

Custom Ephemeris

Compiled by: APS

Calculated by: JPL Horizons

Date: 2023-09-12

C/2023 P1 (Nishimura)

Discovered: 2023-08-11.76854

Orbital Period: 433.50 yrs.

Diameter: n/a

Perihelion: 2023-09-17, 15:30:30.686 UT

Links:

[SBDB](#)

[MPC](#)

Date	UT	JD	AU	RA	Declination	Latitude	Longitude	Rx
2023-Jan-01	12:00	2459946.0	4.2231	91°58'01.39"	-10°40'59.05"	-34°06'18.87"	2° Can 20'04.75"	Rx
2023-Jan-02	12:00	2459947.0	4.2118	91°37'37.69"	-10°38'42.69"	-34°04'20.60"	1° Can 55'50.37"	Rx
2023-Jan-03	12:00	2459948.0	4.2005	91°17'11.34"	-10°36'14.12"	-34°02'06.73"	1° Can 31'33.47"	Rx
2023-Jan-04	12:00	2459949.0	4.1892	90°56'42.98"	-10°33'33.36"	-33°59'37.23"	1° Can 07'15.00"	Rx
2023-Jan-05	12:00	2459950.0	4.1778	90°36'13.29"	-10°30'40.40"	-33°56'52.11"	0° Can 42'55.91"	Rx
2023-Jan-06	12:00	2459951.0	4.1665	90°15'42.93"	-10°27'35.26"	-33°53'51.37"	0° Can 18'37.14"	Rx
2023-Jan-07	12:00	2459952.0	4.1551	89°55'12.56"	-10°24'17.98"	-33°50'35.04"	29° Gem 54'19.62"	Rx
2023-Jan-08	12:00	2459953.0	4.1437	89°34'42.87"	-10°20'48.59"	-33°47'03.18"	29° Gem 30'04.31"	Rx
2023-Jan-09	12:00	2459954.0	4.1323	89°14'14.51"	-10°17'07.17"	-33°43'15.84"	29° Gem 05'52.14"	Rx
2023-Jan-10	12:00	2459955.0	4.1209	88°53'48.18"	-10°13'13.77"	-33°39'13.11"	28° Gem 41'44.08"	Rx
2023-Jan-11	12:00	2459956.0	4.1094	88°33'24.56"	-10°09'08.48"	-33°34'55.11"	28° Gem 17'41.08"	Rx
2023-Jan-12	12:00	2459957.0	4.0980	88°13'04.35"	-10°04'51.40"	-33°30'21.96"	27° Gem 53'44.08"	Rx
2023-Jan-13	12:00	2459958.0	4.0865	87°52'48.23"	-10°00'22.62"	-33°25'33.81"	27° Gem 29'54.04"	Rx
2023-Jan-14	12:00	2459959.0	4.0750	87°32'36.92"	-9°55'42.25"	-33°20'30.81"	27° Gem 06'11.90"	Rx
2023-Jan-15	12:00	2459960.0	4.0635	87°12'31.09"	-9°50'50.41"	-33°15'13.15"	26° Gem 42'38.61"	Rx
2023-Jan-16	12:00	2459961.0	4.0520	86°52'31.46"	-9°45'47.23"	-33°09'41.03"	26° Gem 19'15.09"	Rx
2023-Jan-17	12:00	2459962.0	4.0405	86°32'38.71"	-9°40'32.83"	-33°03'54.66"	25° Gem 56'02.25"	Rx
2023-Jan-18	12:00	2459963.0	4.0290	86°12'53.50"	-9°35'07.35"	-32°57'54.30"	25° Gem 33'00.99"	Rx
2023-Jan-19	12:00	2459964.0	4.0174	85°53'16.50"	-9°29'30.94"	-32°51'40.19"	25° Gem 10'12.15"	Rx
2023-Jan-20	12:00	2459965.0	4.0058	85°33'48.34"	-9°23'43.77"	-32°45'12.61"	24° Gem 47'36.56"	Rx
2023-Jan-21	12:00	2459966.0	3.9942	85°14'29.62"	-9°17'46.03"	-32°38'31.87"	24° Gem 25'14.99"	Rx
2023-Jan-22	12:00	2459967.0	3.9826	84°55'20.94"	-9°11'37.93"	-32°31'38.26"	24° Gem 03'08.22"	Rx
2023-Jan-23	12:00	2459968.0	3.9710	84°36'22.90"	-9°05'19.71"	-32°24'32.15"	23° Gem 41'16.97"	Rx
2023-Jan-24	12:00	2459969.0	3.9593	84°17'36.08"	-8°58'51.61"	-32°17'13.86"	23° Gem 19'41.99"	Rx
2023-Jan-25	12:00	2459970.0	3.9477	83°59'01.06"	-8°52'13.91"	-32°09'43.77"	22° Gem 58'23.98"	Rx
2023-Jan-26	12:00	2459971.0	3.9360	83°40'38.41"	-8°45'26.83"	-32°02'02.26"	22° Gem 37'23.62"	Rx
2023-Jan-27	12:00	2459972.0	3.9243	83°22'28.66"	-8°38'30.64"	-31°54'09.70"	22° Gem 16'41.55"	Rx
2023-Jan-28	12:00	2459973.0	3.9126	83°04'32.33"	-8°31'25.57"	-31°46'06.47"	21° Gem 56'18.35"	Rx
2023-Jan-29	12:00	2459974.0	3.9009	82°46'49.87"	-8°24'11.87"	-31°37'52.99"	21° Gem 36'14.58"	Rx
2023-Jan-30	12:00	2459975.0	3.8891	82°29'21.73"	-8°16'49.79"	-31°29'29.62"	21° Gem 16'30.73"	Rx
2023-Jan-31	12:00	2459976.0	3.8773	82°12'08.32"	-8°09'19.59"	-31°20'56.77"	20° Gem 57'07.25"	Rx
2023-Feb-01	12:00	2459977.0	3.8656	81°55'10.04"	-8°01'41.51"	-31°12'14.84"	20° Gem 38'04.57"	Rx
2023-Feb-02	12:00	2459978.0	3.8538	81°38'27.24"	-7°53'55.81"	-31°03'24.22"	20° Gem 19'23.07"	Rx
2023-Feb-03	12:00	2459979.0	3.8419	81°22'00.29"	-7°46'02.76"	-30°54'25.30"	20° Gem 01'03.12"	Rx
2023-Feb-04	12:00	2459980.0	3.8301	81°05'49.52"	-7°38'02.62"	-30°45'18.48"	19° Gem 43'05.05"	Rx
2023-Feb-05	12:00	2459981.0	3.8183	80°49'55.24"	-7°29'55.65"	-30°36'04.15"	19° Gem 25'29.17"	Rx
2023-Feb-06	12:00	2459982.0	3.8064	80°34'17.76"	-7°21'42.12"	-30°26'42.71"	19° Gem 08'15.76"	Rx
2023-Feb-07	12:00	2459983.0	3.7945	80°18'57.37"	-7°13'22.28"	-30°17'14.52"	18° Gem 51'25.09"	Rx

