

opposition	14600 Jan 10 02:47	3°Ω00'09 -0°55'24	direct	14606 Apr 22 20:30	25°Ω34'45
min. Earth dist.	14600 Jan 09 20:18	3°Ω00'49 18.61621 AU	evening set	14606 Jul 23 16:45	28°Ω38'57
direct	14600 Mar 28 04:40	1°Ω00'17			
evening set	14600 Jun 28 20:10	4°Ω08'47	conjunction	14606 Aug 08 12:36	29°Ω33'33 -0°24'10
			minimum elong	14606 Aug 08 12:36	29°Ω33'33 0°24'47
conjunction	14600 Jul 14 16:55	5°Ω04'18 -0°48'15	max. Earth dist.	14606 Aug 08 21:37	29°Ω34'51 20.91299 AU
minimum elong	14600 Jul 14 16:55	5°Ω04'18 0°49'09		14606 Aug 16 03:18	0°൬
max. Earth dist.	14600 Jul 15 00:25	5°Ω05'24 20.64268 AU	morning rise	14606 Aug 24 08:27	0°൬28'11
morning rise	14600 Jul 30 12:45	5°Ω59'43	retrograde	14606 Nov 24 12:48	3°൬33'09
retrograde	14600 Oct 30 06:36	9°Ω06'47	opposition	14607 Feb 09 08:42	1°൬35'26 -0°24'16
opposition	14601 Jan 14 15:08	7°Ω08'19 -0°51'34	min. Earth dist.	14607 Feb 09 00:04	1°൬36'18 18.92941 AU
min. Earth dist.	14601 Jan 14 07:50	7°Ω09'03 18.66899 AU		14607 Mar 27 13:47	30°℞Ω
direct	14601 Apr 01 17:42	5°Ω08'43	direct	14607 Apr 27 07:19	29°Ω37'26
evening set	14601 Jul 03 04:50	8°Ω16'22		14607 May 27 08:35	0°൬
			evening set	14607 Jul 27 22:52	2°൬41'03
conjunction	14601 Jul 19 01:13	9°Ω11'42 -0°44'42			
minimum elong	14601 Jul 19 01:13	9°Ω11'42 0°45'34	conjunction	14607 Aug 12 18:33	3°൬35'33 -0°19'39
max. Earth dist.	14601 Jul 19 08:20	9°Ω12'44 20.69464 AU	minimum elong	14607 Aug 12 18:33	3°൬35'33 0°20'12
morning rise	14601 Aug 03 21:07	10°Ω06'57	max. Earth dist.	14607 Aug 13 02:39	3°൬36'43 20.94455 AU
retrograde	14601 Nov 03 15:52	13°Ω13'33	morning rise	14607 Aug 28 14:38	4°൬30'06
opposition	14602 Jan 19 03:05	11°Ω15'13 -0°47'30	retrograde	14607 Nov 28 21:16	7°൬34'54
min. Earth dist.	14602 Jan 18 19:40	11°Ω15'58 18.72002 AU	opposition	14608 Feb 13 18:36	5°൬37'11 -0°19'13
direct	14602 Apr 06 04:00	9°Ω15'54	min. Earth dist.	14608 Feb 13 10:47	5°൬37'58 18.95856 AU
evening set	14602 Jul 07 12:50	12°Ω22'46	direct	14608 Apr 30 15:02	3°൬39'21
			evening set	14608 Jul 31 04:40	6°൬42'27
conjunction	14602 Jul 23 09:09	13°Ω17'55 -0°40'55			
minimum elong	14602 Jul 23 09:09	13°Ω17'56 0°41'44	conjunction	14608 Aug 16 00:31	7°൬36'52 -0°15'04
max. Earth dist.	14602 Jul 23 17:36	13°Ω19'10 20.74456 AU	minimum elong	14608 Aug 16 00:31	7°൬36'52 0°15'34
morning rise	14602 Aug 08 04:51	14°Ω13'01	behind sun begin	14608 Aug 15 22:42	7°൬36'37
	14602 Aug 22 08:53	15°Ω	behind sun end	14608 Aug 16 02:19	7°൬37'07
retrograde	14602 Nov 08 01:43	17°Ω19'11	max. Earth dist.	14608 Aug 16 09:06	7°൬38'05 20.97113 AU
opposition	14603 Jan 23 14:29	15°Ω21'01 -0°43'12	morning rise	14608 Aug 31 20:39	8°൬31'20
min. Earth dist.	14603 Jan 23 06:18	15°Ω21'50 18.76859 AU	retrograde	14608 Dec 02 04:45	11°൬35'58
	14603 Feb 01 07:49	15°℞Ω	opposition	14609 Feb 17 03:53	9°൬38'15 -0°14'06
direct	14603 Apr 10 16:06	13°Ω22'00	min. Earth dist.	14609 Feb 16 19:33	9°൬39'05 18.98246 AU
	14603 Jun 13 23:32	15°Ω	direct	14609 May 05 00:44	7°൬40'32
evening set	14603 Jul 11 20:30	16°Ω28'07	evening set	14609 Aug 04 10:18	10°൬43'09
conjunction	14603 Jul 27 16:30	17°Ω23'07 -0°36'58	conjunction	14609 Aug 20 06:05	11°൬37'29 -0°10'25
minimum elong	14603 Jul 27 16:30	17°Ω23'07 0°37'45	minimum elong	14609 Aug 20 06:05	11°൬37'29 0°10'50
max. Earth dist.	14603 Jul 28 00:29	17°Ω24'17 20.79185 AU	behind sun begin	14609 Aug 20 01:02	11°൬36'46
morning rise	14603 Aug 12 12:19	18°Ω18'04	behind sun end	14609 Aug 20 11:07	11°൬38'11
retrograde	14603 Nov 12 10:32	21°Ω23'53	max. Earth dist.	14609 Aug 20 13:38	11°൬38'33 20.99245 AU
opposition	14604 Jan 28 01:41	19°Ω25'51 -0°38'42	morning rise	14609 Sep 05 02:32	12°൬31'54
min. Earth dist.	14604 Jan 27 17:41	19°Ω26'39 18.81449 AU	retrograde	14609 Dec 06 12:04	15°൬36'24
direct	14604 Apr 14 01:00	17°Ω27'07	opposition	14610 Feb 21 13:05	13°൬38'37 -0°08'54
evening set	14604 Jul 15 03:27	20°Ω32'33	min. Earth dist.	14610 Feb 21 05:46	13°൬39'21 19.00129 AU
			direct	14610 May 09 08:12	11°൬40'58
conjunction	14604 Jul 30 23:29	21°Ω27'23 -0°32'50	evening set	14610 Aug 08 15:26	14°൬43'08
minimum elong	14604 Jul 30 23:29	21°Ω27'23 0°33'34			
max. Earth dist.	14604 Jul 31 08:34	21°Ω28'42 20.83612 AU	conjunction	14610 Aug 24 11:25	15°൬37'25 -0°05'44
morning rise	14604 Aug 15 19:12	22°Ω22'13	minimum elong	14610 Aug 24 11:25	15°൬37'25 0°06'06
retrograde	14604 Nov 15 19:48	25°Ω27'43	behind sun begin	14610 Aug 24 05:10	15°൬36'32
opposition	14605 Jan 31 12:21	23°Ω29'48 -0°34'02	behind sun end	14610 Aug 24 17:40	15°൬38'17
min. Earth dist.	14605 Jan 31 03:40	23°Ω30'41 18.85689 AU	max. Earth dist.	14610 Aug 24 19:35	15°൬38'34 21.00889 AU
direct	14605 Apr 18 12:28	21°Ω31'21	morning rise	14610 Sep 09 07:58	16°൬31'47
evening set	14605 Jul 19 10:20	24°Ω36'08	retrograde	14610 Dec 10 19:24	19°൬36'11
			opposition	14611 Feb 25 21:52	17°൬38'19 -0°03'41
conjunction	14605 Aug 04 06:07	25°Ω30'51 -0°28'34	min. Earth dist.	14611 Feb 25 13:47	17°൬39'07 19.01536 AU
minimum elong	14605 Aug 04 06:07	25°Ω30'51 0°29'14	direct	14611 May 13 17:01	15°൬40'43
max. Earth dist.	14605 Aug 04 14:26	25°Ω32'03 20.87663 AU	evening set	14611 Aug 12 20:31	18°൬42'29
morning rise	14605 Aug 20 02:01	26°Ω25'34			
retrograde	14605 Nov 20 04:28	29°Ω30'47	conjunction	14611 Aug 28 16:27	19°൬36'42 -0°00'59
opposition	14606 Feb 04 22:39	27°Ω32'59 -0°29'13	minimum elong	14611 Aug 28 16:27	19°൬36'42 0°01'17
min. Earth dist.	14606 Feb 04 14:37	27°Ω33'47 18.89543 AU	behind sun begin	14611 Aug 28 09:53	19°൬35'47

behind sun end	14611 Aug 28 23:02	19° <u>♏</u> 37'37		evening set	14617 Sep 05 01:32	12° <u>♏</u> 33'30	
max. Earth dist.	14611 Aug 28 23:58	19° <u>♏</u> 37'46	21.02084 AU				
morning rise	14611 Sep 13 13:22	20° <u>♏</u> 31'04		conjunction	14617 Sep 20 22:45	13° <u>♏</u> 27'49	0°26'38
asc. node	14611 Nov 15 04:00	23° <u>♏</u> 13'23		minimum elong	14617 Sep 20 22:45	13° <u>♏</u> 27'48	0°26'45
retrograde	14611 Dec 15 01:40	23° <u>♏</u> 35'24		max. Earth dist.	14617 Sep 21 06:02	13° <u>♏</u> 28'51	21.01657 AU
opposition	14612 Mar 01 06:30	21° <u>♏</u> 37'26	0°01'33	morning rise	14617 Oct 06 21:40	14° <u>♏</u> 22'21	
min. Earth dist.	14612 Feb 29 23:18	21° <u>♏</u> 38'09	19.02545 AU	retrograde	14618 Jan 07 22:03	17° <u>♏</u> 27'38	
direct	14612 May 16 23:30	19° <u>♏</u> 39'52		opposition	14618 Mar 26 07:16	15° <u>♏</u> 29'11	0°31'50
evening set	14612 Aug 16 01:12	22° <u>♏</u> 41'18		min. Earth dist.	14618 Mar 26 00:34	15° <u>♏</u> 29'51	19.01022 AU
				direct	14618 Jun 10 13:35	13° <u>♏</u> 31'51	
conjunction	14612 Aug 31 21:24	23° <u>♏</u> 35'29	0°03'51	evening set	14618 Sep 09 06:47	16° <u>♏</u> 32'46	
minimum elong	14612 Aug 31 21:25	23° <u>♏</u> 35'29	0°03'38				
behind sun begin	14612 Aug 31 14:54	23° <u>♏</u> 34'35		conjunction	14618 Sep 25 04:25	17° <u>♏</u> 27'09	0°30'54
behind sun end	14612 Sep 01 03:57	23° <u>♏</u> 36'24		minimum elong	14618 Sep 25 04:24	17° <u>♏</u> 27'09	0°31'06
max. Earth dist.	14612 Sep 01 05:43	23° <u>♏</u> 36'40	21.02904 AU	max. Earth dist.	14618 Sep 25 12:00	17° <u>♏</u> 28'14	21.00260 AU
morning rise	14612 Sep 16 18:31	24° <u>♏</u> 29'50		morning rise	14618 Oct 11 03:37	18° <u>♏</u> 21'47	
retrograde	14612 Dec 18 09:25	27° <u>♏</u> 34'10		retrograde	14619 Jan 12 07:25	21° <u>♏</u> 27'25	
opposition	14613 Mar 05 14:45	25° <u>♏</u> 36'06	0°06'46	opposition	14619 Mar 30 15:32	19° <u>♏</u> 28'54	0°36'30
min. Earth dist.	14613 Mar 05 06:38	25° <u>♏</u> 36'55	19.03176 AU	min. Earth dist.	14619 Mar 30 08:12	19° <u>♏</u> 29'38	18.99399 AU
direct	14613 May 21 07:34	23° <u>♏</u> 38'34		direct	14619 Jun 14 20:56	17° <u>♏</u> 31'35	
evening set	14613 Aug 20 06:03	26° <u>♏</u> 39'44		evening set	14619 Sep 13 12:37	20° <u>♏</u> 32'39	
conjunction	14613 Sep 05 02:18	27° <u>♏</u> 33'55	0°08'31	conjunction	14619 Sep 29 10:27	21° <u>♏</u> 27'08	0°35'02
minimum elong	14613 Sep 05 02:17	27° <u>♏</u> 33'55	0°08'22	minimum elong	14619 Sep 29 10:27	21° <u>♏</u> 27'07	0°35'18
behind sun begin	14613 Sep 04 20:29	27° <u>♏</u> 33'07		max. Earth dist.	14619 Sep 29 16:58	21° <u>♏</u> 28'03	20.98401 AU
behind sun end	14613 Sep 05 08:06	27° <u>♏</u> 34'44		morning rise	14619 Oct 15 10:10	22° <u>♏</u> 21'52	
max. Earth dist.	14613 Sep 05 09:56	27° <u>♏</u> 35'00	21.03354 AU	retrograde	14620 Jan 16 15:34	25° <u>♏</u> 27'54	
morning rise	14613 Sep 20 23:46	28° <u>♏</u> 28'16		opposition	14620 Apr 03 00:03	23° <u>♏</u> 29'17	0°41'00
	14613 Oct 20 15:01	0° <u>♏</u>		min. Earth dist.	14620 Apr 02 18:17	23° <u>♏</u> 29'52	18.97311 AU
retrograde	14613 Dec 22 15:17	1° <u>♏</u> 32'41		direct	14620 Jun 18 02:03	21° <u>♏</u> 31'58	
	14614 Feb 27 06:19	30° <u>♏</u>		evening set	14620 Sep 16 18:41	24° <u>♏</u> 33'14	
opposition	14614 Mar 09 22:54	29° <u>♏</u> 34'32	0°11'57				
min. Earth dist.	14614 Mar 09 15:41	29° <u>♏</u> 35'15	19.03463 AU	conjunction	14620 Oct 02 17:01	25° <u>♏</u> 27'49	0°39'01
direct	14614 May 25 13:00	27° <u>♏</u> 37'02		minimum elong	14620 Oct 02 17:00	25° <u>♏</u> 27'49	0°39'21
	14614 Aug 12 20:14	0° <u>♏</u>		max. Earth dist.	14620 Oct 02 23:25	25° <u>♏</u> 28'44	20.96063 AU
evening set	14614 Aug 24 10:42	0° <u>♏</u> 38'01		morning rise	14620 Oct 18 17:06	26° <u>♏</u> 22'41	
				retrograde	14621 Jan 20 01:36	29° <u>♏</u> 29'08	
conjunction	14614 Sep 09 07:16	1° <u>♏</u> 32'12	0°13'09	opposition	14621 Apr 07 08:37	27° <u>♏</u> 30'25	0°45'18
minimum elong	14614 Sep 09 07:16	1° <u>♏</u> 32'12	0°13'05	min. Earth dist.	14621 Apr 07 02:28	27° <u>♏</u> 31'02	18.94709 AU
behind sun begin	14614 Sep 09 03:17	1° <u>♏</u> 31'38		direct	14621 Jun 22 10:02	25° <u>♏</u> 33'01	
behind sun end	14614 Sep 09 11:15	1° <u>♏</u> 32'45		evening set	14621 Sep 21 01:17	28° <u>♏</u> 34'34	
max. Earth dist.	14614 Sep 09 15:36	1° <u>♏</u> 33'23	21.03473 AU				
morning rise	14614 Sep 25 04:57	2° <u>♏</u> 26'34		conjunction	14621 Oct 06 23:52	29° <u>♏</u> 29'16	0°42'49
retrograde	14614 Dec 26 23:31	5° <u>♏</u> 31'06		minimum elong	14621 Oct 06 23:52	29° <u>♏</u> 29'16	0°43'14
opposition	14615 Mar 14 06:58	3° <u>♏</u> 32'52	0°17'04	max. Earth dist.	14621 Oct 07 04:59	29° <u>♏</u> 30'00	20.93191 AU
min. Earth dist.	14615 Mar 13 22:45	3° <u>♏</u> 33'42	19.03404 AU		14621 Oct 15 21:34	0° <u>♏</u>	
direct	14615 May 29 20:24	1° <u>♏</u> 35'25		morning rise	14621 Oct 23 00:28	0° <u>♏</u> 24'16	
evening set	14615 Aug 28 15:27	4° <u>♏</u> 36'16		retrograde	14622 Jan 24 10:05	3° <u>♏</u> 31'11	
				opposition	14622 Apr 11 17:31	1° <u>♏</u> 32'18	0°49'25
conjunction	14615 Sep 13 12:08	5° <u>♏</u> 30'29	0°17'44	min. Earth dist.	14622 Apr 11 13:04	1° <u>♏</u> 32'45	18.91585 AU
minimum elong	14615 Sep 13 12:08	5° <u>♏</u> 30'29	0°17'43		14622 May 25 11:47	30° <u>♏</u>	
max. Earth dist.	14615 Sep 13 19:49	5° <u>♏</u> 31'34	21.03236 AU	direct	14622 Jun 26 15:27	29° <u>♏</u> 34'48	
morning rise	14615 Sep 29 10:16	6° <u>♏</u> 24'54			14622 Jul 28 04:27	0° <u>♏</u>	
retrograde	14615 Dec 31 05:59	9° <u>♏</u> 29'38		evening set	14622 Sep 25 08:07	2° <u>♏</u> 36'38	
opposition	14616 Mar 17 15:08	7° <u>♏</u> 31'19	0°22'06				
min. Earth dist.	14616 Mar 17 07:57	7° <u>♏</u> 32'03	19.02995 AU	conjunction	14622 Oct 11 07:15	3° <u>♏</u> 31'28	0°46'25
direct	14616 Jun 02 01:30	5° <u>♏</u> 33'55		minimum elong	14622 Oct 11 07:14	3° <u>♏</u> 31'28	0°46'53
evening set	14616 Aug 31 20:19	8° <u>♏</u> 34'43		max. Earth dist.	14622 Oct 11 12:10	3° <u>♏</u> 32'11	20.89826 AU
				morning rise	14622 Oct 27 08:16	4° <u>♏</u> 26'36	
conjunction	14616 Sep 16 17:23	9° <u>♏</u> 28'58	0°22'14	retrograde	14623 Jan 28 20:50	7° <u>♏</u> 34'01	
minimum elong	14616 Sep 16 17:22	9° <u>♏</u> 28'58	0°22'18	opposition	14623 Apr 16 02:29	5° <u>♏</u> 34'55	0°53'18
max. Earth dist.	14616 Sep 17 01:33	9° <u>♏</u> 30'08	21.02645 AU	min. Earth dist.	14623 Apr 15 21:37	5° <u>♏</u> 35'25	18.87977 AU
morning rise	14616 Oct 02 15:48	10° <u>♏</u> 23'26		direct	14623 Jun 30 23:58	3° <u>♏</u> 37'16	
retrograde	14617 Jan 03 14:42	13° <u>♏</u> 28'24		evening set	14623 Sep 29 15:20	6° <u>♏</u> 39'27	
opposition	14617 Mar 21 23:00	11° <u>♏</u> 30'02	0°27'01				
min. Earth dist.	14617 Mar 21 15:02	11° <u>♏</u> 30'50	19.02207 AU	conjunction	14623 Oct 15 14:50	7° <u>♏</u> 34'26	0°49'48
direct	14617 Jun 06 08:28	9° <u>♏</u> 32'40		minimum elong	14623 Oct 15 14:50	7° <u>♏</u> 34'26	0°50'21

max. Earth dist.	14623 Oct 15 18:42	7° \mathbb{M} 35'00	20.85993 AU	morning rise	14629 Nov 25 04:58	3° \mathbb{A} 10'17	
morning rise	14623 Oct 31 16:28	8° \mathbb{M} 29'45		retrograde	14630 Feb 27 06:10	6° \mathbb{A} 22'00	
retrograde	14624 Feb 02 05:51	11° \mathbb{M} 37'39		opposition	14630 May 15 01:03	4° \mathbb{A} 21'25	1°12'23
opposition	14624 Apr 19 11:47	9° \mathbb{M} 38'21	0°56'56	min. Earth dist.	14630 May 14 24:00	4° \mathbb{A} 21'32	18.54145 AU
min. Earth dist.	14624 Apr 19 08:31	9° \mathbb{M} 38'41	18.83945 AU	direct	14630 Jul 29 08:03	2° \mathbb{A} 22'24	
direct	14624 Jul 04 05:51	7° \mathbb{M} 40'31		evening set	14630 Oct 28 08:45	5° \mathbb{A} 28'38	
evening set	14624 Oct 02 22:59	10° \mathbb{M} 43'06					
				conjunction	14630 Nov 13 12:03	6° \mathbb{A} 25'05	1°05'54
conjunction	14624 Oct 18 23:03	11° \mathbb{M} 38'15	0°52'57	minimum elong	14630 Nov 13 12:03	6° \mathbb{A} 25'05	1°06'48
minimum elong	14624 Oct 18 23:03	11° \mathbb{M} 38'14	0°53'33	max. Earth dist.	14630 Nov 13 13:10	6° \mathbb{A} 25'14	20.51349 AU
max. Earth dist.	14624 Oct 19 02:51	11° \mathbb{M} 38'47	20.81779 AU	morning rise	14630 Nov 29 17:33	7° \mathbb{A} 21'52	
morning rise	14624 Nov 04 01:09	12° \mathbb{M} 33'43		retrograde	14631 Mar 03 21:26	10° \mathbb{A} 34'20	
	14624 Dec 26 02:36	15° \mathbb{M}		opposition	14631 May 19 12:43	8° \mathbb{A} 33'35	1°13'44
retrograde	14625 Feb 05 17:18	15° \mathbb{M} 42'10		min. Earth dist.	14631 May 19 11:13	8° \mathbb{A} 33'44	18.48561 AU
	14625 Mar 20 08:31	15° \mathbb{R} \mathbb{M}		direct	14631 Aug 02 18:29	6° \mathbb{A} 34'22	
opposition	14625 Apr 23 20:57	13° \mathbb{M} 42'37	1°00'18	evening set	14631 Nov 01 20:56	9° \mathbb{A} 41'25	
min. Earth dist.	14625 Apr 23 17:10	13° \mathbb{M} 43'00	18.79561 AU				
direct	14625 Jul 08 14:32	11° \mathbb{M} 44'35		conjunction	14631 Nov 18 00:51	10° \mathbb{A} 38'07	1°06'55
evening set	14625 Oct 07 07:12	14° \mathbb{M} 47'38		minimum elong	14631 Nov 18 00:51	10° \mathbb{A} 38'07	1°07'51
	14625 Oct 10 22:10	15° \mathbb{M}		max. Earth dist.	14631 Nov 18 01:24	10° \mathbb{A} 38'11	20.45679 AU
				morning rise	14631 Dec 04 06:57	11° \mathbb{A} 35'09	
conjunction	14625 Oct 23 07:39	15° \mathbb{M} 42'58	0°55'51	retrograde	14632 Mar 07 11:14	14° \mathbb{A} 48'23	
minimum elong	14625 Oct 23 07:39	15° \mathbb{M} 42'58	0°56'31	opposition	14632 May 23 01:06	12° \mathbb{A} 47'29	1°14'42
max. Earth dist.	14625 Oct 23 10:36	15° \mathbb{M} 43'24	20.77235 AU	min. Earth dist.	14632 May 23 01:05	12° \mathbb{A} 47'29	18.42808 AU
morning rise	14625 Nov 08 10:19	16° \mathbb{M} 38'38		direct	14632 Aug 06 04:45	10° \mathbb{A} 48'04	
retrograde	14626 Feb 10 03:35	19° \mathbb{M} 47'40		evening set	14632 Nov 05 10:06	13° \mathbb{A} 55'59	
opposition	14626 Apr 28 06:44	17° \mathbb{M} 47'53	1°03'23				
min. Earth dist.	14626 Apr 28 04:21	17° \mathbb{M} 48'08	18.74888 AU	conjunction	14632 Nov 21 14:38	14° \mathbb{A} 52'56	1°07'36
direct	14626 Jul 12 21:09	15° \mathbb{M} 49'39		minimum elong	14632 Nov 21 14:38	14° \mathbb{A} 52'56	1°08'34
evening set	14626 Oct 11 15:41	18° \mathbb{M} 53'13		max. Earth dist.	14632 Nov 21 14:19	14° \mathbb{A} 52'53	20.39842 AU
				morning rise	14632 Dec 07 21:20	15° \mathbb{A} 50'14	
conjunction	14626 Oct 27 16:43	19° \mathbb{M} 48'44	0°58'28	retrograde	14633 Mar 12 03:44	19° \mathbb{A} 04'14	
minimum elong	14626 Oct 27 16:42	19° \mathbb{M} 48'44	0°59'11	opposition	14633 May 27 13:50	17° \mathbb{A} 03'11	1°15'16
max. Earth dist.	14626 Oct 27 19:41	19° \mathbb{M} 49'10	20.72443 AU	min. Earth dist.	14633 May 27 13:46	17° \mathbb{A} 03'11	18.36873 AU
morning rise	14626 Nov 12 19:53	20° \mathbb{M} 44'36		direct	14633 Aug 10 16:59	15° \mathbb{A} 03'32	
retrograde	14627 Feb 14 16:00	23° \mathbb{M} 54'16		evening set	14633 Nov 10 00:09	18° \mathbb{A} 12'20	
opposition	14627 May 02 16:41	21° \mathbb{M} 54'16	1°06'08				
min. Earth dist.	14627 May 02 13:36	21° \mathbb{M} 54'35	18.69981 AU	conjunction	14633 Nov 26 05:20	19° \mathbb{A} 09'34	1°07'54
direct	14627 Jul 17 06:04	19° \mathbb{M} 55'50		minimum elong	14633 Nov 26 05:20	19° \mathbb{A} 09'34	1°08'54
evening set	14627 Oct 16 00:59	22° \mathbb{M} 59'58		max. Earth dist.	14633 Nov 26 04:20	19° \mathbb{A} 09'25	20.33797 AU
				morning rise	14633 Dec 12 12:33	20° \mathbb{A} 07'08	
conjunction	14627 Nov 01 02:30	23° \mathbb{M} 55'42	1°00'48	retrograde	14634 Mar 16 18:40	23° \mathbb{A} 21'54	
minimum elong	14627 Nov 01 02:30	23° \mathbb{M} 55'42	1°01'33	opposition	14634 Jun 01 03:28	21° \mathbb{A} 20'40	1°15'26
max. Earth dist.	14627 Nov 01 04:46	23° \mathbb{M} 56'02	20.67423 AU	min. Earth dist.	14634 Jun 01 04:55	21° \mathbb{A} 20'31	18.30728 AU
morning rise	14627 Nov 17 06:16	24° \mathbb{M} 51'47		direct	14634 Aug 15 04:19	19° \mathbb{A} 20'46	
retrograde	14628 Feb 19 03:48	28° \mathbb{M} 02'06		evening set	14634 Nov 14 14:57	22° \mathbb{A} 30'27	
opposition	14628 May 06 03:02	26° \mathbb{M} 01'53	1°08'34				
min. Earth dist.	14628 May 06 01:18	26° \mathbb{M} 02'04	18.64872 AU	conjunction	14634 Nov 30 20:47	23° \mathbb{A} 27'58	1°07'50
direct	14628 Jul 20 13:37	24° \mathbb{M} 03'15		minimum elong	14634 Nov 30 20:47	23° \mathbb{A} 27'58	1°08'50
evening set	14628 Oct 19 10:51	27° \mathbb{M} 08'02		max. Earth dist.	14634 Nov 30 18:33	23° \mathbb{A} 27'38	20.27560 AU
				morning rise	14634 Dec 17 04:41	24° \mathbb{A} 25'48	
conjunction	14628 Nov 04 13:00	28° \mathbb{M} 04'00	1°02'49	retrograde	14635 Mar 21 12:34	27° \mathbb{A} 41'21	
minimum elong	14628 Nov 04 13:00	28° \mathbb{M} 04'00	1°03'39	opposition	14635 Jun 05 17:33	25° \mathbb{A} 39'53	1°15'11
max. Earth dist.	14628 Nov 04 15:03	28° \mathbb{M} 04'18	20.62228 AU	min. Earth dist.	14635 Jun 05 19:08	25° \mathbb{A} 39'43	18.24391 AU
morning rise	14628 Nov 20 17:20	29° \mathbb{M} 00'18		direct	14635 Aug 19 18:29	23° \mathbb{A} 39'41	
	14628 Dec 08 21:54	0° \mathbb{A}		evening set	14635 Nov 19 06:43	26° \mathbb{A} 50'17	
retrograde	14629 Feb 22 17:28	2° \mathbb{A} 11'17					
opposition	14629 May 10 13:42	0° \mathbb{A} 10'54	1°10'40	conjunction	14635 Dec 05 13:17	27° \mathbb{A} 48'05	1°07'23
min. Earth dist.	14629 May 10 11:21	0° \mathbb{A} 11'08	18.59589 AU	minimum elong	14635 Dec 05 13:17	27° \mathbb{A} 48'05	1°08'25
	14629 May 14 23:40	30° \mathbb{R} \mathbb{M}		max. Earth dist.	14635 Dec 05 10:32	27° \mathbb{A} 47'41	20.21128 AU
direct	14629 Jul 24 23:01	28° \mathbb{M} 12'03		morning rise	14635 Dec 21 21:42	28° \mathbb{A} 46'11	
	14629 Sep 29 19:18	0° \mathbb{A}			14636 Jan 13 04:41	0° \mathbb{B}	
evening set	14629 Oct 23 21:24	1° \mathbb{A} 17'33		retrograde	14636 Mar 25 04:20	2° \mathbb{B} 02'28	
				opposition	14636 Jun 09 08:08	0° \mathbb{B} 00'47	1°14'29
conjunction	14629 Nov 09 00:04	2° \mathbb{A} 13'44	1°04'32	min. Earth dist.	14636 Jun 09 11:08	0° \mathbb{B} 00'28	18.17887 AU
minimum elong	14629 Nov 09 00:04	2° \mathbb{A} 13'44	1°05'23		14636 Jun 09 15:33	30° \mathbb{R} \mathbb{A}	
max. Earth dist.	14629 Nov 09 01:33	2° \mathbb{A} 13'57	20.56856 AU	direct	14636 Aug 23 07:12	28° \mathbb{A} 00'14	

	14636 Nov 01 08:41	0°♁			14643 Jan 24 01:11	0°♁	
evening set	14636 Nov 22 23:17	1°♁11'46		retrograde	14643 Apr 26 22:40	3°♁16'31	
				opposition	14643 Jul 11 05:56	1°♁13'26	0°57'31
conjunction	14636 Dec 09 06:28	2°♁09'51	1°06'33	min. Earth dist.	14643 Jul 11 11:36	1°♁12'49	17.74120 AU
minimum elong	14636 Dec 09 06:28	2°♁09'51	1°07'34		14643 Aug 10 17:31	30°♁♁	
max. Earth dist.	14636 Dec 09 02:20	2°♁09'14	20.14585 AU	direct	14643 Sep 24 01:21	29°♁10'34	
morning rise	14636 Dec 25 15:35	3°♁08'14			14643 Nov 06 08:41	0°♁	
retrograde	14637 Mar 29 23:14	6°♁25'14		evening set	14643 Dec 25 17:20	2°♁29'00	
opposition	14637 Jun 13 23:15	4°♁23'18	1°13'22				
min. Earth dist.	14637 Jun 14 02:26	4°♁22'58	18.11308 AU	conjunction	14644 Jan 11 04:57	3°♁29'04	0°49'49
direct	14637 Aug 27 22:35	2°♁22'24		minimum elong	14644 Jan 11 04:57	3°♁29'04	0°50'43
evening set	14637 Nov 27 16:27	5°♁34'53		max. Earth dist.	14644 Jan 10 22:40	3°♁28'07	19.71415 AU
				morning rise	14644 Jan 27 17:19	4°♁29'19	
conjunction	14637 Dec 14 00:21	6°♁33'16	1°05'19	retrograde	14644 Apr 30 21:33	7°♁51'03	
minimum elong	14637 Dec 14 00:21	6°♁33'16	1°06'21	opposition	14644 Jul 15 01:00	5°♁47'53	0°53'26
max. Earth dist.	14637 Dec 13 20:18	6°♁32'39	20.07985 AU	min. Earth dist.	14644 Jul 15 06:34	5°♁47'17	17.68817 AU
morning rise	14637 Dec 30 09:55	7°♁31'55		direct	14644 Sep 27 19:42	3°♁44'49	
retrograde	14638 Apr 03 16:24	10°♁49'38		evening set	14644 Dec 29 16:32	7°♁04'14	
opposition	14638 Jun 18 15:02	8°♁47'28	1°11'48				
min. Earth dist.	14638 Jun 18 19:09	8°♁47'02	18.04715 AU	conjunction	14645 Jan 15 04:26	8°♁04'34	0°45'58
direct	14638 Sep 01 13:02	6°♁46'13		minimum elong	14645 Jan 15 04:27	8°♁04'34	0°46'50
evening set	14638 Dec 02 10:36	9°♁59'39		max. Earth dist.	14645 Jan 14 20:44	8°♁03'23	19.66286 AU
				morning rise	14645 Jan 31 17:18	9°♁05'02	
conjunction	14638 Dec 18 19:04	10°♁58'18	1°03'42	retrograde	14645 May 05 20:45	12°♁27'23	
minimum elong	14638 Dec 18 19:04	10°♁58'18	1°04'43	opposition	14645 Jul 19 20:54	10°♁24'09	0°48'59
max. Earth dist.	14638 Dec 18 13:40	10°♁57'30	20.01432 AU	min. Earth dist.	14645 Jul 20 03:15	10°♁23'28	17.63853 AU
morning rise	14639 Jan 04 05:20	11°♁57'14		direct	14645 Oct 02 15:04	8°♁20'52	
retrograde	14639 Apr 08 12:01	15°♁15'40		evening set	14646 Jan 03 16:13	11°♁41'15	
opposition	14639 Jun 23 07:11	13°♁13'15	1°09'48				
min. Earth dist.	14639 Jun 23 11:29	13°♁12'48	17.98208 AU	conjunction	14646 Jan 20 04:44	12°♁41'50	0°41'49
direct	14639 Sep 06 05:14	11°♁11'38		minimum elong	14646 Jan 20 04:45	12°♁41'50	0°42'39
evening set	14639 Dec 07 05:30	14°♁26'04		max. Earth dist.	14646 Jan 19 21:49	12°♁40'46	19.61476 AU
				morning rise	14646 Feb 05 17:44	13°♁42'32	
conjunction	14639 Dec 23 14:45	15°♁25'01	1°01'40		14646 Feb 28 09:51	15°♁	
minimum elong	14639 Dec 23 14:45	15°♁25'01	1°02'41	retrograde	14646 May 10 20:36	17°♁05'25	
max. Earth dist.	14639 Dec 23 09:44	15°♁24'16	19.94977 AU	opposition	14646 Jul 24 17:19	15°♁02'09	0°44'12
morning rise	14640 Jan 09 01:23	16°♁24'13		min. Earth dist.	14646 Jul 24 23:25	15°♁01'29	17.59186 AU
retrograde	14640 Apr 12 07:01	19°♁43'20			14646 Jul 25 13:07	15°♁♁	
opposition	14640 Jun 26 23:59	17°♁40'43	1°07'22	direct	14646 Oct 07 11:18	12°♁58'40	
min. Earth dist.	14640 Jun 27 04:52	17°♁40'12	17.91826 AU		14646 Dec 16 06:29	15°♁	
direct	14640 Sep 09 21:13	15°♁38'46		evening set	14647 Jan 08 17:05	16°♁19'59	
evening set	14640 Dec 11 01:17	18°♁54'11					
				conjunction	14647 Jan 25 05:50	17°♁20'47	0°37'22
conjunction	14640 Dec 27 10:59	19°♁53'25	0°59'16	minimum elong	14647 Jan 25 05:51	17°♁20'47	0°38'08
minimum elong	14640 Dec 27 10:59	19°♁53'25	1°00'17	max. Earth dist.	14647 Jan 24 21:21	17°♁19'29	19.56955 AU
max. Earth dist.	14640 Dec 27 04:33	19°♁52'26	19.88694 AU	morning rise	14647 Feb 10 19:09	18°♁21'41	
morning rise	14641 Jan 12 22:15	20°♁52'53		retrograde	14647 May 15 19:55	21°♁45'03	
retrograde	14641 Apr 17 03:35	24°♁12'42		opposition	14647 Jul 29 14:20	19°♁41'44	0°39'06
opposition	14641 Jul 01 17:20	22°♁09'53	1°04'30	min. Earth dist.	14647 Jul 29 21:38	19°♁40'56	17.54812 AU
min. Earth dist.	14641 Jul 01 22:27	22°♁09'20	17.85654 AU	direct	14647 Oct 12 08:29	17°♁38'01	
direct	14641 Sep 14 14:14	20°♁07'35		evening set	14648 Jan 13 18:33	21°♁00'13	
evening set	14641 Dec 15 21:45	23°♁24'00					
				conjunction	14648 Jan 30 07:46	22°♁01'14	0°32'39
conjunction	14642 Jan 01 08:12	24°♁23'32	0°56'29	minimum elong	14648 Jan 30 07:47	22°♁01'14	0°33'22
minimum elong	14642 Jan 01 08:13	24°♁23'32	0°57'27	max. Earth dist.	14648 Jan 29 23:37	21°♁59'59	19.52722 AU
max. Earth dist.	14642 Jan 01 02:31	24°♁22'40	19.82639 AU	morning rise	14648 Feb 15 21:07	23°♁02'18	
morning rise	14642 Jan 17 19:46	25°♁23'16		retrograde	14648 May 19 20:17	26°♁26'05	
retrograde	14642 Apr 22 00:36	28°♁43'44		opposition	14648 Aug 02 11:52	24°♁22'42	0°33'42
opposition	14642 Jul 06 11:18	26°♁40'46	1°01'13	min. Earth dist.	14648 Aug 02 18:44	24°♁21'57	17.50714 AU
min. Earth dist.	14642 Jul 06 16:32	26°♁40'12	17.79732 AU	direct	14648 Oct 16 07:22	22°♁18'46	
direct	14642 Sep 19 07:27	24°♁38'11		evening set	14649 Jan 17 20:37	25°♁41'46	
evening set	14642 Dec 20 19:08	27°♁55'36					
				conjunction	14649 Feb 03 09:57	26°♁42'57	0°27'41
conjunction	14643 Jan 06 06:02	28°♁55'24	0°53'19	minimum elong	14649 Feb 03 09:57	26°♁42'57	0°28'20
minimum elong	14643 Jan 06 06:02	28°♁55'24	0°54'17	max. Earth dist.	14649 Feb 03 00:36	26°♁41'30	19.48773 AU
max. Earth dist.	14643 Jan 05 22:56	28°♁54'19	19.76872 AU	morning rise	14649 Feb 19 23:25	27°♁44'11	
morning rise	14643 Jan 22 18:13	29°♁55'24			14649 Apr 03 16:03	0°♁	

retrograde	14649 May 24 19:20	1°♄08'18		behind sun begin	14655 Mar 04 23:38	25°♄08'01	
	14649 Jul 16 11:54	30°♄04'50		behind sun end	14655 Mar 05 12:45	25°♄10'01	
opposition	14649 Aug 07 10:01	29°♄04'50	0°28'04	max. Earth dist.	14655 Mar 04 21:36	25°♄07'42	19.33947 AU
min. Earth dist.	14649 Aug 07 18:06	29°♄03'57	17.46933 AU	morning rise	14655 Mar 21 18:33	26°♄10'38	
direct	14649 Oct 21 06:14	27°♄00'40		retrograde	14655 Jun 22 22:39	29°♄35'16	
	14650 Jan 16 04:14	0°♄		opposition	14655 Sep 05 04:34	27°♄31'32	-0°08'46
evening set	14650 Jan 22 23:08	0°♄24'23		min. Earth dist.	14655 Sep 05 12:15	27°♄30'41	17.33604 AU
				direct	14655 Nov 19 10:19	25°♄26'10	
conjunction	14650 Feb 08 12:47	1°♄25'44	0°22'32	evening set	14656 Feb 21 20:39	28°♄52'45	
minimum elong	14650 Feb 08 12:47	1°♄25'44	0°23'07				
max. Earth dist.	14650 Feb 08 03:38	1°♄24'20	19.45172 AU	conjunction	14656 Mar 09 09:49	29°♄54'30	-0°10'44
morning rise	14650 Feb 25 02:14	2°♄27'05		minimum elong	14656 Mar 09 09:48	29°♄54'30	0°10'37
retrograde	14650 May 29 20:13	5°♄51'28		behind sun begin	14656 Mar 09 04:37	29°♄53'42	
opposition	14650 Aug 12 08:19	3°♄47'56	0°22'12	behind sun end	14656 Mar 09 14:59	29°♄55'17	
min. Earth dist.	14650 Aug 12 15:41	3°♄47'07	17.43510 AU	max. Earth dist.	14656 Mar 09 00:51	29°♄53'07	19.33414 AU
direct	14650 Oct 26 06:53	1°♄43'31			14656 Mar 10 20:54	0°♄	
evening set	14651 Jan 28 02:11	5°♄07'54		morning rise	14656 Mar 25 21:52	0°♄56'06	
				retrograde	14656 Jun 27 00:24	4°♄20'37	
conjunction	14651 Feb 13 15:55	6°♄09'23	0°17'12	opposition	14656 Sep 09 04:23	2°♄16'55	-0°14'59
minimum elong	14651 Feb 13 15:55	6°♄09'23	0°17'44	min. Earth dist.	14656 Sep 09 10:52	2°♄16'13	17.33395 AU
max. Earth dist.	14651 Feb 13 06:13	6°♄07'53	19.41945 AU	direct	14656 Nov 23 12:23	0°♄11'31	
morning rise	14651 Mar 02 05:20	7°♄10'51		evening set	14657 Feb 26 00:21	3°♄38'19	
retrograde	14651 Jun 03 19:37	10°♄35'25					
opposition	14651 Aug 17 07:11	8°♄31'47	0°16'11	conjunction	14657 Mar 14 13:19	4°♄40'02	-0°16'14
min. Earth dist.	14651 Aug 17 15:42	8°♄30'52	17.40499 AU	minimum elong	14657 Mar 14 13:19	4°♄40'02	0°16'13
direct	14651 Oct 31 06:32	6°♄27'08		max. Earth dist.	14657 Mar 14 05:59	4°♄38'54	19.33523 AU
evening set	14652 Feb 02 05:31	9°♄52'07		morning rise	14657 Mar 31 00:43	5°♄41'34	
				retrograde	14657 Jul 02 00:25	9°♄05'56	
conjunction	14652 Feb 18 19:19	10°♄53'42	0°11'45	opposition	14657 Sep 14 04:25	7°♄02'22	-0°21'05
minimum elong	14652 Feb 18 19:20	10°♄53'42	0°12'10	min. Earth dist.	14657 Sep 14 10:56	7°♄01'39	17.33823 AU
behind sun begin	14652 Feb 18 14:51	10°♄53'01		direct	14657 Nov 28 13:09	4°♄56'59	
behind sun end	14652 Feb 18 23:48	10°♄54'23		evening set	14658 Mar 03 04:17	8°♄23'56	
max. Earth dist.	14652 Feb 18 09:36	10°♄52'12	19.39163 AU				
morning rise	14652 Mar 06 08:37	11°♄55'14		conjunction	14658 Mar 19 16:42	9°♄25'35	-0°21'37
retrograde	14652 Jun 07 21:18	15°♄19'55		minimum elong	14658 Mar 19 16:42	9°♄25'35	0°21'40
opposition	14652 Aug 21 06:06	13°♄16'14	0°10'01	max. Earth dist.	14658 Mar 19 08:50	9°♄24'22	19.34270 AU
min. Earth dist.	14652 Aug 21 13:38	13°♄15'24	17.37949 AU	morning rise	14658 Apr 05 03:45	10°♄27'03	
direct	14652 Nov 04 08:17	11°♄11'21		retrograde	14658 Jul 07 01:33	13°♄51'11	
evening set	14653 Feb 06 09:07	14°♄36'51		opposition	14658 Sep 19 04:16	11°♄47'47	-0°27'02
				min. Earth dist.	14658 Sep 19 10:01	11°♄47'09	17.34873 AU
conjunction	14653 Feb 22 22:53	15°♄38'31	0°06'12	direct	14658 Dec 03 14:53	9°♄42'28	
minimum elong	14653 Feb 22 22:54	15°♄38'31	0°06'34	evening set	14659 Mar 08 08:01	13°♄09'30	
behind sun begin	14653 Feb 22 16:34	15°♄37'33					
behind sun end	14653 Feb 23 05:13	15°♄39'28		conjunction	14659 Mar 24 20:07	14°♄11'05	-0°26'52
max. Earth dist.	14653 Feb 22 13:27	15°♄37'03	19.36862 AU	minimum elong	14659 Mar 24 20:07	14°♄11'05	0°27'00
morning rise	14653 Mar 11 11:54	16°♄40'06		max. Earth dist.	14659 Mar 24 13:50	14°♄10'06	19.35597 AU
retrograde	14653 Jun 12 20:50	20°♄04'50		morning rise	14659 Apr 10 06:24	15°♄12'26	
opposition	14653 Aug 26 05:29	18°♄01'06	0°03'47	retrograde	14659 Jul 12 01:38	18°♄36'17	
min. Earth dist.	14653 Aug 26 13:50	18°♄00'11	17.35920 AU	opposition	14659 Sep 24 04:21	16°♄33'05	-0°32'47
direct	14653 Nov 09 07:58	15°♄56'01		min. Earth dist.	14659 Sep 24 10:01	16°♄32'28	17.36461 AU
evening set	14654 Feb 11 12:45	19°♄21'56		direct	14659 Dec 08 16:45	14°♄27'52	
				evening set	14660 Mar 12 11:39	17°♄54'52	
conjunction	14654 Feb 28 02:26	20°♄23'40	0°00'34				
minimum elong	14654 Feb 28 02:24	20°♄23'39	0°00'50	conjunction	14660 Mar 28 23:01	18°♄56'20	-0°31'55
behind sun begin	14654 Feb 27 19:40	20°♄22'38		minimum elong	14660 Mar 28 23:01	18°♄56'20	0°32'09
behind sun end	14654 Feb 28 09:08	20°♄24'41		max. Earth dist.	14660 Mar 28 16:01	18°♄55'15	19.37438 AU
max. Earth dist.	14654 Feb 27 16:48	20°♄22'10	19.35117 AU	morning rise	14660 Apr 14 08:46	19°♄57'34	
morning rise	14654 Mar 16 15:15	21°♄25'17		retrograde	14660 Jul 16 01:18	23°♄21'05	
desc. node	14654 Apr 06 01:55	22°♄36'45		opposition	14660 Sep 28 04:23	21°♄18'04	-0°38'18
retrograde	14654 Jun 17 22:55	24°♄50'00		min. Earth dist.	14660 Sep 28 09:40	21°♄17'29	17.38551 AU
opposition	14654 Aug 31 04:55	22°♄46'14	-0°02'30	direct	14660 Dec 12 18:38	19°♄12'57	
min. Earth dist.	14654 Aug 31 12:07	22°♄45'26	17.34461 AU	evening set	14661 Mar 17 14:51	22°♄39'51	
direct	14654 Nov 14 10:07	20°♄40'59					
evening set	14655 Feb 16 16:39	24°♄07'16		conjunction	14661 Apr 03 01:47	23°♄41'11	-0°36'45
				minimum elong	14661 Apr 03 01:47	23°♄41'11	0°37'03
conjunction	14655 Mar 05 06:12	25°♄09'01	-0°05'10	max. Earth dist.	14661 Apr 02 20:14	23°♄40'19	19.39747 AU
minimum elong	14655 Mar 05 06:11	25°♄09'01	0°04'59	morning rise	14661 Apr 19 10:41	24°♄42'15	























































































































