23935	-4.33473	-0.78535	29.65451	6.11382	227.00	15.32
90/10/24	2448188.5	-19.49637	-20.92721	7.83211	4.24093	-4.33314	-0.78597	29.65465	6.11386	227.03	15.31
90/10/28	2448192.5	-19.48657	-20.93722	7.83029	4.24250	-4.33155	-0.78659	29.65480	6.11390	227.06	15.31
90/11/ 1	2448196.5	-19.47677	-20.94722	7.82848	4.24407	-4.32995	-0.78720	29.65494	6.11394	227.08	15.31
90/11/ 5	2448200.5	-19.46696	-20.95722	7.82666	4.24564	-4.32835	-0.78782	29.65509	6.11398	227.11	15.30
90/11/ 9	2448204.5	-19.45715	-20.96722	7.82484	4.24720	-4.32676	-0.78844	29.65524	6.11402	227.14	15.30
90/11/13	2448208.5	-19.44734	-20.97721	7.82301	4.24877	-4.32516	-0.78905	29.65539	6.11405	227.17	15.30
90/11/17	2448212.5	-19.43752	-20.98720	7.82119	4.25034	-4.32355	-0.78967	29.65554	6.11409	227.20	15.29
90/11/21	2448216.5	-19.42770	-20.99719	7.81936	4.25190	-4.32195	-0.79029	29.65569	6.11412	227.22	15.29

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90/11/25	2448220.5	-19.41788	-21.00717	7.81754	4.25346	-4.32035	-0.79090	29.65585	6.11415	227.25	15.28
90/11/29	2448224.5	-19.40805	-21.01715	7.81571	4.25502	-4.31875	-0.79152	29.65600	6.11419	227.28	15.28
90/12/ 3	2448228.5	-19.39822	-21.02713	7.81388	4.25658	-4.31714	-0.79213	29.65616	6.11422	227.31	15.28
90/12/ 7	2448232.5	-19.38838	-21.03710	7.81205	4.25814	-4.31553	-0.79275	29.65631	6.11425	227.34	15.27
90/12/11	2448236.5	-19.37854	-21.04707	7.81022	4.25970	-4.31393	-0.79336	29.65647	6.11428	227.36	15.27
90/12/15	2448240.5	-19.36870	-21.05703	7.80838	4.26125	-4.31232	-0.79398	29.65663	6.11431	227.39	15.27
90/12/19	2448244.5	-19.35885	-21.06699	7.80655	4.26280	-4.31072	-0.79459	29.65680	6.11434	227.42	15.26
90/12/23	2448248.5	-19.34900	-21.07695	7.80471	4.26436	-4.30912	-0.79521	29.65696	6.11438	227.45	15.26
90/12/27	2448252.5	-19.33915	-21.08690	7.80288	4.26591	-4.30751	-0.79582	29.65712	6.11441	227.48	15.25
90/12/31	2448256.5	-19.32929	-21.09685	7.80104	4.26747	-4.30591	-0.79643	29.65729	6.11444	227.50	15.25
91/ 1/ 4	2448260.5	-19.31943	-21.10680	7.79920	4.26902	-4.30430	-0.79705	29.65746	6.11448	227.53	15.25
91/ 1/ 8	2448264.5	-19.30957	-21.11674	7.79735	4.27058	-4.30269	-0.79766	29.65763	6.11451	227.56	15.24
91/ 1/12	2448268.5	-19.29970	-21.12668	7.79551	4.27213	-4.30108	-0.79828	29.65780	6.11455	227.59	15.24
91/ 1/16	2448272.5	-19.28983	-21.13661	7.79367	4.27369	-4.29947	-0.79889	29.65797	6.11458	227.62	15.24
91/ 1/20	2448276.5	-19.27996	-21.14654	7.79182	4.27524	-4.29786	-0.79950	29.65814	6.11461	227.64	15.23
91/ 1/24	2448280.5	-19.27008	-21.15647	7.78997	4.27679	-4.29625	-0.80012	29.65832	6.11465	227.67	15.23
91/ 1/28	2448284.5	-19.26020	-21.16639	7.78812	4.27834	-4.29464	-0.80073	29.65849	6.11468	227.70	15.22
91/ 2/ 1	2448288.5	-19.25031	-21.17631	7.78627	4.27989	-4.29303	-0.80134	29.65867	6.11471	227.73	15.22
91/ 2/ 5	2448292.5	-19.24042	-21.18623	7.78442	4.28144	-4.29142	-0.80195	29.65885	6.11474	227.76	15.22
91/ 2/ 9	2448296.5	-19.23053	-21.19614	7.78257	4.28299	-4.28980	-0.80257	29.65903	6.11478	227.78	15.21
91/ 2/13	2448300.5	-19.22063	-21.20605	7.78071	4.28454	-4.28819	-0.80318	29.65921	6.11481	227.81	15.21
91/ 2/17	2448304.5	-19.21073	-21.21595	7.77886	4.28609	-4.28658	-0.80379	29.65939	6.11485	227.84	15.20
91/ 2/21	2448308.5	-19.20083	-21.22585	7.77700	4.28764	-4.28496	-0.80440	29.65957	6.11488	227.87	15.20
91/ 2/25	2448312.5	-19.19092	-21.23575	7.77514	4.28919	-4.28335	-0.80501	29.65976	6.11492	227.90	15.20
91/ 3/ 1	2448316.5	-19.18101	-21.24564	7.77328	4.29073	-4.28173	-0.80563	29.65995	6.11496	227.92	15.19
91/ 3/ 5	2448320.5	-19.17110	-21.25553	7.77142	4.29228	-4.28012	-0.80624	29.66013	6.11499	227.95	15.19
91/ 3/ 9	2448324.5	-19.16118	-21.26542	7.76955	4.29383	-4.27850	-0.80685	29.66032	6.11503	227.98	15.19
91/ 3/13	2448328.5	-19.15126	-21.27530	7.76769	4.29538	-4.27689	-0.80746	29.66051	6.11507	228.01	15.18
91/ 3/17	2448332.5	-19.14133	-21.28518	7.76582	4.29693	-4.27528	-0.80807	29.66071	6.11511	228.04	15.18
91/ 3/21	2448336.5	-19.13141	-21.29505	7.76396	4.29848	-4.27366	-0.80868	29.66090	6.11515	228.06	15.17
91/ 3/25	2448340.5	-19.12147	-21.30492	7.76209	4.30003	-4.27205	-0.80930	29.66109	6.11520	228.09	15.17
91/ 3/29	2448344.5	-19.11154	-21.31479	7.76022	4.30159	-4.27043	-0.80991	29.66129	6.11524	228.12	15.17
91/ 4/ 2	2448348.5	-19.10160	-21.32466	7.75834	4.30315	-4.26881	-0.81052	29.66149	6.11529	228.15	15.16
91/ 4/ 6	2448352.5	-19.09166	-21.33452	7.75647	4.30470	-4.26718	-0.81113	29.66169	6.11533	228.18	15.16
91/ 4/10	2448356.5	-19.08171	-21.34437	7.75460	4.30626	-4.26556	-0.81174	29.66189	6.11537	228.20	15.16
91/ 4/14	2448360.5	-19.07176	-21.35422	7.75272	4.30782	-4.26393	-0.81235	29.66209	6.11542	228.23	15.15
91/ 4/18	2448364.5	-19.06181	-21.36407	7.75084	4.30937	-4.26230	-0.81296	29.66229	6.11546	228.26	15.15
91/ 4/22	2448368.5	-19.05185	-21.37392	7.74896	4.31093	-4.26067	-0.81357	29.66250	6.11550	228.29	15.14
91/ 4/26	2448372.5	-19.04189	-21.38376	7.74708	4.31249	-4.25903	-0.81419	29.66270	6.11554	228.32	15.14
91/ 4/30	2448376.5	-19.03192	-21.39360	7.74520	4.31404	-4.25740	-0.81480	29.66291	6.11558	228.34	15.14
91/ 5/ 4	2448380.5	-19.02196	-21.40343	7.74332	4.31560	-4.25576	-0.81541	29.66312	6.11562	228.37	15.13
91/ 5/ 8	2448384.5	-19.01198	-21.41326	7.74144	4.31715	-4.25411	-0.81602	29.66333	6.11565	228.40	15.13
91/ 5/12	2448388.5	-19.00201	-21.42308	7.73955	4.31871	-4.25247	-0.81663	29.66354	6.11569	228.43	15.12
91/ 5/16	2448392.5	-18.99203	-21.43291	7.73766	4.32026	-4.25082	-0.81724	29.66375	6.11572	228.46	15.12
91/ 5/20	2448396.5	-18.98205	-21.44272	7.73577	4.32181	-4.24917	-0.81785	29.66396	6.11575	228.48	15.12

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91/ 5/24	2448400.5	-18.97206	-21.45254	7.73388	4.32337	-4.24752	-0.81845	29.66418	6.11578	228.51	15.11
91/ 5/28	2448404.5	-18.96207	-21.46235	7.73199	4.32491	-4.24587	-0.81906	29.66439	6.11581	228.54	15.11
91/ 6/ 1	2448408.5	-18.95208	-21.47216	7.73010	4.32646	-4.24422	-0.81967	29.66461	6.11584	228.57	15.10
91/ 6/ 5	2448412.5	-18.94208	-21.48196	7.72820	4.32801	-4.24256	-0.82028	29.66483	6.11587	228.60	15.10
91/ 6/ 9	2448416.5	-18.93208	-21.49176	7.72631	4.32955	-4.24090	-0.82089	29.66505	6.11589	228.62	15.10
91/ 6/13	2448420.5	-18.92208	-21.50155	7.72441	4.33110	-4.23924	-0.82150	29.66527	6.11592	228.65	15.09
91/ 6/17	2448424.5	-18.91207	-21.51135	7.72251	4.33264	-4.23758	-0.82211	29.66550	6.11594	228.68	15.09
91/ 6/21	2448428.5	-18.90206	-21.52113	7.72061	4.33418	-4.23592	-0.82272	29.66572	6.11597	228.71	15.09
91/ 6/25	2448432.5	-18.89205	-21.53092	7.71871	4.33572	-4.23426	-0.82332	29.66594	6.11599	228.74	15.08
91/ 6/29	2448436.5	-18.88203	-21.54070	7.71681	4.33726	-4.23259	-0.82393	29.66617	6.11601	228.76	15.08
91/ 7/ 3	2448440.5	-18.87201	-21.55047	7.71491	4.33880	-4.23093	-0.82454	29.66640	6.11603	228.79	15.07
91/ 7/ 7	2448444.5	-18.86198	-21.56025	7.71300	4.34034	-4.22925	-0.82515	29.66663	6.11605	228.82	15.07
91/ 7/11	2448448.5	-18.85195	-21.57001	7.71109	4.34188	-4.22758	-0.82576	29.66686	6.11606	228.85	15.07
91/ 7/15	2448452.5	-18.84192	-21.57978	7.70918	4.34341	-4.22591	-0.82636	29.66709	6.11607	228.87	15.06
91/ 7/19	2448456.5	-18.83188	-21.58954	7.70727	4.34494	-4.22423	-0.82697	29.66732	6.11609	228.90	15.06
91/ 7/23	2448460.5	-18.82184	-21.59930	7.70536	4.34646	-4.22256	-0.82758	29.66756	6.11610	228.93	15.05
91/ 7/27	2448464.5	-18.81180	-21.60905	7.70345	4.34799	-4.22088	-0.82818	29.66779	6.11610	228.96	15.05
91/ 7/31	2448468.5	-18.80175	-21.61880	7.70154	4.34951	-4.21920	-0.82879	29.66803	6.11611	228.99	15.05
91/ 8/ 4	2448472.5	-18.79171	-21.62854	7.69962	4.35103	-4.21753	-0.82939	29.66827	6.11612	229.01	15.04
91/ 8/ 8	2448476.5	-18.78165	-21.63828	7.69770	4.35255	-4.21585	-0.83000	29.66851	6.11612	229.04	15.04
91/ 8/12	2448480.5	-18.77159	-21.64802	7.69579	4.35407	-4.21417	-0.83060	29.66875	6.11613	229.07	15.03
91/ 8/16	2448484.5	-18.76153	-21.65776	7.69387	4.35558	-4.21249	-0.83121	29.66899	6.11613	229.10	15.03
91/ 8/20	2448488.5	-18.75147	-21.66748	7.69195	4.35710	-4.21081	-0.83181	29.66924	6.11614	229.13	15.03
91/ 8/24	2448492.5	-18.74140	-21.67721	7.69002	4.35861	-4.20914	-0.83242	29.66948	6.11614	229.15	15.02
91/ 8/28	2448496.5	-18.73133	-21.68693	7.68810	4.36011	-4.20746	-0.83302	29.66973	6.11614	229.18	15.02
91/ 9/ 1	2448500.5	-18.72126	-21.69665	7.68618	4.36162	-4.20578	-0.83363	29.66997	6.11615	229.21	15.01
91/ 9/ 5	2448504.5	-18.71118	-21.70636	7.68425	4.36313	-4.20411	-0.83423	29.67022	6.11615	229.24	15.01
91/ 9/ 9	2448508.5	-18.70110	-21.71607	7.68232	4.36463	-4.20243	-0.83484	29.67047	6.11616	229.27	15.01
91/ 9/13	2448512.5	-18.69101	-21.72578	7.68039	4.36614	-4.20076	-0.83544	29.67073	6.11617	229.29	15.00
91/ 9/17	2448516.5	-18.68093	-21.73548	7.67846	4.36764	-4.19909	-0.83604	29.67098	6.11618	229.32	15.00
91/ 9/21	2448520.5	-18.67083	-21.74518	7.67653	4.36915	-4.19742	-0.83665	29.67123	6.11619	229.35	14.99
91/ 9/25	2448524.5	-18.66074	-21.75488	7.67459	4.37066	-4.19575	-0.83725	29.67149	6.11620	229.38	14.99
91/ 9/29	2448528.5	-18.65064	-21.76457	7.67266	4.37216	-4.19408	-0.83786	29.67175	6.11622	229.41	14.99
91/10/ 3	2448532.5	-18.64054	-21.77426	7.67072	4.37367	-4.19240	-0.83846	29.67200	6.11623	229.43	14.98
91/10/ 7	2448536.5	-18.63043	-21.78394	7.66879	4.37518	-4.19073	-0.83906	29.67226	6.11624	229.46	14.98
91/10/11	2448540.5	-18.62032	-21.79362	7.66685	4.37668	-4.18906	-0.83967	29.67252	6.11626	229.49	14.97
91/10/15	2448544.5	-18.61021	-21.80329	7.66491	4.37819	-4.18738	-0.84027	29.67279	6.11627	229.52	14.97
91/10/19	2448548.5	-18.60009	-21.81297	7.66296	4.37970	-4.18571	-0.84087	29.67305	6.11629	229.55	14.97
91/10/23	2448552.5	-18.58997	-21.82263	7.66102	4.38120	-4.18403	-0.84148	29.67332	6.11630	229.57	14.96
91/10/27	2448556.5	-18.57985	-21.83230	7.65908	4.38271	-4.18236	-0.84208	29.67358	6.11632	229.60	14.96
91/10/31	2448560.5	-18.56972	-21.84196	7.65713	4.38421	-4.18069	-0.84268	29.67385	6.11634	229.63	14.95
91/11/ 4	2448564.5	-18.55959	-21.85161	7.65518	4.38572	-4.17901	-0.84328	29.67412	6.11636	229.66	14.95
91/11/ 8	2448568.5	-18.54946	-21.86127	7.65323	4.38723	-4.17733	-0.84389	29.67439	6.11637	229.69	14.95
91/11/12	2448572.5	-18.53932	-21.87091	7.65128	4.38874	-4.17566	-0.84449	29.67466	6.11639	229.71	14.94
91/11/16	2448576.5	-18.52918	-21.88056	7.64933	4.39024	-4.17398	-0.84509	29.67493	6.11641	229.74	14.94

