superior conj	12101 Feb 23 23:09	11°♓52'20	0°13'43
minimum elong	12101 Feb 24 02:22	12°♓02'17	0°13'54
behind sun begin	12101 Feb 23 14:25	11°♓25'21	
behind sun end	12101 Feb 24 14:18	12°♓39'12	
desc. node	12101 Mar 01 15:25	18°♓53'45	
	12101 Mar 10 14:41	0°♈	
evening rise	12101 Apr 03 13:07	29°♈41'21	
	12101 Apr 03 19:07	0°♉	
	12101 Apr 27 21:50	0°♊	
	12101 May 22 00:00	0°♋	
	12101 Jun 15 03:56	0°♌	
asc. node	12101 Jun 22 08:24	8°♌52'45	
	12101 Jul 09 12:51	0°♍	
	12101 Aug 03 07:16	0°♎	
	12101 Aug 28 19:33	0°♏	
	12101 Sep 24 22:36	0°♐	
evening max el	12101 Oct 05 23:14	11°♐13'23	46°09'19
desc. node	12101 Oct 12 07:28	17°♐17'08	
	12101 Oct 27 07:50	0°♑	
greatest brilliancy	12101 Nov 14 01:08	10°♑11'44	-4.8m
retrograde	12101 Nov 24 08:53	12°♑07'25	
evening set	12101 Dec 12 15:34	5°♑50'32	
inferior conj	12101 Dec 15 20:39	3°♑50'27	-8°32'13
minimum elong	12101 Dec 16 01:16	3°♑43'11	8°31'03
min. Earth dist.	12101 Dec 15 21:00	3°♑49'54	0.29000 AU
morning rise	12101 Dec 19 11:01	1°♑36'34	
	12101 Dec 22 06:02	30°℞♐	
direct	12102 Jan 06 07:44	25°♐36'36	
greatest brilliancy	12102 Jan 16 17:26	27°♐35'15	-4.7m
	12102 Jan 22 04:54	0°♑	
asc. node	12102 Feb 02 09:20	7°♑03'10	
morning max el	12102 Feb 24 12:18	26°♑20'21	45°52'08
	12102 Feb 28 05:02	0°♒	
	12102 Mar 28 04:33	0°♓	
	12102 Apr 23 03:15	0°♈	
	12102 May 18 03:51	0°♉	
desc. node	12102 May 25 06:42	8°♉39'55	
	12102 Jun 11 16:00	0°♊	
	12102 Jul 05 20:56	0°♋	
	12102 Jul 29 22:27	0°♌	
	12102 Aug 22 23:14	0°♍	
morning set	12102 Aug 28 08:06	6°♍41'56	
asc. node	12102 Sep 14 22:41	28°♍38'51	
	12102 Sep 16 00:44	0°♎	
superior conj	12102 Oct 06 01:11	24°♎54'36	0°48'22
minimum elong	12102 Oct 05 15:44	24°♎25'15	0°48'15
max. Earth dist.	12102 Oct 08 10:19	27°♎52'06	1.72425 AU
	12102 Oct 10 03:29	0°♏	
	12102 Nov 03 08:00	0°♐	
evening rise	12102 Nov 12 07:20	11°♐05'43	
	12102 Nov 27 15:17	0°♑	
	12102 Dec 22 02:41	0°♒	
desc. node	12103 Jan 04 14:26	16°♒25'40	
	12103 Jan 15 19:01	0°♓	
	12103 Feb 09 16:37	0°♈	
	12103 Mar 06 20:40	0°♉	
	12103 Apr 01 12:16	0°♊	
asc. node	12103 Apr 27 12:27	29°♊09'12	
	12103 Apr 28 07:18	0°♋	
evening max el	12103 May 12 20:51	15°♋10'03	46°44'15
	12103 May 28 18:02	0°♌	
greatest brilliancy	12103 Jun 22 07:16	15°♌47'08	-4.9m
retrograde	12103 Jul 02 01:38	17°♌34'39	
evening set	12103 Jul 18 05:31	12°♌31'27	
inferior conj	12103 Jul 22 18:03	9°♌48'51	6°09'45
minimum elong	12103 Jul 23 05:08	9°♌31'50	6°06'20
min. Earth dist.	12103 Jul 23 02:12	9°♌36'21	0.27028 AU
morning rise	12103 Jul 28 04:45	6°♌34'58	
direct	12103 Aug 12 11:01	2°♌02'25	
desc. node	12103 Aug 17 14:10	2°♌32'51	
greatest brilliancy	12103 Aug 22 11:42	3°♌54'29	-4.9m
	12103 Sep 27 11:50	0°♍	
morning max el	12103 Oct 01 07:53	3°♍42'58	46°25'37
	12103 Oct 26 11:26	0°♎	
	12103 Nov 22 02:53	0°♏	
asc. node	12103 Dec 08 13:06	19°♏07'20	
	12103 Dec 17 18:22	0°♐	
	12104 Jan 11 19:59	0°♑	
	12104 Feb 05 12:51	0°♒	
	12104 Mar 01 00:04	0°♓	
	12104 Mar 25 07:10	0°♈	
morning set	12104 Mar 28 20:11	4°♈23'25	
desc. node	12104 Mar 29 05:25	4°♈52'04	
	12104 Apr 18 10:38	0°♉	
max. Earth dist.	12104 May 04 10:00	19°♉56'30	1.71755 AU
superior conj	12104 May 07 14:54	23°♉56'58	-1°17'51
minimum elong	12104 May 07 05:20	23°♉27'04	1°18'16
	12104 May 12 10:56	0°♊	
	12104 Jun 05 09:14	0°♋	
evening rise	12104 Jun 16 14:41	14°♋04'59	
	12104 Jun 29 07:23	0°♌	
asc. node	12104 Jul 19 21:03	25°♌43'18	
	12104 Jul 23 07:22	0°♍	
	12104 Aug 16 11:07	0°♎	
	12104 Sep 09 21:03	0°♏	
	12104 Oct 04 17:21	0°♐	
	12104 Oct 30 07:39	0°♑	
desc. node	12104 Nov 08 17:19	10°♑41'07	
	12104 Nov 26 07:51	0°♒	
evening max el	12104 Dec 15 23:03	19°♒58'45	45°51'14
	12104 Dec 26 21:43	0°♓	
greatest brilliancy	12105 Jan 24 02:27	18°♓18'47	-4.8m
retrograde	12105 Feb 02 20:28	20°♓03'25	
evening set	12105 Feb 17 22:44	15°♓38'32	
inferior conj	12105 Feb 24 01:15	11°♓59'40	-1°25'37
minimum elong	12105 Feb 24 04:27	11°♓54'41	1°24'17
min. Earth dist.	12105 Feb 24 12:40	11°♓41'52	0.28206 AU
asc. node	12105 Mar 01 19:12	8°♓31'10	
morning rise	12105 Mar 02 09:32	8°♓11'15	
direct	12105 Mar 17 05:39	3°♓49'47	
greatest brilliancy	12105 Mar 28 03:26	6°♓01'25	-4.8m
	12105 Apr 30 05:47	0°♈	
morning max el	12105 May 06 06:08	5°♈51'21	46°34'49
	12105 May 29 00:24	0°♉	
desc. node	12105 Jun 21 19:00	27°♉14'41	
	12105 Jun 24 03:14	0°♊	
	12105 Jul 19 05:06	0°♋	
	12105 Aug 12 19:34	0°♌	
	12105 Sep 06 05:14	0°♍	
	12105 Sep 30 13:05	0°♎	
asc. node	12105 Oct 12 12:39	14°♎47'32	
	12105 Oct 24 20:09	0°♏	
morning set	12105 Nov 07 10:39	16°♏48'36	
	12105 Nov 18 02:43	0°♐	
	12105 Dec 12 09:25	0°♑	
superior conj	12105 Dec 14 08:47	2°♑26'16	1°24'23
minimum elong	12105 Dec 14 12:34	2°♑37'56	1°25'12

max. Earth dist.	12105 Dec 15 08:08	3°♑38'21	1.73147 AU
	12106 Jan 05 17:03	0°♒	
evening rise	12106 Jan 20 13:36	18°♒17'40	
	12106 Jan 30 02:03	0°♓	
desc. node	12106 Feb 01 03:32	2°♓32'01	
	12106 Feb 23 12:08	0°♈	
	12106 Mar 19 22:45	0°♉	
	12106 Apr 13 10:25	0°♊	
	12106 May 08 01:45	0°♋	
asc. node	12106 May 24 22:47	20°♋18'26	
	12106 Jun 02 02:27	0°♌	
	12106 Jun 27 23:55	0°♍	
evening max el	12106 Jul 24 08:11	28°♍17'22	46°43'18
	12106 Jul 26 01:22	0°♎	
greatest brilliancy	12106 Sep 01 14:59	28°♎32'50	-4.8m
	12106 Sep 06 04:08	0°♏	
retrograde	12106 Sep 12 15:59	0°♏48'51	
desc. node	12106 Sep 13 23:51	0°♏46'43	
	12106 Sep 18 23:25	30°℞♎	
evening set	12106 Sep 27 20:09	26°♎17'57	
min. Earth dist.	12106 Oct 02 23:26	23°♎15'48	0.27855 AU
inferior conj	12106 Oct 03 19:32	22°♎44'50	-4°45'17
minimum elong	12106 Oct 03 10:07	22°♎59'22	4°42'33
morning rise	12106 Oct 09 00:41	19°♎38'14	
direct	12106 Oct 24 19:38	14°♎50'43	
greatest brilliancy	12106 Nov 03 09:05	16°♎30'42	-4.8m
	12106 Nov 25 22:31	0°♏	
morning max el	12106 Dec 12 18:02	14°♏54'28	45°46'44
	12106 Dec 27 17:49	0°♐	
asc. node	12107 Jan 05 00:50	8°♐49'32	
	12107 Jan 24 02:29	0°♑	
	12107 Feb 18 22:28	0°♒	
	12107 Mar 16 00:08	0°♓	
	12107 Apr 09 15:01	0°♈	
desc. node	12107 Apr 26 19:20	21°♈09'46	
	12107 May 03 22:36	0°♉	
	12107 May 28 00:52	0°♊	
morning set	12107 Jun 12 14:50	19°♊30'08	
	12107 Jun 20 23:44	0°♋	
	12107 Jul 14 21:18	0°♌	
superior conj	12107 Jul 22 14:35	9°♌41'20	-0°57'47
minimum elong	12107 Jul 23 02:08	10°♌17'34	0°58'03
max. Earth dist.	12107 Jul 23 23:21	11°♌24'08	1.71462 AU
	12107 Aug 07 19:27	0°♍	
asc. node	12107 Aug 17 10:33	12°♍02'55	
evening rise	12107 Aug 31 09:34	29°♍28'55	
	12107 Aug 31 19:32	0°♎	
	12107 Sep 24 22:38	0°♏	
	12107 Oct 19 06:12	0°♐	
