




























































































































opposition	13600 Feb 01 08:59	22°09'29	-2°04'06	morning rise	13605 Oct 25 14:52	1°05'50'27	
min. Earth dist.	13600 Feb 01 01:35	22°09'10'54	8.65591 AU	asc. node	13605 Dec 27 12:09	7°05'59'56	
direct	13600 Apr 10 16:58	18°09'48'22		retrograde	13606 Feb 06 20:45	9°05'23'57	
evening set	13600 Jul 21 15:27	26°09'14'15		opposition	13606 Apr 17 15:14	5°05'59'37	0°08'31
				min. Earth dist.	13606 Apr 17 05:46	6°05'01'27	8.65402 AU
conjunction	13600 Aug 07 12:19	28°09'17'51	-1°36'13	direct	13606 Jun 24 23:28	2°05'38'28	
minimum elong	13600 Aug 07 12:21	28°09'17'52	1°36'51	evening set	13606 Oct 03 16:43	9°05'58'38	
max. Earth dist.	13600 Aug 07 21:16	28°09'20'36	10.66333 AU				
	13600 Aug 21 10:12	0°09'00'00		conjunction	13606 Oct 21 00:12	12°05'04'37	0°18'08
morning rise	13600 Aug 24 10:20	0°09'21'46		minimum elong	13606 Oct 21 00:11	12°05'04'37	0°18'46
retrograde	13600 Dec 05 14:40	7°09'52'20		max. Earth dist.	13606 Oct 21 11:13	12°05'07'59	10.64438 AU
opposition	13601 Feb 13 09:21	4°09'30'18	-1°51'36	morning rise	13606 Nov 07 10:39	14°05'11'29	
min. Earth dist.	13601 Feb 13 00:57	4°09'31'54	8.67117 AU		13606 Nov 14 06:50	15°05'00'00	
direct	13601 Apr 23 12:59	1°09'09'31		retrograde	13607 Feb 19 18:29	21°05'46'17	
evening set	13601 Aug 03 02:27	8°09'32'55		opposition	13607 Apr 30 09:40	18°05'21'34	0°36'31
				min. Earth dist.	13607 Apr 30 01:00	18°05'23'15	8.63369 AU
conjunction	13601 Aug 20 00:24	10°09'36'33	-1°24'01		13607 Jul 06 22:37	15°05'00'00	
minimum elong	13601 Aug 20 00:26	10°09'36'34	1°24'28	direct	13607 Jul 07 15:00	14°05'59'59	
max. Earth dist.	13601 Aug 20 10:50	10°09'39'45	10.67561 AU		13607 Jul 08 07:22	15°05'00'00	
morning rise	13601 Sep 06 00:02	12°09'40'39		evening set	13607 Oct 16 11:30	22°05'21'48	
retrograde	13601 Dec 18 09:32	20°09'11'22					
opposition	13602 Feb 26 07:58	16°09'48'54	-1°34'02	conjunction	13607 Nov 02 20:58	24°05'28'30	0°40'19
min. Earth dist.	13602 Feb 25 22:15	16°09'50'46	8.68003 AU	minimum elong	13607 Nov 02 20:56	24°05'28'29	0°41'07
direct	13602 May 06 09:16	13°09'28'20		max. Earth dist.	13607 Nov 03 07:07	24°05'31'35	10.62165 AU
evening set	13602 Aug 15 12:55	20°09'49'43		morning rise	13607 Nov 20 09:05	26°05'36'01	
					13607 Dec 20 16:34	0°05'00'00	
conjunction	13602 Sep 01 12:30	22°09'53'35	-1°07'59	retrograde	13608 Mar 03 17:48	4°05'12'16	
minimum elong	13602 Sep 01 12:32	22°09'53'36	1°08'14	opposition	13608 May 12 04:07	0°05'47'15	1°02'57
max. Earth dist.	13602 Sep 02 00:48	22°09'57'21	10.68155 AU	min. Earth dist.	13608 May 11 20:32	0°05'48'44	8.60906 AU
morning rise	13602 Sep 18 14:02	24°09'58'01			13608 May 22 08:22	30°05'00'00	
	13602 Nov 05 10:45	0°05'00'00		direct	13608 Jul 19 07:28	27°05'25'07	
retrograde	13602 Dec 31 06:43	2°05'29'07			13608 Sep 13 01:17	0°05'00'00	
	13603 Feb 27 08:34	30°05'00'00		evening set	13608 Oct 28 09:42	4°05'49'18	
opposition	13603 Mar 11 05:21	29°05'06'10	-1°12'12				
min. Earth dist.	13603 Mar 10 18:14	29°05'08'18	8.68257 AU	conjunction	13608 Nov 14 20:49	6°05'56'45	1°00'43
direct	13603 May 19 02:19	25°05'45'41		minimum elong	13608 Nov 14 20:47	6°05'56'45	1°01'39
	13603 Jul 31 13:32	0°05'00'00		max. Earth dist.	13608 Nov 15 04:50	6°05'59'12	10.59502 AU
evening set	13603 Aug 27 23:34	3°05'05'35		morning rise	13608 Dec 02 10:19	9°05'04'56	
				retrograde	13609 Mar 16 20:20	16°05'42'41	
conjunction	13603 Sep 14 01:01	5°05'09'50	-0°48'52	opposition	13609 May 24 23:20	13°05'17'29	1°26'34
minimum elong	13603 Sep 14 01:03	5°05'09'50	0°48'53	min. Earth dist.	13609 May 24 17:43	13°05'18'35	8.58116 AU
max. Earth dist.	13603 Sep 14 14:32	5°05'13'57	10.68120 AU	direct	13609 Jul 31 23:28	9°05'54'44	
morning rise	13603 Oct 01 04:46	7°05'14'46		evening set	13609 Nov 10 11:20	17°05'21'55	
retrograde	13604 Jan 13 03:35	14°05'46'27					
opposition	13604 Mar 23 01:30	11°05'22'59	-0°47'04	conjunction	13609 Nov 27 23:47	19°05'30'05	1°18'21
min. Earth dist.	13604 Mar 22 14:05	11°05'25'11	8.67891 AU	minimum elong	13609 Nov 27 23:45	19°05'30'04	1°19'21
direct	13604 May 30 17:02	8°05'02'26		max. Earth dist.	13609 Nov 28 04:39	19°05'31'34	10.56576 AU
evening set	13604 Sep 08 11:25	15°05'21'38		morning rise	13609 Dec 15 14:26	21°05'38'55	
				retrograde	13610 Mar 29 22:38	29°05'18'09	
conjunction	13604 Sep 25 14:49	17°05'26'21	-0°27'31	opposition	13610 Jun 06 19:37	25°05'52'52	1°46'13
minimum elong	13604 Sep 25 14:50	17°05'26'22	0°27'18	min. Earth dist.	13610 Jun 06 16:42	25°05'53'27	8.55138 AU
max. Earth dist.	13604 Sep 26 03:51	17°05'30'20	10.67469 AU	direct	13610 Aug 13 18:39	22°05'29'28	
morning rise	13604 Oct 12 20:57	19°05'31'53		evening set	13610 Nov 23 16:35	0°05'00'00	
retrograde	13605 Jan 24 23:24	27°05'04'21			13610 Nov 23 16:17	0°05'00'00	
opposition	13605 Apr 04 20:35	23°05'40'26	-0°19'46				
min. Earth dist.	13605 Apr 04 10:01	23°05'42'29	8.66928 AU	conjunction	13610 Dec 11 06:14	2°05'08'58	1°32'17
direct	13605 Jun 12 08:23	20°05'19'38		minimum elong	13610 Dec 11 06:12	2°05'08'58	1°33'20
evening set	13605 Sep 21 01:00	27°05'38'56		max. Earth dist.	13610 Dec 11 07:43	2°05'09'25	10.53542 AU
				morning rise	13610 Dec 28 21:47	4°05'18'25	
conjunction	13605 Oct 08 06:26	29°05'44'16	-0°04'54	retrograde	13611 Apr 12 01:46	11°05'59'01	
minimum elong	13605 Oct 08 06:25	29°05'44'16	0°04'29	opposition	13611 Jun 19 17:06	8°05'33'46	2°00'50
behind sun begin	13605 Oct 07 23:25	29°05'42'10		min. Earth dist.	13611 Jun 19 16:45	8°05'33'50	8.52131 AU
behind sun end	13605 Oct 08 13:25	29°05'46'23		direct	13611 Aug 26 16:59	5°05'09'42	
max. Earth dist.	13605 Oct 08 18:18	29°05'47'53	10.66228 AU	evening set	13611 Dec 07 01:12	12°05'44'01	
	13605 Oct 10 09:58	0°05'00'00					

conjunction	13611 Dec 24 16:02	14° \mathfrak{Z} 53'37	1°41'48	conjunction	13618 Mar 14 16:24	2° Υ 50'50	0°52'38
minimum elong	13611 Dec 24 16:01	14° \mathfrak{Z} 53'37	1°42'50	minimum elong	13618 Mar 14 16:26	2° Υ 50'51	0°52'41
max. Earth dist.	13611 Dec 24 14:53	14° \mathfrak{Z} 53'16	10.50555 AU	max. Earth dist.	13618 Mar 14 02:35	2° Υ 46'31	10.40802 AU
morning rise	13612 Jan 11 08:08	17° \mathfrak{Z} 03'37		morning rise	13618 Apr 01 06:15	5° Υ 02'04	
retrograde	13612 Apr 24 07:19	24° \mathfrak{Z} 45'21		retrograde	13618 Jul 12 07:10	12° Υ 42'09	
opposition	13612 Jul 01 16:05	21° \mathfrak{Z} 20'14	2°09'37	opposition	13618 Sep 17 20:02	9° Υ 19'12	0°51'48
min. Earth dist.	13612 Jul 01 17:40	21° \mathfrak{Z} 19'56	8.49236 AU	min. Earth dist.	13618 Sep 18 06:39	9° Υ 17'06	8.40872 AU
direct	13612 Sep 07 16:53	17° \mathfrak{Z} 55'35		direct	13618 Nov 25 18:25	5° Υ 52'43	
evening set	13612 Dec 19 12:55	25° \mathfrak{Z} 33'36		evening set	13619 Mar 10 16:45	13° Υ 43'27	
conjunction	13613 Jan 06 04:43	27° \mathfrak{Z} 43'53	1°46'19	conjunction	13619 Mar 28 07:44	15° Υ 55'05	0°30'19
minimum elong	13613 Jan 06 04:43	27° \mathfrak{Z} 43'53	1°47'17	minimum elong	13619 Mar 28 07:45	15° Υ 55'06	0°30'09
max. Earth dist.	13613 Jan 06 01:19	27° \mathfrak{Z} 42'50	10.47761 AU	max. Earth dist.	13619 Mar 27 17:53	15° Υ 50'45	10.40997 AU
morning rise	13613 Jan 23 21:00	29° \mathfrak{Z} 54'23		morning rise	13619 Apr 14 19:54	18° Υ 05'58	
	13613 Jan 24 15:35	0° \approx		retrograde	13619 Jul 25 16:11	25° Υ 45'00	
retrograde	13613 May 07 14:38	7° \approx 36'53		opposition	13619 Oct 01 04:59	22° Υ 22'28	0°23'00
opposition	13613 Jul 14 16:44	4° \approx 12'01	2°11'59	min. Earth dist.	13619 Oct 01 15:46	22° Υ 20'20	8.41280 AU
min. Earth dist.	13613 Jul 14 20:02	4° \approx 11'22	8.46602 AU	direct	13619 Dec 09 06:17	18° Υ 56'08	
direct	13613 Sep 20 19:05	0° \approx 46'50		evening set	13620 Mar 23 07:56	26° Υ 46'55	
evening set	13614 Jan 02 03:16	8° \approx 28'23		conjunction	13620 Apr 09 21:06	28° Υ 58'06	0°06'31
conjunction	13614 Jan 19 19:47	10° \approx 39'16	1°45'31	minimum elong	13620 Apr 09 21:07	28° Υ 58'07	0°06'06
minimum elong	13614 Jan 19 19:48	10° \approx 39'17	1°46'22	behind sun begin	13620 Apr 09 14:17	28° Υ 56'00	
max. Earth dist.	13614 Jan 19 14:04	10° \approx 37'30	10.45313 AU	behind sun end	13620 Apr 10 03:56	29° Υ 00'14	
morning rise	13614 Feb 06 12:05	12° \approx 50'11		max. Earth dist.	13620 Apr 09 07:30	28° Υ 53'51	10.41668 AU
	13614 Feb 24 21:04	15° \approx			13620 Apr 18 02:30	0° \mathfrak{B}	
retrograde	13614 May 20 22:37	20° \approx 33'02		morning rise	13620 Apr 27 07:14	1° \mathfrak{B} 08'29	
opposition	13614 Jul 27 19:11	17° \approx 08'30	2°07'41	desc. node	13620 Jul 20 05:45	8° \mathfrak{B} 29'38	
min. Earth dist.	13614 Jul 28 00:30	17° \approx 07'27	8.44371 AU	retrograde	13620 Aug 06 23:24	8° \mathfrak{B} 46'33	
	13614 Aug 25 21:29	15° \mathfrak{R} \approx		opposition	13620 Oct 13 15:01	5° \mathfrak{B} 24'23	-0°06'56
direct	13614 Oct 03 23:55	13° \approx 42'52		min. Earth dist.	13620 Oct 14 01:33	5° \mathfrak{B} 22'19	8.42214 AU
	13614 Nov 11 16:20	15° \approx		direct	13620 Dec 21 20:15	1° \mathfrak{B} 58'20	
evening set	13615 Jan 15 19:33	21° \approx 27'31		evening set	13621 Apr 05 21:04	9° \mathfrak{B} 48'30	
conjunction	13615 Feb 02 12:30	23° \approx 38'55	1°39'20	conjunction	13621 Apr 23 07:54	11° \mathfrak{B} 59'01	-0°17'43
minimum elong	13615 Feb 02 12:32	23° \approx 38'55	1°40'03	minimum elong	13621 Apr 23 07:53	11° \mathfrak{B} 59'01	0°18'19
max. Earth dist.	13615 Feb 02 03:52	23° \approx 36'13	10.43334 AU	max. Earth dist.	13621 Apr 22 19:05	11° \mathfrak{B} 55'00	10.42888 AU
morning rise	13615 Feb 20 04:43	25° \approx 50'08		morning rise	13621 May 10 15:48	14° \mathfrak{B} 08'44	
	13615 Mar 29 08:38	0° \mathfrak{H}			13621 May 17 16:25	15° \mathfrak{B}	
retrograde	13615 Jun 03 07:30	3° \mathfrak{H} 32'50		retrograde	13621 Aug 20 05:11	21° \mathfrak{B} 45'51	
opposition	13615 Aug 09 23:24	0° \mathfrak{H} 08'43	1°56'52	opposition	13621 Oct 27 01:30	18° \mathfrak{B} 23'58	-0°36'26
min. Earth dist.	13615 Aug 10 07:06	0° \mathfrak{H} 07'11	8.42645 AU	min. Earth dist.	13621 Oct 27 11:16	18° \mathfrak{B} 22'04	8.43724 AU
	13615 Aug 11 19:10	30° \mathfrak{R} \approx			13621 Dec 29 16:02	15° \mathfrak{R} \mathfrak{B}	
direct	13615 Oct 17 06:58	26° \approx 42'41		direct	13622 Jan 04 10:49	14° \mathfrak{B} 58'16	
	13615 Dec 19 23:36	0° \mathfrak{H}			13622 Jan 10 04:58	15° \mathfrak{B}	
evening set	13616 Jan 29 13:08	4° \mathfrak{H} 29'53		evening set	13622 Apr 19 07:56	22° \mathfrak{B} 47'10	
conjunction	13616 Feb 16 06:09	6° \mathfrak{H} 41'38	1°28'04	conjunction	13622 May 06 16:07	24° \mathfrak{B} 56'49	-0°40'52
minimum elong	13616 Feb 16 06:12	6° \mathfrak{H} 41'38	1°28'34	minimum elong	13622 May 06 16:06	24° \mathfrak{B} 56'48	0°41'39
max. Earth dist.	13616 Feb 15 18:47	6° \mathfrak{H} 38'05	10.41907 AU	max. Earth dist.	13622 May 06 04:43	24° \mathfrak{B} 53'15	10.44665 AU
morning rise	13616 Mar 04 21:58	8° \mathfrak{H} 53'02		morning rise	13622 May 23 21:39	27° \mathfrak{B} 05'41	
retrograde	13616 Jun 15 16:04	16° \mathfrak{H} 35'07			13622 Jun 17 18:05	0° \mathfrak{I}	
opposition	13616 Aug 22 05:03	13° \mathfrak{H} 11'25	1°40'00	retrograde	13622 Sep 02 10:32	4° \mathfrak{I} 41'50	
min. Earth dist.	13616 Aug 22 14:34	13° \mathfrak{H} 09'31	8.41492 AU	opposition	13622 Nov 09 11:52	1° \mathfrak{I} 20'08	-1°03'57
direct	13616 Oct 29 16:57	9° \mathfrak{H} 45'05		min. Earth dist.	13622 Nov 09 19:46	1° \mathfrak{I} 18'36	8.45774 AU
evening set	13617 Feb 11 06:57	17° \mathfrak{H} 34'09			13622 Nov 27 02:34	30° \mathfrak{R} \mathfrak{B}	
				direct	13623 Jan 18 00:13	27° \mathfrak{B} 54'52	
conjunction	13617 Feb 28 23:44	19° \mathfrak{H} 46'02	1°12'13		13623 Mar 09 09:11	0° \mathfrak{I}	
minimum elong	13617 Feb 28 23:46	19° \mathfrak{H} 46'03	1°12'31	evening set	13623 May 02 15:52	5° \mathfrak{I} 41'48	
max. Earth dist.	13617 Feb 28 10:35	19° \mathfrak{H} 41'56	10.41075 AU				
morning rise	13617 Mar 18 14:48	21° \mathfrak{H} 57'27		conjunction	13623 May 19 21:21	7° \mathfrak{I} 50'28	-1°01'51
retrograde	13617 Jun 28 23:01	29° \mathfrak{H} 38'36		minimum elong	13623 May 19 21:19	7° \mathfrak{I} 50'28	1°02'47
opposition	13617 Sep 04 12:01	26° \mathfrak{H} 15'17	1°17'55	max. Earth dist.	13623 May 19 12:50	7° \mathfrak{I} 47'48	10.46935 AU
min. Earth dist.	13617 Sep 04 22:26	26° \mathfrak{H} 13'13	8.40925 AU	morning rise	13623 Jun 06 00:23	9° \mathfrak{I} 58'25	
direct	13617 Nov 12 05:48	22° \mathfrak{H} 48'48		retrograde	13623 Sep 15 14:45	17° \mathfrak{I} 33'37	
	13618 Feb 19 15:58	0° Υ		opposition	13623 Nov 22 21:59	14° \mathfrak{I} 12'00	-1°28'07
evening set	13618 Feb 25 00:14	0° Υ 38'59		min. Earth dist.	13623 Nov 23 03:05	14° \mathfrak{I} 11'00	8.48272 AU


























































































































direct	13624 Jan 31 12:20	10° <u>II</u> 47'14	opposition	13630 Feb 08 06:35	29° <u>Q</u> 35'32	-1°57'35
evening set	13624 May 14 20:19	18° <u>II</u> 31'35	min. Earth dist.	13630 Feb 07 20:38	29° <u>Q</u> 37'27	8.65028 AU
			direct	13630 Apr 18 13:24	26° <u>Q</u> 14'07	
conjunction	13624 May 31 23:13	20° <u>II</u> 39'11 -1°19'40		13630 Jun 26 13:06	0° <u>II</u>	
minimum elong	13624 May 31 23:11	20° <u>II</u> 39'11 1°20'41	evening set	13630 Jul 29 05:25	3° <u>II</u> 38'50	
max. Earth dist.	13624 May 31 18:24	20° <u>II</u> 37'41 10.49588 AU				
morning rise	13624 Jun 17 23:52	22° <u>II</u> 46'10	conjunction	13630 Aug 15 03:01	5° <u>II</u> 42'33	-1°29'39
	13624 Sep 08 00:41	0° <u>III</u>	minimum elong	13630 Aug 15 03:03	5° <u>II</u> 42'34	1°30'11
retrograde	13624 Sep 27 17:25	0° <u>III</u> 20'30	max. Earth dist.	13630 Aug 15 15:23	5° <u>II</u> 46'21	10.65889 AU
	13624 Oct 17 15:16	30° <u>R</u> <u>II</u>	morning rise	13630 Sep 01 01:48	7° <u>II</u> 46'38	
opposition	13624 Dec 05 07:16	26° <u>II</u> 58'51 -1°47'44	retrograde	13630 Dec 13 09:06	15° <u>II</u> 17'24	
min. Earth dist.	13624 Dec 05 09:26	26° <u>II</u> 58'25 8.51095 AU	opposition	13631 Feb 21 05:58	11° <u>II</u> 54'38	-1°42'01
direct	13625 Feb 12 23:17	23° <u>II</u> 34'37	min. Earth dist.	13631 Feb 20 18:50	11° <u>II</u> 56'46	8.66799 AU
	13625 May 17 08:27	0° <u>III</u>	direct	13631 May 01 08:27	8° <u>II</u> 33'38	
evening set	13625 May 27 21:27	1° <u>III</u> 15'57	evening set	13631 Aug 10 15:56	15° <u>II</u> 55'49	
conjunction	13625 Jun 13 21:59	3° <u>III</u> 22'31 -1°33'27	conjunction	13631 Aug 27 14:43	17° <u>II</u> 59'35	-1°15'08
minimum elong	13625 Jun 13 21:57	3° <u>III</u> 22'30 1°34'30	minimum elong	13631 Aug 27 14:46	17° <u>II</u> 59'36	1°15'28
max. Earth dist.	13625 Jun 13 20:42	3° <u>III</u> 22'07 10.52499 AU	max. Earth dist.	13631 Aug 28 03:59	18° <u>II</u> 03'39	10.67413 AU
morning rise	13625 Jun 30 20:41	5° <u>III</u> 28'35	morning rise	13631 Sep 13 15:25	20° <u>II</u> 03'52	
retrograde	13625 Oct 10 19:46	13° <u>III</u> 02'01	retrograde	13631 Dec 26 05:17	27° <u>II</u> 34'37	
opposition	13625 Dec 18 15:12	9° <u>III</u> 40'18 -2°01'56	opposition	13632 Mar 05 03:45	24° <u>II</u> 11'37	-1°21'49
min. Earth dist.	13625 Dec 18 14:59	9° <u>III</u> 40'20 8.54105 AU	min. Earth dist.	13632 Mar 04 16:09	24° <u>II</u> 13'50	8.68014 AU
direct	13626 Feb 26 06:36	6° <u>III</u> 16'37	direct	13632 May 13 01:42	20° <u>II</u> 50'54	
evening set	13626 Jun 09 19:11	13° <u>III</u> 54'38	evening set	13632 Aug 22 02:10	28° <u>II</u> 11'08	
				13632 Sep 06 01:08	0° <u>III</u>	
conjunction	13626 Jun 26 17:43	16° <u>III</u> 00'15 -1°42'37				
minimum elong	13626 Jun 26 17:42	16° <u>III</u> 00'15 1°43'39	conjunction	13632 Sep 08 02:39	0° <u>III</u> 15'08	-0°57'13
max. Earth dist.	13626 Jun 26 19:03	16° <u>III</u> 00'40 10.55525 AU	minimum elong	13632 Sep 08 02:41	0° <u>III</u> 15'09	0°57'20
morning rise	13626 Jul 13 15:09	18° <u>III</u> 05'33	max. Earth dist.	13632 Sep 08 16:23	0° <u>III</u> 19'20	10.68355 AU
retrograde	13626 Oct 23 19:56	25° <u>III</u> 38'10	morning rise	13632 Sep 25 05:34	2° <u>III</u> 19'48	
opposition	13626 Dec 31 21:48	22° <u>III</u> 16'19 -2°10'08	retrograde	13633 Jan 07 00:12	9° <u>III</u> 50'47	
min. Earth dist.	13626 Dec 31 19:31	22° <u>III</u> 16'45 8.57153 AU	opposition	13633 Mar 18 00:04	6° <u>III</u> 27'30	-0°57'57
direct	13627 Mar 11 11:30	18° <u>III</u> 53'13	min. Earth dist.	13633 Mar 17 12:10	6° <u>III</u> 29'47	8.68623 AU
evening set	13627 Jun 22 13:31	26° <u>III</u> 27'45	direct	13633 May 25 18:03	3° <u>III</u> 06'59	
			evening set	13633 Sep 03 13:03	10° <u>III</u> 25'59	
conjunction	13627 Jul 09 10:40	28° <u>III</u> 32'34 -1°46'48				
minimum elong	13627 Jul 09 10:40	28° <u>III</u> 32'34 1°47'46	conjunction	13633 Sep 20 15:33	12° <u>III</u> 30'21	-0°36'42
max. Earth dist.	13627 Jul 09 14:34	28° <u>III</u> 33'47 10.58522 AU	minimum elong	13633 Sep 20 15:34	12° <u>III</u> 30'22	0°36'35
	13627 Jul 21 05:31	0° <u>III</u>	max. Earth dist.	13633 Sep 21 06:09	12° <u>III</u> 34'48	10.68669 AU
morning rise	13627 Jul 26 07:30	0° <u>III</u> 37'15	morning rise	13633 Oct 07 20:38	14° <u>III</u> 35'29	
retrograde	13627 Nov 05 17:08	8° <u>III</u> 09'12	retrograde	13634 Jan 19 19:42	22° <u>III</u> 06'58	
opposition	13628 Jan 14 02:40	4° <u>III</u> 47'10 -2°12'05	opposition	13634 Mar 30 19:08	18° <u>III</u> 43'25	-0°31'27
min. Earth dist.	13628 Jan 13 21:52	4° <u>III</u> 48'05 8.60086 AU	min. Earth dist.	13634 Mar 30 06:41	18° <u>III</u> 45'48	8.68604 AU
direct	13628 Mar 23 15:32	1° <u>III</u> 24'38	direct	13634 Jun 07 09:53	15° <u>III</u> 22'59	
evening set	13628 Jul 04 04:58	8° <u>III</u> 55'43	evening set	13634 Sep 16 01:20	22° <u>III</u> 41'30	
conjunction	13628 Jul 21 01:35	10° <u>III</u> 59'56 -1°45'55	conjunction	13634 Oct 03 05:55	24° <u>III</u> 46'22	-0°14'32
minimum elong	13628 Jul 21 01:36	10° <u>III</u> 59'57 1°46'46	minimum elong	13634 Oct 03 05:56	24° <u>III</u> 46'22	0°14'11
max. Earth dist.	13628 Jul 21 08:33	11° <u>III</u> 02'06 10.61343 AU	behind sun begin	13634 Oct 03 02:29	24° <u>III</u> 45'20	
morning rise	13628 Aug 06 22:27	13° <u>III</u> 04'12	behind sun end	13634 Oct 03 09:22	24° <u>III</u> 47'24	
	13628 Aug 23 08:43	15° <u>III</u>	max. Earth dist.	13634 Oct 03 20:54	24° <u>III</u> 50'55	10.68353 AU
retrograde	13628 Nov 17 15:19	20° <u>III</u> 35'36	morning rise	13634 Oct 20 13:09	26° <u>III</u> 52'02	
opposition	13629 Jan 26 05:31	17° <u>III</u> 13'21 -2°07'47		13634 Nov 17 09:31	0° <u>III</u>	
min. Earth dist.	13629 Jan 25 21:57	17° <u>III</u> 14'47 8.62758 AU	retrograde	13635 Feb 01 18:00	4° <u>III</u> 24'17	
	13629 Feb 27 00:09	15° <u>R</u> <u>III</u>	opposition	13635 Apr 12 13:31	1° <u>III</u> 00'30	-0°03'30
direct	13629 Apr 05 16:25	13° <u>III</u> 51'23	min. Earth dist.	13635 Apr 12 01:19	1° <u>III</u> 02'51	8.67971 AU
	13629 May 12 12:12	15° <u>III</u>		13635 Apr 25 20:37	30° <u>R</u> <u>III</u>	
evening set	13629 Jul 16 18:01	21° <u>III</u> 19'07	asc. node	13635 May 28 12:42	28° <u>III</u> 05'52	
			direct	13635 Jun 19 23:23	27° <u>III</u> 40'00	
conjunction	13629 Aug 02 14:53	23° <u>III</u> 23'00 -1°40'05		13635 Aug 12 00:40	0° <u>III</u>	
minimum elong	13629 Aug 02 14:55	23° <u>III</u> 23'00 1°40'48	evening set	13635 Sep 28 15:40	4° <u>III</u> 58'47	
max. Earth dist.	13629 Aug 03 01:06	23° <u>III</u> 26'09 10.63841 AU				
morning rise	13629 Aug 19 12:24	25° <u>III</u> 27'04	conjunction	13635 Oct 15 22:12	7° <u>III</u> 04'13	0°08'26
	13629 Sep 30 12:26	0° <u>III</u>	minimum elong	13635 Oct 15 22:12	7° <u>III</u> 04'13	0°08'59
retrograde	13629 Nov 30 12:50	2° <u>III</u> 58'03	behind sun begin	13635 Oct 15 16:06	7° <u>III</u> 02'23	
	13630 Feb 02 22:20	30° <u>R</u> <u>III</u>	behind sun end	13635 Oct 16 04:18	7° <u>III</u> 06'03	

max. Earth dist.	13635 Oct 16 12:05	7° \mathbb{M} 08'26	10.67420 AU	max. Earth dist.	13641 Dec 31 09:15	22° \mathfrak{Z} 16'45	10.51309 AU
morning rise	13635 Nov 02 07:34	9° \mathbb{M} 10'30		morning rise	13642 Jan 18 05:12	24° \mathfrak{Z} 27'53	
	13635 Dec 30 10:58	15° \mathbb{M}			13642 Mar 12 05:46	0° \approx	
retrograde	13636 Feb 14 15:14	16° \mathbb{M} 43'42		retrograde	13642 May 02 01:56	2° \approx 08'52	
	13636 Apr 01 16:36	15° \mathbb{R} \mathbb{M}			13642 Jun 22 23:03	30° \mathbb{R} \mathfrak{Z}	
opposition	13636 Apr 24 07:28	13° \mathbb{M} 19'43	0°24'40	opposition	13642 Jul 09 06:24	28° \mathfrak{Z} 44'19	2°11'36
min. Earth dist.	13636 Apr 23 20:47	13° \mathbb{M} 21'47	8.66737 AU	min. Earth dist.	13642 Jul 09 10:26	28° \mathfrak{Z} 43'31	8.49839 AU
direct	13636 Jul 01 13:12	9° \mathbb{M} 58'58		direct	13642 Sep 15 07:38	25° \mathfrak{Z} 19'41	
	13636 Sep 20 04:49	15° \mathbb{M}			13642 Dec 01 13:52	0° \approx	
evening set	13636 Oct 10 08:43	17° \mathbb{M} 18'54		evening set	13642 Dec 27 10:13	2° \approx 58'29	
conjunction	13636 Oct 27 17:03	19° \mathbb{M} 24'55	0°30'58	conjunction	13643 Jan 14 02:09	5° \approx 08'47	1°46'29
minimum elong	13636 Oct 27 17:02	19° \mathbb{M} 24'55	0°31'42	minimum elong	13643 Jan 14 02:10	5° \approx 08'47	1°47'24
max. Earth dist.	13636 Oct 28 04:17	19° \mathbb{M} 28'20	10.65885 AU	max. Earth dist.	13643 Jan 13 19:01	5° \approx 06'35	10.48213 AU
morning rise	13636 Nov 14 04:20	21° \mathbb{M} 31'48		morning rise	13643 Jan 31 18:30	7° \approx 19'14	
retrograde	13637 Feb 26 12:48	29° \mathbb{M} 06'08			13643 May 11 07:18	15° \approx	
opposition	13637 May 07 01:12	25° \mathbb{M} 41'58	0°51'49	retrograde	13643 May 15 06:29	15° \approx 00'51	
min. Earth dist.	13637 May 06 16:58	25° \mathbb{M} 43'34	8.64918 AU		13643 May 19 06:13	15° \mathbb{R} \approx	
direct	13637 Jul 14 04:52	22° \mathbb{M} 20'48		opposition	13643 Jul 22 06:56	11° \approx 36'23	2°10'20
evening set	13637 Oct 23 04:42	29° \mathbb{M} 42'37		min. Earth dist.	13643 Jul 22 13:17	11° \approx 35'07	8.46907 AU
	13637 Oct 25 14:47	0° \mathfrak{A}		direct	13643 Sep 28 12:04	8° \approx 11'01	
					13644 Jan 02 15:19	15° \approx	
conjunction	13637 Nov 09 14:45	1° \mathfrak{A} 49'18	0°52'11	evening set	13644 Jan 10 00:35	15° \approx 53'15	
minimum elong	13637 Nov 09 14:43	1° \mathfrak{A} 49'18	0°53'03				
max. Earth dist.	13637 Nov 09 23:21	1° \mathfrak{A} 51'56	10.63761 AU	conjunction	13644 Jan 27 17:14	18° \approx 04'10	1°42'45
morning rise	13637 Nov 27 03:35	3° \mathfrak{A} 56'48		minimum elong	13644 Jan 27 17:15	18° \approx 04'11	1°43'31
retrograde	13638 Mar 11 12:30	11° \mathfrak{A} 32'27		max. Earth dist.	13644 Jan 27 07:50	18° \approx 01'15	10.45477 AU
opposition	13638 May 19 19:20	8° \mathfrak{A} 08'06	1°16'40	morning rise	13644 Feb 14 09:32	20° \approx 15'01	
min. Earth dist.	13638 May 19 13:16	8° \mathfrak{A} 09'17	8.62524 AU	retrograde	13644 May 27 13:43	27° \approx 56'52	
direct	13638 Jul 26 20:50	4° \mathfrak{A} 46'23		opposition	13644 Aug 03 09:14	24° \approx 32'32	2°02'29
evening set	13638 Nov 05 03:44	12° \mathfrak{A} 10'46		min. Earth dist.	13644 Aug 03 16:57	24° \approx 31'00	8.44388 AU
				direct	13644 Oct 10 17:25	21° \approx 06'34	
conjunction	13638 Nov 22 15:25	14° \mathfrak{A} 18'11	1°11'02	evening set	13645 Jan 22 16:20	28° \approx 51'43	
minimum elong	13638 Nov 22 15:23	14° \mathfrak{A} 18'10	1°12'01		13645 Jan 31 22:25	0° \mathfrak{H}	
max. Earth dist.	13638 Nov 22 21:34	14° \mathfrak{A} 20'03	10.61070 AU				
morning rise	13638 Dec 10 05:25	16° \mathfrak{A} 26'18		conjunction	13645 Feb 09 09:24	1° \mathfrak{H} 03'08	1°33'46
retrograde	13639 Mar 24 13:07	24° \mathfrak{A} 03'27		minimum elong	13645 Feb 09 09:27	1° \mathfrak{H} 03'09	1°34'22
opposition	13639 Jun 01 14:08	20° \mathfrak{A} 38'58	1°38'03	max. Earth dist.	13645 Feb 08 22:31	0° \mathfrak{H} 59'44	10.43225 AU
min. Earth dist.	13639 Jun 01 10:06	20° \mathfrak{A} 39'45	8.59613 AU	morning rise	13645 Feb 27 01:20	3° \mathfrak{H} 14'17	
direct	13639 Aug 08 14:50	17° \mathfrak{A} 16'37		retrograde	13645 Jun 09 22:10	10° \mathfrak{H} 55'57	
evening set	13639 Nov 18 06:30	24° \mathfrak{A} 44'15		opposition	13645 Aug 16 13:15	7° \mathfrak{H} 31'49	1°48'21
				min. Earth dist.	13645 Aug 16 22:13	7° \mathfrak{H} 30'01	8.42402 AU
conjunction	13639 Dec 05 19:35	26° \mathfrak{A} 52'25	1°26'37	direct	13645 Oct 24 00:17	4° \mathfrak{H} 05'22	
minimum elong	13639 Dec 05 19:33	26° \mathfrak{A} 52'24	1°27'39	evening set	13646 Feb 05 09:03	11° \mathfrak{H} 52'52	
max. Earth dist.	13639 Dec 05 23:02	26° \mathfrak{A} 53'28	10.57944 AU				
morning rise	13639 Dec 23 10:27	29° \mathfrak{A} 01'09		conjunction	13646 Feb 23 02:07	14° \mathfrak{H} 04'36	1°19'58
	13639 Dec 31 17:08	0° \mathfrak{Z}		minimum elong	13646 Feb 23 02:10	14° \mathfrak{H} 04'37	1°20'22
retrograde	13640 Apr 05 15:47	6° \mathfrak{Z} 39'49		max. Earth dist.	13646 Feb 22 13:34	14° \mathfrak{H} 00'41	10.41570 AU
opposition	13640 Jun 13 09:55	3° \mathfrak{Z} 15'14	1°54'55	morning rise	13646 Mar 12 17:26	16° \mathfrak{H} 15'55	
min. Earth dist.	13640 Jun 13 08:10	3° \mathfrak{Z} 15'35	8.56377 AU	retrograde	13646 Jun 23 05:31	23° \mathfrak{H} 57'00	
	13640 Aug 08 05:43	30° \mathbb{R} \mathfrak{A}		opposition	13646 Aug 29 18:44	20° \mathfrak{H} 33'09	1°28'36
direct	13640 Aug 20 10:12	29° \mathfrak{A} 52'10		min. Earth dist.	13646 Aug 30 05:06	20° \mathfrak{H} 31'05	8.41054 AU
	13640 Sep 01 13:08	0° \mathfrak{Z}		direct	13646 Nov 06 10:22	17° \mathfrak{H} 06'20	
evening set	13640 Nov 30 12:46	7° \mathfrak{Z} 23'28		evening set	13647 Feb 19 01:59	24° \mathfrak{H} 55'34	
conjunction	13640 Dec 18 02:58	9° \mathfrak{Z} 32'22	1°38'07	conjunction	13647 Mar 08 18:32	27° \mathfrak{H} 07'25	1°02'01
minimum elong	13640 Dec 18 02:57	9° \mathfrak{Z} 32'22	1°39'09	minimum elong	13647 Mar 08 18:34	27° \mathfrak{H} 07'26	1°02'11
max. Earth dist.	13640 Dec 18 02:50	9° \mathfrak{Z} 32'20	10.54615 AU	max. Earth dist.	13647 Mar 08 04:25	27° \mathfrak{H} 03'01	10.40591 AU
morning rise	13641 Jan 04 18:30	11° \mathfrak{Z} 41'44		morning rise	13647 Mar 26 08:57	29° \mathfrak{H} 18'43	
retrograde	13641 Apr 18 20:46	19° \mathfrak{Z} 21'42			13647 Apr 01 00:49	0° \mathfrak{Y}	
opposition	13641 Jun 26 07:20	15° \mathfrak{Z} 57'06	2°06'19	retrograde	13647 Jul 06 13:01	6° \mathfrak{Y} 58'57	
min. Earth dist.	13641 Jun 26 08:32	15° \mathfrak{Z} 56'52	8.53052 AU	opposition	13647 Sep 12 01:42	3° \mathfrak{Y} 35'25	1°04'13
direct	13641 Sep 02 06:53	12° \mathfrak{Z} 33'15		min. Earth dist.	13647 Sep 12 13:13	3° \mathfrak{Y} 33'07	8.40407 AU
evening set	13641 Dec 13 22:04	20° \mathfrak{Z} 08'20		direct	13647 Nov 19 21:47	0° \mathfrak{Y} 08'25	
				evening set	13648 Mar 03 18:21	7° \mathfrak{Y} 58'39	
conjunction	13641 Dec 31 13:09	22° \mathfrak{Z} 17'57	1°44'53	conjunction	13648 Mar 21 09:50	10° \mathfrak{Y} 10'24	0°40'51
minimum elong	13641 Dec 31 13:09	22° \mathfrak{Z} 17'57	1°45'53				

minimum elong	13648 Mar 21 09:51	10° Υ 10'25	0°40'47	evening set	13654 May 22 03:07	25° Π 31'27	
max. Earth dist.	13648 Mar 20 18:48	10° Υ 05'42	10.40330 AU				
morning rise	13648 Apr 07 22:55	12° Υ 21'28		conjunction	13654 Jun 08 04:34	27° Π 38'22	-1°27'24
retrograde	13648 Jul 18 20:02	20° Υ 00'42		minimum elong	13654 Jun 08 04:32	27° Π 38'21	1°28'27
opposition	13648 Sep 24 09:46	16° Υ 37'30	0°36'31	max. Earth dist.	13654 Jun 08 01:15	27° Π 37'20	10.52167 AU
min. Earth dist.	13648 Sep 24 21:19	16° Υ 35'12	8.40499 AU	morning rise	13654 Jun 25 04:15	29° Π 44'44	
direct	13648 Dec 02 10:28	13° Υ 10'34			13654 Jun 27 06:23	0° Θ	
evening set	13649 Mar 17 09:32	21° Υ 01'04		retrograde	13654 Oct 04 23:58	7° Θ 18'02	
				opposition	13654 Dec 12 17:10	3° Θ 56'42	-1°55'47
conjunction	13649 Apr 03 23:30	23° Υ 12'27	0°17'36	min. Earth dist.	13654 Dec 12 18:05	3° Θ 56'31	8.53883 AU
minimum elong	13649 Apr 03 23:30	23° Υ 12'28	0°17'18	direct	13655 Feb 20 08:47	0° Θ 33'07	
max. Earth dist.	13649 Apr 03 09:08	23° Υ 07'58	10.40811 AU	evening set	13655 Jun 04 02:14	8° Θ 12'18	
morning rise	13649 Apr 21 10:48	25° Υ 23'05					
	13649 Jun 02 02:39	0° \mathcal{B}		conjunction	13655 Jun 21 01:35	10° Θ 18'13	-1°38'45
retrograde	13649 Aug 01 02:07	3° \mathcal{B} 01'15		minimum elong	13655 Jun 21 01:34	10° Θ 18'12	1°39'48
	13649 Oct 03 05:01	30° $\mathcal{R}\Upsilon$		max. Earth dist.	13655 Jun 21 01:57	10° Θ 18'20	10.55441 AU
opposition	13649 Oct 07 18:39	29° Υ 38'25	0°06'58	morning rise	13655 Jul 07 23:33	12° Θ 23'43	
min. Earth dist.	13649 Oct 08 05:06	29° Υ 36'21	8.41332 AU	retrograde	13655 Oct 18 00:47	19° Θ 56'14	
direct	13649 Dec 16 00:20	26° Υ 11'44		opposition	13655 Dec 26 00:16	16° Θ 34'56	-2°06'48
desc. node	13650 Jan 02 21:18	26° Υ 28'23		min. Earth dist.	13655 Dec 25 21:55	16° Θ 35'23	8.57190 AU
	13650 Feb 23 08:24	0° \mathcal{B}		direct	13656 Mar 04 15:13	13° Θ 12'06	
evening set	13650 Mar 30 22:57	4° \mathcal{B} 01'49		evening set	13656 Jun 15 21:55	20° Θ 47'51	
conjunction	13650 Apr 17 11:00	6° \mathcal{B} 12'37	-0°06'35	conjunction	13656 Jul 02 19:44	22° Θ 52'53	-1°45'18
minimum elong	13650 Apr 17 11:00	6° \mathcal{B} 12'37	0°07'07	minimum elong	13656 Jul 02 19:44	22° Θ 52'53	1°46'17
behind sun begin	13650 Apr 17 04:23	6° \mathcal{B} 10'34		max. Earth dist.	13656 Jul 02 23:48	22° Θ 54'09	10.58699 AU
behind sun end	13650 Apr 17 17:37	6° \mathcal{B} 14'41		morning rise	13656 Jul 19 16:37	24° Θ 57'40	
max. Earth dist.	13650 Apr 16 22:25	6° \mathcal{B} 08'41	10.42005 AU		13656 Sep 04 21:05	0° \mathcal{Q}	
morning rise	13650 May 04 20:06	8° \mathcal{B} 22'37		retrograde	13656 Oct 30 00:35	2° \mathcal{Q} 29'29	
	13650 Jul 11 19:06	15° \mathcal{B}			13656 Dec 26 19:28	30° $\mathcal{R}\Theta$	
retrograde	13650 Aug 14 08:39	15° \mathcal{B} 59'43		opposition	13657 Jan 07 05:48	29° Θ 08'07	-2°11'41
	13650 Sep 17 11:56	15° $\mathcal{R}\mathcal{B}$		min. Earth dist.	13657 Jan 07 01:04	29° Θ 09'01	8.60381 AU
opposition	13650 Oct 21 04:09	12° \mathcal{B} 37'15	-0°22'52	direct	13657 Mar 17 19:18	25° Θ 45'58	
min. Earth dist.	13650 Oct 21 13:01	12° \mathcal{B} 35'31	8.42854 AU		13657 May 30 13:36	0° \mathcal{Q}	
direct	13650 Dec 29 13:22	9° \mathcal{B} 11'01		evening set	13657 Jun 28 14:47	3° \mathcal{Q} 18'12	
	13651 Mar 27 15:14	15° \mathcal{B}					
evening set	13651 Apr 13 10:18	17° \mathcal{B} 00'01		conjunction	13657 Jul 15 11:37	5° \mathcal{Q} 22'32	-1°46'48
				minimum elong	13657 Jul 15 11:37	5° \mathcal{Q} 22'32	1°47'42
conjunction	13651 Apr 30 19:55	19° \mathcal{B} 10'02	-0°30'15	max. Earth dist.	13657 Jul 15 18:00	5° \mathcal{Q} 24'31	10.61751 AU
minimum elong	13651 Apr 30 19:53	19° \mathcal{B} 10'01	0°30'59	morning rise	13657 Aug 01 08:12	7° \mathcal{Q} 26'48	
max. Earth dist.	13651 Apr 30 09:36	19° \mathcal{B} 06'48	10.43836 AU	retrograde	13657 Nov 11 23:46	14° \mathcal{Q} 57'56	
morning rise	13651 May 18 02:28	21° \mathcal{B} 19'12		opposition	13658 Jan 20 09:27	11° \mathcal{Q} 36'27	-2°10'19
retrograde	13651 Aug 27 15:00	28° \mathcal{B} 55'15		min. Earth dist.	13658 Jan 20 03:13	11° \mathcal{Q} 37'38	8.63252 AU
opposition	13651 Nov 03 13:56	25° \mathcal{B} 33'11	-0°51'25	direct	13658 Mar 30 19:42	8° \mathcal{Q} 14'51	
min. Earth dist.	13651 Nov 03 21:14	25° \mathcal{B} 31'46	8.44983 AU		13658 Jul 05 02:42	15° \mathcal{Q}	
direct	13652 Jan 12 01:05	22° \mathcal{B} 07'30		evening set	13658 Jul 11 05:03	15° \mathcal{Q} 43'43	
evening set	13652 Apr 25 19:02	29° \mathcal{B} 54'49					
	13652 Apr 26 11:55	0° Π		conjunction	13658 Jul 28 01:33	17° \mathcal{Q} 47'35	-1°43'17
				minimum elong	13658 Jul 28 01:34	17° \mathcal{Q} 47'35	1°44'03
conjunction	13652 May 13 01:53	2° Π 03'52	-0°52'20	max. Earth dist.	13658 Jul 28 09:22	17° \mathcal{Q} 49'59	10.64384 AU
minimum elong	13652 May 13 01:51	2° Π 03'51	0°53'13	morning rise	13658 Aug 13 22:37	19° \mathcal{Q} 51'34	
max. Earth dist.	13652 May 12 17:41	2° Π 01'18	10.46219 AU	retrograde	13658 Nov 24 19:52	27° \mathcal{Q} 22'15	
morning rise	13652 May 30 05:55	4° Π 12'08		opposition	13659 Feb 02 11:29	24° \mathcal{Q} 00'32	-2°02'53
retrograde	13652 Sep 08 19:25	11° Π 47'12		min. Earth dist.	13659 Feb 02 04:04	24° \mathcal{Q} 01'56	8.65589 AU
opposition	13652 Nov 15 23:45	8° Π 25'28	-1°17'13	direct	13659 Apr 12 18:49	20° \mathcal{Q} 39'25	
min. Earth dist.	13652 Nov 16 05:34	8° Π 24'20	8.47624 AU	evening set	13659 Jul 23 17:07	28° \mathcal{Q} 05'15	
direct	13653 Jan 24 12:37	5° Π 00'26			13659 Aug 08 09:15	0° \mathcal{P}	
evening set	13653 May 09 00:38	12° Π 45'29					
				conjunction	13659 Aug 09 14:06	0° \mathcal{P} 08'52	-1°34'59
conjunction	13653 May 26 04:40	14° Π 53'28	-1°11'41	minimum elong	13659 Aug 09 14:08	0° \mathcal{P} 08'53	1°35'36
minimum elong	13653 May 26 04:38	14° Π 53'27	1°12'41	max. Earth dist.	13659 Aug 09 23:32	0° \mathcal{P} 11'46	10.66411 AU
max. Earth dist.	13653 May 25 22:33	14° Π 51'33	10.49043 AU	morning rise	13659 Aug 26 12:16	2° \mathcal{P} 12'48	
morning rise	13653 Jun 12 06:25	17° Π 00'47		retrograde	13659 Dec 07 15:40	9° \mathcal{P} 43'23	
retrograde	13653 Sep 21 21:47	24° Π 34'57		opposition	13660 Feb 15 11:46	6° \mathcal{P} 21'20	-1°49'48
opposition	13653 Nov 29 08:57	21° Π 13'27	-1°39'00	min. Earth dist.	13660 Feb 15 02:40	6° \mathcal{P} 23'04	8.67260 AU
min. Earth dist.	13653 Nov 29 12:41	21° Π 12'44	8.50642 AU	direct	13660 Apr 24 16:40	3° \mathcal{P} 00'38	
direct	13654 Feb 07 00:04	17° Π 49'08		evening set	13660 Aug 04 04:04	10° \mathcal{P} 23'51	

