conjunction	8600 Dec 16 16:51	28°♐47'43	0°14'24
minimum elong	8600 Dec 16 17:18	28°♐48'25	0°14'36
behind sun begin	8600 Dec 16 09:48	28°♐36'32	
behind sun end	8600 Dec 17 00:48	29°♐00'18	
max. Earth dist.	8600 Dec 17 07:43	29°♐11'17	2.68059 AU
	8600 Dec 18 14:26	0°♑	
desc. node	8601 Jan 13 08:22	16°♑20'37	
morning rise	8601 Jan 29 11:26	26°♑36'01	
	8601 Feb 03 19:28	0°♒	
	8601 Mar 22 14:27	0°♓	
	8601 May 07 18:32	0°♈	
	8601 Jun 22 09:56	0°♉	
	8601 Aug 06 23:38	0°♊	
	8601 Sep 23 07:14	0°♋	
	8601 Nov 27 10:33	0°♌	
retrograde	8601 Dec 13 23:19	1°♌49'41	
asc. node	8601 Dec 21 02:49	1°♌28'12	
	8601 Dec 30 09:53	30°℞♋	
min. Earth dist.	8602 Jan 09 13:25	27°♋28'34	0.37493 AU
opposition	8602 Jan 14 02:01	26°♋12'57	1°48'04
greatest brilliancy	8602 Jan 13 17:06	26°♋19'11	-3.0m
direct	8602 Feb 12 12:05	21°♋11'27	
	8602 Mar 23 17:41	0°♌	
	8602 May 20 15:56	0°♍	
	8602 Jul 09 00:33	0°♎	
	8602 Aug 26 06:31	0°♏	
	8602 Oct 13 11:18	0°♐	
	8602 Nov 30 10:47	0°♑	
desc. node	8602 Dec 01 06:16	0°♑30'38	
evening set	8602 Dec 07 12:58	4°♑27'53	
max. Earth dist.	8603 Jan 08 23:51	25°♑04'30	2.66403 AU
	8603 Jan 16 16:01	0°♒	
conjunction	8603 Jan 21 01:04	2°♒49'05	-0°26'08
minimum elong	8603 Jan 21 00:19	2°♒47'53	0°25'57
	8603 Mar 03 14:59	0°♓	
morning rise	8603 Mar 06 06:26	1°♓45'23	
	8603 Apr 17 01:02	0°♈	
	8603 May 29 21:45	0°♉	
	8603 Jul 10 09:15	0°♊	
	8603 Aug 19 22:38	0°♋	
	8603 Sep 29 12:13	0°♌	
asc. node	8603 Nov 08 00:28	27°♌55'42	
	8603 Nov 11 02:36	0°♍	
	8604 Jan 02 05:24	0°♎	
retrograde	8604 Feb 11 09:19	9°♎58'54	
min. Earth dist.	8604 Mar 11 13:20	4°♎05'14	0.49647 AU
greatest brilliancy	8604 Mar 18 05:18	1°♎38'54	-2.2m
opposition	8604 Mar 19 18:44	1°♎04'27	5°26'13
	8604 Mar 22 17:50	30°℞♍	
direct	8604 Apr 22 20:58	23°♍47'51	
	8604 May 26 14:27	0°♎	
	8604 Jul 30 16:39	0°♏	
	8604 Sep 21 15:41	0°♐	
desc. node	8604 Oct 18 06:27	15°♐49'04	
	8604 Nov 10 14:42	0°♑	
	8604 Dec 28 11:40	0°♒	
evening set	8605 Jan 11 19:31	9°♒14'27	
max. Earth dist.	8605 Feb 01 17:38	22°♒58'51	2.59368 AU
	8605 Feb 12 05:59	0°♓	
conjunction	8605 Feb 27 00:57	10°♓00'49	-0°58'54
minimum elong	8605 Feb 26 23:50	9°♓58'56	0°58'48
	8605 Mar 27 20:37	0°♈	
morning rise	8605 Apr 16 21:53	14°♈17'07	
	8605 May 08 11:45	0°♉	
	8605 Jun 17 12:18	0°♊	
	8605 Jul 26 12:14	0°♋	
	8605 Sep 03 06:27	0°♌	
asc. node	8605 Sep 24 21:22	16°♌32'07	
	8605 Oct 12 19:45	0°♍	
	8605 Nov 23 16:52	0°♎	
	8606 Jan 10 06:18	0°♏	
retrograde	8606 Mar 23 21:09	25°♏03'32	
min. Earth dist.	8606 Apr 27 21:45	17°♏04'00	0.61555 AU
opposition	8606 May 02 20:01	15°♏06'56	3°59'26
greatest brilliancy	8606 May 02 03:59	15°♏22'50	-1.6m
direct	8606 Jun 09 22:33	6°♏17'11	
	8606 Aug 25 22:22	0°♐	
desc. node	8606 Sep 05 08:20	5°♐11'04	
	8606 Oct 20 18:15	0°♑	
	8606 Dec 09 11:56	0°♒	
	8607 Jan 24 16:37	0°♓	
evening set	8607 Feb 21 18:52	19°♓14'28	
max. Earth dist.	8607 Mar 07 11:58	28°♓54'33	2.47621 AU
	8607 Mar 09 00:44	0°♈	
conjunction	8607 Apr 15 14:49	27°♈26'22	-1°03'44
minimum elong	8607 Apr 15 16:04	27°♈28'43	1°03'50
	8607 Apr 19 01:00	0°♉	
	8607 May 28 08:04	0°♊	
morning rise	8607 Jun 16 13:11	14°♊59'00	
	8607 Jul 05 15:48	0°♋	
greatest brilliancy	8607 Jul 21 09:00	12°♋22'28	1.2m
asc. node	8607 Aug 12 19:18	29°♋58'25	
	8607 Aug 12 20:07	0°♌	
	8607 Sep 20 18:21	0°♍	
	8607 Oct 31 09:37	0°♎	
	8607 Dec 13 22:32	0°♏	
	8608 Jan 31 20:10	0°♐	
	8608 Apr 18 13:15	0°♑	
retrograde	8608 Apr 26 20:41	0°♑25'27	
	8608 May 04 22:47	30°℞♐	
min. Earth dist.	8608 Jun 05 07:19	21°♐00'58	0.67584 AU
opposition	8608 Jun 06 10:20	20°♐34'05	1°35'31
greatest brilliancy	8608 Jun 06 09:06	20°♐35'18	-1.3m
direct	8608 Jul 17 00:18	10°♐54'15	
desc. node	8608 Jul 23 09:20	11°♐08'44	
	8608 Sep 22 07:39	0°♑	
	8608 Nov 17 07:29	0°♒	
	8609 Jan 04 03:52	0°♓	
	8609 Feb 16 19:29	0°♈	
	8609 Mar 29 14:54	0°♉	
evening set	8609 Apr 15 16:31	13°♉00'57	
	8609 May 07 13:29	0°♊	
	8609 Jun 14 13:46	0°♋	
conjunction	8609 Jun 21 17:00	5°♋39'11	-0°05'48
minimum elong	8609 Jun 21 17:40	5°♋40'30	0°06'00
behind sun begin	8609 Jun 20 13:04	4°♋43'52	
behind sun end	8609 Jun 22 22:17	6°♋37'08	
asc. node	8609 Jun 29 16:11	11°♋57'34	
max. Earth dist.	8609 Jul 16 10:53	25°♋11'51	2.36743 AU
	8609 Jul 22 13:46	0°♌	
	8609 Aug 30 10:18	0°♍	
morning rise	8609 Sep 02 10:52	2°♍17'24	
	8609 Oct 09 22:04	0°♎	
	8609 Nov 21 17:21	0°♏	
	8610 Jan 06 14:18	0°♐	
	8610 Feb 26 09:19	0°♑	

	8610 May 07 06:50	0°♒	
retrograde	8610 May 31 07:28	3°♒09'27	
desc. node	8610 Jun 10 08:00	2°♒31'47	
	8610 Jun 22 15:57	30°℞♂	
opposition	8610 Jul 10 04:51	23°♂50'28	-1°02'00
greatest brilliancy	8610 Jul 10 06:44	23°♂48'37	-1.3m
min. Earth dist.	8610 Jul 12 20:45	22°♂47'49	0.67075 AU
direct	8610 Aug 20 19:57	13°♂48'06	
	8610 Oct 19 07:16	0°♒	
	8610 Dec 12 21:47	0°♓	
	8611 Jan 27 05:21	0°♈	
	8611 Mar 09 10:53	0°♉	
	8611 Apr 17 10:33	0°♊	
greatest brilliancy	8611 May 16 02:05	22°♊35'10	1.2m
asc. node	8611 May 17 15:38	23°♊49'32	
	8611 May 25 10:46	0°♋	
evening set	8611 Jun 28 00:18	26°♋27'39	
	8611 Jul 02 13:01	0°♌	
	8611 Aug 10 14:47	0°♍	
conjunction	8611 Sep 03 05:04	17°♍32'34	1°00'33
minimum elong	8611 Sep 03 03:03	17°♍28'53	1°00'29
	8611 Sep 20 08:56	0°♎	
max. Earth dist.	8611 Oct 15 19:05	17°♎58'39	2.49951 AU
morning rise	8611 Oct 31 21:18	29°♎04'06	
	8611 Nov 02 06:05	0°♏	
	8611 Dec 17 11:14	0°♐	
	8612 Feb 03 06:24	0°♑	
	8612 Mar 25 20:56	0°♒	
desc. node	8612 Apr 27 05:30	16°♒43'39	
	8612 May 28 14:47	0°♓	
retrograde	8612 Jul 08 08:22	8°♓08'24	
	8612 Aug 14 14:21	30°℞♒	
opposition	8612 Aug 15 04:27	29°♒46'41	-3°43'36
greatest brilliancy	8612 Aug 15 23:20	29°♒28'50	-1.6m
min. Earth dist.	8612 Aug 21 13:17	27°♒22'07	0.60016 AU
direct	8612 Sep 25 02:31	19°♒57'01	
	8612 Nov 07 04:39	0°♓	
	8613 Jan 01 08:21	0°♈	
	8613 Feb 13 21:47	0°♉	
	8613 Mar 25 18:57	0°♊	
asc. node	8613 Apr 03 17:18	6°♊54'22	
	8613 May 03 08:03	0°♋	
	8613 Jun 10 22:40	0°♌	
	8613 Jul 20 14:33	0°♍	
	8613 Aug 30 23:40	0°♎	
evening set	8613 Aug 31 10:47	0°♎19'40	
	8613 Oct 13 09:07	0°♏	
conjunction	8613 Oct 24 14:54	7°♏33'17	1°00'44
minimum elong	8613 Oct 24 16:03	7°♏35'11	1°00'51
max. Earth dist.	8613 Nov 15 10:09	21°♏59'00	2.61182 AU
	8613 Nov 27 17:06	0°♐	
morning rise	8613 Dec 12 07:30	9°♐25'39	
	8614 Jan 13 16:28	0°♑	
	8614 Mar 03 02:57	0°♒	
desc. node	8614 Mar 15 01:46	7°♒14'55	
	8614 Apr 22 13:07	0°♓	
	8614 Jun 17 02:19	0°♈	
retrograde	8614 Aug 29 02:21	22°♈16'19	
opposition	8614 Oct 01 23:34	15°♈34'52	-5°45'46
greatest brilliancy	8614 Oct 03 18:39	14°♈58'14	-2.2m
min. Earth dist.	8614 Oct 10 15:14	12°♈39'32	0.47350 AU
direct	8614 Nov 08 02:15	7°♈22'21	
	8615 Jan 12 02:18	0°♉	
asc. node	8615 Feb 19 18:12	25°♉01'16	
	8615 Feb 26 20:16	0°♊	
	8615 Apr 08 21:36	0°♋	
	8615 May 19 04:59	0°♌	
	8615 Jun 29 07:24	0°♍	
	8615 Aug 10 22:57	0°♎	
	8615 Sep 24 09:09	0°♏	
evening set	8615 Oct 17 08:26	15°♏05'49	
	8615 Nov 09 08:26	0°♐	
conjunction	8615 Dec 03 15:11	15°♐33'44	0°29'36
minimum elong	8615 Dec 03 16:04	15°♐35'09	0°29'47
max. Earth dist.	8615 Dec 09 18:45	19°♐28'54	2.67193 AU
	8615 Dec 26 07:46	0°♑	
morning rise	8616 Jan 17 02:22	13°♑48'00	
desc. node	8616 Jan 30 21:54	22°♑32'33	
	8616 Feb 11 16:49	0°♒	
	8616 Mar 30 02:04	0°♓	
	8616 May 16 11:33	0°♈	
	8616 Jul 03 09:55	0°♉	
	8616 Aug 22 20:45	0°♊	
retrograde	8616 Nov 12 10:46	29°♊35'21	
opposition	8616 Dec 12 07:13	24°♊40'17	-1°57'26
greatest brilliancy	8616 Dec 12 12:07	24°♊37'01	-3.0m
min. Earth dist.	8616 Dec 13 11:42	24°♊21'20	0.36726 AU
asc. node	8617 Jan 06 18:01	19°♊47'52	
direct	8617 Jan 11 03:10	19°♊39'58	
	8617 Feb 21 22:09	0°♋	
	8617 Apr 17 02:14	0°♌	
	8617 Jun 02 18:32	0°♍	
	8617 Jul 18 18:17	0°♎	
	8617 Sep 03 08:56	0°♏	
	8617 Oct 20 16:29	0°♐	
evening set	8617 Nov 23 13:58	21°♐22'24	
	8617 Dec 07 05:48	0°♑	
desc. node	8617 Dec 17 19:54	6°♑41'55	
max. Earth dist.	8617 Dec 31 02:01	15°♑06'46	2.67697 AU
conjunction	8618 Jan 07 06:32	19°♑41'24	-0°10'43
minimum elong	8618 Jan 07 06:12	19°♑40'53	0°10'32
behind sun begin	8618 Jan 06 16:07	19°♑18'28	
behind sun end	8618 Jan 07 20:17	20°♑03'19	
	8618 Jan 23 09:25	0°♒	
morning rise	8618 Feb 19 22:26	17°♒47'39	
	8618 Mar 10 14:13	0°♓	
	8618 Apr 24 13:19	0°♈	
	8618 Jun 07 05:23	0°♉	
	8618 Jul 19 17:50	0°♊	
	8618 Aug 30 14:35	0°♋	
	8618 Oct 12 04:22	0°♌	
asc. node	8618 Nov 24 17:58	27°♌35'26	
	8618 Nov 29 03:16	0°♍	
retrograde	8619 Jan 22 07:42	17°♍11'21	
min. Earth dist.	8619 Feb 18 07:06	12°♍12'02	0.44145 AU
greatest brilliancy	8619 Feb 25 03:58	9°♍52'42	-2.5m
opposition	8619 Feb 26 17:48	9°♍20'30	5°05'40
direct	8619 Mar 30 18:30	2°♍57'32	
	8619 Jun 18 15:46	0°♎	
	8619 Aug 11 08:29	0°♏	
	8619 Sep 30 18:43	0°♐	
desc. node	8619 Nov 04 19:50	21°♐22'45	
	8619 Nov 18 18:21	0°♑	
evening set	8619 Dec 29 11:02	25°♑36'59	
	8620 Jan 05 07:15	0°♒	
max. Earth dist.	8620 Jan 23 16:02	11°♒53'15	2.62729 AU
conjunction	8620 Feb 12 14:22	25°♒00'30	-0°48'04
minimum elong	8620 Feb 12 13:13	24°♒58'35	0°47'56
	8620 Feb 20 02:05	0°♓	

morning rise	8620 Mar 29 23:21	26°♓31'28	
	8620 Apr 03 22:58	0°♈	
	8620 May 15 23:43	0°♉	
	8620 Jun 25 11:21	0°♊	
	8620 Aug 03 22:08	0°♋	
	8620 Sep 12 03:11	0°♌	
asc. node	8620 Oct 11 15:06	22°♌10'06	
	8620 Oct 22 07:08	0°♍	
	8620 Dec 04 13:53	0°♎	
	8621 Jan 27 19:25	0°♏	
retrograde	8621 Mar 08 23:30	9°♏26'25	
min. Earth dist.	8621 Apr 10 20:31	2°♏10'42	0.57492 AU
greatest brilliancy	8621 Apr 16 04:30	0°♏06'04	-1.8m
	8621 Apr 16 10:42	30°℞♎	
opposition	8621 Apr 17 05:23	29°♎41'44	4°45'42
direct	8621 May 23 22:54	21°♎21'46	
	8621 Jul 04 12:27	0°♏	
	8621 Sep 06 06:55	0°♐	
desc. node	8621 Sep 21 20:56	8°♐34'26	
	8621 Oct 28 22:14	0°♑	
	8621 Dec 16 17:46	0°♒	
	8622 Jan 31 16:45	0°♓	
evening set	8622 Feb 04 20:06	2°♓47'22	
max. Earth dist.	8622 Feb 20 08:54	13°♓23'30	2.52678 AU
	8622 Mar 16 02:31	0°♈	
conjunction	8622 Mar 26 06:28	7°♈15'53	-1°07'17
minimum elong	8622 Mar 26 06:21	7°♈15'40	1°07'17
	8622 Apr 26 07:38	0°♉	
morning rise	8622 May 20 18:55	18°♉26'55	
	8622 Jun 04 20:30	0°♊	
	8622 Jul 13 09:15	0°♋	
	8622 Aug 20 17:20	0°♌	
asc. node	8622 Aug 29 11:30	6°♌48'02	
	8622 Sep 28 18:53	0°♍	
	8622 Nov 08 16:03	0°♎	
	8622 Dec 22 23:49	0°♏	
	8623 Feb 13 08:37	0°♐	
retrograde	8623 Apr 14 14:49	17°♐29'08	
min. Earth dist.	8623 May 22 11:45	8°♐34'02	0.66000 AU
opposition	8623 May 25 02:29	7°♐31'29	2°33'39
greatest brilliancy	8623 May 24 21:09	7°♐36'47	-1.4m
	8623 Jun 16 18:30	30°℞♏	
direct	8623 Jul 03 21:05	28°♏07'40	
	8623 Jul 22 05:33	0°♐	
desc. node	8623 Aug 09 22:13	4°♐58'23	
	8623 Oct 05 03:28	0°♑	
	8623 Nov 26 15:54	0°♒	
	8624 Jan 12 16:09	0°♓	
	8624 Feb 25 03:29	0°♈	
evening set	8624 Mar 23 08:08	19°♈47'18	
	8624 Apr 06 00:03	0°♉	
max. Earth dist.	8624 Apr 13 13:17	5°♉42'48	2.39438 AU
	8624 May 15 01:18	0°♊	
conjunction	8624 May 23 05:27	6°♊23'51	-0°36'56
minimum elong	8624 May 23 08:21	6°♊29'32	0°37'05
	8624 Jun 22 03:35	0°♋	
asc. node	8624 Jul 16 10:07	19°♋11'17	
	8624 Jul 30 04:08	0°♌	
morning rise	8624 Aug 03 05:06	3°♌09'44	
	8624 Sep 06 23:55	0°♍	
	8624 Oct 17 10:50	0°♎	
	8624 Nov 29 08:47	0°♏	
	8625 Jan 14 21:18	0°♐	
	8625 Mar 09 14:52	0°♑	
retrograde	8625 May 17 16:58	20°♑39'12	
desc. node	8625 Jun 26 21:52	11°♑07'19	
opposition	8625 Jun 27 00:09	11°♑05'04	-0°00'12
greatest brilliancy	8625 Jun 27 00:15	11°♑04'58	-1.3m
min. Earth dist.	8625 Jun 28 04:36	10°♑36'56	0.68060 AU
direct	8625 Aug 07 09:29	1°♑08'23	
	8625 Nov 01 03:16	0°♒	
	8625 Dec 21 19:19	0°♓	
	8626 Feb 04 05:47	0°♈	
	8626 Mar 17 05:34	0°♉	
	8626 Apr 25 03:57	0°♊	
evening set	8626 May 28 22:14	26°♊39'29	
	8626 Jun 02 03:22	0°♋	
asc. node	8626 Jun 03 09:04	0°♋58'51	
	8626 Jul 10 03:46	0°♌	
conjunction	8626 Aug 07 17:29	22°♌06'59	0°42'54
minimum elong	8626 Aug 07 14:12	22°♌00'42	0°42'44
	8626 Aug 18 02:19	0°♍	
	8626 Sep 27 16:22	0°♎	
max. Earth dist.	8626 Sep 27 14:07	29°♍55'58	2.44425 AU
morning rise	8626 Oct 11 12:19	9°♎53'08	
	8626 Nov 09 10:37	0°♏	
	8626 Dec 24 18:01	0°♐	
	8627 Feb 11 06:10	0°♑	
	8627 Apr 06 16:44	0°♒	
desc. node	8627 May 14 19:32	16°♒26'37	
retrograde	8627 Jun 23 05:56	24°♒08'27	
opposition	8627 Aug 01 01:41	15°♒20'36	-2°41'28
greatest brilliancy	8627 Aug 01 11:56	15°♒10'44	-1.5m
min. Earth dist.	8627 Aug 06 00:36	13°♒26'00	0.63536 AU
direct	8627 Sep 11 12:19	5°♒19'53	
	8627 Nov 24 22:21	0°♓	
	8628 Jan 12 16:24	0°♈	
	8628 Feb 23 21:52	0°♉	
	8628 Apr 03 07:01	0°♊	
asc. node	8628 Apr 20 08:25	13°♊20'02	
	8628 May 11 12:57	0°♋	
	8628 Jun 18 21:02	0°♌	
	8628 Jul 28 05:54	0°♍	
evening set	8628 Aug 08 13:34	8°♍24'38	
	8628 Sep 07 07:35	0°♎	
conjunction	8628 Oct 06 06:13	20°♎17'45	1°06'21
minimum elong	8628 Oct 06 06:39	20°♎18'30	1°06'25
	8628 Oct 20 10:37	0°♏	
max. Earth dist.	8628 Nov 04 11:19	10°♏07'34	2.57354 AU
morning rise	8628 Nov 26 23:34	25°♏00'27	
	8628 Dec 04 15:24	0°♐	
	8629 Jan 20 18:57	0°♑	
	8629 Mar 11 00:54	0°♒	
desc. node	8629 Mar 31 16:32	12°♒04'06	
	8629 May 02 23:39	0°♓	
	8629 Jul 12 05:04	0°♈	
retrograde	8629 Aug 06 15:23	3°♈28'58	
	8629 Aug 30 05:49	30°℞♓	
opposition	8629 Sep 11 07:27	26°♓01'27	-5°11'27
greatest brilliancy	8629 Sep 12 18:53	25°♓29'31	-2.0m
min. Earth dist.	8629 Sep 19 11:35	23°♓05'06	0.52784 AU
direct	8629 Oct 20 10:23	16°♓54'47	
	8629 Dec 07 16:50	0°♈	
	8630 Jan 27 10:10	0°♉	
asc. node	8630 Mar 08 09:56	28°♉34'29	
	8630 Mar 10 07:53	0°♊	
	8630 Apr 18 21:29	0°♋	
	8630 May 28 06:15	0°♌	
	8630 Jul 07 14:46	0°♍	
	8630 Aug 18 15:13	0°♎	

evening set	8630 Sep 30 14:27	29°♎21'29	
	8630 Oct 01 13:29	0°♏	
	8630 Nov 16 04:57	0°♐	
conjunction	8630 Nov 18 21:41	1°♐44'37	0°43'34
minimum elong	8630 Nov 18 22:53	1°♐46'34	0°43'45
max. Earth dist.	8630 Nov 30 18:59	9°♐23'55	2.65498 AU
	8631 Jan 02 02:27	0°♑	
morning rise	8631 Jan 03 12:56	0°♑54'39	
desc. node	8631 Feb 16 13:24	28°♑37'34	
	8631 Feb 18 18:05	0°♒	
	8631 Apr 07 23:20	0°♓	
	8631 May 27 05:20	0°♈	
	8631 Jul 18 14:13	0°♉	
retrograde	8631 Oct 11 18:44	29°♉43'58	
opposition	8631 Nov 11 12:18	24°♉24'36	-4°48'12
greatest brilliancy	8631 Nov 12 18:41	24°♉02'45	-2.8m
min. Earth dist.	8631 Nov 17 19:41	22°♉36'15	0.39432 AU
direct	8631 Dec 14 00:44	18°♉19'24	
asc. node	8632 Jan 24 11:08	28°♉51'06	
	8632 Jan 26 22:35	0°♊	
	8632 Mar 18 02:13	0°♋	
	8632 May 01 01:55	0°♌	
	8632 Jun 13 09:12	0°♍	
	8632 Jul 27 13:33	0°♎	
	8632 Sep 11 01:52	0°♏	
	8632 Oct 27 17:45	0°♐	
evening set	8632 Nov 09 06:15	7°♐57'59	
	8632 Dec 13 23:55	0°♑	
max. Earth dist.	8632 Dec 22 08:36	5°♑18'12	2.68166 AU
conjunction	8632 Dec 24 13:40	6°♑42'20	0°05'13
minimum elong	8632 Dec 24 13:50	6°♑42'36	0°05'25
behind sun begin	8632 Dec 23 20:14	6°♑14'42	
behind sun end	8632 Dec 25 07:26	7°♑10'29	
desc. node	8633 Jan 03 10:18	12°♑57'52	
	8633 Jan 30 04:01	0°♒	
morning rise	8633 Feb 06 04:09	4°♒28'59	
	8633 Mar 17 17:15	0°♓	
	8633 May 02 09:32	0°♈	
	8633 Jun 16 04:25	0°♉	
	8633 Jul 30 07:51	0°♊	
	8633 Sep 12 17:17	0°♋	
	8633 Oct 31 01:09	0°♌	
asc. node	8633 Dec 11 09:53	17°♌29'27	
retrograde	8633 Dec 29 12:23	19°♌46'20	
min. Earth dist.	8634 Jan 24 12:51	15°♌22'57	0.39342 AU
greatest brilliancy	8634 Jan 30 06:45	13°♌39'23	-2.8m
opposition	8634 Jan 31 05:34	13°♌22'07	3°29'22
direct	8634 Mar 02 10:06	7°♌55'43	
	8634 May 09 19:30	0°♍	
	8634 Jul 02 00:02	0°♎	
	8634 Aug 20 14:48	0°♏	
	8634 Oct 08 10:58	0°♐	
desc. node	8634 Nov 21 09:13	27°♐16'07	
	8634 Nov 25 17:56	0°♑	
evening set	8634 Dec 15 11:01	12°♑24'08	
	8635 Jan 12 01:43	0°♒	
max. Earth dist.	8635 Jan 14 06:32	1°♒24'57	2.65338 AU
conjunction	8635 Jan 29 01:03	10°♒58'28	-0°34'42
minimum elong	8635 Jan 29 00:06	10°♒56'55	0°34'32
	8635 Feb 26 23:15	0°♓	
morning rise	8635 Mar 14 19:50	10°♓37'19	
	8635 Apr 12 04:46	0°♈	
	8635 May 24 17:57	0°♉	
	8635 Jul 04 20:03	0°♊	
	8635 Aug 13 21:52	0°♋	
	8635 Sep 22 19:53	0°♌	
asc. node	8635 Oct 29 08:53	26°♌38'32	
	8635 Nov 03 03:25	0°♍	
	8635 Dec 19 19:05	0°♎	
retrograde	8636 Feb 21 15:27	21°♎47'07	
min. Earth dist.	8636 Mar 23 03:37	15°♎22'24	0.52619 AU
greatest brilliancy	8636 Mar 29 10:00	13°♎00'43	-2.0m
opposition	8636 Mar 30 19:43	12°♎28'46	5°18'43
direct	8636 May 04 22:40	4°♎46'38	
	8636 Jul 22 10:36	0°♏	
	8636 Sep 15 19:36	0°♐	
desc. node	8636 Oct 08 09:53	13°♐08'15	
	8636 Nov 05 13:54	0°♑	
	8636 Dec 23 18:22	0°♒	
evening set	8637 Jan 20 06:45	17°♒49'27	
	8637 Feb 07 14:27	0°♓	
max. Earth dist.	8637 Feb 08 02:55	0°♓20'56	2.57188 AU
conjunction	8637 Mar 08 09:24	19°♓39'29	-1°03'30
minimum elong	8637 Mar 08 08:30	19°♓37'56	1°03'26
	8637 Mar 23 03:50	0°♈	
morning rise	8637 Apr 28 04:00	25°♈57'20	
	8637 May 03 15:42	0°♉	
	8637 Jun 12 12:19	0°♊	
	8637 Jul 21 08:06	0°♋	
	8637 Aug 28 21:55	0°♌	
asc. node	8637 Sep 15 06:48	13°♌22'34	
	8637 Oct 07 05:23	0°♍	
	8637 Nov 17 13:47	0°♎	
	8638 Jan 02 09:37	0°♏	
	8638 Mar 06 16:52	0°♐	
retrograde	8638 Apr 01 00:08	3°♐50'06	
	8638 Apr 24 15:25	30°℞♏	
min. Earth dist.	8638 May 07 02:00	25°♏29'16	0.63393 AU
opposition	8638 May 11 04:39	23°♏51'08	3°29'14
greatest brilliancy	8638 May 10 16:58	24°♏02'45	-1.5m
direct	8638 Jun 18 22:31	14°♏47'52	
	8638 Aug 16 15:11	0°♐	
desc. node	8638 Aug 26 11:01	4°♐23'39	
	8638 Oct 14 20:27	0°♑	
	8638 Dec 04 10:25	0°♒	
	8639 Jan 19 21:47	0°♓	
evening set	8639 Mar 04 04:20	29°♓54'27	
	8639 Mar 04 07:27	0°♈	
max. Earth dist.	8639 Mar 18 03:17	9°♈57'06	2.44655 AU
	8639 Apr 14 06:37	0°♉	
conjunction	8639 Apr 28 11:44	10°♉44'49	-0°57'20
minimum elong	8639 Apr 28 13:53	10°♉48'55	0°57'28
	8639 May 23 11:50	0°♊	
	8639 Jun 30 17:34	0°♋	
morning rise	8639 Jul 03 10:45	2°♋08'34	
asc. node	8639 Aug 03 03:02	26°♋18'22	
	8639 Aug 07 20:11	0°♌	
	8639 Sep 15 16:52	0°♍	
	8639 Oct 26 05:10	0°♎	
	8639 Dec 08 09:46	0°♏	
	8640 Jan 25 02:01	0°♐	
	8640 Mar 25 16:55	0°♑	
retrograde	8640 May 04 10:31	8°♑09'56	
	8640 Jun 09 21:24	30°℞♐	
opposition	8640 Jun 13 22:42	28°♐23'49	1°00'33
greatest brilliancy	8640 Jun 13 22:42	28°♐23'49	-1.3m
min. Earth dist.	8640 Jun 13 15:21	28°♐31'07	0.68026 AU
desc. node	8640 Jul 13 11:23	19°♐26'08	
direct	8640 Jul 24 20:40	18°♐36'58	

	8640 Sep 12 05:40	0°♉	
	8640 Nov 11 06:58	0°♒	
	8640 Dec 29 23:31	0°♓	
	8641 Feb 11 21:47	0°♈	
	8641 Mar 24 18:55	0°♉	
evening set	8641 Apr 30 08:16	28°♉07'57	
	8641 May 02 17:32	0°♊	
	8641 Jun 09 17:14	0°♋	
asc. node	8641 Jun 20 01:02	8°♋11'10	
conjunction	8641 Jul 08 23:44	23°♋09'26	0°13'37
minimum elong	8641 Jul 08 22:15	23°♋06'30	0°13'24
behind sun begin	8641 Jul 08 05:02	22°♋32'36	
behind sun end	8641 Jul 09 15:28	23°♋40'24	
	8641 Jul 17 16:45	0°♌	
	8641 Aug 25 13:12	0°♍	
max. Earth dist.	8641 Aug 29 04:07	2°♍44'31	2.38966 AU
morning rise	8641 Sep 17 17:07	17°♍20'47	
	8641 Oct 05 00:41	0°♎	
	8641 Nov 16 18:03	0°♏	
	8642 Jan 01 07:32	0°♐	
	8642 Feb 19 23:30	0°♑	
	8642 Apr 21 08:08	0°♒	
desc. node	8642 May 31 10:21	10°♒36'04	
retrograde	8642 Jun 08 10:09	10°♒58'33	
opposition	8642 Jul 17 23:36	1°♒49'39	-1°38'38
greatest brilliancy	8642 Jul 18 03:45	1°♒45'36	-1.4m
min. Earth dist.	8642 Jul 21 11:06	0°♒28'08	0.66084 AU
	8642 Jul 22 16:06	30°℞♑	
direct	8642 Aug 28 14:33	21°♑46'16	
	8642 Oct 07 13:59	0°♒	
	8642 Dec 06 11:17	0°♓	
	8643 Jan 21 17:42	0°♈	
	8643 Mar 04 06:46	0°♉	
	8643 Apr 12 09:42	0°♊	
asc. node	8643 May 08 01:25	20°♊10'37	
	8643 May 20 11:40	0°♋	
	8643 Jun 27 15:17	0°♌	
evening set	8643 Jul 14 05:07	12°♌49'58	
	8643 Aug 05 18:36	0°♍	
	8643 Sep 15 14:10	0°♎	
conjunction	8643 Sep 16 09:14	0°♎34'11	1°05'17
minimum elong	8643 Sep 16 08:16	0°♎32'26	1°05'16
max. Earth dist.	8643 Oct 24 01:55	26°♎58'49	2.52759 AU
	8643 Oct 28 12:01	0°♏	
morning rise	8643 Nov 11 05:35	9°♏17'05	
	8643 Dec 12 15:32	0°♐	
	8644 Jan 29 02:50	0°♑	
	8644 Mar 19 14:40	0°♒	
desc. node	8644 Apr 17 07:41	15°♒45'00	
	8644 May 16 08:15	0°♓	
retrograde	8644 Jul 18 08:01	17°♓10'08	
opposition	8644 Aug 24 11:15	9°♓05'45	-4°18'08
greatest brilliancy	8644 Aug 25 11:58	8°♓42'39	-1.7m
min. Earth dist.	8644 Aug 31 13:14	6°♓27'04	0.57640 AU
	8644 Sep 24 21:25	30°℞♒	
direct	8644 Oct 03 20:59	29°♒27'02	
	8644 Oct 13 01:03	0°♓	
	8644 Dec 24 15:02	0°♈	
	8645 Feb 07 16:07	0°♉	
	8645 Mar 20 01:56	0°♊	
asc. node	8645 Mar 25 01:15	3°♊48'13	
	8645 Apr 27 21:48	0°♋	
	8645 Jun 05 17:22	0°♌	
	8645 Jul 15 13:52	0°♍	
	8645 Aug 26 03:07	0°♎	
evening set	8645 Sep 12 00:37	11°♎48'27	
	8645 Oct 08 15:50	0°♏	
conjunction	8645 Nov 03 04:06	16°♏59'54	0°55'21
minimum elong	8645 Nov 03 05:23	17°♏01'59	0°55'30
max. Earth dist.	8645 Nov 21 05:07	28°♏48'17	2.62949 AU
	8645 Nov 23 01:17	0°♐	
morning rise	8645 Dec 20 13:38	17°♐42'02	
	8646 Jan 08 22:51	0°♑	
	8646 Feb 26 00:45	0°♒	
desc. node	8646 Mar 05 03:53	4°♒23'11	
	8646 Apr 16 11:22	0°♓	
	8646 Jun 07 21:10	0°♈	
	8646 Aug 13 16:23	0°♉	
retrograde	8646 Sep 12 09:37	4°♉48'19	
	8646 Oct 10 19:33	30°℞♈	
opposition	8646 Oct 15 05:53	28°♈36'01	-5°46'59
greatest brilliancy	8646 Oct 17 01:17	28°♈00'55	-2.4m
min. Earth dist.	8646 Oct 23 17:09	25°♈53'10	0.44292 AU
direct	8646 Nov 19 20:57	21°♈04'30	
	8646 Dec 27 17:41	0°♉	
asc. node	8647 Feb 10 02:37	24°♉39'47	
	8647 Feb 18 05:06	0°♊	
	8647 Apr 01 21:44	0°♋	
	8647 May 13 00:52	0°♌	
	8647 Jun 23 16:42	0°♍	
	8647 Aug 05 18:20	0°♎	
	8647 Sep 19 11:58	0°♏	
evening set	8647 Oct 26 07:50	23°♏59'19	
	8647 Nov 04 16:01	0°♐	
conjunction	8647 Dec 11 17:48	23°♐40'01	0°20'48
minimum elong	8647 Dec 11 18:26	23°♐41'02	0°21'01
max. Earth dist.	8647 Dec 14 20:24	25°♐38'30	2.67785 AU
	8647 Dec 21 17:07	0°♑	
desc. node	8648 Jan 21 00:24	19°♑13'29	
morning rise	8648 Jan 24 18:09	21°♑35'55	
	8648 Feb 06 23:40	0°♒	
	8648 Mar 25 00:44	0°♓	
	8648 May 10 17:00	0°♈	
	8648 Jun 26 05:18	0°♉	
	8648 Aug 12 09:47	0°♊	
	8648 Oct 03 00:14	0°♋	
retrograde	8648 Nov 30 16:04	18°♋07'31	
asc. node	8648 Dec 28 03:59	13°♋41'52	
min. Earth dist.	8648 Dec 28 18:00	13°♋32'32	0.36697 AU
opposition	8648 Dec 30 21:00	12°♋58'27	0°12'40
greatest brilliancy	8648 Dec 30 20:27	12°♋58'50	-3.1m
direct	8649 Jan 29 01:42	8°♋06'14	
	8649 Apr 05 05:15	0°♌	
	8649 May 26 01:18	0°♍	
	8649 Jul 12 15:02	0°♎	
	8649 Aug 29 01:02	0°♏	
	8649 Oct 15 19:20	0°♐	
evening set	8649 Dec 01 14:40	29°♐22'56	
	8649 Dec 02 14:12	0°♑	
desc. node	8649 Dec 07 22:03	3°♑21'40	
max. Earth dist.	8650 Jan 05 04:41	21°♑17'55	2.67090 AU
conjunction	8650 Jan 15 03:10	27°♑39'12	-0°19'51
minimum elong	8650 Jan 15 02:36	27°♑38'16	0°19'39
	8650 Jan 18 18:58	0°♒	
morning rise	8650 Feb 28 00:35	26°♒08'31	
	8650 Mar 05 20:59	0°♓	
	8650 Apr 19 13:23	0°♈	
	8650 Jun 01 18:46	0°♉	
	8650 Jul 13 17:00	0°♊	

	8650 Aug 23 18:33	0°♋	
	8650 Oct 04 00:26	0°♌	
asc. node	8650 Nov 15 02:20	28°♌45'02	
	8650 Nov 17 01:32	0°♍	
	8651 Jan 22 00:09	0°♎	
retrograde	8651 Feb 03 02:38	1°♎02'41	
	8651 Feb 14 23:02	30°℞♍	
min. Earth dist.	8651 Mar 03 04:35	25°♍34'06	0.47177 AU
greatest brilliancy	8651 Mar 10 01:14	23°♍08'11	-2.3m
opposition	8651 Mar 11 16:10	22°♍33'25	5°24'39
direct	8651 Apr 13 21:18	15°♍39'39	
	8651 Jun 07 05:11	0°♎	
	8651 Aug 04 15:12	0°♏	
	8651 Sep 25 08:52	0°♐	
desc. node	8651 Oct 25 22:13	18°♐22'59	
	8651 Nov 13 21:33	0°♑	
	8651 Dec 31 15:38	0°♒	
evening set	8652 Jan 06 14:30	3°♒49'26	
max. Earth dist.	8652 Jan 29 10:45	18°♒41'59	2.60975 AU
	8652 Feb 15 11:09	0°♓	
conjunction	8652 Feb 21 06:15	3°♓53'35	-0°54'46
minimum elong	8652 Feb 21 05:04	3°♓51'37	0°54'40
	8652 Mar 30 05:41	0°♈	
morning rise	8652 Apr 08 20:54	6°♈47'37	
	8652 May 11 01:50	0°♉	
	8652 Jun 20 07:48	0°♊	
	8652 Jul 29 12:33	0°♋	
	8652 Sep 06 10:43	0°♌	
asc. node	8652 Oct 01 23:09	19°♌23'51	
	8652 Oct 16 04:37	0°♍	
	8652 Nov 27 11:16	0°♎	
	8653 Jan 15 17:08	0°♏	
retrograde	8653 Mar 17 15:47	19°♏02'39	
min. Earth dist.	8653 Apr 20 17:57	11°♏21'33	0.59851 AU
greatest brilliancy	8653 Apr 25 11:49	9°♏29'23	-1.6m
opposition	8653 Apr 26 07:37	9°♏09'50	4°20'13
direct	8653 Jun 02 19:31	0°♏32'32	
	8653 Aug 30 03:01	0°♐	
desc. node	8653 Sep 11 23:54	6°♐43'42	
	8653 Oct 23 11:21	0°♑	
	8653 Dec 11 20:10	0°♒	
	8654 Jan 26 23:37	0°♓	
evening set	8654 Feb 14 06:46	12°♓25'37	
max. Earth dist.	8654 Feb 28 14:13	22°♓21'47	2.49949 AU
	8654 Mar 11 09:55	0°♈	
conjunction	8654 Apr 06 10:25	18°♈48'04	-1°06'21
minimum elong	8654 Apr 06 11:02	18°♈49'11	1°06'25
	8654 Apr 21 13:25	0°♉	
	8654 May 30 23:51	0°♊	
morning rise	8654 Jun 04 07:13	3°♊20'02	
	8654 Jul 08 10:06	0°♋	
	8654 Aug 15 15:39	0°♌	
asc. node	8654 Aug 19 21:00	3°♌17'35	
	8654 Sep 23 14:18	0°♍	
	8654 Nov 03 06:15	0°♎	
	8654 Dec 16 23:31	0°♏	
	8655 Feb 04 20:04	0°♐	
retrograde	8655 Apr 22 06:28	25°♐27'57	
min. Earth dist.	8655 May 31 00:12	16°♐16'05	0.66996 AU
opposition	8655 Jun 01 19:13	15°♐33'10	1°59'54
greatest brilliancy	8655 Jun 01 16:30	15°♐35'53	-1.3m
direct	8655 Jul 12 00:35	6°♐00'04	
desc. node	8655 Jul 31 01:07	7°♐59'44	
	8655 Sep 27 17:30	0°♑	
	8655 Nov 21 03:20	0°♒	

	8656 Jan 07 16:16	0°♓	
	8656 Feb 20 07:34	0°♈	
	8656 Apr 01 04:36	0°♉	
evening set	8656 Apr 05 02:52	2°♉58'04	
	8656 May 10 05:08	0°♊	
max. Earth dist.	8656 May 13 10:20	2°♊30'56	2.37133 AU
conjunction	8656 Jun 08 11:27	23°♊02'08	-0°20'10
minimum elong	8656 Jun 08 13:29	23°♊06'10	0°20'22
	8656 Jun 17 06:36	0°♋	
asc. node	8656 Jul 06 17:43	15°♋24'21	
	8656 Jul 25 06:30	0°♌	
morning rise	8656 Aug 20 15:35	20°♌29'52	
	8656 Sep 02 01:53	0°♍	
	8656 Oct 12 11:57	0°♎	
	8656 Nov 24 06:18	0°♏	
	8657 Jan 09 06:48	0°♐	
	8657 Mar 01 22:28	0°♑	
retrograde	8657 May 25 10:51	28°♑17'34	
desc. node	8657 Jun 17 00:21	25°♑03'13	
opposition	8657 Jul 04 12:46	18°♑51'26	-0°36'16
greatest brilliancy	8657 Jul 04 13:34	18°♑50'40	-1.3m
min. Earth dist.	8657 Jul 06 12:44	18°♑04'11	0.67638 AU
direct	8657 Aug 15 01:26	8°♑51'01	
	8657 Oct 24 07:22	0°♒	
	8657 Dec 16 01:49	0°♓	
	8658 Jan 30 01:28	0°♈	
	8658 Mar 12 05:25	0°♉	
	8658 Apr 20 05:06	0°♊	
asc. node	8658 May 24 16:34	27°♊12'38	
	8658 May 28 05:02	0°♋	
evening set	8658 Jun 14 22:11	14°♋01'22	
	8658 Jul 05 05:53	0°♌	
	8658 Aug 13 05:18	0°♍	
conjunction	8658 Aug 23 04:27	7°♍29'16	0°54'32
minimum elong	8658 Aug 23 01:40	7°♍24'05	0°54'26
	8658 Sep 22 20:25	0°♎	
max. Earth dist.	8658 Oct 08 18:09	11°♎20'54	2.47541 AU
morning rise	8658 Oct 23 10:35	21°♎37'26	
	8658 Nov 04 14:41	0°♏	
	8658 Dec 19 19:06	0°♐	
	8659 Feb 05 18:58	0°♑	
	8659 Mar 30 06:55	0°♒	
desc. node	8659 May 04 22:06	17°♒23'38	
	8659 Jun 10 20:54	0°♓	
retrograde	8659 Jul 02 05:51	2°♓29'42	
	8659 Jul 22 04:33	30°℞♒	
opposition	8659 Aug 09 12:54	23°♒55'35	-3°17'37
greatest brilliancy	8659 Aug 10 03:45	23°♒41'23	-1.5m
min. Earth dist.	8659 Aug 15 06:22	21°♒44'10	0.61717 AU
direct	8659 Sep 19 17:10	13°♒59'35	
	8659 Nov 15 13:24	0°♓	
	8660 Jan 06 07:51	0°♈	
	8660 Feb 18 07:02	0°♉	
	8660 Mar 28 23:02	0°♊	
asc. node	8660 Apr 10 18:18	9°♊56'53	
	8660 May 06 08:44	0°♋	
	8660 Jun 13 19:32	0°♌	
	8660 Jul 23 07:02	0°♍	
evening set	8660 Aug 21 22:32	21°♍44'19	
	8660 Sep 02 11:27	0°♎	
	8660 Oct 15 16:31	0°♏	
conjunction	8660 Oct 16 23:37	0°♏52'39	1°03'44
minimum elong	8660 Oct 17 00:32	0°♏54'13	1°03'50
max. Earth dist.	8660 Nov 10 22:45	17°♏34'26	2.59578 AU

