

Пояснение для эфемерид больших планет. В эфемеридах планет приводятся: Date (год, месяц, день), Right Asc. – прямое восхождение, Declination – склонение, Distance - геоцентрическое расстояние от Земли до планеты в астрономических единицах, dia – видимый диаметр в секундах дуги, mag - звездная величина, Elong – видимое угловое удаление (элонгация) от Солнца в градусах, I - фазовый угол (угол при центре планеты между направлениями на Солнце и Землю), Фаза - величина освещенной части диска планеты (от 0 до 100%), Limb - позиционный угол средней точки светлого лимба в градусах (отсчитывается от точки севера против часовой стрелки от 0° до 360°), De - угол наклона оси планеты к картинной плоскости перпендикулярной лучу зрения в градусах, причем знак указывает наклон северного «+» или южного «-» полюса планеты к Земле (для Сатурна это также наклон колец), Pr – позиционный угол северного полюса планеты по отношению к полюсу мира в градусах (отсчитывается при центре планеты против часовой стрелки от 0° до 360°). (*Occult v4.0*)

Sun
Equinox of J2000

year	Date	Right Asc.	Declination	Distance	dia	Po	Bo	Lo	Carrington
month	day	h m s	o ' "	AU	"	o	o	o	Rotation #
2032	Jan 1	18 42 2.58	-23 5 1.1	0.983261	1951.9	2.28	-2.94	180.95	2386
2032	Jan 6	19 4 4.27	-22 37 7.2	0.983268	1951.9	359.86	-3.51	115.10	2386
2032	Jan 11	19 25 55.65	-21 58 1.2	0.983402	1951.7	357.46	-4.06	49.25	2386
2032	Jan 16	19 47 33.20	-21 8 12.4	0.983632	1951.2	355.10	-4.58	343.41	2387
2032	Jan 21	20 8 53.73	-20 8 17.6	0.983962	1950.5	352.80	-5.06	277.58	2387
2032	Jan 26	20 29 55.24	-18 58 58.0	0.984423	1949.6	350.58	-5.50	211.74	2387
2032	Jan 31	20 50 36.80	-17 40 57.8	0.985030	1948.4	348.46	-5.90	145.91	2387
2032	Feb 5	21 10 58.27	-16 15 4.0	0.985773	1947.0	346.44	-6.25	80.08	2387
2032	Feb 10	21 30 59.94	-14 42 6.6	0.986621	1945.3	344.55	-6.55	14.25	2387
2032	Feb 15	21 50 42.22	-13 2 59.1	0.987536	1943.5	342.79	-6.80	308.41	2388
2032	Feb 20	22 10 5.75	-11 18 35.8	0.988523	1941.5	341.17	-7.00	242.57	2388
2032	Feb 25	22 29 12.11	- 9 29 48.3	0.989605	1939.4	339.70	-7.14	176.72	2388
2032	Mar 1	22 48 3.48	- 7 37 25.9	0.990793	1937.1	338.38	-7.22	110.86	2388
2032	Mar 6	23 6 42.39	- 5 42 16.9	0.992071	1934.6	337.22	-7.25	44.99	2388
2032	Mar 11	23 25 11.35	- 3 45 9.8	0.993399	1932.0	336.21	-7.23	339.11	2389
2032	Mar 16	23 43 32.49	- 1 46 54.8	0.994740	1929.4	335.38	-7.15	273.22	2389
2032	Mar 21	0 1 47.90	0 11 39.4	0.996101	1926.8	334.71	-7.01	207.30	2389
2032	Mar 26	0 20 0.11	2 9 47.6	0.997500	1924.1	334.22	-6.82	141.37	2389
2032	Mar 31	0 38 11.93	4 6 46.5	0.998944	1921.3	333.90	-6.59	75.42	2389
2032	Apr 5	0 56 26.21	6 1 53.9	1.000415	1918.5	333.76	-6.30	9.46	2389
2032	Apr 10	1 14 45.44	7 54 26.6	1.001868	1915.7	333.80	-5.97	303.47	2390
2032	Apr 15	1 33 11.43	9 43 39.7	1.003272	1913.0	334.03	-5.60	237.46	2390
2032	Apr 20	1 51 45.80	11 28 49.3	1.004635	1910.4	334.44	-5.18	171.43	2390
2032	Apr 25	2 10 30.31	13 9 14.3	1.005974	1907.9	335.03	-4.73	105.38	2390
2032	Apr 30	2 29 26.79	14 44 14.8	1.007298	1905.4	335.81	-4.25	39.31	2390
2032	May 5	2 48 36.81	16 13 11.8	1.008586	1902.9	336.76	-3.74	333.23	2391
2032	May 10	3 8 1.19	17 35 26.0	1.009793	1900.6	337.89	-3.20	267.12	2391
2032	May 15	3 27 39.80	18 50 18.4	1.010895	1898.6	339.20	-2.64	201.00	2391
2032	May 20	3 47 32.16	19 57 12.5	1.011905	1896.7	340.66	-2.07	134.87	2391
2032	May 25	4 7 37.61	20 55 35.7	1.012842	1894.9	342.28	-1.48	68.72	2391
2032	May 30	4 27 55.40	21 44 58.7	1.013718	1893.3	344.04	-0.88	2.56	2391
2032	Jun 4	4 48 24.37	22 24 55.8	1.014509	1891.8	345.92	-0.28	296.39	2392
2032	Jun 9	5 9 2.37	22 55 5.5	1.015175	1890.6	347.92	0.32	230.22	2392
2032	Jun 14	5 29 46.47	23 15 11.3	1.015702	1889.6	350.00	0.93	164.04	2392
2032	Jun 19	5 50 33.62	23 25 2.5	1.016105	1888.8	352.17	1.52	97.85	2392
2032	Jun 24	6 11 20.94	23 24 34.7	1.016411	1888.3	354.38	2.10	31.67	2392
2032	Jun 29	6 32 5.93	23 13 48.9	1.016632	1887.9	356.64	2.67	325.48	2393
2032	Jul 4	6 52 46.15	22 52 52.0	1.016744	1887.7	358.90	3.22	259.30	2393
2032	Jul 9	7 13 18.78	22 21 57.6	1.016714	1887.7	1.16	3.75	193.13	2393
2032	Jul 14	7 33 41.06	21 41 25.4	1.016536	1888.0	3.39	4.25	126.96	2393
2032	Jul 19	7 53 50.76	20 51 39.4	1.016230	1888.6	5.59	4.73	60.80	2393
2032	Jul 24	8 13 46.45	19 53 7.0	1.015830	1889.4	7.73	5.17	354.65	2394
2032	Jul 29	8 33 27.68	18 46 17.4	1.015350	1890.2	9.79	5.57	288.51	2394
2032	Aug 3	8 52 54.27	17 31 43.5	1.014763	1891.3	11.78	5.94	222.38	2394
2032	Aug 8	9 12 6.03	16 10 2.1	1.014046	1892.7	13.67	6.27	156.26	2394
2032	Aug 13	9 31 3.03	14 41 52.2	1.013201	1894.3	15.45	6.55	90.16	2394
2032	Aug 18	9 49 45.88	13 7 53.2	1.012253	1896.0	17.13	6.79	24.07	2394
2032	Aug 23	10 8 15.91	11 28 43.4	1.011241	1897.9	18.68	6.98	317.99	2395
2032	Aug 28	10 26 35.21	9 45 0.0	1.010178	1899.9	20.11	7.12	251.92	2395
2032	Sep 2	10 44 45.81	7 57 22.2	1.009040	1902.1	21.40	7.21	185.87	2395
2032	Sep 7	11 2 49.57	6 6 31.6	1.007810	1904.4	22.56	7.25	119.84	2395
2032	Sep 12	11 20 48.34	4 13 10.5	1.006495	1906.9	23.56	7.24	53.81	2395
2032	Sep 17	11 38 44.23	2 18 0.8	1.005127	1909.5	24.42	7.17	347.80	2396
2032	Sep 22	11 56 39.87	0 21 42.7	1.003748	1912.1	25.12	7.05	281.80	2396
2032	Sep 27	12 14 38.28	- 1 35 4.3	1.002368	1914.7	25.66	6.88	215.81	2396

2032	Oct	2	12	32	42.19	- 3	31	37.8	1.000965	1917.4	26.02	6.66	149.83	2396
2032	Oct	7	12	50	53.93	- 5	27	12.7	0.999528	1920.2	26.22	6.39	83.85	2396
2032	Oct	12	13	9	15.62	- 7	21	2.2	0.998065	1923.0	26.23	6.07	17.89	2396
2032	Oct	17	13	27	49.38	- 9	12	19.2	0.996614	1925.8	26.05	5.71	311.93	2397
2032	Oct	22	13	46	37.70	-11	0	17.8	0.995218	1928.5	25.69	5.30	245.99	2397
2032	Oct	27	14	5	43.09	-12	44	11.1	0.993879	1931.1	25.14	4.85	180.05	2397
2032	Nov	1	14	25	7.41	-14	23	9.7	0.992580	1933.6	24.38	4.36	114.11	2397
2032	Nov	6	14	44	51.81	-15	56	22.0	0.991308	1936.1	23.44	3.84	48.18	2397
2032	Nov	11	15	4	56.75	-17	22	56.3	0.990074	1938.5	22.29	3.29	342.26	2398
2032	Nov	16	15	25	22.39	-18	42	1.8	0.988917	1940.8	20.96	2.71	276.34	2398
2032	Nov	21	15	46	8.84	-19	52	50.6	0.987875	1942.8	19.44	2.11	210.43	2398
2032	Nov	26	16	7	15.68	-20	54	37.1	0.986945	1944.6	17.75	1.49	144.53	2398
2032	Dec	1	16	28	41.43	-21	46	38.4	0.986107	1946.3	15.89	0.86	78.63	2398
2032	Dec	6	16	50	23.53	-22	28	15.7	0.985346	1947.8	13.89	0.22	12.74	2398
2032	Dec	11	17	12	18.53	-22	58	56.7	0.984671	1949.1	11.76	-0.42	306.86	2399
2032	Dec	16	17	34	22.73	-23	18	16.4	0.984122	1950.2	9.52	-1.06	240.98	2399
2032	Dec	21	17	56	32.58	-23	25	58.4	0.983724	1951.0	7.19	-1.69	175.11	2399
2032	Dec	26	18	18	44.31	-23	21	55.1	0.983471	1951.5	4.81	-2.31	109.25	2399
2032	Dec	31	18	40	53.77	-23	6	8.1	0.983337	1951.8	2.40	-2.91	43.39	2399

