conjunction	13100 Mar 17 11:40	4°♈18'18	-0°53'51
minimum elong	13100 Mar 17 10:33	4°♈16'31	0°53'49
	13100 Apr 26 19:07	0°♉	
morning rise	13100 Apr 29 15:16	1°♉49'21	
	13100 Jun 12 02:48	0°♊	
	13100 Jul 27 10:02	0°♋	
	13100 Sep 09 15:32	0°♌	
	13100 Oct 23 00:13	0°♍	
	13100 Dec 05 08:14	0°♎	
asc. node	13100 Dec 07 11:32	1°♎27'20	
	13101 Jan 20 18:46	0°♏	
retrograde	13101 Mar 27 07:31	23°♏38'40	
min. Earth dist.	13101 Apr 22 07:51	19°♏08'07	0.40726 AU
greatest brilliancy	13101 Apr 28 04:50	17°♏17'52	-2.7m
opposition	13101 Apr 29 20:45	16°♏46'22	6°32'34
direct	13101 May 30 12:54	11°♏03'34	
	13101 Aug 01 12:20	0°♐	
	13101 Sep 25 12:43	0°♑	
desc. node	13101 Oct 13 18:37	10°♑42'46	
	13101 Nov 14 23:50	0°♒	
	13102 Jan 03 05:30	0°♓	
	13102 Feb 20 13:31	0°♈	
evening set	13102 Mar 08 13:15	10°♈04'50	
max. Earth dist.	13102 Apr 05 20:21	28°♈10'12	2.64829 AU
	13102 Apr 08 16:19	0°♉	
conjunction	13102 Apr 21 18:05	8°♉30'00	-1°10'19
minimum elong	13102 Apr 21 17:49	8°♉29'33	1°10'52
	13102 May 24 05:21	0°♊	
morning rise	13102 Jun 05 23:08	8°♊36'08	
	13102 Jul 07 00:27	0°♋	
	13102 Aug 18 02:12	0°♌	
	13102 Sep 27 16:25	0°♍	
asc. node	13102 Oct 25 05:55	20°♍49'36	
	13102 Nov 06 07:12	0°♎	
	13102 Dec 15 20:34	0°♏	
	13103 Jan 25 23:07	0°♐	
	13103 Mar 13 13:08	0°♑	
retrograde	13103 May 17 13:25	22°♑12'44	
min. Earth dist.	13103 Jun 17 23:56	15°♑29'08	0.54315 AU
opposition	13103 Jun 25 06:22	12°♑42'51	2°55'19
greatest brilliancy	13103 Jun 24 12:41	12°♑59'45	-1.9m
direct	13103 Jul 31 02:43	4°♑46'43	
desc. node	13103 Sep 01 04:35	10°♑16'00	
	13103 Oct 18 08:16	0°♒	
	13103 Dec 12 22:28	0°♓	
	13104 Feb 01 13:42	0°♈	
	13104 Mar 20 09:33	0°♉	
evening set	13104 Apr 13 06:31	15°♉35'24	
max. Earth dist.	13104 May 01 02:06	27°♉30'40	2.55992 AU
	13104 May 04 18:17	0°♊	
conjunction	13104 May 30 23:20	18°♊04'44	-0°58'15
minimum elong	13104 May 31 00:50	18°♊07'22	0°59'12
	13104 Jun 16 19:44	0°♋	
morning rise	13104 Jul 22 20:59	26°♋17'22	
	13104 Jul 27 20:29	0°♌	
	13104 Sep 05 07:37	0°♍	
asc. node	13104 Sep 10 18:06	4°♍12'11	
	13104 Oct 13 20:16	0°♎	
	13104 Nov 21 06:18	0°♏	
	13104 Dec 30 14:17	0°♐	
	13105 Feb 10 04:43	0°♑	
	13105 Mar 28 15:16	0°♒	
	13105 Jun 03 14:06	0°♓	
retrograde	13105 Jun 23 16:51	2°♓26'34	
	13105 Jul 12 15:27	30°℞♒	
desc. node	13105 Jul 19 12:47	27°♒58'08	
min. Earth dist.	13105 Jul 30 11:20	23°♒55'49	0.64537 AU
opposition	13105 Aug 03 05:12	22°♒26'41	-0°33'55
greatest brilliancy	13105 Aug 03 03:03	22°♒28'49	-1.5m
direct	13105 Sep 11 12:00	13°♒15'52	
	13105 Nov 12 22:30	0°♓	
	13106 Jan 10 05:24	0°♈	
	13106 Mar 01 04:17	0°♉	
	13106 Apr 16 00:36	0°♊	
evening set	13106 May 27 05:30	28°♊49'54	
	13106 May 28 20:21	0°♋	
max. Earth dist.	13106 Jun 10 16:00	9°♋20'12	2.42917 AU
	13106 Jul 08 08:01	0°♌	
conjunction	13106 Jul 24 04:53	12°♌07'55	-0°03'40
minimum elong	13106 Jul 24 05:14	12°♌08'36	0°04'28
behind sun begin	13106 Jul 23 03:12	11°♌18'30	
behind sun end	13106 Jul 25 07:16	12°♌58'45	
asc. node	13106 Jul 29 07:56	16°♌05'25	
	13106 Aug 16 04:44	0°♍	
	13106 Sep 23 05:26	0°♎	
morning rise	13106 Oct 02 06:43	7°♎09'56	
	13106 Oct 31 06:51	0°♏	
	13106 Dec 09 06:31	0°♐	
	13107 Jan 19 02:13	0°♑	
	13107 Mar 03 19:06	0°♒	
	13107 Apr 21 07:27	0°♓	
desc. node	13107 Jun 06 14:04	23°♓28'01	
	13107 Jun 23 22:58	0°♈	
retrograde	13107 Jul 27 20:31	6°♈02'52	
	13107 Aug 27 22:20	30°℞♓	
opposition	13107 Sep 06 12:23	26°♓19'17	-3°02'48
greatest brilliancy	13107 Sep 06 11:08	26°♓20'31	-1.3m
min. Earth dist.	13107 Sep 06 13:37	26°♓18'03	0.68492 AU
direct	13107 Oct 17 16:39	16°♓29'12	
	13107 Dec 11 04:24	0°♈	
	13108 Feb 07 07:31	0°♉	
	13108 Mar 26 02:20	0°♊	
	13108 May 08 07:56	0°♋	
asc. node	13108 Jun 15 04:16	28°♋04'52	
	13108 Jun 17 16:43	0°♌	
	13108 Jul 26 07:24	0°♍	
evening set	13108 Jul 27 10:05	0°♍52'35	
	13108 Sep 02 03:39	0°♎	
conjunction	13108 Oct 07 23:30	28°♎17'03	1°03'09
minimum elong	13108 Oct 07 21:06	28°♎12'23	1°03'31
	13108 Oct 10 04:10	0°♏	
	13108 Nov 18 05:49	0°♐	
max. Earth dist.	13108 Nov 30 20:15	9°♐25'08	2.40706 AU
morning rise	13108 Dec 15 17:33	20°♐21'35	
	13108 Dec 29 02:07	0°♑	
	13109 Feb 10 07:08	0°♒	
	13109 Mar 28 10:42	0°♓	
desc. node	13109 Apr 23 05:43	15°♓45'38	
	13109 May 17 21:40	0°♈	
	13109 Jul 19 13:04	0°♉	
retrograde	13109 Aug 31 05:00	8°♉49'22	
opposition	13109 Oct 09 16:59	29°♈44'59	-4°37'28
	13109 Oct 09 01:31	30°℞♈	
greatest brilliancy	13109 Oct 10 06:56	29°♈31'26	-1.3m
min. Earth dist.	13109 Oct 13 15:14	28°♈13'23	0.65709 AU
direct	13109 Nov 20 06:55	19°♈42'09	

	13110 Jan 04 08:59	0°♉		
	13110 Mar 02 17:21	0°♊		
	13110 Apr 17 01:16	0°♋		
asc. node	13110 May 03 06:52	11°♋37'24		
	13110 May 28 00:12	0°♌		
	13110 Jul 05 19:12	0°♍		
	13110 Aug 12 19:01	0°♎		
	13110 Sep 20 01:52	0°♏		
evening set	13110 Oct 12 08:55	17°♏05'35		
	13110 Oct 29 12:59	0°♐		
	13110 Dec 09 19:25	0°♑		
conjunction	13110 Dec 13 04:02	2°♑22'38	0°46'26	
minimum elong	13110 Dec 13 06:05	2°♑26'16	0°47'25	
max. Earth dist.	13111 Jan 16 06:46	25°♑59'05	2.54547 AU	
	13111 Jan 22 05:20	0°♒		
morning rise	13111 Feb 04 12:44	8°♒54'07		
	13111 Mar 08 20:28	0°♓		
desc. node	13111 Mar 10 16:17	1°♓10'14		
	13111 Apr 25 18:35	0°♈		
	13111 Jun 15 17:56	0°♉		
	13111 Aug 13 09:23	0°♊		
retrograde	13111 Oct 12 08:23	15°♊47'26		
opposition	13111 Nov 18 02:59	7°♊51'19	-4°54'39	
greatest brilliancy	13111 Nov 19 11:28	7°♊21'07	-1.8m	
min. Earth dist.	13111 Nov 25 16:14	5°♊03'12	0.56252 AU	
	13111 Dec 12 12:29	30°℞♉		
direct	13111 Dec 28 02:39	28°♉19'52		
	13112 Jan 13 04:59	0°♊		
	13112 Mar 19 18:54	0°♋		
asc. node	13112 Mar 20 14:36	0°♋30'31		
	13112 May 03 02:36	0°♌		
	13112 Jun 12 04:44	0°♍		
	13112 Jul 21 00:10	0°♎		
	13112 Aug 29 01:36	0°♏		
	13112 Oct 08 08:51	0°♐		
	13112 Nov 19 11:25	0°♑		
evening set	13112 Dec 07 15:24	12°♑31'24		
	13113 Jan 02 13:15	0°♒		
desc. node	13113 Jan 25 05:44	14°♒58'40		
conjunction	13113 Jan 26 21:48	16°♒04'09	-0°00'56	
minimum elong	13113 Jan 26 21:50	16°♒04'12	0°00'10	
behind sun begin	13113 Jan 26 02:08	15°♒32'02		
behind sun end	13113 Jan 27 17:32	16°♒36'20		
max. Earth dist.	13113 Feb 11 16:46	26°♒19'45	2.64126 AU	
	13113 Feb 17 09:18	0°♓		
morning rise	13113 Mar 13 21:20	15°♓39'59		
	13113 Apr 05 13:56	0°♈		
	13113 May 23 19:35	0°♉		
	13113 Jul 12 06:37	0°♊		
	13113 Sep 02 10:50	0°♋		
	13113 Nov 06 09:43	0°♌		
retrograde	13113 Dec 09 07:30	5°♌51'34		
opposition	13114 Jan 10 10:04	29°♋55'17	-1°45'44	
	13114 Jan 10 04:04	30°℞♋		
greatest brilliancy	13114 Jan 11 01:41	29°♋43'02	-2.6m	
min. Earth dist.	13114 Jan 18 12:01	27°♋24'02	0.42316 AU	
asc. node	13114 Feb 05 23:48	23°♋15'34		
direct	13114 Feb 14 00:51	22°♋47'35		
	13114 Mar 19 11:25	0°♌		
	13114 May 12 07:04	0°♍		
	13114 Jun 24 09:26	0°♎		
	13114 Aug 05 01:42	0°♏		
	13114 Sep 16 10:09	0°♐		
	13114 Oct 30 05:14	0°♑		
desc. node	13114 Dec 13 01:01	29°♑00'02		
	13114 Dec 14 13:50	0°♒		
evening set	13115 Jan 18 16:47	22°♒40'17		
	13115 Jan 30 03:54	0°♓		
conjunction	13115 Mar 04 22:40	21°♓28'36	-0°41'58	
minimum elong	13115 Mar 04 21:34	21°♓26'52	0°41'43	
max. Earth dist.	13115 Mar 06 13:03	22°♓29'26	2.68258 AU	
	13115 Mar 18 09:22	0°♈		
morning rise	13115 Apr 17 05:44	18°♈55'53		
	13115 May 04 15:29	0°♉		
	13115 Jun 20 12:08	0°♊		
	13115 Aug 05 19:43	0°♋		
	13115 Sep 20 16:42	0°♌		
	13115 Nov 05 18:35	0°♍		
	13115 Dec 24 22:02	0°♎		
asc. node	13115 Dec 25 04:08	0°♎08'30		
retrograde	13116 Feb 29 02:56	22°♎48'26		
min. Earth dist.	13116 Mar 26 17:19	18°♎29'30	0.37103 AU	
opposition	13116 Mar 30 17:10	17°♎23'50	6°12'41	
greatest brilliancy	13116 Mar 29 19:02	17°♎39'03	-3.0m	
direct	13116 Apr 28 21:37	12°♎28'28		
	13116 Jun 26 04:53	0°♏		
	13116 Aug 18 09:22	0°♐		
	13116 Oct 06 03:20	0°♑		
desc. node	13116 Oct 30 04:20	14°♑57'56		
	13116 Nov 23 07:42	0°♒		
	13117 Jan 10 11:50	0°♓		
evening set	13117 Feb 22 20:38	27°♓09'24		
	13117 Feb 27 08:52	0°♈		
max. Earth dist.	13117 Mar 27 17:51	18°♈00'30	2.66870 AU	
conjunction	13117 Apr 07 18:08	25°♈03'54	-1°06'42	
minimum elong	13117 Apr 07 17:23	25°♈02'41	1°07'03	
	13117 Apr 15 10:03	0°♉		
morning rise	13117 May 21 16:30	23°♉41'20		
	13117 May 31 04:41	0°♊		
	13117 Jul 14 11:09	0°♋		
	13117 Aug 26 04:25	0°♌		
	13117 Oct 06 12:46	0°♍		
asc. node	13117 Nov 11 00:08	26°♍17'07		
	13117 Nov 15 23:54	0°♎		
	13117 Dec 26 16:15	0°♏		
	13118 Feb 08 03:27	0°♐		
	13118 Apr 10 01:36	0°♑		
retrograde	13118 Apr 29 22:27	2°♑43'01		
	13118 May 19 04:05	30°℞♐		
min. Earth dist.	13118 May 28 22:12	26°♐53'28	0.49009 AU	
greatest brilliancy	13118 Jun 04 21:47	24°♐21'28	-2.2m	
opposition	13118 Jun 06 03:59	23°♐53'54	4°30'50	
direct	13118 Jul 10 04:03	16°♐42'41		
	13118 Aug 31 15:17	0°♑		
desc. node	13118 Sep 17 14:16	7°♑42'11		
	13118 Oct 30 05:32	0°♒		
	13118 Dec 21 07:50	0°♓		
	13119 Feb 08 19:43	0°♈		
	13119 Mar 28 06:54	0°♉		
evening set	13119 Mar 30 11:36	1°♉25'11		
max. Earth dist.	13119 Apr 21 01:44	15°♉32'44	2.60070 AU	
	13119 May 12 16:18	0°♊		
conjunction	13119 May 15 05:48	1°♊44'11	-1°07'12	
minimum elong	13119 May 15 06:35	1°♊45'30	1°08'03	
	13119 Jun 24 23:39	0°♋		
morning rise	13119 Jul 03 03:48	5°♋49'22		
	13119 Aug 05 08:44	0°♌		
	13119 Sep 14 04:29	0°♍		
asc. node	13119 Sep 28 15:31	11°♍06'34		

	13119 Oct 23 00:46	0°♎		
	13119 Nov 30 17:27	0°♏		
	13120 Jan 09 10:06	0°♐		
	13120 Feb 20 21:19	0°♑		
	13120 Apr 10 19:04	0°♒		
retrograde	13120 Jun 09 17:11	18°♒13'49		
min. Earth dist.	13120 Jul 14 13:51	10°♒19'50	0.61236 AU	
opposition	13120 Jul 19 18:23	8°♒17'06	0°39'26	
greatest brilliancy	13120 Jul 19 15:29	8°♒19'58	-1.6m	
desc. node	13120 Aug 04 23:45	2°♒36'00		
	13120 Aug 18 01:38	30°℞♑		
direct	13120 Aug 26 21:22	29°♑30'03		
	13120 Sep 05 01:54	0°♒		
	13120 Nov 25 16:29	0°♓		
	13121 Jan 18 15:38	0°♈		
	13121 Mar 08 12:52	0°♉		
	13121 Apr 23 03:00	0°♊		
evening set	13121 May 08 16:13	10°♊40'35		
max. Earth dist.	13121 May 22 10:46	20°♊19'30	2.48404 AU	
	13121 Jun 05 00:21	0°♋		
conjunction	13121 Jun 30 10:45	18°♋35'29	-0°30'36	
minimum elong	13121 Jun 30 12:35	18°♋38'53	0°31'34	
	13121 Jul 15 16:35	0°♌		
asc. node	13121 Aug 15 04:22	23°♌20'02		
	13121 Aug 23 18:14	0°♍		
morning rise	13121 Aug 31 23:43	6°♍25'35		
	13121 Sep 30 22:43	0°♎		
greatest brilliancy	13121 Oct 25 01:47	19°♎01'04	1.2m	
	13121 Nov 08 02:06	0°♏		
	13121 Dec 17 02:45	0°♐		
	13122 Jan 27 01:26	0°♑		
	13122 Mar 12 07:19	0°♒		
	13122 May 02 05:11	0°♓		
desc. node	13122 Jun 23 03:35	20°♓53'14		
retrograde	13122 Jul 14 17:10	23°♓33'20		
min. Earth dist.	13122 Aug 23 00:28	14°♓14'41	0.67730 AU	
opposition	13122 Aug 24 11:15	13°♓40'10	-2°11'50	
greatest brilliancy	13122 Aug 24 07:23	13°♓44'01	-1.3m	
direct	13122 Oct 04 01:44	4°♓02'17		
	13122 Dec 24 15:34	0°♈		
	13123 Feb 16 00:09	0°♉		
	13123 Apr 03 18:45	0°♊		
	13123 May 16 18:45	0°♋		
	13123 Jun 26 03:53	0°♌		
evening set	13123 Jul 01 02:39	3°♌46'46		
asc. node	13123 Jul 02 20:21	5°♌06'38		
	13123 Aug 03 20:24	0°♍		
conjunction	13123 Sep 07 09:13	27°♍19'54	0°44'06	
minimum elong	13123 Sep 07 05:14	27°♍11'58	0°43'54	
	13123 Sep 10 17:55	0°♎		
max. Earth dist.	13123 Sep 16 04:50	4°♎19'43	2.36293 AU	
	13123 Oct 18 18:01	0°♏		
morning rise	13123 Nov 20 05:54	25°♏04'59		
	13123 Nov 26 17:43	0°♐		
	13124 Jan 06 11:58	0°♑		
	13124 Feb 18 17:59	0°♒		
	13124 Apr 05 10:03	0°♓		
desc. node	13124 May 09 23:40	20°♓16'08		
	13124 May 28 03:34	0°♈		
retrograde	13124 Aug 17 00:26	26°♈05'17		
opposition	13124 Sep 26 03:03	16°♈42'49	-4°07'44	
greatest brilliancy	13124 Sep 26 09:54	16°♈36'05	-1.3m	
min. Earth dist.	13124 Sep 28 12:40	15°♈46'18	0.67605 AU	
direct	13124 Nov 06 17:38	6°♈41'21		
	13125 Jan 19 20:23	0°♉		

	13125 Mar 12 05:31	0°♊		
	13125 Apr 25 09:45	0°♋		
asc. node	13125 May 19 20:27	17°♋49'38		
	13125 Jun 05 00:27	0°♌		
	13125 Jul 13 16:17	0°♍		
greatest brilliancy	13125 Aug 12 07:44	23°♍27'45	1.2m	
	13125 Aug 20 13:38	0°♎		
evening set	13125 Sep 13 11:11	18°♎52'05		
	13125 Sep 27 16:55	0°♏		
	13125 Nov 05 23:11	0°♐		
conjunction	13125 Nov 20 12:13	10°♐47'54	1°00'44	
minimum elong	13125 Nov 20 14:10	10°♐51'29	1°01'39	
	13125 Dec 17 00:25	0°♑		
max. Earth dist.	13126 Jan 02 11:15	11°♑36'07	2.49484 AU	
morning rise	13126 Jan 17 21:31	22°♑15'54		
	13126 Jan 29 06:36	0°♒		
	13126 Mar 15 23:25	0°♓		
desc. node	13126 Mar 27 12:25	7°♓18'50		
	13126 May 03 12:25	0°♈		
	13126 Jun 25 18:22	0°♉		
	13126 Sep 13 15:05	0°♊		
retrograde	13126 Sep 24 15:34	0°♊41'40		
	13126 Oct 05 05:53	30°℞♉		
opposition	13126 Nov 01 17:01	22°♉14'03	-5°01'16	
greatest brilliancy	13126 Nov 02 19:04	21°♉49'15	-1.6m	
min. Earth dist.	13126 Nov 07 22:14	19°♉52'04	0.60715 AU	
direct	13126 Dec 12 14:53	12°♉22'07		
	13127 Feb 10 04:56	0°♊		
	13127 Apr 01 13:12	0°♋		
asc. node	13127 Apr 07 03:42	3°♋46'50		
	13127 May 13 20:34	0°♌		
	13127 Jun 22 04:46	0°♍		
	13127 Jul 30 13:18	0°♎		
	13127 Sep 07 04:53	0°♏		
	13127 Oct 17 01:55	0°♐		
evening set	13127 Nov 18 21:16	23°♐43'25		
	13127 Nov 27 18:39	0°♑		
	13128 Jan 10 12:25	0°♒		
conjunction	13128 Jan 11 15:26	0°♒45'15	0°17'37	
minimum elong	13128 Jan 11 16:14	0°♒46'35	0°18'32	
max. Earth dist.	13128 Feb 02 20:14	15°♒28'04	2.61012 AU	
desc. node	13128 Feb 11 22:56	21°♒25'24		
	13128 Feb 25 04:42	0°♓		
morning rise	13128 Feb 28 18:16	2°♓17'41		
	13128 Apr 12 13:05	0°♈		
	13128 May 31 12:14	0°♉		
	13128 Jul 21 23:41	0°♊		
	13128 Sep 19 04:30	0°♋		
retrograde	13128 Nov 13 08:24	14°♋02'15		
opposition	13128 Dec 17 11:37	7°♋11'52	-3°41'13	
greatest brilliancy	13128 Dec 18 19:01	6°♋44'45	-2.2m	
min. Earth dist.	13128 Dec 26 05:13	4°♋12'03	0.47876 AU	
	13129 Jan 10 22:13	30°℞♊		
direct	13129 Jan 23 19:28	28°♊48'27		
	13129 Feb 05 23:43	0°♋		
asc. node	13129 Feb 22 11:58	4°♋26'54		
	13129 Apr 12 17:49	0°♌		
	13129 May 26 05:10	0°♍		
	13129 Jul 05 14:43	0°♎		
	13129 Aug 14 19:12	0°♏		
	13129 Sep 25 01:35	0°♐		
	13129 Nov 07 00:26	0°♑		
	13129 Dec 21 18:00	0°♒		
desc. node	13129 Dec 29 15:47	5°♒11'34		
evening set	13130 Jan 03 09:44	8°♒17'51		

	13130 Feb 05 23:02	0°♓	
conjunction	13130 Feb 19 01:46	8°♓23'22	-0°27'39
minimum elong	13130 Feb 19 00:55	8°♓22'00	0°27'11
max. Earth dist.	13130 Feb 26 01:05	12°♓49'57	2.67306 AU
	13130 Mar 25 02:22	0°♈	
morning rise	13130 Apr 03 23:49	6°♈15'25	
	13130 May 11 14:55	0°♉	
	13130 Jun 28 05:36	0°♊	
	13130 Aug 15 00:24	0°♋	
	13130 Oct 02 16:49	0°♌	
	13130 Nov 24 13:34	0°♍	
asc. node	13131 Jan 10 19:14	18°♍20'48	
retrograde	13131 Jan 27 19:42	20°♍10'56	
opposition	13131 Feb 26 10:43	15°♍18'29	3°30'47
greatest brilliancy	13131 Feb 26 13:53	15°♍16'22	-3.0m
min. Earth dist.	13131 Feb 28 05:50	14°♍49'41	0.36627 AU
direct	13131 Mar 28 08:23	10°♍14'10	
	13131 May 27 20:44	0°♎	
	13131 Jul 16 10:56	0°♏	
	13131 Aug 31 09:56	0°♐	
	13131 Oct 16 09:25	0°♑	
desc. node	13131 Nov 16 15:53	20°♑07'29	
	13131 Dec 02 03:19	0°♒	
	13132 Jan 18 12:59	0°♓	
evening set	13132 Feb 10 02:52	14°♓13'59	
	13132 Mar 06 02:02	0°♈	
max. Earth dist.	13132 Mar 18 23:22	8°♈10'17	2.68081 AU
conjunction	13132 Mar 25 04:08	12°♈06'37	-0°59'31
minimum elong	13132 Mar 25 03:05	12°♈04'57	0°59'38
	13132 Apr 22 03:38	0°♉	
morning rise	13132 May 07 10:36	9°♉51'58	
	13132 Jun 07 06:28	0°♊	
	13132 Jul 22 04:10	0°♋	
	13132 Sep 03 19:05	0°♌	
	13132 Oct 16 06:42	0°♍	
asc. node	13132 Nov 27 19:46	0°♎25'58	
	13132 Nov 27 05:12	0°♎	
	13133 Jan 09 08:52	0°♏	
	13133 Mar 02 08:37	0°♐	
retrograde	13133 Apr 09 12:30	9°♐22'10	
min. Earth dist.	13133 May 06 05:53	4°♐28'16	0.43483 AU
greatest brilliancy	13133 May 12 21:52	2°♐15'02	-2.5m
opposition	13133 May 14 13:55	1°♐41'26	5°59'49
	13133 May 19 18:46	30°℞♏	
direct	13133 Jun 15 09:30	25°♏26'08	
	13133 Jul 13 12:45	0°♐	
	13133 Sep 17 12:46	0°♑	
desc. node	13133 Oct 03 23:03	9°♑07'18	
	13133 Nov 09 01:24	0°♒	
	13133 Dec 29 03:01	0°♓	
	13134 Feb 15 19:55	0°♈	
evening set	13134 Mar 16 10:30	18°♈02'46	
	13134 Apr 04 01:30	0°♉	
max. Earth dist.	13134 Apr 11 06:12	4°♉39'55	2.63354 AU
conjunction	13134 Apr 30 00:29	16°♉58'04	-1°10'34
minimum elong	13134 Apr 30 00:33	16°♉58'11	1°11'15
	13134 May 19 13:22	0°♊	
morning rise	13134 Jun 15 06:21	18°♊12'49	
	13134 Jul 02 04:18	0°♋	
	13134 Aug 13 00:03	0°♌	
	13134 Sep 22 07:17	0°♍	
asc. node	13134 Oct 15 11:18	17°♍37'29	
	13134 Oct 31 14:45	0°♎	
	13134 Dec 09 18:47	0°♏	

	13135 Jan 19 04:17	0°♐	
	13135 Mar 04 11:51	0°♑	
	13135 May 07 02:36	0°♒	
retrograde	13135 May 26 17:06	2°♒29'55	
	13135 Jun 14 08:12	30°℞♑	
min. Earth dist.	13135 Jun 28 10:19	25°♑19'13	0.56979 AU
opposition	13135 Jul 04 23:45	22°♑46'36	2°03'00
greatest brilliancy	13135 Jul 04 12:23	22°♑57'38	-1.8m
direct	13135 Aug 10 16:41	14°♑30'14	
desc. node	13135 Aug 22 09:52	15°♑19'11	
	13135 Oct 08 13:53	0°♒	
	13135 Dec 06 20:46	0°♓	
	13136 Jan 27 11:24	0°♈	
	13136 Mar 15 15:37	0°♉	
evening set	13136 Apr 22 02:18	24°♉35'15	
	13136 Apr 30 02:35	0°♊	
max. Earth dist.	13136 May 08 02:27	5°♊27'19	2.53454 AU
conjunction	13136 Jun 10 06:23	28°♊40'24	-0°50'14
minimum elong	13136 Jun 10 08:13	28°♊43'40	0°51'12
	13136 Jun 12 02:55	0°♋	
	13136 Jul 23 00:51	0°♌	
morning rise	13136 Aug 05 02:10	9°♌51'00	
asc. node	13136 Aug 31 23:42	0°♍29'29	
	13136 Aug 31 08:29	0°♍	
	13136 Oct 08 17:58	0°♎	
	13136 Nov 16 00:59	0°♏	
	13136 Dec 25 05:00	0°♐	
	13137 Feb 04 11:08	0°♑	
	13137 Mar 21 18:16	0°♒	
	13137 May 17 06:34	0°♓	
retrograde	13137 Jul 01 11:01	10°♓37'13	
desc. node	13137 Jul 09 17:40	10°♓09'48	
min. Earth dist.	13137 Aug 08 04:02	1°♓48'21	0.65948 AU
opposition	13137 Aug 11 02:27	0°♓38'23	-1°12'34
greatest brilliancy	13137 Aug 10 22:40	0°♓42'08	-1.4m
	13137 Aug 12 17:10	30°℞♒	
direct	13137 Sep 19 21:36	21°♒16'51	
	13137 Nov 01 12:33	0°♓	
	13138 Jan 04 01:46	0°♈	
	13138 Feb 24 00:31	0°♉	
	13138 Apr 11 04:31	0°♊	
	13138 May 24 02:15	0°♋	
evening set	13138 Jun 07 20:20	10°♋45'31	
max. Earth dist.	13138 Jun 26 09:45	24°♋35'09	2.39980 AU
	13138 Jul 03 13:31	0°♌	
asc. node	13138 Jul 19 14:52	12°♌17'30	
conjunction	13138 Aug 08 07:59	27°♌37'09	0°14'01
minimum elong	13138 Aug 08 06:40	27°♌34'36	0°13'22
behind sun begin	13138 Aug 07 14:17	27°♌02'32	
behind sun end	13138 Aug 08 23:04	28°♌06'40	
	13138 Aug 11 08:54	0°♍	
	13138 Sep 18 08:19	0°♎	
morning rise	13138 Oct 20 11:58	25°♎24'08	
	13138 Oct 26 08:42	0°♏	
	13138 Dec 04 07:18	0°♐	
	13139 Jan 14 01:01	0°♑	
	13139 Feb 26 11:23	0°♒	
	13139 Apr 15 01:21	0°♓	
desc. node	13139 May 27 16:05	23°♓14'17	
	13139 Jun 11 08:46	0°♈	
retrograde	13139 Aug 04 11:26	13°♈38'51	
opposition	13139 Sep 13 23:32	4°♈01'54	-3°29'14
greatest brilliancy	13139 Sep 14 00:40	4°♈00'47	-1.3m
min. Earth dist.	13139 Sep 14 20:40	3°♈41'02	0.68455 AU
	13139 Sep 24 12:13	30°℞♓	

direct	13139 Oct 25 08:34	24°♓06'44	
	13139 Nov 28 05:09	0°♈	
	13140 Jan 31 22:58	0°♉	
	13140 Mar 20 18:10	0°♊	
	13140 May 03 07:10	0°♋	
asc. node	13140 Jun 05 10:53	24°♋27'19	
	13140 Jun 12 18:15	0°♌	
	13140 Jul 21 09:28	0°♍	
evening set	13140 Aug 13 09:29	18°♍12'09	
	13140 Aug 28 06:07	0°♎	
	13140 Oct 05 07:16	0°♏	
conjunction	13140 Oct 24 18:41	15°♏04'50	1°06'22
minimum elong	13140 Oct 24 18:22	15°♏04'14	1°07'00
	13140 Nov 13 09:42	0°♐	
max. Earth dist.	13140 Dec 15 03:24	23°♐25'42	2.43861 AU
	13140 Dec 24 06:38	0°♑	
morning rise	13140 Dec 28 15:31	3°♑07'01	
	13141 Feb 05 10:25	0°♒	
	13141 Mar 23 07:46	0°♓	
desc. node	13141 Apr 13 06:46	13°♓01'47	
	13141 May 11 20:21	0°♈	
	13141 Jul 08 08:11	0°♉	
retrograde	13141 Sep 08 17:06	16°♉50'13	
opposition	13141 Oct 17 18:18	7°♉57'32	-4°50'02
greatest brilliancy	13141 Oct 18 12:36	7°♉39'50	-1.4m
min. Earth dist.	13141 Oct 22 12:22	6°♉07'13	0.64205 AU
	13141 Nov 10 10:41	30°℞♈	
direct	13141 Nov 28 04:26	27°♈56'15	
	13141 Dec 16 20:56	0°♉	
	13142 Feb 23 18:09	0°♊	
	13142 Apr 11 07:20	0°♋	
asc. node	13142 Apr 23 15:39	8°♋41'38	
	13142 May 22 15:28	0°♌	
	13142 Jun 30 14:06	0°♍	
	13142 Aug 07 16:17	0°♎	
	13142 Sep 15 01:26	0°♏	
	13142 Oct 24 15:04	0°♐	
evening set	13142 Oct 27 00:37	1°♐46'41	
	13142 Dec 05 00:11	0°♑	
conjunction	13142 Dec 24 13:09	13°♑40'01	0°36'18
minimum elong	13142 Dec 24 14:50	13°♑42'55	0°37'17
	13143 Jan 17 11:43	0°♒	
max. Earth dist.	13143 Jan 23 02:01	3°♒45'24	2.57082 AU
morning rise	13143 Feb 13 16:43	18°♒03'55	
desc. node	13143 Feb 28 17:42	27°♒50'38	
	13143 Mar 04 01:58	0°♓	
	13143 Apr 20 17:03	0°♈	
	13143 Jun 09 18:12	0°♉	
	13143 Aug 03 17:26	0°♊	
retrograde	13143 Oct 23 09:06	25°♊36'49	
opposition	13143 Nov 28 06:55	18°♊01'13	-4°38'49
greatest brilliancy	13143 Nov 29 17:11	17°♊29'57	-1.9m
min. Earth dist.	13143 Dec 06 10:07	15°♊03'42	0.53447 AU
direct	13144 Jan 06 12:26	8°♊47'33	
	13144 Mar 10 10:30	0°♋	
asc. node	13144 Mar 11 01:42	0°♋21'18	
	13144 Apr 26 06:25	0°♌	
	13144 Jun 06 02:43	0°♍	
	13144 Jul 15 07:24	0°♎	
	13144 Aug 23 15:39	0°♏	
	13144 Oct 03 04:45	0°♐	
	13144 Nov 14 12:46	0°♑	
evening set	13144 Dec 17 20:56	22°♑42'59	
	13144 Dec 28 18:47	0°♒	
desc. node	13145 Jan 15 06:43	11°♒32'34	
conjunction	13145 Feb 04 14:55	24°♒46'56	-0°11'19
minimum elong	13145 Feb 04 14:32	24°♒46'19	0°10'38
behind sun begin	13145 Feb 03 23:51	24°♒22'36	
behind sun end	13145 Feb 05 05:13	25°♒10'01	
	13145 Feb 12 17:04	0°♓	
max. Earth dist.	13145 Feb 17 02:04	2°♓48'46	2.65511 AU
morning rise	13145 Mar 21 16:27	23°♓35'04	
	13145 Mar 31 20:13	0°♈	
	13145 May 18 18:19	0°♉	
	13145 Jul 06 10:01	0°♊	
	13145 Aug 25 12:18	0°♋	
	13145 Oct 19 09:03	0°♌	
retrograde	13145 Dec 26 03:10	20°♌39'26	
opposition	13146 Jan 25 23:18	15°♌13'24	-0°06'06
greatest brilliancy	13146 Jan 26 00:17	15°♌12'40	-2.8m
asc. node	13146 Jan 27 09:15	14°♌48'24	
min. Earth dist.	13146 Feb 01 15:59	13°♌15'39	0.39659 AU
direct	13146 Feb 27 20:42	8°♌54'40	
	13146 Apr 30 07:22	0°♍	
	13146 Jun 16 03:50	0°♎	
	13146 Jul 29 07:19	0°♏	
	13146 Sep 10 12:15	0°♐	
	13146 Oct 24 21:08	0°♑	
desc. node	13146 Dec 03 03:40	25°♑48'23	
	13146 Dec 09 14:56	0°♒	
	13147 Jan 25 10:40	0°♓	
evening set	13147 Jan 27 00:56	1°♓00'51	
conjunction	13147 Mar 12 17:19	29°♓20'45	-0°49'18
minimum elong	13147 Mar 12 16:11	29°♓18'57	0°49'10
max. Earth dist.	13147 Mar 11 12:25	28°♓35'00	2.68431 AU
	13147 Mar 13 18:06	0°♈	
morning rise	13147 Apr 24 20:40	26°♈45'57	
	13147 Apr 29 22:09	0°♉	
	13147 Jun 15 11:45	0°♊	
	13147 Jul 31 05:21	0°♋	
	13147 Sep 14 02:52	0°♌	
	13147 Oct 28 11:16	0°♍	
	13147 Dec 12 12:36	0°♎	
asc. node	13147 Dec 15 11:35	1°♎54'15	
	13148 Feb 02 14:34	0°♏	
retrograde	13148 Mar 16 01:01	11°♏07'58	
min. Earth dist.	13148 Apr 10 22:29	6°♏49'29	0.38805 AU
greatest brilliancy	13148 Apr 15 19:17	5°♏23'25	-2.8m
opposition	13148 Apr 17 06:10	4°♏57'31	6°40'29
	13148 May 10 01:09	30°℞♎	
direct	13148 May 17 03:11	29°♎39'35	
	13148 May 24 06:57	0°♏	
	13148 Aug 08 23:09	0°♐	
	13148 Sep 29 12:10	0°♑	
desc. node	13148 Oct 20 09:41	12°♑38'37	
	13148 Nov 17 19:47	0°♒	
	13149 Jan 05 13:17	0°♓	
	13149 Feb 22 16:24	0°♈	
evening set	13149 Mar 02 16:23	5°♈02'26	
max. Earth dist.	13149 Apr 01 23:40	24°♈19'45	2.65851 AU
	13149 Apr 10 18:57	0°♉	
conjunction	13149 Apr 15 16:25	3°♉09'58	-1°09'19
minimum elong	13149 Apr 15 15:55	3°♉09'09	1°09'48
	13149 May 26 11:21	0°♊	
morning rise	13149 May 30 05:31	2°♊30'56	
	13149 Jul 09 12:12	0°♋	
	13149 Aug 20 21:29	0°♌	
	13149 Sep 30 19:43	0°♍	
asc. node	13149 Nov 01 07:20	23°♍36'16	
	13149 Nov 09 18:50	0°♎	

	13149 Dec 19 17:33	0°♏	
	13150 Jan 30 12:54	0°♐	
	13150 Mar 20 20:55	0°♑	
retrograde	13150 May 10 05:45	14°♑38'48	
min. Earth dist.	13150 Jun 09 14:23	8°♑18'11	0.52000 AU
greatest brilliancy	13150 Jun 16 09:16	5°♑45'38	-2.0m
opposition	13150 Jun 17 08:15	5°♑24'00	3°35'43
	13150 Jul 04 01:49	30°℞♐	
direct	13150 Jul 22 09:19	27°♐46'31	
	13150 Aug 10 22:15	0°♑	
desc. node	13150 Sep 07 19:50	8°♑48'18	
	13150 Oct 22 20:31	0°♒	
	13150 Dec 15 18:09	0°♓	
	13151 Feb 03 21:25	0°♈	
	13151 Mar 23 14:11	0°♉	
evening set	13151 Apr 07 19:33	9°♉53'17	
max. Earth dist.	13151 Apr 27 07:51	22°♉48'19	2.57905 AU
	13151 May 08 00:23	0°♊	
conjunction	13151 May 24 13:05	11°♊18'04	-1°02'47
minimum elong	13151 May 24 14:17	11°♊20'09	1°03'43
	13151 Jun 20 05:30	0°♋	
morning rise	13151 Jul 14 11:28	17°♋29'06	
	13151 Jul 31 11:01	0°♌	
	13151 Sep 09 02:33	0°♍	
asc. node	13151 Sep 18 20:22	7°♍30'25	
	13151 Oct 17 18:49	0°♎	
	13151 Nov 25 07:22	0°♏	
	13152 Jan 03 17:33	0°♐	
	13152 Feb 14 13:33	0°♑	
	13152 Apr 01 22:42	0°♒	
retrograde	13152 Jun 17 19:08	26°♒58'02	
min. Earth dist.	13152 Jul 23 17:32	18°♒43'07	0.63172 AU
desc. node	13152 Jul 26 04:52	17°♒44'25	
opposition	13152 Jul 28 03:09	16°♒58'30	-0°04'33
greatest brilliancy	13152 Jul 28 02:56	16°♒58'43	-1.5m
direct	13152 Sep 04 21:55	7°♒57'46	
	13152 Nov 17 20:03	0°♓	
	13153 Jan 13 01:43	0°♈	
	13153 Mar 03 14:15	0°♉	
	13153 Apr 18 09:17	0°♊	
evening set	13153 May 18 21:44	21°♊09'19	
	13153 May 31 06:54	0°♋	
max. Earth dist.	13153 Jun 01 11:45	0°♋51'59	2.45376 AU
	13153 Jul 10 21:36	0°♌	
conjunction	13153 Jul 13 08:54	1°♌52'15	-0°16'00
minimum elong	13153 Jul 13 10:08	1°♌54'36	0°16'54
asc. node	13153 Aug 05 08:58	19°♌29'57	
	13153 Aug 18 21:00	0°♍	
morning rise	13153 Sep 18 04:34	23°♍50'36	
	13153 Sep 25 23:31	0°♎	
	13153 Nov 03 01:30	0°♏	
	13153 Dec 12 00:37	0°♐	
	13154 Jan 21 19:58	0°♑	
	13154 Mar 06 15:28	0°♒	
	13154 Apr 24 20:14	0°♓	
desc. node	13154 Jun 13 07:45	23°♓24'07	
	13154 Jul 07 18:55	0°♈	
retrograde	13154 Jul 22 05:50	1°♈13'20	
	13154 Aug 04 23:16	30°℞♓	
opposition	13154 Aug 31 22:48	21°♓25'01	-2°42'45
min. Earth dist.	13154 Aug 31 07:42	21°♓39'59	0.68280 AU
greatest brilliancy	13154 Aug 31 20:02	21°♓27'45	-1.3m
direct	13154 Oct 11 21:11	11°♓40'04	
	13154 Dec 16 11:15	0°♈	
	13155 Feb 10 08:05	0°♉	
	13155 Mar 29 17:45	0°♊	
	13155 May 11 22:13	0°♋	
	13155 Jun 21 08:14	0°♌	
asc. node	13155 Jun 23 04:15	1°♌23'56	
evening set	13155 Jul 15 22:36	18°♌58'32	
	13155 Jul 30 00:08	0°♍	
	13155 Sep 05 20:53	0°♎	
conjunction	13155 Sep 25 05:33	15°♎20'46	0°56'55
minimum elong	13155 Sep 25 01:53	15°♎13'30	0°57'04
	13155 Oct 13 20:42	0°♏	
max. Earth dist.	13155 Nov 15 13:27	25°♏14'12	2.38301 AU
	13155 Nov 21 20:23	0°♐	
morning rise	13155 Dec 05 18:35	10°♐25'27	
	13156 Jan 01 14:19	0°♑	
	13156 Feb 13 17:54	0°♒	
	13156 Mar 31 00:07	0°♓	
desc. node	13156 Apr 30 00:53	18°♓06'17	
	13156 May 21 03:23	0°♈	
	13156 Jul 29 05:49	0°♉	
retrograde	13156 Aug 25 01:01	3°♉48'46	
	13156 Sep 18 17:06	30°℞♈	
opposition	13156 Oct 03 19:44	24°♈35'50	-4°26'10
greatest brilliancy	13156 Oct 04 06:24	24°♈25'24	-1.3m
min. Earth dist.	13156 Oct 07 01:17	23°♈20'03	0.66694 AU
direct	13156 Nov 14 10:07	14°♈32'59	
	13157 Jan 10 20:43	0°♉	
	13157 Mar 06 05:08	0°♊	
	13157 Apr 20 01:41	0°♋	
asc. node	13157 May 10 05:55	14°♋33'18	
	13157 May 30 22:05	0°♌	
	13157 Jul 08 16:04	0°♍	
	13157 Aug 15 14:39	0°♎	
	13157 Sep 22 19:16	0°♏	
evening set	13157 Sep 30 03:19	5°♏40'51	
	13157 Nov 01 02:59	0°♐	
conjunction	13157 Dec 03 18:12	23°♐56'14	0°53'12
minimum elong	13157 Dec 03 20:25	24°♐00'13	0°54'11
	13157 Dec 12 05:37	0°♑	
max. Earth dist.	13158 Jan 10 20:47	20°♑42'37	2.52357 AU
	13158 Jan 24 12:15	0°♒	
morning rise	13158 Jan 28 04:28	2°♒28'40	
	13158 Mar 11 02:24	0°♓	
desc. node	13158 Mar 17 11:47	4°♓05'00	
	13158 Apr 28 04:37	0°♈	
	13158 Jun 18 21:52	0°♉	
	13158 Aug 20 14:15	0°♊	
retrograde	13158 Oct 04 10:52	9°♊35'46	
opposition	13158 Nov 10 19:39	1°♊24'38	-4°59'49
greatest brilliancy	13158 Nov 12 01:30	0°♊56'30	-1.7m
	13158 Nov 14 13:18	30°℞♉	
min. Earth dist.	13158 Nov 17 18:42	28°♉47'32	0.58361 AU
direct	13158 Dec 21 06:06	21°♉42'19	
	13159 Jan 28 13:00	0°♊	
	13159 Mar 25 11:54	0°♋	
asc. node	13159 Mar 28 13:06	1°♋58'20	
	13159 May 07 20:32	0°♌	
	13159 Jun 16 14:22	0°♍	
	13159 Jul 25 04:21	0°♎	
	13159 Sep 02 00:31	0°♏	
	13159 Oct 12 01:49	0°♐	
	13159 Nov 22 22:29	0°♑	
evening set	13159 Nov 30 09:27	5°♑11'48	
	13160 Jan 05 19:14	0°♒	
conjunction	13160 Jan 21 02:01	10°♒09'19	0°06'45

minimum elong	13160 Jan 21 02:19	10°♒09'49	0°07'36
behind sun begin	13160 Jan 20 08:09	9°♒39'51	
behind sun end	13160 Jan 21 20:29	10°♒39'46	
desc. node	13160 Feb 02 00:18	17°♒59'26	
max. Earth dist.	13160 Feb 08 14:17	22°♒16'59	2.62829 AU
	13160 Feb 20 12:18	0°♓	
morning rise	13160 Mar 07 22:00	10°♓31'20	
	13160 Apr 07 17:20	0°♈	
	13160 May 26 05:17	0°♉	
	13160 Jul 15 09:54	0°♊	
	13160 Sep 07 18:04	0°♋	
retrograde	13160 Nov 27 07:58	26°♋19'21	
opposition	13160 Dec 30 09:33	19°♋57'59	-2°43'48
greatest brilliancy	13160 Dec 31 09:49	19°♋38'00	-2.5m
min. Earth dist.	13161 Jan 08 00:46	17°♋08'42	0.44747 AU
direct	13161 Feb 04 07:50	12°♋13'22	
asc. node	13161 Feb 12 22:23	12°♋44'28	
	13161 Apr 01 02:21	0°♌	
	13161 May 18 06:49	0°♍	
	13161 Jun 28 21:29	0°♎	
	13161 Aug 08 18:36	0°♏	
	13161 Sep 19 13:03	0°♐	
	13161 Nov 01 21:11	0°♑	
	13161 Dec 16 21:38	0°♒	
desc. node	13161 Dec 19 18:38	1°♒52'56	
evening set	13162 Jan 12 05:50	17°♒07'29	
	13162 Feb 01 06:45	0°♓	
conjunction	13162 Feb 27 01:20	16°♓25'53	-0°36'20
minimum elong	13162 Feb 27 00:19	16°♓24'16	0°35'59
max. Earth dist.	13162 Mar 03 01:44	18°♓58'56	2.67937 AU
	13162 Mar 20 10:38	0°♈	
morning rise	13162 Apr 11 13:32	14°♈00'31	
	13162 May 06 19:19	0°♉	
	13162 Jun 22 23:31	0°♊	
	13162 Aug 08 21:11	0°♋	
	13162 Sep 24 19:21	0°♌	
	13162 Nov 11 22:43	0°♍	
asc. node	13163 Jan 01 03:59	27°♍15'34	
	13163 Jan 07 13:29	0°♎	
retrograde	13163 Feb 15 10:04	8°♎51'09	
min. Earth dist.	13163 Mar 15 16:06	4°♎14'32	0.36443 AU
opposition	13163 Mar 17 04:15	3°♎50'37	5°18'31
greatest brilliancy	13163 Mar 16 18:57	3°♎56'47	-3.0m
	13163 Apr 03 00:58	30°℞♍	
direct	13163 Apr 15 06:16	29°♍00'39	
	13163 Apr 27 13:11	0°♎	
	13163 Jul 06 05:28	0°♏	
	13163 Aug 24 04:18	0°♐	
	13163 Oct 10 11:10	0°♑	
desc. node	13163 Nov 06 20:08	17°♑20'11	
	13163 Nov 26 22:08	0°♒	
	13164 Jan 13 17:15	0°♓	
evening set	13164 Feb 17 23:41	22°♓08'50	
	13164 Mar 01 10:30	0°♈	
max. Earth dist.	13164 Mar 23 23:46	14°♈18'04	2.67512 AU
conjunction	13164 Apr 01 21:38	19°♈59'08	-1°04'10
minimum elong	13164 Apr 01 20:44	19°♈57'42	1°04'24
	13164 Apr 17 12:13	0°♉	
morning rise	13164 May 15 11:19	18°♉09'21	
	13164 Jun 02 10:57	0°♊	
	13164 Jul 17 00:29	0°♋	
	13164 Aug 29 03:27	0°♌	
	13164 Oct 09 23:08	0°♍	
asc. node	13164 Nov 18 01:08	28°♍34'45	
	13164 Nov 19 23:42	0°♎	
	13164 Dec 31 11:17	0°♏	
	13165 Feb 14 22:55	0°♐	
retrograde	13165 Apr 21 11:45	23°♐34'18	
min. Earth dist.	13165 May 19 09:16	18°♐09'54	0.46524 AU
greatest brilliancy	13165 May 26 08:28	15°♐43'15	-2.3m
opposition	13165 May 27 19:40	15°♐12'07	5°11'51
direct	13165 Jun 29 21:41	8°♐24'32	
	13165 Sep 07 23:17	0°♑	
desc. node	13165 Sep 24 05:29	8°♑14'37	
	13165 Nov 02 18:04	0°♒	
	13165 Dec 23 21:15	0°♓	
	13166 Feb 11 00:46	0°♈	
evening set	13166 Mar 24 09:07	26°♈06'19	
	13166 Mar 30 10:15	0°♉	
max. Earth dist.	13166 Apr 16 21:02	11°♉21'20	2.61637 AU
conjunction	13166 May 08 12:47	25°♉42'55	-1°09'16
minimum elong	13166 May 08 13:14	25°♉43'42	1°10'03
	13166 May 14 21:46	0°♊	
morning rise	13166 Jun 25 02:49	28°♊23'52	
	13166 Jun 27 09:22	0°♋	
	13166 Aug 07 23:57	0°♌	
	13166 Sep 17 01:08	0°♍	
asc. node	13166 Oct 05 17:18	14°♍17'06	
	13166 Oct 26 02:09	0°♎	
	13166 Dec 03 23:01	0°♏	
	13167 Jan 12 20:39	0°♐	
	13167 Feb 24 20:27	0°♑	
	13167 Apr 18 12:07	0°♒	
retrograde	13167 Jun 04 09:58	12°♒10'21	
min. Earth dist.	13167 Jul 08 08:32	4°♒34'42	0.59448 AU
opposition	13167 Jul 14 04:02	2°♒17'55	1°13'17
greatest brilliancy	13167 Jul 13 21:57	2°♒23'52	-1.7m
	13167 Jul 20 04:20	30°℞♑	
desc. node	13167 Aug 12 15:54	24°♑08'32	
direct	13167 Aug 20 16:23	23°♑43'42	
	13167 Sep 24 17:26	0°♒	
	13167 Nov 30 07:37	0°♓	
	13168 Jan 22 05:15	0°♈	
	13168 Mar 10 20:03	0°♉	
	13168 Apr 25 10:11	0°♊	
evening set	13168 May 01 07:00	3°♊59'41	
max. Earth dist.	13168 May 15 22:15	14°♊05'49	2.50737 AU
	13168 Jun 07 10:05	0°♋	
conjunction	13168 Jun 21 06:50	10°♋01'36	-0°39'55
minimum elong	13168 Jun 21 08:47	10°♋05'10	0°40'54
	13168 Jul 18 05:57	0°♌	
morning rise	13168 Aug 19 14:46	24°♌41'53	
asc. node	13168 Aug 22 06:08	26°♌44'31	
	13168 Aug 26 10:54	0°♍	
	13168 Oct 03 17:40	0°♎	
	13168 Nov 10 22:12	0°♏	
	13168 Dec 19 23:07	0°♐	
	13169 Jan 29 22:44	0°♑	
	13169 Mar 15 11:06	0°♒	
	13169 May 06 20:43	0°♓	
desc. node	13169 Jun 29 20:48	18°♓04'20	
retrograde	13169 Jul 09 02:09	18°♓35'42	
min. Earth dist.	13169 Aug 16 16:32	9°♓30'00	0.67065 AU
opposition	13169 Aug 18 19:33	8°♓39'17	-1°48'28
greatest brilliancy	13169 Aug 18 15:15	8°♓43'33	-1.3m
	13169 Sep 16 09:12	30°℞♒	
direct	13169 Sep 28 02:04	29°♒08'15	
	13169 Oct 10 10:05	0°♓	
	13169 Dec 28 09:34	0°♈	
	13170 Feb 18 17:03	0°♉	

