

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 1

Attention, astronomical year style is used: The year -8900 in astronomical counting style is the year 8901 BCE in historical counting style.

opposition	-8900 Mar 05 j 12:01	9° $\overline{027}^{\circ}24$	2°44'26	conjunction	-8894 Sep 18 j 11:19	23° $\overline{037}^{\circ}07$	2°32'26
min. Earth dist.	-8900 Mar 05 j 13:02	9° $\overline{027}^{\circ}20$	29.28408 AU	minimum elong	-8894 Sep 18 j 11:20	23° $\overline{037}^{\circ}07$	2°32'58
direct	-8900 May 24 j 23:44	8° $\overline{003}^{\circ}55$		max. Earth dist.	-8894 Sep 18 j 16:00	23° $\overline{037}^{\circ}33$	31.26337 AU
evening set	-8900 Aug 21 j 06:31	9° $\overline{058}^{\circ}14$		morning rise	-8894 Oct 03 j 11:41	24° $\overline{011}^{\circ}00$	
				retrograde	-8894 Dec 31 j 16:53	26° $\overline{006}^{\circ}57$	
conjunction	-8900 Sep 05 j 05:59	10° $\overline{031}^{\circ}59$	2°34'07	opposition	-8893 Mar 22 j 07:23	24° $\overline{043}^{\circ}45$	2°42'21
minimum elong	-8900 Sep 05 j 05:59	10° $\overline{031}^{\circ}59$	2°34'40	min. Earth dist.	-8893 Mar 22 j 02:03	24° $\overline{044}^{\circ}07$	29.26265 AU
max. Earth dist.	-8900 Sep 05 j 05:57	10° $\overline{031}^{\circ}59$	31.28034 AU	direct	-8893 Jun 10 j 07:25	23° $\overline{020}^{\circ}43$	
morning rise	-8900 Sep 20 j 05:17	11° $\overline{005}^{\circ}45$		evening set	-8893 Sep 05 j 20:58	25° $\overline{014}^{\circ}28$	
retrograde	-8900 Dec 17 j 19:45	13° $\overline{000}^{\circ}52$					
opposition	-8899 Mar 08 j 00:56	11° $\overline{037}^{\circ}56$	2°44'51	conjunction	-8893 Sep 20 j 20:36	25° $\overline{048}^{\circ}15$	2°31'23
min. Earth dist.	-8899 Mar 08 j 00:44	11° $\overline{037}^{\circ}57$	29.28117 AU	minimum elong	-8893 Sep 20 j 20:37	25° $\overline{048}^{\circ}15$	2°31'55
direct	-8899 May 27 j 12:25	10° $\overline{014}^{\circ}32$		max. Earth dist.	-8893 Sep 21 j 02:42	25° $\overline{048}^{\circ}50$	31.25728 AU
evening set	-8899 Aug 23 j 15:21	12° $\overline{008}^{\circ}46$		morning rise	-8893 Oct 05 j 21:07	26° $\overline{022}^{\circ}09$	
				retrograde	-8892 Jan 03 j 03:57	28° $\overline{018}^{\circ}13$	
conjunction	-8899 Sep 07 j 14:34	12° $\overline{042}^{\circ}31$	2°34'23	opposition	-8892 Mar 23 j 20:18	26° $\overline{054}^{\circ}56$	2°41'07
minimum elong	-8899 Sep 07 j 14:34	12° $\overline{042}^{\circ}31$	2°34'58	min. Earth dist.	-8892 Mar 23 j 13:37	26° $\overline{055}^{\circ}23$	29.25577 AU
max. Earth dist.	-8899 Sep 07 j 14:43	12° $\overline{042}^{\circ}32$	31.27790 AU	direct	-8892 Jun 11 j 18:52	25° $\overline{031}^{\circ}54$	
morning rise	-8899 Sep 22 j 14:06	13° $\overline{016}^{\circ}18$		evening set	-8892 Sep 07 j 06:02	27° $\overline{025}^{\circ}33$	
retrograde	-8899 Dec 20 j 08:55	15° $\overline{011}^{\circ}34$					
opposition	-8898 Mar 10 j 13:55	13° $\overline{048}^{\circ}36$	2°45'01	conjunction	-8892 Sep 22 j 05:41	27° $\overline{059}^{\circ}21$	2°30'07
min. Earth dist.	-8898 Mar 10 j 12:04	13° $\overline{048}^{\circ}43$	29.27908 AU	minimum elong	-8892 Sep 22 j 05:42	27° $\overline{059}^{\circ}21$	2°30'39
direct	-8898 May 29 j 22:43	12° $\overline{025}^{\circ}15$		max. Earth dist.	-8892 Sep 22 j 11:35	27° $\overline{059}^{\circ}54$	31.24989 AU
evening set	-8898 Aug 26 j 00:09	14° $\overline{019}^{\circ}26$		morning rise	-8892 Oct 07 j 06:40	28° $\overline{033}^{\circ}17$	
					-8892 Nov 22 j 23:23	0° $\overline{000}^{\circ}$	
conjunction	-8898 Sep 09 j 23:27	14° $\overline{053}^{\circ}11$	2°34'26	retrograde	-8891 Jan 04 j 16:53	0° $\overline{029}^{\circ}27$	
minimum elong	-8898 Sep 09 j 23:27	14° $\overline{053}^{\circ}11$	2°35'00		-8891 Feb 18 j 02:34	30° $\overline{000}^{\circ}$	
max. Earth dist.	-8898 Sep 10 j 01:34	14° $\overline{053}^{\circ}23$	31.27594 AU	opposition	-8891 Mar 26 j 09:26	29° $\overline{006}^{\circ}03$	2°39'39
morning rise	-8898 Sep 24 j 22:57	15° $\overline{026}^{\circ}59$		min. Earth dist.	-8891 Mar 26 j 02:21	29° $\overline{006}^{\circ}32$	29.24794 AU
retrograde	-8898 Dec 22 j 19:02	17° $\overline{022}^{\circ}23$		direct	-8891 Jun 14 j 05:06	27° $\overline{043}^{\circ}02$	
opposition	-8897 Mar 13 j 02:58	15° $\overline{059}^{\circ}23$	2°44'58	evening set	-8891 Sep 09 j 14:45	29° $\overline{036}^{\circ}33$	
min. Earth dist.	-8897 Mar 13 j 00:47	15° $\overline{059}^{\circ}32$	29.27719 AU		-8891 Sep 20 j 01:18	0° $\overline{000}^{\circ}$	
direct	-8897 Jun 01 j 10:52	14° $\overline{036}^{\circ}08$					
evening set	-8897 Aug 28 j 09:02	16° $\overline{030}^{\circ}14$		conjunction	-8891 Sep 24 j 14:45	0° $\overline{010}^{\circ}22$	2°28'38
				minimum elong	-8891 Sep 24 j 14:46	0° $\overline{010}^{\circ}22$	2°29'10
conjunction	-8897 Sep 12 j 08:15	17° $\overline{003}^{\circ}59$	2°34'16	max. Earth dist.	-8891 Sep 24 j 22:40	0° $\overline{011}^{\circ}07$	31.24174 AU
minimum elong	-8897 Sep 12 j 08:15	17° $\overline{003}^{\circ}59$	2°34'50	morning rise	-8891 Oct 09 j 15:55	0° $\overline{044}^{\circ}19$	
max. Earth dist.	-8897 Sep 12 j 10:45	17° $\overline{004}^{\circ}13$	31.27408 AU	retrograde	-8890 Jan 07 j 04:30	2° $\overline{040}^{\circ}35$	
morning rise	-8897 Sep 27 j 08:00	17° $\overline{037}^{\circ}48$		opposition	-8890 Mar 28 j 22:32	1° $\overline{017}^{\circ}05$	2°37'57
retrograde	-8897 Dec 25 j 07:16	19° $\overline{033}^{\circ}21$		min. Earth dist.	-8890 Mar 28 j 14:29	1° $\overline{017}^{\circ}38$	29.23956 AU
opposition	-8896 Mar 14 j 15:55	18° $\overline{010}^{\circ}19$	2°44'40		-8890 May 28 j 14:45	30° $\overline{000}^{\circ}$	
min. Earth dist.	-8896 Mar 14 j 11:57	18° $\overline{010}^{\circ}35$	29.27509 AU	direct	-8890 Jun 16 j 17:18	29° $\overline{054}^{\circ}03$	
direct	-8896 Jun 02 j 22:52	16° $\overline{047}^{\circ}08$			-8890 Jul 05 j 12:37	0° $\overline{000}^{\circ}$	
evening set	-8896 Aug 29 j 17:58	18° $\overline{041}^{\circ}10$		evening set	-8890 Sep 11 j 23:42	1° $\overline{047}^{\circ}28$	
conjunction	-8896 Sep 13 j 17:13	19° $\overline{014}^{\circ}56$	2°33'53	conjunction	-8890 Sep 26 j 23:48	2° $\overline{021}^{\circ}18$	2°26'57
minimum elong	-8896 Sep 13 j 17:14	19° $\overline{014}^{\circ}56$	2°34'26	minimum elong	-8890 Sep 26 j 23:48	2° $\overline{021}^{\circ}18$	2°27'28
max. Earth dist.	-8896 Sep 13 j 20:51	19° $\overline{015}^{\circ}16$	31.27153 AU	max. Earth dist.	-8890 Sep 27 j 07:46	2° $\overline{022}^{\circ}03$	31.23350 AU
morning rise	-8896 Sep 28 j 17:05	19° $\overline{048}^{\circ}46$		morning rise	-8890 Oct 12 j 01:29	2° $\overline{055}^{\circ}17$	
retrograde	-8896 Dec 26 j 18:23	21° $\overline{044}^{\circ}28$		retrograde	-8889 Jan 09 j 17:46	4° $\overline{051}^{\circ}38$	
opposition	-8895 Mar 17 j 05:01	20° $\overline{021}^{\circ}24$	2°44'07	opposition	-8889 Mar 31 j 11:27	3° $\overline{028}^{\circ}02$	2°36'02
min. Earth dist.	-8895 Mar 17 j 01:21	20° $\overline{021}^{\circ}38$	29.27215 AU	min. Earth dist.	-8889 Mar 31 j 01:56	3° $\overline{028}^{\circ}41$	29.23153 AU
direct	-8895 Jun 05 j 09:56	18° $\overline{058}^{\circ}17$		direct	-8889 Jun 19 j 03:21	2° $\overline{005}^{\circ}01$	
evening set	-8895 Sep 01 j 02:58	20° $\overline{052}^{\circ}13$		evening set	-8889 Sep 14 j 08:30	3° $\overline{058}^{\circ}20$	
conjunction	-8895 Sep 16 j 02:18	21° $\overline{025}^{\circ}59$	2°33'16	conjunction	-8889 Sep 29 j 08:59	4° $\overline{032}^{\circ}11$	2°25'03
minimum elong	-8895 Sep 16 j 02:18	21° $\overline{025}^{\circ}59$	2°33'49	minimum elong	-8889 Sep 29 j 08:59	4° $\overline{032}^{\circ}11$	2°25'33
max. Earth dist.	-8895 Sep 16 j 06:48	21° $\overline{026}^{\circ}25$	31.26814 AU	max. Earth dist.	-8889 Sep 29 j 18:47	4° $\overline{033}^{\circ}07$	31.22568 AU
morning rise	-8895 Oct 01 j 02:19	21° $\overline{059}^{\circ}51$		morning rise	-8889 Oct 14 j 10:58	5° $\overline{006}^{\circ}12$	
retrograde	-8895 Dec 29 j 05:15	23° $\overline{055}^{\circ}41$		retrograde	-8888 Jan 12 j 04:36	7° $\overline{002}^{\circ}40$	
opposition	-8894 Mar 19 j 18:07	22° $\overline{032}^{\circ}33$	2°43'21	opposition	-8888 Apr 02 j 00:24	5° $\overline{038}^{\circ}59$	2°33'54
min. Earth dist.	-8894 Mar 19 j 12:37	22° $\overline{032}^{\circ}56$	29.26807 AU	min. Earth dist.	-8888 Apr 01 j 14:26	5° $\overline{039}^{\circ}40$	29.22407 AU
direct	-8894 Jun 07 j 21:40	21° $\overline{009}^{\circ}29$		direct	-8888 Jun 20 j 15:27	4° $\overline{015}^{\circ}59$	
evening set	-8894 Sep 03 j 11:58	23° $\overline{003}^{\circ}20$		evening set	-8888 Sep 15 j 17:21	6° $\overline{009}^{\circ}13$	

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 2

Attention, astronomical year style is used: The year -8888 in astronomical counting style is the year 8889 BCE in historical counting style.

conjunction	-8888 Sep 30 j 18:03	6°Ω43'06	2°22'56	retrograde	-8881 Jan 27 j 17:52	22°Ω23'45	
minimum elong	-8888 Sep 30 j 18:04	6°Ω43'06	2°23'25	opposition	-8881 Apr 18 j 19:04	20°Ω59'48	2°12'45
max. Earth dist.	-8888 Oct 01 j 04:32	6°Ω44'05	31.21879 AU	min. Earth dist.	-8881 Apr 18 j 03:04	21°Ω00'53	29.18261 AU
morning rise	-8888 Oct 15 j 20:30	7°Ω17'09		direct	-8881 Jul 06 j 18:12	19°Ω37'11	
retrograde	-8887 Jan 13 j 17:33	9°Ω13'43		evening set	-8881 Oct 01 j 09:08	21°Ω29'58	
opposition	-8887 Apr 04 j 13:12	7°Ω49'59	2°31'31				
min. Earth dist.	-8887 Apr 04 j 01:10	7°Ω50'48	29.21758 AU	conjunction	-8881 Oct 16 j 12:42	22°Ω04'07	2°02'29
direct	-8887 Jun 23 j 03:15	6°Ω27'02		minimum elong	-8881 Oct 16 j 12:42	22°Ω04'07	2°02'53
evening set	-8887 Sep 18 j 02:15	8°Ω20'11		max. Earth dist.	-8881 Oct 17 j 04:27	22°Ω05'36	31.17680 AU
				morning rise	-8881 Oct 31 j 18:59	22°Ω38'30	
conjunction	-8887 Oct 03 j 03:16	8°Ω54'07	2°20'37	retrograde	-8880 Jan 30 j 07:40	24°Ω35'58	
minimum elong	-8887 Oct 03 j 03:17	8°Ω54'07	2°21'06	opposition	-8880 Apr 20 j 08:03	23°Ω11'56	2°08'55
max. Earth dist.	-8887 Oct 03 j 15:00	8°Ω55'13	31.21276 AU	min. Earth dist.	-8880 Apr 19 j 15:14	23°Ω13'05	29.17362 AU
morning rise	-8887 Oct 18 j 06:12	9°Ω28'13		direct	-8880 Jul 08 j 03:47	21°Ω49'20	
retrograde	-8886 Jan 16 j 05:18	11°Ω24'55		evening set	-8880 Oct 02 j 18:27	23°Ω42'01	
opposition	-8886 Apr 07 j 02:16	10°Ω01'08	2°28'56				
min. Earth dist.	-8886 Apr 06 j 14:11	10°Ω01'57	29.21196 AU	conjunction	-8880 Oct 17 j 22:35	24°Ω16'12	1°58'48
direct	-8886 Jun 25 j 13:59	8°Ω38'15		minimum elong	-8880 Oct 17 j 22:36	24°Ω16'12	1°59'11
evening set	-8886 Sep 20 j 11:03	10°Ω31'20		max. Earth dist.	-8880 Oct 18 j 15:29	24°Ω17'48	31.16708 AU
				morning rise	-8880 Nov 02 j 05:24	24°Ω50'39	
conjunction	-8886 Oct 05 j 12:32	11°Ω05'17	2°18'05	retrograde	-8879 Jan 31 j 19:40	26°Ω48'11	
minimum elong	-8886 Oct 05 j 12:32	11°Ω05'17	2°18'34	opposition	-8879 Apr 22 j 21:02	25°Ω24'03	2°04'54
max. Earth dist.	-8886 Oct 06 j 01:36	11°Ω06'31	31.20761 AU	min. Earth dist.	-8879 Apr 22 j 04:20	25°Ω25'12	29.16318 AU
morning rise	-8886 Oct 20 j 15:54	11°Ω39'26		direct	-8879 Jul 10 j 16:10	24°Ω01'26	
retrograde	-8885 Jan 18 j 16:29	13°Ω36'16		evening set	-8879 Oct 05 j 03:51	25°Ω54'02	
opposition	-8885 Apr 09 j 15:09	12°Ω12'28	2°26'07				
min. Earth dist.	-8885 Apr 09 j 01:03	12°Ω13'25	29.20689 AU	conjunction	-8879 Oct 20 j 08:31	26°Ω28'15	1°54'57
direct	-8885 Jun 28 j 01:24	10°Ω49'39		minimum elong	-8879 Oct 20 j 08:31	26°Ω28'15	1°55'19
evening set	-8885 Sep 22 j 20:09	12°Ω42'41		max. Earth dist.	-8879 Oct 21 j 01:41	26°Ω29'52	31.15639 AU
				morning rise	-8879 Nov 04 j 16:02	27°Ω02'45	
conjunction	-8885 Oct 07 j 21:54	13°Ω16'40	2°15'22	retrograde	-8878 Feb 03 j 09:56	29°Ω00'20	
minimum elong	-8885 Oct 07 j 21:54	13°Ω16'40	2°15'49	opposition	-8878 Apr 25 j 09:52	27°Ω36'06	2°00'41
max. Earth dist.	-8885 Oct 08 j 11:12	13°Ω17'55	31.20265 AU	min. Earth dist.	-8878 Apr 24 j 15:42	27°Ω37'20	29.15206 AU
morning rise	-8885 Oct 23 j 01:54	13°Ω50'52		direct	-8878 Jul 13 j 04:25	26°Ω13'26	
	-8885 Nov 27 j 00:38	15°Ω		evening set	-8878 Oct 07 j 13:13	28°Ω05'56	
retrograde	-8884 Jan 21 j 04:22	15°Ω47'50					
	-8884 Mar 19 j 05:50	15°Ω		conjunction	-8878 Oct 22 j 18:25	28°Ω40'12	1°50'56
opposition	-8884 Apr 11 j 04:03	14°Ω24'01	2°23'05	minimum elong	-8878 Oct 22 j 18:26	28°Ω40'12	1°51'17
min. Earth dist.	-8884 Apr 10 j 14:04	14°Ω24'57	29.20193 AU	max. Earth dist.	-8878 Oct 23 j 12:20	28°Ω41'54	31.14508 AU
direct	-8884 Jun 29 j 10:33	13°Ω01'16		morning rise	-8878 Nov 07 j 02:39	29°Ω14'45	
evening set	-8884 Sep 24 j 05:11	14°Ω54'14			-8878 Nov 28 j 18:50	0°Ω	
	-8884 Sep 26 j 19:25	15°Ω		retrograde	-8877 Feb 05 j 21:39	1°Ω12'24	
					-8877 Apr 20 j 14:23	30°Ω	
conjunction	-8884 Oct 09 j 07:29	15°Ω28'16	2°12'26	opposition	-8877 Apr 27 j 22:44	29°Ω48'02	1°56'19
minimum elong	-8884 Oct 09 j 07:30	15°Ω28'16	2°12'52	min. Earth dist.	-8877 Apr 27 j 04:57	29°Ω49'15	29.14071 AU
max. Earth dist.	-8884 Oct 09 j 22:28	15°Ω29'41	31.19761 AU	direct	-8877 Jul 15 j 15:31	28°Ω25'21	
morning rise	-8884 Oct 24 j 11:52	16°Ω02'30			-8877 Oct 01 j 18:27	0°Ω	
retrograde	-8883 Jan 22 j 16:06	17°Ω59'37		evening set	-8877 Oct 09 j 22:38	0°Ω17'45	
opposition	-8883 Apr 13 j 17:00	16°Ω35'46	2°19'51				
min. Earth dist.	-8883 Apr 13 j 01:38	16°Ω36'49	29.19648 AU	conjunction	-8877 Oct 25 j 04:29	0°Ω52'03	1°46'46
direct	-8883 Jul 01 j 21:27	15°Ω13'06		minimum elong	-8877 Oct 25 j 04:30	0°Ω52'03	1°47'05
evening set	-8883 Sep 26 j 14:23	17°Ω06'00		max. Earth dist.	-8877 Oct 25 j 23:34	0°Ω53'51	31.13396 AU
				morning rise	-8877 Nov 09 j 13:18	1°Ω26'39	
conjunction	-8883 Oct 11 j 16:56	17°Ω40'04	2°09'18	retrograde	-8876 Feb 08 j 09:07	3°Ω24'20	
minimum elong	-8883 Oct 11 j 16:57	17°Ω40'04	2°09'44	opposition	-8876 Apr 29 j 11:13	1°Ω59'53	1°51'46
max. Earth dist.	-8883 Oct 12 j 07:39	17°Ω41'27	31.19186 AU	min. Earth dist.	-8876 Apr 28 j 15:38	2°Ω01'13	29.12977 AU
morning rise	-8883 Oct 26 j 22:03	18°Ω14'22		direct	-8876 Jul 17 j 03:41	0°Ω37'11	
retrograde	-8882 Jan 25 j 05:35	20°Ω11'37		evening set	-8876 Oct 11 j 08:10	2°Ω29'30	
opposition	-8882 Apr 16 j 06:08	18°Ω47'43	2°16'24				
min. Earth dist.	-8882 Apr 15 j 14:35	18°Ω48'46	29.19024 AU	conjunction	-8876 Oct 26 j 14:27	3°Ω03'51	1°42'26
direct	-8882 Jul 04 j 07:06	17°Ω25'05		minimum elong	-8876 Oct 26 j 14:28	3°Ω03'51	1°42'44
evening set	-8882 Sep 28 j 23:40	19°Ω17'56		max. Earth dist.	-8876 Oct 27 j 09:38	3°Ω05'40	31.12344 AU
				morning rise	-8876 Nov 11 j 00:04	3°Ω38'30	
conjunction	-8882 Oct 14 j 02:51	19°Ω52'02	2°05'59	retrograde	-8875 Feb 09 j 21:18	5°Ω36'15	
minimum elong	-8882 Oct 14 j 02:52	19°Ω52'02	2°06'23	opposition	-8875 May 01 j 23:59	4°Ω11'43	1°47'03
max. Earth dist.	-8882 Oct 14 j 19:09	19°Ω53'35	31.18501 AU	min. Earth dist.	-8875 May 01 j 04:25	4°Ω13'03	29.11973 AU
morning rise	-8882 Oct 29 j 08:23	20°Ω26'23		direct	-8875 Jul 19 j 13:48	2°Ω49'01	

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 3

Attention, astronomical year style is used: The year -8875 in astronomical counting style is the year 8876 BCE in historical counting style.

evening set	-8875 Oct 13 j 17:29	4° <u>14</u> '14		opposition	-8868 May 17 j 15:50	19° <u>17</u> '38'03	1°09'55
				min. Earth dist.	-8868 May 16 j 17:17	19° <u>17</u> '39'36	29.06147 AU
conjunction	-8875 Oct 29 j 00:32	5° <u>15</u> '38	1°37'57	direct	-8868 Aug 03 j 15:30	18° <u>17</u> '15'29	
minimum elong	-8875 Oct 29 j 00:33	5° <u>15</u> '39	1°38'15	evening set	-8868 Oct 28 j 15:22	20° <u>17</u> '07'32	
max. Earth dist.	-8875 Oct 29 j 21:35	5° <u>17</u> '38	31.11398 AU				
morning rise	-8875 Nov 13 j 10:41	5° <u>15</u> '02'1		conjunction	-8868 Nov 13 j 02:51	20° <u>17</u> '42'18	1°02'47
retrograde	-8874 Feb 12 j 08:45	7° <u>14</u> '48'11		minimum elong	-8868 Nov 13 j 02:52	20° <u>17</u> '42'18	1°02'56
opposition	-8874 May 04 j 12:37	6° <u>12</u> '23'35	1°42'11	max. Earth dist.	-8868 Nov 14 j 02:57	20° <u>17</u> '44'34	31.05557 AU
min. Earth dist.	-8874 May 03 j 15:28	6° <u>12</u> '25'02	29.11063 AU	morning rise	-8868 Nov 28 j 18:02	21° <u>17</u> '17'25	
direct	-8874 Jul 22 j 01:20	5° <u>12</u> '00'53		retrograde	-8867 Feb 28 j 04:41	23° <u>17</u> '15'51	
evening set	-8874 Oct 16 j 03:11	6° <u>12</u> '53'04		min. Earth dist.	-8867 May 19 j 04:34	21° <u>17</u> '52'36	29.05065 AU
				opposition	-8867 May 20 j 04:17	21° <u>17</u> '50'58	1°04'07
conjunction	-8874 Oct 31 j 10:42	7° <u>12</u> '27'30	1°33'19	direct	-8867 Aug 06 j 03:57	20° <u>17</u> '28'23	
minimum elong	-8874 Oct 31 j 10:43	7° <u>12</u> '27'30	1°33'36	evening set	-8867 Oct 31 j 01:46	22° <u>17</u> '20'23	
max. Earth dist.	-8874 Nov 01 j 07:34	7° <u>12</u> '29'29	31.10546 AU				
morning rise	-8874 Nov 15 j 21:44	8° <u>12</u> '02'17		conjunction	-8867 Nov 15 j 13:47	22° <u>17</u> '55'12	0°57'19
retrograde	-8873 Feb 14 j 21:28	10° <u>12</u> '00'12		minimum elong	-8867 Nov 15 j 13:47	22° <u>17</u> '55'12	0°57'27
min. Earth dist.	-8873 May 06 j 03:45	8° <u>12</u> '37'01	29.10253 AU	max. Earth dist.	-8867 Nov 16 j 13:17	22° <u>17</u> '57'25	31.04433 AU
opposition	-8873 May 07 j 01:09	8° <u>12</u> '35'33	1°37'09	morning rise	-8867 Dec 01 j 05:51	23° <u>17</u> '30'23	
direct	-8873 Jul 24 j 10:24	7° <u>12</u> '12'53		retrograde	-8866 Mar 02 j 18:05	25° <u>17</u> '28'51	
evening set	-8873 Oct 18 j 12:48	9° <u>12</u> '05'01		opposition	-8866 May 22 j 16:49	24° <u>17</u> '03'53	0°58'14
				min. Earth dist.	-8866 May 21 j 17:51	24° <u>17</u> '05'28	29.03902 AU
conjunction	-8873 Nov 02 j 21:05	9° <u>12</u> '39'31	1°28'32	direct	-8866 Aug 08 j 14:41	22° <u>17</u> '41'16	
minimum elong	-8873 Nov 02 j 21:06	9° <u>12</u> '39'31	1°28'49	evening set	-8866 Nov 02 j 12:12	24° <u>17</u> '33'13	
max. Earth dist.	-8873 Nov 03 j 19:43	9° <u>12</u> '41'39	31.09769 AU				
morning rise	-8873 Nov 18 j 08:42	10° <u>12</u> '14'20		conjunction	-8866 Nov 18 j 01:03	25° <u>17</u> '08'05	0°51'46
retrograde	-8872 Feb 17 j 09:04	12° <u>12</u> '12'21		minimum elong	-8866 Nov 18 j 01:03	25° <u>17</u> '08'05	0°51'53
opposition	-8872 May 08 j 13:41	10° <u>12</u> '47'40	1°31'58	max. Earth dist.	-8866 Nov 19 j 01:50	25° <u>17</u> '10'25	31.03254 AU
min. Earth dist.	-8872 May 07 j 15:42	10° <u>12</u> '49'11	29.09487 AU	morning rise	-8866 Dec 03 j 17:41	25° <u>17</u> '43'19	
direct	-8872 Jul 25 j 20:54	9° <u>12</u> '25'02		retrograde	-8865 Mar 05 j 05:32	27° <u>17</u> '41'48	
evening set	-8872 Oct 19 j 22:36	11° <u>12</u> '17'09		min. Earth dist.	-8865 May 24 j 05:01	26° <u>17</u> '18'24	29.02705 AU
				opposition	-8865 May 25 j 04:55	26° <u>17</u> '16'46	0°52'16
conjunction	-8872 Nov 04 j 07:22	11° <u>12</u> '51'42	1°23'37	direct	-8865 Aug 11 j 02:45	24° <u>17</u> '54'05	
minimum elong	-8872 Nov 04 j 07:23	11° <u>12</u> '51'42	1°23'52	evening set	-8865 Nov 04 j 22:49	26° <u>17</u> '46'00	
max. Earth dist.	-8872 Nov 05 j 05:43	11° <u>12</u> '53'48	31.09031 AU				
morning rise	-8872 Nov 19 j 19:48	12° <u>12</u> '26'35		conjunction	-8865 Nov 20 j 12:09	27° <u>17</u> '20'55	0°46'09
retrograde	-8871 Feb 18 j 23:16	14° <u>12</u> '24'42		minimum elong	-8865 Nov 20 j 12:10	27° <u>17</u> '20'55	0°46'15
min. Earth dist.	-8871 May 10 j 03:27	13° <u>12</u> '01'33	29.08747 AU	max. Earth dist.	-8865 Nov 21 j 12:17	27° <u>17</u> '23'11	31.02075 AU
opposition	-8871 May 11 j 02:15	12° <u>12</u> '59'59	1°26'39	morning rise	-8865 Dec 06 j 05:40	27° <u>17</u> '56'13	
direct	-8871 Jul 28 j 05:59	11° <u>12</u> '37'23		retrograde	-8864 Mar 06 j 17:38	29° <u>17</u> '54'44	
evening set	-8871 Oct 22 j 08:33	13° <u>12</u> '29'29		opposition	-8864 May 26 j 17:10	28° <u>17</u> '29'36	0°46'13
				min. Earth dist.	-8864 May 25 j 17:23	28° <u>17</u> '31'14	29.01555 AU
conjunction	-8871 Nov 06 j 18:01	14° <u>12</u> '04'05	1°18'35	direct	-8864 Aug 12 j 12:20	27° <u>17</u> '06'53	
minimum elong	-8871 Nov 06 j 18:02	14° <u>12</u> '04'05	1°18'49	evening set	-8864 Nov 06 j 09:13	28° <u>17</u> '58'46	
max. Earth dist.	-8871 Nov 07 j 17:27	14° <u>12</u> '06'18	31.08279 AU				
morning rise	-8871 Nov 22 j 07:05	14° <u>12</u> '39'02		conjunction	-8864 Nov 21 j 23:19	29° <u>17</u> '33'43	0°40'28
retrograde	-8870 Feb 21 j 11:55	16° <u>12</u> '37'15		minimum elong	-8864 Nov 21 j 23:19	29° <u>17</u> '33'43	0°40'31
opposition	-8870 May 13 j 14:50	15° <u>12</u> '12'31	1°21'11	max. Earth dist.	-8864 Nov 23 j 01:03	29° <u>17</u> '36'09	31.00958 AU
min. Earth dist.	-8870 May 12 j 16:21	15° <u>12</u> '14'03	29.07969 AU		-8864 Dec 03 j 15:13	0° <u>12</u> '	
direct	-8870 Jul 30 j 17:18	13° <u>12</u> '49'56		morning rise	-8864 Dec 07 j 17:20	0° <u>12</u> '09'04	
evening set	-8870 Oct 24 j 18:41	15° <u>12</u> '42'01		retrograde	-8863 Mar 09 j 04:29	2° <u>12</u> '07'37	
				min. Earth dist.	-8863 May 28 j 05:01	0° <u>12</u> '44'06	29.00484 AU
conjunction	-8870 Nov 09 j 04:49	16° <u>12</u> '16'40	1°13'25	opposition	-8863 May 29 j 05:19	0° <u>12</u> '42'25	0°40'06
minimum elong	-8870 Nov 09 j 04:50	16° <u>12</u> '16'40	1°13'37		-8863 Jun 25 j 00:35	30° <u>12</u> '	
max. Earth dist.	-8870 Nov 10 j 04:16	16° <u>12</u> '18'53	31.07483 AU	direct	-8863 Aug 14 j 22:55	29° <u>17</u> '19'40	
morning rise	-8870 Nov 24 j 18:39	16° <u>12</u> '51'41			-8863 Oct 02 j 22:09	0° <u>12</u> '	
retrograde	-8869 Feb 24 j 03:03	18° <u>12</u> '49'59		evening set	-8863 Nov 08 j 19:56	1° <u>12</u> '11'32	
min. Earth dist.	-8869 May 15 j 03:49	17° <u>12</u> '26'49	29.07117 AU				
opposition	-8869 May 16 j 03:20	17° <u>12</u> '25'13	1°15'37	conjunction	-8863 Nov 24 j 10:35	1° <u>12</u> '46'32	0°34'43
direct	-8869 Aug 02 j 04:52	16° <u>12</u> '02'39		minimum elong	-8863 Nov 24 j 10:36	1° <u>12</u> '46'32	0°34'46
evening set	-8869 Oct 27 j 05:04	17° <u>12</u> '54'43		max. Earth dist.	-8863 Nov 25 j 11:55	1° <u>12</u> '48'55	30.99959 AU
				morning rise	-8863 Dec 10 j 05:25	2° <u>12</u> '21'56	
conjunction	-8869 Nov 11 j 15:46	18° <u>12</u> '29'26	1°08'09	retrograde	-8862 Mar 11 j 18:25	4° <u>12</u> '20'32	
minimum elong	-8869 Nov 11 j 15:47	18° <u>12</u> '29'26	1°08'20	opposition	-8862 May 31 j 17:21	2° <u>12</u> '55'16	0°33'55
max. Earth dist.	-8869 Nov 12 j 15:17	18° <u>12</u> '31'39	31.06571 AU	min. Earth dist.	-8862 May 30 j 16:19	2° <u>12</u> '57'00	28.99552 AU
morning rise	-8869 Nov 27 j 06:19	19° <u>12</u> '04'30		direct	-8862 Aug 17 j 08:00	1° <u>12</u> '32'30	
retrograde	-8868 Feb 26 j 15:31	21° <u>12</u> '02'52		evening set	-8862 Nov 11 j 06:42	3° <u>12</u> '24'22	

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 4

Attention, astronomical year style is used: The year -8862 in astronomical counting style is the year 8863 BCE in historical counting style.

conjunction	-8862 Nov 26 j 22:04	3° <u>♁</u> 59'25	0°28'54	conjunction	-8856 Dec 09 j 21:33	17° <u>♁</u> 19'57	-0°06'45
minimum elong	-8862 Nov 26 j 22:04	3° <u>♁</u> 59'25	0°28'56	minimum elong	-8856 Dec 09 j 21:33	17° <u>♁</u> 19'57	0°06'51
max. Earth dist.	-8862 Nov 28 j 00:26	4° <u>♁</u> 01'54	30.99083 AU	behind sun begin	-8856 Dec 09 j 15:30	17° <u>♁</u> 19'24	
morning rise	-8862 Dec 12 j 17:30	4° <u>♁</u> 34'52		behind sun end	-8856 Dec 10 j 03:36	17° <u>♁</u> 20'29	
retrograde	-8861 Mar 14 j 06:11	6° <u>♁</u> 33'30		max. Earth dist.	-8856 Dec 10 j 23:30	17° <u>♁</u> 22'23	30.95072 AU
min. Earth dist.	-8861 Jun 02 j 04:36	5° <u>♁</u> 09'56	28.98734 AU	morning rise	-8856 Dec 25 j 20:45	17° <u>♁</u> 55'41	
opposition	-8861 Jun 03 j 05:26	5° <u>♁</u> 08'13	0°27'41	retrograde	-8855 Mar 27 j 16:05	19° <u>♁</u> 54'33	
direct	-8861 Aug 19 j 19:03	3° <u>♁</u> 45'26		min. Earth dist.	-8855 Jun 15 j 04:36	18° <u>♁</u> 30'54	28.94696 AU
evening set	-8861 Nov 13 j 17:36	5° <u>♁</u> 37'19		opposition	-8855 Jun 16 j 05:09	18° <u>♁</u> 29'12	-0°10'26
				direct	-8855 Sep 01 j 13:27	17° <u>♁</u> 06'22	
				evening set	-8855 Nov 26 j 14:34	18° <u>♁</u> 58'27	
conjunction	-8861 Nov 29 j 09:35	6° <u>♁</u> 12'25	0°23'03				
minimum elong	-8861 Nov 29 j 09:35	6° <u>♁</u> 12'25	0°23'04	conjunction	-8855 Dec 12 j 10:09	19° <u>♁</u> 33'49	-0°12'41
max. Earth dist.	-8861 Nov 30 j 12:05	6° <u>♁</u> 14'54	30.98335 AU	minimum elong	-8855 Dec 12 j 10:09	19° <u>♁</u> 33'49	0°12'48
morning rise	-8861 Dec 15 j 05:40	6° <u>♁</u> 47'54		behind sun begin	-8855 Dec 12 j 06:07	19° <u>♁</u> 33'27	
retrograde	-8860 Mar 15 j 20:38	8° <u>♁</u> 46'35		behind sun end	-8855 Dec 12 j 14:11	19° <u>♁</u> 34'11	
opposition	-8860 Jun 04 j 17:18	7° <u>♁</u> 21'17	0°21'24	max. Earth dist.	-8855 Dec 13 j 12:50	19° <u>♁</u> 36'20	30.94220 AU
min. Earth dist.	-8860 Jun 03 j 15:21	7° <u>♁</u> 23'05	28.98033 AU	morning rise	-8855 Dec 28 j 09:46	20° <u>♁</u> 09'36	
direct	-8860 Aug 21 j 05:50	5° <u>♁</u> 58'30		retrograde	-8854 Mar 30 j 03:46	22° <u>♁</u> 08'27	
evening set	-8860 Nov 15 j 04:41	7° <u>♁</u> 50'25		opposition	-8854 Jun 18 j 16:56	20° <u>♁</u> 43'04	-0°16'48
				min. Earth dist.	-8854 Jun 17 j 16:43	20° <u>♁</u> 44'45	28.93794 AU
conjunction	-8860 Nov 30 j 21:12	8° <u>♁</u> 25'34	0°17'10	direct	-8854 Sep 04 j 00:51	19° <u>♁</u> 20'11	
minimum elong	-8860 Nov 30 j 21:12	8° <u>♁</u> 25'34	0°17'08	evening set	-8854 Nov 29 j 02:38	21° <u>♁</u> 12'17	
max. Earth dist.	-8860 Dec 01 j 23:57	8° <u>♁</u> 28'04	30.97674 AU				
morning rise	-8860 Dec 16 j 17:59	9° <u>♁</u> 01'07		conjunction	-8854 Dec 14 j 22:41	21° <u>♁</u> 47'41	-0°18'37
retrograde	-8859 Mar 18 j 09:22	10° <u>♁</u> 59'51		minimum elong	-8854 Dec 14 j 22:41	21° <u>♁</u> 47'41	0°18'46
min. Earth dist.	-8859 Jun 06 j 04:19	9° <u>♁</u> 36'16	28.97409 AU	max. Earth dist.	-8854 Dec 16 j 00:08	21° <u>♁</u> 50'04	30.93294 AU
opposition	-8859 Jun 07 j 05:23	9° <u>♁</u> 34'32	0°15'04	morning rise	-8854 Dec 30 j 22:58	22° <u>♁</u> 23'30	
direct	-8859 Aug 23 j 15:41	8° <u>♁</u> 11'45		retrograde	-8853 Apr 01 j 17:22	24° <u>♁</u> 22'21	
evening set	-8859 Nov 17 j 15:45	10° <u>♁</u> 03'42		min. Earth dist.	-8853 Jun 20 j 04:32	22° <u>♁</u> 58'35	28.92848 AU
				opposition	-8853 Jun 21 j 04:42	22° <u>♁</u> 56'54	-0°23'08
conjunction	-8859 Dec 03 j 09:02	10° <u>♁</u> 38'54	0°11'14	direct	-8853 Sep 06 j 10:58	21° <u>♁</u> 33'56	
minimum elong	-8859 Dec 03 j 09:02	10° <u>♁</u> 38'54	0°11'12	evening set	-8853 Dec 01 j 14:39	23° <u>♁</u> 26'04	
behind sun begin	-8859 Dec 03 j 04:14	10° <u>♁</u> 38'28					
behind sun end	-8859 Dec 03 j 13:50	10° <u>♁</u> 39'20		conjunction	-8853 Dec 17 j 11:16	24° <u>♁</u> 01'31	-0°24'32
max. Earth dist.	-8859 Dec 04 j 12:27	10° <u>♁</u> 41'29	30.97081 AU	minimum elong	-8853 Dec 17 j 11:15	24° <u>♁</u> 01'31	0°24'42
morning rise	-8859 Dec 19 j 06:21	11° <u>♁</u> 14'30		max. Earth dist.	-8853 Dec 18 j 13:08	24° <u>♁</u> 03'56	30.92326 AU
retrograde	-8858 Mar 20 j 23:57	13° <u>♁</u> 13'16		morning rise	-8852 Jan 02 j 11:57	24° <u>♁</u> 37'21	
opposition	-8858 Jun 09 j 17:17	11° <u>♁</u> 47'58	0°08'43	retrograde	-8852 Apr 03 j 04:10	26° <u>♁</u> 36'11	
min. Earth dist.	-8858 Jun 08 j 15:17	11° <u>♁</u> 49'46	28.96814 AU	opposition	-8852 Jun 22 j 16:21	25° <u>♁</u> 10'42	-0°29'26
direct	-8858 Aug 26 j 04:18	10° <u>♁</u> 25'12		min. Earth dist.	-8852 Jun 21 j 16:56	25° <u>♁</u> 12'20	28.91892 AU
evening set	-8858 Nov 20 j 03:21	12° <u>♁</u> 17'11		direct	-8852 Sep 07 j 22:07	23° <u>♁</u> 47'40	
				evening set	-8852 Dec 03 j 02:46	25° <u>♁</u> 39'50	
conjunction	-8858 Dec 05 j 21:03	12° <u>♁</u> 52'26	0°05'19				
minimum elong	-8858 Dec 05 j 21:04	12° <u>♁</u> 52'26	0°05'15	conjunction	-8852 Dec 18 j 23:54	26° <u>♁</u> 15'18	-0°30'24
behind sun begin	-8858 Dec 05 j 14:46	12° <u>♁</u> 51'52		minimum elong	-8852 Dec 18 j 23:53	26° <u>♁</u> 15'18	0°30'36
behind sun end	-8858 Dec 06 j 03:22	12° <u>♁</u> 53'00		max. Earth dist.	-8852 Dec 20 j 01:26	26° <u>♁</u> 17'42	30.91407 AU
max. Earth dist.	-8858 Dec 06 j 23:35	12° <u>♁</u> 54'55	30.96475 AU	morning rise	-8851 Jan 04 j 01:05	26° <u>♁</u> 51'10	
morning rise	-8858 Dec 21 j 19:08	13° <u>♁</u> 28'05		retrograde	-8851 Apr 05 j 18:01	28° <u>♁</u> 50'00	
retrograde	-8857 Mar 23 j 14:23	15° <u>♁</u> 26'54		min. Earth dist.	-8851 Jun 24 j 03:42	27° <u>♁</u> 26'09	28.91015 AU
min. Earth dist.	-8857 Jun 11 j 04:21	14° <u>♁</u> 03'19	28.96194 AU	opposition	-8851 Jun 25 j 03:52	27° <u>♁</u> 24'28	-0°35'42
opposition	-8857 Jun 12 j 05:13	14° <u>♁</u> 01'35	0°02'20	direct	-8851 Sep 10 j 09:02	26° <u>♁</u> 01'21	
direct	-8857 Aug 28 j 15:03	12° <u>♁</u> 38'49		evening set	-8851 Dec 05 j 14:59	27° <u>♁</u> 53'35	
desc. node	-8857 Oct 24 j 00:20	13° <u>♁</u> 31'28					
evening set	-8857 Nov 22 j 14:58	14° <u>♁</u> 30'50		conjunction	-8851 Dec 21 j 12:34	28° <u>♁</u> 29'05	-0°36'14
				minimum elong	-8851 Dec 21 j 12:33	28° <u>♁</u> 29'05	0°36'26
conjunction	-8857 Dec 08 j 09:25	15° <u>♁</u> 06'08	-0°00'45	max. Earth dist.	-8851 Dec 22 j 14:03	28° <u>♁</u> 31'29	30.90566 AU
minimum elong	-8857 Dec 08 j 09:25	15° <u>♁</u> 06'08	0°00'50	morning rise	-8850 Jan 06 j 14:16	29° <u>♁</u> 04'59	
behind sun begin	-8857 Dec 08 j 02:55	15° <u>♁</u> 05'33			-8850 Feb 02 j 15:03	0° <u>♁</u>	
behind sun end	-8857 Dec 08 j 15:55	15° <u>♁</u> 06'43		retrograde	-8850 Apr 08 j 06:16	1° <u>♁</u> 03'49	
max. Earth dist.	-8857 Dec 09 j 12:41	15° <u>♁</u> 08'42	30.95820 AU		-8850 Jun 14 j 13:35	30° <u>♁</u>	
morning rise	-8857 Dec 24 j 07:53	15° <u>♁</u> 41'49		opposition	-8850 Jun 27 j 15:30	29° <u>♁</u> 38'15	-0°41'54
retrograde	-8856 Mar 25 j 02:44	17° <u>♁</u> 40'40		min. Earth dist.	-8850 Jun 26 j 16:25	29° <u>♁</u> 39'52	28.90239 AU
opposition	-8856 Jun 13 j 17:06	16° <u>♁</u> 15'21	-0°04'03	direct	-8850 Sep 12 j 19:05	28° <u>♁</u> 15'06	
min. Earth dist.	-8856 Jun 12 j 15:48	16° <u>♁</u> 17'06	28.95491 AU		-8850 Dec 04 j 17:55	0° <u>♁</u>	
direct	-8856 Aug 30 j 03:18	14° <u>♁</u> 52'33		evening set	-8850 Dec 08 j 03:19	0° <u>♁</u> 07'23	
evening set	-8856 Nov 24 j 02:42	16° <u>♁</u> 44'37					

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 5

Attention, astronomical year style is used: The year -8850 in astronomical counting style is the year 8851 BCE in historical counting style.

conjunction	-8850 Dec 24 j 01:30	0°M.42'56	-0°42'00	min. Earth dist.	-8843 Jul 12 j 03:00	15°M.20'29	28.87169 AU
minimum elong	-8850 Dec 24 j 01:30	0°M.42'56	0°42'14		-8843 Jul 24 j 07:59	15°R.M.	
max. Earth dist.	-8850 Dec 25 j 03:23	0°M.45'21	30.89853 AU	direct	-8843 Sep 28 j 02:17	13°M.55'45	
morning rise	-8849 Jan 09 j 03:33	1°M.18'51			-8843 Nov 30 j 02:47	15°M.	
retrograde	-8849 Apr 10 j 20:37	3°M.17'40		evening set	-8843 Dec 23 j 21:56	15°M.48'45	
min. Earth dist.	-8849 Jun 29 j 02:50	1°M.53'47	28.89591 AU				
opposition	-8849 Jun 30 j 02:48	1°M.52'06	-0°48'03	conjunction	-8842 Jan 08 j 22:56	16°M.24'30	-1°20'19
direct	-8849 Sep 15 j 07:51	0°M.28'55		minimum elong	-8842 Jan 08 j 22:55	16°M.24'30	1°20'40
evening set	-8849 Dec 10 j 15:52	2°M.21'18		max. Earth dist.	-8842 Jan 09 j 21:10	16°M.26'35	30.86819 AU
				morning rise	-8842 Jan 25 j 03:24	17°M.00'36	
conjunction	-8849 Dec 26 j 14:21	2°M.56'52	-0°47'43	retrograde	-8842 Apr 26 j 17:48	18°M.59'24	
minimum elong	-8849 Dec 26 j 14:21	2°M.56'52	0°47'57	opposition	-8842 Jul 15 j 10:44	17°M.34'02	-1°28'41
max. Earth dist.	-8849 Dec 27 j 15:22	2°M.59'13	30.89264 AU	min. Earth dist.	-8842 Jul 14 j 14:20	17°M.35'29	28.86602 AU
morning rise	-8848 Jan 11 j 16:56	3°M.32'50		direct	-8842 Sep 30 j 13:13	16°M.10'39	
retrograde	-8848 Apr 12 j 10:49	5°M.31'39		evening set	-8842 Dec 26 j 11:35	18°M.03'44	
opposition	-8848 Jul 01 j 14:22	4°M.06'06	-0°54'08				
min. Earth dist.	-8848 Jun 30 j 15:22	4°M.07'43	28.89078 AU	conjunction	-8841 Jan 11 j 12:51	18°M.39'31	-1°25'23
direct	-8848 Sep 16 j 18:44	2°M.42'54		minimum elong	-8841 Jan 11 j 12:50	18°M.39'31	1°25'46
evening set	-8848 Dec 12 j 04:12	4°M.35'21		max. Earth dist.	-8841 Jan 12 j 10:14	18°M.41'31	30.86189 AU
				morning rise	-8841 Jan 27 j 17:33	19°M.15'37	
conjunction	-8848 Dec 28 j 03:19	5°M.10'59	-0°53'22	retrograde	-8841 Apr 29 j 05:00	21°M.14'22	
minimum elong	-8848 Dec 28 j 03:18	5°M.10'59	0°53'39	opposition	-8841 Jul 17 j 21:59	19°M.48'59	-1°34'02
max. Earth dist.	-8848 Dec 29 j 05:14	5°M.13'24	30.88807 AU	min. Earth dist.	-8841 Jul 17 j 03:23	19°M.50'17	28.85944 AU
morning rise	-8847 Jan 13 j 06:08	5°M.46'58		direct	-8841 Oct 02 j 23:30	18°M.25'30	
retrograde	-8847 Apr 14 j 23:40	7°M.45'48		evening set	-8841 Dec 29 j 01:05	20°M.18'40	
min. Earth dist.	-8847 Jul 03 j 02:15	6°M.21'56	28.88667 AU				
opposition	-8847 Jul 04 j 01:46	6°M.20'17	-1°00'08	conjunction	-8840 Jan 14 j 02:47	20°M.54'27	-1°30'19
direct	-8847 Sep 19 j 07:00	4°M.57'04		minimum elong	-8840 Jan 14 j 02:46	20°M.54'27	1°30'42
evening set	-8847 Dec 14 j 17:05	6°M.49'38		max. Earth dist.	-8840 Jan 14 j 23:49	20°M.56'25	30.85511 AU
				morning rise	-8840 Jan 30 j 07:39	21°M.30'34	
conjunction	-8847 Dec 30 j 16:27	7°M.25'17	-0°58'57	retrograde	-8840 Apr 30 j 18:19	23°M.29'13	
minimum elong	-8847 Dec 30 j 16:27	7°M.25'17	0°59'14	opposition	-8840 Jul 19 j 09:06	22°M.03'49	-1°39'14
max. Earth dist.	-8847 Dec 31 j 17:02	7°M.27'35	30.88437 AU	min. Earth dist.	-8840 Jul 18 j 14:12	22°M.05'09	28.85257 AU
morning rise	-8846 Jan 15 j 19:49	8°M.01'19		direct	-8840 Oct 04 j 13:01	20°M.40'14	
retrograde	-8846 Apr 17 j 14:08	10°M.00'09		evening set	-8840 Dec 30 j 14:39	22°M.33'28	
opposition	-8846 Jul 06 j 13:09	8°M.34'41	-1°06'04				
min. Earth dist.	-8846 Jul 05 j 14:31	8°M.36'16	28.88335 AU	conjunction	-8839 Jan 15 j 16:31	23°M.09'16	-1°35'06
direct	-8846 Sep 21 j 17:17	7°M.11'28		minimum elong	-8839 Jan 15 j 16:30	23°M.09'16	1°35'32
evening set	-8846 Dec 17 j 06:02	9°M.04'09		max. Earth dist.	-8839 Jan 16 j 12:14	23°M.11'07	30.84820 AU
				morning rise	-8839 Jan 31 j 21:42	23°M.45'23	
conjunction	-8845 Jan 02 j 05:58	9°M.39'50	-1°04'27	retrograde	-8839 May 03 j 07:03	25°M.43'59	
minimum elong	-8845 Jan 02 j 05:57	9°M.39'50	1°04'46	opposition	-8839 Jul 21 j 20:18	24°M.18'32	-1°44'16
max. Earth dist.	-8845 Jan 03 j 07:12	9°M.42'12	30.88105 AU	min. Earth dist.	-8839 Jul 21 j 02:52	24°M.19'46	28.84601 AU
morning rise	-8845 Jan 18 j 09:30	10°M.15'52		direct	-8839 Oct 07 j 00:19	22°M.54'50	
retrograde	-8845 Apr 20 j 03:02	12°M.14'43		evening set	-8838 Jan 02 j 04:16	24°M.48'09	
min. Earth dist.	-8845 Jul 08 j 02:27	10°M.50'51	28.88002 AU				
opposition	-8845 Jul 09 j 00:33	10°M.49'18	-1°11'53	conjunction	-8838 Jan 18 j 06:36	25°M.23'58	-1°39'45
direct	-8845 Sep 24 j 04:53	9°M.26'05		minimum elong	-8838 Jan 18 j 06:35	25°M.23'58	1°40'10
evening set	-8845 Dec 19 j 19:12	11°M.18'52		max. Earth dist.	-8838 Jan 19 j 02:41	25°M.25'51	30.84191 AU
				morning rise	-8838 Feb 03 j 11:49	26°M.00'05	
conjunction	-8844 Jan 04 j 19:22	11°M.54'35	-1°09'51	retrograde	-8838 May 05 j 19:59	27°M.58'36	
minimum elong	-8844 Jan 04 j 19:22	11°M.54'35	1°10'10	opposition	-8838 Jul 24 j 07:09	26°M.33'08	-1°49'10
max. Earth dist.	-8844 Jan 05 j 19:01	11°M.56'48	30.87756 AU	min. Earth dist.	-8838 Jul 23 j 13:31	26°M.34'23	28.84019 AU
morning rise	-8844 Jan 20 j 23:19	12°M.30'39		direct	-8838 Oct 09 j 13:11	25°M.09'21	
retrograde	-8844 Apr 21 j 16:36	14°M.29'30		evening set	-8837 Jan 04 j 18:10	27°M.02'46	
opposition	-8844 Jul 10 j 11:57	13°M.04'07	-1°17'36				
min. Earth dist.	-8844 Jul 09 j 14:15	13°M.05'38	28.87634 AU	conjunction	-8837 Jan 20 j 20:35	27°M.38'35	-1°44'15
direct	-8844 Sep 25 j 15:19	11°M.40'52		minimum elong	-8837 Jan 20 j 20:34	27°M.38'35	1°44'41
evening set	-8844 Dec 21 j 08:30	13°M.33'46		max. Earth dist.	-8837 Jan 21 j 15:02	27°M.40'19	30.83660 AU
				morning rise	-8837 Feb 06 j 02:07	28°M.14'43	
conjunction	-8843 Jan 06 j 09:06	14°M.09'30	-1°15'08		-8837 Apr 10 j 01:56	0°X	
minimum elong	-8843 Jan 06 j 09:06	14°M.09'30	1°15'29	retrograde	-8837 May 08 j 10:17	0°X 13'09	
max. Earth dist.	-8843 Jan 07 j 08:39	14°M.11'42	30.87332 AU		-8837 Jun 05 j 21:55	30°R.M.	
morning rise	-8843 Jan 22 j 13:14	14°M.45'35		opposition	-8837 Jul 26 j 18:12	28°M.47'40	-1°53'53
	-8843 Jan 29 j 05:20	15°M.		min. Earth dist.	-8837 Jul 26 j 01:26	28°M.48'52	28.83568 AU
retrograde	-8843 Apr 24 j 03:33	16°M.44'25		direct	-8837 Oct 12 j 00:35	27°M.23'48	
opposition	-8843 Jul 12 j 23:22	15°M.19'03	-1°23'12	evening set	-8836 Jan 07 j 07:47	29°M.17'19	

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 6

Attention, astronomical year style is used: The year -8836 in astronomical counting style is the year 8837 BCE in historical counting style.