	12107 Nov 12 20:37	0°♑	
desc. node	12107 Dec 07 04:23	29°♑10'16	
	12107 Dec 07 21:09	0°♒	
	12108 Jan 02 12:04	0°♓	
	12108 Jan 29 01:42	0°♈	
evening max el	12108 Feb 26 13:51	29°♈51'24	46°10'26
	12108 Feb 26 17:22	0°♉	
asc. node	12108 Mar 29 04:46	25°♉33'54	
greatest brilliancy	12108 Apr 06 06:48	29°♉18'43	-4.8m
	12108 Apr 08 11:03	0°♊	
retrograde	12108 Apr 16 03:04	1°♊06'40	
	12108 Apr 23 12:20	30°℞♉	
evening set	12108 May 02 17:24	25°♉45'37	
inferior conj	12108 May 06 21:03	23°♉14'01	8°05'32
minimum elong	12108 May 06 11:44	23°♉28'29	8°03'31
min. Earth dist.	12108 May 06 20:59	23°♉14'08	0.27513 AU
morning rise	12108 May 10 06:01	21°♉09'59	
direct	12108 May 27 18:50	15°♉16'18	
greatest brilliancy	12108 Jun 06 15:04	17°♉06'36	-4.9m
	12108 Jun 27 14:16	0°♊	
morning max el	12108 Jul 17 07:39	18°♊09'54	46°58'10
desc. node	12108 Jul 19 06:08	20°♊07'34	
	12108 Jul 28 16:47	0°♋	
	12108 Aug 24 13:25	0°♌	
	12108 Sep 19 04:02	0°♍	
	12108 Oct 14 06:09	0°♎	
	12108 Nov 08 01:32	0°♏	
asc. node	12108 Nov 09 02:14	1°♏15'04	
	12108 Dec 02 16:08	0°♐	
	12108 Dec 27 03:09	0°♑	
morning set	12109 Jan 15 06:21	23°♑33'09	
	12109 Jan 20 11:54	0°♒	
	12109 Feb 13 19:19	0°♓	
max. Earth dist.	12109 Feb 19 23:47	7°♓38'33	1.72894 AU
superior conj	12109 Feb 21 14:45	9°♓38'56	0°17'07
minimum elong	12109 Feb 21 18:43	9°♓51'10	0°17'17
desc. node	12109 Feb 28 17:14	18°♓25'56	
	12109 Mar 10 01:32	0°♈	
evening rise	12109 Apr 01 03:28	27°♈22'46	
	12109 Apr 03 06:06	0°♉	
	12109 Apr 27 09:01	0°♊	
	12109 May 21 11:25	0°♋	
	12109 Jun 14 15:41	0°♌	
asc. node	12109 Jun 21 10:24	8°♌22'18	
	12109 Jul 09 01:07	0°♍	
	12109 Aug 02 20:25	0°♎	
	12109 Aug 28 10:25	0°♏	
	12109 Sep 24 17:39	0°♐	
evening max el	12109 Oct 03 14:10	8°♐57'49	46°10'26
desc. node	12109 Oct 11 09:21	16°♐22'55	
	12109 Oct 28 00:31	0°♑	
greatest brilliancy	12109 Nov 11 16:59	8°♑00'36	-4.8m
retrograde	12109 Nov 22 00:16	9°♑56'16	
evening set	12109 Dec 10 08:46	3°♑37'55	
inferior conj	12109 Dec 13 12:43	1°♑39'29	-8°36'28
minimum elong	12109 Dec 13 16:36	1°♑33'23	8°35'24
min. Earth dist.	12109 Dec 13 12:14	1°♑40'16	0.28992 AU
	12109 Dec 16 04:24	30°℞♐	
morning rise	12109 Dec 17 00:29	29°♐29'23	
direct	12110 Jan 03 23:28	23°♐26'06	
greatest brilliancy	12110 Jan 14 08:25	25°♐23'34	-4.7m
	12110 Jan 23 18:53	0°♑	
asc. node	12110 Feb 01 11:16	5°♑55'27	
morning max el	12110 Feb 22 02:29	24°♑04'09	45°51'07
	12110 Feb 28 01:17	0°♒	
	12110 Mar 27 19:39	0°♓	
	12110 Apr 22 16:26	0°♈	
	12110 May 17 16:08	0°♉	
desc. node	12110 May 24 08:38	8°♉08'51	
	12110 Jun 11 03:46	0°♊	
	12110 Jul 05 08:23	0°♋	
	12110 Jul 29 09:40	0°♌	
	12110 Aug 22 10:17	0°♍	
morning set	12110 Aug 25 21:38	4°♍20'04	
asc. node	12110 Sep 14 00:25	28°♍10'12	
	12110 Sep 15 11:40	0°♎	
superior conj	12110 Oct 03 16:13	22°♎38'25	0°45'25
minimum elong	12110 Oct 03 07:06	22°♎10'05	0°45'16
max. Earth dist.	12110 Oct 06 00:39	25°♎33'49	1.72388 AU
	12110 Oct 09 14:20	0°♏	
	12110 Nov 02 18:50	0°♐	
evening rise	12110 Nov 09 23:42	8°♐54'24	

	12110 Nov 27 02:13	0°♉	
	12110 Dec 21 13:49	0°♒	
desc. node	12111 Jan 03 16:26	15°♒57'28	
	12111 Jan 15 06:30	0°♓	
	12111 Feb 09 04:41	0°♈	
	12111 Mar 06 09:42	0°♉	
	12111 Apr 01 03:05	0°♊	
asc. node	12111 Apr 26 14:22	28°♊24'23	
	12111 Apr 28 02:06	0°♋	
evening max el	12111 May 10 08:51	12°♋42'47	46°43'18
	12111 May 29 04:30	0°♌	
greatest brilliancy	12111 Jun 19 21:25	13°♌22'35	-4.9m
retrograde	12111 Jun 29 14:02	15°♌09'07	
evening set	12111 Jul 15 21:46	10°♌00'41	
inferior conj	12111 Jul 20 06:48	7°♌23'23	6°27'29
minimum elong	12111 Jul 20 18:00	7°♌06'13	6°24'09
min. Earth dist.	12111 Jul 20 15:56	7°♌09'23	0.27039 AU
morning rise	12111 Jul 25 14:07	4°♌14'09	
	12111 Aug 05 13:20	30°℞♋	
direct	12111 Aug 09 23:14	29°♋36'20	
	12111 Aug 14 11:30	0°♌	
desc. node	12111 Aug 16 16:06	0°♌27'45	
greatest brilliancy	12111 Aug 20 01:19	1°♌29'40	-4.9m
	12111 Sep 27 12:20	0°♍	
morning max el	12111 Sep 28 21:18	1°♍20'37	46°27'22
	12111 Oct 26 04:06	0°♎	
	12111 Nov 21 16:42	0°♏	
asc. node	12111 Dec 07 15:07	18°♏35'29	
	12111 Dec 17 06:46	0°♐	
	12112 Jan 11 07:37	0°♑	
	12112 Feb 05 00:03	0°♒	
	12112 Feb 29 11:02	0°♓	
	12112 Mar 24 18:00	0°♈	
morning set	12112 Mar 26 10:13	2°♈04'37	
desc. node	12112 Mar 28 07:15	4°♈24'11	
	12112 Apr 17 21:25	0°♉	
max. Earth dist.	12112 May 01 23:48	17°♉35'52	1.71794 AU
superior conj	12112 May 05 03:35	21°♉32'44	-1°16'02
minimum elong	12112 May 04 17:30	21°♉01'13	1°16'24
	12112 May 11 21:44	0°♊	
	12112 Jun 04 20:07	0°♋	
evening rise	12112 Jun 14 02:12	11°♋36'22	
	12112 Jun 28 18:24	0°♌	
asc. node	12112 Jul 18 22:56	25°♌14'28	
	12112 Jul 22 18:32	0°♍	
	12112 Aug 15 22:31	0°♎	
	12112 Sep 09 08:51	0°♏	
	12112 Oct 04 05:52	0°♐	
	12112 Oct 29 21:37	0°♑	
desc. node	12112 Nov 07 19:22	10°♑05'26	
	12112 Nov 26 01:09	0°♒	
evening max el	12112 Dec 13 14:08	17°♒45'55	45°51'23
	12112 Dec 27 03:18	0°♓	
greatest brilliancy	12113 Jan 21 16:47	16°♓04'27	-4.8m
retrograde	12113 Jan 31 11:54	17°♓49'49	
evening set	12113 Feb 15 15:27	13°♓22'12	
inferior conj	12113 Feb 21 16:28	9°♓45'20	-1°46'50
minimum elong	12113 Feb 21 20:26	9°♓39'08	1°45'15
min. Earth dist.	12113 Feb 22 04:06	9°♓27'12	0.28241 AU
morning rise	12113 Feb 28 00:52	5°♓57'04	
asc. node	12113 Feb 28 21:08	5°♓29'49	
direct	12113 Mar 14 21:30	1°♓35'00	
greatest brilliancy	12113 Mar 25 19:28	3°♓47'20	-4.8m
	12113 Apr 30 05:40	0°♈	
morning max el	12113 May 03 22:09	3°♈37'18	46°33'25
	12113 May 28 16:38	0°♉	
desc. node	12113 Jun 20 21:02	26°♉39'54	
	12113 Jun 23 16:56	0°♊	
	12113 Jul 18 17:37	0°♋	
	12113 Aug 12 07:25	0°♌	
	12113 Sep 05 16:38	0°♍	
	12113 Sep 30 00:10	0°♎	
asc. node	12113 Oct 11 14:33	14°♎19'32	
	12113 Oct 24 06:58	0°♏	
morning set	12113 Nov 05 02:33	14°♏36'13	
	12113 Nov 17 13:24	0°♐	
	12113 Dec 11 20:01	0°♑	
superior conj	12113 Dec 12 01:37	0°♑17'18	1°24'58
minimum elong	12113 Dec 12 04:41	0°♑26'47	1°25'49
max. Earth dist.	12113 Dec 13 04:35	1°♑40'35	1.73136 AU
	12114 Jan 05 03:40	0°♒	
evening rise	12114 Jan 18 05:41	16°♒06'39	
	12114 Jan 29 12:48	0°♓	
desc. node	12114 Jan 31 05:20	2°♓04'31	
	12114 Feb 22 23:06	0°♈	
	12114 Mar 19 10:03	0°♉	
	12114 Apr 12 22:10	0°♊	
	12114 May 07 14:12	0°♋	
asc. node	12114 May 24 00:52	19°♋45'25	
	12114 Jun 01 16:06	0°♌	
	12114 Jun 27 16:02	0°♍	
evening max el	12114 Jul 21 23:49	26°♍01'00	46°43'58
	12114 Jul 26 00:32	0°♎	
greatest brilliancy	12114 Aug 30 05:32	26°♎14'21	-4.8m
retrograde	12114 Sep 10 07:14	28°♎30'34	
desc. node	12114 Sep 13 01:45	28°♎21'12	
