














































































































































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			evening set	2106 Apr 20 11:40	15° \mathcal{B} 02'58
conjunction	2100 Apr 11 10:16	21° Υ 37'25 -0°35'13	conjunction	2106 May 06 20:33	15° \mathcal{B} 59'15 -0°21'06
minimum elong	2100 Apr 11 10:16	21° Υ 37'25 0°35'13	minimum elong	2106 May 06 20:33	15° \mathcal{B} 59'15 0°21'05
max. Earth dist.	2100 Apr 12 02:55	21° Υ 39'48 20.96342 AU	max. Earth dist.	2106 May 07 04:51	16° \mathcal{B} 00'26 20.70977 AU
morning rise	2100 Apr 27 16:58	22° Υ 32'51	morning rise	2106 May 23 08:54	16° \mathcal{B} 56'02
retrograde	2100 Jul 31 09:31	25° Υ 40'53	retrograde	2106 Aug 26 03:18	20° \mathcal{B} 06'50
opposition	2100 Oct 16 23:16	23° Υ 40'51 -0°37'50	opposition	2106 Nov 10 21:33	18° \mathcal{B} 06'08 -0°21'44
min. Earth dist.	2100 Oct 16 08:09	23° Υ 42'24 18.94694 AU	min. Earth dist.	2106 Nov 10 14:26	18° \mathcal{B} 06'52 18.68268 AU
direct	2100 Dec 30 21:26	21° Υ 43'52	direct	2107 Jan 24 12:37	16° \mathcal{B} 07'55
evening set	2101 Mar 30 14:23	24° Υ 43'04	evening set	2107 Apr 24 23:03	19° \mathcal{B} 11'05
conjunction	2101 Apr 15 18:17	25° Υ 38'09 -0°33'15	conjunction	2107 May 11 09:03	20° \mathcal{B} 07'40 -0°18'15
minimum elong	2101 Apr 15 18:17	25° Υ 38'09 0°33'15	minimum elong	2107 May 11 09:03	20° \mathcal{B} 07'40 0°18'15
max. Earth dist.	2101 Apr 16 10:31	25° Υ 40'28 20.92923 AU	max. Earth dist.	2107 May 11 16:19	20° \mathcal{B} 08'42 20.65466 AU
morning rise	2101 May 02 01:52	26° Υ 33'47	morning rise	2107 May 27 22:08	21° \mathcal{B} 04'43
retrograde	2101 Aug 04 18:52	29° Υ 42'10	retrograde	2107 Aug 30 14:55	24° \mathcal{B} 16'02
opposition	2101 Oct 21 06:20	27° Υ 42'02 -0°35'35	opposition	2107 Nov 15 06:35	22° \mathcal{B} 15'10 -0°18'31
min. Earth dist.	2101 Oct 20 16:36	27° Υ 43'26 18.91114 AU	min. Earth dist.	2107 Nov 15 01:15	22° \mathcal{B} 15'44 18.62553 AU
direct	2102 Jan 04 03:05	25° Υ 44'53	direct	2108 Jan 28 20:38	20° \mathcal{B} 16'39
evening set	2102 Apr 03 21:51	28° Υ 44'34	evening set	2108 Apr 28 11:30	23° \mathcal{B} 20'41
conjunction	2102 Apr 20 02:42	29° Υ 39'51 -0°31'08	conjunction	2108 May 14 22:23	24° \mathcal{B} 17'32 -0°15'17
minimum elong	2102 Apr 20 02:42	29° Υ 39'51 0°31'08	minimum elong	2108 May 14 22:23	24° \mathcal{B} 17'32 0°15'16
max. Earth dist.	2102 Apr 20 17:12	29° Υ 41'56 20.89203 AU	behind sun begin	2108 May 14 20:33	24° \mathcal{B} 17'16
	2102 Apr 25 23:15	0° \mathcal{B}	behind sun end	2108 May 15 00:13	24° \mathcal{B} 17'47
morning rise	2102 May 06 11:21	0° \mathcal{B} 35'41	max. Earth dist.	2108 May 15 02:43	24° \mathcal{B} 18'09 20.59581 AU
retrograde	2102 Aug 09 05:28	3° \mathcal{B} 44'31	morning rise	2108 May 31 12:26	25° \mathcal{B} 14'51
opposition	2102 Oct 25 13:35	1° \mathcal{B} 44'15 -0°33'09	retrograde	2108 Sep 03 04:42	28° \mathcal{B} 26'42
min. Earth dist.	2102 Oct 25 00:29	1° \mathcal{B} 45'35 18.87234 AU	opposition	2108 Nov 18 15:50	26° \mathcal{B} 25'39 -0°15'11
	2102 Dec 16 17:51	30° $\mathcal{R}\Upsilon$	min. Earth dist.	2108 Nov 18 12:15	26° \mathcal{B} 26'02 18.56492 AU
direct	2103 Jan 08 08:34	29° Υ 46'55	direct	2109 Feb 01 06:04	24° \mathcal{B} 26'45
	2103 Jan 30 19:17	0° \mathcal{B}	evening set	2109 May 03 00:39	27° \mathcal{B} 31'42
evening set	2103 Apr 08 06:04	2° \mathcal{B} 47'10			
conjunction	2103 Apr 24 12:00	3° \mathcal{B} 42'41 -0°28'51	conjunction	2109 May 19 12:36	28° \mathcal{B} 28'52 -0°12'13
minimum elong	2103 Apr 24 12:00	3° \mathcal{B} 42'41 0°28'51	minimum elong	2109 May 19 12:36	28° \mathcal{B} 28'52 0°12'14
max. Earth dist.	2103 Apr 25 01:58	3° \mathcal{B} 44'41 20.85164 AU	behind sun begin	2109 May 19 08:11	28° \mathcal{B} 28'14
morning rise	2103 May 10 21:30	4° \mathcal{B} 38'45	behind sun end	2109 May 19 17:01	28° \mathcal{B} 29'30
retrograde	2103 Aug 13 15:39	7° \mathcal{B} 48'01	max. Earth dist.	2109 May 19 15:59	28° \mathcal{B} 29'21 20.53361 AU
opposition	2103 Oct 29 21:05	5° \mathcal{B} 47'39 -0°30'32	morning rise	2109 Jun 05 03:15	29° \mathcal{B} 26'27
min. Earth dist.	2103 Oct 29 09:32	5° \mathcal{B} 48'50 18.83031 AU		2109 Jun 15 04:26	0° \mathcal{I}
direct	2104 Jan 12 14:56	3° \mathcal{B} 50'10	retrograde	2109 Sep 07 17:23	2° \mathcal{I} 38'50
evening set	2104 Apr 11 15:04	6° \mathcal{B} 51'02	opposition	2109 Nov 23 01:36	0° \mathcal{I} 37'36 -0°11'44
			min. Earth dist.	2109 Nov 22 23:36	0° \mathcal{I} 37'49 18.50129 AU
conjunction	2104 Apr 27 21:59	7° \mathcal{B} 46'48 -0°26'24		2109 Dec 08 06:49	30° $\mathcal{R}\mathcal{B}$
minimum elong	2104 Apr 27 21:59	7° \mathcal{B} 46'48 0°26'25	direct	2110 Feb 05 15:27	28° \mathcal{B} 38'20
max. Earth dist.	2104 Apr 28 09:48	7° \mathcal{B} 48'30 20.80810 AU		2110 Apr 03 22:19	0° \mathcal{I}
morning rise	2104 May 14 08:34	8° \mathcal{B} 43'06	evening set	2110 May 07 14:33	1° \mathcal{I} 44'14
retrograde	2104 Aug 17 03:25	11° \mathcal{B} 52'51			
opposition	2104 Nov 02 04:53	9° \mathcal{B} 52'23 -0°27'46	conjunction	2110 May 24 03:16	2° \mathcal{I} 41'41 -0°09'05
min. Earth dist.	2104 Nov 01 18:28	9° \mathcal{B} 53'27 18.78496 AU	minimum elong	2110 May 24 03:16	2° \mathcal{I} 41'41 0°09'05
direct	2105 Jan 15 21:36	7° \mathcal{B} 54'41	behind sun begin	2110 May 23 21:34	2° \mathcal{I} 40'52
evening set	2105 Apr 16 00:56	10° \mathcal{B} 56'16	behind sun end	2110 May 24 08:57	2° \mathcal{I} 42'29
			max. Earth dist.	2110 May 24 03:52	2° \mathcal{I} 41'46 20.46893 AU
conjunction	2105 May 02 08:55	11° \mathcal{B} 52'18 -0°23'49	morning rise	2110 Jun 09 18:47	3° \mathcal{I} 39'33
minimum elong	2105 May 02 08:55	11° \mathcal{B} 52'18 0°23'49	retrograde	2110 Sep 12 07:38	6° \mathcal{I} 52'30
max. Earth dist.	2105 May 02 19:51	11° \mathcal{B} 53'52 20.76082 AU	opposition	2110 Nov 27 11:50	4° \mathcal{I} 51'04 -0°08'13
morning rise	2105 May 18 20:15	12° \mathcal{B} 48'50	min. Earth dist.	2110 Nov 27 11:29	4° \mathcal{I} 51'06 18.43566 AU
	2105 Jul 02 19:42	15° \mathcal{B}	direct	2111 Feb 10 01:54	2° \mathcal{I} 51'22
retrograde	2105 Aug 21 14:17	15° \mathcal{B} 59'05	evening set	2111 May 12 05:19	5° \mathcal{I} 58'19
	2105 Oct 11 11:24	15° $\mathcal{R}\mathcal{B}$			
opposition	2105 Nov 06 12:58	13° \mathcal{B} 58'32 -0°24'49	conjunction	2111 May 28 19:03	6° \mathcal{I} 56'04 -0°05'53
min. Earth dist.	2105 Nov 06 04:22	13° \mathcal{B} 59'25 18.73573 AU	minimum elong	2111 May 28 19:03	6° \mathcal{I} 56'04 0°05'53
direct	2106 Jan 20 04:31	12° \mathcal{B} 00'36	behind sun begin	2111 May 28 12:37	6° \mathcal{I} 55'09

behind sun end	2111 May 29 01:29	6°II56'59		min. Earth dist.	2116 Dec 22 20:30	0°☿47'33	18.03335 AU
max. Earth dist.	2111 May 28 19:00	6°II56'04	20.40245 AU		2117 Jan 10 20:26	30°♄II	
morning rise	2111 Jun 14 11:05	7°II54'12		direct	2117 Mar 07 04:12	28°II46'27	
retrograde	2111 Sep 16 21:51	11°II07'44			2117 Apr 30 00:14	0°☿	
opposition	2111 Dec 01 22:23	9°II06'07	-0°04'37	evening set	2117 Jun 07 17:57	2°☿00'34	
min. Earth dist.	2111 Dec 01 23:22	9°II06'00	18.36855 AU				
direct	2112 Feb 14 12:45	7°II06'01		conjunction	2117 Jun 24 11:42	3°☿00'11	0°13'58
evening set	2112 May 15 21:08	10°II14'02		minimum elong	2117 Jun 24 11:42	3°☿00'11	0°13'58
				behind sun begin	2117 Jun 24 08:28	2°☿59'42	
conjunction	2112 Jun 01 11:34	11°II12'05	-0°02'37	behind sun end	2117 Jun 24 14:57	3°☿00'39	
minimum elong	2112 Jun 01 11:33	11°II12'05	0°02'37	max. Earth dist.	2117 Jun 24 01:45	2°☿58'42	20.00112 AU
behind sun begin	2112 Jun 01 04:49	11°II11'08		morning rise	2117 Jul 11 06:09	3°☿59'57	
behind sun end	2112 Jun 01 18:18	11°II13'03		retrograde	2117 Oct 13 04:54	7°☿17'13	
max. Earth dist.	2112 Jun 01 08:39	11°II11'43	20.33497 AU	opposition	2117 Dec 27 02:45	5°☿14'58	0°17'17
morning rise	2112 Jun 18 04:22	12°II10'30		min. Earth dist.	2117 Dec 27 11:39	5°☿14'01	17.96877 AU
retrograde	2112 Sep 20 12:55	15°II24'38		direct	2118 Mar 11 19:17	3°☿12'40	
opposition	2112 Dec 05 09:36	13°II22'50	-0°00'59	evening set	2118 Jun 12 15:33	6°☿28'05	
min. Earth dist.	2112 Dec 05 12:17	13°II22'33	18.30082 AU				
direct	2113 Feb 18 00:07	11°II22'19		conjunction	2118 Jun 29 09:33	7°☿27'59	0°17'10
asc. node	2113 Mar 14 08:38	11°II38'03		minimum elong	2118 Jun 29 09:33	7°☿27'59	0°17'10
evening set	2113 May 20 13:41	14°II31'28		max. Earth dist.	2118 Jun 28 20:50	7°☿26'05	19.93697 AU
				morning rise	2118 Jul 16 04:14	8°☿28'00	
conjunction	2113 Jun 06 05:00	15°II29'51	0°00'47	retrograde	2118 Oct 18 00:40	11°☿45'55	
minimum elong	2113 Jun 06 04:59	15°II29'51	0°00'48	opposition	2118 Dec 31 18:06	9°☿43'37	0°20'48
behind sun begin	2113 Jun 05 22:14	15°II28'53		min. Earth dist.	2119 Jan 01 05:16	9°☿42'25	17.90513 AU
behind sun end	2113 Jun 06 11:44	15°II30'49		direct	2119 Mar 16 10:42	7°☿40'58	
max. Earth dist.	2113 Jun 06 01:34	15°II29'24	20.26701 AU	evening set	2119 Jun 17 14:12	10°☿57'42	
morning rise	2113 Jun 22 22:06	16°II28'32					
retrograde	2113 Sep 25 04:45	19°II43'16		conjunction	2119 Jul 04 08:41	11°☿57'53	0°20'17
opposition	2113 Dec 09 21:15	17°II41'19	0°02'41	minimum elong	2119 Jul 04 08:41	11°☿57'53	0°20'16
min. Earth dist.	2113 Dec 10 00:55	17°II40'56	18.23287 AU	max. Earth dist.	2119 Jul 03 19:04	11°☿55'51	19.87363 AU
direct	2114 Feb 22 12:27	15°II40'25		morning rise	2119 Jul 21 03:17	12°☿58'09	
evening set	2114 May 25 07:17	18°II50'45		retrograde	2119 Oct 22 21:32	16°☿16'39	
				opposition	2120 Jan 05 09:59	14°☿14'18	0°24'14
conjunction	2114 Jun 10 23:07	19°II49'26	0°04'08	min. Earth dist.	2120 Jan 05 21:53	14°☿13'01	17.84211 AU
minimum elong	2114 Jun 10 23:08	19°II49'26	0°04'08	direct	2120 Mar 20 04:23	12°☿11'18	
behind sun begin	2114 Jun 10 16:28	19°II48'28		evening set	2120 Jun 21 13:59	15°☿29'20	
behind sun end	2114 Jun 11 05:48	19°II50'23					
max. Earth dist.	2114 Jun 10 16:57	19°II48'33	20.19929 AU	conjunction	2120 Jul 08 08:34	16°☿29'47	0°23'18
morning rise	2114 Jun 27 16:52	20°II48'24		minimum elong	2120 Jul 08 08:34	16°☿29'47	0°23'19
retrograde	2114 Sep 29 21:09	24°II03'46		max. Earth dist.	2120 Jul 07 16:12	16°☿27'18	19.81090 AU
opposition	2114 Dec 14 09:37	22°II01'41	0°06'22	morning rise	2120 Jul 25 03:09	17°☿30'16	
min. Earth dist.	2114 Dec 14 15:02	22°II01'07	18.16552 AU	retrograde	2120 Oct 26 17:35	20°☿49'20	
direct	2115 Feb 27 00:47	20°II00'24		opposition	2121 Jan 09 02:53	18°☿46'54	0°27'32
evening set	2115 May 30 01:41	23°II11'57		min. Earth dist.	2121 Jan 09 17:12	18°☿45'21	17.77991 AU
				direct	2121 Mar 24 21:32	16°☿43'31	
conjunction	2115 Jun 15 18:23	24°II10'57	0°07'26	evening set	2121 Jun 26 14:19	20°☿02'48	
minimum elong	2115 Jun 15 18:23	24°II10'57	0°07'27				
behind sun begin	2115 Jun 15 12:14	24°II10'04		conjunction	2121 Jul 13 09:08	21°☿03'31	0°26'12
behind sun end	2115 Jun 16 00:32	24°II11'50		minimum elong	2121 Jul 13 09:08	21°☿03'31	0°26'12
max. Earth dist.	2115 Jun 15 11:46	24°II09'59	20.13227 AU	max. Earth dist.	2121 Jul 12 15:45	21°☿00'52	19.74917 AU
morning rise	2115 Jul 02 12:21	25°II10'11		morning rise	2121 Jul 30 03:30	22°☿04'11	
retrograde	2115 Oct 04 15:03	28°II26'11		retrograde	2121 Oct 31 15:15	25°☿23'48	
opposition	2115 Dec 18 22:37	26°II24'02	0°10'02	opposition	2122 Jan 13 20:20	23°☿21'16	0°30'41
min. Earth dist.	2115 Dec 19 04:49	26°II23'22	18.09888 AU	min. Earth dist.	2122 Jan 14 11:04	23°☿19'40	17.71880 AU
direct	2116 Mar 02 14:24	24°II22'23		direct	2122 Mar 29 17:58	21°☿17'30	
evening set	2116 Jun 02 21:24	27°II35'12		evening set	2122 Jul 01 15:36	24°☿38'01	
conjunction	2116 Jun 19 14:29	28°II34'30	0°10'43	conjunction	2122 Jul 18 10:25	25°☿38'57	0°28'57
minimum elong	2116 Jun 19 14:29	28°II34'30	0°10'43	minimum elong	2122 Jul 18 10:25	25°☿38'57	0°28'57
behind sun begin	2116 Jun 19 09:21	28°II33'46		max. Earth dist.	2122 Jul 17 14:56	25°☿35'59	19.68880 AU
behind sun end	2116 Jun 19 19:38	28°II35'15		morning rise	2122 Aug 04 04:32	26°☿39'49	
max. Earth dist.	2116 Jun 19 05:04	28°II33'07	20.06616 AU	retrograde	2122 Nov 05 11:33	29°☿59'54	
morning rise	2116 Jul 06 08:53	29°II34'01		opposition	2123 Jan 18 14:33	27°☿57'16	0°33'40
	2116 Jul 13 22:04	0°☿		min. Earth dist.	2123 Jan 19 07:34	27°☿55'25	17.65951 AU
retrograde	2116 Oct 08 09:18	2°☿50'39		direct	2123 Apr 03 13:01	25°☿53'06	
opposition	2116 Dec 22 12:18	0°☿48'26	0°13'41	evening set	2123 Jul 06 17:31	29°☿14'48	

	2123 Jul 19 04:09	0°♈		minimum elong	2129 Aug 21 08:44	28°♏25'31	0°42'16
				morning rise	2129 Sep 06 22:45	29°♏27'08	
conjunction	2123 Jul 23 12:23	0°♏15'58 0°31'32			2129 Sep 16 02:25	0°♐	
minimum elong	2123 Jul 23 12:23	0°♏15'58 0°31'32		retrograde	2129 Dec 08 04:55	2°♐49'35	
max. Earth dist.	2123 Jul 22 15:46	0°♏12'49 19.63064 AU		opposition	2130 Feb 19 16:07	0°♐46'41	0°47'40
morning rise	2123 Aug 09 06:13	1°♏17'00		min. Earth dist.	2130 Feb 20 12:19	0°♐44'28	17.35157 AU
retrograde	2123 Nov 10 10:03	4°♏37'32			2130 Mar 09 19:56	30°♐♌	
opposition	2124 Jan 23 09:20	2°♏34'48 0°36'27		direct	2130 May 06 09:07	28°♏40'30	
min. Earth dist.	2124 Jan 24 02:30	2°♏32'55 17.60260 AU			2130 Jul 01 04:37	0°♐	
direct	2124 Apr 07 11:41	0°♏30'14		evening set	2130 Aug 09 21:10	2°♐09'02	
evening set	2124 Jul 10 20:10	3°♏53'05					
				conjunction	2130 Aug 26 13:14	3°♐11'04	0°43'09
conjunction	2124 Jul 27 14:53	4°♏54'26 0°33'55		minimum elong	2130 Aug 26 13:13	3°♐11'04	0°43'10
minimum elong	2124 Jul 27 14:53	4°♏54'26 0°33'54		max. Earth dist.	2130 Aug 25 13:34	3°♐07'22	19.33926 AU
max. Earth dist.	2124 Jul 26 16:59	4°♏51'05 19.57509 AU		morning rise	2130 Sep 12 02:11	4°♐12'42	
morning rise	2124 Aug 13 08:11	5°♏55'37		retrograde	2130 Dec 13 05:42	7°♐35'20	
retrograde	2124 Nov 14 07:00	9°♏16'33		opposition	2131 Feb 24 15:18	5°♐32'33	0°48'29
opposition	2125 Jan 27 04:54	7°♏13'44 0°39'00		min. Earth dist.	2131 Feb 25 12:04	5°♐30'16	17.32916 AU
min. Earth dist.	2125 Jan 28 00:00	7°♏11'38 17.54883 AU		direct	2131 May 11 09:53	3°♐26'18	
direct	2125 Apr 12 08:23	5°♏08'47		evening set	2131 Aug 15 02:36	6°♐55'31	
evening set	2125 Jul 15 23:19	8°♏32'45					
				conjunction	2131 Aug 31 17:44	7°♐57'34	0°43'44
conjunction	2125 Aug 01 17:46	9°♏34'16 0°36'05		minimum elong	2131 Aug 31 17:44	7°♐57'34	0°43'44
minimum elong	2125 Aug 01 17:46	9°♏34'16 0°36'06		max. Earth dist.	2131 Aug 30 16:56	7°♐53'41	19.31970 AU
max. Earth dist.	2125 Jul 31 18:48	9°♏30'44 19.52321 AU		morning rise	2131 Sep 17 05:54	8°♐59'12	
morning rise	2125 Aug 18 10:38	10°♏35'35		retrograde	2131 Dec 18 06:37	12°♐22'00	
retrograde	2125 Nov 19 06:35	13°♏56'53		opposition	2132 Feb 29 15:07	10°♐19'18	0°48'58
opposition	2126 Feb 01 01:00	11°♏53'58 0°41'18		min. Earth dist.	2132 Mar 01 11:40	10°♐17'03	17.31237 AU
min. Earth dist.	2126 Feb 01 19:52	11°♏51'54 17.49905 AU		direct	2132 May 15 11:46	8°♐13'00	
direct	2126 Apr 17 08:40	9°♏48'41		evening set	2132 Aug 19 07:56	11°♐42'48	
evening set	2126 Jul 21 02:49	13°♏13'40					
				conjunction	2132 Sep 04 22:22	12°♐44'51	0°44'01
conjunction	2126 Aug 06 21:02	14°♏15'21 0°38'01		minimum elong	2132 Sep 04 22:22	12°♐44'51	0°44'01
minimum elong	2126 Aug 06 21:01	14°♏15'21 0°38'01		max. Earth dist.	2132 Sep 03 22:53	12°♐41'10	19.30544 AU
max. Earth dist.	2126 Aug 05 21:48	14°♏11'46 19.47553 AU		morning rise	2132 Sep 21 09:21	13°♐46'27	
	2126 Aug 18 22:46	15°♏		retrograde	2132 Dec 22 08:19	17°♐09'19	
morning rise	2126 Aug 23 13:12	15°♏16'46		opposition	2133 Mar 05 15:32	15°♐06'45	0°49'07
retrograde	2126 Nov 24 04:32	18°♏38'25		min. Earth dist.	2133 Mar 06 12:08	15°♐04'30	17.30062 AU
opposition	2127 Feb 05 21:56	16°♏35'26 0°43'20		direct	2133 May 20 14:22	13°♐00'26	
min. Earth dist.	2127 Feb 06 18:14	16°♏33'13 17.45384 AU		evening set	2133 Aug 24 13:27	16°♐30'40	
	2127 Mar 19 04:25	15°♐♌		max. Earth dist.	2133 Sep 09 02:26	17°♐28'51	19.29622 AU
direct	2127 Apr 22 06:44	14°♏29'50					
	2127 May 26 00:46	15°♏		conjunction	2133 Sep 10 02:50	17°♐32'41	0°43'59
evening set	2127 Jul 26 07:00	17°♏55'49		minimum elong	2133 Sep 10 02:50	17°♐32'41	0°44'00
max. Earth dist.	2127 Aug 11 00:21	18°♏53'50 19.43289 AU		morning rise	2133 Sep 26 12:53	18°♐34'13	
				retrograde	2133 Dec 27 08:14	21°♐57'07	
conjunction	2127 Aug 12 00:41	18°♏57'37 0°39'42		opposition	2134 Mar 10 16:16	19°♐54'39	0°48'55
minimum elong	2127 Aug 12 00:41	18°♏57'37 0°39'42		min. Earth dist.	2134 Mar 11 12:51	19°♐52'24	17.29396 AU
morning rise	2127 Aug 28 16:18	19°♏59'07		direct	2134 May 25 17:03	17°♐48'18	
retrograde	2127 Nov 29 04:48	23°♏21'04		evening set	2134 Aug 29 18:39	21°♐18'52	
opposition	2128 Feb 10 19:14	21°♏18'04 0°45'05		max. Earth dist.	2134 Sep 14 08:07	22°♐17'11	19.29193 AU
min. Earth dist.	2128 Feb 11 15:06	21°♏15'53 17.41394 AU					
direct	2128 Apr 26 07:58	19°♏12'12		conjunction	2134 Sep 15 07:15	22°♐20'49	0°43'39
evening set	2128 Jul 30 11:28	22°♏39'07		minimum elong	2134 Sep 15 07:15	22°♐20'49	0°43'39
max. Earth dist.	2128 Aug 15 05:00	23°♏37'20 19.39571 AU		morning rise	2134 Oct 01 16:09	23°♐22'15	
				retrograde	2135 Jan 01 09:36	26°♐45'05	
conjunction	2128 Aug 16 04:46	23°♏41'01 0°41'08		opposition	2135 Mar 15 17:25	24°♐42'43	0°48'23
minimum elong	2128 Aug 16 04:46	23°♏41'01 0°41'08		min. Earth dist.	2135 Mar 16 13:29	24°♐40'31	17.29192 AU
morning rise	2128 Sep 01 19:26	24°♏42'35		direct	2135 May 30 21:38	22°♐36'23	
retrograde	2128 Dec 03 04:08	28°♏04'48		evening set	2135 Sep 03 23:51	26°♐07'07	
opposition	2129 Feb 14 17:27	26°♏01'50 0°46'32		max. Earth dist.	2135 Sep 19 11:47	27°♐05'16	19.29228 AU
min. Earth dist.	2129 Feb 15 14:11	25°♏59'33 17.37972 AU					
direct	2129 May 01 07:31	23°♏55'47		conjunction	2135 Sep 20 11:19	27°♐08'59	0°43'01
evening set	2129 Aug 04 16:11	27°♏23'32		minimum elong	2135 Sep 20 11:19	27°♐08'59	0°43'01
max. Earth dist.	2129 Aug 20 07:58	28°♏21'39 19.36452 AU		morning rise	2135 Oct 06 19:10	28°♐10'18	
					2135 Nov 08 07:40	0°♑	
conjunction	2129 Aug 21 08:44	28°♏25'31 0°42'17		retrograde	2136 Jan 06 08:28	1°♑33'00	

	2136 Mar 08 11:07	30° <u>8</u> ′ <u>19</u> ″	evening set	2142 Oct 07 19:30	29° <u>2</u> ′ <u>26</u> ″59	
opposition	2136 Mar 19 18:48	29° <u>19</u> ′ <u>30</u> ″43 0°47′30		2142 Oct 16 16:22	0° <u>1</u> ′ <u>1</u> ″	
min. Earth dist.	2136 Mar 20 14:58	29° <u>19</u> ′ <u>28</u> ″31 17.29475 AU				
direct	2136 Jun 04 01:25	27° <u>19</u> ′ <u>24</u> ″23	conjunction	2142 Oct 23 23:18	0° <u>1</u> ′ <u>27</u> ″29 0°30′44	
	2136 Aug 23 17:36	0° <u>2</u> ′ <u>2</u> ″	minimum elong	2142 Oct 23 23:18	0° <u>1</u> ′ <u>27</u> ″29 0°30′44	
evening set	2136 Sep 08 04:32	0° <u>2</u> ′ <u>55</u> ″11	max. Earth dist.	2142 Oct 23 08:48	0° <u>1</u> ′ <u>25</u> ″13 19.44175 AU	
			morning rise	2142 Nov 08 23:35	1° <u>1</u> ′ <u>27</u> ″28	
conjunction	2136 Sep 24 15:02	1° <u>2</u> ′ <u>56</u> ″55 0°42′04	retrograde	2143 Feb 08 02:53	4° <u>1</u> ′ <u>47</u> ″38	
minimum elong	2136 Sep 24 15:02	1° <u>2</u> ′ <u>56</u> ″55 0°42′04	opposition	2143 Apr 23 05:10	2° <u>1</u> ′ <u>45</u> ″59 0°32′48	
max. Earth dist.	2136 Sep 23 16:46	1° <u>2</u> ′ <u>53</u> ″24 19.29758 AU	min. Earth dist.	2143 Apr 23 16:23	2° <u>1</u> ′ <u>44</u> ″47 17.46315 AU	
morning rise	2136 Oct 10 21:44	2° <u>2</u> ′ <u>58</u> ″06	direct	2143 Jul 09 05:07	0° <u>1</u> ′ <u>40</u> ″32	
retrograde	2137 Jan 10 09:16	6° <u>2</u> ′ <u>20</u> ″36	evening set	2143 Oct 12 19:15	4° <u>1</u> ′ <u>08</u> ″17	
opposition	2137 Mar 24 20:23	4° <u>2</u> ′ <u>18</u> ″23 0°46′17				
min. Earth dist.	2137 Mar 25 15:17	4° <u>2</u> ′ <u>16</u> ″20 17.30240 AU	conjunction	2143 Oct 28 22:04	5° <u>1</u> ′ <u>08</u> ″31 0°28′03	
direct	2137 Jun 09 07:22	2° <u>2</u> ′ <u>12</u> ″06	minimum elong	2143 Oct 28 22:04	5° <u>1</u> ′ <u>08</u> ″31 0°28′04	
evening set	2137 Sep 13 08:38	5° <u>2</u> ′ <u>42</u> ″47	max. Earth dist.	2143 Oct 28 10:20	5° <u>1</u> ′ <u>06</u> ″41 19.48569 AU	
			morning rise	2143 Nov 13 21:11	6° <u>1</u> ′ <u>08</u> ″15	
conjunction	2137 Sep 29 18:03	6° <u>2</u> ′ <u>44</u> ″22 0°40′50	retrograde	2144 Feb 12 23:17	9° <u>1</u> ′ <u>27</u> ″55	
minimum elong	2137 Sep 29 18:03	6° <u>2</u> ′ <u>44</u> ″22 0°40′49	opposition	2144 Apr 27 06:12	7° <u>1</u> ′ <u>26</u> ″29 0°29′43	
max. Earth dist.	2137 Sep 28 20:18	6° <u>2</u> ′ <u>40</u> ″57 19.30778 AU	min. Earth dist.	2144 Apr 27 16:42	7° <u>1</u> ′ <u>25</u> ″21 17.50957 AU	
morning rise	2137 Oct 15 23:39	7° <u>2</u> ′ <u>45</u> ″24	direct	2144 Jul 13 06:18	5° <u>1</u> ′ <u>21</u> ″22	
retrograde	2138 Jan 15 07:33	11° <u>2</u> ′ <u>07</u> ″39	evening set	2144 Oct 16 18:20	8° <u>1</u> ′ <u>48</u> ″18	
opposition	2138 Mar 29 22:05	9° <u>2</u> ′ <u>05</u> ″29 0°44′44				
min. Earth dist.	2138 Mar 30 17:01	9° <u>2</u> ′ <u>03</u> ″26 17.31521 AU	conjunction	2144 Nov 01 19:55	9° <u>1</u> ′ <u>48</u> ″15 0°25′13	
direct	2138 Jun 14 10:56	6° <u>2</u> ′ <u>59</u> ″14	minimum elong	2144 Nov 01 19:55	9° <u>1</u> ′ <u>48</u> ″15 0°25′13	
evening set	2138 Sep 18 12:15	10° <u>2</u> ′ <u>29</u> ″43	max. Earth dist.	2144 Nov 01 09:03	9° <u>1</u> ′ <u>46</u> ″33 19.53462 AU	
			morning rise	2144 Nov 17 18:16	10° <u>1</u> ′ <u>47</u> ″43	
conjunction	2138 Oct 04 20:36	11° <u>2</u> ′ <u>31</u> ″07 0°39′18	retrograde	2145 Feb 16 21:47	14° <u>1</u> ′ <u>06</u> ″53	
minimum elong	2138 Oct 04 20:36	11° <u>2</u> ′ <u>31</u> ″07 0°39′19	opposition	2145 May 02 06:47	12° <u>1</u> ′ <u>05</u> ″38 0°26′27	
max. Earth dist.	2138 Oct 04 00:03	11° <u>2</u> ′ <u>27</u> ″52 19.32327 AU	min. Earth dist.	2145 May 02 14:47	12° <u>1</u> ′ <u>04</u> ″47 17.56064 AU	
morning rise	2138 Oct 21 01:08	12° <u>2</u> ′ <u>31</u> ″58	direct	2145 Jul 18 09:11	10° <u>1</u> ′ <u>00</u> ″52	
retrograde	2139 Jan 20 07:54	15° <u>2</u> ′ <u>53</u> ″52	evening set	2145 Oct 21 16:18	13° <u>1</u> ′ <u>26</u> ″56	
opposition	2139 Apr 03 23:33	13° <u>2</u> ′ <u>51</u> ″47 0°42′53				
min. Earth dist.	2139 Apr 04 16:40	13° <u>2</u> ′ <u>49</u> ″56 17.33323 AU	conjunction	2145 Nov 06 17:00	14° <u>1</u> ′ <u>26</u> ″36 0°22′13	
direct	2139 Jun 19 16:31	11° <u>2</u> ′ <u>45</u> ″35	minimum elong	2145 Nov 06 17:00	14° <u>1</u> ′ <u>26</u> ″36 0°22′14	
evening set	2139 Sep 23 15:15	15° <u>2</u> ′ <u>15</u> ″43	max. Earth dist.	2145 Nov 06 09:01	14° <u>1</u> ′ <u>25</u> ″22 19.58765 AU	
				2145 Nov 15 14:52	15° <u>1</u> ′ <u>1</u> ″	
conjunction	2139 Oct 09 22:30	16° <u>2</u> ′ <u>16</u> ″56 0°37′31	morning rise	2145 Nov 22 14:18	15° <u>1</u> ′ <u>25</u> ″49	
minimum elong	2139 Oct 09 22:30	16° <u>2</u> ′ <u>16</u> ″56 0°37′31	retrograde	2146 Feb 21 17:17	18° <u>1</u> ′ <u>44</u> ″25	
max. Earth dist.	2139 Oct 09 03:25	16° <u>2</u> ′ <u>13</u> ″56 19.34406 AU	opposition	2146 May 07 07:10	16° <u>1</u> ′ <u>43</u> ″24 0°23′02	
morning rise	2139 Oct 26 01:51	17° <u>2</u> ′ <u>17</u> ″36	min. Earth dist.	2146 May 07 14:23	16° <u>1</u> ′ <u>42</u> ″38 17.61535 AU	
retrograde	2140 Jan 25 05:57	20° <u>2</u> ′ <u>39</u> ″07		2146 Jun 24 11:58	15° <u>1</u> ′ <u>1</u> ″	
opposition	2140 Apr 08 01:18	18° <u>2</u> ′ <u>37</u> ″05 0°40′45	direct	2146 Jul 23 09:53	14° <u>1</u> ′ <u>39</u> ″01	
min. Earth dist.	2140 Apr 08 18:10	18° <u>2</u> ′ <u>35</u> ″16 17.35690 AU		2146 Aug 20 21:28	15° <u>1</u> ′ <u>1</u> ″	
direct	2140 Jun 23 19:10	16° <u>2</u> ′ <u>31</u> ″00	evening set	2146 Oct 26 13:41	18° <u>1</u> ′ <u>04</u> ″08	
evening set	2140 Sep 27 17:22	20° <u>2</u> ′ <u>00</u> ″40				
			conjunction	2146 Nov 11 13:11	19° <u>1</u> ′ <u>03</u> ″30 0°19′06	
conjunction	2140 Oct 13 23:25	21° <u>2</u> ′ <u>01</u> ″39 0°35′29	minimum elong	2146 Nov 11 13:11	19° <u>1</u> ′ <u>03</u> ″30 0°19′05	
minimum elong	2140 Oct 13 23:25	21° <u>2</u> ′ <u>01</u> ″39 0°35′29	max. Earth dist.	2146 Nov 11 05:47	19° <u>1</u> ′ <u>02</u> ″21 19.64401 AU	
max. Earth dist.	2140 Oct 13 05:37	20° <u>2</u> ′ <u>58</u> ″51 19.37071 AU	morning rise	2146 Nov 27 09:45	20° <u>1</u> ′ <u>02</u> ″25	
morning rise	2140 Oct 30 01:47	22° <u>2</u> ′ <u>02</u> ″06	retrograde	2147 Feb 26 14:26	23° <u>1</u> ′ <u>20</u> ″28	
retrograde	2141 Jan 29 06:04	25° <u>2</u> ′ <u>23</u> ″12	opposition	2147 May 12 07:03	21° <u>1</u> ′ <u>19</u> ″39 0°19′29	
opposition	2141 Apr 13 02:46	23° <u>2</u> ′ <u>21</u> ″16 0°38′20	min. Earth dist.	2147 May 12 12:06	21° <u>1</u> ′ <u>19</u> ″07 17.67312 AU	
min. Earth dist.	2141 Apr 13 17:09	23° <u>2</u> ′ <u>19</u> ″43 17.38641 AU	direct	2147 Jul 28 11:47	19° <u>1</u> ′ <u>15</u> ″39	
direct	2141 Jun 28 23:52	21° <u>2</u> ′ <u>15</u> ″20	evening set	2147 Oct 31 10:02	22° <u>1</u> ′ <u>39</u> ″45	
evening set	2141 Oct 02 18:46	24° <u>2</u> ′ <u>44</u> ″26				
			conjunction	2147 Nov 16 08:42	23° <u>1</u> ′ <u>38</u> ″49 0°15′52	
conjunction	2141 Oct 18 23:47	25° <u>2</u> ′ <u>45</u> ″11 0°33′13	minimum elong	2147 Nov 16 08:42	23° <u>1</u> ′ <u>38</u> ″49 0°15′52	
minimum elong	2141 Oct 18 23:47	25° <u>2</u> ′ <u>45</u> ″11 0°33′12	behind sun begin	2147 Nov 16 07:22	23° <u>1</u> ′ <u>38</u> ″37	
max. Earth dist.	2141 Oct 18 08:18	25° <u>2</u> ′ <u>42</u> ″45 19.40321 AU	behind sun end	2147 Nov 16 10:01	23° <u>1</u> ′ <u>39</u> ″01	
morning rise	2141 Nov 04 00:57	26° <u>2</u> ′ <u>45</u> ″25	max. Earth dist.	2147 Nov 16 04:06	23° <u>1</u> ′ <u>38</u> ″07 19.70302 AU	
	2142 Jan 19 11:55	0° <u>1</u> ′ <u>1</u> ″	morning rise	2147 Dec 02 04:17	24° <u>1</u> ′ <u>37</u> ″27	
retrograde	2142 Feb 03 03:16	0° <u>1</u> ′ <u>06</u> ″03	retrograde	2148 Mar 02 08:47	27° <u>1</u> ′ <u>54</u> ″55	
	2142 Feb 17 23:35	30° <u>1</u> ′ <u>04</u> ″15	opposition	2148 May 16 06:44	25° <u>1</u> ′ <u>53</u> ″53 0°15′49	
opposition	2142 Apr 18 04:06	28° <u>2</u> ′ <u>04</u> ″15 0°35′41	min. Earth dist.	2148 May 16 10:42	25° <u>1</u> ′ <u>53</u> ″53 17.73314 AU	
min. Earth dist.	2142 Apr 18 17:58	28° <u>2</u> ′ <u>02</u> ″46 17.42191 AU	direct	2148 Aug 01 12:09	23° <u>1</u> ′ <u>50</u> ″41	
direct	2142 Jul 04 01:20	25° <u>2</u> ′ <u>58</u> ″31	evening set	2148 Nov 04 05:28	27° <u>1</u> ′ <u>13</u> ″42	

conjunction	2148 Nov 20 03:01	28° \mathbb{M} .12'27	0°12'34	behind sun end	2153 Dec 12 15:50	20° \mathbb{X} 32'52	
minimum elong	2148 Nov 20 03:00	28° \mathbb{M} .12'26	0°12'34	max. Earth dist.	2153 Dec 12 14:56	20° \mathbb{X} 32'44	20.08567 AU
behind sun begin	2148 Nov 19 22:42	28° \mathbb{M} .11'47		morning rise	2153 Dec 28 01:34	21° \mathbb{X} 28'54	
behind sun end	2148 Nov 20 07:19	28° \mathbb{M} .13'06		retrograde	2154 Mar 29 14:24	24° \mathbb{X} 42'29	
max. Earth dist.	2148 Nov 19 23:00	28° \mathbb{M} .11'50	19.76403 AU	opposition	2154 Jun 13 15:32	22° \mathbb{X} 42'38	-0°06'49
morning rise	2148 Dec 05 22:01	29° \mathbb{M} .10'49		min. Earth dist.	2154 Jun 13 09:16	22° \mathbb{X} 43'17	18.11888 AU
	2148 Dec 19 20:48	0° \mathbb{X}		direct	2154 Aug 29 23:03	20° \mathbb{X} 41'05	
retrograde	2149 Mar 07 04:18	2° \mathbb{X} 27'41		evening set	2154 Dec 01 05:06	23° \mathbb{X} 56'47	
opposition	2149 May 21 05:49	0° \mathbb{X} 27'13	0°12'05				
min. Earth dist.	2149 May 21 07:54	0° \mathbb{X} 27'00	17.79499 AU	conjunction	2154 Dec 16 22:07	24° \mathbb{X} 53'40	-0°07'52
	2149 Jun 01 04:39	30° \mathbb{R} \mathbb{M} .		minimum elong	2154 Dec 16 22:07	24° \mathbb{X} 53'41	0°07'52
direct	2149 Aug 06 12:19	28° \mathbb{M} .23'58		behind sun begin	2154 Dec 16 16:13	24° \mathbb{X} 52'48	
	2149 Oct 07 23:27	0° \mathbb{X}		behind sun end	2154 Dec 17 04:02	24° \mathbb{X} 54'33	
evening set	2149 Nov 08 23:55	1° \mathbb{X} 45'51		max. Earth dist.	2154 Dec 17 04:55	24° \mathbb{X} 54'41	20.15279 AU
				morning rise	2155 Jan 01 13:59	25° \mathbb{X} 50'23	
conjunction	2149 Nov 24 20:43	2° \mathbb{X} 44'17	0°09'12	retrograde	2155 Apr 03 04:58	29° \mathbb{X} 03'22	
minimum elong	2149 Nov 24 20:44	2° \mathbb{X} 44'18	0°09'11	opposition	2155 Jun 18 10:38	27° \mathbb{X} 03'37	-0°10'28
behind sun begin	2149 Nov 24 15:08	2° \mathbb{X} 43'27		min. Earth dist.	2155 Jun 18 03:02	27° \mathbb{X} 04'24	18.18665 AU
behind sun end	2149 Nov 25 02:20	2° \mathbb{X} 45'08		direct	2155 Sep 03 16:11	25° \mathbb{X} 02'26	
max. Earth dist.	2149 Nov 24 19:22	2° \mathbb{X} 44'06	19.82652 AU	evening set	2155 Dec 05 17:33	28° \mathbb{X} 16'54	
morning rise	2149 Dec 10 14:54	3° \mathbb{X} 42'22					
retrograde	2150 Mar 11 21:29	6° \mathbb{X} 58'36		conjunction	2155 Dec 21 10:09	29° \mathbb{X} 13'30	-0°11'06
opposition	2150 May 26 04:11	4° \mathbb{X} 58'19	0°08'18	minimum elong	2155 Dec 21 10:08	29° \mathbb{X} 13'30	0°11'06
min. Earth dist.	2150 May 26 04:59	4° \mathbb{X} 58'14	17.85793 AU	behind sun begin	2155 Dec 21 05:12	29° \mathbb{X} 12'46	
direct	2150 Aug 11 11:47	2° \mathbb{X} 55'25		behind sun end	2155 Dec 21 15:05	29° \mathbb{X} 14'13	
evening set	2150 Nov 13 17:33	6° \mathbb{X} 16'08		max. Earth dist.	2155 Dec 21 19:22	29° \mathbb{X} 14'53	20.22103 AU
					2156 Jan 03 06:33	0° \mathbb{Z}	
conjunction	2150 Nov 29 13:22	7° \mathbb{X} 14'15	0°05'48	morning rise	2156 Jan 06 01:37	0° \mathbb{Z} 09'57	
minimum elong	2150 Nov 29 13:22	7° \mathbb{X} 14'15	0°05'49	retrograde	2156 Apr 06 19:41	3° \mathbb{Z} 22'18	
behind sun begin	2150 Nov 29 07:04	7° \mathbb{X} 13'18		opposition	2156 Jun 22 04:58	1° \mathbb{Z} 22'43	-0°14'02
behind sun end	2150 Nov 29 19:40	7° \mathbb{X} 15'12		min. Earth dist.	2156 Jun 21 18:49	1° \mathbb{Z} 23'45	18.25521 AU
max. Earth dist.	2150 Nov 29 12:36	7° \mathbb{X} 14'09	19.88999 AU		2156 Jul 29 09:12	30° \mathbb{R} \mathbb{X}	
morning rise	2150 Dec 15 07:04	8° \mathbb{X} 12'03		direct	2156 Sep 07 10:29	29° \mathbb{X} 21'55	
retrograde	2151 Mar 16 14:55	11° \mathbb{X} 27'38			2156 Oct 16 06:02	0° \mathbb{Z}	
opposition	2151 May 31 02:07	9° \mathbb{X} 27'28	0°04'30	evening set	2156 Dec 09 05:09	2° \mathbb{Z} 35'10	
min. Earth dist.	2151 May 31 01:19	9° \mathbb{X} 27'33	17.92188 AU				
direct	2151 Aug 16 09:29	7° \mathbb{X} 24'55		conjunction	2156 Dec 24 21:11	3° \mathbb{Z} 31'29	-0°14'16
evening set	2151 Nov 18 09:52	10° \mathbb{X} 44'24		minimum elong	2156 Dec 24 21:11	3° \mathbb{Z} 31'29	0°14'16
				behind sun begin	2156 Dec 24 17:56	3° \mathbb{Z} 31'00	
conjunction	2151 Dec 04 05:04	11° \mathbb{X} 42'13	0°02'22	behind sun end	2156 Dec 25 00:26	3° \mathbb{Z} 31'58	
minimum elong	2151 Dec 04 05:03	11° \mathbb{X} 42'13	0°02'22	max. Earth dist.	2156 Dec 25 07:46	3° \mathbb{Z} 33'04	20.28983 AU
behind sun begin	2151 Dec 03 22:29	11° \mathbb{X} 41'14		morning rise	2157 Jan 09 12:34	4° \mathbb{Z} 27'42	
behind sun end	2151 Dec 04 11:37	11° \mathbb{X} 43'12		retrograde	2157 Apr 11 09:37	7° \mathbb{Z} 39'29	
max. Earth dist.	2151 Dec 04 06:56	11° \mathbb{X} 42'26	19.95435 AU	opposition	2157 Jun 26 22:41	5° \mathbb{Z} 40'02	-0°17'29
morning rise	2151 Dec 19 22:03	12° \mathbb{X} 39'44		min. Earth dist.	2157 Jun 26 11:35	5° \mathbb{Z} 41'10	18.32421 AU
retrograde	2152 Mar 20 07:15	15° \mathbb{X} 54'39		direct	2157 Sep 12 01:58	3° \mathbb{Z} 39'39	
opposition	2152 Jun 03 23:23	13° \mathbb{X} 54'36	0°00'41	evening set	2157 Dec 13 15:57	6° \mathbb{Z} 51'42	
min. Earth dist.	2152 Jun 03 20:46	13° \mathbb{X} 54'53	17.98654 AU				
desc. node	2152 Aug 09 23:40	11° \mathbb{X} 55'05		conjunction	2157 Dec 29 07:41	7° \mathbb{Z} 47'45	-0°17'19
direct	2152 Aug 20 07:45	11° \mathbb{X} 52'24		minimum elong	2157 Dec 29 07:41	7° \mathbb{Z} 47'45	0°17'19
evening set	2152 Nov 22 01:21	15° \mathbb{X} 10'37		max. Earth dist.	2157 Dec 29 20:15	7° \mathbb{Z} 49'38	20.35874 AU
				morning rise	2158 Jan 13 22:50	8° \mathbb{Z} 43'44	
conjunction	2152 Dec 07 19:39	16° \mathbb{X} 08'06	-0°01'09	retrograde	2158 Apr 15 23:15	11° \mathbb{Z} 54'57	
minimum elong	2152 Dec 07 19:40	16° \mathbb{X} 08'06	0°01'08	opposition	2158 Jul 01 15:27	9° \mathbb{Z} 55'40	-0°20'50
behind sun begin	2152 Dec 07 13:07	16° \mathbb{X} 07'08		min. Earth dist.	2158 Jul 01 02:00	9° \mathbb{Z} 57'02	18.39280 AU
behind sun end	2152 Dec 08 02:14	16° \mathbb{X} 09'05		direct	2158 Sep 16 18:42	7° \mathbb{Z} 55'42	
max. Earth dist.	2152 Dec 07 22:34	16° \mathbb{X} 08'30	20.01948 AU	evening set	2158 Dec 18 02:08	11° \mathbb{Z} 06'36	
morning rise	2152 Dec 23 12:20	17° \mathbb{X} 05'22					
retrograde	2153 Mar 24 22:57	20° \mathbb{X} 19'37		conjunction	2159 Jan 02 17:25	12° \mathbb{Z} 02'23	-0°20'17
opposition	2153 Jun 08 19:50	18° \mathbb{X} 19'40	-0°03'05	minimum elong	2159 Jan 02 17:25	12° \mathbb{Z} 02'23	0°20'17
min. Earth dist.	2153 Jun 08 15:49	18° \mathbb{X} 20'05	18.05226 AU	max. Earth dist.	2159 Jan 03 07:13	12° \mathbb{Z} 04'27	20.42689 AU
direct	2153 Aug 25 02:42	16° \mathbb{X} 17'45		morning rise	2159 Jan 18 08:33	12° \mathbb{Z} 58'09	
evening set	2153 Nov 26 15:37	19° \mathbb{X} 34'44		retrograde	2159 Apr 20 11:57	16° \mathbb{Z} 08'51	
				opposition	2159 Jul 06 07:57	14° \mathbb{Z} 09'43	-0°24'02
conjunction	2153 Dec 12 09:25	20° \mathbb{X} 31'55	-0°04'33	min. Earth dist.	2159 Jul 05 17:58	14° \mathbb{Z} 11'08	18.46047 AU
minimum elong	2153 Dec 12 09:25	20° \mathbb{X} 31'55	0°04'33	direct	2159 Sep 21 08:55	12° \mathbb{Z} 10'10	
behind sun begin	2153 Dec 12 02:59	20° \mathbb{X} 30'58		evening set	2159 Dec 22 11:25	15° \mathbb{Z} 19'55	