	8660 Nov 29 21:51	0°♐	
morning rise	8660 Dec 05 21:30	3°♐52'55	
	8661 Jan 15 21:49	0°♑	
	8661 Mar 05 14:54	0°♒	
desc. node	8661 Mar 21 18:37	9°♒39'58	
	8661 Apr 25 22:04	0°♓	
	8661 Jun 24 00:01	0°♈	
retrograde	8661 Aug 18 20:53	14°♈14'58	
opposition	8661 Sep 22 14:14	7°♈11'34	-5°34'16
greatest brilliancy	8661 Sep 24 06:37	6°♈36'10	-2.1m
min. Earth dist.	8661 Oct 01 03:15	4°♈12'51	0.49826 AU
	8661 Oct 16 06:01	30°℞♓	
direct	8661 Oct 30 16:24	28°♓31'47	
	8661 Nov 14 11:42	0°♈	
	8662 Jan 18 21:05	0°♉	
asc. node	8662 Feb 26 19:32	26°♉35'11	
	8662 Mar 03 12:37	0°♊	
	8662 Apr 12 19:38	0°♋	
	8662 May 22 15:05	0°♌	
	8662 Jul 02 07:41	0°♍	
	8662 Aug 13 14:50	0°♎	
	8662 Sep 26 18:05	0°♏	
evening set	8662 Oct 10 08:03	9°♏00'00	
	8662 Nov 11 12:47	0°♐	
conjunction	8662 Nov 27 10:18	10°♐13'44	0°35'35
minimum elong	8662 Nov 27 11:21	10°♐15'24	0°35'47
max. Earth dist.	8662 Dec 06 02:49	15°♐47'18	2.66541 AU
	8662 Dec 28 10:35	0°♑	
morning rise	8663 Jan 11 08:10	8°♑48'27	
desc. node	8663 Feb 06 14:30	25°♑23'29	
	8663 Feb 13 21:59	0°♒	
	8663 Apr 02 15:22	0°♓	
	8663 May 20 17:59	0°♈	
	8663 Jul 09 04:35	0°♉	
	8663 Sep 02 05:31	0°♊	
retrograde	8663 Oct 29 21:53	16°♊25'46	
opposition	8663 Nov 28 22:16	11°♊26'19	-3°25'04
greatest brilliancy	8663 Nov 29 13:52	11°♊15'40	-3.0m
min. Earth dist.	8663 Dec 02 16:24	10°♊24'56	0.37547 AU
direct	8663 Dec 29 19:12	6°♊03'21	
asc. node	8664 Jan 14 19:23	7°♊48'06	
	8664 Mar 06 08:37	0°♋	
	8664 Apr 23 01:20	0°♌	
	8664 Jun 06 21:13	0°♍	
	8664 Jul 21 22:25	0°♎	
	8664 Sep 05 23:24	0°♏	
	8664 Oct 22 23:00	0°♐	
evening set	8664 Nov 17 12:16	16°♐10'33	
	8664 Dec 09 08:47	0°♑	
desc. node	8664 Dec 24 12:05	9°♑35'37	
max. Earth dist.	8664 Dec 27 10:05	11°♑26'42	2.68010 AU
conjunction	8665 Jan 01 10:08	14°♑37'20	-0°04'12
minimum elong	8665 Jan 01 10:00	14°♑37'07	0°03'59
behind sun begin	8664 Dec 31 16:01	14°♑08'33	
behind sun end	8665 Jan 02 03:59	15°♑05'42	
	8665 Jan 25 12:39	0°♒	
morning rise	8665 Feb 13 23:50	12°♒30'59	
	8665 Mar 12 21:34	0°♓	
	8665 Apr 27 04:28	0°♈	
	8665 Jun 10 08:05	0°♉	
	8665 Jul 23 12:06	0°♊	
	8665 Sep 04 06:20	0°♋	
	8665 Oct 18 10:58	0°♌	
asc. node	8665 Dec 01 19:28	25°♌22'28	
	8665 Dec 12 19:06	0°♍	
retrograde	8666 Jan 12 11:38	6°♍15'49	
min. Earth dist.	8666 Feb 07 18:11	1°♍36'57	0.41827 AU
	8666 Feb 12 19:06	30°℞♌	
greatest brilliancy	8666 Feb 14 08:48	29°♌29'20	-2.6m
opposition	8666 Feb 15 18:23	29°♌02'09	4°36'24
direct	8666 Mar 18 20:58	23°♌05'09	
	8666 Apr 22 22:26	0°♍	
	8666 Jun 24 01:35	0°♎	
	8666 Aug 14 15:38	0°♏	
	8666 Oct 03 07:38	0°♐	
desc. node	8666 Nov 11 12:00	24°♐05'59	
	8666 Nov 20 23:48	0°♑	
evening set	8666 Dec 23 10:34	20°♑24'40	
	8667 Jan 07 10:50	0°♒	
max. Earth dist.	8667 Jan 19 16:48	7°♒54'02	2.63994 AU
conjunction	8667 Feb 06 06:33	19°♒22'25	-0°42'45
minimum elong	8667 Feb 06 05:27	19°♒20'37	0°42'36
	8667 Feb 22 07:40	0°♓	
morning rise	8667 Mar 23 20:10	19°♓57'37	
	8667 Apr 07 09:11	0°♈	
	8667 May 19 16:10	0°♉	
	8667 Jun 29 10:32	0°♊	
	8667 Aug 08 03:57	0°♋	
	8667 Sep 16 15:18	0°♌	
asc. node	8667 Oct 19 17:27	24°♌36'46	
	8667 Oct 27 04:05	0°♍	
	8667 Dec 10 09:32	0°♎	
	8668 Feb 11 09:30	0°♏	
retrograde	8668 Mar 02 03:57	2°♏34'40	
	8668 Mar 20 23:27	30°℞♎	
min. Earth dist.	8668 Apr 03 00:13	25°♎40'33	0.55395 AU
opposition	8668 Apr 09 23:16	22°♎59'32	5°02'17
greatest brilliancy	8668 Apr 08 18:21	23°♎27'31	-1.9m
direct	8668 May 15 23:35	14°♎55'26	
	8668 Jul 12 09:31	0°♏	
	8668 Sep 09 15:45	0°♐	
desc. node	8668 Sep 28 13:01	10°♐40'05	
	8668 Oct 31 10:43	0°♑	
	8668 Dec 19 00:20	0°♒	
evening set	8669 Jan 29 00:08	26°♒40'48	
	8669 Feb 02 23:12	0°♓	
max. Earth dist.	8669 Feb 14 22:23	8°♓05'25	2.54767 AU
conjunction	8669 Mar 18 06:55	29°♓51'37	-1°06'26
minimum elong	8669 Mar 18 06:25	29°♓50'43	1°06'26
	8669 Mar 18 11:40	0°♈	
	8669 Apr 28 20:39	0°♉	
morning rise	8669 May 10 11:34	8°♉40'21	
	8669 Jun 07 13:25	0°♊	
	8669 Jul 16 05:28	0°♋	
	8669 Aug 23 15:41	0°♌	
asc. node	8669 Sep 05 13:31	9°♌59'55	
	8669 Oct 01 18:40	0°♍	
	8669 Nov 11 18:35	0°♎	
	8669 Dec 26 12:08	0°♏	
	8670 Feb 19 08:20	0°♐	
retrograde	8670 Apr 08 21:07	12°♐13'53	
min. Earth dist.	8670 May 15 23:06	3°♐33'28	0.64958 AU
opposition	8670 May 19 05:53	2°♐14'53	2°57'18
greatest brilliancy	8670 May 18 22:02	2°♐22'43	-1.4m
	8670 May 24 23:32	30°℞♏	
direct	8670 Jun 27 13:45	22°♏59'49	
	8670 Aug 04 01:59	0°♐	
desc. node	8670 Aug 16 14:11	4°♐33'53	
	8670 Oct 08 13:48	0°♑	
	8670 Nov 29 06:13	0°♒	

	8671 Jan 15 02:17	0°♓	
	8671 Feb 27 14:20	0°♈	
evening set	8671 Mar 15 05:20	11°♈15'23	
max. Earth dist.	8671 Mar 31 13:27	23°♈16'47	2.41707 AU
	8671 Apr 09 13:11	0°♉	
conjunction	8671 May 12 11:14	25°♉09'26	-0°47'15
minimum elong	8671 May 12 14:03	25°♉14'54	0°47'24
	8671 May 18 16:46	0°♊	
	8671 Jun 25 20:44	0°♋	
morning rise	8671 Jul 21 05:04	20°♋01'19	
asc. node	8671 Jul 24 11:35	22°♋35'52	
	8671 Aug 02 21:44	0°♌	
	8671 Sep 10 16:49	0°♍	
	8671 Oct 21 02:50	0°♎	
	8671 Dec 03 01:13	0°♏	
	8672 Jan 18 21:11	0°♐	
	8672 Mar 14 10:32	0°♑	
retrograde	8672 May 12 01:07	15°♑50'00	
opposition	8672 Jun 21 10:33	6°♑10'04	0°25'04
greatest brilliancy	8672 Jun 21 10:55	6°♑09'42	-1.3m
min. Earth dist.	8672 Jun 21 22:55	5°♑57'48	0.68179 AU
desc. node	8672 Jul 03 14:12	1°♑33'19	
	8672 Jul 08 09:43	30°℞♐	
direct	8672 Aug 01 14:53	26°♐17'20	
	8672 Aug 28 00:11	0°♑	
	8672 Nov 04 19:25	0°♒	
	8672 Dec 24 15:28	0°♓	
	8673 Feb 06 22:05	0°♈	
	8673 Mar 19 21:56	0°♉	
	8673 Apr 27 21:05	0°♊	
evening set	8673 May 16 00:55	14°♊17'30	
	8673 Jun 04 20:51	0°♋	
asc. node	8673 Jun 10 10:26	4°♋24'46	
	8673 Jul 12 20:26	0°♌	
conjunction	8673 Jul 26 00:07	10°♌15'49	0°31'27
minimum elong	8673 Jul 25 21:08	10°♌10'02	0°31'14
	8673 Aug 20 17:00	0°♍	
max. Earth dist.	8673 Sep 16 22:00	20°♍19'28	2.41908 AU
	8673 Sep 30 04:33	0°♎	
morning rise	8673 Oct 01 15:34	1°♎03'14	
	8673 Nov 11 20:31	0°♏	
	8673 Dec 27 04:20	0°♐	
	8674 Feb 14 00:22	0°♑	
	8674 Apr 11 03:31	0°♒	
desc. node	8674 May 21 12:09	15°♒14'39	
retrograde	8674 Jun 16 18:50	18°♒55'41	
opposition	8674 Jul 25 22:37	9°♒57'53	-2°15'15
greatest brilliancy	8674 Jul 26 05:55	9°♒50'48	-1.4m
min. Earth dist.	8674 Jul 30 05:32	8°♒17'59	0.64803 AU
	8674 Sep 01 21:43	30°℞♑	
direct	8674 Sep 05 11:26	29°♑55'04	
	8674 Sep 09 02:14	0°♒	
	8674 Nov 29 09:29	0°♓	
	8675 Jan 16 00:17	0°♈	
	8675 Feb 26 23:24	0°♉	
	8675 Apr 07 06:13	0°♊	
asc. node	8675 Apr 28 09:50	16°♊34'35	
	8675 May 15 10:25	0°♋	
	8675 Jun 22 15:57	0°♌	
evening set	8675 Jul 29 12:02	28°♌12'31	
	8675 Jul 31 21:15	0°♍	
	8675 Sep 10 18:56	0°♎	
conjunction	8675 Sep 28 13:32	12°♎35'44	1°06'52
minimum elong	8675 Sep 28 13:28	12°♎35'38	1°06'53
	8675 Oct 23 18:03	0°♏	
max. Earth dist.	8675 Oct 31 11:59	5°♏15'14	2.55384 AU
morning rise	8675 Nov 20 23:24	18°♏55'56	
	8675 Dec 07 20:46	0°♐	
	8676 Jan 24 01:51	0°♑	
	8676 Mar 13 17:42	0°♒	
desc. node	8676 Apr 07 09:07	14°♒05'21	
	8676 May 07 04:39	0°♓	
retrograde	8676 Jul 28 23:02	26°♓41'37	
opposition	8676 Sep 03 07:28	18°♓56'25	-4°49'57
greatest brilliancy	8676 Sep 04 14:12	18°♓28'10	-1.8m
min. Earth dist.	8676 Sep 11 00:38	16°♓06'36	0.55054 AU
direct	8676 Oct 13 01:22	9°♓33'03	
	8676 Dec 15 07:46	0°♈	
	8677 Jan 31 22:38	0°♉	
	8677 Mar 14 02:36	0°♊	
asc. node	8677 Mar 15 10:55	1°♊00'58	
	8677 Apr 22 07:22	0°♋	
	8677 May 31 09:07	0°♌	
	8677 Jul 10 10:44	0°♍	
	8677 Aug 21 04:43	0°♎	
evening set	8677 Sep 22 20:09	22°♎32'19	
	8677 Oct 03 21:13	0°♏	
conjunction	8677 Nov 12 07:12	26°♏03'17	0°48'48
minimum elong	8677 Nov 12 08:28	26°♏05'21	0°48'59
	8677 Nov 18 08:55	0°♐	
max. Earth dist.	8677 Nov 26 19:00	5°♐26'52	2.64464 AU
morning rise	8677 Dec 28 15:14	25°♐49'17	
	8678 Jan 04 05:25	0°♑	
	8678 Feb 21 00:38	0°♒	
desc. node	8678 Feb 23 05:49	1°♒22'45	
	8678 Apr 10 17:00	0°♓	
	8678 May 31 01:42	0°♈	
	8678 Jul 25 23:09	0°♉	
retrograde	8678 Sep 28 07:56	18°♉43'52	
opposition	8678 Oct 29 23:24	13°♉01'48	-5°25'09
greatest brilliancy	8678 Oct 31 14:04	12°♉32'28	-2.6m
min. Earth dist.	8678 Nov 06 14:42	10°♉43'40	0.41448 AU
direct	8678 Dec 02 22:56	6°♉17'16	
asc. node	8679 Jan 31 12:24	26°♉10'37	
	8679 Feb 07 03:25	0°♊	
	8679 Mar 25 00:29	0°♋	
	8679 May 06 10:38	0°♌	
	8679 Jun 17 20:42	0°♍	
	8679 Jul 31 10:51	0°♎	
	8679 Sep 14 13:05	0°♏	
	8679 Oct 30 22:44	0°♐	
evening set	8679 Nov 03 22:44	2°♐33'29	
	8679 Dec 17 02:07	0°♑	
conjunction	8679 Dec 19 16:37	1°♑39'07	0°11'43
minimum elong	8679 Dec 19 16:59	1°♑39'42	0°11'56
behind sun begin	8679 Dec 19 04:30	1°♑19'53	
behind sun end	8679 Dec 20 05:29	1°♑59'30	
max. Earth dist.	8679 Dec 19 21:18	1°♑46'31	2.68100 AU
desc. node	8680 Jan 11 02:19	15°♑52'19	
morning rise	8680 Feb 01 10:07	29°♑26'21	
	8680 Feb 02 07:14	0°♒	
	8680 Mar 20 01:43	0°♓	
	8680 May 05 03:59	0°♈	
	8680 Jun 19 15:21	0°♉	
	8680 Aug 03 20:50	0°♊	
	8680 Sep 19 07:18	0°♋	
	8680 Nov 14 21:04	0°♌	
retrograde	8680 Dec 17 13:19	6°♌45'45	
asc. node	8680 Dec 18 11:23	6°♌45'23	

min. Earth dist.	8681 Jan 13 00:41	2°♌25'05	0.37793 AU
opposition	8681 Jan 18 00:30	1°♌00'08	2°15'40
greatest brilliancy	8681 Jan 17 12:27	1°♌08'43	-3.0m
	8681 Jan 21 14:02	30°℞♋	
direct	8681 Feb 16 14:38	25°♋54'24	
	8681 Mar 14 09:28	0°♌	
	8681 May 16 22:41	0°♍	
	8681 Jul 06 00:49	0°♎	
	8681 Aug 23 12:54	0°♏	
	8681 Oct 10 20:33	0°♐	
	8681 Nov 27 21:52	0°♑	
desc. node	8681 Nov 28 00:56	0°♑04'48	
evening set	8681 Dec 09 12:49	7°♑18'53	
max. Earth dist.	8682 Jan 10 09:34	27°♑33'53	2.66228 AU
	8682 Jan 14 04:40	0°♒	
conjunction	8682 Jan 23 00:41	5°♒41'18	-0°28'41
minimum elong	8682 Jan 22 23:52	5°♒39'59	0°28'29
	8682 Mar 01 04:57	0°♓	
morning rise	8682 Mar 08 07:57	4°♓44'12	
	8682 Apr 14 15:52	0°♈	
	8682 May 27 12:46	0°♉	
	8682 Jul 07 23:34	0°♊	
	8682 Aug 17 10:58	0°♋	
	8682 Sep 26 20:04	0°♌	
asc. node	8682 Nov 05 10:24	28°♌16'38	
	8682 Nov 07 23:03	0°♍	
	8682 Dec 27 17:23	0°♎	
retrograde	8683 Feb 13 23:58	13°♎43'45	
min. Earth dist.	8683 Mar 15 09:43	7°♎43'25	0.50235 AU
greatest brilliancy	8683 Mar 21 23:31	5°♎18'03	-2.1m
opposition	8683 Mar 23 12:18	4°♎43'53	5°26'22
	8683 Apr 06 22:50	30°℞♍	
direct	8683 Apr 26 19:35	27°♍21'53	
	8683 May 17 23:31	0°♎	
	8683 Jul 28 03:25	0°♏	
	8683 Sep 19 17:41	0°♐	
desc. node	8683 Oct 16 01:41	15°♐33'28	
	8683 Nov 08 22:44	0°♑	
	8683 Dec 26 23:18	0°♒	
evening set	8684 Jan 14 21:23	12°♒11'58	
max. Earth dist.	8684 Feb 04 13:03	25°♒47'33	2.58981 AU
	8684 Feb 10 20:18	0°♓	
conjunction	8684 Mar 01 06:10	13°♓08'48	-1°00'20
minimum elong	8684 Mar 01 05:06	13°♓06'59	1°00'16
	8684 Mar 25 13:00	0°♈	
morning rise	8684 Apr 19 10:46	17°♈45'47	
	8684 May 06 05:35	0°♉	
	8684 Jun 15 06:55	0°♊	
	8684 Jul 24 06:51	0°♋	
	8684 Aug 31 23:53	0°♌	
asc. node	8684 Sep 22 08:39	16°♌22'53	
	8684 Oct 10 10:16	0°♍	
	8684 Nov 21 00:49	0°♎	
	8685 Jan 06 18:55	0°♏	
retrograde	8685 Mar 25 23:58	28°♏08'55	
min. Earth dist.	8685 Apr 30 04:50	20°♏05'02	0.61922 AU
opposition	8685 May 04 23:20	18°♏11'23	3°51'27
greatest brilliancy	8685 May 04 08:15	18°♏26'23	-1.6m
direct	8685 Jun 12 04:16	9°♏19'03	
	8685 Aug 21 21:59	0°♐	
desc. node	8685 Sep 02 02:37	5°♐24'45	
	8685 Oct 17 18:51	0°♑	
	8685 Dec 06 20:51	0°♒	
	8686 Jan 22 06:11	0°♓	
evening set	8686 Feb 24 04:47	22°♓34'06	
	8686 Mar 06 17:20	0°♈	
max. Earth dist.	8686 Mar 09 22:52	2°♈18'07	2.47056 AU
	8686 Apr 16 19:34	0°♉	
conjunction	8686 Apr 18 11:25	1°♉14'35	-1°02'30
minimum elong	8686 Apr 18 12:54	1°♉17'21	1°02'35
	8686 May 26 03:45	0°♊	
morning rise	8686 Jun 20 04:44	19°♊32'48	
	8686 Jul 03 11:45	0°♋	
asc. node	8686 Aug 10 04:49	29°♋39'08	
	8686 Aug 10 15:29	0°♌	
	8686 Sep 18 12:05	0°♍	
	8686 Oct 29 00:19	0°♎	
	8686 Dec 11 07:26	0°♏	
	8687 Jan 28 14:18	0°♐	
	8687 Apr 05 19:36	0°♑	
retrograde	8687 Apr 29 20:30	3°♑16'49	
	8687 May 22 04:12	30°℞♐	
min. Earth dist.	8687 Jun 08 09:25	23°♐49'48	0.67687 AU
opposition	8687 Jun 09 08:58	23°♐26'19	1°25'16
greatest brilliancy	8687 Jun 09 08:04	23°♐27'13	-1.3m
direct	8687 Jul 19 23:49	13°♐45'15	
desc. node	8687 Jul 21 03:08	13°♐45'43	
	8687 Sep 19 01:03	0°♑	
	8687 Nov 15 08:48	0°♒	
	8688 Jan 02 14:46	0°♓	
	8688 Feb 15 11:24	0°♈	
	8688 Mar 27 09:43	0°♉	
evening set	8688 Apr 18 21:07	17°♉09'12	
	8688 May 05 09:44	0°♊	
	8688 Jun 12 10:19	0°♋	
conjunction	8688 Jun 25 11:49	10°♋21'04	-0°01'11
minimum elong	8688 Jun 25 11:57	10°♋21'20	0°01'25
behind sun begin	8688 Jun 24 05:36	9°♋21'15	
behind sun end	8688 Jun 26 18:17	11°♋21'23	
asc. node	8688 Jun 27 02:02	11°♋36'43	
	8688 Jul 20 09:38	0°♌	
max. Earth dist.	8688 Jul 30 09:20	7°♌48'44	2.37026 AU
	8688 Aug 28 04:38	0°♍	
morning rise	8688 Sep 05 23:35	6°♍38'57	
	8688 Oct 07 14:08	0°♎	
	8688 Nov 19 06:08	0°♏	
	8689 Jan 03 21:38	0°♐	
	8689 Feb 23 03:33	0°♑	
	8689 Apr 29 05:06	0°♒	
retrograde	8689 Jun 02 09:38	6°♒00'59	
desc. node	8689 Jun 07 02:41	5°♒52'46	
	8689 Jul 03 14:04	30°℞♑	
opposition	8689 Jul 12 04:35	26°♑44'00	-1°12'43
greatest brilliancy	8689 Jul 12 06:58	26°♑41'41	-1.3m
min. Earth dist.	8689 Jul 14 23:59	25°♑37'53	0.66901 AU
direct	8689 Aug 22 18:37	16°♑41'25	
	8689 Oct 14 17:52	0°♒	
	8689 Dec 09 23:33	0°♓	
	8690 Jan 24 17:22	0°♈	
	8690 Mar 07 03:43	0°♉	
	8690 Apr 15 05:49	0°♊	
greatest brilliancy	8690 Apr 24 01:36	6°♊55'06	1.2m
asc. node	8690 May 15 02:32	23°♊31'22	
	8690 May 23 06:56	0°♋	
	8690 Jun 30 08:50	0°♌	
evening set	8690 Jul 01 15:34	0°♌59'58	
	8690 Aug 08 09:18	0°♍	
conjunction	8690 Sep 06 07:07	21°♍28'11	1°02'02
minimum elong	8690 Sep 06 05:20	21°♍24'56	1°02'00

	8690 Sep 18 01:29	0°♎	
max. Earth dist.	8690 Oct 18 02:23	21°♎13'42	2.50488 AU
	8690 Oct 30 20:11	0°♏	
morning rise	8690 Nov 03 09:38	2°♏25'40	
	8690 Dec 14 22:20	0°♐	
	8691 Jan 31 12:48	0°♑	
	8691 Mar 23 16:14	0°♒	
desc. node	8691 Apr 25 00:21	17°♒04'29	
	8691 May 23 19:24	0°♓	
retrograde	8691 Jul 11 18:32	11°♓12'12	
opposition	8691 Aug 18 10:24	2°♓53'43	-3°53'00
greatest brilliancy	8691 Aug 19 06:35	2°♓34'37	-1.6m
min. Earth dist.	8691 Aug 24 21:49	0°♓26'46	0.59569 AU
	8691 Aug 26 02:39	30°♓℞	
direct	8691 Sep 28 04:50	23°♒05'48	
	8691 Nov 02 03:27	0°♓	
	8691 Dec 30 06:29	0°♈	
	8692 Feb 12 08:08	0°♉	
	8692 Mar 23 10:01	0°♊	
asc. node	8692 Apr 01 02:37	6°♊42'01	
	8692 May 01 01:03	0°♋	
	8692 Jun 08 16:06	0°♌	
	8692 Jul 18 07:23	0°♍	
	8692 Aug 28 15:18	0°♎	
evening set	8692 Sep 03 05:34	3°♎57'12	
	8692 Oct 10 23:10	0°♏	
conjunction	8692 Oct 26 23:23	10°♏44'57	0°59'23
minimum elong	8692 Oct 27 00:34	10°♏46'57	0°59'30
max. Earth dist.	8692 Nov 16 23:21	24°♏36'57	2.61541 AU
	8692 Nov 25 05:28	0°♐	
morning rise	8692 Dec 14 09:12	12°♐22'11	
	8693 Jan 11 02:52	0°♑	
	8693 Feb 28 10:06	0°♒	
desc. node	8693 Mar 11 20:30	6°♒57'58	
	8693 Apr 19 12:42	0°♓	
	8693 Jun 12 23:54	0°♈	
retrograde	8693 Sep 01 03:27	25°♈54'26	
opposition	8693 Oct 04 21:08	19°♈18'16	-5°46'58
greatest brilliancy	8693 Oct 06 16:36	18°♈41'40	-2.3m
min. Earth dist.	8693 Oct 13 14:04	16°♈23'51	0.46747 AU
direct	8693 Nov 10 16:55	11°♈13'15	
	8694 Jan 07 19:43	0°♉	
asc. node	8694 Feb 17 03:25	25°♉20'58	
	8694 Feb 23 20:28	0°♊	
	8694 Apr 06 05:59	0°♋	
	8694 May 16 16:27	0°♌	
	8694 Jun 26 19:52	0°♍	
	8694 Aug 08 11:29	0°♎	
	8694 Sep 21 21:19	0°♏	
evening set	8694 Oct 19 14:40	18°♏11'58	
	8694 Nov 06 20:11	0°♐	
conjunction	8694 Dec 05 16:27	18°♐28'41	0°27'05
minimum elong	8694 Dec 05 17:16	18°♐29'59	0°27'18
max. Earth dist.	8694 Dec 11 06:37	22°♐02'19	2.67342 AU
	8694 Dec 23 19:07	0°♑	
morning rise	8695 Jan 19 00:35	16°♑37'36	
desc. node	8695 Jan 27 16:54	22°♑07'20	
	8695 Feb 09 03:34	0°♒	
	8695 Mar 28 11:23	0°♓	
	8695 May 14 17:22	0°♈	
	8695 Jul 01 07:42	0°♉	
	8695 Aug 19 19:45	0°♊	
	8695 Oct 21 14:18	0°♋	
retrograde	8695 Nov 17 11:21	4°♋22'45	
	8695 Dec 15 04:57	30°℞♊	
opposition	8695 Dec 17 06:40	29°♊27'14	-1°28'14
greatest brilliancy	8695 Dec 17 09:35	29°♊25'18	-3.1m
min. Earth dist.	8695 Dec 17 20:28	29°♊18'07	0.36617 AU
asc. node	8696 Jan 05 05:13	25°♊16'07	
direct	8696 Jan 15 20:08	24°♊30'31	
	8696 Feb 14 12:58	0°♋	
	8696 Apr 13 09:10	0°♌	
	8696 May 30 18:14	0°♍	
	8696 Jul 15 23:57	0°♎	
	8696 Aug 31 17:14	0°♏	
	8696 Oct 18 02:17	0°♐	
evening set	8696 Nov 25 15:00	24°♐16'22	
	8696 Dec 04 16:49	0°♑	
desc. node	8696 Dec 14 14:22	6°♑15'20	
max. Earth dist.	8697 Jan 01 11:15	17°♑35'40	2.67612 AU
conjunction	8697 Jan 09 06:12	22°♑33'23	-0°13'26
minimum elong	8697 Jan 09 05:48	22°♑32'45	0°13'12
behind sun begin	8697 Jan 08 19:15	22°♑15'57	
behind sun end	8697 Jan 09 16:20	22°♑49'33	
	8697 Jan 20 21:30	0°♒	
morning rise	8697 Feb 21 22:19	20°♒42'21	
	8697 Mar 08 03:01	0°♓	
	8697 Apr 22 02:12	0°♈	
	8697 Jun 04 17:31	0°♉	
	8697 Jul 17 04:06	0°♊	
	8697 Aug 27 21:05	0°♋	
	8697 Oct 09 01:43	0°♌	
asc. node	8697 Nov 22 04:30	28°♌37'24	
	8697 Nov 24 13:39	0°♍	
retrograde	8698 Jan 25 04:39	21°♍16'24	
min. Earth dist.	8698 Feb 21 06:48	16°♍12'04	0.44715 AU
greatest brilliancy	8698 Feb 28 04:30	13°♍50'58	-2.4m
opposition	8698 Mar 01 18:55	13°♍17'56	5°13'21
direct	8698 Apr 03 02:04	6°♍48'52	
	8698 Jun 14 13:23	0°♎	
	8698 Aug 08 06:27	0°♏	
	8698 Sep 28 00:10	0°♐	
desc. node	8698 Nov 01 14:14	21°♐01'22	
	8698 Nov 16 03:38	0°♑	
evening set	8698 Dec 31 11:47	28°♑31'06	
	8699 Jan 02 19:19	0°♒	
max. Earth dist.	8699 Jan 25 07:04	14°♒33'01	2.62434 AU
conjunction	8699 Feb 14 16:57	28°♒00'53	-0°50'06
minimum elong	8699 Feb 14 15:47	27°♒58'55	0°49'57
	8699 Feb 17 16:25	0°♓	
morning rise	8699 Apr 02 06:43	29°♓45'32	
	8699 Apr 02 15:00	0°♈	
	8699 May 14 16:46	0°♉	
	8699 Jun 24 04:40	0°♊	
	8699 Aug 02 14:53	0°♋	
	8699 Sep 10 18:08	0°♌	
asc. node	8699 Oct 10 01:11	22°♌06'06	
	8699 Oct 20 17:55	0°♍	
	8699 Dec 02 14:06	0°♎	
	8700 Jan 23 13:51	0°♏	
retrograde	8700 Mar 12 04:15	12°♏40'47	
min. Earth dist.	8700 Apr 14 07:03	5°♏19'34	0.57961 AU
greatest brilliancy	8700 Apr 19 12:06	3°♏17'15	-1.7m
opposition	8700 Apr 20 11:55	2°♏53'54	4°39'44
	8700 Apr 28 04:41	30°℞♎	
direct	8700 May 27 08:11	24°♎30'31	
	8700 Jun 28 14:57	0°♏	
	8700 Sep 03 22:33	0°♐	
desc. node	8700 Sep 19 15:44	8°♐31'38	
	8700 Oct 27 02:44	0°♑	

	8700 Dec 15 04:02	0°♒		
	8701 Jan 30 06:48	0°♓		
evening set	8701 Feb 08 02:34	5°♓56'49		
max. Earth dist.	8701 Feb 23 11:37	16°♓28'30	2.52182 AU	
	8701 Mar 14 19:19	0°♈		
conjunction	8701 Mar 29 19:55	10°♈44'44	-1°07'20	
minimum elong	8701 Mar 29 19:59	10°♈44'51	1°07'23	
	8701 Apr 25 02:23	0°♉		
morning rise	8701 May 24 22:14	22°♉30'40		
	8701 Jun 03 16:21	0°♊		
	8701 Jul 12 05:20	0°♋		
	8701 Aug 19 12:38	0°♌		
asc. node	8701 Aug 27 22:45	6°♌33'05		
	8701 Sep 27 12:09	0°♍		
	8701 Nov 07 05:27	0°♎		
	8701 Dec 21 05:05	0°♏		
	8702 Feb 10 09:51	0°♐		
retrograde	8702 Apr 17 14:49	20°♐22'51		
min. Earth dist.	8702 May 25 14:43	11°♐24'41	0.66203 AU	
opposition	8702 May 28 02:06	10°♐25'24	2°24'04	
greatest brilliancy	8702 May 27 21:23	10°♐30'06	-1.4m	
direct	8702 Jul 06 22:15	0°♐59'55		
desc. node	8702 Aug 07 17:00	6°♐10'51		
	8702 Oct 02 16:29	0°♑		
	8702 Nov 24 21:17	0°♒		
	8703 Jan 11 04:15	0°♓		
	8703 Feb 23 19:29	0°♈		
evening set	8703 Mar 28 05:18	23°♈36'11		
	8703 Apr 05 18:33	0°♉		
max. Earth dist.	8703 Apr 20 01:16	10°♉49'27	2.38945 AU	
	8703 May 14 21:14	0°♊		
conjunction	8703 May 28 18:40	10°♊52'50	-0°33'11	
minimum elong	8703 May 28 21:27	10°♊58'20	0°33'22	
	8703 Jun 22 00:03	0°♋		
asc. node	8703 Jul 15 19:38	18°♋49'55		
	8703 Jul 30 00:15	0°♌		
morning rise	8703 Aug 09 02:42	7°♌54'03		
	8703 Sep 06 18:44	0°♍		
	8703 Oct 17 03:17	0°♎		
	8703 Nov 28 21:23	0°♏		
	8704 Jan 14 02:33	0°♐		
	8704 Mar 06 21:05	0°♑		
retrograde	8704 May 20 16:49	23°♑26'45		
desc. node	8704 Jun 24 16:46	15°♑56'27		
opposition	8704 Jun 29 22:05	13°♑53'58	-0°10'47	
greatest brilliancy	8704 Jun 29 22:17	13°♑53'46	-1.3m	
min. Earth dist.	8704 Jul 01 05:46	13°♑22'37	0.68004 AU	
direct	8704 Aug 10 07:20	3°♑56'29		
	8704 Oct 29 16:07	0°♒		
	8704 Dec 20 02:46	0°♓		
	8705 Feb 02 20:08	0°♈		
	8705 Mar 15 23:24	0°♉		
	8705 Apr 23 23:26	0°♊		
	8705 May 31 23:18	0°♋		
asc. node	8705 Jun 01 17:38	0°♋36'21		
evening set	8705 Jun 02 17:21	1°♋23'21		
	8705 Jul 08 23:13	0°♌		
conjunction	8705 Aug 12 08:55	26°♌35'37	0°46'11	
minimum elong	8705 Aug 12 05:41	26°♌29'28	0°46'01	
	8705 Aug 16 20:34	0°♍		
	8705 Sep 26 08:49	0°♎		
max. Earth dist.	8705 Oct 01 12:39	3°♎42'59	2.45053 AU	
morning rise	8705 Oct 15 10:05	13°♎36'08		
	8705 Nov 08 00:38	0°♏		
	8705 Dec 23 04:30	0°♐		
	8706 Feb 09 10:06	0°♑		
	8706 Apr 04 00:57	0°♒		
desc. node	8706 May 12 14:46	17°♒25'27		
retrograde	8706 Jun 26 10:53	27°♒03'07		
opposition	8706 Aug 04 03:25	18°♒17'43	-2°51'34	
greatest brilliancy	8706 Aug 04 14:41	18°♒06'52	-1.5m	
min. Earth dist.	8706 Aug 09 05:04	16°♒20'25	0.63226 AU	
direct	8706 Sep 14 11:58	8°♒17'37		
	8706 Nov 22 06:25	0°♓		
	8707 Jan 10 23:54	0°♈		
	8707 Feb 22 12:50	0°♉		
	8707 Apr 03 01:06	0°♊		
asc. node	8707 Apr 19 19:21	13°♊04'43		
	8707 May 11 08:01	0°♋		
	8707 Jun 18 15:44	0°♌		
	8707 Jul 27 23:19	0°♍		
evening set	8707 Aug 13 18:34	12°♍28'00		
	8707 Sep 06 23:13	0°♎		
conjunction	8707 Oct 10 22:01	23°♎47'00	1°05'50	
minimum elong	8707 Oct 10 22:38	23°♎48'03	1°05'54	
	8707 Oct 20 00:17	0°♏		
max. Earth dist.	8707 Nov 08 08:43	13°♏01'59	2.57807 AU	
morning rise	8707 Dec 01 05:44	28°♏07'11		
	8707 Dec 04 02:59	0°♐		
	8708 Jan 20 03:49	0°♑		
	8708 Mar 09 04:39	0°♒		
desc. node	8708 Mar 29 11:20	11°♒56'39		
	8708 Apr 30 13:11	0°♓		
	8708 Jul 04 15:47	0°♈		
retrograde	8708 Aug 10 09:22	6°♈50'03		
	8708 Sep 13 07:56	30°℞♓		
opposition	8708 Sep 14 21:18	29°♓26'43	-5°17'25	
greatest brilliancy	8708 Sep 16 09:43	28°♓53'59	-2.0m	
min. Earth dist.	8708 Sep 23 03:07	26°♓29'48	0.52240 AU	
direct	8708 Oct 23 18:55	20°♓24'49		
	8708 Dec 03 06:02	0°♈		
	8709 Jan 25 08:58	0°♉		
asc. node	8709 Mar 06 20:49	28°♉36'34		
	8709 Mar 08 17:57	0°♊		
	8709 Apr 17 11:33	0°♋		
	8709 May 26 21:36	0°♌		
	8709 Jul 06 05:56	0°♍		
	8709 Aug 17 05:23	0°♎		
	8709 Sep 30 02:23	0°♏		
evening set	8709 Oct 04 00:29	2°♏37'19		
	8709 Nov 14 16:40	0°♐		
conjunction	8709 Nov 22 01:47	4°♐46'10	0°41'19	
minimum elong	8709 Nov 22 02:57	4°♐48'02	0°41'30	
max. Earth dist.	8709 Dec 03 06:02	11°♐57'32	2.65718 AU	
	8709 Dec 31 13:05	0°♑		
morning rise	8710 Jan 06 12:58	3°♑47'59		
desc. node	8710 Feb 14 06:56	28°♑12'49		
	8710 Feb 17 03:19	0°♒		
	8710 Apr 06 05:35	0°♓		
	8710 May 25 04:21	0°♈		
	8710 Jul 15 15:53	0°♉		
	8710 Sep 19 15:10	0°♊		
retrograde	8710 Oct 16 16:17	4°♊09'59		
	8710 Nov 12 09:01	30°℞♉		
opposition	8710 Nov 16 05:33	28°♉55'13	-4°31'28	
greatest brilliancy	8710 Nov 17 09:03	28°♉35'36	-2.8m	
min. Earth dist.	8710 Nov 22 01:56	27°♉15'24	0.39000 AU	
direct	8710 Dec 18 11:16	22°♉58'36		
	8711 Jan 20 14:06	0°♊		

asc. node	8711 Jan 22 20:38	0°♊54'29	
	8711 Mar 16 12:13	0°♋	
	8711 Apr 30 03:20	0°♌	
	8711 Jun 12 16:15	0°♍	
	8711 Jul 26 22:53	0°♎	
	8711 Sep 10 12:02	0°♏	
	8711 Oct 27 04:16	0°♐	
evening set	8711 Nov 13 08:31	10°♐55'18	
	8711 Dec 13 10:45	0°♑	
max. Earth dist.	8711 Dec 25 22:22	7°♑54'55	2.68155 AU
conjunction	8711 Dec 28 14:02	9°♑35'53	0°02'27
minimum elong	8711 Dec 28 14:07	9°♑36'00	0°02'40
behind sun begin	8711 Dec 27 19:50	9°♑07'02	
behind sun end	8711 Dec 29 08:23	10°♑04'59	
desc. node	8712 Jan 02 03:57	12°♑30'18	
	8712 Jan 29 15:14	0°♒	
morning rise	8712 Feb 10 03:56	7°♒22'58	
	8712 Mar 16 04:31	0°♓	
	8712 Apr 30 20:03	0°♈	
	8712 Jun 14 12:53	0°♉	
	8712 Jul 28 11:55	0°♊	
	8712 Sep 10 11:27	0°♋	
	8712 Oct 27 09:26	0°♌	
asc. node	8712 Dec 09 20:46	20°♌29'09	
retrograde	8713 Jan 02 18:06	24°♌22'45	
min. Earth dist.	8713 Jan 28 17:50	19°♌58'24	0.39757 AU
opposition	8713 Feb 04 19:11	17°♌49'27	3°49'10
greatest brilliancy	8713 Feb 03 17:22	18°♌09'11	-2.8m
direct	8713 Mar 07 01:47	12°♌17'51	
	8713 May 06 00:07	0°♍	
	8713 Jun 29 17:44	0°♎	
	8713 Aug 18 18:08	0°♏	
	8713 Oct 06 18:25	0°♐	
desc. node	8713 Nov 19 03:41	26°♐52'22	
	8713 Nov 24 03:48	0°♑	
evening set	8713 Dec 18 11:46	15°♑18'05	
	8714 Jan 10 13:25	0°♒	
max. Earth dist.	8714 Jan 16 17:29	3°♒58'07	2.65089 AU
conjunction	8714 Feb 01 02:44	13°♒56'24	-0°37'08
minimum elong	8714 Feb 01 01:44	13°♒54'46	0°36'56
	8714 Feb 25 12:24	0°♓	
morning rise	8714 Mar 18 00:36	13°♓45'04	
	8714 Apr 10 18:56	0°♈	
	8714 May 23 08:40	0°♉	
	8714 Jul 03 10:44	0°♊	
	8714 Aug 12 11:43	0°♋	
	8714 Sep 21 07:14	0°♌	
asc. node	8714 Oct 27 19:33	26°♌47'16	
	8714 Nov 01 08:04	0°♍	
	8714 Dec 17 00:10	0°♎	
retrograde	8715 Feb 25 00:22	25°♎15'34	
min. Earth dist.	8715 Mar 27 19:04	18°♎44'32	0.53151 AU
greatest brilliancy	8715 Apr 02 22:29	16°♎24'45	-2.0m
opposition	8715 Apr 04 07:17	15°♎53'28	5°16'00
direct	8715 May 09 13:13	8°♎07'06	
	8715 Jul 20 09:50	0°♏	
	8715 Sep 14 18:52	0°♐	
desc. node	8715 Oct 07 04:42	12°♐55'44	
	8715 Nov 04 20:51	0°♑	
	8715 Dec 23 05:35	0°♒	
evening set	8716 Jan 24 09:37	20°♒49'57	
	8716 Feb 07 04:39	0°♓	
max. Earth dist.	8716 Feb 11 23:18	3°♓12'30	2.56728 AU
conjunction	8716 Mar 11 17:38	22°♓55'02	-1°04'31
minimum elong	8716 Mar 11 16:49	22°♓53'37	1°04'29
	8716 Mar 21 20:07	0°♈	
morning rise	8716 May 01 23:02	29°♈41'03	
	8716 May 02 09:18	0°♉	
	8716 Jun 11 06:31	0°♊	
	8716 Jul 20 02:10	0°♋	
	8716 Aug 27 15:02	0°♌	
asc. node	8716 Sep 13 15:12	13°♌07'23	
	8716 Oct 05 20:15	0°♍	
	8716 Nov 15 23:52	0°♎	
	8716 Dec 31 07:10	0°♏	
	8717 Feb 28 09:25	0°♐	
retrograde	8717 Apr 04 00:32	6°♐48'54	
	8717 May 06 04:38	30°℞♏	
min. Earth dist.	8717 May 10 06:52	28°♏24'15	0.63723 AU
opposition	8717 May 14 05:54	26°♏49'35	3°20'31
greatest brilliancy	8717 May 13 19:06	27°♏00'20	-1.5m
direct	8717 Jun 22 02:19	17°♏44'10	
	8717 Aug 12 19:07	0°♐	
desc. node	8717 Aug 24 05:42	4°♐51'55	
	8717 Oct 12 18:24	0°♑	
	8717 Dec 02 18:44	0°♒	
	8718 Jan 18 11:26	0°♓	
	8718 Mar 03 00:33	0°♈	
evening set	8718 Mar 07 16:07	3°♈19'00	
max. Earth dist.	8718 Mar 22 01:16	13°♈42'28	2.44093 AU
	8718 Apr 13 01:56	0°♉	
conjunction	8718 May 02 12:48	14°♉43'36	-0°55'16
minimum elong	8718 May 02 15:08	14°♉48'04	0°55'23
	8718 May 22 08:17	0°♊	
	8718 Jun 29 14:07	0°♋	
morning rise	8718 Jul 08 08:02	6°♋54'18	
asc. node	8718 Aug 01 12:40	25°♋58'20	
	8718 Aug 06 15:53	0°♌	
	8718 Sep 14 10:46	0°♍	
	8718 Oct 24 20:06	0°♎	
	8718 Dec 06 19:47	0°♏	
	8719 Jan 23 01:12	0°♐	
	8719 Mar 22 06:35	0°♑	
retrograde	8719 May 08 10:17	10°♑59'45	
opposition	8719 Jun 17 21:16	1°♑14'31	0°50'05
greatest brilliancy	8719 Jun 17 21:23	1°♑14'24	-1.3m
min. Earth dist.	8719 Jun 17 17:12	1°♑18'33	0.68092 AU
	8719 Jun 21 00:27	30°℞♐	
desc. node	8719 Jul 12 06:08	23°♐11'36	
direct	8719 Jul 28 20:01	21°♐26'38	
	8719 Sep 08 18:30	0°♑	
	8719 Nov 10 05:16	0°♒	
	8719 Dec 29 09:37	0°♓	
	8720 Feb 11 13:26	0°♈	
	8720 Mar 23 13:48	0°♉	
	8720 May 01 14:09	0°♊	
evening set	8720 May 04 17:09	2°♊26'51	
	8720 Jun 08 14:22	0°♋	
asc. node	8720 Jun 18 11:37	7°♋50'18	
conjunction	8720 Jul 13 18:06	27°♋47'57	0°18'03
minimum elong	8720 Jul 13 16:10	27°♋44'09	0°17'48
	8720 Jul 16 13:22	0°♌	
	8720 Aug 24 08:20	0°♍	
max. Earth dist.	8720 Sep 03 17:31	7°♍50'55	2.39482 AU
morning rise	8720 Sep 21 23:56	21°♍25'58	
	8720 Oct 03 17:30	0°♎	
	8720 Nov 15 07:41	0°♏	
	8720 Dec 30 16:22	0°♐	
	8721 Feb 17 22:27	0°♑	

	8721 Apr 17 09:45	0°♒	
desc. node	8721 May 29 04:51	12°♒49'28	
retrograde	8721 Jun 11 13:06	13°♒50'15	
opposition	8721 Jul 20 23:48	4°♒43'18	-1°49'15
greatest brilliancy	8721 Jul 21 04:38	4°♒38'35	-1.4m
min. Earth dist.	8721 Jul 24 14:26	3°♒18'43	0.65868 AU
	8721 Aug 02 12:12	30°℞♑	
direct	8721 Aug 31 13:33	24°♑39'54	
	8721 Oct 02 00:51	0°♒	
	8721 Dec 04 09:26	0°♓	
	8722 Jan 20 04:44	0°♈	
	8722 Mar 02 23:05	0°♉	
	8722 Apr 11 04:28	0°♊	
asc. node	8722 May 06 11:09	19°♊51'22	
	8722 May 19 07:18	0°♋	
	8722 Jun 26 10:41	0°♌	
evening set	8722 Jul 18 17:18	17°♌13'23	
	8722 Aug 04 12:56	0°♍	
	8722 Sep 14 06:48	0°♎	
conjunction	8722 Sep 20 07:11	4°♎18'33	1°05'57
minimum elong	8722 Sep 20 06:27	4°♎17'14	1°05'57
max. Earth dist.	8722 Oct 27 04:53	0°♏04'08	2.53274 AU
	8722 Oct 27 02:28	0°♏	
morning rise	8722 Nov 14 15:25	12°♏31'55	
	8722 Dec 11 03:14	0°♐	
	8723 Jan 27 10:34	0°♑	
	8723 Mar 18 14:06	0°♒	
desc. node	8723 Apr 16 01:41	15°♒51'04	
	8723 May 14 00:34	0°♓	
retrograde	8723 Jul 22 19:37	20°♓17'48	
opposition	8723 Aug 28 18:52	12°♓16'35	-4°26'32
greatest brilliancy	8723 Aug 29 20:51	11°♓52'20	-1.7m
min. Earth dist.	8723 Sep 04 23:08	9°♓36'03	0.57186 AU
direct	8723 Oct 08 00:57	2°♓40'15	
	8723 Dec 23 05:39	0°♈	
	8724 Feb 07 00:48	0°♉	
	8724 Mar 18 16:30	0°♊	
asc. node	8724 Mar 23 11:48	3°♊39'46	
	8724 Apr 26 14:27	0°♋	
	8724 Jun 04 10:20	0°♌	
	8724 Jul 14 06:06	0°♍	
	8724 Aug 24 18:06	0°♎	
evening set	8724 Sep 15 15:55	15°♎17'26	
	8724 Oct 07 05:24	0°♏	
conjunction	8724 Nov 06 11:12	20°♏08'05	0°53'37
minimum elong	8724 Nov 06 12:30	20°♏10'13	0°53'46
	8724 Nov 21 13:26	0°♐	
max. Earth dist.	8724 Nov 23 17:12	1°♐24'04	2.63264 AU
morning rise	8724 Dec 23 15:11	20°♐38'00	
	8725 Jan 07 09:23	0°♑	
	8725 Feb 24 08:39	0°♒	
desc. node	8725 Mar 02 22:15	4°♒03'13	
	8725 Apr 14 13:33	0°♓	
	8725 Jun 05 07:41	0°♈	
	8725 Aug 06 11:11	0°♉	
retrograde	8725 Sep 16 20:02	8°♉42'57	
opposition	8725 Oct 19 10:30	2°♉36'24	-5°43'07
greatest brilliancy	8725 Oct 21 05:29	2°♉02'07	-2.5m
	8725 Oct 27 15:59	30°℞♈	
min. Earth dist.	8725 Oct 27 20:22	29°♈56'38	0.43742 AU
direct	8725 Nov 23 19:11	25°♈13'27	
	8725 Dec 20 18:22	0°♉	
asc. node	8726 Feb 08 13:31	25°♉21'45	
	8726 Feb 15 18:50	0°♊	
	8726 Mar 31 02:35	0°♋	