evening set	12114 Sep 25 08:35	24°♎02'57	
min. Earth dist.	12114 Sep 30 13:44	20°♎58'07	0.27802 AU
inferior conj	12114 Oct 01 09:45	20°♎27'17	-4°26'18
minimum elong	12114 Oct 01 00:44	20°♎41'10	4°23'38
morning rise	12114 Oct 06 17:37	17°♎17'12	
direct	12114 Oct 22 10:05	12°♎34'02	
greatest brilliancy	12114 Oct 31 22:26	14°♎13'31	-4.8m
	12114 Nov 26 07:21	0°♏	
morning max el	12114 Dec 10 08:53	12°♏40'40	45°47'23
	12114 Dec 27 11:38	0°♐	
asc. node	12115 Jan 04 02:46	8°♐10'37	
	12115 Jan 23 16:31	0°♑	
	12115 Feb 18 10:54	0°♒	
	12115 Mar 15 11:45	0°♓	
	12115 Apr 09 02:12	0°♈	
desc. node	12115 Apr 25 21:13	20°♈41'32	
	12115 May 03 09:32	0°♉	
	12115 May 27 11:40	0°♊	
morning set	12115 Jun 10 02:25	17°♊02'28	
	12115 Jun 20 10:25	0°♋	
	12115 Jul 14 07:54	0°♌	
superior conj	12115 Jul 20 02:47	7°♌15'45	-1°00'37
minimum elong	12115 Jul 20 14:28	7°♌52'23	1°00'55
max. Earth dist.	12115 Jul 21 11:38	8°♌58'50	1.71441 AU
	12115 Aug 07 06:01	0°♍	
asc. node	12115 Aug 16 12:19	11°♍35'20	
evening rise	12115 Aug 28 23:28	27°♍09'30	
	12115 Aug 31 06:09	0°♎	
	12115 Sep 24 09:21	0°♏	
	12115 Oct 18 17:08	0°♐	
	12115 Nov 12 07:57	0°♑	
desc. node	12115 Dec 06 06:20	28°♑40'30	
	12115 Dec 07 09:10	0°♒	
	12116 Jan 02 01:23	0°♓	
	12116 Jan 28 17:38	0°♈	

evening max el	12116 Feb 24 03:59	27°♈33'23	46°09'14
	12116 Feb 26 16:36	0°♉	
asc. node	12116 Mar 28 06:46	24°♉03'05	
greatest brilliancy	12116 Apr 03 20:18	26°♉57'49	-4.8m
retrograde	12116 Apr 13 15:57	28°♉45'11	
evening set	12116 Apr 30 02:42	23°♉30'36	
inferior conj	12116 May 04 10:40	20°♉52'31	7°53'54
minimum elong	12116 May 04 00:52	21°♉07'44	7°51'43
min. Earth dist.	12116 May 04 10:34	20°♉52'41	0.27524 AU
morning rise	12116 May 07 22:58	18°♉43'13	
direct	12116 May 25 08:30	12°♉54'35	
greatest brilliancy	12116 Jun 04 05:27	14°♉45'03	-4.9m
	12116 Jun 28 00:26	0°♊	
morning max el	12116 Jul 14 20:15	15°♊44'57	46°58'25
desc. node	12116 Jul 18 07:58	19°♊17'57	
	12116 Jul 28 11:18	0°♋	
	12116 Aug 24 03:59	0°♌	
	12116 Sep 18 16:49	0°♍	
	12116 Oct 13 17:57	0°♎	
	12116 Nov 07 12:43	0°♏	
asc. node	12116 Nov 08 04:13	0°♏47'05	
	12116 Dec 02 02:56	0°♐	
	12116 Dec 26 13:44	0°♑	
morning set	12117 Jan 12 23:17	21°♑25'10	
	12117 Jan 19 22:22	0°♒	
	12117 Feb 13 05:46	0°♓	
max. Earth dist.	12117 Feb 17 15:16	5°♓25'49	1.72922 AU
superior conj	12117 Feb 19 06:06	7°♓25'48	0°20'30
minimum elong	12117 Feb 19 10:47	7°♓40'14	0°20'40
desc. node	12117 Feb 27 19:02	17°♓59'04	
	12117 Mar 09 12:03	0°♈	
evening rise	12117 Mar 29 17:39	25°♈04'52	
	12117 Apr 02 16:44	0°♉	
	12117 Apr 26 19:49	0°♊	
	12117 May 20 22:27	0°♋	
	12117 Jun 14 03:04	0°♌	
asc. node	12117 Jun 20 12:16	7°♌52'39	
	12117 Jul 08 13:02	0°♍	
	12117 Aug 02 09:12	0°♎	
	12117 Aug 28 00:54	0°♏	
	12117 Sep 24 12:35	0°♐	
evening max el	12117 Oct 01 04:09	6°♐41'30	46°11'32
desc. node	12117 Oct 10 11:25	15°♐29'37	
	12117 Oct 28 22:04	0°♑	
greatest brilliancy	12117 Nov 09 08:30	5°♑50'30	-4.8m
retrograde	12117 Nov 19 15:47	7°♑46'44	
evening set	12117 Dec 08 01:34	1°♑27'06	
	12117 Dec 10 09:40	30°℞♐	
inferior conj	12117 Dec 11 04:49	29°♐29'53	-8°39'53
minimum elong	12117 Dec 11 07:55	29°♐25'00	8°38'55
min. Earth dist.	12117 Dec 11 03:32	29°♐31'54	0.28991 AU
morning rise	12117 Dec 14 14:17	27°♐23'14	
direct	12118 Jan 01 14:56	21°♐16'40	
greatest brilliancy	12118 Jan 12 00:02	23°♐13'45	-4.7m
	12118 Jan 24 20:46	0°♑	
asc. node	12118 Jan 31 13:12	4°♑50'26	
morning max el	12118 Feb 19 16:56	21°♑49'30	45°50'08
	12118 Feb 27 20:35	0°♒	
	12118 Mar 27 10:14	0°♓	
	12118 Apr 22 05:12	0°♈	
	12118 May 17 03:59	0°♉	
desc. node	12118 May 23 10:38	7°♉39'14	
	12118 Jun 10 15:06	0°♊	
	12118 Jul 04 19:24	0°♋	
	12118 Jul 28 20:29	0°♌	
	12118 Aug 21 20:56	0°♍	
morning set	12118 Aug 23 11:14	1°♍59'31	
asc. node	12118 Sep 13 02:20	27°♍43'24	
	12118 Sep 14 22:10	0°♎	
superior conj	12118 Oct 01 07:26	20°♎24'08	0°42'24
minimum elong	12118 Sep 30 22:42	19°♎56'58	0°42'13
max. Earth dist.	12118 Oct 03 14:15	23°♎14'33	1.72349 AU
	12118 Oct 09 00:44	0°♏	
	12118 Nov 02 05:13	0°♐	
evening rise	12118 Nov 07 16:22	6°♐45'28	
	12118 Nov 26 12:43	0°♑	
	12118 Dec 21 00:34	0°♒	
desc. node	12119 Jan 02 18:16	15°♒29'52	
	12119 Jan 14 17:41	0°♓	
	12119 Feb 08 16:31	0°♈	
	12119 Mar 05 22:34	0°♉	
	12119 Mar 31 17:50	0°♊	
asc. node	12119 Apr 25 16:28	27°♊40'18	
	12119 Apr 27 21:08	0°♋	
evening max el	12119 May 07 21:15	10°♋17'35	46°42'34
	12119 May 29 18:00	0°♌	
greatest brilliancy	12119 Jun 17 10:53	10°♌58'26	-4.9m
retrograde	12119 Jun 27 03:02	12°♌44'53	
evening set	12119 Jul 13 14:06	7°♌30'51	
inferior conj	12119 Jul 17 19:33	4°♌58'54	6°44'31
minimum elong	12119 Jul 18 06:46	4°♌41'45	6°41'17
min. Earth dist.	12119 Jul 18 05:12	4°♌44'08	0.27049 AU
morning rise	12119 Jul 22 23:19	1°♌54'51	
	12119 Jul 26 16:40	30°℞♋	
direct	12119 Aug 07 11:51	27°♋11'16	
desc. node	12119 Aug 15 18:07	28°♋28'46	
greatest brilliancy	12119 Aug 17 14:24	29°♋05'26	-4.9m
	12119 Aug 19 21:46	0°♌	
morning max el	12119 Sep 26 11:44	29°♌01'51	46°29'08
	12119 Sep 27 11:17	0°♍	
	12119 Oct 25 20:02	0°♎	
	12119 Nov 21 05:59	0°♏	
asc. node	12119 Dec 06 17:01	18°♏04'36	
	12119 Dec 16 18:43	0°♐	
	12120 Jan 10 18:51	0°♑	
	12120 Feb 04 10:55	0°♒	
	12120 Feb 28 21:42	0°♓	
morning set	12120 Mar 24 00:09	29°♓46'11	
	12120 Mar 24 04:36	0°♈	
desc. node	12120 Mar 27 09:13	3°♈57'23	
	12120 Apr 17 08:01	0°♉	
max. Earth dist.	12120 Apr 29 13:07	15°♉14'18	1.71832 AU
superior conj	12120 May 02 15:52	19°♉07'50	-1°14'04
minimum elong	12120 May 02 05:22	18°♉35'02	1°14'23
	12120 May 11 08:22	0°♊	
	12120 Jun 04 06:49	0°♋	
evening rise	12120 Jun 11 13:23	9°♋07'24	
	12120 Jun 28 05:11	0°♌	
asc. node	12120 Jul 18 00:44	24°♌46'07	
	12120 Jul 22 05:28	0°♍	
	12120 Aug 15 09:41	0°♎	
	12120 Sep 08 20:26	0°♏	
	12120 Oct 03 18:13	0°♐	
	12120 Oct 29 11:27	0°♑	
desc. node	12120 Nov 06 21:24	9°♑30'15	
	12120 Nov 25 18:29	0°♒	
evening max el	12120 Dec 11 05:58	15°♒35'55	45°51'33
	12120 Dec 27 10:41	0°♓	
greatest brilliancy	12121 Jan 19 07:08	13°♓51'28	-4.8m
retrograde	12121 Jan 29 03:22	15°♓37'19	
evening set	12121 Feb 13 08:27	11°♓07'04	

inferior conj	12121 Feb 19 07:47	7°♓32'05	-2°07'40
minimum elong	12121 Feb 19 12:29	7°♓24'45	2°05'51
min. Earth dist.	12121 Feb 19 19:21	7°♓14'02	0.28281 AU
morning rise	12121 Feb 25 16:05	3°♓44'08	
asc. node	12121 Feb 27 23:10	2°♓32'48	
	12121 Mar 06 23:12	30°℞♒	
direct	12121 Mar 12 13:48	29°♒21'29	
	12121 Mar 18 07:55	0°♓	
greatest brilliancy	12121 Mar 23 11:01	1°♓33'30	-4.8m