retrograde	14661 Jul 21 00:53	28° Υ 05'22	opposition	14667 Oct 31 22:07	24° \mathcal{S} 06'44	-1°07'33
opposition	14661 Oct 03 04:17	26° Υ 02'32 -0°43'33	min. Earth dist.	14667 Oct 31 23:57	24° \mathcal{S} 06'32	17.64039 AU
min. Earth dist.	14661 Oct 03 09:10	26° Υ 02'00 17.41072 AU	direct	14668 Jan 16 05:49	22° \mathcal{S} 02'27	
direct	14661 Dec 17 21:37	23° Υ 57'33	evening set	14668 Apr 19 21:53	25° \mathcal{S} 25'52	
evening set	14662 Mar 22 17:48	27° Υ 24'12				
conjunction	14662 Apr 08 03:58	28° Υ 25'22 -0°41'19	conjunction	14668 May 06 03:42	26° \mathcal{S} 25'40	-1°01'48
minimum elong	14662 Apr 08 03:58	28° Υ 25'22 0°41'44	minimum elong	14668 May 06 03:41	26° \mathcal{S} 25'40	1°02'35
max. Earth dist.	14662 Apr 07 21:45	28° Υ 24'24 19.42472 AU	max. Earth dist.	14668 May 06 01:31	26° \mathcal{S} 25'20	19.66518 AU
morning rise	14662 Apr 24 12:17	29° Υ 26'16	morning rise	14668 May 22 07:14	27° \mathcal{S} 25'09	
retrograde	14662 May 03 21:14	0° \mathcal{S}	retrograde	14668 Jul 12 19:26	0° \mathcal{I}	
opposition	14662 Jul 25 23:03	2° \mathcal{S} 48'54		14668 Aug 22 05:25	0° \mathcal{I} 43'46	
min. Earth dist.	14662 Oct 08 04:08	0° \mathcal{S} 46'15 -0°48'30	opposition	14668 Oct 02 18:30	30° \mathcal{R} \mathcal{S}	
direct	14662 Oct 26 10:03	30° \mathcal{R} Υ	min. Earth dist.	14668 Nov 04 19:44	28° \mathcal{S} 42'06	-1°10'04
evening set	14662 Dec 22 23:32	28° Υ 41'22	direct	14669 Jan 20 04:27	26° \mathcal{S} 37'59	
	14663 Feb 16 12:06	0° \mathcal{S}	evening set	14669 Apr 24 19:46	0° \mathcal{I} 00'37	
	14663 Mar 27 20:12	2° \mathcal{S} 07'43		14669 Apr 24 15:36	0° \mathcal{I}	
conjunction	14663 Apr 13 05:48	3° \mathcal{S} 08'42 -0°45'36	conjunction	14669 May 11 00:46	1° \mathcal{I} 00'08	-1°03'52
minimum elong	14663 Apr 13 05:48	3° \mathcal{S} 08'42 0°46'04	minimum elong	14669 May 11 00:46	1° \mathcal{I} 00'08	1°04'42
max. Earth dist.	14663 Apr 13 00:45	3° \mathcal{S} 07'55 19.45583 AU	max. Earth dist.	14669 May 10 23:11	0° \mathcal{I} 59'54	19.71829 AU
morning rise	14663 Apr 29 13:14	4° \mathcal{S} 09'24	morning rise	14669 May 27 03:37	1° \mathcal{I} 59'21	
retrograde	14663 Jul 30 21:56	7° \mathcal{S} 31'29	retrograde	14669 Aug 27 01:02	5° \mathcal{I} 17'11	
opposition	14663 Oct 13 03:36	5° \mathcal{S} 29'01 -0°53'06	opposition	14669 Nov 09 16:33	3° \mathcal{I} 15'43	-1°12'06
min. Earth dist.	14663 Oct 13 07:43	5° \mathcal{S} 28'34 17.47288 AU	min. Earth dist.	14669 Nov 09 16:35	3° \mathcal{I} 15'42	17.74652 AU
direct	14663 Dec 28 02:41	3° \mathcal{S} 24'15	direct	14670 Jan 25 04:01	1° \mathcal{I} 11'50	
evening set	14664 Mar 31 22:07	6° \mathcal{S} 50'11	evening set	14670 Apr 29 16:47	4° \mathcal{I} 33'39	
conjunction	14664 Apr 17 06:54	7° \mathcal{S} 50'58 -0°49'34	conjunction	14670 May 15 21:07	5° \mathcal{I} 32'53	-1°05'30
minimum elong	14664 Apr 17 06:53	7° \mathcal{S} 50'58 0°50'07	minimum elong	14670 May 15 21:06	5° \mathcal{I} 32'53	1°06'24
max. Earth dist.	14664 Apr 17 01:35	7° \mathcal{S} 50'08 19.49051 AU	max. Earth dist.	14670 May 15 20:58	5° \mathcal{I} 32'52	19.77511 AU
morning rise	14664 May 03 13:36	8° \mathcal{S} 51'27	morning rise	14670 May 31 23:09	6° \mathcal{I} 31'49	
retrograde	14664 Aug 03 19:02	12° \mathcal{S} 12'56	retrograde	14670 Aug 31 18:22	9° \mathcal{I} 48'52	
opposition	14664 Oct 17 02:57	10° \mathcal{S} 10'38 -0°57'20	opposition	14670 Nov 14 13:07	7° \mathcal{I} 47'38	-1°13'41
min. Earth dist.	14664 Oct 17 07:16	10° \mathcal{S} 10'10 17.50947 AU	min. Earth dist.	14670 Nov 14 13:18	7° \mathcal{I} 47'37	17.80512 AU
direct	14665 Jan 01 03:31	8° \mathcal{S} 05'58	direct	14671 Jan 30 01:47	5° \mathcal{I} 44'03	
evening set	14665 Apr 05 23:06	11° \mathcal{S} 31'24	evening set	14671 May 04 12:59	9° \mathcal{I} 05'01	
conjunction	14665 Apr 22 07:15	12° \mathcal{S} 31'57 -0°53'12	conjunction	14671 May 20 16:28	10° \mathcal{I} 03'57	-1°06'44
minimum elong	14665 Apr 22 07:14	12° \mathcal{S} 31'57 0°53'48	minimum elong	14671 May 20 16:27	10° \mathcal{I} 03'57	1°07'39
max. Earth dist.	14665 Apr 22 02:55	12° \mathcal{S} 31'17 19.52888 AU	max. Earth dist.	14671 May 20 16:32	10° \mathcal{I} 03'58	19.83538 AU
morning rise	14665 May 08 13:10	13° \mathcal{S} 32'12	morning rise	14671 Jun 05 17:53	11° \mathcal{I} 02'36	
retrograde	14665 Jun 03 06:01	15° \mathcal{S}	retrograde	14671 Sep 05 12:48	14° \mathcal{I} 18'54	
opposition	14665 Aug 08 17:17	16° \mathcal{S} 53'03	opposition	14671 Nov 19 09:00	12° \mathcal{I} 17'56	-1°14'48
min. Earth dist.	14665 Oct 18 13:02	15° \mathcal{R} \mathcal{S}	min. Earth dist.	14671 Nov 19 07:21	12° \mathcal{I} 18'06	17.86677 AU
direct	14665 Oct 22 01:47	14° \mathcal{S} 50'54 -1°01'10	direct	14672 Feb 04 00:15	10° \mathcal{I} 14'38	
evening set	14665 Oct 22 04:53	14° \mathcal{S} 50'34 17.54951 AU	evening set	14672 May 08 08:16	13° \mathcal{I} 34'44	
conjunction	14666 Jan 06 05:27	12° \mathcal{S} 46'21	conjunction	14672 May 24 11:07	14° \mathcal{I} 33'24	-1°07'32
minimum elong	14666 Mar 21 10:16	15° \mathcal{S}	minimum elong	14672 May 24 11:07	14° \mathcal{I} 33'24	1°08'31
max. Earth dist.	14666 Apr 10 23:36	16° \mathcal{S} 11'11	max. Earth dist.	14672 May 24 12:51	14° \mathcal{I} 33'39	19.89825 AU
morning rise	14666 Apr 27 06:57	17° \mathcal{S} 11'30 -0°56'27	morning rise	14672 Jun 09 11:45	15° \mathcal{I} 31'45	
retrograde	14666 Apr 27 06:56	17° \mathcal{S} 11'30 0°57'07	retrograde	14672 Sep 09 04:54	18° \mathcal{I} 47'17	
max. Earth dist.	14666 Apr 27 02:55	17° \mathcal{S} 10'53 19.57065 AU	opposition	14672 Nov 23 04:32	16° \mathcal{I} 46'36	-1°15'27
morning rise	14666 May 13 12:05	18° \mathcal{S} 11'31	min. Earth dist.	14672 Nov 23 03:09	16° \mathcal{I} 46'45	17.93071 AU
retrograde	14666 Aug 13 13:31	21° \mathcal{S} 31'38	direct	14673 Feb 07 20:47	14° \mathcal{I} 43'39	
opposition	14666 Oct 27 00:11	19° \mathcal{S} 29'39 -1°04'34	evening set	14673 May 13 02:44	18° \mathcal{I} 02'50	
min. Earth dist.	14666 Oct 27 03:38	19° \mathcal{S} 29'17 17.59314 AU	conjunction	14673 May 29 04:47	19° \mathcal{I} 01'12	-1°07'56
direct	14667 Jan 11 05:11	17° \mathcal{S} 25'13	minimum elong	14673 May 29 04:47	19° \mathcal{I} 01'12	1°08'55
evening set	14667 Apr 15 23:14	20° \mathcal{S} 49'23	max. Earth dist.	14673 May 29 06:19	19° \mathcal{I} 01'26	19.96308 AU
conjunction	14667 May 02 05:50	21° \mathcal{S} 49'26 -0°59'19	morning rise	14673 Jun 14 04:57	19° \mathcal{I} 59'17	
minimum elong	14667 May 02 05:49	21° \mathcal{S} 49'26 1°00'04	retrograde	14673 Sep 13 22:16	23° \mathcal{I} 14'03	
max. Earth dist.	14667 May 02 02:34	21° \mathcal{S} 48'56 19.61611 AU	opposition	14673 Nov 27 23:23	21° \mathcal{I} 13'39	-1°15'39
morning rise	14667 May 18 10:13	22° \mathcal{S} 49'12	min. Earth dist.	14673 Nov 27 20:31	21° \mathcal{I} 13'57	17.99612 AU
retrograde	14667 Aug 18 10:28	26° \mathcal{S} 08'34	direct	14674 Feb 12 18:03	19° \mathcal{I} 11'02	
			evening set	14674 May 17 20:25	22° \mathcal{I} 29'18	

conjunction	14674 Jun 02 21:54	23° Π 27'22	-1°07'56	retrograde	14680 Oct 13 21:20	23° \mathfrak{D} 33'53	
minimum elong	14674 Jun 02 21:54	23° Π 27'22	1°08'57	opposition	14680 Dec 28 19:47	21° \mathfrak{D} 34'56	-1°05'11
max. Earth dist.	14674 Jun 03 00:58	23° Π 27'50	20.02883 AU	min. Earth dist.	14680 Dec 28 14:43	21° \mathfrak{D} 35'27	18.44158 AU
morning rise	14674 Jun 18 21:17	24° Π 25'11		direct	14681 Mar 15 21:59	19° \mathfrak{D} 34'19	
retrograde	14674 Sep 18 12:57	27° Π 39'10		evening set	14681 Jun 16 23:53	22° \mathfrak{D} 45'40	
opposition	14674 Dec 02 17:47	25° Π 39'03	-1°15'23				
min. Earth dist.	14674 Dec 02 15:20	25° Π 39'18	18.06210 AU	conjunction	14681 Jul 02 21:33	23° \mathfrak{D} 41'52	-0°57'24
direct	14675 Feb 17 13:20	23° Π 36'46		minimum elong	14681 Jul 02 21:33	23° \mathfrak{D} 41'52	0°58'24
evening set	14675 May 22 13:22	26° Π 54'05		max. Earth dist.	14681 Jul 03 02:42	23° \mathfrak{D} 42'38	20.47092 AU
				morning rise	14681 Jul 18 18:12	24° \mathfrak{D} 37'55	
conjunction	14675 Jun 07 14:04	27° Π 51'52	-1°07'32	retrograde	14681 Oct 18 09:02	27° \mathfrak{D} 46'48	
minimum elong	14675 Jun 07 14:04	27° Π 51'52	1°08'33	opposition	14682 Jan 02 09:53	25° \mathfrak{D} 47'57	-1°02'11
max. Earth dist.	14675 Jun 07 16:34	27° Π 52'15	20.09494 AU	min. Earth dist.	14682 Jan 02 04:03	25° \mathfrak{D} 48'33	18.50033 AU
morning rise	14675 Jun 23 13:02	28° Π 49'24		direct	14682 Mar 20 11:32	23° \mathfrak{D} 47'34	
	14675 Jul 14 11:54	0° \mathfrak{D}		evening set	14682 Jun 21 10:34	26° \mathfrak{D} 57'58	
retrograde	14675 Sep 23 05:18	2° \mathfrak{D} 02'38					
opposition	14675 Dec 07 11:39	0° \mathfrak{D} 02'46	-1°14'42	conjunction	14682 Jul 07 08:00	27° \mathfrak{D} 53'55	-0°54'35
min. Earth dist.	14675 Dec 07 07:58	0° \mathfrak{D} 03'09	18.12816 AU	minimum elong	14682 Jul 07 08:01	27° \mathfrak{D} 53'56	0°55'32
	14675 Dec 08 14:13	30° \mathfrak{R} Π		max. Earth dist.	14682 Jul 07 14:53	27° \mathfrak{D} 54'56	20.52909 AU
direct	14676 Feb 22 09:09	28° Π 00'48		morning rise	14682 Jul 23 04:14	28° \mathfrak{D} 49'45	
	14676 May 03 01:41	0° \mathfrak{D}			14682 Aug 13 13:37	0° \mathfrak{Q}	
evening set	14676 May 26 05:10	1° \mathfrak{D} 17'09		retrograde	14682 Oct 22 19:15	1° \mathfrak{Q} 57'59	
				opposition	14683 Jan 06 23:24	29° \mathfrak{D} 59'17	-0°58'53
conjunction	14676 Jun 11 05:24	2° \mathfrak{D} 14'39	-1°06'44		14683 Jan 06 16:26	30° \mathfrak{R} \mathfrak{D}	
minimum elong	14676 Jun 11 05:24	2° \mathfrak{D} 14'39	1°07'45	min. Earth dist.	14683 Jan 06 17:00	29° \mathfrak{D} 59'57	18.55793 AU
max. Earth dist.	14676 Jun 11 09:28	2° \mathfrak{D} 15'16	20.16070 AU	direct	14683 Mar 25 01:47	27° \mathfrak{D} 59'11	
morning rise	14676 Jun 27 03:41	3° \mathfrak{D} 11'55			14683 Jun 04 21:57	0° \mathfrak{Q}	
retrograde	14676 Sep 26 18:33	6° \mathfrak{D} 24'24		evening set	14683 Jun 25 20:40	1° \mathfrak{Q} 08'39	
opposition	14676 Dec 11 05:01	4° \mathfrak{D} 24'46	-1°13'35				
min. Earth dist.	14676 Dec 11 01:39	4° \mathfrak{D} 25'07	18.19350 AU	conjunction	14683 Jul 11 17:36	2° \mathfrak{Q} 04'23	-0°51'29
direct	14677 Feb 26 03:23	2° \mathfrak{D} 23'08		minimum elong	14683 Jul 11 17:37	2° \mathfrak{Q} 04'23	0°52'24
evening set	14677 May 30 20:23	5° \mathfrak{D} 38'29		max. Earth dist.	14683 Jul 12 00:04	2° \mathfrak{Q} 05'20	20.58626 AU
				morning rise	14683 Jul 27 13:48	3° \mathfrak{Q} 00'01	
conjunction	14677 Jun 15 19:54	6° \mathfrak{D} 35'42	-1°05'34	retrograde	14683 Oct 27 06:21	6° \mathfrak{Q} 07'41	
minimum elong	14677 Jun 15 19:54	6° \mathfrak{D} 35'42	1°06'36	opposition	14684 Jan 11 12:24	4° \mathfrak{Q} 09'07	-0°55'17
max. Earth dist.	14677 Jun 15 23:12	6° \mathfrak{D} 36'12	20.22559 AU	min. Earth dist.	14684 Jan 11 05:19	4° \mathfrak{Q} 09'50	18.61459 AU
morning rise	14677 Jul 01 17:54	7° \mathfrak{D} 32'42		direct	14684 Mar 28 13:53	2° \mathfrak{Q} 09'18	
retrograde	14677 Oct 01 09:17	10° \mathfrak{D} 44'26		evening set	14684 Jun 29 05:47	5° \mathfrak{Q} 17'52	
opposition	14677 Dec 15 21:31	8° \mathfrak{D} 45'01	-1°12'03				
min. Earth dist.	14677 Dec 15 17:16	8° \mathfrak{D} 45'27	18.25780 AU	conjunction	14684 Jul 15 02:37	6° \mathfrak{Q} 13'24	-0°48'08
direct	14678 Mar 02 21:19	6° \mathfrak{D} 43'39		minimum elong	14684 Jul 15 02:38	6° \mathfrak{Q} 13'24	0°49'01
evening set	14678 Jun 04 10:35	9° \mathfrak{D} 58'01		max. Earth dist.	14684 Jul 15 10:42	6° \mathfrak{Q} 14'36	20.64223 AU
				morning rise	14684 Jul 30 22:32	7° \mathfrak{Q} 08'51	
conjunction	14678 Jun 20 09:45	10° \mathfrak{D} 54'59	-1°04'02	retrograde	14684 Oct 30 16:02	10° \mathfrak{Q} 15'59	
minimum elong	14678 Jun 20 09:45	10° \mathfrak{D} 54'59	1°05'03	opposition	14685 Jan 15 00:49	8° \mathfrak{Q} 17'35	-0°51'25
max. Earth dist.	14678 Jun 20 14:28	10° \mathfrak{D} 55'42	20.28914 AU	min. Earth dist.	14685 Jan 14 17:08	8° \mathfrak{Q} 18'22	18.66961 AU
morning rise	14678 Jul 06 07:10	11° \mathfrak{D} 51'44		direct	14685 Apr 02 02:20	6° \mathfrak{Q} 18'04	
retrograde	14678 Oct 05 21:19	15° \mathfrak{D} 02'43		evening set	14685 Jul 03 14:35	9° \mathfrak{Q} 25'47	
opposition	14678 Dec 20 13:38	13° \mathfrak{D} 03'29	-1°10'08				
min. Earth dist.	14678 Dec 20 09:33	13° \mathfrak{D} 03'54	18.32051 AU	conjunction	14685 Jul 19 11:01	10° \mathfrak{Q} 21'08	-0°44'32
direct	14679 Mar 07 14:26	11° \mathfrak{D} 02'24		minimum elong	14685 Jul 19 11:02	10° \mathfrak{Q} 21'08	0°45'23
evening set	14679 Jun 08 23:57	14° \mathfrak{D} 15'45		max. Earth dist.	14685 Jul 19 18:30	10° \mathfrak{Q} 22'14	20.69633 AU
				morning rise	14685 Aug 04 06:59	11° \mathfrak{Q} 16'24	
conjunction	14679 Jun 24 22:26	15° \mathfrak{D} 12'27	-1°02'09	retrograde	14685 Nov 04 02:26	14° \mathfrak{Q} 23'03	
minimum elong	14679 Jun 24 22:26	15° \mathfrak{D} 12'27	1°03'11	opposition	14686 Jan 19 12:39	12° \mathfrak{Q} 24'48	-0°47'18
max. Earth dist.	14679 Jun 25 02:28	15° \mathfrak{D} 13'03	20.35115 AU	min. Earth dist.	14686 Jan 19 04:46	12° \mathfrak{Q} 25'36	18.72265 AU
morning rise	14679 Jul 10 19:39	16° \mathfrak{D} 08'57		direct	14686 Apr 06 13:28	10° \mathfrak{Q} 25'35	
retrograde	14679 Oct 10 10:17	19° \mathfrak{D} 19'13		evening set	14686 Jul 07 22:41	13° \mathfrak{Q} 32'31	
opposition	14679 Dec 25 05:05	17° \mathfrak{D} 20'08	-1°07'50				
min. Earth dist.	14679 Dec 25 00:11	17° \mathfrak{D} 20'38	18.38178 AU	conjunction	14686 Jul 23 19:04	14° \mathfrak{Q} 27'41	-0°40'45
direct	14680 Mar 11 06:12	15° \mathfrak{D} 19'17		minimum elong	14686 Jul 23 19:05	14° \mathfrak{Q} 27'41	0°41'33
evening set	14680 Jun 12 12:17	18° \mathfrak{D} 31'38		max. Earth dist.	14686 Jul 24 03:53	14° \mathfrak{Q} 28'58	20.74810 AU
					14686 Aug 02 00:32	15° \mathfrak{Q}	
conjunction	14680 Jun 28 10:31	19° \mathfrak{D} 28'04	-0°59'56	morning rise	14686 Aug 08 14:49	15° \mathfrak{Q} 22'47	
minimum elong	14680 Jun 28 10:31	19° \mathfrak{D} 28'04	1°00'56	retrograde	14686 Nov 08 11:36	18° \mathfrak{Q} 28'59	
max. Earth dist.	14680 Jun 28 16:10	19° \mathfrak{D} 28'55	20.41168 AU	opposition	14687 Jan 24 00:11	16° \mathfrak{Q} 30'54	-0°42'59
morning rise	14680 Jul 14 07:15	20° \mathfrak{D} 24'20		min. Earth dist.	14687 Jan 23 15:47	16° \mathfrak{Q} 31'45	18.77288 AU

	14687 Mar 07 18:04	15° κ 8 Ω	direct	14693 May 05 10:47	8° η 49'47	
direct	14687 Apr 11 00:50	14° Ω 31'59	evening set	14693 Aug 04 20:12	11° η 52'15	
	14687 May 14 14:15	15° Ω				
evening set	14687 Jul 12 06:20	17° Ω 38'08	conjunction	14693 Aug 20 15:59	12° η 46'33	-0°10'05
			minimum elong	14693 Aug 20 16:00	12° η 46'33	0°10'29
conjunction	14687 Jul 28 02:22	18° Ω 33'08 -0°36'45	behind sun begin	14693 Aug 20 10:50	12° η 45'50	
minimum elong	14687 Jul 28 02:22	18° Ω 33'08 0°37'31	behind sun end	14693 Aug 20 21:10	12° η 47'17	
max. Earth dist.	14687 Jul 28 10:29	18° Ω 34'18 20.79681 AU	max. Earth dist.	14693 Aug 20 23:29	12° η 47'37	20.99761 AU
morning rise	14687 Aug 12 22:14	19° Ω 28'05	morning rise	14693 Sep 05 12:28	13° η 40'57	
retrograde	14687 Nov 12 21:03	22° Ω 33'55	retrograde	14693 Dec 06 20:43	16° η 45'15	
opposition	14688 Jan 28 11:23	20° Ω 35'57 -0°38'27	opposition	14694 Feb 21 22:27	14° η 47'25	-0°08'31
min. Earth dist.	14688 Jan 28 03:08	20° Ω 36'47 18.81996 AU	min. Earth dist.	14694 Feb 21 15:11	14° η 48'09	19.00657 AU
direct	14688 Apr 14 11:03	18° Ω 37'18	direct	14694 May 09 17:33	12° η 49'41	
evening set	14688 Jul 15 13:29	21° Ω 42'44	evening set	14694 Aug 09 01:16	15° η 51'43	
conjunction	14688 Jul 31 09:33	22° Ω 37'35 -0°32'36	conjunction	14694 Aug 24 21:16	16° η 45'57	-0°05'23
minimum elong	14688 Jul 31 09:34	22° Ω 37'35 0°33'19	minimum elong	14694 Aug 24 21:17	16° η 45'57	0°05'43
max. Earth dist.	14688 Jul 31 18:42	22° Ω 38'55 20.84200 AU	behind sun begin	14694 Aug 24 14:58	16° η 45'04	
morning rise	14688 Aug 16 05:18	23° Ω 32'24	behind sun end	14694 Aug 25 03:35	16° η 46'50	
retrograde	14688 Nov 16 05:56	26° Ω 37'52	max. Earth dist.	14694 Aug 25 05:38	16° η 47'08	21.01446 AU
opposition	14689 Jan 31 21:58	24° Ω 40'02 -0°33'46	morning rise	14694 Sep 09 17:50	17° η 40'18	
min. Earth dist.	14689 Jan 31 13:22	24° Ω 40'53 18.86305 AU	retrograde	14694 Dec 11 04:14	20° η 44'30	
direct	14689 Apr 18 21:41	22° Ω 41'37	opposition	14695 Feb 26 07:09	18° η 46'36	-0°03'17
evening set	14689 Jul 19 20:27	25° Ω 46'24	min. Earth dist.	14695 Feb 25 23:05	18° η 47'25	19.02138 AU
			direct	14695 May 14 02:41	16° η 48'57	
conjunction	14689 Aug 04 16:16	26° Ω 41'06 -0°28'18	evening set	14695 Aug 13 06:08	19° η 50'35	
minimum elong	14689 Aug 04 16:16	26° Ω 41'06 0°28'58				
max. Earth dist.	14689 Aug 05 00:24	26° Ω 42'16 20.88294 AU	conjunction	14695 Aug 29 02:07	20° η 44'47	-0°00'37
morning rise	14689 Aug 20 12:12	27° Ω 35'48	minimum elong	14695 Aug 29 02:05	20° η 44'47	0°00'53
	14689 Oct 10 19:45	0° η	behind sun begin	14695 Aug 28 19:31	20° η 43'52	
retrograde	14689 Nov 20 14:07	0° η 40'58	behind sun end	14695 Aug 29 08:40	20° η 45'42	
	14690 Jan 01 13:35	30° κ 8 Ω	max. Earth dist.	14695 Aug 29 09:43	20° η 45'51	21.02739 AU
opposition	14690 Feb 05 08:26	28° Ω 43'12 -0°28'55	morning rise	14695 Sep 13 23:01	21° η 39'06	
min. Earth dist.	14690 Feb 05 00:23	28° Ω 44'00 18.90178 AU	asc. node	14695 Oct 16 08:40	23° η 18'20	
direct	14690 Apr 23 06:54	26° Ω 45'00	retrograde	14695 Dec 15 11:15	24° η 43'17	
evening set	14690 Jul 24 02:50	29° Ω 49'08	opposition	14696 Mar 01 15:42	22° η 45'18	0°01'58
	14690 Jul 27 07:22	0° η	min. Earth dist.	14696 Mar 01 08:15	22° η 46'03	19.03263 AU
			direct	14696 May 17 08:31	20° η 47'43	
conjunction	14690 Aug 08 22:42	0° η 43'43 -0°23'53	evening set	14696 Aug 16 10:50	23° η 49'03	
minimum elong	14690 Aug 08 22:43	0° η 43'43 0°24'28				
max. Earth dist.	14690 Aug 09 07:37	0° η 45'00 20.91920 AU	conjunction	14696 Sep 01 07:05	24° η 43'13	0°04'13
morning rise	14690 Aug 24 18:33	1° η 38'19	minimum elong	14696 Sep 01 07:05	24° η 43'13	0°04'01
retrograde	14690 Nov 24 22:54	4° η 43'13	behind sun begin	14696 Sep 01 00:35	24° η 42'19	
opposition	14691 Feb 09 18:28	2° η 45'29 -0°23'57	behind sun end	14696 Sep 01 13:34	24° η 44'07	
min. Earth dist.	14691 Feb 09 10:04	2° η 46'20 18.93545 AU	max. Earth dist.	14696 Sep 01 15:34	24° η 44'25	21.03687 AU
direct	14691 Apr 27 17:05	0° η 47'29	morning rise	14696 Sep 17 04:09	25° η 37'32	
evening set	14691 Jul 28 09:04	3° η 51'01	retrograde	14696 Dec 18 18:21	28° η 41'44	
			opposition	14697 Mar 05 23:45	26° η 43'42	0°07'11
conjunction	14691 Aug 13 04:46	4° η 45'29 -0°19'21	min. Earth dist.	14697 Mar 05 15:29	26° η 44'32	19.04029 AU
minimum elong	14691 Aug 13 04:46	4° η 45'29 0°19'54	direct	14697 May 21 16:40	24° η 46'12	
max. Earth dist.	14691 Aug 13 12:35	4° η 46'37 20.95036 AU	evening set	14697 Aug 20 15:38	27° η 47'18	
morning rise	14691 Aug 29 00:53	5° η 40'01				
retrograde	14691 Nov 29 05:58	8° η 44'40	conjunction	14697 Sep 05 11:54	28° η 41'27	0°08'54
opposition	14692 Feb 14 04:14	6° η 46'57 -0°18'53	minimum elong	14697 Sep 05 11:54	28° η 41'27	0°08'47
min. Earth dist.	14692 Feb 13 20:36	6° η 47'43 18.96413 AU	behind sun begin	14697 Sep 05 06:12	28° η 40'39	
direct	14692 May 01 01:03	4° η 49'04	behind sun end	14697 Sep 05 17:36	28° η 42'15	
evening set	14692 Jul 31 14:42	7° η 52'03	max. Earth dist.	14697 Sep 05 19:33	28° η 42'32	21.04277 AU
			morning rise	14697 Sep 21 09:23	29° η 35'47	
conjunction	14692 Aug 16 10:37	8° η 46'26 -0°14'45		14697 Sep 28 16:52	0° Ω	
minimum elong	14692 Aug 16 10:37	8° η 46'26 0°15'12	retrograde	14697 Dec 23 01:43	2° Ω 40'05	
behind sun begin	14692 Aug 16 08:19	8° η 46'06	opposition	14698 Mar 10 07:59	0° Ω 42'00	0°12'23
behind sun end	14692 Aug 16 12:54	8° η 46'45	min. Earth dist.	14698 Mar 10 00:29	0° Ω 42'45	19.04451 AU
max. Earth dist.	14692 Aug 16 19:05	8° η 47'38 20.97649 AU		14698 Mar 28 05:07	30° κ 8 η	
morning rise	14692 Sep 01 06:46	9° η 40'52	direct	14698 May 25 22:03	28° η 44'35	
retrograde	14692 Dec 02 14:10	12° η 45'19		14698 Jul 20 20:37	0° Ω	
opposition	14693 Feb 17 13:30	10° η 47'34 -0°13'43	evening set	14698 Aug 24 20:09	1° Ω 45'30	
min. Earth dist.	14693 Feb 17 05:26	10° η 48'22 18.98762 AU				

conjunction	14698 Sep 09 16:44	2° <u>♄</u> 39'41	0°13'33	retrograde	14705 Jan 21 10:32	0° <u>♄</u> 37'31	
minimum elong	14698 Sep 09 16:44	2° <u>♄</u> 39'41	0°13'29		14705 Mar 02 17:30	30° <u>♄</u> 38'21	
behind sun begin	14698 Sep 09 12:59	2° <u>♄</u> 39'09		opposition	14705 Apr 08 17:36	28° <u>♄</u> 38'52	0°45'47
behind sun end	14698 Sep 09 20:28	2° <u>♄</u> 40'12		min. Earth dist.	14705 Apr 08 11:58	28° <u>♄</u> 39'26	18.95549 AU
max. Earth dist.	14698 Sep 10 01:13	2° <u>♄</u> 40'53	21.04519 AU	direct	14705 Jun 23 19:07	26° <u>♄</u> 41'31	
morning rise	14698 Sep 25 14:24	3° <u>♄</u> 34'02		evening set	14705 Sep 22 10:49	29° <u>♄</u> 42'59	
retrograde	14698 Dec 27 09:06	6° <u>♄</u> 38'29			14705 Sep 27 11:11	0° <u>♄</u>	
opposition	14699 Mar 14 16:03	4° <u>♄</u> 40'22	0°17'30				
min. Earth dist.	14699 Mar 14 07:43	4° <u>♄</u> 41'12	19.04501 AU	conjunction	14705 Oct 08 09:23	0° <u>♄</u> 37'39	0°43'14
direct	14699 May 30 05:29	2° <u>♄</u> 43'02		minimum elong	14705 Oct 08 09:22	0° <u>♄</u> 37'39	0°43'39
evening set	14699 Aug 29 01:00	5° <u>♄</u> 43'51		max. Earth dist.	14705 Oct 08 13:56	0° <u>♄</u> 38'18	20.93962 AU
				morning rise	14705 Oct 24 09:57	1° <u>♄</u> 32'37	
conjunction	14699 Sep 13 21:40	6° <u>♄</u> 38'03	0°18'08	retrograde	14706 Jan 25 18:44	4° <u>♄</u> 39'25	
minimum elong	14699 Sep 13 21:40	6° <u>♄</u> 38'03	0°18'09	opposition	14706 Apr 13 02:27	2° <u>♄</u> 40'32	0°49'53
max. Earth dist.	14699 Sep 14 05:18	6° <u>♄</u> 39'08	21.04380 AU	min. Earth dist.	14706 Apr 12 22:23	2° <u>♄</u> 40'57	18.92287 AU
morning rise	14699 Sep 29 19:49	7° <u>♄</u> 32'27		direct	14706 Jun 28 01:15	0° <u>♄</u> 43'02	
retrograde	14699 Dec 31 16:25	10° <u>♄</u> 37'07		evening set	14706 Sep 26 17:20	3° <u>♄</u> 44'45	
opposition	14700 Mar 19 00:08	8° <u>♄</u> 38'57	0°22'32				
min. Earth dist.	14700 Mar 18 16:51	8° <u>♄</u> 39'41	19.04175 AU	conjunction	14706 Oct 12 16:27	4° <u>♄</u> 39'33	0°46'50
direct	14700 Jun 03 10:31	6° <u>♄</u> 41'41		minimum elong	14706 Oct 12 16:26	4° <u>♄</u> 39'33	0°47'20
evening set	14700 Sep 02 05:50	9° <u>♄</u> 42'29		max. Earth dist.	14706 Oct 12 21:09	4° <u>♄</u> 40'14	20.90476 AU
				morning rise	14706 Oct 28 17:25	5° <u>♄</u> 34'40	
conjunction	14700 Sep 18 02:55	10° <u>♄</u> 36'43	0°22'38	retrograde	14707 Jan 30 05:06	8° <u>♄</u> 41'54	
minimum elong	14700 Sep 18 02:54	10° <u>♄</u> 36'43	0°22'42	opposition	14707 Apr 17 11:16	6° <u>♄</u> 42'48	0°53'46
max. Earth dist.	14700 Sep 18 11:07	10° <u>♄</u> 37'53	21.03848 AU	min. Earth dist.	14707 Apr 17 06:42	6° <u>♄</u> 43'16	18.88584 AU
morning rise	14700 Oct 04 01:19	11° <u>♄</u> 31'10		direct	14707 Jul 02 09:05	4° <u>♄</u> 45'06	
retrograde	14701 Jan 05 00:40	14° <u>♄</u> 36'06		evening set	14707 Oct 01 00:29	7° <u>♄</u> 47'09	
opposition	14701 Mar 23 08:09	12° <u>♄</u> 37'53	0°27'29				
min. Earth dist.	14701 Mar 23 00:17	12° <u>♄</u> 38'40	19.03422 AU	conjunction	14707 Oct 16 23:55	8° <u>♄</u> 42'06	0°50'13
direct	14701 Jun 07 17:47	10° <u>♄</u> 40'41		minimum elong	14707 Oct 16 23:55	8° <u>♄</u> 42'06	0°50'45
evening set	14701 Sep 06 11:03	13° <u>♄</u> 41'30		max. Earth dist.	14707 Oct 17 03:28	8° <u>♄</u> 42'37	20.86575 AU
				morning rise	14707 Nov 02 01:30	9° <u>♄</u> 37'22	
conjunction	14701 Sep 22 08:14	14° <u>♄</u> 35'48	0°27'02	retrograde	14708 Feb 03 14:00	12° <u>♄</u> 45'06	
minimum elong	14701 Sep 22 08:13	14° <u>♄</u> 35'48	0°27'12	opposition	14708 Apr 20 20:15	10° <u>♄</u> 45'44	0°57'23
max. Earth dist.	14701 Sep 22 15:21	14° <u>♄</u> 36'49	21.02869 AU	min. Earth dist.	14708 Apr 20 17:09	10° <u>♄</u> 46'03	18.84517 AU
morning rise	14701 Oct 08 07:05	15° <u>♄</u> 30'20		direct	14708 Jul 05 15:23	8° <u>♄</u> 47'51	
retrograde	14702 Jan 09 07:57	18° <u>♄</u> 35'34		evening set	14708 Oct 04 07:55	11° <u>♄</u> 50'17	
opposition	14702 Mar 27 16:23	16° <u>♄</u> 37'18	0°32'17				
min. Earth dist.	14702 Mar 27 09:52	16° <u>♄</u> 37'57	19.02220 AU	conjunction	14708 Oct 20 07:56	12° <u>♄</u> 45'24	0°53'21
direct	14702 Jun 11 22:45	14° <u>♄</u> 40'07		minimum elong	14708 Oct 20 07:56	12° <u>♄</u> 45'24	0°53'58
evening set	14702 Sep 10 16:26	17° <u>♄</u> 41'02		max. Earth dist.	14708 Oct 20 11:41	12° <u>♄</u> 45'56	20.82347 AU
				morning rise	14708 Nov 05 09:57	13° <u>♄</u> 40'50	
conjunction	14702 Sep 26 14:02	18° <u>♄</u> 35'24	0°31'19		14708 Nov 30 07:29	15° <u>♄</u>	
minimum elong	14702 Sep 26 14:02	18° <u>♄</u> 35'24	0°31'32	retrograde	14709 Feb 07 01:25	16° <u>♄</u> 49'05	
max. Earth dist.	14702 Sep 26 21:29	18° <u>♄</u> 36'28	21.01429 AU		14709 Apr 20 22:02	15° <u>♄</u>	
morning rise	14702 Oct 12 13:11	19° <u>♄</u> 30'01		opposition	14709 Apr 25 05:24	14° <u>♄</u> 49'30	1°00'44
retrograde	14703 Jan 13 17:09	22° <u>♄</u> 35'36		min. Earth dist.	14709 Apr 25 01:38	14° <u>♄</u> 49'53	18.80137 AU
opposition	14703 Apr 01 00:39	20° <u>♄</u> 37'14	0°36'57	direct	14709 Jul 09 23:52	12° <u>♄</u> 51'24	
min. Earth dist.	14703 Mar 31 17:43	20° <u>♄</u> 37'56	19.00527 AU		14709 Sep 22 00:25	15° <u>♄</u>	
direct	14703 Jun 16 06:10	18° <u>♄</u> 40'03		evening set	14709 Oct 08 15:53	15° <u>♄</u> 54'18	
evening set	14703 Sep 14 22:13	21° <u>♄</u> 41'07					
				conjunction	14709 Oct 24 16:15	16° <u>♄</u> 49'35	0°56'14
conjunction	14703 Sep 30 20:02	22° <u>♄</u> 35'34	0°35'27	minimum elong	14709 Oct 24 16:14	16° <u>♄</u> 49'35	0°56'54
minimum elong	14703 Sep 30 20:01	22° <u>♄</u> 35'34	0°35'45	max. Earth dist.	14709 Oct 24 19:03	16° <u>♄</u> 49'59	20.77823 AU
max. Earth dist.	14703 Oct 01 02:06	22° <u>♄</u> 36'26	20.99471 AU	morning rise	14709 Nov 09 18:49	17° <u>♄</u> 45'12	
morning rise	14703 Oct 16 19:43	23° <u>♄</u> 30'17		retrograde	14710 Feb 11 11:03	20° <u>♄</u> 54'03	
retrograde	14704 Jan 18 00:49	26° <u>♄</u> 36'16		opposition	14710 Apr 29 15:02	18° <u>♄</u> 54'14	1°03'47
opposition	14704 Apr 04 09:12	24° <u>♄</u> 37'47	0°41'28	min. Earth dist.	14710 Apr 29 12:34	18° <u>♄</u> 54'29	18.75498 AU
min. Earth dist.	14704 Apr 04 03:52	24° <u>♄</u> 38'19	18.98311 AU	direct	14710 Jul 14 06:19	16° <u>♄</u> 55'56	
direct	14704 Jun 19 11:37	22° <u>♄</u> 40'31		evening set	14710 Oct 13 00:19	19° <u>♄</u> 59'21	
evening set	14704 Sep 18 04:19	25° <u>♄</u> 41'46					
				conjunction	14710 Oct 29 01:17	20° <u>♄</u> 54'50	0°58'50
conjunction	14704 Oct 04 02:37	26° <u>♄</u> 36'19	0°39'26	minimum elong	14710 Oct 29 01:17	20° <u>♄</u> 54'50	0°59'33
minimum elong	14704 Oct 04 02:36	26° <u>♄</u> 36'19	0°39'48	max. Earth dist.	14710 Oct 29 04:20	20° <u>♄</u> 55'17	20.73072 AU
max. Earth dist.	14704 Oct 04 08:37	26° <u>♄</u> 37'11	20.96984 AU	morning rise	14710 Nov 14 04:21	21° <u>♄</u> 50'39	
morning rise	14704 Oct 20 02:37	27° <u>♄</u> 31'09		retrograde	14711 Feb 15 23:58	25° <u>♄</u> 00'08	
	14704 Dec 13 03:20	0° <u>♄</u>		opposition	14711 May 04 00:47	23° <u>♄</u> 00'05	1°06'32

min. Earth dist.	14711 May 03 21:36	23° \mathbb{M} 00'25	18.70637 AU	conjunction	14717 Nov 27 13:24	20° \mathbb{A} 13'59	1°08'08
direct	14711 Jul 18 15:31	21° \mathbb{M} 01'36		minimum elong	14717 Nov 27 13:24	20° \mathbb{A} 13'59	1°09'07
evening set	14711 Oct 17 09:28	24° \mathbb{M} 05'37		max. Earth dist.	14717 Nov 27 11:49	20° \mathbb{A} 13'45	20.34102 AU
				morning rise	14717 Dec 13 20:34	21° \mathbb{A} 11'32	
conjunction	14711 Nov 02 10:55	25° \mathbb{M} 01'19	1°01'09	retrograde	14718 Mar 18 03:09	24° \mathbb{A} 26'16	
minimum elong	14711 Nov 02 10:54	25° \mathbb{M} 01'19	1°01'55	opposition	14718 Jun 02 11:29	22° \mathbb{A} 25'02	1°15'41
max. Earth dist.	14711 Nov 02 13:04	25° \mathbb{M} 01'38	20.68101 AU	min. Earth dist.	14718 Jun 02 13:29	22° \mathbb{A} 24'50	18.30931 AU
morning rise	14711 Nov 18 14:37	25° \mathbb{M} 57'21		direct	14718 Aug 16 12:18	20° \mathbb{A} 25'08	
retrograde	14712 Feb 20 10:41	29° \mathbb{M} 07'29		evening set	14718 Nov 15 23:04	23° \mathbb{A} 34'47	
opposition	14712 May 07 11:08	27° \mathbb{M} 07'16	1°08'57				
min. Earth dist.	14712 May 07 09:20	27° \mathbb{M} 07'27	18.65571 AU	conjunction	14718 Dec 02 04:51	24° \mathbb{A} 32'17	1°08'03
direct	14712 Jul 21 22:19	25° \mathbb{M} 08'36		minimum elong	14718 Dec 02 04:51	24° \mathbb{A} 32'17	1°09'03
evening set	14712 Oct 20 19:13	28° \mathbb{M} 13'16		max. Earth dist.	14718 Dec 02 02:15	24° \mathbb{A} 31'54	20.27666 AU
				morning rise	14718 Dec 18 12:40	25° \mathbb{A} 30'07	
conjunction	14712 Nov 05 21:18	29° \mathbb{M} 09'11	1°03'09	retrograde	14719 Mar 22 20:21	28° \mathbb{A} 45'37	
minimum elong	14712 Nov 05 21:18	29° \mathbb{M} 09'11	1°03'58	opposition	14719 Jun 07 01:21	26° \mathbb{A} 44'09	1°15'24
max. Earth dist.	14712 Nov 05 23:29	29° \mathbb{M} 09'30	20.62943 AU	min. Earth dist.	14719 Jun 07 03:18	26° \mathbb{A} 43'56	18.24405 AU
	14712 Nov 20 11:21	0° \mathbb{A}		direct	14719 Aug 21 01:47	24° \mathbb{A} 43'54	
morning rise	14712 Nov 22 01:30	0° \mathbb{A} 05'27		evening set	14719 Nov 20 14:39	27° \mathbb{A} 54'29	
retrograde	14713 Feb 24 00:57	3° \mathbb{A} 16'17					
opposition	14713 May 11 21:41	1° \mathbb{A} 15'54	1°11'01	conjunction	14719 Dec 06 21:08	28° \mathbb{A} 52'17	1°07'34
min. Earth dist.	14713 May 11 19:17	1° \mathbb{A} 16'09	18.60315 AU	minimum elong	14719 Dec 06 21:08	28° \mathbb{A} 52'17	1°08'35
	14713 Jun 14 05:28	30° \mathbb{R} \mathbb{M}		max. Earth dist.	14719 Dec 06 17:53	28° \mathbb{A} 51'48	20.21064 AU
direct	14713 Jul 26 08:23	29° \mathbb{M} 17'04		morning rise	14719 Dec 23 05:30	29° \mathbb{A} 50'23	
	14713 Sep 05 08:50	0° \mathbb{A}			14719 Dec 25 23:57	0° \mathbb{B}	
evening set	14713 Oct 25 05:49	2° \mathbb{A} 22'28		retrograde	14720 Mar 26 12:42	3° \mathbb{B} 06'37	
				opposition	14720 Jun 10 15:56	1° \mathbb{B} 04'55	1°14'41
conjunction	14713 Nov 10 08:24	3° \mathbb{A} 18'37	1°04'50	min. Earth dist.	14720 Jun 10 19:17	1° \mathbb{B} 04'33	18.17753 AU
minimum elong	14713 Nov 10 08:23	3° \mathbb{A} 18'37	1°05'42		14720 Jul 07 19:28	30° \mathbb{R} \mathbb{A}	
max. Earth dist.	14713 Nov 10 09:44	3° \mathbb{A} 18'49	20.57592 AU	direct	14720 Aug 24 15:23	29° \mathbb{A} 04'20	
morning rise	14713 Nov 26 13:13	4° \mathbb{A} 15'07			14720 Oct 10 02:59	0° \mathbb{B}	
retrograde	14714 Feb 28 13:20	7° \mathbb{A} 26'43		evening set	14720 Nov 24 06:58	2° \mathbb{B} 15'51	
opposition	14714 May 16 09:02	5° \mathbb{A} 26'10	1°12'43				
min. Earth dist.	14714 May 16 08:06	5° \mathbb{A} 26'16	18.54876 AU	conjunction	14720 Dec 10 14:03	3° \mathbb{B} 13'56	1°06'42
direct	14714 Jul 30 16:04	3° \mathbb{A} 27'10		minimum elong	14720 Dec 10 14:03	3° \mathbb{B} 13'56	1°07'45
evening set	14714 Oct 29 17:01	6° \mathbb{A} 33'20		max. Earth dist.	14720 Dec 10 09:49	3° \mathbb{B} 13'18	20.14394 AU
				morning rise	14720 Dec 26 23:04	4° \mathbb{B} 12'18	
conjunction	14714 Nov 14 20:17	7° \mathbb{A} 29'44	1°06'11	retrograde	14721 Mar 31 06:21	7° \mathbb{B} 29'18	
minimum elong	14714 Nov 14 20:16	7° \mathbb{A} 29'44	1°07'05	opposition	14721 Jun 15 06:55	5° \mathbb{B} 27'19	1°13'32
max. Earth dist.	14714 Nov 14 21:24	7° \mathbb{A} 29'54	20.52065 AU	min. Earth dist.	14721 Jun 15 10:07	5° \mathbb{B} 26'59	18.11074 AU
morning rise	14714 Dec 01 01:41	8° \mathbb{A} 26'29		direct	14721 Aug 29 06:16	3° \mathbb{B} 26'23	
retrograde	14715 Mar 05 04:58	11° \mathbb{A} 38'52		evening set	14721 Nov 29 00:06	6° \mathbb{B} 38'52	
opposition	14715 May 20 20:44	9° \mathbb{A} 38'10	1°14'03				
min. Earth dist.	14715 May 20 19:27	9° \mathbb{A} 38'18	18.49242 AU	conjunction	14721 Dec 15 07:54	7° \mathbb{B} 37'14	1°05'27
direct	14715 Aug 04 03:13	7° \mathbb{A} 38'59		minimum elong	14721 Dec 15 07:54	7° \mathbb{B} 37'14	1°06'28
evening set	14715 Nov 03 05:20	10° \mathbb{A} 46'00		max. Earth dist.	14721 Dec 15 03:35	7° \mathbb{B} 36'35	20.07722 AU
				morning rise	14721 Dec 31 17:23	8° \mathbb{B} 35'53	
conjunction	14715 Nov 19 09:09	11° \mathbb{A} 42'40	1°07'11	retrograde	14722 Apr 04 23:52	11° \mathbb{B} 53'36	
minimum elong	14715 Nov 19 09:09	11° \mathbb{A} 42'40	1°08'08	opposition	14722 Jun 19 22:35	9° \mathbb{B} 51'23	1°11'56
max. Earth dist.	14715 Nov 19 09:17	11° \mathbb{A} 42'41	20.46313 AU	min. Earth dist.	14722 Jun 20 02:47	9° \mathbb{B} 50'57	18.04435 AU
morning rise	14715 Dec 05 15:09	12° \mathbb{A} 39'40		direct	14722 Sep 02 20:56	7° \mathbb{B} 50'06	
retrograde	14716 Mar 08 19:08	15° \mathbb{A} 52'50		evening set	14722 Dec 03 18:02	11° \mathbb{B} 03'32	
opposition	14716 May 24 09:00	13° \mathbb{A} 52'00	1°14'59				
min. Earth dist.	14716 May 24 09:30	13° \mathbb{A} 51'56	18.43380 AU	conjunction	14722 Dec 20 02:26	12° \mathbb{B} 02'12	1°03'48
direct	14716 Aug 07 12:26	11° \mathbb{A} 52'36		minimum elong	14722 Dec 20 02:27	12° \mathbb{B} 02'12	1°04'49
evening set	14716 Nov 06 18:27	15° \mathbb{A} 00'29		max. Earth dist.	14722 Dec 19 21:04	12° \mathbb{B} 01'23	20.01142 AU
				morning rise	14723 Jan 05 12:38	13° \mathbb{B} 01'07	
conjunction	14716 Nov 22 22:56	15° \mathbb{A} 57'25	1°07'51	retrograde	14723 Apr 09 19:05	16° \mathbb{B} 19'35	
minimum elong	14716 Nov 22 22:55	15° \mathbb{A} 57'25	1°08'48	opposition	14723 Jun 24 14:42	14° \mathbb{B} 17'07	1°09'54
max. Earth dist.	14716 Nov 22 22:16	15° \mathbb{A} 57'19	20.40336 AU	min. Earth dist.	14723 Jun 24 18:48	14° \mathbb{B} 16'41	17.97918 AU
morning rise	14716 Dec 09 05:31	16° \mathbb{A} 54'42		direct	14723 Sep 07 13:05	12° \mathbb{B} 15'28	
retrograde	14717 Mar 13 11:48	20° \mathbb{A} 08'39		evening set	14723 Dec 08 12:52	15° \mathbb{B} 29'54	
opposition	14717 May 28 21:51	18° \mathbb{A} 07'38	1°15'32				
min. Earth dist.	14717 May 28 22:14	18° \mathbb{A} 07'35	18.37277 AU	conjunction	14723 Dec 24 22:00	16° \mathbb{B} 28'51	1°01'45
direct	14717 Aug 12 00:46	16° \mathbb{A} 08'00		minimum elong	14723 Dec 24 22:01	16° \mathbb{B} 28'51	1°02'45
evening set	14717 Nov 11 08:19	19° \mathbb{A} 16'46		max. Earth dist.	14723 Dec 24 16:56	16° \mathbb{B} 28'05	19.94693 AU
				morning rise	14724 Jan 10 08:34	17° \mathbb{B} 28'03	