	8726 May 11 10:52	0°♌	
	8726 Jun 22 04:32	0°♍	
	8726 Aug 04 06:27	0°♎	
	8726 Sep 17 23:46	0°♏	
evening set	8726 Oct 29 11:32	27°♏00'04	
	8726 Nov 03 03:27	0°♐	
conjunction	8726 Dec 14 18:01	26°♐33'03	0°18'10
minimum elong	8726 Dec 14 18:34	26°♐33'57	0°18'23
max. Earth dist.	8726 Dec 17 08:56	28°♐12'58	2.67868 AU
	8726 Dec 20 04:22	0°♑	
desc. node	8727 Jan 18 18:50	18°♑47'02	
morning rise	8727 Jan 27 16:33	24°♑26'17	
	8727 Feb 05 10:40	0°♒	
	8727 Mar 24 10:45	0°♓	
	8727 May 10 00:27	0°♈	
	8727 Jun 25 07:14	0°♉	
	8727 Aug 10 23:23	0°♊	
	8727 Sep 29 19:52	0°♋	
retrograde	8727 Dec 06 13:18	23°♋08'28	
asc. node	8727 Dec 27 13:12	20°♋20'47	
min. Earth dist.	8728 Jan 03 06:18	18°♋37'18	0.36834 AU
opposition	8728 Jan 05 23:02	17°♋53'33	0°43'41
greatest brilliancy	8728 Jan 05 20:34	17°♋55'14	-3.1m
direct	8728 Feb 04 06:13	12°♋59'58	
	8728 Apr 01 02:08	0°♌	
	8728 May 23 17:11	0°♍	
	8728 Jul 10 17:57	0°♎	
	8728 Aug 27 08:16	0°♏	
	8728 Oct 14 04:38	0°♐	
	8728 Dec 01 00:58	0°♑	
evening set	8728 Dec 04 14:08	2°♑14'08	
desc. node	8728 Dec 05 17:05	2°♑56'37	
max. Earth dist.	8729 Jan 07 14:08	23°♑47'21	2.66954 AU
	8729 Jan 17 07:05	0°♒	
conjunction	8729 Jan 18 02:07	0°♒30'31	-0°22'27
minimum elong	8729 Jan 18 01:28	0°♒29'28	0°22'15
morning rise	8729 Mar 03 00:50	29°♒04'53	
	8729 Mar 04 10:14	0°♓	
	8729 Apr 18 03:13	0°♈	
	8729 May 31 08:23	0°♉	
	8729 Jul 12 05:25	0°♊	
	8729 Aug 22 04:15	0°♋	
	8729 Oct 02 04:09	0°♌	
asc. node	8729 Nov 13 12:09	29°♌20'30	
	8729 Nov 14 12:24	0°♍	
	8730 Jan 10 11:35	0°♎	
retrograde	8730 Feb 06 19:43	4°♎58'44	
	8730 Mar 05 08:47	30°℞♍	
min. Earth dist.	8730 Mar 07 03:38	29°♍23'21	0.47780 AU
greatest brilliancy	8730 Mar 13 22:37	26°♍57'35	-2.3m
opposition	8730 Mar 15 13:22	26°♍22'35	5°27'37
direct	8730 Apr 18 00:00	19°♍22'50	
	8730 Jun 02 13:30	0°♎	
	8730 Aug 02 07:06	0°♏	
	8730 Sep 23 12:11	0°♐	
desc. node	8730 Oct 23 17:38	18°♐05'50	
	8730 Nov 12 05:54	0°♑	
	8730 Dec 30 03:12	0°♒	
evening set	8731 Jan 09 15:17	6°♒44'46	
max. Earth dist.	8731 Feb 01 03:29	21°♒25'48	2.60632 AU
	8731 Feb 14 01:13	0°♓	
conjunction	8731 Feb 24 09:45	6°♓57'29	-0°56'28
minimum elong	8731 Feb 24 08:36	6°♓55'32	0°56'21
	8731 Mar 29 21:42	0°♈	

morning rise	8731 Apr 13 06:47	10°♈08'55	
	8731 May 10 19:14	0°♉	
	8731 Jun 20 01:54	0°♊	
	8731 Jul 29 06:28	0°♋	
	8731 Sep 06 03:15	0°♌	
asc. node	8731 Oct 01 10:27	19°♌17'32	
	8731 Oct 15 17:46	0°♍	
	8731 Nov 26 16:31	0°♎	
	8732 Jan 13 19:31	0°♏	
retrograde	8732 Mar 20 18:41	22°♏12'24	
min. Earth dist.	8732 Apr 24 01:51	14°♏26'53	0.60262 AU
opposition	8732 Apr 29 12:14	12°♏18'05	4°12'56
greatest brilliancy	8732 Apr 28 17:23	12°♏36'42	-1.6m
direct	8732 Jun 06 03:17	3°♏37'57	
	8732 Aug 27 10:19	0°♐	
desc. node	8732 Sep 09 18:33	6°♐49'48	
	8732 Oct 21 13:37	0°♑	
	8732 Dec 10 05:42	0°♒	
	8733 Jan 25 13:22	0°♓	
evening set	8733 Feb 17 14:43	15°♓39'49	
max. Earth dist.	8733 Mar 03 21:42	25°♓37'16	2.49403 AU
	8733 Mar 10 02:31	0°♈	
conjunction	8733 Apr 10 03:09	22°♈26'24	-1°05'42
minimum elong	8733 Apr 10 03:58	22°♈27'54	1°05'47
	8733 Apr 20 07:53	0°♉	
	8733 May 29 19:24	0°♊	
morning rise	8733 Jun 08 17:03	7°♊40'27	
	8733 Jul 07 05:57	0°♋	
	8733 Aug 14 10:56	0°♌	
asc. node	8733 Aug 18 06:50	2°♌59'23	
	8733 Sep 22 07:58	0°♍	
	8733 Nov 01 20:39	0°♎	
	8733 Dec 15 07:26	0°♏	
	8734 Feb 02 09:39	0°♐	
retrograde	8734 Apr 25 05:37	28°♐20'07	
min. Earth dist.	8734 Jun 03 02:05	19°♐05'49	0.67144 AU
opposition	8734 Jun 04 18:08	18°♐25'51	1°49'50
greatest brilliancy	8734 Jun 04 15:51	18°♐28'08	-1.3m
direct	8734 Jul 15 01:25	8°♐51'25	
desc. node	8734 Jul 28 19:08	9°♐55'22	
	8734 Sep 24 20:51	0°♑	
	8734 Nov 19 06:44	0°♒	
	8735 Jan 06 04:02	0°♓	
	8735 Feb 18 23:55	0°♈	
	8735 Mar 31 23:38	0°♉	
evening set	8735 Apr 10 02:54	6°♉54'28	
	8735 May 10 01:33	0°♊	
max. Earth dist.	8735 May 24 22:01	11°♊38'56	2.36828 AU
conjunction	8735 Jun 14 03:42	27°♊38'12	-0°15'49
minimum elong	8735 Jun 14 05:22	27°♊41'30	0°16'01
behind sun begin	8735 Jun 14 01:11	27°♊33'15	
behind sun end	8735 Jun 14 09:32	27°♊49'46	
	8735 Jun 17 03:18	0°♋	
asc. node	8735 Jul 06 03:31	15°♋03'12	
	8735 Jul 25 02:35	0°♌	
morning rise	8735 Aug 26 08:43	25°♌02'32	
	8735 Sep 01 20:32	0°♍	
	8735 Oct 12 04:19	0°♎	
	8735 Nov 23 19:15	0°♏	
	8736 Jan 08 13:43	0°♐	
	8736 Feb 28 13:29	0°♑	
	8736 May 14 12:17	0°♒	
retrograde	8736 May 28 12:03	1°♒07'20	
	8736 Jun 10 18:17	30°℞♑	
desc. node	8736 Jun 14 19:07	29°♑12'22	
opposition	8736 Jul 07 11:44	21°♑42'47	-0°47'02
greatest brilliancy	8736 Jul 07 12:49	21°♑41'42	-1.3m
min. Earth dist.	8736 Jul 09 14:44	20°♑52'31	0.67521 AU
direct	8736 Aug 18 00:01	11°♑42'02	
	8736 Oct 21 07:41	0°♒	
	8736 Dec 14 06:21	0°♓	
	8737 Jan 28 14:54	0°♈	
	8737 Mar 10 23:15	0°♉	
	8737 Apr 19 01:11	0°♊	
asc. node	8737 May 23 03:37	26°♊53'19	
	8737 May 27 01:52	0°♋	
evening set	8737 Jun 19 14:55	18°♋37'30	
	8737 Jul 04 02:19	0°♌	
	8737 Aug 12 00:26	0°♍	
conjunction	8737 Aug 27 11:14	11°♍35'52	0°56'45
minimum elong	8737 Aug 27 08:40	11°♍31'07	0°56'38
	8737 Sep 21 13:33	0°♎	
max. Earth dist.	8737 Oct 12 08:34	14°♎49'21	2.48105 AU
morning rise	8737 Oct 27 02:22	25°♎06'04	
	8737 Nov 03 05:20	0°♏	
	8737 Dec 18 06:30	0°♐	
	8738 Feb 04 01:00	0°♑	
	8738 Mar 27 23:11	0°♒	
desc. node	8738 May 02 17:05	17°♒57'05	
	8738 Jun 02 19:49	0°♓	
retrograde	8738 Jul 05 13:54	5°♓29'29	
	8738 Aug 04 10:49	30°℞♒	
opposition	8738 Aug 12 17:08	26°♒58'10	-3°27'28
greatest brilliancy	8738 Aug 13 09:09	26°♒42'52	-1.6m
min. Earth dist.	8738 Aug 18 13:17	24°♒44'18	0.61317 AU
direct	8738 Sep 22 18:26	17°♒03'40	
	8738 Nov 11 23:01	0°♓	
	8739 Jan 04 10:22	0°♈	
	8739 Feb 16 19:29	0°♉	
	8739 Mar 28 15:40	0°♊	
asc. node	8739 Apr 10 04:07	9°♊42'08	
	8739 May 06 03:04	0°♋	
	8739 Jun 13 14:09	0°♌	
	8739 Jul 23 00:56	0°♍	
evening set	8739 Aug 26 20:40	25°♍29'36	
	8739 Sep 02 03:54	0°♎	
	8739 Oct 15 07:12	0°♏	
conjunction	8739 Oct 21 10:03	4°♏08'31	1°02'41
minimum elong	8739 Oct 21 11:05	4°♏10'16	1°02'48
max. Earth dist.	8739 Nov 14 16:30	20°♏19'55	2.59965 AU
	8739 Nov 29 10:35	0°♐	
morning rise	8739 Dec 10 00:12	6°♐51'13	
	8740 Jan 15 08:13	0°♑	
	8740 Mar 03 21:23	0°♒	
desc. node	8740 Mar 19 13:04	9°♒25'12	
	8740 Apr 23 18:52	0°♓	
	8740 Jun 20 03:35	0°♈	
retrograde	8740 Aug 22 18:08	17°♈44'09	
opposition	8740 Sep 26 08:09	10°♈45'44	-5°37'57
greatest brilliancy	8740 Sep 28 01:22	10°♈09'52	-2.1m
min. Earth dist.	8740 Oct 04 23:32	7°♈46'40	0.49223 AU
direct	8740 Nov 03 04:26	2°♈12'22	
	8741 Jan 16 07:36	0°♉	
asc. node	8741 Feb 25 04:22	26°♉43'56	
	8741 Mar 01 17:41	0°♊	
	8741 Apr 11 06:34	0°♋	
	8741 May 21 04:12	0°♌	
	8741 Jun 30 21:22	0°♍	
	8741 Aug 12 04:16	0°♎	
	8741 Sep 25 06:54	0°♏	

evening set	8741 Oct 13 15:35	12°♏09'16	
	8741 Nov 10 00:54	0°♐	
conjunction	8741 Nov 30 12:21	13°♐10'12	0°33'11
minimum elong	8741 Nov 30 13:20	13°♐11'46	0°33'23
max. Earth dist.	8741 Dec 08 12:08	18°♐16'45	2.66727 AU
	8741 Dec 26 22:01	0°♑	
morning rise	8742 Jan 14 06:46	11°♑38'23	
desc. node	8742 Feb 04 09:13	24°♑58'20	
	8742 Feb 12 08:27	0°♒	
	8742 Mar 31 23:48	0°♓	
	8742 May 18 21:42	0°♈	
	8742 Jul 06 20:33	0°♉	
	8742 Aug 29 01:13	0°♊	
retrograde	8742 Nov 03 20:45	21°♊03'55	
opposition	8742 Dec 03 19:21	16°♊06'52	-3°00'27
greatest brilliancy	8742 Dec 04 07:49	15°♊58'26	-3.0m
min. Earth dist.	8742 Dec 07 00:02	15°♊15'11	0.37278 AU
direct	8743 Jan 03 07:50	10°♊50'26	
asc. node	8743 Jan 13 06:09	11°♊31'09	
	8743 Mar 03 13:29	0°♋	
	8743 Apr 21 18:34	0°♌	
	8743 Jun 06 00:26	0°♍	
	8743 Jul 21 05:35	0°♎	
	8743 Sep 05 08:20	0°♏	
	8743 Oct 22 08:57	0°♐	
evening set	8743 Nov 21 14:00	19°♐06'24	
	8743 Dec 08 19:39	0°♑	
desc. node	8743 Dec 23 06:23	9°♑08'57	
max. Earth dist.	8743 Dec 30 22:23	14°♑00'47	2.67966 AU
conjunction	8744 Jan 05 10:09	17°♑30'06	-0°06'56
minimum elong	8744 Jan 05 09:56	17°♑29'46	0°06'43
behind sun begin	8744 Jan 04 17:00	17°♑02'51	
behind sun end	8744 Jan 06 02:53	17°♑56'41	
	8744 Jan 25 00:18	0°♒	
morning rise	8744 Feb 17 23:35	15°♒25'13	
	8744 Mar 11 09:37	0°♓	
	8744 Apr 25 16:14	0°♈	
	8744 Jun 08 18:33	0°♉	
	8744 Jul 21 19:53	0°♊	
	8744 Sep 02 08:34	0°♋	
	8744 Oct 15 22:46	0°♌	
asc. node	8744 Nov 30 06:18	27°♌00'54	
	8744 Dec 06 11:46	0°♍	
retrograde	8745 Jan 16 13:02	10°♍34'40	
min. Earth dist.	8745 Feb 11 20:29	5°♍51'54	0.42350 AU
greatest brilliancy	8745 Feb 18 13:37	3°♍41'11	-2.6m
opposition	8745 Feb 20 00:41	3°♍12'28	4°48'49
	8745 Mar 02 15:46	30°℞♌	
direct	8745 Mar 23 09:33	27°♌09'24	
	8745 Apr 14 01:00	0°♍	
	8745 Jun 21 09:46	0°♎	
	8745 Aug 12 15:47	0°♏	
	8745 Oct 01 13:34	0°♐	
desc. node	8745 Nov 09 05:49	23°♐43'08	
	8745 Nov 19 08:56	0°♑	
evening set	8745 Dec 26 11:26	23°♑19'27	
	8746 Jan 05 22:23	0°♒	
max. Earth dist.	8746 Jan 22 04:14	10°♒28'30	2.63726 AU
conjunction	8746 Feb 09 08:33	22°♒21'49	-0°44'58
minimum elong	8746 Feb 09 07:26	22°♒19'59	0°44'48
	8746 Feb 20 21:12	0°♓	
morning rise	8746 Mar 27 01:49	23°♓08'14	
	8746 Apr 06 00:09	0°♈	
	8746 May 18 07:55	0°♉	
	8746 Jun 28 02:22	0°♊	
	8746 Aug 06 19:03	0°♋	
	8746 Sep 15 04:19	0°♌	
asc. node	8746 Oct 18 03:02	24°♌37'16	
	8746 Oct 25 12:10	0°♍	
	8746 Dec 08 03:35	0°♎	
	8747 Feb 03 12:46	0°♏	
retrograde	8747 Mar 06 10:08	5°♏56'37	
	8747 Apr 04 17:16	30°℞♎	
min. Earth dist.	8747 Apr 07 12:42	28°♎56'56	0.55902 AU
greatest brilliancy	8747 Apr 13 04:20	26°♎45'40	-1.8m
opposition	8747 Apr 14 08:17	26°♎18'33	4°57'28
direct	8747 May 20 11:54	18°♎10'45	
	8747 Jul 09 06:05	0°♏	
	8747 Sep 08 10:04	0°♐	
desc. node	8747 Sep 27 07:12	10°♐32'59	
	8747 Oct 30 15:26	0°♑	
	8747 Dec 18 10:13	0°♒	
evening set	8748 Feb 02 05:08	29°♒47'30	
	8748 Feb 02 12:36	0°♓	
max. Earth dist.	8748 Feb 18 23:23	11°♓07'11	2.54302 AU
	8748 Mar 17 03:44	0°♈	
conjunction	8748 Mar 21 17:50	3°♈14'54	-1°06'57
minimum elong	8748 Mar 21 17:27	3°♈14'13	1°06'57
	8748 Apr 27 14:34	0°♉	
morning rise	8748 May 14 10:33	12°♉34'26	
	8748 Jun 06 08:24	0°♊	
	8748 Jul 15 00:35	0°♋	
	8748 Aug 22 09:55	0°♌	
asc. node	8748 Sep 03 23:55	9°♌45'48	
	8748 Sep 30 10:46	0°♍	
	8748 Nov 10 06:26	0°♎	
	8748 Dec 24 14:24	0°♏	
	8749 Feb 15 17:50	0°♐	
retrograde	8749 Apr 11 20:53	15°♐11'13	
min. Earth dist.	8749 May 19 02:36	6°♐27'42	0.65217 AU
opposition	8749 May 22 06:23	5°♐12'06	2°47'58
greatest brilliancy	8749 May 21 23:16	5°♐19'12	-1.4m
	8749 Jun 05 10:13	30°℞♏	
direct	8749 Jun 30 16:49	25°♏55'06	
	8749 Jul 28 13:26	0°♐	
desc. node	8749 Aug 14 08:31	5°♐25'22	
	8749 Oct 06 06:02	0°♑	
	8749 Nov 27 12:00	0°♒	
	8750 Jan 13 14:11	0°♓	
	8750 Feb 26 05:59	0°♈	
evening set	8750 Mar 18 23:23	14°♈56'29	
max. Earth dist.	8750 Apr 05 06:13	27°♈43'12	2.41166 AU
	8750 Apr 08 07:18	0°♉	
conjunction	8750 May 16 20:13	29°♉28'31	-0°44'10
minimum elong	8750 May 16 23:05	29°♉34'06	0°44'19
	8750 May 17 12:25	0°♊	
	8750 Jun 24 16:58	0°♋	
asc. node	8750 Jul 22 21:16	22°♋15'27	
morning rise	8750 Jul 26 04:31	24°♋51'25	
	8750 Aug 01 17:36	0°♌	
	8750 Sep 09 11:20	0°♍	
	8750 Oct 19 18:49	0°♎	
	8750 Dec 01 12:55	0°♏	
	8751 Jan 17 00:23	0°♐	
	8751 Mar 12 06:51	0°♑	
retrograde	8751 May 16 00:15	18°♑38'34	
opposition	8751 Jun 25 08:32	8°♑59'40	0°14'28
greatest brilliancy	8751 Jun 25 08:48	8°♑59'23	-1.3m
min. Earth dist.	8751 Jun 25 23:46	8°♑44'33	0.68168 AU

desc. node	8751 Jul 02 08:52	6°♉15'07	
	8751 Jul 24 15:43	30°℞♐	
direct	8751 Aug 05 13:51	29°♐06'05	
	8751 Aug 18 02:52	0°♑	
	8751 Nov 03 12:27	0°♒	
	8751 Dec 23 23:44	0°♓	
	8752 Feb 06 12:38	0°♈	
	8752 Mar 18 15:44	0°♉	
	8752 Apr 26 16:31	0°♊	
evening set	8752 May 20 18:16	18°♊57'26	
	8752 Jun 03 16:45	0°♋	
asc. node	8752 Jun 08 18:47	4°♋01'55	
	8752 Jul 11 15:53	0°♌	
conjunction	8752 Jul 30 19:35	14°♌55'37	0°35'26
minimum elong	8752 Jul 30 16:25	14°♌49'28	0°35'13
	8752 Aug 19 11:18	0°♍	
max. Earth dist.	8752 Sep 21 11:26	24°♍36'51	2.42534 AU
	8752 Sep 28 21:02	0°♎	
morning rise	8752 Oct 05 17:22	4°♎56'24	
	8752 Nov 10 10:27	0°♏	
	8752 Dec 25 14:26	0°♐	
	8753 Feb 12 02:57	0°♑	
	8753 Apr 08 04:10	0°♒	
desc. node	8753 May 19 07:25	16°♒38'18	
retrograde	8753 Jun 19 22:17	21°♒48'13	
opposition	8753 Jul 28 23:26	12°♒52'29	-2°25'36
greatest brilliancy	8753 Jul 29 07:34	12°♒44'35	-1.4m
min. Earth dist.	8753 Aug 02 09:00	11°♒10'01	0.64537 AU
direct	8753 Sep 08 10:57	2°♒50'07	
	8753 Nov 27 01:08	0°♓	
	8754 Jan 14 09:48	0°♈	
	8754 Feb 25 15:16	0°♉	
	8754 Apr 06 00:50	0°♊	
asc. node	8754 Apr 26 20:06	16°♊16'56	
	8754 May 14 05:52	0°♋	
	8754 Jun 21 10:57	0°♌	
	8754 Jul 30 15:00	0°♍	
evening set	8754 Aug 02 21:48	2°♍27'49	
	8754 Sep 09 10:57	0°♎	
conjunction	8754 Oct 02 09:00	16°♎13'14	1°06'49
minimum elong	8754 Oct 02 09:07	16°♎13'27	1°06'52
	8754 Oct 22 08:07	0°♏	
max. Earth dist.	8754 Nov 03 13:11	8°♏16'37	2.55886 AU
morning rise	8754 Nov 24 07:36	22°♏06'41	
	8754 Dec 06 08:38	0°♐	
	8755 Jan 22 10:40	0°♑	
	8755 Mar 12 20:27	0°♒	
desc. node	8755 Apr 06 03:55	14°♒02'16	
	8755 May 05 12:43	0°♓	
retrograde	8755 Aug 02 13:07	29°♓55'19	
opposition	8755 Sep 07 18:14	22°♓13'45	-4°57'04
greatest brilliancy	8755 Sep 09 02:07	21°♓44'30	-1.9m
min. Earth dist.	8755 Sep 15 13:45	19°♓22'34	0.54553 AU
direct	8755 Oct 17 08:04	12°♓54'09	
	8755 Dec 13 04:12	0°♈	
	8756 Jan 31 03:02	0°♉	
	8756 Mar 12 15:25	0°♊	
asc. node	8756 Mar 13 21:53	0°♊57'12	
	8756 Apr 20 23:17	0°♋	
	8756 May 30 01:48	0°♌	
	8756 Jul 09 02:54	0°♍	
	8756 Aug 19 19:43	0°♎	
evening set	8756 Sep 26 08:51	25°♎53'42	
	8756 Oct 02 10:49	0°♏	
conjunction	8756 Nov 15 13:01	29°♏07'42	0°46'44
minimum elong	8756 Nov 15 14:17	29°♏09'45	0°46'54
	8756 Nov 16 21:13	0°♐	
max. Earth dist.	8756 Nov 29 07:26	8°♐02'19	2.64728 AU
morning rise	8756 Dec 31 16:16	28°♐43'32	
	8757 Jan 02 16:30	0°♑	
	8757 Feb 19 09:55	0°♒	
desc. node	8757 Feb 20 23:24	0°♒58'27	
	8757 Apr 08 22:26	0°♓	
	8757 May 28 21:24	0°♈	
	8757 Jul 22 07:14	0°♉	
retrograde	8757 Oct 03 02:06	22°♉54'12	
opposition	8757 Nov 03 11:00	17°♉17'47	-5°14'43
greatest brilliancy	8757 Nov 04 23:51	16°♉50'06	-2.7m
min. Earth dist.	8757 Nov 10 19:08	15°♉06'09	0.40928 AU
direct	8757 Dec 07 03:45	10°♉42'20	
asc. node	8758 Jan 29 22:04	27°♉26'58	
	8758 Feb 03 14:20	0°♊	
	8758 Mar 22 21:10	0°♋	
	8758 May 04 16:42	0°♌	
	8758 Jun 16 06:25	0°♍	
	8758 Jul 29 21:54	0°♎	
	8758 Sep 13 00:24	0°♏	
	8758 Oct 29 10:01	0°♐	
evening set	8758 Nov 07 01:53	5°♐32'08	
	8758 Dec 15 13:26	0°♑	
conjunction	8758 Dec 22 17:02	4°♑32'06	0°09'00
minimum elong	8758 Dec 22 17:19	4°♑32'33	0°09'13
behind sun begin	8758 Dec 22 01:56	4°♑08'11	
behind sun end	8758 Dec 23 08:42	4°♑56'56	
max. Earth dist.	8758 Dec 22 10:53	4°♑22'21	2.68134 AU
desc. node	8759 Jan 08 20:18	15°♑24'42	
	8759 Jan 31 18:38	0°♒	
morning rise	8759 Feb 04 09:15	2°♒18'09	
	8759 Mar 19 12:51	0°♓	
	8759 May 04 13:50	0°♈	
	8759 Jun 18 22:07	0°♉	
	8759 Aug 02 21:04	0°♊	
	8759 Sep 17 15:02	0°♋	
	8759 Nov 09 05:14	0°♌	
asc. node	8759 Dec 17 22:16	11°♌22'16	
retrograde	8759 Dec 23 00:46	11°♌33'24	
min. Earth dist.	8760 Jan 18 08:01	7°♌14'14	0.38087 AU
opposition	8760 Jan 23 19:42	5°♌39'33	2°41'11
greatest brilliancy	8760 Jan 23 04:24	5°♌50'35	-2.9m
direct	8760 Feb 22 10:58	0°♌29'56	
	8760 May 14 00:16	0°♍	
	8760 Jul 03 23:08	0°♎	
	8760 Aug 21 18:03	0°♏	
	8760 Oct 09 04:49	0°♐	
desc. node	8760 Nov 25 19:42	29°♐40'32	
	8760 Nov 26 08:07	0°♑	
evening set	8760 Dec 12 13:10	10°♑11'52	
	8761 Jan 12 16:27	0°♒	
max. Earth dist.	8761 Jan 12 19:40	0°♒05'10	2.66023 AU
conjunction	8761 Jan 26 01:31	8°♒36'53	-0°31'12
minimum elong	8761 Jan 26 00:39	8°♒35'29	0°31'01
	8761 Feb 27 17:59	0°♓	
morning rise	8761 Mar 11 11:04	7°♓47'33	
	8761 Apr 13 05:45	0°♈	
	8761 May 26 02:57	0°♉	
	8761 Jul 06 13:28	0°♊	
	8761 Aug 15 23:38	0°♋	
	8761 Sep 25 05:23	0°♌	
asc. node	8761 Nov 03 21:40	28°♌34'24	

	8761 Nov 05 23:13	0°♍	
	8761 Dec 24 01:18	0°♎	
retrograde	8762 Feb 17 10:28	17°♎20'37	
min. Earth dist.	8762 Mar 19 03:19	11°♎13'48	0.50787 AU
greatest brilliancy	8762 Mar 25 14:25	8°♎49'44	-2.1m
opposition	8762 Mar 27 02:37	8°♎15'53	5°25'37
direct	8762 Apr 30 13:10	0°♎49'14	
	8762 Jul 25 11:29	0°♏	
	8762 Sep 17 18:47	0°♐	
desc. node	8762 Oct 13 20:28	15°♐18'22	
	8762 Nov 07 06:11	0°♑	
	8762 Dec 25 10:30	0°♒	
evening set	8763 Jan 17 23:18	15°♒10'17	
max. Earth dist.	8763 Feb 07 06:25	28°♒33'35	2.58560 AU
	8763 Feb 09 10:10	0°♓	
conjunction	8763 Mar 05 12:39	16°♓20'01	-1°01'41
minimum elong	8763 Mar 05 11:39	16°♓18'18	1°01'36
	8763 Mar 25 04:48	0°♈	
morning rise	8763 Apr 24 02:22	21°♈21'08	
	8763 May 05 22:36	0°♉	
	8763 Jun 15 00:29	0°♊	
	8763 Jul 24 00:18	0°♋	
	8763 Aug 31 16:20	0°♌	
asc. node	8763 Sep 21 17:12	16°♌09'55	
	8763 Oct 10 00:16	0°♍	
	8763 Nov 20 09:17	0°♎	
	8764 Jan 05 11:20	0°♏	
	8764 Mar 15 11:36	0°♐	
retrograde	8764 Mar 28 23:56	1°♐10'46	
	8764 Apr 10 23:00	30°℞♏	
min. Earth dist.	8764 May 03 09:55	23°♏03'14	0.62292 AU
greatest brilliancy	8764 May 07 11:12	21°♏26'38	-1.5m
opposition	8764 May 08 01:20	21°♏12'36	3°43'20
direct	8764 Jun 15 09:30	12°♏17'54	
	8764 Aug 18 16:42	0°♐	
desc. node	8764 Aug 30 21:38	5°♐42'26	
	8764 Oct 15 18:42	0°♑	
	8764 Dec 05 05:34	0°♒	
	8765 Jan 20 19:44	0°♓	
evening set	8765 Feb 27 14:13	25°♓52'55	
	8765 Mar 05 10:06	0°♈	
max. Earth dist.	8765 Mar 13 11:13	5°♈44'16	2.46492 AU
	8765 Apr 15 14:20	0°♉	
conjunction	8765 Apr 22 08:09	5°♉03'18	-1°01'04
minimum elong	8765 Apr 22 09:50	5°♉06'28	1°01'11
	8765 May 24 23:30	0°♊	
morning rise	8765 Jun 24 21:33	24°♊09'43	
	8765 Jul 02 07:34	0°♋	
asc. node	8765 Aug 08 14:09	29°♋20'19	
	8765 Aug 09 10:25	0°♌	
	8765 Sep 17 05:13	0°♍	
	8765 Oct 27 14:27	0°♎	
	8765 Dec 09 16:11	0°♏	
	8766 Jan 26 10:10	0°♐	
	8766 Mar 30 01:01	0°♑	
retrograde	8766 May 02 19:11	6°♑07'47	
	8766 Jun 02 18:41	30°℞♐	
min. Earth dist.	8766 Jun 11 11:00	26°♐38'28	0.67802 AU
opposition	8766 Jun 12 07:36	26°♐17'58	1°15'00
greatest brilliancy	8766 Jun 12 06:58	26°♐18'35	-1.3m
desc. node	8766 Jul 18 22:21	16°♐41'53	
direct	8766 Jul 23 00:21	16°♐35'45	
	8766 Sep 15 10:57	0°♑	
	8766 Nov 13 09:02	0°♒	
	8767 Jan 01 01:12	0°♓	
	8767 Feb 14 03:02	0°♈	
	8767 Mar 27 04:25	0°♉	
evening set	8767 Apr 24 01:04	21°♉16'39	
	8767 May 05 06:08	0°♊	
	8767 Jun 12 07:12	0°♋	
asc. node	8767 Jun 26 13:12	11°♋17'42	
conjunction	8767 Jul 01 05:40	15°♋00'23	0°03'26
minimum elong	8767 Jul 01 05:16	14°♋59'35	0°03'13
behind sun begin	8767 Jun 29 23:06	13°♋59'54	
behind sun end	8767 Jul 02 11:26	15°♋59'14	
	8767 Jul 20 05:56	0°♌	
max. Earth dist.	8767 Aug 11 18:08	17°♌33'02	2.37371 AU
	8767 Aug 27 23:23	0°♍	
morning rise	8767 Sep 11 11:12	10°♍57'07	
	8767 Oct 07 06:29	0°♎	
	8767 Nov 18 19:06	0°♏	
	8768 Jan 03 05:23	0°♐	
	8768 Feb 21 23:35	0°♑	
	8768 Apr 23 22:13	0°♒	
desc. node	8768 Jun 04 21:34	8°♒51'45	
retrograde	8768 Jun 05 10:53	8°♒51'52	
	8768 Jul 14 03:53	30°℞♑	
opposition	8768 Jul 15 03:54	29°♑36'28	-1°23'22
greatest brilliancy	8768 Jul 15 06:47	29°♑33'39	-1.3m
min. Earth dist.	8768 Jul 18 02:11	28°♑27'31	0.66740 AU
direct	8768 Aug 25 17:46	19°♑33'43	
	8768 Oct 10 18:10	0°♒	
	8768 Dec 08 00:28	0°♓	
	8769 Jan 23 05:12	0°♈	
	8769 Mar 05 20:23	0°♉	
	8769 Apr 14 00:49	0°♊	
asc. node	8769 May 13 12:36	23°♊12'06	
	8769 May 22 02:50	0°♋	
	8769 Jun 29 04:32	0°♌	
evening set	8769 Jul 06 06:27	5°♌31'16	
	8769 Aug 07 03:56	0°♍	
conjunction	8769 Sep 10 09:04	25°♍22'32	1°03'21
minimum elong	8769 Sep 10 07:33	25°♍19'47	1°03'18
	8769 Sep 16 18:21	0°♎	
max. Earth dist.	8769 Oct 21 08:24	24°♎25'41	2.51028 AU
	8769 Oct 29 10:41	0°♏	
morning rise	8769 Nov 06 22:07	5°♏46'37	
	8769 Dec 13 09:51	0°♐	
	8770 Jan 29 19:46	0°♑	
	8770 Mar 21 13:08	0°♒	
desc. node	8770 Apr 22 18:21	17°♒19'45	
	8770 May 19 17:18	0°♓	
retrograde	8770 Jul 15 03:02	14°♓15'25	
opposition	8770 Aug 21 15:51	5°♓59'43	-4°02'05
greatest brilliancy	8770 Aug 22 13:14	5°♓39'30	-1.7m
min. Earth dist.	8770 Aug 28 05:58	3°♓30'31	0.59154 AU
	8770 Sep 07 11:56	30°℞♒	
direct	8770 Oct 01 07:51	26°♒13'43	
	8770 Oct 26 12:35	0°♓	
	8770 Dec 28 03:46	0°♈	
	8771 Feb 10 19:03	0°♉	
	8771 Mar 23 01:48	0°♊	
asc. node	8771 Mar 31 12:51	6°♊30'10	
	8771 Apr 30 18:38	0°♋	
	8771 Jun 08 09:48	0°♌	
	8771 Jul 18 00:16	0°♍	
	8771 Aug 28 06:50	0°♎	
evening set	8771 Sep 07 23:43	7°♎33'15	
	8771 Oct 10 13:09	0°♏	

conjunction	8771 Oct 31 07:58	13°♏56'41	0°57'54
minimum elong	8771 Oct 31 09:13	13°♏58'45	0°58'02
max. Earth dist.	8771 Nov 20 15:16	27°♏19'17	2.61889 AU
	8771 Nov 24 17:51	0°♐	
morning rise	8771 Dec 18 11:28	15°♐19'34	
	8772 Jan 10 13:18	0°♑	
	8772 Feb 27 17:21	0°♒	
desc. node	8772 Mar 09 14:38	6°♒39'43	
	8772 Apr 17 12:53	0°♓	
	8772 Jun 10 01:58	0°♈	
retrograde	8772 Sep 05 07:50	29°♈36'48	
opposition	8772 Oct 08 20:47	23°♈06'10	-5°46'49
greatest brilliancy	8772 Oct 10 16:35	22°♈29'42	-2.3m
min. Earth dist.	8772 Oct 17 14:14	20°♈13'08	0.46179 AU
direct	8772 Nov 14 11:18	15°♈08'35	
	8773 Jan 04 02:12	0°♉	
asc. node	8773 Feb 15 14:32	25°♉45'48	
	8773 Feb 21 19:39	0°♊	
	8773 Apr 04 14:52	0°♋	
	8773 May 15 04:48	0°♌	
	8773 Jun 25 09:12	0°♍	
	8773 Aug 07 00:41	0°♎	
	8773 Sep 20 09:54	0°♏	
evening set	8773 Oct 22 19:40	21°♏15'17	
	8773 Nov 05 08:12	0°♐	
conjunction	8773 Dec 08 17:28	21°♐22'45	0°24'31
minimum elong	8773 Dec 08 18:13	21°♐23'56	0°24'44
max. Earth dist.	8773 Dec 13 16:15	24°♐31'49	2.67463 AU
	8773 Dec 22 06:43	0°♑	
morning rise	8774 Jan 21 23:24	19°♑27'50	
desc. node	8774 Jan 25 11:12	21°♑40'32	
	8774 Feb 07 14:34	0°♒	
	8774 Mar 26 20:54	0°♓	
	8774 May 12 23:22	0°♈	
	8774 Jun 29 06:01	0°♉	
	8774 Aug 16 22:24	0°♊	
	8774 Oct 13 00:53	0°♋	
retrograde	8774 Nov 22 14:10	9°♋19'59	
opposition	8774 Dec 22 09:27	4°♋22'18	-0°57'13
greatest brilliancy	8774 Dec 22 10:51	4°♋21'22	-3.1m
min. Earth dist.	8774 Dec 22 08:41	4°♋22'48	0.36588 AU
asc. node	8775 Jan 03 14:46	1°♋22'00	
	8775 Jan 11 20:23	30°℞♊	
direct	8775 Jan 20 20:49	29°♊27'42	
	8775 Jan 29 21:11	0°♋	
	8775 Apr 11 10:34	0°♌	
	8775 May 29 17:04	0°♍	
	8775 Jul 15 05:55	0°♎	
	8775 Aug 31 02:05	0°♏	
	8775 Oct 17 12:35	0°♐	
evening set	8775 Nov 29 14:56	27°♐07'41	
	8775 Dec 04 04:14	0°♑	
desc. node	8775 Dec 13 08:56	5°♑48'21	
max. Earth dist.	8776 Jan 04 23:31	20°♑08'39	2.67510 AU
conjunction	8776 Jan 13 05:19	25°♑23'52	-0°16'05
minimum elong	8776 Jan 13 04:50	25°♑23'06	0°15'53
behind sun begin	8776 Jan 13 02:53	25°♑19'59	
behind sun end	8776 Jan 13 06:47	25°♑26'13	
	8776 Jan 20 09:59	0°♒	
morning rise	8776 Feb 25 22:19	23°♒36'44	
	8776 Mar 06 16:20	0°♓	
	8776 Apr 20 15:41	0°♈	
	8776 Jun 03 06:15	0°♉	
	8776 Jul 15 14:53	0°♊	
	8776 Aug 26 04:03	0°♋	
	8776 Oct 07 00:12	0°♌	
asc. node	8776 Nov 20 13:34	29°♌32'11	
	8776 Nov 21 08:01	0°♍	
retrograde	8777 Jan 29 01:23	25°♍24'45	
min. Earth dist.	8777 Feb 25 09:14	20°♍13'46	0.45317 AU
greatest brilliancy	8777 Mar 04 06:02	17°♍51'46	-2.4m
opposition	8777 Mar 05 20:55	17°♍17'54	5°19'55
direct	8777 Apr 07 10:21	10°♍42'21	
	8777 Jun 11 02:52	0°♎	
	8777 Aug 06 02:55	0°♏	
	8777 Sep 26 05:17	0°♐	
desc. node	8777 Oct 30 09:06	20°♐40'58	
	8777 Nov 14 12:50	0°♑	
	8778 Jan 01 07:16	0°♒	
evening set	8778 Jan 03 12:15	1°♒24'49	
max. Earth dist.	8778 Jan 27 19:58	17°♒09'33	2.62121 AU
	8778 Feb 16 06:35	0°♓	
conjunction	8778 Feb 17 19:19	1°♓01'16	-0°52'01
minimum elong	8778 Feb 17 18:09	0°♓59'19	0°51'53
	8778 Apr 01 06:53	0°♈	
morning rise	8778 Apr 05 14:14	3°♈00'31	
	8778 May 13 09:51	0°♉	
	8778 Jun 22 22:13	0°♊	
	8778 Aug 01 08:03	0°♋	
	8778 Sep 09 09:37	0°♌	
asc. node	8778 Oct 08 11:54	22°♌02'04	
	8778 Oct 19 05:24	0°♍	
	8778 Nov 30 15:50	0°♎	
	8779 Jan 19 21:57	0°♏	
retrograde	8779 Mar 15 08:13	15°♏56'32	
min. Earth dist.	8779 Apr 17 16:47	8°♏30'57	0.58421 AU
opposition	8779 Apr 23 18:56	6°♏07'39	4°33'17
greatest brilliancy	8779 Apr 22 20:05	6°♏30'04	-1.7m
	8779 May 12 01:36	30°℞♎	
direct	8779 May 30 19:09	27°♎41'06	
	8779 Jun 20 01:35	0°♏	
	8779 Sep 01 11:11	0°♐	
desc. node	8779 Sep 17 10:07	8°♐31'12	
	8779 Oct 25 06:11	0°♑	
	8779 Dec 13 13:46	0°♒	
	8780 Jan 28 20:24	0°♓	
evening set	8780 Feb 11 08:50	9°♓06'48	
max. Earth dist.	8780 Feb 26 15:47	19°♓36'53	2.51666 AU
	8780 Mar 12 11:36	0°♈	
conjunction	8780 Apr 01 09:37	14°♈15'29	-1°07'13
minimum elong	8780 Apr 01 09:51	14°♈15'55	1°07'16
	8780 Apr 22 20:30	0°♉	
morning rise	8780 May 28 03:13	26°♉39'30	
	8780 Jun 01 11:33	0°♊	
	8780 Jul 10 00:49	0°♋	
	8780 Aug 17 07:33	0°♌	
asc. node	8780 Aug 25 08:26	6°♌15'42	
	8780 Sep 25 05:18	0°♍	
	8780 Nov 04 19:02	0°♎	
	8780 Dec 18 11:07	0°♏	
	8781 Feb 06 15:54	0°♐	
retrograde	8781 Apr 19 13:21	23°♐17'30	
min. Earth dist.	8781 May 27 17:10	14°♐16'44	0.66405 AU
opposition	8781 May 30 01:38	13°♐20'25	2°14'14
greatest brilliancy	8781 May 29 21:30	13°♐24'32	-1.4m
direct	8781 Jul 09 00:51	3°♐53'21	
desc. node	8781 Aug 04 10:48	7°♐35'04	
	8781 Sep 29 01:47	0°♑	
	8781 Nov 22 01:35	0°♒	
	8782 Jan 08 16:01	0°♓	