conjunction	2160 Jan 07 02:30	16°  15'28 -0°23'07			2166 May 05 01:23	15° 	
minimum elong	2160 Jan 07 02:30	16°  15'28 0°23'06	retrograde		2166 May 19 16:11	15°  05'15	
max. Earth dist.	2160 Jan 07 17:55	16°  17'45 20.49379 AU			2166 Jun 03 08:06	15°  R 	
morning rise	2160 Jan 22 17:34	17°  11'01	min. Earth dist.		2166 Aug 04 11:29	13°  08'38	18.85325 AU
retrograde	2160 Apr 24 01:03	20°  21'12	opposition		2166 Aug 05 08:13	13°  06'34	-0°41'41
opposition	2160 Jul 09 23:37	18°  22'13 -0°27'06	direct		2166 Oct 20 23:25	11°  09'03	
min. Earth dist.	2160 Jul 09 07:26	18°  23'51 18.52639 AU	evening set		2167 Jan 19 12:45	14°  11'51	
direct	2160 Sep 25 00:06	16°  23'03			2167 Feb 02 10:03	15° 	
evening set	2160 Dec 25 20:15	19°  31'42					
conjunction	2161 Jan 10 11:04	20°  27'01 -0°25'48	conjunction		2167 Feb 04 03:49	15°  06'05	-0°38'29
minimum elong	2161 Jan 10 11:04	20°  27'01 0°25'48	minimum elong		2167 Feb 04 03:49	15°  06'05	0°38'29
max. Earth dist.	2161 Jan 11 03:30	20°  29'27 20.55849 AU	max. Earth dist.		2167 Feb 05 01:06	15°  09'11	20.87410 AU
morning rise	2161 Jan 26 02:14	21°  22'23	morning rise		2167 Feb 19 20:40	16°  00'34	
retrograde	2161 Apr 28 11:55	24°  32'05	retrograde		2167 May 23 23:37	19°  07'51	
opposition	2161 Jul 14 14:39	22°  33'13 -0°30'00	opposition		2167 Aug 09 19:32	17°  09'07	-0°43'23
min. Earth dist.	2161 Jul 13 22:29	22°  34'51 18.58994 AU	min. Earth dist.		2167 Aug 08 23:09	17°  11'09	18.89472 AU
direct	2161 Sep 29 13:01	20°  34'26	direct		2167 Oct 25 07:40	15°  11'48	
evening set	2161 Dec 30 04:25	23°  34'01	evening set		2168 Jan 23 17:35	18°  13'47	
conjunction	2162 Jan 14 19:10	24°  37'06 -0°28'21	conjunction		2168 Feb 08 08:58	19°  07'54	-0°39'56
minimum elong	2162 Jan 14 19:10	24°  37'06 0°28'21	minimum elong		2168 Feb 08 08:58	19°  07'54	0°39'56
max. Earth dist.	2162 Jan 15 12:39	24°  39'42 20.62053 AU	max. Earth dist.		2168 Feb 09 06:53	19°  11'05	20.91398 AU
morning rise	2162 Jan 30 10:26	25°  32'17	morning rise		2168 Feb 24 02:19	20°  02'18	
retrograde	2162 May 03 00:27	28°  34'31	retrograde		2168 May 27 09:19	23°  09'18	
min. Earth dist.	2162 Jul 18 10:56	26°  34'34 18.65031 AU	min. Earth dist.		2168 Aug 12 07:59	21°  12'45	18.93302 AU
opposition	2162 Jul 19 05:00	26°  34'25 -0°32'44	opposition		2168 Aug 13 06:03	21°  10'33	-0°44'51
direct	2162 Oct 04 02:40	24°  34'18	direct		2168 Oct 28 17:08	19°  13'25	
evening set	2163 Jan 03 12:00	27°  35'051	evening set		2169 Jan 26 22:15	22°  14'41	
conjunction	2163 Jan 19 02:36	28°  34'54 -0°30'44	conjunction		2169 Feb 11 13:56	23°  08'42	-0°41'10
minimum elong	2163 Jan 19 02:36	28°  34'54 0°30'44	minimum elong		2169 Feb 11 13:56	23°  08'42	0°41'10
max. Earth dist.	2163 Jan 19 20:54	28°  34'26 20.67900 AU	max. Earth dist.		2169 Feb 12 12:39	23°  12'00	20.95059 AU
morning rise	2163 Feb 03 18:03	29°  34'05	morning rise		2169 Feb 27 07:50	24°  03'02	
retrograde	2163 Feb 09 09:16	0° 	retrograde		2169 May 31 16:26	27°  09'48	
opposition	2163 May 07 09:50	2°  49'33	opposition		2169 Aug 17 16:01	25°  11'03	-0°46'06
min. Earth dist.	2163 Jul 23 18:56	0°  50'52 -0°35'16	min. Earth dist.		2169 Aug 16 18:28	25°  13'11	18.96814 AU
direct	2163 Jul 23 01:08	0°  52'39 18.70702 AU	direct		2169 Nov 01 24:00	23°  14'06	
evening set	2163 Aug 14 15:24	30°  R 	evening set		2170 Jan 31 02:34	26°  14'44	
conjunction	2163 Oct 08 14:06	28°  35'242	conjunction		2170 Feb 15 18:40	27°  08'40	-0°42'12
minimum elong	2163 Nov 29 20:10	0° 	minimum elong		2170 Feb 15 18:40	27°  08'40	0°42'12
max. Earth dist.	2163 Jan 07 19:01	1°  58'15	max. Earth dist.		2170 Feb 16 17:42	27°  12'00	20.98412 AU
morning rise	2164 Jan 23 09:42	2°  52'56 -0°32'57	morning rise		2170 Mar 03 13:09	28°  02'57	
minimum elong	2164 Jan 23 09:41	2°  52'56 0°32'58	minimum elong		2170 Apr 11 17:07	0° 	
max. Earth dist.	2164 Jan 24 04:43	2°  55'44 20.73376 AU	max. Earth dist.		2170 Jun 05 01:26	1°  H  09'31	
morning rise	2164 Feb 08 01:23	3°  47'47	morning rise		2170 Jul 31 20:25	30°  R 	
retrograde	2164 May 10 21:32	6°  56'10	retrograde		2170 Aug 21 02:29	29°  13'05	18.99998 AU
opposition	2164 Jul 27 08:01	4°  57'31 -0°37'37	opposition		2170 Aug 22 01:30	29°  10'47	-0°47'08
min. Earth dist.	2164 Jul 26 12:29	4°  59'28 18.75974 AU	min. Earth dist.		2170 Nov 06 07:54	27°  14'01	
direct	2164 Oct 12 02:32	2°  59'36	direct		2171 Jan 31 01:40	0° 	
evening set	2165 Jan 11 01:27	6°  04'10	evening set		2171 Feb 04 06:34	0°  H  14'05	
conjunction	2165 Jan 26 16:12	6°  58'42 -0°34'59	conjunction		2171 Feb 19 23:07	1°  H  07'58	-0°43'02
minimum elong	2165 Jan 26 16:12	6°  58'42 0°34'59	minimum elong		2171 Feb 19 23:06	1°  H  07'58	0°43'03
max. Earth dist.	2165 Jan 27 11:57	7°  01'36 20.78436 AU	max. Earth dist.		2171 Feb 20 22:49	1°  H  11'23	21.01412 AU
morning rise	2165 Feb 11 08:16	7°  53'25	morning rise		2171 Mar 07 18:14	2°  H  02'13	
retrograde	2165 May 15 05:43	11°  01'24	retrograde		2171 Jun 09 08:39	5°  H  08'41	
opposition	2165 Jul 31 20:34	9°  02'44 -0°39'45	opposition		2171 Aug 26 10:47	3°  H  09'57	-0°47'56
min. Earth dist.	2165 Jul 31 01:30	9°  04'38 18.80840 AU	min. Earth dist.		2171 Aug 25 12:25	3°  H  12'11	19.02821 AU
direct	2165 Oct 16 12:16	7°  05'02	direct		2171 Nov 10 13:36	1°  H  13'23	
evening set	2166 Jan 15 07:19	10°  08'42	evening set		2172 Feb 08 10:34	4°  H  12'56	
conjunction	2166 Jan 30 22:14	11°  03'04 -0°36'50	conjunction		2172 Feb 24 03:39	5°  H  06'47	-0°43'40
minimum elong	2166 Jan 30 22:14	11°  03'04 0°36'51	minimum elong		2172 Feb 24 03:39	5°  H  06'47	0°43'39
max. Earth dist.	2166 Jan 31 18:37	11°  06'02 20.83109 AU	max. Earth dist.		2172 Feb 25 03:24	5°  H  10'13	21.04053 AU
morning rise	2166 Feb 15 14:39	11°  57'39	morning rise		2172 Mar 10 23:29	6°  H  01'01	
retrograde			retrograde		2172 Jun 12 17:26	9°  H  07'24	

opposition	2172 Aug 29 19:25	7° H 08'41 -0°48'30	conjunction	2179 Mar 23 14:23	2° Y 53'27 -0°42'08
min. Earth dist.	2172 Aug 28 20:00	7° H 11'01 19.05259 AU	minimum elong	2179 Mar 23 14:23	2° Y 53'27 0°42'07
direct	2172 Nov 13 20:30	5° H 12'17	max. Earth dist.	2179 Mar 24 11:21	2° Y 56'26 21.08577 AU
evening set	2173 Feb 11 14:32	8° H 11'26	morning rise	2179 Apr 08 16:05	3° Y 48'05
			retrograde	2179 Jul 12 00:54	6° Y 54'45
conjunction	2173 Feb 27 08:11	9° H 05'16 -0°44'05	min. Earth dist.	2179 Sep 27 06:59	4° Y 57'25 19.07910 AU
minimum elong	2173 Feb 27 08:11	9° H 05'16 0°44'05	opposition	2179 Sep 28 01:35	4° Y 55'32 -0°45'58
max. Earth dist.	2173 Feb 28 08:15	9° H 08'43 21.06269 AU	direct	2179 Dec 12 09:20	2° Y 59'17
morning rise	2173 Mar 15 04:45	9° H 59'30	evening set	2180 Mar 10 21:09	5° Y 57'10
retrograde	2173 Jun 17 00:31	13° H 05'50			
min. Earth dist.	2173 Sep 02 05:35	11° H 09'22 19.07253 AU	conjunction	2180 Mar 26 20:09	6° Y 51'23 -0°41'04
opposition	2173 Sep 03 03:55	11° H 07'08 -0°48'50	minimum elong	2180 Mar 26 20:09	6° Y 51'23 0°41'05
direct	2173 Nov 18 01:10	9° H 10'53	max. Earth dist.	2180 Mar 27 16:06	6° Y 54'13 21.07068 AU
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conjunction	2174 Mar 03 12:44	13° H 03'30 -0°44'17	opposition	2180 Oct 01 08:19	8° Y 53'33 -0°44'41
minimum elong	2174 Mar 03 12:44	13° H 03'30 0°44'17	min. Earth dist.	2180 Sep 30 13:44	8° Y 55'25 19.06176 AU
max. Earth dist.	2174 Mar 04 12:27	13° H 06'54 21.08032 AU	direct	2180 Dec 15 14:30	6° Y 57'09
morning rise	2174 Mar 19 10:04	13° H 57'46	evening set	2181 Mar 15 02:18	9° Y 55'07
retrograde	2174 Jun 21 09:35	17° H 04'06			
opposition	2174 Sep 07 12:02	15° H 05'24 -0°48'56	conjunction	2181 Mar 31 02:13	10° Y 49'28 -0°39'49
min. Earth dist.	2174 Sep 06 13:04	15° H 07'41 19.08767 AU	minimum elong	2181 Mar 31 02:13	10° Y 49'28 0°39'49
direct	2174 Nov 22 07:40	13° H 09'16	max. Earth dist.	2181 Mar 31 21:45	10° Y 52'15 21.05115 AU
evening set	2175 Feb 19 22:38	16° H 07'46	morning rise	2181 Apr 16 05:50	11° Y 44'21
			retrograde	2181 Jul 19 17:07	14° Y 51'22
conjunction	2175 Mar 07 17:31	17° H 01'37 -0°44'16	opposition	2181 Oct 05 15:09	12° Y 51'48 -0°43'11
minimum elong	2175 Mar 07 17:31	17° H 01'37 0°44'17	min. Earth dist.	2181 Oct 04 22:00	12° Y 53'32 19.04023 AU
max. Earth dist.	2175 Mar 08 17:11	17° H 05'01 21.09278 AU	direct	2181 Dec 19 19:19	10° Y 55'16
morning rise	2175 Mar 23 15:38	17° H 55'55	evening set	2182 Mar 19 07:39	13° Y 53'23
retrograde	2175 Jun 25 16:33	21° H 02'17			
opposition	2175 Sep 11 20:03	19° H 03'34 -0°48'48	conjunction	2182 Apr 04 08:28	14° Y 47'52 -0°38'22
min. Earth dist.	2175 Sep 10 22:30	19° H 05'43 19.09746 AU	minimum elong	2182 Apr 04 08:28	14° Y 47'52 0°38'22
direct	2175 Nov 26 11:59	17° H 07'31	max. Earth dist.	2182 Apr 05 02:57	14° Y 50'30 21.02784 AU
evening set	2176 Feb 24 02:49	20° H 05'46	morning rise	2182 Apr 20 13:05	15° Y 42'54
			retrograde	2182 Jul 24 03:06	18° Y 50'11
conjunction	2176 Mar 10 22:28	20° H 59'40 -0°44'03	opposition	2182 Oct 09 21:54	16° Y 50'27 -0°41'29
minimum elong	2176 Mar 10 22:28	20° H 59'40 0°44'04	min. Earth dist.	2182 Oct 09 04:46	16° Y 52'11 19.01508 AU
max. Earth dist.	2176 Mar 11 21:19	21° H 02'56 21.09982 AU	direct	2182 Dec 24 00:40	14° Y 53'46
morning rise	2176 Mar 26 21:27	21° H 54'01	evening set	2183 Mar 23 13:31	17° Y 52'08
retrograde	2176 Jun 29 01:54	25° H 00'26			
min. Earth dist.	2176 Sep 14 06:00	23° H 03'49 19.10152 AU	conjunction	2183 Apr 08 15:19	18° Y 46'47 -0°36'44
opposition	2176 Sep 15 03:44	23° H 01'38 -0°48'27	minimum elong	2183 Apr 08 15:19	18° Y 46'47 0°36'44
direct	2176 Nov 29 18:09	21° H 05'36	max. Earth dist.	2183 Apr 09 09:23	18° Y 49'22 21.00090 AU
evening set	2177 Feb 27 07:18	24° H 03'42	morning rise	2183 Apr 24 20:52	19° Y 42'00
			retrograde	2183 Jul 28 10:37	22° Y 49'34
conjunction	2177 Mar 15 03:42	24° H 57'39 -0°43'37	opposition	2183 Oct 14 04:43	20° Y 49'41 -0°39'35
minimum elong	2177 Mar 15 03:42	24° H 57'39 0°43'37	min. Earth dist.	2183 Oct 13 13:01	20° Y 51'17 18.98644 AU
max. Earth dist.	2177 Mar 16 02:04	25° H 00'50 21.10081 AU	direct	2183 Dec 28 04:56	18° Y 52'52
morning rise	2177 Mar 31 03:31	25° H 52'04	evening set	2184 Mar 26 19:50	21° Y 51'34
retrograde	2177 Jul 03 08:51	28° H 58'32			
opposition	2177 Sep 19 11:10	26° H 59'39 -0°47'51	conjunction	2184 Apr 11 22:38	22° Y 46'24 -0°34'55
min. Earth dist.	2177 Sep 18 15:04	27° H 01'40 19.09955 AU	minimum elong	2184 Apr 11 22:38	22° Y 46'24 0°34'55
direct	2177 Dec 03 22:45	25° H 03'35	max. Earth dist.	2184 Apr 12 15:23	22° Y 48'48 20.97073 AU
evening set	2178 Mar 03 11:46	28° H 01'33	morning rise	2184 Apr 28 05:15	23° Y 41'48
			retrograde	2184 Jul 31 21:31	26° Y 49'43
conjunction	2178 Mar 19 09:00	28° H 55'34 -0°42'59	opposition	2184 Oct 17 11:34	24° Y 49'43 -0°37'29
minimum elong	2178 Mar 19 09:00	28° H 55'34 0°42'59	min. Earth dist.	2184 Oct 16 20:10	24° Y 51'17 18.95455 AU
max. Earth dist.	2178 Mar 20 06:20	28° H 58'37 21.09608 AU	direct	2184 Dec 31 10:47	22° Y 52'45
morning rise	2178 Apr 04 09:46	29° H 50'05	evening set	2185 Mar 31 02:44	25° Y 51'52
retrograde	2178 Apr 07 09:21	0° Y			
retrograde	2178 Jul 07 17:52	2° Y 56'38	conjunction	2185 Apr 16 06:33	26° Y 46'54 -0°32'55
opposition	2178 Sep 23 18:24	0° Y 57'36 -0°47'01	minimum elong	2185 Apr 16 06:33	26° Y 46'54 0°32'56
min. Earth dist.	2178 Sep 22 22:16	0° Y 59'37 19.09195 AU	max. Earth dist.	2185 Apr 16 22:45	26° Y 49'13 20.93710 AU
	2178 Oct 18 18:50	30° R H	morning rise	2185 May 02 14:03	27° Y 42'30
direct	2178 Dec 08 04:22	29° H 01'27		2185 Jun 19 23:36	0° B
	2179 Jan 25 17:09	0° Y	retrograde	2185 Aug 05 06:00	0° B 50'48
evening set	2179 Mar 07 16:18	1° Y 59'20		2185 Sep 21 13:35	30° R Y



























































































































opposition	2185 Oct 21 18:34	28° Υ 50'42	-0°35'12	evening set	2192 Apr 28 23:32	24° \mathcal{B} 29'15	
min. Earth dist.	2185 Oct 21 04:46	28° Υ 52'07	18.91920 AU				
direct	2186 Jan 04 14:53	26° Υ 53'36		conjunction	2192 May 15 10:22	25° \mathcal{B} 26'06	-0°14'45
evening set	2186 Apr 04 10:15	29° Υ 53'13		minimum elong	2192 May 15 10:22	25° \mathcal{B} 26'06	0°14'46
	2186 Apr 06 10:42	0° \mathcal{B}		behind sun begin	2192 May 15 07:51	25° \mathcal{B} 25'44	
				behind sun end	2192 May 15 12:53	25° \mathcal{B} 26'27	
conjunction	2186 Apr 20 15:03	0° \mathcal{B} 48'29	-0°30'46	max. Earth dist.	2192 May 15 14:29	25° \mathcal{B} 26'41	20.59688 AU
minimum elong	2186 Apr 20 15:03	0° \mathcal{B} 48'29	0°30'46	morning rise	2192 Jun 01 00:21	26° \mathcal{B} 23'24	
max. Earth dist.	2186 Apr 21 05:39	0° \mathcal{B} 50'34	20.90026 AU	retrograde	2192 Sep 03 16:18	29° \mathcal{B} 35'13	
morning rise	2186 May 06 23:36	1° \mathcal{B} 44'17		opposition	2192 Nov 19 03:59	27° \mathcal{B} 34'09	-0°14'35
retrograde	2186 Aug 09 17:37	4° \mathcal{B} 53'02		min. Earth dist.	2192 Nov 19 00:31	27° \mathcal{B} 34'31	18.56535 AU
opposition	2186 Oct 26 01:48	2° \mathcal{B} 52'50	-0°32'43	direct	2193 Feb 01 17:59	25° \mathcal{B} 35'14	
min. Earth dist.	2186 Oct 25 12:39	2° \mathcal{B} 54'11	18.88058 AU	evening set	2193 May 03 12:26	28° \mathcal{B} 40'08	
direct	2187 Jan 08 21:24	0° \mathcal{B} 55'35					
evening set	2187 Apr 08 18:23	3° \mathcal{B} 55'47		conjunction	2193 May 20 00:17	29° \mathcal{B} 37'16	-0°11'40
				minimum elong	2193 May 20 00:17	29° \mathcal{B} 37'16	0°11'40
conjunction	2187 Apr 25 00:15	4° \mathcal{B} 51'17	-0°28'27	behind sun begin	2193 May 19 19:34	29° \mathcal{B} 36'36	
minimum elong	2187 Apr 25 00:15	4° \mathcal{B} 51'17	0°28'27	behind sun end	2193 May 20 04:59	29° \mathcal{B} 37'56	
max. Earth dist.	2187 Apr 25 14:07	4° \mathcal{B} 53'16	20.85979 AU	max. Earth dist.	2193 May 20 03:28	29° \mathcal{B} 37'43	20.53352 AU
morning rise	2187 May 11 09:42	5° \mathcal{B} 47'19			2193 May 26 12:32	0° \mathcal{B}	
retrograde	2187 Aug 14 03:39	8° \mathcal{B} 56'32		morning rise	2193 Jun 05 14:51	0° \mathcal{B} 34'51	
opposition	2187 Oct 30 09:23	6° \mathcal{B} 56'15	-0°30'05	retrograde	2193 Sep 08 05:15	3° \mathcal{B} 47'12	
min. Earth dist.	2187 Oct 29 22:06	6° \mathcal{B} 57'25	18.83817 AU	opposition	2193 Nov 23 13:34	1° \mathcal{B} 45'56	-0°11'07
direct	2188 Jan 13 02:30	4° \mathcal{B} 58'50		min. Earth dist.	2193 Nov 23 11:43	1° \mathcal{B} 46'08	18.50083 AU
evening set	2188 Apr 12 03:30	7° \mathcal{B} 59'41			2194 Jan 14 10:34	30° \mathcal{B}	
				direct	2194 Feb 06 03:51	29° \mathcal{B} 46'38	
conjunction	2188 Apr 28 10:20	8° \mathcal{B} 55'25	-0°25'59		2194 Feb 28 16:04	0° \mathcal{B}	
minimum elong	2188 Apr 28 10:20	8° \mathcal{B} 55'25	0°25'58	evening set	2194 May 08 02:18	2° \mathcal{B} 52'29	
max. Earth dist.	2188 Apr 28 22:03	8° \mathcal{B} 57'06	20.81554 AU				
morning rise	2188 May 14 20:49	9° \mathcal{B} 51'42		conjunction	2194 May 24 14:55	3° \mathcal{B} 49'56	-0°08'31
retrograde	2188 Aug 17 15:51	13° \mathcal{B} 01'25		minimum elong	2194 May 24 14:55	3° \mathcal{B} 49'56	0°08'31
opposition	2188 Nov 02 17:04	11° \mathcal{B} 01'03	-0°27'16	behind sun begin	2194 May 24 09:04	3° \mathcal{B} 49'06	
min. Earth dist.	2188 Nov 02 06:57	11° \mathcal{B} 02'05	18.79183 AU	behind sun end	2194 May 24 20:47	3° \mathcal{B} 50'45	
direct	2189 Jan 16 09:34	9° \mathcal{B} 03'24		max. Earth dist.	2194 May 24 15:29	3° \mathcal{B} 50'00	20.46820 AU
evening set	2189 Apr 16 13:23	12° \mathcal{B} 04'59		morning rise	2194 Jun 10 06:22	4° \mathcal{B} 47'46	
				retrograde	2194 Sep 12 18:55	8° \mathcal{B} 00'42	
conjunction	2189 May 02 21:16	13° \mathcal{B} 00'59	-0°23'22	opposition	2194 Nov 27 23:35	5° \mathcal{B} 59'13	-0°07'35
minimum elong	2189 May 02 21:16	13° \mathcal{B} 00'59	0°23'21	min. Earth dist.	2194 Nov 27 23:09	5° \mathcal{B} 59'16	18.43478 AU
max. Earth dist.	2189 May 03 07:49	13° \mathcal{B} 02'30	20.76699 AU	direct	2195 Feb 10 14:00	3° \mathcal{B} 59'29	
morning rise	2189 May 19 08:33	13° \mathcal{B} 57'30		evening set	2195 May 12 16:52	7° \mathcal{B} 06'22	
	2189 Jun 07 17:38	15° \mathcal{B}					
retrograde	2189 Aug 22 03:08	17° \mathcal{B} 07'44		conjunction	2195 May 29 06:32	8° \mathcal{B} 04'07	-0°05'19
opposition	2189 Nov 07 01:20	15° \mathcal{B} 07'14	-0°24'18	minimum elong	2195 May 29 06:31	8° \mathcal{B} 04'07	0°05'19
min. Earth dist.	2189 Nov 06 17:12	15° \mathcal{B} 08'05	18.74108 AU	behind sun begin	2195 May 29 00:00	8° \mathcal{B} 03'11	
	2189 Nov 09 23:28	15° \mathcal{B}		behind sun end	2195 May 29 13:02	8° \mathcal{B} 05'03	
direct	2190 Jan 20 16:29	13° \mathcal{B} 09'22		max. Earth dist.	2195 May 29 06:24	8° \mathcal{B} 04'06	20.40147 AU
	2190 Mar 29 12:59	15° \mathcal{B}		morning rise	2195 Jun 14 22:29	9° \mathcal{B} 02'14	
evening set	2190 Apr 20 23:53	16° \mathcal{B} 11'41		retrograde	2195 Sep 17 08:58	12° \mathcal{B} 15'45	
				opposition	2195 Dec 02 10:08	10° \mathcal{B} 14'05	-0°03'59
conjunction	2190 May 07 08:44	17° \mathcal{B} 07'57	-0°20'36	min. Earth dist.	2195 Dec 02 11:05	10° \mathcal{B} 13'59	18.36756 AU
minimum elong	2190 May 07 08:43	17° \mathcal{B} 07'57	0°20'37	direct	2196 Feb 15 00:46	8° \mathcal{B} 13'56	
max. Earth dist.	2190 May 07 16:44	17° \mathcal{B} 09'06	20.71422 AU	evening set	2196 May 16 08:35	11° \mathcal{B} 21'54	
morning rise	2190 May 23 21:00	18° \mathcal{B} 04'44					
retrograde	2190 Aug 26 15:30	21° \mathcal{B} 15'30		conjunction	2196 Jun 01 22:53	12° \mathcal{B} 19'57	-0°02'02
opposition	2190 Nov 11 09:55	19° \mathcal{B} 14'50	-0°21'11	minimum elong	2196 Jun 01 22:54	12° \mathcal{B} 19'57	0°02'02
min. Earth dist.	2190 Nov 11 03:05	19° \mathcal{B} 15'32	18.68617 AU	behind sun begin	2196 Jun 01 16:09	12° \mathcal{B} 18'59	
direct	2191 Jan 25 00:18	17° \mathcal{B} 16'38		behind sun end	2196 Jun 02 05:39	12° \mathcal{B} 20'55	
evening set	2191 Apr 25 11:17	20° \mathcal{B} 19'46		max. Earth dist.	2196 Jun 01 20:04	12° \mathcal{B} 19'36	20.33402 AU
				morning rise	2196 Jun 18 15:37	13° \mathcal{B} 18'21	
conjunction	2191 May 11 21:13	21° \mathcal{B} 16'20	-0°17'44	retrograde	2196 Sep 21 00:06	16° \mathcal{B} 32'28	
minimum elong	2191 May 11 21:13	21° \mathcal{B} 16'20	0°17'44	opposition	2196 Dec 05 21:09	14° \mathcal{B} 30'37	-0°00'21
max. Earth dist.	2191 May 12 04:02	21° \mathcal{B} 17'18	20.65728 AU	min. Earth dist.	2196 Dec 05 23:35	14° \mathcal{B} 30'21	18.29999 AU
morning rise	2191 May 28 10:14	22° \mathcal{B} 13'22		asc. node	2197 Jan 09 21:34	13° \mathcal{B} 09'28	
retrograde	2191 Aug 31 03:47	25° \mathcal{B} 24'39		direct	2197 Feb 18 12:03	12° \mathcal{B} 30'04	
opposition	2191 Nov 15 18:46	23° \mathcal{B} 23'48	-0°17'56	evening set	2197 May 21 01:03	15° \mathcal{B} 39'10	
min. Earth dist.	2191 Nov 15 13:52	23° \mathcal{B} 24'19	18.62730 AU				
direct	2192 Jan 29 09:03	21° \mathcal{B} 25'16		conjunction	2197 Jun 06 16:17	16° \mathcal{B} 37'32	0°01'22

minimum elong	2197 Jun 06 16:17	16° Π 37'32	0°01'22	opposition	2203 Jan 02 05:53	10° \mathfrak{D} 50'58	0°21'24
behind sun begin	2197 Jun 06 09:32	16° Π 36'34		min. Earth dist.	2203 Jan 02 17:18	10° \mathfrak{D} 49'44	17.90227 AU
behind sun end	2197 Jun 06 23:03	16° Π 38'30		direct	2203 Mar 17 22:52	8° \mathfrak{D} 48'16	
max. Earth dist.	2197 Jun 06 12:58	16° Π 37'06	20.26634 AU	evening set	2203 Jun 19 01:42	12° \mathfrak{D} 05'00	
morning rise	2197 Jun 23 09:20	17° Π 36'13					
retrograde	2197 Sep 25 15:56	20° Π 50'55		conjunction	2203 Jul 05 20:09	13° \mathfrak{D} 05'11	0°20'49
opposition	2197 Dec 10 08:53	18° Π 48'57	0°03'19	minimum elong	2203 Jul 05 20:09	13° \mathfrak{D} 05'11	0°20'49
min. Earth dist.	2197 Dec 10 12:23	18° Π 48'34	18.23238 AU	max. Earth dist.	2203 Jul 05 06:20	13° \mathfrak{D} 03'06	19.86990 AU
direct	2198 Feb 22 23:58	16° Π 48'01		morning rise	2203 Jul 22 14:42	14° \mathfrak{D} 05'26	
evening set	2198 May 25 18:29	19° Π 58'18		retrograde	2203 Oct 24 09:01	17° \mathfrak{D} 23'59	
				opposition	2204 Jan 06 21:56	15° \mathfrak{D} 21'33	0°24'49
conjunction	2198 Jun 11 10:17	20° Π 56'58	0°04'42	min. Earth dist.	2204 Jan 07 10:10	15° \mathfrak{D} 20'14	17.83751 AU
minimum elong	2198 Jun 11 10:17	20° Π 56'58	0°04'43	direct	2204 Mar 21 16:42	13° \mathfrak{D} 18'30	
behind sun begin	2198 Jun 11 03:41	20° Π 56'01		evening set	2204 Jun 23 01:25	16° \mathfrak{D} 36'30	
behind sun end	2198 Jun 11 16:53	20° Π 57'55					
max. Earth dist.	2198 Jun 11 04:18	20° Π 56'07	20.19900 AU	conjunction	2204 Jul 09 19:57	17° \mathfrak{D} 36'58	0°23'49
morning rise	2198 Jun 28 03:59	21° Π 55'56		minimum elong	2204 Jul 09 19:57	17° \mathfrak{D} 36'58	0°23'49
retrograde	2198 Sep 30 08:35	25° Π 11'18		max. Earth dist.	2204 Jul 09 03:19	17° \mathfrak{D} 34'27	19.80544 AU
opposition	2198 Dec 14 21:18	23° Π 09'11	0°07'00	morning rise	2204 Jul 26 14:31	18° \mathfrak{D} 37'27	
min. Earth dist.	2198 Dec 15 02:25	23° Π 08'39	18.16533 AU	retrograde	2204 Oct 28 04:41	21° \mathfrak{D} 56'33	
direct	2199 Feb 27 12:20	21° Π 07'54		opposition	2205 Jan 10 14:46	19° \mathfrak{D} 54'02	0°28'06
evening set	2199 May 30 12:59	24° Π 19'25		min. Earth dist.	2205 Jan 11 05:16	19° \mathfrak{D} 52'28	17.77366 AU
				direct	2205 Mar 26 10:13	17° \mathfrak{D} 50'34	
conjunction	2199 Jun 16 05:38	25° Π 18'24	0°08'00	evening set	2205 Jun 28 01:47	21° \mathfrak{D} 09'52	
minimum elong	2199 Jun 16 05:37	25° Π 18'24	0°07'59				
behind sun begin	2199 Jun 15 23:36	25° Π 17'32		conjunction	2205 Jul 14 20:36	22° \mathfrak{D} 10'35	0°26'41
behind sun end	2199 Jun 16 11:38	25° Π 19'16		minimum elong	2205 Jul 14 20:36	22° \mathfrak{D} 10'35	0°26'42
max. Earth dist.	2199 Jun 15 23:10	25° Π 17'28	20.13219 AU	max. Earth dist.	2205 Jul 14 03:09	22° \mathfrak{D} 07'56	19.74225 AU
morning rise	2199 Jul 02 23:32	26° Π 17'38		morning rise	2205 Jul 31 14:57	23° \mathfrak{D} 11'16	
retrograde	2199 Oct 05 02:38	29° Π 33'38		retrograde	2205 Nov 02 02:57	26° \mathfrak{D} 30'55	
opposition	2199 Dec 19 10:14	27° Π 31'27	0°10'40	opposition	2206 Jan 15 08:11	24° \mathfrak{D} 28'18	0°31'13
min. Earth dist.	2199 Dec 19 16:24	27° Π 30'48	18.09878 AU	min. Earth dist.	2206 Jan 15 23:05	24° \mathfrak{D} 26'41	17.71131 AU
direct	2200 Mar 04 01:58	25° Π 29'49		direct	2206 Mar 31 05:41	22° \mathfrak{D} 24'27	
evening set	2200 Jun 04 08:44	28° Π 42'37		evening set	2206 Jul 03 02:56	25° \mathfrak{D} 44'58	
conjunction	2200 Jun 21 01:46	29° Π 41'55	0°11'16	conjunction	2206 Jul 19 21:46	26° \mathfrak{D} 45'56	0°29'25
minimum elong	2200 Jun 21 01:46	29° Π 41'55	0°11'16	minimum elong	2206 Jul 19 21:46	26° \mathfrak{D} 45'56	0°29'25
behind sun begin	2200 Jun 20 20:52	29° Π 41'12		max. Earth dist.	2206 Jul 19 02:09	26° \mathfrak{D} 42'56	19.68088 AU
behind sun end	2200 Jun 21 06:40	29° Π 42'37		morning rise	2206 Aug 05 15:56	27° \mathfrak{D} 46'49	
max. Earth dist.	2200 Jun 20 16:25	29° Π 40'32	20.06598 AU		2206 Sep 17 05:01	0° \mathcal{O}	
	2200 Jun 26 03:09	0° \mathfrak{D}		retrograde	2206 Nov 06 23:21	1° \mathcal{O} 06'58	
morning rise	2200 Jul 07 20:08	0° \mathfrak{D} 41'25			2206 Dec 28 22:33	30° \mathfrak{R} \mathfrak{D}	
retrograde	2200 Oct 09 20:33	3° \mathfrak{D} 58'04		opposition	2207 Jan 20 02:28	29° \mathfrak{D} 04'15	0°34'10
opposition	2200 Dec 24 00:03	1° \mathfrak{D} 55'50	0°14'18	min. Earth dist.	2207 Jan 20 19:29	29° \mathfrak{D} 02'23	17.65123 AU
min. Earth dist.	2200 Dec 24 08:13	1° \mathfrak{D} 54'58	18.03291 AU	direct	2207 Apr 05 01:02	26° \mathfrak{D} 59'59	
	2201 Feb 21 11:28	30° \mathfrak{R} Π			2207 Jul 02 01:31	0° \mathcal{O}	
direct	2201 Mar 08 15:37	29° Π 53'52		evening set	2207 Jul 08 04:51	0° \mathcal{O} 21'44	
	2201 Mar 23 18:21	0° \mathfrak{D}					
evening set	2201 Jun 09 05:14	3° \mathfrak{D} 07'58		conjunction	2207 Jul 24 23:43	1° \mathcal{O} 22'54	0°31'57
				minimum elong	2207 Jul 24 23:43	1° \mathcal{O} 22'54	0°31'57
conjunction	2201 Jun 25 22:54	4° \mathfrak{D} 07'34	0°14'31	max. Earth dist.	2207 Jul 24 03:18	1° \mathcal{O} 19'47	19.62216 AU
minimum elong	2201 Jun 25 22:54	4° \mathfrak{D} 07'34	0°14'31	morning rise	2207 Aug 10 17:33	2° \mathcal{O} 23'58	
behind sun begin	2201 Jun 25 20:11	4° \mathfrak{D} 07'10		retrograde	2207 Nov 11 22:08	5° \mathcal{O} 44'34	
behind sun end	2201 Jun 26 01:37	4° \mathfrak{D} 07'57		opposition	2208 Jan 24 21:08	3° \mathcal{O} 41'45	0°36'54
max. Earth dist.	2201 Jun 25 13:00	4° \mathfrak{D} 06'05	20.00025 AU	min. Earth dist.	2208 Jan 25 14:14	3° \mathcal{O} 39'53	17.59406 AU
morning rise	2201 Jul 12 17:17	5° \mathfrak{D} 07'19		direct	2208 Apr 08 22:41	1° \mathcal{O} 37'08	
retrograde	2201 Oct 14 16:38	8° \mathfrak{D} 24'38		evening set	2208 Jul 12 07:28	5° \mathcal{O} 00'02	
opposition	2201 Dec 28 14:35	6° \mathfrak{D} 22'21	0°17'53	max. Earth dist.	2208 Jul 28 04:25	5° \mathcal{O} 58'04	19.56664 AU
min. Earth dist.	2201 Dec 28 23:43	6° \mathfrak{D} 21'22	17.96736 AU				
direct	2202 Mar 13 07:26	4° \mathfrak{D} 20'03		conjunction	2208 Jul 29 02:10	6° \mathcal{O} 01'25	0°34'18
evening set	2202 Jun 14 03:03	7° \mathfrak{D} 35'27		minimum elong	2208 Jul 29 02:10	6° \mathcal{O} 01'25	0°34'19
				morning rise	2208 Aug 14 19:31	7° \mathcal{O} 02'37	
conjunction	2202 Jun 30 20:58	8° \mathfrak{D} 35'21	0°17'42	retrograde	2208 Nov 15 19:02	10° \mathcal{O} 23'40	
minimum elong	2202 Jun 30 20:58	8° \mathfrak{D} 35'21	0°17'42	opposition	2209 Jan 28 16:49	8° \mathcal{O} 20'45	0°39'25
max. Earth dist.	2202 Jun 30 08:02	8° \mathfrak{D} 33'25	19.93487 AU	min. Earth dist.	2209 Jan 29 11:40	8° \mathcal{O} 18'41	17.54061 AU
morning rise	2202 Jul 17 15:37	9° \mathfrak{D} 35'22		direct	2209 Apr 13 19:56	6° \mathcal{O} 15'46	
retrograde	2202 Oct 19 11:27	12° \mathfrak{D} 53'19		evening set	2209 Jul 17 10:25	9° \mathcal{O} 39'47	

max. Earth dist.	2209 Aug 02 06:26	10°♈37'53	19.51530 AU	conjunction	2215 Sep 02 05:46	9°♏07'10	0°43'52
				minimum elong	2215 Sep 02 05:46	9°♏07'10	0°43'53
conjunction	2209 Aug 03 04:53	10°♈41'20	0°36'26	morning rise	2215 Sep 18 17:58	10°♏08'49	
minimum elong	2209 Aug 03 04:53	10°♈41'20	0°36'26	retrograde	2215 Dec 19 20:03	13°♏31'46	
morning rise	2209 Aug 19 21:47	11°♈42'41		opposition	2216 Mar 02 03:37	11°♏29'07	0°49'06
	2209 Nov 08 14:06	15°♈		min. Earth dist.	2216 Mar 03 00:10	11°♏26'52	17.30837 AU
retrograde	2209 Nov 20 18:21	15°♈04'07		direct	2216 May 17 00:06	9°♏22'51	
	2209 Dec 02 23:46	15°♏♈		evening set	2216 Aug 20 20:12	12°♏52'46	
opposition	2210 Feb 02 12:56	13°♈01'09	0°41'41	max. Earth dist.	2216 Sep 05 10:56	13°♏51'08	19.30091 AU
min. Earth dist.	2210 Feb 03 07:25	12°♈59'07	17.49156 AU				
direct	2210 Apr 18 19:28	10°♈55'51		conjunction	2216 Sep 06 10:40	13°♏54'52	0°44'06
evening set	2210 Jul 22 14:03	14°♈20'55		minimum elong	2216 Sep 06 10:40	13°♏54'52	0°44'07
	2210 Aug 02 05:57	15°♈		morning rise	2216 Sep 22 21:42	14°♏56'29	
max. Earth dist.	2210 Aug 07 09:23	15°♈19'05	19.46855 AU	retrograde	2216 Dec 23 20:31	18°♏19'29	
				opposition	2217 Mar 07 04:13	16°♏16'56	0°49'12
conjunction	2210 Aug 08 08:15	15°♈22'37	0°38'20	min. Earth dist.	2217 Mar 08 01:01	16°♏14'39	17.29552 AU
minimum elong	2210 Aug 08 08:15	15°♈22'37	0°38'20	direct	2217 May 22 02:17	14°♏10'37	
morning rise	2210 Aug 25 00:27	16°♈24'04		evening set	2217 Aug 26 01:45	17°♏40'56	
retrograde	2210 Nov 25 16:17	19°♈45'52					
opposition	2211 Feb 07 09:47	17°♈42'52	0°43'40	conjunction	2217 Sep 11 15:11	18°♏42'59	0°44'02
min. Earth dist.	2211 Feb 08 05:42	17°♈40'41	17.44748 AU	minimum elong	2217 Sep 11 15:11	18°♏42'59	0°44'01
direct	2211 Apr 23 18:22	15°♈37'17		max. Earth dist.	2217 Sep 10 14:26	18°♏39'05	19.29044 AU
evening set	2211 Jul 27 18:17	19°♈03'22		morning rise	2217 Sep 28 01:20	19°♏44'33	
				retrograde	2217 Dec 28 21:37	23°♏07'33	
conjunction	2211 Aug 13 12:00	20°♈05'12	0°40'00	opposition	2218 Mar 12 05:07	21°♏05'03	0°48'57
minimum elong	2211 Aug 13 12:00	20°♈05'12	0°39'59	min. Earth dist.	2218 Mar 13 01:47	21°♏02'48	17.28745 AU
max. Earth dist.	2211 Aug 12 12:11	20°♈01'30	19.42717 AU	direct	2218 May 27 06:04	18°♏58'41	
morning rise	2211 Aug 30 03:38	21°♈06'44		evening set	2218 Aug 31 07:09	22°♏29'19	
retrograde	2211 Nov 30 16:44	24°♈28'51					
opposition	2212 Feb 12 07:16	22°♈25'52	0°45'23	conjunction	2218 Sep 16 19:49	23°♏31'18	0°43'39
min. Earth dist.	2212 Feb 13 02:36	22°♈23'45	17.40885 AU	minimum elong	2218 Sep 16 19:49	23°♏31'18	0°43'39
direct	2212 Apr 27 19:21	20°♈20'04		max. Earth dist.	2218 Sep 15 20:22	23°♏27'36	19.28470 AU
evening set	2212 Jul 31 22:46	23°♈47'05		morning rise	2218 Oct 03 04:46	24°♏32'46	
				retrograde	2219 Jan 02 21:55	27°♏55'41	
conjunction	2212 Aug 17 16:04	24°♈49'01	0°41'23	opposition	2219 Mar 17 06:16	25°♏53'16	0°48'21
minimum elong	2212 Aug 17 16:04	24°♈49'01	0°41'23	min. Earth dist.	2219 Mar 18 02:35	25°♏51'02	17.28401 AU
max. Earth dist.	2212 Aug 16 16:39	24°♈45'23	19.39122 AU	direct	2219 Jun 01 10:16	23°♏46'52	
morning rise	2212 Sep 03 06:46	25°♈50'38		evening set	2219 Sep 05 12:29	27°♏17'40	
retrograde	2212 Dec 04 15:55	29°♈13'02		max. Earth dist.	2219 Sep 21 00:06	28°♏15'47	19.28375 AU
opposition	2213 Feb 16 05:32	27°♈10'06	0°46'47				
min. Earth dist.	2213 Feb 17 01:55	27°♈07'52	17.37576 AU	conjunction	2219 Sep 22 00:01	28°♏19'33	0°42'58
direct	2213 May 02 18:57	25°♈04'09		minimum elong	2219 Sep 22 00:01	28°♏19'33	0°42'57
evening set	2213 Aug 06 03:47	28°♈32'02		morning rise	2219 Oct 08 07:57	29°♏20'55	
					2219 Oct 19 03:19	0°♏	
conjunction	2213 Aug 22 20:21	29°♈34'03	0°42'30	retrograde	2220 Jan 07 21:51	2°♏43'42	
minimum elong	2213 Aug 22 20:21	29°♈34'03	0°42'31	opposition	2220 Mar 21 07:48	0°♏41'19	0°47'25
max. Earth dist.	2213 Aug 21 19:53	29°♈30'13	19.36099 AU	min. Earth dist.	2220 Mar 22 04:01	0°♏39'07	17.28564 AU
	2213 Aug 29 18:44	0°♏			2220 Apr 06 10:02	30°♏♏	
morning rise	2213 Sep 08 10:24	0°♏35'42		direct	2220 Jun 05 14:24	28°♏34'55	
retrograde	2213 Dec 09 17:44	3°♏58'20			2220 Aug 02 15:08	0°♏	
opposition	2214 Feb 21 04:12	1°♏55'29	0°47'53	evening set	2220 Sep 09 17:06	2°♏05'45	
min. Earth dist.	2214 Feb 22 00:08	1°♏53'18	17.34827 AU	max. Earth dist.	2220 Sep 25 05:22	3°♏04'00	19.28799 AU
	2214 Apr 17 20:05	30°♏♏					
direct	2214 May 07 20:44	29°♈49'24		conjunction	2220 Sep 26 03:42	3°♏07'31	0°41'58
	2214 May 27 16:15	0°♏		minimum elong	2220 Sep 26 03:42	3°♏07'31	0°41'58
evening set	2214 Aug 11 08:58	3°♏18'04		morning rise	2220 Oct 12 10:28	4°♏08'44	
max. Earth dist.	2214 Aug 27 01:25	4°♏16'27	19.33604 AU	retrograde	2221 Jan 11 22:14	7°♏31'19	
				opposition	2221 Mar 26 09:26	5°♏29'00	0°46'09
conjunction	2214 Aug 28 01:03	4°♏20'09	0°43'20	min. Earth dist.	2221 Mar 27 04:29	5°♏26'55	17.29240 AU
minimum elong	2214 Aug 28 01:03	4°♏20'09	0°43'20	direct	2221 Jun 10 19:46	3°♏22'36	
morning rise	2214 Sep 13 14:03	5°♏21'49		evening set	2221 Sep 14 21:26	6°♏53'21	
retrograde	2214 Dec 14 18:04	8°♏44'38		max. Earth dist.	2221 Sep 30 09:01	7°♏51'31	19.29753 AU
opposition	2215 Feb 26 03:42	6°♏41'54	0°48'40				
min. Earth dist.	2215 Feb 27 00:28	6°♏39'37	17.32584 AU	conjunction	2221 Oct 01 06:54	7°♏54'58	0°40'41
direct	2215 May 12 21:16	4°♏35'43		minimum elong	2221 Oct 01 06:54	7°♏54'58	0°40'41
evening set	2215 Aug 16 14:38	8°♏05'04		morning rise	2221 Oct 17 12:37	8°♏56'02	
max. Earth dist.	2215 Sep 01 04:52	9°♏03'15	19.31609 AU	retrograde	2222 Jan 16 21:03	12°♏18'21	

