

# Custom Ephemeris

Compiled by: APS

Calculated by: JPL Horizons

Date: 2023-04-13

## (469219) Kamo`oalewa

Discovered: 2016-04-27.31228

Orbital Period: 1.00 yrs.

Diameter: 0.049 km

Perihelion: 2022-10-04, 17:51:05.3 UT

Links:

[SBDB](#)

[MPC](#)

Date	UT	JD	AU	RA	Declination	Latitude	Longitude	Rx
2023-Jan-01	12:00	2459946.0	1.0071	200°37'17.97"	+23°14'51.20"	+29°23'47.81"	9° Lib 14'25.70"	
2023-Jan-02	12:00	2459947.0	1.0088	201°14'22.31"	+23°34'50.09"	+29°56'24.31"	9° Lib 39'59.38"	
2023-Jan-03	12:00	2459948.0	1.0106	201°51'06.96"	+23°54'44.66"	+30°28'47.79"	10° Lib 05'17.96"	
2023-Jan-04	12:00	2459949.0	1.0123	202°27'31.34"	+24°14'35.88"	+31°00'58.88"	10° Lib 30'20.38"	
2023-Jan-05	12:00	2459950.0	1.0141	203°03'34.79"	+24°34'24.71"	+31°32'58.18"	10° Lib 55'05.49"	
2023-Jan-06	12:00	2459951.0	1.0158	203°39'16.62"	+24°54'12.14"	+32°04'46.32"	11° Lib 19'32.05"	
2023-Jan-07	12:00	2459952.0	1.0175	204°14'36.09"	+25°13'59.18"	+32°36'23.90"	11° Lib 43'38.76"	
2023-Jan-08	12:00	2459953.0	1.0192	204°49'32.37"	+25°33'46.83"	+33°07'51.51"	12° Lib 07'24.21"	
2023-Jan-09	12:00	2459954.0	1.0209	205°24'04.62"	+25°53'36.11"	+33°39'09.74"	12° Lib 30'46.92"	
2023-Jan-10	12:00	2459955.0	1.0226	205°58'11.92"	+26°13'28.00"	+34°10'19.12"	12° Lib 53'45.32"	
2023-Jan-11	12:00	2459956.0	1.0243	206°31'53.30"	+26°33'23.51"	+34°41'20.19"	13° Lib 16'17.76"	
2023-Jan-12	12:00	2459957.0	1.0260	207°05'07.74"	+26°53'23.60"	+35°12'13.42"	13° Lib 38'22.51"	
2023-Jan-13	12:00	2459958.0	1.0277	207°37'54.15"	+27°13'29.22"	+35°42'59.28"	13° Lib 59'57.75"	
2023-Jan-14	12:00	2459959.0	1.0293	208°10'11.38"	+27°33'41.31"	+36°13'38.15"	14° Lib 21'01.58"	
2023-Jan-15	12:00	2459960.0	1.0310	208°41'58.24"	+27°54'00.73"	+36°44'10.38"	14° Lib 41'31.99"	
2023-Jan-16	12:00	2459961.0	1.0326	209°13'13.43"	+28°14'28.33"	+37°14'36.25"	15° Lib 01'26.90"	
2023-Jan-17	12:00	2459962.0	1.0342	209°43'55.62"	+28°35'04.89"	+37°44'55.97"	15° Lib 20'44.13"	
2023-Jan-18	12:00	2459963.0	1.0358	210°14'03.37"	+28°55'51.08"	+38°15'09.63"	15° Lib 39'21.45"	
2023-Jan-19	12:00	2459964.0	1.0374	210°43'35.23"	+29°16'47.52"	+38°45'17.24"	15° Lib 57'16.56"	
2023-Jan-20	12:00	2459965.0	1.0390	211°12'29.72"	+29°37'54.67"	+39°15'18.68"	16° Lib 14'27.17"	
2023-Jan-21	12:00	2459966.0	1.0406	211°40'45.38"	+29°59'12.89"	+39°45'13.75"	16° Lib 30'51.05"	
2023-Jan-22	12:00	2459967.0	1.0422	212°08'20.81"	+30°20'42.40"	+40°15'02.12"	16° Lib 46'26.07"	
2023-Jan-23	12:00	2459968.0	1.0437	212°35'14.74"	+30°42'23.31"	+40°44'43.44"	17° Lib 01'10.26"	
2023-Jan-24	12:00	2459969.0	1.0453	213°01'26.04"	+31°04'15.66"	+41°14'17.32"	17° Lib 15'01.76"	
2023-Jan-25	12:00	2459970.0	1.0468	213°26'53.66"	+31°26'19.43"	+41°43'43.36"	17° Lib 27'58.84"	
2023-Jan-26	12:00	2459971.0	1.0483	213°51'36.61"	+31°48'34.62"	+42°13'01.19"	17° Lib 39'59.75"	
2023-Jan-27	12:00	2459972.0	1.0498	214°15'33.90"	+32°11'01.24"	+42°42'10.46"	17° Lib 51'02.71"	
2023-Jan-28	12:00	2459973.0	1.0513	214°38'44.51"	+32°33'39.32"	+43°11'10.83"	18° Lib 01'05.82"	
2023-Jan-29	12:00	2459974.0	1.0527	215°01'07.34"	+32°56'28.95"	+43°40'01.96"	18° Lib 10'07.07"	
2023-Jan-30	12:00	2459975.0	1.0542	215°22'41.21"	+33°19'30.23"	+44°08'43.49"	18° Lib 18'04.29"	
2023-Jan-31	12:00	2459976.0	1.0556	215°43'24.85"	+33°42'43.28"	+44°37'15.03"	18° Lib 24'55.17"	
2023-Feb-01	12:00	2459977.0	1.0570	216°03'16.89"	+34°06'08.24"	+45°05'36.16"	18° Lib 30'37.25"	
2023-Feb-02	12:00	2459978.0	1.0584	216°22'15.84"	+34°29'45.24"	+45°33'46.42"	18° Lib 35'07.92"	
2023-Feb-03	12:00	2459979.0	1.0598	216°40'20.11"	+34°53'34.42"	+46°01'45.28"	18° Lib 38'24.42"	
2023-Feb-04	12:00	2459980.0	1.0611	216°57'28.02"	+35°17'35.89"	+46°29'32.14"	18° Lib 40'23.85"	
2023-Feb-05	12:00	2459981.0	1.0625	217°13'37.73"	+35°41'49.74"	+46°57'06.33"	18° Lib 41'03.13"	
2023-Feb-06	12:00	2459982.0	1.0638	217°28'47.31"	+36°06'16.06"	+47°24'27.10"	18° Lib 40'19.08"	Rx
2023-Feb-07	12:00	2459983.0	1.0651	217°42'54.67"	+36°30'54.87"	+47°51'33.58"	18° Lib 38'08.32"	Rx

