

Custom Ephemeris

Compiled by: APS

Calculated by: JPL Horizons

Date: 2023-08-27

321P (SOHO)

Discovered: 2012-06-30.16687

Orbital Period: 3.78 yrs.

Diameter: 150 m

Perihelion: 2023-10-26, 13:44:32.398 UT

Links:

[SBDB](#)

[MPC](#)

Date	UT	JD	AU	RA	Declination	Latitude	Longitude	Rx
2023-Jan-01	12:00	2459946.0	3.7634	178°45'05.23"	-0°04'32.67"	-0°33'57.89"	28° Vir 53'04.43"	Rx
2023-Jan-02	12:00	2459947.0	3.7577	178°44'14.63"	-0°03'50.52"	-0°33'39.34"	28° Vir 52'01.24"	Rx
2023-Jan-03	12:00	2459948.0	3.7519	178°43'07.13"	-0°03'00.74"	-0°33'20.50"	28° Vir 50'39.51"	Rx
2023-Jan-04	12:00	2459949.0	3.7460	178°41'42.48"	-0°02'03.20"	-0°33'01.38"	28° Vir 48'58.95"	Rx
2023-Jan-05	12:00	2459950.0	3.7402	178°40'00.40"	-0°00'57.79"	-0°32'41.96"	28° Vir 46'59.27"	Rx
2023-Jan-06	12:00	2459951.0	3.7343	178°38'00.62"	+0°00'15.62"	-0°32'22.23"	28° Vir 44'40.17"	Rx
2023-Jan-07	12:00	2459952.0	3.7285	178°35'42.86"	+0°01'37.16"	-0°32'02.20"	28° Vir 42'01.34"	Rx
2023-Jan-08	12:00	2459953.0	3.7226	178°33'06.86"	+0°03'06.95"	-0°31'41.85"	28° Vir 39'02.49"	Rx
2023-Jan-09	12:00	2459954.0	3.7166	178°30'12.34"	+0°04'45.12"	-0°31'21.17"	28° Vir 35'43.31"	Rx
2023-Jan-10	12:00	2459955.0	3.7107	178°26'59.03"	+0°06'31.79"	-0°31'00.16"	28° Vir 32'03.52"	Rx
2023-Jan-11	12:00	2459956.0	3.7047	178°23'26.68"	+0°08'27.09"	-0°30'38.82"	28° Vir 28'02.83"	Rx
2023-Jan-12	12:00	2459957.0	3.6988	178°19'35.03"	+0°10'31.12"	-0°30'17.12"	28° Vir 23'40.95"	Rx
2023-Jan-13	12:00	2459958.0	3.6928	178°15'23.83"	+0°12'44.01"	-0°29'55.06"	28° Vir 18'57.62"	Rx
2023-Jan-14	12:00	2459959.0	3.6867	178°10'52.85"	+0°15'05.86"	-0°29'32.63"	28° Vir 13'52.57"	Rx
2023-Jan-15	12:00	2459960.0	3.6807	178°06'01.86"	+0°17'36.80"	-0°29'09.82"	28° Vir 08'25.54"	Rx
2023-Jan-16	12:00	2459961.0	3.6746	178°00'50.61"	+0°20'16.92"	-0°28'46.63"	28° Vir 02'36.28"	Rx
2023-Jan-17	12:00	2459962.0	3.6685	177°55'18.89"	+0°23'06.34"	-0°28'23.03"	27° Vir 56'24.54"	Rx
2023-Jan-18	12:00	2459963.0	3.6624	177°49'26.47"	+0°26'05.17"	-0°27'59.02"	27° Vir 49'50.08"	Rx
2023-Jan-19	12:00	2459964.0	3.6563	177°43'13.12"	+0°29'13.51"	-0°27'34.59"	27° Vir 42'52.62"	Rx
2023-Jan-20	12:00	2459965.0	3.6501	177°36'38.60"	+0°32'31.47"	-0°27'09.73"	27° Vir 35'31.92"	Rx
2023-Jan-21	12:00	2459966.0	3.6439	177°29'42.69"	+0°35'59.17"	-0°26'44.42"	27° Vir 27'47.72"	Rx
2023-Jan-22	12:00	2459967.0	3.6377	177°22'25.17"	+0°39'36.70"	-0°26'18.65"	27° Vir 19'39.80"	Rx
2023-Jan-23	12:00	2459968.0	3.6315	177°14'45.87"	+0°43'24.13"	-0°25'52.43"	27° Vir 11'07.96"	Rx
2023-Jan-24	12:00	2459969.0	3.6253	177°06'44.65"	+0°47'21.54"	-0°25'25.73"	27° Vir 02'12.06"	Rx
2023-Jan-25	12:00	2459970.0	3.6190	176°58'21.43"	+0°51'28.96"	-0°24'58.55"	26° Vir 52'52.00"	Rx
2023-Jan-26	12:00	2459971.0	3.6127	176°49'36.13"	+0°55'46.41"	-0°24'30.89"	26° Vir 43'07.69"	Rx
2023-Jan-27	12:00	2459972.0	3.6064	176°40'28.69"	+1°00'13.94"	-0°24'02.75"	26° Vir 32'59.08"	Rx
2023-Jan-28	12:00	2459973.0	3.6001	176°30'59.03"	+1°04'51.55"	-0°23'34.11"	26° Vir 22'26.09"	Rx
2023-Jan-29	12:00	2459974.0	3.5937	176°21'07.09"	+1°09'39.29"	-0°23'04.97"	26° Vir 11'28.66"	Rx
2023-Jan-30	12:00	2459975.0	3.5874	176°10'52.81"	+1°14'37.16"	-0°22'35.34"	26° Vir 00'06.72"	Rx
2023-Jan-31	12:00	2459976.0	3.5810	176°00'16.14"	+1°19'45.19"	-0°22'05.20"	25° Vir 48'20.22"	Rx
2023-Feb-01	12:00	2459977.0	3.5745	175°49'17.02"	+1°25'03.38"	-0°21'34.55"	25° Vir 36'09.12"	Rx
2023-Feb-02	12:00	2459978.0	3.5681	175°37'55.43"	+1°30'31.76"	-0°21'03.39"	25° Vir 23'33.37"	Rx
2023-Feb-03	12:00	2459979.0	3.5616	175°26'11.33"	+1°36'10.31"	-0°20'31.72"	25° Vir 10'32.97"	Rx
2023-Feb-04	12:00	2459980.0	3.5552	175°14'04.72"	+1°41'59.02"	-0°19'59.53"	24° Vir 57'07.92"	Rx
2023-Feb-05	12:00	2459981.0	3.5486	175°01'35.63"	+1°47'57.88"	-0°19'26.82"	24° Vir 43'18.26"	Rx
2023-Feb-06	12:00	2459982.0	3.5421	174°48'44.09"	+1°54'06.84"	-0°18'53.58"	24° Vir 29'04.03"	Rx
2023-Feb-07	12:00	2459983.0	3.5356	174°35'30.18"	+2°00'25.87"	-0°18'19.82"	24° Vir 14'25.33"	Rx