Mercury
Equinox of J2000

Date	Right Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp	
year mth d	h m s	o ' "	AU	"		o	o		o	o	o	
2032	Jan	1	17 24 5.91	-22 45 10.2	1.256032	5.3	-0.4	17.9w	43	86.3	94.9	-4 9
2032	Jan	4	17 42 47.93	-23 20 12.3	1.293771	5.2	-0.4	16.7w	39	89.0	91.8	-4 7
2032	Jan	7	18 2 2.83	-23 45 39.4	1.326243	5.0	-0.4	15.3w	34	91.2	88.6	-4 5
2032	Jan	10	18 21 44.35	-24 0 38.1	1.353684	4.9	-0.5	13.9w	31	93.0	85.1	-4 3
2032	Jan	13	18 41 47.46	-24 4 26.4	1.376281	4.9	-0.5	12.4w	27	94.6	81.4	-4 0
2032	Jan	16	19 2 7.93	-23 56 30.5	1.394168	4.8	-0.6	10.9w	23	95.9	77.3	-5 358
2032	Jan	19	19 22 42.16	-23 36 22.4	1.407412	4.7	-0.7	9.2w	20	97.0	72.6	-5 355
2032	Jan	22	19 43 27.04	-23 3 38.6	1.416003	4.7	-0.8	7.6w	16	98.0	66.9	-5 353
2032	Jan	25	20 4 19.84	-22 17 59.4	1.419835	4.7	-1.0	5.9w	13	98.7	59.4	-5 351
2032	Jan	28	20 25 18.14	-21 19 8.7	1.418696	4.7	-1.2	4.2w	9	99.3	47.5	-5 348
2032	Jan	31	20 46 19.65	-20 6 54.7	1.412249	4.7	-1.4	2.6w	6	99.7	22.8	-5 346
2032	Feb	3	21 7 22.07	-18 41 11.0	1.400016	4.8	-1.5	2.1e	5	99.8	329.7	-5 344
2032	Feb	6	21 28 22.69	-17 2 0.2	1.381362	4.8	-1.5	3.4e	8	99.5	288.2	-5 342
2032	Feb	9	21 49 17.75	-15 9 39.2	1.355488	4.9	-1.4	5.4e	14	98.5	270.8	-5 340
2032	Feb	12	22 10 1.41	-13 4 48.9	1.321458	5.1	-1.3	7.6e	21	96.7	261.8	-5 338
2032	Feb	15	22 30 24.06	-10 48 50.0	1.278292	5.2	-1.2	10.0e	29	93.6	256.0	-5 336
2032	Feb	18	22 50 10.11	- 8 24 5.2	1.225158	5.5	-1.2	12.3e	39	88.8	251.9	-6 335
2032	Feb	21	23 8 55.15	- 5 54 27.8	1.161729	5.8	-1.1	14.5e	50	81.8	248.7	-6 334
2032	Feb	24	23 26 3.60	- 3 25 47.4	1.088695	6.1	-1.0	16.4e	63	72.4	246.1	-6 333
2032	Feb	27	23 40 48.70	- 1 5 55.2	1.008252	6.6	-0.8	17.7e	78	60.6	243.8	-7 332
2032	Mar	1	23 52 17.07	0 55 48.5	0.924270	7.2	-0.5	18.2e	93	47.2	241.6	-7 332
2032	Mar	4	23 59 38.49	2 29 46.3	0.841834	7.9	0.1	17.5e	109	33.6	239.2	-7 332
2032	Mar	7	0 2 19.26	3 27 33.9	0.766331	8.7	0.9	15.7e	125	21.1	236.0	-8 332
2032	Mar	10	0 0 16.27	3 43 41.0	0.702507	9.5	2.1	12.5e	141	11.0	231.0	-8 332
2032	Mar	13	23 54 8.53	3 17 28.2	0.653823	10.2	3.7	8.3e	157	4.1	220.8	-9 332
2032	Mar	16	23 45 19.04	2 14 52.6	0.622092	10.7	5.3	4.1e	169	0.9	186.3	-9 332
2032	Mar	19	23 35 39.60	0 48 25.7	0.607360	11.0	5.1	4.9w	167	1.2	106.6	-9 332
2032	Mar	22	23 27 1.03	- 0 45 55.2	0.608097	11.0	3.7	9.7w	156	4.4	82.0	-8 333
2032	Mar	25	23 20 45.14	- 2 13 33.1	0.621747	10.7	2.6	14.5w	144	9.5	74.1	-8 333
2032	Mar	28	23 17 33.67	- 3 24 28.5	0.645412	10.3	1.8	18.5w	133	15.6	70.2	-7 333
2032	Mar	31	23 17 34.37	- 4 13 44.4	0.676405	9.9	1.2	21.8w	124	22.0	67.8	-6 333
2032	Apr	3	23 20 34.07	- 4 40 6.7	0.712525	9.4	0.9	24.2w	116	28.2	66.1	-6 333
2032	Apr	6	23 26 10.44	- 4 44 25.7	0.752101	8.9	0.6	26.0w	109	34.0	64.8	-5 333
2032	Apr	9	23 33 59.53	- 4 28 25.8	0.793939	8.4	0.5	27.0w	102	39.5	63.7	-4 333
2032	Apr	12	23 43 39.70	- 3 54 5.1	0.837215	8.0	0.3	27.6w	96	44.5	62.9	-4 332
2032	Apr	15	23 54 53.17	- 3 3 16.5	0.881370	7.6	0.2	27.6w	91	49.2	62.2	-3 332
2032	Apr	18	0 7 26.37	- 1 57 41.4	0.926021	7.2	0.1	27.3w	86	53.6	61.6	-3 332
2032	Apr	21	0 21 9.60	- 0 38 49.3	0.970887	6.9	0.1	26.5w	81	57.9	61.2	-2 332
2032	Apr	24	0 35 56.69	0 52 0.3	1.015724	6.6	0.0	25.5w	76	62.1	61.0	-2 331
2032	Apr	27	0 51 44.53	2 33 34.7	1.060274	6.3	-0.1	24.1w	71	66.3	61.0	-1 331

2032	Nov	17	14 58 13.63	-15 32 50.4	0.705225	9.5	3.1	8.2w	153	5.6	115.6	-1	23
2032	Nov	20	14 49 50.02	-14 12 51.2	0.756061	8.8	1.2	13.6w	131	17.0	115.4	-1	24
2032	Nov	23	14 47 52.55	-13 39 36.3	0.823165	8.1	0.2	17.3w	112	31.1	114.9	-2	24
2032	Nov	26	14 51 49.88	-13 49 25.3	0.897927	7.4	-0.3	19.3w	96	44.9	114.1	-2	24
2032	Nov	29	15 0 23.97	-14 30 59.2	0.973573	6.9	-0.5	20.2w	82	56.9	113.0	-2	23
2032	Dec	2	15 12 17.14	-15 32 29.9	1.045797	6.4	-0.6	20.1w	71	66.7	111.6	-2	22
2032	Dec	5	15 26 29.22	-16 44 30.9	1.112309	6.0	-0.6	19.5w	61	74.3	109.8	-3	21
2032	Dec	8	15 42 18.42	-18 0 15.4	1.172145	5.7	-0.6	18.6w	53	80.2	107.8	-3	20
2032	Dec	11	15 59 17.22	-19 15 3.9	1.225096	5.5	-0.5	17.4w	46	84.8	105.6	-3	18
2032	Dec	14	16 17 7.85	-20 25 45.3	1.271336	5.3	-0.5	16.1w	40	88.3	103.0	-3	17
2032	Dec	17	16 35 38.88	-21 30 7.1	1.311195	5.1	-0.5	14.7w	35	91.1	100.2	-3	15
2032	Dec	20	16 54 42.77	-22 26 34.0	1.345044	5.0	-0.6	13.2w	30	93.2	97.0	-3	13
2032	Dec	23	17 14 14.31	-23 13 55.1	1.373225	4.9	-0.6	11.7w	26	94.9	93.5	-3	11
2032	Dec	26	17 34 9.61	-23 51 14.6	1.396031	4.8	-0.7	10.2w	22	96.3	89.5	-4	8
2032	Dec	29	17 54 25.50	-24 17 46.8	1.413684	4.7	-0.7	8.7w	19	97.4	84.9	-4	6