	13170 Apr 06 06:48	0°♊	
	13170 May 19 07:07	0°♋	
evening set	13170 Jun 20 11:34	23°♋44'09	
	13170 Jun 28 18:20	0°♌	
asc. node	13170 Jul 09 20:51	8°♌29'20	
max. Earth dist.	13170 Jul 20 07:44	16°♌33'46	2.37376 AU
	13170 Aug 06 12:47	0°♍	
conjunction	13170 Aug 24 18:51	14°♍23'43	0°31'46
minimum elong	13170 Aug 24 15:44	14°♍17'32	0°31'21
	13170 Sep 13 11:15	0°♎	
	13170 Oct 21 11:09	0°♏	
morning rise	13170 Nov 07 05:14	13°♏02'19	
	13170 Nov 29 09:27	0°♐	
	13171 Jan 09 01:50	0°♑	
	13171 Feb 21 07:35	0°♒	
	13171 Apr 09 05:03	0°♓	
desc. node	13171 May 17 17:44	22°♓03'57	
	13171 Jun 02 05:44	0°♈	
retrograde	13171 Aug 12 04:23	21°♈14'57	
opposition	13171 Sep 21 11:23	11°♈45'32	-3°52'52
greatest brilliancy	13171 Sep 21 15:30	11°♈41'28	-1.3m
min. Earth dist.	13171 Sep 23 04:23	11°♈05'09	0.68118 AU
direct	13171 Nov 01 23:48	1°♈46'24	
	13172 Jan 25 00:26	0°♉	
	13172 Mar 15 06:11	0°♊	
	13172 Apr 28 04:57	0°♋	
asc. node	13172 May 26 19:25	20°♋56'57	
	13172 Jun 07 19:08	0°♌	
	13172 Jul 16 11:11	0°♍	
	13172 Aug 23 08:05	0°♎	
evening set	13172 Aug 30 21:37	5°♎59'43	
	13172 Sep 30 09:54	0°♏	
	13172 Nov 08 13:28	0°♐	
conjunction	13172 Nov 09 08:52	0°♐36'26	1°04'37
minimum elong	13172 Nov 09 10:09	0°♐38'51	1°05'26
	13172 Dec 19 11:21	0°♑	
max. Earth dist.	13172 Dec 26 11:17	4°♑58'42	2.47018 AU
morning rise	13173 Jan 09 11:43	14°♑49'11	
	13173 Jan 31 14:56	0°♒	
	13173 Mar 18 07:37	0°♓	
desc. node	13173 Apr 03 07:46	10°♓04'52	
	13173 May 06 03:31	0°♈	
	13173 Jun 29 16:38	0°♉	
retrograde	13173 Sep 17 15:02	25°♉07'11	
opposition	13173 Oct 26 03:21	16°♉27'39	-4°58'09
greatest brilliancy	13173 Oct 27 01:58	16°♉05'55	-1.5m
min. Earth dist.	13173 Oct 31 16:37	14°♉19'42	0.62403 AU
direct	13173 Dec 06 07:09	6°♉30'26	
	13174 Feb 15 18:19	0°♊	
	13174 Apr 05 06:03	0°♋	
asc. node	13174 Apr 14 02:01	6°♋04'42	
	13174 May 17 03:31	0°♌	
	13174 Jun 25 07:43	0°♍	
	13174 Aug 02 12:59	0°♎	
	13174 Sep 10 00:52	0°♏	
	13174 Oct 19 17:21	0°♐	
evening set	13174 Nov 09 08:55	15°♐06'40	
	13174 Nov 30 05:08	0°♑	
conjunction	13175 Jan 04 02:05	24°♑07'37	0°25'33
minimum elong	13175 Jan 04 03:16	24°♑09'38	0°26'30
	13175 Jan 12 18:44	0°♒	
max. Earth dist.	13175 Jan 29 11:39	11°♒08'37	2.59351 AU
desc. node	13175 Feb 18 17:59	24°♒25'36	
morning rise	13175 Feb 22 10:14	26°♒48'42	
	13175 Feb 27 08:40	0°♓	
	13175 Apr 15 18:32	0°♈	
	13175 Jun 04 02:42	0°♉	
	13175 Jul 26 18:08	0°♊	
	13175 Sep 30 15:06	0°♋	
retrograde	13175 Nov 04 08:26	6°♋12'52	
	13175 Dec 06 12:37	30°℞♊	
opposition	13175 Dec 09 08:06	29°♊00'54	-4°10'59
greatest brilliancy	13175 Dec 10 17:47	28°♊30'58	-2.1m
min. Earth dist.	13175 Dec 17 21:37	25°♊59'20	0.50414 AU
direct	13176 Jan 16 13:58	20°♊12'10	
	13176 Feb 26 02:27	0°♋	
asc. node	13176 Mar 01 10:22	1°♋56'51	
	13176 Apr 18 11:23	0°♌	
	13176 May 30 13:53	0°♍	
	13176 Jul 09 08:35	0°♎	
	13176 Aug 18 02:23	0°♏	
	13176 Sep 27 23:24	0°♐	
	13176 Nov 09 13:50	0°♑	
	13176 Dec 24 00:50	0°♒	
evening set	13176 Dec 27 10:47	2°♒15'27	
desc. node	13177 Jan 05 09:14	8°♒08'18	
	13177 Feb 08 01:42	0°♓	
conjunction	13177 Feb 12 23:00	3°♓08'15	-0°21'06
minimum elong	13177 Feb 12 22:19	3°♓07'09	0°20'32
max. Earth dist.	13177 Feb 22 07:48	9°♓07'59	2.66610 AU
	13177 Mar 27 04:14	0°♈	
morning rise	13177 Mar 29 07:38	1°♈21'13	
	13177 May 13 20:29	0°♉	
	13177 Jun 30 20:58	0°♊	
	13177 Aug 18 12:28	0°♋	
	13177 Oct 08 04:06	0°♌	
	13177 Dec 08 10:06	0°♍	
retrograde	13178 Jan 13 04:22	7°♍08'38	
asc. node	13178 Jan 17 17:49	7°♍00'30	
opposition	13178 Feb 12 03:24	2°♍06'52	1°54'42
greatest brilliancy	13178 Feb 12 09:36	2°♍02'34	-3.0m
min. Earth dist.	13178 Feb 16 10:10	0°♍55'47	0.37598 AU
	13178 Feb 19 21:36	30°℞♌	
direct	13178 Mar 15 06:12	26°♌34'43	
	13178 Apr 06 19:24	0°♍	
	13178 Jun 05 23:19	0°♎	
	13178 Jul 21 17:45	0°♏	
	13178 Sep 04 05:27	0°♐	
	13178 Oct 19 08:49	0°♑	
desc. node	13178 Nov 23 08:07	22°♑45'12	
	13178 Dec 04 14:29	0°♒	
	13179 Jan 20 17:02	0°♓	
evening set	13179 Feb 04 03:24	9°♓07'53	
	13179 Mar 09 03:15	0°♈	
max. Earth dist.	13179 Mar 16 10:46	4°♈38'03	2.68344 AU
conjunction	13179 Mar 20 09:49	7°♈08'44	-0°55'40
minimum elong	13179 Mar 20 08:43	7°♈06'59	0°55'40
	13179 Apr 25 06:07	0°♉	
morning rise	13179 May 02 13:08	4°♉41'00	
	13179 Jun 10 13:56	0°♊	
	13179 Jul 25 20:36	0°♋	
	13179 Sep 08 00:26	0°♌	
	13179 Oct 21 05:26	0°♍	
	13179 Dec 03 05:05	0°♎	
asc. node	13179 Dec 05 20:11	1°♎48'47	
	13180 Jan 17 12:54	0°♏	
retrograde	13180 Mar 30 10:46	28°♏08'32	
min. Earth dist.	13180 Apr 25 11:33	23°♏35'17	0.41195 AU
greatest brilliancy	13180 May 01 14:09	21°♏39'27	-2.7m

opposition	13180 May 03 06:40	21°♏07'12	6°27'58
direct	13180 Jun 03 02:47	15°♏18'45	
	13180 Jul 27 06:40	0°♐	
	13180 Sep 22 03:42	0°♑	
desc. node	13180 Oct 10 14:18	10°♑42'03	
	13180 Nov 12 01:39	0°♒	
	13180 Dec 31 12:03	0°♓	
	13181 Feb 17 22:54	0°♈	
evening set	13181 Mar 10 12:23	12°♈57'20	
	13181 Apr 06 03:49	0°♉	
max. Earth dist.	13181 Apr 07 06:45	0°♉43'30	2.64579 AU
conjunction	13181 Apr 23 18:25	11°♉26'57	-1°10'36
minimum elong	13181 Apr 23 18:13	11°♉26'38	1°11'11
	13181 May 21 18:28	0°♊	
morning rise	13181 Jun 08 03:27	11°♊44'33	
	13181 Jul 04 14:42	0°♋	
	13181 Aug 15 17:06	0°♌	
	13181 Sep 25 07:25	0°♍	
asc. node	13181 Oct 22 13:13	20°♍35'46	
	13181 Nov 03 21:25	0°♎	
	13181 Dec 13 08:17	0°♏	
	13182 Jan 23 04:12	0°♐	
	13182 Mar 09 19:23	0°♑	
retrograde	13182 May 19 19:53	25°♑35'48	
min. Earth dist.	13182 Jun 20 12:35	18°♑46'21	0.54822 AU
opposition	13182 Jun 27 15:17	16°♑02'45	2°41'25
greatest brilliancy	13182 Jun 26 23:11	16°♑18'12	-1.9m
direct	13182 Aug 02 14:38	8°♑02'42	
desc. node	13182 Aug 29 01:03	11°♑52'49	
	13182 Oct 14 06:50	0°♒	
	13182 Dec 09 21:03	0°♓	
	13183 Jan 29 20:12	0°♈	
	13183 Mar 18 20:29	0°♉	
evening set	13183 Apr 16 09:01	18°♉37'11	
	13183 May 03 08:18	0°♊	
max. Earth dist.	13183 May 03 21:56	0°♊23'05	2.55533 AU
conjunction	13183 Jun 03 07:56	21°♊23'01	-0°56'23
minimum elong	13183 Jun 03 09:32	21°♊25'49	0°57'22
	13183 Jun 15 11:57	0°♋	
morning rise	13183 Jul 26 18:02	0°♌07'17	
	13183 Jul 26 14:08	0°♌	
	13183 Sep 04 01:56	0°♍	
asc. node	13183 Sep 09 01:27	3°♍50'55	
	13183 Oct 12 14:30	0°♎	
	13183 Nov 19 23:30	0°♏	
	13183 Dec 29 05:02	0°♐	
	13184 Feb 08 14:18	0°♑	
	13184 Mar 25 11:21	0°♒	
	13184 May 25 22:48	0°♓	
retrograde	13184 Jun 25 16:13	5°♓22'59	
desc. node	13184 Jul 16 10:04	2°♓27'41	
	13184 Jul 24 04:31	30°℞♒	
min. Earth dist.	13184 Aug 01 14:21	26°♒49'00	0.64825 AU
opposition	13184 Aug 05 04:58	25°♒22'59	-0°45'31
greatest brilliancy	13184 Aug 05 02:08	25°♒25'48	-1.5m
direct	13184 Sep 13 13:54	16°♒10'17	
	13184 Nov 08 07:06	0°♓	
	13185 Jan 07 03:25	0°♈	
	13185 Feb 26 12:18	0°♉	
	13185 Apr 13 13:55	0°♊	
	13185 May 26 13:04	0°♋	
evening set	13185 May 29 19:48	2°♋22'06	
max. Earth dist.	13185 Jun 13 21:42	13°♋23'07	2.42364 AU
	13185 Jul 06 02:56	0°♌	
asc. node	13185 Jul 26 15:48	15°♌42'42	
conjunction	13185 Jul 27 10:15	16°♌18'19	0°00'32
minimum elong	13185 Jul 27 10:14	16°♌18'17	0°00'14
behind sun begin	13185 Jul 26 07:21	15°♌26'22	
behind sun end	13185 Jul 28 13:08	17°♌10'15	
	13185 Aug 14 00:47	0°♍	
	13185 Sep 21 01:36	0°♎	
morning rise	13185 Oct 06 04:44	11°♎58'31	
	13185 Oct 29 02:11	0°♏	
	13185 Dec 07 00:03	0°♐	
	13186 Jan 16 16:44	0°♑	
	13186 Mar 01 04:29	0°♒	
	13186 Apr 18 05:03	0°♓	
desc. node	13186 Jun 03 10:15	24°♓06'02	
	13186 Jun 17 19:04	0°♈	
retrograde	13186 Jul 29 19:29	8°♈51'19	
	13186 Sep 06 06:11	30°℞♓	
opposition	13186 Sep 08 09:59	29°♓08'48	-3°11'05
greatest brilliancy	13186 Sep 08 09:07	29°♓09'41	-1.3m
min. Earth dist.	13186 Sep 08 14:34	29°♓04'17	0.68503 AU
direct	13186 Oct 19 14:46	19°♓17'51	
	13186 Dec 06 04:33	0°♈	
	13187 Feb 04 06:35	0°♉	
	13187 Mar 24 12:13	0°♊	
	13187 May 06 22:59	0°♋	
asc. node	13187 Jun 13 11:00	27°♋43'41	
	13187 Jun 16 10:46	0°♌	
	13187 Jul 25 03:04	0°♍	
evening set	13187 Aug 01 01:37	5°♍28'24	
	13187 Aug 31 23:50	0°♎	
	13187 Oct 08 23:55	0°♏	
conjunction	13187 Oct 12 17:29	2°♏54'47	1°04'26
minimum elong	13187 Oct 12 15:34	2°♏51'03	1°04'54
	13187 Nov 17 00:13	0°♐	
max. Earth dist.	13187 Dec 05 05:08	13°♐35'19	2.41294 AU
morning rise	13187 Dec 19 17:34	24°♐12'30	
	13187 Dec 27 18:19	0°♑	
	13188 Feb 08 20:13	0°♒	
	13188 Mar 25 18:53	0°♓	
desc. node	13188 Apr 20 01:51	15°♓33'59	
	13188 May 14 19:12	0°♈	
	13188 Jul 14 03:14	0°♉	
retrograde	13188 Sep 02 07:16	11°♉40'19	
opposition	13188 Oct 11 16:31	2°♉37'57	-4°41'21
greatest brilliancy	13188 Oct 12 07:22	2°♉23'31	-1.4m
min. Earth dist.	13188 Oct 15 17:56	1°♉03'10	0.65445 AU
	13188 Oct 18 11:46	30°℞♈	
direct	13188 Nov 22 04:56	22°♈35'12	
	13188 Dec 29 16:06	0°♉	
	13189 Feb 27 16:49	0°♊	
	13189 Apr 14 12:20	0°♋	
asc. node	13189 Apr 30 14:10	11°♋26'27	
	13189 May 25 16:00	0°♌	
	13189 Jul 03 13:04	0°♍	
	13189 Aug 10 13:30	0°♎	
	13189 Sep 17 20:00	0°♏	
evening set	13189 Oct 15 19:08	21°♏24'15	
	13189 Oct 27 06:04	0°♐	
	13189 Dec 07 10:57	0°♑	
conjunction	13189 Dec 15 21:37	5°♑58'02	0°43'52
minimum elong	13189 Dec 15 23:38	6°♑01'34	0°44'52
max. Earth dist.	13190 Jan 18 04:26	28°♑54'57	2.55068 AU
	13190 Jan 19 18:56	0°♒	
morning rise	13190 Feb 06 18:37	12°♒01'34	
	13190 Mar 06 07:33	0°♓	
desc. node	13190 Mar 07 13:19	0°♓47'52	

	13190 Apr 23 01:42	0°♈	
	13190 Jun 12 16:22	0°♉	
	13190 Aug 08 21:37	0°♊	
retrograde	13190 Oct 14 20:09	18°♊56'02	
opposition	13190 Nov 20 10:35	11°♊03'16	-4°50'50
greatest brilliancy	13190 Nov 21 19:19	10°♊32'53	-1.8m
min. Earth dist.	13190 Nov 28 01:50	8°♊13'40	0.55750 AU
direct	13190 Dec 30 06:10	1°♊34'36	
	13191 Mar 17 10:34	0°♋	
asc. node	13191 Mar 18 23:54	0°♋56'25	
	13191 May 01 11:04	0°♌	
	13191 Jun 10 18:33	0°♍	
	13191 Jul 19 15:43	0°♎	
	13191 Aug 27 17:15	0°♏	
	13191 Oct 06 23:44	0°♐	
	13191 Nov 18 01:07	0°♑	
evening set	13191 Dec 11 03:59	15°♑55'02	
	13192 Jan 01 01:42	0°♒	
desc. node	13192 Jan 23 01:29	14°♒32'21	
conjunction	13192 Jan 30 02:16	19°♒08'05	-0°03'59
minimum elong	13192 Jan 30 02:07	19°♒07'51	0°03'15
behind sun begin	13192 Jan 29 06:37	18°♒36'05	
behind sun end	13192 Jan 30 21:37	19°♒39'36	
max. Earth dist.	13192 Feb 14 02:45	28°♒52'42	2.64424 AU
	13192 Feb 15 20:29	0°♓	
morning rise	13192 Mar 15 20:17	18°♓32'18	
	13192 Apr 02 23:37	0°♈	
	13192 May 21 02:45	0°♉	
	13192 Jul 09 08:13	0°♊	
	13192 Aug 29 21:16	0°♋	
	13192 Oct 29 17:37	0°♌	
retrograde	13192 Dec 12 21:13	9°♌52'42	
opposition	13193 Jan 13 16:39	4°♌02'21	-1°23'35
greatest brilliancy	13193 Jan 14 05:01	3°♌52'46	-2.7m
min. Earth dist.	13193 Jan 21 14:22	1°♌35'57	0.41788 AU
	13193 Jan 27 05:36	30°℞♋	
asc. node	13193 Feb 03 08:19	28°♋22'29	
direct	13193 Feb 17 01:07	27°♋03'27	
	13193 Mar 09 19:00	0°♌	
	13193 May 08 17:23	0°♍	
	13193 Jun 21 12:05	0°♎	
	13193 Aug 02 09:45	0°♏	
	13193 Sep 13 20:10	0°♐	
	13193 Oct 27 15:44	0°♑	
desc. node	13193 Dec 09 20:43	28°♑35'58	
	13193 Dec 12 00:18	0°♒	
evening set	13194 Jan 20 18:59	25°♒39'13	
	13194 Jan 27 14:16	0°♓	
conjunction	13194 Mar 06 21:48	24°♓20'55	-0°44'15
minimum elong	13194 Mar 06 20:41	24°♓19'09	0°44'02
max. Earth dist.	13194 Mar 08 01:43	25°♓05'10	2.68320 AU
	13194 Mar 15 19:46	0°♈	
morning rise	13194 Apr 19 03:23	21°♈46'18	
	13194 May 02 01:47	0°♉	
	13194 Jun 17 21:38	0°♊	
	13194 Aug 03 03:02	0°♋	
	13194 Sep 17 19:23	0°♌	
	13194 Nov 02 11:07	0°♍	
	13194 Dec 20 07:13	0°♎	
asc. node	13194 Dec 22 11:35	1°♎16'26	
retrograde	13195 Mar 04 16:41	27°♎44'33	
min. Earth dist.	13195 Mar 31 03:33	23°♎26'50	0.37364 AU
opposition	13195 Apr 04 15:02	22°♎11'55	6°24'24
greatest brilliancy	13195 Apr 03 13:58	22°♎29'28	-2.9m
direct	13195 May 03 23:06	17°♎13'05	
	13195 Jun 21 09:47	0°♏	
	13195 Aug 15 22:03	0°♐	
	13195 Oct 04 04:24	0°♑	
desc. node	13195 Oct 28 01:17	14°♑47'09	
	13195 Nov 21 13:31	0°♒	
	13196 Jan 08 20:00	0°♓	
evening set	13196 Feb 25 19:41	0°♈01'36	
	13196 Feb 25 18:40	0°♈	
max. Earth dist.	13196 Mar 29 03:08	20°♈31'36	2.66702 AU
conjunction	13196 Apr 09 17:24	27°♈57'48	-1°07'40
minimum elong	13196 Apr 09 16:43	27°♈56'42	1°08'02
	13196 Apr 12 21:17	0°♉	
morning rise	13196 May 23 18:02	26°♉42'16	
	13196 May 28 17:06	0°♊	
	13196 Jul 12 00:20	0°♋	
	13196 Aug 23 17:44	0°♌	
	13196 Oct 04 01:23	0°♍	
asc. node	13196 Nov 08 08:31	26°♍12'28	
	13196 Nov 13 10:25	0°♎	
	13196 Dec 23 21:40	0°♏	
	13197 Feb 04 18:06	0°♐	
	13197 Mar 31 21:56	0°♑	
retrograde	13197 May 02 10:55	6°♑26'48	
min. Earth dist.	13197 May 31 17:14	0°♑30'25	0.49579 AU
	13197 Jun 02 03:07	30°℞♐	
opposition	13197 Jun 08 20:09	27°♐31'53	4°17'32
greatest brilliancy	13197 Jun 07 15:38	27°♐58'09	-2.2m
direct	13197 Jul 13 00:44	20°♐15'20	
	13197 Aug 25 20:22	0°♑	
desc. node	13197 Sep 14 11:29	8°♑21'39	
	13197 Oct 26 20:48	0°♒	
	13197 Dec 18 10:34	0°♓	
	13198 Feb 06 03:29	0°♈	
	13198 Mar 25 17:50	0°♉	
evening set	13198 Apr 01 12:52	4°♉23'32	
max. Earth dist.	13198 Apr 22 20:33	18°♉22'21	2.59668 AU
	13198 May 10 05:34	0°♊	
conjunction	13198 May 17 11:17	4°♊54'23	-1°06'14
minimum elong	13198 May 17 12:11	4°♊55'54	1°07'06
	13198 Jun 22 14:44	0°♋	
morning rise	13198 Jul 05 17:40	9°♋21'37	
	13198 Aug 03 01:08	0°♌	
	13198 Sep 11 21:38	0°♍	
asc. node	13198 Sep 25 22:43	10°♍47'11	
	13198 Oct 20 17:56	0°♎	
	13198 Nov 28 09:28	0°♏	
	13199 Jan 06 23:00	0°♐	
	13199 Feb 18 02:31	0°♑	
	13199 Apr 07 20:57	0°♒	
retrograde	13199 Jun 12 17:20	21°♒16'45	
min. Earth dist.	13199 Jul 17 18:52	13°♒19'00	0.61611 AU
opposition	13199 Jul 22 20:17	11°♒19'07	0°26'43
greatest brilliancy	13199 Jul 22 18:22	11°♒21'00	-1.6m
desc. node	13199 Aug 02 21:08	7°♒13'31	
direct	13199 Aug 30 02:14	2°♒29'39	
	13199 Nov 23 01:30	0°♓	
	13200 Jan 16 18:13	0°♈	
	13200 Mar 05 22:16	0°♉	
	13200 Apr 20 16:22	0°♊	
evening set	13200 May 11 00:57	13°♊59'04	
max. Earth dist.	13200 May 24 19:35	23°♊40'21	2.47808 AU
	13200 Jun 02 16:20	0°♋	
conjunction	13200 Jul 03 07:57	22°♋26'00	-0°27'07
minimum elong	13200 Jul 03 09:41	22°♋29'13	0°28'04

	13200 Jul 13 10:14	0°♌	
asc. node	13200 Aug 12 10:17	22°♌55'53	
	13200 Aug 21 12:47	0°♍	
morning rise	13200 Sep 04 17:25	11°♍05'55	
	13200 Sep 28 17:25	0°♎	
greatest brilliancy	13200 Oct 10 18:20	9°♎30'11	1.2m
	13200 Nov 05 20:09	0°♏	
	13200 Dec 14 19:09	0°♐	
	13201 Jan 24 14:36	0°♑	
	13201 Mar 09 13:54	0°♒	
	13201 Apr 28 16:04	0°♓	
desc. node	13201 Jun 20 01:12	22°♓26'02	
retrograde	13201 Jul 16 15:03	26°♓22'09	
min. Earth dist.	13201 Aug 25 00:56	17°♓01'03	0.67865 AU
opposition	13201 Aug 26 08:35	16°♓29'36	-2°21'22
greatest brilliancy	13201 Aug 26 04:45	16°♓33'26	-1.3m
direct	13201 Oct 06 00:35	6°♓50'31	
	13201 Dec 20 22:39	0°♈	
	13202 Feb 13 04:35	0°♉	
	13202 Apr 01 06:54	0°♊	
	13202 May 14 11:04	0°♋	
	13202 Jun 23 22:33	0°♌	
asc. node	13202 Jun 30 04:11	4°♌45'25	
evening set	13202 Jul 04 06:58	7°♌54'48	
	13202 Aug 01 16:09	0°♍	
	13202 Sep 08 13:41	0°♎	
conjunction	13202 Sep 11 07:26	2°♎10'31	0°47'36
minimum elong	13202 Sep 11 03:22	2°♎02'27	0°47'30
max. Earth dist.	13202 Oct 10 10:57	25°♎13'30	2.36449 AU
	13202 Oct 16 12:58	0°♏	
morning rise	13202 Nov 23 21:46	29°♏34'48	
	13202 Nov 24 11:06	0°♐	
	13203 Jan 04 02:58	0°♑	
	13203 Feb 16 05:28	0°♒	
	13203 Apr 03 15:12	0°♓	
desc. node	13203 May 07 19:40	20°♓16'07	
	13203 May 25 15:06	0°♈	
retrograde	13203 Aug 20 00:51	28°♈54'09	
opposition	13203 Sep 29 01:17	19°♈33'19	-4°13'26
greatest brilliancy	13203 Sep 29 08:53	19°♈25'52	-1.3m
min. Earth dist.	13203 Oct 01 14:00	18°♈33'43	0.67467 AU
direct	13203 Nov 09 15:18	9°♈31'38	
	13204 Jan 17 01:20	0°♉	
	13204 Mar 09 11:12	0°♊	
	13204 Apr 22 23:35	0°♋	
asc. node	13204 May 17 05:02	17°♋35'01	
	13204 Jun 02 18:13	0°♌	
	13204 Jul 11 11:55	0°♍	
greatest brilliancy	13204 Jul 31 01:34	15°♍27'36	1.2m
	13204 Aug 18 09:42	0°♎	
evening set	13204 Sep 17 04:35	23°♎29'56	
	13204 Sep 25 12:18	0°♏	
	13204 Nov 03 17:01	0°♐	
conjunction	13204 Nov 23 15:15	14°♐46'48	0°59'03
minimum elong	13204 Nov 23 17:20	14°♐50'37	0°59'59
	13204 Dec 14 16:06	0°♑	
max. Earth dist.	13205 Jan 04 21:45	14°♑57'56	2.50035 AU
morning rise	13205 Jan 20 10:02	25°♑39'03	
	13205 Jan 26 19:41	0°♒	
	13205 Mar 13 09:09	0°♓	
desc. node	13205 Mar 24 07:14	6°♓56'56	
	13205 Apr 30 16:31	0°♈	
	13205 Jun 22 07:30	0°♉	
	13205 Aug 31 11:05	0°♊	
retrograde	13205 Sep 26 23:31	3°♊42'41	
	13205 Oct 21 08:11	30°℞♉	
opposition	13205 Nov 03 21:11	25°♉17'56	-5°01'04
greatest brilliancy	13205 Nov 04 23:56	24°♉52'28	-1.6m
min. Earth dist.	13205 Nov 10 05:04	22°♉53'32	0.60289 AU
direct	13205 Dec 14 16:12	15°♉27'38	
	13206 Feb 05 20:08	0°♊	
	13206 Mar 29 16:40	0°♋	
asc. node	13206 Apr 04 11:22	3°♋51'01	
	13206 May 11 09:08	0°♌	
	13206 Jun 19 20:57	0°♍	
	13206 Jul 28 06:46	0°♎	
	13206 Sep 04 22:18	0°♏	
	13206 Oct 14 18:27	0°♐	
evening set	13206 Nov 21 15:05	27°♐20'16	
	13206 Nov 25 09:42	0°♑	
	13207 Jan 08 01:43	0°♒	
conjunction	13207 Jan 13 23:17	3°♒56'57	0°14'35
minimum elong	13207 Jan 13 23:57	3°♒58'04	0°15'28
behind sun begin	13207 Jan 13 19:18	3°♒50'18	
behind sun end	13207 Jan 14 04:36	4°♒05'50	
max. Earth dist.	13207 Feb 04 11:22	18°♒10'10	2.61366 AU
desc. node	13207 Feb 08 18:53	20°♒59'20	
	13207 Feb 22 16:03	0°♓	
morning rise	13207 Mar 02 19:30	5°♓14'32	
	13207 Apr 10 21:59	0°♈	
	13207 May 29 16:58	0°♉	
	13207 Jul 19 18:19	0°♊	
	13207 Sep 15 04:22	0°♋	
retrograde	13207 Nov 17 07:30	17°♋37'40	
opposition	13207 Dec 21 07:17	10°♋52'25	-3°28'05
greatest brilliancy	13207 Dec 22 13:13	10°♋26'48	-2.3m
min. Earth dist.	13207 Dec 30 02:19	7°♋53'14	0.47284 AU
direct	13208 Jan 27 09:12	2°♋35'51	
asc. node	13208 Feb 20 20:26	6°♋31'40	
	13208 Apr 09 02:55	0°♌	
	13208 May 23 09:20	0°♍	
	13208 Jul 03 00:46	0°♎	
	13208 Aug 12 07:18	0°♏	
	13208 Sep 22 14:08	0°♐	
	13208 Nov 04 12:41	0°♑	
	13208 Dec 19 05:41	0°♒	
desc. node	13208 Dec 26 11:53	4°♒46'12	
evening set	13209 Jan 05 14:15	11°♒22'14	
	13209 Feb 03 10:06	0°♓	
conjunction	13209 Feb 21 02:10	11°♓17'58	-0°30'17
minimum elong	13209 Feb 21 01:15	11°♓16'31	0°29'51
max. Earth dist.	13209 Feb 27 10:33	15°♓20'38	2.67449 AU
	13209 Mar 22 12:48	0°♈	
morning rise	13209 Apr 05 21:56	9°♈05'56	
	13209 May 09 00:18	0°♉	
	13209 Jun 25 12:48	0°♊	
	13209 Aug 12 02:56	0°♋	
	13209 Sep 29 08:36	0°♌	
	13209 Nov 19 17:17	0°♍	
asc. node	13210 Jan 08 03:12	21°♍32'00	
retrograde	13210 Jan 31 21:28	24°♍59'36	
opposition	13210 Mar 02 10:01	20°♍07'33	3°58'29
greatest brilliancy	13210 Mar 02 11:34	20°♍06'31	-3.0m
min. Earth dist.	13210 Mar 03 15:04	19°♍48'20	0.36518 AU
direct	13210 Apr 01 01:01	15°♍07'46	
	13210 May 22 09:59	0°♎	
	13210 Jul 13 00:49	0°♏	
	13210 Aug 28 11:42	0°♐	
	13210 Oct 13 15:47	0°♑	
desc. node	13210 Nov 13 11:57	19°♑48'37	

	13210 Nov 29 11:44	0°♒	
	13211 Jan 15 22:34	0°♓	
evening set	13211 Feb 12 02:20	17°♓06'28	
	13211 Mar 04 12:31	0°♈	
max. Earth dist.	13211 Mar 21 09:43	10°♈42'04	2.67980 AU
conjunction	13211 Mar 28 02:43	14°♈57'59	-1°01'03
minimum elong	13211 Mar 28 01:43	14°♈56'24	1°01'12
	13211 Apr 20 14:50	0°♉	
morning rise	13211 May 10 10:07	12°♉47'20	
	13211 Jun 05 17:55	0°♊	
	13211 Jul 20 15:14	0°♋	
	13211 Sep 02 04:56	0°♌	
	13211 Oct 14 14:12	0°♍	
	13211 Nov 25 07:56	0°♎	
asc. node	13211 Nov 26 01:56	0°♎32'20	
	13212 Jan 06 23:25	0°♏	
	13212 Feb 25 07:26	0°♐	
retrograde	13212 Apr 12 09:42	13°♐32'43	
min. Earth dist.	13212 May 09 07:19	8°♐32'46	0.44067 AU
greatest brilliancy	13212 May 16 01:16	6°♐16'37	-2.5m
opposition	13212 May 17 16:14	5°♐43'33	5°50'02
	13212 Jun 09 00:06	30°℞♏	
direct	13212 Jun 18 19:11	29°♏21'44	
	13212 Jun 28 19:36	0°♐	
	13212 Sep 13 19:07	0°♑	
desc. node	13212 Sep 30 20:34	9°♑17'30	
	13212 Nov 06 01:05	0°♒	
	13212 Dec 26 08:51	0°♓	
	13213 Feb 13 05:07	0°♈	
evening set	13213 Mar 18 08:57	20°♈54'17	
	13213 Apr 01 13:10	0°♉	
max. Earth dist.	13213 Apr 12 17:48	7°♉15'19	2.63055 AU
conjunction	13213 May 02 01:17	19°♉56'33	-1°10'27
minimum elong	13213 May 02 01:28	19°♉56'51	1°11'09
	13213 May 17 02:58	0°♊	
morning rise	13213 Jun 17 12:49	21°♊26'31	
	13213 Jun 29 19:16	0°♋	
	13213 Aug 10 15:42	0°♌	
	13213 Sep 19 22:56	0°♍	
asc. node	13213 Oct 12 18:47	17°♍22'37	
	13213 Oct 29 05:30	0°♎	
	13213 Dec 07 07:20	0°♏	
	13214 Jan 16 11:50	0°♐	
	13214 Mar 01 05:28	0°♑	
	13214 Apr 28 04:36	0°♒	
retrograde	13214 May 28 20:48	5°♒46'49	
	13214 Jun 26 21:11	30°℞♑	
min. Earth dist.	13214 Jun 30 20:23	28°♑30'55	0.57491 AU
opposition	13214 Jul 07 06:26	26°♑01'02	1°49'14
greatest brilliancy	13214 Jul 06 20:29	26°♑10'43	-1.8m
direct	13214 Aug 13 03:01	17°♑41'09	
desc. node	13214 Aug 19 07:30	17°♑55'03	
	13214 Oct 03 12:56	0°♒	
	13214 Dec 03 15:40	0°♓	
	13215 Jan 24 16:38	0°♈	
	13215 Mar 14 01:59	0°♉	
evening set	13215 Apr 25 05:37	27°♉40'13	
	13215 Apr 28 16:22	0°♊	
max. Earth dist.	13215 May 11 02:56	8°♊29'21	2.52970 AU
	13215 Jun 10 19:14	0°♋	
conjunction	13215 Jun 13 17:20	2°♋05'27	-0°47'49
minimum elong	13215 Jun 13 19:12	2°♋08'48	0°48'50
	13215 Jul 21 18:54	0°♌	
morning rise	13215 Aug 09 04:30	13°♌53'54	
asc. node	13215 Aug 30 07:51	0°♍08'29	
	13215 Aug 30 03:28	0°♍	
	13215 Oct 07 12:57	0°♎	
	13215 Nov 14 18:51	0°♏	
	13215 Dec 23 20:25	0°♐	
	13216 Feb 02 21:52	0°♑	
	13216 Mar 18 18:39	0°♒	
	13216 May 12 08:15	0°♓	
retrograde	13216 Jul 03 09:27	13°♓32'41	
desc. node	13216 Jul 06 13:38	13°♓28'42	
min. Earth dist.	13216 Aug 10 06:14	4°♓40'55	0.66197 AU
opposition	13216 Aug 13 01:42	3°♓33'51	-1°23'36
greatest brilliancy	13216 Aug 12 21:30	3°♓38'01	-1.4m
	13216 Aug 22 09:16	30°℞♒	
direct	13216 Sep 21 23:43	24°♒10'33	
	13216 Oct 25 23:07	0°♓	
	13216 Dec 31 19:24	0°♈	
	13217 Feb 21 07:05	0°♉	
	13217 Apr 08 17:00	0°♊	
	13217 May 21 18:19	0°♋	
evening set	13217 Jun 10 14:55	14°♋29'37	
max. Earth dist.	13217 Jun 30 07:29	29°♋13'56	2.39451 AU
	13217 Jul 01 07:48	0°♌	
asc. node	13217 Jul 16 21:41	11°♌54'14	
	13217 Aug 09 04:24	0°♍	
conjunction	13217 Aug 11 19:48	2°♍04'16	0°18'20
minimum elong	13217 Aug 11 18:03	2°♍00'51	0°17'44
	13217 Sep 16 04:09	0°♎	
morning rise	13217 Oct 24 09:33	0°♏11'02	
	13217 Oct 24 03:56	0°♏	
	13217 Dec 02 00:58	0°♐	
	13218 Jan 11 15:55	0°♑	
	13218 Feb 23 21:40	0°♒	
	13218 Apr 12 02:18	0°♓	
desc. node	13218 May 24 11:51	23°♓34'10	
	13218 Jun 06 21:10	0°♈	
retrograde	13218 Aug 06 10:25	16°♈27'58	
opposition	13218 Sep 15 21:05	6°♈52'08	-3°36'41
greatest brilliancy	13218 Sep 15 22:43	6°♈50'31	-1.3m
min. Earth dist.	13218 Sep 16 21:18	6°♈28'13	0.68422 AU
	13218 Oct 05 07:30	30°℞♓	
direct	13218 Oct 27 06:47	26°♓56'17	
	13218 Nov 20 01:18	0°♈	
	13219 Jan 28 17:33	0°♉	
	13219 Mar 19 02:56	0°♊	
	13219 May 01 21:57	0°♋	
asc. node	13219 Jun 03 18:55	24°♋09'35	
	13219 Jun 11 12:07	0°♌	
	13219 Jul 20 04:48	0°♍	
evening set	13219 Aug 18 04:16	22°♍56'19	
	13219 Aug 27 01:44	0°♎	
	13219 Oct 04 02:15	0°♏	
conjunction	13219 Oct 29 08:11	19°♏31'29	1°06'22
minimum elong	13219 Oct 29 08:21	19°♏31'48	1°07'05
	13219 Nov 12 03:19	0°♐	
max. Earth dist.	13219 Dec 19 05:13	27°♐20'04	2.44472 AU
	13219 Dec 22 22:14	0°♑	
morning rise	13220 Jan 01 11:08	6°♑47'46	
	13220 Feb 03 23:16	0°♒	
	13220 Mar 20 16:26	0°♓	
desc. node	13220 Apr 10 03:03	12°♓47'02	
	13220 May 08 20:38	0°♈	
	13220 Jul 04 02:04	0°♉	
retrograde	13220 Sep 10 21:32	19°♉45'47	
opposition	13220 Oct 19 19:28	10°♉55'16	-4°52'32

greatest brilliancy	13220 Oct 20 14:34	10°♉36'47	-1.4m
min. Earth dist.	13220 Oct 24 16:21	9°♉02'15	0.63898 AU
direct	13220 Nov 30 03:46	0°♉54'39	
	13221 Feb 20 10:44	0°♊	
	13221 Apr 08 16:39	0°♋	
asc. node	13221 Apr 21 00:30	8°♋36'38	
	13221 May 20 06:58	0°♌	
	13221 Jun 28 08:16	0°♍	
	13221 Aug 05 11:12	0°♎	
	13221 Sep 12 19:53	0°♏	
	13221 Oct 22 08:14	0°♐	
evening set	13221 Oct 30 03:06	5°♐45'54	
	13221 Dec 02 15:37	0°♑	
conjunction	13221 Dec 27 02:10	17°♑04'34	0°33'27
minimum elong	13221 Dec 27 03:45	17°♑07'17	0°34'27
	13222 Jan 15 01:10	0°♒	
max. Earth dist.	13222 Jan 24 23:15	6°♒39'25	2.57533 AU
morning rise	13222 Feb 15 20:44	21°♒07'01	
desc. node	13222 Feb 25 13:36	27°♒25'35	
	13222 Mar 01 13:10	0°♓	
	13222 Apr 18 00:59	0°♈	
	13222 Jun 06 19:25	0°♉	
	13222 Jul 30 22:01	0°♊	
retrograde	13222 Oct 26 01:13	28°♊57'10	
opposition	13222 Nov 30 19:37	21°♊25'37	-4°32'01
greatest brilliancy	13222 Dec 02 05:34	20°♊54'46	-2.0m
min. Earth dist.	13222 Dec 09 00:56	18°♊27'14	0.52878 AU
direct	13223 Jan 08 20:06	12°♊16'33	
	13223 Mar 07 05:48	0°♋	
asc. node	13223 Mar 09 08:49	1°♋08'13	
	13223 Apr 24 09:11	0°♌	
	13223 Jun 04 13:59	0°♍	
	13223 Jul 13 21:57	0°♎	
	13223 Aug 22 07:11	0°♏	
	13223 Oct 01 20:02	0°♐	
	13223 Nov 13 03:05	0°♑	
evening set	13223 Dec 21 04:25	25°♑54'09	
	13223 Dec 27 07:52	0°♒	
desc. node	13224 Jan 13 03:22	11°♒06'22	
conjunction	13224 Feb 07 16:05	27°♒43'09	-0°14'10
minimum elong	13224 Feb 07 15:36	27°♒42'22	0°13'32
behind sun begin	13224 Feb 07 05:19	27°♒25'46	
behind sun end	13224 Feb 08 01:54	27°♒58'58	
	13224 Feb 11 04:58	0°♓	
max. Earth dist.	13224 Feb 19 11:14	5°♓18'42	2.65732 AU
morning rise	13224 Mar 23 13:51	26°♓23'30	
	13224 Mar 29 06:55	0°♈	
	13224 May 16 03:09	0°♉	
	13224 Jul 03 14:55	0°♊	
	13224 Aug 22 07:31	0°♋	
	13224 Oct 14 19:01	0°♌	
retrograde	13224 Dec 29 23:41	25°♌03'16	
asc. node	13225 Jan 24 16:36	21°♌06'49	
opposition	13225 Jan 29 15:07	19°♌42'42	0°21'33
greatest brilliancy	13225 Jan 29 17:05	19°♌41'17	-2.9m
min. Earth dist.	13225 Feb 04 21:02	17°♌53'48	0.39182 AU
direct	13225 Mar 03 04:35	13°♌33'29	
	13225 Apr 25 05:34	0°♍	
	13225 Jun 12 19:58	0°♎	
	13225 Jul 26 10:30	0°♏	
	13225 Sep 07 19:56	0°♐	
	13225 Oct 22 06:50	0°♑	
desc. node	13225 Nov 30 01:00	25°♑27'05	
	13225 Dec 07 01:28	0°♒	
	13226 Jan 22 21:35	0°♓	
evening set	13226 Jan 29 01:02	3°♓54'16	
	13226 Mar 11 05:19	0°♈	
max. Earth dist.	13226 Mar 13 00:27	1°♈08'18	2.68441 AU
conjunction	13226 Mar 14 14:59	2°♈09'21	-0°51'16
minimum elong	13226 Mar 14 13:51	2°♈07'34	0°51'12
morning rise	13226 Apr 26 17:44	29°♈34'42	
	13226 Apr 27 09:34	0°♉	
	13226 Jun 12 22:56	0°♊	
	13226 Jul 28 15:24	0°♋	
	13226 Sep 11 10:13	0°♌	
	13226 Oct 25 13:00	0°♍	
	13226 Dec 09 00:38	0°♎	
asc. node	13226 Dec 12 20:30	2°♎30'53	
	13227 Jan 27 12:30	0°♏	
retrograde	13227 Mar 20 09:49	15°♏51'02	
min. Earth dist.	13227 Apr 15 04:27	11°♏31'56	0.39195 AU
greatest brilliancy	13227 Apr 20 09:07	9°♏59'01	-2.8m
opposition	13227 Apr 21 21:53	9°♏31'26	6°41'54
direct	13227 May 21 21:13	4°♏08'27	
	13227 Aug 05 18:56	0°♐	
	13227 Sep 27 08:22	0°♑	
desc. node	13227 Oct 18 06:12	12°♑32'49	
	13227 Nov 15 23:49	0°♒	
	13228 Jan 03 21:00	0°♓	
	13228 Feb 21 02:27	0°♈	
evening set	13228 Mar 04 15:01	7°♈53'16	
max. Earth dist.	13228 Apr 03 07:43	26°♈48'20	2.65637 AU
	13228 Apr 08 06:46	0°♉	
conjunction	13228 Apr 17 15:46	6°♉03'55	-1°09'53
minimum elong	13228 Apr 17 15:22	6°♉03'15	1°10'24
	13228 May 24 00:31	0°♊	
morning rise	13228 Jun 01 08:04	5°♊34'22	
	13228 Jul 07 02:19	0°♋	
	13228 Aug 18 12:03	0°♌	
	13228 Sep 28 10:08	0°♍	
asc. node	13228 Oct 29 15:04	23°♍25'08	
	13228 Nov 07 08:05	0°♎	
	13228 Dec 17 03:33	0°♏	
	13229 Jan 27 14:07	0°♐	
	13229 Mar 16 09:03	0°♑	
retrograde	13229 May 12 13:33	18°♑09'06	
min. Earth dist.	13229 Jun 12 04:54	11°♑42'32	0.52527 AU
opposition	13229 Jun 19 19:36	8°♑50'12	3°21'55
greatest brilliancy	13229 Jun 18 22:12	9°♑10'26	-2.0m
direct	13229 Jul 24 23:59	1°♑08'30	
desc. node	13229 Sep 04 16:38	9°♑55'39	
	13229 Oct 19 03:40	0°♒	
	13229 Dec 12 18:43	0°♓	
	13230 Feb 01 04:38	0°♈	
	13230 Mar 21 01:19	0°♉	
evening set	13230 Apr 09 21:05	12°♉52'22	
max. Earth dist.	13230 Apr 29 01:59	25°♉36'56	2.57474 AU
	13230 May 05 14:16	0°♊	
conjunction	13230 May 26 19:36	14°♊31'04	-1°01'20
minimum elong	13230 May 26 20:54	14°♊33'20	1°02'16
	13230 Jun 17 21:20	0°♋	
morning rise	13230 Jul 17 04:18	21°♋08'57	
	13230 Jul 29 04:05	0°♌	
	13230 Sep 06 20:12	0°♍	
asc. node	13230 Sep 16 03:32	7°♍10'05	
	13230 Oct 15 12:22	0°♎	
	13230 Nov 22 23:49	0°♏	
	13231 Jan 01 07:22	0°♐	
	13231 Feb 11 21:28	0°♑	