2023-Feb-08	12:00	2459984.0	3.5290	174°21'53.97"	+2°06'54.91"	-0°17'45.52"	23° Vir 59'22.27"	Rx
2023-Feb-09	12:00	2459985.0	3.5224	174°07'55.60"	+2°13'33.87"	-0°17'10.69"	23° Vir 43'55.00"	Rx
2023-Feb-10	12:00	2459986.0	3.5157	173°53'35.21"	+2°20'22.68"	-0°16'35.33"	23° Vir 28'03.69"	Rx
2023-Feb-11	12:00	2459987.0	3.5091	173°38'52.99"	+2°27'21.23"	-0°15'59.43"	23° Vir 11'48.55"	Rx
2023-Feb-12	12:00	2459988.0	3.5024	173°23'49.12"	+2°34'29.42"	-0°15'23.00"	22° Vir 55'09.83"	Rx
2023-Feb-13	12:00	2459989.0	3.4957	173°08'23.84"	+2°41'47.10"	-0°14'46.02"	22° Vir 38'07.80"	Rx
2023-Feb-14	12:00	2459990.0	3.4890	172°52'37.41"	+2°49'14.16"	-0°14'08.50"	22° Vir 20'42.75"	Rx
2023-Feb-15	12:00	2459991.0	3.4823	172°36'30.10"	+2°56'50.44"	-0°13'30.44"	22° Vir 02'55.01"	Rx
2023-Feb-16	12:00	2459992.0	3.4755	172°20'02.21"	+3°04'35.77"	-0°12'51.84"	21° Vir 44'44.92"	Rx
2023-Feb-17	12:00	2459993.0	3.4687	172°03'14.06"	+3°12'29.98"	-0°12'12.70"	21° Vir 26'12.86"	Rx
2023-Feb-18	12:00	2459994.0	3.4619	171°46'06.01"	+3°20'32.88"	-0°11'33.03"	21° Vir 07'19.25"	Rx
2023-Feb-19	12:00	2459995.0	3.4551	171°28'38.46"	+3°28'44.24"	-0°10'52.83"	20° Vir 48'04.57"	Rx
2023-Feb-20	12:00	2459996.0	3.4482	171°10'51.89"	+3°37'03.81"	-0°10'12.10"	20° Vir 28'29.35"	Rx
2023-Feb-21	12:00	2459997.0	3.4413	170°52'46.82"	+3°45'31.32"	-0°09'30.86"	20° Vir 08'34.20"	Rx
2023-Feb-22	12:00	2459998.0	3.4344	170°34'23.82"	+3°54'06.45"	-0°08'49.12"	19° Vir 48'19.78"	Rx
2023-Feb-23	12:00	2459999.0	3.4275	170°15'43.50"	+4°02'48.89"	-0°08'06.89"	19° Vir 27'46.80"	Rx
2023-Feb-24	12:00	2460000.0	3.4205	169°56'46.50"	+4°11'38.30"	-0°07'24.19"	19° Vir 06'55.98"	Rx
2023-Feb-25	12:00	2460001.0	3.4135	169°37'33.46"	+4°20'34.36"	-0°06'41.02"	18° Vir 45'48.05"	Rx
2023-Feb-26	12:00	2460002.0	3.4065	169°18'05.03"	+4°29'36.72"	-0°05'57.41"	18° Vir 24'23.76"	Rx
2023-Feb-27	12:00	2460003.0	3.3995	168°58'21.87"	+4°38'45.03"	-0°05'13.37"	18° Vir 02'43.88"	Rx
2023-Feb-28	12:00	2460004.0	3.3924	168°38'24.67"	+4°47'58.94"	-0°04'28.93"	17° Vir 40'49.19"	Rx
2023-Mar-01	12:00	2460005.0	3.3853	168°18'14.13"	+4°57'18.08"	-0°03'44.09"	17° Vir 18'40.49"	Rx
2023-Mar-02	12:00	2460006.0	3.3782	167°57'50.98"	+5°06'42.08"	-0°02'58.87"	16° Vir 56'18.61"	Rx
2023-Mar-03	12:00	2460007.0	3.3711	167°37'15.97"	+5°16'10.55"	-0°02'13.29"	16° Vir 33'44.42"	Rx
2023-Mar-04	12:00	2460008.0	3.3639	167°16'29.87"	+5°25'43.09"	-0°01'27.38"	16° Vir 10'58.78"	Rx
2023-Mar-05	12:00	2460009.0	3.3567	166°55'33.47"	+5°35'19.30"	-0°00'41.15"	15° Vir 48'02.61"	Rx
2023-Mar-06	12:00	2460010.0	3.3495	166°34'27.61"	+5°44'58.75"	+0°00'05.39"	15° Vir 24'56.83"	Rx
2023-Mar-07	12:00	2460011.0	3.3423	166°13'13.11"	+5°54'41.04"	+0°00'52.21"	15° Vir 01'42.40"	Rx
2023-Mar-08	12:00	2460012.0	3.3350	165°51'50.86"	+6°04'25.71"	+0°01'39.29"	14° Vir 38'20.30"	Rx
2023-Mar-09	12:00	2460013.0	3.3277	165°30'21.74"	+6°14'12.34"	+0°02'26.61"	14° Vir 14'51.54"	Rx
2023-Mar-10	12:00	2460014.0	3.3204	165°08'46.66"	+6°24'00.47"	+0°03'14.16"	13° Vir 51'17.13"	Rx
2023-Mar-11	12:00	2460015.0	3.3131	164°47'06.55"	+6°33'49.67"	+0°04'01.91"	13° Vir 27'38.11"	Rx
2023-Mar-12	12:00	2460016.0	3.3057	164°25'22.35"	+6°43'39.48"	+0°04'49.85"	13° Vir 03'55.53"	Rx
2023-Mar-13	12:00	2460017.0	3.2983	164°03'35.01"	+6°53'29.45"	+0°05'37.96"	12° Vir 40'10.44"	Rx
2023-Mar-14	12:00	2460018.0	3.2909	163°41'45.48"	+7°03'19.13"	+0°06'26.21"	12° Vir 16'23.91"	Rx
2023-Mar-15	12:00	2460019.0	3.2835	163°19'54.71"	+7°13'08.10"	+0°07'14.59"	11° Vir 52'36.98"	Rx
2023-Mar-16	12:00	2460020.0	3.2760	162°58'03.67"	+7°22'55.89"	+0°08'03.07"	11° Vir 28'50.71"	Rx
2023-Mar-17	12:00	2460021.0	3.2685	162°36'13.32"	+7°32'42.07"	+0°08'51.63"	11° Vir 05'06.17"	Rx
2023-Mar-18	12:00	2460022.0	3.2610	162°14'24.63"	+7°42'26.20"	+0°09'40.26"	10° Vir 41'24.43"	Rx
2023-Mar-19	12:00	2460023.0	3.2534	161°52'38.60"	+7°52'07.81"	+0°10'28.92"	10° Vir 17'46.57"	Rx
2023-Mar-20	12:00	2460024.0	3.2458	161°30'56.24"	+8°01'46.46"	+0°11'17.60"	9° Vir 54'13.71"	Rx
2023-Mar-21	12:00	2460025.0	3.2382	161°09'18.58"	+8°11'21.68"	+0°12'06.27"	9° Vir 30'46.96"	Rx
2023-Mar-22	12:00	2460026.0	3.2306	160°47'46.65"	+8°20'53.02"	+0°12'54.91"	9° Vir 07'27.45"	Rx
2023-Mar-23	12:00	2460027.0	3.2229	160°26'21.48"	+8°30'20.03"	+0°13'43.48"	8° Vir 44'16.27"	Rx
2023-Mar-24	12:00	2460028.0	3.2152	160°05'04.05"	+8°39'42.31"	+0°14'31.98"	8° Vir 21'14.49"	Rx
2023-Mar-25	12:00	2460029.0	3.2075	159°43'55.30"	+8°48'59.45"	+0°15'20.36"	7° Vir 58'23.12"	Rx