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91/11/20	2448580.5	-18.51904	-21.89020	7.64738	4.39175	-4.17230	-0.84569	29.67521	6.11644	229.77	14.93
91/11/24	2448584.5	-18.50889	-21.89984	7.64543	4.39326	-4.17062	-0.84629	29.67549	6.11646	229.80	14.93
91/11/28	2448588.5	-18.49874	-21.90947	7.64347	4.39477	-4.16894	-0.84690	29.67576	6.11648	229.82	14.93
91/12/ 2	2448592.5	-18.48859	-21.91910	7.64151	4.39628	-4.16727	-0.84750	29.67604	6.11650	229.85	14.92
91/12/ 6	2448596.5	-18.47843	-21.92872	7.63955	4.39779	-4.16559	-0.84810	29.67632	6.11653	229.88	14.92
91/12/10	2448600.5	-18.46827	-21.93834	7.63759	4.39930	-4.16390	-0.84870	29.67660	6.11655	229.91	14.91
91/12/14	2448604.5	-18.45810	-21.94796	7.63563	4.40081	-4.16222	-0.84930	29.67688	6.11658	229.94	14.91
91/12/18	2448608.5	-18.44793	-21.95758	7.63367	4.40233	-4.16054	-0.84990	29.67717	6.11661	229.96	14.91
91/12/22	2448612.5	-18.43776	-21.96719	7.63171	4.40384	-4.15885	-0.85051	29.67745	6.11663	229.99	14.90
91/12/26	2448616.5	-18.42759	-21.97679	7.62974	4.40536	-4.15716	-0.85111	29.67774	6.11666	230.02	14.90
91/12/30	2448620.5	-18.41741	-21.98639	7.62777	4.40688	-4.15546	-0.85171	29.67803	6.11668	230.05	14.89
92/ 1/ 3	2448624.5	-18.40723	-21.99599	7.62580	4.40839	-4.15377	-0.85231	29.67832	6.11671	230.08	14.89
92/ 1/ 7	2448628.5	-18.39704	-22.00558	7.62384	4.40991	-4.15207	-0.85291	29.67861	6.11673	230.10	14.89
92/ 1/11	2448632.5	-18.38685	-22.01517	7.62186	4.41142	-4.15036	-0.85351	29.67890	6.11675	230.13	14.88
92/ 1/15	2448636.5	-18.37666	-22.02476	7.61989	4.41293	-4.14866	-0.85411	29.67919	6.11677	230.16	14.88
92/ 1/19	2448640.5	-18.36646	-22.03434	7.61792	4.41444	-4.14695	-0.85471	29.67948	6.11679	230.19	14.87
92/ 1/23	2448644.5	-18.35626	-22.04392	7.61594	4.41596	-4.14524	-0.85531	29.67978	6.11680	230.22	14.87
92/ 1/27	2448648.5	-18.34606	-22.05350	7.61397	4.41746	-4.14353	-0.85591	29.68008	6.11682	230.24	14.86
92/ 1/31	2448652.5	-18.33585	-22.06307	7.61199	4.41897	-4.14182	-0.85651	29.68037	6.11683	230.27	14.86
92/ 2/ 4	2448656.5	-18.32564	-22.07263	7.61001	4.42048	-4.14010	-0.85710	29.68067	6.11684	230.30	14.86
92/ 2/ 8	2448660.5	-18.31543	-22.08219	7.60803	4.42198	-4.13839	-0.85770	29.68097	6.11685	230.33	14.85
92/ 2/12	2448664.5	-18.30521	-22.09175	7.60605	4.42349	-4.13667	-0.85830	29.68128	6.11686	230.35	14.85
92/ 2/16	2448668.5	-18.29499	-22.10131	7.60406	4.42499	-4.13495	-0.85890	29.68158	6.11686	230.38	14.84
92/ 2/20	2448672.5	-18.28476	-22.11086	7.60208	4.42649	-4.13323	-0.85950	29.68188	6.11687	230.41	14.84
92/ 2/24	2448676.5	-18.27454	-22.12040	7.60009	4.42798	-4.13150	-0.86009	29.68219	6.11687	230.44	14.84
92/ 2/28	2448680.5	-18.26431	-22.12995	7.59810	4.42948	-4.12978	-0.86069	29.68250	6.11688	230.47	14.83
92/ 3/ 3	2448684.5	-18.25407	-22.13949	7.59611	4.43097	-4.12806	-0.86129	29.68280	6.11688	230.49	14.83
92/ 3/ 7	2448688.5	-18.24383	-22.14902	7.59412	4.43247	-4.12633	-0.86189	29.68311	6.11688	230.52	14.82
92/ 3/11	2448692.5	-18.23359	-22.15855	7.59213	4.43396	-4.12461	-0.86248	29.68342	6.11689	230.55	14.82
92/ 3/15	2448696.5	-18.22335	-22.16808	7.59014	4.43545	-4.12288	-0.86308	29.68374	6.11689	230.58	14.82
92/ 3/19	2448700.5	-18.21310	-22.17760	7.58814	4.43695	-4.12115	-0.86368	29.68405	6.11689	230.61	14.81
92/ 3/23	2448704.5	-18.20285	-22.18712	7.58615	4.43844	-4.11942	-0.86427	29.68436	6.11689	230.63	14.81
92/ 3/27	2448708.5	-18.19259	-22.19663	7.58415	4.43993	-4.11769	-0.86487	29.68468	6.11689	230.66	14.80
92/ 3/31	2448712.5	-18.18233	-22.20614	7.58215	4.44141	-4.11596	-0.86547	29.68500	6.11689	230.69	14.80
92/ 4/ 4	2448716.5	-18.17207	-22.21565	7.58015	4.44290	-4.11422	-0.86606	29.68531	6.11688	230.72	14.79
92/ 4/ 8	2448720.5	-18.16180	-22.22515	7.57815	4.44438	-4.11249	-0.86666	29.68563	6.11688	230.75	14.79
92/ 4/12	2448724.5	-18.15154	-22.23465	7.57615	4.44586	-4.11075	-0.86725	29.68596	6.11687	230.77	14.79
92/ 4/16	2448728.5	-18.14126	-22.24415	7.57414	4.44734	-4.10902	-0.86785	29.68628	6.11687	230.80	14.78
92/ 4/20	2448732.5	-18.13099	-22.25364	7.57214	4.44882	-4.10728	-0.86844	29.68660	6.11686	230.83	14.78
92/ 4/24	2448736.5	-18.12071	-22.26312	7.57013	4.45030	-4.10555	-0.86904	29.68693	6.11685	230.86	14.77
92/ 4/28	2448740.5	-18.11043	-22.27261	7.56812	4.45178	-4.10381	-0.86963	29.68725	6.11685	230.88	14.77
92/ 5/ 2	2448744.5	-18.10014	-22.28208	7.56611	4.45325	-4.10207	-0.87023	29.68758	6.11684	230.91	14.77
92/ 5/ 6	2448748.5	-18.08985	-22.29156	7.56410	4.45472	-4.10033	-0.87082	29.68791	6.11683	230.94	14.76
92/ 5/10	2448752.5	-18.07956	-22.30103	7.56209	4.45620	-4.09860	-0.87141	29.68824	6.11682	230.97	14.76
92/ 5/14	2448756.5	-18.06926	-22.31050	7.56008	4.45767	-4.09686	-0.87201	29.68857	6.11682	231.00	14.75

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92/ 5/18	2448760.5	-18.05896	-22.31996	7.55806	4.45914	-4.09512	-0.87260	29.68890	6.11681	231.02	14.75
92/ 5/22	2448764.5	-18.04866	-22.32942	7.55604	4.46061	-4.09338	-0.87319	29.68923	6.11680	231.05	14.74
92/ 5/26	2448768.5	-18.03835	-22.33887	7.55403	4.46208	-4.09165	-0.87379	29.68957	6.11680	231.08	14.74
92/ 5/30	2448772.5	-18.02804	-22.34832	7.55201	4.46355	-4.08991	-0.87438	29.68991	6.11679	231.11	14.74
92/ 6/ 3	2448776.5	-18.01773	-22.35777	7.54999	4.46502	-4.08817	-0.87497	29.69024	6.11679	231.14	14.73
92/ 6/ 7	2448780.5	-18.00741	-22.36721	7.54796	4.46649	-4.08644	-0.87557	29.69058	6.11679	231.16	14.73
92/ 6/11	2448784.5	-17.99709	-22.37665	7.54594	4.46796	-4.08470	-0.87616	29.69092	6.11679	231.19	14.72
92/ 6/15	2448788.5	-17.98677	-22.38608	7.54392	4.46943	-4.08296	-0.87676	29.69126	6.11679	231.22	14.72
92/ 6/19	2448792.5	-17.97644	-22.39551	7.54189	4.47090	-4.08122	-0.87735	29.69161	6.11679	231.25	14.71
92/ 6/23	2448796.5	-17.96611	-22.40494	7.53986	4.47238	-4.07948	-0.87794	29.69195	6.11679	231.27	14.71
92/ 6/27	2448800.5	-17.95578	-22.41436	7.53783	4.47385	-4.07773	-0.87853	29.69230	6.11678	231.30	14.71
92/ 7/ 1	2448804.5	-17.94544	-22.42378	7.53580	4.47532	-4.07598	-0.87913	29.69264	6.11678	231.33	14.70
92/ 7/ 5	2448808.5	-17.93510	-22.43319	7.53377	4.47679	-4.07424	-0.87972	29.69299	6.11678	231.36	14.70
92/ 7/ 9	2448812.5	-17.92476	-22.44260	7.53174	4.47826	-4.07249	-0.88031	29.69334	6.11677	231.39	14.69
92/ 7/13	2448816.5	-17.91441	-22.45201	7.52970	4.47973	-4.07074	-0.88090	29.69369	6.11677	231.41	14.69
92/ 7/17	2448820.5	-17.90406	-22.46141	7.52767	4.48120	-4.06898	-0.88150	29.69404	6.11677	231.44	14.69
92/ 7/21	2448824.5	-17.89370	-22.47081	7.52563	4.48267	-4.06723	-0.88209	29.69439	6.11676	231.47	14.68
92/ 7/25	2448828.5	-17.88335	-22.48020	7.52359	4.48414	-4.06547	-0.88268	29.69475	6.11675	231.50	14.68
92/ 7/29	2448832.5	-17.87299	-22.48959	7.52155	4.48561	-4.06371	-0.88327	29.69510	6.11675	231.53	14.67
92/ 8/ 2	2448836.5	-17.86262	-22.49898	7.51951	4.48707	-4.06195	-0.88386	29.69546	6.11674	231.55	14.67
92/ 8/ 6	2448840.5	-17.85225	-22.50836	7.51747	4.48854	-4.06019	-0.88445	29.69582	6.11673	231.58	14.66
92/ 8/10	2448844.5	-17.84188	-22.51774	7.51543	4.49000	-4.05843	-0.88504	29.69618	6.11672	231.61	14.66
92/ 8/14	2448848.5	-17.83151	-22.52711	7.51338	4.49146	-4.05666	-0.88563	29.69654	6.11671	231.64	14.66
92/ 8/18	2448852.5	-17.82113	-22.53648	7.51133	4.49292	-4.05490	-0.88622	29.69690	6.11669	231.66	14.65
92/ 8/22	2448856.5	-17.81075	-22.54585	7.50929	4.49438	-4.05313	-0.88682	29.69726	6.11668	231.69	14.65
92/ 8/26	2448860.5	-17.80036	-22.55521	7.50724	4.49584	-4.05137	-0.88741	29.69763	6.11667	231.72	14.64
92/ 8/30	2448864.5	-17.78998	-22.56457	7.50519	4.49730	-4.04960	-0.88800	29.69799	6.11665	231.75	14.64
92/ 9/ 3	2448868.5	-17.77959	-22.57392	7.50313	4.49875	-4.04783	-0.88859	29.69836	6.11664	231.78	14.63
92/ 9/ 7	2448872.5	-17.76919	-22.58327	7.50108	4.50021	-4.04606	-0.88918	29.69873	6.11663	231.80	14.63
92/ 9/11	2448876.5	-17.75879	-22.59261	7.49903	4.50167	-4.04429	-0.88977	29.69910	6.11661	231.83	14.63
92/ 9/15	2448880.5	-17.74839	-22.60196	7.49697	4.50312	-4.04251	-0.89036	29.69947	6.11659	231.86	14.62
92/ 9/19	2448884.5	-17.73799	-22.61129	7.49491	4.50457	-4.04073	-0.89094	29.69984	6.11658	231.89	14.62
92/ 9/23	2448888.5	-17.72758	-22.62063	7.49285	4.50602	-4.03895	-0.89153	29.70021	6.11655	231.91	14.61
92/ 9/27	2448892.5	-17.71717	-22.62995	7.49079	4.50747	-4.03717	-0.89212	29.70059	6.11653	231.94	14.61
92/10/ 1	2448896.5	-17.70675	-22.63928	7.48873	4.50892	-4.03539	-0.89271	29.70096	6.11651	231.97	14.60
92/10/ 5	2448900.5	-17.69633	-22.64860	7.48667	4.51036	-4.03361	-0.89330	29.70134	6.11648	232.00	14.60
92/10/ 9	2448904.5	-17.68591	-22.65792	7.48460	4.51181	-4.03183	-0.89389	29.70172	6.11646	232.03	14.60
92/10/13	2448908.5	-17.67549	-22.66723	7.48254	4.51325	-4.03004	-0.89447	29.70209	6.11643	232.05	14.59
92/10/17	2448912.5	-17.66506	-22.67654	7.48047	4.51468	-4.02826	-0.89506	29.70248	6.11640	232.08	14.59
92/10/21	2448916.5	-17.65463	-22.68584	7.47840	4.51612	-4.02647	-0.89565	29.70286	6.11637	232.11	14.58
92/10/25	2448920.5	-17.64419	-22.69514	7.47633	4.51755	-4.02469	-0.89623	29.70324	6.11634	232.14	14.58
92/10/29	2448924.5	-17.63376	-22.70443	7.47426	4.51899	-4.02290	-0.89682	29.70362	6.11631	232.16	14.57
92/11/ 2	2448928.5	-17.62332	-22.71373	7.47219	4.52042	-4.02112	-0.89741	29.70401	6.11628	232.19	14.57
92/11/ 6	2448932.5	-17.61287	-22.72301	7.47011	4.52184	-4.01933	-0.89799	29.70440	6.11625	232.22	14.57
92/11/10	2448936.5	-17.60242	-22.73230	7.46804	4.52327	-4.01755	-0.89858	29.70478	6.11622	232.25	14.56