	13231 Mar 30 13:32	0°♒	
retrograde	13231 Jun 20 18:24	29°♒57'26	
desc. node	13231 Jul 24 02:26	22°♒44'24	
min. Earth dist.	13231 Jul 26 20:59	21°♒39'30	0.63502 AU
opposition	13231 Jul 31 03:49	19°♒57'36	-0°16'40
greatest brilliancy	13231 Jul 31 02:41	19°♒58'43	-1.5m
direct	13231 Sep 08 01:49	10°♒54'48	
	13231 Nov 14 16:44	0°♓	
	13232 Jan 11 01:18	0°♈	
	13232 Feb 29 22:29	0°♉	
	13232 Apr 15 22:21	0°♊	
evening set	13232 May 21 08:38	24°♊33'51	
	13232 May 28 23:12	0°♋	
max. Earth dist.	13232 Jun 04 05:09	4°♋30'22	2.44820 AU
	13232 Jul 08 15:58	0°♌	
conjunction	13232 Jul 16 09:06	5°♌50'53	-0°12'08
minimum elong	13232 Jul 16 10:06	5°♌52'46	0°13'00
behind sun begin	13232 Jul 15 18:27	5°♌23'01	
behind sun end	13232 Jul 17 01:44	6°♌22'32	
asc. node	13232 Aug 02 16:53	19°♌08'12	
	13232 Aug 16 16:25	0°♍	
morning rise	13232 Sep 22 00:11	28°♍35'18	
	13232 Sep 23 19:01	0°♎	
	13232 Oct 31 20:09	0°♏	
	13232 Dec 09 17:23	0°♐	
	13233 Jan 19 09:35	0°♑	
	13233 Mar 03 23:22	0°♒	
	13233 Apr 21 13:55	0°♓	
desc. node	13233 Jun 10 04:16	24°♓21'34	
	13233 Jun 26 23:32	0°♈	
retrograde	13233 Jul 24 04:00	4°♈03'16	
	13233 Aug 18 06:09	30°℞♓	
opposition	13233 Sep 02 20:26	24°♓15'45	-2°51'36
min. Earth dist.	13233 Sep 02 08:20	24°♓27'45	0.68347 AU
greatest brilliancy	13233 Sep 02 17:53	24°♓18'16	-1.3m
direct	13233 Oct 13 20:26	14°♓29'48	
	13233 Dec 12 02:38	0°♈	
	13234 Feb 07 08:34	0°♉	
	13234 Mar 27 03:45	0°♊	
	13234 May 09 13:07	0°♋	
	13234 Jun 19 02:03	0°♌	
asc. node	13234 Jun 20 11:17	1°♌03'12	
evening set	13234 Jul 19 09:21	23°♌23'26	
	13234 Jul 27 19:34	0°♍	
	13234 Sep 03 16:51	0°♎	
conjunction	13234 Sep 29 01:48	20°♎05'53	0°59'14
minimum elong	13234 Sep 28 22:26	19°♎59'17	0°59'27
	13234 Oct 11 16:11	0°♏	
	13234 Nov 19 14:25	0°♐	
max. Earth dist.	13234 Nov 20 01:08	0°♐20'16	2.38837 AU
morning rise	13234 Dec 09 00:06	14°♐30'28	
	13234 Dec 30 06:03	0°♑	
	13235 Feb 11 06:14	0°♒	
	13235 Mar 29 06:57	0°♓	
desc. node	13235 Apr 27 20:44	17°♓59'02	
	13235 May 18 21:19	0°♈	
	13235 Jul 22 16:17	0°♉	
retrograde	13235 Aug 28 02:13	6°♉39'30	
	13235 Sep 30 03:48	30°℞♈	
opposition	13235 Oct 06 18:33	27°♈28'17	-4°30'57
greatest brilliancy	13235 Oct 07 06:02	27°♈17'03	-1.3m
min. Earth dist.	13235 Oct 10 03:10	26°♈09'29	0.66475 AU
direct	13235 Nov 17 08:16	17°♈25'29	
	13236 Jan 07 05:38	0°♉	
	13236 Mar 03 06:40	0°♊	
	13236 Apr 17 13:10	0°♋	
asc. node	13236 May 07 12:53	14°♋20'27	
	13236 May 28 13:56	0°♌	
	13236 Jul 06 09:58	0°♍	
	13236 Aug 13 09:13	0°♎	
	13236 Sep 20 13:31	0°♏	
evening set	13236 Oct 03 18:12	10°♏12'13	
	13236 Oct 29 20:08	0°♐	
conjunction	13236 Dec 06 15:26	27°♐41'16	0°50'57
minimum elong	13236 Dec 06 17:38	27°♐45'13	0°51'56
	13236 Dec 09 21:07	0°♑	
max. Earth dist.	13237 Jan 12 20:27	23°♑43'43	2.52904 AU
	13237 Jan 22 01:35	0°♒	
morning rise	13237 Jan 30 12:13	5°♒41'17	
	13237 Mar 08 12:54	0°♓	
desc. node	13237 Mar 14 08:47	3°♓44'13	
	13237 Apr 25 10:32	0°♈	
	13237 Jun 15 17:08	0°♉	
	13237 Aug 15 02:56	0°♊	
retrograde	13237 Oct 06 19:48	12°♊40'25	
opposition	13237 Nov 13 01:14	4°♊32'12	-4°57'43
greatest brilliancy	13237 Nov 14 07:35	4°♊03'39	-1.7m
min. Earth dist.	13237 Nov 20 03:04	1°♊52'54	0.57891 AU
	13237 Nov 25 10:12	30°℞♉	
direct	13237 Dec 23 08:26	24°♉52'08	
	13238 Jan 21 18:49	0°♊	
	13238 Mar 22 09:42	0°♋	
asc. node	13238 Mar 25 21:47	2°♋13'31	
	13238 May 05 06:52	0°♌	
	13238 Jun 14 05:01	0°♍	
	13238 Jul 22 20:26	0°♎	
	13238 Aug 30 16:33	0°♏	
	13238 Oct 09 17:01	0°♐	
	13238 Nov 20 12:28	0°♑	
evening set	13238 Dec 03 00:43	8°♑42'28	
	13239 Jan 03 07:51	0°♒	
conjunction	13239 Jan 23 08:00	13°♒16'58	0°03'43
minimum elong	13239 Jan 23 08:10	13°♒17'14	0°04'32
behind sun begin	13239 Jan 22 12:34	12°♒45'00	
behind sun end	13239 Jan 24 03:45	13°♒49'26	
desc. node	13239 Jan 29 20:14	17°♒33'27	
max. Earth dist.	13239 Feb 10 03:40	24°♒55'57	2.63168 AU
	13239 Feb 17 23:32	0°♓	
morning rise	13239 Mar 10 21:49	13°♓25'26	
	13239 Apr 06 02:47	0°♈	
	13239 May 24 11:38	0°♉	
	13239 Jul 13 09:13	0°♊	
	13239 Sep 04 19:26	0°♋	
	13239 Nov 27 01:47	0°♌	
retrograde	13239 Dec 01 15:07	0°♌07'35	
	13239 Dec 06 03:24	30°℞♋	
opposition	13240 Jan 03 10:53	23°♋51'57	-2°25'49
greatest brilliancy	13240 Jan 04 08:44	23°♋34'11	-2.5m
min. Earth dist.	13240 Jan 12 00:38	21°♋05'30	0.44181 AU
direct	13240 Feb 08 04:00	16°♋15'09	
asc. node	13240 Feb 11 06:50	16°♋19'17	
	13240 Mar 27 03:01	0°♌	
	13240 May 15 03:43	0°♍	
	13240 Jun 26 04:22	0°♎	
	13240 Aug 06 04:59	0°♏	
	13240 Sep 17 00:28	0°♐	
	13240 Oct 30 08:38	0°♑	
	13240 Dec 14 08:44	0°♒	
desc. node	13240 Dec 16 13:36	1°♒26'36	
evening set	13241 Jan 14 09:26	20°♒09'11	

	13241 Jan 29 17:35	0°♓	
conjunction	13241 Mar 01 01:14	19°♓19'13	-0°38'47
minimum elong	13241 Mar 01 00:10	19°♓17'32	0°38'29
max. Earth dist.	13241 Mar 04 12:01	21°♓30'36	2.68046 AU
	13241 Mar 17 21:18	0°♈	
morning rise	13241 Apr 13 11:29	16°♈50'36	
	13241 May 04 05:36	0°♉	
	13241 Jun 20 08:32	0°♊	
	13241 Aug 06 03:07	0°♋	
	13241 Sep 21 18:39	0°♌	
	13241 Nov 08 05:44	0°♍	
asc. node	13241 Dec 29 11:14	29°♍02'20	
	13241 Dec 31 11:08	0°♎	
retrograde	13242 Feb 19 06:32	13°♎49'53	
min. Earth dist.	13242 Mar 19 03:35	9°♎17'58	0.36541 AU
opposition	13242 Mar 21 05:20	8°♎44'42	5°38'54
greatest brilliancy	13242 Mar 20 17:05	8°♎52'54	-3.0m
direct	13242 Apr 19 08:58	3°♎54'28	
	13242 Jul 01 23:30	0°♏	
	13242 Aug 21 00:13	0°♐	
	13242 Oct 07 15:12	0°♑	
desc. node	13242 Nov 03 16:48	17°♑05'01	
	13242 Nov 24 05:32	0°♒	
	13243 Jan 11 02:25	0°♓	
evening set	13243 Feb 19 23:18	25°♓01'07	
	13243 Feb 27 20:57	0°♈	
max. Earth dist.	13243 Mar 26 10:46	16°♈50'50	2.67379 AU
conjunction	13243 Apr 04 20:41	22°♈51'24	-1°05'22
minimum elong	13243 Apr 04 19:51	22°♈50'04	1°05'40
	13243 Apr 15 23:49	0°♉	
morning rise	13243 May 18 11:40	21°♉06'31	
	13243 May 31 23:29	0°♊	
	13243 Jul 15 13:25	0°♋	
	13243 Aug 27 16:06	0°♌	
	13243 Oct 08 10:29	0°♍	
asc. node	13243 Nov 16 09:23	28°♍34'07	
	13243 Nov 18 08:05	0°♎	
	13243 Dec 29 12:30	0°♏	
	13244 Feb 12 00:36	0°♐	
retrograde	13244 Apr 24 03:42	27°♐29'59	
min. Earth dist.	13244 May 22 08:05	21°♐58'32	0.47102 AU
greatest brilliancy	13244 May 29 06:43	19°♐30'42	-2.3m
opposition	13244 May 30 16:29	19°♐00'30	4°59'21
direct	13244 Jul 02 23:18	12°♐07'05	
	13244 Sep 03 10:05	0°♑	
desc. node	13244 Sep 21 02:50	8°♑39'15	
	13244 Oct 30 13:31	0°♒	
	13244 Dec 21 01:32	0°♓	
	13245 Feb 08 09:17	0°♈	
evening set	13245 Mar 26 09:28	29°♈01'53	
	13245 Mar 27 21:33	0°♉	
max. Earth dist.	13245 Apr 18 11:58	14°♉03'17	2.61286 AU
conjunction	13245 May 10 16:28	28°♉48'02	-1°08'39
minimum elong	13245 May 10 17:03	28°♉49'02	1°09'29
	13245 May 12 11:16	0°♊	
	13245 Jun 25 00:35	0°♋	
morning rise	13245 Jun 27 13:26	1°♋47'21	
	13245 Aug 05 16:24	0°♌	
	13245 Sep 14 18:12	0°♍	
asc. node	13245 Oct 03 00:43	13°♍58'28	
	13245 Oct 23 19:03	0°♎	
	13245 Dec 01 14:30	0°♏	
	13246 Jan 10 08:24	0°♐	
	13246 Feb 21 22:46	0°♑	
	13246 Apr 13 20:29	0°♒	
retrograde	13246 Jun 06 10:57	15°♒17'54	
min. Earth dist.	13246 Jul 10 14:46	7°♒38'30	0.59872 AU
opposition	13246 Jul 16 07:41	5°♒24'05	1°00'04
greatest brilliancy	13246 Jul 16 02:48	5°♒28'52	-1.7m
	13246 Jul 31 17:25	30°℞♑	
desc. node	13246 Aug 09 12:46	27°♑57'15	
direct	13246 Aug 22 23:49	26°♑47'03	
	13246 Sep 16 07:50	0°♒	
	13246 Nov 26 21:29	0°♓	
	13247 Jan 19 09:04	0°♈	
	13247 Mar 09 05:50	0°♉	
	13247 Apr 23 23:37	0°♊	
evening set	13247 May 04 13:51	7°♊13'01	
max. Earth dist.	13247 May 19 03:51	17°♊19'05	2.50173 AU
	13247 Jun 06 01:59	0°♋	
conjunction	13247 Jun 25 00:12	13°♋42'12	-0°36'51
minimum elong	13247 Jun 25 02:06	13°♋45'42	0°37'50
	13247 Jul 16 23:31	0°♌	
asc. node	13247 Aug 20 11:47	26°♌19'47	
morning rise	13247 Aug 24 03:00	29°♌08'46	
	13247 Aug 25 05:24	0°♍	
	13247 Oct 02 12:23	0°♎	
	13247 Nov 09 16:18	0°♏	
	13247 Dec 18 15:27	0°♐	
	13248 Jan 28 11:30	0°♑	
	13248 Mar 12 16:10	0°♒	
	13248 May 02 23:47	0°♓	
desc. node	13248 Jun 26 18:06	20°♓12'53	
retrograde	13248 Jul 10 23:24	21°♓25'53	
min. Earth dist.	13248 Aug 18 16:56	12°♓17'50	0.67246 AU
opposition	13248 Aug 20 17:10	11°♓29'56	-1°58'35
greatest brilliancy	13248 Aug 20 12:42	11°♓34'22	-1.3m
direct	13248 Sep 30 02:12	1°♓57'32	
	13248 Dec 24 21:52	0°♈	
	13249 Feb 15 22:29	0°♉	
	13249 Apr 03 19:09	0°♊	
	13249 May 16 23:19	0°♋	
evening set	13249 Jun 23 11:36	27°♋41'29	
	13249 Jun 26 12:45	0°♌	
asc. node	13249 Jul 07 04:19	8°♌07'35	
max. Earth dist.	13249 Jul 28 23:14	25°♌00'27	2.36936 AU
	13249 Aug 04 08:11	0°♍	
conjunction	13249 Aug 28 14:22	19°♍08'47	0°35'51
minimum elong	13249 Aug 28 10:54	19°♍01'56	0°35'30
	13249 Sep 11 06:40	0°♎	
	13249 Oct 19 05:46	0°♏	
morning rise	13249 Nov 11 01:44	17°♏45'08	
	13249 Nov 27 02:28	0°♐	
	13250 Jan 06 16:26	0°♑	
	13250 Feb 18 18:23	0°♒	
	13250 Apr 06 08:41	0°♓	
desc. node	13250 May 14 14:24	22°♓11'52	
	13250 May 29 10:55	0°♈	
retrograde	13250 Aug 14 03:34	24°♈03'33	
opposition	13250 Sep 23 09:07	14°♈35'32	-3°59'14
greatest brilliancy	13250 Sep 23 13:50	14°♈30'53	-1.3m
min. Earth dist.	13250 Sep 25 04:59	13°♈52'21	0.68031 AU
direct	13250 Nov 03 22:04	4°♈36'08	
	13251 Jan 21 11:53	0°♉	
	13251 Mar 13 13:03	0°♊	
	13251 Apr 26 19:02	0°♋	
asc. node	13251 May 25 04:24	20°♋42'14	
	13251 Jun 06 12:52	0°♌	
	13251 Jul 15 06:38	0°♍	

	13251 Aug 22 03:54	0°♎	
evening set	13251 Sep 04 16:24	10°♎42'50	
	13251 Sep 29 04:58	0°♏	
	13251 Nov 07 06:55	0°♐	
conjunction	13251 Nov 13 16:39	4°♐48'20	1°03'32
minimum elong	13251 Nov 13 18:15	4°♐51'19	1°04'24
	13251 Dec 18 02:36	0°♑	
max. Earth dist.	13251 Dec 30 02:16	8°♑31'18	2.47596 AU
morning rise	13252 Jan 13 03:30	18°♑20'57	
	13252 Jan 30 03:26	0°♒	
	13252 Mar 15 16:29	0°♓	
desc. node	13252 Mar 31 02:48	9°♓45'53	
	13252 May 03 05:52	0°♈	
	13252 Jun 25 23:49	0°♉	
retrograde	13252 Sep 19 20:37	28°♉05'45	
opposition	13252 Oct 28 05:54	19°♉28'39	-4°59'09
greatest brilliancy	13252 Oct 29 05:16	19°♉06'13	-1.5m
min. Earth dist.	13252 Nov 02 22:02	17°♉18'08	0.62033 AU
direct	13252 Dec 08 07:46	9°♉32'44	
	13253 Feb 11 22:53	0°♊	
	13253 Apr 02 11:48	0°♋	
asc. node	13253 Apr 11 09:48	6°♋04'25	
	13253 May 14 16:58	0°♌	
	13253 Jun 23 00:24	0°♍	
	13253 Jul 31 06:50	0°♎	
	13253 Sep 07 18:34	0°♏	
	13253 Oct 17 10:01	0°♐	
evening set	13253 Nov 12 06:00	18°♐52'35	
	13253 Nov 27 20:11	0°♑	
conjunction	13254 Jan 06 12:03	27°♑25'03	0°22'33
minimum elong	13254 Jan 06 13:07	27°♑26'49	0°23'30
	13254 Jan 10 07:51	0°♒	
max. Earth dist.	13254 Jan 31 06:17	13°♒57'44	2.59744 AU
desc. node	13254 Feb 15 13:57	24°♒00'30	
morning rise	13254 Feb 24 12:46	29°♒48'55	
	13254 Feb 24 19:38	0°♓	
	13254 Apr 13 02:43	0°♈	
	13254 Jun 01 05:51	0°♉	
	13254 Jul 23 08:11	0°♊	
	13254 Sep 23 16:28	0°♋	
retrograde	13254 Nov 07 03:10	9°♋39'25	
opposition	13254 Dec 11 23:29	2°♋32'10	-4°00'56
greatest brilliancy	13254 Dec 13 08:23	2°♋03'09	-2.1m
	13254 Dec 19 04:29	30°℞♊	
min. Earth dist.	13254 Dec 20 15:50	29°♊29'44	0.49827 AU
direct	13255 Jan 19 01:01	23°♊49'07	
	13255 Feb 19 10:42	0°♋	
asc. node	13255 Feb 27 18:30	3°♋19'01	
	13255 Apr 16 06:17	0°♌	
	13255 May 28 21:28	0°♍	
	13255 Jul 07 20:28	0°♎	
	13255 Aug 16 15:43	0°♏	
	13255 Sep 26 12:49	0°♐	
	13255 Nov 08 02:41	0°♑	
	13255 Dec 22 12:52	0°♒	
evening set	13255 Dec 30 16:36	5°♒23'15	
desc. node	13256 Jan 03 05:48	7°♒43'19	
	13256 Feb 06 12:51	0°♓	
conjunction	13256 Feb 15 23:42	6°♓04'02	-0°23'50
minimum elong	13256 Feb 15 22:56	6°♓02'48	0°23'19
max. Earth dist.	13256 Feb 24 15:50	11°♓36'49	2.66783 AU
	13256 Mar 24 14:25	0°♈	
morning rise	13256 Mar 31 05:28	4°♈11'24	
	13256 May 11 05:16	0°♉	
	13256 Jun 28 02:58	0°♊	
	13256 Aug 15 12:16	0°♋	
	13256 Oct 04 11:46	0°♌	
	13256 Nov 30 21:10	0°♍	
asc. node	13257 Jan 15 02:30	11°♍43'23	
retrograde	13257 Jan 17 02:17	11°♍44'55	
opposition	13257 Feb 15 22:59	6°♍46'24	2°23'59
greatest brilliancy	13257 Feb 16 05:26	6°♍42'00	-3.0m
min. Earth dist.	13257 Feb 19 17:06	5°♍44'56	0.37323 AU
direct	13257 Mar 18 16:17	1°♍21'48	
	13257 Jun 01 22:32	0°♎	
	13257 Jul 18 15:16	0°♏	
	13257 Sep 01 10:20	0°♐	
	13257 Oct 16 16:44	0°♑	
desc. node	13257 Nov 20 04:34	22°♑24'55	
	13257 Dec 01 23:46	0°♒	
	13258 Jan 18 03:08	0°♓	
evening set	13258 Feb 06 02:55	12°♓00'27	
	13258 Mar 06 13:59	0°♈	
max. Earth dist.	13258 Mar 17 22:43	7°♈11'57	2.68287 AU
conjunction	13258 Mar 22 08:00	9°♈58'57	-0°57'23
minimum elong	13258 Mar 22 06:54	9°♈57'13	0°57'27
	13258 Apr 22 17:19	0°♉	
morning rise	13258 May 04 11:48	7°♉33'53	
	13258 Jun 08 01:07	0°♊	
	13258 Jul 23 07:00	0°♋	
	13258 Sep 05 09:04	0°♌	
	13258 Oct 18 10:41	0°♍	
	13258 Nov 30 03:20	0°♎	
asc. node	13258 Dec 03 02:56	2°♎04'44	
	13259 Jan 13 14:38	0°♏	
	13259 Mar 15 13:16	0°♐	
retrograde	13259 Apr 03 12:30	2°♐31'13	
	13259 Apr 22 05:35	30°℞♏	
min. Earth dist.	13259 Apr 29 14:59	27°♏53'10	0.41733 AU
greatest brilliancy	13259 May 05 21:38	25°♏52'56	-2.6m
opposition	13259 May 07 13:51	25°♏20'29	6°21'46
direct	13259 Jun 07 17:12	19°♏25'30	
	13259 Jul 22 09:45	0°♐	
	13259 Sep 19 18:16	0°♑	
desc. node	13259 Oct 08 12:11	10°♑44'15	
	13259 Nov 10 04:07	0°♒	
	13259 Dec 29 19:18	0°♓	
	13260 Feb 16 08:57	0°♈	
evening set	13260 Mar 12 10:19	15°♈46'45	
	13260 Apr 03 16:01	0°♉	
max. Earth dist.	13260 Apr 08 15:24	3°♉12'48	2.64312 AU
conjunction	13260 Apr 25 18:15	14°♉21'59	-1°10'46
minimum elong	13260 Apr 25 18:10	14°♉21'50	1°11'25
	13260 May 19 08:21	0°♊	
morning rise	13260 Jun 10 08:07	14°♊52'37	
	13260 Jul 02 05:40	0°♋	
	13260 Aug 13 08:32	0°♌	
	13260 Sep 22 22:37	0°♍	
asc. node	13260 Oct 19 20:15	20°♍21'25	
	13260 Nov 01 11:31	0°♎	
	13260 Dec 10 19:49	0°♏	
	13261 Jan 20 09:38	0°♐	
	13261 Mar 06 05:49	0°♑	
retrograde	13261 May 22 00:16	28°♑57'07	
min. Earth dist.	13261 Jun 22 23:44	22°♑02'36	0.55367 AU
opposition	13261 Jun 29 23:47	19°♑20'57	2°27'29
greatest brilliancy	13261 Jun 29 09:14	19°♑34'57	-1.9m
direct	13261 Aug 05 03:18	11°♑17'00	
desc. node	13261 Aug 25 23:20	13°♑43'55	

	13261 Oct 10 00:41	0°♒	
	13261 Dec 06 19:29	0°♓	
	13262 Jan 27 03:05	0°♈	
	13262 Mar 16 07:51	0°♉	
evening set	13262 Apr 18 10:53	21°♉37'13	
	13262 Apr 30 22:47	0°♊	
max. Earth dist.	13262 May 05 19:07	3°♊17'04	2.55078 AU
conjunction	13262 Jun 05 16:03	24°♊39'51	-0°54'25
minimum elong	13262 Jun 05 17:43	24°♊42'48	0°55'24
	13262 Jun 13 04:43	0°♋	
	13262 Jul 24 08:27	0°♌	
morning rise	13262 Jul 29 15:12	3°♌56'45	
	13262 Sep 01 21:00	0°♍	
asc. node	13262 Sep 06 09:51	3°♍30'14	
	13262 Oct 10 09:25	0°♎	
	13262 Nov 17 17:13	0°♏	
	13262 Dec 26 20:08	0°♐	
	13263 Feb 06 00:17	0°♑	
	13263 Mar 23 09:04	0°♒	
	13263 May 20 11:36	0°♓	
retrograde	13263 Jun 28 14:32	8°♓19'49	
desc. node	13263 Jul 14 06:32	6°♓39'55	
	13263 Aug 03 23:54	30°℞♒	
min. Earth dist.	13263 Aug 04 17:17	29°♒42'50	0.65125 AU
opposition	13263 Aug 08 05:06	28°♒19'39	-0°57'02
greatest brilliancy	13263 Aug 08 01:39	28°♒23'04	-1.4m
direct	13263 Sep 16 17:44	19°♒04'55	
	13263 Nov 04 05:05	0°♓	
	13264 Jan 05 00:22	0°♈	
	13264 Feb 24 20:03	0°♉	
	13264 Apr 11 03:00	0°♊	
	13264 May 24 05:30	0°♋	
evening set	13264 Jun 01 10:10	5°♋55'09	
max. Earth dist.	13264 Jun 17 02:22	17°♋25'18	2.41814 AU
	13264 Jul 03 21:33	0°♌	
asc. node	13264 Jul 23 23:02	15°♌19'16	
conjunction	13264 Jul 30 16:14	20°♌30'50	0°04'48
minimum elong	13264 Jul 30 15:53	20°♌30'08	0°04'04
behind sun begin	13264 Jul 29 13:00	19°♌38'06	
behind sun end	13264 Jul 31 18:45	21°♌22'13	
	13264 Aug 11 20:38	0°♍	
	13264 Sep 18 21:47	0°♎	
morning rise	13264 Oct 10 02:50	16°♎47'05	
	13264 Oct 26 21:44	0°♏	
	13264 Dec 04 17:55	0°♐	
	13265 Jan 14 07:39	0°♑	
	13265 Feb 26 14:21	0°♒	
	13265 Apr 15 04:02	0°♓	
desc. node	13265 May 31 06:00	24°♓37'57	
	13265 Jun 12 11:41	0°♈	
retrograde	13265 Jul 31 17:27	11°♈40'13	
opposition	13265 Sep 10 07:24	1°♈58'36	-3°19'06
greatest brilliancy	13265 Sep 10 06:53	1°♈59'06	-1.3m
min. Earth dist.	13265 Sep 10 14:59	1°♈51'05	0.68524 AU
	13265 Sep 15 08:16	30°℞♓	
direct	13265 Oct 21 13:48	22°♓06'46	
	13265 Nov 30 12:53	0°♈	
	13266 Feb 01 04:19	0°♉	
	13266 Mar 21 21:54	0°♊	
	13266 May 04 14:03	0°♋	
asc. node	13266 Jun 10 18:40	27°♋24'30	
	13266 Jun 14 04:44	0°♌	
	13266 Jul 22 22:27	0°♍	
evening set	13266 Aug 04 17:20	10°♍05'27	
	13266 Aug 29 19:34	0°♎	
	13266 Oct 06 19:06	0°♏	
conjunction	13266 Oct 16 11:34	7°♏33'11	1°05'25
minimum elong	13266 Oct 16 10:10	7°♏30'29	1°05'56
	13266 Nov 14 18:04	0°♐	
max. Earth dist.	13266 Dec 08 22:47	18°♐01'49	2.41899 AU
morning rise	13266 Dec 22 17:52	28°♐04'21	
	13266 Dec 25 10:05	0°♑	
	13267 Feb 06 09:00	0°♒	
	13267 Mar 24 02:56	0°♓	
desc. node	13267 Apr 17 22:09	15°♓22'16	
	13267 May 12 17:18	0°♈	
	13267 Jul 10 05:38	0°♉	
retrograde	13267 Sep 05 09:41	14°♉33'58	
opposition	13267 Oct 14 16:30	5°♉33'30	-4°44'49
greatest brilliancy	13267 Oct 15 08:05	5°♉18'20	-1.4m
min. Earth dist.	13267 Oct 18 20:51	3°♉55'59	0.65186 AU
	13267 Oct 29 18:13	30°℞♈	
direct	13267 Nov 25 04:10	25°♈31'14	
	13267 Dec 23 14:23	0°♉	
	13268 Feb 25 13:48	0°♊	
	13268 Apr 11 22:51	0°♋	
asc. node	13268 Apr 27 23:00	11°♋18'44	
	13268 May 23 07:57	0°♌	
	13268 Jul 01 07:24	0°♍	
	13268 Aug 08 08:26	0°♎	
	13268 Sep 15 14:23	0°♏	
evening set	13268 Oct 19 02:34	25°♏36'44	
	13268 Oct 24 23:06	0°♐	
	13268 Dec 05 02:08	0°♑	
conjunction	13268 Dec 18 13:52	9°♑31'18	0°41'12
minimum elong	13268 Dec 18 15:48	9°♑34'40	0°42'12
	13269 Jan 17 07:59	0°♒	
max. Earth dist.	13269 Jan 20 02:27	1°♒52'14	2.55556 AU
morning rise	13269 Feb 09 00:22	15°♒09'36	
	13269 Mar 03 18:03	0°♓	
desc. node	13269 Mar 04 09:17	0°♓24'34	
	13269 Apr 20 08:22	0°♈	
	13269 Jun 09 14:53	0°♉	
	13269 Aug 04 15:07	0°♊	
retrograde	13269 Oct 17 09:07	22°♊11'06	
opposition	13269 Nov 22 20:34	14°♊22'01	-4°46'11
greatest brilliancy	13269 Nov 24 05:23	13°♊51'40	-1.8m
min. Earth dist.	13269 Nov 30 15:01	11°♊30'26	0.55217 AU
direct	13270 Jan 01 12:40	4°♊57'07	
	13270 Mar 13 19:47	0°♋	
asc. node	13270 Mar 16 07:09	1°♋27'01	
	13270 Apr 28 17:10	0°♌	
	13270 Jun 08 07:20	0°♍	
	13270 Jul 17 07:02	0°♎	
	13270 Aug 25 09:10	0°♏	
	13270 Oct 04 15:04	0°♐	
	13270 Nov 15 15:13	0°♑	
evening set	13270 Dec 13 13:41	19°♑12'48	
	13270 Dec 29 14:23	0°♒	
desc. node	13271 Jan 19 21:38	14°♒06'22	
conjunction	13271 Feb 01 04:49	22°♒08'33	-0°06'56
minimum elong	13271 Feb 01 04:33	22°♒08'09	0°06'13
behind sun begin	13271 Jan 31 10:11	21°♒38'16	
behind sun end	13271 Feb 01 22:55	22°♒38'00	
	13271 Feb 13 07:45	0°♓	
max. Earth dist.	13271 Feb 15 15:04	1°♓29'11	2.64683 AU
morning rise	13271 Mar 18 18:34	21°♓23'29	
	13271 Apr 01 09:24	0°♈	
	13271 May 19 10:09	0°♉	

	13271 Jul 07	10:30	0°♊		
	13271 Aug 27	10:04	0°♋		
	13271 Oct 24	11:18	0°♌		
retrograde	13271 Dec 17	14:05	14°♌03'31		
opposition	13272 Jan 18	03:03	8°♌19'12	-0°59'48	
greatest brilliancy	13272 Jan 18	11:53	8°♌12'25	-2.7m	
min. Earth dist.	13272 Jan 25	17:33	5°♌59'34	0.41231 AU	
asc. node	13272 Feb 01	15:02	4°♌05'11		
direct	13272 Feb 21	04:15	1°♌29'41		
	13272 May 04	19:22	0°♍		
	13272 Jun 18	11:07	0°♎		
	13272 Jul 30	15:53	0°♏		
	13272 Sep 11	05:18	0°♐		
	13272 Oct 25	02:01	0°♑		
desc. node	13272 Dec 06	17:45	28°♑13'49		
	13272 Dec 09	10:55	0°♒		
evening set	13273 Jan 22	20:02	28°♒35'35		
	13273 Jan 25	00:56	0°♓		
conjunction	13273 Mar 08	19:54	27°♓11'05	-0°46'26	
minimum elong	13273 Mar 08	18:46	27°♓09'17	0°46'15	
max. Earth dist.	13273 Mar 09	11:54	27°♓36'26	2.68374 AU	
	13273 Mar 13	06:30	0°♈		
morning rise	13273 Apr 21	00:31	24°♈35'28		
	13273 Apr 29	12:29	0°♉		
	13273 Jun 15	07:45	0°♊		
	13273 Jul 31	11:21	0°♋		
	13273 Sep 14	23:43	0°♌		
	13273 Oct 30	06:45	0°♍		
	13273 Dec 16	02:05	0°♎		
asc. node	13273 Dec 19	20:20	2°♎16'42		
	13274 Feb 16	11:35	0°♏		
retrograde	13274 Mar 08	06:59	2°♏40'30		
	13274 Mar 28	12:13	30°℞♎		
min. Earth dist.	13274 Apr 03	12:02	28°♎25'08	0.37626 AU	
greatest brilliancy	13274 Apr 07	08:29	27°♎19'59	-2.9m	
opposition	13274 Apr 08	12:40	27°♎00'03	6°33'48	
direct	13274 May 07	20:50	21°♎57'54		
	13274 Jun 14	05:32	0°♏		
	13274 Aug 12	06:11	0°♐		
	13274 Oct 01	03:46	0°♑		
desc. node	13274 Oct 24	22:03	14°♑37'47		
	13274 Nov 18	18:44	0°♒		
	13275 Jan 06	04:09	0°♓		
	13275 Feb 23	04:42	0°♈		
evening set	13275 Feb 27	18:39	2°♈53'07		
max. Earth dist.	13275 Mar 31	12:54	23°♈02'57	2.66522 AU	
	13275 Apr 11	08:49	0°♉		
conjunction	13275 Apr 12	16:13	0°♉50'36	-1°08'29	
minimum elong	13275 Apr 12	15:36	0°♉49'36	1°08'55	
morning rise	13275 May 26	19:05	29°♉42'14		
	13275 May 27	05:47	0°♊		
	13275 Jul 10	13:47	0°♋		
	13275 Aug 22	07:27	0°♌		
	13275 Oct 02	14:39	0°♍		
asc. node	13275 Nov 06	16:34	26°♍05'12		
	13275 Nov 11	22:02	0°♎		
	13275 Dec 22	04:56	0°♏		
	13276 Feb 02	12:52	0°♐		
	13276 Mar 25	09:18	0°♑		
retrograde	13276 May 04	21:17	10°♑07'50		
min. Earth dist.	13276 Jun 03	10:45	4°♑05'31	0.50124 AU	
greatest brilliancy	13276 Jun 10	08:31	1°♑32'36	-2.1m	
opposition	13276 Jun 11	11:30	1°♑07'37	4°03'48	
	13276 Jun 14	13:45	30°℞♐		
direct	13276 Jul 15	19:29	23°♐46'22		
	13276 Aug 18	21:41	0°♑		
desc. node	13276 Sep 11	07:58	9°♑07'15		
	13276 Oct 23	09:41	0°♒		
	13276 Dec 15	12:39	0°♓		
	13277 Feb 03	11:14	0°♈		
	13277 Mar 23	05:07	0°♉		
evening set	13277 Apr 03	13:29	7°♉20'10		
max. Earth dist.	13277 Apr 24	10:45	21°♉03'33	2.59278 AU	
	13277 May 07	19:24	0°♊		
conjunction	13277 May 19	15:57	8°♊02'28	-1°05'08	
minimum elong	13277 May 19	16:58	8°♊04'11	1°06'03	
	13277 Jun 20	06:24	0°♋		
morning rise	13277 Jul 08	07:02	12°♋52'29		
	13277 Jul 31	17:59	0°♌		
	13277 Sep 09	15:04	0°♍		
asc. node	13277 Sep 23	05:23	10°♍26'23		
	13277 Oct 18	11:13	0°♎		
	13277 Nov 26	01:38	0°♏		
	13278 Jan 04	12:16	0°♐		
	13278 Feb 15	08:54	0°♑		
	13278 Apr 04	04:27	0°♒		
retrograde	13278 Jun 14	17:03	24°♒19'06		
min. Earth dist.	13278 Jul 19	23:26	16°♒18'05	0.61989 AU	
opposition	13278 Jul 24	22:10	14°♒20'55	0°14'06	
greatest brilliancy	13278 Jul 24	21:12	14°♒21'52	-1.6m	
desc. node	13278 Jul 30	18:03	12°♒06'05		
direct	13278 Sep 01	08:10	5°♒28'57		
	13278 Nov 19	06:48	0°♓		
	13279 Jan 13	19:52	0°♈		
	13279 Mar 04	07:29	0°♉		
	13279 Apr 19	06:02	0°♊		
evening set	13279 May 14	09:26	17°♊16'28		
max. Earth dist.	13279 May 28	05:21	27°♊02'00	2.47266 AU	
	13279 Jun 01	09:01	0°♋		
conjunction	13279 Jul 07	03:56	26°♋13'07	-0°23'36	
minimum elong	13279 Jul 07	05:31	26°♋16'04	0°24'32	
	13279 Jul 12	04:53	0°♌		
asc. node	13279 Aug 10	18:02	22°♌33'09		
	13279 Aug 20	08:27	0°♍		
morning rise	13279 Sep 09	09:02	15°♍40'33		
greatest brilliancy	13279 Sep 24	05:46	27°♍23'20	1.2m	
	13279 Sep 27	13:08	0°♎		
	13279 Nov 04	15:00	0°♏		
	13279 Dec 13	12:08	0°♐		
	13280 Jan 23	04:13	0°♑		
	13280 Mar 06	21:09	0°♒		
	13280 Apr 25	05:51	0°♓		
desc. node	13280 Jun 16	21:46	23°♓47'06		
retrograde	13280 Jul 18	12:22	29°♓12'05		
min. Earth dist.	13280 Aug 27	01:51	19°♓48'36	0.67984 AU	
opposition	13280 Aug 28	06:25	19°♓20'16	-2°30'46	
greatest brilliancy	13280 Aug 28	02:39	19°♓24'00	-1.3m	
direct	13280 Oct 08	00:54	9°♓39'58		
	13280 Dec 17	00:35	0°♈		
	13281 Feb 10	07:21	0°♉		
	13281 Mar 29	18:05	0°♊		
	13281 May 12	02:49	0°♋		
	13281 Jun 21	17:06	0°♌		
asc. node	13281 Jun 27	11:37	4°♌23'31		
evening set	13281 Jul 07	12:42	12°♌06'06		
	13281 Jul 30	12:15	0°♍		
	13281 Sep 06	10:12	0°♎		
conjunction	13281 Sep 15	03:03	6°♎54'31	0°50'47	
minimum elong	13281 Sep 14	22:59	6°♎46'26	0°50'45	

	13281 Oct 14	08:55	0°♏		
max. Earth dist.	13281 Oct 23	09:37	7°♏03'27	2.36767 AU	
	13281 Nov 22	05:31	0°♐		
morning rise	13281 Nov 27	08:07	3°♐51'36		
	13282 Jan 01	18:56	0°♑		
	13282 Feb 13	17:51	0°♒		
	13282 Mar 31	21:29	0°♓		
desc. node	13282 May 04	15:44	20°♓13'22		
	13282 May 22	05:43	0°♈		
	13282 Aug 04	10:42	0°♉		
retrograde	13282 Aug 22	00:51	1°♉43'34		
	13282 Sep 07	12:41	30°℞♈		
opposition	13282 Sep 30	23:46	22°♈24'15	-4°18'54	
greatest brilliancy	13282 Oct 01	08:04	22°♈16'06	-1.3m	
min. Earth dist.	13282 Oct 03	15:45	21°♈21'32	0.67295 AU	
direct	13282 Nov 11	14:02	12°♈22'32		
	13283 Jan 13	00:24	0°♉		
	13283 Mar 07	15:05	0°♊		
	13283 Apr 21	12:01	0°♋		
asc. node	13283 May 15	11:46	17°♋19'31		
	13283 Jun 01	10:41	0°♌		
	13283 Jul 10	06:24	0°♍		
greatest brilliancy	13283 Jul 11	12:45	0°♍59'36	1.2m	
	13283 Aug 17	04:52	0°♎		
evening set	13283 Sep 21	22:28	28°♎09'20		
	13283 Sep 24	07:13	0°♏		
	13283 Nov 02	10:52	0°♐		
conjunction	13283 Nov 27	16:13	18°♐40'52	0°57'13	
minimum elong	13283 Nov 27	18:26	18°♐44'54	0°58'11	
	13283 Dec 13	08:11	0°♑		
max. Earth dist.	13284 Jan 07	21:29	17°♑59'58	2.50603 AU	
morning rise	13284 Jan 23	19:59	28°♑56'28		
	13284 Jan 25	09:25	0°♒		
	13284 Mar 10	19:43	0°♓		
desc. node	13284 Mar 21	04:16	6°♓36'57		
	13284 Apr 27	21:49	0°♈		
	13284 Jun 18	23:39	0°♉		
	13284 Aug 23	13:39	0°♊		
retrograde	13284 Sep 29	05:48	6°♊42'57		
	13284 Nov 01	14:33	30°℞♉		
opposition	13284 Nov 06	00:47	28°♉20'49	-5°00'25	
greatest brilliancy	13284 Nov 07	04:11	27°♉54'47	-1.6m	
min. Earth dist.	13284 Nov 12	12:11	25°♉53'31	0.59862 AU	
direct	13284 Dec 16	17:39	18°♉32'15		
	13285 Feb 01	01:02	0°♊		
	13285 Mar 26	18:42	0°♋		
asc. node	13285 Apr 01	19:34	3°♋58'03		
	13285 May 08	20:57	0°♌		
	13285 Jun 17	12:26	0°♍		
	13285 Jul 25	23:26	0°♎		
	13285 Sep 02	14:51	0°♏		
	13285 Oct 12	10:08	0°♐		
	13285 Nov 23	00:07	0°♑		
evening set	13285 Nov 24	09:18	0°♑58'23		
	13286 Jan 05	14:43	0°♒		
conjunction	13286 Jan 16	06:53	7°♒08'26	0°11'32	
minimum elong	13286 Jan 16	07:24	7°♒09'18	0°12'25	
behind sun begin	13286 Jan 15	18:16	6°♒47'26		
behind sun end	13286 Jan 16	20:33	7°♒31'10		
desc. node	13286 Feb 05	15:28	20°♒34'19		
max. Earth dist.	13286 Feb 06	03:38	20°♒54'12	2.61750 AU	
	13286 Feb 20	03:26	0°♓		
morning rise	13286 Mar 04	20:10	8°♓10'20		
	13286 Apr 08	07:14	0°♈		
	13286 May 26	22:25	0°♉		
	13286 Jul 16	14:46	0°♊		
	13286 Sep 10	15:01	0°♋		
retrograde	13286 Nov 20	08:44	21°♋14'01		
opposition	13286 Dec 24	03:15	14°♋34'10	-3°13'54	
greatest brilliancy	13286 Dec 25	07:38	14°♋10'09	-2.3m	
min. Earth dist.	13287 Jan 01	23:00	11°♋35'54	0.46701 AU	
direct	13287 Jan 30	00:55	6°♋24'15		
asc. node	13287 Feb 18	05:15	8°♋53'38		
	13287 Apr 06	06:40	0°♌		
	13287 May 21	12:17	0°♍		
	13287 Jul 01	10:20	0°♎		
	13287 Aug 10	19:06	0°♏		
	13287 Sep 21	02:23	0°♐		
	13287 Nov 03	00:31	0°♑		
	13287 Dec 17	16:55	0°♒		
desc. node	13287 Dec 24	07:19	4°♒20'27		
evening set	13288 Jan 08	19:00	14°♒27'18		
	13288 Feb 01	20:47	0°♓		
conjunction	13288 Feb 24	02:09	14°♓12'23	-0°32'52	
minimum elong	13288 Feb 24	01:11	14°♓10'51	0°32'28	
max. Earth dist.	13288 Feb 29	18:49	17°♓49'52	2.67595 AU	
	13288 Mar 19	23:03	0°♈		
morning rise	13288 Apr 07	19:24	11°♈55'39		
	13288 May 06	09:49	0°♉		
	13288 Jun 22	20:28	0°♊		
	13288 Aug 09	06:27	0°♋		
	13288 Sep 26	02:37	0°♌		
	13288 Nov 15	06:41	0°♍		
asc. node	13289 Jan 05	11:02	24°♍20'26		
retrograde	13289 Feb 04	23:12	29°♍53'25		
opposition	13289 Mar 06	10:52	25°♍00'43	4°25'10	
greatest brilliancy	13289 Mar 06	10:29	25°♍00'58	-3.0m	
min. Earth dist.	13289 Mar 07	01:55	24°♍50'47	0.36440 AU	
direct	13289 Apr 04	22:32	20°♍04'36		
	13289 May 15	19:41	0°♎		
	13289 Jul 09	10:37	0°♏		
	13289 Aug 25	11:56	0°♐		
	13289 Oct 10	21:21	0°♑		
desc. node	13289 Nov 10	08:54	19°♑32'08		
	13289 Nov 26	19:37	0°♒		
	13290 Jan 13	07:42	0°♓		
evening set	13290 Feb 14	01:46	19°♓59'17		
	13290 Mar 01	22:40	0°♈		
max. Earth dist.	13290 Mar 22	22:29	13°♈18'04	2.67893 AU	
conjunction	13290 Mar 30	01:03	17°♈49'23	-1°02'29	
minimum elong	13290 Mar 30	00:05	17°♈47'50	1°02'41	
	13290 Apr 18	01:56	0°♉		
morning rise	13290 May 12	09:15	15°♉42'12		
	13290 Jun 03	05:41	0°♊		
	13290 Jul 18	03:05	0°♋		
	13290 Aug 30	15:59	0°♌		
	13290 Oct 11	23:16	0°♍		
	13290 Nov 22	12:41	0°♎		
asc. node	13290 Nov 23	10:15	0°♎38'58		
	13291 Jan 03	17:34	0°♏		
	13291 Feb 20	04:15	0°♐		
retrograde	13291 Apr 16	04:53	17°♐41'27		
min. Earth dist.	13291 May 13	08:48	12°♐34'51	0.44635 AU	
greatest brilliancy	13291 May 20	03:32	10°♐16'12	-2.4m	
opposition	13291 May 21	17:26	9°♐43'34	5°39'27	
direct	13291 Jun 23	01:42	3°♐15'21		
	13291 Sep 10	20:29	0°♑		
desc. node	13291 Sep 28	18:29	9°♑32'14		
	13291 Nov 03	23:16	0°♒		
	13291 Dec 24	13:54	0°♓		