2023-Mar-26	12:00	2460030.0	3.1998	159°22'56.17"	+8°58'11.09"	+0°16'08.60"	7° Vir 35'43.14"	Rx
2023-Mar-27	12:00	2460031.0	3.1920	159°02'07.52"	+9°07'16.87"	+0°16'56.70"	7° Vir 13'15.48"	Rx
2023-Mar-28	12:00	2460032.0	3.1842	158°41'30.20"	+9°16'16.45"	+0°17'44.62"	6° Vir 51'01.03"	Rx
2023-Mar-29	12:00	2460033.0	3.1764	158°21'05.04"	+9°25'09.50"	+0°18'32.34"	6° Vir 29'00.67"	Rx
2023-Mar-30	12:00	2460034.0	3.1685	158°00'52.83"	+9°33'55.73"	+0°19'19.85"	6° Vir 07'15.22"	Rx
2023-Mar-31	12:00	2460035.0	3.1606	157°40'54.34"	+9°42'34.84"	+0°20'07.14"	5° Vir 45'45.49"	Rx
2023-Apr-01	12:00	2460036.0	3.1527	157°21'10.33"	+9°51'06.56"	+0°20'54.17"	5° Vir 24'32.25"	Rx
2023-Apr-02	12:00	2460037.0	3.1448	157°01'41.51"	+9°59'30.61"	+0°21'40.95"	5° Vir 03'36.26"	Rx
2023-Apr-03	12:00	2460038.0	3.1368	156°42'28.59"	+10°07'46.75"	+0°22'27.45"	4° Vir 42'58.23"	Rx
2023-Apr-04	12:00	2460039.0	3.1288	156°23'32.24"	+10°15'54.76"	+0°23'13.67"	4° Vir 22'38.85"	Rx
2023-Apr-05	12:00	2460040.0	3.1207	156°04'53.12"	+10°23'54.40"	+0°23'59.59"	4° Vir 02'38.78"	Rx
2023-Apr-06	12:00	2460041.0	3.1127	155°46'31.87"	+10°31'45.47"	+0°24'45.20"	3° Vir 42'58.67"	Rx
2023-Apr-07	12:00	2460042.0	3.1046	155°28'29.08"	+10°39'27.80"	+0°25'30.51"	3° Vir 23'39.12"	Rx
2023-Apr-08	12:00	2460043.0	3.0965	155°10'45.34"	+10°47'01.20"	+0°26'15.49"	3° Vir 04'40.69"	Rx
2023-Apr-09	12:00	2460044.0	3.0883	154°53'21.19"	+10°54'25.53"	+0°27'00.15"	2° Vir 46'03.93"	Rx
2023-Apr-10	12:00	2460045.0	3.0801	154°36'17.14"	+11°01'40.65"	+0°27'44.47"	2° Vir 27'49.32"	Rx
2023-Apr-11	12:00	2460046.0	3.0719	154°19'33.68"	+11°08'46.44"	+0°28'28.47"	2° Vir 09'57.35"	Rx
2023-Apr-12	12:00	2460047.0	3.0637	154°03'11.25"	+11°15'42.80"	+0°29'12.12"	1° Vir 52'28.41"	Rx
2023-Apr-13	12:00	2460048.0	3.0554	153°47'10.27"	+11°22'29.63"	+0°29'55.43"	1° Vir 35'22.93"	Rx
2023-Apr-14	12:00	2460049.0	3.0471	153°31'31.13"	+11°29'06.84"	+0°30'38.40"	1° Vir 18'41.25"	Rx
2023-Apr-15	12:00	2460050.0	3.0388	153°16'14.21"	+11°35'34.35"	+0°31'21.02"	1° Vir 02'23.75"	Rx
2023-Apr-16	12:00	2460051.0	3.0304	153°01'19.89"	+11°41'52.07"	+0°32'03.28"	0° Vir 46'30.76"	Rx
2023-Apr-17	12:00	2460052.0	3.0220	152°46'48.52"	+11°47'59.92"	+0°32'45.19"	0° Vir 31'02.62"	Rx
2023-Apr-18	12:00	2460053.0	3.0136	152°32'40.44"	+11°53'57.85"	+0°33'26.74"	0° Vir 15'59.64"	Rx
2023-Apr-19	12:00	2460054.0	3.0051	152°18'55.97"	+11°59'45.78"	+0°34'07.92"	0° Vir 01'22.11"	Rx
2023-Apr-20	12:00	2460055.0	2.9966	152°05'35.38"	+12°05'23.70"	+0°34'48.74"	29° Leo 47'10.26"	Rx
2023-Apr-21	12:00	2460056.0	2.9881	151°52'38.90"	+12°10'51.58"	+0°35'29.18"	29° Leo 33'24.30"	Rx
2023-Apr-22	12:00	2460057.0	2.9795	151°40'06.70"	+12°16'09.44"	+0°36'09.26"	29° Leo 20'04.35"	Rx
2023-Apr-23	12:00	2460058.0	2.9710	151°27'58.94"	+12°21'17.29"	+0°36'48.97"	29° Leo 07'10.51"	Rx
2023-Apr-24	12:00	2460059.0	2.9623	151°16'15.69"	+12°26'15.16"	+0°37'28.31"	28° Leo 54'42.84"	Rx
2023-Apr-25	12:00	2460060.0	2.9537	151°04'57.03"	+12°31'03.11"	+0°38'07.28"	28° Leo 42'41.36"	Rx
2023-Apr-26	12:00	2460061.0	2.9450	150°54'02.99"	+12°35'41.18"	+0°38'45.88"	28° Leo 31'06.06"	Rx
2023-Apr-27	12:00	2460062.0	2.9363	150°43'33.59"	+12°40'09.42"	+0°39'24.13"	28° Leo 19'56.92"	Rx
2023-Apr-28	12:00	2460063.0	2.9275	150°33'28.83"	+12°44'27.89"	+0°40'02.02"	28° Leo 09'13.89"	Rx
2023-Apr-29	12:00	2460064.0	2.9187	150°23'48.68"	+12°48'36.67"	+0°40'39.56"	27° Leo 58'56.93"	Rx
2023-Apr-30	12:00	2460065.0	2.9099	150°14'33.12"	+12°52'35.82"	+0°41'16.76"	27° Leo 49'05.96"	Rx
2023-May-01	12:00	2460066.0	2.9011	150°05'42.11"	+12°56'25.40"	+0°41'53.62"	27° Leo 39'40.89"	Rx
2023-May-02	12:00	2460067.0	2.8922	149°57'15.58"	+13°00'05.50"	+0°42'30.16"	27° Leo 30'41.63"	Rx
2023-May-03	12:00	2460068.0	2.8833	149°49'13.46"	+13°03'36.19"	+0°43'06.37"	27° Leo 22'08.08"	Rx
2023-May-04	12:00	2460069.0	2.8743	149°41'35.69"	+13°06'57.56"	+0°43'42.27"	27° Leo 14'00.11"	Rx
2023-May-05	12:00	2460070.0	2.8653	149°34'22.17"	+13°10'09.70"	+0°44'17.88"	27° Leo 06'17.61"	Rx
2023-May-06	12:00	2460071.0	2.8563	149°27'32.81"	+13°13'12.68"	+0°44'53.19"	26° Leo 59'00.45"	Rx
2023-May-07	12:00	2460072.0	2.8472	149°21'07.50"	+13°16'06.63"	+0°45'28.22"	26° Leo 52'08.45"	Rx
2023-May-08	12:00	2460073.0	2.8381	149°15'06.08"	+13°18'51.62"	+0°46'02.98"	26° Leo 45'41.47"	Rx
2023-May-09	12:00	2460074.0	2.8290	149°09'28.42"	+13°21'27.78"	+0°46'37.48"	26° Leo 39'39.29"	Rx
2023-May-10	12:00	2460075.0	2.8198	149°04'14.35"	+13°23'55.20"	+0°47'11.73"	26° Leo 34'01.75"	Rx