Venus
Equinox of J2000

Date	Right	Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp	
year mth d	h m s	h m s	o ' "	AU	"		o	o		o	o	o	
2032	Jan	1	16 4 16.67	-18 49 56.6	1.197382	14.0	-4.0	37.0w	55	78.6	103.6	-1	12
2032	Jan	6	16 29 38.58	-20 2 57.0	1.228068	13.7	-4.0	36.0w	53	80.0	101.2	-1	10
2032	Jan	11	16 55 27.23	-21 2 37.7	1.257994	13.4	-4.0	34.9w	51	81.3	98.6	-1	7
2032	Jan	16	17 21 38.33	-21 47 44.8	1.287131	13.1	-4.0	33.9w	49	82.6	95.8	-1	5
2032	Jan	21	17 48 6.41	-22 17 18.7	1.315494	12.8	-3.9	32.8w	48	83.8	92.9	0	2
2032	Jan	26	18 14 45.46	-22 30 35.8	1.343104	12.5	-3.9	31.7w	46	84.9	90.0	0	360
2032	Jan	31	18 41 28.96	-22 27 10.8	1.369956	12.3	-3.9	30.6w	44	86.1	87.0	0	357
2032	Feb	5	19 8 10.11	-22 6 57.4	1.396025	12.0	-3.9	29.5w	42	87.1	84.0	0	355
2032	Feb	10	19 34 42.11	-21 30 9.3	1.421273	11.8	-3.9	28.4w	40	88.1	81.1	0	352
2032	Feb	15	20 0 58.61	-20 37 19.7	1.445678	11.6	-3.9	27.3w	39	89.1	78.3	0	350
2032	Feb	20	20 26 54.42	-19 29 17.7	1.469255	11.4	-3.9	26.1w	37	90.0	75.6	0	347
2032	Feb	25	20 52 26.07	-18 7 5.0	1.492023	11.3	-3.9	25.0w	35	90.9	73.1	0	345
2032	Mar	1	21 17 31.65	-16 31 53.2	1.513973	11.1	-3.8	23.8w	33	91.8	70.8	0	344
2032	Mar	6	21 42 10.62	-14 45 2.2	1.535076	11.0	-3.8	22.7w	32	92.6	68.7	0	342
2032	Mar	11	22 6 23.58	-12 47 57.6	1.555282	10.8	-3.8	21.5w	30	93.3	66.8	0	341
2032	Mar	16	22 30 12.04	-10 42 9.7	1.574556	10.7	-3.8	20.3w	28	94.0	65.1	0	339
2032	Mar	21	22 53 38.57	- 8 29 8.7	1.592900	10.6	-3.8	19.1w	27	94.7	63.8	1	339
2032	Mar	26	23 16 46.79	- 6 10 23.9	1.610315	10.4	-3.8	17.8w	25	95.4	62.6	0	338
2032	Mar	31	23 39 41.07	- 3 47 23.5	1.626780	10.3	-3.8	16.6w	23	96.0	61.7	0	337
2032	Apr	5	0 2 26.18	- 1 21 35.5	1.642247	10.2	-3.8	15.4w	21	96.6	61.1	0	337
2032	Apr	10	0 25 7.00	1 5 31.3	1.656650	10.2	-3.8	14.1w	20	97.1	60.8	0	337
2032	Apr	15	0 47 48.25	3 32 27.7	1.669939	10.1	-3.8	12.9w	18	97.6	60.7	0	337
2032	Apr	20	1 10 34.78	5 57 44.9	1.682099	10.0	-3.9	11.6w	16	98.0	60.8	0	338
2032	Apr	25	1 33 31.53	8 19 54.9	1.693117	9.9	-3.9	10.3w	14	98.4	61.2	0	339
2032	Apr	30	1 56 43.31	10 37 29.2	1.702967	9.9	-3.9	9.0w	13	98.8	61.9	0	340
2032	May	5	2 20 14.57	12 48 58.0	1.711591	9.8	-3.9	7.7w	11	99.1	62.8	0	341
2032	May	10	2 44 8.87	14 52 49.4	1.718918	9.8	-3.9	6.3w	9	99.4	63.9	0	342
2032	May	15	3 8 28.76	16 47 31.0	1.724899	9.8	-3.9	5.0w	7	99.6	65.1	0	344
2032	May	20	3 33 15.83	18 31 31.7	1.729519	9.7	-3.9	3.7w	5	99.8	66.4	0	346
2032	May	25	3 58 30.60	20 3 23.4	1.732774	9.7	-3.9	2.3w	3	99.9	67.4	-1	348
2032	May	30	4 24 12.42	21 21 42.7	1.734649	9.7	-4.0	0.9w	1	100.0	65.7	-1	350
2032	Jun	4	4 50 19.13	22 25 13.2	1.735102	9.7	-4.0	0.4e	1	100.0	269.5	-1	352
2032	Jun	9	5 16 46.73	23 12 48.6	1.734081	9.7	-4.0	1.8e	3	100.0	261.0	-1	355
2032	Jun	14	5 43 29.65	23 43 35.9	1.731562	9.7	-3.9	3.2e	4	99.8	262.1	-1	357
2032	Jun	19	6 10 21.22	23 56 58.7	1.727553	9.7	-3.9	4.6e	6	99.7	264.3	-1	360
2032	Jun	24	6 37 14.26	23 52 38.9	1.722080	9.8	-3.9	5.9e	8	99.5	266.8	-1	3
2032	Jun	29	7 4 1.64	23 30 37.0	1.715164	9.8	-3.9	7.3e	10	99.2	269.4	-1	5
2032	Jul	4	7 30 36.58	22 51 12.8	1.706796	9.9	-3.9	8.7e	12	98.8	272.0	-1	8
2032	Jul	9	7 56 52.80	21 55 4.8	1.696959	9.9	-3.9	10.1e	14	98.4	274.6	-1	10
2032	Jul	14	8 22 45.05	20 43 7.6	1.685666	10.0	-3.9	11.5e	16	98.0	277.1	-1	12
2032	Jul	19	8 48 9.60	19 16 28.8	1.672959	10.1	-3.9	12.8e	18	97.5	279.4	-1	14
2032	Jul	24	9 13 4.40	17 36 25.3	1.658900	10.1	-3.9	14.2e	20	96.9	281.6	-1	16
2032	Jul	29	9 37 29.19	15 44 19.7	1.643545	10.2	-3.8	15.6e	22	96.3	283.5	-1	18
2032	Aug	3	10 1 25.09	13 41 39.2	1.626913	10.3	-3.8	16.9e	24	95.6	285.3	-1	19
2032	Aug	8	10 24 54.14	11 29 54.5	1.609021	10.5	-3.8	18.3e	26	94.9	286.9	-1	20
2032	Aug	13	10 47 59.20	9 10 37.7	1.589905	10.6	-3.8	19.6e	28	94.1	288.2	-1	21

2032 Aug 18	11 10 43.91	6 45 20.4	1.569624	10.7	-3.8	20.9e	30	93.3	289.3	0	22
2032 Aug 23	11 33 12.66	4 15 32.6	1.548261	10.9	-3.8	22.2e	32	92.4	290.2	0	23
2032 Aug 28	11 55 30.54	1 42 41.8	1.525885	11.0	-3.8	23.5e	34	91.5	290.9	0	23
2032 Sep 2	12 17 42.91	- 0 51 44.1	1.502523	11.2	-3.8	24.8e	36	90.5	291.3	0	23
2032 Sep 7	12 39 55.00	- 3 26 16.4	1.478198	11.4	-3.8	26.1e	38	89.6	291.4	0	23
2032 Sep 12	13 2 11.87	- 5 59 25.2	1.452945	11.6	-3.9	27.3e	40	88.5	291.4	1	22
2032 Sep 17	13 24 38.44	- 8 29 39.9	1.426820	11.8	-3.9	28.5e	41	87.5	291.1	1	22
2032 Sep 22	13 47 19.52	-10 55 29.7	1.399899	12.0	-3.9	29.7e	43	86.4	290.5	1	21
2032 Sep 27	14 10 19.90	-13 15 23.6	1.372242	12.3	-3.9	30.9e	45	85.3	289.8	1	20
2032 Oct 2	14 33 43.71	-15 27 48.3	1.343866	12.5	-3.9	32.1e	47	84.1	288.7	2	18
2032 Oct 7	14 57 33.99	-17 31 8.8	1.314781	12.8	-3.9	33.2e	49	82.9	287.5	2	17
2032 Oct 12	15 21 52.47	-19 23 49.6	1.285003	13.1	-3.9	34.3e	51	81.7	286.0	2	15
2032 Oct 17	15 46 39.46	-21 4 16.9	1.254576	13.4	-3.9	35.4e	53	80.4	284.2	2	13
2032 Oct 22	16 11 53.95	-22 31 1.6	1.223561	13.7	-4.0	36.5e	54	79.1	282.3	2	11
2032 Oct 27	16 37 33.64	-23 42 42.3	1.192000	14.1	-4.0	37.6e	56	77.7	280.1	3	9
2032 Nov 1	17 3 34.34	-24 38 7.5	1.159899	14.5	-4.0	38.6e	58	76.4	277.9	3	6
2032 Nov 6	17 29 49.89	-25 16 19.7	1.127255	14.9	-4.0	39.6e	60	74.9	275.4	3	4
2032 Nov 11	17 56 12.33	-25 36 38.7	1.094071	15.4	-4.1	40.5e	62	73.4	272.9	3	1
2032 Nov 16	18 22 32.53	-25 38 44.5	1.060381	15.9	-4.1	41.4e	64	71.9	270.4	3	359
2032 Nov 21	18 48 41.27	-25 22 38.2	1.026243	16.4	-4.1	42.3e	66	70.3	267.8	3	356
2032 Nov 26	19 14 29.86	-24 48 42.0	0.991690	17.0	-4.2	43.1e	68	68.6	265.3	3	354
2032 Dec 1	19 39 50.23	-23 57 38.8	0.956732	17.6	-4.2	43.9e	70	66.9	262.9	3	352
2032 Dec 6	20 4 35.09	-22 50 30.1	0.921367	18.3	-4.3	44.6e	72	65.1	260.6	2	349
2032 Dec 11	20 28 37.98	-21 28 33.8	0.885601	19.0	-4.3	45.2e	75	63.3	258.4	2	347
2032 Dec 16	20 51 53.68	-19 53 19.4	0.849483	19.8	-4.3	45.8e	77	61.3	256.4	2	345
2032 Dec 21	21 14 18.68	-18 6 22.7	0.813083	20.7	-4.4	46.3e	79	59.2	254.6	2	344
2032 Dec 26	21 35 50.87	-16 9 23.4	0.776455	21.7	-4.4	46.7e	82	57.1	252.9	1	342
2032 Dec 31	21 56 28.75	-14 4 4.9	0.739640	22.7	-4.5	47.0e	85	54.8	251.4	1	341