conjunction	-8836 Jan 23 j 10:35	29° $\overline{\text{M}}$ 53'10	-1°48'35	retrograde	-8830 May 24 j 02:51	15° $\overline{\text{A}}$ 57'07	
minimum elong	-8836 Jan 23 j 10:34	29° $\overline{\text{M}}$ 53'10	1°49'01	opposition	-8830 Aug 10 j 22:23	14° $\overline{\text{A}}$ 32'04	-2°21'43
max. Earth dist.	-8836 Jan 24 j 05:46	29° $\overline{\text{M}}$ 54'58	30.83262 AU	min. Earth dist.	-8830 Aug 10 j 11:12	14° $\overline{\text{A}}$ 32'51	28.83007 AU
	-8836 Jan 26 j 11:38	0° $\overline{\text{A}}$		direct	-8830 Oct 27 j 07:55	13° $\overline{\text{A}}$ 07'53	
morning rise	-8836 Feb 08 j 16:03	0° $\overline{\text{A}}$ 29'17		evening set	-8829 Jan 23 j 11:38	15° $\overline{\text{A}}$ 02'24	
retrograde	-8836 May 09 j 22:40	2° $\overline{\text{A}}$ 27'39					
opposition	-8836 Jul 28 j 05:08	1° $\overline{\text{A}}$ 02'13	-1°58'26	conjunction	-8829 Feb 08 j 15:49	15° $\overline{\text{A}}$ 38'20	-2°13'59
min. Earth dist.	-8836 Jul 27 j 12:42	1° $\overline{\text{A}}$ 03'23	28.83247 AU	minimum elong	-8829 Feb 08 j 15:49	15° $\overline{\text{A}}$ 38'20	2°14'31
	-8836 Sep 07 j 07:31	30° $\overline{\text{K}}$ $\overline{\text{M}}$		max. Earth dist.	-8829 Feb 09 j 04:39	15° $\overline{\text{A}}$ 39'32	30.82761 AU
direct	-8836 Oct 13 j 13:13	29° $\overline{\text{M}}$ 38'17		morning rise	-8829 Feb 24 j 21:43	16° $\overline{\text{A}}$ 14'27	
	-8836 Nov 18 j 04:28	0° $\overline{\text{A}}$		retrograde	-8829 May 26 j 15:55	18° $\overline{\text{A}}$ 12'24	
evening set	-8835 Jan 08 j 21:42	1° $\overline{\text{A}}$ 31'55		opposition	-8829 Aug 13 j 09:13	16° $\overline{\text{A}}$ 47'24	-2°24'53
				min. Earth dist.	-8829 Aug 12 j 22:21	16° $\overline{\text{A}}$ 48'10	28.82838 AU
conjunction	-8835 Jan 25 j 00:37	2° $\overline{\text{A}}$ 07'47	-1°52'45	direct	-8829 Oct 29 j 20:58	15° $\overline{\text{A}}$ 23'09	
minimum elong	-8835 Jan 25 j 00:36	2° $\overline{\text{A}}$ 07'46	1°53'14	evening set	-8828 Jan 26 j 02:10	17° $\overline{\text{A}}$ 17'46	
max. Earth dist.	-8835 Jan 25 j 18:17	2° $\overline{\text{A}}$ 09'26	30.83018 AU				
morning rise	-8835 Feb 10 j 06:22	2° $\overline{\text{A}}$ 43'54		conjunction	-8828 Feb 11 j 06:19	17° $\overline{\text{A}}$ 53'42	-2°16'50
retrograde	-8835 May 12 j 12:12	4° $\overline{\text{A}}$ 42'13		minimum elong	-8828 Feb 11 j 06:18	17° $\overline{\text{A}}$ 53'42	2°17'22
opposition	-8835 Jul 30 j 15:58	3° $\overline{\text{A}}$ 16'49	-2°02'48	max. Earth dist.	-8828 Feb 11 j 16:58	17° $\overline{\text{A}}$ 54'42	30.82561 AU
min. Earth dist.	-8835 Jul 29 j 23:47	3° $\overline{\text{A}}$ 17'58	28.83085 AU	morning rise	-8828 Feb 27 j 12:22	18° $\overline{\text{A}}$ 29'49	
direct	-8835 Oct 16 j 00:08	1° $\overline{\text{A}}$ 52'50		retrograde	-8828 May 28 j 05:56	20° $\overline{\text{A}}$ 27'40	
evening set	-8834 Jan 11 j 11:41	3° $\overline{\text{A}}$ 46'36		opposition	-8828 Aug 14 j 20:04	19° $\overline{\text{A}}$ 02'40	-2°27'49
				min. Earth dist.	-8828 Aug 14 j 10:32	19° $\overline{\text{A}}$ 03'21	28.82632 AU
conjunction	-8834 Jan 27 j 14:55	4° $\overline{\text{A}}$ 22'29	-1°56'45	direct	-8828 Oct 31 j 09:15	17° $\overline{\text{A}}$ 38'20	
minimum elong	-8834 Jan 27 j 14:55	4° $\overline{\text{A}}$ 22'29	1°57'14	evening set	-8827 Jan 27 j 16:39	19° $\overline{\text{A}}$ 33'03	
max. Earth dist.	-8834 Jan 28 j 08:46	4° $\overline{\text{A}}$ 24'09	30.82904 AU				
morning rise	-8834 Feb 12 j 20:40	4° $\overline{\text{A}}$ 58'37		conjunction	-8827 Feb 12 j 21:07	20° $\overline{\text{A}}$ 08'59	-2°19'29
retrograde	-8834 May 14 j 23:47	6° $\overline{\text{A}}$ 56'52		minimum elong	-8827 Feb 12 j 21:07	20° $\overline{\text{A}}$ 08'59	2°20'02
min. Earth dist.	-8834 Aug 01 j 11:54	5° $\overline{\text{A}}$ 32'36	28.83029 AU	max. Earth dist.	-8827 Feb 13 j 07:55	20° $\overline{\text{A}}$ 10'00	30.82341 AU
opposition	-8834 Aug 02 j 02:55	5° $\overline{\text{A}}$ 31'32	-2°06'59	morning rise	-8827 Mar 01 j 02:59	20° $\overline{\text{A}}$ 45'05	
direct	-8834 Oct 18 j 11:14	4° $\overline{\text{A}}$ 07'32		retrograde	-8827 May 30 j 18:02	22° $\overline{\text{A}}$ 42'49	
evening set	-8833 Jan 14 j 01:51	6° $\overline{\text{A}}$ 01'27		opposition	-8827 Aug 17 j 06:40	21° $\overline{\text{A}}$ 17'50	-2°30'32
				min. Earth dist.	-8827 Aug 16 j 22:02	21° $\overline{\text{A}}$ 18'27	28.82420 AU
conjunction	-8833 Jan 30 j 05:15	6° $\overline{\text{A}}$ 37'20	-2°00'35	direct	-8827 Nov 02 j 22:53	19° $\overline{\text{A}}$ 53'24	
minimum elong	-8833 Jan 30 j 05:15	6° $\overline{\text{A}}$ 37'20	2°01'05	evening set	-8826 Jan 30 j 07:19	21° $\overline{\text{A}}$ 48'14	
max. Earth dist.	-8833 Jan 30 j 21:49	6° $\overline{\text{A}}$ 38'53	30.82893 AU				
morning rise	-8833 Feb 15 j 11:07	7° $\overline{\text{A}}$ 13'28		conjunction	-8826 Feb 15 j 11:47	22° $\overline{\text{A}}$ 24'10	-2°21'55
retrograde	-8833 May 17 j 14:05	9° $\overline{\text{A}}$ 11'41		minimum elong	-8826 Feb 15 j 11:46	22° $\overline{\text{A}}$ 24'10	2°22'27
opposition	-8833 Aug 04 j 13:39	7° $\overline{\text{A}}$ 46'26	-2°10'58	max. Earth dist.	-8826 Feb 15 j 20:33	22° $\overline{\text{A}}$ 24'59	30.82152 AU
min. Earth dist.	-8833 Aug 03 j 22:34	7° $\overline{\text{A}}$ 47'30	28.83052 AU	morning rise	-8826 Mar 03 j 17:48	23° $\overline{\text{A}}$ 00'15	
direct	-8833 Oct 20 j 21:56	6° $\overline{\text{A}}$ 22'24		retrograde	-8826 Jun 02 j 07:31	24° $\overline{\text{A}}$ 57'51	
evening set	-8832 Jan 16 j 16:10	8° $\overline{\text{A}}$ 16'28		opposition	-8826 Aug 19 j 17:18	23° $\overline{\text{A}}$ 32'53	-2°33'01
				min. Earth dist.	-8826 Aug 19 j 09:11	23° $\overline{\text{A}}$ 33'28	28.82273 AU
conjunction	-8832 Feb 01 j 19:43	8° $\overline{\text{A}}$ 52'22	-2°04'13	direct	-8826 Nov 05 j 10:47	22° $\overline{\text{A}}$ 08'21	
minimum elong	-8832 Feb 01 j 19:42	8° $\overline{\text{A}}$ 52'22	2°04'43	evening set	-8825 Feb 01 j 21:49	24° $\overline{\text{A}}$ 03'17	
max. Earth dist.	-8832 Feb 02 j 11:35	8° $\overline{\text{A}}$ 53'51	30.82918 AU				
morning rise	-8832 Feb 18 j 01:36	9° $\overline{\text{A}}$ 28'31		conjunction	-8825 Feb 18 j 02:29	24° $\overline{\text{A}}$ 39'14	-2°24'08
retrograde	-8832 May 19 j 01:11	11° $\overline{\text{A}}$ 26'41		minimum elong	-8825 Feb 18 j 02:28	24° $\overline{\text{A}}$ 39'14	2°24'41
min. Earth dist.	-8832 Aug 05 j 11:24	10° $\overline{\text{A}}$ 02'27	28.83091 AU	max. Earth dist.	-8825 Feb 18 j 11:20	24° $\overline{\text{A}}$ 40'03	30.82033 AU
opposition	-8832 Aug 06 j 00:38	10° $\overline{\text{A}}$ 01'31	-2°14'46	morning rise	-8825 Mar 06 j 08:17	25° $\overline{\text{A}}$ 15'18	
direct	-8832 Oct 22 j 07:55	8° $\overline{\text{A}}$ 37'27		retrograde	-8825 Jun 04 j 19:19	27° $\overline{\text{A}}$ 12'46	
evening set	-8831 Jan 18 j 06:25	10° $\overline{\text{A}}$ 31'41		opposition	-8825 Aug 22 j 03:54	25° $\overline{\text{A}}$ 47'50	-2°35'16
				min. Earth dist.	-8825 Aug 21 j 21:02	25° $\overline{\text{A}}$ 48'20	28.82218 AU
conjunction	-8831 Feb 03 j 10:15	11° $\overline{\text{A}}$ 07'35	-2°07'40	direct	-8825 Nov 07 j 22:57	24° $\overline{\text{A}}$ 23'14	
minimum elong	-8831 Feb 03 j 10:14	11° $\overline{\text{A}}$ 07'35	2°08'11	evening set	-8824 Feb 04 j 12:21	26° $\overline{\text{A}}$ 18'15	
max. Earth dist.	-8831 Feb 04 j 01:20	11° $\overline{\text{A}}$ 09'00	30.82942 AU				
morning rise	-8831 Feb 19 j 16:09	11° $\overline{\text{A}}$ 43'43		conjunction	-8824 Feb 20 j 17:03	26° $\overline{\text{A}}$ 54'12	-2°26'07
retrograde	-8831 May 21 j 14:23	13° $\overline{\text{A}}$ 41'50		minimum elong	-8824 Feb 20 j 17:02	26° $\overline{\text{A}}$ 54'12	2°26'40
opposition	-8831 Aug 08 j 11:28	12° $\overline{\text{A}}$ 16'44	-2°18'21	max. Earth dist.	-8824 Feb 21 j 00:27	26° $\overline{\text{A}}$ 54'53	30.82050 AU
min. Earth dist.	-8831 Aug 07 j 22:20	12° $\overline{\text{A}}$ 17'40	28.83088 AU	morning rise	-8824 Mar 07 j 22:54	27° $\overline{\text{A}}$ 30'15	
direct	-8831 Oct 24 j 20:59	10° $\overline{\text{A}}$ 52'38		retrograde	-8824 Jun 06 j 09:05	29° $\overline{\text{A}}$ 27'36	
evening set	-8830 Jan 20 j 21:05	12° $\overline{\text{A}}$ 47'01		opposition	-8824 Aug 23 j 14:23	28° $\overline{\text{A}}$ 02'43	-2°37'16
				min. Earth dist.	-8824 Aug 23 j 07:15	28° $\overline{\text{A}}$ 03'13	28.82316 AU
conjunction	-8830 Feb 06 j 00:57	13° $\overline{\text{A}}$ 22'56	-2°10'56	direct	-8824 Nov 09 j 10:28	26° $\overline{\text{A}}$ 38'01	
minimum elong	-8830 Feb 06 j 00:57	13° $\overline{\text{A}}$ 22'56	2°11'26	evening set	-8823 Feb 06 j 02:48	28° $\overline{\text{A}}$ 33'10	
max. Earth dist.	-8830 Feb 06 j 14:12	13° $\overline{\text{A}}$ 24'10	30.82889 AU				
morning rise	-8830 Feb 22 j 06:58	13° $\overline{\text{A}}$ 59'04		conjunction	-8823 Feb 22 j 07:38	29° $\overline{\text{A}}$ 09'07	-2°27'53

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 7

Attention, astronomical year style is used: The year -8823 in astronomical counting style is the year 8824 BCE in historical counting style.

minimum elong	-8823 Feb 22 j 07:37	29° <del>2</del> 09'06	2°28'27	opposition	-8817 Sep 08 j 16:24	13° <del>3</del> 47'56	-2°44'28
max. Earth dist.	-8823 Feb 22 j 14:39	29° <del>2</del> 09'46	30.82212 AU	min. Earth dist.	-8817 Sep 08 j 16:04	13° <del>3</del> 47'57	28.85492 AU
morning rise	-8823 Mar 10 j 13:23	29° <del>2</del> 45'10		direct	-8817 Nov 25 j 22:06	12° <del>3</del> 22'57	
	-8823 Mar 17 j 11:04	0° <del>3</del>		evening set	-8816 Feb 23 j 10:17	14° <del>3</del> 18'58	
retrograde	-8823 Jun 08 j 19:12	1° <del>3</del> 42'23					
opposition	-8823 Aug 26 j 01:01	0° <del>3</del> 17'34	-2°39'03	conjunction	-8816 Mar 10 j 15:38	14° <del>3</del> 54'55	-2°33'49
min. Earth dist.	-8823 Aug 25 j 19:31	0° <del>3</del> 17'57	28.82561 AU	minimum elong	-8816 Mar 10 j 15:38	14° <del>3</del> 54'55	2°34'23
	-8823 Sep 05 j 08:45	30° <del>8</del> <del>2</del>		max. Earth dist.	-8816 Mar 10 j 15:15	14° <del>3</del> 54'53	30.85444 AU
direct	-8823 Nov 11 j 21:07	28° <del>2</del> 52'49		morning rise	-8816 Mar 26 j 20:36	15° <del>3</del> 30'52	
	-8822 Jan 16 j 05:13	0° <del>3</del>		retrograde	-8816 Jun 24 j 10:18	17° <del>3</del> 27'15	
evening set	-8822 Feb 08 j 17:26	0° <del>3</del> 48'05		opposition	-8816 Sep 10 j 03:00	16° <del>3</del> 03'01	-2°44'30
				min. Earth dist.	-8816 Sep 10 j 04:23	16° <del>3</del> 02'55	28.85820 AU
conjunction	-8822 Feb 24 j 22:24	1° <del>3</del> 24'01	-2°29'26	direct	-8816 Nov 27 j 11:16	14° <del>3</del> 37'59	
minimum elong	-8822 Feb 24 j 22:23	1° <del>3</del> 24'01	2°29'59	evening set	-8815 Feb 25 j 01:06	16° <del>3</del> 34'04	
max. Earth dist.	-8822 Feb 25 j 04:41	1° <del>3</del> 24'37	30.82538 AU				
morning rise	-8822 Mar 13 j 04:04	2° <del>3</del> 00'04		conjunction	-8815 Mar 13 j 06:25	17° <del>3</del> 10'01	-2°33'44
retrograde	-8822 Jun 11 j 07:35	3° <del>3</del> 57'10		minimum elong	-8815 Mar 13 j 06:26	17° <del>3</del> 10'01	2°34'18
opposition	-8822 Aug 28 j 11:24	2° <del>3</del> 32'26	-2°40'34	max. Earth dist.	-8815 Mar 13 j 03:56	17° <del>3</del> 09'47	30.85756 AU
min. Earth dist.	-8822 Aug 28 j 05:40	2° <del>3</del> 32'51	28.82952 AU	morning rise	-8815 Mar 29 j 11:26	17° <del>3</del> 45'57	
direct	-8822 Nov 14 j 09:36	1° <del>3</del> 07'39		retrograde	-8815 Jun 26 j 23:40	19° <del>3</del> 42'11	
evening set	-8821 Feb 11 j 08:11	3° <del>3</del> 03'03		opposition	-8815 Sep 12 j 13:29	18° <del>3</del> 18'00	-2°44'17
				min. Earth dist.	-8815 Sep 12 j 15:04	18° <del>3</del> 17'53	28.86109 AU
conjunction	-8821 Feb 27 j 13:08	3° <del>3</del> 39'00	-2°30'45	direct	-8815 Nov 30 j 00:08	16° <del>3</del> 52'53	
minimum elong	-8821 Feb 27 j 13:07	3° <del>3</del> 39'00	2°31'19	evening set	-8814 Feb 27 j 15:55	18° <del>3</del> 49'02	
max. Earth dist.	-8821 Feb 27 j 18:10	3° <del>3</del> 39'28	30.82985 AU				
morning rise	-8821 Mar 15 j 18:46	4° <del>3</del> 15'01		conjunction	-8814 Mar 15 j 21:19	19° <del>3</del> 24'59	-2°33'26
retrograde	-8821 Jun 13 j 19:26	6° <del>3</del> 12'01		minimum elong	-8814 Mar 15 j 21:19	19° <del>3</del> 24'59	2°33'59
opposition	-8821 Aug 30 j 22:03	4° <del>3</del> 47'23	-2°41'51	max. Earth dist.	-8814 Mar 15 j 18:08	19° <del>3</del> 24'41	30.86030 AU
min. Earth dist.	-8821 Aug 30 j 17:58	4° <del>3</del> 47'41	28.83461 AU	morning rise	-8814 Apr 01 j 02:06	20° <del>3</del> 00'54	
direct	-8821 Nov 16 j 19:26	3° <del>3</del> 22'34		retrograde	-8814 Jun 29 j 10:01	21° <del>3</del> 56'58	
evening set	-8820 Feb 13 j 22:41	5° <del>3</del> 18'06		opposition	-8814 Sep 14 j 24:00	20° <del>3</del> 32'50	-2°43'50
				min. Earth dist.	-8814 Sep 15 j 03:33	20° <del>3</del> 32'34	28.86392 AU
conjunction	-8820 Mar 01 j 03:50	5° <del>3</del> 54'03	-2°31'50	direct	-8814 Dec 02 j 11:42	19° <del>3</del> 07'38	
minimum elong	-8820 Mar 01 j 03:49	5° <del>3</del> 54'03	2°32'23	evening set	-8813 Mar 02 j 06:37	21° <del>3</del> 03'52	
max. Earth dist.	-8820 Mar 01 j 08:39	5° <del>3</del> 54'30	30.83532 AU				
morning rise	-8820 Mar 17 j 09:17	6° <del>3</del> 30'04		conjunction	-8813 Mar 18 j 12:02	21° <del>3</del> 39'49	-2°32'53
retrograde	-8820 Jun 15 j 07:27	8° <del>3</del> 26'58		minimum elong	-8813 Mar 18 j 12:03	21° <del>3</del> 39'49	2°33'26
opposition	-8820 Sep 01 j 08:34	7° <del>3</del> 02'26	-2°42'53	max. Earth dist.	-8813 Mar 18 j 07:47	21° <del>3</del> 39'25	30.86342 AU
min. Earth dist.	-8820 Sep 01 j 04:44	7° <del>3</del> 02'42	28.84023 AU	morning rise	-8813 Apr 03 j 16:44	22° <del>3</del> 15'42	
direct	-8820 Nov 18 j 08:26	5° <del>3</del> 37'36		retrograde	-8813 Jul 01 j 22:19	24° <del>3</del> 11'36	
evening set	-8819 Feb 15 j 13:37	7° <del>3</del> 33'16		opposition	-8813 Sep 17 j 10:26	22° <del>3</del> 47'31	-2°43'07
				min. Earth dist.	-8813 Sep 17 j 13:50	22° <del>3</del> 47'16	28.86729 AU
conjunction	-8819 Mar 03 j 18:39	8° <del>3</del> 09'13	-2°32'41	direct	-8813 Dec 05 j 00:29	21° <del>3</del> 22'15	
minimum elong	-8819 Mar 03 j 18:39	8° <del>3</del> 09'13	2°33'15	evening set	-8812 Mar 03 j 21:06	23° <del>3</del> 18'33	
max. Earth dist.	-8819 Mar 03 j 21:19	8° <del>3</del> 09'27	30.84098 AU				
morning rise	-8819 Mar 20 j 00:09	8° <del>3</del> 45'13		conjunction	-8812 Mar 20 j 02:29	23° <del>3</del> 54'30	-2°32'06
retrograde	-8819 Jun 17 j 20:30	10° <del>3</del> 42'01		minimum elong	-8812 Mar 20 j 02:29	23° <del>3</del> 54'30	2°32'38
opposition	-8819 Sep 03 j 19:06	9° <del>3</del> 17'34	-2°43'39	max. Earth dist.	-8812 Mar 19 j 21:10	23° <del>3</del> 54'00	30.86716 AU
min. Earth dist.	-8819 Sep 03 j 16:46	9° <del>3</del> 17'44	28.84589 AU	morning rise	-8812 Apr 05 j 07:03	24° <del>3</del> 30'23	
direct	-8819 Nov 20 j 20:16	7° <del>3</del> 52'42		retrograde	-8812 Jul 03 j 09:14	26° <del>3</del> 26'08	
evening set	-8818 Feb 18 j 04:30	9° <del>3</del> 48'30		opposition	-8812 Sep 18 j 20:57	25° <del>3</del> 02'06	-2°42'10
				min. Earth dist.	-8812 Sep 19 j 01:57	25° <del>3</del> 01'44	28.87163 AU
conjunction	-8818 Mar 06 j 09:47	10° <del>3</del> 24'27	-2°33'18	direct	-8812 Dec 06 j 10:25	23° <del>3</del> 36'46	
minimum elong	-8818 Mar 06 j 09:47	10° <del>3</del> 24'27	2°33'51	evening set	-8811 Mar 06 j 11:35	25° <del>3</del> 33'09	
max. Earth dist.	-8818 Mar 06 j 12:12	10° <del>3</del> 24'41	30.84630 AU				
morning rise	-8818 Mar 22 j 15:00	11° <del>3</del> 00'26		conjunction	-8811 Mar 22 j 17:05	26° <del>3</del> 09'05	-2°31'06
retrograde	-8818 Jun 20 j 08:32	12° <del>3</del> 57'07		minimum elong	-8811 Mar 22 j 17:06	26° <del>3</del> 09'05	2°31'37
opposition	-8818 Sep 06 j 05:47	11° <del>3</del> 32'45	-2°44'11	max. Earth dist.	-8811 Mar 22 j 11:32	26° <del>3</del> 08'34	30.87213 AU
min. Earth dist.	-8818 Sep 06 j 04:37	11° <del>3</del> 32'50	28.85079 AU	morning rise	-8811 Apr 07 j 21:27	26° <del>3</del> 44'58	
direct	-8818 Nov 23 j 09:53	10° <del>3</del> 07'51		retrograde	-8811 Jul 05 j 19:58	28° <del>3</del> 40'33	
evening set	-8817 Feb 20 j 19:29	12° <del>3</del> 03'45		opposition	-8811 Sep 21 j 07:15	27° <del>3</del> 16'36	-2°40'58
				min. Earth dist.	-8811 Sep 21 j 12:16	27° <del>3</del> 16'15	28.87712 AU
conjunction	-8817 Mar 09 j 00:37	12° <del>3</del> 39'42	-2°33'41	direct	-8811 Dec 08 j 23:43	25° <del>3</del> 51'14	
minimum elong	-8817 Mar 09 j 00:37	12° <del>3</del> 39'42	2°34'14	evening set	-8810 Mar 09 j 02:14	27° <del>3</del> 47'42	
max. Earth dist.	-8817 Mar 09 j 00:35	12° <del>3</del> 39'42	30.85079 AU				
morning rise	-8817 Mar 25 j 05:52	13° <del>3</del> 15'40		conjunction	-8810 Mar 25 j 07:36	28° <del>3</del> 23'38	-2°29'51
retrograde	-8817 Jun 22 j 22:16	15° <del>3</del> 12'13		minimum elong	-8810 Mar 25 j 07:36	28° <del>3</del> 23'38	2°30'23

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 8

Attention, astronomical year style is used: The year -8810 in astronomical counting style is the year 8811 BCE in historical counting style.

max. Earth dist.	-8810 Mar 25 j 00:17	28° $\overline{322}$ '57	30.87831 AU	min. Earth dist.	-8804 Oct 06 j 20:14	12° $\approx$ 58'04	28.93181 AU
morning rise	-8810 Apr 10 j 11:55	28° $\overline{359}$ '29		direct	-8804 Dec 24 j 16:35	11° $\approx$ 33'24	
	-8810 May 10 j 20:41	0° $\approx$		evening set	-8803 Mar 25 j 07:18	13° $\approx$ 30'25	
retrograde	-8810 Jul 08 j 07:48	0° $\approx$ 54'57					
	-8810 Sep 06 j 10:55	30° $\overline{R3}$		conjunction	-8803 Apr 10 j 12:29	14° $\approx$ 06'20	-2°14'56
opposition	-8810 Sep 23 j 17:47	29° $\overline{331}$ '05	-2°39'31	minimum elong	-8803 Apr 10 j 12:30	14° $\approx$ 06'20	2°15'23
min. Earth dist.	-8810 Sep 23 j 23:46	29° $\overline{330}$ '39	28.88403 AU	max. Earth dist.	-8803 Apr 09 j 22:03	14° $\approx$ 04'59	30.93288 AU
direct	-8810 Dec 11 j 11:12	28° $\overline{305}$ '41		morning rise	-8803 Apr 26 j 15:27	14° $\approx$ 42'04	
	-8809 Mar 10 j 15:30	0° $\approx$			-8803 May 05 j 00:43	15° $\approx$	
evening set	-8809 Mar 11 j 16:31	0° $\approx$ 02'16		retrograde	-8803 Jul 23 j 19:41	16° $\approx$ 36'33	
				opposition	-8803 Oct 08 j 19:32	15° $\approx$ 13'18	-2°22'45
conjunction	-8809 Mar 27 j 22:02	0° $\approx$ 38'12	-2°28'23	min. Earth dist.	-8803 Oct 09 j 08:42	15° $\approx$ 12'21	28.93733 AU
minimum elong	-8809 Mar 27 j 22:03	0° $\approx$ 38'12	2°28'54		-8803 Oct 16 j 15:50	15° $\overline{R\approx}$	
max. Earth dist.	-8809 Mar 27 j 15:03	0° $\approx$ 37'33	30.88584 AU	direct	-8803 Dec 27 j 03:20	13° $\approx$ 47'45	
morning rise	-8809 Apr 13 j 02:01	1° $\approx$ 14'02			-8802 Mar 06 j 02:26	15° $\approx$	
retrograde	-8809 Jul 10 j 18:55	3° $\approx$ 09'22		evening set	-8802 Mar 27 j 21:34	15° $\approx$ 44'47	
opposition	-8809 Sep 26 j 04:15	1° $\approx$ 45'36	-2°37'49	max. Earth dist.	-8802 Apr 12 j 11:42	16° $\approx$ 19'17	30.93820 AU
min. Earth dist.	-8809 Sep 26 j 10:58	1° $\approx$ 45'08	28.89198 AU				
direct	-8809 Dec 14 j 00:09	0° $\approx$ 20'13		conjunction	-8802 Apr 13 j 02:45	16° $\approx$ 20'42	-2°11'58
evening set	-8808 Mar 13 j 07:03	2° $\approx$ 16'53		minimum elong	-8802 Apr 13 j 02:46	16° $\approx$ 20'42	2°12'25
				morning rise	-8802 Apr 29 j 05:29	16° $\approx$ 56'24	
conjunction	-8808 Mar 29 j 12:22	2° $\approx$ 52'49	-2°26'41	retrograde	-8802 Jul 26 j 05:34	18° $\approx$ 50'42	
minimum elong	-8808 Mar 29 j 12:23	2° $\approx$ 52'49	2°27'13	opposition	-8802 Oct 11 j 06:05	17° $\approx$ 27'29	-2°19'28
max. Earth dist.	-8808 Mar 29 j 03:26	2° $\approx$ 51'59	30.89437 AU	min. Earth dist.	-8802 Oct 11 j 19:30	17° $\approx$ 26'32	28.94231 AU
morning rise	-8808 Apr 14 j 16:22	3° $\approx$ 28'38		direct	-8802 Dec 29 j 17:24	16° $\approx$ 01'53	
retrograde	-8808 Jul 12 j 08:14	5° $\approx$ 23'51		evening set	-8801 Mar 30 j 11:39	17° $\approx$ 58'55	
opposition	-8808 Sep 27 j 14:36	4° $\approx$ 00'12	-2°35'53				
min. Earth dist.	-8808 Sep 27 j 21:52	3° $\approx$ 59'41	28.90083 AU	conjunction	-8801 Apr 15 j 16:37	18° $\approx$ 34'49	-2°08'48
direct	-8808 Dec 15 j 11:54	2° $\approx$ 34'48		minimum elong	-8801 Apr 15 j 16:38	18° $\approx$ 34'49	2°09'14
evening set	-8807 Mar 15 j 21:26	4° $\approx$ 31'35		max. Earth dist.	-8801 Apr 14 j 23:53	18° $\approx$ 33'15	30.94318 AU
				morning rise	-8801 May 01 j 19:11	19° $\approx$ 10'30	
conjunction	-8807 Apr 01 j 02:56	5° $\approx$ 07'31	-2°24'46	retrograde	-8801 Jul 28 j 16:10	21° $\approx$ 04'38	
minimum elong	-8807 Apr 01 j 02:57	5° $\approx$ 07'31	2°25'16	opposition	-8801 Oct 13 j 16:38	19° $\approx$ 41'26	-2°15'59
max. Earth dist.	-8807 Mar 31 j 18:03	5° $\approx$ 06'41	30.90332 AU	min. Earth dist.	-8801 Oct 14 j 07:05	19° $\approx$ 40'24	28.94740 AU
morning rise	-8807 Apr 17 j 06:36	5° $\approx$ 43'19		direct	-8800 Jan 01 j 04:27	18° $\approx$ 15'45	
retrograde	-8807 Jul 14 j 20:18	7° $\approx$ 38'25		evening set	-8800 Apr 01 j 01:31	20° $\approx$ 12'48	
opposition	-8807 Sep 30 j 01:12	6° $\approx$ 14'52	-2°33'43				
min. Earth dist.	-8807 Sep 30 j 10:05	6° $\approx$ 14'14	28.90965 AU	conjunction	-8800 Apr 17 j 06:32	20° $\approx$ 48'41	-2°05'27
direct	-8807 Dec 18 j 01:44	4° $\approx$ 49'29		minimum elong	-8800 Apr 17 j 06:33	20° $\approx$ 48'41	2°05'52
evening set	-8806 Mar 18 j 12:04	6° $\approx$ 46'21		max. Earth dist.	-8800 Apr 16 j 14:05	20° $\approx$ 47'09	30.94853 AU
				morning rise	-8800 May 03 j 08:46	21° $\approx$ 24'20	
conjunction	-8806 Apr 03 j 17:22	7° $\approx$ 22'17	-2°22'38	retrograde	-8800 Jul 30 j 02:04	23° $\approx$ 18'18	
minimum elong	-8806 Apr 03 j 17:22	7° $\approx$ 22'17	2°23'07	opposition	-8800 Oct 15 j 03:03	21° $\approx$ 55'08	-2°12'18
max. Earth dist.	-8806 Apr 03 j 06:21	7° $\approx$ 21'15	30.91205 AU	min. Earth dist.	-8800 Oct 15 j 18:13	21° $\approx$ 54'04	28.95295 AU
morning rise	-8806 Apr 19 j 20:59	7° $\approx$ 58'04		direct	-8799 Jan 02 j 17:13	20° $\approx$ 29'23	
retrograde	-8806 Jul 17 j 09:19	9° $\approx$ 53'02		evening set	-8799 Apr 03 j 15:27	22° $\approx$ 26'27	
opposition	-8806 Oct 02 j 11:40	8° $\approx$ 29'35	-2°31'18				
min. Earth dist.	-8806 Oct 02 j 20:45	8° $\approx$ 28'56	28.91801 AU	conjunction	-8799 Apr 19 j 20:13	23° $\approx$ 02'19	-2°01'55
direct	-8806 Dec 20 j 15:07	7° $\approx$ 04'11		minimum elong	-8799 Apr 19 j 20:14	23° $\approx$ 02'19	2°02'18
evening set	-8805 Mar 21 j 02:34	9° $\approx$ 01'08		max. Earth dist.	-8799 Apr 19 j 02:02	23° $\approx$ 00'37	30.95461 AU
				morning rise	-8799 May 05 j 22:22	23° $\approx$ 37'58	
conjunction	-8805 Apr 06 j 07:54	9° $\approx$ 37'03	-2°20'16	retrograde	-8799 Aug 01 j 13:48	25° $\approx$ 31'46	
minimum elong	-8805 Apr 06 j 07:54	9° $\approx$ 37'03	2°20'45	opposition	-8799 Oct 17 j 13:32	24° $\approx$ 08'38	-2°08'26
max. Earth dist.	-8805 Apr 05 j 20:14	9° $\approx$ 35'58	30.91994 AU	min. Earth dist.	-8799 Oct 18 j 04:51	24° $\approx$ 07'33	28.95954 AU
morning rise	-8805 Apr 22 j 11:11	10° $\approx$ 12'49		direct	-8798 Jan 05 j 05:25	22° $\approx$ 42'51	
retrograde	-8805 Jul 19 j 20:25	12° $\approx$ 07'39		evening set	-8798 Apr 06 j 05:08	24° $\approx$ 39'56	
opposition	-8805 Oct 04 j 22:26	10° $\approx$ 44'17	-2°28'40				
min. Earth dist.	-8805 Oct 05 j 09:32	10° $\approx$ 43'30	28.92544 AU	conjunction	-8798 Apr 22 j 09:54	25° $\approx$ 15'47	-1°58'12
direct	-8805 Dec 23 j 03:05	9° $\approx$ 18'51		minimum elong	-8798 Apr 22 j 09:55	25° $\approx$ 15'47	1°58'35
evening set	-8804 Mar 22 j 16:52	11° $\approx$ 15'51		max. Earth dist.	-8798 Apr 21 j 16:20	25° $\approx$ 14'09	30.96179 AU
				morning rise	-8798 May 08 j 11:36	25° $\approx$ 51'24	
conjunction	-8804 Apr 07 j 22:07	11° $\approx$ 51'46	-2°17'42	retrograde	-8798 Aug 04 j 00:13	27° $\approx$ 45'04	
minimum elong	-8804 Apr 07 j 22:08	11° $\approx$ 51'46	2°18'10	opposition	-8798 Oct 20 j 00:08	26° $\approx$ 21'59	-2°04'22
max. Earth dist.	-8804 Apr 07 j 08:59	11° $\approx$ 50'32	30.92697 AU	min. Earth dist.	-8798 Oct 20 j 16:32	26° $\approx$ 20'50	28.96730 AU
morning rise	-8804 Apr 24 j 01:19	12° $\approx$ 27'31		direct	-8797 Jan 07 j 19:05	24° $\approx$ 56'11	
retrograde	-8804 Jul 21 j 09:15	14° $\approx$ 22'10		evening set	-8797 Apr 08 j 18:52	26° $\approx$ 53'18	
opposition	-8804 Oct 06 j 08:59	12° $\approx$ 58'52	-2°25'49				



## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 9

Attention, astronomical year style is used: The year -8797 in astronomical counting style is the year 8798 BCE in historical counting style.

conjunction	-8797 Apr 24 j 23:20	27° $\approx$ 29'08	-1°54'19	retrograde	-8791 Aug 19 j 05:03	13° $\mathbb{H}$ 18'06	
minimum elong	-8797 Apr 24 j 23:21	27° $\approx$ 29'09	1°54'40	opposition	-8791 Nov 04 j 02:51	11° $\mathbb{H}$ 55'38	-1°31'04
max. Earth dist.	-8797 Apr 24 j 04:18	27° $\approx$ 27'22	30.97040 AU	min. Earth dist.	-8791 Nov 04 j 23:37	11° $\mathbb{H}$ 54'11	29.03496 AU
morning rise	-8797 May 11 j 00:56	28° $\approx$ 04'44		direct	-8790 Jan 23 j 08:52	10° $\mathbb{H}$ 29'58	
retrograde	-8797 Aug 06 j 12:34	29° $\approx$ 58'16		evening set	-8790 Apr 24 j 17:03	12° $\mathbb{H}$ 27'17	
opposition	-8797 Oct 22 j 10:36	28° $\approx$ 35'16	-2°00'07				
min. Earth dist.	-8797 Oct 23 j 02:28	28° $\approx$ 34'09	28.97650 AU	conjunction	-8790 May 10 j 19:57	13° $\mathbb{H}$ 03'01	-1°22'40
direct	-8796 Jan 10 j 08:02	27° $\approx$ 09'29		minimum elong	-8790 May 10 j 19:58	13° $\mathbb{H}$ 03'01	1°22'54
evening set	-8796 Apr 10 j 08:16	29° $\approx$ 06'39		max. Earth dist.	-8790 May 09 j 19:46	13° $\mathbb{H}$ 00'46	31.03775 AU
				morning rise	-8790 May 26 j 19:20	13° $\mathbb{H}$ 38'28	
conjunction	-8796 Apr 26 j 12:43	29° $\approx$ 42'28	-1°50'15	retrograde	-8790 Aug 21 j 16:00	15° $\mathbb{H}$ 31'16	
minimum elong	-8796 Apr 26 j 12:44	29° $\approx$ 42'28	1°50'36	opposition	-8790 Nov 06 j 13:38	14° $\mathbb{H}$ 08'50	-1°25'44
max. Earth dist.	-8796 Apr 25 j 17:55	29° $\approx$ 40'43	30.98021 AU	min. Earth dist.	-8790 Nov 07 j 10:39	14° $\mathbb{H}$ 07'21	29.04215 AU
	-8796 May 04 j 09:14	0° $\mathbb{H}$		direct	-8789 Jan 25 j 21:05	12° $\mathbb{H}$ 43'08	
morning rise	-8796 May 12 j 13:56	0° $\mathbb{H}$ 18'03		evening set	-8789 Apr 27 j 06:04	14° $\mathbb{H}$ 40'26	
retrograde	-8796 Aug 07 j 23:23	2° $\mathbb{H}$ 11'29		max. Earth dist.	-8789 May 12 j 09:15	15° $\mathbb{H}$ 13'57	31.04471 AU
opposition	-8796 Oct 23 j 21:15	0° $\mathbb{H}$ 48'35	-1°55'41				
min. Earth dist.	-8796 Oct 24 j 14:38	0° $\mathbb{H}$ 47'21	28.98672 AU	conjunction	-8789 May 13 j 08:51	15° $\mathbb{H}$ 16'09	-1°17'36
	-8796 Nov 23 j 09:51	30° $\mathbb{R}$ $\approx$		minimum elong	-8789 May 13 j 08:52	15° $\mathbb{H}$ 16'09	1°17'49
direct	-8795 Jan 11 j 20:04	29° $\approx$ 22'49		morning rise	-8789 May 29 j 07:42	15° $\mathbb{H}$ 51'33	
	-8795 Mar 01 j 07:53	0° $\mathbb{H}$		retrograde	-8789 Aug 24 j 01:36	17° $\mathbb{H}$ 44'15	
evening set	-8795 Apr 12 j 21:54	1° $\mathbb{H}$ 20'02		opposition	-8789 Nov 09 j 00:29	16° $\mathbb{H}$ 21'49	-1°20'16
max. Earth dist.	-8795 Apr 28 j 06:17	1° $\mathbb{H}$ 54'00	30.99092 AU	min. Earth dist.	-8789 Nov 09 j 22:43	16° $\mathbb{H}$ 20'16	29.04889 AU
				direct	-8788 Jan 28 j 10:28	14° $\mathbb{H}$ 56'06	
conjunction	-8795 Apr 29 j 02:06	1° $\mathbb{H}$ 55'51	-1°46'01	evening set	-8788 Apr 28 j 19:00	16° $\mathbb{H}$ 53'22	
minimum elong	-8795 Apr 29 j 02:07	1° $\mathbb{H}$ 55'51	1°46'20				
morning rise	-8795 May 15 j 03:08	2° $\mathbb{H}$ 31'24		conjunction	-8788 May 14 j 21:20	17° $\mathbb{H}$ 29'03	-1°12'27
retrograde	-8795 Aug 10 j 12:05	4° $\mathbb{H}$ 24'43		minimum elong	-8788 May 14 j 21:21	17° $\mathbb{H}$ 29'03	1°12'38
opposition	-8795 Oct 26 j 07:42	3° $\mathbb{H}$ 01'56	-1°51'04	max. Earth dist.	-8788 May 13 j 20:20	17° $\mathbb{H}$ 26'43	31.05157 AU
min. Earth dist.	-8795 Oct 27 j 00:51	3° $\mathbb{H}$ 00'44	28.99744 AU	morning rise	-8788 May 30 j 20:01	18° $\mathbb{H}$ 04'26	
direct	-8794 Jan 14 j 09:32	1° $\mathbb{H}$ 36'13		retrograde	-8788 Aug 25 j 13:06	19° $\mathbb{H}$ 57'00	
evening set	-8794 Apr 15 j 11:30	3° $\mathbb{H}$ 33'29		opposition	-8788 Nov 10 j 11:11	18° $\mathbb{H}$ 34'35	-1°14'42
				min. Earth dist.	-8788 Nov 11 j 08:52	18° $\mathbb{H}$ 33'04	29.05577 AU
conjunction	-8794 May 01 j 15:30	4° $\mathbb{H}$ 09'17	-1°41'38	direct	-8787 Jan 29 j 23:07	17° $\mathbb{H}$ 08'50	
minimum elong	-8794 May 01 j 15:30	4° $\mathbb{H}$ 09'18	1°41'57	evening set	-8787 May 01 j 07:47	19° $\mathbb{H}$ 06'04	
max. Earth dist.	-8794 Apr 30 j 19:02	4° $\mathbb{H}$ 07'23	31.00168 AU	max. Earth dist.	-8787 May 16 j 09:20	19° $\mathbb{H}$ 39'27	31.05864 AU
morning rise	-8794 May 17 j 16:09	4° $\mathbb{H}$ 44'49					
retrograde	-8794 Aug 12 j 22:43	6° $\mathbb{H}$ 38'04		conjunction	-8787 May 17 j 09:54	19° $\mathbb{H}$ 41'44	-1°07'11
opposition	-8794 Oct 28 j 18:30	5° $\mathbb{H}$ 15'22	-1°46'18	minimum elong	-8787 May 17 j 09:55	19° $\mathbb{H}$ 41'44	1°07'20
min. Earth dist.	-8794 Oct 29 j 13:13	5° $\mathbb{H}$ 14'03	29.00811 AU	morning rise	-8787 Jun 02 j 08:00	20° $\mathbb{H}$ 17'05	
direct	-8793 Jan 16 j 20:21	3° $\mathbb{H}$ 49'41		retrograde	-8787 Aug 27 j 23:22	22° $\mathbb{H}$ 09'32	
evening set	-8793 Apr 18 j 00:51	5° $\mathbb{H}$ 46'59		opposition	-8787 Nov 12 j 22:02	20° $\mathbb{H}$ 47'08	-1°09'02
max. Earth dist.	-8793 May 03 j 07:50	6° $\mathbb{H}$ 20'51	31.01214 AU	min. Earth dist.	-8787 Nov 13 j 20:59	20° $\mathbb{H}$ 45'32	29.06318 AU
				direct	-8786 Feb 01 j 12:08	19° $\mathbb{H}$ 21'23	
conjunction	-8793 May 04 j 04:39	6° $\mathbb{H}$ 22'47	-1°37'06	evening set	-8786 May 03 j 20:32	21° $\mathbb{H}$ 18'35	
minimum elong	-8793 May 04 j 04:40	6° $\mathbb{H}$ 22'47	1°37'22				
morning rise	-8793 May 20 j 04:59	6° $\mathbb{H}$ 58'18		conjunction	-8786 May 19 j 22:12	21° $\mathbb{H}$ 54'13	-1°01'50
retrograde	-8793 Aug 15 j 08:44	8° $\mathbb{H}$ 51'26		minimum elong	-8786 May 19 j 22:12	21° $\mathbb{H}$ 54'13	1°01'59
opposition	-8793 Oct 31 j 05:17	7° $\mathbb{H}$ 28'51	-1°41'22	max. Earth dist.	-8786 May 18 j 21:04	21° $\mathbb{H}$ 51'52	31.06665 AU
min. Earth dist.	-8793 Nov 01 j 00:07	7° $\mathbb{H}$ 27'31	29.01803 AU	morning rise	-8786 Jun 04 j 19:59	22° $\mathbb{H}$ 29'31	
direct	-8792 Jan 19 j 10:01	6° $\mathbb{H}$ 03'11		retrograde	-8786 Aug 30 j 11:29	24° $\mathbb{H}$ 21'52	
evening set	-8792 Apr 19 j 14:22	8° $\mathbb{H}$ 00'30		opposition	-8786 Nov 15 j 08:53	22° $\mathbb{H}$ 59'30	-1°03'16
				min. Earth dist.	-8786 Nov 16 j 06:57	22° $\mathbb{H}$ 57'57	29.07164 AU
conjunction	-8792 May 05 j 17:50	8° $\mathbb{H}$ 36'17	-1°32'25	direct	-8785 Feb 04 j 02:36	21° $\mathbb{H}$ 33'44	
minimum elong	-8792 May 05 j 17:50	8° $\mathbb{H}$ 36'17	1°32'41	evening set	-8785 May 06 j 08:59	23° $\mathbb{H}$ 30'55	
max. Earth dist.	-8792 May 04 j 19:24	8° $\mathbb{H}$ 34'12	31.02165 AU	max. Earth dist.	-8785 May 21 j 09:16	24° $\mathbb{H}$ 04'12	31.07575 AU
morning rise	-8792 May 21 j 17:53	9° $\mathbb{H}$ 11'46					
retrograde	-8792 Aug 16 j 19:24	11° $\mathbb{H}$ 04'48		conjunction	-8785 May 22 j 10:17	24° $\mathbb{H}$ 06'31	-0°56'24
opposition	-8792 Nov 01 j 15:58	9° $\mathbb{H}$ 42'17	-1°36'17	minimum elong	-8785 May 22 j 10:17	24° $\mathbb{H}$ 06'31	0°56'31
min. Earth dist.	-8792 Nov 02 j 11:53	9° $\mathbb{H}$ 40'53	29.02708 AU	morning rise	-8785 Jun 07 j 07:34	24° $\mathbb{H}$ 41'47	
direct	-8791 Jan 20 j 20:23	8° $\mathbb{H}$ 16'37		retrograde	-8785 Sep 01 j 21:27	26° $\mathbb{H}$ 34'04	
evening set	-8791 Apr 22 j 03:42	10° $\mathbb{H}$ 13'57		opposition	-8785 Nov 17 j 19:50	25° $\mathbb{H}$ 11'45	-0°57'24
max. Earth dist.	-8791 May 07 j 08:41	10° $\mathbb{H}$ 47'38	31.03020 AU	min. Earth dist.	-8785 Nov 18 j 18:45	25° $\mathbb{H}$ 10'09	29.08144 AU
				direct	-8784 Feb 06 j 14:17	23° $\mathbb{H}$ 46'01	
conjunction	-8791 May 08 j 07:04	10° $\mathbb{H}$ 49'43	-1°27'36	evening set	-8784 May 07 j 21:27	25° $\mathbb{H}$ 43'10	
minimum elong	-8791 May 08 j 07:05	10° $\mathbb{H}$ 49'43	1°27'51				
morning rise	-8791 May 24 j 06:40	11° $\mathbb{H}$ 25'11		conjunction	-8784 May 23 j 22:24	26° $\mathbb{H}$ 18'45	-0°50'52

Attention, astronomical year style is used: The year -8784 in astronomical counting style is the year 8785 BCE in historical counting style.

minimum elong	-8784 May 23 j 22:24	26° $\mathbf{H}$ 18'45	0°51'00	opposition	-8778 Dec 03 j 01:48	10° $\mathbf{Y}$ 37'10	-0°14'31
max. Earth dist.	-8784 May 22 j 21:42	26° $\mathbf{H}$ 16'27	31.08626 AU	min. Earth dist.	-8778 Dec 04 j 02:55	10° $\mathbf{Y}$ 35'26	29.15438 AU
morning rise	-8784 Jun 08 j 19:16	26° $\mathbf{H}$ 53'59		direct	-8777 Feb 22 j 03:09	9° $\mathbf{Y}$ 11'45	
retrograde	-8784 Sep 03 j 07:12	28° $\mathbf{H}$ 46'10		evening set	-8777 May 24 j 11:25	11° $\mathbf{Y}$ 08'48	
opposition	-8784 Nov 19 j 06:34	27° $\mathbf{H}$ 23'56	-0°51'27	max. Earth dist.	-8777 Jun 08 j 05:57	11° $\mathbf{Y}$ 41'37	31.15756 AU
min. Earth dist.	-8784 Nov 20 j 05:02	27° $\mathbf{H}$ 22'22	29.09233 AU				
direct	-8783 Feb 08 j 03:39	25° $\mathbf{H}$ 58'14		conjunction	-8777 Jun 09 j 08:55	11° $\mathbf{Y}$ 44'08	-0°10'37
evening set	-8783 May 10 j 10:00	27° $\mathbf{H}$ 55'24		minimum elong	-8777 Jun 09 j 08:55	11° $\mathbf{Y}$ 44'08	0°10'34
max. Earth dist.	-8783 May 25 j 08:56	28° $\mathbf{H}$ 28'34	31.09767 AU	behind sun begin	-8777 Jun 09 j 03:52	11° $\mathbf{Y}$ 43'41	
				behind sun end	-8777 Jun 09 j 13:57	11° $\mathbf{Y}$ 44'35	
conjunction	-8783 May 26 j 10:26	28° $\mathbf{H}$ 30'57	-0°45'16	morning rise	-8777 Jun 25 j 02:20	12° $\mathbf{Y}$ 19'07	
minimum elong	-8783 May 26 j 10:27	28° $\mathbf{H}$ 30'57	0°45'21	retrograde	-8777 Sep 19 j 08:52	14° $\mathbf{Y}$ 11'02	
morning rise	-8783 Jun 11 j 06:54	29° $\mathbf{H}$ 06'09		opposition	-8777 Dec 05 j 13:03	12° $\mathbf{Y}$ 49'07	-0°08'15
	-8783 Jul 07 j 22:45	0° $\mathbf{Y}$		min. Earth dist.	-8777 Dec 06 j 13:30	12° $\mathbf{Y}$ 47'26	29.16115 AU
retrograde	-8783 Sep 05 j 18:09	0° $\mathbf{Y}$ 58'17		direct	-8776 Feb 24 j 17:30	11° $\mathbf{Y}$ 23'43	
	-8783 Nov 07 j 05:19	30° $\mathbf{R}$ $\mathbf{H}$		evening set	-8776 May 25 j 23:18	13° $\mathbf{Y}$ 20'43	
opposition	-8783 Nov 21 j 17:34	29° $\mathbf{H}$ 36'07	-0°45'26				
min. Earth dist.	-8783 Nov 22 j 16:26	29° $\mathbf{H}$ 34'32	29.10408 AU	conjunction	-8776 Jun 10 j 20:17	13° $\mathbf{Y}$ 56'00	-0°04'47
direct	-8782 Feb 10 j 14:20	28° $\mathbf{H}$ 10'29		minimum elong	-8776 Jun 10 j 20:18	13° $\mathbf{Y}$ 56'00	0°04'44
	-8782 May 09 j 09:28	0° $\mathbf{Y}$		behind sun begin	-8776 Jun 10 j 13:57	13° $\mathbf{Y}$ 55'26	
evening set	-8782 May 12 j 22:17	0° $\mathbf{Y}$ 07'39		behind sun end	-8776 Jun 11 j 02:39	13° $\mathbf{Y}$ 56'34	
				max. Earth dist.	-8776 Jun 09 j 17:16	13° $\mathbf{Y}$ 53'29	31.16392 AU
conjunction	-8782 May 28 j 22:23	0° $\mathbf{Y}$ 43'10	-0°39'36	morning rise	-8776 Jun 26 j 13:07	14° $\mathbf{Y}$ 30'57	
minimum elong	-8782 May 28 j 22:24	0° $\mathbf{Y}$ 43'10	0°39'41	retrograde	-8776 Sep 20 j 18:49	16° $\mathbf{Y}$ 22'49	
max. Earth dist.	-8782 May 27 j 21:40	0° $\mathbf{Y}$ 40'52	31.10957 AU	opposition	-8776 Dec 07 j 00:19	15° $\mathbf{Y}$ 00'54	-0°01'58
morning rise	-8782 Jun 13 j 18:16	1° $\mathbf{Y}$ 18'20		min. Earth dist.	-8776 Dec 08 j 01:46	14° $\mathbf{Y}$ 59'09	29.16733 AU
retrograde	-8782 Sep 08 j 03:19	3° $\mathbf{Y}$ 10'26		direct	-8775 Feb 26 j 05:29	13° $\mathbf{Y}$ 35'30	
opposition	-8782 Nov 24 j 04:43	1° $\mathbf{Y}$ 48'21	-0°39'20	asc. node	-8775 Mar 31 j 21:22	13° $\mathbf{Y}$ 53'31	
min. Earth dist.	-8782 Nov 25 j 04:01	1° $\mathbf{Y}$ 46'44	29.11584 AU	evening set	-8775 May 28 j 11:05	15° $\mathbf{Y}$ 32'27	
direct	-8781 Feb 13 j 02:52	0° $\mathbf{Y}$ 22'47		max. Earth dist.	-8775 Jun 12 j 04:56	16° $\mathbf{Y}$ 05'13	31.17001 AU
evening set	-8781 May 15 j 10:44	2° $\mathbf{Y}$ 19'56					
max. Earth dist.	-8781 May 30 j 08:10	2° $\mathbf{Y}$ 53'00	31.12124 AU	conjunction	-8775 Jun 13 j 07:31	16° $\mathbf{Y}$ 07'42	0°01'12
				minimum elong	-8775 Jun 13 j 07:31	16° $\mathbf{Y}$ 07'42	0°01'18
conjunction	-8781 May 31 j 10:13	2° $\mathbf{Y}$ 55'25	-0°33'53	behind sun begin	-8775 Jun 13 j 01:02	16° $\mathbf{Y}$ 07'07	
minimum elong	-8781 May 31 j 10:13	2° $\mathbf{Y}$ 55'25	0°33'55	behind sun end	-8775 Jun 13 j 14:00	16° $\mathbf{Y}$ 08'17	
morning rise	-8781 Jun 16 j 05:44	3° $\mathbf{Y}$ 30'34		morning rise	-8775 Jun 28 j 23:47	16° $\mathbf{Y}$ 42'36	
retrograde	-8781 Sep 10 j 14:02	5° $\mathbf{Y}$ 22'38		retrograde	-8775 Sep 23 j 04:27	18° $\mathbf{Y}$ 34'26	
opposition	-8781 Nov 26 j 15:47	4° $\mathbf{Y}$ 00'36	-0°33'11	opposition	-8775 Dec 09 j 11:43	17° $\mathbf{Y}$ 12'31	0°04'18
min. Earth dist.	-8781 Nov 27 j 15:00	3° $\mathbf{Y}$ 59'00	29.12726 AU	min. Earth dist.	-8775 Dec 10 j 12:31	17° $\mathbf{Y}$ 10'49	29.17333 AU
direct	-8780 Feb 15 j 14:01	2° $\mathbf{Y}$ 35'06		direct	-8774 Feb 28 j 19:37	15° $\mathbf{Y}$ 47'07	
evening set	-8780 May 16 j 22:56	4° $\mathbf{Y}$ 32'14		evening set	-8774 May 30 j 22:39	17° $\mathbf{Y}$ 44'01	
conjunction	-8780 Jun 01 j 22:07	5° $\mathbf{Y}$ 07'42	-0°28'07	conjunction	-8774 Jun 15 j 18:23	18° $\mathbf{Y}$ 19'13	0°07'04
minimum elong	-8780 Jun 01 j 22:08	5° $\mathbf{Y}$ 07'42	0°28'08	minimum elong	-8774 Jun 15 j 18:23	18° $\mathbf{Y}$ 19'13	0°07'10
max. Earth dist.	-8780 May 31 j 20:50	5° $\mathbf{Y}$ 05'20	31.13214 AU	behind sun begin	-8774 Jun 15 j 12:24	18° $\mathbf{Y}$ 18'41	
morning rise	-8780 Jun 17 j 17:00	5° $\mathbf{Y}$ 42'48		behind sun end	-8774 Jun 16 j 00:21	18° $\mathbf{Y}$ 19'45	
retrograde	-8780 Sep 11 j 23:19	7° $\mathbf{Y}$ 34'50		max. Earth dist.	-8774 Jun 14 j 15:23	18° $\mathbf{Y}$ 16'42	31.17614 AU
opposition	-8780 Nov 28 j 03:06	6° $\mathbf{Y}$ 12'52	-0°27'00	morning rise	-8774 Jul 01 j 10:07	18° $\mathbf{Y}$ 54'05	
min. Earth dist.	-8780 Nov 29 j 03:29	6° $\mathbf{Y}$ 11'10	29.13753 AU	retrograde	-8774 Sep 25 j 15:07	20° $\mathbf{Y}$ 45'53	
direct	-8779 Feb 17 j 02:12	4° $\mathbf{Y}$ 47'24		opposition	-8774 Dec 11 j 23:11	19° $\mathbf{Y}$ 23'58	0°10'33
evening set	-8779 May 19 j 11:19	6° $\mathbf{Y}$ 44'31		min. Earth dist.	-8774 Dec 12 j 23:53	19° $\mathbf{Y}$ 22'16	29.17988 AU
max. Earth dist.	-8779 Jun 03 j 07:07	7° $\mathbf{Y}$ 17'26	31.14184 AU	direct	-8773 Mar 03 j 07:10	17° $\mathbf{Y}$ 58'36	
				evening set	-8773 Jun 02 j 10:03	19° $\mathbf{Y}$ 55'26	
conjunction	-8779 Jun 04 j 09:49	7° $\mathbf{Y}$ 19'56	-0°22'18	max. Earth dist.	-8773 Jun 17 j 03:36	20° $\mathbf{Y}$ 28'12	31.18305 AU
minimum elong	-8779 Jun 04 j 09:49	7° $\mathbf{Y}$ 19'56	0°22'17				
morning rise	-8779 Jun 20 j 04:19	7° $\mathbf{Y}$ 55'00		conjunction	-8773 Jun 18 j 05:19	20° $\mathbf{Y}$ 30'36	0°12'53
retrograde	-8779 Sep 14 j 10:51	9° $\mathbf{Y}$ 47'00		minimum elong	-8773 Jun 18 j 05:19	20° $\mathbf{Y}$ 30'36	0°13'02
opposition	-8779 Nov 30 j 14:18	8° $\mathbf{Y}$ 25'04	-0°20'46	behind sun begin	-8773 Jun 18 j 01:24	20° $\mathbf{Y}$ 30'15	
min. Earth dist.	-8779 Dec 01 j 14:06	8° $\mathbf{Y}$ 23'25	29.14657 AU	behind sun end	-8773 Jun 18 j 09:14	20° $\mathbf{Y}$ 30'57	
direct	-8778 Feb 19 j 14:12	6° $\mathbf{Y}$ 59'37		morning rise	-8773 Jul 03 j 20:22	21° $\mathbf{Y}$ 05'25	
evening set	-8778 May 21 j 23:28	8° $\mathbf{Y}$ 56'43		retrograde	-8773 Sep 27 j 23:40	22° $\mathbf{Y}$ 57'13	
				opposition	-8773 Dec 14 j 10:34	21° $\mathbf{Y}$ 35'19	0°16'47
conjunction	-8778 Jun 06 j 21:35	9° $\mathbf{Y}$ 32'06	-0°16'28	min. Earth dist.	-8773 Dec 15 j 11:08	21° $\mathbf{Y}$ 33'37	29.18719 AU
minimum elong	-8778 Jun 06 j 21:35	9° $\mathbf{Y}$ 32'06	0°16'27	direct	-8772 Mar 04 j 20:09	20° $\mathbf{Y}$ 09'59	
max. Earth dist.	-8778 Jun 05 j 19:15	9° $\mathbf{Y}$ 29'38	31.15022 AU	evening set	-8772 Jun 03 j 21:29	22° $\mathbf{Y}$ 06'47	
morning rise	-8778 Jun 22 j 15:24	10° $\mathbf{Y}$ 07'08					
retrograde	-8778 Sep 16 j 21:07	11° $\mathbf{Y}$ 59'05		conjunction	-8772 Jun 19 j 16:00	22° $\mathbf{Y}$ 41'54	0°18'42