	8782 Feb 21 11:29	0°♈	
evening set	8782 Mar 31 02:04	27°♈24'35	
	8782 Apr 03 13:06	0°♉	
max. Earth dist.	8782 Apr 24 22:11	16°♉14'14	2.38448 AU
	8782 May 12 17:06	0°♊	
conjunction	8782 Jun 01 08:11	15°♊23'04	-0°29'17
minimum elong	8782 Jun 01 10:48	15°♊28'13	0°29'28
	8782 Jun 19 20:14	0°♋	
asc. node	8782 Jul 13 04:58	18°♋29'03	
	8782 Jul 27 19:51	0°♌	
morning rise	8782 Aug 13 00:28	12°♌39'26	
	8782 Sep 04 12:51	0°♍	
	8782 Oct 14 19:03	0°♎	
	8782 Nov 26 09:25	0°♏	
	8783 Jan 11 07:42	0°♐	
	8783 Mar 04 06:03	0°♑	
retrograde	8783 May 23 16:43	26°♑17'22	
desc. node	8783 Jun 22 11:08	20°♑43'04	
opposition	8783 Jul 02 20:48	16°♑45'54	-0°21'32
greatest brilliancy	8783 Jul 02 21:07	16°♑45'34	-1.3m
min. Earth dist.	8783 Jul 04 07:24	16°♑11'41	0.67938 AU
direct	8783 Aug 13 06:52	6°♑47'59	
	8783 Oct 26 23:51	0°♒	
	8783 Dec 18 08:28	0°♓	
	8784 Feb 01 09:46	0°♈	
	8784 Mar 13 17:08	0°♉	
	8784 Apr 21 19:13	0°♊	
	8784 May 29 19:42	0°♋	
asc. node	8784 May 30 04:33	0°♋17'32	
evening set	8784 Jun 06 10:23	6°♋02'01	
	8784 Jul 06 19:06	0°♌	
	8784 Aug 14 15:01	0°♍	
conjunction	8784 Aug 15 20:30	0°♍55'54	0°49'08
minimum elong	8784 Aug 15 17:19	0°♍49'53	0°48'59
	8784 Sep 24 01:13	0°♎	
max. Earth dist.	8784 Oct 04 13:20	7°♎33'29	2.45636 AU
morning rise	8784 Oct 18 05:40	17°♎15'12	
	8784 Nov 05 14:24	0°♏	
	8784 Dec 20 14:46	0°♐	
	8785 Feb 06 14:11	0°♑	
	8785 Mar 31 11:38	0°♒	
desc. node	8785 May 09 09:38	18°♒17'12	
	8785 Jun 26 11:42	0°♓	
retrograde	8785 Jun 28 16:59	0°♓01'47	
	8785 Jun 30 21:46	30°♓℞	
opposition	8785 Aug 06 06:41	21°♒18'50	-3°01'43
greatest brilliancy	8785 Aug 06 18:56	21°♒07'02	-1.5m
min. Earth dist.	8785 Aug 11 11:13	19°♒18'56	0.62875 AU
direct	8785 Sep 16 13:25	11°♒19'58	
	8785 Nov 18 06:58	0°♓	
	8786 Jan 08 04:39	0°♈	
	8786 Feb 20 02:04	0°♉	
	8786 Mar 31 18:06	0°♊	
asc. node	8786 Apr 17 05:21	12°♊49'17	
	8786 May 09 02:35	0°♋	
	8786 Jun 16 10:27	0°♌	
	8786 Jul 25 17:09	0°♍	
evening set	8786 Aug 16 20:41	16°♍24'20	
	8786 Sep 04 15:29	0°♎	
conjunction	8786 Oct 13 11:19	27°♎10'26	1°05'09
minimum elong	8786 Oct 13 12:03	27°♎11'42	1°05'15
	8786 Oct 17 14:36	0°♏	
max. Earth dist.	8786 Nov 10 06:08	15°♏55'17	2.58233 AU
	8786 Dec 01 15:09	0°♐	
morning rise	8786 Dec 03 10:12	1°♐10'05	
	8787 Jan 17 13:20	0°♑	
	8787 Mar 07 09:29	0°♒	
desc. node	8787 Mar 27 05:27	11°♒45'54	
	8787 Apr 28 05:34	0°♓	
	8787 Jun 29 02:18	0°♈	
retrograde	8787 Aug 14 02:52	10°♈12'37	
opposition	8787 Sep 18 11:54	2°♈53'44	-5°22'53
greatest brilliancy	8787 Sep 20 01:30	2°♈20'10	-2.0m
	8787 Sep 26 15:35	30°♓℞	
min. Earth dist.	8787 Sep 26 20:59	29°♓55'20	0.51659 AU
direct	8787 Oct 27 05:04	23°♓57'03	
	8787 Nov 27 13:58	0°♈	
	8788 Jan 23 04:16	0°♉	
asc. node	8788 Mar 04 05:20	28°♉37'59	
	8788 Mar 06 02:02	0°♊	
	8788 Apr 15 00:07	0°♋	
	8788 May 24 11:49	0°♌	
	8788 Jul 03 20:23	0°♍	
	8788 Aug 14 19:23	0°♎	
	8788 Sep 27 15:34	0°♏	
evening set	8788 Oct 06 10:01	5°♏51'25	
	8788 Nov 12 04:58	0°♐	
conjunction	8788 Nov 24 05:02	7°♐45'12	0°39'02
minimum elong	8788 Nov 24 06:09	7°♐47'01	0°39'15
max. Earth dist.	8788 Dec 04 15:56	14°♐28'12	2.65941 AU
	8788 Dec 29 00:28	0°♑	
morning rise	8789 Jan 08 12:14	6°♑38'58	
desc. node	8789 Feb 11 01:27	27°♑48'10	
	8789 Feb 14 13:25	0°♒	
	8789 Apr 03 13:00	0°♓	
	8789 May 22 05:27	0°♈	
	8789 Jul 11 23:25	0°♉	
	8789 Sep 10 11:12	0°♊	
retrograde	8789 Oct 20 11:05	8°♊35'12	
opposition	8789 Nov 19 22:23	3°♊24'46	-4°13'09
greatest brilliancy	8789 Nov 20 22:45	3°♊07'32	-2.9m
min. Earth dist.	8789 Nov 25 07:59	1°♊53'42	0.38591 AU
	8789 Dec 02 17:09	30°♉℞	
direct	8789 Dec 21 18:39	27°♉36'39	
	8790 Jan 09 12:54	0°♊	
asc. node	8790 Jan 20 07:09	3°♊15'30	
	8790 Mar 12 17:44	0°♋	
	8790 Apr 27 03:10	0°♌	
	8790 Jun 09 22:27	0°♍	
	8790 Jul 24 07:43	0°♎	
	8790 Sep 07 22:01	0°♏	
	8790 Oct 24 14:56	0°♐	
evening set	8790 Nov 15 10:51	13°♐52'06	
	8790 Dec 10 22:00	0°♑	
max. Earth dist.	8790 Dec 27 11:09	10°♑29'17	2.68155 AU
desc. node	8790 Dec 29 22:49	12°♑03'56	
conjunction	8790 Dec 30 13:48	12°♑27'42	-0°00'20
minimum elong	8790 Dec 30 13:48	12°♑27'41	0°00'06
behind sun begin	8790 Dec 29 19:53	11°♑59'16	
behind sun end	8790 Dec 31 07:43	12°♑56'06	
	8791 Jan 27 03:01	0°♒	
morning rise	8791 Feb 12 02:50	10°♒14'44	
	8791 Mar 14 16:25	0°♓	
	8791 Apr 29 07:17	0°♈	
	8791 Jun 12 22:14	0°♉	
	8791 Jul 26 17:25	0°♊	
	8791 Sep 08 08:36	0°♋	
	8791 Oct 24 04:40	0°♌	
asc. node	8791 Dec 08 08:08	23°♌04'09	

retrograde	8792 Jan 07 00:57	28°♌54'14	
min. Earth dist.	8792 Feb 01 22:21	24°♌27'53	0.40202 AU
greatest brilliancy	8792 Feb 08 02:49	22°♌33'55	-2.8m
opposition	8792 Feb 09 07:10	22°♌12'00	4°07'08
direct	8792 Mar 10 18:19	16°♌34'54	
	8792 Apr 30 15:24	0°♍	
	8792 Jun 26 09:36	0°♎	
	8792 Aug 15 20:55	0°♏	
	8792 Oct 04 01:43	0°♐	
desc. node	8792 Nov 15 21:44	26°♐27'56	
	8792 Nov 21 13:48	0°♑	
evening set	8792 Dec 20 12:08	18°♑10'51	
	8793 Jan 08 01:34	0°♒	
max. Earth dist.	8793 Jan 18 03:04	6°♒28'14	2.64860 AU
conjunction	8793 Feb 03 03:43	16°♒52'18	-0°39'28
minimum elong	8793 Feb 03 02:40	16°♒50'36	0°39'18
	8793 Feb 23 02:18	0°♓	
morning rise	8793 Mar 20 04:25	16°♓50'07	
	8793 Apr 08 10:00	0°♈	
	8793 May 21 00:17	0°♉	
	8793 Jul 01 02:12	0°♊	
	8793 Aug 10 02:12	0°♋	
	8793 Sep 18 19:14	0°♌	
asc. node	8793 Oct 25 05:10	26°♌52'18	
	8793 Oct 29 13:53	0°♍	
	8793 Dec 13 10:18	0°♎	
retrograde	8794 Feb 27 07:34	28°♎42'49	
min. Earth dist.	8794 Mar 30 09:10	22°♎06'04	0.53689 AU
greatest brilliancy	8794 Apr 05 10:21	19°♎47'38	-1.9m
opposition	8794 Apr 06 18:20	19°♎17'02	5°12'35
direct	8794 May 12 04:09	11°♎26'36	
	8794 Jul 16 02:48	0°♏	
	8794 Sep 11 16:44	0°♐	
desc. node	8794 Oct 03 22:47	12°♐43'42	
	8794 Nov 02 03:08	0°♑	
	8794 Dec 20 16:25	0°♒	
evening set	8795 Jan 26 13:08	23°♒51'47	
	8795 Feb 04 18:46	0°♓	
max. Earth dist.	8795 Feb 13 19:46	6°♓04'20	2.56304 AU
conjunction	8795 Mar 15 02:00	26°♓10'44	-1°05'25
minimum elong	8795 Mar 15 01:18	26°♓09'31	1°05'23
	8795 Mar 20 12:43	0°♈	
	8795 May 01 03:37	0°♉	
morning rise	8795 May 05 17:38	3°♉23'15	
	8795 Jun 10 01:42	0°♊	
	8795 Jul 18 21:20	0°♋	
	8795 Aug 26 09:13	0°♌	
asc. node	8795 Sep 12 01:27	12°♌53'45	
	8795 Oct 04 12:04	0°♍	
	8795 Nov 14 10:56	0°♎	
	8795 Dec 29 06:43	0°♏	
	8796 Feb 23 13:10	0°♐	
retrograde	8796 Apr 05 23:55	9°♐47'49	
min. Earth dist.	8796 May 12 10:54	1°♐20'02	0.64032 AU
	8796 May 15 19:18	30°℞♏	
opposition	8796 May 16 07:08	29°♏48'13	3°11'38
greatest brilliancy	8796 May 15 21:11	29°♏58'07	-1.5m
direct	8796 Jun 24 07:13	20°♏40'33	
	8796 Aug 07 09:03	0°♐	
desc. node	8796 Aug 21 00:32	5°♐26'38	
	8796 Oct 09 14:16	0°♑	
	8796 Nov 30 01:52	0°♒	
	8797 Jan 16 00:05	0°♓	
	8797 Feb 28 16:41	0°♈	
evening set	8797 Mar 10 06:44	6°♈50'31	
max. Earth dist.	8797 Mar 25 01:58	17°♈34'55	2.43539 AU
	8797 Apr 10 20:28	0°♉	
conjunction	8797 May 05 16:04	18°♉48'22	-0°52'55
minimum elong	8797 May 05 18:34	18°♉53'10	0°53'04
	8797 May 20 04:15	0°♊	
	8797 Jun 27 10:37	0°♋	
morning rise	8797 Jul 12 04:44	11°♋38'56	
asc. node	8797 Jul 29 23:18	25°♋39'32	
	8797 Aug 04 11:58	0°♌	
	8797 Sep 12 05:23	0°♍	
	8797 Oct 22 12:00	0°♎	
	8797 Dec 04 07:03	0°♏	
	8798 Jan 20 02:34	0°♐	
	8798 Mar 17 11:43	0°♑	
retrograde	8798 May 10 08:19	13°♑48'41	
opposition	8798 Jun 19 19:23	4°♑04'20	0°39'38
greatest brilliancy	8798 Jun 19 19:35	4°♑04'08	-1.3m
min. Earth dist.	8798 Jun 19 18:12	4°♑05'30	0.68128 AU
	8798 Jun 30 10:42	30°℞♐	
desc. node	8798 Jul 09 01:13	27°♐16'02	
direct	8798 Jul 30 20:19	24°♐15'28	
	8798 Sep 02 08:45	0°♑	
	8798 Nov 07 01:37	0°♒	
	8798 Dec 26 18:40	0°♓	
	8799 Feb 09 04:08	0°♈	
	8799 Mar 22 07:36	0°♉	
	8799 Apr 30 09:34	0°♊	
evening set	8799 May 09 06:02	6°♊56'19	
	8799 Jun 07 10:20	0°♋	
asc. node	8799 Jun 16 20:33	7°♋28'28	
	8799 Jul 15 08:59	0°♌	
conjunction	8799 Jul 18 15:13	2°♌33'25	0°22'30
minimum elong	8799 Jul 18 12:52	2°♌28'48	0°22'17
	8799 Aug 23 02:50	0°♍	
max. Earth dist.	8799 Sep 09 00:47	12°♍45'47	2.40067 AU
morning rise	8799 Sep 26 05:43	25°♍29'27	
	8799 Oct 02 10:05	0°♎	
	8799 Nov 13 21:33	0°♏	
	8799 Dec 29 01:57	0°♐	
	8800 Feb 15 23:11	0°♑	
	8800 Apr 12 22:28	0°♒	
desc. node	8800 May 26 00:04	14°♒45'47	
retrograde	8800 Jun 13 14:22	16°♒41'02	
opposition	8800 Jul 22 23:20	7°♒35'50	-1°59'38
greatest brilliancy	8800 Jul 23 04:51	7°♒30'28	-1.4m
min. Earth dist.	8800 Jul 26 16:54	6°♒08'28	0.65653 AU
	8800 Aug 14 01:47	30°℞♑	
direct	8800 Sep 02 12:57	27°♑32'40	
	8800 Sep 23 07:27	0°♒	
	8800 Dec 01 05:41	0°♓	
	8801 Jan 17 15:17	0°♈	
	8801 Feb 28 15:14	0°♉	
	8801 Apr 08 23:05	0°♊	
asc. node	8801 May 03 20:56	19°♊32'40	
	8801 May 17 02:39	0°♋	
	8801 Jun 24 05:37	0°♌	
evening set	8801 Jul 22 07:10	21°♌40'17	
	8801 Aug 02 06:39	0°♍	
	8801 Sep 11 22:47	0°♎	
conjunction	8801 Sep 23 06:23	8°♎05'39	1°06'27
minimum elong	8801 Sep 23 05:54	8°♎04'48	1°06'28
	8801 Oct 24 16:24	0°♏	
max. Earth dist.	8801 Oct 29 06:35	3°♏08'01	2.53813 AU
morning rise	8801 Nov 17 01:43	15°♏47'58	

	8801 Dec 08 14:43	0°♐	
	8802 Jan 24 18:31	0°♑	
	8802 Mar 15 14:39	0°♒	
desc. node	8802 Apr 12 20:38	15°♒55'18	
	8802 May 09 23:23	0°♓	
retrograde	8802 Jul 25 06:16	23°♓26'32	
opposition	8802 Aug 31 02:56	15°♓28'33	-4°34'35
greatest brilliancy	8802 Sep 01 06:07	15°♓03'14	-1.8m
min. Earth dist.	8802 Sep 07 10:12	12°♓45'59	0.56723 AU
direct	8802 Oct 10 06:12	5°♓55'16	
	8802 Dec 19 15:44	0°♈	
	8803 Feb 04 08:19	0°♉	
	8803 Mar 17 06:43	0°♊	
asc. node	8803 Mar 21 22:57	3°♊33'03	
	8803 Apr 25 07:08	0°♋	
	8803 Jun 03 03:27	0°♌	
	8803 Jul 12 22:28	0°♍	
	8803 Aug 23 09:01	0°♎	
evening set	8803 Sep 19 07:01	18°♎45'53	
	8803 Oct 05 18:44	0°♏	
conjunction	8803 Nov 09 18:11	23°♏16'26	0°51'45
minimum elong	8803 Nov 09 19:29	23°♏18'33	0°51'55
	8803 Nov 20 01:15	0°♐	
max. Earth dist.	8803 Nov 26 09:22	4°♐06'55	2.63565 AU
morning rise	8803 Dec 26 16:43	23°♐34'21	
	8804 Jan 05 19:42	0°♑	
	8804 Feb 22 16:44	0°♒	
desc. node	8804 Feb 28 16:04	3°♒41'51	
	8804 Apr 11 16:43	0°♓	
	8804 Jun 01 21:30	0°♈	
	8804 Jul 31 01:03	0°♉	
retrograde	8804 Sep 20 09:30	12°♉41'04	
opposition	8804 Oct 22 16:58	6°♉40'31	-5°37'51
greatest brilliancy	8804 Oct 24 11:14	6°♉07'10	-2.5m
min. Earth dist.	8804 Oct 30 22:35	4°♉05'23	0.43171 AU
	8804 Nov 17 20:44	30°℞♈	
direct	8804 Nov 26 19:39	29°♈26'12	
	8804 Dec 05 18:06	0°♉	
asc. node	8805 Feb 05 23:34	26°♉10'21	
	8805 Feb 12 03:03	0°♊	
	8805 Mar 28 05:12	0°♋	
	8805 May 08 19:40	0°♌	
	8805 Jun 19 15:41	0°♍	
	8805 Aug 01 18:12	0°♎	
	8805 Sep 15 11:21	0°♏	
evening set	8805 Oct 31 15:37	0°♐01'30	
	8805 Oct 31 14:41	0°♐	
conjunction	8805 Dec 16 18:48	29°♐27'18	0°15'29
minimum elong	8805 Dec 16 19:16	29°♐28'04	0°15'43
behind sun begin	8805 Dec 16 16:33	29°♐23'44	
behind sun end	8805 Dec 16 22:00	29°♐32'24	
	8805 Dec 17 15:24	0°♑	
max. Earth dist.	8805 Dec 18 19:34	0°♑44'44	2.67940 AU
desc. node	8806 Jan 15 12:36	18°♑19'47	
morning rise	8806 Jan 29 15:40	27°♑18'09	
	8806 Feb 02 21:32	0°♒	
	8806 Mar 21 20:58	0°♓	
	8806 May 07 08:43	0°♈	
	8806 Jun 22 11:04	0°♉	
	8806 Aug 07 17:11	0°♊	
	8806 Sep 25 06:34	0°♋	
retrograde	8806 Dec 10 05:44	28°♋03'31	
asc. node	8806 Dec 24 23:31	26°♋37'19	
min. Earth dist.	8807 Jan 06 15:12	23°♋36'47	0.36980 AU
opposition	8807 Jan 09 22:26	22°♋42'32	1°13'38
greatest brilliancy	8807 Jan 09 17:34	22°♋45'52	-3.0m
direct	8807 Feb 08 06:11	17°♋47'15	
	8807 Mar 27 04:07	0°♌	
	8807 May 21 05:58	0°♍	
	8807 Jul 08 19:34	0°♎	
	8807 Aug 25 14:45	0°♏	
	8807 Oct 12 13:30	0°♐	
	8807 Nov 29 11:23	0°♑	
desc. node	8807 Dec 03 11:28	2°♑31'10	
evening set	8807 Dec 07 14:47	5°♑07'33	
max. Earth dist.	8808 Jan 10 02:44	26°♑22'19	2.66788 AU
	8808 Jan 15 18:50	0°♒	
conjunction	8808 Jan 21 02:46	3°♒25'12	-0°25'04
minimum elong	8808 Jan 21 02:03	3°♒24'03	0°24'52
	8808 Mar 01 23:02	0°♓	
morning rise	8808 Mar 05 03:11	2°♓05'43	
	8808 Apr 15 16:38	0°♈	
	8808 May 28 21:51	0°♉	
	8808 Jul 09 18:11	0°♊	
	8808 Aug 19 15:07	0°♋	
	8808 Sep 29 10:23	0°♌	
asc. node	8808 Nov 10 23:12	29°♌50'01	
	8808 Nov 11 05:12	0°♍	
	8809 Jan 03 03:15	0°♎	
retrograde	8809 Feb 09 09:09	8°♎46'28	
min. Earth dist.	8809 Mar 10 00:22	3°♎04'30	0.48345 AU
greatest brilliancy	8809 Mar 16 17:06	0°♎39'13	-2.2m
opposition	8809 Mar 18 07:42	0°♎04'04	5°29'27
	8809 Mar 18 12:10	30°℞♍	
direct	8809 Apr 20 21:55	22°♍59'07	
	8809 May 26 23:06	0°♎	
	8809 Jul 29 21:30	0°♏	
	8809 Sep 20 15:10	0°♐	
desc. node	8809 Oct 20 11:54	17°♐47'20	
	8809 Nov 09 14:08	0°♑	
	8809 Dec 27 14:41	0°♒	
evening set	8810 Jan 11 16:52	9°♒41'29	
max. Earth dist.	8810 Feb 02 17:14	24°♒04'57	2.60238 AU
	8810 Feb 11 15:04	0°♓	
conjunction	8810 Feb 26 14:52	10°♓04'44	-0°58'05
minimum elong	8810 Feb 26 13:44	10°♓02'50	0°58'00
	8810 Mar 27 13:17	0°♈	
morning rise	8810 Apr 15 19:29	13°♈36'37	
	8810 May 08 11:56	0°♉	
	8810 Jun 17 19:07	0°♊	
	8810 Jul 26 23:33	0°♋	
	8810 Sep 03 19:19	0°♌	
asc. node	8810 Sep 28 19:10	19°♌06'22	
	8810 Oct 13 07:08	0°♍	
	8810 Nov 23 23:20	0°♎	
	8811 Jan 10 04:42	0°♏	
retrograde	8811 Mar 23 19:34	25°♏17'58	
min. Earth dist.	8811 Apr 27 08:19	17°♏28'50	0.60674 AU
opposition	8811 May 02 16:00	15°♏22'43	4°05'22
greatest brilliancy	8811 May 01 22:11	15°♏40'19	-1.6m
direct	8811 Jun 09 11:10	6°♏39'51	
	8811 Aug 24 14:51	0°♐	
desc. node	8811 Sep 07 13:14	6°♐57'46	
	8811 Oct 19 15:34	0°♑	
	8811 Dec 08 15:15	0°♒	
	8812 Jan 24 03:19	0°♓	
evening set	8812 Feb 20 22:20	18°♓53'06	
max. Earth dist.	8812 Mar 06 02:52	28°♓48'21	2.48849 AU
	8812 Mar 07 19:25	0°♈	

conjunction	8812 Apr 12 20:40	26°♈06'12	-1°04'53
minimum elong	8812 Apr 12 21:42	26°♈08'05	1°04'58
	8812 Apr 18 02:39	0°♉	
	8812 May 27 15:05	0°♊	
morning rise	8812 Jun 12 05:35	12°♊06'44	
	8812 Jul 05 01:37	0°♋	
	8812 Aug 12 05:47	0°♌	
asc. node	8812 Aug 15 15:21	2°♌39'27	
greatest brilliancy	8812 Sep 13 11:22	24°♌59'08	1.2m
	8812 Sep 20 01:04	0°♍	
	8812 Oct 30 10:39	0°♎	
	8812 Dec 12 15:33	0°♏	
	8813 Jan 30 02:02	0°♐	
	8813 Apr 13 03:10	0°♑	
retrograde	8813 Apr 27 03:37	1°♑11'25	
	8813 May 10 12:43	30°℞♐	
min. Earth dist.	8813 Jun 05 04:06	21°♐54'38	0.67312 AU
opposition	8813 Jun 06 17:03	21°♐17'50	1°39'43
greatest brilliancy	8813 Jun 06 15:11	21°♐19'41	-1.3m
direct	8813 Jul 17 03:18	11°♐41'57	
desc. node	8813 Jul 25 14:11	12°♐06'49	
	8813 Sep 20 19:32	0°♑	
	8813 Nov 16 09:17	0°♒	
	8814 Jan 03 15:28	0°♓	
	8814 Feb 16 16:08	0°♈	
	8814 Mar 29 18:46	0°♉	
evening set	8814 Apr 13 03:08	10°♉51'27	
	8814 May 07 22:18	0°♊	
max. Earth dist.	8814 Jun 07 14:40	24°♊08'04	2.36603 AU
	8814 Jun 15 00:27	0°♋	
conjunction	8814 Jun 17 20:33	2°♋14'55	-0°11'24
minimum elong	8814 Jun 17 21:47	2°♋17'22	0°11'36
behind sun begin	8814 Jun 17 00:30	1°♋35'12	
behind sun end	8814 Jun 18 19:05	2°♋59'34	
asc. node	8814 Jul 03 14:28	14°♋43'25	
	8814 Jul 22 23:04	0°♌	
morning rise	8814 Aug 30 02:07	29°♌34'42	
	8814 Aug 30 15:23	0°♍	
	8814 Oct 09 20:39	0°♎	
	8814 Nov 21 08:01	0°♏	
	8815 Jan 05 20:40	0°♐	
	8815 Feb 25 06:17	0°♑	
	8815 May 04 08:00	0°♒	
retrograde	8815 May 31 11:56	3°♒57'36	
desc. node	8815 Jun 12 13:47	3°♒01'45	
	8815 Jun 25 11:43	30°℞♑	
opposition	8815 Jul 10 10:48	24°♑34'27	-0°57'42
greatest brilliancy	8815 Jul 10 12:15	24°♑33'02	-1.3m
min. Earth dist.	8815 Jul 12 16:51	23°♑41'15	0.67411 AU
direct	8815 Aug 21 00:17	14°♑33'23	
	8815 Oct 18 01:35	0°♒	
	8815 Dec 12 09:42	0°♓	
	8816 Jan 27 03:40	0°♈	
	8816 Mar 08 16:28	0°♉	
	8816 Apr 16 20:38	0°♊	
asc. node	8816 May 20 13:50	26°♊33'28	
	8816 May 24 22:08	0°♋	
evening set	8816 Jun 23 07:40	23°♋14'19	
	8816 Jul 01 22:19	0°♌	
greatest brilliancy	8816 Jul 01 23:50	0°♌02'59	1.2m
	8816 Aug 09 19:15	0°♍	
conjunction	8816 Aug 30 17:22	15°♍41'11	0°58'44
minimum elong	8816 Aug 30 15:01	15°♍36'49	0°58'39
	8816 Sep 19 06:26	0°♎	
max. Earth dist.	8816 Oct 14 17:53	18°♎09'05	2.48665 AU
morning rise	8816 Oct 29 17:53	28°♎34'25	
	8816 Oct 31 19:41	0°♏	
	8816 Dec 15 17:34	0°♐	
	8817 Feb 01 06:56	0°♑	
	8817 Mar 24 16:51	0°♒	
desc. node	8817 Apr 29 10:47	18°♒24'03	
	8817 May 27 01:21	0°♓	
retrograde	8817 Jul 07 20:14	8°♓30'02	
opposition	8817 Aug 14 21:23	0°♓01'14	-3°36'59
	8817 Aug 14 22:40	30°℞♒	
greatest brilliancy	8817 Aug 15 14:30	29°♒44'54	-1.6m
min. Earth dist.	8817 Aug 20 20:44	27°♒44'41	0.60941 AU
direct	8817 Sep 24 21:30	20°♒08'18	
	8817 Nov 06 19:49	0°♓	
	8818 Jan 01 11:41	0°♈	
	8818 Feb 14 07:37	0°♉	
	8818 Mar 26 07:59	0°♊	
asc. node	8818 Apr 07 13:42	9°♊27'42	
	8818 May 03 20:55	0°♋	
	8818 Jun 11 08:02	0°♌	
	8818 Jul 20 17:57	0°♍	
evening set	8818 Aug 29 18:31	29°♍15'25	
	8818 Aug 30 19:29	0°♎	
	8818 Oct 12 21:06	0°♏	
conjunction	8818 Oct 23 21:01	7°♏26'20	1°01'31
minimum elong	8818 Oct 23 22:07	7°♏28'12	1°01'38
max. Earth dist.	8818 Nov 16 11:12	23°♏08'09	2.60354 AU
	8818 Nov 26 22:36	0°♐	
morning rise	8818 Dec 12 03:54	9°♐52'12	
	8819 Jan 12 17:58	0°♑	
	8819 Mar 02 03:19	0°♒	
desc. node	8819 Mar 17 06:45	9°♒09'41	
	8819 Apr 21 15:57	0°♓	
	8819 Jun 16 15:20	0°♈	
retrograde	8819 Aug 26 17:12	21°♈16'57	
opposition	8819 Sep 30 03:11	14°♈23'35	-5°40'34
greatest brilliancy	8819 Oct 01 21:19	13°♈47'17	-2.2m
min. Earth dist.	8819 Oct 08 20:44	11°♈24'13	0.48662 AU
direct	8819 Nov 06 19:36	5°♈56'21	
	8820 Jan 13 13:08	0°♉	
asc. node	8820 Feb 23 15:19	26°♉57'53	
	8820 Feb 27 22:00	0°♊	
	8820 Apr 08 17:37	0°♋	
	8820 May 18 17:34	0°♌	
	8820 Jun 28 11:09	0°♍	
	8820 Aug 09 17:31	0°♎	
	8820 Sep 22 19:22	0°♏	
evening set	8820 Oct 15 22:42	15°♏18'06	
	8820 Nov 07 12:35	0°♐	
conjunction	8820 Dec 02 14:38	16°♐07'38	0°30'42
minimum elong	8820 Dec 02 15:34	16°♐09'06	0°30'55
max. Earth dist.	8820 Dec 09 21:29	20°♐46'53	2.66888 AU
	8820 Dec 24 09:04	0°♑	
morning rise	8821 Jan 16 06:17	14°♑30'30	
desc. node	8821 Feb 01 03:24	24°♑32'52	
	8821 Feb 09 18:33	0°♒	
	8821 Mar 29 07:48	0°♓	
	8821 May 16 01:03	0°♈	
	8821 Jul 03 13:07	0°♉	
	8821 Aug 24 06:41	0°♊	
retrograde	8821 Nov 08 00:50	25°♊52'12	
opposition	8821 Dec 07 19:57	20°♊56'32	-2°33'15
greatest brilliancy	8821 Dec 08 05:27	20°♊50'12	-3.0m
min. Earth dist.	8821 Dec 10 11:29	20°♊14'12	0.37080 AU
direct	8822 Jan 07 01:19	15°♊45'52	

asc. node	8822 Jan 10 16:22	15°♊51'13	
	8822 Feb 26 00:21	0°♋	
	8822 Apr 18 08:58	0°♌	
	8822 Jun 03 03:13	0°♍	
	8822 Jul 18 13:00	0°♎	
	8822 Sep 02 17:37	0°♏	
	8822 Oct 19 19:09	0°♐	
evening set	8822 Nov 23 14:23	21°♐59'35	
	8822 Dec 06 06:38	0°♑	
desc. node	8822 Dec 20 01:04	8°♑42'42	
max. Earth dist.	8823 Jan 01 11:46	16°♑36'20	2.67905 AU
conjunction	8823 Jan 07 09:00	20°♑20'48	-0°09'38
minimum elong	8823 Jan 07 08:42	20°♑20'20	0°09'24
behind sun begin	8823 Jan 06 17:35	19°♑56'18	
behind sun end	8823 Jan 07 23:49	20°♑44'22	
	8823 Jan 22 12:06	0°♒	
morning rise	8823 Feb 19 22:47	18°♒18'25	
	8823 Mar 09 21:58	0°♓	
	8823 Apr 24 04:24	0°♈	
	8823 Jun 07 05:25	0°♉	
	8823 Jul 20 04:00	0°♊	
	8823 Aug 31 11:16	0°♋	
	8823 Oct 13 12:36	0°♌	
asc. node	8823 Nov 28 15:06	28°♌28'15	
	8823 Dec 01 13:09	0°♍	
retrograde	8824 Jan 20 14:31	14°♍57'49	
min. Earth dist.	8824 Feb 16 02:01	10°♍09'15	0.42925 AU
greatest brilliancy	8824 Feb 22 19:49	7°♍56'12	-2.6m
opposition	8824 Feb 24 08:14	7°♍25'53	5°00'00
direct	8824 Mar 26 23:44	1°♍16'04	
	8824 Jun 17 13:22	0°♎	
	8824 Aug 09 15:05	0°♏	
	8824 Sep 28 19:30	0°♐	
desc. node	8824 Nov 06 00:48	23°♐21'51	
	8824 Nov 16 18:19	0°♑	
evening set	8824 Dec 28 11:11	26°♑11'46	
	8825 Jan 03 10:15	0°♒	
max. Earth dist.	8825 Jan 23 14:54	13°♒01'05	2.63454 AU
conjunction	8825 Feb 11 09:36	25°♒19'09	-0°47'04
minimum elong	8825 Feb 11 08:27	25°♒17'15	0°46'55
	8825 Feb 18 11:06	0°♓	
morning rise	8825 Mar 29 07:05	26°♓17'39	
	8825 Apr 03 15:41	0°♈	
	8825 May 16 00:26	0°♉	
	8825 Jun 25 19:12	0°♊	
	8825 Aug 04 11:13	0°♋	
	8825 Sep 12 18:26	0°♌	
asc. node	8825 Oct 15 13:28	24°♌37'10	
	8825 Oct 22 21:29	0°♍	
	8825 Dec 05 00:19	0°♎	
	8826 Jan 28 01:15	0°♏	
retrograde	8826 Mar 08 15:07	9°♏18'15	
min. Earth dist.	8826 Apr 09 23:58	2°♏14'03	0.56408 AU
	8826 Apr 15 18:11	30°℞♎	
opposition	8826 Apr 16 17:17	29°♎37'34	4°52'01
greatest brilliancy	8826 Apr 15 14:18	0°♏03'46	-1.8m
direct	8826 May 23 01:30	21°♎26'05	
	8826 Jul 03 09:17	0°♏	
	8826 Sep 05 02:58	0°♐	
desc. node	8826 Sep 24 01:50	10°♐27'35	
	8826 Oct 27 20:11	0°♑	
	8826 Dec 15 20:29	0°♒	
	8827 Jan 31 02:28	0°♓	
evening set	8827 Feb 04 09:44	2°♓52'46	
max. Earth dist.	8827 Feb 20 22:07	14°♓04'27	2.53827 AU
	8827 Mar 15 20:12	0°♈	
conjunction	8827 Mar 25 04:32	6°♈37'30	-1°07'18
minimum elong	8827 Mar 25 04:18	6°♈37'05	1°07'19
	8827 Apr 26 08:51	0°♉	
morning rise	8827 May 18 10:20	16°♉29'57	
	8827 Jun 05 03:45	0°♊	
	8827 Jul 13 20:13	0°♋	
	8827 Aug 21 04:52	0°♌	
asc. node	8827 Sep 02 10:23	9°♌30'16	
	8827 Sep 29 03:47	0°♍	
	8827 Nov 08 19:27	0°♎	
	8827 Dec 22 18:37	0°♏	
	8828 Feb 12 13:07	0°♐	
retrograde	8828 Apr 13 19:13	18°♐07'11	
min. Earth dist.	8828 May 21 05:47	9°♐20'45	0.65467 AU
opposition	8828 May 24 06:32	8°♐08'16	2°38'26
greatest brilliancy	8828 May 24 00:08	8°♐14'38	-1.4m
	8828 Jun 19 04:57	30°℞♏	
direct	8828 Jul 02 20:53	28°♏49'14	
	8828 Jul 17 06:39	0°♐	
desc. node	8828 Aug 11 03:03	6°♐24'51	
	8828 Oct 02 20:42	0°♑	
	8828 Nov 24 18:02	0°♒	
	8829 Jan 11 02:48	0°♓	
	8829 Feb 23 22:30	0°♈	
evening set	8829 Mar 21 16:30	18°♈34'41	
	8829 Apr 06 02:10	0°♉	
max. Earth dist.	8829 Apr 08 12:59	1°♉50'15	2.40612 AU
	8829 May 15 08:33	0°♊	
conjunction	8829 May 20 04:28	3°♊45'37	-0°40'55
minimum elong	8829 May 20 07:22	3°♊51'15	0°41'06
	8829 Jun 22 13:26	0°♋	
asc. node	8829 Jul 20 06:58	21°♋54'50	
morning rise	8829 Jul 30 03:01	29°♋39'20	
	8829 Jul 30 13:32	0°♌	
	8829 Sep 07 05:54	0°♍	
	8829 Oct 17 11:00	0°♎	
	8829 Nov 29 01:09	0°♏	
	8830 Jan 14 04:49	0°♐	
	8830 Mar 08 09:12	0°♑	
retrograde	8830 May 17 22:55	21°♑27'58	
opposition	8830 Jun 27 07:02	11°♑50'14	0°03'49
greatest brilliancy	8830 Jun 27 07:11	11°♑50'05	-1.3m
min. Earth dist.	8830 Jun 28 01:24	11°♑32'04	0.68152 AU
desc. node	8830 Jun 29 03:26	11°♑06'20	
direct	8830 Aug 07 14:19	1°♑55'58	
	8830 Oct 31 02:35	0°♒	
	8830 Dec 21 07:23	0°♓	
	8831 Feb 04 03:21	0°♈	
	8831 Mar 17 10:12	0°♉	
	8831 Apr 25 12:55	0°♊	
evening set	8831 May 25 08:37	23°♊29'30	
	8831 Jun 02 13:42	0°♋	
asc. node	8831 Jun 07 05:46	3°♋42'13	
	8831 Jul 10 12:17	0°♌	
conjunction	8831 Aug 04 10:44	19°♌24'50	0°39'04
minimum elong	8831 Aug 04 07:26	19°♌18'30	0°38'52
	8831 Aug 18 06:19	0°♍	
max. Earth dist.	8831 Sep 26 02:05	28°♍54'46	2.43118 AU
	8831 Sep 27 13:59	0°♎	
morning rise	8831 Oct 09 16:44	8°♎43'57	
	8831 Nov 09 00:43	0°♏	
	8831 Dec 24 00:56	0°♐	
	8832 Feb 10 06:25	0°♑	

	8832 Apr 04 09:16	0°♒	
desc. node	8832 May 16 02:11	17°♒51'30	
retrograde	8832 Jun 22 01:54	24°♒43'13	
opposition	8832 Jul 31 01:07	15°♒49'41	-2°35'53
greatest brilliancy	8832 Jul 31 10:06	15°♒40'59	-1.4m
min. Earth dist.	8832 Aug 04 14:01	14°♒04'15	0.64241 AU
direct	8832 Sep 10 12:17	5°♒48'11	
	8832 Nov 23 11:41	0°♓	
	8833 Jan 11 17:17	0°♈	
	8833 Feb 23 06:03	0°♉	
	8833 Apr 03 19:01	0°♊	
asc. node	8833 Apr 24 06:30	15°♊59'45	
	8833 May 12 01:28	0°♋	
	8833 Jun 19 06:37	0°♌	
	8833 Jul 28 09:42	0°♍	
evening set	8833 Aug 06 03:46	6°♍33'28	
	8833 Sep 07 03:58	0°♎	
conjunction	8833 Oct 05 01:10	19°♎42'56	1°06'34
minimum elong	8833 Oct 05 01:30	19°♎43'31	1°06'38
	8833 Oct 19 23:01	0°♏	
max. Earth dist.	8833 Nov 05 10:13	11°♏09'33	2.56342 AU
morning rise	8833 Nov 26 13:45	25°♏12'45	
	8833 Dec 03 21:10	0°♐	
	8834 Jan 19 20:09	0°♑	
	8834 Mar 10 00:13	0°♒	
desc. node	8834 Apr 02 22:13	13°♒56'08	
	8834 May 02 00:09	0°♓	
	8834 Jul 11 22:39	0°♈	
retrograde	8834 Aug 05 03:40	3°♈11'19	
	8834 Aug 27 18:35	30°℞♓	
opposition	8834 Sep 10 05:59	25°♓33'54	-5°03'55
greatest brilliancy	8834 Sep 11 15:11	25°♓03'39	-1.9m
min. Earth dist.	8834 Sep 18 05:28	22°♓40'20	0.53997 AU
direct	8834 Oct 19 16:44	16°♓18'34	
	8834 Dec 08 12:56	0°♈	
	8835 Jan 28 04:10	0°♉	
	8835 Mar 11 02:05	0°♊	
asc. node	8835 Mar 12 06:33	0°♊53'08	
	8835 Apr 19 13:35	0°♋	
	8835 May 28 17:21	0°♌	
	8835 Jul 07 18:27	0°♍	
	8835 Aug 18 10:32	0°♎	
evening set	8835 Sep 29 19:51	29°♎11'40	
	8835 Oct 01 00:31	0°♏	
	8835 Nov 15 09:44	0°♐	
conjunction	8835 Nov 18 16:43	2°♐08'13	0°44'37
minimum elong	8835 Nov 18 17:56	2°♐10'12	0°44'49
max. Earth dist.	8835 Dec 01 20:39	10°♐38'35	2.64981 AU
	8836 Jan 01 03:48	0°♑	
morning rise	8836 Jan 03 15:36	1°♑34'48	
	8836 Feb 17 19:30	0°♒	
desc. node	8836 Feb 18 18:04	0°♒35'16	
	8836 Apr 06 04:34	0°♓	
	8836 May 25 19:01	0°♈	
	8836 Jul 18 00:30	0°♉	
retrograde	8836 Oct 06 18:01	27°♉06'50	
opposition	8836 Nov 06 23:14	21°♉35'49	-5°02'48
greatest brilliancy	8836 Nov 08 09:47	21°♉10'05	-2.7m
min. Earth dist.	8836 Nov 13 23:19	19°♉31'31	0.40415 AU
direct	8836 Dec 10 06:50	15°♉09'36	
asc. node	8837 Jan 27 08:12	28°♉56'09	
	8837 Jan 29 10:37	0°♊	
	8837 Mar 19 14:14	0°♋	
	8837 May 01 20:39	0°♌	
	8837 Jun 13 14:33	0°♍	
	8837 Jul 27 07:44	0°♎	
	8837 Sep 10 10:53	0°♏	
	8837 Oct 26 20:50	0°♐	
evening set	8837 Nov 09 04:53	8°♐30'53	
	8837 Dec 13 00:33	0°♑	
conjunction	8837 Dec 24 16:50	7°♑24'24	0°06'17
minimum elong	8837 Dec 24 17:02	7°♑24'43	0°06'31
behind sun begin	8837 Dec 23 23:55	6°♑57'35	
behind sun end	8837 Dec 25 10:09	7°♑51'51	
max. Earth dist.	8837 Dec 23 20:50	6°♑52'41	2.68173 AU
desc. node	8838 Jan 05 15:16	14°♑58'53	
	8838 Jan 29 05:56	0°♒	
morning rise	8838 Feb 06 07:51	5°♒09'21	
	8838 Mar 16 23:56	0°♓	
	8838 May 01 23:46	0°♈	
	8838 Jun 16 05:18	0°♉	
	8838 Jul 30 22:33	0°♊	
	8838 Sep 14 02:57	0°♋	
	8838 Nov 03 04:48	0°♌	
asc. node	8838 Dec 15 09:29	15°♌25'11	
retrograde	8838 Dec 26 12:39	16°♌16'59	
min. Earth dist.	8839 Jan 21 13:49	11°♌58'40	0.38419 AU
opposition	8839 Jan 27 12:52	10°♌14'59	3°05'04
greatest brilliancy	8839 Jan 26 18:25	10°♌28'23	-2.9m
direct	8839 Feb 26 05:48	5°♌01'07	
	8839 May 10 19:24	0°♍	
	8839 Jul 01 19:27	0°♎	
	8839 Aug 19 22:02	0°♏	
	8839 Oct 07 12:20	0°♐	
desc. node	8839 Nov 23 13:38	29°♐15'46	
	8839 Nov 24 17:55	0°♑	
evening set	8839 Dec 15 13:45	13°♑05'30	
	8840 Jan 11 04:07	0°♒	
max. Earth dist.	8840 Jan 15 07:10	2°♒38'46	2.65828 AU
conjunction	8840 Jan 29 02:09	11°♒32'20	-0°33'41
minimum elong	8840 Jan 29 01:14	11°♒30'51	0°33'28
	8840 Feb 26 07:08	0°♓	
morning rise	8840 Mar 13 13:55	10°♓50'31	
	8840 Apr 10 19:49	0°♈	
	8840 May 23 17:17	0°♉	
	8840 Jul 04 03:22	0°♊	
	8840 Aug 13 12:10	0°♋	
	8840 Sep 22 14:42	0°♌	
asc. node	8840 Nov 01 07:03	28°♌47'43	
	8840 Nov 03 00:23	0°♍	
	8840 Dec 19 18:58	0°♎	
retrograde	8841 Feb 19 19:40	20°♎57'14	
min. Earth dist.	8841 Mar 21 19:39	14°♎44'46	0.51350 AU
greatest brilliancy	8841 Mar 28 05:11	12°♎21'16	-2.1m
opposition	8841 Mar 29 16:46	11°♎47'53	5°24'04
direct	8841 May 03 07:29	4°♎16'41	
	8841 Jul 21 15:00	0°♏	
	8841 Sep 14 18:22	0°♐	
desc. node	8841 Oct 10 14:09	15°♐03'28	
	8841 Nov 04 12:43	0°♑	
	8841 Dec 22 21:04	0°♒	
evening set	8842 Jan 20 01:54	18°♒10'24	
	8842 Feb 06 23:45	0°♓	
max. Earth dist.	8842 Feb 08 22:04	1°♓17'19	2.58164 AU
conjunction	8842 Mar 07 18:56	19°♓31'20	-1°02'55
minimum elong	8842 Mar 07 17:59	19°♓29'43	1°02'51
	8842 Mar 22 20:42	0°♈	
morning rise	8842 Apr 26 17:17	24°♈55'07	
	8842 May 03 16:04	0°♉	

	8842 Jun 12 18:43	0°♊	
	8842 Jul 21 18:27	0°♋	
	8842 Aug 29 09:22	0°♌	
asc. node	8842 Sep 19 03:03	15°♌58'20	
	8842 Oct 07 14:45	0°♍	
	8842 Nov 17 18:20	0°♎	
	8843 Jan 02 05:55	0°♏	
	8843 Mar 05 12:08	0°♐	
retrograde	8843 Apr 01 00:25	4°♐14'09	
	8843 Apr 25 21:56	30°℞♏	
min. Earth dist.	8843 May 06 15:46	26°♏03'02	0.62653 AU
opposition	8843 May 11 04:09	24°♏15'30	3°34'48
greatest brilliancy	8843 May 10 15:00	24°♏28'32	-1.5m
direct	8843 Jun 18 16:46	15°♏18'07	
	8843 Aug 15 02:52	0°♐	
desc. node	8843 Aug 28 16:13	6°♐05'05	
	8843 Oct 13 16:27	0°♑	
	8843 Dec 03 12:57	0°♒	
	8844 Jan 19 08:13	0°♓	
evening set	8844 Mar 02 02:06	29°♓17'43	
	8844 Mar 03 02:01	0°♈	
max. Earth dist.	8844 Mar 16 01:05	9°♈14'54	2.45948 AU
	8844 Apr 13 08:38	0°♉	
conjunction	8844 Apr 25 07:01	8°♉57'18	-0°59'25
minimum elong	8844 Apr 25 08:55	9°♉00'54	0°59'32
	8844 May 22 19:15	0°♊	
morning rise	8844 Jun 28 14:43	28°♊46'57	
	8844 Jun 30 03:49	0°♋	
asc. node	8844 Aug 06 00:50	29°♋02'26	
	8844 Aug 07 06:11	0°♌	
	8844 Sep 14 23:27	0°♍	
	8844 Oct 25 05:49	0°♎	
	8844 Dec 07 02:25	0°♏	
	8845 Jan 23 08:39	0°♐	
	8845 Mar 23 22:57	0°♑	
retrograde	8845 May 04 16:48	8°♑58'02	
	8845 Jun 12 02:48	30°℞♐	
opposition	8845 Jun 14 06:05	29°♐09'03	1°04'35
greatest brilliancy	8845 Jun 14 05:41	29°♐09'27	-1.3m
min. Earth dist.	8845 Jun 13 12:50	29°♐26'12	0.67887 AU
desc. node	8845 Jul 15 17:09	19°♐58'02	
direct	8845 Jul 25 01:47	19°♐25'28	
	8845 Sep 10 10:09	0°♑	
	8845 Nov 10 07:47	0°♒	
	8845 Dec 29 10:50	0°♓	
	8846 Feb 11 17:54	0°♈	
	8846 Mar 24 22:19	0°♉	
evening set	8846 Apr 27 10:06	25°♉35'59	
	8846 May 03 01:43	0°♊	
	8846 Jun 10 03:26	0°♋	
asc. node	8846 Jun 23 22:09	10°♋55'22	
conjunction	8846 Jul 05 03:39	19°♋48'38	0°08'09
minimum elong	8846 Jul 05 02:45	19°♋46'52	0°07'55
behind sun begin	8846 Jul 03 23:36	18°♋53'15	
behind sun end	8846 Jul 06 05:53	20°♋40'27	
	8846 Jul 18 01:54	0°♌	
max. Earth dist.	8846 Aug 19 20:00	25°♌27'57	2.37847 AU
	8846 Aug 25 18:13	0°♍	
morning rise	8846 Sep 14 22:17	15°♍13'17	
	8846 Oct 04 23:21	0°♎	
	8846 Nov 16 08:59	0°♏	
	8846 Dec 31 14:30	0°♐	
	8847 Feb 18 22:13	0°♑	
	8847 Apr 19 14:29	0°♒	
desc. node	8847 Jun 02 16:09	11°♒29'24	
retrograde	8847 Jun 08 10:48	11°♒41'23	
opposition	8847 Jul 18 02:58	2°♒27'34	-1°33'54
greatest brilliancy	8847 Jul 18 06:23	2°♒24'13	-1.4m
min. Earth dist.	8847 Jul 21 04:41	1°♒15'24	0.66568 AU
	8847 Jul 24 10:44	30°℞♑	
direct	8847 Aug 28 17:56	22°♑24'40	
	8847 Oct 06 02:56	0°♒	
	8847 Dec 06 00:30	0°♓	
	8848 Jan 21 17:03	0°♈	
	8848 Mar 03 13:11	0°♉	
	8848 Apr 11 19:52	0°♊	
asc. node	8848 May 10 21:34	22°♊50'58	
	8848 May 19 22:33	0°♋	
	8848 Jun 26 23:49	0°♌	
evening set	8848 Jul 09 24:00	10°♌07'59	
	8848 Aug 04 22:02	0°♍	
conjunction	8848 Sep 13 12:18	29°♍19'24	1°04'27
minimum elong	8848 Sep 13 11:02	29°♍17'08	1°04'27
	8848 Sep 14 10:45	0°♎	
max. Earth dist.	8848 Oct 23 10:09	27°♎30'37	2.51604 AU
	8848 Oct 27 01:00	0°♏	
morning rise	8848 Nov 09 10:53	9°♏07'57	
	8848 Dec 10 21:35	0°♐	
	8849 Jan 27 03:31	0°♑	
	8849 Mar 18 12:02	0°♒	
desc. node	8849 Apr 19 13:01	17°♒31'05	
	8849 May 15 03:05	0°♓	
retrograde	8849 Jul 17 11:25	17°♓19'19	
opposition	8849 Aug 23 22:10	9°♓06'33	-4°10'46
greatest brilliancy	8849 Aug 24 20:46	8°♓45'15	-1.7m
min. Earth dist.	8849 Aug 30 16:02	6°♓34'32	0.58730 AU
	8849 Sep 23 22:14	30°℞♒	
direct	8849 Oct 03 12:38	29°♒22'52	
	8849 Oct 13 09:33	0°♓	
	8849 Dec 24 22:27	0°♈	
	8850 Feb 08 05:23	0°♉	
	8850 Mar 20 17:34	0°♊	
asc. node	8850 Mar 28 23:35	6°♊19'14	
	8850 Apr 28 12:23	0°♋	
	8850 Jun 06 03:45	0°♌	
	8850 Jul 15 17:18	0°♍	
	8850 Aug 25 22:23	0°♎	
evening set	8850 Sep 10 18:19	11°♎09'39	
	8850 Oct 08 03:00	0°♏	
conjunction	8850 Nov 02 17:05	17°♏09'20	0°56'16
minimum elong	8850 Nov 02 18:22	17°♏11'28	0°56'25
max. Earth dist.	8850 Nov 22 10:35	0°♐07'22	2.62240 AU
	8850 Nov 22 06:04	0°♐	
morning rise	8850 Dec 20 14:16	18°♐17'55	
	8851 Jan 07 23:48	0°♑	
	8851 Feb 25 01:07	0°♒	
desc. node	8851 Mar 07 08:28	6°♒19'47	
	8851 Apr 15 14:31	0°♓	
	8851 Jun 07 09:00	0°♈	
	8851 Aug 15 23:33	0°♉	
retrograde	8851 Sep 09 15:38	3°♉21'56	
	8851 Oct 02 23:21	30°℞♈	
opposition	8851 Oct 12 21:52	26°♈57'05	-5°45'36
greatest brilliancy	8851 Oct 14 17:51	26°♈20'49	-2.4m
min. Earth dist.	8851 Oct 21 13:51	24°♈06'33	0.45592 AU
direct	8851 Nov 18 07:13	19°♈07'04	
	8851 Dec 30 14:22	0°♉	
asc. node	8852 Feb 14 00:51	26°♉14'54	
	8852 Feb 19 15:24	0°♊	
	8852 Apr 01 22:06	0°♋	