2023-May-11	12:00	2460076.0	2.8106	148°59'23.71"	+13°26'13.98"	+0°47'45.73"	26° Leo 28'48.63"	Rx
2023-May-12	12:00	2460077.0	2.8014	148°54'56.34"	+13°28'24.19"	+0°48'19.51"	26° Leo 23'59.76"	Rx
2023-May-13	12:00	2460078.0	2.7921	148°50'52.09"	+13°30'25.93"	+0°48'53.05"	26° Leo 19'34.95"	Rx
2023-May-14	12:00	2460079.0	2.7828	148°47'10.81"	+13°32'19.25"	+0°49'26.38"	26° Leo 15'34.06"	Rx
2023-May-15	12:00	2460080.0	2.7734	148°43'52.36"	+13°34'04.24"	+0°49'59.50"	26° Leo 11'56.91"	Rx
2023-May-16	12:00	2460081.0	2.7641	148°40'56.61"	+13°35'40.97"	+0°50'32.41"	26° Leo 08'43.35"	Rx
2023-May-17	12:00	2460082.0	2.7546	148°38'23.41"	+13°37'09.52"	+0°51'05.12"	26° Leo 05'53.19"	Rx
2023-May-18	12:00	2460083.0	2.7452	148°36'12.56"	+13°38'29.97"	+0°51'37.63"	26° Leo 03'26.26"	Rx
2023-May-19	12:00	2460084.0	2.7357	148°34'23.88"	+13°39'42.42"	+0°52'09.97"	26° Leo 01'22.31"	Rx
2023-May-20	12:00	2460085.0	2.7261	148°32'57.15"	+13°40'46.97"	+0°52'42.12"	25° Leo 59'41.11"	Rx
2023-May-21	12:00	2460086.0	2.7166	148°31'52.12"	+13°41'43.74"	+0°53'14.10"	25° Leo 58'22.41"	Rx
2023-May-22	12:00	2460087.0	2.7069	148°31'08.54"	+13°42'32.82"	+0°53'45.91"	25° Leo 57'25.92"	Rx
2023-May-23	12:00	2460088.0	2.6973	148°30'46.14"	+13°43'14.32"	+0°54'17.57"	25° Leo 56'51.37"	Rx
2023-May-24	12:00	2460089.0	2.6876	148°30'44.67"	+13°43'48.34"	+0°54'49.08"	25° Leo 56'38.48"	Rx
2023-May-25	12:00	2460090.0	2.6779	148°31'03.85"	+13°44'14.98"	+0°55'20.45"	25° Leo 56'46.98"	
2023-May-26	12:00	2460091.0	2.6681	148°31'43.44"	+13°44'34.34"	+0°55'51.68"	25° Leo 57'16.59"	
2023-May-27	12:00	2460092.0	2.6583	148°32'43.18"	+13°44'46.51"	+0°56'22.80"	25° Leo 58'07.05"	
2023-May-28	12:00	2460093.0	2.6484	148°34'02.81"	+13°44'51.57"	+0°56'53.81"	25° Leo 59'18.10"	
2023-May-29	12:00	2460094.0	2.6385	148°35'42.10"	+13°44'49.63"	+0°57'24.72"	26° Leo 00'49.49"	
2023-May-30	12:00	2460095.0	2.6286	148°37'40.81"	+13°44'40.76"	+0°57'55.54"	26° Leo 02'40.97"	
2023-May-31	12:00	2460096.0	2.6186	148°39'58.70"	+13°44'25.04"	+0°58'26.28"	26° Leo 04'52.31"	
2023-Jun-01	12:00	2460097.0	2.6086	148°42'35.55"	+13°44'02.55"	+0°58'56.95"	26° Leo 07'23.27"	
2023-Jun-02	12:00	2460098.0	2.5985	148°45'31.14"	+13°43'33.39"	+0°59'27.56"	26° Leo 10'13.62"	
2023-Jun-03	12:00	2460099.0	2.5884	148°48'45.25"	+13°42'57.63"	+0°59'58.12"	26° Leo 13'23.14"	
2023-Jun-04	12:00	2460100.0	2.5783	148°52'17.65"	+13°42'15.36"	+1°00'28.65"	26° Leo 16'51.58"	
2023-Jun-05	12:00	2460101.0	2.5681	148°56'08.10"	+13°41'26.67"	+1°00'59.16"	26° Leo 20'38.70"	
2023-Jun-06	12:00	2460102.0	2.5579	149°00'16.36"	+13°40'31.63"	+1°01'29.64"	26° Leo 24'44.27"	
2023-Jun-07	12:00	2460103.0	2.5476	149°04'42.21"	+13°39'30.33"	+1°02'00.12"	26° Leo 29'08.05"	
2023-Jun-08	12:00	2460104.0	2.5373	149°09'25.42"	+13°38'22.82"	+1°02'30.61"	26° Leo 33'49.82"	
2023-Jun-09	12:00	2460105.0	2.5269	149°14'25.80"	+13°37'09.16"	+1°03'01.10"	26° Leo 38'49.39"	
2023-Jun-10	12:00	2460106.0	2.5165	149°19'43.18"	+13°35'49.38"	+1°03'31.61"	26° Leo 44'06.60"	
2023-Jun-11	12:00	2460107.0	2.5060	149°25'17.40"	+13°34'23.52"	+1°04'02.14"	26° Leo 49'41.29"	
2023-Jun-12	12:00	2460108.0	2.4955	149°31'08.31"	+13°32'51.61"	+1°04'32.70"	26° Leo 55'33.32"	
2023-Jun-13	12:00	2460109.0	2.4850	149°37'15.75"	+13°31'13.70"	+1°05'03.30"	27° Leo 01'42.53"	
2023-Jun-14	12:00	2460110.0	2.4744	149°43'39.57"	+13°29'29.84"	+1°05'33.94"	27° Leo 08'08.78"	
2023-Jun-15	12:00	2460111.0	2.4638	149°50'19.58"	+13°27'40.08"	+1°06'04.62"	27° Leo 14'51.87"	
2023-Jun-16	12:00	2460112.0	2.4531	149°57'15.59"	+13°25'44.48"	+1°06'35.36"	27° Leo 21'51.63"	
2023-Jun-17	12:00	2460113.0	2.4423	150°04'27.41"	+13°23'43.08"	+1°07'06.16"	27° Leo 29'07.86"	
2023-Jun-18	12:00	2460114.0	2.4316	150°11'54.81"	+13°21'35.97"	+1°07'37.03"	27° Leo 36'40.34"	
2023-Jun-19	12:00	2460115.0	2.4207	150°19'37.59"	+13°19'23.19"	+1°08'07.97"	27° Leo 44'28.87"	
2023-Jun-20	12:00	2460116.0	2.4099	150°27'35.54"	+13°17'04.80"	+1°08'38.99"	27° Leo 52'33.24"	
2023-Jun-21	12:00	2460117.0	2.3989	150°35'48.45"	+13°14'40.85"	+1°09'10.10"	28° Leo 00'53.26"	
2023-Jun-22	12:00	2460118.0	2.3880	150°44'16.13"	+13°12'11.40"	+1°09'41.31"	28° Leo 09'28.74"	
2023-Jun-23	12:00	2460119.0	2.3769	150°52'58.39"	+13°09'36.49"	+1°10'12.63"	28° Leo 18'19.50"	
2023-Jun-24	12:00	2460120.0	2.3659	151°01'55.05"	+13°06'56.16"	+1°10'44.06"	28° Leo 27'25.36"	
2023-Jun-25	12:00	2460121.0	2.3547	151°11'05.94"	+13°04'10.45"	+1°11'15.62"	28° Leo 36'46.16"	