	13292 Feb 11 13:44	0°♈	
evening set	13292 Mar 20 08:29	23°♈48'18	
	13292 Mar 30 00:19	0°♉	
max. Earth dist.	13292 Apr 14 05:01	9°♉50'55	2.62746 AU
conjunction	13292 May 04 03:23	22°♉58'05	-1°10'10
minimum elong	13292 May 04 03:40	22°♉58'33	1°10'55
	13292 May 14 16:08	0°♊	
morning rise	13292 Jun 19 20:43	24°♊43'24	
	13292 Jun 27 10:05	0°♋	
	13292 Aug 08 07:38	0°♌	
	13292 Sep 17 15:22	0°♍	
asc. node	13292 Oct 10 02:36	17°♍06'17	
	13292 Oct 26 21:33	0°♎	
	13292 Dec 04 21:36	0°♏	
	13293 Jan 13 21:37	0°♐	
	13293 Feb 26 03:08	0°♑	
	13293 Apr 21 18:43	0°♒	
retrograde	13293 May 30 22:51	8°♒59'43	
min. Earth dist.	13293 Jul 03 03:51	1°♒40'03	0.57955 AU
	13293 Jul 07 10:43	30°℞♑	
opposition	13293 Jul 09 11:52	29°♑12'03	1°35'37
greatest brilliancy	13293 Jul 09 03:17	29°♑20'25	-1.8m
direct	13293 Aug 15 13:05	20°♑48'50	
desc. node	13293 Aug 16 04:40	20°♑49'00	
	13293 Sep 27 21:47	0°♒	
	13293 Nov 30 09:11	0°♓	
	13294 Jan 21 21:26	0°♈	
	13294 Mar 11 12:04	0°♉	
	13294 Apr 26 05:46	0°♊	
evening set	13294 Apr 27 10:51	0°♊49'08	
max. Earth dist.	13294 May 13 04:09	11°♊33'28	2.52437 AU
	13294 Jun 08 10:59	0°♋	
conjunction	13294 Jun 16 07:02	5°♋36'53	-0°45'12
minimum elong	13294 Jun 16 08:56	5°♋40'18	0°46'13
	13294 Jul 19 12:17	0°♌	
morning rise	13294 Aug 12 10:26	18°♌05'38	
asc. node	13294 Aug 27 13:53	29°♌44'35	
	13294 Aug 27 21:51	0°♍	
	13294 Oct 05 07:36	0°♎	
	13294 Nov 12 12:54	0°♏	
	13294 Dec 21 12:38	0°♐	
	13295 Jan 31 10:10	0°♑	
	13295 Mar 16 22:01	0°♒	
	13295 May 08 23:21	0°♓	
desc. node	13295 Jul 04 11:03	16°♓22'47	
retrograde	13295 Jul 06 06:25	16°♓24'03	
min. Earth dist.	13295 Aug 13 07:20	7°♓29'43	0.66420 AU
opposition	13295 Aug 15 23:57	6°♓25'37	-1°34'14
greatest brilliancy	13295 Aug 15 19:26	6°♓30'06	-1.4m
	13295 Sep 03 06:45	30°℞♒	
direct	13295 Sep 25 01:02	27°♒00'36	
	13295 Oct 18 15:37	0°♓	
	13295 Dec 29 12:02	0°♈	
	13296 Feb 19 13:43	0°♉	
	13296 Apr 06 05:47	0°♊	
	13296 May 19 10:40	0°♋	
evening set	13296 Jun 13 10:33	18°♋15'37	
	13296 Jun 29 02:15	0°♌	
max. Earth dist.	13296 Jul 04 07:57	3°♌58'33	2.38891 AU
asc. node	13296 Jul 14 04:57	11°♌31'45	
	13296 Aug 06 23:52	0°♍	
conjunction	13296 Aug 15 10:48	6°♍38'14	0°22'40
minimum elong	13296 Aug 15 08:36	6°♍33'55	0°22'09
	13296 Sep 13 23:43	0°♎	
	13296 Oct 21 22:47	0°♏	
morning rise	13296 Oct 28 09:30	5°♏02'52	
	13296 Nov 29 18:21	0°♐	
	13297 Jan 09 06:52	0°♑	
	13297 Feb 21 08:37	0°♒	
	13297 Apr 09 05:06	0°♓	
desc. node	13297 May 21 09:11	23°♓50'18	
	13297 Jun 02 18:27	0°♈	
retrograde	13297 Aug 08 08:01	19°♈14'56	
opposition	13297 Sep 17 18:15	9°♈40'20	-3°43'38
greatest brilliancy	13297 Sep 17 20:24	9°♈38'12	-1.3m
min. Earth dist.	13297 Sep 18 21:38	9°♈13'20	0.68389 AU
	13297 Oct 22 15:29	30°℞♓	
direct	13297 Oct 29 05:30	29°♓43'55	
	13297 Nov 04 23:32	0°♈	
	13298 Jan 25 10:32	0°♉	
	13298 Mar 16 11:36	0°♊	
	13298 Apr 29 13:02	0°♋	
asc. node	13298 Jun 01 03:49	23°♋52'40	
	13298 Jun 09 06:31	0°♌	
	13298 Jul 18 00:48	0°♍	
evening set	13298 Aug 21 23:04	27°♍39'07	
	13298 Aug 24 22:02	0°♎	
	13298 Oct 01 21:48	0°♏	
conjunction	13298 Nov 01 21:35	23°♏56'27	1°06'05
minimum elong	13298 Nov 01 22:10	23°♏57'34	1°06'50
	13298 Nov 09 21:20	0°♐	
	13298 Dec 20 14:04	0°♑	
max. Earth dist.	13298 Dec 22 03:04	1°♑06'25	2.45069 AU
morning rise	13299 Jan 04 07:09	10°♑28'29	
	13299 Feb 01 12:16	0°♒	
	13299 Mar 19 01:28	0°♓	
desc. node	13299 Apr 07 22:28	12°♓29'47	
	13299 May 06 22:09	0°♈	
	13299 Jul 01 02:26	0°♉	
retrograde	13299 Sep 14 00:42	22°♉40'47	
opposition	13299 Oct 22 20:42	13°♉52'26	-4°54'35
greatest brilliancy	13299 Oct 23 16:35	13°♉33'14	-1.4m
min. Earth dist.	13299 Oct 27 20:55	11°♉56'29	0.63576 AU
direct	13299 Dec 03 04:10	3°♉52'51	
	13300 Feb 18 00:16	0°♊	
	13300 Apr 07 01:02	0°♋	
asc. node	13300 Apr 19 08:23	8°♋31'23	
	13300 May 18 21:56	0°♌	
	13300 Jun 27 02:09	0°♍	
	13300 Aug 04 06:07	0°♎	
	13300 Sep 11 14:31	0°♏	
	13300 Oct 21 01:43	0°♐	
evening set	13300 Nov 03 04:22	9°♐41'40	
	13300 Dec 01 07:18	0°♑	
conjunction	13300 Dec 30 14:38	20°♑27'32	0°30'34
minimum elong	13300 Dec 30 16:05	20°♑30'01	0°31'31
	13301 Jan 13 14:44	0°♒	
max. Earth dist.	13301 Jan 27 18:20	9°♒29'39	2.57961 AU
morning rise	13301 Feb 19 00:37	24°♒09'51	
desc. node	13301 Feb 23 09:13	26°♒59'58	
	13301 Feb 28 00:21	0°♓	
	13301 Apr 16 09:00	0°♈	
	13301 Jun 04 21:26	0°♉	
	13301 Jul 28 06:43	0°♊	
	13301 Oct 09 13:06	0°♋	
retrograde	13301 Oct 29 16:44	2°♋16'18	
	13301 Nov 17 17:28	30°℞♊	
opposition	13301 Dec 04 08:06	24°♊49'10	-4°24'37
greatest brilliancy	13301 Dec 05 17:51	24°♊18'42	-2.0m

min. Earth dist.	13301 Dec 12 17:08	21°♊48'47	0.52304 AU
direct	13302 Jan 12 05:28	15°♊44'47	
	13302 Mar 03 16:07	0°♋	
asc. node	13302 Mar 07 16:34	2°♋01'51	
	13302 Apr 22 10:20	0°♌	
	13302 Jun 03 00:15	0°♍	
	13302 Jul 12 11:29	0°♎	
	13302 Aug 20 21:42	0°♏	
	13302 Sep 30 10:23	0°♐	
	13302 Nov 11 16:39	0°♑	
evening set	13302 Dec 24 12:07	29°♑06'16	
	13302 Dec 25 20:22	0°♒	
desc. node	13303 Jan 10 23:49	10°♒40'41	
	13303 Feb 09 16:19	0°♓	
conjunction	13303 Feb 10 17:51	0°♓41'10	-0°17'01
minimum elong	13303 Feb 10 17:16	0°♓40'14	0°16'25
max. Earth dist.	13303 Feb 21 21:51	7°♓51'47	2.65942 AU
morning rise	13303 Mar 27 12:15	29°♓14'32	
	13303 Mar 28 17:02	0°♈	
	13303 May 15 11:25	0°♉	
	13303 Jul 02 19:36	0°♊	
	13303 Aug 21 03:53	0°♋	
	13303 Oct 12 13:19	0°♌	
retrograde	13304 Jan 04 16:59	29°♌25'39	
asc. node	13304 Jan 24 01:18	27°♌07'30	
opposition	13304 Feb 04 05:43	24°♌09'54	0°49'15
greatest brilliancy	13304 Feb 04 09:45	24°♌07'00	-2.9m
min. Earth dist.	13304 Feb 10 01:47	22°♌29'29	0.38775 AU
direct	13304 Mar 07 09:35	18°♌09'38	
	13304 Apr 20 10:10	0°♍	
	13304 Jun 10 09:48	0°♎	
	13304 Jul 24 12:46	0°♏	
	13304 Sep 06 02:51	0°♐	
	13304 Oct 20 15:40	0°♑	
desc. node	13304 Nov 27 21:15	25°♑05'32	
	13304 Dec 05 11:05	0°♒	
	13305 Jan 21 07:39	0°♓	
evening set	13305 Feb 01 01:37	6°♓49'29	
	13305 Mar 09 15:46	0°♈	
max. Earth dist.	13305 Mar 15 10:45	3°♈40'09	2.68431 AU
conjunction	13305 Mar 17 13:40	5°♈00'50	-0°53'13
minimum elong	13305 Mar 17 12:32	4°♈59'02	0°53'11
	13305 Apr 25 20:10	0°♉	
morning rise	13305 Apr 29 16:27	2°♉27'34	
	13305 Jun 11 09:12	0°♊	
	13305 Jul 27 00:27	0°♋	
	13305 Sep 09 16:42	0°♌	
	13305 Oct 23 14:36	0°♍	
	13305 Dec 06 15:08	0°♎	
asc. node	13305 Dec 11 03:35	3°♎01'07	
	13306 Jan 23 08:19	0°♏	
retrograde	13306 Mar 24 17:06	20°♏28'19	
min. Earth dist.	13306 Apr 19 10:14	16°♏06'34	0.39645 AU
greatest brilliancy	13306 Apr 24 21:15	14°♏27'56	-2.8m
opposition	13306 Apr 26 11:00	13°♏59'16	6°41'01
direct	13306 May 26 15:40	8°♏30'33	
	13306 Aug 02 08:27	0°♐	
	13306 Sep 25 03:32	0°♑	
desc. node	13306 Oct 16 03:42	12°♑29'32	
	13306 Nov 14 03:25	0°♒	
	13307 Jan 02 04:21	0°♓	
	13307 Feb 19 12:06	0°♈	
evening set	13307 Mar 08 13:21	10°♈44'03	
max. Earth dist.	13307 Apr 06 17:21	29°♈19'58	2.65397 AU
	13307 Apr 07 18:13	0°♉	
conjunction	13307 Apr 21 15:09	8°♉58'34	-1°10'21
minimum elong	13307 Apr 21 14:49	8°♉58'02	1°10'54
	13307 May 23 13:23	0°♊	
morning rise	13307 Jun 05 11:19	8°♊39'47	
	13307 Jul 06 16:03	0°♋	
	13307 Aug 18 02:00	0°♌	
	13307 Sep 27 23:41	0°♍	
asc. node	13307 Oct 28 21:25	23°♍13'14	
	13307 Nov 06 20:20	0°♎	
	13307 Dec 16 12:42	0°♏	
	13308 Jan 26 15:29	0°♐	
	13308 Mar 13 05:07	0°♑	
retrograde	13308 May 15 20:04	21°♑39'16	
min. Earth dist.	13308 Jun 15 18:18	15°♑07'39	0.53099 AU
greatest brilliancy	13308 Jun 22 11:23	12°♑35'09	-2.0m
opposition	13308 Jun 23 07:08	12°♑16'26	3°07'43
direct	13308 Jul 28 16:11	4°♑30'23	
desc. node	13308 Sep 02 14:44	11°♑14'44	
	13308 Oct 16 07:10	0°♒	
	13308 Dec 10 18:26	0°♓	
	13309 Jan 30 11:26	0°♈	
	13309 Mar 19 12:10	0°♉	
evening set	13309 Apr 12 21:49	15°♉50'31	
max. Earth dist.	13309 May 01 18:28	28°♉23'03	2.57054 AU
	13309 May 04 04:03	0°♊	
conjunction	13309 May 30 01:34	17°♊43'23	-0°59'45
minimum elong	13309 May 30 02:59	17°♊45'49	1°00'43
	13309 Jun 16 13:20	0°♋	
morning rise	13309 Jul 20 21:32	24°♋49'31	
	13309 Jul 27 21:32	0°♌	
	13309 Sep 05 14:19	0°♍	
asc. node	13309 Sep 14 11:27	6°♍50'22	
	13309 Oct 14 06:14	0°♎	
	13309 Nov 21 16:24	0°♏	
	13309 Dec 30 21:09	0°♐	
	13310 Feb 10 05:31	0°♑	
	13310 Mar 28 06:17	0°♒	
	13310 Jun 01 14:30	0°♓	
retrograde	13310 Jun 23 17:07	2°♓57'50	
	13310 Jul 14 14:29	30°R♒	
desc. node	13310 Jul 21 22:46	27°♒39'52	
min. Earth dist.	13310 Jul 30 01:08	24°♒36'29	0.63856 AU
opposition	13310 Aug 03 04:57	22°♒57'43	-0°28'45
greatest brilliancy	13310 Aug 03 02:57	22°♒59'41	-1.5m
direct	13310 Sep 11 07:00	13°♒52'24	
	13310 Nov 11 06:57	0°♓	
	13311 Jan 08 23:57	0°♈	
	13311 Feb 28 06:26	0°♉	
	13311 Apr 15 11:14	0°♊	
evening set	13311 May 25 20:02	27°♊59'39	
	13311 May 28 15:22	0°♋	
max. Earth dist.	13311 Jun 08 22:13	8°♋08'44	2.44271 AU
	13311 Jul 08 10:20	0°♌	
conjunction	13311 Jul 21 10:18	9°♌51'48	-0°08'10
minimum elong	13311 Jul 21 11:00	9°♌53'08	0°09'01
behind sun begin	13311 Jul 20 12:56	9°♌11'03	
behind sun end	13311 Jul 22 09:04	10°♌35'16	
asc. node	13311 Aug 02 00:24	18°♌45'27	
	13311 Aug 16 12:04	0°♍	
	13311 Sep 23 15:02	0°♎	
morning rise	13311 Sep 27 20:42	3°♎21'04	
	13311 Oct 31 15:28	0°♏	
	13311 Dec 09 10:54	0°♐	
	13312 Jan 18 23:54	0°♑	
	13312 Mar 02 08:04	0°♒	

	13312 Apr 19 09:39	0°♓	
desc. node	13312 Jun 07 23:50	25°♓10'09	
	13312 Jun 20 17:38	0°♈	
retrograde	13312 Jul 27 01:09	6°♈53'02	
	13312 Aug 29 07:46	30°℞♓	
opposition	13312 Sep 05 18:02	27°♓06'20	-3°00'15
min. Earth dist.	13312 Sep 05 09:14	27°♓15'02	0.68419 AU
greatest brilliancy	13312 Sep 05 15:45	27°♓08'35	-1.3m
direct	13312 Oct 16 20:23	17°♓19'10	
	13312 Dec 08 10:08	0°♈	
	13313 Feb 05 08:33	0°♉	
	13313 Mar 25 14:03	0°♊	
	13313 May 08 04:25	0°♋	
	13313 Jun 17 20:06	0°♌	
asc. node	13313 Jun 18 18:30	0°♌42'30	
evening set	13313 Jul 23 20:57	27°♌50'19	
	13313 Jul 26 15:02	0°♍	
	13313 Sep 02 12:42	0°♎	
conjunction	13313 Oct 03 22:13	24°♎51'11	1°01'15
minimum elong	13313 Oct 03 19:14	24°♎45'19	1°01'33
	13313 Oct 10 11:31	0°♏	
	13313 Nov 18 08:27	0°♐	
max. Earth dist.	13313 Nov 25 20:47	5°♐40'05	2.39397 AU
morning rise	13313 Dec 13 04:48	18°♐33'21	
	13313 Dec 28 21:57	0°♑	
	13314 Feb 09 18:57	0°♒	
	13314 Mar 27 14:30	0°♓	
desc. node	13314 Apr 25 17:19	17°♓50'58	
	13314 May 16 17:08	0°♈	
	13314 Jul 17 13:52	0°♉	
retrograde	13314 Aug 31 02:44	9°♉31'06	
opposition	13314 Oct 09 17:48	0°♉21'33	-4°35'13
greatest brilliancy	13314 Oct 10 06:02	0°♉09'37	-1.3m
	13314 Oct 10 15:53	30°℞♈	
min. Earth dist.	13314 Oct 13 05:47	28°♈59'39	0.66265 AU
direct	13314 Nov 20 08:00	20°♈18'56	
	13315 Jan 03 02:13	0°♉	
	13315 Mar 02 07:22	0°♊	
	13315 Apr 17 01:03	0°♋	
asc. node	13315 May 06 21:25	14°♋09'23	
	13315 May 28 06:36	0°♌	
	13315 Jul 06 04:47	0°♍	
	13315 Aug 13 04:36	0°♎	
	13315 Sep 20 08:22	0°♏	
evening set	13315 Oct 09 06:14	14°♏36'13	
	13315 Oct 29 13:41	0°♐	
	13315 Dec 09 12:52	0°♑	
conjunction	13315 Dec 11 11:23	1°♑22'57	0°48'33
minimum elong	13315 Dec 11 13:35	1°♑26'52	0°49'33
max. Earth dist.	13316 Jan 16 17:45	26°♑40'17	2.53430 AU
	13316 Jan 21 15:08	0°♒	
morning rise	13316 Feb 03 20:01	8°♒53'23	
	13316 Mar 06 23:44	0°♓	
desc. node	13316 Mar 12 04:58	3°♓21'24	
	13316 Apr 23 17:03	0°♈	
	13316 Jun 13 13:52	0°♉	
	13316 Aug 11 04:40	0°♊	
retrograde	13316 Oct 10 05:18	15°♊48'37	
opposition	13316 Nov 16 08:26	7°♊43'42	-4°54'49
greatest brilliancy	13316 Nov 17 15:09	7°♊14'54	-1.7m
min. Earth dist.	13316 Nov 23 14:06	5°♊01'35	0.57408 AU
	13316 Dec 09 21:55	30°℞♉	
direct	13316 Dec 26 13:42	28°♉06'26	
	13317 Jan 12 22:13	0°♊	
	13317 Mar 20 04:05	0°♋	

asc. node	13317 Mar 24 05:27	2°♋31'22	
	13317 May 03 16:20	0°♌	
	13317 Jun 12 19:50	0°♍	
	13317 Jul 21 13:16	0°♎	
	13317 Aug 29 09:40	0°♏	
	13317 Oct 08 09:22	0°♐	
	13317 Nov 19 03:30	0°♑	
evening set	13317 Dec 06 13:09	12°♑05'56	
	13318 Jan 01 21:22	0°♒	
conjunction	13318 Jan 26 12:10	16°♒20'07	0°00'42
minimum elong	13318 Jan 26 12:13	16°♒20'12	0°01'29
behind sun begin	13318 Jan 25 16:14	15°♒47'23	
behind sun end	13318 Jan 27 08:13	16°♒53'00	
desc. node	13318 Jan 27 16:28	17°♒06'33	
max. Earth dist.	13318 Feb 12 18:58	27°♒36'41	2.63471 AU
	13318 Feb 16 11:31	0°♓	
morning rise	13318 Mar 13 21:02	16°♓17'24	
	13318 Apr 04 13:00	0°♈	
	13318 May 22 18:53	0°♉	
	13318 Jul 11 09:57	0°♊	
	13318 Sep 02 01:06	0°♋	
	13318 Nov 09 00:21	0°♌	
retrograde	13318 Dec 06 03:13	4°♌03'14	
	13318 Dec 31 19:47	30°℞♋	
opposition	13319 Jan 07 15:23	27°♋53'45	-2°06'14
greatest brilliancy	13319 Jan 08 10:25	27°♋38'25	-2.5m
min. Earth dist.	13319 Jan 16 00:55	25°♋11'56	0.43576 AU
asc. node	13319 Feb 09 13:35	20°♋28'12	
direct	13319 Feb 12 01:45	20°♋25'29	
	13319 Mar 23 02:46	0°♌	
	13319 May 13 19:44	0°♍	
	13319 Jun 25 09:01	0°♎	
	13319 Aug 05 14:25	0°♏	
	13319 Sep 16 11:49	0°♐	
	13319 Oct 29 20:31	0°♑	
	13319 Dec 13 20:29	0°♒	
desc. node	13319 Dec 15 11:10	1°♒03'23	
evening set	13320 Jan 18 11:09	23°♒06'27	
	13320 Jan 29 05:02	0°♓	
conjunction	13320 Mar 03 23:07	22°♓08'26	-0°41'06
minimum elong	13320 Mar 03 22:02	22°♓06'42	0°40'51
max. Earth dist.	13320 Mar 06 19:40	23°♓57'11	2.68133 AU
	13320 Mar 16 08:31	0°♈	
morning rise	13320 Apr 16 07:58	19°♈37'36	
	13320 May 02 16:28	0°♉	
	13320 Jun 18 18:22	0°♊	
	13320 Aug 04 10:20	0°♋	
	13320 Sep 19 20:05	0°♌	
	13320 Nov 05 17:23	0°♍	
	13320 Dec 26 15:42	0°♎	
asc. node	13320 Dec 27 20:05	0°♎37'03	
retrograde	13321 Feb 24 02:10	18°♎51'00	
min. Earth dist.	13321 Mar 23 13:24	14°♎25'08	0.36643 AU
opposition	13321 Mar 26 06:57	13°♎40'52	5°57'09
greatest brilliancy	13321 Mar 25 15:12	13°♎51'32	-3.0m
direct	13321 Apr 24 09:55	8°♎50'15	
	13321 Jun 28 05:58	0°♏	
	13321 Aug 18 16:40	0°♐	
	13321 Oct 05 17:40	0°♑	
desc. node	13321 Nov 01 14:17	16°♑52'49	
	13321 Nov 22 12:15	0°♒	
	13322 Jan 09 11:23	0°♓	
evening set	13322 Feb 22 21:53	27°♓51'35	
	13322 Feb 26 07:26	0°♈	
max. Earth dist.	13322 Mar 28 22:48	19°♈25'03	2.67245 AU

conjunction	13322 Apr 07 18:35	25°♈41'46	-1°06'26
minimum elong	13322 Apr 07 17:48	25°♈40'31	1°06'46
	13322 Apr 14 11:30	0°♉	
morning rise	13322 May 21 11:15	24°♉02'29	
	13322 May 30 12:06	0°♊	
	13322 Jul 14 02:33	0°♋	
	13322 Aug 26 05:10	0°♌	
	13322 Oct 06 22:39	0°♍	
asc. node	13322 Nov 14 17:59	28°♍31'42	
	13322 Nov 16 17:48	0°♎	
	13322 Dec 27 16:04	0°♏	
	13323 Feb 09 08:58	0°♐	
	13323 Apr 14 21:53	0°♑	
retrograde	13323 Apr 28 16:30	1°♑21'48	
	13323 May 12 04:13	30°℞♐	
min. Earth dist.	13323 May 27 04:02	25°♐44'40	0.47652 AU
greatest brilliancy	13323 Jun 03 03:05	23°♐15'01	-2.3m
opposition	13323 Jun 04 11:32	22°♐45'47	4°46'28
direct	13323 Jul 07 22:02	15°♐47'10	
	13323 Aug 31 09:44	0°♑	
desc. node	13323 Sep 19 23:32	9°♑08'51	
	13323 Oct 29 06:42	0°♒	
	13323 Dec 20 04:52	0°♓	
	13324 Feb 07 17:24	0°♈	
	13324 Mar 26 08:47	0°♉	
evening set	13324 Mar 29 09:15	1°♉56'38	
max. Earth dist.	13324 Apr 20 22:33	16°♉38'05	2.60933 AU
	13324 May 11 00:48	0°♊	
conjunction	13324 May 13 19:27	1°♊52'07	-1°07'56
minimum elong	13324 May 13 20:08	1°♊53'17	1°08'46
	13324 Jun 23 15:48	0°♋	
morning rise	13324 Jun 30 23:47	5°♋10'49	
	13324 Aug 04 08:44	0°♌	
	13324 Sep 13 11:03	0°♍	
asc. node	13324 Oct 01 07:25	13°♍38'54	
	13324 Oct 22 11:43	0°♎	
	13324 Nov 30 05:52	0°♏	
	13325 Jan 08 20:24	0°♐	
	13325 Feb 20 02:22	0°♑	
	13325 Apr 10 14:47	0°♒	
retrograde	13325 Jun 09 11:29	18°♒24'24	
min. Earth dist.	13325 Jul 13 20:34	10°♒41'27	0.60286 AU
opposition	13325 Jul 19 10:48	8°♒29'46	0°46'56
greatest brilliancy	13325 Jul 19 07:04	8°♒33'25	-1.7m
desc. node	13325 Aug 07 09:50	2°♒07'53	
	13325 Aug 21 02:13	30°℞♑	
direct	13325 Aug 26 07:29	29°♑49'47	
	13325 Aug 31 15:16	0°♒	
	13325 Nov 24 08:14	0°♓	
	13326 Jan 17 11:47	0°♈	
	13326 Mar 07 15:10	0°♉	
	13326 Apr 22 13:02	0°♊	
evening set	13326 May 07 20:11	10°♊25'26	
max. Earth dist.	13326 May 22 06:33	20°♊27'10	2.49644 AU
	13326 Jun 04 18:11	0°♋	
conjunction	13326 Jun 28 15:58	17°♋19'44	-0°33'45
minimum elong	13326 Jun 28 17:50	17°♋23'09	0°34'44
	13326 Jul 15 17:32	0°♌	
asc. node	13326 Aug 18 19:43	25°♌58'40	
	13326 Aug 24 00:20	0°♍	
morning rise	13326 Aug 28 12:50	3°♍30'50	
	13326 Oct 01 07:23	0°♎	
	13326 Nov 08 10:28	0°♏	
	13326 Dec 17 07:42	0°♐	
	13327 Jan 27 00:13	0°♑	
	13327 Mar 11 21:39	0°♒	
	13327 May 01 06:53	0°♓	
desc. node	13327 Jun 25 15:14	22°♓07'16	
retrograde	13327 Jul 14 20:20	24°♓17'26	
min. Earth dist.	13327 Aug 22 18:34	15°♓06'37	0.67412 AU
opposition	13327 Aug 24 15:22	14°♓22'13	-2°08'33
greatest brilliancy	13327 Aug 24 10:51	14°♓26'42	-1.3m
direct	13327 Oct 04 03:15	4°♓48'17	
	13327 Dec 23 05:55	0°♈	
	13328 Feb 15 02:09	0°♉	
	13328 Apr 02 06:22	0°♊	
	13328 May 15 14:52	0°♋	
	13328 Jun 25 07:02	0°♌	
evening set	13328 Jun 27 11:55	1°♌40'12	
asc. node	13328 Jul 05 12:22	7°♌47'02	
	13328 Aug 03 03:57	0°♍	
max. Earth dist.	13328 Aug 07 03:06	3°♍06'46	2.36616 AU
conjunction	13328 Sep 02 07:16	23°♍47'50	0°39'39
minimum elong	13328 Sep 02 03:32	23°♍40'26	0°39'24
	13328 Sep 10 02:51	0°♎	
	13328 Oct 18 01:19	0°♏	
morning rise	13328 Nov 15 16:57	22°♏15'19	
	13328 Nov 25 20:26	0°♐	
	13329 Jan 05 07:53	0°♑	
	13329 Feb 17 06:01	0°♒	
	13329 Apr 04 13:28	0°♓	
desc. node	13329 May 12 10:53	22°♓16'21	
	13329 May 26 20:05	0°♈	
retrograde	13329 Aug 17 02:04	26°♈52'39	
opposition	13329 Sep 26 07:00	17°♈26'03	-4°05'24
greatest brilliancy	13329 Sep 26 12:24	17°♈20'44	-1.3m
min. Earth dist.	13329 Sep 28 06:41	16°♈39'13	0.67912 AU
direct	13329 Nov 06 21:10	7°♈26'15	
	13330 Jan 18 19:02	0°♉	
	13330 Mar 11 18:15	0°♊	
	13330 Apr 25 07:51	0°♋	
asc. node	13330 May 23 10:57	20°♋25'14	
	13330 Jun 05 05:31	0°♌	
	13330 Jul 14 01:17	0°♍	
	13330 Aug 20 23:19	0°♎	
evening set	13330 Sep 09 12:23	15°♎28'23	
greatest brilliancy	13330 Sep 20 11:18	24°♎05'55	1.1m
	13330 Sep 28 00:10	0°♏	
	13330 Nov 06 01:02	0°♐	
conjunction	13330 Nov 17 22:19	8°♐54'11	1°02'16
minimum elong	13330 Nov 18 00:08	8°♐57'34	1°03'10
	13330 Dec 16 18:53	0°♑	
max. Earth dist.	13331 Jan 02 03:51	11°♑38'10	2.48179 AU
morning rise	13331 Jan 16 16:30	21°♑45'35	
	13331 Jan 28 17:10	0°♒	
	13331 Mar 15 02:41	0°♓	
desc. node	13331 Mar 29 23:47	9°♓27'30	
	13331 May 02 10:00	0°♈	
	13331 Jun 24 11:20	0°♉	
	13331 Sep 10 10:44	0°♊	
retrograde	13331 Sep 24 00:33	1°♊02'52	
	13331 Oct 06 22:38	30°℞♉	
opposition	13331 Nov 01 08:01	22°♉28'11	-4°59'45
greatest brilliancy	13331 Nov 02 08:10	22°♉05'04	-1.5m
min. Earth dist.	13331 Nov 07 04:21	20°♉14'06	0.61644 AU
direct	13331 Dec 12 09:07	12°♉33'30	
	13332 Feb 09 22:26	0°♊	
	13332 Mar 31 16:46	0°♋	
asc. node	13332 Apr 09 17:33	6°♋05'09	
	13332 May 13 06:01	0°♌	

	13332 Jun 21 16:38	0°♍	
	13332 Jul 30 00:08	0°♎	
	13332 Sep 06 11:45	0°♏	
	13332 Oct 16 02:18	0°♐	
evening set	13332 Nov 16 03:41	22°♐39'22	
	13332 Nov 26 11:10	0°♑	
	13333 Jan 08 21:15	0°♒	
conjunction	13333 Jan 09 21:22	0°♒40'40	0°19'33
minimum elong	13333 Jan 09 22:17	0°♒42'12	0°20'28
max. Earth dist.	13333 Feb 02 21:59	16°♒41'15	2.60165 AU
desc. node	13333 Feb 13 10:48	23°♒35'47	
	13333 Feb 23 07:14	0°♓	
morning rise	13333 Feb 27 14:12	2°♓46'20	
	13333 Apr 11 11:49	0°♈	
	13333 May 30 10:27	0°♉	
	13333 Jul 21 01:19	0°♊	
	13333 Sep 18 22:27	0°♋	
retrograde	13333 Nov 10 23:47	13°♋06'04	
opposition	13333 Dec 15 15:36	6°♋03'50	-3°50'02
greatest brilliancy	13333 Dec 16 23:43	5°♋35'45	-2.2m
min. Earth dist.	13333 Dec 24 09:49	3°♋00'58	0.49243 AU
	13334 Jan 03 08:17	30°℞♊	
direct	13334 Jan 22 13:35	27°♊26'10	
	13334 Feb 11 04:20	0°♋	
asc. node	13334 Feb 26 03:35	4°♋52'11	
	13334 Apr 13 22:59	0°♌	
	13334 May 27 04:43	0°♍	
	13334 Jul 06 08:21	0°♎	
	13334 Aug 15 05:02	0°♏	
	13334 Sep 25 02:09	0°♐	
	13334 Nov 06 15:26	0°♑	
	13334 Dec 21 00:49	0°♒	
desc. node	13335 Jan 01 01:15	7°♒16'29	
evening set	13335 Jan 02 23:08	8°♒31'50	
	13335 Feb 05 00:08	0°♓	
conjunction	13335 Feb 19 00:37	8°♓59'47	-0°26'33
minimum elong	13335 Feb 18 23:47	8°♓58'27	0°26'05
max. Earth dist.	13335 Feb 27 02:05	14°♓08'45	2.66968 AU
	13335 Mar 24 01:01	0°♈	
morning rise	13335 Apr 04 03:19	7°♈00'59	
	13335 May 10 14:45	0°♉	
	13335 Jun 27 10:00	0°♊	
	13335 Aug 14 13:45	0°♋	
	13335 Oct 02 23:19	0°♌	
	13335 Nov 26 18:55	0°♍	
asc. node	13336 Jan 14 10:25	15°♍56'46	
retrograde	13336 Jan 23 04:44	16°♍25'39	
opposition	13336 Feb 21 20:23	11°♍29'49	2°53'23
greatest brilliancy	13336 Feb 22 02:41	11°♍25'34	-3.0m
min. Earth dist.	13336 Feb 25 02:31	10°♍37'08	0.37085 AU
direct	13336 Mar 23 06:34	6°♍12'07	
	13336 May 29 13:36	0°♎	
	13336 Jul 16 10:49	0°♏	
	13336 Aug 30 14:31	0°♐	
	13336 Oct 15 00:21	0°♑	
desc. node	13336 Nov 18 01:00	22°♑04'58	
	13336 Nov 30 08:52	0°♒	
	13337 Jan 16 13:06	0°♓	
evening set	13337 Feb 09 03:16	14°♓54'14	
	13337 Mar 05 00:42	0°♈	
max. Earth dist.	13337 Mar 20 10:33	9°♈45'36	2.68245 AU
conjunction	13337 Mar 25 06:40	12°♈49'53	-0°59'03
minimum elong	13337 Mar 25 05:37	12°♈48'13	0°59'09
	13337 Apr 21 04:44	0°♉	
morning rise	13337 May 07 10:49	10°♉26'58	
	13337 Jun 06 12:53	0°♊	
	13337 Jul 21 18:21	0°♋	
	13337 Sep 03 18:59	0°♌	
	13337 Oct 16 17:34	0°♍	
	13337 Nov 28 03:53	0°♎	
asc. node	13337 Dec 01 10:43	2°♎18'37	
	13338 Jan 10 21:59	0°♏	
	13338 Mar 06 05:13	0°♐	
retrograde	13338 Apr 07 12:14	6°♐54'00	
min. Earth dist.	13338 May 03 20:04	2°♐09'59	0.42265 AU
greatest brilliancy	13338 May 10 04:52	0°♐06'07	-2.6m
	13338 May 10 12:18	30°℞♏	
opposition	13338 May 11 20:47	29°♏33'22	6°14'13
direct	13338 Jun 12 06:21	23°♏31'46	
	13338 Jul 16 02:58	0°♐	
	13338 Sep 17 05:11	0°♑	
desc. node	13338 Oct 06 09:50	10°♑49'37	
	13338 Nov 08 05:04	0°♒	
	13338 Dec 28 01:34	0°♓	
	13339 Feb 14 18:08	0°♈	
evening set	13339 Mar 16 09:53	18°♈39'55	
	13339 Apr 03 03:22	0°♉	
max. Earth dist.	13339 Apr 12 02:56	5°♉48'05	2.64036 AU
conjunction	13339 Apr 29 19:21	17°♉20'32	-1°10'49
minimum elong	13339 Apr 29 19:21	17°♉20'33	1°11'30
	13339 May 18 21:32	0°♊	
morning rise	13339 Jun 14 13:53	18°♊03'48	
	13339 Jul 01 20:17	0°♋	
	13339 Aug 13 00:06	0°♌	
	13339 Sep 22 14:27	0°♍	
asc. node	13339 Oct 19 04:01	20°♍06'37	
	13339 Nov 01 02:44	0°♎	
	13339 Dec 10 08:51	0°♏	
	13340 Jan 19 17:06	0°♐	
	13340 Mar 03 20:51	0°♑	
	13340 May 06 16:19	0°♒	
retrograde	13340 May 25 04:51	2°♒17'11	
	13340 Jun 12 01:13	30°℞♑	
min. Earth dist.	13340 Jun 26 09:51	25°♑18'34	0.55871 AU
opposition	13340 Jul 03 08:05	22°♑38'32	2°13'23
greatest brilliancy	13340 Jul 02 19:05	22°♑51'03	-1.9m
direct	13340 Aug 08 16:56	14°♑30'48	
desc. node	13340 Aug 23 20:13	15°♑50'57	
	13340 Oct 06 09:49	0°♒	
	13340 Dec 04 15:37	0°♓	
	13341 Jan 25 08:28	0°♈	
	13341 Mar 14 17:54	0°♉	
evening set	13341 Apr 21 14:52	24°♉42'59	
	13341 Apr 29 11:57	0°♊	
max. Earth dist.	13341 May 08 15:08	6°♊11'24	2.54585 AU
conjunction	13341 Jun 09 03:03	28°♊04'35	-0°52'12
minimum elong	13341 Jun 09 04:47	28°♊07'39	0°53'13
	13341 Jun 11 20:07	0°♋	
	13341 Jul 23 01:31	0°♌	
morning rise	13341 Aug 02 16:07	7°♌56'17	
	13341 Aug 31 15:04	0°♍	
asc. node	13341 Sep 04 15:49	3°♍06'41	
	13341 Oct 09 03:47	0°♎	
	13341 Nov 16 10:58	0°♏	
	13341 Dec 25 11:52	0°♐	
	13342 Feb 04 11:36	0°♑	
	13342 Mar 21 09:34	0°♒	
	13342 May 16 02:58	0°♓	
retrograde	13342 Jul 01 12:01	11°♓13'54	

desc. node	13342 Jul 12 03:24	10°♓28'21	
min. Earth dist.	13342 Aug 07 19:36	2°♓33'55	0.65393 AU
opposition	13342 Aug 11 04:08	1°♓14'09	-1°08'20
greatest brilliancy	13342 Aug 11 00:10	1°♓18'05	-1.4m
	13342 Aug 14 07:32	30°♓℞	
direct	13342 Sep 19 20:01	21°♒57'18	
	13342 Oct 30 11:33	0°♓	
	13343 Jan 02 19:31	0°♈	
	13343 Feb 23 02:56	0°♉	
	13343 Apr 10 15:27	0°♊	
	13343 May 23 21:16	0°♋	
evening set	13343 Jun 06 02:48	9°♋33'53	
max. Earth dist.	13343 Jun 22 03:31	21°♋22'57	2.41215 AU
	13343 Jul 03 15:23	0°♌	
asc. node	13343 Jul 23 05:37	14°♌56'22	
conjunction	13343 Aug 05 02:59	24°♌54'53	0°09'10
minimum elong	13343 Aug 05 02:11	24°♌53'21	0°08'29
behind sun begin	13343 Aug 04 02:03	24°♌06'26	
behind sun end	13343 Aug 06 02:20	25°♌40'17	
	13343 Aug 11 15:31	0°♍	
	13343 Sep 18 16:51	0°♎	
morning rise	13343 Oct 16 05:00	21°♎45'52	
	13343 Oct 26 16:13	0°♏	
	13343 Dec 04 10:55	0°♐	
	13344 Jan 13 22:05	0°♑	
	13344 Feb 26 00:21	0°♒	
	13344 Apr 13 04:30	0°♓	
desc. node	13344 May 29 03:32	25°♓05'58	
	13344 Jun 08 18:14	0°♈	
retrograde	13344 Aug 03 14:01	14°♈27'51	
opposition	13344 Sep 13 04:26	4°♈47'27	-3°26'46
greatest brilliancy	13344 Sep 13 04:23	4°♈47'30	-1.2m
min. Earth dist.	13344 Sep 13 15:39	4°♈36'23	0.68537 AU
	13344 Sep 25 22:09	30°♓℞	
direct	13344 Oct 24 13:02	24°♓54'42	
	13344 Nov 24 19:38	0°♈	
	13345 Jan 30 00:18	0°♉	
	13345 Mar 20 07:02	0°♊	
	13345 May 03 05:00	0°♋	
asc. node	13345 Jun 09 03:09	27°♋06'51	
	13345 Jun 12 22:47	0°♌	
	13345 Jul 21 17:56	0°♍	
evening set	13345 Aug 09 10:12	14°♍44'55	
	13345 Aug 28 15:15	0°♎	
	13345 Oct 05 14:01	0°♏	
conjunction	13345 Oct 21 05:44	12°♏11'55	1°06'04
minimum elong	13345 Oct 21 04:52	12°♏10'13	1°06'41
	13345 Nov 13 11:26	0°♐	
max. Earth dist.	13345 Dec 13 11:48	22°♐20'07	2.42506 AU
	13345 Dec 24 01:15	0°♑	
morning rise	13345 Dec 26 18:16	1°♑56'56	
	13346 Feb 04 21:17	0°♒	
	13346 Mar 22 10:55	0°♓	
desc. node	13346 Apr 15 18:10	15°♓09'22	
	13346 May 10 16:30	0°♈	
	13346 Jul 06 18:02	0°♉	
retrograde	13346 Sep 08 11:04	17°♉27'38	
opposition	13346 Oct 17 16:52	8°♉29'12	-4°47'49
greatest brilliancy	13346 Oct 18 09:19	8°♉13'15	-1.4m
min. Earth dist.	13346 Oct 22 01:10	6°♉48'08	0.64915 AU
	13346 Nov 12 19:09	30°♓℞	
direct	13346 Nov 28 04:50	28°♈27'33	
	13346 Dec 14 08:21	0°♉	
	13347 Feb 23 08:21	0°♊	
	13347 Apr 11 08:23	0°♋	

asc. node	13347 Apr 27 06:57	11°♋10'59	
	13347 May 22 23:19	0°♌	
	13347 Jul 01 01:25	0°♍	
	13347 Aug 08 03:21	0°♎	
	13347 Sep 15 08:58	0°♏	
evening set	13347 Oct 24 08:33	29°♏45'17	
	13347 Oct 24 16:25	0°♐	
	13347 Dec 04 17:34	0°♑	
conjunction	13347 Dec 23 05:35	13°♑02'52	0°38'26
minimum elong	13347 Dec 23 07:25	13°♑06'04	0°39'27
	13348 Jan 16 21:11	0°♒	
max. Earth dist.	13348 Jan 23 20:37	4°♒42'47	2.56025 AU
morning rise	13348 Feb 13 06:05	18°♒17'20	
desc. node	13348 Mar 02 04:28	29°♒59'40	
	13348 Mar 02 04:41	0°♓	
	13348 Apr 18 15:27	0°♈	
	13348 Jun 07 14:50	0°♉	
	13348 Aug 01 15:25	0°♊	
retrograde	13348 Oct 20 21:12	25°♊24'06	
opposition	13348 Nov 26 06:01	17°♊39'01	-4°40'54
greatest brilliancy	13348 Nov 27 15:06	17°♊08'37	-1.9m
min. Earth dist.	13348 Dec 04 04:34	14°♊44'41	0.54678 AU
direct	13349 Jan 04 20:03	8°♊17'37	
	13349 Mar 11 00:46	0°♋	
asc. node	13349 Mar 14 14:47	2°♋01'48	
	13349 Apr 26 22:14	0°♌	
	13349 Jun 06 19:25	0°♍	
	13349 Jul 15 21:42	0°♎	
	13349 Aug 24 00:31	0°♏	
	13349 Oct 03 06:04	0°♐	
	13349 Nov 14 05:17	0°♑	
evening set	13349 Dec 16 23:45	22°♑30'31	
	13349 Dec 28 03:14	0°♒	
desc. node	13350 Jan 17 18:11	13°♒40'36	
conjunction	13350 Feb 04 07:53	25°♒09'26	-0°09'52
minimum elong	13350 Feb 04 07:32	25°♒08'52	0°09'12
behind sun begin	13350 Feb 03 15:17	24°♒42'30	
behind sun end	13350 Feb 04 23:47	25°♒35'13	
	13350 Feb 11 19:16	0°♓	
max. Earth dist.	13350 Feb 18 05:06	4°♓08'02	2.64935 AU
morning rise	13350 Mar 21 17:34	24°♓15'32	
	13350 Mar 30 19:25	0°♈	
	13350 May 17 17:56	0°♉	
	13350 Jul 05 13:46	0°♊	
	13350 Aug 25 02:05	0°♋	
	13350 Oct 20 04:06	0°♌	
retrograde	13350 Dec 22 02:38	18°♌10'34	
opposition	13351 Jan 22 11:46	12°♌31'45	-0°35'35
greatest brilliancy	13351 Jan 22 17:01	12°♌27'45	-2.8m
min. Earth dist.	13351 Jan 29 19:21	10°♌18'53	0.40724 AU
asc. node	13351 Jan 31 00:01	9°♌58'02	
direct	13351 Feb 25 03:42	5°♌51'16	
	13351 May 02 16:38	0°♍	
	13351 Jun 17 09:34	0°♎	
	13351 Jul 29 21:55	0°♏	
	13351 Sep 10 14:20	0°♐	
	13351 Oct 24 12:11	0°♑	
desc. node	13351 Dec 05 14:36	27°♑51'29	
	13351 Dec 08 21:28	0°♒	
	13352 Jan 24 11:38	0°♓	
evening set	13352 Jan 26 21:15	1°♓31'51	
conjunction	13352 Mar 11 18:19	0°♈01'40	-0°48'32
minimum elong	13352 Mar 11 17:11	29°♓59'52	0°48'25
	13352 Mar 11 17:16	0°♈	