conjunction	13660 Aug 21 02:15	12°  27'31	-1°22'20	conjunction	13666 Nov 03 22:24	26°  17'00	0°42'33
minimum elong	13660 Aug 21 02:18	12°  27'32	1°22'46	minimum elong	13666 Nov 03 22:22	26°  16'59	0°43'22
max. Earth dist.	13660 Aug 21 13:50	12°  31'04	10.67761 AU	max. Earth dist.	13666 Nov 04 08:36	26°  20'06	10.62670 AU
morning rise	13660 Sep 07 01:58	14°  31'37		morning rise	13666 Nov 21 10:29	28°  24'26	
retrograde	13660 Dec 19 13:19	22°  02'17			13666 Dec 05 01:45	0° 	
opposition	13661 Feb 27 10:14	18°  39'51	-1°31'43	retrograde	13667 Mar 05 20:04	6°  30'18	
min. Earth dist.	13661 Feb 26 23:36	18°  41'52	8.68249 AU	opposition	13667 May 14 05:04	2°  35'19	1°05'31
direct	13661 May 07 11:06	15°  19'22		min. Earth dist.	13667 May 13 21:36	2°  36'47	8.61420 AU
evening set	13661 Aug 16 14:36	22°  40'31			13667 Jun 21 02:09	30° 	
				direct	13667 Jul 21 07:25	29°  13'12	
conjunction	13661 Sep 02 14:22	24°  44'24	-1°05'57		13667 Aug 20 06:08	0° 	
minimum elong	13661 Sep 02 14:24	24°  44'24	1°06'10	evening set	13667 Oct 30 10:55	6°  37'06	
max. Earth dist.	13661 Sep 03 03:22	24°  48'22	10.68443 AU				
morning rise	13661 Sep 19 16:02	26°  48'51		conjunction	13667 Nov 16 21:56	8°  44'26	1°02'39
	13661 Oct 17 22:23	0° 		minimum elong	13667 Nov 16 21:54	8°  44'26	1°03'36
retrograde	13662 Jan 01 09:20	4°  19'48		max. Earth dist.	13667 Nov 17 05:10	8°  46'39	10.60020 AU
opposition	13662 Mar 12 07:27	0°  56'54	-1°09'30	morning rise	13667 Dec 04 11:30	10°  52'33	
min. Earth dist.	13662 Mar 11 20:05	0°  59'04	8.68576 AU	retrograde	13668 Mar 17 20:37	18°  52'52	
	13662 Mar 24 21:08	30° 		opposition	13668 May 25 23:57	15°  04'43	1°28'43
direct	13662 May 20 02:58	27°  36'29		min. Earth dist.	13668 May 25 19:04	15°  05'40	8.58635 AU
	13662 Jul 13 01:20	0° 		direct	13668 Aug 02 00:24	11°  41'57	
evening set	13662 Aug 29 01:19	4°  56'12		evening set	13668 Nov 11 12:22	19°  08'52	
conjunction	13662 Sep 15 02:49	7°  00'25	-0°46'34	conjunction	13668 Nov 29 00:44	21°  16'55	1°19'53
minimum elong	13662 Sep 15 02:51	7°  00'25	0°46'34	minimum elong	13668 Nov 29 00:42	21°  16'55	1°20'55
max. Earth dist.	13662 Sep 15 15:59	7°  04'26	10.68473 AU	max. Earth dist.	13668 Nov 29 04:48	21°  18'10	10.57086 AU
morning rise	13662 Oct 02 06:47	9°  05'21		morning rise	13668 Dec 16 15:26	23°  52'39	
retrograde	13663 Jan 14 04:56	16°  36'49			13669 Feb 23 05:20	0° 	
opposition	13663 Mar 25 03:31	13°  13'26	-0°44'07	retrograde	13669 Mar 30 21:39	1°  30'42'27	
min. Earth dist.	13663 Mar 24 16:33	13°  15'33	8.68271 AU		13669 May 05 21:48	30° 	
direct	13663 Jun 01 19:14	9°  52'56		opposition	13669 Jun 07 19:43	27°  53'13	1°47'50
evening set	13663 Sep 10 13:05	17°  11'54		min. Earth dist.	13669 Jun 07 17:21	27°  53'41	8.55638 AU
				direct	13669 Aug 14 20:16	24°  51'46	
conjunction	13663 Sep 27 16:34	19°  16'36	-0°25'03		13669 Nov 09 15:22	0° 	
minimum elong	13663 Sep 27 16:35	19°  16'37	0°24'49	evening set	13669 Nov 24 17:16	1°  34'08	
max. Earth dist.	13663 Sep 28 05:07	19°  20'26	10.67880 AU				
morning rise	13663 Oct 14 22:56	21°  22'07		conjunction	13669 Dec 12 06:57	3°  54'56	1°33'23
retrograde	13664 Jan 27 01:25	28°  54'20		minimum elong	13669 Dec 12 06:55	3°  54'55	1°34'26
opposition	13664 Apr 05 22:27	25°  30'29	-0°16'41	max. Earth dist.	13669 Dec 12 08:25	3°  55'23	10.54019 AU
min. Earth dist.	13664 Apr 05 12:08	25°  32'28	8.67364 AU	morning rise	13669 Dec 29 22:24	6°  30'41'6	
direct	13664 Jun 13 10:13	22°  09'43		retrograde	13670 Apr 13 01:31	13°  34'42'6	
evening set	13664 Sep 22 02:30	29°  28'45		opposition	13670 Jun 20 16:49	10°  31'12	2°01'52
	13664 Sep 26 10:43	0° 		min. Earth dist.	13670 Jun 20 16:18	10°  31'18	8.52584 AU
				direct	13670 Aug 27 17:16	6°  55'07	
conjunction	13664 Oct 09 08:08	1°  34'03	-0°02'24	evening set	13670 Dec 08 01:26	14°  32'09	
minimum elong	13664 Oct 09 08:08	1°  34'03	0°01'56				
behind sun begin	13664 Oct 09 01:00	1°  31'54		conjunction	13670 Dec 25 16:19	16°  38'41	1°42'24
behind sun end	13664 Oct 09 15:16	1°  36'12		minimum elong	13670 Dec 25 16:18	16°  38'40	1°43'25
max. Earth dist.	13664 Oct 09 20:21	1°  37'46	10.66687 AU	max. Earth dist.	13670 Dec 25 15:36	16°  38'27	10.50972 AU
morning rise	13664 Oct 26 16:42	3°  40'11		morning rise	13671 Jan 12 08:14	18°  34'35	
asc. node	13664 Nov 17 12:50	6°  10'09		retrograde	13671 Apr 26 07:03	26°  32'55	
retrograde	13665 Feb 07 21:31	11°  13'24		opposition	13671 Jul 03 15:27	23°  30'48	2°10'01
opposition	13665 Apr 18 16:45	7°  49'06	0°11'34	min. Earth dist.	13671 Jul 03 16:46	23°  30'43	8.49618 AU
min. Earth dist.	13665 Apr 18 06:53	7°  51'01	8.65879 AU	direct	13671 Sep 09 16:35	19°  34'07	
direct	13665 Jun 26 01:28	4°  12'28'00		evening set	13671 Dec 21 12:55	27°  31'7'54	
evening set	13665 Oct 04 18:14	11°  14'47'53					
				conjunction	13672 Jan 08 04:43	29°  32'07	1°46'23
conjunction	13665 Oct 22 01:54	13°  15'53'50	0°20'33	minimum elong	13672 Jan 08 04:43	29°  32'07	1°47'21
minimum elong	13665 Oct 22 01:53	13°  15'53'49	0°21'13	max. Earth dist.	13672 Jan 08 01:08	29°  32'01	10.48101 AU
max. Earth dist.	13665 Oct 22 13:42	13°  15'57'25	10.64925 AU		13672 Jan 12 11:43	0° 	
	13665 Oct 31 03:02	15° 		morning rise	13672 Jan 25 20:53	1°  38'32	
morning rise	13665 Nov 08 12:18	16°  10'00'36		retrograde	13672 May 08 13:52	9°  35'49	2°11'44
retrograde	13666 Feb 20 19:40	23°  10'35'05		opposition	13672 Jul 15 15:46	5°  55'49	2°11'44
opposition	13666 May 01 10:47	20°  10'23	0°39'23	min. Earth dist.	13672 Jul 15 19:27	5°  55'05	8.46897 AU
min. Earth dist.	13666 May 01 01:33	20°  12'11	8.63869 AU	direct	13672 Sep 21 18:14	2°  53'30'36	
direct	13666 Jul 08 16:51	16°  14'48'51		evening set	13673 Jan 03 02:59	10°  53'11'58	
evening set	13666 Oct 17 12:56	24°  10'21					

conjunction	13673 Jan 20 19:24	12° \approx 22'48	1°45'04	conjunction	13679 Apr 11 19:45	0° \mathcal{B} 40'56	0°04'16
minimum elong	13673 Jan 20 19:25	12° \approx 22'49	1°45'54	minimum elong	13679 Apr 11 19:46	0° \mathcal{B} 40'57	0°03'50
max. Earth dist.	13673 Jan 20 12:37	12° \approx 20'42	10.45562 AU	behind sun begin	13679 Apr 11 12:39	0° \mathcal{B} 38'44	
morning rise	13673 Feb 07 11:42	14° \approx 33'39		behind sun end	13679 Apr 12 02:53	0° \mathcal{B} 43'09	
	13673 Feb 11 02:50	15° \approx		max. Earth dist.	13679 Apr 11 05:24	0° \mathcal{B} 36'27	10.41700 AU
retrograde	13673 May 21 22:05	22° \approx 16'11		morning rise	13679 Apr 29 05:52	2° \mathcal{B} 51'18	
opposition	13673 Jul 28 18:05	18° \approx 51'43	2°06'49	desc. node	13679 Jun 17 06:43	8° \mathcal{B} 07'40	
min. Earth dist.	13673 Jul 29 00:21	18° \approx 50'28	8.44571 AU	retrograde	13679 Aug 08 21:29	10° \mathcal{B} 29'21	
direct	13673 Oct 04 22:26	15° \approx 26'01		opposition	13679 Oct 15 13:54	7° \mathcal{B} 07'13	-0°09'43
evening set	13674 Jan 16 18:52	23° \approx 10'34		min. Earth dist.	13679 Oct 16 01:04	7° \mathcal{B} 05'01	8.42228 AU
				direct	13679 Dec 23 19:49	3° \mathcal{B} 41'09	
conjunction	13674 Feb 03 11:42	25° \approx 21'55	1°38'24	evening set	13680 Apr 06 19:55	11° \mathcal{B} 31'20	
minimum elong	13674 Feb 03 11:45	25° \approx 21'56	1°39'05				
max. Earth dist.	13674 Feb 03 01:53	25° \approx 18'52	10.43491 AU	conjunction	13680 Apr 24 06:32	13° \mathcal{B} 41'50	-0°19'54
morning rise	13674 Feb 21 03:59	27° \approx 33'08		minimum elong	13680 Apr 24 06:31	13° \mathcal{B} 41'49	0°20'33
	13674 Mar 14 00:30	0° \mathcal{H}		max. Earth dist.	13680 Apr 23 17:02	13° \mathcal{B} 37'36	10.42864 AU
retrograde	13674 Jun 04 05:50	5° \mathcal{H} 15'37			13680 May 04 16:06	15° \mathcal{B}	
opposition	13674 Aug 10 22:08	1° \mathcal{H} 51'32	1°55'25	morning rise	13680 May 11 14:23	15° \mathcal{B} 51'30	
min. Earth dist.	13674 Aug 11 06:28	1° \mathcal{H} 49'52	8.42754 AU	retrograde	13680 Aug 21 04:05	23° \mathcal{B} 28'43	
	13674 Sep 04 14:45	30° \mathcal{R} \approx		opposition	13680 Oct 28 00:27	20° \mathcal{B} 06'51	-0°39'04
direct	13674 Oct 18 06:25	28° \approx 25'29		min. Earth dist.	13680 Oct 28 10:15	20° \mathcal{B} 04'56	8.43659 AU
	13674 Nov 30 07:53	0° \mathcal{H}		direct	13681 Jan 05 09:40	16° \mathcal{B} 41'11	
evening set	13675 Jan 30 12:10	6° \mathcal{H} 12'39		evening set	13681 Apr 20 06:43	24° \mathcal{B} 30'08	
conjunction	13675 Feb 17 05:13	8° \mathcal{H} 24'22	1°26'41	conjunction	13681 May 07 14:48	26° \mathcal{B} 39'47	-0°42'53
minimum elong	13675 Feb 17 05:15	8° \mathcal{H} 24'23	1°27'10	minimum elong	13681 May 07 14:46	26° \mathcal{B} 39'47	0°43'42
max. Earth dist.	13675 Feb 16 17:27	8° \mathcal{H} 20'42	10.41977 AU	max. Earth dist.	13681 May 07 03:36	26° \mathcal{B} 36'16	10.44549 AU
morning rise	13675 Mar 06 21:04	10° \mathcal{H} 35'47		morning rise	13681 May 24 20:10	28° \mathcal{B} 48'39	
retrograde	13675 Jun 17 13:10	18° \mathcal{H} 17'46			13681 Jun 03 15:58	0° \mathcal{H}	
opposition	13675 Aug 24 03:38	14° \mathcal{H} 54'06	1°38'03	retrograde	13681 Sep 03 09:15	6° \mathcal{H} 25'01	
min. Earth dist.	13675 Aug 24 13:03	14° \mathcal{H} 52'13	8.41520 AU	opposition	13681 Nov 10 11:00	3° \mathcal{H} 03'19	-1°06'19
direct	13675 Oct 31 17:18	11° \mathcal{H} 27'48		min. Earth dist.	13681 Nov 10 18:21	3° \mathcal{H} 01'53	8.45609 AU
evening set	13676 Feb 13 05:55	19° \mathcal{H} 16'53			13681 Dec 29 04:26	30° \mathcal{R} \mathcal{B}	
				direct	13682 Jan 18 23:30	29° \mathcal{B} 38'06	
conjunction	13676 Mar 01 22:48	21° \mathcal{H} 28'48	1°10'28		13682 Feb 08 14:15	0° \mathcal{H}	
minimum elong	13676 Mar 01 22:50	21° \mathcal{H} 28'49	1°10'44	evening set	13682 May 03 14:44	7° \mathcal{H} 25'11	
max. Earth dist.	13676 Mar 01 10:06	21° \mathcal{H} 24'49	10.41076 AU				
morning rise	13676 Mar 19 13:46	23° \mathcal{H} 40'12		conjunction	13682 May 20 20:13	9° \mathcal{H} 33'51	-1°03'37
	13676 May 21 13:30	0° \mathcal{Y}		minimum elong	13682 May 20 20:11	9° \mathcal{H} 33'51	1°04'34
retrograde	13676 Jun 29 22:22	1° \mathcal{Y} 21'22		max. Earth dist.	13682 May 20 12:21	9° \mathcal{H} 31'24	10.46714 AU
	13676 Aug 08 22:51	30° \mathcal{R} \mathcal{H}		morning rise	13682 Jun 06 23:02	11° \mathcal{H} 41'49	
opposition	13676 Sep 05 10:40	27° \mathcal{H} 58'04	1°15'34	retrograde	13682 Sep 16 14:07	19° \mathcal{H} 17'21	
min. Earth dist.	13676 Sep 05 20:35	27° \mathcal{H} 56'06	8.40903 AU	opposition	13682 Nov 23 21:23	15° \mathcal{H} 55'43	-1°30'06
direct	13676 Nov 13 03:58	24° \mathcal{H} 31'39		min. Earth dist.	13682 Nov 24 02:14	15° \mathcal{H} 54'46	8.48001 AU
	13677 Feb 05 22:53	0° \mathcal{Y}		direct	13683 Feb 01 11:58	12° \mathcal{H} 30'59	
evening set	13677 Feb 25 23:12	2° \mathcal{Y} 21'51		evening set	13683 May 16 19:33	20° \mathcal{H} 15'35	
conjunction	13677 Mar 15 15:22	4° \mathcal{Y} 33'44	0°50'36	conjunction	13683 Jun 02 22:21	22° \mathcal{H} 23'13	-1°21'05
minimum elong	13677 Mar 15 15:24	4° \mathcal{Y} 33'45	0°50'38	minimum elong	13683 Jun 02 22:19	22° \mathcal{H} 23'13	1°22'07
max. Earth dist.	13677 Mar 15 02:16	4° \mathcal{Y} 29'38	10.40782 AU	max. Earth dist.	13683 Jun 02 17:40	22° \mathcal{H} 21'45	10.49264 AU
morning rise	13677 Apr 02 05:02	6° \mathcal{Y} 44'57		morning rise	13683 Jun 19 22:51	24° \mathcal{H} 30'14	
retrograde	13677 Jul 13 07:10	14° \mathcal{Y} 25'04			13683 Aug 11 01:46	0° \mathcal{G}	
opposition	13677 Sep 18 18:52	11° \mathcal{Y} 02'08	0°49'10	retrograde	13683 Sep 29 18:38	2° \mathcal{G} 04'55	
min. Earth dist.	13677 Sep 19 05:17	11° \mathcal{Y} 00'05	8.40865 AU		13683 Nov 20 07:37	30° \mathcal{R} \mathcal{H}	
direct	13677 Nov 26 16:05	7° \mathcal{Y} 35'42		opposition	13683 Dec 07 07:05	28° \mathcal{H} 43'17	-1°49'14
evening set	13678 Mar 11 15:41	15° \mathcal{Y} 26'25		min. Earth dist.	13683 Dec 07 09:39	28° \mathcal{H} 42'47	8.50728 AU
				direct	13684 Feb 14 21:18	25° \mathcal{H} 19'05	
conjunction	13678 Mar 29 06:33	17° \mathcal{Y} 38'02	0°28'07		13684 May 02 21:13	0° \mathcal{G}	
minimum elong	13678 Mar 29 06:34	17° \mathcal{Y} 38'02	0°27'55	evening set	13684 May 28 21:00	3° \mathcal{G} 00'41	
max. Earth dist.	13678 Mar 28 16:45	17° \mathcal{Y} 33'43	10.41015 AU				
morning rise	13678 Apr 15 18:36	19° \mathcal{Y} 48'54		conjunction	13684 Jun 14 21:21	5° \mathcal{G} 07'19	-1°34'26
retrograde	13678 Jul 26 14:35	27° \mathcal{Y} 27'54		minimum elong	13684 Jun 14 21:20	5° \mathcal{G} 07'18	1°35'30
opposition	13678 Oct 02 03:53	24° \mathcal{Y} 05'22	0°20'14	max. Earth dist.	13684 Jun 14 19:27	5° \mathcal{G} 06'43	10.52090 AU
min. Earth dist.	13678 Oct 02 15:09	24° \mathcal{Y} 03'09	8.41314 AU	morning rise	13684 Jul 01 20:05	7° \mathcal{G} 13'27	
direct	13678 Dec 10 05:34	20° \mathcal{Y} 39'03		retrograde	13684 Oct 11 19:42	14° \mathcal{G} 47'18	
evening set	13679 Mar 25 06:48	28° \mathcal{Y} 29'48		opposition	13684 Dec 19 15:32	11° \mathcal{G} 25'34	-2°02'53
	13679 Apr 06 09:12	0° \mathcal{B}		min. Earth dist.	13684 Dec 19 15:57	11° \mathcal{G} 25'29	8.53667 AU

direct	13685 Feb 27 05:52	8°  01'53		13691 Aug 24 00:44	0° 	
evening set	13685 Jun 10 18:55	15°  40'12				
conjunction	13685 Jun 27 17:22	17°  45'53 -1°43'08		conjunction	13691 Sep 10 04:20	2°  04'56 -0°55'02
minimum elong	13685 Jun 27 17:21	17°  45'53 1°44'10		minimum elong	13691 Sep 10 04:22	2°  04'57 0°55'06
max. Earth dist.	13685 Jun 27 18:08	17°  46'07 10.55058 AU		max. Earth dist.	13691 Sep 10 18:51	2°  09'22 10.68003 AU
morning rise	13685 Jul 14 14:56	19°  51'16		morning rise	13691 Sep 27 07:23	4°  09'41
retrograde	13685 Oct 24 19:11	27°  24'21		retrograde	13692 Jan 09 02:04	11°  40'54
opposition	13686 Jan 01 22:26	24°  20'27 -2°10'29		opposition	13692 Mar 19 02:03	8°  17'31 -0°55'06
min. Earth dist.	13686 Jan 01 20:09	24°  20'53 8.56663 AU		min. Earth dist.	13692 Mar 18 13:18	8°  19'57 8.68307 AU
direct	13686 Mar 12 12:56	20°  39'19		direct	13692 May 26 20:50	4°  56'58
evening set	13686 Jun 23 13:35	28°  14'10		evening set	13692 Sep 04 14:43	12°  16'04
	13686 Jul 07 21:24	0° 				
conjunction	13686 Jul 10 10:50	0°  19'04 -1°46'49		conjunction	13692 Sep 21 17:29	14°  20'31 -0°34'18
minimum elong	13686 Jul 10 10:50	0°  19'04 1°47'46		minimum elong	13692 Sep 21 17:30	14°  20'32 0°34'09
max. Earth dist.	13686 Jul 10 15:04	0°  20'23 10.58014 AU		max. Earth dist.	13692 Sep 22 09:02	14°  25'16 10.68397 AU
morning rise	13686 Jul 27 07:43	2°  23'51		morning rise	13692 Oct 08 22:41	16°  25'43
retrograde	13686 Nov 06 18:48	9°  56'14		retrograde	13693 Jan 20 23:18	23°  57'20
opposition	13687 Jan 15 03:34	6°  34'08 -2°11'47		opposition	13693 Mar 31 21:03	20°  33'43 -0°28'24
min. Earth dist.	13687 Jan 14 22:06	6°  35'11 8.59563 AU		min. Earth dist.	13693 Mar 31 08:02	20°  36'13 8.68373 AU
direct	13687 Mar 25 16:36	3°  11'35		direct	13693 Jun 08 10:47	17°  13'15
evening set	13687 Jul 06 05:20	10°  42'55		evening set	13693 Sep 17 03:16	24°  31'50
conjunction	13687 Jul 23 02:09	12°  47'15 -1°45'25		conjunction	13693 Oct 04 07:57	26°  36'45 -0°12'02
minimum elong	13687 Jul 23 02:10	12°  47'16 1°46'15		minimum elong	13693 Oct 04 07:57	26°  36'45 0°11'40
max. Earth dist.	13687 Jul 23 10:01	12°  49'42 10.60815 AU		behind sun begin	13693 Oct 04 02:54	26°  35'14
morning rise	13687 Aug 08 23:01	14°  51'37		behind sun end	13693 Oct 04 13:01	26°  38'17
	13687 Aug 10 02:46	15° 		max. Earth dist.	13693 Oct 04 22:55	26°  41'18 10.68169 AU
retrograde	13687 Nov 19 17:16	22°  23'26		morning rise	13693 Oct 21 15:22	28°  42'30
opposition	13688 Jan 28 06:52	19°  01'05 -2°06'51			13693 Nov 01 16:12	0° 
min. Earth dist.	13688 Jan 27 22:38	19°  02'40 8.62228 AU		retrograde	13694 Feb 02 20:01	6°  14'46
direct	13688 Apr 06 16:28	15°  39'07		opposition	13694 Apr 13 15:27	2°  50'57 -0°00'24
evening set	13688 Jul 17 18:41	23°  07'04		min. Earth dist.	13694 Apr 13 03:26	2°  53'16 8.67835 AU
conjunction	13688 Aug 03 15:40	25°  11'03 -1°39'05		asc. node	13694 Apr 18 20:49	2°  26'50
minimum elong	13688 Aug 03 15:42	25°  11'04 1°39'45			13694 May 28 00:16	30°  14'46
max. Earth dist.	13688 Aug 04 02:20	25°  14'20 10.63322 AU		direct	13694 Jun 21 00:20	29°  30'24
morning rise	13688 Aug 20 13:19	27°  15'14		evening set	13694 Jul 14 20:52	0° 
	13688 Sep 13 10:32	0° 			13694 Sep 29 17:39	6°  14'17
retrograde	13688 Dec 01 14:38	4°  46'36		conjunction	13694 Oct 17 00:13	8°  54'44 0°10'55
opposition	13689 Feb 09 08:16	1°  42'01 -1°56'03		minimum elong	13694 Oct 17 00:13	8°  54'44 0°11'30
min. Earth dist.	13689 Feb 08 22:22	1°  42'54 8.64523 AU		behind sun begin	13694 Oct 16 19:04	8°  53'11
	13689 Feb 28 05:45	30°  02'32		behind sun end	13694 Oct 17 05:21	8°  56'16
direct	13689 Apr 19 14:23	28°  02'32		max. Earth dist.	13694 Oct 17 13:34	8°  58'47 10.67341 AU
evening set	13689 Jun 07 05:32	0° 		morning rise	13694 Nov 03 09:47	11°  01'02
conjunction	13689 Aug 16 04:09	7°  31'17 -1°28'11			13694 Dec 09 18:09	15° 
minimum elong	13689 Aug 16 04:11	7°  31'18 1°28'41		retrograde	13695 Feb 15 16:42	18°  34'13
max. Earth dist.	13689 Aug 16 16:03	7°  34'57 10.65410 AU		opposition	13695 Apr 26 09:22	15°  10'13 0°27'41
morning rise	13689 Sep 02 03:13	9°  35'30		min. Earth dist.	13695 Apr 25 23:04	15°  12'13 8.66718 AU
retrograde	13689 Dec 14 11:22	17°  06'33			13695 Apr 28 14:10	15°  14'10
opposition	13690 Feb 22 07:46	13°  43'44 -1°39'56		direct	13695 Jul 03 15:41	11°  49'26
min. Earth dist.	13690 Feb 21 21:03	13°  45'47 8.66345 AU			13695 Sep 04 04:33	15° 
direct	13690 May 02 09:35	10°  22'39		evening set	13695 Oct 12 10:43	19°  09'23
evening set	13690 Aug 11 17:14	17°  45'02		conjunction	13695 Oct 29 19:09	21°  15'26 0°33'20
conjunction	13690 Aug 28 16:10	19°  48'54 -1°13'16		minimum elong	13695 Oct 29 19:07	21°  15'26 0°34'05
minimum elong	13690 Aug 28 16:12	19°  48'55 1°13'34		max. Earth dist.	13695 Oct 30 06:31	21°  18'54 10.65935 AU
max. Earth dist.	13690 Aug 29 05:14	19°  52'54 10.66992 AU		morning rise	13695 Nov 16 06:33	23°  22'20
morning rise	13690 Sep 14 17:08	21°  53'19			13696 Jan 25 22:38	0° 
retrograde	13690 Dec 27 06:08	29°  24'18		retrograde	13696 Feb 28 14:48	0°  56'34
opposition	13691 Mar 07 05:42	26°  01'13 -1°19'18			13696 Apr 02 14:21	30°  14'10
min. Earth dist.	13691 Mar 06 17:58	26°  03'28 8.67624 AU		opposition	13696 May 08 02:55	27°  32'24 0°54'35
direct	13691 May 15 03:28	22°  40'27		min. Earth dist.	13696 May 07 18:26	27°  34'03 8.65043 AU
evening set	13691 Aug 24 03:35	0° 		direct	13696 Jul 15 06:38	24°  11'14
				evening set	13696 Oct 11 00:03	0° 
					13696 Oct 24 06:42	1°  33'00
				conjunction	13696 Nov 10 16:54	3°  39'41 0°54'17

minimum elong	13696 Nov 10 16:53	3°♊39'40	0°55'11	minimum elong	13703 Jan 29 17:42	19°♊50'05	1°42'44
max. Earth dist.	13696 Nov 11 02:30	3°♊42'36	10.63964 AU	max. Earth dist.	13703 Jan 29 08:41	19°♊47'17	10.45992 AU
morning rise	13696 Nov 28 05:42	5°♊47'09		morning rise	13703 Feb 16 09:49	22°♊00'50	
retrograde	13697 Mar 12 13:45	13°♊22'36		retrograde	13703 May 30 14:08	29°♊42'16	
opposition	13697 May 20 20:46	9°♊58'16	1°19'03	opposition	13703 Aug 06 08:56	26°♊18'01	2°01'13
min. Earth dist.	13697 May 20 13:55	9°♊59'36	8.62816 AU	min. Earth dist.	13703 Aug 06 16:35	26°♊16'30	8.44864 AU
direct	13697 Jul 27 22:55	6°♊36'34		direct	13703 Oct 13 16:55	22°♊52'07	
evening set	13697 Nov 06 05:44	14°♊00'49		evening set	13704 Jan 20 14:13	0°♊	
					13704 Jan 25 16:37	0°♊37'00	
conjunction	13697 Nov 23 17:27	16°♊08'10	1°12'48	conjunction	13704 Feb 12 09:38	2°♊48'20	1°32'31
minimum elong	13697 Nov 23 17:25	16°♊08'10	1°13'47	minimum elong	13704 Feb 12 09:40	2°♊48'21	1°33'06
max. Earth dist.	13697 Nov 24 00:25	16°♊10'18	10.61442 AU	max. Earth dist.	13704 Feb 11 22:17	2°♊44'48	10.43661 AU
morning rise	13697 Dec 11 07:20	18°♊16'13		morning rise	13704 Mar 01 01:27	4°♊59'25	
retrograde	13698 Mar 25 14:49	25°♊53'02		retrograde	13704 Jun 11 21:21	12°♊40'42	
opposition	13698 Jun 02 15:19	22°♊28'35	1°39'57	opposition	13704 Aug 18 12:46	9°♊16'40	1°46'32
min. Earth dist.	13698 Jun 02 10:51	22°♊29'27	8.60065 AU	min. Earth dist.	13704 Aug 18 22:26	9°♊14'45	8.42790 AU
direct	13698 Aug 09 16:11	19°♊06'15		direct	13704 Oct 26 00:29	5°♊50'15	
evening set	13698 Nov 19 08:17	26°♊33'38		evening set	13705 Feb 07 09:06	13°♊37'34	
conjunction	13698 Dec 06 21:16	28°♊41'43	1°27'56	conjunction	13705 Feb 25 02:01	15°♊49'14	1°18'19
minimum elong	13698 Dec 06 21:14	28°♊41'42	1°28'59	minimum elong	13705 Feb 25 02:04	15°♊49'15	1°18'41
max. Earth dist.	13698 Dec 07 00:29	28°♊42'42	10.58453 AU	max. Earth dist.	13705 Feb 24 12:20	15°♊44'58	10.41911 AU
	13698 Dec 17 13:24	0°♊		morning rise	13705 Mar 14 17:20	18°♊00'29	
morning rise	13698 Dec 24 12:05	0°♊50'21		retrograde	13705 Jun 25 05:07	25°♊41'18	
retrograde	13699 Apr 07 17:56	8°♊28'34		opposition	13705 Aug 31 18:14	22°♊17'31	1°26'20
opposition	13699 Jun 15 10:53	5°♊04'04	1°56'14	min. Earth dist.	13705 Sep 01 05:29	22°♊15'17	8.41341 AU
min. Earth dist.	13699 Jun 15 09:34	5°♊04'20	8.56933 AU	direct	13705 Nov 08 09:47	18°♊50'44	
direct	13699 Aug 22 10:11	1°♊41'00		evening set	13706 Feb 21 01:41	26°♊39'48	
evening set	13699 Dec 02 14:15	9°♊12'01					
conjunction	13699 Dec 20 04:19	11°♊20'49	1°38'56	conjunction	13706 Mar 10 18:07	28°♊51'37	1°00'02
minimum elong	13699 Dec 20 04:18	11°♊20'49	1°39'59	minimum elong	13706 Mar 10 18:09	28°♊51'38	1°00'11
max. Earth dist.	13699 Dec 20 03:16	11°♊20'30	10.55197 AU	max. Earth dist.	13706 Mar 10 03:02	28°♊46'54	10.40825 AU
morning rise	13700 Jan 06 19:54	13°♊30'05			13706 Mar 19 21:07	0°♊	
retrograde	13700 Apr 20 20:49	21°♊09'33		morning rise	13706 Mar 28 08:35	1°♊02'52	
opposition	13700 Jun 28 07:56	17°♊45'03	2°07'00	retrograde	13706 Jul 08 11:52	8°♊42'56	
min. Earth dist.	13700 Jun 28 09:50	17°♊44'41	8.53649 AU	opposition	13706 Sep 14 01:06	5°♊19'26	1°01'37
direct	13700 Sep 04 08:21	14°♊21'13		min. Earth dist.	13706 Sep 14 13:00	5°♊17'04	8.40579 AU
evening set	13700 Dec 15 23:14	21°♊56'01		direct	13706 Nov 21 21:55	1°♊52'29	
				evening set	13707 Mar 06 17:55	9°♊42'37	
conjunction	13701 Jan 02 14:17	24°♊05'32	1°45'10	conjunction	13707 Mar 24 09:23	11°♊54'20	0°38'40
minimum elong	13701 Jan 02 14:17	24°♊05'32	1°46'10	minimum elong	13707 Mar 24 09:24	11°♊54'21	0°38'33
max. Earth dist.	13701 Jan 02 09:56	24°♊04'12	10.51905 AU	max. Earth dist.	13707 Mar 23 18:10	11°♊49'34	10.40441 AU
morning rise	13701 Jan 20 06:18	26°♊15'21		morning rise	13707 Apr 10 22:25	14°♊05'23	
	13701 Feb 22 14:18	0°♊		retrograde	13707 Jul 21 18:23	21°♊44'33	
retrograde	13701 May 04 00:27	3°♊55'52		opposition	13707 Sep 27 09:04	18°♊21'21	0°33'43
opposition	13701 Jul 11 06:34	0°♊31'24	2°11'36	min. Earth dist.	13707 Sep 27 20:23	18°♊19'07	8.40540 AU
min. Earth dist.	13701 Jul 11 10:46	0°♊30'34	8.50428 AU	direct	13707 Dec 05 11:07	14°♊54'26	
	13701 Jul 17 21:34	30°♊		evening set	13708 Mar 19 09:02	22°♊44'56	
direct	13701 Sep 17 09:44	27°♊06'49					
	13701 Nov 15 15:09	0°♊		conjunction	13708 Apr 05 23:01	24°♊56'19	0°15'19
evening set	13701 Dec 29 11:00	4°♊45'18		minimum elong	13708 Apr 05 23:01	24°♊56'19	0°14'58
conjunction	13702 Jan 16 02:58	6°♊55'31	1°46'14	behind sun begin	13708 Apr 05 20:27	24°♊55'31	
minimum elong	13702 Jan 16 02:59	6°♊55'31	1°47'08	behind sun end	13708 Apr 06 01:36	24°♊57'07	
max. Earth dist.	13702 Jan 15 20:08	6°♊53'24	10.48783 AU	max. Earth dist.	13708 Apr 05 09:05	24°♊51'57	10.40785 AU
morning rise	13702 Feb 02 19:10	9°♊05'50		morning rise	13708 Apr 23 10:08	27°♊06'55	
	13702 Apr 01 09:50	15°♊			13708 May 18 01:43	0°♊	
retrograde	13702 May 17 07:02	16°♊47'02		retrograde	13708 Aug 03 02:00	4°♊45'08	
	13702 Jul 02 23:29	15°♊		opposition	13708 Oct 09 18:08	1°♊22'17	0°04'06
opposition	13702 Jul 24 06:50	13°♊22'38	2°09'41	min. Earth dist.	13708 Oct 10 04:20	1°♊20'16	8.41235 AU
min. Earth dist.	13702 Jul 24 12:48	13°♊21'27	8.47453 AU		13708 Oct 27 15:28	30°♊	
direct	13702 Sep 30 11:50	9°♊57'20		desc. node	13708 Nov 29 16:24	28°♊12'50	
	13702 Dec 20 05:18	15°♊		direct	13708 Dec 17 23:39	27°♊55'37	
evening set	13703 Jan 12 00:58	17°♊39'14			13709 Feb 06 01:20	0°♊	
				evening set	13709 Apr 01 22:22	5°♊45'43	
conjunction	13703 Jan 29 17:40	19°♊50'05	1°41'58				

conjunction	13709 Apr 19 10:21	7°♄56'33	-0°08'52	evening set	13715 Jun 18 22:23	22°♄35'26	
minimum elong	13709 Apr 19 10:20	7°♄56'32	0°09'26				
behind sun begin	13709 Apr 19 04:21	7°♄54'41		conjunction	13715 Jul 05 20:08	24°♄40'33	-1°45'33
behind sun end	13709 Apr 19 16:19	7°♄58'24		minimum elong	13715 Jul 05 20:08	24°♄40'33	1°46'33
max. Earth dist.	13709 Apr 18 21:59	7°♄52'41	10.41842 AU	max. Earth dist.	13715 Jul 06 00:11	24°♄41'49	10.58124 AU
morning rise	13709 May 06 19:13	10°♄06'31		morning rise	13715 Jul 22 17:04	26°♄45'26	
	13709 Jun 20 11:52	15°♄			13715 Aug 20 01:25	0°♄	
retrograde	13709 Aug 16 09:23	17°♄43'46		retrograde	13715 Nov 02 02:56	4°♄17'43	
	13709 Oct 14 21:41	15°♄♄		opposition	13716 Jan 10 07:10	0°♄56'18	-2°11'42
opposition	13709 Oct 23 03:51	14°♄21'18	-0°25'40	min. Earth dist.	13716 Jan 10 02:44	0°♄57'09	8.59829 AU
min. Earth dist.	13709 Oct 23 13:02	14°♄19'30	8.42631 AU		13716 Jan 22 17:26	30°♄♄	
direct	13709 Dec 31 11:31	10°♄55'02		direct	13716 Mar 19 19:11	27°♄34'08	
	13710 Mar 13 16:43	15°♄			13716 May 13 11:28	0°♄	
evening set	13710 Apr 15 09:49	18°♄44'10		evening set	13716 Jun 30 15:30	5°♄06'41	
conjunction	13710 May 02 19:15	20°♄54'11	-0°32'26	conjunction	13716 Jul 17 12:17	7°♄11'06	-1°46'32
minimum elong	13710 May 02 19:13	20°♄54'11	0°33'11	minimum elong	13716 Jul 17 12:18	7°♄11'06	1°47'25
max. Earth dist.	13710 May 02 08:23	20°♄50'47	10.43555 AU	max. Earth dist.	13716 Jul 17 18:26	7°♄13'00	10.61239 AU
morning rise	13710 May 20 01:43	23°♄03'23		morning rise	13716 Aug 03 09:04	9°♄15'29	
	13710 Aug 02 06:27	0°♄♄			13716 Sep 28 13:55	15°♄	
retrograde	13710 Aug 29 14:07	0°♄♄39'40		retrograde	13716 Nov 14 00:11	16°♄47'02	
	13710 Sep 26 05:59	30°♄♄			13716 Dec 31 23:27	15°♄♄	
opposition	13710 Nov 05 13:47	27°♄17'34	-0°54'00	opposition	13717 Jan 22 11:10	13°♄25'29	-2°09'40
min. Earth dist.	13710 Nov 05 21:53	27°♄15'59	8.44651 AU	min. Earth dist.	13717 Jan 22 04:53	13°♄26'41	8.62800 AU
direct	13711 Jan 14 01:00	23°♄51'50		direct	13717 Apr 01 20:44	10°♄03'53	
	13711 Apr 14 22:43	0°♄♄			13717 Jun 21 04:44	15°♄	
evening set	13711 Apr 28 18:40	1°♄♄39'23		evening set	13717 Jul 13 05:57	17°♄32'59	
conjunction	13711 May 16 01:17	3°♄♄48'27	-0°54'18	conjunction	13717 Jul 30 02:35	19°♄36'55	-1°42'29
minimum elong	13711 May 16 01:15	3°♄♄48'26	0°55'12	minimum elong	13717 Jul 30 02:37	19°♄36'56	1°43'15
max. Earth dist.	13711 May 15 16:08	3°♄♄45'35	10.45835 AU	max. Earth dist.	13717 Jul 30 10:55	19°♄39'29	10.64010 AU
morning rise	13711 Jun 02 05:20	5°♄♄56'45		morning rise	13717 Aug 15 23:51	21°♄40'59	
retrograde	13711 Sep 11 18:26	13°♄♄32'10		retrograde	13717 Nov 26 21:04	29°♄12'00	
opposition	13711 Nov 18 23:49	10°♄♄10'23	-1°19'28	opposition	13718 Feb 04 13:18	25°♄50'13	-2°01'36
min. Earth dist.	13711 Nov 19 06:00	10°♄♄09'11	8.47196 AU	min. Earth dist.	13718 Feb 04 05:02	25°♄51'47	8.65302 AU
direct	13712 Jan 27 13:35	6°♄♄45'18		direct	13718 Apr 14 21:41	22°♄29'07	
evening set	13712 May 11 00:22	14°♄♄30'38		evening set	13718 Jul 25 18:15	29°♄55'01	
					13718 Jul 26 10:50	0°♄♄	
conjunction	13712 May 28 04:14	16°♄♄38'39	-1°13'20	conjunction	13718 Aug 11 15:28	1°♄♄58'42	-1°33'42
minimum elong	13712 May 28 04:12	16°♄♄38'39	1°14'20	minimum elong	13718 Aug 11 15:30	1°♄♄58'43	1°34'18
max. Earth dist.	13712 May 27 21:57	16°♄♄36'41	10.48572 AU	max. Earth dist.	13718 Aug 12 02:15	2°♄♄02'01	10.66216 AU
morning rise	13712 Jun 14 05:57	18°♄♄46'01		morning rise	13718 Aug 28 13:41	4°♄♄02'41	
retrograde	13712 Sep 23 22:23	26°♄♄20'37		retrograde	13718 Dec 09 18:45	11°♄♄33'26	
opposition	13712 Dec 01 09:18	22°♄♄59'02	-1°40'49	opposition	13719 Feb 17 13:38	8°♄♄11'20	-1°47'57
min. Earth dist.	13712 Dec 01 12:35	22°♄♄58'24	8.50137 AU	min. Earth dist.	13719 Feb 17 03:25	8°♄♄13'16	8.67150 AU
direct	13713 Feb 09 00:01	19°♄♄34'42		direct	13719 Apr 27 18:01	4°♄♄50'39	
evening set	13713 May 24 02:57	27°♄♄17'18		evening set	13719 Aug 07 05:22	12°♄♄13'49	
conjunction	13713 Jun 10 04:24	29°♄♄24'17	-1°28'38	conjunction	13719 Aug 24 03:43	14°♄♄17'31	-1°20'38
minimum elong	13713 Jun 10 04:23	29°♄♄24'17	1°29'41	minimum elong	13719 Aug 24 03:46	14°♄♄17'32	1°21'02
max. Earth dist.	13713 Jun 10 01:48	29°♄♄23'28	10.51632 AU	max. Earth dist.	13719 Aug 24 16:15	14°♄♄21'21	10.67734 AU
	13713 Jun 14 22:44	0°♄♄		morning rise	13719 Sep 10 03:31	16°♄♄21'40	
morning rise	13713 Jun 27 03:58	1°♄♄30'43		retrograde	13719 Dec 22 15:25	23°♄♄52'22	
retrograde	13713 Oct 07 00:24	9°♄♄04'30		opposition	13720 Mar 01 12:15	20°♄♄29'54	-1°29'23
opposition	13713 Dec 14 17:45	5°♄♄43'05	-1°57'03	min. Earth dist.	13720 Mar 01 01:11	20°♄♄32'01	8.68295 AU
min. Earth dist.	13713 Dec 14 17:58	5°♄♄43'02	8.53326 AU	direct	13720 May 09 11:31	17°♄♄09'28	
direct	13714 Feb 22 09:05	2°♄♄19'29		evening set	13720 Aug 18 16:01	24°♄♄30'32	
evening set	13714 Jun 06 02:20	9°♄♄59'00					
conjunction	13714 Jun 23 01:44	12°♄♄04'59	-1°39'32	conjunction	13720 Sep 04 15:51	26°♄♄34'25	-1°03'54
minimum elong	13714 Jun 23 01:43	12°♄♄04'58	1°40'34	minimum elong	13720 Sep 04 15:53	26°♄♄34'25	1°04'05
max. Earth dist.	13714 Jun 23 02:50	12°♄♄05'19	10.54867 AU	max. Earth dist.	13720 Sep 05 04:47	26°♄♄38'22	10.68560 AU
morning rise	13714 Jul 09 23:36	14°♄♄10'33		morning rise	13720 Sep 21 17:45	28°♄♄38'53	
retrograde	13714 Oct 20 02:14	21°♄♄43'35			13720 Oct 03 06:10	0°♄♄	
opposition	13714 Dec 28 01:12	18°♄♄22'12	-2°07'28	retrograde	13721 Jan 03 11:07	6°♄♄09'47	
min. Earth dist.	13714 Dec 27 22:43	18°♄♄22'41	8.56609 AU	opposition	13721 Mar 14 09:26	2°♄♄46'54	-1°06'47
direct	13715 Mar 07 15:44	14°♄♄59'21		min. Earth dist.	13721 Mar 13 22:20	2°♄♄49'02	8.68758 AU