Mars
Equinox of J2000

Date	Right Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp
year mth d	h m s	o ' "	AU	"		o	o		o	o	o
2032 Jan 1	22 15 4.64	-11 56 15.7	1.772534	5.3	1.0	51.7e	34	91.7	249.9	-24	349
2032 Jan 6	22 29 35.76	-10 28 40.8	1.801950	5.2	1.0	50.5e	33	92.0	249.2	-24	347
2032 Jan 11	22 43 58.41	- 8 58 55.9	1.831472	5.1	1.0	49.2e	32	92.4	248.7	-25	345
2032 Jan 16	22 58 13.36	- 7 27 25.6	1.861043	5.0	1.1	48.0e	31	92.7	248.2	-25	342
2032 Jan 21	23 12 21.18	- 5 54 35.6	1.890611	5.0	1.1	46.7e	30	93.1	247.8	-26	340
2032 Jan 26	23 26 22.53	- 4 20 50.9	1.920168	4.9	1.1	45.4e	30	93.4	247.5	-26	338
2032 Jan 31	23 40 18.31	- 2 46 34.4	1.949712	4.8	1.2	44.2e	29	93.8	247.3	-26	336
2032 Feb 5	23 54 9.66	- 1 12 8.0	1.979228	4.7	1.2	42.9e	28	94.1	247.1	-26	334
2032 Feb 10	0 7 57.73	0 22 7.1	2.008667	4.7	1.2	41.6e	27	94.4	247.1	-26	332
2032 Feb 15	0 21 43.53	1 55 49.1	2.037954	4.6	1.2	40.3e	26	94.8	247.1	-26	330
2032 Feb 20	0 35 27.78	3 28 35.7	2.067033	4.5	1.3	39.1e	26	95.1	247.3	-25	329
2032 Feb 25	0 49 11.27	5 0 6.1	2.095885	4.5	1.3	37.8e	25	95.4	247.5	-25	327
2032 Mar 1	1 2 54.94	6 30 0.8	2.124497	4.4	1.3	36.5e	24	95.7	247.7	-24	326
2032 Mar 6	1 16 39.82	7 58 1.7	2.152837	4.3	1.3	35.2e	23	96.0	248.1	-23	325
2032 Mar 11	1 30 26.91	9 23 51.0	2.180841	4.3	1.4	33.9e	22	96.3	248.5	-22	324
2032 Mar 16	1 44 16.89	10 47 10.4	2.208423	4.2	1.4	32.6e	21	96.6	249.1	-22	323
2032 Mar 21	1 58 10.19	12 7 41.7	2.235533	4.2	1.4	31.2e	20	96.8	249.7	-21	322
2032 Mar 26	2 12 7.25	13 25 7.9	2.262148	4.1	1.4	29.9e	20	97.1	250.3	-19	322
2032 Mar 31	2 26 8.63	14 39 13.5	2.288249	4.1	1.4	28.6e	19	97.4	251.0	-18	321
2032 Apr 5	2 40 14.87	15 49 44.0	2.313797	4.0	1.5	27.3e	18	97.6	251.8	-17	321
2032 Apr 10	2 54 26.36	16 56 25.2	2.338715	4.0	1.5	25.9e	17	97.8	252.7	-16	321
2032 Apr 15	3 8 43.10	17 59 3.0	2.362923	4.0	1.5	24.6e	16	98.1	253.6	-15	321
2032 Apr 20	3 23 4.87	18 57 24.0	2.386377	3.9	1.5	23.2e	15	98.3	254.5	-13	322
2032 Apr 25	3 37 31.44	19 51 16.5	2.409058	3.9	1.5	21.9e	14	98.5	255.5	-12	322
2032 Apr 30	3 52 2.63	20 40 29.9	2.430947	3.9	1.5	20.5e	13	98.6	256.6	-10	323
2032 May 5	4 6 38.22	21 24 54.9	2.451997	3.8	1.6	19.2e	12	98.8	257.6	-9	324
2032 May 10	4 21 17.76	22 4 23.4	2.472130	3.8	1.6	17.8e	12	99.0	258.7	-7	325
2032 May 15	4 36 0.41	22 38 48.1	2.491273	3.8	1.6	16.4e	11	99.1	259.7	-6	326
2032 May 20	4 50 45.19	23 8 3.2	2.509396	3.7	1.6	15.0e	10	99.3	260.8	-4	327
2032 May 25	5 5 31.18	23 32 4.7	2.526483	3.7	1.6	13.6e	9	99.4	261.8	-3	328
2032 May 30	5 20 17.55	23 50 49.9	2.542520	3.7	1.6	12.2e	8	99.5	262.7	-2	329
2032 Jun 4	5 35 3.51	24 4 17.9	2.557452	3.7	1.6	10.8e	7	99.6	263.6	0	331
2032 Jun 9	5 49 48.01	24 12 29.3	2.571203	3.6	1.6	9.4e	6	99.7	264.2	1	332
2032 Jun 14	6 4 29.81	24 15 26.3	2.583717	3.6	1.6	8.0e	5	99.8	264.6	3	334

2032 Jun 19	6 19	7.69	24 13 12.6	2.594972	3.6	1.6	6.6e	4	99.9	264.4	4	336
2032 Jun 24	6 33	40.63	24 5 53.3	2.604964	3.6	1.6	5.2e	3	99.9	263.5	6	337
2032 Jun 29	6 48	7.84	23 53 34.4	2.613677	3.6	1.6	3.7e	2	100.0	260.6	7	339
2032 Jul 4	7 2	28.64	23 36 23.5	2.621052	3.6	1.6	2.3e	1	100.0	252.5	9	341
2032 Jul 9	7 16	42.15	23 14 29.5	2.627022	3.6	1.6	1.2e	1	100.0	221.9	10	343
2032 Jul 14	7 30	47.50	22 48 2.8	2.631548	3.6	1.6	1.3w	1	100.0	148.8	11	345
2032 Jul 19	7 44	44.01	22 17 14.1	2.634620	3.6	1.7	2.6w	2	100.0	123.5	13	347
2032 Jul 24	7 58	31.21	21 42 14.7	2.636243	3.6	1.7	4.0w	3	100.0	116.3	14	349
2032 Jul 29	8 12	8.99	21 3 15.8	2.636400	3.6	1.7	5.5w	3	99.9	113.6	15	351
2032 Aug 3	8 25	37.24	20 20 29.7	2.635032	3.6	1.7	7.0w	4	99.9	112.4	16	353
2032 Aug 8	8 38	55.75	19 34 9.7	2.632087	3.6	1.7	8.6w	5	99.8	112.0	17	355
2032 Aug 13	8 52	4.34	18 44 29.3	2.627545	3.6	1.8	10.2w	6	99.7	112.0	18	357
2032 Aug 18	9 5	3.02	17 51 42.0	2.621410	3.6	1.8	11.8w	7	99.6	112.1	19	359
2032 Aug 23	9 17	52.05	16 56 0.3	2.613698	3.6	1.8	13.4w	8	99.5	112.4	20	1
2032 Aug 28	9 30	31.92	15 57 36.5	2.604390	3.6	1.8	15.0w	9	99.4	112.8	21	3
2032 Sep 2	9 43	3.05	14 56 43.9	2.593437	3.6	1.8	16.6w	10	99.2	113.1	22	5
2032 Sep 7	9 55	25.72	13 53 36.1	2.580807	3.6	1.8	18.3w	11	99.1	113.5	23	7
2032 Sep 12	10 7	40.25	12 48 26.5	2.566499	3.6	1.8	20.0w	12	98.9	113.8	23	9
2032 Sep 17	10 19	47.08	11 41 28.1	2.550539	3.7	1.8	21.7w	13	98.7	114.1	24	11
2032 Sep 22	10 31	46.89	10 32 52.5	2.532953	3.7	1.8	23.4w	14	98.5	114.4	24	13
2032 Sep 27	10 43	40.46	9 22 51.1	2.513726	3.7	1.8	25.2w	15	98.3	114.7	25	15
2032 Oct 2	10 55	28.41	8 11 36.6	2.492827	3.8	1.8	26.9w	16	98.1	114.9	25	17
2032 Oct 7	11 7	11.20	6 59 21.6	2.470250	3.8	1.8	28.7w	17	97.9	115.0	25	19
2032 Oct 12	11 18	49.32	5 46 18.8	2.446019	3.8	1.8	30.5w	18	97.6	115.1	25	21
2032 Oct 17	11 30	23.37	4 32 39.7	2.420185	3.9	1.8	32.3w	19	97.4	115.2	25	23
2032 Oct 22	11 41	54.16	3 18 34.9	2.392785	3.9	1.8	34.2w	20	97.1	115.2	25	24
2032 Oct 27	11 53	22.47	2 4 15.4	2.363816	4.0	1.8	36.0w	21	96.8	115.1	25	26
2032 Nov 1	12 4	48.86	0 49 52.8	2.333274	4.0	1.8	37.9w	21	96.5	115.0	25	27
2032 Nov 6	12 16	13.77	- 0 24 20.4	2.301181	4.1	1.8	39.8w	22	96.2	114.9	25	29
2032 Nov 11	12 27	37.60	- 1 38 12.5	2.267594	4.1	1.7	41.7w	23	95.9	114.6	25	30
2032 Nov 16	12 39	0.93	- 2 51 32.7	2.232590	4.2	1.7	43.7w	24	95.6	114.4	24	31
2032 Nov 21	12 50	24.48	- 4 4 11.1	2.196218	4.3	1.7	45.6w	25	95.3	114.0	24	33
2032 Nov 26	13 1	48.83	- 5 15 56.8	2.158492	4.3	1.7	47.6w	26	94.9	113.7	23	34
2032 Dec 1	13 13	14.32	- 6 26 38.4	2.119440	4.4	1.6	49.6w	27	94.6	113.2	23	35
2032 Dec 6	13 24	41.12	- 7 36 4.2	2.079114	4.5	1.6	51.6w	28	94.2	112.7	22	36
2032 Dec 11	13 36	9.39	- 8 44 2.9	2.037607	4.6	1.6	53.6w	29	93.9	112.2	21	36
2032 Dec 16	13 47	39.50	- 9 50 24.9	1.995014	4.7	1.5	55.6w	29	93.5	111.6	20	37
2032 Dec 21	13 59	11.88	-10 55 0.6	1.951394	4.8	1.5	57.7w	30	93.2	110.9	19	38
2032 Dec 26	14 10	46.69	-11 57 40.3	1.906785	4.9	1.5	59.7w	31	92.8	110.2	19	38
2032 Dec 31	14 22	23.79	-12 58 13.5	1.861239	5.0	1.4	61.8w	32	92.5	109.5	18	38