2023-Feb-08	12:00	2459984.0	1.0664	217°55'57.59"	+36°55'46.16"	+48°18'24.79"	18° Lib 34'27.37"	Rx
2023-Feb-09	12:00	2459985.0	1.0677	218°07'53.72"	+37°20'49.82"	+48°44'59.63"	18° Lib 29'12.60"	Rx
2023-Feb-10	12:00	2459986.0	1.0689	218°18'40.54"	+37°46'05.71"	+49°11'16.84"	18° Lib 22'20.28"	Rx
2023-Feb-11	12:00	2459987.0	1.0702	218°28'15.41"	+38°11'33.55"	+49°37'15.00"	18° Lib 13'46.56"	Rx
2023-Feb-12	12:00	2459988.0	1.0714	218°36'35.49"	+38°37'12.97"	+50°02'52.51"	18° Lib 03'27.54"	Rx
2023-Feb-13	12:00	2459989.0	1.0726	218°43'37.83"	+39°03'03.47"	+50°28'07.58"	17° Lib 51'19.25"	Rx
2023-Feb-14	12:00	2459990.0	1.0738	218°49'19.32"	+39°29'04.38"	+50°52'58.20"	17° Lib 37'17.76"	Rx
2023-Feb-15	12:00	2459991.0	1.0749	218°53'36.71"	+39°55'14.88"	+51°17'22.12"	17° Lib 21'19.18"	Rx
2023-Feb-16	12:00	2459992.0	1.0761	218°56'26.65"	+40°21'33.91"	+51°41'16.87"	17° Lib 03'19.77"	Rx
2023-Feb-17	12:00	2459993.0	1.0772	218°57'45.73"	+40°48'00.21"	+52°04'39.72"	16° Lib 43'16.06"	Rx
2023-Feb-18	12:00	2459994.0	1.0783	218°57'30.52"	+41°14'32.28"	+52°27'27.71"	16° Lib 21'04.94"	Rx
2023-Feb-19	12:00	2459995.0	1.0793	218°55'37.69"	+41°41'08.39"	+52°49'37.69"	15° Lib 56'43.81"	Rx
2023-Feb-20	12:00	2459996.0	1.0804	218°52'04.01"	+42°07'46.58"	+53°11'06.37"	15° Lib 30'10.64"	Rx
2023-Feb-21	12:00	2459997.0	1.0814	218°46'46.46"	+42°34'24.72"	+53°31'50.34"	15° Lib 01'24.06"	Rx
2023-Feb-22	12:00	2459998.0	1.0824	218°39'42.14"	+43°01'00.55"	+53°51'46.17"	14° Lib 30'23.29"	Rx
2023-Feb-23	12:00	2459999.0	1.0834	218°30'48.32"	+43°27'31.72"	+54°10'50.41"	13° Lib 57'08.15"	Rx
2023-Feb-24	12:00	2460000.0	1.0844	218°20'02.31"	+43°53'55.84"	+54°28'59.62"	13° Lib 21'38.98"	Rx
2023-Feb-25	12:00	2460001.0	1.0853	218°07'21.48"	+44°20'10.45"	+54°46'10.34"	12° Lib 43'56.61"	Rx
2023-Feb-26	12:00	2460002.0	1.0863	217°52'43.21"	+44°46'13.06"	+55°02'19.11"	12° Lib 04'02.41"	Rx
2023-Feb-27	12:00	2460003.0	1.0872	217°36'04.88"	+45°12'01.09"	+55°17'22.47"	11° Lib 21'58.30"	Rx
2023-Feb-28	12:00	2460004.0	1.0880	217°17'23.90"	+45°37'31.89"	+55°31'16.93"	10° Lib 37'46.82"	Rx
2023-Mar-01	12:00	2460005.0	1.0889	216°56'37.70"	+46°02'42.72"	+55°43'59.00"	9° Lib 51'31.13"	Rx
2023-Mar-02	12:00	2460006.0	1.0897	216°33'43.82"	+46°27'30.68"	+55°55'25.20"	9° Lib 03'15.14"	Rx