retrograde	14724 Apr 13 13:57	20°  47'12			14730 Nov 24 10:43	15° 	
opposition	14724 Jun 28 07:24	18°  44'33	1°07'26	evening set	14731 Jan 10 00:49	17°  24'12	
min. Earth dist.	14724 Jun 28 12:11	18°  44'02	17.91562 AU				
direct	14724 Sep 11 04:45	16°  42'34		conjunction	14731 Jan 26 13:30	18°  24'59	0°37'14
evening set	14724 Dec 12 08:35	19°  58'00		minimum elong	14731 Jan 26 13:30	18°  25'00	0°38'00
				max. Earth dist.	14731 Jan 26 04:48	18°  23'39	19.56788 AU
conjunction	14724 Dec 28 18:13	20°  57'14	0°59'19	morning rise	14731 Feb 12 02:47	19°  25'53	
minimum elong	14724 Dec 28 18:13	20°  57'14	1°00'17	retrograde	14731 May 17 03:15	22°  49'17	
max. Earth dist.	14724 Dec 28 11:58	20°  56'17	19.88457 AU	opposition	14731 Jul 30 22:22	20°  45'55	0°38'56
morning rise	14725 Jan 14 05:24	21°  56'42		min. Earth dist.	14731 Jul 31 05:47	20°  45'07	17.54587 AU
retrograde	14725 Apr 18 10:53	25°  31'63		direct	14731 Oct 13 16:28	18°  42'10	
opposition	14725 Jul 03 00:46	23°  31'42	1°04'32	evening set	14732 Jan 15 02:15	22°  40'21	
min. Earth dist.	14725 Jul 03 05:30	23°  31'12	17.85450 AU				
direct	14725 Sep 15 21:42	21°  31'25		conjunction	14732 Jan 31 15:25	23°  40'21	0°32'30
evening set	14725 Dec 17 04:53	24°  32'50		minimum elong	14732 Jan 31 15:25	23°  40'21	0°33'11
				max. Earth dist.	14732 Jan 31 07:12	23°  40'05	19.52433 AU
conjunction	14726 Jan 02 15:16	25°  32'22	0°56'30	morning rise	14732 Feb 17 04:41	24°  40'25	
minimum elong	14726 Jan 02 15:17	25°  32'22	0°57'28	retrograde	14732 May 21 04:27	27°  40'13	
max. Earth dist.	14726 Jan 02 09:47	25°  32'32	19.82471 AU	opposition	14732 Aug 03 19:53	25°  40'46	0°33'31
morning rise	14726 Jan 19 02:47	26°  32'06		min. Earth dist.	14732 Aug 04 02:59	25°  40'00	17.50366 AU
retrograde	14726 Apr 23 07:54	29°  34'37		direct	14732 Oct 17 15:49	23°  42'47	
opposition	14726 Jul 07 18:50	27°  34'39	1°01'13	evening set	14733 Jan 19 04:23	26°  45'45	
min. Earth dist.	14726 Jul 07 23:52	27°  34'06	17.79600 AU				
direct	14726 Sep 20 14:47	25°  34'05		conjunction	14733 Feb 04 17:41	27°  46'57	0°27'31
evening set	14726 Dec 22 02:24	28°  35'31		minimum elong	14733 Feb 04 17:41	27°  46'57	0°28'09
				max. Earth dist.	14733 Feb 04 08:08	27°  45'28	19.48373 AU
conjunction	14727 Jan 07 13:14	29°  35'18	0°53'19	morning rise	14733 Feb 21 07:08	28°  48'11	
minimum elong	14727 Jan 07 13:14	29°  35'18	0°54'14		14733 Mar 14 00:42	0° 	
max. Earth dist.	14727 Jan 07 06:24	29°  35'16	19.76779 AU	retrograde	14733 May 26 03:14	2°  12'19	
	14727 Jan 07 17:48	0° 		opposition	14733 Aug 08 18:01	0°  08'47	0°27'51
morning rise	14727 Jan 24 01:21	0°  59'18		min. Earth dist.	14733 Aug 09 02:14	0°  07'53	17.46483 AU
retrograde	14727 Apr 28 06:05	4°  20'28			14733 Aug 12 02:44	30° 	
opposition	14727 Jul 12 13:23	2°  17'23	0°57'29	direct	14733 Oct 22 13:39	28°  40'32	
min. Earth dist.	14727 Jul 12 18:45	2°  16'49	17.74057 AU		14733 Dec 29 09:29	0° 	
direct	14727 Sep 25 08:35	0°  14'34		evening set	14734 Jan 24 06:45	1°  28'15	
evening set	14727 Dec 27 00:41	3°  33'01					
				conjunction	14734 Feb 09 20:24	2°  29'37	0°22'20
conjunction	14728 Jan 12 12:12	4°  33'05	0°49'47	minimum elong	14734 Feb 09 20:24	2°  29'37	0°22'53
minimum elong	14728 Jan 12 12:13	4°  33'05	0°50'41	max. Earth dist.	14734 Feb 09 11:20	2°  28'12	19.44678 AU
max. Earth dist.	14728 Jan 12 06:09	4°  32'10	19.71379 AU	morning rise	14734 Feb 26 09:51	3°  30'58	
morning rise	14728 Jan 29 00:31	5°  33'20		retrograde	14734 May 31 04:44	6°  35'23	
retrograde	14728 May 02 05:05	8°  55'07		opposition	14734 Aug 13 16:23	4°  51'46	0°21'58
opposition	14728 Jul 16 08:40	6°  51'58	0°53'22	min. Earth dist.	14734 Aug 13 23:53	4°  50'57	17.42974 AU
min. Earth dist.	14728 Jul 16 14:13	6°  51'22	17.68792 AU	direct	14734 Oct 27 14:50	2°  47'18	
direct	14728 Sep 29 03:37	4°  48'56		evening set	14735 Jan 29 09:50	6°  31'41	
evening set	14728 Dec 30 23:53	8°  08'22					
				conjunction	14735 Feb 14 23:32	7°  31'11	0°16'58
conjunction	14729 Jan 16 11:42	9°  08'41	0°45'54	minimum elong	14735 Feb 14 23:32	7°  31'11	0°17'27
minimum elong	14729 Jan 16 11:42	9°  08'41	0°46'46	max. Earth dist.	14735 Feb 14 13:43	7°  31'40	19.41379 AU
max. Earth dist.	14729 Jan 16 04:07	9°  07'32	19.66260 AU	morning rise	14735 Mar 03 12:57	8°  34'39	
morning rise	14729 Feb 02 00:30	10°  09'10		retrograde	14735 Jun 05 03:24	11°  39'17	
retrograde	14729 May 07 03:51	13°  31'34		opposition	14735 Aug 18 15:08	9°  35'35	0°15'54
opposition	14729 Jul 21 04:40	11°  28'20	0°48'54	min. Earth dist.	14735 Aug 18 23:43	9°  34'39	17.39907 AU
min. Earth dist.	14729 Jul 21 10:58	11°  27'40	17.63811 AU	direct	14735 Nov 01 13:49	7°  30'53	
direct	14729 Oct 03 22:39	9°  25'05		evening set	14736 Feb 03 13:08	10°  35'54	
evening set	14730 Jan 04 23:53	12°  45'28					
				conjunction	14736 Feb 20 02:56	11°  37'30	0°11'29
conjunction	14730 Jan 21 12:19	13°  46'03	0°41'43	minimum elong	14736 Feb 20 02:56	11°  37'30	0°11'55
minimum elong	14730 Jan 21 12:19	13°  46'03	0°42'31	behind sun begin	14736 Feb 19 22:20	11°  36'48	
max. Earth dist.	14730 Jan 21 05:21	13°  44'59	19.61402 AU	behind sun end	14736 Feb 20 07:32	11°  38'12	
morning rise	14730 Feb 07 01:13	14°  46'44		max. Earth dist.	14736 Feb 19 17:26	11°  36'02	19.38556 AU
	14730 Feb 10 18:03	15° 		morning rise	14736 Mar 07 16:13	12°  39'04	
retrograde	14730 May 12 04:23	18°  09'39		retrograde	14736 Jun 09 05:10	16°  32'50	
opposition	14730 Jul 26 01:10	16°  06'23	0°44'05	opposition	14736 Aug 22 14:09	14°  32'05	0°09'43
min. Earth dist.	14730 Jul 26 07:30	16°  05'41	17.59071 AU	min. Earth dist.	14736 Aug 22 21:39	14°  31'16	17.37333 AU
	14730 Aug 22 00:37	15°		direct	14736 Nov 05 16:07	12° 31'11	
direct	14730 Oct 08 19:59	14° 02'53		evening set	14737 Feb 07 16:35	15° 34'44	

conjunction	14737 Feb 24 06:20	16° H 42'25	0°05'56	opposition	14742 Sep 20 13:07	12° Y 54'40	-0°27'26
minimum elong	14737 Feb 24 06:20	16° H 42'25	0°06'16	min. Earth dist.	14742 Sep 20 18:44	12° Y 54'03	17.34432 AU
behind sun begin	14737 Feb 23 23:57	16° H 41'27		direct	14742 Dec 04 23:05	10° Y 49'27	
behind sun end	14737 Feb 24 12:42	16° H 43'24		evening set	14743 Mar 09 16:25	14° Y 16'40	
max. Earth dist.	14737 Feb 23 21:02	16° H 40'59	19.36245 AU				
morning rise	14737 Mar 12 19:22	17° H 44'02		conjunction	14743 Mar 26 04:31	15° Y 18'17	-0°27'14
retrograde	14737 Jun 14 04:34	21° H 08'54		minimum elong	14743 Mar 26 04:30	15° Y 18'17	0°27'24
opposition	14737 Aug 27 13:38	19° H 05'07	0°03'28	max. Earth dist.	14743 Mar 25 22:09	15° Y 17'18	19.35117 AU
min. Earth dist.	14737 Aug 27 21:52	19° H 04'13	17.35312 AU	morning rise	14743 Apr 11 14:47	16° Y 19'41	
direct	14737 Nov 10 15:58	17° H 00'03		retrograde	14743 Jul 13 11:02	19° Y 43'46	
evening set	14738 Feb 12 20:21	20° H 26'04		opposition	14743 Sep 25 13:22	17° Y 40'37	-0°33'12
				min. Earth dist.	14743 Sep 25 19:10	17° Y 39'59	17.35937 AU
conjunction	14738 Mar 01 10:00	21° H 27'48	0°00'16	direct	14743 Dec 10 00:33	15° Y 35'29	
minimum elong	14738 Mar 01 10:00	21° H 27'48	0°00'31	evening set	14744 Mar 13 20:20	19° Y 02'39	
behind sun begin	14738 Mar 01 03:17	21° H 26'47					
behind sun end	14738 Mar 01 16:44	21° H 28'50		conjunction	14744 Mar 30 07:43	20° Y 04'09	-0°32'18
max. Earth dist.	14738 Mar 01 00:49	21° H 26'23	19.34523 AU	minimum elong	14744 Mar 30 07:42	20° Y 04'09	0°32'33
morning rise	14738 Mar 17 22:51	22° H 29'27		max. Earth dist.	14744 Mar 30 00:30	20° Y 03'02	19.36858 AU
desc. node	14738 Mar 17 23:35	22° H 29'34		morning rise	14744 Apr 15 17:29	21° Y 05'25	
retrograde	14738 Jun 19 06:33	25° H 54'20		retrograde	14744 Jul 17 10:59	24° Y 29'09	
opposition	14738 Sep 01 13:02	23° H 50'34	-0°02'50	opposition	14744 Sep 29 13:37	22° Y 26'08	-0°38'45
min. Earth dist.	14738 Sep 01 20:00	23° H 49'48	17.33893 AU	min. Earth dist.	14744 Sep 29 18:54	22° Y 25'34	17.37911 AU
direct	14738 Nov 15 18:15	21° H 45'21		direct	14744 Dec 14 03:47	20° Y 21'04	
evening set	14739 Feb 18 00:20	25° H 11'46		evening set	14745 Mar 18 23:37	23° Y 48'05	
conjunction	14739 Mar 06 13:52	26° H 13'33	-0°05'28	conjunction	14745 Apr 04 10:36	24° Y 49'27	-0°37'08
minimum elong	14739 Mar 06 13:52	26° H 13'33	0°05'17	minimum elong	14745 Apr 04 10:35	24° Y 49'27	0°37'29
behind sun begin	14739 Mar 06 07:21	26° H 12'33		max. Earth dist.	14745 Apr 04 04:51	24° Y 48'33	19.39038 AU
behind sun end	14739 Mar 06 20:23	26° H 14'33		morning rise	14745 Apr 20 19:32	25° Y 50'34	
max. Earth dist.	14739 Mar 06 05:31	26° H 12'16	19.33408 AU	retrograde	14745 Jul 22 10:12	29° Y 13'51	
morning rise	14739 Mar 23 02:15	27° H 15'12		opposition	14745 Oct 04 13:47	27° Y 11'00	-0°44'00
	14739 May 16 21:40	0° Y		min. Earth dist.	14745 Oct 04 18:51	27° Y 10'27	17.40293 AU
retrograde	14739 Jun 24 06:54	0° Y 40'02		direct	14745 Dec 19 06:24	25° Y 06'00	
	14739 Aug 02 11:40	30° R H		evening set	14746 Mar 24 02:52	28° Y 32'46	
opposition	14739 Sep 06 12:57	28° H 36'20	-0°09'08				
min. Earth dist.	14739 Sep 06 20:23	28° H 35'31	17.33100 AU	conjunction	14746 Apr 09 13:03	29° Y 33'58	-0°41'43
direct	14739 Nov 20 18:07	26° H 31'03		minimum elong	14746 Apr 09 13:02	29° Y 33'58	0°42'07
evening set	14740 Feb 23 04:20	29° H 57'47		max. Earth dist.	14746 Apr 09 06:28	29° Y 32'56	19.41623 AU
	14740 Feb 23 18:49	0° Y			14746 Apr 16 11:36	0° B	
conjunction	14740 Mar 10 17:30	0° Y 59'34	-0°11'03	morning rise	14746 Apr 25 21:24	0° B 34'54	
minimum elong	14740 Mar 10 17:30	0° Y 59'34	0°10'58	retrograde	14746 Jul 27 08:49	3° B 57'40	
behind sun begin	14740 Mar 10 12:27	0° Y 58'48		opposition	14746 Oct 09 13:38	1° B 54'58	-0°48'57
behind sun end	14740 Mar 10 22:32	1° Y 00'20		min. Earth dist.	14746 Oct 09 18:35	1° B 54'25	17.43085 AU
max. Earth dist.	14740 Mar 10 08:58	0° Y 58'15	19.32943 AU		14746 Dec 04 21:46	30° R Y	
morning rise	14740 Mar 27 05:34	2° Y 01'12		direct	14746 Dec 24 09:01	29° Y 50'01	
retrograde	14740 Jun 28 09:04	5° Y 25'57		evening set	14747 Jan 12 16:22	0° B	
opposition	14740 Sep 10 12:51	3° Y 22'20	-0°15'21		14747 Mar 29 05:25	3° B 16'27	
min. Earth dist.	14740 Sep 10 18:58	3° Y 21'40	17.32952 AU	conjunction	14747 Apr 14 15:04	4° B 17'28	-0°46'01
direct	14740 Nov 24 20:19	1° Y 17'03		minimum elong	14747 Apr 14 15:04	4° B 17'28	0°46'30
evening set	14741 Feb 27 08:20	4° Y 44'02		max. Earth dist.	14747 Apr 14 09:49	4° B 16'39	19.44607 AU
				morning rise	14747 Apr 30 22:32	5° B 18'12	
conjunction	14741 Mar 15 21:18	5° Y 45'47	-0°16'34	retrograde	14747 Aug 01 07:36	8° B 40'24	
minimum elong	14741 Mar 15 21:17	5° Y 45'47	0°16'33	opposition	14747 Oct 14 13:19	6° B 37'51	-0°53'34
max. Earth dist.	14741 Mar 15 14:08	5° Y 44'41	19.33101 AU	min. Earth dist.	14747 Oct 14 17:34	6° B 37'23	17.46256 AU
morning rise	14741 Apr 01 08:44	6° Y 47'22		direct	14747 Dec 29 11:47	4° B 33'00	
retrograde	14741 Jul 03 09:42	10° Y 11'57		evening set	14748 Apr 02 07:20	7° B 58'59	
opposition	14741 Sep 15 12:59	8° Y 08'30	-0°21'28				
min. Earth dist.	14741 Sep 15 19:26	8° Y 07'48	17.33411 AU	conjunction	14748 Apr 18 16:08	8° B 59'47	-0°49'59
direct	14741 Nov 29 20:29	6° Y 03'15		minimum elong	14748 Apr 18 16:08	8° B 59'47	0°50'32
evening set	14742 Mar 04 12:26	9° Y 30'23		max. Earth dist.	14748 Apr 18 10:36	8° B 58'55	19.47974 AU
				morning rise	14748 May 04 22:55	10° B 00'18	
conjunction	14742 Mar 21 00:52	10° Y 32'05	-0°21'59	retrograde	14748 Aug 05 04:52	13° B 21'54	
minimum elong	14742 Mar 21 00:52	10° Y 32'05	0°22'04	opposition	14748 Oct 18 12:43	11° B 19'28	-0°57'47
max. Earth dist.	14742 Mar 20 17:06	10° Y 30'53	19.33852 AU	min. Earth dist.	14748 Oct 18 16:58	11° B 19'01	17.49831 AU
morning rise	14742 Apr 06 11:58	11° Y 33'36		direct	14749 Jan 02 13:06	9° B 14'42	
retrograde	14742 Jul 08 11:00	14° Y 57'59		evening set	14749 Apr 07 08:30	12° B 40'10	

conjunction	14749 Apr 23 16:42	13° 8 40'45	-0°53'36	minimum elong	14755 May 22 02:33	11° II 13'34	1°07'56
minimum elong	14749 Apr 23 16:42	13° 8 40'45	0°54'12	max. Earth dist.	14755 May 22 02:57	11° II 13'38	19.82893 AU
max. Earth dist.	14749 Apr 23 12:25	13° 8 40'05	19.51745 AU	morning rise	14755 Jun 07 04:03	12° II 12'16	
morning rise	14749 May 09 22:40	14° 8 41'02		retrograde	14755 Sep 06 23:58	15° II 28'44	
	14749 May 15 04:38	15° 8		opposition	14755 Nov 20 19:19	13° II 27'49	-1°15'06
retrograde	14749 Aug 10 02:58	18° 8 01'57		min. Earth dist.	14755 Nov 20 17:33	13° II 28'00	17.86062 AU
opposition	14749 Oct 23 11:30	15° 8 59'40	-1°01'37	direct	14756 Feb 05 09:48	11° II 24'35	
min. Earth dist.	14749 Oct 23 14:37	15° 8 59'20	17.53794 AU	evening set	14756 May 09 18:21	14° II 44'50	
	14749 Nov 16 14:10	15° 8 8					
direct	14750 Jan 07 15:22	13° 8 55'00		conjunction	14756 May 25 21:16	15° II 43'33	-1°07'47
	14750 Feb 27 00:02	15° 8		minimum elong	14756 May 25 21:15	15° II 43'33	1°08'44
evening set	14750 Apr 12 09:04	17° 8 19'52		max. Earth dist.	14756 May 25 23:06	15° II 43'50	19.89231 AU
				morning rise	14756 Jun 10 21:58	16° II 41'57	
conjunction	14750 Apr 28 16:26	18° 8 20'13	-0°56'50	retrograde	14756 Sep 10 16:14	19° II 57'40	
minimum elong	14750 Apr 28 16:26	18° 8 20'13	0°57'32	opposition	14756 Nov 24 15:00	17° II 57'02	-1°15'43
max. Earth dist.	14750 Apr 28 12:24	18° 8 19'35	19.55907 AU	min. Earth dist.	14756 Nov 24 13:41	17° II 57'11	17.92484 AU
morning rise	14750 May 14 21:40	19° 8 20'15		direct	14757 Feb 09 05:49	15° II 54'08	
retrograde	14750 Aug 14 22:41	22° 8 40'27		evening set	14757 May 14 13:04	19° II 13'30	
opposition	14750 Oct 28 10:04	20° 8 38'19	-1°05'00				
min. Earth dist.	14750 Oct 28 13:17	20° 8 37'58	17.58173 AU	conjunction	14757 May 30 15:10	20° II 11'54	-1°08'09
direct	14751 Jan 12 15:00	18° 8 33'46		minimum elong	14757 May 30 15:10	20° II 11'54	1°09'09
evening set	14751 Apr 17 08:40	21° 8 57'59		max. Earth dist.	14757 May 30 16:49	20° II 12'09	19.95717 AU
				morning rise	14757 Jun 15 15:23	21° II 10'02	
conjunction	14751 May 03 15:18	22° 8 58'04	-0°59'42	retrograde	14757 Sep 15 09:41	24° II 24'58	
minimum elong	14751 May 03 15:17	22° 8 58'04	1°00'26	opposition	14757 Nov 29 09:49	22° II 24'37	-1°15'52
max. Earth dist.	14751 May 03 12:24	22° 8 57'37	19.60495 AU	min. Earth dist.	14757 Nov 29 07:04	22° II 24'54	17.99010 AU
morning rise	14751 May 19 19:42	23° 8 57'51		direct	14758 Feb 14 03:41	20° II 22'02	
retrograde	14751 Aug 19 20:09	27° 8 17'19		evening set	14758 May 19 06:52	23° II 40'28	
opposition	14751 Nov 02 08:03	25° 8 15'22	-1°07'57				
min. Earth dist.	14751 Nov 02 09:36	25° 8 15'12	17.62969 AU	conjunction	14758 Jun 04 08:25	24° II 38'35	-1°08'07
direct	14752 Jan 17 16:27	23° 8 10'59		minimum elong	14758 Jun 04 08:25	24° II 38'35	1°09'07
evening set	14752 Apr 21 07:31	26° 8 34'29		max. Earth dist.	14758 Jun 04 11:25	24° II 39'03	20.02261 AU
				morning rise	14758 Jun 20 07:52	25° II 36'26	
conjunction	14752 May 07 13:21	27° 8 34'19	-1°02'09	retrograde	14758 Sep 20 00:36	28° II 50'35	
minimum elong	14752 May 07 13:21	27° 8 34'18	1°02'57	opposition	14758 Dec 04 04:27	26° II 50'29	-1°15'35
max. Earth dist.	14752 May 07 11:23	27° 8 34'00	19.65505 AU	min. Earth dist.	14758 Dec 04 02:11	26° II 50'43	18.05564 AU
morning rise	14752 May 23 16:57	28° 8 33'50		direct	14759 Feb 18 23:24	24° II 48'14	
	14752 Jun 18 02:04	0° II		evening set	14759 May 23 23:48	28° II 05'40	
retrograde	14752 Aug 23 14:31	1° II 52'33					
	14752 Nov 02 15:22	30° 8 8		conjunction	14759 Jun 09 00:33	29° II 03'30	-1°07'41
opposition	14752 Nov 06 05:41	29° 8 50'49	-1°10'26	minimum elong	14759 Jun 09 00:33	29° II 03'30	1°08'42
min. Earth dist.	14752 Nov 06 07:15	29° 8 50'39	17.68208 AU	max. Earth dist.	14759 Jun 09 03:03	29° II 03'53	20.08812 AU
direct	14753 Jan 21 14:14	27° 8 46'39		morning rise	14759 Jun 24 23:35	0° III 01'04	
	14753 Apr 06 01:41	0° II			14759 Jun 24 16:22	0° III	
evening set	14753 Apr 26 05:25	1° II 09'24		retrograde	14759 Sep 24 16:04	3° III 14'27	
				opposition	14759 Dec 08 22:21	1° III 14'34	-1°14'51
conjunction	14753 May 12 10:31	2° II 08'57	-1°04'11	min. Earth dist.	14759 Dec 08 18:45	1° III 14'56	18.12096 AU
minimum elong	14753 May 12 10:30	2° II 08'57	1°05'02		14760 Jan 10 02:25	30° 8 II	
max. Earth dist.	14753 May 12 09:20	2° II 08'46	19.70956 AU	direct	14760 Feb 23 19:39	29° II 12'36	
morning rise	14753 May 28 13:26	3° II 08'11			14760 Apr 07 04:31	0° III	
retrograde	14753 Aug 28 11:13	6° II 26'10		evening set	14760 May 27 15:47	2° III 29'03	
opposition	14753 Nov 11 02:41	4° II 24'40	-1°12'28				
min. Earth dist.	14753 Nov 11 02:24	4° II 24'42	17.73843 AU	conjunction	14760 Jun 12 16:05	3° III 26'36	-1°06'51
direct	14754 Jan 26 14:11	2° II 20'48		minimum elong	14760 Jun 12 16:05	3° III 26'36	1°07'52
evening set	14754 May 01 02:38	5° II 42'45		max. Earth dist.	14760 Jun 12 19:59	3° III 27'11	20.15309 AU
				morning rise	14760 Jun 28 14:26	4° III 23'53	
conjunction	14754 May 17 07:00	6° II 42'02	-1°05'48	retrograde	14760 Sep 28 05:45	7° III 36'29	
minimum elong	14754 May 17 07:00	6° II 42'02	1°06'42	opposition	14760 Dec 12 15:39	5° III 36'48	-1°13'42
max. Earth dist.	14754 May 17 07:03	6° II 42'02	19.76767 AU	min. Earth dist.	14760 Dec 12 12:30	5° III 37'08	18.18551 AU
morning rise	14754 Jun 02 09:06	7° II 41'00		direct	14761 Feb 27 14:03	3° III 35'07	
retrograde	14754 Sep 02 04:41	10° II 58'13		evening set	14761 Jun 01 07:00	6° III 50'33	
opposition	14754 Nov 15 23:16	8° II 57'01	-1°14'01				
min. Earth dist.	14754 Nov 15 23:15	8° II 57'01	17.79820 AU	conjunction	14761 Jun 17 06:36	7° III 47'49	-1°05'39
direct	14755 Jan 31 10:48	6° II 53'27		minimum elong	14761 Jun 17 06:37	7° III 47'49	1°06'40
evening set	14755 May 05 23:01	10° II 14'35		max. Earth dist.	14761 Jun 17 09:45	7° III 48'17	20.21721 AU
				morning rise	14761 Jul 03 04:42	8° III 44'50	
conjunction	14755 May 22 02:34	11° II 13'34	-1°07'00	retrograde	14761 Oct 02 19:37	11° III 56'39	

opposition	14761 Dec 17 08:15	9°☿57'08	-1°12'08	conjunction	14768 Jul 16 13:10	7°♄24'08	-0°47'58
min. Earth dist.	14761 Dec 17 04:00	9°☿57'35	18.24906 AU	minimum elong	14768 Jul 16 13:11	7°♄24'08	0°48'49
direct	14762 Mar 04 08:22	7°☿55'41		max. Earth dist.	14768 Jul 16 21:30	7°♄25'22	20.63928 AU
evening set	14762 Jun 05 21:09	11°☿10'06		morning rise	14768 Aug 01 09:08	8°♄19'35	
				retrograde	14768 Nov 01 02:22	11°♄26'42	
conjunction	14762 Jun 21 20:23	12°☿07'05	-1°04'05	opposition	14769 Jan 16 11:04	9°♄28'16	-0°51'13
minimum elong	14762 Jun 21 20:23	12°☿07'05	1°05'06	min. Earth dist.	14769 Jan 16 03:22	9°♄29'03	18.66724 AU
max. Earth dist.	14762 Jun 22 01:01	12°☿07'46	20.28013 AU	direct	14769 Apr 03 13:21	7°♄28'43	
morning rise	14762 Jul 07 17:52	13°☿03'51		evening set	14769 Jul 05 01:09	10°♄36'28	
retrograde	14762 Oct 07 07:48	16°☿14'52					
opposition	14762 Dec 22 00:17	14°☿15'31	-1°10'10	conjunction	14769 Jul 20 21:39	11°♄31'49	-0°44'21
min. Earth dist.	14762 Dec 21 20:16	14°☿15'56	18.31135 AU	minimum elong	14769 Jul 20 21:40	11°♄31'49	0°45'11
direct	14763 Mar 09 01:07	12°☿14'18		max. Earth dist.	14769 Jul 21 05:17	11°♄32'56	20.69449 AU
evening set	14763 Jun 10 10:31	15°☿27'40		morning rise	14769 Aug 05 17:41	12°♄27'05	
					14769 Sep 29 21:56	15°♄	
conjunction	14763 Jun 26 09:06	16°☿24'23	-1°02'10	retrograde	14769 Nov 05 12:26	15°♄33'44	
minimum elong	14763 Jun 26 09:06	16°☿24'23	1°03'10		14769 Dec 13 03:23	15°♄	
max. Earth dist.	14763 Jun 26 13:09	16°☿24'59	20.34201 AU	opposition	14770 Jan 20 23:04	13°♄35'29	-0°47'04
morning rise	14763 Jul 12 06:23	17°☿20'54		min. Earth dist.	14770 Jan 20 15:04	13°♄36'18	18.72120 AU
retrograde	14763 Oct 11 20:39	20°☿31'10		direct	14770 Apr 07 23:39	11°♄36'14	
opposition	14763 Dec 26 15:37	18°☿31'55	-1°07'50	evening set	14770 Jul 09 09:16	14°♄43'12	
min. Earth dist.	14763 Dec 26 10:29	18°☿32'27	18.37283 AU		14770 Jul 14 06:16	15°♄	
direct	14764 Mar 12 17:26	16°☿30'56					
evening set	14764 Jun 13 22:41	19°☿43'15		conjunction	14770 Jul 25 05:42	15°♄38'22	-0°40'31
				minimum elong	14770 Jul 25 05:42	15°♄38'22	0°41'18
conjunction	14764 Jun 29 20:59	20°☿39'43	-0°59'54	max. Earth dist.	14770 Jul 25 14:42	15°♄39'41	20.74698 AU
minimum elong	14764 Jun 29 21:00	20°☿39'43	1°00'54	morning rise	14770 Aug 10 01:28	16°♄33'29	
max. Earth dist.	14764 Jun 30 02:50	20°☿40'35	20.40305 AU	retrograde	14770 Nov 09 21:44	19°♄39'42	
morning rise	14764 Jul 15 17:49	21°☿35'59		opposition	14771 Jan 25 10:40	17°♄41'37	-0°42'43
retrograde	14764 Oct 15 07:38	24°☿45'31		min. Earth dist.	14771 Jan 25 02:23	17°♄42'28	18.77202 AU
opposition	14764 Dec 30 06:19	22°☿46'25	-1°05'08	direct	14771 Apr 12 11:43	15°♄42'42	
min. Earth dist.	14764 Dec 30 01:02	22°☿46'57	18.43346 AU	evening set	14771 Jul 13 17:08	18°♄48'54	
direct	14765 Mar 17 08:25	20°☿45'40					
evening set	14765 Jun 18 10:19	23°☿56'59		conjunction	14771 Jul 29 13:13	19°♄43'54	-0°36'30
				minimum elong	14771 Jul 29 13:13	19°♄43'54	0°37'15
conjunction	14765 Jul 04 08:02	24°☿53'11	-0°57'20	max. Earth dist.	14771 Jul 29 21:20	19°♄45'05	20.79611 AU
minimum elong	14765 Jul 04 08:02	24°☿53'11	0°58'18	morning rise	14771 Aug 14 09:07	20°♄38'52	
max. Earth dist.	14765 Jul 04 13:24	24°☿53'59	20.46341 AU	retrograde	14771 Nov 14 07:20	23°♄44'42	
morning rise	14765 Jul 20 04:44	25°☿49'14		opposition	14772 Jan 29 21:49	21°♄46'46	-0°38'10
retrograde	14765 Oct 19 19:21	28°☿58'05		min. Earth dist.	14772 Jan 29 13:37	21°♄47'36	18.81939 AU
opposition	14766 Jan 03 20:14	26°☿59'07	-1°02'06	direct	14772 Apr 15 20:52	19°♄48'07	
min. Earth dist.	14766 Jan 03 13:58	26°☿59'46	18.49356 AU	evening set	14772 Jul 17 00:18	22°♄53'37	
direct	14766 Mar 21 22:46	24°☿58'37					
evening set	14766 Jun 22 21:00	28°☿09'00		conjunction	14772 Aug 01 20:26	23°♄48'28	-0°32'20
				minimum elong	14772 Aug 01 20:26	23°♄48'28	0°33'01
conjunction	14766 Jul 08 18:31	29°☿04'59	-0°54'29	max. Earth dist.	14772 Aug 02 05:34	23°♄49'47	20.84140 AU
minimum elong	14766 Jul 08 18:32	29°☿04'59	0°55'25	morning rise	14772 Aug 17 16:12	24°♄43'18	
max. Earth dist.	14766 Jul 09 01:40	29°☿06'02	20.52315 AU	retrograde	14772 Nov 17 16:00	27°♄48'47	
morning rise	14766 Jul 24 14:48	0°♄00'48		opposition	14773 Feb 02 08:33	25°♄50'58	-0°33'26
	14766 Jul 24 09:13	0°♄		min. Earth dist.	14773 Feb 02 00:11	25°♄51'49	18.86240 AU
retrograde	14766 Oct 24 05:44	3°♄09'01		direct	14773 Apr 20 08:04	23°♄52'34	
opposition	14767 Jan 08 09:47	1°♄10'14	-0°58'45	evening set	14773 Jul 21 07:19	26°♄57'24	
min. Earth dist.	14767 Jan 08 03:07	1°♄10'54	18.55279 AU				
	14767 Feb 08 01:33	30°♄		conjunction	14773 Aug 06 03:10	27°♄52'07	-0°28'00
direct	14767 Mar 26 12:26	29°☿10'02		minimum elong	14773 Aug 06 03:10	27°♄52'07	0°28'38
	14767 May 10 11:20	0°♄		max. Earth dist.	14773 Aug 06 11:07	27°♄53'16	20.88213 AU
evening set	14767 Jun 27 06:59	2°♄19'29		morning rise	14773 Aug 21 23:07	28°♄46'50	
					14773 Sep 13 18:55	0°♄	
conjunction	14767 Jul 13 04:00	3°♄15'14	-0°51'21	retrograde	14773 Nov 22 01:11	1°♄52'00	
minimum elong	14767 Jul 13 04:00	3°♄15'14	0°52'15		14774 Feb 04 09:41	30°♄	
max. Earth dist.	14767 Jul 13 10:43	3°♄16'13	20.58193 AU	opposition	14774 Feb 06 18:55	29°♄54'16	-0°28'34
morning rise	14767 Jul 29 00:16	4°♄10'52		min. Earth dist.	14774 Feb 06 10:57	29°♄55'04	18.90081 AU
retrograde	14767 Oct 28 16:33	7°♄18'31		direct	14774 Apr 24 16:47	27°♄56'04	
opposition	14768 Jan 12 22:45	5°♄19'54	-0°55'07		14774 Jul 06 23:38	0°♄	
min. Earth dist.	14768 Jan 12 15:19	5°♄20'39	18.61096 AU	evening set	14774 Jul 25 13:45	1°♄00'15	
direct	14768 Mar 30 00:39	3°♄20'01					
evening set	14768 Jun 30 16:15	6°♄28'35		conjunction	14774 Aug 10 09:42	1°♄54'51	-0°23'33

minimum elong	14774 Aug 10 09:42	1° <u>0</u> 54'51	0°24'08	conjunction	14780 Sep 02 17:35	25° <u>0</u> 54'19	0°04'38
max. Earth dist.	14774 Aug 10 18:26	1° <u>0</u> 56'06	20.91808 AU	minimum elong	14780 Sep 02 17:35	25° <u>0</u> 54'19	0°04'27
morning rise	14774 Aug 26 05:35	2° <u>0</u> 49'28		behind sun begin	14780 Sep 02 11:07	25° <u>0</u> 53'25	
retrograde	14774 Nov 26 08:56	5° <u>0</u> 54'21		behind sun end	14780 Sep 03 00:02	25° <u>0</u> 55'13	
opposition	14775 Feb 11 04:57	3° <u>0</u> 56'39	-0°23'35	max. Earth dist.	14780 Sep 03 02:24	25° <u>0</u> 55'34	21.04131 AU
min. Earth dist.	14775 Feb 10 20:44	3° <u>0</u> 57'28	18.93419 AU	morning rise	14780 Sep 18 14:39	26° <u>0</u> 48'37	
direct	14775 Apr 29 03:09	1° <u>0</u> 58'37		retrograde	14780 Dec 20 05:17	29° <u>0</u> 52'47	
evening set	14775 Jul 29 19:48	5° <u>0</u> 02'11		opposition	14781 Mar 07 09:54	27° <u>0</u> 54'48	0°07'39
				min. Earth dist.	14781 Mar 07 01:30	27° <u>0</u> 55'39	19.04550 AU
conjunction	14775 Aug 14 15:35	5° <u>0</u> 56'40	-0°19'01	direct	14781 May 23 02:37	25° <u>0</u> 57'21	
minimum elong	14775 Aug 14 15:35	5° <u>0</u> 56'40	0°19'30	evening set	14781 Aug 22 02:02	28° <u>0</u> 58'26	
max. Earth dist.	14775 Aug 14 23:11	5° <u>0</u> 57'45	20.94906 AU				
morning rise	14775 Aug 30 11:46	6° <u>0</u> 51'12		conjunction	14781 Sep 06 22:17	29° <u>0</u> 52'35	0°09'19
retrograde	14775 Nov 30 17:29	9° <u>0</u> 55'51		minimum elong	14781 Sep 06 22:17	29° <u>0</u> 52'35	0°09'12
opposition	14776 Feb 15 14:39	7° <u>0</u> 58'07	-0°18'29	behind sun begin	14781 Sep 06 16:43	29° <u>0</u> 51'48	
min. Earth dist.	14776 Feb 15 06:57	7° <u>0</u> 58'53	18.96281 AU	behind sun end	14781 Sep 07 03:52	29° <u>0</u> 53'22	
direct	14776 May 02 11:23	6° <u>0</u> 00'12		max. Earth dist.	14781 Sep 07 06:11	29° <u>0</u> 53'42	21.04868 AU
evening set	14776 Aug 02 01:24	9° <u>0</u> 03'12			14781 Sep 09 01:58	0° <u>0</u>	
				morning rise	14781 Sep 22 19:46	0° <u>0</u> 46'54	
conjunction	14776 Aug 17 21:22	9° <u>0</u> 57'36	-0°14'23	retrograde	14781 Dec 24 11:31	3° <u>0</u> 51'10	
minimum elong	14776 Aug 17 21:22	9° <u>0</u> 57'36	0°14'50	opposition	14782 Mar 11 18:06	1° <u>0</u> 53'09	0°12'50
behind sun begin	14776 Aug 17 18:41	9° <u>0</u> 57'13		min. Earth dist.	14782 Mar 11 10:25	1° <u>0</u> 53'55	19.05105 AU
behind sun end	14776 Aug 18 00:04	9° <u>0</u> 57'58			14782 May 14 07:07	30° <u>0</u>	
max. Earth dist.	14776 Aug 18 05:51	9° <u>0</u> 58'48	20.97536 AU	direct	14782 May 27 08:06	29° <u>0</u> 55'47	
morning rise	14776 Sep 02 17:34	10° <u>0</u> 52'03			14782 Jun 09 06:10	0° <u>0</u>	
retrograde	14776 Dec 04 00:20	13° <u>0</u> 56'28		evening set	14782 Aug 26 06:40	2° <u>0</u> 56'41	
opposition	14777 Feb 18 23:42	11° <u>0</u> 58'42	-0°13'19				
min. Earth dist.	14777 Feb 18 15:39	11° <u>0</u> 59'30	18.98682 AU	conjunction	14782 Sep 11 03:16	3° <u>0</u> 50'51	0°13'58
direct	14777 May 06 20:38	10° <u>0</u> 00'53		minimum elong	14782 Sep 11 03:16	3° <u>0</u> 50'50	0°13'56
evening set	14777 Aug 06 06:50	13° <u>0</u> 03'22		behind sun begin	14782 Sep 10 23:50	3° <u>0</u> 50'22	
				behind sun end	14782 Sep 11 06:42	3° <u>0</u> 51'19	
conjunction	14777 Aug 22 02:41	13° <u>0</u> 57'40	-0°09'42	max. Earth dist.	14782 Sep 11 12:01	3° <u>0</u> 52'05	21.05228 AU
minimum elong	14777 Aug 22 02:40	13° <u>0</u> 57'40	0°10'04	morning rise	14782 Sep 27 00:55	4° <u>0</u> 45'11	
behind sun begin	14777 Aug 21 21:22	13° <u>0</u> 56'55		retrograde	14782 Dec 28 19:39	7° <u>0</u> 49'35	
behind sun end	14777 Aug 22 07:59	13° <u>0</u> 58'25		opposition	14783 Mar 16 02:10	5° <u>0</u> 51'32	0°17'58
max. Earth dist.	14777 Aug 22 10:13	13° <u>0</u> 58'44	20.99732 AU	min. Earth dist.	14783 Mar 15 17:53	5° <u>0</u> 52'22	19.05255 AU
morning rise	14777 Sep 06 23:11	14° <u>0</u> 52'04		direct	14783 May 31 15:30	3° <u>0</u> 54'15	
retrograde	14777 Dec 08 07:43	17° <u>0</u> 56'20		evening set	14783 Aug 30 11:30	6° <u>0</u> 55'03	
opposition	14778 Feb 23 08:43	15° <u>0</u> 58'30	-0°08'05				
min. Earth dist.	14778 Feb 23 01:06	15° <u>0</u> 59'16	19.00692 AU	conjunction	14783 Sep 15 08:11	7° <u>0</u> 49'14	0°18'34
direct	14778 May 11 04:15	14° <u>0</u> 00'46		minimum elong	14783 Sep 15 08:10	7° <u>0</u> 49'14	0°18'35
evening set	14778 Aug 10 11:43	17° <u>0</u> 02'47		max. Earth dist.	14783 Sep 15 15:49	7° <u>0</u> 50'19	21.05167 AU
				morning rise	14783 Oct 01 06:19	8° <u>0</u> 43'36	
conjunction	14778 Aug 26 07:45	17° <u>0</u> 57'02	-0°04'59	retrograde	14784 Jan 02 02:40	11° <u>0</u> 48'13	
minimum elong	14778 Aug 26 07:45	17° <u>0</u> 57'02	0°05'19	opposition	14784 Mar 19 10:20	9° <u>0</u> 50'07	0°23'01
behind sun begin	14778 Aug 26 01:23	17° <u>0</u> 56'09		min. Earth dist.	14784 Mar 19 03:05	9° <u>0</u> 50'51	19.04980 AU
behind sun end	14778 Aug 26 14:07	17° <u>0</u> 57'55		direct	14784 Jun 03 20:34	7° <u>0</u> 52'54	
max. Earth dist.	14778 Aug 26 16:26	17° <u>0</u> 58'16	21.01553 AU	evening set	14784 Sep 02 16:28	10° <u>0</u> 53'40	
morning rise	14778 Sep 11 04:19	18° <u>0</u> 51'22					
retrograde	14778 Dec 12 14:59	21° <u>0</u> 55'33		conjunction	14784 Sep 18 13:31	11° <u>0</u> 47'53	0°23'04
opposition	14779 Feb 27 17:21	19° <u>0</u> 57'40	-0°02'50	minimum elong	14784 Sep 18 13:31	11° <u>0</u> 47'53	0°23'11
min. Earth dist.	14779 Feb 27 09:02	19° <u>0</u> 58'30	19.02328 AU	max. Earth dist.	14784 Sep 18 21:41	11° <u>0</u> 49'03	21.04659 AU
direct	14779 May 15 12:30	18° <u>0</u> 00'01		morning rise	14784 Oct 04 11:52	12° <u>0</u> 42'19	
evening set	14779 Aug 14 16:40	21° <u>0</u> 01'40		retrograde	14785 Jan 05 10:57	15° <u>0</u> 47'10	
				opposition	14785 Mar 23 18:18	13° <u>0</u> 49'01	0°27'57
conjunction	14779 Aug 30 12:38	21° <u>0</u> 55'51	-0°00'12	min. Earth dist.	14785 Mar 23 10:42	13° <u>0</u> 49'47	19.04226 AU
minimum elong	14779 Aug 30 12:38	21° <u>0</u> 55'51	0°00'27	direct	14785 Jun 08 03:55	11° <u>0</u> 51'52	
behind sun begin	14779 Aug 30 06:05	21° <u>0</u> 54'56		evening set	14785 Sep 06 21:50	14° <u>0</u> 52'39	
behind sun end	14779 Aug 30 19:11	21° <u>0</u> 56'46					
max. Earth dist.	14779 Aug 30 20:29	21° <u>0</u> 56'57	21.03014 AU	conjunction	14785 Sep 22 18:59	15° <u>0</u> 46'55	0°27'28
asc. node	14779 Sep 14 05:27	22° <u>0</u> 46'13		minimum elong	14785 Sep 22 18:58	15° <u>0</u> 46'55	0°27'38
morning rise	14779 Sep 15 09:35	22° <u>0</u> 50'10		max. Earth dist.	14785 Sep 23 01:44	15° <u>0</u> 47'53	21.03654 AU
retrograde	14779 Dec 16 21:24	25° <u>0</u> 54'19		morning rise	14785 Oct 08 17:49	16° <u>0</u> 41'25	
opposition	14780 Mar 03 01:44	23° <u>0</u> 56'22	0°02'25	retrograde	14786 Jan 09 18:52	19° <u>0</u> 46'35	
min. Earth dist.	14780 Mar 02 17:58	23° <u>0</u> 57'09	19.03625 AU	opposition	14786 Mar 28 02:40	17° <u>0</u> 48'21	0°32'46
direct	14780 May 18 18:57	21° <u>0</u> 58'49		min. Earth dist.	14786 Mar 27 20:22	17° <u>0</u> 48'59	19.02972 AU
evening set	14780 Aug 17 21:18	25° <u>0</u> 00'09		direct	14786 Jun 12 09:09	15° <u>0</u> 51'12	