opposition	2222 Mar 31 11:03	10° <u>♏</u> 16'05	0°44'33	conjunction	2228 Nov 03 09:44	11° <u>♍</u> 01'24	0°24'46
min. Earth dist.	2222 Apr 01 05:59	10° <u>♏</u> 14'02	17.30482 AU	minimum elong	2228 Nov 03 09:44	11° <u>♍</u> 01'24	0°24'46
direct	2222 Jun 15 23:36	8° <u>♏</u> 09'43		max. Earth dist.	2228 Nov 02 23:04	10° <u>♍</u> 59'44	19.52928 AU
evening set	2222 Sep 20 01:07	11° <u>♏</u> 40'16		morning rise	2228 Nov 19 08:10	12° <u>♍</u> 00'55	
					2229 Jan 22 09:05	15° <u>♍</u>	
conjunction	2222 Oct 06 09:33	12° <u>♏</u> 41'42	0°39'07	retrograde	2229 Feb 18 12:30	15° <u>♍</u> 20'18	
minimum elong	2222 Oct 06 09:33	12° <u>♏</u> 41'42	0°39'07		2229 Mar 18 03:32	15° <u>♍</u>	
max. Earth dist.	2222 Oct 05 13:10	12° <u>♏</u> 38'29	19.31288 AU	opposition	2229 May 03 20:55	13° <u>♍</u> 19'09	0°25'56
morning rise	2222 Oct 22 14:10	13° <u>♏</u> 42'36		min. Earth dist.	2229 May 04 04:55	13° <u>♍</u> 18'18	17.55532 AU
retrograde	2223 Jan 21 21:14	17° <u>♏</u> 04'35		direct	2229 Jul 19 21:48	11° <u>♍</u> 14'29	
opposition	2223 Apr 05 12:45	15° <u>♏</u> 02'24	0°42'39	evening set	2229 Oct 23 06:24	14° <u>♍</u> 40'45	
min. Earth dist.	2223 Apr 06 05:49	15° <u>♏</u> 00'33	17.32298 AU		2229 Oct 28 11:38	15° <u>♍</u>	
direct	2223 Jun 21 05:16	12° <u>♏</u> 56'07					
evening set	2223 Sep 25 04:09	16° <u>♏</u> 26'20		conjunction	2229 Nov 08 07:10	15° <u>♍</u> 40'29	0°21'44
				minimum elong	2229 Nov 08 07:10	15° <u>♍</u> 40'29	0°21'43
conjunction	2223 Oct 11 11:27	17° <u>♏</u> 27'35	0°37'17	max. Earth dist.	2229 Nov 07 23:11	15° <u>♍</u> 39'14	19.58227 AU
minimum elong	2223 Oct 11 11:27	17° <u>♏</u> 27'35	0°37'17	morning rise	2229 Nov 24 04:31	16° <u>♍</u> 39'43	
max. Earth dist.	2223 Oct 10 16:30	17° <u>♏</u> 24'36	19.33408 AU	retrograde	2230 Feb 23 08:52	19° <u>♍</u> 58'32	
morning rise	2223 Oct 27 14:53	18° <u>♏</u> 28'17		opposition	2230 May 08 21:24	17° <u>♍</u> 57'36	0°22'28
retrograde	2224 Jan 26 19:16	21° <u>♏</u> 49'55		min. Earth dist.	2230 May 09 04:49	17° <u>♍</u> 56'49	17.60984 AU
opposition	2224 Apr 09 14:35	19° <u>♏</u> 47'49	0°40'27	direct	2230 Jul 24 23:35	15° <u>♍</u> 53'17	
min. Earth dist.	2224 Apr 10 07:11	19° <u>♏</u> 46'02	17.34736 AU	evening set	2230 Oct 28 04:04	19° <u>♍</u> 18'36	
direct	2224 Jun 25 08:18	17° <u>♏</u> 41'41					
evening set	2224 Sep 29 06:29	21° <u>♏</u> 11'28		conjunction	2230 Nov 13 03:37	20° <u>♍</u> 18'01	0°18'34
				minimum elong	2230 Nov 13 03:37	20° <u>♍</u> 18'01	0°18'34
conjunction	2224 Oct 15 12:37	22° <u>♏</u> 12'30	0°35'12	max. Earth dist.	2230 Nov 12 20:10	20° <u>♍</u> 16'52	19.63830 AU
minimum elong	2224 Oct 15 12:37	22° <u>♏</u> 12'30	0°35'11	morning rise	2230 Nov 29 00:15	21° <u>♍</u> 16'59	
max. Earth dist.	2224 Oct 14 19:09	22° <u>♏</u> 09'45	19.36169 AU	retrograde	2231 Feb 28 05:15	24° <u>♍</u> 35'13	
morning rise	2224 Oct 31 15:02	23° <u>♏</u> 12'59		opposition	2231 May 13 21:32	22° <u>♍</u> 34'27	0°18'52
retrograde	2225 Jan 30 19:16	26° <u>♏</u> 34'14		min. Earth dist.	2231 May 14 02:41	22° <u>♍</u> 33'55	17.66713 AU
opposition	2225 Apr 14 16:06	24° <u>♏</u> 32'16	0°38'00	direct	2231 Jul 30 01:13	20° <u>♍</u> 30'30	
min. Earth dist.	2225 Apr 15 06:13	24° <u>♏</u> 30'45	17.37801 AU	evening set	2231 Nov 02 00:30	23° <u>♍</u> 54'46	
direct	2225 Jun 30 12:49	22° <u>♏</u> 26'20					
evening set	2225 Oct 04 07:57	25° <u>♏</u> 55'35		conjunction	2231 Nov 17 23:13	24° <u>♍</u> 53'52	0°15'18
				minimum elong	2231 Nov 17 23:13	24° <u>♍</u> 53'52	0°15'18
conjunction	2225 Oct 20 13:03	26° <u>♏</u> 56'24	0°32'53	behind sun begin	2231 Nov 17 21:01	24° <u>♍</u> 53'32	
minimum elong	2225 Oct 20 13:04	26° <u>♏</u> 56'24	0°32'53	behind sun end	2231 Nov 18 01:25	24° <u>♍</u> 54'12	
max. Earth dist.	2225 Oct 19 21:45	26° <u>♏</u> 53'59	19.39545 AU	max. Earth dist.	2231 Nov 17 18:31	24° <u>♍</u> 53'09	19.69667 AU
morning rise	2225 Nov 05 14:21	27° <u>♏</u> 56'40		morning rise	2231 Dec 03 18:51	25° <u>♍</u> 52'33	
	2225 Dec 13 01:24	0° <u>♍</u>		retrograde	2232 Mar 04 00:21	29° <u>♍</u> 10'10	
retrograde	2226 Feb 04 17:10	1° <u>♍</u> 17'29		opposition	2232 May 17 21:20	27° <u>♍</u> 09'34	0°15'11
	2226 Apr 02 03:14	30° <u>♍</u>		min. Earth dist.	2232 May 18 01:32	27° <u>♍</u> 09'08	17.72644 AU
opposition	2226 Apr 19 17:41	29° <u>♏</u> 15'42	0°35'18	direct	2232 Aug 03 02:44	25° <u>♍</u> 05'58	
min. Earth dist.	2226 Apr 20 07:16	29° <u>♏</u> 14'15	17.41473 AU	evening set	2232 Nov 05 20:12	28° <u>♍</u> 29'07	
direct	2226 Jul 05 14:48	27° <u>♏</u> 10'01					
	2226 Sep 28 15:04	0° <u>♍</u>		conjunction	2232 Nov 21 17:48	29° <u>♍</u> 27'54	0°11'58
evening set	2226 Oct 09 08:51	0° <u>♍</u> 38'41		minimum elong	2232 Nov 21 17:48	29° <u>♍</u> 27'54	0°11'58
				behind sun begin	2232 Nov 21 13:12	29° <u>♍</u> 27'12	
conjunction	2226 Oct 25 12:45	1° <u>♍</u> 39'14	0°30'22	behind sun end	2232 Nov 21 22:23	29° <u>♍</u> 28'35	
minimum elong	2226 Oct 25 12:45	1° <u>♍</u> 39'14	0°30'22	max. Earth dist.	2232 Nov 21 13:36	29° <u>♍</u> 27'16	19.75695 AU
max. Earth dist.	2226 Oct 24 22:36	1° <u>♍</u> 37'01	19.43513 AU		2232 Nov 30 08:58	0° <u>♏</u>	
morning rise	2226 Nov 10 13:07	2° <u>♍</u> 39'16		morning rise	2232 Dec 07 12:52	0° <u>♏</u> 26'18	
retrograde	2227 Feb 09 16:32	5° <u>♍</u> 59'38		retrograde	2233 Mar 08 18:47	3° <u>♏</u> 43'16	
opposition	2227 Apr 24 18:50	3° <u>♍</u> 58'04	0°32'22	opposition	2233 May 22 20:21	1° <u>♏</u> 42'48	0°11'25
min. Earth dist.	2227 Apr 25 05:52	3° <u>♍</u> 56'53	17.45697 AU	min. Earth dist.	2233 May 22 22:33	1° <u>♏</u> 42'34	17.78756 AU
direct	2227 Jul 10 17:57	1° <u>♍</u> 52'41			2233 Jul 10 08:50	30° <u>♍</u>	
evening set	2227 Oct 14 08:53	5° <u>♍</u> 20'39		direct	2233 Aug 08 02:48	29° <u>♍</u> 39'31	
					2233 Sep 05 06:45	0° <u>♏</u>	
conjunction	2227 Oct 30 11:47	6° <u>♍</u> 20'57	0°27'39	evening set	2233 Nov 10 14:40	3° <u>♏</u> 01'30	
minimum elong	2227 Oct 30 11:47	6° <u>♍</u> 20'57	0°27'38				
max. Earth dist.	2227 Oct 30 00:14	6° <u>♍</u> 19'08	19.47993 AU	conjunction	2233 Nov 26 11:35	3° <u>♏</u> 59'58	0°08'35
morning rise	2227 Nov 15 11:00	7° <u>♍</u> 20'43		minimum elong	2233 Nov 26 11:34	3° <u>♏</u> 59'58	0°08'35
retrograde	2228 Feb 14 14:13	10° <u>♍</u> 40'36		behind sun begin	2233 Nov 26 05:49	3° <u>♏</u> 59'06	
opposition	2228 Apr 28 20:07	8° <u>♍</u> 39'15	0°29'14	behind sun end	2233 Nov 26 17:20	4° <u>♏</u> 00'50	
min. Earth dist.	2228 Apr 29 06:35	8° <u>♍</u> 38'08	17.50407 AU	max. Earth dist.	2233 Nov 26 10:04	3° <u>♏</u> 59'45	19.81876 AU
direct	2228 Jul 14 19:25	6° <u>♍</u> 34'14		morning rise	2233 Dec 12 05:48	4° <u>♏</u> 58'05	
evening set	2228 Oct 18 08:04	10° <u>♍</u> 01'23		retrograde	2234 Mar 13 12:20	8° <u>♏</u> 14'22	

opposition	2234 May 27 18:54	6°♊14'02	0°07'36		2239 Dec 15 06:32	0°♊	
min. Earth dist.	2234 May 27 19:51	6°♊13'56	17.84990 AU				
direct	2234 Aug 13 02:36	4°♊11'04		conjunction	2239 Dec 23 00:48	0°♊28'11	-0°11'44
evening set	2234 Nov 15 08:16	7°♊31'50		minimum elong	2239 Dec 23 00:48	0°♊28'11	0°11'45
				behind sun begin	2239 Dec 22 20:07	0°♊27'29	
conjunction	2234 Dec 01 04:09	8°♊29'58	0°05'10	behind sun end	2239 Dec 23 05:29	0°♊28'52	
minimum elong	2234 Dec 01 04:08	8°♊29'58	0°05'09	max. Earth dist.	2239 Dec 23 10:20	0°♊29'36	20.21809 AU
behind sun begin	2234 Nov 30 21:45	8°♊29'00		morning rise	2240 Jan 07 16:19	1°♊24'38	
behind sun end	2234 Dec 01 10:31	8°♊30'56		retrograde	2240 Apr 08 10:15	4°♊36'58	
max. Earth dist.	2234 Dec 01 03:18	8°♊29'52	19.88179 AU	opposition	2240 Jun 23 19:26	2°♊37'20	-0°14'45
morning rise	2234 Dec 16 21:53	9°♊27'48		min. Earth dist.	2240 Jun 23 09:04	2°♊38'23	18.25299 AU
retrograde	2235 Mar 18 05:26	12°♊43'24		direct	2240 Sep 09 01:39	0°♊36'30	
opposition	2235 Jun 01 16:45	10°♊43'09	0°03'47	evening set	2240 Dec 10 19:54	3°♊49'45	
min. Earth dist.	2235 Jun 01 15:52	10°♊43'14	17.91363 AU				
direct	2235 Aug 18 00:36	8°♊40'29		conjunction	2240 Dec 26 11:58	4°♊46'04	-0°14'54
evening set	2235 Nov 20 00:36	11°♊59'59		minimum elong	2240 Dec 26 11:58	4°♊46'04	0°14'53
				behind sun begin	2240 Dec 26 09:14	4°♊45'40	
conjunction	2235 Dec 05 19:50	12°♊57'48	0°01'43	behind sun end	2240 Dec 26 14:42	4°♊46'28	
minimum elong	2235 Dec 05 19:51	12°♊57'49	0°01'43	max. Earth dist.	2240 Dec 26 22:39	4°♊47'40	20.28832 AU
behind sun begin	2235 Dec 05 13:17	12°♊56'50		morning rise	2241 Jan 11 03:23	5°♊42'18	
behind sun end	2235 Dec 06 02:25	12°♊58'47		retrograde	2241 Apr 12 23:30	8°♊54'03	
max. Earth dist.	2235 Dec 05 21:51	12°♊58'03	19.94621 AU	opposition	2241 Jun 28 13:01	6°♊54'35	-0°18'11
morning rise	2235 Dec 21 12:55	13°♊55'21		min. Earth dist.	2241 Jun 28 01:45	6°♊55'44	18.32328 AU
retrograde	2236 Mar 21 21:42	17°♊10'16		direct	2241 Sep 13 16:28	4°♊54'10	
desc. node	2236 Jun 01 20:33	15°♊19'20		evening set	2241 Dec 15 06:43	8°♊06'15	
opposition	2236 Jun 05 13:57	15°♊10'06	-0°00'02				
min. Earth dist.	2236 Jun 05 11:17	15°♊10'22	17.97869 AU	conjunction	2241 Dec 30 22:30	9°♊02'18	-0°17'57
direct	2236 Aug 21 22:19	13°♊07'45		minimum elong	2241 Dec 30 22:30	9°♊02'18	0°17'57
evening set	2236 Nov 23 15:57	16°♊25'58		max. Earth dist.	2241 Dec 31 11:16	9°♊04'13	20.35833 AU
				morning rise	2242 Jan 15 13:41	9°♊58'17	
conjunction	2236 Dec 09 10:20	17°♊23'28	-0°01'49	retrograde	2242 Apr 17 13:52	13°♊09'29	
minimum elong	2236 Dec 09 10:19	17°♊23'28	0°01'49	opposition	2242 Jul 03 05:58	11°♊10'13	-0°21'31
behind sun begin	2236 Dec 09 03:45	17°♊22'29		min. Earth dist.	2242 Jul 02 16:32	11°♊11'34	18.39277 AU
behind sun end	2236 Dec 09 16:53	17°♊24'27		direct	2242 Sep 18 09:29	9°♊10'15	
max. Earth dist.	2236 Dec 09 13:21	17°♊23'52	20.01203 AU	evening set	2242 Dec 19 16:52	12°♊21'10	
morning rise	2236 Dec 25 03:03	18°♊20'44					
retrograde	2237 Mar 26 13:30	21°♊34'58		conjunction	2243 Jan 04 08:10	13°♊16'57	-0°20'53
opposition	2237 Jun 10 10:24	19°♊34'53	-0°03'49	minimum elong	2243 Jan 04 08:10	13°♊16'57	0°20'53
min. Earth dist.	2237 Jun 10 06:00	19°♊35'20	18.04537 AU	max. Earth dist.	2243 Jan 04 21:59	13°♊19'01	20.42715 AU
direct	2237 Aug 26 18:00	17°♊32'51		morning rise	2243 Jan 19 23:19	14°♊12'43	
evening set	2237 Nov 28 06:16	20°♊49'48		retrograde	2243 Apr 22 02:05	17°♊23'25	
				opposition	2243 Jul 07 22:29	15°♊24'18	-0°24'42
conjunction	2237 Dec 14 00:06	21°♊47'00	-0°05'12	min. Earth dist.	2243 Jul 07 08:32	15°♊25'42	18.46094 AU
minimum elong	2237 Dec 14 00:06	21°♊47'00	0°05'13	direct	2243 Sep 22 22:47	13°♊24'45	
behind sun begin	2237 Dec 13 17:44	21°♊46'04		evening set	2243 Dec 24 02:18	16°♊34'32	
behind sun end	2237 Dec 14 06:27	21°♊47'57					
max. Earth dist.	2237 Dec 14 05:53	21°♊47'51	20.07943 AU	conjunction	2244 Jan 08 17:25	17°♊30'05	-0°23'42
morning rise	2237 Dec 29 16:15	22°♊43'59		minimum elong	2244 Jan 08 17:25	17°♊30'05	0°23'42
retrograde	2238 Mar 31 04:48	25°♊57'33		max. Earth dist.	2244 Jan 09 08:53	17°♊32'23	20.49432 AU
opposition	2238 Jun 15 05:59	23°♊57'36	-0°07'32	morning rise	2244 Jan 24 08:29	18°♊25'38	
min. Earth dist.	2238 Jun 14 23:25	23°♊58'16	18.11343 AU	retrograde	2244 Apr 25 15:28	21°♊35'49	
direct	2238 Aug 31 13:59	21°♊55'56		opposition	2244 Jul 11 14:06	19°♊36'51	-0°27'45
evening set	2238 Dec 02 19:49	25°♊11'38		min. Earth dist.	2244 Jul 10 22:10	19°♊38'28	18.52695 AU
				direct	2244 Sep 26 14:39	17°♊37'42	
conjunction	2238 Dec 18 12:53	26°♊08'32	-0°08'30	evening set	2244 Dec 27 11:07	20°♊46'23	
minimum elong	2238 Dec 18 12:53	26°♊08'32	0°08'30				
behind sun begin	2238 Dec 18 07:07	26°♊07'40		conjunction	2245 Jan 12 01:58	21°♊41'42	-0°26'23
behind sun end	2238 Dec 18 18:39	26°♊09'23		minimum elong	2245 Jan 12 01:58	21°♊41'42	0°26'23
max. Earth dist.	2238 Dec 18 19:49	26°♊09'34	20.14819 AU	max. Earth dist.	2245 Jan 12 18:11	21°♊44'07	20.55891 AU
morning rise	2239 Jan 03 04:47	27°♊05'15		morning rise	2245 Jan 27 17:10	22°♊37'04	
	2239 Mar 09 11:49	0°♊		retrograde	2245 Apr 30 02:59	25°♊46'46	
retrograde	2239 Apr 04 19:22	0°♊18'11		opposition	2245 Jul 16 05:15	23°♊47'56	-0°30'37
	2239 May 01 18:21	30°♊		min. Earth dist.	2245 Jul 15 13:17	23°♊49'32	18.59017 AU
opposition	2239 Jun 20 01:07	28°♊18'22	-0°11'11	direct	2245 Oct 01 02:34	21°♊49'08	
min. Earth dist.	2239 Jun 19 17:03	28°♊19'12	18.18288 AU	evening set	2245 Dec 31 19:17	24°♊56'45	
direct	2239 Sep 05 07:08	26°♊17'07					
evening set	2239 Dec 07 08:09	29°♊31'34		conjunction	2246 Jan 16 10:03	25°♊51'51	-0°28'54

minimum elong	2246 Jan 16 10:03	25°  51'51	0°28'54	retrograde	2252 May 28 23:08	24°  23'17	
max. Earth dist.	2246 Jan 17 03:24	25°  54'25	20.62044 AU	opposition	2252 Aug 14 19:48	22°  24'32	-0°45'12
morning rise	2246 Feb 01 01:17	26°  47'01		min. Earth dist.	2252 Aug 13 21:25	22°  26'46	18.93574 AU
retrograde	2246 May 04 14:45	29°  56'15		direct	2252 Oct 30 07:14	20°  27'23	
opposition	2246 Jul 20 19:32	27°  57'31	-0°33'19	evening set	2253 Jan 28 12:26	23°  28'38	
min. Earth dist.	2246 Jul 20 01:44	27°  59'18	18.64990 AU				
direct	2246 Oct 05 17:24	25°  59'02		conjunction	2253 Feb 13 04:07	24°  22'39	-0°41'28
evening set	2247 Jan 05 02:55	29°  05'36		minimum elong	2253 Feb 13 04:07	24°  22'39	0°41'27
				max. Earth dist.	2253 Feb 14 03:00	24°  25'57	20.95418 AU
conjunction	2247 Jan 20 17:33	0°  00'30	-0°31'15	morning rise	2253 Feb 28 22:00	25°  16'57	
minimum elong	2247 Jan 20 17:33	0°  00'30	0°31'16	retrograde	2253 Jun 02 06:05	28°  23'39	
	2247 Jan 20 14:08	0°  00'00		min. Earth dist.	2253 Aug 18 07:59	26°  27'06	18.97259 AU
max. Earth dist.	2247 Jan 21 11:31	0°  03'09	20.67829 AU	opposition	2253 Aug 19 05:51	26°  24'55	-0°46'24
morning rise	2247 Feb 05 09:01	0°  55'30		direct	2253 Nov 03 13:49	24°  27'59	
retrograde	2247 May 09 01:18	4°  04'18		evening set	2254 Feb 01 16:37	27°  28'34	
opposition	2247 Jul 25 09:26	2°  05'35	-0°35'49				
min. Earth dist.	2247 Jul 24 15:48	2°  07'21	18.70600 AU	conjunction	2254 Feb 17 08:43	28°  22'30	-0°42'28
direct	2247 Oct 10 04:19	0°  07'24		minimum elong	2254 Feb 17 08:43	28°  22'30	0°42'28
evening set	2248 Jan 09 09:43	3°  12'56		max. Earth dist.	2254 Feb 18 08:08	28°  25'53	20.98940 AU
				morning rise	2254 Mar 05 03:09	29°  16'45	
conjunction	2248 Jan 25 00:27	4°  07'38	-0°33'26		2254 Mar 18 07:02	0°  00'00	
minimum elong	2248 Jan 25 00:26	4°  07'38	0°33'26	retrograde	2254 Jun 06 15:30	2°  13'15	
max. Earth dist.	2248 Jan 25 19:23	4°  10'25	20.73252 AU	opposition	2254 Aug 23 15:18	0°  13'15	-0°47'24
morning rise	2248 Feb 09 16:09	5°  02'29		min. Earth dist.	2254 Aug 22 15:59	0°  13'15	19.00603 AU
retrograde	2248 May 12 11:44	8°  10'50			2254 Sep 02 23:25	30°  00'00	
opposition	2248 Jul 28 22:25	6°  12'09	-0°38'08	direct	2254 Nov 07 21:43	28°  27'49	
min. Earth dist.	2248 Jul 28 03:01	6°  14'05	18.75833 AU		2255 Jan 08 16:37	0°  00'00	
direct	2248 Oct 13 17:16	4°  14'11		evening set	2255 Feb 05 20:45	1°  13'15	
evening set	2249 Jan 12 16:06	7°  18'45					
				conjunction	2255 Feb 21 13:15	2°  13'15	-0°43'15
conjunction	2249 Jan 28 06:51	8°  13'16	-0°35'26	minimum elong	2255 Feb 21 13:15	2°  13'15	0°43'15
minimum elong	2249 Jan 28 06:50	8°  13'16	0°35'27	max. Earth dist.	2255 Feb 22 13:08	2°  13'15	21.02093 AU
max. Earth dist.	2249 Jan 29 02:27	8°  16'09	20.78298 AU	morning rise	2255 Mar 09 08:21	3°  15'55	
morning rise	2249 Feb 12 22:55	9°  07'59		retrograde	2255 Jun 10 22:08	6°  22'17	
retrograde	2249 May 16 20:32	12°  15'55		min. Earth dist.	2255 Aug 27 02:03	4°  25'50	19.03570 AU
opposition	2249 Aug 02 10:41	10°  17'12	-0°40'14	opposition	2255 Aug 28 00:31	4°  23'36	-0°48'09
min. Earth dist.	2249 Aug 01 15:37	10°  19'06	18.80720 AU	direct	2255 Nov 12 03:23	2°  13'15	
direct	2249 Oct 18 03:04	8°  19'27		evening set	2256 Feb 10 00:41	5°  26'33	
evening set	2250 Jan 16 21:50	11°  23'05					
				conjunction	2256 Feb 25 17:46	6°  20'23	-0°43'51
conjunction	2250 Feb 01 12:45	12°  17'27	-0°37'15	minimum elong	2256 Feb 25 17:46	6°  20'23	0°43'51
minimum elong	2250 Feb 01 12:45	12°  17'27	0°37'14	max. Earth dist.	2256 Feb 26 17:48	6°  23'50	21.04858 AU
max. Earth dist.	2250 Feb 02 09:19	12°  20'27	20.83024 AU	morning rise	2256 Mar 12 13:33	7°  14'35	
morning rise	2250 Feb 17 05:09	13°  12'02		retrograde	2256 Jun 14 07:40	10°  20'51	
	2250 Mar 24 07:41	15°  00'00		min. Earth dist.	2256 Aug 30 09:45	8°  24'32	19.06108 AU
retrograde	2250 May 21 06:06	16°  19'35		opposition	2256 Nov 15 09:12	8°  22'12	-0°48'40
	2250 Jul 21 07:02	15°  00'00		direct	2256 Nov 15 10:16	6°  25'49	
opposition	2250 Aug 06 22:18	14°  22'51	-0°42'06	evening set	2257 Feb 13 04:45	9°  24'54	
min. Earth dist.	2250 Aug 06 01:22	14°  22'57	18.85292 AU				
direct	2250 Oct 22 13:53	12°  23'18		conjunction	2257 Feb 28 22:19	10°  18'42	-0°44'13
	2251 Jan 13 08:41	15°  00'00		minimum elong	2257 Feb 28 22:19	10°  18'42	0°44'13
evening set	2251 Jan 21 03:02	15°  26'04		max. Earth dist.	2257 Mar 01 22:22	10°  22'09	21.07150 AU
				morning rise	2257 Mar 16 18:49	11°  12'54	
conjunction	2251 Feb 05 18:05	16°  20'18	-0°38'51	retrograde	2257 Jun 18 14:15	14°  19'07	
minimum elong	2251 Feb 05 18:05	16°  20'18	0°38'51	opposition	2257 Sep 04 17:35	12°  20'28	-0°48'58
max. Earth dist.	2251 Feb 06 15:30	16°  23'25	20.87439 AU	min. Earth dist.	2257 Sep 03 19:25	12°  22'41	19.08157 AU
morning rise	2251 Feb 21 10:56	17°  14'46		direct	2257 Nov 19 15:27	10°  24'15	
retrograde	2251 May 25 13:47	20°  21'59		evening set	2258 Feb 17 08:46	13°  22'58	
opposition	2251 Aug 11 09:30	18°  23'15	-0°43'46				
min. Earth dist.	2251 Aug 10 12:49	18°  25'19	18.89576 AU	conjunction	2258 Mar 05 02:59	14°  16'46	-0°44'23
direct	2251 Oct 26 22:08	16°  25'54		minimum elong	2258 Mar 05 02:59	14°  16'46	0°44'23
evening set	2252 Jan 25 07:53	19°  27'52		max. Earth dist.	2258 Mar 06 02:41	14°  20'09	21.08945 AU
				morning rise	2258 Mar 21 00:14	15°  10'59	
conjunction	2252 Feb 09 23:15	20°  21'58	-0°40'15	retrograde	2258 Jun 22 23:37	18°  17'11	
minimum elong	2252 Feb 09 23:15	20°  21'58	0°40'15	min. Earth dist.	2258 Sep 08 02:58	16°  20'48	19.09675 AU
max. Earth dist.	2252 Feb 10 21:29	20°  25'12	20.91582 AU	opposition	2258 Sep 09 01:44	16°  18'32	-0°49'02
morning rise	2252 Feb 25 16:34	21°  16'21		direct	2258 Nov 23 21:48	14°  17'11	

evening set	2259 Feb 21 12:48	17° ✕ 20'49		max. Earth dist.	2265 Apr 02 11:10	12° Υ 03'30	21.05927 AU
				morning rise	2265 Apr 17 19:05	12° Υ 55'34	
conjunction	2259 Mar 09 07:39	18° ✕ 14'38 -0°44'21		retrograde	2265 Jul 21 06:07	16° Υ 02'31	
minimum elong	2259 Mar 09 07:39	18° ✕ 14'38 0°44'20		min. Earth dist.	2265 Oct 06 11:03	14° Υ 04'46	19.04878 AU
max. Earth dist.	2259 Mar 10 07:00	18° ✕ 17'59 21.10166 AU		opposition	2265 Oct 07 04:19	14° Υ 03'01	-0°42'59
morning rise	2259 Mar 25 05:44	19° ✕ 08'54		direct	2265 Dec 21 08:12	12° Υ 06'33	
retrograde	2259 Jun 27 06:28	22° ✕ 15'08		evening set	2266 Mar 20 21:04	15° Υ 04'38	
opposition	2259 Sep 13 09:47	20° ✕ 16'25 -0°48'51					
min. Earth dist.	2259 Sep 12 12:31	20° ✕ 18'32 19.10604 AU		conjunction	2266 Apr 05 21:50	15° Υ 59'06	-0°38'10
direct	2259 Nov 28 02:41	18° ✕ 20'22		minimum elong	2266 Apr 05 21:50	15° Υ 59'06	0°38'10
evening set	2260 Feb 25 17:00	21° ✕ 18'31		max. Earth dist.	2266 Apr 06 16:34	16° Υ 01'47	21.03683 AU
				morning rise	2266 Apr 22 02:22	16° Υ 54'07	
conjunction	2260 Mar 12 12:38	22° ✕ 12'23 -0°44'05		retrograde	2266 Jul 25 15:44	20° Υ 01'21	
minimum elong	2260 Mar 12 12:38	22° ✕ 12'23 0°44'04		opposition	2266 Oct 11 11:01	18° Υ 01'43	-0°41'15
max. Earth dist.	2260 Mar 13 11:13	22° ✕ 15'36 21.10803 AU		min. Earth dist.	2266 Oct 10 17:41	18° Υ 03'28	19.02451 AU
morning rise	2260 Mar 28 11:34	23° ✕ 06'42		direct	2266 Dec 25 13:35	16° Υ 05'08	
retrograde	2260 Jun 30 15:25	26° ✕ 12'57		evening set	2267 Mar 25 02:47	19° Υ 03'29	
opposition	2260 Sep 16 17:16	24° ✕ 14'10 -0°48'27					
min. Earth dist.	2260 Sep 15 19:46	24° ✕ 16'19 19.10934 AU		conjunction	2267 Apr 10 04:32	19° Υ 58'07	-0°36'30
direct	2260 Dec 01 08:52	22° ✕ 18'07		minimum elong	2267 Apr 10 04:32	19° Υ 58'07	0°36'30
evening set	2261 Feb 28 21:19	25° ✕ 16'05		max. Earth dist.	2267 Apr 10 22:42	20° Υ 00'43	21.01072 AU
				morning rise	2267 Apr 26 10:02	20° Υ 53'18	
conjunction	2261 Mar 16 17:41	26° ✕ 10'00 -0°43'37		retrograde	2267 Jul 30 00:16	24° Υ 00'51	
minimum elong	2261 Mar 16 17:41	26° ✕ 10'00 0°43'37		opposition	2267 Oct 15 17:53	22° Υ 01'06	-0°39'19
max. Earth dist.	2261 Mar 17 15:40	26° ✕ 13'08 21.10830 AU		min. Earth dist.	2267 Oct 15 02:11	22° Υ 02'42	18.99659 AU
morning rise	2261 Apr 01 17:30	27° ✕ 04'24		direct	2267 Dec 29 17:51	20° Υ 04'25	
	2261 Jun 13 22:17	0° Υ		evening set	2268 Mar 28 09:07	23° Υ 03'06	
retrograde	2261 Jul 04 22:03	0° Υ 10'42					
	2261 Jul 26 06:12	30° ✕		conjunction	2268 Apr 13 11:52	23° Υ 57'55	-0°34'39
min. Earth dist.	2261 Sep 20 04:50	28° ✕ 13'48 19.10673 AU		minimum elong	2268 Apr 13 11:52	23° Υ 57'55	0°34'40
opposition	2261 Sep 21 00:44	28° ✕ 11'48 -0°47'48		max. Earth dist.	2268 Apr 14 04:49	24° Υ 00'20	20.98117 AU
direct	2261 Dec 05 13:07	26° ✕ 15'43		morning rise	2268 Apr 29 18:24	24° Υ 53'18	
evening set	2262 Mar 05 01:30	29° ✕ 13'33		retrograde	2268 Aug 02 10:32	28° Υ 01'11	
	2262 Mar 18 17:55	0° Υ		min. Earth dist.	2268 Oct 18 09:11	26° Υ 02'55	18.96517 AU
				opposition	2268 Oct 19 00:37	26° Υ 01'21	-0°37'11
conjunction	2262 Mar 20 22:43	0° Υ 07'32 -0°42'56		direct	2269 Jan 01 22:59	24° Υ 04'31	
minimum elong	2262 Mar 20 22:43	0° Υ 07'32 0°42'55		evening set	2269 Apr 01 16:02	27° Υ 03'38	
max. Earth dist.	2262 Mar 21 20:00	0° Υ 10'34 21.10309 AU					
morning rise	2262 Apr 05 23:26	1° Υ 02'01		conjunction	2269 Apr 17 19:46	27° Υ 58'40	-0°32'38
retrograde	2262 Jul 09 06:57	4° Υ 08'26		minimum elong	2269 Apr 17 19:46	27° Υ 58'40	0°32'38
min. Earth dist.	2262 Sep 24 11:42	2° Υ 11'24 19.09888 AU		max. Earth dist.	2269 Apr 18 11:55	28° Υ 00'58	20.94787 AU
opposition	2262 Sep 25 07:52	2° Υ 09'23 -0°46'56		morning rise	2269 May 04 03:14	28° Υ 54'14	
direct	2262 Dec 09 19:11	0° Υ 13'13			2269 May 24 18:14	0° ♄	
evening set	2263 Mar 09 06:02	3° Υ 11'00		retrograde	2269 Aug 06 19:43	2° ♄ 02'32	
				opposition	2269 Oct 23 07:45	0° ♄ 02'35	-0°34'51
conjunction	2263 Mar 25 04:03	4° Υ 05'05 -0°42'02		min. Earth dist.	2269 Oct 22 18:07	0° ♄ 03'59	18.92995 AU
minimum elong	2263 Mar 25 04:03	4° Υ 05'05 0°42'03			2269 Oct 24 09:04	30° ✕ Υ	
max. Earth dist.	2263 Mar 26 00:55	4° Υ 08'03 21.09277 AU		direct	2270 Jan 06 04:11	28° Υ 05'38	
morning rise	2263 Apr 10 05:42	4° Υ 59'40			2270 Mar 16 12:10	0° ♄	
retrograde	2263 Jul 13 13:34	8° Υ 06'13		evening set	2270 Apr 05 23:27	1° ♄ 05'14	
opposition	2263 Sep 29 14:51	6° Υ 07'01 -0°45'50					
min. Earth dist.	2263 Sep 28 20:14	6° Υ 08'53 19.08630 AU		conjunction	2270 Apr 22 04:12	2° ♄ 00'28	-0°30'27
direct	2263 Dec 13 22:47	4° Υ 10'46		minimum elong	2270 Apr 22 04:12	2° ♄ 00'28	0°30'27
evening set	2264 Mar 12 10:43	7° Υ 08'34		max. Earth dist.	2270 Apr 22 18:49	2° ♄ 02'34	20.91086 AU
				morning rise	2270 May 08 12:41	2° ♄ 56'16	
conjunction	2264 Mar 28 09:40	8° Υ 02'45 -0°40'57		retrograde	2270 Aug 11 07:12	6° ♄ 05'00	
minimum elong	2264 Mar 28 09:40	8° Υ 02'45 0°40'56		opposition	2270 Oct 27 15:04	4° ♄ 04'57	-0°32'21
max. Earth dist.	2264 Mar 29 05:46	8° Υ 05'37 21.07812 AU		min. Earth dist.	2270 Oct 27 02:03	4° ♄ 06'17	18.89085 AU
morning rise	2264 Apr 13 12:17	8° Υ 57'28		direct	2271 Jan 10 10:03	2° ♄ 07'49	
retrograde	2264 Jul 16 22:50	12° Υ 04'12		evening set	2271 Apr 10 07:49	5° ♄ 08'00	
opposition	2264 Oct 02 21:36	10° Υ 04'50 -0°44'31					
min. Earth dist.	2264 Oct 02 02:48	10° Υ 06'44 19.06953 AU		conjunction	2271 Apr 26 13:35	6° ♄ 03'28	-0°28'06
direct	2264 Dec 17 04:36	8° Υ 08'29		minimum elong	2271 Apr 26 13:35	6° ♄ 03'28	0°28'05
evening set	2265 Mar 16 15:44	11° Υ 06'23		max. Earth dist.	2271 Apr 27 03:03	6° ♄ 05'24	20.86958 AU
				morning rise	2271 May 12 22:57	6° ♄ 59'29	
conjunction	2265 Apr 01 15:33	12° Υ 00'42 -0°39'39		retrograde	2271 Aug 15 16:56	10° ♄ 08'41	
minimum elong	2265 Apr 01 15:33	12° Υ 00'42 0°39'39		opposition	2271 Oct 31 22:35	8° ♄ 08'31	-0°29'40

min. Earth dist.	2271 Oct 31 11:42	8°8'09"38	18.84736 AU	morning rise	2277 Jun 07 03:45	1°11'45"29	
direct	2272 Jan 14 16:00	6°8'11"11		retrograde	2277 Sep 09 17:26	4°11'57"44	
evening set	2272 Apr 13 16:56	9°8'12"00		opposition	2277 Nov 25 02:31	2°11'56"23	-0°10'32
				min. Earth dist.	2277 Nov 25 00:46	2°11'56"34	18.50220 AU
conjunction	2272 Apr 29 23:43	10°8'07"43	-0°25'35	direct	2278 Feb 07 16:34	0°11'57"00	
minimum elong	2272 Apr 29 23:43	10°8'07"43	0°25'35	evening set	2278 May 09 15:04	4°11'02"45	
max. Earth dist.	2272 Apr 30 11:01	10°8'09"20	20.82394 AU				
morning rise	2272 May 16 10:06	11°8'03"58		conjunction	2278 May 26 03:40	5°11'00"10	-0°08'00
retrograde	2272 Aug 19 05:20	14°8'13"38		minimum elong	2278 May 26 03:39	5°11'00"10	0°07'59
opposition	2272 Nov 04 06:26	12°8'13"19	-0°26'49	behind sun begin	2278 May 25 21:39	4°11'59"18	
min. Earth dist.	2272 Nov 03 20:33	12°8'14"20	18.79935 AU	behind sun end	2278 May 26 09:39	5°11'01"01	
direct	2273 Jan 17 23:20	10°8'15"43		max. Earth dist.	2278 May 26 04:25	5°11'00"16	20.46954 AU
evening set	2273 Apr 18 02:44	13°8'17"13		morning rise	2278 Jun 11 19:03	5°11'57"59	
				retrograde	2278 Sep 14 07:55	9°11'10"50	
conjunction	2273 May 04 10:32	14°8'13"12	-0°22'56	opposition	2278 Nov 29 12:32	7°11'09"17	-0°07'00
minimum elong	2273 May 04 10:32	14°8'13"12	0°22'56	min. Earth dist.	2278 Nov 29 11:58	7°11'09"20	18.43614 AU
max. Earth dist.	2273 May 04 20:28	14°8'14"37	20.77354 AU	direct	2279 Feb 12 02:58	5°11'09"30	
	2273 May 18 01:03	15°8'		evening set	2279 May 14 05:39	8°11'16"18	
morning rise	2273 May 20 21:43	15°8'09"42					
retrograde	2273 Aug 23 15:33	18°8'19"51		conjunction	2279 May 30 19:13	9°11'14"01	-0°04'47
opposition	2273 Nov 08 14:40	16°8'19"21	-0°23'49	minimum elong	2279 May 30 19:14	9°11'14"01	0°04'46
min. Earth dist.	2273 Nov 08 06:53	16°8'20"10	18.74667 AU	behind sun begin	2279 May 30 12:39	9°11'13"05	
	2273 Dec 13 17:47	15°8'		behind sun end	2279 May 31 01:49	9°11'14"58	
direct	2274 Jan 22 05:55	14°8'21"28		max. Earth dist.	2279 May 30 19:14	9°11'14"01	20.40292 AU
	2274 Mar 02 01:14	15°8'		morning rise	2279 Jun 16 11:08	10°11'12"07	
evening set	2274 Apr 22 13:16	17°8'23"41		retrograde	2279 Sep 18 21:49	13°11'25"33	
				opposition	2279 Dec 03 22:58	11°11'23"51	-0°03'23
conjunction	2274 May 08 22:03	18°8'19"56	-0°20'09	min. Earth dist.	2279 Dec 03 23:55	11°11'23"45	18.36917 AU
minimum elong	2274 May 08 22:03	18°8'19"56	0°20'09	direct	2280 Feb 16 13:19	9°11'23"42	
max. Earth dist.	2274 May 09 05:39	18°8'21"01	20.71894 AU	evening set	2280 May 17 21:16	12°11'31"36	
morning rise	2274 May 25 10:14	19°8'16"41					
retrograde	2274 Aug 28 04:39	22°8'27"20		conjunction	2280 Jun 03 11:33	13°11'29"38	-0°01'29
opposition	2274 Nov 12 23:05	20°8'26"38	-0°20'40	minimum elong	2280 Jun 03 11:33	13°11'29"38	0°01'29
min. Earth dist.	2274 Nov 12 16:28	20°8'27"19	18.69004 AU	behind sun begin	2280 Jun 03 04:48	13°11'28"40	
direct	2275 Jan 26 14:42	18°8'28"23		behind sun end	2280 Jun 03 18:18	13°11'30"36	
evening set	2275 Apr 27 00:31	21°8'31"24		max. Earth dist.	2280 Jun 03 08:57	13°11'29"19	20.33582 AU
				morning rise	2280 Jun 20 04:12	14°11'28"02	
conjunction	2275 May 13 10:23	22°8'27"56	-0°17'15	retrograde	2280 Sep 22 13:04	17°11'42"06	
minimum elong	2275 May 13 10:23	22°8'27"56	0°17'16	asc. node	2280 Nov 10 17:24	16°11'44"34	
max. Earth dist.	2275 May 13 16:47	22°8'28"51	20.66046 AU	opposition	2280 Dec 07 10:06	15°11'40"15	0°00'16
morning rise	2275 May 29 23:21	23°8'24"56		min. Earth dist.	2280 Dec 07 12:19	15°11'40"01	18.30200 AU
retrograde	2275 Sep 01 15:33	26°8'36"05		direct	2281 Feb 20 00:36	13°11'39"43	
opposition	2275 Nov 17 07:55	24°8'35"10	-0°17'24	evening set	2281 May 22 13:34	16°11'48"48	
min. Earth dist.	2275 Nov 17 03:17	24°8'35"39	18.62985 AU				
direct	2276 Jan 30 22:08	22°8'36"34		conjunction	2281 Jun 08 04:45	17°11'47"09	0°01'56
evening set	2276 Apr 30 12:39	25°8'40"26		minimum elong	2281 Jun 08 04:44	17°11'47"09	0°01'56
				behind sun begin	2281 Jun 07 21:58	17°11'46"11	
conjunction	2276 May 16 23:24	26°8'37"14	-0°14'15	behind sun end	2281 Jun 08 11:29	17°11'48"07	
minimum elong	2276 May 16 23:24	26°8'37"14	0°14'14	max. Earth dist.	2281 Jun 08 01:36	17°11'46"44	20.26854 AU
behind sun begin	2276 May 16 20:21	26°8'36"48		morning rise	2281 Jun 24 21:44	18°11'45"49	
behind sun end	2276 May 17 02:27	26°8'37"40		retrograde	2281 Sep 27 04:50	22°11'00"33	
max. Earth dist.	2276 May 17 03:26	26°8'37"48	20.59895 AU	opposition	2281 Dec 11 21:51	19°11'58"36	0°03'56
morning rise	2276 Jun 02 13:17	27°8'34"31		min. Earth dist.	2281 Dec 12 01:18	19°11'58"14	18.23474 AU
	2276 Jul 23 16:20	0°11'		direct	2282 Feb 24 12:38	17°11'57"44	
retrograde	2276 Sep 05 05:18	0°11'46"12		evening set	2282 May 27 07:08	21°11'08"01	
	2276 Oct 19 08:56	30°8'					
opposition	2276 Nov 20 16:56	28°8'45"03	-0°14'01	conjunction	2282 Jun 12 22:52	22°11'06"41	0°05'16
min. Earth dist.	2276 Nov 20 13:31	28°8'45"25	18.56706 AU	minimum elong	2282 Jun 12 22:52	22°11'06"41	0°05'15
direct	2277 Feb 03 07:52	26°8'46"03		behind sun begin	2282 Jun 12 16:20	22°11'05"45	
evening set	2277 May 05 01:28	29°8'50"50		behind sun end	2282 Jun 13 05:25	22°11'07"38	
	2277 May 07 17:50	0°11'		max. Earth dist.	2282 Jun 12 17:02	22°11'05"51	20.20149 AU
conjunction	2277 May 21 13:14	0°11'47"57	-0°11'09	morning rise	2282 Jun 29 16:31	23°11'05"38	
minimum elong	2277 May 21 13:14	0°11'47"57	0°11'10	retrograde	2282 Oct 01 21:29	26°11'21"03	
behind sun begin	2277 May 21 08:18	0°11'47"15		opposition	2282 Dec 16 10:10	24°11'19"01	0°07'37
behind sun end	2277 May 21 18:11	0°11'48"39		min. Earth dist.	2282 Dec 16 15:13	24°11'18"28	18.16783 AU
max. Earth dist.	2277 May 21 16:21	0°11'48"23	20.53501 AU	direct	2283 Mar 01 01:10	22°11'17"48	
				evening set	2283 Jun 01 01:40	25°11'29"21	