2023-Feb-08	12:00	2459984.0	3.7826	80°03'54.37"	-7°04'56.40"	-30°07'39.99"	18° Gem 34'57.42"	Rx
2023-Feb-09	12:00	2459985.0	3.7707	79°49'09.02"	-6°56'24.73"	-29°57'59.49"	18° Gem 18'52.97"	Rx
2023-Feb-10	12:00	2459986.0	3.7587	79°34'41.58"	-6°47'47.52"	-29°48'13.38"	18° Gem 03'11.96"	Rx
2023-Feb-11	12:00	2459987.0	3.7468	79°20'32.31"	-6°39'05.01"	-29°38'22.05"	17° Gem 47'54.59"	Rx
2023-Feb-12	12:00	2459988.0	3.7348	79°06'41.45"	-6°30'17.46"	-29°28'25.86"	17° Gem 33'01.03"	Rx
2023-Feb-13	12:00	2459989.0	3.7228	78°53'09.22"	-6°21'25.08"	-29°18'25.16"	17° Gem 18'31.44"	Rx
2023-Feb-14	12:00	2459990.0	3.7108	78°39'55.81"	-6°12'28.12"	-29°08'20.32"	17° Gem 04'25.93"	Rx
2023-Feb-15	12:00	2459991.0	3.6987	78°27'01.40"	-6°03'26.79"	-28°58'11.69"	16° Gem 50'44.61"	Rx
2023-Feb-16	12:00	2459992.0	3.6867	78°14'26.15"	-5°54'21.32"	-28°47'59.60"	16° Gem 37'27.53"	Rx
2023-Feb-17	12:00	2459993.0	3.6746	78°02'10.17"	-5°45'11.96"	-28°37'44.42"	16° Gem 24'34.72"	Rx
2023-Feb-18	12:00	2459994.0	3.6625	77°50'13.57"	-5°35'58.95"	-28°27'26.47"	16° Gem 12'06.18"	Rx
2023-Feb-19	12:00	2459995.0	3.6504	77°38'36.43"	-5°26'42.53"	-28°17'06.10"	16° Gem 00'01.89"	Rx
2023-Feb-20	12:00	2459996.0	3.6383	77°27'18.85"	-5°17'22.97"	-28°06'43.63"	15° Gem 48'21.82"	Rx
2023-Feb-21	12:00	2459997.0	3.6261	77°16'20.89"	-5°08'00.53"	-27°56'19.40"	15° Gem 37'05.96"	Rx
2023-Feb-22	12:00	2459998.0	3.6140	77°05'42.65"	-4°58'35.44"	-27°45'53.72"	15° Gem 26'14.27"	Rx
2023-Feb-23	12:00	2459999.0	3.6018	76°55'24.16"	-4°49'07.93"	-27°35'26.89"	15° Gem 15'46.68"	Rx
2023-Feb-24	12:00	2460000.0	3.5896	76°45'25.48"	-4°39'38.21"	-27°24'59.22"	15° Gem 05'43.11"	Rx
2023-Feb-25	12:00	2460001.0	3.5773	76°35'46.58"	-4°30'06.49"	-27°14'30.99"	14° Gem 56'03.44"	Rx
2023-Feb-26	12:00	2460002.0	3.5651	76°26'27.46"	-4°20'32.97"	-27°04'02.45"	14° Gem 46'47.52"	Rx
2023-Feb-27	12:00	2460003.0	3.5528	76°17'28.06"	-4°10'57.83"	-26°53'33.89"	14° Gem 37'55.17"	Rx
2023-Feb-28	12:00	2460004.0	3.5405	76°08'48.32"	-4°01'21.26"	-26°43'05.53"	14° Gem 29'26.21"	Rx
2023-Mar-01	12:00	2460005.0	3.5282	76°00'28.17"	-3°51'43.44"	-26°32'37.62"	14° Gem 21'20.43"	Rx
2023-Mar-02	12:00	2460006.0	3.5159	75°52'27.51"	-3°42'04.55"	-26°22'10.38"	14° Gem 13'37.63"	Rx
2023-Mar-03	12:00	2460007.0	3.5035	75°44'46.26"	-3°32'24.77"	-26°11'44.02"	14° Gem 06'17.59"	Rx
2023-Mar-04	12:00	2460008.0	3.4911	75°37'24.34"	-3°22'44.26"	-26°01'18.74"	13° Gem 59'20.09"	Rx
2023-Mar-05	12:00	2460009.0	3.4787	75°30'21.63"	-3°13'03.19"	-25°50'54.74"	13° Gem 52'44.92"	Rx
2023-Mar-06	12:00	2460010.0	3.4663	75°23'38.04"	-3°03'21.71"	-25°40'32.19"	13° Gem 46'31.86"	Rx
2023-Mar-07	12:00	2460011.0	3.4539	75°17'13.49"	-2°53'39.97"	-25°30'11.27"	13° Gem 40'40.70"	Rx
2023-Mar-08	12:00	2460012.0	3.4414	75°11'07.86"	-2°43'58.12"	-25°19'52.13"	13° Gem 35'11.23"	Rx
2023-Mar-09	12:00	2460013.0	3.4289	75°05'21.08"	-2°34'16.28"	-25°09'34.94"	13° Gem 30'03.25"	Rx
2023-Mar-10	12:00	2460014.0	3.4164	74°59'53.06"	-2°24'34.58"	-24°59'19.83"	13° Gem 25'16.56"	Rx
2023-Mar-11	12:00	2460015.0	3.4039	74°54'43.69"	-2°14'53.13"	-24°49'06.95"	13° Gem 20'50.95"	Rx
2023-Mar-12	12:00	2460016.0	3.3914	74°49'52.89"	-2°05'12.05"	-24°38'56.42"	13° Gem 16'46.23"	Rx
2023-Mar-13	12:00	2460017.0	3.3788	74°45'20.55"	-1°55'31.43"	-24°28'48.36"	13° Gem 13'02.19"	Rx
2023-Mar-14	12:00	2460018.0	3.3662	74°41'06.54"	-1°45'51.36"	-24°18'42.90"	13° Gem 09'38.59"	Rx
2023-Mar-15	12:00	2460019.0	3.3536	74°37'10.75"	-1°36'11.96"	-24°08'40.15"	13° Gem 06'35.22"	Rx
2023-Mar-16	12:00	2460020.0	3.3409	74°33'33.03"	-1°26'33.31"	-23°58'40.22"	13° Gem 03'51.82"	Rx
2023-Mar-17	12:00	2460021.0	3.3283	74°30'13.22"	-1°16'55.53"	-23°48'43.20"	13° Gem 01'28.13"	Rx
2023-Mar-18	12:00	2460022.0	3.3156	74°27'11.17"	-1°07'18.72"	-23°38'49.20"	12° Gem 59'23.92"	Rx
2023-Mar-19	12:00	2460023.0	3.3029	74°24'26.72"	-0°57'43.01"	-23°28'58.32"	12° Gem 57'38.91"	Rx
2023-Mar-20	12:00	2460024.0	3.2901	74°21'59.74"	-0°48'08.50"	-23°19'10.64"	12° Gem 56'12.88"	Rx
2023-Mar-21	12:00	2460025.0	3.2774	74°19'50.09"	-0°38'35.30"	-23°09'26.26"	12° Gem 55'05.61"	Rx
2023-Mar-22	12:00	2460026.0	3.2646	74°17'57.63"	-0°29'03.51"	-22°59'45.25"	12° Gem 54'16.86"	Rx
2023-Mar-23	12:00	2460027.0	3.2518	74°16'22.22"	-0°19'33.22"	-22°50'07.68"	12° Gem 53'46.41"	Rx
2023-Mar-24	12:00	2460028.0	3.2390	74°15'03.70"	-0°10'04.49"	-22°40'33.63"	12° Gem 53'34.01"	Rx
2023-Mar-25	12:00	2460029.0	3.2261	74°14'01.90"	-0°00'37.39"	-22°31'03.14"	12° Gem 53'39.41"	