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92/11/14	2448940.5	-17.59197	-22.74158	7.46596	4.52469	-4.01576	-0.89916	29.70517	6.11618	232.28	14.56
92/11/18	2448944.5	-17.58152	-22.75085	7.46389	4.52612	-4.01398	-0.89975	29.70556	6.11615	232.30	14.55
92/11/22	2448948.5	-17.57106	-22.76012	7.46181	4.52754	-4.01220	-0.90033	29.70596	6.11612	232.33	14.55
92/11/26	2448952.5	-17.56060	-22.76939	7.45973	4.52896	-4.01042	-0.90092	29.70635	6.11610	232.36	14.54
92/11/30	2448956.5	-17.55013	-22.77865	7.45764	4.53039	-4.00864	-0.90150	29.70674	6.11607	232.39	14.54
92/12/ 4	2448960.5	-17.53967	-22.78791	7.45556	4.53181	-4.00686	-0.90209	29.70714	6.11605	232.41	14.53
92/12/ 8	2448964.5	-17.52920	-22.79716	7.45348	4.53324	-4.00508	-0.90267	29.70754	6.11602	232.44	14.53
92/12/12	2448968.5	-17.51872	-22.80641	7.45139	4.53466	-4.00330	-0.90326	29.70793	6.11600	232.47	14.53
92/12/16	2448972.5	-17.50824	-22.81566	7.44930	4.53609	-4.00152	-0.90384	29.70833	6.11598	232.50	14.52
92/12/20	2448976.5	-17.49776	-22.82490	7.44721	4.53751	-3.99973	-0.90443	29.70873	6.11595	232.53	14.52
92/12/24	2448980.5	-17.48728	-22.83414	7.44512	4.53894	-3.99795	-0.90501	29.70914	6.11593	232.55	14.51
92/12/28	2448984.5	-17.47679	-22.84338	7.44303	4.54036	-3.99617	-0.90559	29.70954	6.11591	232.58	14.51
93/ 1/ 1	2448988.5	-17.46630	-22.85261	7.44094	4.54178	-3.99439	-0.90618	29.70994	6.11589	232.61	14.50
93/ 1/ 5	2448992.5	-17.45581	-22.86183	7.43885	4.54321	-3.99260	-0.90676	29.71035	6.11586	232.64	14.50
93/ 1/ 9	2448996.5	-17.44531	-22.87105	7.43675	4.54463	-3.99082	-0.90735	29.71076	6.11584	232.66	14.50
93/ 1/13	2449000.5	-17.43481	-22.88027	7.43465	4.54605	-3.98903	-0.90793	29.71117	6.11582	232.69	14.49
93/ 1/17	2449004.5	-17.42430	-22.88948	7.43255	4.54748	-3.98725	-0.90851	29.71158	6.11581	232.72	14.49
93/ 1/21	2449008.5	-17.41380	-22.89869	7.43046	4.54890	-3.98546	-0.90909	29.71199	6.11579	232.75	14.48
93/ 1/25	2449012.5	-17.40329	-22.90790	7.42835	4.55033	-3.98367	-0.90968	29.71240	6.11577	232.78	14.48
93/ 1/29	2449016.5	-17.39277	-22.91710	7.42625	4.55175	-3.98188	-0.91026	29.71281	6.11575	232.80	14.47
93/ 2/ 2	2449020.5	-17.38226	-22.92630	7.42415	4.55317	-3.98009	-0.91084	29.71323	6.11573	232.83	14.47
93/ 2/ 6	2449024.5	-17.37174	-22.93549	7.42204	4.55460	-3.97830	-0.91142	29.71364	6.11571	232.86	14.46
93/ 2/10	2449028.5	-17.36121	-22.94468	7.41994	4.55602	-3.97651	-0.91201	29.71406	6.11570	232.89	14.46
93/ 2/14	2449032.5	-17.35069	-22.95386	7.41783	4.55745	-3.97472	-0.91259	29.71448	6.11568	232.91	14.46
93/ 2/18	2449036.5	-17.34016	-22.96304	7.41572	4.55887	-3.97293	-0.91317	29.71490	6.11566	232.94	14.45
93/ 2/22	2449040.5	-17.32962	-22.97222	7.41361	4.56030	-3.97113	-0.91375	29.71532	6.11565	232.97	14.45
93/ 2/26	2449044.5	-17.31909	-22.98139	7.41150	4.56173	-3.96934	-0.91434	29.71574	6.11564	233.00	14.44
93/ 3/ 2	2449048.5	-17.30855	-22.99056	7.40939	4.56316	-3.96754	-0.91492	29.71616	6.11562	233.03	14.44
93/ 3/ 6	2449052.5	-17.29800	-22.99972	7.40727	4.56459	-3.96574	-0.91550	29.71659	6.11561	233.05	14.43
93/ 3/10	2449056.5	-17.28746	-23.00888	7.40516	4.56602	-3.96393	-0.91608	29.71702	6.11560	233.08	14.43
93/ 3/14	2449060.5	-17.27691	-23.01803	7.40304	4.56745	-3.96213	-0.91666	29.71744	6.11558	233.11	14.43
93/ 3/18	2449064.5	-17.26635	-23.02719	7.40092	4.56888	-3.96031	-0.91724	29.71787	6.11556	233.14	14.42
93/ 3/22	2449068.5	-17.25580	-23.03633	7.39880	4.57031	-3.95850	-0.91782	29.71830	6.11554	233.16	14.42
93/ 3/26	2449072.5	-17.24524	-23.04548	7.39668	4.57173	-3.95668	-0.91840	29.71873	6.11552	233.19	14.41
93/ 3/30	2449076.5	-17.23467	-23.05461	7.39456	4.57316	-3.95486	-0.91899	29.71916	6.11549	233.22	14.41
93/ 4/ 3	2449080.5	-17.22411	-23.06375	7.39243	4.57458	-3.95304	-0.91957	29.71960	6.11547	233.25	14.40
93/ 4/ 7	2449084.5	-17.21354	-23.07288	7.39031	4.57600	-3.95122	-0.92015	29.72003	6.11544	233.28	14.40
93/ 4/11	2449088.5	-17.20296	-23.08200	7.38818	4.57742	-3.94939	-0.92072	29.72047	6.11541	233.30	14.39
93/ 4/15	2449092.5	-17.19239	-23.09113	7.38606	4.57884	-3.94756	-0.92130	29.72090	6.11538	233.33	14.39
93/ 4/19	2449096.5	-17.18181	-23.10024	7.38393	4.58026	-3.94573	-0.92188	29.72134	6.11534	233.36	14.39
93/ 4/23	2449100.5	-17.17122	-23.10936	7.38180	4.58167	-3.94390	-0.92246	29.72178	6.11531	233.39	14.38
93/ 4/27	2449104.5	-17.16064	-23.11847	7.37966	4.58308	-3.94206	-0.92304	29.72222	6.11527	233.41	14.38
93/ 5/ 1	2449108.5	-17.15005	-23.12757	7.37753	4.58449	-3.94022	-0.92362	29.72266	6.11523	233.44	14.37
93/ 5/ 5	2449112.5	-17.13946	-23.13667	7.37540	4.58590	-3.93838	-0.92420	29.72311	6.11519	233.47	14.37
93/ 5/ 9	2449116.5	-17.12886	-23.14577	7.37326	4.58730	-3.93655	-0.92477	29.72355	6.11514	233.50	14.36

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93/ 5/13	2449120.5	-17.11826	-23.15486	7.37112	4.58871	-3.93471	-0.92535	29.72399	6.11510	233.52	14.36
93/ 5/17	2449124.5	-17.10766	-23.16395	7.36899	4.59011	-3.93287	-0.92593	29.72444	6.11505	233.55	14.35
93/ 5/21	2449128.5	-17.09705	-23.17303	7.36685	4.59150	-3.93102	-0.92651	29.72489	6.11501	233.58	14.35
93/ 5/25	2449132.5	-17.08645	-23.18211	7.36470	4.59290	-3.92918	-0.92708	29.72534	6.11496	233.61	14.34
93/ 5/29	2449136.5	-17.07583	-23.19118	7.36256	4.59430	-3.92734	-0.92766	29.72579	6.11491	233.64	14.34
93/ 6/ 2	2449140.5	-17.06522	-23.20026	7.36042	4.59569	-3.92549	-0.92824	29.72624	6.11486	233.66	14.34
93/ 6/ 6	2449144.5	-17.05460	-23.20932	7.35827	4.59709	-3.92365	-0.92881	29.72669	6.11481	233.69	14.33
93/ 6/10	2449148.5	-17.04398	-23.21838	7.35613	4.59848	-3.92180	-0.92939	29.72714	6.11476	233.72	14.33
93/ 6/14	2449152.5	-17.03335	-23.22744	7.35398	4.59986	-3.91995	-0.92997	29.72760	6.11470	233.75	14.32
93/ 6/18	2449156.5	-17.02272	-23.23650	7.35183	4.60125	-3.91810	-0.93054	29.72806	6.11465	233.77	14.32
93/ 6/22	2449160.5	-17.01209	-23.24555	7.34968	4.60263	-3.91625	-0.93112	29.72851	6.11459	233.80	14.31
93/ 6/26	2449164.5	-17.00146	-23.25459	7.34753	4.60401	-3.91440	-0.93169	29.72897	6.11453	233.83	14.31
93/ 6/30	2449168.5	-16.99082	-23.26363	7.34538	4.60539	-3.91255	-0.93227	29.72943	6.11447	233.86	14.30
93/ 7/ 4	2449172.5	-16.98018	-23.27267	7.34322	4.60677	-3.91070	-0.93284	29.72989	6.11441	233.88	14.30
93/ 7/ 8	2449176.5	-16.96954	-23.28170	7.34107	4.60814	-3.90885	-0.93342	29.73035	6.11435	233.91	14.30
93/ 7/12	2449180.5	-16.95889	-23.29073	7.33891	4.60951	-3.90699	-0.93399	29.73082	6.11429	233.94	14.29
93/ 7/16	2449184.5	-16.94824	-23.29975	7.33675	4.61088	-3.90514	-0.93456	29.73128	6.11423	233.97	14.29
93/ 7/20	2449188.5	-16.93759	-23.30877	7.33459	4.61225	-3.90329	-0.93514	29.73175	6.11417	234.00	14.28
93/ 7/24	2449192.5	-16.92693	-23.31779	7.33243	4.61362	-3.90144	-0.93571	29.73221	6.11411	234.02	14.28
93/ 7/28	2449196.5	-16.91627	-23.32680	7.33027	4.61498	-3.89959	-0.93629	29.73268	6.11404	234.05	14.27
93/ 8/ 1	2449200.5	-16.90561	-23.33580	7.32810	4.61635	-3.89775	-0.93686	29.73315	6.11398	234.08	14.27
93/ 8/ 5	2449204.5	-16.89494	-23.34481	7.32594	4.61771	-3.89590	-0.93743	29.73362	6.11392	234.11	14.26
93/ 8/ 9	2449208.5	-16.88427	-23.35380	7.32377	4.61907	-3.89405	-0.93800	29.73409	6.11386	234.13	14.26
93/ 8/13	2449212.5	-16.87360	-23.36280	7.32160	4.62043	-3.89221	-0.93858	29.73457	6.11380	234.16	14.25
93/ 8/17	2449216.5	-16.86292	-23.37179	7.31944	4.62179	-3.89036	-0.93915	29.73504	6.11375	234.19	14.25
93/ 8/21	2449220.5	-16.85224	-23.38077	7.31727	4.62315	-3.88852	-0.93972	29.73552	6.11369	234.22	14.25
93/ 8/25	2449224.5	-16.84156	-23.38975	7.31509	4.62452	-3.88668	-0.94030	29.73599	6.11364	234.24	14.24
93/ 8/29	2449228.5	-16.83088	-23.39873	7.31292	4.62588	-3.88483	-0.94087	29.73647	6.11359	234.27	14.24
93/ 9/ 2	2449232.5	-16.82019	-23.40770	7.31075	4.62725	-3.88298	-0.94144	29.73695	6.11353	234.30	14.23
93/ 9/ 6	2449236.5	-16.80950	-23.41667	7.30857	4.62861	-3.88114	-0.94201	29.73743	6.11348	234.33	14.23
93/ 9/10	2449240.5	-16.79880	-23.42564	7.30639	4.62997	-3.87929	-0.94259	29.73791	6.11343	234.36	14.22
93/ 9/14	2449244.5	-16.78811	-23.43459	7.30422	4.63134	-3.87744	-0.94316	29.73840	6.11337	234.38	14.22
93/ 9/18	2449248.5	-16.77740	-23.44355	7.30204	4.63270	-3.87559	-0.94373	29.73888	6.11332	234.41	14.21
93/ 9/22	2449252.5	-16.76670	-23.45250	7.29986	4.63406	-3.87374	-0.94430	29.73937	6.11327	234.44	14.21
93/ 9/26	2449256.5	-16.75599	-23.46145	7.29767	4.63542	-3.87189	-0.94487	29.73985	6.11322	234.47	14.20
93/ 9/30	2449260.5	-16.74528	-23.47039	7.29549	4.63678	-3.87003	-0.94544	29.74034	6.11316	234.49	14.20
93/10/ 4	2449264.5	-16.73457	-23.47933	7.29330	4.63814	-3.86818	-0.94601	29.74083	6.11311	234.52	14.20
93/10/ 8	2449268.5	-16.72385	-23.48826	7.29112	4.63951	-3.86632	-0.94659	29.74132	6.11306	234.55	14.19
93/10/12	2449272.5	-16.71313	-23.49719	7.28893	4.64087	-3.86447	-0.94716	29.74181	6.11301	234.58	14.19
93/10/16	2449276.5	-16.70241	-23.50612	7.28674	4.64223	-3.86261	-0.94773	29.74231	6.11295	234.60	14.18
93/10/20	2449280.5	-16.69168	-23.51504	7.28455	4.64358	-3.86075	-0.94830	29.74280	6.11290	234.63	14.18
93/10/24	2449284.5	-16.68096	-23.52396	7.28236	4.64494	-3.85889	-0.94887	29.74329	6.11284	234.66	14.17
93/10/28	2449288.5	-16.67022	-23.53287	7.28017	4.64630	-3.85703	-0.94944	29.74379	6.11279	234.69	14.17
93/11/ 1	2449292.5	-16.65949	-23.54178	7.27797	4.64766	-3.85516	-0.95001	29.74429	6.11273	234.71	14.16
93/11/ 5	2449296.5	-16.64875	-23.55068	7.27578	4.64901	-3.85330	-0.95058	29.74479	6.11268	234.74	14.16