Attention, astronomical year style is used: The year -8772 in astronomical counting style is the year 8773 BCE in historical counting style.

minimum elong	-8772 Jun 19 j 16:00	22° $\Upsilon$ 41'54	0°18'51	opposition	-8766 Dec 29 j 20:37	6° $\delta$ 55'08	0°59'14
max. Earth dist.	-8772 Jun 18 j 13:37	22° $\Upsilon$ 39'26	31.19090 AU	min. Earth dist.	-8766 Dec 30 j 19:37	6° $\delta$ 53'34	29.24387 AU
morning rise	-8772 Jul 05 j 06:37	23° $\Upsilon$ 16'41		direct	-8765 Mar 21 j 08:21	5° $\delta$ 30'15	
retrograde	-8772 Sep 29 j 09:41	25° $\Upsilon$ 08'29		evening set	-8765 Jun 20 j 03:33	7° $\delta$ 26'48	
opposition	-8772 Dec 15 j 22:00	23° $\Upsilon$ 46'37	0°22'59				
min. Earth dist.	-8772 Dec 16 j 21:42	23° $\Upsilon$ 44'59	29.19557 AU	conjunction	-8765 Jul 05 j 17:26	8° $\delta$ 01'36	0°58'13
direct	-8771 Mar 07 j 07:00	22° $\Upsilon$ 21'20		minimum elong	-8765 Jul 05 j 17:25	8° $\delta$ 01'36	0°58'30
evening set	-8771 Jun 06 j 08:43	24° $\Upsilon$ 18'07		max. Earth dist.	-8765 Jul 04 j 16:46	7° $\delta$ 59'17	31.24556 AU
max. Earth dist.	-8771 Jun 21 j 01:53	24° $\Upsilon$ 50'52	31.19964 AU	morning rise	-8765 Jul 21 j 03:46	8° $\delta$ 36'05	
				retrograde	-8765 Oct 15 j 12:19	10° $\delta$ 28'09	
conjunction	-8771 Jun 22 j 02:45	24° $\Upsilon$ 53'12	0°24'29	opposition	-8764 Jan 01 j 08:25	9° $\delta$ 06'24	1°05'01
minimum elong	-8771 Jun 22 j 02:44	24° $\Upsilon$ 53'12	0°24'40	min. Earth dist.	-8764 Jan 02 j 07:30	9° $\delta$ 04'50	29.24820 AU
morning rise	-8771 Jul 07 j 16:35	25° $\Upsilon$ 27'56		direct	-8764 Mar 22 j 20:39	7° $\delta$ 41'31	
retrograde	-8771 Oct 01 j 18:28	27° $\Upsilon$ 19'46		evening set	-8764 Jun 21 j 14:19	9° $\delta$ 38'01	
opposition	-8771 Dec 18 j 09:37	25° $\Upsilon$ 57'56	0°29'10	max. Earth dist.	-8764 Jul 06 j 04:09	10° $\delta$ 10'33	31.24924 AU
min. Earth dist.	-8771 Dec 19 j 09:48	25° $\Upsilon$ 56'17	29.20462 AU				
direct	-8770 Mar 09 j 18:12	24° $\Upsilon$ 32'44		conjunction	-8764 Jul 07 j 03:41	10° $\delta$ 12'45	1°03'34
evening set	-8770 Jun 08 j 20:03	26° $\Upsilon$ 29'29		minimum elong	-8764 Jul 07 j 03:41	10° $\delta$ 12'45	1°03'52
max. Earth dist.	-8770 Jun 23 j 11:53	27° $\Upsilon$ 02'09	31.20899 AU	morning rise	-8764 Jul 22 j 13:19	10° $\delta$ 47'12	
				retrograde	-8764 Oct 16 j 20:44	12° $\delta$ 39'17	
conjunction	-8770 Jun 24 j 13:17	27° $\Upsilon$ 04'31	0°30'15	opposition	-8763 Jan 02 j 20:26	11° $\delta$ 17'30	1°10'42
minimum elong	-8770 Jun 24 j 13:17	27° $\Upsilon$ 04'31	0°30'26	min. Earth dist.	-8763 Jan 03 j 19:29	11° $\delta$ 15'55	29.25134 AU
morning rise	-8770 Jul 10 j 02:42	27° $\Upsilon$ 39'14		direct	-8763 Mar 25 j 10:18	9° $\delta$ 52'37	
retrograde	-8770 Oct 04 j 05:54	29° $\Upsilon$ 31'06		evening set	-8763 Jun 24 j 01:04	11° $\delta$ 49'01	
opposition	-8770 Dec 20 j 21:12	28° $\Upsilon$ 09'19	0°35'18				
min. Earth dist.	-8770 Dec 21 j 20:07	28° $\Upsilon$ 07'45	29.21407 AU	conjunction	-8763 Jul 09 j 13:35	12° $\delta$ 23'42	1°08'50
direct	-8769 Mar 12 j 04:57	26° $\Upsilon$ 44'12		minimum elong	-8763 Jul 09 j 13:34	12° $\delta$ 23'42	1°09'11
evening set	-8769 Jun 11 j 07:04	28° $\Upsilon$ 40'56		max. Earth dist.	-8763 Jul 08 j 13:25	12° $\delta$ 21'26	31.25202 AU
				morning rise	-8763 Jul 24 j 22:45	12° $\delta$ 58'06	
conjunction	-8769 Jun 26 j 23:47	29° $\Upsilon$ 15'56	0°35'58	retrograde	-8763 Oct 19 j 06:38	14° $\delta$ 50'13	
minimum elong	-8769 Jun 26 j 23:47	29° $\Upsilon$ 15'55	0°36'11	opposition	-8762 Jan 05 j 08:23	13° $\delta$ 28'22	1°16'16
max. Earth dist.	-8769 Jun 25 j 23:21	29° $\Upsilon$ 13'38	31.21826 AU	min. Earth dist.	-8762 Jan 06 j 06:32	13° $\delta$ 26'52	29.25402 AU
morning rise	-8769 Jul 12 j 12:29	29° $\Upsilon$ 50'36		direct	-8762 Mar 27 j 21:58	12° $\delta$ 03'30	
	-8769 Jul 16 j 20:19	0° $\delta$		evening set	-8762 Jun 26 j 11:30	13° $\delta$ 59'48	
retrograde	-8769 Oct 06 j 16:09	1° $\delta$ 42'31					
opposition	-8769 Dec 23 j 09:00	0° $\delta$ 20'47	0°41'23	conjunction	-8762 Jul 11 j 23:30	14° $\delta$ 34'27	1°14'00
min. Earth dist.	-8769 Dec 24 j 08:52	0° $\delta$ 19'09	29.22316 AU	minimum elong	-8762 Jul 11 j 23:29	14° $\delta$ 34'27	1°14'20
	-8768 Jan 05 j 03:31	30° $\kappa$ ' $\Upsilon$		max. Earth dist.	-8762 Jul 11 j 01:02	14° $\delta$ 32'20	31.25454 AU
direct	-8768 Mar 13 j 17:15	28° $\Upsilon$ 55'44			-8762 Jul 23 j 08:30	15° $\delta$	
	-8768 May 17 j 23:30	0° $\delta$		morning rise	-8762 Jul 27 j 07:55	15° $\delta$ 08'48	
evening set	-8768 Jun 12 j 18:19	0° $\delta$ 52'27		retrograde	-8762 Oct 21 j 15:04	17° $\delta$ 00'56	
max. Earth dist.	-8768 Jun 27 j 09:34	1° $\delta$ 25'04	31.22697 AU	opposition	-8761 Jan 07 j 20:29	15° $\delta$ 39'03	1°21'44
				min. Earth dist.	-8761 Jan 08 j 18:48	15° $\delta$ 37'32	29.25670 AU
conjunction	-8768 Jun 28 j 10:17	1° $\delta$ 27'23	0°41'38		-8761 Feb 01 j 16:44	15° $\kappa$ ' $\delta$	
minimum elong	-8768 Jun 28 j 10:16	1° $\delta$ 27'23	0°41'51	direct	-8761 Mar 30 j 09:55	14° $\delta$ 14'11	
morning rise	-8768 Jul 13 j 22:27	2° $\delta$ 02'01			-8761 May 23 j 17:50	15° $\delta$	
retrograde	-8768 Oct 08 j 03:54	3° $\delta$ 53'59		evening set	-8761 Jun 28 j 21:52	16° $\delta$ 10'24	
opposition	-8768 Dec 24 j 20:38	2° $\delta$ 32'16	0°47'25	max. Earth dist.	-8761 Jul 13 j 10:29	16° $\delta$ 42'52	31.25745 AU
min. Earth dist.	-8768 Dec 25 j 19:33	2° $\delta$ 30'42	29.23134 AU				
direct	-8767 Mar 16 j 06:23	1° $\delta$ 07'17		conjunction	-8761 Jul 14 j 09:03	16° $\delta$ 44'59	1°19'03
evening set	-8767 Jun 15 j 05:31	3° $\delta$ 03'58		minimum elong	-8761 Jul 14 j 09:02	16° $\delta$ 44'59	1°19'25
				morning rise	-8761 Jul 29 j 17:03	17° $\delta$ 19'18	
conjunction	-8767 Jun 30 j 20:49	3° $\delta$ 38'51	0°47'14	retrograde	-8761 Oct 24 j 01:44	19° $\delta$ 11'30	
minimum elong	-8767 Jun 30 j 20:48	3° $\delta$ 38'51	0°47'29	opposition	-8760 Jan 10 j 08:25	17° $\delta$ 49'34	1°27'04
max. Earth dist.	-8767 Jun 29 j 20:12	3° $\delta$ 36'33	31.23448 AU	min. Earth dist.	-8760 Jan 11 j 04:59	17° $\delta$ 48'10	29.26001 AU
morning rise	-8767 Jul 16 j 08:18	4° $\delta$ 13'26		direct	-8760 Mar 31 j 21:17	16° $\delta$ 24'43	
retrograde	-8767 Oct 10 j 14:31	6° $\delta$ 05'27		evening set	-8760 Jun 30 j 08:08	18° $\delta$ 20'53	
opposition	-8767 Dec 27 j 08:38	4° $\delta$ 43'44	0°53'22				
min. Earth dist.	-8767 Dec 28 j 08:19	4° $\delta$ 42'07	29.23835 AU	conjunction	-8760 Jul 15 j 18:44	18° $\delta$ 55'25	1°23'59
direct	-8766 Mar 18 j 17:45	3° $\delta$ 18'49		minimum elong	-8760 Jul 15 j 18:43	18° $\delta$ 55'24	1°24'21
evening set	-8766 Jun 17 j 16:30	5° $\delta$ 15'26		max. Earth dist.	-8760 Jul 14 j 21:31	18° $\delta$ 53'25	31.26104 AU
max. Earth dist.	-8766 Jul 02 j 07:06	5° $\delta$ 48'01	31.24075 AU	morning rise	-8760 Jul 31 j 02:00	19° $\delta$ 29'41	
				retrograde	-8760 Oct 25 j 11:20	21° $\delta$ 21'57	
conjunction	-8766 Jul 03 j 07:08	5° $\delta$ 50'17	0°52'46	opposition	-8759 Jan 11 j 20:28	19° $\delta$ 59'59	1°32'17
minimum elong	-8766 Jul 03 j 07:08	5° $\delta$ 50'17	0°53'01	min. Earth dist.	-8759 Jan 12 j 17:16	19° $\delta$ 58'35	29.26419 AU
morning rise	-8766 Jul 18 j 18:00	6° $\delta$ 24'49		direct	-8759 Apr 03 j 08:39	18° $\delta$ 35'12	
retrograde	-8766 Oct 13 j 00:52	8° $\delta$ 16'52		evening set	-8759 Jul 02 j 18:24	20° $\delta$ 31'18	

Attention, astronomical year style is used: The year -8759 in astronomical counting style is the year 8760 BCE in historical counting style.

max. Earth dist.	-8759 Jul	17 j 07:40	21° <b>8</b> 03'51	31.26575 AU	minimum elong	-8753 Jul	31 j 12:50	4° <b>II</b> 09'57	1°55'16
					max. Earth dist.	-8753 Jul	30 j 20:36	4° <b>II</b> 08'25	31.29437 AU
conjunction	-8759 Jul	18 j 04:16	21° <b>8</b> 05'47	1°28'48	morning rise	-8753 Aug	15 j 16:22	4° <b>II</b> 43'59	
minimum elong	-8759 Jul	18 j 04:15	21° <b>8</b> 05'47	1°29'12	retrograde	-8753 Nov	10 j 13:55	6° <b>II</b> 37'00	
morning rise	-8759 Aug	02 j 11:03	21° <b>8</b> 40'01		opposition	-8752 Jan	28 j 10:55	5° <b>II</b> 15'03	2°04'40
retrograde	-8759 Oct	27 j 22:39	23° <b>8</b> 32'22		min. Earth dist.	-8752 Jan	29 j 03:30	5° <b>II</b> 13'56	29.29655 AU
opposition	-8758 Jan	14 j 08:35	22° <b>8</b> 10'25	1°37'21	direct	-8752 Apr	18 j 21:10	3° <b>II</b> 50'50	
min. Earth dist.	-8758 Jan	15 j 03:35	22° <b>8</b> 09'08	29.26933 AU	evening set	-8752 Jul	17 j 16:42	5° <b>II</b> 46'37	
direct	-8758 Apr	05 j 20:32	20° <b>8</b> 45'43						
evening set	-8758 Jul	05 j 04:28	22° <b>8</b> 41'46		conjunction	-8752 Aug	01 j 22:06	6° <b>II</b> 20'48	1°58'34
					minimum elong	-8752 Aug	01 j 22:05	6° <b>II</b> 20'48	1°59'03
conjunction	-8758 Jul	20 j 13:40	23° <b>8</b> 16'13	1°33'29	max. Earth dist.	-8752 Aug	01 j 05:35	6° <b>II</b> 19'14	31.29565 AU
minimum elong	-8758 Jul	20 j 13:39	23° <b>8</b> 16'13	1°33'53	morning rise	-8752 Aug	17 j 01:17	6° <b>II</b> 54'48	
max. Earth dist.	-8758 Jul	19 j 17:51	23° <b>8</b> 14'21	31.27120 AU	retrograde	-8752 Nov	12 j 00:42	8° <b>II</b> 47'55	
morning rise	-8758 Aug	04 j 19:53	23° <b>8</b> 50'25		opposition	-8751 Jan	29 j 23:20	7° <b>II</b> 25'56	2°08'37
retrograde	-8758 Oct	30 j 09:37	25° <b>8</b> 42'53		min. Earth dist.	-8751 Jan	30 j 14:21	7° <b>II</b> 24'55	29.29726 AU
opposition	-8757 Jan	16 j 20:52	24° <b>8</b> 20'56	1°42'18	direct	-8751 Apr	21 j 08:53	6° <b>II</b> 01'43	
min. Earth dist.	-8757 Jan	17 j 15:55	24° <b>8</b> 19'38	29.27520 AU	evening set	-8751 Jul	20 j 02:29	7° <b>II</b> 57'25	
direct	-8757 Apr	08 j 06:55	22° <b>8</b> 56'19						
evening set	-8757 Jul	07 j 14:33	24° <b>8</b> 52'21		conjunction	-8751 Aug	04 j 07:24	8° <b>II</b> 31'34	2°02'11
					minimum elong	-8751 Aug	04 j 07:24	8° <b>II</b> 31'34	2°02'42
conjunction	-8757 Jul	22 j 23:10	25° <b>8</b> 26'45	1°38'02	max. Earth dist.	-8751 Aug	03 j 15:58	8° <b>II</b> 30'06	31.29575 AU
minimum elong	-8757 Jul	22 j 23:09	25° <b>8</b> 26'45	1°38'28	morning rise	-8751 Aug	19 j 10:03	9° <b>II</b> 05'32	
max. Earth dist.	-8757 Jul	22 j 04:39	25° <b>8</b> 25'00	31.27716 AU	retrograde	-8751 Nov	14 j 10:15	10° <b>II</b> 58'45	
morning rise	-8757 Aug	07 j 04:48	26° <b>8</b> 00'55		opposition	-8750 Feb	01 j 12:05	9° <b>II</b> 36'41	2°12'24
retrograde	-8757 Nov	01 j 20:22	27° <b>8</b> 53'29		min. Earth dist.	-8750 Feb	02 j 03:25	9° <b>II</b> 35'39	29.29709 AU
opposition	-8756 Jan	19 j 08:57	26° <b>8</b> 31'34	1°47'05	direct	-8750 Apr	23 j 20:03	8° <b>II</b> 12'30	
min. Earth dist.	-8756 Jan	20 j 02:54	26° <b>8</b> 30'21	29.28111 AU	evening set	-8750 Jul	22 j 12:03	10° <b>II</b> 08'05	
direct	-8756 Apr	09 j 20:34	25° <b>8</b> 07'03						
evening set	-8756 Jul	09 j 00:44	27° <b>8</b> 03'03		conjunction	-8750 Aug	06 j 16:25	10° <b>II</b> 42'11	2°05'38
					minimum elong	-8750 Aug	06 j 16:24	10° <b>II</b> 42'11	2°06'08
conjunction	-8756 Jul	24 j 08:35	27° <b>8</b> 37'25	1°42'27	max. Earth dist.	-8750 Aug	06 j 01:45	10° <b>II</b> 40'48	31.29533 AU
minimum elong	-8756 Jul	24 j 08:34	27° <b>8</b> 37'24	1°42'53	morning rise	-8750 Aug	21 j 18:42	11° <b>II</b> 16'07	
max. Earth dist.	-8756 Jul	23 j 13:50	27° <b>8</b> 35'39	31.28284 AU	retrograde	-8750 Nov	16 j 21:02	13° <b>II</b> 09'25	
morning rise	-8756 Aug	08 j 13:47	28° <b>8</b> 11'32		opposition	-8749 Feb	04 j 00:36	11° <b>II</b> 47'17	2°15'59
	-8756 Oct	18 j 12:40	0° <b>II</b>		min. Earth dist.	-8749 Feb	04 j 14:09	11° <b>II</b> 46'22	29.29654 AU
retrograde	-8756 Nov	03 j 08:47	0° <b>II</b> 04'14		direct	-8749 Apr	26 j 07:23	10° <b>II</b> 23'07	
	-8756 Nov	19 j 05:44	30° <b>8</b>		evening set	-8749 Jul	24 j 21:38	12° <b>II</b> 18'36	
opposition	-8755 Jan	20 j 21:19	28° <b>8</b> 42'19	1°51'44	max. Earth dist.	-8749 Aug	08 j 11:27	12° <b>II</b> 51'21	31.29470 AU
min. Earth dist.	-8755 Jan	21 j 14:51	28° <b>8</b> 41'08	29.28666 AU					
direct	-8755 Apr	12 j 08:14	27° <b>8</b> 17'54		conjunction	-8749 Aug	09 j 01:26	12° <b>II</b> 52'40	2°08'54
evening set	-8755 Jul	11 j 10:41	29° <b>8</b> 13'53		minimum elong	-8749 Aug	09 j 01:26	12° <b>II</b> 52'40	2°09'25
					morning rise	-8749 Aug	24 j 03:21	13° <b>II</b> 26'34	
conjunction	-8755 Jul	26 j 18:02	29° <b>8</b> 48'11	1°46'43	retrograde	-8749 Nov	19 j 07:58	15° <b>II</b> 19'58	
minimum elong	-8755 Jul	26 j 18:01	29° <b>8</b> 48'11	1°47'11	opposition	-8748 Feb	06 j 13:05	13° <b>II</b> 57'45	2°19'22
max. Earth dist.	-8755 Jul	26 j 00:50	29° <b>8</b> 46'34	31.28785 AU	min. Earth dist.	-8748 Feb	07 j 02:31	13° <b>II</b> 56'51	29.29627 AU
	-8755 Jul	31 j 23:24	0° <b>II</b>		direct	-8748 Apr	27 j 17:42	12° <b>II</b> 33'36	
morning rise	-8755 Aug	10 j 22:32	0° <b>II</b> 22'17		evening set	-8748 Jul	26 j 07:05	14° <b>II</b> 29'00	
retrograde	-8755 Nov	05 j 17:59	2° <b>II</b> 15'06						
opposition	-8754 Jan	23 j 09:52	0° <b>II</b> 53'12	1°56'12	conjunction	-8748 Aug	10 j 10:28	15° <b>II</b> 03'01	2°11'58
min. Earth dist.	-8754 Jan	24 j 03:07	0° <b>II</b> 52'02	29.29117 AU	minimum elong	-8748 Aug	10 j 10:27	15° <b>II</b> 03'01	2°12'29
	-8754 Feb	27 j 21:17	30° <b>8</b>		max. Earth dist.	-8748 Aug	09 j 22:11	15° <b>II</b> 01'51	31.29467 AU
direct	-8754 Apr	14 j 21:16	29° <b>8</b> 28'52		morning rise	-8748 Aug	25 j 11:55	15° <b>II</b> 36'54	
	-8754 May	29 j 04:07	0° <b>II</b>		retrograde	-8748 Nov	20 j 18:51	17° <b>II</b> 30'23	
evening set	-8754 Jul	13 j 20:51	1° <b>II</b> 24'47		opposition	-8747 Feb	08 j 01:41	16° <b>II</b> 08'07	2°22'34
max. Earth dist.	-8754 Jul	28 j 09:40	1° <b>II</b> 57'23	31.29177 AU	min. Earth dist.	-8747 Feb	08 j 13:26	16° <b>II</b> 07'19	29.29662 AU
					direct	-8747 Apr	30 j 07:10	14° <b>II</b> 44'00	
conjunction	-8754 Jul	29 j 03:24	1° <b>II</b> 59'03	1°50'50	evening set	-8747 Jul	28 j 16:28	16° <b>II</b> 39'20	
minimum elong	-8754 Jul	29 j 03:23	1° <b>II</b> 59'03	1°51'17					
morning rise	-8754 Aug	13 j 07:33	2° <b>II</b> 33'07		conjunction	-8747 Aug	12 j 19:13	17° <b>II</b> 13'18	2°14'52
retrograde	-8754 Nov	08 j 04:44	4° <b>II</b> 26'02		minimum elong	-8747 Aug	12 j 19:12	17° <b>II</b> 13'18	2°15'24
opposition	-8753 Jan	25 j 22:18	3° <b>II</b> 04'08	2°00'31	max. Earth dist.	-8747 Aug	12 j 07:10	17° <b>II</b> 12'10	31.29543 AU
min. Earth dist.	-8753 Jan	26 j 14:33	3° <b>II</b> 03'02	29.29461 AU	morning rise	-8747 Aug	27 j 20:26	17° <b>II</b> 47'09	
direct	-8753 Apr	17 j 08:53	1° <b>II</b> 39'51		retrograde	-8747 Nov	23 j 07:33	19° <b>II</b> 40'46	
evening set	-8753 Jul	16 j 06:43	3° <b>II</b> 35'43		opposition	-8746 Feb	10 j 14:23	18° <b>II</b> 18'27	2°25'33
					min. Earth dist.	-8746 Feb	11 j 01:05	18° <b>II</b> 17'43	29.29799 AU
conjunction	-8753 Jul	31 j 12:51	4° <b>II</b> 09'57	1°54'47	direct	-8746 May	02 j 18:04	16° <b>II</b> 54'24	

Attention, astronomical year style is used: The year -8746 in astronomical counting style is the year 8747 BCE in historical counting style.

evening set	-8746 Jul 31 j 01:45	18°II49'39		conjunction	-8740 Aug 27 j 09:51	2°☾27'28	2°29'30
				minimum elong	-8740 Aug 27 j 09:51	2°☾27'28	2°30'03
conjunction	-8746 Aug 15 j 04:13	19°II23'36	2°17'33	max. Earth dist.	-8740 Aug 27 j 03:55	2°☾26'54	31.30223 AU
minimum elong	-8746 Aug 15 j 04:13	19°II23'36	2°18'05	morning rise	-8740 Sep 11 j 09:27	3°☾01'14	
max. Earth dist.	-8746 Aug 14 j 18:17	19°II22'40	31.29715 AU	retrograde	-8740 Dec 08 j 11:24	4°☾55'49	
morning rise	-8746 Aug 30 j 04:59	19°II57'26		opposition	-8739 Feb 26 j 08:33	3°☾33'18	2°40'26
retrograde	-8746 Nov 25 j 17:01	21°II51'10		min. Earth dist.	-8739 Feb 26 j 13:57	3°☾32'57	29.30281 AU
opposition	-8745 Feb 13 j 03:02	20°II28'49	2°28'20	direct	-8739 May 18 j 01:56	2°☾09'47	
min. Earth dist.	-8745 Feb 13 j 12:53	20°II28'10	29.30006 AU	evening set	-8739 Aug 14 j 18:44	4°☾04'31	
direct	-8745 May 05 j 06:24	19°II04'52					
evening set	-8745 Aug 02 j 11:04	21°II00'03		conjunction	-8739 Aug 29 j 18:50	4°☾38'19	2°30'45
				minimum elong	-8739 Aug 29 j 18:50	4°☾38'19	2°31'20
conjunction	-8745 Aug 17 j 12:59	21°II33'58	2°20'03	max. Earth dist.	-8739 Aug 29 j 14:26	4°☾37'54	31.29886 AU
minimum elong	-8745 Aug 17 j 12:59	21°II33'58	2°20'37	morning rise	-8739 Sep 13 j 18:14	5°☾12'05	
max. Earth dist.	-8745 Aug 17 j 03:04	21°II33'02	31.29948 AU	retrograde	-8739 Dec 10 j 22:50	7°☾06'47	
morning rise	-8745 Sep 01 j 13:39	22°II07'47		opposition	-8738 Feb 28 j 21:38	5°☾44'12	2°41'40
retrograde	-8745 Nov 28 j 04:46	24°II01'39		min. Earth dist.	-8738 Mar 01 j 01:42	5°☾43'56	29.29873 AU
opposition	-8744 Feb 15 j 15:42	22°II39'18	2°30'53	direct	-8738 May 20 j 14:54	4°☾20'42	
min. Earth dist.	-8744 Feb 16 j 00:04	22°II38'44	29.30255 AU	evening set	-8738 Aug 17 j 03:58	6°☾15'21	
direct	-8744 May 06 j 18:06	21°II15'25					
evening set	-8744 Aug 03 j 20:16	23°II10'33		conjunction	-8738 Sep 01 j 03:43	6°☾49'07	2°31'48
				minimum elong	-8738 Sep 01 j 03:43	6°☾49'07	2°32'21
conjunction	-8744 Aug 18 j 21:54	23°II44'27	2°22'21	max. Earth dist.	-8738 Aug 31 j 23:09	6°☾48'41	31.29428 AU
minimum elong	-8744 Aug 18 j 21:54	23°II44'27	2°22'54	morning rise	-8738 Sep 16 j 03:14	7°☾22'53	
max. Earth dist.	-8744 Aug 18 j 13:52	23°II43'41	31.30179 AU	retrograde	-8738 Dec 13 j 11:59	9°☾17'42	
morning rise	-8744 Sep 02 j 22:08	24°II18'15		opposition	-8737 Mar 03 j 10:34	7°☾55'01	2°42'40
retrograde	-8744 Nov 29 j 14:51	26°II12'16		min. Earth dist.	-8737 Mar 03 j 13:56	7°☾54'48	29.29389 AU
opposition	-8743 Feb 17 j 04:36	24°II49'54	2°33'14	direct	-8737 May 23 j 01:19	6°☾31'31	
min. Earth dist.	-8743 Feb 17 j 12:57	24°II49'20	29.30473 AU	evening set	-8737 Aug 19 j 12:54	8°☾26'04	
direct	-8743 May 09 j 06:23	23°II26'07					
evening set	-8743 Aug 06 j 05:40	25°II21'11		conjunction	-8737 Sep 03 j 12:39	8°☾59'51	2°32'37
				minimum elong	-8737 Sep 03 j 12:39	8°☾59'51	2°33'12
conjunction	-8743 Aug 21 j 06:48	25°II55'03	2°24'27	max. Earth dist.	-8737 Sep 03 j 10:03	8°☾59'36	31.28912 AU
minimum elong	-8743 Aug 21 j 06:48	25°II55'03	2°25'01	morning rise	-8737 Sep 18 j 11:59	9°☾33'37	
max. Earth dist.	-8743 Aug 20 j 22:58	25°II54'19	31.30373 AU	retrograde	-8737 Dec 15 j 21:51	11°☾28'31	
morning rise	-8743 Sep 05 j 06:55	26°II28'51		opposition	-8736 Mar 04 j 23:34	10°☾05'45	2°43'26
retrograde	-8743 Dec 02 j 02:17	28°II23'00		min. Earth dist.	-8736 Mar 05 j 02:05	10°☾05'35	29.28860 AU
opposition	-8742 Feb 19 j 17:30	27°II00'38	2°35'22	direct	-8736 May 24 j 13:44	8°☾42'17	
min. Earth dist.	-8742 Feb 20 j 00:00	27°II00'12	29.30628 AU	evening set	-8736 Aug 20 j 21:53	10°☾36'44	
direct	-8742 May 11 j 17:48	25°II36'56					
evening set	-8742 Aug 08 j 14:53	27°II31'56		conjunction	-8736 Sep 04 j 21:19	11°☾10'29	2°33'14
				minimum elong	-8736 Sep 04 j 21:19	11°☾10'29	2°33'47
conjunction	-8742 Aug 23 j 15:45	28°II05'47	2°26'21	max. Earth dist.	-8736 Sep 04 j 18:53	11°☾10'15	31.28396 AU
minimum elong	-8742 Aug 23 j 15:44	28°II05'47	2°26'53	morning rise	-8736 Sep 19 j 20:47	11°☾44'15	
max. Earth dist.	-8742 Aug 23 j 08:56	28°II05'08	31.30461 AU	retrograde	-8736 Dec 17 j 10:06	13°☾39'16	
morning rise	-8742 Sep 07 j 15:36	28°II39'34		opposition	-8735 Mar 07 j 12:31	12°☾16'26	2°43'58
	-8742 Oct 20 j 01:40	0°☾		min. Earth dist.	-8735 Mar 07 j 13:20	12°☾16'22	29.28373 AU
retrograde	-8742 Dec 04 j 12:25	0°☾33'53		direct	-8735 May 27 j 01:50	10°☾52'59	
	-8741 Jan 21 j 02:48	30°☾II		evening set	-8735 Aug 23 j 06:46	12°☾47'20	
opposition	-8741 Feb 22 j 06:36	29°II11'28	2°37'17				
min. Earth dist.	-8741 Feb 22 j 13:27	29°II11'01	29.30664 AU	conjunction	-8735 Sep 07 j 06:12	13°☾21'05	2°33'38
direct	-8741 May 14 j 04:36	27°II47'51		minimum elong	-8735 Sep 07 j 06:12	13°☾21'05	2°34'12
evening set	-8741 Aug 11 j 00:16	29°II42'46		max. Earth dist.	-8735 Sep 07 j 05:49	13°☾21'03	31.27934 AU
	-8741 Aug 18 j 17:09	0°☾		morning rise	-8735 Sep 22 j 05:34	13°☾54'52	
				retrograde	-8735 Dec 19 j 20:56	15°☾50'01	
conjunction	-8741 Aug 26 j 00:49	0°☾16'36	2°28'01	opposition	-8734 Mar 10 j 01:36	14°☾27'05	2°44'16
minimum elong	-8741 Aug 26 j 00:49	0°☾16'36	2°28'35	min. Earth dist.	-8734 Mar 10 j 01:58	14°☾27'04	29.27956 AU
max. Earth dist.	-8741 Aug 25 j 18:41	0°☾16'01	31.30425 AU	direct	-8734 May 29 j 14:11	13°☾03'42	
morning rise	-8741 Sep 10 j 00:30	0°☾50'23		evening set	-8734 Aug 25 j 15:37	14°☾57'57	
retrograde	-8741 Dec 06 j 23:34	2°☾44'49					
opposition	-8740 Feb 24 j 19:24	1°☾22'22	2°38'58	conjunction	-8734 Sep 09 j 14:56	15°☾31'43	2°33'48
min. Earth dist.	-8740 Feb 25 j 00:40	1°☾22'01	29.30547 AU	minimum elong	-8734 Sep 09 j 14:56	15°☾31'43	2°34'21
	-8740 May 07 j 01:07	30°☾II		max. Earth dist.	-8734 Sep 09 j 15:14	15°☾31'44	31.27568 AU
direct	-8740 May 15 j 15:44	29°II58'48		morning rise	-8734 Sep 22 j 14:29	16°☾05'30	
	-8740 May 24 j 05:21	0°☾		retrograde	-8734 Dec 22 j 08:13	18°☾00'47	
evening set	-8740 Aug 12 j 09:39	1°☾53'39		opposition	-8733 Mar 12 j 14:30	16°☾37'49	2°44'20
				min. Earth dist.	-8733 Mar 12 j 12:37	16°☾37'57	29.27624 AU

Attention, astronomical year style is used: The year -8733 in astronomical counting style is the year 8734 BCE in historical counting style.

direct	-8733 Jun 01 j 01:33	15° $\mathring{O}$ 14'29		minimum elong	-8727 Sep 24 j 06:07	0° $\mathring{O}$ 49'16	2°29'19
evening set	-8733 Aug 28 j 00:30	17° $\mathring{O}$ 08'40		max. Earth dist.	-8727 Sep 24 j 12:12	0° $\mathring{O}$ 49'50	31.24704 AU
				morning rise	-8727 Oct 09 j 07:10	1° $\mathring{O}$ 23'12	
conjunction	-8733 Sep 11 j 23:48	17° $\mathring{O}$ 42'25	2°33'45	retrograde	-8726 Jan 06 j 19:35	3° $\mathring{O}$ 19'26	
minimum elong	-8733 Sep 11 j 23:48	17° $\mathring{O}$ 42'25	2°34'18	opposition	-8726 Mar 28 j 10:09	1° $\mathring{O}$ 56'05	2°38'10
max. Earth dist.	-8733 Sep 12 j 01:18	17° $\mathring{O}$ 42'34	31.27260 AU	min. Earth dist.	-8726 Mar 28 j 02:35	1° $\mathring{O}$ 56'35	29.24503 AU
morning rise	-8733 Sep 26 j 23:26	18° $\mathring{O}$ 16'14		direct	-8726 Jun 16 j 05:43	0° $\mathring{O}$ 33'05	
retrograde	-8733 Dec 24 j 18:06	20° $\mathring{O}$ 11'39		evening set	-8726 Sep 11 j 15:15	2° $\mathring{O}$ 26'40	
opposition	-8732 Mar 14 j 03:27	18° $\mathring{O}$ 48'39	2°44'10				
min. Earth dist.	-8732 Mar 14 j 01:31	18° $\mathring{O}$ 48'47	29.27345 AU	conjunction	-8726 Sep 26 j 15:21	3° $\mathring{O}$ 00'30	2°27'13
direct	-8732 Jun 02 j 12:13	17° $\mathring{O}$ 25'24		minimum elong	-8726 Sep 26 j 15:22	3° $\mathring{O}$ 00'31	2°27'43
evening set	-8732 Aug 29 j 09:22	19° $\mathring{O}$ 19'30		max. Earth dist.	-8726 Sep 26 j 22:54	3° $\mathring{O}$ 01'13	31.23864 AU
				morning rise	-8726 Oct 11 j 16:42	3° $\mathring{O}$ 34'29	
conjunction	-8732 Sep 13 j 08:42	19° $\mathring{O}$ 53'16	2°33'28	retrograde	-8725 Jan 09 j 07:00	5° $\mathring{O}$ 30'48	
minimum elong	-8732 Sep 13 j 08:42	19° $\mathring{O}$ 53'16	2°34'01	opposition	-8725 Mar 30 j 23:19	4° $\mathring{O}$ 07'20	2°36'22
max. Earth dist.	-8732 Sep 13 j 11:33	19° $\mathring{O}$ 53'32	31.27004 AU	min. Earth dist.	-8725 Mar 30 j 15:49	4° $\mathring{O}$ 07'50	29.23606 AU
morning rise	-8732 Sep 28 j 08:26	20° $\mathring{O}$ 27'05		direct	-8725 Jun 18 j 17:58	2° $\mathring{O}$ 44'20	
retrograde	-8732 Dec 26 j 05:23	22° $\mathring{O}$ 22'40		evening set	-8725 Sep 14 j 00:13	4° $\mathring{O}$ 37'47	
opposition	-8731 Mar 16 j 16:27	20° $\mathring{O}$ 59'38	2°43'45				
min. Earth dist.	-8731 Mar 16 j 12:30	20° $\mathring{O}$ 59'54	29.27083 AU	conjunction	-8725 Sep 29 j 00:31	5° $\mathring{O}$ 11'39	2°25'25
direct	-8731 Jun 04 j 23:09	19° $\mathring{O}$ 36'27		minimum elong	-8725 Sep 29 j 00:31	5° $\mathring{O}$ 11'39	2°25'55
evening set	-8731 Aug 31 j 18:15	21° $\mathring{O}$ 30'29		max. Earth dist.	-8725 Sep 29 j 08:31	5° $\mathring{O}$ 12'24	31.22944 AU
				morning rise	-8725 Oct 14 j 02:16	5° $\mathring{O}$ 45'39	
conjunction	-8731 Sep 15 j 17:31	22° $\mathring{O}$ 04'15	2°32'58	retrograde	-8724 Jan 11 j 18:39	7° $\mathring{O}$ 42'02	
minimum elong	-8731 Sep 15 j 17:31	22° $\mathring{O}$ 04'15	2°33'32	opposition	-8724 Apr 01 j 12:10	6° $\mathring{O}$ 18'28	2°34'21
max. Earth dist.	-8731 Sep 15 j 20:48	22° $\mathring{O}$ 04'34	31.26732 AU	min. Earth dist.	-8724 Apr 01 j 02:47	6° $\mathring{O}$ 19'06	29.22661 AU
morning rise	-8731 Sep 30 j 17:32	22° $\mathring{O}$ 38'06		direct	-8724 Jun 20 j 05:46	4° $\mathring{O}$ 55'27	
retrograde	-8731 Dec 28 j 17:38	24° $\mathring{O}$ 33'50		evening set	-8724 Sep 15 j 09:07	6° $\mathring{O}$ 48'47	
opposition	-8730 Mar 19 j 05:40	23° $\mathring{O}$ 10'46	2°43'06				
min. Earth dist.	-8730 Mar 19 j 01:41	23° $\mathring{O}$ 11'02	29.26795 AU	conjunction	-8724 Sep 30 j 09:39	7° $\mathring{O}$ 22'40	2°23'25
direct	-8730 Jun 07 j 08:52	21° $\mathring{O}$ 47'39		minimum elong	-8724 Sep 30 j 09:40	7° $\mathring{O}$ 22'40	2°23'54
evening set	-8730 Sep 03 j 03:10	23° $\mathring{O}$ 41'36		max. Earth dist.	-8724 Sep 30 j 18:38	7° $\mathring{O}$ 23'31	31.21998 AU
				morning rise	-8724 Oct 15 j 11:50	7° $\mathring{O}$ 56'42	
conjunction	-8730 Sep 18 j 02:39	24° $\mathring{O}$ 15'23	2°32'15	retrograde	-8723 Jan 13 j 05:07	9° $\mathring{O}$ 53'11	
minimum elong	-8730 Sep 18 j 02:39	24° $\mathring{O}$ 15'23	2°32'47	opposition	-8723 Apr 04 j 01:18	8° $\mathring{O}$ 29'29	2°32'06
max. Earth dist.	-8730 Sep 18 j 07:40	24° $\mathring{O}$ 15'52	31.26409 AU	min. Earth dist.	-8723 Apr 03 j 15:50	8° $\mathring{O}$ 30'08	29.21735 AU
morning rise	-8730 Oct 03 j 02:44	24° $\mathring{O}$ 49'16		direct	-8723 Jun 22 j 17:08	7° $\mathring{O}$ 06'29	
retrograde	-8730 Dec 31 j 05:13	26° $\mathring{O}$ 45'08		evening set	-8723 Sep 17 j 17:52	8° $\mathring{O}$ 59'42	
opposition	-8729 Mar 21 j 18:36	25° $\mathring{O}$ 22'01	2°42'13				
min. Earth dist.	-8729 Mar 21 j 13:20	25° $\mathring{O}$ 22'23	29.26419 AU	conjunction	-8723 Oct 02 j 18:47	9° $\mathring{O}$ 33'36	2°21'13
direct	-8729 Jun 09 j 20:28	23° $\mathring{O}$ 58'58		minimum elong	-8723 Oct 02 j 18:48	9° $\mathring{O}$ 33'36	2°21'41
evening set	-8729 Sep 05 j 12:18	25° $\mathring{O}$ 52'51		max. Earth dist.	-8723 Oct 03 j 05:21	9° $\mathring{O}$ 34'36	31.21113 AU
				morning rise	-8723 Oct 17 j 21:20	10° $\mathring{O}$ 07'40	
conjunction	-8729 Sep 20 j 11:44	26° $\mathring{O}$ 26'38	2°31'19	retrograde	-8722 Jan 15 j 16:28	12° $\mathring{O}$ 04'15	
minimum elong	-8729 Sep 20 j 11:44	26° $\mathring{O}$ 26'38	2°31'51	opposition	-8722 Apr 06 j 14:12	10° $\mathring{O}$ 40'28	2°29'38
max. Earth dist.	-8729 Sep 20 j 16:21	26° $\mathring{O}$ 27'05	31.25979 AU	min. Earth dist.	-8722 Apr 06 j 02:35	10° $\mathring{O}$ 41'15	29.20883 AU
morning rise	-8729 Oct 05 j 12:13	27° $\mathring{O}$ 00'32		direct	-8722 Jun 25 j 04:46	9° $\mathring{O}$ 17'28	
retrograde	-8728 Jan 02 j 18:51	28° $\mathring{O}$ 56'33		evening set	-8722 Sep 20 j 02:52	11° $\mathring{O}$ 10'35	
opposition	-8728 Mar 23 j 07:47	27° $\mathring{O}$ 33'22	2°41'06				
min. Earth dist.	-8728 Mar 23 j 01:59	27° $\mathring{O}$ 33'45	29.25928 AU	conjunction	-8722 Oct 05 j 03:59	11° $\mathring{O}$ 44'31	2°18'49
direct	-8728 Jun 11 j 05:44	26° $\mathring{O}$ 10'21		minimum elong	-8722 Oct 05 j 04:00	11° $\mathring{O}$ 44'31	2°19'15
evening set	-8728 Sep 06 j 21:13	28° $\mathring{O}$ 04'09		max. Earth dist.	-8722 Oct 05 j 14:59	11° $\mathring{O}$ 45'34	31.20311 AU
				morning rise	-8722 Oct 20 j 07:08	12° $\mathring{O}$ 18'38	
conjunction	-8728 Sep 21 j 20:55	28° $\mathring{O}$ 37'57	2°30'10	retrograde	-8721 Jan 18 j 04:16	14° $\mathring{O}$ 15'20	
minimum elong	-8728 Sep 21 j 20:55	28° $\mathring{O}$ 37'57	2°30'40	opposition	-8721 Apr 09 j 03:03	12° $\mathring{O}$ 51'29	2°26'57
max. Earth dist.	-8728 Sep 22 j 03:14	28° $\mathring{O}$ 38'33	31.25411 AU	min. Earth dist.	-8721 Apr 08 j 15:11	12° $\mathring{O}$ 52'17	29.20138 AU
morning rise	-8728 Oct 06 j 21:30	29° $\mathring{O}$ 11'52		direct	-8721 Jun 27 j 14:14	11° $\mathring{O}$ 28'31	
	-8728 Oct 30 j 00:41	0° $\mathring{O}$		evening set	-8721 Sep 22 j 11:41	13° $\mathring{O}$ 21'33	
retrograde	-8727 Jan 04 j 05:46	1° $\mathring{O}$ 08'00					
	-8727 Mar 16 j 09:06	30° $\mathring{R}$ $\mathring{O}$		conjunction	-8721 Oct 07 j 13:21	13° $\mathring{O}$ 55'31	2°16'12
opposition	-8727 Mar 25 j 21:00	29° $\mathring{O}$ 44'45	2°39'45	minimum elong	-8721 Oct 07 j 13:22	13° $\mathring{O}$ 55'31	2°16'39
min. Earth dist.	-8727 Mar 25 j 14:38	29° $\mathring{O}$ 45'10	29.25278 AU	max. Earth dist.	-8721 Oct 08 j 02:23	13° $\mathring{O}$ 56'45	31.19622 AU
direct	-8727 Jun 13 j 18:02	28° $\mathring{O}$ 21'45		morning rise	-8721 Oct 22 j 16:50	14° $\mathring{O}$ 29'40	
	-8727 Sep 02 j 04:31	0° $\mathring{O}$			-8721 Nov 05 j 20:41	15° $\mathring{O}$	
evening set	-8727 Sep 09 j 06:21	0° $\mathring{O}$ 15'27		retrograde	-8720 Jan 20 j 15:32	16° $\mathring{O}$ 26'29	
				opposition	-8720 Apr 10 j 15:54	15° $\mathring{O}$ 02'35	2°24'03
conjunction	-8727 Sep 24 j 06:06	0° $\mathring{O}$ 49'16	2°28'47	min. Earth dist.	-8720 Apr 10 j 02:22	15° $\mathring{O}$ 03'30	29.19483 AU

Attention, astronomical year style is used: The year -8720 in astronomical counting style is the year 8721 BCE in historical counting style.