2023-Mar-26	12:00	2460030.0	3.2132	74°13'16.62"	+0°08'48.01"	-22°21'36.27"	12° Gem 54'02.31"	
2023-Mar-27	12:00	2460031.0	3.2003	74°12'47.65"	+0°18'11.67"	-22°12'13.06"	12° Gem 54'42.44"	
2023-Mar-28	12:00	2460032.0	3.1874	74°12'34.78"	+0°27'33.52"	-22°02'53.54"	12° Gem 55'39.51"	
2023-Mar-29	12:00	2460033.0	3.1745	74°12'37.83"	+0°36'53.50"	-21°53'37.75"	12° Gem 56'53.25"	
2023-Mar-30	12:00	2460034.0	3.1615	74°12'56.58"	+0°46'11.56"	-21°44'25.70"	12° Gem 58'23.38"	
2023-Mar-31	12:00	2460035.0	3.1485	74°13'30.84"	+0°55'27.65"	-21°35'17.41"	13° Gem 00'09.62"	
2023-Apr-01	12:00	2460036.0	3.1355	74°14'20.43"	+1°04'41.71"	-21°26'12.89"	13° Gem 02'11.74"	
2023-Apr-02	12:00	2460037.0	3.1224	74°15'25.15"	+1°13'53.71"	-21°17'12.16"	13° Gem 04'29.48"	
2023-Apr-03	12:00	2460038.0	3.1093	74°16'44.84"	+1°23'03.61"	-21°08'15.20"	13° Gem 07'02.60"	
2023-Apr-04	12:00	2460039.0	3.0962	74°18'19.34"	+1°32'11.36"	-20°59'22.02"	13° Gem 09'50.89"	
2023-Apr-05	12:00	2460040.0	3.0831	74°20'08.50"	+1°41'16.94"	-20°50'32.62"	13° Gem 12'54.14"	
2023-Apr-06	12:00	2460041.0	3.0699	74°22'12.16"	+1°50'20.33"	-20°41'46.98"	13° Gem 16'12.15"	
2023-Apr-07	12:00	2460042.0	3.0568	74°24'30.20"	+1°59'21.51"	-20°33'05.09"	13° Gem 19'44.73"	
2023-Apr-08	12:00	2460043.0	3.0435	74°27'02.48"	+2°08'20.47"	-20°24'26.93"	13° Gem 23'31.69"	
2023-Apr-09	12:00	2460044.0	3.0303	74°29'48.87"	+2°17'17.20"	-20°15'52.49"	13° Gem 27'32.86"	
2023-Apr-10	12:00	2460045.0	3.0170	74°32'49.21"	+2°26'11.69"	-20°07'21.75"	13° Gem 31'48.04"	
2023-Apr-11	12:00	2460046.0	3.0037	74°36'03.37"	+2°35'03.96"	-19°58'54.69"	13° Gem 36'17.04"	
2023-Apr-12	12:00	2460047.0	2.9904	74°39'31.18"	+2°43'53.97"	-19°50'31.29"	13° Gem 40'59.64"	
2023-Apr-13	12:00	2460048.0	2.9771	74°43'12.48"	+2°52'41.72"	-19°42'11.53"	13° Gem 45'55.65"	
2023-Apr-14	12:00	2460049.0	2.9637	74°47'07.11"	+3°01'27.17"	-19°33'55.38"	13° Gem 51'04.85"	
2023-Apr-15	12:00	2460050.0	2.9503	74°51'14.92"	+3°10'10.31"	-19°25'42.84"	13° Gem 56'27.05"	
2023-Apr-16	12:00	2460051.0	2.9369	74°55'35.76"	+3°18'51.09"	-19°17'33.87"	14° Gem 02'02.08"	
2023-Apr-17	12:00	2460052.0	2.9234	75°00'09.52"	+3°27'29.49"	-19°09'28.47"	14° Gem 07'49.76"	
2023-Apr-18	12:00	2460053.0	2.9099	75°04'56.06"	+3°36'05.49"	-19°01'26.59"	14° Gem 13'49.94"	
2023-Apr-19	12:00	2460054.0	2.8964	75°09'55.28"	+3°44'39.06"	-18°53'28.22"	14° Gem 20'02.45"	
2023-Apr-20	12:00	2460055.0	2.8828	75°15'07.03"	+3°53'10.22"	-18°45'33.34"	14° Gem 26'27.15"	
2023-Apr-21	12:00	2460056.0	2.8692	75°20'31.19"	+4°01'38.96"	-18°37'41.90"	14° Gem 33'03.84"	
2023-Apr-22	12:00	2460057.0	2.8556	75°26'07.58"	+4°10'05.27"	-18°29'53.88"	14° Gem 39'52.34"	
2023-Apr-23	12:00	2460058.0	2.8420	75°31'56.05"	+4°18'29.18"	-18°22'09.23"	14° Gem 46'52.44"	
2023-Apr-24	12:00	2460059.0	2.8283	75°37'56.41"	+4°26'50.69"	-18°14'27.91"	14° Gem 54'03.95"	
2023-Apr-25	12:00	2460060.0	2.8146	75°44'08.51"	+4°35'09.78"	-18°06'49.88"	15° Gem 01'26.66"	
2023-Apr-26	12:00	2460061.0	2.8008	75°50'32.18"	+4°43'26.48"	-17°59'15.09"	15° Gem 09'00.39"	
2023-Apr-27	12:00	2460062.0	2.7871	75°57'07.26"	+4°51'40.78"	-17°51'43.48"	15° Gem 16'44.94"	
2023-Apr-28	12:00	2460063.0	2.7733	76°03'53.61"	+4°59'52.68"	-17°44'15.01"	15° Gem 24'40.14"	
2023-Apr-29	12:00	2460064.0	2.7594	76°10'51.09"	+5°08'02.20"	-17°36'49.62"	15° Gem 32'45.85"	
2023-Apr-30	12:00	2460065.0	2.7456	76°17'59.58"	+5°16'09.35"	-17°29'27.24"	15° Gem 41'01.90"	
2023-May-01	12:00	2460066.0	2.7317	76°25'18.97"	+5°24'14.13"	-17°22'07.83"	15° Gem 49'28.17"	
2023-May-02	12:00	2460067.0	2.7177	76°32'49.16"	+5°32'16.56"	-17°14'51.32"	15° Gem 58'04.53"	
2023-May-03	12:00	2460068.0	2.7038	76°40'30.04"	+5°40'16.67"	-17°07'37.65"	16° Gem 06'50.87"	
2023-May-04	12:00	2460069.0	2.6898	76°48'21.55"	+5°48'14.47"	-17°00'26.75"	16° Gem 15'47.10"	
2023-May-05	12:00	2460070.0	2.6757	76°56'23.61"	+5°56'10.00"	-16°53'18.57"	16° Gem 24'53.11"	
2023-May-06	12:00	2460071.0	2.6617	77°04'36.15"	+6°04'03.31"	-16°46'13.02"	16° Gem 34'08.82"	
2023-May-07	12:00	2460072.0	2.6476	77°12'59.08"	+6°11'54.42"	-16°39'10.06"	16° Gem 43'34.15"	
2023-May-08	12:00	2460073.0	2.6334	77°21'32.33"	+6°19'43.38"	-16°32'09.62"	16° Gem 53'08.98"	
2023-May-09	12:00	2460074.0	2.6193	77°30'15.80"	+6°27'30.21"	-16°25'11.62"	17° Gem 02'53.20"	
2023-May-10	12:00	2460075.0	2.6050	77°39'09.40"	+6°35'14.95"	-16°18'16.01"	17° Gem 12'46.71"	