Jupiter
Equinox of J2000

Date	Right Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp	
year mth d	h m s	o ' "	AU	"		o	o		o	o	o	
2032 Jan 1	18 43	7.87	-23 3 27.3	6.193115	31.8	-1.7	0.3e	0	100.0	264.0	-2	355
2032 Jan 6	18 48	8.81	-22 58 28.0	6.188902	31.8	-1.7	3.7w	1	100.0	85.2	-2	354
2032 Jan 11	18 53	8.93	-22 52 53.7	6.179300	31.9	-1.7	7.6w	1	100.0	84.7	-2	353
2032 Jan 16	18 58	7.42	-22 46 46.3	6.164312	31.9	-1.7	11.6w	2	100.0	84.2	-2	353
2032 Jan 21	19 3	3.41	-22 40 7.5	6.144010	32.1	-1.7	15.5w	3	99.9	83.7	-2	352
2032 Jan 26	19 7	56.13	-22 32 59.7	6.118518	32.2	-1.7	19.5w	4	99.9	83.2	-2	352
2032 Jan 31	19 12	44.89	-22 25 25.1	6.087955	32.3	-1.7	23.4w	4	99.9	82.8	-2	351
2032 Feb 5	19 17	29.01	-22 17 26.5	6.052432	32.5	-1.7	27.4w	5	99.8	82.3	-2	351
2032 Feb 10	19 22	7.71	-22 9 7.1	6.012064	32.8	-1.7	31.4w	6	99.8	81.9	-2	351
2032 Feb 15	19 26	40.15	-22 0 30.8	5.967008	33.0	-1.8	35.4w	6	99.7	81.5	-2	350
2032 Feb 20	19 31	5.48	-21 51 41.4	5.917495	33.3	-1.8	39.4w	7	99.6	81.1	-2	350
2032 Feb 25	19 35	22.98	-21 42 42.9	5.863774	33.6	-1.8	43.4w	8	99.6	80.7	-2	349
2032 Mar 1	19 39	31.97	-21 33 39.2	5.806085	33.9	-1.8	47.5w	8	99.5	80.3	-1	349
2032 Mar 6	19 43	31.71	-21 24 34.8	5.744661	34.3	-1.8	51.5w	9	99.4	79.9	-1	348
2032 Mar 11	19 47	21.38	-21 15 34.9	5.679749	34.7	-1.9	55.6w	9	99.4	79.6	-1	348
2032 Mar 16	19 51	0.08	-21 6 44.5	5.611659	35.1	-1.9	59.8w	10	99.3	79.3	-1	348
2032 Mar 21	19 54	27.01	-20 58 8.6	5.540758	35.5	-1.9	63.9w	10	99.2	79.0	-1	347
2032 Mar 26	19 57	41.43	-20 49 52.2	5.467407	36.0	-1.9	68.1w	10	99.2	78.7	-1	347
2032 Mar 31	20 0	42.64	-20 42 0.1	5.391957	36.5	-2.0	72.3w	11	99.1	78.4	-1	347
2032 Apr 5	20 3	29.85	-20 34 37.8	5.314754	37.1	-2.0	76.6w	11	99.1	78.2	-1	346
2032 Apr 10	20 6	2.18	-20 27 50.8	5.236183	37.6	-2.0	80.9w	11	99.1	78.0	-1	346

2032 Apr 15	20 8 18.77	-20 21 44.2	5.156697	38.2	-2.1	85.3w	11	99.1	77.8	-1	346
2032 Apr 20	20 10 18.90	-20 16 22.6	5.076775	38.8	-2.1	89.7w	11	99.0	77.6	-1	346
2032 Apr 25	20 12 1.96	-20 11 50.2	4.996881	39.4	-2.1	94.2w	11	99.0	77.5	-1	346
2032 Apr 30	20 13 27.33	-20 8 11.1	4.917460	40.0	-2.2	98.7w	11	99.1	77.4	-1	346
2032 May 5	20 14 34.37	-20 5 29.2	4.838972	40.7	-2.2	103.3w	11	99.1	77.3	-1	345
2032 May 10	20 15 22.43	-20 3 47.8	4.761929	41.4	-2.2	107.9w	11	99.1	77.3	-1	345
2032 May 15	20 15 51.06	-20 3 9.3	4.686892	42.0	-2.3	112.6w	10	99.2	77.3	-1	345
2032 May 20	20 16 0.09	-20 3 34.4	4.614409	42.7	-2.3	117.4w	10	99.2	77.3	-1	345
2032 May 25	20 15 49.49	-20 5 3.4	4.544998	43.3	-2.4	122.3w	10	99.3	77.4	-1	345
2032 May 30	20 15 19.39	-20 7 35.7	4.479152	44.0	-2.4	127.2w	9	99.4	77.4	-1	345
2032 Jun 4	20 14 29.95	-20 11 9.7	4.417378	44.6	-2.4	132.2w	8	99.5	77.6	-1	345
2032 Jun 9	20 13 21.65	-20 15 42.5	4.360226	45.2	-2.5	137.2w	8	99.6	77.7	-1	346
2032 Jun 14	20 11 55.39	-20 21 9.2	4.308225	45.7	-2.5	142.4w	7	99.6	78.0	-1	346
2032 Jun 19	20 10 12.47	-20 27 23.8	4.261846	46.2	-2.5	147.6w	6	99.7	78.2	-1	346
2032 Jun 24	20 8 14.41	-20 34 19.2	4.221489	46.7	-2.5	152.8w	5	99.8	78.6	-1	346
2032 Jun 29	20 6 2.95	-20 41 48.0	4.187505	47.0	-2.6	158.1w	4	99.9	79.0	-1	346
2032 Jul 4	20 3 40.02	-20 49 42.1	4.160242	47.3	-2.6	163.4w	3	99.9	79.6	-1	346
2032 Jul 9	20 1 8.01	-20 57 52.1	4.140014	47.6	-2.6	168.8w	2	100.0	80.6	-1	347
2032 Jul 14	19 58 29.64	-21 6 8.2	4.127041	47.7	-2.6	174.2w	1	100.0	83.1	-1	347
2032 Jul 19	19 55 47.82	-21 14 21.2	4.121431	47.8	-2.6	179.4w	0	100.0	129.6	-1	347
2032 Jul 24	19 53 5.45	-21 22 22.4	4.123196	47.8	-2.6	174.9e	1	100.0	253.8	-1	347
2032 Jul 29	19 50 25.32	-21 30 4.3	4.132293	47.7	-2.6	169.5e	2	100.0	256.8	-1	348
2032 Aug 3	19 47 50.25	-21 37 19.9	4.148654	47.5	-2.6	164.1e	3	99.9	257.9	-1	348
2032 Aug 8	19 45 23.12	-21 44 2.6	4.172125	47.2	-2.6	158.8e	4	99.9	258.6	-1	348
2032 Aug 13	19 43 6.65	-21 50 7.1	4.202441	46.9	-2.6	153.4e	5	99.8	259.0	-1	348
2032 Aug 18	19 41 3.26	-21 55 29.7	4.239247	46.5	-2.5	148.2e	6	99.7	259.4	-1	349
2032 Aug 23	19 39 14.91	-22 0 7.9	4.282132	46.0	-2.5	142.9e	7	99.6	259.7	-1	349
2032 Aug 28	19 37 43.20	-22 4 0.0	4.330689	45.5	-2.5	137.7e	8	99.6	260.0	-1	349
2032 Sep 2	19 36 29.58	-22 7 4.6	4.384493	44.9	-2.5	132.6e	8	99.5	260.2	-1	349
2032 Sep 7	19 35 35.28	-22 9 20.7	4.443053	44.3	-2.4	127.6e	9	99.4	260.3	-1	349
2032 Sep 12	19 35 1.12	-22 10 47.9	4.505821	43.7	-2.4	122.6e	10	99.3	260.4	-1	349
2032 Sep 17	19 34 47.55	-22 11 26.6	4.572224	43.1	-2.4	117.6e	10	99.2	260.5	-1	349
2032 Sep 22	19 34 54.63	-22 11 17.4	4.641710	42.4	-2.3	112.8e	10	99.2	260.6	-1	349
2032 Sep 27	19 35 22.23	-22 10 20.4	4.713775	41.8	-2.3	108.0e	11	99.1	260.6	-1	349
2032 Oct 2	19 36 10.21	-22 8 35.5	4.787904	41.1	-2.3	103.3e	11	99.1	260.5	-1	349
2032 Oct 7	19 37 18.21	-22 6 2.5	4.863547	40.5	-2.2	98.6e	11	99.1	260.5	-1	349
2032 Oct 12	19 38 45.68	-22 2 41.7	4.940148	39.9	-2.2	94.0e	11	99.0	260.4	-1	349
2032 Oct 17	19 40 31.83	-21 58 33.2	5.017170	39.3	-2.2	89.5e	11	99.0	260.3	-1	349
2032 Oct 22	19 42 35.73	-21 53 37.1	5.094142	38.7	-2.1	85.0e	11	99.0	260.1	-1	348
2032 Oct 27	19 44 56.57	-21 47 52.9	5.170632	38.1	-2.1	80.6e	11	99.1	260.0	-1	348
2032 Nov 1	19 47 33.51	-21 41 19.9	5.246190	37.5	-2.1	76.2e	11	99.1	259.8	-1	348
2032 Nov 6	19 50 25.66	-21 33 58.0	5.320356	37.0	-2.0	71.9e	11	99.1	259.6	-1	348
2032 Nov 11	19 53 32.03	-21 25 46.9	5.392682	36.5	-2.0	67.6e	10	99.2	259.3	-1	347
2032 Nov 16	19 56 51.50	-21 16 46.8	5.462771	36.1	-2.0	63.3e	10	99.2	259.1	-1	347
2032 Nov 21	20 0 23.04	-21 6 57.7	5.530294	35.6	-2.0	59.1e	10	99.3	258.8	-1	347
2032 Nov 26	20 4 5.76	-20 56 19.1	5.594933	35.2	-1.9	55.0e	9	99.4	258.6	-1	346
2032 Dec 1	20 7 58.75	-20 44 51.2	5.656356	34.8	-1.9	50.8e	9	99.4	258.3	-1	346
2032 Dec 6	20 12 1.10	-20 32 34.4	5.714227	34.5	-1.9	46.7e	8	99.5	258.0	-1	346
2032 Dec 11	20 16 11.79	-20 19 29.4	5.768246	34.1	-1.9	42.6e	8	99.6	257.7	-1	345
2032 Dec 16	20 20 29.81	-20 5 37.4	5.818178	33.8	-1.9	38.6e	7	99.6	257.5	-1	345
2032 Dec 21	20 24 54.30	-19 50 59.2	5.863836	33.6	-1.8	34.6e	6	99.7	257.2	-1	345
2032 Dec 26	20 29 24.46	-19 35 35.8	5.905025	33.4	-1.8	30.6e	6	99.8	257.0	-1	344
2032 Dec 31	20 33 59.52	-19 19 28.5	5.941542	33.1	-1.8	26.6e	5	99.8	256.8	-1	344

Saturn
Equinox of J2000

Date	Right Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp
year mth d	h m s	o ' "	AU	"		o	o		o	o	o
2032 Jan 1	5 6 8.58	21 18 57.0	8.108265	20.6	-0.4	157.8e	2	100.0	260.9	-27	356
2032 Jan 6	5 4 37.83	21 17 48.6	8.143400	20.5	-0.3	152.3e	3	99.9	261.6	-27	356
2032 Jan 11	5 3 14.24	21 16 51.0	8.185518	20.4	-0.3	146.9e	3	99.9	262.1	-27	356
2032 Jan 16	5 1 58.99	21 16 6.1	8.234229	20.2	-0.3	141.5e	4	99.9	262.4	-27	356
2032 Jan 21	5 0 53.14	21 15 35.5	8.289026	20.1	-0.2	136.2e	4	99.9	262.6	-27	356
2032 Jan 26	4 59 57.49	21 15 20.8	8.349352	20.0	-0.2	130.9e	5	99.8	262.8	-27	356
2032 Jan 31	4 59 12.66	21 15 22.9	8.414651	19.8	-0.2	125.6e	5	99.8	263.0	-27	356
2032 Feb 5	4 58 39.16	21 15 42.8	8.484360	19.6	-0.1	120.4e	5	99.8	263.1	-27	356
2032 Feb 10	4 58 17.41	21 16 21.0	8.557899	19.5	-0.1	115.3e	6	99.8	263.3	-27	356