	13721 Apr 26 10:56	30° \mathbb{R} \mathbb{M}	retrograde	13727 Mar 20 19:53	20° \mathbb{X} 16'19	
direct	13721 May 22 05:00	29° \mathbb{M} 26'32	opposition	13727 May 29 00:14	16° \mathbb{X} 51'14	1°30'46
	13721 Jun 16 16:10	0° \mathbb{L}	min. Earth dist.	13727 May 28 19:41	16° \mathbb{X} 52'08	8.59297 AU
evening set	13721 Aug 31 02:52	6° \mathbb{L} 46'06	direct	13727 Aug 05 01:58	13° \mathbb{X} 28'30	
			evening set	13727 Nov 14 13:02	20° \mathbb{X} 55'03	
conjunction	13721 Sep 17 04:28	8° \mathbb{L} 50'19 -0°44'16				
minimum elong	13721 Sep 17 04:29	8° \mathbb{L} 50'20 0°44'13	conjunction	13727 Dec 02 01:29	23° \mathbb{X} 03'01	1°21'21
max. Earth dist.	13721 Sep 17 17:15	8° \mathbb{L} 54'13 10.68716 AU	minimum elong	13727 Dec 02 01:27	23° \mathbb{X} 03'00	1°22'23
morning rise	13721 Oct 04 08:40	10° \mathbb{L} 55'16	max. Earth dist.	13727 Dec 02 05:46	23° \mathbb{X} 04'20	10.57755 AU
retrograde	13722 Jan 16 06:44	18° \mathbb{L} 26'34	morning rise	13727 Dec 19 16:07	25° \mathbb{X} 11'38	
opposition	13722 Mar 27 05:16	15° \mathbb{L} 03'14 -0°41'10		13728 Feb 02 12:38	0° \mathbb{Z}	
min. Earth dist.	13722 Mar 26 18:27	15° \mathbb{L} 05'19 8.68569 AU	retrograde	13728 Apr 01 21:40	2° \mathbb{Z} 49'54	
direct	13722 Jun 03 20:48	11° \mathbb{L} 42'46		13728 Jun 02 07:27	30° \mathbb{R} \mathbb{X}	
evening set	13722 Sep 12 14:36	19° \mathbb{L} 01'33	opposition	13728 Jun 09 19:25	29° \mathbb{X} 24'44	1°49'21
			min. Earth dist.	13728 Jun 09 16:49	29° \mathbb{X} 25'15	8.56306 AU
conjunction	13722 Sep 29 18:16	21° \mathbb{L} 06'14 -0°22'37	direct	13728 Aug 16 20:20	26° \mathbb{X} 01'19	
minimum elong	13722 Sep 29 18:17	21° \mathbb{L} 06'14 0°22'20		13728 Oct 26 09:21	0° \mathbb{Z}	
max. Earth dist.	13722 Sep 30 07:19	21° \mathbb{L} 10'13 10.68232 AU	evening set	13728 Nov 26 17:34	3° \mathbb{Z} 31'19	
morning rise	13722 Oct 17 00:44	23° \mathbb{L} 11'44				
	13722 Dec 30 12:04	0° \mathbb{M}	conjunction	13728 Dec 14 07:19	5° \mathbb{Z} 40'00	1°34'24
retrograde	13723 Jan 29 02:08	0° \mathbb{M} 43'44	minimum elong	13728 Dec 14 07:18	5° \mathbb{Z} 40'00	1°35'26
	13723 Feb 28 00:03	30° \mathbb{R} \mathbb{L}	max. Earth dist.	13728 Dec 14 09:18	5° \mathbb{Z} 40'37	10.54669 AU
opposition	13723 Apr 09 00:03	27° \mathbb{L} 19'54 -0°13'38	morning rise	13728 Dec 31 22:36	7° \mathbb{Z} 49'12	
min. Earth dist.	13723 Apr 08 13:07	27° \mathbb{L} 22'01 8.67764 AU	retrograde	13729 Apr 15 00:46	15° \mathbb{Z} 28'52	
direct	13723 Jun 16 12:20	23° \mathbb{L} 59'13	opposition	13729 Jun 22 16:04	12° \mathbb{Z} 03'41	2°02'48
	13723 Sep 14 01:39	0° \mathbb{M}	min. Earth dist.	13729 Jun 22 15:16	12° \mathbb{Z} 03'50	8.53213 AU
evening set	13723 Sep 25 03:56	1° \mathbb{M} 17'59	direct	13729 Aug 29 17:11	8° \mathbb{Z} 39'38	
asc. node	13723 Oct 10 06:06	3° \mathbb{M} 07'30	evening set	13729 Dec 10 01:17	16° \mathbb{Z} 13'18	
conjunction	13723 Oct 12 09:46	3° \mathbb{M} 23'15 0°00'09	conjunction	13729 Dec 27 16:06	18° \mathbb{Z} 22'42	1°42'55
minimum elong	13723 Oct 12 09:45	3° \mathbb{M} 23'15 0°00'39	minimum elong	13729 Dec 27 16:05	18° \mathbb{Z} 22'42	1°43'56
behind sun begin	13723 Oct 12 02:38	3° \mathbb{M} 21'06	max. Earth dist.	13729 Dec 27 15:09	18° \mathbb{Z} 22'25	10.51569 AU
behind sun end	13723 Oct 12 16:53	3° \mathbb{M} 25'24	morning rise	13730 Jan 14 07:53	20° \mathbb{Z} 32'28	
max. Earth dist.	13723 Oct 12 22:56	3° \mathbb{M} 27'15 10.67132 AU	retrograde	13730 Apr 28 06:06	28° \mathbb{Z} 13'18	
morning rise	13723 Oct 29 18:18	5° \mathbb{M} 29'20	opposition	13730 Jul 05 14:19	24° \mathbb{Z} 48'15	2°10'19
retrograde	13724 Feb 10 23:23	13° \mathbb{M} 02'17	min. Earth dist.	13730 Jul 05 16:05	24° \mathbb{Z} 47'54	8.50180 AU
opposition	13724 Apr 20 18:04	9° \mathbb{M} 38'01 0°14'34	direct	13730 Sep 11 15:34	21° \mathbb{Z} 23'34	
min. Earth dist.	13724 Apr 20 07:30	9° \mathbb{M} 40'04 8.66368 AU	evening set	13730 Dec 23 12:16	29° \mathbb{Z} 00'59	
direct	13724 Jun 28 03:17	6° \mathbb{M} 16'59		13730 Dec 31 13:35	0° \mathbb{X}	
evening set	13724 Oct 06 19:44	13° \mathbb{M} 36'34				
	13724 Oct 18 08:10	15° \mathbb{M}	conjunction	13731 Jan 10 03:55	1° \mathbb{X} 11'06	1°46'24
			minimum elong	13731 Jan 10 03:55	1° \mathbb{X} 11'06	1°47'20
conjunction	13724 Oct 24 03:28	15° \mathbb{M} 42'27 0°22'55	max. Earth dist.	13731 Jan 09 23:17	1° \mathbb{X} 09'40	10.48621 AU
minimum elong	13724 Oct 24 03:27	15° \mathbb{M} 42'27 0°23'37	morning rise	13731 Jan 27 20:06	3° \mathbb{X} 21'25	
max. Earth dist.	13724 Oct 24 15:29	15° \mathbb{M} 46'07 10.65452 AU	retrograde	13731 May 11 13:09	11° \mathbb{X} 03'03	
morning rise	13724 Nov 10 13:54	17° \mathbb{M} 49'10	opposition	13731 Jul 18 14:16	7° \mathbb{X} 38'16	2°11'25
retrograde	13725 Feb 22 21:59	25° \mathbb{M} 23'14	min. Earth dist.	13731 Jul 18 18:53	7° \mathbb{X} 37'21	8.47370 AU
opposition	13725 May 03 11:45	21° \mathbb{M} 58'37 0°42'12	direct	13731 Sep 24 16:20	4° \mathbb{X} 13'00	
min. Earth dist.	13725 May 03 02:34	22° \mathbb{M} 00'24 8.64432 AU	evening set	13732 Jan 06 01:52	11° \mathbb{X} 54'05	
direct	13725 Jul 10 16:40	18° \mathbb{M} 37'07				
evening set	13725 Oct 19 14:19	25° \mathbb{M} 58'21	conjunction	13732 Jan 23 18:12	14° \mathbb{X} 04'50	1°44'34
			minimum elong	13732 Jan 23 18:13	14° \mathbb{X} 04'50	1°45'24
conjunction	13725 Nov 05 23:43	28° \mathbb{M} 04'53 0°44'43	max. Earth dist.	13732 Jan 23 10:15	14° \mathbb{X} 02'22	10.45981 AU
minimum elong	13725 Nov 05 23:41	28° \mathbb{M} 04'52 0°45'33		13732 Jan 31 04:11	15° \mathbb{X}	
max. Earth dist.	13725 Nov 06 09:09	28° \mathbb{M} 07'45 10.63266 AU	morning rise	13732 Feb 10 10:34	16° \mathbb{X} 15'37	
	13725 Nov 21 19:00	0° \mathbb{X}	retrograde	13732 May 23 18:57	23° \mathbb{X} 57'43	
morning rise	13725 Nov 23 11:53	0° \mathbb{X} 12'14	opposition	13732 Jul 30 16:09	20° \mathbb{X} 33'16	2°05'54
retrograde	13726 Mar 07 20:15	7° \mathbb{X} 47'38	min. Earth dist.	13732 Jul 30 23:07	20° \mathbb{X} 31'53	8.44927 AU
opposition	13726 May 16 05:45	4° \mathbb{X} 22'45 1°08'00	direct	13732 Oct 06 22:10	17° \mathbb{X} 07'33	
min. Earth dist.	13726 May 15 22:57	4° \mathbb{X} 24'04 8.62044 AU	evening set	13733 Jan 18 17:17	24° \mathbb{X} 51'52	
direct	13726 Jul 23 08:26	1° \mathbb{X} 00'39				
evening set	13726 Nov 01 11:55	8° \mathbb{X} 24'15	conjunction	13733 Feb 05 10:08	27° \mathbb{X} 03'09	1°37'27
			minimum elong	13733 Feb 05 10:10	27° \mathbb{X} 03'10	1°38'07
conjunction	13726 Nov 18 22:53	10° \mathbb{X} 31'29 1°04'31	max. Earth dist.	13733 Feb 04 23:56	26° \mathbb{X} 59'59	10.43784 AU
minimum elong	13726 Nov 18 22:51	10° \mathbb{X} 31'28 1°05'28	morning rise	13733 Feb 23 02:22	29° \mathbb{X} 14'18	
max. Earth dist.	13726 Nov 19 05:34	10° \mathbb{X} 33'31 10.60666 AU		13733 Mar 01 09:41	0° \mathbb{X}	
morning rise	13726 Dec 06 12:31	12° \mathbb{X} 39'28	retrograde	13733 Jun 06 02:20	6° \mathbb{X} 56'30	

opposition	13733 Aug 12 19:54	3° X 32'26	1°53'57	retrograde	13739 Aug 24 01:13	25° S 09'13
min. Earth dist.	13733 Aug 13 04:10	3° X 30'47	8.42978 AU	opposition	13739 Oct 30 22:26	21° S 47'19 -0°41'36
direct	13733 Oct 20 05:47	0° X 06'23		min. Earth dist.	13739 Oct 31 07:42	21° S 45'30 8.43562 AU
evening set	13734 Feb 01 10:13	7° X 53'23		direct	13740 Jan 08 08:35	18° S 21'39
				evening set	13740 Apr 22 04:34	26° S 10'40
conjunction	13734 Feb 19 03:20	10° X 05'05	1°25'18			
minimum elong	13734 Feb 19 03:22	10° X 05'06	1°25'47	conjunction	13740 May 09 12:37	28° S 20'18 -0°44'49
max. Earth dist.	13734 Feb 18 15:57	10° X 01'32	10.42139 AU	minimum elong	13740 May 09 12:36	28° S 20'18 0°45'40
morning rise	13734 Mar 08 19:04	12° X 16'26		max. Earth dist.	13740 May 09 02:04	28° S 17'00 10.44404 AU
retrograde	13734 Jun 19 11:43	19° X 58'17			13740 May 22 19:19	0° II
opposition	13734 Aug 26 01:16	16° X 34'36	1°36'07	morning rise	13740 May 26 17:46	0° II 29'09
min. Earth dist.	13734 Aug 26 10:25	16° X 32'47	8.41616 AU	retrograde	13740 Sep 05 08:03	8° II 05'45
direct	13734 Nov 02 14:08	13° X 08'19		opposition	13740 Nov 12 09:20	4° II 44'02 -1°08'34
evening set	13735 Feb 15 03:49	20° X 57'19		min. Earth dist.	13740 Nov 12 16:28	4° II 42'38 8.45417 AU
				direct	13741 Jan 20 21:26	1° II 18'50
conjunction	13735 Mar 04 20:44	23° X 09'14	1°08'45	evening set	13741 May 05 12:40	9° II 06'02
minimum elong	13735 Mar 04 20:47	23° X 09'15	1°09'00			
max. Earth dist.	13735 Mar 04 08:16	23° X 05'20	10.41116 AU	conjunction	13741 May 22 18:02	11° II 14'44 -1°05'17
morning rise	13735 Mar 22 11:36	25° X 20'38		minimum elong	13741 May 22 18:00	11° II 14'43 1°06'15
	13735 May 03 15:18	0° Y		max. Earth dist.	13741 May 22 10:15	11° II 12'17 10.46469 AU
retrograde	13735 Jul 02 20:55	3° Y 01'43		morning rise	13741 Jun 08 20:43	13° II 22'42
	13735 Sep 03 19:43	30° R X		retrograde	13741 Sep 18 13:51	20° II 58'32
opposition	13735 Sep 08 08:20	29° X 38'28	1°13'16	opposition	13741 Nov 25 20:04	17° II 36'55 -1°31'58
min. Earth dist.	13735 Sep 08 18:26	29° X 36'27	8.40892 AU	min. Earth dist.	13741 Nov 26 01:23	17° II 35'53 8.47710 AU
direct	13735 Nov 16 01:01	26° X 12'03		direct	13742 Feb 03 08:56	14° II 12'12
	13736 Jan 24 04:14	0° Y		evening set	13742 May 18 17:51	21° II 57'01
evening set	13736 Feb 28 21:12	4° Y 02'18				
conjunction	13736 Mar 17 13:16	6° Y 14'11	0°48'37	conjunction	13742 Jun 04 20:28	24° II 04'42 -1°22'24
minimum elong	13736 Mar 17 13:18	6° Y 14'11	0°48'38	minimum elong	13742 Jun 04 20:26	24° II 04'41 1°23'26
max. Earth dist.	13736 Mar 16 23:45	6° Y 09'57	10.40738 AU	max. Earth dist.	13742 Jun 04 15:01	24° II 03'00 10.48923 AU
morning rise	13736 Apr 04 02:52	8° Y 25'25		morning rise	13742 Jun 21 20:58	26° II 11'46
retrograde	13736 Jul 15 04:25	16° Y 05'31			13742 Jul 25 08:36	0° S
opposition	13736 Sep 20 16:40	12° Y 42'39	0°46'36	retrograde	13742 Oct 01 16:44	3° S 46'50
min. Earth dist.	13736 Sep 21 03:46	12° Y 40'27	8.40806 AU	opposition	13742 Dec 09 06:04	0° S 25'13 -1°50'38
direct	13736 Nov 28 14:22	9° Y 16'12		min. Earth dist.	13742 Dec 09 09:15	0° S 24'36 8.50346 AU
evening set	13737 Mar 13 13:40	17° Y 06'59			13742 Dec 14 16:46	30° R II
				direct	13743 Feb 16 19:58	27° II 01'01
conjunction	13737 Mar 31 04:20	19° Y 18'35	0°25'59		13743 Apr 18 18:38	0° S
minimum elong	13737 Mar 31 04:21	19° Y 18'35	0°25'46	evening set	13743 May 31 19:36	4° S 42'57
max. Earth dist.	13737 Mar 30 13:46	19° Y 14'01	10.40962 AU			
morning rise	13737 Apr 17 16:24	21° Y 29'27		conjunction	13743 Jun 17 19:50	6° S 49'37 -1°35'20
retrograde	13737 Jul 28 11:57	29° Y 08'28		minimum elong	13743 Jun 17 19:48	6° S 49'37 1°36'24
opposition	13737 Oct 04 01:50	25° Y 45'57	0°17'32	max. Earth dist.	13743 Jun 17 17:16	6° S 48'49 10.51665 AU
min. Earth dist.	13737 Oct 04 13:29	25° Y 43'39	8.41277 AU	morning rise	13743 Jul 04 18:37	8° S 55'50
direct	13737 Dec 12 03:56	22° Y 19'36		retrograde	13743 Oct 14 18:25	16° S 30'09
	13738 Mar 25 18:55	0° S		opposition	13743 Dec 22 14:59	13° S 08'25 -2°03'44
evening set	13738 Mar 27 04:38	0° S 10'20		min. Earth dist.	13743 Dec 22 15:22	13° S 08'20 8.53206 AU
				direct	13744 Mar 01 06:00	9° S 44'45
conjunction	13738 Apr 13 17:27	2° S 21'28	0°02'04	evening set	13744 Jun 12 17:44	17° S 23'24
minimum elong	13738 Apr 13 17:28	2° S 21'28	0°01'36			
behind sun begin	13738 Apr 13 10:16	2° S 19'14		conjunction	13744 Jun 29 16:14	19° S 29'10 -1°43'34
behind sun end	13738 Apr 14 00:39	2° S 23'42		minimum elong	13744 Jun 29 16:13	19° S 29'10 1°44'35
max. Earth dist.	13738 Apr 13 02:47	2° S 16'52	10.41672 AU	max. Earth dist.	13744 Jun 29 17:20	19° S 29'30 10.54564 AU
morning rise	13738 May 01 03:34	4° S 31'48		morning rise	13744 Jul 16 13:48	21° S 34'38
desc. node	13738 May 15 22:13	6° S 18'06		retrograde	13744 Oct 26 19:39	29° S 08'14
retrograde	13738 Aug 10 19:08	12° S 09'52		opposition	13745 Jan 03 22:16	25° S 46'17 -2°10'44
opposition	13738 Oct 17 11:50	8° S 47'41	-0°12'23	min. Earth dist.	13745 Jan 03 19:15	25° S 46'52 8.56141 AU
min. Earth dist.	13738 Oct 17 22:48	8° S 45'32	8.42194 AU	direct	13745 Mar 14 12:19	22° S 23'12
direct	13738 Dec 25 17:51	5° S 21'37		evening set	13745 Jun 25 12:47	29° S 58'21
evening set	13739 Apr 09 17:44	13° S 11'47			13745 Jun 25 18:11	0° S
	13739 Apr 24 05:28	15° S				
conjunction	13739 Apr 27 04:19	15° S 22'15	-0°22'01	conjunction	13745 Jul 12 10:11	2° S 03'22 -1°46'45
minimum elong	13739 Apr 27 04:18	15° S 22'15	0°22'41	minimum elong	13745 Jul 12 10:11	2° S 03'22 1°47'41
max. Earth dist.	13739 Apr 26 15:09	15° S 18'08	10.42805 AU	max. Earth dist.	13745 Jul 12 15:19	2° S 04'58 10.57471 AU
morning rise	13739 May 14 12:02	17° S 31'55		morning rise	13745 Jul 29 07:03	4° S 08'15
				retrograde	13745 Nov 08 19:24	11° S 41'09
				opposition	13746 Jan 17 03:41	8° S 18'59 -2°11'25

min. Earth dist.	13746 Jan 16 21:44	8°♏20'07	8.59002 AU	min. Earth dist.	13752 Apr 02 09:42	22°♎25'23	8.68037 AU
direct	13746 Mar 27 15:33	4°♏56'27		direct	13752 Jun 10 11:23	19°♎02'22	
evening set	13746 Jul 08 05:00	12°♏28'07		evening set	13752 Sep 19 04:35	26°♎21'08	
conjunction	13746 Jul 25 01:54	14°♏32'34	-1°44'51	conjunction	13752 Oct 06 09:21	28°♎26'07	-0°09'35
minimum elong	13746 Jul 25 01:55	14°♏32'34	1°45'40	minimum elong	13752 Oct 06 09:21	28°♎26'07	0°09'11
max. Earth dist.	13746 Jul 25 10:03	14°♏35'05	10.60246 AU	behind sun begin	13752 Oct 06 03:20	28°♎24'18	
	13746 Jul 28 18:33	15°♏		behind sun end	13752 Oct 06 15:23	28°♎27'56	
morning rise	13746 Aug 10 22:51	16°♏37'03		max. Earth dist.	13752 Oct 06 23:44	28°♎30'29	10.67874 AU
retrograde	13746 Nov 21 18:28	24°♏09'20			13752 Oct 19 06:33	0°♎	
opposition	13747 Jan 30 07:25	20°♏46'57	-2°05'52	morning rise	13752 Oct 23 17:03	0°♎31'55	
min. Earth dist.	13747 Jan 29 23:23	20°♏48'29	8.61655 AU	retrograde	13753 Feb 04 21:00	8°♎04'18	
direct	13747 Apr 09 16:21	17°♏24'57		asc. node	13753 Mar 12 11:20	7°♎03'02	
evening set	13747 Jul 20 18:42	24°♏53'14		opposition	13753 Apr 15 16:52	4°♎40'25	0°02'37
conjunction	13747 Aug 06 15:41	26°♏57'19	-1°38'02	min. Earth dist.	13753 Apr 15 05:19	4°♎42'39	8.67580 AU
minimum elong	13747 Aug 06 15:43	26°♏57'20	1°38'41	direct	13753 Jun 23 02:26	1°♎19'47	
max. Earth dist.	13747 Aug 07 01:52	27°♏00'27	10.62757 AU	evening set	13753 Oct 01 19:08	8°♎38'47	
morning rise	13747 Aug 23 13:34	29°♏01'38		conjunction	13753 Oct 19 01:50	10°♎44'17	0°13'20
	13747 Aug 31 17:29	0°♎		minimum elong	13753 Oct 19 01:49	10°♎44'17	0°13'57
retrograde	13747 Dec 04 15:53	6°♎33'25		behind sun begin	13753 Oct 18 22:12	10°♎43'11	
opposition	13748 Feb 12 09:11	3°♎10'47	-1°54'29	behind sun end	13753 Oct 19 05:26	10°♎45'23	
min. Earth dist.	13748 Feb 11 23:44	3°♎12'35	8.63971 AU	max. Earth dist.	13753 Oct 19 15:08	10°♎48'20	10.67128 AU
	13748 Apr 07 03:05	30°♎♏		morning rise	13753 Nov 05 11:32	12°♎50'39	
direct	13748 Apr 21 14:01	29°♏49'15			13753 Nov 24 04:42	15°♎	
	13748 May 06 00:20	0°♎		retrograde	13754 Feb 17 18:16	20°♎23'52	
evening set	13748 Aug 01 06:46	7°♎14'29		opposition	13754 Apr 28 10:41	16°♎59'49	0°30'36
conjunction	13748 Aug 18 04:34	9°♎18'25	-1°26'41	min. Earth dist.	13754 Apr 28 00:13	17°♎01'50	8.66552 AU
minimum elong	13748 Aug 18 04:36	9°♎18'26	1°27'10		13754 May 26 02:49	15°♎♎	
max. Earth dist.	13748 Aug 18 16:17	9°♎22'01	10.64880 AU	direct	13754 Jul 05 16:41	13°♎38'58	
morning rise	13748 Sep 04 03:55	11°♎22'46			13754 Aug 14 11:58	15°♎	
retrograde	13748 Dec 16 11:19	18°♎54'12		evening set	13754 Oct 14 12:15	20°♎59'00	
opposition	13749 Feb 24 08:49	15°♎31'17	-1°37'52	conjunction	13754 Oct 31 20:52	23°♎05'05	0°35'37
min. Earth dist.	13749 Feb 23 21:57	15°♎33'22	8.65834 AU	minimum elong	13754 Oct 31 20:50	23°♎05'04	0°36'23
direct	13749 May 04 10:36	12°♎10'10		max. Earth dist.	13754 Nov 01 09:07	23°♎08'49	10.65818 AU
evening set	13749 Aug 13 17:47	19°♎32'49		morning rise	13754 Nov 18 08:15	25°♎11'59	
conjunction	13749 Aug 30 17:00	21°♎36'48	-1°11'24		13755 Jan 02 13:07	0°♎♎	
minimum elong	13749 Aug 30 17:03	21°♎36'49	1°11'40	retrograde	13755 Mar 02 15:40	2°♎46'14	
max. Earth dist.	13749 Aug 31 06:45	21°♎41'01	10.66507 AU		13755 May 02 23:30	30°♎♎	
morning rise	13749 Sep 16 18:08	23°♎41'19		opposition	13755 May 11 04:12	29°♎22'00	0°57'15
	13749 Nov 21 00:31	0°♎		min. Earth dist.	13755 May 10 18:52	29°♎23'49	8.64987 AU
retrograde	13749 Dec 29 07:32	1°♎12'39		direct	13755 Jul 18 08:34	26°♎00'48	
	13750 Feb 06 08:58	30°♎♎		evening set	13755 Sep 27 03:21	0°♎♎	
opposition	13750 Mar 09 06:49	27°♎49'28	-1°16'48		13755 Oct 27 08:20	3°♎22'37	
min. Earth dist.	13750 Mar 08 18:22	27°♎51'51	8.67159 AU	conjunction	13755 Nov 13 18:39	5°♎29'18	0°56'19
direct	13750 May 17 05:36	24°♎28'40		minimum elong	13755 Nov 13 18:37	5°♎29'18	0°57'14
	13750 Aug 10 13:03	0°♎		max. Earth dist.	13755 Nov 14 05:03	5°♎32'28	10.63971 AU
evening set	13750 Aug 26 04:26	1°♎49'15		morning rise	13755 Dec 01 07:25	7°♎36'45	
conjunction	13750 Sep 12 05:26	3°♎53'28	-0°52'52	retrograde	13756 Mar 14 15:36	15°♎12'08	
minimum elong	13750 Sep 12 05:28	3°♎53'29	0°52'55	opposition	13756 May 22 21:58	11°♎47'47	1°21'21
max. Earth dist.	13750 Sep 12 20:49	3°♎58'10	10.67566 AU	min. Earth dist.	13756 May 22 14:39	11°♎49'12	8.62903 AU
morning rise	13750 Sep 29 08:34	5°♎58'19		direct	13756 Jul 30 00:11	8°♎26'03	
retrograde	13751 Jan 11 05:02	13°♎29'46		evening set	13756 Nov 08 07:36	15°♎50'17	
opposition	13751 Mar 22 03:21	10°♎06'19	-0°52'18	conjunction	13756 Nov 25 19:15	17°♎57'36	1°14'28
min. Earth dist.	13751 Mar 21 14:02	10°♎08'52	8.67898 AU	minimum elong	13756 Nov 25 19:13	17°♎57'35	1°15'29
direct	13751 May 29 20:33	6°♎45'43		max. Earth dist.	13756 Nov 26 02:04	17°♎59'41	10.61610 AU
evening set	13751 Sep 07 15:51	14°♎04'59		morning rise	13756 Dec 13 09:08	20°♎05'36	
conjunction	13751 Sep 24 18:43	16°♎09'32	-0°31'56	retrograde	13757 Mar 27 17:08	27°♎42'10	
minimum elong	13751 Sep 24 18:45	16°♎09'32	0°31'46	opposition	13757 Jun 04 16:21	24°♎17'44	1°41'46
max. Earth dist.	13751 Sep 25 10:21	16°♎14'17	10.68023 AU	min. Earth dist.	13757 Jun 04 12:11	24°♎18'33	8.60323 AU
morning rise	13751 Oct 12 00:07	18°♎14'49		direct	13757 Aug 11 16:06	20°♎55'22	
retrograde	13752 Jan 24 00:43	25°♎46'36		evening set	13757 Nov 21 10:03	28°♎22'39	
opposition	13752 Apr 02 22:30	22°♎22'55	-0°25'25		13757 Dec 04 18:51	0°♎♎	

conjunction	13757 Dec 08 22:54	0° \mathfrak{Z} 30'38	1°29'11	evening set	13764 Feb 09 09:17	15° \mathfrak{X} 22'33	
minimum elong	13757 Dec 08 22:52	0° \mathfrak{Z} 30'37	1°30'14	max. Earth dist.	13764 Feb 26 11:39	17° \mathfrak{X} 29'39	10.42285 AU
max. Earth dist.	13757 Dec 09 01:30	0° \mathfrak{Z} 31'25	10.58787 AU				
morning rise	13757 Dec 26 13:46	2° \mathfrak{Z} 39'13		conjunction	13764 Feb 27 02:08	17° \mathfrak{X} 34'10	1°16'37
retrograde	13758 Apr 09 17:40	10° \mathfrak{Z} 17'03		minimum elong	13764 Feb 27 02:10	17° \mathfrak{X} 34'11	1°16'57
opposition	13758 Jun 17 11:45	6° \mathfrak{Z} 52'35	1°57'27	morning rise	13764 Mar 15 17:29	19° \mathfrak{X} 45'23	
min. Earth dist.	13758 Jun 17 10:55	6° \mathfrak{Z} 52'45	8.57334 AU	retrograde	13764 Jun 26 03:48	27° \mathfrak{X} 25'54	
direct	13758 Aug 24 12:21	3° \mathfrak{Z} 29'30		opposition	13764 Sep 01 17:51	24° \mathfrak{X} 02'13	1°24'00
evening set	13758 Dec 04 15:40	11° \mathfrak{Z} 00'19		min. Earth dist.	13764 Sep 02 05:18	23° \mathfrak{X} 59'57	8.41676 AU
				direct	13764 Nov 09 10:42	20° \mathfrak{X} 35'31	
				evening set	13765 Feb 22 01:31	28° \mathfrak{X} 24'25	
conjunction	13758 Dec 22 05:43	13° \mathfrak{Z} 09'02	1°39'41		13765 Mar 06 22:13	0° \mathfrak{Y}	
minimum elong	13758 Dec 22 05:42	13° \mathfrak{Z} 09'01	1°40'44				
max. Earth dist.	13758 Dec 22 04:34	13° \mathfrak{Z} 08'40	10.55641 AU				
morning rise	13759 Jan 08 21:17	15° \mathfrak{Z} 18'11		conjunction	13765 Mar 11 17:57	0° \mathfrak{Y} 36'11	0°58'02
retrograde	13759 Apr 22 20:24	22° \mathfrak{Z} 57'16		minimum elong	13765 Mar 11 17:59	0° \mathfrak{Y} 36'12	0°58'08
opposition	13759 Jun 30 08:30	19° \mathfrak{Z} 32'49	2°07'34	max. Earth dist.	13765 Mar 11 02:57	0° \mathfrak{Y} 31'30	10.41124 AU
min. Earth dist.	13759 Jun 30 10:20	19° \mathfrak{Z} 32'28	8.54124 AU	morning rise	13765 Mar 29 08:20	2° \mathfrak{Y} 47'24	
direct	13759 Sep 06 10:24	16° \mathfrak{Z} 09'00		retrograde	13765 Jul 09 10:38	10° \mathfrak{Y} 27'18	
evening set	13759 Dec 18 00:29	23° \mathfrak{Z} 43'32		opposition	13765 Sep 15 00:38	7° \mathfrak{Y} 03'52	0°58'59
				min. Earth dist.	13765 Sep 15 12:08	7° \mathfrak{Y} 01'35	8.40833 AU
				direct	13765 Nov 22 22:25	3° \mathfrak{Y} 37'01	
conjunction	13760 Jan 04 15:37	25° \mathfrak{Z} 52'59	1°45'23	evening set	13766 Mar 07 17:32	11° \mathfrak{Y} 27'00	
minimum elong	13760 Jan 04 15:37	25° \mathfrak{Z} 52'59	1°46'22				
max. Earth dist.	13760 Jan 04 11:45	25° \mathfrak{Z} 51'48	10.52394 AU				
morning rise	13760 Jan 22 07:31	28° \mathfrak{Z} 02'42		conjunction	13766 Mar 25 09:03	13° \mathfrak{Y} 38'41	0°36'27
	13760 Feb 07 23:39	0° \mathfrak{Z}		minimum elong	13766 Mar 25 09:04	13° \mathfrak{Y} 38'42	0°36'19
retrograde	13760 May 05 01:27	5° \mathfrak{Z} 42'48		max. Earth dist.	13766 Mar 24 18:25	13° \mathfrak{Y} 34'07	10.40654 AU
opposition	13760 Jul 12 06:45	2° \mathfrak{Z} 18'23	2°11'31	morning rise	13766 Apr 11 21:55	15° \mathfrak{Y} 49'41	
min. Earth dist.	13760 Jul 12 10:32	2° \mathfrak{Z} 17'38	8.50922 AU	retrograde	13766 Jul 22 18:51	23° \mathfrak{Y} 28'45	
	13760 Aug 13 07:29	30° \mathfrak{R} \mathfrak{Z}		opposition	13766 Sep 28 08:32	20° \mathfrak{Y} 05'37	0°30'54
direct	13760 Sep 18 09:49	28° \mathfrak{Z} 53'50		min. Earth dist.	13766 Sep 28 19:39	20° \mathfrak{Y} 03'25	8.40701 AU
	13760 Oct 24 03:41	0° \mathfrak{Z}		direct	13766 Dec 06 09:45	16° \mathfrak{Y} 38'46	
evening set	13760 Dec 30 12:00	6° \mathfrak{Z} 32'04		evening set	13767 Mar 21 08:36	24° \mathfrak{Y} 29'09	
conjunction	13761 Jan 17 04:01	8° \mathfrak{Z} 42'12	1°45'55	conjunction	13767 Apr 07 22:31	26° \mathfrak{Y} 40'31	0°13'01
minimum elong	13761 Jan 17 04:02	8° \mathfrak{Z} 42'13	1°46'48	minimum elong	13767 Apr 07 22:32	26° \mathfrak{Y} 40'31	0°12'39
max. Earth dist.	13761 Jan 16 21:30	8° \mathfrak{Z} 40'12	10.49272 AU	behind sun begin	13767 Apr 07 17:59	26° \mathfrak{Y} 39'07	
morning rise	13761 Feb 03 20:03	10° \mathfrak{Z} 52'26		behind sun end	13767 Apr 08 03:04	26° \mathfrak{Y} 41'56	
	13761 Mar 12 21:53	15° \mathfrak{Z}		max. Earth dist.	13767 Apr 07 08:40	26° \mathfrak{Y} 36'11	10.40896 AU
retrograde	13761 May 18 07:25	18° \mathfrak{Z} 33'12		morning rise	13767 Apr 25 09:28	28° \mathfrak{Y} 51'05	
opposition	13761 Jul 25 06:54	15° \mathfrak{Z} 08'54	2°08'57		13767 May 04 21:15	0° \mathfrak{Z}	
min. Earth dist.	13761 Jul 25 12:47	15° \mathfrak{Z} 07'44	8.47931 AU	retrograde	13767 Aug 05 02:13	6° \mathfrak{Z} 29'16	
	13761 Jul 27 03:42	15° \mathfrak{R} \mathfrak{Z}		opposition	13767 Oct 11 17:40	3° \mathfrak{Z} 06'27	0°01'14
direct	13761 Oct 01 12:08	11° \mathfrak{Z} 43'40		min. Earth dist.	13767 Oct 12 04:23	3° \mathfrak{Z} 04'20	8.41293 AU
	13761 Dec 03 23:53	15° \mathfrak{Z}		desc. node	13767 Oct 27 00:42	1° \mathfrak{Z} 55'35	
evening set	13762 Jan 13 01:37	19° \mathfrak{Z} 25'18			13767 Nov 30 03:32	30° \mathfrak{R} \mathfrak{Y}	
				direct	13767 Dec 19 22:13	29° \mathfrak{Y} 39'49	
conjunction	13762 Jan 30 18:16	21° \mathfrak{Z} 36'04	1°41'08		13768 Jan 08 16:43	0° \mathfrak{Z}	
minimum elong	13762 Jan 30 18:18	21° \mathfrak{Z} 36'05	1°41'52	evening set	13768 Apr 02 21:54	7° \mathfrak{Z} 29'54	
max. Earth dist.	13762 Jan 30 08:52	21° \mathfrak{Z} 33'09	10.46458 AU				
morning rise	13762 Feb 17 10:20	23° \mathfrak{Z} 46'45		conjunction	13768 Apr 20 09:38	9° \mathfrak{Z} 40'41	-0°11'09
	13762 Apr 20 07:54	0° \mathfrak{X}		minimum elong	13768 Apr 20 09:38	9° \mathfrak{Z} 40'40	0°11'44
retrograde	13762 May 31 14:10	1° \mathfrak{X} 27'49		behind sun begin	13768 Apr 20 04:35	9° \mathfrak{Z} 39'06	
	13762 Jul 12 09:20	30° \mathfrak{R} \mathfrak{Z}		behind sun end	13768 Apr 20 14:40	9° \mathfrak{Z} 42'14	
opposition	13762 Aug 07 08:52	28° \mathfrak{Z} 03'40	1°59'52	max. Earth dist.	13768 Apr 19 20:34	9° \mathfrak{Z} 36'35	10.41846 AU
min. Earth dist.	13762 Aug 07 17:08	28° \mathfrak{Z} 02'01	8.45311 AU	morning rise	13768 May 07 18:25	11° \mathfrak{Z} 50'39	
direct	13762 Oct 14 16:51	24° \mathfrak{Z} 37'48			13768 Jun 03 21:58	15° \mathfrak{Z}	
	13763 Jan 06 11:15	0° \mathfrak{X}		retrograde	13768 Aug 17 07:51	19° \mathfrak{Z} 27'56	
evening set	13763 Jan 26 17:01	2° \mathfrak{X} 22'28		opposition	13768 Oct 24 03:29	16° \mathfrak{Z} 05'28	-0°28'25
				min. Earth dist.	13768 Oct 24 13:25	16° \mathfrak{Z} 03'31	8.42587 AU
					13768 Nov 07 06:45	15° \mathfrak{R} \mathfrak{Z}	
conjunction	13763 Feb 13 09:56	4° \mathfrak{X} 33'45	1°31'13	direct	13769 Jan 01 12:00	12° \mathfrak{Z} 39'11	
minimum elong	13763 Feb 13 09:59	4° \mathfrak{X} 33'46	1°31'46		13769 Feb 24 00:58	15° \mathfrak{Z}	
max. Earth dist.	13763 Feb 12 21:27	4° \mathfrak{X} 29'52	10.44090 AU	evening set	13769 Apr 16 09:11	20° \mathfrak{Z} 28'21	
morning rise	13763 Mar 03 01:49	6° \mathfrak{X} 44'45					
retrograde	13763 Jun 13 21:16	14° \mathfrak{X} 25'42		conjunction	13769 May 03 18:22	22° \mathfrak{Z} 38'20	-0°34'35
opposition	13763 Aug 20 12:30	11° \mathfrak{X} 01'47	1°44'39	minimum elong	13769 May 03 18:21	22° \mathfrak{Z} 38'20	0°35'21
min. Earth dist.	13763 Aug 20 23:00	10° \mathfrak{X} 59'42	8.43191 AU	max. Earth dist.	13769 May 03 06:40	22° \mathfrak{Z} 34'40	10.43459 AU
direct	13763 Oct 28 00:11	7° \mathfrak{X} 35'25					

morning rise	13769 May 21 00:49	24° ♄ 47'32	morning rise	13775 Aug 05 09:10	11° ♄ 02'06
	13769 Jul 08 09:26	0° ♄		13775 Sep 09 23:12	15° ♄
retrograde	13769 Aug 30 13:24	2° ♄ 23'57	retrograde	13775 Nov 16 00:33	18° ♄ 34'04
	13769 Oct 24 23:15	30° ♄	opposition	13776 Jan 24 12:06	15° ♄ 12'26 -2°08'58
opposition	13769 Nov 06 13:25	29° ♄ 01'49 -0°56'32	min. Earth dist.	13776 Jan 24 05:08	15° ♄ 13'45 8.62316 AU
min. Earth dist.	13769 Nov 06 21:50	29° ♄ 00'11 8.44512 AU		13776 Jan 27 05:12	15° ♄
direct	13770 Jan 15 00:57	25° ♄ 36'04	direct	13776 Apr 02 22:54	11° ♄ 50'48
	13770 Mar 31 07:01	0° ♄		13776 Jun 04 15:35	15° ♄
evening set	13770 Apr 29 17:55	3° ♄ 23'40	evening set	13776 Jul 14 06:02	19° ♄ 20'05
conjunction	13770 May 17 00:25	5° ♄ 32'44 -0°56'12	conjunction	13776 Jul 31 02:52	21° ♄ 24'07 -1°41'39
minimum elong	13770 May 17 00:23	5° ♄ 32'43 0°57'07	minimum elong	13776 Jul 31 02:54	21° ♄ 24'08 1°42'24
max. Earth dist.	13770 May 16 15:04	5° ♄ 29'48 10.45643 AU	max. Earth dist.	13776 Jul 31 12:20	21° ♄ 27'03 10.63560 AU
morning rise	13770 Jun 03 04:25	7° ♄ 41'02	morning rise	13776 Aug 17 00:11	23° ♄ 28'17
retrograde	13770 Sep 12 17:58	15° ♄ 16'39		13776 Oct 24 12:03	0° ♄
opposition	13770 Nov 19 23:26	11° ♄ 54'47 -1°21'38	retrograde	13776 Nov 27 23:27	0° ♄ 59'39
min. Earth dist.	13770 Nov 20 05:13	11° ♄ 53'40 8.46958 AU		13777 Jan 02 01:24	30° ♄
direct	13771 Jan 28 13:05	8° ♄ 29'41	opposition	13777 Feb 05 14:26	27° ♄ 37'46 -2°00'17
evening set	13771 May 12 23:38	16° ♄ 15'08	min. Earth dist.	13777 Feb 05 05:08	27° ♄ 39'33 8.64899 AU
			direct	13777 Apr 15 21:36	24° ♄ 16'41
conjunction	13771 May 30 03:30	18° ♄ 23'10 -1°14'54		13777 Jul 12 04:43	0° ♄
minimum elong	13771 May 30 03:27	18° ♄ 23'09 1°15'55	evening set	13777 Jul 26 18:42	1° ♄ 42'41
max. Earth dist.	13771 May 29 21:49	18° ♄ 21'23 10.48281 AU			
morning rise	13771 Jun 16 05:01	20° ♄ 30'32	conjunction	13777 Aug 12 16:05	3° ♄ 46'28 -1°32'24
retrograde	13771 Sep 25 21:36	28° ♄ 05'25	minimum elong	13777 Aug 12 16:08	3° ♄ 46'29 1°32'58
opposition	13771 Dec 03 09:06	24° ♄ 43'45 -1°42'31	max. Earth dist.	13777 Aug 13 03:50	3° ♄ 50'04 10.65878 AU
min. Earth dist.	13771 Dec 03 11:51	24° ♄ 43'13 8.49801 AU	morning rise	13777 Aug 29 14:25	5° ♄ 50'32
direct	13772 Feb 11 00:03	21° ♄ 19'23	retrograde	13777 Dec 10 20:08	13° ♄ 21'29
evening set	13772 May 25 02:18	29° ♄ 02'09	opposition	13778 Feb 18 14:52	9° ♄ 59'19 -1°46'04
	13772 Jun 01 21:59	0° ♄	min. Earth dist.	13778 Feb 18 04:17	10° ♄ 01'21 8.66878 AU
			direct	13778 Apr 28 18:10	6° ♄ 38'38
conjunction	13772 Jun 11 03:43	1° ♄ 09'09 -1°29'48	evening set	13778 Aug 08 06:07	14° ♄ 01'52
minimum elong	13772 Jun 11 03:41	1° ♄ 09'08 1°30'51			
max. Earth dist.	13772 Jun 11 01:40	1° ♄ 08'30 10.51252 AU	conjunction	13778 Aug 25 04:31	16° ♄ 05'37 -1°18'55
morning rise	13772 Jun 28 03:07	3° ♄ 15'36	minimum elong	13778 Aug 25 04:34	16° ♄ 05'38 1°19'17
retrograde	13772 Oct 08 01:23	10° ♄ 49'44	max. Earth dist.	13778 Aug 25 16:58	16° ♄ 09'26 10.67530 AU
opposition	13772 Dec 15 17:51	7° ♄ 28'13 -1°58'12	morning rise	13778 Sep 11 04:33	18° ♄ 09'50
min. Earth dist.	13772 Dec 15 18:06	7° ♄ 28'11 8.52913 AU	retrograde	13778 Dec 23 16:40	25° ♄ 40'40
direct	13773 Feb 23 08:34	4° ♄ 04'35	opposition	13779 Mar 03 13:43	22° ♄ 18'11 -1°27'03
evening set	13773 Jun 07 01:48	11° ♄ 44'16	min. Earth dist.	13779 Mar 03 02:54	22° ♄ 20'15 8.68149 AU
			direct	13779 May 11 12:55	18° ♄ 57'45
conjunction	13773 Jun 24 01:06	13° ♄ 50'18 -1°40'13	evening set	13779 Aug 20 16:51	26° ♄ 18'49
minimum elong	13773 Jun 24 01:05	13° ♄ 50'18 1°41'16			
max. Earth dist.	13773 Jun 24 01:58	13° ♄ 50'35 10.54420 AU	conjunction	13779 Sep 06 16:46	28° ♄ 22'45 -1°01'51
morning rise	13773 Jul 10 23:01	15° ♄ 55'57	minimum elong	13779 Sep 06 16:48	28° ♄ 22'46 1°02'00
retrograde	13773 Oct 21 03:07	23° ♄ 29'19	max. Earth dist.	13779 Sep 07 05:28	28° ♄ 26'38 10.68472 AU
opposition	13773 Dec 29 01:34	20° ♄ 07'52 -2°08'02		13779 Sep 20 00:08	0° ♄
min. Earth dist.	13773 Dec 28 23:39	20° ♄ 08'14 8.56140 AU	morning rise	13779 Sep 23 18:57	0° ♄ 27'18
direct	13774 Mar 08 14:24	16° ♄ 44'56	retrograde	13780 Jan 05 12:32	7° ♄ 58'16
evening set	13774 Jun 19 22:07	24° ♄ 21'16	opposition	13780 Mar 15 10:57	4° ♄ 35'24 -1°04'05
			min. Earth dist.	13780 Mar 14 23:54	4° ♄ 37'31 8.68718 AU
conjunction	13774 Jul 06 19:47	26° ♄ 26'26 -1°45'45	direct	13780 May 23 05:47	1° ♄ 15'02
minimum elong	13774 Jul 06 19:47	26° ♄ 26'26 1°46'44	evening set	13780 Sep 01 03:54	8° ♄ 34'37
max. Earth dist.	13774 Jul 06 23:08	26° ♄ 27'29 10.57634 AU			
morning rise	13774 Jul 23 16:52	28° ♄ 31'25	conjunction	13780 Sep 18 05:45	10° ♄ 38'53 -0°41'58
	13774 Aug 05 02:23	0° ♄	minimum elong	13780 Sep 18 05:46	10° ♄ 38'54 0°41'53
retrograde	13774 Nov 03 02:03	6° ♄ 04'03	max. Earth dist.	13780 Sep 18 19:00	10° ♄ 42'56 10.68725 AU
opposition	13775 Jan 11 07:45	2° ♄ 42'34 -2°11'38	morning rise	13780 Oct 05 10:07	12° ♄ 43'52
min. Earth dist.	13775 Jan 11 03:33	2° ♄ 43'22 8.59329 AU	retrograde	13781 Jan 17 07:22	20° ♄ 15'14
	13775 Feb 21 12:54	30° ♄	opposition	13781 Mar 28 06:38	16° ♄ 51'54 -0°38'14
direct	13775 Mar 21 19:42	29° ♄ 20'20	min. Earth dist.	13781 Mar 27 19:13	16° ♄ 54'06 8.68618 AU
	13775 Apr 18 17:49	0° ♄	direct	13781 Jun 04 22:49	13° ♄ 31'29
evening set	13775 Jul 02 15:25	6° ♄ 53'08	evening set	13781 Sep 13 15:52	20° ♄ 50'16
conjunction	13775 Jul 19 12:16	8° ♄ 57'37 -1°46'12	conjunction	13781 Sep 30 19:47	22° ♄ 55'00 -0°20'11
minimum elong	13775 Jul 19 12:17	8° ♄ 57'38 1°47'05	minimum elong	13781 Sep 30 19:48	22° ♄ 55'00 0°19'52
max. Earth dist.	13775 Jul 19 18:35	8° ♄ 59'35 10.60742 AU	max. Earth dist.	13781 Oct 01 09:48	22° ♄ 59'16 10.68321 AU

morning rise	13781 Oct 18 02:17	25° Ω 00'30		conjunction	13787 Dec 16 08:19	7° \mathfrak{Z} 27'13	1°35'22
	13781 Dec 04 14:23	0° \mathfrak{M}		minimum elong	13787 Dec 16 08:18	7° \mathfrak{Z} 27'13	1°36'25
retrograde	13782 Jan 30 04:21	2° \mathfrak{M} 32'30		max. Earth dist.	13787 Dec 16 10:14	7° \mathfrak{Z} 27'48	10.55204 AU
	13782 Mar 29 20:13	30° \mathfrak{R} Ω		morning rise	13788 Jan 02 23:31	9° \mathfrak{Z} 36'19	
opposition	13782 Apr 10 01:24	29° Ω 08'43	-0°10'37	retrograde	13788 Apr 16 01:52	17° \mathfrak{Z} 15'31	
min. Earth dist.	13782 Apr 09 13:43	29° Ω 10'58	8.67891 AU	opposition	13788 Jun 23 16:05	13° \mathfrak{Z} 50'25	2°03'40
direct	13782 Jun 17 13:47	25° Ω 48'06		min. Earth dist.	13788 Jun 23 15:39	13° \mathfrak{Z} 50'30	8.53762 AU
	13782 Aug 29 12:49	0° \mathfrak{M}		direct	13788 Aug 30 16:42	10° \mathfrak{Z} 26'22	
asc. node	13782 Aug 30 16:40	0° \mathfrak{M} 07'13		evening set	13788 Dec 11 02:04	17° \mathfrak{Z} 59'44	
evening set	13782 Sep 26 05:23	3° \mathfrak{M} 06'50					
conjunction	13782 Oct 13 11:17	5° \mathfrak{M} 12'06	0°02'39	conjunction	13788 Dec 28 16:42	20° \mathfrak{Z} 09'03	1°43'23
minimum elong	13782 Oct 13 11:16	5° \mathfrak{M} 12'06	0°03'10	minimum elong	13788 Dec 28 16:42	20° \mathfrak{Z} 09'02	1°44'24
behind sun begin	13782 Oct 13 04:10	5° \mathfrak{M} 09'58		max. Earth dist.	13788 Dec 28 14:46	20° \mathfrak{Z} 08'27	10.52122 AU
behind sun end	13782 Oct 13 18:23	5° \mathfrak{M} 14'14		morning rise	13789 Jan 15 08:29	22° \mathfrak{Z} 18'43	
max. Earth dist.	13782 Oct 14 00:44	5° \mathfrak{M} 16'12	10.67301 AU	retrograde	13789 Apr 29 06:13	29° \mathfrak{Z} 59'01	
morning rise	13782 Oct 30 19:53	7° \mathfrak{M} 18'12		opposition	13789 Jul 06 13:59	26° \mathfrak{Z} 34'02	2°10'33
retrograde	13783 Feb 12 02:08	14° \mathfrak{M} 51'03		min. Earth dist.	13789 Jul 06 16:36	26° \mathfrak{Z} 33'31	8.50734 AU
opposition	13783 Apr 22 19:28	11° \mathfrak{M} 26'52	0°17'33	direct	13789 Sep 12 15:10	23° \mathfrak{Z} 09'19	
min. Earth dist.	13783 Apr 22 08:51	11° \mathfrak{M} 28'55	8.66580 AU		13789 Dec 18 01:27	0° \approx	
direct	13783 Jun 30 02:57	8° \mathfrak{M} 05'53		evening set	13789 Dec 24 12:31	0° \approx 46'26	
	13783 Oct 05 07:35	15° \mathfrak{M}		conjunction	13790 Jan 11 04:03	2° \approx 56'25	1°46'21
evening set	13783 Oct 08 21:19	15° \mathfrak{M} 25'26		minimum elong	13790 Jan 11 04:03	2° \approx 56'25	1°47'17
conjunction	13783 Oct 26 05:02	17° \mathfrak{M} 31'18	0°25'17	max. Earth dist.	13790 Jan 10 22:36	2° \approx 54'44	10.49168 AU
minimum elong	13783 Oct 26 05:01	17° \mathfrak{M} 31'17	0°25'59	morning rise	13790 Jan 28 20:14	5° \approx 06'38	
max. Earth dist.	13783 Oct 26 16:30	17° \mathfrak{M} 34'47	10.65712 AU	retrograde	13790 May 12 10:33	12° \approx 47'44	
morning rise	13783 Nov 12 15:38	19° \mathfrak{M} 38'00		opposition	13790 Jul 19 13:30	9° \approx 22'59	2°11'01
retrograde	13784 Feb 24 22:41	27° \mathfrak{M} 11'54		min. Earth dist.	13790 Jul 19 18:33	9° \approx 21'58	8.47904 AU
opposition	13784 May 04 13:01	23° \mathfrak{M} 47'23	0°45'00	direct	13790 Sep 25 17:46	5° \approx 57'41	
min. Earth dist.	13784 May 04 04:23	23° \mathfrak{M} 49'04	8.64738 AU	evening set	13791 Jan 07 01:31	13° \approx 38'24	
direct	13784 Jul 11 18:20	20° \mathfrak{M} 25'54			13791 Jan 18 03:39	15° \approx	
evening set	13784 Oct 20 15:54	27° \mathfrak{M} 47'05		conjunction	13791 Jan 24 17:53	15° \approx 49'03	1°44'01
conjunction	13784 Nov 07 01:19	29° \mathfrak{M} 53'35	0°46'51	minimum elong	13791 Jan 24 17:55	15° \approx 49'03	1°44'50
minimum elong	13784 Nov 07 01:18	29° \mathfrak{M} 53'35	0°47'43	max. Earth dist.	13791 Jan 24 09:53	15° \approx 46'34	10.46493 AU
max. Earth dist.	13784 Nov 07 10:21	29° \mathfrak{M} 56'20	10.63615 AU	morning rise	13791 Feb 11 10:12	17° \approx 59'43	
	13784 Nov 07 22:21	0° \mathfrak{X}		retrograde	13791 May 25 17:07	25° \approx 41'19	
morning rise	13784 Nov 24 13:37	2° \mathfrak{X} 00'54		opposition	13791 Aug 01 14:55	22° \approx 16'52	2°04'54
retrograde	13785 Mar 08 21:02	9° \mathfrak{X} 36'03		min. Earth dist.	13791 Aug 01 21:41	22° \approx 15'32	8.45408 AU
opposition	13785 May 17 06:45	6° \mathfrak{X} 11'16	1°10'28	direct	13791 Oct 08 21:51	18° \approx 51'08	
min. Earth dist.	13785 May 17 00:10	6° \mathfrak{X} 12'33	8.62435 AU	evening set	13792 Jan 20 16:33	26° \approx 35'04	
direct	13785 Jul 24 10:10	2° \mathfrak{X} 49'13		conjunction	13792 Feb 07 09:28	28° \approx 46'17	1°36'25
evening set	13785 Nov 02 13:21	10° \mathfrak{X} 12'41		minimum elong	13792 Feb 07 09:30	28° \approx 46'18	1°37'04
conjunction	13785 Nov 20 00:24	12° \mathfrak{X} 19'52	1°06'21	max. Earth dist.	13792 Feb 06 23:41	28° \approx 43'14	10.44226 AU
minimum elong	13785 Nov 20 00:22	12° \mathfrak{X} 19'51	1°07'19		13792 Feb 17 06:51	0° \mathfrak{H}	
max. Earth dist.	13785 Nov 20 07:34	12° \mathfrak{X} 22'03	10.61092 AU	morning rise	13792 Feb 25 01:32	0° \mathfrak{H} 57'18	
morning rise	13785 Dec 07 13:57	14° \mathfrak{X} 27'48		retrograde	13792 Jun 07 01:35	8° \mathfrak{H} 39'02	
retrograde	13786 Mar 21 20:56	22° \mathfrak{X} 04'20		opposition	13792 Aug 13 18:14	5° \mathfrak{H} 14'58	1°52'24
opposition	13786 May 30 00:55	18° \mathfrak{X} 39'20	1°32'47	min. Earth dist.	13792 Aug 14 02:15	5° \mathfrak{H} 13'22	8.43375 AU
min. Earth dist.	13786 May 29 19:54	18° \mathfrak{X} 40'19	8.59760 AU	direct	13792 Oct 21 03:44	1° \mathfrak{H} 48'53	
direct	13786 Aug 06 02:50	15° \mathfrak{X} 16'39		evening set	13793 Feb 02 09:01	9° \mathfrak{H} 35'32	
evening set	13786 Nov 15 14:16	22° \mathfrak{X} 43'01		conjunction	13793 Feb 20 02:08	11° \mathfrak{H} 47'10	1°23'52
conjunction	13786 Dec 03 02:47	24° \mathfrak{X} 50'54	1°22'48	minimum elong	13793 Feb 20 02:10	11° \mathfrak{H} 47'11	1°24'19
minimum elong	13786 Dec 03 02:45	24° \mathfrak{X} 50'54	1°23'49	max. Earth dist.	13793 Feb 19 14:45	11° \mathfrak{H} 43'37	10.42491 AU
max. Earth dist.	13786 Dec 03 07:48	24° \mathfrak{X} 52'26	10.58245 AU	morning rise	13793 Mar 09 17:42	13° \mathfrak{H} 58'27	
morning rise	13786 Dec 20 17:16	26° \mathfrak{X} 59'25		retrograde	13793 Jun 20 10:01	21° \mathfrak{H} 39'54	
	13787 Jan 16 04:24	0° \mathfrak{Z}		opposition	13793 Aug 26 23:27	18° \mathfrak{H} 16'13	1°34'06
retrograde	13787 Apr 03 21:56	4° \mathfrak{Z} 37'21		min. Earth dist.	13793 Aug 27 08:57	18° \mathfrak{H} 14'20	8.41920 AU
opposition	13787 Jun 11 19:48	1° \mathfrak{Z} 12'14	1°50'50	direct	13793 Nov 03 12:28	14° \mathfrak{H} 49'55	
min. Earth dist.	13787 Jun 11 16:45	1° \mathfrak{Z} 12'50	8.56824 AU	evening set	13794 Feb 16 02:11	22° \mathfrak{H} 38'39	
	13787 Jun 27 10:51	30° \mathfrak{R} \mathfrak{X}		conjunction	13794 Mar 05 19:00	24° \mathfrak{H} 50'30	1°06'59
direct	13787 Aug 18 21:27	27° \mathfrak{X} 48'52		minimum elong	13794 Mar 05 19:02	24° \mathfrak{H} 50'31	1°07'12
	13787 Oct 08 21:40	0° \mathfrak{Z}		max. Earth dist.	13794 Mar 05 05:46	24° \mathfrak{H} 46'22	10.41375 AU
evening set	13787 Nov 28 18:37	5° \mathfrak{Z} 18'37		morning rise	13794 Mar 23 09:50	27° \mathfrak{H} 01'50	