	8852 May 12 16:12	0°♌	
	8852 Jun 22 22:00	0°♍	
	8852 Aug 04 13:34	0°♎	
	8852 Sep 17 22:15	0°♏	
evening set	8852 Oct 25 01:33	24°♏20'05	
	8852 Nov 02 19:58	0°♐	
conjunction	8852 Dec 10 19:12	24°♐18'23	0°21'53
minimum elong	8852 Dec 10 19:53	24°♐19'27	0°22'07
max. Earth dist.	8852 Dec 15 02:06	27°♐02'05	2.67575 AU
	8852 Dec 19 18:03	0°♑	
desc. node	8853 Jan 22 04:41	21°♑12'45	
morning rise	8853 Jan 23 22:53	22°♑19'35	
	8853 Feb 05 01:26	0°♒	
	8853 Mar 24 06:39	0°♓	
	8853 May 10 06:20	0°♈	
	8853 Jun 26 06:37	0°♉	
	8853 Aug 13 07:03	0°♊	
	8853 Oct 06 03:20	0°♋	
retrograde	8853 Nov 26 12:21	14°♋15'39	
opposition	8853 Dec 26 11:09	9°♋15'18	-0°26'07
greatest brilliancy	8853 Dec 26 11:34	9°♋15'01	-3.1m
min. Earth dist.	8853 Dec 25 19:05	9°♋25'59	0.36560 AU
asc. node	8854 Jan 01 00:48	7°♋47'46	
direct	8854 Jan 24 21:55	4°♋22'18	
	8854 Apr 07 03:50	0°♌	
	8854 May 26 13:00	0°♍	
	8854 Jul 12 10:10	0°♎	
	8854 Aug 28 09:44	0°♏	
	8854 Oct 14 21:56	0°♐	
evening set	8854 Dec 01 15:49	0°♑01'43	
	8854 Dec 01 14:43	0°♑	
desc. node	8854 Dec 10 03:18	5°♑22'35	
max. Earth dist.	8855 Jan 06 13:43	22°♑46'09	2.67391 AU
conjunction	8855 Jan 15 05:21	28°♑17'24	-0°18'46
minimum elong	8855 Jan 15 04:49	28°♑16'31	0°18'33
	8855 Jan 17 21:30	0°♒	
morning rise	8855 Feb 27 23:26	26°♒34'42	
	8855 Mar 05 04:43	0°♓	
	8855 Apr 19 04:26	0°♈	
	8855 Jun 01 18:44	0°♉	
	8855 Jul 14 02:10	0°♊	
	8855 Aug 24 12:30	0°♋	
	8855 Oct 05 01:50	0°♌	
	8855 Nov 18 11:48	0°♍	
asc. node	8855 Nov 19 00:34	0°♍19'54	
retrograde	8856 Feb 01 18:28	29°♍25'49	
min. Earth dist.	8856 Feb 29 09:12	24°♍08'40	0.45880 AU
greatest brilliancy	8856 Mar 07 04:44	21°♍45'59	-2.4m
opposition	8856 Mar 08 20:07	21°♍11'18	5°25'07
direct	8856 Apr 10 12:55	14°♍30'07	
	8856 Jun 06 06:46	0°♎	
	8856 Aug 02 21:16	0°♏	
	8856 Sep 23 09:10	0°♐	
desc. node	8856 Oct 27 03:30	20°♐21'31	
	8856 Nov 11 21:07	0°♑	
	8856 Dec 29 18:25	0°♒	
evening set	8857 Jan 05 13:21	4°♒20'41	
max. Earth dist.	8857 Jan 29 07:20	19°♒44'50	2.61768 AU
	8857 Feb 13 19:54	0°♓	
conjunction	8857 Feb 19 23:04	4°♓05'34	-0°53'53
minimum elong	8857 Feb 19 21:54	4°♓03'37	0°53'45
	8857 Mar 29 21:48	0°♈	
morning rise	8857 Apr 08 00:13	6°♈21'54	
	8857 May 11 01:50	0°♉	
	8857 Jun 20 14:41	0°♊	
	8857 Jul 30 00:24	0°♋	
	8857 Sep 07 00:47	0°♌	
asc. node	8857 Oct 05 21:25	21°♌55'16	
	8857 Oct 16 17:25	0°♍	
	8857 Nov 27 19:44	0°♎	
	8858 Jan 15 17:54	0°♏	
retrograde	8858 Mar 17 10:21	19°♏06'56	
min. Earth dist.	8858 Apr 20 00:34	11°♏37'28	0.58870 AU
greatest brilliancy	8858 Apr 25 02:20	9°♏38'08	-1.7m
opposition	8858 Apr 26 00:03	9°♏16'50	4°26'28
direct	8858 Jun 02 04:59	0°♏47'05	
	8858 Aug 28 21:36	0°♐	
desc. node	8858 Sep 14 04:53	8°♐33'09	
	8858 Oct 22 09:02	0°♑	
	8858 Dec 10 23:15	0°♒	
	8859 Jan 26 09:57	0°♓	
evening set	8859 Feb 13 14:54	12°♓16'32	
max. Earth dist.	8859 Feb 28 14:12	22°♓35'27	2.51135 AU
	8859 Mar 11 03:56	0°♈	
conjunction	8859 Apr 05 00:10	17°♈48'10	-1°06'56
minimum elong	8859 Apr 05 00:35	17°♈48'56	1°07'00
	8859 Apr 21 14:37	0°♉	
	8859 May 31 06:30	0°♊	
morning rise	8859 Jun 01 10:39	0°♊54'11	
	8859 Jul 08 19:49	0°♋	
	8859 Aug 16 01:43	0°♌	
asc. node	8859 Aug 23 17:03	5°♌57'40	
	8859 Sep 23 21:40	0°♍	
	8859 Nov 03 08:07	0°♎	
	8859 Dec 16 17:32	0°♏	
	8860 Feb 04 02:17	0°♐	
retrograde	8860 Apr 21 11:09	26°♐10'16	
min. Earth dist.	8860 May 29 19:47	17°♐06'34	0.66618 AU
opposition	8860 Jun 01 00:46	16°♐13'50	2°04'19
greatest brilliancy	8860 May 31 21:14	16°♐17'20	-1.4m
direct	8860 Jul 11 03:16	6°♐44'55	
desc. node	8860 Aug 01 06:27	9°♐11'39	
	8860 Sep 25 08:08	0°♑	
	8860 Nov 19 05:24	0°♒	
	8861 Jan 06 03:43	0°♓	
	8861 Feb 19 03:37	0°♈	
	8861 Apr 01 08:00	0°♉	
evening set	8861 Apr 02 22:06	1°♉11'23	
max. Earth dist.	8861 May 01 00:21	22°♉35'43	2.37995 AU
	8861 May 10 13:29	0°♊	
conjunction	8861 Jun 04 21:01	19°♊51'19	-0°25'17
minimum elong	8861 Jun 04 23:24	19°♊56'02	0°25'30
	8861 Jun 17 16:58	0°♋	
asc. node	8861 Jul 10 15:55	18°♋10'20	
	8861 Jul 25 15:54	0°♌	
morning rise	8861 Aug 16 21:10	17°♌21'33	
	8861 Sep 02 07:16	0°♍	
	8861 Oct 12 10:57	0°♎	
	8861 Nov 23 21:35	0°♏	
	8862 Jan 08 13:26	0°♐	
	8862 Feb 28 18:22	0°♑	
retrograde	8862 May 25 15:25	29°♑07'14	
desc. node	8862 Jun 19 06:12	25°♑15'59	
opposition	8862 Jul 04 19:37	19°♑37'04	-0°32'12
greatest brilliancy	8862 Jul 04 20:08	19°♑36'33	-1.3m
min. Earth dist.	8862 Jul 06 09:41	18°♑59'31	0.67878 AU
direct	8862 Aug 15 07:39	9°♑38'32	
	8862 Oct 23 03:53	0°♒	
	8862 Dec 15 13:31	0°♓	

	8863 Jan 29 23:07	0°♈	
	8863 Mar 12 10:39	0°♉	
	8863 Apr 20 14:56	0°♊	
asc. node	8863 May 28 15:12	29°♊57'52	
	8863 May 28 16:17	0°♋	
evening set	8863 Jun 11 02:31	10°♋38'22	
	8863 Jul 05 15:25	0°♌	
	8863 Aug 13 10:07	0°♍	
conjunction	8863 Aug 20 06:20	5°♍11'08	0°51'50
minimum elong	8863 Aug 20 03:18	5°♍05'24	0°51'42
	8863 Sep 22 18:18	0°♎	
max. Earth dist.	8863 Oct 08 02:53	11°♎02'34	2.46208 AU
morning rise	8863 Oct 22 00:16	20°♎50'58	
	8863 Nov 04 04:50	0°♏	
	8863 Dec 19 01:43	0°♐	
	8864 Feb 04 19:21	0°♑	
	8864 Mar 28 01:40	0°♒	
desc. node	8864 May 06 03:23	18°♒59'03	
	8864 Jun 07 09:42	0°♓	
retrograde	8864 Jun 30 20:50	2°♓58'29	
	8864 Jul 22 15:14	30°℞♒	
opposition	8864 Aug 08 09:07	24°♒17'51	-3°11'33
greatest brilliancy	8864 Aug 08 22:25	24°♒05'04	-1.5m
min. Earth dist.	8864 Aug 13 17:30	22°♒14'41	0.62542 AU
direct	8864 Sep 18 15:49	14°♒20'00	
	8864 Nov 14 02:14	0°♓	
	8865 Jan 05 09:16	0°♈	
	8865 Feb 17 15:36	0°♉	
	8865 Mar 29 11:17	0°♊	
asc. node	8865 Apr 14 14:44	12°♊32'27	
	8865 May 06 21:12	0°♋	
	8865 Jun 14 05:08	0°♌	
	8865 Jul 23 11:00	0°♍	
evening set	8865 Aug 19 22:13	20°♍18'50	
	8865 Sep 02 07:55	0°♎	
	8865 Oct 15 05:13	0°♏	
conjunction	8865 Oct 16 00:33	0°♏32'59	1°04'20
minimum elong	8865 Oct 16 01:25	0°♏34'29	1°04'27
max. Earth dist.	8865 Nov 11 23:21	18°♏41'01	2.58655 AU
	8865 Nov 29 03:43	0°♐	
morning rise	8865 Dec 05 15:02	4°♐12'57	
	8866 Jan 14 23:14	0°♑	
	8866 Mar 04 14:52	0°♒	
desc. node	8866 Mar 23 23:23	11°♒33'29	
	8866 Apr 24 23:49	0°♓	
	8866 Jun 23 12:44	0°♈	
retrograde	8866 Aug 16 21:42	13°♈35'52	
opposition	8866 Sep 21 02:58	6°♈21'36	-5°27'34
greatest brilliancy	8866 Sep 22 17:46	5°♈47'14	-2.0m
min. Earth dist.	8866 Sep 29 15:07	3°♈21'43	0.51111 AU
	8866 Oct 10 15:05	30°℞♓	
direct	8866 Oct 29 17:21	27°♓29'45	
	8866 Nov 18 07:07	0°♈	
	8867 Jan 19 21:55	0°♉	
asc. node	8867 Mar 02 16:15	28°♉43'00	
	8867 Mar 04 10:33	0°♊	
	8867 Apr 13 13:32	0°♋	
	8867 May 23 02:51	0°♌	
	8867 Jul 02 11:26	0°♍	
	8867 Aug 13 09:42	0°♎	
	8867 Sep 26 04:52	0°♏	
evening set	8867 Oct 09 18:32	9°♏03'09	
	8867 Nov 10 17:20	0°♐	
conjunction	8867 Nov 27 07:45	10°♐43'14	0°36'42
minimum elong	8867 Nov 27 08:50	10°♐44'57	0°36'54
max. Earth dist.	8867 Dec 07 03:51	17°♐01'54	2.66139 AU
	8867 Dec 27 11:56	0°♑	
morning rise	8868 Jan 11 11:46	9°♑30'22	
desc. node	8868 Feb 08 20:04	27°♑23'29	
	8868 Feb 12 23:36	0°♒	
	8868 Mar 31 20:31	0°♓	
	8868 May 19 06:54	0°♈	
	8868 Jul 08 09:14	0°♉	
	8868 Sep 03 12:18	0°♊	
retrograde	8868 Oct 24 11:33	13°♊09'03	
opposition	8868 Nov 23 18:42	8°♊02'24	-3°52'16
greatest brilliancy	8868 Nov 24 15:49	7°♊47'42	-2.9m
min. Earth dist.	8868 Nov 28 17:35	6°♊40'07	0.38249 AU
direct	8868 Dec 25 05:38	2°♊22'33	
asc. node	8869 Jan 17 17:58	6°♊01'01	
	8869 Mar 08 17:02	0°♋	
	8869 Apr 24 02:03	0°♌	
	8869 Jun 07 04:57	0°♍	
	8869 Jul 21 17:11	0°♎	
	8869 Sep 05 08:36	0°♏	
	8869 Oct 22 02:02	0°♐	
evening set	8869 Nov 17 11:52	16°♐45'52	
	8869 Dec 08 09:34	0°♑	
desc. node	8869 Dec 26 17:19	11°♑36'29	
max. Earth dist.	8869 Dec 28 21:47	12°♑59'42	2.68131 AU
conjunction	8870 Jan 01 12:43	15°♑17'40	-0°03'06
minimum elong	8870 Jan 01 12:37	15°♑17'31	0°02'52
behind sun begin	8869 Dec 31 18:26	14°♑48'39	
behind sun end	8870 Jan 02 06:49	15°♑46'23	
	8870 Jan 24 15:06	0°♒	
morning rise	8870 Feb 14 01:46	13°♒06'11	
	8870 Mar 12 04:42	0°♓	
	8870 Apr 26 18:53	0°♈	
	8870 Jun 10 07:51	0°♉	
	8870 Jul 23 23:04	0°♊	
	8870 Sep 05 06:20	0°♋	
	8870 Oct 20 04:50	0°♌	
asc. node	8870 Dec 05 16:34	25°♌21'16	
	8870 Dec 18 15:43	0°♍	
retrograde	8871 Jan 10 07:23	3°♍30'10	
	8871 Feb 01 19:37	30°℞♌	
min. Earth dist.	8871 Feb 05 05:56	28°♌59'46	0.40714 AU
opposition	8871 Feb 12 20:06	26°♌37'43	4°23'52
greatest brilliancy	8871 Feb 11 13:31	27°♌01'47	-2.7m
direct	8871 Mar 15 14:14	20°♌54'05	
	8871 Apr 25 05:48	0°♍	
	8871 Jun 23 22:39	0°♎	
	8871 Aug 13 23:07	0°♏	
	8871 Oct 02 08:57	0°♐	
desc. node	8871 Nov 13 16:31	26°♐04'39	
	8871 Nov 19 23:51	0°♑	
evening set	8871 Dec 23 11:51	21°♑02'14	
	8872 Jan 06 13:46	0°♒	
max. Earth dist.	8872 Jan 20 15:19	9°♒02'27	2.64620 AU
conjunction	8872 Feb 06 04:08	19°♒47'17	-0°41'44
minimum elong	8872 Feb 06 03:04	19°♒45'32	0°41'34
	8872 Feb 21 16:18	0°♓	
morning rise	8872 Mar 22 08:18	19°♓55'17	
	8872 Apr 06 01:20	0°♈	
	8872 May 18 16:20	0°♉	
	8872 Jun 28 18:10	0°♊	
	8872 Aug 07 17:08	0°♋	
	8872 Sep 16 07:34	0°♌	
asc. node	8872 Oct 22 14:57	26°♌56'55	

	8872 Oct 26 20:13	0°♍		
	8872 Dec 09 23:20	0°♎		
	8873 Feb 11 14:24	0°♏		
retrograde	8873 Mar 01 14:48	2°♏12'10		
	8873 Mar 19 00:48	30°℞♎		
min. Earth dist.	8873 Apr 01 22:42	25°♎30'48	0.54238 AU	
greatest brilliancy	8873 Apr 07 23:07	23°♎12'48	-1.9m	
opposition	8873 Apr 09 06:10	22°♎43'03	5°08'32	
direct	8873 May 14 21:12	14°♎48'20		
	8873 Jul 11 10:13	0°♏		
	8873 Sep 08 12:48	0°♐		
desc. node	8873 Sep 30 17:24	12°♐34'16		
	8873 Oct 30 08:43	0°♑		
	8873 Dec 18 02:48	0°♒		
evening set	8874 Jan 28 16:28	26°♒54'05		
	8874 Feb 02 08:23	0°♓		
max. Earth dist.	8874 Feb 15 13:35	8°♓52'35	2.55862 AU	
conjunction	8874 Mar 17 10:05	29°♓27'12	-1°06'09	
minimum elong	8874 Mar 17 09:29	29°♓26'09	1°06'08	
	8874 Mar 18 04:46	0°♈		
	8874 Apr 28 21:26	0°♉		
morning rise	8874 May 08 12:47	7°♉07'57		
	8874 Jun 07 20:34	0°♊		
	8874 Jul 16 16:27	0°♋		
	8874 Aug 24 03:33	0°♌		
asc. node	8874 Sep 09 12:23	12°♌40'55		
	8874 Oct 02 04:13	0°♍		
	8874 Nov 11 22:30	0°♎		
	8874 Dec 26 07:37	0°♏		
	8875 Feb 18 11:18	0°♐		
retrograde	8875 Apr 08 23:37	12°♐47'50		
min. Earth dist.	8875 May 15 15:56	4°♐16'33	0.64333 AU	
opposition	8875 May 19 08:42	2°♐48'18	3°02'21	
greatest brilliancy	8875 May 18 23:39	2°♐57'18	-1.4m	
	8875 May 26 14:36	30°℞♏		
direct	8875 Jun 27 12:38	23°♏38'12		
	8875 Aug 01 23:55	0°♐		
desc. node	8875 Aug 18 18:54	6°♐08'27		
	8875 Oct 07 07:47	0°♑		
	8875 Nov 28 08:09	0°♒		
	8876 Jan 14 12:21	0°♓		
	8876 Feb 27 08:36	0°♈		
evening set	8876 Mar 12 21:03	10°♈22'12		
max. Earth dist.	8876 Mar 27 19:58	21°♈16'06	2.42968 AU	
	8876 Apr 08 14:42	0°♉		
conjunction	8876 May 08 19:57	22°♉55'29	-0°50'21	
minimum elong	8876 May 08 22:35	23°♉00'35	0°50'30	
	8876 May 17 23:45	0°♊		
	8876 Jun 25 06:30	0°♋		
morning rise	8876 Jul 16 02:45	16°♋27'29		
asc. node	8876 Jul 27 08:43	25°♋19'34		
	8876 Aug 02 07:25	0°♌		
	8876 Sep 09 23:28	0°♍		
	8876 Oct 20 03:36	0°♎		
	8876 Dec 01 18:17	0°♏		
	8877 Jan 17 04:38	0°♐		
	8877 Mar 13 01:46	0°♑		
retrograde	8877 May 12 06:25	16°♑39'21		
opposition	8877 Jun 21 17:54	6°♑56'13	0°28'58	
greatest brilliancy	8877 Jun 21 18:08	6°♑56'00	-1.3m	
min. Earth dist.	8877 Jun 21 20:23	6°♑53'46	0.68161 AU	
desc. node	8877 Jul 05 19:15	1°♑41'42		
	8877 Jul 11 10:50	30°℞♐		
direct	8877 Aug 01 21:05	27°♐06'15		
	8877 Aug 24 22:56	0°♑		
	8877 Nov 03 19:08	0°♒		
	8877 Dec 24 02:47	0°♓		
	8878 Feb 06 18:40	0°♈		
	8878 Mar 20 01:42	0°♉		
	8878 Apr 28 05:29	0°♊		
evening set	8878 May 12 17:44	11°♊22'49		
	8878 Jun 05 06:46	0°♋		
asc. node	8878 Jun 14 06:46	7°♋08'15		
	8878 Jul 13 04:54	0°♌		
conjunction	8878 Jul 22 10:07	7°♌13'33	0°26'46	
minimum elong	8878 Jul 22 07:25	7°♌08'15	0°26'31	
	8878 Aug 20 21:20	0°♍		
max. Earth dist.	8878 Sep 13 18:03	17°♍58'15	2.40624 AU	
morning rise	8878 Sep 29 10:10	29°♍30'17		
	8878 Sep 30 02:28	0°♎		
	8878 Nov 11 11:05	0°♏		
	8878 Dec 26 11:18	0°♐		
	8879 Feb 13 00:16	0°♑		
	8879 Apr 09 17:19	0°♒		
desc. node	8879 May 23 18:10	16°♒29'25		
retrograde	8879 Jun 16 16:20	19°♒35'22		
opposition	8879 Jul 26 00:15	10°♒32'14	-2°10'10	
greatest brilliancy	8879 Jul 26 06:30	10°♒26'08	-1.4m	
min. Earth dist.	8879 Jul 29 21:38	9°♒01'25	0.65408 AU	
direct	8879 Sep 05 14:32	0°♒29'25		
	8879 Nov 28 21:49	0°♓		
	8880 Jan 16 00:05	0°♈		
	8880 Feb 27 06:32	0°♉		
	8880 Apr 06 17:30	0°♊		
asc. node	8880 May 01 07:23	19°♊15'02		
	8880 May 14 22:18	0°♋		
	8880 Jun 22 01:11	0°♌		
evening set	8880 Jul 25 17:15	25°♌57'47		
	8880 Jul 31 01:07	0°♍		
	8880 Sep 09 15:26	0°♎		
conjunction	8880 Sep 26 02:03	11°♎44'52	1°06'42	
minimum elong	8880 Sep 26 01:48	11°♎44'25	1°06'45	
	8880 Oct 22 06:52	0°♏		
max. Earth dist.	8880 Oct 31 03:18	6°♏02'31	2.54305 AU	
morning rise	8880 Nov 19 10:11	19°♏00'05		
	8880 Dec 06 02:39	0°♐		
	8881 Jan 22 03:00	0°♑		
	8881 Mar 12 16:20	0°♒		
desc. node	8881 Apr 09 14:41	15°♒55'30		
	8881 May 06 03:01	0°♓		
retrograde	8881 Jul 27 18:38	26°♓38'32		
opposition	8881 Sep 02 12:50	18°♓44'23	-4°42'26	
greatest brilliancy	8881 Sep 03 17:25	18°♓17'56	-1.8m	
min. Earth dist.	8881 Sep 10 00:29	15°♓58'44	0.56201 AU	
direct	8881 Oct 12 14:09	9°♓14'25		
	8881 Dec 15 18:45	0°♈		
	8882 Feb 01 13:03	0°♉		
	8882 Mar 14 19:04	0°♊		
asc. node	8882 Mar 19 07:39	3°♊25'10		
	8882 Apr 22 22:31	0°♋		
	8882 May 31 19:51	0°♌		
	8882 Jul 10 14:41	0°♍		
	8882 Aug 21 00:19	0°♎		
evening set	8882 Sep 21 20:38	22°♎10'16		
	8882 Oct 03 08:44	0°♏		
conjunction	8882 Nov 11 23:25	26°♏20'30	0°49'50	
minimum elong	8882 Nov 12 00:43	26°♏22'38	0°50'01	
	8882 Nov 17 13:51	0°♐		
max. Earth dist.	8882 Nov 28 01:40	6°♐48'43	2.63859 AU	

morning rise	8882 Dec 28 17:01	26°♐27'31	
	8883 Jan 03 06:51	0°♑	
	8883 Feb 20 01:49	0°♒	
desc. node	8883 Feb 25 10:23	3°♒19'31	
	8883 Apr 09 21:28	0°♓	
	8883 May 30 14:47	0°♈	
	8883 Jul 26 15:02	0°♉	
retrograde	8883 Sep 24 21:28	16°♉40'04	
opposition	8883 Oct 26 23:43	10°♉45'14	-5°31'27
greatest brilliancy	8883 Oct 28 16:48	10°♉13'02	-2.6m
min. Earth dist.	8883 Nov 04 00:32	8°♉15'14	0.42593 AU
direct	8883 Nov 30 17:54	3°♉39'42	
asc. node	8884 Feb 04 09:03	27°♉05'32	
	8884 Feb 09 05:15	0°♊	
	8884 Mar 25 05:30	0°♋	
	8884 May 06 02:56	0°♌	
	8884 Jun 17 01:46	0°♍	
	8884 Jul 30 05:22	0°♎	
	8884 Sep 12 22:51	0°♏	
	8884 Oct 29 02:15	0°♐	
evening set	8884 Nov 02 20:04	3°♐02'37	
	8884 Dec 15 02:59	0°♑	
conjunction	8884 Dec 18 19:16	2°♑20'09	0°12'48
minimum elong	8884 Dec 18 19:40	2°♑20'47	0°13'02
behind sun begin	8884 Dec 18 08:49	2°♑03'35	
behind sun end	8884 Dec 19 06:31	2°♑37'59	
max. Earth dist.	8884 Dec 20 04:06	3°♑12'14	2.68018 AU
desc. node	8885 Jan 12 07:20	17°♑53'02	
morning rise	8885 Jan 31 14:21	0°♒08'25	
	8885 Jan 31 09:03	0°♒	
	8885 Mar 19 07:54	0°♓	
	8885 May 04 17:56	0°♈	
	8885 Jun 19 16:25	0°♉	
	8885 Aug 04 14:02	0°♊	
	8885 Sep 21 03:18	0°♋	
	8885 Nov 22 23:31	0°♌	
retrograde	8885 Dec 13 22:39	2°♌54'21	
asc. node	8885 Dec 22 10:42	2°♌25'02	
	8886 Jan 04 08:16	30°℞♋	
min. Earth dist.	8886 Jan 09 22:29	28°♋31'46	0.37159 AU
opposition	8886 Jan 13 20:09	27°♋27'12	1°42'18
greatest brilliancy	8886 Jan 13 12:35	27°♋32'25	-3.0m
direct	8886 Feb 12 02:37	22°♋29'52	
	8886 Mar 19 21:33	0°♌	
	8886 May 17 15:22	0°♍	
	8886 Jul 05 19:59	0°♎	
	8886 Aug 22 20:40	0°♏	
	8886 Oct 09 22:07	0°♐	
	8886 Nov 26 21:51	0°♑	
desc. node	8886 Nov 30 05:29	2°♑05'05	
evening set	8886 Dec 09 15:29	8°♑00'38	
max. Earth dist.	8887 Jan 11 16:25	28°♑58'29	2.66637 AU
	8887 Jan 13 06:53	0°♒	
conjunction	8887 Jan 23 02:45	6°♒18'24	-0°27'38
minimum elong	8887 Jan 23 01:59	6°♒17'09	0°27'26
	8887 Feb 28 12:18	0°♓	
morning rise	8887 Mar 08 04:45	5°♓04'42	
	8887 Apr 14 06:35	0°♈	
	8887 May 27 11:49	0°♉	
	8887 Jul 08 07:26	0°♊	
	8887 Aug 18 02:30	0°♋	
	8887 Sep 27 17:32	0°♌	
asc. node	8887 Nov 09 08:59	0°♍13'45	
	8887 Nov 09 00:51	0°♍	
	8887 Dec 29 08:06	0°♎	
retrograde	8888 Feb 12 21:08	12°♎32'18	
min. Earth dist.	8888 Mar 12 19:14	6°♎44'56	0.48921 AU
greatest brilliancy	8888 Mar 19 11:13	4°♎19'16	-2.2m
opposition	8888 Mar 21 01:35	3°♎44'10	5°30'15
	8888 Apr 01 05:07	30°℞♍	
direct	8888 Apr 23 19:59	26°♍34'12	
	8888 May 18 05:48	0°♎	
	8888 Jul 26 08:53	0°♏	
	8888 Sep 17 17:01	0°♐	
desc. node	8888 Oct 17 05:37	17°♐29'21	
	8888 Nov 06 21:45	0°♑	
	8888 Dec 25 01:55	0°♒	
evening set	8889 Jan 13 18:42	12°♒38'41	
max. Earth dist.	8889 Feb 04 05:44	26°♒41'57	2.59877 AU
	8889 Feb 09 05:03	0°♓	
conjunction	8889 Feb 28 19:26	13°♓10'56	-0°59'37
minimum elong	8889 Feb 28 18:22	13°♓09'07	0°59'31
	8889 Mar 25 05:22	0°♈	
morning rise	8889 Apr 18 07:16	17°♈02'03	
	8889 May 06 05:23	0°♉	
	8889 Jun 15 13:12	0°♊	
	8889 Jul 24 17:27	0°♋	
	8889 Sep 01 12:02	0°♌	
asc. node	8889 Sep 26 05:01	18°♌56'16	
	8889 Oct 10 21:02	0°♍	
	8889 Nov 21 06:55	0°♎	
	8890 Jan 06 17:23	0°♏	
retrograde	8890 Mar 25 21:21	28°♏24'10	
min. Earth dist.	8890 Apr 29 15:40	20°♏30'51	0.61078 AU
opposition	8890 May 04 19:52	18°♏28'15	3°57'28
greatest brilliancy	8890 May 04 03:12	18°♏44'42	-1.6m
direct	8890 Jun 11 19:33	9°♏42'17	
	8890 Aug 20 13:38	0°♐	
desc. node	8890 Sep 04 07:50	7°♐10'16	
	8890 Oct 16 15:32	0°♑	
	8890 Dec 05 23:28	0°♒	
	8891 Jan 21 16:14	0°♓	
evening set	8891 Feb 23 07:56	22°♓11'24	
	8891 Mar 06 11:36	0°♈	
max. Earth dist.	8891 Mar 09 08:29	2°♈01'45	2.48325 AU
conjunction	8891 Apr 16 15:34	29°♈49'40	-1°03'51
minimum elong	8891 Apr 16 16:47	29°♈51'57	1°03'58
	8891 Apr 16 21:08	0°♉	
	8891 May 26 10:56	0°♊	
morning rise	8891 Jun 16 17:38	16°♊31'57	
	8891 Jul 03 21:52	0°♋	
	8891 Aug 11 01:27	0°♌	
asc. node	8891 Aug 14 02:28	2°♌22'56	
greatest brilliancy	8891 Aug 17 20:15	5°♌18'23	1.2m
	8891 Sep 18 19:02	0°♍	
	8891 Oct 29 01:30	0°♎	
	8891 Dec 11 00:42	0°♏	
	8892 Jan 27 20:57	0°♐	
	8892 Apr 02 07:30	0°♑	
retrograde	8892 Apr 29 01:20	4°♑02'41	
	8892 May 23 22:25	30°℞♐	
min. Earth dist.	8892 Jun 07 06:52	24°♐42'44	0.67443 AU
opposition	8892 Jun 08 15:50	24°♐09'58	1°29'29
greatest brilliancy	8892 Jun 08 14:23	24°♐11'24	-1.3m
direct	8892 Jul 19 04:48	14°♐32'21	
desc. node	8892 Jul 22 09:26	14°♐36'01	
	8892 Sep 16 11:07	0°♑	
	8892 Nov 13 09:57	0°♒	
	8893 Jan 01 01:30	0°♓	
	8893 Feb 14 06:59	0°♈	

	8893 Mar 27 12:31	0°♉	
evening set	8893 Apr 16 07:16	14°♉58'58	
	8893 May 05 17:44	0°♊	
	8893 Jun 12 20:35	0°♋	
conjunction	8893 Jun 21 15:54	6°♋58'39	-0°06'48
minimum elong	8893 Jun 21 16:40	7°♋00'11	0°07'01
behind sun begin	8893 Jun 20 13:02	6°♋05'26	
behind sun end	8893 Jun 22 20:19	7°♋54'55	
max. Earth dist.	8893 Jun 25 11:48	10°♋00'41	2.36557 AU
asc. node	8893 Jun 30 23:55	14°♋22'14	
	8893 Jul 20 19:00	0°♌	
	8893 Aug 28 10:12	0°♍	
morning rise	8893 Sep 02 17:19	4°♍02'10	
	8893 Oct 07 13:24	0°♎	
	8893 Nov 18 21:34	0°♏	
	8894 Jan 03 04:51	0°♐	
	8894 Feb 22 01:52	0°♑	
	8894 Apr 27 00:16	0°♒	
retrograde	8894 Jun 02 10:47	6°♒46'34	
desc. node	8894 Jun 09 08:27	6°♒28'34	
	8894 Jul 05 16:34	30°℞♑	
opposition	8894 Jul 12 09:25	27°♑24'59	-1°08'18
greatest brilliancy	8894 Jul 12 11:15	27°♑23'10	-1.3m
min. Earth dist.	8894 Jul 14 19:28	26°♑28'00	0.67282 AU
direct	8894 Aug 23 00:17	17°♑23'25	
	8894 Oct 13 11:14	0°♒	
	8894 Dec 09 11:47	0°♓	
	8895 Jan 24 15:46	0°♈	
	8895 Mar 07 09:04	0°♉	
	8895 Apr 15 15:22	0°♊	
asc. node	8895 May 18 22:27	26°♊12'09	
	8895 May 23 17:32	0°♋	
greatest brilliancy	8895 Jun 09 02:21	12°♋57'38	1.2m
evening set	8895 Jun 28 03:14	27°♋58'08	
	8895 Jun 30 17:22	0°♌	
	8895 Aug 08 13:12	0°♍	
conjunction	8895 Sep 04 00:32	19°♍49'04	1°00'33
minimum elong	8895 Sep 03 22:27	19°♍45'13	1°00'29
	8895 Sep 17 22:42	0°♎	
max. Earth dist.	8895 Oct 17 21:00	21°♎18'28	2.49272 AU
	8895 Oct 30 09:50	0°♏	
morning rise	8895 Nov 02 09:06	2°♏02'22	
	8895 Dec 14 04:53	0°♐	
	8896 Jan 30 13:43	0°♑	
	8896 Mar 21 12:52	0°♒	
desc. node	8896 Apr 26 05:35	18°♒46'18	
	8896 May 21 09:57	0°♓	
retrograde	8896 Jul 10 01:48	11°♓29'46	
opposition	8896 Aug 17 01:19	3°♓03'44	-3°46'12
greatest brilliancy	8896 Aug 17 19:39	2°♓46'19	-1.6m
min. Earth dist.	8896 Aug 23 05:02	0°♓43'38	0.60559 AU
	8896 Aug 25 04:03	30°℞♒	
direct	8896 Sep 27 00:51	23°♒12'19	
	8896 Oct 31 20:09	0°♓	
	8896 Dec 29 11:20	0°♈	
	8897 Feb 11 19:22	0°♉	
	8897 Mar 24 00:19	0°♊	
asc. node	8897 Apr 05 00:20	9°♊15'13	
	8897 May 01 14:53	0°♋	
	8897 Jun 09 02:02	0°♌	
	8897 Jul 18 10:59	0°♍	
	8897 Aug 28 10:58	0°♎	
evening set	8897 Sep 01 16:50	3°♎01'38	
	8897 Oct 10 10:50	0°♏	
conjunction	8897 Oct 26 08:11	10°♏44'31	1°00'11
minimum elong	8897 Oct 26 09:23	10°♏46'31	1°00'20
max. Earth dist.	8897 Nov 18 05:01	25°♏55'03	2.60748 AU
	8897 Nov 24 10:33	0°♐	
morning rise	8897 Dec 14 07:31	12°♐53'06	
	8898 Jan 10 03:54	0°♑	
	8898 Feb 27 09:56	0°♒	
desc. node	8898 Mar 14 01:25	8°♒54'06	
	8898 Apr 18 14:50	0°♓	
	8898 Jun 12 11:07	0°♈	
retrograde	8898 Aug 29 19:35	24°♈51'36	
opposition	8898 Oct 02 23:23	18°♈03'36	-5°42'21
greatest brilliancy	8898 Oct 04 18:16	17°♈26'55	-2.2m
min. Earth dist.	8898 Oct 11 16:57	15°♈05'13	0.48079 AU
direct	8898 Nov 09 11:13	9°♈42'32	
	8899 Jan 09 11:13	0°♉	
asc. node	8899 Feb 21 02:12	27°♉15'09	
	8899 Feb 25 00:21	0°♊	
	8899 Apr 07 03:52	0°♋	
	8899 May 17 06:39	0°♌	
	8899 Jun 27 00:57	0°♍	
	8899 Aug 08 06:56	0°♎	
	8899 Sep 21 07:57	0°♏	
evening set	8899 Oct 19 05:39	18°♏26'08	
	8899 Nov 06 00:20	0°♐	
conjunction	8899 Dec 05 16:37	19°♐04'26	0°28'10
minimum elong	8899 Dec 05 17:28	19°♐05'48	0°28'23
max. Earth dist.	8899 Dec 12 09:54	23°♐21'46	2.67038 AU
	8899 Dec 22 20:12	0°♑	
morning rise	8900 Jan 19 05:33	17°♑22'03	
desc. node	8900 Jan 29 21:17	24°♑06'28	
	8900 Feb 08 04:59	0°♒	
	8900 Mar 27 16:40	0°♓	
	8900 May 14 06:08	0°♈	
	8900 Jul 01 09:08	0°♉	
	8900 Aug 20 23:21	0°♊	
	8900 Nov 02 17:11	0°♋	
retrograde	8900 Nov 13 03:27	0°♋41'29	
	8900 Nov 23 10:49	30°℞♊	
opposition	8900 Dec 12 21:04	25°♊46'38	-2°04'58
greatest brilliancy	8900 Dec 13 03:52	25°♊42'06	-3.0m
min. Earth dist.	8900 Dec 14 22:09	25°♊13'57	0.36881 AU
asc. node	8901 Jan 09 02:17	20°♊44'23	
direct	8901 Jan 11 22:53	20°♊41'05	
	8901 Feb 20 06:24	0°♋	
	8901 Apr 15 19:02	0°♌	
	8901 Jun 01 04:13	0°♍	
	8901 Jul 16 19:33	0°♎	
	8901 Sep 01 02:31	0°♏	
	8901 Oct 18 05:12	0°♐	
evening set	8901 Nov 26 15:39	24°♐54'03	
	8901 Dec 04 17:31	0°♑	
desc. node	8901 Dec 17 19:10	8°♑15'49	
max. Earth dist.	8902 Jan 03 23:49	19°♑09'56	2.67830 AU
conjunction	8902 Jan 10 08:46	23°♑13'14	-0°12'20
minimum elong	8902 Jan 10 08:24	23°♑12'39	0°12'07
behind sun begin	8902 Jan 09 20:14	22°♑53'17	
behind sun end	8902 Jan 10 20:34	23°♑32'01	
	8902 Jan 20 23:46	0°♒	
morning rise	8902 Feb 22 23:11	21°♒13'54	
	8902 Mar 08 10:16	0°♓	
	8902 Apr 22 16:50	0°♈	
	8902 Jun 05 17:08	0°♉	
	8902 Jul 18 13:49	0°♊	
	8902 Aug 29 16:52	0°♋	

	8902 Oct 11 07:52	0°♌	
asc. node	8902 Nov 27 01:48	29°♌42'17	
	8902 Nov 27 14:29	0°♍	
retrograde	8903 Jan 24 11:13	19°♍11'33	
min. Earth dist.	8903 Feb 20 04:53	14°♍17'33	0.43459 AU
greatest brilliancy	8903 Feb 26 22:38	12°♍02'32	-2.5m
opposition	8903 Feb 28 12:21	11°♍30'44	5°09'30
direct	8903 Apr 01 07:49	5°♍14'56	
	8903 Jun 15 12:21	0°♎	
	8903 Aug 08 13:15	0°♏	
	8903 Sep 28 00:59	0°♐	
desc. node	8903 Nov 04 19:10	23°♐00'06	
	8903 Nov 16 03:30	0°♑	
evening set	8904 Jan 01 12:18	29°♑06'21	
	8904 Jan 02 21:56	0°♒	
max. Earth dist.	8904 Jan 27 03:36	15°♒37'13	2.63136 AU
conjunction	8904 Feb 15 12:32	28°♒20'15	-0°49'08
minimum elong	8904 Feb 15 11:23	28°♒18'21	0°49'00
	8904 Feb 18 00:43	0°♓	
morning rise	8904 Apr 01 15:04	29°♓32'55	
	8904 Apr 02 06:43	0°♈	
	8904 May 14 16:22	0°♉	
	8904 Jun 24 11:32	0°♊	
	8904 Aug 03 03:17	0°♋	
	8904 Sep 11 09:05	0°♌	
asc. node	8904 Oct 13 23:37	24°♌34'03	
	8904 Oct 21 08:21	0°♍	
	8904 Dec 03 00:48	0°♎	
	8905 Jan 23 19:17	0°♏	
retrograde	8905 Mar 11 19:41	12°♏33'39	
min. Earth dist.	8905 Apr 13 10:00	5°♏25'04	0.56889 AU
greatest brilliancy	8905 Apr 18 22:44	3°♏16'19	-1.8m
opposition	8905 Apr 20 00:32	2°♏51'14	4°46'14
	8905 Apr 27 15:58	30°℞♎	
direct	8905 May 26 13:59	24°♎36'04	
	8905 Jun 27 10:28	0°♏	
	8905 Sep 02 18:41	0°♐	
desc. node	8905 Sep 21 20:24	10°♐23'02	
	8905 Oct 26 00:44	0°♑	
	8905 Dec 14 06:45	0°♒	
	8906 Jan 29 16:20	0°♓	
evening set	8906 Feb 07 14:34	5°♓58'25	
max. Earth dist.	8906 Feb 23 15:49	16°♓53'13	2.53316 AU
	8906 Mar 14 12:36	0°♈	
conjunction	8906 Mar 28 16:24	10°♈02'46	-1°07'29
minimum elong	8906 Mar 28 16:19	10°♈02'37	1°07'31
	8906 Apr 25 02:52	0°♉	
morning rise	8906 May 22 12:55	20°♉32'17	
	8906 Jun 03 22:36	0°♊	
	8906 Jul 12 15:08	0°♋	
	8906 Aug 19 23:03	0°♌	
asc. node	8906 Aug 31 19:00	9°♌12'32	
	8906 Sep 27 20:12	0°♍	
	8906 Nov 07 08:19	0°♎	
	8906 Dec 20 23:50	0°♏	
	8907 Feb 09 15:39	0°♐	
retrograde	8907 Apr 17 18:07	21°♐01'21	
min. Earth dist.	8907 May 25 09:47	12°♐11'24	0.65724 AU
opposition	8907 May 28 06:32	11°♐03'00	2°28'47
greatest brilliancy	8907 May 28 00:55	11°♐08'36	-1.4m
direct	8907 Jul 06 23:41	1°♐41'48	
desc. node	8907 Aug 09 22:13	7°♐33'27	
	8907 Oct 01 09:03	0°♑	
	8907 Nov 23 23:23	0°♒	
	8908 Jan 10 15:07	0°♓	
	8908 Feb 23 14:57	0°♈	
evening set	8908 Mar 25 09:20	22°♈12'36	
	8908 Apr 04 21:11	0°♉	
max. Earth dist.	8908 Apr 13 05:56	6°♉16'47	2.40072 AU
	8908 May 14 04:57	0°♊	
conjunction	8908 May 24 13:33	8°♊04'24	-0°37'30
minimum elong	8908 May 24 16:24	8°♊09'59	0°37'41
	8908 Jun 21 10:07	0°♋	
asc. node	8908 Jul 18 16:57	21°♋34'32	
	8908 Jul 29 09:31	0°♌	
morning rise	8908 Aug 04 02:34	4°♌29'05	
	8908 Sep 06 00:18	0°♍	
	8908 Oct 16 02:51	0°♎	
	8908 Nov 27 13:05	0°♏	
	8909 Jan 12 09:29	0°♐	
	8909 Mar 05 15:43	0°♑	
retrograde	8909 May 20 21:08	24°♑17'28	
desc. node	8909 Jun 26 22:05	15°♑59'30	
opposition	8909 Jun 30 05:42	14°♑41'10	-0°06'52
greatest brilliancy	8909 Jun 30 05:49	14°♑41'03	-1.3m
min. Earth dist.	8909 Jul 01 04:10	14°♑18'58	0.68139 AU
direct	8909 Aug 10 14:51	4°♑45'54	
	8909 Oct 28 13:26	0°♒	
	8909 Dec 19 13:53	0°♓	
	8910 Feb 02 17:14	0°♈	
	8910 Mar 16 04:01	0°♉	
	8910 Apr 24 08:52	0°♊	
evening set	8910 May 29 23:39	28°♊03'29	
	8910 Jun 01 10:27	0°♋	
asc. node	8910 Jun 05 16:15	3°♋21'49	
	8910 Jul 09 08:42	0°♌	
conjunction	8910 Aug 09 01:13	23°♌52'14	0°42'31
minimum elong	8910 Aug 08 21:52	23°♌45'48	0°42'19
	8910 Aug 17 01:25	0°♍	
	8910 Sep 26 06:56	0°♎	
max. Earth dist.	8910 Sep 30 02:06	2°♎45'36	2.43689 AU
morning rise	8910 Oct 13 15:40	12°♎30'25	
	8910 Nov 07 14:48	0°♏	
	8910 Dec 22 11:10	0°♐	
	8911 Feb 08 09:59	0°♑	
	8911 Apr 02 17:32	0°♒	
desc. node	8911 May 14 19:35	18°♒53'53	
retrograde	8911 Jun 26 04:25	27°♒38'29	
opposition	8911 Aug 04 02:43	18°♒47'12	-2°46'02
greatest brilliancy	8911 Aug 04 12:41	18°♒37'35	-1.4m
min. Earth dist.	8911 Aug 08 20:05	16°♒57'48	0.63951 AU
direct	8911 Sep 14 14:20	8°♒46'10	
	8911 Nov 21 18:11	0°♓	
	8912 Jan 10 23:49	0°♈	
	8912 Feb 22 20:09	0°♉	
	8912 Apr 02 12:25	0°♊	
asc. node	8912 Apr 22 15:48	15°♊42'13	
	8912 May 10 20:07	0°♋	
	8912 Jun 18 01:14	0°♌	
	8912 Jul 27 03:27	0°♍	
evening set	8912 Aug 10 09:18	10°♍39'21	
	8912 Sep 05 20:11	0°♎	
conjunction	8912 Oct 08 17:18	23°♎13'26	1°06'10
minimum elong	8912 Oct 08 17:47	23°♎14'16	1°06'15
	8912 Oct 18 13:16	0°♏	
max. Earth dist.	8912 Nov 08 02:26	13°♏55'28	2.56801 AU
morning rise	8912 Nov 29 20:27	28°♏20'39	
	8912 Dec 02 09:07	0°♐	
	8913 Jan 18 05:05	0°♑	