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
93/11/ 9	2449300.5	-16.63801	-23.55958	7.27358	4.65037	-3.85144	-0.95114	29.74529	6.11262	234.77	14.15
93/11/13	2449304.5	-16.62726	-23.56848	7.27138	4.65172	-3.84957	-0.95171	29.74579	6.11257	234.80	14.15
93/11/17	2449308.5	-16.61652	-23.57737	7.26919	4.65308	-3.84771	-0.95228	29.74629	6.11251	234.83	14.14
93/11/21	2449312.5	-16.60576	-23.58625	7.26698	4.65443	-3.84584	-0.95285	29.74680	6.11246	234.85	14.14
93/11/25	2449316.5	-16.59501	-23.59514	7.26478	4.65579	-3.84397	-0.95342	29.74730	6.11240	234.88	14.14
93/11/29	2449320.5	-16.58425	-23.60401	7.26258	4.65714	-3.84210	-0.95399	29.74781	6.11235	234.91	14.13
93/12/ 3	2449324.5	-16.57349	-23.61289	7.26037	4.65850	-3.84022	-0.95456	29.74831	6.11229	234.94	14.13
93/12/ 7	2449328.5	-16.56273	-23.62176	7.25817	4.65985	-3.83834	-0.95513	29.74882	6.11223	234.96	14.12
93/12/11	2449332.5	-16.55196	-23.63062	7.25596	4.66120	-3.83646	-0.95569	29.74933	6.11216	234.99	14.12
93/12/15	2449336.5	-16.54119	-23.63948	7.25375	4.66254	-3.83458	-0.95626	29.74984	6.11210	235.02	14.11
93/12/19	2449340.5	-16.53042	-23.64834	7.25154	4.66389	-3.83270	-0.95683	29.75036	6.11204	235.05	14.11
93/12/23	2449344.5	-16.51964	-23.65719	7.24933	4.66523	-3.83082	-0.95739	29.75087	6.11197	235.07	14.10
93/12/27	2449348.5	-16.50887	-23.66604	7.24712	4.66658	-3.82893	-0.95796	29.75138	6.11190	235.10	14.10
93/12/31	2449352.5	-16.49808	-23.67488	7.24491	4.66792	-3.82704	-0.95853	29.75190	6.11183	235.13	14.09
94/ 1/ 4	2449356.5	-16.48730	-23.68372	7.24269	4.66925	-3.82516	-0.95909	29.75242	6.11176	235.16	14.09
94/ 1/ 8	2449360.5	-16.47651	-23.69256	7.24047	4.67059	-3.82327	-0.95966	29.75293	6.11169	235.18	14.08
94/ 1/12	2449364.5	-16.46572	-23.70139	7.23826	4.67192	-3.82138	-0.96022	29.75345	6.11161	235.21	14.08
94/ 1/16	2449368.5	-16.45492	-23.71021	7.23604	4.67325	-3.81949	-0.96079	29.75397	6.11154	235.24	14.08
94/ 1/20	2449372.5	-16.44413	-23.71903	7.23382	4.67458	-3.81760	-0.96135	29.75450	6.11147	235.27	14.07
94/ 1/24	2449376.5	-16.43333	-23.72785	7.23160	4.67591	-3.81571	-0.96192	29.75502	6.11139	235.29	14.07
94/ 1/28	2449380.5	-16.42252	-23.73666	7.22937	4.67724	-3.81382	-0.96248	29.75554	6.11131	235.32	14.06
94/ 2/ 1	2449384.5	-16.41171	-23.74547	7.22715	4.67856	-3.81193	-0.96305	29.75607	6.11124	235.35	14.06
94/ 2/ 5	2449388.5	-16.40090	-23.75428	7.22492	4.67988	-3.81004	-0.96361	29.75659	6.11116	235.38	14.05
94/ 2/ 9	2449392.5	-16.39009	-23.76308	7.22270	4.68121	-3.80816	-0.96417	29.75712	6.11109	235.40	14.05
94/ 2/13	2449396.5	-16.37928	-23.77187	7.22047	4.68253	-3.80627	-0.96474	29.75765	6.11101	235.43	14.04
94/ 2/17	2449400.5	-16.36846	-23.78066	7.21824	4.68385	-3.80438	-0.96530	29.75818	6.11094	235.46	14.04
94/ 2/21	2449404.5	-16.35764	-23.78945	7.21601	4.68517	-3.80249	-0.96586	29.75871	6.11087	235.49	14.03
94/ 2/25	2449408.5	-16.34681	-23.79823	7.21378	4.68650	-3.80060	-0.96643	29.75924	6.11079	235.52	14.03
94/ 3/ 1	2449412.5	-16.33598	-23.80701	7.21154	4.68782	-3.79871	-0.96699	29.75978	6.11072	235.54	14.02
94/ 3/ 5	2449416.5	-16.32515	-23.81578	7.20931	4.68913	-3.79681	-0.96755	29.76031	6.11064	235.57	14.02
94/ 3/ 9	2449420.5	-16.31432	-23.82455	7.20707	4.69045	-3.79492	-0.96811	29.76085	6.11057	235.60	14.01
94/ 3/13	2449424.5	-16.30348	-23.83332	7.20484	4.69177	-3.79303	-0.96868	29.76139	6.11049	235.63	14.01
94/ 3/17	2449428.5	-16.29264	-23.84208	7.20260	4.69309	-3.79113	-0.96924	29.76192	6.11041	235.65	14.01
94/ 3/21	2449432.5	-16.28180	-23.85083	7.20036	4.69440	-3.78924	-0.96980	29.76246	6.11034	235.68	14.00
94/ 3/25	2449436.5	-16.27095	-23.85958	7.19812	4.69571	-3.78734	-0.97036	29.76300	6.11026	235.71	14.00
94/ 3/29	2449440.5	-16.26010	-23.86833	7.19587	4.69703	-3.78545	-0.97092	29.76355	6.11019	235.74	13.99
94/ 4/ 2	2449444.5	-16.24925	-23.87707	7.19363	4.69834	-3.78355	-0.97148	29.76409	6.11011	235.76	13.99
94/ 4/ 6	2449448.5	-16.23839	-23.88581	7.19139	4.69965	-3.78165	-0.97204	29.76463	6.11003	235.79	13.98
94/ 4/10	2449452.5	-16.22753	-23.89455	7.18914	4.70096	-3.77976	-0.97261	29.76518	6.10996	235.82	13.98
94/ 4/14	2449456.5	-16.21667	-23.90328	7.18689	4.70228	-3.77786	-0.97317	29.76573	6.10988	235.85	13.97
94/ 4/18	2449460.5	-16.20581	-23.91200	7.18464	4.70358	-3.77596	-0.97373	29.76627	6.10980	235.87	13.97
94/ 4/22	2449464.5	-16.19494	-23.92072	7.18239	4.70489	-3.77406	-0.97429	29.76682	6.10973	235.90	13.96
94/ 4/26	2449468.5	-16.18407	-23.92944	7.18014	4.70620	-3.77216	-0.97485	29.76737	6.10965	235.93	13.96
94/ 4/30	2449472.5	-16.17319	-23.93815	7.17789	4.70751	-3.77026	-0.97541	29.76793	6.10958	235.96	13.95
94/ 5/ 4	2449476.5	-16.16232	-23.94686	7.17564	4.70882	-3.76836	-0.97597	29.76848	6.10950	235.98	13.95

1.9 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/ 5/ 8	2449480.5	-16.15144	-23.95556	7.17338	4.71013	-3.76646	-0.97653	29.76903	6.10943	236.01	13.94
94/ 5/12	2449484.5	-16.14056	-23.96426	7.17112	4.71144	-3.76455	-0.97709	29.76959	6.10936	236.04	13.94
94/ 5/16	2449488.5	-16.12967	-23.97296	7.16887	4.71275	-3.76265	-0.97765	29.77014	6.10928	236.07	13.93
94/ 5/20	2449492.5	-16.11878	-23.98165	7.16661	4.71406	-3.76074	-0.97821	29.77070	6.10921	236.09	13.93
94/ 5/24	2449496.5	-16.10789	-23.99033	7.16435	4.71537	-3.75883	-0.97877	29.77126	6.10913	236.12	13.92
94/ 5/28	2449500.5	-16.09699	-23.99901	7.16208	4.71668	-3.75692	-0.97933	29.77182	6.10906	236.15	13.92
94/ 6/ 1	2449504.5	-16.08610	-24.00769	7.15982	4.71799	-3.75500	-0.97989	29.77238	6.10898	236.18	13.92
94/ 6/ 5	2449508.5	-16.07520	-24.01636	7.15756	4.71930	-3.75309	-0.98044	29.77294	6.10890	236.20	13.91
94/ 6/ 9	2449512.5	-16.06429	-24.02503	7.15529	4.72060	-3.75117	-0.98100	29.77351	6.10882	236.23	13.91
94/ 6/13	2449516.5	-16.05339	-24.03369	7.15302	4.72190	-3.74925	-0.98156	29.77407	6.10874	236.26	13.90
94/ 6/17	2449520.5	-16.04247	-24.04235	7.15076	4.72321	-3.74732	-0.98212	29.77464	6.10865	236.29	13.90
94/ 6/21	2449524.5	-16.03156	-24.05101	7.14849	4.72451	-3.74540	-0.98268	29.77521	6.10857	236.31	13.89
94/ 6/25	2449528.5	-16.02065	-24.05966	7.14622	4.72581	-3.74347	-0.98323	29.77577	6.10848	236.34	13.89
94/ 6/29	2449532.5	-16.00973	-24.06831	7.14394	4.72710	-3.74154	-0.98379	29.77634	6.10839	236.37	13.88
94/ 7/ 3	2449536.5	-15.99881	-24.07695	7.14167	4.72840	-3.73961	-0.98435	29.77691	6.10830	236.40	13.88
94/ 7/ 7	2449540.5	-15.98788	-24.08558	7.13940	4.72969	-3.73767	-0.98490	29.77748	6.10821	236.42	13.87
94/ 7/11	2449544.5	-15.97695	-24.09422	7.13712	4.73098	-3.73574	-0.98546	29.77806	6.10811	236.45	13.87
94/ 7/15	2449548.5	-15.96602	-24.10284	7.13484	4.73226	-3.73380	-0.98602	29.77863	6.10801	236.48	13.86
94/ 7/19	2449552.5	-15.95509	-24.11147	7.13256	4.73355	-3.73187	-0.98657	29.77921	6.10792	236.51	13.86
94/ 7/23	2449556.5	-15.94415	-24.12009	7.13028	4.73483	-3.72993	-0.98713	29.77978	6.10781	236.53	13.85
94/ 7/27	2449560.5	-15.93321	-24.12870	7.12800	4.73611	-3.72799	-0.98768	29.78036	6.10771	236.56	13.85
94/ 7/31	2449564.5	-15.92227	-24.13731	7.12572	4.73738	-3.72606	-0.98824	29.78094	6.10761	236.59	13.84
94/ 8/ 4	2449568.5	-15.91132	-24.14592	7.12344	4.73866	-3.72412	-0.98879	29.78152	6.10751	236.62	13.84
94/ 8/ 8	2449572.5	-15.90037	-24.15452	7.12115	4.73993	-3.72218	-0.98935	29.78210	6.10741	236.64	13.83
94/ 8/12	2449576.5	-15.88942	-24.16311	7.11887	4.74121	-3.72024	-0.98990	29.78268	6.10730	236.67	13.83
94/ 8/16	2449580.5	-15.87847	-24.17171	7.11658	4.74248	-3.71830	-0.99046	29.78326	6.10720	236.70	13.82
94/ 8/20	2449584.5	-15.86751	-24.18029	7.11429	4.74375	-3.71636	-0.99101	29.78385	6.10709	236.73	13.82
94/ 8/24	2449588.5	-15.85655	-24.18888	7.11200	4.74501	-3.71441	-0.99157	29.78443	6.10698	236.75	13.81
94/ 8/28	2449592.5	-15.84559	-24.19746	7.10971	4.74628	-3.71247	-0.99212	29.78502	6.10687	236.78	13.81
94/ 9/ 1	2449596.5	-15.83462	-24.20603	7.10742	4.74754	-3.71053	-0.99267	29.78561	6.10676	236.81	13.81
94/ 9/ 5	2449600.5	-15.82365	-24.21460	7.10512	4.74880	-3.70858	-0.99323	29.78620	6.10665	236.84	13.80
94/ 9/ 9	2449604.5	-15.81268	-24.22317	7.10283	4.75005	-3.70664	-0.99378	29.78679	6.10653	236.86	13.80
94/ 9/13	2449608.5	-15.80171	-24.23173	7.10053	4.75131	-3.70469	-0.99433	29.78738	6.10642	236.89	13.79
94/ 9/17	2449612.5	-15.79073	-24.24028	7.09823	4.75256	-3.70275	-0.99488	29.78797	6.10630	236.92	13.79
94/ 9/21	2449616.5	-15.77975	-24.24883	7.09593	4.75381	-3.70080	-0.99544	29.78857	6.10619	236.95	13.78
94/ 9/25	2449620.5	-15.76876	-24.25738	7.09363	4.75505	-3.69886	-0.99599	29.78916	6.10607	236.97	13.78
94/ 9/29	2449624.5	-15.75778	-24.26592	7.09133	4.75630	-3.69692	-0.99654	29.78976	6.10595	237.00	13.77
94/10/ 3	2449628.5	-15.74679	-24.27446	7.08903	4.75754	-3.69498	-0.99709	29.79035	6.10584	237.03	13.77
94/10/ 7	2449632.5	-15.73579	-24.28300	7.08672	4.75878	-3.69304	-0.99764	29.79095	6.10572	237.06	13.76
94/10/11	2449636.5	-15.72480	-24.29153	7.08442	4.76002	-3.69110	-0.99819	29.79155	6.10560	237.08	13.76
94/10/15	2449640.5	-15.71380	-24.30005	7.08211	4.76126	-3.68916	-0.99874	29.79215	6.10549	237.11	13.75
94/10/19	2449644.5	-15.70280	-24.30857	7.07980	4.76250	-3.68722	-0.99929	29.79275	6.10537	237.14	13.75
94/10/23	2449648.5	-15.69180	-24.31709	7.07750	4.76374	-3.68529	-0.99984	29.79336	6.10526	237.17	13.74
94/10/27	2449652.5	-15.68079	-24.32560	7.07519	4.76497	-3.68335	-1.00039	29.79396	6.10515	237.19	13.74
94/10/31	2449656.5	-15.66978	-24.33411	7.07287	4.76621	-3.68142	-1.00094	29.79457	6.10504	237.22	13.73