conjunction	2283 Jun 17 18:14	26° Π 28'21	0°08'33	evening set	2289 Jun 28 14:11	22° \mathfrak{D} 20'48	
minimum elong	2283 Jun 17 18:14	26° Π 28'21	0°08'34				
behind sun begin	2283 Jun 17 12:22	26° Π 27'30		conjunction	2289 Jul 15 09:00	23° \mathfrak{D} 21'31	0°27'11
behind sun end	2283 Jun 18 00:06	26° Π 29'12		minimum elong	2289 Jul 15 09:00	23° \mathfrak{D} 21'31	0°27'11
max. Earth dist.	2283 Jun 17 11:45	26° Π 27'24	20.13457 AU	max. Earth dist.	2289 Jul 14 15:28	23° \mathfrak{D} 18'52	19.73608 AU
morning rise	2283 Jul 04 12:06	27° Π 27'35		morning rise	2289 Aug 01 03:20	24° \mathfrak{D} 22'13	
	2283 Aug 26 05:15	0° \mathfrak{D}		retrograde	2289 Nov 02 15:33	27° \mathfrak{D} 41'55	
retrograde	2283 Oct 06 15:13	0° \mathfrak{D} 43'39		opposition	2290 Jan 15 21:12	25° \mathfrak{D} 39'11	0°31'46
	2283 Nov 17 16:32	30° \mathfrak{R} Π		min. Earth dist.	2290 Jan 16 12:09	25° \mathfrak{D} 37'34	17.70459 AU
opposition	2283 Dec 20 23:14	28° Π 41'34	0°11'17	direct	2290 Mar 31 19:04	23° \mathfrak{D} 35'15	
min. Earth dist.	2283 Dec 21 05:36	28° Π 40'53	18.10090 AU	evening set	2290 Jul 03 15:24	26° \mathfrak{D} 55'45	
direct	2284 Mar 04 14:45	26° Π 40'02					
evening set	2284 Jun 04 21:26	29° Π 52'53		conjunction	2290 Jul 20 10:10	27° \mathfrak{D} 56'42	0°29'53
	2284 Jun 06 22:19	0° \mathfrak{D}		minimum elong	2290 Jul 20 10:10	27° \mathfrak{D} 56'42	0°29'53
				max. Earth dist.	2290 Jul 19 14:28	27° \mathfrak{D} 53'42	19.67379 AU
conjunction	2284 Jun 21 14:22	0° \mathfrak{D} 52'11	0°11'50	morning rise	2290 Aug 06 04:21	28° \mathfrak{D} 57'36	
minimum elong	2284 Jun 21 14:22	0° \mathfrak{D} 52'10	0°11'50		2290 Aug 24 08:47	0° \mathfrak{Q}	
behind sun begin	2284 Jun 21 09:45	0° \mathfrak{D} 51'30		retrograde	2290 Nov 07 11:40	2° \mathfrak{Q} 17'47	
behind sun end	2284 Jun 21 19:00	0° \mathfrak{D} 52'51		opposition	2291 Jan 20 15:16	0° \mathfrak{Q} 14'56	0°34'40
max. Earth dist.	2284 Jun 21 04:52	0° \mathfrak{D} 50'46	20.06766 AU	min. Earth dist.	2291 Jan 21 08:15	0° \mathfrak{Q} 13'05	17.64386 AU
morning rise	2284 Jul 08 08:40	1° \mathfrak{D} 51'41			2291 Jan 26 08:30	30° \mathfrak{R} \mathfrak{D}	
retrograde	2284 Oct 10 09:38	5° \mathfrak{D} 08'26		direct	2291 Apr 05 13:46	28° \mathfrak{D} 10'34	
opposition	2284 Dec 24 13:03	3° \mathfrak{D} 06'17	0°14'56		2291 Jun 11 01:23	0° \mathfrak{Q}	
min. Earth dist.	2284 Dec 24 21:21	3° \mathfrak{D} 05'24	18.03404 AU	evening set	2291 Jul 08 17:13	1° \mathfrak{Q} 32'16	
direct	2285 Mar 09 04:55	1° \mathfrak{D} 04'23					
evening set	2285 Jun 09 18:04	4° \mathfrak{D} 18'33		conjunction	2291 Jul 25 12:04	2° \mathfrak{Q} 33'28	0°32'24
				minimum elong	2291 Jul 25 12:04	2° \mathfrak{Q} 33'27	0°32'24
conjunction	2285 Jun 26 11:41	5° \mathfrak{D} 18'09	0°15'05	max. Earth dist.	2291 Jul 24 15:52	2° \mathfrak{Q} 30'22	19.61464 AU
minimum elong	2285 Jun 26 11:41	5° \mathfrak{D} 18'09	0°15'05	morning rise	2291 Aug 11 05:53	3° \mathfrak{Q} 34'32	
behind sun begin	2285 Jun 26 09:39	5° \mathfrak{D} 17'51		retrograde	2291 Nov 12 10:24	6° \mathfrak{Q} 55'09	
behind sun end	2285 Jun 26 13:42	5° \mathfrak{D} 18'27		opposition	2292 Jan 25 10:01	4° \mathfrak{Q} 52'12	0°37'22
max. Earth dist.	2285 Jun 26 01:25	5° \mathfrak{D} 16'38	20.00065 AU	min. Earth dist.	2292 Jan 26 02:59	4° \mathfrak{Q} 50'21	17.58651 AU
morning rise	2285 Jul 13 06:01	6° \mathfrak{D} 17'55		direct	2292 Apr 09 12:10	2° \mathfrak{Q} 47'27	
retrograde	2285 Oct 15 05:07	9° \mathfrak{D} 35'19		evening set	2292 Jul 12 19:41	6° \mathfrak{Q} 10'19	
opposition	2285 Dec 29 03:38	7° \mathfrak{D} 33'06	0°18'31				
min. Earth dist.	2285 Dec 29 13:05	7° \mathfrak{D} 32'05	17.96698 AU	conjunction	2292 Jul 29 14:20	7° \mathfrak{Q} 11'42	0°34'42
direct	2286 Mar 13 20:14	5° \mathfrak{D} 30'49		minimum elong	2292 Jul 29 14:20	7° \mathfrak{Q} 11'42	0°34'42
evening set	2286 Jun 14 15:47	8° \mathfrak{D} 46'17		max. Earth dist.	2292 Jul 28 16:46	7° \mathfrak{Q} 08'24	19.55916 AU
				morning rise	2292 Aug 15 07:41	8° \mathfrak{Q} 12'55	
conjunction	2286 Jul 01 09:41	9° \mathfrak{D} 46'11	0°18'15	retrograde	2292 Nov 16 07:12	11° \mathfrak{Q} 33'59	
minimum elong	2286 Jul 01 09:41	9° \mathfrak{D} 46'11	0°18'16	opposition	2293 Jan 29 05:37	9° \mathfrak{Q} 30'57	0°39'51
max. Earth dist.	2286 Jun 30 20:16	9° \mathfrak{D} 44'10	19.93358 AU	min. Earth dist.	2293 Jan 30 00:14	9° \mathfrak{Q} 28'55	17.53335 AU
morning rise	2286 Jul 18 04:19	10° \mathfrak{D} 46'13		direct	2293 Apr 14 08:34	7° \mathfrak{Q} 25'51	
retrograde	2286 Oct 20 00:56	14° \mathfrak{D} 04'14		evening set	2293 Jul 17 22:44	10° \mathfrak{Q} 49'51	
opposition	2287 Jan 02 19:02	12° \mathfrak{D} 01'54	0°22'01				
min. Earth dist.	2287 Jan 03 06:36	12° \mathfrak{D} 00'39	17.90002 AU	conjunction	2293 Aug 03 17:11	11° \mathfrak{Q} 51'24	0°36'48
direct	2287 Mar 18 12:02	9° \mathfrak{D} 59'13		minimum elong	2293 Aug 03 17:11	11° \mathfrak{Q} 51'24	0°36'48
evening set	2287 Jun 19 14:26	13° \mathfrak{D} 15'58		max. Earth dist.	2293 Aug 02 19:09	11° \mathfrak{Q} 48'00	19.50833 AU
				morning rise	2293 Aug 20 10:04	12° \mathfrak{Q} 52'45	
conjunction	2287 Jul 06 08:50	14° \mathfrak{D} 16'10	0°21'21		2293 Sep 29 02:42	15° \mathfrak{Q}	
minimum elong	2287 Jul 06 08:50	14° \mathfrak{D} 16'10	0°21'21	retrograde	2293 Nov 21 07:03	16° \mathfrak{Q} 14'13	
max. Earth dist.	2287 Jul 05 18:37	14° \mathfrak{D} 14'02	19.86671 AU		2294 Jan 14 23:05	15° \mathfrak{R} \mathfrak{Q}	
morning rise	2287 Jul 23 03:22	15° \mathfrak{D} 16'26		opposition	2294 Feb 03 01:40	14° \mathfrak{Q} 11'08	0°42'04
retrograde	2287 Oct 24 21:39	18° \mathfrak{D} 35'02		min. Earth dist.	2294 Feb 03 19:52	14° \mathfrak{Q} 09'09	17.48502 AU
opposition	2288 Jan 07 10:59	16° \mathfrak{D} 32'35	0°25'24	direct	2294 Apr 19 08:38	12° \mathfrak{Q} 05'45	
min. Earth dist.	2288 Jan 07 23:26	16° \mathfrak{D} 31'14	17.83342 AU		2294 Jul 14 10:36	15° \mathfrak{Q}	
direct	2288 Mar 22 05:46	14° \mathfrak{D} 29'29		evening set	2294 Jul 23 02:24	15° \mathfrak{Q} 30'49	
evening set	2288 Jun 23 14:05	17° \mathfrak{D} 47'31					
				conjunction	2294 Aug 08 20:35	16° \mathfrak{Q} 32'32	0°38'40
conjunction	2288 Jul 10 08:35	18° \mathfrak{D} 47'58	0°24'20	minimum elong	2294 Aug 08 20:35	16° \mathfrak{Q} 32'32	0°38'40
minimum elong	2288 Jul 10 08:35	18° \mathfrak{D} 47'58	0°24'21	max. Earth dist.	2294 Aug 07 21:58	16° \mathfrak{Q} 29'02	19.46248 AU
max. Earth dist.	2288 Jul 09 15:34	18° \mathfrak{D} 45'24	19.80059 AU	morning rise	2294 Aug 25 12:49	17° \mathfrak{Q} 34'00	
morning rise	2288 Jul 27 03:10	19° \mathfrak{D} 48'29		retrograde	2294 Nov 26 04:58	20° \mathfrak{Q} 55'50	
retrograde	2288 Oct 28 17:42	23° \mathfrak{D} 07'38		opposition	2295 Feb 07 22:41	18° \mathfrak{Q} 52'46	0°44'01
opposition	2289 Jan 11 03:49	21° \mathfrak{D} 05'03	0°28'40	min. Earth dist.	2295 Feb 08 18:18	18° \mathfrak{Q} 50'37	17.44190 AU
min. Earth dist.	2289 Jan 11 18:22	21° \mathfrak{D} 03'28	17.76808 AU	direct	2295 Apr 24 06:24	16° \mathfrak{Q} 47'08	
direct	2289 Mar 26 22:48	19° \mathfrak{D} 01'31		evening set	2295 Jul 28 06:40	20° \mathfrak{Q} 13'15	

max. Earth dist.	2295 Aug 13 01:03	21° Ω 11'28	19.42210 AU	morning rise	2301 Sep 29 14:32	20° \mathbb{N} 55'49	
				retrograde	2301 Dec 30 10:55	24° \mathbb{N} 18'56	
conjunction	2295 Aug 14 00:23	21° Ω 15'05	0°40'17	opposition	2302 Mar 13 18:29	22° \mathbb{N} 16'25	0°48'58
minimum elong	2295 Aug 14 00:23	21° Ω 15'05	0°40'17	min. Earth dist.	2302 Mar 14 15:06	22° \mathbb{N} 14'10	17.28250 AU
morning rise	2295 Aug 30 16:01	22° Ω 16'38		direct	2302 May 28 19:11	20° \mathbb{N} 10'02	
retrograde	2295 Dec 01 05:53	25° Ω 38'50		evening set	2302 Sep 01 20:18	23° \mathbb{N} 40'45	
opposition	2296 Feb 12 20:10	23° Ω 35'48	0°45'41	max. Earth dist.	2302 Sep 17 09:41	24° \mathbb{N} 39'04	19.27959 AU
min. Earth dist.	2296 Feb 13 15:13	23° Ω 33'43	17.40423 AU				
direct	2296 Apr 28 07:52	21° Ω 30'00		conjunction	2302 Sep 18 09:02	24° \mathbb{N} 42'45	0°43'39
evening set	2296 Aug 01 11:21	24° Ω 57'04		minimum elong	2302 Sep 18 09:02	24° \mathbb{N} 42'45	0°43'38
max. Earth dist.	2296 Aug 17 05:31	25° Ω 55'26	19.38706 AU	morning rise	2302 Oct 04 18:02	25° \mathbb{N} 44'15	
				retrograde	2303 Jan 04 12:04	29° \mathbb{N} 07'16	
conjunction	2296 Aug 18 04:39	25° Ω 59'02	0°41'38	opposition	2303 Mar 18 19:45	27° \mathbb{N} 04'49	0°48'19
minimum elong	2296 Aug 18 04:39	25° Ω 59'01	0°41'39	min. Earth dist.	2303 Mar 19 16:08	27° \mathbb{N} 02'35	17.27879 AU
morning rise	2296 Sep 03 19:24	27° Ω 00'39		direct	2303 Jun 02 23:02	24° \mathbb{N} 58'24	
	2296 Nov 06 09:00	0° \mathbb{N}		evening set	2303 Sep 07 01:32	28° \mathbb{N} 29'16	
retrograde	2296 Dec 05 05:10	0° \mathbb{N} 23'08					
	2297 Jan 03 11:30	30° \mathbb{R} Ω		conjunction	2303 Sep 23 13:06	29° \mathbb{N} 31'10	0°42'54
opposition	2297 Feb 16 18:32	28° Ω 20'13	0°47'03	minimum elong	2303 Sep 23 13:06	29° \mathbb{N} 31'10	0°42'55
min. Earth dist.	2297 Feb 17 14:50	28° Ω 17'59	17.37192 AU	max. Earth dist.	2303 Sep 22 13:18	29° \mathbb{N} 27'25	19.27848 AU
direct	2297 May 03 07:13	26° Ω 14'16			2303 Oct 01 04:07	0° Ω	
evening set	2297 Aug 06 16:22	29° Ω 42'13		morning rise	2303 Oct 09 21:07	0° Ω 32'33	
	2297 Aug 11 12:29	0° \mathbb{N}		retrograde	2304 Jan 09 11:27	3° Ω 55'26	
max. Earth dist.	2297 Aug 22 08:52	0° \mathbb{N} 40'29	19.35737 AU	opposition	2304 Mar 22 21:12	1° Ω 53'01	0°47'20
				min. Earth dist.	2304 Mar 23 17:16	1° Ω 50'49	17.28038 AU
conjunction	2297 Aug 23 08:59	0° \mathbb{N} 44'15	0°42'43		2304 May 15 12:09	30° \mathbb{R} \mathbb{N}	
minimum elong	2297 Aug 23 08:59	0° \mathbb{N} 44'15	0°42'43	direct	2304 Jun 07 03:25	29° \mathbb{N} 46'34	
morning rise	2297 Sep 08 23:05	1° \mathbb{N} 45'56			2304 Jun 29 15:43	0° Ω	
retrograde	2297 Dec 10 06:40	5° \mathbb{N} 08'41		evening set	2304 Sep 11 06:12	3° Ω 17'28	
opposition	2298 Feb 21 17:24	3° \mathbb{N} 05'51	0°48'06				
min. Earth dist.	2298 Feb 22 13:15	3° \mathbb{N} 03'40	17.34471 AU	conjunction	2304 Sep 27 16:52	4° Ω 19'15	0°41'52
direct	2298 May 08 09:38	0° \mathbb{N} 59'47		minimum elong	2304 Sep 27 16:52	4° Ω 19'15	0°41'52
evening set	2298 Aug 11 21:49	4° \mathbb{N} 28'32		max. Earth dist.	2304 Sep 26 18:47	4° Ω 15'46	19.28284 AU
				morning rise	2304 Oct 13 23:42	5° Ω 20'30	
conjunction	2298 Aug 28 13:54	5° \mathbb{N} 30'38	0°43'31	retrograde	2305 Jan 13 11:45	8° Ω 43'09	
minimum elong	2298 Aug 28 13:54	5° \mathbb{N} 30'38	0°43'31	opposition	2305 Mar 27 22:46	6° Ω 40'47	0°46'00
max. Earth dist.	2298 Aug 27 14:23	5° \mathbb{N} 26'57	19.33245 AU	min. Earth dist.	2305 Mar 28 17:45	6° Ω 38'43	17.28746 AU
morning rise	2298 Sep 14 02:56	6° \mathbb{N} 32'19		direct	2305 Jun 12 08:46	4° Ω 34'22	
retrograde	2298 Dec 15 07:14	9° \mathbb{N} 55'16		evening set	2305 Sep 16 10:25	8° Ω 05'09	
opposition	2299 Feb 26 16:57	7° \mathbb{N} 52'32	0°48'50				
min. Earth dist.	2299 Feb 27 13:50	7° \mathbb{N} 50'14	17.32218 AU	conjunction	2305 Oct 02 19:57	9° Ω 06'47	0°40'32
direct	2299 May 13 10:34	5° \mathbb{N} 46'23		minimum elong	2305 Oct 02 19:57	9° Ω 06'47	0°40'32
evening set	2299 Aug 17 03:36	9° \mathbb{N} 15'49		max. Earth dist.	2305 Oct 01 22:14	9° Ω 03'22	19.29285 AU
				morning rise	2305 Oct 19 01:46	10° Ω 07'53	
conjunction	2299 Sep 02 18:46	10° \mathbb{N} 17'55	0°44'00	retrograde	2306 Jan 18 10:17	13° Ω 30'16	
minimum elong	2299 Sep 02 18:46	10° \mathbb{N} 17'55	0°44'00	opposition	2306 Apr 02 00:29	11° Ω 27'57	0°44'22
max. Earth dist.	2299 Sep 01 17:58	10° \mathbb{N} 14'02	19.31227 AU	min. Earth dist.	2306 Apr 02 19:04	11° Ω 25'56	17.30051 AU
morning rise	2299 Sep 19 07:01	11° \mathbb{N} 19'37		direct	2306 Jun 17 12:54	9° Ω 21'34	
retrograde	2299 Dec 20 08:54	14° \mathbb{N} 42'41		evening set	2306 Sep 21 14:05	12° Ω 52'09	
opposition	2300 Mar 03 17:03	12° \mathbb{N} 40'02	0°49'14				
min. Earth dist.	2300 Mar 04 13:33	12° \mathbb{N} 37'47	17.30434 AU	conjunction	2306 Oct 07 22:34	13° Ω 53'36	0°38'55
direct	2300 May 18 13:33	10° \mathbb{N} 33'47		minimum elong	2306 Oct 07 22:34	13° Ω 53'37	0°38'55
evening set	2300 Aug 22 09:08	14° \mathbb{N} 03'46		max. Earth dist.	2306 Oct 07 02:37	13° Ω 50'28	19.30898 AU
				morning rise	2306 Oct 24 03:14	14° Ω 54'31	
conjunction	2300 Sep 07 23:38	15° \mathbb{N} 05'52	0°44'12	retrograde	2307 Jan 23 10:25	18° Ω 16'35	
minimum elong	2300 Sep 07 23:38	15° \mathbb{N} 05'52	0°44'11	opposition	2307 Apr 07 02:08	16° Ω 14'22	0°42'25
max. Earth dist.	2300 Sep 06 23:58	15° \mathbb{N} 02'09	19.29664 AU	min. Earth dist.	2307 Apr 07 18:51	16° Ω 12'33	17.31965 AU
morning rise	2300 Sep 24 10:42	16° \mathbb{N} 07'31		direct	2307 Jun 22 18:28	14° Ω 08'05	
retrograde	2300 Dec 25 10:15	19° \mathbb{N} 30'38		evening set	2307 Sep 26 17:12	17° Ω 38'21	
opposition	2301 Mar 08 17:42	17° \mathbb{N} 28'04	0°49'16	max. Earth dist.	2307 Oct 12 05:52	18° Ω 36'40	19.33137 AU
min. Earth dist.	2301 Mar 09 14:36	17° \mathbb{N} 25'47	17.29100 AU				
direct	2301 May 23 15:47	15° \mathbb{N} 21'46		conjunction	2307 Oct 13 00:33	18° Ω 39'36	0°37'03
evening set	2301 Aug 27 14:52	18° \mathbb{N} 52'10		minimum elong	2307 Oct 13 00:33	18° Ω 39'36	0°37'02
max. Earth dist.	2301 Sep 12 03:36	19° \mathbb{N} 50'20	19.28569 AU	morning rise	2307 Oct 29 04:04	19° Ω 40'20	
				retrograde	2308 Jan 28 08:41	23° Ω 02'02	
conjunction	2301 Sep 13 04:20	19° \mathbb{N} 54'14	0°44'05	opposition	2308 Apr 11 04:00	20° Ω 59'56	0°40'11
minimum elong	2301 Sep 13 04:20	19° \mathbb{N} 54'14	0°44'05	min. Earth dist.	2308 Apr 11 20:07	20° Ω 58'12	17.34530 AU

direct	2308 Jun 26 21:18	18° $\underline{\text{D}}$ 53'49		evening set	2314 Oct 29 18:08	20° M 32'02	
evening set	2308 Sep 30 19:28	22° $\underline{\text{D}}$ 23'39					
max. Earth dist.	2308 Oct 16 08:40	23° $\underline{\text{D}}$ 22'01	19.36027 AU	conjunction	2314 Nov 14 17:44	21° M 31'27	0°18'06
				minimum elong	2314 Nov 14 17:44	21° M 31'27	0°18'06
conjunction	2308 Oct 17 01:41	23° $\underline{\text{D}}$ 24'42	0°34'56	max. Earth dist.	2314 Nov 14 09:58	21° M 30'15	19.63658 AU
minimum elong	2308 Oct 17 01:41	23° $\underline{\text{D}}$ 24'42	0°34'56	morning rise	2314 Nov 30 14:24	22° M 30'27	
morning rise	2308 Nov 02 04:12	24° $\underline{\text{D}}$ 25'13		retrograde	2315 Mar 01 19:56	25° M 48'42	
retrograde	2309 Feb 01 09:03	27° $\underline{\text{D}}$ 46'32		opposition	2315 May 15 11:38	23° M 47'55	0°18'20
opposition	2309 Apr 16 05:36	25° $\underline{\text{D}}$ 44'37	0°37'41	min. Earth dist.	2315 May 15 16:57	23° M 47'22	17.66488 AU
min. Earth dist.	2309 Apr 16 19:22	25° $\underline{\text{D}}$ 43'08	17.37712 AU	direct	2315 Jul 31 15:41	21° M 43'57	
direct	2309 Jul 02 02:01	23° $\underline{\text{D}}$ 38'43		evening set	2315 Nov 03 14:45	25° M 08'15	
evening set	2309 Oct 05 21:11	27° $\underline{\text{D}}$ 08'02					
max. Earth dist.	2309 Oct 21 11:12	28° $\underline{\text{D}}$ 06'29	19.39508 AU	conjunction	2315 Nov 19 13:32	26° M 07'22	0°14'48
				minimum elong	2315 Nov 19 13:32	26° M 07'22	0°14'49
conjunction	2309 Oct 22 02:21	28° $\underline{\text{D}}$ 08'52	0°32'35	behind sun begin	2315 Nov 19 10:48	26° M 06'57	
minimum elong	2309 Oct 22 02:21	28° $\underline{\text{D}}$ 08'52	0°32'35	behind sun end	2315 Nov 19 16:16	26° M 07'47	
morning rise	2309 Nov 07 03:43	29° $\underline{\text{D}}$ 09'09		max. Earth dist.	2315 Nov 19 08:27	26° M 06'35	19.69387 AU
	2309 Nov 21 08:35	0° M		morning rise	2315 Dec 05 09:13	27° M 06'04	
retrograde	2310 Feb 06 06:43	2° M 30'02			2316 Feb 05 01:56	0° X	
opposition	2310 Apr 21 07:07	0° M 28'19	0°34'57	retrograde	2316 Mar 05 14:13	0° X 23'41	
min. Earth dist.	2310 Apr 21 20:31	0° M 26'52	17.41470 AU		2316 Apr 04 19:48	30° R M	
	2310 May 02 09:04	30° R $\underline{\text{D}}$		opposition	2316 May 19 11:27	28° M 23'04	0°14'36
direct	2310 Jul 07 03:29	28° $\underline{\text{D}}$ 22'41		min. Earth dist.	2316 May 19 15:58	28° M 22'36	17.72313 AU
	2310 Sep 07 17:03	0° M		direct	2316 Aug 04 15:50	26° M 19'25	
evening set	2310 Oct 10 22:16	1° M 51'25		evening set	2316 Nov 07 10:23	29° M 42'36	
					2316 Nov 12 04:34	0° X	
conjunction	2310 Oct 27 02:14	2° M 51'59	0°30'02	conjunction	2316 Nov 23 08:05	0° X 41'24	0°11'27
minimum elong	2310 Oct 27 02:14	2° M 51'59	0°30'02	minimum elong	2316 Nov 23 08:05	0° X 41'24	0°11'27
max. Earth dist.	2310 Oct 26 12:17	2° M 49'47	19.43539 AU	behind sun begin	2316 Nov 23 03:16	0° X 40'40	
morning rise	2310 Nov 12 02:40	3° M 52'02		behind sun end	2316 Nov 23 12:54	0° X 42'08	
retrograde	2311 Feb 11 06:59	7° M 12'28		max. Earth dist.	2316 Nov 23 03:34	0° X 40'43	19.75315 AU
opposition	2311 Apr 26 08:31	5° M 10'56	0°31'59	morning rise	2316 Dec 09 03:14	1° X 39'49	
min. Earth dist.	2311 Apr 26 19:28	5° M 09'46	17.45733 AU	retrograde	2317 Mar 10 09:55	4° X 56'48	
direct	2311 Jul 12 07:42	3° M 05'38		opposition	2317 May 24 10:32	2° X 56'18	0°10'49
evening set	2311 Oct 15 22:24	6° M 33'38		min. Earth dist.	2317 May 24 12:54	2° X 56'03	17.78329 AU
				direct	2317 Aug 09 16:55	0° X 52'58	
conjunction	2311 Nov 01 01:20	7° M 33'56	0°27'17	evening set	2317 Nov 12 04:55	4° X 14'59	
minimum elong	2311 Nov 01 01:20	7° M 33'56	0°27'17				
max. Earth dist.	2311 Oct 31 13:43	7° M 32'07	19.48028 AU	conjunction	2317 Nov 28 01:54	5° X 13'28	0°08'02
morning rise	2311 Nov 17 00:37	8° M 33'44		minimum elong	2317 Nov 28 01:53	5° X 13'28	0°08'01
retrograde	2312 Feb 16 03:41	11° M 53'41		behind sun begin	2317 Nov 27 20:00	5° X 12'35	
opposition	2312 Apr 30 09:55	9° M 52'22	0°28'48	behind sun end	2317 Nov 28 07:47	5° X 14'21	
min. Earth dist.	2312 Apr 30 20:26	9° M 51'15	17.50431 AU	max. Earth dist.	2317 Nov 28 00:11	5° X 13'13	19.81416 AU
direct	2312 Jul 16 08:47	7° M 47'23		morning rise	2317 Dec 13 20:11	6° X 11'35	
evening set	2312 Oct 19 21:53	11° M 14'35		retrograde	2318 Mar 15 02:42	9° X 27'54	
				opposition	2318 May 29 08:59	7° X 27'30	0°06'59
conjunction	2312 Nov 04 23:37	12° M 14'36	0°24'22	min. Earth dist.	2318 May 29 10:12	7° X 27'23	17.84508 AU
minimum elong	2312 Nov 04 23:37	12° M 14'36	0°24'21	direct	2318 Aug 14 16:23	5° X 24'29	
max. Earth dist.	2312 Nov 04 12:48	12° M 12'55	19.52928 AU	evening set	2318 Nov 16 22:31	8° X 45'17	
morning rise	2312 Nov 20 22:05	13° M 14'08					
	2312 Dec 22 10:09	15° M		conjunction	2318 Dec 02 18:27	9° X 43'27	0°04'36
retrograde	2313 Feb 20 02:45	16° M 33'33		minimum elong	2318 Dec 02 18:27	9° X 43'27	0°04'37
	2313 Apr 24 12:39	15° R M		behind sun begin	2318 Dec 02 12:01	9° X 42'29	
opposition	2313 May 05 10:43	14° M 32'26	0°25'27	behind sun end	2318 Dec 03 00:54	9° X 44'25	
min. Earth dist.	2313 May 05 18:51	14° M 31'34	17.55502 AU	max. Earth dist.	2318 Dec 02 17:34	9° X 43'20	19.87694 AU
direct	2313 Jul 21 12:16	12° M 27'47		morning rise	2318 Dec 18 12:17	10° X 41'18	
	2313 Oct 09 13:45	15° M		retrograde	2319 Mar 19 20:09	13° X 56'55	
evening set	2313 Oct 24 20:24	15° M 54'06		opposition	2319 Jun 03 06:53	11° X 56'37	0°03'09
				min. Earth dist.	2319 Jun 03 05:57	11° X 56'43	17.90886 AU
conjunction	2313 Nov 09 21:13	16° M 53'50	0°21'17	direct	2319 Aug 19 14:51	9° X 53'55	
minimum elong	2313 Nov 09 21:13	16° M 53'50	0°21'18	evening set	2319 Nov 21 14:44	13° X 13'28	
max. Earth dist.	2313 Nov 09 12:53	16° M 52'32	19.58155 AU				
morning rise	2313 Nov 25 18:37	17° M 53'06		conjunction	2319 Dec 07 10:03	14° X 11'19	0°01'08
retrograde	2314 Feb 24 22:24	21° M 11'56		minimum elong	2319 Dec 07 10:03	14° X 11'19	0°01'07
opposition	2314 May 10 11:27	19° M 11'00	0°21'57	behind sun begin	2319 Dec 07 03:29	14° X 10'20	
min. Earth dist.	2314 May 10 19:06	19° M 10'12	17.60868 AU	behind sun end	2319 Dec 07 16:37	14° X 12'18	
direct	2314 Jul 26 12:54	17° M 06'41					

max. Earth dist.	2319 Dec 07 12:15	14°♂11'35	19.94168 AU	opposition	2325 Jun 30 03:29	8°♂09'53	-0°18'50
morning rise	2319 Dec 23 03:10	15°♂08'52		min. Earth dist.	2325 Jun 29 16:10	8°♂11'02	18.32369 AU
retrograde	2320 Mar 23 12:09	18°♂23'50		direct	2325 Sep 15 06:48	6°♂09'33	
desc. node	2320 Apr 02 23:01	18°♂20'58		evening set	2325 Dec 16 21:22	9°♂21'43	
opposition	2320 Jun 07 04:07	16°♂23'38	-0°00'40				
min. Earth dist.	2320 Jun 07 01:24	16°♂23'55	17.97454 AU	conjunction	2326 Jan 01 13:10	10°♂17'47	-0°18'31
direct	2320 Aug 23 12:43	14°♂21'16		minimum elong	2326 Jan 01 13:10	10°♂17'47	0°18'31
evening set	2320 Nov 25 06:15	17°♂39'34		max. Earth dist.	2326 Jan 02 01:58	10°♂19'42	20.35875 AU
				morning rise	2326 Jan 17 04:21	11°♂13'47	
conjunction	2320 Dec 11 00:40	18°♂37'06	-0°02'24	retrograde	2326 Apr 19 04:30	14°♂25'03	
minimum elong	2320 Dec 11 00:39	18°♂37'06	0°02'23	opposition	2326 Jul 04 20:30	12°♂25'51	-0°22'09
behind sun begin	2320 Dec 10 18:06	18°♂36'07		min. Earth dist.	2326 Jul 04 07:11	12°♂27'12	18.39314 AU
behind sun end	2320 Dec 11 07:13	18°♂38'04		direct	2326 Sep 19 23:20	10°♂25'56	
max. Earth dist.	2320 Dec 11 03:52	18°♂37'32	20.00838 AU	evening set	2326 Dec 21 07:43	13°♂36'56	
morning rise	2320 Dec 26 17:25	19°♂34'23					
retrograde	2321 Mar 28 03:51	22°♂48'40		conjunction	2327 Jan 05 23:02	14°♂32'44	-0°21'27
opposition	2321 Jun 12 00:25	20°♂48'37	-0°04'27	minimum elong	2327 Jan 05 23:02	14°♂32'44	0°21'28
min. Earth dist.	2321 Jun 11 19:48	20°♂49'05	18.04231 AU	max. Earth dist.	2327 Jan 06 12:34	14°♂34'45	20.42737 AU
direct	2321 Aug 28 08:02	18°♂46'36		morning rise	2327 Jan 21 14:13	15°♂28'30	
evening set	2321 Nov 29 20:37	22°♂03'40		retrograde	2327 Apr 23 17:22	18°♂39'14	
				opposition	2327 Jul 09 13:04	16°♂40'09	-0°25'19
conjunction	2321 Dec 15 14:30	23°♂00'53	-0°05'47	min. Earth dist.	2327 Jul 08 23:12	16°♂41'33	18.46094 AU
minimum elong	2321 Dec 15 14:30	23°♂00'53	0°05'46	direct	2327 Sep 24 13:48	14°♂40'38	
behind sun begin	2321 Dec 15 08:13	22°♂59'57		evening set	2327 Dec 25 17:08	17°♂50'27	
behind sun end	2321 Dec 15 20:48	23°♂01'49					
max. Earth dist.	2321 Dec 15 20:36	23°♂01'48	20.07700 AU	conjunction	2328 Jan 10 08:18	18°♂46'00	-0°24'15
morning rise	2321 Dec 31 06:42	23°♂57'54		minimum elong	2328 Jan 10 08:17	18°♂46'00	0°24'15
retrograde	2322 Apr 01 19:08	27°♂11'32		max. Earth dist.	2328 Jan 10 23:32	18°♂48'17	20.49397 AU
opposition	2322 Jun 16 20:12	25°♂11'38	-0°08'11	morning rise	2328 Jan 25 23:22	19°♂41'34	
min. Earth dist.	2322 Jun 16 13:31	25°♂12'19	18.11160 AU	retrograde	2328 Apr 27 06:24	22°♂51'45	
direct	2322 Sep 02 03:51	23°♂10'02		opposition	2328 Jul 13 04:47	20°♂52'48	-0°28'21
evening set	2322 Dec 04 10:07	26°♂25'51		min. Earth dist.	2328 Jul 12 13:04	20°♂54'23	18.52617 AU
				direct	2328 Sep 28 05:09	18°♂53'38	
conjunction	2322 Dec 20 03:15	27°♂22'47	-0°09'05	evening set	2328 Dec 29 02:07	22°♂02'19	
minimum elong	2322 Dec 20 03:14	27°♂22'47	0°09'05				
behind sun begin	2322 Dec 19 21:37	27°♂21'57		conjunction	2329 Jan 13 16:57	22°♂57'38	-0°26'54
behind sun end	2322 Dec 20 08:51	27°♂23'36		minimum elong	2329 Jan 13 16:57	22°♂57'38	0°26'54
max. Earth dist.	2322 Dec 20 10:24	27°♂23'51	20.14695 AU	max. Earth dist.	2329 Jan 14 08:41	22°♂59'58	20.55765 AU
morning rise	2323 Jan 04 19:11	28°♂19'31		morning rise	2329 Jan 29 08:09	23°♂53'00	
	2323 Feb 04 14:48	0°♂		retrograde	2329 May 01 17:12	27°♂02'40	
retrograde	2323 Apr 06 10:04	1°♂32'33		opposition	2329 Jul 17 19:47	25°♂03'47	-0°31'12
	2323 Jun 10 11:35	30°♂♂		min. Earth dist.	2329 Jul 17 04:02	25°♂05'22	18.58841 AU
opposition	2323 Jun 21 15:22	29°♂32'49	-0°11'50	direct	2329 Oct 02 18:15	23°♂04'56	
min. Earth dist.	2323 Jun 21 07:07	29°♂33'40	18.18214 AU	evening set	2330 Jan 02 10:17	26°♂12'31	
direct	2323 Sep 06 21:12	27°♂31'38					
	2323 Nov 25 12:31	0°♂		conjunction	2330 Jan 18 01:06	27°♂07'37	-0°29'24
evening set	2323 Dec 08 22:39	0°♂46'14		minimum elong	2330 Jan 18 01:05	27°♂07'37	0°29'24
				max. Earth dist.	2330 Jan 18 18:08	27°♂10'08	20.61822 AU
conjunction	2323 Dec 24 15:22	1°♂42'51	-0°12'19	morning rise	2330 Feb 02 16:20	28°♂02'47	
minimum elong	2323 Dec 24 15:22	1°♂42'51	0°12'18		2330 Mar 12 19:40	0°♂	
behind sun begin	2323 Dec 24 10:56	1°♂42'12		retrograde	2330 May 06 05:30	1°♂11'57	
behind sun end	2323 Dec 24 19:47	1°♂43'30			2330 Jul 02 10:20	30°♂♂	
max. Earth dist.	2323 Dec 25 01:08	1°♂44'19	20.21779 AU	opposition	2330 Jul 22 10:08	29°♂13'07	-0°33'52
morning rise	2324 Jan 09 06:55	2°♂39'20		min. Earth dist.	2330 Jul 21 16:35	29°♂14'53	18.64723 AU
retrograde	2324 Apr 10 00:40	5°♂51'45		direct	2330 Oct 07 08:12	27°♂14'32	
opposition	2324 Jun 25 09:42	3°♂52'13	-0°15'23		2330 Dec 31 13:44	0°♂	
min. Earth dist.	2324 Jun 24 23:23	3°♂53'16	18.25304 AU	evening set	2331 Jan 06 17:44	0°♂21'03	
direct	2324 Sep 10 14:56	1°♂51'28					
evening set	2324 Dec 12 10:26	5°♂04'50		conjunction	2331 Jan 22 08:23	1°♂15'56	-0°31'44
				minimum elong	2331 Jan 22 08:22	1°♂15'56	0°31'43
conjunction	2324 Dec 28 02:34	6°♂01'10	-0°15'28	max. Earth dist.	2331 Jan 23 02:03	1°♂18'32	20.67530 AU
minimum elong	2324 Dec 28 02:34	6°♂01'10	0°15'29	morning rise	2331 Feb 06 23:53	2°♂10'56	
behind sun begin	2324 Dec 28 00:29	6°♂00'52		retrograde	2331 May 10 14:36	5°♂19'37	
behind sun end	2324 Dec 28 04:38	6°♂01'29		opposition	2331 Jul 26 23:55	3°♂20'48	-0°36'20
max. Earth dist.	2324 Dec 28 13:15	6°♂02'46	20.28861 AU	min. Earth dist.	2331 Jul 26 06:26	3°♂22'33	18.70277 AU
morning rise	2325 Jan 12 18:02	6°♂57'25		direct	2331 Oct 11 19:33	1°♂22'28	
retrograde	2325 Apr 14 14:49	10°♂09'15		evening set	2332 Jan 11 00:30	4°♂27'55	

conjunction	2332 Jan 26 15:15	5°22'37" -0°33'53"	morning rise	2338 Mar 06 17:31	0°30'07"
minimum elong	2332 Jan 26 15:15	5°22'37" 0°33'53"	retrograde	2338 Jun 08 05:51	3°36'36"
max. Earth dist.	2332 Jan 27 10:13	5°25'24" 20.72925 AU	min. Earth dist.	2338 Aug 24 05:45	1°40'19" 19.01090 AU
morning rise	2332 Feb 11 06:57	6°17'27"	opposition	2338 Aug 25 05:14	1°37'58" -0°47'36"
retrograde	2332 May 14 01:46	9°25'40"		2338 Oct 12 17:57	30°R
opposition	2332 Jul 30 12:38	7°26'51" -0°38'36"	direct	2338 Nov 09 11:55	29°41'18"
min. Earth dist.	2332 Jul 29 17:21	7°28'47" 18.75519 AU		2338 Dec 06 13:19	0°
direct	2332 Oct 15 08:01	5°28'45"	evening set	2339 Feb 07 11:04	2°41'20"
evening set	2333 Jan 14 06:45	8°33'14"			
conjunction	2333 Jan 29 21:29	9°27'45" -0°35'50"	conjunction	2339 Feb 23 03:33	3°35'12" -0°43'26"
minimum elong	2333 Jan 29 21:29	9°27'45" 0°35'50"	minimum elong	2339 Feb 23 03:33	3°35'12" 0°43'26"
max. Earth dist.	2333 Jan 30 17:08	9°30'37" 20.78013 AU	max. Earth dist.	2339 Feb 24 03:27	3°38'38" 21.02632 AU
morning rise	2333 Feb 14 13:33	10°22'26"	morning rise	2339 Mar 10 22:39	4°29'25"
retrograde	2333 May 18 09:51	13°30'15"	retrograde	2339 Jun 12 13:19	7°35'47"
min. Earth dist.	2333 Aug 03 05:44	11°33'20" 18.80483 AU	opposition	2339 Aug 29 14:31	5°37'11" -0°48'19"
opposition	2333 Aug 04 00:55	11°31'25" -0°40'39"	min. Earth dist.	2339 Aug 28 15:58	5°39'26" 19.04147 AU
direct	2333 Oct 19 17:10	9°33'33"	direct	2339 Nov 13 17:29	3°40'44"
evening set	2334 Jan 18 12:17	12°37'06"	evening set	2340 Feb 11 15:06	6°40'16"
conjunction	2334 Feb 03 03:12	13°31'27" -0°37'36"	conjunction	2340 Feb 27 08:10	7°34'05" -0°43'59"
minimum elong	2334 Feb 03 03:12	13°31'27" 0°37'37"	minimum elong	2340 Feb 27 08:10	7°34'05" 0°43'58"
max. Earth dist.	2334 Feb 04 00:07	13°34'31" 20.82843 AU	max. Earth dist.	2340 Feb 28 08:15	7°37'33" 21.05465 AU
morning rise	2334 Feb 18 19:33	14°26'01"	morning rise	2340 Mar 14 03:54	8°28'17"
	2334 Feb 28 23:12	15°	retrograde	2340 Jun 15 21:57	11°34'33"
retrograde	2334 May 22 19:56	17°33'28"	opposition	2340 Sep 01 23:03	9°35'59" -0°48'48"
opposition	2334 Aug 08 12:25	15°34'39" -0°42'29"	min. Earth dist.	2340 Aug 31 23:38	9°38'19" 19.06735 AU
min. Earth dist.	2334 Aug 07 15:16	15°36'46" 18.85183 AU	direct	2340 Nov 17 00:41	7°39'42"
	2334 Aug 23 04:17	15°R	evening set	2341 Feb 14 19:12	10°38'49"
direct	2334 Oct 24 04:21	13°37'01"	conjunction	2341 Mar 02 12:44	11°32'36" -0°44'19"
	2334 Dec 21 13:04	15°	minimum elong	2341 Mar 02 12:44	11°32'36" 0°44'20"
evening set	2335 Jan 22 17:33	16°39'44"	max. Earth dist.	2341 Mar 03 12:35	11°36'01" 21.07786 AU
conjunction	2335 Feb 07 08:35	17°33'57" -0°39'11"	morning rise	2341 Mar 18 09:13	12°26'48"
minimum elong	2335 Feb 07 08:35	17°33'57" 0°39'11"	retrograde	2341 Jun 20 04:57	15°33'00"
max. Earth dist.	2335 Feb 08 06:11	17°37'06" 20.87407 AU	min. Earth dist.	2341 Sep 05 09:31	13°36'39" 19.08794 AU
morning rise	2335 Feb 23 01:25	18°28'24"	opposition	2341 Sep 06 07:36	13°34'27" -0°49'03"
retrograde	2335 May 27 03:51	21°35'33"	direct	2341 Nov 21 05:27	11°38'19"
opposition	2335 Aug 12 23:28	19°36'45" -0°44'06"	evening set	2342 Feb 18 23:06	14°37'02"
min. Earth dist.	2335 Aug 12 02:34	19°38'50" 18.89629 AU	conjunction	2342 Mar 06 17:18	15°30'49" -0°44'27"
direct	2335 Oct 28 11:49	17°39'22"	minimum elong	2342 Mar 06 17:18	15°30'49" 0°44'27"
evening set	2336 Jan 26 22:14	20°41'18"	max. Earth dist.	2342 Mar 07 16:56	15°34'12" 21.09569 AU
conjunction	2336 Feb 11 13:38	21°35'24" -0°40'33"	morning rise	2342 Mar 22 14:30	16°25'02"
minimum elong	2336 Feb 11 13:38	21°35'24" 0°40'33"	retrograde	2342 Jun 24 13:48	19°31'12"
max. Earth dist.	2336 Feb 12 12:13	21°38'40" 20.91716 AU	opposition	2342 Sep 10 15:45	17°32'36" -0°49'04"
morning rise	2336 Feb 27 06:56	22°29'46"	min. Earth dist.	2342 Sep 09 17:03	17°34'52" 19.10284 AU
retrograde	2336 May 30 13:17	25°36'38"	direct	2342 Nov 25 12:18	15°36'33"
min. Earth dist.	2336 Aug 15 11:10	23°40'09" 18.93786 AU	evening set	2343 Feb 23 03:13	18°34'55"
opposition	2336 Aug 16 09:48	23°37'54" -0°45'30"	conjunction	2343 Mar 10 22:02	19°28'44" -0°44'22"
direct	2336 Oct 31 21:22	21°40'45"	minimum elong	2343 Mar 10 22:02	19°28'44" 0°44'21"
evening set	2337 Jan 30 02:47	24°41'59"	max. Earth dist.	2343 Mar 11 21:07	19°32'02" 21.10760 AU
conjunction	2337 Feb 14 18:26	25°35'59" -0°41'43"	morning rise	2343 Mar 26 20:05	20°22'59"
minimum elong	2337 Feb 14 18:26	25°35'59" 0°41'43"	retrograde	2343 Jun 28 20:11	23°29'07"
max. Earth dist.	2337 Feb 15 17:27	25°39'19" 20.95706 AU	opposition	2343 Sep 14 23:39	21°30'27" -0°48'51"
morning rise	2337 Mar 02 12:18	26°30'17"	min. Earth dist.	2343 Sep 14 02:31	21°32'34" 19.11186 AU
retrograde	2337 Jun 03 20:56	29°36'56"	direct	2343 Nov 29 16:47	19°34'25"
opposition	2337 Aug 20 19:45	27°38'15" -0°46'40"	evening set	2344 Feb 27 07:12	22°32'31"
min. Earth dist.	2337 Aug 19 21:41	27°40'27" 18.97619 AU	conjunction	2344 Mar 14 02:51	23°26'21" -0°44'04"
direct	2337 Nov 05 03:49	25°41'21"	minimum elong	2344 Mar 14 02:51	23°26'21" 0°44'04"
evening set	2338 Feb 03 07:01	28°41'57"	max. Earth dist.	2344 Mar 15 01:27	23°29'34" 21.11384 AU
conjunction	2338 Feb 18 23:07	29°35'52" -0°42'41"	morning rise	2344 Mar 30 01:44	24°20'39"
minimum elong	2338 Feb 18 23:07	29°35'52" 0°42'40"	retrograde	2344 Jul 02 05:02	27°26'47"
max. Earth dist.	2338 Feb 19 22:46	29°39'17" 20.99368 AU	min. Earth dist.	2344 Sep 17 09:35	25°30'09" 19.11521 AU
	2338 Feb 25 22:15	0°	opposition	2344 Sep 18 07:06	25°28'00" -0°48'24"
			direct	2344 Dec 02 22:58	23°31'56"

evening set	2345 Mar 02 11:18	26° K 29'48	max. Earth dist.	2351 Apr 12 11:58	21° Y 11'42	21.02779 AU
			morning rise	2351 Apr 27 23:00	22° Y 04'12	
conjunction	2345 Mar 18 07:36	27° K 23'41 -0°43'33	retrograde	2351 Jul 31 12:06	25° Y 11'31	
minimum elong	2345 Mar 18 07:36	27° K 23'41 0°43'32	opposition	2351 Oct 17 06:39	23° Y 11'52	-0°39'00
max. Earth dist.	2345 Mar 19 05:40	27° K 26'50 21.11444 AU	min. Earth dist.	2351 Oct 16 14:40	23° Y 13'29	19.01449 AU
morning rise	2345 Apr 03 07:23	28° K 18'03	direct	2351 Dec 31 07:02	21° Y 15'15	
	2345 May 06 22:24	0° Y	evening set	2352 Mar 29 22:08	24° Y 13'45	
retrograde	2345 Jul 06 11:08	1° Y 24'13				
	2345 Sep 07 22:15	30° K	conjunction	2352 Apr 15 00:50	25° Y 08'31	-0°34'22
opposition	2345 Sep 22 14:23	29° K 25'18 -0°47'43	minimum elong	2352 Apr 15 00:50	25° Y 08'31	0°34'22
min. Earth dist.	2345 Sep 21 18:25	29° K 27'18 19.11330 AU	max. Earth dist.	2352 Apr 15 18:07	25° Y 10'59	20.99977 AU
direct	2345 Dec 07 03:26	27° K 29'11	morning rise	2352 May 01 07:16	26° Y 03'50	
	2346 Feb 26 10:55	0° Y	retrograde	2352 Aug 03 23:06	29° Y 11'31	
evening set	2346 Mar 06 15:24	0° Y 26'53	opposition	2352 Oct 20 13:25	27° Y 11'47	-0°36'50
			min. Earth dist.	2352 Oct 19 21:43	27° Y 13'23	18.98430 AU
conjunction	2346 Mar 22 12:34	1° Y 20'50 -0°42'49	direct	2353 Jan 03 12:58	25° Y 15'04	
minimum elong	2346 Mar 22 12:34	1° Y 20'50 0°42'50	evening set	2353 Apr 03 04:57	28° Y 14'00	
max. Earth dist.	2346 Mar 23 10:14	1° Y 23'55 21.11026 AU				
morning rise	2346 Apr 07 13:13	2° Y 15'17	conjunction	2353 Apr 19 08:34	29° Y 08'58	-0°32'19
retrograde	2346 Jul 10 19:55	5° Y 21'31	minimum elong	2353 Apr 19 08:34	29° Y 08'58	0°32'20
opposition	2346 Sep 26 21:19	3° Y 22'26 -0°46'48	max. Earth dist.	2353 Apr 20 00:46	29° Y 11'17	20.96737 AU
min. Earth dist.	2346 Sep 26 00:54	3° Y 24'29 19.10684 AU		2353 May 04 07:51	0° B	
direct	2346 Dec 11 08:51	1° Y 26'15	morning rise	2353 May 05 15:55	0° B 04'29	
evening set	2347 Mar 10 19:41	4° Y 23'52	retrograde	2353 Aug 08 07:42	3° B 12'36	
			opposition	2353 Oct 24 20:31	1° B 12'47	-0°34'29
conjunction	2347 Mar 26 17:39	5° Y 17'55 -0°41'54	min. Earth dist.	2353 Oct 24 06:53	1° B 14'10	18.94967 AU
minimum elong	2347 Mar 26 17:39	5° Y 17'55 0°41'53		2353 Nov 25 23:23	30° K Y	
max. Earth dist.	2347 Mar 27 14:49	5° Y 20'55 21.10158 AU	direct	2354 Jan 07 16:53	29° Y 15'56	
morning rise	2347 Apr 11 19:16	6° Y 12'28		2354 Feb 18 10:56	0° B	
retrograde	2347 Jul 15 02:27	9° Y 18'49	evening set	2354 Apr 07 12:29	2° B 15'23	
min. Earth dist.	2347 Sep 30 09:18	7° Y 21'29 19.09609 AU				
opposition	2347 Oct 01 04:13	7° Y 19'35 -0°45'40	conjunction	2354 Apr 23 17:08	3° B 10'34	-0°30'06
direct	2347 Dec 15 13:06	5° Y 23'19	minimum elong	2354 Apr 23 17:08	3° B 10'34	0°30'06
evening set	2348 Mar 14 00:14	8° Y 20'57	max. Earth dist.	2354 Apr 24 07:47	3° B 12'39	20.93059 AU
			morning rise	2354 May 10 01:29	4° B 06'17	
conjunction	2348 Mar 29 23:08	9° Y 15'05 -0°40'46	retrograde	2354 Aug 12 19:17	7° B 14'50	
minimum elong	2348 Mar 29 23:08	9° Y 15'05 0°40'46	opposition	2354 Oct 29 03:42	5° B 14'55	-0°31'57
max. Earth dist.	2348 Mar 30 19:43	9° Y 18'01 21.08891 AU	min. Earth dist.	2354 Oct 28 14:47	5° B 16'14	18.91045 AU
morning rise	2348 Apr 15 01:39	10° Y 09'45	direct	2355 Jan 11 23:31	3° B 17'54	
retrograde	2348 Jul 18 11:35	13° Y 16'16	evening set	2355 Apr 11 20:46	6° B 17'56	
opposition	2348 Oct 04 10:40	11° Y 16'55 -0°44'18				
min. Earth dist.	2348 Oct 03 15:27	11° Y 18'51 19.08143 AU	conjunction	2355 Apr 28 02:26	7° B 13'21	-0°27'44
direct	2348 Dec 18 18:15	9° Y 20'33	minimum elong	2355 Apr 28 02:26	7° B 13'21	0°27'44
evening set	2349 Mar 18 05:07	12° Y 18'17	max. Earth dist.	2355 Apr 28 15:35	7° B 15'13	20.88883 AU
			morning rise	2355 May 14 11:44	8° B 09'18	
conjunction	2349 Apr 03 04:52	13° Y 12'33 -0°39'27	retrograde	2355 Aug 17 05:22	11° B 18'19	
minimum elong	2349 Apr 03 04:52	13° Y 12'33 0°39'26	opposition	2355 Nov 02 11:18	9° B 18'16	-0°29'14
max. Earth dist.	2349 Apr 04 00:47	13° Y 15'23 21.07227 AU	min. Earth dist.	2355 Nov 02 00:42	9° B 19'21	18.86614 AU
morning rise	2349 Apr 19 08:20	14° Y 07'21	direct	2356 Jan 16 04:40	7° B 21'02	
retrograde	2349 Jul 22 18:29	17° Y 14'05	evening set	2356 Apr 15 05:45	10° B 21'41	
opposition	2349 Oct 08 17:23	15° Y 14'36 -0°42'45				
min. Earth dist.	2349 Oct 07 23:42	15° Y 16'24 19.06289 AU	conjunction	2356 May 01 12:26	11° B 17'20	-0°25'12
direct	2349 Dec 22 22:05	13° Y 18'11	minimum elong	2356 May 01 12:26	11° B 17'20	0°25'11
evening set	2350 Mar 22 10:10	16° Y 16'04	max. Earth dist.	2356 May 01 23:32	11° B 18'55	20.84216 AU
			morning rise	2356 May 17 22:42	12° B 13'32	
conjunction	2350 Apr 07 10:54	17° Y 10'29 -0°37'56		2356 Jul 20 23:42	15° B	
minimum elong	2350 Apr 07 10:54	17° Y 10'29 0°37'56	retrograde	2356 Aug 20 17:13	15° B 23'00	
max. Earth dist.	2350 Apr 08 06:08	17° Y 13'13 21.05199 AU		2356 Sep 20 16:50	15° R B	
morning rise	2350 Apr 23 15:21	18° Y 05'26	opposition	2356 Nov 05 18:57	13° B 22'48	-0°26'22
retrograde	2350 Jul 27 04:36	21° Y 12'27	min. Earth dist.	2356 Nov 05 09:17	13° B 23'47	18.81696 AU
opposition	2350 Oct 12 24:00	19° Y 12'52 -0°40'58	direct	2357 Jan 19 11:52	11° B 25'18	
min. Earth dist.	2350 Oct 12 06:10	19° Y 14'40 19.04065 AU	evening set	2357 Apr 19 15:23	14° B 26'37	
direct	2350 Dec 27 03:32	17° Y 16'20		2357 Apr 29 10:22	15° B	
evening set	2351 Mar 26 15:54	20° Y 14'30				
			conjunction	2357 May 05 23:06	15° B 22'32	-0°22'31
conjunction	2351 Apr 11 17:33	21° Y 09'04 -0°36'14	minimum elong	2357 May 05 23:06	15° B 22'32	0°22'31
minimum elong	2351 Apr 11 17:33	21° Y 09'04 0°36'15	max. Earth dist.	2357 May 06 08:41	15° B 23'54	20.79065 AU