	12121 Apr 30 04:24	0°♈	
morning max el	12121 May 01 14:06	1°♈23'27	46°31'43
	12121 May 28 08:34	0°♉	
desc. node	12121 Jun 19 22:52	26°♉04'43	
	12121 Jun 23 06:31	0°♊	
	12121 Jul 18 06:02	0°♋	
	12121 Aug 11 19:09	0°♌	
	12121 Sep 05 03:53	0°♍	
	12121 Sep 29 11:05	0°♎	
asc. node	12121 Oct 10 16:27	13°♎52'01	
	12121 Oct 23 17:40	0°♏	
morning set	12121 Nov 02 18:36	12°♏24'39	
	12121 Nov 16 23:57	0°♐	
superior conj	12121 Dec 09 18:46	28°♐09'36	1°25'27
minimum elong	12121 Dec 09 21:07	28°♐16'53	1°26'17
max. Earth dist.	12121 Dec 11 01:09	29°♐43'26	1.73120 AU
	12121 Dec 11 06:31	0°♑	
	12122 Jan 04 14:11	0°♒	
evening rise	12122 Jan 15 22:07	13°♒57'02	
	12122 Jan 28 23:26	0°♓	
desc. node	12122 Jan 30 07:12	1°♓37'33	
	12122 Feb 22 09:58	0°♈	
	12122 Mar 18 21:18	0°♉	
	12122 Apr 12 09:57	0°♊	
	12122 May 07 02:47	0°♋	
asc. node	12122 May 23 02:43	19°♋11'13	
	12122 Jun 01 06:00	0°♌	
	12122 Jun 27 08:37	0°♍	
evening max el	12122 Jul 19 15:18	23°♍43'39	46°44'43
	12122 Jul 26 01:01	0°♎	
greatest brilliancy	12122 Aug 27 20:46	23°♎56'13	-4.8m
retrograde	12122 Sep 07 22:05	26°♎11'42	
desc. node	12122 Sep 12 03:51	25°♎49'49	
evening set	12122 Sep 22 21:14	21°♎47'23	
min. Earth dist.	12122 Sep 28 04:16	18°♎39'43	0.27743 AU
inferior conj	12122 Sep 28 23:57	18°♎09'25	-4°06'52
minimum elong	12122 Sep 28 15:25	18°♎22'34	4°04'17
morning rise	12122 Oct 04 10:22	14°♎55'49	
direct	12122 Oct 20 00:26	10°♎17'09	
greatest brilliancy	12122 Oct 29 11:50	11°♎56'00	-4.8m
	12122 Nov 26 13:41	0°♏	
morning max el	12122 Dec 07 22:52	10°♏24'39	45°48'09
	12122 Dec 27 05:01	0°♐	
asc. node	12123 Jan 03 04:38	7°♐31'50	
	12123 Jan 23 06:25	0°♑	
	12123 Feb 17 23:16	0°♒	
	12123 Mar 14 23:20	0°♓	
	12123 Apr 08 13:24	0°♈	
desc. node	12123 Apr 24 23:10	20°♈13'22	
	12123 May 02 20:32	0°♉	
	12123 May 26 22:34	0°♊	
morning set	12123 Jun 07 13:47	14°♊33'40	
	12123 Jun 19 21:17	0°♋	
	12123 Jul 13 18:44	0°♌	
superior conj	12123 Jul 17 14:34	4°♌48'09	-1°03'22
minimum elong	12123 Jul 18 02:17	5°♌24'53	1°03'42
max. Earth dist.	12123 Jul 18 19:45	6°♌19'40	1.71423 AU
	12123 Aug 06 16:51	0°♍	
asc. node	12123 Aug 15 14:15	11°♍07'31	
evening rise	12123 Aug 26 12:43	24°♍47'14	
	12123 Aug 30 17:00	0°♎	
	12123 Sep 23 20:18	0°♏	
	12123 Oct 18 04:16	0°♐	
	12123 Nov 11 19:29	0°♑	
desc. node	12123 Dec 05 08:12	28°♑09'50	
	12123 Dec 06 21:26	0°♒	
	12124 Jan 01 15:00	0°♓	
	12124 Jan 28 10:01	0°♈	
evening max el	12124 Feb 21 17:34	25°♈13'55	46°08'08
	12124 Feb 26 17:02	0°♉	
asc. node	12124 Mar 27 08:50	22°♉29'10	
greatest brilliancy	12124 Apr 01 10:13	24°♉37'40	-4.8m
retrograde	12124 Apr 11 05:00	26°♉24'33	
evening set	12124 Apr 27 12:24	21°♉15'55	
inferior conj	12124 May 02 00:36	18°♉31'44	7°41'33
minimum elong	12124 May 01 14:25	18°♉47'34	7°39'11
min. Earth dist.	12124 May 02 00:39	18°♉31'40	0.27540 AU
morning rise	12124 May 05 16:19	16°♉17'10	
direct	12124 May 22 22:04	10°♉33'19	
greatest brilliancy	12124 Jun 01 20:33	12°♉24'39	-4.9m
	12124 Jun 28 07:59	0°♊	
morning max el	12124 Jul 12 08:55	13°♊19'26	46°58'22
desc. node	12124 Jul 17 10:01	18°♊29'00	
	12124 Jul 28 05:37	0°♋	
	12124 Aug 23 18:44	0°♌	
	12124 Sep 18 05:56	0°♍	
	12124 Oct 13 06:06	0°♎	
asc. node	12124 Nov 07 06:04	0°♏17'44	
	12124 Nov 07 00:14	0°♏	
	12124 Dec 01 14:02	0°♐	
	12124 Dec 26 00:34	0°♑	
morning set	12125 Jan 10 16:18	19°♑16'34	
	12125 Jan 19 09:06	0°♒	
	12125 Feb 12 16:30	0°♓	
max. Earth dist.	12125 Feb 15 08:28	3°♓17'32	1.72949 AU
superior conj	12125 Feb 16 21:47	5°♓12'47	0°23'50
minimum elong	12125 Feb 17 03:09	5°♓29'22	0°24'01
desc. node	12125 Feb 26 21:02	17°♓32'00	
	12125 Mar 08 22:51	0°♈	
evening rise	12125 Mar 27 08:20	22°♈47'46	
	12125 Apr 02 03:39	0°♉	
	12125 Apr 26 06:53	0°♊	
	12125 May 20 09:46	0°♋	
	12125 Jun 13 14:45	0°♌	
asc. node	12125 Jun 19 14:09	7°♌22'08	
	12125 Jul 08 01:18	0°♍	
	12125 Aug 01 22:28	0°♎	
	12125 Aug 27 16:05	0°♏	
	12125 Sep 24 08:44	0°♐	
evening max el	12125 Sep 28 18:08	4°♐23'31	46°12'44
desc. node	12125 Oct 09 13:27	14°♐33'23	
	12125 Oct 30 05:20	0°♑	
greatest brilliancy	12125 Nov 06 23:33	3°♑38'08	-4.8m
retrograde	12125 Nov 17 07:39	5°♑35'37	
	12125 Dec 04 11:59	30°℞♐	
evening set	12125 Dec 05 17:59	29°♐14'59	
inferior conj	12125 Dec 08 20:47	27°♐18'39	-8°42'39
minimum elong	12125 Dec 08 23:06	27°♐15'00	8°41'43
min. Earth dist.	12125 Dec 08 18:33	27°♐22'10	0.28983 AU
morning rise	12125 Dec 12 04:16	25°♐15'11	
direct	12125 Dec 30 06:13	19°♐05'36	
greatest brilliancy	12126 Jan 09 15:28	21°♐02'35	-4.7m

	12126 Jan 25 16:14	0°♉		
asc. node	12126 Jan 30 15:18	3°♉46'17		
morning max el	12126 Feb 17 08:01	19°♉35'23	45°49'17	
	12126 Feb 27 15:42	0°♒		
	12126 Mar 27 00:58	0°♓		
	12126 Apr 21 18:12	0°♈		
	12126 May 16 16:06	0°♉		
desc. node	12126 May 22 12:25	7°♉08'06		
	12126 Jun 10 02:42	0°♊		
	12126 Jul 04 06:41	0°♋		
	12126 Jul 28 07:34	0°♌		
morning set	12126 Aug 21 00:53	29°♌38'04		
	12126 Aug 21 07:54	0°♍		
asc. node	12126 Sep 12 04:15	27°♍15'31		
	12126 Sep 14 09:03	0°♎		
superior conj	12126 Sep 28 22:26	18°♎07'48	0°39'17	
minimum elong	12126 Sep 28 14:07	17°♎41'57	0°39'05	
max. Earth dist.	12126 Oct 01 03:31	20°♎52'54	1.72317 AU	
	12126 Oct 08 11:34	0°♏		
	12126 Nov 01 16:03	0°♐		
evening rise	12126 Nov 05 08:47	4°♐34'21		
	12126 Nov 25 23:39	0°♑		
	12126 Dec 20 11:45	0°♒		
desc. node	12127 Jan 01 20:10	15°♒01'12		
	12127 Jan 14 05:16	0°♓		
	12127 Feb 08 04:46	0°♈		
	12127 Mar 05 11:54	0°♉		
	12127 Mar 31 09:09	0°♊		
asc. node	12127 Apr 24 18:23	26°♊54'04		
	12127 Apr 27 17:06	0°♋		
evening max el	12127 May 05 10:50	7°♋54'35	46°41'53	
	12127 May 30 12:34	0°♌		
greatest brilliancy	12127 Jun 15 00:03	8°♌33'35	-4.9m	
retrograde	12127 Jun 24 16:41	10°♌20'20		
evening set	12127 Jul 11 06:40	5°♌00'45		
inferior conj	12127 Jul 15 08:29	2°♌34'04	7°00'42	
minimum elong	12127 Jul 15 19:38	2°♌17'01	6°57'35	
min. Earth dist.	12127 Jul 15 18:12	2°♌19'13	0.27060 AU	
	12127 Jul 19 15:18	30°℞♋		
morning rise	12127 Jul 20 08:32	29°♋35'30		
direct	12127 Aug 05 01:11	24°♋46'06		
desc. node	12127 Aug 14 20:09	26°♋34'09		
greatest brilliancy	12127 Aug 15 02:56	26°♋40'12	-4.9m	
	12127 Aug 22 08:02	0°♌		
morning max el	12127 Sep 24 02:39	26°♌43'34	46°30'39	
	12127 Sep 27 09:34	0°♍		
	12127 Oct 25 12:01	0°♎		
	12127 Nov 20 19:32	0°♏		
asc. node	12127 Dec 05 18:52	17°♏32'23		
	12127 Dec 16 07:03	0°♐		
	12128 Jan 10 06:29	0°♑		
	12128 Feb 03 22:09	0°♒		
	12128 Feb 28 08:43	0°♓		
morning set	12128 Mar 21 14:13	27°♓27'21		