	13794 Apr 17 21:42	0°♊	conjunction	13800 May 24 15:24	12°♊54'18	-1°06'53
retrograde	13794 Jul 03 18:06	4°♊42'39	minimum elong	13800 May 24 15:22	12°♊54'18	1°07'51
opposition	13794 Sep 09 06:19	1°♊19'25 1°10'54	max. Earth dist.	13800 May 24 06:40	12°♊51'34	10.46329 AU
min. Earth dist.	13794 Sep 09 17:15	1°♊17'14 8.41104 AU	morning rise	13800 Jun 10 18:04	15°♊02'18	
	13794 Sep 26 09:10	30°♋♋	retrograde	13800 Sep 20 10:53	22°♊38'22	
direct	13794 Nov 16 23:41	27°♋52'58	opposition	13800 Nov 27 18:16	19°♊16'46	-1°33'44
	13795 Jan 06 11:12	0°♊	min. Earth dist.	13800 Nov 28 00:18	19°♊15'36	8.47505 AU
evening set	13795 Mar 01 19:23	5°♊43'03	direct	13801 Feb 05 07:23	15°♊52'05	
			evening set	13801 May 20 15:33	23°♊37'07	
conjunction	13795 Mar 19 11:18	7°♊54'53 0°46'37				
minimum elong	13795 Mar 19 11:20	7°♊54'54 0°46'35	conjunction	13801 Jun 06 18:02	25°♊44'49	-1°23'38
max. Earth dist.	13795 Mar 18 20:43	7°♊50'19 10.40911 AU	minimum elong	13801 Jun 06 18:00	25°♊44'48	1°24'40
morning rise	13795 Apr 06 00:58	10°♊06'05	max. Earth dist.	13801 Jun 06 11:52	25°♊42'53	10.48643 AU
retrograde	13795 Jul 17 02:16	17°♊46'00	morning rise	13801 Jun 23 18:36	27°♊51'56	
opposition	13795 Sep 22 14:31	14°♊23'09 0°44'01		13801 Jul 11 18:04	0°♋	
min. Earth dist.	13795 Sep 23 02:09	14°♊20'51 8.40945 AU	retrograde	13801 Oct 03 14:40	5°♋27'24	
direct	13795 Nov 30 12:18	10°♊56'42	opposition	13801 Dec 11 04:26	2°♋05'47	-1°51'55
evening set	13796 Mar 14 11:40	18°♊47'22	min. Earth dist.	13801 Dec 11 07:41	2°♋05'09	8.49999 AU
max. Earth dist.	13796 Mar 31 11:19	20°♊54'16 10.41083 AU		13802 Jan 09 10:48	30°♋♊	
			direct	13802 Feb 18 19:00	28°♊41'37	
conjunction	13796 Apr 01 02:15	20°♊58'57 0°23'51		13802 Mar 30 06:26	0°♋	
minimum elong	13796 Apr 01 02:15	20°♊58'57 0°23'35	evening set	13802 Jun 02 17:33	6°♋23'53	
morning rise	13796 Apr 18 14:17	23°♊09'47				
	13796 Jun 29 04:17	0°♋	conjunction	13802 Jun 19 17:49	8°♋30'38	-1°36'09
retrograde	13796 Jul 29 09:06	0°♋48'41	minimum elong	13802 Jun 19 17:48	8°♋30'37	1°37'12
	13796 Aug 28 23:37	30°♋♊	max. Earth dist.	13802 Jun 19 15:25	8°♋29'53	10.51245 AU
opposition	13796 Oct 04 23:43	27°♊26'10 0°14'51	morning rise	13802 Jul 06 16:35	10°♋36'55	
min. Earth dist.	13796 Oct 05 11:00	27°♊23'56 8.41391 AU	retrograde	13802 Oct 16 17:52	18°♋11'45	
direct	13796 Dec 13 02:33	23°♊59'50	opposition	13802 Dec 24 13:44	14°♋50'00	-2°04'28
	13797 Mar 12 16:54	0°♋	min. Earth dist.	13802 Dec 24 13:37	14°♋50'02	8.52718 AU
evening set	13797 Mar 28 02:21	1°♋50'25	direct	13803 Mar 04 03:50	11°♋26'25	
desc. node	13797 Apr 12 10:21	3°♋44'55	evening set	13803 Jun 15 16:04	19°♋05'27	
conjunction	13797 Apr 14 15:09	4°♋01'30 -0°00'10	conjunction	13803 Jul 02 14:39	21°♋11'19	-1°43'55
minimum elong	13797 Apr 14 15:09	4°♋01'30 0°00'40	minimum elong	13803 Jul 02 14:39	21°♋11'19	1°44'56
behind sun begin	13797 Apr 14 07:59	3°♋59'16	max. Earth dist.	13803 Jul 02 16:26	21°♋11'52	10.54014 AU
behind sun end	13797 Apr 14 22:20	4°♋03'43	morning rise	13803 Jul 19 12:08	23°♋16'53	
max. Earth dist.	13797 Apr 14 01:09	3°♋57'07 10.41788 AU		13803 Sep 28 07:01	0°♌	
morning rise	13797 May 02 01:07	6°♋11'48	retrograde	13803 Oct 29 19:20	0°♌51'05	
retrograde	13797 Aug 11 15:59	13°♋49'47		13803 Nov 30 21:14	30°♋♋	
opposition	13797 Oct 18 09:40	10°♋27'34 -0°15'02	opposition	13804 Jan 06 21:35	27°♋29'08	-2°10'52
min. Earth dist.	13797 Oct 18 19:59	10°♋25'32 8.42305 AU	min. Earth dist.	13804 Jan 06 18:14	27°♋29'47	8.55536 AU
direct	13797 Dec 26 16:50	7°♋01'30	direct	13804 Mar 16 10:50	24°♋06'05	
evening set	13798 Apr 10 15:21	14°♋51'30		13804 Jun 13 04:56	0°♌	
	13798 Apr 11 19:00	15°♋	evening set	13804 Jun 27 11:34	1°♌41'41	
conjunction	13798 Apr 28 01:55	17°♋01'56 -0°24'05	conjunction	13804 Jul 14 09:01	3°♌46'50	-1°46'37
minimum elong	13798 Apr 28 01:54	17°♋01'55 0°24'47	minimum elong	13804 Jul 14 09:02	3°♌46'50	1°47'32
max. Earth dist.	13798 Apr 27 13:23	16°♋58'00 10.42896 AU	max. Earth dist.	13804 Jul 14 14:18	3°♌48'28	10.56822 AU
morning rise	13798 May 15 09:26	19°♋11'32	morning rise	13804 Jul 31 05:58	5°♌51'50	
retrograde	13798 Aug 25 00:02	26°♋48'48	retrograde	13804 Nov 10 20:09	13°♌25'22	
opposition	13798 Oct 31 20:12	23°♋26'52 -0°44'03	opposition	13805 Jan 19 03:33	10°♌03'11	-2°10'57
min. Earth dist.	13798 Nov 01 05:26	23°♋25'04 8.43614 AU	min. Earth dist.	13805 Jan 18 21:58	10°♌04'15	8.58316 AU
direct	13799 Jan 09 05:23	20°♋01'13	direct	13805 Mar 29 14:29	6°♌40'39	
evening set	13799 Apr 24 02:11	27°♋50'08	evening set	13805 Jul 10 04:18	14°♌12'47	
				13805 Jul 16 14:50	15°♌	
conjunction	13799 May 11 10:06	29°♋59'46 -0°46'42	conjunction	13805 Jul 27 01:12	16°♌17'23	-1°44'13
minimum elong	13799 May 11 10:04	29°♋59'45 0°47'34	minimum elong	13805 Jul 27 01:14	16°♌17'23	1°45'01
max. Earth dist.	13799 May 10 23:22	29°♋56'24 10.44400 AU	max. Earth dist.	13805 Jul 27 08:46	16°♌19'43	10.59534 AU
	13799 May 11 10:51	0°♌	morning rise	13805 Aug 12 22:25	18°♌22'02	
morning rise	13799 May 28 15:06	2°♌08'35	retrograde	13805 Nov 23 19:24	25°♌54'54	
retrograde	13799 Sep 07 06:25	9°♌45'14	opposition	13806 Feb 01 07:46	22°♌32'29	-2°04'48
opposition	13799 Nov 14 07:18	6°♌23'32 -1°10'44	min. Earth dist.	13806 Feb 01 00:16	22°♌33'55	8.60923 AU
min. Earth dist.	13799 Nov 14 15:08	6°♌22'01 8.45350 AU	direct	13806 Apr 11 15:00	19°♌10'28	
direct	13800 Jan 22 18:11	2°♌58'21	evening set	13806 Jul 22 18:29	26°♌39'14	
evening set	13800 May 07 10:17	10°♌45'37				

conjunction	13806 Aug 08 15:35	28° Ω 43'27	-1°36'55	conjunction	13812 Oct 21 04:09	12° \mathbb{M} 35'15	0°15'47
minimum elong	13806 Aug 08 15:37	28° Ω 43'28	1°37'33	minimum elong	13812 Oct 21 04:08	12° \mathbb{M} 35'15	0°16'26
max. Earth dist.	13806 Aug 09 01:26	28° Ω 46'30	10.62017 AU	max. Earth dist.	13812 Oct 21 18:18	12° \mathbb{M} 39'34	10.66782 AU
	13806 Aug 19 00:11	0° \mathbb{M}		morning rise	13812 Nov 07 13:53	14° \mathbb{M} 41'40	
morning rise	13806 Aug 25 13:42	0° \mathbb{M} 47'56			13812 Nov 10 03:38	15° \mathbb{M}	
retrograde	13806 Dec 06 15:29	8° \mathbb{M} 20'19		retrograde	13813 Feb 19 19:36	22° \mathbb{M} 14'59	
opposition	13807 Feb 14 09:58	4° \mathbb{M} 57'37	-1°52'51	opposition	13813 Apr 30 12:35	18° \mathbb{M} 50'49	0°33'33
min. Earth dist.	13807 Feb 14 00:25	4° \mathbb{M} 59'26	8.63226 AU	min. Earth dist.	13813 Apr 30 01:20	18° \mathbb{M} 53'00	8.66267 AU
direct	13807 Apr 24 15:08	1° \mathbb{M} 36'03		direct	13813 Jul 07 19:36	15° \mathbb{M} 29'53	
evening set	13807 Aug 04 06:57	9° \mathbb{M} 01'43		evening set	13813 Oct 16 14:34	22° \mathbb{M} 50'03	
conjunction	13807 Aug 21 05:00	11° \mathbb{M} 05'49	-1°25'08	conjunction	13813 Nov 02 23:18	24° \mathbb{M} 56'11	0°37'55
minimum elong	13807 Aug 21 05:03	11° \mathbb{M} 05'49	1°25'36	minimum elong	13813 Nov 02 23:17	24° \mathbb{M} 56'10	0°38'43
max. Earth dist.	13807 Aug 21 17:27	11° \mathbb{M} 09'38	10.64145 AU	max. Earth dist.	13813 Nov 03 12:17	25° \mathbb{M} 00'08	10.65593 AU
morning rise	13807 Sep 07 04:30	13° \mathbb{M} 10'17		morning rise	13813 Nov 20 10:40	27° \mathbb{M} 03'06	
retrograde	13807 Dec 19 13:02	20° \mathbb{M} 42'19			13813 Dec 16 12:01	0° \mathbb{X}	
opposition	13808 Feb 27 10:01	17° \mathbb{M} 19'18	-1°35'43	retrograde	13814 Mar 04 19:02	4° \mathbb{X} 37'22	
min. Earth dist.	13808 Feb 26 22:18	17° \mathbb{M} 21'33	8.65112 AU	opposition	13814 May 13 06:10	1° \mathbb{X} 13'04	0°59'56
direct	13808 May 06 12:12	13° \mathbb{M} 58'08		min. Earth dist.	13814 May 12 20:22	1° \mathbb{X} 14'58	8.64834 AU
evening set	13808 Aug 15 18:25	21° \mathbb{M} 21'09			13814 May 29 07:06	30° \mathbb{R} \mathbb{M}	
conjunction	13808 Sep 01 17:55	23° \mathbb{M} 25'17	-1°09'28	direct	13814 Jul 20 09:56	27° \mathbb{M} 51'48	
minimum elong	13808 Sep 01 17:58	23° \mathbb{M} 25'18	1°09'43	evening set	13814 Sep 08 23:06	0° \mathbb{X}	
max. Earth dist.	13808 Sep 02 08:39	23° \mathbb{M} 29'48	10.65806 AU		13814 Oct 29 10:46	5° \mathbb{X} 13'39	
morning rise	13808 Sep 18 19:11	25° \mathbb{M} 29'57		conjunction	13814 Nov 15 21:03	7° \mathbb{X} 20'21	0°58'21
	13808 Oct 30 10:59	0° \mathbb{A}		minimum elong	13814 Nov 15 21:01	7° \mathbb{X} 20'21	0°59'17
retrograde	13808 Dec 31 10:47	3° \mathbb{A} 01'46		max. Earth dist.	13814 Nov 16 07:20	7° \mathbb{X} 23'29	10.63894 AU
	13809 Mar 06 15:43	30° \mathbb{R} \mathbb{M}		morning rise	13814 Dec 03 09:52	9° \mathbb{X} 27'49	
opposition	13809 Mar 11 08:17	29° \mathbb{M} 38'28	-1°14'14	retrograde	13815 Mar 17 18:32	17° \mathbb{X} 03'05	
min. Earth dist.	13809 Mar 10 19:16	29° \mathbb{M} 40'57	8.66483 AU	opposition	13815 May 25 23:57	13° \mathbb{X} 38'43	1°23'39
direct	13809 May 19 05:15	26° \mathbb{M} 17'36		min. Earth dist.	13815 May 25 16:52	13° \mathbb{X} 40'06	8.62914 AU
	13809 Jul 26 10:55	0° \mathbb{A}		direct	13815 Aug 02 01:10	10° \mathbb{X} 16'56	
evening set	13809 Aug 28 05:37	3° \mathbb{A} 38'32		evening set	13815 Nov 11 10:09	17° \mathbb{X} 41'11	
conjunction	13809 Sep 14 06:45	5° \mathbb{A} 42'52	-0°50'39	conjunction	13815 Nov 28 21:45	19° \mathbb{X} 48'28	1°16'08
minimum elong	13809 Sep 14 06:46	5° \mathbb{A} 42'53	0°50'39	minimum elong	13815 Nov 28 21:43	19° \mathbb{X} 48'27	1°17'09
max. Earth dist.	13809 Sep 14 22:14	5° \mathbb{A} 47'36	10.66922 AU	max. Earth dist.	13815 Nov 29 04:08	19° \mathbb{X} 50'25	10.61719 AU
morning rise	13809 Oct 01 10:06	7° \mathbb{A} 47'52		morning rise	13815 Dec 16 11:45	21° \mathbb{X} 56'27	
retrograde	13810 Jan 13 06:27	15° \mathbb{A} 19'41		retrograde	13816 Mar 29 17:39	29° \mathbb{X} 32'47	
opposition	13810 Mar 24 05:03	11° \mathbb{A} 56'07	-0°49'25	opposition	13816 Jun 06 18:07	26° \mathbb{X} 08'21	1°43'32
min. Earth dist.	13810 Mar 23 15:56	11° \mathbb{A} 58'39	8.67293 AU	min. Earth dist.	13816 Jun 06 14:14	26° \mathbb{X} 09'07	8.60536 AU
direct	13810 May 31 21:38	8° \mathbb{A} 35'26		direct	13816 Aug 13 19:15	22° \mathbb{X} 45'56	
evening set	13810 Sep 09 17:25	15° \mathbb{A} 55'01		evening set	13816 Nov 21 16:33	0° \mathbb{B}	
conjunction	13810 Sep 26 20:21	17° \mathbb{A} 59'40	-0°29'32		13816 Nov 23 12:29	0° \mathbb{B} 13'07	
minimum elong	13810 Sep 26 20:22	17° \mathbb{A} 59'40	0°29'19	conjunction	13816 Dec 11 01:22	2° \mathbb{B} 21'03	1°30'24
max. Earth dist.	13810 Sep 27 11:26	18° \mathbb{A} 04'16	10.67464 AU	minimum elong	13816 Dec 11 01:21	2° \mathbb{B} 21'03	1°31'26
morning rise	13810 Oct 14 02:01	20° \mathbb{A} 05'04		max. Earth dist.	13816 Dec 11 04:11	2° \mathbb{B} 21'55	10.59099 AU
retrograde	13811 Jan 26 02:41	27° \mathbb{A} 37'09		morning rise	13816 Dec 28 16:13	4° \mathbb{B} 29'34	
opposition	13811 Apr 06 00:29	24° \mathbb{A} 13'22	-0°22'23	retrograde	13817 Apr 11 18:51	12° \mathbb{B} 07'02	
min. Earth dist.	13811 Apr 05 12:02	24° \mathbb{A} 15'46	8.67528 AU	opposition	13817 Jun 19 13:16	8° \mathbb{B} 42'35	1°58'37
direct	13811 Jun 13 13:26	20° \mathbb{A} 52'42		min. Earth dist.	13817 Jun 19 12:07	8° \mathbb{B} 42'49	8.57736 AU
evening set	13811 Sep 22 06:20	28° \mathbb{A} 11'41		direct	13817 Aug 26 14:42	5° \mathbb{B} 19'29	
	13811 Oct 07 04:22	0° \mathbb{M}		evening set	13817 Dec 06 17:47	12° \mathbb{B} 50'03	
conjunction	13811 Oct 09 11:17	0° \mathbb{M} 16'45	-0°07'06	conjunction	13817 Dec 24 07:54	14° \mathbb{B} 58'41	1°40'23
minimum elong	13811 Oct 09 11:17	0° \mathbb{M} 16'45	0°06'40	minimum elong	13817 Dec 24 07:53	14° \mathbb{B} 58'41	1°41'25
behind sun begin	13811 Oct 09 04:37	0° \mathbb{M} 14'45		max. Earth dist.	13817 Dec 24 07:36	14° \mathbb{B} 58'36	10.56110 AU
behind sun end	13811 Oct 09 17:57	0° \mathbb{M} 18'46		morning rise	13818 Jan 10 23:18	17° \mathbb{B} 07'45	
max. Earth dist.	13811 Oct 10 01:46	0° \mathbb{M} 21'10	10.67418 AU	retrograde	13818 Apr 24 22:02	24° \mathbb{B} 46'23	
morning rise	13811 Oct 26 19:10	2° \mathbb{M} 22'40		opposition	13818 Jul 02 09:40	21° \mathbb{B} 21'58	2°08'05
asc. node	13812 Feb 03 06:53	9° \mathbb{M} 54'08		min. Earth dist.	13818 Jul 02 10:50	21° \mathbb{B} 21'45	8.54645 AU
retrograde	13812 Feb 07 23:05	9° \mathbb{M} 55'14		direct	13818 Sep 08 11:42	17° \mathbb{B} 58'10	
opposition	13812 Apr 17 18:53	6° \mathbb{M} 31'14	0°05'42	evening set	13818 Dec 20 02:19	25° \mathbb{B} 32'25	
min. Earth dist.	13812 Apr 17 07:00	6° \mathbb{M} 33'32	8.67180 AU				
direct	13812 Jun 25 04:14	3° \mathbb{M} 10'30		conjunction	13819 Jan 06 17:29	27° \mathbb{B} 41'46	1°45'32
evening set	13812 Oct 03 21:12	10° \mathbb{M} 29'41		minimum elong	13819 Jan 06 17:29	27° \mathbb{B} 41'46	1°46'31

max. Earth dist.	13819 Jan 06 14:05	27° Z 40'43	10.52947 AU	minimum elong	13825 Mar 27 09:04	15° Y 24'02	0°34'02
morning rise	13819 Jan 24 09:14	29° Z 51'23		max. Earth dist.	13825 Mar 26 18:18	15° Y 19'25	10.40905 AU
	13819 Jan 25 13:53	0° \approx		morning rise	13825 Apr 13 21:46	17° Y 34'59	
retrograde	13819 May 08 02:24	7° \approx 31'00		retrograde	13825 Jul 24 18:44	25° Y 13'55	
opposition	13819 Jul 15 07:35	4° \approx 06'40	2°11'20	opposition	13825 Sep 30 08:23	21° Y 50'52	0°28'02
min. Earth dist.	13819 Jul 15 11:18	4° \approx 05'56	8.51493 AU	min. Earth dist.	13825 Sep 30 20:05	21° Y 48'33	8.40897 AU
direct	13819 Sep 21 11:05	0° \approx 42'10		direct	13825 Dec 08 09:26	18° Y 24'04	
evening set	13820 Jan 02 13:35	8° \approx 20'06		evening set	13826 Mar 23 08:30	26° Y 14'24	
conjunction	13820 Jan 20 05:31	10° \approx 30'09	1°45'31	conjunction	13826 Apr 09 22:14	28° Y 25'42	0°10'42
minimum elong	13820 Jan 20 05:32	10° \approx 30'09	1°46'23	minimum elong	13826 Apr 09 22:15	28° Y 25'43	0°10'18
max. Earth dist.	13820 Jan 19 22:27	10° \approx 27'58	10.49850 AU	behind sun begin	13826 Apr 09 16:34	28° Y 23'57	
morning rise	13820 Feb 06 21:30	12° \approx 40'16		behind sun end	13826 Apr 10 03:56	28° Y 27'28	
	13820 Feb 26 20:21	15° \approx		max. Earth dist.	13826 Apr 09 07:28	28° Y 21'05	10.41035 AU
retrograde	13820 May 20 08:24	20° \approx 20'34			13826 Apr 22 11:48	0° Z	
opposition	13820 Jul 27 07:29	16° \approx 56'22	2°08'07	morning rise	13826 Apr 27 09:09	0° Z 36'15	
min. Earth dist.	13820 Jul 27 14:03	16° \approx 55'04	8.48503 AU	retrograde	13826 Aug 07 01:04	8° Z 14'22	
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direct	13820 Oct 03 12:26	13° \approx 31'11		opposition	13826 Oct 13 17:27	4° Z 51'37	-0°01'39
	13820 Nov 14 05:28	15° \approx		min. Earth dist.	13826 Oct 14 05:04	4° Z 49'20	8.41376 AU
evening set	13821 Jan 15 02:51	21° \approx 12'33		direct	13826 Dec 21 22:52	1° Z 24'59	
				evening set	13827 Apr 05 21:44	9° Z 15'05	
conjunction	13821 Feb 01 19:20	23° \approx 23'13	1°40'13	conjunction	13827 Apr 23 09:16	11° Z 25'49	-0°13'26
minimum elong	13821 Feb 01 19:22	23° \approx 23'14	1°40'56	minimum elong	13827 Apr 23 09:15	11° Z 25'49	0°14'03
max. Earth dist.	13821 Feb 01 08:52	23° \approx 19'59	10.47020 AU	behind sun begin	13827 Apr 23 05:41	11° Z 24'42	
morning rise	13821 Feb 19 11:24	25° \approx 33'49		behind sun end	13827 Apr 23 12:48	11° Z 26'55	
	13821 Mar 31 15:57	0° X		max. Earth dist.	13827 Apr 22 19:12	11° Z 21'25	10.41866 AU
retrograde	13821 Jun 02 14:37	3° X 14'26		morning rise	13827 May 10 18:01	13° Z 35'45	
	13821 Aug 07 09:04	30° R \approx			13827 May 22 09:21	15° Z	
opposition	13821 Aug 09 09:14	29° \approx 50'26	1°58'25	retrograde	13827 Aug 20 07:27	21° Z 13'04	
min. Earth dist.	13821 Aug 09 18:16	29° \approx 48'38	8.45854 AU	opposition	13827 Oct 27 03:16	17° Z 50'37	-0°31'11
direct	13821 Oct 16 17:36	26° \approx 24'38		min. Earth dist.	13827 Oct 27 13:31	17° Z 48'36	8.42551 AU
	13821 Dec 22 14:29	0° X			13827 Dec 08 22:51	15° R Z	
evening set	13822 Jan 28 17:50	4° X 09'02		direct	13828 Jan 04 11:59	14° Z 24'20	
conjunction	13822 Feb 15 10:40	6° X 20'14	1°29'50		13828 Jan 30 20:40	15° Z	
minimum elong	13822 Feb 15 10:43	6° X 20'15	1°30'22	evening set	13828 Apr 18 08:52	22° Z 13'30	
max. Earth dist.	13822 Feb 14 21:34	6° X 16'09	10.44613 AU	conjunction	13828 May 05 17:55	24° Z 23'29	-0°36'43
morning rise	13822 Mar 05 02:35	8° X 31'10		minimum elong	13828 May 05 17:54	24° Z 23'28	0°37'31
retrograde	13822 Jun 15 20:07	16° X 11'45		max. Earth dist.	13828 May 05 06:05	24° Z 19'46	10.43361 AU
opposition	13822 Aug 22 12:35	12° X 47'57	1°42'41	morning rise	13828 May 23 00:16	26° Z 32'40	
min. Earth dist.	13822 Aug 22 23:13	12° X 45'50	8.43680 AU		13828 Jun 21 23:57	0° II	
direct	13822 Oct 30 01:56	9° X 21'41		retrograde	13828 Sep 01 12:44	4° II 09'12	
evening set	13823 Feb 11 09:46	17° X 08'35		opposition	13828 Nov 08 13:19	0° II 47'01	-0°59'02
conjunction	13823 Mar 01 02:40	19° X 20'09	1°14'51	min. Earth dist.	13828 Nov 08 21:19	0° II 45'27	8.44362 AU
minimum elong	13823 Mar 01 02:43	19° X 20'10	1°15'09		13828 Nov 18 16:04	30° R Z	
max. Earth dist.	13823 Feb 28 12:21	19° X 15'41	10.42739 AU	direct	13829 Jan 17 01:06	27° Z 21'14	
morning rise	13823 Mar 18 17:57	21° X 31'16			13829 Mar 15 03:11	0° II	
retrograde	13823 Jun 29 03:14	29° X 11'32		evening set	13829 May 01 17:27	5° II 08'53	
opposition	13823 Sep 04 17:43	25° X 47'57	1°21'37	conjunction	13829 May 18 23:56	7° II 17'56	-0°58'05
min. Earth dist.	13823 Sep 05 04:53	25° X 45'44	8.42081 AU	minimum elong	13829 May 18 23:54	7° II 17'56	0°59'01
direct	13823 Nov 12 11:23	22° X 21'22		max. Earth dist.	13829 May 18 15:13	7° II 15'12	10.45435 AU
	13824 Feb 23 16:50	0° Y		morning rise	13829 Jun 05 03:44	9° II 26'15	
evening set	13824 Feb 25 01:50	0° Y 10'04		retrograde	13829 Sep 14 17:36	17° II 02'04	
conjunction	13824 Mar 13 18:17	2° Y 21'48	0°55'58	opposition	13829 Nov 21 23:27	13° II 40'07	-1°23'47
minimum elong	13824 Mar 13 18:19	2° Y 21'49	0°56'03	min. Earth dist.	13829 Nov 22 04:47	13° II 39'05	8.46699 AU
max. Earth dist.	13824 Mar 13 03:40	2° Y 17'14	10.41481 AU	direct	13830 Jan 30 13:35	10° II 14'59	
morning rise	13824 Mar 31 08:28	4° Y 32'56		evening set	13830 May 14 23:18	18° II 00'31	
retrograde	13824 Jul 11 11:59	12° Y 12'38		conjunction	13830 Jun 01 03:06	20° II 08'34	-1°16'26
opposition	13824 Sep 17 00:26	8° Y 49'18	0°56'17	minimum elong	13830 Jun 01 03:04	20° II 08'33	1°17'28
min. Earth dist.	13824 Sep 17 11:53	8° Y 47'02	8.41135 AU	max. Earth dist.	13830 May 31 21:48	20° II 06'54	10.47968 AU
direct	13824 Nov 24 20:57	5° Y 22'32		morning rise	13830 Jun 18 04:27	22° II 15'56	
evening set	13825 Mar 09 17:38	13° Y 12'22		retrograde	13830 Sep 27 22:36	29° II 51'04	
conjunction	13825 Mar 27 09:03	15° Y 24'02	0°34'12	opposition	13830 Dec 05 09:17	26° II 29'20	-1°44'11




























































































































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direct	13831 Feb 12 23:35	23° Π 04'53		min. Earth dist.	13837 Feb 20 06:18	11° Π 50'10	8.66511 AU
	13831 May 21 12:17	0° Ξ		direct	13837 Apr 30 19:12	8° Π 27'27	
evening set	13831 May 28 02:07	0° Ξ 47'47		evening set	13837 Aug 10 07:17	15° Π 50'51	
conjunction	13831 Jun 14 03:22	2° Ξ 54'49	-1°30'55	conjunction	13837 Aug 27 05:47	17° Π 54'40	-1°17'07
minimum elong	13831 Jun 14 03:21	2° Ξ 54'49	1°31'59	minimum elong	13837 Aug 27 05:50	17° Π 54'41	1°17'28
max. Earth dist.	13831 Jun 14 00:52	2° Ξ 54'03	10.50849 AU	max. Earth dist.	13837 Aug 27 18:02	17° Π 58'26	10.67240 AU
morning rise	13831 Jul 01 02:45	5° Ξ 01'19		morning rise	13837 Sep 13 06:07	19° Π 58'59	
retrograde	13831 Oct 11 02:07	12° Ξ 35'45		retrograde	13837 Dec 25 18:13	27° Π 30'00	
opposition	13831 Dec 18 18:25	9° Ξ 14'08	-1°59'19	opposition	13838 Mar 05 15:38	24° Π 07'29	-1°24'37
min. Earth dist.	13831 Dec 18 19:14	9° Ξ 13'59	8.52476 AU	min. Earth dist.	13838 Mar 05 04:46	24° Π 09'33	8.67925 AU
direct	13832 Feb 26 07:36	5° Ξ 50'25		direct	13838 May 13 14:16	20° Π 47'02	
evening set	13832 Jun 09 01:38	13° Ξ 30'16		evening set	13838 Aug 22 18:11	28° Π 08'12	
					13838 Sep 07 02:28	0° Ω	
conjunction	13832 Jun 26 00:48	15° Ξ 36'21	-1°40'51	conjunction	13838 Sep 08 18:19	0° Ω 12'12	-0°59'43
minimum elong	13832 Jun 26 00:47	15° Ξ 36'20	1°41'54	minimum elong	13838 Sep 08 18:21	0° Ω 12'12	0°59'50
max. Earth dist.	13832 Jun 26 01:01	15° Ξ 36'25	10.53949 AU	max. Earth dist.	13838 Sep 09 07:38	0° Ω 16'16	10.68309 AU
morning rise	13832 Jul 12 22:49	17° Ξ 42'04		morning rise	13838 Sep 25 20:40	2° Ω 16'49	
retrograde	13832 Oct 23 02:12	25° Ξ 15'47		retrograde	13839 Jan 07 13:33	9° Ω 47'58	
opposition	13832 Dec 31 02:20	21° Ξ 54'14	-2°08'31	opposition	13839 Mar 18 12:56	6° Ω 25'04	-1°01'19
min. Earth dist.	13832 Dec 31 00:37	21° Ξ 54'33	8.55644 AU	min. Earth dist.	13839 Mar 18 01:10	6° Ω 27'19	8.68605 AU
direct	13833 Mar 10 15:51	18° Ξ 31'13		direct	13839 May 26 08:37	3° Ω 04'45	
evening set	13833 Jun 21 22:07	26° Ξ 07'45		evening set	13839 Sep 04 05:26	10° Ω 24'22	
conjunction	13833 Jul 08 19:50	28° Ξ 13'00	-1°45'52	conjunction	13839 Sep 21 07:33	12° Ω 28'43	-0°39'37
minimum elong	13833 Jul 08 19:50	28° Ξ 13'00	1°46'50	minimum elong	13839 Sep 21 07:34	12° Ω 28'43	0°39'30
max. Earth dist.	13833 Jul 08 23:12	28° Ξ 14'03	10.57115 AU	max. Earth dist.	13839 Sep 21 21:53	12° Ω 33'05	10.68658 AU
	13833 Jul 23 05:51	0° Ω		morning rise	13839 Oct 08 12:00	14° Ω 33'45	
morning rise	13833 Jul 25 17:00	0° Ω 18'03		retrograde	13840 Jan 20 10:56	22° Ω 05'14	
retrograde	13833 Nov 05 02:44	7° Ω 51'05		opposition	13840 Mar 30 08:39	18° Ω 41'56	-0°35'14
opposition	13834 Jan 13 08:37	4° Ω 29'28	-2°11'28	min. Earth dist.	13840 Mar 29 20:26	18° Ω 44'16	8.68593 AU
min. Earth dist.	13834 Jan 13 03:51	4° Ω 30'23	8.58793 AU	direct	13840 Jun 07 00:08	15° Ω 21'34	
direct	13834 Mar 23 21:16	1° Ω 07'10		evening set	13840 Sep 15 17:43	22° Ω 40'24	
evening set	13834 Jul 04 15:38	8° Ω 40'12					
conjunction	13834 Jul 21 12:40	10° Ω 44'47	-1°45'48	conjunction	13840 Oct 02 21:46	24° Ω 45'11	-0°17'43
minimum elong	13834 Jul 21 12:41	10° Ω 44'48	1°46'40	minimum elong	13840 Oct 02 21:47	24° Ω 45'11	0°17'22
max. Earth dist.	13834 Jul 21 19:52	10° Ω 47'01	10.60197 AU	max. Earth dist.	13840 Oct 03 12:07	24° Ω 49'33	10.68333 AU
morning rise	13834 Aug 07 09:35	12° Ω 49'21		morning rise	13840 Oct 20 04:24	26° Ω 50'44	
	13834 Aug 25 23:45	15° Ω			13840 Nov 17 05:26	0° Π	
retrograde	13834 Nov 18 02:48	20° Ω 21'43		retrograde	13841 Feb 01 07:28	4° Π 22'47	
opposition	13835 Jan 26 13:17	16° Ω 59'58	-2°08'10	opposition	13841 Apr 12 03:25	0° Π 59'04	-0°07'32
min. Earth dist.	13835 Jan 26 05:30	17° Ω 01'27	8.61770 AU	min. Earth dist.	13841 Apr 11 15:44	1° Π 01'19	8.67939 AU
	13835 Feb 23 14:29	15° κ Ω			13841 Apr 25 02:52	30° κ Ω	
direct	13835 Apr 05 22:58	13° Ω 38'19		direct	13841 Jun 19 14:14	27° Ω 38'30	
	13835 May 16 06:37	15° Ω		asc. node	13841 Jul 21 17:09	28° Ω 31'40	
evening set	13835 Jul 17 06:31	21° Ω 07'49		evening set	13841 Aug 11 23:47	0° Π	
					13841 Sep 28 07:26	4° Π 57'19	
conjunction	13835 Aug 03 03:30	23° Ω 11'57	-1°40'45	conjunction	13841 Oct 15 13:20	7° Π 02'35	0°05'08
minimum elong	13835 Aug 03 03:32	23° Ω 11'57	1°41'28	minimum elong	13841 Oct 15 13:20	7° Π 02'35	0°05'41
max. Earth dist.	13835 Aug 03 13:46	23° Ω 15'07	10.63034 AU	behind sun begin	13841 Oct 15 06:29	7° Π 00'32	
morning rise	13835 Aug 20 00:54	25° Ω 16'13		behind sun end	13841 Oct 15 20:11	7° Π 04'39	
	13835 Oct 02 23:00	0° Π		max. Earth dist.	13841 Oct 16 02:14	7° Π 06'30	10.67385 AU
retrograde	13835 Dec 01 00:58	2° Π 47'59		morning rise	13841 Nov 01 22:08	9° Π 08'43	
	13836 Feb 01 05:14	30° κ Ω			13841 Dec 30 11:43	15° Π	
opposition	13836 Feb 08 16:01	29° Ω 26'01	-1°58'52	retrograde	13842 Feb 14 03:30	16° Π 41'34	
min. Earth dist.	13836 Feb 08 06:24	29° Ω 27'51	8.64406 AU		13842 Apr 01 17:02	15° κ Π	
direct	13836 Apr 17 22:14	26° Ω 04'54		opposition	13842 Apr 24 21:29	13° Π 17'28	0°20'34
	13836 Jun 27 11:28	0° Π		min. Earth dist.	13842 Apr 24 11:24	13° Π 19'25	8.66702 AU
evening set	13836 Jul 28 19:35	3° Π 31'06		direct	13842 Jul 02 05:20	9° Π 56'32	
					13842 Sep 21 05:38	15° Π	
conjunction	13836 Aug 14 17:03	5° Π 34'59	-1°31'01	evening set	13842 Oct 10 23:27	17° Π 16'08	
minimum elong	13836 Aug 14 17:06	5° Π 34'59	1°31'33				
max. Earth dist.	13836 Aug 15 04:48	5° Π 38'35	10.65444 AU	conjunction	13842 Oct 28 07:12	19° Π 22'00	0°27'39
morning rise	13836 Aug 31 15:39	7° Π 39'10		minimum elong	13842 Oct 28 07:11	19° Π 22'00	0°28'23
retrograde	13836 Dec 12 22:17	15° Π 10'24					

max. Earth dist.	13842 Oct 28 18:21	19° \mathbb{M} 25'23	10.65872 AU	max. Earth dist.	13849 Jan 13 00:13	4° \approx 43'08	10.49595 AU
morning rise	13842 Nov 14 17:57	21° \mathbb{M} 28'42		morning rise	13849 Jan 30 21:37	6° \approx 54'52	
retrograde	13843 Feb 27 01:03	29° \mathbb{M} 02'34		retrograde	13849 May 14 10:39	14° \approx 35'32	
opposition	13843 May 07 14:59	25° \mathbb{M} 38'08	0°47'48	opposition	13849 Jul 21 13:54	11° \approx 10'47	2°10'30
min. Earth dist.	13843 May 07 06:30	25° \mathbb{M} 39'46	8.64937 AU	min. Earth dist.	13849 Jul 21 18:39	11° \approx 09'50	8.48322 AU
direct	13843 Jul 14 20:14	22° \mathbb{M} 16'42		direct	13849 Sep 27 18:57	7° \approx 45'28	
evening set	13843 Oct 23 18:03	29° \mathbb{M} 37'52			13850 Jan 05 12:53	15° \approx	
	13843 Oct 26 19:59	0° \mathbb{X}		evening set	13850 Jan 09 02:27	15° \approx 25'48	
conjunction	13843 Nov 10 03:37	1° \mathbb{X} 44'21	0°49'01	conjunction	13850 Jan 26 18:53	17° \approx 36'24	1°43'21
minimum elong	13843 Nov 10 03:35	1° \mathbb{X} 44'21	0°49'53	minimum elong	13850 Jan 26 18:55	17° \approx 36'24	1°44'09
max. Earth dist.	13843 Nov 10 13:11	1° \mathbb{X} 47'17	10.63847 AU	max. Earth dist.	13850 Jan 26 11:23	17° \approx 34'04	10.46897 AU
morning rise	13843 Nov 27 15:54	3° \mathbb{X} 51'39		morning rise	13850 Feb 13 11:02	19° \approx 46'58	
retrograde	13844 Mar 10 22:50	11° \mathbb{X} 26'42		retrograde	13850 May 27 18:08	27° \approx 28'06	
opposition	13844 May 19 08:29	8° \mathbb{X} 01'58	1°12'56	opposition	13850 Aug 03 15:00	24° \approx 03'38	2°03'46
min. Earth dist.	13844 May 19 01:23	8° \mathbb{X} 03'21	8.62702 AU	min. Earth dist.	13850 Aug 03 21:29	24° \approx 02'20	8.45791 AU
direct	13844 Jul 26 12:08	4° \mathbb{X} 39'59		direct	13850 Oct 10 21:43	20° \approx 37'51	
evening set	13844 Nov 04 15:37	12° \mathbb{X} 03'24		evening set	13851 Jan 22 17:10	28° \approx 21'26	
conjunction	13844 Nov 22 02:46	14° \mathbb{X} 10'33	1°08'10		13851 Feb 05 01:16	0° \mathbb{X}	
minimum elong	13844 Nov 22 02:44	14° \mathbb{X} 10'32	1°09'09	conjunction	13851 Feb 09 10:06	0° \mathbb{X} 32'35	1°35'17
max. Earth dist.	13844 Nov 22 10:40	14° \mathbb{X} 12'58	10.61383 AU	minimum elong	13851 Feb 09 10:08	0° \mathbb{X} 32'35	1°35'54
morning rise	13844 Dec 09 16:11	16° \mathbb{X} 18'25		max. Earth dist.	13851 Feb 09 00:13	0° \mathbb{X} 29'30	10.44587 AU
retrograde	13845 Mar 23 22:28	23° \mathbb{X} 54'47		morning rise	13851 Feb 27 02:03	2° \mathbb{X} 43'31	
opposition	13845 Jun 01 02:26	20° \mathbb{X} 29'50	1°34'47	retrograde	13851 Jun 10 01:05	10° \mathbb{X} 24'47	
min. Earth dist.	13845 May 31 20:58	20° \mathbb{X} 30'54	8.60083 AU	opposition	13851 Aug 16 17:59	7° \mathbb{X} 00'42	1°50'43
direct	13845 Aug 08 05:02	17° \mathbb{X} 07'12		min. Earth dist.	13851 Aug 17 02:25	6° \mathbb{X} 59'01	8.43705 AU
evening set	13845 Nov 17 16:30	24° \mathbb{X} 33'28		direct	13851 Oct 24 04:07	3° \mathbb{X} 34'34	
conjunction	13845 Dec 05 04:58	26° \mathbb{X} 41'18	1°24'12	evening set	13852 Feb 05 09:18	11° \mathbb{X} 20'56	
minimum elong	13845 Dec 05 04:56	26° \mathbb{X} 41'18	1°25'15	conjunction	13852 Feb 23 02:18	13° \mathbb{X} 32'29	1°22'19
max. Earth dist.	13845 Dec 05 09:52	26° \mathbb{X} 42'48	10.58591 AU	minimum elong	13852 Feb 23 02:21	13° \mathbb{X} 32'30	1°22'44
morning rise	13845 Dec 22 19:22	28° \mathbb{X} 49'45		max. Earth dist.	13852 Feb 22 13:58	13° \mathbb{X} 28'38	10.42793 AU
	13846 Jan 01 17:35	0° \mathbb{Z}		morning rise	13852 Mar 11 17:52	15° \mathbb{X} 43'40	
retrograde	13846 Apr 06 00:47	6° \mathbb{Z} 27'24		retrograde	13852 Jun 22 09:07	23° \mathbb{X} 24'43	
opposition	13846 Jun 13 21:14	3° \mathbb{Z} 02'21	1°52'16	opposition	13852 Aug 28 23:02	20° \mathbb{X} 01'04	1°31'57
min. Earth dist.	13846 Jun 13 18:27	3° \mathbb{Z} 02'54	8.57199 AU	min. Earth dist.	13852 Aug 29 09:25	19° \mathbb{X} 59'00	8.42185 AU
	13846 Jul 31 22:41	30° \mathbb{R} \mathbb{X}		direct	13852 Nov 05 12:35	16° \mathbb{X} 34'42	
direct	13846 Aug 20 21:46	29° \mathbb{X} 39'00		evening set	13853 Feb 18 02:02	24° \mathbb{X} 23'10	
	13846 Sep 09 20:44	0° \mathbb{Z}		conjunction	13853 Mar 07 18:42	26° \mathbb{X} 34'57	1°05'06
evening set	13846 Nov 30 20:39	7° \mathbb{Z} 08'35		minimum elong	13853 Mar 07 18:44	26° \mathbb{X} 34'58	1°05'16
conjunction	13846 Dec 18 10:14	9° \mathbb{Z} 17'07	1°36'18	max. Earth dist.	13853 Mar 07 04:26	26° \mathbb{X} 30'30	10.41611 AU
minimum elong	13846 Dec 18 10:13	9° \mathbb{Z} 17'06	1°37'21	morning rise	13853 Mar 25 09:34	28° \mathbb{X} 46'14	
max. Earth dist.	13846 Dec 18 11:18	9° \mathbb{Z} 17'26	10.55601 AU		13853 Apr 04 14:24	0° \mathbb{Y}	
morning rise	13847 Jan 05 01:28	11° \mathbb{Z} 26'09		retrograde	13853 Jul 05 17:15	6° \mathbb{Y} 26'46	
retrograde	13847 Apr 19 03:05	19° \mathbb{Z} 04'58		opposition	13853 Sep 11 05:44	3° \mathbb{Y} 03'31	1°08'24
opposition	13847 Jun 26 17:16	15° \mathbb{Z} 39'56	2°04'29	min. Earth dist.	13853 Sep 11 17:07	3° \mathbb{Y} 01'15	8.41304 AU
min. Earth dist.	13847 Jun 26 17:34	15° \mathbb{Z} 39'52	8.54178 AU		13853 Oct 28 23:15	30° \mathbb{R} \mathbb{X}	
direct	13847 Sep 02 18:13	12° \mathbb{Z} 15'51		direct	13853 Nov 18 23:24	29° \mathbb{X} 37'03	
evening set	13847 Dec 14 03:55	19° \mathbb{Z} 49'03			13853 Dec 09 22:41	0° \mathbb{Y}	
conjunction	13847 Dec 31 18:30	21° \mathbb{Z} 58'15	1°43'47	evening set	13854 Mar 03 18:55	7° \mathbb{Y} 26'57	
minimum elong	13847 Dec 31 18:30	21° \mathbb{Z} 58'15	1°44'48	conjunction	13854 Mar 21 10:49	9° \mathbb{Y} 38'44	0°44'30
max. Earth dist.	13847 Dec 31 15:52	21° \mathbb{Z} 57'27	10.52548 AU	minimum elong	13854 Mar 21 10:51	9° \mathbb{Y} 38'44	0°44'26
morning rise	13848 Jan 18 10:17	24° \mathbb{Z} 07'50		max. Earth dist.	13854 Mar 20 19:57	9° \mathbb{Y} 34'05	10.41083 AU
	13848 Mar 15 23:18	0° \approx		morning rise	13854 Apr 08 00:28	11° \mathbb{Y} 49'53	
retrograde	13848 May 01 05:25	1° \approx 47'42		retrograde	13854 Jul 19 00:13	19° \mathbb{Y} 29'37	
	13848 Jun 17 07:04	30° \mathbb{R} \mathbb{Z}		opposition	13854 Sep 24 13:43	16° \mathbb{Y} 06'46	0°41'17
opposition	13848 Jul 08 14:43	28° \mathbb{Z} 22'45	2°10'42	min. Earth dist.	13854 Sep 25 01:06	16° \mathbb{Y} 04'31	8.41086 AU
min. Earth dist.	13848 Jul 08 17:42	28° \mathbb{Z} 22'10	8.51165 AU	direct	13854 Dec 02 13:00	12° \mathbb{Y} 40'20	
direct	13848 Sep 14 18:00	24° \mathbb{Z} 58'01		evening set	13855 Mar 17 11:05	20° \mathbb{Y} 30'54	
	13848 Dec 04 07:33	0° \approx		max. Earth dist.	13855 Apr 03 11:21	22° \mathbb{Y} 37'56	10.41208 AU
evening set	13848 Dec 26 13:58	2° \approx 34'52		conjunction	13855 Apr 04 01:41	22° \mathbb{Y} 42'26	0°21'36
conjunction	13849 Jan 13 05:32	4° \approx 44'47	1°46'13	minimum elong	13855 Apr 04 01:41	22° \mathbb{Y} 42'26	0°21'18
minimum elong	13849 Jan 13 05:33	4° \approx 44'47	1°47'08	morning rise	13855 Apr 21 13:34	24° \mathbb{Y} 53'13	