max. Earth dist.	13352 Mar 11 19:17	0°♈03'12	2.68404 AU
morning rise	13352 Apr 23 22:27	27°♈26'00	
	13352 Apr 27 23:09	0°♉	
	13352 Jun 13 17:46	0°♊	
	13352 Jul 29 19:40	0°♋	
	13352 Sep 13 04:32	0°♌	
	13352 Oct 28 04:22	0°♍	
	13352 Dec 13 04:39	0°♎	
asc. node	13352 Dec 18 04:11	3°♎06'21	
	13353 Feb 06 14:15	0°♏	
retrograde	13353 Mar 12 20:29	7°♏27'42	
min. Earth dist.	13353 Apr 07 18:58	3°♏12'58	0.37953 AU
greatest brilliancy	13353 Apr 12 00:30	2°♏00'52	-2.9m
opposition	13353 Apr 13 07:03	1°♏39'04	6°40'21
	13353 Apr 19 06:19	30°℞♎	
direct	13353 May 12 17:22	26°♎32'51	
	13353 Jun 05 10:41	0°♏	
	13353 Aug 09 12:23	0°♐	
	13353 Sep 29 03:19	0°♑	
desc. node	13353 Oct 22 19:29	14°♑29'01	
	13353 Nov 17 00:20	0°♒	
	13354 Jan 04 12:40	0°♓	
	13354 Feb 21 15:08	0°♈	
evening set	13354 Mar 02 16:49	5°♈42'31	
max. Earth dist.	13354 Apr 03 00:37	25°♈36'36	2.66321 AU
	13354 Apr 09 20:47	0°♉	
conjunction	13354 Apr 15 14:51	3°♉42'25	-1°09'13
minimum elong	13354 Apr 15 14:19	3°♉41'34	1°09'42
	13354 May 25 18:53	0°♊	
morning rise	13354 May 29 20:55	2°♊43'01	
	13354 Jul 09 03:28	0°♋	
	13354 Aug 20 21:07	0°♌	
	13354 Oct 01 03:40	0°♍	
asc. node	13354 Nov 04 22:45	25°♍54'59	
	13354 Nov 10 09:22	0°♎	
	13354 Dec 20 12:25	0°♏	
	13355 Jan 31 09:53	0°♐	
	13355 Mar 22 00:47	0°♑	
retrograde	13355 May 09 05:46	13°♑44'18	
min. Earth dist.	13355 Jun 08 01:56	7°♑36'52	0.50711 AU
greatest brilliancy	13355 Jun 15 00:10	5°♑02'49	-2.1m
opposition	13355 Jun 16 01:29	4°♑39'18	3°49'54
	13355 Jun 30 04:34	30°℞♐	
direct	13355 Jul 20 14:47	27°♐13'12	
	13355 Aug 11 15:10	0°♑	
desc. node	13355 Sep 10 06:14	10°♑00'19	
	13355 Oct 21 21:16	0°♒	
	13355 Dec 14 14:56	0°♓	
	13356 Feb 02 19:21	0°♈	
	13356 Mar 21 16:50	0°♉	
evening set	13356 Apr 06 13:12	10°♉14'30	
max. Earth dist.	13356 Apr 26 22:40	23°♉40'07	2.58889 AU
	13356 May 06 09:47	0°♊	
conjunction	13356 May 22 20:01	11°♊08'47	-1°03'57
minimum elong	13356 May 22 21:07	11°♊10'41	1°04'52
	13356 Jun 18 22:45	0°♋	
morning rise	13356 Jul 11 20:48	16°♋23'15	
	13356 Jul 30 11:35	0°♌	
	13356 Sep 08 09:09	0°♍	
asc. node	13356 Sep 21 13:14	10°♍06'43	
	13356 Oct 17 04:55	0°♎	
	13356 Nov 24 17:56	0°♏	
	13357 Jan 03 01:32	0°♐	
	13357 Feb 13 15:36	0°♑	
	13357 Apr 01 15:30	0°♒	
retrograde	13357 Jun 17 16:40	27°♒21'17	
min. Earth dist.	13357 Jul 23 04:48	19°♒16'23	0.62389 AU
opposition	13357 Jul 28 00:11	17°♒22'38	0°01'31
greatest brilliancy	13357 Jul 28 00:07	17°♒22'43	-1.6m
desc. node	13357 Jul 28 15:15	17°♒07'49	
direct	13357 Sep 04 14:16	8°♒27'43	
	13357 Nov 16 08:21	0°♓	
	13358 Jan 11 20:59	0°♈	
	13358 Mar 02 16:33	0°♉	
	13358 Apr 17 19:34	0°♊	
evening set	13358 May 17 17:52	20°♊34'07	
	13358 May 31 01:34	0°♋	
max. Earth dist.	13358 May 31 12:04	0°♋18'47	2.46725 AU
conjunction	13358 Jul 10 23:53	0°♌00'44	-0°20'00
minimum elong	13358 Jul 11 01:19	0°♌03'24	0°20'56
	13358 Jul 10 23:30	0°♌	
asc. node	13358 Aug 09 02:19	22°♌11'18	
	13358 Aug 19 04:16	0°♍	
morning rise	13358 Sep 14 00:44	20°♍15'14	
	13358 Sep 26 09:12	0°♎	
	13358 Nov 03 10:20	0°♏	
	13358 Dec 12 05:34	0°♐	
	13359 Jan 21 18:14	0°♑	
	13359 Mar 06 04:59	0°♒	
	13359 Apr 23 22:00	0°♓	
desc. node	13359 Jun 15 17:50	24°♓57'40	
	13359 Jul 03 16:03	0°♈	
retrograde	13359 Jul 22 09:16	2°♈02'16	
	13359 Aug 09 02:19	30°℞♓	
min. Earth dist.	13359 Aug 31 03:29	22°♓35'56	0.68105 AU
opposition	13359 Sep 01 04:21	22°♓11'19	-2°40'02
greatest brilliancy	13359 Sep 01 00:44	22°♓14'53	-1.3m
direct	13359 Oct 12 01:19	12°♓29'30	
	13359 Dec 14 21:14	0°♈	
	13360 Feb 09 09:13	0°♉	
	13360 Mar 28 04:53	0°♊	
	13360 May 10 18:11	0°♋	
	13360 Jun 20 11:08	0°♌	
asc. node	13360 Jun 25 18:56	4°♌02'37	
evening set	13360 Jul 11 18:51	16°♌19'49	
	13360 Jul 29 07:42	0°♍	
	13360 Sep 05 06:05	0°♎	
conjunction	13360 Sep 19 23:23	11°♎41'01	0°53'44
minimum elong	13360 Sep 19 19:26	11°♎33'10	0°53'49
	13360 Oct 13 04:20	0°♏	
max. Earth dist.	13360 Nov 03 03:04	16°♏19'10	2.37194 AU
	13360 Nov 20 23:37	0°♐	
morning rise	13360 Dec 01 17:41	8°♐06'58	
	13360 Dec 31 10:47	0°♑	
	13361 Feb 12 06:18	0°♒	
	13361 Mar 30 04:05	0°♓	
desc. node	13361 May 02 12:34	20°♓10'16	
	13361 May 19 22:11	0°♈	
	13361 Jul 26 11:55	0°♉	
retrograde	13361 Aug 24 23:25	4°♉33'39	
	13361 Sep 21 00:48	30°℞♈	
opposition	13361 Oct 03 22:00	25°♈15'59	-4°24'00
greatest brilliancy	13361 Oct 04 07:05	25°♈07'06	-1.3m
min. Earth dist.	13361 Oct 06 17:54	24°♈09'36	0.67138 AU
direct	13361 Nov 14 13:40	15°♈14'01	
	13362 Jan 09 16:19	0°♉	
	13362 Mar 05 18:01	0°♊	
	13362 Apr 20 00:28	0°♋	
asc. node	13362 May 13 20:02	17°♋06'36	
	13362 May 31 03:26	0°♌	

	13362 Jul 09 01:07	0°♍	
	13362 Aug 16 00:06	0°♎	
	13362 Sep 23 01:56	0°♏	
evening set	13362 Sep 26 14:45	2°♏45'13	
	13362 Nov 01 04:19	0°♐	
conjunction	13362 Dec 01 16:42	22°♐34'12	0°55'12
minimum elong	13362 Dec 01 18:58	22°♐38'19	0°56'12
	13362 Dec 11 23:47	0°♑	
max. Earth dist.	13363 Jan 10 19:03	20°♑58'58	2.51158 AU
	13363 Jan 23 22:42	0°♒	
morning rise	13363 Jan 27 06:25	2°♒15'15	
	13363 Mar 10 05:55	0°♓	
desc. node	13363 Mar 20 00:44	6°♓16'26	
	13363 Apr 27 02:59	0°♈	
	13363 Jun 17 16:44	0°♉	
	13363 Aug 19 04:50	0°♊	
retrograde	13363 Oct 03 12:29	9°♊47'10	
opposition	13363 Nov 10 05:47	1°♊28'03	-4°59'05
greatest brilliancy	13363 Nov 11 09:50	1°♊01'30	-1.6m
	13363 Nov 14 02:42	30°℞♉	
min. Earth dist.	13363 Nov 16 21:24	28°♉57'24	0.59425 AU
direct	13363 Dec 20 22:01	21°♉41'28	
	13364 Jan 28 10:49	0°♊	
	13364 Mar 24 18:11	0°♋	
asc. node	13364 Mar 31 03:53	4°♋08'36	
	13364 May 07 08:09	0°♌	
	13364 Jun 16 04:06	0°♍	
	13364 Jul 24 16:41	0°♎	
	13364 Sep 01 08:06	0°♏	
	13364 Oct 11 02:24	0°♐	
	13364 Nov 21 14:52	0°♑	
evening set	13364 Nov 28 00:42	4°♑30'26	
	13365 Jan 04 03:46	0°♒	
conjunction	13365 Jan 19 12:40	10°♒16'41	0°08'31
minimum elong	13365 Jan 19 13:03	10°♒17'20	0°09'21
behind sun begin	13365 Jan 18 20:08	9°♒49'14	
behind sun end	13365 Jan 20 05:59	10°♒45'24	
desc. node	13365 Feb 03 11:25	20°♒08'13	
max. Earth dist.	13365 Feb 08 18:42	23°♒36'18	2.62094 AU
	13365 Feb 18 14:44	0°♓	
morning rise	13365 Mar 07 20:14	11°♓05'20	
	13365 Apr 06 16:28	0°♈	
	13365 May 25 04:03	0°♉	
	13365 Jul 14 12:07	0°♊	
	13365 Sep 07 07:56	0°♋	
retrograde	13365 Nov 24 15:31	24°♋59'02	
opposition	13365 Dec 28 03:01	18°♋25'03	-2°58'16
greatest brilliancy	13365 Dec 29 05:28	18°♋02'50	-2.4m
min. Earth dist.	13366 Jan 05 20:36	15°♋29'39	0.46079 AU
direct	13366 Feb 02 18:46	10°♋22'24	
asc. node	13366 Feb 16 12:11	11°♋41'18	
	13366 Apr 02 23:43	0°♌	
	13366 May 19 11:43	0°♍	
	13366 Jun 29 18:17	0°♎	
	13366 Aug 09 06:18	0°♏	
	13366 Sep 19 14:43	0°♐	
	13366 Nov 01 12:51	0°♑	
	13366 Dec 16 04:45	0°♒	
desc. node	13366 Dec 22 04:43	3°♒56'52	
evening set	13367 Jan 11 21:59	17°♒28'11	
	13367 Jan 31 08:03	0°♓	
conjunction	13367 Feb 27 00:43	17°♓03'39	-0°35'21
minimum elong	13367 Feb 26 23:42	17°♓02'02	0°35'01
max. Earth dist.	13367 Mar 04 03:42	20°♓19'13	2.67714 AU
	13367 Mar 19 09:49	0°♈	
morning rise	13367 Apr 11 16:10	14°♈43'33	
	13367 May 05 19:55	0°♉	
	13367 Jun 22 05:01	0°♊	
	13367 Aug 08 11:21	0°♋	
	13367 Sep 24 23:11	0°♌	
	13367 Nov 13 03:53	0°♍	
asc. node	13368 Jan 04 19:06	26°♍48'45	
	13368 Jan 13 17:08	0°♎	
retrograde	13368 Feb 10 23:04	4°♎52'33	
opposition	13368 Mar 11 13:24	29°♍58'34	4°50'57
greatest brilliancy	13368 Mar 11 10:27	0°♎00'32	-3.0m
	13368 Mar 11 11:15	30°℞♍	
min. Earth dist.	13368 Mar 11 12:22	29°♍59'16	0.36370 AU
direct	13368 Apr 09 23:16	25°♍05'32	
	13368 May 07 18:39	0°♎	
	13368 Jul 06 14:17	0°♏	
	13368 Aug 23 09:52	0°♐	
	13368 Oct 09 02:01	0°♑	
desc. node	13368 Nov 08 06:27	19°♑17'15	
	13368 Nov 25 03:23	0°♒	
	13369 Jan 11 17:08	0°♓	
evening set	13369 Feb 17 00:56	22°♓50'41	
	13369 Feb 28 09:18	0°♈	
max. Earth dist.	13369 Mar 25 10:22	15°♈51'49	2.67802 AU
conjunction	13369 Apr 01 23:00	20°♈39'24	-1°03'47
minimum elong	13369 Apr 01 22:05	20°♈37'57	1°04'03
	13369 Apr 16 13:32	0°♉	
morning rise	13369 May 15 08:24	18°♉36'26	
	13369 Jun 01 17:58	0°♊	
	13369 Jul 16 15:36	0°♋	
	13369 Aug 29 04:00	0°♌	
	13369 Oct 10 09:44	0°♍	
	13369 Nov 20 19:32	0°♎	
asc. node	13369 Nov 21 18:47	0°♎42'14	
	13370 Jan 01 15:24	0°♏	
	13370 Feb 16 16:00	0°♐	
retrograde	13370 Apr 19 21:35	21°♐46'42	
min. Earth dist.	13370 May 17 08:39	16°♐34'22	0.45177 AU
greatest brilliancy	13370 May 24 04:30	14°♐12'58	-2.4m
opposition	13370 May 25 17:33	13°♐40'46	5°27'59
direct	13370 Jun 27 05:41	7°♐06'50	
	13370 Sep 07 15:56	0°♑	
desc. node	13370 Sep 26 14:55	9°♑48'58	
	13370 Nov 01 20:06	0°♒	
	13370 Dec 22 18:39	0°♓	
	13371 Feb 09 22:30	0°♈	
evening set	13371 Mar 24 08:05	26°♈41'45	
	13371 Mar 29 11:47	0°♉	
max. Earth dist.	13371 Apr 17 15:45	12°♉25'05	2.62422 AU
conjunction	13371 May 08 05:10	25°♉58'40	-1°09'46
minimum elong	13371 May 08 05:34	25°♉59'20	1°10'33
	13371 May 14 05:39	0°♊	
morning rise	13371 Jun 24 04:37	28°♊00'17	
	13371 Jun 27 01:07	0°♋	
	13371 Aug 07 23:41	0°♌	
	13371 Sep 17 07:56	0°♍	
asc. node	13371 Oct 09 09:14	16°♍47'19	
	13371 Oct 26 13:53	0°♎	
	13371 Dec 04 12:28	0°♏	
	13372 Jan 13 08:35	0°♐	
	13372 Feb 25 03:31	0°♑	
	13372 Apr 17 11:19	0°♒	
retrograde	13372 Jun 03 01:34	12°♒11'03	
min. Earth dist.	13372 Jul 06 12:01	4°♒47'20	0.58407 AU

opposition	13372 Jul 12 17:10	2°♒22'07	1°21'59
greatest brilliancy	13372 Jul 12 09:58	2°♒29'09	-1.7m
	13372 Jul 18 23:11	30°℞♉	
desc. node	13372 Aug 14 01:21	24°♉04'36	
direct	13372 Aug 18 23:03	23°♉55'30	
	13372 Sep 22 06:07	0°♒	
	13372 Nov 28 00:38	0°♓	
	13373 Jan 20 01:40	0°♈	
	13373 Mar 09 22:08	0°♉	
	13373 Apr 24 19:33	0°♊	
evening set	13373 Apr 30 15:41	3°♊56'47	
max. Earth dist.	13373 May 16 00:35	14°♊28'39	2.51929 AU
	13373 Jun 07 03:22	0°♋	
conjunction	13373 Jun 19 19:57	9°♋06'16	-0°42'30
minimum elong	13373 Jun 19 21:51	9°♋09'42	0°43'31
	13373 Jul 18 06:19	0°♌	
morning rise	13373 Aug 16 15:32	22°♌15'26	
asc. node	13373 Aug 25 21:10	29°♌22'10	
	13373 Aug 26 16:45	0°♍	
	13373 Oct 04 02:35	0°♎	
	13373 Nov 11 07:06	0°♏	
	13373 Dec 20 04:58	0°♐	
	13374 Jan 29 22:43	0°♑	
	13374 Mar 15 02:20	0°♒	
	13374 May 05 21:41	0°♓	
desc. node	13374 Jul 02 08:07	18°♓58'33	
retrograde	13374 Jul 09 03:49	19°♓16'12	
min. Earth dist.	13374 Aug 16 10:02	10°♓18'34	0.66634 AU
opposition	13374 Aug 18 22:35	9°♓18'34	-1°44'50
greatest brilliancy	13374 Aug 18 17:50	9°♓23'16	-1.4m
	13374 Sep 23 07:58	30°℞♒	
direct	13374 Sep 28 02:23	29°♒51'39	
	13374 Oct 02 22:36	0°♓	
	13374 Dec 27 01:29	0°♈	
	13375 Feb 17 19:00	0°♉	
	13375 Apr 05 17:48	0°♊	
	13375 May 19 02:45	0°♋	
evening set	13375 Jun 18 06:58	22°♋03'27	
	13375 Jun 28 20:54	0°♌	
max. Earth dist.	13375 Jul 11 11:22	9°♌35'02	2.38402 AU
asc. node	13375 Jul 13 12:57	11°♌10'00	
	13375 Aug 06 19:56	0°♍	
conjunction	13375 Aug 21 00:41	11°♍09'19	0°26'52
minimum elong	13375 Aug 20 22:05	11°♍04'11	0°26'24
	13375 Sep 13 20:06	0°♎	
	13375 Oct 21 18:29	0°♏	
morning rise	13375 Nov 03 05:35	9°♏45'03	
	13375 Nov 29 12:25	0°♐	
	13376 Jan 08 22:19	0°♑	
	13376 Feb 20 19:59	0°♒	
	13376 Apr 07 08:41	0°♓	
desc. node	13376 May 19 05:41	24°♓02'18	
	13376 May 30 20:46	0°♈	
retrograde	13376 Aug 11 05:42	22°♈03'26	
opposition	13376 Sep 20 16:02	12°♈30'18	-3°50'31
greatest brilliancy	13376 Sep 20 18:50	12°♈27'33	-1.3m
min. Earth dist.	13376 Sep 21 23:42	11°♈59'09	0.68322 AU
direct	13376 Nov 01 04:48	2°♈33'07	
	13377 Jan 22 23:40	0°♉	
	13377 Mar 14 18:19	0°♊	
	13377 Apr 28 02:34	0°♋	
asc. node	13377 May 30 10:13	23°♋33'39	
	13377 Jun 07 23:39	0°♌	
	13377 Jul 16 19:51	0°♍	
	13377 Aug 23 17:48	0°♎	
evening set	13377 Aug 26 19:13	2°♎25'43	
	13377 Sep 30 17:16	0°♏	
conjunction	13377 Nov 06 07:48	28°♏14'20	1°05'32
minimum elong	13377 Nov 06 08:47	28°♏16'13	1°06'21
	13377 Nov 08 15:37	0°♐	
	13377 Dec 19 06:22	0°♑	
max. Earth dist.	13377 Dec 25 10:30	4°♑25'46	2.45666 AU
morning rise	13378 Jan 07 23:36	14°♑01'33	
	13378 Jan 31 01:52	0°♒	
	13378 Mar 17 11:13	0°♓	
desc. node	13378 Apr 05 19:13	12°♓13'06	
	13378 May 05 00:55	0°♈	
	13378 Jun 28 07:40	0°♉	
retrograde	13378 Sep 17 03:10	25°♉35'48	
opposition	13378 Oct 25 22:00	16°♉49'50	-4°56'20
greatest brilliancy	13378 Oct 26 18:47	16°♉29'49	-1.5m
min. Earth dist.	13378 Oct 31 02:51	14°♉49'48	0.63228 AU
direct	13378 Dec 06 05:33	6°♉51'01	
	13379 Feb 15 09:44	0°♊	
	13379 Apr 05 07:51	0°♋	
asc. node	13379 Apr 17 15:30	8°♋27'23	
	13379 May 17 11:34	0°♌	
	13379 Jun 25 18:40	0°♍	
	13379 Aug 02 23:37	0°♎	
	13379 Sep 10 07:52	0°♏	
	13379 Oct 19 18:11	0°♐	
evening set	13379 Nov 07 06:15	13°♐39'31	
	13379 Nov 29 22:23	0°♑	
conjunction	13380 Jan 03 02:20	23°♑49'27	0°27'37
minimum elong	13380 Jan 03 03:39	23°♑51'42	0°28'36
	13380 Jan 12 04:06	0°♒	
max. Earth dist.	13380 Jan 30 08:14	12°♒11'26	2.58420 AU
desc. node	13380 Feb 21 06:00	26°♒35'59	
morning rise	13380 Feb 22 03:17	27°♒10'35	
	13380 Feb 26 11:39	0°♓	
	13380 Apr 13 17:26	0°♈	
	13380 Jun 02 00:28	0°♉	
	13380 Jul 24 18:48	0°♊	
	13380 Sep 29 14:35	0°♋	
retrograde	13380 Nov 01 09:08	5°♋35'09	
	13380 Dec 01 17:13	30°℞♊	
opposition	13380 Dec 06 20:20	28°♊12'32	-4°16'24
greatest brilliancy	13380 Dec 08 05:54	27°♊42'27	-2.0m
min. Earth dist.	13380 Dec 15 08:03	25°♊10'37	0.51741 AU
direct	13381 Jan 14 14:54	19°♊12'13	
	13381 Feb 26 13:15	0°♋	
asc. node	13381 Mar 05 01:47	3°♋03'57	
	13381 Apr 19 09:53	0°♌	
	13381 May 31 09:52	0°♍	
	13381 Jul 10 00:29	0°♎	
	13381 Aug 18 11:33	0°♏	
	13381 Sep 27 23:58	0°♐	
	13381 Nov 09 05:27	0°♑	
	13381 Dec 23 08:17	0°♒	
evening set	13381 Dec 26 20:52	2°♒20'42	
desc. node	13382 Jan 07 19:37	10°♒14'43	
	13382 Feb 07 03:21	0°♓	
conjunction	13382 Feb 12 19:56	3°♓40'06	-0°19'51
minimum elong	13382 Feb 12 19:16	3°♓39'01	0°19'18
max. Earth dist.	13382 Feb 23 11:13	10°♓29'39	2.66173 AU
	13382 Mar 26 03:07	0°♈	
morning rise	13382 Mar 29 10:27	2°♈05'25	
	13382 May 12 19:58	0°♉	
	13382 Jun 30 00:56	0°♊	

	13382 Aug 18	01:48	0°♋		
	13382 Oct 08	13:42	0°♌		
	13382 Dec 13	20:04	0°♍		
retrograde	13383 Jan 08	13:45	3°♍51'17		
asc. node	13383 Jan 21	09:40	2°♍49'20		
	13383 Feb 03	02:43	30°℞♌		
opposition	13383 Feb 07	21:31	28°♌40'11	1°17'39	
greatest brilliancy	13383 Feb 08	03:13	28°♌36'09	-2.9m	
min. Earth dist.	13383 Feb 13	08:38	27°♌07'43	0.38402 AU	
direct	13383 Mar 11	15:50	22°♌48'47		
	13383 Apr 14	04:05	0°♍		
	13383 Jun 07	19:56	0°♎		
	13383 Jul 22	13:49	0°♏		
	13383 Sep 04	09:12	0°♐		
	13383 Oct 19	00:08	0°♑		
desc. node	13383 Nov 25	17:45	24°♑44'57		
	13383 Dec 03	20:23	0°♒		
	13384 Jan 19	17:25	0°♓		
evening set	13384 Feb 04	02:23	9°♓45'09		
	13384 Mar 07	02:03	0°♈		
max. Earth dist.	13384 Mar 16	19:24	6°♈09'32	2.68431 AU	
conjunction	13384 Mar 19	11:58	7°♈51'52	-0°55'04	
minimum elong	13384 Mar 19	10:50	7°♈50'06	0°55'06	
	13384 Apr 23	06:54	0°♉		
morning rise	13384 May 01	14:32	5°♉19'20		
	13384 Jun 08	19:58	0°♊		
	13384 Jul 24	10:23	0°♋		
	13384 Sep 07	00:27	0°♌		
	13384 Oct 20	17:58	0°♍		
	13384 Dec 03	08:45	0°♎		
asc. node	13384 Dec 08	11:10	3°♎27'25		
	13385 Jan 18	17:27	0°♏		
retrograde	13385 Mar 27	22:46	25°♏05'39		
min. Earth dist.	13385 Apr 22	17:54	20°♏39'38	0.40110 AU	
greatest brilliancy	13385 Apr 28	09:20	18°♏56'04	-2.7m	
opposition	13385 Apr 29	23:48	18°♏26'18	6°38'26	
direct	13385 May 30	11:13	12°♏51'19		
	13385 Jul 28	10:54	0°♐		
	13385 Sep 21	20:23	0°♑		
desc. node	13385 Oct 13	01:21	12°♑28'45		
	13385 Nov 11	06:05	0°♒		
	13385 Dec 30	11:10	0°♓		
	13386 Feb 16	21:25	0°♈		
evening set	13386 Mar 10	12:26	13°♈36'17		
	13386 Apr 05	05:29	0°♉		
max. Earth dist.	13386 Apr 08	06:40	1°♉57'45	2.65165 AU	
conjunction	13386 Apr 23	15:02	11°♉54'23	-1°10'42	
minimum elong	13386 Apr 23	14:48	11°♉54'01	1°11'18	
	13386 May 21	02:17	0°♊		
morning rise	13386 Jun 07	14:59	11°♊45'56		
	13386 Jul 04	06:14	0°♋		
	13386 Aug 15	16:54	0°♌		
	13386 Sep 25	14:39	0°♍		
asc. node	13386 Oct 26	05:30	23°♍01'22		
	13386 Nov 04	10:21	0°♎		
	13386 Dec 13	23:58	0°♏		
	13387 Jan 23	19:45	0°♐		
	13387 Mar 10	09:26	0°♑		
retrograde	13387 May 19	02:44	25°♑06'01		
min. Earth dist.	13387 Jun 19	06:30	18°♑29'50	0.53635 AU	
opposition	13387 Jun 26	17:38	15°♑39'57	2°53'32	
greatest brilliancy	13387 Jun 25	23:36	15°♑57'04	-2.0m	
direct	13387 Aug 01	08:38	7°♑49'29		
desc. node	13387 Aug 31	11:59	12°♑44'18		
	13387 Oct 13	06:05	0°♒		
	13387 Dec 08	17:06	0°♓		
	13388 Jan 28	17:45	0°♈		
	13388 Mar 16	22:40	0°♉		
evening set	13388 Apr 15	00:28	18°♉52'18		
	13388 May 01	17:27	0°♊		
max. Earth dist.	13388 May 03	09:53	1°♊08'05	2.56602 AU	
conjunction	13388 Jun 01	09:56	21°♊00'52	-0°57'58	
minimum elong	13388 Jun 01	11:26	21°♊03'29	0°58'57	
	13388 Jun 14	04:56	0°♋		
morning rise	13388 Jul 23	17:37	28°♋36'31		
	13388 Jul 25	14:43	0°♌		
	13388 Sep 03	08:30	0°♍		
asc. node	13388 Sep 11	18:10	6°♍27'57		
	13388 Oct 12	00:41	0°♎		
	13388 Nov 19	10:06	0°♏		
	13388 Dec 28	12:37	0°♐		
	13389 Feb 07	15:57	0°♑		
	13389 Mar 25	03:30	0°♒		
	13389 May 24	13:39	0°♓		
retrograde	13389 Jun 25	15:38	5°♓53'36		
desc. node	13389 Jul 18	20:08	2°♓16'21		
	13389 Jul 25	14:02	30°℞♒		
min. Earth dist.	13389 Aug 01	04:44	27°♒28'34	0.64165 AU	
opposition	13389 Aug 05	04:43	25°♒53'39	-0°40'33	
greatest brilliancy	13389 Aug 05	01:59	25°♒56'22	-1.5m	
direct	13389 Sep 13	09:54	16°♒45'48		
	13389 Nov 06	14:24	0°♓		
	13390 Jan 05	22:11	0°♈		
	13390 Feb 25	14:33	0°♉		
	13390 Apr 13	00:17	0°♊		
	13390 May 26	07:29	0°♋		
evening set	13390 May 28	09:18	1°♋29'07		
max. Earth dist.	13390 Jun 11	11:20	11°♋40'38	2.43662 AU	
	13390 Jul 06	04:21	0°♌		
conjunction	13390 Jul 24	15:14	14°♌01'09	-0°04'01	
minimum elong	13390 Jul 24	15:38	14°♌01'55	0°04'50	
behind sun begin	13390 Jul 23	14:05	13°♌13'00		
behind sun end	13390 Jul 25	17:12	14°♌50'54		
asc. node	13390 Jul 30	06:57	18°♌21'54		
	13390 Aug 14	07:10	0°♍		
	13390 Sep 21	10:25	0°♎		
morning rise	13390 Oct 01	21:02	8°♎15'49		
	13390 Oct 29	10:20	0°♏		
	13390 Dec 07	04:23	0°♐		
	13391 Jan 16	14:49	0°♑		
	13391 Feb 28	18:10	0°♒		
	13391 Apr 17	08:35	0°♓		
desc. node	13391 Jun 05	21:59	25°♓51'51		
	13391 Jun 15	22:52	0°♈		
retrograde	13391 Jul 29	21:22	9°♈39'30		
opposition	13391 Sep 08	15:02	29°♓54'02	-3°08'30	
min. Earth dist.	13391 Sep 08	10:21	29°♓58'39	0.68477 AU	
	13391 Sep 08	08:59	30°℞♓		
greatest brilliancy	13391 Sep 08	13:08	29°♓55'55	-1.3m	
direct	13391 Oct 19	19:21	20°♓05'36		
	13391 Dec 04	07:38	0°♈		
	13392 Feb 03	08:00	0°♉		
	13392 Mar 23	00:34	0°♊		
	13392 May 05	20:09	0°♋		
	13392 Jun 15	14:39	0°♌		
asc. node	13392 Jun 16	02:56	0°♌23'14		
	13392 Jul 24	10:55	0°♍		
evening set	13392 Jul 27	09:26	2°♍18'31		
	13392 Aug 31	08:46	0°♎		

conjunction	13392 Oct 07 19:43	29°♎38'09	1°02'56
minimum elong	13392 Oct 07 17:12	29°♎33'14	1°03'21
	13392 Oct 08 06:50	0°♏	
	13392 Nov 16 02:18	0°♐	
max. Earth dist.	13392 Nov 30 22:18	11°♐09'52	2.39977 AU
morning rise	13392 Dec 16 10:05	22°♐37'07	
	13392 Dec 26 13:41	0°♑	
	13393 Feb 07 07:44	0°♒	
	13393 Mar 24 22:39	0°♓	
desc. node	13393 Apr 22 14:03	17°♓41'05	
	13393 May 13 15:02	0°♈	
	13393 Jul 12 08:13	0°♉	
retrograde	13393 Sep 02 02:17	12°♉21'12	
opposition	13393 Oct 11 16:52	3°♉13'42	-4°39'06
greatest brilliancy	13393 Oct 12 05:59	3°♉00'56	-1.3m
min. Earth dist.	13393 Oct 15 09:19	1°♉47'40	0.66048 AU
	13393 Oct 20 02:29	30°℞♈	
direct	13393 Nov 22 07:49	23°♈11'10	
	13393 Dec 28 04:23	0°♉	
	13394 Feb 27 06:34	0°♊	
	13394 Apr 14 12:30	0°♋	
asc. node	13394 May 04 05:44	13°♋58'30	
	13394 May 25 23:11	0°♌	
	13394 Jul 03 23:46	0°♍	
	13394 Aug 11 00:21	0°♎	
	13394 Sep 18 03:39	0°♏	
evening set	13394 Oct 12 17:07	18°♏56'30	
	13394 Oct 27 07:37	0°♐	
	13394 Dec 07 04:51	0°♑	
conjunction	13394 Dec 14 06:59	5°♑03'14	0°46'01
minimum elong	13394 Dec 14 09:08	5°♑07'02	0°47'02
max. Earth dist.	13395 Jan 18 12:28	29°♑32'18	2.53928 AU
	13395 Jan 19 04:44	0°♒	
morning rise	13395 Feb 06 03:56	12°♒05'33	
	13395 Mar 05 10:33	0°♓	
desc. node	13395 Mar 10 00:07	2°♓56'48	
	13395 Apr 21 23:48	0°♈	
	13395 Jun 11 11:58	0°♉	
	13395 Aug 07 16:48	0°♊	
retrograde	13395 Oct 13 15:01	18°♊56'03	
opposition	13395 Nov 19 15:33	10°♊54'49	-4°51'25
greatest brilliancy	13395 Nov 20 22:52	10°♊25'37	-1.7m
min. Earth dist.	13395 Nov 27 01:30	8°♊09'28	0.56908 AU
direct	13395 Dec 29 19:18	1°♊20'08	
	13396 Mar 16 19:26	0°♋	
asc. node	13396 Mar 21 13:18	2°♋52'55	
	13396 May 01 00:36	0°♌	
	13396 Jun 10 09:43	0°♍	
	13396 Jul 19 05:17	0°♎	
	13396 Aug 27 02:04	0°♏	
	13396 Oct 06 01:09	0°♐	
	13396 Nov 16 18:06	0°♑	
evening set	13396 Dec 09 01:22	15°♑29'13	
	13396 Dec 30 10:27	0°♒	
desc. node	13397 Jan 24 12:52	16°♒40'39	
conjunction	13397 Jan 28 16:20	19°♒23'53	-0°02'22
minimum elong	13397 Jan 28 16:17	19°♒23'48	0°01'37
behind sun begin	13397 Jan 27 20:24	18°♒51'14	
behind sun end	13397 Jan 29 12:10	19°♒56'21	
	13397 Feb 13 23:01	0°♓	
max. Earth dist.	13397 Feb 14 09:21	0°♓16'43	2.63762 AU
morning rise	13397 Mar 15 20:30	19°♓10'42	
	13397 Apr 01 22:42	0°♈	
	13397 May 20 01:51	0°♉	
	13397 Jul 08 11:13	0°♊	
	13397 Aug 29 10:34	0°♋	
	13397 Oct 31 06:28	0°♌	
retrograde	13397 Dec 09 11:22	7°♌57'53	
opposition	13398 Jan 10 19:07	1°♌54'00	-1°46'05
greatest brilliancy	13398 Jan 11 11:07	1°♌41'12	-2.6m
	13398 Jan 16 17:24	30°℞♋	
min. Earth dist.	13398 Jan 19 00:12	29°♋17'10	0.43010 AU
asc. node	13398 Feb 06 22:30	25°♋01'38	
direct	13398 Feb 14 21:16	24°♋34'09	
	13398 Mar 15 13:08	0°♌	
	13398 May 10 08:57	0°♍	
	13398 Jun 22 12:33	0°♎	
	13398 Aug 02 22:53	0°♏	
	13398 Sep 13 22:07	0°♐	
	13398 Oct 27 07:21	0°♑	
	13398 Dec 11 07:16	0°♒	
desc. node	13398 Dec 12 08:12	0°♒40'52	
evening set	13399 Jan 20 13:25	26°♒05'42	
	13399 Jan 26 15:37	0°♓	
conjunction	13399 Mar 06 22:01	25°♓00'34	-0°43'23
minimum elong	13399 Mar 06 20:54	24°♓58'47	0°43'12
max. Earth dist.	13399 Mar 09 03:37	26°♓25'35	2.68196 AU
	13399 Mar 14 18:52	0°♈	
morning rise	13399 Apr 19 05:54	22°♈28'31	
	13399 May 01 02:23	0°♉	
	13399 Jun 17 03:14	0°♊	
	13399 Aug 02 16:49	0°♋	
	13399 Sep 17 21:37	0°♌	
	13399 Nov 03 07:47	0°♍	
	13399 Dec 22 15:39	0°♎	
asc. node	13399 Dec 26 03:56	1°♎56'38	
retrograde	13400 Feb 28 20:00	23°♎44'15	
min. Earth dist.	13400 Mar 27 20:36	19°♎22'55	0.36818 AU
greatest brilliancy	13400 Mar 30 09:48	18°♎41'26	-3.0m
opposition	13400 Mar 31 04:45	18°♎28'34	6°12'16
direct	13400 Apr 29 05:54	13°♎36'31	
	13400 Jun 24 01:40	0°♏	
	13400 Aug 16 07:38	0°♐	
	13400 Oct 03 19:32	0°♑	
desc. node	13400 Oct 30 11:19	16°♑40'50	
	13400 Nov 20 18:27	0°♒	
	13401 Jan 07 19:48	0°♓	
	13401 Feb 24 17:26	0°♈	
evening set	13401 Feb 25 20:43	0°♈42'58	
max. Earth dist.	13401 Mar 31 10:50	21°♈59'58	2.67082 AU
conjunction	13401 Apr 10 17:22	28°♈34'22	-1°07'26
minimum elong	13401 Apr 10 16:39	28°♈33'13	1°07'50
	13401 Apr 12 22:43	0°♉	
morning rise	13401 May 24 12:35	27°♉02'28	
	13401 May 29 00:09	0°♊	
	13401 Jul 12 14:52	0°♋	
	13401 Aug 24 17:10	0°♌	
	13401 Oct 05 09:37	0°♍	
asc. node	13401 Nov 12 23:46	28°♍25'53	
	13401 Nov 15 02:35	0°♎	
	13401 Dec 25 19:40	0°♏	
	13402 Feb 06 21:09	0°♐	
	13402 Apr 04 10:25	0°♑	
retrograde	13402 May 02 04:17	5°♑09'11	
	13402 May 29 07:46	30°℞♐	
min. Earth dist.	13402 May 30 22:10	29°♐26'42	0.48245 AU
greatest brilliancy	13402 Jun 06 22:16	26°♐55'10	-2.2m
opposition	13402 Jun 08 05:10	26°♐27'14	4°33'04
direct	13402 Jul 11 21:06	19°♐23'18	
	13402 Aug 26 19:42	0°♑	

desc. node	13402 Sep 17 21:33	9°♋44'12	
	13402 Oct 26 22:47	0°♒	
	13402 Dec 18 08:00	0°♓	
	13403 Feb 06 01:26	0°♈	
	13403 Mar 25 19:57	0°♉	
evening set	13403 Apr 02 08:29	4°♉50'23	
max. Earth dist.	13403 Apr 24 09:43	19°♉13'48	2.60566 AU
	13403 May 10 14:23	0°♊	
conjunction	13403 May 17 22:06	4°♊55'47	-1°07'05
minimum elong	13403 May 17 22:55	4°♊57'09	1°07'58
	13403 Jun 23 07:09	0°♋	
morning rise	13403 Jul 05 10:48	8°♋35'40	
	13403 Aug 04 01:11	0°♌	
	13403 Sep 13 03:52	0°♍	
asc. node	13403 Sep 30 14:45	13°♍20'49	
	13403 Oct 22 04:08	0°♎	
	13403 Nov 29 20:47	0°♏	
	13404 Jan 08 08:00	0°♐	
	13404 Feb 19 06:14	0°♑	
	13404 Apr 07 15:20	0°♒	
retrograde	13404 Jun 12 13:11	21°♒31'26	
min. Earth dist.	13404 Jul 17 03:58	13°♒44'00	0.60734 AU
opposition	13404 Jul 22 14:29	11°♒35'55	0°33'52
greatest brilliancy	13404 Jul 22 11:53	11°♒38'28	-1.6m
desc. node	13404 Aug 05 07:28	6°♒39'53	
direct	13404 Aug 29 15:05	2°♒52'35	
	13404 Nov 21 16:19	0°♓	
	13405 Jan 15 14:00	0°♈	
	13405 Mar 06 00:22	0°♉	
	13405 Apr 21 02:23	0°♊	
evening set	13405 May 11 02:29	13°♊37'52	
max. Earth dist.	13405 May 25 05:45	23°♊29'14	2.49120 AU
	13405 Jun 03 10:28	0°♋	
conjunction	13405 Jul 02 08:16	20°♋58'18	-0°30'32
minimum elong	13405 Jul 02 10:03	21°♋01'35	0°31'30
	13405 Jul 14 11:49	0°♌	
asc. node	13405 Aug 17 03:51	25°♌37'05	
	13405 Aug 22 19:44	0°♍	
morning rise	13405 Sep 01 23:58	7°♍55'01	
	13405 Sep 30 03:01	0°♎	
	13405 Nov 07 05:18	0°♏	
greatest brilliancy	13405 Nov 19 15:09	9°♏41'33	1.2m
	13405 Dec 16 00:33	0°♐	
	13406 Jan 25 13:29	0°♑	
	13406 Mar 10 04:00	0°♒	
	13406 Apr 28 17:40	0°♓	
desc. node	13406 Jun 23 11:18	23°♓47'09	
retrograde	13406 Jul 17 17:55	27°♓08'53	
min. Earth dist.	13406 Aug 25 21:09	17°♓54'40	0.67583 AU
opposition	13406 Aug 27 13:42	17°♓14'31	-2°18'23
greatest brilliancy	13406 Aug 27 09:13	17°♓18'58	-1.3m
direct	13406 Oct 07 03:38	7°♓38'41	
	13406 Dec 20 10:52	0°♈	
	13407 Feb 13 05:32	0°♉	
	13407 Apr 01 17:40	0°♊	
	13407 May 15 06:29	0°♋	
	13407 Jun 25 01:15	0°♌	
evening set	13407 Jul 02 13:37	5°♌42'11	
asc. node	13407 Jul 04 19:21	7°♌24'40	
	13407 Aug 02 23:36	0°♍	
max. Earth dist.	13407 Aug 24 08:47	16°♍50'37	2.36369 AU
conjunction	13407 Sep 08 02:15	28°♍31'15	0°43'22
minimum elong	13407 Sep 07 22:19	28°♍23'26	0°43'11
	13407 Sep 09 22:59	0°♎	
	13407 Oct 17 21:01	0°♏	
morning rise	13407 Nov 21 08:15	26°♏44'34	
	13407 Nov 25 14:45	0°♐	
	13408 Jan 04 23:50	0°♑	
	13408 Feb 16 18:15	0°♒	
	13408 Apr 02 19:12	0°♓	
desc. node	13408 May 10 07:16	22°♓17'55	
	13408 May 24 08:31	0°♈	
retrograde	13408 Aug 19 23:50	29°♈41'25	
opposition	13408 Sep 29 04:55	20°♈16'26	-4°11'14
greatest brilliancy	13408 Sep 29 11:05	20°♈10'23	-1.3m
min. Earth dist.	13408 Oct 01 08:58	19°♈25'24	0.67803 AU
direct	13408 Nov 09 20:27	10°♈15'52	
	13409 Jan 15 22:36	0°♉	
	13409 Mar 09 23:33	0°♊	
	13409 Apr 23 21:21	0°♋	
asc. node	13409 May 21 18:39	20°♋09'07	
	13409 Jun 03 22:53	0°♌	
	13409 Jul 12 20:25	0°♍	
	13409 Aug 19 18:55	0°♎	
greatest brilliancy	13409 Sep 03 06:36	11°♎28'48	1.1m
evening set	13409 Sep 14 07:28	20°♎11'43	
	13409 Sep 26 19:16	0°♏	
	13409 Nov 04 18:53	0°♐	
conjunction	13409 Nov 22 03:31	12°♐58'58	1°00'46
minimum elong	13409 Nov 22 05:34	13°♐02'44	1°01'43
	13409 Dec 15 10:55	0°♑	
max. Earth dist.	13410 Jan 05 05:07	14°♑44'38	2.48765 AU
morning rise	13410 Jan 20 05:57	25°♑10'56	
	13410 Jan 27 06:49	0°♒	
	13410 Mar 13 13:04	0°♓	
desc. node	13410 Mar 27 20:14	9°♓07'44	
	13410 Apr 30 14:39	0°♈	
	13410 Jun 22 01:05	0°♉	
	13410 Aug 30 12:33	0°♊	
retrograde	13410 Sep 27 05:31	4°♊02'41	
	13410 Oct 22 18:48	30°℞♉	
opposition	13410 Nov 04 11:34	25°♉30'48	-4°59'45
greatest brilliancy	13410 Nov 05 12:33	25°♉06'58	-1.5m
min. Earth dist.	13410 Nov 10 12:16	23°♉12'59	0.61256 AU
direct	13410 Dec 15 12:19	15°♉37'22	
	13411 Feb 06 13:17	0°♊	
	13411 Mar 30 20:31	0°♋	
asc. node	13411 Apr 09 02:03	6°♋08'31	
	13411 May 12 19:11	0°♌	
	13411 Jun 21 09:32	0°♍	
	13411 Jul 29 18:19	0°♎	
	13411 Sep 06 05:45	0°♏	
	13411 Oct 15 19:13	0°♐	
evening set	13411 Nov 20 23:00	26°♐20'25	
	13411 Nov 26 02:30	0°♑	
	13412 Jan 08 10:48	0°♒	
conjunction	13412 Jan 14 05:31	3°♒53'49	0°16'30
minimum elong	13412 Jan 14 06:17	3°♒55'06	0°17'25
max. Earth dist.	13412 Feb 06 11:21	19°♒20'46	2.60555 AU
desc. node	13412 Feb 12 06:22	23°♒08'46	
	13412 Feb 22 18:55	0°♓	
morning rise	13412 Mar 02 15:37	5°♓43'36	
	13412 Apr 09 21:07	0°♈	
	13412 May 28 15:29	0°♉	
	13412 Jul 18 19:51	0°♊	
	13412 Sep 14 19:03	0°♋	
retrograde	13412 Nov 15 01:10	16°♋39'36	
opposition	13412 Dec 19 10:28	9°♋42'41	-3°37'47
greatest brilliancy	13412 Dec 20 17:24	9°♋15'48	-2.2m