	12128 Mar 23 15:31	0°♈		
desc. node	12128 Mar 26 11:00	3°♈29'08		
	12128 Apr 16 18:54	0°♉		
max. Earth dist.	12128 Apr 27 01:56	12°♉50'17	1.71869 AU	
superior conj	12128 Apr 30 04:17	16°♉42'29	-1°11'59	
minimum elong	12128 Apr 29 17:26	16°♉08'37	1°12'13	
	12128 May 10 19:19	0°♊		
	12128 Jun 03 17:50	0°♋		
evening rise	12128 Jun 09 00:45	6°♋37'56		
	12128 Jun 27 16:18	0°♌		
asc. node	12128 Jul 17 02:43	24°♌17'22		
	12128 Jul 21 16:42	0°♍		
	12128 Aug 14 21:09	0°♎		
	12128 Sep 08 08:20	0°♏		
	12128 Oct 03 06:55	0°♐		
	12128 Oct 29 01:46	0°♑		
desc. node	12128 Nov 05 23:14	8°♑53'11		
	12128 Nov 25 12:41	0°♒		
evening max el	12128 Dec 08 22:02	13°♒25'14	45°51'35	
	12128 Dec 27 21:33	0°♓		
greatest brilliancy	12129 Jan 16 22:09	11°♓38'03	-4.8m	
retrograde	12129 Jan 26 18:32	13°♓23'31		
evening set	12129 Feb 11 01:37	8°♓50'48		
inferior conj	12129 Feb 16 23:07	5°♓17'53	-2°28'21	
minimum elong	12129 Feb 17 04:31	5°♓09'26	2°26'18	
min. Earth dist.	12129 Feb 17 10:47	4°♓59'37	0.28317 AU	
morning rise	12129 Feb 23 07:03	1°♓30'17		
	12129 Feb 26 06:07	30°℞♒		
asc. node	12129 Feb 27 01:10	29°♒38'29		
direct	12129 Mar 10 05:56	27°♒07'11		
greatest brilliancy	12129 Mar 21 02:23	29°♒18'29	-4.8m	
	12129 Mar 22 18:59	0°♓		
morning max el	12129 Apr 29 05:11	29°♓06'45	46°30'01	
	12129 Apr 30 02:31	0°♈		
	12129 May 28 00:28	0°♉		
desc. node	12129 Jun 19 00:51	25°♉29'29		
	12129 Jun 22 20:12	0°♊		
	12129 Jul 17 18:37	0°♋		
	12129 Aug 11 07:03	0°♌		
	12129 Sep 04 15:19	0°♍		
	12129 Sep 28 22:10	0°♎		
asc. node	12129 Oct 09 18:15	13°♎23'38		
	12129 Oct 23 04:31	0°♏		
morning set	12129 Oct 31 10:51	10°♏13'09		
	12129 Nov 16 10:41	0°♐		
superior conj	12129 Dec 07 12:01	26°♐01'38	1°25'48	
minimum elong	12129 Dec 07 13:38	26°♐06'37	1°26'38	
max. Earth dist.	12129 Dec 08 20:43	27°♐42'35	1.73107 AU	
	12129 Dec 10 17:13	0°♑		
	12130 Jan 04 00:56	0°♒		
evening rise	12130 Jan 13 14:26	11°♒46'17		
	12130 Jan 28 10:20	0°♓		
desc. node	12130 Jan 29 09:11	1°♓10'09		
	12130 Feb 21 21:07	0°♈		
	12130 Mar 18 08:48	0°♉		
	12130 Apr 11 21:58	0°♊		
	12130 May 06 15:36	0°♋		
asc. node	12130 May 22 04:39	18°♋36'32		
	12130 May 31 20:12	0°♌		
	12130 Jun 27 01:43	0°♍		
evening max el	12130 Jul 17 05:57	21°♍23'36	46°45'18	
	12130 Jul 26 03:01	0°♎		
greatest brilliancy	12130 Aug 25 12:38	21°♎38'11	-4.8m	
retrograde	12130 Sep 05 12:29	23°♎52'09		
desc. node	12130 Sep 11 05:50	23°♎12'20		
evening set	12130 Sep 20 10:02	19°♎30'57		
min. Earth dist.	12130 Sep 25 19:12	16°♎20'11	0.27685 AU	
inferior conj	12130 Sep 26 14:06	15°♎51'03	-3°46'47	
minimum elong	12130 Sep 26 06:07	16°♎03'22	3°44'21	
morning rise	12130 Oct 02 02:56	12°♎33'57		
direct	12130 Oct 17 14:09	7°♎59'45		
greatest brilliancy	12130 Oct 27 01:39	9°♎38'24	-4.8m	
	12130 Nov 26 18:05	0°♏		
morning max el	12130 Dec 05 12:00	8°♏06'11	45°49'02	
	12130 Dec 26 22:06	0°♐		
asc. node	12131 Jan 02 06:44	6°♐53'50		
	12131 Jan 22 20:15	0°♑		

	12131 Feb 17 11:41	0°♒	
	12131 Mar 14 11:03	0°♓	
	12131 Apr 08 00:43	0°♈	
desc. node	12131 Apr 24 00:59	19°♈44'28	
	12131 May 02 07:38	0°♉	
	12131 May 26 09:32	0°♊	
morning set	12131 Jun 05 00:55	12°♊04'01	
	12131 Jun 19 08:10	0°♋	
	12131 Jul 13 05:35	0°♌	
superior conj	12131 Jul 15 02:19	2°♌20'22	-1°05'59
minimum elong	12131 Jul 15 13:57	2°♌56'53	1°06'21
max. Earth dist.	12131 Jul 16 01:40	3°♌33'39	1.71409 AU
	12131 Aug 06 03:42	0°♍	
asc. node	12131 Aug 14 16:08	10°♍39'29	
evening rise	12131 Aug 24 01:54	22°♍24'36	
	12131 Aug 30 03:54	0°♎	
	12131 Sep 23 07:17	0°♏	
	12131 Oct 17 15:26	0°♐	
	12131 Nov 11 07:02	0°♑	
desc. node	12131 Dec 04 10:12	27°♑39'34	
	12131 Dec 06 09:44	0°♒	
	12132 Jan 01 04:42	0°♓	
	12132 Jan 28 02:44	0°♈	
evening max el	12132 Feb 19 06:38	22°♈53'10	46°06'56
	12132 Feb 26 18:52	0°♉	
asc. node	12132 Mar 26 10:45	20°♉50'55	
greatest brilliancy	12132 Mar 29 23:44	22°♉16'28	-4.8m
retrograde	12132 Apr 08 18:09	24°♉03'22	
evening set	12132 Apr 24 21:56	19°♉00'13	
inferior conj	12132 Apr 29 14:21	16°♉10'15	7°28'11
minimum elong	12132 Apr 29 03:51	16°♉26'32	7°25'41
min. Earth dist.	12132 Apr 29 14:35	16°♉09'52	0.27557 AU
morning rise	12132 May 03 09:35	13°♉50'27	
direct	12132 May 20 11:19	8°♉11'12	
greatest brilliancy	12132 May 30 11:39	10°♉03'55	-4.9m
	12132 Jun 28 13:20	0°♊	
morning max el	12132 Jul 09 22:16	10°♊55'42	46°58'26
desc. node	12132 Jul 16 12:04	17°♊40'57	
	12132 Jul 27 23:27	0°♋	
	12132 Aug 23 09:12	0°♌	
	12132 Sep 17 18:49	0°♍	
	12132 Oct 12 18:04	0°♎	
asc. node	12132 Nov 06 07:55	29°♎48'48	
	12132 Nov 06 11:36	0°♏	
	12132 Dec 01 00:58	0°♐	
	12132 Dec 25 11:16	0°♑	
morning set	12133 Jan 08 09:29	17°♑08'53	
	12133 Jan 18 19:40	0°♒	
	12133 Feb 12 03:05	0°♓	
max. Earth dist.	12133 Feb 13 04:08	1°♓17'22	1.72977 AU
superior conj	12133 Feb 14 13:33	3°♓00'35	0°27'07
minimum elong	12133 Feb 14 19:34	3°♓19'09	0°27'17
desc. node	12133 Feb 25 22:49	17°♓04'48	
	12133 Mar 08 09:30	0°♈	
evening rise	12133 Mar 24 23:01	20°♈31'13	
	12133 Apr 01 14:26	0°♉	
	12133 Apr 25 17:52	0°♊	
	12133 May 19 21:00	0°♋	
	12133 Jun 13 02:22	0°♌	
asc. node	12133 Jun 18 16:08	6°♌52'09	
	12133 Jul 07 13:30	0°♍	
	12133 Aug 01 11:39	0°♎	
	12133 Aug 27 07:16	0°♏	
	12133 Sep 24 05:19	0°♐	
evening max el	12133 Sep 26 08:46	2°♐07'46	46°14'00
desc. node	12133 Oct 08 15:21	13°♐36'12	
	12133 Nov 01 03:21	0°♑	
greatest brilliancy	12133 Nov 04 13:58	1°♑25'31	-4.8m
retrograde	12133 Nov 14 23:55	3°♑24'53	
	12133 Nov 28 03:58	30°℞♐	
evening set	12133 Dec 03 09:56	27°♐03'42	
inferior conj	12133 Dec 06 12:39	25°♐07'42	-8°44'35
minimum elong	12133 Dec 06 14:11	25°♐05'18	8°43'42
min. Earth dist.	12133 Dec 06 09:08	25°♐13'13	0.28973 AU
morning rise	12133 Dec 09 18:28	23°♐07'00	
direct	12133 Dec 27 21:45	16°♐54'55	
greatest brilliancy	12134 Jan 07 06:16	18°♐51'26	-4.7m
	12134 Jan 26 06:17	0°♑	
asc. node	12134 Jan 29 17:14	2°♑44'05	
morning max el	12134 Feb 14 23:54	17°♑24'15	45°48'33
	12134 Feb 27 09:59	0°♒	
	12134 Mar 26 15:14	0°♓	
	12134 Apr 21 06:51	0°♈	
	12134 May 16 03:56	0°♉	
desc. node	12134 May 21 14:23	6°♉38'16	
	12134 Jun 09 14:05	0°♊	
	12134 Jul 03 17:47	0°♋	
	12134 Jul 27 18:28	0°♌	
morning set	12134 Aug 18 14:10	27°♌16'06	
	12134 Aug 20 18:38	0°♍	
asc. node	12134 Sep 11 05:59	26°♍47'53	
	12134 Sep 13 19:39	0°♎	
superior conj	12134 Sep 26 13:04	15°♎51'10	0°36'05
minimum elong	12134 Sep 26 05:16	15°♎26'52	0°35'53
max. Earth dist.	12134 Sep 28 18:39	18°♎37'52	1.72284 AU
	12134 Oct 07 22:05	0°♏	
	12134 Nov 01 02:36	0°♐	