	-8720 Apr 12 j 06:04	15° $\kappa$ $\delta$		max. Earth dist.	-8714 Oct 23 j 02:50	29° $\delta$ 19'10	31.14952 AU
direct	-8720 Jun 29 j 01:16	13° $\delta$ 39'41		morning rise	-8714 Nov 06 j 16:35	29° $\delta$ 51'59	
	-8720 Sep 08 j 12:40	15° $\delta$			-8714 Nov 10 j 08:08	0° $\eta$	
evening set	-8720 Sep 23 j 20:36	15° $\delta$ 32'39		retrograde	-8713 Feb 05 j 09:56	1° $\eta$ 49'36	
				opposition	-8713 Apr 27 j 10:15	0° $\eta$ 25'23	1°58'04
conjunction	-8720 Oct 08 j 22:27	16° $\delta$ 06'39	2°13'23	min. Earth dist.	-8713 Apr 26 j 15:53	0° $\eta$ 26'38	29.14569 AU
minimum elong	-8720 Oct 08 j 22:28	16° $\delta$ 06'39	2°13'49		-8713 May 13 j 05:29	30° $\kappa$ $\delta$	
max. Earth dist.	-8720 Oct 09 j 11:32	16° $\delta$ 07'53	31.19020 AU	direct	-8713 Jul 15 j 06:21	29° $\delta$ 02'45	
morning rise	-8720 Oct 24 j 02:37	16° $\delta$ 40'51			-8713 Sep 12 j 10:39	0° $\eta$	
retrograde	-8719 Jan 22 j 05:12	18° $\delta$ 37'49		evening set	-8713 Oct 09 j 13:38	0° $\eta$ 55'17	
opposition	-8719 Apr 13 j 04:54	17° $\delta$ 13'52	2°20'57				
min. Earth dist.	-8719 Apr 12 j 14:31	17° $\delta$ 14'51	29.18913 AU	conjunction	-8713 Oct 24 j 18:55	1° $\eta$ 29'34	1°48'27
direct	-8719 Jul 01 j 09:44	15° $\delta$ 51'01		minimum elong	-8713 Oct 24 j 18:56	1° $\eta$ 29'34	1°48'48
evening set	-8719 Sep 26 j 05:32	17° $\delta$ 43'57		max. Earth dist.	-8713 Oct 25 j 12:33	1° $\eta$ 31'14	31.13919 AU
				morning rise	-8713 Nov 09 j 03:20	2° $\eta$ 04'09	
conjunction	-8719 Oct 11 j 07:59	18° $\delta$ 17'59	2°10'22	retrograde	-8712 Feb 07 j 21:11	4° $\eta$ 01'50	
minimum elong	-8719 Oct 11 j 08:00	18° $\delta$ 17'59	2°10'49	opposition	-8712 Apr 28 j 23:08	2° $\eta$ 37'30	1°53'38
max. Earth dist.	-8719 Oct 11 j 23:02	18° $\delta$ 19'24	31.18473 AU	min. Earth dist.	-8712 Apr 28 j 05:07	2° $\eta$ 38'43	29.13503 AU
morning rise	-8719 Oct 26 j 12:33	18° $\delta$ 52'14		direct	-8712 Jul 16 j 16:19	1° $\eta$ 14'51	
retrograde	-8718 Jan 24 j 16:54	20° $\delta$ 49'20		evening set	-8712 Oct 10 j 22:52	3° $\eta$ 07'16	
opposition	-8718 Apr 15 j 17:47	19° $\delta$ 25'22	2°17'37				
min. Earth dist.	-8718 Apr 15 j 02:43	19° $\delta$ 26'23	29.18367 AU	conjunction	-8712 Oct 26 j 04:54	3° $\eta$ 41'36	1°44'13
direct	-8718 Jul 03 j 20:59	18° $\delta$ 02'35		minimum elong	-8712 Oct 26 j 04:55	3° $\eta$ 41'36	1°44'31
evening set	-8718 Sep 28 j 14:42	19° $\delta$ 55'28		max. Earth dist.	-8712 Oct 27 j 00:18	3° $\eta$ 43'26	31.12844 AU
				morning rise	-8712 Nov 10 j 13:50	4° $\eta$ 16'13	
conjunction	-8718 Oct 13 j 17:28	20° $\delta$ 29'32	2°07'10	retrograde	-8711 Feb 09 j 07:39	6° $\eta$ 13'58	
minimum elong	-8718 Oct 13 j 17:29	20° $\delta$ 29'32	2°07'34	opposition	-8711 May 01 j 11:53	4° $\eta$ 49'32	1°49'01
max. Earth dist.	-8718 Oct 14 j 08:30	20° $\delta$ 30'58	31.17939 AU	min. Earth dist.	-8711 Apr 30 j 16:34	4° $\eta$ 50'51	29.12417 AU
morning rise	-8718 Oct 28 j 22:44	21° $\delta$ 03'51		direct	-8711 Jul 19 j 03:57	3° $\eta$ 26'51	
retrograde	-8717 Jan 27 j 07:49	23° $\delta$ 01'04		evening set	-8711 Oct 13 j 08:28	5° $\eta$ 19'11	
opposition	-8717 Apr 18 j 06:41	21° $\delta$ 37'05	2°14'06				
min. Earth dist.	-8717 Apr 17 j 14:27	21° $\delta$ 38'11	29.17810 AU	conjunction	-8711 Oct 28 j 14:55	5° $\eta$ 53'33	1°39'50
direct	-8717 Jul 06 j 07:44	20° $\delta$ 14'21		minimum elong	-8711 Oct 28 j 14:56	5° $\eta$ 53'33	1°40'08
evening set	-8717 Sep 30 j 23:54	22° $\delta$ 07'11		max. Earth dist.	-8711 Oct 29 j 10:02	5° $\eta$ 55'21	31.11787 AU
				morning rise	-8711 Nov 13 j 00:42	6° $\eta$ 28'13	
conjunction	-8717 Oct 16 j 03:10	22° $\delta$ 41'19	2°03'47	retrograde	-8710 Feb 11 j 20:51	8° $\eta$ 26'02	
minimum elong	-8717 Oct 16 j 03:11	22° $\delta$ 41'19	2°04'10	min. Earth dist.	-8710 May 03 j 04:41	7° $\eta$ 02'50	29.11395 AU
max. Earth dist.	-8717 Oct 16 j 19:29	22° $\delta$ 42'51	31.17345 AU	opposition	-8710 May 04 j 00:31	7° $\eta$ 01'29	1°44'15
morning rise	-8717 Oct 31 j 08:55	23° $\delta$ 15'40		direct	-8710 Jul 21 j 12:41	5° $\eta$ 38'47	
retrograde	-8716 Jan 29 j 20:14	25° $\delta$ 13'01		evening set	-8710 Oct 15 j 17:57	7° $\eta$ 31'02	
opposition	-8716 Apr 19 j 19:37	23° $\delta$ 49'00	2°10'22				
min. Earth dist.	-8716 Apr 19 j 03:39	23° $\delta$ 50'04	29.17171 AU	conjunction	-8710 Oct 31 j 01:09	8° $\eta$ 05'27	1°35'18
direct	-8716 Jul 07 j 18:54	22° $\delta$ 26'20		minimum elong	-8710 Oct 31 j 01:09	8° $\eta$ 05'27	1°35'34
evening set	-8716 Oct 02 j 09:15	24° $\delta$ 19'06		max. Earth dist.	-8710 Oct 31 j 22:04	8° $\eta$ 07'25	31.10803 AU
				morning rise	-8710 Nov 15 j 11:29	8° $\eta$ 40'11	
conjunction	-8716 Oct 17 j 13:00	24° $\delta$ 53'16	2°00'12	retrograde	-8709 Feb 14 j 08:05	10° $\eta$ 38'03	
minimum elong	-8716 Oct 17 j 13:00	24° $\delta$ 53'16	2°00'34	opposition	-8709 May 06 j 13:07	9° $\eta$ 13'25	1°39'20
max. Earth dist.	-8716 Oct 18 j 05:36	24° $\delta$ 54'50	31.16674 AU	min. Earth dist.	-8709 May 05 j 16:33	9° $\eta$ 14'50	29.10449 AU
morning rise	-8716 Nov 01 j 19:21	25° $\delta$ 27'41		direct	-8709 Jul 24 j 00:11	7° $\eta$ 50'43	
retrograde	-8715 Jan 31 j 09:22	27° $\delta$ 25'08		evening set	-8709 Oct 18 j 03:34	9° $\eta$ 42'54	
opposition	-8715 Apr 22 j 08:32	26° $\delta$ 01'04	2°06'27				
min. Earth dist.	-8715 Apr 21 j 15:02	26° $\delta$ 02'15	29.16434 AU	conjunction	-8709 Nov 02 j 11:14	10° $\eta$ 17'21	1°30'37
direct	-8715 Jul 10 j 06:24	24° $\delta$ 38'26		minimum elong	-8709 Nov 02 j 11:15	10° $\eta$ 17'21	1°30'53
evening set	-8715 Oct 04 j 18:37	26° $\delta$ 31'08		max. Earth dist.	-8709 Nov 03 j 08:14	10° $\eta$ 19'20	31.09923 AU
				morning rise	-8709 Nov 17 j 22:22	10° $\eta$ 52'08	
conjunction	-8715 Oct 19 j 22:50	27° $\delta$ 05'20	1°56'27	retrograde	-8708 Feb 16 j 22:23	12° $\eta$ 50'05	
minimum elong	-8715 Oct 19 j 22:51	27° $\delta$ 05'20	1°56'49	min. Earth dist.	-8708 May 07 j 03:49	11° $\eta$ 26'53	29.09619 AU
max. Earth dist.	-8715 Oct 20 j 15:45	27° $\delta$ 06'56	31.15872 AU	opposition	-8708 May 08 j 01:38	11° $\eta$ 25'24	1°34'15
morning rise	-8715 Nov 04 j 05:54	27° $\delta$ 39'49		direct	-8708 Jul 25 j 10:07	10° $\eta$ 02'41	
retrograde	-8714 Feb 02 j 21:24	29° $\delta$ 37'22		evening set	-8708 Oct 19 j 13:13	11° $\eta$ 54'50	
opposition	-8714 Apr 24 j 21:36	28° $\delta$ 13'13	2°02'21				
min. Earth dist.	-8714 Apr 24 j 04:40	28° $\delta$ 14'22	29.15563 AU	conjunction	-8708 Nov 03 j 21:33	12° $\eta$ 29'20	1°25'49
direct	-8714 Jul 12 j 18:04	26° $\delta$ 50'36		minimum elong	-8708 Nov 03 j 21:34	12° $\eta$ 29'21	1°26'02
evening set	-8714 Oct 07 j 04:06	28° $\delta$ 43'13		max. Earth dist.	-8708 Nov 04 j 19:55	12° $\eta$ 31'27	31.09145 AU
				morning rise	-8708 Nov 19 j 09:20	13° $\eta$ 04'11	
conjunction	-8714 Oct 22 j 08:59	29° $\delta$ 17'28	1°52'32	retrograde	-8707 Feb 18 j 10:28	15° $\eta$ 02'12	
minimum elong	-8714 Oct 22 j 09:00	29° $\delta$ 17'28	1°52'52	opposition	-8707 May 10 j 14:16	13° $\eta$ 37'28	1°29'02

Attention, astronomical year style is used: The year -8707 in astronomical counting style is the year 8708 BCE in historical counting style.

min. Earth dist.	-8707 May 09 j 16:30	13° $\mathring{M}$ 38'58	29.08884 AU	morning rise	-8701 Dec 05 j 18:19	28° $\mathring{M}$ 33'10	
direct	-8707 Jul 27 j 20:23	12° $\mathring{M}$ 14'48			-8700 Jan 21 j 10:30	0° $\mathring{A}$	
evening set	-8707 Oct 21 j 22:55	14° $\mathring{M}$ 06'54		retrograde	-8700 Mar 06 j 04:25	0° $\mathring{A}$ 31'42	
					-8700 Apr 21 j 08:29	30° $\mathring{R}$ $\mathring{M}$	
conjunction	-8707 Nov 06 j 07:56	14° $\mathring{M}$ 41'27	1°20'52	min. Earth dist.	-8700 May 25 j 06:06	29° $\mathring{M}$ 08'21	29.03188 AU
minimum elong	-8707 Nov 06 j 07:57	14° $\mathring{M}$ 41'27	1°21'05	opposition	-8700 May 26 j 05:44	29° $\mathring{M}$ 06'44	0°49'06
max. Earth dist.	-8707 Nov 07 j 06:53	14° $\mathring{M}$ 43'37	31.08467 AU	direct	-8700 Aug 12 j 01:06	27° $\mathring{M}$ 44'08	
morning rise	-8707 Nov 21 j 20:28	15° $\mathring{M}$ 16'21		evening set	-8700 Nov 05 j 23:22	29° $\mathring{M}$ 36'04	
retrograde	-8706 Feb 21 j 00:44	17° $\mathring{M}$ 14'27			-8700 Nov 16 j 16:16	0° $\mathring{A}$	
min. Earth dist.	-8706 May 12 j 03:28	15° $\mathring{M}$ 51'18	29.08222 AU				
opposition	-8706 May 13 j 02:47	15° $\mathring{M}$ 49'42	1°23'40	conjunction	-8700 Nov 21 j 12:50	0° $\mathring{A}$ 10'59	0°43'11
direct	-8706 Jul 30 j 07:43	14° $\mathring{M}$ 27'03		minimum elong	-8700 Nov 21 j 12:51	0° $\mathring{A}$ 10'59	0°43'15
evening set	-8706 Oct 24 j 08:57	16° $\mathring{M}$ 19'08		max. Earth dist.	-8700 Nov 22 j 13:12	0° $\mathring{A}$ 13'17	31.02576 AU
				morning rise	-8700 Dec 07 j 06:22	0° $\mathring{A}$ 46'17	
conjunction	-8706 Nov 08 j 18:31	16° $\mathring{M}$ 53'45	1°15'47	retrograde	-8699 Mar 08 j 18:23	2° $\mathring{A}$ 44'51	
minimum elong	-8706 Nov 08 j 18:31	16° $\mathring{M}$ 53'45	1°15'58	opposition	-8699 May 28 j 18:00	1° $\mathring{A}$ 19'48	0°43'02
max. Earth dist.	-8706 Nov 09 j 17:44	16° $\mathring{M}$ 55'56	31.07819 AU	min. Earth dist.	-8699 May 27 j 17:48	1° $\mathring{A}$ 21'28	29.02044 AU
morning rise	-8706 Nov 24 j 07:48	17° $\mathring{M}$ 28'43			-8699 Aug 01 j 14:46	30° $\mathring{R}$ $\mathring{M}$	
retrograde	-8705 Feb 23 j 13:58	19° $\mathring{M}$ 26'54		direct	-8699 Aug 14 j 11:13	29° $\mathring{M}$ 57'08	
opposition	-8705 May 15 j 15:16	18° $\mathring{M}$ 02'07	1°18'11		-8699 Aug 27 j 07:07	0° $\mathring{A}$	
min. Earth dist.	-8705 May 14 j 16:35	18° $\mathring{M}$ 03'40	29.07579 AU	evening set	-8699 Nov 08 j 10:03	1° $\mathring{A}$ 49'04	
direct	-8705 Aug 01 j 18:44	16° $\mathring{M}$ 39'31					
evening set	-8705 Oct 26 j 18:59	18° $\mathring{M}$ 31'35		conjunction	-8699 Nov 24 j 00:12	2° $\mathring{A}$ 24'02	0°37'29
				minimum elong	-8699 Nov 24 j 00:12	2° $\mathring{A}$ 24'02	0°37'32
conjunction	-8705 Nov 11 j 05:18	19° $\mathring{M}$ 06'15	1°10'36	max. Earth dist.	-8699 Nov 25 j 01:23	2° $\mathring{A}$ 26'24	31.01423 AU
minimum elong	-8705 Nov 11 j 05:19	19° $\mathring{M}$ 06'15	1°10'46	morning rise	-8699 Dec 09 j 18:24	2° $\mathring{A}$ 59'23	
max. Earth dist.	-8705 Nov 12 j 05:34	19° $\mathring{M}$ 08'32	31.07180 AU	retrograde	-8698 Mar 11 j 06:02	4° $\mathring{A}$ 57'58	
morning rise	-8705 Nov 26 j 19:11	19° $\mathring{M}$ 41'16		min. Earth dist.	-8698 May 30 j 06:35	3° $\mathring{A}$ 34'28	29.00901 AU
retrograde	-8704 Feb 26 j 03:34	21° $\mathring{M}$ 39'32		opposition	-8698 May 31 j 06:15	3° $\mathring{A}$ 32'50	0°36'54
min. Earth dist.	-8704 May 16 j 03:46	20° $\mathring{M}$ 16'24	29.06906 AU	direct	-8698 Aug 16 j 21:21	2° $\mathring{A}$ 10'08	
opposition	-8704 May 17 j 03:44	20° $\mathring{M}$ 14'45	1°12'34	evening set	-8698 Nov 10 j 20:50	4° $\mathring{A}$ 02'02	
direct	-8704 Aug 03 j 06:50	18° $\mathring{M}$ 52'11					
evening set	-8704 Oct 28 j 05:13	20° $\mathring{M}$ 44'14		conjunction	-8698 Nov 26 j 11:39	4° $\mathring{A}$ 37'02	0°31'44
				minimum elong	-8698 Nov 26 j 11:39	4° $\mathring{A}$ 37'02	0°31'44
conjunction	-8704 Nov 12 j 16:01	21° $\mathring{M}$ 18'57	1°05'18	max. Earth dist.	-8698 Nov 27 j 13:03	4° $\mathring{A}$ 39'26	31.00318 AU
minimum elong	-8704 Nov 12 j 16:01	21° $\mathring{M}$ 18'57	1°05'26	morning rise	-8698 Dec 12 j 06:28	5° $\mathring{A}$ 12'26	
max. Earth dist.	-8704 Nov 13 j 15:46	21° $\mathring{M}$ 21'12	31.06478 AU	retrograde	-8697 Mar 13 j 20:18	7° $\mathring{A}$ 11'03	
morning rise	-8704 Nov 28 j 06:45	21° $\mathring{M}$ 54'02		opposition	-8697 Jun 02 j 18:09	5° $\mathring{A}$ 45'51	0°30'43
retrograde	-8703 Feb 27 j 15:57	23° $\mathring{M}$ 52'24		min. Earth dist.	-8697 Jun 01 j 17:16	5° $\mathring{A}$ 47'34	28.99833 AU
opposition	-8703 May 19 j 16:26	22° $\mathring{M}$ 27'35	1°06'51	direct	-8697 Aug 19 j 09:03	4° $\mathring{A}$ 23'06	
min. Earth dist.	-8703 May 18 j 17:11	22° $\mathring{M}$ 29'11	29.06162 AU	evening set	-8697 Nov 13 j 07:45	6° $\mathring{A}$ 15'00	
direct	-8703 Aug 05 j 16:37	21° $\mathring{M}$ 05'02					
evening set	-8703 Oct 30 j 15:36	22° $\mathring{M}$ 57'04		conjunction	-8697 Nov 28 j 23:05	6° $\mathring{A}$ 50'03	0°25'55
				minimum elong	-8697 Nov 28 j 23:05	6° $\mathring{A}$ 50'03	0°25'56
conjunction	-8703 Nov 15 j 03:13	23° $\mathring{M}$ 31'50	0°59'53	max. Earth dist.	-8697 Nov 30 j 00:35	6° $\mathring{A}$ 52'27	30.99292 AU
minimum elong	-8703 Nov 15 j 03:14	23° $\mathring{M}$ 31'50	1°00'02	morning rise	-8697 Dec 14 j 18:38	7° $\mathring{A}$ 25'31	
max. Earth dist.	-8703 Nov 16 j 04:09	23° $\mathring{M}$ 34'11	31.05680 AU	retrograde	-8696 Mar 15 j 09:53	9° $\mathring{A}$ 24'10	
morning rise	-8703 Nov 30 j 18:31	24° $\mathring{M}$ 06'59		min. Earth dist.	-8696 Jun 03 j 06:01	8° $\mathring{A}$ 00'34	28.98867 AU
retrograde	-8702 Mar 02 j 03:37	26° $\mathring{M}$ 05'25		opposition	-8696 Jun 04 j 06:19	7° $\mathring{A}$ 58'53	0°24'29
min. Earth dist.	-8702 May 21 j 04:59	24° $\mathring{M}$ 42'12	29.05291 AU	direct	-8696 Aug 20 j 20:21	6° $\mathring{A}$ 36'08	
opposition	-8702 May 22 j 04:49	24° $\mathring{M}$ 40'34	1°01'01	evening set	-8696 Nov 14 j 18:30	8° $\mathring{A}$ 28'01	
direct	-8702 Aug 08 j 04:17	23° $\mathring{M}$ 18'01					
evening set	-8702 Nov 02 j 02:15	25° $\mathring{M}$ 10'02		conjunction	-8696 Nov 30 j 10:37	9° $\mathring{A}$ 03'08	0°20'04
				minimum elong	-8696 Nov 30 j 10:37	9° $\mathring{A}$ 03'08	0°20'03
conjunction	-8702 Nov 17 j 14:23	25° $\mathring{M}$ 44'51	0°54'24	max. Earth dist.	-8696 Dec 01 j 13:12	9° $\mathring{A}$ 05'38	30.98393 AU
minimum elong	-8702 Nov 17 j 14:24	25° $\mathring{M}$ 44'51	0°54'31	morning rise	-8696 Dec 16 j 06:42	9° $\mathring{A}$ 38'38	
max. Earth dist.	-8702 Nov 18 j 14:12	25° $\mathring{M}$ 47'06	31.04755 AU	retrograde	-8695 Mar 17 j 23:36	11° $\mathring{A}$ 37'19	
morning rise	-8702 Dec 03 j 06:34	26° $\mathring{M}$ 20'03		opposition	-8695 Jun 06 j 18:18	10° $\mathring{A}$ 12'01	0°18'13
retrograde	-8701 Mar 04 j 17:23	28° $\mathring{M}$ 18'33		min. Earth dist.	-8695 Jun 05 j 16:40	10° $\mathring{A}$ 13'48	28.98017 AU
opposition	-8701 May 24 j 17:21	26° $\mathring{M}$ 53'38	0°55'06	direct	-8695 Aug 23 j 08:45	8° $\mathring{A}$ 49'14	
min. Earth dist.	-8701 May 23 j 17:45	26° $\mathring{M}$ 55'15	29.04299 AU	evening set	-8695 Nov 17 j 05:42	10° $\mathring{A}$ 41'09	
direct	-8701 Aug 10 j 13:26	25° $\mathring{M}$ 31'04					
evening set	-8701 Nov 04 j 12:43	27° $\mathring{M}$ 23'03		conjunction	-8695 Dec 02 j 22:17	11° $\mathring{A}$ 16'18	0°14'12
				minimum elong	-8695 Dec 02 j 22:17	11° $\mathring{A}$ 16'19	0°14'10
conjunction	-8701 Nov 20 j 01:36	27° $\mathring{M}$ 57'55	0°48'50	behind sun begin	-8695 Dec 02 j 19:09	11° $\mathring{A}$ 16'02	
minimum elong	-8701 Nov 20 j 01:37	27° $\mathring{M}$ 57'55	0°48'56	behind sun end	-8695 Dec 03 j 01:25	11° $\mathring{A}$ 16'35	
max. Earth dist.	-8701 Nov 21 j 02:30	28° $\mathring{M}$ 00'16	31.03701 AU	max. Earth dist.	-8695 Dec 04 j 00:21	11° $\mathring{A}$ 18'46	30.97598 AU



Attention, astronomical year style is used: The year -8695 in astronomical counting style is the year 8696 BCE in historical counting style.

morning rise	-8695 Dec 18 j 19:11	11° <u>♂</u> 51'52		conjunction	-8689 Dec 16 j 23:46	24° <u>♂</u> 38'37	-0°21'26
retrograde	-8694 Mar 20 j 12:21	13° <u>♂</u> 50'36		minimum elong	-8689 Dec 16 j 23:46	24° <u>♂</u> 38'37	0°21'36
min. Earth dist.	-8694 Jun 08 j 05:21	12° <u>♂</u> 27'00	28.97276 AU	max. Earth dist.	-8689 Dec 18 j 01:40	24° <u>♂</u> 41'02	30.93246 AU
opposition	-8694 Jun 09 j 06:16	12° <u>♂</u> 25'16	0°11'54	morning rise	-8688 Jan 01 j 23:57	25° <u>♂</u> 14'25	
direct	-8694 Aug 25 j 18:31	11° <u>♂</u> 02'29		retrograde	-8688 Apr 02 j 17:36	27° <u>♂</u> 13'19	
evening set	-8694 Nov 19 j 16:53	12° <u>♂</u> 54'26		min. Earth dist.	-8688 Jun 21 j 05:09	25° <u>♂</u> 49'36	28.92807 AU
				opposition	-8688 Jun 22 j 05:36	25° <u>♂</u> 47'53	-0°26'08
conjunction	-8694 Dec 05 j 10:14	13° <u>♂</u> 29'38	0°08'18	direct	-8688 Sep 07 j 11:23	24° <u>♂</u> 24'57	
minimum elong	-8694 Dec 05 j 10:14	13° <u>♂</u> 29'38	0°08'14	evening set	-8688 Dec 02 j 15:44	26° <u>♂</u> 17'07	
behind sun begin	-8694 Dec 05 j 04:29	13° <u>♂</u> 29'07					
behind sun end	-8694 Dec 05 j 15:59	13° <u>♂</u> 30'09		conjunction	-8688 Dec 18 j 12:18	26° <u>♂</u> 52'34	-0°27'18
max. Earth dist.	-8694 Dec 06 j 13:36	13° <u>♂</u> 32'13	30.96898 AU	minimum elong	-8688 Dec 18 j 12:18	26° <u>♂</u> 52'34	0°27'30
morning rise	-8694 Dec 21 j 07:35	14° <u>♂</u> 05'15		max. Earth dist.	-8688 Dec 19 j 13:36	26° <u>♂</u> 54'56	30.92280 AU
retrograde	-8693 Mar 23 j 01:15	16° <u>♂</u> 04'00		morning rise	-8687 Jan 03 j 13:05	27° <u>♂</u> 28'25	
opposition	-8693 Jun 11 j 18:10	14° <u>♂</u> 38'41	0°05'34	retrograde	-8687 Apr 05 j 06:25	29° <u>♂</u> 27'17	
min. Earth dist.	-8693 Jun 10 j 16:35	14° <u>♂</u> 40'28	28.96599 AU	opposition	-8687 Jun 24 j 17:26	28° <u>♂</u> 01'48	-0°32'23
direct	-8693 Aug 28 j 06:42	13° <u>♂</u> 15'55		min. Earth dist.	-8687 Jun 23 j 18:19	28° <u>♂</u> 03'25	28.91823 AU
evening set	-8693 Nov 22 j 04:15	15° <u>♂</u> 07'53		direct	-8687 Sep 09 j 22:39	26° <u>♂</u> 38'47	
				evening set	-8687 Dec 05 j 03:55	28° <u>♂</u> 30'59	
conjunction	-8693 Dec 07 j 21:59	15° <u>♂</u> 43'08	0°02'23				
minimum elong	-8693 Dec 07 j 22:00	15° <u>♂</u> 43'08	0°02'18	conjunction	-8687 Dec 21 j 01:08	29° <u>♂</u> 06'28	-0°33'08
behind sun begin	-8693 Dec 07 j 15:30	15° <u>♂</u> 42'33		minimum elong	-8687 Dec 21 j 01:08	29° <u>♂</u> 06'28	0°33'20
behind sun end	-8693 Dec 08 j 04:30	15° <u>♂</u> 43'43		max. Earth dist.	-8687 Dec 22 j 02:47	29° <u>♂</u> 08'52	30.91292 AU
max. Earth dist.	-8693 Dec 09 j 00:25	15° <u>♂</u> 45'37	30.96247 AU	morning rise	-8686 Jan 06 j 02:17	29° <u>♂</u> 42'20	
morning rise	-8693 Dec 23 j 20:06	16° <u>♂</u> 18'48			-8686 Jan 14 j 06:47	0° <u>♂</u>	
retrograde	-8692 Mar 24 j 15:04	18° <u>♂</u> 17'37		retrograde	-8686 Apr 07 j 19:56	1° <u>♂</u> 41'10	
desc. node	-8692 Apr 29 j 09:53	17° <u>♂</u> 57'45		min. Earth dist.	-8686 Jun 26 j 05:01	0° <u>♂</u> 17'18	28.90840 AU
min. Earth dist.	-8692 Jun 12 j 04:54	16° <u>♂</u> 54'02	28.95963 AU	opposition	-8686 Jun 27 j 04:51	0° <u>♂</u> 15'38	-0°38'36
opposition	-8692 Jun 13 j 06:10	16° <u>♂</u> 52'17	-0°00'47		-8686 Jul 06 j 13:23	30° <u>♂</u>	
direct	-8692 Aug 29 j 16:14	15° <u>♂</u> 29'31		direct	-8686 Sep 12 j 11:21	28° <u>♂</u> 52'32	
evening set	-8692 Nov 23 j 15:48	17° <u>♂</u> 21'32			-8686 Nov 16 j 00:17	0° <u>♂</u>	
				evening set	-8686 Dec 07 j 16:17	0° <u>♂</u> 44'46	
conjunction	-8692 Dec 09 j 10:16	17° <u>♂</u> 56'49	-0°03'42				
minimum elong	-8692 Dec 09 j 10:15	17° <u>♂</u> 56'49	0°03'49	conjunction	-8686 Dec 23 j 13:50	1° <u>♂</u> 20'17	-0°38'55
behind sun begin	-8692 Dec 09 j 03:49	17° <u>♂</u> 56'15		minimum elong	-8686 Dec 23 j 13:49	1° <u>♂</u> 20'17	0°39'09
behind sun end	-8692 Dec 09 j 16:42	17° <u>♂</u> 57'24		max. Earth dist.	-8686 Dec 24 j 14:31	1° <u>♂</u> 22'36	30.90327 AU
max. Earth dist.	-8692 Dec 10 j 13:35	17° <u>♂</u> 59'23	30.95600 AU	morning rise	-8685 Jan 08 j 15:34	1° <u>♂</u> 56'11	
morning rise	-8692 Dec 25 j 08:47	18° <u>♂</u> 32'32		retrograde	-8685 Apr 10 j 09:13	3° <u>♂</u> 55'00	
retrograde	-8691 Mar 27 j 02:03	20° <u>♂</u> 31'23		opposition	-8685 Jun 29 j 16:28	2° <u>♂</u> 29'25	-0°44'45
opposition	-8691 Jun 15 j 18:02	19° <u>♂</u> 06'03	-0°07'09	min. Earth dist.	-8685 Jun 28 j 17:39	2° <u>♂</u> 31'01	28.89925 AU
min. Earth dist.	-8691 Jun 14 j 17:03	19° <u>♂</u> 07'48	28.95298 AU	direct	-8685 Sep 14 j 21:49	1° <u>♂</u> 06'15	
direct	-8691 Sep 01 j 03:35	17° <u>♂</u> 43'16		evening set	-8685 Dec 10 j 04:24	2° <u>♂</u> 58'31	
evening set	-8691 Nov 26 j 03:39	19° <u>♂</u> 35'20					
				conjunction	-8685 Dec 26 j 02:34	3° <u>♂</u> 34'04	-0°44'38
conjunction	-8691 Dec 11 j 22:37	20° <u>♂</u> 10'40	-0°09'37	minimum elong	-8685 Dec 26 j 02:33	3° <u>♂</u> 34'04	0°44'53
minimum elong	-8691 Dec 11 j 22:37	20° <u>♂</u> 10'40	0°09'45	max. Earth dist.	-8685 Dec 27 j 04:21	3° <u>♂</u> 36'29	30.89454 AU
behind sun begin	-8691 Dec 11 j 17:17	20° <u>♂</u> 10'11		morning rise	-8684 Jan 11 j 04:33	4° <u>♂</u> 10'00	
behind sun end	-8691 Dec 12 j 03:57	20° <u>♂</u> 11'09		retrograde	-8684 Apr 11 j 22:32	6° <u>♂</u> 08'48	
max. Earth dist.	-8691 Dec 13 j 00:54	20° <u>♂</u> 13'08	30.94914 AU	min. Earth dist.	-8684 Jun 30 j 04:32	4° <u>♂</u> 44'49	28.89112 AU
morning rise	-8691 Dec 27 j 21:49	20° <u>♂</u> 46'25		opposition	-8684 Jul 01 j 03:54	4° <u>♂</u> 43'11	-0°50'50
retrograde	-8690 Mar 29 j 15:49	22° <u>♂</u> 45'18		direct	-8684 Sep 16 j 10:41	3° <u>♂</u> 19'57	
min. Earth dist.	-8690 Jun 17 j 04:55	21° <u>♂</u> 21'42	28.94571 AU	evening set	-8684 Dec 11 j 16:55	5° <u>♂</u> 12'18	
opposition	-8690 Jun 18 j 05:57	21° <u>♂</u> 19'57	-0°13'30				
direct	-8690 Sep 03 j 13:24	19° <u>♂</u> 57'08		conjunction	-8684 Dec 27 j 15:23	5° <u>♂</u> 47'52	-0°50'17
evening set	-8690 Nov 28 j 15:39	21° <u>♂</u> 49'15		minimum elong	-8684 Dec 27 j 15:22	5° <u>♂</u> 47'52	0°50'33
				max. Earth dist.	-8684 Dec 28 j 15:59	5° <u>♂</u> 50'11	30.88710 AU
conjunction	-8690 Dec 14 j 11:10	22° <u>♂</u> 24'37	-0°15'32	morning rise	-8683 Jan 12 j 17:56	6° <u>♂</u> 23'50	
minimum elong	-8690 Dec 14 j 11:10	22° <u>♂</u> 24'37	0°15'41	retrograde	-8683 Apr 14 j 11:59	8° <u>♂</u> 22'37	
behind sun begin	-8690 Dec 14 j 09:56	22° <u>♂</u> 24'31		opposition	-8683 Jul 03 j 15:16	6° <u>♂</u> 57'00	-0°56'50
behind sun end	-8690 Dec 14 j 12:24	22° <u>♂</u> 24'44		min. Earth dist.	-8683 Jul 02 j 16:18	6° <u>♂</u> 58'36	28.88451 AU
max. Earth dist.	-8690 Dec 15 j 13:34	22° <u>♂</u> 27'06	30.94123 AU	direct	-8683 Sep 18 j 20:45	5° <u>♂</u> 33'43	
morning rise	-8690 Dec 30 j 10:50	23° <u>♂</u> 00'24		evening set	-8683 Dec 14 j 05:25	7° <u>♂</u> 26'09	
retrograde	-8689 Apr 01 j 03:38	24° <u>♂</u> 59'18					
opposition	-8689 Jun 20 j 17:49	23° <u>♂</u> 33'55	-0°19'49	conjunction	-8683 Dec 30 j 04:29	8° <u>♂</u> 01'45	-0°55'52
min. Earth dist.	-8689 Jun 19 j 17:55	23° <u>♂</u> 35'35	28.93731 AU	minimum elong	-8683 Dec 30 j 04:28	8° <u>♂</u> 01'45	0°56'09
direct	-8689 Sep 05 j 23:22	22° <u>♂</u> 11'03		max. Earth dist.	-8683 Dec 31 j 05:59	8° <u>♂</u> 04'09	30.88107 AU
evening set	-8689 Dec 01 j 03:40	24° <u>♂</u> 03'12		morning rise	-8682 Jan 15 j 07:17	8° <u>♂</u> 37'45	

Attention, astronomical year style is used: The year -8682 in astronomical counting style is the year 8683 BCE in historical counting style.

retrograde	-8682 Apr 16 j 23:17	10° $\mathbb{M}$ 36'32		min. Earth dist.	-8676 Jul 18 j 03:22	22° $\mathbb{M}$ 39'52	28.85822 AU
min. Earth dist.	-8682 Jul 05 j 03:49	9° $\mathbb{M}$ 12'32	28.87918 AU	direct	-8676 Oct 04 j 01:00	21° $\mathbb{M}$ 15'03	
opposition	-8682 Jul 06 j 02:37	9° $\mathbb{M}$ 10'55	-1°02'46	evening set	-8676 Dec 30 j 01:43	23° $\mathbb{M}$ 08'15	
direct	-8682 Sep 21 j 08:16	7° $\mathbb{M}$ 47'38					
evening set	-8682 Dec 16 j 18:09	9° $\mathbb{M}$ 40'09		conjunction	-8675 Jan 15 j 03:23	23° $\mathbb{M}$ 44'03	-1°32'15
				minimum elong	-8675 Jan 15 j 03:22	23° $\mathbb{M}$ 44'03	1°32'39
conjunction	-8681 Jan 01 j 17:31	10° $\mathbb{M}$ 15'47	-1°01'22	max. Earth dist.	-8675 Jan 16 j 01:03	23° $\mathbb{M}$ 46'04	30.85464 AU
minimum elong	-8681 Jan 01 j 17:30	10° $\mathbb{M}$ 15'47	1°01'41	morning rise	-8675 Jan 31 j 08:09	24° $\mathbb{M}$ 20'09	
max. Earth dist.	-8681 Jan 02 j 18:01	10° $\mathbb{M}$ 18'05	30.87643 AU	retrograde	-8675 May 02 j 20:47	26° $\mathbb{M}$ 18'51	
morning rise	-8681 Jan 17 j 20:46	10° $\mathbb{M}$ 51'48		opposition	-8675 Jul 21 j 09:35	24° $\mathbb{M}$ 53'28	-1°41'14
retrograde	-8681 Apr 19 j 13:01	12° $\mathbb{M}$ 50'35		min. Earth dist.	-8675 Jul 20 j 14:43	24° $\mathbb{M}$ 54'48	28.85286 AU
opposition	-8681 Jul 08 j 13:53	11° $\mathbb{M}$ 25'01	-1°08'36	direct	-8675 Oct 06 j 14:57	23° $\mathbb{M}$ 29'55	
min. Earth dist.	-8681 Jul 07 j 14:53	11° $\mathbb{M}$ 26'38	28.87520 AU	evening set	-8674 Jan 01 j 15:32	25° $\mathbb{M}$ 23'12	
direct	-8681 Sep 23 j 17:56	10° $\mathbb{M}$ 01'43					
evening set	-8681 Dec 19 j 06:58	11° $\mathbb{M}$ 54'21		conjunction	-8674 Jan 17 j 17:21	25° $\mathbb{M}$ 59'01	-1°36'57
				minimum elong	-8674 Jan 17 j 17:20	25° $\mathbb{M}$ 59'01	1°37'22
conjunction	-8680 Jan 04 j 06:46	12° $\mathbb{M}$ 30'01	-1°06'47	max. Earth dist.	-8674 Jan 18 j 13:03	26° $\mathbb{M}$ 00'52	30.84906 AU
minimum elong	-8680 Jan 04 j 06:45	12° $\mathbb{M}$ 30'01	1°07'07	morning rise	-8674 Feb 02 j 22:30	26° $\mathbb{M}$ 35'08	
max. Earth dist.	-8680 Jan 05 j 07:38	12° $\mathbb{M}$ 32'21	30.87284 AU	retrograde	-8674 May 05 j 09:59	28° $\mathbb{M}$ 33'46	
morning rise	-8680 Jan 20 j 10:16	13° $\mathbb{M}$ 06'03		opposition	-8674 Jul 23 j 20:46	27° $\mathbb{M}$ 08'21	-1°46'11
	-8680 Apr 03 j 20:33	15° $\mathbb{M}$		min. Earth dist.	-8674 Jul 23 j 02:55	27° $\mathbb{M}$ 09'37	28.84731 AU
retrograde	-8680 Apr 21 j 00:54	15° $\mathbb{M}$ 04'52		direct	-8674 Oct 09 j 02:13	25° $\mathbb{M}$ 44'42	
	-8680 May 08 j 09:30	15° $\mathbb{R}$ $\mathbb{M}$		evening set	-8673 Jan 04 j 05:09	27° $\mathbb{M}$ 38'04	
min. Earth dist.	-8680 Jul 09 j 03:20	13° $\mathbb{M}$ 40'53	28.87208 AU				
opposition	-8680 Jul 10 j 01:14	13° $\mathbb{M}$ 39'20	-1°14'21	conjunction	-8673 Jan 20 j 07:22	28° $\mathbb{M}$ 13'53	-1°41'30
direct	-8680 Sep 25 j 03:16	12° $\mathbb{M}$ 16'02		minimum elong	-8673 Jan 20 j 07:21	28° $\mathbb{M}$ 13'53	1°41'57
evening set	-8680 Dec 20 j 19:55	14° $\mathbb{M}$ 08'47		max. Earth dist.	-8673 Jan 21 j 03:27	28° $\mathbb{M}$ 15'46	30.84340 AU
				morning rise	-8673 Feb 05 j 12:30	28° $\mathbb{M}$ 50'01	
conjunction	-8679 Jan 05 j 20:09	14° $\mathbb{M}$ 44'29	-1°12'06		-8673 Mar 13 j 06:14	0° $\mathbb{J}$	
minimum elong	-8679 Jan 05 j 20:08	14° $\mathbb{M}$ 44'28	1°12'28	retrograde	-8673 May 07 j 22:02	0° $\mathbb{J}$ 48'33	
max. Earth dist.	-8679 Jan 06 j 20:25	14° $\mathbb{M}$ 46'45	30.87003 AU		-8673 Jul 03 j 21:06	30° $\mathbb{R}$ $\mathbb{M}$	
	-8679 Jan 12 j 17:47	15° $\mathbb{M}$		opposition	-8673 Jul 26 j 07:46	29° $\mathbb{M}$ 23'08	-1°50'59
morning rise	-8679 Jan 22 j 00:00	15° $\mathbb{M}$ 20'32		min. Earth dist.	-8673 Jul 25 j 14:32	29° $\mathbb{M}$ 24'21	28.84189 AU
retrograde	-8679 Apr 23 j 14:29	17° $\mathbb{M}$ 19'21		direct	-8673 Oct 11 j 14:45	27° $\mathbb{M}$ 59'23	
opposition	-8679 Jul 12 j 12:30	15° $\mathbb{M}$ 53'53	-1°19'59	evening set	-8672 Jan 06 j 18:57	29° $\mathbb{M}$ 52'50	
min. Earth dist.	-8679 Jul 11 j 14:17	15° $\mathbb{M}$ 55'27	28.86938 AU		-8672 Jan 10 j 01:16	0° $\mathbb{J}$	
	-8679 Aug 16 j 03:01	15° $\mathbb{R}$ $\mathbb{M}$		conjunction	-8672 Jan 22 j 21:19	0° $\mathbb{J}$ 28'40	-1°45'54
direct	-8679 Sep 27 j 15:03	14° $\mathbb{M}$ 30'33		minimum elong	-8672 Jan 22 j 21:18	0° $\mathbb{J}$ 28'40	1°46'21
	-8679 Nov 08 j 07:00	15° $\mathbb{M}$		max. Earth dist.	-8672 Jan 23 j 15:54	0° $\mathbb{J}$ 30'24	30.83837 AU
evening set	-8679 Dec 23 j 09:18	16° $\mathbb{M}$ 23'27		morning rise	-8672 Feb 08 j 02:44	1° $\mathbb{J}$ 04'47	
				retrograde	-8672 May 09 j 12:09	3° $\mathbb{J}$ 03'14	
conjunction	-8678 Jan 08 j 09:48	16° $\mathbb{M}$ 59'10	-1°17'19	opposition	-8672 Jul 27 j 18:41	1° $\mathbb{J}$ 37'49	-1°55'36
minimum elong	-8678 Jan 08 j 09:47	16° $\mathbb{M}$ 59'10	1°17'41	min. Earth dist.	-8672 Jul 27 j 01:34	1° $\mathbb{J}$ 39'01	28.83745 AU
max. Earth dist.	-8678 Jan 09 j 09:11	17° $\mathbb{M}$ 01'21	30.86713 AU	direct	-8672 Oct 13 j 01:47	0° $\mathbb{J}$ 13'58	
morning rise	-8678 Jan 24 j 13:58	17° $\mathbb{M}$ 35'14		evening set	-8671 Jan 08 j 08:43	2° $\mathbb{J}$ 07'31	
retrograde	-8678 Apr 26 j 03:01	19° $\mathbb{M}$ 34'04					
opposition	-8678 Jul 14 j 23:48	18° $\mathbb{M}$ 08'38	-1°25'30	conjunction	-8671 Jan 24 j 11:25	2° $\mathbb{J}$ 43'22	-1°50'08
min. Earth dist.	-8678 Jul 14 j 03:17	18° $\mathbb{M}$ 10'05	28.86642 AU	minimum elong	-8671 Jan 24 j 11:24	2° $\mathbb{J}$ 43'22	1°50'36
direct	-8678 Sep 30 j 01:34	16° $\mathbb{M}$ 45'17		max. Earth dist.	-8671 Jan 25 j 06:11	2° $\mathbb{J}$ 45'07	30.83431 AU
evening set	-8678 Dec 25 j 22:41	18° $\mathbb{M}$ 38'17		morning rise	-8671 Feb 09 j 16:54	3° $\mathbb{J}$ 19'29	
				retrograde	-8671 May 11 j 23:07	5° $\mathbb{J}$ 17'52	
conjunction	-8677 Jan 10 j 23:39	19° $\mathbb{M}$ 14'03	-1°22'25	opposition	-8671 Jul 30 j 05:42	3° $\mathbb{J}$ 52'26	-2°00'02
minimum elong	-8677 Jan 10 j 23:39	19° $\mathbb{M}$ 14'02	1°22'48	min. Earth dist.	-8671 Jul 29 j 13:47	3° $\mathbb{J}$ 53'34	28.83409 AU
max. Earth dist.	-8677 Jan 11 j 22:45	19° $\mathbb{M}$ 16'12	30.86385 AU	direct	-8671 Oct 15 j 12:27	2° $\mathbb{J}$ 28'32	
morning rise	-8677 Jan 27 j 03:58	19° $\mathbb{M}$ 50'08		evening set	-8670 Jan 10 j 22:39	4° $\mathbb{J}$ 22'10	
retrograde	-8677 Apr 28 j 17:00	21° $\mathbb{M}$ 48'56					
opposition	-8677 Jul 17 j 11:04	20° $\mathbb{M}$ 23'33	-1°30'53	conjunction	-8670 Jan 27 j 01:36	4° $\mathbb{J}$ 58'01	-1°54'13
min. Earth dist.	-8677 Jul 16 j 14:19	20° $\mathbb{M}$ 25'01	28.86275 AU	minimum elong	-8670 Jan 27 j 01:35	4° $\mathbb{J}$ 58'01	1°54'41
direct	-8677 Oct 02 j 13:56	19° $\mathbb{M}$ 00'08		max. Earth dist.	-8670 Jan 27 j 19:29	4° $\mathbb{J}$ 59'42	30.83163 AU
evening set	-8677 Dec 28 j 12:10	20° $\mathbb{M}$ 53'15		morning rise	-8670 Feb 12 j 07:13	5° $\mathbb{J}$ 34'09	
				retrograde	-8670 May 14 j 11:42	7° $\mathbb{J}$ 32'26	
conjunction	-8676 Jan 13 j 13:19	21° $\mathbb{M}$ 29'02	-1°27'24	opposition	-8670 Aug 01 j 16:27	6° $\mathbb{J}$ 07'03	-2°04'18
minimum elong	-8676 Jan 13 j 13:18	21° $\mathbb{M}$ 29'01	1°27'47	min. Earth dist.	-8670 Aug 01 j 00:09	6° $\mathbb{J}$ 08'13	28.83217 AU
max. Earth dist.	-8676 Jan 14 j 10:47	21° $\mathbb{M}$ 31'02	30.85964 AU	direct	-8670 Oct 18 j 00:16	4° $\mathbb{J}$ 43'04	
morning rise	-8676 Jan 29 j 18:00	22° $\mathbb{M}$ 05'08		evening set	-8669 Jan 13 j 12:41	6° $\mathbb{J}$ 36'51	
retrograde	-8676 Apr 30 j 06:47	24° $\mathbb{M}$ 03'54					
opposition	-8676 Jul 18 j 22:30	22° $\mathbb{M}$ 38'31	-1°36'08				

Attention, astronomical year style is used: The year -8669 in astronomical counting style is the year 8670 BCE in historical counting style.

conjunction	-8669 Jan 29 j 15:46	7°♂12'43	-1°58'07	direct	-8663 Nov 02 j 10:56	20°♂28'23	
minimum elong	-8669 Jan 29 j 15:46	7°♂12'42	1°58'36	evening set	-8662 Jan 29 j 17:41	22°♂23'08	
max. Earth dist.	-8669 Jan 30 j 09:03	7°♂14'19	30.83027 AU				
morning rise	-8669 Feb 14 j 21:30	7°♂48'50		conjunction	-8662 Feb 14 j 22:03	22°♂59'04	-2°20'05
retrograde	-8669 May 16 j 23:25	9°♂47'04		minimum elong	-8662 Feb 14 j 22:02	22°♂59'04	2°20'38
opposition	-8669 Aug 04 j 03:27	8°♂21'44	-2°08'23	max. Earth dist.	-8662 Feb 15 j 08:33	23°♂00'03	30.83233 AU
min. Earth dist.	-8669 Aug 03 j 12:35	8°♂22'47	28.83164 AU	morning rise	-8662 Mar 03 j 03:53	23°♂35'10	
direct	-8669 Oct 20 j 10:16	6°♂57'43		retrograde	-8662 Jun 01 j 19:41	25°♂32'54	
evening set	-8668 Jan 16 j 02:30	8°♂51'36		opposition	-8662 Aug 19 j 07:22	24°♂08'01	-2°31'07
				min. Earth dist.	-8662 Aug 18 j 23:08	24°♂08'36	28.83327 AU
conjunction	-8668 Feb 01 j 05:56	9°♂27'29	-2°01'50	direct	-8662 Nov 04 j 22:32	22°♂43'39	
minimum elong	-8668 Feb 01 j 05:55	9°♂27'29	2°02'20	evening set	-8661 Feb 01 j 08:21	24°♂38'30	
max. Earth dist.	-8668 Feb 01 j 23:02	9°♂29'05	30.83038 AU				
morning rise	-8668 Feb 17 j 11:41	10°♂03'36		conjunction	-8661 Feb 17 j 12:49	25°♂14'26	-2°22'24
retrograde	-8668 May 18 j 12:41	12°♂01'47		minimum elong	-8661 Feb 17 j 12:49	25°♂14'26	2°22'57
opposition	-8668 Aug 05 j 14:15	10°♂36'31	-2°12'15	max. Earth dist.	-8661 Feb 17 j 21:45	25°♂15'16	30.83049 AU
min. Earth dist.	-8668 Aug 04 j 23:01	10°♂37'36	28.83226 AU	morning rise	-8661 Mar 05 j 18:42	25°♂50'32	
direct	-8668 Oct 21 j 22:18	9°♂12'28		retrograde	-8661 Jun 04 j 08:25	27°♂48'07	
evening set	-8667 Jan 17 j 16:49	11°♂06'31		opposition	-8661 Aug 21 j 18:01	26°♂23'16	-2°33'29
				min. Earth dist.	-8661 Aug 21 j 09:49	26°♂23'51	28.83144 AU
conjunction	-8667 Feb 02 j 20:18	11°♂42'24	-2°05'22	direct	-8661 Nov 07 j 10:56	24°♂58'48	
minimum elong	-8667 Feb 02 j 20:17	11°♂42'24	2°05'53	evening set	-8660 Feb 03 j 22:52	26°♂53'45	
max. Earth dist.	-8667 Feb 03 j 11:55	11°♂43'51	30.83134 AU				
morning rise	-8667 Feb 19 j 02:14	12°♂18'31		conjunction	-8660 Feb 20 j 03:27	27°♂29'42	-2°24'30
retrograde	-8667 May 21 j 01:41	14°♂16'39		minimum elong	-8660 Feb 20 j 03:27	27°♂29'42	2°25'04
min. Earth dist.	-8667 Aug 07 j 11:32	12°♂52'26	28.83363 AU	max. Earth dist.	-8660 Feb 20 j 11:34	27°♂30'27	30.82865 AU
opposition	-8667 Aug 08 j 01:07	12°♂51'28	-2°15'56	morning rise	-8660 Mar 07 j 09:18	28°♂05'46	
direct	-8667 Oct 24 j 09:10	11°♂27'23			-8660 May 22 j 23:18	0°♂	
evening set	-8666 Jan 20 j 07:10	13°♂21'36		retrograde	-8660 Jun 05 j 19:49	0°♂03'15	
					-8660 Jun 19 j 17:24	30°♂	
conjunction	-8666 Feb 05 j 11:00	13°♂57'30	-2°08'43	opposition	-8660 Aug 23 j 04:46	28°♂38'24	-2°35'36
minimum elong	-8666 Feb 05 j 10:59	13°♂57'30	2°09'14	min. Earth dist.	-8660 Aug 22 j 22:22	28°♂38'51	28.82993 AU
max. Earth dist.	-8666 Feb 06 j 02:40	13°♂58'58	30.83277 AU	direct	-8660 Nov 08 j 21:10	27°♂13'50	
morning rise	-8666 Feb 21 j 16:48	14°♂33'37		evening set	-8659 Feb 05 j 13:29	29°♂08'53	
retrograde	-8666 May 23 j 15:15	16°♂31'42					
opposition	-8666 Aug 10 j 11:56	15°♂06'36	-2°19'24	conjunction	-8659 Feb 21 j 18:16	29°♂44'50	-2°26'23
min. Earth dist.	-8666 Aug 09 j 22:47	15°♂07'32	28.83501 AU	minimum elong	-8659 Feb 21 j 18:16	29°♂44'50	2°26'56
direct	-8666 Oct 26 j 22:42	13°♂42'30		max. Earth dist.	-8659 Feb 22 j 01:41	29°♂45'32	30.82753 AU
evening set	-8665 Jan 22 j 21:41	15°♂36'51			-8659 Feb 28 j 12:55	0°♂	
				morning rise	-8659 Mar 10 j 00:03	0°♂20'54	
conjunction	-8665 Feb 08 j 01:28	16°♂12'46	-2°11'52	retrograde	-8659 Jun 08 j 07:46	2°♂18'14	
minimum elong	-8665 Feb 08 j 01:27	16°♂12'46	2°12'23	opposition	-8659 Aug 25 j 15:11	0°♂53'26	-2°37'30
max. Earth dist.	-8665 Feb 08 j 14:57	16°♂14'01	30.83389 AU	min. Earth dist.	-8659 Aug 25 j 08:35	0°♂53'54	28.82926 AU
morning rise	-8665 Feb 24 j 07:26	16°♂48'53			-8659 Sep 28 j 09:35	30°♂	
retrograde	-8665 May 26 j 04:59	18°♂46'55		direct	-8659 Nov 11 j 09:24	29°♂28'46	
opposition	-8665 Aug 12 j 22:52	17°♂21'53	-2°22'40		-8659 Dec 24 j 19:54	0°♂	
min. Earth dist.	-8665 Aug 12 j 10:59	17°♂22'43	28.83597 AU	evening set	-8658 Feb 08 j 04:13	1°♂23'56	
direct	-8665 Oct 29 j 09:56	15°♂57'44					
evening set	-8664 Jan 25 j 12:14	17°♂52'15		conjunction	-8658 Feb 24 j 08:58	1°♂59'52	-2°28'03
				minimum elong	-8658 Feb 24 j 08:58	1°♂59'52	2°28'36
conjunction	-8664 Feb 10 j 16:20	18°♂28'10	-2°14'49	max. Earth dist.	-8658 Feb 24 j 14:56	2°♂00'26	30.82735 AU
minimum elong	-8664 Feb 10 j 16:19	18°♂28'10	2°15'21	morning rise	-8658 Mar 12 j 14:46	2°♂35'55	
max. Earth dist.	-8664 Feb 11 j 05:39	18°♂29'25	30.83431 AU	retrograde	-8658 Jun 10 j 19:03	4°♂33'08	
morning rise	-8664 Feb 26 j 22:08	19°♂04'17		opposition	-8658 Aug 28 j 01:51	3°♂08'22	-2°39'09
retrograde	-8664 May 27 j 18:03	21°♂02'13		min. Earth dist.	-8658 Aug 27 j 20:44	3°♂08'44	28.82988 AU
opposition	-8664 Aug 14 j 09:43	19°♂37'16	-2°25'42	direct	-8658 Nov 13 j 20:48	1°♂43'38	
min. Earth dist.	-8664 Aug 13 j 23:00	19°♂38'01	28.83594 AU	evening set	-8657 Feb 10 j 18:37	3°♂38'54	
direct	-8664 Oct 30 j 22:53	18°♂13'04					
evening set	-8663 Jan 27 j 02:58	20°♂07'42		conjunction	-8657 Feb 26 j 23:36	4°♂14'51	-2°29'28
				minimum elong	-8657 Feb 26 j 23:36	4°♂14'51	2°30'01
conjunction	-8663 Feb 12 j 07:07	20°♂43'38	-2°17'33	max. Earth dist.	-8657 Feb 27 j 05:46	4°♂15'25	30.82863 AU
minimum elong	-8663 Feb 12 j 07:06	20°♂43'38	2°18'05	morning rise	-8657 Mar 15 j 05:11	4°♂50'52	
max. Earth dist.	-8663 Feb 12 j 18:03	20°♂44'39	30.83382 AU	retrograde	-8657 Jun 13 j 07:04	6°♂47'59	
morning rise	-8663 Feb 28 j 13:06	21°♂19'44		opposition	-8657 Aug 30 j 12:23	5°♂23'16	-2°40'33
retrograde	-8663 May 30 j 08:45	23°♂17'35		min. Earth dist.	-8657 Aug 30 j 07:19	5°♂23'37	28.83187 AU
opposition	-8663 Aug 16 j 20:35	21°♂52'39	-2°28'31	direct	-8657 Nov 16 j 10:15	3°♂58'28	
min. Earth dist.	-8663 Aug 16 j 10:32	21°♂53'22	28.83502 AU	evening set	-8656 Feb 13 j 09:18	5°♂53'52	

Attention, astronomical year style is used: The year -8656 in astronomical counting style is the year 8657 BCE in historical counting style.