2023-Mar-03	12:00	2460007.0	1.0905	216°08'39.88"	+46°51'52.80"	+56°05'32.07"	8° Lib 13'03.48"	Rx
2023-Mar-04	12:00	2460008.0	1.0913	215°41'23.65"	+47°15'45.96"	+56°14'16.19"	7° Lib 21'01.55"	Rx
2023-Mar-05	12:00	2460009.0	1.0921	215°11'53.07"	+47°39'06.87"	+56°21'34.21"	6° Lib 27'15.53"	Rx
2023-Mar-06	12:00	2460010.0	1.0928	214°40'06.30"	+48°01'52.16"	+56°27'22.87"	5° Lib 31'52.39"	Rx
2023-Mar-07	12:00	2460011.0	1.0936	214°06'01.77"	+48°23'58.27"	+56°31'39.01"	4° Lib 34'59.86"	Rx
2023-Mar-08	12:00	2460012.0	1.0943	213°29'38.21"	+48°45'21.50"	+56°34'19.59"	3° Lib 36'46.43"	Rx
2023-Mar-09	12:00	2460013.0	1.0949	212°50'54.73"	+49°05'57.98"	+56°35'21.75"	2° Lib 37'21.32"	Rx
2023-Mar-10	12:00	2460014.0	1.0956	212°09'50.87"	+49°25'43.69"	+56°34'42.76"	1° Lib 36'54.43"	Rx
2023-Mar-11	12:00	2460015.0	1.0962	211°26'26.69"	+49°44'34.42"	+56°32'20.11"	0° Lib 35'36.31"	Rx
2023-Mar-12	12:00	2460016.0	1.0968	210°40'42.85"	+50°02'25.81"	+56°28'11.52"	29° Vir 33'38.09"	Rx
2023-Mar-13	12:00	2460017.0	1.0974	209°52'40.69"	+50°19'13.34"	+56°22'14.95"	28° Vir 31'11.43"	Rx
2023-Mar-14	12:00	2460018.0	1.0979	209°02'22.35"	+50°34'52.34"	+56°14'28.65"	27° Vir 28'28.41"	Rx
2023-Mar-15	12:00	2460019.0	1.0985	208°09'50.84"	+50°49'18.01"	+56°04'51.18"	26° Vir 25'41.50"	Rx
2023-Mar-16	12:00	2460020.0	1.0990	207°15'10.19"	+51°02'25.49"	+55°53'21.47"	25° Vir 23'03.42"	Rx
2023-Mar-17	12:00	2460021.0	1.0995	206°18'25.50"	+51°14'09.86"	+55°39'58.87"	24° Vir 20'47.02"	Rx
2023-Mar-18	12:00	2460022.0	1.0999	205°19'43.06"	+51°24'26.23"	+55°24'43.16"	23° Vir 19'05.19"	Rx
2023-Mar-19	12:00	2460023.0	1.1003	204°19'10.40"	+51°33'09.80"	+55°07'34.64"	22° Vir 18'10.71"	Rx
2023-Mar-20	12:00	2460024.0	1.1008	203°16'56.32"	+51°40'15.98"	+54°48'34.13"	21° Vir 18'16.01"	Rx
2023-Mar-21	12:00	2460025.0	1.1011	202°13'10.80"	+51°45'40.49"	+54°27'43.01"	20° Vir 19'32.97"	Rx
2023-Mar-22	12:00	2460026.0	1.1015	201°08'04.93"	+51°49'19.44"	+54°05'03.24"	19° Vir 22'12.71"	Rx
2023-Mar-23	12:00	2460027.0	1.1018	200°01'50.64"	+51°51'09.46"	+53°40'37.27"	18° Vir 26'25.34"	Rx
2023-Mar-24	12:00	2460028.0	1.1021	198°54'40.59"	+51°51'07.71"	+53°14'28.02"	17° Vir 32'19.83"	Rx
2023-Mar-25	12:00	2460029.0	1.1024	197°46'47.85"	+51°49'11.96"	+52°46'38.80"	16° Vir 40'03.88"	Rx