min. Earth dist.	13412 Dec 28 04:19	6°♋40'59	0.48635 AU
direct	13413 Jan 26 03:26	1°♋10'53	
asc. node	13413 Feb 24 10:43	6°♋41'27	
	13413 Apr 11 09:46	0°♌	
	13413 May 25 09:47	0°♍	
	13413 Jul 04 19:23	0°♎	
	13413 Aug 13 18:19	0°♏	
	13413 Sep 23 15:57	0°♐	
	13413 Nov 05 04:49	0°♑	
	13413 Dec 19 13:24	0°♒	
desc. node	13413 Dec 29 22:30	6°♒51'35	
evening set	13414 Jan 06 03:54	11°♒36'11	
	13414 Feb 03 11:54	0°♓	
conjunction	13414 Feb 22 00:11	11°♓52'34	-0°29'11
minimum elong	13414 Feb 21 23:17	11°♓51'07	0°28'45
max. Earth dist.	13414 Mar 01 14:11	16°♓42'54	2.67124 AU
	13414 Mar 22 12:01	0°♈	
morning rise	13414 Apr 07 00:21	9°♈48'49	
	13414 May 09 00:41	0°♉	
	13414 Jun 25 17:43	0°♊	
	13414 Aug 12 16:27	0°♋	
	13414 Sep 30 13:45	0°♌	
	13414 Nov 22 11:35	0°♍	
asc. node	13415 Jan 12 17:53	19°♍44'23	
retrograde	13415 Jan 28 07:32	21°♍15'04	
opposition	13415 Feb 26 20:50	16°♍21'26	3°23'01
greatest brilliancy	13415 Feb 27 02:27	16°♍17'41	-3.0m
min. Earth dist.	13415 Mar 01 12:43	15°♍38'34	0.36846 AU
direct	13415 Mar 29 02:01	11°♍10'21	
	13415 May 26 14:00	0°♎	
	13415 Jul 15 02:01	0°♏	
	13415 Aug 29 16:41	0°♐	
	13415 Oct 14 07:03	0°♑	
desc. node	13415 Nov 16 23:03	21°♑48'21	
	13415 Nov 29 17:39	0°♒	
	13416 Jan 15 23:00	0°♓	
evening set	13416 Feb 13 02:22	17°♓45'49	
	13416 Mar 03 11:24	0°♈	
max. Earth dist.	13416 Mar 22 19:15	12°♈14'17	2.68194 AU
conjunction	13416 Mar 28 03:55	15°♈38'37	-1°00'34
minimum elong	13416 Mar 28 02:53	15°♈36'59	1°00'45
	13416 Apr 19 16:08	0°♉	
morning rise	13416 May 10 08:44	13°♉18'32	
	13416 Jun 05 00:43	0°♊	
	13416 Jul 20 06:03	0°♋	
	13416 Sep 02 05:39	0°♌	
	13416 Oct 15 01:43	0°♍	
	13416 Nov 26 06:34	0°♎	
asc. node	13416 Nov 29 19:24	2°♎30'24	
	13417 Jan 08 10:17	0°♏	
	13417 Feb 28 04:19	0°♐	
retrograde	13417 Apr 11 09:44	11°♐14'31	
min. Earth dist.	13417 May 07 23:26	6°♐25'30	0.42780 AU
greatest brilliancy	13417 May 14 10:49	4°♐17'33	-2.6m
opposition	13417 May 16 02:36	3°♐44'30	6°05'28
	13417 May 28 18:04	30°℞♏	
direct	13417 Jun 16 15:50	27°♏36'52	
	13417 Jul 06 11:22	0°♐	
	13417 Sep 14 11:33	0°♑	
desc. node	13417 Oct 04 06:29	10°♑57'41	
	13417 Nov 06 04:18	0°♒	
	13417 Dec 26 07:04	0°♓	
	13418 Feb 13 03:01	0°♈	
evening set	13418 Mar 19 08:52	21°♈32'15	
	13418 Apr 01 14:36	0°♉	
max. Earth dist.	13418 Apr 14 15:33	8°♉25'10	2.63754 AU
conjunction	13418 May 02 19:41	20°♉18'07	-1°10'44
minimum elong	13418 May 02 19:48	20°♉18'19	1°11'28
	13418 May 17 10:36	0°♊	
morning rise	13418 Jun 17 19:16	21°♊14'58	
	13418 Jun 30 10:43	0°♋	
	13418 Aug 11 15:28	0°♌	
	13418 Sep 21 06:12	0°♍	
asc. node	13418 Oct 17 11:20	19°♍50'46	
	13418 Oct 30 18:07	0°♎	
	13418 Dec 08 22:26	0°♏	
	13419 Jan 18 01:51	0°♐	
	13419 Mar 02 15:33	0°♑	
	13419 Apr 29 12:27	0°♒	
retrograde	13419 May 29 09:30	5°♒34'33	
	13419 Jun 26 20:02	30°℞♑	
min. Earth dist.	13419 Jun 30 19:47	28°♑31'23	0.56355 AU
opposition	13419 Jul 07 15:03	25°♑54'01	1°59'26
greatest brilliancy	13419 Jul 07 03:39	26°♑05'02	-1.8m
direct	13419 Aug 13 04:32	17°♑42'25	
desc. node	13419 Aug 22 17:03	18°♑15'14	
	13419 Oct 03 08:07	0°♒	
	13419 Dec 03 09:58	0°♓	
	13420 Jan 24 13:15	0°♈	
	13420 Mar 13 03:54	0°♉	
evening set	13420 Apr 24 18:10	27°♉47'09	
	13420 Apr 28 01:24	0°♊	
max. Earth dist.	13420 May 11 06:45	8°♊57'43	2.54103 AU
	13420 Jun 10 11:59	0°♋	
conjunction	13420 Jun 12 13:08	1°♋27'15	-0°49'56
minimum elong	13420 Jun 12 14:55	1°♋30'26	0°50'57
	13420 Jul 21 18:57	0°♌	
morning rise	13420 Aug 06 16:09	11°♌54'15	
	13420 Aug 30 09:18	0°♍	
asc. node	13420 Sep 02 23:06	2°♍45'28	
	13420 Oct 07 22:05	0°♎	
	13420 Nov 15 04:29	0°♏	
	13420 Dec 24 03:22	0°♐	
	13421 Feb 02 22:57	0°♑	
	13421 Mar 19 11:11	0°♒	
	13421 May 12 08:43	0°♓	
retrograde	13421 Jul 04 10:24	14°♓08'07	
desc. node	13421 Jul 10 01:14	13°♓55'41	
min. Earth dist.	13421 Aug 10 23:06	5°♓24'17	0.65649 AU
opposition	13421 Aug 14 03:08	4°♓08'59	-1°19'23
greatest brilliancy	13421 Aug 13 22:44	4°♓13'20	-1.4m
	13421 Aug 25 02:58	30°℞♒	
direct	13421 Sep 22 21:13	24°♒49'58	
	13421 Oct 24 14:52	0°♓	
	13421 Dec 31 12:23	0°♈	
	13422 Feb 21 08:58	0°♉	
	13422 Apr 09 03:37	0°♊	
	13422 May 22 13:13	0°♋	
evening set	13422 Jun 09 18:44	13°♋11'11	
max. Earth dist.	13422 Jun 26 10:08	25°♋30'29	2.40670 AU
	13422 Jul 02 09:46	0°♌	
asc. node	13422 Jul 21 14:00	14°♌35'38	
conjunction	13422 Aug 09 11:18	29°♌13'22	0°13'23
minimum elong	13422 Aug 09 10:05	29°♌11'00	0°12'45
behind sun begin	13422 Aug 08 16:25	28°♌36'34	
behind sun end	13422 Aug 10 03:45	29°♌45'27	
	13422 Aug 10 11:12	0°♍	
	13422 Sep 17 12:48	0°♎	
morning rise	13422 Oct 21 02:34	26°♎33'43	

	13422 Oct 25 11:29	0°♏		
	13422 Dec 03 04:34	0°♐		
	13423 Jan 12 13:04	0°♑		
	13423 Feb 24 10:58	0°♒		
	13423 Apr 12 06:11	0°♓		
desc. node	13423 May 28 00:34	25°♓28'50		
	13423 Jun 06 09:43	0°♈		
retrograde	13423 Aug 07 11:41	17°♈16'20		
opposition	13423 Sep 17 02:07	7°♈37'24	-3°34'12	
greatest brilliancy	13423 Sep 17 02:38	7°♈36'53	-1.2m	
min. Earth dist.	13423 Sep 17 17:54	7°♈21'51	0.68521 AU	
	13423 Oct 09 11:20	30°℞♓		
direct	13423 Oct 28 11:39	27°♓43'34		
	13423 Nov 17 17:32	0°♈		
	13424 Jan 28 17:29	0°♉		
	13424 Mar 18 14:48	0°♊		
	13424 May 01 19:00	0°♋		
asc. node	13424 Jun 07 10:07	26°♋47'33		
	13424 Jun 11 16:16	0°♌		
	13424 Jul 20 13:18	0°♍		
evening set	13424 Aug 14 03:27	19°♍24'59		
	13424 Aug 27 11:20	0°♎		
	13424 Oct 04 09:47	0°♏		
conjunction	13424 Oct 25 19:49	16°♏40'14	1°06'24	
minimum elong	13424 Oct 25 19:26	16°♏39'30	1°07'05	
	13424 Nov 12 05:56	0°♐		
max. Earth dist.	13424 Dec 17 05:35	26°♐00'29	2.43099 AU	
	13424 Dec 22 17:42	0°♑		
morning rise	13424 Dec 30 14:37	5°♑39'26		
	13425 Feb 03 10:54	0°♒		
	13425 Mar 20 20:22	0°♓		
desc. node	13425 Apr 13 14:51	14°♓54'42		
	13425 May 08 17:52	0°♈		
	13425 Jul 03 14:43	0°♉		
retrograde	13425 Sep 11 12:09	20°♉19'51		
opposition	13425 Oct 20 16:53	11°♉23'44	-4°50'31	
greatest brilliancy	13425 Oct 21 10:17	11°♉06'54	-1.4m	
min. Earth dist.	13425 Oct 25 06:01	9°♉38'14	0.64612 AU	
direct	13425 Dec 01 04:59	1°♉22'17		
	13426 Feb 21 00:32	0°♊		
	13426 Apr 09 17:02	0°♋		
asc. node	13426 Apr 25 13:48	11°♋02'45		
	13426 May 21 13:59	0°♌		
	13426 Jun 29 18:46	0°♍		
	13426 Aug 06 21:41	0°♎		
	13426 Sep 14 03:14	0°♏		
	13426 Oct 23 09:48	0°♐		
evening set	13426 Oct 28 14:41	3°♐53'16		
	13426 Dec 03 09:30	0°♑		
conjunction	13426 Dec 26 19:56	16°♑30'32	0°35'39	
minimum elong	13426 Dec 26 21:39	16°♑33'30	0°36'39	
	13427 Jan 15 11:15	0°♒		
max. Earth dist.	13427 Jan 26 10:17	7°♒24'12	2.56504 AU	
morning rise	13427 Feb 16 10:00	21°♒20'24		
desc. node	13427 Mar 01 01:38	29°♒36'02		
	13427 Mar 01 16:25	0°♓		
	13427 Apr 17 23:52	0°♈		
	13427 Jun 06 16:46	0°♉		
	13427 Jul 30 21:25	0°♊		
retrograde	13427 Oct 25 10:35	28°♊35'43		
opposition	13427 Nov 30 15:18	20°♊54'42	-4°35'03	
greatest brilliancy	13427 Dec 02 00:37	20°♊24'14	-1.9m	
min. Earth dist.	13427 Dec 08 17:01	17°♊58'02	0.54140 AU	
direct	13428 Jan 09 02:52	11°♊36'17		
	13428 Mar 08 00:46	0°♋		
asc. node	13428 Mar 13 00:04	2°♋42'13		
	13428 Apr 25 02:52	0°♌		
	13428 Jun 05 07:32	0°♍		
	13428 Jul 14 12:23	0°♎		
	13428 Aug 22 15:44	0°♏		
	13428 Oct 01 20:48	0°♐		
	13428 Nov 12 19:06	0°♑		
evening set	13428 Dec 20 10:09	25°♑48'31		
	13428 Dec 26 15:59	0°♒		
desc. node	13429 Jan 15 14:32	13°♒14'22		
conjunction	13429 Feb 07 10:41	28°♒09'27	-0°12'47	
minimum elong	13429 Feb 07 10:14	28°♒08'43	0°12'08	
behind sun begin	13429 Feb 06 21:26	27°♒47'59		
behind sun end	13429 Feb 07 23:02	28°♒29'27		
	13429 Feb 10 06:59	0°♓		
max. Earth dist.	13429 Feb 20 18:40	6°♓45'42	2.65209 AU	
morning rise	13429 Mar 24 15:53	27°♓05'57		
	13429 Mar 29 05:54	0°♈		
	13429 May 16 02:29	0°♉		
	13429 Jul 03 18:15	0°♊		
	13429 Aug 22 20:34	0°♋		
	13429 Oct 16 10:02	0°♌		
retrograde	13429 Dec 26 16:49	22°♌20'31		
opposition	13430 Jan 26 22:00	16°♌47'06	-0°10'22	
greatest brilliancy	13430 Jan 26 23:37	16°♌45'53	-2.8m	
asc. node	13430 Jan 29 08:39	16°♌03'01		
min. Earth dist.	13430 Feb 02 23:34	14°♌40'47	0.40254 AU	
direct	13430 Mar 01 04:24	10°♌15'58		
	13430 Apr 29 05:11	0°♍		
	13430 Jun 15 06:24	0°♎		
	13430 Jul 28 03:31	0°♏		
	13430 Sep 08 23:14	0°♐		
	13430 Oct 22 22:15	0°♑		
desc. node	13430 Dec 03 10:56	27°♑28'33		
	13430 Dec 07 07:52	0°♒		
	13431 Jan 22 22:11	0°♓		
evening set	13431 Jan 29 22:50	4°♓28'38		
	13431 Mar 11 04:02	0°♈		
conjunction	13431 Mar 15 16:54	2°♈52'29	-0°50'36	
minimum elong	13431 Mar 15 15:45	2°♈50'40	0°50'32	
max. Earth dist.	13431 Mar 15 03:36	2°♈31'25	2.68436 AU	
morning rise	13431 Apr 27 20:20	0°♉16'21		
	13431 Apr 27 10:05	0°♉		
	13431 Jun 13 04:19	0°♊		
	13431 Jul 29 04:45	0°♋		
	13431 Sep 12 10:26	0°♌		
	13431 Oct 27 03:42	0°♍		
	13431 Dec 11 11:58	0°♎		
asc. node	13431 Dec 17 11:07	3°♎48'39		
	13432 Feb 01 05:19	0°♏		
retrograde	13432 Mar 17 08:18	12°♏15'49		
min. Earth dist.	13432 Apr 12 04:04	7°♏59'33	0.38316 AU	
greatest brilliancy	13432 Apr 16 16:42	6°♏41'27	-2.9m	
opposition	13432 Apr 18 01:06	6°♏17'58	6°44'39	
direct	13432 May 17 16:54	1°♏06'49		
	13432 Aug 06 12:58	0°♐		
	13432 Sep 27 01:01	0°♑		
desc. node	13432 Oct 20 16:55	14°♑22'20		
	13432 Nov 15 04:56	0°♒		
	13433 Jan 02 20:27	0°♓		
	13433 Feb 20 00:56	0°♈		
evening set	13433 Mar 05 16:09	8°♈34'31		
max. Earth dist.	13433 Apr 05 14:31	28°♈14'33	2.66128 AU	
	13433 Apr 08 08:15	0°♉		

conjunction	13433 Apr 18 14:23	6°♉36'37	-1°09'51
minimum elong	13433 Apr 18 13:56	6°♉35'52	1°10'23
	13433 May 24 07:43	0°♊	
morning rise	13433 Jun 01 23:23	5°♊45'37	
	13433 Jul 07 17:13	0°♋	
	13433 Aug 19 11:14	0°♌	
	13433 Sep 29 17:25	0°♍	
asc. node	13433 Nov 03 06:41	25°♍46'12	
	13433 Nov 08 21:41	0°♎	
	13433 Dec 18 21:10	0°♏	
	13434 Jan 29 09:15	0°♐	
	13434 Mar 18 07:47	0°♑	
retrograde	13434 May 12 15:41	17°♑20'17	
min. Earth dist.	13434 Jun 11 17:08	11°♑07'51	0.51276 AU
opposition	13434 Jun 19 15:19	8°♑11'02	3°35'38
greatest brilliancy	13434 Jun 18 15:48	8°♑32'56	-2.1m
direct	13434 Jul 24 10:48	0°♑39'57	
desc. node	13434 Sep 08 03:39	11°♑02'31	
	13434 Oct 19 04:38	0°♒	
	13434 Dec 12 15:21	0°♓	
	13435 Feb 01 02:04	0°♈	
	13435 Mar 21 03:11	0°♉	
evening set	13435 Apr 10 14:50	13°♉14'03	
max. Earth dist.	13435 Apr 30 13:06	26°♉23'05	2.58470 AU
	13435 May 05 22:48	0°♊	
conjunction	13435 May 27 02:09	14°♊21'12	-1°02'33
minimum elong	13435 May 27 03:22	14°♊23'17	1°03'31
	13435 Jun 18 13:50	0°♋	
morning rise	13435 Jul 16 12:49	20°♋00'43	
	13435 Jul 30 04:13	0°♌	
	13435 Sep 08 02:43	0°♍	
asc. node	13435 Sep 20 20:23	9°♍46'24	
	13435 Oct 16 22:38	0°♎	
	13435 Nov 24 10:46	0°♏	
	13436 Jan 02 15:47	0°♐	
	13436 Feb 12 23:56	0°♑	
	13436 Mar 30 06:50	0°♒	
	13436 Jun 13 05:44	0°♓	
retrograde	13436 Jun 20 17:23	0°♓21'53	
	13436 Jun 28 01:10	30°♓℞	
min. Earth dist.	13436 Jul 26 10:23	22°♒12'41	0.62745 AU
desc. node	13436 Jul 26 12:35	22°♒10'32	
opposition	13436 Jul 31 01:32	20°♒22'59	-0°10'52
greatest brilliancy	13436 Jul 31 00:47	20°♒23'43	-1.6m
direct	13436 Sep 07 18:23	11°♒25'17	
	13436 Nov 13 04:10	0°♓	
	13437 Jan 09 20:24	0°♈	
	13437 Mar 01 00:29	0°♉	
	13437 Apr 16 08:03	0°♊	
evening set	13437 May 21 04:46	23°♊58'12	
	13437 May 29 16:58	0°♋	
max. Earth dist.	13437 Jun 03 18:34	3°♋37'29	2.46124 AU
	13437 Jul 09 16:49	0°♌	
conjunction	13437 Jul 15 00:25	3°♌59'53	-0°16'09
minimum elong	13437 Jul 15 01:38	4°♌02'09	0°17'03
asc. node	13437 Aug 07 08:08	21°♌47'26	
	13437 Aug 17 22:41	0°♍	
morning rise	13437 Sep 18 22:02	25°♍04'00	
	13437 Sep 25 03:59	0°♎	
	13437 Nov 02 04:42	0°♏	
	13437 Dec 10 22:32	0°♐	
	13438 Jan 20 08:25	0°♑	
	13438 Mar 04 13:46	0°♒	
	13438 Apr 21 17:11	0°♓	
desc. node	13438 Jun 13 15:40	25°♓58'58	
	13438 Jun 25 11:47	0°♈	
retrograde	13438 Jul 25 06:17	4°♈50'22	
	13438 Aug 21 19:00	30°♓℞	
min. Earth dist.	13438 Sep 03 05:07	25°♓20'46	0.68205 AU
opposition	13438 Sep 04 01:29	25°♓00'37	-2°48'54
greatest brilliancy	13438 Sep 03 22:08	25°♓03'57	-1.3m
direct	13438 Oct 14 23:44	15°♓17'17	
	13438 Dec 11 11:21	0°♈	
	13439 Feb 07 10:02	0°♉	
	13439 Mar 27 15:20	0°♊	
	13439 May 10 09:27	0°♋	
	13439 Jun 20 05:07	0°♌	
asc. node	13439 Jun 25 02:35	3°♌42'31	
evening set	13439 Jul 17 03:22	20°♌38'53	
	13439 Jul 29 02:58	0°♍	
	13439 Sep 05 01:31	0°♎	
conjunction	13439 Sep 25 23:16	16°♎35'25	0°56'29
minimum elong	13439 Sep 25 19:30	16°♎27'57	0°56'38
	13439 Oct 12 23:04	0°♏	
max. Earth dist.	13439 Nov 12 18:11	23°♏55'53	2.37659 AU
	13439 Nov 20 16:53	0°♐	
morning rise	13439 Dec 07 04:55	12°♐26'24	
	13439 Dec 31 01:52	0°♑	
	13440 Feb 11 18:16	0°♒	
	13440 Mar 28 10:52	0°♓	
desc. node	13440 Apr 30 09:16	20°♓05'16	
	13440 May 17 16:39	0°♈	
	13440 Jul 20 11:07	0°♉	
retrograde	13440 Aug 27 22:30	7°♉23'14	
	13440 Oct 01 23:52	30°♈℞	
opposition	13440 Oct 06 20:28	28°♈07'33	-4°28'38
greatest brilliancy	13440 Oct 07 06:26	27°♈57'49	-1.3m
min. Earth dist.	13440 Oct 09 21:07	26°♈56'39	0.66970 AU
direct	13440 Nov 17 12:32	18°♈05'10	
	13441 Jan 05 23:02	0°♉	
	13441 Mar 03 19:44	0°♊	
	13441 Apr 18 12:34	0°♋	
asc. node	13441 May 12 04:26	16°♋54'14	
	13441 May 29 20:12	0°♌	
	13441 Jul 07 20:05	0°♍	
	13441 Aug 14 19:39	0°♎	
	13441 Sep 21 20:56	0°♏	
evening set	13441 Oct 01 06:08	7°♏18'11	
	13441 Oct 30 21:53	0°♐	
conjunction	13441 Dec 05 16:46	26°♐26'18	0°53'00
minimum elong	13441 Dec 05 19:04	26°♐30'28	0°54'01
	13441 Dec 10 15:19	0°♑	
max. Earth dist.	13442 Jan 13 18:26	24°♑01'14	2.51694 AU
	13442 Jan 22 11:50	0°♒	
morning rise	13442 Jan 30 17:07	5°♒34'36	
	13442 Mar 08 16:05	0°♓	
desc. node	13442 Mar 17 19:38	5°♓53'12	
	13442 Apr 25 08:36	0°♈	
	13442 Jun 15 11:48	0°♉	
	13442 Aug 14 18:20	0°♊	
retrograde	13442 Oct 06 20:44	12°♊51'08	
opposition	13442 Nov 13 11:21	4°♊35'22	-4°57'11
greatest brilliancy	13442 Nov 14 16:09	4°♊08'13	-1.6m
min. Earth dist.	13442 Nov 20 07:11	2°♊01'11	0.58970 AU
	13442 Nov 25 22:37	30°♉℞	
direct	13442 Dec 24 01:57	24°♉50'34	
	13443 Jan 22 15:56	0°♊	
	13443 Mar 23 15:34	0°♋	
asc. node	13443 Mar 30 11:36	4°♋20'44	
	13443 May 06 18:26	0°♌	

	13443 Jun 15 19:10	0°♍	
	13443 Jul 24 09:32	0°♎	
	13443 Sep 01 01:11	0°♏	
	13443 Oct 10 18:45	0°♐	
	13443 Nov 21 05:49	0°♑	
evening set	13443 Dec 02 16:01	8°♑01'20	
	13444 Jan 03 17:03	0°♒	
conjunction	13444 Jan 23 18:45	13°♒24'49	0°05'27
minimum elong	13444 Jan 23 19:01	13°♒25'16	0°06'17
behind sun begin	13444 Jan 22 23:56	12°♒53'41	
behind sun end	13444 Jan 24 14:06	13°♒56'50	
desc. node	13444 Feb 02 07:22	19°♒41'42	
max. Earth dist.	13444 Feb 12 07:28	26°♒14'22	2.62428 AU
	13444 Feb 18 02:15	0°♓	
morning rise	13444 Mar 10 20:43	14°♓00'45	
	13444 Apr 05 01:58	0°♈	
	13444 May 23 10:22	0°♉	
	13444 Jul 12 11:18	0°♊	
	13444 Sep 04 08:21	0°♋	
retrograde	13444 Nov 28 19:10	28°♋41'16	
opposition	13445 Jan 01 01:30	22°♋12'37	-2°41'57
greatest brilliancy	13445 Jan 02 01:43	21°♋52'23	-2.4m
min. Earth dist.	13445 Jan 09 17:04	19°♋20'10	0.45486 AU
direct	13445 Feb 06 09:54	14°♋17'12	
asc. node	13445 Feb 14 20:41	14°♋47'47	
	13445 Mar 30 08:13	0°♌	
	13445 May 17 10:01	0°♍	
	13445 Jun 28 01:44	0°♎	
	13445 Aug 07 17:05	0°♏	
	13445 Sep 18 02:39	0°♐	
	13445 Oct 31 00:55	0°♑	
	13445 Dec 14 16:31	0°♒	
desc. node	13445 Dec 20 01:53	3°♒33'00	
evening set	13446 Jan 15 01:44	20°♒29'57	
	13446 Jan 29 19:21	0°♓	
conjunction	13446 Mar 02 00:23	19°♓56'29	-0°37'49
minimum elong	13446 Mar 01 23:19	19°♓54'48	0°37'30
max. Earth dist.	13446 Mar 06 14:48	22°♓51'57	2.67816 AU
	13446 Mar 17 20:37	0°♈	
morning rise	13446 Apr 14 14:00	17°♈33'21	
	13446 May 04 05:59	0°♉	
	13446 Jun 20 13:34	0°♊	
	13446 Aug 06 16:41	0°♋	
	13446 Sep 22 21:32	0°♌	
	13446 Nov 10 07:59	0°♍	
asc. node	13447 Jan 03 03:15	28°♍53'28	
	13447 Jan 05 17:25	0°♎	
retrograde	13447 Feb 15 19:22	9°♎44'05	
opposition	13447 Mar 17 12:36	4°♎47'58	5°13'51
greatest brilliancy	13447 Mar 17 06:48	4°♎51'49	-3.0m
min. Earth dist.	13447 Mar 16 19:31	4°♎59'18	0.36368 AU
	13447 Apr 13 00:41	30°℞♍	
direct	13447 Apr 15 18:21	29°♍56'54	
	13447 Apr 18 12:01	0°♎	
	13447 Jul 04 14:33	0°♏	
	13447 Aug 22 07:26	0°♐	
	13447 Oct 08 06:42	0°♑	
desc. node	13447 Nov 07 03:30	19°♑01'37	
	13447 Nov 24 11:08	0°♒	
	13448 Jan 11 02:33	0°♓	
evening set	13448 Feb 20 23:46	25°♓41'24	
	13448 Feb 27 19:54	0°♈	
max. Earth dist.	13448 Mar 27 19:12	18°♈20'46	2.67682 AU
conjunction	13448 Apr 04 21:11	23°♈29'53	-1°05'02
minimum elong	13448 Apr 04 20:18	23°♈28'30	1°05'20
	13448 Apr 15 01:06	0°♉	
morning rise	13448 May 18 08:28	21°♉32'36	
	13448 May 31 06:05	0°♊	
	13448 Jul 15 03:44	0°♋	
	13448 Aug 27 15:28	0°♌	
	13448 Oct 08 19:42	0°♍	
	13448 Nov 19 02:23	0°♎	
asc. node	13448 Nov 20 00:55	0°♎41'07	
	13448 Dec 30 14:54	0°♏	
	13449 Feb 13 13:50	0°♐	
retrograde	13449 Apr 23 12:59	25°♐44'44	
min. Earth dist.	13449 May 21 05:25	20°♐27'24	0.45762 AU
greatest brilliancy	13449 May 28 03:36	18°♐02'51	-2.4m
opposition	13449 May 29 15:27	17°♐31'31	5°15'51
direct	13449 Jul 01 08:34	10°♐51'48	
	13449 Sep 04 06:12	0°♑	
desc. node	13449 Sep 24 12:50	10°♑09'40	
	13449 Oct 30 16:37	0°♒	
	13449 Dec 20 23:35	0°♓	
	13450 Feb 08 07:30	0°♈	
evening set	13450 Mar 27 06:40	29°♈32'54	
	13450 Mar 27 23:34	0°♉	
max. Earth dist.	13450 Apr 20 04:24	15°♉01'45	2.62088 AU
conjunction	13450 May 11 06:22	28°♉57'53	-1°09'16
minimum elong	13450 May 11 06:52	28°♉58'43	1°10'06
	13450 May 12 19:33	0°♊	
	13450 Jun 25 16:33	0°♋	
morning rise	13450 Jun 27 12:56	1°♋17'38	
	13450 Aug 06 15:59	0°♌	
	13450 Sep 16 00:28	0°♍	
asc. node	13450 Oct 07 16:30	16°♍29'57	
	13450 Oct 25 05:51	0°♎	
	13450 Dec 03 02:48	0°♏	
	13451 Jan 11 19:10	0°♐	
	13451 Feb 23 04:41	0°♑	
	13451 Apr 14 18:32	0°♒	
retrograde	13451 Jun 07 04:57	15°♒21'18	
min. Earth dist.	13451 Jul 10 20:54	7°♒52'26	0.58891 AU
opposition	13451 Jul 16 21:56	5°♒30'57	1°08'28
greatest brilliancy	13451 Jul 16 16:04	5°♒36'41	-1.7m
	13451 Aug 01 19:43	30°℞♑	
desc. node	13451 Aug 12 23:40	27°♑41'50	
direct	13451 Aug 23 07:31	27°♑00'42	
	13451 Sep 15 14:02	0°♒	
	13451 Nov 26 14:21	0°♓	
	13452 Jan 19 05:31	0°♈	
	13452 Mar 08 08:06	0°♉	
	13452 Apr 23 09:21	0°♊	
evening set	13452 May 03 19:56	7°♊03'22	
max. Earth dist.	13452 May 18 18:27	17°♊19'21	2.51429 AU
	13452 Jun 05 19:54	0°♋	
conjunction	13452 Jun 23 08:40	12°♋35'13	-0°39'43
minimum elong	13452 Jun 23 10:34	12°♋38'40	0°40'44
	13452 Jul 17 00:43	0°♌	
morning rise	13452 Aug 20 20:56	26°♌25'34	
asc. node	13452 Aug 24 05:40	29°♌01'10	
	13452 Aug 25 12:08	0°♍	
	13452 Oct 02 22:01	0°♎	
	13452 Nov 10 01:35	0°♏	
	13452 Dec 18 21:20	0°♐	
	13453 Jan 28 11:11	0°♑	
	13453 Mar 13 06:57	0°♒	
	13453 May 03 00:54	0°♓	
desc. node	13453 Jun 30 04:58	21°♓17'01	

retrograde	13453 Jul 12 02:31	22°♓08'54	
min. Earth dist.	13453 Aug 19 13:08	13°♓07'31	0.66852 AU
opposition	13453 Aug 21 21:14	12°♓11'54	-1°55'10
greatest brilliancy	13453 Aug 21 16:20	12°♓16'45	-1.3m
direct	13453 Oct 01 02:28	2°♓42'58	
	13453 Dec 24 12:19	0°♈	
	13454 Feb 15 23:37	0°♉	
	13454 Apr 04 05:26	0°♊	
	13454 May 17 18:23	0°♋	
evening set	13454 Jun 22 03:17	25°♋52'30	
	13454 Jun 27 15:03	0°♌	
asc. node	13454 Jul 11 20:19	10°♌48'05	
max. Earth dist.	13454 Jul 18 02:24	15°♌36'10	2.37941 AU
	13454 Aug 05 15:33	0°♍	
conjunction	13454 Aug 25 14:36	15°♍41'38	0°30'57
minimum elong	13454 Aug 25 11:36	15°♍35'42	0°30'33
	13454 Sep 12 16:12	0°♎	
	13454 Oct 20 14:06	0°♏	
morning rise	13454 Nov 08 00:31	14°♏24'34	
	13454 Nov 28 06:37	0°♐	
	13455 Jan 07 13:58	0°♑	
	13455 Feb 19 07:35	0°♒	
	13455 Apr 06 12:50	0°♓	
desc. node	13455 May 18 01:59	24°♓11'15	
	13455 May 29 03:03	0°♈	
retrograde	13455 Aug 15 03:41	24°♈52'07	
opposition	13455 Sep 24 13:40	15°♈20'33	-3°57'00
greatest brilliancy	13455 Sep 24 17:11	15°♈17'06	-1.3m
min. Earth dist.	13455 Sep 26 01:48	14°♈45'02	0.68261 AU
direct	13455 Nov 05 03:04	5°♈22'22	
	13456 Jan 21 09:52	0°♉	
	13456 Mar 13 00:37	0°♊	
	13456 Apr 26 16:09	0°♋	
asc. node	13456 May 28 17:54	23°♋17'03	
	13456 Jun 06 16:49	0°♌	
	13456 Jul 15 14:47	0°♍	
	13456 Aug 22 13:12	0°♎	
evening set	13456 Aug 31 14:18	7°♎10'48	
	13456 Sep 29 12:12	0°♏	
	13456 Nov 07 09:22	0°♐	
conjunction	13456 Nov 10 17:22	2°♐31'13	1°04'44
minimum elong	13456 Nov 10 18:42	2°♐33'45	1°05'35
	13456 Dec 17 22:15	0°♑	
max. Earth dist.	13456 Dec 28 17:34	7°♑44'54	2.46268 AU
morning rise	13457 Jan 11 16:15	17°♑35'16	
	13457 Jan 29 15:13	0°♒	
	13457 Mar 15 20:55	0°♓	
desc. node	13457 Apr 03 15:56	11°♓56'05	
	13457 May 03 04:00	0°♈	
	13457 Jun 25 15:49	0°♉	
retrograde	13457 Sep 20 06:37	28°♉32'37	
opposition	13457 Oct 28 23:40	19°♉49'18	-4°57'28
greatest brilliancy	13457 Oct 29 21:23	19°♉28'26	-1.5m
min. Earth dist.	13457 Nov 03 08:52	17°♉45'19	0.62888 AU
direct	13457 Dec 09 06:37	9°♉51'04	
	13458 Feb 12 14:05	0°♊	
	13458 Apr 03 13:55	0°♋	
asc. node	13458 Apr 16 00:18	8°♋26'59	
	13458 May 16 01:30	0°♌	
	13458 Jun 24 11:55	0°♍	
	13458 Aug 01 17:57	0°♎	
	13458 Sep 09 01:56	0°♏	
	13458 Oct 18 11:07	0°♐	
evening set	13458 Nov 11 05:34	17°♐31'21	
	13458 Nov 28 13:38	0°♑	

conjunction	13459 Jan 06 12:54	27°♑09'04	0°24'38
minimum elong	13459 Jan 06 14:05	27°♑11'05	0°25'35
	13459 Jan 10 17:27	0°♒	
max. Earth dist.	13459 Feb 01 21:02	14°♒51'28	2.58839 AU
desc. node	13459 Feb 19 02:07	26°♒10'54	
	13459 Feb 24 22:52	0°♓	
morning rise	13459 Feb 25 05:44	0°♓11'10	
	13459 Apr 13 01:52	0°♈	
	13459 Jun 01 03:43	0°♉	
	13459 Jul 23 08:28	0°♊	
	13459 Sep 24 08:28	0°♋	
retrograde	13459 Nov 06 06:00	9°♋00'33	
opposition	13459 Dec 11 11:12	1°♋42'41	-4°07'08
greatest brilliancy	13459 Dec 12 20:12	1°♋13'12	-2.1m
	13459 Dec 16 05:48	30°℞♊	
min. Earth dist.	13459 Dec 19 23:34	28°♊40'45	0.51158 AU
direct	13460 Jan 19 01:08	22°♊46'57	
	13460 Feb 22 07:33	0°♋	
asc. node	13460 Mar 03 09:25	4°♋16'32	
	13460 Apr 17 05:52	0°♌	
	13460 May 29 18:24	0°♍	
	13460 Jul 08 13:30	0°♎	
	13460 Aug 17 02:04	0°♏	
	13460 Sep 26 14:31	0°♐	
	13460 Nov 07 19:14	0°♑	
	13460 Dec 21 20:58	0°♒	
evening set	13460 Dec 30 02:47	5°♒28'41	
desc. node	13461 Jan 05 16:52	9°♒49'52	
	13461 Feb 05 15:00	0°♓	
conjunction	13461 Feb 15 20:07	6°♓34'49	-0°22'37
minimum elong	13461 Feb 15 19:22	6°♓33'38	0°22'05
max. Earth dist.	13461 Feb 26 00:05	13°♓05'43	2.66369 AU
	13461 Mar 24 13:47	0°♈	
morning rise	13461 Apr 01 07:37	4°♈53'53	
	13461 May 11 05:12	0°♉	
	13461 Jun 28 07:13	0°♊	
	13461 Aug 16 01:17	0°♋	
	13461 Oct 05 18:31	0°♌	
	13461 Dec 05 02:55	0°♍	
retrograde	13462 Jan 13 16:52	8°♍27'49	
asc. node	13462 Jan 19 16:34	8°♍13'58	
opposition	13462 Feb 12 18:01	3°♍21'21	1°47'21
greatest brilliancy	13462 Feb 13 01:00	3°♍16'28	-2.9m
min. Earth dist.	13462 Feb 17 17:56	1°♍57'41	0.38021 AU
	13462 Feb 25 08:24	30°℞♌	
direct	13462 Mar 16 05:17	27°♌38'57	
	13462 Apr 03 19:27	0°♍	
	13462 Jun 04 22:55	0°♎	
	13462 Jul 20 12:18	0°♏	
	13462 Sep 02 14:43	0°♐	
	13462 Oct 17 08:41	0°♑	
desc. node	13462 Nov 23 16:00	24°♑26'20	
	13462 Dec 02 06:17	0°♒	
	13463 Jan 18 03:56	0°♓	
evening set	13463 Feb 07 01:48	12°♓37'13	
	13463 Mar 06 13:04	0°♈	
max. Earth dist.	13463 Mar 20 02:57	8°♈36'02	2.68411 AU
conjunction	13463 Mar 23 09:09	10°♈40'00	-0°56'49
minimum elong	13463 Mar 23 08:03	10°♈38'15	0°56'53
	13463 Apr 22 18:21	0°♉	
morning rise	13463 May 05 11:58	8°♉09'07	
	13463 Jun 08 07:34	0°♊	
	13463 Jul 23 21:25	0°♋	
	13463 Sep 06 09:42	0°♌	
	13463 Oct 19 23:22	0°♍	

	13463 Dec 02 05:42	0°♎	
asc. node	13463 Dec 07 19:31	3°♎49'36	
	13464 Jan 16 12:50	0°♏	
retrograde	13464 Apr 01 01:19	29°♏40'50	
min. Earth dist.	13464 Apr 27 00:37	25°♏11'03	0.40567 AU
greatest brilliancy	13464 May 02 20:19	23°♏22'17	-2.7m
opposition	13464 May 04 11:37	22°♏51'22	6°34'02
direct	13464 Jun 04 03:09	17°♏10'24	
	13464 Jul 23 21:02	0°♐	
	13464 Sep 19 10:34	0°♑	
desc. node	13464 Oct 10 22:17	12°♑29'16	
	13464 Nov 09 08:04	0°♒	
	13464 Dec 28 18:05	0°♓	
	13465 Feb 15 07:10	0°♈	
evening set	13465 Mar 13 11:23	16°♈27'19	
	13465 Apr 03 17:16	0°♉	
max. Earth dist.	13465 Apr 10 20:39	4°♉35'42	2.64921 AU
conjunction	13465 Apr 26 14:43	14°♉49'10	-1°10'55
minimum elong	13465 Apr 26 14:35	14°♉48'56	1°11'34
	13465 May 19 15:38	0°♊	
morning rise	13465 Jun 10 18:39	14°♊51'47	
	13465 Jul 02 20:44	0°♋	
	13465 Aug 14 08:07	0°♌	
	13465 Sep 24 06:02	0°♍	
asc. node	13465 Oct 24 13:17	22°♍47'43	
	13465 Nov 03 01:04	0°♎	
	13465 Dec 12 12:21	0°♏	
	13466 Jan 22 02:01	0°♐	
	13466 Mar 07 19:49	0°♑	
retrograde	13466 May 22 10:21	28°♑30'28	
min. Earth dist.	13466 Jun 22 19:13	21°♑49'09	0.54150 AU
greatest brilliancy	13466 Jun 29 11:11	19°♑17'05	-1.9m
opposition	13466 Jun 30 03:27	19°♑01'34	2°39'13
direct	13466 Aug 04 23:06	11°♑06'45	
desc. node	13466 Aug 29 08:44	14°♑26'47	
	13466 Oct 09 23:01	0°♒	
	13466 Dec 06 14:39	0°♓	
	13467 Jan 26 23:52	0°♈	
	13467 Mar 16 09:19	0°♉	
evening set	13467 Apr 19 02:31	21°♉52'35	
	13467 May 01 07:11	0°♊	
max. Earth dist.	13467 May 07 00:22	3°♊50'57	2.56145 AU
conjunction	13467 Jun 05 17:34	24°♊16'46	-0°56'05
minimum elong	13467 Jun 05 19:09	24°♊19'32	0°57'06
	13467 Jun 13 20:52	0°♋	
	13467 Jul 25 08:06	0°♌	
morning rise	13467 Jul 28 13:14	2°♌22'59	
	13467 Sep 03 02:40	0°♍	
asc. node	13467 Sep 11 01:07	6°♍06'10	
	13467 Oct 11 18:57	0°♎	
	13467 Nov 19 03:32	0°♏	
	13467 Dec 28 03:56	0°♐	
	13468 Feb 07 02:37	0°♑	
	13468 Mar 23 02:26	0°♒	
	13468 May 19 09:05	0°♓	
retrograde	13468 Jun 28 15:47	8°♓50'15	
desc. node	13468 Jul 16 17:54	6°♓37'01	
min. Earth dist.	13468 Aug 04 09:22	0°♓21'02	0.64468 AU
	13468 Aug 05 06:41	30°℞♒	
opposition	13468 Aug 08 04:48	28°♒50'29	-0°52'14
greatest brilliancy	13468 Aug 08 01:23	28°♒53'52	-1.5m
direct	13468 Sep 16 11:39	19°♒40'20	
	13468 Nov 02 09:03	0°♓	
	13469 Jan 03 18:14	0°♈	
	13469 Feb 23 21:41	0°♉	
	13469 Apr 11 12:58	0°♊	
	13469 May 24 23:43	0°♋	
evening set	13469 May 31 22:07	4°♋57'51	
max. Earth dist.	13469 Jun 15 02:50	15°♋16'44	2.43096 AU
	13469 Jul 04 22:50	0°♌	
conjunction	13469 Jul 28 18:58	18°♌07'48	0°00'07
minimum elong	13469 Jul 28 19:04	18°♌07'59	0°00'39
behind sun begin	13469 Jul 27 16:24	17°♌16'45	
behind sun end	13469 Jul 29 21:43	18°♌59'16	
asc. node	13469 Jul 28 14:54	18°♌00'01	
	13469 Aug 13 02:51	0°♍	
	13469 Sep 20 06:20	0°♎	
morning rise	13469 Oct 06 18:56	13°♎04'57	
	13469 Oct 28 05:33	0°♏	
	13469 Dec 05 22:00	0°♐	
	13470 Jan 15 05:40	0°♑	
	13470 Feb 27 04:15	0°♒	
	13470 Apr 15 08:14	0°♓	
desc. node	13470 Jun 03 18:46	26°♓27'16	
	13470 Jun 11 20:21	0°♈	
retrograde	13470 Aug 01 19:52	12°♈28'15	
opposition	13470 Sep 11 12:42	2°♈44'13	-3°16'37
greatest brilliancy	13470 Sep 11 11:16	2°♈45'38	-1.3m
min. Earth dist.	13470 Sep 11 12:36	2°♈44'19	0.68508 AU
	13470 Sep 18 13:19	30°℞♓	
direct	13470 Oct 22 17:15	22°♓54'34	
	13470 Nov 29 09:08	0°♈	
	13471 Feb 01 04:17	0°♉	
	13471 Mar 22 09:12	0°♊	
	13471 May 05 10:34	0°♋	
asc. node	13471 Jun 15 10:01	0°♌03'03	
	13471 Jun 15 08:24	0°♌	
	13471 Jul 24 06:31	0°♍	
evening set	13471 Aug 01 23:18	6°♍50'13	
	13471 Aug 31 05:01	0°♎	
	13471 Oct 08 02:38	0°♏	
conjunction	13471 Oct 13 13:50	4°♏17'17	1°04'17
minimum elong	13471 Oct 13 11:47	4°♏13'17	1°04'47
	13471 Nov 15 20:42	0°♐	
max. Earth dist.	13471 Dec 06 13:57	15°♐34'28	2.40544 AU
morning rise	13471 Dec 21 11:23	26°♐32'04	
	13471 Dec 26 05:52	0°♑	
	13472 Feb 06 20:50	0°♒	
	13472 Mar 23 07:07	0°♓	
desc. node	13472 Apr 20 10:00	17°♓29'00	
	13472 May 11 13:57	0°♈	
	13472 Jul 08 14:13	0°♉	
retrograde	13472 Sep 05 03:16	15°♉12'47	
opposition	13472 Oct 14 16:22	6°♉07'33	-4°42'42
greatest brilliancy	13472 Oct 15 06:29	5°♉53'50	-1.3m
min. Earth dist.	13472 Oct 18 13:32	4°♉37'03	0.65789 AU
	13472 Oct 31 12:34	30°℞♈	
direct	13472 Nov 25 06:53	26°♈04'52	
	13472 Dec 21 18:12	0°♉	
	13473 Feb 25 02:40	0°♊	
	13473 Apr 12 22:01	0°♋	
asc. node	13473 May 02 12:13	13°♋47'38	
	13473 May 24 14:04	0°♌	
	13473 Jul 02 17:10	0°♍	
	13473 Aug 09 18:44	0°♎	
	13473 Sep 16 21:55	0°♏	
evening set	13473 Oct 17 03:37	23°♏16'49	
	13473 Oct 26 00:57	0°♐	
	13473 Dec 05 20:37	0°♑	

conjunction	13473 Dec 18 00:34	8°♑39'46	0°43'25
minimum elong	13473 Dec 18 02:38	8°♑43'26	0°44'27
	13474 Jan 17 18:27	0°♒	
max. Earth dist.	13474 Jan 21 05:49	2°♒21'46	2.54437 AU
morning rise	13474 Feb 09 09:47	15°♒13'58	
	13474 Mar 03 21:39	0°♓	
desc. node	13474 Mar 07 21:07	2°♓34'31	
	13474 Apr 20 07:05	0°♈	
	13474 Jun 09 11:22	0°♉	
	13474 Aug 04 12:18	0°♊	
retrograde	13474 Oct 17 02:19	22°♊03'55	
opposition	13474 Nov 22 22:51	14°♊06'23	-4°47'25
greatest brilliancy	13474 Nov 24 06:39	13°♊36'49	-1.8m
min. Earth dist.	13474 Nov 30 11:57	11°♊18'21	0.56401 AU
direct	13475 Jan 01 23:57	4°♊33'55	
	13475 Mar 15 07:04	0°♋	
asc. node	13475 Mar 20 21:53	3°♋19'16	
	13475 Apr 30 07:37	0°♌	
	13475 Jun 09 22:40	0°♍	
	13475 Jul 18 20:19	0°♎	
	13475 Aug 26 17:25	0°♏	
	13475 Oct 05 15:54	0°♐	
	13475 Nov 16 07:49	0°♑	
evening set	13475 Dec 13 14:20	18°♑54'30	
	13475 Dec 29 22:57	0°♒	
desc. node	13476 Jan 23 09:20	16°♒15'24	
conjunction	13476 Feb 01 20:37	22°♒28'12	-0°05'23
minimum elong	13476 Feb 01 20:27	22°♒27'56	0°04'41
behind sun begin	13476 Feb 01 01:13	21°♒56'31	
behind sun end	13476 Feb 02 15:41	22°♒59'19	
	13476 Feb 13 10:16	0°♓	
max. Earth dist.	13476 Feb 17 20:38	2°♓52'09	2.64081 AU
morning rise	13476 Mar 18 19:29	22°♓03'25	
	13476 Mar 31 08:29	0°♈	
	13476 May 18 09:14	0°♉	
	13476 Jul 06 13:30	0°♊	
	13476 Aug 26 23:11	0°♋	
	13476 Oct 25 14:19	0°♌	
retrograde	13476 Dec 13 19:13	11°♌54'00	
opposition	13477 Jan 14 23:10	5°♌55'35	-1°24'48
greatest brilliancy	13477 Jan 15 11:56	5°♌45'30	-2.6m
min. Earth dist.	13477 Jan 23 01:16	3°♌23'14	0.42474 AU
asc. node	13477 Feb 05 07:12	0°♌01'34	
	13477 Feb 05 10:35	30°℞♋	
direct	13477 Feb 18 16:16	28°♋44'29	
	13477 Mar 04 02:24	0°♌	
	13477 May 07 18:19	0°♍	
	13477 Jun 20 14:59	0°♎	
	13477 Aug 01 06:51	0°♏	
	13477 Sep 12 08:04	0°♐	
	13477 Oct 25 17:52	0°♑	
	13477 Dec 09 17:46	0°♒	
desc. node	13477 Dec 10 04:16	0°♒17'14	
evening set	13478 Jan 23 16:20	29°♒06'03	
	13478 Jan 25 02:02	0°♓	
conjunction	13478 Mar 09 21:13	27°♓53'08	-0°45'39
minimum elong	13478 Mar 09 20:05	27°♓51'20	0°45'29
max. Earth dist.	13478 Mar 11 14:45	28°♓58'57	2.68268 AU
	13478 Mar 13 05:16	0°♈	
morning rise	13478 Apr 22 03:28	25°♈18'42	
	13478 Apr 29 12:36	0°♉	
	13478 Jun 15 12:40	0°♊	
	13478 Aug 01 00:09	0°♋	
	13478 Sep 16 00:26	0°♌	
	13478 Nov 01 00:46	0°♍	
	13478 Dec 19 02:45	0°♎	
asc. node	13478 Dec 24 10:57	3°♎05'43	
retrograde	13479 Mar 05 15:00	28°♎39'55	
min. Earth dist.	13479 Apr 01 06:21	24°♎20'53	0.37038 AU
greatest brilliancy	13479 Apr 04 05:23	23°♎32'28	-3.0m
opposition	13479 Apr 05 03:10	23°♎17'34	6°25'02
direct	13479 May 04 05:51	18°♎23'08	
	13479 Jun 19 00:31	0°♏	
	13479 Aug 13 19:36	0°♐	
	13479 Oct 01 20:26	0°♑	
desc. node	13479 Oct 28 08:40	16°♑30'18	
	13479 Nov 19 00:14	0°♒	
	13480 Jan 06 04:00	0°♓	
	13480 Feb 23 03:17	0°♈	
evening set	13480 Feb 28 19:44	3°♈34'36	
max. Earth dist.	13480 Apr 01 21:41	24°♈32'58	2.66935 AU
	13480 Apr 10 10:00	0°♉	
conjunction	13480 Apr 12 16:00	1°♉26'39	-1°08'20
minimum elong	13480 Apr 12 15:21	1°♉25'37	1°08'46
morning rise	13480 May 26 13:22	0°♊01'11	
	13480 May 26 12:39	0°♊	
	13480 Jul 10 04:05	0°♋	
	13480 Aug 22 06:26	0°♌	
	13480 Oct 02 22:07	0°♍	
asc. node	13480 Nov 10 07:49	28°♍21'08	
	13480 Nov 12 13:02	0°♎	
	13480 Dec 23 01:17	0°♏	
	13481 Feb 03 13:22	0°♐	
	13481 Mar 28 03:51	0°♑	
retrograde	13481 May 04 17:25	8°♑55'30	
min. Earth dist.	13481 Jun 02 16:12	3°♑07'44	0.48832 AU
opposition	13481 Jun 10 22:43	0°♑07'52	4°19'13
greatest brilliancy	13481 Jun 09 17:37	0°♑34'20	-2.2m
	13481 Jun 11 07:24	30°℞♐	
direct	13481 Jul 14 21:16	22°♐58'14	
	13481 Aug 20 04:32	0°♑	
desc. node	13481 Sep 14 19:14	10°♑25'45	
	13481 Oct 23 12:26	0°♒	
	13481 Dec 15 10:19	0°♓	
	13482 Feb 03 09:03	0°♈	
	13482 Mar 23 06:49	0°♉	
evening set	13482 Apr 04 09:04	7°♉46'40	
max. Earth dist.	13482 Apr 26 01:22	21°♉57'15	2.60191 AU
	13482 May 08 03:44	0°♊	
conjunction	13482 May 20 02:10	8°♊02'21	-1°06'05
minimum elong	13482 May 20 03:04	8°♊03'54	1°07'00
	13482 Jun 20 22:30	0°♋	
morning rise	13482 Jul 07 23:00	12°♋03'04	
	13482 Aug 01 18:00	0°♌	
	13482 Sep 10 21:31	0°♍	
asc. node	13482 Sep 27 22:38	13°♍01'47	
	13482 Oct 19 21:51	0°♎	
	13482 Nov 27 13:24	0°♏	
	13483 Jan 05 21:38	0°♐	
	13483 Feb 16 12:53	0°♑	
	13483 Apr 04 23:12	0°♒	
retrograde	13483 Jun 15 15:14	24°♒35'05	
min. Earth dist.	13483 Jul 20 10:49	16°♒42'47	0.61129 AU
opposition	13483 Jul 25 16:55	14°♒38'43	0°20'55
greatest brilliancy	13483 Jul 25 15:22	14°♒40'15	-1.6m
desc. node	13483 Aug 03 05:01	11°♒25'31	
direct	13483 Sep 01 20:00	5°♒52'25	
	13483 Nov 18 21:22	0°♓	
	13484 Jan 13 15:37	0°♈	
	13484 Mar 03 09:20	0°♉	