	13855 Jun 07 17:44	0°♄	conjunction	13861 Jun 20 16:34	10°♄13'44	-1°36'56
retrograde	13855 Aug 01 08:11	2°♄32'03	minimum elong	13861 Jun 20 16:32	10°♄13'43	1°37'59
	13855 Sep 27 04:20	30°♄♂	max. Earth dist.	13861 Jun 20 14:44	10°♄13'09	10.51091 AU
opposition	13855 Oct 07 22:58	29°♄09'32 0°12'02	morning rise	13861 Jul 07 15:12	12°♄20'03	
min. Earth dist.	13855 Oct 08 09:37	29°♄07'26 8.41506 AU	retrograde	13861 Oct 17 17:26	19°♄55'13	
direct	13855 Dec 16 02:14	25°♄43'16	opposition	13861 Dec 25 13:09	16°♄33'30	-2°05'09
	13856 Feb 28 01:28	0°♄	min. Earth dist.	13861 Dec 25 12:53	16°♄33'33	8.52499 AU
desc. node	13856 Mar 08 22:14	1°♄04'03	direct	13862 Mar 05 03:04	13°♄09'58	
evening set	13856 Mar 30 01:38	3°♄33'43	evening set	13862 Jun 16 15:05	20°♄49'14	
conjunction	13856 Apr 16 14:23	5°♄44'46 -0°02'28	conjunction	13862 Jul 03 13:38	22°♄55'09	-1°44'13
minimum elong	13856 Apr 16 14:23	5°♄44'46 0°03'00	minimum elong	13862 Jul 03 13:38	22°♄55'09	1°45'13
behind sun begin	13856 Apr 16 07:13	5°♄42'33	max. Earth dist.	13862 Jul 03 15:19	22°♄55'41	10.53727 AU
behind sun end	13856 Apr 16 21:32	5°♄46'59	morning rise	13862 Jul 20 11:06	25°♄00'47	
max. Earth dist.	13856 Apr 16 01:12	5°♄40'39 10.41915 AU		13862 Sep 04 17:09	0°♄	
morning rise	13856 May 04 00:07	7°♄55'00	retrograde	13862 Oct 30 20:22	2°♄35'22	
	13856 Jul 19 20:39	15°♄		13862 Dec 28 17:00	30°♄♂	
retrograde	13856 Aug 13 16:15	15°♄32'55	opposition	13863 Jan 07 21:22	29°♄13'28	-2°10'57
	13856 Sep 07 16:41	15°♄♂	min. Earth dist.	13863 Jan 07 18:35	29°♄14'00	8.55186 AU
opposition	13856 Oct 20 08:59	12°♄10'43 -0°17'47	direct	13863 Mar 18 09:10	25°♄50'27	
min. Earth dist.	13856 Oct 20 19:07	12°♄08'43 8.42454 AU		13863 May 30 06:50	0°♄	
direct	13856 Dec 28 15:01	8°♄44'42	evening set	13863 Jun 29 10:53	3°♄26'20	
	13857 Mar 30 11:45	15°♄				
evening set	13857 Apr 12 14:28	16°♄34'31	conjunction	13863 Jul 16 08:15	5°♄31'33	-1°46'24
conjunction	13857 Apr 30 00:51	18°♄44'53 -0°26'14	minimum elong	13863 Jul 16 08:16	5°♄31'33	1°47'19
minimum elong	13857 Apr 30 00:50	18°♄44'53 0°26'57	max. Earth dist.	13863 Jul 16 12:41	5°♄32'56	10.56415 AU
max. Earth dist.	13857 Apr 29 12:22	18°♄40'58 10.43066 AU	morning rise	13863 Aug 02 05:22	7°♄36'40	
morning rise	13857 May 17 08:14	20°♄54'27		13863 Oct 29 11:56	15°♄	
retrograde	13857 Aug 26 23:02	28°♄31'35	retrograde	13863 Nov 12 20:21	15°♄10'37	
opposition	13857 Nov 02 19:27	25°♄09'40 -0°46'36		13863 Nov 27 06:17	15°♄♄	
min. Earth dist.	13857 Nov 03 05:10	25°♄07'46 8.43794 AU	opposition	13864 Jan 21 03:47	11°♄48'27	-2°10'24
direct	13858 Jan 11 04:13	21°♄44'01	min. Earth dist.	13864 Jan 20 22:51	11°♄49'24	8.57859 AU
evening set	13858 Apr 26 01:08	29°♄32'49	direct	13864 Mar 30 13:18	8°♄25'56	
	13858 Apr 29 17:17	0°♄♄	evening set	13864 Jul 03 00:50	15°♄	
				13864 Jul 11 03:48	15°♄58'23	
conjunction	13858 May 13 08:47	1°♄42'22 -0°48'38	conjunction	13864 Jul 28 00:47	18°♄03'04	-1°43'30
minimum elong	13858 May 13 08:46	1°♄42'21 0°49'31	minimum elong	13864 Jul 28 00:48	18°♄03'05	1°44'17
max. Earth dist.	13858 May 12 21:18	1°♄38'46 10.44564 AU	max. Earth dist.	13864 Jul 28 07:52	18°♄05'16	10.59031 AU
morning rise	13858 May 30 13:45	3°♄51'09	morning rise	13864 Aug 13 22:13	20°♄07'51	
retrograde	13858 Sep 09 04:19	11°♄27'45	retrograde	13864 Nov 24 18:21	27°♄41'13	
opposition	13858 Nov 16 06:24	8°♄06'05 -1°12'57	opposition	13865 Feb 02 08:15	24°♄18'45	-2°03'39
min. Earth dist.	13858 Nov 16 14:50	8°♄04'27 8.45487 AU	min. Earth dist.	13865 Feb 02 00:44	24°♄20'11	8.60375 AU
direct	13859 Jan 24 18:15	4°♄40'55	direct	13865 Apr 12 16:11	20°♄56'42	
evening set	13859 May 09 09:04	12°♄28'08	evening set	13865 Jul 23 18:21	28°♄25'48	
				13865 Aug 05 14:04	0°♄♄	
conjunction	13859 May 26 13:58	14°♄36'46 -1°08'30	conjunction	13865 Aug 09 15:42	0°♄30'10	-1°35'44
minimum elong	13859 May 26 13:56	14°♄36'46 1°09'29	minimum elong	13865 Aug 09 15:44	0°♄30'11	1°36'21
max. Earth dist.	13859 May 26 04:40	14°♄33'51 10.46417 AU	max. Earth dist.	13865 Aug 10 02:00	0°♄33'21	10.61430 AU
morning rise	13859 Jun 12 16:35	16°♄44'43	morning rise	13865 Aug 26 13:57	2°♄34'46	
retrograde	13859 Sep 22 09:45	24°♄20'54	retrograde	13865 Dec 07 17:24	10°♄07'39	
opposition	13859 Nov 29 17:22	20°♄59'20 -1°35'30	opposition	13866 Feb 15 10:42	6°♄44'51	-1°51'08
min. Earth dist.	13859 Nov 29 23:20	20°♄58'11 8.47543 AU	min. Earth dist.	13866 Feb 15 00:32	6°♄46'48	8.62603 AU
direct	13860 Feb 07 06:45	17°♄34'42	direct	13866 Apr 25 15:57	3°♄23'16	
evening set	13860 May 21 14:12	25°♄19'45	evening set	13866 Aug 05 07:14	10°♄49'15	
conjunction	13860 Jun 07 16:37	27°♄27'27 -1°24'51	conjunction	13866 Aug 22 05:33	12°♄53'30	-1°23'32
minimum elong	13860 Jun 07 16:35	27°♄27'26 1°25'54	minimum elong	13866 Aug 22 05:35	12°♄53'31	1°23'57
max. Earth dist.	13860 Jun 07 10:48	27°♄25'37 10.48619 AU	max. Earth dist.	13866 Aug 22 18:43	12°♄57'33	10.63497 AU
morning rise	13860 Jun 24 17:04	29°♄34'34	morning rise	13866 Sep 08 05:09	14°♄58'07	
	13860 Jun 28 04:26	0°♄	retrograde	13866 Dec 20 15:28	22°♄30'36	
retrograde	13860 Oct 04 14:07	7°♄10'15	opposition	13867 Feb 28 11:13	19°♄07'30	-1°33'30
opposition	13860 Dec 12 03:39	3°♄48'39 -1°53'10	min. Earth dist.	13867 Feb 27 23:05	19°♄09'49	8.64442 AU
min. Earth dist.	13860 Dec 12 06:21	3°♄48'08 8.49914 AU	direct	13867 May 08 11:36	15°♄46'17	
direct	13861 Feb 19 17:38	0°♄24'35	evening set	13867 Aug 17 19:07	23°♄09'37	
evening set	13861 Jun 03 16:15	8°♄06'58				

conjunction	13867 Sep 03 18:46	25° \mathbb{M} 13'53	-1°07'29	direct	13873 Jul 21 11:36	29° \mathbb{M} 43'52	
minimum elong	13867 Sep 03 18:49	25° \mathbb{M} 13'54	1°07'42		13873 Aug 08 00:13	0° \mathbb{M}	
max. Earth dist.	13867 Sep 04 09:28	25° \mathbb{M} 18'24	10.65127 AU	evening set	13873 Oct 30 13:50	7° \mathbb{M} 06'02	
morning rise	13867 Sep 20 20:16	27° \mathbb{M} 18'43					
	13867 Oct 14 07:08	0° \mathbb{M}		conjunction	13873 Nov 17 00:06	9° \mathbb{M} 12'46	1°00'23
retrograde	13868 Jan 02 12:04	4° \mathbb{M} 50'57		minimum elong	13873 Nov 17 00:04	9° \mathbb{M} 12'46	1°01'20
opposition	13868 Mar 12 09:53	1° \mathbb{M} 27'33	-1°11'37	max. Earth dist.	13873 Nov 17 09:50	9° \mathbb{M} 15'44	10.63515 AU
min. Earth dist.	13868 Mar 11 21:12	1° \mathbb{M} 29'59	8.65798 AU	morning rise	13873 Dec 04 13:05	11° \mathbb{M} 20'17	
	13868 Apr 01 02:34	30° \mathbb{R} \mathbb{M}		retrograde	13874 Mar 18 20:26	18° \mathbb{M} 55'42	
direct	13868 May 20 06:10	28° \mathbb{M} 06'36		opposition	13874 May 27 02:42	15° \mathbb{M} 31'17	1°25'56
	13868 Jul 06 20:28	0° \mathbb{M}		min. Earth dist.	13874 May 26 19:56	15° \mathbb{M} 32'36	8.62610 AU
evening set	13868 Aug 29 06:51	5° \mathbb{M} 27'53		direct	13874 Aug 03 04:47	12° \mathbb{M} 09'25	
				evening set	13874 Nov 12 13:23	19° \mathbb{M} 33'55	
conjunction	13868 Sep 15 08:06	7° \mathbb{M} 32'21	-0°48'23				
minimum elong	13868 Sep 15 08:08	7° \mathbb{M} 32'21	0°48'21	conjunction	13874 Nov 30 01:05	21° \mathbb{M} 41'15	1°17'47
max. Earth dist.	13868 Sep 15 22:55	7° \mathbb{M} 36'53	10.66242 AU	minimum elong	13874 Nov 30 01:03	21° \mathbb{M} 41'14	1°18'48
morning rise	13868 Oct 02 11:48	9° \mathbb{M} 37'29		max. Earth dist.	13874 Nov 30 07:50	21° \mathbb{M} 43'18	10.61497 AU
retrograde	13869 Jan 14 08:44	17° \mathbb{M} 09'41		morning rise	13874 Dec 17 15:09	23° \mathbb{M} 49'15	
opposition	13869 Mar 25 06:52	13° \mathbb{M} 46'02	-0°46'31		13875 Feb 18 09:36	0° \mathbb{M}	
min. Earth dist.	13869 Mar 24 18:15	13° \mathbb{M} 48'27	8.66617 AU	retrograde	13875 Mar 31 20:30	1° \mathbb{M} 25'39	
direct	13869 Jun 01 23:20	10° \mathbb{M} 25'12			13875 May 12 20:39	30° \mathbb{R} \mathbb{M}	
evening set	13869 Sep 10 19:02	17° \mathbb{M} 45'08		opposition	13875 Jun 08 20:51	28° \mathbb{M} 01'12	1°45'18
				min. Earth dist.	13875 Jun 08 16:31	28° \mathbb{M} 02'03	8.60412 AU
conjunction	13869 Sep 27 22:11	19° \mathbb{M} 49'55	-0°27'05	direct	13875 Aug 15 22:27	24° \mathbb{M} 38'44	
minimum elong	13869 Sep 27 22:12	19° \mathbb{M} 49'55	0°26'50		13875 Nov 07 12:58	0° \mathbb{M}	
max. Earth dist.	13869 Sep 28 13:08	19° \mathbb{M} 54'29	10.66802 AU	evening set	13875 Nov 25 15:54	2° \mathbb{M} 06'04	
morning rise	13869 Oct 15 04:05	21° \mathbb{M} 55'28					
retrograde	13870 Jan 27 04:30	29° \mathbb{M} 27'53		conjunction	13875 Dec 13 04:56	4° \mathbb{M} 14'01	1°31'35
opposition	13870 Apr 07 02:35	26° \mathbb{M} 03'58	-0°19'18	minimum elong	13875 Dec 13 04:54	4° \mathbb{M} 14'01	1°32'37
min. Earth dist.	13870 Apr 06 13:57	26° \mathbb{M} 06'24	8.66879 AU	max. Earth dist.	13875 Dec 13 08:49	4° \mathbb{M} 15'13	10.59074 AU
direct	13870 Jun 14 15:14	22° \mathbb{M} 43'11		morning rise	13875 Dec 30 19:41	6° \mathbb{M} 22'31	
	13870 Sep 22 23:56	0° \mathbb{M}		retrograde	13876 Apr 12 22:04	13° \mathbb{M} 59'54	
evening set	13870 Sep 23 08:17	0° \mathbb{M} 02'30		opposition	13876 Jun 20 15:53	10° \mathbb{M} 35'28	1°59'45
				min. Earth dist.	13876 Jun 20 13:57	10° \mathbb{M} 35'51	8.57820 AU
conjunction	13870 Oct 10 13:30	2° \mathbb{M} 07'41	-0°04'36	direct	13876 Aug 27 17:30	7° \mathbb{M} 12'21	
minimum elong	13870 Oct 10 13:31	2° \mathbb{M} 07'41	0°04'08	evening set	13876 Dec 07 21:15	14° \mathbb{M} 42'56	
behind sun begin	13870 Oct 10 06:29	2° \mathbb{M} 05'34					
behind sun end	13870 Oct 10 20:32	2° \mathbb{M} 09'48		conjunction	13876 Dec 25 11:23	16° \mathbb{M} 51'32	1°41'02
max. Earth dist.	13870 Oct 11 04:50	2° \mathbb{M} 12'21	10.66790 AU	minimum elong	13876 Dec 25 11:22	16° \mathbb{M} 51'32	1°42'04
morning rise	13870 Oct 27 21:28	4° \mathbb{M} 13'42		max. Earth dist.	13876 Dec 25 11:50	16° \mathbb{M} 51'40	10.56287 AU
asc. node	13870 Dec 25 08:40	10° \mathbb{M} 04'46		morning rise	13877 Jan 12 02:39	19° \mathbb{M} 00'32	
retrograde	13871 Feb 09 01:04	11° \mathbb{M} 46'37		retrograde	13877 Apr 26 00:56	26° \mathbb{M} 38'57	
opposition	13871 Apr 19 21:11	8° \mathbb{M} 22'28	0°08'48	opposition	13877 Jul 03 12:13	23° \mathbb{M} 14'35	2°08'32
min. Earth dist.	13871 Apr 19 08:32	8° \mathbb{M} 24'55	8.66578 AU	min. Earth dist.	13877 Jul 03 13:05	23° \mathbb{M} 14'25	8.54908 AU
direct	13871 Jun 27 07:09	5° \mathbb{M} 01'37		direct	13877 Sep 09 14:25	19° \mathbb{M} 50'48	
evening set	13871 Oct 05 23:38	12° \mathbb{M} 21'06		evening set	13877 Dec 21 05:38	27° \mathbb{M} 24'56	
conjunction	13871 Oct 23 06:47	14° \mathbb{M} 26'47	0°18'15	conjunction	13878 Jan 07 20:42	29° \mathbb{M} 34'14	1°45'38
minimum elong	13871 Oct 23 06:46	14° \mathbb{M} 26'47	0°18'56	minimum elong	13878 Jan 07 20:42	29° \mathbb{M} 34'14	1°46'35
max. Earth dist.	13871 Oct 23 21:34	14° \mathbb{M} 31'17	10.66210 AU	max. Earth dist.	13878 Jan 07 17:01	29° \mathbb{M} 33'07	10.53277 AU
	13871 Oct 27 19:45	15° \mathbb{M}			13878 Jan 11 08:25	0° \mathbb{M}	
morning rise	13871 Nov 09 16:36	16° \mathbb{M} 33'17		morning rise	13878 Jan 25 12:25	1° \mathbb{M} 43'47	
retrograde	13872 Feb 21 23:41	24° \mathbb{M} 06'52		retrograde	13878 May 09 05:38	9° \mathbb{M} 23'05	
opposition	13872 May 01 15:01	20° \mathbb{M} 42'35	0°36'31	opposition	13878 Jul 16 10:01	5° \mathbb{M} 58'50	2°11'05
min. Earth dist.	13872 May 01 03:27	20° \mathbb{M} 44'49	8.65733 AU	min. Earth dist.	13878 Jul 16 14:14	5° \mathbb{M} 58'00	8.51878 AU
direct	13872 Jul 08 21:12	17° \mathbb{M} 21'32		direct	13878 Sep 22 12:57	2° \mathbb{M} 34'21	
evening set	13872 Oct 17 17:27	24° \mathbb{M} 41'59		evening set	13879 Jan 03 16:40	10° \mathbb{M} 12'08	
conjunction	13872 Nov 04 02:13	26° \mathbb{M} 48'11	0°40'13	conjunction	13879 Jan 21 08:30	12° \mathbb{M} 22'07	1°45'02
minimum elong	13872 Nov 04 02:12	26° \mathbb{M} 48'11	0°41'03	minimum elong	13879 Jan 21 08:31	12° \mathbb{M} 22'07	1°45'54
max. Earth dist.	13872 Nov 04 14:54	26° \mathbb{M} 52'03	10.65100 AU	max. Earth dist.	13879 Jan 21 00:36	12° \mathbb{M} 19'41	10.50277 AU
morning rise	13872 Nov 21 13:43	28° \mathbb{M} 55'12		morning rise	13879 Feb 08 00:32	14° \mathbb{M} 32'11	
	13872 Nov 30 18:14	0° \mathbb{M}			13879 Feb 11 21:01	15° \mathbb{M}	
retrograde	13873 Mar 05 22:15	6° \mathbb{M} 29'38		retrograde	13879 May 22 10:33	22° \mathbb{M} 12'06	
opposition	13873 May 14 08:48	3° \mathbb{M} 05'16	1°02'38	opposition	13879 Jul 29 09:41	18° \mathbb{M} 48'02	2°07'09
min. Earth dist.	13873 May 13 23:21	3° \mathbb{M} 07'06	8.64394 AU	min. Earth dist.	13879 Jul 29 16:49	18° \mathbb{M} 46'37	8.48959 AU
	13873 Jul 03 22:46	30° \mathbb{R} \mathbb{M}		direct	13879 Oct 05 15:10	15° \mathbb{M} 22'53	

evening set	13880 Jan 17 05:41	23° \approx 04'05		opposition	13885 Oct 14 18:37	6° \mathcal{B} 40'12	-0°04'39
				min. Earth dist.	13885 Oct 15 06:25	6° \mathcal{B} 37'52	8.41646 AU
conjunction	13880 Feb 03 22:07	25° \approx 14'40	1°39'12	direct	13885 Dec 23 00:18	3° \mathcal{B} 13'35	
minimum elong	13880 Feb 03 22:09	25° \approx 14'41	1°39'54	evening set	13886 Apr 06 22:50	11° \mathcal{B} 03'29	
max. Earth dist.	13880 Feb 03 11:19	25° \approx 11'20	10.47496 AU				
morning rise	13880 Feb 21 14:11	27° \approx 25'12		conjunction	13886 Apr 24 10:15	13° \mathcal{B} 14'09	-0°15'48
	13880 Mar 14 17:53	0° \mathcal{H}		minimum elong	13886 Apr 24 10:14	13° \mathcal{B} 14'09	0°16'27
retrograde	13880 Jun 03 14:58	5° \mathcal{H} 05'27		max. Earth dist.	13886 Apr 23 20:10	13° \mathcal{B} 09'44	10.42083 AU
opposition	13880 Aug 10 11:08	1° \mathcal{H} 41'33	1°56'50		13886 May 08 12:59	15° \mathcal{B}	
min. Earth dist.	13880 Aug 10 20:08	1° \mathcal{H} 39'46	8.46339 AU	morning rise	13886 May 11 18:53	15° \mathcal{B} 24'01	
	13880 Sep 01 18:11	30° \mathcal{R} \approx		retrograde	13886 Aug 21 07:35	23° \mathcal{B} 01'13	
direct	13880 Oct 17 21:21	28° \approx 15'51		opposition	13886 Oct 28 04:14	19° \mathcal{B} 38'44	-0°34'03
	13880 Dec 02 04:44	0° \mathcal{H}		min. Earth dist.	13886 Oct 28 14:08	19° \mathcal{B} 36'48	8.42708 AU
evening set	13881 Jan 29 20:16	6° \mathcal{H} 00'01		direct	13887 Jan 05 13:53	16° \mathcal{B} 12'28	
				evening set	13887 Apr 20 09:47	24° \mathcal{B} 01'30	
conjunction	13881 Feb 16 13:08	8° \mathcal{H} 11'09	1°28'20				
minimum elong	13881 Feb 16 13:11	8° \mathcal{H} 11'10	1°28'51	conjunction	13887 May 07 18:47	26° \mathcal{B} 11'24	-0°38'55
max. Earth dist.	13881 Feb 16 00:30	8° \mathcal{H} 07'13	10.45104 AU	minimum elong	13887 May 07 18:45	26° \mathcal{B} 11'23	0°39'44
morning rise	13881 Mar 06 04:55	10° \mathcal{H} 22'00		max. Earth dist.	13887 May 07 07:26	26° \mathcal{B} 07'50	10.43454 AU
retrograde	13881 Jun 16 22:08	18° \mathcal{H} 02'15		morning rise	13887 May 25 00:53	28° \mathcal{B} 20'31	
opposition	13881 Aug 23 14:17	14° \mathcal{H} 38'33	1°40'32		13887 Jun 07 20:15	0° \mathcal{I}	
min. Earth dist.	13881 Aug 24 00:23	14° \mathcal{H} 36'32	8.44167 AU	retrograde	13887 Sep 03 13:28	5° \mathcal{I} 57'02	
direct	13881 Oct 31 03:39	11° \mathcal{H} 12'23		opposition	13887 Nov 10 14:22	2° \mathcal{I} 34'48	-1°01'36
evening set	13882 Feb 12 11:50	18° \mathcal{H} 59'00		min. Earth dist.	13887 Nov 10 22:05	2° \mathcal{I} 33'17	8.44390 AU
					13887 Dec 18 01:51	30° \mathcal{R} \mathcal{B}	
conjunction	13882 Mar 02 04:47	21° \mathcal{H} 10'31	1°12'56	direct	13888 Jan 19 02:48	29° \mathcal{B} 09'00	
minimum elong	13882 Mar 02 04:49	21° \mathcal{H} 10'31	1°13'13		13888 Feb 19 17:52	0° \mathcal{I}	
max. Earth dist.	13882 Mar 01 15:02	21° \mathcal{H} 06'13	10.43220 AU	evening set	13888 May 02 18:09	6° \mathcal{I} 56'31	
morning rise	13882 Mar 19 19:52	23° \mathcal{H} 21'33					
	13882 May 27 02:27	0° \mathcal{Y}		conjunction	13888 May 20 00:30	9° \mathcal{I} 05'32	-0°59'59
retrograde	13882 Jun 30 05:55	1° \mathcal{Y} 01'29		minimum elong	13888 May 20 00:28	9° \mathcal{I} 05'32	1°00'57
	13882 Aug 03 17:46	30° \mathcal{R} \mathcal{H}		max. Earth dist.	13888 May 19 16:01	9° \mathcal{I} 02'53	10.45396 AU
opposition	13882 Sep 05 19:15	27° \mathcal{H} 38'00	1°19'03	morning rise	13888 Jun 06 04:04	11° \mathcal{I} 13'48	
min. Earth dist.	13882 Sep 06 06:18	27° \mathcal{H} 35'48	8.42545 AU	retrograde	13888 Sep 15 19:43	18° \mathcal{I} 49'40	
direct	13882 Nov 13 11:59	24° \mathcal{H} 11'30		opposition	13888 Nov 23 00:34	15° \mathcal{I} 27'40	-1°25'56
	13883 Feb 09 07:30	0° \mathcal{Y}		min. Earth dist.	13888 Nov 23 06:15	15° \mathcal{I} 26'33	8.46598 AU
evening set	13883 Feb 26 03:46	1° \mathcal{Y} 59'58		direct	13889 Jan 31 13:20	12° \mathcal{I} 02'28	
				evening set	13889 May 15 23:58	19° \mathcal{I} 47'57	
conjunction	13883 Mar 15 20:08	4° \mathcal{Y} 11'37	0°53'46				
minimum elong	13883 Mar 15 20:10	4° \mathcal{Y} 11'38	0°53'49	conjunction	13889 Jun 02 03:34	21° \mathcal{I} 55'59	-1°17'58
max. Earth dist.	13883 Mar 15 05:15	4° \mathcal{Y} 06'58	10.41927 AU	minimum elong	13889 Jun 02 03:32	21° \mathcal{I} 55'58	1°19'00
morning rise	13883 Apr 02 10:10	6° \mathcal{Y} 22'41		max. Earth dist.	13889 Jun 01 21:37	21° \mathcal{I} 54'07	10.47801 AU
retrograde	13883 Jul 13 12:51	14° \mathcal{Y} 02'03		morning rise	13889 Jun 19 04:52	24° \mathcal{I} 03'21	
opposition	13883 Sep 19 01:48	10° \mathcal{Y} 38'50	0°53'26		13889 Aug 16 02:58	0° \mathcal{E}	
min. Earth dist.	13883 Sep 19 13:52	10° \mathcal{Y} 36'26	8.41554 AU	retrograde	13889 Sep 28 23:17	1° \mathcal{E} 38'35	
direct	13883 Nov 26 23:02	7° \mathcal{Y} 12'08			13889 Nov 13 02:26	30° \mathcal{R} \mathcal{I}	
evening set	13884 Mar 10 19:19	15° \mathcal{Y} 01'46		opposition	13889 Dec 06 10:24	28° \mathcal{I} 16'46	-1°45'50
				min. Earth dist.	13889 Dec 06 14:12	28° \mathcal{I} 16'02	8.49218 AU
conjunction	13884 Mar 28 10:31	17° \mathcal{Y} 13'20	0°31'49	direct	13890 Feb 13 23:59	24° \mathcal{I} 52'14	
minimum elong	13884 Mar 28 10:32	17° \mathcal{Y} 13'20	0°31'37		13890 May 07 01:17	0° \mathcal{E}	
max. Earth dist.	13884 Mar 27 18:50	17° \mathcal{Y} 08'25	10.41295 AU	evening set	13890 May 29 02:45	2° \mathcal{E} 35'13	
morning rise	13884 Apr 14 23:09	19° \mathcal{Y} 24'12					
retrograde	13884 Jul 25 19:29	27° \mathcal{Y} 02'53		conjunction	13890 Jun 15 03:50	4° \mathcal{E} 42'14	-1°32'00
opposition	13884 Oct 01 09:42	23° \mathcal{Y} 39'55	0°25'01	minimum elong	13890 Jun 15 03:48	4° \mathcal{E} 42'14	1°33'03
min. Earth dist.	13884 Oct 01 22:09	23° \mathcal{Y} 37'28	8.41253 AU	max. Earth dist.	13890 Jun 15 00:24	4° \mathcal{E} 41'10	10.50557 AU
direct	13884 Dec 09 11:16	20° \mathcal{Y} 13'10		morning rise	13890 Jul 02 03:16	6° \mathcal{E} 48'46	
evening set	13885 Mar 24 09:48	28° \mathcal{Y} 03'16		retrograde	13890 Oct 12 01:27	14° \mathcal{E} 23'24	
	13885 Apr 09 01:04	0° \mathcal{B}		opposition	13890 Dec 19 19:39	11° \mathcal{E} 01'42	-2°00'22
				min. Earth dist.	13890 Dec 19 20:46	11° \mathcal{E} 01'29	8.52123 AU
conjunction	13885 Apr 10 23:20	0° \mathcal{B} 14'30	0°08'16	direct	13891 Feb 27 10:01	7° \mathcal{E} 37'54	
minimum elong	13885 Apr 10 23:21	0° \mathcal{B} 14'31	0°07'49	evening set	13891 Jun 11 02:14	15° \mathcal{E} 17'53	
behind sun begin	13885 Apr 10 16:53	0° \mathcal{B} 12'30					
behind sun end	13885 Apr 11 05:49	0° \mathcal{B} 16'31		conjunction	13891 Jun 28 01:21	17° \mathcal{E} 24'00	-1°41'27
max. Earth dist.	13885 Apr 10 07:45	0° \mathcal{B} 09'38	10.41352 AU	minimum elong	13891 Jun 28 01:20	17° \mathcal{E} 23'59	1°42'29
morning rise	13885 Apr 28 10:14	2° \mathcal{B} 24'59		max. Earth dist.	13891 Jun 28 01:30	17° \mathcal{E} 24'02	10.53535 AU
retrograde	13885 Aug 08 01:58	10° \mathcal{B} 02'54		morning rise	13891 Jul 14 23:23	19° \mathcal{E} 29'45	
desc. node	13885 Aug 18 04:36	9° \mathcal{B} 57'24		retrograde	13891 Oct 25 03:50	27° \mathcal{E} 03'50	

opposition	13892 Jan 02 03:45	23°  42'08	-2°08'56	min. Earth dist.	13898 Mar 19 03:26	8°  20'25	8.68256 AU
min. Earth dist.	13892 Jan 02 01:36	23°  42'33	8.55174 AU	direct	13898 May 27 10:59	4°  57'44	
direct	13892 Mar 11 17:28	20°  19'04		evening set	13898 Sep 05 08:19	12°  17'35	
evening set	13892 Jun 22 22:48	27°  55'46					
				conjunction	13898 Sep 22 10:34	14°  22'01	-0°37'08
conjunction	13892 Jul 09 20:39	0°  01'06	-1°45'56	minimum elong	13898 Sep 22 10:36	14°  22'01	0°36'59
minimum elong	13892 Jul 09 20:39	0°  01'06	1°46'53	max. Earth dist.	13898 Sep 23 01:23	14°  26'32	10.68360 AU
	13892 Jul 09 17:06	0°  00		morning rise	13898 Oct 09 15:11	16°  27'09	
max. Earth dist.	13892 Jul 10 00:44	0°  02'22	10.56595 AU	retrograde	13899 Jan 21 15:00	23°  58'54	
morning rise	13892 Jul 26 17:48	2°  06'14		opposition	13899 Apr 01 12:03	20°  35'37	-0°32'05
retrograde	13892 Nov 06 04:53	9°  03'40		min. Earth dist.	13899 Mar 31 23:42	20°  37'59	8.68345 AU
opposition	13893 Jan 14 10:13	6°  17'56	-2°11'14	direct	13899 Jun 09 01:40	17°  15'18	
min. Earth dist.	13893 Jan 14 04:53	6°  18'57	8.58226 AU	evening set	13899 Sep 17 20:55	24°  34'21	
direct	13893 Mar 24 21:52	2°  05'35					
evening set	13893 Jul 05 16:37	10°  28'52		conjunction	13899 Oct 05 01:04	26°  39'12	-0°15'07
				minimum elong	13899 Oct 05 01:04	26°  39'12	0°14'44
conjunction	13893 Jul 22 13:47	12°  03'34	-1°45'19	behind sun begin	13899 Oct 04 22:09	26°  38'19	
minimum elong	13893 Jul 22 13:48	12°  03'34	1°46'10	behind sun end	13899 Oct 05 04:00	26°  40'05	
max. Earth dist.	13893 Jul 22 21:27	12°  03'56	10.59593 AU	max. Earth dist.	13899 Oct 05 14:58	26°  43'26	10.68135 AU
morning rise	13893 Aug 08 10:45	14°  03'14		morning rise	13899 Oct 22 07:58	28°  44'50	
	13893 Aug 11 10:51	15°  00			13899 Nov 02 00:21	0°  00	
retrograde	13893 Nov 19 04:52	22°  01'04		retrograde	13900 Feb 03 10:49	6°  17'05	
opposition	13894 Jan 27 15:15	18°  04'13	-2°07'16	opposition	13900 Apr 14 06:59	2°  53'25	-0°04'18
min. Earth dist.	13894 Jan 27 07:32	18°  05'41	8.61135 AU	min. Earth dist.	13900 Apr 13 19:46	2°  55'35	8.67790 AU
direct	13894 Apr 07 00:10	15°  02'31			13900 May 29 17:47	30°  00	
evening set	13894 Jul 18 07:54	22°  05'20		asc. node	13900 Jun 10 06:10	29°  39'46	
				direct	13900 Jun 21 17:51	29°  32'53	
conjunction	13894 Aug 04 04:55	25°  01'36	-1°39'45		13900 Jul 14 13:07	0°  00	
minimum elong	13894 Aug 04 04:57	25°  01'36	1°40'26	evening set	13900 Sep 30 11:02	6°  15'54	
max. Earth dist.	13894 Aug 04 14:51	25°  04'40	10.62387 AU				
morning rise	13894 Aug 21 02:32	27°  06'00		conjunction	13900 Oct 17 17:03	8°  15'15	0°07'43
	13894 Sep 15 08:55	0°  00		minimum elong	13900 Oct 17 17:03	8°  15'15	0°08'18
retrograde	13894 Dec 02 04:08	4°  00'38'15		behind sun begin	13900 Oct 17 10:45	8°  15'55'21	
opposition	13895 Feb 09 18:26	1°  00'16'13	-1°57'20	behind sun end	13900 Oct 17 23:20	8°  15'59'09	
min. Earth dist.	13895 Feb 09 09:13	1°  00'17'59	8.63760 AU	max. Earth dist.	13900 Oct 18 05:39	9°  01'05	10.67284 AU
	13895 Feb 26 19:58	30°  00'00		morning rise	13900 Nov 04 02:04	11°  03'26	
direct	13895 Apr 19 23:37	27°  05'50'4			13900 Dec 10 00:11	15°  00	
	13895 Jun 09 05:56	0°  00		retrograde	13901 Feb 16 07:31	18°  13'36'24	
evening set	13895 Jul 30 21:19	5°  00'21'38		opposition	13901 Apr 27 01:04	15°  13'12'22	0°23'43
				min. Earth dist.	13901 Apr 26 15:02	15°  13'14'18	8.66650 AU
conjunction	13895 Aug 16 18:53	7°  00'25'38	-1°29'32		13901 Apr 29 17:02	15°  13'00	
minimum elong	13895 Aug 16 18:55	7°  00'25'39	1°30'03	direct	13901 Jul 04 08:52	11°  13'51'28	
max. Earth dist.	13895 Aug 17 06:21	7°  00'29'10	10.64825 AU		13901 Sep 04 13:24	15°  00	
morning rise	13895 Sep 02 17:47	9°  00'29'59		evening set	13901 Oct 13 03:15	19°  13'11'13	
retrograde	13895 Dec 15 00:22	17°  00'01'42					
opposition	13896 Feb 22 19:25	13°  00'39'26	-1°42'01	conjunction	13901 Oct 30 11:12	21°  13'17'07	0°30'08
min. Earth dist.	13896 Feb 22 09:01	13°  00'41'25	8.65932 AU	minimum elong	13901 Oct 30 11:10	21°  13'17'06	0°30'54
direct	13896 May 01 21:11	10°  00'18'40		max. Earth dist.	13901 Oct 30 22:57	21°  13'20'42	10.65868 AU
evening set	13896 Aug 11 09:20	17°  00'17'42'23		morning rise	13901 Nov 16 21:58	23°  13'23'51	
					13902 Jan 26 03:50	0°  00	
conjunction	13896 Aug 28 08:07	19°  00'17'46'21	-1°15'13	retrograde	13902 Mar 01 04:35	0°  00'57'46	
minimum elong	13896 Aug 28 08:09	19°  00'17'46'21	1°15'31		13902 Apr 04 13:43	30°  00'00	
max. Earth dist.	13896 Aug 28 21:00	19°  00'17'50'18	10.66721 AU	opposition	13902 May 09 18:39	27°  13'33'22	0°50'43
morning rise	13896 Sep 14 08:40	21°  00'17'50'48		min. Earth dist.	13902 May 09 09:30	27°  13'35'08	8.64987 AU
retrograde	13896 Dec 26 20:38	29°  00'17'22'14		direct	13902 Jul 17 00:04	24°  13'11'59	
opposition	13897 Mar 06 18:32	25°  00'17'59'38	-1°22'03		13902 Oct 12 14:32	0°  00	
min. Earth dist.	13897 Mar 06 06:54	26°  00'17'01'52	8.67465 AU	evening set	13902 Oct 25 22:01	1°  00'33'14	
direct	13897 May 14 17:52	22°  00'17'39'11					
evening set	13897 Aug 23 20:39	0°  00'00'37		conjunction	13902 Nov 12 07:44	3°  00'39'44	0°51'15
	13897 Aug 23 18:35	0°  00		minimum elong	13902 Nov 12 07:43	3°  00'39'44	0°52'09
				max. Earth dist.	13902 Nov 12 18:10	3°  00'42'55	10.63945 AU
conjunction	13897 Sep 09 21:04	2°  00'04'44	-0°57'29	morning rise	13902 Nov 29 19:58	5°  00'47'01	
minimum elong	13897 Sep 09 21:06	2°  00'04'45	0°57'34	retrograde	13903 Mar 14 03:03	13°  00'42'22'02	
max. Earth dist.	13897 Sep 10 11:33	2°  00'09'10	10.67907 AU	opposition	13903 May 22 12:07	9°  00'57'20	1°15'29
morning rise	13897 Sep 26 23:31	4°  00'09'27		min. Earth dist.	13903 May 22 04:26	9°  00'58'51	8.62855 AU
retrograde	13898 Jan 08 18:20	11°  00'40'56		direct	13903 Jul 29 16:02	6°  00'35'23	
opposition	13898 Mar 19 16:01	8°  00'18'00	-0°58'23	evening set	13903 Nov 07 19:51	13°  00'58'48	

conjunction	13903 Nov 25 07:00	16° \mathbb{X} 05'57	1°10'03	conjunction	13910 Feb 11 12:21	2° \mathbb{X} 22'55	1°34'01
minimum elong	13903 Nov 25 06:58	16° \mathbb{X} 05'56	1°11'03	minimum elong	13910 Feb 11 12:23	2° \mathbb{X} 22'55	1°34'37
max. Earth dist.	13903 Nov 25 14:54	16° \mathbb{X} 08'21	10.61585 AU	max. Earth dist.	13910 Feb 11 01:33	2° \mathbb{X} 19'33	10.45081 AU
morning rise	13903 Dec 12 20:26	18° \mathbb{X} 13'47		morning rise	13910 Mar 01 04:19	4° \mathbb{X} 33'45	
retrograde	13904 Mar 26 03:34	25° \mathbb{X} 49'57		retrograde	13910 Jun 12 02:38	12° \mathbb{X} 14'27	
opposition	13904 Jun 03 05:55	22° \mathbb{X} 25'04	1°36'50	opposition	13910 Aug 18 19:31	8° \mathbb{X} 50'22	1°48'52
min. Earth dist.	13904 Jun 03 00:40	22° \mathbb{X} 26'06	8.60339 AU	min. Earth dist.	13910 Aug 19 04:47	8° \mathbb{X} 48'31	8.44177 AU
direct	13904 Aug 10 07:26	19° \mathbb{X} 02'27		direct	13910 Oct 26 05:48	5° \mathbb{X} 24'10	
evening set	13904 Nov 19 20:45	26° \mathbb{X} 28'39		evening set	13911 Feb 07 11:12	13° \mathbb{X} 10'07	
conjunction	13904 Dec 07 09:06	28° \mathbb{X} 36'25	1°25'39	conjunction	13911 Feb 25 04:05	15° \mathbb{X} 21'35	1°20'38
minimum elong	13904 Dec 07 09:05	28° \mathbb{X} 36'25	1°26'41	minimum elong	13911 Feb 25 04:07	15° \mathbb{X} 21'36	1°21'01
max. Earth dist.	13904 Dec 07 13:15	28° \mathbb{X} 37'42	10.58896 AU	max. Earth dist.	13911 Feb 24 14:45	15° \mathbb{X} 17'26	10.43243 AU
	13904 Dec 18 18:57	0° \mathbb{Z}		morning rise	13911 Mar 14 19:41	17° \mathbb{X} 32'41	
morning rise	13904 Dec 24 23:34	0° \mathbb{Z} 44'50		retrograde	13911 Jun 25 09:29	25° \mathbb{X} 13'13	
retrograde	13905 Apr 08 04:03	8° \mathbb{Z} 22'09		opposition	13911 Sep 01 00:09	21° \mathbb{X} 49'34	1°29'37
opposition	13905 Jun 16 00:36	4° \mathbb{Z} 57'11	1°53'44	min. Earth dist.	13911 Sep 01 11:00	21° \mathbb{X} 47'24	8.42597 AU
min. Earth dist.	13905 Jun 15 22:24	4° \mathbb{Z} 57'37	8.57554 AU	direct	13911 Nov 08 14:49	18° \mathbb{X} 23'10	
direct	13905 Aug 23 01:27	1° \mathbb{Z} 33'49		evening set	13912 Feb 21 03:24	26° \mathbb{X} 11'17	
evening set	13905 Dec 03 00:35	9° \mathbb{Z} 03'15		conjunction	13912 Mar 09 20:00	28° \mathbb{X} 22'59	1°03'04
conjunction	13905 Dec 20 14:07	11° \mathbb{Z} 11'42	1°37'13	minimum elong	13912 Mar 09 20:03	28° \mathbb{X} 23'00	1°03'13
minimum elong	13905 Dec 20 14:06	11° \mathbb{Z} 11'42	1°38'16	max. Earth dist.	13912 Mar 09 05:34	28° \mathbb{X} 18'28	10.41987 AU
max. Earth dist.	13905 Dec 20 14:49	11° \mathbb{Z} 11'55	10.55999 AU		13912 Mar 22 19:38	0° \mathbb{Y}	
morning rise	13906 Jan 07 05:23	13° \mathbb{Z} 20'39		morning rise	13912 Mar 27 10:48	0° \mathbb{Y} 34'11	
retrograde	13906 Apr 21 04:39	20° \mathbb{Z} 59'06		retrograde	13912 Jul 07 16:34	8° \mathbb{Y} 14'20	
opposition	13906 Jun 28 20:19	17° \mathbb{Z} 34'06	2°05'16	opposition	13912 Sep 13 06:32	4° \mathbb{Y} 51'05	1°05'43
min. Earth dist.	13906 Jun 28 20:46	17° \mathbb{Z} 34'00	8.54616 AU	min. Earth dist.	13912 Sep 13 17:40	4° \mathbb{Y} 48'52	8.41633 AU
direct	13906 Sep 04 23:02	14° \mathbb{Z} 10'00		direct	13912 Nov 21 02:02	1° \mathbb{Y} 24'38	
evening set	13906 Dec 16 07:35	21° \mathbb{Z} 42'56		evening set	13913 Mar 05 19:49	9° \mathbb{Y} 14'14	
conjunction	13907 Jan 02 22:15	23° \mathbb{Z} 52'05	1°44'09	conjunction	13913 Mar 23 11:43	11° \mathbb{Y} 25'57	0°42'15
minimum elong	13907 Jan 02 22:15	23° \mathbb{Z} 52'05	1°45'09	minimum elong	13913 Mar 23 11:45	11° \mathbb{Y} 25'58	0°42'09
max. Earth dist.	13907 Jan 02 20:00	23° \mathbb{Z} 51'23	10.53017 AU	max. Earth dist.	13913 Mar 22 21:22	11° \mathbb{Y} 21'28	10.41372 AU
morning rise	13907 Jan 20 13:58	26° \mathbb{Z} 01'33		morning rise	13913 Apr 10 01:12	13° \mathbb{Y} 37'02	
	13907 Feb 25 07:31	0° \mathbb{Z}		retrograde	13913 Jul 21 01:08	21° \mathbb{Y} 16'32	
retrograde	13907 May 04 08:25	3° \mathbb{Z} 40'56		opposition	13913 Sep 26 14:19	17° \mathbb{Y} 53'41	0°38'23
opposition	13907 Jul 11 17:19	0° \mathbb{Z} 16'01	2°10'47	min. Earth dist.	13913 Sep 27 01:20	17° \mathbb{Y} 51'30	8.41329 AU
min. Earth dist.	13907 Jul 11 19:52	0° \mathbb{Z} 15'30	8.51658 AU	direct	13913 Dec 04 13:21	14° \mathbb{Y} 27'18	
	13907 Jul 15 02:09	30° \mathbb{R} \mathbb{Z}		evening set	13914 Mar 19 11:44	22° \mathbb{Y} 17'39	
direct	13907 Sep 17 20:58	26° \mathbb{Z} 51'15		conjunction	13914 Apr 06 02:17	24° \mathbb{Y} 29'09	0°19'14
	13907 Nov 18 23:03	0° \mathbb{Z}		minimum elong	13914 Apr 06 02:18	24° \mathbb{Y} 29'09	0°18'54
evening set	13907 Dec 29 17:19	4° \mathbb{Z} 27'45		max. Earth dist.	13914 Apr 05 12:20	24° \mathbb{Y} 24'47	10.41413 AU
conjunction	13908 Jan 16 08:57	6° \mathbb{Z} 37'34	1°46'00	morning rise	13914 Apr 23 13:59	26° \mathbb{Y} 39'53	
minimum elong	13908 Jan 16 08:58	6° \mathbb{Z} 37'35	1°46'55		13914 May 22 10:18	0° \mathbb{Z}	
max. Earth dist.	13908 Jan 16 04:14	6° \mathbb{Z} 36'07	10.50100 AU	retrograde	13914 Aug 03 09:42	4° \mathbb{Z} 18'34	
morning rise	13908 Feb 03 00:52	8° \mathbb{Z} 47'33		opposition	13914 Oct 09 23:29	0° \mathbb{Z} 56'07	0°09'05
	13908 Apr 05 03:36	15° \mathbb{Z}		min. Earth dist.	13914 Oct 10 10:19	0° \mathbb{Z} 53'59	8.41677 AU
retrograde	13908 May 16 13:28	16° \mathbb{Z} 27'40			13914 Oct 21 23:51	30° \mathbb{R} \mathbb{Y}	
	13908 Jun 27 11:33	15° \mathbb{R} \mathbb{Z}		direct	13914 Dec 18 01:39	27° \mathbb{Y} 29'53	
opposition	13908 Jul 23 16:09	13° \mathbb{Z} 02'55	2°09'53	desc. node	13915 Feb 01 18:53	29° \mathbb{Y} 14'18	
min. Earth dist.	13908 Jul 23 20:37	13° \mathbb{Z} 02'01	8.48832 AU		13915 Feb 11 09:53	0° \mathbb{Z}	
direct	13908 Sep 29 21:19	9° \mathbb{Z} 37'34		evening set	13915 Apr 02 02:16	5° \mathbb{Z} 20'15	
	13908 Dec 22 14:57	15° \mathbb{Z}		conjunction	13915 Apr 19 14:48	7° \mathbb{Z} 31'15	-0°04'50
evening set	13909 Jan 11 05:20	17° \mathbb{Z} 17'31		minimum elong	13915 Apr 19 14:48	7° \mathbb{Z} 31'15	0°05'23
conjunction	13909 Jan 28 21:43	19° \mathbb{Z} 27'59	1°42'36	behind sun begin	13915 Apr 19 07:52	7° \mathbb{Z} 29'06	
minimum elong	13909 Jan 28 21:45	19° \mathbb{Z} 28'00	1°43'22	behind sun end	13915 Apr 19 21:44	7° \mathbb{Z} 33'25	
max. Earth dist.	13909 Jan 28 14:03	19° \mathbb{Z} 25'37	10.47406 AU	max. Earth dist.	13915 Apr 19 01:20	7° \mathbb{Z} 27'03	10.42068 AU
morning rise	13909 Feb 15 13:44	21° \mathbb{Z} 38'26		morning rise	13915 May 07 00:23	9° \mathbb{Z} 41'27	
retrograde	13909 May 29 19:27	29° \mathbb{Z} 19'01			13915 Jun 25 12:00	15° \mathbb{Z}	
opposition	13909 Aug 05 16:55	25° \mathbb{Z} 54'33	2°02'29	retrograde	13915 Aug 16 16:15	17° \mathbb{Z} 19'18	
min. Earth dist.	13909 Aug 05 23:50	25° \mathbb{Z} 53'10	8.46293 AU		13915 Oct 09 19:58	15° \mathbb{R} \mathbb{Z}	
direct	13909 Oct 13 00:27	22° \mathbb{Z} 28'43		opposition	13915 Oct 23 09:34	13° \mathbb{Z} 57'10	-0°20'40
	13910 Jan 23 04:23	0° \mathbb{X}		min. Earth dist.	13915 Oct 23 20:16	13° \mathbb{Z} 55'04	8.42608 AU
evening set	13910 Jan 24 19:33	0° \mathbb{X} 11'52		direct	13915 Dec 31 15:49	10° \mathbb{Z} 31'11	