2023-May-11	12:00	2460076.0	2.5908	77°48'13.03"	+6°42'57.61"	-16°11'22.74"	17° Gem 22'49.39"	
2023-May-12	12:00	2460077.0	2.5765	77°57'26.61"	+6°50'38.20"	-16°04'31.72"	17° Gem 33'01.15"	
2023-May-13	12:00	2460078.0	2.5622	78°06'50.07"	+6°58'16.72"	-15°57'42.92"	17° Gem 43'21.89"	
2023-May-14	12:00	2460079.0	2.5478	78°16'23.36"	+7°05'53.19"	-15°50'56.26"	17° Gem 53'51.56"	
2023-May-15	12:00	2460080.0	2.5335	78°26'06.42"	+7°13'27.62"	-15°44'11.69"	18° Gem 04'30.08"	
2023-May-16	12:00	2460081.0	2.5190	78°35'59.23"	+7°21'00.04"	-15°37'29.14"	18° Gem 15'17.41"	
2023-May-17	12:00	2460082.0	2.5045	78°46'01.72"	+7°28'30.46"	-15°30'48.56"	18° Gem 26'13.47"	
2023-May-18	12:00	2460083.0	2.4900	78°56'13.84"	+7°35'58.93"	-15°24'09.88"	18° Gem 37'18.20"	
2023-May-19	12:00	2460084.0	2.4755	79°06'35.52"	+7°43'25.48"	-15°17'33.03"	18° Gem 48'31.52"	
2023-May-20	12:00	2460085.0	2.4609	79°17'06.68"	+7°50'50.16"	-15°10'57.94"	18° Gem 59'53.31"	
2023-May-21	12:00	2460086.0	2.4463	79°27'47.22"	+7°58'13.01"	-15°04'24.54"	19° Gem 11'23.49"	
2023-May-22	12:00	2460087.0	2.4316	79°38'37.05"	+8°05'34.05"	-14°57'52.75"	19° Gem 23'01.95"	
2023-May-23	12:00	2460088.0	2.4169	79°49'36.10"	+8°12'53.34"	-14°51'22.50"	19° Gem 34'48.60"	
2023-May-24	12:00	2460089.0	2.4022	80°00'44.29"	+8°20'10.90"	-14°44'53.71"	19° Gem 46'43.34"	
2023-May-25	12:00	2460090.0	2.3874	80°12'01.54"	+8°27'26.78"	-14°38'26.28"	19° Gem 58'46.09"	
2023-May-26	12:00	2460091.0	2.3725	80°23'27.82"	+8°34'41.01"	-14°32'00.15"	20° Gem 10'56.81"	
2023-May-27	12:00	2460092.0	2.3576	80°35'03.08"	+8°41'53.64"	-14°25'35.21"	20° Gem 23'15.43"	
2023-May-28	12:00	2460093.0	2.3427	80°46'47.30"	+8°49'04.72"	-14°19'11.39"	20° Gem 35'41.92"	
2023-May-29	12:00	2460094.0	2.3278	80°58'40.45"	+8°56'14.28"	-14°12'48.58"	20° Gem 48'16.25"	
2023-May-30	12:00	2460095.0	2.3128	81°10'42.55"	+9°03'22.39"	-14°06'26.70"	21° Gem 00'58.41"	
2023-May-31	12:00	2460096.0	2.2977	81°22'53.58"	+9°10'29.10"	-14°00'05.65"	21° Gem 13'48.39"	
2023-Jun-01	12:00	2460097.0	2.2826	81°35'13.59"	+9°17'34.48"	-13°53'45.34"	21° Gem 26'46.22"	
2023-Jun-02	12:00	2460098.0	2.2675	81°47'42.59"	+9°24'38.59"	-13°47'25.66"	21° Gem 39'51.90"	
2023-Jun-03	12:00	2460099.0	2.2523	82°00'20.62"	+9°31'41.52"	-13°41'06.51"	21° Gem 53'05.46"	
2023-Jun-04	12:00	2460100.0	2.2370	82°13'07.69"	+9°38'43.34"	-13°34'47.79"	22° Gem 06'26.90"	
2023-Jun-05	12:00	2460101.0	2.2218	82°26'03.83"	+9°45'44.13"	-13°28'29.40"	22° Gem 19'56.23"	
2023-Jun-06	12:00	2460102.0	2.2064	82°39'09.05"	+9°52'43.95"	-13°22'11.24"	22° Gem 33'33.46"	
2023-Jun-07	12:00	2460103.0	2.1910	82°52'23.37"	+9°59'42.88"	-13°15'53.20"	22° Gem 47'18.58"	
2023-Jun-08	12:00	2460104.0	2.1756	83°05'46.81"	+10°06'40.95"	-13°09'35.18"	23° Gem 01'11.61"	
2023-Jun-09	12:00	2460105.0	2.1601	83°19'19.43"	+10°13'38.22"	-13°03'17.08"	23° Gem 15'12.59"	
2023-Jun-10	12:00	2460106.0	2.1446	83°33'01.30"	+10°20'34.73"	-12°56'58.79"	23° Gem 29'21.57"	
2023-Jun-11	12:00	2460107.0	2.1290	83°46'52.49"	+10°27'30.56"	-12°50'40.21"	23° Gem 43'38.61"	
2023-Jun-12	12:00	2460108.0	2.1134	84°00'53.10"	+10°34'25.75"	-12°44'21.23"	23° Gem 58'03.80"	
2023-Jun-13	12:00	2460109.0	2.0977	84°15'03.21"	+10°41'20.39"	-12°38'01.74"	24° Gem 12'37.19"	
2023-Jun-14	12:00	2460110.0	2.0820	84°29'22.90"	+10°48'14.57"	-12°31'41.62"	24° Gem 27'18.86"	
2023-Jun-15	12:00	2460111.0	2.0662	84°43'52.25"	+10°55'08.35"	-12°25'20.75"	24° Gem 42'08.86"	
2023-Jun-16	12:00	2460112.0	2.0504	84°58'31.32"	+11°02'01.85"	-12°18'59.01"	24° Gem 57'07.24"	
2023-Jun-17	12:00	2460113.0	2.0345	85°13'20.18"	+11°08'55.15"	-12°12'36.26"	25° Gem 12'14.03"	
2023-Jun-18	12:00	2460114.0	2.0185	85°28'18.90"	+11°15'48.35"	-12°06'12.37"	25° Gem 27'29.30"	
2023-Jun-19	12:00	2460115.0	2.0025	85°43'27.54"	+11°22'41.54"	-11°59'47.21"	25° Gem 42'53.08"	
2023-Jun-20	12:00	2460116.0	1.9864	85°58'46.19"	+11°29'34.81"	-11°53'20.61"	25° Gem 58'25.44"	
2023-Jun-21	12:00	2460117.0	1.9703	86°14'14.97"	+11°36'28.28"	-11°46'52.44"	26° Gem 14'06.47"	
2023-Jun-22	12:00	2460118.0	1.9541	86°29'53.98"	+11°43'22.04"	-11°40'22.53"	26° Gem 29'56.26"	
2023-Jun-23	12:00	2460119.0	1.9379	86°45'43.38"	+11°50'16.20"	-11°33'50.72"	26° Gem 45'54.92"	
2023-Jun-24	12:00	2460120.0	1.9216	87°01'43.32"	+11°57'10.87"	-11°27'16.84"	27° Gem 02'02.60"	
2023-Jun-25	12:00	2460121.0	1.9052	87°17'54.00"	+12°04'06.18"	-11°20'40.71"	27° Gem 18'19.44"	