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
94/11/ 4	2449660.5	-15.65877	-24.34261	7.07056	4.76745	-3.67949	-1.00149	29.79517	6.10493	237.25	13.73
94/11/ 8	2449664.5	-15.64775	-24.35111	7.06825	4.76869	-3.67756	-1.00204	29.79578	6.10482	237.28	13.72
94/11/12	2449668.5	-15.63674	-24.35960	7.06593	4.76993	-3.67562	-1.00259	29.79639	6.10472	237.30	13.72
94/11/16	2449672.5	-15.62572	-24.36809	7.06361	4.77117	-3.67369	-1.00314	29.79700	6.10461	237.33	13.71
94/11/20	2449676.5	-15.61469	-24.37657	7.06130	4.77240	-3.67176	-1.00369	29.79761	6.10451	237.36	13.71
94/11/24	2449680.5	-15.60367	-24.38505	7.05898	4.77364	-3.66982	-1.00424	29.79823	6.10441	237.39	13.70
94/11/28	2449684.5	-15.59264	-24.39353	7.05666	4.77488	-3.66789	-1.00479	29.79884	6.10430	237.41	13.70
94/12/ 2	2449688.5	-15.58160	-24.40200	7.05433	4.77612	-3.66595	-1.00533	29.79946	6.10420	237.44	13.69
94/12/ 6	2449692.5	-15.57057	-24.41047	7.05201	4.77736	-3.66401	-1.00588	29.80007	6.10410	237.47	13.69
94/12/10	2449696.5	-15.55953	-24.41893	7.04969	4.77860	-3.66208	-1.00643	29.80069	6.10399	237.50	13.68
94/12/14	2449700.5	-15.54849	-24.42739	7.04736	4.77984	-3.66014	-1.00698	29.80131	6.10389	237.52	13.68
94/12/18	2449704.5	-15.53745	-24.43584	7.04503	4.78108	-3.65820	-1.00753	29.80193	6.10379	237.55	13.67
94/12/22	2449708.5	-15.52640	-24.44429	7.04271	4.78232	-3.65626	-1.00807	29.80255	6.10369	237.58	13.67
94/12/26	2449712.5	-15.51535	-24.45273	7.04038	4.78356	-3.65432	-1.00862	29.80317	6.10359	237.60	13.66
94/12/30	2449716.5	-15.50430	-24.46117	7.03805	4.78480	-3.65237	-1.00917	29.80380	6.10349	237.63	13.66
95/ 1/ 3	2449720.5	-15.49324	-24.46961	7.03571	4.78604	-3.65043	-1.00972	29.80442	6.10338	237.66	13.65
95/ 1/ 7	2449724.5	-15.48218	-24.47804	7.03338	4.78727	-3.64848	-1.01026	29.80505	6.10328	237.69	13.65
95/ 1/11	2449728.5	-15.47112	-24.48647	7.03105	4.78851	-3.64654	-1.01081	29.80568	6.10318	237.71	13.64
95/ 1/15	2449732.5	-15.46006	-24.49489	7.02871	4.78975	-3.64459	-1.01136	29.80630	6.10308	237.74	13.64
95/ 1/19	2449736.5	-15.44899	-24.50331	7.02637	4.79098	-3.64264	-1.01190	29.80693	6.10297	237.77	13.63
95/ 1/23	2449740.5	-15.43792	-24.51172	7.02403	4.79222	-3.64069	-1.01245	29.80756	6.10287	237.80	13.63
95/ 1/27	2449744.5	-15.42685	-24.52013	7.02170	4.79346	-3.63874	-1.01299	29.80820	6.10277	237.82	13.62
95/ 1/31	2449748.5	-15.41578	-24.52853	7.01935	4.79469	-3.63679	-1.01354	29.80883	6.10267	237.85	13.62
95/ 2/ 4	2449752.5	-15.40470	-24.53693	7.01701	4.79593	-3.63483	-1.01409	29.80946	6.10257	237.88	13.61
95/ 2/ 8	2449756.5	-15.39362	-24.54532	7.01467	4.79717	-3.63287	-1.01463	29.81010	6.10246	237.91	13.61
95/ 2/12	2449760.5	-15.38253	-24.55371	7.01232	4.79840	-3.63091	-1.01518	29.81074	6.10236	237.93	13.61
95/ 2/16	2449764.5	-15.37145	-24.56210	7.00998	4.79964	-3.62894	-1.01572	29.81137	6.10225	237.96	13.60
95/ 2/20	2449768.5	-15.36036	-24.57048	7.00763	4.80087	-3.62698	-1.01627	29.81201	6.10214	237.99	13.60
95/ 2/24	2449772.5	-15.34927	-24.57886	7.00528	4.80210	-3.62501	-1.01681	29.81265	6.10203	238.02	13.59
95/ 2/28	2449776.5	-15.33817	-24.58723	7.00293	4.80333	-3.62304	-1.01735	29.81329	6.10192	238.04	13.59
95/ 3/ 4	2449780.5	-15.32707	-24.59560	7.00058	4.80456	-3.62106	-1.01790	29.81394	6.10180	238.07	13.58
95/ 3/ 8	2449784.5	-15.31597	-24.60396	6.99823	4.80578	-3.61909	-1.01844	29.81458	6.10168	238.10	13.58
95/ 3/12	2449788.5	-15.30487	-24.61232	6.99588	4.80700	-3.61711	-1.01898	29.81522	6.10156	238.13	13.57
95/ 3/16	2449792.5	-15.29376	-24.62067	6.99352	4.80822	-3.61513	-1.01953	29.81587	6.10144	238.15	13.57
95/ 3/20	2449796.5	-15.28265	-24.62902	6.99117	4.80944	-3.61315	-1.02007	29.81652	6.10132	238.18	13.56
95/ 3/24	2449800.5	-15.27154	-24.63737	6.98881	4.81065	-3.61117	-1.02061	29.81716	6.10119	238.21	13.56
95/ 3/28	2449804.5	-15.26043	-24.64571	6.98645	4.81186	-3.60918	-1.02115	29.81781	6.10106	238.23	13.55
95/ 4/ 1	2449808.5	-15.24931	-24.65404	6.98409	4.81307	-3.60720	-1.02169	29.81846	6.10093	238.26	13.55
95/ 4/ 5	2449812.5	-15.23819	-24.66237	6.98173	4.81428	-3.60522	-1.02223	29.81911	6.10080	238.29	13.54
95/ 4/ 9	2449816.5	-15.22706	-24.67070	6.97937	4.81548	-3.60323	-1.02277	29.81977	6.10067	238.32	13.54
95/ 4/13	2449820.5	-15.21594	-24.67902	6.97700	4.81668	-3.60125	-1.02332	29.82042	6.10054	238.34	13.53
95/ 4/17	2449824.5	-15.20481	-24.68734	6.97464	4.81788	-3.59926	-1.02386	29.82108	6.10040	238.37	13.53
95/ 4/21	2449828.5	-15.19368	-24.69565	6.97227	4.81907	-3.59728	-1.02440	29.82173	6.10027	238.40	13.52
95/ 4/25	2449832.5	-15.18254	-24.70396	6.96991	4.82027	-3.59530	-1.02494	29.82239	6.10013	238.43	13.52
95/ 4/29	2449836.5	-15.17141	-24.71226	6.96754	4.82146	-3.59331	-1.02548	29.82305	6.10000	238.45	13.51

1.9 1 A.U.=149,599,000 KM.

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95/ 5/ 3	2449840.5	-15.16027	-24.72056	6.96517	4.82265	-3.59133	-1.02602	29.82371	6.09986	238.48	13.51
95/ 5/ 7	2449844.5	-15.14912	-24.72886	6.96280	4.82384	-3.58935	-1.02656	29.82437	6.09973	238.51	13.50
95/ 5/11	2449848.5	-15.13798	-24.73715	6.96043	4.82503	-3.58736	-1.02709	29.82503	6.09959	238.54	13.50
95/ 5/15	2449852.5	-15.12683	-24.74543	6.95805	4.82622	-3.58537	-1.02763	29.82569	6.09945	238.56	13.49
95/ 5/19	2449856.5	-15.11568	-24.75371	6.95568	4.82741	-3.58339	-1.02817	29.82636	6.09931	238.59	13.49
95/ 5/23	2449860.5	-15.10453	-24.76199	6.95330	4.82859	-3.58140	-1.02871	29.82702	6.09917	238.62	13.48
95/ 5/27	2449864.5	-15.09337	-24.77026	6.95092	4.82977	-3.57941	-1.02925	29.82769	6.09903	238.64	13.48
95/ 5/31	2449868.5	-15.08221	-24.77853	6.94855	4.83095	-3.57742	-1.02979	29.82835	6.09889	238.67	13.47
95/ 6/ 4	2449872.5	-15.07105	-24.78679	6.94617	4.83213	-3.57544	-1.03032	29.82902	6.09875	238.70	13.47
95/ 6/ 8	2449876.5	-15.05989	-24.79505	6.94379	4.83330	-3.57345	-1.03086	29.82969	6.09861	238.73	13.46
95/ 6/12	2449880.5	-15.04872	-24.80330	6.94140	4.83448	-3.57146	-1.03140	29.83036	6.09847	238.75	13.46
95/ 6/16	2449884.5	-15.03755	-24.81155	6.93902	4.83565	-3.56948	-1.03194	29.83104	6.09833	238.78	13.45
95/ 6/20	2449888.5	-15.02638	-24.81979	6.93664	4.83682	-3.56749	-1.03247	29.83171	6.09818	238.81	13.45
95/ 6/24	2449892.5	-15.01520	-24.82803	6.93425	4.83799	-3.56550	-1.03301	29.83238	6.09804	238.84	13.44
95/ 6/28	2449896.5	-15.00402	-24.83627	6.93186	4.83916	-3.56352	-1.03354	29.83306	6.09790	238.86	13.44
95/ 7/ 2	2449900.5	-14.99284	-24.84450	6.92947	4.84033	-3.56153	-1.03408	29.83374	6.09776	238.89	13.43
95/ 7/ 6	2449904.5	-14.98166	-24.85272	6.92709	4.84150	-3.55955	-1.03462	29.83441	6.09761	238.92	13.43
95/ 7/10	2449908.5	-14.97047	-24.86094	6.92469	4.84266	-3.55756	-1.03515	29.83509	6.09747	238.94	13.42
95/ 7/14	2449912.5	-14.95928	-24.86916	6.92230	4.84383	-3.55558	-1.03569	29.83577	6.09733	238.97	13.42
95/ 7/18	2449916.5	-14.94809	-24.87737	6.91991	4.84499	-3.55359	-1.03622	29.83646	6.09719	239.00	13.41
95/ 7/22	2449920.5	-14.93690	-24.88558	6.91751	4.84616	-3.55161	-1.03676	29.83714	6.09705	239.03	13.41
95/ 7/26	2449924.5	-14.92570	-24.89378	6.91512	4.84733	-3.54963	-1.03730	29.83782	6.09692	239.05	13.40
95/ 7/30	2449928.5	-14.91450	-24.90198	6.91272	4.84849	-3.54764	-1.03783	29.83851	6.09678	239.08	13.40
95/ 8/ 3	2449932.5	-14.90330	-24.91017	6.91032	4.84966	-3.54566	-1.03837	29.83919	6.09665	239.11	13.39
95/ 8/ 7	2449936.5	-14.89209	-24.91836	6.90792	4.85083	-3.54367	-1.03890	29.83988	6.09651	239.14	13.39
95/ 8/11	2449940.5	-14.88089	-24.92654	6.90552	4.85199	-3.54168	-1.03944	29.84057	6.09637	239.16	13.38
95/ 8/15	2449944.5	-14.86968	-24.93472	6.90312	4.85316	-3.53969	-1.03997	29.84126	6.09623	239.19	13.38
95/ 8/19	2449948.5	-14.85846	-24.94290	6.90072	4.85432	-3.53769	-1.04051	29.84195	6.09609	239.22	13.37
95/ 8/23	2449952.5	-14.84725	-24.95107	6.89831	4.85548	-3.53570	-1.04104	29.84264	6.09595	239.25	13.37
95/ 8/27	2449956.5	-14.83603	-24.95923	6.89591	4.85664	-3.53370	-1.04157	29.84334	6.09581	239.27	13.36
95/ 8/31	2449960.5	-14.82481	-24.96740	6.89350	4.85780	-3.53170	-1.04211	29.84403	6.09567	239.30	13.36
95/ 9/ 4	2449964.5	-14.81359	-24.97555	6.89109	4.85896	-3.52970	-1.04264	29.84473	6.09552	239.33	13.35
95/ 9/ 8	2449968.5	-14.80236	-24.98370	6.88868	4.86012	-3.52770	-1.04317	29.84542	6.09538	239.35	13.34
95/ 9/12	2449972.5	-14.79113	-24.99185	6.88627	4.86127	-3.52570	-1.04371	29.84612	6.09523	239.38	13.34
95/ 9/16	2449976.5	-14.77990	-24.99999	6.88386	4.86243	-3.52370	-1.04424	29.84682	6.09509	239.41	13.33
95/ 9/20	2449980.5	-14.76866	-25.00813	6.88145	4.86358	-3.52170	-1.04477	29.84752	6.09494	239.44	13.33
95/ 9/24	2449984.5	-14.75743	-25.01627	6.87903	4.86473	-3.51969	-1.04530	29.84822	6.09479	239.46	13.32
95/ 9/28	2449988.5	-14.74619	-25.02439	6.87662	4.86587	-3.51768	-1.04583	29.84892	6.09464	239.49	13.32
95/10/ 2	2449992.5	-14.73494	-25.03252	6.87420	4.86702	-3.51568	-1.04637	29.84963	6.09448	239.52	13.31
95/10/ 6	2449996.5	-14.72370	-25.04064	6.87178	4.86816	-3.51367	-1.04690	29.85033	6.09433	239.54	13.31
95/10/10	2450000.5	-14.71245	-25.04875	6.86937	4.86930	-3.51167	-1.04743	29.85104	6.09417	239.57	13.30
95/10/14	2450004.5	-14.70120	-25.05686	6.86695	4.87044	-3.50966	-1.04796	29.85174	6.09402	239.60	13.30
95/10/18	2450008.5	-14.68995	-25.06497	6.86452	4.87158	-3.50765	-1.04849	29.85245	6.09387	239.63	13.29
95/10/22	2450012.5	-14.67869	-25.07307	6.86210	4.87271	-3.50565	-1.04902	29.85316	6.09371	239.65	13.29
95/10/26	2450016.5	-14.66744	-25.08117	6.85968	4.87385	-3.50364	-1.04955	29.85387	6.09356	239.68	13.28