morning rise	2357 May 22 10:13	16° 8 18'58	minimum elong	2363 Jun 01 06:24	10° II 21'28	0°04'18
retrograde	2357 Aug 25 04:06	19° 8 28'55	behind sun begin	2363 May 31 23:46	10° II 20'31	
opposition	2357 Nov 10 03:03	17° 8 28'31 -0°23'20	behind sun end	2363 Jun 01 13:02	10° II 22'25	
min. Earth dist.	2357 Nov 09 19:36	17° 8 29'17 18.76326 AU	max. Earth dist.	2363 Jun 01 06:26	10° II 21'28	20.41929 AU
direct	2358 Jan 23 18:36	15° 8 30'43	morning rise	2363 Jun 17 22:14	11° II 19'31	
evening set	2358 Apr 24 01:34	18° 8 32'44	retrograde	2363 Sep 20 08:45	14° II 32'48	
			opposition	2363 Dec 05 10:30	12° II 31'11	-0°02'51
conjunction	2358 May 10 10:18	19° 8 28'56 -0°19'43	min. Earth dist.	2363 Dec 05 11:17	12° II 31'06	18.38577 AU
minimum elong	2358 May 10 10:18	19° 8 28'56 0°19'44	direct	2364 Feb 18 00:34	10° II 31'08	
max. Earth dist.	2358 May 10 17:52	19° 8 30'01 20.73514 AU	evening set	2364 May 19 08:18	13° II 38'52	
morning rise	2358 May 26 22:25	20° 8 25'37				
retrograde	2358 Aug 29 16:22	23° 8 36'05	conjunction	2364 Jun 04 22:27	14° II 36'50	-0°00'59
opposition	2358 Nov 14 11:20	21° 8 35'27 -0°20'11	minimum elong	2364 Jun 04 22:29	14° II 36'50	0°00'59
min. Earth dist.	2358 Nov 14 04:48	21° 8 36'08 18.70586 AU	behind sun begin	2364 Jun 04 15:44	14° II 35'52	
direct	2359 Jan 28 02:22	19° 8 37'17	behind sun end	2364 Jun 05 05:13	14° II 37'48	
evening set	2359 Apr 28 12:40	22° 8 40'07	max. Earth dist.	2364 Jun 04 20:07	14° II 36'33	20.35261 AU
			morning rise	2364 Jun 21 15:02	15° II 35'10	
conjunction	2359 May 14 22:26	23° 8 36'35 -0°16'48	asc. node	2364 Sep 19 17:23	18° II 48'37	
minimum elong	2359 May 14 22:26	23° 8 36'35 0°16'48	retrograde	2364 Sep 24 00:28	18° II 49'06	
max. Earth dist.	2359 May 15 04:41	23° 8 37'28 20.67606 AU	opposition	2364 Dec 08 21:28	16° II 47'21	0°00'48
morning rise	2359 May 31 11:20	24° 8 33'32	min. Earth dist.	2364 Dec 08 23:23	16° II 47'08	18.31891 AU
retrograde	2359 Sep 03 03:55	27° 8 44'30	direct	2365 Feb 21 12:16	14° II 46'56	
opposition	2359 Nov 18 19:52	25° 8 43'40 -0°16'54	evening set	2365 May 24 00:35	17° II 55'50	
min. Earth dist.	2359 Nov 18 15:23	25° 8 44'08 18.64532 AU				
direct	2360 Feb 01 10:34	23° 8 45'08	conjunction	2365 Jun 09 15:39	18° II 54'08	0°02'25
evening set	2360 May 02 00:32	26° 8 48'48	minimum elong	2365 Jun 09 15:39	18° II 54'08	0°02'24
			behind sun begin	2365 Jun 09 08:54	18° II 53'10	
conjunction	2360 May 18 11:13	27° 8 45'34 -0°13'47	behind sun end	2365 Jun 09 22:24	18° II 55'06	
minimum elong	2360 May 18 11:13	27° 8 45'34 0°13'48	max. Earth dist.	2365 Jun 09 12:35	18° II 53'44	20.28553 AU
behind sun begin	2360 May 18 07:48	27° 8 45'05	morning rise	2365 Jun 26 08:35	19° II 52'44	
behind sun end	2360 May 18 14:38	27° 8 46'03	retrograde	2365 Sep 28 15:37	23° II 07'19	
max. Earth dist.	2360 May 18 15:20	27° 8 46'09 20.61439 AU	opposition	2365 Dec 13 09:05	21° II 05'29	0°04'28
morning rise	2360 Jun 04 01:01	28° 8 42'47	min. Earth dist.	2365 Dec 13 12:34	21° II 05'06	18.25167 AU
	2360 Jun 28 04:33	0° II	direct	2366 Feb 25 23:27	19° II 04'44	
retrograde	2360 Sep 06 16:43	1° II 54'18	evening set	2366 May 28 18:00	22° II 14'50	
	2360 Nov 19 11:50	30° R8				
opposition	2360 Nov 22 04:49	29° 8 53'13 -0°13'30	conjunction	2366 Jun 14 09:40	23° II 13'27	0°05'44
min. Earth dist.	2360 Nov 22 01:14	29° 8 53'36 18.58254 AU	minimum elong	2366 Jun 14 09:40	23° II 13'26	0°05'45
direct	2361 Feb 04 19:23	27° 8 54'18	behind sun begin	2366 Jun 14 03:12	23° II 12'31	
	2361 Apr 18 11:18	0° II	behind sun end	2366 Jun 14 16:08	23° II 14'22	
evening set	2361 May 06 13:01	0° II 58'54	max. Earth dist.	2366 Jun 14 03:54	23° II 12'37	20.21823 AU
			morning rise	2366 Jul 01 03:15	24° II 12'21	
conjunction	2361 May 23 00:40	1° II 55'57 -0°10'42	retrograde	2366 Oct 03 08:49	27° II 27'36	
minimum elong	2361 May 23 00:40	1° II 55'57 0°10'41	opposition	2366 Dec 17 21:24	25° II 25'40	0°08'09
behind sun begin	2361 May 22 19:32	1° II 55'13	min. Earth dist.	2366 Dec 18 02:27	25° II 25'08	18.18415 AU
behind sun end	2361 May 23 05:48	1° II 56'41	direct	2367 Mar 02 12:25	23° II 24'34	
max. Earth dist.	2361 May 23 03:49	1° II 56'23 20.55058 AU	evening set	2367 Jun 02 12:33	26° II 35'56	
morning rise	2361 Jun 08 15:07	2° II 53'27				
retrograde	2361 Sep 11 05:10	6° II 05'31	conjunction	2367 Jun 19 05:00	27° II 34'52	0°09'02
opposition	2361 Nov 26 14:17	4° II 04'15 -0°10'01	minimum elong	2367 Jun 19 04:59	27° II 34'52	0°09'02
min. Earth dist.	2361 Nov 26 12:26	4° II 04'27 18.51793 AU	behind sun begin	2367 Jun 18 23:16	27° II 34'02	
direct	2362 Feb 09 04:25	2° II 04'58	behind sun end	2367 Jun 19 10:43	27° II 35'42	
evening set	2362 May 11 02:32	5° II 10'32	max. Earth dist.	2367 Jun 18 22:20	27° II 33'54	20.15032 AU
			morning rise	2367 Jul 05 22:45	28° II 34'02	
conjunction	2362 May 27 15:02	6° II 07'53 -0°07'32		2367 Aug 01 09:16	0° III	
minimum elong	2362 May 27 15:02	6° II 07'53 0°07'32	retrograde	2367 Oct 08 02:08	1° III 49'58	
behind sun begin	2362 May 27 08:56	6° II 07'01		2367 Dec 17 17:20	30° RII	
behind sun end	2362 May 27 21:08	6° II 08'45	opposition	2367 Dec 22 10:21	29° II 47'57	0°11'50
max. Earth dist.	2362 May 27 15:58	6° II 08'00 20.48545 AU	min. Earth dist.	2367 Dec 22 17:03	29° II 47'14	18.11592 AU
morning rise	2362 Jun 13 06:20	7° II 05'39	direct	2368 Mar 06 01:41	27° II 46'29	
retrograde	2362 Sep 15 19:16	10° II 18'20		2368 May 19 16:12	0° III	
opposition	2362 Dec 01 00:04	8° II 16'52 -0°06'28	evening set	2368 Jun 06 08:15	0° III 59'09	
min. Earth dist.	2362 Nov 30 23:12	8° II 16'57 18.45230 AU				
direct	2363 Feb 13 14:43	6° II 17'11	conjunction	2368 Jun 23 01:06	1° III 58'23	0°12'19
evening set	2363 May 15 16:56	9° II 23'48	minimum elong	2368 Jun 23 01:06	1° III 58'23	0°12'19
			behind sun begin	2368 Jun 22 20:44	1° III 57'45	
conjunction	2363 Jun 01 06:25	10° II 21'28 -0°04'18	behind sun end	2368 Jun 23 05:28	1° III 59'01	

max. Earth dist.	2368 Jun 22 15:19	1°☾56'56	20.08180 AU	min. Earth dist.	2375 Jan 22 18:31	1°♄16'03	17.64626 AU
morning rise	2368 Jul 09 19:19	2°☾57'50			2375 Feb 23 06:02	30°♄☾	
retrograde	2368 Oct 11 20:23	6°☾14'25		direct	2375 Apr 07 00:46	29°☾13'29	
opposition	2368 Dec 26 00:11	4°☾12'18	0°15'28		2375 May 19 05:31	0°♄	
min. Earth dist.	2368 Dec 26 08:42	4°☾11'23	18.04716 AU	evening set	2375 Jul 10 02:45	2°♄35'05	
direct	2369 Mar 10 16:07	2°☾10'26					
evening set	2369 Jun 11 04:39	5°☾24'23		conjunction	2375 Jul 26 21:34	3°♄36'15	0°32'44
				minimum elong	2375 Jul 26 21:34	3°♄36'15	0°32'44
conjunction	2369 Jun 27 22:11	6°☾23'56	0°15'33	max. Earth dist.	2375 Jul 26 01:26	3°♄33'10	19.61660 AU
minimum elong	2369 Jun 27 22:11	6°☾23'56	0°15'33	morning rise	2375 Aug 12 15:20	4°♄37'18	
behind sun begin	2369 Jun 27 21:05	6°☾23'46		retrograde	2375 Nov 13 20:11	7°♄57'53	
behind sun end	2369 Jun 27 23:16	6°☾24'05		opposition	2376 Jan 26 20:07	5°♄54'54	0°37'44
max. Earth dist.	2369 Jun 27 11:34	6°☾22'21	20.01266 AU	min. Earth dist.	2376 Jan 27 13:02	5°♄53'02	17.58819 AU
morning rise	2369 Jul 14 16:27	7°☾23'39		direct	2376 Apr 10 21:32	3°♄50'08	
retrograde	2369 Oct 16 15:33	10°☾40'53		evening set	2376 Jul 14 05:09	7°♄12'55	
opposition	2369 Dec 30 14:44	8°☾38'38	0°19'02				
min. Earth dist.	2369 Dec 31 00:37	8°☾37'35	17.97780 AU	conjunction	2376 Jul 30 23:45	8°♄14'17	0°35'01
direct	2370 Mar 15 07:39	6°☾36'23		minimum elong	2376 Jul 30 23:45	8°♄14'17	0°35'01
evening set	2370 Jun 16 02:20	9°☾51'36		max. Earth dist.	2376 Jul 30 02:06	8°♄10'58	19.56060 AU
				morning rise	2376 Aug 16 17:08	9°♄15'30	
conjunction	2370 Jul 02 20:09	10°☾51'27	0°18'43	retrograde	2376 Nov 17 17:38	12°♄36'34	
minimum elong	2370 Jul 02 20:09	10°☾51'27	0°18'43	opposition	2377 Jan 30 15:38	10°♄33'31	0°40'10
max. Earth dist.	2370 Jul 02 06:22	10°☾49'23	19.94327 AU	min. Earth dist.	2377 Jan 31 10:05	10°♄31'30	17.53464 AU
morning rise	2370 Jul 19 14:45	11°☾51'26		direct	2377 Apr 15 18:19	8°♄28'26	
retrograde	2370 Oct 21 10:34	15°☾09'17		evening set	2377 Jul 19 07:58	11°♄52'23	
opposition	2371 Jan 04 05:52	13°☾06'54	0°22'31	max. Earth dist.	2377 Aug 04 04:35	12°♄50'35	19.50945 AU
min. Earth dist.	2371 Jan 04 17:46	13°☾05'37	17.90856 AU				
direct	2371 Mar 19 23:44	11°☾04'11		conjunction	2377 Aug 05 02:28	12°♄53'57	0°37'05
evening set	2371 Jun 21 00:48	14°☾20'44		minimum elong	2377 Aug 05 02:28	12°♄53'57	0°37'04
				morning rise	2377 Aug 21 19:23	13°♄55'18	
conjunction	2371 Jul 07 19:09	15°☾20'52	0°21'48		2377 Sep 09 11:36	15°♄	
minimum elong	2371 Jul 07 19:09	15°☾20'52	0°21'48	retrograde	2377 Nov 22 16:59	17°♄16'50	
max. Earth dist.	2371 Jul 07 04:40	15°☾18'41	19.87420 AU	opposition	2378 Feb 04 11:44	15°♄13'45	0°42'21
morning rise	2371 Jul 24 13:37	16°☾21'05		min. Earth dist.	2378 Feb 05 05:46	15°♄11'47	17.48593 AU
retrograde	2371 Oct 26 07:12	19°☾39'31			2378 Feb 09 17:33	15°♄♄	
opposition	2372 Jan 08 21:45	17°☾37'01	0°25'53	direct	2378 Apr 20 17:20	13°♄08'25	
min. Earth dist.	2372 Jan 09 10:37	17°☾35'37	17.83990 AU		2378 Jun 26 18:11	15°♄	
direct	2372 Mar 23 17:04	15°☾33'53		evening set	2378 Jul 24 11:42	16°♄33'30	
evening set	2372 Jun 25 00:08	18°☾51'41		max. Earth dist.	2378 Aug 09 07:08	17°♄31'42	19.46319 AU
conjunction	2372 Jul 11 18:33	19°☾52'06	0°24'46	conjunction	2378 Aug 10 05:52	17°♄35'13	0°38'55
minimum elong	2372 Jul 11 18:33	19°☾52'06	0°24'45	minimum elong	2378 Aug 10 05:52	17°♄35'13	0°38'55
max. Earth dist.	2372 Jul 11 01:19	19°☾49'30	19.80617 AU	morning rise	2378 Aug 26 22:09	18°♄36'42	
morning rise	2372 Jul 28 13:06	20°☾52'33		retrograde	2378 Nov 27 15:16	21°♄58'37	
retrograde	2372 Oct 30 03:09	24°☾11'35		opposition	2379 Feb 09 08:37	19°♄55'36	0°44'16
opposition	2373 Jan 12 14:22	22°☾08'55	0°29'07	min. Earth dist.	2379 Feb 10 04:12	19°♄53'27	17.44230 AU
min. Earth dist.	2373 Jan 13 05:07	22°☾07'19	17.77283 AU	direct	2379 Apr 25 15:59	17°♄50'02	
direct	2373 Mar 28 10:46	20°☾05'20		evening set	2379 Jul 29 15:59	21°♄16'11	
evening set	2373 Jun 30 00:10	23°☾24'26		max. Earth dist.	2379 Aug 14 10:27	22°♄14'26	19.42213 AU
conjunction	2373 Jul 16 18:56	24°☾25'07	0°27'35	conjunction	2379 Aug 15 09:44	22°♄18'03	0°40'30
minimum elong	2373 Jul 16 18:56	24°☾25'07	0°27'35	minimum elong	2379 Aug 15 09:44	22°♄18'03	0°40'30
max. Earth dist.	2373 Jul 16 01:20	24°☾22'26	19.74010 AU	morning rise	2379 Sep 01 01:25	23°♄19'37	
morning rise	2373 Aug 02 13:14	25°☾25'47		retrograde	2379 Dec 02 15:49	26°♄41'56	
retrograde	2373 Nov 04 00:48	28°☾45'20		opposition	2380 Feb 14 06:11	24°♄38'57	0°45'55
opposition	2374 Jan 17 07:30	26°☾42'34	0°32'11	min. Earth dist.	2380 Feb 15 01:16	24°♄36'52	17.40370 AU
min. Earth dist.	2374 Jan 17 22:42	26°☾40'54	17.70800 AU	direct	2380 Apr 29 16:56	22°♄33'14	
direct	2374 Apr 02 05:27	24°☾38'34		evening set	2380 Aug 02 20:36	26°♄00'22	
evening set	2374 Jul 05 01:09	27°☾58'55					
				conjunction	2380 Aug 19 13:54	27°♄02'20	0°41'49
conjunction	2374 Jul 21 19:53	28°☾59'50	0°30'15	minimum elong	2380 Aug 19 13:54	27°♄02'20	0°41'49
minimum elong	2374 Jul 21 19:53	28°☾59'50	0°30'15	max. Earth dist.	2380 Aug 18 14:29	26°♄58'42	19.38584 AU
max. Earth dist.	2374 Jul 21 00:00	28°☾56'49	19.67664 AU	morning rise	2380 Sep 05 04:43	28°♄03'59	
morning rise	2374 Aug 07 14:04	0°♄00'43			2380 Oct 10 08:16	0°♄	
	2374 Aug 07 09:16	0°♄		retrograde	2380 Dec 06 15:09	1°♄26'37	
retrograde	2374 Nov 08 21:47	3°♄20'48			2381 Feb 04 04:44	30°♄♄	
opposition	2375 Jan 22 01:31	1°♄17'54	0°35'04	opposition	2381 Feb 18 04:37	29°♄23'44	0°47'14

min. Earth dist.	2381 Feb 19 01:08	29° Ω 21'29	17.36987 AU	conjunction	2387 Sep 23 23:03	0° Ω 35'16	0°42'49
direct	2381 May 04 16:51	27° Ω 17'50		minimum elong	2387 Sep 23 23:03	0° Ω 35'16	0°42'49
	2381 Jul 26 04:21	0° \mathbb{M}		max. Earth dist.	2387 Sep 22 23:06	0° Ω 31'30	19.26400 AU
evening set	2381 Aug 08 01:50	0° \mathbb{M} 45'52		morning rise	2387 Oct 10 07:11	1° Ω 36'42	
				retrograde	2388 Jan 09 21:47	4° Ω 59'41	
conjunction	2381 Aug 24 18:29	1° \mathbb{M} 47'55	0°42'52	opposition	2388 Mar 23 07:34	2° Ω 57'05	0°47'13
minimum elong	2381 Aug 24 18:29	1° \mathbb{M} 47'55	0°42'53	min. Earth dist.	2388 Mar 24 03:30	2° Ω 54'55	17.26565 AU
max. Earth dist.	2381 Aug 23 18:03	1° \mathbb{M} 44'07	19.35433 AU	direct	2388 Jun 07 13:40	0° Ω 50'29	
morning rise	2381 Sep 10 08:38	2° \mathbb{M} 49'37		evening set	2388 Sep 11 15:58	4° Ω 21'27	
retrograde	2381 Dec 11 17:01	6° \mathbb{M} 12'31		max. Earth dist.	2388 Sep 27 04:52	5° Ω 19'50	19.26803 AU
opposition	2382 Feb 23 03:26	4° \mathbb{M} 09'41	0°48'16				
min. Earth dist.	2382 Feb 23 23:31	4° \mathbb{M} 07'29	17.34064 AU	conjunction	2388 Sep 28 02:46	5° Ω 23'17	0°41'44
direct	2382 May 09 19:18	2° \mathbb{M} 03'38		minimum elong	2388 Sep 28 02:46	5° Ω 23'17	0°41'45
evening set	2382 Aug 13 07:22	5° \mathbb{M} 32'28		morning rise	2388 Oct 14 09:43	6° Ω 24'35	
				retrograde	2389 Jan 13 22:08	9° Ω 47'21	
conjunction	2382 Aug 29 23:29	6° \mathbb{M} 34'35	0°43'38	opposition	2389 Mar 28 09:14	7° Ω 44'49	0°45'51
minimum elong	2382 Aug 29 23:29	6° \mathbb{M} 34'35	0°43'37	min. Earth dist.	2389 Mar 29 04:08	7° Ω 42'46	17.27273 AU
max. Earth dist.	2382 Aug 28 23:23	6° \mathbb{M} 30'48	19.32722 AU	direct	2389 Jun 12 18:46	5° Ω 38'15	
morning rise	2382 Sep 15 12:35	7° \mathbb{M} 36'18		evening set	2389 Sep 16 20:25	9° Ω 09'08	
retrograde	2382 Dec 16 17:11	10° \mathbb{M} 59'22		max. Earth dist.	2389 Oct 02 08:28	10° Ω 07'25	19.27840 AU
opposition	2383 Feb 28 03:09	8° \mathbb{M} 56'36	0°48'57				
min. Earth dist.	2383 Mar 01 00:23	8° \mathbb{M} 54'16	17.31579 AU	conjunction	2389 Oct 03 06:01	10° Ω 10'49	0°40'22
direct	2383 May 14 20:17	6° \mathbb{M} 50'25		minimum elong	2389 Oct 03 06:01	10° Ω 10'49	0°40'22
evening set	2383 Aug 18 13:07	10° \mathbb{M} 19'55		morning rise	2389 Oct 19 11:57	11° Ω 11'58	
max. Earth dist.	2383 Sep 03 03:05	11° \mathbb{M} 18'05	19.30465 AU	retrograde	2390 Jan 18 21:12	14° Ω 34'29	
				opposition	2390 Apr 02 10:55	12° Ω 32'02	0°44'10
conjunction	2383 Sep 04 04:20	11° \mathbb{M} 22'03	0°44'05	min. Earth dist.	2390 Apr 03 05:10	12° Ω 30'03	17.28648 AU
minimum elong	2383 Sep 04 04:20	11° \mathbb{M} 22'03	0°44'05	direct	2390 Jun 17 22:37	10° Ω 25'33	
morning rise	2383 Sep 20 16:38	12° \mathbb{M} 23'46		evening set	2390 Sep 22 00:15	13° Ω 56'16	
retrograde	2383 Dec 21 19:20	15° \mathbb{M} 46'57					
opposition	2384 Mar 04 03:16	13° \mathbb{M} 44'14	0°49'18	conjunction	2390 Oct 08 08:51	14° Ω 57'47	0°38'44
min. Earth dist.	2384 Mar 04 23:58	13° \mathbb{M} 41'57	17.29555 AU	minimum elong	2390 Oct 08 08:51	14° Ω 57'47	0°38'43
direct	2384 May 18 23:35	11° \mathbb{M} 37'55		max. Earth dist.	2390 Oct 07 13:21	14° Ω 54'42	19.29553 AU
evening set	2384 Aug 22 18:49	15° \mathbb{M} 07'57		morning rise	2390 Oct 24 13:36	15° Ω 58'45	
max. Earth dist.	2384 Sep 07 09:12	16° \mathbb{M} 06'18	19.28671 AU	retrograde	2391 Jan 23 21:31	19° Ω 20'58	
				opposition	2391 Apr 07 12:48	17° Ω 18'40	0°42'11
conjunction	2384 Sep 08 09:23	16° \mathbb{M} 10'06	0°44'14	min. Earth dist.	2391 Apr 08 05:15	17° Ω 16'53	17.30681 AU
minimum elong	2384 Sep 08 09:23	16° \mathbb{M} 10'06	0°44'14	direct	2391 Jun 23 04:09	15° Ω 12'20	
morning rise	2384 Sep 24 20:32	17° \mathbb{M} 11'46		evening set	2391 Sep 27 03:28	18° Ω 42'45	
retrograde	2384 Dec 25 19:46	20° \mathbb{M} 35'00					
opposition	2385 Mar 09 03:52	18° \mathbb{M} 32'19	0°49'18	conjunction	2391 Oct 13 10:53	19° Ω 44'05	0°36'49
min. Earth dist.	2385 Mar 10 01:09	18° \mathbb{M} 29'59	17.28005 AU	minimum elong	2391 Oct 13 10:53	19° Ω 44'05	0°36'50
direct	2385 May 24 01:48	16° \mathbb{M} 25'54		max. Earth dist.	2391 Oct 12 16:30	19° Ω 41'11	19.31922 AU
evening set	2385 Aug 28 00:33	19° \mathbb{M} 56'21		morning rise	2391 Oct 29 14:32	20° Ω 44'52	
				retrograde	2392 Jan 28 19:58	24° Ω 06'46	
conjunction	2385 Sep 13 14:08	20° \mathbb{M} 58'28	0°44'04	opposition	2392 Apr 11 14:45	22° Ω 04'38	0°39'55
minimum elong	2385 Sep 13 14:08	20° \mathbb{M} 58'28	0°44'04	min. Earth dist.	2392 Apr 12 06:34	22° Ω 02'56	17.33376 AU
max. Earth dist.	2385 Sep 12 12:59	20° \mathbb{M} 54'30	19.27379 AU	direct	2392 Jun 27 07:20	19° Ω 58'31	
morning rise	2385 Sep 30 00:27	22° \mathbb{M} 00'06		evening set	2392 Oct 01 06:04	23° Ω 28'34	
retrograde	2385 Dec 30 21:14	25° \mathbb{M} 23'18					
opposition	2386 Mar 14 04:47	23° \mathbb{M} 20'39	0°48'57	conjunction	2392 Oct 17 12:25	24° Ω 29'40	0°34'40
min. Earth dist.	2386 Mar 15 01:32	23° \mathbb{M} 18'22	17.26971 AU	minimum elong	2392 Oct 17 12:25	24° Ω 29'40	0°34'40
direct	2386 May 29 05:44	21° \mathbb{M} 14'08		max. Earth dist.	2392 Oct 16 19:48	24° Ω 27'03	19.34934 AU
evening set	2386 Sep 02 06:03	24° \mathbb{M} 44'53		morning rise	2392 Nov 02 15:01	25° Ω 30'15	
				retrograde	2393 Feb 01 20:13	28° Ω 51'47	
conjunction	2386 Sep 18 18:52	25° \mathbb{M} 46'56	0°43'36	opposition	2393 Apr 16 16:25	26° Ω 49'52	0°37'23
minimum elong	2386 Sep 18 18:52	25° \mathbb{M} 46'56	0°43'37	min. Earth dist.	2393 Apr 17 06:07	26° Ω 48'23	17.36664 AU
max. Earth dist.	2386 Sep 17 19:17	25° \mathbb{M} 43'13	19.26608 AU	direct	2393 Jul 02 12:13	24° Ω 44'00	
morning rise	2386 Oct 05 03:57	26° \mathbb{M} 48'28		evening set	2393 Oct 06 08:04	28° Ω 13'34	
	2386 Dec 15 15:36	0° Ω					
retrograde	2387 Jan 04 21:30	0° Ω 11'35		conjunction	2393 Oct 22 13:19	29° Ω 14'27	0°32'17
	2387 Jan 25 07:16	30° \mathbb{R} \mathbb{M}		minimum elong	2393 Oct 22 13:19	29° Ω 14'27	0°32'18
opposition	2387 Mar 19 06:02	28° \mathbb{M} 08'58	0°48'15	max. Earth dist.	2393 Oct 21 22:16	29° Ω 12'05	19.38498 AU
min. Earth dist.	2387 Mar 20 02:39	28° \mathbb{M} 06'43	17.26468 AU		2393 Nov 03 15:13	0° \mathbb{M}	
direct	2387 Jun 03 09:38	26° \mathbb{M} 02'24		morning rise	2393 Nov 07 14:49	0° \mathbb{M} 14'48	
evening set	2387 Sep 07 11:23	29° \mathbb{M} 33'19		retrograde	2394 Feb 06 18:27	3° \mathbb{M} 35'56	
	2387 Sep 14 15:08	0° Ω		opposition	2394 Apr 21 18:16	1° \mathbb{M} 34'14	0°34'36

min. Earth dist.	2394 Apr 22 07:38	1° \mathbb{M} 32'48	17.40484 AU		2400 May 09 01:31	30° $\mathbb{R}\mathbb{M}$	
	2394 Jun 02 05:04	30° $\mathbb{R}\mathbb{A}$		opposition	2400 May 19 23:35	29° \mathbb{M} 32'44	0°14'04
direct	2394 Jul 07 14:35	29° \mathbb{A} 28'40		min. Earth dist.	2400 May 20 04:19	29° \mathbb{M} 32'14	17.70932 AU
	2394 Aug 11 07:11	0° \mathbb{M}		direct	2400 Aug 05 04:06	27° \mathbb{M} 29'01	
evening set	2394 Oct 11 09:22	2° \mathbb{M} 57'38			2400 Oct 24 01:10	0° \mathbb{A}	
				evening set	2400 Nov 07 22:37	0° \mathbb{A} 52'23	
conjunction	2394 Oct 27 13:25	3° \mathbb{M} 58'16	0°29'42				
minimum elong	2394 Oct 27 13:25	3° \mathbb{M} 58'16	0°29'42	conjunction	2400 Nov 23 20:25	1° \mathbb{A} 51'15	0°10'57
max. Earth dist.	2394 Oct 26 23:38	3° \mathbb{M} 56'06	19.42560 AU	minimum elong	2400 Nov 23 20:25	1° \mathbb{A} 51'15	0°10'57
morning rise	2394 Nov 12 13:56	4° \mathbb{M} 58'23		behind sun begin	2400 Nov 23 15:24	1° \mathbb{A} 50'29	
retrograde	2395 Feb 11 18:14	8° \mathbb{M} 19'03		behind sun end	2400 Nov 24 01:26	1° \mathbb{A} 52'00	
opposition	2395 Apr 26 19:52	6° \mathbb{M} 17'35	0°31'35	max. Earth dist.	2400 Nov 23 15:48	1° \mathbb{A} 50'33	19.73908 AU
min. Earth dist.	2395 Apr 27 06:54	6° \mathbb{M} 16'24	17.44752 AU	morning rise	2400 Dec 09 15:40	2° \mathbb{A} 49'43	
direct	2395 Jul 12 18:17	4° \mathbb{M} 12'19		retrograde	2401 Mar 10 22:02	6° \mathbb{A} 06'52	
evening set	2395 Oct 16 09:51	7° \mathbb{M} 40'35		opposition	2401 May 24 22:37	4° \mathbb{A} 06'17	0°10'16
				min. Earth dist.	2401 May 25 00:59	4° \mathbb{A} 06'02	17.76904 AU
conjunction	2395 Nov 01 12:52	8° \mathbb{M} 40'57	0°26'55	direct	2401 Aug 10 04:49	2° \mathbb{A} 02'51	
minimum elong	2395 Nov 01 12:52	8° \mathbb{M} 40'57	0°26'55	evening set	2401 Nov 12 17:16	5° \mathbb{A} 25'02	
max. Earth dist.	2395 Nov 01 01:07	8° \mathbb{M} 39'07	19.47034 AU				
morning rise	2395 Nov 17 12:15	9° \mathbb{M} 40'49		conjunction	2401 Nov 28 14:20	6° \mathbb{A} 23'35	0°07'32
retrograde	2396 Feb 16 16:11	13° \mathbb{M} 01'00		minimum elong	2401 Nov 28 14:20	6° \mathbb{A} 23'35	0°07'33
opposition	2396 Apr 30 21:25	10° \mathbb{M} 59'44	0°28'23	behind sun begin	2401 Nov 28 08:20	6° \mathbb{A} 22'40	
min. Earth dist.	2396 May 01 08:08	10° \mathbb{M} 58'35	17.49418 AU	behind sun end	2401 Nov 28 20:20	6° \mathbb{A} 24'29	
direct	2396 Jul 16 19:59	8° \mathbb{M} 54'47		max. Earth dist.	2401 Nov 28 12:40	6° \mathbb{A} 23'20	19.79993 AU
evening set	2396 Oct 20 09:28	12° \mathbb{M} 22'14		morning rise	2401 Dec 14 08:43	7° \mathbb{A} 21'45	
				retrograde	2402 Mar 15 15:16	10° \mathbb{A} 38'12	
conjunction	2396 Nov 05 11:19	13° \mathbb{M} 22'20	0°23'58	opposition	2402 May 29 21:19	8° \mathbb{A} 37'43	0°06'25
minimum elong	2396 Nov 05 11:19	13° \mathbb{M} 22'20	0°23'58	min. Earth dist.	2402 May 29 22:31	8° \mathbb{A} 37'36	17.83102 AU
max. Earth dist.	2396 Nov 05 00:25	13° \mathbb{M} 20'37	19.51878 AU	direct	2402 Aug 15 04:44	6° \mathbb{A} 34'36	
morning rise	2396 Nov 21 09:53	14° \mathbb{M} 21'56		evening set	2402 Nov 17 10:54	9° \mathbb{A} 55'33	
	2396 Dec 01 23:44	15° \mathbb{M}					
retrograde	2397 Feb 20 14:52	17° \mathbb{M} 41'35		conjunction	2402 Dec 03 06:55	10° \mathbb{A} 53'45	0°04'06
opposition	2397 May 05 22:29	15° \mathbb{M} 40'29	0°25'00	minimum elong	2402 Dec 03 06:55	10° \mathbb{A} 53'45	0°04'05
min. Earth dist.	2397 May 06 06:48	15° \mathbb{M} 39'36	17.54409 AU	behind sun begin	2402 Dec 03 00:25	10° \mathbb{A} 52'47	
	2397 May 22 03:10	15° $\mathbb{R}\mathbb{M}$		behind sun end	2402 Dec 03 13:24	10° \mathbb{A} 54'44	
direct	2397 Jul 21 22:47	13° \mathbb{M} 35'51		max. Earth dist.	2402 Dec 03 06:12	10° \mathbb{A} 53'40	19.86319 AU
	2397 Sep 17 23:53	15° \mathbb{M}		morning rise	2402 Dec 19 00:49	11° \mathbb{A} 51'39	
evening set	2397 Oct 25 08:13	17° \mathbb{M} 02'25		retrograde	2403 Mar 20 08:53	15° \mathbb{A} 07'25	
				opposition	2403 Jun 03 19:20	13° \mathbb{A} 07'01	0°02'35
conjunction	2397 Nov 10 09:07	18° \mathbb{M} 02'13	0°20'52	min. Earth dist.	2403 Jun 03 18:03	13° \mathbb{A} 07'09	17.89560 AU
minimum elong	2397 Nov 10 09:06	18° \mathbb{M} 02'13	0°20'51	direct	2403 Aug 20 03:11	11° \mathbb{A} 04'13	
max. Earth dist.	2397 Nov 10 00:31	18° \mathbb{M} 00'53	19.57011 AU	evening set	2403 Nov 22 03:24	14° \mathbb{A} 23'56	
morning rise	2397 Nov 26 06:36	19° \mathbb{M} 01'32					
retrograde	2398 Feb 25 11:19	22° \mathbb{M} 20'36		conjunction	2403 Dec 07 22:45	15° \mathbb{A} 21'49	0°00'36
opposition	2398 May 10 23:17	20° \mathbb{M} 19'41	0°21'28	minimum elong	2403 Dec 07 22:47	15° \mathbb{A} 21'50	0°00'37
min. Earth dist.	2398 May 11 07:13	20° \mathbb{M} 18'51	17.59674 AU	behind sun begin	2403 Dec 07 16:14	15° \mathbb{A} 20'51	
direct	2398 Jul 27 00:31	18° \mathbb{M} 15'22		behind sun end	2403 Dec 08 05:20	15° \mathbb{A} 22'48	
evening set	2398 Oct 30 06:08	21° \mathbb{M} 40'57		max. Earth dist.	2403 Dec 08 01:13	15° \mathbb{A} 22'08	19.92900 AU
				morning rise	2403 Dec 23 15:57	16° \mathbb{A} 19'26	
conjunction	2398 Nov 15 05:52	22° \mathbb{M} 40'26	0°17'39	desc. node	2404 Feb 07 14:32	18° \mathbb{A} 40'27	
minimum elong	2398 Nov 15 05:52	22° \mathbb{M} 40'26	0°17'39	retrograde	2404 Mar 24 00:49	19° \mathbb{A} 34'30	
max. Earth dist.	2398 Nov 14 21:53	22° \mathbb{M} 39'12	19.62414 AU	opposition	2404 Jun 07 16:35	17° \mathbb{A} 34'15	-0°01'15
morning rise	2398 Dec 01 02:38	23° \mathbb{M} 39'29		min. Earth dist.	2404 Jun 07 13:40	17° \mathbb{A} 34'34	17.96258 AU
retrograde	2399 Mar 02 08:20	26° \mathbb{M} 57'57		direct	2404 Aug 24 00:47	15° \mathbb{A} 31'49	
opposition	2399 May 15 23:39	24° \mathbb{M} 57'09	0°17'49	evening set	2404 Nov 25 19:02	18° \mathbb{A} 50'17	
min. Earth dist.	2399 May 16 05:07	24° \mathbb{M} 56'35	17.65192 AU				
direct	2399 Aug 01 02:34	22° \mathbb{M} 53'08		conjunction	2404 Dec 11 13:32	19° \mathbb{A} 47'51	-0°02'55
evening set	2399 Nov 04 02:46	26° \mathbb{M} 17'39		minimum elong	2404 Dec 11 13:31	19° \mathbb{A} 47'51	0°02'55
				behind sun begin	2404 Dec 11 06:59	19° \mathbb{A} 46'53	
conjunction	2399 Nov 20 01:40	27° \mathbb{M} 16'50	0°14'20	behind sun end	2404 Dec 11 20:04	19° \mathbb{A} 48'50	
minimum elong	2399 Nov 20 01:40	27° \mathbb{M} 16'50	0°14'20	max. Earth dist.	2404 Dec 11 16:52	19° \mathbb{A} 48'19	19.99714 AU
behind sun begin	2399 Nov 19 22:30	27° \mathbb{M} 16'21		morning rise	2404 Dec 27 06:22	20° \mathbb{A} 45'11	
behind sun end	2399 Nov 20 04:50	27° \mathbb{M} 17'19		retrograde	2405 Mar 28 17:27	23° \mathbb{A} 59'36	
max. Earth dist.	2399 Nov 19 20:24	27° \mathbb{M} 16'01	19.68047 AU	opposition	2405 Jun 12 13:10	21° \mathbb{A} 59'30	-0°05'02
morning rise	2399 Dec 05 21:29	28° \mathbb{M} 15'35		min. Earth dist.	2405 Jun 12 08:08	22° \mathbb{A} 00'02	18.03176 AU
	2400 Jan 06 03:55	0° \mathbb{A}		direct	2405 Aug 28 20:38	19° \mathbb{A} 57'28	
retrograde	2400 Mar 06 03:11	1° \mathbb{A} 33'24		evening set	2405 Nov 30 09:33	23° \mathbb{A} 14'42	

conjunction	2405 Dec 16 03:32	24° \mathbb{A} 11'58	-0°06'18	min. Earth dist.	2411 Jul 09 13:23	17° \mathbb{B} 54'48	18.45284 AU
minimum elong	2405 Dec 16 03:31	24° \mathbb{A} 11'58	0°06'18	direct	2411 Sep 25 03:05	15° \mathbb{B} 53'53	
behind sun begin	2405 Dec 15 21:18	24° \mathbb{A} 11'02		evening set	2411 Dec 26 07:34	19° \mathbb{B} 03'53	
behind sun end	2405 Dec 16 09:43	24° \mathbb{A} 12'53					
max. Earth dist.	2405 Dec 16 09:49	24° \mathbb{A} 12'54	20.06713 AU	conjunction	2412 Jan 10 22:46	19° \mathbb{B} 59'28	-0°24'46
morning rise	2405 Dec 31 19:45	25° \mathbb{A} 09'00		minimum elong	2412 Jan 10 22:46	19° \mathbb{B} 59'28	0°24'46
retrograde	2406 Apr 02 08:39	28° \mathbb{A} 22'47		max. Earth dist.	2412 Jan 11 13:50	20° \mathbb{B} 01'43	20.48549 AU
opposition	2406 Jun 17 09:07	26° \mathbb{A} 22'53	-0°08'46	morning rise	2412 Jan 26 13:51	20° \mathbb{B} 55'04	
min. Earth dist.	2406 Jun 17 02:17	26° \mathbb{A} 23'35	18.10233 AU	retrograde	2412 Apr 27 20:09	24° \mathbb{B} 05'22	
direct	2406 Sep 02 16:35	24° \mathbb{A} 21'16		opposition	2412 Jul 13 18:41	22° \mathbb{B} 06'25	-0°28'54
evening set	2406 Dec 04 23:21	27° \mathbb{A} 37'15		min. Earth dist.	2412 Jul 13 03:24	22° \mathbb{B} 07'58	18.51733 AU
				direct	2412 Sep 28 19:06	20° \mathbb{B} 07'13	
				evening set	2412 Dec 29 16:37	23° \mathbb{B} 16'04	
conjunction	2406 Dec 20 16:32	28° \mathbb{A} 34'13	-0°09'37				
minimum elong	2406 Dec 20 16:32	28° \mathbb{A} 34'13	0°09'36				
behind sun begin	2406 Dec 20 11:04	28° \mathbb{A} 33'24		conjunction	2413 Jan 14 07:30	24° \mathbb{B} 11'25	-0°27'24
behind sun end	2406 Dec 20 22:00	28° \mathbb{A} 35'01		minimum elong	2413 Jan 14 07:30	24° \mathbb{B} 11'25	0°27'24
max. Earth dist.	2406 Dec 20 23:45	28° \mathbb{A} 35'17	20.13827 AU	max. Earth dist.	2413 Jan 14 22:56	24° \mathbb{B} 13'43	20.54845 AU
morning rise	2407 Jan 05 08:33	29° \mathbb{A} 31'00		morning rise	2413 Jan 29 22:44	25° \mathbb{B} 06'49	
	2407 Jan 13 15:05	0° \mathbb{B}		retrograde	2413 May 02 07:54	28° \mathbb{B} 16'35	
retrograde	2407 Apr 07 00:02	2° \mathbb{B} 44'10		opposition	2413 Jul 18 09:53	26° \mathbb{B} 17'41	-0°31'44
opposition	2407 Jun 22 04:29	0° \mathbb{B} 44'26	-0°12'25	min. Earth dist.	2413 Jul 17 18:22	26° \mathbb{B} 19'15	18.57887 AU
min. Earth dist.	2407 Jun 21 19:59	0° \mathbb{B} 45'18	18.17391 AU	direct	2413 Oct 03 07:30	24° \mathbb{B} 18'47	
	2407 Jul 10 16:32	30° \mathbb{R} \mathbb{A}		evening set	2414 Jan 03 00:43	27° \mathbb{B} 26'31	
direct	2407 Sep 07 10:02	28° \mathbb{A} 43'16					
	2407 Nov 02 03:37	0° \mathbb{B}		conjunction	2414 Jan 18 15:34	28° \mathbb{B} 21'38	-0°29'53
evening set	2407 Dec 09 12:01	1° \mathbb{B} 58'01		minimum elong	2414 Jan 18 15:34	28° \mathbb{B} 21'38	0°29'52
				max. Earth dist.	2414 Jan 19 08:34	28° \mathbb{B} 24'09	20.60844 AU
conjunction	2407 Dec 25 04:49	2° \mathbb{B} 54'41	-0°12'51	morning rise	2414 Feb 03 06:49	29° \mathbb{B} 16'50	
minimum elong	2407 Dec 25 04:49	2° \mathbb{B} 54'41	0°12'52		2414 Feb 16 01:57	0° \mathbb{B}	
behind sun begin	2407 Dec 25 00:40	2° \mathbb{B} 54'04		retrograde	2414 May 06 19:07	2° \mathbb{B} 26'05	
behind sun end	2407 Dec 25 08:57	2° \mathbb{B} 55'18		min. Earth dist.	2414 Jul 22 06:52	0° \mathbb{B} 28'58	18.63733 AU
max. Earth dist.	2407 Dec 25 14:41	2° \mathbb{B} 56'10	20.20993 AU	opposition	2414 Jul 23 00:14	0° \mathbb{B} 27'13	-0°34'22
morning rise	2408 Jan 09 20:25	3° \mathbb{B} 51'12			2414 Aug 03 09:33	30° \mathbb{R} \mathbb{B}	
retrograde	2408 Apr 10 14:41	7° \mathbb{B} 03'46		direct	2414 Oct 07 22:17	28° \mathbb{B} 28'35	
opposition	2408 Jun 25 23:05	5° \mathbb{B} 04'15	-0°15'59		2414 Dec 08 07:48	0° \mathbb{B}	
min. Earth dist.	2408 Jun 25 12:50	5° \mathbb{B} 05'18	18.24540 AU	evening set	2415 Jan 07 08:13	1° \mathbb{B} 35'12	
direct	2408 Sep 11 04:43	3° \mathbb{B} 03'30					
evening set	2408 Dec 13 00:09	6° \mathbb{B} 17'03		conjunction	2415 Jan 22 22:54	2° \mathbb{B} 30'07	-0°32'11
				minimum elong	2415 Jan 22 22:54	2° \mathbb{B} 30'07	0°32'11
conjunction	2408 Dec 28 16:18	7° \mathbb{B} 13'26	-0°16'00	max. Earth dist.	2415 Jan 23 16:28	2° \mathbb{B} 32'43	20.66545 AU
minimum elong	2408 Dec 28 16:18	7° \mathbb{B} 13'26	0°16'00	morning rise	2415 Feb 07 14:26	3° \mathbb{B} 25'09	
behind sun begin	2408 Dec 28 15:05	7° \mathbb{B} 13'15		retrograde	2415 May 11 05:43	6° \mathbb{B} 33'55	
behind sun end	2408 Dec 28 17:31	7° \mathbb{B} 13'36		opposition	2415 Jul 27 13:55	4° \mathbb{B} 35'02	-0°36'48
max. Earth dist.	2408 Dec 29 02:52	7° \mathbb{B} 15'00	20.28113 AU	min. Earth dist.	2415 Jul 26 20:24	4° \mathbb{B} 36'48	18.69315 AU
morning rise	2409 Jan 13 07:48	8° \mathbb{B} 09'42		direct	2415 Oct 12 09:14	2° \mathbb{B} 36'38	
retrograde	2409 Apr 15 04:35	11° \mathbb{B} 21'41		evening set	2416 Jan 11 14:53	5° \mathbb{B} 42'13	
opposition	2409 Jun 30 16:58	9° \mathbb{B} 22'20	-0°19'25				
min. Earth dist.	2409 Jun 30 05:42	9° \mathbb{B} 23'29	18.31626 AU	conjunction	2416 Jan 27 05:41	6° \mathbb{B} 36'56	-0°34'17
direct	2409 Sep 15 19:56	7° \mathbb{B} 22'01		minimum elong	2416 Jan 27 05:41	6° \mathbb{B} 36'56	0°34'17
evening set	2409 Dec 17 11:23	10° \mathbb{B} 34'22		max. Earth dist.	2416 Jan 28 00:49	6° \mathbb{B} 39'45	20.71997 AU
				morning rise	2416 Feb 11 21:24	7° \mathbb{B} 31'48	
conjunction	2410 Jan 02 03:14	11° \mathbb{B} 30'28	-0°19'03	retrograde	2416 May 14 15:44	10° \mathbb{B} 40'06	
minimum elong	2410 Jan 02 03:13	11° \mathbb{B} 30'28	0°19'03	min. Earth dist.	2416 Jul 30 07:15	8° \mathbb{B} 43'11	18.74643 AU
max. Earth dist.	2410 Jan 02 15:58	11° \mathbb{B} 32'23	20.35129 AU	opposition	2416 Jul 31 02:44	8° \mathbb{B} 41'14	-0°39'02
morning rise	2410 Jan 17 18:25	12° \mathbb{B} 26'30		direct	2416 Oct 15 21:54	6° \mathbb{B} 43'04	
retrograde	2410 Apr 19 18:32	15° \mathbb{B} 37'54		evening set	2417 Jan 14 21:09	9° \mathbb{B} 47'40	
opposition	2410 Jul 05 10:17	13° \mathbb{B} 38'43	-0°22'44				
min. Earth dist.	2410 Jul 04 21:15	13° \mathbb{B} 40'03	18.38556 AU	conjunction	2417 Jan 30 11:52	10° \mathbb{B} 42'12	-0°36'13
direct	2410 Sep 20 13:21	11° \mathbb{B} 38'49		minimum elong	2417 Jan 30 11:52	10° \mathbb{B} 42'12	0°36'14
evening set	2410 Dec 21 21:51	14° \mathbb{B} 49'58		max. Earth dist.	2417 Jan 31 07:37	10° \mathbb{B} 45'06	20.77197 AU
				morning rise	2417 Feb 15 03:56	11° \mathbb{B} 36'55	
conjunction	2411 Jan 06 13:12	15° \mathbb{B} 45'49	-0°21'58	retrograde	2417 May 19 00:42	14° \mathbb{B} 44'48	
minimum elong	2411 Jan 06 13:12	15° \mathbb{B} 45'49	0°21'58	opposition	2417 Aug 04 14:57	12° \mathbb{B} 45'57	-0°41'03
max. Earth dist.	2411 Jan 07 02:32	15° \mathbb{B} 47'48	20.41956 AU	min. Earth dist.	2417 Aug 03 19:26	12° \mathbb{B} 47'54	18.79742 AU
morning rise	2411 Jan 22 04:24	16° \mathbb{B} 41'37		direct	2417 Oct 20 07:37	10° \mathbb{B} 48'02	
retrograde	2411 Apr 24 07:21	19° \mathbb{B} 52'29		evening set	2418 Jan 19 02:46	13° \mathbb{B} 51'42	
opposition	2411 Jul 10 03:00	17° \mathbb{B} 53'26	-0°25'54				