	13916 Mar 16 15:22	15°♄			13922 May 13 05:33	0°♄
evening set	13916 Apr 14 14:55	18°♄20'57		evening set	13922 Jul 01 11:15	5°♄13'56
max. Earth dist.	13916 May 01 11:54	20°♄27'08 10.43230 AU				
conjunction	13916 May 02 01:01	20°♄31'14 -0°28'28		conjunction	13922 Jul 18 08:38	7°♄19'13 -1°46'08
minimum elong	13916 May 02 01:00	20°♄31'14 0°29'13		minimum elong	13922 Jul 18 08:39	7°♄19'13 1°47'02
morning rise	13916 May 19 08:19	22°♄40'45		max. Earth dist.	13922 Jul 18 12:29	7°♄20'24 10.56050 AU
	13916 Aug 10 16:49	0°♄		morning rise	13922 Aug 04 05:53	9°♄24'24
retrograde	13916 Aug 28 22:20	0°♄17'50		retrograde	13922 Sep 27 00:47	15°♄
	13916 Sep 16 07:29	30°♄			13923 Jan 04 12:43	15°♄
opposition	13916 Nov 04 20:00	26°♄55'58 -0°49'15		opposition	13923 Jan 23 05:04	13°♄36'36 -2°09'44
min. Earth dist.	13916 Nov 05 06:01	26°♄54'01 8.43977 AU		min. Earth dist.	13923 Jan 23 00:05	13°♄37'33 8.57434 AU
direct	13917 Jan 13 05:46	23°♄30'21		direct	13923 Apr 02 15:29	10°♄14'05
	13917 Apr 17 03:13	0°♄			13923 Jun 20 03:41	15°♄
evening set	13917 Apr 28 01:17	1°♄19'01		evening set	13923 Jul 14 04:20	17°♄46'48
conjunction	13917 May 15 08:45	3°♄28'29 -0°50'38		conjunction	13923 Jul 31 01:30	19°♄51'36 -1°42'43
minimum elong	13917 May 15 08:43	3°♄28'29 0°51'32		minimum elong	13923 Jul 31 01:32	19°♄51'36 1°43'28
max. Earth dist.	13917 May 14 21:02	3°♄24'49 10.44744 AU		max. Earth dist.	13923 Jul 31 09:03	19°♄53'56 10.58554 AU
morning rise	13917 Jun 01 13:40	5°♄37'13		morning rise	13923 Aug 16 23:02	21°♄56'28
retrograde	13917 Sep 11 04:39	13°♄13'48		retrograde	13923 Nov 27 20:57	29°♄30'18
opposition	13917 Nov 18 06:48	9°♄52'08 -1°15'14		opposition	13924 Feb 05 09:52	26°♄07'46 -2°02'22
min. Earth dist.	13917 Nov 18 14:59	9°♄50'32 8.45651 AU		min. Earth dist.	13924 Feb 05 01:43	26°♄09'20 8.59845 AU
direct	13918 Jan 26 18:28	6°♄27'01		direct	13924 Apr 14 17:47	22°♄45'44
evening set	13918 May 11 09:04	14°♄14'07			13924 Jul 23 17:20	0°♄
conjunction	13918 May 28 13:54	16°♄22'43 -1°10'09		evening set	13924 Jul 25 19:20	0°♄15'05
minimum elong	13918 May 28 13:52	16°♄22'42 1°11'10		conjunction	13924 Aug 11 16:55	2°♄19'35 -1°34'27
max. Earth dist.	13918 May 28 05:01	16°♄19'55 10.46540 AU		minimum elong	13924 Aug 11 16:57	2°♄19'36 1°35'02
morning rise	13918 Jun 14 16:20	18°♄30'37		max. Earth dist.	13924 Aug 12 03:51	2°♄22'58 10.60861 AU
retrograde	13918 Sep 24 09:37	26°♄06'51		morning rise	13924 Aug 28 15:16	4°♄24'19
opposition	13918 Dec 01 17:41	22°♄45'18 -1°37'19		retrograde	13924 Dec 09 20:14	11°♄57'38
min. Earth dist.	13918 Dec 01 23:05	22°♄44'15 8.47616 AU		opposition	13925 Feb 17 12:34	8°♄34'45 -1°49'16
direct	13919 Feb 09 07:17	19°♄20'44		min. Earth dist.	13925 Feb 17 02:09	8°♄36'45 8.61993 AU
evening set	13919 May 24 14:09	27°♄05'47		direct	13925 Apr 27 16:02	5°♄13'08
conjunction	13919 Jun 10 16:31	29°♄13'26 -1°26'06		evening set	13925 Aug 07 08:44	12°♄39'26
minimum elong	13919 Jun 10 16:29	29°♄13'26 1°27'09		conjunction	13925 Aug 24 07:10	14°♄43'48 -1°21'48
max. Earth dist.	13919 Jun 10 11:18	29°♄11'48 10.48630 AU		minimum elong	13925 Aug 24 07:13	14°♄43'49 1°22'12
	13919 Jun 16 21:05	0°♄		max. Earth dist.	13925 Aug 24 20:13	14°♄47'49 10.62859 AU
morning rise	13919 Jun 27 16:44	1°♄20'31		morning rise	13925 Sep 10 07:00	16°♄48'35
retrograde	13919 Oct 07 14:42	8°♄56'25		retrograde	13925 Dec 22 17:47	24°♄21'29
opposition	13919 Dec 15 04:12	5°♄34'51 -1°54'26		opposition	13926 Mar 02 13:32	20°♄58'17 -1°31'08
min. Earth dist.	13919 Dec 15 06:49	5°♄34'20 8.49866 AU		min. Earth dist.	13926 Mar 02 01:51	21°♄00'32 8.63778 AU
direct	13920 Feb 22 18:05	2°♄10'51		direct	13926 May 10 13:26	17°♄37'00
evening set	13920 Jun 05 16:11	9°♄53'17		evening set	13926 Aug 19 21:01	25°♄00'40
conjunction	13920 Jun 22 16:23	12°♄00'03 -1°37'42		conjunction	13926 Sep 05 20:46	27°♄05'05 -1°05'24
minimum elong	13920 Jun 22 16:22	12°♄00'03 1°38'45		minimum elong	13926 Sep 05 20:48	27°♄05'05 1°05'34
max. Earth dist.	13920 Jun 22 14:25	11°♄59'26 10.50976 AU		max. Earth dist.	13926 Sep 06 10:43	27°♄09'22 10.64454 AU
morning rise	13920 Jul 09 14:58	14°♄06'23		morning rise	13926 Sep 22 22:36	29°♄10'03
retrograde	13920 Oct 19 19:23	21°♄41'50			13926 Sep 29 22:37	0°♄
opposition	13920 Dec 27 13:53	18°♄20'09 -2°05'47		retrograde	13927 Jan 04 15:02	6°♄42'43
min. Earth dist.	13920 Dec 27 14:12	18°♄20'06 8.52322 AU		opposition	13927 Mar 15 12:37	3°♄19'13 -1°08'51
direct	13921 Mar 07 02:14	14°♄56'41		min. Earth dist.	13927 Mar 15 00:27	3°♄21'33 8.65114 AU
evening set	13921 Jun 18 15:15	22°♄36'05			13927 May 17 09:04	30°♄
conjunction	13921 Jul 05 13:42	24°♄42'03 -1°44'28		direct	13927 May 23 08:28	29°♄58'08
minimum elong	13921 Jul 05 13:41	24°♄42'03 1°45'28			13927 May 29 07:37	0°♄
max. Earth dist.	13921 Jul 05 14:30	24°♄42'18 10.53483 AU		evening set	13927 Sep 01 09:10	7°♄19'46
morning rise	13921 Jul 22 11:16	26°♄47'45		conjunction	13927 Sep 18 10:39	9°♄24'22 -0°46'00
	13921 Aug 19 06:55	0°♄		minimum elong	13927 Sep 18 10:41	9°♄24'23 0°45'57
retrograde	13921 Nov 01 20:37	4°♄22'39		max. Earth dist.	13927 Sep 19 01:22	9°♄28'53 10.65560 AU
opposition	13922 Jan 09 22:17	1°♄00'47 -2°10'56		morning rise	13927 Oct 05 14:37	11°♄29'40
min. Earth dist.	13922 Jan 09 20:11	1°♄01'11 8.54881 AU		retrograde	13928 Jan 17 11:10	19°♄02'16
	13922 Jan 23 07:23	30°♄		opposition	13928 Mar 27 09:46	15°♄38'28 -0°43'27
direct	13922 Mar 20 09:15	27°♄37'47		min. Earth dist.	13928 Mar 26 21:00	15°♄40'55 8.65935 AU

direct	13928 Jun 04 01:58	12°♄17'32			13934 Jun 10 12:29	30°♄♂	
evening set	13928 Sep 12 21:47	19°♄37'49		opposition	13934 Jun 11 00:57	29°♄57'33	1°47'03
				min. Earth dist.	13934 Jun 10 19:48	29°♄58'34	8.60112 AU
conjunction	13928 Sep 30 01:15	21°♄42'44 -0°24'32		direct	13934 Aug 18 02:35	26°♄35'04	
minimum elong	13928 Sep 30 01:16	21°♄42'45 0°24'15			13934 Oct 22 01:58	0°♄	
max. Earth dist.	13928 Sep 30 16:54	21°♄47'31 10.66124 AU		evening set	13934 Nov 27 20:46	4°♄02'42	
morning rise	13928 Oct 17 07:18	23°♄48'25					
	13928 Dec 19 17:16	0°♄		conjunction	13934 Dec 15 09:53	6°♄10'41	1°32'45
retrograde	13929 Jan 29 07:46	1°♄21'14		minimum elong	13934 Dec 15 09:51	6°♄10'41	1°33'48
	13929 Mar 11 16:27	30°♄♂		max. Earth dist.	13934 Dec 15 14:27	6°♄12'05	10.58853 AU
opposition	13929 Apr 09 05:41	27°♄57'10 -0°16'06		morning rise	13935 Jan 02 00:35	8°♄19'13	
min. Earth dist.	13929 Apr 08 16:25	27°♄59'43 8.66207 AU		retrograde	13935 Apr 16 02:50	15°♄56'41	
direct	13929 Jun 16 19:02	24°♄36'17		opposition	13935 Jun 23 20:05	12°♄32'15	2°00'52
	13929 Sep 08 19:36	0°♄		min. Earth dist.	13935 Jun 23 17:49	12°♄32'42	8.57697 AU
evening set	13929 Sep 25 11:31	1°♄55'56		direct	13935 Aug 30 21:39	9°♄09'07	
				evening set	13935 Dec 11 02:24	16°♄39'52	
conjunction	13929 Oct 12 16:56	4°♄01'16 -0°01'58					
minimum elong	13929 Oct 12 16:57	4°♄01'16 0°01'28		conjunction	13935 Dec 28 16:28	18°♄48'29	1°41'39
behind sun begin	13929 Oct 12 09:48	3°♄59'07		minimum elong	13935 Dec 28 16:27	18°♄48'29	1°42'41
behind sun end	13929 Oct 13 00:05	4°♄03'25		max. Earth dist.	13935 Dec 28 16:41	18°♄48'34	10.56260 AU
max. Earth dist.	13929 Oct 13 08:50	4°♄06'06 10.66127 AU		morning rise	13936 Jan 15 07:44	20°♄57'30	
morning rise	13929 Oct 30 00:59	6°♄07'23		retrograde	13936 Apr 28 06:28	28°♄35'48	
asc. node	13929 Nov 14 01:31	7°♄52'14		opposition	13936 Jul 05 16:24	25°♄11'28	2°08'55
retrograde	13930 Feb 11 06:10	13°♄40'39		min. Earth dist.	13936 Jul 05 17:39	25°♄11'13	8.54977 AU
min. Earth dist.	13930 Apr 21 11:40	10°♄18'53 8.65933 AU		direct	13936 Sep 11 17:36	21°♄47'39	
opposition	13930 Apr 22 00:35	10°♄16'23 0°12'00		evening set	13936 Dec 23 10:42	29°♄21'51	
direct	13930 Jun 29 09:21	6°♄55'25			13936 Dec 28 16:39	0°♄	
evening set	13930 Oct 08 03:18	14°♄15'15					
	13930 Oct 14 08:08	15°♄		conjunction	13937 Jan 10 01:39	1°♄31'07	1°45'39
				minimum elong	13937 Jan 10 01:39	1°♄31'07	1°46'36
conjunction	13930 Oct 25 10:31	16°♄21'02 0°20'49		max. Earth dist.	13937 Jan 09 21:19	1°♄29'47	10.53425 AU
minimum elong	13930 Oct 25 10:30	16°♄21'02 0°21'30		morning rise	13937 Jan 27 17:25	3°♄40'39	
max. Earth dist.	13930 Oct 26 00:58	16°♄25'27 10.65587 AU		retrograde	13937 May 11 09:09	11°♄19'42	
morning rise	13930 Nov 11 20:31	18°♄27'40		opposition	13937 Jul 18 14:08	7°♄55'32	2°10'43
retrograde	13931 Feb 24 03:53	26°♄01'33		min. Earth dist.	13937 Jul 18 18:46	7°♄54'37	8.52092 AU
opposition	13931 May 04 18:42	22°♄37'09 0°39'35		direct	13937 Sep 24 18:02	4°♄31'03	
min. Earth dist.	13931 May 04 07:34	22°♄39'19 8.65140 AU		evening set	13938 Jan 05 21:24	12°♄08'48	
direct	13931 Jul 11 23:53	19°♄15'58					
evening set	13931 Oct 20 21:28	26°♄36'49		conjunction	13938 Jan 23 13:14	14°♄18'44	1°44'27
				minimum elong	13938 Jan 23 13:16	14°♄18'44	1°45'17
conjunction	13931 Nov 07 06:19	28°♄43'07 0°42'35		max. Earth dist.	13938 Jan 23 05:18	14°♄16'17	10.50540 AU
minimum elong	13931 Nov 07 06:18	28°♄43'06 0°43'26			13938 Jan 29 02:56	15°♄	
max. Earth dist.	13931 Nov 07 18:20	28°♄46'46 10.64540 AU		morning rise	13938 Feb 10 05:18	16°♄28'45	
	13931 Nov 17 19:02	0°♄♂		retrograde	13938 May 24 13:06	24°♄08'25	
morning rise	13931 Nov 24 18:03	0°♄50'13		opposition	13938 Jul 31 13:34	20°♄44'25	2°06'04
retrograde	13932 Mar 08 01:31	8°♄24'55		min. Earth dist.	13938 Jul 31 20:31	20°♄43'02	8.49256 AU
opposition	13932 May 16 12:38	5°♄00'28 1°05'24		direct	13938 Oct 07 20:57	17°♄19'19	
min. Earth dist.	13932 May 16 03:38	5°♄02'13 8.63873 AU		evening set	13939 Jan 19 10:18	25°♄00'24	
direct	13932 Jul 23 16:12	1°♄38'57					
evening set	13932 Nov 01 18:11	9°♄01'29		conjunction	13939 Feb 06 02:50	27°♄10'58	1°38'03
				minimum elong	13939 Feb 06 02:52	27°♄10'58	1°38'43
conjunction	13932 Nov 19 04:35	11°♄08'20 1°02'27		max. Earth dist.	13939 Feb 05 16:32	27°♄07'46	10.47818 AU
minimum elong	13932 Nov 19 04:33	11°♄08'19 1°03'25		morning rise	13939 Feb 23 18:47	29°♄21'25	
max. Earth dist.	13932 Nov 19 14:23	11°♄11'19 10.63033 AU			13939 Mar 01 03:00	0°♄♂	
morning rise	13932 Dec 06 17:38	13°♄15'55		retrograde	13939 Jun 06 19:36	7°♄01'23	
retrograde	13933 Mar 21 00:54	20°♄51'34		opposition	13939 Aug 13 14:47	3°♄37'33	1°55'05
opposition	13933 May 29 06:38	17°♄27'05 1°28'15		min. Earth dist.	13939 Aug 13 23:20	3°♄35'52	8.46674 AU
min. Earth dist.	13933 May 28 23:36	17°♄28'28 8.62180 AU		direct	13939 Oct 21 00:33	0°♄11'55	
direct	13933 Aug 05 08:38	14°♄05'08		evening set	13940 Feb 02 00:42	7°♄55'56	
evening set	13933 Nov 14 17:58	21°♄29'59					
				conjunction	13940 Feb 19 17:37	10°♄07'02	1°26'41
conjunction	13933 Dec 02 05:50	23°♄37'23 1°19'27		minimum elong	13940 Feb 19 17:40	10°♄07'02	1°27'09
minimum elong	13933 Dec 02 05:48	23°♄37'22 1°20'28		max. Earth dist.	13940 Feb 19 05:25	10°♄03'14	10.45451 AU
max. Earth dist.	13933 Dec 02 13:31	23°♄39'44 10.61122 AU		morning rise	13940 Mar 08 09:13	12°♄17'49	
morning rise	13933 Dec 19 19:49	25°♄45'27		retrograde	13940 Jun 19 02:39	19°♄57'45	
	13934 Jan 27 16:32	0°♄		opposition	13940 Aug 25 17:56	16°♄34'09	1°38'12
retrograde	13934 Apr 03 01:03	3°♄22'02		min. Earth dist.	13940 Aug 26 03:56	16°♄32'10	8.44517 AU

direct	13940 Nov 02 06:58	13° X 08'03		opposition	13946 Nov 12 17:42	4° II 27'47	-1°04'19
evening set	13941 Feb 14 15:59	20° X 54'30		min. Earth dist.	13946 Nov 13 01:49	4° II 26'11	8.44502 AU
				direct	13947 Jan 21 04:48	1° II 01'59	
conjunction	13941 Mar 04 08:51	23° X 05'56	1°10'52	evening set	13947 May 05 21:07	8° II 49'20	
minimum elong	13941 Mar 04 08:53	23° X 05'57	1°11'07				
max. Earth dist.	13941 Mar 03 18:50	23° X 01'34	10.43575 AU	conjunction	13947 May 23 03:10	10° II 58'16	-1°02'00
morning rise	13941 Mar 21 23:51	25° X 16'55		minimum elong	13947 May 23 03:08	10° II 58'15	1°02'58
	13941 May 03 23:45	0° Y		max. Earth dist.	13947 May 22 18:07	10° II 55'26	10.45463 AU
retrograde	13941 Jul 02 09:04	2° Y 56'34		morning rise	13947 Jun 09 06:37	13° II 06'29	
	13941 Sep 02 07:29	30° R X		retrograde	13947 Sep 18 21:50	20° II 42'19	
opposition	13941 Sep 07 22:53	29° X 33'12	1°16'15	opposition	13947 Nov 26 03:56	17° II 20'17	-1°28'11
min. Earth dist.	13941 Sep 08 10:30	29° X 30'53	8.42897 AU	min. Earth dist.	13947 Nov 26 10:15	17° II 19'03	8.46629 AU
direct	13941 Nov 15 16:15	26° X 06'45		direct	13948 Feb 03 16:57	13° II 55'02	
	13942 Jan 24 17:04	0° Y		evening set	13948 May 18 02:42	21° II 40'24	
evening set	13942 Feb 28 07:46	3° Y 55'02					
				conjunction	13948 Jun 04 06:02	23° II 48'22	-1°19'34
conjunction	13942 Mar 17 23:58	6° Y 06'37	0°51'23	minimum elong	13948 Jun 04 06:00	23° II 48'22	1°20'36
minimum elong	13942 Mar 18 00:00	6° Y 06'37	0°51'23	max. Earth dist.	13948 Jun 03 23:24	23° II 46'17	10.47787 AU
max. Earth dist.	13942 Mar 17 08:09	6° Y 01'40	10.42279 AU	morning rise	13948 Jun 21 07:19	25° II 55'43	
morning rise	13942 Apr 04 14:00	8° Y 17'36			13948 Jul 27 10:42	0° S	
retrograde	13942 Jul 15 15:54	15° Y 56'42		retrograde	13948 Oct 01 01:12	3° S 31'00	
opposition	13942 Sep 21 05:18	12° Y 33'35	0°50'20	opposition	13948 Dec 08 13:40	0° S 09'08	-1°47'31
min. Earth dist.	13942 Sep 21 18:01	12° Y 31'04	8.41895 AU	min. Earth dist.	13948 Dec 08 17:38	0° S 08'22	8.49164 AU
direct	13942 Nov 29 02:56	9° Y 06'56			13948 Dec 10 12:47	30° R II	
evening set	13943 Mar 13 23:07	16° Y 56'23		direct	13949 Feb 16 04:22	26° II 44'33	
					13949 Apr 21 00:24	0° S	
conjunction	13943 Mar 31 14:09	19° Y 07'52	0°29'15	evening set	13949 May 31 05:19	4° S 27'27	
minimum elong	13943 Mar 31 14:10	19° Y 07'53	0°29'01				
max. Earth dist.	13943 Mar 30 21:49	19° Y 02'46	10.41625 AU	conjunction	13949 Jun 17 06:18	6° S 34'27	-1°33'07
morning rise	13943 Apr 18 02:46	21° Y 18'41		minimum elong	13949 Jun 17 06:17	6° S 34'27	1°34'10
retrograde	13943 Jul 28 22:34	28° Y 57'07		max. Earth dist.	13949 Jun 17 02:54	6° S 33'23	10.50454 AU
opposition	13943 Oct 04 13:10	25° Y 34'14	0°21'47	morning rise	13949 Jul 04 05:41	8° S 40'58	
min. Earth dist.	13943 Oct 05 01:38	25° Y 31'46	8.41561 AU	retrograde	13949 Oct 14 04:39	16° S 15'44	
direct	13943 Dec 12 15:07	22° Y 07'32		opposition	13949 Dec 21 22:49	12° S 53'56	-2°01'25
evening set	13944 Mar 26 13:15	29° Y 57'25		min. Earth dist.	13949 Dec 21 23:28	12° S 53'49	8.51972 AU
	13944 Mar 26 21:41	0° Z		direct	13950 Mar 01 13:25	9° S 30'06	
max. Earth dist.	13944 Apr 12 11:20	2° Z 03'47	10.41639 AU	evening set	13950 Jun 13 04:44	17° S 10'04	
conjunction	13944 Apr 13 02:42	2° Z 08'35	0°05'39	conjunction	13950 Jun 30 03:53	19° S 16'11	-1°42'01
minimum elong	13944 Apr 13 02:41	2° Z 08'35	0°05'11	minimum elong	13950 Jun 30 03:52	19° S 16'11	1°43'02
behind sun begin	13944 Apr 12 19:43	2° Z 06'25		max. Earth dist.	13950 Jun 30 04:42	19° S 16'26	10.53332 AU
behind sun end	13944 Apr 13 09:39	2° Z 10'45		morning rise	13950 Jul 17 01:46	21° S 21'57	
morning rise	13944 Apr 30 13:25	4° Z 18'59		retrograde	13950 Oct 27 07:01	28° S 56'13	
desc. node	13944 Jul 10 21:00	11° Z 07'46		opposition	13951 Jan 04 06:59	25° S 34'27	-2°09'18
retrograde	13944 Aug 10 04:14	11° Z 56'45		min. Earth dist.	13951 Jan 04 04:20	25° S 34'57	8.54921 AU
opposition	13944 Oct 16 22:01	8° Z 34'03	-0°07'53	direct	13951 Mar 14 20:08	22° S 11'21	
min. Earth dist.	13944 Oct 17 09:15	8° Z 31'51	8.41904 AU	evening set	13951 Jun 26 01:19	29° S 48'06	
direct	13944 Dec 25 04:54	5° Z 07'30			13951 Jun 27 16:20	0° N	
evening set	13945 Apr 09 02:03	12° Z 57'10					
	13945 Apr 25 12:39	15° Z		conjunction	13951 Jul 12 23:11	1° N 53'28	-1°45'56
				minimum elong	13951 Jul 12 23:11	1° N 53'28	1°46'53
conjunction	13945 Apr 26 13:25	15° Z 07'46	-0°18'20	max. Earth dist.	13951 Jul 13 03:42	1° N 54'52	10.56295 AU
minimum elong	13945 Apr 26 13:24	15° Z 07'46	0°19'01	morning rise	13951 Jul 29 20:18	3° N 58'38	
max. Earth dist.	13945 Apr 26 00:04	15° Z 03'35	10.42311 AU	retrograde	13951 Nov 09 08:40	11° N 32'21	
morning rise	13945 May 13 21:48	17° Z 17'33		opposition	13952 Jan 17 13:38	8° N 10'32	-2°10'53
retrograde	13945 Aug 23 10:54	24° Z 54'38		min. Earth dist.	13952 Jan 17 08:25	8° N 11'32	8.57883 AU
opposition	13945 Oct 30 07:31	21° Z 32'10	-0°37'05	direct	13952 Mar 27 00:45	4° N 48'08	
min. Earth dist.	13945 Oct 30 17:09	21° Z 30'16	8.42899 AU	evening set	13952 Jul 07 19:12	12° N 21'32	
direct	13946 Jan 07 17:24	18° Z 05'54					
evening set	13946 Apr 22 12:53	25° Z 54'43		conjunction	13952 Jul 24 16:21	14° N 26'18	-1°44'45
				minimum elong	13952 Jul 24 16:22	14° N 26'18	1°45'35
conjunction	13946 May 09 21:43	28° Z 04'34	-0°41'15	max. Earth dist.	13952 Jul 24 23:33	14° N 28'32	10.59211 AU
minimum elong	13946 May 09 21:41	28° Z 04'33	0°42'06		13952 Jul 29 05:06	15° N	
max. Earth dist.	13946 May 09 10:34	28° Z 01'04	10.43605 AU	morning rise	13952 Aug 10 13:30	16° N 31'03	
	13946 May 25 07:24	0° II		retrograde	13952 Nov 21 08:53	24° N 04'11	
morning rise	13946 May 27 03:35	0° II 13'36		opposition	13953 Jan 29 18:46	20° N 42'17	-2°06'14
retrograde	13946 Sep 05 17:36	7° II 50'02		min. Earth dist.	13953 Jan 29 11:41	20° N 43'38	8.60718 AU

direct	13953 Apr 09 02:27	17° Ω 20'32	opposition	13959 Apr 16 11:36	4° \mathbb{M} 50'36	-0°00'58
evening set	13953 Jul 20 10:40	24° Ω 50'33	min. Earth dist.	13959 Apr 16 00:29	4° \mathbb{M} 52'45	8.67565 AU
			asc. node	13959 Apr 29 02:17	3° \mathbb{M} 53'06	
conjunction	13953 Aug 06 07:44	26° Ω 54'53 -1°38'38	direct	13959 Jun 23 21:48	1° \mathbb{M} 30'04	
minimum elong	13953 Aug 06 07:46	26° Ω 54'54 1°39'19	evening set	13959 Oct 02 15:39	8° \mathbb{M} 49'18	
max. Earth dist.	13953 Aug 06 17:01	26° Ω 57'46 10.61943 AU				
morning rise	13953 Aug 23 05:36	28° Ω 59'25	conjunction	13959 Oct 19 21:55	10° \mathbb{M} 54'44	0°10'24
	13953 Aug 31 16:39	0° \mathbb{M}	minimum elong	13959 Oct 19 21:55	10° \mathbb{M} 54'43	0°11'01
retrograde	13953 Dec 04 06:40	6° \mathbb{M} 32'00	behind sun begin	13959 Oct 19 16:33	10° \mathbb{M} 53'07	
opposition	13954 Feb 11 22:05	3° \mathbb{M} 09'56 -1°55'40	behind sun end	13959 Oct 20 03:16	10° \mathbb{M} 56'20	
min. Earth dist.	13954 Feb 11 13:02	3° \mathbb{M} 11'39 8.63293 AU	max. Earth dist.	13959 Oct 20 10:59	10° \mathbb{M} 58'42	10.67078 AU
	13954 Apr 07 07:08	30° \mathbb{R} Ω	morning rise	13959 Nov 06 07:01	13° \mathbb{M} 00'59	
direct	13954 Apr 22 02:46	29° Ω 48'45		13959 Nov 23 10:32	15° \mathbb{M}	
	13954 May 06 21:02	0° \mathbb{M}	retrograde	13960 Feb 18 11:59	20° \mathbb{M} 34'08	
evening set	13954 Aug 02 00:14	7° \mathbb{M} 15'34	opposition	13960 Apr 28 05:40	17° \mathbb{M} 10'06	0°26'58
			min. Earth dist.	13960 Apr 27 19:05	17° \mathbb{M} 12'09	8.66464 AU
conjunction	13954 Aug 18 22:00	9° \mathbb{M} 19'40 -1°27'56		13960 May 28 18:32	15° \mathbb{R} \mathbb{M}	
minimum elong	13954 Aug 18 22:03	9° \mathbb{M} 19'41 1°28'25	direct	13960 Jul 05 13:39	13° \mathbb{M} 49'13	
max. Earth dist.	13954 Aug 19 09:49	9° \mathbb{M} 23'19 10.64353 AU		13960 Aug 11 16:05	15° \mathbb{M}	
morning rise	13954 Sep 04 21:06	11° \mathbb{M} 24'08	evening set	13960 Oct 14 08:16	21° \mathbb{M} 09'13	
retrograde	13954 Dec 17 03:59	18° \mathbb{M} 56'16				
opposition	13955 Feb 24 23:19	15° \mathbb{M} 33'56 -1°39'46	conjunction	13960 Oct 31 16:25	23° \mathbb{M} 15'11	0°32'41
min. Earth dist.	13955 Feb 24 12:14	15° \mathbb{M} 36'03 8.65464 AU	minimum elong	13960 Oct 31 16:24	23° \mathbb{M} 15'10	0°33'28
direct	13955 May 05 02:00	12° \mathbb{M} 13'11	max. Earth dist.	13960 Nov 01 04:52	23° \mathbb{M} 18'58	10.65698 AU
evening set	13955 Aug 14 12:28	19° \mathbb{M} 37'07	morning rise	13960 Nov 18 03:11	25° \mathbb{M} 21'57	
				13960 Dec 31 10:49	0° \mathbb{A}	
conjunction	13955 Aug 31 11:32	21° \mathbb{M} 41'12 -1°13'11	retrograde	13961 Mar 02 09:58	2° \mathbb{A} 56'01	
minimum elong	13955 Aug 31 11:35	21° \mathbb{M} 41'13 1°13'28		13961 May 04 20:56	30° \mathbb{R} \mathbb{M}	
max. Earth dist.	13955 Sep 01 01:33	21° \mathbb{M} 45'31 10.66278 AU	opposition	13961 May 10 23:24	29° \mathbb{M} 31'38	0°53'43
morning rise	13955 Sep 17 12:14	23° \mathbb{M} 45'46	min. Earth dist.	13961 May 10 13:47	29° \mathbb{M} 33'30	8.64842 AU
	13955 Nov 20 11:09	0° \mathbb{A}	direct	13961 Jul 18 05:07	26° \mathbb{M} 10'16	
retrograde	13955 Dec 30 02:19	1° \mathbb{A} 17'34		13961 Sep 25 10:17	0° \mathbb{A}	
	13956 Feb 08 12:06	30° \mathbb{R} \mathbb{M}	evening set	13961 Oct 27 03:23	3° \mathbb{A} 31'42	
opposition	13956 Mar 08 22:36	27° \mathbb{M} 54'56 -1°19'20	conjunction	13961 Nov 13 13:08	5° \mathbb{A} 38'15	0°53'32
min. Earth dist.	13956 Mar 08 10:07	27° \mathbb{M} 57'19 8.67056 AU	minimum elong	13961 Nov 13 13:06	5° \mathbb{A} 38'15	0°54'27
direct	13956 May 16 20:40	24° \mathbb{M} 34'30	max. Earth dist.	13961 Nov 13 23:30	5° \mathbb{A} 41'25	10.63826 AU
	13956 Aug 09 08:49	0° \mathbb{A}	morning rise	13961 Dec 01 01:25	7° \mathbb{A} 45'35	
evening set	13956 Aug 26 00:15	1° \mathbb{A} 56'06	retrograde	13962 Mar 15 09:54	15° \mathbb{A} 20'39	
			opposition	13962 May 23 17:05	11° \mathbb{A} 56'00	1°18'06
conjunction	13956 Sep 12 00:52	4° \mathbb{A} 00'20 -0°55'07	min. Earth dist.	13962 May 23 09:37	11° \mathbb{A} 57'28	8.62773 AU
minimum elong	13956 Sep 12 00:54	4° \mathbb{A} 00'20 0°55'09	direct	13962 Jul 30 19:14	8° \mathbb{A} 34'02	
max. Earth dist.	13956 Sep 12 15:49	4° \mathbb{A} 04'54 10.67541 AU	evening set	13962 Nov 09 01:31	15° \mathbb{A} 57'38	
morning rise	13956 Sep 29 03:29	6° \mathbb{A} 05'10				
retrograde	13957 Jan 10 22:59	13° \mathbb{A} 36'54	conjunction	13962 Nov 26 12:39	18° \mathbb{A} 04'47	1°11'58
opposition	13957 Mar 21 20:12	10° \mathbb{A} 13'57 -0°55'19	minimum elong	13962 Nov 26 12:37	18° \mathbb{A} 04'46	1°12'59
min. Earth dist.	13957 Mar 21 07:36	10° \mathbb{A} 16'21 8.67926 AU	max. Earth dist.	13962 Nov 26 19:45	18° \mathbb{A} 06'57	10.61541 AU
direct	13957 May 29 13:38	6° \mathbb{A} 53'40	morning rise	13962 Dec 14 02:14	20° \mathbb{A} 12'39	
evening set	13957 Sep 07 12:16	14° \mathbb{A} 13'43	retrograde	13963 Mar 28 08:18	27° \mathbb{A} 48'46	
			opposition	13963 Jun 05 10:56	24° \mathbb{A} 23'57	1°38'55
conjunction	13957 Sep 24 14:37	16° \mathbb{A} 18'14 -0°34'33	min. Earth dist.	13963 Jun 05 06:20	24° \mathbb{A} 24'51	8.60338 AU
minimum elong	13957 Sep 24 14:38	16° \mathbb{A} 18'15 0°34'21	direct	13963 Aug 12 12:47	21° \mathbb{A} 01'16	
max. Earth dist.	13957 Sep 25 04:57	16° \mathbb{A} 22'37 10.68064 AU	evening set	13963 Nov 22 02:36	28° \mathbb{A} 27'39	
morning rise	13957 Oct 11 19:29	18° \mathbb{A} 23'28		13963 Dec 04 19:16	0° \mathbb{B}	
retrograde	13958 Jan 23 19:12	25° \mathbb{A} 55'28				
opposition	13958 Apr 03 16:31	22° \mathbb{A} 32'10 -0°28'48	conjunction	13963 Dec 09 15:00	0° \mathbb{B} 35'25	1°27'06
min. Earth dist.	13958 Apr 03 04:37	22° \mathbb{A} 34'28 8.68074 AU	minimum elong	13963 Dec 09 14:58	0° \mathbb{B} 35'25	1°28'08
direct	13958 Jun 11 06:23	19° \mathbb{A} 11'51	max. Earth dist.	13963 Dec 09 18:45	0° \mathbb{B} 36'34	10.58936 AU
evening set	13958 Sep 20 01:08	26° \mathbb{A} 31'07	morning rise	13963 Dec 27 05:32	2° \mathbb{B} 43'49	
			retrograde	13964 Apr 09 08:06	10° \mathbb{B} 21'02	
conjunction	13958 Oct 07 05:25	28° \mathbb{A} 36'03 -0°12'25	opposition	13964 Jun 17 05:35	6° \mathbb{B} 56'05	1°55'11
minimum elong	13958 Oct 07 05:25	28° \mathbb{A} 36'03 0°12'00	min. Earth dist.	13964 Jun 17 03:31	6° \mathbb{B} 56'30	8.57636 AU
behind sun begin	13958 Oct 07 00:31	28° \mathbb{A} 34'35	direct	13964 Aug 24 07:59	3° \mathbb{B} 32'42	
behind sun end	13958 Oct 07 10:18	28° \mathbb{A} 37'32	evening set	13964 Dec 04 06:26	11° \mathbb{B} 02'11	
max. Earth dist.	13958 Oct 07 18:59	28° \mathbb{A} 40'11 10.67889 AU				
	13958 Oct 18 17:27	0° \mathbb{M}	conjunction	13964 Dec 21 20:05	13° \mathbb{B} 10'38	1°38'07
morning rise	13958 Oct 24 12:33	0° \mathbb{M} 41'47	minimum elong	13964 Dec 21 20:04	13° \mathbb{B} 10'37	1°39'10
retrograde	13959 Feb 05 15:58	8° \mathbb{M} 14'15				

max. Earth dist.	13964 Dec 21 21:16	13° S 11'00	10.56121 AU	max. Earth dist.	13971 Mar 11 10:17	0° Y 13'24	10.42361 AU
morning rise	13965 Jan 08 11:16	15° S 19'33					
retrograde	13965 Apr 22 10:24	22° S 57'48		conjunction	13971 Mar 12 00:06	0° Y 17'43	1°00'50
opposition	13965 Jun 30 01:13	19° S 32'49	2°06'00	minimum elong	13971 Mar 12 00:09	0° Y 17'43	1°00'57
min. Earth dist.	13965 Jun 30 01:11	19° S 32'49	8.54780 AU	morning rise	13971 Mar 29 14:43	2° Y 28'48	
direct	13965 Sep 06 03:52	16° S 08'43		retrograde	13971 Jul 09 20:29	10° Y 08'34	
evening set	13965 Dec 17 13:22	23° S 41'36		opposition	13971 Sep 15 09:53	6° Y 45'20	1°02'46
				min. Earth dist.	13971 Sep 15 20:39	6° Y 43'12	8.41992 AU
conjunction	13966 Jan 04 04:08	25° S 50'43	1°44'28	direct	13971 Nov 23 05:04	3° Y 18'54	
minimum elong	13966 Jan 04 04:08	25° S 50'42	1°45'27	evening set	13972 Mar 06 23:27	11° Y 08'12	
max. Earth dist.	13966 Jan 04 02:34	25° S 50'14	10.53220 AU				
morning rise	13966 Jan 21 19:43	28° S 00'08		conjunction	13972 Mar 24 15:17	13° Y 19'51	0°39'46
	13966 Feb 07 21:46	0° \approx		minimum elong	13972 Mar 24 15:19	13° Y 19'51	0°39'38
retrograde	13966 May 05 13:38	5° \approx 39'15		max. Earth dist.	13972 Mar 24 01:11	13° Y 15'26	10.41718 AU
opposition	13966 Jul 12 22:06	2° \approx 14'20	2°10'46	morning rise	13972 Apr 11 04:33	15° Y 30'50	
min. Earth dist.	13966 Jul 13 00:19	2° \approx 13'53	8.51898 AU	retrograde	13972 Jul 22 04:54	23° Y 10'01	
	13966 Aug 12 18:29	30° R S		opposition	13972 Sep 27 17:32	19° Y 47'13	0°35'14
direct	13966 Sep 19 02:03	28° S 49'33		min. Earth dist.	13972 Sep 28 04:47	19° Y 44'59	8.41660 AU
	13966 Oct 26 00:10	0° \approx		direct	13972 Dec 05 15:56	16° Y 20'51	
evening set	13966 Dec 30 23:01	6° \approx 25'55		evening set	13973 Mar 20 14:57	24° Y 10'57	
conjunction	13967 Jan 17 14:39	8° \approx 35'42	1°45'42	conjunction	13973 Apr 07 05:19	26° Y 22'22	0°16'40
minimum elong	13967 Jan 17 14:40	8° \approx 35'42	1°46'36	minimum elong	13973 Apr 07 05:20	26° Y 22'22	0°16'17
max. Earth dist.	13967 Jan 17 09:49	8° \approx 34'13	10.50373 AU	max. Earth dist.	13973 Apr 06 14:54	26° Y 17'51	10.41729 AU
morning rise	13967 Feb 04 06:31	10° \approx 45'37		morning rise	13973 Apr 24 16:54	28° Y 33'02	
	13967 Mar 14 14:49	15° \approx			13973 May 06 17:56	0° S	
retrograde	13967 May 18 18:18	18° \approx 25'22		retrograde	13973 Aug 04 11:43	6° S 11'29	
opposition	13967 Jul 25 20:46	15° \approx 00'38	2°09'08	opposition	13973 Oct 11 02:33	2° S 49'06	0°05'52
	13967 Jul 25 23:58	15° R \approx		min. Earth dist.	13973 Oct 11 14:00	2° S 46'50	8.41982 AU
min. Earth dist.	13967 Jul 26 01:39	14° \approx 59'40	8.49134 AU		13973 Nov 22 05:09	30° R Y	
direct	13967 Oct 02 02:15	11° \approx 35'15		direct	13973 Dec 19 05:32	29° Y 22'54	
	13967 Dec 06 01:43	15° \approx		desc. node	13973 Dec 23 22:00	29° Y 24'03	
evening set	13968 Jan 13 10:48	19° \approx 15'01			13974 Jan 15 01:59	0° S	
				evening set	13974 Apr 03 05:16	7° S 13'05	
conjunction	13968 Jan 31 03:03	21° \approx 25'25	1°41'43				
minimum elong	13968 Jan 31 03:05	21° \approx 25'25	1°42'28	conjunction	13974 Apr 20 17:33	9° S 24'00	-0°07'22
max. Earth dist.	13968 Jan 30 18:31	21° \approx 22'46	10.47733 AU	minimum elong	13974 Apr 20 17:33	9° S 24'00	0°07'58
morning rise	13968 Feb 17 19:05	23° \approx 35'47		behind sun begin	13974 Apr 20 11:08	9° S 22'00	
	13968 Apr 22 16:04	0° H		behind sun end	13974 Apr 20 23:59	9° S 25'59	
retrograde	13968 May 31 00:08	1° H 15'56		max. Earth dist.	13974 Apr 20 03:19	9° S 19'32	10.42366 AU
	13968 Jul 08 17:00	30° R \approx		morning rise	13974 May 08 03:05	11° S 34'07	
opposition	13968 Aug 06 21:20	27° \approx 51'29	2°01'02		13974 Jun 06 21:02	15° S	
min. Earth dist.	13968 Aug 07 04:56	27° \approx 49'59	8.46640 AU	retrograde	13974 Aug 17 18:33	19° S 11'48	
direct	13968 Oct 14 04:53	24° \approx 25'37		opposition	13974 Oct 24 12:25	15° S 49'44	-0°23'45
	13969 Jan 07 19:28	0° H		min. Earth dist.	13974 Oct 24 23:24	15° S 47'35	8.42910 AU
evening set	13969 Jan 26 00:32	2° H 08'31			13974 Nov 04 04:15	15° R S	
				direct	13975 Jan 01 19:11	12° S 23'49	
conjunction	13969 Feb 12 17:14	4° H 19'28	1°32'35		13975 Feb 27 08:37	15° S	
minimum elong	13969 Feb 12 17:16	4° H 19'28	1°33'10	evening set	13975 Apr 16 17:39	20° S 13'23	
max. Earth dist.	13969 Feb 12 05:47	4° H 15'54	10.45446 AU				
morning rise	13969 Mar 02 09:14	6° H 30'14		conjunction	13975 May 04 03:31	22° S 23'35	-0°30'52
retrograde	13969 Jun 13 05:31	14° H 10'29		minimum elong	13975 May 04 03:30	22° S 23'35	0°31'39
opposition	13969 Aug 19 23:36	10° H 46'24	1°46'47	max. Earth dist.	13975 May 03 14:23	22° S 19'28	10.43546 AU
min. Earth dist.	13969 Aug 20 09:06	10° H 44'31	8.44554 AU	morning rise	13975 May 21 10:43	24° S 33'01	
direct	13969 Oct 27 11:28	7° H 20'10			13975 Jul 11 16:20	0° II	
evening set	13970 Feb 08 15:37	15° H 05'49		retrograde	13975 Aug 31 00:45	2° II 09'58	
					13975 Oct 22 06:33	30° R S	
conjunction	13970 Feb 26 08:32	17° H 17'12	1°18'44	opposition	13975 Nov 06 22:47	28° S 48'07	-0°52'04
minimum elong	13970 Feb 26 08:34	17° H 17'13	1°19'06	min. Earth dist.	13975 Nov 07 08:12	28° S 46'17	8.44318 AU
max. Earth dist.	13970 Feb 25 19:17	17° H 13'05	10.43628 AU	direct	13976 Jan 15 08:43	25° S 22'35	
morning rise	13970 Mar 16 00:06	19° H 28'14			13976 Apr 01 17:10	0° II	
retrograde	13970 Jun 26 12:05	27° H 08'21		evening set	13976 Apr 29 03:32	3° II 10'56	
opposition	13970 Sep 02 03:49	23° H 44'41	1°27'02				
min. Earth dist.	13970 Sep 02 14:16	23° H 42'36	8.42977 AU	conjunction	13976 May 16 10:54	5° II 20'18	-0°52'45
direct	13970 Nov 09 19:56	20° H 18'17		minimum elong	13976 May 16 10:52	5° II 20'18	0°53'41
evening set	13971 Feb 22 07:27	28° H 06'05		max. Earth dist.	13976 May 16 00:03	5° II 16'54	10.45109 AU
	13971 Mar 09 15:25	0° Y		morning rise	13976 Jun 02 15:35	7° II 28'56	