evening set	14786 Sep 11 03:11	18° <u>♏</u> 52'04		max. Earth dist.	14792 Oct 20 22:10	13° <u>♍</u> 55'37	20.82735 AU
				morning rise	14792 Nov 05 20:08	14° <u>♍</u> 50'28	
conjunction	14786 Sep 27 00:47	19° <u>♏</u> 46'24	0°31'45		14792 Nov 08 16:06	15° <u>♍</u>	
minimum elong	14786 Sep 27 00:46	19° <u>♏</u> 46'24	0°32'00	retrograde	14793 Feb 07 10:50	17° <u>♍</u> 58'41	
max. Earth dist.	14786 Sep 27 07:50	19° <u>♏</u> 47'25	21.02130 AU	opposition	14793 Apr 25 15:18	15° <u>♍</u> 59'08	1°01'10
morning rise	14786 Oct 12 23:52	20° <u>♏</u> 41'00		min. Earth dist.	14793 Apr 25 11:30	15° <u>♍</u> 59'31	18.80562 AU
retrograde	14787 Jan 14 03:35	23° <u>♏</u> 46'29			14793 May 20 23:49	15° <u>♍</u>	
opposition	14787 Apr 01 11:00	21° <u>♏</u> 48'09	0°37'27	direct	14793 Jul 10 10:10	14° <u>♍</u> 01'05	
min. Earth dist.	14787 Apr 01 04:25	21° <u>♏</u> 48'49	19.01170 AU		14793 Aug 28 00:43	15° <u>♍</u>	
direct	14787 Jun 16 16:50	19° <u>♏</u> 50'58		evening set	14793 Oct 09 02:16	17° <u>♍</u> 03'59	
evening set	14787 Sep 15 09:06	22° <u>♏</u> 51'58					
				conjunction	14793 Oct 25 02:34	17° <u>♍</u> 59'16	0°56'37
conjunction	14787 Oct 01 06:53	23° <u>♏</u> 46'23	0°35'54	minimum elong	14793 Oct 25 02:33	17° <u>♍</u> 59'16	0°57'18
minimum elong	14787 Oct 01 06:52	23° <u>♏</u> 46'23	0°36'12	max. Earth dist.	14793 Oct 25 05:24	17° <u>♍</u> 59'41	20.78286 AU
max. Earth dist.	14787 Oct 01 12:19	23° <u>♏</u> 47'10	21.00049 AU	morning rise	14793 Nov 10 05:06	18° <u>♍</u> 54'52	
morning rise	14787 Oct 17 06:32	24° <u>♏</u> 41'05		retrograde	14794 Feb 11 21:02	22° <u>♍</u> 03'42	
retrograde	14788 Jan 18 11:49	27° <u>♏</u> 46'56		opposition	14794 Apr 30 00:56	20° <u>♍</u> 03'57	1°04'12
opposition	14788 Apr 04 19:24	25° <u>♏</u> 48'27	0°41'57	min. Earth dist.	14794 Apr 29 22:25	20° <u>♍</u> 04'13	18.76002 AU
min. Earth dist.	14788 Apr 04 14:22	25° <u>♏</u> 48'57	18.98821 AU	direct	14794 Jul 14 16:40	18° <u>♍</u> 05'44	
direct	14788 Jun 19 22:18	23° <u>♏</u> 51'11		evening set	14794 Oct 13 10:33	21° <u>♍</u> 09'11	
evening set	14788 Sep 18 15:06	26° <u>♏</u> 52'20					
				conjunction	14794 Oct 29 11:31	22° <u>♍</u> 04'39	0°59'12
conjunction	14788 Oct 04 13:25	27° <u>♏</u> 46'53	0°39'53	minimum elong	14794 Oct 29 11:31	22° <u>♍</u> 04'39	0°59'56
minimum elong	14788 Oct 04 13:24	27° <u>♏</u> 46'53	0°40'15	max. Earth dist.	14794 Oct 29 14:44	22° <u>♍</u> 05'07	20.73613 AU
max. Earth dist.	14788 Oct 04 19:00	27° <u>♏</u> 47'41	20.97434 AU	morning rise	14794 Nov 14 14:32	23° <u>♍</u> 00'28	
morning rise	14788 Oct 20 13:23	28° <u>♏</u> 41'41		retrograde	14795 Feb 16 09:23	26° <u>♍</u> 09'56	
	14788 Nov 14 08:11	0° <u>♍</u>		opposition	14795 May 04 10:46	24° <u>♍</u> 10'00	1°06'55
retrograde	14789 Jan 21 20:50	1° <u>♍</u> 47'55		min. Earth dist.	14795 May 04 07:33	24° <u>♍</u> 10'20	18.71211 AU
	14789 Apr 04 16:56	30° <u>♏</u>		direct	14795 Jul 19 01:02	22° <u>♍</u> 11'37	
opposition	14789 Apr 09 03:50	29° <u>♏</u> 49'15	0°46'16	evening set	14795 Oct 17 19:47	25° <u>♍</u> 15'40	
min. Earth dist.	14789 Apr 08 22:30	29° <u>♏</u> 49'47	18.95945 AU				
direct	14789 Jun 24 06:21	27° <u>♏</u> 51'51		conjunction	14795 Nov 02 21:10	26° <u>♍</u> 11'21	1°01'29
	14789 Sep 06 11:12	0° <u>♍</u>		minimum elong	14795 Nov 02 21:10	26° <u>♍</u> 11'21	1°02'16
evening set	14789 Sep 22 21:22	0° <u>♍</u> 53'14		max. Earth dist.	14795 Nov 02 23:14	26° <u>♍</u> 11'39	20.68707 AU
				morning rise	14795 Nov 19 00:49	27° <u>♍</u> 07'23	
conjunction	14789 Oct 08 19:54	1° <u>♍</u> 47'53	0°43'40		14796 Jan 25 09:20	0° <u>♏</u>	
minimum elong	14789 Oct 08 19:53	1° <u>♍</u> 47'53	0°44'07	retrograde	14796 Feb 20 21:07	0° <u>♏</u> 17'32	
max. Earth dist.	14789 Oct 09 00:09	1° <u>♍</u> 48'30	20.94320 AU		14796 Mar 18 18:17	30° <u>♏</u>	
morning rise	14789 Oct 24 20:26	2° <u>♍</u> 42'50		opposition	14796 May 07 21:00	28° <u>♍</u> 17'26	1°09'19
retrograde	14790 Jan 26 05:10	5° <u>♍</u> 49'30		min. Earth dist.	14796 May 07 19:15	28° <u>♍</u> 17'37	18.66202 AU
opposition	14790 Apr 13 12:34	3° <u>♍</u> 50'36	0°50'22	direct	14796 Jul 22 08:23	26° <u>♍</u> 18'52	
min. Earth dist.	14790 Apr 13 08:38	3° <u>♍</u> 51'00	18.92619 AU	evening set	14796 Oct 21 05:33	29° <u>♍</u> 23'36	
direct	14790 Jun 28 11:56	1° <u>♍</u> 53'04			14796 Oct 31 17:56	0° <u>♏</u>	
evening set	14790 Sep 27 03:54	4° <u>♍</u> 54'43					
				conjunction	14796 Nov 06 07:36	0° <u>♏</u> 19'30	1°03'28
conjunction	14790 Oct 13 02:59	5° <u>♍</u> 49'30	0°47'16	minimum elong	14796 Nov 06 07:35	0° <u>♏</u> 19'30	1°04'18
minimum elong	14790 Oct 13 02:58	5° <u>♍</u> 49'30	0°47'45	max. Earth dist.	14796 Nov 06 09:48	0° <u>♏</u> 19'50	20.63593 AU
max. Earth dist.	14790 Oct 13 07:41	5° <u>♍</u> 50'11	20.90797 AU	morning rise	14796 Nov 22 11:44	1° <u>♏</u> 15'45	
morning rise	14790 Oct 29 03:54	6° <u>♍</u> 44'35		retrograde	14797 Feb 24 11:01	4° <u>♏</u> 26'37	
retrograde	14791 Jan 30 14:59	9° <u>♍</u> 51'44		opposition	14797 May 12 07:42	2° <u>♏</u> 26'22	1°11'21
opposition	14791 Apr 17 21:13	7° <u>♍</u> 52'37	0°54'14	min. Earth dist.	14797 May 12 05:23	2° <u>♏</u> 26'36	18.60972 AU
min. Earth dist.	14791 Apr 17 16:46	7° <u>♍</u> 53'04	18.88911 AU	direct	14797 Jul 26 17:40	0° <u>♏</u> 27'38	
direct	14791 Jul 02 20:11	5° <u>♍</u> 54'54		evening set	14797 Oct 25 16:04	3° <u>♏</u> 33'04	
evening set	14791 Oct 01 10:55	8° <u>♍</u> 56'55					
				conjunction	14797 Nov 10 18:34	4° <u>♏</u> 29'13	1°05'08
conjunction	14791 Oct 17 10:19	9° <u>♍</u> 51'50	0°50'38	minimum elong	14797 Nov 10 18:33	4° <u>♏</u> 29'13	1°05'59
minimum elong	14791 Oct 17 10:18	9° <u>♍</u> 51'50	0°51'12	max. Earth dist.	14797 Nov 10 19:42	4° <u>♏</u> 29'23	20.58245 AU
max. Earth dist.	14791 Oct 17 13:50	9° <u>♍</u> 52'21	20.86914 AU	morning rise	14797 Nov 26 23:20	5° <u>♏</u> 25'43	
morning rise	14791 Nov 02 11:51	10° <u>♍</u> 47'05		retrograde	14798 Feb 28 23:53	8° <u>♏</u> 37'19	
retrograde	14792 Feb 03 23:54	13° <u>♍</u> 54'45		opposition	14798 May 16 19:06	6° <u>♏</u> 36'54	1°13'02
opposition	14792 Apr 21 06:14	11° <u>♍</u> 55'25	0°57'50	min. Earth dist.	14798 May 16 18:23	6° <u>♏</u> 36'58	18.55511 AU
min. Earth dist.	14792 Apr 21 03:06	11° <u>♍</u> 55'44	18.84880 AU	direct	14798 Jul 31 02:12	4° <u>♏</u> 38'00	
direct	14792 Jul 06 01:57	9° <u>♍</u> 57'31		evening set	14798 Oct 30 03:26	7° <u>♏</u> 44'12	
evening set	14792 Oct 04 18:16	12° <u>♍</u> 59'57					
				conjunction	14798 Nov 15 06:38	8° <u>♏</u> 40'36	1°06'28
conjunction	14792 Oct 20 18:13	13° <u>♍</u> 55'03	0°53'45	minimum elong	14798 Nov 15 06:37	8° <u>♏</u> 40'36	1°07'22
minimum elong	14792 Oct 20 18:13	13° <u>♍</u> 55'03	0°54'23	max. Earth dist.	14798 Nov 15 07:33	8° <u>♏</u> 40'44	20.52663 AU

morning rise	14798 Dec 01 11:56	9° $\mathring{\text{A}}$ 37'20		conjunction	14805 Dec 15 17:25	8° $\mathring{\text{B}}$ 45'51	1°05'31
retrograde	14799 Mar 05 15:36	12° $\mathring{\text{A}}$ 49'42		minimum elong	14805 Dec 15 17:25	8° $\mathring{\text{B}}$ 45'51	1°06'33
opposition	14799 May 21 06:43	10° $\mathring{\text{A}}$ 49'06	1°14'21	max. Earth dist.	14805 Dec 15 13:09	8° $\mathring{\text{B}}$ 45'13	20.07623 AU
min. Earth dist.	14799 May 21 05:45	10° $\mathring{\text{A}}$ 49'12	18.49793 AU	morning rise	14806 Jan 01 02:51	9° $\mathring{\text{B}}$ 44'29	
direct	14799 Aug 04 13:03	8° $\mathring{\text{A}}$ 49'59		retrograde	14806 Apr 05 08:44	13° $\mathring{\text{B}}$ 02'05	
evening set	14799 Nov 03 15:47	11° $\mathring{\text{A}}$ 57'00		opposition	14806 Jun 20 08:08	10° $\mathring{\text{B}}$ 59'46	1°12'00
				min. Earth dist.	14806 Jun 20 12:23	10° $\mathring{\text{B}}$ 59'19	18.04350 AU
conjunction	14799 Nov 19 19:30	12° $\mathring{\text{A}}$ 53'39	1°07'27	direct	14806 Sep 03 06:22	8° $\mathring{\text{B}}$ 58'22	
minimum elong	14799 Nov 19 19:30	12° $\mathring{\text{A}}$ 53'39	1°08'23	evening set	14806 Dec 04 03:34	12° $\mathring{\text{B}}$ 11'42	
max. Earth dist.	14799 Nov 19 19:05	12° $\mathring{\text{A}}$ 53'35	20.46796 AU				
morning rise	14799 Dec 06 01:27	13° $\mathring{\text{A}}$ 50'39		conjunction	14806 Dec 20 11:55	13° $\mathring{\text{B}}$ 10'21	1°03'50
retrograde	14800 Mar 09 05:07	17° $\mathring{\text{A}}$ 03'46		minimum elong	14806 Dec 20 11:55	13° $\mathring{\text{B}}$ 10'21	1°04'50
opposition	14800 May 24 19:10	15° $\mathring{\text{A}}$ 02'58	1°15'16	max. Earth dist.	14806 Dec 20 06:49	13° $\mathring{\text{B}}$ 09'34	20.01076 AU
min. Earth dist.	14800 May 24 20:01	15° $\mathring{\text{A}}$ 02'53	18.43788 AU	morning rise	14807 Jan 05 22:00	14° $\mathring{\text{B}}$ 09'15	
direct	14800 Aug 07 22:54	13° $\mathring{\text{A}}$ 03'36		retrograde	14807 Apr 10 04:35	17° $\mathring{\text{B}}$ 27'36	
evening set	14800 Nov 07 04:46	16° $\mathring{\text{A}}$ 11'26		opposition	14807 Jun 25 00:03	15° $\mathring{\text{B}}$ 25'04	1°09'56
				min. Earth dist.	14807 Jun 25 04:01	15° $\mathring{\text{B}}$ 24'39	17.97879 AU
conjunction	14800 Nov 23 09:11	17° $\mathring{\text{A}}$ 08'21	1°08'05	direct	14807 Sep 07 22:42	13° $\mathring{\text{B}}$ 23'21	
minimum elong	14800 Nov 23 09:11	17° $\mathring{\text{A}}$ 08'21	1°09'03	evening set	14807 Dec 08 22:18	16° $\mathring{\text{B}}$ 37'42	
max. Earth dist.	14800 Nov 23 08:09	17° $\mathring{\text{A}}$ 08'12	20.40657 AU				
morning rise	14800 Dec 09 15:40	18° $\mathring{\text{A}}$ 05'37		conjunction	14807 Dec 25 07:21	17° $\mathring{\text{B}}$ 36'38	1°01'45
retrograde	14801 Mar 13 21:56	21° $\mathring{\text{A}}$ 19'30		minimum elong	14807 Dec 25 07:22	17° $\mathring{\text{B}}$ 36'38	1°02'44
opposition	14801 May 29 08:00	19° $\mathring{\text{A}}$ 18'28	1°15'47	max. Earth dist.	14807 Dec 25 02:26	17° $\mathring{\text{B}}$ 35'54	19.94685 AU
min. Earth dist.	14801 May 29 08:37	19° $\mathring{\text{A}}$ 18'24	18.37512 AU	morning rise	14808 Jan 10 17:51	18° $\mathring{\text{B}}$ 35'49	
direct	14801 Aug 12 11:41	17° $\mathring{\text{A}}$ 18'48		retrograde	14808 Apr 13 23:08	21° $\mathring{\text{B}}$ 54'54	
evening set	14801 Nov 11 18:40	20° $\mathring{\text{A}}$ 27'29		opposition	14808 Jun 28 16:51	19° $\mathring{\text{B}}$ 52'12	1°07'25
				min. Earth dist.	14808 Jun 28 21:34	19° $\mathring{\text{B}}$ 51'42	17.91589 AU
conjunction	14801 Nov 27 23:40	21° $\mathring{\text{A}}$ 24'40	1°08'20	direct	14808 Sep 11 14:05	17° $\mathring{\text{B}}$ 50'12	
minimum elong	14801 Nov 27 23:40	21° $\mathring{\text{A}}$ 24'40	1°09'20	evening set	14808 Dec 12 17:48	21° $\mathring{\text{B}}$ 05'34	
max. Earth dist.	14801 Nov 27 21:32	21° $\mathring{\text{A}}$ 24'21	20.34258 AU				
morning rise	14801 Dec 14 06:46	22° $\mathring{\text{A}}$ 22'12		conjunction	14808 Dec 29 03:23	22° $\mathring{\text{B}}$ 04'48	0°59'17
retrograde	14802 Mar 18 12:12	25° $\mathring{\text{A}}$ 36'50		minimum elong	14808 Dec 29 03:23	22° $\mathring{\text{B}}$ 04'48	1°00'16
opposition	14802 Jun 02 21:29	23° $\mathring{\text{A}}$ 35'32	1°15'54	max. Earth dist.	14808 Dec 28 21:29	22° $\mathring{\text{B}}$ 03'54	19.88519 AU
min. Earth dist.	14802 Jun 02 23:47	23° $\mathring{\text{A}}$ 35'18	18.31015 AU	morning rise	14809 Jan 14 14:30	23° $\mathring{\text{B}}$ 04'15	
direct	14802 Aug 16 22:39	21° $\mathring{\text{A}}$ 35'32		retrograde	14809 Apr 18 20:06	26° $\mathring{\text{B}}$ 24'05	
evening set	14802 Nov 16 09:11	24° $\mathring{\text{A}}$ 45'05		opposition	14809 Jul 03 10:14	24° $\mathring{\text{B}}$ 21'14	1°04'29
				min. Earth dist.	14809 Jul 03 14:43	24° $\mathring{\text{B}}$ 20'46	17.85544 AU
conjunction	14802 Dec 02 14:56	25° $\mathring{\text{A}}$ 42'34	1°08'13	direct	14809 Sep 16 07:26	22° $\mathring{\text{B}}$ 18'58	
minimum elong	14802 Dec 02 14:56	25° $\mathring{\text{A}}$ 42'34	1°09'13	evening set	14809 Dec 17 14:16	25° $\mathring{\text{B}}$ 35'23	
max. Earth dist.	14802 Dec 02 12:09	25° $\mathring{\text{A}}$ 42'09	20.27689 AU				
morning rise	14802 Dec 18 22:41	26° $\mathring{\text{A}}$ 40'21		conjunction	14810 Jan 03 00:34	26° $\mathring{\text{B}}$ 34'54	0°56'26
retrograde	14803 Mar 23 05:59	29° $\mathring{\text{A}}$ 55'44		minimum elong	14810 Jan 03 00:35	26° $\mathring{\text{B}}$ 34'54	0°57'23
opposition	14803 Jun 07 11:18	27° $\mathring{\text{A}}$ 54'09	1°15'34	max. Earth dist.	14810 Jan 02 19:12	26° $\mathring{\text{B}}$ 34'05	19.82596 AU
min. Earth dist.	14803 Jun 07 13:23	27° $\mathring{\text{A}}$ 53'56	18.24375 AU	morning rise	14810 Jan 19 12:01	27° $\mathring{\text{B}}$ 34'38	
direct	14803 Aug 21 13:06	25° $\mathring{\text{A}}$ 53'49			14810 Mar 08 08:02	0° $\mathring{\text{B}}$	
evening set	14803 Nov 21 00:39	29° $\mathring{\text{A}}$ 04'16		retrograde	14810 Apr 23 16:43	0° $\mathring{\text{B}}$ 55'10	
	14803 Dec 06 17:25	0° $\mathring{\text{B}}$			14810 Jun 10 05:48	30° $\mathring{\text{B}}$	
conjunction	14803 Dec 07 07:01	0° $\mathring{\text{B}}$ 02'02	1°07'43	opposition	14810 Jul 08 04:14	28° $\mathring{\text{B}}$ 52'14	1°01'07
minimum elong	14803 Dec 07 07:01	0° $\mathring{\text{B}}$ 02'02	1°08'44	min. Earth dist.	14810 Jul 08 09:18	28° $\mathring{\text{B}}$ 51'41	17.79747 AU
max. Earth dist.	14803 Dec 07 03:33	0° $\mathring{\text{B}}$ 01'31	20.20997 AU	direct	14810 Sep 21 00:14	26° $\mathring{\text{B}}$ 49'43	
morning rise	14803 Dec 23 15:19	1° $\mathring{\text{B}}$ 00'06			14810 Dec 20 11:17	0° $\mathring{\text{B}}$	
retrograde	14804 Mar 26 21:08	4° $\mathring{\text{B}}$ 16'12		evening set	14810 Dec 22 11:46	0° $\mathring{\text{B}}$ 07'11	
opposition	14804 Jun 11 01:39	2° $\mathring{\text{B}}$ 14'22	1°14'49				
min. Earth dist.	14804 Jun 11 05:10	2° $\mathring{\text{B}}$ 14'00	18.17661 AU	conjunction	14811 Jan 07 22:32	1° $\mathring{\text{B}}$ 06'59	0°53'13
direct	14804 Aug 25 01:09	0° $\mathring{\text{B}}$ 13'40		minimum elong	14811 Jan 07 22:33	1° $\mathring{\text{B}}$ 06'59	0°54'09
evening set	14804 Nov 24 16:48	3° $\mathring{\text{B}}$ 25'04		max. Earth dist.	14811 Jan 07 15:49	1° $\mathring{\text{B}}$ 05'57	19.76939 AU
				morning rise	14811 Jan 24 10:36	2° $\mathring{\text{B}}$ 06'59	
conjunction	14804 Dec 10 23:50	4° $\mathring{\text{B}}$ 23'06	1°06'49	retrograde	14811 Apr 28 15:27	5° $\mathring{\text{B}}$ 28'12	
minimum elong	14804 Dec 10 23:50	4° $\mathring{\text{B}}$ 23'06	1°07'50	opposition	14811 Jul 12 22:54	3° $\mathring{\text{B}}$ 25'12	0°57'22
max. Earth dist.	14804 Dec 10 19:42	4° $\mathring{\text{B}}$ 22'29	20.14292 AU	min. Earth dist.	14811 Jul 13 04:13	3° $\mathring{\text{B}}$ 24'38	17.74211 AU
morning rise	14804 Dec 27 08:45	5° $\mathring{\text{B}}$ 21'27		direct	14811 Sep 25 18:39	1° $\mathring{\text{B}}$ 22'27	
retrograde	14805 Mar 31 16:02	8° $\mathring{\text{B}}$ 38'19		evening set	14811 Dec 27 10:05	4° $\mathring{\text{B}}$ 40'58	
opposition	14805 Jun 15 16:33	6° $\mathring{\text{B}}$ 36'13	1°13'38				
min. Earth dist.	14805 Jun 15 19:42	6° $\mathring{\text{B}}$ 35'53	18.10970 AU	conjunction	14812 Jan 12 21:31	5° $\mathring{\text{B}}$ 41'02	0°49'39
direct	14805 Aug 29 16:40	4° $\mathring{\text{B}}$ 35'10		minimum elong	14812 Jan 12 21:31	5° $\mathring{\text{B}}$ 41'02	0°50'32
evening set	14805 Nov 29 09:41	7° $\mathring{\text{B}}$ 47'31		max. Earth dist.	14812 Jan 12 15:21	5° $\mathring{\text{B}}$ 40'06	19.71512 AU
				morning rise	14812 Jan 29 09:45	6° $\mathring{\text{B}}$ 41'17	

retrograde	14812 May 02 13:59	10° \approx 03'09	direct	14818 Oct 28 00:02	3° \times 56'02	
opposition	14812 Jul 16 18:14	8° \approx 00'05 0°53'13	evening set	14819 Jan 29 18:56	7° \times 20'24	
min. Earth dist.	14812 Jul 17 00:01	7° \approx 59'28 17.68894 AU				
direct	14812 Sep 29 12:52	5° \approx 57'08	conjunction	14819 Feb 15 08:35	8° \times 21'53 0°16'40	
evening set	14812 Dec 31 09:26	9° \approx 16'38	minimum elong	14819 Feb 15 08:35	8° \times 21'53 0°17'09	
			max. Earth dist.	14819 Feb 14 22:55	8° \times 20'24 19.41012 AU	
conjunction	14813 Jan 16 21:11	10° \approx 16'58 0°45'45	morning rise	14819 Mar 03 22:01	9° \times 23'22	
minimum elong	14813 Jan 16 21:11	10° \approx 16'58 0°46'36	retrograde	14819 Jun 05 12:46	12° \times 47'59	
max. Earth dist.	14813 Jan 16 13:20	10° \approx 15'45 19.66313 AU	opposition	14819 Aug 19 00:39	10° \times 44'12 0°15'33	
morning rise	14813 Feb 02 09:55	11° \approx 17'27	min. Earth dist.	14819 Aug 19 08:53	10° \times 43'18 17.39577 AU	
retrograde	14813 May 07 14:01	14° \approx 39'56	direct	14819 Nov 01 23:45	8° \times 39'26	
opposition	14813 Jul 21 14:16	12° \approx 36'46 0°48'43	evening set	14820 Feb 03 22:01	12° \times 04'23	
min. Earth dist.	14813 Jul 21 20:41	12° \approx 36'05 17.63809 AU				
direct	14813 Oct 04 08:46	10° \approx 33'33	conjunction	14820 Feb 20 11:47	13° \times 05'59 0°11'10	
evening set	14814 Jan 05 09:21	13° \approx 54'01	minimum elong	14820 Feb 20 11:47	13° \times 05'59 0°11'33	
			behind sun begin	14820 Feb 20 07:00	13° \times 05'15	
conjunction	14814 Jan 21 21:45	14° \approx 54'36 0°41'32	behind sun end	14820 Feb 20 16:34	13° \times 06'43	
minimum elong	14814 Jan 21 21:45	14° \approx 54'36 0°42'20	max. Earth dist.	14820 Feb 20 02:49	13° \times 04'36 19.38271 AU	
max. Earth dist.	14814 Jan 21 14:27	14° \approx 53'29 19.61331 AU	morning rise	14820 Mar 08 01:01	14° \times 07'32	
	14814 Jan 23 08:47	15° \approx	retrograde	14820 Jun 09 14:01	17° \times 32'18	
morning rise	14814 Feb 07 10:37	15° \approx 55'18	opposition	14820 Aug 22 23:39	15° \times 28'27 0°09'21	
retrograde	14814 May 12 13:39	19° \approx 18'18	min. Earth dist.	14820 Aug 23 06:42	15° \times 27'41 17.37108 AU	
opposition	14814 Jul 26 10:53	17° \approx 15'04 0°43'52	direct	14820 Nov 06 01:25	13° \times 23'30	
min. Earth dist.	14814 Jul 26 17:28	17° \approx 14'21 17.58930 AU	evening set	14821 Feb 08 01:33	16° \times 48'58	
direct	14814 Oct 09 04:45	15° \approx 11'36				
evening set	14815 Jan 10 10:17	18° \approx 32'57	conjunction	14821 Feb 24 15:14	17° \times 50'39 0°05'35	
			minimum elong	14821 Feb 24 15:14	17° \times 50'39 0°05'55	
conjunction	14815 Jan 26 22:55	19° \approx 33'45 0°37'02	behind sun begin	14821 Feb 24 08:48	17° \times 49'40	
minimum elong	14815 Jan 26 22:55	19° \approx 33'45 0°37'45	behind sun end	14821 Feb 24 21:40	17° \times 51'37	
max. Earth dist.	14815 Jan 26 13:51	19° \approx 32'21 19.56581 AU	max. Earth dist.	14821 Feb 24 06:18	17° \times 49'16 19.36089 AU	
morning rise	14815 Feb 12 12:10	20° \approx 34'40	morning rise	14821 Mar 13 04:16	18° \times 52'15	
retrograde	14815 May 17 13:44	23° \approx 58'07	retrograde	14821 Jun 14 13:37	22° \times 17'05	
opposition	14815 Jul 31 07:56	21° \approx 54'46 0°38'42	opposition	14821 Aug 27 23:00	20° \times 13'14 0°03'04	
min. Earth dist.	14815 Jul 31 15:25	21° \approx 53'57 17.54318 AU	min. Earth dist.	14821 Aug 28 06:45	20° \times 12'23 17.35238 AU	
direct	14815 Oct 14 02:20	19° \approx 51'01	direct	14821 Nov 11 01:08	18° \times 08'07	
evening set	14816 Jan 15 11:39	23° \approx 13'13	evening set	14822 Feb 13 05:14	21° \times 34'03	
			desc. node	14822 Feb 21 05:37	22° \times 03'42	
conjunction	14816 Feb 01 00:47	24° \approx 14'15 0°32'16				
minimum elong	14816 Feb 01 00:47	24° \approx 14'15 0°32'57	conjunction	14822 Mar 01 18:51	22° \times 35'47 -0°00'07	
max. Earth dist.	14816 Jan 31 16:23	24° \approx 12'57 19.52116 AU	minimum elong	14822 Mar 01 18:52	22° \times 35'47 0°00'07	
morning rise	14816 Feb 17 14:02	25° \approx 15'19	behind sun begin	14822 Mar 01 12:19	22° \times 34'47	
retrograde	14816 May 21 13:34	28° \approx 39'10	behind sun end	14822 Mar 02 01:24	22° \times 36'47	
opposition	14816 Aug 04 05:31	26° \approx 35'42 0°33'14	max. Earth dist.	14822 Mar 01 10:16	22° \times 34'27 19.34531 AU	
min. Earth dist.	14816 Aug 04 12:40	26° \approx 34'55 17.50008 AU	morning rise	14822 Mar 18 07:41	23° \times 37'25	
direct	14816 Oct 18 00:43	24° \approx 31'41	retrograde	14822 Jun 19 15:49	27° \times 02'16	
evening set	14817 Jan 19 13:33	27° \approx 54'40	opposition	14822 Sep 01 22:31	24° \times 58'27 -0°03'15	
			min. Earth dist.	14822 Sep 02 04:55	24° \times 57'45 17.33984 AU	
conjunction	14817 Feb 05 02:49	28° \approx 55'52 0°27'15	direct	14822 Nov 16 03:20	22° \times 53'15	
minimum elong	14817 Feb 05 02:49	28° \approx 55'52 0°27'51	evening set	14823 Feb 18 09:13	26° \times 19'35	
max. Earth dist.	14817 Feb 04 17:09	28° \approx 54'22 19.47991 AU				
morning rise	14817 Feb 21 16:17	29° \approx 57'06	conjunction	14823 Mar 06 22:41	27° \times 21'21 -0°05'50	
	14817 Feb 22 11:27	0° \times	minimum elong	14823 Mar 06 22:41	27° \times 21'21 0°05'42	
retrograde	14817 May 26 13:01	3° \times 21'17	behind sun begin	14823 Mar 06 16:13	27° \times 20'22	
opposition	14817 Aug 09 03:37	1° \times 17'41 0°27'32	behind sun end	14823 Mar 07 05:09	27° \times 22'20	
min. Earth dist.	14817 Aug 09 11:40	1° \times 16'48 17.46082 AU	max. Earth dist.	14823 Mar 06 14:43	27° \times 20'08 19.33582 AU	
	14817 Sep 10 06:39	30° \approx	morning rise	14823 Mar 23 11:03	28° \times 23'00	
direct	14817 Oct 22 23:36	29° \approx 13'24		14823 Apr 20 22:14	0° γ	
	14817 Dec 03 21:24	0° \times	retrograde	14823 Jun 24 15:49	1° γ 47'49	
evening set	14818 Jan 24 15:57	2° \times 37'06		14823 Aug 31 20:29	30° \times 3'	
			opposition	14823 Sep 06 22:22	29° \times 44'06 -0°09'33	
conjunction	14818 Feb 10 05:35	3° \times 38'28 0°22'02	min. Earth dist.	14823 Sep 07 05:24	29° \times 43'20 17.33346 AU	
minimum elong	14818 Feb 10 05:35	3° \times 38'28 0°22'35	direct	14823 Nov 21 03:25	27° \times 38'51	
max. Earth dist.	14818 Feb 09 20:40	3° \times 37'05 19.44276 AU		14824 Feb 04 22:05	0° γ	
morning rise	14818 Feb 26 19:00	4° \times 39'50	evening set	14824 Feb 23 13:19	1° γ 05'32	
retrograde	14818 May 31 13:24	8° \times 04'16				
opposition	14818 Aug 14 01:51	6° \times 00'34 0°21'38	conjunction	14824 Mar 11 02:28	2° γ 07'18 -0°11'26	
min. Earth dist.	14818 Aug 14 09:11	5° \times 59'46 17.42583 AU	minimum elong	14824 Mar 11 02:28	2° γ 07'18 0°11'21	

behind sun begin	14824 Mar 10 21:35	2°♊06'33		retrograde	14830 Jul 27 18:57	5°♊06'01	
behind sun end	14824 Mar 11 07:20	2°♊08'03		opposition	14830 Oct 09 23:26	3°♊03'19	-0°49'25
max. Earth dist.	14824 Mar 10 18:24	2°♊06'03	19.33256 AU	min. Earth dist.	14830 Oct 10 04:29	3°♊02'46	17.42960 AU
morning rise	14824 Mar 27 14:32	3°♊08'55		direct	14830 Dec 24 17:51	0°♊58'24	
retrograde	14824 Jun 28 18:09	6°♊33'40		evening set	14831 Mar 29 14:44	4°♊24'52	
opposition	14824 Sep 10 22:18	4°♊30'05	-0°15'47				
min. Earth dist.	14824 Sep 11 04:08	4°♊29'27	17.33308 AU	conjunction	14831 Apr 15 00:24	5°♊25'54	-0°46'25
direct	14824 Nov 25 05:37	2°♊24'51		minimum elong	14831 Apr 15 00:23	5°♊25'54	0°46'54
evening set	14825 Feb 27 17:20	5°♊51'47		max. Earth dist.	14831 Apr 14 19:10	5°♊25'05	19.44425 AU
				morning rise	14831 May 01 07:53	6°♊26'38	
conjunction	14825 Mar 16 06:16	6°♊53'32	-0°16'57	retrograde	14831 Aug 01 17:34	9°♊48'55	
minimum elong	14825 Mar 16 06:16	6°♊53'32	0°16'59	opposition	14831 Oct 14 23:04	7°♊46'22	-0°54'01
max. Earth dist.	14825 Mar 15 23:18	6°♊52'27	19.33486 AU	min. Earth dist.	14831 Oct 15 03:32	7°♊45'53	17.46029 AU
morning rise	14825 Apr 01 17:44	7°♊55'07		direct	14831 Dec 29 21:18	5°♊41'32	
retrograde	14825 Jul 03 18:42	11°♊19'43		evening set	14832 Apr 02 16:44	9°♊07'33	
opposition	14825 Sep 15 22:35	9°♊16'17	-0°21'55				
min. Earth dist.	14825 Sep 16 05:04	9°♊15'35	17.33800 AU	conjunction	14832 Apr 19 01:33	10°♊08'23	-0°50'22
direct	14825 Nov 30 06:25	7°♊11'06		minimum elong	14832 Apr 19 01:32	10°♊08'23	0°50'56
evening set	14826 Mar 04 21:39	10°♊38'12		max. Earth dist.	14832 Apr 18 19:57	10°♊07'30	19.47710 AU
				morning rise	14832 May 05 08:23	11°♊08'55	
conjunction	14826 Mar 21 10:03	11°♊39'54	-0°22'22	retrograde	14832 Aug 05 14:27	14°♊30'35	
minimum elong	14826 Mar 21 10:03	11°♊39'54	0°22'28	opposition	14832 Oct 18 22:22	12°♊28'09	-0°58'13
max. Earth dist.	14826 Mar 21 02:23	11°♊38'42	19.34229 AU	min. Earth dist.	14832 Oct 19 02:37	12°♊27'41	17.49542 AU
morning rise	14826 Apr 06 21:07	12°♊41'24		direct	14833 Jan 02 22:39	10°♊23'22	
retrograde	14826 Jul 08 20:27	16°♊05'48		evening set	14833 Apr 07 17:48	13°♊48'54	
opposition	14826 Sep 20 22:42	14°♊02'32	-0°27'53				
min. Earth dist.	14826 Sep 21 04:23	14°♊01'54	17.34781 AU	conjunction	14833 Apr 24 02:04	14°♊49'30	-0°53'59
direct	14826 Dec 05 08:37	11°♊57'23		minimum elong	14833 Apr 24 02:03	14°♊49'30	0°54'37
evening set	14827 Mar 10 01:45	15°♊24'34		max. Earth dist.	14833 Apr 23 21:59	14°♊48'52	19.51440 AU
					14833 Apr 26 21:27	15°♊	
conjunction	14827 Mar 26 13:49	16°♊26'11	-0°27'38	morning rise	14833 May 10 08:04	15°♊49'48	
minimum elong	14827 Mar 26 13:49	16°♊26'11	0°27'49	retrograde	14833 Aug 10 12:20	19°♊10'48	
max. Earth dist.	14827 Mar 26 07:21	16°♊25'11	19.35425 AU	opposition	14833 Oct 23 21:15	17°♊08'30	-1°02'02
morning rise	14827 Apr 12 00:06	17°♊27'35		min. Earth dist.	14833 Oct 24 00:22	17°♊08'10	17.53487 AU
retrograde	14827 Jul 13 20:50	20°♊51'41		direct	14834 Jan 08 00:57	15°♊03'51	
opposition	14827 Sep 25 23:08	18°♊48'35	-0°33'40	evening set	14834 Apr 12 18:23	18°♊28'46	
min. Earth dist.	14827 Sep 26 05:13	18°♊47'55	17.36197 AU				
direct	14827 Dec 10 10:22	16°♊43'30		conjunction	14834 Apr 29 01:46	19°♊29'08	-0°57'12
evening set	14828 Mar 14 05:35	20°♊10'39		minimum elong	14834 Apr 29 01:45	19°♊29'08	0°57'54
				max. Earth dist.	14834 Apr 28 21:52	19°♊28'31	19.55609 AU
conjunction	14828 Mar 30 16:57	21°♊12'09	-0°32'43	morning rise	14834 May 15 07:02	20°♊29'11	
minimum elong	14828 Mar 30 16:56	21°♊12'09	0°32'59	retrograde	14834 Aug 15 08:27	23°♊49'29	
max. Earth dist.	14828 Mar 30 09:37	21°♊11'00	19.37056 AU	opposition	14834 Oct 28 19:45	21°♊47'21	-1°05'24
morning rise	14828 Apr 16 02:44	22°♊13'25		min. Earth dist.	14834 Oct 28 22:42	21°♊47'02	17.57900 AU
retrograde	14828 Jul 17 21:04	25°♊37'11		direct	14835 Jan 13 00:51	19°♊42'49	
opposition	14828 Sep 29 23:26	23°♊34'13	-0°39'12	evening set	14835 Apr 17 18:03	23°♊07'06	
min. Earth dist.	14828 Sep 30 04:50	23°♊33'38	17.38044 AU				
direct	14828 Dec 14 12:33	21°♊29'11		conjunction	14835 May 04 00:45	24°♊07'12	-1°00'02
evening set	14829 Mar 19 09:02	24°♊56'12		minimum elong	14835 May 04 00:44	24°♊07'12	1°00'48
				max. Earth dist.	14835 May 03 22:13	24°♊06'49	19.60257 AU
conjunction	14829 Apr 04 20:01	25°♊57'35	-0°37'33	morning rise	14835 May 20 05:11	25°♊07'00	
minimum elong	14829 Apr 04 20:00	25°♊57'34	0°37'53	retrograde	14835 Aug 20 05:37	28°♊26'34	
max. Earth dist.	14829 Apr 04 14:05	25°♊56'39	19.39103 AU	opposition	14835 Nov 02 17:51	26°♊24'38	-1°08'20
morning rise	14829 Apr 21 04:57	26°♊58'41		min. Earth dist.	14835 Nov 02 19:06	26°♊24'30	17.62775 AU
	14829 Jun 24 13:43	0°♊		direct	14836 Jan 18 01:23	24°♊20'18	
retrograde	14829 Jul 22 20:43	0°♊22'01		evening set	14836 Apr 21 16:50	27°♊43'52	
	14829 Aug 20 12:31	30°♊					
opposition	14829 Oct 04 23:29	28°♊19'12	-0°44'28	conjunction	14836 May 07 22:43	28°♊43'43	-1°02'28
min. Earth dist.	14829 Oct 05 04:54	28°♊18'36	17.40293 AU	minimum elong	14836 May 07 22:42	28°♊43'43	1°03'16
direct	14829 Dec 19 15:32	26°♊14'14		max. Earth dist.	14836 May 07 20:57	28°♊43'26	19.65356 AU
evening set	14830 Mar 24 12:16	29°♊41'01		morning rise	14836 May 24 02:24	29°♊43'15	
	14830 Mar 29 15:48	0°♊			14836 May 28 18:13	0°♊	
conjunction	14830 Apr 09 22:28	0°♊42'14	-0°42'08	retrograde	14836 Aug 24 00:59	3°♊02'05	
minimum elong	14830 Apr 09 22:27	0°♊42'14	0°42'34	opposition	14836 Nov 06 15:34	1°♊00'23	-1°10'47
max. Earth dist.	14830 Apr 09 15:41	0°♊41'10	19.41558 AU	min. Earth dist.	14836 Nov 06 16:46	1°♊00'15	17.68096 AU
morning rise	14830 Apr 26 06:51	1°♊43'10			14836 Dec 01 07:10	30°♊	
				direct	14837 Jan 21 23:43	28°♊56'18	

	14837 Mar 13 02:24	0°♊	minimum elong	14843 Jun 09 11:04	0°♊14'13	1°08'50
evening set	14837 Apr 26 14:54	2°♊19'07	max. Earth dist.	14843 Jun 09 13:14	0°♊14'33	20.08358 AU
			morning rise	14843 Jun 25 10:09	1°♊11'48	
conjunction	14837 May 12 20:04	3°♊18'41 -1°04'29	retrograde	14843 Sep 25 03:18	4°♊25'11	
minimum elong	14837 May 12 20:04	3°♊18'41 1°05'20	opposition	14843 Dec 09 08:51	2°♊25'15	-1°15'00
max. Earth dist.	14837 May 12 19:14	3°♊18'33 19.70879 AU	min. Earth dist.	14843 Dec 09 05:27	2°♊25'36	18.11579 AU
morning rise	14837 May 28 23:03	4°♊17'57	direct	14844 Feb 24 06:00	0°♊23'12	
retrograde	14837 Aug 28 21:15	7°♊36'02	evening set	14844 May 28 02:12	3°♊39'39	
opposition	14837 Nov 11 12:32	5°♊34'36 -1°12'47				
min. Earth dist.	14837 Nov 11 12:05	5°♊34'39 17.73787 AU	conjunction	14844 Jun 13 02:34	4°♊37'13	-1°06'58
direct	14838 Jan 26 23:23	3°♊30'47	minimum elong	14844 Jun 13 02:35	4°♊37'13	1°07'58
evening set	14838 May 01 12:17	6°♊52'49	max. Earth dist.	14844 Jun 13 06:06	4°♊37'45	20.14730 AU
			morning rise	14844 Jun 29 01:01	5°♊34'32	
conjunction	14838 May 17 16:41	7°♊52'07 -1°06'05	retrograde	14844 Sep 28 16:07	8°♊47'07	
minimum elong	14838 May 17 16:40	7°♊52'07 1°06'58	opposition	14844 Dec 13 02:14	6°♊47'22	-1°13'48
max. Earth dist.	14838 May 17 16:47	7°♊52'08 19.76727 AU	min. Earth dist.	14844 Dec 12 23:22	6°♊47'39	18.17914 AU
morning rise	14838 Jun 02 18:52	8°♊51'06	direct	14845 Feb 28 00:00	4°♊45'35	
retrograde	14838 Sep 02 15:01	12°♊08'25	evening set	14845 Jun 01 17:27	8°♊01'01	
opposition	14838 Nov 16 09:20	10°♊07'16 -1°14'19				
min. Earth dist.	14838 Nov 16 09:14	10°♊07'17 17.79780 AU	conjunction	14845 Jun 17 17:08	8°♊58'17	-1°05'43
direct	14839 Jan 31 20:42	8°♊03'46	minimum elong	14845 Jun 17 17:08	8°♊58'17	1°06'44
evening set	14839 May 06 08:41	11°♊24'57	max. Earth dist.	14845 Jun 17 20:05	8°♊58'44	20.21037 AU
			morning rise	14845 Jul 03 15:16	9°♊55'20	
conjunction	14839 May 22 12:18	12°♊23'57 -1°07'16	retrograde	14845 Oct 03 06:54	13°♊07'08	
minimum elong	14839 May 22 12:18	12°♊23'57 1°08'11	opposition	14845 Dec 17 18:41	11°♊07'32	-1°12'12
max. Earth dist.	14839 May 22 12:49	12°♊24'02 19.82839 AU	min. Earth dist.	14845 Dec 17 14:35	11°♊07'57	18.24185 AU
morning rise	14839 Jun 07 13:50	13°♊22'40	direct	14846 Mar 04 18:58	9°♊05'59	
retrograde	14839 Sep 07 10:15	16°♊39'13	evening set	14846 Jun 06 07:35	12°♊20'24	
opposition	14839 Nov 21 05:31	14°♊38'20 -1°15'22				
min. Earth dist.	14839 Nov 21 03:46	14°♊38'31 17.85985 AU	conjunction	14846 Jun 22 06:53	13°♊17'24	-1°04'07
direct	14840 Feb 05 19:42	12°♊35'08	minimum elong	14846 Jun 22 06:53	13°♊17'24	1°05'06
evening set	14840 May 10 04:21	15°♊55'26	max. Earth dist.	14846 Jun 22 11:28	13°♊18'05	20.27276 AU
			morning rise	14846 Jul 08 04:27	14°♊14'11	
conjunction	14840 May 26 07:17	16°♊54'09 -1°08'01	retrograde	14846 Oct 07 18:18	17°♊25'13	
minimum elong	14840 May 26 07:17	16°♊54'09 1°08'59	opposition	14846 Dec 22 10:45	15°♊25'45	-1°10'11
max. Earth dist.	14840 May 26 08:54	16°♊54'24 19.89118 AU	min. Earth dist.	14846 Dec 22 06:51	15°♊26'10	18.30396 AU
morning rise	14840 Jun 11 08:04	17°♊52'34	direct	14847 Mar 09 11:43	13°♊24'27	
retrograde	14840 Sep 11 02:18	21°♊08'20	evening set	14847 Jun 10 20:46	16°♊37'50	
opposition	14840 Nov 25 01:12	19°♊07'43 -1°15'57				
min. Earth dist.	14840 Nov 25 00:02	19°♊07'50 17.92334 AU	conjunction	14847 Jun 26 19:25	17°♊34'34	-1°02'09
direct	14841 Feb 09 16:04	17°♊04'49	minimum elong	14847 Jun 26 19:25	17°♊34'34	1°03'09
evening set	14841 May 14 23:13	20°♊24'13	max. Earth dist.	14847 Jun 26 23:42	17°♊35'12	20.33477 AU
			morning rise	14847 Jul 12 16:47	18°♊31'06	
conjunction	14841 May 31 01:24	21°♊22'38 -1°08'22	retrograde	14847 Oct 12 07:20	21°♊41'24	
minimum elong	14841 May 31 01:23	21°♊22'38 1°09'20	opposition	14847 Dec 27 02:01	19°♊42'05	-1°07'48
max. Earth dist.	14841 May 31 02:49	21°♊22'51 19.95514 AU	min. Earth dist.	14847 Dec 26 20:43	19°♊42'38	18.36589 AU
morning rise	14841 Jun 16 01:39	22°♊20'46	direct	14848 Mar 13 04:08	17°♊41'01	
retrograde	14841 Sep 15 20:14	25°♊35'45	evening set	14848 Jun 14 09:03	20°♊53'25	
opposition	14841 Nov 29 20:17	23°♊35'22 -1°16'05				
min. Earth dist.	14841 Nov 29 17:40	23°♊35'38 17.98751 AU	conjunction	14848 Jun 30 07:25	21°♊49'53	-0°59'52
direct	14842 Feb 14 14:05	21°♊32'46	minimum elong	14848 Jun 30 07:25	21°♊49'53	1°00'49
evening set	14842 May 19 17:09	24°♊51'12	max. Earth dist.	14848 Jun 30 13:31	21°♊50'48	20.39653 AU
			morning rise	14848 Jul 16 04:17	22°♊46'11	
conjunction	14842 Jun 04 18:43	25°♊49'20 -1°08'18	retrograde	14848 Oct 15 17:59	25°♊55'46	
minimum elong	14842 Jun 04 18:43	25°♊49'20 1°09'18	opposition	14848 Dec 30 16:34	23°♊56'38	-1°05'04
max. Earth dist.	14842 Jun 04 21:19	25°♊49'44 20.01936 AU	min. Earth dist.	14848 Dec 30 11:12	23°♊57'11	18.42751 AU
morning rise	14842 Jun 20 18:13	26°♊47'12	direct	14849 Mar 17 19:07	21°♊55'51	
	14842 Sep 13 06:45	0°♊	evening set	14849 Jun 18 20:43	25°♊07'16	
retrograde	14842 Sep 20 10:44	0°♊01'22				
	14842 Sep 27 15:03	30°♋♊	conjunction	14849 Jul 04 18:30	26°♊03'30	-0°57'15
opposition	14842 Dec 04 14:57	28°♊01'14 -1°15'46	minimum elong	14849 Jul 04 18:31	26°♊03'30	0°58'12
min. Earth dist.	14842 Dec 04 12:55	28°♊01'27 18.05176 AU	max. Earth dist.	14849 Jul 05 00:09	26°♊04'20	20.45807 AU
direct	14843 Feb 19 09:15	25°♊58'55	morning rise	14849 Jul 20 15:16	26°♊59'35	
evening set	14843 May 24 10:15	29°♊16'23		14849 Oct 02 03:57	0°♋	
	14843 Jun 05 13:17	0°♊	retrograde	14849 Oct 20 05:52	0°♋08'31	
				14849 Nov 07 13:53	30°♋♊	
conjunction	14843 Jun 09 11:04	0°♊14'13 -1°07'49	opposition	14850 Jan 04 06:36	28°♊09'33	-1°01'59