conjunction	2418 Feb 03 17:43	14° \approx 46'05 -0°37'57	minimum elong	2424 Feb 27 22:56	8° \approx 49'16 0°44'06
minimum elong	2418 Feb 03 17:43	14° \approx 46'05 0°37'56	max. Earth dist.	2424 Feb 28 22:58	8° \approx 52'43 21.05372 AU
max. Earth dist.	2418 Feb 04 14:53	14° \approx 49'10 20.82181 AU	morning rise	2424 Mar 14 18:37	9° \approx 43'28
	2418 Feb 07 16:53	15° \approx	retrograde	2424 Jun 16 12:37	12° \approx 49'41
morning rise	2418 Feb 19 10:03	15° \approx 40'40	opposition	2424 Sep 02 13:29	10° \approx 51'06 -0°48'54
retrograde	2418 May 23 10:30	18° \approx 48'11	min. Earth dist.	2424 Sep 01 14:17	10° \approx 53'24 19.06625 AU
min. Earth dist.	2418 Aug 08 05:02	16° \approx 51'30 18.84604 AU	direct	2424 Nov 17 15:08	8° \approx 54'46
opposition	2418 Aug 09 02:31	16° \approx 49'21 -0°42'51	evening set	2425 Feb 15 09:57	11° \approx 53'51
	2418 Oct 06 10:20	15° \approx			
direct	2418 Oct 24 18:09	14° \approx 51'42	conjunction	2425 Mar 03 03:27	12° \approx 47'38 -0°44'24
	2418 Nov 11 18:10	15° \approx	minimum elong	2425 Mar 03 03:27	12° \approx 47'38 0°44'23
evening set	2419 Jan 23 07:56	17° \approx 54'30	max. Earth dist.	2425 Mar 04 02:58	12° \approx 51'00 21.07644 AU
			morning rise	2425 Mar 18 23:53	13° \approx 41'49
conjunction	2419 Feb 07 23:00	18° \approx 48'45 -0°39'29	retrograde	2425 Jun 20 19:15	16° \approx 47'58
minimum elong	2419 Feb 07 23:00	18° \approx 48'45 0°39'29	opposition	2425 Sep 06 22:02	14° \approx 49'21 -0°49'06
max. Earth dist.	2419 Feb 08 20:45	18° \approx 51'55 20.86909 AU	min. Earth dist.	2425 Sep 06 00:12	14° \approx 51'32 19.08617 AU
morning rise	2419 Feb 23 15:51	19° \approx 43'14	direct	2425 Nov 21 20:23	12° \approx 53'08
retrograde	2419 May 27 18:20	22° \approx 50'25	evening set	2426 Feb 19 13:55	15° \approx 51'48
opposition	2419 Aug 13 13:39	20° \approx 51'38 -0°44'25			
min. Earth dist.	2419 Aug 12 16:25	20° \approx 53'45 18.89206 AU	conjunction	2426 Mar 07 08:07	16° \approx 45'35 -0°44'28
direct	2419 Oct 29 02:20	18° \approx 54'14	minimum elong	2426 Mar 07 08:07	16° \approx 45'35 0°44'29
evening set	2420 Jan 27 12:45	21° \approx 56'15	max. Earth dist.	2426 Mar 08 07:31	16° \approx 48'56 21.09355 AU
			morning rise	2426 Mar 23 05:17	17° \approx 39'47
conjunction	2420 Feb 12 04:11	22° \approx 50'22 -0°40'49	retrograde	2426 Jun 25 04:04	20° \approx 45'52
minimum elong	2420 Feb 12 04:11	22° \approx 50'22 0°40'48	min. Earth dist.	2426 Sep 10 07:37	18° \approx 49'26 19.10034 AU
max. Earth dist.	2420 Feb 13 03:01	22° \approx 53'41 20.91365 AU	opposition	2426 Sep 11 06:07	18° \approx 47'11 -0°49'04
morning rise	2420 Feb 27 21:27	23° \approx 44'45	direct	2426 Nov 26 03:18	16° \approx 51'01
retrograde	2420 May 31 03:59	26° \approx 51'40	evening set	2427 Feb 23 17:50	19° \approx 49'20
opposition	2420 Aug 16 23:54	24° \approx 52'56 -0°45'46			
min. Earth dist.	2420 Aug 16 01:06	24° \approx 55'12 18.93500 AU	conjunction	2427 Mar 11 12:39	20° \approx 43'07 -0°44'21
direct	2420 Nov 01 11:24	22° \approx 55'47	minimum elong	2427 Mar 11 12:39	20° \approx 43'07 0°44'21
evening set	2421 Jan 30 17:22	25° \approx 57'05	max. Earth dist.	2427 Mar 12 11:25	20° \approx 46'23 21.10484 AU
			morning rise	2427 Mar 27 10:43	21° \approx 37'22
conjunction	2421 Feb 15 09:01	26° \approx 51'06 -0°41'57	retrograde	2427 Jun 29 10:38	24° \approx 43'25
minimum elong	2421 Feb 15 09:01	26° \approx 51'06 0°41'56	opposition	2427 Sep 15 13:58	22° \approx 44'38 -0°48'48
max. Earth dist.	2421 Feb 16 08:08	26° \approx 54'27 20.95482 AU	min. Earth dist.	2427 Sep 14 16:58	22° \approx 46'43 19.10890 AU
morning rise	2421 Mar 03 02:53	27° \approx 45'25	direct	2427 Nov 30 07:58	20° \approx 48'29
	2421 Apr 18 19:29	0° \approx	evening set	2428 Feb 27 21:44	23° \approx 46'30
retrograde	2421 Jun 04 11:02	0° \approx 52'05			
	2421 Jul 22 20:22	30° \approx	conjunction	2428 Mar 14 17:21	24° \approx 40'19 -0°44'00
min. Earth dist.	2421 Aug 20 11:50	28° \approx 55'37 18.97443 AU	minimum elong	2428 Mar 14 17:21	24° \approx 40'19 0°44'00
opposition	2421 Aug 21 10:00	28° \approx 53'25 -0°46'54	max. Earth dist.	2428 Mar 15 15:56	24° \approx 43'33 21.11084 AU
direct	2421 Nov 05 17:58	26° \approx 56'31	morning rise	2428 Mar 30 16:11	25° \approx 34'36
evening set	2422 Feb 03 21:32	29° \approx 57'10	retrograde	2428 Jul 02 18:44	28° \approx 40'38
	2422 Feb 04 17:41	0° \approx	opposition	2428 Sep 18 21:09	26° \approx 41'45 -0°48'18
			min. Earth dist.	2428 Sep 17 23:36	26° \approx 43'54 19.11234 AU
conjunction	2422 Feb 19 13:39	0° \approx 51'05 -0°42'52	direct	2428 Dec 03 14:21	24° \approx 45'35
minimum elong	2422 Feb 19 13:39	0° \approx 51'05 0°42'52	evening set	2429 Mar 03 01:44	27° \approx 43'23
max. Earth dist.	2422 Feb 20 13:33	0° \approx 54'32 20.99233 AU			
morning rise	2422 Mar 07 08:02	1° \approx 45'20	conjunction	2429 Mar 18 22:00	28° \approx 37'15 -0°43'26
retrograde	2422 Jun 08 20:35	4° \approx 51'50	minimum elong	2429 Mar 18 22:00	28° \approx 37'15 0°43'27
opposition	2422 Aug 25 19:34	2° \approx 53'12 -0°47'48	max. Earth dist.	2429 Mar 19 20:02	28° \approx 40'24 21.11188 AU
min. Earth dist.	2422 Aug 24 20:07	2° \approx 55'32 19.00982 AU	morning rise	2429 Apr 03 21:44	29° \approx 31'37
direct	2422 Nov 10 02:10	0° \approx 56'31		2429 Apr 12 13:12	0° \approx
evening set	2423 Feb 08 01:48	3° \approx 56'35	retrograde	2429 Jul 07 01:07	2° \approx 37'41
			min. Earth dist.	2429 Sep 22 08:13	0° \approx 40'41 19.11120 AU
conjunction	2423 Feb 23 18:15	4° \approx 50'26 -0°43'35	opposition	2429 Sep 23 04:22	0° \approx 38'40 -0°47'34
minimum elong	2423 Feb 23 18:15	4° \approx 50'26 0°43'34		2429 Oct 09 13:51	30° \approx
max. Earth dist.	2423 Feb 24 18:06	4° \approx 53'52 21.02542 AU	direct	2429 Dec 07 18:04	28° \approx 42'29
morning rise	2423 Mar 11 13:20	5° \approx 44'39		2430 Feb 02 02:07	0° \approx
retrograde	2423 Jun 13 03:19	8° \approx 51'00	evening set	2430 Mar 07 05:34	1° \approx 40'08
min. Earth dist.	2423 Aug 29 06:25	6° \approx 54'38 19.04065 AU			
opposition	2423 Aug 30 04:46	6° \approx 52'24 -0°48'28	conjunction	2430 Mar 23 02:43	2° \approx 34'05 -0°42'41
direct	2423 Nov 14 07:44	4° \approx 55'55	minimum elong	2430 Mar 23 02:43	2° \approx 34'05 0°42'40
evening set	2424 Feb 12 05:52	7° \approx 55'27	max. Earth dist.	2430 Mar 24 00:41	2° \approx 37'12 21.10871 AU
			morning rise	2430 Apr 08 03:19	3° \approx 28'30
conjunction	2424 Feb 27 22:56	8° \approx 49'16 -0°44'06	retrograde	2430 Jul 11 09:29	6° \approx 34'41

opposition	2430 Sep 27 11:12	4°♈35'33 -0°46'37	conjunction	2437 Apr 19 22:39	0°♏22'50 -0°31'57
min. Earth dist.	2430 Sep 26 14:28	4°♈37'38 19.10595 AU	minimum elong	2437 Apr 19 22:39	0°♏22'50 0°31'56
direct	2430 Dec 11 23:58	2°♈39'19	max. Earth dist.	2437 Apr 20 14:46	0°♏25'08 20.97544 AU
evening set	2431 Mar 11 09:53	5°♈36'55	morning rise	2437 May 06 05:57	1°♏18'19
			retrograde	2437 Aug 08 21:45	4°♏26'25
conjunction	2431 Mar 27 07:47	6°♈30'57 -0°41'43	opposition	2437 Oct 25 10:22	2°♏26'41 -0°34'04
minimum elong	2431 Mar 27 07:47	6°♈30'57 0°41'43	min. Earth dist.	2437 Oct 24 20:51	2°♏28'04 18.95787 AU
max. Earth dist.	2431 Mar 28 05:09	6°♈34'00 21.10142 AU	direct	2438 Jan 08 07:00	0°♏29'56
morning rise	2431 Apr 12 09:21	7°♈25'29	evening set	2438 Apr 08 02:32	3°♏29'20
retrograde	2431 Jul 15 15:58	10°♈31'48			
opposition	2431 Oct 01 17:53	8°♈32'34 -0°45'26	conjunction	2438 Apr 24 07:09	4°♏24'30 -0°29'42
min. Earth dist.	2431 Sep 30 22:41	8°♈34'30 19.09677 AU	minimum elong	2438 Apr 24 07:09	4°♏24'30 0°29'42
direct	2431 Dec 16 03:05	6°♈36'18	max. Earth dist.	2438 Apr 24 21:45	4°♏26'35 20.93874 AU
evening set	2432 Mar 14 14:19	9°♈33'55	morning rise	2438 May 10 15:26	5°♏20'12
			retrograde	2438 Aug 13 09:29	8°♏28'42
conjunction	2432 Mar 30 13:11	10°♈28'04 -0°40'33	opposition	2438 Oct 29 17:36	6°♏28'51 -0°31'30
minimum elong	2432 Mar 30 13:11	10°♈28'04 0°40'33	min. Earth dist.	2438 Oct 29 04:42	6°♏30'10 18.91846 AU
max. Earth dist.	2432 Mar 31 10:11	10°♈31'03 21.09042 AU	direct	2439 Jan 12 13:25	4°♏31'52
morning rise	2432 Apr 15 15:39	11°♈22'43	evening set	2439 Apr 12 10:49	7°♏31'49
retrograde	2432 Jul 19 01:03	14°♈29'13			
min. Earth dist.	2432 Oct 04 04:51	12°♈31'51 19.08380 AU	conjunction	2439 Apr 28 16:25	8°♏27'12 -0°27'18
opposition	2432 Oct 05 00:26	12°♈29'53 -0°44'03	minimum elong	2439 Apr 28 16:25	8°♏27'12 0°27'17
direct	2432 Dec 19 08:28	10°♈33'34	max. Earth dist.	2439 Apr 29 05:16	8°♏29'02 20.89665 AU
evening set	2433 Mar 18 19:03	13°♈31'18	morning rise	2439 May 15 01:40	9°♏23'08
			retrograde	2439 Aug 17 18:30	12°♏32'01
conjunction	2433 Apr 03 18:44	14°♈25'34 -0°39'12	opposition	2439 Nov 03 01:02	10°♏32'00 -0°28'45
minimum elong	2433 Apr 03 18:44	14°♈25'34 0°39'12	min. Earth dist.	2439 Nov 02 14:32	10°♏33'05 18.87376 AU
max. Earth dist.	2433 Apr 04 14:59	14°♈28'27 21.07550 AU	direct	2440 Jan 16 18:53	8°♏34'47
morning rise	2433 Apr 19 22:10	15°♈20'22	evening set	2440 Apr 15 19:38	11°♏35'18
retrograde	2433 Jul 23 08:14	18°♈27'06			
opposition	2433 Oct 09 07:10	16°♈27'42 -0°42'27	conjunction	2440 May 02 02:18	12°♏30'55 -0°24'45
min. Earth dist.	2433 Oct 08 13:12	16°♈29'31 19.06698 AU	minimum elong	2440 May 02 02:18	12°♏30'55 0°24'45
direct	2433 Dec 23 11:54	14°♈31'20	max. Earth dist.	2440 May 02 13:21	12°♏32'30 20.84967 AU
evening set	2434 Mar 23 00:12	17°♈29'15	morning rise	2440 May 18 12:29	13°♏27'04
				2440 Jun 17 11:47	15°♏
conjunction	2434 Apr 08 00:54	18°♈23'40 -0°37'39	retrograde	2440 Aug 21 06:53	16°♏36'24
minimum elong	2434 Apr 08 00:54	18°♈23'40 0°37'40		2440 Oct 27 15:11	15°♏♏
max. Earth dist.	2434 Apr 08 20:34	18°♈26'28 21.05690 AU	opposition	2440 Nov 06 08:40	14°♏36'11 -0°25'51
morning rise	2434 Apr 24 05:17	19°♈18'36	min. Earth dist.	2440 Nov 05 22:54	14°♏37'11 18.82437 AU
retrograde	2434 Jul 27 17:59	22°♈25'38	direct	2441 Jan 20 02:32	12°♏38'39
opposition	2434 Oct 13 13:43	20°♈26'09 -0°40'39		2441 Apr 08 01:28	15°♏
min. Earth dist.	2434 Oct 12 19:39	20°♈27'58 19.04634 AU	evening set	2441 Apr 20 04:59	15°♏39'48
direct	2434 Dec 27 16:55	18°♈29'43			
evening set	2435 Mar 27 05:55	21°♈27'54	conjunction	2441 May 06 12:37	16°♏35'41 -0°22'03
			minimum elong	2441 May 06 12:37	16°♏35'41 0°22'03
conjunction	2435 Apr 12 07:32	22°♈22'29 -0°35'56	max. Earth dist.	2441 May 06 22:11	16°♏37'03 20.79810 AU
minimum elong	2435 Apr 12 07:32	22°♈22'29 0°35'56	morning rise	2441 May 22 23:43	17°♏32'05
max. Earth dist.	2435 Apr 13 02:09	22°♈25'08 21.03419 AU	retrograde	2441 Aug 25 16:24	20°♏41'52
morning rise	2435 Apr 28 12:57	23°♈17'36	opposition	2441 Nov 10 16:40	18°♏41'25 -0°22'49
retrograde	2435 Aug 01 02:22	26°♈24'56	min. Earth dist.	2441 Nov 10 09:08	18°♏42'12 18.77081 AU
opposition	2435 Oct 17 20:31	24°♈25'24 -0°38'39	direct	2442 Jan 24 08:28	16°♏43'34
min. Earth dist.	2435 Oct 17 04:27	24°♈27'01 19.02148 AU	evening set	2442 Apr 24 15:07	19°♏45'25
direct	2435 Dec 31 20:55	22°♈28'53			
evening set	2436 Mar 30 12:10	25°♈27'25	conjunction	2442 May 10 23:47	20°♏41'34 -0°19'14
			minimum elong	2442 May 10 23:47	20°♏41'34 0°19'14
conjunction	2436 Apr 15 14:48	26°♈22'10 -0°34'02	max. Earth dist.	2442 May 11 07:36	20°♏42'41 20.74292 AU
minimum elong	2436 Apr 15 14:48	26°♈22'10 0°34'02	morning rise	2442 May 27 11:49	21°♏38'12
max. Earth dist.	2436 Apr 16 08:21	26°♈24'40 21.00722 AU	retrograde	2442 Aug 30 05:20	24°♏48'28
morning rise	2436 May 01 21:08	27°♈17'28	opposition	2442 Nov 15 00:42	22°♏47'48 -0°19'38
	2436 Jul 03 04:53	0°♏	min. Earth dist.	2442 Nov 14 17:57	22°♏48'30 18.71397 AU
retrograde	2436 Aug 04 12:50	0°♏25'10	direct	2443 Jan 28 17:14	20°♏49'36
	2436 Sep 06 06:57	30°♏♈	evening set	2443 Apr 29 02:03	23°♏52'14
min. Earth dist.	2436 Oct 20 11:28	28°♈27'09 18.99213 AU			
opposition	2436 Oct 21 03:14	28°♈25'33 -0°36'27	conjunction	2443 May 15 11:43	24°♏48'39 -0°16'19
direct	2437 Jan 04 02:13	26°♈28'56	minimum elong	2443 May 15 11:43	24°♏48'39 0°16'19
evening set	2437 Apr 03 19:06	29°♈27'53	max. Earth dist.	2443 May 15 18:09	24°♏49'34 20.68455 AU
	2437 Apr 13 06:45	0°♏	morning rise	2443 Jun 01 00:34	25°♏45'34

retrograde	2443 Sep 03 15:54	28° 8 56'20	direct	2449 Feb 22 00:20	15° II 57'31	
opposition	2443 Nov 19 09:16	26° 8 55'28 -0°16'20	evening set	2449 May 24 13:24	19° II 06'19	
min. Earth dist.	2443 Nov 19 04:36	26° 8 55'57 18.65429 AU				
direct	2444 Feb 01 23:54	24° 8 56'54	conjunction	2449 Jun 10 04:23	20° II 04'35	0°02'57
evening set	2444 May 02 13:40	28° 8 00'23	minimum elong	2449 Jun 10 04:22	20° II 04'35	0°02'57
			behind sun begin	2449 Jun 09 21:38	20° II 03'37	
conjunction	2444 May 19 00:15	28° 8 57'05 -0°13'17	behind sun end	2449 Jun 10 11:06	20° II 05'33	
minimum elong	2444 May 19 00:15	28° 8 57'05 0°13'17	max. Earth dist.	2449 Jun 10 01:21	20° II 04'11	20.29965 AU
behind sun begin	2444 May 18 20:28	28° 8 56'33	morning rise	2449 Jun 26 21:15	21° II 03'10	
behind sun end	2444 May 19 04:03	28° 8 57'38	retrograde	2449 Sep 29 05:24	24° II 17'42	
max. Earth dist.	2444 May 19 04:50	28° 8 57'44 20.62382 AU	opposition	2449 Dec 13 22:12	22° II 16'01	0°05'03
morning rise	2444 Jun 04 13:56	29° 8 54'16	min. Earth dist.	2449 Dec 14 01:49	22° II 15'37	18.26570 AU
	2444 Jun 06 06:42	0° II	direct	2450 Feb 26 12:11	20° II 15'26	
retrograde	2444 Sep 07 05:33	3° II 05'35	evening set	2450 May 29 06:58	23° II 25'28	
opposition	2444 Nov 22 18:03	1° II 04'31 -0°12'56				
min. Earth dist.	2444 Nov 22 14:06	1° II 04'56 18.59255 AU	conjunction	2450 Jun 14 22:33	24° II 24'03	0°06'16
	2444 Dec 19 23:54	30° 8	minimum elong	2450 Jun 14 22:33	24° II 24'03	0°06'15
direct	2445 Feb 05 09:23	29° 8 05'36	behind sun begin	2450 Jun 14 16:11	24° II 23'08	
	2445 Mar 23 15:42	0° II	behind sun end	2450 Jun 15 04:56	24° II 24'58	
evening set	2445 May 07 02:08	2° II 10'01	max. Earth dist.	2450 Jun 14 16:42	24° II 23'13	20.23201 AU
			morning rise	2450 Jul 01 16:03	25° II 22'55	
conjunction	2445 May 23 13:40	3° II 07'01 -0°10'11	retrograde	2450 Oct 03 22:02	28° II 38'08	
minimum elong	2445 May 23 13:40	3° II 07'01 0°10'12	opposition	2450 Dec 18 10:26	26° II 36'21	0°08'45
behind sun begin	2445 May 23 08:21	3° II 06'16	min. Earth dist.	2450 Dec 18 15:36	26° II 35'48	18.19752 AU
behind sun end	2445 May 23 19:00	3° II 07'46	direct	2451 Mar 03 01:06	24° II 35'24	
max. Earth dist.	2445 May 23 17:07	3° II 07'30 20.56116 AU	evening set	2451 Jun 03 01:33	27° II 46'43	
morning rise	2445 Jun 09 04:03	4° II 04'28				
retrograde	2445 Sep 11 17:37	7° II 16'22	conjunction	2451 Jun 19 17:54	28° II 45'37	0°09'34
opposition	2445 Nov 27 03:24	5° II 15'08 -0°09'27	minimum elong	2451 Jun 19 17:54	28° II 45'37	0°09'34
min. Earth dist.	2445 Nov 27 01:22	5° II 15'20 18.52916 AU	behind sun begin	2451 Jun 19 12:21	28° II 44'49	
direct	2446 Feb 09 17:22	3° II 15'52	behind sun end	2451 Jun 19 23:28	28° II 46'26	
evening set	2446 May 11 15:28	6° II 21'16	max. Earth dist.	2451 Jun 19 10:53	28° II 44'36	20.16310 AU
			morning rise	2451 Jul 06 11:37	29° II 44'46	
conjunction	2446 May 28 03:55	7° II 18'35 -0°07'01		2451 Jul 10 21:45	0° III	
minimum elong	2446 May 28 03:54	7° II 18'35 0°07'00	retrograde	2451 Oct 08 15:12	3° III 00'39	
behind sun begin	2446 May 27 21:41	7° II 17'42	opposition	2451 Dec 22 23:32	0° III 58'46	0°12'25
behind sun end	2446 May 28 10:07	7° II 19'28	min. Earth dist.	2451 Dec 23 06:32	0° III 58'02	18.12804 AU
max. Earth dist.	2446 May 28 05:18	7° II 18'46 20.49726 AU		2452 Jan 15 22:31	30° 8 II	
morning rise	2446 Jun 13 19:07	8° II 16'19	direct	2452 Mar 06 14:43	28° II 57'27	
retrograde	2446 Sep 16 08:19	11° II 28'50		2452 Apr 25 01:32	0° III	
opposition	2446 Dec 01 13:11	9° II 27'27 -0°05'54	evening set	2452 Jun 06 21:04	2° III 10'01	
min. Earth dist.	2446 Dec 01 11:59	9° II 27'34 18.46466 AU				
direct	2447 Feb 14 03:25	7° II 27'50	conjunction	2452 Jun 23 13:51	3° III 09'14	0°12'50
evening set	2447 May 16 05:49	10° II 34'19	minimum elong	2452 Jun 23 13:51	3° III 09'14	0°12'50
			behind sun begin	2452 Jun 23 09:47	3° III 08'38	
conjunction	2447 Jun 01 19:10	11° II 31'57 -0°03'47	behind sun end	2452 Jun 23 17:55	3° III 09'49	
minimum elong	2447 Jun 01 19:11	11° II 31'57 0°03'47	max. Earth dist.	2452 Jun 23 03:45	3° III 07'44	20.09315 AU
behind sun begin	2447 Jun 01 12:31	11° II 31'00	morning rise	2452 Jul 10 08:01	4° III 08'39	
behind sun end	2447 Jun 02 01:51	11° II 32'54	retrograde	2452 Oct 12 09:16	7° III 25'12	
max. Earth dist.	2447 Jun 01 19:29	11° II 31'58 20.43217 AU	opposition	2452 Dec 26 13:19	5° III 23'10	0°16'02
morning rise	2447 Jun 18 10:56	12° II 29'57	min. Earth dist.	2452 Dec 26 21:57	5° III 22'15	18.05771 AU
retrograde	2447 Sep 20 22:11	15° II 43'07	direct	2453 Mar 11 05:29	3° III 21'25	
opposition	2447 Dec 05 23:31	13° II 41'36 -0°02'17	evening set	2453 Jun 11 17:30	6° III 35'16	
min. Earth dist.	2447 Dec 06 00:11	13° II 41'32 18.39912 AU				
direct	2448 Feb 18 13:17	11° II 41'41	conjunction	2453 Jun 28 10:58	7° III 34'47	0°16'04
evening set	2448 May 19 21:11	14° II 49'18	minimum elong	2453 Jun 28 10:58	7° III 34'47	0°16'04
			max. Earth dist.	2453 Jun 27 23:58	7° III 33'09	20.02245 AU
conjunction	2448 Jun 05 11:18	15° II 47'14 -0°00'27	morning rise	2453 Jul 15 05:11	8° III 34'28	
minimum elong	2448 Jun 05 11:18	15° II 47'14 0°00'27	retrograde	2453 Oct 17 03:55	11° III 51'38	
behind sun begin	2448 Jun 05 04:34	15° II 46'17	opposition	2453 Dec 31 03:40	9° III 49'28	0°19'36
behind sun end	2448 Jun 05 18:01	15° II 48'12	min. Earth dist.	2453 Dec 31 13:49	9° III 48'23	17.98687 AU
max. Earth dist.	2448 Jun 05 09:15	15° II 47'00 20.36637 AU	direct	2454 Mar 15 20:47	7° III 47'16	
morning rise	2448 Jun 22 03:46	16° II 45'32	evening set	2454 Jun 16 15:01	11° III 02'24	
asc. node	2448 Jul 23 21:15	18° II 25'32				
retrograde	2448 Sep 24 13:39	19° II 59'23	conjunction	2454 Jul 03 08:47	12° III 02'13	0°19'13
opposition	2448 Dec 09 10:30	17° II 57'46 0°01'23	minimum elong	2454 Jul 03 08:47	12° III 02'13	0°19'14
min. Earth dist.	2448 Dec 09 12:14	17° II 57'35 18.33291 AU	max. Earth dist.	2454 Jul 02 18:43	12° III 00'07	19.95172 AU

morning rise	2454 Jul 20 03:20	13° $\mathring{\text{O}}$ 02'10	conjunction	2461 Aug 05 14:05	14° $\mathring{\text{O}}$ 02'33	0°37'23	
retrograde	2454 Oct 21 23:13	16° $\mathring{\text{O}}$ 19'56	minimum elong	2461 Aug 05 14:05	14° $\mathring{\text{O}}$ 02'33	0°37'23	
opposition	2455 Jan 04 18:46	14° $\mathring{\text{O}}$ 17'35	0°23'04	max. Earth dist.	2461 Aug 04 16:36	13° $\mathring{\text{O}}$ 59'15	19.51739 AU
min. Earth dist.	2455 Jan 05 06:40	14° $\mathring{\text{O}}$ 16'19	17.91642 AU		2461 Aug 21 05:12	15° $\mathring{\text{O}}$	
direct	2455 Mar 20 12:50	12° $\mathring{\text{O}}$ 14'56		morning rise	2461 Aug 22 06:59	15° $\mathring{\text{O}}$ 03'53	
evening set	2455 Jun 21 13:15	15° $\mathring{\text{O}}$ 31'20		retrograde	2461 Nov 23 05:14	18° $\mathring{\text{O}}$ 25'18	
				opposition	2462 Feb 04 23:51	16° $\mathring{\text{O}}$ 22'16	0°42'41
conjunction	2455 Jul 08 07:32	16° $\mathring{\text{O}}$ 31'27	0°22'17	min. Earth dist.	2462 Feb 05 17:50	16° $\mathring{\text{O}}$ 20'18	17.49394 AU
minimum elong	2455 Jul 08 07:32	16° $\mathring{\text{O}}$ 31'27	0°22'17		2462 Mar 11 04:05	15° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
max. Earth dist.	2455 Jul 07 16:56	16° $\mathring{\text{O}}$ 29'15	19.88158 AU	direct	2462 Apr 21 05:48	14° $\mathring{\text{O}}$ 16'59	
morning rise	2455 Jul 25 01:57	17° $\mathring{\text{O}}$ 31'38			2462 May 31 17:00	15° $\mathring{\text{O}}$	
retrograde	2455 Oct 26 19:26	20° $\mathring{\text{O}}$ 49'58		evening set	2462 Jul 24 23:19	17° $\mathring{\text{O}}$ 41'55	
opposition	2456 Jan 09 10:27	18° $\mathring{\text{O}}$ 47'29	0°26'25				
min. Earth dist.	2456 Jan 09 23:22	18° $\mathring{\text{O}}$ 46'05	17.84691 AU	conjunction	2462 Aug 10 17:27	18° $\mathring{\text{O}}$ 43'37	0°39'11
direct	2456 Mar 24 06:04	16° $\mathring{\text{O}}$ 44'22		minimum elong	2462 Aug 10 17:27	18° $\mathring{\text{O}}$ 43'37	0°39'11
evening set	2456 Jun 25 12:28	20° $\mathring{\text{O}}$ 02'03		max. Earth dist.	2462 Aug 09 18:48	18° $\mathring{\text{O}}$ 40'07	19.47120 AU
				morning rise	2462 Aug 27 09:46	19° $\mathring{\text{O}}$ 45'04	
conjunction	2456 Jul 12 06:51	21° $\mathring{\text{O}}$ 02'25	0°25'13	retrograde	2462 Nov 28 03:11	23° $\mathring{\text{O}}$ 06'56	
minimum elong	2456 Jul 12 06:51	21° $\mathring{\text{O}}$ 02'25	0°25'14	opposition	2463 Feb 09 20:48	21° $\mathring{\text{O}}$ 03'56	0°44'33
max. Earth dist.	2456 Jul 11 13:34	20° $\mathring{\text{O}}$ 59'48	19.81294 AU	min. Earth dist.	2463 Feb 10 16:26	21° $\mathring{\text{O}}$ 01'47	17.45010 AU
morning rise	2456 Jul 29 01:22	22° $\mathring{\text{O}}$ 02'51		direct	2463 Apr 26 03:29	18° $\mathring{\text{O}}$ 58'26	
retrograde	2456 Oct 30 15:21	25° $\mathring{\text{O}}$ 21'45		evening set	2463 Jul 30 03:31	22° $\mathring{\text{O}}$ 24'28	
opposition	2457 Jan 13 02:55	23° $\mathring{\text{O}}$ 19'05	0°29'37				
min. Earth dist.	2457 Jan 13 17:30	23° $\mathring{\text{O}}$ 17'30	17.77944 AU	conjunction	2463 Aug 15 21:15	23° $\mathring{\text{O}}$ 26'17	0°40'44
direct	2457 Mar 28 22:59	21° $\mathring{\text{O}}$ 15'31		minimum elong	2463 Aug 15 21:15	23° $\mathring{\text{O}}$ 26'17	0°40'45
evening set	2457 Jun 30 12:13	24° $\mathring{\text{O}}$ 34'27		max. Earth dist.	2463 Aug 14 22:06	23° $\mathring{\text{O}}$ 22'42	19.42955 AU
				morning rise	2463 Sep 01 12:54	24° $\mathring{\text{O}}$ 27'50	
conjunction	2457 Jul 17 06:58	25° $\mathring{\text{O}}$ 35'06	0°28'01	retrograde	2463 Dec 03 04:21	27° $\mathring{\text{O}}$ 50'05	
minimum elong	2457 Jul 17 06:58	25° $\mathring{\text{O}}$ 35'06	0°28'01	opposition	2464 Feb 14 18:20	25° $\mathring{\text{O}}$ 47'09	0°46'09
max. Earth dist.	2457 Jul 16 13:31	25° $\mathring{\text{O}}$ 32'27	19.74662 AU	min. Earth dist.	2464 Feb 15 13:35	25° $\mathring{\text{O}}$ 45'02	17.41061 AU
morning rise	2457 Aug 03 01:16	26° $\mathring{\text{O}}$ 35'44		direct	2464 Apr 30 04:53	23° $\mathring{\text{O}}$ 41'28	
retrograde	2457 Nov 04 13:11	29° $\mathring{\text{O}}$ 55'11		evening set	2464 Aug 03 08:17	27° $\mathring{\text{O}}$ 08'29	
opposition	2458 Jan 17 20:02	27° $\mathring{\text{O}}$ 52'23	0°32'39	max. Earth dist.	2464 Aug 19 01:53	28° $\mathring{\text{O}}$ 06'45	19.39207 AU
min. Earth dist.	2458 Jan 18 11:08	27° $\mathring{\text{O}}$ 50'44	17.71450 AU				
direct	2458 Apr 02 18:31	25° $\mathring{\text{O}}$ 48'23		conjunction	2464 Aug 20 01:34	28° $\mathring{\text{O}}$ 10'26	0°42'01
evening set	2458 Jul 05 13:07	29° $\mathring{\text{O}}$ 08'34		minimum elong	2464 Aug 20 01:34	28° $\mathring{\text{O}}$ 10'26	0°42'02
	2458 Jul 19 17:48	0° $\mathring{\text{O}}$		morning rise	2464 Sep 05 16:24	29° $\mathring{\text{O}}$ 12'04	
conjunction	2458 Jul 22 07:48	0° $\mathring{\text{O}}$ 09'27	0°30'39		2464 Sep 19 04:55	0° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
minimum elong	2458 Jul 22 07:48	0° $\mathring{\text{O}}$ 09'27	0°30'39	retrograde	2464 Dec 07 03:10	2° $\mathring{\text{R}}$ 34'39	
max. Earth dist.	2458 Jul 21 12:04	0° $\mathring{\text{O}}$ 06'27	19.68321 AU	opposition	2465 Feb 18 16:41	0° $\mathring{\text{R}}$ 31'45	0°47'26
morning rise	2458 Aug 08 01:58	1° $\mathring{\text{O}}$ 10'18		min. Earth dist.	2465 Feb 19 13:32	0° $\mathring{\text{R}}$ 29'28	17.37536 AU
retrograde	2458 Nov 09 09:16	4° $\mathring{\text{O}}$ 30'16		direct	2465 Mar 02 21:07	30° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
opposition	2459 Jan 22 13:52	2° $\mathring{\text{O}}$ 27'20	0°35'30		2465 May 05 04:22	28° $\mathring{\text{O}}$ 25'53	
min. Earth dist.	2459 Jan 23 06:37	2° $\mathring{\text{O}}$ 25'31	17.65299 AU	evening set	2465 Jul 05 06:42	0° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
direct	2459 Apr 07 12:49	0° $\mathring{\text{O}}$ 22'56		max. Earth dist.	2465 Aug 08 13:29	1° $\mathring{\text{R}}$ 53'49	
evening set	2459 Jul 10 14:35	3° $\mathring{\text{O}}$ 44'21			2465 Aug 24 05:31	2° $\mathring{\text{R}}$ 52'00	19.35891 AU
				conjunction	2465 Aug 25 06:10	2° $\mathring{\text{R}}$ 55'51	0°43'02
conjunction	2459 Jul 27 09:23	4° $\mathring{\text{O}}$ 45'29	0°33'06	minimum elong	2465 Aug 25 06:10	2° $\mathring{\text{R}}$ 55'51	0°43'01
minimum elong	2459 Jul 27 09:22	4° $\mathring{\text{O}}$ 45'29	0°33'06	morning rise	2465 Sep 10 20:19	3° $\mathring{\text{R}}$ 57'32	
max. Earth dist.	2459 Jul 26 13:37	4° $\mathring{\text{O}}$ 42'27	19.62355 AU	retrograde	2465 Dec 12 04:49	7° $\mathring{\text{R}}$ 20'23	
morning rise	2459 Aug 13 03:07	5° $\mathring{\text{O}}$ 46'30		opposition	2466 Feb 23 15:36	5° $\mathring{\text{R}}$ 17'32	0°48'25
retrograde	2459 Nov 14 08:17	9° $\mathring{\text{O}}$ 06'58		min. Earth dist.	2466 Feb 24 11:58	5° $\mathring{\text{R}}$ 15'18	17.34424 AU
opposition	2460 Jan 27 08:28	7° $\mathring{\text{O}}$ 03'58	0°38'08	direct	2466 May 10 07:22	3° $\mathring{\text{R}}$ 11'29	
min. Earth dist.	2460 Jan 28 01:11	7° $\mathring{\text{O}}$ 02'08	17.59540 AU	evening set	2466 Aug 13 19:00	6° $\mathring{\text{R}}$ 40'13	
direct	2460 Apr 11 10:23	4° $\mathring{\text{O}}$ 59'13		max. Earth dist.	2466 Aug 29 10:37	7° $\mathring{\text{R}}$ 38'29	19.32980 AU
evening set	2460 Jul 14 16:43	8° $\mathring{\text{O}}$ 21'50					
				conjunction	2466 Aug 30 11:06	7° $\mathring{\text{R}}$ 42'19	0°43'44
conjunction	2460 Jul 31 11:18	9° $\mathring{\text{O}}$ 23'10	0°35'21	minimum elong	2466 Aug 30 11:06	7° $\mathring{\text{R}}$ 42'19	0°43'45
minimum elong	2460 Jul 31 11:18	9° $\mathring{\text{O}}$ 23'10	0°35'20	morning rise	2466 Sep 16 00:13	8° $\mathring{\text{R}}$ 44'01	
max. Earth dist.	2460 Jul 30 13:56	9° $\mathring{\text{O}}$ 19'53	19.56811 AU	retrograde	2466 Dec 17 04:35	12° $\mathring{\text{R}}$ 07'03	
morning rise	2460 Aug 17 04:42	10° $\mathring{\text{O}}$ 24'21		opposition	2467 Feb 28 15:12	10° $\mathring{\text{R}}$ 04'15	0°49'03
retrograde	2460 Nov 18 05:08	13° $\mathring{\text{O}}$ 45'19		min. Earth dist.	2467 Mar 01 12:49	10° $\mathring{\text{R}}$ 01'52	17.31737 AU
opposition	2461 Jan 31 03:56	11° $\mathring{\text{O}}$ 42'17	0°40'32	direct	2467 May 15 08:31	7° $\mathring{\text{R}}$ 58'03	
min. Earth dist.	2461 Jan 31 22:09	11° $\mathring{\text{O}}$ 40'17	17.54237 AU	evening set	2467 Aug 19 00:43	11° $\mathring{\text{R}}$ 27'27	
direct	2461 Apr 16 06:27	9° $\mathring{\text{O}}$ 37'14					
evening set	2461 Jul 19 19:36	13° $\mathring{\text{O}}$ 01'02		conjunction	2467 Sep 04 15:59	12° $\mathring{\text{R}}$ 29'35	0°44'09

minimum elong	2467 Sep 04 15:59	12° <u>♏</u> 29'35	0°44'09	opposition	2474 Apr 02 22:16	13° <u>♊</u> 39'01	0°43'56
max. Earth dist.	2467 Sep 03 14:28	12° <u>♏</u> 25'35	19.30527 AU	min. Earth dist.	2474 Apr 03 16:11	13° <u>♊</u> 37'04	17.28244 AU
morning rise	2467 Sep 21 04:19	13° <u>♏</u> 31'18		direct	2474 Jun 18 09:51	11° <u>♊</u> 32'31	
retrograde	2467 Dec 22 06:28	16° <u>♏</u> 54'28		evening set	2474 Sep 22 11:12	15° <u>♊</u> 03'18	
opposition	2468 Mar 04 15:13	14° <u>♏</u> 51'41	0°49'20				
min. Earth dist.	2468 Mar 05 12:08	14° <u>♏</u> 49'23	17.29523 AU	conjunction	2474 Oct 08 19:54	16° <u>♊</u> 04'51	0°38'30
direct	2468 May 19 12:11	12° <u>♏</u> 45'20		minimum elong	2474 Oct 08 19:54	16° <u>♊</u> 04'51	0°38'30
evening set	2468 Aug 23 06:11	16° <u>♏</u> 15'18		max. Earth dist.	2474 Oct 08 00:36	16° <u>♊</u> 01'48	19.29173 AU
				morning rise	2474 Oct 25 00:43	17° <u>♊</u> 05'50	
conjunction	2468 Sep 08 20:49	17° <u>♏</u> 17'26	0°44'15	retrograde	2475 Jan 24 08:47	20° <u>♊</u> 28'09	
minimum elong	2468 Sep 08 20:49	17° <u>♏</u> 17'26	0°44'15	opposition	2475 Apr 08 00:08	18° <u>♊</u> 25'52	0°41'54
max. Earth dist.	2468 Sep 07 20:21	17° <u>♏</u> 13'36	19.28552 AU	min. Earth dist.	2475 Apr 08 16:26	18° <u>♊</u> 24'06	17.30322 AU
morning rise	2468 Sep 25 08:02	18° <u>♏</u> 19'07		direct	2475 Jun 23 14:54	16° <u>♊</u> 19'33	
retrograde	2468 Dec 26 06:57	21° <u>♏</u> 42'20		evening set	2475 Sep 27 14:36	19° <u>♊</u> 50'04	
opposition	2469 Mar 09 15:45	19° <u>♏</u> 39'36	0°49'17				
min. Earth dist.	2469 Mar 10 13:19	19° <u>♏</u> 37'14	17.27802 AU	conjunction	2475 Oct 13 22:06	20° <u>♊</u> 51'25	0°36'33
direct	2469 May 24 13:59	17° <u>♏</u> 33'08		minimum elong	2475 Oct 13 22:06	20° <u>♊</u> 51'25	0°36'33
evening set	2469 Aug 28 11:54	21° <u>♏</u> 03'32		max. Earth dist.	2475 Oct 13 03:40	20° <u>♊</u> 48'30	19.31582 AU
max. Earth dist.	2469 Sep 13 00:11	22° <u>♏</u> 01'39	19.27105 AU	morning rise	2475 Oct 30 01:52	21° <u>♊</u> 52'13	
				retrograde	2476 Jan 29 07:43	25° <u>♊</u> 14'14	
conjunction	2469 Sep 14 01:31	22° <u>♏</u> 05'38	0°44'02	opposition	2476 Apr 12 02:03	23° <u>♊</u> 12'07	0°39'36
minimum elong	2469 Sep 14 01:31	22° <u>♏</u> 05'38	0°44'03	min. Earth dist.	2476 Apr 12 17:43	23° <u>♊</u> 10'25	17.33044 AU
morning rise	2469 Sep 30 11:54	23° <u>♏</u> 07'17		direct	2476 Jun 27 18:21	21° <u>♊</u> 06'01	
retrograde	2469 Dec 31 08:25	26° <u>♏</u> 30'29		evening set	2476 Oct 01 17:11	24° <u>♊</u> 36'09	
opposition	2470 Mar 14 16:24	24° <u>♏</u> 27'45	0°48'53				
min. Earth dist.	2470 Mar 15 13:14	24° <u>♏</u> 25'28	17.26633 AU	conjunction	2476 Oct 17 23:40	25° <u>♊</u> 37'18	0°34'22
direct	2470 May 29 17:53	22° <u>♏</u> 21'10		minimum elong	2476 Oct 17 23:40	25° <u>♊</u> 37'18	0°34'23
evening set	2470 Sep 02 17:16	25° <u>♏</u> 51'54		max. Earth dist.	2476 Oct 17 07:07	25° <u>♊</u> 34'41	19.34598 AU
max. Earth dist.	2470 Sep 18 06:30	26° <u>♏</u> 50'14	19.26220 AU	morning rise	2476 Nov 03 02:23	26° <u>♊</u> 37'54	
				retrograde	2477 Feb 02 08:03	29° <u>♊</u> 59'32	
conjunction	2470 Sep 19 06:08	26° <u>♏</u> 53'57	0°43'31	opposition	2477 Apr 17 03:54	27° <u>♊</u> 57'38	0°37'01
minimum elong	2470 Sep 19 06:08	26° <u>♏</u> 53'57	0°43'31	min. Earth dist.	2477 Apr 17 17:40	27° <u>♊</u> 56'09	17.36312 AU
morning rise	2470 Oct 05 15:18	27° <u>♏</u> 55'31		direct	2477 Jul 02 23:13	25° <u>♊</u> 51'48	
	2470 Nov 12 08:45	0° <u>♊</u>		evening set	2477 Oct 06 19:22	29° <u>♊</u> 21'26	
retrograde	2471 Jan 05 09:03	1° <u>♊</u> 18'38			2477 Oct 17 02:51	0° <u>♏</u>	
	2471 Mar 02 13:25	30° <u>♏</u>		max. Earth dist.	2477 Oct 22 09:24	0° <u>♏</u> 19'57	19.38121 AU
opposition	2471 Mar 19 17:37	29° <u>♏</u> 15'57	0°48'09				
min. Earth dist.	2471 Mar 20 14:20	29° <u>♏</u> 13'41	17.26044 AU	conjunction	2477 Oct 23 00:41	0° <u>♏</u> 22'21	0°31'57
direct	2471 Jun 03 20:37	27° <u>♏</u> 09'19		minimum elong	2477 Oct 23 00:41	0° <u>♏</u> 22'21	0°31'57
	2471 Aug 27 18:56	0° <u>♊</u>		morning rise	2477 Nov 08 02:17	1° <u>♏</u> 22'44	
evening set	2471 Sep 07 22:21	0° <u>♊</u> 40'13		retrograde	2478 Feb 07 06:14	4° <u>♏</u> 43'57	
max. Earth dist.	2471 Sep 23 10:10	1° <u>♊</u> 38'25	19.25949 AU	opposition	2478 Apr 22 05:49	2° <u>♏</u> 42'15	0°34'12
				min. Earth dist.	2478 Apr 22 19:13	2° <u>♏</u> 40'49	17.40077 AU
conjunction	2471 Sep 24 10:03	1° <u>♊</u> 42'11	0°42'42	direct	2478 Jul 08 01:28	0° <u>♏</u> 36'41	
minimum elong	2471 Sep 24 10:03	1° <u>♊</u> 42'11	0°42'42	evening set	2478 Oct 11 20:49	4° <u>♏</u> 05'44	
morning rise	2471 Oct 10 18:17	2° <u>♊</u> 43'38		max. Earth dist.	2478 Oct 27 11:05	5° <u>♏</u> 04'12	19.42117 AU
retrograde	2472 Jan 10 09:26	6° <u>♊</u> 06'39					
opposition	2472 Mar 23 19:00	4° <u>♊</u> 03'59	0°47'04	conjunction	2478 Oct 28 00:59	5° <u>♏</u> 06'23	0°29'20
min. Earth dist.	2472 Mar 24 14:46	4° <u>♊</u> 01'49	17.26103 AU	minimum elong	2478 Oct 28 00:59	5° <u>♏</u> 06'23	0°29'20
direct	2472 Jun 08 01:11	1° <u>♊</u> 57'19		morning rise	2478 Nov 13 01:35	6° <u>♏</u> 06'32	
evening set	2472 Sep 12 02:59	5° <u>♊</u> 28'18		retrograde	2479 Feb 12 06:34	9° <u>♏</u> 27'17	
				opposition	2479 Apr 27 07:34	7° <u>♏</u> 25'47	0°31'10
conjunction	2472 Sep 28 13:50	6° <u>♊</u> 30'09	0°41'35	min. Earth dist.	2479 Apr 27 18:44	7° <u>♏</u> 24'35	17.44269 AU
minimum elong	2472 Sep 28 13:50	6° <u>♊</u> 30'09	0°41'34	direct	2479 Jul 13 06:08	5° <u>♏</u> 20'29	
max. Earth dist.	2472 Sep 27 16:08	6° <u>♊</u> 26'43	19.26339 AU	evening set	2479 Oct 16 21:19	8° <u>♏</u> 48'48	
morning rise	2472 Oct 14 20:51	7° <u>♊</u> 31'28					
retrograde	2473 Jan 14 09:22	10° <u>♊</u> 54'17		conjunction	2479 Nov 02 00:25	9° <u>♏</u> 49'12	0°26'31
opposition	2473 Mar 28 20:30	8° <u>♊</u> 51'42	0°45'39	minimum elong	2479 Nov 02 00:26	9° <u>♏</u> 49'12	0°26'31
min. Earth dist.	2473 Mar 29 15:20	8° <u>♊</u> 49'39	17.26824 AU	max. Earth dist.	2479 Nov 01 12:21	9° <u>♏</u> 47'18	19.46503 AU
direct	2473 Jun 13 05:13	6° <u>♊</u> 45'06		morning rise	2479 Nov 17 23:56	10° <u>♏</u> 49'06	
evening set	2473 Sep 17 07:26	10° <u>♊</u> 16'01		retrograde	2480 Feb 17 03:31	14° <u>♏</u> 09'20	
				opposition	2480 May 01 09:13	12° <u>♏</u> 08'01	0°27'55
conjunction	2473 Oct 03 17:06	11° <u>♊</u> 17'44	0°40'10	min. Earth dist.	2480 May 01 20:04	12° <u>♏</u> 06'52	17.48839 AU
minimum elong	2473 Oct 03 17:06	11° <u>♊</u> 17'44	0°40'10	direct	2480 Jul 17 07:32	10° <u>♏</u> 03'01	
max. Earth dist.	2473 Oct 02 19:37	11° <u>♊</u> 14'20	19.27410 AU	evening set	2480 Oct 20 21:10	13° <u>♏</u> 30'31	
morning rise	2473 Oct 19 23:07	12° <u>♊</u> 18'54					
retrograde	2474 Jan 19 08:52	15° <u>♊</u> 41'30		conjunction	2480 Nov 05 23:07	14° <u>♏</u> 30'37	0°23'32