	8913 Mar 08 03:47	0°♒	
desc. node	8913 Mar 31 15:46	13°♒48'24	
	8913 Apr 29 13:19	0°♓	
	8913 Jul 04 03:22	0°♈	
retrograde	8913 Aug 08 19:26	6°♈29'06	
	8913 Sep 10 18:33	30°℞♓	
opposition	8913 Sep 13 18:21	28°♓55'55	-5°10'06
greatest brilliancy	8913 Sep 15 05:01	28°♓24'33	-1.9m
min. Earth dist.	8913 Sep 21 21:11	26°♓00'11	0.53474 AU
direct	8913 Oct 23 02:47	19°♓44'18	
	8913 Dec 04 07:20	0°♈	
	8914 Jan 26 03:57	0°♉	
	8914 Mar 09 12:35	0°♊	
asc. node	8914 Mar 10 17:00	0°♊52'43	
	8914 Apr 18 03:50	0°♋	
	8914 May 27 08:41	0°♌	
	8914 Jul 06 09:33	0°♍	
	8914 Aug 17 00:41	0°♎	
	8914 Sep 29 13:29	0°♏	
evening set	8914 Oct 03 06:54	2°♏30'28	
	8914 Nov 13 21:33	0°♐	
conjunction	8914 Nov 21 20:58	5°♐10'39	0°42'25
minimum elong	8914 Nov 21 22:10	5°♐12'36	0°42'38
max. Earth dist.	8914 Dec 04 11:40	13°♐18'48	2.65226 AU
	8914 Dec 30 14:29	0°♑	
morning rise	8915 Jan 06 16:03	4°♑28'57	
desc. node	8915 Feb 16 12:20	0°♒12'15	
	8915 Feb 16 04:31	0°♒	
	8915 Apr 05 10:13	0°♓	
	8915 May 24 16:47	0°♈	
	8915 Jul 15 22:28	0°♉	
	8915 Sep 27 02:19	0°♊	
retrograde	8915 Oct 12 11:32	1°♊25'42	
	8915 Oct 27 15:54	30°℞♉	
opposition	8915 Nov 12 13:25	25°♉59'40	-4°48'36
greatest brilliancy	8915 Nov 13 21:22	25°♉36'13	-2.7m
min. Earth dist.	8915 Nov 19 06:25	24°♉02'27	0.39968 AU
direct	8915 Dec 15 11:08	19°♉42'40	
	8916 Jan 25 07:55	0°♊	
asc. node	8916 Jan 26 19:07	0°♊40'12	
	8916 Mar 17 04:36	0°♋	
	8916 Apr 30 00:12	0°♌	
	8916 Jun 11 22:53	0°♍	
	8916 Jul 25 17:54	0°♎	
	8916 Sep 08 21:36	0°♏	
	8916 Oct 25 07:43	0°♐	
evening set	8916 Nov 12 07:24	11°♐28'26	
	8916 Dec 11 11:40	0°♑	
max. Earth dist.	8916 Dec 26 05:12	9°♑20'29	2.68184 AU
conjunction	8916 Dec 27 16:33	10°♑16'33	0°03'33
minimum elong	8916 Dec 27 16:41	10°♑16'45	0°03'48
behind sun begin	8916 Dec 26 22:36	9°♑48'05	
behind sun end	8916 Dec 28 10:46	10°♑45'25	
desc. node	8917 Jan 03 09:12	14°♑31'23	
	8917 Jan 27 17:17	0°♒	
morning rise	8917 Feb 09 06:58	8°♒01'28	
	8917 Mar 15 11:05	0°♓	
	8917 Apr 30 09:44	0°♈	
	8917 Jun 14 12:26	0°♉	
	8917 Jul 29 00:09	0°♊	
	8917 Sep 11 16:26	0°♋	
	8917 Oct 29 22:18	0°♌	
asc. node	8917 Dec 13 18:09	19°♌02'52	
retrograde	8917 Dec 31 01:32	21°♌05'55	
min. Earth dist.	8918 Jan 25 23:26	16°♌45'59	0.38829 AU
greatest brilliancy	8918 Jan 31 10:10	15°♌10'05	-2.9m
opposition	8918 Feb 01 07:36	14°♌54'15	3°27'49
direct	8918 Mar 03 06:08	9°♌34'56	
	8918 May 07 05:30	0°♍	
	8918 Jun 29 14:22	0°♎	
	8918 Aug 18 02:02	0°♏	
	8918 Oct 05 20:08	0°♐	
desc. node	8918 Nov 21 08:07	28°♐51'27	
	8918 Nov 23 04:01	0°♑	
evening set	8918 Dec 18 13:20	15°♑56'51	
	8919 Jan 09 16:05	0°♒	
max. Earth dist.	8919 Jan 17 21:32	5°♒16'24	2.65628 AU
conjunction	8919 Feb 01 01:48	14°♒25'43	-0°36'04
minimum elong	8919 Feb 01 00:50	14°♒24'09	0°35'53
	8919 Feb 24 20:42	0°♓	
morning rise	8919 Mar 17 16:24	13°♓52'17	
	8919 Apr 10 10:32	0°♈	
	8919 May 23 08:27	0°♉	
	8919 Jul 03 18:11	0°♊	
	8919 Aug 13 01:33	0°♋	
	8919 Sep 22 00:48	0°♌	
asc. node	8919 Oct 31 16:22	28°♌59'05	
	8919 Nov 02 02:49	0°♍	
	8919 Dec 17 19:23	0°♎	
retrograde	8920 Feb 24 06:08	24°♎35'26	
min. Earth dist.	8920 Mar 25 12:02	18°♎17'57	0.51937 AU
greatest brilliancy	8920 Mar 31 21:08	15°♎54'25	-2.0m
opposition	8920 Apr 02 07:56	15°♎21'40	5°21'39
direct	8920 May 07 04:32	7°♎45'32	
	8920 Jul 18 13:25	0°♏	
	8920 Sep 12 17:12	0°♐	
desc. node	8920 Oct 08 08:59	14°♐50'43	
	8920 Nov 02 19:22	0°♑	
	8920 Dec 21 07:56	0°♒	
evening set	8921 Jan 23 04:15	21°♒09'28	
	8921 Feb 05 13:38	0°♓	
max. Earth dist.	8921 Feb 11 12:53	3°♓59'07	2.57756 AU
conjunction	8921 Mar 11 00:59	22°♓42'00	-1°04'00
minimum elong	8921 Mar 11 00:08	22°♓40'33	1°03'57
	8921 Mar 21 12:54	0°♈	
morning rise	8921 Apr 30 08:40	28°♈29'48	
	8921 May 02 09:57	0°♉	
	8921 Jun 11 13:36	0°♊	
	8921 Jul 20 13:32	0°♋	
	8921 Aug 28 03:33	0°♌	
asc. node	8921 Sep 17 14:18	15°♌47'02	
	8921 Oct 06 06:31	0°♍	
	8921 Nov 16 04:53	0°♎	
	8921 Dec 31 03:25	0°♏	
	8922 Feb 27 08:51	0°♐	
retrograde	8922 Apr 04 01:32	7°♐16'34	
	8922 May 07 10:10	30°℞♏	
min. Earth dist.	8922 May 09 22:12	29°♏01'21	0.62999 AU
opposition	8922 May 14 06:43	27°♏17'43	3°26'01
greatest brilliancy	8922 May 13 18:37	27°♏29'43	-1.5m
direct	8922 Jun 21 22:45	18°♏17'30	
	8922 Aug 11 03:04	0°♐	
desc. node	8922 Aug 26 10:44	6°♐32'06	
	8922 Oct 11 13:21	0°♑	
	8922 Dec 01 20:33	0°♒	
	8923 Jan 17 21:11	0°♓	
	8923 Mar 02 18:24	0°♈	
evening set	8923 Mar 06 14:01	2°♈41'59	
max. Earth dist.	8923 Mar 20 10:13	12°♈36'35	2.45378 AU
	8923 Apr 13 03:13	0°♉	

conjunction	8923 Apr 30 06:42	12°♉52'52	-0°57'32
minimum elong	8923 Apr 30 08:48	12°♉56'50	0°57'41
	8923 May 22 15:05	0°♊	
	8923 Jun 30 00:06	0°♋	
morning rise	8923 Jul 04 09:27	3°♋27'33	
asc. node	8923 Aug 05 10:33	28°♋42'30	
	8923 Aug 07 02:02	0°♌	
	8923 Sep 14 17:55	0°♍	
	8923 Oct 24 21:41	0°♎	
	8923 Dec 06 13:29	0°♏	
	8924 Jan 22 09:04	0°♐	
	8924 Mar 19 17:53	0°♑	
retrograde	8924 May 07 14:53	11°♑47'55	
opposition	8924 Jun 17 04:34	2°♑00'10	0°54'06
greatest brilliancy	8924 Jun 17 04:24	2°♑00'21	-1.3m
min. Earth dist.	8924 Jun 16 15:29	2°♑13'09	0.67964 AU
	8924 Jun 22 06:47	30°℞♐	
desc. node	8924 Jul 13 11:28	23°♐35'34	
direct	8924 Jul 28 02:10	22°♐15'07	
	8924 Sep 05 17:08	0°♑	
	8924 Nov 08 05:15	0°♒	
	8924 Dec 27 20:29	0°♓	
	8925 Feb 10 09:16	0°♈	
	8925 Mar 23 16:52	0°♉	
evening set	8925 May 01 17:27	29°♉51'15	
	8925 May 01 21:56	0°♊	
	8925 Jun 09 00:09	0°♋	
asc. node	8925 Jun 22 07:54	10°♋33'49	
conjunction	8925 Jul 09 23:22	24°♋31'31	0°12'44
minimum elong	8925 Jul 09 21:58	24°♋28'45	0°12'29
behind sun begin	8925 Jul 09 02:14	23°♋49'49	
behind sun end	8925 Jul 10 17:42	25°♋07'40	
	8925 Jul 16 22:06	0°♌	
	8925 Aug 24 13:07	0°♍	
max. Earth dist.	8925 Aug 27 01:49	1°♍55'50	2.38320 AU
morning rise	8925 Sep 19 07:33	19°♍25'31	
	8925 Oct 03 16:13	0°♎	
	8925 Nov 14 22:55	0°♏	
	8925 Dec 29 23:54	0°♐	
	8926 Feb 16 22:00	0°♑	
	8926 Apr 15 19:25	0°♒	
desc. node	8926 May 31 10:26	13°♒50'18	
retrograde	8926 Jun 11 11:26	14°♒33'05	
opposition	8926 Jul 21 03:03	5°♒21'15	-1°44'29
greatest brilliancy	8926 Jul 21 07:05	5°♒17'19	-1.4m
min. Earth dist.	8926 Jul 24 08:58	4°♒05'12	0.66375 AU
	8926 Aug 04 12:37	30°℞♑	
direct	8926 Aug 31 18:50	25°♑18'16	
	8926 Sep 30 04:20	0°♒	
	8926 Dec 03 21:30	0°♓	
	8927 Jan 20 03:37	0°♈	
	8927 Mar 03 05:29	0°♉	
	8927 Apr 11 14:59	0°♊	
asc. node	8927 May 10 08:17	22°♊32'29	
	8927 May 19 18:46	0°♋	
	8927 Jun 26 19:49	0°♌	
evening set	8927 Jul 15 13:31	14°♌34'45	
	8927 Aug 04 16:51	0°♍	
	8927 Sep 14 03:45	0°♎	
conjunction	8927 Sep 18 11:44	3°♎07'45	1°05'19
minimum elong	8927 Sep 18 10:45	3°♎06'00	1°05'19
	8927 Oct 26 15:45	0°♏	
max. Earth dist.	8927 Oct 27 08:15	0°♏28'23	2.52132 AU
morning rise	8927 Nov 13 21:48	12°♏25'18	
	8927 Dec 10 09:40	0°♐	
	8928 Jan 26 11:44	0°♑	
	8928 Mar 16 12:06	0°♒	
desc. node	8928 Apr 17 07:28	17°♒38'54	
	8928 May 11 20:29	0°♓	
retrograde	8928 Jul 20 20:54	20°♓25'45	
opposition	8928 Aug 27 05:28	12°♓16'36	-4°19'23
greatest brilliancy	8928 Aug 28 05:30	11°♓54'06	-1.7m
min. Earth dist.	8928 Sep 03 03:48	9°♓41'05	0.58250 AU
direct	8928 Oct 06 18:37	2°♓35'20	
	8928 Dec 22 11:55	0°♈	
	8929 Feb 06 13:05	0°♉	
	8929 Mar 19 07:30	0°♊	
asc. node	8929 Mar 27 08:59	6°♊09'04	
	8929 Apr 27 04:57	0°♋	
	8929 Jun 04 21:05	0°♌	
	8929 Jul 14 10:17	0°♍	
	8929 Aug 24 14:15	0°♎	
evening set	8929 Sep 14 10:44	14°♎40'54	
	8929 Oct 06 17:19	0°♏	
conjunction	8929 Nov 05 23:46	20°♏16'59	0°54'35
minimum elong	8929 Nov 06 01:04	20°♏19'09	0°54'46
	8929 Nov 20 18:44	0°♐	
max. Earth dist.	8929 Nov 25 01:21	2°♐47'17	2.62568 AU
morning rise	8929 Dec 23 15:02	21°♐12'26	
	8930 Jan 06 10:42	0°♑	
	8930 Feb 23 09:27	0°♒	
desc. node	8930 Mar 05 03:17	6°♒00'16	
	8930 Apr 13 17:20	0°♓	
	8930 Jun 04 19:58	0°♈	
	8930 Aug 07 18:44	0°♉	
retrograde	8930 Sep 13 23:11	7°♉08'59	
opposition	8930 Oct 16 23:23	0°♉49'51	-5°43'30
greatest brilliancy	8930 Oct 18 19:08	0°♉13'59	-2.4m
	8930 Oct 19 12:08	30°℞♈	
min. Earth dist.	8930 Oct 25 12:43	28°♈02'39	0.44981 AU
direct	8930 Nov 22 00:55	23°♈07'36	
	8930 Dec 24 20:05	0°♉	
asc. node	8931 Feb 12 10:04	26°♉48'50	
	8931 Feb 17 06:50	0°♊	
	8931 Apr 01 02:51	0°♋	
	8931 May 12 01:41	0°♌	
	8931 Jun 22 09:19	0°♍	
	8931 Aug 04 01:25	0°♎	
	8931 Sep 17 10:01	0°♏	
evening set	8931 Oct 29 06:31	27°♏23'30	
	8931 Nov 02 07:29	0°♐	
conjunction	8931 Dec 14 19:35	27°♐11'56	0°19'16
minimum elong	8931 Dec 14 20:11	27°♐12'53	0°19'31
max. Earth dist.	8931 Dec 18 12:18	29°♐32'57	2.67689 AU
	8931 Dec 19 05:20	0°♑	
desc. node	8932 Jan 20 23:48	20°♑47'28	
morning rise	8932 Jan 27 21:06	25°♑09'26	
	8932 Feb 04 12:20	0°♒	
	8932 Mar 22 16:38	0°♓	
	8932 May 08 13:52	0°♈	
	8932 Jun 24 08:40	0°♉	
	8932 Aug 10 19:55	0°♊	
	8932 Oct 01 11:40	0°♋	
retrograde	8932 Dec 01 08:27	19°♋08'49	
min. Earth dist.	8932 Dec 30 02:43	14°♋27'03	0.36566 AU
asc. node	8932 Dec 30 11:54	14°♋20'55	
opposition	8932 Dec 31 11:18	14°♋05'17	0°04'35
greatest brilliancy	8932 Dec 31 11:12	14°♋05'21	-3.1m
direct	8933 Jan 29 18:48	9°♋13'15	
	8933 Apr 03 11:19	0°♌	

	8933 May 24 06:12	0°♍	
	8933 Jul 10 12:57	0°♎	
	8933 Aug 26 16:27	0°♏	
	8933 Oct 13 06:42	0°♐	
	8933 Nov 30 00:59	0°♑	
evening set	8933 Dec 04 16:42	2°♑55'53	
desc. node	8933 Dec 07 21:26	4°♑56'47	
max. Earth dist.	8934 Jan 09 01:51	25°♑20'23	2.67282 AU
	8934 Jan 16 09:01	0°♒	
conjunction	8934 Jan 18 04:56	1°♒10'15	-0°21'24
minimum elong	8934 Jan 18 04:19	1°♒09'15	0°21'11
morning rise	8934 Mar 03 00:06	29°♒31'56	
	8934 Mar 03 17:13	0°♓	
	8934 Apr 17 17:23	0°♈	
	8934 May 31 07:25	0°♉	
	8934 Jul 12 13:43	0°♊	
	8934 Aug 22 21:32	0°♋	
	8934 Oct 03 04:59	0°♌	
	8934 Nov 15 21:16	0°♍	
asc. node	8934 Nov 17 10:50	1°♍00'10	
	8935 Jan 14 07:40	0°♎	
retrograde	8935 Feb 05 09:22	3°♎22'38	
	8935 Feb 27 01:13	30°℞♍	
min. Earth dist.	8935 Mar 05 06:29	28°♍00'23	0.46445 AU
greatest brilliancy	8935 Mar 12 01:59	25°♍36'28	-2.3m
opposition	8935 Mar 13 17:41	25°♍01'18	5°29'03
direct	8935 Apr 15 14:51	18°♍14'44	
	8935 Jun 02 20:51	0°♎	
	8935 Aug 01 13:30	0°♏	
	8935 Sep 22 12:12	0°♐	
desc. node	8935 Oct 25 21:17	20°♐02'02	
	8935 Nov 11 05:02	0°♑	
	8935 Dec 29 05:32	0°♒	
evening set	8936 Jan 09 14:54	7°♒17'06	
max. Earth dist.	8936 Feb 01 20:34	22°♒22'48	2.61433 AU
	8936 Feb 13 09:32	0°♓	
conjunction	8936 Feb 24 02:33	7°♓09'04	-0°55'38
minimum elong	8936 Feb 24 01:24	7°♓07'09	0°55'32
	8936 Mar 28 13:18	0°♈	
morning rise	8936 Apr 11 09:31	9°♈41'29	
	8936 May 09 18:30	0°♉	
	8936 Jun 19 07:49	0°♊	
	8936 Jul 28 17:15	0°♋	
	8936 Sep 05 16:19	0°♌	
asc. node	8936 Oct 04 07:05	21°♌48'04	
	8936 Oct 15 05:47	0°♍	
	8936 Nov 26 00:36	0°♎	
	8937 Jan 12 20:19	0°♏	
retrograde	8937 Mar 20 14:11	22°♏17'53	
min. Earth dist.	8937 Apr 23 10:02	14°♏43'31	0.59314 AU
greatest brilliancy	8937 Apr 28 09:03	12°♏46'47	-1.7m
opposition	8937 Apr 29 05:32	12°♏26'40	4°19'18
direct	8937 Jun 05 14:48	3°♏53'26	
	8937 Aug 26 04:12	0°♐	
desc. node	8937 Sep 11 23:17	8°♐37'54	
	8937 Oct 20 10:34	0°♑	
	8937 Dec 09 07:54	0°♒	
	8938 Jan 24 22:56	0°♓	
evening set	8938 Feb 16 22:24	15°♓29'29	
max. Earth dist.	8938 Mar 03 13:43	25°♓36'38	2.50630 AU
	8938 Mar 09 20:01	0°♈	
conjunction	8938 Apr 08 15:21	21°♈22'30	-1°06'28
minimum elong	8938 Apr 08 15:58	21°♈23'37	1°06'33
	8938 Apr 20 08:54	0°♉	

	8938 May 30 02:04	0°♊	
morning rise	8938 Jun 05 17:23	5°♊06'58	
	8938 Jul 07 15:46	0°♋	
	8938 Aug 14 21:03	0°♌	
asc. node	8938 Aug 22 04:02	5°♌41'54	
	8938 Sep 22 15:14	0°♍	
	8938 Nov 01 22:23	0°♎	
	8938 Dec 15 01:23	0°♏	
	8939 Feb 01 16:26	0°♐	
retrograde	8939 Apr 25 10:02	29°♐03'19	
min. Earth dist.	8939 Jun 02 23:49	19°♐55'53	0.66799 AU
opposition	8939 Jun 05 00:20	19°♐07'37	1°54'17
greatest brilliancy	8939 Jun 04 21:24	19°♐10'32	-1.4m
direct	8939 Jul 15 05:00	9°♐36'39	
desc. node	8939 Jul 31 01:11	11°♐01'47	
	8939 Sep 23 09:49	0°♑	
	8939 Nov 18 07:47	0°♒	
	8940 Jan 05 14:23	0°♓	
	8940 Feb 18 18:48	0°♈	
	8940 Mar 31 02:02	0°♉	
evening set	8940 Apr 06 22:04	5°♉07'40	
max. Earth dist.	8940 May 08 11:11	29°♉17'12	2.37596 AU
	8940 May 09 09:13	0°♊	
conjunction	8940 Jun 09 13:00	24°♊26'59	-0°21'03
minimum elong	8940 Jun 09 15:05	24°♊31'05	0°21'16
	8940 Jun 16 13:28	0°♋	
asc. node	8940 Jul 09 01:19	17°♋48'23	
	8940 Jul 24 12:14	0°♌	
morning rise	8940 Aug 21 16:50	22°♌00'02	
	8940 Sep 01 02:29	0°♍	
	8940 Oct 11 04:02	0°♎	
	8940 Nov 22 11:15	0°♏	
	8941 Jan 06 21:06	0°♐	
	8941 Feb 26 10:40	0°♑	
	8941 May 10 04:46	0°♒	
retrograde	8941 May 28 13:57	1°♒55'17	
	8941 Jun 14 22:52	30°℞♑	
desc. node	8941 Jun 17 00:22	29°♑30'59	
opposition	8941 Jul 07 18:00	22°♑26'45	-0°42'51
greatest brilliancy	8941 Jul 07 18:47	22°♑25'59	-1.3m
min. Earth dist.	8941 Jul 09 12:34	21°♑44'52	0.67789 AU
direct	8941 Aug 18 07:14	12°♑27'19	
	8941 Oct 20 03:19	0°♒	
	8941 Dec 13 17:51	0°♓	
	8942 Jan 28 12:07	0°♈	
	8942 Mar 11 03:47	0°♉	
	8942 Apr 19 10:06	0°♊	
asc. node	8942 May 26 23:18	29°♊34'32	
	8942 May 27 12:09	0°♋	
evening set	8942 Jun 15 23:24	15°♋25'28	
	8942 Jul 04 11:01	0°♌	
	8942 Aug 12 04:39	0°♍	
conjunction	8942 Aug 24 18:26	9°♍30'50	0°54'25
minimum elong	8942 Aug 24 15:33	9°♍25'26	0°54'17
	8942 Sep 21 11:10	0°♎	
max. Earth dist.	8942 Oct 11 10:45	14°♎21'26	2.46831 AU
morning rise	8942 Oct 25 18:48	24°♎26'10	
	8942 Nov 02 19:27	0°♏	
	8942 Dec 17 13:15	0°♐	
	8943 Feb 03 01:40	0°♑	
	8943 Mar 26 18:45	0°♒	
desc. node	8943 May 04 21:50	19°♒33'55	
	8943 May 31 23:47	0°♓	
retrograde	8943 Jul 05 00:49	5°♓54'39	
	8943 Aug 05 03:51	30°℞♒	

opposition	8943 Aug 12 11:46	27°♒16'40	-3°21'09
greatest brilliancy	8943 Aug 13 02:13	27°♒02'50	-1.5m
min. Earth dist.	8943 Aug 18 00:51	25°♒09'24	0.62201 AU
direct	8943 Sep 22 18:21	17°♒19'37	
	8943 Nov 11 12:52	0°♓	
	8944 Jan 04 12:59	0°♈	
	8944 Feb 17 05:05	0°♉	
	8944 Mar 28 04:35	0°♊	
asc. node	8944 Apr 13 01:01	12°♊17'13	
	8944 May 05 15:50	0°♋	
	8944 Jun 12 23:39	0°♌	
	8944 Jul 22 04:26	0°♍	
evening set	8944 Aug 24 00:38	24°♍15'11	
	8944 Aug 31 23:47	0°♎	
	8944 Oct 13 19:18	0°♏	
conjunction	8944 Oct 19 14:27	3°♏57'18	1°03'21
minimum elong	8944 Oct 19 15:26	3°♏58'58	1°03'29
max. Earth dist.	8944 Nov 14 15:32	21°♏25'44	2.59096 AU
	8944 Nov 27 15:55	0°♐	
morning rise	8944 Dec 08 20:17	7°♐17'01	
	8945 Jan 13 09:09	0°♑	
	8945 Mar 02 20:49	0°♒	
desc. node	8945 Mar 21 18:02	11°♒20'36	
	8945 Apr 22 19:57	0°♓	
	8945 Jun 19 14:00	0°♈	
retrograde	8945 Aug 20 19:55	17°♈02'02	
opposition	8945 Sep 24 19:39	9°♈52'38	-5°31'33
greatest brilliancy	8945 Sep 26 11:37	9°♈17'25	-2.1m
min. Earth dist.	8945 Oct 03 08:41	6°♈52'41	0.50550 AU
direct	8945 Nov 02 05:49	1°♈05'41	
	8946 Jan 17 11:08	0°♉	
asc. node	8946 Mar 01 03:10	28°♉50'50	
	8946 Mar 02 17:30	0°♊	
	8946 Apr 12 02:10	0°♋	
	8946 May 21 17:26	0°♌	
	8946 Jul 01 02:11	0°♍	
	8946 Aug 11 23:42	0°♎	
	8946 Sep 24 17:44	0°♏	
evening set	8946 Oct 13 03:41	12°♏16'17	
	8946 Nov 09 05:11	0°♐	
conjunction	8946 Nov 30 11:09	13°♐43'01	0°34'15
minimum elong	8946 Nov 30 12:10	13°♐44'39	0°34'30
max. Earth dist.	8946 Dec 09 20:02	19°♐43'12	2.66338 AU
	8946 Dec 25 22:57	0°♑	
morning rise	8947 Jan 14 11:51	12°♑23'22	
desc. node	8947 Feb 06 13:30	26°♑57'12	
	8947 Feb 11 09:36	0°♒	
	8947 Mar 31 04:23	0°♓	
	8947 May 18 09:38	0°♈	
	8947 Jul 06 22:49	0°♉	
	8947 Aug 30 18:22	0°♊	
retrograde	8947 Oct 30 14:27	17°♊45'52	
opposition	8947 Nov 29 16:00	12°♊42'57	-3°29'33
greatest brilliancy	8947 Nov 30 10:02	12°♊30'35	-2.9m
min. Earth dist.	8947 Dec 04 03:55	11°♊29'03	0.37903 AU
direct	8947 Dec 30 20:06	7°♊11'07	
asc. node	8948 Jan 17 03:29	9°♊11'50	
	8948 Mar 05 06:18	0°♋	
	8948 Apr 21 21:24	0°♌	
	8948 Jun 05 09:25	0°♍	
	8948 Jul 20 01:17	0°♎	
	8948 Sep 03 18:11	0°♏	
	8948 Oct 20 12:15	0°♐	
evening set	8948 Nov 20 14:17	19°♐42'57	
	8948 Dec 06 20:16	0°♑	

desc. node	8948 Dec 24 10:38	11°♑08'36	
max. Earth dist.	8948 Dec 31 07:31	15°♑30'07	2.68093 AU
conjunction	8949 Jan 04 12:59	18°♑11'12	-0°05'52
minimum elong	8949 Jan 04 12:48	18°♑10'55	0°05'37
behind sun begin	8949 Jan 03 19:22	17°♑43'14	
behind sun end	8949 Jan 05 06:15	18°♑38'36	
	8949 Jan 23 02:19	0°♒	
morning rise	8949 Feb 17 01:52	16°♒01'02	
	8949 Mar 10 16:14	0°♓	
	8949 Apr 25 06:09	0°♈	
	8949 Jun 08 17:49	0°♉	
	8949 Jul 22 06:04	0°♊	
	8949 Sep 03 07:00	0°♋	
	8949 Oct 17 12:26	0°♌	
asc. node	8949 Dec 04 02:59	27°♌19'13	
	8949 Dec 10 06:14	0°♍	
retrograde	8950 Jan 14 09:34	7°♍59'32	
min. Earth dist.	8950 Feb 09 12:24	3°♍24'49	0.41194 AU
greatest brilliancy	8950 Feb 15 21:29	1°♍23'38	-2.7m
opposition	8950 Feb 17 06:16	0°♍57'23	4°38'42
	8950 Feb 20 07:10	30°℞♌	
direct	8950 Mar 20 04:48	25°♌07'48	
	8950 Apr 17 23:08	0°♍	
	8950 Jun 21 07:40	0°♎	
	8950 Aug 11 23:23	0°♏	
	8950 Sep 30 14:50	0°♐	
desc. node	8950 Nov 11 10:42	25°♐42'24	
	8950 Nov 18 08:44	0°♑	
evening set	8950 Dec 26 12:43	23°♑57'06	
	8951 Jan 05 00:48	0°♒	
max. Earth dist.	8951 Jan 23 06:32	11°♒43'17	2.64346 AU
conjunction	8951 Feb 09 06:06	22°♒46'54	-0°43'58
minimum elong	8951 Feb 09 05:00	22°♒45'06	0°43'49
	8951 Feb 20 05:05	0°♓	
morning rise	8951 Mar 26 14:24	23°♓06'39	
	8951 Apr 05 15:25	0°♈	
	8951 May 18 07:15	0°♉	
	8951 Jun 28 09:22	0°♊	
	8951 Aug 07 07:53	0°♋	
	8951 Sep 15 20:31	0°♌	
asc. node	8951 Oct 22 01:30	26°♌59'57	
	8951 Oct 26 04:24	0°♍	
	8951 Dec 08 17:21	0°♎	
	8952 Feb 04 05:27	0°♏	
retrograde	8952 Mar 04 22:22	5°♏35'42	
	8952 Apr 02 06:42	30°℞♎	
min. Earth dist.	8952 Apr 05 11:31	28°♎49'14	0.54757 AU
greatest brilliancy	8952 Apr 11 10:10	26°♎32'41	-1.9m
opposition	8952 Apr 12 16:02	26°♎04'00	5°03'51
direct	8952 May 18 12:34	18°♎05'02	
	8952 Jul 07 07:08	0°♏	
	8952 Sep 06 07:20	0°♐	
desc. node	8952 Sep 28 11:59	12°♐26'25	
	8952 Oct 28 13:37	0°♑	
	8952 Dec 16 12:44	0°♒	
evening set	8953 Jan 31 20:27	29°♒57'59	
	8953 Jan 31 21:40	0°♓	
max. Earth dist.	8953 Feb 18 04:45	11°♓37'01	2.55372 AU
	8953 Mar 16 20:22	0°♈	
conjunction	8953 Mar 20 19:57	2°♈47'56	-1°06'46
minimum elong	8953 Mar 20 19:29	2°♈47'07	1°06'46
	8953 Apr 27 14:36	0°♉	
morning rise	8953 May 12 11:20	11°♉00'59	
	8953 Jun 06 14:34	0°♊	

	8953 Jul 15 10:34	0°♋	
	8953 Aug 22 21:01	0°♌	
asc. node	8953 Sep 07 20:58	12°♌24'55	
	8953 Sep 30 19:51	0°♍	
	8953 Nov 10 10:16	0°♎	
	8953 Dec 24 10:20	0°♏	
	8954 Feb 14 23:25	0°♐	
retrograde	8954 Apr 11 23:34	15°♐44'27	
min. Earth dist.	8954 May 18 20:52	7°♐09'07	0.64629 AU
opposition	8954 May 22 09:11	5°♐45'17	2°53'03
greatest brilliancy	8954 May 22 01:02	5°♐53'24	-1.4m
	8954 Jun 07 09:17	30°℞♏	
direct	8954 Jun 30 15:29	26°♏32'47	
	8954 Jul 26 00:15	0°♐	
desc. node	8954 Aug 16 13:54	6°♐56'37	
	8954 Oct 04 23:57	0°♑	
	8954 Nov 26 14:15	0°♒	
	8955 Jan 13 00:47	0°♓	
	8955 Feb 26 00:52	0°♈	
evening set	8955 Mar 17 11:12	13°♈53'10	
max. Earth dist.	8955 Apr 01 14:56	24°♈58'40	2.42391 AU
	8955 Apr 08 09:25	0°♉	
conjunction	8955 May 14 01:03	27°♉04'41	-0°47'35
minimum elong	8955 May 14 03:48	27°♉09'59	0°47'46
	8955 May 17 19:42	0°♊	
	8955 Jun 25 02:40	0°♋	
morning rise	8955 Jul 22 02:18	21°♋19'01	
asc. node	8955 Jul 26 18:04	24°♋59'21	
	8955 Aug 02 02:52	0°♌	
	8955 Sep 09 17:19	0°♍	
	8955 Oct 19 18:54	0°♎	
	8955 Dec 01 05:28	0°♏	
	8956 Jan 16 07:39	0°♐	
	8956 Mar 09 23:37	0°♑	
retrograde	8956 May 15 04:37	19°♑28'32	
opposition	8956 Jun 24 16:22	9°♑46'51	0°18'25
greatest brilliancy	8956 Jun 24 16:36	9°♑46'37	-1.3m
min. Earth dist.	8956 Jun 24 23:24	9°♑39'54	0.68194 AU
desc. node	8956 Jul 03 14:23	6°♑19'52	
	8956 Aug 01 09:53	30°℞♐	
direct	8956 Aug 04 21:03	29°♐55'34	
	8956 Aug 08 09:09	0°♑	
	8956 Nov 01 11:04	0°♒	
	8956 Dec 22 10:40	0°♓	
	8957 Feb 05 09:10	0°♈	
	8957 Mar 18 19:53	0°♉	
	8957 Apr 27 01:40	0°♊	
evening set	8957 May 17 05:12	15°♊48'25	
	8957 Jun 04 03:41	0°♋	
asc. node	8957 Jun 12 17:22	6°♋47'47	
	8957 Jul 12 01:26	0°♌	
conjunction	8957 Jul 27 03:38	11°♌49'24	0°30'49
minimum elong	8957 Jul 27 00:38	11°♌43'35	0°30'35
	8957 Aug 19 16:31	0°♍	
max. Earth dist.	8957 Sep 18 18:52	22°♍38'01	2.41180 AU
	8957 Sep 28 19:29	0°♎	
morning rise	8957 Oct 03 13:42	3°♎27'50	
	8957 Nov 10 01:11	0°♏	
	8957 Dec 24 21:17	0°♐	
	8958 Feb 11 02:41	0°♑	
	8958 Apr 06 18:45	0°♒	
desc. node	8958 May 21 12:15	17°♒58'07	
retrograde	8958 Jun 19 17:47	22°♒27'58	
opposition	8958 Jul 29 00:59	13°♒27'00	-2°20'25
greatest brilliancy	8958 Jul 29 08:05	13°♒20'07	-1.4m
min. Earth dist.	8958 Aug 02 03:03	11°♒51'52	0.65166 AU
direct	8958 Sep 08 15:39	3°♒24'09	
	8958 Nov 26 12:05	0°♓	
	8959 Jan 14 08:43	0°♈	
	8959 Feb 25 21:46	0°♉	
	8959 Apr 06 11:45	0°♊	
asc. node	8959 Apr 30 17:06	18°♊56'27	
	8959 May 14 17:43	0°♋	
	8959 Jun 21 20:36	0°♌	
	8959 Jul 30 19:38	0°♍	
evening set	8959 Jul 31 02:36	0°♍13'11	
	8959 Sep 09 08:23	0°♎	
conjunction	8959 Sep 30 21:19	15°♎22'19	1°06'48
minimum elong	8959 Sep 30 21:18	15°♎22'17	1°06'51
	8959 Oct 21 21:47	0°♏	
max. Earth dist.	8959 Nov 03 20:35	8°♏50'19	2.54797 AU
morning rise	8959 Nov 23 18:49	22°♏11'30	
	8959 Dec 05 15:07	0°♐	
	8960 Jan 21 12:08	0°♑	
	8960 Mar 10 19:13	0°♒	
desc. node	8960 Apr 07 08:31	15°♒52'22	
	8960 May 03 11:15	0°♓	
retrograde	8960 Jul 31 07:03	29°♓48'32	
opposition	8960 Sep 05 21:58	21°♓58'16	-4°49'44
greatest brilliancy	8960 Sep 07 04:04	21°♓30'33	-1.8m
min. Earth dist.	8960 Sep 13 13:07	19°♓09'55	0.55710 AU
direct	8960 Oct 15 21:14	12°♓30'57	
	8960 Dec 12 16:56	0°♈	
	8961 Jan 30 17:54	0°♉	
	8961 Mar 13 08:01	0°♊	
asc. node	8961 Mar 17 18:02	3°♊19'24	
	8961 Apr 21 14:25	0°♋	
	8961 May 30 12:32	0°♌	
	8961 Jul 09 06:57	0°♍	
	8961 Aug 19 15:32	0°♎	
evening set	8961 Sep 25 10:14	25°♎34'13	
	8961 Oct 01 22:39	0°♏	
conjunction	8961 Nov 15 04:57	29°♏24'56	0°47'49
minimum elong	8961 Nov 15 06:14	29°♏27'02	0°48'01
	8961 Nov 16 02:26	0°♐	
max. Earth dist.	8961 Nov 30 15:33	9°♐26'33	2.64143 AU
morning rise	8961 Dec 31 17:42	29°♐21'24	
	8962 Jan 01 18:00	0°♑	
	8962 Feb 18 10:54	0°♒	
desc. node	8962 Feb 23 05:04	2°♒57'38	
	8962 Apr 08 02:22	0°♓	
	8962 May 28 09:20	0°♈	
	8962 Jul 22 18:03	0°♉	
retrograde	8962 Sep 29 08:29	20°♉42'26	
opposition	8962 Oct 31 07:32	14°♉52'55	-5°23'10
greatest brilliancy	8962 Nov 01 22:59	14°♉22'21	-2.6m
min. Earth dist.	8962 Nov 08 04:01	12°♉28'13	0.42077 AU
direct	8962 Dec 04 16:29	7°♉56'19	
asc. node	8963 Feb 02 20:15	28°♉10'00	
	8963 Feb 06 00:54	0°♊	
	8963 Mar 24 05:10	0°♋	
	8963 May 05 10:38	0°♌	
	8963 Jun 16 12:28	0°♍	
	8963 Jul 29 16:58	0°♎	
	8963 Sep 12 10:31	0°♏	
	8963 Oct 28 13:47	0°♐	
evening set	8963 Nov 06 23:07	6°♐01'13	
	8963 Dec 14 14:30	0°♑	
conjunction	8963 Dec 22 19:06	5°♑12'01	0°10'06

minimum elong	8963 Dec 22 19:25	5°♑12'32	0°10'22
behind sun begin	8963 Dec 22 05:04	4°♑49'46	
behind sun end	8963 Dec 23 09:46	5°♑35'17	
max. Earth dist.	8963 Dec 23 13:23	5°♑41'00	2.68066 AU
desc. node	8964 Jan 11 01:34	17°♑25'35	
	8964 Jan 30 20:33	0°♒	
morning rise	8964 Feb 04 13:07	2°♒59'04	
	8964 Mar 17 18:48	0°♓	
	8964 May 03 03:01	0°♈	
	8964 Jun 17 21:35	0°♉	
	8964 Aug 02 11:12	0°♊	
	8964 Sep 18 04:14	0°♋	
	8964 Nov 13 01:55	0°♌	
retrograde	8964 Dec 18 17:51	7°♌50'31	
asc. node	8964 Dec 20 19:59	7°♌48'42	
min. Earth dist.	8965 Jan 14 08:16	3°♌29'56	0.37433 AU
opposition	8965 Jan 18 19:17	2°♌15'39	2°10'27
greatest brilliancy	8965 Jan 18 08:48	2°♌22'57	-3.0m
	8965 Jan 27 07:41	30°℞♋	
direct	8965 Feb 17 03:44	27°♋14'55	
	8965 Mar 10 02:57	0°♌	
	8965 May 14 20:37	0°♍	
	8965 Jul 03 19:41	0°♎	
	8965 Aug 21 02:38	0°♏	
	8965 Oct 08 06:53	0°♐	
	8965 Nov 25 08:24	0°♑	
desc. node	8965 Nov 27 23:51	1°♑39'31	
evening set	8965 Dec 12 14:58	10°♑51'30	
	8966 Jan 11 18:59	0°♒	
max. Earth dist.	8966 Jan 14 05:20	1°♒33'18	2.66476 AU
conjunction	8966 Jan 26 01:52	9°♒10'09	-0°30'08
minimum elong	8966 Jan 26 01:02	9°♒08'48	0°29'55
	8966 Feb 27 01:43	0°♓	
morning rise	8966 Mar 11 06:12	8°♓03'26	
	8966 Apr 12 20:50	0°♈	
	8966 May 26 02:10	0°♉	
	8966 Jul 06 20:59	0°♊	
	8966 Aug 16 14:04	0°♋	
	8966 Sep 26 00:52	0°♌	
	8966 Nov 06 21:43	0°♍	
asc. node	8966 Nov 07 17:58	0°♍34'47	
	8966 Dec 25 06:55	0°♎	
retrograde	8967 Feb 16 10:44	16°♎19'45	
min. Earth dist.	8967 Mar 17 14:10	10°♎27'08	0.49527 AU
greatest brilliancy	8967 Mar 24 06:03	8°♎00'56	-2.2m
opposition	8967 Mar 25 19:56	7°♎26'07	5°30'08
direct	8967 Apr 28 20:40	0°♎10'44	
	8967 Jul 24 16:33	0°♏	
	8967 Sep 16 17:54	0°♐	
desc. node	8967 Oct 16 00:46	17°♐14'26	
	8967 Nov 06 05:01	0°♑	
	8967 Dec 24 12:55	0°♒	
evening set	8968 Jan 17 20:21	15°♒35'51	
max. Earth dist.	8968 Feb 07 20:42	29°♒23'23	2.59499 AU
	8968 Feb 08 18:46	0°♓	
conjunction	8968 Mar 03 23:53	16°♓17'31	-1°01'00
minimum elong	8968 Mar 03 22:52	16°♓15'46	1°00'55
	8968 Mar 23 21:12	0°♈	
morning rise	8968 Apr 21 19:16	20°♈28'42	
	8968 May 04 22:44	0°♉	
	8968 Jun 14 07:24	0°♊	
	8968 Jul 23 11:39	0°♋	
	8968 Aug 31 05:09	0°♌	
asc. node	8968 Sep 24 16:09	18°♌47'43	
	8968 Oct 09 11:23	0°♍	
	8968 Nov 19 15:12	0°♎	
	8969 Jan 04 08:56	0°♏	
	8969 Mar 13 14:52	0°♐	
retrograde	8969 Mar 29 00:25	1°♐31'26	
	8969 Apr 12 18:43	30°℞♏	
min. Earth dist.	8969 May 02 24:00	23°♏33'23	0.61469 AU
opposition	8969 May 07 23:56	21°♏34'52	3°49'10
greatest brilliancy	8969 May 07 08:24	21°♏50'13	-1.6m
direct	8969 Jun 15 02:34	12°♏45'47	
	8969 Aug 17 05:38	0°♐	
desc. node	8969 Sep 02 02:25	7°♐27'10	
	8969 Oct 14 14:10	0°♑	
	8969 Dec 04 07:11	0°♒	
	8970 Jan 20 04:49	0°♓	
evening set	8970 Feb 26 17:18	25°♓30'04	
	8970 Mar 05 03:23	0°♈	
max. Earth dist.	8970 Mar 12 11:15	5°♈11'03	2.47770 AU
	8970 Apr 15 15:04	0°♉	
conjunction	8970 Apr 20 10:54	3°♉35'19	-1°02'37
minimum elong	8970 Apr 20 12:21	3°♉38'01	1°02'44
	8970 May 25 06:11	0°♊	
morning rise	8970 Jun 21 07:26	21°♊02'07	
	8970 Jul 02 17:35	0°♋	
greatest brilliancy	8970 Jul 31 21:23	22°♋57'02	1.2m
	8970 Aug 09 20:47	0°♌	
asc. node	8970 Aug 12 12:26	2°♌04'43	
	8970 Sep 17 12:57	0°♍	
	8970 Oct 27 16:34	0°♎	
	8970 Dec 09 10:24	0°♏	
	8971 Jan 25 17:46	0°♐	
	8971 Mar 28 02:21	0°♑	
retrograde	8971 May 03 00:18	6°♑54'42	
	8971 Jun 05 01:58	30°℞♐	
min. Earth dist.	8971 Jun 11 10:09	27°♐31'27	0.67568 AU
opposition	8971 Jun 12 14:44	27°♐03'02	1°19'05
greatest brilliancy	8971 Jun 12 13:40	27°♐04'05	-1.3m
desc. node	8971 Jul 21 03:13	17°♐25'15	
direct	8971 Jul 23 05:06	17°♐23'40	
	8971 Sep 13 17:19	0°♑	
	8971 Nov 12 09:13	0°♒	
	8971 Dec 31 11:19	0°♓	
	8972 Feb 13 22:03	0°♈	
	8972 Mar 26 06:38	0°♉	
evening set	8972 Apr 20 10:34	19°♉04'45	
	8972 May 04 13:27	0°♊	
	8972 Jun 11 16:47	0°♋	
conjunction	8972 Jun 26 10:57	11°♋41'40	-0°02'10
minimum elong	8972 Jun 26 11:11	11°♋42'09	0°02'25
behind sun begin	8972 Jun 25 04:59	10°♋42'20	
behind sun end	8972 Jun 27 17:23	12°♋41'57	
asc. node	8972 Jun 29 08:58	14°♋00'20	
max. Earth dist.	8972 Jul 17 07:39	28°♋11'27	2.36667 AU
	8972 Jul 19 14:46	0°♌	
	8972 Aug 27 04:45	0°♍	
morning rise	8972 Sep 07 08:19	8°♍29'16	
	8972 Oct 06 05:52	0°♎	
	8972 Nov 17 11:00	0°♏	
	8973 Jan 01 13:12	0°♐	
	8973 Feb 19 22:42	0°♑	
	8973 Apr 22 00:30	0°♒	
retrograde	8973 Jun 05 10:48	9°♒37'49	
desc. node	8973 Jun 07 02:20	9°♒36'49	
opposition	8973 Jul 15 08:56	0°♒18'14	-1°18'58
greatest brilliancy	8973 Jul 15 11:14	0°♒15'58	-1.3m
	8973 Jul 16 03:31	30°℞♑	

min. Earth dist.	8973 Jul 17 23:22	29°♌17'02	0.67134 AU
direct	8973 Aug 26 00:24	20°♌16'09	
	8973 Oct 09 06:50	0°♒	
	8973 Dec 07 11:38	0°♓	
	8974 Jan 23 03:10	0°♈	
	8974 Mar 06 01:44	0°♉	
	8974 Apr 14 10:41	0°♊	
asc. node	8974 May 17 09:05	25°♊53'10	
	8974 May 22 13:47	0°♋	
greatest brilliancy	8974 May 26 03:34	2°♋49'52	1.2m
	8974 Jun 29 13:20	0°♌	
evening set	8974 Jul 02 19:56	2°♌34'02	
	8974 Aug 07 07:55	0°♍	
conjunction	8974 Sep 08 04:42	23°♍49'36	1°02'04
minimum elong	8974 Sep 08 02:52	23°♍46'14	1°02'01
	8974 Sep 16 15:30	0°♎	
max. Earth dist.	8974 Oct 20 23:47	24°♎26'27	2.49823 AU
	8974 Oct 29 00:17	0°♏	
morning rise	8974 Nov 05 23:00	5°♏27'15	
	8974 Dec 12 16:26	0°♐	
	8975 Jan 28 20:53	0°♑	
	8975 Mar 20 10:09	0°♒	
desc. node	8975 Apr 24 23:56	19°♒04'10	
	8975 May 18 09:09	0°♓	
retrograde	8975 Jul 14 09:51	14°♓33'05	
opposition	8975 Aug 21 07:08	6°♓10'27	-3°55'20
greatest brilliancy	8975 Aug 22 02:49	5°♓51'48	-1.6m
min. Earth dist.	8975 Aug 27 15:07	3°♓46'40	0.60124 AU
	8975 Sep 07 15:10	30°℞♒	
direct	8975 Oct 01 05:30	26°♒20'38	
	8975 Oct 26 00:45	0°♓	
	8975 Dec 28 07:13	0°♈	
	8976 Feb 11 05:18	0°♉	
	8976 Mar 22 15:36	0°♊	
asc. node	8976 Apr 03 10:16	9°♊03'07	
	8976 Apr 30 08:25	0°♋	
	8976 Jun 07 20:09	0°♌	
	8976 Jul 17 04:34	0°♍	
	8976 Aug 27 03:14	0°♎	
evening set	8976 Sep 05 12:21	6°♎40'49	
	8976 Oct 09 01:25	0°♏	
conjunction	8976 Oct 29 17:02	13°♏57'07	0°58'46
minimum elong	8976 Oct 29 18:17	13°♏59'12	0°58'55
max. Earth dist.	8976 Nov 20 18:09	28°♏32'55	2.61113 AU
	8976 Nov 22 23:18	0°♐	
morning rise	8976 Dec 17 09:41	15°♐50'25	
	8977 Jan 08 14:40	0°♑	
	8977 Feb 25 17:36	0°♒	
desc. node	8977 Mar 11 19:42	8°♒36'00	
	8977 Apr 16 15:31	0°♓	
	8977 Jun 09 13:09	0°♈	
retrograde	8977 Sep 02 23:15	28°♈29'23	
opposition	8977 Oct 06 21:08	21°♈46'43	-5°43'27
greatest brilliancy	8977 Oct 08 16:28	21°♈09'49	-2.2m
min. Earth dist.	8977 Oct 15 13:45	18°♈50'07	0.47462 AU
direct	8977 Nov 13 01:58	13°♈32'18	
	8978 Jan 05 22:44	0°♉	
asc. node	8978 Feb 19 10:46	27°♉33'34	
	8978 Feb 22 23:38	0°♊	
	8978 Apr 05 12:11	0°♋	
	8978 May 15 18:22	0°♌	
	8978 Jun 25 13:55	0°♍	
	8978 Aug 06 20:01	0°♎	
	8978 Sep 19 20:38	0°♏	
evening set	8978 Oct 22 12:05	21°♏32'24	
	8978 Nov 04 12:29	0°♐	
conjunction	8978 Dec 08 17:58	21°♐59'17	0°25'37
minimum elong	8978 Dec 08 18:45	22°♐00'32	0°25'52
max. Earth dist.	8978 Dec 14 23:28	25°♐57'32	2.67194 AU
	8978 Dec 21 07:52	0°♑	
morning rise	8979 Jan 22 04:16	20°♑11'56	
desc. node	8979 Jan 27 15:41	23°♑39'54	
	8979 Feb 06 16:02	0°♒	
	8979 Mar 26 02:20	0°♓	
	8979 May 12 12:29	0°♈	
	8979 Jun 29 07:43	0°♉	
	8979 Aug 18 00:08	0°♊	
	8979 Oct 18 15:08	0°♋	
retrograde	8979 Nov 18 01:57	5°♋29'11	
opposition	8979 Dec 17 21:07	0°♋34'36	-1°35'54
greatest brilliancy	8979 Dec 18 01:30	0°♋31'40	-3.1m
min. Earth dist.	8979 Dec 19 06:27	0°♋12'24	0.36708 AU
	8979 Dec 20 01:06	30°℞♊	
asc. node	8980 Jan 07 12:36	26°♊07'46	
direct	8980 Jan 16 18:36	25°♊33'25	
	8980 Feb 12 02:03	0°♋	
	8980 Apr 12 00:21	0°♌	
	8980 May 29 03:19	0°♍	
	8980 Jul 14 01:01	0°♎	
	8980 Aug 29 10:50	0°♏	
	8980 Oct 15 15:00	0°♐	
evening set	8980 Nov 28 17:23	27°♐49'01	
	8980 Dec 02 04:26	0°♑	
desc. node	8980 Dec 14 12:57	7°♑48'16	
max. Earth dist.	8981 Jan 05 09:07	21°♑38'53	2.67755 AU
conjunction	8981 Jan 12 08:35	26°♑05'27	-0°15'03
minimum elong	8981 Jan 12 08:08	26°♑04'44	0°14'48
behind sun begin	8981 Jan 12 01:07	25°♑53'33	
behind sun end	8981 Jan 12 15:10	26°♑15'56	
	8981 Jan 18 11:38	0°♒	
morning rise	8981 Feb 24 23:16	24°♒08'46	
	8981 Mar 05 22:45	0°♓	
	8981 Apr 20 05:26	0°♈	
	8981 Jun 03 05:03	0°♉	
	8981 Jul 15 23:59	0°♊	
	8981 Aug 26 23:24	0°♋	
	8981 Oct 08 05:46	0°♌	
	8981 Nov 23 05:01	0°♍	
asc. node	8981 Nov 24 12:28	0°♍46'04	
retrograde	8982 Jan 27 06:48	23°♍20'59	
min. Earth dist.	8982 Feb 23 05:30	18°♍22'32	0.44000 AU
greatest brilliancy	8982 Mar 02 00:12	16°♍05'11	-2.5m
opposition	8982 Mar 03 15:03	15°♍32'11	5°17'27
direct	8982 Apr 04 14:05	9°♍10'48	
	8982 Jun 11 04:32	0°♎	
	8982 Aug 05 09:40	0°♏	
	8982 Sep 25 05:32	0°♐	
desc. node	8982 Nov 01 12:49	22°♐38'24	
	8982 Nov 13 12:05	0°♑	
	8982 Dec 31 09:20	0°♒	
evening set	8983 Jan 03 13:19	2°♒01'07	
max. Earth dist.	8983 Jan 28 18:56	18°♒17'49	2.62838 AU
	8983 Feb 15 14:19	0°♓	
conjunction	8983 Feb 17 14:55	1°♓20'35	-0°51'07
minimum elong	8983 Feb 17 13:46	1°♓18'39	0°50'58
	8983 Mar 31 21:58	0°♈	
morning rise	8983 Apr 04 22:17	2°♈46'57	
	8983 May 13 08:34	0°♉	
	8983 Jun 23 04:03	0°♊	