2023-Mar-26	12:00	2460030.0	1.1027	196°38'25.78"	+51°45'20.55"	+52°17'13.22"	15° Vir 49'43.98"	Rx
2023-Mar-27	12:00	2460031.0	1.1029	195°29'47.76"	+51°39'32.41"	+51°46'15.13"	15° Vir 01'25.39"	Rx
2023-Mar-28	12:00	2460032.0	1.1031	194°21'07.14"	+51°31'47.01"	+51°13'48.57"	14° Vir 15'12.21"	Rx
2023-Mar-29	12:00	2460033.0	1.1033	193°12'36.99"	+51°22'04.38"	+50°39'57.69"	13° Vir 31'07.52"	Rx
2023-Mar-30	12:00	2460034.0	1.1035	192°04'30.04"	+51°10'25.06"	+50°04'46.76"	12° Vir 49'13.41"	Rx
2023-Mar-31	12:00	2460035.0	1.1036	190°56'58.48"	+50°56'50.07"	+49°28'20.06"	12° Vir 09'31.10"	Rx
2023-Apr-01	12:00	2460036.0	1.1037	189°50'13.90"	+50°41'20.91"	+48°50'41.92"	11° Vir 32'01.02"	Rx
2023-Apr-02	12:00	2460037.0	1.1038	188°44'27.17"	+50°23'59.51"	+48°11'56.66"	10° Vir 56'42.89"	Rx
2023-Apr-03	12:00	2460038.0	1.1039	187°39'48.33"	+50°04'48.18"	+47°32'08.56"	10° Vir 23'35.84"	Rx
2023-Apr-04	12:00	2460039.0	1.1039	186°36'26.55"	+49°43'49.61"	+46°51'21.83"	9° Vir 52'38.43"	Rx
2023-Apr-05	12:00	2460040.0	1.1039	185°34'30.09"	+49°21'06.76"	+46°09'40.61"	9° Vir 23'48.83"	Rx
2023-Apr-06	12:00	2460041.0	1.1039	184°34'06.26"	+48°56'42.86"	+45°27'08.93"	8° Vir 57'04.80"	Rx
2023-Apr-07	12:00	2460042.0	1.1039	183°35'21.50"	+48°30'41.35"	+44°43'50.71"	8° Vir 32'23.87"	Rx
2023-Apr-08	12:00	2460043.0	1.1038	182°38'21.33"	+48°03'05.82"	+43°59'49.74"	8° Vir 09'43.38"	Rx
2023-Apr-09	12:00	2460044.0	1.1037	181°43'10.44"	+47°33'59.97"	+43°15'09.70"	7° Vir 49'00.52"	Rx
2023-Apr-10	12:00	2460045.0	1.1036	180°49'52.75"	+47°03'27.61"	+42°29'54.14"	7° Vir 30'12.45"	Rx
2023-Apr-11	12:00	2460046.0	1.1035	179°58'31.49"	+46°31'32.58"	+41°44'06.53"	7° Vir 13'16.33"	Rx
2023-Apr-12	12:00	2460047.0	1.1033	179°09'09.19"	+45°58'18.79"	+40°57'50.23"	6° Vir 58'09.34"	Rx
2023-Apr-13	12:00	2460048.0	1.1031	178°21'47.84"	+45°23'50.15"	+40°11'08.53"	6° Vir 44'48.73"	Rx
2023-Apr-14	12:00	2460049.0	1.1029	177°36'28.87"	+44°48'10.61"	+39°24'04.64"	6° Vir 33'11.82"	Rx
2023-Apr-15	12:00	2460050.0	1.1027	176°53'13.22"	+44°11'24.12"	+38°36'41.73"	6° Vir 23'15.99"	Rx
2023-Apr-16	12:00	2460051.0	1.1024	176°12'01.38"	+43°33'34.65"	+37°49'02.93"	6° Vir 14'58.70"	Rx
2023-Apr-17	12:00	2460052.0	1.1021	175°32'53.37"	+42°54'46.18"	+37°01'11.28"	6° Vir 08'17.40"	Rx