conjunction	-8656 Feb 29 j 14:13	6° $\overline{3}$ 29'48	-2°30'40	direct	-8650 Dec 01 j 23:49	19° $\overline{3}$ 43'27	
minimum elong	-8656 Feb 29 j 14:12	6° $\overline{3}$ 29'48	2°31'14	evening set	-8649 Mar 01 j 16:41	21° $\overline{3}$ 39'36	
max. Earth dist.	-8656 Feb 29 j 18:33	6° $\overline{3}$ 30'13	30.83138 AU				
morning rise	-8656 Mar 16 j 19:53	7° $\overline{3}$ 05'50		conjunction	-8649 Mar 17 j 22:03	22° $\overline{3}$ 15'33	-2°32'33
retrograde	-8656 Jun 14 j 20:08	9° $\overline{3}$ 02'49		minimum elong	-8649 Mar 17 j 22:03	22° $\overline{3}$ 15'33	2°33'05
opposition	-8656 Aug 31 j 22:51	7° $\overline{3}$ 38'10	-2°41'42	max. Earth dist.	-8649 Mar 17 j 18:19	22° $\overline{3}$ 15'13	30.86118 AU
min. Earth dist.	-8656 Aug 31 j 18:46	7° $\overline{3}$ 38'28	28.83543 AU	morning rise	-8649 Apr 03 j 02:56	22° $\overline{3}$ 51'29	
direct	-8656 Nov 17 j 21:05	6° $\overline{3}$ 13'20		retrograde	-8649 Jul 01 j 10:02	24° $\overline{3}$ 47'32	
evening set	-8655 Feb 14 j 23:54	8° $\overline{3}$ 08'51		opposition	-8649 Sep 17 j 00:49	23° $\overline{3}$ 23'25	-2°42'49
				min. Earth dist.	-8649 Sep 17 j 04:16	23° $\overline{3}$ 23'10	28.86461 AU
conjunction	-8655 Mar 03 j 05:05	8° $\overline{3}$ 44'48	-2°31'38	direct	-8649 Dec 04 j 11:10	21° $\overline{3}$ 58'13	
minimum elong	-8655 Mar 03 j 05:05	8° $\overline{3}$ 44'48	2°32'12	evening set	-8648 Mar 03 j 07:18	23° $\overline{3}$ 54'26	
max. Earth dist.	-8655 Mar 03 j 09:40	8° $\overline{3}$ 45'14	30.83550 AU				
morning rise	-8655 Mar 19 j 10:32	9° $\overline{3}$ 20'48		conjunction	-8648 Mar 19 j 12:50	24° $\overline{3}$ 30'23	-2°31'53
retrograde	-8655 Jun 17 j 08:52	11° $\overline{3}$ 17'41		minimum elong	-8648 Mar 19 j 12:51	24° $\overline{3}$ 30'23	2°32'26
opposition	-8655 Sep 03 j 09:24	9° $\overline{3}$ 53'08	-2°42'37	max. Earth dist.	-8648 Mar 19 j 08:47	24° $\overline{3}$ 30'01	30.86378 AU
min. Earth dist.	-8655 Sep 03 j 06:12	9° $\overline{3}$ 53'21	28.83999 AU	morning rise	-8648 Apr 04 j 17:31	25° $\overline{3}$ 06'17	
direct	-8655 Nov 20 j 10:40	8° $\overline{3}$ 28'16		retrograde	-8648 Jul 02 j 21:11	27° $\overline{3}$ 02'10	
evening set	-8654 Feb 17 j 14:44	10° $\overline{3}$ 23'55		opposition	-8648 Sep 18 j 11:07	25° $\overline{3}$ 38'05	-2°42'00
				min. Earth dist.	-8648 Sep 18 j 15:03	25° $\overline{3}$ 37'49	28.86716 AU
conjunction	-8654 Mar 05 j 19:49	10° $\overline{3}$ 59'52	-2°32'22	direct	-8648 Dec 06 j 00:22	24° $\overline{3}$ 12'48	
minimum elong	-8654 Mar 05 j 19:48	10° $\overline{3}$ 59'52	2°32'57	evening set	-8647 Mar 05 j 22:04	26° $\overline{3}$ 09'06	
max. Earth dist.	-8654 Mar 05 j 22:16	11° $\overline{3}$ 00'06	30.84049 AU				
morning rise	-8654 Mar 22 j 01:18	11° $\overline{3}$ 35'52		conjunction	-8647 Mar 22 j 03:29	26° $\overline{3}$ 45'03	-2°31'00
retrograde	-8654 Jun 19 j 23:00	13° $\overline{3}$ 32'38		minimum elong	-8647 Mar 22 j 03:29	26° $\overline{3}$ 45'03	2°31'31
opposition	-8654 Sep 05 j 19:52	12° $\overline{3}$ 08'10	-2°43'16	max. Earth dist.	-8647 Mar 21 j 21:26	26° $\overline{3}$ 44'29	30.86657 AU
min. Earth dist.	-8654 Sep 05 j 17:09	12° $\overline{3}$ 08'22	28.84527 AU	morning rise	-8647 Apr 07 j 08:10	27° $\overline{3}$ 20'56	
direct	-8654 Nov 22 j 23:18	10° $\overline{3}$ 43'17		retrograde	-8647 Jul 05 j 09:10	29° $\overline{3}$ 16'39	
evening set	-8653 Feb 20 j 05:28	12° $\overline{3}$ 39'04		opposition	-8647 Sep 20 j 21:34	27° $\overline{3}$ 52'36	-2°40'56
				min. Earth dist.	-8647 Sep 21 j 02:34	27° $\overline{3}$ 52'15	28.87034 AU
conjunction	-8653 Mar 08 j 10:43	13° $\overline{3}$ 15'01	-2°32'52	direct	-8647 Dec 08 j 11:32	26° $\overline{3}$ 27'14	
minimum elong	-8653 Mar 08 j 10:43	13° $\overline{3}$ 15'01	2°33'26	evening set	-8646 Mar 08 j 12:29	28° $\overline{3}$ 23'36	
max. Earth dist.	-8653 Mar 08 j 12:59	13° $\overline{3}$ 15'14	30.84576 AU				
morning rise	-8653 Mar 24 j 15:57	13° $\overline{3}$ 51'00		conjunction	-8646 Mar 24 j 18:04	28° $\overline{3}$ 59'33	-2°29'53
retrograde	-8653 Jun 22 j 10:23	15° $\overline{3}$ 47'39		minimum elong	-8646 Mar 24 j 18:04	28° $\overline{3}$ 59'33	2°30'25
opposition	-8653 Sep 08 j 06:29	14° $\overline{3}$ 23'17	-2°43'41	max. Earth dist.	-8646 Mar 24 j 12:18	28° $\overline{3}$ 59'00	30.87013 AU
min. Earth dist.	-8653 Sep 08 j 05:34	14° $\overline{3}$ 23'21	28.85050 AU	morning rise	-8646 Apr 09 j 22:25	29° $\overline{3}$ 35'24	
direct	-8653 Nov 25 j 11:19	12° $\overline{3}$ 58'22			-8646 Apr 21 j 12:39	0° $\approx$	
evening set	-8652 Feb 22 j 20:14	14° $\overline{3}$ 54'16		retrograde	-8646 Jul 07 j 20:28	1° $\approx$ 30'58	
				opposition	-8646 Sep 23 j 07:59	0° $\approx$ 06'58	-2°39'37
conjunction	-8652 Mar 10 j 01:29	15° $\overline{3}$ 30'14	-2°33'08	min. Earth dist.	-8646 Sep 23 j 13:46	0° $\approx$ 06'33	28.87438 AU
minimum elong	-8652 Mar 10 j 01:29	15° $\overline{3}$ 30'14	2°33'42		-8646 Sep 27 j 09:50	30° $\overline{R}$ $\overline{3}$	
max. Earth dist.	-8652 Mar 10 j 01:52	15° $\overline{3}$ 30'16	30.85084 AU	direct	-8646 Dec 11 j 01:31	28° $\overline{3}$ 41'33	
morning rise	-8652 Mar 26 j 06:46	16° $\overline{3}$ 06'12			-8645 Feb 20 j 20:22	0° $\approx$	
retrograde	-8652 Jun 24 j 00:08	18° $\overline{3}$ 02'43		evening set	-8645 Mar 11 j 03:00	0° $\approx$ 37'59	
opposition	-8652 Sep 09 j 17:03	16° $\overline{3}$ 38'26	-2°43'50				
min. Earth dist.	-8652 Sep 09 j 16:25	16° $\overline{3}$ 38'29	28.85521 AU	conjunction	-8645 Mar 27 j 08:25	1° $\approx$ 13'55	-2°28'33
direct	-8652 Nov 26 j 23:59	15° $\overline{3}$ 13'28		minimum elong	-8645 Mar 27 j 08:25	1° $\approx$ 13'55	2°29'03
evening set	-8651 Feb 24 j 11:09	17° $\overline{3}$ 09'28		max. Earth dist.	-8645 Mar 27 j 00:44	1° $\approx$ 13'12	30.87492 AU
				morning rise	-8645 Apr 12 j 12:48	1° $\approx$ 49'46	
conjunction	-8651 Mar 12 j 16:29	17° $\overline{3}$ 45'26	-2°33'10	retrograde	-8645 Jul 10 j 09:33	3° $\approx$ 45'11	
minimum elong	-8651 Mar 12 j 16:29	17° $\overline{3}$ 45'26	2°33'42	opposition	-8645 Sep 25 j 18:18	2° $\approx$ 21'14	-2°38'04
max. Earth dist.	-8651 Mar 12 j 15:45	17° $\overline{3}$ 45'22	30.85502 AU	min. Earth dist.	-8645 Sep 26 j 00:11	2° $\approx$ 20'49	28.87994 AU
morning rise	-8651 Mar 28 j 21:34	18° $\overline{3}$ 21'23		direct	-8645 Dec 13 j 14:21	0° $\approx$ 55'46	
retrograde	-8651 Jun 26 j 11:45	20° $\overline{3}$ 17'46		evening set	-8644 Mar 12 j 17:14	2° $\approx$ 52'18	
opposition	-8651 Sep 12 j 03:40	18° $\overline{3}$ 53'33	-2°43'45				
min. Earth dist.	-8651 Sep 12 j 05:11	18° $\overline{3}$ 53'26	28.85900 AU	conjunction	-8644 Mar 28 j 22:50	3° $\approx$ 28'14	-2°26'59
direct	-8651 Nov 29 j 10:51	17° $\overline{3}$ 28'31		minimum elong	-8644 Mar 28 j 22:50	3° $\approx$ 28'14	2°27'29
evening set	-8650 Feb 27 j 02:00	19° $\overline{3}$ 24'36		max. Earth dist.	-8644 Mar 28 j 15:24	3° $\approx$ 27'33	30.88119 AU
				morning rise	-8644 Apr 14 j 02:55	4° $\approx$ 04'04	
conjunction	-8650 Mar 15 j 07:25	20° $\overline{3}$ 00'34	-2°32'58	retrograde	-8644 Jul 11 j 20:29	5° $\approx$ 59'20	
minimum elong	-8650 Mar 15 j 07:25	20° $\overline{3}$ 00'34	2°33'32	opposition	-8644 Sep 27 j 04:46	4° $\approx$ 35'29	-2°36'16
max. Earth dist.	-8650 Mar 15 j 05:22	20° $\overline{3}$ 00'22	30.85847 AU	min. Earth dist.	-8644 Sep 27 j 12:03	4° $\approx$ 34'58	28.88688 AU
morning rise	-8650 Mar 31 j 12:23	20° $\overline{3}$ 36'30		direct	-8644 Dec 15 j 02:43	3° $\approx$ 10'00	
retrograde	-8650 Jun 28 j 23:26	22° $\overline{3}$ 32'43		evening set	-8643 Mar 15 j 07:42	5° $\approx$ 06'37	
opposition	-8650 Sep 14 j 14:13	21° $\overline{3}$ 08'33	-2°43'24				
min. Earth dist.	-8650 Sep 14 j 15:52	21° $\overline{3}$ 08'26	28.86200 AU	conjunction	-8643 Mar 31 j 13:11	5° $\approx$ 42'33	-2°25'11

Attention, astronomical year style is used: The year -8643 in astronomical counting style is the year 8644 BCE in historical counting style.

minimum elong	-8643 Mar 31 j 13:11	5°42'33	2°25'40	opposition	-8637 Oct 13 j 06:18	20°16'26	-2°17'15
max. Earth dist.	-8643 Mar 31 j 04:13	5°41'43	30.88898 AU	min. Earth dist.	-8637 Oct 13 j 19:48	20°15'29	28.94656 AU
morning rise	-8643 Apr 16 j 17:14	6°18'22		direct	-8637 Dec 31 j 15:42	18°50'53	
retrograde	-8643 Jul 14 j 10:05	8°13'30		evening set	-8636 Mar 31 j 11:51	20°47'57	
opposition	-8643 Sep 29 j 15:02	6°49'46	-2°34'14				
min. Earth dist.	-8643 Sep 29 j 22:07	6°49'15	28.89523 AU	conjunction	-8636 Apr 16 j 16:57	21°23'51	-2°06'42
direct	-8643 Dec 17 j 15:37	5°24'17		minimum elong	-8636 Apr 16 j 16:58	21°23'51	2°07'06
evening set	-8642 Mar 17 j 22:05	7°20'59		max. Earth dist.	-8636 Apr 16 j 00:21	21°22'18	30.94818 AU
				morning rise	-8636 May 02 j 19:40	21°59'33	
conjunction	-8642 Apr 03 j 03:36	7°56'56	-2°23'11	retrograde	-8636 Jul 29 j 16:38	23°53'42	
minimum elong	-8642 Apr 03 j 03:36	7°56'56	2°23'40	opposition	-8636 Oct 14 j 16:47	22°30'34	-2°13'41
max. Earth dist.	-8642 Apr 02 j 18:21	7°56'04	30.89788 AU	min. Earth dist.	-8636 Oct 15 j 06:40	22°29'35	28.95283 AU
morning rise	-8642 Apr 19 j 07:22	8°32'44		direct	-8635 Jan 02 j 04:34	21°04'56	
retrograde	-8642 Jul 16 j 21:46	10°27'44		evening set	-8635 Apr 03 j 01:50	23°02'02	
opposition	-8642 Oct 02 j 01:36	9°04'07	-2°31'58				
min. Earth dist.	-8642 Oct 02 j 10:24	9°03'30	28.90456 AU	conjunction	-8635 Apr 19 j 06:58	23°37'55	-2°03'16
direct	-8642 Dec 20 j 02:35	7°38'40		minimum elong	-8635 Apr 19 j 06:59	23°37'55	2°03'38
evening set	-8641 Mar 20 j 12:17	9°35'27		max. Earth dist.	-8635 Apr 18 j 14:29	23°36'23	30.95432 AU
				morning rise	-8635 May 05 j 09:17	24°13'35	
conjunction	-8641 Apr 05 j 17:46	10°11'24	-2°20'57	retrograde	-8635 Aug 01 j 02:53	26°07'34	
minimum elong	-8641 Apr 05 j 17:46	10°11'24	2°21'24	opposition	-8635 Oct 17 j 03:22	24°44'28	-2°09'55
max. Earth dist.	-8641 Apr 05 j 07:32	10°10'26	30.90759 AU	min. Earth dist.	-8635 Oct 17 j 18:50	24°43'22	28.95889 AU
morning rise	-8641 Apr 21 j 21:26	10°47'11		direct	-8634 Jan 04 j 17:23	23°18'47	
retrograde	-8641 Jul 19 j 09:15	12°42'04		evening set	-8634 Apr 05 j 15:48	25°15'53	
opposition	-8641 Oct 04 j 12:01	11°18'35	-2°29'27				
min. Earth dist.	-8641 Oct 04 j 20:46	11°17'58	28.91423 AU	conjunction	-8634 Apr 21 j 20:40	25°51'45	-1°59'39
direct	-8641 Dec 22 j 15:27	9°53'08		minimum elong	-8634 Apr 21 j 20:41	25°51'45	2°00'02
evening set	-8640 Mar 22 j 02:44	11°50'01		max. Earth dist.	-8634 Apr 21 j 02:37	25°50'04	30.96067 AU
				morning rise	-8634 May 07 j 22:54	26°27'23	
conjunction	-8640 Apr 07 j 08:07	12°25'57	-2°18'30	retrograde	-8634 Aug 03 j 15:49	28°21'12	
minimum elong	-8640 Apr 07 j 08:08	12°25'57	2°18'58	opposition	-8634 Oct 19 j 13:52	26°58'08	-2°05'58
max. Earth dist.	-8640 Apr 06 j 20:27	12°24'52	30.91718 AU	min. Earth dist.	-8634 Oct 20 j 05:01	26°57'04	28.96543 AU
morning rise	-8640 Apr 23 j 11:36	13°01'44		direct	-8633 Jan 07 j 07:34	25°32'24	
retrograde	-8640 Jul 20 j 20:00	14°56'30		evening set	-8633 Apr 08 j 05:21	27°29'30	
opposition	-8640 Oct 05 j 22:30	13°33'07	-2°26'44				
min. Earth dist.	-8640 Oct 06 j 09:05	13°32'22	28.92365 AU	conjunction	-8633 Apr 24 j 10:12	28°05'21	-1°55'52
direct	-8640 Dec 24 j 02:09	12°07'39		minimum elong	-8633 Apr 24 j 10:13	28°05'21	1°56'13
evening set	-8639 Mar 24 j 17:08	14°04'37		max. Earth dist.	-8633 Apr 23 j 16:12	28°03'41	30.96757 AU
				morning rise	-8633 May 10 j 12:03	28°40'58	
conjunction	-8639 Apr 09 j 22:34	14°40'33	-2°15'51		-8633 Jun 21 j 13:30	0°	
minimum elong	-8639 Apr 09 j 22:35	14°40'33	2°16'17	retrograde	-8633 Aug 06 j 02:18	0°34'38	
max. Earth dist.	-8639 Apr 09 j 10:19	14°39'24	30.92630 AU		-8633 Sep 21 j 12:48	30°	
	-8639 Apr 18 j 15:55	15°		opposition	-8633 Oct 22 j 00:30	29°11'35	-2°01'50
morning rise	-8639 Apr 26 j 01:47	15°16'18		min. Earth dist.	-8633 Oct 22 j 17:08	29°10'25	28.97278 AU
retrograde	-8639 Jul 23 j 07:12	17°10'56		direct	-8632 Jan 09 j 20:01	27°45'50	
opposition	-8639 Oct 08 j 09:07	15°47'39	-2°23'47	evening set	-8632 Apr 09 j 19:03	29°42'56	
min. Earth dist.	-8639 Oct 08 j 20:17	15°46'51	28.93217 AU		-8632 Apr 17 j 13:37	0°	
	-8639 Nov 07 j 02:10	15°					
direct	-8639 Dec 26 j 14:34	14°22'10		conjunction	-8632 Apr 25 j 23:42	0°18'46	-1°51'55
	-8638 Feb 13 j 08:00	15°		minimum elong	-8632 Apr 25 j 23:43	0°18'47	1°52'15
evening set	-8638 Mar 27 j 07:31	16°19'11		max. Earth dist.	-8632 Apr 25 j 04:57	0°17'02	30.97557 AU
				morning rise	-8632 May 12 j 01:23	0°54'22	
conjunction	-8638 Apr 12 j 12:43	16°55'07	-2°12'59	retrograde	-8632 Aug 07 j 13:28	2°47'52	
minimum elong	-8638 Apr 12 j 12:44	16°55'07	2°13'26	opposition	-8632 Oct 23 j 10:53	1°24'54	-1°57'31
max. Earth dist.	-8638 Apr 11 j 22:24	16°53'47	30.93438 AU	min. Earth dist.	-8632 Oct 24 j 03:02	1°23'46	28.98122 AU
morning rise	-8638 Apr 28 j 15:49	17°30'51			-8631 Jan 04 j 00:46	30°	
retrograde	-8638 Jul 25 j 18:16	19°25'20		direct	-8631 Jan 11 j 09:32	29°59'07	
opposition	-8638 Oct 10 j 19:45	18°02'07	-2°20'37		-8631 Jan 18 j 15:01	0°	
min. Earth dist.	-8638 Oct 11 j 08:07	18°01'15	28.93983 AU	evening set	-8631 Apr 12 j 08:44	1°56'15	
direct	-8638 Dec 29 j 01:42	16°36'36					
evening set	-8637 Mar 29 j 21:41	18°33'39		conjunction	-8631 Apr 28 j 13:11	2°32'05	-1°47'48
				minimum elong	-8631 Apr 28 j 13:12	2°32'05	1°48'06
conjunction	-8637 Apr 15 j 02:59	19°09'34	-2°09'56	max. Earth dist.	-8631 Apr 27 j 17:43	2°30'16	30.98467 AU
minimum elong	-8637 Apr 15 j 03:00	19°09'34	2°10'21	morning rise	-8631 May 14 j 14:33	3°07'39	
max. Earth dist.	-8637 Apr 14 j 12:37	19°08'14	30.94163 AU	retrograde	-8631 Aug 10 j 00:10	5°01'02	
morning rise	-8637 May 01 j 05:44	19°45'17		opposition	-8631 Oct 25 j 21:34	3°38'08	-1°53'01
retrograde	-8637 Jul 28 j 04:25	21°39'37		min. Earth dist.	-8631 Oct 26 j 14:52	3°36'55	28.99093 AU

Attention, astronomical year style is used: The year -8630 in astronomical counting style is the year 8631 BCE in historical counting style.

direct	-8630 Jan 13 j 20:28	2° $\mathbf{H}$ 12'22		retrograde	-8624 Aug 25 j 04:24	20° $\mathbf{H}$ 33'31	
evening set	-8630 Apr 14 j 22:08	4° $\mathbf{H}$ 09'31		opposition	-8624 Nov 10 j 00:54	19° $\mathbf{H}$ 11'10	-1°17'16
max. Earth dist.	-8630 Apr 30 j 07:06	4° $\mathbf{H}$ 43'32	30.99501 AU	min. Earth dist.	-8624 Nov 10 j 23:17	19° $\mathbf{H}$ 09'36	29.05764 AU
				direct	-8623 Jan 29 j 11:57	17° $\mathbf{H}$ 45'31	
conjunction	-8630 May 01 j 02:28	4° $\mathbf{H}$ 45'20	-1°43'31	evening set	-8623 Apr 30 j 19:36	19° $\mathbf{H}$ 42'49	
minimum elong	-8630 May 01 j 02:29	4° $\mathbf{H}$ 45'20	1°43'49				
morning rise	-8630 May 17 j 03:29	5° $\mathbf{H}$ 20'53		conjunction	-8623 May 16 j 22:02	20° $\mathbf{H}$ 18'30	-1°09'37
retrograde	-8630 Aug 12 j 10:42	7° $\mathbf{H}$ 14'09		minimum elong	-8623 May 16 j 22:02	20° $\mathbf{H}$ 18'30	1°09'46
opposition	-8630 Oct 28 j 08:11	5° $\mathbf{H}$ 51'22	-1°48'21	max. Earth dist.	-8623 May 15 j 21:14	20° $\mathbf{H}$ 16'12	31.06015 AU
min. Earth dist.	-8630 Oct 29 j 01:31	5° $\mathbf{H}$ 50'08	29.00152 AU	morning rise	-8623 Jun 01 j 20:41	20° $\mathbf{H}$ 53'53	
direct	-8629 Jan 16 j 08:50	4° $\mathbf{H}$ 25'38		retrograde	-8623 Aug 27 j 15:26	22° $\mathbf{H}$ 46'27	
evening set	-8629 Apr 17 j 11:41	6° $\mathbf{H}$ 22'49		opposition	-8623 Nov 12 j 11:45	21° $\mathbf{H}$ 24'07	-1°11'39
				min. Earth dist.	-8623 Nov 13 j 09:43	21° $\mathbf{H}$ 22'35	29.06389 AU
conjunction	-8629 May 03 j 15:42	6° $\mathbf{H}$ 58'37	-1°39'04	direct	-8622 Feb 01 j 01:59	19° $\mathbf{H}$ 58'28	
minimum elong	-8629 May 03 j 15:42	6° $\mathbf{H}$ 58'37	1°39'21	evening set	-8622 May 03 j 08:24	21° $\mathbf{H}$ 55'43	
max. Earth dist.	-8629 May 02 j 18:59	6° $\mathbf{H}$ 56'42	31.00603 AU	max. Earth dist.	-8622 May 18 j 09:09	22° $\mathbf{H}$ 29'02	31.06628 AU
morning rise	-8629 May 19 j 16:30	7° $\mathbf{H}$ 34'09					
retrograde	-8629 Aug 14 j 21:22	9° $\mathbf{H}$ 27'20		conjunction	-8622 May 19 j 10:29	22° $\mathbf{H}$ 31'23	-1°04'19
opposition	-8629 Oct 30 j 18:43	8° $\mathbf{H}$ 04'38	-1°43'32	minimum elong	-8622 May 19 j 10:30	22° $\mathbf{H}$ 31'23	1°04'28
min. Earth dist.	-8629 Oct 31 j 12:51	8° $\mathbf{H}$ 03'22	29.01274 AU	morning rise	-8622 Jun 04 j 08:41	23° $\mathbf{H}$ 06'43	
direct	-8628 Jan 18 j 19:30	6° $\mathbf{H}$ 38'56		retrograde	-8622 Aug 30 j 02:07	24° $\mathbf{H}$ 59'12	
evening set	-8628 Apr 19 j 01:04	8° $\mathbf{H}$ 36'10		opposition	-8622 Nov 14 j 22:41	23° $\mathbf{H}$ 36'52	-1°05'57
max. Earth dist.	-8628 May 04 j 08:41	9° $\mathbf{H}$ 10'04	31.01725 AU	min. Earth dist.	-8622 Nov 15 j 21:44	23° $\mathbf{H}$ 35'16	29.07009 AU
				direct	-8621 Feb 03 j 13:57	22° $\mathbf{H}$ 11'11	
conjunction	-8628 May 05 j 05:02	9° $\mathbf{H}$ 11'58	-1°34'29	evening set	-8621 May 05 j 21:04	24° $\mathbf{H}$ 08'24	
minimum elong	-8628 May 05 j 05:03	9° $\mathbf{H}$ 11'58	1°34'45				
morning rise	-8628 May 21 j 05:25	9° $\mathbf{H}$ 47'29		conjunction	-8621 May 21 j 22:51	24° $\mathbf{H}$ 44'03	-0°58'56
retrograde	-8628 Aug 16 j 07:07	11° $\mathbf{H}$ 40'34		minimum elong	-8621 May 21 j 22:52	24° $\mathbf{H}$ 44'03	0°59'03
opposition	-8628 Nov 01 j 05:30	10° $\mathbf{H}$ 17'59	-1°38'33	max. Earth dist.	-8621 May 20 j 21:45	24° $\mathbf{H}$ 41'42	31.07268 AU
min. Earth dist.	-8628 Nov 02 j 00:35	10° $\mathbf{H}$ 16'38	29.02361 AU	morning rise	-8621 Jun 06 j 20:38	25° $\mathbf{H}$ 19'21	
direct	-8627 Jan 20 j 08:27	8° $\mathbf{H}$ 52'19		retrograde	-8621 Sep 01 j 11:54	27° $\mathbf{H}$ 11'42	
evening set	-8627 Apr 21 j 14:39	10° $\mathbf{H}$ 49'35		opposition	-8621 Nov 17 j 09:24	25° $\mathbf{H}$ 49'24	-1°00'09
				min. Earth dist.	-8621 Nov 18 j 08:19	25° $\mathbf{H}$ 47'48	29.07661 AU
conjunction	-8627 May 07 j 18:10	11° $\mathbf{H}$ 25'22	-1°29'45	direct	-8620 Feb 06 j 03:14	24° $\mathbf{H}$ 23'42	
minimum elong	-8627 May 07 j 18:10	11° $\mathbf{H}$ 25'22	1°29'59	evening set	-8620 May 07 j 09:45	26° $\mathbf{H}$ 20'53	
max. Earth dist.	-8627 May 06 j 19:52	11° $\mathbf{H}$ 23'18	31.02788 AU	max. Earth dist.	-8620 May 22 j 09:01	26° $\mathbf{H}$ 54'04	31.07963 AU
morning rise	-8627 May 23 j 18:20	12° $\mathbf{H}$ 00'52					
retrograde	-8627 Aug 18 j 19:10	13° $\mathbf{H}$ 53'52		conjunction	-8620 May 23 j 11:03	26° $\mathbf{H}$ 56'29	-0°53'29
opposition	-8627 Nov 03 j 16:16	12° $\mathbf{H}$ 31'21	-1°33'25	minimum elong	-8620 May 23 j 11:03	26° $\mathbf{H}$ 56'29	0°53'35
min. Earth dist.	-8627 Nov 04 j 11:32	12° $\mathbf{H}$ 30'00	29.03381 AU	morning rise	-8620 Jun 08 j 08:28	27° $\mathbf{H}$ 31'46	
direct	-8626 Jan 22 j 20:11	11° $\mathbf{H}$ 05'43		retrograde	-8620 Sep 02 j 21:27	29° $\mathbf{H}$ 24'02	
evening set	-8626 Apr 24 j 04:00	13° $\mathbf{H}$ 03'01		opposition	-8620 Nov 18 j 20:19	28° $\mathbf{H}$ 01'45	-0°54'16
max. Earth dist.	-8626 May 09 j 09:18	13° $\mathbf{H}$ 36'44	31.03755 AU	min. Earth dist.	-8620 Nov 19 j 19:27	28° $\mathbf{H}$ 00'08	29.08409 AU
				direct	-8619 Feb 07 j 14:34	26° $\mathbf{H}$ 36'02	
conjunction	-8626 May 10 j 07:24	13° $\mathbf{H}$ 38'47	-1°24'53	evening set	-8619 May 09 j 22:08	28° $\mathbf{H}$ 33'11	
minimum elong	-8626 May 10 j 07:25	13° $\mathbf{H}$ 38'47	1°25'07				
morning rise	-8626 May 26 j 07:03	14° $\mathbf{H}$ 14'15		conjunction	-8619 May 25 j 23:09	29° $\mathbf{H}$ 08'46	-0°47'57
retrograde	-8626 Aug 21 j 05:21	16° $\mathbf{H}$ 07'10		minimum elong	-8619 May 25 j 23:09	29° $\mathbf{H}$ 08'46	0°48'01
opposition	-8626 Nov 06 j 03:15	14° $\mathbf{H}$ 44'44	-1°28'09	max. Earth dist.	-8619 May 24 j 22:10	29° $\mathbf{H}$ 06'26	31.08765 AU
min. Earth dist.	-8626 Nov 07 j 00:05	14° $\mathbf{H}$ 43'16	29.04285 AU	morning rise	-8619 Jun 10 j 19:58	29° $\mathbf{H}$ 44'00	
direct	-8625 Jan 25 j 08:37	13° $\mathbf{H}$ 19'07			-8619 Jun 18 j 06:56	0° $\mathbf{Y}$	
evening set	-8625 Apr 26 j 17:15	15° $\mathbf{H}$ 16'25		retrograde	-8619 Sep 05 j 05:42	1° $\mathbf{Y}$ 36'11	
				opposition	-8619 Nov 21 j 07:18	0° $\mathbf{Y}$ 13'57	-0°48'19
conjunction	-8625 May 12 j 20:15	15° $\mathbf{H}$ 52'09	-1°19'54	min. Earth dist.	-8619 Nov 22 j 06:40	0° $\mathbf{Y}$ 12'19	29.09259 AU
minimum elong	-8625 May 12 j 20:16	15° $\mathbf{H}$ 52'09	1°20'06		-8619 Nov 29 j 16:05	30° $\mathbf{R}$ $\mathbf{H}$	
max. Earth dist.	-8625 May 11 j 20:27	15° $\mathbf{H}$ 49'56	31.04613 AU	direct	-8618 Feb 10 j 02:56	28° $\mathbf{H}$ 48'15	
morning rise	-8625 May 28 j 19:43	16° $\mathbf{H}$ 27'35			-8618 Apr 20 j 08:11	0° $\mathbf{Y}$	
retrograde	-8625 Aug 23 j 18:05	18° $\mathbf{H}$ 20'24		evening set	-8618 May 12 j 10:37	0° $\mathbf{Y}$ 45'23	
opposition	-8625 Nov 08 j 14:03	16° $\mathbf{H}$ 58'01	-1°22'46	max. Earth dist.	-8618 May 27 j 08:58	1° $\mathbf{Y}$ 18'30	31.09688 AU
min. Earth dist.	-8625 Nov 09 j 10:43	16° $\mathbf{H}$ 56'34	29.05076 AU				
direct	-8624 Jan 27 j 23:03	15° $\mathbf{H}$ 32'23		conjunction	-8618 May 28 j 11:02	1° $\mathbf{Y}$ 20'56	-0°42'20
evening set	-8624 Apr 28 j 06:27	17° $\mathbf{H}$ 29'42		minimum elong	-8618 May 28 j 11:02	1° $\mathbf{Y}$ 20'56	0°42'24
max. Earth dist.	-8624 May 13 j 09:20	18° $\mathbf{H}$ 03'11	31.05350 AU	morning rise	-8618 Jun 13 j 07:33	1° $\mathbf{Y}$ 56'08	
				retrograde	-8618 Sep 07 j 17:07	3° $\mathbf{Y}$ 48'16	
conjunction	-8624 May 14 j 09:16	18° $\mathbf{H}$ 05'25	-1°14'49	opposition	-8618 Nov 23 j 18:12	2° $\mathbf{Y}$ 26'04	-0°42'18
minimum elong	-8624 May 14 j 09:17	18° $\mathbf{H}$ 05'25	1°15'00	min. Earth dist.	-8618 Nov 24 j 16:57	2° $\mathbf{Y}$ 24'29	29.10239 AU
morning rise	-8624 May 30 j 08:13	18° $\mathbf{H}$ 40'49		direct	-8617 Feb 12 j 13:24	1° $\mathbf{Y}$ 00'25	

Attention, astronomical year style is used: The year -8617 in astronomical counting style is the year 8618 BCE in historical counting style.

evening set	-8617 May 14 j 22:44	2°♈57'32		minimum elong	-8611 Jun 12 j 20:34	16°♈45'25	0°01'49
				behind sun begin	-8611 Jun 12 j 14:04	16°♈44'50	
conjunction	-8617 May 30 j 22:54	3°♈33'03	-0°36'40	behind sun end	-8611 Jun 13 j 03:03	16°♈46'00	
minimum elong	-8617 May 30 j 22:55	3°♈33'03	0°36'42	max. Earth dist.	-8611 Jun 11 j 17:10	16°♈42'52	31.16146 AU
max. Earth dist.	-8617 May 29 j 21:52	3°♈30'43	31.10713 AU	morning rise	-8611 Jun 28 j 13:23	17°♈20'22	
morning rise	-8617 Jun 15 j 18:49	4°♈08'14		retrograde	-8611 Sep 22 j 18:44	19°♈12'15	
retrograde	-8617 Sep 10 j 02:16	6°♈00'19		asc. node	-8611 Oct 07 j 23:06	19°♈08'17	
opposition	-8617 Nov 26 j 05:17	4°♈38'11	-0°36'12	opposition	-8611 Dec 09 j 00:49	17°♈50'19	0°01'04
min. Earth dist.	-8617 Nov 27 j 05:01	4°♈36'32	29.11287 AU	min. Earth dist.	-8611 Dec 10 j 01:47	17°♈48'36	29.16483 AU
direct	-8616 Feb 15 j 01:29	3°♈12'35		direct	-8610 Feb 28 j 06:31	16°♈24'55	
evening set	-8616 May 16 j 11:07	5°♈09'42		evening set	-8610 May 30 j 11:25	18°♈21'51	
max. Earth dist.	-8616 May 31 j 08:35	5°♈42'45	31.11789 AU	max. Earth dist.	-8610 Jun 14 j 05:29	18°♈54'39	31.16732 AU
conjunction	-8616 Jun 01 j 10:39	5°♈45'11	-0°30'57	conjunction	-8610 Jun 15 j 07:51	18°♈57'06	0°04'04
minimum elong	-8616 Jun 01 j 10:39	5°♈45'11	0°30'58	minimum elong	-8610 Jun 15 j 07:51	18°♈57'06	0°04'10
morning rise	-8616 Jun 17 j 06:13	6°♈20'20		behind sun begin	-8610 Jun 15 j 01:27	18°♈56'32	
retrograde	-8616 Sep 11 j 14:12	8°♈12'22		behind sun end	-8610 Jun 15 j 14:14	18°♈57'40	
opposition	-8616 Nov 27 j 16:13	6°♈50'18	-0°30'04	morning rise	-8610 Jun 30 j 24:00	19°♈32'01	
min. Earth dist.	-8616 Nov 28 j 15:18	6°♈48'42	29.12358 AU	retrograde	-8610 Sep 25 j 02:54	21°♈23'51	
direct	-8615 Feb 16 j 14:44	5°♈24'45		opposition	-8610 Dec 11 j 12:12	20°♈01'55	0°07'19
evening set	-8615 May 18 j 23:22	7°♈21'53		min. Earth dist.	-8610 Dec 12 j 13:29	20°♈00'10	29.17043 AU
conjunction	-8615 Jun 03 j 22:31	7°♈57'20	-0°25'11	direct	-8609 Mar 02 j 19:19	18°♈36'31	
minimum elong	-8615 Jun 03 j 22:31	7°♈57'20	0°25'10	evening set	-8609 Jun 01 j 23:02	20°♈33'23	
max. Earth dist.	-8615 Jun 02 j 20:55	7°♈54'57	31.12843 AU	conjunction	-8609 Jun 17 j 18:44	21°♈08'36	0°09'52
morning rise	-8615 Jun 19 j 17:25	8°♈32'26		minimum elong	-8609 Jun 17 j 18:44	21°♈08'36	0°10'00
retrograde	-8615 Sep 14 j 00:30	10°♈24'28		behind sun begin	-8609 Jun 17 j 13:30	21°♈08'08	
opposition	-8615 Nov 30 j 03:35	9°♈02'27	-0°23'53	behind sun end	-8609 Jun 17 j 23:58	21°♈09'04	
min. Earth dist.	-8615 Dec 01 j 03:57	9°♈00'46	29.13390 AU	max. Earth dist.	-8609 Jun 16 j 15:24	21°♈06'03	31.17289 AU
direct	-8614 Feb 19 j 02:35	7°♈36'57		morning rise	-8609 Jul 03 j 10:30	21°♈43'28	
evening set	-8614 May 21 j 11:29	9°♈34'03		retrograde	-8609 Sep 27 j 13:49	23°♈35'16	
max. Earth dist.	-8614 Jun 05 j 07:57	10°♈07'02	31.13840 AU	opposition	-8609 Dec 13 j 23:29	22°♈13'20	0°13'32
conjunction	-8614 Jun 06 j 10:03	10°♈09'28	-0°19'23	min. Earth dist.	-8609 Dec 15 j 00:02	22°♈11'38	29.17609 AU
minimum elong	-8614 Jun 06 j 10:03	10°♈09'28	0°19'22	direct	-8608 Mar 04 j 06:10	20°♈47'55	
morning rise	-8614 Jun 22 j 04:31	10°♈44'32		evening set	-8608 Jun 03 j 10:26	22°♈44'45	
retrograde	-8614 Sep 16 j 11:49	12°♈36'32		max. Earth dist.	-8608 Jun 18 j 03:38	23°♈17'28	31.17864 AU
opposition	-8614 Dec 02 j 14:49	11°♈14'34	-0°17'40	conjunction	-8608 Jun 19 j 05:41	23°♈19'54	0°15'39
min. Earth dist.	-8614 Dec 03 j 14:34	11°♈12'55	29.14329 AU	minimum elong	-8608 Jun 19 j 05:40	23°♈19'54	0°15'49
direct	-8613 Feb 21 j 16:30	9°♈49'06		behind sun begin	-8608 Jun 19 j 04:32	23°♈19'48	
evening set	-8613 May 23 j 23:40	11°♈46'11		behind sun end	-8608 Jun 19 j 06:48	23°♈20'00	
conjunction	-8613 Jun 08 j 21:41	12°♈21'34	-0°13'34	morning rise	-8608 Jul 04 j 20:40	23°♈54'44	
minimum elong	-8613 Jun 08 j 21:42	12°♈21'34	0°13'31	retrograde	-8608 Sep 28 j 22:14	25°♈46'31	
behind sun begin	-8613 Jun 08 j 18:06	12°♈21'15		opposition	-8608 Dec 15 j 10:58	24°♈24'35	0°19'43
behind sun end	-8613 Jun 09 j 01:17	12°♈21'53		min. Earth dist.	-8608 Dec 16 j 12:06	24°♈22'51	29.18215 AU
max. Earth dist.	-8613 Jun 07 j 19:07	12°♈19'05	31.14720 AU	direct	-8607 Mar 06 j 18:25	22°♈59'12	
morning rise	-8613 Jun 24 j 15:35	12°♈56'36		evening set	-8607 Jun 05 j 21:54	24°♈55'58	
retrograde	-8613 Sep 18 j 23:00	14°♈48'33		conjunction	-8607 Jun 21 j 16:21	25°♈31'05	0°21'26
opposition	-8613 Dec 05 j 02:03	13°♈26'37	-0°11'25	minimum elong	-8607 Jun 21 j 16:21	25°♈31'05	0°21'36
min. Earth dist.	-8613 Dec 06 j 02:53	13°♈24'54	29.15160 AU	max. Earth dist.	-8607 Jun 20 j 13:53	25°♈28'37	31.18521 AU
direct	-8612 Feb 24 j 04:51	12°♈01'11		morning rise	-8607 Jul 07 j 06:54	26°♈05'52	
evening set	-8612 May 25 j 11:44	13°♈58'14		retrograde	-8607 Oct 01 j 09:32	27°♈57'39	
max. Earth dist.	-8612 Jun 09 j 06:50	14°♈31'06	31.15493 AU	opposition	-8607 Dec 17 j 22:24	26°♈35'43	0°25'53
conjunction	-8612 Jun 10 j 09:17	14°♈33'34	-0°07'45	min. Earth dist.	-8607 Dec 18 j 22:07	26°♈34'05	29.18927 AU
minimum elong	-8612 Jun 10 j 09:17	14°♈33'34	0°07'41	direct	-8606 Mar 09 j 06:44	25°♈10'22	
behind sun begin	-8612 Jun 10 j 03:24	14°♈33'02		evening set	-8606 Jun 08 j 08:59	27°♈07'07	
behind sun end	-8612 Jun 10 j 15:09	14°♈34'05		max. Earth dist.	-8606 Jun 23 j 01:36	27°♈39'49	31.19283 AU
morning rise	-8612 Jun 26 j 02:36	15°♈08'33		conjunction	-8606 Jun 24 j 02:55	27°♈42'11	0°27'10
retrograde	-8612 Sep 20 j 08:50	17°♈00'28		minimum elong	-8606 Jun 24 j 02:55	27°♈42'11	0°27'22
opposition	-8612 Dec 06 j 13:25	15°♈38'33	-0°05'10	morning rise	-8606 Jul 09 j 16:44	28°♈16'56	
min. Earth dist.	-8612 Dec 07 j 14:09	15°♈36'50	29.15863 AU		-8606 Sep 11 j 08:31	0°♈	
direct	-8611 Feb 25 j 18:59	14°♈13'08		retrograde	-8606 Oct 03 j 19:29	0°♈08'45	
evening set	-8611 May 27 j 23:42	16°♈10'08			-8606 Oct 26 j 16:17	30°♈	
conjunction	-8611 Jun 12 j 20:33	16°♈45'25	-0°01'55	opposition	-8606 Dec 20 j 10:00	28°♈46'50	0°32'01
				min. Earth dist.	-8606 Dec 21 j 10:17	28°♈45'10	29.19753 AU

Attention, astronomical year style is used: The year -8605 in astronomical counting style is the year 8606 BCE in historical counting style.

direct	-8605 Mar	11 j 17:29	27° $\Upsilon$ 21'33		conjunction	-8599 Jul	09 j 03:35	13° $\mathcal{B}$ 01'16	1°05'51
evening set	-8605 Jun	10 j 20:12	29° $\Upsilon$ 18'16		minimum elong	-8599 Jul	09 j 03:34	13° $\mathcal{B}$ 01'16	1°06'11
					morning rise	-8599 Jul	24 j 13:06	13° $\mathcal{B}$ 35'43	
conjunction	-8605 Jun	26 j 13:27	29° $\Upsilon$ 53'18	0°32'53		-8599 Sep	08 j 05:58	15° $\mathcal{B}$	
minimum elong	-8605 Jun	26 j 13:27	29° $\Upsilon$ 53'17	0°33'05	retrograde	-8599 Oct	18 j 19:24	15° $\mathcal{B}$ 27'52	
max. Earth dist.	-8605 Jun	25 j 12:24	29° $\Upsilon$ 50'57	31.20166 AU		-8599 Nov	29 j 21:52	15° $\mathcal{R}$ $\mathcal{B}$	
	-8605 Jun	29 j 12:59	0° $\mathcal{B}$		opposition	-8598 Jan	04 j 20:45	14° $\mathcal{B}$ 06'08	1°13'06
morning rise	-8605 Jul	12 j 02:46	0° $\mathcal{B}$ 28'00		min. Earth dist.	-8598 Jan	05 j 19:39	14° $\mathcal{B}$ 04'34	29.25320 AU
retrograde	-8605 Oct	06 j 06:32	2° $\mathcal{B}$ 19'51		direct	-8598 Mar	27 j 08:58	12° $\mathcal{B}$ 41'20	
opposition	-8605 Dec	22 j 21:19	0° $\mathcal{B}$ 57'59	0°38'05	evening set	-8598 Jun	26 j 01:04	14° $\mathcal{B}$ 37'46	
min. Earth dist.	-8605 Dec	23 j 20:20	0° $\mathcal{B}$ 56'24	29.20670 AU		-8598 Jul	06 j 00:52	15° $\mathcal{B}$	
	-8604 Jan	30 j 16:02	30° $\mathcal{R}$ $\Upsilon$						
direct	-8604 Mar	13 j 06:53	29° $\Upsilon$ 32'47		conjunction	-8598 Jul	11 j 13:31	15° $\mathcal{B}$ 12'28	1°11'03
	-8604 Apr	23 j 21:05	0° $\mathcal{B}$		minimum elong	-8598 Jul	11 j 13:30	15° $\mathcal{B}$ 12'28	1°11'24
evening set	-8604 Jun	12 j 07:22	1° $\mathcal{B}$ 29'29		max. Earth dist.	-8598 Jul	10 j 13:52	15° $\mathcal{B}$ 10'15	31.25447 AU
					morning rise	-8598 Jul	26 j 22:36	15° $\mathcal{B}$ 46'52	
conjunction	-8604 Jun	27 j 23:57	2° $\mathcal{B}$ 04'28	0°38'32	retrograde	-8598 Oct	21 j 06:03	17° $\mathcal{B}$ 39'03	
minimum elong	-8604 Jun	27 j 23:57	2° $\mathcal{B}$ 04'28	0°38'46	opposition	-8597 Jan	07 j 08:43	16° $\mathcal{B}$ 17'17	1°18'36
max. Earth dist.	-8604 Jun	26 j 23:07	2° $\mathcal{B}$ 02'09	31.21109 AU	min. Earth dist.	-8597 Jan	08 j 06:24	16° $\mathcal{B}$ 15'48	29.25688 AU
morning rise	-8604 Jul	13 j 12:38	2° $\mathcal{B}$ 39'08			-8597 Mar	07 j 21:59	15° $\mathcal{R}$ $\mathcal{B}$	
retrograde	-8604 Oct	07 j 18:31	4° $\mathcal{B}$ 31'02		direct	-8597 Mar	29 j 20:42	14° $\mathcal{B}$ 52'29	
opposition	-8604 Dec	24 j 09:02	3° $\mathcal{B}$ 09'13	0°44'07		-8597 Apr	20 j 12:32	15° $\mathcal{B}$	
min. Earth dist.	-8604 Dec	25 j 08:26	3° $\mathcal{B}$ 07'37	29.21640 AU	evening set	-8597 Jun	28 j 11:41	16° $\mathcal{B}$ 48'51	
direct	-8603 Mar	15 j 18:57	1° $\mathcal{B}$ 44'07						
evening set	-8603 Jun	14 j 18:20	3° $\mathcal{B}$ 40'49		conjunction	-8597 Jul	13 j 23:33	17° $\mathcal{B}$ 23'29	1°16'09
max. Earth dist.	-8603 Jun	29 j 10:22	4° $\mathcal{B}$ 13'30	31.22076 AU	minimum elong	-8597 Jul	13 j 23:32	17° $\mathcal{B}$ 23'29	1°16'30
					max. Earth dist.	-8597 Jul	13 j 00:47	17° $\mathcal{B}$ 21'21	31.25761 AU
conjunction	-8603 Jun	30 j 10:18	4° $\mathcal{B}$ 15'45	0°44'09	morning rise	-8597 Jul	29 j 07:56	17° $\mathcal{B}$ 57'51	
minimum elong	-8603 Jun	30 j 10:18	4° $\mathcal{B}$ 15'45	0°44'24	retrograde	-8597 Oct	23 j 15:42	19° $\mathcal{B}$ 50'04	
morning rise	-8603 Jul	15 j 22:20	4° $\mathcal{B}$ 50'22		opposition	-8596 Jan	09 j 20:43	18° $\mathcal{B}$ 28'14	1°23'59
retrograde	-8603 Oct	10 j 04:36	6° $\mathcal{B}$ 42'20		min. Earth dist.	-8596 Jan	10 j 19:07	18° $\mathcal{B}$ 26'43	29.25985 AU
opposition	-8603 Dec	26 j 20:51	5° $\mathcal{B}$ 20'33	0°50'04	direct	-8596 Mar	31 j 07:13	17° $\mathcal{B}$ 03'27	
min. Earth dist.	-8603 Dec	27 j 19:41	5° $\mathcal{B}$ 19'00	29.22584 AU	evening set	-8596 Jun	29 j 22:13	18° $\mathcal{B}$ 59'43	
direct	-8602 Mar	18 j 08:49	3° $\mathcal{B}$ 55'33		max. Earth dist.	-8596 Jul	14 j 11:06	19° $\mathcal{B}$ 32'13	31.26043 AU
evening set	-8602 Jun	17 j 05:28	5° $\mathcal{B}$ 52'13						
					conjunction	-8596 Jul	15 j 09:21	19° $\mathcal{B}$ 34'18	1°21'07
conjunction	-8602 Jul	02 j 20:38	6° $\mathcal{B}$ 27'07	0°49'41	minimum elong	-8596 Jul	15 j 09:21	19° $\mathcal{B}$ 34'18	1°21'30
minimum elong	-8602 Jul	02 j 20:38	6° $\mathcal{B}$ 27'07	0°49'58	morning rise	-8596 Jul	30 j 17:12	20° $\mathcal{B}$ 08'37	
max. Earth dist.	-8602 Jul	01 j 20:08	6° $\mathcal{B}$ 24'49	31.22987 AU	retrograde	-8596 Oct	25 j 02:25	22° $\mathcal{B}$ 00'52	
morning rise	-8602 Jul	18 j 08:09	7° $\mathcal{B}$ 01'41		opposition	-8595 Jan	11 j 08:48	20° $\mathcal{B}$ 38'59	1°29'15
retrograde	-8602 Oct	12 j 15:09	8° $\mathcal{B}$ 53'43		min. Earth dist.	-8595 Jan	12 j 05:39	20° $\mathcal{B}$ 37'34	29.26265 AU
opposition	-8602 Dec	29 j 08:37	7° $\mathcal{B}$ 31'59	0°55'58	direct	-8595 Apr	02 j 21:05	19° $\mathcal{B}$ 14'13	
min. Earth dist.	-8602 Dec	30 j 07:23	7° $\mathcal{B}$ 30'25	29.23470 AU	evening set	-8595 Jul	02 j 08:31	21° $\mathcal{B}$ 10'24	
direct	-8601 Mar	20 j 19:50	6° $\mathcal{B}$ 07'02						
evening set	-8601 Jun	19 j 16:23	8° $\mathcal{B}$ 03'41		conjunction	-8595 Jul	17 j 18:56	21° $\mathcal{B}$ 44'56	1°25'59
max. Earth dist.	-8601 Jul	04 j 07:43	8° $\mathcal{B}$ 36'21	31.23806 AU	minimum elong	-8595 Jul	17 j 18:55	21° $\mathcal{B}$ 44'56	1°26'23
					max. Earth dist.	-8595 Jul	16 j 21:10	21° $\mathcal{B}$ 42'53	31.26328 AU
conjunction	-8601 Jul	05 j 07:02	8° $\mathcal{B}$ 38'32	0°55'09	morning rise	-8595 Aug	02 j 02:11	22° $\mathcal{B}$ 19'12	
minimum elong	-8601 Jul	05 j 07:02	8° $\mathcal{B}$ 38'32	0°55'27	retrograde	-8595 Oct	27 j 14:03	24° $\mathcal{B}$ 11'31	
morning rise	-8601 Jul	20 j 17:49	9° $\mathcal{B}$ 13'04		opposition	-8594 Jan	13 j 21:03	22° $\mathcal{B}$ 49'35	1°34'23
retrograde	-8601 Oct	14 j 23:50	11° $\mathcal{B}$ 05'08		min. Earth dist.	-8594 Jan	14 j 17:46	22° $\mathcal{B}$ 48'10	29.26598 AU
opposition	-8601 Dec	31 j 20:36	9° $\mathcal{B}$ 43'25	1°01'46	direct	-8594 Apr	05 j 08:44	21° $\mathcal{B}$ 24'50	
min. Earth dist.	-8600 Jan	01 j 19:38	9° $\mathcal{B}$ 41'51	29.24222 AU	evening set	-8594 Jul	04 j 18:44	23° $\mathcal{B}$ 20'57	
direct	-8600 Mar	22 j 09:16	8° $\mathcal{B}$ 18'33		max. Earth dist.	-8594 Jul	19 j 08:15	23° $\mathcal{B}$ 53'31	31.26692 AU
evening set	-8600 Jun	21 j 03:28	10° $\mathcal{B}$ 15'08						
					conjunction	-8594 Jul	20 j 04:34	23° $\mathcal{B}$ 55'26	1°30'43
conjunction	-8600 Jul	06 j 17:15	10° $\mathcal{B}$ 49'56	1°00'33	minimum elong	-8594 Jul	20 j 04:33	23° $\mathcal{B}$ 55'26	1°31'07
minimum elong	-8600 Jul	06 j 17:14	10° $\mathcal{B}$ 49'56	1°00'52	morning rise	-8594 Aug	04 j 11:12	24° $\mathcal{B}$ 29'39	
max. Earth dist.	-8600 Jul	05 j 16:58	10° $\mathcal{B}$ 47'39	31.24486 AU	retrograde	-8594 Oct	29 j 23:44	26° $\mathcal{B}$ 22'02	
morning rise	-8600 Jul	22 j 03:32	11° $\mathcal{B}$ 24'26		opposition	-8593 Jan	16 j 09:05	25° $\mathcal{B}$ 00'04	1°39'22
retrograde	-8600 Oct	16 j 11:16	13° $\mathcal{B}$ 16'32		min. Earth dist.	-8593 Jan	17 j 04:38	24° $\mathcal{B}$ 58'45	29.27003 AU
opposition	-8599 Jan	02 j 08:33	11° $\mathcal{B}$ 54'50	1°07'29	direct	-8593 Apr	07 j 22:08	23° $\mathcal{B}$ 35'22	
min. Earth dist.	-8599 Jan	03 j 06:46	11° $\mathcal{B}$ 53'19	29.24841 AU	evening set	-8593 Jul	07 j 04:59	25° $\mathcal{B}$ 31'27	
direct	-8599 Mar	24 j 20:39	10° $\mathcal{B}$ 29'59						
evening set	-8599 Jun	23 j 14:20	12° $\mathcal{B}$ 26'32		conjunction	-8593 Jul	22 j 14:03	26° $\mathcal{B}$ 05'52	1°35'20
max. Earth dist.	-8599 Jul	08 j 04:26	12° $\mathcal{B}$ 59'06	31.25026 AU	minimum elong	-8593 Jul	22 j 14:02	26° $\mathcal{B}$ 05'52	1°35'45
					max. Earth dist.	-8593 Jul	21 j 17:40	26° $\mathcal{B}$ 03'57	31.27138 AU



## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25

Attention, astronomical year style is used: The year -8593 in astronomical counting style is the year 8594 BCE in historical counting style.