2032 Feb 15	4 58 7.72	21 17 17.6	8.634631	19.3	-0.1	110.2e	6	99.7	263.4	-27	356
2032 Feb 20	4 58 10.21	21 18 32.5	8.713874	19.1	0.0	105.2e	6	99.7	263.5	-27	356
2032 Feb 25	4 58 24.82	21 20 5.2	8.794977	18.9	0.0	100.2e	6	99.7	263.7	-27	356
2032 Mar 1	4 58 51.38	21 21 55.0	8.877331	18.8	0.0	95.3e	6	99.7	263.9	-27	356
2032 Mar 6	4 59 29.69	21 24 0.8	8.960355	18.6	0.0	90.4e	6	99.7	264.0	-27	356
2032 Mar 11	5 0 19.52	21 26 21.3	9.043466	18.4	0.0	85.6e	6	99.7	264.2	-27	356
2032 Mar 16	5 1 20.55	21 28 55.2	9.126051	18.3	0.1	80.9e	6	99.7	264.4	-27	356
2032 Mar 21	5 2 32.33	21 31 40.7	9.207516	18.1	0.1	76.2e	6	99.7	264.6	-27	356
2032 Mar 26	5 3 54.33	21 34 36.2	9.287340	17.9	0.1	71.5e	6	99.7	264.9	-27	356
2032 Mar 31	5 5 26.03	21 37 39.7	9.365053	17.8	0.1	66.9e	6	99.7	265.1	-27	356
2032 Apr 5	5 7 6.92	21 40 49.4	9.440215	17.7	0.1	62.4e	6	99.8	265.4	-27	356
2032 Apr 10	5 8 56.51	21 44 3.3	9.512380	17.5	0.1	57.9e	5	99.8	265.7	-27	356
2032 Apr 15	5 10 54.23	21 47 19.7	9.581093	17.4	0.1	53.5e	5	99.8	266.0	-27	356
2032 Apr 20	5 12 59.44	21 50 36.7	9.645964	17.3	0.1	49.1e	5	99.8	266.3	-27	356
2032 Apr 25	5 15 11.50	21 53 52.4	9.706670	17.2	0.1	44.7e	5	99.8	266.7	-27	356
2032 Apr 30	5 17 29.82	21 57 5.1	9.762934	17.1	0.1	40.4e	4	99.9	267.1	-27	355
2032 May 5	5 19 53.85	22 0 13.2	9.814489	17.0	0.1	36.1e	4	99.9	267.5	-27	355
2032 May 10	5 22 23.04	22 3 15.1	9.861053	16.9	0.1	31.9e	3	99.9	268.0	-27	355
2032 May 15	5 24 56.76	22 6 9.5	9.902370	16.8	0.1	27.6e	3	99.9	268.6	-27	355
2032 May 20	5 27 34.37	22 8 55.0	9.938253	16.8	0.1	23.4e	3	100.0	269.3	-27	355
2032 May 25	5 30 15.24	22 11 30.6	9.968573	16.7	0.1	19.2e	2	100.0	270.1	-27	355
2032 May 30	5 32 58.83	22 13 55.2	9.993229	16.7	0.0	15.1e	2	100.0	271.2	-27	355
2032 Jun 4	5 35 44.62	22 16 8.0	10.012104	16.6	0.0	10.9e	1	100.0	273.0	-27	355
2032 Jun 9	5 38 32.04	22 18 8.2	10.025080	16.6	0.0	6.8e	1	100.0	276.6	-27	355
2032 Jun 14	5 41 20.45	22 19 55.5	10.032089	16.6	0.0	2.8e	0	100.0	289.6	-27	355
2032 Jun 19	5 44 9.23	22 21 29.4	10.033126	16.6	0.0	1.8w	0	100.0	54.0	-27	355
2032 Jun 24	5 46 57.83	22 22 49.6	10.028229	16.6	0.0	5.7w	1	100.0	78.4	-27	355
2032 Jun 29	5 49 45.72	22 23 56.2	10.017444	16.6	0.0	9.8w	1	100.0	83.1	-27	355
2032 Jul 4	5 52 32.38	22 24 49.1	10.000790	16.7	0.0	13.9w	2	100.0	85.2	-27	355
2032 Jul 9	5 55 17.19	22 25 28.6	9.978312	16.7	0.1	18.0w	2	100.0	86.4	-27	355
2032 Jul 14	5 57 59.55	22 25 55.3	9.950120	16.7	0.1	22.2w	2	100.0	87.3	-27	355
2032 Jul 19	6 0 38.84	22 26 9.5	9.916376	16.8	0.1	26.3w	3	99.9	88.0	-27	354
2032 Jul 24	6 3 14.52	22 26 12.0	9.877270	16.9	0.1	30.5w	3	99.9	88.6	-26	354
2032 Jul 29	6 5 46.08	22 26 3.5	9.832979	16.9	0.1	34.7w	4	99.9	89.1	-26	354
2032 Aug 3	6 8 12.93	22 25 45.0	9.783671	17.0	0.1	38.9w	4	99.9	89.6	-26	354
2032 Aug 8	6 10 34.45	22 25 17.6	9.729568	17.1	0.1	43.1w	4	99.9	90.0	-26	354
2032 Aug 13	6 12 50.00	22 24 42.5	9.670957	17.2	0.1	47.4w	5	99.8	90.4	-26	354
2032 Aug 18	6 14 59.00	22 24 0.9	9.608165	17.3	0.1	51.7w	5	99.8	90.7	-26	354
2032 Aug 23	6 17 0.93	22 23 14.1	9.541537	17.5	0.1	56.0w	5	99.8	91.0	-26	354
2032 Aug 28	6 18 55.25	22 22 23.5	9.471389	17.6	0.1	60.4w	6	99.8	91.3	-26	354
2032 Sep 2	6 20 41.37	22 21 30.6	9.398066	17.7	0.1	64.9w	6	99.7	91.6	-26	354
2032 Sep 7	6 22 18.68	22 20 36.9	9.321980	17.9	0.1	69.3w	6	99.7	91.8	-26	354
2032 Sep 12	6 23 46.60	22 19 43.9	9.243599	18.0	0.1	73.8w	6	99.7	92.1	-26	354
2032 Sep 17	6 25 4.65	22 18 53.1	9.163422	18.2	0.1	78.4w	6	99.7	92.3	-26	354
2032 Sep 22	6 26 12.42	22 18 5.6	9.081936	18.4	0.1	83.0w	6	99.7	92.5	-26	354
2032 Sep 27	6 27 9.46	22 17 22.9	8.999613	18.5	0.1	87.7w	6	99.7	92.7	-26	354
2032 Oct 2	6 27 55.33	22 16 46.4	8.916981	18.7	0.0	92.4w	6	99.7	92.8	-26	354
2032 Oct 7	6 28 29.62	22 16 17.0	8.834626	18.9	0.0	97.2w	6	99.7	93.0	-26	354
2032 Oct 12	6 28 52.08	22 15 55.7	8.753167	19.0	0.0	102.1w	6	99.7	93.1	-26	354
2032 Oct 17	6 29 2.57	22 15 43.1	8.673222	19.2	0.0	107.0w	6	99.7	93.2	-26	354
2032 Oct 22	6 29 1.05	22 15 39.5	8.595371	19.4	-0.1	112.0w	6	99.7	93.3	-26	354
2032 Oct 27	6 28 47.50	22 15 45.5	8.520194	19.6	-0.1	117.0w	6	99.8	93.4	-26	354
2032 Nov 1	6 28 21.98	22 16 1.1	8.448312	19.7	-0.1	122.1w	5	99.8	93.4	-26	354
2032 Nov 6	6 27 44.74	22 16 26.0	8.380371	19.9	-0.2	127.2w	5	99.8	93.5	-26	354
2032 Nov 11	6 26 56.21	22 16 59.7	8.316999	20.0	-0.2	132.5w	5	99.8	93.6	-26	354
2032 Nov 16	6 25 57.04	22 17 41.3	8.258764	20.2	-0.2	137.7w	4	99.9	93.7	-26	354
2032 Nov 21	6 24 47.94	22 18 30.1	8.206166	20.3	-0.3	143.0w	4	99.9	93.8	-26	354
2032 Nov 26	6 23 29.71	22 19 25.0	8.159696	20.4	-0.3	148.4w	3	99.9	94.0	-26	354
2032 Dec 1	6 22 3.30	22 20 24.9	8.119837	20.5	-0.3	153.8w	3	99.9	94.2	-26	354
2032 Dec 6	6 20 29.90	22 21 28.6	8.087031	20.6	-0.4	159.2w	2	100.0	94.6	-26	354
2032 Dec 11	6 18 50.85	22 22 34.7	8.061627	20.7	-0.4	164.6w	2	100.0	95.5	-26	354
2032 Dec 16	6 17 7.61	22 23 42.1	8.043860	20.7	-0.4	170.1w	1	100.0	97.3	-26	354
2032 Dec 21	6 15 21.60	22 24 49.8	8.033886	20.7	-0.5	175.5w	0	100.0	104.1	-26	354
2032 Dec 26	6 13 34.30	22 25 57.0	8.031826	20.7	-0.5	178.5e	0	100.0	231.7	-26	354
2032 Dec 31	6 11 47.25	22 27 3.0	8.037743	20.7	-0.5	173.3e	1	100.0	263.1	-26	354