	8983 Aug 01 19:20	0°♋	
	8983 Sep 09 23:36	0°♌	
asc. node	8983 Oct 12 08:56	24°♌29'28	
	8983 Oct 19 19:13	0°♍	
	8983 Dec 01 02:17	0°♎	
	8984 Jan 20 03:14	0°♏	
retrograde	8984 Mar 14 01:39	15°♏50'04	
min. Earth dist.	8984 Apr 15 21:43	8°♏35'51	0.57379 AU
greatest brilliancy	8984 Apr 21 07:28	6°♏29'43	-1.8m
opposition	8984 Apr 22 07:57	6°♏05'51	4°39'51
	8984 May 10 16:01	30°℞♎	
direct	8984 May 29 01:18	27°♎46'46	
	8984 Jun 17 17:36	0°♏	
	8984 Aug 30 06:57	0°♐	
desc. node	8984 Sep 18 14:38	10°♐21'32	
	8984 Oct 23 03:38	0°♑	
	8984 Dec 11 15:52	0°♒	
	8985 Jan 27 05:25	0°♓	
evening set	8985 Feb 09 20:27	9°♓07'04	
max. Earth dist.	8985 Feb 25 11:59	19°♓47'16	2.52832 AU
	8985 Mar 12 04:36	0°♈	
conjunction	8985 Mar 31 04:48	13°♈29'49	-1°07'31
minimum elong	8985 Mar 31 04:53	13°♈29'58	1°07'34
	8985 Apr 22 20:54	0°♉	
morning rise	8985 May 25 15:05	24°♉34'01	
	8985 Jun 01 17:50	0°♊	
	8985 Jul 10 10:38	0°♋	
	8985 Aug 17 17:49	0°♌	
asc. node	8985 Aug 29 05:26	8°♌57'10	
	8985 Sep 25 13:06	0°♍	
	8985 Nov 04 21:37	0°♎	
	8985 Dec 18 05:47	0°♏	
	8986 Feb 05 22:33	0°♐	
retrograde	8986 Apr 19 18:02	23°♐56'41	
min. Earth dist.	8986 May 27 14:34	15°♐02'38	0.65953 AU
opposition	8986 May 30 06:36	13°♐58'52	2°18'56
greatest brilliancy	8986 May 30 01:43	14°♐03'44	-1.4m
direct	8986 Jul 09 01:28	4°♐35'30	
desc. node	8986 Aug 06 16:46	8°♐53'26	
	8986 Sep 27 17:06	0°♑	
	8986 Nov 21 02:48	0°♒	
	8987 Jan 08 01:57	0°♓	
	8987 Feb 21 06:04	0°♈	
evening set	8987 Mar 29 05:32	25°♈59'22	
	8987 Apr 03 15:04	0°♉	
max. Earth dist.	8987 Apr 19 01:37	11°♉36'43	2.39563 AU
	8987 May 13 00:31	0°♊	
conjunction	8987 May 29 01:10	12°♊30'08	-0°33'49
minimum elong	8987 May 29 03:55	12°♊35'31	0°34'03
	8987 Jun 20 06:22	0°♋	
asc. node	8987 Jul 17 02:49	21°♋14'11	
	8987 Jul 28 05:30	0°♌	
morning rise	8987 Aug 09 00:23	9°♌14'59	
	8987 Sep 04 19:03	0°♍	
	8987 Oct 14 19:18	0°♎	
	8987 Nov 26 01:48	0°♏	
	8988 Jan 10 15:26	0°♐	
	8988 Mar 02 02:28	0°♑	
retrograde	8988 May 22 19:53	27°♑06'07	
desc. node	8988 Jun 23 16:43	20°♑47'01	
opposition	8988 Jul 02 04:00	17°♑31'26	-0°17'30
greatest brilliancy	8988 Jul 02 04:12	17°♑31'14	-1.3m
min. Earth dist.	8988 Jul 03 07:04	17°♑04'43	0.68092 AU
direct	8988 Aug 12 13:49	7°♑35'01	
	8988 Oct 24 20:36	0°♒	

	8988 Dec 16 19:12	0°♓	
	8989 Jan 31 06:13	0°♈	
	8989 Mar 13 20:48	0°♉	
	8989 Apr 22 03:40	0°♊	
	8989 May 30 05:59	0°♋	
evening set	8989 Jun 02 18:51	2°♋48'15	
asc. node	8989 Jun 03 00:32	2°♋59'30	
	8989 Jul 07 04:00	0°♌	
conjunction	8989 Aug 12 17:18	28°♌23'39	0°45'50
minimum elong	8989 Aug 12 13:58	28°♌17'17	0°45'40
	8989 Aug 14 19:44	0°♍	
	8989 Sep 23 23:33	0°♎	
max. Earth dist.	8989 Oct 02 17:50	6°♎21'33	2.44321 AU
morning rise	8989 Oct 16 13:49	16°♎15'11	
	8989 Nov 05 05:03	0°♏	
	8989 Dec 19 22:02	0°♐	
	8990 Feb 05 14:52	0°♑	
	8990 Mar 30 05:51	0°♒	
desc. node	8990 May 11 14:28	19°♒47'26	
	8990 Jun 18 16:06	0°♓	
retrograde	8990 Jun 28 07:07	0°♓32'26	
	8990 Jul 07 15:32	30°℞♒	
opposition	8990 Aug 06 04:04	21°♒43'38	-2°55'52
greatest brilliancy	8990 Aug 06 15:05	21°♒33'02	-1.5m
min. Earth dist.	8990 Aug 11 01:54	19°♒50'07	0.63656 AU
direct	8990 Sep 16 15:25	11°♒42'48	
	8990 Nov 17 20:01	0°♓	
	8991 Jan 08 05:46	0°♈	
	8991 Feb 20 10:14	0°♉	
	8991 Apr 01 05:54	0°♊	
asc. node	8991 Apr 21 01:53	15°♊26'09	
	8991 May 09 14:45	0°♋	
	8991 Jun 16 19:39	0°♌	
	8991 Jul 25 20:48	0°♍	
evening set	8991 Aug 14 15:56	14°♍47'21	
	8991 Sep 04 11:57	0°♎	
conjunction	8991 Oct 12 10:09	26°♎45'20	1°05'36
minimum elong	8991 Oct 12 10:49	26°♎46'29	1°05'42
	8991 Oct 17 03:16	0°♏	
max. Earth dist.	8991 Nov 10 19:22	16°♏42'43	2.57285 AU
	8991 Nov 30 21:09	0°♐	
morning rise	8991 Dec 03 03:18	1°♐28'42	
	8992 Jan 16 14:33	0°♑	
	8992 Mar 05 08:32	0°♒	
desc. node	8992 Mar 28 10:49	13°♒40'07	
	8992 Apr 26 05:39	0°♓	
	8992 Jun 27 12:03	0°♈	
retrograde	8992 Aug 11 13:15	9°♈47'04	
opposition	8992 Sep 16 07:02	2°♈18'12	-5°15'41
greatest brilliancy	8992 Sep 17 18:59	1°♈45'48	-1.9m
	8992 Sep 22 16:06	30°℞♓	
min. Earth dist.	8992 Sep 24 11:34	29°♓21'25	0.52943 AU
direct	8992 Oct 25 11:41	23°♓10'21	
	8992 Nov 28 01:59	0°♈	
	8993 Jan 23 01:42	0°♉	
	8993 Mar 06 22:42	0°♊	
asc. node	8993 Mar 08 04:17	0°♊54'28	
	8993 Apr 15 18:17	0°♋	
	8993 May 25 00:26	0°♌	
	8993 Jul 04 01:06	0°♍	
	8993 Aug 14 15:13	0°♎	
	8993 Sep 27 02:43	0°♏	
evening set	8993 Oct 05 18:14	5°♏48'50	
	8993 Nov 11 09:34	0°♐	

conjunction	8993 Nov 24 01:25	8°♐12'52	0°40'07
minimum elong	8993 Nov 24 02:35	8°♐14'45	0°40'21
max. Earth dist.	8993 Dec 06 03:14	15°♐59'28	2.65467 AU
	8993 Dec 28 01:27	0°♑	
morning rise	8994 Jan 08 16:11	7°♑22'12	
desc. node	8994 Feb 13 06:14	29°♑47'34	
	8994 Feb 13 14:09	0°♒	
	8994 Apr 02 17:04	0°♓	
	8994 May 21 16:53	0°♈	
	8994 Jul 12 02:58	0°♉	
	8994 Sep 14 01:09	0°♊	
retrograde	8994 Oct 16 09:39	5°♊46'35	
opposition	8994 Nov 16 05:00	0°♊25'54	-4°32'36
greatest brilliancy	8994 Nov 17 10:25	0°♊04'40	-2.8m
	8994 Nov 17 16:53	30°℞♉	
min. Earth dist.	8994 Nov 22 14:39	28°♉35'39	0.39510 AU
direct	8994 Dec 18 18:27	24°♉18'21	
	8995 Jan 17 09:26	0°♊	
asc. node	8995 Jan 24 04:55	2°♊38'59	
	8995 Mar 14 14:27	0°♋	
	8995 Apr 28 02:07	0°♌	
	8995 Jun 10 06:33	0°♍	
	8995 Jul 24 03:50	0°♎	
	8995 Sep 07 08:18	0°♏	
	8995 Oct 23 18:39	0°♐	
evening set	8995 Nov 15 09:59	14°♐25'46	
	8995 Dec 09 22:51	0°♑	
max. Earth dist.	8995 Dec 28 15:23	11°♑50'58	2.68186 AU
conjunction	8995 Dec 30 16:37	13°♑09'02	0°00'46
minimum elong	8995 Dec 30 16:40	13°♑09'07	0°01'02
behind sun begin	8995 Dec 29 22:18	12°♑40'01	
behind sun end	8995 Dec 31 11:02	13°♑38'12	
desc. node	8996 Jan 01 02:39	14°♑03'00	
	8996 Jan 26 04:47	0°♒	
morning rise	8996 Feb 12 06:19	10°♒53'52	
	8996 Mar 12 22:40	0°♓	
	8996 Apr 27 20:37	0°♈	
	8996 Jun 11 21:13	0°♉	
	8996 Jul 26 04:32	0°♊	
	8996 Sep 08 10:58	0°♋	
	8996 Oct 25 08:35	0°♌	
asc. node	8996 Dec 11 04:33	22°♌08'55	
retrograde	8997 Jan 03 09:25	25°♌47'23	
min. Earth dist.	8997 Jan 29 08:02	21°♌25'10	0.39224 AU
opposition	8997 Feb 04 23:23	19°♌26'04	3°48'40
greatest brilliancy	8997 Feb 03 23:05	19°♌44'23	-2.8m
direct	8997 Mar 07 03:10	14°♌01'20	
	8997 May 02 04:11	0°♍	
	8997 Jun 26 07:11	0°♎	
	8997 Aug 15 05:13	0°♏	
	8997 Oct 03 03:35	0°♐	
desc. node	8997 Nov 18 02:23	28°♐27'16	
	8997 Nov 20 13:53	0°♑	
evening set	8997 Dec 20 13:53	18°♑49'57	
	8998 Jan 07 03:46	0°♒	
max. Earth dist.	8998 Jan 19 12:07	7°♒54'48	2.65401 AU
conjunction	8998 Feb 03 02:56	17°♒22'07	-0°38'27
minimum elong	8998 Feb 03 01:56	17°♒20'28	0°38'15
	8998 Feb 22 09:55	0°♓	
morning rise	8998 Mar 19 20:48	16°♓58'14	
	8998 Apr 08 00:54	0°♈	
	8998 May 20 23:27	0°♉	
	8998 Jul 01 09:15	0°♊	
	8998 Aug 10 15:50	0°♋	
	8998 Sep 19 12:42	0°♌	
asc. node	8998 Oct 29 03:24	29°♌08'05	
	8998 Oct 30 08:29	0°♍	
	8998 Dec 14 04:28	0°♎	
retrograde	8999 Feb 26 16:16	28°♎05'44	
min. Earth dist.	8999 Mar 29 03:15	21°♎42'44	0.52480 AU
greatest brilliancy	8999 Apr 04 10:40	19°♎20'19	-2.0m
opposition	8999 Apr 05 20:24	18°♎48'25	5°18'40
direct	8999 May 10 22:31	11°♎07'36	
	8999 Jul 15 06:49	0°♏	
	8999 Sep 10 15:15	0°♐	
desc. node	8999 Oct 06 03:49	14°♐38'43	
	8999 Nov 01 01:47	0°♑	
	8999 Dec 19 18:43	0°♒	
evening set	9000 Jan 26 07:34	24°♒10'16	
	9000 Feb 04 03:21	0°♓	
max. Earth dist.	9000 Feb 14 04:36	6°♓42'42	2.57292 AU
conjunction	9000 Mar 14 09:02	25°♓56'56	-1°04'59
minimum elong	9000 Mar 14 08:16	25°♓55'36	1°04'56
	9000 Mar 20 04:43	0°♈	
	9000 May 01 03:09	0°♉	
morning rise	9000 May 04 03:01	2°♉11'47	
	9000 Jun 10 07:34	0°♊	
	9000 Jul 19 07:37	0°♋	
	9000 Aug 26 20:57	0°♌	
asc. node	9000 Sep 15 23:09	15°♌32'07	
	9000 Oct 04 22:01	0°♍	
	9000 Nov 14 16:07	0°♎	
	9000 Dec 29 03:41	0°♏	
	9001 Feb 22 17:13	0°♐	
retrograde	9001 Apr 07 02:50	10°♐15'22	
min. Earth dist.	9001 May 13 04:18	1°♐55'42	0.63331 AU
opposition	9001 May 17 08:09	0°♐16'32	3°17'04
greatest brilliancy	9001 May 16 21:03	0°♐27'33	-1.5m
	9001 May 18 00:48	30°℞♏	
direct	9001 Jun 25 02:16	21°♏13'50	
	9001 Aug 06 13:54	0°♐	
desc. node	9001 Aug 24 05:31	7°♐03'43	
	9001 Oct 09 09:07	0°♑	
	9001 Nov 30 03:47	0°♒	
	9002 Jan 16 10:02	0°♓	
	9002 Mar 01 10:48	0°♈	
evening set	9002 Mar 10 01:20	6°♈05'26	
max. Earth dist.	9002 Mar 23 19:42	15°♈59'08	2.44793 AU
	9002 Apr 11 21:50	0°♉	
conjunction	9002 May 04 07:20	16°♉50'46	-0°55'27
minimum elong	9002 May 04 09:36	16°♉55'06	0°55'36
	9002 May 21 10:51	0°♊	
	9002 Jun 28 20:03	0°♋	
morning rise	9002 Jul 09 06:35	8°♋13'58	
asc. node	9002 Aug 03 19:25	28°♋21'58	
	9002 Aug 05 21:18	0°♌	
	9002 Sep 13 11:37	0°♍	
	9002 Oct 23 12:46	0°♎	
	9002 Dec 05 00:09	0°♏	
	9003 Jan 20 10:17	0°♐	
	9003 Mar 17 01:47	0°♑	
retrograde	9003 May 11 13:44	14°♑37'34	
opposition	9003 Jun 21 03:06	4°♑51'06	0°43'34
greatest brilliancy	9003 Jun 21 03:06	4°♑51'06	-1.3m
min. Earth dist.	9003 Jun 20 18:36	4°♑59'33	0.68046 AU
	9003 Jul 04 00:06	30°℞♐	
desc. node	9003 Jul 12 06:14	27°♐33'32	
direct	9003 Aug 01 01:38	25°♐04'36	
	9003 Aug 31 20:59	0°♑	
	9003 Nov 07 00:41	0°♒	

	9003 Dec 27 05:14	0°♓	
	9004 Feb 10 00:05	0°♈	
	9004 Mar 22 11:09	0°♉	
	9004 Apr 30 18:08	0°♊	
evening set	9004 May 06 00:53	4°♊07'07	
	9004 Jun 07 21:00	0°♋	
asc. node	9004 Jun 20 18:23	10°♋13'22	
conjunction	9004 Jul 14 18:48	29°♋13'21	0°17'13
minimum elong	9004 Jul 14 16:56	29°♋09'40	0°16'57
	9004 Jul 15 18:30	0°♌	
	9004 Aug 23 08:06	0°♍	
max. Earth dist.	9004 Sep 03 16:08	8°♍37'44	2.38804 AU
morning rise	9004 Sep 23 16:42	23°♍37'01	
	9004 Oct 02 08:57	0°♎	
	9004 Nov 13 12:34	0°♏	
	9004 Dec 28 09:04	0°♐	
	9005 Feb 14 22:18	0°♑	
	9005 Apr 12 09:14	0°♒	
desc. node	9005 May 29 04:38	15°♒54'19	
retrograde	9005 Jun 14 12:38	17°♒25'05	
opposition	9005 Jul 24 03:12	8°♒15'27	-1°54'57
greatest brilliancy	9005 Jul 24 07:57	8°♒10'49	-1.4m
min. Earth dist.	9005 Jul 27 13:43	6°♒54'58	0.66175 AU
	9005 Aug 18 01:07	30°℞♑	
direct	9005 Sep 03 18:50	28°♑12'07	
	9005 Sep 21 09:10	0°♒	
	9005 Dec 01 16:08	0°♓	
	9006 Jan 18 13:10	0°♈	
	9006 Mar 01 20:59	0°♉	
	9006 Apr 10 09:22	0°♊	
asc. node	9006 May 08 18:20	22°♊14'05	
	9006 May 18 14:18	0°♋	
	9006 Jun 25 15:18	0°♌	
evening set	9006 Jul 20 02:46	19°♌01'13	
	9006 Aug 03 11:20	0°♍	
	9006 Sep 12 20:29	0°♎	
conjunction	9006 Sep 22 10:42	6°♎55'18	1°05'58
minimum elong	9006 Sep 22 09:58	6°♎54'00	1°05'59
	9006 Oct 25 06:12	0°♏	
max. Earth dist.	9006 Oct 30 06:35	3°♏26'56	2.52643 AU
morning rise	9006 Nov 17 08:35	15°♏42'55	
	9006 Dec 08 21:23	0°♐	
	9007 Jan 24 19:37	0°♑	
	9007 Mar 15 12:28	0°♒	
desc. node	9007 Apr 16 01:02	17°♒43'20	
	9007 May 09 19:24	0°♓	
retrograde	9007 Jul 25 07:46	23°♓32'33	
opposition	9007 Aug 31 12:44	15°♓27'00	-4°27'30
greatest brilliancy	9007 Sep 01 14:15	15°♓03'10	-1.7m
min. Earth dist.	9007 Sep 07 14:33	12°♓48'31	0.57790 AU
direct	9007 Oct 10 23:40	5°♓47'39	
	9007 Dec 20 22:09	0°♈	
	9008 Feb 05 20:20	0°♉	
	9008 Mar 17 21:17	0°♊	
asc. node	9008 Mar 25 19:00	6°♊00'29	
	9008 Apr 25 21:12	0°♋	
	9008 Jun 03 13:52	0°♌	
	9008 Jul 13 02:31	0°♍	
	9008 Aug 23 05:19	0°♎	
evening set	9008 Sep 18 03:02	18°♎12'43	
	9008 Oct 05 06:56	0°♏	
conjunction	9008 Nov 09 07:10	23°♏26'37	0°52'47
minimum elong	9008 Nov 09 08:29	23°♏28'48	0°52'58
	9008 Nov 19 06:49	0°♐	
max. Earth dist.	9008 Nov 27 13:07	5°♐23'18	2.62892 AU
morning rise	9008 Dec 26 16:48	24°♐09'32	
	9009 Jan 04 21:04	0°♑	
	9009 Feb 21 17:14	0°♒	
desc. node	9009 Mar 02 21:10	5°♒39'57	
	9009 Apr 11 19:55	0°♓	
	9009 Jun 02 08:33	0°♈	
	9009 Aug 01 20:23	0°♉	
retrograde	9009 Sep 18 05:16	11°♉00'20	
opposition	9009 Oct 21 02:14	4°♉46'16	-5°39'49
greatest brilliancy	9009 Oct 22 21:17	4°♉11'17	-2.4m
min. Earth dist.	9009 Oct 29 13:43	2°♉02'25	0.44432 AU
	9009 Nov 05 15:44	30°℞♈	
direct	9009 Nov 25 19:35	27°♈12'04	
	9009 Dec 16 04:56	0°♉	
asc. node	9010 Feb 10 20:47	27°♉29'08	
	9010 Feb 14 19:22	0°♊	
	9010 Mar 30 07:24	0°♋	
	9010 May 10 11:33	0°♌	
	9010 Jun 20 21:00	0°♍	
	9010 Aug 02 13:25	0°♎	
	9010 Sep 15 21:41	0°♏	
	9010 Oct 31 18:47	0°♐	
evening set	9010 Nov 01 10:58	0°♐26'06	
conjunction	9010 Dec 17 20:29	0°♑06'28	0°16'36
minimum elong	9010 Dec 17 21:00	0°♑07'18	0°16'51
	9010 Dec 17 16:24	0°♑	
max. Earth dist.	9010 Dec 21 00:59	2°♑08'00	2.67780 AU
desc. node	9011 Jan 18 17:28	20°♑20'09	
morning rise	9011 Jan 30 20:23	28°♑01'25	
	9011 Feb 02 23:06	0°♒	
	9011 Mar 22 02:26	0°♓	
	9011 May 07 21:09	0°♈	
	9011 Jun 23 10:35	0°♉	
	9011 Aug 09 09:56	0°♊	
	9011 Sep 28 10:16	0°♋	
retrograde	9011 Dec 07 08:16	24°♋07'50	
asc. node	9011 Dec 29 21:21	21°♋00'08	
min. Earth dist.	9012 Jan 04 12:48	19°♋32'05	0.36672 AU
opposition	9012 Jan 06 13:12	18°♋59'43	0°35'49
greatest brilliancy	9012 Jan 06 11:34	19°♋00'49	-3.1m
direct	9012 Feb 04 18:02	14°♋07'22	
	9012 Mar 30 04:47	0°♌	
	9012 May 21 21:43	0°♍	
	9012 Jul 08 15:54	0°♎	
	9012 Aug 24 23:45	0°♏	
	9012 Oct 11 16:03	0°♐	
	9012 Nov 28 11:42	0°♑	
desc. node	9012 Dec 05 15:14	4°♑29'49	
evening set	9012 Dec 07 16:47	5°♑47'50	
max. Earth dist.	9013 Jan 11 11:34	27°♑50'04	2.67151 AU
	9013 Jan 14 20:58	0°♒	
conjunction	9013 Jan 21 04:09	4°♒01'48	-0°24'01
minimum elong	9013 Jan 21 03:28	4°♒00'42	0°23'46
	9013 Mar 02 06:13	0°♓	
morning rise	9013 Mar 06 00:48	2°♓28'42	
	9013 Apr 16 06:52	0°♈	
	9013 May 29 20:36	0°♉	
	9013 Jul 11 01:35	0°♊	
	9013 Aug 21 06:43	0°♋	
	9013 Oct 01 08:30	0°♌	
	9013 Nov 13 09:28	0°♍	
asc. node	9013 Nov 15 19:26	1°♍35'03	
	9014 Jan 06 11:00	0°♎	
retrograde	9014 Feb 09 03:16	7°♎21'54	

min. Earth dist.	9014 Mar 09 04:43	1°♎54'29	0.47064 AU
	9014 Mar 14 14:22	30°℞♍	
greatest brilliancy	9014 Mar 16 00:54	29°♍29'05	-2.3m
opposition	9014 Mar 17 16:36	28°♍53'42	5°31'51
direct	9014 Apr 19 20:08	22°♍01'10	
	9014 May 28 11:27	0°♎	
	9014 Jul 30 03:50	0°♏	
	9014 Sep 20 15:07	0°♐	
desc. node	9014 Oct 23 16:15	19°♐44'14	
	9014 Nov 09 13:11	0°♑	
	9014 Dec 27 16:56	0°♒	
evening set	9015 Jan 12 15:36	10°♒11'34	
max. Earth dist.	9015 Feb 04 13:12	25°♒05'46	2.61094 AU
	9015 Feb 11 23:28	0°♓	
conjunction	9015 Feb 27 05:30	10°♓11'17	-0°57'18
minimum elong	9015 Feb 27 04:23	10°♓09'24	0°57'11
	9015 Mar 28 05:12	0°♈	
morning rise	9015 Apr 15 18:49	13°♈00'46	
	9015 May 09 11:47	0°♉	
	9015 Jun 19 01:45	0°♊	
	9015 Jul 28 10:59	0°♋	
	9015 Sep 05 08:42	0°♌	
asc. node	9015 Oct 03 17:31	21°♌40'39	
	9015 Oct 14 19:01	0°♍	
	9015 Nov 25 06:42	0°♎	
	9016 Jan 11 03:53	0°♏	
retrograde	9016 Mar 23 19:03	25°♏29'40	
min. Earth dist.	9016 Apr 26 20:17	17°♏49'53	0.59760 AU
opposition	9016 May 02 11:20	15°♏37'02	4°11'37
greatest brilliancy	9016 May 01 16:04	15°♏56'02	-1.6m
direct	9016 Jun 08 23:23	7°♏00'21	
	9016 Aug 23 06:54	0°♐	
desc. node	9016 Sep 09 17:54	8°♐45'33	
	9016 Oct 18 11:37	0°♑	
	9016 Dec 07 16:43	0°♒	
	9017 Jan 23 12:09	0°♓	
evening set	9017 Feb 20 05:47	18°♓42'02	
max. Earth dist.	9017 Mar 06 13:37	28°♓38'18	2.50098 AU
	9017 Mar 08 12:14	0°♈	
conjunction	9017 Apr 12 07:16	24°♈58'20	-1°05'48
minimum elong	9017 Apr 12 08:05	24°♈59'49	1°05'55
	9017 Apr 19 03:13	0°♉	
	9017 May 28 21:41	0°♊	
morning rise	9017 Jun 10 02:13	9°♊24'13	
	9017 Jul 06 11:52	0°♋	
	9017 Aug 13 16:43	0°♌	
asc. node	9017 Aug 20 14:06	5°♌23'34	
	9017 Sep 21 09:20	0°♍	
	9017 Oct 31 13:23	0°♎	
	9017 Dec 13 10:18	0°♏	
	9018 Jan 30 09:37	0°♐	
	9018 Apr 10 08:55	0°♑	
retrograde	9018 Apr 28 09:52	1°♑56'06	
	9018 May 15 11:15	30°℞♐	
min. Earth dist.	9018 Jun 06 03:19	22°♐45'15	0.66971 AU
opposition	9018 Jun 07 23:36	22°♐01'08	1°43'59
greatest brilliancy	9018 Jun 07 21:11	22°♐03'33	-1.3m
direct	9018 Jul 18 05:24	12°♐28'21	
desc. node	9018 Jul 28 18:52	13°♐07'12	
	9018 Sep 20 06:07	0°♑	
	9018 Nov 16 09:33	0°♒	
	9019 Jan 04 01:17	0°♓	
	9019 Feb 17 10:30	0°♈	
	9019 Mar 30 20:33	0°♉	
evening set	9019 Apr 11 21:35	9°♉02'45	
	9019 May 09 05:12	0°♊	
max. Earth dist.	9019 May 17 22:42	6°♊48'03	2.37195 AU
conjunction	9019 Jun 15 05:12	29°♊03'13	-0°16'41
minimum elong	9019 Jun 15 06:55	29°♊06'38	0°16'56
	9019 Jun 16 09:55	0°♋	
asc. node	9019 Jul 08 10:22	17°♋26'12	
	9019 Jul 24 08:14	0°♌	
morning rise	9019 Aug 27 12:13	26°♌38'17	
	9019 Aug 31 21:13	0°♍	
	9019 Oct 10 20:42	0°♎	
	9019 Nov 22 00:40	0°♏	
	9020 Jan 06 04:56	0°♐	
	9020 Feb 25 04:44	0°♑	
	9020 May 01 16:40	0°♒	
retrograde	9020 May 31 14:02	4°♒45'13	
desc. node	9020 Jun 14 18:36	3°♒28'48	
	9020 Jun 28 01:58	30°℞♑	
opposition	9020 Jul 10 17:06	25°♑18'35	-0°53'35
greatest brilliancy	9020 Jul 10 18:11	25°♑17'31	-1.3m
min. Earth dist.	9020 Jul 12 15:52	24°♑32'34	0.67688 AU
direct	9020 Aug 21 06:24	15°♑18'26	
	9020 Oct 16 18:33	0°♒	
	9020 Dec 11 20:31	0°♓	
	9021 Jan 27 00:38	0°♈	
	9021 Mar 09 21:03	0°♉	
	9021 Apr 18 05:44	0°♊	
asc. node	9021 May 25 10:01	29°♊15'16	
	9021 May 26 08:37	0°♋	
evening set	9021 Jun 20 16:45	20°♋04'12	
	9021 Jul 03 07:06	0°♌	
	9021 Aug 10 23:27	0°♍	
conjunction	9021 Aug 29 03:16	13°♍43'18	0°56'40
minimum elong	9021 Aug 29 00:37	13°♍38'20	0°56'34
	9021 Sep 20 04:03	0°♎	
max. Earth dist.	9021 Oct 14 20:47	17°♎44'00	2.47405 AU
morning rise	9021 Oct 29 12:04	27°♎59'04	
	9021 Nov 01 09:54	0°♏	
	9021 Dec 16 00:36	0°♐	
	9022 Feb 01 08:01	0°♑	
	9022 Mar 24 13:06	0°♒	
desc. node	9022 May 02 16:39	20°♒04'38	
	9022 May 26 10:33	0°♓	
retrograde	9022 Jul 08 07:32	8°♓54'33	
opposition	9022 Aug 15 15:55	0°♓19'39	-3°30'42
greatest brilliancy	9022 Aug 16 07:37	0°♓04'39	-1.5m
	9022 Aug 16 12:29	30°℞♒	
min. Earth dist.	9022 Aug 21 08:49	28°♒08'52	0.61821 AU
direct	9022 Sep 25 20:54	20°♒23'37	
	9022 Nov 07 07:05	0°♓	
	9023 Jan 02 13:16	0°♈	
	9023 Feb 15 16:42	0°♉	
	9023 Mar 27 20:52	0°♊	
asc. node	9023 Apr 12 11:32	12°♊03'58	
	9023 May 05 10:05	0°♋	
	9023 Jun 12 18:17	0°♌	
	9023 Jul 21 22:19	0°♍	
evening set	9023 Aug 28 23:37	28°♍03'40	
	9023 Aug 31 16:13	0°♎	
	9023 Oct 13 09:53	0°♏	
conjunction	9023 Oct 24 01:46	7°♏16'01	1°02'15
minimum elong	9023 Oct 24 02:52	7°♏17'52	1°02'24
max. Earth dist.	9023 Nov 18 05:32	24°♏06'05	2.59496 AU
	9023 Nov 27 04:32	0°♐	
morning rise	9023 Dec 12 23:53	10°♐17'47	

	9024 Jan 12 19:27	0°♉	
	9024 Mar 01 03:23	0°♒	
desc. node	9024 Mar 19 12:18	11°♒05'45	
	9024 Apr 20 17:43	0°♓	
	9024 Jun 16 01:30	0°♈	
retrograde	9024 Aug 24 19:12	20°♈31'09	
opposition	9024 Sep 28 13:11	13°♈26'41	-5°35'01
greatest brilliancy	9024 Sep 30 05:58	12°♈50'53	-2.1m
min. Earth dist.	9024 Oct 07 02:40	10°♈27'11	0.49944 AU
direct	9024 Nov 05 16:59	4°♈45'23	
	9025 Jan 14 17:52	0°♉	
asc. node	9025 Feb 27 11:50	28°♉59'54	
	9025 Feb 28 21:30	0°♊	
	9025 Apr 10 12:46	0°♋	
	9025 May 20 06:36	0°♌	
	9025 Jun 29 16:04	0°♍	
	9025 Aug 10 13:22	0°♎	
	9025 Sep 23 06:41	0°♏	
evening set	9025 Oct 16 11:26	15°♏26'30	
	9025 Nov 07 17:16	0°♐	
conjunction	9025 Dec 03 12:59	16°♐39'43	0°31'49
minimum elong	9025 Dec 03 13:57	16°♐41'16	0°32'03
max. Earth dist.	9025 Dec 12 09:15	22°♐19'19	2.66530 AU
	9025 Dec 24 10:13	0°♑	
morning rise	9026 Jan 17 10:14	15°♑13'25	
desc. node	9026 Feb 04 08:03	26°♑32'08	
	9026 Feb 09 19:56	0°♒	
	9026 Mar 29 12:48	0°♓	
	9026 May 16 13:36	0°♈	
	9026 Jul 04 15:41	0°♉	
	9026 Aug 26 18:33	0°♊	
retrograde	9026 Nov 04 13:49	22°♊23'16	
opposition	9026 Dec 04 13:04	17°♊23'31	-3°05'38
greatest brilliancy	9026 Dec 05 03:55	17°♊13'22	-3.0m
min. Earth dist.	9026 Dec 08 11:35	16°♊19'03	0.37566 AU
direct	9027 Jan 04 11:30	11°♊58'57	
asc. node	9027 Jan 15 13:31	12°♊49'47	
	9027 Mar 02 07:12	0°♋	
	9027 Apr 20 13:28	0°♌	
	9027 Jun 04 12:06	0°♍	
	9027 Jul 19 08:13	0°♎	
	9027 Sep 03 03:02	0°♏	
	9027 Oct 19 22:11	0°♐	
evening set	9027 Nov 24 15:54	22°♐38'42	
	9027 Dec 06 07:00	0°♑	
desc. node	9027 Dec 23 05:05	10°♑42'23	
max. Earth dist.	9028 Jan 03 16:12	17°♑58'36	2.68059 AU
conjunction	9028 Jan 08 12:24	21°♑03'04	-0°08'34
minimum elong	9028 Jan 08 12:08	21°♑02'40	0°08'19
behind sun begin	9028 Jan 07 20:11	20°♑37'21	
behind sun end	9028 Jan 09 04:05	21°♑28'00	
	9028 Jan 22 13:45	0°♒	
morning rise	9028 Feb 21 00:59	18°♒54'09	
	9028 Mar 09 04:05	0°♓	
	9028 Apr 23 17:47	0°♈	
	9028 Jun 07 04:18	0°♉	
	9028 Jul 20 13:59	0°♊	
	9028 Sep 01 09:35	0°♋	
	9028 Oct 15 01:15	0°♌	
asc. node	9028 Dec 02 14:18	29°♌00'54	
	9028 Dec 04 14:32	0°♍	
retrograde	9029 Jan 18 09:14	12°♍22'13	
min. Earth dist.	9029 Feb 13 15:25	7°♍44'12	0.41683 AU
greatest brilliancy	9029 Feb 20 03:06	5°♍39'15	-2.6m
opposition	9029 Feb 21 13:54	5°♍11'06	4°51'40
	9029 Mar 14 06:12	30°℞♌	
direct	9029 Mar 24 15:22	29°♌15'49	
	9029 Apr 04 08:20	0°♍	
	9029 Jun 18 13:07	0°♎	
	9029 Aug 09 22:40	0°♏	
	9029 Sep 28 20:22	0°♐	
desc. node	9029 Nov 09 04:40	25°♐19'58	
	9029 Nov 16 17:37	0°♑	
evening set	9029 Dec 29 13:13	26°♑50'48	
	9030 Jan 03 12:10	0°♒	
max. Earth dist.	9030 Jan 25 21:20	14°♒22'39	2.64091 AU
conjunction	9030 Feb 12 07:32	25°♒44'49	-0°46'08
minimum elong	9030 Feb 12 06:25	25°♒42'58	0°45'57
	9030 Feb 18 18:28	0°♓	
morning rise	9030 Mar 29 19:41	26°♓15'53	
	9030 Apr 04 06:13	0°♈	
	9030 May 16 22:52	0°♉	
	9030 Jun 27 01:07	0°♊	
	9030 Aug 05 23:02	0°♋	
	9030 Sep 14 09:52	0°♌	
asc. node	9030 Oct 20 11:05	27°♌00'01	
	9030 Oct 24 13:18	0°♍	
	9030 Dec 06 14:01	0°♎	
	9031 Jan 29 14:45	0°♏	
retrograde	9031 Mar 09 05:58	8°♏57'50	
min. Earth dist.	9031 Apr 10 01:02	2°♏05'15	0.55274 AU
	9031 Apr 15 11:26	30°℞♎	
greatest brilliancy	9031 Apr 15 20:41	29°♎51'03	-1.9m
opposition	9031 Apr 17 01:17	29°♎23'26	4°58'44
direct	9031 May 23 01:26	21°♎20'14	
	9031 Jul 03 11:14	0°♏	
	9031 Sep 05 00:07	0°♐	
desc. node	9031 Sep 27 06:20	12°♐19'51	
	9031 Oct 27 17:59	0°♑	
	9031 Dec 15 22:33	0°♒	
	9032 Jan 31 11:08	0°♓	
evening set	9032 Feb 05 00:58	3°♓02'27	
max. Earth dist.	9032 Feb 22 00:23	14°♓28'27	2.54912 AU
	9032 Mar 15 12:32	0°♈	
conjunction	9032 Mar 24 05:41	6°♈07'40	-1°07'15
minimum elong	9032 Mar 24 05:20	6°♈07'04	1°07'14
	9032 Apr 26 08:38	0°♉	
morning rise	9032 May 16 08:26	14°♉50'10	
	9032 Jun 05 09:37	0°♊	
	9032 Jul 14 05:48	0°♋	
	9032 Aug 21 15:30	0°♌	
asc. node	9032 Sep 06 07:06	12°♌10'03	
	9032 Sep 29 12:22	0°♍	
	9032 Nov 08 22:57	0°♎	
	9032 Dec 22 14:31	0°♏	
	9033 Feb 11 20:01	0°♐	
retrograde	9033 Apr 15 00:35	18°♐41'43	
min. Earth dist.	9033 May 22 02:13	10°♐02'11	0.64902 AU
opposition	9033 May 25 10:03	8°♐42'38	2°43'30
greatest brilliancy	9033 May 25 02:45	8°♐49'55	-1.4m
	9033 Jun 24 13:52	30°℞♏	
direct	9033 Jul 03 18:00	29°♏27'55	
	9033 Jul 13 07:11	0°♐	
desc. node	9033 Aug 14 08:21	7°♐52'39	
	9033 Oct 02 13:25	0°♑	
	9033 Nov 24 19:13	0°♒	
	9034 Jan 11 12:22	0°♓	
	9034 Feb 24 16:29	0°♈	
evening set	9034 Mar 21 03:25	17°♈29'14	
max. Earth dist.	9034 Apr 06 05:07	29°♈17'59	2.41849 AU

	9034 Apr 07 03:45	0°♉	
	9034 May 16 15:42	0°♊	
conjunction	9034 May 18 07:19	1°♊16'41	-0°44'36
minimum elong	9034 May 18 10:07	1°♊22'07	0°44'48
	9034 Jun 23 23:21	0°♋	
asc. node	9034 Jul 25 04:30	24°♋39'28	
morning rise	9034 Jul 26 23:44	26°♋04'41	
	9034 Jul 31 23:16	0°♌	
	9034 Sep 08 12:24	0°♍	
	9034 Oct 18 11:33	0°♎	
	9034 Nov 29 18:07	0°♏	
	9035 Jan 14 12:40	0°♐	
	9035 Mar 08 03:58	0°♑	
retrograde	9035 May 19 04:05	22°♑16'56	
opposition	9035 Jun 28 14:40	12°♑36'37	0°07'46
greatest brilliancy	9035 Jun 28 14:50	12°♑36'27	-1.3m
min. Earth dist.	9035 Jun 29 01:57	12°♑25'26	0.68194 AU
desc. node	9035 Jul 02 08:48	11°♑07'37	
direct	9035 Aug 08 19:30	2°♑44'04	
	9035 Oct 31 00:21	0°♒	
	9035 Dec 21 17:36	0°♓	
	9036 Feb 04 22:54	0°♈	
	9036 Mar 17 13:15	0°♉	
	9036 Apr 25 20:59	0°♊	
evening set	9036 May 21 21:21	20°♊25'08	
	9036 Jun 02 23:49	0°♋	
asc. node	9036 Jun 11 01:53	6°♋24'38	
	9036 Jul 10 21:29	0°♌	
conjunction	9036 Jul 31 23:00	16°♌29'02	0°34'50
minimum elong	9036 Jul 31 19:47	16°♌22'48	0°34'35
	9036 Aug 18 11:37	0°♍	
max. Earth dist.	9036 Sep 22 23:04	26°♍38'34	2.41798 AU
	9036 Sep 27 12:52	0°♎	
morning rise	9036 Oct 07 16:11	7°♎22'08	
	9036 Nov 08 16:03	0°♏	
	9036 Dec 23 08:23	0°♐	
	9037 Feb 09 06:51	0°♑	
	9037 Apr 04 01:38	0°♒	
desc. node	9037 May 19 06:57	19°♒14'18	
retrograde	9037 Jun 22 20:08	25°♒19'29	
opposition	9037 Aug 01 01:27	16°♒20'53	-2°30'36
greatest brilliancy	9037 Aug 01 09:27	16°♒13'07	-1.4m
min. Earth dist.	9037 Aug 05 07:31	14°♒41'51	0.64907 AU
direct	9037 Sep 11 15:17	6°♒17'56	
	9037 Nov 23 23:16	0°♓	
	9038 Jan 12 16:48	0°♈	
	9038 Feb 24 12:52	0°♉	
	9038 Apr 05 05:52	0°♊	
asc. node	9038 Apr 29 02:35	18°♊37'48	
	9038 May 13 12:53	0°♋	
	9038 Jun 20 15:33	0°♌	
	9038 Jul 29 13:30	0°♍	
evening set	9038 Aug 04 13:46	4°♍32'31	
	9038 Sep 08 00:40	0°♎	
conjunction	9038 Oct 04 17:17	19°♎01'37	1°06'43
minimum elong	9038 Oct 04 17:27	19°♎01'55	1°06'47
	9038 Oct 20 12:11	0°♏	
max. Earth dist.	9038 Nov 06 17:40	11°♏45'11	2.55311 AU
morning rise	9038 Nov 27 03:10	25°♏22'57	
	9038 Dec 04 03:21	0°♐	
	9039 Jan 19 21:24	0°♑	
	9039 Mar 09 22:51	0°♒	
desc. node	9039 Apr 06 03:21	15°♒48'25	
	9039 May 01 22:44	0°♓	
	9039 Jul 12 08:13	0°♈	
retrograde	9039 Aug 04 22:10	3°♈00'41	
	9039 Aug 26 19:55	30°℞♓	
opposition	9039 Sep 10 08:06	25°♓14'20	-4°56'33
greatest brilliancy	9039 Sep 11 15:33	24°♓45'25	-1.8m
min. Earth dist.	9039 Sep 18 01:16	22°♓24'26	0.55209 AU
direct	9039 Oct 20 03:35	15°♓50'01	
	9039 Dec 10 05:15	0°♈	
	9040 Jan 29 20:55	0°♉	
	9040 Mar 11 20:20	0°♊	
asc. node	9040 Mar 16 05:04	3°♊15'57	
	9040 Apr 20 06:04	0°♋	
	9040 May 29 05:04	0°♌	
	9040 Jul 07 22:59	0°♍	
	9040 Aug 18 06:22	0°♎	
evening set	9040 Sep 29 00:03	28°♎58'56	
	9040 Sep 30 12:01	0°♏	
	9040 Nov 14 14:26	0°♐	
conjunction	9040 Nov 18 11:05	2°♐31'04	0°45'40
minimum elong	9040 Nov 18 12:22	2°♐33'09	0°45'54
max. Earth dist.	9040 Dec 03 04:35	12°♐03'57	2.64428 AU
	9040 Dec 31 04:43	0°♑	
morning rise	9041 Jan 03 18:42	2°♑16'36	
	9041 Feb 16 19:52	0°♒	
desc. node	9041 Feb 20 22:32	2°♒33'52	
	9041 Apr 06 07:41	0°♓	
	9041 May 26 05:34	0°♈	
	9041 Jul 19 06:38	0°♉	
retrograde	9041 Oct 04 00:13	24°♉50'14	
opposition	9041 Nov 04 17:46	19°♉06'33	-5°13'07
greatest brilliancy	9041 Nov 06 07:35	18°♉37'43	-2.6m
min. Earth dist.	9041 Nov 12 10:31	16°♉46'54	0.41551 AU
direct	9041 Dec 08 18:15	12°♉19'34	
asc. node	9042 Feb 01 05:53	29°♉24'39	
	9042 Feb 02 08:01	0°♊	
	9042 Mar 22 01:13	0°♋	
	9042 May 03 16:28	0°♌	
	9042 Jun 14 22:01	0°♍	
	9042 Jul 28 03:46	0°♎	
	9042 Sep 10 21:29	0°♏	
	9042 Oct 27 00:37	0°♐	
evening set	9042 Nov 10 02:43	9°♐01'36	
	9042 Dec 13 01:19	0°♑	
conjunction	9042 Dec 25 19:53	8°♑06'24	0°07'21
minimum elong	9042 Dec 25 20:08	8°♑06'47	0°07'36
behind sun begin	9042 Dec 25 03:34	7°♑40'31	
behind sun end	9042 Dec 26 12:42	8°♑33'03	
max. Earth dist.	9042 Dec 26 02:56	8°♑17'33	2.68111 AU
desc. node	9043 Jan 08 18:31	16°♑57'08	
	9043 Jan 29 07:27	0°♒	
morning rise	9043 Feb 07 12:36	5°♒51'59	
	9043 Mar 17 05:27	0°♓	
	9043 May 02 12:23	0°♈	
	9043 Jun 17 03:49	0°♉	
	9043 Aug 01 10:45	0°♊	
	9043 Sep 16 11:23	0°♋	
	9043 Nov 07 17:41	0°♌	
asc. node	9043 Dec 20 05:44	12°♌37'21	
retrograde	9043 Dec 24 08:57	12°♌44'36	
min. Earth dist.	9044 Jan 19 19:18	8°♌24'32	0.37702 AU
opposition	9044 Jan 24 17:01	7°♌01'35	2°37'14
greatest brilliancy	9044 Jan 24 03:30	7°♌11'10	-3.0m
direct	9044 Feb 23 05:47	1°♌57'11	
	9044 May 11 19:03	0°♍	
	9044 Jul 01 16:50	0°♎	