morning rise	-8593 Aug 06 j 20:14	26° <del>8</del> 40'04		direct	-8586 Apr 23 j 07:44	8° <del>II</del> 51'26	
retrograde	-8593 Nov 01 j 10:48	28° <del>8</del> 32'31		evening set	-8586 Jul 22 j 03:03	10° <del>II</del> 47'10	
opposition	-8592 Jan 18 j 21:15	27° <del>8</del> 10'34	1°44'13				
min. Earth dist.	-8592 Jan 19 j 16:01	27° <del>8</del> 09'18	29.27502 AU	conjunction	-8586 Aug 06 j 07:49	11° <del>II</del> 21'19	2°03'24
direct	-8592 Apr 09 j 09:14	25° <del>8</del> 45'56		minimum elong	-8586 Aug 06 j 07:48	11° <del>II</del> 21'19	2°03'54
evening set	-8592 Jul 08 j 15:00	27° <del>8</del> 41'58		max. Earth dist.	-8586 Aug 05 j 16:00	11° <del>II</del> 19'49	31.29733 AU
				morning rise	-8586 Aug 21 j 10:29	11° <del>II</del> 55'17	
conjunction	-8592 Jul 23 j 23:33	28° <del>8</del> 16'21	1°39'48	retrograde	-8586 Nov 16 j 13:44	13° <del>II</del> 48'34	
minimum elong	-8592 Jul 23 j 23:32	28° <del>8</del> 16'21	1°40'14	opposition	-8585 Feb 03 j 12:42	12° <del>II</del> 26'33	2°13'38
max. Earth dist.	-8592 Jul 23 j 05:06	28° <del>8</del> 14'37	31.27659 AU	min. Earth dist.	-8585 Feb 04 j 03:51	12° <del>II</del> 25'32	29.29860 AU
morning rise	-8592 Aug 08 j 05:01	28° <del>8</del> 50'30		direct	-8585 Apr 25 j 18:30	11° <del>II</del> 02'25	
	-8592 Sep 12 j 18:04	0° <del>II</del>		evening set	-8585 Jul 24 j 12:46	12° <del>II</del> 58'05	
retrograde	-8592 Nov 02 j 19:56	0° <del>II</del> 43'04					
	-8592 Dec 26 j 11:55	30° <del>8</del>		conjunction	-8585 Aug 08 j 17:08	13° <del>II</del> 32'11	2°06'44
opposition	-8591 Jan 20 j 09:36	29° <del>8</del> 21'08	1°48'55	minimum elong	-8585 Aug 08 j 17:07	13° <del>II</del> 32'11	2°07'15
min. Earth dist.	-8591 Jan 21 j 03:56	29° <del>8</del> 19'53	29.28043 AU	max. Earth dist.	-8585 Aug 08 j 02:37	13° <del>II</del> 30'49	31.29644 AU
direct	-8591 Apr 11 j 22:39	27° <del>8</del> 56'36		morning rise	-8585 Aug 23 j 19:18	14° <del>II</del> 06'08	
evening set	-8591 Jul 11 j 01:10	29° <del>8</del> 52'35		retrograde	-8585 Nov 18 j 23:40	15° <del>II</del> 59'30	
	-8591 Jul 14 j 09:36	0° <del>II</del>		opposition	-8584 Feb 06 j 01:21	14° <del>II</del> 37'25	2°17'07
				min. Earth dist.	-8584 Feb 06 j 15:29	14° <del>II</del> 36'27	29.29716 AU
conjunction	-8591 Jul 26 j 08:54	0° <del>II</del> 26'56	1°44'07	direct	-8584 Apr 27 j 07:35	13° <del>II</del> 13'18	
minimum elong	-8591 Jul 26 j 08:54	0° <del>II</del> 26'56	1°44'34	evening set	-8584 Jul 25 j 22:24	15° <del>II</del> 08'52	
max. Earth dist.	-8591 Jul 25 j 14:12	0° <del>II</del> 25'10	31.28213 AU	max. Earth dist.	-8584 Aug 09 j 11:28	15° <del>II</del> 41'33	31.29461 AU
morning rise	-8591 Aug 10 j 14:01	1° <del>II</del> 01'03					
retrograde	-8591 Nov 05 j 07:51	2° <del>II</del> 53'44		conjunction	-8584 Aug 10 j 02:06	15° <del>II</del> 42'55	2°09'54
opposition	-8590 Jan 22 j 21:55	1° <del>II</del> 31'49	1°53'28	minimum elong	-8584 Aug 10 j 02:05	15° <del>II</del> 42'55	2°10'26
min. Earth dist.	-8590 Jan 23 j 14:52	1° <del>II</del> 30'40	29.28605 AU	morning rise	-8584 Aug 25 j 04:00	16° <del>II</del> 16'50	
direct	-8590 Apr 14 j 09:43	0° <del>II</del> 07'23		retrograde	-8584 Nov 20 j 11:17	18° <del>II</del> 10'18	
evening set	-8590 Jul 13 j 11:04	2° <del>II</del> 03'20		opposition	-8583 Feb 07 j 14:04	16° <del>II</del> 48'08	2°20'23
				min. Earth dist.	-8583 Feb 08 j 03:24	16° <del>II</del> 47'14	29.29528 AU
conjunction	-8590 Jul 28 j 18:20	2° <del>II</del> 37'38	1°48'18	direct	-8583 Apr 29 j 19:18	15° <del>II</del> 24'02	
minimum elong	-8590 Jul 28 j 18:19	2° <del>II</del> 37'38	1°48'46	evening set	-8583 Jul 28 j 07:51	17° <del>II</del> 19'29	
max. Earth dist.	-8590 Jul 28 j 01:11	2° <del>II</del> 36'01	31.28741 AU				
morning rise	-8590 Aug 12 j 22:47	3° <del>II</del> 11'44		conjunction	-8583 Aug 12 j 11:12	17° <del>II</del> 53'31	2°12'52
retrograde	-8590 Nov 07 j 16:32	5° <del>II</del> 04'32		minimum elong	-8583 Aug 12 j 11:11	17° <del>II</del> 53'31	2°13'24
opposition	-8589 Jan 25 j 10:25	3° <del>II</del> 42'38	1°57'51	max. Earth dist.	-8583 Aug 11 j 22:39	17° <del>II</del> 52'20	31.29260 AU
min. Earth dist.	-8589 Jan 26 j 03:46	3° <del>II</del> 41'28	29.29106 AU	morning rise	-8583 Aug 27 j 12:35	18° <del>II</del> 27'24	
direct	-8589 Apr 16 j 21:30	2° <del>II</del> 18'18		retrograde	-8583 Nov 22 j 20:58	20° <del>II</del> 20'56	
evening set	-8589 Jul 15 j 21:11	4° <del>II</del> 14'12		opposition	-8582 Feb 10 j 02:47	18° <del>II</del> 58'41	2°23'28
max. Earth dist.	-8589 Jul 30 j 10:22	4° <del>II</del> 46'50	31.29193 AU	min. Earth dist.	-8582 Feb 10 j 15:27	18° <del>II</del> 57'50	29.29344 AU
				direct	-8582 May 02 j 09:25	17° <del>II</del> 34'37	
conjunction	-8589 Jul 31 j 03:42	4° <del>II</del> 48'28	1°52'19	evening set	-8582 Jul 30 j 17:16	19° <del>II</del> 29'59	
minimum elong	-8589 Jul 31 j 03:41	4° <del>II</del> 48'28	1°52'47				
morning rise	-8589 Aug 15 j 07:45	5° <del>II</del> 22'32		conjunction	-8582 Aug 14 j 20:00	20° <del>II</del> 03'58	2°15'39
retrograde	-8589 Nov 10 j 03:32	7° <del>II</del> 15'28		minimum elong	-8582 Aug 14 j 19:59	20° <del>II</del> 03'58	2°16'12
opposition	-8588 Jan 27 j 22:44	5° <del>II</del> 53'34	2°02'04	max. Earth dist.	-8582 Aug 14 j 07:31	20° <del>II</del> 02'47	31.29102 AU
min. Earth dist.	-8588 Jan 28 j 14:38	5° <del>II</del> 52'29	29.29505 AU	morning rise	-8582 Aug 29 j 21:13	20° <del>II</del> 37'49	
direct	-8588 Apr 18 j 08:29	4° <del>II</del> 29'18		retrograde	-8582 Nov 25 j 08:44	22° <del>II</del> 31'28	
evening set	-8588 Jul 17 j 07:13	6° <del>II</del> 25'10		opposition	-8581 Feb 12 j 15:23	21° <del>II</del> 09'09	2°26'21
				min. Earth dist.	-8581 Feb 13 j 02:12	21° <del>II</del> 08'25	29.29231 AU
conjunction	-8588 Aug 01 j 13:12	6° <del>II</del> 59'24	1°56'11	direct	-8581 May 04 j 20:48	19° <del>II</del> 45'05	
minimum elong	-8588 Aug 01 j 13:11	6° <del>II</del> 59'24	1°56'40	evening set	-8581 Aug 02 j 02:33	21° <del>II</del> 40'22	
max. Earth dist.	-8588 Jul 31 j 20:45	6° <del>II</del> 57'51	31.29514 AU				
morning rise	-8588 Aug 16 j 16:40	7° <del>II</del> 33'26		conjunction	-8581 Aug 17 j 04:57	22° <del>II</del> 14'20	2°18'15
retrograde	-8588 Nov 11 j 14:03	9° <del>II</del> 26'29		minimum elong	-8581 Aug 17 j 04:57	22° <del>II</del> 14'20	2°18'47
opposition	-8587 Jan 29 j 11:30	8° <del>II</del> 04'34	2°06'06	max. Earth dist.	-8581 Aug 16 j 18:22	22° <del>II</del> 13'19	31.29017 AU
min. Earth dist.	-8587 Jan 30 j 03:57	8° <del>II</del> 03'28	29.29770 AU	morning rise	-8581 Sep 01 j 05:42	22° <del>II</del> 48'10	
direct	-8587 Apr 20 j 18:22	6° <del>II</del> 40'22		retrograde	-8581 Nov 27 j 16:53	24° <del>II</del> 41'55	
evening set	-8587 Jul 19 j 17:07	8° <del>II</del> 36'11		opposition	-8580 Feb 15 j 04:04	23° <del>II</del> 19'33	2°29'00
				min. Earth dist.	-8580 Feb 15 j 14:39	23° <del>II</del> 18'50	29.29198 AU
conjunction	-8587 Aug 03 j 22:29	9° <del>II</del> 10'22	1°59'52	direct	-8580 May 06 j 09:00	21° <del>II</del> 55'33	
minimum elong	-8587 Aug 03 j 22:28	9° <del>II</del> 10'22	2°00'22	evening set	-8580 Aug 03 j 11:55	23° <del>II</del> 50'45	
max. Earth dist.	-8587 Aug 03 j 06:37	9° <del>II</del> 08'52	31.29703 AU				
morning rise	-8587 Aug 19 j 01:31	9° <del>II</del> 44'22		conjunction	-8580 Aug 18 j 13:48	24° <del>II</del> 24'41	2°20'38
retrograde	-8587 Nov 14 j 01:16	11° <del>II</del> 37'32		minimum elong	-8580 Aug 18 j 13:47	24° <del>II</del> 24'41	2°21'11
opposition	-8586 Feb 01 j 00:07	10° <del>II</del> 15'35	2°09'58	max. Earth dist.	-8580 Aug 18 j 03:48	24° <del>II</del> 23'44	31.29037 AU
min. Earth dist.	-8586 Feb 01 j 15:07	10° <del>II</del> 14'35	29.29882 AU	morning rise	-8580 Sep 02 j 14:21	24° <del>II</del> 58'30	

## Planetary Phenomena of Neptune from -8900 through -8398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26

Attention, astronomical year style is used: The year -8580 in astronomical counting style is the year 8581 BCE in historical counting style.

retrograde	-8580 Nov 29 j 03:44	26° $\Pi$ 52'22		evening set	-8573 Aug 19 j 04:29	9° $\Theta$ 05'30	
opposition	-8579 Feb 16 j 16:47	25° $\Pi$ 29'59	2°31'27				
min. Earth dist.	-8579 Feb 17 j 01:10	25° $\Pi$ 29'25	29.29258 AU	conjunction	-8573 Sep 03 j 04:15	9° $\Theta$ 39'17	2°31'35
direct	-8579 May 08 j 20:18	24° $\Pi$ 06'03		minimum elong	-8573 Sep 03 j 04:15	9° $\Theta$ 39'17	2°32'09
evening set	-8579 Aug 05 j 21:02	26° $\Pi$ 01'10		max. Earth dist.	-8573 Sep 02 j 23:56	9° $\Theta$ 38'53	31.28609 AU
				morning rise	-8573 Sep 18 j 03:45	10° $\Theta$ 13'04	
conjunction	-8579 Aug 20 j 22:35	26° $\Pi$ 35'04	2°22'50	retrograde	-8573 Dec 15 j 12:51	12° $\Theta$ 07'53	
minimum elong	-8579 Aug 20 j 22:35	26° $\Pi$ 35'04	2°23'22	opposition	-8572 Mar 04 j 11:19	10° $\Theta$ 45'12	2°42'23
max. Earth dist.	-8579 Aug 20 j 13:57	26° $\Pi$ 34'15	31.29119 AU	min. Earth dist.	-8572 Mar 04 j 14:06	10° $\Theta$ 45'00	29.28589 AU
morning rise	-8579 Sep 04 j 22:52	27° $\Pi$ 08'53		direct	-8572 May 24 j 03:36	9° $\Theta$ 21'41	
retrograde	-8579 Dec 01 j 14:20	29° $\Pi$ 02'54		evening set	-8572 Aug 20 j 13:30	11° $\Theta$ 16'16	
opposition	-8578 Feb 19 j 05:42	27° $\Pi$ 40'29	2°33'41				
min. Earth dist.	-8578 Feb 19 j 14:08	27° $\Pi$ 39'55	29.29370 AU	conjunction	-8572 Sep 04 j 13:14	11° $\Theta$ 50'03	2°32'18
direct	-8578 May 11 j 06:20	26° $\Pi$ 16'38		minimum elong	-8572 Sep 04 j 13:14	11° $\Theta$ 50'03	2°32'52
evening set	-8578 Aug 08 j 06:17	28° $\Pi$ 11'41		max. Earth dist.	-8572 Sep 04 j 10:26	11° $\Theta$ 49'47	31.28124 AU
				morning rise	-8572 Sep 19 j 12:36	12° $\Theta$ 23'50	
conjunction	-8578 Aug 23 j 07:30	28° $\Pi$ 45'34	2°24'49	retrograde	-8572 Dec 16 j 22:02	14° $\Theta$ 18'46	
minimum elong	-8578 Aug 23 j 07:29	28° $\Pi$ 45'33	2°25'22	opposition	-8571 Mar 07 j 00:27	12° $\Theta$ 55'59	2°43'02
max. Earth dist.	-8578 Aug 23 j 00:04	28° $\Pi$ 44'51	31.29237 AU	min. Earth dist.	-8571 Mar 07 j 03:13	12° $\Theta$ 55'48	29.28072 AU
morning rise	-8578 Sep 07 j 07:33	29° $\Pi$ 19'22		direct	-8571 May 26 j 16:10	11° $\Theta$ 32'29	
	-8578 Sep 26 j 14:56	0° $\Theta$		evening set	-8571 Aug 22 j 22:26	13° $\Theta$ 26'57	
retrograde	-8578 Dec 04 j 01:20	1° $\Theta$ 13'31					
	-8577 Feb 16 j 05:27	30° $\kappa$ $\Pi$		conjunction	-8571 Sep 06 j 21:59	14° $\Theta$ 00'44	2°32'48
opposition	-8577 Feb 21 j 18:19	29° $\Pi$ 51'05	2°35'42	minimum elong	-8571 Sep 06 j 21:59	14° $\Theta$ 00'44	2°33'21
min. Earth dist.	-8577 Feb 22 j 00:56	29° $\Pi$ 50'38	29.29477 AU	max. Earth dist.	-8571 Sep 06 j 19:51	14° $\Theta$ 00'31	31.27597 AU
direct	-8577 May 13 j 18:18	28° $\Pi$ 27'19		morning rise	-8571 Sep 21 j 21:28	14° $\Theta$ 34'30	
	-8577 Jul 31 j 07:40	0° $\Theta$		retrograde	-8571 Dec 19 j 09:12	16° $\Theta$ 29'33	
evening set	-8577 Aug 10 j 15:36	0° $\Theta$ 22'18		opposition	-8570 Mar 09 j 13:23	15° $\Theta$ 06'41	2°43'27
				min. Earth dist.	-8570 Mar 09 j 14:05	15° $\Theta$ 06'38	29.27539 AU
conjunction	-8577 Aug 25 j 16:23	0° $\Theta$ 56'10	2°26'35	direct	-8570 May 29 j 04:04	13° $\Theta$ 43'12	
minimum elong	-8577 Aug 25 j 16:23	0° $\Theta$ 56'10	2°27'09	evening set	-8570 Aug 25 j 07:23	15° $\Theta$ 37'34	
max. Earth dist.	-8577 Aug 25 j 09:13	0° $\Theta$ 55'29	31.29316 AU				
morning rise	-8577 Sep 09 j 16:19	1° $\Theta$ 29'57		conjunction	-8570 Sep 09 j 06:50	16° $\Theta$ 11'20	2°33'05
retrograde	-8577 Dec 06 j 13:56	3° $\Theta$ 24'16		minimum elong	-8570 Sep 09 j 06:50	16° $\Theta$ 11'20	2°33'38
opposition	-8576 Feb 24 j 07:18	2° $\Theta$ 01'48	2°37'29	max. Earth dist.	-8570 Sep 09 j 05:51	16° $\Theta$ 11'14	31.27066 AU
min. Earth dist.	-8576 Feb 24 j 13:46	2° $\Theta$ 01'21	29.29537 AU	morning rise	-8570 Sep 24 j 06:21	16° $\Theta$ 45'07	
direct	-8576 May 15 j 03:45	0° $\Theta$ 38'06		retrograde	-8570 Dec 21 j 19:41	18° $\Theta$ 40'17	
evening set	-8576 Aug 12 j 00:43	2° $\Theta$ 33'02		opposition	-8569 Mar 12 j 02:17	17° $\Theta$ 17'20	2°43'38
				min. Earth dist.	-8569 Mar 12 j 02:57	17° $\Theta$ 17'17	29.27043 AU
conjunction	-8576 Aug 27 j 01:19	3° $\Theta$ 06'52	2°28'09	direct	-8569 May 31 j 14:24	15° $\Theta$ 53'53	
minimum elong	-8576 Aug 27 j 01:18	3° $\Theta$ 06'52	2°28'43	evening set	-8569 Aug 27 j 16:15	17° $\Theta$ 48'09	
max. Earth dist.	-8576 Aug 26 j 19:47	3° $\Theta$ 06'20	31.29327 AU				
morning rise	-8576 Sep 11 j 00:56	3° $\Theta$ 40'39		conjunction	-8569 Sep 11 j 15:42	18° $\Theta$ 21'54	2°33'09
retrograde	-8576 Dec 08 j 00:38	5° $\Theta$ 35'06		minimum elong	-8569 Sep 11 j 15:42	18° $\Theta$ 21'54	2°33'41
opposition	-8575 Feb 25 j 20:20	4° $\Theta$ 12'36	2°39'03	max. Earth dist.	-8569 Sep 11 j 16:16	18° $\Theta$ 21'58	31.26609 AU
min. Earth dist.	-8575 Feb 26 j 01:39	4° $\Theta$ 12'15	29.29491 AU	morning rise	-8569 Sep 26 j 15:13	18° $\Theta$ 55'43	
direct	-8575 May 17 j 16:02	2° $\Theta$ 48'58		retrograde	-8569 Dec 24 j 06:26	20° $\Theta$ 51'00	
evening set	-8575 Aug 14 j 10:06	4° $\Theta$ 43'50		opposition	-8568 Mar 13 j 15:13	19° $\Theta$ 27'59	2°43'35
				min. Earth dist.	-8568 Mar 13 j 13:38	19° $\Theta$ 28'05	29.26623 AU
conjunction	-8575 Aug 29 j 10:16	5° $\Theta$ 17'39	2°29'31	direct	-8568 Jun 02 j 02:10	18° $\Theta$ 04'35	
minimum elong	-8575 Aug 29 j 10:16	5° $\Theta$ 17'39	2°30'04	evening set	-8568 Aug 29 j 01:05	19° $\Theta$ 58'45	
max. Earth dist.	-8575 Aug 29 j 04:29	5° $\Theta$ 17'06	31.29221 AU				
morning rise	-8575 Sep 13 j 09:55	5° $\Theta$ 51'26		conjunction	-8568 Sep 13 j 00:22	20° $\Theta$ 32'31	2°32'59
retrograde	-8575 Dec 10 j 13:36	7° $\Theta$ 46'01		minimum elong	-8568 Sep 13 j 00:22	20° $\Theta$ 32'31	2°33'32
opposition	-8574 Feb 28 j 09:20	6° $\Theta$ 23'28	2°40'23	max. Earth dist.	-8568 Sep 13 j 01:28	20° $\Theta$ 32'37	31.26236 AU
min. Earth dist.	-8574 Feb 28 j 13:58	6° $\Theta$ 23'09	29.29333 AU	morning rise	-8568 Sep 28 j 00:07	21° $\Theta$ 06'20	
direct	-8574 May 20 j 02:57	4° $\Theta$ 59'53		retrograde	-8568 Dec 25 j 19:03	23° $\Theta$ 01'46	
evening set	-8574 Aug 16 j 19:13	6° $\Theta$ 54'40		opposition	-8567 Mar 16 j 04:21	21° $\Theta$ 38'42	2°43'18
				min. Earth dist.	-8567 Mar 16 j 02:08	21° $\Theta$ 38'51	29.26305 AU
conjunction	-8574 Aug 31 j 19:21	7° $\Theta$ 28'28	2°30'39	direct	-8567 Jun 04 j 10:48	20° $\Theta$ 15'22	
minimum elong	-8574 Aug 31 j 19:21	7° $\Theta$ 28'28	2°31'13	evening set	-8567 Aug 31 j 09:51	22° $\Theta$ 09'28	
max. Earth dist.	-8574 Aug 31 j 15:17	7° $\Theta$ 28'05	31.28983 AU				
morning rise	-8574 Sep 15 j 18:46	8° $\Theta$ 02'15		conjunction	-8567 Sep 15 j 09:19	22° $\Theta$ 43'14	2°32'37
retrograde	-8574 Dec 13 j 00:27	9° $\Theta$ 56'58		minimum elong	-8567 Sep 15 j 09:20	22° $\Theta$ 43'14	2°33'09
opposition	-8573 Mar 02 j 22:23	8° $\Theta$ 34'21	2°41'30	max. Earth dist.	-8567 Sep 15 j 12:32	22° $\Theta$ 43'33	31.25960 AU
min. Earth dist.	-8573 Mar 03 j 02:40	8° $\Theta$ 34'03	29.29020 AU	morning rise	-8567 Sep 30 j 09:06	23° $\Theta$ 17'04	
direct	-8573 May 22 j 16:21	7° $\Theta$ 10'49		retrograde	-8567 Dec 28 j 06:00	25° $\Theta$ 12'39	

Attention, astronomical year style is used: The year -8566 in astronomical counting style is the year 8567 BCE in historical counting style.

opposition	-8566 Mar 18 j 17:15	23° $\mathring{\text{O}}$ 49'33	2°42'47	conjunction	-8560 Sep 30 j 01:10	8° $\mathring{\text{O}}$ 02'07	2°23'50
min. Earth dist.	-8566 Mar 18 j 13:30	23° $\mathring{\text{O}}$ 49'48	29.26053 AU	minimum elong	-8560 Sep 30 j 01:11	8° $\mathring{\text{O}}$ 02'07	2°24'19
direct	-8566 Jun 06 j 22:06	22° $\mathring{\text{O}}$ 26'18		max. Earth dist.	-8560 Sep 30 j 09:57	8° $\mathring{\text{O}}$ 02'57	31.23002 AU
evening set	-8566 Sep 02 j 18:46	24° $\mathring{\text{O}}$ 20'20		morning rise	-8560 Oct 15 j 02:59	8° $\mathring{\text{O}}$ 36'09	
				retrograde	-8559 Jan 12 j 18:10	10° $\mathring{\text{O}}$ 32'37	
conjunction	-8566 Sep 17 j 18:08	24° $\mathring{\text{O}}$ 54'06	2°32'01	opposition	-8559 Apr 03 j 13:15	9° $\mathring{\text{O}}$ 09'07	2°32'36
minimum elong	-8566 Sep 17 j 18:08	24° $\mathring{\text{O}}$ 54'06	2°32'33	min. Earth dist.	-8559 Apr 03 j 03:41	9° $\mathring{\text{O}}$ 09'46	29.22759 AU
max. Earth dist.	-8566 Sep 17 j 21:25	24° $\mathring{\text{O}}$ 54'25	31.25736 AU	direct	-8559 Jun 22 j 06:59	7° $\mathring{\text{O}}$ 46'11	
morning rise	-8566 Oct 02 j 18:17	25° $\mathring{\text{O}}$ 27'58		evening set	-8559 Sep 17 j 09:48	9° $\mathring{\text{O}}$ 39'34	
retrograde	-8566 Dec 30 j 19:51	27° $\mathring{\text{O}}$ 23'42					
opposition	-8565 Mar 21 j 06:18	26° $\mathring{\text{O}}$ 00'34	2°42'01	conjunction	-8559 Oct 02 j 10:26	10° $\mathring{\text{O}}$ 13'28	2°21'44
min. Earth dist.	-8565 Mar 21 j 01:35	26° $\mathring{\text{O}}$ 00'53	29.25841 AU	minimum elong	-8559 Oct 02 j 10:26	10° $\mathring{\text{O}}$ 13'28	2°22'13
direct	-8565 Jun 09 j 08:17	24° $\mathring{\text{O}}$ 37'24		max. Earth dist.	-8559 Oct 02 j 19:11	10° $\mathring{\text{O}}$ 14'18	31.22129 AU
evening set	-8565 Sep 05 j 03:32	26° $\mathring{\text{O}}$ 31'21		morning rise	-8559 Oct 17 j 12:49	10° $\mathring{\text{O}}$ 47'32	
				retrograde	-8558 Jan 15 j 06:07	12° $\mathring{\text{O}}$ 44'05	
conjunction	-8565 Sep 20 j 03:07	27° $\mathring{\text{O}}$ 05'09	2°31'11	opposition	-8558 Apr 06 j 02:17	11° $\mathring{\text{O}}$ 20'28	2°30'15
minimum elong	-8565 Sep 20 j 03:07	27° $\mathring{\text{O}}$ 05'09	2°31'43	min. Earth dist.	-8558 Apr 05 j 16:38	11° $\mathring{\text{O}}$ 21'07	29.21864 AU
max. Earth dist.	-8565 Sep 20 j 08:27	27° $\mathring{\text{O}}$ 05'39	31.25513 AU	direct	-8558 Jun 24 j 16:19	9° $\mathring{\text{O}}$ 57'32	
morning rise	-8565 Oct 05 j 03:18	27° $\mathring{\text{O}}$ 39'02		evening set	-8558 Sep 19 j 18:42	11° $\mathring{\text{O}}$ 50'47	
retrograde	-8564 Jan 02 j 07:53	29° $\mathring{\text{O}}$ 34'55					
opposition	-8564 Mar 22 j 19:26	28° $\mathring{\text{O}}$ 11'45	2°41'01	conjunction	-8558 Oct 04 j 19:48	12° $\mathring{\text{O}}$ 24'43	2°19'27
min. Earth dist.	-8564 Mar 22 j 14:08	28° $\mathring{\text{O}}$ 12'07	29.25595 AU	minimum elong	-8558 Oct 04 j 19:48	12° $\mathring{\text{O}}$ 24'43	2°19'54
direct	-8564 Jun 10 j 20:35	26° $\mathring{\text{O}}$ 48'40		max. Earth dist.	-8558 Oct 05 j 06:27	12° $\mathring{\text{O}}$ 25'43	31.21225 AU
evening set	-8564 Sep 06 j 12:35	28° $\mathring{\text{O}}$ 42'34		morning rise	-8558 Oct 19 j 22:28	12° $\mathring{\text{O}}$ 58'48	
				retrograde	-8557 Jan 17 j 16:59	14° $\mathring{\text{O}}$ 55'26	
conjunction	-8564 Sep 21 j 12:07	29° $\mathring{\text{O}}$ 16'22	2°30'09	opposition	-8557 Apr 08 j 15:14	13° $\mathring{\text{O}}$ 31'43	2°27'41
minimum elong	-8564 Sep 21 j 12:07	29° $\mathring{\text{O}}$ 16'22	2°30'40	min. Earth dist.	-8557 Apr 08 j 04:09	13° $\mathring{\text{O}}$ 32'28	29.20954 AU
max. Earth dist.	-8564 Sep 21 j 17:28	29° $\mathring{\text{O}}$ 16'53	31.25252 AU	direct	-8557 Jun 27 j 04:11	12° $\mathring{\text{O}}$ 08'46	
morning rise	-8564 Oct 06 j 12:41	29° $\mathring{\text{O}}$ 50'17		evening set	-8557 Sep 22 j 03:39	14° $\mathring{\text{O}}$ 01'55	
	-8564 Oct 10 j 22:52	0° $\mathring{\text{O}}$					
retrograde	-8563 Jan 03 j 21:12	1° $\mathring{\text{O}}$ 46'18		conjunction	-8557 Oct 07 j 04:53	14° $\mathring{\text{O}}$ 35'52	2°16'57
opposition	-8563 Mar 25 j 08:34	0° $\mathring{\text{O}}$ 23'07	2°39'48	minimum elong	-8557 Oct 07 j 04:54	14° $\mathring{\text{O}}$ 35'52	2°17'23
min. Earth dist.	-8563 Mar 25 j 01:46	0° $\mathring{\text{O}}$ 23'34	29.25295 AU	max. Earth dist.	-8557 Oct 07 j 15:37	14° $\mathring{\text{O}}$ 36'53	31.20342 AU
	-8563 Apr 08 j 20:19	30° $\mathring{\text{R}}$ $\mathring{\text{O}}$			-8557 Oct 17 j 20:37	15° $\mathring{\text{O}}$	
direct	-8563 Jun 13 j 06:52	29° $\mathring{\text{O}}$ 00'05		morning rise	-8557 Oct 22 j 08:10	15° $\mathring{\text{O}}$ 10'00	
	-8563 Aug 13 j 14:18	0° $\mathring{\text{O}}$		retrograde	-8556 Jan 20 j 06:21	17° $\mathring{\text{O}}$ 06'43	
evening set	-8563 Sep 08 j 21:31	0° $\mathring{\text{O}}$ 53'55		opposition	-8556 Apr 10 j 04:14	15° $\mathring{\text{O}}$ 42'54	2°24'55
				min. Earth dist.	-8556 Apr 09 j 16:08	15° $\mathring{\text{O}}$ 43'43	29.20106 AU
conjunction	-8563 Sep 23 j 21:18	1° $\mathring{\text{O}}$ 27'44	2°28'53		-8556 May 07 j 21:31	15° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
minimum elong	-8563 Sep 23 j 21:18	1° $\mathring{\text{O}}$ 27'44	2°29'24	direct	-8556 Jun 28 j 13:59	14° $\mathring{\text{O}}$ 19'57	
max. Earth dist.	-8563 Sep 24 j 03:57	1° $\mathring{\text{O}}$ 28'22	31.24892 AU		-8556 Aug 16 j 22:08	15° $\mathring{\text{O}}$	
morning rise	-8563 Oct 08 j 22:05	2° $\mathring{\text{O}}$ 01'40		evening set	-8556 Sep 23 j 12:34	16° $\mathring{\text{O}}$ 13'01	
retrograde	-8562 Jan 06 j 07:57	3° $\mathring{\text{O}}$ 57'50					
opposition	-8562 Mar 27 j 21:50	2° $\mathring{\text{O}}$ 34'35	2°38'20	conjunction	-8556 Oct 08 j 14:19	16° $\mathring{\text{O}}$ 46'59	2°14'15
min. Earth dist.	-8562 Mar 27 j 15:13	2° $\mathring{\text{O}}$ 35'02	29.24872 AU	minimum elong	-8556 Oct 08 j 14:20	16° $\mathring{\text{O}}$ 46'59	2°14'41
direct	-8562 Jun 15 j 19:34	1° $\mathring{\text{O}}$ 11'37		max. Earth dist.	-8556 Oct 09 j 03:09	16° $\mathring{\text{O}}$ 48'12	31.19534 AU
evening set	-8562 Sep 11 j 06:40	3° $\mathring{\text{O}}$ 05'21		morning rise	-8556 Oct 23 j 17:57	17° $\mathring{\text{O}}$ 21'10	
				retrograde	-8555 Jan 21 j 18:11	19° $\mathring{\text{O}}$ 18'00	
conjunction	-8562 Sep 26 j 06:36	3° $\mathring{\text{O}}$ 39'11	2°27'25	opposition	-8555 Apr 12 j 17:12	17° $\mathring{\text{O}}$ 54'06	2°21'55
minimum elong	-8562 Sep 26 j 06:36	3° $\mathring{\text{O}}$ 39'11	2°27'55	min. Earth dist.	-8555 Apr 12 j 04:19	17° $\mathring{\text{O}}$ 54'58	29.19338 AU
max. Earth dist.	-8562 Sep 26 j 13:36	3° $\mathring{\text{O}}$ 39'51	31.24409 AU	direct	-8555 Jul 01 j 01:23	16° $\mathring{\text{O}}$ 31'11	
morning rise	-8562 Oct 11 j 07:43	4° $\mathring{\text{O}}$ 13'09		evening set	-8555 Sep 25 j 21:33	18° $\mathring{\text{O}}$ 24'09	
retrograde	-8561 Jan 08 j 20:39	6° $\mathring{\text{O}}$ 09'25					
opposition	-8561 Mar 30 j 10:48	4° $\mathring{\text{O}}$ 46'07	2°36'39	conjunction	-8555 Oct 10 j 23:37	18° $\mathring{\text{O}}$ 58'10	2°11'21
min. Earth dist.	-8561 Mar 30 j 02:33	4° $\mathring{\text{O}}$ 46'40	29.24307 AU	minimum elong	-8555 Oct 10 j 23:38	18° $\mathring{\text{O}}$ 58'10	2°11'46
direct	-8561 Jun 18 j 07:53	3° $\mathring{\text{O}}$ 23'11		max. Earth dist.	-8555 Oct 11 j 12:43	18° $\mathring{\text{O}}$ 59'24	31.18826 AU
evening set	-8561 Sep 13 j 15:48	5° $\mathring{\text{O}}$ 16'49		morning rise	-8555 Oct 26 j 03:55	19° $\mathring{\text{O}}$ 32'23	
				retrograde	-8554 Jan 24 j 07:50	21° $\mathring{\text{O}}$ 29'20	
conjunction	-8561 Sep 28 j 15:54	5° $\mathring{\text{O}}$ 50'41	2°25'44	opposition	-8554 Apr 15 j 06:05	20° $\mathring{\text{O}}$ 05'22	2°18'43
minimum elong	-8561 Sep 28 j 15:55	5° $\mathring{\text{O}}$ 50'41	2°26'13	min. Earth dist.	-8554 Apr 14 j 15:30	20° $\mathring{\text{O}}$ 06'22	29.18664 AU
max. Earth dist.	-8561 Sep 28 j 23:26	5° $\mathring{\text{O}}$ 51'23	31.23768 AU	direct	-8554 Jul 03 j 11:17	18° $\mathring{\text{O}}$ 42'30	
morning rise	-8561 Oct 13 j 17:24	6° $\mathring{\text{O}}$ 24'40		evening set	-8554 Sep 28 j 06:35	20° $\mathring{\text{O}}$ 35'25	
retrograde	-8560 Jan 11 j 07:39	8° $\mathring{\text{O}}$ 21'03					
opposition	-8560 Apr 01 j 00:07	6° $\mathring{\text{O}}$ 57'39	2°34'44	conjunction	-8554 Oct 13 j 09:07	21° $\mathring{\text{O}}$ 09'28	2°08'15
min. Earth dist.	-8560 Mar 31 j 16:16	6° $\mathring{\text{O}}$ 58'11	29.23595 AU	minimum elong	-8554 Oct 13 j 09:07	21° $\mathring{\text{O}}$ 09'28	2°08'39
direct	-8560 Jun 19 j 18:48	5° $\mathring{\text{O}}$ 34'44		max. Earth dist.	-8554 Oct 13 j 23:38	21° $\mathring{\text{O}}$ 10'50	31.18182 AU
evening set	-8560 Sep 15 j 00:42	7° $\mathring{\text{O}}$ 28'14		morning rise	-8554 Oct 28 j 13:53	21° $\mathring{\text{O}}$ 43'44	

Attention, astronomical year style is used: The year -8553 in astronomical counting style is the year 8554 BCE in historical counting style.

retrograde	-8553 Jan 26 j 19:34	23° $\Omega$ 40'48		opposition	-8547 May 01 j 00:38	5° $\Upsilon$ 29'09	1°50'51
opposition	-8553 Apr 17 j 18:58	22° $\Omega$ 16'48	2°15'19	direct	-8547 Jul 18 j 15:38	4° $\Upsilon$ 06'32	
min. Earth dist.	-8553 Apr 17 j 04:19	22° $\Omega$ 17'48	29.18041 AU	evening set	-8547 Oct 13 j 00:09	5° $\Upsilon$ 59'00	
direct	-8553 Jul 05 j 23:13	20° $\Omega$ 54'00					
evening set	-8553 Sep 30 j 15:40	22° $\Omega$ 46'51		conjunction	-8547 Oct 28 j 06:19	6° $\Upsilon$ 33'21	1°41'35
				minimum elong	-8547 Oct 28 j 06:20	6° $\Upsilon$ 33'21	1°41'52
conjunction	-8553 Oct 15 j 18:39	23° $\Omega$ 20'57	2°04'59	max. Earth dist.	-8547 Oct 29 j 01:28	6° $\Upsilon$ 35'09	31.12645 AU
minimum elong	-8553 Oct 15 j 18:40	23° $\Omega$ 20'57	2°05'22	morning rise	-8547 Nov 12 j 15:28	7° $\Upsilon$ 08'00	
max. Earth dist.	-8553 Oct 16 j 10:01	23° $\Omega$ 22'24	31.17595 AU	retrograde	-8546 Feb 11 j 09:50	9° $\Upsilon$ 05'48	
morning rise	-8553 Oct 30 j 24:00	23° $\Omega$ 55'16		opposition	-8546 May 03 j 13:27	7° $\Upsilon$ 41'24	1°46'10
retrograde	-8552 Jan 29 j 09:31	25° $\Omega$ 52'27		min. Earth dist.	-8546 May 02 j 18:47	7° $\Upsilon$ 42'40	29.12170 AU
opposition	-8552 Apr 19 j 07:52	24° $\Omega$ 28'26	2°11'42	direct	-8546 Jul 21 j 02:42	6° $\Upsilon$ 18'45	
min. Earth dist.	-8552 Apr 18 j 15:22	24° $\Omega$ 29'33	29.17449 AU	evening set	-8546 Oct 15 j 09:45	8° $\Upsilon$ 11'08	
direct	-8552 Jul 07 j 11:00	23° $\Omega$ 05'42					
evening set	-8552 Oct 02 j 00:49	24° $\Omega$ 58'30		conjunction	-8546 Oct 30 j 16:25	8° $\Upsilon$ 45'31	1°37'08
				minimum elong	-8546 Oct 30 j 16:25	8° $\Upsilon$ 45'31	1°37'24
conjunction	-8552 Oct 17 j 04:12	25° $\Omega$ 32'38	2°01'30	max. Earth dist.	-8546 Oct 31 j 11:27	8° $\Upsilon$ 47'19	31.11483 AU
minimum elong	-8552 Oct 17 j 04:12	25° $\Omega$ 32'38	2°01'53	morning rise	-8546 Nov 15 j 02:19	9° $\Upsilon$ 20'13	
max. Earth dist.	-8552 Oct 17 j 20:10	25° $\Omega$ 34'08	31.16998 AU	retrograde	-8545 Feb 13 j 23:24	11° $\Upsilon$ 18'05	
morning rise	-8552 Nov 01 j 10:12	26° $\Omega$ 07'00		min. Earth dist.	-8545 May 05 j 06:10	9° $\Upsilon$ 54'55	29.11000 AU
retrograde	-8551 Jan 30 j 21:16	28° $\Omega$ 04'20		opposition	-8545 May 06 j 02:03	9° $\Upsilon$ 53'34	1°41'20
opposition	-8551 Apr 21 j 20:59	26° $\Omega$ 40'17	2°07'54	direct	-8545 Jul 23 j 12:40	8° $\Upsilon$ 30'53	
min. Earth dist.	-8551 Apr 21 j 04:54	26° $\Omega$ 41'22	29.16832 AU	evening set	-8545 Oct 17 j 19:19	10° $\Upsilon$ 23'10	
direct	-8551 Jul 09 j 21:23	25° $\Omega$ 17'36					
evening set	-8551 Oct 04 j 10:08	27° $\Omega$ 10'21		conjunction	-8545 Nov 02 j 02:35	10° $\Upsilon$ 57'37	1°32'33
				minimum elong	-8545 Nov 02 j 02:35	10° $\Upsilon$ 57'37	1°32'47
conjunction	-8551 Oct 19 j 14:08	27° $\Omega$ 44'32	1°57'51	max. Earth dist.	-8545 Nov 02 j 22:46	10° $\Upsilon$ 59'31	31.10325 AU
minimum elong	-8551 Oct 19 j 14:09	27° $\Omega$ 44'32	1°58'12	morning rise	-8545 Nov 17 j 13:07	11° $\Upsilon$ 32'22	
max. Earth dist.	-8551 Oct 20 j 07:21	27° $\Omega$ 46'10	31.16360 AU	retrograde	-8544 Feb 16 j 11:48	13° $\Upsilon$ 30'16	
morning rise	-8551 Nov 03 j 20:38	28° $\Omega$ 18'58		opposition	-8544 May 07 j 14:46	12° $\Upsilon$ 05'39	1°36'22
	-8550 Jan 01 j 11:00	0° $\Upsilon$		min. Earth dist.	-8544 May 06 j 18:55	12° $\Upsilon$ 07'00	29.09872 AU
retrograde	-8550 Feb 02 j 08:38	0° $\Upsilon$ 16'24		direct	-8544 Jul 25 j 00:54	10° $\Upsilon$ 42'56	
	-8550 Mar 07 j 01:40	30° $\Upsilon$ 0		evening set	-8544 Oct 19 j 04:51	12° $\Upsilon$ 35'09	
opposition	-8550 Apr 24 j 09:44	28° $\Omega$ 52'20	2°03'54				
min. Earth dist.	-8550 Apr 23 j 16:13	28° $\Omega$ 53'31	29.16139 AU	conjunction	-8544 Nov 03 j 12:45	13° $\Upsilon$ 09'38	1°27'50
direct	-8550 Jul 12 j 09:07	27° $\Omega$ 29'42		minimum elong	-8544 Nov 03 j 12:46	13° $\Upsilon$ 09'38	1°28'03
evening set	-8550 Oct 06 j 19:40	29° $\Omega$ 22'24		max. Earth dist.	-8544 Nov 04 j 09:49	13° $\Upsilon$ 11'37	31.09256 AU
				morning rise	-8544 Nov 18 j 24:00	13° $\Upsilon$ 44'26	
conjunction	-8550 Oct 22 j 00:01	29° $\Omega$ 56'37	1°54'02	retrograde	-8543 Feb 18 j 02:05	15° $\Upsilon$ 42'24	
minimum elong	-8550 Oct 22 j 00:02	29° $\Omega$ 56'37	1°54'22	min. Earth dist.	-8543 May 09 j 05:39	14° $\Upsilon$ 19'10	29.08845 AU
max. Earth dist.	-8550 Oct 22 j 16:47	29° $\Omega$ 58'12	31.15618 AU	opposition	-8543 May 10 j 03:18	14° $\Upsilon$ 17'41	1°31'15
	-8550 Oct 23 j 11:46	0° $\Upsilon$		direct	-8543 Jul 27 j 12:51	12° $\Upsilon$ 54'57	
morning rise	-8550 Nov 06 j 07:18	0° $\Upsilon$ 31'06		evening set	-8543 Oct 21 j 14:39	14° $\Upsilon$ 47'06	
retrograde	-8549 Feb 04 j 21:17	2° $\Upsilon$ 28'40					
opposition	-8549 Apr 26 j 22:46	1° $\Upsilon$ 04'32	1°59'43	conjunction	-8543 Nov 05 j 23:05	15° $\Upsilon$ 21'38	1°22'58
min. Earth dist.	-8549 Apr 26 j 05:32	1° $\Upsilon$ 05'42	29.15337 AU	minimum elong	-8543 Nov 05 j 23:05	15° $\Upsilon$ 21'39	1°23'10
	-8549 Jun 11 j 04:53	30° $\Upsilon$ 0		max. Earth dist.	-8543 Nov 06 j 20:36	15° $\Upsilon$ 23'40	31.08284 AU
direct	-8549 Jul 14 j 18:11	29° $\Omega$ 41'56		morning rise	-8543 Nov 21 j 11:06	15° $\Upsilon$ 56'30	
	-8549 Aug 16 j 08:57	0° $\Upsilon$		retrograde	-8542 Feb 20 j 13:43	17° $\Upsilon$ 54'32	
evening set	-8549 Oct 09 j 05:01	1° $\Upsilon$ 34'34		opposition	-8542 May 12 j 15:45	16° $\Upsilon$ 29'45	1°25'59
				min. Earth dist.	-8542 May 11 j 18:27	16° $\Upsilon$ 31'12	29.07933 AU
conjunction	-8549 Oct 24 j 10:03	2° $\Upsilon$ 08'50	1°50'02	direct	-8542 Jul 29 j 23:06	15° $\Upsilon$ 07'01	
minimum elong	-8549 Oct 24 j 10:04	2° $\Upsilon$ 08'50	1°50'21	evening set	-8542 Oct 24 j 00:20	16° $\Upsilon$ 59'07	
max. Earth dist.	-8549 Oct 25 j 04:19	2° $\Upsilon$ 10'33	31.14752 AU				
morning rise	-8549 Nov 08 j 17:47	2° $\Upsilon$ 43'22		conjunction	-8542 Nov 08 j 09:32	17° $\Upsilon$ 33'42	1°18'00
retrograde	-8548 Feb 07 j 08:46	4° $\Upsilon$ 41'02		minimum elong	-8542 Nov 08 j 09:33	17° $\Upsilon$ 33'42	1°18'11
opposition	-8548 Apr 28 j 11:44	3° $\Upsilon$ 16'50	1°55'22	max. Earth dist.	-8542 Nov 09 j 08:33	17° $\Upsilon$ 35'52	31.07439 AU
min. Earth dist.	-8548 Apr 27 j 17:33	3° $\Upsilon$ 18'04	29.14388 AU	morning rise	-8542 Nov 23 j 22:08	18° $\Upsilon$ 08'37	
direct	-8548 Jul 16 j 06:05	1° $\Upsilon$ 54'14		retrograde	-8541 Feb 23 j 01:57	20° $\Upsilon$ 06'42	
evening set	-8548 Oct 10 j 14:40	3° $\Upsilon$ 46'47		min. Earth dist.	-8541 May 14 j 05:12	18° $\Upsilon$ 43'27	29.07129 AU
				opposition	-8541 May 15 j 04:09	18° $\Upsilon$ 41'53	1°20'36
conjunction	-8548 Oct 25 j 20:07	4° $\Upsilon$ 21'06	1°45'53	direct	-8541 Aug 01 j 11:15	17° $\Upsilon$ 19'11	
minimum elong	-8548 Oct 25 j 20:08	4° $\Upsilon$ 21'06	1°46'12	evening set	-8541 Oct 26 j 10:10	19° $\Upsilon$ 11'14	
max. Earth dist.	-8548 Oct 26 j 13:47	4° $\Upsilon$ 22'46	31.13754 AU				
morning rise	-8548 Nov 10 j 04:41	4° $\Upsilon$ 55'42		conjunction	-8541 Nov 10 j 19:49	19° $\Upsilon$ 45'52	1°12'54
retrograde	-8547 Feb 08 j 22:12	6° $\Upsilon$ 53'26		minimum elong	-8541 Nov 10 j 19:50	19° $\Upsilon$ 45'52	1°13'03
min. Earth dist.	-8547 Apr 30 j 06:10	5° $\Upsilon$ 30'24	29.13329 AU	max. Earth dist.	-8541 Nov 11 j 18:38	19° $\Upsilon$ 48'01	31.06689 AU

Attention, astronomical year style is used: The year -8541 in astronomical counting style is the year 8542 BCE in historical counting style.

morning rise	-8541 Nov 26 j 09:17	20° $\mathring{M}$ 20'51		direct	-8534 Aug 16 j 13:15	2° $\mathring{A}$ 48'30	
retrograde	-8540 Feb 25 j 15:09	22° $\mathring{M}$ 19'01		evening set	-8534 Nov 10 j 11:20	4° $\mathring{A}$ 40'27	
opposition	-8540 May 16 j 16:45	20° $\mathring{M}$ 54'09	1°15'04				
min. Earth dist.	-8540 May 15 j 17:53	20° $\mathring{M}$ 55'44	29.06418 AU	conjunction	-8534 Nov 26 j 01:30	5° $\mathring{A}$ 15'26	0°34'29
direct	-8540 Aug 02 j 20:51	19° $\mathring{M}$ 31'29		minimum elong	-8534 Nov 26 j 01:30	5° $\mathring{A}$ 15'26	0°34'30
evening set	-8540 Oct 27 j 20:05	21° $\mathring{M}$ 23'31		max. Earth dist.	-8534 Nov 27 j 02:15	5° $\mathring{A}$ 17'45	31.00925 AU
				morning rise	-8534 Dec 11 j 19:50	5° $\mathring{A}$ 50'48	
conjunction	-8540 Nov 12 j 06:33	21° $\mathring{M}$ 58'12	1°07'41	retrograde	-8533 Mar 13 j 09:30	7° $\mathring{A}$ 49'24	
minimum elong	-8540 Nov 12 j 06:34	21° $\mathring{M}$ 58'12	1°07'50	min. Earth dist.	-8533 Jun 01 j 07:45	6° $\mathring{A}$ 25'52	29.00421 AU
max. Earth dist.	-8540 Nov 13 j 07:02	22° $\mathring{M}$ 00'30	31.06011 AU	opposition	-8533 Jun 02 j 07:23	6° $\mathring{A}$ 24'15	0°33'41
morning rise	-8540 Nov 27 j 20:34	22° $\mathring{M}$ 33'14		direct	-8533 Aug 18 j 23:49	5° $\mathring{A}$ 01'32	
retrograde	-8539 Feb 27 j 02:31	24° $\mathring{M}$ 31'29		evening set	-8533 Nov 12 j 21:55	6° $\mathring{A}$ 53'27	
min. Earth dist.	-8539 May 18 j 05:20	23° $\mathring{M}$ 08'14	29.05746 AU				
opposition	-8539 May 19 j 05:05	23° $\mathring{M}$ 06'36	1°09'26	conjunction	-8533 Nov 28 j 12:52	7° $\mathring{A}$ 28'28	0°28'43
direct	-8539 Aug 05 j 08:20	21° $\mathring{M}$ 43'58		minimum elong	-8533 Nov 28 j 12:52	7° $\mathring{A}$ 28'28	0°28'42
evening set	-8539 Oct 30 j 06:21	23° $\mathring{M}$ 35'59		max. Earth dist.	-8533 Nov 29 j 14:43	7° $\mathring{A}$ 30'54	30.99846 AU
				morning rise	-8533 Dec 14 j 07:44	8° $\mathring{A}$ 03'53	
conjunction	-8539 Nov 14 j 17:19	24° $\mathring{M}$ 10'42	1°02'21	retrograde	-8532 Mar 14 j 22:47	10° $\mathring{A}$ 02'30	
minimum elong	-8539 Nov 14 j 17:20	24° $\mathring{M}$ 10'42	1°02'28	opposition	-8532 Jun 03 j 19:29	8° $\mathring{A}$ 37'17	0°27'30
max. Earth dist.	-8539 Nov 15 j 17:12	24° $\mathring{M}$ 12'58	31.05353 AU	min. Earth dist.	-8532 Jun 02 j 18:41	8° $\mathring{A}$ 39'00	28.99351 AU
morning rise	-8539 Nov 30 j 08:13	24° $\mathring{M}$ 45'48		direct	-8532 Aug 20 j 12:39	7° $\mathring{A}$ 14'32	
retrograde	-8538 Mar 01 j 15:45	26° $\mathring{M}$ 44'09		evening set	-8532 Nov 14 j 08:55	9° $\mathring{A}$ 06'25	
opposition	-8538 May 21 j 17:34	25° $\mathring{M}$ 19'15	1°03'42				
min. Earth dist.	-8538 May 20 j 17:43	25° $\mathring{M}$ 20'53	29.05075 AU	conjunction	-8532 Nov 30 j 00:19	9° $\mathring{A}$ 41'30	0°22'55
direct	-8538 Aug 07 j 17:24	23° $\mathring{M}$ 56'38		minimum elong	-8532 Nov 30 j 00:19	9° $\mathring{A}$ 41'30	0°22'54
evening set	-8538 Nov 01 j 16:38	25° $\mathring{M}$ 48'38		max. Earth dist.	-8532 Dec 01 j 01:33	9° $\mathring{A}$ 43'52	30.98809 AU
				morning rise	-8532 Dec 15 j 20:01	10° $\mathring{A}$ 16'58	
conjunction	-8538 Nov 17 j 04:19	26° $\mathring{M}$ 23'25	0°56'56	retrograde	-8531 Mar 17 j 12:28	12° $\mathring{A}$ 15'37	
minimum elong	-8538 Nov 17 j 04:20	26° $\mathring{M}$ 23'25	0°57'02	min. Earth dist.	-8531 Jun 05 j 07:13	10° $\mathring{A}$ 52'00	28.98366 AU
max. Earth dist.	-8538 Nov 18 j 05:25	26° $\mathring{M}$ 25'47	31.04651 AU	opposition	-8531 Jun 06 j 07:33	10° $\mathring{A}$ 50'19	0°21'17
morning rise	-8538 Dec 02 j 19:45	26° $\mathring{M}$ 58'34		direct	-8531 Aug 22 j 22:51	9° $\mathring{A}$ 27'32	
retrograde	-8537 Mar 04 j 03:26	28° $\mathring{M}$ 57'00		evening set	-8531 Nov 16 j 19:51	11° $\mathring{A}$ 19'25	
min. Earth dist.	-8537 May 23 j 06:15	27° $\mathring{M}$ 33'42	29.04332 AU				
opposition	-8537 May 24 j 05:58	27° $\mathring{M}$ 32'04	0°57'51	conjunction	-8531 Dec 02 j 12:03	11° $\mathring{A}$ 54'32	0°17'05
direct	-8537 Aug 10 j 03:48	26° $\mathring{M}$ 09'28		minimum elong	-8531 Dec 02 j 12:03	11° $\mathring{A}$ 54'32	0°17'02
evening set	-8537 Nov 04 j 03:11	28° $\mathring{M}$ 01'28		max. Earth dist.	-8531 Dec 03 j 14:42	11° $\mathring{A}$ 57'03	30.97871 AU
				morning rise	-8531 Dec 18 j 08:13	12° $\mathring{A}$ 30'04	
conjunction	-8537 Nov 19 j 15:26	28° $\mathring{M}$ 36'18	0°51'26	retrograde	-8530 Mar 19 j 23:33	14° $\mathring{A}$ 28'44	
minimum elong	-8537 Nov 19 j 15:27	28° $\mathring{M}$ 36'18	0°51'30	opposition	-8530 Jun 08 j 19:29	13° $\mathring{A}$ 03'24	0°15'01
max. Earth dist.	-8537 Nov 20 j 15:59	28° $\mathring{M}$ 38'36	31.03880 AU	min. Earth dist.	-8530 Jun 07 j 18:19	13° $\mathring{A}$ 05'09	28.97481 AU
morning rise	-8537 Dec 05 j 07:39	29° $\mathring{M}$ 11'30		direct	-8530 Aug 25 j 10:45	11° $\mathring{A}$ 40'36	
	-8537 Dec 28 j 17:32	0° $\mathring{A}$		evening set	-8530 Nov 19 j 06:56	13° $\mathring{A}$ 32'30	
retrograde	-8536 Mar 05 j 17:52	1° $\mathring{A}$ 10'00					
	-8536 May 16 j 15:46	30° $\mathring{R}$ $\mathring{M}$		conjunction	-8530 Dec 04 j 23:34	14° $\mathring{A}$ 07'39	0°11'14
opposition	-8536 May 25 j 18:25	29° $\mathring{M}$ 45'02	0°51'55	minimum elong	-8530 Dec 04 j 23:34	14° $\mathring{A}$ 07'39	0°11'10
min. Earth dist.	-8536 May 24 j 18:03	29° $\mathring{M}$ 46'43	29.03506 AU	behind sun begin	-8530 Dec 04 j 18:45	14° $\mathring{A}$ 07'13	
direct	-8536 Aug 11 j 13:40	28° $\mathring{M}$ 22'26		behind sun end	-8530 Dec 05 j 04:23	14° $\mathring{A}$ 08'05	
	-8536 Oct 29 j 22:36	0° $\mathring{A}$		max. Earth dist.	-8530 Dec 06 j 01:35	14° $\mathring{A}$ 10'06	30.97053 AU
evening set	-8536 Nov 05 j 13:46	0° $\mathring{A}$ 14'25		morning rise	-8530 Dec 20 j 20:29	14° $\mathring{A}$ 43'13	
				retrograde	-8529 Mar 22 j 12:18	16° $\mathring{A}$ 41'56	
conjunction	-8536 Nov 21 j 02:42	0° $\mathring{A}$ 49'18	0°45'50	min. Earth dist.	-8529 Jun 10 j 06:07	15° $\mathring{A}$ 18'20	28.96729 AU
minimum elong	-8536 Nov 21 j 02:42	0° $\mathring{A}$ 49'18	0°45'54	opposition	-8529 Jun 11 j 07:28	15° $\mathring{A}$ 16'35	0°08'44
max. Earth dist.	-8536 Nov 22 j 03:36	0° $\mathring{A}$ 51'39	31.02991 AU	direct	-8529 Aug 27 j 20:01	13° $\mathring{A}$ 53'46	
morning rise	-8536 Dec 06 j 19:36	1° $\mathring{A}$ 24'34		evening set	-8529 Nov 21 j 18:05	15° $\mathring{A}$ 45'42	
retrograde	-8535 Mar 08 j 06:42	3° $\mathring{A}$ 23'07					
min. Earth dist.	-8535 May 27 j 07:20	1° $\mathring{A}$ 59'43	29.02554 AU	conjunction	-8529 Dec 07 j 11:25	16° $\mathring{A}$ 20'54	0°05'22
opposition	-8535 May 28 j 06:56	1° $\mathring{A}$ 58'06	0°45'54	minimum elong	-8529 Dec 07 j 11:25	16° $\mathring{A}$ 20'54	0°05'16
direct	-8535 Aug 14 j 01:21	0° $\mathring{A}$ 35'28		behind sun begin	-8529 Dec 07 j 05:07	16° $\mathring{A}$ 20'20	
evening set	-8535 Nov 08 j 00:30	2° $\mathring{A}$ 27'26		behind sun end	-8529 Dec 07 j 17:42	16° $\mathring{A}$ 21'28	
				max. Earth dist.	-8529 Dec 08 j 14:44	16° $\mathring{A}$ 23'28	30.96356 AU
conjunction	-8535 Nov 23 j 14:09	3° $\mathring{A}$ 02'22	0°40'11	morning rise	-8529 Dec 23 j 08:49	16° $\mathring{A}$ 56'31	
minimum elong	-8535 Nov 23 j 14:09	3° $\mathring{A}$ 02'22	0°40'13	retrograde	-8528 Mar 23 j 24:00	18° $\mathring{A}$ 55'17	
max. Earth dist.	-8535 Nov 24 j 15:07	3° $\mathring{A}$ 04'43	31.02001 AU	opposition	-8528 Jun 12 j 19:24	17° $\mathring{A}$ 29'55	0°02'25
morning rise	-8535 Dec 09 j 07:43	3° $\mathring{A}$ 37'41		min. Earth dist.	-8528 Jun 11 j 18:06	17° $\mathring{A}$ 31'40	28.96085 AU
retrograde	-8534 Mar 10 j 21:08	5° $\mathring{A}$ 36'15		direct	-8528 Aug 29 j 06:02	16° $\mathring{A}$ 07'07	
opposition	-8534 May 30 j 19:03	4° $\mathring{A}$ 11'10	0°39'50	desc. node	-8528 Oct 31 j 03:33	17° $\mathring{A}$ 11'32	
min. Earth dist.	-8534 May 29 j 18:30	4° $\mathring{A}$ 12'52	29.01510 AU	evening set	-8528 Nov 23 j 05:24	17° $\mathring{A}$ 59'04	