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95/10/30	2450020.5	-14.65617	-25.08926	6.85725	4.87498	-3.50163	-1.05008	29.85458	6.09340	239.71	13.28
95/11/ 3	2450024.5	-14.64491	-25.09735	6.85483	4.87612	-3.49962	-1.05061	29.85530	6.09324	239.74	13.27
95/11/ 7	2450028.5	-14.63364	-25.10543	6.85240	4.87725	-3.49760	-1.05114	29.85601	6.09308	239.76	13.27
95/11/11	2450032.5	-14.62238	-25.11351	6.84997	4.87837	-3.49559	-1.05167	29.85673	6.09292	239.79	13.26
95/11/15	2450036.5	-14.61111	-25.12158	6.84754	4.87950	-3.49358	-1.05219	29.85744	6.09276	239.82	13.26
95/11/19	2450040.5	-14.59983	-25.12965	6.84511	4.88062	-3.49157	-1.05272	29.85816	6.09260	239.84	13.25
95/11/23	2450044.5	-14.58855	-25.13771	6.84267	4.88174	-3.48955	-1.05325	29.85888	6.09243	239.87	13.25
95/11/27	2450048.5	-14.57728	-25.14577	6.84024	4.88286	-3.48754	-1.05378	29.85960	6.09227	239.90	13.24
95/12/ 1	2450052.5	-14.56599	-25.15382	6.83781	4.88398	-3.48553	-1.05431	29.86032	6.09210	239.93	13.24
95/12/ 5	2450056.5	-14.55471	-25.16187	6.83537	4.88509	-3.48351	-1.05483	29.86104	6.09193	239.95	13.23
95/12/ 9	2450060.5	-14.54342	-25.16992	6.83293	4.88621	-3.48150	-1.05536	29.86176	6.09177	239.98	13.23
95/12/13	2450064.5	-14.53213	-25.17796	6.83049	4.88732	-3.47949	-1.05588	29.86249	6.09160	240.01	13.22
95/12/17	2450068.5	-14.52084	-25.18600	6.82805	4.88842	-3.47748	-1.05641	29.86321	6.09143	240.03	13.22
95/12/21	2450072.5	-14.50955	-25.19403	6.82561	4.88953	-3.47546	-1.05694	29.86394	6.09126	240.06	13.21
95/12/25	2450076.5	-14.49825	-25.20205	6.82317	4.89064	-3.47345	-1.05746	29.86467	6.09110	240.09	13.21
95/12/29	2450080.5	-14.48695	-25.21008	6.82073	4.89174	-3.47145	-1.05799	29.86540	6.09093	240.12	13.20
96/ 1/ 2	2450084.5	-14.47565	-25.21809	6.81828	4.89284	-3.46944	-1.05851	29.86613	6.09076	240.14	13.20
96/ 1/ 6	2450088.5	-14.46434	-25.22611	6.81584	4.89394	-3.46743	-1.05904	29.86686	6.09059	240.17	13.19
96/ 1/10	2450092.5	-14.45304	-25.23411	6.81339	4.89505	-3.46543	-1.05956	29.86759	6.09043	240.20	13.19
96/ 1/14	2450096.5	-14.44173	-25.24212	6.81094	4.89615	-3.46342	-1.06009	29.86833	6.09027	240.22	13.18
96/ 1/18	2450100.5	-14.43042	-25.25012	6.80849	4.89725	-3.46142	-1.06061	29.86906	6.09010	240.25	13.18
96/ 1/22	2450104.5	-14.41910	-25.25811	6.80604	4.89835	-3.45942	-1.06114	29.86980	6.08994	240.28	13.17
96/ 1/26	2450108.5	-14.40778	-25.26610	6.80359	4.89946	-3.45741	-1.06166	29.87053	6.08979	240.31	13.17
96/ 1/30	2450112.5	-14.39646	-25.27408	6.80113	4.90056	-3.45541	-1.06218	29.87127	6.08963	240.33	13.16
96/ 2/ 3	2450116.5	-14.38514	-25.28206	6.79868	4.90166	-3.45340	-1.06271	29.87201	6.08947	240.36	13.16
96/ 2/ 7	2450120.5	-14.37382	-25.29004	6.79622	4.90276	-3.45139	-1.06323	29.87275	6.08931	240.39	13.15
96/ 2/11	2450124.5	-14.36249	-25.29801	6.79377	4.90387	-3.44939	-1.06375	29.87350	6.08915	240.42	13.15
96/ 2/15	2450128.5	-14.35116	-25.30598	6.79131	4.90497	-3.44738	-1.06428	29.87424	6.08899	240.44	13.14
96/ 2/19	2450132.5	-14.33983	-25.31394	6.78885	4.90607	-3.44537	-1.06480	29.87498	6.08883	240.47	13.13
96/ 2/23	2450136.5	-14.32849	-25.32190	6.78639	4.90717	-3.44336	-1.06532	29.87573	6.08867	240.50	13.13
96/ 2/27	2450140.5	-14.31715	-25.32985	6.78393	4.90827	-3.44135	-1.06585	29.87648	6.08852	240.52	13.12
96/ 3/ 2	2450144.5	-14.30581	-25.33780	6.78147	4.90937	-3.43934	-1.06637	29.87722	6.08836	240.55	13.12
96/ 3/ 6	2450148.5	-14.29447	-25.34574	6.77900	4.91047	-3.43733	-1.06689	29.87797	6.08820	240.58	13.11
96/ 3/10	2450152.5	-14.28313	-25.35368	6.77654	4.91157	-3.43531	-1.06741	29.87872	6.08804	240.61	13.11
96/ 3/14	2450156.5	-14.27178	-25.36161	6.77407	4.91266	-3.43330	-1.06793	29.87947	6.08788	240.63	13.10
96/ 3/18	2450160.5	-14.26043	-25.36954	6.77160	4.91376	-3.43128	-1.06845	29.88023	6.08772	240.66	13.10
96/ 3/22	2450164.5	-14.24907	-25.37747	6.76913	4.91486	-3.42927	-1.06898	29.88098	6.08756	240.69	13.09
96/ 3/26	2450168.5	-14.23772	-25.38539	6.76666	4.91595	-3.42725	-1.06950	29.88174	6.08740	240.71	13.09
96/ 3/30	2450172.5	-14.22636	-25.39330	6.76419	4.91705	-3.42523	-1.07002	29.88249	6.08724	240.74	13.08
96/ 4/ 3	2450176.5	-14.21500	-25.40121	6.76172	4.91814	-3.42321	-1.07054	29.88325	6.08708	240.77	13.08
96/ 4/ 7	2450180.5	-14.20364	-25.40912	6.75925	4.91923	-3.42119	-1.07106	29.88401	6.08692	240.79	13.07
96/ 4/11	2450184.5	-14.19227	-25.41702	6.75677	4.92033	-3.41917	-1.07158	29.88477	6.08676	240.82	13.07
96/ 4/15	2450188.5	-14.18090	-25.42492	6.75429	4.92142	-3.41715	-1.07210	29.88553	6.08660	240.85	13.06
96/ 4/19	2450192.5	-14.16953	-25.43281	6.75182	4.92251	-3.41512	-1.07262	29.88629	6.08644	240.88	13.06
96/ 4/23	2450196.5	-14.15816	-25.44069	6.74934	4.92361	-3.41309	-1.07314	29.88705	6.08628	240.90	13.05

1.9 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
96/ 4/27	2450200.5	-14.14678	-25.44858	6.74686	4.92470	-3.41106	-1.07366	29.88782	6.08611	240.93	13.05
96/ 5/ 1	2450204.5	-14.13541	-25.45645	6.74438	4.92579	-3.40903	-1.07418	29.88858	6.08595	240.96	13.04
96/ 5/ 5	2450208.5	-14.12402	-25.46433	6.74190	4.92687	-3.40699	-1.07470	29.88935	6.08578	240.98	13.04
96/ 5/ 9	2450212.5	-14.11264	-25.47220	6.73941	4.92796	-3.40496	-1.07522	29.89012	6.08561	241.01	13.03
96/ 5/13	2450216.5	-14.10126	-25.48006	6.73693	4.92904	-3.40292	-1.07573	29.89089	6.08543	241.04	13.03
96/ 5/17	2450220.5	-14.08987	-25.48792	6.73444	4.93012	-3.40087	-1.07625	29.89166	6.08526	241.07	13.02
96/ 5/21	2450224.5	-14.07848	-25.49577	6.73195	4.93120	-3.39883	-1.07677	29.89243	6.08508	241.09	13.01
96/ 5/25	2450228.5	-14.06708	-25.50362	6.72947	4.93227	-3.39679	-1.07729	29.89320	6.08490	241.12	13.01
96/ 5/29	2450232.5	-14.05569	-25.51147	6.72698	4.93334	-3.39474	-1.07780	29.89397	6.08472	241.15	13.00
96/ 6/ 2	2450236.5	-14.04429	-25.51931	6.72449	4.93441	-3.39269	-1.07832	29.89475	6.08453	241.17	13.00
96/ 6/ 6	2450240.5	-14.03289	-25.52714	6.72200	4.93547	-3.39065	-1.07884	29.89552	6.08435	241.20	12.99
96/ 6/10	2450244.5	-14.02149	-25.53497	6.71950	4.93654	-3.38860	-1.07935	29.89630	6.08416	241.23	12.99
96/ 6/14	2450248.5	-14.01008	-25.54280	6.71701	4.93759	-3.38655	-1.07987	29.89708	6.08397	241.26	12.98
96/ 6/18	2450252.5	-13.99867	-25.55062	6.71451	4.93865	-3.38450	-1.08038	29.89786	6.08378	241.28	12.98
96/ 6/22	2450256.5	-13.98726	-25.55844	6.71202	4.93970	-3.38245	-1.08090	29.89863	6.08358	241.31	12.97
96/ 6/26	2450260.5	-13.97585	-25.56625	6.70952	4.94075	-3.38040	-1.08141	29.89942	6.08339	241.34	12.97
96/ 6/30	2450264.5	-13.96443	-25.57406	6.70702	4.94180	-3.37835	-1.08193	29.90020	6.08319	241.36	12.96
96/ 7/ 4	2450268.5	-13.95302	-25.58186	6.70452	4.94284	-3.37631	-1.08244	29.90098	6.08299	241.39	12.96
96/ 7/ 8	2450272.5	-13.94160	-25.58966	6.70202	4.94388	-3.37426	-1.08296	29.90177	6.08280	241.42	12.95
96/ 7/12	2450276.5	-13.93017	-25.59745	6.69952	4.94492	-3.37222	-1.08347	29.90255	6.08260	241.44	12.95
96/ 7/16	2450280.5	-13.91875	-25.60524	6.69701	4.94596	-3.37017	-1.08398	29.90334	6.08240	241.47	12.94
96/ 7/20	2450284.5	-13.90732	-25.61302	6.69451	4.94700	-3.36813	-1.08450	29.90413	6.08221	241.50	12.94
96/ 7/24	2450288.5	-13.89589	-25.62080	6.69200	4.94804	-3.36608	-1.08501	29.90492	6.08201	241.53	12.93
96/ 7/28	2450292.5	-13.88446	-25.62857	6.68949	4.94907	-3.36403	-1.08552	29.90571	6.08181	241.55	12.93
96/ 8/ 1	2450296.5	-13.87303	-25.63634	6.68699	4.95010	-3.36199	-1.08604	29.90650	6.08161	241.58	12.92
96/ 8/ 5	2450300.5	-13.86159	-25.64411	6.68448	4.95113	-3.35994	-1.08655	29.90729	6.08140	241.61	12.92
96/ 8/ 9	2450304.5	-13.85015	-25.65187	6.68197	4.95215	-3.35790	-1.08706	29.90808	6.08120	241.63	12.91
96/ 8/13	2450308.5	-13.83871	-25.65962	6.67945	4.95318	-3.35585	-1.08757	29.90888	6.08100	241.66	12.90
96/ 8/17	2450312.5	-13.82727	-25.66737	6.67694	4.95420	-3.35381	-1.08808	29.90968	6.08080	241.69	12.90
96/ 8/21	2450316.5	-13.81582	-25.67512	6.67443	4.95522	-3.35177	-1.08859	29.91047	6.08059	241.72	12.89
96/ 8/25	2450320.5	-13.80437	-25.68286	6.67191	4.95624	-3.34973	-1.08911	29.91127	6.08039	241.74	12.89
96/ 8/29	2450324.5	-13.79292	-25.69059	6.66939	4.95726	-3.34769	-1.08962	29.91207	6.08019	241.77	12.88
96/ 9/ 2	2450328.5	-13.78147	-25.69832	6.66688	4.95827	-3.34565	-1.09013	29.91287	6.07998	241.80	12.88
96/ 9/ 6	2450332.5	-13.77001	-25.70605	6.66436	4.95928	-3.34361	-1.09064	29.91367	6.07978	241.82	12.87
96/ 9/10	2450336.5	-13.75855	-25.71377	6.66184	4.96030	-3.34158	-1.09115	29.91448	6.07958	241.85	12.87
96/ 9/14	2450340.5	-13.74709	-25.72149	6.65932	4.96131	-3.33954	-1.09166	29.91528	6.07938	241.88	12.86
96/ 9/18	2450344.5	-13.73563	-25.72920	6.65679	4.96232	-3.33751	-1.09217	29.91609	6.07918	241.90	12.86
96/ 9/22	2450348.5	-13.72416	-25.73691	6.65427	4.96333	-3.33547	-1.09268	29.91689	6.07898	241.93	12.85
96/ 9/26	2450352.5	-13.71270	-25.74461	6.65175	4.96434	-3.33344	-1.09318	29.91770	6.07878	241.96	12.85
96/ 9/30	2450356.5	-13.70123	-25.75231	6.64922	4.96535	-3.33141	-1.09369	29.91851	6.07858	241.99	12.84
96/10/ 4	2450360.5	-13.68976	-25.76001	6.64669	4.96636	-3.32938	-1.09420	29.91932	6.07839	242.01	12.84
96/10/ 8	2450364.5	-13.67828	-25.76770	6.64416	4.96737	-3.32736	-1.09471	29.92013	6.07819	242.04	12.83
96/10/12	2450368.5	-13.66680	-25.77538	6.64163	4.96838	-3.32533	-1.09522	29.92095	6.07800	242.07	12.82
96/10/16	2450372.5	-13.65533	-25.78306	6.63910	4.96939	-3.32330	-1.09573	29.92176	6.07781	242.09	12.82
96/10/20	2450376.5	-13.64384	-25.79073	6.63657	4.97041	-3.32127	-1.09624	29.92258	6.07762	242.12	12.81