2023-Apr-18	12:00	2460053.0	1.1018	174°55'48.77"	+42°15'02.69"	+36°13'09.81"	6° Vir 03'09.56"	Rx
2023-Apr-19	12:00	2460054.0	1.1015	174°20'46.72"	+41°34'28.16"	+35°25'01.43"	5° Vir 59'32.56"	Rx
2023-Apr-20	12:00	2460055.0	1.1011	173°47'45.85"	+40°53'06.58"	+34°36'48.99"	5° Vir 57'23.70"	Rx
2023-Apr-21	12:00	2460056.0	1.1007	173°16'44.36"	+40°11'01.88"	+33°48'35.18"	5° Vir 56'40.19"	Rx
2023-Apr-22	12:00	2460057.0	1.1003	172°47'40.00"	+39°28'17.93"	+33°00'22.58"	5° Vir 57'19.09"	
2023-Apr-23	12:00	2460058.0	1.0999	172°20'30.16"	+38°44'58.51"	+32°12'13.60"	5° Vir 59'17.43"	
2023-Apr-24	12:00	2460059.0	1.0994	171°55'11.90"	+38°01'07.24"	+31°24'10.47"	6° Vir 02'32.18"	
2023-Apr-25	12:00	2460060.0	1.0989	171°31'42.04"	+37°16'47.60"	+30°36'15.26"	6° Vir 07'00.31"	
2023-Apr-26	12:00	2460061.0	1.0984	171°09'57.23"	+36°32'02.91"	+29°48'29.86"	6° Vir 12'38.83"	
2023-Apr-27	12:00	2460062.0	1.0979	170°49'54.00"	+35°46'56.28"	+29°00'56.00"	6° Vir 19'24.79"	
2023-Apr-28	12:00	2460063.0	1.0973	170°31'28.82"	+35°01'30.66"	+28°13'35.24"	6° Vir 27'15.32"	
2023-Apr-29	12:00	2460064.0	1.0968	170°14'38.12"	+34°15'48.81"	+27°26'29.01"	6° Vir 36'07.63"	
2023-Apr-30	12:00	2460065.0	1.0962	169°59'18.31"	+33°29'53.32"	+26°39'38.59"	6° Vir 45'59.03"	
2023-May-01	12:00	2460066.0	1.0955	169°45'25.86"	+32°43'46.60"	+25°53'05.12"	6° Vir 56'46.88"	
2023-May-02	12:00	2460067.0	1.0949	169°32'57.25"	+31°57'30.87"	+25°06'49.62"	7° Vir 08'28.69"	
2023-May-03	12:00	2460068.0	1.0942	169°21'49.05"	+31°11'08.22"	+24°20'52.99"	7° Vir 21'02.03"	
2023-May-04	12:00	2460069.0	1.0935	169°11'57.92"	+30°24'40.55"	+23°35'16.01"	7° Vir 34'24.59"	
2023-May-05	12:00	2460070.0	1.0928	169°03'20.61"	+29°38'09.59"	+22°49'59.36"	7° Vir 48'34.21"	
2023-May-06	12:00	2460071.0	1.0920	168°55'54.03"	+28°51'36.95"	+22°05'03.60"	8° Vir 03'28.81"	
2023-May-07	12:00	2460072.0	1.0913	168°49'35.24"	+28°05'04.04"	+21°20'29.25"	8° Vir 19'06.52"	
2023-May-08	12:00	2460073.0	1.0905	168°44'21.44"	+27°18'32.17"	+20°36'16.71"	8° Vir 35'25.57"	
2023-May-09	12:00	2460074.0	1.0897	168°40'10.05"	+26°32'02.47"	+19°52'26.34"	8° Vir 52'24.40"	
2023-May-10	12:00	2460075.0	1.0888	168°36'58.66"	+25°45'35.98"	+19°08'58.45"	9° Vir 10'01.58"	