Attention, astronomical year style is used: The year -8528 in astronomical counting style is the year 8529 BCE in historical counting style.

conjunction	-8528 Dec 08 j 23:16	18° <u>♂</u> 34'19	-0°00'39	direct	-8522 Sep 12 j 00:28	29° <u>♂</u> 30'36	
minimum elong	-8528 Dec 08 j 23:18	18° <u>♂</u> 34'19	0°00'45		-8522 Oct 23 j 12:53	0° <u>♂</u>	
behind sun begin	-8528 Dec 08 j 16:48	18° <u>♂</u> 33'44		evening set	-8522 Dec 07 j 05:16	1° <u>♂</u> 22'52	
behind sun end	-8528 Dec 09 j 05:47	18° <u>♂</u> 34'54					
max. Earth dist.	-8528 Dec 10 j 02:10	18° <u>♂</u> 36'51	30.95772 AU	conjunction	-8522 Dec 23 j 02:27	1° <u>♂</u> 58'21	-0°35'51
morning rise	-8528 Dec 24 j 21:24	19° <u>♂</u> 09'59		minimum elong	-8522 Dec 23 j 02:26	1° <u>♂</u> 58'21	0°36'05
retrograde	-8527 Mar 26 j 13:58	21° <u>♂</u> 08'47		max. Earth dist.	-8522 Dec 24 j 04:26	2° <u>♂</u> 00'48	30.91867 AU
min. Earth dist.	-8527 Jun 14 j 05:23	19° <u>♂</u> 45'14	28.95536 AU	morning rise	-8521 Jan 08 j 03:31	2° <u>♂</u> 34'14	
opposition	-8527 Jun 15 j 07:18	19° <u>♂</u> 43'26	-0°03'54	retrograde	-8521 Apr 09 j 22:15	4° <u>♂</u> 33'08	
direct	-8527 Aug 31 j 15:47	18° <u>♂</u> 20'38		min. Earth dist.	-8521 Jun 28 j 06:35	3° <u>♂</u> 09'20	28.91449 AU
evening set	-8527 Nov 25 j 17:01	20° <u>♂</u> 12'39		opposition	-8521 Jun 29 j 06:12	3° <u>♂</u> 07'41	-0°41'29
				direct	-8521 Sep 14 j 13:03	1° <u>♂</u> 44'40	
				evening set	-8521 Dec 09 j 17:42	3° <u>♂</u> 36'58	
conjunction	-8527 Dec 11 j 11:27	20° <u>♂</u> 47'56	-0°06'35				
minimum elong	-8527 Dec 11 j 11:27	20° <u>♂</u> 47'56	0°06'44				
behind sun begin	-8527 Dec 11 j 05:23	20° <u>♂</u> 47'24		conjunction	-8521 Dec 25 j 15:14	4° <u>♂</u> 12'28	-0°41'35
behind sun end	-8527 Dec 11 j 17:32	20° <u>♂</u> 48'29		minimum elong	-8521 Dec 25 j 15:14	4° <u>♂</u> 12'28	0°41'51
max. Earth dist.	-8527 Dec 12 j 14:40	20° <u>♂</u> 50'30	30.95236 AU	max. Earth dist.	-8521 Dec 26 j 15:52	4° <u>♂</u> 14'47	30.90949 AU
morning rise	-8527 Dec 27 j 10:06	21° <u>♂</u> 23'39		morning rise	-8520 Jan 10 j 16:56	4° <u>♂</u> 48'23	
retrograde	-8526 Mar 29 j 02:05	23° <u>♂</u> 22'30		retrograde	-8520 Apr 11 j 11:53	6° <u>♂</u> 47'15	
opposition	-8526 Jun 17 j 19:08	21° <u>♂</u> 57'09	-0°10'14	opposition	-8520 Jun 30 j 17:49	5° <u>♂</u> 21'45	-0°47'35
min. Earth dist.	-8526 Jun 16 j 18:08	21° <u>♂</u> 58'54	28.95014 AU	min. Earth dist.	-8520 Jun 29 j 18:42	5° <u>♂</u> 23'22	28.90538 AU
direct	-8526 Sep 03 j 02:35	20° <u>♂</u> 34'22		direct	-8520 Sep 15 j 23:37	3° <u>♂</u> 58'39	
evening set	-8526 Nov 28 j 04:44	22° <u>♂</u> 26'26		evening set	-8520 Dec 11 j 06:07	5° <u>♂</u> 50'58	
conjunction	-8526 Dec 13 j 23:46	23° <u>♂</u> 01'46	-0°12'28	conjunction	-8520 Dec 27 j 04:15	6° <u>♂</u> 26'31	-0°47'16
minimum elong	-8526 Dec 13 j 23:46	23° <u>♂</u> 01'46	0°12'38	minimum elong	-8520 Dec 27 j 04:15	6° <u>♂</u> 26'31	0°47'32
behind sun begin	-8526 Dec 13 j 19:39	23° <u>♂</u> 01'24		max. Earth dist.	-8520 Dec 28 j 05:39	6° <u>♂</u> 28'54	30.90037 AU
behind sun end	-8526 Dec 14 j 03:54	23° <u>♂</u> 02'09		morning rise	-8519 Jan 12 j 06:16	7° <u>♂</u> 02'27	
max. Earth dist.	-8526 Dec 15 j 02:56	23° <u>♂</u> 04'19	30.94723 AU	retrograde	-8519 Apr 13 j 23:28	9° <u>♂</u> 01'17	
morning rise	-8526 Dec 29 j 22:54	23° <u>♂</u> 37'31		min. Earth dist.	-8519 Jul 02 j 06:44	7° <u>♂</u> 37'19	28.89651 AU
retrograde	-8525 Mar 31 j 16:30	25° <u>♂</u> 36'25		opposition	-8519 Jul 03 j 05:21	7° <u>♂</u> 35'44	-0°53'37
min. Earth dist.	-8525 Jun 19 j 05:11	24° <u>♂</u> 12'52	28.94484 AU	direct	-8519 Sep 18 j 10:52	6° <u>♂</u> 12'34	
opposition	-8525 Jun 20 j 06:56	24° <u>♂</u> 11'05	-0°16'32	evening set	-8519 Dec 13 j 18:44	8° <u>♂</u> 04'56	
direct	-8525 Sep 05 j 13:37	22° <u>♂</u> 48'16					
evening set	-8525 Nov 30 j 16:37	24° <u>♂</u> 40'25		conjunction	-8519 Dec 29 j 17:14	8° <u>♂</u> 40'30	-0°52'52
				minimum elong	-8519 Dec 29 j 17:14	8° <u>♂</u> 40'30	0°53'10
conjunction	-8525 Dec 16 j 12:05	25° <u>♂</u> 15'47	-0°18'22	max. Earth dist.	-8519 Dec 30 j 17:43	8° <u>♂</u> 42'48	30.89190 AU
minimum elong	-8525 Dec 16 j 12:04	25° <u>♂</u> 15'47	0°18'33	morning rise	-8518 Jan 14 j 19:43	9° <u>♂</u> 16'28	
max. Earth dist.	-8525 Dec 17 j 14:39	25° <u>♂</u> 18'17	30.94155 AU	retrograde	-8518 Apr 16 j 12:27	11° <u>♂</u> 15'16	
morning rise	-8524 Jan 01 j 11:50	25° <u>♂</u> 51'34		opposition	-8518 Jul 05 j 16:40	9° <u>♂</u> 49'41	-0°59'34
retrograde	-8524 Apr 02 j 05:48	27° <u>♂</u> 50'31		min. Earth dist.	-8518 Jul 04 j 17:44	9° <u>♂</u> 51'18	28.88861 AU
opposition	-8524 Jun 21 j 18:57	26° <u>♂</u> 25'10	-0°22'50	direct	-8518 Sep 20 j 21:22	8° <u>♂</u> 26'26	
min. Earth dist.	-8524 Jun 20 j 18:38	26° <u>♂</u> 26'52	28.93883 AU	evening set	-8518 Dec 16 j 07:22	10° <u>♂</u> 18'53	
direct	-8524 Sep 07 j 00:02	25° <u>♂</u> 02'20					
evening set	-8524 Dec 02 j 04:44	26° <u>♂</u> 54'32		conjunction	-8517 Jan 01 j 06:17	10° <u>♂</u> 54'29	-0°58'23
				minimum elong	-8517 Jan 01 j 06:17	10° <u>♂</u> 54'29	0°58'41
conjunction	-8524 Dec 18 j 00:54	27° <u>♂</u> 29'57	-0°24'14	max. Earth dist.	-8517 Jan 02 j 07:01	10° <u>♂</u> 56'48	30.88442 AU
minimum elong	-8524 Dec 18 j 00:53	27° <u>♂</u> 29'57	0°24'25	morning rise	-8517 Jan 17 j 09:05	11° <u>♂</u> 30'27	
max. Earth dist.	-8524 Dec 19 j 03:45	27° <u>♂</u> 32'28	30.93506 AU	retrograde	-8517 Apr 18 j 23:36	13° <u>♂</u> 29'15	
morning rise	-8523 Jan 03 j 01:02	28° <u>♂</u> 05'46		min. Earth dist.	-8517 Jul 07 j 06:03	12° <u>♂</u> 05'12	28.88186 AU
	-8523 Mar 18 j 19:42	0° <u>♂</u>		opposition	-8517 Jul 08 j 04:08	12° <u>♂</u> 03'39	-1°05'26
retrograde	-8523 Apr 04 j 20:22	0° <u>♂</u> 04'42		direct	-8517 Sep 23 j 07:56	10° <u>♂</u> 40'21	
	-8523 Apr 21 j 22:44	30° <u>♂</u> 4		evening set	-8517 Dec 18 j 19:55	12° <u>♂</u> 32'53	
min. Earth dist.	-8523 Jun 23 j 05:55	28° <u>♂</u> 41'04	28.93173 AU				
opposition	-8523 Jun 24 j 06:38	28° <u>♂</u> 39'20	-0°29'06	conjunction	-8516 Jan 03 j 19:20	13° <u>♂</u> 08'30	-1°03'49
direct	-8523 Sep 09 j 13:20	27° <u>♂</u> 16'28		minimum elong	-8516 Jan 03 j 19:20	13° <u>♂</u> 08'30	1°04'09
evening set	-8523 Dec 04 j 17:06	29° <u>♂</u> 08'42		max. Earth dist.	-8516 Jan 04 j 19:55	13° <u>♂</u> 10'49	30.87837 AU
				morning rise	-8516 Jan 19 j 22:30	13° <u>♂</u> 44'30	
conjunction	-8523 Dec 20 j 13:38	29° <u>♂</u> 44'10	-0°30'04		-8516 Feb 28 j 01:16	15° <u>♂</u>	
minimum elong	-8523 Dec 20 j 13:38	29° <u>♂</u> 44'10	0°30'17	retrograde	-8516 Apr 20 j 13:31	15° <u>♂</u> 43'17	
max. Earth dist.	-8523 Dec 21 j 14:58	29° <u>♂</u> 46'32	30.92735 AU		-8516 Jun 13 j 10:12	15° <u>♂</u>	
	-8523 Dec 27 j 14:29	0° <u>♂</u>		opposition	-8516 Jul 09 j 15:28	14° <u>♂</u> 17'42	-1°11'11
morning rise	-8522 Jan 05 j 14:26	0° <u>♂</u> 20'01		min. Earth dist.	-8516 Jul 08 j 16:35	14° <u>♂</u> 19'19	28.87646 AU
retrograde	-8522 Apr 07 j 10:24	2° <u>♂</u> 18'56		direct	-8516 Sep 24 j 18:54	12° <u>♂</u> 54'22	
opposition	-8522 Jun 26 j 18:32	0° <u>♂</u> 53'32	-0°35'19	evening set	-8516 Dec 20 j 08:53	14° <u>♂</u> 47'00	
min. Earth dist.	-8522 Jun 25 j 19:03	0° <u>♂</u> 55'11	28.92355 AU		-8516 Dec 26 j 06:15	15° <u>♂</u>	
	-8522 Jul 31 j 09:46	30° <u>♂</u> 4					

Attention, astronomical year style is used: The year -8515 in astronomical counting style is the year 8516 BCE in historical counting style.

conjunction	-8515 Jan 05 j 08:37	15° <del>M</del> 22'39	-1°09'10	min. Earth dist.	-8509 Jul 25 j 04:04	0° <del>7</del> 02'01	28.84874 AU
minimum elong	-8515 Jan 05 j 08:36	15° <del>M</del> 22'39	1°09'30		-8509 Jul 26 j 08:26	30° <del>R</del> <del>M</del>	
max. Earth dist.	-8515 Jan 06 j 08:39	15° <del>M</del> 24'54	30.87347 AU	direct	-8509 Oct 11 j 03:39	28° <del>M</del> 37'06	
morning rise	-8515 Jan 21 j 12:11	15° <del>M</del> 58'41			-8509 Dec 22 j 20:05	0° <del>7</del>	
retrograde	-8515 Apr 23 j 02:11	17° <del>M</del> 57'27		evening set	-8508 Jan 06 j 06:59	0° <del>7</del> 30'31	
min. Earth dist.	-8515 Jul 11 j 05:15	16° <del>M</del> 33'25	28.87222 AU				
opposition	-8515 Jul 12 j 02:47	16° <del>M</del> 31'54	-1°16'51	conjunction	-8508 Jan 22 j 09:06	1° <del>7</del> 06'20	-1°43'17
direct	-8515 Sep 27 j 05:02	15° <del>M</del> 08'33		minimum elong	-8508 Jan 22 j 09:05	1° <del>7</del> 06'20	1°43'45
evening set	-8515 Dec 22 j 21:51	17° <del>M</del> 01'17		max. Earth dist.	-8508 Jan 23 j 04:41	1° <del>7</del> 08'10	30.84464 AU
				morning rise	-8508 Feb 07 j 14:14	1° <del>7</del> 42'28	
conjunction	-8514 Jan 07 j 22:06	17° <del>M</del> 36'58	-1°14'25	retrograde	-8508 May 08 j 22:51	3° <del>7</del> 41'02	
minimum elong	-8514 Jan 07 j 22:06	17° <del>M</del> 36'58	1°14'47	opposition	-8508 Jul 27 j 09:25	2° <del>7</del> 15'40	-1°52'50
max. Earth dist.	-8514 Jan 08 j 22:32	17° <del>M</del> 39'16	30.86971 AU	min. Earth dist.	-8508 Jul 26 j 16:44	2° <del>7</del> 16'51	28.84286 AU
morning rise	-8514 Jan 24 j 01:51	18° <del>M</del> 13'01		direct	-8508 Oct 12 j 14:33	0° <del>7</del> 51'57	
retrograde	-8514 Apr 25 j 16:38	20° <del>M</del> 11'48		evening set	-8507 Jan 07 j 20:50	2° <del>7</del> 45'27	
opposition	-8514 Jul 14 j 14:01	18° <del>M</del> 46'17	-1°22'24				
min. Earth dist.	-8514 Jul 13 j 16:00	18° <del>M</del> 47'51	28.86883 AU	conjunction	-8507 Jan 23 j 23:15	3° <del>7</del> 21'17	-1°47'35
direct	-8514 Sep 29 j 18:03	17° <del>M</del> 22'55		minimum elong	-8507 Jan 23 j 23:14	3° <del>7</del> 21'17	1°48'02
evening set	-8514 Dec 25 j 10:59	19° <del>M</del> 15'47		max. Earth dist.	-8507 Jan 24 j 17:54	3° <del>7</del> 23'02	30.83883 AU
				morning rise	-8507 Feb 09 j 04:33	3° <del>7</del> 57'24	
conjunction	-8513 Jan 10 j 11:25	19° <del>M</del> 51'30	-1°19'33	retrograde	-8507 May 11 j 12:26	5° <del>7</del> 55'53	
minimum elong	-8513 Jan 10 j 11:24	19° <del>M</del> 51'30	1°19'55	opposition	-8507 Jul 29 j 20:13	4° <del>7</del> 30'30	-1°57'21
max. Earth dist.	-8513 Jan 11 j 10:29	19° <del>M</del> 53'40	30.86651 AU	min. Earth dist.	-8507 Jul 29 j 03:16	4° <del>7</del> 31'42	28.83724 AU
morning rise	-8513 Jan 26 j 15:35	20° <del>M</del> 27'34		direct	-8507 Oct 15 j 01:34	3° <del>7</del> 06'41	
retrograde	-8513 Apr 28 j 06:37	22° <del>M</del> 26'22		evening set	-8506 Jan 10 j 10:48	5° <del>7</del> 00'16	
min. Earth dist.	-8513 Jul 16 j 04:39	21° <del>M</del> 02'22	28.86590 AU				
opposition	-8513 Jul 17 j 01:24	21° <del>M</del> 00'54	-1°27'50	conjunction	-8506 Jan 26 j 13:22	5° <del>7</del> 36'07	-1°51'43
direct	-8513 Oct 02 j 04:58	19° <del>M</del> 37'30		minimum elong	-8506 Jan 26 j 13:21	5° <del>7</del> 36'07	1°52'12
evening set	-8513 Dec 28 j 00:17	21° <del>M</del> 30'30		max. Earth dist.	-8506 Jan 27 j 07:10	5° <del>7</del> 37'47	30.83338 AU
				morning rise	-8506 Feb 11 j 18:50	6° <del>7</del> 12'14	
conjunction	-8512 Jan 13 j 01:13	22° <del>M</del> 06'15	-1°24'34	retrograde	-8506 May 13 j 23:14	8° <del>7</del> 10'38	
minimum elong	-8512 Jan 13 j 01:12	22° <del>M</del> 06'15	1°24'58	opposition	-8506 Aug 01 j 07:14	6° <del>7</del> 45'14	-2°01'41
max. Earth dist.	-8512 Jan 14 j 00:43	22° <del>M</del> 08'27	30.86349 AU	min. Earth dist.	-8506 Jul 31 j 15:51	6° <del>7</del> 46'20	28.83239 AU
morning rise	-8512 Jan 29 j 05:28	22° <del>M</del> 42'20		direct	-8506 Oct 17 j 12:23	5° <del>7</del> 21'19	
retrograde	-8512 Apr 29 j 19:45	24° <del>M</del> 41'07		evening set	-8505 Jan 13 j 00:28	7° <del>7</del> 15'00	
opposition	-8512 Jul 18 j 12:33	23° <del>M</del> 15'42	-1°33'08				
min. Earth dist.	-8512 Jul 17 j 16:03	23° <del>M</del> 17'09	28.86274 AU	conjunction	-8505 Jan 29 j 03:23	7° <del>7</del> 50'51	-1°55'41
direct	-8512 Oct 03 j 17:17	21° <del>M</del> 52'17		minimum elong	-8505 Jan 29 j 03:23	7° <del>7</del> 50'50	1°56'10
evening set	-8512 Dec 29 j 13:57	23° <del>M</del> 45'25		max. Earth dist.	-8505 Jan 29 j 21:20	7° <del>7</del> 52'31	30.82905 AU
				morning rise	-8505 Feb 14 j 08:52	8° <del>7</del> 26'58	
conjunction	-8511 Jan 14 j 15:04	24° <del>M</del> 21'11	-1°29'27	retrograde	-8505 May 16 j 12:03	10° <del>7</del> 25'16	
minimum elong	-8511 Jan 14 j 15:04	24° <del>M</del> 21'11	1°29'51	opposition	-8505 Aug 03 j 18:03	8° <del>7</del> 59'53	-2°05'50
max. Earth dist.	-8511 Jan 15 j 12:35	24° <del>M</del> 23'12	30.86002 AU	min. Earth dist.	-8505 Aug 03 j 02:14	9° <del>7</del> 01'00	28.82874 AU
morning rise	-8511 Jan 30 j 19:44	24° <del>M</del> 57'17		direct	-8505 Oct 20 j 01:35	7° <del>7</del> 35'52	
retrograde	-8511 May 02 j 10:54	26° <del>M</del> 56'02		evening set	-8504 Jan 15 j 14:31	9° <del>7</del> 29'40	
opposition	-8511 Jul 20 j 23:54	25° <del>M</del> 30'40	-1°38'17				
min. Earth dist.	-8511 Jul 20 j 04:22	25° <del>M</del> 32'03	28.85899 AU	conjunction	-8504 Jan 31 j 17:30	10° <del>7</del> 05'31	-1°59'29
direct	-8511 Oct 06 j 04:31	24° <del>M</del> 07'12		minimum elong	-8504 Jan 31 j 17:30	10° <del>7</del> 05'31	1°59'59
evening set	-8510 Jan 01 j 03:35	26° <del>M</del> 00'26		max. Earth dist.	-8504 Feb 01 j 10:02	10° <del>7</del> 07'04	30.82603 AU
				morning rise	-8504 Feb 16 j 23:14	10° <del>7</del> 41'38	
conjunction	-8510 Jan 17 j 05:07	26° <del>M</del> 36'14	-1°34'12	retrograde	-8504 May 18 j 00:55	12° <del>7</del> 39'52	
minimum elong	-8510 Jan 17 j 05:06	26° <del>M</del> 36'14	1°34'39	opposition	-8504 Aug 05 j 04:53	11° <del>7</del> 14'30	-2°09'47
max. Earth dist.	-8510 Jan 18 j 02:45	26° <del>M</del> 38'16	30.85563 AU	min. Earth dist.	-8504 Aug 04 j 14:18	11° <del>7</del> 15'32	28.82664 AU
morning rise	-8510 Feb 02 j 09:48	27° <del>M</del> 12'20		direct	-8504 Oct 21 j 12:24	9° <del>7</del> 50'24	
retrograde	-8510 May 04 j 22:54	29° <del>M</del> 11'03		evening set	-8503 Jan 17 j 04:30	11° <del>7</del> 44'19	
opposition	-8510 Jul 23 j 11:06	27° <del>M</del> 45'42	-1°43'18				
min. Earth dist.	-8510 Jul 22 j 16:38	27° <del>M</del> 47'00	28.85417 AU	conjunction	-8503 Feb 02 j 07:54	12° <del>7</del> 20'11	-2°03'06
direct	-8510 Oct 08 j 16:21	26° <del>M</del> 22'11		minimum elong	-8503 Feb 02 j 07:53	12° <del>7</del> 20'11	2°03'35
evening set	-8509 Jan 03 j 17:19	28° <del>M</del> 15'30		max. Earth dist.	-8503 Feb 03 j 00:50	12° <del>7</del> 21'46	30.82459 AU
				morning rise	-8503 Feb 18 j 13:32	12° <del>7</del> 56'18	
conjunction	-8509 Jan 19 j 19:05	28° <del>M</del> 51'18	-1°38'49	retrograde	-8503 May 20 j 13:57	14° <del>7</del> 54'27	
minimum elong	-8509 Jan 19 j 19:04	28° <del>M</del> 51'18	1°39'15	opposition	-8503 Aug 07 j 15:40	13° <del>7</del> 29'07	-2°13'33
max. Earth dist.	-8509 Jan 20 j 15:00	28° <del>M</del> 53'10	30.85046 AU	min. Earth dist.	-8503 Aug 07 j 01:05	13° <del>7</del> 30'10	28.82593 AU
morning rise	-8509 Feb 05 j 00:05	29° <del>M</del> 27'26		direct	-8503 Oct 24 j 01:07	12° <del>7</del> 04'59	
	-8509 Feb 20 j 10:10	0° <del>7</del>		evening set	-8502 Jan 19 j 18:40	13° <del>7</del> 59'02	
retrograde	-8509 May 07 j 12:01	1° <del>7</del> 26'05					
opposition	-8509 Jul 25 j 22:16	0° <del>7</del> 00'43	-1°48'09	conjunction	-8502 Feb 04 j 22:04	14° <del>7</del> 34'54	-2°06'31

Attention, astronomical year style is used: The year -8502 in astronomical counting style is the year 8503 BCE in historical counting style.

minimum elong	-8502 Feb 04 j 22:04	14° $\nearrow$ 34'54	2°07'02	min. Earth dist.	-8496 Aug 22 j 10:47	29° $\nearrow$ 15'11	28.83261 AU
max. Earth dist.	-8502 Feb 05 j 13:16	14° $\nearrow$ 36'19	30.82456 AU	direct	-8496 Nov 08 j 10:57	27° $\nearrow$ 50'07	
morning rise	-8502 Feb 21 j 03:55	15° $\nearrow$ 11'01		evening set	-8495 Feb 05 j 00:23	29° $\nearrow$ 45'06	
retrograde	-8502 May 23 j 04:40	17° $\nearrow$ 09'06			-8495 Feb 11 j 18:53	0° $\searrow$	
opposition	-8502 Aug 10 j 02:27	15° $\nearrow$ 43'50	-2°17'06				
min. Earth dist.	-8502 Aug 09 j 12:35	15° $\nearrow$ 44'49	28.82665 AU	conjunction	-8495 Feb 21 j 04:54	0° $\searrow$ 21'02	-2°24'50
direct	-8502 Oct 26 j 12:52	14° $\nearrow$ 19'40		minimum elong	-8495 Feb 21 j 04:53	0° $\searrow$ 21'02	2°25'23
evening set	-8501 Jan 22 j 08:49	16° $\nearrow$ 13'50		max. Earth dist.	-8495 Feb 21 j 12:41	0° $\searrow$ 21'45	30.83035 AU
				morning rise	-8495 Mar 09 j 10:47	0° $\searrow$ 57'06	
conjunction	-8501 Feb 07 j 12:33	16° $\nearrow$ 49'44	-2°09'45	retrograde	-8495 Jun 07 j 19:56	2° $\searrow$ 54'34	
minimum elong	-8501 Feb 07 j 12:32	16° $\nearrow$ 49'44	2°10'16	opposition	-8495 Aug 25 j 05:49	1° $\searrow$ 29'45	-2°35'54
max. Earth dist.	-8501 Feb 08 j 04:09	16° $\nearrow$ 51'12	30.82571 AU	min. Earth dist.	-8495 Aug 24 j 23:14	1° $\searrow$ 30'13	28.83201 AU
morning rise	-8501 Feb 23 j 18:16	17° $\nearrow$ 25'51		direct	-8495 Nov 10 j 21:54	0° $\searrow$ 05'11	
retrograde	-8501 May 25 j 16:39	19° $\nearrow$ 23'52		evening set	-8494 Feb 07 j 14:52	2° $\searrow$ 00'16	
opposition	-8501 Aug 12 j 13:12	17° $\nearrow$ 58'41	-2°20'27				
min. Earth dist.	-8501 Aug 12 j 00:20	17° $\nearrow$ 59'36	28.82824 AU	conjunction	-8494 Feb 23 j 19:39	2° $\searrow$ 36'12	-2°26'36
direct	-8501 Oct 29 j 01:01	16° $\nearrow$ 34'30		minimum elong	-8494 Feb 23 j 19:39	2° $\searrow$ 36'12	2°27'10
evening set	-8500 Jan 24 j 23:10	18° $\nearrow$ 28'49		max. Earth dist.	-8494 Feb 24 j 03:26	2° $\searrow$ 36'56	30.82979 AU
				morning rise	-8494 Mar 12 j 01:20	3° $\searrow$ 12'15	
conjunction	-8500 Feb 10 j 02:59	19° $\nearrow$ 04'43	-2°12'47	retrograde	-8494 Jun 10 j 08:09	5° $\searrow$ 09'36	
minimum elong	-8500 Feb 10 j 02:59	19° $\nearrow$ 04'43	2°13'19	opposition	-8494 Aug 27 j 16:23	3° $\searrow$ 44'48	-2°37'39
max. Earth dist.	-8500 Feb 10 j 16:49	19° $\nearrow$ 06'01	30.82760 AU	min. Earth dist.	-8494 Aug 27 j 10:07	3° $\searrow$ 45'15	28.83167 AU
morning rise	-8500 Feb 26 j 08:55	19° $\nearrow$ 40'50		direct	-8494 Nov 13 j 11:12	2° $\searrow$ 20'10	
retrograde	-8500 May 27 j 06:49	21° $\nearrow$ 38'47		evening set	-8493 Feb 10 j 05:32	4° $\searrow$ 15'20	
opposition	-8500 Aug 13 j 23:58	20° $\nearrow$ 13'41	-2°23'35				
min. Earth dist.	-8500 Aug 13 j 11:30	20° $\nearrow$ 14'35	28.83028 AU	conjunction	-8493 Feb 26 j 10:15	4° $\searrow$ 51'16	-2°28'08
direct	-8500 Oct 30 j 12:29	18° $\nearrow$ 49'28		minimum elong	-8493 Feb 26 j 10:15	4° $\searrow$ 51'16	2°28'41
evening set	-8499 Jan 26 j 13:44	20° $\nearrow$ 43'56		max. Earth dist.	-8493 Feb 26 j 16:00	4° $\searrow$ 51'49	30.82983 AU
				morning rise	-8493 Mar 14 j 16:03	5° $\searrow$ 27'19	
conjunction	-8499 Feb 11 j 17:46	21° $\nearrow$ 19'52	-2°15'37	retrograde	-8493 Jun 12 j 22:06	7° $\searrow$ 24'32	
minimum elong	-8499 Feb 11 j 17:45	21° $\nearrow$ 19'51	2°16'08	opposition	-8493 Aug 30 j 02:53	5° $\searrow$ 59'46	-2°39'11
max. Earth dist.	-8499 Feb 12 j 07:07	21° $\nearrow$ 21'06	30.82938 AU	min. Earth dist.	-8493 Aug 29 j 21:28	6° $\searrow$ 00'09	28.83233 AU
morning rise	-8499 Feb 27 j 23:35	21° $\nearrow$ 55'58		direct	-8493 Nov 15 j 23:46	4° $\searrow$ 35'02	
retrograde	-8499 May 29 j 18:41	23° $\nearrow$ 53'51		evening set	-8492 Feb 12 j 20:01	6° $\searrow$ 30'20	
opposition	-8499 Aug 16 j 10:47	22° $\nearrow$ 28'50	-2°26'30				
min. Earth dist.	-8499 Aug 16 j 00:08	22° $\nearrow$ 29'36	28.83193 AU	conjunction	-8492 Feb 29 j 01:01	7° $\searrow$ 06'16	-2°29'27
direct	-8499 Nov 01 j 23:27	21° $\nearrow$ 04'35		minimum elong	-8492 Feb 29 j 01:01	7° $\searrow$ 06'16	2°30'01
evening set	-8498 Jan 29 j 04:23	22° $\nearrow$ 59'12		max. Earth dist.	-8492 Feb 29 j 07:05	7° $\searrow$ 06'50	30.83095 AU
				morning rise	-8492 Mar 16 j 06:37	7° $\searrow$ 42'18	
conjunction	-8498 Feb 14 j 08:33	23° $\nearrow$ 35'07	-2°18'14	retrograde	-8492 Jun 14 j 09:25	9° $\searrow$ 39'22	
minimum elong	-8498 Feb 14 j 08:32	23° $\nearrow$ 35'07	2°18'47	opposition	-8492 Aug 31 j 13:27	8° $\searrow$ 14'40	-2°40'28
max. Earth dist.	-8498 Feb 14 j 20:18	23° $\nearrow$ 36'13	30.83075 AU	min. Earth dist.	-8492 Aug 31 j 09:00	8° $\searrow$ 14'59	28.83405 AU
morning rise	-8498 Mar 02 j 14:24	24° $\nearrow$ 11'13		direct	-8492 Nov 17 j 12:47	6° $\searrow$ 49'52	
retrograde	-8498 Jun 01 j 08:35	26° $\nearrow$ 09'02		evening set	-8491 Feb 14 j 10:45	8° $\searrow$ 45'17	
opposition	-8498 Aug 18 j 21:35	24° $\nearrow$ 44'05	-2°29'11				
min. Earth dist.	-8498 Aug 18 j 11:00	24° $\nearrow$ 44'50	28.83294 AU	conjunction	-8491 Mar 02 j 15:42	9° $\searrow$ 21'13	-2°30'32
direct	-8498 Nov 04 j 10:47	23° $\nearrow$ 19'46		minimum elong	-8491 Mar 02 j 15:41	9° $\searrow$ 21'13	2°31'05
evening set	-8497 Jan 31 j 18:55	25° $\nearrow$ 14'31		max. Earth dist.	-8491 Mar 02 j 19:57	9° $\searrow$ 21'37	30.83340 AU
				morning rise	-8491 Mar 18 j 21:21	9° $\searrow$ 57'14	
conjunction	-8497 Feb 16 j 23:11	25° $\nearrow$ 50'27	-2°20'39	retrograde	-8491 Jun 16 j 23:29	11° $\searrow$ 54'11	
minimum elong	-8497 Feb 16 j 23:11	25° $\nearrow$ 50'27	2°21'11	opposition	-8491 Sep 02 j 23:53	10° $\searrow$ 29'32	-2°41'30
max. Earth dist.	-8497 Feb 17 j 09:39	25° $\nearrow$ 51'25	30.83121 AU	min. Earth dist.	-8491 Sep 02 j 19:33	10° $\searrow$ 29'51	28.83728 AU
morning rise	-8497 Mar 05 j 05:03	26° $\nearrow$ 26'33		direct	-8491 Nov 20 j 00:54	9° $\searrow$ 04'42	
retrograde	-8497 Jun 03 j 19:15	28° $\nearrow$ 24'15		evening set	-8490 Feb 17 j 01:20	11° $\searrow$ 00'13	
opposition	-8497 Aug 21 j 08:30	26° $\nearrow$ 59'22	-2°31'39				
min. Earth dist.	-8497 Aug 20 j 23:59	26° $\nearrow$ 59'58	28.83310 AU	conjunction	-8490 Mar 05 j 06:27	11° $\searrow$ 36'10	-2°31'23
direct	-8497 Nov 06 j 21:50	25° $\nearrow$ 34'59		minimum elong	-8490 Mar 05 j 06:28	11° $\searrow$ 36'10	2°31'57
evening set	-8496 Feb 03 j 09:34	27° $\nearrow$ 29'50		max. Earth dist.	-8490 Mar 05 j 10:43	11° $\searrow$ 36'34	30.83725 AU
				morning rise	-8490 Mar 21 j 11:54	12° $\searrow$ 12'10	
conjunction	-8496 Feb 19 j 14:05	28° $\nearrow$ 05'46	-2°22'51	retrograde	-8490 Jun 19 j 11:35	14° $\searrow$ 09'00	
minimum elong	-8496 Feb 19 j 14:05	28° $\nearrow$ 05'46	2°23'24	opposition	-8490 Sep 05 j 10:30	12° $\searrow$ 44'26	-2°42'17
max. Earth dist.	-8496 Feb 19 j 23:48	28° $\nearrow$ 06'41	30.83105 AU	min. Earth dist.	-8490 Sep 05 j 07:36	12° $\searrow$ 44'39	28.84185 AU
morning rise	-8496 Mar 06 j 19:54	28° $\nearrow$ 41'51		direct	-8490 Nov 22 j 12:34	11° $\searrow$ 19'35	
	-8496 Apr 16 j 20:17	0° $\searrow$		evening set	-8489 Feb 19 j 15:50	13° $\searrow$ 15'12	
retrograde	-8496 Jun 05 j 07:44	0° $\searrow$ 39'27					
	-8496 Jul 25 j 17:38	30° $\nwarrow$		conjunction	-8489 Mar 07 j 21:01	13° $\searrow$ 51'10	-2°32'00
opposition	-8496 Aug 22 j 19:05	29° $\nearrow$ 14'36	-2°33'53	minimum elong	-8489 Mar 07 j 21:01	13° $\searrow$ 51'10	2°32'33



Attention, astronomical year style is used: The year -8489 in astronomical counting style is the year 8490 BCE in historical counting style.

max. Earth dist.	-8489 Mar 07 j 23:57	13° $\overline{3}$ 51'26	30.84255 AU	conjunction	-8482 Mar 24 j 05:03	29° $\overline{3}$ 37'06	-2°29'50
morning rise	-8489 Mar 24 j 02:30	14° $\overline{3}$ 27'09		minimum elong	-8482 Mar 24 j 05:04	29° $\overline{3}$ 37'06	2°30'21
retrograde	-8489 Jun 22 j 00:55	16° $\overline{3}$ 23'52		max. Earth dist.	-8482 Mar 23 j 22:52	29° $\overline{3}$ 36'31	30.87643 AU
opposition	-8489 Sep 07 j 20:57	14° $\overline{3}$ 59'25	-2°42'49		-8482 Apr 03 j 11:46	0° $\approx$	
min. Earth dist.	-8489 Sep 07 j 17:53	14° $\overline{3}$ 59'38	28.84760 AU	morning rise	-8482 Apr 09 j 09:47	0° $\approx$ 12'59	
direct	-8489 Nov 25 j 00:26	13° $\overline{3}$ 34'32		retrograde	-8482 Jul 07 j 12:19	2° $\approx$ 08'42	
evening set	-8488 Feb 22 j 06:37	15° $\overline{3}$ 30'17		opposition	-8482 Sep 22 j 22:50	0° $\approx$ 44'44	-2°39'37
				min. Earth dist.	-8482 Sep 23 j 03:37	0° $\approx$ 44'24	28.87991 AU
conjunction	-8488 Mar 09 j 11:52	16° $\overline{3}$ 06'15	-2°32'24		-8482 Oct 20 j 12:03	30° $\overline{8}$ $\overline{3}$	
minimum elong	-8488 Mar 09 j 11:52	16° $\overline{3}$ 06'15	2°32'57	direct	-8482 Dec 10 j 14:34	29° $\overline{3}$ 19'27	
max. Earth dist.	-8488 Mar 09 j 13:53	16° $\overline{3}$ 06'26	30.84860 AU		-8481 Jan 29 j 19:26	0° $\approx$	
morning rise	-8488 Mar 25 j 17:13	16° $\overline{3}$ 42'14		evening set	-8481 Mar 10 j 13:59	1° $\approx$ 15'50	
retrograde	-8488 Jun 23 j 11:25	18° $\overline{3}$ 38'50					
opposition	-8488 Sep 09 j 07:28	17° $\overline{3}$ 14'30	-2°43'06	conjunction	-8481 Mar 26 j 19:38	1° $\approx$ 51'47	-2°28'37
min. Earth dist.	-8488 Sep 09 j 06:24	17° $\overline{3}$ 14'34	28.85393 AU	minimum elong	-8481 Mar 26 j 19:38	1° $\approx$ 51'47	2°29'07
direct	-8488 Nov 26 j 11:17	15° $\overline{3}$ 49'35		max. Earth dist.	-8481 Mar 26 j 13:23	1° $\approx$ 51'12	30.87933 AU
evening set	-8487 Feb 23 j 21:28	17° $\overline{3}$ 45'28		morning rise	-8481 Apr 12 j 00:06	2° $\approx$ 27'39	
				retrograde	-8481 Jul 09 j 23:37	4° $\approx$ 23'12	
conjunction	-8487 Mar 12 j 02:50	18° $\overline{3}$ 21'26	-2°32'33	opposition	-8481 Sep 25 j 09:21	2° $\approx$ 59'16	-2°38'11
minimum elong	-8487 Mar 12 j 02:50	18° $\overline{3}$ 21'26	2°33'05	min. Earth dist.	-8481 Sep 25 j 15:48	2° $\approx$ 58'48	28.88298 AU
max. Earth dist.	-8487 Mar 12 j 03:58	18° $\overline{3}$ 21'32	30.85503 AU	direct	-8481 Dec 13 j 03:34	1° $\approx$ 33'54	
morning rise	-8487 Mar 28 j 08:03	18° $\overline{3}$ 57'24		evening set	-8480 Mar 12 j 04:33	3° $\approx$ 30'20	
retrograde	-8487 Jun 26 j 00:12	20° $\overline{3}$ 53'53					
opposition	-8487 Sep 11 j 18:00	19° $\overline{3}$ 29'40	-2°43'08	conjunction	-8480 Mar 28 j 10:08	4° $\approx$ 06'17	-2°27'10
min. Earth dist.	-8487 Sep 11 j 17:11	19° $\overline{3}$ 29'43	28.86017 AU	minimum elong	-8480 Mar 28 j 10:09	4° $\approx$ 06'17	2°27'39
direct	-8487 Nov 28 j 23:38	18° $\overline{3}$ 04'43		max. Earth dist.	-8480 Mar 28 j 02:18	4° $\approx$ 05'33	30.88284 AU
evening set	-8486 Feb 26 j 12:19	20° $\overline{3}$ 00'44		morning rise	-8480 Apr 13 j 14:35	4° $\approx$ 42'07	
				retrograde	-8480 Jul 11 j 12:12	6° $\approx$ 37'30	
conjunction	-8486 Mar 14 j 17:35	20° $\overline{3}$ 36'41	-2°32'28	opposition	-8480 Sep 26 j 19:37	5° $\approx$ 13'37	-2°36'31
minimum elong	-8486 Mar 14 j 17:36	20° $\overline{3}$ 36'41	2°33'00	min. Earth dist.	-8480 Sep 27 j 01:51	5° $\approx$ 13'10	28.88688 AU
max. Earth dist.	-8486 Mar 14 j 16:52	20° $\overline{3}$ 36'37	30.86094 AU	direct	-8480 Dec 14 j 16:41	3° $\approx$ 48'11	
morning rise	-8486 Mar 30 j 22:45	21° $\overline{3}$ 12'39		evening set	-8479 Mar 14 j 19:02	5° $\approx$ 44'41	
retrograde	-8486 Jun 28 j 11:42	23° $\overline{3}$ 09'01					
opposition	-8486 Sep 14 j 04:42	21° $\overline{3}$ 44'52	-2°42'55	conjunction	-8479 Mar 31 j 00:38	6° $\approx$ 20'38	-2°25'30
min. Earth dist.	-8486 Sep 14 j 05:43	21° $\overline{3}$ 44'48	28.86583 AU	minimum elong	-8479 Mar 31 j 00:39	6° $\approx$ 20'38	2°25'58
direct	-8486 Dec 01 j 09:56	20° $\overline{3}$ 19'53		max. Earth dist.	-8479 Mar 30 j 16:15	6° $\approx$ 19'51	30.88725 AU
evening set	-8485 Mar 01 j 03:06	22° $\overline{3}$ 16'00		morning rise	-8479 Apr 16 j 04:50	6° $\approx$ 56'27	
				retrograde	-8479 Jul 13 j 22:37	8° $\approx$ 51'40	
conjunction	-8485 Mar 17 j 08:35	22° $\overline{3}$ 51'57	-2°32'09	opposition	-8479 Sep 29 j 06:11	7° $\approx$ 27'51	-2°34'37
minimum elong	-8485 Mar 17 j 08:35	22° $\overline{3}$ 51'57	2°32'41	min. Earth dist.	-8479 Sep 29 j 14:01	7° $\approx$ 27'18	28.89196 AU
max. Earth dist.	-8485 Mar 17 j 07:20	22° $\overline{3}$ 51'50	30.86614 AU	direct	-8479 Dec 17 j 03:57	6° $\approx$ 02'23	
morning rise	-8485 Apr 02 j 13:31	23° $\overline{3}$ 27'54		evening set	-8478 Mar 17 j 09:12	7° $\approx$ 58'57	
retrograde	-8485 Jun 30 j 23:00	25° $\overline{3}$ 24'07					
opposition	-8485 Sep 16 j 15:13	24° $\overline{3}$ 00'03	-2°42'28	conjunction	-8478 Apr 02 j 14:49	8° $\approx$ 34'53	-2°23'36
min. Earth dist.	-8485 Sep 16 j 16:59	23° $\overline{3}$ 59'55	28.87043 AU	minimum elong	-8478 Apr 02 j 14:50	8° $\approx$ 34'53	2°24'05
direct	-8485 Dec 03 j 23:41	22° $\overline{3}$ 35'00		max. Earth dist.	-8478 Apr 02 j 05:53	8° $\approx$ 34'03	30.89310 AU
evening set	-8484 Mar 02 j 18:04	24° $\overline{3}$ 31'12		morning rise	-8478 Apr 18 j 18:53	9° $\approx$ 10'41	
				retrograde	-8478 Jul 16 j 10:47	11° $\approx$ 05'46	
conjunction	-8484 Mar 18 j 23:27	25° $\overline{3}$ 07'09	-2°31'36	opposition	-8478 Oct 01 j 16:32	9° $\approx$ 42'02	-2°32'29
minimum elong	-8484 Mar 18 j 23:28	25° $\overline{3}$ 07'09	2°32'08	min. Earth dist.	-8478 Oct 02 j 00:05	9° $\approx$ 41'29	28.89840 AU
max. Earth dist.	-8484 Mar 18 j 19:39	25° $\overline{3}$ 06'48	30.87029 AU	direct	-8478 Dec 19 j 16:19	8° $\approx$ 16'31	
morning rise	-8484 Apr 04 j 04:27	25° $\overline{3}$ 43'05		evening set	-8477 Mar 19 j 23:32	10° $\approx$ 13'10	
retrograde	-8484 Jul 02 j 11:48	27° $\overline{3}$ 39'09					
opposition	-8484 Sep 18 j 01:51	26° $\overline{3}$ 15'07	-2°41'45	conjunction	-8477 Apr 05 j 05:04	10° $\approx$ 49'06	-2°21'30
min. Earth dist.	-8484 Sep 18 j 04:51	26° $\overline{3}$ 14'54	28.87415 AU	minimum elong	-8477 Apr 05 j 05:05	10° $\approx$ 49'06	2°21'58
direct	-8484 Dec 05 j 12:15	24° $\overline{3}$ 49'59		max. Earth dist.	-8477 Apr 04 j 18:58	10° $\approx$ 48'10	30.90028 AU
evening set	-8483 Mar 05 j 08:49	26° $\overline{3}$ 46'16		morning rise	-8477 Apr 21 j 09:01	11° $\approx$ 24'54	
				retrograde	-8477 Jul 18 j 21:23	13° $\approx$ 19'51	
conjunction	-8483 Mar 21 j 14:24	27° $\overline{3}$ 22'13	-2°30'50	opposition	-8477 Oct 04 j 02:55	11° $\approx$ 56'13	-2°30'07
minimum elong	-8483 Mar 21 j 14:24	27° $\overline{3}$ 22'13	2°31'21	min. Earth dist.	-8477 Oct 04 j 11:50	11° $\approx$ 55'34	28.90626 AU
max. Earth dist.	-8483 Mar 21 j 10:24	27° $\overline{3}$ 21'51	30.87356 AU	direct	-8477 Dec 22 j 02:09	10° $\approx$ 30'42	
morning rise	-8483 Apr 06 j 19:05	27° $\overline{3}$ 58'07		evening set	-8476 Mar 21 j 13:48	12° $\approx$ 27'26	
retrograde	-8483 Jul 04 j 22:47	29° $\overline{3}$ 54'01					
opposition	-8483 Sep 20 j 12:23	28° $\overline{3}$ 30'02	-2°40'49	conjunction	-8476 Apr 06 j 19:27	13° $\approx$ 03'22	-2°19'11
min. Earth dist.	-8483 Sep 20 j 16:47	28° $\overline{3}$ 29'43	28.87705 AU	minimum elong	-8476 Apr 06 j 19:28	13° $\approx$ 03'22	2°19'38
direct	-8483 Dec 08 j 01:33	27° $\overline{3}$ 04'49		max. Earth dist.	-8476 Apr 06 j 09:19	13° $\approx$ 02'25	30.90876 AU
evening set	-8482 Mar 07 j 23:35	29° $\overline{3}$ 01'09		morning rise	-8476 Apr 22 j 23:09	13° $\approx$ 39'09	

Attention, astronomical year style is used: The year -8476 in astronomical counting style is the year 8477 BCE in historical counting style.

	-8476 Jun 05 j 03:28	15°	min. Earth dist.	-8470 Oct 19 j 20:19	27°35'03	28.96042 AU
retrograde	-8476 Jul 20 j 07:55	15°33'58	direct	-8469 Jan 06 j 20:06	26°10'31	
	-8476 Sep 04 j 09:53	15°	evening set	-8469 Apr 07 j 17:00	28°07'37	
opposition	-8476 Oct 05 j 13:20	14°10'27 -2°27'31				
min. Earth dist.	-8476 Oct 05 j 22:36	14°09'48 28.91498 AU	conjunction	-8469 Apr 23 j 22:02	28°43'30 -1°57'17	
direct	-8476 Dec 23 j 15:29	12°44'57	minimum elong	-8469 Apr 23 j 22:03	28°43'30 1°57'39	
evening set	-8475 Mar 24 j 04:11	14°41'47	max. Earth dist.	-8469 Apr 23 j 04:13	28°41'50 30.96188 AU	
	-8475 Apr 01 j 10:56	15°	morning rise	-8469 May 10 j 00:19	29°19'09	
				-8469 May 29 j 17:52	0°	
conjunction	-8475 Apr 09 j 09:37	15°17'43 -2°16'38	retrograde	-8469 Aug 05 j 18:22	1°12'58	
minimum elong	-8475 Apr 09 j 09:37	15°17'43 2°17'05		-8469 Oct 15 j 16:16	30°	
max. Earth dist.	-8475 Apr 08 j 21:32	15°16'35 30.91781 AU	opposition	-8469 Oct 21 j 15:03	29°49'55 -2°03'24	
morning rise	-8475 Apr 25 j 13:14	15°53'29	min. Earth dist.	-8469 Oct 22 j 06:37	29°48'49 28.96605 AU	
retrograde	-8475 Jul 22 j 20:00	17°48'12	direct	-8468 Jan 09 j 09:40	28°24'13	
opposition	-8475 Oct 07 j 23:47	16°24'47 -2°24'41		-8468 Mar 30 j 06:12	0°	
min. Earth dist.	-8475 Oct 08 j 09:59	16°24'04 28.92418 AU	evening set	-8468 Apr 09 j 06:52	0°21'19	
	-8475 Dec 19 j 15:38	15°				
direct	-8475 Dec 26 j 02:54	14°59'17	conjunction	-8468 Apr 25 j 11:45	0°57'11 -1°53'26	
	-8474 Jan 01 j 15:58	15°	minimum elong	-8468 Apr 25 j 11:46	0°57'12 1°53'46	
evening set	-8474 Mar 26 j 18:24	16°56'13	max. Earth dist.	-8468 Apr 24 j 16:51	0°55'26 30.96768 AU	
			morning rise	-8468 May 11 j 13:46	1°32'49	
conjunction	-8474 Apr 11 j 23:57	17°32'09 -2°13'54	retrograde	-8468 Aug 07 j 03:56	3°26'28	
minimum elong	-8474 Apr 11 j 23:58	17°32'09 2°14'19	opposition	-8468 Oct 23 j 01:38	2°03'27 -1°59'12	
max. Earth dist.	-8474 Apr 11 j 11:57	17°31'02 30.92698 AU	min. Earth dist.	-8468 Oct 23 j 18:29	2°02'15 28.97215 AU	
morning rise	-8474 Apr 28 j 03:12	18°07'54	direct	-8467 Jan 10 j 20:40	0°37'41	
retrograde	-8474 Jul 25 j 06:50	20°02'30	evening set	-8467 Apr 11 j 20:25	2°34'47	
opposition	-8474 Oct 10 j 10:21	18°39'11 -2°21'39	max. Earth dist.	-8467 Apr 27 j 06:31	3°08'54 30.97420 AU	
min. Earth dist.	-8474 Oct 10 j 21:51	18°38'22 28.93306 AU				
direct	-8474 Dec 28 j 15:09	17°13'42	conjunction	-8467 Apr 28 j 01:13	3°10'38 -1°49'25	
evening set	-8473 Mar 29 j 08:41	19°10'41	minimum elong	-8467 Apr 28 j 01:14	3°10'38 1°49'44	
			morning rise	-8467 May 14 j 02:53	3°46'14	
conjunction	-8473 Apr 14 j 14:01	19°46'37 -2°10'57	retrograde	-8467 Aug 09 j 13:13	5°39'43	
minimum elong	-8473 Apr 14 j 14:02	19°46'37 2°11'21	opposition	-8467 Oct 25 j 12:09	4°16'45 -1°54'49	
max. Earth dist.	-8473 Apr 13 j 23:47	19°45'17 30.93563 AU	min. Earth dist.	-8467 Oct 26 j 05:03	4°15'33 28.97902 AU	
morning rise	-8473 Apr 30 j 17:16	20°22'22	direct	-8466 Jan 13 j 10:12	2°50'57	
retrograde	-8473 Jul 27 j 20:10	22°16'49	evening set	-8466 Apr 14 j 10:01	4°48'02	
opposition	-8473 Oct 12 j 20:54	20°53'36 -2°18'24				
min. Earth dist.	-8473 Oct 13 j 08:51	20°52'45 28.94125 AU	conjunction	-8466 Apr 30 j 14:30	5°23'53 -1°45'15	
direct	-8473 Dec 31 j 04:27	19°28'05	minimum elong	-8466 Apr 30 j 14:31	5°23'53 1°45'32	
evening set	-8472 Mar 30 j 22:56	21°25'08	max. Earth dist.	-8466 Apr 29 j 18:23	5°22'00 30.98177 AU	
			morning rise	-8466 May 16 j 16:00	5°59'27	
conjunction	-8472 Apr 16 j 04:20	22°01'03 -2°07'49	retrograde	-8466 Aug 12 j 00:06	7°52'48	
minimum elong	-8472 Apr 16 j 04:21	22°01'04 2°08'12	opposition	-8466 Oct 27 j 22:37	6°29'52 -1°50'16	
max. Earth dist.	-8472 Apr 15 j 13:53	21°59'43 30.94330 AU	min. Earth dist.	-8466 Oct 28 j 15:51	6°28'39 28.98731 AU	
morning rise	-8472 May 02 j 07:11	22°36'47	direct	-8465 Jan 15 j 20:43	5°04'03	
retrograde	-8472 Jul 29 j 07:13	24°31'06	evening set	-8465 Apr 16 j 23:18	7°01'09	
opposition	-8472 Oct 14 j 07:32	23°07'56 -2°14'56	max. Earth dist.	-8465 May 02 j 08:19	7°35'09 30.99078 AU	
min. Earth dist.	-8472 Oct 14 j 21:21	23°06'58 28.94836 AU				
direct	-8471 Jan 01 j 18:10	21°42'24	conjunction	-8465 May 03 j 03:47	7°36'58 -1°40'54	
evening set	-8471 Apr 02 j 13:12	23°39'29	minimum elong	-8465 May 03 j 03:48	7°36'58 1°41'11	
			morning rise	-8465 May 19 j 04:52	8°12'32	
conjunction	-8471 Apr 18 j 18:24	24°15'24 -2°04'29	retrograde	-8465 Aug 14 j 09:42	10°05'45	
minimum elong	-8471 Apr 18 j 18:25	24°15'24 2°04'52	opposition	-8465 Oct 30 j 09:13	8°42'53 -1°45'33	
max. Earth dist.	-8471 Apr 18 j 02:04	24°13'53 30.95011 AU	min. Earth dist.	-8465 Oct 31 j 03:11	8°41'37 28.99683 AU	
morning rise	-8471 May 04 j 21:10	24°51'06	direct	-8464 Jan 18 j 08:52	7°17'04	
retrograde	-8471 Jul 31 j 19:38	26°45'16	evening set	-8464 Apr 18 j 12:48	9°14'11	
opposition	-8471 Oct 16 j 18:05	25°22'09 -2°11'17				
min. Earth dist.	-8471 Oct 17 j 07:50	25°21'10 28.95466 AU	conjunction	-8464 May 04 j 16:54	9°50'00 -1°36'25	
direct	-8470 Jan 04 j 08:00	23°56'34	minimum elong	-8464 May 04 j 16:55	9°50'00 1°36'40	
evening set	-8470 Apr 05 j 03:05	25°53'40	max. Earth dist.	-8464 May 03 j 19:56	9°48'02 31.00108 AU	
			morning rise	-8464 May 20 j 17:50	10°25'32	
conjunction	-8470 Apr 21 j 08:15	26°29'33 -2°00'59	retrograde	-8464 Aug 15 j 21:39	12°18'38	
minimum elong	-8470 Apr 21 j 08:16	26°29'34 2°01'20	opposition	-8464 Oct 31 j 19:41	10°55'52 -1°40'40	
max. Earth dist.	-8470 Apr 20 j 15:19	26°27'59 30.95609 AU	min. Earth dist.	-8464 Nov 01 j 13:27	10°54'36 29.00762 AU	
morning rise	-8470 May 07 j 10:41	27°05'14	direct	-8463 Jan 19 j 21:26	9°30'04	
retrograde	-8470 Aug 03 j 06:18	28°59'14	evening set	-8463 Apr 21 j 02:05	11°27'14	
opposition	-8470 Oct 19 j 04:44	27°36'09 -2°07'26	max. Earth dist.	-8463 May 06 j 09:45	12°01'08 31.01233 AU	