Uranus
Equinox of J2000

Date	Right	Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp
year mth d	h m s	h m s	o ' "	AU	"		o	o		o	o	o
2032 Jan 1	5 34	30.64	23 27 51.5	18.134753	3.8	5.5	164.5e	1	100.0	268.0	80	36
2032 Jan 6	5 33	38.33	23 27 21.3	18.160747	3.8	5.5	159.2e	1	100.0	267.8	80	35
2032 Jan 11	5 32	48.40	23 26 51.3	18.194095	3.8	5.5	153.9e	1	100.0	267.6	80	34
2032 Jan 16	5 32	1.44	23 26 22.0	18.234518	3.8	5.5	148.6e	2	100.0	267.5	80	33
2032 Jan 21	5 31	18.01	23 25 54.1	18.281624	3.8	5.5	143.4e	2	100.0	267.4	80	32
2032 Jan 26	5 30	38.55	23 25 27.9	18.334949	3.7	5.5	138.1e	2	100.0	267.3	80	32
2032 Jan 31	5 30	3.46	23 25 4.2	18.394019	3.7	5.5	132.9e	2	100.0	267.2	80	31
2032 Feb 5	5 29	33.11	23 24 43.2	18.458344	3.7	5.6	127.7e	2	100.0	267.1	80	30
2032 Feb 10	5 29	7.83	23 24 25.4	18.527402	3.7	5.6	122.6e	2	100.0	267.0	81	30
2032 Feb 15	5 28	47.90	23 24 11.2	18.600602	3.7	5.6	117.4e	3	99.9	267.0	81	29
2032 Feb 20	5 28	33.56	23 24 1.0	18.677287	3.7	5.6	112.3e	3	99.9	266.9	81	29
2032 Feb 25	5 28	24.92	23 23 54.8	18.756803	3.7	5.6	107.3e	3	99.9	266.9	81	29
2032 Mar 1	5 28	22.05	23 23 53.0	18.838526	3.6	5.6	102.2e	3	99.9	266.9	81	29
2032 Mar 6	5 28	25.01	23 23 55.5	18.921843	3.6	5.6	97.2e	3	99.9	266.9	81	29
2032 Mar 11	5 28	33.80	23 24 2.3	19.006128	3.6	5.6	92.3e	3	99.9	266.9	81	29
2032 Mar 16	5 28	48.42	23 24 13.4	19.090710	3.6	5.6	87.3e	3	99.9	266.9	81	29
2032 Mar 21	5 29	8.75	23 24 28.6	19.174920	3.6	5.6	82.4e	3	99.9	266.9	81	30
2032 Mar 26	5 29	34.62	23 24 47.7	19.258145	3.6	5.6	77.6e	3	99.9	266.9	80	30
2032 Mar 31	5 30	5.87	23 25 10.5	19.339825	3.5	5.7	72.8e	3	99.9	267.0	80	31
2032 Apr 5	5 30	42.30	23 25 36.6	19.419421	3.5	5.7	68.0e	3	99.9	267.0	80	32
2032 Apr 10	5 31	23.72	23 26 5.6	19.496386	3.5	5.7	63.2e	3	99.9	267.1	80	32
2032 Apr 15	5 32	9.88	23 26 37.1	19.570162	3.5	5.7	58.5e	3	99.9	267.1	80	33
2032 Apr 20	5 33	0.48	23 27 10.8	19.640247	3.5	5.7	53.8e	2	100.0	267.2	80	34
2032 Apr 25	5 33	55.20	23 27 46.2	19.706212	3.5	5.7	49.1e	2	100.0	267.3	80	35
2032 Apr 30	5 34	53.74	23 28 22.8	19.767677	3.5	5.7	44.5e	2	100.0	267.3	80	36
2032 May 5	5 35	55.81	23 29 0.2	19.824282	3.5	5.7	39.9e	2	100.0	267.4	80	38
2032 May 10	5 37	1.09	23 29 38.0	19.875654	3.4	5.7	35.3e	2	100.0	267.5	79	39
2032 May 15	5 38	9.22	23 30 15.7	19.921448	3.4	5.7	30.7e	2	100.0	267.6	79	40
2032 May 20	5 39	19.83	23 30 53.0	19.961400	3.4	5.7	26.2e	1	100.0	267.6	79	41
2032 May 25	5 40	32.55	23 31 29.5	19.995311	3.4	5.7	21.6e	1	100.0	267.7	79	42
2032 May 30	5 41	47.04	23 32 4.8	20.023019	3.4	5.7	17.1e	1	100.0	267.7	79	43
2032 Jun 4	5 43	2.96	23 32 38.6	20.044361	3.4	5.7	12.6e	1	100.0	267.6	78	44
2032 Jun 9	5 44	19.95	23 33 10.7	20.059178	3.4	5.7	8.1e	0	100.0	267.3	78	46
2032 Jun 14	5 45	37.62	23 33 40.9	20.067370	3.4	5.7	3.6e	0	100.0	265.9	78	47
2032 Jun 19	5 46	55.59	23 34 9.1	20.068915	3.4	5.7	0.8w	0	100.0	100.1	78	48
2032 Jun 24	5 48	13.47	23 34 35.0	20.063842	3.4	5.7	5.3w	0	100.0	90.6	78	49
2032 Jun 29	5 49	30.94	23 34 58.5	20.052200	3.4	5.7	9.8w	1	100.0	89.9	77	50
2032 Jul 4	5 50	47.65	23 35 19.7	20.034021	3.4	5.7	14.2w	1	100.0	89.8	77	51
2032 Jul 9	5 52	3.23	23 35 38.5	20.0009374	3.4	5.7	18.7w	1	100.0	89.7	77	51
2032 Jul 14	5 53	17.28	23 35 55.1	19.978402	3.4	5.7	23.2w	1	100.0	89.7	77	52
2032 Jul 19	5 54	29.45	23 36 9.5	19.941311	3.4	5.7	27.7w	1	100.0	89.8	76	53
2032 Jul 24	5 55	39.39	23 36 21.7	19.898344	3.4	5.7	32.2w	2	100.0	89.8	76	54
2032 Jul 29	5 56	46.79	23 36 32.0	19.849738	3.5	5.7	36.7w	2	100.0	89.9	76	55
2032 Aug 3	5 57	51.31	23 36 40.4	19.795729	3.5	5.7	41.3w	2	100.0	90.0	76	55
2032 Aug 8	5 58	52.61	23 36 47.4	19.736617	3.5	5.7	45.8w	2	100.0	90.1	76	56
2032 Aug 13	5 59	50.33	23 36 53.1	19.672770	3.5	5.7	50.4w	2	100.0	90.1	75	56
2032 Aug 18	6 0	44.18	23 36 57.7	19.604606	3.5	5.7	55.0w	2	100.0	90.2	75	57
2032 Aug 23	6 1	33.88	23 37 1.4	19.532555	3.5	5.7	59.6w	3	99.9	90.3	75	57
2032 Aug 28	6 2	19.18	23 37 4.5	19.457027	3.5	5.7	64.3w	3	99.9	90.3	75	58
2032 Sep 2	6 2	59.79	23 37 7.4	19.378460	3.5	5.7	68.9w	3	99.9	90.4	75	58
2032 Sep 7	6 3	35.46	23 37 10.1	19.297364	3.6	5.6	73.7w	3	99.9	90.4	75	59
2032 Sep 12	6 4	5.95	23 37 13.0	19.214298	3.6	5.6	78.4w	3	99.9	90.4	75	59
2032 Sep 17	6 4	31.09	23 37 16.2	19.129847	3.6	5.6	83.2w	3	99.9	90.5	75	59
2032 Sep 22	6 4	50.76	23 37 19.8	19.044576	3.6	5.6	88.0w	3	99.9	90.5	74	59
2032 Sep 27	6 5	4.82	23 37 24.0	18.959030	3.6	5.6	92.8w	3	99.9	90.5	74	59
2032 Oct 2	6 5	13.16	23 37 28.9	18.873804	3.6	5.6	97.7w	3	99.9	90.5	74	59
2032 Oct 7	6 5	15.72	23 37 34.5	18.789538	3.6	5.6	102.6w	3	99.9	90.5	74	59
2032 Oct 12	6 5	12.48	23 37 40.9	18.706894	3.7	5.6	107.6w	3	99.9	90.5	74	59
2032 Oct 17	6 5	3.52	23 37 47.9	18.626512	3.7	5.6	112.6w	3	99.9	90.4	74	59
2032 Oct 22	6 4	48.96	23 37 55.4	18.548979	3.7	5.6	117.6w	3	99.9	90.4	74	59
2032 Oct 27	6 4	28.92	23 38 3.3	18.474873	3.7	5.5	122.6w	3	100.0	90.3	75	59
2032 Nov 1	6 4	3.55	23 38 11.6	18.404800	3.7	5.5	127.7w	2	100.0	90.2	75	59
2032 Nov 6	6 3	33.12	23 38 19.9	18.339372	3.7	5.5	132.9w	2	100.0	90.2	75	58

2032 Nov 11	6 2 57.94	23 38 27.9	18.279166	3.8	5.5 138.0w	2 100.0	90.1	75	58
2032 Nov 16	6 2 18.41	23 38 35.5	18.224681	3.8	5.5 143.2w	2 100.0	89.9	75	58
2032 Nov 21	6 1 34.95	23 38 42.3	18.176346	3.8	5.5 148.4w	2 100.0	89.8	75	57
2032 Nov 26	6 0 47.97	23 38 48.3	18.134573	3.8	5.5 153.6w	1 100.0	89.7	75	57
2032 Dec 1	5 59 57.97	23 38 53.2	18.099761	3.8	5.5 158.9w	1 100.0	89.4	75	56
2032 Dec 6	5 59 5.51	23 38 56.6	18.072259	3.8	5.5 164.2w	1 100.0	89.2	76	56
2032 Dec 11	5 58 11.19	23 38 58.6	18.052326	3.8	5.5 169.4w	1 100.0	88.7	76	55
2032 Dec 16	5 57 15.64	23 38 59.0	18.040107	3.8	5.5 174.7w	0 100.0	87.4	76	55
2032 Dec 21	5 56 19.48	23 38 57.8	18.035684	3.8	5.5 179.8e	0 100.0	347.0	76	54
2032 Dec 26	5 55 23.29	23 38 55.0	18.039108	3.8	5.5 174.6e	0 100.0	271.9	76	54
2032 Dec 31	5 54 27.72	23 38 50.7	18.050383	3.8	5.5 169.3e	1 100.0	270.6	76	53