2023-Jun-26	12:00	2460122.0	2.3436	151°20'30.91"	+13°01'19.40"	+1°11'47.32"	28° Leo 46'21.77"	
2023-Jun-27	12:00	2460123.0	2.3323	151°30'09.80"	+12°58'23.05"	+1°12'19.15"	28° Leo 56'12.03"	
2023-Jun-28	12:00	2460124.0	2.3210	151°40'02.48"	+12°55'21.42"	+1°12'51.14"	29° Leo 06'16.81"	
2023-Jun-29	12:00	2460125.0	2.3097	151°50'08.81"	+12°52'14.56"	+1°13'23.30"	29° Leo 16'35.99"	
2023-Jun-30	12:00	2460126.0	2.2983	152°00'28.67"	+12°49'02.51"	+1°13'55.63"	29° Leo 27'09.45"	
2023-Jul-01	12:00	2460127.0	2.2869	152°11'01.92"	+12°45'45.28"	+1°14'28.14"	29° Leo 37'57.05"	
2023-Jul-02	12:00	2460128.0	2.2754	152°21'48.42"	+12°42'22.93"	+1°15'00.85"	29° Leo 48'58.67"	
2023-Jul-03	12:00	2460129.0	2.2638	152°32'48.05"	+12°38'55.50"	+1°15'33.75"	0° Vir 00'14.18"	
2023-Jul-04	12:00	2460130.0	2.2522	152°44'00.66"	+12°35'23.01"	+1°16'06.88"	0° Vir 11'43.45"	
2023-Jul-05	12:00	2460131.0	2.2406	152°55'26.12"	+12°31'45.49"	+1°16'40.22"	0° Vir 23'26.36"	
2023-Jul-06	12:00	2460132.0	2.2288	153°07'04.35"	+12°28'02.94"	+1°17'13.79"	0° Vir 35'22.84"	
2023-Jul-07	12:00	2460133.0	2.2171	153°18'55.26"	+12°24'15.37"	+1°17'47.60"	0° Vir 47'32.83"	
2023-Jul-08	12:00	2460134.0	2.2052	153°30'58.82"	+12°20'22.75"	+1°18'21.64"	0° Vir 59'56.29"	
2023-Jul-09	12:00	2460135.0	2.1933	153°43'14.99"	+12°16'25.08"	+1°18'55.94"	1° Vir 12'33.21"	
2023-Jul-10	12:00	2460136.0	2.1814	153°55'43.73"	+12°12'22.35"	+1°19'30.49"	1° Vir 25'23.57"	
2023-Jul-11	12:00	2460137.0	2.1694	154°08'25.01"	+12°08'14.56"	+1°20'05.31"	1° Vir 38'27.35"	
2023-Jul-12	12:00	2460138.0	2.1573	154°21'18.76"	+12°04'01.72"	+1°20'40.39"	1° Vir 51'44.48"	
2023-Jul-13	12:00	2460139.0	2.1452	154°34'24.93"	+11°59'43.83"	+1°21'15.74"	2° Vir 05'14.93"	
2023-Jul-14	12:00	2460140.0	2.1330	154°47'43.43"	+11°55'20.90"	+1°21'51.38"	2° Vir 18'58.62"	
2023-Jul-15	12:00	2460141.0	2.1207	155°01'14.18"	+11°50'52.95"	+1°22'27.31"	2° Vir 32'55.49"	
2023-Jul-16	12:00	2460142.0	2.1084	155°14'57.10"	+11°46'20.00"	+1°23'03.53"	2° Vir 47'05.45"	
2023-Jul-17	12:00	2460143.0	2.0960	155°28'52.12"	+11°41'42.05"	+1°23'40.06"	3° Vir 01'28.45"	
2023-Jul-18	12:00	2460144.0	2.0836	155°42'59.15"	+11°36'59.11"	+1°24'16.91"	3° Vir 16'04.43"	
2023-Jul-19	12:00	2460145.0	2.0711	155°57'18.13"	+11°32'11.18"	+1°24'54.08"	3° Vir 30'53.31"	
2023-Jul-20	12:00	2460146.0	2.0585	156°11'49.00"	+11°27'18.27"	+1°25'31.58"	3° Vir 45'55.08"	
2023-Jul-21	12:00	2460147.0	2.0458	156°26'31.71"	+11°22'20.38"	+1°26'09.43"	4° Vir 01'09.68"	
2023-Jul-22	12:00	2460148.0	2.0331	156°41'26.24"	+11°17'17.50"	+1°26'47.64"	4° Vir 16'37.10"	
2023-Jul-23	12:00	2460149.0	2.0204	156°56'32.55"	+11°12'09.62"	+1°27'26.21"	4° Vir 32'17.33"	
2023-Jul-24	12:00	2460150.0	2.0075	157°11'50.64"	+11°06'56.74"	+1°28'05.16"	4° Vir 48'10.37"	
2023-Jul-25	12:00	2460151.0	1.9946	157°27'20.50"	+11°01'38.84"	+1°28'44.50"	5° Vir 04'16.23"	
2023-Jul-26	12:00	2460152.0	1.9816	157°43'02.13"	+10°56'15.90"	+1°29'24.25"	5° Vir 20'34.92"	
2023-Jul-27	12:00	2460153.0	1.9685	157°58'55.54"	+10°50'47.93"	+1°30'04.40"	5° Vir 37'06.46"	
2023-Jul-28	12:00	2460154.0	1.9554	158°15'00.74"	+10°45'14.90"	+1°30'44.98"	5° Vir 53'50.89"	
2023-Jul-29	12:00	2460155.0	1.9422	158°31'17.75"	+10°39'36.80"	+1°31'26.00"	6° Vir 10'48.22"	
2023-Jul-30	12:00	2460156.0	1.9289	158°47'46.58"	+10°33'53.62"	+1°32'07.46"	6° Vir 27'58.47"	
2023-Jul-31	12:00	2460157.0	1.9155	159°04'27.24"	+10°28'05.35"	+1°32'49.39"	6° Vir 45'21.68"	
2023-Aug-01	12:00	2460158.0	1.9021	159°21'19.75"	+10°22'11.96"	+1°33'31.80"	7° Vir 02'57.87"	
2023-Aug-02	12:00	2460159.0	1.8886	159°38'24.14"	+10°16'13.42"	+1°34'14.68"	7° Vir 20'47.11"	
2023-Aug-03	12:00	2460160.0	1.8750	159°55'40.51"	+10°10'09.69"	+1°34'58.06"	7° Vir 38'49.48"	
2023-Aug-04	12:00	2460161.0	1.8613	160°13'08.94"	+10°04'00.68"	+1°35'41.94"	7° Vir 57'05.13"	
2023-Aug-05	12:00	2460162.0	1.8476	160°30'49.59"	+9°57'46.35"	+1°36'26.33"	8° Vir 15'34.21"	
2023-Aug-06	12:00	2460163.0	1.8337	160°48'42.58"	+9°51'26.61"	+1°37'11.25"	8° Vir 34'16.89"	
2023-Aug-07	12:00	2460164.0	1.8198	161°06'48.07"	+9°45'01.40"	+1°37'56.69"	8° Vir 53'13.32"	
2023-Aug-08	12:00	2460165.0	1.8058	161°25'06.18"	+9°38'30.67"	+1°38'42.68"	9° Vir 12'23.66"	
2023-Aug-09	12:00	2460166.0	1.7917	161°43'37.02"	+9°31'54.35"	+1°39'29.22"	9° Vir 31'48.04"	
2023-Aug-10	12:00	2460167.0	1.7775	162°02'20.72"	+9°25'12.40"	+1°40'16.32"	9° Vir 51'26.59"	