2023-Jun-26	12:00	2460122.0	1.8888	87°34'15.61"	+12°11'02.24"	-11°14'02.15"	27° Gem 34'45.62"	
2023-Jun-27	12:00	2460123.0	1.8723	87°50'48.38"	+12°17'59.19"	-11°07'20.97"	27° Gem 51'21.34"	
2023-Jun-28	12:00	2460124.0	1.8557	88°07'32.57"	+12°24'57.18"	-11°00'36.96"	28° Gem 08'06.81"	
2023-Jun-29	12:00	2460125.0	1.8391	88°24'28.44"	+12°31'56.35"	-10°53'49.94"	28° Gem 25'02.27"	
2023-Jun-30	12:00	2460126.0	1.8224	88°41'36.28"	+12°38'56.86"	-10°46'59.68"	28° Gem 42'07.95"	
2023-Jul-01	12:00	2460127.0	1.8056	88°58'56.39"	+12°45'58.89"	-10°40'05.96"	28° Gem 59'24.11"	
2023-Jul-02	12:00	2460128.0	1.7888	89°16'29.08"	+12°53'02.60"	-10°33'08.55"	29° Gem 16'51.03"	
2023-Jul-03	12:00	2460129.0	1.7719	89°34'14.67"	+13°00'08.18"	-10°26'07.22"	29° Gem 34'28.97"	
2023-Jul-04	12:00	2460130.0	1.7550	89°52'13.50"	+13°07'15.79"	-10°19'01.73"	29° Gem 52'18.22"	
2023-Jul-05	12:00	2460131.0	1.7379	90°10'25.93"	+13°14'25.60"	-10°11'51.83"	0° Can 10'19.07"	
2023-Jul-06	12:00	2460132.0	1.7208	90°28'52.36"	+13°21'37.77"	-10°04'37.25"	0° Can 28'31.88"	
2023-Jul-07	12:00	2460133.0	1.7036	90°47'33.23"	+13°28'52.47"	-9°57'17.72"	0° Can 46'57.02"	
2023-Jul-08	12:00	2460134.0	1.6864	91°06'29.02"	+13°36'09.87"	-9°49'52.98"	1° Can 05'34.91"	
2023-Jul-09	12:00	2460135.0	1.6691	91°25'40.26"	+13°43'30.17"	-9°42'22.72"	1° Can 24'25.99"	
2023-Jul-10	12:00	2460136.0	1.6516	91°45'07.49"	+13°50'53.58"	-9°34'46.63"	1° Can 43'30.73"	
2023-Jul-11	12:00	2460137.0	1.6342	92°04'51.25"	+13°58'20.32"	-9°27'04.41"	2° Can 02'49.58"	
2023-Jul-12	12:00	2460138.0	1.6166	92°24'52.12"	+14°05'50.62"	-9°19'15.71"	2° Can 22'23.05"	
2023-Jul-13	12:00	2460139.0	1.5989	92°45'10.70"	+14°13'24.73"	-9°11'20.17"	2° Can 42'11.64"	
2023-Jul-14	12:00	2460140.0	1.5812	93°05'47.62"	+14°21'02.92"	-9°03'17.42"	3° Can 02'15.86"	
2023-Jul-15	12:00	2460141.0	1.5634	93°26'43.55"	+14°28'45.45"	-8°55'07.06"	3° Can 22'36.28"	
2023-Jul-16	12:00	2460142.0	1.5455	93°47'59.21"	+14°36'32.59"	-8°46'48.68"	3° Can 43'13.50"	
2023-Jul-17	12:00	2460143.0	1.5275	94°09'35.35"	+14°44'24.64"	-8°38'21.84"	4° Can 04'08.16"	
2023-Jul-18	12:00	2460144.0	1.5094	94°31'32.81"	+14°52'21.89"	-8°29'46.07"	4° Can 25'20.95"	
2023-Jul-19	12:00	2460145.0	1.4912	94°53'52.48"	+15°00'24.65"	-8°21'00.87"	4° Can 46'52.62"	
2023-Jul-20	12:00	2460146.0	1.4730	95°16'35.35"	+15°08'33.26"	-8°12'05.74"	5° Can 08'44.00"	
2023-Jul-21	12:00	2460147.0	1.4546	95°39'42.47"	+15°16'48.04"	-8°03'00.11"	5° Can 30'55.96"	
2023-Jul-22	12:00	2460148.0	1.4361	96°03'14.98"	+15°25'09.36"	-7°53'43.41"	5° Can 53'29.47"	
2023-Jul-23	12:00	2460149.0	1.4176	96°27'14.13"	+15°33'37.60"	-7°44'15.03"	6° Can 16'25.58"	
2023-Jul-24	12:00	2460150.0	1.3989	96°51'41.25"	+15°42'13.15"	-7°34'34.31"	6° Can 39'45.40"	
2023-Jul-25	12:00	2460151.0	1.3802	97°16'37.80"	+15°50'56.42"	-7°24'40.57"	7° Can 03'30.15"	
2023-Jul-26	12:00	2460152.0	1.3613	97°42'05.35"	+15°59'47.84"	-7°14'33.06"	7° Can 27'41.15"	
2023-Jul-27	12:00	2460153.0	1.3423	98°08'05.59"	+16°08'47.89"	-7°04'11.01"	7° Can 52'19.82"	
2023-Jul-28	12:00	2460154.0	1.3232	98°34'40.35"	+16°17'57.02"	-6°53'33.59"	8° Can 17'27.67"	
2023-Jul-29	12:00	2460155.0	1.3040	99°01'51.59"	+16°27'15.76"	-6°42'39.94"	8° Can 43'06.36"	
2023-Jul-30	12:00	2460156.0	1.2847	99°29'41.45"	+16°36'44.60"	-6°31'29.10"	9° Can 09'17.65"	
2023-Jul-31	12:00	2460157.0	1.2653	99°58'12.21"	+16°46'24.10"	-6°20'00.10"	9° Can 36'03.45"	
2023-Aug-01	12:00	2460158.0	1.2458	100°27'26.37"	+16°56'14.77"	-6°08'11.88"	10° Can 03'25.83"	
2023-Aug-02	12:00	2460159.0	1.2261	100°57'26.64"	+17°06'17.18"	-5°56'03.30"	10° Can 31'27.04"	
2023-Aug-03	12:00	2460160.0	1.2063	101°28'15.99"	+17°16'31.87"	-5°43'33.17"	11° Can 00'09.54"	
2023-Aug-04	12:00	2460161.0	1.1864	101°59'57.68"	+17°26'59.41"	-5°30'40.22"	11° Can 29'36.04"	
2023-Aug-05	12:00	2460162.0	1.1663	102°32'35.24"	+17°37'40.41"	-5°17'23.07"	11° Can 59'49.48"	
2023-Aug-06	12:00	2460163.0	1.1462	103°06'12.54"	+17°48'35.48"	-5°03'40.25"	12° Can 30'53.04"	
2023-Aug-07	12:00	2460164.0	1.1258	103°40'53.77"	+17°59'45.24"	-4°49'30.19"	13° Can 02'50.21"	
2023-Aug-08	12:00	2460165.0	1.1054	104°16'43.50"	+18°11'10.37"	-4°34'51.20"	13° Can 35'44.73"	
2023-Aug-09	12:00	2460166.0	1.0848	104°53'46.71"	+18°22'51.50"	-4°19'41.47"	14° Can 09'40.71"	
2023-Aug-10	12:00	2460167.0	1.0640	105°32'08.86"	+18°34'49.30"	-4°03'59.04"	14° Can 44'42.65"	