evening rise	12134 Nov 03 01:09	2°♐23'57	
	12134 Nov 25 10:20	0°♑	
	12134 Dec 19 22:39	0°♒	
desc. node	12134 Dec 31 22:09	14°♒33'39	
	12135 Jan 13 16:35	0°♓	
	12135 Feb 07 16:43	0°♈	
	12135 Mar 05 00:57	0°♉	
	12135 Mar 31 00:18	0°♊	
asc. node	12135 Apr 23 20:20	26°♊08'12	
	12135 Apr 27 13:21	0°♋	
evening max el	12135 May 03 01:02	5°♋34'10	46°40'55
	12135 May 31 13:27	0°♌	
greatest brilliancy	12135 Jun 12 12:51	6°♌08'45	-4.9m
retrograde	12135 Jun 22 06:03	7°♌55'32	
evening set	12135 Jul 08 23:05	2°♌30'35	
inferior conj	12135 Jul 12 21:09	0°♌09'04	7°16'12
minimum elong	12135 Jul 13 08:10	29°♋52'14	7°13'12
	12135 Jul 13 03:05	30°℞♋	
min. Earth dist.	12135 Jul 13 06:48	29°♋54'20	0.27074 AU
morning rise	12135 Jul 17 17:14	27°♋16'10	
direct	12135 Aug 02 14:35	22°♋20'58	
greatest brilliancy	12135 Aug 12 14:54	24°♋14'16	-4.9m
desc. node	12135 Aug 13 22:06	24°♋43'55	
	12135 Aug 23 21:17	0°♌	
morning max el	12135 Sep 21 17:11	24°♌24'47	46°32'12
	12135 Sep 27 06:46	0°♍	
	12135 Oct 25 03:27	0°♎	
	12135 Nov 20 08:38	0°♏	
asc. node	12135 Dec 04 20:54	17°♏01'59	
	12135 Dec 15 18:56	0°♐	
	12136 Jan 09 17:43	0°♑	
	12136 Feb 03 09:00	0°♒	
	12136 Feb 27 19:21	0°♓	
morning set	12136 Mar 19 04:38	25°♓10'50	

	12136 Mar 23 02:02	0°♈	
desc. node	12136 Mar 25 12:51	3°♈02'12	
	12136 Apr 16 05:25	0°♉	
max. Earth dist.	12136 Apr 24 13:35	10°♉24'00	1.71905 AU
superior conj	12136 Apr 27 17:03	14°♉19'35	-1°09'46
minimum elong	12136 Apr 27 05:57	13°♉44'57	1°09'58
	12136 May 10 05:52	0°♊	
	12136 Jun 03 04:29	0°♋	
evening rise	12136 Jun 06 12:17	4°♋10'10	
	12136 Jun 27 03:03	0°♌	
asc. node	12136 Jul 16 04:35	23°♌49'15	
	12136 Jul 21 03:38	0°♍	
	12136 Aug 14 08:21	0°♎	
	12136 Sep 07 19:59	0°♏	
	12136 Oct 02 19:23	0°♐	
	12136 Oct 28 15:53	0°♑	
desc. node	12136 Nov 05 01:19	8°♑17'31	
	12136 Nov 25 06:55	0°♒	
evening max el	12136 Dec 06 13:31	11°♒14'15	45°51'42
	12136 Dec 28 11:29	0°♓	
greatest brilliancy	12137 Jan 14 13:44	9°♓26'35	-4.7m
retrograde	12137 Jan 24 09:15	11°♓11'04	
evening set	12137 Feb 08 18:58	6°♓35'42	
inferior conj	12137 Feb 14 14:31	3°♓05'09	-2°48'45
minimum elong	12137 Feb 14 20:35	2°♓55'38	2°46'29
min. Earth dist.	12137 Feb 15 02:36	2°♓46'13	0.28352 AU
	12137 Feb 19 15:57	30°♑℞♒	
morning rise	12137 Feb 20 21:50	29°♒17'58	
asc. node	12137 Feb 26 03:08	26°♒49'35	
direct	12137 Mar 07 21:41	24°♒54'14	
greatest brilliancy	12137 Mar 18 18:08	27°♒05'06	-4.8m
	12137 Mar 24 22:59	0°♓	
morning max el	12137 Apr 26 19:32	26°♓49'26	46°28'30
	12137 Apr 29 23:20	0°♈	
	12137 May 27 15:40	0°♉	
desc. node	12137 Jun 18 02:52	24°♉55'59	
	12137 Jun 22 09:19	0°♊	
	12137 Jul 17 06:42	0°♋	
	12137 Aug 10 18:32	0°♌	
	12137 Sep 04 02:23	0°♍	
	12137 Sep 28 08:57	0°♎	
asc. node	12137 Oct 08 20:09	12°♎56'30	
	12137 Oct 22 15:05	0°♏	
morning set	12137 Oct 29 02:44	8°♏01'22	
	12137 Nov 15 21:06	0°♐	
superior conj	12137 Dec 05 05:03	23°♐54'00	1°26'00
minimum elong	12137 Dec 05 05:54	23°♐56'39	1°26'51
max. Earth dist.	12137 Dec 06 14:33	25°♐37'29	1.73088 AU
	12137 Dec 10 03:34	0°♑	
	12138 Jan 03 11:20	0°♒	
evening rise	12138 Jan 11 06:38	9°♒36'20	
	12138 Jan 27 20:53	0°♓	
desc. node	12138 Jan 28 10:57	0°♓43'11	
	12138 Feb 21 07:56	0°♈	
	12138 Mar 17 20:00	0°♉	
	12138 Apr 11 09:42	0°♊	
	12138 May 06 04:07	0°♋	
asc. node	12138 May 21 06:44	18°♋03'17	
	12138 May 31 10:07	0°♌	
	12138 Jun 26 18:41	0°♍	
evening max el	12138 Jul 14 19:38	19°♍02'19	46°45'48
	12138 Jul 26 06:00	0°♎	
greatest brilliancy	12138 Aug 23 04:39	19°♎21'12	-4.8m
retrograde	12138 Sep 03 02:32	21°♎33'36	
desc. node	12138 Sep 10 07:46	20°♎30'24	
evening set	12138 Sep 17 22:58	17°♎14'51	
min. Earth dist.	12138 Sep 23 10:28	14°♎01'01	0.27633 AU
inferior conj	12138 Sep 24 04:15	13°♎33'35	-3°26'14
minimum elong	12138 Sep 23 20:51	13°♎45'00	3°23'57
morning rise	12138 Sep 29 19:24	10°♎13'06	
direct	12138 Oct 15 03:21	5°♎42'52	
greatest brilliancy	12138 Oct 24 16:13	7°♎22'09	-4.8m
	12138 Nov 26 20:28	0°♏	
morning max el	12138 Dec 03 01:07	5°♏48'14	45°50'00
	12138 Dec 26 14:34	0°♐	
asc. node	12139 Jan 01 08:38	6°♐16'24	
	12139 Jan 22 09:41	0°♑	
	12139 Feb 16 23:44	0°♒	
	12139 Mar 13 22:24	0°♓	
	12139 Apr 07 11:43	0°♈	
desc. node	12139 Apr 23 02:51	19°♈16'40	
	12139 May 01 18:27	0°♉	
	12139 May 25 20:14	0°♊	
morning set	12139 Jun 02 12:11	9°♊35'35	
	12139 Jun 18 18:47	0°♋	
superior conj	12139 Jul 12 14:23	29°♋54'26	-1°08'27
minimum elong	12139 Jul 13 01:52	0°♌30'29	1°08'52
	12139 Jul 12 16:09	0°♌	
max. Earth dist.	12139 Jul 13 06:56	0°♌46'23	1.71394 AU
	12139 Aug 05 14:16	0°♍	
asc. node	12139 Aug 13 17:55	10°♍12'02	
evening rise	12139 Aug 21 15:20	20°♍03'40	
	12139 Aug 29 14:31	0°♎	
	12139 Sep 22 18:00	0°♏	
	12139 Oct 17 02:23	0°♐	
	12139 Nov 10 18:24	0°♑	
desc. node	12139 Dec 03 12:09	27°♑09'34	
	12139 Dec 05 21:54	0°♒	
	12139 Dec 31 18:21	0°♓	
	12140 Jan 27 19:35	0°♈	
evening max el	12140 Feb 16 20:13	20°♈34'33	46°05'57
	12140 Feb 26 21:57	0°♉	
asc. node	12140 Mar 25 12:46	19°♉09'56	
greatest brilliancy	12140 Mar 27 12:49	19°♉55'42	-4.8m
retrograde	12140 Apr 06 07:49	21°♉43'21	
evening set	12140 Apr 22 07:42	16°♉45'08	
inferior conj	12140 Apr 27 04:11	13°♉49'38	7°14'02
minimum elong	12140 Apr 26 17:27	14°♉06'16	7°11'25
min. Earth dist.	12140 Apr 27 04:23	13°♉49'18	0.27576 AU
morning rise	12140 May 01 02:59	11°♉24'43	
direct	12140 May 18 01:12	5°♉49'53	
greatest brilliancy	12140 May 28 02:38	7°♉43'50	-4.9m
	12140 Jun 28 16:37	0°♊	
morning max el	12140 Jul 07 12:50	8°♊35'39	46°58'30
desc. node	12140 Jul 15 13:54	16°♊53'29	
	12140 Jul 27 16:42	0°♋	
	12140 Aug 22 23:20	0°♌	
	12140 Sep 17 07:27	0°♍	
	12140 Oct 12 05:49	0°♎	
asc. node	12140 Nov 05 09:53	29°♎20'45	
	12140 Nov 05 22:46	0°♏	
	12140 Nov 30 11:47	0°♐	
	12140 Dec 24 21:52	0°♑	
morning set	12141 Jan 06 02:40	15°♑01'22	
	12141 Jan 18 06:11	0°♒	
max. Earth dist.	12141 Feb 11 00:36	29°♒19'52	1.73001 AU
	12141 Feb 11 13:36	0°♓	
superior conj	12141 Feb 12 05:16	0°♓48'22	0°30'22
minimum elong	12141 Feb 12 11:53	1°♓08'47	0°30'32
desc. node	12141 Feb 25 00:38	16°♓37'50	

	12141 Mar 07 20:06	0°♈	
evening rise	12141 Mar 22 13:43	18°♈14'56	
	12141 Apr 01 01:10	0°♉	
	12141 Apr 25 04:48	0°♊	
	12141 May 19 08:15	0°♋	
	12141 Jun 12 14:02	0°♌	
asc. node	12141 Jun 17 18:01	6°♌21'43	
	12141 Jul 07 01:46	0°♍	
	12141 Aug 01 00:56	0°♎	
	12141 Aug 26 22:38	0°♏	
evening max el	12141 Sep 24 00:27	29°♏54'52	46°15'21
	12141 Sep 24 02:32	0°♐	
desc. node	12141 Oct 07 17:25	12°♐38'26	
greatest brilliancy	12141 Nov 02 04:13	29°♐13'14	-4.8m