min. Earth dist.	14850 Jan 03 24:00	28° $\mathring{\text{U}}$ 10'13	18.48882 AU	conjunction	14856 Aug 02 07:20	25° $\mathring{\text{O}}$ 00'47	-0°32'01
direct	14850 Mar 22 09:05	26° $\mathring{\text{U}}$ 09'04		minimum elong	14856 Aug 02 07:21	25° $\mathring{\text{O}}$ 00'47	0°32'40
evening set	14850 Jun 23 07:21	29° $\mathring{\text{U}}$ 19'33		max. Earth dist.	14856 Aug 02 16:09	25° $\mathring{\text{O}}$ 02'04	20.83826 AU
	14850 Jul 04 19:44	0° $\mathring{\text{O}}$		morning rise	14856 Aug 18 03:09	25° $\mathring{\text{O}}$ 55'37	
				retrograde	14856 Nov 18 02:54	29° $\mathring{\text{O}}$ 01'06	
conjunction	14850 Jul 09 04:56	0° $\mathring{\text{O}}$ 15'33	-0°54'21	opposition	14857 Feb 02 19:04	27° $\mathring{\text{O}}$ 03'15	-0°33'04
minimum elong	14850 Jul 09 04:57	0° $\mathring{\text{O}}$ 15'33	0°55'17	min. Earth dist.	14857 Feb 02 11:00	27° $\mathring{\text{O}}$ 04'03	18.85887 AU
max. Earth dist.	14850 Jul 09 12:22	0° $\mathring{\text{O}}$ 16'39	20.51899 AU	direct	14857 Apr 20 18:38	25° $\mathring{\text{O}}$ 04'47	
morning rise	14850 Jul 25 01:16	1° $\mathring{\text{O}}$ 11'25		evening set	14857 Jul 21 18:12	28° $\mathring{\text{O}}$ 09'36	
retrograde	14850 Oct 24 16:01	4° $\mathring{\text{O}}$ 19'44					
opposition	14851 Jan 08 20:09	2° $\mathring{\text{O}}$ 20'59	-0°58'36	conjunction	14857 Aug 06 14:07	29° $\mathring{\text{O}}$ 04'19	-0°27'40
min. Earth dist.	14851 Jan 08 13:22	2° $\mathring{\text{O}}$ 21'40	18.54916 AU	minimum elong	14857 Aug 06 14:07	29° $\mathring{\text{O}}$ 04'19	0°28'16
direct	14851 Mar 26 22:30	0° $\mathring{\text{O}}$ 20'50		max. Earth dist.	14857 Aug 06 21:43	29° $\mathring{\text{O}}$ 05'25	20.87827 AU
evening set	14851 Jun 27 17:30	3° $\mathring{\text{O}}$ 30'25		morning rise	14857 Aug 22 10:08	29° $\mathring{\text{O}}$ 59'03	
					14857 Aug 22 16:52	0° $\mathring{\text{O}}$	
conjunction	14851 Jul 13 14:35	4° $\mathring{\text{O}}$ 26'11	-0°51'11	retrograde	14857 Nov 22 11:13	3° $\mathring{\text{O}}$ 04'10	
minimum elong	14851 Jul 13 14:35	4° $\mathring{\text{O}}$ 26'11	0°52'04	opposition	14858 Feb 07 05:30	1° $\mathring{\text{O}}$ 06'21	-0°28'10
max. Earth dist.	14851 Jul 13 21:28	4° $\mathring{\text{O}}$ 27'12	20.57879 AU	min. Earth dist.	14858 Feb 06 21:38	1° $\mathring{\text{O}}$ 07'08	18.89660 AU
morning rise	14851 Jul 29 10:55	5° $\mathring{\text{O}}$ 21'51			14858 Mar 08 11:08	30° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
retrograde	14851 Oct 29 03:21	8° $\mathring{\text{O}}$ 29'36		direct	14858 Apr 25 04:05	29° $\mathring{\text{O}}$ 08'03	
opposition	14852 Jan 13 09:02	6° $\mathring{\text{O}}$ 31'02	-0°54'55		14858 Jun 10 06:49	0° $\mathring{\text{O}}$	
min. Earth dist.	14852 Jan 13 01:25	6° $\mathring{\text{O}}$ 31'49	18.60820 AU	evening set	14858 Jul 26 00:27	2° $\mathring{\text{O}}$ 12'11	
direct	14852 Mar 30 10:54	4° $\mathring{\text{O}}$ 31'12					
evening set	14852 Jul 01 02:48	7° $\mathring{\text{O}}$ 39'55		conjunction	14858 Aug 10 20:29	3° $\mathring{\text{O}}$ 06'47	-0°23'11
				minimum elong	14858 Aug 10 20:29	3° $\mathring{\text{O}}$ 06'47	0°23'44
conjunction	14852 Jul 16 23:48	8° $\mathring{\text{O}}$ 35'29	-0°47'46	max. Earth dist.	14858 Aug 11 05:07	3° $\mathring{\text{O}}$ 08'01	20.91366 AU
minimum elong	14852 Jul 16 23:48	8° $\mathring{\text{O}}$ 35'30	0°48'38	morning rise	14858 Aug 26 16:25	4° $\mathring{\text{O}}$ 01'23	
max. Earth dist.	14852 Jul 17 08:12	8° $\mathring{\text{O}}$ 36'44	20.63682 AU	retrograde	14858 Nov 26 19:17	7° $\mathring{\text{O}}$ 06'12	
morning rise	14852 Aug 01 19:50	9° $\mathring{\text{O}}$ 30'58		opposition	14859 Feb 11 15:28	5° $\mathring{\text{O}}$ 08'22	-0°23'09
retrograde	14852 Nov 01 12:56	12° $\mathring{\text{O}}$ 38'11		min. Earth dist.	14859 Feb 11 07:28	5° $\mathring{\text{O}}$ 09'10	18.92963 AU
opposition	14853 Jan 16 21:32	10° $\mathring{\text{O}}$ 39'49	-0°50'59	direct	14859 Apr 29 14:20	3° $\mathring{\text{O}}$ 10'12	
min. Earth dist.	14853 Jan 16 13:53	10° $\mathring{\text{O}}$ 40'36	18.66498 AU	evening set	14859 Jul 30 06:31	6° $\mathring{\text{O}}$ 13'42	
direct	14853 Apr 03 22:42	8° $\mathring{\text{O}}$ 40'19					
evening set	14853 Jul 05 11:45	11° $\mathring{\text{O}}$ 48'11		conjunction	14859 Aug 15 02:21	7° $\mathring{\text{O}}$ 08'11	-0°18'37
				minimum elong	14859 Aug 15 02:21	7° $\mathring{\text{O}}$ 08'11	0°19'07
conjunction	14853 Jul 21 08:18	12° $\mathring{\text{O}}$ 43'33	-0°44'07	max. Earth dist.	14859 Aug 15 09:59	7° $\mathring{\text{O}}$ 09'16	20.94459 AU
minimum elong	14853 Jul 21 08:19	12° $\mathring{\text{O}}$ 43'33	0°44'55	morning rise	14859 Aug 30 22:35	8° $\mathring{\text{O}}$ 02'42	
max. Earth dist.	14853 Jul 21 15:53	12° $\mathring{\text{O}}$ 44'39	20.69233 AU	retrograde	14859 Dec 01 02:31	11° $\mathring{\text{O}}$ 07'14	
morning rise	14853 Aug 06 04:23	13° $\mathring{\text{O}}$ 38'51		opposition	14860 Feb 16 00:54	9° $\mathring{\text{O}}$ 09'22	-0°18'02
	14853 Aug 31 10:53	15° $\mathring{\text{O}}$		min. Earth dist.	14860 Feb 15 17:10	9° $\mathring{\text{O}}$ 10'09	18.95860 AU
retrograde	14853 Nov 05 23:32	16° $\mathring{\text{O}}$ 45'35		direct	14860 May 02 22:11	7° $\mathring{\text{O}}$ 11'19	
	14854 Jan 16 04:17	15° $\mathring{\text{R}}$ $\mathring{\text{O}}$		evening set	14860 Aug 02 12:00	10° $\mathring{\text{O}}$ 14'14	
opposition	14854 Jan 21 09:31	14° $\mathring{\text{O}}$ 47'23	-0°46'48				
min. Earth dist.	14854 Jan 21 01:27	14° $\mathring{\text{O}}$ 48'12	18.71908 AU	conjunction	14860 Aug 18 08:02	11° $\mathring{\text{O}}$ 08'37	-0°13'58
direct	14854 Apr 08 10:25	12° $\mathring{\text{O}}$ 48'10		minimum elong	14860 Aug 18 08:02	11° $\mathring{\text{O}}$ 08'37	0°14'23
	14854 Jun 23 01:19	15° $\mathring{\text{O}}$		behind sun begin	14860 Aug 18 04:56	11° $\mathring{\text{O}}$ 08'11	
evening set	14854 Jul 09 20:01	15° $\mathring{\text{O}}$ 55'14		behind sun end	14860 Aug 18 11:07	11° $\mathring{\text{O}}$ 09'03	
				max. Earth dist.	14860 Aug 18 16:48	11° $\mathring{\text{O}}$ 09'52	20.97159 AU
conjunction	14854 Jul 25 16:31	16° $\mathring{\text{O}}$ 50'25	-0°40'15	morning rise	14860 Sep 03 04:15	12° $\mathring{\text{O}}$ 03'03	
minimum elong	14854 Jul 25 16:31	16° $\mathring{\text{O}}$ 50'25	0°41'02	retrograde	14860 Dec 04 09:55	15° $\mathring{\text{O}}$ 07'22	
max. Earth dist.	14854 Jul 26 01:22	16° $\mathring{\text{O}}$ 51'43	20.74481 AU	opposition	14861 Feb 19 10:01	13° $\mathring{\text{O}}$ 09'28	-0°12'51
morning rise	14854 Aug 10 12:20	17° $\mathring{\text{O}}$ 45'33		min. Earth dist.	14861 Feb 19 01:52	13° $\mathring{\text{O}}$ 10'17	18.98370 AU
retrograde	14854 Nov 10 08:42	20° $\mathring{\text{O}}$ 51'50		direct	14861 May 07 07:37	11° $\mathring{\text{O}}$ 11'32	
opposition	14855 Jan 25 21:12	18° $\mathring{\text{O}}$ 53'47	-0°42'24	evening set	14861 Aug 06 17:18	14° $\mathring{\text{O}}$ 13'56	
min. Earth dist.	14855 Jan 25 13:06	18° $\mathring{\text{O}}$ 54'36	18.76975 AU				
direct	14855 Apr 12 21:18	16° $\mathring{\text{O}}$ 54'52		conjunction	14861 Aug 22 13:09	15° $\mathring{\text{O}}$ 08'13	-0°09'16
evening set	14855 Jul 14 03:50	20° $\mathring{\text{O}}$ 01'08		minimum elong	14861 Aug 22 13:09	15° $\mathring{\text{O}}$ 08'13	0°09'38
				behind sun begin	14861 Aug 22 07:42	15° $\mathring{\text{O}}$ 07'28	
conjunction	14855 Jul 29 23:59	20° $\mathring{\text{O}}$ 56'09	-0°36'13	behind sun end	14861 Aug 22 18:36	15° $\mathring{\text{O}}$ 08'59	
minimum elong	14855 Jul 29 23:59	20° $\mathring{\text{O}}$ 56'09	0°36'55	max. Earth dist.	14861 Aug 22 21:04	15° $\mathring{\text{O}}$ 09'21	20.99495 AU
max. Earth dist.	14855 Jul 30 07:50	20° $\mathring{\text{O}}$ 57'17	20.79363 AU	morning rise	14861 Sep 07 09:40	16° $\mathring{\text{O}}$ 02'36	
morning rise	14855 Aug 14 19:58	21° $\mathring{\text{O}}$ 51'08		retrograde	14861 Dec 08 17:08	19° $\mathring{\text{O}}$ 06'47	
retrograde	14855 Nov 14 18:17	24° $\mathring{\text{O}}$ 57'00		opposition	14862 Feb 23 18:54	17° $\mathring{\text{O}}$ 08'51	-0°07'36
opposition	14856 Jan 30 08:25	22° $\mathring{\text{O}}$ 59'04	-0°37'49	min. Earth dist.	14862 Feb 23 10:54	17° $\mathring{\text{O}}$ 09'39	19.00548 AU
min. Earth dist.	14856 Jan 30 00:16	22° $\mathring{\text{O}}$ 59'53	18.81660 AU	direct	14862 May 11 14:13	15° $\mathring{\text{O}}$ 11'01	
direct	14856 Apr 16 08:00	21° $\mathring{\text{O}}$ 00'23		evening set	14862 Aug 10 22:14	18° $\mathring{\text{O}}$ 13'00	
evening set	14856 Jul 17 11:09	24° $\mathring{\text{O}}$ 05'55					

conjunction	14862 Aug 26 18:17	19° 00 07'13	-0°04'33	morning rise	14867 Oct 01 16:51	9° 00 53'44	
minimum elong	14862 Aug 26 18:18	19° 00 07'13	0°04'50	retrograde	14868 Jan 02 13:54	12° 00 58'19	
behind sun begin	14862 Aug 26 11:53	19° 00 06'19		opposition	14868 Mar 19 20:15	11° 00 00'20	0°23'33
behind sun end	14862 Aug 27 00:43	19° 00 08'07		min. Earth dist.	14868 Mar 19 12:58	11° 00 01'04	19.05835 AU
max. Earth dist.	14862 Aug 27 03:24	19° 00 08'31	21.01507 AU	direct	14868 Jun 04 06:38	9° 00 03'14	
morning rise	14862 Sep 11 14:51	20° 00 01'33		evening set	14868 Sep 03 03:05	12° 00 04'01	
retrograde	14862 Dec 13 00:12	23° 00 05'38					
opposition	14863 Feb 28 03:27	21° 00 07'42	-0°02'20	conjunction	14868 Sep 19 00:08	12° 00 58'14	0°23'33
min. Earth dist.	14863 Feb 27 18:51	21° 00 08'34	19.02389 AU	minimum elong	14868 Sep 19 00:07	12° 00 58'14	0°23'39
direct	14863 May 15 22:46	19° 00 10'01		max. Earth dist.	14868 Sep 19 08:16	12° 00 59'23	21.05533 AU
asc. node	14863 Aug 08 09:01	21° 00 49'14		morning rise	14868 Oct 04 22:25	13° 00 52'39	
evening set	14863 Aug 15 03:03	22° 00 11'37		retrograde	14869 Jan 05 22:09	16° 00 57'28	
				opposition	14869 Mar 24 04:21	14° 00 59'27	0°28'29
conjunction	14863 Aug 30 23:02	23° 00 05'48	0°00'17	min. Earth dist.	14869 Mar 23 20:57	15° 00 00'11	19.05107 AU
minimum elong	14863 Aug 30 23:04	23° 00 05'48	0°00'03	direct	14869 Jun 08 13:50	13° 00 02'24	
behind sun begin	14863 Aug 30 17:11	23° 00 04'59		evening set	14869 Sep 07 08:22	16° 00 03'11	
behind sun end	14863 Aug 31 04:57	23° 00 06'37					
max. Earth dist.	14863 Aug 31 07:14	23° 00 06'57	21.03180 AU	conjunction	14869 Sep 23 05:29	16° 00 57'26	0°27'57
morning rise	14863 Sep 15 20:02	24° 00 00'07		minimum elong	14869 Sep 23 05:29	16° 00 57'26	0°28'09
retrograde	14863 Dec 17 08:04	27° 00 04'11		max. Earth dist.	14869 Sep 23 12:03	16° 00 58'22	21.04524 AU
opposition	14864 Mar 03 11:50	25° 00 06'14	0°02'55	morning rise	14869 Oct 09 04:17	17° 00 51'56	
min. Earth dist.	14864 Mar 03 03:36	25° 00 07'04	19.03892 AU	retrograde	14870 Jan 10 05:24	20° 00 57'03	
direct	14864 May 19 04:30	23° 00 08'41		opposition	14870 Mar 28 12:42	18° 00 58'55	0°33'18
evening set	14864 Aug 18 07:42	26° 00 09'59		min. Earth dist.	14870 Mar 28 06:35	18° 00 59'32	19.03823 AU
				direct	14870 Jun 12 19:32	17° 00 01'51	
conjunction	14864 Sep 03 04:01	27° 00 04'09	0°05'05	evening set	14870 Sep 11 13:47	20° 00 02'42	
minimum elong	14864 Sep 03 04:00	27° 00 04'09	0°04'56				
behind sun begin	14864 Sep 02 21:36	27° 00 03'15		conjunction	14870 Sep 27 11:22	20° 00 57'01	0°32'14
behind sun end	14864 Sep 03 10:25	27° 00 05'03		minimum elong	14870 Sep 27 11:22	20° 00 57'01	0°32'29
max. Earth dist.	14864 Sep 03 13:10	27° 00 05'27	21.04497 AU	max. Earth dist.	14870 Sep 27 18:14	20° 00 58'00	21.02952 AU
morning rise	14864 Sep 19 01:04	27° 00 58'27		morning rise	14870 Oct 13 10:25	21° 00 51'35	
	14864 Oct 30 10:26	0° 00 00		retrograde	14871 Jan 14 14:11	24° 00 57'00	
retrograde	14864 Dec 20 14:51	1° 00 02'33		opposition	14871 Apr 01 20:53	22° 00 58'45	0°37'58
	14865 Feb 11 19:00	30° 00 08		min. Earth dist.	14871 Apr 01 14:40	22° 00 59'22	19.01961 AU
opposition	14865 Mar 07 19:55	29° 00 04'38	0°08'10	direct	14871 Jun 17 03:06	21° 00 01'37	
min. Earth dist.	14865 Mar 07 11:14	29° 00 05'30	19.05011 AU	evening set	14871 Sep 15 19:31	24° 00 02'33	
direct	14865 May 23 12:16	27° 00 07'13					
	14865 Aug 20 00:57	0° 00 00		conjunction	14871 Oct 01 17:18	24° 00 56'57	0°36'22
evening set	14865 Aug 22 12:31	0° 00 08'18		minimum elong	14871 Oct 01 17:17	24° 00 56'57	0°36'42
				max. Earth dist.	14871 Oct 01 22:29	24° 00 57'42	21.00814 AU
conjunction	14865 Sep 07 08:48	1° 00 02'26	0°09'47	morning rise	14871 Oct 17 16:56	25° 00 51'38	
minimum elong	14865 Sep 07 08:47	1° 00 02'26	0°09'42	retrograde	14872 Jan 18 21:28	28° 00 57'23	
behind sun begin	14865 Sep 07 03:21	1° 00 01'40		opposition	14872 Apr 05 05:15	26° 00 58'56	0°42'28
behind sun end	14865 Sep 07 14:13	1° 00 03'11		min. Earth dist.	14872 Apr 05 00:25	26° 00 59'25	18.99564 AU
max. Earth dist.	14865 Sep 07 16:51	1° 00 03'34	21.05424 AU	direct	14872 Jun 20 08:48	25° 00 01'40	
morning rise	14865 Sep 23 06:16	1° 00 56'45		evening set	14872 Sep 19 01:18	28° 00 02'46	
retrograde	14865 Dec 24 22:58	5° 00 00'58					
opposition	14866 Mar 12 04:09	3° 00 03'01	0°13'22	conjunction	14872 Oct 04 23:34	28° 00 57'16	0°40'21
min. Earth dist.	14866 Mar 11 20:05	3° 00 03'50	19.05742 AU	minimum elong	14872 Oct 04 23:34	28° 00 57'16	0°40'44
direct	14866 May 27 17:51	1° 00 05'44		max. Earth dist.	14872 Oct 05 05:10	28° 00 58'04	20.98167 AU
evening set	14866 Aug 26 17:04	4° 00 06'39		morning rise	14872 Oct 20 23:29	29° 00 52'02	
					14872 Oct 23 08:32	0° 00 00	
conjunction	14866 Sep 11 13:41	5° 00 00'48	0°14'26	retrograde	14873 Jan 22 06:23	2° 00 58'09	
minimum elong	14866 Sep 11 13:41	5° 00 00'48	0°14'25	opposition	14873 Apr 09 13:32	0° 00 59'30	0°46'46
behind sun begin	14866 Sep 11 10:37	5° 00 00'22		min. Earth dist.	14873 Apr 09 08:22	1° 00 00'01	18.96681 AU
behind sun end	14866 Sep 11 16:44	5° 00 01'13			14873 May 05 08:44	30° 00 08	
max. Earth dist.	14866 Sep 11 22:39	5° 00 02'04	21.05938 AU	direct	14873 Jun 24 16:24	29° 00 02'06	
morning rise	14866 Sep 27 11:19	5° 00 55'07			14873 Aug 12 01:52	0° 00 00	
retrograde	14866 Dec 29 06:16	8° 00 59'30		evening set	14873 Sep 23 07:31	2° 00 58'23	
opposition	14867 Mar 16 12:15	7° 00 01'34	0°18'30				
min. Earth dist.	14867 Mar 16 03:52	7° 00 02'24	19.06024 AU	conjunction	14873 Oct 09 06:00	2° 00 58'00	0°44'08
direct	14867 Jun 01 01:00	5° 00 04'23		minimum elong	14873 Oct 09 05:59	2° 00 58'00	0°44'35
evening set	14867 Aug 30 22:05	8° 00 05'12		max. Earth dist.	14873 Oct 09 10:12	2° 00 58'37	20.95075 AU
				morning rise	14873 Oct 25 06:30	3° 00 52'55	
conjunction	14867 Sep 15 18:44	8° 00 59'22	0°19'02	retrograde	14874 Jan 26 14:24	6° 00 59'27	
minimum elong	14867 Sep 15 18:44	8° 00 59'22	0°19'06	opposition	14874 Apr 13 22:08	5° 00 58'33	0°50'51
max. Earth dist.	14867 Sep 16 02:22	9° 00 00'27	21.05986 AU	min. Earth dist.	14874 Apr 13 18:08	5° 00 58'57	18.93406 AU

direct	14874 Jun 28 22:16	3° \mathbb{M} 03'00		evening set	14880 Oct 21 15:05	0° \mathbb{A} 31'48	
evening set	14874 Sep 27 13:48	6° \mathbb{M} 04'33					
conjunction	14874 Oct 13 12:52	6° \mathbb{M} 59'18	0°47'42	conjunction	14880 Nov 06 17:03	1° \mathbb{A} 27'40	1°03'48
minimum elong	14874 Oct 13 12:51	6° \mathbb{M} 59'18	0°48'14	minimum elong	14880 Nov 06 17:03	1° \mathbb{A} 27'40	1°04'38
max. Earth dist.	14874 Oct 13 17:41	7° \mathbb{M} 00'00	20.91618 AU	max. Earth dist.	14880 Nov 06 19:20	1° \mathbb{A} 28'00	20.64842 AU
morning rise	14874 Oct 29 13:43	7° \mathbb{M} 54'21		morning rise	14880 Nov 22 21:04	2° \mathbb{A} 23'53	
retrograde	14875 Jan 31 00:10	11° \mathbb{M} 01'20		retrograde	14881 Feb 24 20:05	5° \mathbb{A} 34'37	
opposition	14875 Apr 18 06:44	9° \mathbb{M} 02'14	0°54'42	opposition	14881 May 12 17:01	3° \mathbb{A} 34'27	1°11'42
min. Earth dist.	14875 Apr 18 02:11	9° \mathbb{M} 02'42	18.89777 AU	min. Earth dist.	14881 May 12 14:55	3° \mathbb{A} 34'40	18.62198 AU
direct	14875 Jul 03 05:53	7° \mathbb{M} 04'31		direct	14881 Jul 27 03:59	1° \mathbb{A} 35'49	
evening set	14875 Oct 01 20:47	10° \mathbb{M} 06'25		evening set	14881 Oct 26 01:47	4° \mathbb{A} 41'10	
conjunction	14875 Oct 17 20:07	11° \mathbb{M} 01'18	0°51'03	conjunction	14881 Nov 11 04:11	5° \mathbb{A} 37'17	1°05'27
minimum elong	14875 Oct 17 20:06	11° \mathbb{M} 01'18	0°51'37	minimum elong	14881 Nov 11 04:11	5° \mathbb{A} 37'17	1°06'20
max. Earth dist.	14875 Oct 17 23:36	11° \mathbb{M} 01'48	20.87827 AU	max. Earth dist.	14881 Nov 11 05:01	5° \mathbb{A} 37'24	20.59433 AU
morning rise	14875 Nov 02 21:35	11° \mathbb{M} 56'31		morning rise	14881 Nov 27 08:52	6° \mathbb{A} 33'44	
retrograde	14876 Jan 22 17:45	15° \mathbb{M}		retrograde	14882 Mar 01 08:50	9° \mathbb{A} 45'14	
opposition	14876 Feb 04 09:10	15° \mathbb{M} 04'01		opposition	14882 May 17 04:24	7° \mathbb{A} 44'54	1°13'22
min. Earth dist.	14876 Feb 17 04:42	15° \mathbb{K} \mathbb{M}		min. Earth dist.	14882 May 17 04:04	7° \mathbb{A} 44'56	18.56646 AU
direct	14876 Apr 21 15:32	13° \mathbb{M} 04'41	0°58'18	direct	14882 Jul 31 11:59	5° \mathbb{A} 46'04	
evening set	14876 Apr 21 12:12	13° \mathbb{M} 05'02	18.85846 AU	evening set	14882 Oct 30 13:08	8° \mathbb{A} 52'12	
direct	14876 Jul 06 11:47	11° \mathbb{M} 06'49		conjunction	14882 Nov 15 16:16	9° \mathbb{A} 48'33	1°06'46
evening set	14876 Oct 05 04:03	14° \mathbb{M} 09'07		minimum elong	14882 Nov 15 16:15	9° \mathbb{A} 48'33	1°07'39
	14876 Oct 19 23:03	15° \mathbb{M}		max. Earth dist.	14882 Nov 15 16:51	9° \mathbb{A} 48'38	20.53723 AU
conjunction	14876 Oct 21 03:58	15° \mathbb{M} 04'11	0°54'09	morning rise	14882 Dec 01 21:28	10° \mathbb{A} 45'15	
minimum elong	14876 Oct 21 03:58	15° \mathbb{M} 04'11	0°54'48	retrograde	14883 Mar 06 00:06	13° \mathbb{A} 57'31	
max. Earth dist.	14876 Oct 21 08:01	15° \mathbb{M} 04'46	20.83753 AU	opposition	14883 May 21 16:07	11° \mathbb{A} 56'59	1°14'39
morning rise	14876 Nov 06 05:48	15° \mathbb{M} 59'33		min. Earth dist.	14883 May 21 15:35	11° \mathbb{A} 57'03	18.50768 AU
retrograde	14877 Feb 07 20:09	19° \mathbb{M} 07'36		direct	14883 Aug 04 23:01	9° \mathbb{A} 57'55	
opposition	14877 Apr 26 00:38	17° \mathbb{M} 08'06	1°01'36	evening set	14883 Nov 04 01:27	13° \mathbb{A} 04'51	
min. Earth dist.	14877 Apr 25 20:39	17° \mathbb{M} 08'30	18.81631 AU	conjunction	14883 Nov 20 05:04	14° \mathbb{A} 01'28	1°07'43
direct	14877 Jul 10 20:03	15° \mathbb{M} 10'04		minimum elong	14883 Nov 20 05:04	14° \mathbb{A} 01'28	1°08'40
evening set	14877 Oct 09 11:50	18° \mathbb{M} 12'51		max. Earth dist.	14883 Nov 20 04:02	14° \mathbb{A} 01'19	20.47678 AU
conjunction	14877 Oct 25 12:05	19° \mathbb{M} 08'05	0°57'00	morning rise	14883 Dec 06 10:54	14° \mathbb{A} 58'26	
minimum elong	14877 Oct 25 12:05	19° \mathbb{M} 08'05	0°57'41	retrograde	14884 Mar 09 14:17	18° \mathbb{A} 11'27	
max. Earth dist.	14877 Oct 25 14:58	19° \mathbb{M} 08'30	20.79405 AU	opposition	14884 May 25 04:25	16° \mathbb{A} 10'42	1°15'33
morning rise	14877 Nov 10 14:34	20° \mathbb{M} 03'39		min. Earth dist.	14884 May 25 05:45	16° \mathbb{A} 10'34	18.44575 AU
retrograde	14878 Feb 12 06:19	23° \mathbb{M} 12'20		direct	14884 Aug 08 08:40	14° \mathbb{A} 11'21	
opposition	14878 Apr 30 10:16	21° \mathbb{M} 12'37	1°04'37	evening set	14884 Nov 07 14:22	17° \mathbb{A} 19'07	
min. Earth dist.	14878 Apr 30 07:32	21° \mathbb{M} 12'54	18.77163 AU	conjunction	14884 Nov 23 18:44	18° \mathbb{A} 16'00	1°08'20
direct	14878 Jul 15 02:07	19° \mathbb{M} 14'27		minimum elong	14884 Nov 23 18:43	18° \mathbb{A} 16'00	1°09'17
evening set	14878 Oct 13 20:12	22° \mathbb{M} 17'46		max. Earth dist.	14884 Nov 23 17:17	18° \mathbb{A} 15'47	20.41357 AU
conjunction	14878 Oct 29 21:07	23° \mathbb{M} 13'12	0°59'34	morning rise	14884 Dec 10 01:07	19° \mathbb{A} 13'13	
minimum elong	14878 Oct 29 21:07	23° \mathbb{M} 13'12	1°00'18	retrograde	14885 Mar 14 06:23	22° \mathbb{A} 27'00	
max. Earth dist.	14878 Oct 30 00:28	23° \mathbb{M} 13'41	20.74811 AU	opposition	14885 May 29 17:10	20° \mathbb{A} 26'00	1°16'03
morning rise	14878 Nov 15 00:02	24° \mathbb{M} 08'58		min. Earth dist.	14885 May 29 18:11	20° \mathbb{A} 25'54	18.38127 AU
retrograde	14879 Feb 16 18:50	27° \mathbb{M} 18'17		direct	14885 Aug 12 20:48	18° \mathbb{A} 26'20	
opposition	14879 May 04 19:57	25° \mathbb{M} 18'25	1°07'19	evening set	14885 Nov 12 03:59	21° \mathbb{A} 34'57	
min. Earth dist.	14879 May 04 16:42	25° \mathbb{M} 18'45	18.72438 AU	conjunction	14885 Nov 28 08:55	22° \mathbb{A} 32'06	1°08'34
direct	14879 Jul 19 11:13	23° \mathbb{M} 20'06		minimum elong	14885 Nov 28 08:55	22° \mathbb{A} 32'06	1°09'32
evening set	14879 Oct 18 05:24	26° \mathbb{M} 24'02		max. Earth dist.	14885 Nov 28 06:19	22° \mathbb{A} 31'43	20.34805 AU
conjunction	14879 Nov 03 06:42	27° \mathbb{M} 19'41	1°01'50	morning rise	14885 Dec 14 15:58	23° \mathbb{A} 29'36	
minimum elong	14879 Nov 03 06:42	27° \mathbb{M} 19'41	1°02'37	retrograde	14886 Mar 18 21:39	26° \mathbb{A} 44'08	
max. Earth dist.	14879 Nov 03 08:45	27° \mathbb{M} 19'59	20.69956 AU	opposition	14886 Jun 03 06:33	24° \mathbb{A} 42'52	1°16'07
morning rise	14879 Nov 19 10:18	28° \mathbb{M} 15'40		min. Earth dist.	14886 Jun 03 09:13	24° \mathbb{A} 42'35	18.31497 AU
retrograde	14879 Dec 23 03:14	0° \mathbb{A}		direct	14886 Aug 17 08:06	22° \mathbb{A} 42'52	
opposition	14880 Feb 21 06:05	1° \mathbb{A} 25'41		evening set	14886 Nov 16 18:25	25° \mathbb{A} 52'21	
min. Earth dist.	14880 Apr 24 02:08	30° \mathbb{K} \mathbb{M}		conjunction	14886 Dec 03 00:06	26° \mathbb{A} 49'48	1°08'25
direct	14880 May 08 06:20	29° \mathbb{M} 25'40	1°09'41	minimum elong	14886 Dec 03 00:06	26° \mathbb{A} 49'48	1°09'25
evening set	14880 May 08 04:36	29° \mathbb{M} 25'50	18.67458 AU	max. Earth dist.	14886 Dec 02 21:08	26° \mathbb{A} 49'22	20.28123 AU
direct	14880 Jul 22 17:54	27° \mathbb{M} 27'11		morning rise	14886 Dec 19 07:45	27° \mathbb{A} 47'34	
	14880 Oct 12 03:11	0° \mathbb{A}			14887 Feb 01 02:21	0° \mathbb{B}	

retrograde	14887 Mar 23 14:36	1°30'25.2"		conjunction	14894 Jan 03 09:01	27°34'50"	0°56'23"
	14887 May 14 10:58	30°R 27'		minimum elong	14894 Jan 03 09:02	27°34'50"	0°57'20"
opposition	14887 Jun 07 20:06	29°30'01.19"	1°15'46"	max. Earth dist.	14894 Jan 03 03:30	27°34'05.9"	19.82929 AU
min. Earth dist.	14887 Jun 07 22:23	29°30'01.04"	18.24769 AU	morning rise	14894 Jan 19 20:26	28°34'13.3"	
direct	14887 Aug 21 21:20	27°30'00.57"			14894 Feb 12 03:25	0°00'00.0"	
	14887 Nov 18 03:01	0°00'00.0"		retrograde	14894 Apr 24 01:30	2°00'02.04"	
evening set	14887 Nov 21 09:43	0°00'31.122"		opposition	14894 Jul 08 12:56	29°35'59.11"	1°01'03"
					14894 Jul 08 05:19	30°R 30'	
conjunction	14887 Dec 07 16:00	1°30'09.06"	1°07'53"	min. Earth dist.	14894 Jul 08 18:15	29°35'58.37"	17.80039 AU
minimum elong	14887 Dec 07 16:00	1°30'09.06"	1°08'52"	direct	14894 Sep 21 08:44	27°35'56.43"	
max. Earth dist.	14887 Dec 07 12:15	1°30'08.33"	20.21364 AU		14894 Nov 30 23:08	0°00'00.0"	
morning rise	14887 Dec 24 00:14	2°30'07.09"		evening set	14894 Dec 22 20:22	1°00'14.09"	
retrograde	14888 Mar 27 06:37	5°30'23.12"					
opposition	14888 Jun 11 10:29	3°30'21.23"	1°14'59"	conjunction	14895 Jan 08 07:04	2°00'13.56"	0°53'09"
min. Earth dist.	14888 Jun 11 14:08	3°30'21.00"	18.18010 AU	minimum elong	14895 Jan 08 07:04	2°00'13.56"	0°54'02"
direct	14888 Aug 25 10:21	1°30'20.42"		max. Earth dist.	14895 Jan 08 00:11	2°00'12.53"	19.77177 AU
evening set	14888 Nov 25 01:35	4°30'32.02"		morning rise	14895 Jan 24 19:02	3°00'13.55"	
				retrograde	14895 Apr 29 00:04	6°00'35.08"	
conjunction	14888 Dec 11 08:33	5°30'30.04"	1°06'57"	opposition	14895 Jul 13 07:32	4°00'32.09"	0°57'16"
minimum elong	14888 Dec 11 08:33	5°30'30.04"	1°07'58"	min. Earth dist.	14895 Jul 13 13:05	4°00'31.33"	17.74378 AU
max. Earth dist.	14888 Dec 11 04:28	5°30'29.27"	20.14626 AU	direct	14895 Sep 26 03:13	2°00'29.25"	
morning rise	14888 Dec 27 17:23	6°30'28.24"		evening set	14895 Dec 27 18:45	5°00'47.53"	
retrograde	14889 Apr 01 00:29	9°30'45.13"					
opposition	14889 Jun 16 01:18	7°30'43.08"	1°13'45"	conjunction	14896 Jan 13 06:06	6°00'47.57"	0°49'33"
min. Earth dist.	14889 Jun 16 04:22	7°30'42.49"	18.11298 AU	minimum elong	14896 Jan 13 06:06	6°00'47.57"	0°50'25"
direct	14889 Aug 30 01:02	5°30'42.06"		max. Earth dist.	14896 Jan 12 23:32	6°00'46.57"	19.71593 AU
evening set	14889 Nov 29 18:29	8°30'54.25"		morning rise	14896 Jan 29 18:17	7°00'48.10"	
				retrograde	14896 May 02 22:41	11°00'10.02"	
conjunction	14889 Dec 16 02:06	9°30'52.44"	1°05'37"	opposition	14896 Jul 17 03:01	9°00'06.56"	0°53'05"
minimum elong	14889 Dec 16 02:06	9°30'52.44"	1°06'37"	min. Earth dist.	14896 Jul 17 09:16	9°00'06.16"	17.68879 AU
max. Earth dist.	14889 Dec 15 21:41	9°30'52.05"	20.07950 AU	direct	14896 Sep 29 22:01	7°00'03.56"	
morning rise	14890 Jan 01 11:28	10°30'51.21"		evening set	14896 Dec 31 17:56	10°00'23.23"	
retrograde	14890 Apr 05 17:40	14°30'08.55"					
opposition	14890 Jun 20 16:45	12°30'06.38"	1°12'05"	conjunction	14897 Jan 17 05:38	11°00'23.42"	0°45'37"
min. Earth dist.	14890 Jun 20 20:58	12°30'06.11"	18.04685 AU	minimum elong	14897 Jan 17 05:39	11°00'23.42"	0°46'26"
direct	14890 Sep 03 15:10	10°30'05.16"		max. Earth dist.	14897 Jan 16 21:26	11°00'22.27"	19.66193 AU
evening set	14890 Dec 04 12:14	13°30'18.34"		morning rise	14897 Feb 02 18:20	12°00'24.11"	
					14897 Mar 26 15:56	15°00'00.00"	
conjunction	14890 Dec 20 20:31	14°30'17.12"	1°03'53"	retrograde	14897 May 07 21:51	15°00'46.38"	
minimum elong	14890 Dec 20 20:31	14°30'17.12"	1°04'53"		14897 Jun 20 00:13	15°R 00'	
max. Earth dist.	14890 Dec 20 15:29	14°30'16.26"	20.01417 AU	opposition	14897 Jul 21 23:06	13°00'43.24"	0°48'32"
morning rise	14891 Jan 06 06:31	15°30'16.05"		min. Earth dist.	14897 Jul 22 05:48	13°00'42.40"	17.63575 AU
retrograde	14891 Apr 10 13:02	18°30'34.25"		direct	14897 Oct 04 17:49	11°00'40.07"	
opposition	14891 Jun 25 08:44	16°30'31.54"	1°09'58"	evening set	14898 Jan 05 17:53	15°00'00.30"	
min. Earth dist.	14891 Jun 25 12:28	16°30'31.31"	17.98228 AU		14898 Jan 05 14:33	15°00'00.00"	
direct	14891 Sep 08 07:26	14°30'30.14"					
evening set	14891 Dec 09 06:50	17°30'44.34"		conjunction	14898 Jan 22 06:14	16°00'01.04"	0°41'22"
				minimum elong	14898 Jan 22 06:15	16°00'01.04"	0°42'08"
conjunction	14891 Dec 25 15:47	18°30'43.29"	1°01'46"	max. Earth dist.	14898 Jan 21 22:32	15°00'59.53"	19.60989 AU
minimum elong	14891 Dec 25 15:47	18°30'43.29"	1°02'46"	morning rise	14898 Feb 07 19:03	17°00'01.46"	
max. Earth dist.	14891 Dec 25 10:47	18°30'42.43"	19.95040 AU	retrograde	14898 May 12 21:48	20°00'24.44"	
morning rise	14892 Jan 11 02:12	19°30'42.39"		opposition	14898 Jul 26 19:34	18°00'21.22"	0°43'39"
retrograde	14892 Apr 14 07:32	23°30'01.43"		min. Earth dist.	14898 Jul 27 02:38	18°00'20.36"	17.58483 AU
opposition	14892 Jun 29 01:29	20°30'59.04"	1°07'25"	direct	14898 Oct 09 14:42	16°00'17.48"	
min. Earth dist.	14892 Jun 29 06:10	20°30'58.34"	17.91949 AU	evening set	14899 Jan 10 18:43	19°00'39.06"	
direct	14892 Sep 11 22:36	18°30'57.06"					
evening set	14892 Dec 13 02:23	22°30'12.28"		conjunction	14899 Jan 27 07:18	20°00'39.53"	0°36'50"
				minimum elong	14899 Jan 27 07:19	20°00'39.53"	0°37'33"
conjunction	14892 Dec 29 11:55	23°30'11.40"	0°59'16"	max. Earth dist.	14899 Jan 26 21:56	20°00'38.27"	19.56040 AU
minimum elong	14892 Dec 29 11:55	23°30'11.41"	1°00'14"	morning rise	14899 Feb 12 20:32	21°00'40.48"	
max. Earth dist.	14892 Dec 29 06:05	23°30'10.47"	19.88882 AU	retrograde	14899 May 17 20:58	25°00'04.14"	
morning rise	14893 Jan 14 22:57	24°30'11.07"		opposition	14899 Jul 31 16:42	23°00'00.44"	0°38'27"
retrograde	14893 Apr 19 04:51	27°30'30.56"		min. Earth dist.	14899 Aug 01 00:23	22°00'59.54"	17.53686 AU
opposition	14893 Jul 03 18:49	25°30'28.08"	1°04'27"	direct	14899 Oct 14 11:34	20°00'56.52"	
min. Earth dist.	14893 Jul 03 23:13	25°30'27.40"	17.85897 AU	evening set	14900 Jan 15 19:52	24°00'19.01"	
direct	14893 Sep 16 15:59	23°30'25.55"					
evening set	14893 Dec 17 22:47	26°30'42.19"		conjunction	14900 Feb 01 08:57	25°00'20.01"	0°32'02"

minimum elong	14900 Feb 01 08:58	25° \approx 20'01	0°32'41	behind sun begin	14906 Mar 02 20:27	23° $\cancel{\text{H}}$ 40'38	
max. Earth dist.	14900 Feb 01 00:28	25° \approx 18'43	19.51406 AU	behind sun end	14906 Mar 03 09:51	23° $\cancel{\text{H}}$ 42'40	
morning rise	14900 Feb 17 22:10	26° \approx 21'06		max. Earth dist.	14906 Mar 02 18:55	23° $\cancel{\text{H}}$ 40'23	19.33708 AU
retrograde	14900 May 22 21:55	29° \approx 44'57		morning rise	14906 Mar 19 15:58	24° $\cancel{\text{H}}$ 43'20	
opposition	14900 Aug 05 14:12	27° \approx 41'20	0°32'58	retrograde	14906 Jun 21 00:28	28° $\cancel{\text{H}}$ 08'24	
min. Earth dist.	14900 Aug 05 21:39	27° \approx 40'31	17.49229 AU	opposition	14906 Sep 03 07:16	26° $\cancel{\text{H}}$ 04'38	-0°03'41
direct	14900 Oct 19 10:12	25° \approx 37'12		min. Earth dist.	14906 Sep 03 13:27	26° $\cancel{\text{H}}$ 03'57	17.33190 AU
evening set	14901 Jan 20 21:49	29° \approx 00'08		direct	14906 Nov 17 11:41	23° $\cancel{\text{H}}$ 59'29	
				evening set	14907 Feb 19 17:40	27° $\cancel{\text{H}}$ 26'01	
conjunction	14901 Feb 06 11:01	0° $\cancel{\text{H}}$ 01'20	0°26'59				
minimum elong	14901 Feb 06 11:02	0° $\cancel{\text{H}}$ 01'20	0°27'35	conjunction	14907 Mar 08 07:07	28° $\cancel{\text{H}}$ 27'50	-0°06'14
max. Earth dist.	14901 Feb 06 01:16	29° \approx 59'50	19.47157 AU	minimum elong	14907 Mar 08 07:07	28° $\cancel{\text{H}}$ 27'50	0°06'06
	14901 Feb 06 02:21	0° $\cancel{\text{H}}$		behind sun begin	14907 Mar 08 00:43	28° $\cancel{\text{H}}$ 26'51	
morning rise	14901 Feb 23 00:29	1° $\cancel{\text{H}}$ 02'35		behind sun end	14907 Mar 08 13:31	28° $\cancel{\text{H}}$ 28'48	
retrograde	14901 May 27 20:57	4° $\cancel{\text{H}}$ 26'47		max. Earth dist.	14907 Mar 07 23:18	28° $\cancel{\text{H}}$ 26'38	19.32818 AU
opposition	14901 Aug 10 12:09	2° $\cancel{\text{H}}$ 23'03	0°27'14	morning rise	14907 Mar 24 19:32	29° $\cancel{\text{H}}$ 29'31	
min. Earth dist.	14901 Aug 10 20:18	2° $\cancel{\text{H}}$ 22'10	17.45204 AU		14907 Apr 02 05:55	0° $\cancel{\text{Y}}$	
direct	14901 Oct 24 08:13	0° $\cancel{\text{H}}$ 18'38		retrograde	14907 Jun 26 00:48	2° $\cancel{\text{Y}}$ 54'35	
evening set	14902 Jan 26 00:07	3° $\cancel{\text{H}}$ 42'21		opposition	14907 Sep 08 07:22	0° $\cancel{\text{Y}}$ 50'56	-0°10'00
				min. Earth dist.	14907 Sep 08 14:16	0° $\cancel{\text{Y}}$ 50'11	17.32598 AU
conjunction	14902 Feb 11 13:43	4° $\cancel{\text{H}}$ 43'43	0°21'45		14907 Sep 28 07:13	30° $\cancel{\text{R}}$ $\cancel{\text{H}}$	
minimum elong	14902 Feb 11 13:43	4° $\cancel{\text{H}}$ 43'43	0°22'16	direct	14907 Nov 22 11:48	28° $\cancel{\text{H}}$ 45'47	
max. Earth dist.	14902 Feb 11 04:55	4° $\cancel{\text{H}}$ 42'21	19.43361 AU		14908 Jan 14 22:34	0° $\cancel{\text{Y}}$	
morning rise	14902 Feb 28 03:06	5° $\cancel{\text{H}}$ 45'06		evening set	14908 Feb 24 21:48	2° $\cancel{\text{Y}}$ 12'40	
retrograde	14902 Jun 01 22:17	9° $\cancel{\text{H}}$ 09'35					
opposition	14902 Aug 15 10:27	7° $\cancel{\text{H}}$ 05'46	0°21'17	conjunction	14908 Mar 12 10:58	3° $\cancel{\text{Y}}$ 14'29	-0°11'50
min. Earth dist.	14902 Aug 15 17:53	7° $\cancel{\text{H}}$ 04'57	17.41644 AU	minimum elong	14908 Mar 12 10:58	3° $\cancel{\text{Y}}$ 14'29	0°11'48
direct	14902 Oct 29 08:30	5° $\cancel{\text{H}}$ 01'08		behind sun begin	14908 Mar 12 06:18	3° $\cancel{\text{Y}}$ 13'46	
evening set	14903 Jan 31 03:03	8° $\cancel{\text{H}}$ 25'31		behind sun end	14908 Mar 12 15:38	3° $\cancel{\text{Y}}$ 15'11	
				max. Earth dist.	14908 Mar 12 03:13	3° $\cancel{\text{Y}}$ 13'17	19.32514 AU
conjunction	14903 Feb 16 16:37	9° $\cancel{\text{H}}$ 27'02	0°16'21	morning rise	14908 Mar 28 23:03	4° $\cancel{\text{Y}}$ 16'09	
minimum elong	14903 Feb 16 16:37	9° $\cancel{\text{H}}$ 27'02	0°16'47	retrograde	14908 Jun 30 03:45	7° $\cancel{\text{Y}}$ 41'10	
max. Earth dist.	14903 Feb 16 07:02	9° $\cancel{\text{H}}$ 25'33	19.40059 AU	opposition	14908 Sep 12 07:30	5° $\cancel{\text{Y}}$ 37'38	-0°16'15
morning rise	14903 Mar 05 06:01	10° $\cancel{\text{H}}$ 28'32		min. Earth dist.	14908 Sep 12 13:14	5° $\cancel{\text{Y}}$ 37'01	17.32559 AU
retrograde	14903 Jun 06 21:07	13° $\cancel{\text{H}}$ 53'15		direct	14908 Nov 26 14:36	3° $\cancel{\text{Y}}$ 32'29	
opposition	14903 Aug 20 09:11	11° $\cancel{\text{H}}$ 49'22	0°15'11	evening set	14909 Mar 01 02:12	6° $\cancel{\text{Y}}$ 59'37	
min. Earth dist.	14903 Aug 20 17:16	11° $\cancel{\text{H}}$ 48'29	17.38626 AU				
direct	14903 Nov 03 07:38	9° $\cancel{\text{H}}$ 44'31		conjunction	14909 Mar 17 15:06	8° $\cancel{\text{Y}}$ 01'25	-0°17'23
evening set	14904 Feb 05 06:11	13° $\cancel{\text{H}}$ 09'34		minimum elong	14909 Mar 17 15:06	8° $\cancel{\text{Y}}$ 01'25	0°17'24
				max. Earth dist.	14909 Mar 17 08:05	8° $\cancel{\text{Y}}$ 00'19	19.32721 AU
conjunction	14904 Feb 21 19:55	14° $\cancel{\text{H}}$ 11'11	0°10'50	morning rise	14909 Apr 03 02:35	9° $\cancel{\text{Y}}$ 03'02	
minimum elong	14904 Feb 21 19:55	14° $\cancel{\text{H}}$ 11'11	0°11'12	retrograde	14909 Jul 05 04:10	12° $\cancel{\text{Y}}$ 27'53	
behind sun begin	14904 Feb 21 14:59	14° $\cancel{\text{H}}$ 10'26		opposition	14909 Sep 17 07:52	10° $\cancel{\text{Y}}$ 24'30	-0°22'24
behind sun end	14904 Feb 22 00:52	14° $\cancel{\text{H}}$ 11'56		min. Earth dist.	14909 Sep 17 14:24	10° $\cancel{\text{Y}}$ 23'47	17.33017 AU
max. Earth dist.	14904 Feb 21 11:16	14° $\cancel{\text{H}}$ 09'51	19.37330 AU	direct	14909 Dec 01 14:46	8° $\cancel{\text{Y}}$ 19'21	
morning rise	14904 Mar 09 09:08	15° $\cancel{\text{H}}$ 12'46		evening set	14910 Mar 06 06:41	11° $\cancel{\text{Y}}$ 46'39	
retrograde	14904 Jun 10 22:49	18° $\cancel{\text{H}}$ 37'40					
opposition	14904 Aug 24 08:14	16° $\cancel{\text{H}}$ 33'46	0°08'57	conjunction	14910 Mar 22 19:06	12° $\cancel{\text{Y}}$ 48'23	-0°22'49
min. Earth dist.	14904 Aug 24 15:05	16° $\cancel{\text{H}}$ 33'01	17.36191 AU	minimum elong	14910 Mar 22 19:06	12° $\cancel{\text{Y}}$ 48'23	0°22'56
direct	14904 Nov 07 09:25	14° $\cancel{\text{H}}$ 28'47		max. Earth dist.	14910 Mar 22 11:25	12° $\cancel{\text{Y}}$ 47'11	19.33415 AU
evening set	14905 Feb 09 09:39	17° $\cancel{\text{H}}$ 54'22		morning rise	14910 Apr 08 06:11	13° $\cancel{\text{Y}}$ 49'56	
				retrograde	14910 Jul 10 06:33	17° $\cancel{\text{Y}}$ 14'33	
conjunction	14905 Feb 25 23:19	18° $\cancel{\text{H}}$ 56'05	0°05'14	opposition	14910 Sep 22 08:16	15° $\cancel{\text{Y}}$ 11'16	-0°28'23
minimum elong	14905 Feb 25 23:20	18° $\cancel{\text{H}}$ 56'05	0°05'31	min. Earth dist.	14910 Sep 22 13:50	15° $\cancel{\text{Y}}$ 10'40	17.33939 AU
behind sun begin	14905 Feb 25 16:50	18° $\cancel{\text{H}}$ 55'05		direct	14910 Dec 06 18:01	13° $\cancel{\text{Y}}$ 06'08	
behind sun end	14905 Feb 26 05:49	18° $\cancel{\text{H}}$ 57'04		evening set	14911 Mar 11 10:51	16° $\cancel{\text{Y}}$ 33'28	
max. Earth dist.	14905 Feb 25 14:33	18° $\cancel{\text{H}}$ 54'43	19.35201 AU				
morning rise	14905 Mar 14 12:24	19° $\cancel{\text{H}}$ 57'43		conjunction	14911 Mar 27 22:54	17° $\cancel{\text{Y}}$ 35'08	-0°28'05
retrograde	14905 Jun 15 22:10	23° $\cancel{\text{H}}$ 22'45		minimum elong	14911 Mar 27 22:54	17° $\cancel{\text{Y}}$ 35'07	0°28'17
opposition	14905 Aug 29 07:45	21° $\cancel{\text{H}}$ 18'52	0°02'39	max. Earth dist.	14911 Mar 27 16:19	17° $\cancel{\text{Y}}$ 34'06	19.34547 AU
min. Earth dist.	14905 Aug 29 15:12	21° $\cancel{\text{H}}$ 18'03	17.34380 AU	morning rise	14911 Apr 13 09:11	18° $\cancel{\text{Y}}$ 36'34	
direct	14905 Nov 12 09:20	19° $\cancel{\text{H}}$ 13'47		retrograde	14911 Jul 15 06:18	22° $\cancel{\text{Y}}$ 00'51	
desc. node	14906 Jan 27 22:38	21° $\cancel{\text{H}}$ 37'47		opposition	14911 Sep 27 08:48	19° $\cancel{\text{Y}}$ 57'43	-0°34'10
evening set	14906 Feb 14 13:30	22° $\cancel{\text{H}}$ 39'53		min. Earth dist.	14911 Sep 27 14:52	19° $\cancel{\text{Y}}$ 57'03	17.35292 AU
				direct	14911 Dec 11 19:04	17° $\cancel{\text{Y}}$ 52'36	
conjunction	14906 Mar 03 03:10	23° $\cancel{\text{H}}$ 41'39	-0°00'31	evening set	14912 Mar 15 14:53	21° $\cancel{\text{Y}}$ 19'52	
minimum elong	14906 Mar 03 03:09	23° $\cancel{\text{H}}$ 41'39	0°00'18				