2023-Aug-11	12:00	2460168.0	1.7632	162°21'17.38"	+9°18'24.77"	+1°41'03.99"	10° Vir 11'19.45"	
2023-Aug-12	12:00	2460169.0	1.7489	162°40'27.12"	+9°11'31.40"	+1°41'52.25"	10° Vir 31'26.74"	
2023-Aug-13	12:00	2460170.0	1.7344	162°59'50.05"	+9°04'32.23"	+1°42'41.11"	10° Vir 51'48.62"	
2023-Aug-14	12:00	2460171.0	1.7199	163°19'26.32"	+8°57'27.20"	+1°43'30.58"	11° Vir 12'25.22"	
2023-Aug-15	12:00	2460172.0	1.7053	163°39'16.06"	+8°50'16.25"	+1°44'20.68"	11° Vir 33'16.71"	
2023-Aug-16	12:00	2460173.0	1.6905	163°59'19.43"	+8°42'59.31"	+1°45'11.42"	11° Vir 54'23.29"	
2023-Aug-17	12:00	2460174.0	1.6757	164°19'36.61"	+8°35'36.30"	+1°46'02.81"	12° Vir 15'45.14"	
2023-Aug-18	12:00	2460175.0	1.6607	164°40'07.80"	+8°28'07.13"	+1°46'54.88"	12° Vir 37'22.49"	
2023-Aug-19	12:00	2460176.0	1.6457	165°00'53.20"	+8°20'31.72"	+1°47'47.63"	12° Vir 59'15.57"	
2023-Aug-20	12:00	2460177.0	1.6306	165°21'53.04"	+8°12'49.97"	+1°48'41.08"	13° Vir 21'24.63"	
2023-Aug-21	12:00	2460178.0	1.6153	165°43'07.58"	+8°05'01.78"	+1°49'35.25"	13° Vir 43'49.95"	
2023-Aug-22	12:00	2460179.0	1.6000	166°04'37.06"	+7°57'07.06"	+1°50'30.16"	14° Vir 06'31.82"	
2023-Aug-23	12:00	2460180.0	1.5845	166°26'21.77"	+7°49'05.68"	+1°51'25.83"	14° Vir 29'30.52"	
2023-Aug-24	12:00	2460181.0	1.5689	166°48'22.00"	+7°40'57.54"	+1°52'22.26"	14° Vir 52'46.40"	
2023-Aug-25	12:00	2460182.0	1.5533	167°10'38.04"	+7°32'42.52"	+1°53'19.48"	15° Vir 16'19.77"	
2023-Aug-26	12:00	2460183.0	1.5375	167°33'10.23"	+7°24'20.49"	+1°54'17.50"	15° Vir 40'10.98"	
2023-Aug-27	12:00	2460184.0	1.5215	167°55'58.87"	+7°15'51.33"	+1°55'16.35"	16° Vir 04'20.38"	
2023-Aug-28	12:00	2460185.0	1.5055	168°19'04.33"	+7°07'14.89"	+1°56'16.03"	16° Vir 28'48.37"	
2023-Aug-29	12:00	2460186.0	1.4893	168°42'26.97"	+6°58'31.02"	+1°57'16.56"	16° Vir 53'35.34"	
2023-Aug-30	12:00	2460187.0	1.4731	169°06'07.22"	+6°49'39.56"	+1°58'17.96"	17° Vir 18'41.77"	
2023-Aug-31	12:00	2460188.0	1.4566	169°30'05.55"	+6°40'40.29"	+1°59'20.23"	17° Vir 44'08.16"	
2023-Sep-01	12:00	2460189.0	1.4401	169°54'22.48"	+6°31'33.02"	+2°00'23.40"	18° Vir 09'55.10"	
2023-Sep-02	12:00	2460190.0	1.4234	170°18'58.58"	+6°22'17.49"	+2°01'27.48"	18° Vir 36'03.20"	
2023-Sep-03	12:00	2460191.0	1.4066	170°43'54.43"	+6°12'53.48"	+2°02'32.46"	19° Vir 02'33.09"	
2023-Sep-04	12:00	2460192.0	1.3897	171°09'10.65"	+6°03'20.74"	+2°03'38.38"	19° Vir 29'25.44"	
2023-Sep-05	12:00	2460193.0	1.3726	171°34'47.84"	+5°53'39.03"	+2°04'45.23"	19° Vir 56'40.91"	
2023-Sep-06	12:00	2460194.0	1.3553	172°00'46.63"	+5°43'48.10"	+2°05'53.03"	20° Vir 24'20.18"	
2023-Sep-07	12:00	2460195.0	1.3379	172°27'07.67"	+5°33'47.69"	+2°07'01.80"	20° Vir 52'23.95"	
2023-Sep-08	12:00	2460196.0	1.3204	172°53'51.64"	+5°23'37.53"	+2°08'11.54"	21° Vir 20'52.96"	
2023-Sep-09	12:00	2460197.0	1.3027	173°20'59.26"	+5°13'17.33"	+2°09'22.26"	21° Vir 49'48.00"	
2023-Sep-10	12:00	2460198.0	1.2848	173°48'31.29"	+5°02'46.78"	+2°10'33.98"	22° Vir 19'09.88"	
2023-Sep-11	12:00	2460199.0	1.2667	174°16'28.56"	+4°52'05.57"	+2°11'46.70"	22° Vir 48'59.50"	
2023-Sep-12	12:00	2460200.0	1.2485	174°44'51.92"	+4°41'13.34"	+2°13'00.44"	23° Vir 19'17.79"	
2023-Sep-13	12:00	2460201.0	1.2302	175°13'42.31"	+4°30'09.73"	+2°14'15.19"	23° Vir 50'05.75"	
2023-Sep-14	12:00	2460202.0	1.2116	175°43'00.70"	+4°18'54.34"	+2°15'30.98"	24° Vir 21'24.44"	
2023-Sep-15	12:00	2460203.0	1.1928	176°12'48.16"	+4°07'26.76"	+2°16'47.79"	24° Vir 53'15.02"	
2023-Sep-16	12:00	2460204.0	1.1739	176°43'05.81"	+3°55'46.54"	+2°18'05.63"	25° Vir 25'38.69"	
2023-Sep-17	12:00	2460205.0	1.1547	177°13'54.86"	+3°43'53.20"	+2°19'24.50"	25° Vir 58'36.75"	
2023-Sep-18	12:00	2460206.0	1.1354	177°45'16.58"	+3°31'46.22"	+2°20'44.38"	26° Vir 32'10.58"	
2023-Sep-19	12:00	2460207.0	1.1158	178°17'12.35"	+3°19'25.07"	+2°22'05.27"	27° Vir 06'21.67"	
2023-Sep-20	12:00	2460208.0	1.0961	178°49'43.63"	+3°06'49.16"	+2°23'27.15"	27° Vir 41'11.57"	
2023-Sep-21	12:00	2460209.0	1.0761	179°22'51.97"	+2°53'57.85"	+2°24'49.99"	28° Vir 16'41.98"	
2023-Sep-22	12:00	2460210.0	1.0558	179°56'39.04"	+2°40'50.49"	+2°26'13.77"	28° Vir 52'54.69"	
2023-Sep-23	12:00	2460211.0	1.0353	180°31'06.62"	+2°27'26.36"	+2°27'38.44"	29° Vir 29'51.61"	
2023-Sep-24	12:00	2460212.0	1.0146	181°06'16.63"	+2°13'44.67"	+2°29'03.95"	0° Lib 07'34.81"	
2023-Sep-25	12:00	2460213.0	0.9936	181°42'11.13"	+1°59'44.60"	+2°30'30.25"	0° Lib 46'06.51"	