	12141 Nov 04 12:43	0°♑	
retrograde	12141 Nov 12 16:35	1°♑14'36	
	12141 Nov 20 13:05	30°℞♐	
evening set	12141 Dec 01 01:40	24°♐53'29	
inferior conj	12141 Dec 04 04:38	22°♐57'11	-8°45'43
minimum elong	12141 Dec 04 05:23	22°♐56'02	8°44'53
min. Earth dist.	12141 Dec 03 23:33	23°♐05'09	0.28961 AU
morning rise	12141 Dec 07 09:09	20°♐58'42	
direct	12141 Dec 25 13:55	14°♐44'48	
greatest brilliancy	12142 Jan 04 20:39	16°♐40'07	-4.7m
	12142 Jan 26 16:39	0°♑	
asc. node	12142 Jan 28 19:10	1°♑43'23	
morning max el	12142 Feb 12 16:25	15°♑14'38	45°47'40
	12142 Feb 27 03:54	0°♒	
	12142 Mar 26 05:26	0°♓	
	12142 Apr 20 19:30	0°♈	
	12142 May 15 15:48	0°♉	
desc. node	12142 May 20 16:20	6°♉08'16	
	12142 Jun 09 01:31	0°♊	
	12142 Jul 03 04:57	0°♋	
	12142 Jul 27 05:29	0°♌	
morning set	12142 Aug 16 03:28	24°♌53'43	
	12142 Aug 20 05:31	0°♍	
asc. node	12142 Sep 10 07:55	26°♍20'22	
	12142 Sep 13 06:24	0°♎	
superior conj	12142 Sep 24 03:43	13°♎33'57	0°32'49
minimum elong	12142 Sep 23 20:29	13°♎11'25	0°32'35
max. Earth dist.	12142 Sep 26 11:10	16°♎26'32	1.72246 AU
	12142 Oct 07 08:46	0°♏	
evening rise	12142 Oct 31 17:38	0°♐13'29	
	12142 Oct 31 13:17	0°♐	
	12142 Nov 24 21:08	0°♑	
	12142 Dec 19 09:43	0°♒	
desc. node	12142 Dec 30 23:58	14°♒05'09	
	12143 Jan 13 04:05	0°♓	
	12143 Feb 07 04:56	0°♈	
	12143 Mar 04 14:22	0°♉	
	12143 Mar 30 15:59	0°♊	
asc. node	12143 Apr 22 22:25	25°♊21'10	
	12143 Apr 27 10:38	0°♋	
evening max el	12143 Apr 30 15:25	3°♋13'23	46°39'57
	12143 Jun 02 01:06	0°♌	
greatest brilliancy	12143 Jun 10 02:04	3°♌43'49	-4.9m
retrograde	12143 Jun 19 19:08	5°♌29'56	
evening set	12143 Jul 06 15:32	29°♋59'55	
	12143 Jul 06 15:29	30°℞♋	
inferior conj	12143 Jul 10 09:53	27°♋43'29	7°30'45
minimum elong	12143 Jul 10 20:38	27°♋27'00	7°27'55
min. Earth dist.	12143 Jul 10 19:30	27°♋28'44	0.27086 AU
morning rise	12143 Jul 15 01:46	24°♋56'17	
direct	12143 Jul 31 03:50	19°♋55'17	
greatest brilliancy	12143 Aug 10 03:03	21°♋47'37	-4.9m
desc. node	12143 Aug 13 00:06	22°♋57'10	
	12143 Aug 24 23:58	0°♌	
morning max el	12143 Sep 19 07:02	22°♌03'17	46°33'41
	12143 Sep 27 03:34	0°♍	
	12143 Oct 24 18:57	0°♎	
	12143 Nov 19 21:54	0°♏	
asc. node	12143 Dec 03 22:45	16°♏30'18	
	12143 Dec 15 07:03	0°♐	
	12144 Jan 09 05:10	0°♑	
	12144 Feb 02 20:05	0°♒	
	12144 Feb 27 06:15	0°♓	
morning set	12144 Mar 16 19:08	22°♓53'34	
	12144 Mar 22 12:53	0°♈	
desc. node	12144 Mar 24 14:48	2°♈34'39	
	12144 Apr 15 16:17	0°♉	
max. Earth dist.	12144 Apr 21 22:29	7°♉48'09	1.71946 AU
superior conj	12144 Apr 25 05:48	11°♉55'33	-1°07'25
minimum elong	12144 Apr 24 18:33	11°♉20'29	1°07'34
	12144 May 09 16:47	0°♊	
	12144 Jun 02 15:29	0°♋	
evening rise	12144 Jun 03 23:37	1°♋40'44	
	12144 Jun 26 14:10	0°♌	
asc. node	12144 Jul 15 06:23	23°♌19'51	
	12144 Jul 20 14:55	0°♍	
	12144 Aug 13 19:56	0°♎	
	12144 Sep 07 08:04	0°♏	
	12144 Oct 02 08:21	0°♐	
	12144 Oct 28 06:36	0°♑	
desc. node	12144 Nov 04 03:17	7°♑40'01	
	12144 Nov 25 02:05	0°♒	
evening max el	12144 Dec 04 04:16	9°♒00'22	45°51'55
	12144 Dec 29 06:50	0°♓	
greatest brilliancy	12145 Jan 12 05:38	7°♓14'43	-4.7m
retrograde	12145 Jan 21 23:47	8°♓58'16	
evening set	12145 Feb 06 12:31	4°♓19'50	
inferior conj	12145 Feb 12 06:04	0°♓52'04	-3°08'34
minimum elong	12145 Feb 12 12:46	0°♓41'33	3°06'09
min. Earth dist.	12145 Feb 12 18:45	0°♓32'09	0.28388 AU
	12145 Feb 13 15:17	30°℞♒	
morning rise	12145 Feb 18 12:34	27°♒05'30	
asc. node	12145 Feb 25 05:09	24°♒04'41	
direct	12145 Mar 05 13:07	22°♒40'44	
greatest brilliancy	12145 Mar 16 10:30	24°♒51'49	-4.8m
	12145 Mar 26 09:22	0°♓	
morning max el	12145 Apr 24 09:33	24°♓30'09	46°26'49
	12145 Apr 29 19:54	0°♈	
	12145 May 27 07:09	0°♉	
desc. node	12145 Jun 17 04:40	24°♉20'34	
	12145 Jun 21 22:50	0°♊	
	12145 Jul 16 19:13	0°♋	
	12145 Aug 10 06:25	0°♌	
	12145 Sep 03 13:51	0°♍	
	12145 Sep 27 20:07	0°♎	
asc. node	12145 Oct 07 22:03	12°♎28'06	
	12145 Oct 22 02:05	0°♏	
morning set	12145 Oct 26 18:21	5°♏47'22	
	12145 Nov 15 07:58	0°♐	
superior conj	12145 Dec 02 22:02	21°♐44'52	1°26'06
minimum elong	12145 Dec 02 22:09	21°♐45'13	1°26'57
max. Earth dist.	12145 Dec 04 06:35	23°♐25'23	1.73069 AU
	12145 Dec 09 14:22	0°♑	
	12146 Jan 02 22:10	0°♒	
evening rise	12146 Jan 08 22:57	7°♒25'27	
	12146 Jan 27 07:51	0°♓	
desc. node	12146 Jan 27 12:50	0°♓15'16	

	12146 Feb 20 19:10	0°♈	
	12146 Mar 17 07:37	0°♉	
	12146 Apr 10 21:52	0°♊	
	12146 May 05 17:10	0°♋	
asc. node	12146 May 20 08:33	17°♋27'34	
	12146 May 31 00:45	0°♌	
	12146 Jun 26 12:40	0°♍	
evening max el	12146 Jul 12 08:50	16°♍38'06	46°46'22
	12146 Jul 26 11:36	0°♎	
greatest brilliancy	12146 Aug 20 20:12	17°♎01'36	-4.9m
retrograde	12146 Aug 31 16:30	19°♎13'07	
desc. node	12146 Sep 09 09:50	17°♎40'59	
evening set	12146 Sep 15 11:53	14°♎56'10	
min. Earth dist.	12146 Sep 21 01:34	11°♎39'43	0.27583 AU
inferior conj	12146 Sep 21 18:13	11°♎14'04	-3°05'13
minimum elong	12146 Sep 21 11:27	11°♎24'29	3°03'06
morning rise	12146 Sep 27 11:36	7°♎50'31	
direct	12146 Oct 12 16:12	3°♎23'42	
greatest brilliancy	12146 Oct 22 06:48	5°♎04'13	-4.8m
	12146 Nov 26 22:02	0°♏	
morning max el	12146 Nov 30 14:51	3°♏30'15	45°51'02
	12146 Dec 26 07:12	0°♐	
asc. node	12146 Dec 31 10:31	5°♐37'54	
	12147 Jan 21 23:25	0°♑	
	12147 Feb 16 12:09	0°♒	
	12147 Mar 13 10:07	0°♓	
	12147 Apr 06 23:04	0°♈	
desc. node	12147 Apr 22 04:46	18°♈47'59	
	12147 May 01 05:36	0°♉	
	12147 May 25 07:17	0°♊	
morning set	12147 May 30 23:31	7°♊06'11	
	12147 Jun 18 05:47	0°♋	
superior conj	12147 Jul 10 02:08	27°♋26'09	-1°10'48
minimum elong	12147 Jul 10 13:24	28°♋01'31	1°11'16
max. Earth dist.	12147 Jul 10 13:13	28°♋00'58	1.71388 AU
	12147 Jul 12 03:09	0°♌	
	12147 Aug 05 01:17	0°♍	
asc. node	12147 Aug 12 19:51	9°♍43'42	
evening rise	12147 Aug 19 04:14	17°♍39'44	
	12147 Aug 29 01:34	0°♎	
	12147 Sep 22 05:09	0°♏	
	12147 Oct 16 13:45	0°♐	
	12147 Nov 10 06:14	0°♑	
desc. node	12147 Dec 02 13:59	26°♑37'54	
	12147 Dec 05 10:35	0°♒	
	12147 Dec 31 08:36	0°♓	
	12148 Jan 27 13:14	0°♈	
evening max el	12148 Feb 14 10:51	18°♈17'42	46°05'06
	12148 Feb 27 03:15	0°♉	
asc. node	12148 Mar 24 14:49	17°♉24'28	
greatest brilliancy	12148 Mar 25 01:27	17°♉34'00	-4.8m
retrograde	12148 Apr 03 22:00	19°♉22'52	
evening set	12148 Apr 19 17:46	14°♉29'28	
inferior conj	12148 Apr 24 18:04	11°♉28'33	6°59'18
minimum elong	12148 Apr 24 07:11	11°♉45'25	6°56'32
min. Earth dist.	12148 Apr 24 17:54	11°♉28'50	0.27592 AU
morning rise	12148 Apr 28 20:26	8°♉58'40	
direct	12148 May 15 15:40	3°♉28'28	