retrograde	13976 Sep 12 06:09	15° Π 05'21			13982 Oct 19 14:07	0° Π
opposition	13976 Nov 19 09:23	11° Π 43'41 -1°17'39		retrograde	13982 Nov 29 00:19	1° Π 21'55
min. Earth dist.	13976 Nov 19 16:48	11° Π 42'14 8.46027 AU			13983 Jan 09 09:35	30° \mathbb{R} \mathcal{Q}
direct	13977 Jan 27 21:55	8° Π 18'37		opposition	13983 Feb 06 12:42	27° \mathcal{Q} 59'20 -2°00'58
evening set	13977 May 12 11:03	16° Π 05'23		min. Earth dist.	13983 Feb 06 04:27	28° \mathcal{Q} 00'55 8.59422 AU
				direct	13983 Apr 16 19:12	24° \mathcal{Q} 37'19
conjunction	13977 May 29 15:47	18° Π 13'52 -1°11'54			13983 Jul 09 20:07	0° Π
minimum elong	13977 May 29 15:45	18° Π 13'52 1°12'55		evening set	13983 Jul 27 21:30	2° Π 06'53
max. Earth dist.	13977 May 29 07:36	18° Π 11'18 10.46902 AU				
morning rise	13977 Jun 15 17:58	20° Π 21'40		conjunction	13983 Aug 13 19:11	4° Π 11'29 -1°33'04
retrograde	13977 Sep 25 12:27	27° Π 57'45		minimum elong	13983 Aug 13 19:14	4° Π 11'29 1°33'38
opposition	13977 Dec 02 20:01	24° Π 36'13 -1°39'12		max. Earth dist.	13983 Aug 14 05:52	4° Π 14'47 10.60371 AU
min. Earth dist.	13977 Dec 03 01:20	24° Π 35'11 8.47948 AU		morning rise	13983 Aug 30 17:44	6° Π 16'20
direct	13978 Feb 10 09:21	21° Π 11'42		retrograde	13983 Dec 11 23:24	13° Π 50'03
evening set	13978 May 25 15:54	28° Π 56'27		opposition	13984 Feb 19 15:44	10° Π 27'08 -1°47'16
	13978 Jun 03 05:20	0° \mathcal{E}		min. Earth dist.	13984 Feb 19 05:55	10° Π 29'01 8.61436 AU
conjunction	13978 Jun 11 18:05	1° \mathcal{E} 04'03 -1°27'23		direct	13984 Apr 28 18:48	7° Π 05'27
minimum elong	13978 Jun 11 18:03	1° \mathcal{E} 04'02 1°28'26		evening set	13984 Aug 08 11:19	14° Π 32'04
max. Earth dist.	13978 Jun 11 12:41	1° \mathcal{E} 02'21 10.48910 AU		conjunction	13984 Aug 25 09:52	16° Π 36'34 -1°19'58
morning rise	13978 Jun 28 18:10	3° \mathcal{E} 11'03		minimum elong	13984 Aug 25 09:54	16° Π 36'35 1°20'19
retrograde	13978 Oct 08 17:38	10° \mathcal{E} 46'52		max. Earth dist.	13984 Aug 25 22:03	16° Π 40'20 10.62248 AU
opposition	13978 Dec 16 06:33	7° \mathcal{E} 25'20 -1°55'42		morning rise	13984 Sep 11 10:01	18° Π 41'30
min. Earth dist.	13978 Dec 16 09:48	7° \mathcal{E} 24'42 8.50087 AU		retrograde	13984 Dec 23 21:47	26° Π 14'51
direct	13979 Feb 23 19:00	4° \mathcal{E} 01'23		opposition	13985 Mar 03 17:00	22° Π 51'35 -1°28'37
evening set	13979 Jun 07 17:44	11° \mathcal{E} 43'38		min. Earth dist.	13985 Mar 03 06:00	22° Π 53'42 8.63112 AU
conjunction	13979 Jun 24 17:43	13° \mathcal{E} 50'21 -1°38'28		direct	13985 May 11 15:57	19° Π 30'13
minimum elong	13979 Jun 24 17:42	13° \mathcal{E} 50'21 1°39'31		evening set	13985 Aug 21 00:01	26° Π 54'16
max. Earth dist.	13979 Jun 24 14:51	13° \mathcal{E} 49'27 10.51126 AU		conjunction	13985 Sep 06 23:59	28° Π 58'49 -1°03'10
morning rise	13979 Jul 11 16:19	15° \mathcal{E} 56'40		minimum elong	13985 Sep 07 00:01	28° Π 58'50 1°03'19
retrograde	13979 Oct 21 20:21	23° \mathcal{E} 32'09		max. Earth dist.	13985 Sep 07 13:37	29° Π 03'01 10.63747 AU
opposition	13979 Dec 29 16:16	20° \mathcal{E} 10'30 -2°06'24			13985 Sep 15 07:19	0° \mathcal{A}
min. Earth dist.	13979 Dec 29 17:11	20° \mathcal{E} 10'20 8.52401 AU		morning rise	13985 Sep 24 02:04	1° \mathcal{A} 03'57
direct	13980 Mar 08 04:20	16° \mathcal{E} 47'04		retrograde	13986 Jan 05 18:13	8° \mathcal{A} 37'07
evening set	13980 Jun 19 16:44	24° \mathcal{E} 26'26		opposition	13986 Mar 16 16:26	5° \mathcal{A} 13'31 -1°05'56
conjunction	13980 Jul 06 15:07	26° \mathcal{E} 32'23 -1°44'41		min. Earth dist.	13986 Mar 16 04:13	5° \mathcal{A} 15'51 8.64368 AU
minimum elong	13980 Jul 06 15:07	26° \mathcal{E} 32'22 1°45'40		direct	13986 May 24 12:15	1° \mathcal{A} 52'22
max. Earth dist.	13980 Jul 06 15:21	26° \mathcal{E} 32'27 10.53482 AU		evening set	13986 Sep 02 12:38	9° \mathcal{A} 14'25
morning rise	13980 Jul 23 12:46	28° \mathcal{E} 38'05		conjunction	13986 Sep 19 14:26	11° \mathcal{A} 19'12 -0°43'30
	13980 Aug 03 22:00	0° \mathcal{Q}		minimum elong	13986 Sep 19 14:27	11° \mathcal{A} 19'12 0°43'25
retrograde	13980 Nov 02 21:52	6° \mathcal{Q} 13'11		max. Earth dist.	13986 Sep 20 05:47	11° \mathcal{A} 23'54 10.64787 AU
opposition	13981 Jan 11 00:37	2° \mathcal{Q} 51'18 -2°10'52		morning rise	13986 Oct 06 18:32	13° \mathcal{A} 24'38
min. Earth dist.	13981 Jan 10 22:30	2° \mathcal{Q} 51'42 8.54797 AU		retrograde	13987 Jan 18 15:37	20° \mathcal{A} 57'48
	13981 Feb 24 08:49	30° \mathbb{R} \mathcal{E}		opposition	13987 Mar 29 13:57	17° \mathcal{A} 33'52 -0°40'15
direct	13981 Mar 21 12:52	29° \mathcal{E} 28'21		min. Earth dist.	13987 Mar 29 00:34	17° \mathcal{A} 36'26 8.65139 AU
	13981 Apr 15 08:21	0° \mathcal{Q}		direct	13987 Jun 06 06:35	14° \mathcal{A} 12'51
evening set	13981 Jul 02 12:49	7° \mathcal{Q} 04'31		evening set	13987 Sep 15 01:49	21° \mathcal{A} 33'35
conjunction	13981 Jul 19 10:20	9° \mathcal{Q} 09'51 -1°45'48		conjunction	13987 Oct 02 05:34	23° \mathcal{A} 38'41 -0°21'51
minimum elong	13981 Jul 19 10:20	9° \mathcal{Q} 09'51 1°46'40		minimum elong	13987 Oct 02 05:34	23° \mathcal{A} 38'42 0°21'32
max. Earth dist.	13981 Jul 19 14:27	9° \mathcal{Q} 11'08 10.55880 AU		max. Earth dist.	13987 Oct 02 21:42	23° \mathcal{A} 43'37 10.65312 AU
morning rise	13981 Aug 05 07:36	11° \mathcal{Q} 15'06		morning rise	13987 Oct 19 11:45	25° \mathcal{A} 44'32
	13981 Sep 07 12:07	15° \mathcal{Q}			13987 Nov 27 14:16	0° \mathbb{L}
retrograde	13981 Nov 15 23:58	18° \mathcal{Q} 49'45		retrograde	13988 Jan 31 14:24	3° \mathbb{L} 17'52
opposition	13982 Jan 24 07:33	15° \mathcal{Q} 27'32 -2°08'59			13988 Apr 09 01:31	30° \mathbb{R} \mathcal{A}
min. Earth dist.	13982 Jan 24 02:06	15° \mathcal{Q} 28'35 8.57174 AU		opposition	13988 Apr 10 10:12	29° \mathcal{A} 53'42 -0°12'44
	13982 Jan 30 07:33	15° \mathbb{R} \mathcal{Q}		min. Earth dist.	13988 Apr 09 20:45	29° \mathcal{A} 56'17 8.65387 AU
direct	13982 Apr 03 17:21	12° \mathcal{Q} 05'04		direct	13988 Jun 17 21:44	26° \mathcal{A} 32'43
	13982 Jun 02 17:20	15° \mathcal{Q}			13988 Aug 22 09:47	0° \mathbb{L}
evening set	13982 Jul 15 06:07	19° \mathcal{Q} 37'53		evening set	13988 Sep 26 16:14	3° \mathbb{L} 52'52
				asc. node	13988 Sep 29 23:35	4° \mathbb{L} 16'41
conjunction	13982 Aug 01 03:27	21° \mathcal{Q} 42'46 -1°41'50		conjunction	13988 Oct 13 21:44	5° \mathbb{L} 58'21 0°00'52
minimum elong	13982 Aug 01 03:29	21° \mathcal{Q} 42'46 1°42'34		minimum elong	13988 Oct 13 21:46	5° \mathbb{L} 58'21 0°01'24
max. Earth dist.	13982 Aug 01 11:31	21° \mathcal{Q} 45'16 10.58213 AU		behind sun begin	13988 Oct 13 14:37	5° \mathbb{L} 56'12
morning rise	13982 Aug 18 00:59	23° \mathcal{Q} 47'43				

behind sun end	13988 Oct 14 04:54	6° \mathbb{M} 00'30		minimum elong	13994 Dec 29 23:42	20° \mathfrak{Z} 50'59	1°43'15
max. Earth dist.	13988 Oct 14 13:14	6° \mathbb{M} 03'04	10.65304 AU	max. Earth dist.	13994 Dec 29 23:33	20° \mathfrak{Z} 50'56	10.56067 AU
morning rise	13988 Oct 31 06:02	8° \mathbb{M} 04'39		morning rise	13995 Jan 16 15:06	23° \mathfrak{Z} 00'02	
	13989 Jan 15 19:02	15° \mathbb{M}			13995 Apr 03 06:43	0° \approx	
retrograde	13989 Feb 12 11:18	15° \mathbb{M} 38'24		retrograde	13995 Apr 30 11:56	0° \approx 38'17	
	13989 Mar 12 07:59	15° \mathbb{R} \mathbb{M}			13995 May 27 19:59	30° \mathbb{R} \mathfrak{Z}	
opposition	13989 Apr 23 05:29	12° \mathbb{M} 14'02	0°15'21	opposition	13995 Jul 07 22:38	27° \mathfrak{Z} 13'59	2°09'15
min. Earth dist.	13989 Apr 22 17:05	12° \mathbb{M} 16'26	8.65117 AU	min. Earth dist.	13995 Jul 08 00:07	27° \mathfrak{Z} 13'41	8.54905 AU
direct	13989 Jun 30 13:29	8° \mathbb{M} 52'57		direct	13995 Sep 14 01:08	23° \mathfrak{Z} 50'07	
	13989 Sep 28 22:44	15° \mathbb{M}			13995 Dec 13 19:57	0° \approx	
evening set	13989 Oct 09 08:31	16° \mathbb{M} 13'21		evening set	13995 Dec 25 18:00	1° \approx 24'28	
conjunction	13989 Oct 26 15:48	18° \mathbb{M} 19'16	0°23'28	conjunction	13996 Jan 12 09:00	3° \approx 33'44	1°45'36
minimum elong	13989 Oct 26 15:47	18° \mathbb{M} 19'16	0°24'11	minimum elong	13996 Jan 12 09:01	3° \approx 33'44	1°46'32
max. Earth dist.	13989 Oct 27 05:30	18° \mathbb{M} 23'27	10.64786 AU	max. Earth dist.	13996 Jan 12 04:52	3° \approx 32'27	10.53464 AU
morning rise	13989 Nov 13 02:03	20° \mathbb{M} 26'02		morning rise	13996 Jan 30 00:47	5° \approx 43'14	
retrograde	13990 Feb 25 08:54	28° \mathbb{M} 00'24		retrograde	13996 May 12 14:42	13° \approx 22'06	
opposition	13990 May 06 00:00	24° \mathbb{M} 35'55	0°42'46	opposition	13996 Jul 19 20:20	9° \approx 57'57	2°10'16
min. Earth dist.	13990 May 05 13:20	24° \mathbb{M} 38'00	8.64364 AU	min. Earth dist.	13996 Jul 20 00:36	9° \approx 57'06	8.52226 AU
direct	13990 Jul 13 05:35	21° \mathbb{M} 14'36		direct	13996 Sep 26 01:28	6° \approx 33'26	
evening set	13990 Oct 22 03:05	28° \mathbb{M} 35'59		evening set	13997 Jan 07 04:28	14° \approx 11'07	
	13990 Nov 02 17:11	0° \mathfrak{Z}			13997 Jan 13 21:13	15° \approx	
conjunction	13990 Nov 08 12:08	0° \mathfrak{Z} 42'25	0°45'03	conjunction	13997 Jan 24 20:25	16° \approx 21'03	1°43'47
minimum elong	13990 Nov 08 12:06	0° \mathfrak{Z} 42'24	0°45'55	minimum elong	13997 Jan 24 20:26	16° \approx 21'03	1°44'35
max. Earth dist.	13990 Nov 09 00:15	0° \mathfrak{Z} 46'07	10.63791 AU	max. Earth dist.	13997 Jan 24 13:19	16° \approx 18'51	10.50751 AU
morning rise	13990 Nov 25 24:00	2° \mathfrak{Z} 49'40		morning rise	13997 Feb 11 12:21	18° \approx 31'01	
retrograde	13991 Mar 10 07:48	10° \mathfrak{Z} 24'48		retrograde	13997 May 25 20:05	26° \approx 10'23	
opposition	13991 May 18 18:09	7° \mathfrak{Z} 00'15	1°08'16	opposition	13997 Aug 01 19:38	22° \approx 46'24	2°04'50
min. Earth dist.	13991 May 18 08:53	7° \mathfrak{Z} 02'03	8.63161 AU	min. Earth dist.	13997 Aug 02 01:56	22° \approx 45'10	8.49528 AU
direct	13991 Jul 25 21:21	3° \mathfrak{Z} 38'37		direct	13997 Oct 09 02:41	19° \approx 21'19	
evening set	13991 Nov 04 00:22	11° \mathfrak{Z} 01'41		evening set	13998 Jan 20 17:11	27° \approx 02'14	
conjunction	13991 Nov 21 10:59	13° \mathfrak{Z} 08'38	1°04'35	conjunction	13998 Feb 07 09:48	29° \approx 12'46	1°36'46
minimum elong	13991 Nov 21 10:57	13° \mathfrak{Z} 08'38	1°05'34	minimum elong	13998 Feb 07 09:50	29° \approx 12'47	1°37'25
max. Earth dist.	13991 Nov 21 21:31	13° \mathfrak{Z} 11'51	10.62357 AU	max. Earth dist.	13998 Feb 07 00:01	29° \approx 09'44	10.48140 AU
morning rise	13991 Dec 09 00:01	15° \mathfrak{Z} 16'20			13998 Feb 13 18:21	0° \mathfrak{H}	
retrograde	13992 Mar 22 06:49	22° \mathfrak{Z} 52'20		morning rise	13998 Feb 25 01:38	1° \mathfrak{H} 23'10	
opposition	13992 May 30 12:18	19° \mathfrak{Z} 27'47	1°30'39	retrograde	13998 Jun 08 02:06	9° \mathfrak{H} 02'45	
min. Earth dist.	13992 May 30 04:36	19° \mathfrak{Z} 29'18	8.61556 AU	opposition	13998 Aug 14 20:43	5° \mathfrak{H} 38'59	1°53'08
direct	13992 Aug 06 14:42	16° \mathfrak{Z} 05'45		min. Earth dist.	13998 Aug 15 05:11	5° \mathfrak{H} 37'18	8.47031 AU
evening set	13992 Nov 16 00:36	23° \mathfrak{Z} 31'05		direct	13998 Oct 22 06:31	2° \mathfrak{H} 13'22	
				evening set	13999 Feb 03 07:26	9° \mathfrak{H} 57'12	
conjunction	13992 Dec 03 12:33	25° \mathfrak{Z} 38'36	1°21'09	max. Earth dist.	13999 Feb 20 11:43	12° \mathfrak{H} 04'19	10.45838 AU
minimum elong	13992 Dec 03 12:31	25° \mathfrak{Z} 38'35	1°22'12				
max. Earth dist.	13992 Dec 03 20:44	25° \mathfrak{Z} 41'06	10.60554 AU	conjunction	13999 Feb 21 00:18	12° \mathfrak{H} 08'13	1°24'52
morning rise	13992 Dec 21 02:30	27° \mathfrak{Z} 46'44		minimum elong	13999 Feb 21 00:20	12° \mathfrak{H} 08'14	1°25'19
	13993 Jan 09 07:41	0° \mathfrak{Z}		morning rise	13999 Mar 10 15:50	14° \mathfrak{H} 18'57	
retrograde	13993 Apr 04 08:12	5° \mathfrak{Z} 23'37		retrograde	13999 Jun 21 08:03	21° \mathfrak{H} 58'29	
opposition	13993 Jun 12 06:56	1° \mathfrak{Z} 59'06	1°48'51	opposition	13999 Aug 27 23:47	18° \mathfrak{H} 34'58	1°35'40
min. Earth dist.	13993 Jun 12 01:32	2° \mathfrak{Z} 00'10	8.59617 AU	min. Earth dist.	13999 Aug 28 10:22	18° \mathfrak{H} 32'52	8.44920 AU
	13993 Jul 09 08:48	30° \mathbb{R} \mathfrak{Z}		direct	13999 Nov 04 13:22	15° \mathfrak{H} 08'54	
direct	13993 Aug 19 08:07	28° \mathfrak{Z} 36'33		evening set	14000 Feb 16 22:24	22° \mathfrak{H} 55'06	
	13993 Sep 28 15:54	0° \mathfrak{Z}					
evening set	13993 Nov 29 03:43	6° \mathfrak{Z} 04'35		conjunction	14000 Mar 05 15:05	25° \mathfrak{H} 06'28	1°08'37
				minimum elong	14000 Mar 05 15:07	25° \mathfrak{H} 06'29	1°08'50
conjunction	13993 Dec 16 16:47	8° \mathfrak{Z} 12'39	1°33'55	max. Earth dist.	14000 Mar 05 00:11	25° \mathfrak{H} 01'50	10.43997 AU
minimum elong	13993 Dec 16 16:46	8° \mathfrak{Z} 12'39	1°34'59	morning rise	14000 Mar 23 06:04	27° \mathfrak{H} 17'23	
max. Earth dist.	13993 Dec 16 21:08	8° \mathfrak{Z} 13'59	10.58444 AU		14000 Apr 15 11:14	0° \mathfrak{Y}	
morning rise	13994 Jan 03 07:34	10° \mathfrak{Z} 21'15		retrograde	14000 Jul 03 14:42	4° \mathfrak{Y} 56'38	
retrograde	13994 Apr 17 10:36	17° \mathfrak{Z} 58'53		opposition	14000 Sep 09 04:37	1° \mathfrak{Y} 33'22	1°13'15
opposition	13994 Jun 25 02:21	14° \mathfrak{Z} 34'27	2°01'57	min. Earth dist.	14000 Sep 09 16:48	1° \mathfrak{Y} 30'57	8.43326 AU
min. Earth dist.	13994 Jun 25 00:22	14° \mathfrak{Z} 34'51	8.57390 AU		14000 Sep 29 13:19	30° \mathbb{R} \mathfrak{H}	
direct	13994 Sep 01 02:45	11° \mathfrak{Z} 11'16		direct	14000 Nov 16 22:12	28° \mathfrak{H} 06'58	
evening set	13994 Dec 12 09:40	18° \mathfrak{Z} 42'21			14001 Jan 03 10:14	0° \mathfrak{Y}	
				evening set	14001 Mar 01 13:48	5° \mathfrak{Y} 54'58	
conjunction	13994 Dec 29 23:42	20° \mathfrak{Z} 50'59	1°42'14				

conjunction	14001 Mar 19 05:53	8°♈06'28	0°48'49	conjunction	14007 Jun 06 10:22	25°♊45'14	-1°21'13
minimum elong	14001 Mar 19 05:54	8°♈06'29	0°48'48	minimum elong	14007 Jun 06 10:20	25°♊45'13	1°22'16
max. Earth dist.	14001 Mar 18 13:36	8°♈01'23	10.42717 AU	max. Earth dist.	14007 Jun 06 03:48	25°♊43'10	10.47848 AU
morning rise	14001 Apr 05 19:54	10°♈17'23		morning rise	14007 Jun 23 11:31	27°♊52'32	
retrograde	14001 Jul 16 20:44	17°♈56'08			14007 Jul 11 08:52	0°♊	
opposition	14001 Sep 22 10:48	14°♈33'05	0°47'01	retrograde	14007 Oct 03 06:05	5°♊27'53	
min. Earth dist.	14001 Sep 22 23:27	14°♈30'35	8.42328 AU	opposition	14007 Dec 10 18:43	2°♊05'57	-1°49'14
direct	14001 Nov 30 09:21	11°♈06'30		min. Earth dist.	14007 Dec 10 22:07	2°♊05'18	8.49179 AU
evening set	14002 Mar 15 04:50	18°♈55'40			14008 Jan 09 00:26	30°♋♊	
				direct	14008 Feb 18 09:11	28°♊41'23	
conjunction	14002 Apr 01 19:50	21°♈07'04	0°26'30		14008 Mar 28 22:14	0°♊	
minimum elong	14002 Apr 01 19:51	21°♈07'05	0°26'14	evening set	14008 Jun 01 09:31	6°♊24'10	
max. Earth dist.	14002 Apr 01 03:49	21°♈02'04	10.42050 AU				
morning rise	14002 Apr 19 08:19	23°♈17'48		conjunction	14008 Jun 18 10:30	8°♊31'09	-1°34'14
	14002 Jun 27 16:28	0°♋		minimum elong	14008 Jun 18 10:28	8°♊31'08	1°35'17
retrograde	14002 Jul 30 02:46	0°♋55'57		max. Earth dist.	14008 Jun 18 07:51	8°♊30'19	10.50413 AU
	14002 Sep 01 00:52	30°♋♈		morning rise	14008 Jul 05 09:42	10°♊37'38	
opposition	14002 Oct 05 18:30	27°♈33'07	0°18'20	retrograde	14008 Oct 15 09:20	18°♊12'33	
min. Earth dist.	14002 Oct 06 06:31	27°♈30'44	8.41964 AU	opposition	14008 Dec 23 03:50	14°♊50'41	-2°02'27
direct	14002 Dec 13 21:59	24°♈06'31		min. Earth dist.	14008 Dec 23 04:00	14°♊50'40	8.51880 AU
	14003 Mar 12 13:01	0°♋		direct	14009 Mar 02 18:14	11°♊26'51	
evening set	14003 Mar 28 18:45	1°♋56'07		evening set	14009 Jun 14 08:57	19°♊06'47	
conjunction	14003 Apr 15 08:07	4°♋07'11	0°02'52	conjunction	14009 Jul 01 08:04	21°♊12'54	-1°42'33
minimum elong	14003 Apr 15 08:07	4°♋07'11	0°02'22	minimum elong	14009 Jul 01 08:03	21°♊12'54	1°43'34
behind sun begin	14003 Apr 15 00:55	4°♋04'58		max. Earth dist.	14009 Jul 01 09:11	21°♊13'15	10.53182 AU
behind sun end	14003 Apr 15 15:18	4°♋09'25		morning rise	14009 Jul 18 05:52	23°♊18'40	
max. Earth dist.	14003 Apr 14 17:22	4°♋02'34	10.42020 AU		14009 Sep 26 09:01	0°♋	
morning rise	14003 May 02 18:34	6°♋17'29		retrograde	14009 Oct 28 12:19	0°♋53'08	
desc. node	14003 May 30 09:24	9°♋29'39			14009 Nov 30 04:56	30°♋♊	
retrograde	14003 Aug 12 10:19	13°♋55'02		opposition	14010 Jan 05 12:01	27°♊31'18	-2°09'36
opposition	14003 Oct 19 03:19	10°♋32'23	-0°11'17	min. Earth dist.	14010 Jan 05 09:36	27°♊31'46	8.54720 AU
min. Earth dist.	14003 Oct 19 14:20	10°♋30'13	8.42255 AU	direct	14010 Mar 16 00:50	24°♊08'11	
direct	14003 Dec 27 09:37	7°♋05'55			14010 Jun 12 11:53	0°♋	
evening set	14004 Apr 10 07:16	14°♋55'18		evening set	14010 Jun 27 05:32	1°♋44'57	
	14004 Apr 10 22:35	15°♋					
				conjunction	14010 Jul 14 03:18	3°♋50'21	-1°45'52
conjunction	14004 Apr 27 18:26	17°♋05'49	-0°21'01	minimum elong	14010 Jul 14 03:18	3°♋50'21	1°46'49
minimum elong	14004 Apr 27 18:26	17°♋05'49	0°21'43	max. Earth dist.	14010 Jul 14 07:18	3°♋51'35	10.56042 AU
max. Earth dist.	14004 Apr 27 05:15	17°♋01'41	10.42631 AU	morning rise	14010 Jul 31 00:30	5°♋55'34	
morning rise	14004 May 15 02:35	19°♋15'31		retrograde	14010 Nov 10 14:17	13°♋29'31	
retrograde	14004 Aug 24 16:37	26°♋52'25		opposition	14011 Jan 18 18:54	10°♋07'39	-2°10'27
opposition	14004 Oct 31 12:48	23°♋29'59	-0°40'17	min. Earth dist.	14011 Jan 18 14:15	10°♋08'33	8.57583 AU
min. Earth dist.	14004 Oct 31 22:53	23°♋28'00	8.43188 AU	direct	14011 Mar 29 04:22	6°♋45'13	
direct	14005 Jan 08 21:43	20°♋03'46		evening set	14011 Jul 09 23:22	14°♋18'41	
evening set	14005 Apr 23 17:52	27°♋52'22			14011 Jul 15 14:34	15°♋	
	14005 May 10 19:40	0°♊					
				conjunction	14011 Jul 26 20:30	16°♋23'30	-1°44'06
conjunction	14005 May 11 02:25	0°♊02'07	-0°43'42	minimum elong	14011 Jul 26 20:31	16°♋23'31	1°44'55
minimum elong	14005 May 11 02:23	0°♊02'06	0°44'34	max. Earth dist.	14011 Jul 27 03:05	16°♋25'33	10.58868 AU
max. Earth dist.	14005 May 10 14:35	29°♋58'24	10.43852 AU	morning rise	14011 Aug 12 17:52	18°♋28'21	
morning rise	14005 May 28 08:10	2°♊11'05		retrograde	14011 Nov 23 12:43	26°♋01'47	
retrograde	14005 Sep 06 21:28	9°♊47'24		opposition	14012 Feb 01 00:07	22°♋39'48	-2°05'04
opposition	14005 Nov 13 22:52	6°♊25'10	-1°07'09	min. Earth dist.	14012 Jan 31 17:11	22°♋41'08	8.60333 AU
min. Earth dist.	14005 Nov 14 07:41	6°♊23'27	8.44711 AU	direct	14012 Apr 10 07:53	19°♋18'01	
direct	14006 Jan 22 10:38	2°♊59'22		evening set	14012 Jul 21 14:57	26°♋48'11	
evening set	14006 May 07 01:55	10°♊46'34					
				conjunction	14012 Aug 07 12:12	28°♋52'36	-1°37'25
conjunction	14006 May 24 07:40	12°♊55'25	-1°04'06	minimum elong	14012 Aug 07 12:14	28°♋52'37	1°38'03
minimum elong	14006 May 24 07:38	12°♊55'24	1°05'05	max. Earth dist.	14012 Aug 07 21:42	28°♋55'32	10.61522 AU
max. Earth dist.	14006 May 23 21:53	12°♊52'21	10.45621 AU		14012 Aug 16 14:35	0°♎	
morning rise	14006 Jun 10 11:02	15°♊03'34		morning rise	14012 Aug 24 10:14	0°♎57'13	
retrograde	14006 Sep 20 01:58	22°♊39'23		retrograde	14012 Dec 05 11:34	8°♎30'11	
opposition	14006 Nov 27 09:01	19°♊17'20	-1°30'31	opposition	14013 Feb 13 03:24	5°♎08'00	-1°53'50
min. Earth dist.	14006 Nov 27 15:29	19°♊16'04	8.46744 AU	min. Earth dist.	14013 Feb 12 17:48	5°♎09'50	8.62837 AU
direct	14007 Feb 04 22:58	15°♊52'06		direct	14013 Apr 23 09:04	1°♎46'48	
evening set	14007 May 20 07:12	23°♊37'19		evening set	14013 Aug 03 04:45	9°♎13'47	

conjunction	14013 Aug 20 02:48	11° \mathbb{M} 18'01	-1°26'12	direct	14019 Jul 07 19:45	15° \mathbb{M} 50'50	
minimum elong	14013 Aug 20 02:50	11° \mathbb{M} 18'02	1°26'39	evening set	14019 Oct 16 14:59	23° \mathbb{M} 11'02	
max. Earth dist.	14013 Aug 20 15:26	11° \mathbb{M} 21'55	10.63877 AU				
morning rise	14013 Sep 06 01:59	13° \mathbb{M} 22'36		conjunction	14019 Nov 02 23:14	25° \mathbb{M} 17'04	0°35'20
retrograde	14013 Dec 18 11:16	20° \mathbb{M} 55'06		minimum elong	14019 Nov 02 23:12	25° \mathbb{M} 17'04	0°36'09
opposition	14014 Feb 26 04:53	17° \mathbb{M} 32'41	-1°37'20	max. Earth dist.	14019 Nov 03 11:34	25° \mathbb{M} 20'49	10.65496 AU
min. Earth dist.	14014 Feb 25 17:07	17° \mathbb{M} 34'56	8.64972 AU	morning rise	14019 Nov 20 10:07	27° \mathbb{M} 23'54	
direct	14014 May 06 06:07	14° \mathbb{M} 11'56			14019 Dec 13 05:01	0° \mathbb{M}	
evening set	14014 Aug 15 17:17	21° \mathbb{M} 36'03		retrograde	14020 Mar 03 18:10	4° \mathbb{M} 58'05	
				opposition	14020 May 12 05:53	1° \mathbb{M} 33'43	0°56'51
conjunction	14014 Sep 01 16:32	23° \mathbb{M} 40'16	-1°11'01	min. Earth dist.	14020 May 11 20:34	1° \mathbb{M} 35'32	8.64661 AU
minimum elong	14014 Sep 01 16:35	23° \mathbb{M} 40'16	1°11'15		14020 Jun 02 03:57	30° \mathbb{R} \mathbb{M}	
max. Earth dist.	14014 Sep 02 07:04	23° \mathbb{M} 44'43	10.65796 AU	direct	14020 Jul 19 10:03	28° \mathbb{M} 12'21	
morning rise	14014 Sep 18 17:25	25° \mathbb{M} 44'57			14020 Sep 03 13:20	0° \mathbb{M}	
	14014 Oct 27 15:08	0° \mathbb{M}		evening set	14020 Oct 28 10:28	5° \mathbb{M} 34'01	
retrograde	14014 Dec 31 08:11	3° \mathbb{M} 17'07					
	14015 Mar 09 23:15	30° \mathbb{R} \mathbb{M}		conjunction	14020 Nov 14 20:12	7° \mathbb{M} 40'36	0°55'55
opposition	14015 Mar 11 04:27	29° \mathbb{M} 54'25	-1°16'25	minimum elong	14020 Nov 14 20:10	7° \mathbb{M} 40'35	0°56'50
min. Earth dist.	14015 Mar 10 15:50	29° \mathbb{M} 56'50	8.66594 AU	max. Earth dist.	14020 Nov 15 05:47	7° \mathbb{M} 43'31	10.63665 AU
direct	14015 May 19 01:13	26° \mathbb{M} 33'57		morning rise	14020 Dec 02 08:37	9° \mathbb{M} 47'58	
	14015 Jul 23 13:04	0° \mathbb{M}		retrograde	14021 Mar 16 16:04	17° \mathbb{M} 23'07	
evening set	14015 Aug 28 05:30	3° \mathbb{M} 55'47		opposition	14021 May 24 23:45	13° \mathbb{M} 58'31	1°20'47
				min. Earth dist.	14021 May 24 16:54	13° \mathbb{M} 59'51	8.62639 AU
conjunction	14015 Sep 14 06:15	6° \mathbb{M} 00'06	-0°52'36	direct	14021 Aug 01 02:22	10° \mathbb{M} 36'31	
minimum elong	14015 Sep 14 06:17	6° \mathbb{M} 00'07	0°52'36	evening set	14021 Nov 10 08:50	18° \mathbb{M} 00'22	
max. Earth dist.	14015 Sep 14 20:52	6° \mathbb{M} 04'35	10.67124 AU				
morning rise	14015 Oct 01 09:12	8° \mathbb{M} 05'03		conjunction	14021 Nov 27 20:00	20° \mathbb{M} 07'32	1°13'56
retrograde	14016 Jan 13 04:47	15° \mathbb{M} 37'03		minimum elong	14021 Nov 27 19:58	20° \mathbb{M} 07'31	1°14'57
opposition	14016 Mar 23 02:10	12° \mathbb{M} 14'03	-0°52'03	max. Earth dist.	14021 Nov 28 02:45	20° \mathbb{M} 09'36	10.61435 AU
min. Earth dist.	14016 Mar 22 13:58	12° \mathbb{M} 16'24	8.67552 AU	morning rise	14021 Dec 15 09:40	22° \mathbb{M} 15'25	
direct	14016 May 30 19:32	8° \mathbb{M} 53'43		retrograde	14022 Mar 29 14:56	29° \mathbb{M} 51'36	
evening set	14016 Sep 08 17:52	16° \mathbb{M} 13'58		opposition	14022 Jun 06 17:41	26° \mathbb{M} 26'48	1°41'03
				min. Earth dist.	14022 Jun 06 13:14	26° \mathbb{M} 27'41	8.60264 AU
conjunction	14016 Sep 25 20:22	18° \mathbb{M} 18'35	-0°31'48	direct	14022 Aug 13 20:13	23° \mathbb{M} 04'07	
minimum elong	14016 Sep 25 20:23	18° \mathbb{M} 18'35	0°31'34		14022 Nov 19 03:01	0° \mathbb{M}	
max. Earth dist.	14016 Sep 26 10:27	18° \mathbb{M} 22'53	10.67734 AU	evening set	14022 Nov 23 10:06	0° \mathbb{M} 30'40	
morning rise	14016 Oct 13 01:32	20° \mathbb{M} 23'55					
retrograde	14017 Jan 25 01:35	27° \mathbb{M} 56'06		conjunction	14022 Dec 10 22:39	2° \mathbb{M} 38'28	1°28'33
opposition	14017 Apr 04 22:34	24° \mathbb{M} 32'47	-0°25'20	minimum elong	14022 Dec 10 22:38	2° \mathbb{M} 38'28	1°29'36
min. Earth dist.	14017 Apr 04 10:43	24° \mathbb{M} 35'04	8.67775 AU	max. Earth dist.	14022 Dec 11 02:53	2° \mathbb{M} 39'46	10.58890 AU
direct	14017 Jun 12 11:56	21° \mathbb{M} 12'26		morning rise	14022 Dec 28 13:10	4° \mathbb{M} 46'52	
evening set	14017 Sep 21 06:59	28° \mathbb{M} 31'53		retrograde	14023 Apr 11 15:41	12° \mathbb{M} 24'04	
	14017 Oct 03 10:35	0° \mathbb{M}		opposition	14023 Jun 19 12:17	8° \mathbb{M} 59'10	1°56'38
				min. Earth dist.	14023 Jun 19 09:47	8° \mathbb{M} 59'39	8.57622 AU
conjunction	14017 Oct 08 11:30	0° \mathbb{M} 36'54	-0°09'35	direct	14023 Aug 26 14:40	5° \mathbb{M} 35'46	
minimum elong	14017 Oct 08 11:30	0° \mathbb{M} 36'54	0°09'08	evening set	14023 Dec 06 14:12	13° \mathbb{M} 05'25	
behind sun begin	14017 Oct 08 05:28	0° \mathbb{M} 35'04					
behind sun end	14017 Oct 08 17:33	0° \mathbb{M} 38'43		conjunction	14023 Dec 24 03:56	15° \mathbb{M} 13'51	1°39'00
max. Earth dist.	14017 Oct 09 01:38	0° \mathbb{M} 41'12	10.67615 AU	minimum elong	14023 Dec 24 03:55	15° \mathbb{M} 13'51	1°40'03
morning rise	14017 Oct 25 18:46	2° \mathbb{M} 42'43		max. Earth dist.	14023 Dec 24 05:41	15° \mathbb{M} 14'23	10.56131 AU
retrograde	14018 Feb 06 21:32	10° \mathbb{M} 15'24		morning rise	14024 Jan 10 19:00	17° \mathbb{M} 22'45	
asc. node	14018 Mar 15 05:39	9° \mathbb{M} 11'48		retrograde	14024 Apr 23 17:34	25° \mathbb{M} 00'56	
opposition	14018 Apr 17 17:47	6° \mathbb{M} 51'42	0°02'33	opposition	14024 Jul 01 07:56	21° \mathbb{M} 35'59	2°06'42
min. Earth dist.	14018 Apr 17 06:05	6° \mathbb{M} 53'57	8.67312 AU	min. Earth dist.	14024 Jul 01 07:38	21° \mathbb{M} 36'03	8.54823 AU
direct	14018 Jun 25 04:29	3° \mathbb{M} 31'10		direct	14024 Sep 07 10:55	18° \mathbb{M} 11'53	
evening set	14018 Oct 03 21:53	10° \mathbb{M} 50'36		evening set	14024 Dec 18 21:12	25° \mathbb{M} 44'52	
conjunction	14018 Oct 21 04:24	12° \mathbb{M} 56'07	0°13'12	conjunction	14025 Jan 05 11:56	27° \mathbb{M} 53'58	1°44'43
minimum elong	14018 Oct 21 04:23	12° \mathbb{M} 56'06	0°13'51	minimum elong	14025 Jan 05 11:56	27° \mathbb{M} 53'58	1°45'42
behind sun begin	14018 Oct 21 00:41	12° \mathbb{M} 54'59		max. Earth dist.	14025 Jan 05 10:11	27° \mathbb{M} 53'26	10.53292 AU
behind sun end	14018 Oct 21 08:06	12° \mathbb{M} 57'13			14025 Jan 22 16:16	0° \mathbb{M}	
max. Earth dist.	14018 Oct 21 18:15	13° \mathbb{M} 00'19	10.66842 AU	morning rise	14025 Jan 23 03:28	0° \mathbb{M} 03'22	
morning rise	14018 Nov 07 13:33	15° \mathbb{M} 02'25		retrograde	14025 May 06 21:18	7° \mathbb{M} 42'19	
	14018 Nov 07 05:28	15° \mathbb{M}		opposition	14025 Jul 14 04:53	4° \mathbb{M} 17'28	2°10'41
retrograde	14019 Feb 19 19:26	22° \mathbb{M} 35'46		min. Earth dist.	14025 Jul 14 07:29	4° \mathbb{M} 16'57	8.52003 AU
opposition	14019 Apr 30 11:58	19° \mathbb{M} 11'43	0°30'22	direct	14025 Sep 20 08:19	0° \mathbb{M} 52'39	
min. Earth dist.	14019 Apr 30 00:54	19° \mathbb{M} 13'52	8.66247 AU	evening set	14026 Jan 01 06:46	8° \mathbb{M} 29'04	

conjunction	14026 Jan 18 22:20	10° \approx 38'50	1°45'19	conjunction	14032 Apr 08 10:57	28° Υ 22'15	0°13'52
minimum elong	14026 Jan 18 22:21	10° \approx 38'50	1°46'11	minimum elong	14032 Apr 08 10:57	28° Υ 22'15	0°13'28
max. Earth dist.	14026 Jan 18 16:36	10° \approx 37'04	10.50509 AU	behind sun begin	14032 Apr 08 06:57	28° Υ 21'01	
morning rise	14026 Feb 05 14:15	12° \approx 48'44		behind sun end	14032 Apr 08 14:57	28° Υ 23'30	
	14026 Feb 24 07:39	15° \approx		max. Earth dist.	14032 Apr 07 19:46	28° Υ 17'31	10.41951 AU
retrograde	14026 May 20 01:30	20° \approx 28'13			14032 Apr 21 11:57	0° δ	
opposition	14026 Jul 27 03:29	17° \approx 03'33	2°08'15	morning rise	14032 Apr 25 22:29	0° δ 32'51	
min. Earth dist.	14026 Jul 27 09:07	17° \approx 02'26	8.49295 AU	retrograde	14032 Aug 05 17:09	8° δ 11'08	
	14026 Aug 23 23:45	15° \approx		opposition	14032 Oct 12 08:13	4° δ 48'45	0°02'24
direct	14026 Oct 03 09:02	13° \approx 38'07		min. Earth dist.	14032 Oct 12 19:55	4° δ 46'27	8.42199 AU
	14026 Nov 12 08:18	15° \approx		desc. node	14032 Nov 11 08:08	2° δ 38'07	
evening set	14027 Jan 14 18:29	21° \approx 17'52		direct	14032 Dec 20 11:15	1° δ 22'35	
				evening set	14033 Apr 04 10:49	9° δ 12'35	
conjunction	14027 Feb 01 10:41	23° \approx 28'14	1°40'42	conjunction	14033 Apr 21 22:57	11° δ 23'26	-0°10'07
minimum elong	14027 Feb 01 10:43	23° \approx 28'15	1°41'25	minimum elong	14033 Apr 21 22:57	11° δ 23'25	0°10'45
max. Earth dist.	14027 Feb 01 01:29	23° \approx 25'23	10.47918 AU	behind sun begin	14033 Apr 21 17:27	11° δ 21'43	
morning rise	14027 Feb 19 02:46	25° \approx 38'35		behind sun end	14033 Apr 22 04:27	11° δ 25'08	
	14027 Mar 30 13:11	0° χ		max. Earth dist.	14033 Apr 21 08:38	11° δ 18'56	10.42582 AU
retrograde	14027 Jun 02 05:29	3° χ 18'25		morning rise	14033 May 09 08:24	13° δ 33'29	
	14027 Aug 07 21:40	30° \approx			14033 May 21 07:32	15° δ	
opposition	14027 Aug 09 03:46	29° \approx 54'01	1°59'24	retrograde	14033 Aug 18 23:17	21° δ 11'02	
min. Earth dist.	14027 Aug 09 11:38	29° \approx 52'27	8.46842 AU	opposition	14033 Oct 25 17:53	17° δ 48'59	-0°27'05
direct	14027 Oct 16 13:11	26° \approx 28'06		min. Earth dist.	14033 Oct 26 04:22	17° δ 46'55	8.43129 AU
	14027 Dec 21 18:57	0° χ			14033 Dec 07 00:36	15° \approx δ	
evening set	14028 Jan 28 07:53	4° χ 10'55		direct	14034 Jan 03 01:13	14° δ 23'07	
					14034 Jan 29 20:23	15° δ	
conjunction	14028 Feb 15 00:38	6° χ 21'50	1°31'00	evening set	14034 Apr 17 22:58	22° δ 12'30	
minimum elong	14028 Feb 15 00:40	6° χ 21'51	1°31'32				
max. Earth dist.	14028 Feb 14 13:19	6° χ 18'19	10.45664 AU	conjunction	14034 May 05 08:45	24° δ 22'38	-0°33'27
morning rise	14028 Mar 03 16:33	8° χ 32'32		minimum elong	14034 May 05 08:44	24° δ 22'38	0°34'15
retrograde	14028 Jun 14 11:07	16° χ 12'29		max. Earth dist.	14034 May 04 20:28	24° δ 18'47	10.43779 AU
opposition	14028 Aug 21 05:53	12° χ 48'25	1°44'30	morning rise	14034 May 22 15:43	26° δ 31'59	
min. Earth dist.	14028 Aug 21 15:00	12° χ 46'36	8.44781 AU		14034 Jun 21 18:04	0° Π	
direct	14028 Oct 28 18:52	9° χ 22'11		retrograde	14034 Sep 01 05:21	4° Π 08'51	
evening set	14029 Feb 09 22:31	17° χ 07'37		opposition	14034 Nov 08 04:15	0° Π 47'01	-0°55'06
				min. Earth dist.	14034 Nov 08 12:49	0° Π 45'20	8.44576 AU
conjunction	14029 Feb 27 15:30	19° χ 18'58	1°16'40		14034 Nov 18 07:13	30° \approx δ	
minimum elong	14029 Feb 27 15:33	19° χ 18'59	1°16'59	direct	14035 Jan 16 15:03	27° δ 21'33	
max. Earth dist.	14029 Feb 27 02:51	19° χ 15'02	10.43864 AU		14035 Mar 14 15:17	0° Π	
morning rise	14029 Mar 17 06:54	21° χ 29'56		evening set	14035 May 01 08:37	5° Π 09'39	
retrograde	14029 Jun 27 19:22	29° χ 09'44					
opposition	14029 Sep 03 09:54	25° χ 46'04	1°24'13	conjunction	14035 May 18 15:49	7° Π 18'56	-0°55'02
min. Earth dist.	14029 Sep 03 20:00	25° χ 44'04	8.43214 AU	minimum elong	14035 May 18 15:47	7° Π 18'55	0°55'58
direct	14029 Nov 11 01:20	22° χ 19'39		max. Earth dist.	14035 May 18 06:01	7° Π 15'51	10.45407 AU
	14030 Feb 22 14:22	0° Υ		morning rise	14035 Jun 04 20:12	9° Π 27'27	
evening set	14030 Feb 23 14:06	0° Υ 07'14		retrograde	14035 Sep 14 11:56	17° Π 03'44	
				opposition	14035 Nov 21 14:50	13° Π 42'03	-1°20'14
conjunction	14030 Mar 13 06:44	2° Υ 18'49	0°58'23	min. Earth dist.	14035 Nov 21 21:53	13° Π 40'41	8.46372 AU
minimum elong	14030 Mar 13 06:46	2° Υ 18'50	0°58'27	direct	14036 Jan 30 03:01	10° Π 17'03	
max. Earth dist.	14030 Mar 12 17:00	2° Υ 14'32	10.42601 AU	evening set	14036 May 13 15:50	18° Π 03'26	
morning rise	14030 Mar 30 21:11	4° Υ 29'52					
retrograde	14030 Jul 11 02:31	12° Υ 09'17		conjunction	14036 May 30 20:19	20° Π 11'49	-1°13'46
opposition	14030 Sep 16 15:45	8° Υ 46'05	0°59'34	minimum elong	14036 May 30 20:17	20° Π 11'48	1°14'47
min. Earth dist.	14030 Sep 17 02:51	8° Υ 43'53	8.42227 AU	max. Earth dist.	14036 May 30 12:20	20° Π 09'19	10.47285 AU
direct	14030 Nov 24 11:06	5° Υ 19'38		morning rise	14036 Jun 16 22:20	22° Π 19'30	
evening set	14031 Mar 09 05:47	13° Υ 08'44		retrograde	14036 Sep 26 17:43	29° Π 55'21	
				opposition	14036 Dec 04 01:13	26° Π 33'48	-1°41'12
conjunction	14031 Mar 26 21:26	15° Υ 20'19	0°37'05	min. Earth dist.	14036 Dec 04 06:54	26° Π 32'42	8.48353 AU
minimum elong	14031 Mar 26 21:28	15° Υ 20'19	0°36'54	direct	14037 Feb 11 13:17	23° Π 09'19	
max. Earth dist.	14031 Mar 26 06:40	15° Υ 15'42	10.41951 AU		14037 May 19 11:01	0° ϕ	
morning rise	14031 Apr 13 10:37	17° Υ 31'14		evening set	14037 May 26 20:21	0° ϕ 53'42	
retrograde	14031 Jul 24 09:37	25° Υ 10'09					
opposition	14031 Sep 29 23:20	21° Υ 47'23	0°31'48	conjunction	14037 Jun 12 22:16	3° ϕ 01'10	-1°28'44
min. Earth dist.	14031 Sep 30 11:15	21° Υ 45'02	8.41886 AU	minimum elong	14037 Jun 12 22:14	3° ϕ 01'09	1°29'47
direct	14031 Dec 07 22:48	18° Υ 21'01		max. Earth dist.	14037 Jun 12 16:17	2° ϕ 59'17	10.49311 AU
evening set	14032 Mar 21 20:49	26° Υ 10'55		morning rise	14037 Jun 29 22:19	5° ϕ 08'06	