Attention, astronomical year style is used: The year -8463 in astronomical counting style is the year 8464 BCE in historical counting style.

conjunction	-8463 May 07 j 06:07	12° $\text{H}$ 03'02	-1°31'48	evening set	-8456 May 06 j 21:50	26° $\text{H}$ 58'38	
minimum elong	-8463 May 07 j 06:08	12° $\text{H}$ 03'02	1°32'02				
morning rise	-8463 May 23 j 06:33	12° $\text{H}$ 38'32		conjunction	-8456 May 22 j 23:42	27° $\text{H}$ 34'17	-0°56'02
retrograde	-8463 Aug 18 j 08:01	14° $\text{H}$ 31'34		minimum elong	-8456 May 22 j 23:43	27° $\text{H}$ 34'17	0°56'06
opposition	-8463 Nov 03 j 06:27	13° $\text{H}$ 08'52	-1°35'39	max. Earth dist.	-8456 May 21 j 22:52	27° $\text{H}$ 31'58	31.07841 AU
min. Earth dist.	-8463 Nov 04 j 01:35	13° $\text{H}$ 07'32	29.01908 AU	morning rise	-8456 Jun 07 j 21:27	28° $\text{H}$ 09'36	
direct	-8462 Jan 22 j 10:06	11° $\text{H}$ 43'08			-8456 Aug 22 j 21:46	0° $\text{Y}$	
evening set	-8462 Apr 23 j 15:18	13° $\text{H}$ 40'20		retrograde	-8456 Sep 02 j 10:17	0° $\text{Y}$ 01'57	
					-8456 Sep 13 j 03:10	30° $\text{R}$ $\text{H}$	
conjunction	-8462 May 09 j 18:57	14° $\text{H}$ 16'07	-1°27'02	opposition	-8456 Nov 18 j 10:17	28° $\text{H}$ 39'42	-0°57'02
minimum elong	-8462 May 09 j 18:58	14° $\text{H}$ 16'07	1°27'14	min. Earth dist.	-8456 Nov 19 j 09:36	28° $\text{H}$ 38'04	29.08241 AU
max. Earth dist.	-8462 May 08 j 21:16	14° $\text{H}$ 14'06	31.02404 AU	direct	-8455 Feb 07 j 01:22	27° $\text{H}$ 14'03	
morning rise	-8462 May 25 j 19:13	14° $\text{H}$ 51'36		evening set	-8455 May 09 j 10:35	29° $\text{H}$ 11'13	
retrograde	-8462 Aug 20 j 20:24	16° $\text{H}$ 44'32		max. Earth dist.	-8455 May 24 j 09:44	29° $\text{H}$ 44'23	31.08546 AU
opposition	-8462 Nov 05 j 17:06	15° $\text{H}$ 21'57	-1°30'29				
min. Earth dist.	-8462 Nov 06 j 11:50	15° $\text{H}$ 20'38	29.03064 AU	conjunction	-8455 May 25 j 11:53	29° $\text{H}$ 46'50	-0°50'33
direct	-8461 Jan 24 j 23:15	13° $\text{H}$ 56'16		minimum elong	-8455 May 25 j 11:54	29° $\text{H}$ 46'50	0°50'37
evening set	-8461 Apr 26 j 04:33	15° $\text{H}$ 53'30			-8455 May 31 j 09:13	0° $\text{Y}$	
max. Earth dist.	-8461 May 11 j 10:04	16° $\text{H}$ 27'13	31.03536 AU	morning rise	-8455 Jun 10 j 09:22	0° $\text{Y}$ 22'07	
				retrograde	-8455 Sep 04 j 21:13	2° $\text{Y}$ 14'23	
conjunction	-8461 May 12 j 08:02	16° $\text{H}$ 29'15	-1°22'08	opposition	-8455 Nov 20 j 21:11	0° $\text{Y}$ 52'08	-0°51'08
minimum elong	-8461 May 12 j 08:03	16° $\text{H}$ 29'15	1°22'19	min. Earth dist.	-8455 Nov 21 j 20:01	0° $\text{Y}$ 50'33	29.08968 AU
morning rise	-8461 May 28 j 07:49	17° $\text{H}$ 04'43			-8455 Dec 24 j 09:49	30° $\text{R}$ $\text{H}$	
retrograde	-8461 Aug 23 j 07:22	18° $\text{H}$ 57'34		direct	-8454 Feb 09 j 13:46	29° $\text{H}$ 26'28	
opposition	-8461 Nov 08 j 03:51	17° $\text{H}$ 35'05	-1°25'11		-8454 Mar 27 j 20:09	0° $\text{Y}$	
min. Earth dist.	-8461 Nov 09 j 00:20	17° $\text{H}$ 33'38	29.04161 AU	evening set	-8454 May 11 j 22:53	1° $\text{Y}$ 23'36	
direct	-8460 Jan 27 j 11:23	16° $\text{H}$ 09'25					
evening set	-8460 Apr 27 j 17:53	18° $\text{H}$ 06'41		conjunction	-8454 May 27 j 23:56	1° $\text{Y}$ 59'11	-0°45'00
				minimum elong	-8454 May 27 j 23:56	1° $\text{Y}$ 59'11	0°45'02
conjunction	-8460 May 13 j 21:01	18° $\text{H}$ 42'25	-1°17'07	max. Earth dist.	-8454 May 26 j 22:47	1° $\text{Y}$ 56'51	31.09300 AU
minimum elong	-8460 May 13 j 21:02	18° $\text{H}$ 42'25	1°17'17	morning rise	-8454 Jun 12 j 20:48	2° $\text{Y}$ 34'26	
max. Earth dist.	-8460 May 12 j 22:08	18° $\text{H}$ 40'18	31.04597 AU	retrograde	-8454 Sep 07 j 06:30	4° $\text{Y}$ 26'38	
morning rise	-8460 May 29 j 20:30	19° $\text{H}$ 17'51		opposition	-8454 Nov 23 j 08:13	3° $\text{Y}$ 04'24	-0°45'10
retrograde	-8460 Aug 24 j 19:36	21° $\text{H}$ 10'37		min. Earth dist.	-8454 Nov 24 j 08:02	3° $\text{Y}$ 02'44	29.09759 AU
opposition	-8460 Nov 09 j 14:43	19° $\text{H}$ 48'12	-1°19'45	direct	-8453 Feb 12 j 02:00	1° $\text{Y}$ 38'44	
min. Earth dist.	-8460 Nov 10 j 11:06	19° $\text{H}$ 46'47	29.05155 AU	evening set	-8453 May 14 j 11:22	3° $\text{Y}$ 35'51	
direct	-8459 Jan 29 j 01:24	18° $\text{H}$ 22'34		max. Earth dist.	-8453 May 29 j 09:51	4° $\text{Y}$ 08'59	31.10149 AU
evening set	-8459 Apr 30 j 07:03	20° $\text{H}$ 19'50					
max. Earth dist.	-8459 May 15 j 09:58	20° $\text{H}$ 53'20	31.05537 AU	conjunction	-8453 May 30 j 11:51	4° $\text{Y}$ 11'24	-0°39'24
				minimum elong	-8453 May 30 j 11:51	4° $\text{Y}$ 11'24	0°39'26
conjunction	-8459 May 16 j 09:50	20° $\text{H}$ 55'34	-1°11'59	morning rise	-8453 Jun 15 j 08:23	4° $\text{Y}$ 46'37	
minimum elong	-8459 May 16 j 09:50	20° $\text{H}$ 55'34	1°12'09	retrograde	-8453 Sep 09 j 18:01	6° $\text{Y}$ 38'44	
morning rise	-8459 Jun 01 j 08:53	21° $\text{H}$ 30'58		opposition	-8453 Nov 25 j 19:00	5° $\text{Y}$ 16'33	-0°39'08
retrograde	-8459 Aug 27 j 05:29	23° $\text{H}$ 23'39		min. Earth dist.	-8453 Nov 26 j 17:49	5° $\text{Y}$ 14'57	29.10654 AU
opposition	-8459 Nov 12 j 01:41	22° $\text{H}$ 01'17	-1°14'13	direct	-8452 Feb 14 j 14:38	3° $\text{Y}$ 50'54	
min. Earth dist.	-8459 Nov 12 j 23:23	21° $\text{H}$ 59'46	29.06046 AU	evening set	-8452 May 15 j 23:43	5° $\text{Y}$ 48'01	
direct	-8458 Jan 31 j 12:46	20° $\text{H}$ 35'40					
evening set	-8458 May 02 j 20:05	22° $\text{H}$ 32'55		conjunction	-8452 May 31 j 23:50	6° $\text{Y}$ 23'31	-0°33'44
				minimum elong	-8452 May 31 j 23:50	6° $\text{Y}$ 23'31	0°33'44
conjunction	-8458 May 18 j 22:37	23° $\text{H}$ 08'37	-1°06'45	max. Earth dist.	-8452 May 30 j 22:19	6° $\text{Y}$ 21'09	31.11098 AU
minimum elong	-8458 May 18 j 22:38	23° $\text{H}$ 08'37	1°06'53	morning rise	-8452 Jun 16 j 19:44	6° $\text{Y}$ 58'42	
max. Earth dist.	-8458 May 17 j 22:43	23° $\text{H}$ 06'24	31.06383 AU	retrograde	-8452 Sep 11 j 04:54	8° $\text{Y}$ 50'46	
morning rise	-8458 Jun 03 j 21:15	23° $\text{H}$ 44'00		opposition	-8452 Nov 27 j 06:09	7° $\text{Y}$ 28'38	-0°33'03
retrograde	-8458 Aug 29 j 14:48	25° $\text{H}$ 36'34		min. Earth dist.	-8452 Nov 28 j 05:57	7° $\text{Y}$ 26'59	29.11655 AU
opposition	-8458 Nov 14 j 12:29	24° $\text{H}$ 14'15	-1°08'35	direct	-8451 Feb 16 j 03:25	6° $\text{Y}$ 03'03	
min. Earth dist.	-8458 Nov 15 j 10:30	24° $\text{H}$ 12'43	29.06831 AU	evening set	-8451 May 18 j 11:54	8° $\text{Y}$ 00'08	
direct	-8457 Feb 03 j 02:16	22° $\text{H}$ 48'38		max. Earth dist.	-8451 Jun 02 j 09:53	8° $\text{Y}$ 33'14	31.12151 AU
evening set	-8457 May 05 j 09:05	24° $\text{H}$ 45'52					
max. Earth dist.	-8457 May 20 j 09:44	25° $\text{H}$ 19'10	31.07136 AU	conjunction	-8451 Jun 03 j 11:28	8° $\text{Y}$ 35'37	-0°28'01
				minimum elong	-8451 Jun 03 j 11:29	8° $\text{Y}$ 35'37	0°28'00
conjunction	-8457 May 21 j 11:11	25° $\text{H}$ 21'32	-1°01'26	morning rise	-8451 Jun 19 j 06:58	9° $\text{Y}$ 10'45	
minimum elong	-8457 May 21 j 11:12	25° $\text{H}$ 21'32	1°01'33	retrograde	-8451 Sep 13 j 16:45	11° $\text{Y}$ 02'47	
morning rise	-8457 Jun 06 j 09:31	25° $\text{H}$ 56'53		opposition	-8451 Nov 29 j 17:13	9° $\text{Y}$ 40'43	-0°26'55
retrograde	-8457 Sep 01 j 01:31	27° $\text{H}$ 49'21		min. Earth dist.	-8451 Nov 30 j 16:16	9° $\text{Y}$ 39'07	29.12726 AU
opposition	-8457 Nov 16 j 23:21	26° $\text{H}$ 27'04	-1°02'51	direct	-8450 Feb 18 j 17:40	8° $\text{Y}$ 15'11	
min. Earth dist.	-8457 Nov 17 j 21:50	26° $\text{H}$ 25'30	29.07556 AU	evening set	-8450 May 21 j 00:07	10° $\text{Y}$ 12'17	
direct	-8456 Feb 05 j 12:51	25° $\text{H}$ 01'25					

Attention, astronomical year style is used: The year -8450 in astronomical counting style is the year 8451 BCE in historical counting style.

conjunction	-8450 Jun 05 j 23:11	10° $\Upsilon$ 47'44	-0°22'15	evening set	-8444 Jun 03 j 00:06	23° $\Upsilon$ 24'32	
minimum elong	-8450 Jun 05 j 23:11	10° $\Upsilon$ 47'44	0°22'13				
max. Earth dist.	-8450 Jun 04 j 21:18	10° $\Upsilon$ 45'19	31.13241 AU	conjunction	-8444 Jun 18 j 19:45	23° $\Upsilon$ 59'44	0°12'42
morning rise	-8450 Jun 21 j 18:09	11° $\Upsilon$ 22'50		minimum elong	-8444 Jun 18 j 19:45	23° $\Upsilon$ 59'44	0°12'52
retrograde	-8450 Sep 16 j 02:48	13° $\Upsilon$ 14'51		behind sun begin	-8444 Jun 18 j 15:45	23° $\Upsilon$ 59'22	
opposition	-8450 Dec 02 j 04:16	11° $\Upsilon$ 52'50	-0°20'44	behind sun end	-8444 Jun 18 j 23:45	24° $\Upsilon$ 00'05	
min. Earth dist.	-8450 Dec 03 j 04:12	11° $\Upsilon$ 51'11	29.13827 AU	max. Earth dist.	-8444 Jun 17 j 16:30	23° $\Upsilon$ 57'11	31.18115 AU
direct	-8449 Feb 21 j 04:47	10° $\Upsilon$ 27'22		morning rise	-8444 Jul 04 j 11:26	24° $\Upsilon$ 34'36	
evening set	-8449 May 23 j 12:15	12° $\Upsilon$ 24'28		retrograde	-8444 Sep 28 j 14:51	26° $\Upsilon$ 26'26	
max. Earth dist.	-8449 Jun 07 j 09:27	12° $\Upsilon$ 57'31	31.14325 AU	opposition	-8444 Dec 15 j 00:36	25° $\Upsilon$ 04'34	0°16'34
				min. Earth dist.	-8444 Dec 16 j 01:12	25° $\Upsilon$ 02'52	29.18387 AU
conjunction	-8449 Jun 08 j 10:54	12° $\Upsilon$ 59'53	-0°16'28	direct	-8443 Mar 06 j 06:33	23° $\Upsilon$ 39'14	
minimum elong	-8449 Jun 08 j 10:54	12° $\Upsilon$ 59'53	0°16'25	evening set	-8443 Jun 05 j 11:30	25° $\Upsilon$ 36'04	
morning rise	-8449 Jun 24 j 05:18	13° $\Upsilon$ 34'57		max. Earth dist.	-8443 Jun 20 j 04:00	26° $\Upsilon$ 08'44	31.18583 AU
retrograde	-8449 Sep 18 j 12:36	15° $\Upsilon$ 26'55					
opposition	-8449 Dec 04 j 15:31	14° $\Upsilon$ 04'59	-0°14'32	conjunction	-8443 Jun 21 j 06:38	26° $\Upsilon$ 11'14	0°18'28
min. Earth dist.	-8449 Dec 05 j 15:28	14° $\Upsilon$ 03'20	29.14866 AU	minimum elong	-8443 Jun 21 j 06:38	26° $\Upsilon$ 11'14	0°18'39
direct	-8448 Feb 23 j 18:32	12° $\Upsilon$ 39'35		morning rise	-8443 Jul 06 j 21:37	26° $\Upsilon$ 46'03	
evening set	-8448 May 25 j 00:28	14° $\Upsilon$ 36'39		retrograde	-8443 Oct 01 j 01:10	28° $\Upsilon$ 37'52	
				opposition	-8443 Dec 17 j 12:12	27° $\Upsilon$ 15'58	0°22'43
conjunction	-8448 Jun 09 j 22:24	15° $\Upsilon$ 12'02	-0°10'40	min. Earth dist.	-8443 Dec 18 j 13:39	27° $\Upsilon$ 14'13	29.18859 AU
minimum elong	-8448 Jun 09 j 22:24	15° $\Upsilon$ 12'02	0°10'34	direct	-8442 Mar 08 j 19:18	25° $\Upsilon$ 50'39	
behind sun begin	-8448 Jun 09 j 17:22	15° $\Upsilon$ 11'35		evening set	-8442 Jun 07 j 22:55	27° $\Upsilon$ 47'25	
behind sun end	-8448 Jun 10 j 03:27	15° $\Upsilon$ 12'29					
max. Earth dist.	-8448 Jun 08 j 19:47	15° $\Upsilon$ 09'33	31.15319 AU	conjunction	-8442 Jun 23 j 17:23	28° $\Upsilon$ 22'32	0°24'13
morning rise	-8448 Jun 25 j 16:20	15° $\Upsilon$ 47'04		minimum elong	-8442 Jun 23 j 17:23	28° $\Upsilon$ 22'32	0°24'25
retrograde	-8448 Sep 19 j 23:44	17° $\Upsilon$ 39'01		max. Earth dist.	-8442 Jun 22 j 14:57	28° $\Upsilon$ 20'03	31.19065 AU
opposition	-8448 Dec 06 j 02:52	16° $\Upsilon$ 17'08	-0°08'19	morning rise	-8442 Jul 09 j 07:51	28° $\Upsilon$ 57'18	
min. Earth dist.	-8448 Dec 07 j 03:00	16° $\Upsilon$ 15'27	29.15816 AU		-8442 Aug 09 j 23:07	0° $\mathcal{B}$	
direct	-8447 Feb 25 j 05:36	14° $\Upsilon$ 51'45		retrograde	-8442 Oct 03 j 12:11	0° $\mathcal{B}$ 49'06	
evening set	-8447 May 27 j 12:30	16° $\Upsilon$ 48'48			-8442 Nov 29 j 12:30	30° $\mathcal{R}\Upsilon$	
max. Earth dist.	-8447 Jun 11 j 08:08	17° $\Upsilon$ 21'44	31.16205 AU	opposition	-8442 Dec 19 j 23:30	29° $\Upsilon$ 27'11	0°28'51
				min. Earth dist.	-8442 Dec 20 j 23:55	29° $\Upsilon$ 25'31	29.19357 AU
conjunction	-8447 Jun 12 j 10:02	17° $\Upsilon$ 24'09	-0°04'52	direct	-8441 Mar 11 j 09:22	28° $\Upsilon$ 01'52	
minimum elong	-8447 Jun 12 j 10:02	17° $\Upsilon$ 24'09	0°04'46	evening set	-8441 Jun 10 j 10:15	29° $\Upsilon$ 58'36	
behind sun begin	-8447 Jun 12 j 03:41	17° $\Upsilon$ 23'35			-8441 Jun 11 j 01:32	0° $\mathcal{B}$	
behind sun end	-8447 Jun 12 j 16:22	17° $\Upsilon$ 24'43		max. Earth dist.	-8441 Jun 25 j 01:44	0° $\mathcal{B}$ 31'12	31.19591 AU
morning rise	-8447 Jun 28 j 03:15	17° $\Upsilon$ 59'08					
retrograde	-8447 Sep 22 j 08:19	19° $\Upsilon$ 51'04		conjunction	-8441 Jun 26 j 04:03	0° $\mathcal{B}$ 33'40	0°29'55
opposition	-8447 Dec 08 j 14:21	18° $\Upsilon$ 29'12	-0°02'05	minimum elong	-8441 Jun 26 j 04:03	0° $\mathcal{B}$ 33'40	0°30'08
min. Earth dist.	-8447 Dec 09 j 15:14	18° $\Upsilon$ 27'29	29.16634 AU	morning rise	-8441 Jul 11 j 17:54	1° $\mathcal{B}$ 08'24	
direct	-8446 Feb 27 j 18:31	17° $\Upsilon$ 03'52		retrograde	-8441 Oct 05 j 22:11	3° $\mathcal{B}$ 00'13	
asc. node	-8446 Apr 09 j 11:50	17° $\Upsilon$ 30'02		opposition	-8441 Dec 22 j 11:06	1° $\mathcal{B}$ 38'17	0°34'55
evening set	-8446 May 30 j 00:27	19° $\Upsilon$ 00'52		min. Earth dist.	-8441 Dec 23 j 11:42	1° $\mathcal{B}$ 36'36	29.19939 AU
				direct	-8440 Mar 12 j 20:41	0° $\mathcal{B}$ 13'00	
conjunction	-8446 Jun 14 j 21:14	19° $\Upsilon$ 36'10	0°01'05	evening set	-8440 Jun 11 j 21:22	2° $\mathcal{B}$ 09'42	
minimum elong	-8446 Jun 14 j 21:16	19° $\Upsilon$ 36'10	0°01'13				
behind sun begin	-8446 Jun 14 j 14:46	19° $\Upsilon$ 35'35		conjunction	-8440 Jun 27 j 14:34	2° $\mathcal{B}$ 44'43	0°35'34
behind sun end	-8446 Jun 15 j 03:45	19° $\Upsilon$ 36'44		minimum elong	-8440 Jun 27 j 14:34	2° $\mathcal{B}$ 44'43	0°35'49
max. Earth dist.	-8446 Jun 13 j 18:01	19° $\Upsilon$ 33'37	31.16961 AU	max. Earth dist.	-8440 Jun 26 j 13:29	2° $\mathcal{B}$ 42'22	31.20220 AU
morning rise	-8446 Jun 30 j 14:07	20° $\Upsilon$ 11'07		morning rise	-8440 Jul 13 j 03:44	3° $\mathcal{B}$ 19'24	
retrograde	-8446 Sep 24 j 18:46	22° $\Upsilon$ 03'01		retrograde	-8440 Oct 07 j 07:41	5° $\mathcal{B}$ 11'14	
opposition	-8446 Dec 11 j 01:42	20° $\Upsilon$ 41'10	0°04'09	opposition	-8440 Dec 23 j 22:44	3° $\mathcal{B}$ 49'20	0°40'57
min. Earth dist.	-8446 Dec 12 j 02:10	20° $\Upsilon$ 39'28	29.17325 AU	min. Earth dist.	-8440 Dec 24 j 22:33	3° $\mathcal{B}$ 47'42	29.20613 AU
direct	-8445 Mar 02 j 06:08	19° $\Upsilon$ 15'50		direct	-8439 Mar 15 j 10:44	2° $\mathcal{B}$ 24'06	
evening set	-8445 Jun 01 j 12:15	21° $\Upsilon$ 12'47		evening set	-8439 Jun 14 j 08:33	4° $\mathcal{B}$ 20'46	
max. Earth dist.	-8445 Jun 16 j 06:12	21° $\Upsilon$ 45'34	31.17584 AU	max. Earth dist.	-8439 Jun 28 j 23:29	4° $\mathcal{B}$ 53'22	31.20947 AU
conjunction	-8445 Jun 17 j 08:39	21° $\Upsilon$ 48'03	0°06'55	conjunction	-8439 Jun 30 j 00:58	4° $\mathcal{B}$ 55'45	0°41'11
minimum elong	-8445 Jun 17 j 08:39	21° $\Upsilon$ 48'02	0°07'03	minimum elong	-8439 Jun 30 j 00:58	4° $\mathcal{B}$ 55'45	0°41'26
behind sun begin	-8445 Jun 17 j 02:39	21° $\Upsilon$ 47'30		morning rise	-8439 Jul 15 j 13:38	5° $\mathcal{B}$ 30'23	
behind sun end	-8445 Jun 17 j 14:39	21° $\Upsilon$ 48'35		retrograde	-8439 Oct 09 j 18:58	7° $\mathcal{B}$ 22'16	
morning rise	-8445 Jul 03 j 00:45	22° $\Upsilon$ 22'57		opposition	-8439 Dec 26 j 10:18	6° $\mathcal{B}$ 00'24	0°46'54
retrograde	-8445 Sep 27 j 03:44	24° $\Upsilon$ 14'49		min. Earth dist.	-8439 Dec 27 j 09:30	5° $\mathcal{B}$ 58'48	29.21398 AU
opposition	-8445 Dec 13 j 13:09	22° $\Upsilon$ 52'57	0°10'22	direct	-8438 Mar 17 j 21:46	4° $\mathcal{B}$ 35'15	
min. Earth dist.	-8445 Dec 14 j 14:47	22° $\Upsilon$ 51'11	29.17893 AU	evening set	-8438 Jun 16 j 19:24	6° $\mathcal{B}$ 31'54	
direct	-8444 Mar 03 j 17:51	21° $\Upsilon$ 27'38		max. Earth dist.	-8438 Jul 01 j 11:22	7° $\mathcal{B}$ 04'35	31.21758 AU

Attention, astronomical year style is used: The year -8438 in astronomical counting style is the year 8439 BCE in historical counting style.

conjunction	-8438 Jul 02 j 11:21	7°8'06"49	0°46'44	opposition	-8431 Jan 10 j 21:51	21°8'19"04	1°26'16
minimum elong	-8438 Jul 02 j 11:20	7°8'06"49	0°47'01	min. Earth dist.	-8431 Jan 11 j 19:54	21°8'17"34	29.25647 AU
morning rise	-8438 Jul 17 j 23:17	7°8'41"26		direct	-8431 Apr 02 j 08:30	19°8'54"18	
retrograde	-8438 Oct 12 j 03:26	9°8'33"21		evening set	-8431 Jul 01 j 23:10	21°8'50"38	
opposition	-8438 Dec 28 j 22:02	8°8'11"32	0°52'48				
min. Earth dist.	-8438 Dec 29 j 21:25	8°8'09"56	29.22219 AU	conjunction	-8431 Jul 17 j 10:15	22°8'25"13	1°23'13
direct	-8437 Mar 20 j 10:28	6°8'46"29		minimum elong	-8431 Jul 17 j 10:14	22°8'25"12	1°23'36
evening set	-8437 Jun 19 j 06:30	8°8'43"06		max. Earth dist.	-8431 Jul 16 j 12:20	22°8'23"09	31.25677 AU
				morning rise	-8431 Aug 01 j 17:55	22°8'59"31	
conjunction	-8437 Jul 04 j 21:34	9°8'17"59	0°52'12	retrograde	-8431 Oct 27 j 04:43	24°8'51"50	
minimum elong	-8437 Jul 04 j 21:34	9°8'17"59	0°52'30	opposition	-8430 Jan 13 j 09:52	23°8'29"58	1°31'26
max. Earth dist.	-8437 Jul 03 j 20:54	9°8'15"41	31.22583 AU	min. Earth dist.	-8430 Jan 14 j 07:14	23°8'28"31	29.25871 AU
morning rise	-8437 Jul 20 j 09:02	9°8'52"34		direct	-8430 Apr 04 j 23:10	22°8'05"12	
retrograde	-8437 Oct 14 j 13:47	11°8'44"33		evening set	-8430 Jul 04 j 09:32	24°8'01"26	
opposition	-8437 Dec 31 j 09:42	10°8'22"47	0°58'37				
min. Earth dist.	-8436 Jan 01 j 08:08	10°8'21"15	29.23040 AU	conjunction	-8430 Jul 19 j 19:51	24°8'35"58	1°27'59
direct	-8436 Mar 21 j 21:13	8°8'57"47		minimum elong	-8430 Jul 19 j 19:50	24°8'35"58	1°28'25
evening set	-8436 Jun 20 j 17:26	10°8'54"24		max. Earth dist.	-8430 Jul 18 j 21:34	24°8'33"53	31.25887 AU
max. Earth dist.	-8436 Jul 05 j 08:35	11°8'27"03	31.23368 AU	morning rise	-8430 Aug 04 j 03:06	25°8'10"14	
				retrograde	-8430 Oct 29 j 16:04	27°8'02"35	
conjunction	-8436 Jul 06 j 07:58	11°8'29"15	0°57'37	opposition	-8429 Jan 15 j 21:57	25°8'40"39	1°36'29
minimum elong	-8436 Jul 06 j 07:57	11°8'29"15	0°57'57	min. Earth dist.	-8429 Jan 16 j 18:31	25°8'39"16	29.26097 AU
morning rise	-8436 Jul 21 j 18:38	12°8'03"47		direct	-8429 Apr 07 j 11:12	24°8'15"54	
retrograde	-8436 Oct 15 j 23:09	13°8'55"50		evening set	-8429 Jul 06 j 19:41	26°8'12"04	
opposition	-8435 Jan 01 j 21:46	12°8'34"05	1°04'22	max. Earth dist.	-8429 Jul 21 j 09:00	26°8'44"37	31.26116 AU
min. Earth dist.	-8435 Jan 02 j 20:57	12°8'32"31	29.23794 AU				
direct	-8435 Mar 24 j 07:53	11°8'09"11		conjunction	-8429 Jul 22 j 05:27	26°8'46"32	1°32'38
evening set	-8435 Jun 23 j 04:19	13°8'05"46		minimum elong	-8429 Jul 22 j 05:27	26°8'46"32	1°33'04
				morning rise	-8429 Aug 06 j 11:57	27°8'20"46	
conjunction	-8435 Jul 08 j 18:01	13°8'40"33	1°02'56	retrograde	-8429 Nov 01 j 00:05	29°8'13"10	
minimum elong	-8435 Jul 08 j 18:01	13°8'40"33	1°03'15	opposition	-8428 Jan 18 j 10:07	27°8'51"11	1°41'23
max. Earth dist.	-8435 Jul 07 j 18:14	13°8'38"19	31.24073 AU	min. Earth dist.	-8428 Jan 19 j 06:23	27°8'49"49	29.26359 AU
morning rise	-8435 Jul 24 j 04:13	14°8'15"03		direct	-8428 Apr 09 j 00:17	26°8'26"27	
	-8435 Aug 14 j 21:12	15°8'		evening set	-8428 Jul 08 j 05:56	28°8'22"32	
retrograde	-8435 Oct 18 j 10:20	16°8'07"10					
	-8435 Dec 26 j 10:52	15°8'		conjunction	-8428 Jul 23 j 14:52	28°8'56"58	1°37'09
opposition	-8434 Jan 04 j 09:41	14°8'45"26	1°10'00	minimum elong	-8428 Jul 23 j 14:51	28°8'56"58	1°37'36
min. Earth dist.	-8434 Jan 05 j 07:38	14°8'43"57	29.24445 AU	max. Earth dist.	-8428 Jul 22 j 18:17	28°8'55"01	31.26424 AU
direct	-8434 Mar 26 j 19:55	13°8'20"35		morning rise	-8428 Aug 07 j 20:58	29°8'31"09	
	-8434 Jun 17 j 16:28	15°8'			-8428 Aug 21 j 09:35	0°II	
evening set	-8434 Jun 25 j 15:11	15°8'17"07		retrograde	-8428 Nov 02 j 10:19	1°II23'37	
max. Earth dist.	-8434 Jul 10 j 04:59	15°8'49"41	31.24648 AU	opposition	-8427 Jan 19 j 22:19	0°II01'37	1°46'08
					-8427 Jan 20 j 22:01	30°R8	
conjunction	-8434 Jul 11 j 04:18	15°8'51"52	1°08'10	min. Earth dist.	-8427 Jan 20 j 16:53	0°II00'21	29.26729 AU
minimum elong	-8434 Jul 11 j 04:17	15°8'51"52	1°08'31	direct	-8427 Apr 11 j 11:44	28°8'36"55	
morning rise	-8434 Jul 26 j 13:46	16°8'26"19			-8427 Jun 25 j 02:14	0°II	
retrograde	-8434 Oct 20 j 21:01	18°8'18"30		evening set	-8427 Jul 10 j 15:50	0°II32'56	
opposition	-8433 Jan 06 j 21:38	16°8'56"45	1°15'32	max. Earth dist.	-8427 Jul 25 j 05:34	1°II05'33	31.26833 AU
min. Earth dist.	-8433 Jan 07 j 20:27	16°8'55"12	29.24968 AU				
direct	-8433 Mar 29 j 07:49	15°8'31"57		conjunction	-8427 Jul 26 j 00:16	1°II07'19	1°41'32
evening set	-8433 Jun 28 j 02:02	17°8'28"26		minimum elong	-8427 Jul 26 j 00:15	1°II07'19	1°41'58
				morning rise	-8427 Aug 10 j 05:41	1°II41'28	
conjunction	-8433 Jul 13 j 14:26	18°8'03"07	1°13'18	retrograde	-8427 Nov 04 j 19:34	3°II34'02	
minimum elong	-8433 Jul 13 j 14:25	18°8'03"07	1°13'39	opposition	-8426 Jan 22 j 10:39	2°II12'01	1°50'44
max. Earth dist.	-8433 Jul 12 j 15:18	18°8'00"57	31.25104 AU	min. Earth dist.	-8426 Jan 23 j 05:17	2°II10'45	29.27193 AU
morning rise	-8433 Jul 28 j 23:20	18°8'37"31		direct	-8426 Apr 13 j 22:49	0°II47'24	
retrograde	-8433 Oct 23 j 08:09	20°8'29"45		evening set	-8426 Jul 13 j 01:54	2°II43'21	
opposition	-8432 Jan 09 j 09:41	19°8'07"59	1°20'58				
min. Earth dist.	-8432 Jan 10 j 07:29	19°8'06"30	29.25356 AU	conjunction	-8426 Jul 28 j 09:36	3°II17'42	1°45'46
direct	-8432 Mar 30 j 21:01	17°8'43"12		minimum elong	-8426 Jul 28 j 09:36	3°II17'41	1°46'14
evening set	-8432 Jun 29 j 12:41	19°8'39"37		max. Earth dist.	-8426 Jul 27 j 15:11	3°II15'57	31.27341 AU
max. Earth dist.	-8432 Jul 14 j 01:11	20°8'12"04	31.25428 AU	morning rise	-8426 Aug 12 j 14:37	3°II51'49	
				retrograde	-8426 Nov 07 j 06:21	5°II44'28	
conjunction	-8432 Jul 15 j 00:21	20°8'14"15	1°18'19	opposition	-8425 Jan 24 j 22:42	4°II22'28	1°55'10
minimum elong	-8432 Jul 15 j 00:21	20°8'14"15	1°18'42	min. Earth dist.	-8425 Jan 25 j 15:29	4°II21'20	29.27733 AU
morning rise	-8432 Jul 30 j 08:41	20°8'48"37		direct	-8425 Apr 16 j 10:15	2°II57'56	
retrograde	-8432 Oct 24 j 18:42	22°8'40"53		evening set	-8425 Jul 15 j 11:53	4°II53'52	

Attention, astronomical year style is used: The year -8425 in astronomical counting style is the year 8426 BCE in historical counting style.

conjunction	-8425 Jul 30 j 19:00	5°II28'10	1°49'51	direct	-8418 May 01 j 22:10	18°II14'23	
minimum elong	-8425 Jul 30 j 19:00	5°II28'10	1°50'18	evening set	-8418 Jul 30 j 08:39	20°II09'54	
max. Earth dist.	-8425 Jul 30 j 01:37	5°II26'31	31.27889 AU				
morning rise	-8425 Aug 14 j 23:26	6°II02'15		conjunction	-8418 Aug 14 j 11:56	20°II43'56	2°13'42
retrograde	-8425 Nov 09 j 17:16	7°II55'02		minimum elong	-8418 Aug 14 j 11:55	20°II43'56	2°14'15
opposition	-8424 Jan 27 j 11:12	6°II33'03	1°59'27	max. Earth dist.	-8418 Aug 13 j 23:11	20°II42'44	31.29433 AU
min. Earth dist.	-8424 Jan 28 j 04:14	6°II31'54	29.28299 AU	morning rise	-8418 Aug 29 j 13:17	21°II17'49	
direct	-8424 Apr 17 j 20:46	5°II08'38		retrograde	-8418 Nov 24 j 20:54	23°II11'25	
evening set	-8424 Jul 16 j 21:45	7°II04'30		opposition	-8417 Feb 12 j 03:44	21°II49'14	2°24'18
max. Earth dist.	-8424 Jul 31 j 11:47	7°II37'13	31.28442 AU	min. Earth dist.	-8417 Feb 12 j 16:42	21°II48'21	29.29519 AU
				direct	-8417 May 04 j 10:03	20°II25'12	
				evening set	-8417 Aug 01 j 18:12	22°II20'37	
conjunction	-8424 Aug 01 j 04:15	7°II38'46	1°53'46				
minimum elong	-8424 Aug 01 j 04:14	7°II38'46	1°54'16	conjunction	-8417 Aug 16 j 20:55	22°II54'36	2°16'23
morning rise	-8424 Aug 16 j 08:10	8°II12'49		minimum elong	-8417 Aug 16 j 20:54	22°II54'36	2°16'55
retrograde	-8424 Nov 11 j 04:37	10°II05'44		max. Earth dist.	-8417 Aug 16 j 08:41	22°II53'27	31.29259 AU
opposition	-8423 Jan 28 j 23:42	8°II43'46	2°03'34	morning rise	-8417 Aug 31 j 22:01	23°II28'28	
min. Earth dist.	-8423 Jan 29 j 15:17	8°II42'43	29.28825 AU	retrograde	-8417 Nov 27 j 07:11	25°II22'09	
direct	-8423 Apr 20 j 08:38	7°II19'26		opposition	-8416 Feb 14 j 16:25	23°II59'54	2°27'04
evening set	-8423 Jul 19 j 07:45	9°II15'17		min. Earth dist.	-8416 Feb 15 j 03:17	23°II59'10	29.29351 AU
				direct	-8416 May 05 j 21:59	22°II35'54	
conjunction	-8423 Aug 03 j 13:35	9°II49'30	1°57'32	evening set	-8416 Aug 03 j 03:29	24°II31'12	
minimum elong	-8423 Aug 03 j 13:34	9°II49'30	1°58'01				
max. Earth dist.	-8423 Aug 02 j 21:15	9°II47'58	31.28922 AU	conjunction	-8416 Aug 18 j 05:46	25°II05'10	2°18'52
morning rise	-8423 Aug 18 j 17:05	10°II23'32		minimum elong	-8416 Aug 18 j 05:45	25°II05'10	2°19'25
retrograde	-8423 Nov 13 j 16:15	12°II16'35		max. Earth dist.	-8416 Aug 17 j 18:42	25°II04'07	31.29098 AU
opposition	-8422 Jan 31 j 12:14	10°II54'37	2°07'29	morning rise	-8416 Sep 02 j 06:32	25°II39'01	
min. Earth dist.	-8422 Feb 01 j 03:53	10°II53'33	29.29276 AU	retrograde	-8416 Nov 28 j 17:33	27°II32'49	
direct	-8422 Apr 22 j 19:15	9°II30'22		opposition	-8415 Feb 16 j 05:19	26°II10'29	2°29'37
evening set	-8422 Jul 21 j 17:37	11°II26'11		min. Earth dist.	-8415 Feb 16 j 16:00	26°II09'46	29.29236 AU
				direct	-8415 May 08 j 08:15	24°II46'31	
conjunction	-8422 Aug 05 j 23:00	12°II00'22	2°01'07	evening set	-8415 Aug 05 j 12:49	26°II41'44	
minimum elong	-8422 Aug 05 j 22:59	12°II00'22	2°01'38				
max. Earth dist.	-8422 Aug 05 j 08:01	11°II58'57	31.29303 AU	conjunction	-8415 Aug 20 j 14:44	27°II15'40	2°21'09
morning rise	-8422 Aug 21 j 01:56	12°II34'21		minimum elong	-8415 Aug 20 j 14:44	27°II15'40	2°21'41
retrograde	-8422 Nov 16 j 03:15	14°II27'32		max. Earth dist.	-8415 Aug 20 j 05:05	27°II14'45	31.29021 AU
opposition	-8421 Feb 03 j 00:52	13°II05'33	2°11'14	morning rise	-8415 Sep 04 j 15:12	27°II49'29	
min. Earth dist.	-8421 Feb 03 j 15:48	13°II04'33	29.29585 AU	retrograde	-8415 Dec 01 j 04:21	29°II43'24	
direct	-8421 Apr 25 j 09:13	11°II41'23		opposition	-8414 Feb 18 j 17:53	28°II21'01	2°31'57
evening set	-8421 Jul 24 j 03:35	13°II37'09		min. Earth dist.	-8414 Feb 19 j 02:36	28°II20'26	29.29199 AU
				direct	-8414 May 10 j 19:08	26°II57'06	
conjunction	-8421 Aug 08 j 08:14	14°II11'17	2°04'32	evening set	-8414 Aug 07 j 22:07	28°II52'15	
minimum elong	-8421 Aug 08 j 08:13	14°II11'17	2°05'02				
max. Earth dist.	-8421 Aug 07 j 16:44	14°II09'50	31.29533 AU	conjunction	-8414 Aug 22 j 23:34	29°II26'09	2°23'14
morning rise	-8421 Aug 23 j 10:51	14°II45'15		minimum elong	-8414 Aug 22 j 23:34	29°II26'09	2°23'48
retrograde	-8421 Nov 18 j 15:42	16°II38'33		max. Earth dist.	-8414 Aug 22 j 14:22	29°II25'17	31.29019 AU
opposition	-8420 Feb 05 j 13:34	15°II16'33	2°14'48	morning rise	-8414 Sep 06 j 23:54	29°II59'58	
min. Earth dist.	-8420 Feb 06 j 03:46	15°II15'35	29.29755 AU				
direct	-8420 Apr 26 j 20:54	13°II52'26		retrograde	-8414 Sep 07 j 00:14	0°☾	
evening set	-8420 Jul 25 j 13:23	15°II48'08		opposition	-8414 Dec 03 j 16:20	1°☾54'01	
				min. Earth dist.	-8413 Feb 21 j 06:42	0°☾31'36	2°34'04
conjunction	-8420 Aug 09 j 17:39	16°II22'14	2°07'47				
minimum elong	-8420 Aug 09 j 17:38	16°II22'14	2°08'19	direct	-8413 Feb 21 j 14:55	0°☾31'03	29.29243 AU
max. Earth dist.	-8420 Aug 09 j 03:42	16°II20'55	31.29620 AU				
morning rise	-8420 Aug 24 j 19:41	16°II56'10			-8413 Mar 13 j 07:37	30°☾II	
retrograde	-8420 Nov 20 j 00:41	18°II49'35		direct	-8413 May 13 j 05:35	29°II07'45	
opposition	-8419 Feb 07 j 02:24	17°II27'32	2°18'10	evening set	-8413 Jul 09 j 21:47	0°☾	
min. Earth dist.	-8419 Feb 07 j 16:30	17°II26'35	29.29775 AU				
direct	-8419 Apr 29 j 09:56	16°II03'28		conjunction	-8413 Aug 25 j 08:26	1°☾36'43	2°25'07
evening set	-8419 Jul 27 j 23:06	17°II59'04		minimum elong	-8413 Aug 25 j 08:26	1°☾36'43	2°25'40
				max. Earth dist.	-8413 Aug 25 j 01:17	1°☾36'02	31.29084 AU
conjunction	-8419 Aug 12 j 02:43	18°II33'08	2°10'50	morning rise	-8413 Sep 09 j 08:24	2°☾10'31	
minimum elong	-8419 Aug 12 j 02:43	18°II33'08	2°11'21	retrograde	-8413 Dec 06 j 03:54	4°☾04'42	
max. Earth dist.	-8419 Aug 11 j 12:27	18°II31'47	31.29579 AU	opposition	-8412 Feb 23 j 19:36	2°☾42'16	2°35'58
morning rise	-8419 Aug 27 j 04:34	19°II07'03		min. Earth dist.	-8412 Feb 24 j 02:31	2°☾41'48	29.29318 AU
retrograde	-8419 Nov 22 j 11:23	21°II00'32		direct	-8412 May 14 j 18:22	1°☾18'30	
opposition	-8418 Feb 09 j 15:03	19°II38'26	2°21'20	evening set	-8412 Aug 11 j 16:31	3°☾13'31	
min. Earth dist.	-8418 Feb 10 j 03:46	19°II37'34	29.29685 AU	conjunction	-8412 Aug 26 j 17:16	3°☾47'22	2°26'47

Attention, astronomical year style is used: The year -8412 in astronomical counting style is the year 8413 BCE in historical counting style.

minimum elong	-8412 Aug 26 j 17:15	3° $\overline{04}$ 7'22	2°27'21	evening set	-8405 Aug 27 j 08:41	18° $\overline{08}$ 29'51	
max. Earth dist.	-8412 Aug 26 j 10:04	3° $\overline{08}$ 46'41	31.29167 AU				
morning rise	-8412 Sep 10 j 17:13	4° $\overline{08}$ 21'10		conjunction	-8405 Sep 11 j 08:07	19° $\overline{08}$ 03'37	2°32'29
retrograde	-8412 Dec 07 j 16:54	6° $\overline{08}$ 15'30		minimum elong	-8405 Sep 11 j 08:07	19° $\overline{08}$ 03'37	2°33'01
opposition	-8411 Feb 25 j 08:31	4° $\overline{08}$ 53'02	2°37'38	max. Earth dist.	-8405 Sep 11 j 06:27	19° $\overline{08}$ 03'28	31.27013 AU
min. Earth dist.	-8411 Feb 25 j 14:19	4° $\overline{08}$ 52'39	29.29404 AU	morning rise	-8405 Sep 26 j 07:45	19° $\overline{08}$ 37'26	
direct	-8411 May 17 j 04:48	3° $\overline{08}$ 29'21		retrograde	-8405 Dec 23 j 22:04	21° $\overline{08}$ 32'38	
evening set	-8411 Aug 14 j 01:35	5° $\overline{08}$ 24'18		opposition	-8404 Mar 13 j 04:04	20° $\overline{08}$ 09'42	2°42'56
				min. Earth dist.	-8404 Mar 13 j 04:45	20° $\overline{08}$ 09'39	29.26892 AU
conjunction	-8411 Aug 29 j 02:13	5° $\overline{08}$ 58'09	2°28'14	direct	-8404 Jun 01 j 14:11	18° $\overline{08}$ 46'17	
minimum elong	-8411 Aug 29 j 02:13	5° $\overline{08}$ 58'09	2°28'47	evening set	-8404 Aug 28 j 17:33	20° $\overline{08}$ 40'33	
max. Earth dist.	-8411 Aug 28 j 20:55	5° $\overline{08}$ 57'39	31.29218 AU				
morning rise	-8411 Sep 13 j 01:53	6° $\overline{08}$ 31'56		conjunction	-8404 Sep 12 j 17:05	21° $\overline{08}$ 14'19	2°32'26
retrograde	-8411 Dec 10 j 02:57	8° $\overline{08}$ 26'25		minimum elong	-8404 Sep 12 j 17:05	21° $\overline{08}$ 14'19	2°32'59
opposition	-8410 Feb 27 j 21:34	7° $\overline{08}$ 03'56	2°39'05	max. Earth dist.	-8404 Sep 12 j 17:33	21° $\overline{08}$ 14'22	31.26352 AU
min. Earth dist.	-8410 Feb 28 j 03:03	7° $\overline{08}$ 03'33	29.29416 AU	morning rise	-8404 Sep 27 j 16:39	21° $\overline{08}$ 48'08	
direct	-8410 May 19 j 17:25	5° $\overline{08}$ 40'19		retrograde	-8404 Dec 25 j 09:33	23° $\overline{08}$ 43'27	
evening set	-8410 Aug 16 j 10:57	7° $\overline{08}$ 35'12		opposition	-8403 Mar 15 j 17:04	22° $\overline{08}$ 20'25	2°42'46
				min. Earth dist.	-8403 Mar 15 j 16:19	22° $\overline{08}$ 20'28	29.26247 AU
conjunction	-8410 Aug 31 j 11:09	8° $\overline{08}$ 09'02	2°29'29	direct	-8403 Jun 04 j 02:21	20° $\overline{08}$ 57'01	
minimum elong	-8410 Aug 31 j 11:09	8° $\overline{08}$ 09'02	2°30'02	evening set	-8403 Aug 31 j 02:28	22° $\overline{08}$ 51'11	
max. Earth dist.	-8410 Aug 31 j 05:42	8° $\overline{08}$ 08'31	31.29184 AU				
morning rise	-8410 Sep 15 j 10:49	8° $\overline{08}$ 42'49		conjunction	-8403 Sep 15 j 01:50	23° $\overline{08}$ 24'58	2°32'10
retrograde	-8410 Dec 12 j 15:03	10° $\overline{08}$ 37'26		minimum elong	-8403 Sep 15 j 01:50	23° $\overline{08}$ 24'58	2°32'41
opposition	-8409 Mar 02 j 10:27	9° $\overline{08}$ 14'54	2°40'18	max. Earth dist.	-8403 Sep 15 j 02:25	23° $\overline{08}$ 25'01	31.25744 AU
min. Earth dist.	-8409 Mar 02 j 14:30	9° $\overline{08}$ 14'38	29.29327 AU	morning rise	-8403 Sep 30 j 01:43	23° $\overline{08}$ 58'47	
direct	-8409 May 22 j 05:39	7° $\overline{08}$ 51'22		retrograde	-8403 Dec 27 j 22:35	25° $\overline{08}$ 54'14	
evening set	-8409 Aug 18 j 20:12	9° $\overline{08}$ 46'10		opposition	-8402 Mar 18 j 06:02	24° $\overline{08}$ 31'07	2°42'22
				min. Earth dist.	-8402 Mar 18 j 03:53	24° $\overline{08}$ 31'16	29.25687 AU
conjunction	-8409 Sep 02 j 20:16	10° $\overline{08}$ 19'59	2°30'31	direct	-8402 Jun 06 j 12:13	23° $\overline{08}$ 07'44	
minimum elong	-8409 Sep 02 j 20:16	10° $\overline{08}$ 19'59	2°31'03	evening set	-8402 Sep 02 j 11:15	25° $\overline{08}$ 01'50	
max. Earth dist.	-8409 Sep 02 j 16:10	10° $\overline{08}$ 19'36	31.29018 AU				
morning rise	-8409 Sep 17 j 19:43	10° $\overline{08}$ 53'46		conjunction	-8402 Sep 17 j 10:45	25° $\overline{08}$ 35'37	2°31'41
retrograde	-8409 Dec 15 j 01:47	12° $\overline{08}$ 48'31		minimum elong	-8402 Sep 17 j 10:46	25° $\overline{08}$ 35'37	2°32'13
opposition	-8408 Mar 03 j 23:43	11° $\overline{08}$ 25'57	2°41'17	max. Earth dist.	-8402 Sep 17 j 13:28	25° $\overline{08}$ 35'52	31.25220 AU
min. Earth dist.	-8408 Mar 04 j 04:01	11° $\overline{08}$ 25'39	29.29095 AU	morning rise	-8402 Oct 02 j 10:37	26° $\overline{08}$ 09'27	
direct	-8408 May 23 j 17:40	10° $\overline{08}$ 02'28		retrograde	-8402 Dec 30 j 09:04	28° $\overline{08}$ 05'01	
evening set	-8408 Aug 20 j 05:23	11° $\overline{08}$ 57'10		opposition	-8401 Mar 20 j 19:00	26° $\overline{08}$ 41'52	2°41'44
				min. Earth dist.	-8401 Mar 20 j 16:03	26° $\overline{08}$ 42'03	29.25206 AU
conjunction	-8408 Sep 04 j 05:14	12° $\overline{08}$ 30'58	2°31'20	direct	-8401 Jun 09 j 00:24	25° $\overline{08}$ 18'33	
minimum elong	-8408 Sep 04 j 05:14	12° $\overline{08}$ 30'58	2°31'53	evening set	-8401 Sep 04 j 20:08	27° $\overline{08}$ 12'33	
max. Earth dist.	-8408 Sep 04 j 01:33	12° $\overline{08}$ 30'37	31.28717 AU				
morning rise	-8408 Sep 19 j 04:42	13° $\overline{08}$ 04'46		conjunction	-8401 Sep 19 j 19:35	27° $\overline{08}$ 46'21	2°30'59
retrograde	-8408 Dec 16 j 12:34	14° $\overline{08}$ 59'38		minimum elong	-8401 Sep 19 j 19:35	27° $\overline{08}$ 46'21	2°31'29
opposition	-8407 Mar 06 j 12:49	13° $\overline{08}$ 36'59	2°42'03	max. Earth dist.	-8401 Sep 19 j 22:43	27° $\overline{08}$ 46'38	31.24800 AU
min. Earth dist.	-8407 Mar 06 j 15:20	13° $\overline{08}$ 36'49	29.28713 AU	morning rise	-8401 Oct 04 j 19:46	28° $\overline{08}$ 20'12	
direct	-8407 May 26 j 05:42	12° $\overline{08}$ 13'32			-8401 Dec 01 j 16:26	0° $\overline{08}$	
evening set	-8407 Aug 22 j 14:38	14° $\overline{08}$ 08'09		retrograde	-8400 Jan 01 j 22:10	0° $\overline{08}$ 15'55	
					-8400 Feb 02 j 21:23	30° $\overline{08}$	
conjunction	-8407 Sep 06 j 14:19	14° $\overline{08}$ 41'56	2°31'56	opposition	-8400 Mar 22 j 08:00	28° $\overline{08}$ 52'42	2°40'52
minimum elong	-8407 Sep 06 j 14:19	14° $\overline{08}$ 41'56	2°32'28	min. Earth dist.	-8400 Mar 22 j 03:05	28° $\overline{08}$ 53'02	29.24823 AU
max. Earth dist.	-8407 Sep 06 j 11:10	14° $\overline{08}$ 41'38	31.28254 AU	direct	-8400 Jun 10 j 12:17	27° $\overline{08}$ 29'28	
morning rise	-8407 Sep 21 j 13:49	15° $\overline{08}$ 15'44		evening set	-8400 Sep 06 j 04:52	29° $\overline{08}$ 23'24	
retrograde	-8407 Dec 18 j 23:10	17° $\overline{08}$ 10'43					
opposition	-8406 Mar 09 j 01:52	15° $\overline{08}$ 47'59	2°42'34	conjunction	-8400 Sep 21 j 04:29	29° $\overline{08}$ 57'13	2°30'03
min. Earth dist.	-8406 Mar 09 j 04:40	15° $\overline{08}$ 47'48	29.28191 AU	minimum elong	-8400 Sep 21 j 04:29	29° $\overline{08}$ 57'13	2°30'34
direct	-8406 May 28 j 16:11	14° $\overline{08}$ 24'33		max. Earth dist.	-8400 Sep 21 j 09:20	29° $\overline{08}$ 57'40	31.24441 AU
evening set	-8406 Aug 24 j 23:42	16° $\overline{08}$ 19'03			-8400 Sep 22 j 09:54	0° $\overline{08}$	
				morning rise	-8400 Oct 06 j 04:50	0° $\overline{08}$ 31'06	
conjunction	-8406 Sep 08 j 23:22	16° $\overline{08}$ 52'50	2°32'19	retrograde	-8399 Jan 03 j 09:45	2° $\overline{08}$ 26'58	
minimum elong	-8406 Sep 08 j 23:22	16° $\overline{08}$ 52'50	2°32'52	opposition	-8399 Mar 24 j 21:09	1° $\overline{08}$ 03'43	2°39'45
max. Earth dist.	-8406 Sep 08 j 21:26	16° $\overline{08}$ 52'39	31.27676 AU	min. Earth dist.	-8399 Mar 24 j 16:10	1° $\overline{08}$ 04'03	29.24482 AU
morning rise	-8406 Sep 23 j 22:49	17° $\overline{08}$ 26'37			-8399 May 08 j 15:24	30° $\overline{08}$	
retrograde	-8406 Dec 21 j 09:57	19° $\overline{08}$ 21'43		direct	-8399 Jun 12 j 23:42	29° $\overline{08}$ 40'34	
opposition	-8405 Mar 11 j 14:53	17° $\overline{08}$ 58'54	2°42'52		-8399 Jul 17 j 03:51	0° $\overline{08}$	
min. Earth dist.	-8405 Mar 11 j 16:00	17° $\overline{08}$ 58'49	29.27557 AU	evening set	-8399 Sep 08 j 13:46	1° $\overline{08}$ 34'26	
direct	-8405 May 31 j 03:42	16° $\overline{08}$ 35'28					

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

conjunction	-8399 Sep 23 j 13:30	2°Ω08'15	2°28'54
minimum elong	-8399 Sep 23 j 13:30	2°Ω08'15	2°29'24
max. Earth dist.	-8399 Sep 23 j 19:13	2°Ω08'47	31.24118 AU
morning rise	-8399 Oct 08 j 14:08	2°Ω42'10	
retrograde	-8398 Jan 05 j 20:40	4°Ω38'10	