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
97/10/19	2450740.5	-12.58962	-26.46935	6.40133	5.05704	-3.13440	-1.14143	30.00170	6.05814	244.56	12.32
97/10/23	2450744.5	-12.57793	-26.47659	6.39869	5.05792	-3.13234	-1.14191	30.00263	6.05789	244.59	12.31
97/10/27	2450748.5	-12.56625	-26.48383	6.39605	5.05879	-3.13028	-1.14240	30.00355	6.05765	244.62	12.31
97/10/31	2450752.5	-12.55456	-26.49106	6.39341	5.05967	-3.12823	-1.14288	30.00448	6.05741	244.64	12.30
97/11/ 4	2450756.5	-12.54287	-26.49828	6.39077	5.06054	-3.12617	-1.14336	30.00541	6.05717	244.67	12.30
97/11/ 8	2450760.5	-12.53118	-26.50550	6.38813	5.06141	-3.12412	-1.14385	30.00633	6.05692	244.70	12.29
97/11/12	2450764.5	-12.51948	-26.51271	6.38549	5.06227	-3.12207	-1.14433	30.00726	6.05668	244.72	12.29
97/11/16	2450768.5	-12.50779	-26.51992	6.38284	5.06314	-3.12002	-1.14481	30.00820	6.05644	244.75	12.28
97/11/20	2450772.5	-12.49609	-26.52713	6.38020	5.06401	-3.11797	-1.14529	30.00913	6.05620	244.78	12.28
97/11/24	2450776.5	-12.48439	-26.53433	6.37755	5.06487	-3.11592	-1.14578	30.01006	6.05596	244.80	12.27
97/11/28	2450780.5	-12.47269	-26.54153	6.37490	5.06574	-3.11387	-1.14626	30.01100	6.05572	244.83	12.26
97/12/ 2	2450784.5	-12.46099	-26.54872	6.37225	5.06660	-3.11183	-1.14674	30.01193	6.05549	244.86	12.26
97/12/ 6	2450788.5	-12.44928	-26.55590	6.36960	5.06746	-3.10978	-1.14722	30.01287	6.05525	244.88	12.25
97/12/10	2450792.5	-12.43757	-26.56309	6.36695	5.06833	-3.10774	-1.14770	30.01381	6.05502	244.91	12.25
97/12/14	2450796.5	-12.42586	-26.57026	6.36430	5.06919	-3.10570	-1.14818	30.01475	6.05478	244.94	12.24
97/12/18	2450800.5	-12.41415	-26.57744	6.36165	5.07006	-3.10367	-1.14866	30.01569	6.05456	244.96	12.24
97/12/22	2450804.5	-12.40244	-26.58460	6.35899	5.07092	-3.10163	-1.14915	30.01663	6.05433	244.99	12.23
97/12/26	2450808.5	-12.39072	-26.59177	6.35634	5.07179	-3.09959	-1.14963	30.01758	6.05410	245.02	12.23
97/12/30	2450812.5	-12.37900	-26.59892	6.35368	5.07266	-3.09755	-1.15011	30.01852	6.05388	245.04	12.22
98/ 1/ 3	2450816.5	-12.36728	-26.60608	6.35102	5.07353	-3.09551	-1.15059	30.01947	6.05366	245.07	12.21
98/ 1/ 7	2450820.5	-12.35556	-26.61323	6.34837	5.07440	-3.09347	-1.15107	30.02042	6.05343	245.10	12.21
98/ 1/11	2450824.5	-12.34384	-26.62037	6.34571	5.07527	-3.09143	-1.15155	30.02137	6.05321	245.12	12.20
98/ 1/15	2450828.5	-12.33211	-26.62751	6.34305	5.07614	-3.08939	-1.15203	30.02232	6.05299	245.15	12.20
98/ 1/19	2450832.5	-12.32038	-26.63464	6.34038	5.07701	-3.08735	-1.15251	30.02327	6.05277	245.18	12.19
98/ 1/23	2450836.5	-12.30866	-26.64177	6.33772	5.07787	-3.08531	-1.15299	30.02422	6.05255	245.20	12.19
98/ 1/27	2450840.5	-12.29692	-26.64890	6.33506	5.07874	-3.08326	-1.15347	30.02517	6.05233	245.23	12.18
98/ 1/31	2450844.5	-12.28519	-26.65602	6.33239	5.07961	-3.08122	-1.15395	30.02613	6.05210	245.26	12.17
98/ 2/ 4	2450848.5	-12.27345	-26.66314	6.32972	5.08048	-3.07917	-1.15442	30.02709	6.05188	245.28	12.17
98/ 2/ 8	2450852.5	-12.26172	-26.67025	6.32706	5.08135	-3.07713	-1.15490	30.02804	6.05166	245.31	12.16
98/ 2/12	2450856.5	-12.24998	-26.67735	6.32439	5.08221	-3.07508	-1.15538	30.02900	6.05144	245.34	12.16
98/ 2/16	2450860.5	-12.23823	-26.68446	6.32172	5.08308	-3.07303	-1.15586	30.02996	6.05122	245.36	12.15
98/ 2/20	2450864.5	-12.22649	-26.69155	6.31905	5.08394	-3.07098	-1.15634	30.03092	6.05099	245.39	12.15
98/ 2/24	2450868.5	-12.21474	-26.69864	6.31638	5.08481	-3.06893	-1.15681	30.03189	6.05077	245.42	12.14
98/ 2/28	2450872.5	-12.20300	-26.70573	6.31370	5.08567	-3.06687	-1.15729	30.03285	6.05054	245.44	12.14
98/ 3/ 4	2450876.5	-12.19125	-26.71281	6.31103	5.08653	-3.06482	-1.15777	30.03381	6.05032	245.47	12.13
98/ 3/ 8	2450880.5	-12.17950	-26.71989	6.30835	5.08739	-3.06277	-1.15824	30.03478	6.05009	245.50	12.12
98/ 3/12	2450884.5	-12.16774	-26.72697	6.30568	5.08824	-3.06071	-1.15872	30.03575	6.04986	245.52	12.12
98/ 3/16	2450888.5	-12.15599	-26.73403	6.30300	5.08910	-3.05866	-1.15920	30.03672	6.04964	245.55	12.11
98/ 3/20	2450892.5	-12.14423	-26.74110	6.30032	5.08996	-3.05661	-1.15967	30.03769	6.04941	245.58	12.11
98/ 3/24	2450896.5	-12.13247	-26.74816	6.29764	5.09082	-3.05455	-1.16015	30.03866	6.04918	245.60	12.10
98/ 3/28	2450900.5	-12.12071	-26.75521	6.29496	5.09167	-3.05249	-1.16062	30.03963	6.04895	245.63	12.10
98/ 4/ 1	2450904.5	-12.10894	-26.76226	6.29228	5.09252	-3.05043	-1.16110	30.04060	6.04872	245.65	12.09
98/ 4/ 5	2450908.5	-12.09718	-26.76930	6.28960	5.09337	-3.04836	-1.16157	30.04158	6.04849	245.68	12.09
98/ 4/ 9	2450912.5	-12.08541	-26.77634	6.28691	5.09422	-3.04630	-1.16205	30.04255	6.04826	245.71	12.08
98/ 4/13	2450916.5	-12.07364	-26.78338	6.28423	5.09507	-3.04424	-1.16252	30.04353	6.04802	245.73	12.07

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98/ 4/17	2450920.5	-12.06187	-26.79041	6.28154	5.09591	-3.04217	-1.16300	30.04451	6.04778	245.76	12.07
98/ 4/21	2450924.5	-12.05010	-26.79744	6.27885	5.09675	-3.04010	-1.16347	30.04549	6.04754	245.79	12.06
98/ 4/25	2450928.5	-12.03832	-26.80446	6.27617	5.09759	-3.03804	-1.16394	30.04647	6.04730	245.81	12.06
98/ 4/29	2450932.5	-12.02654	-26.81147	6.27348	5.09842	-3.03597	-1.16441	30.04745	6.04706	245.84	12.05
98/ 5/ 3	2450936.5	-12.01476	-26.81848	6.27079	5.09926	-3.03390	-1.16489	30.04843	6.04681	245.87	12.05
98/ 5/ 7	2450940.5	-12.00298	-26.82549	6.26809	5.10008	-3.03184	-1.16536	30.04942	6.04657	245.89	12.04
98/ 5/11	2450944.5	-11.99120	-26.83249	6.26540	5.10091	-3.02977	-1.16583	30.05040	6.04632	245.92	12.03
98/ 5/15	2450948.5	-11.97941	-26.83949	6.26271	5.10173	-3.02770	-1.16630	30.05139	6.04607	245.95	12.03
98/ 5/19	2450952.5	-11.96763	-26.84648	6.26001	5.10256	-3.02564	-1.16677	30.05238	6.04582	245.97	12.02
98/ 5/23	2450956.5	-11.95584	-26.85347	6.25732	5.10337	-3.02357	-1.16724	30.05337	6.04557	246.00	12.02
98/ 5/27	2450960.5	-11.94405	-26.86045	6.25462	5.10419	-3.02151	-1.16771	30.05436	6.04531	246.03	12.01
98/ 5/31	2450964.5	-11.93226	-26.86743	6.25192	5.10500	-3.01945	-1.16818	30.05535	6.04506	246.05	12.01
98/ 6/ 4	2450968.5	-11.92046	-26.87440	6.24922	5.10581	-3.01739	-1.16865	30.05634	6.04481	246.08	12.00
98/ 6/ 8	2450972.5	-11.90867	-26.88137	6.24652	5.10662	-3.01533	-1.16912	30.05733	6.04456	246.11	11.99
98/ 6/12	2450976.5	-11.89687	-26.88833	6.24382	5.10743	-3.01328	-1.16959	30.05833	6.04431	246.13	11.99
98/ 6/16	2450980.5	-11.88507	-26.89529	6.24112	5.10824	-3.01122	-1.17006	30.05933	6.04406	246.16	11.98
98/ 6/20	2450984.5	-11.87327	-26.90225	6.23841	5.10905	-3.00917	-1.17053	30.06032	6.04381	246.19	11.98
98/ 6/24	2450988.5	-11.86146	-26.90920	6.23571	5.10986	-3.00712	-1.17100	30.06132	6.04356	246.21	11.97
98/ 6/28	2450992.5	-11.84966	-26.91614	6.23300	5.11066	-3.00506	-1.17147	30.06232	6.04331	246.24	11.97
98/ 7/ 2	2450996.5	-11.83785	-26.92308	6.23030	5.11147	-3.00301	-1.17194	30.06332	6.04306	246.27	11.96
98/ 7/ 6	2451000.5	-11.82604	-26.93002	6.22759	5.11227	-3.00096	-1.17240	30.06433	6.04281	246.29	11.95
98/ 7/10	2451004.5	-11.81423	-26.93695	6.22488	5.11307	-2.99891	-1.17287	30.06533	6.04256	246.32	11.95
98/ 7/14	2451008.5	-11.80241	-26.94387	6.22217	5.11387	-2.99686	-1.17334	30.06634	6.04232	246.34	11.94
98/ 7/18	2451012.5	-11.79060	-26.95079	6.21946	5.11467	-2.99481	-1.17381	30.06734	6.04207	246.37	11.94
98/ 7/22	2451016.5	-11.77878	-26.95771	6.21675	5.11547	-2.99276	-1.17427	30.06835	6.04182	246.40	11.93
98/ 7/26	2451020.5	-11.76696	-26.96462	6.21403	5.11627	-2.99071	-1.17474	30.06936	6.04157	246.42	11.93
98/ 7/30	2451024.5	-11.75514	-26.97153	6.21132	5.11707	-2.98867	-1.17521	30.07037	6.04132	246.45	11.92
98/ 8/ 3	2451028.5	-11.74332	-26.97843	6.20860	5.11786	-2.98662	-1.17567	30.07138	6.04108	246.48	11.92
98/ 8/ 7	2451032.5	-11.73150	-26.98533	6.20589	5.11866	-2.98457	-1.17614	30.07239	6.04083	246.50	11.91
98/ 8/11	2451036.5	-11.71967	-26.99222	6.20317	5.11945	-2.98253	-1.17661	30.07341	6.04059	246.53	11.90
98/ 8/15	2451040.5	-11.70784	-26.99911	6.20045	5.12025	-2.98049	-1.17707	30.07442	6.04034	246.56	11.90
98/ 8/19	2451044.5	-11.69601	-27.00599	6.19773	5.12104	-2.97844	-1.17754	30.07544	6.04010	246.58	11.89
98/ 8/23	2451048.5	-11.68418	-27.01287	6.19501	5.12183	-2.97640	-1.17800	30.07646	6.03985	246.61	11.89
98/ 8/27	2451052.5	-11.67235	-27.01974	6.19229	5.12262	-2.97436	-1.17847	30.07748	6.03961	246.64	11.88
98/ 8/31	2451056.5	-11.66051	-27.02661	6.18957	5.12342	-2.97232	-1.17893	30.07850	6.03937	246.66	11.88
98/ 9/ 4	2451060.5	-11.64868	-27.03347	6.18684	5.12421	-2.97029	-1.17940	30.07952	6.03913	246.69	11.87
98/ 9/ 8	2451064.5	-11.63684	-27.04033	6.18412	5.12500	-2.96825	-1.17986	30.08054	6.03889	246.72	11.86
98/ 9/12	2451068.5	-11.62500	-27.04719	6.18139	5.12580	-2.96621	-1.18033	30.08157	6.03865	246.74	11.86
98/ 9/16	2451072.5	-11.61316	-27.05404	6.17866	5.12659	-2.96417	-1.18079	30.08259	6.03842	246.77	11.85
98/ 9/20	2451076.5	-11.60131	-27.06088	6.17593	5.12739	-2.96213	-1.18126	30.08362	6.03818	246.79	11.85
98/ 9/24	2451080.5	-11.58947	-27.06772	6.17320	5.12818	-2.96009	-1.18172	30.08465	6.03795	246.82	11.84
98/ 9/28	2451084.5	-11.57762	-27.07456	6.17047	5.12897	-2.95805	-1.18218	30.08567	6.03771	246.85	11.84
98/10/ 2	2451088.5	-11.56577	-27.08139	6.16774	5.12977	-2.95601	-1.18265	30.08671	6.03748	246.87	11.83
98/10/ 6	2451092.5	-11.55392	-27.08822	6.16501	5.13056	-2.95396	-1.18311	30.08774	6.03724	246.90	11.82
98/10/10	2451096.5	-11.54206	-27.09504	6.16228	5.13135	-2.95192	-1.18357	30.08877	6.03700	246.93	11.82