2023-Aug-11	12:00	2460168.0	1.0431	106°11'55.96"	+18°47'04.40"	-3°47'41.82"	15° Can 20'55.47"	
2023-Aug-12	12:00	2460169.0	1.0221	106°53'14.60"	+18°59'37.42"	-3°30'47.54"	15° Can 58'24.60"	
2023-Aug-13	12:00	2460170.0	1.0008	107°36'12.10"	+19°12'28.91"	-3°13'13.78"	16° Can 37'16.03"	
2023-Aug-14	12:00	2460171.0	0.9795	108°20'56.53"	+19°25'39.40"	-2°54'57.91"	17° Can 17'36.39"	
2023-Aug-15	12:00	2460172.0	0.9579	109°07'36.82"	+19°39'09.31"	-2°35'57.13"	17° Can 59'33.04"	
2023-Aug-16	12:00	2460173.0	0.9362	109°56'22.93"	+19°52'58.93"	-2°16'08.40"	18° Can 43'14.14"	
2023-Aug-17	12:00	2460174.0	0.9143	110°47'25.89"	+20°07'08.42"	-1°55'28.48"	19° Can 28'48.78"	
2023-Aug-18	12:00	2460175.0	0.8922	111°40'58.01"	+20°21'37.73"	-1°33'53.88"	20° Can 16'27.11"	
2023-Aug-19	12:00	2460176.0	0.8700	112°37'13.01"	+20°36'26.52"	-1°11'20.87"	21° Can 06'20.45"	
2023-Aug-20	12:00	2460177.0	0.8475	113°36'26.19"	+20°51'34.12"	-0°47'45.47"	21° Can 58'41.48"	
2023-Aug-21	12:00	2460178.0	0.8249	114°38'54.66"	+21°06'59.37"	-0°23'03.45"	22° Can 53'44.41"	
2023-Aug-22	12:00	2460179.0	0.8021	115°44'57.55"	+21°22'40.56"	+0°02'49.65"	23° Can 51'45.19"	
2023-Aug-23	12:00	2460180.0	0.7790	116°54'56.24"	+21°38'35.19"	+0°29'58.54"	24° Can 53'01.77"	
2023-Aug-24	12:00	2460181.0	0.7558	118°09'14.68"	+21°54'39.79"	+0°58'28.08"	25° Can 57'54.36"	
2023-Aug-25	12:00	2460182.0	0.7323	119°28'19.63"	+22°10'49.64"	+1°28'23.25"	27° Can 06'45.75"	
2023-Aug-26	12:00	2460183.0	0.7086	120°52'41.00"	+22°26'58.45"	+1°59'49.04"	28° Can 20'01.67"	
2023-Aug-27	12:00	2460184.0	0.6848	122°22'52.09"	+22°42'57.87"	+2°32'50.27"	29° Can 38'11.19"	
2023-Aug-28	12:00	2460185.0	0.6607	123°59'29.95"	+22°58'36.98"	+3°07'31.43"	1° Leo 01'47.14"	
2023-Aug-29	12:00	2460186.0	0.6363	125°43'15.51"	+23°13'41.60"	+3°43'56.25"	2° Leo 31'26.57"	
2023-Aug-30	12:00	2460187.0	0.6118	127°34'53.70"	+23°27'53.42"	+4°22'07.33"	4° Leo 07'51.25"	
2023-Aug-31	12:00	2460188.0	0.5871	129°35'13.27"	+23°40'49.01"	+5°02'05.44"	5° Leo 51'48.06"	
2023-Sep-01	12:00	2460189.0	0.5621	131°45'06.32"	+23°51'58.54"	+5°43'48.64"	7° Leo 44'09.28"	
2023-Sep-02	12:00	2460190.0	0.5370	134°05'27.23"	+24°00'44.35"	+6°27'11.06"	9° Leo 45'52.71"	
2023-Sep-03	12:00	2460191.0	0.5117	136°37'10.79"	+24°06'19.33"	+7°12'01.29"	11° Leo 58'01.35"	
2023-Sep-04	12:00	2460192.0	0.4863	139°21'09.22"	+24°07'45.18"	+7°58'00.24"	14° Leo 21'42.44"	
2023-Sep-05	12:00	2460193.0	0.4607	142°18'07.78"	+24°03'50.80"	+8°44'38.39"	16° Leo 58'05.49"	
2023-Sep-06	12:00	2460194.0	0.4352	145°28'38.37"	+23°53'11.10"	+9°31'12.51"	19° Leo 48'18.82"	
2023-Sep-07	12:00	2460195.0	0.4097	148°52'50.98"	+23°34'06.82"	+10°16'41.73"	22° Leo 53'23.80"	
2023-Sep-08	12:00	2460196.0	0.3843	152°30'22.86"	+23°04'46.19"	+10°59'43.57"	26° Leo 14'06.07"	
2023-Sep-09	12:00	2460197.0	0.3593	156°20'05.69"	+22°23'09.38"	+11°38'30.32"	29° Leo 50'42.89"	
2023-Sep-10	12:00	2460198.0	0.3349	160°19'52.20"	+21°27'16.90"	+12°10'47.38"	3° Vir 42'46.25"	
2023-Sep-11	12:00	2460199.0	0.3115	164°26'24.26"	+20°15'22.84"	+12°33'55.23"	7° Vir 48'42.21"	
2023-Sep-12	12:00	2460200.0	0.2893	168°35'05.84"	+18°46'13.12"	+12°44'57.88"	12° Vir 05'28.99"	
2023-Sep-13	12:00	2460201.0	0.2692	172°40'05.23"	+16°59'27.61"	+12°41'00.21"	16° Vir 28'19.37"	
2023-Sep-14	12:00	2460202.0	0.2518	176°34'31.63"	+14°56'02.86"	+12°19'36.25"	20° Vir 50'36.86"	
2023-Sep-15	12:00	2460203.0	0.2380	180°11'11.89"	+12°38'29.67"	+11°39'26.27"	25° Vir 04'18.42"	
2023-Sep-16	12:00	2460204.0	0.2289	183°23'30.58"	+10°10'55.57"	+10°40'54.30"	29° Vir 00'54.80"	
2023-Sep-17	12:00	2460205.0	0.2252	186°06'45.92"	+7°38'41.11"	+9°26'27.97"	2° Lib 33'05.62"	
2023-Sep-18	12:00	2460206.0	0.2273	188°19'14.18"	+5°07'26.19"	+8°00'20.77"	5° Lib 36'17.62"	
2023-Sep-19	12:00	2460207.0	0.2349	190°02'23.88"	+2°42'02.95"	+6°27'34.08"	8° Lib 09'34.44"	
2023-Sep-20	12:00	2460208.0	0.2473	191°20'06.76"	+0°25'48.06"	+4°52'46.97"	10° Lib 15'08.81"	
2023-Sep-21	12:00	2460209.0	0.2638	192°17'16.36"	-1°39'45.57"	+3°19'29.61"	11° Lib 57'02.60"	
2023-Sep-22	12:00	2460210.0	0.2832	192°58'38.82"	-3°34'25.88"	+1°49'53.35"	13° Lib 19'45.97"	
2023-Sep-23	12:00	2460211.0	0.3048	193°28'16.26"	-5°18'49.54"	+0°25'04.87"	14° Lib 27'26.50"	
2023-Sep-24	12:00	2460212.0	0.3279	193°49'17.68"	-6°53'55.61"	-0°54'32.85"	15° Lib 23'29.02"	
2023-Sep-25	12:00	2460213.0	0.3521	194°04'04.21"	-8°20'49.11"	-2°09'02.53"	16° Lib 10'33.98"	