retrograde	14037 Oct 09 20:46	12°♊43'41		retrograde	14043 Dec 26 01:42	28°♏11'54	
opposition	14037 Dec 17 11:30	9°♊22'10	-1°57'01	opposition	14044 Mar 04 22:06	24°♏48'35	-1°25'56
min. Earth dist.	14037 Dec 17 15:10	9°♊21'28	8.50471 AU	min. Earth dist.	14044 Mar 04 11:04	24°♏50'42	8.62777 AU
direct	14038 Feb 25 00:45	5°♊58'15		direct	14044 May 12 21:20	21°♏27'12	
evening set	14038 Jun 08 21:52	13°♊40'11		evening set	14044 Aug 22 04:25	28°♏51'26	
					14044 Aug 31 14:04	0°♏	
conjunction	14038 Jun 25 21:40	15°♊46'48	-1°39'15	conjunction	14044 Sep 08 04:41	0°♏56'07	-1°00'49
minimum elong	14038 Jun 25 21:39	15°♊46'48	1°40'17	minimum elong	14044 Sep 08 04:43	0°♏56'07	1°00'55
max. Earth dist.	14038 Jun 25 18:31	15°♊45'49	10.51474 AU	max. Earth dist.	14044 Sep 08 18:48	1°♏00'27	10.63352 AU
morning rise	14038 Jul 12 20:14	17°♊53'02		morning rise	14044 Sep 25 06:55	3°♏01'21	
retrograde	14038 Oct 23 00:00	25°♊28'26		retrograde	14045 Jan 07 00:09	10°♏34'52	
opposition	14038 Dec 30 21:04	22°♊06'48	-2°06'59	opposition	14045 Mar 17 21:35	7°♏11'12	-1°02'50
min. Earth dist.	14038 Dec 30 21:43	22°♊06'40	8.52707 AU	min. Earth dist.	14045 Mar 17 08:52	7°♏13'39	8.63913 AU
direct	14039 Mar 10 10:23	18°♊43'25		direct	14045 May 25 17:34	3°♏50'02	
evening set	14039 Jun 21 20:35	26°♊22'30		evening set	14045 Sep 03 17:24	11°♏12'20	
conjunction	14039 Jul 08 18:58	28°♊28'24	-1°44'52	conjunction	14045 Sep 20 19:27	13°♏17'15	-0°40'52
minimum elong	14039 Jul 08 18:58	28°♊28'24	1°45'50	minimum elong	14045 Sep 20 19:28	13°♏17'15	0°40'45
max. Earth dist.	14039 Jul 08 19:46	28°♊28'39	10.53736 AU	max. Earth dist.	14045 Sep 21 11:12	13°♏22'05	10.64279 AU
	14039 Jul 21 01:33	0°♏		morning rise	14045 Oct 07 23:41	15°♏22'49	
morning rise	14039 Jul 25 16:34	0°♏34'04		retrograde	14046 Jan 19 22:43	22°♏56'22	
retrograde	14039 Nov 05 03:14	8°♏09'10		opposition	14046 Mar 30 19:26	19°♏32'22	-0°36'53
opposition	14040 Jan 13 05:17	4°♏47'16	-2°10'43	min. Earth dist.	14046 Mar 30 05:57	19°♏34'58	8.64583 AU
min. Earth dist.	14040 Jan 13 02:36	4°♏47'47	8.54992 AU	direct	14046 Jun 07 10:20	16°♏11'19	
direct	14040 Mar 22 16:55	1°♏24'24		evening set	14046 Sep 16 06:59	23°♏32'22	
evening set	14040 Jul 03 16:34	9°♏00'22					
conjunction	14040 Jul 20 14:12	11°♏05'42	-1°45'23	conjunction	14046 Oct 03 10:51	25°♏37'36	-0°19'04
minimum elong	14040 Jul 20 14:13	11°♏05'42	1°46'15	minimum elong	14046 Oct 03 10:51	25°♏37'36	0°18'42
max. Earth dist.	14040 Jul 20 18:52	11°♏07'09	10.56011 AU	max. Earth dist.	14046 Oct 04 02:30	25°♏42'23	10.64716 AU
morning rise	14040 Aug 06 11:26	13°♏10'57		morning rise	14046 Oct 20 17:18	27°♏43'35	
	14040 Aug 21 19:24	15°♏			14046 Nov 09 10:01	0°♏	
retrograde	14040 Nov 17 04:41	20°♏45'40		retrograde	14047 Feb 01 20:02	5°♏17'20	
opposition	14041 Jan 25 12:14	17°♏23'27	-2°08'07	opposition	14047 Apr 12 15:57	1°♏53'06	-0°09'16
min. Earth dist.	14041 Jan 25 06:40	17°♏24'31	8.57234 AU	min. Earth dist.	14047 Apr 12 03:06	1°♏55'34	8.64754 AU
	14041 Mar 01 04:49	15°♏♏			14047 May 08 14:43	30°♏♏	
direct	14041 Apr 04 21:13	14°♏01'03		direct	14047 Jun 20 02:48	28°♏32'01	
	14041 May 08 22:23	15°♏			14047 Jul 31 16:32	0°♏	
evening set	14041 Jul 16 10:01	21°♏33'47		asc. node	14047 Aug 15 03:41	1°♏07'20	
				evening set	14047 Sep 28 21:57	5°♏52'37	
conjunction	14041 Aug 02 07:23	23°♏38'41	-1°40'51	conjunction	14047 Oct 16 03:36	7°♏58'14	0°03'43
minimum elong	14041 Aug 02 07:25	23°♏38'42	1°41'34	minimum elong	14047 Oct 16 03:35	7°♏58'14	0°04'17
max. Earth dist.	14041 Aug 02 15:11	23°♏41'06	10.58204 AU	behind sun begin	14047 Oct 15 20:34	7°♏56'07	
morning rise	14041 Aug 19 05:03	25°♏43'41		behind sun end	14047 Oct 16 10:36	8°♏00'21	
	14041 Sep 26 21:09	0°♏		max. Earth dist.	14047 Oct 16 18:09	8°♏02'40	10.64639 AU
retrograde	14041 Nov 30 05:20	3°♏18'01		morning rise	14047 Nov 02 12:08	10°♏04'40	
	14042 Feb 06 17:48	30°♏♏			14047 Dec 19 00:14	15°♏	
opposition	14042 Feb 07 17:31	29°♏55'27	-1°59'24	retrograde	14048 Feb 14 17:34	17°♏38'50	
min. Earth dist.	14042 Feb 07 09:52	29°♏56'55	8.59342 AU		14048 Apr 14 13:48	15°♏♏	
direct	14042 Apr 17 23:25	26°♏33'27		opposition	14048 Apr 24 11:22	14°♏14'25	0°18'48
	14042 Jun 22 13:27	0°♏		min. Earth dist.	14048 Apr 23 23:38	14°♏16'41	8.64424 AU
evening set	14042 Jul 29 01:29	4°♏03'01		direct	14048 Jul 01 19:26	10°♏53'12	
conjunction	14042 Aug 14 23:12	6°♏07'40	-1°31'33		14048 Sep 11 20:01	15°♏	
minimum elong	14042 Aug 14 23:15	6°♏07'41	1°32'05	evening set	14048 Oct 10 14:40	18°♏14'05	
max. Earth dist.	14042 Aug 15 08:59	6°♏10'42	10.60227 AU				
morning rise	14042 Aug 31 22:02	8°♏12'37		conjunction	14048 Oct 27 22:08	20°♏20'09	0°26'12
retrograde	14042 Dec 13 04:32	15°♏46'33		minimum elong	14048 Oct 27 22:07	20°♏20'09	0°26'57
opposition	14043 Feb 20 20:47	12°♏23'36	-1°45'06	max. Earth dist.	14048 Oct 28 11:38	20°♏24'16	10.64067 AU
min. Earth dist.	14043 Feb 20 11:34	12°♏25'22	8.61225 AU	morning rise	14048 Nov 14 08:31	22°♏27'03	
direct	14043 Apr 30 22:53	9°♏01'57			14049 Feb 20 14:21	0°♏♏	
evening set	14043 Aug 10 15:24	16°♏28'38		retrograde	14049 Feb 26 15:35	0°♏♏01'52	
					14049 Mar 04 16:42	30°♏♏	
conjunction	14043 Aug 27 14:09	18°♏33'13	-1°17'59	opposition	14049 May 07 06:09	26°♏37'17	0°46'01
minimum elong	14043 Aug 27 14:11	18°♏33'14	1°18'19	min. Earth dist.	14049 May 06 19:24	26°♏39'23	8.63628 AU
max. Earth dist.	14043 Aug 28 02:01	18°♏36'53	10.61978 AU	direct	14049 Jul 14 11:24	23°♏15'51	
morning rise	14043 Sep 13 14:35	20°♏38'16			14049 Oct 18 02:21	0°♏♏	

evening set	14049 Oct 23 09:38	0°♊37'45		evening set	14056 Jan 09 13:22	16°♊17'32	
conjunction	14049 Nov 09 18:54	2°♊44'19	0°47'33	conjunction	14056 Jan 27 05:22	18°♊27'29	1°42'59
minimum elong	14049 Nov 09 18:52	2°♊44'18	0°48'27	minimum elong	14056 Jan 27 05:24	18°♊27'30	1°43'46
max. Earth dist.	14049 Nov 10 07:36	2°♊48'11	10.63038 AU	max. Earth dist.	14056 Jan 26 22:55	18°♊25'30	10.50645 AU
morning rise	14049 Nov 27 06:47	4°♊51'41		morning rise	14056 Feb 13 21:11	20°♊37'27	
retrograde	14050 Mar 11 14:16	12°♊27'17		retrograde	14056 May 27 04:22	28°♊16'42	
opposition	14050 May 20 00:35	9°♊02'37	1°11'10	opposition	14056 Aug 03 03:33	24°♊52'43	2°03'28
min. Earth dist.	14050 May 19 14:49	9°♊04'31	8.62403 AU	min. Earth dist.	14056 Aug 03 09:40	24°♊51'30	8.49499 AU
direct	14050 Jul 27 04:11	5°♊40'52		direct	14056 Oct 10 10:50	21°♊27'36	
evening set	14050 Nov 05 07:32	13°♊04'28		evening set	14057 Jan 22 02:04	29°♊08'34	
					14057 Jan 29 02:36	0°♋	
conjunction	14050 Nov 22 18:18	15°♊11'34	1°06'45	conjunction	14057 Feb 08 18:38	1°♋19'05	1°35'21
minimum elong	14050 Nov 22 18:16	15°♊11'33	1°07'44	minimum elong	14057 Feb 08 18:40	1°♋19'06	1°35'58
max. Earth dist.	14050 Nov 23 05:02	15°♊14'51	10.61598 AU	max. Earth dist.	14057 Feb 08 08:36	1°♋15'59	10.48181 AU
morning rise	14050 Dec 10 07:21	17°♊19'22		morning rise	14057 Feb 26 10:27	3°♋29'27	
retrograde	14051 Mar 24 15:13	24°♊55'48		retrograde	14057 Jun 09 09:56	11°♋08'51	
opposition	14051 Jun 01 18:59	21°♊31'09	1°33'04	opposition	14057 Aug 16 04:42	7°♋45'08	1°51'01
min. Earth dist.	14051 Jun 01 11:17	21°♊32'40	8.60809 AU	min. Earth dist.	14057 Aug 16 13:41	7°♋43'21	8.47127 AU
direct	14051 Aug 08 20:33	18°♊08'59		direct	14057 Oct 23 14:59	4°♋19'29	
evening set	14051 Nov 18 08:19	25°♊34'53		evening set	14058 Feb 04 16:16	12°♋03'18	
conjunction	14051 Dec 05 20:17	27°♊42'31	1°22'51	conjunction	14058 Feb 22 09:02	14°♋14'18	1°22'53
minimum elong	14051 Dec 05 20:15	27°♊42'30	1°23'54	minimum elong	14058 Feb 22 09:04	14°♋14'18	1°23'18
max. Earth dist.	14051 Dec 06 03:49	27°♊44'49	10.59826 AU	max. Earth dist.	14058 Feb 21 19:42	14°♋10'09	10.45986 AU
morning rise	14051 Dec 23 10:21	29°♊50'46		morning rise	14058 Mar 12 00:37	16°♋24'59	
	14051 Dec 24 17:15	0°♋		retrograde	14058 Jun 22 16:20	24°♋04'17	
retrograde	14052 Apr 05 16:42	7°♋27'59		opposition	14058 Aug 29 07:46	20°♋40'49	1°32'54
opposition	14052 Jun 13 14:01	4°♋03'26	1°50'38	min. Earth dist.	14058 Aug 29 18:51	20°♋38'37	8.45107 AU
min. Earth dist.	14052 Jun 13 09:12	4°♋04'23	8.58923 AU	direct	14058 Nov 05 21:27	17°♋14'46	
direct	14052 Aug 20 14:01	0°♋40'44		evening set	14059 Feb 18 07:09	25°♋00'54	
evening set	14052 Nov 30 11:47	8°♋09'20					
conjunction	14052 Dec 18 00:51	10°♋17'30	1°35'04	conjunction	14059 Mar 07 23:45	27°♋12'14	1°06'11
minimum elong	14052 Dec 18 00:50	10°♋17'30	1°36'07	minimum elong	14059 Mar 07 23:47	27°♋12'14	1°06'21
max. Earth dist.	14052 Dec 18 04:30	10°♋18'37	10.57797 AU	max. Earth dist.	14059 Mar 07 08:31	27°♋07'29	10.44222 AU
morning rise	14053 Jan 04 15:46	12°♋26'13		morning rise	14059 Mar 25 14:42	29°♋23'06	
retrograde	14053 Apr 18 17:18	20°♋04'09			14059 Mar 30 16:34	0°♌	
opposition	14053 Jun 26 09:46	16°♋39'41	2°03'01	retrograde	14059 Jul 05 21:34	7°♌02'06	
min. Earth dist.	14053 Jun 26 08:08	16°♋40'01	8.56808 AU	opposition	14059 Sep 11 12:32	3°♌38'53	1°09'59
direct	14053 Sep 02 11:11	13°♋16'23		min. Earth dist.	14059 Sep 12 00:35	3°♌36'30	8.43580 AU
evening set	14053 Dec 13 18:05	20°♋47'58		direct	14059 Nov 19 07:34	0°♌12'33	
				evening set	14060 Mar 02 22:18	8°♌00'26	
conjunction	14053 Dec 31 08:14	22°♋56'43	1°42'46	conjunction	14060 Mar 20 14:20	10°♌11'52	0°46'03
minimum elong	14053 Dec 31 08:14	22°♋56'43	1°43'46	minimum elong	14060 Mar 20 14:22	10°♌11'53	0°45'59
max. Earth dist.	14053 Dec 31 08:21	22°♋56'45	10.55567 AU	max. Earth dist.	14060 Mar 19 22:36	10°♌06'57	10.43000 AU
morning rise	14054 Jan 17 23:41	25°♋05'50		morning rise	14060 Apr 07 04:11	12°♌22'43	
	14054 Mar 04 19:06	0°♌		retrograde	14060 Jul 18 04:01	20°♌01'16	
retrograde	14054 May 01 19:15	2°♌44'18		opposition	14060 Sep 23 18:43	16°♌38'17	0°43'26
	14054 Jun 30 18:05	30°♌♊		min. Earth dist.	14060 Sep 24 06:42	16°♌35'54	8.42633 AU
opposition	14054 Jul 09 06:15	29°♋19'58	2°09'30	direct	14060 Dec 01 18:15	13°♌11'47	
min. Earth dist.	14054 Jul 09 07:18	29°♋19'45	8.54501 AU	evening set	14061 Mar 16 13:05	21°♌00'46	
direct	14054 Sep 15 09:44	25°♋56'01					
	14054 Nov 25 22:59	0°♌		conjunction	14061 Apr 03 04:03	23°♌12'07	0°23'33
evening set	14054 Dec 27 02:44	3°♌30'41		minimum elong	14061 Apr 03 04:04	23°♌12'07	0°23'14
conjunction	14055 Jan 13 17:55	5°♌40'02	1°45'28	max. Earth dist.	14061 Apr 02 12:48	23°♌07'21	10.42376 AU
minimum elong	14055 Jan 13 17:56	5°♌40'02	1°46'23	morning rise	14061 Apr 20 16:17	25°♌22'45	
max. Earth dist.	14055 Jan 13 14:45	5°♌39'03	10.53164 AU		14061 Jun 01 11:59	0°♍	
morning rise	14055 Jan 31 09:37	7°♌49'34		retrograde	14061 Jul 31 11:36	3°♍00'42	
	14055 Apr 21 16:08	15°♌			14061 Oct 02 10:27	30°♌♌	
retrograde	14055 May 14 23:49	15°♌28'27		opposition	14061 Oct 07 02:22	29°♌37'57	0°14'37
	14055 Jun 07 09:03	15°♌		min. Earth dist.	14061 Oct 07 14:08	29°♌35'37	8.42304 AU
opposition	14055 Jul 22 04:06	12°♌04'16	2°09'41	direct	14061 Dec 15 04:59	26°♌11'26	
min. Earth dist.	14055 Jul 22 07:39	12°♌03'34	8.52028 AU		14062 Feb 22 15:05	0°♍	
direct	14055 Sep 28 08:49	8°♌39'42		evening set	14062 Mar 30 02:55	4°♍00'51	
	14055 Dec 29 16:11	15°♌		desc. node	14062 Apr 13 16:25	5°♍49'23	

conjunction	14062 Apr 16 16:05	6°♄11'51 -0°00'13	conjunction	14068 Jul 02 14:09	23°♄14'54 -1°43'05
minimum elong	14062 Apr 16 16:06	6°♄11'51 0°00'45	minimum elong	14068 Jul 02 14:09	23°♄14'53 1°44'05
behind sun begin	14062 Apr 16 08:55	6°♄09'37	max. Earth dist.	14068 Jul 02 14:45	23°♄15'05 10.53267 AU
behind sun end	14062 Apr 16 23:17	6°♄14'04	morning rise	14068 Jul 19 11:59	25°♄20'39
max. Earth dist.	14062 Apr 16 01:26	6°♄07'15 10.42371 AU		14068 Aug 31 00:36	0°♄
morning rise	14062 May 04 02:18	8°♄22'03	retrograde	14068 Oct 29 19:20	2°♄55'06
	14062 Jul 11 05:55	15°♄		14068 Dec 31 23:22	30°♄♄
retrograde	14062 Aug 13 18:15	15°♄59'23	opposition	14069 Jan 06 19:02	29°♄33'13 -2°09'51
	14062 Sep 16 17:37	15°♄♄	min. Earth dist.	14069 Jan 06 17:16	29°♄33'33 8.54756 AU
opposition	14062 Oct 20 11:09	12°♄36'51 -0°14'57	direct	14069 Mar 17 06:41	26°♄10'04
min. Earth dist.	14062 Oct 20 22:34	12°♄34'36 8.42613 AU		14069 May 26 00:02	0°♄
direct	14062 Dec 28 17:02	9°♄10'27	evening set	14069 Jun 28 11:34	3°♄46'41
	14063 Mar 26 21:12	15°♄			
evening set	14063 Apr 12 15:12	16°♄59'39	conjunction	14069 Jul 15 09:15	5°♄52'03 -1°45'45
			minimum elong	14069 Jul 15 09:16	5°♄52'03 1°46'40
conjunction	14063 Apr 30 02:02	19°♄10'03 -0°23'53	max. Earth dist.	14069 Jul 15 12:33	5°♄53'05 10.56022 AU
minimum elong	14063 Apr 30 02:01	19°♄10'03 0°24'37	morning rise	14069 Aug 01 06:35	7°♄57'18
max. Earth dist.	14063 Apr 29 12:14	19°♄05'44 10.42990 AU		14069 Oct 18 03:58	15°♄
morning rise	14063 May 17 10:01	21°♄19'40	retrograde	14069 Nov 11 19:03	15°♄31'19
retrograde	14063 Aug 26 23:13	28°♄56'24		14069 Dec 06 18:58	15°♄♄
opposition	14063 Nov 02 20:37	25°♄34'03 -0°43'42	opposition	14070 Jan 20 01:51	12°♄09'22 -2°09'55
min. Earth dist.	14063 Nov 03 07:14	25°♄31'58 8.43548 AU	min. Earth dist.	14070 Jan 19 21:23	12°♄10'13 8.57504 AU
direct	14064 Jan 11 06:25	22°♄07'54	direct	14070 Mar 30 11:58	8°♄46'54
evening set	14064 Apr 25 01:20	29°♄56'17		14070 Jun 29 23:49	15°♄
	14064 Apr 25 13:28	0°♄♄	evening set	14070 Jul 11 05:10	16°♄20'16
conjunction	14064 May 12 09:35	2°♄05'55 -0°46'18	conjunction	14070 Jul 28 02:24	18°♄25'06 -1°43'22
minimum elong	14064 May 12 09:33	2°♄05'54 0°47'11	minimum elong	14070 Jul 28 02:25	18°♄25'07 1°44'08
max. Earth dist.	14064 May 11 21:14	2°♄02'03 10.44202 AU	max. Earth dist.	14070 Jul 28 09:06	18°♄27'11 10.58731 AU
morning rise	14064 May 29 15:14	4°♄14'47	morning rise	14070 Aug 13 23:52	20°♄29'58
retrograde	14064 Sep 08 04:22	11°♄50'59	retrograde	14070 Nov 24 19:31	28°♄03'36
opposition	14064 Nov 15 06:31	8°♄28'47 -1°10'09	opposition	14071 Feb 02 06:59	24°♄41'30 -2°03'47
min. Earth dist.	14064 Nov 15 15:17	8°♄27'05 8.45050 AU	min. Earth dist.	14071 Feb 01 23:34	24°♄42'55 8.60133 AU
direct	14065 Jan 23 18:59	5°♄03'03	direct	14071 Apr 12 15:28	21°♄19'40
evening set	14065 May 08 09:04	12°♄50'00	evening set	14071 Jul 23 20:44	28°♄49'46
				14071 Aug 02 10:33	0°♄♄
conjunction	14065 May 25 14:39	14°♄58'45 -1°06'18	conjunction	14071 Aug 09 18:14	0°♄54'16 -1°36'05
minimum elong	14065 May 25 14:37	14°♄58'45 1°07'18	minimum elong	14071 Aug 09 18:16	0°♄54'17 1°36'42
max. Earth dist.	14065 May 25 05:06	14°♄55'45 10.45935 AU	max. Earth dist.	14071 Aug 10 04:27	0°♄57'26 10.61267 AU
morning rise	14065 Jun 11 17:50	17°♄06'48	morning rise	14071 Aug 26 16:21	2°♄58'57
retrograde	14065 Sep 21 09:04	24°♄42'31	retrograde	14071 Dec 07 19:30	10°♄32'07
opposition	14065 Nov 28 16:23	21°♄20'28 -1°32'57	opposition	14072 Feb 15 10:13	7°♄09'50 -1°51'51
min. Earth dist.	14065 Nov 28 22:18	21°♄19'18 8.47033 AU	min. Earth dist.	14072 Feb 15 00:07	7°♄11'45 8.62522 AU
direct	14066 Feb 06 06:22	17°♄55'17	direct	14072 Apr 24 14:38	3°♄48'35
evening set	14066 May 21 14:01	25°♄40'15	evening set	14072 Aug 04 10:43	11°♄15'36
conjunction	14066 Jun 07 17:06	27°♄48'05 -1°22'56	conjunction	14072 Aug 21 08:58	13°♄19'55 -1°24'20
minimum elong	14066 Jun 07 17:04	27°♄48'04 1°23'59	minimum elong	14072 Aug 21 09:00	13°♄19'56 1°24'45
max. Earth dist.	14066 Jun 07 11:15	27°♄46'15 10.48101 AU	max. Earth dist.	14072 Aug 21 21:48	13°♄23'53 10.63514 AU
morning rise	14066 Jun 24 17:58	29°♄55'17	morning rise	14072 Sep 07 08:21	15°♄24'36
	14066 Jun 25 09:21	0°♄	retrograde	14072 Dec 19 17:56	22°♄57'21
retrograde	14066 Oct 04 12:51	7°♄30'36	opposition	14073 Feb 27 11:51	19°♄34'50 -1°34'45
opposition	14066 Dec 12 02:04	4°♄08'38 -1°51'00	min. Earth dist.	14073 Feb 27 00:17	19°♄37'03 8.64562 AU
min. Earth dist.	14066 Dec 12 04:59	4°♄08'04 8.49397 AU	direct	14073 May 07 11:59	16°♄14'03
direct	14067 Feb 19 16:56	0°♄44'06	evening set	14073 Aug 16 23:32	23°♄38'18
evening set	14067 Jun 03 15:58	8°♄26'37			
conjunction	14067 Jun 20 16:49	10°♄33'32 -1°35'22	conjunction	14073 Sep 02 22:54	25°♄42'37 -1°08'42
minimum elong	14067 Jun 20 16:48	10°♄33'31 1°36'25	minimum elong	14073 Sep 02 22:56	25°♄42'37 1°08'54
max. Earth dist.	14067 Jun 20 14:35	10°♄32'50 10.50588 AU	max. Earth dist.	14073 Sep 03 12:54	25°♄46'54 10.65361 AU
morning rise	14067 Jul 07 15:51	12°♄39'57	morning rise	14073 Sep 20 00:06	27°♄47'25
retrograde	14067 Oct 17 17:03	20°♄14'51		14073 Oct 09 01:19	0°♄
opposition	14067 Dec 25 11:04	16°♄52'58 -2°03'29	retrograde	14074 Jan 01 15:39	5°♄19'53
min. Earth dist.	14067 Dec 25 11:26	16°♄52'54 8.52014 AU	opposition	14074 Mar 12 11:42	1°♄57'06 -1°13'21
direct	14068 Mar 04 00:47	13°♄29'07	min. Earth dist.	14074 Mar 11 23:35	1°♄59'26 8.66142 AU
evening set	14068 Jun 15 15:11	21°♄08'48		14074 Apr 08 17:58	30°♄♄
			direct	14074 May 20 08:12	28°♄36'35

	14074 Jun 29 22:23	0°♎		min. Earth dist.	14080 May 26 01:23	16°♊06'29	8.62345 AU
evening set	14074 Aug 29 12:02	5°♎58'36		direct	14080 Aug 02 11:13	12°♊43'10	
				evening set	14080 Nov 11 17:57	20°♊07'23	
conjunction	14074 Sep 15 12:57	8°♎03'02	-0°49'57				
minimum elong	14074 Sep 15 12:59	8°♎03'03	0°49'55	conjunction	14080 Nov 29 05:17	22°♊14'38	1°15'57
max. Earth dist.	14074 Sep 16 03:19	8°♎07'26	10.66683 AU	minimum elong	14080 Nov 29 05:15	22°♊14'38	1°16'59
morning rise	14074 Oct 02 16:15	10°♎08'07		max. Earth dist.	14080 Nov 29 12:28	22°♊16'50	10.61160 AU
retrograde	14075 Jan 14 12:15	17°♎40'25		morning rise	14080 Dec 16 18:55	24°♊22'35	
opposition	14075 Mar 25 09:35	14°♎17'20	-0°48'37		14081 Feb 09 18:26	0°♊	
min. Earth dist.	14075 Mar 24 21:25	14°♎19'40	8.67127 AU	retrograde	14081 Mar 31 00:22	1°♊58'59	
direct	14075 Jun 02 02:17	10°♎56'56			14081 May 20 06:28	30°♊♊	
evening set	14075 Sep 11 00:44	18°♎17'23		opposition	14081 Jun 08 02:15	28°♊34'13	1°43'13
				min. Earth dist.	14081 Jun 07 21:18	28°♊35'11	8.60022 AU
conjunction	14075 Sep 28 03:33	20°♎22'06	-0°28'56	direct	14081 Aug 15 04:32	25°♊11'32	
minimum elong	14075 Sep 28 03:34	20°♎22'06	0°28'40		14081 Nov 01 18:25	0°♊	
max. Earth dist.	14075 Sep 28 18:14	20°♎26'35	10.67334 AU	evening set	14081 Nov 24 19:34	2°♊38'26	
morning rise	14075 Oct 15 08:55	22°♎27'33					
retrograde	14076 Jan 27 08:27	0°♌00'00		conjunction	14081 Dec 12 08:15	4°♊46'18	1°30'02
	14076 Jan 27 01:45	0°♌		minimum elong	14081 Dec 12 08:14	4°♊46'18	1°31'05
	14076 Jan 27 15:10	30°♌♎		max. Earth dist.	14081 Dec 12 13:06	4°♊47'47	10.58676 AU
opposition	14076 Apr 06 06:03	26°♎36'36	-0°21'42	morning rise	14081 Dec 29 22:41	6°♊54'44	
min. Earth dist.	14076 Apr 05 17:38	26°♎38'59	8.67393 AU	retrograde	14082 Apr 13 01:06	14°♊32'06	
direct	14076 Jun 13 19:50	23°♎16'12		opposition	14082 Jun 20 21:03	11°♊07'14	1°58'05
	14076 Sep 17 13:19	0°♌		min. Earth dist.	14082 Jun 20 18:11	11°♊07'48	8.57448 AU
evening set	14076 Sep 22 14:18	0°♌35'52		direct	14082 Aug 27 23:30	7°♊43'51	
				evening set	14082 Dec 08 00:07	15°♊13'49	
conjunction	14076 Oct 09 19:04	2°♌40'59	-0°06'37				
minimum elong	14076 Oct 09 19:05	2°♌40'59	0°06'08	conjunction	14082 Dec 25 13:52	17°♊22'18	1°39'52
behind sun begin	14076 Oct 09 12:19	2°♌38'57		minimum elong	14082 Dec 25 13:51	17°♊22'18	1°40'54
behind sun end	14076 Oct 10 01:51	2°♌43'02		max. Earth dist.	14082 Dec 25 15:23	17°♊22'46	10.55995 AU
max. Earth dist.	14076 Oct 10 09:59	2°♌45'32	10.67242 AU	morning rise	14083 Jan 12 04:55	19°♊31'13	
morning rise	14076 Oct 27 02:26	4°♌46'53		retrograde	14083 Apr 26 03:42	27°♊09'26	
asc. node	14077 Jan 27 06:53	12°♌12'33		opposition	14083 Jul 03 16:48	23°♊44'34	2°07'21
retrograde	14077 Feb 08 06:32	12°♌19'51		min. Earth dist.	14083 Jul 03 16:52	23°♊44'33	8.54732 AU
opposition	14077 Apr 19 01:27	8°♌56'06	0°06'13	direct	14083 Sep 09 19:09	20°♊20'27	
min. Earth dist.	14077 Apr 18 13:16	8°♌58'27	8.66947 AU	evening set	14083 Dec 21 07:18	27°♊53'41	
direct	14077 Jun 26 11:49	5°♌35'33					
evening set	14077 Oct 05 05:42	12°♌55'15		conjunction	14084 Jan 07 21:57	0°♌02'49	1°44'54
				minimum elong	14084 Jan 07 21:57	0°♌02'49	1°45'52
conjunction	14077 Oct 22 12:18	15°♌00'51	0°16'08		14084 Jan 07 12:49	0°♌	
minimum elong	14077 Oct 22 12:18	15°♌00'51	0°16'48	max. Earth dist.	14084 Jan 07 19:22	0°♌02'01	10.53247 AU
	14077 Oct 22 09:30	15°♌		morning rise	14084 Jan 25 13:33	2°♌12'14	
max. Earth dist.	14077 Oct 23 02:09	15°♌05'04	10.66481 AU	retrograde	14084 May 08 07:04	9°♌51'06	
morning rise	14077 Nov 08 21:36	17°♌07'15		opposition	14084 Jul 15 13:53	6°♌26'20	2°10'29
retrograde	14078 Feb 21 04:50	24°♌40'52		min. Earth dist.	14084 Jul 15 17:05	6°♌25'42	8.52006 AU
opposition	14078 May 01 19:57	21°♌16'49	0°33'53	direct	14084 Sep 21 17:13	3°♌01'30	
min. Earth dist.	14078 May 01 09:07	21°♌18'55	8.65896 AU	evening set	14085 Jan 02 16:44	10°♌38'04	
direct	14078 Jul 09 01:55	17°♌55'54					
evening set	14078 Oct 17 23:14	25°♌16'27		conjunction	14085 Jan 20 08:17	12°♌47'49	1°44'49
				minimum elong	14085 Jan 20 08:18	12°♌47'50	1°45'40
conjunction	14078 Nov 04 07:31	27°♌22'33	0°38'06	max. Earth dist.	14085 Jan 20 02:07	12°♌45'55	10.50561 AU
minimum elong	14078 Nov 04 07:29	27°♌22'33	0°38'56	morning rise	14085 Feb 07 00:16	14°♌57'44	
max. Earth dist.	14078 Nov 04 19:02	27°♌26'04	10.65154 AU		14085 Feb 07 07:47	15°♌	
morning rise	14078 Nov 21 18:37	29°♌29'29		retrograde	14085 May 21 09:14	22°♌37'04	
	14078 Nov 26 01:32	0°♊		opposition	14085 Jul 28 12:25	19°♌12'27	2°07'13
retrograde	14079 Mar 06 02:05	7°♊03'55		min. Earth dist.	14085 Jul 28 18:10	19°♌11'19	8.49392 AU
opposition	14079 May 14 14:05	3°♊39'35	1°00'04	direct	14085 Oct 04 19:42	15°♌47'01	
min. Earth dist.	14079 May 14 05:27	3°♊41'16	8.64333 AU	evening set	14086 Jan 16 04:21	23°♌26'48	
direct	14079 Jul 21 18:19	0°♊18'10					
evening set	14079 Oct 30 19:14	7°♊40'15		conjunction	14086 Feb 02 20:40	25°♌37'09	1°39'33
				minimum elong	14086 Feb 02 20:42	25°♌37'10	1°40'14
conjunction	14079 Nov 17 05:03	9°♊46'55	0°58'21	max. Earth dist.	14086 Feb 02 11:47	25°♌34'24	10.48059 AU
minimum elong	14079 Nov 17 05:01	9°♊46'54	0°59'18	morning rise	14086 Feb 20 12:42	27°♌47'28	
max. Earth dist.	14079 Nov 17 14:12	9°♊49'42	10.63349 AU		14086 Mar 11 08:59	0°♌	
morning rise	14079 Dec 04 17:36	11°♊54'21		retrograde	14086 Jun 03 14:11	5°♌27'03	
retrograde	14080 Mar 18 00:29	19°♊29'45		opposition	14086 Aug 10 12:28	2°♌02'40	1°57'35
opposition	14080 May 26 08:05	16°♊05'10	1°23'33	min. Earth dist.	14086 Aug 10 19:53	2°♌01'12	8.47017 AU

	14086 Sep 07 02:24	30° \mathbb{R} \mathbb{A}			14092 May 05 13:25	15° \mathbb{B}
direct	14086 Oct 17 22:40	28° \mathbb{A} 36'45		morning rise	14092 May 10 15:41	15° \mathbb{B} 37'45
	14086 Nov 27 06:15	0° \mathbb{H}		retrograde	14092 Aug 20 06:07	23° \mathbb{B} 15'03
evening set	14087 Jan 29 17:35	6° \mathbb{H} 19'28		opposition	14092 Oct 27 01:23	19° \mathbb{B} 52'59 -0°30'36
				min. Earth dist.	14092 Oct 27 11:17	19° \mathbb{B} 51'03 8.43456 AU
conjunction	14087 Feb 16 10:25	8° \mathbb{H} 30'22 1°29'15		direct	14093 Jan 04 09:37	16° \mathbb{B} 27'10
minimum elong	14087 Feb 16 10:27	8° \mathbb{H} 30'22 1°29'45		evening set	14093 Apr 19 06:18	24° \mathbb{B} 16'14
max. Earth dist.	14087 Feb 15 23:44	8° \mathbb{H} 27'03 10.45873 AU				
morning rise	14087 Mar 06 02:10	10° \mathbb{H} 41'01		conjunction	14093 May 06 15:57	26° \mathbb{B} 26'17 -0°36'10
retrograde	14087 Jun 16 20:58	18° \mathbb{H} 20'37		minimum elong	14093 May 06 15:56	26° \mathbb{B} 26'16 0°36'59
opposition	14087 Aug 23 14:30	14° \mathbb{H} 56'33 1°41'59		max. Earth dist.	14093 May 06 04:20	26° \mathbb{B} 22'39 10.44106 AU
min. Earth dist.	14087 Aug 23 23:16	14° \mathbb{H} 54'49 8.45015 AU		morning rise	14093 May 23 22:37	28° \mathbb{B} 35'30
direct	14087 Oct 31 02:52	11° \mathbb{H} 30'19			14093 Jun 04 15:02	0° \mathbb{I}
evening set	14088 Feb 12 07:51	19° \mathbb{H} 15'33		retrograde	14093 Sep 02 13:31	6° \mathbb{I} 12'10
				opposition	14093 Nov 09 11:38	2° \mathbb{I} 50'22 -0°58'17
conjunction	14088 Mar 01 00:48	21° \mathbb{H} 26'50 1°14'25		min. Earth dist.	14093 Nov 09 20:07	2° \mathbb{I} 48'42 8.44914 AU
minimum elong	14088 Mar 01 00:50	21° \mathbb{H} 26'51 1°14'41			14093 Dec 22 12:48	30° \mathbb{R} \mathbb{B}
max. Earth dist.	14088 Feb 29 12:15	21° \mathbb{H} 22'56 10.44127 AU		direct	14094 Jan 17 21:34	29° \mathbb{B} 24'56
morning rise	14088 Mar 18 16:02	23° \mathbb{H} 37'44			14094 Feb 13 01:58	0° \mathbb{I}
	14088 May 21 17:19	0° \mathbb{Y}		evening set	14094 May 02 15:45	7° \mathbb{I} 12'44
retrograde	14088 Jun 29 03:24	1° \mathbb{Y} 17'09				
	14088 Aug 07 01:43	30° \mathbb{R} \mathbb{H}		conjunction	14094 May 19 22:39	9° \mathbb{I} 21'55 -0°57'25
opposition	14088 Sep 04 18:23	27° \mathbb{H} 53'29 1°21'09		minimum elong	14094 May 19 22:38	9° \mathbb{I} 21'54 0°58'22
min. Earth dist.	14088 Sep 05 04:45	27° \mathbb{H} 51'26 8.43498 AU		max. Earth dist.	14094 May 19 12:55	9° \mathbb{I} 18'52 10.45763 AU
direct	14088 Nov 12 10:33	24° \mathbb{H} 27'03		morning rise	14094 Jun 06 02:49	11° \mathbb{I} 30'20
	14089 Feb 05 23:24	0° \mathbb{Y}		retrograde	14094 Sep 15 19:04	19° \mathbb{I} 06'23
evening set	14089 Feb 24 23:04	2° \mathbb{Y} 14'22		opposition	14094 Nov 22 22:09	15° \mathbb{I} 44'45 -1°22'54
				min. Earth dist.	14094 Nov 23 05:31	15° \mathbb{I} 43'19 8.46769 AU
conjunction	14089 Mar 14 15:33	4° \mathbb{Y} 25'52 0°55'44		direct	14095 Jan 31 09:37	12° \mathbb{I} 19'47
minimum elong	14089 Mar 14 15:35	4° \mathbb{Y} 25'53 0°55'47		evening set	14095 May 15 22:34	20° \mathbb{I} 05'48
max. Earth dist.	14089 Mar 14 01:10	4° \mathbb{Y} 21'23 10.42910 AU				
morning rise	14089 Apr 01 05:57	6° \mathbb{Y} 36'50		conjunction	14095 Jun 02 02:43	22° \mathbb{I} 14'02 -1°15'41
retrograde	14089 Jul 12 10:01	14° \mathbb{Y} 15'51		minimum elong	14095 Jun 02 02:41	22° \mathbb{I} 14'01 1°16'43
opposition	14089 Sep 17 23:58	10° \mathbb{Y} 52'39 0°56'06		max. Earth dist.	14095 Jun 01 18:26	22° \mathbb{I} 11'26 10.47721 AU
min. Earth dist.	14089 Sep 18 11:44	10° \mathbb{Y} 50'19 8.42549 AU		morning rise	14095 Jun 19 04:39	24° \mathbb{I} 21'38
direct	14089 Nov 25 20:06	7° \mathbb{Y} 26'09			14095 Aug 12 00:19	0° \mathbb{B}
evening set	14090 Mar 10 14:23	15° \mathbb{Y} 14'58		retrograde	14095 Sep 28 22:39	1° \mathbb{B} 57'13
					14095 Nov 17 14:49	30° \mathbb{R} \mathbb{I}
conjunction	14090 Mar 28 05:51	17° \mathbb{Y} 26'27 0°34'11		opposition	14095 Dec 06 08:19	28° \mathbb{I} 35'40 -1°43'15
minimum elong	14090 Mar 28 05:52	17° \mathbb{Y} 26'28 0°33'59		min. Earth dist.	14095 Dec 06 14:06	28° \mathbb{I} 34'33 8.48831 AU
max. Earth dist.	14090 Mar 27 14:16	17° \mathbb{Y} 21'36 10.42286 AU		direct	14096 Feb 13 21:40	25° \mathbb{I} 11'13
morning rise	14090 Apr 14 18:59	19° \mathbb{Y} 37'17			14096 May 03 00:55	0° \mathbb{B}
retrograde	14090 Jul 25 17:07	27° \mathbb{Y} 15'48		evening set	14096 May 28 02:34	2° \mathbb{B} 55'09
opposition	14090 Oct 01 07:18	23° \mathbb{Y} 53'02 0°28'08				
min. Earth dist.	14090 Oct 01 19:27	23° \mathbb{Y} 50'38 8.42222 AU		conjunction	14096 Jun 14 04:17	5° \mathbb{B} 02'29 -1°30'07
direct	14090 Dec 09 07:19	20° \mathbb{Y} 26'39		minimum elong	14096 Jun 14 04:15	5° \mathbb{B} 02'29 1°31'10
evening set	14091 Mar 24 04:57	28° \mathbb{Y} 16'14		max. Earth dist.	14096 Jun 13 22:16	5° \mathbb{B} 00'36 10.49801 AU
	14091 Apr 07 03:15	0° \mathbb{B}		morning rise	14096 Jul 01 04:16	7° \mathbb{B} 09'18
				retrograde	14096 Oct 11 02:52	14° \mathbb{B} 44'39
conjunction	14091 Apr 10 18:54	0° \mathbb{B} 27'28 0°10'54		opposition	14096 Dec 18 18:14	11° \mathbb{B} 23'08 -1°58'21
minimum elong	14091 Apr 10 18:54	0° \mathbb{B} 27'28 0°10'27		min. Earth dist.	14096 Dec 18 21:30	11° \mathbb{B} 22'30 8.50959 AU
behind sun begin	14091 Apr 10 13:17	0° \mathbb{B} 25'44		direct	14097 Feb 26 08:12	7° \mathbb{B} 59'15
behind sun end	14091 Apr 11 00:31	0° \mathbb{B} 29'13		evening set	14097 Jun 10 03:42	15° \mathbb{B} 40'46
max. Earth dist.	14091 Apr 10 03:43	0° \mathbb{B} 22'43 10.42289 AU				
morning rise	14091 Apr 28 06:17	2° \mathbb{B} 37'58		conjunction	14097 Jun 27 03:28	17° \mathbb{B} 47'18 -1°40'02
retrograde	14091 Aug 07 23:41	10° \mathbb{B} 15'55		minimum elong	14097 Jun 27 03:27	17° \mathbb{B} 47'17 1°41'04
desc. node	14091 Sep 28 16:35	8° \mathbb{B} 07'14		max. Earth dist.	14097 Jun 27 00:56	17° \mathbb{B} 46'30 10.51932 AU
opposition	14091 Oct 14 15:55	6° \mathbb{B} 53'32 -0°01'17		morning rise	14097 Jul 14 01:52	19° \mathbb{B} 53'26
min. Earth dist.	14091 Oct 15 03:11	6° \mathbb{B} 51'19 8.42533 AU		retrograde	14097 Oct 24 06:33	27° \mathbb{B} 28'39
direct	14091 Dec 22 20:16	3° \mathbb{B} 27'22		opposition	14098 Jan 01 03:31	24° \mathbb{B} 07'01 -2°07'33
evening set	14092 Apr 05 18:28	11° \mathbb{B} 17'03		min. Earth dist.	14098 Jan 01 03:30	24° \mathbb{B} 07'01 8.53126 AU
				direct	14098 Mar 11 16:26	20° \mathbb{B} 43'44
conjunction	14092 Apr 23 06:30	13° \mathbb{B} 27'48 -0°13'02		evening set	14098 Jun 23 02:08	28° \mathbb{B} 22'28
minimum elong	14092 Apr 23 06:30	13° \mathbb{B} 27'47 0°13'41			14098 Jul 06 05:45	0° \mathbb{Q}
behind sun begin	14092 Apr 23 02:39	13° \mathbb{B} 26'36				
behind sun end	14092 Apr 23 10:20	13° \mathbb{B} 28'59		conjunction	14098 Jul 10 00:32	0° \mathbb{Q} 28'18 -1°45'01
max. Earth dist.	14092 Apr 22 16:54	13° \mathbb{B} 23'32 10.42913 AU		minimum elong	14098 Jul 10 00:32	0° \mathbb{Q} 28'18 1°45'58

max. Earth dist.	14098 Jul 10 01:58	0°Ω28'45	10.54102 AU
morning rise	14098 Jul 26 21:59	2°Ω33'55	
retrograde	14098 Nov 06 09:19	10°Ω08'56	
opposition	14099 Jan 14 11:44	6°Ω47'05	-2°10'29
min. Earth dist.	14099 Jan 14 08:54	6°Ω47'38	8.55304 AU
direct	14099 Mar 24 22:48	3°Ω24'19	
evening set	14099 Jul 05 21:56	11°Ω00'02	
conjunction	14099 Jul 22 19:32	13°Ω05'20	-1°44'54
minimum elong	14099 Jul 22 19:33	13°Ω05'20	1°45'45
max. Earth dist.	14099 Jul 22 24:00	13°Ω06'43	10.56260 AU
	14099 Aug 07 06:13	15°Ω	
morning rise	14099 Aug 08 16:51	15°Ω10'34	
retrograde	14099 Nov 19 11:36	22°Ω45'18	
opposition	14100 Jan 27 18:37	19°Ω23'09	-2°07'08
min. Earth dist.	14100 Jan 27 13:36	19°Ω24'07	8.57418 AU
direct	14100 Apr 07 02:45	16°Ω00'50	
evening set	14100 Jul 18 15:25	23°Ω33'26	
conjunction	14100 Aug 04 12:46	25°Ω38'20	-1°39'46
minimum elong	14100 Aug 04 12:48	25°Ω38'21	1°40'27
max. Earth dist.	14100 Aug 04 19:40	25°Ω40'29	10.58320 AU
morning rise	14100 Aug 21 10:40	27°Ω43'22	
	14100 Sep 09 21:35	0°♍	
retrograde	14100 Dec 02 11:20	5°♍17'47	
opposition	14101 Feb 09 23:48	1°♍55'16	-1°57'43
min. Earth dist.	14101 Feb 09 16:49	1°♍56'37	8.59384 AU
	14101 Mar 08 16:21	30°♋	
direct	14101 Apr 20 04:44	28°Ω33'20	
	14101 May 31 16:09	0°♍	
evening set	14101 Jul 31 06:53	6°♍02'54	
conjunction	14101 Aug 17 04:44	8°♍07'35	-1°29'55
minimum elong	14101 Aug 17 04:47	8°♍07'36	1°30'25
max. Earth dist.	14101 Aug 17 14:07	8°♍10'29	10.60201 AU
morning rise	14101 Sep 03 03:47	10°♍12'35	
retrograde	14101 Dec 15 09:41	17°♍46'43	