conjunction	14912 Apr 01 02:16	22° Υ 21'24	-0°33'10	minimum elong	14918 Apr 30 11:15	20° \mathcal{B} 37'59	0°58'19
minimum elong	14912 Apr 01 02:16	22° Υ 21'24	0°33'26	max. Earth dist.	14918 Apr 30 07:42	20° \mathcal{B} 37'26	19.54933 AU
max. Earth dist.	14912 Mar 31 18:52	22° Υ 20'15	19.36125 AU	morning rise	14918 May 16 16:35	21° \mathcal{B} 38'04	
morning rise	14912 Apr 17 12:06	23° Υ 22'42		retrograde	14918 Aug 16 18:25	24° \mathcal{B} 58'26	
retrograde	14912 Jul 19 07:02	26° Υ 46'37		opposition	14918 Oct 30 05:49	22° \mathcal{B} 56'14	-1°05'51
opposition	14912 Oct 01 09:04	24° Υ 43'34	-0°39'43	min. Earth dist.	14918 Oct 30 08:13	22° \mathcal{B} 55'59	17.57302 AU
min. Earth dist.	14912 Oct 01 14:20	24° Υ 43'00	17.37092 AU	direct	14919 Jan 14 10:27	20° \mathcal{B} 51'41	
direct	14912 Dec 15 22:49	22° Υ 38'28		evening set	14919 Apr 19 03:30	24° \mathcal{B} 16'01	
evening set	14913 Mar 20 18:22	26° Υ 05'34					
conjunction	14913 Apr 06 05:23	27° Υ 06'58	-0°38'01	conjunction	14919 May 05 10:15	25° \mathcal{B} 16'08	-1°00'25
minimum elong	14913 Apr 06 05:22	27° Υ 06'58	0°38'23	minimum elong	14919 May 05 10:14	25° \mathcal{B} 16'08	1°01'10
max. Earth dist.	14913 Apr 05 23:24	27° Υ 06'02	19.38134 AU	max. Earth dist.	14919 May 05 08:17	25° \mathcal{B} 15'50	19.59735 AU
morning rise	14913 Apr 22 14:22	28° Υ 08'07		morning rise	14919 May 21 14:43	26° \mathcal{B} 15'58	
retrograde	14913 May 26 02:06	0° \mathcal{B}		retrograde	14919 Aug 21 15:43	29° \mathcal{B} 35'38	
	14913 Jul 24 05:44	1° \mathcal{B} 31'33		opposition	14919 Nov 04 03:59	27° \mathcal{B} 33'41	-1°08'45
	14913 Sep 24 04:59	30° $\mathcal{R}\Upsilon$		min. Earth dist.	14919 Nov 04 04:55	27° \mathcal{B} 33'35	17.62323 AU
opposition	14913 Oct 06 09:18	29° Υ 28'38	-0°44'59	direct	14920 Jan 19 11:32	25° \mathcal{B} 29'23	
min. Earth dist.	14913 Oct 06 14:42	29° Υ 28'03	17.39312 AU	evening set	14920 Apr 23 02:36	28° \mathcal{B} 53'03	
direct	14913 Dec 21 00:47	27° Υ 23'34		conjunction	14920 May 09 08:30	29° \mathcal{B} 52'55	-1°02'50
	14914 Mar 11 17:18	0° \mathcal{B}		minimum elong	14920 May 09 08:30	29° \mathcal{B} 52'55	1°03'39
evening set	14914 Mar 25 21:38	0° \mathcal{B} 50'24		max. Earth dist.	14920 May 09 07:01	29° \mathcal{B} 52'41	19.64970 AU
conjunction	14914 Apr 11 07:51	1° \mathcal{B} 51'38	-0°42'35		14920 May 11 06:17	0° \mathcal{B}	
minimum elong	14914 Apr 11 07:50	1° \mathcal{B} 51'38	0°43'01	morning rise	14920 May 25 12:15	0° \mathcal{B} 52'29	
max. Earth dist.	14914 Apr 11 01:06	1° \mathcal{B} 50'35	19.40574 AU	retrograde	14920 Aug 25 10:52	4° \mathcal{B} 11'27	
morning rise	14914 Apr 27 16:17	2° \mathcal{B} 52'36		opposition	14920 Nov 08 01:42	2° \mathcal{B} 09'47	-1°11'11
retrograde	14914 Jul 29 04:55	6° \mathcal{B} 15'31		min. Earth dist.	14920 Nov 08 02:40	2° \mathcal{B} 09'41	17.67762 AU
opposition	14914 Oct 11 09:12	4° \mathcal{B} 12'41	-0°49'56	direct	14921 Jan 23 09:39	0° \mathcal{B} 05'45	
min. Earth dist.	14914 Oct 11 14:00	4° \mathcal{B} 12'10	17.41979 AU	evening set	14921 Apr 28 00:52	3° \mathcal{B} 28'42	
direct	14914 Dec 26 04:13	2° \mathcal{B} 07'40		conjunction	14921 May 14 06:06	4° \mathcal{B} 28'18	-1°04'49
evening set	14915 Mar 31 00:08	5° \mathcal{B} 34'09		minimum elong	14921 May 14 06:05	4° \mathcal{B} 28'18	1°05'40
conjunction	14915 Apr 16 09:51	6° \mathcal{B} 35'12	-0°46'52	max. Earth dist.	14921 May 14 05:35	4° \mathcal{B} 28'14	19.70585 AU
minimum elong	14915 Apr 16 09:50	6° \mathcal{B} 35'12	0°47'23	morning rise	14921 May 30 09:06	5° \mathcal{B} 27'36	
max. Earth dist.	14915 Apr 16 04:47	6° \mathcal{B} 34'24	19.43460 AU	retrograde	14921 Aug 30 07:44	8° \mathcal{B} 45'50	
morning rise	14915 May 02 17:22	7° \mathcal{B} 35'58		opposition	14921 Nov 12 22:57	6° \mathcal{B} 44'28	-1°13'09
retrograde	14915 Aug 03 02:53	10° \mathcal{B} 58'17		min. Earth dist.	14921 Nov 12 22:29	6° \mathcal{B} 44'31	17.73516 AU
opposition	14915 Oct 16 08:55	8° \mathcal{B} 55'35	-0°54'31	direct	14922 Jan 28 09:30	4° \mathcal{B} 40'45	
min. Earth dist.	14915 Oct 16 13:13	8° \mathcal{B} 55'07	17.45087 AU	evening set	14922 May 02 22:26	8° \mathcal{B} 02'55	
direct	14915 Dec 31 06:30	6° \mathcal{B} 50'38		conjunction	14922 May 19 02:50	9° \mathcal{B} 02'15	-1°06'24
evening set	14916 Apr 04 01:59	10° \mathcal{B} 16'39		minimum elong	14922 May 19 02:50	9° \mathcal{B} 02'15	1°07'17
conjunction	14916 Apr 20 10:51	11° \mathcal{B} 17'30	-0°50'49	max. Earth dist.	14922 May 19 02:58	9° \mathcal{B} 02'16	19.76466 AU
minimum elong	14916 Apr 20 10:50	11° \mathcal{B} 17'30	0°51'23	morning rise	14922 Jun 04 05:04	10° \mathcal{B} 01'16	
max. Earth dist.	14916 Apr 20 05:28	11° \mathcal{B} 16'39	19.46802 AU	retrograde	14922 Sep 04 01:55	13° \mathcal{B} 18'46	
morning rise	14916 May 06 17:47	12° \mathcal{B} 18'03		opposition	14922 Nov 17 19:53	11° \mathcal{B} 17'41	-1°14'39
retrograde	14916 Jun 29 18:40	15° \mathcal{B}		min. Earth dist.	14922 Nov 17 19:47	11° \mathcal{B} 17'42	17.79521 AU
	14916 Aug 07 00:33	15° \mathcal{B} 39'46		direct	14923 Feb 02 06:39	9° \mathcal{B} 14'16	
	14916 Sep 15 05:31	15° $\mathcal{R}\mathcal{B}$		evening set	14923 May 07 19:08	12° \mathcal{B} 35'37	
opposition	14916 Oct 20 08:17	13° \mathcal{B} 37'11	-0°58'43	conjunction	14923 May 23 22:47	13° \mathcal{B} 34'39	-1°07'33
min. Earth dist.	14916 Oct 20 12:06	13° \mathcal{B} 36'47	17.48676 AU	minimum elong	14923 May 23 22:47	13° \mathcal{B} 34'39	1°08'29
direct	14917 Jan 04 08:29	11° \mathcal{B} 32'18		max. Earth dist.	14923 May 23 23:24	13° \mathcal{B} 34'45	19.82569 AU
evening set	14917 Apr 09 03:11	14° \mathcal{B} 57'50		morning rise	14923 Jun 09 00:21	14° \mathcal{B} 33'24	
	14917 Apr 09 17:30	15° \mathcal{B}		retrograde	14923 Sep 08 21:18	17° \mathcal{B} 50'07	
conjunction	14917 Apr 25 11:29	15° \mathcal{B} 58'27	-0°54'24	opposition	14923 Nov 22 16:11	15° \mathcal{B} 49'19	-1°15'40
minimum elong	14917 Apr 25 11:28	15° \mathcal{B} 58'27	0°55'02	min. Earth dist.	14923 Nov 22 14:34	15° \mathcal{B} 49'29	17.85699 AU
max. Earth dist.	14917 Apr 25 07:50	15° \mathcal{B} 57'53	19.50625 AU	direct	14924 Feb 07 05:29	13° \mathcal{B} 46'12	
morning rise	14917 May 11 17:31	16° \mathcal{B} 58'46		evening set	14924 May 11 14:55	17° \mathcal{B} 06'40	
retrograde	14917 Aug 11 22:04	20° \mathcal{B} 19'48		conjunction	14924 May 27 17:53	18° \mathcal{B} 05'25	-1°08'17
opposition	14917 Oct 25 07:08	18° \mathcal{B} 17'24	-1°02'30	minimum elong	14924 May 27 17:53	18° \mathcal{B} 05'25	1°09'13
min. Earth dist.	14917 Oct 25 09:55	18° \mathcal{B} 17'06	17.52738 AU	max. Earth dist.	14924 May 27 19:20	18° \mathcal{B} 05'38	19.88803 AU
direct	14918 Jan 09 10:22	16° \mathcal{B} 12'40		morning rise	14924 Jun 12 18:44	19° \mathcal{B} 03'53	
evening set	14918 Apr 14 03:52	19° \mathcal{B} 37'37		retrograde	14924 Sep 12 14:15	22° \mathcal{B} 19'49	
conjunction	14918 Apr 30 11:16	20° \mathcal{B} 37'59	-0°57'37	opposition	14924 Nov 26 12:06	20° \mathcal{B} 19'16	-1°16'14
				min. Earth dist.	14924 Nov 26 11:05	20° \mathcal{B} 19'22	17.91984 AU

direct	14925 Feb 11 01:52	18° Π 16'26	minimum elong	14931 Jun 28 06:27	18° \mathfrak{D} 47'31	1°03'07
evening set	14925 May 16 09:57	21° Π 35'59	max. Earth dist.	14931 Jun 28 10:59	18° \mathfrak{D} 48'11	20.32992 AU
			morning rise	14931 Jul 14 03:52	19° \mathfrak{D} 44'04	
conjunction	14925 Jun 01 12:11	22° Π 34'26 -1°08'35	retrograde	14931 Oct 13 18:21	22° \mathfrak{D} 54'23	
minimum elong	14925 Jun 01 12:11	22° Π 34'26 1°09'34	opposition	14931 Dec 28 12:55	20° \mathfrak{D} 55'00	-1°07'47
max. Earth dist.	14925 Jun 01 13:34	22° Π 34'39 19.95121 AU	min. Earth dist.	14931 Dec 28 07:12	20° \mathfrak{D} 55'36	18.36174 AU
morning rise	14925 Jun 17 12:28	23° Π 32'37	direct	14932 Mar 14 15:02	18° \mathfrak{D} 53'54	
retrograde	14925 Sep 17 07:44	26° Π 47'44	evening set	14932 Jun 15 20:01	22° \mathfrak{D} 06'18	
opposition	14925 Dec 01 07:12	24° Π 47'25 -1°16'19				
min. Earth dist.	14925 Dec 01 04:45	24° Π 47'41 17.98315 AU	conjunction	14932 Jul 01 18:28	23° \mathfrak{D} 02'48	-0°59'49
direct	14926 Feb 15 23:57	22° Π 44'52	minimum elong	14932 Jul 01 18:28	23° \mathfrak{D} 02'48	1°00'47
evening set	14926 May 21 04:03	26° Π 03'27	max. Earth dist.	14932 Jul 02 00:45	23° \mathfrak{D} 03'44	20.39308 AU
			morning rise	14932 Jul 17 15:25	23° \mathfrak{D} 59'07	
conjunction	14926 Jun 06 05:40	27° Π 01'37 -1°08'29	retrograde	14932 Oct 17 05:10	27° \mathfrak{D} 08'43	
minimum elong	14926 Jun 06 05:40	27° Π 01'37 1°09'28	opposition	14933 Jan 01 03:38	25° \mathfrak{D} 09'32	-1°04'59
max. Earth dist.	14926 Jun 06 08:03	27° Π 01'59 20.01457 AU	min. Earth dist.	14932 Dec 31 21:59	25° \mathfrak{D} 10'07	18.42473 AU
morning rise	14926 Jun 22 05:14	27° Π 59'31	direct	14933 Mar 19 05:43	23° \mathfrak{D} 08'44	
	14926 Jul 30 06:52	0° \mathfrak{D}	evening set	14933 Jun 20 07:41	26° \mathfrak{D} 20'10	
retrograde	14926 Sep 21 22:52	1° \mathfrak{D} 13'49				
	14926 Nov 17 02:45	30° \mathfrak{R} Π	conjunction	14933 Jul 06 05:33	27° \mathfrak{D} 16'25	-0°57'10
opposition	14926 Dec 06 02:00	29° Π 13'43 -1°15'58	minimum elong	14933 Jul 06 05:34	27° \mathfrak{D} 16'25	0°58'06
min. Earth dist.	14926 Dec 06 00:08	29° Π 13'54 18.04655 AU	max. Earth dist.	14933 Jul 06 11:25	27° \mathfrak{D} 17'17	20.45593 AU
direct	14927 Feb 20 19:55	27° Π 11'26	morning rise	14933 Jul 22 02:22	28° \mathfrak{D} 12'30	
	14927 May 17 13:34	0° \mathfrak{D}		14933 Aug 25 08:33	0° \mathfrak{D}	
evening set	14927 May 25 21:04	0° \mathfrak{D} 29'00	retrograde	14933 Oct 21 17:30	1° \mathfrak{D} 21'26	
				14933 Dec 21 04:06	30° \mathfrak{R} \mathfrak{D}	
conjunction	14927 Jun 10 21:59	1° \mathfrak{D} 26'52 -1°07'59	opposition	14934 Jan 05 17:39	29° \mathfrak{D} 22'27	-1°01'52
minimum elong	14927 Jun 10 21:59	1° \mathfrak{D} 26'52 1°08'59	min. Earth dist.	14934 Jan 05 10:45	29° \mathfrak{D} 23'10	18.48720 AU
max. Earth dist.	14927 Jun 11 00:08	1° \mathfrak{D} 27'12 20.07797 AU	direct	14934 Mar 23 20:12	27° \mathfrak{D} 21'58	
morning rise	14927 Jun 26 21:08	2° \mathfrak{D} 24'29		14934 Jun 15 05:05	0° \mathfrak{D}	
retrograde	14927 Sep 26 14:23	5° \mathfrak{D} 37'59	evening set	14934 Jun 24 18:29	0° \mathfrak{D} 32'28	
opposition	14927 Dec 10 19:55	3° \mathfrak{D} 38'02 -1°15'09				
min. Earth dist.	14927 Dec 10 16:36	3° \mathfrak{D} 38'23 18.10980 AU	conjunction	14934 Jul 10 16:08	1° \mathfrak{D} 28'29	-0°54'14
direct	14928 Feb 25 16:32	1° \mathfrak{D} 35'59	minimum elong	14934 Jul 10 16:09	1° \mathfrak{D} 28'29	0°55'08
evening set	14928 May 29 13:10	4° \mathfrak{D} 52'31	max. Earth dist.	14934 Jul 10 23:42	1° \mathfrak{D} 29'36	20.51788 AU
			morning rise	14934 Jul 26 12:33	2° \mathfrak{D} 24'21	
conjunction	14928 Jun 14 13:36	5° \mathfrak{D} 50'07 -1°07'05	retrograde	14934 Oct 26 03:37	5° \mathfrak{D} 32'40	
minimum elong	14928 Jun 14 13:36	5° \mathfrak{D} 50'07 1°08'05	opposition	14935 Jan 10 07:18	3° \mathfrak{D} 33'54	-0°58'26
max. Earth dist.	14928 Jun 14 17:01	5° \mathfrak{D} 50'38 20.14106 AU	min. Earth dist.	14935 Jan 10 00:30	3° \mathfrak{D} 34'36	18.54840 AU
morning rise	14928 Jun 30 12:08	6° \mathfrak{D} 47'27	direct	14935 Mar 28 09:36	1° \mathfrak{D} 33'45	
retrograde	14928 Sep 30 03:43	10° \mathfrak{D} 00'06	evening set	14935 Jun 29 04:37	4° \mathfrak{D} 43'20	
opposition	14928 Dec 14 13:09	8° \mathfrak{D} 00'19 -1°13'55				
min. Earth dist.	14928 Dec 14 10:23	8° \mathfrak{D} 00'36 18.17275 AU	conjunction	14935 Jul 15 01:47	5° \mathfrak{D} 39'07	-0°51'01
direct	14929 Mar 01 11:16	5° \mathfrak{D} 58'29	minimum elong	14935 Jul 15 01:48	5° \mathfrak{D} 39'07	0°51'53
evening set	14929 Jun 03 04:24	9° \mathfrak{D} 13'59	max. Earth dist.	14935 Jul 15 08:46	5° \mathfrak{D} 40'09	20.57830 AU
			morning rise	14935 Jul 30 22:12	6° \mathfrak{D} 34'47	
conjunction	14929 Jun 19 04:10	10° \mathfrak{D} 11'17 -1°05'48	retrograde	14935 Oct 30 15:00	9° \mathfrak{D} 42'33	
minimum elong	14929 Jun 19 04:10	10° \mathfrak{D} 11'17 1°06'48	opposition	14936 Jan 14 20:18	7° \mathfrak{D} 43'58	-0°54'42
max. Earth dist.	14929 Jun 19 07:14	10° \mathfrak{D} 11'45 20.20400 AU	min. Earth dist.	14936 Jan 14 12:38	7° \mathfrak{D} 44'45	18.60780 AU
morning rise	14929 Jul 05 02:23	11° \mathfrak{D} 08'21	direct	14936 Mar 31 22:13	5° \mathfrak{D} 44'08	
retrograde	14929 Oct 04 17:29	14° \mathfrak{D} 20'12	evening set	14936 Jul 02 14:07	8° \mathfrak{D} 52'51	
opposition	14929 Dec 19 05:42	12° \mathfrak{D} 20'32 -1°12'16				
min. Earth dist.	14929 Dec 19 01:24	12° \mathfrak{D} 20'59 18.23563 AU	conjunction	14936 Jul 18 11:10	9° \mathfrak{D} 48'26	-0°47'33
direct	14930 Mar 06 06:00	10° \mathfrak{D} 18'55	minimum elong	14936 Jul 18 11:10	9° \mathfrak{D} 48'26	0°48'23
evening set	14930 Jun 07 18:25	13° \mathfrak{D} 33'22	max. Earth dist.	14936 Jul 18 19:32	9° \mathfrak{D} 49'40	20.63643 AU
			morning rise	14936 Aug 03 07:15	10° \mathfrak{D} 43'54	
conjunction	14930 Jun 23 17:46	14° \mathfrak{D} 30'23 -1°04'09	retrograde	14936 Nov 03 00:21	13° \mathfrak{D} 51'07	
minimum elong	14930 Jun 23 17:46	14° \mathfrak{D} 30'23 1°05'09	opposition	14937 Jan 18 08:46	11° \mathfrak{D} 52'45	-0°50'44
max. Earth dist.	14930 Jun 23 22:32	14° \mathfrak{D} 31'06 20.26683 AU	min. Earth dist.	14937 Jan 18 01:22	11° \mathfrak{D} 53'30	18.66450 AU
morning rise	14930 Jul 09 15:24	15° \mathfrak{D} 27'11	direct	14937 Apr 05 10:48	9° \mathfrak{D} 53'14	
retrograde	14930 Oct 09 05:22	18° \mathfrak{D} 38'15	evening set	14937 Jul 06 23:13	13° \mathfrak{D} 01'07	
opposition	14930 Dec 23 21:45	16° \mathfrak{D} 38'44 -1°10'13				
min. Earth dist.	14930 Dec 23 17:35	16° \mathfrak{D} 39'10 18.29854 AU	conjunction	14937 Jul 22 19:49	13° \mathfrak{D} 56'30	-0°43'52
direct	14931 Mar 10 22:38	14° \mathfrak{D} 37'22	minimum elong	14937 Jul 22 19:50	13° \mathfrak{D} 56'30	0°44'40
evening set	14931 Jun 12 07:44	17° \mathfrak{D} 50'46	max. Earth dist.	14937 Jul 23 03:17	13° \mathfrak{D} 57'35	20.69169 AU
			morning rise	14937 Aug 07 15:57	14° \mathfrak{D} 51'48	
conjunction	14931 Jun 28 06:27	18° \mathfrak{D} 47'31 -1°02'09		14937 Aug 10 01:32	15° \mathfrak{D}	

retrograde	14937 Nov 07 10:52	17°♏58'32		min. Earth dist.	14944 Feb 17 03:57	10°♐22'42	18.95375 AU
opposition	14938 Jan 22 20:53	16°♏00'19	-0°46'31	direct	14944 May 04 09:20	8°♐23'47	
min. Earth dist.	14938 Jan 22 12:58	16°♏01'07	18.71815 AU	evening set	14944 Aug 03 23:12	11°♐26'44	
	14938 Feb 17 22:19	15°♐♏					
direct	14938 Apr 09 21:40	14°♏01'06		conjunction	14944 Aug 19 19:14	12°♐21'08	-0°13'31
	14938 May 29 00:24	15°♏		minimum elong	14944 Aug 19 19:14	12°♐21'08	0°13'55
evening set	14938 Jul 11 07:27	17°♏08'10		behind sun begin	14944 Aug 19 15:47	12°♐20'39	
				behind sun end	14944 Aug 19 22:41	12°♐21'37	
conjunction	14938 Jul 27 04:00	18°♏03'22	-0°39'59	max. Earth dist.	14944 Aug 20 04:06	12°♐22'24	20.96710 AU
minimum elong	14938 Jul 27 04:00	18°♏03'22	0°40'43	morning rise	14944 Sep 04 15:27	13°♐15'35	
max. Earth dist.	14938 Jul 27 12:42	18°♏04'38	20.74348 AU	retrograde	14944 Dec 05 20:44	16°♐19'54	
morning rise	14938 Aug 11 23:52	18°♏58'30		opposition	14945 Feb 20 20:51	14°♐21'59	-0°12'20
retrograde	14938 Nov 11 19:34	22°♏04'47		min. Earth dist.	14945 Feb 20 12:34	14°♐22'49	18.97973 AU
opposition	14939 Jan 27 08:37	20°♏06'43	-0°42'05	direct	14945 May 08 17:41	12°♐24'01	
min. Earth dist.	14939 Jan 27 00:54	20°♏07'29	18.76795 AU	evening set	14945 Aug 08 04:29	15°♐26'29	
direct	14939 Apr 14 09:34	18°♏07'46					
evening set	14939 Jul 15 15:27	21°♏14'03		conjunction	14945 Aug 24 00:22	16°♐20'47	-0°08'48
				minimum elong	14945 Aug 24 00:22	16°♐20'47	0°09'08
conjunction	14939 Jul 31 11:39	22°♏09'05	-0°35'54	behind sun begin	14945 Aug 23 18:46	16°♐20'00	
minimum elong	14939 Jul 31 11:40	22°♏09'05	0°36'36	behind sun end	14945 Aug 24 05:58	16°♐21'34	
max. Earth dist.	14939 Jul 31 19:12	22°♏10'10	20.79127 AU	max. Earth dist.	14945 Aug 24 08:20	16°♐21'55	20.99157 AU
morning rise	14939 Aug 16 07:40	23°♏04'04		morning rise	14945 Sep 08 20:54	17°♐15'11	
retrograde	14939 Nov 16 05:24	26°♏09'56		retrograde	14945 Dec 10 04:24	20°♐19'22	
opposition	14940 Jan 31 19:40	24°♏11'58	-0°37'27	opposition	14946 Feb 25 05:41	18°♐21'27	-0°07'05
min. Earth dist.	14940 Jan 31 11:48	24°♏12'45	18.81365 AU	min. Earth dist.	14946 Feb 24 21:21	18°♐22'17	19.00270 AU
direct	14940 Apr 17 19:17	22°♏13'14		direct	14946 May 13 01:13	16°♐23'37	
evening set	14940 Jul 18 22:46	25°♏18'47		evening set	14946 Aug 12 09:16	19°♐25'38	
conjunction	14940 Aug 03 19:02	26°♏13'40	-0°31'40	conjunction	14946 Aug 28 05:23	20°♐19'53	-0°04'04
minimum elong	14940 Aug 03 19:02	26°♏13'40	0°32'18	minimum elong	14946 Aug 28 05:23	20°♐19'53	0°04'21
max. Earth dist.	14940 Aug 04 03:31	26°♏14'53	20.83471 AU	behind sun begin	14946 Aug 27 22:55	20°♐18'59	
morning rise	14940 Aug 19 14:53	27°♏08'31		behind sun end	14946 Aug 28 11:51	20°♐20'48	
	14940 Oct 27 00:30	0°♐		max. Earth dist.	14946 Aug 28 14:39	20°♐21'12	21.01286 AU
retrograde	14940 Nov 19 13:16	0°♐13'59		morning rise	14946 Sep 13 01:58	21°♐14'14	
	14940 Dec 13 12:40	30°♐♏		retrograde	14946 Dec 14 11:48	24°♐18'21	
opposition	14941 Feb 04 06:24	28°♏16'05	-0°32'40	opposition	14947 Mar 01 14:12	22°♐20'26	-0°01'48
min. Earth dist.	14941 Feb 03 22:44	28°♏16'51	18.85474 AU	min. Earth dist.	14947 Mar 01 05:32	22°♐21'18	19.02221 AU
direct	14941 Apr 22 06:06	26°♏17'33		direct	14947 May 17 08:56	20°♐22'46	
evening set	14941 Jul 23 05:40	29°♏22'23		asc. node	14947 Jul 01 09:24	21°♐12'26	
	14941 Aug 03 03:44	0°♐		evening set	14947 Aug 16 14:10	23°♐24'25	
conjunction	14941 Aug 08 01:38	0°♐17'07	-0°27'17	conjunction	14947 Sep 01 10:13	24°♐18'36	0°00'47
minimum elong	14941 Aug 08 01:38	0°♐17'07	0°27'52	minimum elong	14947 Sep 01 10:13	24°♐18'36	0°00'35
max. Earth dist.	14941 Aug 08 08:58	0°♐18'10	20.87365 AU	behind sun begin	14947 Sep 01 03:39	24°♐17'41	
morning rise	14941 Aug 23 21:42	1°♐11'50		behind sun end	14947 Sep 01 16:46	24°♐19'31	
retrograde	14941 Nov 23 22:26	4°♐16'58		max. Earth dist.	14947 Sep 01 18:28	24°♐19'46	21.03065 AU
opposition	14942 Feb 08 16:42	2°♐19'04	-0°27'44	morning rise	14947 Sep 17 07:12	25°♐12'56	
min. Earth dist.	14942 Feb 08 08:57	2°♐19'51	18.89158 AU	retrograde	14947 Dec 18 18:42	28°♐17'01	
direct	14942 Apr 26 15:26	0°♐20'41		opposition	14948 Mar 04 22:26	26°♐19'06	0°03'28
evening set	14942 Jul 27 11:54	3°♐24'51		min. Earth dist.	14948 Mar 04 14:05	26°♐19'57	19.03822 AU
				direct	14948 May 20 15:24	24°♐21'34	
conjunction	14942 Aug 12 07:59	4°♐19'27	-0°22'47	evening set	14948 Aug 19 18:52	27°♐22'56	
minimum elong	14942 Aug 12 07:59	4°♐19'27	0°23'19				
max. Earth dist.	14942 Aug 12 16:29	4°♐20'40	20.90843 AU	conjunction	14948 Sep 04 15:12	28°♐17'06	0°05'35
morning rise	14942 Aug 28 03:58	5°♐14'04		minimum elong	14948 Sep 04 15:12	28°♐17'06	0°05'27
retrograde	14942 Nov 28 05:32	8°♐18'52		behind sun begin	14948 Sep 04 08:51	28°♐16'13	
opposition	14943 Feb 13 02:30	6°♐20'59	-0°22'41	behind sun end	14948 Sep 04 21:33	28°♐17'59	
min. Earth dist.	14943 Feb 12 18:39	6°♐21'46	18.92438 AU	max. Earth dist.	14948 Sep 05 00:30	28°♐18'25	21.04468 AU
direct	14943 May 01 00:51	4°♐22'44		morning rise	14948 Sep 20 12:16	29°♐11'24	
evening set	14943 Jul 31 17:46	7°♐26'15			14948 Oct 05 11:08	0°♐	
				retrograde	14948 Dec 22 02:32	2°♐15'31	
conjunction	14943 Aug 16 13:40	8°♐20'44	-0°18'11	opposition	14949 Mar 09 06:41	0°♐17'38	0°08'43
minimum elong	14943 Aug 16 13:40	8°♐20'44	0°18'39	min. Earth dist.	14949 Mar 08 22:07	0°♐18'29	19.05014 AU
max. Earth dist.	14943 Aug 16 21:15	8°♐21'50	20.93946 AU		14949 Mar 16 15:43	30°♐♐	
morning rise	14943 Sep 01 09:57	9°♐15'16		direct	14949 May 24 22:54	28°♐20'14	
retrograde	14943 Dec 02 13:56	12°♐19'49			14949 Jul 28 23:44	0°♐	
opposition	14944 Feb 17 11:54	10°♐21'54	-0°17'33	evening set	14949 Aug 23 23:37	1°♐21'21	

conjunction	14949 Sep 08 19:54	2°♌15'30	0°10'18	morning rise	14955 Oct 19 04:08	27°♌03'41	
minimum elong	14949 Sep 08 19:54	2°♌15'30	0°10'13		14955 Dec 31 22:20	0°♌	
behind sun begin	14949 Sep 08 14:38	2°♌14'46		retrograde	14956 Jan 20 08:44	0°♌09'19	
behind sun end	14949 Sep 09 01:10	2°♌16'14			14956 Feb 08 23:28	30°♌♌	
max. Earth dist.	14949 Sep 09 04:02	2°♌16'39	21.05452 AU	opposition	14956 Apr 06 15:57	28°♌10'46	0°43'03
morning rise	14949 Sep 24 17:24	3°♌09'49		min. Earth dist.	14956 Apr 06 11:00	28°♌11'16	18.99401 AU
retrograde	14949 Dec 26 09:26	6°♌14'02		direct	14956 Jun 21 20:03	26°♌13'25	
opposition	14950 Mar 13 14:57	4°♌16'07	0°13'56	evening set	14956 Sep 20 12:28	29°♌14'26	
min. Earth dist.	14950 Mar 13 06:57	4°♌16'55	19.05785 AU		14956 Oct 03 20:36	0°♌	
direct	14950 May 29 04:36	2°♌18'50					
evening set	14950 Aug 28 04:22	5°♌19'47		conjunction	14956 Oct 06 10:44	0°♌08'56	0°40'51
				minimum elong	14956 Oct 06 10:43	0°♌08'56	0°41'16
conjunction	14950 Sep 13 01:00	6°♌13'56	0°14'57	max. Earth dist.	14956 Oct 06 16:27	0°♌09'45	20.98041 AU
minimum elong	14950 Sep 13 01:00	6°♌13'56	0°14'58	morning rise	14956 Oct 22 10:36	1°♌03'42	
behind sun begin	14950 Sep 12 22:27	6°♌13'34		retrograde	14957 Jan 23 17:04	4°♌09'43	
behind sun end	14950 Sep 13 03:33	6°♌14'17		opposition	14957 Apr 11 00:15	2°♌10'58	0°47'20
max. Earth dist.	14950 Sep 13 09:57	6°♌15'12	21.05985 AU	min. Earth dist.	14957 Apr 10 18:56	2°♌11'30	18.96607 AU
morning rise	14950 Sep 28 22:38	7°♌08'16		direct	14957 Jun 26 03:37	0°♌13'31	
retrograde	14950 Dec 30 17:15	10°♌12'37		evening set	14957 Sep 24 18:29	3°♌14'44	
opposition	14951 Mar 17 23:01	8°♌14'41	0°19'04				
min. Earth dist.	14951 Mar 17 14:58	8°♌15'30	19.06071 AU	conjunction	14957 Oct 10 16:56	4°♌09'21	0°44'38
direct	14951 Jun 02 12:07	6°♌17'30		minimum elong	14957 Oct 10 16:56	4°♌09'21	0°45'06
evening set	14951 Sep 01 09:25	9°♌18'20		max. Earth dist.	14957 Oct 10 21:23	4°♌09'59	20.95062 AU
				morning rise	14957 Oct 26 17:25	5°♌04'15	
conjunction	14951 Sep 17 06:05	10°♌12'30	0°19'33	retrograde	14958 Jan 28 01:32	8°♌10'42	
minimum elong	14951 Sep 17 06:05	10°♌12'30	0°19'37	opposition	14958 Apr 15 08:47	6°♌11'46	0°51'24
max. Earth dist.	14951 Sep 17 13:29	10°♌13'33	21.06016 AU	min. Earth dist.	14958 Apr 15 04:29	6°♌12'12	18.93465 AU
morning rise	14951 Oct 03 04:12	11°♌06'52		direct	14958 Jun 30 09:19	4°♌14'11	
retrograde	14952 Jan 04 00:53	14°♌11'25		evening set	14958 Sep 29 00:49	7°♌15'42	
opposition	14952 Mar 21 07:12	12°♌13'25	0°24'07				
min. Earth dist.	14952 Mar 21 00:06	12°♌14'08	19.05841 AU	conjunction	14958 Oct 14 23:51	8°♌10'27	0°48'11
direct	14952 Jun 05 17:28	10°♌16'17		minimum elong	14958 Oct 14 23:50	8°♌10'27	0°48'42
evening set	14952 Sep 04 14:26	13°♌17'03		max. Earth dist.	14958 Oct 15 05:01	8°♌11'11	20.91749 AU
				morning rise	14958 Oct 31 00:39	9°♌05'29	
conjunction	14952 Sep 20 11:29	14°♌11'15	0°24'04	retrograde	14959 Feb 01 11:01	12°♌12'25	
minimum elong	14952 Sep 20 11:28	14°♌11'15	0°24'14	opposition	14959 Apr 19 17:13	10°♌13'18	0°55'14
max. Earth dist.	14952 Sep 20 19:20	14°♌12'23	21.05500 AU	min. Earth dist.	14959 Apr 19 12:31	10°♌13'47	18.89990 AU
morning rise	14952 Oct 06 09:44	15°♌05'40		direct	14959 Jul 04 17:00	8°♌15'36	
retrograde	14953 Jan 07 08:31	18°♌10'26		evening set	14959 Oct 03 07:44	11°♌17'30	
opposition	14953 Mar 25 15:20	16°♌12'22	0°29'04				
min. Earth dist.	14953 Mar 25 08:14	16°♌13'05	19.05038 AU	conjunction	14959 Oct 19 07:01	12°♌12'23	0°51'31
direct	14953 Jun 10 01:10	14°♌15'15		minimum elong	14959 Oct 19 07:01	12°♌12'23	0°52'07
evening set	14953 Sep 08 19:49	17°♌16'00		max. Earth dist.	14959 Oct 19 10:47	12°♌12'56	20.88118 AU
				morning rise	14959 Nov 04 08:27	13°♌07'35	
conjunction	14953 Sep 24 16:57	18°♌10'15	0°28'29		14959 Dec 11 13:49	15°♌	
minimum elong	14953 Sep 24 16:57	18°♌10'15	0°28'41	retrograde	14960 Feb 05 20:02	16°♌15'04	
max. Earth dist.	14953 Sep 24 23:05	18°♌11'08	21.04417 AU		14960 Apr 04 11:03	15°♌♌	
morning rise	14953 Oct 10 15:45	19°♌04'44		opposition	14960 Apr 23 02:07	14°♌15'47	0°58'48
retrograde	14954 Jan 11 16:49	22°♌09'46		min. Earth dist.	14960 Apr 22 22:31	14°♌16'09	18.86215 AU
opposition	14954 Mar 29 23:38	20°♌11'34	0°33'53	direct	14960 Jul 07 22:45	12°♌17'57	
min. Earth dist.	14954 Mar 29 17:37	20°♌12'10	19.03681 AU		14960 Sep 30 13:16	15°♌	
direct	14954 Jun 14 06:42	18°♌14'24		evening set	14960 Oct 06 14:51	15°♌20'17	
evening set	14954 Sep 13 01:04	21°♌15'11					
				conjunction	14960 Oct 22 14:44	16°♌15'20	0°54'36
conjunction	14954 Sep 28 22:41	22°♌09'30	0°32'46	minimum elong	14960 Oct 22 14:43	16°♌15'20	0°55'14
minimum elong	14954 Sep 28 22:41	22°♌09'30	0°33'03	max. Earth dist.	14960 Oct 22 19:11	16°♌15'59	20.84192 AU
max. Earth dist.	14954 Sep 29 05:18	22°♌10'26	21.02784 AU	morning rise	14960 Nov 07 16:30	17°♌10'42	
morning rise	14954 Oct 14 21:44	23°♌04'03		retrograde	14961 Feb 09 06:49	20°♌18'46	
retrograde	14955 Jan 16 00:30	26°♌09'22		opposition	14961 Apr 27 11:13	18°♌19'20	1°02'05
opposition	14955 Apr 03 07:48	24°♌11'01	0°38'33	min. Earth dist.	14961 Apr 27 07:07	18°♌19'45	18.82140 AU
min. Earth dist.	14955 Apr 03 01:43	24°♌11'37	19.01775 AU	direct	14961 Jul 12 06:41	16°♌21'24	
direct	14955 Jun 18 14:21	22°♌13'46		evening set	14961 Oct 10 22:47	19°♌24'14	
evening set	14955 Sep 17 06:45	25°♌14'38					
				conjunction	14961 Oct 26 22:59	20°♌19'28	0°57'26
conjunction	14955 Oct 03 04:31	26°♌09'01	0°36'54	minimum elong	14961 Oct 26 22:58	20°♌19'28	0°58'07
minimum elong	14955 Oct 03 04:30	26°♌09'01	0°37'14	max. Earth dist.	14961 Oct 27 02:01	20°♌19'54	20.79975 AU
max. Earth dist.	14955 Oct 03 09:33	26°♌09'45	21.00633 AU	morning rise	14961 Nov 12 01:25	21°♌15'01	

retrograde	14962 Feb 13 17:04	24° \mathbb{M} 23'43		evening set	14968 Nov 09 01:20	18° \mathbb{X} 31'54	
opposition	14962 May 01 20:46	22° \mathbb{M} 24'08	1°05'04				
min. Earth dist.	14962 May 01 17:56	22° \mathbb{M} 24'26	18.77788 AU	conjunction	14968 Nov 25 05:39	19° \mathbb{X} 28'46	1°08'36
direct	14962 Jul 16 13:07	20° \mathbb{M} 26'04		minimum elong	14968 Nov 25 05:39	19° \mathbb{X} 28'46	1°09'33
evening set	14962 Oct 15 07:07	23° \mathbb{M} 29'28		max. Earth dist.	14968 Nov 25 04:07	19° \mathbb{X} 28'32	20.41598 AU
				morning rise	14968 Dec 11 11:59	20° \mathbb{X} 25'58	
conjunction	14962 Oct 31 08:00	24° \mathbb{M} 24'54	0°59'58	retrograde	14969 Mar 15 17:24	23° \mathbb{X} 39'40	
minimum elong	14962 Oct 31 07:59	24° \mathbb{M} 24'53	1°00'43	opposition	14969 May 31 03:57	21° \mathbb{X} 38'38	1°16'19
max. Earth dist.	14962 Oct 31 11:29	24° \mathbb{M} 25'24	20.75477 AU	min. Earth dist.	14969 May 31 05:07	21° \mathbb{X} 38'31	18.38333 AU
morning rise	14962 Nov 16 10:51	25° \mathbb{M} 20'39		direct	14969 Aug 14 08:31	19° \mathbb{X} 38'56	
retrograde	14963 Feb 18 05:22	28° \mathbb{M} 30'00		evening set	14969 Nov 13 15:00	22° \mathbb{X} 47'27	
opposition	14963 May 06 06:34	26° \mathbb{M} 30'18	1°07'45				
min. Earth dist.	14963 May 06 03:23	26° \mathbb{M} 30'37	18.73132 AU	conjunction	14969 Nov 29 19:52	23° \mathbb{X} 44'36	1°08'48
direct	14963 Jul 20 21:18	24° \mathbb{M} 32'06		minimum elong	14969 Nov 29 19:51	23° \mathbb{X} 44'36	1°09'46
evening set	14963 Oct 19 16:25	27° \mathbb{M} 36'07		max. Earth dist.	14969 Nov 29 17:06	23° \mathbb{X} 44'11	20.34992 AU
				morning rise	14969 Dec 16 02:52	24° \mathbb{X} 42'04	
conjunction	14963 Nov 04 17:38	28° \mathbb{M} 31'45	1°02'13	retrograde	14970 Mar 20 07:20	27° \mathbb{X} 56'30	
minimum elong	14963 Nov 04 17:37	28° \mathbb{M} 31'45	1°03'01	opposition	14970 Jun 04 17:11	25° \mathbb{X} 55'11	1°16'21
max. Earth dist.	14963 Nov 04 19:31	28° \mathbb{M} 32'02	20.70663 AU	min. Earth dist.	14970 Jun 04 19:56	25° \mathbb{X} 54'53	18.31676 AU
morning rise	14963 Nov 20 21:08	29° \mathbb{M} 27'44		direct	14970 Aug 18 19:03	23° \mathbb{X} 55'07	
	14963 Nov 30 12:40	0° \mathbb{X}		evening set	14970 Nov 18 05:18	27° \mathbb{X} 04'32	
retrograde	14964 Feb 22 17:06	2° \mathbb{X} 37'47					
opposition	14964 May 09 16:56	0° \mathbb{X} 37'56	1°10'06	conjunction	14970 Dec 04 10:56	28° \mathbb{X} 01'57	1°08'37
min. Earth dist.	14964 May 09 15:19	0° \mathbb{X} 38'06	18.68164 AU	minimum elong	14970 Dec 04 10:56	28° \mathbb{X} 01'57	1°09'36
	14964 May 25 09:59	30° \mathbb{R} \mathbb{M}		max. Earth dist.	14970 Dec 04 08:07	28° \mathbb{X} 01'32	20.28300 AU
direct	14964 Jul 24 04:47	28° \mathbb{M} 39'35		morning rise	14970 Dec 20 18:31	28° \mathbb{X} 59'41	
	14964 Sep 19 08:06	0° \mathbb{X}			14971 Jan 07 19:47	0° \mathbb{Z}	
evening set	14964 Oct 23 02:16	1° \mathbb{X} 44'17		retrograde	14971 Mar 25 01:02	2° \mathbb{Z} 14'52	
				opposition	14971 Jun 09 06:49	0° \mathbb{Z} 13'16	1°15'58
conjunction	14964 Nov 08 04:10	2° \mathbb{X} 40'08	1°04'10	min. Earth dist.	14971 Jun 09 09:02	0° \mathbb{Z} 13'02	18.24957 AU
minimum elong	14964 Nov 08 04:10	2° \mathbb{X} 40'08	1°05'00		14971 Jun 14 13:43	30° \mathbb{R} \mathbb{X}	
max. Earth dist.	14964 Nov 08 06:13	2° \mathbb{X} 40'26	20.65529 AU	direct	14971 Aug 23 09:15	28° \mathbb{X} 12'52	
morning rise	14964 Nov 24 08:06	3° \mathbb{X} 36'20			14971 Oct 28 08:47	0° \mathbb{Z}	
retrograde	14965 Feb 26 07:02	6° \mathbb{X} 47'07		evening set	14971 Nov 22 20:29	1° \mathbb{Z} 23'11	
opposition	14965 May 14 03:45	4° \mathbb{X} 47'05	1°12'06				
min. Earth dist.	14965 May 14 01:54	4° \mathbb{X} 47'17	18.62855 AU	conjunction	14971 Dec 09 02:39	2° \mathbb{Z} 20'54	1°08'02
direct	14965 Jul 28 14:15	2° \mathbb{X} 48'33		minimum elong	14971 Dec 09 02:39	2° \mathbb{Z} 20'54	1°09'02
evening set	14965 Oct 27 12:58	5° \mathbb{X} 53'58		max. Earth dist.	14971 Dec 08 22:58	2° \mathbb{Z} 20'21	20.21566 AU
				morning rise	14971 Dec 25 10:49	3° \mathbb{Z} 18'55	
conjunction	14965 Nov 12 15:18	6° \mathbb{X} 50'03	1°05'47	retrograde	14972 Mar 28 16:15	6° \mathbb{Z} 34'52	
minimum elong	14965 Nov 12 15:18	6° \mathbb{X} 50'03	1°06'39	opposition	14972 Jun 12 21:09	4° \mathbb{Z} 33'01	1°15'08
max. Earth dist.	14965 Nov 12 15:37	6° \mathbb{X} 50'06	20.60039 AU	min. Earth dist.	14972 Jun 13 00:44	4° \mathbb{Z} 32'38	18.18238 AU
morning rise	14965 Nov 28 19:56	7° \mathbb{X} 46'30		direct	14972 Aug 26 20:57	2° \mathbb{Z} 32'16	
retrograde	14966 Mar 02 19:58	10° \mathbb{X} 58'01		evening set	14972 Nov 26 12:24	5° \mathbb{Z} 43'32	
opposition	14966 May 18 15:14	8° \mathbb{X} 57'47	1°13'44				
min. Earth dist.	14966 May 18 15:10	8° \mathbb{X} 57'47	18.57190 AU	conjunction	14972 Dec 12 19:18	6° \mathbb{Z} 41'32	1°07'04
direct	14966 Aug 01 22:46	6° \mathbb{X} 59'01		minimum elong	14972 Dec 12 19:18	6° \mathbb{Z} 41'32	1°08'03
evening set	14966 Nov 01 00:24	10° \mathbb{X} 05'09		max. Earth dist.	14972 Dec 12 15:29	6° \mathbb{Z} 40'58	20.14883 AU
				morning rise	14972 Dec 29 04:03	7° \mathbb{Z} 39'51	
conjunction	14966 Nov 17 03:29	11° \mathbb{X} 01'30	1°07'05	retrograde	14973 Apr 02 11:11	10° \mathbb{Z} 56'34	
minimum elong	14966 Nov 17 03:29	11° \mathbb{X} 01'30	1°07'59	opposition	14973 Jun 17 11:56	8° \mathbb{Z} 54'29	1°13'51
max. Earth dist.	14966 Nov 17 03:37	11° \mathbb{X} 01'31	20.54197 AU	min. Earth dist.	14973 Jun 17 14:52	8° \mathbb{Z} 54'10	18.11592 AU
morning rise	14966 Dec 03 08:36	11° \mathbb{X} 58'11		direct	14973 Aug 31 12:14	6° \mathbb{Z} 53'25	
retrograde	14967 Mar 07 11:26	15° \mathbb{X} 10'25		evening set	14973 Dec 01 05:12	10° \mathbb{Z} 05'40	
opposition	14967 May 23 02:51	13° \mathbb{X} 09'57	1°14'59				
min. Earth dist.	14967 May 23 02:39	13° \mathbb{X} 09'58	18.51171 AU	conjunction	14973 Dec 17 12:46	11° \mathbb{Z} 03'58	1°05'42
direct	14967 Aug 06 10:05	11° \mathbb{X} 10'54		minimum elong	14973 Dec 17 12:46	11° \mathbb{Z} 03'58	1°06'42
evening set	14967 Nov 05 12:40	14° \mathbb{X} 17'49		max. Earth dist.	14973 Dec 17 08:26	11° \mathbb{Z} 03'19	20.08280 AU
				morning rise	14974 Jan 02 22:05	12° \mathbb{Z} 02'33	
conjunction	14967 Nov 21 16:14	15° \mathbb{X} 14'25	1°08'01	retrograde	14974 Apr 07 04:05	15° \mathbb{Z} 20'04	
minimum elong	14967 Nov 21 16:14	15° \mathbb{X} 14'25	1°08'56	opposition	14974 Jun 22 03:30	13° \mathbb{Z} 17'46	1°12'08
max. Earth dist.	14967 Nov 21 14:42	15° \mathbb{X} 14'11	20.48021 AU	min. Earth dist.	14974 Jun 22 07:39	13° \mathbb{Z} 17'20	18.05051 AU
morning rise	14967 Dec 07 22:02	16° \mathbb{X} 11'21		direct	14974 Sep 05 01:27	11° \mathbb{Z} 16'25	
retrograde	14968 Mar 11 00:40	19° \mathbb{X} 24'19		evening set	14974 Dec 05 22:57	14° \mathbb{Z} 29'40	
opposition	14968 May 26 15:15	17° \mathbb{X} 23'34	1°15'52				
min. Earth dist.	14968 May 26 16:49	17° \mathbb{X} 23'24	18.44860 AU	conjunction	14974 Dec 22 07:11	15° \mathbb{Z} 28'17	1°03'56
direct	14968 Aug 09 19:37	15° \mathbb{X} 24'12		minimum elong	14974 Dec 22 07:11	15° \mathbb{Z} 28'17	1°04'54