minimum elong	2480 Nov 05 23:07	14° $\overline{\text{M}}$ 30'37	0°23'31	min. Earth dist.	2486 May 30 10:15	9° $\overline{\text{A}}$ 45'23	17.82455 AU
max. Earth dist.	2480 Nov 05 11:59	14° $\overline{\text{M}}$ 28'53	19.51251 AU	direct	2486 Aug 15 15:49	7° $\overline{\text{A}}$ 42'19	
	2480 Nov 13 18:26	15° $\overline{\text{M}}$		evening set	2486 Nov 17 22:53	11° $\overline{\text{A}}$ 03'21	
morning rise	2480 Nov 21 21:46	15° $\overline{\text{M}}$ 30'15					
retrograde	2481 Feb 21 02:45	18° $\overline{\text{M}}$ 49'56		conjunction	2486 Dec 03 18:57	12° $\overline{\text{A}}$ 01'35	0°03'34
opposition	2481 May 06 10:13	16° $\overline{\text{M}}$ 48'46	0°24'30	minimum elong	2486 Dec 03 18:57	12° $\overline{\text{A}}$ 01'35	0°03'35
min. Earth dist.	2481 May 06 18:44	16° $\overline{\text{M}}$ 47'52	17.53735 AU	behind sun begin	2486 Dec 03 12:26	12° $\overline{\text{A}}$ 00'36	
	2481 Jun 27 09:17	15° $\overline{\text{R}}$ $\overline{\text{M}}$		behind sun end	2486 Dec 04 01:29	12° $\overline{\text{A}}$ 02'33	
direct	2481 Jul 22 11:30	14° $\overline{\text{M}}$ 44'03		max. Earth dist.	2486 Dec 03 18:30	12° $\overline{\text{A}}$ 01'32	19.85738 AU
	2481 Aug 16 04:38	15° $\overline{\text{M}}$		morning rise	2486 Dec 19 12:55	12° $\overline{\text{A}}$ 59'30	
evening set	2481 Oct 25 20:05	18° $\overline{\text{M}}$ 10'40		retrograde	2487 Mar 20 21:23	16° $\overline{\text{A}}$ 15'19	
				opposition	2487 Jun 04 07:08	14° $\overline{\text{A}}$ 14'55	0°02'00
conjunction	2481 Nov 10 21:04	19° $\overline{\text{M}}$ 10'29	0°20'25	min. Earth dist.	2487 Jun 04 05:33	14° $\overline{\text{A}}$ 15'05	17.89051 AU
minimum elong	2481 Nov 10 21:04	19° $\overline{\text{M}}$ 10'29	0°20'25	direct	2487 Aug 20 14:47	12° $\overline{\text{A}}$ 12'06	
max. Earth dist.	2481 Nov 10 12:07	19° $\overline{\text{M}}$ 09'05	19.56297 AU	evening set	2487 Nov 22 15:20	15° $\overline{\text{A}}$ 31'56	
morning rise	2481 Nov 26 18:39	20° $\overline{\text{M}}$ 09'50					
retrograde	2482 Feb 25 22:31	23° $\overline{\text{M}}$ 28'55		conjunction	2487 Dec 08 10:48	16° $\overline{\text{A}}$ 29'51	0°00'04
opposition	2482 May 11 11:12	21° $\overline{\text{M}}$ 27'55	0°20'57	minimum elong	2487 Dec 08 10:48	16° $\overline{\text{A}}$ 29'51	0°00'03
min. Earth dist.	2482 May 11 19:18	21° $\overline{\text{M}}$ 27'03	17.58924 AU	behind sun begin	2487 Dec 08 05:05	16° $\overline{\text{A}}$ 29'00	
direct	2482 Jul 27 12:12	19° $\overline{\text{M}}$ 23'30		behind sun end	2487 Dec 08 16:31	16° $\overline{\text{A}}$ 30'42	
evening set	2482 Oct 30 17:58	22° $\overline{\text{M}}$ 49'06		max. Earth dist.	2487 Dec 08 13:30	16° $\overline{\text{A}}$ 30'12	19.92460 AU
				desc. node	2487 Dec 13 21:20	16° $\overline{\text{A}}$ 49'56	
conjunction	2482 Nov 15 17:47	23° $\overline{\text{M}}$ 48'36	0°17'10	morning rise	2487 Dec 24 04:03	17° $\overline{\text{A}}$ 27'29	
minimum elong	2482 Nov 15 17:47	23° $\overline{\text{M}}$ 48'36	0°17'10	retrograde	2488 Mar 24 13:41	20° $\overline{\text{A}}$ 42'39	
max. Earth dist.	2482 Nov 15 09:41	23° $\overline{\text{M}}$ 47'21	19.61636 AU	opposition	2488 Jun 08 04:30	18° $\overline{\text{A}}$ 42'26	-0°01'50
morning rise	2482 Dec 01 14:39	24° $\overline{\text{M}}$ 47'41		min. Earth dist.	2488 Jun 08 01:28	18° $\overline{\text{A}}$ 42'45	17.95880 AU
retrograde	2483 Mar 02 20:10	28° $\overline{\text{M}}$ 06'09		direct	2488 Aug 24 12:18	16° $\overline{\text{A}}$ 40'03	
opposition	2483 May 16 11:32	26° $\overline{\text{M}}$ 05'16	0°17'16	evening set	2488 Nov 26 07:07	19° $\overline{\text{A}}$ 58'39	
min. Earth dist.	2483 May 16 17:05	26° $\overline{\text{M}}$ 04'40	17.64392 AU				
direct	2483 Aug 01 15:19	24° $\overline{\text{M}}$ 01'08		conjunction	2488 Dec 12 01:42	20° $\overline{\text{A}}$ 56'16	-0°03'27
evening set	2483 Nov 04 14:45	27° $\overline{\text{M}}$ 25'39		minimum elong	2488 Dec 12 01:40	20° $\overline{\text{A}}$ 56'15	0°03'27
				behind sun begin	2488 Dec 11 19:09	20° $\overline{\text{A}}$ 55'17	
conjunction	2483 Nov 20 13:43	28° $\overline{\text{M}}$ 24'52	0°13'50	behind sun end	2488 Dec 12 08:12	20° $\overline{\text{A}}$ 57'14	
minimum elong	2483 Nov 20 13:43	28° $\overline{\text{M}}$ 24'52	0°13'51	max. Earth dist.	2488 Dec 12 05:11	20° $\overline{\text{A}}$ 56'45	19.99394 AU
behind sun begin	2483 Nov 20 10:12	28° $\overline{\text{M}}$ 24'20		morning rise	2488 Dec 27 18:34	21° $\overline{\text{A}}$ 53'37	
behind sun end	2483 Nov 20 17:15	28° $\overline{\text{M}}$ 25'24		retrograde	2489 Mar 29 05:53	25° $\overline{\text{A}}$ 08'09	
max. Earth dist.	2483 Nov 20 08:20	28° $\overline{\text{M}}$ 24'02	19.67241 AU	opposition	2489 Jun 13 01:02	23° $\overline{\text{A}}$ 08'08	-0°05'37
morning rise	2483 Dec 06 09:38	29° $\overline{\text{M}}$ 23'39		min. Earth dist.	2489 Jun 12 19:50	23° $\overline{\text{A}}$ 08'40	18.02900 AU
	2483 Dec 16 13:41	0° $\overline{\text{A}}$		direct	2489 Aug 29 08:28	21° $\overline{\text{A}}$ 06'10	
retrograde	2484 Mar 06 14:33	2° $\overline{\text{A}}$ 41'28		evening set	2489 Nov 30 21:49	24° $\overline{\text{A}}$ 23'34	
opposition	2484 May 20 11:20	0° $\overline{\text{A}}$ 40'41	0°13'31				
min. Earth dist.	2484 May 20 16:13	0° $\overline{\text{A}}$ 40'10	17.70132 AU	conjunction	2489 Dec 16 15:51	25° $\overline{\text{A}}$ 20'52	-0°06'49
	2484 Jun 05 21:45	30° $\overline{\text{R}}$ $\overline{\text{M}}$		minimum elong	2489 Dec 16 15:51	25° $\overline{\text{A}}$ 20'52	0°06'49
direct	2484 Aug 05 15:07	28° $\overline{\text{M}}$ 36'51		behind sun begin	2489 Dec 16 09:44	25° $\overline{\text{A}}$ 19'57	
	2484 Oct 02 11:22	0° $\overline{\text{A}}$		behind sun end	2489 Dec 16 21:59	25° $\overline{\text{A}}$ 21'46	
evening set	2484 Nov 08 10:32	2° $\overline{\text{A}}$ 00'15		max. Earth dist.	2489 Dec 16 22:19	25° $\overline{\text{A}}$ 21'50	20.06477 AU
				morning rise	2490 Jan 01 08:08	26° $\overline{\text{A}}$ 17'56	
conjunction	2484 Nov 24 08:26	2° $\overline{\text{A}}$ 59'08	0°10'27	retrograde	2490 Apr 02 21:27	29° $\overline{\text{A}}$ 31'51	
minimum elong	2484 Nov 24 08:26	2° $\overline{\text{A}}$ 59'08	0°10'27	opposition	2490 Jun 17 21:11	27° $\overline{\text{A}}$ 32'03	-0°09'21
behind sun begin	2484 Nov 24 03:14	2° $\overline{\text{A}}$ 58'20		min. Earth dist.	2490 Jun 17 14:27	27° $\overline{\text{A}}$ 32'44	18.10022 AU
behind sun end	2484 Nov 24 13:38	2° $\overline{\text{A}}$ 59'55		direct	2490 Sep 03 04:11	25° $\overline{\text{A}}$ 30'32	
max. Earth dist.	2484 Nov 24 03:55	2° $\overline{\text{A}}$ 58'27	19.73127 AU	evening set	2490 Dec 05 11:42	28° $\overline{\text{A}}$ 46'41	
morning rise	2484 Dec 10 03:46	3° $\overline{\text{A}}$ 57'38					
retrograde	2485 Mar 11 10:25	7° $\overline{\text{A}}$ 14'46		conjunction	2490 Dec 21 04:56	29° $\overline{\text{A}}$ 43'41	-0°10'08
opposition	2485 May 25 10:29	5° $\overline{\text{A}}$ 14'06	0°09'42	minimum elong	2490 Dec 21 04:56	29° $\overline{\text{A}}$ 43'41	0°10'08
min. Earth dist.	2485 May 25 12:45	5° $\overline{\text{A}}$ 13'52	17.76155 AU	behind sun begin	2490 Dec 20 23:38	29° $\overline{\text{A}}$ 42'54	
direct	2485 Aug 10 16:39	3° $\overline{\text{A}}$ 10'34		behind sun end	2490 Dec 21 10:13	29° $\overline{\text{A}}$ 44'28	
evening set	2485 Nov 13 05:08	6° $\overline{\text{A}}$ 32'48		max. Earth dist.	2490 Dec 21 12:09	29° $\overline{\text{A}}$ 44'46	20.13629 AU
					2490 Dec 25 16:07	0° $\overline{\text{B}}$	
conjunction	2485 Nov 29 02:16	7° $\overline{\text{A}}$ 31'22	0°07'01	morning rise	2491 Jan 05 21:01	0° $\overline{\text{B}}$ 40'30	
minimum elong	2485 Nov 29 02:15	7° $\overline{\text{A}}$ 31'22	0°07'00	retrograde	2491 Apr 07 12:50	3° $\overline{\text{B}}$ 53'49	
behind sun begin	2485 Nov 28 20:08	7° $\overline{\text{A}}$ 30'26		opposition	2491 Jun 22 16:39	1° $\overline{\text{B}}$ 54'11	-0°13'00
behind sun end	2485 Nov 29 08:22	7° $\overline{\text{A}}$ 32'17		min. Earth dist.	2491 Jun 22 08:13	1° $\overline{\text{B}}$ 55'03	18.17191 AU
max. Earth dist.	2485 Nov 29 00:49	7° $\overline{\text{A}}$ 31'10	19.79286 AU		2491 Aug 22 08:28	30° $\overline{\text{R}}$ $\overline{\text{A}}$	
morning rise	2485 Dec 14 20:41	8° $\overline{\text{A}}$ 29'34		direct	2491 Sep 07 22:14	29° $\overline{\text{A}}$ 53'06	
retrograde	2486 Mar 16 03:25	11° $\overline{\text{A}}$ 46'02			2491 Sep 24 07:11	0° $\overline{\text{B}}$	
opposition	2486 May 30 09:10	9° $\overline{\text{A}}$ 45'30	0°05'51	evening set	2491 Dec 10 00:39	3° $\overline{\text{B}}$ 08'03	

conjunction	2491 Dec 25 17:30	4°30'44" -0°13'22"	retrograde	2498 May 07 08:18	3°33'42"
minimum elong	2491 Dec 25 17:30	4°30'44" 0°13'22"	opposition	2498 Jul 23 13:06	1°33'44" -0°34'51"
behind sun begin	2491 Dec 25 13:38	4°30'41"0"	min. Earth dist.	2498 Jul 22 19:53	1°34'02"8 18.62940 AU
behind sun end	2491 Dec 25 21:21	4°30'51"9"		2498 Sep 09 18:35	30°38'30"
max. Earth dist.	2491 Dec 26 03:17	4°30'61"3 20.20781 AU	direct	2498 Oct 08 11:20	29°34'00"0
morning rise	2492 Jan 10 09:07	5°30'11"8"		2498 Nov 05 12:41	0°33'30"
retrograde	2492 Apr 11 03:23	8°30'13'59"	evening set	2499 Jan 07 21:24	2°33'46'39"
opposition	2492 Jun 26 11:16	6°30'14'34" -0°16'33"			
min. Earth dist.	2492 Jun 26 01:22	6°30'15'35" 18.24308 AU	conjunction	2499 Jan 23 12:06	3°33'41'35" -0°32'35"
direct	2492 Sep 11 15:58	4°30'13'54"	minimum elong	2499 Jan 23 12:06	3°33'41'35" 0°32'35"
evening set	2492 Dec 13 13:00	7°30'27'37"	max. Earth dist.	2499 Jan 24 05:38	3°33'44'10" 20.65762 AU
			morning rise	2499 Feb 08 03:41	4°33'36'37"
conjunction	2492 Dec 29 05:11	8°30'24'02" -0°16'31"	retrograde	2499 May 11 17:44	7°33'45'23"
minimum elong	2492 Dec 29 05:11	8°30'24'02" 0°16'32"	min. Earth dist.	2499 Jul 27 09:17	5°33'48'12" 18.68557 AU
max. Earth dist.	2492 Dec 29 15:24	8°30'25'34" 20.27847 AU	opposition	2499 Jul 28 02:53	5°33'46'26" -0°37'15"
morning rise	2493 Jan 13 20:43	9°30'20'20"	direct	2499 Oct 12 22:27	3°33'47'56"
retrograde	2493 Apr 15 17:50	12°30'32'26"	evening set	2500 Jan 12 04:14	6°33'53'34"
opposition	2493 Jul 01 05:24	10°30'33'10" -0°19'59"			
min. Earth dist.	2493 Jun 30 18:22	10°30'34'17" 18.31320 AU	conjunction	2500 Jan 27 19:02	7°33'48'18" -0°34'40"
direct	2493 Sep 16 08:34	8°30'32'53"	minimum elong	2500 Jan 27 19:02	7°33'48'18" 0°34'41"
evening set	2493 Dec 18 00:16	11°30'45'24"	max. Earth dist.	2500 Jan 28 14:21	7°33'51'08" 20.71273 AU
			morning rise	2500 Feb 12 10:44	8°33'43'10"
conjunction	2494 Jan 02 16:09	12°30'41'32" -0°19'34"	retrograde	2500 May 16 04:38	11°33'51'28"
minimum elong	2494 Jan 02 16:09	12°30'41'32" 0°19'33"	opposition	2500 Aug 01 15:36	9°33'52'33" -0°39'27"
max. Earth dist.	2494 Jan 03 04:34	12°30'43'24" 20.34767 AU	min. Earth dist.	2500 Jul 31 20:08	9°33'54'30" 18.73964 AU
morning rise	2494 Jan 18 07:21	13°30'37'36"	direct	2500 Oct 17 10:58	7°33'54'19"
retrograde	2494 Apr 20 07:35	16°30'49'06"	evening set	2501 Jan 16 10:35	10°33'58'59"
opposition	2494 Jul 05 22:50	14°30'49'58" -0°23'18"			
min. Earth dist.	2494 Jul 05 10:12	14°30'51'15" 18.38138 AU	conjunction	2501 Feb 01 01:19	11°33'53'32" -0°36'34"
direct	2494 Sep 21 01:11	12°30'50'04"	minimum elong	2501 Feb 01 01:19	11°33'53'32" 0°36'33"
evening set	2494 Dec 22 10:59	16°30'01'22"	max. Earth dist.	2501 Feb 01 21:10	11°33'56'27" 20.76571 AU
			morning rise	2501 Feb 16 17:24	12°33'48'16"
conjunction	2495 Jan 07 02:22	16°30'57'14" -0°22'28"		2501 Apr 02 10:36	15°33'30"
minimum elong	2495 Jan 07 02:22	16°30'57'14" 0°22'28"	retrograde	2501 May 20 13:30	15°33'56'11"
max. Earth dist.	2495 Jan 07 15:06	16°30'59'08" 20.41473 AU		2501 Jul 09 16:11	15°33'38"
morning rise	2495 Jan 22 17:37	17°30'53'04"	min. Earth dist.	2501 Aug 05 08:23	13°33'59'16" 18.79168 AU
retrograde	2495 Apr 24 20:35	21°30'04'00"	opposition	2501 Aug 06 04:01	13°33'57'18" -0°41'25"
opposition	2495 Jul 10 15:35	19°30'04'57" -0°26'27"	direct	2501 Oct 21 19:51	11°33'59'21"
min. Earth dist.	2495 Jul 10 02:14	19°30'06'18" 18.44738 AU		2502 Jan 19 18:22	15°33'30"
direct	2495 Sep 25 16:11	17°30'05'23"	evening set	2502 Jan 20 16:10	15°33'03'06"
evening set	2495 Dec 26 20:41	20°30'15'28"			
			conjunction	2502 Feb 05 07:09	15°33'57'30" -0°38'16"
conjunction	2496 Jan 11 11:58	21°30'11'05" -0°25'15"	minimum elong	2502 Feb 05 07:09	15°33'57'30" 0°38'16"
minimum elong	2496 Jan 11 11:58	21°30'11'05" 0°25'15"	max. Earth dist.	2502 Feb 06 04:36	16°33'00'38" 20.81659 AU
max. Earth dist.	2496 Jan 12 02:35	21°30'13'16" 20.47937 AU	morning rise	2502 Feb 20 23:29	16°33'52'06"
morning rise	2496 Jan 27 03:05	22°30'06'42"	retrograde	2502 May 24 23:35	19°33'59'40"
retrograde	2496 Apr 28 09:24	25°30'17'03"	opposition	2502 Aug 10 15:41	18°33'00'51" -0°43'11"
opposition	2496 Jul 14 07:28	23°30'18'04" -0°29'26"	min. Earth dist.	2502 Aug 09 18:12	18°33'03'00" 18.84127 AU
min. Earth dist.	2496 Jul 13 16:32	23°30'19'35" 18.51058 AU	direct	2502 Oct 26 07:12	16°33'03'12"
direct	2496 Sep 29 07:51	21°30'18'48"	evening set	2503 Jan 24 21:34	19°33'06'06"
evening set	2496 Dec 30 05:46	24°30'27'43"			
			conjunction	2503 Feb 09 12:38	20°33'00'22" -0°39'46"
conjunction	2497 Jan 14 20:41	25°30'23'05" -0°27'52"	minimum elong	2503 Feb 09 12:37	20°33'00'22" 0°39'46"
minimum elong	2497 Jan 14 20:41	25°30'23'05" 0°27'52"	max. Earth dist.	2503 Feb 10 10:26	20°33'03'32" 20.86477 AU
max. Earth dist.	2497 Jan 15 11:39	25°30'25'18" 20.54119 AU	morning rise	2503 Feb 25 05:30	20°33'54'52"
morning rise	2497 Jan 30 11:57	26°30'18'30"	retrograde	2503 May 29 08:24	24°33'02'08"
retrograde	2497 May 02 20:22	29°30'28'17"	min. Earth dist.	2503 Aug 14 05:35	22°33'05'30" 18.88812 AU
opposition	2497 Jul 18 22:41	27°30'29'19" -0°32'14"	opposition	2503 Aug 15 02:49	22°33'03'23" -0°44'44"
min. Earth dist.	2497 Jul 18 07:18	27°30'30'52" 18.57121 AU	direct	2503 Oct 30 14:31	20°33'06'00"
direct	2497 Oct 03 21:09	25°30'30'19"	evening set	2504 Jan 29 02:27	23°33'08'08"
evening set	2498 Jan 03 13:56	28°30'38'05"			
			conjunction	2504 Feb 13 17:55	24°33'02'17" -0°41'04"
conjunction	2498 Jan 19 04:50	29°30'33'14" -0°30'19"	minimum elong	2504 Feb 13 17:55	24°33'02'17" 0°41'04"
minimum elong	2498 Jan 19 04:50	29°30'33'14" 0°30'20"	max. Earth dist.	2504 Feb 14 16:51	24°33'05'37" 20.91001 AU
max. Earth dist.	2498 Jan 19 21:43	29°30'35'44" 20.60058 AU	morning rise	2504 Feb 29 11:10	24°33'56'41"
	2498 Jan 26 17:34	0°33'30"	retrograde	2504 Jun 01 17:41	28°33'03'41"
morning rise	2498 Feb 03 20:06	0°33'28'26"	opposition	2504 Aug 18 13:20	26°33'05'01" -0°46'02"

min. Earth dist.	2504 Aug 17 14:36	26°07'17	18.93155 AU	conjunction	2511 Mar 13 02:52	21°57'07	-0°44'18
direct	2504 Nov 03 00:26	24°07'55		minimum elong	2511 Mar 13 02:52	21°57'07	0°44'18
evening set	2505 Feb 01 07:10	27°09'21		max. Earth dist.	2511 Mar 14 01:31	22°00'21	21.09810 AU
				morning rise	2511 Mar 29 00:54	22°51'22	
conjunction	2505 Feb 16 22:47	28°03'23	-0°42'10	retrograde	2511 Jun 30 23:57	25°57'25	
minimum elong	2505 Feb 16 22:47	28°03'23	0°42'11	min. Earth dist.	2511 Sep 16 06:39	24°00'40	19.10229 AU
max. Earth dist.	2505 Feb 17 21:47	28°06'43	20.95148 AU	opposition	2511 Sep 17 03:33	23°58'35	-0°48'44
morning rise	2505 Mar 04 16:38	28°57'43		direct	2511 Dec 01 22:05	22°02'21	
	2505 Mar 23 22:14	0°		evening set	2512 Feb 29 11:51	25°00'24	
retrograde	2505 Jun 06 02:05	2°04'31					
opposition	2505 Aug 22 23:35	0°05'54	-0°47'08	conjunction	2512 Mar 16 07:27	25°54'14	-0°43'55
min. Earth dist.	2505 Aug 22 01:29	0°08'06	18.97113 AU	minimum elong	2512 Mar 16 07:27	25°54'14	0°43'55
	2505 Aug 25 10:48	30°		max. Earth dist.	2512 Mar 17 06:16	25°57'30	21.10454 AU
direct	2505 Nov 07 07:07	28°09'03		morning rise	2512 Apr 01 06:15	26°48'32	
	2506 Jan 14 15:52	0°		retrograde	2512 Jul 04 08:23	29°54'33	
evening set	2506 Feb 05 11:36	1°09'50		opposition	2512 Sep 20 10:49	27°55'36	-0°48'11
				min. Earth dist.	2512 Sep 19 13:11	27°57'46	19.10650 AU
conjunction	2506 Feb 21 03:42	2°03'48	-0°43'03	direct	2512 Dec 05 04:09	25°59'21	
minimum elong	2506 Feb 21 03:42	2°03'48	0°43'03	evening set	2513 Mar 04 15:40	28°57'10	
max. Earth dist.	2506 Feb 22 03:29	2°07'14	20.98894 AU				
morning rise	2506 Mar 08 22:03	2°58'04		conjunction	2513 Mar 20 11:53	29°51'03	-0°43'19
retrograde	2506 Jun 10 10:55	6°04'41		minimum elong	2513 Mar 20 11:53	29°51'03	0°43'18
min. Earth dist.	2506 Aug 26 09:58	4°08'26	19.00629 AU	max. Earth dist.	2513 Mar 21 10:08	29°54'13	21.10661 AU
opposition	2506 Aug 27 09:14	4°06'07	-0°47'59		2513 Mar 23 02:36	0°	
direct	2506 Nov 11 15:35	2°09'30		morning rise	2513 Apr 05 11:36	0°45'24	
evening set	2507 Feb 09 15:58	5°09'42		retrograde	2513 Jul 08 14:14	3°51'28	
				opposition	2513 Sep 24 18:02	1°52'23	-0°47'24
conjunction	2507 Feb 25 08:24	6°03'35	-0°43'44	min. Earth dist.	2513 Sep 23 21:42	1°54'25	19.10664 AU
minimum elong	2507 Feb 25 08:24	6°03'35	0°43'45		2513 Nov 26 23:17	30°	
max. Earth dist.	2507 Feb 26 07:50	6°06'57	21.02158 AU	direct	2513 Dec 09 08:15	29°56'08	
morning rise	2507 Mar 13 03:28	6°57'49			2513 Dec 21 14:38	0°	
retrograde	2507 Jun 14 18:33	10°04'17		evening set	2514 Mar 08 19:35	2°53'47	
opposition	2507 Aug 31 18:37	8°05'44	-0°48'37				
min. Earth dist.	2507 Aug 30 20:28	8°07'56	19.03643 AU	conjunction	2514 Mar 24 16:43	3°47'44	-0°42'30
direct	2507 Nov 15 21:39	6°09'17		minimum elong	2514 Mar 24 16:43	3°47'44	0°42'31
evening set	2508 Feb 13 20:11	9°08'57		max. Earth dist.	2514 Mar 25 15:02	3°50'55	21.10489 AU
				morning rise	2514 Apr 09 17:15	4°42'09	
conjunction	2508 Feb 29 13:14	10°02'48	-0°44'12	retrograde	2514 Jul 12 22:56	7°48'18	
minimum elong	2508 Feb 29 13:13	10°02'48	0°44'11	min. Earth dist.	2514 Sep 28 03:47	5°51'13	19.10299 AU
max. Earth dist.	2508 Mar 01 12:55	10°06'12	21.04900 AU	opposition	2514 Sep 29 00:47	5°49'07	-0°46'24
morning rise	2508 Mar 16 08:51	10°57'00		direct	2514 Dec 13 13:33	3°52'50	
retrograde	2508 Jun 18 03:02	14°03'20		evening set	2515 Mar 12 23:48	6°50'25	
min. Earth dist.	2508 Sep 03 04:21	12°07'03	19.06102 AU				
opposition	2508 Sep 04 03:17	12°04'46	-0°49'00	conjunction	2515 Mar 28 21:41	7°44'27	-0°41'30
direct	2508 Nov 19 05:18	10°08'27		minimum elong	2515 Mar 28 21:41	7°44'27	0°41'30
evening set	2509 Feb 17 00:21	13°07'38		max. Earth dist.	2515 Mar 29 19:13	7°47'31	21.09929 AU
				morning rise	2515 Apr 13 23:14	8°38'59	
conjunction	2509 Mar 04 17:49	14°01'27	-0°44'27	retrograde	2515 Jul 17 05:31	11°45'15	
minimum elong	2509 Mar 04 17:49	14°01'27	0°44'27	opposition	2515 Oct 03 07:36	9°45'58	-0°45'11
max. Earth dist.	2509 Mar 05 16:53	14°04'45	21.07075 AU	min. Earth dist.	2515 Oct 02 12:06	9°47'56	19.09550 AU
morning rise	2509 Mar 20 14:15	14°55'40		direct	2515 Dec 17 17:14	7°49'40	
retrograde	2509 Jun 22 09:41	18°01'52		evening set	2516 Mar 16 04:09	10°47'16	
opposition	2509 Sep 08 11:54	16°03'15	-0°49'09				
min. Earth dist.	2509 Sep 07 14:16	16°05'24	19.08002 AU	conjunction	2516 Apr 01 03:00	11°41'24	-0°40'18
direct	2509 Nov 23 10:31	14°07'00		minimum elong	2516 Apr 01 03:00	11°41'24	0°40'19
evening set	2510 Feb 21 04:08	17°05'45		max. Earth dist.	2516 Apr 02 00:22	11°44'26	21.08996 AU
				morning rise	2516 Apr 17 05:23	12°36'03	
conjunction	2510 Mar 08 22:21	17°59'33	-0°44'29	retrograde	2516 Jul 20 14:38	15°42'30	
minimum elong	2510 Mar 08 22:21	17°59'33	0°44'29	opposition	2516 Oct 06 14:06	13°43'09	-0°43'45
max. Earth dist.	2510 Mar 09 21:38	18°02'53	21.08709 AU	min. Earth dist.	2516 Oct 05 18:09	13°45'09	19.08416 AU
morning rise	2510 Mar 24 19:30	18°53'46		direct	2516 Dec 20 22:34	11°46'48	
retrograde	2510 Jun 26 18:09	21°59'53		evening set	2517 Mar 20 08:59	14°44'31	
opposition	2510 Sep 12 19:56	20°01'10	-0°49'04				
min. Earth dist.	2510 Sep 11 21:36	20°03'23	19.09362 AU	conjunction	2517 Apr 05 08:37	15°38'46	-0°38'55
direct	2510 Nov 27 17:37	18°04'57		minimum elong	2517 Apr 05 08:37	15°38'46	0°38'55
evening set	2511 Feb 25 08:04	21°03'18		max. Earth dist.	2517 Apr 06 05:01	15°41'40	21.07666 AU
				morning rise	2517 Apr 21 12:02	16°33'33	

retrograde	2517 Jul 24 21:52	19° Υ 40'14	evening set	2524 Apr 17 09:07	12° B 47'15
opposition	2517 Oct 10 20:50	17° Υ 40'49 -0°42'07			
min. Earth dist.	2517 Oct 10 02:37	17° Υ 42'39 19.06886 AU	conjunction	2524 May 03 15:43	13° B 42'51 -0°24'15
direct	2517 Dec 25 01:50	15° Υ 44'27	minimum elong	2524 May 03 15:43	13° B 42'51 0°24'15
evening set	2518 Mar 24 14:03	18° Υ 42'20	max. Earth dist.	2524 May 04 03:04	13° B 44'28 20.85290 AU
			morning rise	2524 May 20 01:50	14° B 38'59
conjunction	2518 Apr 09 14:44	19° Υ 36'43 -0°37'20		2524 May 26 09:48	15° B
minimum elong	2518 Apr 09 14:44	19° Υ 36'43 0°37'20	retrograde	2524 Aug 22 19:03	17° B 48'13
max. Earth dist.	2518 Apr 10 10:42	19° Υ 39'34 21.05941 AU	opposition	2524 Nov 07 22:07	15° B 47'58 -0°25'18
morning rise	2518 Apr 25 19:04	20° Υ 31'39	min. Earth dist.	2524 Nov 07 12:11	15° B 48'59 18.82793 AU
retrograde	2518 Jul 29 07:55	23° Υ 38'37		2524 Nov 27 22:53	15° R B
min. Earth dist.	2518 Oct 14 09:10	21° Υ 41'00 19.04933 AU	direct	2525 Jan 21 16:07	13° B 50'25
opposition	2518 Oct 15 03:27	21° Υ 39'09 -0°40'16		2525 Mar 15 13:29	15° B
direct	2518 Dec 29 07:34	19° Υ 42'44	evening set	2525 Apr 21 18:27	16° B 51'29
evening set	2519 Mar 28 19:53	22° Υ 40'53			
			conjunction	2525 May 08 01:59	17° B 47'20 -0°21'32
conjunction	2519 Apr 13 21:26	23° Υ 35'26 -0°35'35	minimum elong	2525 May 08 01:59	17° B 47'20 0°21'33
minimum elong	2519 Apr 13 21:26	23° Υ 35'26 0°35'35	max. Earth dist.	2525 May 08 11:45	17° B 48'43 20.80215 AU
max. Earth dist.	2519 Apr 14 16:03	23° Υ 38'05 21.03757 AU	morning rise	2525 May 24 13:01	18° B 43'42
morning rise	2519 Apr 30 02:47	24° Υ 30'32	retrograde	2525 Aug 27 05:31	21° B 53'23
retrograde	2519 Aug 02 15:37	27° Υ 37'49	opposition	2525 Nov 12 05:54	19° B 52'56 -0°22'14
opposition	2519 Oct 19 10:08	25° Υ 38'17 -0°38'14	min. Earth dist.	2525 Nov 11 22:12	19° B 53'44 18.77553 AU
min. Earth dist.	2519 Oct 18 18:03	25° Υ 39'55 19.02513 AU	direct	2526 Jan 25 22:19	17° B 55'05
direct	2520 Jan 02 10:51	23° Υ 41'47	evening set	2526 Apr 26 04:19	20° B 56'50
evening set	2520 Apr 01 02:11	26° Υ 40'17			
			conjunction	2526 May 12 12:56	21° B 52'57 -0°18'43
conjunction	2520 Apr 17 04:46	27° Υ 35'01 -0°33'38	minimum elong	2526 May 12 12:56	21° B 52'57 0°18'43
minimum elong	2520 Apr 17 04:46	27° Υ 35'01 0°33'38	max. Earth dist.	2526 May 12 21:13	21° B 54'08 20.74836 AU
max. Earth dist.	2520 Apr 17 22:23	27° Υ 37'32 21.01100 AU	morning rise	2526 May 29 00:54	22° B 49'34
morning rise	2520 May 03 11:01	28° Υ 30'17	retrograde	2526 Aug 31 17:51	25° B 59'45
	2520 Jun 01 11:28	0° B	opposition	2526 Nov 16 13:51	23° B 59'05 -0°19'02
retrograde	2520 Aug 06 02:23	1° B 37'56	min. Earth dist.	2526 Nov 16 06:40	23° B 59'50 18.72028 AU
	2520 Oct 13 18:02	30° R Υ	direct	2527 Jan 30 05:54	22° B 00'54
opposition	2520 Oct 22 16:59	29° Υ 38'19 -0°36'00	evening set	2527 Apr 30 15:08	25° B 03'27
min. Earth dist.	2520 Oct 22 01:12	29° Υ 39'55 18.99592 AU			
direct	2521 Jan 05 17:04	27° Υ 41'42	conjunction	2527 May 17 00:40	25° B 59'50 -0°15'47
	2521 Mar 23 21:29	0° B	minimum elong	2527 May 17 00:40	25° B 59'50 0°15'46
evening set	2521 Apr 05 09:00	0° B 40'36	behind sun begin	2527 May 16 23:55	25° B 59'44
			behind sun end	2527 May 17 01:26	25° B 59'57
conjunction	2521 Apr 21 12:29	1° B 35'32 -0°31'32	max. Earth dist.	2527 May 17 07:28	26° B 00'48 20.69177 AU
minimum elong	2521 Apr 21 12:29	1° B 35'32 0°31'32	morning rise	2527 Jun 02 13:25	26° B 56'43
max. Earth dist.	2521 Apr 22 04:27	1° B 37'48 20.97912 AU		2527 Aug 18 23:53	0° II
morning rise	2521 May 07 19:45	2° B 31'00	retrograde	2527 Sep 05 04:53	0° II 07'23
retrograde	2521 Aug 10 10:58	5° B 39'01		2527 Sep 22 11:22	30° R B
min. Earth dist.	2521 Oct 26 10:44	3° B 40'39 18.96135 AU	opposition	2527 Nov 20 22:11	28° B 06'33 -0°15'44
opposition	2521 Oct 27 00:10	3° B 39'17 -0°33'35	min. Earth dist.	2527 Nov 20 17:06	28° B 07'05 18.66257 AU
direct	2522 Jan 09 21:14	1° B 42'31	direct	2528 Feb 03 13:11	26° B 08'03
evening set	2522 Apr 09 16:28	4° B 41'51	evening set	2528 May 04 02:36	29° B 11'27
				2528 May 18 05:08	0° II
conjunction	2522 Apr 25 21:03	5° B 37'00 -0°29'15			
minimum elong	2522 Apr 25 21:03	5° B 37'00 0°29'15	conjunction	2528 May 20 13:07	0° II 08'07 -0°12'45
max. Earth dist.	2522 Apr 26 11:38	5° B 39'05 20.94202 AU	minimum elong	2528 May 20 13:07	0° II 08'07 0°12'45
morning rise	2522 May 12 05:16	6° B 32'41	behind sun begin	2528 May 20 09:00	0° II 07'32
retrograde	2522 Aug 14 22:05	9° B 41'05	behind sun end	2528 May 20 17:15	0° II 08'42
opposition	2522 Oct 31 07:15	7° B 41'12 -0°30'59	max. Earth dist.	2528 May 20 18:16	0° II 08'51 20.63318 AU
min. Earth dist.	2522 Oct 30 18:24	7° B 42'31 18.92156 AU	morning rise	2528 Jun 06 02:43	1° II 05'15
direct	2523 Jan 14 03:55	5° B 44'13	retrograde	2528 Sep 08 18:20	4° II 16'29
evening set	2523 Apr 14 00:36	8° B 44'04	opposition	2528 Nov 24 06:55	2° II 15'28 -0°12'20
			min. Earth dist.	2528 Nov 24 02:20	2° II 15'57 18.60305 AU
conjunction	2523 Apr 30 06:09	9° B 39'26 -0°26'49	direct	2529 Feb 06 21:51	0° II 16'38
minimum elong	2523 Apr 30 06:09	9° B 39'26 0°26'50	evening set	2529 May 08 14:50	3° II 20'57
max. Earth dist.	2523 Apr 30 18:54	9° B 41'15 20.89970 AU			
morning rise	2523 May 16 15:21	10° B 35'20	conjunction	2529 May 25 02:19	4° II 17'55 -0°09'38
retrograde	2523 Aug 19 07:42	13° B 44'08	minimum elong	2529 May 25 02:18	4° II 17'55 0°09'38
opposition	2523 Nov 04 14:40	11° B 44'05 -0°28'13	behind sun begin	2529 May 24 20:47	4° II 17'08
min. Earth dist.	2523 Nov 04 04:14	11° B 45'09 18.87683 AU	behind sun end	2529 May 25 07:49	4° II 18'42
direct	2524 Jan 18 09:06	9° B 46'50	max. Earth dist.	2529 May 25 06:10	4° II 18'27 20.57277 AU

morning rise	2529 Jun 10 16:38	5°II15'19		conjunction	2535 Jun 21 06:05	29°II55'31	0°10'06
retrograde	2529 Sep 13 06:28	8°II27'08		minimum elong	2535 Jun 21 06:05	29°II55'31	0°10'06
opposition	2529 Nov 28 16:15	6°II25'59	-0°08'51	behind sun begin	2535 Jun 21 00:42	29°II54'44	
min. Earth dist.	2529 Nov 28 13:43	6°II26'15	18.54186 AU	behind sun end	2535 Jun 21 11:27	29°II56'17	
direct	2530 Feb 11 05:54	4°II26'50		max. Earth dist.	2535 Jun 20 22:54	29°II54'28	20.17900 AU
evening set	2530 May 13 04:08	7°II32'08			2535 Jun 22 12:23	0°☾	
				morning rise	2535 Jul 07 23:41	0°☾54'35	
conjunction	2530 May 29 16:31	8°II29'24	-0°06'28	retrograde	2535 Oct 10 03:11	4°☾10'16	
minimum elong	2530 May 29 16:31	8°II29'24	0°06'28	opposition	2535 Dec 24 12:01	2°☾08'25	0°13'00
behind sun begin	2530 May 29 10:12	8°II28'30		min. Earth dist.	2535 Dec 24 19:14	2°☾07'39	18.14339 AU
behind sun end	2530 May 29 22:50	8°II30'17		direct	2536 Mar 08 03:07	0°☾07'08	
max. Earth dist.	2530 May 29 18:27	8°II29'39	20.51101 AU	evening set	2536 Jun 08 09:14	3°☾19'27	
morning rise	2530 Jun 15 07:39	9°II27'04					
retrograde	2530 Sep 17 21:15	12°II39'30		conjunction	2536 Jun 25 01:57	4°☾18'36	0°13'22
opposition	2530 Dec 03 01:51	10°II38'13	-0°05'17	minimum elong	2536 Jun 25 01:57	4°☾18'36	0°13'22
min. Earth dist.	2530 Dec 03 00:07	10°II38'24	18.47936 AU	behind sun begin	2536 Jun 24 22:14	4°☾18'03	
direct	2531 Feb 15 16:21	8°II38'44		behind sun end	2536 Jun 25 05:39	4°☾19'08	
evening set	2531 May 17 18:27	11°II45'06		max. Earth dist.	2536 Jun 24 15:46	4°☾17'05	20.10797 AU
				morning rise	2536 Jul 11 20:02	5°☾17'57	
conjunction	2531 Jun 03 07:44	12°II42'41	-0°03'14	retrograde	2536 Oct 13 21:18	8°☾34'16	
minimum elong	2531 Jun 03 07:43	12°II42'41	0°03'14	opposition	2536 Dec 28 01:36	6°☾32'15	0°16'37
behind sun begin	2531 Jun 03 01:01	12°II41'44		min. Earth dist.	2536 Dec 28 10:19	6°☾31'19	18.07200 AU
behind sun end	2531 Jun 03 14:25	12°II43'38		direct	2537 Mar 12 18:03	4°☾30'30	
max. Earth dist.	2531 Jun 03 08:21	12°II42'45	20.44775 AU	evening set	2537 Jun 13 05:23	7°☾44'05	
morning rise	2531 Jun 19 23:25	13°II40'39					
retrograde	2531 Sep 22 10:27	16°II53'42		conjunction	2537 Jun 29 22:48	8°☾43'32	0°16'35
opposition	2531 Dec 07 12:15	14°II52'19	-0°01'40	minimum elong	2537 Jun 29 22:48	8°☾43'32	0°16'35
min. Earth dist.	2531 Dec 07 12:39	14°II52'17	18.41538 AU	max. Earth dist.	2537 Jun 29 11:42	8°☾41'53	20.03627 AU
direct	2532 Feb 20 01:18	12°II52'32		morning rise	2537 Jul 16 16:59	9°☾43'09	
evening set	2532 May 21 09:37	16°II00'00		retrograde	2537 Oct 18 15:21	13°☾00'05	
asc. node	2532 May 24 11:02	16°II10'32		opposition	2538 Jan 01 15:53	10°☾57'54	0°20'09
				min. Earth dist.	2538 Jan 02 02:13	10°☾56'47	18.00025 AU
conjunction	2532 Jun 06 23:38	16°II57'53	0°00'08	direct	2538 Mar 17 09:10	8°☾55'43	
minimum elong	2532 Jun 06 23:38	16°II57'53	0°00'08	evening set	2538 Jun 18 02:42	12°☾10'34	
behind sun begin	2532 Jun 06 17:03	16°II56'57					
behind sun end	2532 Jun 07 06:14	16°II58'50		conjunction	2538 Jul 04 20:24	13°☾10'18	0°19'43
max. Earth dist.	2532 Jun 06 22:01	16°II57'43	20.38315 AU	minimum elong	2538 Jul 04 20:24	13°☾10'18	0°19'43
morning rise	2532 Jun 23 16:01	17°II56'08		max. Earth dist.	2538 Jul 04 06:23	13°☾08'13	19.96476 AU
retrograde	2532 Sep 26 02:46	21°II09'52		morning rise	2538 Jul 21 14:55	14°☾10'11	
opposition	2532 Dec 10 23:11	19°II08'22	0°01'59	retrograde	2538 Oct 23 10:19	17°☾27'43	
min. Earth dist.	2532 Dec 11 00:42	19°II08'13	18.35000 AU	opposition	2539 Jan 06 06:41	15°☾25'22	0°23'36
direct	2533 Feb 23 13:33	17°II08'15		min. Earth dist.	2539 Jan 06 18:34	15°☾24'05	17.92918 AU
evening set	2533 May 26 01:58	20°II16'54		direct	2539 Mar 22 01:28	13°☾22'42	
				evening set	2539 Jun 23 00:44	16°☾38'51	
conjunction	2533 Jun 11 16:49	21°II15'07	0°03'30				
minimum elong	2533 Jun 11 16:49	21°II15'07	0°03'30	conjunction	2539 Jul 09 18:57	17°☾38'53	0°22'45
behind sun begin	2533 Jun 11 10:07	21°II14'09		minimum elong	2539 Jul 09 18:57	17°☾38'53	0°22'46
behind sun end	2533 Jun 11 23:32	21°II16'04		max. Earth dist.	2539 Jul 09 04:26	17°☾36'43	19.89418 AU
max. Earth dist.	2533 Jun 11 13:51	21°II14'43	20.31684 AU	morning rise	2539 Jul 26 13:19	18°☾39'01	
morning rise	2533 Jun 28 09:37	22°II13'38		retrograde	2539 Oct 28 05:57	21°☾57'08	
retrograde	2533 Sep 30 17:23	25°II28'01		opposition	2540 Jan 10 22:18	19°☾54'38	0°26'55
opposition	2533 Dec 15 10:47	23°II26'26	0°05'40	min. Earth dist.	2540 Jan 11 11:15	19°☾53'14	17.85941 AU
min. Earth dist.	2533 Dec 15 14:32	23°II26'02	18.28284 AU	direct	2540 Mar 25 18:12	17°☾51'32	
direct	2534 Feb 28 00:21	21°II25'57		evening set	2540 Jun 26 23:34	21°☾08'57	
evening set	2534 May 30 19:26	24°II35'49					
				conjunction	2540 Jul 13 17:53	22°☾09'16	0°25'40
conjunction	2534 Jun 16 10:57	25°II34'20	0°06'49	minimum elong	2540 Jul 13 17:53	22°☾09'16	0°25'39
minimum elong	2534 Jun 16 10:57	25°II34'20	0°06'49	max. Earth dist.	2540 Jul 13 00:49	22°☾06'41	19.82541 AU
behind sun begin	2534 Jun 16 04:40	25°II33'25		morning rise	2540 Jul 30 12:23	23°☾09'37	
behind sun end	2534 Jun 16 17:13	25°II35'14		retrograde	2540 Nov 01 02:08	26°☾28'21	
max. Earth dist.	2534 Jun 16 05:06	25°II33'29	20.24885 AU	opposition	2541 Jan 14 14:36	24°☾25'42	0°30'05
morning rise	2534 Jul 03 04:21	26°II33'08		min. Earth dist.	2541 Jan 15 04:59	24°☾24'08	17.79194 AU
retrograde	2534 Oct 05 10:50	29°II48'10		direct	2541 Mar 30 11:49	22°☾22'09	
opposition	2534 Dec 19 23:04	27°II46'28	0°09'21	evening set	2541 Jul 01 23:14	25°☾40'52	
min. Earth dist.	2534 Dec 20 04:16	27°II45'55	18.21396 AU				
direct	2535 Mar 04 14:02	25°II45'35		conjunction	2541 Jul 18 17:55	26°☾41'27	0°28'26
evening set	2535 Jun 04 13:50	28°II56'41		minimum elong	2541 Jul 18 17:55	26°☾41'27	0°28'26