2023-Sep-26	12:00	2460214.0	0.9723	182°18'52.37"	+1°45'25.24"	+2°31'57.26"	1° Lib 25'29.13"	
2023-Sep-27	12:00	2460215.0	0.9508	182°56'22.79"	+1°30'45.57"	+2°33'24.88"	2° Lib 05'45.31"	
2023-Sep-28	12:00	2460216.0	0.9289	183°34'45.07"	+1°15'44.50"	+2°34'53.00"	2° Lib 46'57.91"	
2023-Sep-29	12:00	2460217.0	0.9068	184°14'02.10"	+1°00'20.83"	+2°36'21.49"	3° Lib 29'10.08"	
2023-Sep-30	12:00	2460218.0	0.8843	184°54'17.06"	+0°44'33.25"	+2°37'50.16"	4° Lib 12'25.23"	
2023-Oct-01	12:00	2460219.0	0.8615	185°35'33.38"	+0°28'20.33"	+2°39'18.85"	4° Lib 56'47.04"	
2023-Oct-02	12:00	2460220.0	0.8383	186°17'54.76"	+0°11'40.53"	+2°40'47.29"	5° Lib 42'19.50"	
2023-Oct-03	12:00	2460221.0	0.8148	187°01'25.22"	-0°05'27.86"	+2°42'15.24"	6° Lib 29'06.94"	
2023-Oct-04	12:00	2460222.0	0.7908	187°46'09.14"	-0°23'06.67"	+2°43'42.34"	7° Lib 17'14.07"	
2023-Oct-05	12:00	2460223.0	0.7664	188°32'11.33"	-0°41'17.95"	+2°45'08.21"	8° Lib 06'46.06"	
2023-Oct-06	12:00	2460224.0	0.7416	189°19'37.07"	-1°00'03.96"	+2°46'32.37"	8° Lib 57'48.58"	
2023-Oct-07	12:00	2460225.0	0.7163	190°08'32.19"	-1°19'27.23"	+2°47'54.25"	9° Lib 50'27.93"	
2023-Oct-08	12:00	2460226.0	0.6905	190°59'03.19"	-1°39'30.59"	+2°49'13.16"	10° Lib 44'51.07"	
2023-Oct-09	12:00	2460227.0	0.6642	191°51'17.27"	-2°00'17.21"	+2°50'28.26"	11° Lib 41'05.77"	
2023-Oct-10	12:00	2460228.0	0.6373	192°45'22.51"	-2°21'50.73"	+2°51'38.51"	12° Lib 39'20.73"	
2023-Oct-11	12:00	2460229.0	0.6098	193°41'27.98"	-2°44'15.27"	+2°52'42.64"	13° Lib 39'45.72"	
2023-Oct-12	12:00	2460230.0	0.5815	194°39'43.93"	-3°07'35.62"	+2°53'39.05"	14° Lib 42'31.80"	
2023-Oct-13	12:00	2460231.0	0.5526	195°40'21.99"	-3°31'57.33"	+2°54'25.75"	15° Lib 47'51.57"	
2023-Oct-14	12:00	2460232.0	0.5228	196°43'35.47"	-3°57'26.93"	+2°55'00.20"	16° Lib 55'59.43"	
2023-Oct-15	12:00	2460233.0	0.4922	197°49'39.64"	-4°24'12.23"	+2°55'19.09"	18° Lib 07'12.02"	
2023-Oct-16	12:00	2460234.0	0.4605	198°58'52.22"	-4°52'22.68"	+2°55'18.13"	19° Lib 21'48.72"	
2023-Oct-17	12:00	2460235.0	0.4277	200°11'33.85"	-5°22'09.95"	+2°54'51.49"	20° Lib 40'12.24"	
2023-Oct-18	12:00	2460236.0	0.3936	201°28'08.80"	-5°53'48.80"	+2°53'51.22"	22° Lib 02'49.57"	
2023-Oct-19	12:00	2460237.0	0.3581	202°49'05.73"	-6°27'38.40"	+2°52'05.99"	23° Lib 30'13.04"	
2023-Oct-20	12:00	2460238.0	0.3208	204°14'58.46"	-7°04'04.56"	+2°49'19.02"	25° Lib 03'01.70"	
2023-Oct-21	12:00	2460239.0	0.2815	205°46'26.34"	-7°43'43.71"	+2°45'04.17"	26° Lib 42'02.74"	
2023-Oct-22	12:00	2460240.0	0.2396	207°24'12.10"	-8°27'30.44"	+2°38'37.50"	28° Lib 28'11.77"	
2023-Oct-23	12:00	2460241.0	0.1945	209°08'49.26"	-9°16'53.66"	+2°28'37.15"	0° Sco 22'25.91"	
2023-Oct-24	12:00	2460242.0	0.1451	210°59'38.26"	-10°14'36.45"	+2°12'03.78"	2° Sco 24'56.49"	
2023-Oct-25	12:00	2460243.0	0.0908	212°47'52.87"	-11°26'29.99"	+1°40'19.21"	4° Sco 29'21.66"	
2023-Oct-26	12:00	2460244.0	0.0461	213°02'16.35"	-12°59'51.68"	+0°17'00.96"	5° Sco 13'48.30"	
2023-Oct-27	12:00	2460245.0	0.0827	208°47'05.85"	-13°37'38.58"	-1°43'13.87"	1° Sco 33'15.56"	Rx
2023-Oct-28	12:00	2460246.0	0.1375	205°12'00.68"	-13°31'48.18"	-2°51'55.39"	28° Lib 15'32.74"	Rx
2023-Oct-29	12:00	2460247.0	0.1875	202°34'47.24"	-13°20'13.10"	-3°36'50.13"	25° Lib 48'40.43"	Rx
2023-Oct-30	12:00	2460248.0	0.2332	200°32'58.99"	-13°08'28.49"	-4°09'53.35"	23° Lib 53'56.33"	Rx
2023-Oct-31	12:00	2460249.0	0.2755	198°54'48.52"	-12°57'42.92"	-4°35'49.75"	22° Lib 20'59.22"	Rx
2023-Nov-01	12:00	2460250.0	0.3152	197°33'31.56"	-12°48'10.13"	-4°57'02.02"	21° Lib 03'46.66"	Rx
2023-Nov-02	12:00	2460251.0	0.3527	196°24'54.16"	-12°39'48.74"	-5°14'52.47"	19° Lib 58'27.96"	Rx
2023-Nov-03	12:00	2460252.0	0.3885	195°26'05.42"	-12°32'32.92"	-5°30'13.12"	19° Lib 02'26.30"	Rx
2023-Nov-04	12:00	2460253.0	0.4228	194°35'04.33"	-12°26'15.78"	-5°43'38.95"	18° Lib 13'49.74"	Rx
2023-Nov-05	12:00	2460254.0	0.4557	193°50'21.88"	-12°20'50.61"	-5°55'34.66"	17° Lib 31'15.37"	Rx
2023-Nov-06	12:00	2460255.0	0.4875	193°10'50.60"	-12°16'11.25"	-6°06'18.27"	16° Lib 53'39.90"	Rx
2023-Nov-07	12:00	2460256.0	0.5183	192°35'38.05"	-12°12'12.20"	-6°16'03.35"	16° Lib 20'13.93"	Rx
2023-Nov-08	12:00	2460257.0	0.5482	192°04'02.69"	-12°08'48.58"	-6°25'00.32"	15° Lib 50'18.08"	Rx
2023-Nov-09	12:00	2460258.0	0.5773	191°35'31.03"	-12°05'56.12"	-6°33'17.37"	15° Lib 23'20.48"	Rx
2023-Nov-10	12:00	2460259.0	0.6056	191°09'35.67"	-12°03'31.03"	-6°41'01.00"	14° Lib 58'54.92"	Rx