Neptune
Equinox of J2000

Date	Right Asc.	Declination	Distance	dia	mag	Elong	I	%Ill	Limb	De	Pp
year mth d	h m s	o ' "	AU	"		o	o	o	o	o	o
2032 Jan 1	0 48 1.00	3 26 40.1	29.785248	2.5	7.9	92.7e	2	100.0	247.0	-15	314
2032 Jan 6	0 48 7.21	3 27 35.6	29.872072	2.4	7.9	87.7e	2	100.0	247.2	-15	314
2032 Jan 11	0 48 16.62	3 28 51.2	29.958625	2.4	7.9	82.6e	2	100.0	247.3	-15	314
2032 Jan 16	0 48 29.21	3 30 26.5	30.044222	2.4	7.9	77.6e	2	100.0	247.5	-15	314
2032 Jan 21	0 48 44.88	3 32 20.9	30.128174	2.4	7.9	72.6e	2	100.0	247.6	-15	314
2032 Jan 26	0 49 3.53	3 34 33.5	30.209855	2.4	7.9	67.6e	2	100.0	247.8	-15	314
2032 Jan 31	0 49 25.04	3 37 3.5	30.288698	2.4	7.9	62.6e	2	100.0	247.9	-15	314
2032 Feb 5	0 49 49.28	3 39 50.0	30.364157	2.4	7.9	57.6e	2	100.0	248.1	-15	314
2032 Feb 10	0 50 16.12	3 42 51.9	30.435689	2.4	7.9	52.7e	2	100.0	248.3	-15	314
2032 Feb 15	0 50 45.38	3 46 8.1	30.502745	2.4	7.9	47.8e	1	100.0	248.6	-15	314
2032 Feb 20	0 51 16.89	3 49 37.2	30.564836	2.4	7.9	42.8e	1	100.0	248.8	-15	314
2032 Feb 25	0 51 50.42	3 53 17.8	30.621561	2.4	7.9	38.0e	1	100.0	249.2	-15	313
2032 Mar 1	0 52 25.78	3 57 8.7	30.672576	2.4	7.9	33.1e	1	100.0	249.6	-15	313
2032 Mar 6	0 53 2.76	4 1 8.4	30.717562	2.4	7.9	28.3e	1	100.0	250.1	-15	313
2032 Mar 11	0 53 41.17	4 5 15.6	30.756206	2.4	7.9	23.5e	1	100.0	250.8	-14	313
2032 Mar 16	0 54 20.77	4 9 28.7	30.788227	2.4	7.9	18.7e	1	100.0	251.8	-14	313
2032 Mar 21	0 55 1.30	4 13 46.1	30.813439	2.4	7.9	13.9e	0	100.0	253.5	-14	313
2032 Mar 26	0 55 42.54	4 18 6.4	30.831733	2.4	7.9	9.2e	0	100.0	256.8	-14	313
2032 Mar 31	0 56 24.26	4 22 28.2	30.843045	2.4	8.0	4.5e	0	100.0	266.9	-14	313
2032 Apr 5	0 57 6.24	4 26 49.9	30.847323	2.4	8.0	1.6e	0	100.0	354.0	-14	313
2032 Apr 10	0 57 48.25	4 31 10.1	30.844530	2.4	8.0	5.4w	0	100.0	51.0	-14	313
2032 Apr 15	0 58 30.05	4 35 27.4	30.834689	2.4	7.9	10.0w	0	100.0	58.7	-14	313
2032 Apr 20	0 59 11.38	4 39 40.3	30.817920	2.4	7.9	14.7w	0	100.0	61.5	-14	313
2032 Apr 25	0 59 52.04	4 43 47.3	30.794397	2.4	7.9	19.4w	1	100.0	63.0	-14	313
2032 Apr 30	1 0 31.81	4 47 47.3	30.764311	2.4	7.9	24.0w	1	100.0	64.0	-14	313
2032 May 5	1 1 10.49	4 51 39.0	30.727858	2.4	7.9	28.7w	1	100.0	64.6	-14	313
2032 May 10	1 1 47.87	4 55 21.2	30.685258	2.4	7.9	33.4w	1	100.0	65.1	-14	313
2032 May 15	1 2 23.74	4 58 52.6	30.636814	2.4	7.9	38.0w	1	100.0	65.5	-13	313
2032 May 20	1 2 57.88	5 2 12.0	30.582895	2.4	7.9	42.7w	1	100.0	65.8	-13	313
2032 May 25	1 3 30.13	5 5 18.5	30.523897	2.4	7.9	47.3w	1	100.0	66.1	-13	313
2032 May 30	1 4 0.33	5 8 11.1	30.460213	2.4	7.9	52.0w	2	100.0	66.3	-13	313
2032 Jun 4	1 4 28.32	5 10 49.1	30.392228	2.4	7.9	56.7w	2	100.0	66.5	-13	313
2032 Jun 9	1 4 53.94	5 13 11.3	30.320380	2.4	7.9	61.3w	2	100.0	66.7	-13	313
2032 Jun 14	1 5 17.03	5 15 17.2	30.245179	2.4	7.9	66.0w	2	100.0	66.9	-13	313
2032 Jun 19	1 5 37.48	5 17 6.0	30.167165	2.4	7.9	70.7w	2	100.0	67.0	-13	313
2032 Jun 24	1 5 55.18	5 18 37.3	30.086875	2.4	7.9	75.4w	2	100.0	67.2	-13	313
2032 Jun 29	1 6 10.06	5 19 50.7	30.004823	2.4	7.9	80.1w	2	100.0	67.3	-13	313
2032 Jul 4	1 6 22.03	5 20 45.7	29.921527	2.4	7.9	84.8w	2	100.0	67.4	-13	313
2032 Jul 9	1 6 31.01	5 21 22.1	29.837566	2.5	7.9	89.5w	2	100.0	67.6	-13	313
2032 Jul 14	1 6 36.96	5 21 39.7	29.753557	2.5	7.9	94.3w	2	100.0	67.7	-13	313
2032 Jul 19	1 6 39.87	5 21 38.6	29.670109	2.5	7.9	99.0w	2	100.0	67.8	-13	313
2032 Jul 24	1 6 39.74	5 21 18.9	29.587801	2.5	7.9	103.8w	2	100.0	68.0	-13	313
2032 Jul 29	1 6 36.62	5 20 41.0	29.507175	2.5	7.9	108.6w	2	100.0	68.1	-13	313
2032 Aug 3	1 6 30.51	5 19 45.1	29.428795	2.5	7.8	113.4w	2	100.0	68.3	-13	313
2032 Aug 8	1 6 21.48	5 18 31.8	29.353262	2.5	7.8	118.2w	2	100.0	68.5	-13	313
2032 Aug 13	1 6 9.61	5 17 1.5	29.281169	2.5	7.8	123.1w	2	100.0	68.6	-13	313
2032 Aug 18	1 5 55.04	5 15 15.4	29.213066	2.5	7.8	127.9w	2	100.0	68.8	-13	313
2032 Aug 23	1 5 37.90	5 13 14.3	29.149442	2.5	7.8	132.8w	1	100.0	69.1	-13	313
2032 Aug 28	1 5 18.36	5 10 59.3	29.090750	2.5	7.8	137.7w	1	100.0	69.3	-13	313
2032 Sep 2	1 4 56.56	5 8 31.4	29.037467	2.5	7.8	142.7w	1	100.0	69.7	-13	313

2032 Sep 7	1	4	32.70	5	5	52.0	28.990058	2.5	7.8	147.6w	1	100.0	70.1	-13	313
2032 Sep 12	1	4	7.03	5	3	2.6	28.948935	2.5	7.8	152.6w	1	100.0	70.7	-13	313
2032 Sep 17	1	3	39.79	5	0	4.9	28.914430	2.5	7.8	157.6w	1	100.0	71.5	-13	313
2032 Sep 22	1	3	11.25	4	57	0.4	28.886798	2.5	7.8	162.6w	1	100.0	72.7	-13	313
2032 Sep 27	1	2	41.66	4	53	50.9	28.866274	2.5	7.8	167.6w	0	100.0	75.0	-13	313
2032 Oct 2	1	2	11.29	4	50	38.0	28.853083	2.5	7.8	172.5w	0	100.0	80.1	-13	313
2032 Oct 7	1	1	40.45	4	47	23.7	28.847396	2.5	7.8	177.2w	0	100.0	104.0	-13	313
2032 Oct 12	1	1	9.44	4	44	10.0	28.849295	2.5	7.8	176.7e	0	100.0	217.5	-14	313
2032 Oct 17	1	0	38.60	4	40	58.8	28.858763	2.5	7.8	171.9e	0	100.0	235.8	-14	313
2032 Oct 22	1	0	8.21	4	37	51.8	28.875720	2.5	7.8	166.8e	0	100.0	240.3	-14	313
2032 Oct 27	0	59	38.55	4	34	51.0	28.900074	2.5	7.8	161.8e	1	100.0	242.4	-14	313
2032 Nov 1	0	59	9.94	4	31	58.2	28.931693	2.5	7.8	156.7e	1	100.0	243.6	-14	313
2032 Nov 6	0	58	42.67	4	29	15.2	28.970366	2.5	7.8	151.5e	1	100.0	244.3	-14	313
2032 Nov 11	0	58	17.03	4	26	43.6	29.015786	2.5	7.8	146.4e	1	100.0	244.9	-14	313
2032 Nov 16	0	57	53.28	4	24	25.2	29.067560	2.5	7.8	141.3e	1	100.0	245.3	-14	313
2032 Nov 21	0	57	31.66	4	22	21.2	29.125278	2.5	7.8	136.1e	1	100.0	245.6	-14	313
2032 Nov 26	0	57	12.37	4	20	32.9	29.188522	2.5	7.8	131.0e	1	100.0	245.9	-14	313
2032 Dec 1	0	56	55.62	4	19	1.5	29.256824	2.5	7.8	125.9e	2	100.0	246.1	-14	313
2032 Dec 6	0	56	41.61	4	17	48.2	29.329645	2.5	7.8	120.7e	2	100.0	246.3	-14	313
2032 Dec 11	0	56	30.51	4	16	53.6	29.406369	2.5	7.8	115.6e	2	100.0	246.5	-14	313
2032 Dec 16	0	56	22.41	4	16	18.6	29.486360	2.5	7.9	110.5e	2	100.0	246.7	-14	313
2032 Dec 21	0	56	17.41	4	16	3.4	29.569002	2.5	7.9	105.4e	2	100.0	246.9	-14	313
2032 Dec 26	0	56	15.57	4	16	8.3	29.653684	2.5	7.9	100.3e	2	100.0	247.0	-14	313
2032 Dec 31	0	56	16.95	4	16	33.6	29.739759	2.5	7.9	95.2e	2	100.0	247.2	-14	313