max. Earth dist.	2541 Jul 18 00:44	26° \mathring{O} 38'51	19.75918 AU	opposition	2548 Feb 16 05:30	26° \mathring{O} 53'28	0°46'23
morning rise	2541 Aug 04 12:09	27° \mathring{O} 42'02		min. Earth dist.	2548 Feb 17 00:59	26° \mathring{O} 51'20	17.42105 AU
	2541 Sep 18 07:18	0° \mathring{O}		direct	2548 May 01 15:12	24° \mathring{O} 47'55	
retrograde	2541 Nov 05 23:13	1° \mathring{O} 01'19		evening set	2548 Aug 04 18:53	28° \mathring{O} 14'51	
	2541 Dec 25 14:39	30° \mathring{R} \mathring{O}		max. Earth dist.	2548 Aug 20 11:55	29° \mathring{O} 13'00	19.40148 AU
opposition	2542 Jan 19 07:29	28° \mathring{O} 58'33	0°33'05				
min. Earth dist.	2542 Jan 19 22:28	28° \mathring{O} 56'55	17.72724 AU	conjunction	2548 Aug 21 12:09	29° \mathring{O} 16'46	0°42'13
direct	2542 Apr 04 05:52	26° \mathring{O} 54'37		minimum elong	2548 Aug 21 12:09	29° \mathring{O} 16'46	0°42'13
	2542 Jul 02 20:44	0° \mathring{O}			2548 Sep 02 02:48	0° \mathring{N}	
evening set	2542 Jul 06 23:58	0° \mathring{O} 14'37		morning rise	2548 Sep 07 03:02	0° \mathring{N} 18'23	
				retrograde	2548 Dec 08 14:22	3° \mathring{N} 40'56	
conjunction	2542 Jul 23 18:35	1° \mathring{O} 15'27	0°31'02	opposition	2549 Feb 20 03:52	1° \mathring{N} 38'07	0°47'38
minimum elong	2542 Jul 23 18:35	1° \mathring{O} 15'27	0°31'02	min. Earth dist.	2549 Feb 21 01:00	1° \mathring{N} 35'48	17.38366 AU
max. Earth dist.	2542 Jul 22 23:03	1° \mathring{O} 12'28	19.69615 AU		2549 Apr 04 00:14	30° \mathring{R} \mathring{O}	
morning rise	2542 Aug 09 12:43	2° \mathring{O} 16'14		direct	2549 May 06 15:22	29° \mathring{O} 32'19	
retrograde	2542 Nov 10 20:48	5° \mathring{O} 36'05			2549 Jun 07 22:26	0° \mathring{N}	
opposition	2543 Jan 24 01:18	3° \mathring{O} 33'14	0°35'54	evening set	2549 Aug 10 00:04	3° \mathring{N} 00'09	
min. Earth dist.	2543 Jan 24 17:41	3° \mathring{O} 31'27	17.66617 AU				
direct	2543 Apr 09 00:53	1° \mathring{O} 28'56		conjunction	2549 Aug 26 16:46	4° \mathring{N} 02'09	0°43'11
evening set	2543 Jul 12 01:11	4° \mathring{O} 50'12		minimum elong	2549 Aug 26 16:46	4° \mathring{N} 02'09	0°43'11
				max. Earth dist.	2549 Aug 25 15:43	3° \mathring{N} 58'15	19.36607 AU
conjunction	2543 Jul 28 19:56	5° \mathring{O} 51'16	0°33'27	morning rise	2549 Sep 12 06:56	5° \mathring{N} 03'49	
minimum elong	2543 Jul 28 19:56	5° \mathring{O} 51'16	0°33'27	retrograde	2549 Dec 13 15:38	8° \mathring{N} 26'37	
max. Earth dist.	2543 Jul 28 00:29	5° \mathring{O} 48'18	19.63693 AU	opposition	2550 Feb 25 02:35	6° \mathring{N} 23'47	0°48'33
morning rise	2543 Aug 14 13:38	6° \mathring{O} 52'15		min. Earth dist.	2550 Feb 25 23:15	6° \mathring{N} 21'31	17.35027 AU
retrograde	2543 Nov 15 19:01	10° \mathring{O} 12'38		direct	2550 May 11 18:18	4° \mathring{N} 17'47	
opposition	2544 Jan 28 19:47	8° \mathring{O} 09'45	0°38'30	evening set	2550 Aug 15 05:31	7° \mathring{N} 46'23	
min. Earth dist.	2544 Jan 29 12:16	8° \mathring{O} 07'57	17.60897 AU				
direct	2544 Apr 12 20:48	6° \mathring{O} 05'09		conjunction	2550 Aug 31 21:38	8° \mathring{N} 48'28	0°43'51
evening set	2544 Jul 16 03:25	9° \mathring{O} 27'39		minimum elong	2550 Aug 31 21:38	8° \mathring{N} 48'28	0°43'50
				max. Earth dist.	2550 Aug 30 20:34	8° \mathring{N} 44'33	19.33474 AU
conjunction	2544 Aug 01 21:56	10° \mathring{O} 28'56	0°35'41	morning rise	2550 Sep 17 10:48	9° \mathring{N} 50'09	
minimum elong	2544 Aug 01 21:55	10° \mathring{O} 28'56	0°35'41	retrograde	2550 Dec 18 15:13	13° \mathring{N} 13'07	
max. Earth dist.	2544 Aug 01 00:36	10° \mathring{O} 25'40	19.58182 AU	opposition	2551 Mar 02 02:09	11° \mathring{N} 10'18	0°49'08
morning rise	2544 Aug 18 15:19	11° \mathring{O} 30'06		min. Earth dist.	2551 Mar 03 00:05	11° \mathring{N} 07'54	17.32125 AU
retrograde	2544 Nov 19 17:12	14° \mathring{O} 51'01		direct	2551 May 16 19:22	9° \mathring{N} 04'05	
opposition	2545 Feb 01 15:03	12° \mathring{O} 48'07	0°40'52	evening set	2551 Aug 20 10:57	12° \mathring{N} 33'21	
min. Earth dist.	2545 Feb 02 09:05	12° \mathring{O} 46'08	17.55608 AU	max. Earth dist.	2551 Sep 05 00:27	13° \mathring{N} 31'25	19.30814 AU
direct	2545 Apr 17 17:07	10° \mathring{O} 43'14					
evening set	2545 Jul 21 06:15	14° \mathring{O} 06'57		conjunction	2551 Sep 06 02:15	13° \mathring{N} 35'28	0°44'12
	2545 Aug 04 17:56	15° \mathring{O}		minimum elong	2551 Sep 06 02:15	13° \mathring{N} 35'28	0°44'13
max. Earth dist.	2545 Aug 06 03:18	15° \mathring{O} 05'09	19.53097 AU	morning rise	2551 Sep 22 14:39	14° \mathring{N} 37'09	
				retrograde	2551 Dec 23 16:59	18° \mathring{N} 00'15	
conjunction	2545 Aug 07 00:43	15° \mathring{O} 08'27	0°37'41	opposition	2552 Mar 06 02:00	15° \mathring{N} 57'24	0°49'23
minimum elong	2545 Aug 07 00:43	15° \mathring{O} 08'27	0°37'41	min. Earth dist.	2552 Mar 06 23:08	15° \mathring{N} 55'05	17.29714 AU
morning rise	2545 Aug 23 17:36	16° \mathring{O} 09'45		direct	2552 May 20 22:54	13° \mathring{N} 51'00	
retrograde	2545 Nov 24 16:36	19° \mathring{O} 31'09		evening set	2552 Aug 24 16:26	17° \mathring{N} 20'49	
opposition	2546 Feb 06 11:04	17° \mathring{O} 28'16	0°42'59	max. Earth dist.	2552 Sep 09 06:16	18° \mathring{N} 19'03	19.28658 AU
min. Earth dist.	2546 Feb 07 05:04	17° \mathring{O} 26'18	17.50719 AU				
direct	2546 Apr 22 15:45	15° \mathring{O} 23'10		conjunction	2552 Sep 10 07:06	18° \mathring{N} 22'57	0°44'16
evening set	2546 Jul 26 10:00	18° \mathring{O} 48'02		minimum elong	2552 Sep 10 07:06	18° \mathring{N} 22'57	0°44'16
max. Earth dist.	2546 Aug 11 05:09	19° \mathring{O} 46'09	19.48396 AU	morning rise	2552 Sep 26 18:24	19° \mathring{N} 24'37	
				retrograde	2552 Dec 27 17:00	22° \mathring{N} 47'45	
conjunction	2546 Aug 12 04:04	19° \mathring{O} 49'42	0°39'27	opposition	2553 Mar 11 02:17	20° \mathring{N} 44'54	0°49'17
minimum elong	2546 Aug 12 04:04	19° \mathring{O} 49'42	0°39'28	min. Earth dist.	2553 Mar 12 00:11	20° \mathring{N} 42'30	17.27832 AU
morning rise	2546 Aug 28 20:22	20° \mathring{O} 51'08		direct	2553 May 26 00:53	18° \mathring{N} 38'20	
retrograde	2546 Nov 29 15:05	24° \mathring{O} 12'58		evening set	2553 Aug 29 22:00	22° \mathring{N} 08'36	
opposition	2547 Feb 11 07:56	22° \mathring{O} 10'07	0°44'50	max. Earth dist.	2553 Sep 14 10:12	23° \mathring{N} 06'41	19.27068 AU
min. Earth dist.	2547 Feb 12 03:42	22° \mathring{O} 07'57	17.46224 AU				
direct	2547 Apr 27 14:08	20° \mathring{O} 04'47		conjunction	2553 Sep 15 11:41	23° \mathring{N} 10'42	0°44'00
evening set	2547 Jul 31 14:14	23° \mathring{O} 30'44		minimum elong	2553 Sep 15 11:41	23° \mathring{N} 10'42	0°44'00
max. Earth dist.	2547 Aug 16 08:35	24° \mathring{O} 28'55	19.44088 AU	morning rise	2553 Oct 01 22:09	24° \mathring{N} 12'20	
				retrograde	2554 Jan 01 18:23	27° \mathring{N} 35'26	
conjunction	2547 Aug 17 07:58	24° \mathring{O} 32'33	0°40'58	opposition	2554 Mar 16 02:56	25° \mathring{N} 32'36	0°48'49
minimum elong	2547 Aug 17 07:58	24° \mathring{O} 32'33	0°40'58	min. Earth dist.	2554 Mar 16 23:51	25° \mathring{N} 30'18	17.26540 AU
morning rise	2547 Sep 02 23:37	25° \mathring{O} 34'04		direct	2554 May 31 04:41	23° \mathring{N} 25'55	
retrograde	2547 Dec 04 15:20	28° \mathring{O} 56'19		evening set	2554 Sep 04 03:11	26° \mathring{N} 56'30	

conjunction	2554 Sep 20 16:05	27° <u>♏</u> 58'33	0°43'26		2560 Dec 17 09:07	0° <u>♐</u>	
minimum elong	2554 Sep 20 16:05	27° <u>♏</u> 58'33	0°43'27	retrograde	2561 Feb 03 18:54	1° <u>♐</u> 03'52	
max. Earth dist.	2554 Sep 19 16:24	27° <u>♏</u> 54'49	19.26079 AU		2561 Mar 26 05:00	30° <u>♏</u> <u>♏</u>	
morning rise	2554 Oct 07 01:19	29° <u>♏</u> 00'05		opposition	2561 Apr 18 14:20	29° <u>♏</u> 01'58	0°36'39
	2554 Oct 23 21:26	0° <u>♏</u>		min. Earth dist.	2561 Apr 19 04:35	29° <u>♏</u> 00'26	17.35734 AU
retrograde	2555 Jan 06 18:33	2° <u>♏</u> 23'08		direct	2561 Jul 04 09:18	26° <u>♏</u> 56'08	
opposition	2555 Mar 21 04:03	0° <u>♏</u> 20'19	0°48'02		2561 Oct 01 03:04	0° <u>♐</u>	
min. Earth dist.	2555 Mar 22 00:54	0° <u>♏</u> 18'02	17.25871 AU	evening set	2561 Oct 08 05:44	0° <u>♐</u> 25'54	
	2555 Mar 28 22:24	30° <u>♏</u> <u>♏</u>					
direct	2555 Jun 05 07:51	28° <u>♏</u> 13'35		conjunction	2561 Oct 24 11:08	1° <u>♐</u> 26'51	0°31'36
	2555 Aug 09 15:53	0° <u>♏</u>		minimum elong	2561 Oct 24 11:08	1° <u>♐</u> 26'51	0°31'36
evening set	2555 Sep 09 08:15	1° <u>♏</u> 44'23		max. Earth dist.	2561 Oct 23 19:22	1° <u>♐</u> 24'22	19.37453 AU
				morning rise	2561 Nov 09 12:49	2° <u>♐</u> 27'17	
conjunction	2555 Sep 25 20:01	2° <u>♏</u> 46'20	0°42'35	retrograde	2562 Feb 08 17:05	5° <u>♐</u> 48'39	
minimum elong	2555 Sep 25 20:02	2° <u>♏</u> 46'20	0°42'34	opposition	2562 Apr 23 16:25	3° <u>♐</u> 46'56	0°33'48
max. Earth dist.	2555 Sep 24 20:08	2° <u>♏</u> 42'34	19.25751 AU	min. Earth dist.	2562 Apr 24 06:13	3° <u>♐</u> 45'27	17.39314 AU
morning rise	2555 Oct 12 04:21	3° <u>♏</u> 47'47		direct	2562 Jul 09 12:11	1° <u>♐</u> 41'21	
retrograde	2556 Jan 11 19:09	7° <u>♏</u> 10'44		evening set	2562 Oct 13 07:13	5° <u>♐</u> 10'33	
opposition	2556 Mar 25 05:17	5° <u>♏</u> 07'58	0°46'54				
min. Earth dist.	2556 Mar 26 00:56	5° <u>♏</u> 05'49	17.25894 AU	conjunction	2562 Oct 29 11:29	6° <u>♐</u> 11'15	0°28'57
direct	2556 Jun 09 11:25	3° <u>♏</u> 01'13		minimum elong	2562 Oct 29 11:29	6° <u>♐</u> 11'15	0°28'56
evening set	2556 Sep 13 12:47	6° <u>♏</u> 32'07		max. Earth dist.	2562 Oct 28 21:17	6° <u>♐</u> 09'01	19.41248 AU
				morning rise	2562 Nov 14 12:09	7° <u>♐</u> 11'26	
conjunction	2556 Sep 29 23:44	7° <u>♏</u> 33'59	0°41'25	retrograde	2563 Feb 13 16:51	10° <u>♐</u> 32'21	
minimum elong	2556 Sep 29 23:44	7° <u>♏</u> 33'59	0°41'25	opposition	2563 Apr 28 18:14	8° <u>♐</u> 30'50	0°30'43
max. Earth dist.	2556 Sep 29 02:05	7° <u>♏</u> 30'34	19.26119 AU	min. Earth dist.	2563 Apr 29 05:53	8° <u>♐</u> 29'35	17.43297 AU
morning rise	2556 Oct 16 06:51	8° <u>♏</u> 35'18		direct	2563 Jul 14 16:34	6° <u>♐</u> 25'31	
retrograde	2557 Jan 15 19:42	11° <u>♏</u> 58'06		evening set	2563 Oct 18 08:00	9° <u>♐</u> 54'00	
opposition	2557 Mar 30 06:53	9° <u>♏</u> 55'27	0°45'27				
min. Earth dist.	2557 Mar 31 01:44	9° <u>♏</u> 53'24	17.26596 AU	conjunction	2563 Nov 03 11:11	10° <u>♐</u> 54'27	0°26'06
direct	2557 Jun 14 15:41	7° <u>♏</u> 48'48		minimum elong	2563 Nov 03 11:11	10° <u>♐</u> 54'27	0°26'06
evening set	2557 Sep 18 17:15	11° <u>♏</u> 19'41		max. Earth dist.	2563 Nov 02 22:31	10° <u>♐</u> 52'28	19.45424 AU
max. Earth dist.	2557 Oct 04 05:29	12° <u>♏</u> 18'01	19.27173 AU	morning rise	2563 Nov 19 10:47	11° <u>♐</u> 54'24	
					2564 Jan 26 14:15	15° <u>♐</u>	
conjunction	2557 Oct 05 03:00	12° <u>♏</u> 21'24	0°39'58	retrograde	2564 Feb 18 14:33	15° <u>♐</u> 14'48	
minimum elong	2557 Oct 05 03:00	12° <u>♏</u> 21'24	0°39'58		2564 Mar 13 02:08	15° <u>♏</u> <u>♐</u>	
morning rise	2557 Oct 21 09:07	13° <u>♏</u> 22'36		opposition	2564 May 02 19:48	13° <u>♐</u> 13'26	0°27'26
retrograde	2558 Jan 20 19:18	16° <u>♏</u> 45'12		min. Earth dist.	2564 May 03 07:07	13° <u>♐</u> 12'14	17.47660 AU
opposition	2558 Apr 04 08:33	14° <u>♏</u> 42'43	0°43'41	direct	2564 Jul 18 18:29	11° <u>♐</u> 08'23	
min. Earth dist.	2558 Apr 05 02:24	14° <u>♏</u> 40'46	17.27989 AU	evening set	2564 Oct 22 07:54	14° <u>♐</u> 36'04	
direct	2558 Jun 19 19:12	12° <u>♏</u> 36'12			2564 Oct 28 18:44	15° <u>♐</u>	
evening set	2558 Sep 23 21:06	16° <u>♏</u> 07'00					
max. Earth dist.	2558 Oct 09 10:42	17° <u>♏</u> 05'31	19.28898 AU	conjunction	2564 Nov 07 09:59	15° <u>♐</u> 36'14	0°23'05
				minimum elong	2564 Nov 07 09:59	15° <u>♐</u> 36'14	0°23'06
conjunction	2558 Oct 10 05:55	17° <u>♏</u> 08'34	0°38'15	max. Earth dist.	2564 Nov 06 22:29	15° <u>♐</u> 34'26	19.49971 AU
minimum elong	2558 Oct 10 05:55	17° <u>♏</u> 08'34	0°38'15	morning rise	2564 Nov 23 08:44	16° <u>♐</u> 35'56	
morning rise	2558 Oct 26 10:50	18° <u>♏</u> 09'35		retrograde	2565 Feb 22 13:23	19° <u>♐</u> 55'47	
retrograde	2559 Jan 25 19:57	21° <u>♏</u> 31'57		opposition	2565 May 07 21:00	17° <u>♐</u> 54'34	0°24'00
opposition	2559 Apr 09 10:29	19° <u>♏</u> 29'39	0°41'37	min. Earth dist.	2565 May 08 05:54	17° <u>♐</u> 53'37	17.52361 AU
min. Earth dist.	2559 Apr 10 03:02	19° <u>♏</u> 27'51	17.30011 AU	direct	2565 Jul 23 21:46	15° <u>♐</u> 49'46	
direct	2559 Jun 25 00:23	17° <u>♏</u> 23'21		evening set	2565 Oct 27 06:50	19° <u>♐</u> 16'33	
evening set	2559 Sep 29 00:29	20° <u>♏</u> 53'55					
				conjunction	2565 Nov 12 07:55	20° <u>♐</u> 16'26	0°19'56
conjunction	2559 Oct 15 08:05	21° <u>♏</u> 55'18	0°36'16	minimum elong	2565 Nov 12 07:55	20° <u>♐</u> 16'26	0°19'56
minimum elong	2559 Oct 15 08:05	21° <u>♏</u> 55'18	0°36'17	max. Earth dist.	2565 Nov 11 22:33	20° <u>♐</u> 14'58	19.54837 AU
max. Earth dist.	2559 Oct 14 13:28	21° <u>♏</u> 52'21	19.31223 AU	morning rise	2565 Nov 28 05:36	21° <u>♐</u> 15'51	
morning rise	2559 Oct 31 11:59	22° <u>♏</u> 56'08		retrograde	2566 Feb 27 09:43	24° <u>♐</u> 35'06	
retrograde	2560 Jan 30 18:43	26° <u>♏</u> 18'15		opposition	2566 May 12 21:57	22° <u>♐</u> 34'00	0°20'25
opposition	2560 Apr 13 12:29	24° <u>♏</u> 16'08	0°39'16	min. Earth dist.	2566 May 13 06:22	22° <u>♐</u> 33'07	17.57392 AU
min. Earth dist.	2560 Apr 14 04:22	24° <u>♏</u> 14'25	17.32622 AU	direct	2566 Jul 28 23:07	20° <u>♐</u> 29'29	
direct	2560 Jun 29 03:52	22° <u>♏</u> 10'03		evening set	2566 Nov 01 04:49	23° <u>♐</u> 55'16	
evening set	2560 Oct 03 03:21	25° <u>♏</u> 40'17					
				conjunction	2566 Nov 17 04:46	24° <u>♐</u> 54'50	0°16'41
conjunction	2560 Oct 19 09:55	26° <u>♏</u> 41'28	0°34'03	minimum elong	2566 Nov 17 04:46	24° <u>♐</u> 54'50	0°16'41
minimum elong	2560 Oct 19 09:55	26° <u>♏</u> 41'28	0°34'02	max. Earth dist.	2566 Nov 16 20:30	24° <u>♐</u> 53'33	19.60047 AU
max. Earth dist.	2560 Oct 18 17:12	26° <u>♏</u> 38'50	19.34102 AU	morning rise	2566 Dec 03 01:44	25° <u>♐</u> 53'58	
morning rise	2560 Nov 04 12:42	27° <u>♏</u> 42'06		retrograde	2567 Mar 04 07:13	29° <u>♐</u> 12'36	

opposition	2567 May 17 22:16	27° \mathbb{M} 11'36	0°16'43	evening set	2572 Nov 27 18:47	21° \mathbb{X} 06'32	
min. Earth dist.	2567 May 18 03:58	27° \mathbb{M} 11'00	17.62764 AU				
direct	2567 Aug 03 01:24	25° \mathbb{M} 07'20		conjunction	2572 Dec 13 13:26	22° \mathbb{X} 04'11	-0°03'59
evening set	2567 Nov 06 01:31	28° \mathbb{M} 32'03		minimum elong	2572 Dec 13 13:26	22° \mathbb{X} 04'11	0°03'59
				behind sun begin	2572 Dec 13 06:57	22° \mathbb{X} 03'13	
conjunction	2567 Nov 22 00:37	29° \mathbb{M} 31'19	0°13'20	behind sun end	2572 Dec 13 19:55	22° \mathbb{X} 05'09	
minimum elong	2567 Nov 22 00:37	29° \mathbb{M} 31'19	0°13'20	max. Earth dist.	2572 Dec 13 17:03	22° \mathbb{X} 04'42	19.98215 AU
behind sun begin	2567 Nov 21 20:45	29° \mathbb{M} 30'43		morning rise	2572 Dec 29 06:25	23° \mathbb{X} 01'36	
behind sun end	2567 Nov 22 04:29	29° \mathbb{M} 31'54		retrograde	2573 Mar 30 18:36	26° \mathbb{X} 16'17	
max. Earth dist.	2567 Nov 21 19:08	29° \mathbb{M} 30'28	19.65588 AU	opposition	2573 Jun 14 12:30	24° \mathbb{X} 16'14	-0°06'14
	2567 Nov 29 16:47	0° \mathbb{X}		min. Earth dist.	2573 Jun 14 07:07	24° \mathbb{X} 16'47	18.01769 AU
morning rise	2567 Dec 07 20:40	0° \mathbb{X} 30'09		direct	2573 Aug 30 19:31	22° \mathbb{X} 14'14	
retrograde	2568 Mar 08 01:43	3° \mathbb{X} 48'07		evening set	2573 Dec 02 09:37	25° \mathbb{X} 31'49	
opposition	2568 May 21 22:12	1° \mathbb{X} 47'14	0°12'57				
min. Earth dist.	2568 May 22 03:05	1° \mathbb{X} 46'43	17.68476 AU	conjunction	2573 Dec 18 03:44	26° \mathbb{X} 29'10	-0°07'22
	2568 Jul 12 07:36	30° \mathbb{R} \mathbb{M}		minimum elong	2573 Dec 18 03:43	26° \mathbb{X} 29'10	0°07'22
direct	2568 Aug 07 02:16	29° \mathbb{M} 43'16		behind sun begin	2573 Dec 17 21:42	26° \mathbb{X} 28'16	
	2568 Sep 01 12:46	0° \mathbb{X}		behind sun end	2573 Dec 18 09:44	26° \mathbb{X} 30'04	
evening set	2568 Nov 09 21:26	3° \mathbb{X} 06'51		max. Earth dist.	2573 Dec 18 10:17	26° \mathbb{X} 30'09	20.05387 AU
				morning rise	2574 Jan 02 20:04	27° \mathbb{X} 26'17	
conjunction	2568 Nov 25 19:25	4° \mathbb{X} 05'47	0°09'56		2574 Feb 24 02:38	0° \mathbb{Z}	
minimum elong	2568 Nov 25 19:26	4° \mathbb{X} 05'47	0°09'55	retrograde	2574 Apr 04 09:39	0° \mathbb{Z} 40'20	
behind sun begin	2568 Nov 25 14:03	4° \mathbb{X} 04'58			2574 May 15 04:10	30° \mathbb{R} \mathbb{X}	
behind sun end	2568 Nov 26 00:48	4° \mathbb{X} 06'36		opposition	2574 Jun 19 08:52	28° \mathbb{X} 40'31	-0°09'58
max. Earth dist.	2568 Nov 25 15:00	4° \mathbb{X} 05'07	19.71482 AU	min. Earth dist.	2574 Jun 19 02:13	28° \mathbb{X} 41'12	18.08966 AU
morning rise	2568 Dec 11 14:50	5° \mathbb{X} 04'20		direct	2574 Sep 04 15:36	26° \mathbb{X} 38'58	
retrograde	2569 Mar 12 21:23	8° \mathbb{X} 21'39		evening set	2574 Dec 06 23:49	29° \mathbb{X} 55'18	
opposition	2569 May 26 21:19	6° \mathbb{X} 20'52	0°09'07		2574 Dec 08 07:24	0° \mathbb{Z}	
min. Earth dist.	2569 May 26 23:19	6° \mathbb{X} 20'39	17.74544 AU				
direct	2569 Aug 12 03:17	4° \mathbb{X} 17'13		conjunction	2574 Dec 22 17:07	0° \mathbb{Z} 52'20	-0°10'41
evening set	2569 Nov 14 16:14	7° \mathbb{X} 39'38		minimum elong	2574 Dec 22 17:07	0° \mathbb{Z} 52'20	0°10'40
				behind sun begin	2574 Dec 22 12:01	0° \mathbb{Z} 51'35	
conjunction	2569 Nov 30 13:27	8° \mathbb{X} 38'16	0°06'30	behind sun end	2574 Dec 22 22:14	0° \mathbb{Z} 53'06	
minimum elong	2569 Nov 30 13:27	8° \mathbb{X} 38'16	0°06'30	max. Earth dist.	2574 Dec 23 00:16	0° \mathbb{Z} 53'24	20.12599 AU
behind sun begin	2569 Nov 30 07:15	8° \mathbb{X} 37'19		morning rise	2575 Jan 07 09:16	1° \mathbb{Z} 49'12	
behind sun end	2569 Nov 30 19:39	8° \mathbb{X} 39'12		retrograde	2575 Apr 09 01:45	5° \mathbb{Z} 02'38	
max. Earth dist.	2569 Nov 30 12:07	8° \mathbb{X} 38'05	19.77725 AU	opposition	2575 Jun 24 04:27	3° \mathbb{Z} 02'59	-0°13'37
morning rise	2569 Dec 16 07:58	9° \mathbb{X} 36'31		min. Earth dist.	2575 Jun 23 20:01	3° \mathbb{Z} 03'51	18.16180 AU
retrograde	2570 Mar 17 14:33	12° \mathbb{X} 53'09		direct	2575 Sep 09 09:50	1° \mathbb{Z} 01'52	
opposition	2570 May 31 20:10	10° \mathbb{X} 52'32	0°05'16	evening set	2575 Dec 11 12:57	4° \mathbb{Z} 16'58	
min. Earth dist.	2570 May 31 20:59	10° \mathbb{X} 52'26	17.80955 AU				
direct	2570 Aug 17 02:38	8° \mathbb{X} 49'15		conjunction	2575 Dec 27 05:52	5° \mathbb{Z} 13'43	-0°13'55
evening set	2570 Nov 19 10:00	12° \mathbb{X} 10'29		minimum elong	2575 Dec 27 05:52	5° \mathbb{Z} 13'43	0°13'56
				behind sun begin	2575 Dec 27 02:22	5° \mathbb{Z} 13'12	
conjunction	2570 Dec 05 06:12	13° \mathbb{X} 08'46	0°03'03	behind sun end	2575 Dec 27 09:22	5° \mathbb{Z} 14'14	
minimum elong	2570 Dec 05 06:12	13° \mathbb{X} 08'46	0°03'02	max. Earth dist.	2575 Dec 27 15:33	5° \mathbb{Z} 15'10	20.19774 AU
behind sun begin	2570 Dec 04 23:39	13° \mathbb{X} 07'47		morning rise	2576 Jan 11 21:33	6° \mathbb{Z} 10'18	
behind sun end	2570 Dec 05 12:45	13° \mathbb{X} 09'45		retrograde	2576 Apr 12 16:03	9° \mathbb{Z} 23'07	
max. Earth dist.	2570 Dec 05 05:56	13° \mathbb{X} 08'45	19.84305 AU	opposition	2576 Jun 27 23:24	7° \mathbb{Z} 23'40	-0°17'10
morning rise	2570 Dec 21 00:15	14° \mathbb{X} 06'45		min. Earth dist.	2576 Jun 27 13:44	7° \mathbb{Z} 24'39	18.23299 AU
retrograde	2571 Mar 22 09:07	17° \mathbb{X} 22'44		direct	2576 Sep 13 04:40	5° \mathbb{Z} 22'58	
opposition	2571 Jun 05 18:14	15° \mathbb{X} 22'16	0°01'24	evening set	2576 Dec 15 01:28	8° \mathbb{Z} 36'50	
min. Earth dist.	2571 Jun 05 16:17	15° \mathbb{X} 22'28	17.87681 AU				
direct	2571 Aug 22 01:33	13° \mathbb{X} 19'24		conjunction	2576 Dec 30 17:41	9° \mathbb{Z} 33'17	-0°17'04
desc. node	2571 Oct 18 21:55	14° \mathbb{X} 42'26		minimum elong	2576 Dec 30 17:41	9° \mathbb{Z} 33'17	0°17'03
evening set	2571 Nov 24 02:46	16° \mathbb{X} 39'25		max. Earth dist.	2576 Dec 31 03:42	9° \mathbb{Z} 34'47	20.26824 AU
				morning rise	2577 Jan 15 09:15	10° \mathbb{Z} 29'38	
conjunction	2571 Dec 09 22:19	17° \mathbb{X} 37'24	-0°00'30	retrograde	2577 Apr 17 06:30	13° \mathbb{Z} 41'51	
minimum elong	2571 Dec 09 22:21	17° \mathbb{X} 37'24	0°00'30	opposition	2577 Jul 02 17:39	11° \mathbb{Z} 42'32	-0°20'35
behind sun begin	2571 Dec 09 15:47	17° \mathbb{X} 36'25		min. Earth dist.	2577 Jul 02 06:43	11° \mathbb{Z} 43'39	18.30280 AU
behind sun end	2571 Dec 10 04:54	17° \mathbb{X} 38'23		direct	2577 Sep 17 20:43	9° \mathbb{Z} 42'12	
max. Earth dist.	2571 Dec 10 01:11	17° \mathbb{X} 37'47	19.91159 AU	evening set	2577 Dec 19 12:59	12° \mathbb{Z} 54'52	
morning rise	2571 Dec 25 15:40	18° \mathbb{X} 35'05					
retrograde	2572 Mar 26 01:01	21° \mathbb{X} 50'24		conjunction	2578 Jan 04 04:57	13° \mathbb{Z} 51'02	-0°20'06
opposition	2572 Jun 09 15:38	19° \mathbb{X} 50'10	-0°02'26	minimum elong	2578 Jan 04 04:56	13° \mathbb{Z} 51'02	0°20'06
min. Earth dist.	2572 Jun 09 12:31	19° \mathbb{X} 50'29	17.94640 AU	max. Earth dist.	2578 Jan 04 17:12	13° \mathbb{Z} 52'53	20.33704 AU
direct	2572 Aug 25 22:57	17° \mathbb{X} 47'43		morning rise	2578 Jan 19 20:10	14° \mathbb{Z} 47'08	

retrograde	2578 Apr 21 19:55	17° $\overline{3}$ 58'45	evening set	2585 Jan 16 23:40	12° \approx 10'22
opposition	2578 Jul 07 11:15	15° $\overline{3}$ 59'34 -0°23'53			
min. Earth dist.	2578 Jul 06 22:56	16° $\overline{3}$ 00'49 18.37049 AU	conjunction	2585 Feb 01 14:25	13° \approx 04'57 -0°36'56
direct	2578 Sep 22 14:17	13° $\overline{3}$ 59'36	minimum elong	2585 Feb 01 14:25	13° \approx 04'57 0°36'57
evening set	2578 Dec 23 23:43	17° $\overline{3}$ 11'02	max. Earth dist.	2585 Feb 02 10:19	13° \approx 07'52 20.75908 AU
			morning rise	2585 Feb 17 06:30	13° \approx 59'43
conjunction	2579 Jan 08 15:10	18° $\overline{3}$ 06'57 -0°23'00		2585 Mar 07 14:29	15° \approx
minimum elong	2579 Jan 08 15:10	18° $\overline{3}$ 06'56 0°22'59	retrograde	2585 May 21 03:20	17° \approx 07'47
max. Earth dist.	2579 Jan 09 03:42	18° $\overline{3}$ 08'49 20.40359 AU	opposition	2585 Aug 06 16:51	15° \approx 08'58 -0°41'49
morning rise	2579 Jan 24 06:29	19° $\overline{3}$ 02'49	min. Earth dist.	2585 Aug 05 20:53	15° \approx 10'58 18.78571 AU
retrograde	2579 Apr 26 09:05	22° $\overline{3}$ 13'51		2585 Aug 10 10:29	15° \approx
opposition	2579 Jul 12 04:05	20° $\overline{3}$ 14'45 -0°27'01	direct	2585 Oct 22 08:41	13° \approx 11'05
min. Earth dist.	2579 Jul 11 14:53	20° $\overline{3}$ 16'05 18.43597 AU		2585 Dec 28 22:51	15° \approx
direct	2579 Sep 27 04:35	18° $\overline{3}$ 15'05	evening set	2586 Jan 21 05:29	16° \approx 15'00
evening set	2579 Dec 28 09:32	21° $\overline{3}$ 25'20			
conjunction	2580 Jan 13 00:53	22° $\overline{3}$ 20'59 -0°25'45	conjunction	2586 Feb 05 20:29	17° \approx 09'27 -0°38'36
minimum elong	2580 Jan 13 00:53	22° $\overline{3}$ 20'59 0°25'45	minimum elong	2586 Feb 05 20:29	17° \approx 09'27 0°38'36
max. Earth dist.	2580 Jan 13 15:28	22° $\overline{3}$ 23'09 20.46783 AU	max. Earth dist.	2586 Feb 06 18:04	17° \approx 12'36 20.81122 AU
morning rise	2580 Jan 28 16:01	23° $\overline{3}$ 16'37	morning rise	2586 Feb 21 12:49	18° \approx 04'05
retrograde	2580 Apr 29 21:11	26° $\overline{3}$ 27'04	retrograde	2586 May 25 13:41	21° \approx 11'47
opposition	2580 Jul 15 19:53	24° $\overline{3}$ 28'01 -0°29'58	min. Earth dist.	2586 Aug 10 07:01	19° \approx 15'13 18.83642 AU
min. Earth dist.	2580 Jul 15 05:12	24° $\overline{3}$ 29'30 18.49899 AU	opposition	2586 Aug 11 04:37	19° \approx 13'03 -0°43'33
direct	2580 Sep 30 20:26	22° $\overline{3}$ 28'40	direct	2586 Oct 26 19:14	17° \approx 15'27
evening set	2580 Dec 31 18:41	25° $\overline{3}$ 37'44	evening set	2587 Jan 25 11:00	20° \approx 18'32
conjunction	2581 Jan 16 09:38	26° $\overline{3}$ 33'08 -0°28'21	conjunction	2587 Feb 10 02:04	21° \approx 12'50 -0°40'05
minimum elong	2581 Jan 16 09:38	26° $\overline{3}$ 33'08 0°28'21	minimum elong	2587 Feb 10 02:04	21° \approx 12'50 0°40'05
max. Earth dist.	2581 Jan 17 00:37	26° $\overline{3}$ 35'22 20.52976 AU	max. Earth dist.	2587 Feb 10 23:49	21° \approx 16'00 20.86034 AU
morning rise	2581 Feb 01 00:57	27° $\overline{3}$ 28'35	morning rise	2587 Feb 25 18:58	22° \approx 07'22
	2581 Mar 26 05:10	0° \approx	retrograde	2587 May 29 22:00	25° \approx 14'46
retrograde	2581 May 04 09:13	0° \approx 38'29	opposition	2587 Aug 15 15:59	23° \approx 16'05 -0°45'03
	2581 Jun 13 21:17	30° \overline{R} $\overline{3}$	min. Earth dist.	2587 Aug 14 18:40	23° \approx 18'13 18.88396 AU
opposition	2581 Jul 20 11:12	28° $\overline{3}$ 39'27 -0°32'45	direct	2587 Oct 31 03:47	21° \approx 18'47
min. Earth dist.	2581 Jul 19 19:46	28° $\overline{3}$ 41'01 18.56006 AU	evening set	2588 Jan 29 16:06	24° \approx 21'04
direct	2581 Oct 05 09:18	26° $\overline{3}$ 40'23	conjunction	2588 Feb 14 07:32	25° \approx 15'14 -0°41'21
evening set	2582 Jan 05 02:46	29° $\overline{3}$ 48'18	minimum elong	2588 Feb 14 07:32	25° \approx 15'14 0°41'21
	2582 Jan 08 11:12	0° \approx	max. Earth dist.	2588 Feb 15 06:30	25° \approx 18'35 20.90601 AU
conjunction	2582 Jan 20 17:42	0° \approx 43'29 -0°30'46	morning rise	2588 Mar 01 00:45	26° \approx 09'40
minimum elong	2582 Jan 20 17:42	0° \approx 43'29 0°30'46	retrograde	2588 Jun 02 08:04	29° \approx 16'47
max. Earth dist.	2582 Jan 21 10:51	0° \approx 46'01 20.58982 AU	min. Earth dist.	2588 Aug 18 04:00	27° \approx 20'26 18.92761 AU
morning rise	2582 Feb 05 08:59	1° \approx 38'44	opposition	2588 Aug 19 02:34	27° \approx 18'11 -0°46'20
retrograde	2582 May 08 20:17	4° \approx 48'06	direct	2588 Nov 03 13:19	25° \approx 21'08
min. Earth dist.	2582 Jul 24 08:22	2° \approx 50'52 18.61921 AU	evening set	2589 Feb 01 21:05	28° \approx 22'42
opposition	2582 Jul 25 01:40	2° \approx 49'07 -0°35'20	conjunction	2589 Feb 17 12:41	29° \approx 16'46 -0°42'25
direct	2582 Oct 09 23:25	0° \approx 50'20	minimum elong	2589 Feb 17 12:41	29° \approx 16'46 0°42'25
evening set	2583 Jan 09 10:26	3° \approx 57'10	max. Earth dist.	2589 Feb 18 11:28	29° \approx 20'04 20.94752 AU
conjunction	2583 Jan 25 01:08	4° \approx 52'08 -0°33'00		2589 Mar 02 00:19	0° \overline{H}
minimum elong	2583 Jan 25 01:08	4° \approx 52'07 0°33'01	morning rise	2589 Mar 05 06:31	0° \overline{H} 11'07
max. Earth dist.	2583 Jan 25 18:46	4° \approx 54'44 20.64807 AU	retrograde	2589 Jun 06 15:31	3° \overline{H} 18'00
morning rise	2583 Feb 09 16:43	5° \approx 47'12	opposition	2589 Aug 23 13:02	1° \overline{H} 19'26 -0°47'23
retrograde	2583 May 13 07:19	8° \approx 56'06	min. Earth dist.	2589 Aug 22 15:10	1° \overline{H} 21'37 18.96699 AU
opposition	2583 Jul 29 15:21	6° \approx 57'09 -0°37'42		2589 Sep 29 00:20	30° \overline{R} \approx
min. Earth dist.	2583 Jul 28 21:28	6° \approx 58'57 18.67676 AU	direct	2589 Nov 07 20:19	29° \approx 22'37
direct	2583 Oct 14 10:31	4° \approx 58'39		2589 Dec 16 10:08	0° \overline{H}
evening set	2584 Jan 13 17:17	8° \approx 04'28	evening set	2590 Feb 06 01:36	2° \overline{H} 23'31
conjunction	2584 Jan 29 08:08	8° \approx 59'14 -0°35'04	conjunction	2590 Feb 21 17:43	3° \overline{H} 17'29 -0°43'16
minimum elong	2584 Jan 29 08:08	8° \approx 59'14 0°35'03	minimum elong	2590 Feb 21 17:43	3° \overline{H} 17'29 0°43'16
max. Earth dist.	2584 Jan 30 03:40	9° \approx 02'06 20.70465 AU	max. Earth dist.	2590 Feb 22 17:20	3° \overline{H} 20'54 20.98447 AU
morning rise	2584 Feb 13 23:49	9° \approx 54'08	morning rise	2590 Mar 09 12:01	4° \overline{H} 11'46
retrograde	2584 May 16 17:39	13° \approx 02'35	retrograde	2590 Jun 11 01:05	7° \overline{H} 18'27
min. Earth dist.	2584 Aug 01 08:37	11° \approx 05'41 18.73231 AU	opposition	2590 Aug 27 22:51	5° \overline{H} 19'54 -0°48'12
opposition	2584 Aug 02 04:19	11° \approx 03'43 -0°39'52	min. Earth dist.	2590 Aug 26 24:00	5° \overline{H} 22'11 19.00136 AU
direct	2584 Oct 17 22:45	9° \approx 05'31	direct	2590 Nov 12 05:13	3° \overline{H} 23'16
			evening set	2591 Feb 10 06:12	6° \overline{H} 23'33

conjunction	2591 Feb 25 22:38	7° $\mathbf{\text{H}}$ 17'27 -0°43'55	retrograde	2597 Jul 09 04:49	5° $\mathbf{\text{Y}}$ 04'37
minimum elong	2591 Feb 25 22:38	7° $\mathbf{\text{H}}$ 17'27 0°43'54	min. Earth dist.	2597 Sep 24 11:20	3° $\mathbf{\text{Y}}$ 07'33 19.10018 AU
max. Earth dist.	2591 Feb 26 21:37	7° $\mathbf{\text{H}}$ 20'46 21.01612 AU	opposition	2597 Sep 25 07:54	3° $\mathbf{\text{Y}}$ 05'29 -0°47'16
morning rise	2591 Mar 13 17:41	8° $\mathbf{\text{H}}$ 11'42	direct	2597 Dec 09 22:16	1° $\mathbf{\text{Y}}$ 09'11
retrograde	2591 Jun 15 08:06	11° $\mathbf{\text{H}}$ 18'12	evening set	2598 Mar 09 09:42	4° $\mathbf{\text{Y}}$ 06'55
min. Earth dist.	2591 Aug 31 10:31	9° $\mathbf{\text{H}}$ 21'47 19.03037 AU			
opposition	2591 Sep 01 08:13	9° $\mathbf{\text{H}}$ 19'37 -0°48'47	conjunction	2598 Mar 25 06:50	5° $\mathbf{\text{Y}}$ 00'53 -0°42'22
direct	2591 Nov 16 11:07	7° $\mathbf{\text{H}}$ 23'06	minimum elong	2598 Mar 25 06:50	5° $\mathbf{\text{Y}}$ 00'53 0°42'21
evening set	2592 Feb 14 10:27	10° $\mathbf{\text{H}}$ 22'50	max. Earth dist.	2598 Mar 26 05:24	5° $\mathbf{\text{Y}}$ 04'06 21.09894 AU
			morning rise	2598 Apr 10 07:21	5° $\mathbf{\text{Y}}$ 55'20
conjunction	2592 Mar 01 03:31	11° $\mathbf{\text{H}}$ 16'41 -0°44'20	retrograde	2598 Jul 13 13:10	9° $\mathbf{\text{Y}}$ 01'32
minimum elong	2592 Mar 01 03:31	11° $\mathbf{\text{H}}$ 16'41 0°44'20	opposition	2598 Sep 29 14:45	7° $\mathbf{\text{Y}}$ 02'20 -0°46'13
max. Earth dist.	2592 Mar 02 02:54	11° $\mathbf{\text{H}}$ 20'03 21.04236 AU	min. Earth dist.	2598 Sep 28 17:32	7° $\mathbf{\text{Y}}$ 04'28 19.09751 AU
morning rise	2592 Mar 16 23:08	12° $\mathbf{\text{H}}$ 10'55	direct	2598 Dec 14 04:06	5° $\mathbf{\text{Y}}$ 06'03
retrograde	2592 Jun 18 16:50	15° $\mathbf{\text{H}}$ 17'14	evening set	2599 Mar 13 14:00	8° $\mathbf{\text{Y}}$ 03'44
opposition	2592 Sep 04 17:06	13° $\mathbf{\text{H}}$ 18'36 -0°49'07			
min. Earth dist.	2592 Sep 03 18:34	13° $\mathbf{\text{H}}$ 20'51 19.05377 AU	conjunction	2599 Mar 29 11:51	8° $\mathbf{\text{Y}}$ 57'47 -0°41'19
direct	2592 Nov 19 19:18	11° $\mathbf{\text{H}}$ 22'11	minimum elong	2599 Mar 29 11:51	8° $\mathbf{\text{Y}}$ 57'47 0°41'19
evening set	2593 Feb 17 14:30	14° $\mathbf{\text{H}}$ 21'24	max. Earth dist.	2599 Mar 30 09:29	9° $\mathbf{\text{Y}}$ 00'52 21.09431 AU
			morning rise	2599 Apr 14 13:22	9° $\mathbf{\text{Y}}$ 52'20
conjunction	2593 Mar 05 07:59	15° $\mathbf{\text{H}}$ 15'13 -0°44'32	retrograde	2599 Jul 17 19:48	12° $\mathbf{\text{Y}}$ 58'42
minimum elong	2593 Mar 05 07:59	15° $\mathbf{\text{H}}$ 15'13 0°44'32	opposition	2599 Oct 03 21:29	10° $\mathbf{\text{Y}}$ 59'27 -0°44'57
max. Earth dist.	2593 Mar 06 06:41	15° $\mathbf{\text{H}}$ 18'28 21.06303 AU	min. Earth dist.	2599 Oct 03 01:52	11° $\mathbf{\text{Y}}$ 01'25 19.09096 AU
morning rise	2593 Mar 21 04:26	16° $\mathbf{\text{H}}$ 09'26	direct	2599 Dec 18 07:14	9° $\mathbf{\text{Y}}$ 03'10
retrograde	2593 Jun 22 23:40	19° $\mathbf{\text{H}}$ 15'38	evening set	2600 Mar 17 18:25	12° $\mathbf{\text{Y}}$ 00'53
min. Earth dist.	2593 Sep 08 04:24	17° $\mathbf{\text{H}}$ 19'02 19.07190 AU			
opposition	2593 Sep 09 01:46	17° $\mathbf{\text{H}}$ 16'54 -0°49'13	conjunction	2600 Apr 02 17:15	12° $\mathbf{\text{Y}}$ 55'02 -0°40'04
direct	2593 Nov 24 00:39	15° $\mathbf{\text{H}}$ 20'33	minimum elong	2600 Apr 02 17:15	12° $\mathbf{\text{Y}}$ 55'02 0°40'04
evening set	2594 Feb 21 18:21	18° $\mathbf{\text{H}}$ 19'17	max. Earth dist.	2600 Apr 03 14:51	12° $\mathbf{\text{Y}}$ 58'07 21.08585 AU
			morning rise	2600 Apr 18 19:36	13° $\mathbf{\text{Y}}$ 49'42
conjunction	2594 Mar 09 12:35	19° $\mathbf{\text{H}}$ 13'06 -0°44'31	retrograde	2600 Jul 22 04:57	16° $\mathbf{\text{Y}}$ 56'16
minimum elong	2594 Mar 09 12:35	19° $\mathbf{\text{H}}$ 13'06 0°44'32	min. Earth dist.	2600 Oct 07 08:08	14° $\mathbf{\text{Y}}$ 58'59 19.08035 AU
max. Earth dist.	2594 Mar 10 11:45	19° $\mathbf{\text{H}}$ 16'25 21.07873 AU	opposition	2600 Oct 08 04:09	14° $\mathbf{\text{Y}}$ 56'58 -0°43'29
morning rise	2594 Mar 25 09:43	20° $\mathbf{\text{H}}$ 07'20	direct	2600 Dec 22 12:35	13° $\mathbf{\text{Y}}$ 00'41
retrograde	2594 Jun 27 07:44	23° $\mathbf{\text{H}}$ 13'26	evening set	2601 Mar 21 23:13	15° $\mathbf{\text{Y}}$ 58'31
min. Earth dist.	2594 Sep 12 11:30	21° $\mathbf{\text{H}}$ 16'48 19.08520 AU			
opposition	2594 Sep 13 09:42	21° $\mathbf{\text{H}}$ 14'35 -0°49'05	conjunction	2601 Apr 06 22:49	16° $\mathbf{\text{Y}}$ 52'47 -0°38'38
direct	2594 Nov 28 07:52	19° $\mathbf{\text{H}}$ 18'15	minimum elong	2601 Apr 06 22:49	16° $\mathbf{\text{Y}}$ 52'47 0°38'39
evening set	2595 Feb 25 22:14	22° $\mathbf{\text{H}}$ 16'37	max. Earth dist.	2601 Apr 07 19:17	16° $\mathbf{\text{Y}}$ 55'42 21.07311 AU
			morning rise	2601 Apr 23 02:13	17° $\mathbf{\text{Y}}$ 47'36
conjunction	2595 Mar 13 17:01	23° $\mathbf{\text{H}}$ 10'26 -0°44'18	retrograde	2601 Jul 26 12:12	20° $\mathbf{\text{Y}}$ 54'24
minimum elong	2595 Mar 13 17:01	23° $\mathbf{\text{H}}$ 10'26 0°44'18	opposition	2601 Oct 12 11:00	18° $\mathbf{\text{Y}}$ 55'03 -0°41'48
max. Earth dist.	2595 Mar 14 15:31	23° $\mathbf{\text{H}}$ 13'39 21.08974 AU	min. Earth dist.	2601 Oct 11 16:52	18° $\mathbf{\text{Y}}$ 56'53 19.06540 AU
morning rise	2595 Mar 29 15:03	24° $\mathbf{\text{H}}$ 04'42	direct	2601 Dec 26 16:08	16° $\mathbf{\text{Y}}$ 58'45
retrograde	2595 Jul 01 14:25	27° $\mathbf{\text{H}}$ 10'45			
opposition	2595 Sep 17 17:27	25° $\mathbf{\text{H}}$ 11'48 -0°48'42			
min. Earth dist.	2595 Sep 16 20:28	25° $\mathbf{\text{H}}$ 13'54 19.09414 AU			
direct	2595 Dec 02 12:20	23° $\mathbf{\text{H}}$ 15'28			
evening set	2596 Mar 01 01:56	26° $\mathbf{\text{H}}$ 13'33			
conjunction	2596 Mar 16 21:31	27° $\mathbf{\text{H}}$ 07'24 -0°43'52			
minimum elong	2596 Mar 16 21:31	27° $\mathbf{\text{H}}$ 07'24 0°43'51			
max. Earth dist.	2596 Mar 17 20:28	27° $\mathbf{\text{H}}$ 10'40 21.09665 AU			
morning rise	2596 Apr 01 20:15	28° $\mathbf{\text{H}}$ 01'41			
	2596 May 11 23:23	0° $\mathbf{\text{Y}}$			
retrograde	2596 Jul 04 22:10	1° $\mathbf{\text{Y}}$ 07'44			
	2596 Aug 29 22:21	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$			
min. Earth dist.	2596 Sep 20 02:50	29° $\mathbf{\text{H}}$ 10'53 19.09903 AU			
opposition	2596 Sep 21 00:41	29° $\mathbf{\text{H}}$ 08'42 -0°48'06			
direct	2596 Dec 05 18:43	27° $\mathbf{\text{H}}$ 12'23			
	2597 Mar 02 03:51	0° $\mathbf{\text{Y}}$			
evening set	2597 Mar 05 05:52	0° $\mathbf{\text{Y}}$ 10'15			
conjunction	2597 Mar 21 02:03	1° $\mathbf{\text{Y}}$ 04'08 -0°43'13			
minimum elong	2597 Mar 21 02:03	1° $\mathbf{\text{Y}}$ 04'08 0°43'13			
max. Earth dist.	2597 Mar 22 00:20	1° $\mathbf{\text{Y}}$ 07'19 21.09961 AU			
morning rise	2597 Apr 06 01:45	1° $\mathbf{\text{Y}}$ 58'31			