2023-May-11	12:00	2460076.0	1.0880	168°34'45.06"	+24°59'13.62"	+18°25'53.30"	9° Vir 28'15.87"	
2023-May-12	12:00	2460077.0	1.0871	168°33'27.19"	+24°12'56.18"	+17°43'11.13"	9° Vir 47'06.14"	
2023-May-13	12:00	2460078.0	1.0862	168°33'03.15"	+23°26'44.41"	+17°00'52.15"	10° Vir 06'31.39"	
2023-May-14	12:00	2460079.0	1.0853	168°33'31.18"	+22°40'38.96"	+16°18'56.54"	10° Vir 26'30.72"	
2023-May-15	12:00	2460080.0	1.0843	168°34'49.59"	+21°54'40.43"	+15°37'24.43"	10° Vir 47'03.27"	
2023-May-16	12:00	2460081.0	1.0834	168°36'56.73"	+21°08'49.38"	+14°56'15.94"	11° Vir 08'08.17"	
2023-May-17	12:00	2460082.0	1.0824	168°39'51.00"	+20°23'06.33"	+14°15'31.16"	11° Vir 29'44.57"	
2023-May-18	12:00	2460083.0	1.0813	168°43'30.76"	+19°37'31.77"	+13°35'10.11"	11° Vir 51'51.56"	
2023-May-19	12:00	2460084.0	1.0803	168°47'54.38"	+18°52'06.17"	+12°55'12.80"	12° Vir 14'28.18"	
2023-May-20	12:00	2460085.0	1.0793	168°53'00.17"	+18°06'49.98"	+12°15'39.18"	12° Vir 37'33.41"	
2023-May-21	12:00	2460086.0	1.0782	168°58'46.43"	+17°21'43.60"	+11°36'29.16"	13° Vir 01'06.19"	
2023-May-22	12:00	2460087.0	1.0771	169°05'11.47"	+16°36'47.43"	+10°57'42.59"	13° Vir 25'05.42"	
2023-May-23	12:00	2460088.0	1.0760	169°12'13.58"	+15°52'01.79"	+10°19'19.30"	13° Vir 49'29.99"	
2023-May-24	12:00	2460089.0	1.0748	169°19'51.08"	+15°07'26.99"	+9°41'19.09"	14° Vir 14'18.77"	
2023-May-25	12:00	2460090.0	1.0737	169°28'02.33"	+14°23'03.29"	+9°03'41.69"	14° Vir 39'30.67"	
2023-May-26	12:00	2460091.0	1.0725	169°36'45.73"	+13°38'50.92"	+8°26'26.84"	15° Vir 05'04.58"	
2023-May-27	12:00	2460092.0	1.0713	169°45'59.72"	+12°54'50.07"	+7°49'34.24"	15° Vir 30'59.45"	
2023-May-28	12:00	2460093.0	1.0701	169°55'42.78"	+12°11'00.89"	+7°13'03.55"	15° Vir 57'14.22"	
2023-May-29	12:00	2460094.0	1.0689	170°05'53.46"	+11°27'23.51"	+6°36'54.44"	16° Vir 23'47.88"	
2023-May-30	12:00	2460095.0	1.0676	170°16'30.33"	+10°43'58.05"	+6°01'06.55"	16° Vir 50'39.43"	
2023-May-31	12:00	2460096.0	1.0663	170°27'32.04"	+10°00'44.57"	+5°25'39.53"	17° Vir 17'47.91"	