2023-Sep-26	12:00	2460214.0	0.3769	194°14'18.96"	-9°40'32.38"	-3°18'40.36"	16° Lib 50'43.82"
2023-Sep-27	12:00	2460215.0	0.4022	194°21'16.62"	-10°54'01.56"	-4°23'48.44"	17° Lib 25'30.99"
2023-Sep-28	12:00	2460216.0	0.4276	194°25'51.27"	-12°02'05.53"	-5°24'50.59"	17° Lib 56'05.26"
2023-Sep-29	12:00	2460217.0	0.4532	194°28'42.20"	-13°05'26.23"	-6°22'10.18"	18° Lib 23'19.46"
2023-Sep-30	12:00	2460218.0	0.4787	194°30'18.10"	-14°04'39.37"	-7°16'09.03"	18° Lib 47'53.94"
2023-Oct-01	12:00	2460219.0	0.5042	194°31'00.02"	-15°00'15.29"	-8°07'07.04"	19° Lib 10'19.72"
2023-Oct-02	12:00	2460220.0	0.5295	194°31'03.50"	-15°52'39.79"	-8°55'22.10"	19° Lib 31'00.88"
2023-Oct-03	12:00	2460221.0	0.5547	194°30'40.03"	-16°42'14.90"	-9°41'10.17"	19° Lib 50'16.26"
2023-Oct-04	12:00	2460222.0	0.5797	194°29'58.14"	-17°29'19.46"	-10°24'45.44"	20° Lib 08'20.70"
2023-Oct-05	12:00	2460223.0	0.6045	194°29'04.14"	-18°14'09.69"	-11°06'20.50"	20° Lib 25'26.03"
2023-Oct-06	12:00	2460224.0	0.6291	194°28'02.74"	-18°56'59.59"	-11°46'06.55"	20° Lib 41'41.72"
2023-Oct-07	12:00	2460225.0	0.6534	194°26'57.40"	-19°38'01.34"	-12°24'13.56"	20° Lib 57'15.43"
2023-Oct-08	12:00	2460226.0	0.6776	194°25'50.66"	-20°17'25.55"	-13°00'50.40"	21° Lib 12'13.38"
2023-Oct-09	12:00	2460227.0	0.7015	194°24'44.33"	-20°55'21.52"	-13°36'05.01"	21° Lib 26'40.64"
2023-Oct-10	12:00	2460228.0	0.7253	194°23'39.71"	-21°31'57.43"	-14°10'04.48"	21° Lib 40'41.41"
2023-Oct-11	12:00	2460229.0	0.7488	194°22'37.67"	-22°07'20.54"	-14°42'55.21"	21° Lib 54'19.13"
2023-Oct-12	12:00	2460230.0	0.7721	194°21'38.74"	-22°41'37.25"	-15°14'42.94"	22° Lib 07'36.67"
2023-Oct-13	12:00	2460231.0	0.7952	194°20'43.23"	-23°14'53.29"	-15°45'32.88"	22° Lib 20'36.41"
2023-Oct-14	12:00	2460232.0	0.8181	194°19'51.22"	-23°47'13.77"	-16°15'29.71"	22° Lib 33'20.34"
2023-Oct-15	12:00	2460233.0	0.8408	194°19'02.65"	-24°18'43.29"	-16°44'37.70"	22° Lib 45'50.10"
2023-Oct-16	12:00	2460234.0	0.8633	194°18'17.33"	-24°49'25.96"	-17°13'00.75"	22° Lib 58'07.08"
2023-Oct-17	12:00	2460235.0	0.8856	194°17'34.98"	-25°19'25.50"	-17°40'42.40"	23° Lib 10'12.42"
2023-Oct-18	12:00	2460236.0	0.9077	194°16'55.22"	-25°48'45.28"	-18°07'45.87"	23° Lib 22'07.07"
2023-Oct-19	12:00	2460237.0	0.9296	194°16'17.61"	-26°17'28.32"	-18°34'14.16"	23° Lib 33'51.81"
2023-Oct-20	12:00	2460238.0	0.9514	194°15'41.67"	-26°45'37.41"	-19°00'09.97"	23° Lib 45'27.27"
2023-Oct-21	12:00	2460239.0	0.9730	194°15'06.88"	-27°13'15.04"	-19°25'35.83"	23° Lib 56'53.97"
2023-Oct-22	12:00	2460240.0	0.9944	194°14'32.69"	-27°40'23.53"	-19°50'34.04"	24° Lib 08'12.34"
2023-Oct-23	12:00	2460241.0	1.0157	194°13'58.57"	-28°07'04.97"	-20°15'06.75"	24° Lib 19'22.74"
2023-Oct-24	12:00	2460242.0	1.0368	194°13'23.98"	-28°33'21.31"	-20°39'15.94"	24° Lib 30'25.46"
2023-Oct-25	12:00	2460243.0	1.0577	194°12'48.40"	-28°59'14.34"	-21°03'03.47"	24° Lib 41'20.79"
2023-Oct-26	12:00	2460244.0	1.0785	194°12'11.33"	-29°24'45.74"	-21°26'31.04"	24° Lib 52'08.95"
2023-Oct-27	12:00	2460245.0	1.0991	194°11'32.25"	-29°49'57.04"	-21°49'40.28"	25° Lib 02'50.16"
2023-Oct-28	12:00	2460246.0	1.1196	194°10'50.66"	-30°14'49.71"	-22°12'32.67"	25° Lib 13'24.59"
2023-Oct-29	12:00	2460247.0	1.1400	194°10'06.01"	-30°39'25.08"	-22°35'09.65"	25° Lib 23'52.35"
2023-Oct-30	12:00	2460248.0	1.1602	194°09'17.74"	-31°03'44.40"	-22°57'32.54"	25° Lib 34'13.52"
2023-Oct-31	12:00	2460249.0	1.1803	194°08'25.25"	-31°27'48.82"	-23°19'42.59"	25° Lib 44'28.10"
2023-Nov-01	12:00	2460250.0	1.2003	194°07'27.91"	-31°51'39.39"	-23°41'40.99"	25° Lib 54'36.06"
2023-Nov-02	12:00	2460251.0	1.2201	194°06'25.08"	-32°15'17.11"	-24°03'28.85"	26° Lib 04'37.30"
2023-Nov-03	12:00	2460252.0	1.2398	194°05'16.12"	-32°38'42.89"	-24°25'07.23"	26° Lib 14'31.74"
2023-Nov-04	12:00	2460253.0	1.2594	194°04'00.38"	-33°01'57.57"	-24°46'37.12"	26° Lib 24'19.24"
2023-Nov-05	12:00	2460254.0	1.2788	194°02'37.20"	-33°25'01.94"	-25°07'59.46"	26° Lib 33'59.65"
2023-Nov-06	12:00	2460255.0	1.2982	194°01'05.92"	-33°47'56.75"	-25°29'15.16"	26° Lib 43'32.81"
2023-Nov-07	12:00	2460256.0	1.3174	193°59'25.88"	-34°10'42.68"	-25°50'25.04"	26° Lib 52'58.53"
2023-Nov-08	12:00	2460257.0	1.3365	193°57'36.41"	-34°33'20.37"	-26°11'29.93"	27° Lib 02'16.63"
2023-Nov-09	12:00	2460258.0	1.3555	193°55'36.82"	-34°55'50.41"	-26°32'30.56"	27° Lib 11'26.89"
2023-Nov-10	12:00	2460259.0	1.3744	193°53'26.44"	-35°18'13.36"	-26°53'27.69"	27° Lib 20'29.09"