2023-Nov-11	12:00	2460260.0	0.6332	190°45'53.91"	-12°01'29.98"	-6°48'16.48"	14° Lib 36'39.61"	Rx
2023-Nov-12	12:00	2460261.0	0.6602	190°24'06.73"	-11°59'50.01"	-6°55'08.13"	14° Lib 16'16.23"	Rx
2023-Nov-13	12:00	2460262.0	0.6866	190°03'58.01"	-11°58'28.49"	-7°01'39.50"	13° Lib 57'29.19"	Rx
2023-Nov-14	12:00	2460263.0	0.7125	189°45'13.99"	-11°57'23.06"	-7°07'53.57"	13° Lib 40'05.13"	Rx
2023-Nov-15	12:00	2460264.0	0.7378	189°27'42.82"	-11°56'31.61"	-7°13'52.83"	13° Lib 23'52.52"	Rx
2023-Nov-16	12:00	2460265.0	0.7627	189°11'14.18"	-11°55'52.24"	-7°19'39.42"	13° Lib 08'41.28"	Rx
2023-Nov-17	12:00	2460266.0	0.7872	188°55'39.09"	-11°55'23.21"	-7°25'15.14"	12° Lib 54'22.59"	Rx
2023-Nov-18	12:00	2460267.0	0.8112	188°40'49.63"	-11°55'02.95"	-7°30'41.54"	12° Lib 40'48.69"	Rx
2023-Nov-19	12:00	2460268.0	0.8348	188°26'38.82"	-11°54'50.04"	-7°35'59.99"	12° Lib 27'52.69"	Rx
2023-Nov-20	12:00	2460269.0	0.8580	188°13'00.46"	-11°54'43.18"	-7°41'11.65"	12° Lib 15'28.47"	Rx
2023-Nov-21	12:00	2460270.0	0.8809	187°59'49.05"	-11°54'41.19"	-7°46'17.55"	12° Lib 03'30.56"	Rx
2023-Nov-22	12:00	2460271.0	0.9034	187°46'59.64"	-11°54'42.99"	-7°51'18.60"	11° Lib 51'54.07"	Rx
2023-Nov-23	12:00	2460272.0	0.9256	187°34'27.78"	-11°54'47.59"	-7°56'15.61"	11° Lib 40'34.55"	Rx
2023-Nov-24	12:00	2460273.0	0.9475	187°22'09.43"	-11°54'54.08"	-8°01'09.27"	11° Lib 29'27.99"	Rx
2023-Nov-25	12:00	2460274.0	0.9691	187°10'00.89"	-11°55'01.58"	-8°06'00.23"	11° Lib 18'30.69"	Rx
2023-Nov-26	12:00	2460275.0	0.9904	186°57'58.75"	-11°55'09.28"	-8°10'49.06"	11° Lib 07'39.21"	Rx
2023-Nov-27	12:00	2460276.0	1.0114	186°45'59.82"	-11°55'16.39"	-8°15'36.27"	10° Lib 56'50.38"	Rx
2023-Nov-28	12:00	2460277.0	1.0322	186°34'01.15"	-11°55'22.16"	-8°20'22.30"	10° Lib 46'01.18"	Rx
2023-Nov-29	12:00	2460278.0	1.0527	186°21'59.95"	-11°55'25.84"	-8°25'07.59"	10° Lib 35'08.80"	Rx
2023-Nov-30	12:00	2460279.0	1.0730	186°09'53.60"	-11°55'26.72"	-8°29'52.48"	10° Lib 24'10.56"	Rx
2023-Dec-01	12:00	2460280.0	1.0930	185°57'39.63"	-11°55'24.10"	-8°34'37.30"	10° Lib 13'03.94"	Rx
2023-Dec-02	12:00	2460281.0	1.1128	185°45'15.71"	-11°55'17.28"	-8°39'22.35"	10° Lib 01'46.53"	Rx
2023-Dec-03	12:00	2460282.0	1.1324	185°32'39.63"	-11°55'05.61"	-8°44'07.87"	9° Lib 50'16.04"	Rx
2023-Dec-04	12:00	2460283.0	1.1518	185°19'49.30"	-11°54'48.41"	-8°48'54.10"	9° Lib 38'30.31"	Rx
2023-Dec-05	12:00	2460284.0	1.1710	185°06'42.73"	-11°54'25.05"	-8°53'41.24"	9° Lib 26'27.24"	Rx
2023-Dec-06	12:00	2460285.0	1.1899	184°53'17.99"	-11°53'54.87"	-8°58'29.45"	9° Lib 14'04.82"	Rx
2023-Dec-07	12:00	2460286.0	1.2087	184°39'33.27"	-11°53'17.24"	-9°03'18.87"	9° Lib 01'21.11"	Rx
2023-Dec-08	12:00	2460287.0	1.2273	184°25'26.81"	-11°52'31.53"	-9°08'09.63"	8° Lib 48'14.25"	Rx
2023-Dec-09	12:00	2460288.0	1.2457	184°10'56.92"	-11°51'37.08"	-9°13'01.82"	8° Lib 34'42.42"	Rx
2023-Dec-10	12:00	2460289.0	1.2639	183°56'01.96"	-11°50'33.28"	-9°17'55.51"	8° Lib 20'43.85"	Rx
2023-Dec-11	12:00	2460290.0	1.2820	183°40'40.36"	-11°49'19.48"	-9°22'50.76"	8° Lib 06'16.82"	Rx
2023-Dec-12	12:00	2460291.0	1.2999	183°24'50.59"	-11°47'55.03"	-9°27'47.58"	7° Lib 51'19.66"	Rx
2023-Dec-13	12:00	2460292.0	1.3176	183°08'31.16"	-11°46'19.28"	-9°32'45.98"	7° Lib 35'50.72"	Rx
2023-Dec-14	12:00	2460293.0	1.3352	182°51'40.65"	-11°44'31.58"	-9°37'45.94"	7° Lib 19'48.40"	Rx
2023-Dec-15	12:00	2460294.0	1.3526	182°34'17.68"	-11°42'31.27"	-9°42'47.43"	7° Lib 03'11.17"	Rx
2023-Dec-16	12:00	2460295.0	1.3699	182°16'20.97"	-11°40'17.72"	-9°47'50.37"	6° Lib 45'57.52"	Rx
2023-Dec-17	12:00	2460296.0	1.3870	181°57'49.30"	-11°37'50.29"	-9°52'54.69"	6° Lib 28'06.05"	Rx
2023-Dec-18	12:00	2460297.0	1.4040	181°38'41.52"	-11°35'08.36"	-9°58'00.31"	6° Lib 09'35.43"	Rx
2023-Dec-19	12:00	2460298.0	1.4208	181°18'56.58"	-11°32'11.33"	-10°03'07.09"	5° Lib 50'24.37"	Rx
2023-Dec-20	12:00	2460299.0	1.4375	180°58'33.47"	-11°28'58.61"	-10°08'14.92"	5° Lib 30'31.68"	Rx
2023-Dec-21	12:00	2460300.0	1.4541	180°37'31.25"	-11°25'29.61"	-10°13'23.63"	5° Lib 09'56.19"	Rx
2023-Dec-22	12:00	2460301.0	1.4705	180°15'49.01"	-11°21'43.75"	-10°18'33.07"	4° Lib 48'36.76"	Rx
2023-Dec-23	12:00	2460302.0	1.4868	179°53'25.87"	-11°17'40.42"	-10°23'43.03"	4° Lib 26'32.29"	Rx
2023-Dec-24	12:00	2460303.0	1.5030	179°30'21.00"	-11°13'19.03"	-10°28'53.31"	4° Lib 03'41.70"	Rx
2023-Dec-25	12:00	2460304.0	1.5191	179°06'33.59"	-11°08'38.97"	-10°34'03.67"	3° Lib 40'03.94"	Rx
2023-Dec-26	12:00	2460305.0	1.5350	178°42'02.88"	-11°03'39.63"	-10°39'13.85"	3° Lib 15'37.98"	Rx

2023-Dec-27	12:00	2460306.0	1.5508	178°16'48.15"	-10°58'20.39"	-10°44'23.56"	2° Lib 50'22.82"	Rx
2023-Dec-28	12:00	2460307.0	1.5665	177°50'48.76"	-10°52'40.64"	-10°49'32.49"	2° Lib 24'17.54"	Rx
2023-Dec-29	12:00	2460308.0	1.5821	177°24'04.12"	-10°46'39.76"	-10°54'40.28"	1° Lib 57'21.27"	Rx
2023-Dec-30	12:00	2460309.0	1.5976	176°56'33.72"	-10°40'17.16"	-10°59'46.57"	1° Lib 29'33.19"	Rx
2023-Dec-31	12:00	2460310.0	1.6129	176°28'17.14"	-10°33'32.26"	-11°04'50.96"	1° Lib 00'52.58"	Rx