max. Earth dist.	14974 Dec 22 02:26	15° $\mathring{3}27'34$	20.01817 AU		14981 Jul 21 16:29	15° $\mathring{R}\approx$	
morning rise	14975 Jan 07 17:06	16° $\mathring{3}27'09$		opposition	14981 Jul 23 10:01	14° $\approx 55'31$	0°48'17
retrograde	14975 Apr 12 00:13	19° $\mathring{3}45'26$		min. Earth dist.	14981 Jul 23 16:52	14° $\approx 54'47$	17.63540 AU
opposition	14975 Jun 26 19:26	17° $\mathring{3}42'59$	1°09'59	direct	14981 Oct 06 05:28	12° $\approx 52'15$	
min. Earth dist.	14975 Jun 26 23:02	17° $\mathring{3}42'36$	17.98659 AU		14981 Dec 17 00:09	15° \approx	
direct	14975 Sep 09 17:43	15° $\mathring{3}41'21$		evening set	14982 Jan 07 04:45	16° $\approx 12'39$	
evening set	14975 Dec 10 17:37	18° $\mathring{3}55'40$					
				conjunction	14982 Jan 23 17:03	17° $\approx 13'13$	0°41'08
conjunction	14975 Dec 27 02:30	19° $\mathring{3}54'34$	1°01'46	minimum elong	14982 Jan 23 17:03	17° $\approx 13'13$	0°41'53
minimum elong	14975 Dec 27 02:31	19° $\mathring{3}54'34$	1°02'44	max. Earth dist.	14982 Jan 23 08:59	17° $\approx 11'59$	19.60890 AU
max. Earth dist.	14975 Dec 26 21:34	19° $\mathring{3}53'49$	19.95502 AU	morning rise	14982 Feb 09 05:50	18° $\approx 13'55$	
morning rise	14976 Jan 12 12:53	20° $\mathring{3}53'43$		retrograde	14982 May 14 07:59	21° $\approx 36'54$	
retrograde	14976 Apr 15 18:52	24° $\mathring{3}12'47$		opposition	14982 Jul 28 06:33	19° $\approx 33'32$	0°43'22
opposition	14976 Jun 30 12:19	22° $\mathring{3}10'12$	1°07'23	min. Earth dist.	14982 Jul 28 13:50	19° $\approx 32'45$	17.58325 AU
min. Earth dist.	14976 Jun 30 17:01	22° $\mathring{3}09'42$	17.92429 AU	direct	14982 Oct 11 01:19	17° $\approx 29'57$	
direct	14976 Sep 13 08:53	20° $\mathring{3}08'20$		evening set	14983 Jan 12 05:26	20° $\approx 51'14$	
evening set	14976 Dec 14 13:05	23° $\mathring{3}23'41$					
				conjunction	14983 Jan 28 17:58	21° $\approx 52'02$	0°36'33
conjunction	14976 Dec 30 22:34	24° $\mathring{3}22'53$	0°59'14	minimum elong	14983 Jan 28 17:58	21° $\approx 52'02$	0°37'14
minimum elong	14976 Dec 30 22:34	24° $\mathring{3}22'54$	1°00'11	max. Earth dist.	14983 Jan 28 08:24	21° $\approx 50'33$	19.55836 AU
max. Earth dist.	14976 Dec 30 16:55	24° $\mathring{3}22'02$	19.89369 AU	morning rise	14983 Feb 14 07:07	22° $\approx 52'56$	
morning rise	14977 Jan 16 09:33	25° $\mathring{3}22'20$		retrograde	14983 May 19 08:21	26° $\approx 16'23$	
retrograde	14977 Apr 20 16:06	28° $\mathring{3}42'11$		opposition	14983 Aug 02 03:29	24° $\approx 12'51$	0°38'07
opposition	14977 Jul 05 05:43	26° $\mathring{3}39'28$	1°04'22	min. Earth dist.	14983 Aug 02 11:08	24° $\approx 12'01$	17.53444 AU
min. Earth dist.	14977 Jul 05 10:10	26° $\mathring{3}39'00$	17.86370 AU	direct	14983 Oct 15 22:54	22° $\approx 08'57$	
direct	14977 Sep 18 02:26	24° $\mathring{3}37'21$		evening set	14984 Jan 17 06:32	25° $\approx 31'05$	
evening set	14977 Dec 19 09:42	27° $\mathring{3}53'47$					
				conjunction	14984 Feb 02 19:35	26° $\approx 32'05$	0°31'43
conjunction	14978 Jan 04 19:50	28° $\mathring{3}53'17$	0°56'19	minimum elong	14984 Feb 02 19:35	26° $\approx 32'06$	0°32'21
minimum elong	14978 Jan 04 19:51	28° $\mathring{3}53'17$	0°57'13	max. Earth dist.	14984 Feb 02 11:00	26° $\approx 30'46$	19.51140 AU
max. Earth dist.	14978 Jan 04 14:07	28° $\mathring{3}52'25$	19.83374 AU	morning rise	14984 Feb 19 08:44	27° $\approx 33'10$	
morning rise	14978 Jan 21 07:12	29° $\mathring{3}53'00$			14984 Apr 06 16:19	0° \mathring{H}	
	14978 Jan 23 06:35	0° \approx		retrograde	14984 May 23 07:54	0° $\mathring{H}57'01$	
retrograde	14978 Apr 25 12:30	3° $\approx 13'34$			14984 Jul 10 00:59	30° $\mathring{R}\approx$	
opposition	14978 Jul 09 23:49	1° $\approx 10'46$	1°00'56	opposition	14984 Aug 06 00:56	28° $\approx 53'21$	0°32'36
min. Earth dist.	14978 Jul 10 05:27	1° $\approx 10'10$	17.80443 AU	min. Earth dist.	14984 Aug 06 08:24	28° $\approx 52'32$	17.48948 AU
	14978 Aug 08 08:03	30° $\mathring{R}\mathring{3}$		direct	14984 Oct 19 20:35	26° $\approx 49'09$	
direct	14978 Sep 22 19:28	29° $\mathring{3}08'24$			14985 Jan 18 00:02	0° \mathring{H}	
	14978 Nov 06 03:25	0° \approx		evening set	14985 Jan 21 08:16	0° $\mathring{H}12'04$	
evening set	14978 Dec 24 07:21	2° $\approx 25'53$					
				conjunction	14985 Feb 06 21:26	1° $\mathring{H}13'16$	0°26'39
conjunction	14979 Jan 09 17:58	3° $\approx 25'39$	0°53'01	minimum elong	14985 Feb 06 21:26	1° $\mathring{H}13'16$	0°27'12
minimum elong	14979 Jan 09 17:59	3° $\approx 25'39$	0°53'55	max. Earth dist.	14985 Feb 06 11:40	1° $\mathring{H}11'45$	19.46869 AU
max. Earth dist.	14979 Jan 09 10:50	3° $\approx 24'34$	19.77520 AU	morning rise	14985 Feb 23 10:54	2° $\mathring{H}14'31$	
morning rise	14979 Jan 26 05:52	4° $\approx 25'38$		retrograde	14985 May 28 07:52	5° $\mathring{H}38'42$	
retrograde	14979 Apr 30 11:06	7° $\approx 46'54$		opposition	14985 Aug 10 22:51	3° $\mathring{H}34'54$	0°26'50
opposition	14979 Jul 14 18:35	5° $\approx 43'59$	0°57'06	min. Earth dist.	14985 Aug 11 06:46	3° $\mathring{H}34'02$	17.44916 AU
min. Earth dist.	14979 Jul 15 00:18	5° $\approx 43'22$	17.74653 AU	direct	14985 Oct 24 19:11	1° $\mathring{H}30'26$	
direct	14979 Sep 27 14:35	3° $\approx 41'19$		evening set	14986 Jan 26 10:29	4° $\mathring{H}54'05$	
evening set	14979 Dec 29 05:37	6° $\approx 59'49$					
				conjunction	14986 Feb 12 00:03	5° $\mathring{H}55'27$	0°21'22
conjunction	14980 Jan 14 16:53	7° $\approx 59'52$	0°49'23	minimum elong	14986 Feb 12 00:03	5° $\mathring{H}55'27$	0°21'52
minimum elong	14980 Jan 14 16:53	7° $\approx 59'53$	0°50'14	max. Earth dist.	14986 Feb 11 15:23	5° $\mathring{H}54'07$	19.43082 AU
max. Earth dist.	14980 Jan 14 09:53	7° $\approx 58'48$	19.71788 AU	morning rise	14986 Feb 28 13:23	6° $\mathring{H}56'50$	
morning rise	14980 Jan 31 05:00	9° $\approx 00'06$		retrograde	14986 Jun 02 07:59	10° $\mathring{H}21'18$	
retrograde	14980 May 04 08:56	12° $\approx 22'00$		opposition	14986 Aug 15 21:00	8° $\mathring{H}17'24$	0°20'51
opposition	14980 Jul 18 14:06	10° $\approx 18'57$	0°52'53	min. Earth dist.	14986 Aug 16 04:16	8° $\mathring{H}16'36$	17.41386 AU
min. Earth dist.	14980 Jul 18 20:39	10° $\approx 18'15$	17.68994 AU	direct	14986 Oct 29 19:06	6° $\mathring{H}12'42$	
direct	14980 Oct 01 09:08	8° $\approx 16'00$		evening set	14987 Jan 31 13:20	9° $\mathring{H}37'03$	
evening set	14981 Jan 02 04:53	11° $\approx 35'28$					
				conjunction	14987 Feb 17 02:52	10° $\mathring{H}38'33$	0°15'57
conjunction	14981 Jan 18 16:32	12° $\approx 35'47$	0°45'25	minimum elong	14987 Feb 17 02:52	10° $\mathring{H}38'33$	0°16'22
minimum elong	14981 Jan 18 16:33	12° $\approx 35'47$	0°46'13	max. Earth dist.	14987 Feb 16 17:24	10° $\mathring{H}37'05$	19.39830 AU
max. Earth dist.	14981 Jan 18 07:58	12° $\approx 34'28$	19.66231 AU	morning rise	14987 Mar 05 16:15	11° $\mathring{H}40'02$	
morning rise	14981 Feb 04 05:11	13° $\approx 36'15$		retrograde	14987 Jun 07 07:37	15° $\mathring{H}04'44$	
	14981 Feb 28 22:47	15° \approx		opposition	14987 Aug 20 19:48	13° $\mathring{H}00'47$	0°14'43
retrograde	14981 May 09 08:53	16° $\approx 58'44$		min. Earth dist.	14987 Aug 21 03:31	12° $\mathring{H}59'57$	17.38431 AU

direct	14987 Nov 03 18:30	10° H 55'54		conjunction	14993 Mar 18 01:29	9° Y 12'19	-0°17'53
evening set	14988 Feb 05 16:15	14° H 20'52		minimum elong	14993 Mar 18 01:29	9° Y 12'19	0°17'57
				max. Earth dist.	14993 Mar 17 18:11	9° Y 11'11	19.32510 AU
conjunction	14988 Feb 22 05:59	15° H 22'29	0°10'24	morning rise	14993 Apr 03 12:59	10° Y 13'57	
minimum elong	14988 Feb 22 05:59	15° H 22'29	0°10'45	retrograde	14993 Jul 05 14:33	13° Y 38'49	
behind sun begin	14988 Feb 22 00:51	15° H 21'42		opposition	14993 Sep 17 18:43	11° Y 35'23	-0°22'58
behind sun end	14988 Feb 22 11:07	15° H 23'16		min. Earth dist.	14993 Sep 18 01:29	11° Y 34'38	17.32743 AU
max. Earth dist.	14988 Feb 21 21:42	15° H 21'12	19.37174 AU	direct	14993 Dec 02 02:13	9° Y 30'12	
morning rise	14988 Mar 09 19:10	16° H 24'03		evening set	14994 Mar 06 17:03	12° Y 57'28	
retrograde	14988 Jun 11 08:50	19° H 48'57					
opposition	14988 Aug 24 18:52	17° H 44'59	0°08'28	conjunction	14994 Mar 23 05:28	13° Y 59'12	-0°23'19
min. Earth dist.	14988 Aug 25 01:27	17° H 44'16	17.36072 AU	minimum elong	14994 Mar 23 05:27	13° Y 59'12	0°23'27
direct	14988 Nov 07 19:51	15° H 39'58		max. Earth dist.	14994 Mar 22 21:40	13° Y 57'59	19.33071 AU
evening set	14989 Feb 09 19:51	19° H 05'31		morning rise	14994 Apr 08 16:31	15° Y 00'45	
				retrograde	14994 Jul 10 16:24	18° Y 25'24	
conjunction	14989 Feb 26 09:29	20° H 07'13	0°04'47	opposition	14994 Sep 22 19:02	16° Y 22'04	-0°28'57
minimum elong	14989 Feb 26 09:29	20° H 07'13	0°05'04	min. Earth dist.	14994 Sep 23 00:46	16° Y 21'27	17.33527 AU
behind sun begin	14989 Feb 26 02:56	20° H 06'13		direct	14994 Dec 07 05:02	14° Y 16'53	
behind sun end	14989 Feb 26 16:02	20° H 08'13		evening set	14995 Mar 11 21:14	17° Y 44'12	
max. Earth dist.	14989 Feb 26 00:54	20° H 05'54	19.35122 AU				
morning rise	14989 Mar 14 22:33	21° H 08'52		conjunction	14995 Mar 28 09:17	18° Y 45'52	-0°28'36
retrograde	14989 Jun 16 08:50	24° H 33'53		minimum elong	14995 Mar 28 09:16	18° Y 45'52	0°28'49
opposition	14989 Aug 29 18:16	22° H 29'59	0°02'08	max. Earth dist.	14995 Mar 28 02:30	18° Y 44'49	19.34074 AU
min. Earth dist.	14989 Aug 30 01:32	22° H 29'11	17.34329 AU	morning rise	14995 Apr 13 19:36	19° Y 47'19	
direct	14989 Nov 12 19:35	20° H 24'52		retrograde	14995 Jul 15 16:46	23° Y 11'39	
desc. node	14989 Dec 28 13:17	21° H 20'05		opposition	14995 Sep 27 19:35	21° Y 08'26	-0°34'45
evening set	14990 Feb 14 23:43	23° H 50'56		min. Earth dist.	14995 Sep 28 01:52	21° Y 07'45	17.34762 AU
				direct	14995 Dec 12 06:33	19° Y 03'16	
conjunction	14990 Mar 03 13:21	24° H 52'43	-0°00'59	evening set	14996 Mar 16 01:06	22° Y 30'32	
minimum elong	14990 Mar 03 13:21	24° H 52'43	0°00'48				
behind sun begin	14990 Mar 03 06:37	24° H 51'41		conjunction	14996 Apr 01 12:31	23° Y 32'05	-0°33'41
behind sun end	14990 Mar 03 20:05	24° H 53'44		minimum elong	14996 Apr 01 12:31	23° Y 32'05	0°33'59
max. Earth dist.	14990 Mar 03 05:27	24° H 51'30	19.33679 AU	max. Earth dist.	14996 Apr 01 05:08	23° Y 30'55	19.35545 AU
morning rise	14990 Mar 20 02:09	25° H 54'23		morning rise	14996 Apr 17 22:23	24° Y 33'25	
retrograde	14990 Jun 21 11:11	29° H 19'28		retrograde	14996 Jul 19 17:25	27° Y 57'22	
opposition	14990 Sep 03 17:57	27° H 15'40	-0°04'13	opposition	14996 Oct 01 19:53	25° Y 54'15	-0°40'18
min. Earth dist.	14990 Sep 04 00:05	27° H 15'00	17.33163 AU	min. Earth dist.	14996 Oct 02 01:10	25° Y 53'41	17.36466 AU
direct	14990 Nov 17 21:56	25° H 10'32		direct	14996 Dec 16 09:02	23° Y 49'06	
evening set	14991 Feb 20 03:53	28° H 37'02		evening set	14997 Mar 21 04:38	27° Y 16'13	
conjunction	14991 Mar 08 17:16	29° H 38'51	-0°06'42	conjunction	14997 Apr 06 15:40	28° Y 17'38	-0°38'31
minimum elong	14991 Mar 08 17:16	29° H 38'51	0°06'36	minimum elong	14997 Apr 06 15:39	28° Y 17'38	0°38'53
behind sun begin	14991 Mar 08 10:57	29° H 37'53		max. Earth dist.	14997 Apr 06 09:44	28° Y 16'43	19.37477 AU
behind sun end	14991 Mar 08 23:35	29° H 39'48		morning rise	14997 Apr 23 00:41	29° Y 18'48	
max. Earth dist.	14991 Mar 08 09:27	29° H 37'38	19.32781 AU		14997 May 04 12:16	0° B	
	14991 Mar 14 08:16	0° Y		retrograde	14997 Jul 24 16:58	2° B 42'18	
morning rise	14991 Mar 25 05:40	0° Y 40'32		opposition	14997 Oct 06 19:58	0° B 39'19	-0°45'33
retrograde	14991 Jun 26 11:27	4° Y 05'38		min. Earth dist.	14997 Oct 07 01:28	0° B 38'43	17.38634 AU
opposition	14991 Sep 08 18:04	2° Y 01'57	-0°10'33		14997 Oct 22 04:10	30° R Y	
min. Earth dist.	14991 Sep 09 01:04	2° Y 01'11	17.32537 AU	direct	14997 Dec 21 11:31	28° Y 34'12	
	14991 Nov 12 00:25	30° R H			14998 Feb 17 13:11	0° B	
direct	14991 Nov 22 22:15	29° H 56'47		evening set	14998 Mar 26 07:53	2° B 01'04	
	14991 Dec 03 18:31	0° Y					
evening set	14992 Feb 25 08:12	3° Y 23'39		conjunction	14998 Apr 11 18:07	3° B 02'19	-0°43'05
				minimum elong	14998 Apr 11 18:06	3° B 02'19	0°43'33
conjunction	14992 Mar 12 21:20	4° Y 25'27	-0°12'20	max. Earth dist.	14998 Apr 11 11:34	3° B 01'18	19.39892 AU
minimum elong	14992 Mar 12 21:21	4° Y 25'27	0°12'17	morning rise	14998 Apr 28 02:35	4° B 03'19	
behind sun begin	14992 Mar 12 16:56	4° Y 24'47		retrograde	14998 Jul 29 15:28	7° B 26'18	
behind sun end	14992 Mar 13 01:45	4° Y 26'08		opposition	14998 Oct 11 19:54	5° B 23'25	-0°50'29
max. Earth dist.	14992 Mar 12 13:35	4° Y 24'15	19.32412 AU	min. Earth dist.	14998 Oct 12 00:29	5° B 22'55	17.41305 AU
morning rise	14992 Mar 29 09:24	5° Y 27'08		direct	14998 Dec 26 13:53	3° B 18'20	
retrograde	14992 Jun 30 13:59	8° Y 52'09		evening set	14999 Mar 31 10:13	6° B 44'52	
opposition	14992 Sep 12 18:12	6° Y 48'35	-0°16'48				
min. Earth dist.	14992 Sep 13 00:06	6° Y 47'57	17.32410 AU	conjunction	14999 Apr 16 19:56	7° B 45'56	-0°47'21
direct	14992 Nov 27 01:06	4° Y 43'25		minimum elong	14999 Apr 16 19:55	7° B 45'56	0°47'52
evening set	14993 Mar 01 12:36	8° Y 10'32		max. Earth dist.	14999 Apr 16 15:18	7° B 45'12	19.42809 AU
				morning rise	14999 May 03 03:29	8° B 46'43	

retrograde	14999 Aug 03 13:58	12°♄09'08	opposition	15005 Nov 14 09:47	7°♄56'51	-1°13'31
opposition	14999 Oct 16 19:36	10°♄06'23 -0°55'03	min. Earth dist.	15005 Nov 14 09:13	7°♄56'55	17.73716 AU
min. Earth dist.	14999 Oct 16 23:42	10°♄05'57 17.44478 AU	direct	15006 Jan 29 20:03	5°♄53'11	
direct	14999 Dec 31 16:57	8°♄01'24	evening set	15006 May 04 09:08	9°♄15'22	
evening set	15000 Apr 05 12:12	11°♄27'29				
conjunction	15000 Apr 21 21:04	12°♄28'21 -0°51'17	conjunction	15006 May 20 13:33	10°♄14'42	-1°06'43
minimum elong	15000 Apr 21 21:03	12°♄28'21 0°51'52	minimum elong	15006 May 20 13:33	10°♄14'42	1°07'37
max. Earth dist.	15000 Apr 21 16:09	12°♄27'35 19.46249 AU	max. Earth dist.	15006 May 20 13:37	10°♄14'42	19.76670 AU
morning rise	15000 May 08 04:01	13°♄28'55	morning rise	15006 Jun 05 15:50	11°♄13'43	
retrograde	15000 Jun 03 20:11	15°♄	retrograde	15006 Sep 05 12:51	14°♄31'14	
retrograde	15000 Aug 08 10:57	16°♄50'44	opposition	15006 Nov 19 06:50	12°♄30'11	-1°15'00
	15000 Oct 17 04:37	15°♄♄	min. Earth dist.	15006 Nov 19 06:37	12°♄30'12	17.79722 AU
opposition	15000 Oct 21 18:49	14°♄48'07 -0°59'14	direct	15007 Feb 03 17:22	10°♄26'47	
min. Earth dist.	15000 Oct 21 22:09	14°♄47'46 17.48199 AU	evening set	15007 May 09 05:46	13°♄48'07	
direct	15001 Jan 05 18:37	12°♄43'14				
	15001 Mar 21 19:13	15°♄	conjunction	15007 May 25 09:29	14°♄47'09	-1°07'51
evening set	15001 Apr 10 13:25	16°♄08'50	minimum elong	15007 May 25 09:29	14°♄47'09	1°08'46
			max. Earth dist.	15007 May 25 10:07	14°♄47'15	19.82750 AU
conjunction	15001 Apr 26 21:43	17°♄09'29 -0°54'51	morning rise	15007 Jun 10 11:05	15°♄45'53	
minimum elong	15001 Apr 26 21:43	17°♄09'29 0°55'30	retrograde	15007 Sep 10 08:27	19°♄02'36	
max. Earth dist.	15001 Apr 26 18:41	17°♄09'00 19.50231 AU	opposition	15007 Nov 24 03:12	17°♄01'48	-1°15'59
morning rise	15001 May 13 03:46	18°♄09'49	min. Earth dist.	15007 Nov 24 01:39	17°♄01'58	17.85852 AU
retrograde	15001 Aug 13 08:39	21°♄30'58	direct	15008 Feb 08 16:49	14°♄58'41	
opposition	15001 Oct 26 17:49	19°♄28'34 -1°02'59	evening set	15008 May 13 01:44	18°♄19'06	
min. Earth dist.	15001 Oct 26 20:10	19°♄28'19 17.52437 AU				
direct	15002 Jan 10 20:50	17°♄23'52	conjunction	15008 May 29 04:44	19°♄17'51	-1°08'33
evening set	15002 Apr 15 14:04	20°♄48'54	minimum elong	15008 May 29 04:44	19°♄17'51	1°09'30
			max. Earth dist.	15008 May 29 05:52	19°♄18'01	19.88920 AU
conjunction	15002 May 01 21:28	21°♄49'18 -0°58'02	morning rise	15008 Jun 14 05:39	20°♄16'18	
minimum elong	15002 May 01 21:27	21°♄49'18 0°58'45	retrograde	15008 Sep 14 00:28	23°♄32'12	
max. Earth dist.	15002 May 01 18:24	21°♄48'49 19.54727 AU	opposition	15008 Nov 27 23:00	21°♄31'37	-1°16'31
morning rise	15002 May 18 02:49	22°♄49'24	min. Earth dist.	15008 Nov 27 22:06	21°♄31'43	17.92063 AU
retrograde	15002 Aug 18 05:03	26°♄09'52	direct	15009 Feb 12 13:02	19°♄28'46	
opposition	15002 Oct 31 16:28	24°♄07'43 -1°06'18	evening set	15009 May 17 20:48	22°♄48'15	
min. Earth dist.	15002 Oct 31 18:16	24°♄07'31 17.57188 AU				
direct	15003 Jan 15 20:55	22°♄03'14	conjunction	15009 Jun 02 23:05	23°♄46'42	-1°08'50
evening set	15003 Apr 20 13:51	25°♄27'39	minimum elong	15009 Jun 02 23:05	23°♄46'42	1°09'47
			max. Earth dist.	15009 Jun 03 00:17	23°♄46'53	19.95157 AU
conjunction	15003 May 06 20:38	26°♄27'47 -1°00'50	morning rise	15009 Jun 18 23:25	24°♄44'53	
minimum elong	15003 May 06 20:37	26°♄27'47 1°01'36	retrograde	15009 Sep 18 18:40	27°♄59'57	
max. Earth dist.	15003 May 06 19:13	26°♄27'34 19.59709 AU	opposition	15009 Dec 02 18:11	25°♄59'35	-1°16'34
morning rise	15003 May 23 01:08	27°♄27'38	min. Earth dist.	15009 Dec 02 15:53	25°♄59'50	17.98306 AU
	15003 Jul 12 01:44	0°♄	direct	15010 Feb 17 11:28	23°♄56'59	
retrograde	15003 Aug 23 02:23	0°♄47'24	evening set	15010 May 22 14:46	27°♄15'29	
	15003 Oct 05 09:32	30°♄♄				
opposition	15003 Nov 05 14:38	28°♄45'32 -1°09'11	conjunction	15010 Jun 07 16:26	28°♄13'39	-1°08'42
min. Earth dist.	15003 Nov 05 15:16	28°♄45'28 17.62371 AU	minimum elong	15010 Jun 07 16:26	28°♄13'39	1°09'41
direct	15004 Jan 20 21:30	26°♄41'18	max. Earth dist.	15010 Jun 07 18:32	28°♄13'58	20.01406 AU
	15004 Apr 23 03:34	0°♄	morning rise	15010 Jun 23 16:05	29°♄11'33	
evening set	15004 Apr 24 13:00	0°♄05'02		15010 Jul 07 16:56	0°♄	
			retrograde	15010 Sep 23 09:00	2°♄25'48	
conjunction	15004 May 10 18:56	1°♄04'55 -1°03'13	opposition	15010 Dec 07 12:56	0°♄25'37	-1°16'10
minimum elong	15004 May 10 18:55	1°♄04'55 1°04'01	min. Earth dist.	15010 Dec 07 11:12	0°♄25'48	18.04567 AU
max. Earth dist.	15004 May 10 17:40	1°♄04'43 19.65080 AU		15010 Dec 17 19:57	30°♄♄	
morning rise	15004 May 26 22:46	2°♄04'30	direct	15011 Feb 22 06:26	28°♄23'15	
retrograde	15004 Aug 26 22:09	5°♄23'32		15011 Apr 26 08:34	0°♄	
opposition	15004 Nov 09 12:30	3°♄21'56 -1°11'35	evening set	15011 May 27 07:51	1°♄40'45	
min. Earth dist.	15004 Nov 09 13:09	3°♄21'52 17.67915 AU				
direct	15005 Jan 24 20:05	1°♄17'59	conjunction	15011 Jun 12 08:50	2°♄38'37	-1°08'09
evening set	15005 Apr 29 11:25	4°♄40'58	minimum elong	15011 Jun 12 08:50	2°♄38'37	1°09'08
			max. Earth dist.	15011 Jun 12 10:54	2°♄38'56	20.07681 AU
conjunction	15005 May 15 16:40	5°♄40'35 -1°05'11	morning rise	15011 Jun 28 08:03	3°♄36'14	
minimum elong	15005 May 15 16:39	5°♄40'35 1°06'02	retrograde	15011 Sep 28 01:30	6°♄49'40	
max. Earth dist.	15005 May 15 16:25	5°♄40'33 19.70766 AU	opposition	15011 Dec 12 06:41	4°♄49'39	-1°15'19
morning rise	15005 May 31 19:41	6°♄39'53	min. Earth dist.	15011 Dec 12 03:28	4°♄49'59	18.10845 AU
retrograde	15005 Aug 31 18:43	9°♄58'10	direct	15012 Feb 27 03:36	2°♄47'30	
			evening set	15012 May 30 23:52	6°♄03'59	

conjunction	15012 Jun 16 00:22	7°☾01'35	-1°07'13	retrograde	15018 Oct 27 15:16	6°♊45'12	
minimum elong	15012 Jun 16 00:22	7°☾01'35	1°08'13	opposition	15019 Jan 11 18:23	4°♊46'34	-0°58'17
max. Earth dist.	15012 Jun 16 03:44	7°☾02'05	20.13966 AU	min. Earth dist.	15019 Jan 11 11:40	4°♊47'15	18.55164 AU
morning rise	15012 Jul 01 23:00	7°☾58'55		direct	15019 Mar 29 20:11	2°♊46'33	
retrograde	15012 Oct 01 14:13	11°☾11'31		evening set	15019 Jun 30 15:49	5°♊56'14	
opposition	15012 Dec 16 00:02	9°☾11'40	-1°14'03				
min. Earth dist.	15012 Dec 15 21:15	9°☾11'57	18.17145 AU	conjunction	15019 Jul 16 13:03	6°♊52'02	-0°50'52
direct	15013 Mar 02 21:08	7°☾09'46		minimum elong	15019 Jul 16 13:03	6°♊52'02	0°51'43
evening set	15013 Jun 04 15:01	10°☾25'13		max. Earth dist.	15019 Jul 16 19:58	6°♊53'03	20.58147 AU
				morning rise	15019 Aug 01 09:30	7°♊47'43	
conjunction	15013 Jun 20 14:50	11°☾22'31	-1°05'54	retrograde	15019 Nov 01 02:35	10°♊55'34	
minimum elong	15013 Jun 20 14:50	11°☾22'31	1°06'53	opposition	15020 Jan 16 07:20	8°♊57'07	-0°54'32
max. Earth dist.	15013 Jun 20 18:11	11°☾23'01	20.20291 AU	min. Earth dist.	15020 Jan 15 23:43	8°♊57'53	18.61082 AU
morning rise	15013 Jul 06 13:06	12°☾19'35		direct	15020 Apr 02 09:20	6°♊57'24	
retrograde	15013 Oct 06 05:06	15°☾31'24		evening set	15020 Jul 04 01:28	10°♊06'13	
opposition	15013 Dec 20 16:32	13°☾31'42	-1°12'21				
min. Earth dist.	15013 Dec 20 12:02	13°☾32'10	18.23493 AU	conjunction	15020 Jul 19 22:34	11°♊01'49	-0°47'23
direct	15014 Mar 07 16:38	11°☾30'04		minimum elong	15020 Jul 19 22:35	11°♊01'49	0°48'12
evening set	15014 Jun 09 05:10	14°☾44'30		max. Earth dist.	15020 Jul 20 06:43	11°♊03'01	20.63919 AU
				morning rise	15020 Aug 04 18:42	11°♊57'18	
conjunction	15014 Jun 25 04:33	15°☾41'32	-1°04'12		15020 Oct 22 03:43	15°♊	
minimum elong	15014 Jun 25 04:33	15°☾41'32	1°05'10	retrograde	15020 Nov 04 11:59	15°♊04'36	
max. Earth dist.	15014 Jun 25 09:34	15°☾42'17	20.26663 AU		15020 Nov 18 01:48	15°♊04'36	
morning rise	15014 Jul 11 02:14	16°☾38'20		opposition	15021 Jan 19 20:02	13°♊06'20	-0°50'30
retrograde	15014 Oct 10 16:36	19°☾49'24		min. Earth dist.	15021 Jan 19 12:52	13°♊07'03	18.66694 AU
opposition	15014 Dec 25 08:36	17°☾49'54	-1°10'15	direct	15021 Apr 06 21:02	11°♊06'54	
min. Earth dist.	15014 Dec 25 04:15	17°☾50'21	18.29894 AU	evening set	15021 Jul 08 10:36	14°♊14'52	
direct	15015 Mar 12 08:45	15°☾48'33			15021 Jul 21 09:22	15°♊	
evening set	15015 Jun 13 18:23	19°☾01'59					
				conjunction	15021 Jul 24 07:15	15°♊10'15	-0°43'39
conjunction	15015 Jun 29 17:12	19°☾58'45	-1°02'10	minimum elong	15021 Jul 24 07:16	15°♊10'15	0°44'25
minimum elong	15015 Jun 29 17:12	19°☾58'45	1°03'08	max. Earth dist.	15021 Jul 24 14:25	15°♊11'18	20.69367 AU
max. Earth dist.	15015 Jun 29 22:06	19°☾59'29	20.33091 AU	morning rise	15021 Aug 09 03:25	16°♊05'34	
morning rise	15015 Jul 15 14:41	20°☾55'19		retrograde	15021 Nov 08 22:37	19°♊12'21	
retrograde	15015 Oct 15 06:02	24°☾05'40		opposition	15022 Jan 24 08:11	17°♊14'13	-0°46'15
opposition	15015 Dec 29 23:50	22°☾06'22	-1°07'46	min. Earth dist.	15022 Jan 24 00:24	17°♊15'00	18.71964 AU
min. Earth dist.	15015 Dec 29 17:51	22°☾06'59	18.36325 AU	direct	15022 Apr 11 09:22	15°♊15'02	
direct	15016 Mar 16 01:42	20°☾05'20		evening set	15022 Jul 12 19:03	18°♊22'10	
evening set	15016 Jun 17 06:50	23°☾17'48					
				conjunction	15022 Jul 28 15:39	19°♊17'22	-0°39'44
conjunction	15016 Jul 03 05:19	24°☾14'19	-0°59'47	minimum elong	15022 Jul 28 15:39	19°♊17'22	0°40'28
minimum elong	15016 Jul 03 05:20	24°☾14'19	1°00'43	max. Earth dist.	15022 Jul 28 23:55	19°♊18'34	20.74440 AU
max. Earth dist.	15016 Jul 03 11:50	24°☾15'17	20.39511 AU	morning rise	15022 Aug 13 11:33	20°♊12'31	
morning rise	15016 Jul 19 02:20	25°☾10'38		retrograde	15022 Nov 13 07:20	23°♊18'48	
retrograde	15016 Oct 18 16:53	28°☾20'18		opposition	15023 Jan 28 19:52	21°♊20'46	-0°41'47
opposition	15017 Jan 02 14:30	26°☾21'14	-1°04'56	min. Earth dist.	15023 Jan 28 12:32	21°♊21'31	18.76831 AU
min. Earth dist.	15017 Jan 02 08:47	26°☾21'49	18.42718 AU	direct	15023 Apr 15 20:06	19°♊21'49	
direct	15017 Mar 20 16:18	24°☾20'33		evening set	15023 Jul 17 03:00	22°♊28'08	
evening set	15017 Jun 21 18:37	27°☾32'04					
				conjunction	15023 Aug 01 23:17	23°♊23'09	-0°35'37
conjunction	15017 Jul 07 16:34	28°☾28'20	-0°57'06	minimum elong	15023 Aug 01 23:18	23°♊23'09	0°36'17
minimum elong	15017 Jul 07 16:34	28°☾28'20	0°58'01	max. Earth dist.	15023 Aug 02 06:24	23°♊24'11	20.79106 AU
max. Earth dist.	15017 Jul 07 22:39	28°☾29'14	20.45877 AU	morning rise	15023 Aug 17 19:22	24°♊18'09	
morning rise	15017 Jul 23 13:26	29°☾24'26		retrograde	15023 Nov 17 16:48	27°♊23'59	
	15017 Aug 03 00:19	0°♊		opposition	15024 Feb 02 06:59	25°♊26'00	-0°37'07
retrograde	15017 Oct 23 05:00	2°♊33'28		min. Earth dist.	15024 Feb 01 23:19	25°♊26'46	18.81286 AU
opposition	15018 Jan 07 04:39	0°♊34'37	-1°01'46	direct	15024 Apr 19 07:13	23°♊27'13	
min. Earth dist.	15018 Jan 06 21:36	0°♊35'20	18.49026 AU	evening set	15024 Jul 20 10:15	26°♊32'45	
	15018 Jan 21 12:17	30°♊					
direct	15018 Mar 25 07:04	28°☾34'15		conjunction	15024 Aug 05 06:34	27°♊27'38	-0°31'20
	15018 May 23 20:28	0°♊		minimum elong	15024 Aug 05 06:34	27°♊27'38	0°31'57
evening set	15018 Jun 26 05:25	1°♊44'51		max. Earth dist.	15024 Aug 05 14:46	27°♊28'49	20.83347 AU
				morning rise	15024 Aug 21 02:28	28°♊22'28	
conjunction	15018 Jul 12 03:08	2°♊40'53	-0°54'07		15024 Sep 21 10:39	0°♊	
minimum elong	15018 Jul 12 03:08	2°♊40'53	0°55'00	retrograde	15024 Nov 21 00:42	1°♊27'52	
max. Earth dist.	15018 Jul 12 10:47	2°♊42'01	20.52108 AU		15025 Jan 24 02:57	30°♊	
morning rise	15018 Jul 27 23:37	3°♊36'46		opposition	15025 Feb 05 17:35	29°♊29'55	-0°32'17

min. Earth dist.	15025 Feb 05 10:13	29° Ω 30'39	18.85316 AU	min. Earth dist.	15031 Mar 02 16:19	23° Υ 33'14	19.02543 AU
direct	15025 Apr 23 17:43	27° Ω 31'17		direct	15031 May 18 19:44	21° Υ 34'42	
	15025 Jul 13 20:11	0° Υ		asc. node	15031 May 25 21:57	21° Υ 35'57	
evening set	15025 Jul 24 17:06	0° Υ 36'04		evening set	15031 Aug 18 01:22	24° Υ 36'19	
conjunction	15025 Aug 09 13:08	1° Υ 30'47	-0°26'56	conjunction	15031 Sep 02 21:25	25° Υ 30'30	0°01'18
minimum elong	15025 Aug 09 13:09	1° Υ 30'47	0°27'29	minimum elong	15031 Sep 02 21:27	25° Υ 30'30	0°01'07
max. Earth dist.	15025 Aug 09 20:23	1° Υ 31'50	20.87195 AU	behind sun begin	15031 Sep 02 14:52	25° Υ 29'35	
morning rise	15025 Aug 25 09:16	2° Υ 25'31		behind sun end	15031 Sep 03 04:01	25° Υ 31'25	
retrograde	15025 Nov 25 09:02	5° Υ 30'32		max. Earth dist.	15031 Sep 03 05:43	25° Υ 31'40	21.03427 AU
opposition	15026 Feb 10 03:47	3° Υ 32'33	-0°27'19	morning rise	15031 Sep 18 18:28	26° Υ 24'49	
min. Earth dist.	15026 Feb 09 20:01	3° Υ 33'20	18.88988 AU	retrograde	15031 Dec 20 06:06	29° Υ 28'51	
direct	15026 Apr 28 03:03	1° Υ 34'04		opposition	15032 Mar 06 09:20	27° Υ 30'59	0°04'02
evening set	15026 Jul 28 23:07	4° Υ 38'08		min. Earth dist.	15032 Mar 06 00:51	27° Υ 31'50	19.04212 AU
conjunction	15026 Aug 13 19:15	5° Υ 32'44	-0°22'24	direct	15032 May 22 01:52	25° Υ 33'28	
minimum elong	15026 Aug 13 19:16	5° Υ 32'44	0°22'53	evening set	15032 Aug 21 06:01	28° Υ 34'48	
max. Earth dist.	15026 Aug 14 03:54	5° Υ 33'58	20.90691 AU	conjunction	15032 Sep 06 02:23	29° Υ 28'58	0°06'06
morning rise	15026 Aug 29 15:18	6° Υ 27'20		minimum elong	15032 Sep 06 02:22	29° Υ 28'58	0°05'59
retrograde	15026 Nov 29 16:15	9° Υ 32'02		behind sun begin	15032 Sep 05 20:05	29° Υ 28'06	
opposition	15027 Feb 14 13:31	7° Υ 34'02	-0°22'14	behind sun end	15032 Sep 06 08:38	29° Υ 29'51	
min. Earth dist.	15027 Feb 14 05:42	7° Υ 34'50	18.92319 AU	max. Earth dist.	15032 Sep 06 11:39	29° Υ 30'17	21.04878 AU
direct	15027 May 02 12:52	5° Υ 35'42			15032 Sep 15 02:54	0° Ω	
evening set	15027 Aug 02 05:01	8° Υ 39'08		morning rise	15032 Sep 21 23:26	0° Ω 23'16	
conjunction	15027 Aug 18 00:57	9° Υ 33'37	-0°17'46	retrograde	15032 Dec 23 12:49	3° Ω 27'21	
minimum elong	15027 Aug 18 00:57	9° Υ 33'37	0°18'13	opposition	15033 Mar 10 17:34	1° Ω 29'30	0°09'18
max. Earth dist.	15027 Aug 18 08:42	9° Υ 34'43	20.93872 AU	min. Earth dist.	15033 Mar 10 09:06	1° Ω 30'21	19.05436 AU
morning rise	15027 Sep 02 21:15	10° Υ 28'08			15033 Apr 22 03:36	30° Υ	
retrograde	15027 Dec 04 00:01	13° Υ 32'34		direct	15033 May 26 09:05	29° Υ 32'09	
opposition	15028 Feb 18 22:43	11° Υ 34'34	-0°17'04		15033 Jun 28 20:01	0° Ω	
min. Earth dist.	15028 Feb 18 14:33	11° Υ 35'23	18.95356 AU	evening set	15033 Aug 25 10:55	2° Ω 33'16	
direct	15028 May 05 20:26	9° Υ 36'22		conjunction	15033 Sep 10 07:12	3° Ω 27'25	0°10'49
evening set	15028 Aug 05 10:25	12° Υ 39'15		minimum elong	15033 Sep 10 07:12	3° Ω 27'24	0°10'46
conjunction	15028 Aug 21 06:31	13° Υ 33'38	-0°13'05	behind sun begin	15033 Sep 10 02:08	3° Ω 26'42	
minimum elong	15028 Aug 21 06:31	13° Υ 33'38	0°13'27	behind sun end	15033 Sep 10 12:16	3° Ω 28'07	
behind sun begin	15028 Aug 21 02:44	13° Υ 33'06		max. Earth dist.	15033 Sep 10 15:09	3° Ω 28'32	21.05876 AU
behind sun end	15028 Aug 21 10:17	13° Υ 34'10		morning rise	15033 Sep 26 04:42	4° Ω 21'43	
max. Earth dist.	15028 Aug 21 15:36	13° Υ 34'56	20.96753 AU	retrograde	15033 Dec 27 21:18	7° Ω 25'55	
morning rise	15028 Sep 06 02:46	14° Υ 28'04		opposition	15034 Mar 15 01:48	5° Ω 28'04	0°14'31
retrograde	15028 Dec 07 06:49	17° Υ 32'18		min. Earth dist.	15034 Mar 14 17:49	5° Ω 28'51	19.06201 AU
opposition	15029 Feb 22 07:45	15° Υ 34'20	-0°11'50	direct	15034 May 30 15:14	3° Ω 30'49	
min. Earth dist.	15029 Feb 21 23:24	15° Υ 35'10	18.98078 AU	evening set	15034 Aug 29 15:36	6° Ω 31'46	
direct	15029 May 10 05:17	13° Υ 36'18		conjunction	15034 Sep 14 12:15	7° Ω 25'56	0°15'29
evening set	15029 Aug 09 15:34	16° Υ 38'42		minimum elong	15034 Sep 14 12:15	7° Ω 25'56	0°15'30
conjunction	15029 Aug 25 11:30	17° Υ 33'00	-0°08'21	behind sun begin	15034 Sep 14 10:22	7° Ω 25'40	
minimum elong	15029 Aug 25 11:30	17° Υ 33'00	0°08'40	behind sun end	15034 Sep 14 14:07	7° Ω 26'11	
behind sun begin	15029 Aug 25 05:46	17° Υ 32'12		max. Earth dist.	15034 Sep 14 20:56	7° Ω 27'10	21.06378 AU
behind sun end	15029 Aug 25 17:13	17° Υ 33'48		morning rise	15034 Sep 30 09:53	8° Ω 20'15	
max. Earth dist.	15029 Aug 25 19:42	17° Υ 34'10	20.99323 AU	retrograde	15035 Jan 01 04:32	11° Ω 24'35	
morning rise	15029 Sep 10 08:05	18° Υ 27'22		opposition	15035 Mar 19 09:55	9° Ω 26'43	0°19'40
retrograde	15029 Dec 11 14:54	21° Υ 31'30		min. Earth dist.	15035 Mar 19 02:09	9° Ω 27'30	19.06429 AU
opposition	15030 Feb 26 16:33	19° Υ 33'32	-0°06'33	direct	15035 Jun 03 22:12	7° Ω 29'34	
min. Earth dist.	15030 Feb 26 07:59	19° Υ 34'24	19.00491 AU	evening set	15035 Sep 02 20:43	10° Ω 30'24	
direct	15030 May 14 11:55	17° Υ 35'41		conjunction	15035 Sep 18 17:22	11° Ω 24'34	0°20'06
evening set	15030 Aug 13 20:27	20° Υ 37'40		minimum elong	15035 Sep 18 17:22	11° Ω 24'34	0°20'12
conjunction	15030 Aug 29 16:37	21° Υ 31'54	-0°03'36	max. Earth dist.	15035 Sep 19 00:22	11° Ω 25'33	21.06330 AU
minimum elong	15030 Aug 29 16:37	21° Υ 31'54	0°03'50	morning rise	15035 Oct 04 15:27	12° Ω 18'56	
behind sun begin	15030 Aug 29 10:06	21° Υ 30'59		retrograde	15036 Jan 05 12:17	15° Ω 23'27	
behind sun end	15030 Aug 29 23:07	21° Υ 32'48		opposition	15036 Mar 22 17:58	13° Ω 25'30	0°24'43
max. Earth dist.	15030 Aug 30 02:02	21° Υ 33'14	21.01561 AU	min. Earth dist.	15036 Mar 22 11:04	13° Ω 26'12	19.06106 AU
morning rise	15030 Sep 14 13:14	22° Υ 26'14		direct	15036 Jun 07 04:34	11° Ω 28'23	
retrograde	15030 Dec 15 21:37	25° Υ 30'16		evening set	15036 Sep 06 01:43	14° Ω 29'09	
opposition	15031 Mar 03 00:58	23° Υ 32'22	-0°01'16	conjunction	15036 Sep 21 22:46	15° Ω 23'21	0°24'37