	13484 Apr 18 15:32	0°♊	
evening set	13484 May 13 11:03	16°♊54'48	
max. Earth dist.	13484 May 27 07:32	26°♊36'33	2.48544 AU
	13484 Jun 01 02:23	0°♋	
conjunction	13484 Jul 05 04:17	24°♋44'58	-0°27'04
minimum elong	13484 Jul 05 05:58	24°♋48'05	0°28'03
	13484 Jul 12 05:37	0°♌	
asc. node	13484 Aug 14 09:46	25°♌12'14	
	13484 Aug 20 14:39	0°♍	
morning rise	13484 Sep 05 15:18	12°♍28'49	
	13484 Sep 27 22:19	0°♎	
greatest brilliancy	13484 Nov 02 11:20	28°♎00'37	1.2m
	13484 Nov 05 00:11	0°♏	
	13484 Dec 13 17:58	0°♐	
	13485 Jan 23 03:55	0°♑	
	13485 Mar 07 12:21	0°♒	
	13485 Apr 25 09:22	0°♓	
desc. node	13485 Jun 20 09:24	25°♓12'51	
retrograde	13485 Jul 19 15:45	29°♓56'45	
min. Earth dist.	13485 Aug 27 22:50	20°♓39'08	0.67722 AU
opposition	13485 Aug 29 10:56	20°♓03'20	-2°27'51
greatest brilliancy	13485 Aug 29 06:32	20°♓07'42	-1.3m
direct	13485 Oct 09 01:41	10°♓25'55	
	13485 Dec 16 12:30	0°♈	
	13486 Feb 10 08:43	0°♉	
	13486 Mar 30 05:10	0°♊	
	13486 May 12 22:19	0°♋	
	13486 Jun 22 19:35	0°♌	
asc. node	13486 Jul 02 02:40	7°♌02'55	
evening set	13486 Jul 05 16:45	9°♌47'15	
	13486 Jul 31 19:10	0°♍	
	13486 Sep 07 18:48	0°♎	
conjunction	13486 Sep 12 00:09	3°♎21'08	0°46'55
minimum elong	13486 Sep 11 20:04	3°♎13'03	0°46'50
max. Earth dist.	13486 Sep 17 10:39	7°♎40'09	2.36236 AU
	13486 Oct 15 16:13	0°♏	
	13486 Nov 23 08:35	0°♐	
morning rise	13486 Nov 25 00:27	1°♐15'55	
	13487 Jan 02 15:32	0°♑	
	13487 Feb 14 06:41	0°♒	
	13487 Apr 01 01:53	0°♓	
desc. node	13487 May 08 04:29	22°♓17'26	
	13487 May 22 00:19	0°♈	
	13487 Aug 01 18:07	0°♉	
retrograde	13487 Aug 22 22:54	2°♉28'48	
	13487 Sep 11 19:23	30°℞♈	
opposition	13487 Oct 02 02:42	23°♈05'40	-4°16'37
greatest brilliancy	13487 Oct 02 09:42	22°♈58'48	-1.3m
min. Earth dist.	13487 Oct 04 11:14	22°♈10'16	0.67684 AU
direct	13487 Nov 12 17:50	13°♈04'28	
	13488 Jan 12 20:52	0°♉	
	13488 Mar 07 03:55	0°♊	
	13488 Apr 21 10:38	0°♋	
asc. node	13488 May 19 03:31	19°♋55'13	
	13488 Jun 01 16:23	0°♌	
	13488 Jul 10 15:54	0°♍	
	13488 Aug 17 14:55	0°♎	
greatest brilliancy	13488 Aug 21 03:21	2°♎47'25	1.2m
evening set	13488 Sep 18 01:35	24°♎52'00	
	13488 Sep 24 14:40	0°♏	
	13488 Nov 02 12:49	0°♐	
conjunction	13488 Nov 25 08:05	17°♐01'57	0°59'02
minimum elong	13488 Nov 25 10:16	17°♐05'58	1°00'01
	13488 Dec 13 02:51	0°♑	
max. Earth dist.	13489 Jan 07 11:20	17°♑59'50	2.49333 AU
morning rise	13489 Jan 22 19:32	28°♑36'36	
	13489 Jan 24 20:16	0°♒	
	13489 Mar 10 23:23	0°♓	
desc. node	13489 Mar 24 15:43	8°♓46'09	
	13489 Apr 27 19:46	0°♈	
	13489 Jun 18 17:14	0°♉	
	13489 Aug 22 21:02	0°♊	
retrograde	13489 Sep 29 11:59	7°♊02'07	
	13489 Nov 02 18:40	30°℞♉	
opposition	13489 Nov 06 15:01	28°♉33'22	-4°59'14
greatest brilliancy	13489 Nov 07 16:52	28°♉08'46	-1.6m
min. Earth dist.	13489 Nov 12 19:41	26°♉11'59	0.60847 AU
direct	13489 Dec 17 13:49	18°♉41'08	
	13490 Feb 01 16:51	0°♊	
	13490 Mar 27 22:14	0°♋	
asc. node	13490 Apr 06 10:02	6°♋13'50	
	13490 May 10 07:14	0°♌	
	13490 Jun 19 01:42	0°♍	
	13490 Jul 27 12:04	0°♎	
	13490 Sep 03 23:37	0°♏	
	13490 Oct 13 12:09	0°♐	
evening set	13490 Nov 23 17:31	29°♐59'22	
	13490 Nov 23 17:53	0°♑	
	13491 Jan 06 00:16	0°♒	
conjunction	13491 Jan 16 13:24	7°♒06'26	0°13'27
minimum elong	13491 Jan 16 14:02	7°♒07'30	0°14'20
behind sun begin	13491 Jan 16 04:51	6°♒52'05	
behind sun end	13491 Jan 16 23:14	7°♒22'53	
max. Earth dist.	13491 Feb 07 23:44	21°♒58'59	2.60915 AU
desc. node	13491 Feb 09 02:44	22°♒43'17	
	13491 Feb 20 06:21	0°♓	
morning rise	13491 Mar 05 16:42	8°♓40'51	
	13491 Apr 08 06:10	0°♈	
	13491 May 26 20:39	0°♉	
	13491 Jul 16 15:56	0°♊	
	13491 Sep 11 03:46	0°♋	
retrograde	13491 Nov 19 00:30	20°♋12'17	
opposition	13491 Dec 23 04:34	13°♋20'22	-3°24'59
greatest brilliancy	13491 Dec 24 10:04	12°♋54'50	-2.2m
min. Earth dist.	13491 Dec 31 21:54	10°♋20'08	0.48034 AU
direct	13492 Jan 29 14:45	4°♋54'40	
asc. node	13492 Feb 22 18:57	8°♋45'15	
	13492 Apr 07 15:56	0°♌	
	13492 May 22 13:15	0°♍	
	13492 Jul 02 05:14	0°♎	
	13492 Aug 11 06:30	0°♏	
	13492 Sep 21 04:41	0°♐	
	13492 Nov 02 17:19	0°♑	
	13492 Dec 17 01:15	0°♒	
desc. node	13492 Dec 26 20:03	6°♒28'20	
evening set	13493 Jan 08 08:22	14°♒40'52	
	13493 Jan 31 23:00	0°♓	
conjunction	13493 Feb 24 00:08	14°♓46'56	-0°31'47
minimum elong	13493 Feb 23 23:11	14°♓45'24	0°31'24
max. Earth dist.	13493 Mar 03 02:51	19°♓19'00	2.67269 AU
	13493 Mar 19 22:19	0°♈	
morning rise	13493 Apr 08 21:57	12°♈38'50	
	13493 May 06 09:56	0°♉	
	13493 Jun 23 00:58	0°♊	
	13493 Aug 09 19:19	0°♋	
	13493 Sep 27 06:27	0°♌	
	13493 Nov 17 18:33	0°♍	
asc. node	13494 Jan 10 02:18	22°♍59'59	
retrograde	13494 Feb 01 04:49	26°♍00'48	

opposition	13494 Mar 02 19:05	21°♍08'17	3°50'56
greatest brilliancy	13494 Mar 02 23:22	21°♍05'25	-3.0m
min. Earth dist.	13494 Mar 04 19:21	20°♍35'56	0.36672 AU
direct	13494 Apr 01 19:21	16°♍02'27	
	13494 May 20 23:16	0°♎	
	13494 Jul 11 15:02	0°♏	
	13494 Aug 26 17:59	0°♐	
	13494 Oct 11 13:06	0°♑	
desc. node	13494 Nov 13 20:09	21°♑31'19	
	13494 Nov 27 01:48	0°♒	
	13495 Jan 13 08:18	0°♓	
evening set	13495 Feb 15 01:31	20°♓38'09	
	13495 Mar 01 21:33	0°♈	
max. Earth dist.	13495 Mar 25 02:10	14°♈41'00	2.68110 AU
conjunction	13495 Mar 31 02:02	18°♈29'35	-1°02'02
minimum elong	13495 Mar 31 01:03	18°♈28'01	1°02'15
	13495 Apr 18 02:57	0°♉	
morning rise	13495 May 13 08:08	16°♉13'41	
	13495 Jun 03 11:52	0°♊	
	13495 Jul 18 16:54	0°♋	
	13495 Aug 31 15:27	0°♌	
	13495 Oct 13 09:19	0°♍	
	13495 Nov 24 09:42	0°♎	
asc. node	13495 Nov 28 01:53	2°♎37'24	
	13496 Jan 06 02:02	0°♏	
	13496 Feb 23 13:39	0°♐	
retrograde	13496 Apr 14 05:03	15°♐26'12	
min. Earth dist.	13496 May 10 23:06	10°♐32'45	0.43331 AU
greatest brilliancy	13496 May 17 14:00	8°♐20'35	-2.5m
opposition	13496 May 19 05:14	7°♐47'44	5°55'34
direct	13496 Jun 19 23:07	1°♐34'06	
	13496 Sep 10 15:16	0°♑	
desc. node	13496 Oct 01 04:20	11°♑08'48	
	13496 Nov 03 03:18	0°♒	
	13496 Dec 23 12:37	0°♓	
	13497 Feb 10 12:01	0°♈	
evening set	13497 Mar 21 07:26	24°♈23'31	
	13497 Mar 30 02:02	0°♉	
max. Earth dist.	13497 Apr 16 05:23	11°♉03'49	2.63449 AU
conjunction	13497 May 04 20:16	23°♉15'55	-1°10'34
minimum elong	13497 May 04 20:30	23°♉16'17	1°11'19
	13497 May 14 23:53	0°♊	
morning rise	13497 Jun 20 01:36	24°♊27'55	
	13497 Jun 28 01:15	0°♋	
	13497 Aug 09 06:41	0°♌	
	13497 Sep 18 21:29	0°♍	
asc. node	13497 Oct 14 18:08	19°♍35'14	
	13497 Oct 28 08:45	0°♎	
	13497 Dec 06 11:13	0°♏	
	13498 Jan 15 10:15	0°♐	
	13498 Feb 27 11:56	0°♑	
	13498 Apr 22 22:44	0°♒	
retrograde	13498 May 31 14:56	8°♒50'49	
min. Earth dist.	13498 Jul 03 06:52	1°♒41'50	0.56872 AU
	13498 Jul 07 16:21	30°℞♑	
opposition	13498 Jul 09 21:49	29°♑08'05	1°45'30
greatest brilliancy	13498 Jul 09 11:57	29°♑17'39	-1.8m
direct	13498 Aug 15 14:57	20°♑52'32	
desc. node	13498 Aug 19 15:41	20°♑58'36	
	13498 Sep 27 16:01	0°♒	
	13498 Nov 30 03:24	0°♓	
	13499 Jan 21 18:02	0°♈	
	13499 Mar 11 14:02	0°♉	
	13499 Apr 26 15:06	0°♊	
evening set	13499 Apr 27 20:41	0°♊49'37	
max. Earth dist.	13499 May 13 23:16	11°♊45'06	2.53625 AU
	13499 Jun 09 04:15	0°♋	
conjunction	13499 Jun 15 22:51	4°♋48'50	-0°47'33
minimum elong	13499 Jun 16 00:40	4°♋52'06	0°48'35
	13499 Jul 20 12:59	0°♌	
morning rise	13499 Aug 10 16:35	15°♌52'25	
	13499 Aug 29 04:13	0°♍	
asc. node	13499 Sep 01 07:22	2°♍24'50	
	13499 Oct 06 17:00	0°♎	
	13499 Nov 13 22:25	0°♏	
	13499 Dec 22 19:04	0°♐	
	13500 Feb 01 10:28	0°♑	
	13500 Mar 17 13:39	0°♒	
	13500 May 08 23:53	0°♓	
retrograde	13500 Jul 07 10:18	17°♓03'09	
desc. node	13500 Jul 07 22:15	17°♓03'03	
min. Earth dist.	13500 Aug 14 02:53	8°♓15'21	0.65921 AU
opposition	13500 Aug 17 02:38	7°♓04'10	-1°30'22
greatest brilliancy	13500 Aug 16 21:52	7°♓08'54	-1.4m
	13500 Sep 06 23:13	30°℞♒	
direct	13500 Sep 25 21:58	27°♒43'00	
	13500 Oct 16 09:02	0°♓	
	13500 Dec 29 03:40	0°♈	
	13501 Feb 19 14:48	0°♉	
	13501 Apr 07 15:47	0°♊	
	13501 May 21 05:11	0°♋	
evening set	13501 Jun 13 11:10	16°♋49'42	
	13501 Jul 01 04:13	0°♌	
max. Earth dist.	13501 Jul 01 12:30	0°♌15'34	2.40138 AU
asc. node	13501 Jul 19 21:07	14°♌12'20	
	13501 Aug 09 07:05	0°♍	
conjunction	13501 Aug 13 20:33	3°♍33'49	0°17'37
minimum elong	13501 Aug 13 18:56	3°♍30'38	0°17'02
	13501 Sep 16 09:13	0°♎	
	13501 Oct 24 07:27	0°♏	
morning rise	13501 Oct 26 00:39	1°♏20'58	
	13501 Dec 01 23:01	0°♐	
	13502 Jan 11 04:50	0°♑	
	13502 Feb 22 22:21	0°♒	
	13502 Apr 10 09:07	0°♓	
desc. node	13502 May 25 20:10	25°♓45'32	
	13502 Jun 03 08:04	0°♈	
retrograde	13502 Aug 10 10:16	20°♈04'39	
opposition	13502 Sep 19 23:43	10°♈27'06	-3°41'28
greatest brilliancy	13502 Sep 20 00:50	10°♈26'00	-1.2m
min. Earth dist.	13502 Sep 20 19:45	10°♈07'20	0.68504 AU
direct	13502 Oct 31 09:20	0°♈32'08	
	13503 Jan 26 09:03	0°♉	
	13503 Mar 17 22:37	0°♊	
	13503 May 01 09:18	0°♋	
asc. node	13503 Jun 06 17:19	26°♋28'23	
	13503 Jun 11 09:59	0°♌	
	13503 Jul 20 08:43	0°♍	
evening set	13503 Aug 19 21:38	24°♍07'19	
	13503 Aug 27 07:16	0°♎	
	13503 Oct 04 05:20	0°♏	
conjunction	13503 Oct 31 10:26	21°♏09'16	1°06'27
minimum elong	13503 Oct 31 10:33	21°♏09'29	1°07'12
	13503 Nov 12 00:16	0°♐	
max. Earth dist.	13503 Dec 21 22:14	29°♐38'32	2.43703 AU
	13503 Dec 22 10:06	0°♑	
morning rise	13504 Jan 04 11:15	9°♑22'05	
	13504 Feb 03 00:34	0°♒	
	13504 Mar 19 06:01	0°♓	

desc. node	13504 Apr 11 11:12	14°♓38'49	
	13504 May 06 19:52	0°♈	
	13504 Jun 30 16:11	0°♉	
retrograde	13504 Sep 14 14:58	23°♉13'44	
opposition	13504 Oct 23 17:34	14°♉20'06	-4°52'46
greatest brilliancy	13504 Oct 24 11:58	14°♉02'19	-1.4m
min. Earth dist.	13504 Oct 28 10:49	12°♉30'40	0.64315 AU
direct	13504 Dec 04 04:28	4°♉18'48	
	13505 Feb 18 13:42	0°♊	
	13505 Apr 08 01:28	0°♋	
asc. node	13505 Apr 23 22:26	10°♋57'32	
	13505 May 20 05:05	0°♌	
	13505 Jun 28 12:42	0°♍	
	13505 Aug 05 16:32	0°♎	
	13505 Sep 12 21:45	0°♏	
	13505 Oct 22 03:09	0°♐	
evening set	13505 Nov 01 18:30	7°♐56'16	
	13505 Dec 02 01:11	0°♑	
conjunction	13505 Dec 30 09:38	19°♑57'10	0°32'45
minimum elong	13505 Dec 30 11:14	19°♑59'56	0°33'45
	13506 Jan 14 00:58	0°♒	
max. Earth dist.	13506 Jan 29 02:34	10°♒10'29	2.56965 AU
morning rise	13506 Feb 19 14:17	24°♒24'35	
desc. node	13506 Feb 26 21:54	29°♒11'18	
	13506 Feb 28 03:51	0°♓	
	13506 Apr 16 08:06	0°♈	
	13506 Jun 04 18:50	0°♉	
	13506 Jul 28 05:41	0°♊	
	13506 Oct 10 16:42	0°♋	
retrograde	13506 Oct 29 03:41	1°♋53'53	
	13506 Nov 15 11:33	30°℞♊	
opposition	13506 Dec 04 03:08	24°♊17'02	-4°28'07
greatest brilliancy	13506 Dec 05 12:18	23°♊46'46	-1.9m
min. Earth dist.	13506 Dec 12 05:57	21°♊19'41	0.53592 AU
direct	13507 Jan 12 10:11	15°♊02'12	
	13507 Mar 05 13:24	0°♋	
asc. node	13507 Mar 12 07:39	3°♋29'27	
	13507 Apr 24 04:52	0°♌	
	13507 Jun 04 18:48	0°♍	
	13507 Jul 14 03:03	0°♎	
	13507 Aug 22 07:23	0°♏	
	13507 Oct 01 12:06	0°♐	
	13507 Nov 12 09:21	0°♑	
evening set	13507 Dec 24 18:16	29°♑01'50	
	13507 Dec 26 04:57	0°♒	
desc. node	13508 Jan 14 11:08	12°♒48'18	
	13508 Feb 09 18:43	0°♓	
conjunction	13508 Feb 11 12:23	1°♓07'24	-0°15'40
minimum elong	13508 Feb 11 11:50	1°♓06'31	0°15'04
behind sun begin	13508 Feb 11 05:35	0°♓56'24	
behind sun end	13508 Feb 11 18:05	1°♓16'38	
max. Earth dist.	13508 Feb 24 05:25	9°♓18'52	2.65451 AU
morning rise	13508 Mar 27 13:52	29°♓55'58	
	13508 Mar 27 16:25	0°♈	
	13508 May 14 11:11	0°♉	
	13508 Jul 01 23:07	0°♊	
	13508 Aug 20 16:15	0°♋	
	13508 Oct 12 23:31	0°♌	
retrograde	13508 Dec 31 14:36	26°♌41'10	
asc. node	13509 Jan 27 15:02	22°♌21'29	
opposition	13509 Jan 31 12:27	21°♌13'46	0°16'43
greatest brilliancy	13509 Jan 31 14:05	21°♌12'33	-2.8m
min. Earth dist.	13509 Feb 07 06:55	19°♌14'29	0.39763 AU
direct	13509 Mar 05 10:36	14°♌52'42	
	13509 Apr 24 23:40	0°♍	
	13509 Jun 12 22:11	0°♎	
	13509 Jul 26 06:45	0°♏	
	13509 Sep 07 07:05	0°♐	
	13509 Oct 21 08:02	0°♑	
desc. node	13509 Dec 01 08:57	27°♑08'17	
	13509 Dec 05 18:21	0°♒	
	13510 Jan 21 08:52	0°♓	
evening set	13510 Feb 01 23:09	7°♓22'59	
	13510 Mar 09 14:52	0°♈	
conjunction	13510 Mar 18 14:27	5°♈41'29	-0°52'32
minimum elong	13510 Mar 18 13:18	5°♈39'40	0°52'32
max. Earth dist.	13510 Mar 17 13:22	5°♈01'46	2.68451 AU
	13510 Apr 25 21:03	0°♉	
morning rise	13510 Apr 30 17:16	3°♉05'17	
	13510 Jun 11 15:04	0°♊	
	13510 Jul 27 14:22	0°♋	
	13510 Sep 10 17:19	0°♌	
	13510 Oct 25 04:48	0°♍	
	13510 Dec 08 23:22	0°♎	
asc. node	13510 Dec 15 19:25	4°♎27'34	
	13511 Jan 27 06:24	0°♏	
retrograde	13511 Mar 22 17:47	17°♏06'14	
min. Earth dist.	13511 Apr 17 14:07	12°♏48'18	0.38676 AU
greatest brilliancy	13511 Apr 22 09:01	11°♏24'09	-2.8m
opposition	13511 Apr 23 19:25	10°♏58'43	6°46'52
direct	13511 May 23 15:46	5°♏42'33	
	13511 Aug 04 04:44	0°♐	
	13511 Sep 25 19:55	0°♑	
desc. node	13511 Oct 19 14:17	14°♑18'31	
	13511 Nov 14 08:16	0°♒	
	13512 Jan 02 03:38	0°♓	
	13512 Feb 19 10:26	0°♈	
evening set	13512 Mar 08 14:32	11°♈25'18	
	13512 Apr 06 19:29	0°♉	
max. Earth dist.	13512 Apr 08 01:56	0°♉48'51	2.65933 AU
conjunction	13512 Apr 21 13:00	9°♉29'41	-1°10'21
minimum elong	13512 Apr 21 12:38	9°♉29'05	1°10'56
	13512 May 22 20:22	0°♊	
morning rise	13512 Jun 05 01:06	8°♊47'31	
	13512 Jul 06 06:54	0°♋	
	13512 Aug 18 01:29	0°♌	
	13512 Sep 28 07:36	0°♍	
asc. node	13512 Nov 01 15:00	25°♍36'46	
	13512 Nov 07 10:47	0°♎	
	13512 Dec 17 07:10	0°♏	
	13513 Jan 27 11:00	0°♐	
	13513 Mar 15 01:52	0°♑	
retrograde	13513 May 16 02:12	20°♑54'43	
min. Earth dist.	13513 Jun 15 08:50	14°♑36'26	0.51820 AU
greatest brilliancy	13513 Jun 22 06:34	12°♑01'39	-2.1m
opposition	13513 Jun 23 04:14	11°♑41'19	3°21'13
direct	13513 Jul 28 04:41	4°♑05'19	
desc. node	13513 Sep 06 00:23	12°♑14'40	
	13513 Oct 16 07:32	0°♒	
	13513 Dec 10 14:29	0°♓	
	13514 Jan 30 08:23	0°♈	
	13514 Mar 19 13:33	0°♉	
evening set	13514 Apr 13 15:48	16°♉12'16	
max. Earth dist.	13514 May 03 05:06	29°♉08'18	2.58050 AU
	13514 May 04 12:01	0°♊	
conjunction	13514 May 30 07:40	17°♊32'22	-1°01'04
minimum elong	13514 May 30 08:59	17°♊34'38	1°02'03
	13514 Jun 17 05:08	0°♋	
morning rise	13514 Jul 20 04:23	23°♋37'46	

	13514 Jul 28 20:57	0°♌	
	13514 Sep 06 20:16	0°♍	
asc. node	13514 Sep 19 03:16	9°♍25'38	
	13514 Oct 15 16:18	0°♎	
	13514 Nov 23 03:36	0°♏	
	13515 Jan 01 06:16	0°♐	
	13515 Feb 11 09:03	0°♑	
	13515 Mar 29 01:08	0°♒	
	13515 Jun 01 03:12	0°♓	
retrograde	13515 Jun 24 18:05	3°♓21'49	
	13515 Jul 16 21:46	30°℞♒	
desc. node	13515 Jul 25 10:20	27°♒08'05	
min. Earth dist.	13515 Jul 30 15:18	25°♒08'23	0.63085 AU
opposition	13515 Aug 04 02:15	23°♒22'36	-0°23'06
greatest brilliancy	13515 Aug 04 00:34	23°♒24'17	-1.5m
direct	13515 Sep 11 20:40	14°♒22'31	
	13515 Nov 10 16:51	0°♓	
	13516 Jan 08 18:29	0°♈	
	13516 Feb 28 08:08	0°♉	
	13516 Apr 14 20:50	0°♊	
evening set	13516 May 24 14:49	27°♊19'59	
	13516 May 28 09:04	0°♋	
max. Earth dist.	13516 Jun 07 01:25	6°♋55'43	2.45558 AU
	13516 Jul 08 11:04	0°♌	
conjunction	13516 Jul 18 23:25	7°♌54'58	-0°12'19
minimum elong	13516 Jul 19 00:24	7°♌56'49	0°13'12
behind sun begin	13516 Jul 18 09:24	7°♌28'27	
behind sun end	13516 Jul 19 15:24	8°♌25'13	
asc. node	13516 Aug 05 15:45	21°♌25'13	
	13516 Aug 16 18:03	0°♍	
morning rise	13516 Sep 23 16:25	29°♍45'56	
	13516 Sep 23 23:32	0°♎	
	13516 Oct 31 23:35	0°♏	
	13516 Dec 09 15:49	0°♐	
	13517 Jan 18 22:49	0°♑	
	13517 Mar 02 23:00	0°♒	
	13517 Apr 19 14:07	0°♓	
desc. node	13517 Jun 11 13:01	26°♓51'57	
	13517 Jun 19 18:28	0°♈	
retrograde	13517 Jul 28 05:09	7°♈39'26	
	13517 Sep 01 11:26	30°℞♓	
opposition	13517 Sep 06 23:03	27°♓50'50	-2°57'36
min. Earth dist.	13517 Sep 06 06:50	28°♓06'54	0.68281 AU
greatest brilliancy	13517 Sep 06 19:59	27°♓53'53	-1.3m
direct	13517 Oct 17 21:22	18°♓06'16	
	13517 Dec 07 15:30	0°♈	
	13518 Feb 05 08:59	0°♉	
	13518 Mar 26 00:55	0°♊	
	13518 May 09 00:21	0°♋	
	13518 Jun 18 23:12	0°♌	
asc. node	13518 Jun 23 10:15	3°♌22'11	
evening set	13518 Jul 21 11:40	24°♌57'02	
	13518 Jul 27 22:51	0°♍	
	13518 Sep 03 22:00	0°♎	
conjunction	13518 Sep 30 18:29	21°♎18'08	0°58'49
minimum elong	13518 Sep 30 15:01	21°♎11'18	0°59'05
	13518 Oct 11 19:06	0°♏	
	13518 Nov 19 11:31	0°♐	
max. Earth dist.	13518 Nov 20 15:14	0°♐52'46	2.38144 AU
morning rise	13518 Dec 11 10:58	16°♐32'59	
	13518 Dec 29 18:14	0°♑	
	13519 Feb 10 07:26	0°♒	
	13519 Mar 27 18:58	0°♓	
desc. node	13519 Apr 29 05:25	19°♓56'39	
	13519 May 16 13:32	0°♈	
	13519 Jul 16 16:08	0°♉	
retrograde	13519 Aug 31 23:15	10°♉12'57	
opposition	13519 Oct 10 19:18	0°♉59'18	-4°33'05
greatest brilliancy	13519 Oct 11 06:11	0°♉48'40	-1.3m
	13519 Oct 13 08:00	30°℞♈	
min. Earth dist.	13519 Oct 14 00:06	29°♈44'19	0.66761 AU
direct	13519 Nov 21 10:17	20°♈56'34	
	13520 Jan 02 16:08	0°♉	
	13520 Mar 01 19:23	0°♊	
	13520 Apr 16 23:27	0°♋	
asc. node	13520 May 10 11:07	16°♋40'49	
	13520 May 28 12:00	0°♌	
	13520 Jul 06 14:19	0°♍	
	13520 Aug 13 14:53	0°♎	
	13520 Sep 20 16:06	0°♏	
evening set	13520 Oct 05 20:19	11°♏47'36	
	13520 Oct 29 16:09	0°♐	
conjunction	13520 Dec 09 13:43	0°♑10'22	0°50'44
minimum elong	13520 Dec 09 16:01	0°♑14'30	0°51'44
	13520 Dec 09 07:58	0°♑	
max. Earth dist.	13521 Jan 16 17:15	27°♑00'02	2.52227 AU
	13521 Jan 21 02:20	0°♒	
morning rise	13521 Feb 03 00:57	8°♒46'41	
	13521 Mar 07 03:46	0°♓	
desc. node	13521 Mar 15 17:08	5°♓31'31	
	13521 Apr 23 15:58	0°♈	
	13521 Jun 13 09:43	0°♉	
	13521 Aug 10 23:05	0°♊	
retrograde	13521 Oct 10 05:32	15°♊53'10	
opposition	13521 Nov 16 16:15	7°♊40'46	-4°54'55
greatest brilliancy	13521 Nov 17 21:44	7°♊12'59	-1.7m
min. Earth dist.	13521 Nov 23 15:04	5°♊03'49	0.58496 AU
	13521 Dec 09 19:15	30°℞♉	
direct	13521 Dec 27 03:59	27°♉57'35	
	13522 Jan 14 05:03	0°♊	
	13522 Mar 21 11:04	0°♋	
asc. node	13522 Mar 28 19:42	4°♋35'26	
	13522 May 05 04:05	0°♌	
	13522 Jun 14 09:43	0°♍	
	13522 Jul 23 01:51	0°♎	
	13522 Aug 30 17:46	0°♏	
	13522 Oct 09 10:44	0°♐	
	13522 Nov 19 20:42	0°♑	
evening set	13522 Dec 06 07:32	11°♑31'59	
	13523 Jan 02 06:37	0°♒	
conjunction	13523 Jan 27 00:11	16°♒30'57	0°02'26
minimum elong	13523 Jan 27 00:18	16°♒31'10	0°03'14
behind sun begin	13523 Jan 26 04:14	15°♒58'03	
behind sun end	13523 Jan 27 20:23	17°♒04'16	
desc. node	13523 Jan 31 04:57	19°♒16'59	
max. Earth dist.	13523 Feb 14 17:05	28°♒46'28	2.62775 AU
	13523 Feb 16 14:20	0°♓	
morning rise	13523 Mar 14 19:46	16°♓52'55	
	13523 Apr 04 12:15	0°♈	
	13523 May 22 17:43	0°♉	
	13523 Jul 11 12:15	0°♊	
	13523 Sep 02 14:08	0°♋	
	13523 Nov 13 10:36	0°♌	
retrograde	13523 Dec 03 21:22	2°♌23'41	
	13523 Dec 23 10:20	30°℞♋	
opposition	13524 Jan 06 00:07	26°♋00'18	-2°24'46
greatest brilliancy	13524 Jan 06 21:52	25°♋42'17	-2.4m
min. Earth dist.	13524 Jan 14 14:44	23°♋10'31	0.44911 AU
direct	13524 Feb 11 00:34	18°♋12'35	
asc. node	13524 Feb 14 05:43	18°♋17'02	

	13524 Mar 26 02:27	0°♌	
	13524 May 15 06:30	0°♍	
	13524 Jun 26 08:39	0°♎	
	13524 Aug 06 03:33	0°♏	
	13524 Sep 16 14:16	0°♐	
	13524 Oct 29 12:36	0°♑	
	13524 Dec 13 03:55	0°♒	
desc. node	13524 Dec 17 22:10	3°♒08'14	
evening set	13525 Jan 18 05:16	23°♒31'33	
	13525 Jan 28 06:25	0°♓	
conjunction	13525 Mar 04 23:46	22°♓48'52	-0°40'13
minimum elong	13525 Mar 04 22:40	22°♓47'08	0°39'58
max. Earth dist.	13525 Mar 09 03:41	25°♓27'30	2.67935 AU
	13525 Mar 16 07:26	0°♈	
morning rise	13525 Apr 17 11:11	20°♈22'00	
	13525 May 02 16:21	0°♉	
	13525 Jun 18 22:39	0°♊	
	13525 Aug 04 22:49	0°♋	
	13525 Sep 20 21:19	0°♌	
	13525 Nov 07 16:10	0°♍	
	13525 Dec 30 23:00	0°♎	
asc. node	13526 Jan 01 10:45	0°♎42'47	
retrograde	13526 Feb 20 18:53	14°♎39'14	
min. Earth dist.	13526 Mar 21 04:26	10°♎01'21	0.36424 AU
opposition	13526 Mar 22 12:46	9°♎39'57	5°34'58
greatest brilliancy	13526 Mar 22 04:00	9°♎45'45	-3.0m
direct	13526 Apr 20 14:44	4°♎49'54	
	13526 Jul 01 07:09	0°♏	
	13526 Aug 20 02:55	0°♐	
	13526 Oct 06 10:25	0°♑	
desc. node	13526 Nov 05 00:40	18°♑47'22	
	13526 Nov 22 18:16	0°♒	
	13527 Jan 09 11:24	0°♓	
evening set	13527 Feb 23 22:49	28°♓33'02	
	13527 Feb 26 06:02	0°♈	
max. Earth dist.	13527 Mar 31 03:34	20°♈49'29	2.67573 AU
conjunction	13527 Apr 08 19:30	26°♈21'02	-1°06'10
minimum elong	13527 Apr 08 18:41	26°♈19'44	1°06'32
	13527 Apr 14 12:25	0°♉	
morning rise	13527 May 22 08:16	24°♉28'37	
	13527 May 30 18:19	0°♊	
	13527 Jul 14 16:21	0°♋	
	13527 Aug 27 03:42	0°♌	
	13527 Oct 08 06:35	0°♍	
	13527 Nov 18 10:19	0°♎	
asc. node	13527 Nov 19 08:43	0°♎41'04	
	13527 Dec 29 16:02	0°♏	
	13528 Feb 11 17:41	0°♐	
retrograde	13528 Apr 27 05:50	29°♐43'05	
min. Earth dist.	13528 May 25 02:33	24°♐20'22	0.46347 AU
greatest brilliancy	13528 Jun 01 02:52	21°♐53'02	-2.3m
opposition	13528 Jun 02 13:10	21°♐22'49	5°02'56
direct	13528 Jul 05 13:31	14°♐37'00	
	13528 Aug 31 09:22	0°♑	
desc. node	13528 Sep 22 10:53	10°♑36'43	
	13528 Oct 28 10:29	0°♒	
	13528 Dec 19 03:03	0°♓	
	13529 Feb 06 15:22	0°♈	
	13529 Mar 26 10:19	0°♉	
evening set	13529 Mar 30 06:47	2°♉28'08	
max. Earth dist.	13529 Apr 22 21:20	17°♉46'58	2.61751 AU
	13529 May 11 08:32	0°♊	
conjunction	13529 May 14 09:07	2°♊01'18	-1°08'37
minimum elong	13529 May 14 09:44	2°♊02'21	1°09'29
	13529 Jun 24 07:21	0°♋	
morning rise	13529 Jun 30 22:05	4°♋38'05	
	13529 Aug 05 08:04	0°♌	
	13529 Sep 14 17:14	0°♍	
asc. node	13529 Oct 06 00:34	16°♍13'12	
	13529 Oct 23 22:29	0°♎	
	13529 Dec 01 18:05	0°♏	
	13530 Jan 10 06:58	0°♐	
	13530 Feb 21 07:53	0°♑	
	13530 Apr 11 12:10	0°♒	
retrograde	13530 Jun 10 08:20	18°♒31'15	
min. Earth dist.	13530 Jul 14 05:25	10°♒57'15	0.59327 AU
opposition	13530 Jul 20 02:17	8°♒39'21	0°55'00
greatest brilliancy	13530 Jul 19 21:40	8°♒43'52	-1.7m
desc. node	13530 Aug 10 21:14	1°♒42'23	
direct	13530 Aug 26 14:21	0°♒05'56	
	13530 Nov 24 00:35	0°♓	
	13531 Jan 17 07:45	0°♈	
	13531 Mar 07 16:45	0°♉	
	13531 Apr 22 21:50	0°♊	
evening set	13531 May 08 02:20	10°♊16'01	
max. Earth dist.	13531 May 22 18:50	20°♊23'43	2.50882 AU
	13531 Jun 05 11:05	0°♋	
conjunction	13531 Jun 28 00:42	16°♋13'04	-0°36'41
minimum elong	13531 Jun 28 02:34	16°♋16'28	0°37'41
	13531 Jul 16 17:47	0°♌	
asc. node	13531 Aug 23 11:34	28°♌37'22	
	13531 Aug 25 06:25	0°♍	
morning rise	13531 Aug 26 06:24	0°♍46'17	
	13531 Oct 02 16:45	0°♎	
	13531 Nov 09 19:54	0°♏	
	13531 Dec 18 14:05	0°♐	
	13532 Jan 28 00:35	0°♑	
	13532 Mar 11 13:21	0°♒	
	13532 Apr 30 09:48	0°♓	
desc. node	13532 Jun 28 02:37	23°♓17'45	
retrograde	13532 Jul 15 01:00	24°♓59'47	
min. Earth dist.	13532 Aug 22 14:57	15°♓55'01	0.67038 AU
opposition	13532 Aug 24 19:02	15°♓03'18	-2°05'16
greatest brilliancy	13532 Aug 24 14:01	15°♓08'17	-1.3m
direct	13532 Oct 04 01:18	5°♓32'43	
	13532 Dec 21 20:02	0°♈	
	13533 Feb 14 03:24	0°♉	
	13533 Apr 02 16:37	0°♊	
	13533 May 16 09:38	0°♋	
evening set	13533 Jun 26 02:22	29°♋48'07	
	13533 Jun 26 08:41	0°♌	
asc. node	13533 Jul 10 02:43	10°♌25'30	
max. Earth dist.	13533 Jul 24 17:21	21°♌40'02	2.37455 AU
	13533 Aug 04 10:28	0°♍	
conjunction	13533 Aug 30 09:34	20°♍25'46	0°35'05
minimum elong	13533 Aug 30 06:12	20°♍19'07	0°34'45
	13533 Sep 11 11:27	0°♎	
	13533 Oct 19 08:53	0°♏	
morning rise	13533 Nov 12 22:22	19°♏10'48	
	13533 Nov 27 00:08	0°♐	
	13534 Jan 06 05:18	0°♑	
	13534 Feb 17 19:24	0°♒	
	13534 Apr 04 18:06	0°♓	
desc. node	13534 May 15 23:10	24°♓17'35	
	13534 May 26 13:40	0°♈	
retrograde	13534 Aug 18 02:50	27°♈39'41	
opposition	13534 Sep 27 11:03	18°♈09'44	-4°03'09
greatest brilliancy	13534 Sep 27 15:16	18°♈05'35	-1.3m
min. Earth dist.	13534 Sep 29 03:10	17°♈30'16	0.68185 AU

direct	13534 Nov 07 23:47	8°♈10'49	
	13535 Jan 18 16:33	0°♉	
	13535 Mar 12 06:19	0°♊	
	13535 Apr 26 05:44	0°♋	
asc. node	13535 May 28 02:35	23°♋01'57	
	13535 Jun 06 10:18	0°♌	
	13535 Jul 15 10:09	0°♍	
	13535 Aug 22 09:00	0°♎	
evening set	13535 Sep 06 10:37	11°♎57'29	
	13535 Sep 29 07:22	0°♏	
	13535 Nov 07 03:05	0°♐	
conjunction	13535 Nov 16 03:36	6°♐48'46	1°03'38
minimum elong	13535 Nov 16 05:15	6°♐51'52	1°04'33
	13535 Dec 17 13:55	0°♑	
max. Earth dist.	13536 Jan 02 09:39	11°♑20'07	2.46861 AU
morning rise	13536 Jan 16 09:23	21°♑09'54	
	13536 Jan 29 04:21	0°♒	
	13536 Mar 14 06:39	0°♓	
desc. node	13536 Apr 01 11:34	11°♓36'49	
	13536 May 01 07:49	0°♈	
	13536 Jun 23 03:27	0°♉	
	13536 Sep 07 03:30	0°♊	
retrograde	13536 Sep 23 11:55	1°♊29'26	
	13536 Oct 08 23:03	30°℞♉	
opposition	13536 Nov 01 01:53	22°♉48'56	-4°58'11
greatest brilliancy	13536 Nov 02 00:30	22°♉27'14	-1.5m
min. Earth dist.	13536 Nov 06 14:40	20°♉41'32	0.62525 AU
direct	13536 Dec 12 06:39	12°♉51'30	
	13537 Feb 09 12:29	0°♊	
	13537 Apr 01 18:45	0°♋	
asc. node	13537 Apr 14 08:20	8°♋26'50	
	13537 May 14 14:54	0°♌	
	13537 Jun 23 04:57	0°♍	
	13537 Jul 31 12:20	0°♎	
	13537 Sep 07 20:16	0°♏	
	13537 Oct 17 04:26	0°♐	
evening set	13537 Nov 15 04:07	21°♐20'22	
	13537 Nov 27 05:16	0°♑	
conjunction	13538 Jan 09 23:35	0°♒28'00	0°21'35
minimum elong	13538 Jan 10 00:37	0°♒29'46	0°22'32
	13538 Jan 09 07:06	0°♒	
max. Earth dist.	13538 Feb 04 13:09	17°♒36'30	2.59239 AU
desc. node	13538 Feb 16 22:04	25°♒45'00	
	13538 Feb 23 10:21	0°♓	
morning rise	13538 Feb 28 08:26	3°♓11'43	
	13538 Apr 11 10:42	0°♈	
	13538 May 30 07:58	0°♉	
	13538 Jul 21 01:08	0°♊	
	13538 Sep 19 10:53	0°♋	
retrograde	13538 Nov 10 01:32	12°♋25'06	
opposition	13538 Dec 15 01:59	5°♋11'40	-3°57'08
greatest brilliancy	13538 Dec 16 10:09	4°♋43'02	-2.1m
min. Earth dist.	13538 Dec 23 14:58	2°♋10'01	0.50572 AU
	13538 Dec 30 08:05	30°℞♊	
direct	13539 Jan 22 09:51	26°♊20'58	
	13539 Feb 15 04:03	0°♋	
asc. node	13539 Mar 02 16:52	5°♋37'34	
	13539 Apr 15 23:17	0°♌	
	13539 May 29 01:51	0°♍	
	13539 Jul 08 01:41	0°♎	
	13539 Aug 16 15:53	0°♏	
	13539 Sep 26 04:34	0°♐	
	13539 Nov 07 08:44	0°♑	
	13539 Dec 21 09:36	0°♒	
evening set	13540 Jan 03 09:03	8°♒37'02	
desc. node	13540 Jan 04 13:52	9°♒24'37	
	13540 Feb 05 02:39	0°♓	
conjunction	13540 Feb 19 21:20	9°♓31'03	-0°25'21
minimum elong	13540 Feb 19 20:30	9°♓29'44	0°24'53
max. Earth dist.	13540 Feb 29 11:18	15°♓39'08	2.66560 AU
	13540 Mar 23 00:28	0°♈	
morning rise	13540 Apr 04 05:47	7°♈44'06	
	13540 May 09 14:33	0°♉	
	13540 Jun 26 13:58	0°♊	
	13540 Aug 14 02:16	0°♋	
	13540 Oct 03 04:25	0°♌	
	13540 Nov 29 04:32	0°♍	
retrograde	13541 Jan 18 13:49	13°♍00'06	
asc. node	13541 Jan 18 00:58	12°♍59'59	
opposition	13541 Feb 17 12:27	7°♍57'27	2°16'26
greatest brilliancy	13541 Feb 17 20:10	7°♍52'05	-3.0m
min. Earth dist.	13541 Feb 21 23:42	6°♍43'04	0.37686 AU
direct	13541 Mar 20 17:28	2°♍22'57	
	13541 Jun 01 21:04	0°♎	
	13541 Jul 18 09:34	0°♏	
	13541 Aug 31 19:35	0°♐	
	13541 Oct 15 16:44	0°♑	
desc. node	13541 Nov 21 12:50	24°♑06'12	
	13541 Nov 30 15:44	0°♒	
	13542 Jan 16 14:08	0°♓	
evening set	13542 Feb 10 01:53	15°♓30'38	
	13542 Mar 04 23:47	0°♈	
max. Earth dist.	13542 Mar 22 11:50	11°♈05'03	2.68363 AU
conjunction	13542 Mar 26 07:34	13°♈30'30	-0°58'30
minimum elong	13542 Mar 26 06:29	13°♈28'47	0°58'38
	13542 Apr 21 05:26	0°♉	
morning rise	13542 May 08 10:40	11°♉01'50	
	13542 Jun 06 18:39	0°♊	
	13542 Jul 22 07:52	0°♋	
	13542 Sep 04 18:31	0°♌	
	13542 Oct 18 05:02	0°♍	
	13542 Nov 30 04:37	0°♎	
asc. node	13542 Dec 06 02:41	4°♎06'16	
	13543 Jan 13 16:23	0°♏	
	13543 Mar 12 16:56	0°♐	
retrograde	13543 Apr 06 01:50	4°♐06'17	
	13543 Apr 30 16:18	30°℞♏	
min. Earth dist.	13543 May 02 03:36	29°♏33'16	0.41054 AU
greatest brilliancy	13543 May 08 04:13	27°♏39'12	-2.7m
opposition	13543 May 09 20:02	27°♏07'34	6°28'01
direct	13543 Jun 09 14:51	21°♏20'49	
	13543 Jul 19 09:46	0°♐	
	13543 Sep 17 23:11	0°♑	
desc. node	13543 Oct 09 19:57	12°♑31'57	
	13543 Nov 08 09:39	0°♒	
	13543 Dec 28 00:43	0°♓	
	13544 Feb 14 16:40	0°♈	
evening set	13544 Mar 16 09:35	19°♈17'26	
	13544 Apr 02 04:51	0°♉	
max. Earth dist.	13544 Apr 13 08:03	7°♉09'47	2.64660 AU
conjunction	13544 Apr 29 14:31	17°♉44'28	-1°11'02
minimum elong	13544 Apr 29 14:29	17°♉44'24	1°11'44
	13544 May 18 04:48	0°♊	
morning rise	13544 Jun 13 23:09	17°♊59'48	
	13544 Jul 01 10:58	0°♋	
	13544 Aug 12 22:50	0°♌	
	13544 Sep 22 20:40	0°♍	
asc. node	13544 Oct 22 19:33	22°♍32'53	
	13544 Nov 01 14:52	0°♎	