2023-Nov-11	12:00	2460260.0	1.3932	193°51'04.57"	-35°40'29.73"	-27°14'21.98"	27° Lib 29'22.97"	
2023-Nov-12	12:00	2460261.0	1.4119	193°48'30.49"	-36°02'40.00"	-27°35'14.09"	27° Lib 38'08.29"	
2023-Nov-13	12:00	2460262.0	1.4304	193°45'43.47"	-36°24'44.59"	-27°56'04.65"	27° Lib 46'44.76"	
2023-Nov-14	12:00	2460263.0	1.4489	193°42'42.77"	-36°46'43.92"	-28°16'54.24"	27° Lib 55'12.08"	
2023-Nov-15	12:00	2460264.0	1.4673	193°39'27.61"	-37°08'38.33"	-28°37'43.42"	28° Lib 03'29.92"	
2023-Nov-16	12:00	2460265.0	1.4856	193°35'57.21"	-37°30'28.14"	-28°58'32.72"	28° Lib 11'37.94"	
2023-Nov-17	12:00	2460266.0	1.5038	193°32'10.77"	-37°52'13.65"	-29°19'22.64"	28° Lib 19'35.79"	
2023-Nov-18	12:00	2460267.0	1.5219	193°28'07.50"	-38°13'55.12"	-29°40'13.67"	28° Lib 27'23.08"	
2023-Nov-19	12:00	2460268.0	1.5399	193°23'46.61"	-38°35'32.78"	-30°01'06.25"	28° Lib 34'59.47"	
2023-Nov-20	12:00	2460269.0	1.5579	193°19'07.33"	-38°57'06.84"	-30°22'00.83"	28° Lib 42'24.60"	
2023-Nov-21	12:00	2460270.0	1.5757	193°14'08.90"	-39°18'37.53"	-30°42'57.81"	28° Lib 49'38.13"	
2023-Nov-22	12:00	2460271.0	1.5935	193°08'50.57"	-39°40'05.02"	-31°03'57.60"	28° Lib 56'39.75"	
2023-Nov-23	12:00	2460272.0	1.6111	193°03'11.58"	-40°01'29.51"	-31°25'00.59"	29° Lib 03'29.12"	
2023-Nov-24	12:00	2460273.0	1.6287	192°57'11.18"	-40°22'51.15"	-31°46'07.15"	29° Lib 10'05.94"	
2023-Nov-25	12:00	2460274.0	1.6463	192°50'48.55"	-40°44'10.10"	-32°07'17.64"	29° Lib 16'29.86"	
2023-Nov-26	12:00	2460275.0	1.6637	192°44'02.87"	-41°05'26.48"	-32°28'32.42"	29° Lib 22'40.53"	
2023-Nov-27	12:00	2460276.0	1.6810	192°36'53.26"	-41°26'40.40"	-32°49'51.81"	29° Lib 28'37.53"	
2023-Nov-28	12:00	2460277.0	1.6983	192°29'18.81"	-41°47'51.91"	-33°11'16.14"	29° Lib 34'20.45"	
2023-Nov-29	12:00	2460278.0	1.7155	192°21'18.56"	-42°09'01.07"	-33°32'45.74"	29° Lib 39'48.81"	
2023-Nov-30	12:00	2460279.0	1.7326	192°12'51.55"	-42°30'07.90"	-33°54'20.90"	29° Lib 45'02.13"	
2023-Dec-01	12:00	2460280.0	1.7497	192°03'56.79"	-42°51'12.38"	-34°16'01.91"	29° Lib 49'59.91"	
2023-Dec-02	12:00	2460281.0	1.7667	191°54'33.26"	-43°12'14.47"	-34°37'49.04"	29° Lib 54'41.63"	
2023-Dec-03	12:00	2460282.0	1.7836	191°44'39.94"	-43°33'14.13"	-34°59'42.54"	29° Lib 59'06.74"	
2023-Dec-04	12:00	2460283.0	1.8004	191°34'15.78"	-43°54'11.26"	-35°21'42.65"	0° Sco 03'14.70"	
2023-Dec-05	12:00	2460284.0	1.8172	191°23'19.71"	-44°15'05.76"	-35°43'49.60"	0° Sco 07'04.92"	
2023-Dec-06	12:00	2460285.0	1.8339	191°11'50.65"	-44°35'57.48"	-36°06'03.59"	0° Sco 10'36.81"	
2023-Dec-07	12:00	2460286.0	1.8506	190°59'47.48"	-44°56'46.27"	-36°28'24.80"	0° Sco 13'49.77"	
2023-Dec-08	12:00	2460287.0	1.8671	190°47'09.06"	-45°17'31.93"	-36°50'53.42"	0° Sco 16'43.16"	
2023-Dec-09	12:00	2460288.0	1.8836	190°33'54.23"	-45°38'14.23"	-37°13'29.58"	0° Sco 19'16.31"	
2023-Dec-10	12:00	2460289.0	1.9001	190°20'01.80"	-45°58'52.92"	-37°36'13.42"	0° Sco 21'28.53"	
2023-Dec-11	12:00	2460290.0	1.9165	190°05'30.56"	-46°19'27.70"	-37°59'05.06"	0° Sco 23'19.12"	
2023-Dec-12	12:00	2460291.0	1.9328	189°50'19.25"	-46°39'58.25"	-38°22'04.58"	0° Sco 24'47.30"	
2023-Dec-13	12:00	2460292.0	1.9491	189°34'26.60"	-47°00'24.18"	-38°45'12.04"	0° Sco 25'52.29"	
2023-Dec-14	12:00	2460293.0	1.9653	189°17'51.33"	-47°20'45.09"	-39°08'27.50"	0° Sco 26'33.27"	
2023-Dec-15	12:00	2460294.0	1.9814	189°00'32.14"	-47°41'00.53"	-39°31'50.96"	0° Sco 26'49.39"	
2023-Dec-16	12:00	2460295.0	1.9975	188°42'27.77"	-48°01'10.03"	-39°55'22.43"	0° Sco 26'39.79"	Rx
2023-Dec-17	12:00	2460296.0	2.0135	188°23'36.97"	-48°21'13.08"	-40°19'01.88"	0° Sco 26'03.60"	Rx
2023-Dec-18	12:00	2460297.0	2.0295	188°03'58.52"	-48°41'09.15"	-40°42'49.28"	0° Sco 24'59.99"	Rx
2023-Dec-19	12:00	2460298.0	2.0454	187°43'31.23"	-49°00'57.72"	-41°06'44.55"	0° Sco 23'28.10"	Rx
2023-Dec-20	12:00	2460299.0	2.0613	187°22'13.91"	-49°20'38.21"	-41°30'47.61"	0° Sco 21'27.05"	Rx
2023-Dec-21	12:00	2460300.0	2.0771	187°00'05.37"	-49°40'10.04"	-41°54'58.38"	0° Sco 18'55.99"	Rx
2023-Dec-22	12:00	2460301.0	2.0928	186°37'04.43"	-49°59'32.58"	-42°19'16.74"	0° Sco 15'53.99"	Rx
2023-Dec-23	12:00	2460302.0	2.1085	186°13'09.88"	-50°18'45.18"	-42°43'42.56"	0° Sco 12'20.09"	Rx
2023-Dec-24	12:00	2460303.0	2.1242	185°48'20.51"	-50°37'47.15"	-43°08'15.68"	0° Sco 08'13.29"	Rx
2023-Dec-25	12:00	2460304.0	2.1397	185°22'35.11"	-50°56'37.74"	-43°32'55.93"	0° Sco 03'32.54"	Rx
2023-Dec-26	12:00	2460305.0	2.1553	184°55'52.48"	-51°15'16.17"	-43°57'43.12"	29° Lib 58'16.73"	Rx

2023-Dec-27	12:00	2460306.0	2.1708	184°28'11.46"	-51°33'41.63"	-44°22'37.02"	29° Lib 52'24.71"	Rx
2023-Dec-28	12:00	2460307.0	2.1862	183°59'30.90"	-51°51'53.25"	-44°47'37.39"	29° Lib 45'55.27"	Rx
2023-Dec-29	12:00	2460308.0	2.2016	183°29'49.72"	-52°09'50.13"	-45°12'43.94"	29° Lib 38'47.19"	Rx
2023-Dec-30	12:00	2460309.0	2.2170	182°59'06.90"	-52°27'31.33"	-45°37'56.38"	29° Lib 30'59.17"	Rx
2023-Dec-31	12:00	2460310.0	2.2323	182°27'21.45"	-52°44'55.87"	-46°03'14.35"	29° Lib 22'29.91"	Rx