minimum elong	15036 Sep 21 22:46	15°♂23'21	0°24'46	opposition	15043 Apr 21 03:08	11°♂24'07	0°55'45
max. Earth dist.	15036 Sep 22 06:17	15°♂24'26	21.05716 AU	min. Earth dist.	15043 Apr 20 22:12	11°♂24'37	18.90548 AU
morning rise	15036 Oct 07 21:01	16°♂17'46		direct	15043 Jul 06 03:08	9°♂26'25	
retrograde	15037 Jan 08 20:14	19°♂22'29		evening set	15043 Oct 04 18:00	12°♂28'14	
opposition	15037 Mar 27 02:06	17°♂24'26	0°29'40				
min. Earth dist.	15037 Mar 26 19:21	17°♂25'07	19.05204 AU	conjunction	15043 Oct 20 17:14	13°♂23'05	0°51'59
direct	15037 Jun 11 11:46	15°♂27'19		minimum elong	15043 Oct 20 17:13	13°♂23'05	0°52'35
evening set	15037 Sep 10 06:51	18°♂28'02		max. Earth dist.	15043 Oct 20 21:08	13°♂23'39	20.88752 AU
				morning rise	15043 Nov 05 18:35	14°♂18'15	
conjunction	15037 Sep 26 03:59	19°♂22'17	0°29'01		15043 Nov 18 11:11	15°♂	
minimum elong	15037 Sep 26 03:59	19°♂22'16	0°29'15	retrograde	15044 Feb 07 06:05	17°♂25'37	
max. Earth dist.	15037 Sep 26 09:54	19°♂23'07	21.04547 AU	opposition	15044 Apr 24 11:55	15°♂26'22	0°59'18
morning rise	15037 Oct 12 02:47	20°♂16'45		min. Earth dist.	15044 Apr 24 07:58	15°♂26'46	18.86925 AU
retrograde	15038 Jan 13 03:16	23°♂21'43			15044 May 05 10:05	15°♂	
opposition	15038 Mar 31 10:15	21°♂23'30	0°34'29	direct	15044 Jul 09 08:53	13°♂28'33	
min. Earth dist.	15038 Mar 31 04:24	21°♂24'06	19.03779 AU		15044 Sep 08 21:42	15°♂	
direct	15038 Jun 15 17:55	19°♂26'19		evening set	15044 Oct 08 01:09	16°♂30'48	
evening set	15038 Sep 14 12:01	22°♂27'03					
				conjunction	15044 Oct 24 01:00	17°♂25'49	0°55'03
conjunction	15038 Sep 30 09:38	23°♂21'22	0°33'18	minimum elong	15044 Oct 24 01:00	17°♂25'49	0°55'43
minimum elong	15038 Sep 30 09:38	23°♂21'22	0°33'35	max. Earth dist.	15044 Oct 24 05:38	17°♂26'29	20.84976 AU
max. Earth dist.	15038 Sep 30 16:14	23°♂22'18	21.02871 AU	morning rise	15044 Nov 09 02:42	18°♂21'09	
morning rise	15038 Oct 16 08:40	24°♂15'54		retrograde	15045 Feb 10 16:35	21°♂29'05	
retrograde	15039 Jan 17 11:25	27°♂21'08		opposition	15045 Apr 28 21:03	19°♂29'42	1°02'34
opposition	15039 Apr 04 18:07	25°♂22'45	0°39'09	min. Earth dist.	15045 Apr 28 16:44	19°♂30'08	18.82992 AU
min. Earth dist.	15039 Apr 04 12:16	25°♂23'20	19.01869 AU	direct	15045 Jul 13 16:50	17°♂31'47	
direct	15039 Jun 20 01:17	23°♂25'28		evening set	15045 Oct 12 08:59	20°♂34'31	
evening set	15039 Sep 18 17:32	26°♂26'17					
				conjunction	15045 Oct 28 09:08	21°♂29'43	0°57'51
conjunction	15039 Oct 04 15:17	27°♂20'40	0°37'25	minimum elong	15045 Oct 28 09:07	21°♂29'43	0°58'33
minimum elong	15039 Oct 04 15:16	27°♂20'40	0°37'47	max. Earth dist.	15045 Oct 28 12:18	21°♂30'10	20.80889 AU
max. Earth dist.	15039 Oct 04 20:24	27°♂21'24	21.00749 AU	morning rise	15045 Nov 13 11:32	22°♂25'14	
morning rise	15039 Oct 20 14:53	28°♂15'19		retrograde	15046 Feb 15 03:21	25°♂33'48	
	15039 Nov 24 02:08	0°♂		opposition	15046 May 03 06:38	23°♂34'16	1°05'32
retrograde	15040 Jan 21 18:38	1°♂20'52		min. Earth dist.	15046 May 03 03:37	23°♂34'35	18.78748 AU
	15040 Mar 23 04:23	30°♂		direct	15046 Jul 17 23:00	21°♂36'15	
opposition	15040 Apr 08 02:14	29°♂22'17	0°43'37	evening set	15046 Oct 16 17:25	24°♂39'32	
min. Earth dist.	15040 Apr 07 21:11	29°♂22'48	18.99556 AU				
direct	15040 Jun 23 06:54	27°♂24'54		conjunction	15046 Nov 01 18:14	25°♂34'56	1°00'23
	15040 Sep 14 03:31	0°♂		minimum elong	15046 Nov 01 18:14	25°♂34'56	1°01'08
evening set	15040 Sep 21 23:00	0°♂25'52		max. Earth dist.	15046 Nov 01 21:50	25°♂35'27	20.76473 AU
				morning rise	15046 Nov 17 21:00	26°♂30'39	
conjunction	15040 Oct 07 21:14	1°♂20'20	0°41'22	retrograde	15047 Feb 19 15:19	29°♂39'52	
minimum elong	15040 Oct 07 21:13	1°♂20'20	0°41'48	opposition	15047 May 07 16:20	27°♂40'12	1°08'12
max. Earth dist.	15040 Oct 08 03:11	1°♂21'11	20.98241 AU	min. Earth dist.	15047 May 07 13:15	27°♂40'31	18.74151 AU
morning rise	15040 Oct 23 21:03	2°♂15'05		direct	15047 Jul 22 07:59	25°♂42'03	
retrograde	15041 Jan 25 02:59	5°♂21'00		evening set	15047 Oct 21 02:45	28°♂45'58	
opposition	15041 Apr 12 10:22	3°♂22'15	0°47'54				
min. Earth dist.	15041 Apr 12 04:59	3°♂22'47	18.96871 AU	conjunction	15047 Nov 06 03:54	29°♂41'34	1°02'37
direct	15041 Jun 27 14:17	1°♂24'45		minimum elong	15047 Nov 06 03:53	29°♂41'34	1°03'25
evening set	15041 Sep 26 05:00	4°♂25'56		max. Earth dist.	15047 Nov 06 05:42	29°♂41'50	20.71690 AU
					15047 Nov 11 10:38	0°♂	
conjunction	15041 Oct 12 03:25	5°♂20'31	0°45'08	morning rise	15047 Nov 22 07:20	0°♂37'30	
minimum elong	15041 Oct 12 03:24	5°♂20'31	0°45'36	retrograde	15048 Feb 24 03:05	3°♂47'25	
max. Earth dist.	15041 Oct 12 08:00	5°♂21'10	20.95392 AU	opposition	15048 May 11 02:48	1°♂47'36	1°10'31
morning rise	15041 Oct 28 03:51	6°♂15'23		min. Earth dist.	15048 May 11 01:20	1°♂47'45	18.69185 AU
retrograde	15042 Jan 29 11:22	9°♂21'45			15048 Jul 05 02:23	30°♂	
opposition	15042 Apr 16 18:41	7°♂22'48	0°51'57	direct	15048 Jul 25 15:03	29°♂49'17	
min. Earth dist.	15042 Apr 16 14:06	7°♂23'16	18.93872 AU		15048 Aug 14 23:11	0°♂	
direct	15042 Jul 01 19:46	5°♂25'12		evening set	15048 Oct 24 12:29	2°♂53'52	
evening set	15042 Sep 30 11:11	8°♂26'40					
				conjunction	15048 Nov 09 14:19	3°♂49'41	1°04'33
conjunction	15042 Oct 16 10:11	9°♂21'23	0°48'40	minimum elong	15048 Nov 09 14:19	3°♂49'41	1°05'22
minimum elong	15042 Oct 16 10:11	9°♂21'23	0°49'13	max. Earth dist.	15048 Nov 09 16:17	3°♂49'58	20.66523 AU
max. Earth dist.	15042 Oct 16 15:33	9°♂22'09	20.92230 AU	morning rise	15048 Nov 25 18:10	4°♂45'50	
morning rise	15042 Nov 01 10:56	10°♂16'23		retrograde	15049 Feb 27 16:30	7°♂56'28	
retrograde	15043 Feb 02 20:31	13°♂23'13		opposition	15049 May 15 13:38	5°♂56'28	1°12'30

min. Earth dist.	15049 May 15 12:06	5°♊56'37	18.63813 AU	conjunction	15055 Dec 10 11:48	3°♊28'27	1°08'13
direct	15049 Jul 30 01:12	3°♊57'57		minimum elong	15055 Dec 10 11:48	3°♊28'27	1°09'11
evening set	15049 Oct 28 23:13	7°♊03'13		max. Earth dist.	15055 Dec 10 08:02	3°♊27'54	20.22387 AU
				morning rise	15055 Dec 26 19:53	4°♊26'27	
conjunction	15049 Nov 14 01:29	7°♊59'17	1°06'09	retrograde	15056 Mar 30 01:56	7°♊42'21	
minimum elong	15049 Nov 14 01:28	7°♊59'17	1°07'01	opposition	15056 Jun 14 06:13	5°♊40'35	1°15'19
max. Earth dist.	15049 Nov 14 01:28	7°♊59'17	20.60954 AU	min. Earth dist.	15056 Jun 14 09:38	5°♊40'13	18.19088 AU
morning rise	15049 Nov 30 06:02	8°♊55'40		direct	15056 Aug 28 05:58	3°♊39'56	
retrograde	15050 Mar 04 05:12	12°♊07'01		evening set	15056 Nov 27 21:23	6°♊51'09	
opposition	15050 May 20 00:55	10°♊06'48	1°14'06				
min. Earth dist.	15050 May 20 01:09	10°♊06'46	18.58060 AU	conjunction	15056 Dec 14 04:14	7°♊49'08	1°07'13
direct	15050 Aug 03 09:39	8°♊08'01		minimum elong	15056 Dec 14 04:14	7°♊49'08	1°08'12
evening set	15050 Nov 02 10:26	11°♊14'02		max. Earth dist.	15056 Dec 14 00:36	7°♊48'36	20.15757 AU
				morning rise	15056 Dec 30 12:53	8°♊47'25	
conjunction	15050 Nov 18 13:29	12°♊10'20	1°07'25	retrograde	15057 Apr 03 20:27	12°♊04'07	
minimum elong	15050 Nov 18 13:28	12°♊10'20	1°08'18	opposition	15057 Jun 18 21:00	10°♊02'08	1°14'00
max. Earth dist.	15050 Nov 18 13:27	12°♊10'19	20.55025 AU	min. Earth dist.	15057 Jun 18 23:43	10°♊01'51	18.12488 AU
morning rise	15050 Dec 04 18:31	13°♊06'58		direct	15057 Sep 01 20:32	8°♊01'11	
retrograde	15051 Mar 08 19:44	16°♊19'02		evening set	15057 Dec 02 14:16	11°♊13'25	
opposition	15051 May 24 12:31	14°♊18'34	1°15'20				
min. Earth dist.	15051 May 24 12:36	14°♊18'33	18.51961 AU	conjunction	15057 Dec 18 21:43	12°♊11'42	1°05'49
direct	15051 Aug 07 20:26	12°♊19'30		minimum elong	15057 Dec 18 21:43	12°♊11'42	1°06'47
evening set	15051 Nov 06 22:25	15°♊26'17		max. Earth dist.	15057 Dec 18 17:20	12°♊11'02	20.09197 AU
				morning rise	15058 Jan 04 06:58	13°♊10'16	
conjunction	15051 Nov 23 01:54	16°♊22'50	1°08'19	retrograde	15058 Apr 08 13:36	16°♊27'45	
minimum elong	15051 Nov 23 01:54	16°♊22'50	1°09'16	opposition	15058 Jun 23 12:25	14°♊25'36	1°12'15
max. Earth dist.	15051 Nov 23 00:12	16°♊22'35	20.48784 AU	min. Earth dist.	15058 Jun 23 16:30	14°♊25'10	18.05982 AU
morning rise	15051 Dec 09 07:38	17°♊19'44		direct	15058 Sep 06 10:05	12°♊24'22	
retrograde	15052 Mar 12 09:45	20°♊32'32		evening set	15058 Dec 07 07:58	15°♊37'38	
opposition	15052 May 28 00:45	18°♊31'48	1°16'11				
min. Earth dist.	15052 May 28 02:26	18°♊31'37	18.45605 AU	conjunction	15058 Dec 23 16:08	16°♊36'13	1°04'01
direct	15052 Aug 11 06:15	16°♊32'25		minimum elong	15058 Dec 23 16:08	16°♊36'13	1°04'59
evening set	15052 Nov 10 11:01	19°♊40'00		max. Earth dist.	15058 Dec 23 11:31	16°♊35'31	20.02758 AU
				morning rise	15059 Jan 09 01:57	17°♊35'04	
conjunction	15052 Nov 26 15:16	20°♊36'50	1°08'52	retrograde	15059 Apr 13 09:33	20°♊53'21	
minimum elong	15052 Nov 26 15:16	20°♊36'50	1°09'49	opposition	15059 Jun 28 04:28	18°♊51'02	1°10'03
max. Earth dist.	15052 Nov 26 13:44	20°♊36'36	20.42335 AU	min. Earth dist.	15059 Jun 28 08:00	18°♊50'39	17.99593 AU
morning rise	15052 Dec 12 21:30	21°♊34'00		direct	15059 Sep 11 02:31	16°♊49'33	
retrograde	15053 Mar 17 01:24	24°♊47'33		evening set	15059 Dec 12 02:36	20°♊03'51	
opposition	15053 Jun 01 13:16	22°♊46'33	1°16'36				
min. Earth dist.	15053 Jun 01 14:30	22°♊46'25	18.39074 AU	conjunction	15059 Dec 28 11:21	21°♊02'44	1°01'50
direct	15053 Aug 15 17:50	20°♊46'51		minimum elong	15059 Dec 28 11:22	21°♊02'44	1°02'47
evening set	15053 Nov 15 00:27	23°♊55'17		max. Earth dist.	15059 Dec 28 06:16	21°♊01'58	19.96419 AU
				morning rise	15060 Jan 13 21:40	22°♊01'52	
conjunction	15053 Dec 01 05:14	24°♊52'23	1°09'02	retrograde	15060 Apr 17 04:02	25°♊20'57	
minimum elong	15053 Dec 01 05:14	24°♊52'23	1°10'01	opposition	15060 Jul 01 21:25	23°♊18'30	1°07'26
max. Earth dist.	15053 Dec 01 02:21	24°♊51'57	20.35738 AU	min. Earth dist.	15060 Jul 02 02:20	23°♊17'58	17.93308 AU
morning rise	15053 Dec 17 12:11	25°♊49'49		direct	15060 Sep 14 17:26	21°♊16'45	
retrograde	15054 Mar 21 16:49	29°♊04'09		evening set	15060 Dec 15 22:18	24°♊32'06	
opposition	15054 Jun 06 02:27	27°♊02'52	1°16'36				
min. Earth dist.	15054 Jun 06 05:10	27°♊02'35	18.32436 AU	conjunction	15061 Jan 01 07:41	25°♊31'17	0°59'15
direct	15054 Aug 20 04:46	25°♊02'51		minimum elong	15061 Jan 01 07:42	25°♊31'17	1°00'11
evening set	15054 Nov 19 14:38	28°♊12'11		max. Earth dist.	15061 Jan 01 01:52	25°♊30'24	19.90193 AU
				morning rise	15061 Jan 17 18:34	26°♊30'42	
conjunction	15054 Dec 05 20:10	29°♊09'34	1°08'49	retrograde	15061 Apr 22 01:43	29°♊50'33	
minimum elong	15054 Dec 05 20:10	29°♊09'34	1°09'48	opposition	15061 Jul 06 14:49	27°♊47'57	1°04'23
max. Earth dist.	15054 Dec 05 17:26	29°♊09'10	20.29073 AU	min. Earth dist.	15061 Jul 06 19:33	27°♊47'26	17.87125 AU
	15054 Dec 20 01:34	0°♊		direct	15061 Sep 19 11:40	25°♊45'55	
morning rise	15054 Dec 22 03:37	0°♊07'17		evening set	15061 Dec 20 19:00	29°♊02'19	
retrograde	15055 Mar 26 09:48	3°♊22'23			15062 Jan 05 17:12	0°♊	
opposition	15055 Jun 10 15:54	1°♊20'51	1°16'11				
min. Earth dist.	15055 Jun 10 18:01	1°♊20'38	18.25753 AU	conjunction	15062 Jan 06 05:03	0°♊01'48	0°56'18
	15055 Jul 15 21:52	30°♊		minimum elong	15062 Jan 06 05:03	0°♊01'48	0°57'13
direct	15055 Aug 24 17:43	29°♊20'30		max. Earth dist.	15062 Jan 05 22:46	0°♊00'51	19.84040 AU
	15055 Oct 02 17:33	0°♊		morning rise	15062 Jan 22 16:20	1°♊01'29	
evening set	15055 Nov 24 05:43	2°♊30'47		retrograde	15062 Apr 26 21:47	4°♊22'02	
				opposition	15062 Jul 11 09:08	2°♊19'18	1°00'55

min. Earth dist.	15062 Jul 11 15:14	2° \approx 18'39	17.81011 AU		15068 Dec 30 18:13	0° \mathbb{H}	
direct	15062 Sep 24 04:27	0° \approx 16'58		evening set	15069 Jan 22 17:07	1° \mathbb{H} 18'53	
evening set	15062 Dec 25 16:36	3° \approx 34'24					
				conjunction	15069 Feb 08 06:15	2° \mathbb{H} 20'04	0°26'23
conjunction	15063 Jan 11 03:09	4° \approx 34'09	0°52'59	minimum elong	15069 Feb 08 06:15	2° \mathbb{H} 20'05	0°26'56
minimum elong	15063 Jan 11 03:09	4° \approx 34'09	0°53'50	max. Earth dist.	15069 Feb 07 20:33	2° \mathbb{H} 18'35	19.46507 AU
max. Earth dist.	15063 Jan 10 19:38	4° \approx 33'00	19.77979 AU	morning rise	15069 Feb 24 19:41	3° \mathbb{H} 21'19	
morning rise	15063 Jan 27 14:57	5° \approx 34'06		retrograde	15069 May 29 16:19	6° \mathbb{H} 45'32	
retrograde	15063 May 01 20:27	8° \approx 55'19		opposition	15069 Aug 12 07:58	4° \mathbb{H} 41'40	0°26'31
opposition	15063 Jul 16 03:53	6° \approx 52'24	0°57'02	min. Earth dist.	15069 Aug 12 15:49	4° \mathbb{H} 40'48	17.44546 AU
min. Earth dist.	15063 Jul 16 09:57	6° \approx 51'45	17.75001 AU	direct	15069 Oct 26 04:40	2° \mathbb{H} 37'08	
direct	15063 Sep 28 23:58	4° \approx 49'44		evening set	15070 Jan 27 19:19	6° \mathbb{H} 00'48	
evening set	15063 Dec 30 14:56	8° \approx 08'10					
				conjunction	15070 Feb 13 08:51	7° \mathbb{H} 02'10	0°21'05
conjunction	15064 Jan 16 02:07	9° \approx 08'12	0°49'19	minimum elong	15070 Feb 13 08:51	7° \mathbb{H} 02'10	0°21'34
minimum elong	15064 Jan 16 02:08	9° \approx 08'12	0°50'09	max. Earth dist.	15070 Feb 13 00:23	7° \mathbb{H} 00'52	19.42710 AU
max. Earth dist.	15064 Jan 15 18:37	9° \approx 07'03	19.72032 AU	morning rise	15070 Mar 01 22:09	8° \mathbb{H} 03'34	
morning rise	15064 Feb 01 14:12	10° \approx 08'24		retrograde	15070 Jun 03 17:32	11° \mathbb{H} 28'05	
retrograde	15064 May 05 18:09	13° \approx 30'14		opposition	15070 Aug 17 06:19	9° \mathbb{H} 24'10	0°20'31
opposition	15064 Jul 19 23:23	11° \approx 27'08	0°52'46	min. Earth dist.	15070 Aug 17 13:32	9° \mathbb{H} 23'22	17.41020 AU
min. Earth dist.	15064 Jul 20 06:26	11° \approx 26'23	17.69136 AU	direct	15070 Oct 31 03:46	7° \mathbb{H} 19'28	
direct	15064 Oct 02 18:37	9° \approx 24'09		evening set	15071 Feb 01 22:04	10° \mathbb{H} 43'50	
evening set	15065 Jan 03 14:00	12° \approx 43'31					
				conjunction	15071 Feb 18 11:33	11° \mathbb{H} 45'21	0°15'38
conjunction	15065 Jan 20 01:38	13° \approx 43'49	0°45'18	minimum elong	15071 Feb 18 11:33	11° \mathbb{H} 45'21	0°16'02
minimum elong	15065 Jan 20 01:39	13° \approx 43'49	0°46'05	max. Earth dist.	15071 Feb 18 02:15	11° \mathbb{H} 43'55	19.39472 AU
max. Earth dist.	15065 Jan 19 16:48	13° \approx 42'28	19.66283 AU	morning rise	15071 Mar 07 00:56	12° \mathbb{H} 46'52	
morning rise	15065 Feb 05 14:14	14° \approx 44'16		retrograde	15071 Jun 08 17:14	16° \mathbb{H} 11'41	
	15065 Feb 09 24:00	15° \approx		opposition	15071 Aug 22 05:08	14° \mathbb{H} 07'44	0°14'21
retrograde	15065 May 10 17:26	18° \approx 06'41		min. Earth dist.	15071 Aug 22 12:37	14° \mathbb{H} 06'55	17.38084 AU
opposition	15065 Jul 24 19:20	16° \approx 03'23	0°48'09	direct	15071 Nov 05 03:08	12° \mathbb{H} 02'52	
min. Earth dist.	15065 Jul 25 02:25	16° \approx 02'38	17.63501 AU	evening set	15072 Feb 07 01:09	15° \mathbb{H} 27'56	
	15065 Aug 19 11:28	15° $\mathbb{R}\approx$					
direct	15065 Oct 07 15:09	14° \approx 00'03		conjunction	15072 Feb 23 14:52	16° \mathbb{H} 29'34	0°10'04
	15065 Nov 24 10:09	15° \approx		minimum elong	15072 Feb 23 14:52	16° \mathbb{H} 29'34	0°10'24
evening set	15066 Jan 08 13:51	17° \approx 20'22		behind sun begin	15072 Feb 23 09:37	16° \mathbb{H} 28'46	
				behind sun end	15072 Feb 23 20:08	16° \mathbb{H} 30'22	
conjunction	15066 Jan 25 02:05	18° \approx 20'55	0°40'59	max. Earth dist.	15072 Feb 23 06:49	16° \mathbb{H} 28'20	19.36835 AU
minimum elong	15066 Jan 25 02:05	18° \approx 20'55	0°41'42	morning rise	15072 Mar 11 04:02	17° \mathbb{H} 31'10	
max. Earth dist.	15066 Jan 24 17:45	18° \approx 19'38	19.60776 AU	retrograde	15072 Jun 12 18:51	20° \mathbb{H} 56'13	
morning rise	15066 Feb 10 14:49	19° \approx 21'35		opposition	15072 Aug 26 04:13	18° \mathbb{H} 52'18	0°08'04
retrograde	15066 May 15 16:28	22° \approx 44'30		min. Earth dist.	15072 Aug 26 10:46	18° \mathbb{H} 51'35	17.35733 AU
opposition	15066 Jul 29 15:43	20° \approx 41'03	0°43'11	direct	15072 Nov 09 04:00	16° \mathbb{H} 47'22	
min. Earth dist.	15066 Jul 29 23:21	20° \approx 40'13	17.58145 AU	evening set	15073 Feb 11 04:49	20° \mathbb{H} 13'02	
direct	15066 Oct 12 11:27	18° \approx 37'23					
evening set	15067 Jan 13 14:26	21° \approx 58'36		conjunction	15073 Feb 27 18:25	21° \mathbb{H} 14'46	0°04'25
				minimum elong	15073 Feb 27 18:26	21° \mathbb{H} 14'46	0°04'40
conjunction	15067 Jan 30 02:55	22° \approx 59'22	0°36'22	behind sun begin	15073 Feb 27 11:50	21° \mathbb{H} 13'46	
minimum elong	15067 Jan 30 02:55	22° \approx 59'22	0°37'03	behind sun end	15073 Feb 28 01:01	21° \mathbb{H} 15'47	
max. Earth dist.	15067 Jan 29 17:17	22° \approx 57'53	19.55603 AU	max. Earth dist.	15073 Feb 27 09:46	21° \mathbb{H} 13'26	19.34774 AU
morning rise	15067 Feb 15 16:03	24° \approx 00'16		morning rise	15073 Mar 16 07:31	22° \mathbb{H} 16'27	
retrograde	15067 May 20 16:07	27° \approx 23'40		retrograde	15073 Jun 17 18:40	25° \mathbb{H} 41'39	
opposition	15067 Aug 03 12:41	25° \approx 20'02	0°37'54	opposition	15073 Aug 31 03:47	23° \mathbb{H} 37'49	0°01'43
min. Earth dist.	15067 Aug 03 20:23	25° \approx 19'12	17.53165 AU	min. Earth dist.	15073 Aug 31 11:02	23° \mathbb{H} 37'01	17.33955 AU
direct	15067 Oct 17 08:44	23° \approx 16'03		direct	15073 Nov 14 04:21	21° \mathbb{H} 32'48	
evening set	15068 Jan 18 15:19	26° \approx 38'07		desc. node	15073 Dec 04 11:09	21° \mathbb{H} 44'00	
				evening set	15074 Feb 16 08:48	24° \mathbb{H} 59'01	
conjunction	15068 Feb 04 04:19	27° \approx 39'07	0°31'30	conjunction	15074 Mar 04 22:22	26° \mathbb{H} 00'49	-0°01'24
minimum elong	15068 Feb 04 04:20	27° \approx 39'07	0°32'06	minimum elong	15074 Mar 04 22:24	26° \mathbb{H} 00'49	0°01'14
max. Earth dist.	15068 Feb 03 19:46	27° \approx 37'48	19.50824 AU	behind sun begin	15074 Mar 04 15:39	25° \mathbb{H} 59'48	
morning rise	15068 Feb 20 17:28	28° \approx 40'11		behind sun end	15074 Mar 05 05:08	26° \mathbb{H} 01'51	
	15068 Mar 14 23:49	0° \mathbb{H}		max. Earth dist.	15074 Mar 04 14:29	25° \mathbb{H} 59'36	19.33262 AU
retrograde	15068 May 24 16:34	2° \mathbb{H} 04'01		morning rise	15074 Mar 21 11:09	27° \mathbb{H} 02'32	
opposition	15068 Aug 07 10:10	0° \mathbb{H} 00'16	0°32'20		15074 May 21 23:22	0° \mathbb{V}	
	15068 Aug 07 12:36	30° $\mathbb{R}\approx$					
min. Earth dist.	15068 Aug 07 17:47	29° \approx 59'26	17.48604 AU	retrograde	15074 Jun 22 20:53	0° \mathbb{V} 27'49	
direct	15068 Oct 21 06:30	27° \approx 56'01			15074 Jul 25 06:14	30° $\mathbb{R}\mathbb{H}$	

opposition	15074 Sep 05 03:32	28° H 24'05	-0°04'40	direct	15080 Dec 17 19:52	24° Y 59'03	
min. Earth dist.	15074 Sep 05 09:49	28° H 23'24	17.32693 AU	evening set	15081 Mar 22 14:17	28° Y 26'14	
direct	15074 Nov 19 06:47	26° H 19'02					
evening set	15075 Feb 21 13:10	29° H 45'41		conjunction	15081 Apr 08 01:20	29° Y 27'42	-0°39'01
	15075 Feb 25 10:14	0° Y		minimum elong	15081 Apr 08 01:19	29° Y 27'42	0°39'25
				max. Earth dist.	15081 Apr 07 19:17	29° Y 26'45	19.36052 AU
conjunction	15075 Mar 10 02:32	0° Y 47'32	-0°07'07		15081 Apr 16 15:34	0° B	
minimum elong	15075 Mar 10 02:31	0° Y 47'32	0°07'02	morning rise	15081 Apr 24 10:23	0° B 28'54	
behind sun begin	15075 Mar 09 20:17	0° Y 46'35		retrograde	15081 Jul 26 01:50	3° B 52'30	
behind sun end	15075 Mar 10 08:44	0° Y 48'29		opposition	15081 Oct 08 06:03	1° B 49'19	-0°46'07
max. Earth dist.	15075 Mar 09 18:19	0° Y 46'16	19.32242 AU	min. Earth dist.	15081 Oct 08 11:34	1° B 48'43	17.37190 AU
morning rise	15075 Mar 26 14:56	1° Y 49'16			15081 Nov 28 07:03	30° R Y	
retrograde	15075 Jun 27 21:09	5° Y 14'34		direct	15081 Dec 22 21:14	29° Y 44'02	
opposition	15075 Sep 10 03:49	3° Y 10'55	-0°11'02		15082 Jan 16 08:27	0° B	
min. Earth dist.	15075 Sep 10 10:58	3° Y 10'08	17.31925 AU	evening set	15082 Mar 27 17:26	3° B 10'57	
direct	15075 Nov 24 07:41	1° Y 05'48					
evening set	15076 Feb 26 17:29	4° Y 32'48		conjunction	15082 Apr 13 03:40	4° B 12'14	-0°43'35
				minimum elong	15082 Apr 13 03:40	4° B 12'14	0°44'02
conjunction	15076 Mar 14 06:39	5° Y 34'39	-0°12'46	max. Earth dist.	15082 Apr 12 21:15	4° B 11'14	19.38440 AU
minimum elong	15076 Mar 14 06:38	5° Y 34'39	0°12'46	morning rise	15082 Apr 29 12:10	5° B 13'16	
behind sun begin	15076 Mar 14 02:30	5° Y 34'01		retrograde	15082 Jul 31 01:37	8° B 36'21	
behind sun end	15076 Mar 14 10:47	5° Y 35'17		opposition	15082 Oct 13 05:58	6° B 33'17	-0°51'02
max. Earth dist.	15076 Mar 13 22:39	5° Y 33'25	19.31711 AU	min. Earth dist.	15082 Oct 13 10:16	6° B 32'49	17.39862 AU
morning rise	15076 Mar 30 18:42	6° Y 36'22		direct	15082 Dec 28 00:51	4° B 28'02	
retrograde	15076 Jul 01 24:00	10° Y 01'35		evening set	15083 Apr 01 19:54	7° B 54'37	
opposition	15076 Sep 14 04:07	7° Y 58'01	-0°17'19				
min. Earth dist.	15076 Sep 14 10:13	7° Y 57'21	17.31617 AU	conjunction	15083 Apr 18 05:38	8° B 55'43	-0°47'50
direct	15076 Nov 28 10:58	5° Y 52'51		minimum elong	15083 Apr 18 05:38	8° B 55'43	0°48'23
evening set	15077 Mar 02 22:06	9° Y 20'06		max. Earth dist.	15083 Apr 18 01:12	8° B 55'02	19.41388 AU
				morning rise	15083 May 04 13:13	9° B 56'33	
conjunction	15077 Mar 19 10:57	10° Y 21'56	-0°18'21	retrograde	15083 Aug 04 23:13	13° B 19'03	
minimum elong	15077 Mar 19 10:57	10° Y 21'56	0°18'25	opposition	15083 Oct 18 05:41	11° B 16'08	-0°55'35
max. Earth dist.	15077 Mar 19 03:08	10° Y 20'43	19.31623 AU	min. Earth dist.	15083 Oct 18 09:35	11° B 15'43	17.43099 AU
morning rise	15077 Apr 04 22:28	11° Y 23'36		direct	15084 Jan 02 02:23	9° B 11'00	
retrograde	15077 Jul 07 00:02	14° Y 48'38		evening set	15084 Apr 05 21:54	12° B 37'09	
opposition	15077 Sep 19 04:36	12° Y 45'10	-0°23'29				
min. Earth dist.	15077 Sep 19 11:37	12° Y 44'24	17.31764 AU	conjunction	15084 Apr 22 06:48	13° B 38'03	-0°51'45
direct	15077 Dec 03 11:37	10° Y 39'56		minimum elong	15084 Apr 22 06:47	13° B 38'03	0°52'21
evening set	15078 Mar 08 02:37	14° Y 07'20		max. Earth dist.	15084 Apr 22 02:07	13° B 37'19	19.44916 AU
				morning rise	15084 May 08 13:49	14° B 38'40	
conjunction	15078 Mar 24 15:02	15° Y 09'06	-0°23'48		15084 May 14 11:12	15° B	
minimum elong	15078 Mar 24 15:02	15° Y 09'06	0°23'58	retrograde	15084 Aug 08 21:41	18° B 00'36	
max. Earth dist.	15078 Mar 24 06:58	15° Y 07'50	19.32006 AU	opposition	15084 Oct 22 05:05	15° B 57'52	-0°59'45
morning rise	15078 Apr 10 02:06	16° Y 10'42		min. Earth dist.	15084 Oct 22 07:57	15° B 57'33	17.46917 AU
retrograde	15078 Jul 12 02:47	19° Y 35'30			15084 Nov 14 10:07	15° R B	
opposition	15078 Sep 24 05:04	17° Y 32'05	-0°29'30	direct	15085 Jan 06 04:39	13° B 52'52	
min. Earth dist.	15078 Sep 24 10:55	17° Y 31'26	17.32379 AU		15085 Feb 26 07:54	15° B	
direct	15078 Dec 08 15:15	15° Y 26'49		evening set	15085 Apr 10 23:15	17° B 18'34	
evening set	15079 Mar 13 06:44	18° Y 54'14					
				conjunction	15085 Apr 27 07:36	18° B 19'15	-0°55'18
conjunction	15079 Mar 29 18:46	19° Y 55'56	-0°29'05	minimum elong	15085 Apr 27 07:35	18° B 19'15	0°55'58
minimum elong	15079 Mar 29 18:46	19° Y 55'56	0°29'19	max. Earth dist.	15085 Apr 27 04:53	18° B 18'50	19.49005 AU
max. Earth dist.	15079 Mar 29 11:40	19° Y 54'49	19.32851 AU	morning rise	15085 May 13 13:40	19° B 19'38	
morning rise	15079 Apr 15 05:08	20° Y 57'25		retrograde	15085 Aug 13 19:04	22° B 40'55	
retrograde	15079 Jul 17 02:10	24° Y 21'54		opposition	15085 Oct 27 04:08	20° B 38'27	-1°03'29
opposition	15079 Sep 29 05:39	22° Y 18'33	-0°35'18	min. Earth dist.	15085 Oct 27 06:16	20° B 38'13	17.51263 AU
min. Earth dist.	15079 Sep 29 12:05	22° Y 17'51	17.33472 AU	direct	15086 Jan 11 06:05	18° B 33'41	
direct	15079 Dec 13 16:06	20° Y 13'16		evening set	15086 Apr 16 00:05	21° B 58'51	
evening set	15080 Mar 17 10:44	23° Y 40'37					
				conjunction	15086 May 02 07:32	22° B 59'17	-0°58'28
conjunction	15080 Apr 02 22:11	24° Y 42'12	-0°34'11	minimum elong	15086 May 02 07:31	22° B 59'17	0°59'11
minimum elong	15080 Apr 02 22:10	24° Y 42'12	0°34'29	max. Earth dist.	15086 May 02 04:42	22° B 58'51	19.53607 AU
max. Earth dist.	15080 Apr 02 14:39	24° Y 41'01	19.34200 AU	morning rise	15086 May 18 12:58	23° B 59'26	
morning rise	15080 Apr 19 08:04	25° Y 43'34		retrograde	15086 Aug 18 16:11	27° B 20'05	
retrograde	15080 Jul 21 03:27	29° Y 07'38		opposition	15086 Nov 01 02:57	25° B 17'52	-1°06'47
opposition	15080 Oct 03 05:49	27° Y 04'22	-0°40'51	min. Earth dist.	15086 Nov 01 04:27	25° B 17'43	17.56106 AU
min. Earth dist.	15080 Oct 03 11:06	27° Y 03'47	17.35075 AU	direct	15087 Jan 16 06:45	23° B 13'22	

evening set	15087 Apr 20 23:56	26° ♁ 37'56		max. Earth dist.	15093 Jun 03 11:42	24° ♁ 59'58	19.94112 AU
				morning rise	15093 Jun 19 10:36	25° ♁ 57'57	
conjunction	15087 May 07 06:47	27° ♁ 38'07	-1°01'14	retrograde	15093 Sep 19 05:56	29° ♁ 13'11	
minimum elong	15087 May 07 06:47	27° ♁ 38'07	1°02'00	opposition	15093 Dec 03 05:34	27° ♁ 12'47	-1°16'50
max. Earth dist.	15087 May 07 05:42	27° ♁ 37'57	19.58658 AU	min. Earth dist.	15093 Dec 03 03:08	27° ♁ 13'02	17.97278 AU
morning rise	15087 May 23 11:21	28° ♁ 38'01		direct	15094 Feb 17 21:57	25° ♁ 10'08	
	15087 Jun 16 09:32	0° ♁		evening set	15094 May 23 01:59	28° ♁ 28'46	
retrograde	15087 Aug 23 13:18	1° ♁ 57'59					
	15087 Nov 04 12:37	30° ♁		conjunction	15094 Jun 08 03:42	29° ♁ 26'58	-1°08'54
opposition	15087 Nov 06 01:21	29° ♁ 56'04	-1°09'38	minimum elong	15094 Jun 08 03:42	29° ♁ 26'58	1°09'52
min. Earth dist.	15087 Nov 06 01:57	29° ♁ 56'00	17.61338 AU	max. Earth dist.	15094 Jun 08 05:59	29° ♁ 27'19	20.00410 AU
direct	15088 Jan 21 07:45	27° ♁ 51'51			15094 Jun 17 05:19	0° ♁	
	15088 Apr 02 22:31	0° ♁		morning rise	15094 Jun 24 03:26	0° ♁ 24'54	
evening set	15088 Apr 24 23:24	1° ♁ 15'45		retrograde	15094 Sep 23 21:14	3° ♁ 39'16	
				opposition	15094 Dec 08 00:17	1° ♁ 39'02	-1°16'23
conjunction	15088 May 11 05:22	2° ♁ 15'40	-1°03'36	min. Earth dist.	15094 Dec 07 22:18	1° ♁ 39'15	18.03615 AU
minimum elong	15088 May 11 05:22	2° ♁ 15'40	1°04'25		15095 Jan 23 01:27	30° ♁	
max. Earth dist.	15088 May 11 04:11	2° ♁ 15'29	19.64058 AU	direct	15095 Feb 22 17:47	29° ♁ 36'37	
morning rise	15088 May 27 09:16	3° ♁ 15'18			15095 Mar 24 23:24	0° ♁	
retrograde	15088 Aug 27 09:01	6° ♁ 34'33		evening set	15095 May 27 18:56	2° ♁ 54'13	
opposition	15088 Nov 09 23:15	4° ♁ 32'56	-1°12'01				
min. Earth dist.	15088 Nov 09 23:51	4° ♁ 32'52	17.66898 AU	conjunction	15095 Jun 12 20:02	3° ♁ 52'07	-1°08'20
direct	15089 Jan 25 06:45	2° ♁ 28'59		minimum elong	15095 Jun 12 20:02	3° ♁ 52'07	1°09'19
evening set	15089 Apr 29 22:01	5° ♁ 52'10		max. Earth dist.	15095 Jun 12 22:36	3° ♁ 52'30	20.06786 AU
				morning rise	15095 Jun 28 19:19	4° ♁ 49'46	
conjunction	15089 May 16 03:19	6° ♁ 51'49	-1°05'33	retrograde	15095 Sep 28 12:46	8° ♁ 03'17	
minimum elong	15089 May 16 03:19	6° ♁ 51'49	1°06'23	opposition	15095 Dec 12 18:07	6° ♁ 03'12	-1°15'29
max. Earth dist.	15089 May 16 03:17	6° ♁ 51'49	19.69747 AU	min. Earth dist.	15095 Dec 12 14:30	6° ♁ 03'35	18.10017 AU
morning rise	15089 Jun 01 06:23	7° ♁ 51'10		direct	15096 Feb 27 14:19	4° ♁ 01'01	
retrograde	15089 Sep 01 05:35	11° ♁ 09'40		evening set	15096 May 31 11:02	7° ♁ 17'33	
opposition	15089 Nov 14 20:49	9° ♁ 08'20	-1°13'55				
min. Earth dist.	15089 Nov 14 20:20	9° ♁ 08'23	17.72694 AU	conjunction	15096 Jun 16 11:34	8° ♁ 15'10	-1°07'21
direct	15090 Jan 30 06:47	7° ♁ 04'41		minimum elong	15096 Jun 16 11:34	8° ♁ 15'10	1°08'19
evening set	15090 May 04 19:48	10° ♁ 27'03		max. Earth dist.	15096 Jun 16 15:21	8° ♁ 15'45	20.13221 AU
				morning rise	15096 Jul 02 10:15	9° ♁ 12'32	
conjunction	15090 May 21 00:15	11° ♁ 26'25	-1°07'04	retrograde	15096 Oct 02 01:59	12° ♁ 25'13	
minimum elong	15090 May 21 00:15	11° ♁ 26'25	1°07'57	opposition	15096 Dec 16 11:22	10° ♁ 25'18	-1°14'10
max. Earth dist.	15090 May 21 00:20	11° ♁ 26'26	19.75638 AU	min. Earth dist.	15096 Dec 16 08:05	10° ♁ 25'38	18.16499 AU
morning rise	15090 Jun 06 02:36	12° ♁ 25'30		direct	15097 Mar 03 08:56	8° ♁ 23'22	
retrograde	15090 Sep 06 00:09	15° ♁ 43'13		evening set	15097 Jun 05 02:14	11° ♁ 38'52	
opposition	15090 Nov 19 17:59	13° ♁ 42'09	-1°15'22				
min. Earth dist.	15090 Nov 19 17:44	13° ♁ 42'11	17.78683 AU	conjunction	15097 Jun 21 02:07	12° ♁ 36'12	-1°05'59
direct	15091 Feb 04 04:34	11° ♁ 38'45		minimum elong	15097 Jun 21 02:07	12° ♁ 36'12	1°06'57
evening set	15091 May 09 16:42	15° ♁ 00'16		max. Earth dist.	15097 Jun 21 06:02	12° ♁ 36'47	20.19752 AU
				morning rise	15097 Jul 07 00:25	13° ♁ 33'17	
conjunction	15091 May 25 20:29	15° ♁ 59'21	-1°08'10	retrograde	15097 Oct 06 16:12	16° ♁ 45'10	
minimum elong	15091 May 25 20:28	15° ♁ 59'21	1°09'05	opposition	15097 Dec 21 03:57	14° ♁ 45'26	-1°12'25
max. Earth dist.	15091 May 25 21:15	15° ♁ 59'28	19.81701 AU	min. Earth dist.	15097 Dec 20 22:49	14° ♁ 45'58	18.23065 AU
morning rise	15091 Jun 10 22:07	16° ♁ 58'09		direct	15098 Mar 08 03:35	12° ♁ 43'47	
retrograde	15091 Sep 10 19:19	20° ♁ 15'03		evening set	15098 Jun 09 16:18	15° ♁ 58'16	
opposition	15091 Nov 24 14:21	18° ♁ 14'14	-1°16'19				
min. Earth dist.	15091 Nov 24 12:52	18° ♁ 14'23	17.84799 AU	conjunction	15098 Jun 25 15:45	16° ♁ 55'19	-1°04'15
direct	15092 Feb 09 03:14	16° ♁ 11'06		minimum elong	15098 Jun 25 15:45	16° ♁ 55'19	1°05'13
evening set	15092 May 13 12:47	19° ♁ 31'42		max. Earth dist.	15098 Jun 25 21:11	16° ♁ 56'08	20.26347 AU
				morning rise	15098 Jul 11 13:31	17° ♁ 52'08	
conjunction	15092 May 29 15:51	20° ♁ 30'30	-1°08'50	retrograde	15098 Oct 11 04:12	21° ♁ 03'15	
minimum elong	15092 May 29 15:50	20° ♁ 30'30	1°09'46	opposition	15098 Dec 25 20:01	19° ♁ 03'45	-1°10'16
max. Earth dist.	15092 May 29 16:57	20° ♁ 30'40	19.87864 AU	min. Earth dist.	15098 Dec 25 15:09	19° ♁ 04'15	18.29682 AU
morning rise	15092 Jun 14 16:50	21° ♁ 29'00		direct	15099 Mar 12 19:59	17° ♁ 02'25	
retrograde	15092 Sep 14 12:40	24° ♁ 45'05		evening set	15099 Jun 14 05:43	20° ♁ 15'53	
opposition	15092 Nov 28 10:22	22° ♁ 44'29	-1°16'49				
min. Earth dist.	15092 Nov 28 09:22	22° ♁ 44'35	17.91009 AU	conjunction	15099 Jun 30 04:36	21° ♁ 12'40	-1°02'10
direct	15093 Feb 13 00:00	20° ♁ 41'36		minimum elong	15099 Jun 30 04:36	21° ♁ 12'40	1°03'06
evening set	15093 May 18 07:52	24° ♁ 01'14		max. Earth dist.	15099 Jun 30 09:54	21° ♁ 13'27	20.32979 AU
				morning rise	15099 Jul 16 02:08	22° ♁ 09'14	
conjunction	15093 Jun 03 10:14	24° ♁ 59'44	-1°09'05	retrograde	15099 Oct 15 17:41	25° ♁ 19'37	
minimum elong	15093 Jun 03 10:14	24° ♁ 59'44	1°10'03	opposition	15099 Dec 30 11:09	23° ♁ 20'20	-1°07'45

min. Earth dist.	15099 Dec 30 04:46	23° \mathring{O} 20'59	18.36296 AU
direct	15100 Mar 17 12:40	21° \mathring{O} 19'20	
evening set	15100 Jun 18 18:18	24° \mathring{O} 31'50	
conjunction	15100 Jul 04 16:50	25° \mathring{O} 28'22	-0°59'45
minimum elong	15100 Jul 04 16:51	25° \mathring{O} 28'22	1°00'41
max. Earth dist.	15100 Jul 04 23:33	25° \mathring{O} 29'21	20.39560 AU
morning rise	15100 Jul 20 13:55	26° \mathring{O} 24'41	
retrograde	15100 Oct 20 04:32	29° \mathring{O} 34'22	
opposition	15101 Jan 04 02:02	27° \mathring{O} 35'20	-1°04'52
min. Earth dist.	15101 Jan 03 20:07	27° \mathring{O} 35'56	18.42828 AU
direct	15101 Mar 22 03:15	25° \mathring{O} 34'40	
evening set	15101 Jun 23 06:07	28° \mathring{O} 46'13	
conjunction	15101 Jul 09 04:07	29° \mathring{O} 42'29	-0°57'01
minimum elong	15101 Jul 09 04:07	29° \mathring{O} 42'29	0°57'55
max. Earth dist.	15101 Jul 09 10:25	29° \mathring{O} 43'25	20.46035 AU
	15101 Jul 14 02:09	0° \mathring{O}	
morning rise	15101 Jul 25 01:02	0° \mathring{O} 38'35	
retrograde	15101 Oct 24 17:26	3° \mathring{O} 47'37	
opposition	15102 Jan 08 16:15	1° \mathring{O} 48'48	-1°01'39
min. Earth dist.	15102 Jan 08 09:04	1° \mathring{O} 49'32	18.49220 AU