	13544 Dec 10 23:59	0°♏	
	13545 Jan 20 08:19	0°♐	
	13545 Mar 05 09:42	0°♑	
	13545 May 08 23:13	0°♒	
retrograde	13545 May 25 17:20	1°♒52'47	
	13545 Jun 10 18:00	30°℞♑	
min. Earth dist.	13545 Jun 26 08:23	25°♑05'01	0.54698 AU
opposition	13545 Jul 03 12:13	22°♑20'42	2°24'58
greatest brilliancy	13545 Jul 02 21:37	22°♑34'41	-1.9m
direct	13545 Aug 08 11:33	14°♑21'37	
desc. node	13545 Aug 27 07:25	16°♑24'13	
	13545 Oct 06 08:55	0°♒	
	13545 Dec 04 11:12	0°♓	
	13546 Jan 25 05:36	0°♈	
	13546 Mar 14 19:46	0°♉	
evening set	13546 Apr 22 03:42	24°♉51'37	
	13546 Apr 29 20:51	0°♊	
max. Earth dist.	13546 May 09 17:42	6°♊38'36	2.55695 AU
conjunction	13546 Jun 09 00:58	27°♊32'17	-0°54'06
minimum elong	13546 Jun 09 02:37	27°♊35'12	0°55'08
	13546 Jun 12 12:57	0°♋	
	13546 Jul 24 01:47	0°♌	
morning rise	13546 Aug 01 09:24	6°♌10'31	
	13546 Sep 01 21:09	0°♍	
asc. node	13546 Sep 09 09:01	5°♍45'39	
	13546 Oct 10 13:20	0°♎	
	13546 Nov 17 20:52	0°♏	
	13546 Dec 26 18:55	0°♐	
	13547 Feb 05 12:58	0°♑	
	13547 Mar 22 02:02	0°♒	
	13547 May 16 01:56	0°♓	
retrograde	13547 Jul 02 15:40	11°♓47'34	
desc. node	13547 Jul 15 15:17	10°♓38'43	
min. Earth dist.	13547 Aug 08 13:08	3°♓14'31	0.64784 AU
opposition	13547 Aug 12 04:45	1°♓47'35	-1°03'43
greatest brilliancy	13547 Aug 12 00:43	1°♓51'34	-1.5m
	13547 Aug 16 18:30	30°℞♒	
direct	13547 Sep 20 13:23	22°♒35'17	
	13547 Oct 29 09:42	0°♓	
	13548 Jan 02 12:37	0°♈	
	13548 Feb 23 04:12	0°♉	
	13548 Apr 10 01:14	0°♊	
	13548 May 23 15:35	0°♋	
evening set	13548 Jun 04 11:06	8°♋27'52	
max. Earth dist.	13548 Jun 19 05:39	19°♋14'30	2.42542 AU
	13548 Jul 03 17:05	0°♌	
asc. node	13548 Jul 26 22:14	17°♌37'11	
conjunction	13548 Aug 01 22:59	22°♌15'51	0°04'18
minimum elong	13548 Aug 01 22:41	22°♌15'16	0°03'34
behind sun begin	13548 Jul 31 20:03	21°♌23'55	
behind sun end	13548 Aug 03 01:18	23°♌06'39	
	13548 Aug 11 22:30	0°♍	
	13548 Sep 19 02:25	0°♎	
morning rise	13548 Oct 11 16:08	17°♎52'13	
	13548 Oct 27 01:05	0°♏	
	13548 Dec 04 15:55	0°♐	
	13549 Jan 13 20:43	0°♑	
	13549 Feb 25 14:32	0°♒	
	13549 Apr 13 08:48	0°♓	
desc. node	13549 Jun 01 14:40	26°♓56'40	
	13549 Jun 08 05:07	0°♈	
retrograde	13549 Aug 04 18:37	15°♈17'25	
opposition	13549 Sep 14 10:12	5°♈34'30	-3°24'28
greatest brilliancy	13549 Sep 14 09:12	5°♈35'29	-1.3m
min. Earth dist.	13549 Sep 14 13:52	5°♈30'52	0.68537 AU
	13549 Sep 29 12:50	30°℞♓	
direct	13549 Oct 25 15:04	25°♓43'45	
	13549 Nov 23 03:30	0°♈	
	13550 Jan 29 23:02	0°♉	
	13550 Mar 20 17:26	0°♊	
	13550 May 04 00:42	0°♋	
asc. node	13550 Jun 13 17:15	29°♋44'00	
	13550 Jun 14 01:45	0°♌	
	13550 Jul 23 01:35	0°♍	
evening set	13550 Aug 06 13:33	11°♍24'09	
	13550 Aug 30 00:41	0°♎	
	13550 Oct 06 21:58	0°♏	
conjunction	13550 Oct 18 07:39	8°♏56'06	1°05'20
minimum elong	13550 Oct 18 06:08	8°♏53'09	1°05'54
	13550 Nov 14 14:52	0°♐	
max. Earth dist.	13550 Dec 10 20:38	19°♐42'00	2.41134 AU
	13550 Dec 24 22:02	0°♑	
morning rise	13550 Dec 25 12:05	0°♑25'29	
	13551 Feb 05 10:05	0°♒	
	13551 Mar 22 15:53	0°♓	
desc. node	13551 Apr 19 06:42	17°♓17'00	
	13551 May 10 13:52	0°♈	
	13551 Jul 06 04:43	0°♉	
retrograde	13551 Sep 09 05:12	18°♉05'00	
opposition	13551 Oct 18 15:49	9°♉01'52	-4°45'52
greatest brilliancy	13551 Oct 19 06:50	8°♉47'16	-1.4m
min. Earth dist.	13551 Oct 22 16:38	7°♉27'44	0.65544 AU
	13551 Nov 16 17:07	30°℞♈	
direct	13551 Nov 29 04:53	28°♈59'04	
	13551 Dec 12 05:17	0°♉	
	13552 Feb 23 20:57	0°♊	
	13552 Apr 11 07:34	0°♋	
asc. node	13552 Apr 30 20:52	13°♋40'13	
	13552 May 23 05:26	0°♌	
	13552 Jul 01 11:07	0°♍	
	13552 Aug 08 13:31	0°♎	
	13552 Sep 15 16:21	0°♏	
evening set	13552 Oct 21 11:55	27°♏32'07	
	13552 Oct 24 18:17	0°♐	
	13552 Dec 04 12:19	0°♑	
conjunction	13552 Dec 21 17:35	12°♑14'51	0°40'43
minimum elong	13552 Dec 21 19:34	12°♑18'21	0°41'44
	13553 Jan 16 08:09	0°♒	
max. Earth dist.	13553 Jan 24 02:56	5°♒17'30	2.54937 AU
morning rise	13553 Feb 12 15:52	18°♒22'34	
	13553 Mar 02 08:54	0°♓	
desc. node	13553 Mar 05 18:14	2°♓12'02	
	13553 Apr 18 14:41	0°♈	
	13553 Jun 07 11:35	0°♉	
	13553 Aug 01 12:34	0°♊	
retrograde	13553 Oct 20 15:34	25°♊15'23	
opposition	13553 Nov 26 07:20	17°♊21'28	-4°42'40
greatest brilliancy	13553 Nov 27 15:19	16°♊51'45	-1.8m
min. Earth dist.	13553 Dec 03 22:03	14°♊32'10	0.55893 AU
direct	13554 Jan 05 04:15	7°♊51'47	
	13554 Mar 12 13:11	0°♋	
asc. node	13554 Mar 19 05:53	3°♋49'58	
	13554 Apr 28 13:35	0°♌	
	13554 Jun 08 11:49	0°♍	
	13554 Jul 17 12:11	0°♎	
	13554 Aug 25 09:53	0°♏	
	13554 Oct 04 07:48	0°♐	
	13554 Nov 14 22:29	0°♑	
evening set	13554 Dec 17 00:42	22°♑13'29	
	13554 Dec 28 12:10	0°♒	

desc. node	13555 Jan 21 06:15	15°♒49'46	
conjunction	13555 Feb 04 23:25	25°♒28'54	-0°08'21
minimum elong	13555 Feb 04 23:08	25°♒28'25	0°07'39
behind sun begin	13555 Feb 04 05:30	24°♒59'41	
behind sun end	13555 Feb 05 16:46	25°♒57'09	
	13555 Feb 11 22:05	0°♓	
max. Earth dist.	13555 Feb 20 05:40	5°♓23'03	2.64357 AU
morning rise	13555 Mar 22 17:38	24°♓54'03	
	13555 Mar 30 18:49	0°♈	
	13555 May 17 17:17	0°♉	
	13555 Jul 05 16:45	0°♊	
	13555 Aug 25 14:05	0°♋	
	13555 Oct 21 21:18	0°♌	
retrograde	13555 Dec 19 09:38	15°♌58'48	
opposition	13556 Jan 20 07:20	10°♌06'46	-1°01'50
greatest brilliancy	13556 Jan 20 16:39	9°♌59'30	-2.7m
min. Earth dist.	13556 Jan 28 05:38	7°♌39'30	0.41912 AU
asc. node	13556 Feb 04 13:49	5°♌37'03	
direct	13556 Feb 23 16:46	3°♌05'27	
	13556 May 04 19:52	0°♍	
	13556 Jun 18 14:50	0°♎	
	13556 Jul 30 14:00	0°♏	
	13556 Sep 10 18:13	0°♐	
	13556 Oct 24 05:07	0°♑	
desc. node	13556 Dec 08 02:19	29°♑55'16	
	13556 Dec 08 05:12	0°♒	
	13557 Jan 23 13:22	0°♓	
evening set	13557 Jan 26 16:58	2°♓00'59	
	13557 Mar 11 16:33	0°♈	
conjunction	13557 Mar 12 18:48	0°♈41'36	-0°47'46
minimum elong	13557 Mar 12 17:38	0°♈39'46	0°47'40
max. Earth dist.	13557 Mar 14 02:29	1°♈31'47	2.68324 AU
morning rise	13557 Apr 24 23:55	28°♈05'49	
	13557 Apr 27 23:47	0°♉	
	13557 Jun 13 23:15	0°♊	
	13557 Jul 30 08:57	0°♋	
	13557 Sep 14 05:11	0°♌	
	13557 Oct 29 20:47	0°♍	
	13557 Dec 15 22:32	0°♎	
asc. node	13557 Dec 22 19:13	4°♎07'36	
	13558 Feb 14 18:37	0°♏	
retrograde	13558 Mar 10 07:45	3°♏39'17	
	13558 Apr 03 09:12	30°℞♎	
min. Earth dist.	13558 Apr 05 18:07	29°♎21'43	0.37270 AU
greatest brilliancy	13558 Apr 09 02:02	28°♎26'28	-2.9m
opposition	13558 Apr 10 02:40	28°♎09'20	6°35'39
direct	13558 May 09 09:16	23°♎11'57	
	13558 Jun 12 06:49	0°♏	
	13558 Aug 11 02:53	0°♐	
	13558 Sep 29 19:58	0°♑	
desc. node	13558 Oct 26 06:32	16°♑21'35	
	13558 Nov 17 05:50	0°♒	
	13559 Jan 04 12:33	0°♓	
	13559 Feb 21 13:42	0°♈	
evening set	13559 Mar 03 17:52	6°♈23'52	
max. Earth dist.	13559 Apr 05 06:01	27°♈01'02	2.66779 AU
	13559 Apr 09 21:52	0°♉	
conjunction	13559 Apr 16 14:03	4°♉17'05	-1°09'05
minimum elong	13559 Apr 16 13:28	4°♉16'09	1°09'35
	13559 May 26 01:42	0°♊	
morning rise	13559 May 30 13:46	2°♊58'38	
	13559 Jul 09 17:58	0°♋	
	13559 Aug 21 20:35	0°♌	
	13559 Oct 02 11:48	0°♍	

asc. node	13559 Nov 09 16:24	28°♍14'31	
	13559 Nov 12 01:02	0°♎	
	13559 Dec 22 09:00	0°♏	
	13560 Feb 02 09:30	0°♐	
	13560 Mar 23 10:07	0°♑	
retrograde	13560 May 08 07:05	12°♑39'34	
min. Earth dist.	13560 Jun 06 11:05	6°♑45'29	0.49391 AU
greatest brilliancy	13560 Jun 13 12:00	4°♑11'27	-2.2m
opposition	13560 Jun 14 15:18	3°♑46'24	4°04'57
	13560 Jun 25 19:34	30°℞♐	
direct	13560 Jul 18 19:10	26°♐31'24	
	13560 Aug 12 10:35	0°♑	
desc. node	13560 Sep 12 16:14	11°♑14'12	
	13560 Oct 20 23:12	0°♒	
	13560 Dec 13 11:56	0°♓	
	13561 Feb 01 16:37	0°♈	
	13561 Mar 21 17:55	0°♉	
evening set	13561 Apr 07 09:26	10°♉42'12	
max. Earth dist.	13561 Apr 28 18:43	24°♉43'02	2.59803 AU
	13561 May 06 17:20	0°♊	
conjunction	13561 May 23 06:06	11°♊08'29	-1°04'57
minimum elong	13561 May 23 07:07	11°♊10'14	1°05'54
	13561 Jun 19 13:56	0°♋	
morning rise	13561 Jul 11 11:02	15°♋30'39	
	13561 Jul 31 10:43	0°♌	
	13561 Sep 09 15:00	0°♍	
asc. node	13561 Sep 26 05:25	12°♍40'57	
	13561 Oct 18 15:26	0°♎	
	13561 Nov 26 06:04	0°♏	
	13562 Jan 04 11:41	0°♐	
	13562 Feb 14 20:40	0°♑	
	13562 Apr 02 11:34	0°♒	
retrograde	13562 Jun 18 16:35	27°♒38'33	
min. Earth dist.	13562 Jul 23 16:34	19°♒42'09	0.61506 AU
opposition	13562 Jul 28 19:04	17°♒41'19	0°08'07
greatest brilliancy	13562 Jul 28 18:30	17°♒41'53	-1.6m
desc. node	13562 Aug 01 02:27	16°♒23'46	
direct	13562 Sep 05 00:11	8°♒52'34	
	13562 Nov 15 21:22	0°♓	
	13563 Jan 11 15:51	0°♈	
	13563 Mar 02 17:45	0°♉	
	13563 Apr 18 04:33	0°♊	
evening set	13563 May 17 18:35	20°♊10'07	
max. Earth dist.	13563 May 31 10:51	29°♊46'30	2.47990 AU
	13563 May 31 18:28	0°♋	
conjunction	13563 Jul 09 23:04	28°♋29'27	-0°23'36
minimum elong	13563 Jul 10 00:37	28°♋32'18	0°24'33
	13563 Jul 11 23:41	0°♌	
asc. node	13563 Aug 13 17:02	24°♌49'38	
	13563 Aug 20 09:46	0°♍	
morning rise	13563 Sep 11 05:25	17°♍00'37	
	13563 Sep 27 17:41	0°♎	
greatest brilliancy	13563 Oct 22 07:49	19°♎24'23	1.2m
	13563 Nov 04 18:54	0°♏	
	13563 Dec 13 11:03	0°♐	
	13564 Jan 22 18:00	0°♑	
	13564 Mar 05 20:41	0°♒	
	13564 Apr 23 02:47	0°♓	
desc. node	13564 Jun 18 06:44	26°♓28'41	
	13564 Jun 30 12:20	0°♈	
retrograde	13564 Jul 22 14:41	2°♈47'01	
	13564 Aug 12 05:09	30°℞♓	
min. Earth dist.	13564 Aug 31 00:07	23°♓26'42	0.67849 AU
opposition	13564 Sep 01 08:40	22°♓54'24	-2°37'08
greatest brilliancy	13564 Sep 01 04:21	22°♓58'41	-1.3m

direct	13564 Oct 12	00:07	13°♓15'45		
	13564 Dec 13	06:38	0°♈		
	13565 Feb 08	09:30	0°♉		
	13565 Mar 28	15:15	0°♊		
	13565 May 11	13:21	0°♋		
	13565 Jun 21	13:37	0°♌		
asc. node	13565 Jun 30	10:22	6°♌42'18		
evening set	13565 Jul 09	20:21	13°♌53'56		
	13565 Jul 30	14:53	0°♍		
	13565 Sep 06	15:04	0°♎		
conjunction	13565 Sep 16	19:33	8°♎05'17	0°50'10	
minimum elong	13565 Sep 16	15:28	7°♎57'11	0°50'09	
max. Earth dist.	13565 Oct 12	15:46	28°♎32'54	2.36356 AU	
	13565 Oct 14	12:00	0°♏		
	13565 Nov 22	02:55	0°♐		
morning rise	13565 Nov 29	12:41	5°♐38'07		
	13566 Jan 01	07:33	0°♑		
	13566 Feb 12	19:15	0°♒		
	13566 Mar 30	08:46	0°♓		
desc. node	13566 May 06	00:36	22°♓14'08		
	13566 May 19	17:34	0°♈		
	13566 Jul 24	22:52	0°♉		
retrograde	13566 Aug 25	23:31	5°♉18'45		
	13566 Sep 24	05:49	30°℞♈		
opposition	13566 Oct 05	01:07	25°♈57'25	-4°21'50	
greatest brilliancy	13566 Oct 05	08:55	25°♈49'47	-1.3m	
min. Earth dist.	13566 Oct 07	13:13	24°♈58'28	0.67522 AU	
direct	13566 Nov 15	15:18	15°♈55'53		
	13567 Jan 09	09:48	0°♉		
	13567 Mar 06	05:27	0°♊		
	13567 Apr 20	21:55	0°♋		
asc. node	13567 May 18	10:12	19°♋40'36		
	13567 Jun 01	08:16	0°♌		
	13567 Jul 10	10:09	0°♍		
greatest brilliancy	13567 Aug 10	14:53	24°♍36'21	1.2m	
	13567 Aug 17	10:09	0°♎		
evening set	13567 Sep 23	19:39	29°♎32'21		
	13567 Sep 24	09:46	0°♏		
	13567 Nov 02	06:53	0°♐		
conjunction	13567 Nov 30	09:26	20°♐57'58	0°57'11	
minimum elong	13567 Nov 30	11:44	21°♐02'11	0°58'11	
	13567 Dec 12	19:09	0°♑		
max. Earth dist.	13568 Jan 11	16:48	21°♑12'45	2.49887 AU	
	13568 Jan 24	10:09	0°♒		
morning rise	13568 Jan 27	05:57	1°♒55'57		
	13568 Mar 09	10:08	0°♓		
desc. node	13568 Mar 22	12:52	8°♓26'18		
	13568 Apr 26	01:33	0°♈		
	13568 Jun 16	11:24	0°♉		
	13568 Aug 17	17:28	0°♊		
retrograde	13568 Oct 02	19:23	10°♊02'18		
opposition	13568 Nov 09	18:36	1°♊36'34	-4°58'23	
greatest brilliancy	13568 Nov 10	21:13	1°♊11'14	-1.6m	
	13568 Nov 13	23:51	30°℞♉		
min. Earth dist.	13568 Nov 16	02:08	29°♉12'25	0.60408 AU	
direct	13568 Dec 20	14:33	21°♉45'37		
	13569 Jan 28	03:41	0°♊		
	13569 Mar 25	21:40	0°♋		
asc. node	13569 Apr 04	17:22	6°♋21'09		
	13569 May 08	17:50	0°♌		
	13569 Jun 17	16:28	0°♍		
	13569 Jul 26	04:26	0°♎		
	13569 Sep 02	16:09	0°♏		
	13569 Oct 12	04:01	0°♐		
	13569 Nov 22	08:36	0°♑		
evening set	13569 Nov 27	12:19	3°♑39'20		
	13570 Jan 04	13:30	0°♒		
conjunction	13570 Jan 19	20:54	10°♒18'18	0°10'23	
minimum elong	13570 Jan 19	21:23	10°♒19'07	0°11'15	
behind sun begin	13570 Jan 19	06:23	9°♒54'03		
behind sun end	13570 Jan 20	12:24	10°♒44'11		
desc. node	13570 Feb 07	00:18	22°♒19'35		
max. Earth dist.	13570 Feb 10	11:45	24°♒36'31	2.61299 AU	
	13570 Feb 18	17:55	0°♓		
morning rise	13570 Mar 08	16:52	11°♓36'23		
	13570 Apr 06	15:35	0°♈		
	13570 May 25	02:31	0°♉		
	13570 Jul 14	13:44	0°♊		
	13570 Sep 07	20:59	0°♋		
retrograde	13570 Nov 22	22:16	23°♋45'35		
opposition	13570 Dec 26	22:52	16°♋58'25	-3°11'13	
greatest brilliancy	13570 Dec 28	02:41	16°♋34'31	-2.3m	
min. Earth dist.	13571 Jan 04	17:08	13°♋59'01	0.47451 AU	
direct	13571 Feb 02	02:30	8°♋39'07		
asc. node	13571 Feb 21	03:39	11°♋05'09		
	13571 Apr 05	16:29	0°♌		
	13571 May 21	15:30	0°♍		
	13571 Jul 01	14:27	0°♎		
	13571 Aug 10	18:06	0°♏		
	13571 Sep 20	16:49	0°♐		
	13571 Nov 02	05:11	0°♑		
	13571 Dec 16	12:35	0°♒		
desc. node	13571 Dec 25	15:51	6°♒02'51		
evening set	13572 Jan 12	13:33	17°♒47'04		
	13572 Jan 31	09:53	0°♓		
conjunction	13572 Feb 28	00:38	17°♓42'05	-0°34'22	
minimum elong	13572 Feb 27	23:37	17°♓40'28	0°34'01	
max. Earth dist.	13572 Mar 05	13:59	21°♓52'39	2.67438 AU	
	13572 Mar 18	08:46	0°♈		
morning rise	13572 Apr 11	19:35	15°♈28'39		
	13572 May 04	19:38	0°♉		
	13572 Jun 21	08:55	0°♊		
	13572 Aug 07	23:20	0°♋		
	13572 Sep 25	01:29	0°♌		
	13572 Nov 14	10:47	0°♍		
asc. node	13573 Jan 08	10:06	25°♍50'41		
	13573 Jan 25	23:22	0°♎		
retrograde	13573 Feb 06	04:28	0°♎48'30		
	13573 Feb 17	10:37	30°℞♍		
opposition	13573 Mar 07	17:54	25°♍56'29	4°17'50	
greatest brilliancy	13573 Mar 07	20:23	25°♍54'50	-3.0m	
min. Earth dist.	13573 Mar 09	03:01	25°♍34'29	0.36550 AU	
direct	13573 Apr 06	10:49	20°♍55'20		
	13573 May 15	04:06	0°♎		
	13573 Jul 09	00:41	0°♏		
	13573 Aug 24	18:18	0°♐		
	13573 Oct 09	18:48	0°♑		
desc. node	13573 Nov 11	16:41	21°♑13'40		
	13573 Nov 25	09:50	0°♒		
	13574 Jan 11	17:35	0°♓		
evening set	13574 Feb 18	01:17	23°♓31'13		
	13574 Feb 28	07:48	0°♈		
max. Earth dist.	13574 Mar 27	11:47	17°♈11'38	2.68034 AU	
conjunction	13574 Apr 03	00:26	21°♈20'35	-1°03'26	
minimum elong	13574 Apr 02	23:29	21°♈19'05	1°03'41	
	13574 Apr 16	14:06	0°♉		
morning rise	13574 May 16	07:04	19°♉07'36		
	13574 Jun 01	23:41	0°♊		
	13574 Jul 17	04:44	0°♋		

	13574 Aug 30 02:27	0°♌	
	13574 Oct 11 18:19	0°♍	
	13574 Nov 22 14:33	0°♎	
asc. node	13574 Nov 26 09:24	2°♎43'12	
	13575 Jan 03 20:51	0°♏	
	13575 Feb 19 16:21	0°♐	
retrograde	13575 Apr 19 02:40	19°♐37'54	
min. Earth dist.	13575 May 15 23:32	14°♐39'32	0.43895 AU
greatest brilliancy	13575 May 22 17:55	12°♐23'20	-2.5m
opposition	13575 May 24 08:11	11°♐50'59	5°44'38
direct	13575 Jun 25 08:55	5°♐31'00	
	13575 Sep 08 13:25	0°♑	
desc. node	13575 Sep 30 02:27	11°♑24'04	
	13575 Nov 02 00:50	0°♒	
	13575 Dec 22 17:31	0°♓	
	13576 Feb 09 20:35	0°♈	
evening set	13576 Mar 24 06:50	27°♈16'34	
	13576 Mar 28 13:09	0°♉	
max. Earth dist.	13576 Apr 18 20:05	13°♉44'16	2.63160 AU
conjunction	13576 May 07 21:47	26°♉15'28	-1°10'14
minimum elong	13576 May 07 22:06	26°♉16'00	1°11'03
	13576 May 13 13:06	0°♊	
morning rise	13576 Jun 23 08:18	27°♊41'33	
	13576 Jun 26 16:08	0°♋	
	13576 Aug 07 22:43	0°♌	
	13576 Sep 17 13:59	0°♍	
asc. node	13576 Oct 13 01:57	19°♍18'51	
	13576 Oct 27 00:55	0°♎	
	13576 Dec 05 01:46	0°♏	
	13577 Jan 13 20:42	0°♐	
	13577 Feb 25 11:37	0°♑	
	13577 Apr 18 13:18	0°♒	
retrograde	13577 Jun 03 19:01	12°♒05'37	
min. Earth dist.	13577 Jul 06 16:49	4°♒51'16	0.57351 AU
opposition	13577 Jul 13 03:59	2°♒20'31	1°31'30
greatest brilliancy	13577 Jul 12 19:32	2°♒28'44	-1.8m
	13577 Jul 19 08:47	30°℞♑	
desc. node	13577 Aug 17 13:14	24°♑02'17	
direct	13577 Aug 18 23:51	24°♑01'30	
	13577 Sep 21 22:50	0°♒	
	13577 Nov 27 18:44	0°♓	
	13578 Jan 19 22:00	0°♈	
	13578 Mar 09 23:34	0°♉	
	13578 Apr 25 04:09	0°♊	
evening set	13578 May 01 01:23	3°♊56'55	
max. Earth dist.	13578 May 16 23:32	14°♊46'52	2.53115 AU
	13578 Jun 07 19:51	0°♋	
conjunction	13578 Jun 19 11:42	8°♋17'30	-0°44'56
minimum elong	13578 Jun 19 13:34	8°♋20'50	0°45'58
	13578 Jul 19 06:29	0°♌	
morning rise	13578 Aug 14 20:37	19°♌58'44	
	13578 Aug 27 22:56	0°♍	
asc. node	13578 Aug 30 13:32	2°♍00'32	
	13578 Oct 05 12:11	0°♎	
	13578 Nov 12 17:08	0°♏	
	13578 Dec 21 12:02	0°♐	
	13579 Jan 30 23:45	0°♑	
	13579 Mar 15 18:49	0°♒	
	13579 May 06 00:22	0°♓	
desc. node	13579 Jul 05 19:38	19°♓47'03	
retrograde	13579 Jul 10 08:32	19°♓54'55	
min. Earth dist.	13579 Aug 17 04:29	11°♓04'02	0.66149 AU
opposition	13579 Aug 20 00:51	9°♓56'06	-1°41'02
greatest brilliancy	13579 Aug 19 19:44	10°♓01'10	-1.4m
direct	13579 Sep 28 22:05	0°♓33'16	
	13579 Dec 26 17:05	0°♈	
	13580 Feb 17 20:13	0°♉	
	13580 Apr 05 03:45	0°♊	
	13580 May 18 20:52	0°♋	
evening set	13580 Jun 16 06:34	20°♋34'56	
	13580 Jun 28 22:09	0°♌	
max. Earth dist.	13580 Jul 05 16:38	5°♌06'00	2.39565 AU
asc. node	13580 Jul 17 03:15	13°♌48'27	
	13580 Aug 07 02:13	0°♍	
conjunction	13580 Aug 17 10:38	8°♍05'44	0°21'58
minimum elong	13580 Aug 17 08:33	8°♍01'39	0°21'27
	13580 Sep 14 04:43	0°♎	
	13580 Oct 22 02:33	0°♏	
morning rise	13580 Oct 30 01:16	6°♏14'35	
	13580 Nov 29 16:54	0°♐	
	13581 Jan 08 20:32	0°♑	
	13581 Feb 20 10:18	0°♒	
	13581 Apr 07 13:42	0°♓	
desc. node	13581 May 22 18:06	25°♓59'52	
	13581 May 30 12:53	0°♈	
retrograde	13581 Aug 12 09:04	22°♈51'03	
opposition	13581 Sep 21 20:41	13°♈14'50	-3°48'14
greatest brilliancy	13581 Sep 21 22:21	13°♈13'11	-1.2m
min. Earth dist.	13581 Sep 22 20:05	12°♈51'44	0.68473 AU
direct	13581 Nov 02 06:11	3°♈19'12	
	13582 Jan 22 22:18	0°♉	
	13582 Mar 15 05:57	0°♊	
	13582 Apr 28 23:32	0°♋	
asc. node	13582 Jun 04 01:57	26°♋11'56	
	13582 Jun 09 03:44	0°♌	
	13582 Jul 18 04:08	0°♍	
evening set	13582 Aug 23 16:48	28°♍51'55	
	13582 Aug 25 03:05	0°♎	
	13582 Oct 02 00:32	0°♏	
conjunction	13582 Nov 04 01:51	25°♏40'02	1°06'12
minimum elong	13582 Nov 04 02:25	25°♏41'09	1°06'59
	13582 Nov 09 18:05	0°♐	
	13582 Dec 20 01:55	0°♑	
max. Earth dist.	13582 Dec 25 01:36	3°♑36'25	2.44315 AU
morning rise	13583 Jan 07 08:10	13°♑05'50	
	13583 Jan 31 13:48	0°♒	
	13583 Mar 17 15:35	0°♓	
desc. node	13583 Apr 09 07:44	14°♓22'39	
	13583 May 04 22:41	0°♈	
	13583 Jun 27 22:20	0°♉	
retrograde	13583 Sep 17 18:41	26°♉07'26	
opposition	13583 Oct 26 18:10	17°♉16'10	-4°54'28
greatest brilliancy	13583 Oct 27 13:23	16°♉57'35	-1.4m
min. Earth dist.	13583 Oct 31 14:28	15°♉23'43	0.64011 AU
direct	13583 Dec 07 03:05	7°♉15'24	
	13584 Feb 15 22:45	0°♊	
	13584 Apr 05 08:36	0°♋	
asc. node	13584 Apr 21 06:53	10°♋53'50	
	13584 May 17 19:32	0°♌	
	13584 Jun 26 06:19	0°♍	
	13584 Aug 03 11:18	0°♎	
	13584 Sep 10 16:20	0°♏	
	13584 Oct 19 20:35	0°♐	
evening set	13584 Nov 04 21:30	11°♐56'53	
	13584 Nov 29 16:52	0°♑	
conjunction	13585 Jan 01 23:23	23°♑23'38	0°29'47
minimum elong	13585 Jan 02 00:51	23°♑26'10	0°30'45
	13585 Jan 11 14:34	0°♒	
max. Earth dist.	13585 Jan 30 23:30	13°♒04'43	2.57408 AU

morning rise	13585 Feb 21	18:41	27°♒29'09	
desc. node	13585 Feb 23	18:00	28°♒46'25	
	13585 Feb 25	15:08	0°♓	
	13585 Apr 13	16:22	0°♈	
	13585 Jun 01	21:36	0°♉	
	13585 Jul 24	17:20	0°♊	
	13585 Sep 30	05:15	0°♋	
retrograde	13585 Oct 31	19:24	5°♋11'18	
	13585 Nov 29	20:41	30°℞♊	
opposition	13585 Dec 06	14:23	27°♊38'27	-4°20'42
greatest brilliancy	13585 Dec 07	23:12	27°♊08'34	-2.0m
min. Earth dist.	13585 Dec 14	18:58	24°♊40'15	0.53032 AU
direct	13586 Jan 14	16:21	18°♊27'46	
	13586 Feb 28	13:31	0°♋	
asc. node	13586 Mar 09	15:04	4°♋23'09	
	13586 Apr 21	04:36	0°♌	
	13586 Jun 02	04:42	0°♍	
	13586 Jul 11	16:36	0°♎	
	13586 Aug 19	22:07	0°♏	
	13586 Sep 29	02:44	0°♐	
	13586 Nov 09	23:08	0°♑	
	13586 Dec 23	17:33	0°♒	
evening set	13586 Dec 27	02:14	2°♒15'11	
desc. node	13587 Jan 11	08:25	12°♒23'52	
	13587 Feb 07	06:05	0°♓	
conjunction	13587 Feb 13	14:16	4°♓06'09	-0°18'31
minimum elong	13587 Feb 13	13:38	4°♓05'07	0°17'57
max. Earth dist.	13587 Feb 25	14:48	11°♓50'30	2.65676 AU
	13587 Mar 26	02:30	0°♈	
morning rise	13587 Mar 30	11:55	2°♈46'52	
	13587 May 12	19:33	0°♉	
	13587 Jun 30	04:13	0°♊	
	13587 Aug 18	13:40	0°♋	
	13587 Oct 09	21:21	0°♌	
	13587 Dec 23	15:58	0°♍	
retrograde	13588 Jan 05	09:42	0°♍59'05	
	13588 Jan 17	18:44	30°℞♌	
asc. node	13588 Jan 25	23:48	28°♌20'59	
opposition	13588 Feb 05	01:30	25°♌37'09	0°43'40
greatest brilliancy	13588 Feb 05	05:30	25°♌34'14	-2.9m
min. Earth dist.	13588 Feb 11	10:50	23°♌45'31	0.39302 AU
direct	13588 Mar 08	17:07	19°♌25'12	
	13588 Apr 18	22:20	0°♍	
	13588 Jun 09	11:21	0°♎	
	13588 Jul 23	08:45	0°♏	
	13588 Sep 04	13:55	0°♐	
	13588 Oct 18	16:54	0°♑	
desc. node	13588 Nov 28	06:07	26°♑47'54	
	13588 Dec 03	04:03	0°♒	
	13589 Jan 18	18:58	0°♓	
evening set	13589 Feb 03	23:31	10°♓18'06	
	13589 Mar 07	01:13	0°♈	
max. Earth dist.	13589 Mar 19	00:57	7°♈35'41	2.68447 AU
conjunction	13589 Mar 20	12:48	8°♈32'28	-0°54'26
minimum elong	13589 Mar 20	11:40	8°♈30'40	0°54'28
	13589 Apr 23	07:31	0°♉	
morning rise	13589 May 02	15:16	5°♉56'59	
	13589 Jun 09	01:16	0°♊	
	13589 Jul 24	23:31	0°♋	
	13589 Sep 08	00:10	0°♌	
	13589 Oct 22	07:00	0°♍	
	13589 Dec 05	14:54	0°♎	
asc. node	13589 Dec 13	03:23	4°♎59'18	
	13590 Jan 22	06:15	0°♏	
retrograde	13590 Mar 25	23:01	21°♏44'44	
min. Earth dist.	13590 Apr 20	19:23	17°♏25'27	0.39069 AU
greatest brilliancy	13590 Apr 25	21:00	15°♏55'03	-2.8m
opposition	13590 Apr 27	09:04	15°♏28'03	6°46'37
direct	13590 May 27	07:51	10°♏06'46	
	13590 Jul 30	14:11	0°♐	
	13590 Sep 22	14:07	0°♑	
desc. node	13590 Oct 16	11:56	14°♑15'34	
	13590 Nov 11	11:30	0°♒	
	13590 Dec 30	10:47	0°♓	
	13591 Feb 16	19:56	0°♈	
evening set	13591 Mar 11	12:39	14°♈15'26	
	13591 Apr 05	06:48	0°♉	
max. Earth dist.	13591 Apr 10	10:06	3°♉17'47	2.65708 AU
conjunction	13591 Apr 24	12:22	12°♉23'50	-1°10'45
minimum elong	13591 Apr 24	12:05	12°♉23'22	1°11'22
	13591 May 21	09:05	0°♊	
morning rise	13591 Jun 08	04:16	11°♊52'14	
	13591 Jul 04	20:27	0°♋	
	13591 Aug 16	15:21	0°♌	
	13591 Sep 26	21:11	0°♍	
asc. node	13591 Oct 30	20:56	25°♍23'54	
	13591 Nov 05	23:20	0°♎	
	13591 Dec 15	17:04	0°♏	
	13592 Jan 25	14:03	0°♐	
	13592 Mar 11	04:20	0°♑	
retrograde	13592 May 18	10:24	24°♑24'13	
min. Earth dist.	13592 Jun 17	23:54	17°♑59'16	0.52384 AU
opposition	13592 Jun 25	15:25	15°♑06'36	3°06'49
greatest brilliancy	13592 Jun 24	19:32	15°♑25'23	-2.0m
direct	13592 Jul 30	19:33	7°♑25'57	
desc. node	13592 Sep 02	23:17	13°♑37'04	
	13592 Oct 12	07:25	0°♒	
	13592 Dec 07	13:42	0°♓	
	13593 Jan 27	15:08	0°♈	
	13593 Mar 17	00:26	0°♉	
evening set	13593 Apr 15	16:09	19°♉08'34	
	13593 May 02	01:49	0°♊	
max. Earth dist.	13593 May 04	22:50	1°♊55'24	2.57623 AU
conjunction	13593 Jun 01	13:07	20°♊42'35	-0°59'28
minimum elong	13593 Jun 01	14:32	20°♊45'01	1°00'29
	13593 Jun 14	21:03	0°♋	
morning rise	13593 Jul 22	20:33	27°♋15'18	
	13593 Jul 26	14:17	0°♌	
	13593 Sep 04	14:16	0°♍	
asc. node	13593 Sep 16	10:43	9°♍05'13	
	13593 Oct 13	10:10	0°♎	
	13593 Nov 20	20:25	0°♏	
	13593 Dec 29	20:39	0°♐	
	13594 Feb 08	18:23	0°♑	
	13594 Mar 25	21:27	0°♒	
	13594 May 24	09:16	0°♓	
retrograde	13594 Jun 26	17:56	6°♓21'25	
desc. node	13594 Jul 22	08:05	1°♓55'38	
	13594 Jul 27	19:17	30°℞♒	
min. Earth dist.	13594 Aug 01	19:38	28°♒04'14	0.63445 AU
opposition	13594 Aug 06	03:15	26°♒21'34	-0°35'11
greatest brilliancy	13594 Aug 06	00:41	26°♒24'07	-1.5m
direct	13594 Sep 14	00:30	17°♒19'14	
	13594 Nov 05	21:26	0°♓	
	13595 Jan 05	15:58	0°♈	
	13595 Feb 25	15:48	0°♉	
	13595 Apr 13	09:43	0°♊	
	13595 May 27	01:19	0°♋	
evening set	13595 May 28	00:31	0°♋41'09	
max. Earth dist.	13595 Jun 10	17:44	10°♋30'54	2.45007 AU

	13595 Jul 07	05:38	0°♌		
conjunction	13595 Jul 22	22:27	11°♌49'59	-0°08'27	
minimum elong	13595 Jul 22	23:09	11°♌51'20	0°09'18	
behind sun begin	13595 Jul 22	01:45	11°♌10'41		
behind sun end	13595 Jul 23	20:34	12°♌32'02		
asc. node	13595 Aug 03	23:41	21°♌02'45		
	13595 Aug 15	13:57	0°♍		
	13595 Sep 22	19:49	0°♎		
morning rise	13595 Sep 28	11:06	4°♎27'23		
	13595 Oct 30	19:16	0°♏		
	13595 Dec 08	09:48	0°♐		
	13596 Jan 17	13:50	0°♑		
	13596 Feb 29	08:55	0°♒		
	13596 Apr 16	12:47	0°♓		
desc. node	13596 Jun 08	09:00	27°♓36'07		
	13596 Jun 14	04:02	0°♈		
retrograde	13596 Jul 30	03:32	10°♈28'34		
opposition	13596 Sep 08	20:36	0°♈40'44	-3°06'04	
min. Earth dist.	13596 Sep 08	07:43	0°♈53'30	0.68364 AU	
greatest brilliancy	13596 Sep 08	17:48	0°♈43'30	-1.3m	
	13596 Sep 10	13:43	30°℞♓		
direct	13596 Oct 19	20:09	20°♓55'01		
	13596 Dec 02	07:09	0°♈		
	13597 Feb 02	07:05	0°♉		
	13597 Mar 23	10:26	0°♊		
	13597 May 06	15:12	0°♋		
	13597 Jun 16	17:06	0°♌		
asc. node	13597 Jun 20	17:17	3°♌01'12		
evening set	13597 Jul 24	21:33	29°♌19'11		
	13597 Jul 25	18:26	0°♍		
	13597 Sep 01	18:14	0°♎		
conjunction	13597 Oct 04	14:44	26°♎02'53	1°00'55	
minimum elong	13597 Oct 04	11:37	25°♎56'43	1°01'15	
	13597 Oct 09	15:04	0°♏		
	13597 Nov 17	06:20	0°♐		
max. Earth dist.	13597 Nov 25	13:11	6°♐17'57	2.38682 AU	
morning rise	13597 Dec 14	17:12	20°♐38'48		
	13597 Dec 27	10:57	0°♑		
	13598 Feb 07	21:02	0°♒		
	13598 Mar 25	03:35	0°♓		
desc. node	13598 Apr 26	02:01	19°♓47'16		
	13598 May 13	11:44	0°♈		
	13598 Jul 11	13:43	0°♉		
retrograde	13598 Sep 03	00:31	13°♉03'16		
opposition	13598 Oct 12	18:01	3°♉51'24	-4°37'07	
greatest brilliancy	13598 Oct 13	05:44	3°♉39'58	-1.3m	
min. Earth dist.	13598 Oct 16	02:02	2°♉33'12	0.66563 AU	
	13598 Oct 22	19:49	30°℞♈		
direct	13598 Nov 23	07:57	23°♈48'31		
	13598 Dec 27	12:16	0°♉		
	13599 Feb 27	17:56	0°♊		
	13599 Apr 15	10:29	0°♋		
asc. node	13599 May 08	19:21	16°♋29'41		
	13599 May 27	04:12	0°♌		
	13599 Jul 05	08:51	0°♍		
	13599 Aug 12	10:08	0°♎		
	13599 Sep 19	11:00	0°♏		
evening set	13599 Oct 10	09:35	16°♏15'19		
	13599 Oct 28	09:54	0°♐		
	13599 Dec 08	00:01	0°♑		
conjunction	13599 Dec 13	10:39	3°♑54'51	0°48'17	
minimum elong	13599 Dec 13	12:56	3°♑58'56	0°49'19	
	13600 Jan 19	16:16	0°♒		
max. Earth dist.	13600 Jan 19	18:55	0°♒04'32	2.52763 AU	
morning rise	13600 Feb 06	09:11	12°♒00'09		
	13600 Mar 04	14:59	0°♓		
desc. node	13600 Mar 12	14:12	5°♓09'41		
	13600 Apr 20	23:01	0°♈		
	13600 Jun 10	07:57	0°♉		
	13600 Aug 06	11:21	0°♊		
retrograde	13600 Oct 12	16:19	18°♊59'52		
opposition	13600 Nov 18	22:39	10°♊50'37	-4°51'50	
greatest brilliancy	13600 Nov 20	04:30	10°♊22'31	-1.7m	
min. Earth dist.	13600 Nov 25	23:39	8°♊11'52	0.58029 AU	
direct	13600 Dec 29	06:47	1°♊09'43		
	13601 Mar 18	02:50	0°♋		
asc. node	13601 Mar 26	03:49	4°♋54'12		
	13601 May 02	12:53	0°♌		
	13601 Jun 12	00:17	0°♍		
	13601 Jul 20	18:32	0°♎		
	13601 Aug 28	10:44	0°♏		
	13601 Oct 07	02:55	0°♐		
	13601 Nov 17	11:30	0°♑		
evening set	13601 Dec 08	20:56	14°♑58'44		
	13601 Dec 30	19:51	0°♒		