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
98/10/14	2451100.5	-11.53021	-27.10186	6.15954	5.13214	-2.94987	-1.18404	30.08980	6.03676	246.95	11.81
98/10/18	2451104.5	-11.51835	-27.10867	6.15681	5.13292	-2.94783	-1.18450	30.09084	6.03652	246.98	11.81
98/10/22	2451108.5	-11.50649	-27.11548	6.15407	5.13371	-2.94578	-1.18496	30.09188	6.03628	247.01	11.80
98/10/26	2451112.5	-11.49463	-27.12228	6.15133	5.13449	-2.94373	-1.18542	30.09291	6.03604	247.03	11.80
98/10/30	2451116.5	-11.48277	-27.12908	6.14859	5.13528	-2.94169	-1.18588	30.09395	6.03580	247.06	11.79
98/11/ 3	2451120.5	-11.47090	-27.13587	6.14585	5.13606	-2.93964	-1.18634	30.09499	6.03556	247.09	11.78
98/11/ 7	2451124.5	-11.45904	-27.14266	6.14311	5.13684	-2.93759	-1.18680	30.09604	6.03532	247.11	11.78
98/11/11	2451128.5	-11.44717	-27.14944	6.14037	5.13761	-2.93554	-1.18726	30.09708	6.03507	247.14	11.77
98/11/15	2451132.5	-11.43530	-27.15622	6.13762	5.13839	-2.93350	-1.18772	30.09812	6.03483	247.16	11.77
98/11/19	2451136.5	-11.42343	-27.16300	6.13488	5.13916	-2.93145	-1.18818	30.09917	6.03458	247.19	11.76
98/11/23	2451140.5	-11.41156	-27.16977	6.13213	5.13993	-2.92940	-1.18864	30.10022	6.03433	247.22	11.75
98/11/27	2451144.5	-11.39968	-27.17653	6.12939	5.14070	-2.92736	-1.18910	30.10126	6.03409	247.24	11.75
98/12/ 1	2451148.5	-11.38780	-27.18329	6.12664	5.14147	-2.92532	-1.18956	30.10231	6.03384	247.27	11.74
98/12/ 5	2451152.5	-11.37593	-27.19005	6.12389	5.14224	-2.92327	-1.19002	30.10336	6.03360	247.30	11.74
98/12/ 9	2451156.5	-11.36405	-27.19680	6.12114	5.14301	-2.92123	-1.19048	30.10442	6.03335	247.32	11.73
98/12/13	2451160.5	-11.35216	-27.20355	6.11839	5.14378	-2.91919	-1.19094	30.10547	6.03311	247.35	11.73
98/12/17	2451164.5	-11.34028	-27.21029	6.11564	5.14454	-2.91715	-1.19139	30.10652	6.03287	247.38	11.72
98/12/21	2451168.5	-11.32839	-27.21702	6.11289	5.14531	-2.91510	-1.19185	30.10758	6.03262	247.40	11.71
98/12/25	2451172.5	-11.31651	-27.22376	6.11013	5.14607	-2.91306	-1.19231	30.10864	6.03238	247.43	11.71
98/12/29	2451176.5	-11.30462	-27.23048	6.10738	5.14683	-2.91102	-1.19277	30.10969	6.03213	247.45	11.70
99/ 1/ 2	2451180.5	-11.29273	-27.23721	6.10462	5.14759	-2.90898	-1.19322	30.11075	6.03189	247.48	11.70
99/ 1/ 6	2451184.5	-11.28083	-27.24392	6.10186	5.14835	-2.90694	-1.19368	30.11181	6.03164	247.51	11.69
99/ 1/10	2451188.5	-11.26894	-27.25064	6.09911	5.14911	-2.90490	-1.19413	30.11288	6.03139	247.53	11.69
99/ 1/14	2451192.5	-11.25704	-27.25735	6.09635	5.14987	-2.90286	-1.19459	30.11394	6.03115	247.56	11.68
99/ 1/18	2451196.5	-11.24514	-27.26405	6.09359	5.15062	-2.90082	-1.19504	30.11500	6.03090	247.59	11.67
99/ 1/22	2451200.5	-11.23325	-27.27075	6.09083	5.15137	-2.89878	-1.19550	30.11607	6.03066	247.61	11.67
99/ 1/26	2451204.5	-11.22134	-27.27744	6.08806	5.15213	-2.89675	-1.19595	30.11714	6.03041	247.64	11.66
99/ 1/30	2451208.5	-11.20944	-27.28413	6.08530	5.15288	-2.89471	-1.19641	30.11821	6.03016	247.67	11.66
99/ 2/ 3	2451212.5	-11.19754	-27.29082	6.08254	5.15363	-2.89268	-1.19686	30.11928	6.02992	247.69	11.65
99/ 2/ 7	2451216.5	-11.18563	-27.29750	6.07977	5.15438	-2.89064	-1.19732	30.12035	6.02967	247.72	11.65
99/ 2/11	2451220.5	-11.17372	-27.30417	6.07700	5.15513	-2.88861	-1.19777	30.12142	6.02943	247.74	11.64
99/ 2/15	2451224.5	-11.16181	-27.31084	6.07424	5.15587	-2.88658	-1.19822	30.12249	6.02919	247.77	11.63
99/ 2/19	2451228.5	-11.14990	-27.31751	6.07147	5.15662	-2.88455	-1.19868	30.12357	6.02895	247.80	11.63
99/ 2/23	2451232.5	-11.13798	-27.32417	6.06870	5.15737	-2.88252	-1.19913	30.12464	6.02871	247.82	11.62
99/ 2/27	2451236.5	-11.12607	-27.33083	6.06593	5.15812	-2.88050	-1.19958	30.12572	6.02847	247.85	11.62
99/ 3/ 3	2451240.5	-11.11415	-27.33748	6.06316	5.15886	-2.87848	-1.20003	30.12680	6.02823	247.88	11.61
99/ 3/ 7	2451244.5	-11.10223	-27.34413	6.06038	5.15961	-2.87645	-1.20049	30.12788	6.02800	247.90	11.60
99/ 3/11	2451248.5	-11.09031	-27.35077	6.05761	5.16037	-2.87443	-1.20094	30.12896	6.02777	247.93	11.60
99/ 3/15	2451252.5	-11.07839	-27.35741	6.05483	5.16112	-2.87240	-1.20139	30.13004	6.02754	247.95	11.59
99/ 3/19	2451256.5	-11.06647	-27.36404	6.05206	5.16187	-2.87038	-1.20184	30.13113	6.02731	247.98	11.59
99/ 3/23	2451260.5	-11.05454	-27.37067	6.04928	5.16262	-2.86835	-1.20230	30.13221	6.02708	248.01	11.58
99/ 3/27	2451264.5	-11.04261	-27.37730	6.04650	5.16338	-2.86633	-1.20275	30.13330	6.02685	248.03	11.58
99/ 3/31	2451268.5	-11.03068	-27.38392	6.04372	5.16413	-2.86430	-1.20320	30.13439	6.02662	248.06	11.57
99/ 4/ 4	2451272.5	-11.01875	-27.39053	6.04094	5.16488	-2.86227	-1.20365	30.13548	6.02639	248.09	11.56
99/ 4/ 8	2451276.5	-11.00682	-27.39714	6.03816	5.16563	-2.86024	-1.20410	30.13657	6.02616	248.11	11.56

1.9 1 A.U.=149,599,000 KM.

HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM — PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
99/ 4/12	2451280.5	-10.99489	-27.40375	6.03538	5.16638	-2.85821	-1.20455	30.13766	6.02593	248.14	11.55
99/ 4/16	2451284.5	-10.98295	-27.41035	6.03260	5.16714	-2.85618	-1.20500	30.13875	6.02570	248.16	11.55
99/ 4/20	2451288.5	-10.97101	-27.41694	6.02981	5.16789	-2.85415	-1.20545	30.13985	6.02548	248.19	11.54
99/ 4/24	2451292.5	-10.95907	-27.42353	6.02703	5.16864	-2.85212	-1.20590	30.14094	6.02525	248.22	11.53
99/ 4/28	2451296.5	-10.94713	-27.43012	6.02424	5.16939	-2.85009	-1.20635	30.14204	6.02502	248.24	11.53
99/ 5/ 2	2451300.5	-10.93519	-27.43670	6.02145	5.17014	-2.84806	-1.20680	30.14314	6.02479	248.27	11.52
99/ 5/ 6	2451304.5	-10.92324	-27.44328	6.01867	5.17088	-2.84602	-1.20725	30.14424	6.02456	248.30	11.52
99/ 5/10	2451308.5	-10.91130	-27.44985	6.01588	5.17163	-2.84399	-1.20770	30.14534	6.02433	248.32	11.51
99/ 5/14	2451312.5	-10.89935	-27.45642	6.01309	5.17237	-2.84195	-1.20815	30.14644	6.02410	248.35	11.51
99/ 5/18	2451316.5	-10.88740	-27.46298	6.01029	5.17312	-2.83992	-1.20860	30.14754	6.02387	248.37	11.50
99/ 5/22	2451320.5	-10.87545	-27.46954	6.00750	5.17386	-2.83788	-1.20904	30.14865	6.02364	248.40	11.49
99/ 5/26	2451324.5	-10.86349	-27.47609	6.00471	5.17460	-2.83584	-1.20949	30.14976	6.02340	248.43	11.49
99/ 5/30	2451328.5	-10.85154	-27.48264	6.00191	5.17534	-2.83381	-1.20994	30.15086	6.02317	248.45	11.48
99/ 6/ 3	2451332.5	-10.83958	-27.48919	5.99912	5.17609	-2.83177	-1.21039	30.15197	6.02294	248.48	11.48
99/ 6/ 7	2451336.5	-10.82762	-27.49573	5.99632	5.17683	-2.82973	-1.21084	30.15308	6.02271	248.51	11.47
99/ 6/11	2451340.5	-10.81566	-27.50226	5.99352	5.17757	-2.82769	-1.21128	30.15419	6.02248	248.53	11.46
99/ 6/15	2451344.5	-10.80370	-27.50879	5.99072	5.17831	-2.82565	-1.21173	30.15530	6.02225	248.56	11.46
99/ 6/19	2451348.5	-10.79174	-27.51532	5.98792	5.17904	-2.82361	-1.21218	30.15642	6.02201	248.58	11.45
99/ 6/23	2451352.5	-10.77977	-27.52184	5.98512	5.17978	-2.82156	-1.21262	30.15753	6.02177	248.61	11.45
99/ 6/27	2451356.5	-10.76781	-27.52835	5.98232	5.18051	-2.81952	-1.21307	30.15865	6.02153	248.64	11.44
99/ 7/ 1	2451360.5	-10.75584	-27.53486	5.97952	5.18124	-2.81747	-1.21351	30.15977	6.02129	248.66	11.44
99/ 7/ 5	2451364.5	-10.74387	-27.54137	5.97671	5.18196	-2.81543	-1.21396	30.16088	6.02105	248.69	11.43
99/ 7/ 9	2451368.5	-10.73189	-27.54787	5.97391	5.18269	-2.81338	-1.21440	30.16200	6.02081	248.72	11.42
99/ 7/13	2451372.5	-10.71992	-27.55437	5.97110	5.18341	-2.81134	-1.21485	30.16312	6.02056	248.74	11.42
99/ 7/17	2451376.5	-10.70795	-27.56086	5.96830	5.18413	-2.80929	-1.21529	30.16425	6.02032	248.77	11.41
99/ 7/21	2451380.5	-10.69597	-27.56735	5.96549	5.18484	-2.80725	-1.21573	30.16537	6.02007	248.79	11.41
99/ 7/25	2451384.5	-10.68399	-27.57383	5.96268	5.18556	-2.80520	-1.21618	30.16649	6.01982	248.82	11.40
99/ 7/29	2451388.5	-10.67201	-27.58031	5.95987	5.18627	-2.80316	-1.21662	30.16762	6.01957	248.85	11.39
99/ 8/ 2	2451392.5	-10.66003	-27.58678	5.95706	5.18698	-2.80112	-1.21706	30.16875	6.01932	248.87	11.39
99/ 8/ 6	2451396.5	-10.64804	-27.59325	5.95425	5.18768	-2.79907	-1.21751	30.16988	6.01907	248.90	11.38
99/ 8/10	2451400.5	-10.63606	-27.59972	5.95143	5.18839	-2.79703	-1.21795	30.17101	6.01882	248.92	11.38
99/ 8/14	2451404.5	-10.62407	-27.60618	5.94862	5.18909	-2.79500	-1.21839	30.17214	6.01856	248.95	11.37
99/ 8/18	2451408.5	-10.61208	-27.61263	5.94580	5.18979	-2.79296	-1.21883	30.17327	6.01831	248.98	11.36
99/ 8/22	2451412.5	-10.60009	-27.61908	5.94299	5.19049	-2.79093	-1.21927	30.17440	6.01806	249.00	11.36
99/ 8/26	2451416.5	-10.58810	-27.62553	5.94017	5.19119	-2.78890	-1.21971	30.17554	6.01781	249.03	11.35
99/ 8/30	2451420.5	-10.57611	-27.63197	5.93735	5.19188	-2.78687	-1.22015	30.17668	6.01756	249.06	11.35
99/ 9/ 3	2451424.5	-10.56411	-27.63840	5.93453	5.19258	-2.78484	-1.22059	30.17781	6.01732	249.08	11.34
99/ 9/ 7	2451428.5	-10.55212	-27.64483	5.93171	5.19328	-2.78281	-1.22104	30.17895	6.01707	249.11	11.34
99/ 9/11	2451432.5	-10.54012	-27.65126	5.92889	5.19398	-2.78079	-1.22148	30.18009	6.01682	249.13	11.33
99/ 9/15	2451436.5	-10.52812	-27.65768	5.92607	5.19467	-2.77876	-1.22192	30.18123	6.01658	249.16	11.32
99/ 9/19	2451440.5	-10.51612	-27.66410	5.92325	5.19537	-2.77674	-1.22236	30.18238	6.01633	249.19	11.32
99/ 9/23	2451444.5	-10.50411	-27.67051	5.92042	5.19606	-2.77471	-1.22279	30.18352	6.01609	249.21	11.31
99/ 9/27	2451448.5	-10.49211	-27.67692	5.91760	5.19675	-2.77269	-1.22323	30.18467	6.01584	249.24	11.31
99/10/ 1	2451452.5	-10.48010	-27.68332	5.91477	5.19745	-2.77067	-1.22367	30.18581	6.01560	249.26	11.30
99/10/ 5	2451456.5	-10.46809	-27.68972	5.91194	5.19814	-2.76865	-1.22411	30.18696	6.01536	249.29	11.29

1.9 1 A.U.=149,599,000 KM. HELIOCENTRIC ECLIPTIC COORDINATE SYSTEM PLUTO

DATE	JUL. DATE	X(AU)	Y(AU)	Z(AU)	XD(KM/SEC)	YD(KM/SEC)	ZD(KM/SEC)	R(AU)	V(KM/SEC)	LONG	LAT
99/10/ 9	2451460.5	-10.45609	-27.69611	5.90911	5.19883	-2.76663	-1.22455	30.18811	6.01512	249.32	11.29
99/10/13	2451464.5	-10.44407	-27.70250	5.90628	5.19952	-2.76462	-1.22499	30.18926	6.01488	249.34	11.28
99/10/17	2451468.5	-10.43206	-27.70889	5.90345	5.20021	-2.76260	-1.22543	30.19041	6.01464	249.37	11.28
99/10/21	2451472.5	-10.42005	-27.71527	5.90062	5.20090	-2.76059	-1.22586	30.19157	6.01440	249.40	11.27
99/10/25	2451476.5	-10.40803	-27.72164	5.89779	5.20160	-2.75857	-1.22630	30.19272	6.01416	249.42	11.26
99/10/29	2451480.5	-10.39601	-27.72801	5.89496	5.20229	-2.75656	-1.22674	30.19388	6.01393	249.45	11.26
99/11/ 2	2451484.5	-10.38400	-27.73438	5.89212	5.20298	-2.75455	-1.22717	30.19504	6.01369	249.47	11.25
99/11/ 6	2451488.5	-10.37197	-27.74074	5.88929	5.20367	-2.75254	-1.22761	30.19619	6.01346	249.50	11.25
99/11/10	2451492.5	-10.35995	-27.74710	5.88645	5.20436	-2.75054	-1.22805	30.19736	6.01323	249.53	11.24
99/11/14	2451496.5	-10.34793	-27.75345	5.88361	5.20505	-2.74853	-1.22848	30.19852	6.01300	249.55	11.23
99/11/18	2451500.5	-10.33590	-27.75980	5.88077	5.20575	-2.74653	-1.22892	30.19968	6.01278	249.58	11.23
99/11/22	2451504.5	-10.32388	-27.76614	5.87793	5.20645	-2.74452	-1.22936	30.20084	6.01255	249.60	11.22
99/11/26	2451508.5	-10.31185	-27.77248	5.87509	5.20714	-2.74252	-1.22979	30.20201	6.01233	249.63	11.22
99/11/30	2451512.5	-10.29982	-27.77881	5.87225	5.20784	-2.74051	-1.23023	30.20318	6.01211	249.66	11.21
99/12/ 4	2451516.5	-10.28779	-27.78514	5.86941	5.20854	-2.73851	-1.23067	30.20434	6.01190	249.68	11.21
99/12/ 8	2451520.5	-10.27575	-27.79146	5.86657	5.20925	-2.73650	-1.23110	30.20551	6.01168	249.71	11.20
99/12/12	2451524.5	-10.26372	-27.79778	5.86372	5.20995	-2.73449	-1.23154	30.20668	6.01146	249.73	11.19
99/12/16	2451528.5	-10.25168	-27.80410	5.86088	5.21065	-2.73248	-1.23197	30.20786	6.01125	249.76	11.19
99/12/20	2451532.5	-10.23964	-27.81041	5.85803	5.21135	-2.73047	-1.23241	30.20903	6.01103	249.79	11.18
99/12/24	2451536.5	-10.22760	-27.81671	5.85518	5.21205	-2.72846	-1.23284	30.21021	6.01081	249.81	11.18