	9044 Aug 19 07:06	0°♏	
	9044 Oct 06 14:34	0°♐	
	9044 Nov 23 17:58	0°♑	
desc. node	9044 Nov 25 17:47	1°♑14'53	
evening set	9044 Dec 15 15:47	13°♑45'51	
	9045 Jan 10 06:03	0°♒	
max. Earth dist.	9045 Jan 16 16:51	4°♒07'30	2.66287 AU
conjunction	9045 Jan 29 02:40	12°♒06'16	-0°32'39
minimum elong	9045 Jan 29 01:46	12°♒04'49	0°32'26
	9045 Feb 25 14:04	0°♓	
morning rise	9045 Mar 14 09:10	11°♓06'49	
	9045 Apr 11 10:09	0°♈	
	9045 May 24 15:55	0°♉	
	9045 Jul 05 10:29	0°♊	
	9045 Aug 15 02:19	0°♋	
	9045 Sep 24 09:53	0°♌	
	9045 Nov 04 22:05	0°♍	
asc. node	9045 Nov 06 04:56	0°♍53'44	
	9045 Dec 21 20:50	0°♎	
retrograde	9046 Feb 20 00:25	20°♎01'57	
min. Earth dist.	9046 Mar 21 08:44	14°♎03'33	0.50095 AU
greatest brilliancy	9046 Mar 27 23:24	11°♎37'45	-2.1m
opposition	9046 Mar 29 12:27	11°♎03'27	5°29'11
direct	9046 May 02 18:53	3°♎42'51	
	9046 Jul 21 20:12	0°♏	
	9046 Sep 14 17:26	0°♐	
desc. node	9046 Oct 13 19:20	17°♐00'18	
	9046 Nov 04 11:26	0°♑	
	9046 Dec 22 23:12	0°♒	
evening set	9047 Jan 20 22:45	18°♒35'19	
	9047 Feb 07 07:46	0°♓	
max. Earth dist.	9047 Feb 10 14:29	2°♓10'37	2.59075 AU
conjunction	9047 Mar 08 06:18	19°♓28'58	-1°02'18
minimum elong	9047 Mar 08 05:20	19°♓27'20	1°02'14
	9047 Mar 23 12:11	0°♈	
morning rise	9047 Apr 26 10:16	24°♈03'03	
	9047 May 04 15:06	0°♉	
	9047 Jun 14 00:32	0°♊	
	9047 Jul 23 04:55	0°♋	
	9047 Aug 30 21:43	0°♌	
asc. node	9047 Sep 24 01:01	18°♌35'07	
	9047 Oct 09 01:50	0°♍	
	9047 Nov 19 00:40	0°♎	
	9048 Jan 03 04:29	0°♏	
	9048 Mar 04 12:32	0°♐	
retrograde	9048 Apr 01 02:49	4°♐34'41	
	9048 Apr 26 21:53	30°℞♏	
min. Earth dist.	9048 May 06 07:10	26°♏31'49	0.61846 AU
greatest brilliancy	9048 May 10 12:04	24°♏51'50	-1.6m
opposition	9048 May 11 02:31	24°♏37'29	3°40'42
direct	9048 Jun 18 07:29	15°♏45'43	
	9048 Aug 13 14:55	0°♐	
desc. node	9048 Aug 30 20:53	7°♐46'54	
	9048 Oct 12 12:06	0°♑	
	9048 Dec 02 14:53	0°♒	
	9049 Jan 18 17:36	0°♓	
evening set	9049 Mar 02 02:36	28°♓48'20	
	9049 Mar 03 19:29	0°♈	
max. Earth dist.	9049 Mar 15 16:59	8°♈25'11	2.47191 AU
	9049 Apr 14 09:18	0°♉	
conjunction	9049 Apr 24 07:58	7°♉24'14	-1°01'10
minimum elong	9049 Apr 24 09:37	7°♉27'20	1°01'19
	9049 May 24 01:31	0°♊	
morning rise	9049 Jun 26 01:04	25°♊40'34	
	9049 Jul 01 13:08	0°♋	
greatest brilliancy	9049 Jul 12 07:43	8°♋28'54	1.2m
	9049 Aug 08 15:42	0°♌	
asc. node	9049 Aug 10 20:43	1°♌44'02	
	9049 Sep 16 06:20	0°♍	
	9049 Oct 26 07:14	0°♎	
	9049 Dec 07 20:15	0°♏	
	9050 Jan 23 16:28	0°♐	
	9050 Mar 23 07:22	0°♑	
retrograde	9050 May 05 23:43	9°♑45'03	
opposition	9050 Jun 15 13:19	29°♐54'20	1°08'41
min. Earth dist.	9050 Jun 14 12:55	0°♑18'37	0.67696 AU
	9050 Jun 15 07:37	30°℞♐	
greatest brilliancy	9050 Jun 15 12:34	29°♐55'04	-1.3m
desc. node	9050 Jul 18 21:57	20°♐33'22	
direct	9050 Jul 26 04:32	20°♐13'29	
	9050 Sep 09 12:28	0°♑	
	9050 Nov 10 07:41	0°♒	
	9050 Dec 29 21:11	0°♓	
	9051 Feb 12 13:28	0°♈	
	9051 Mar 26 01:20	0°♉	
evening set	9051 Apr 25 13:56	23°♉09'46	
	9051 May 04 09:55	0°♊	
	9051 Jun 11 13:45	0°♋	
asc. node	9051 Jun 28 19:34	13°♋40'01	
conjunction	9051 Jul 02 06:01	16°♋23'20	0°02'32
minimum elong	9051 Jul 02 05:43	16°♋22'44	0°02'16
behind sun begin	9051 Jun 30 23:22	15°♋22'38	
behind sun end	9051 Jul 03 12:04	17°♋22'49	
	9051 Jul 19 11:13	0°♌	
max. Earth dist.	9051 Aug 05 02:02	13°♌02'24	2.36900 AU
	9051 Aug 26 23:43	0°♍	
morning rise	9051 Sep 12 22:31	12°♍53'35	
	9051 Oct 05 22:33	0°♎	
	9051 Nov 17 00:32	0°♏	
	9051 Dec 31 21:55	0°♐	
	9052 Feb 18 21:11	0°♑	
	9052 Apr 17 20:22	0°♒	
desc. node	9052 Jun 04 21:14	12°♒23'28	
retrograde	9052 Jun 08 12:14	12°♒28'10	
opposition	9052 Jul 18 08:37	3°♒10'33	-1°29'32
greatest brilliancy	9052 Jul 18 11:27	3°♒07'46	-1.3m
min. Earth dist.	9052 Jul 21 03:10	2°♒05'19	0.66982 AU
	9052 Jul 26 13:32	30°℞♑	
direct	9052 Aug 28 23:24	23°♑07'59	
	9052 Oct 04 08:40	0°♒	
	9052 Dec 05 10:24	0°♓	
	9053 Jan 21 14:18	0°♈	
	9053 Mar 04 18:13	0°♉	
	9053 Apr 13 05:52	0°♊	
greatest brilliancy	9053 May 06 22:15	18°♊32'53	1.2m
asc. node	9053 May 15 19:36	25°♊33'59	
	9053 May 21 10:05	0°♋	
	9053 Jun 28 09:34	0°♌	
evening set	9053 Jul 07 11:30	7°♌06'37	
	9053 Aug 06 03:07	0°♍	
conjunction	9053 Sep 12 07:43	27°♍46'33	1°03'22
minimum elong	9053 Sep 12 06:11	27°♍43'45	1°03'20
	9053 Sep 15 08:52	0°♎	
max. Earth dist.	9053 Oct 24 05:25	27°♎38'14	2.50356 AU
	9053 Oct 27 15:16	0°♏	
morning rise	9053 Nov 09 12:24	8°♏50'16	
	9053 Dec 11 04:28	0°♐	
	9054 Jan 27 04:42	0°♑	
	9054 Mar 18 09:08	0°♒	

desc. node	9054 Apr 22 17:47	19°♒16'31	
	9054 May 14 20:03	0°♓	
retrograde	9054 Jul 17 18:50	17°♓34'44	
opposition	9054 Aug 24 12:20	9°♓15'14	-4°04'05
greatest brilliancy	9054 Aug 25 09:23	8°♓55'20	-1.6m
min. Earth dist.	9054 Aug 30 23:39	6°♓48'26	0.59710 AU
	9054 Sep 25 06:17	30°♑♒	
direct	9054 Oct 04 08:08	29°♒26'45	
	9054 Oct 13 15:01	0°♓	
	9054 Dec 26 01:44	0°♈	
	9055 Feb 09 15:16	0°♉	
	9055 Mar 22 07:00	0°♊	
asc. node	9055 Apr 02 20:00	8°♊50'34	
	9055 Apr 30 01:53	0°♋	
	9055 Jun 07 14:01	0°♌	
	9055 Jul 16 21:49	0°♍	
	9055 Aug 26 19:16	0°♎	
evening set	9055 Sep 10 07:44	10°♎19'25	
	9055 Oct 08 15:56	0°♏	
conjunction	9055 Nov 03 02:30	17°♏10'25	0°57'13
minimum elong	9055 Nov 03 03:47	17°♏12'35	0°57'24
	9055 Nov 22 12:07	0°♐	
max. Earth dist.	9055 Nov 24 06:09	1°♐08'51	2.61472 AU
morning rise	9055 Dec 21 12:30	18°♐48'45	
	9056 Jan 08 01:30	0°♑	
	9056 Feb 25 01:24	0°♒	
desc. node	9056 Mar 09 13:22	8°♒16'29	
	9056 Apr 14 16:52	0°♓	
	9056 Jun 06 19:18	0°♈	
	9056 Aug 18 15:57	0°♉	
retrograde	9056 Sep 07 00:29	2°♉07'48	
	9056 Sep 25 10:07	30°♑♈	
opposition	9056 Oct 10 18:40	25°♈29'59	-5°43'17
greatest brilliancy	9056 Oct 12 14:02	24°♈53'18	-2.3m
min. Earth dist.	9056 Oct 19 11:20	22°♈35'00	0.46899 AU
direct	9056 Nov 16 16:13	17°♈22'33	
	9057 Jan 01 22:04	0°♉	
asc. node	9057 Feb 17 21:33	27°♉57'03	
	9057 Feb 20 22:00	0°♊	
	9057 Apr 03 20:50	0°♋	
	9057 May 14 06:36	0°♌	
	9057 Jun 24 03:13	0°♍	
	9057 Aug 05 09:09	0°♎	
	9057 Sep 18 09:11	0°♏	
evening set	9057 Oct 25 17:44	24°♏37'30	
	9057 Nov 03 00:22	0°♐	
conjunction	9057 Dec 11 19:18	24°♐54'25	0°23'01
minimum elong	9057 Dec 11 20:01	24°♐55'34	0°23'16
max. Earth dist.	9057 Dec 17 12:33	28°♐32'59	2.67327 AU
	9057 Dec 19 19:15	0°♑	
morning rise	9058 Jan 25 03:10	23°♑02'49	
desc. node	9058 Jan 25 09:50	23°♑13'22	
	9058 Feb 05 02:46	0°♒	
	9058 Mar 24 11:36	0°♓	
	9058 May 10 18:26	0°♈	
	9058 Jun 27 06:24	0°♉	
	9058 Aug 15 04:18	0°♊	
	9058 Oct 10 22:47	0°♋	
retrograde	9058 Nov 23 02:12	10°♋21'59	
opposition	9058 Dec 22 22:27	5°♋26'25	-1°05'37
greatest brilliancy	9058 Dec 23 00:49	5°♋24'51	-3.1m
min. Earth dist.	9058 Dec 23 15:11	5°♋15'20	0.36631 AU
asc. node	9059 Jan 05 22:54	2°♋04'30	
direct	9059 Jan 21 13:48	0°♋28'33	
	9059 Apr 10 00:29	0°♌	
	9059 May 28 01:38	0°♍	
	9059 Jul 13 06:34	0°♎	
	9059 Aug 28 19:18	0°♏	
	9059 Oct 15 00:51	0°♐	
	9059 Dec 01 15:18	0°♑	
evening set	9059 Dec 02 17:20	0°♑41'01	
desc. node	9059 Dec 13 07:18	7°♑21'46	
max. Earth dist.	9060 Jan 08 17:16	24°♑06'02	2.67661 AU
conjunction	9060 Jan 16 07:29	28°♑56'11	-0°17'42
minimum elong	9060 Jan 16 06:58	28°♑55'22	0°17'27
	9060 Jan 17 23:30	0°♒	
morning rise	9060 Feb 28 23:00	27°♒03'15	
	9060 Mar 04 11:21	0°♓	
	9060 Apr 18 18:09	0°♈	
	9060 Jun 01 16:58	0°♉	
	9060 Jul 14 09:59	0°♊	
	9060 Aug 25 05:41	0°♋	
	9060 Oct 06 04:05	0°♌	
	9060 Nov 20 02:01	0°♍	
asc. node	9060 Nov 22 21:17	1°♍42'32	
retrograde	9061 Jan 31 04:05	27°♍32'03	
min. Earth dist.	9061 Feb 27 06:02	22°♍28'55	0.44605 AU
greatest brilliancy	9061 Mar 06 02:35	20°♍08'58	-2.5m
opposition	9061 Mar 07 18:04	19°♍35'06	5°24'04
direct	9061 Apr 08 23:33	13°♍07'24	
	9061 Jun 07 11:15	0°♎	
	9061 Aug 03 04:35	0°♏	
	9061 Sep 23 09:46	0°♐	
desc. node	9061 Oct 30 07:56	22°♐19'18	
	9061 Nov 11 20:33	0°♑	
	9061 Dec 29 20:39	0°♒	
evening set	9062 Jan 06 13:11	4°♒54'01	
max. Earth dist.	9062 Jan 31 11:00	20°♒59'34	2.62542 AU
	9062 Feb 14 03:56	0°♓	
conjunction	9062 Feb 20 16:37	4°♓19'50	-0°52'59
minimum elong	9062 Feb 20 15:28	4°♓17'55	0°52'51
	9062 Mar 30 13:24	0°♈	
morning rise	9062 Apr 08 05:10	6°♈00'28	
	9062 May 12 01:12	0°♉	
	9062 Jun 21 21:09	0°♊	
	9062 Jul 31 11:58	0°♋	
	9062 Sep 08 14:36	0°♌	
asc. node	9062 Oct 10 19:09	24°♌25'46	
	9062 Oct 18 06:29	0°♍	
	9062 Nov 29 04:44	0°♎	
	9063 Jan 16 20:18	0°♏	
retrograde	9063 Mar 18 07:48	19°♏07'49	
min. Earth dist.	9063 Apr 20 09:29	11°♏47'45	0.57866 AU
opposition	9063 Apr 26 15:23	9°♏21'18	4°33'04
greatest brilliancy	9063 Apr 25 16:03	9°♏44'09	-1.7m
direct	9063 Jun 02 11:43	0°♏58'32	
	9063 Aug 28 16:11	0°♐	
desc. node	9063 Sep 17 09:40	10°♐23'29	
	9063 Oct 22 05:53	0°♑	
	9063 Dec 11 00:50	0°♒	
	9064 Jan 26 18:23	0°♓	
evening set	9064 Feb 14 02:03	12°♓15'34	
max. Earth dist.	9064 Feb 29 11:06	22°♓46'41	2.52328 AU
	9064 Mar 10 20:25	0°♈	
conjunction	9064 Apr 03 17:15	16°♈57'35	-1°07'23
minimum elong	9064 Apr 03 17:30	16°♈58'03	1°07'26
	9064 Apr 21 14:44	0°♉	
morning rise	9064 May 29 17:50	28°♉37'35	
	9064 May 31 12:57	0°♊	

	9064 Jul 09 06:12	0°♋	
	9064 Aug 16 12:55	0°♌	
asc. node	9064 Aug 27 16:01	8°♌41'17	
	9064 Sep 24 06:32	0°♍	
	9064 Nov 03 11:36	0°♎	
	9064 Dec 16 12:50	0°♏	
	9065 Feb 03 09:33	0°♐	
retrograde	9065 Apr 22 18:41	26°♐52'18	
min. Earth dist.	9065 May 30 18:13	17°♐54'56	0.66167 AU
opposition	9065 Jun 02 06:32	16°♐54'46	2°08'54
greatest brilliancy	9065 Jun 02 02:16	16°♐59'01	-1.4m
direct	9065 Jul 12 02:48	7°♐29'34	
desc. node	9065 Aug 04 10:42	10°♐25'22	
	9065 Sep 24 21:23	0°♑	
	9065 Nov 19 05:38	0°♒	
	9066 Jan 06 12:50	0°♓	
	9066 Feb 19 21:25	0°♈	
evening set	9066 Apr 02 00:57	29°♈44'47	
	9066 Apr 02 09:08	0°♉	
max. Earth dist.	9066 Apr 24 12:04	16°♉40'07	2.39053 AU
	9066 May 11 20:07	0°♊	
conjunction	9066 Jun 02 12:45	16°♊56'14	-0°30'00
minimum elong	9066 Jun 02 15:21	17°♊01'21	0°30'13
	9066 Jun 19 02:30	0°♋	
asc. node	9066 Jul 15 12:10	20°♋53'13	
	9066 Jul 27 01:16	0°♌	
morning rise	9066 Aug 13 22:20	14°♌01'09	
	9066 Sep 03 13:38	0°♍	
	9066 Oct 13 11:43	0°♎	
	9066 Nov 24 14:47	0°♏	
	9067 Jan 08 22:06	0°♐	
	9067 Feb 28 16:10	0°♑	
retrograde	9067 May 26 20:06	29°♑55'57	
desc. node	9067 Jun 22 10:42	25°♑26'15	
opposition	9067 Jul 06 02:35	20°♑22'50	-0°28'13
greatest brilliancy	9067 Jul 06 02:55	20°♑22'30	-1.3m
min. Earth dist.	9067 Jul 07 09:22	19°♑52'24	0.68039 AU
direct	9067 Aug 16 12:16	10°♑25'34	
	9067 Oct 22 22:39	0°♒	
	9067 Dec 15 23:37	0°♓	
	9068 Jan 30 19:19	0°♈	
	9068 Mar 12 14:15	0°♉	
	9068 Apr 20 23:22	0°♊	
	9068 May 29 02:28	0°♋	
asc. node	9068 Jun 01 10:57	2°♋39'33	
evening set	9068 Jun 07 11:23	7°♋25'55	
	9068 Jul 06 00:10	0°♌	
	9068 Aug 13 14:41	0°♍	
conjunction	9068 Aug 17 06:49	2°♍48'09	0°48'53
minimum elong	9068 Aug 17 03:32	2°♍41'54	0°48'42
	9068 Sep 22 16:36	0°♎	
max. Earth dist.	9068 Oct 06 13:16	10°♎03'03	2.44909 AU
morning rise	9068 Oct 20 11:03	19°♎57'22	
	9068 Nov 03 19:37	0°♏	
	9068 Dec 18 09:12	0°♐	
	9069 Feb 03 20:21	0°♑	
	9069 Mar 27 20:27	0°♒	
desc. node	9069 May 09 09:07	20°♒33'58	
	9069 Jun 05 23:23	0°♓	
retrograde	9069 Jul 01 13:04	3°♓29'38	
	9069 Jul 25 04:05	30°℞♒	
opposition	9069 Aug 09 06:54	24°♒43'35	-3°05'47
greatest brilliancy	9069 Aug 09 18:59	24°♒31'58	-1.5m
min. Earth dist.	9069 Aug 14 08:05	22°♒46'50	0.63321 AU
direct	9069 Sep 19 16:09	14°♒43'25	
	9069 Nov 14 12:54	0°♓	
	9070 Jan 06 09:27	0°♈	
	9070 Feb 18 23:25	0°♉	
	9070 Mar 30 23:17	0°♊	
asc. node	9070 Apr 19 12:27	15°♊10'37	
	9070 May 08 09:55	0°♋	
	9070 Jun 15 15:02	0°♌	
	9070 Jul 24 15:20	0°♍	
evening set	9070 Aug 18 18:49	18°♍45'29	
	9070 Sep 03 04:52	0°♎	
conjunction	9070 Oct 15 23:58	0°♏09'53	1°04'52
minimum elong	9070 Oct 16 00:46	0°♏11'15	1°04'59
	9070 Oct 15 18:13	0°♏	
max. Earth dist.	9070 Nov 13 13:29	19°♏30'26	2.57714 AU
	9070 Nov 29 09:56	0°♐	
morning rise	9070 Dec 06 08:13	4°♐32'16	
	9071 Jan 15 00:45	0°♑	
	9071 Mar 04 14:19	0°♒	
desc. node	9071 Mar 27 04:49	13°♒28'11	
	9071 Apr 25 00:16	0°♓	
	9071 Jun 23 21:02	0°♈	
retrograde	9071 Aug 16 09:07	13°♈09'17	
opposition	9071 Sep 20 21:47	5°♈44'58	-5°20'59
greatest brilliancy	9071 Sep 22 10:50	5°♈11'39	-2.0m
min. Earth dist.	9071 Sep 29 03:27	2°♈47'50	0.52354 AU
	9071 Oct 07 20:31	30°℞♓	
direct	9071 Oct 29 20:31	26°♓41'53	
	9071 Nov 21 14:43	0°♈	
	9072 Jan 21 18:50	0°♉	
	9072 Mar 05 06:24	0°♊	
asc. node	9072 Mar 06 12:49	0°♊55'36	
	9072 Apr 14 07:07	0°♋	
	9072 May 23 15:15	0°♌	
	9072 Jul 02 16:23	0°♍	
	9072 Aug 13 06:01	0°♎	
	9072 Sep 25 16:34	0°♏	
evening set	9072 Oct 09 03:38	9°♏02'30	
	9072 Nov 09 22:20	0°♐	
conjunction	9072 Nov 27 04:23	11°♐11'15	0°37'48
minimum elong	9072 Nov 27 05:30	11°♐13'04	0°38'02
max. Earth dist.	9072 Dec 08 13:49	18°♐30'58	2.65695 AU
	9072 Dec 26 13:11	0°♑	
morning rise	9073 Jan 11 15:05	10°♑12'25	
desc. node	9073 Feb 11 00:08	29°♑21'36	
	9073 Feb 12 00:35	0°♒	
	9073 Apr 01 00:57	0°♓	
	9073 May 19 18:50	0°♈	
	9073 Jul 09 12:27	0°♉	
	9073 Sep 07 00:23	0°♊	
retrograde	9073 Oct 21 08:36	10°♊10'45	
opposition	9073 Nov 20 21:54	4°♊55'11	-4°14'53
greatest brilliancy	9073 Nov 22 00:36	4°♊36'08	-2.8m
min. Earth dist.	9073 Nov 26 22:07	3°♊12'36	0.39048 AU
	9073 Dec 10 17:24	30°℞♉	
direct	9073 Dec 23 04:46	28°♉56'39	
	9074 Jan 04 12:52	0°♊	
asc. node	9074 Jan 22 14:06	4°♊56'15	
	9074 Mar 11 18:06	0°♋	
	9074 Apr 26 01:19	0°♌	
	9074 Jun 08 12:32	0°♍	
	9074 Jul 22 12:42	0°♎	
	9074 Sep 05 18:26	0°♏	
	9074 Oct 22 05:26	0°♐	
evening set	9074 Nov 18 12:19	17°♐22'29	
	9074 Dec 08 10:10	0°♑	

desc. node	9074 Dec 29 21:04	13°♉35'54	
max. Earth dist.	9074 Dec 31 02:56	14°♉23'14	2.68193 AU
conjunction	9075 Jan 02 16:29	16°♉00'50	-0°02'02
minimum elong	9075 Jan 02 16:27	16°♉00'46	0°01'46
behind sun begin	9075 Jan 01 22:07	15°♉31'43	
behind sun end	9075 Jan 03 10:47	16°♉29'50	
	9075 Jan 24 16:31	0°♒	
morning rise	9075 Feb 15 05:17	13°♒45'32	
	9075 Mar 12 10:30	0°♓	
	9075 Apr 27 07:50	0°♈	
	9075 Jun 11 06:35	0°♉	
	9075 Jul 25 10:03	0°♊	
	9075 Sep 07 08:10	0°♋	
	9075 Oct 23 04:57	0°♌	
asc. node	9075 Dec 10 15:37	24°♌50'00	
	9076 Jan 01 03:08	0°♍	
retrograde	9076 Jan 08 14:41	0°♍24'28	
	9076 Jan 16 02:45	30°℞♌	
min. Earth dist.	9076 Feb 03 14:26	26°♌00'34	0.39627 AU
greatest brilliancy	9076 Feb 09 10:00	24°♌14'42	-2.8m
opposition	9076 Feb 10 13:14	23°♌53'54	4°07'37
direct	9076 Mar 11 19:09	18°♌23'57	
	9076 Apr 27 08:39	0°♍	
	9076 Jun 23 20:57	0°♎	
	9076 Aug 13 07:01	0°♏	
	9076 Oct 01 10:13	0°♐	
desc. node	9076 Nov 15 20:15	28°♐03'19	
	9076 Nov 18 23:16	0°♑	
evening set	9076 Dec 23 14:28	21°♑43'27	
	9077 Jan 05 15:14	0°♒	
max. Earth dist.	9077 Jan 21 23:50	10°♒28'49	2.65181 AU
conjunction	9077 Feb 06 03:49	20°♒18'18	-0°40'46
minimum elong	9077 Feb 06 02:46	20°♒16'35	0°40'34
	9077 Feb 20 23:03	0°♓	
morning rise	9077 Mar 23 00:27	20°♓03'23	
	9077 Apr 06 15:13	0°♈	
	9077 May 19 14:20	0°♉	
	9077 Jun 30 00:05	0°♊	
	9077 Aug 09 05:49	0°♋	
	9077 Sep 18 00:25	0°♌	
asc. node	9077 Oct 27 13:03	29°♌14'02	
	9077 Oct 28 14:34	0°♍	
	9077 Dec 11 17:12	0°♎	
	9078 Feb 14 18:02	0°♏	
retrograde	9078 Mar 02 02:23	1°♏36'37	
	9078 Mar 16 20:24	30°℞♎	
min. Earth dist.	9078 Apr 01 19:38	25°♎07'03	0.53026 AU
greatest brilliancy	9078 Apr 08 00:08	22°♎46'35	-2.0m
opposition	9078 Apr 09 08:46	22°♎15'32	5°14'56
direct	9078 May 14 14:30	14°♎30'08	
	9078 Jul 11 14:50	0°♏	
	9078 Sep 08 10:54	0°♐	
desc. node	9078 Oct 03 21:37	14°♐27'58	
	9078 Oct 30 06:47	0°♑	
	9078 Dec 18 04:32	0°♒	
evening set	9079 Jan 29 10:45	27°♒11'55	
	9079 Feb 02 16:32	0°♓	
max. Earth dist.	9079 Feb 17 00:51	9°♓34'37	2.56868 AU
conjunction	9079 Mar 17 16:40	29°♓11'38	-1°05'50
minimum elong	9079 Mar 17 16:00	29°♓10'29	1°05'49
	9079 Mar 18 20:27	0°♈	
	9079 Apr 29 20:35	0°♉	
morning rise	9079 May 07 20:15	5°♉51'52	
	9079 Jun 09 01:54	0°♊	
	9079 Jul 18 02:02	0°♋	
	9079 Aug 25 14:31	0°♌	
asc. node	9079 Sep 14 08:33	15°♌18'06	
	9079 Oct 03 13:30	0°♍	
	9079 Nov 13 03:17	0°♎	
	9079 Dec 27 04:39	0°♏	
	9080 Feb 18 17:46	0°♐	
retrograde	9080 Apr 09 04:29	13°♐16'32	
min. Earth dist.	9080 May 15 10:07	4°♐52'40	0.63655 AU
opposition	9080 May 19 09:55	3°♐17'18	3°07'51
greatest brilliancy	9080 May 18 23:44	3°♐27'26	-1.5m
	9080 May 27 23:37	30°℞♏	
direct	9080 Jun 27 06:00	24°♏12'18	
	9080 Jul 30 22:35	0°♐	
desc. node	9080 Aug 20 23:36	7°♐42'34	
	9080 Oct 06 01:42	0°♑	
	9080 Nov 27 09:12	0°♒	
	9081 Jan 13 21:28	0°♓	
	9081 Feb 27 02:07	0°♈	
evening set	9081 Mar 12 14:37	9°♈34'27	
max. Earth dist.	9081 Mar 26 19:18	19°♈49'06	2.44247 AU
	9081 Apr 09 15:48	0°♉	
conjunction	9081 May 07 09:08	20°♉52'13	-0°53'09
minimum elong	9081 May 07 11:33	20°♉56'51	0°53'20
	9081 May 19 06:30	0°♊	
	9081 Jun 26 16:20	0°♋	
morning rise	9081 Jul 13 02:15	12°♋57'04	
asc. node	9081 Aug 01 05:58	28°♋03'30	
	9081 Aug 03 17:10	0°♌	
	9081 Sep 11 06:04	0°♍	
	9081 Oct 21 04:34	0°♎	
	9081 Dec 02 11:31	0°♏	
	9082 Jan 17 12:44	0°♐	
	9082 Mar 12 18:28	0°♑	
retrograde	9082 May 13 13:43	17°♑27'57	
opposition	9082 Jun 23 01:33	7°♑42'30	0°33'00
greatest brilliancy	9082 Jun 23 01:39	7°♑42'25	-1.3m
min. Earth dist.	9082 Jun 22 20:41	7°♑47'20	0.68094 AU
desc. node	9082 Jul 09 00:42	1°♑51'30	
	9082 Jul 15 21:48	30°℞♐	
direct	9082 Aug 03 00:23	27°♐54'46	
	9082 Aug 22 11:41	0°♑	
	9082 Nov 03 17:21	0°♒	
	9082 Dec 24 12:34	0°♓	
	9083 Feb 07 13:41	0°♈	
	9083 Mar 21 04:14	0°♉	
	9083 Apr 29 13:10	0°♊	
evening set	9083 May 10 13:02	8°♊34'44	
	9083 Jun 06 16:54	0°♋	
asc. node	9083 Jun 19 03:31	9°♋51'56	
	9083 Jul 14 14:16	0°♌	
conjunction	9083 Jul 19 15:30	3°♌58'36	0°21'41
minimum elong	9083 Jul 19 13:12	3°♌54'05	0°21'26
	9083 Aug 22 02:55	0°♍	
max. Earth dist.	9083 Sep 09 13:46	14°♍01'07	2.39369 AU
morning rise	9083 Sep 27 23:22	27°♍43'00	
	9083 Oct 01 01:57	0°♎	
	9083 Nov 12 02:51	0°♏	
	9083 Dec 26 19:12	0°♐	
	9084 Feb 13 00:24	0°♑	
	9084 Apr 08 07:00	0°♒	
desc. node	9084 May 25 23:30	17°♒42'01	
retrograde	9084 Jun 16 14:49	20°♒16'01	
opposition	9084 Jul 26 03:02	11°♒08'25	-2°05'16
greatest brilliancy	9084 Jul 26 08:29	11°♒03'06	-1.4m

min. Earth dist.	9084 Jul 29 16:57	9°♒44'34	0.65958 AU
direct	9084 Sep 05 17:31	1°♒04'52	
	9084 Nov 28 08:45	0°♓	
	9085 Jan 15 22:16	0°♈	
	9085 Feb 27 12:13	0°♉	
	9085 Apr 08 03:24	0°♊	
asc. node	9085 May 06 03:18	21°♊54'30	
	9085 May 16 09:20	0°♋	
	9085 Jun 23 10:09	0°♌	
evening set	9085 Jul 23 17:53	23°♌31'50	
	9085 Aug 01 05:12	0°♍	
	9085 Sep 10 12:49	0°♎	
conjunction	9085 Sep 25 10:18	10°♎44'03	1°06'26
minimum elong	9085 Sep 25 09:51	10°♎43'14	1°06'28
	9085 Oct 22 20:35	0°♏	
max. Earth dist.	9085 Nov 01 08:56	6°♏32'14	2.53192 AU
morning rise	9085 Nov 19 18:51	18°♏59'18	
	9085 Dec 06 09:26	0°♐	
	9086 Jan 22 04:20	0°♑	
	9086 Mar 12 14:34	0°♒	
desc. node	9086 Apr 12 19:55	17°♒45'27	
	9086 May 06 00:12	0°♓	
retrograde	9086 Jul 27 19:23	26°♓38'59	
opposition	9086 Sep 02 20:01	18°♓36'45	-4°35'12
greatest brilliancy	9086 Sep 03 22:49	18°♓11'44	-1.7m
min. Earth dist.	9086 Sep 09 24:00	15°♓56'23	0.57335 AU
direct	9086 Oct 13 03:19	8°♓59'36	
	9086 Dec 17 04:05	0°♈	
	9087 Feb 03 03:05	0°♉	
	9087 Mar 16 11:18	0°♊	
asc. node	9087 Mar 24 05:43	5°♊52'43	
	9087 Apr 24 13:52	0°♋	
	9087 Jun 02 07:04	0°♌	
	9087 Jul 11 19:04	0°♍	
	9087 Aug 21 20:36	0°♎	
evening set	9087 Sep 21 19:50	21°♎44'29	
	9087 Oct 03 20:43	0°♏	
conjunction	9087 Nov 12 15:13	26°♏36'38	0°50'51
minimum elong	9087 Nov 12 16:33	26°♏38'49	0°51'03
	9087 Nov 17 19:12	0°♐	
max. Earth dist.	9087 Nov 30 01:49	8°♐00'18	2.63220 AU
morning rise	9087 Dec 29 18:41	27°♐06'06	
	9088 Jan 03 07:59	0°♑	
	9088 Feb 20 02:00	0°♒	
desc. node	9088 Feb 28 14:55	5°♒17'40	
	9088 Apr 09 00:07	0°♓	
	9088 May 30 00:43	0°♈	
	9088 Jul 27 02:42	0°♉	
retrograde	9088 Sep 21 14:02	14°♉53'08	
opposition	9088 Oct 24 06:21	8°♉44'51	-5°34'44
greatest brilliancy	9088 Oct 26 00:42	8°♉10'53	-2.5m
min. Earth dist.	9088 Nov 01 16:41	6°♉04'08	0.43867 AU
direct	9088 Nov 28 16:00	1°♉19'28	
asc. node	9089 Feb 08 07:10	28°♉15'19	
	9089 Feb 11 02:53	0°♊	
	9089 Mar 27 10:32	0°♋	
	9089 May 07 21:02	0°♌	
	9089 Jun 18 08:48	0°♍	
	9089 Jul 31 01:46	0°♎	
	9089 Sep 13 09:45	0°♏	
	9089 Oct 29 06:25	0°♐	
evening set	9089 Nov 03 15:25	3°♐27'55	
	9089 Dec 15 03:47	0°♑	
conjunction	9089 Dec 19 21:23	3°♑00'27	0°13'52
minimum elong	9089 Dec 19 21:50	3°♑01'09	0°14'09
behind sun begin	9089 Dec 19 13:10	2°♑47'25	
behind sun end	9089 Dec 20 06:29	3°♑14'54	
max. Earth dist.	9089 Dec 22 15:46	4°♑45'50	2.67870 AU
desc. node	9090 Jan 15 10:54	19°♑51'50	
	9090 Jan 31 10:20	0°♒	
morning rise	9090 Feb 01 19:13	0°♒52'12	
	9090 Mar 19 13:04	0°♓	
	9090 May 05 05:54	0°♈	
	9090 Jun 20 14:56	0°♉	
	9090 Aug 06 04:23	0°♊	
	9090 Sep 23 22:43	0°♋	
retrograde	9090 Dec 11 07:03	29°♋05'13	
asc. node	9090 Dec 27 07:16	27°♋23'48	
min. Earth dist.	9091 Jan 08 00:10	24°♋34'02	0.36778 AU
opposition	9091 Jan 10 14:33	23°♋52'06	1°06'34
greatest brilliancy	9091 Jan 10 10:54	23°♋54'33	-3.1m
direct	9091 Feb 08 20:11	18°♋59'05	
	9091 Mar 24 23:23	0°♌	
	9091 May 19 09:36	0°♍	
	9091 Jul 06 17:27	0°♎	
	9091 Aug 23 06:23	0°♏	
	9091 Oct 10 01:03	0°♐	
	9091 Nov 26 22:11	0°♑	
desc. node	9091 Dec 03 09:38	4°♑04'13	
evening set	9091 Dec 10 17:17	8°♑40'39	
	9092 Jan 13 08:42	0°♒	
max. Earth dist.	9092 Jan 13 21:08	0°♒19'50	2.67006 AU
conjunction	9092 Jan 24 04:18	6°♒55'12	-0°26'36
minimum elong	9092 Jan 24 03:33	6°♒53'59	0°26'22
	9092 Feb 28 19:02	0°♓	
morning rise	9092 Mar 08 02:17	5°♓27'22	
	9092 Apr 13 20:24	0°♈	
	9092 May 27 10:16	0°♉	
	9092 Jul 08 14:37	0°♊	
	9092 Aug 18 17:51	0°♋	
	9092 Sep 28 15:05	0°♌	
	9092 Nov 10 03:32	0°♍	
asc. node	9092 Nov 13 06:39	2°♍05'39	
	9092 Dec 31 03:00	0°♎	
retrograde	9093 Feb 11 19:49	11°♎13'33	
min. Earth dist.	9093 Mar 12 01:59	5°♎40'11	0.47637 AU
greatest brilliancy	9093 Mar 18 21:20	3°♎14'31	-2.3m
opposition	9093 Mar 20 12:39	2°♎39'08	5°33'40
	9093 Mar 28 06:31	30°℞♍	
direct	9093 Apr 22 22:24	25°♍40'55	
	9093 May 20 09:12	0°♎	
	9093 Jul 26 15:41	0°♏	
	9093 Sep 17 17:08	0°♐	
desc. node	9093 Oct 20 10:54	19°♐27'02	
	9093 Nov 06 20:47	0°♑	
	9093 Dec 25 03:52	0°♒	
evening set	9094 Jan 14 17:11	13°♒08'11	
max. Earth dist.	9094 Feb 06 06:50	27°♒51'13	2.60718 AU
	9094 Feb 09 12:51	0°♓	
conjunction	9094 Mar 01 10:26	13°♓17'56	-0°58'52
minimum elong	9094 Mar 01 09:21	13°♓16'06	0°58'46
	9094 Mar 25 20:25	0°♈	
morning rise	9094 Apr 18 06:43	16°♈26'26	
	9094 May 07 04:17	0°♉	
	9094 Jun 16 18:58	0°♊	
	9094 Jul 26 04:18	0°♋	
	9094 Sep 03 01:11	0°♌	
asc. node	9094 Oct 01 03:15	21°♌30'46	
	9094 Oct 12 09:04	0°♍	

	9094 Nov 22	14:48	0°♎		
	9095 Jan 07	17:31	0°♏		
retrograde	9095 Mar 26	21:46	28°♏36'16		
min. Earth dist.	9095 Apr 30	04:06	20°♏51'38	0.60169 AU	
opposition	9095 May 05	15:03	18°♏42'23	4°03'46	
greatest brilliancy	9095 May 04	20:50	19°♏00'23	-1.6m	
direct	9095 Jun 12	05:45	10°♏02'53		
	9095 Aug 20	05:33	0°♐		
desc. node	9095 Sep 07	12:36	8°♐55'42		
	9095 Oct 16	11:55	0°♑		
	9095 Dec 06	01:14	0°♒		
	9096 Jan 22	01:12	0°♓		
evening set	9096 Feb 23	13:18	21°♓55'19		
	9096 Mar 06	04:16	0°♈		
max. Earth dist.	9096 Mar 08	17:38	1°♈47'36	2.49530 AU	
conjunction	9096 Apr 15	00:35	28°♈37'49	-1°04'58	
minimum elong	9096 Apr 15	01:37	28°♈39'42	1°05'04	
	9096 Apr 16	21:11	0°♉		
	9096 May 26	16:41	0°♊		
morning rise	9096 Jun 13	14:06	13°♊49'21		
	9096 Jul 04	07:06	0°♋		
	9096 Aug 11	11:23	0°♌		
asc. node	9096 Aug 17	22:27	5°♌03'46		
	9096 Sep 19	02:32	0°♍		
	9096 Oct 29	03:50	0°♎		
	9096 Dec 10	19:25	0°♏		
	9097 Jan 27	05:15	0°♐		
	9097 Apr 01	02:13	0°♑		
retrograde	9097 Apr 30	09:22	4°♑47'33		
	9097 May 27	10:17	30°℞♐		
min. Earth dist.	9097 Jun 08	05:43	25°♐33'46	0.67139 AU	
opposition	9097 Jun 09	22:24	24°♐53'13	1°33'46	
greatest brilliancy	9097 Jun 09	20:25	24°♐55'11	-1.3m	
direct	9097 Jul 20	05:26	15°♐19'02		
desc. node	9097 Jul 25	13:51	15°♐29'12		
	9097 Sep 15	19:37	0°♑		
	9097 Nov 13	10:01	0°♒		
	9098 Jan 01	11:33	0°♓		
	9098 Feb 15	01:52	0°♈		
	9098 Mar 28	14:59	0°♉		
evening set	9098 Apr 14	20:36	12°♉57'19		
	9098 May 07	01:19	0°♊		
max. Earth dist.	9098 May 27	20:55	16°♊16'00	2.36861 AU	
	9098 Jun 14	06:31	0°♋		
conjunction	9098 Jun 18	21:40	3°♋39'58	-0°12'17	
minimum elong	9098 Jun 18	23:00	3°♋42'36	0°12'31	
behind sun begin	9098 Jun 18	03:43	3°♋04'26		
behind sun end	9098 Jun 19	18:16	4°♋20'45		
asc. node	9098 Jul 05	20:53	17°♋06'38		
	9098 Jul 22	04:16	0°♌		
	9098 Aug 29	15:47	0°♍		
morning rise	9098 Aug 31	06:53	1°♍15'04		
	9098 Oct 08	12:58	0°♎		
	9098 Nov 19	13:39	0°♏		
	9099 Jan 03	12:39	0°♐		
	9099 Feb 22	00:15	0°♑		
	9099 Apr 25	19:58	0°♒		
retrograde	9099 Jun 03	15:10	7°♒35'12		
desc. node	9099 Jun 12	13:35	7°♒05'05		
	9099 Jul 08	23:17	30°℞♑		
opposition	9099 Jul 13	16:00	28°♑10'15	-1°04'09	
greatest brilliancy	9099 Jul 13	17:26	28°♑08'51	-1.3m	
min. Earth dist.	9099 Jul 15	18:20	27°♑20'42	0.67586 AU	
direct	9099 Aug 24	04:33	18°♑09'35		
	9099 Oct 13	00:12	0°♒		
	9099 Dec 09	21:31	0°♓		
	9100 Jan 25	12:13	0°♈		
	9100 Mar 08	13:35	0°♉		
	9100 Apr 17	00:51	0°♊		
asc. node	9100 May 23	20:40	28°♊56'18		
	9100 May 25	04:51	0°♋		
evening set	9100 Jun 25	09:39	24°♋41'46		
	9100 Jul 02	03:16	0°♌		
	9100 Aug 09	18:30	0°♍		
conjunction	9100 Sep 02	10:53	17°♍52'31	0°58'41	
minimum elong	9100 Sep 02	08:28	17°♍47'59	0°58'36	
	9100 Sep 18	21:12	0°♎		
max. Earth dist.	9100 Oct 18	10:48	21°♎12'57	2.47957 AU	
	9100 Oct 31	00:28	0°♏		
morning rise	9100 Nov 02	04:38	1°♏30'19		
	9100 Dec 14	11:57	0°♐		
	9101 Jan 30	14:32	0°♑		
	9101 Mar 22	08:51	0°♒		
desc. node	9101 Apr 30	10:25	20°♒28'50		
	9101 May 21	21:26	0°♓		
retrograde	9101 Jul 11	15:01	11°♓54'03		
opposition	9101 Aug 18	19:37	3°♓21'57	-3°39'57	
greatest brilliancy	9101 Aug 19	12:30	3°♓05'49	-1.5m	
min. Earth dist.	9101 Aug 24	15:28	1°♓08'21	0.61444 AU	
	9101 Aug 27	16:48	30°℞♒		
direct	9101 Sep 28	21:53	23°♒26'57		
	9101 Nov 02	04:36	0°♓		
	9101 Dec 31	12:03	0°♈		