greatest brilliancy	12148 May 25 17:00	5°♉22'50	-4.9m
	12148 Jun 28 18:36	0°♊	
morning max el	12148 Jul 05 04:00	6°♊16'38	46°58'16
desc. node	12148 Jul 14 15:57	16°♊06'44	
	12148 Jul 27 09:51	0°♋	
	12148 Aug 22 13:39	0°♌	
	12148 Sep 16 20:21	0°♍	
	12148 Oct 11 17:52	0°♎	
asc. node	12148 Nov 04 11:44	28°♎51'23	
	12148 Nov 05 10:14	0°♏	
	12148 Nov 29 22:52	0°♐	
	12148 Dec 24 08:43	0°♑	
morning set	12149 Jan 03 19:36	12°♑52'26	
	12149 Jan 17 16:58	0°♒	
max. Earth dist.	12149 Feb 08 20:45	27°♒20'33	1.73022 AU
superior conj	12149 Feb 09 20:54	28°♒35'07	0°33'33
minimum elong	12149 Feb 10 04:04	28°♒57'17	0°33'45
	12149 Feb 11 00:23	0°♓	
desc. node	12149 Feb 24 02:36	16°♓10'32	
	12149 Mar 07 06:57	0°♈	
evening rise	12149 Mar 20 04:28	15°♈58'08	
	12149 Mar 31 12:07	0°♉	
	12149 Apr 24 15:56	0°♊	
	12149 May 18 19:38	0°♋	
	12149 Jun 12 01:49	0°♌	
asc. node	12149 Jun 16 19:54	5°♌51'02	
	12149 Jul 06 14:11	0°♍	
	12149 Jul 31 14:26	0°♎	
	12149 Aug 26 14:26	0°♏	
evening max el	12149 Sep 21 16:46	27°♏42'37	46°16'32
	12149 Sep 24 00:56	0°♐	
desc. node	12149 Oct 06 19:25	11°♐38'14	
greatest brilliancy	12149 Oct 30 18:36	26°♐59'56	-4.8m
retrograde	12149 Nov 10 08:56	29°♐02'41	
evening set	12149 Nov 28 16:52	22°♐42'34	
inferior conj	12149 Dec 01 20:24	20°♐45'18	-8°46'10
minimum elong	12149 Dec 01 20:19	20°♐45'26	8°45'20
min. Earth dist.	12149 Dec 01 13:44	20°♐55'46	0.28943 AU
morning rise	12149 Dec 04 23:53	18°♐48'27	
direct	12149 Dec 23 06:06	12°♐33'37	
greatest brilliancy	12150 Jan 02 10:22	14°♐27'03	-4.7m
	12150 Jan 27 00:29	0°♑	
asc. node	12150 Jan 27 21:16	0°♑43'50	
morning max el	12150 Feb 10 08:13	13°♑02'51	45°46'47
	12150 Feb 26 21:33	0°♒	
	12150 Mar 25 19:35	0°♓	
	12150 Apr 20 08:10	0°♈	
	12150 May 15 03:40	0°♉	
desc. node	12150 May 19 18:06	5°♉37'39	
	12150 Jun 08 12:55	0°♊	
	12150 Jul 02 16:04	0°♋	
	12150 Jul 26 16:24	0°♌	
morning set	12150 Aug 13 17:03	22°♌32'29	
	12150 Aug 19 16:17	0°♍	
asc. node	12150 Sep 09 09:48	25°♍52'56	
	12150 Sep 12 17:05	0°♎	
superior conj	12150 Sep 21 18:21	11°♎16'51	0°29'30
minimum elong	12150 Sep 21 11:44	10°♎56'13	0°29'15
max. Earth dist.	12150 Sep 24 04:33	14°♎18'02	1.72213 AU
	12150 Oct 06 19:25	0°♏	
evening rise	12150 Oct 29 09:55	28°♏02'16	
	12150 Oct 30 23:58	0°♐	
	12150 Nov 24 07:57	0°♑	
	12150 Dec 18 20:48	0°♒	
desc. node	12150 Dec 30 01:52	13°♒36'47	
	12151 Jan 12 15:36	0°♓	
	12151 Feb 06 17:12	0°♈	
	12151 Mar 04 03:54	0°♉	
	12151 Mar 30 07:54	0°♊	
asc. node	12151 Apr 22 00:20	24°♊33'06	
	12151 Apr 27 08:40	0°♋	
evening max el	12151 Apr 28 05:16	0°♋51'30	46°38'58
	12151 Jun 04 07:20	0°♌	

greatest brilliancy	12151 Jun 07	16:01	1°♌20'24	-4.9m	
retrograde	12151 Jun 17	07:50	3°♌05'12		
	12151 Jun 29	17:17	30°℞♋		
evening set	12151 Jul 04	08:08	27°♋30'23		
inferior conj	12151 Jul 07	22:48	25°♋19'07	7°44'29	
minimum elong	12151 Jul 08	09:12	25°♋03'08	7°41'50	
min. Earth dist.	12151 Jul 08	08:40	25°♋03'57	0.27094 AU	
morning rise	12151 Jul 12	10:17	22°♋37'45		
direct	12151 Jul 28	16:46	17°♋30'50		
greatest brilliancy	12151 Aug 07	15:48	19°♋22'43	-4.9m	
desc. node	12151 Aug 12	02:08	21°♋15'37		
	12151 Aug 25	18:59	0°♌		
morning max el	12151 Sep 16	19:56	19°♌40'18	46°35'10	
	12151 Sep 26	23:18	0°♍		
	12151 Oct 24	09:54	0°♎		
	12151 Nov 19	10:50	0°♏		
asc. node	12151 Dec 03	00:37	15°♏59'28		
	12151 Dec 14	18:55	0°♐		
	12152 Jan 08	16:26	0°♑		
	12152 Feb 02	06:59	0°♒		
	12152 Feb 26	16:58	0°♓		
morning set	12152 Mar 14	09:30	20°♓36'34		
	12152 Mar 21	23:31	0°♈		
desc. node	12152 Mar 23	16:35	2°♈07'13		
	12152 Apr 15	02:56	0°♉		
max. Earth dist.	12152 Apr 19	07:58	5°♉14'49	1.71988 AU	
superior conj	12152 Apr 22	18:30	9°♉32'12	-1°04'57	
minimum elong	12152 Apr 22	07:11	8°♉56'54	1°05'02	
	12152 May 09	03:30	0°♊		
evening rise	12152 Jun 01	11:02	29°♊12'17		
	12152 Jun 02	02:16	0°♋		
	12152 Jun 26	01:02	0°♌		
asc. node	12152 Jul 14	08:23	22°♌51'50		
	12152 Jul 20	01:56	0°♍		
	12152 Aug 13	07:12	0°♎		
	12152 Sep 06	19:48	0°♏		
	12152 Oct 01	20:58	0°♐		
	12152 Oct 27	21:04	0°♑		
desc. node	12152 Nov 03	05:09	7°♑03'05		
	12152 Nov 24	21:24	0°♒		
evening max el	12152 Dec 01	18:21	6°♒45'53	45°52'01	
	12152 Dec 30	08:44	0°♓		
greatest brilliancy	12153 Jan 09	21:22	5°♓03'30	-4.7m	
retrograde	12153 Jan 19	14:24	6°♓46'35		
evening set	12153 Feb 04	06:09	2°♓04'34		
	12153 Feb 07	18:18	30°℞♒		
inferior conj	12153 Feb 09	21:40	28°♒39'54	-3°28'05	
minimum elong	12153 Feb 10	04:56	28°♒28'30	3°25'30	
min. Earth dist.	12153 Feb 10	11:01	28°♒18'56	0.28428 AU	
morning rise	12153 Feb 16	03:11	24°♒54'26		
asc. node	12153 Feb 24	07:09	21°♒25'27		
direct	12153 Mar 03	04:26	20°♒28'00		
greatest brilliancy	12153 Mar 14	03:26	22°♒40'10	-4.8m	
	12153 Mar 27	09:17	0°♓		
morning max el	12153 Apr 21	23:50	22°♓12'28	46°25'14	
	12153 Apr 29	15:28	0°♈		
	12153 May 26	22:03	0°♉		
desc. node	12153 Jun 16	06:41	23°♉47'00		
	12153 Jun 21	11:53	0°♊		
	12153 Jul 16	07:18	0°♋		
	12153 Aug 09	17:54	0°♌		
	12153 Sep 03	00:54	0°♍		
	12153 Sep 27	06:52	0°♎		
asc. node	12153 Oct 06	23:50	12°♎00'46		
	12153 Oct 21	12:36	0°♏		
morning set	12153 Oct 24	10:20	3°♏35'51		
	12153 Nov 14	18:21	0°♐		
superior conj	12153 Nov 30	15:24	19°♐38'16	1°26'04	
minimum elong	12153 Nov 30	14:45	19°♐36'17	1°26'54	
max. Earth dist.	12153 Dec 01	23:35	21°♐17'42	1.73055 AU	
	12153 Dec 09	00:42	0°♑		
	12154 Jan 02	08:35	0°♒		
evening rise	12154 Jan 06	15:35	5°♒16'50		
desc. node	12154 Jan 26	14:49	29°♒48'50		
	12154 Jan 26	18:27	0°♓		
	12154 Feb 20	06:03	0°♈		
	12154 Mar 16	18:54	0°♉		
	12154 Apr 10	09:43	0°♊		
	12154 May 05	05:56	0°♋		
asc. node	12154 May 19	10:31	16°♋53'13		
	12154 May 30	15:08	0°♌		
	12154 Jun 26	06:39	0°♍		
evening max el	12154 Jul 09	22:20	14°♍15'54	46°46'58	
	12154 Jul 26	18:53	0°♎		
greatest brilliancy	12154 Aug 18	11:18	14°♎42'38	-4.9m	
retrograde	12154 Aug 29	06:57	16°♎54'04		
desc. node	12154 Sep 08	11:50	14°♎48'02		
evening set	12154 Sep 13	01:02	12°♎38'21		
min. Earth dist.	12154 Sep 18	16:28	9°♎19'54	0.27532 AU	
inferior conj	12154 Sep 19	08:10	8°♎55'46	-2°43'42	
minimum elong	12154 Sep 19	02:07	9°♎05'05	2°41'48	
morning rise	12154 Sep 25	03:43	5°♎29'36		
direct	12154 Oct 10	05:20	1°♎05'45		
greatest brilliancy	12154 Oct 19	21:09	2°♎47'31	-4.8m	
	12154 Nov 26	21:36	0°♏		
morning max el	12154 Nov 28	05:29	1°♏16'11	45°52'15	
	12154 Dec 25	22:53	0°♐		
asc. node	12154 Dec 30	12:36	5°♐02'04		
	12155 Jan 21	12:28	0°♑		
	12155 Feb 15	24:00	0°♒		
	12155 Mar 12	21:23	0°♓		
	12155 Apr 06	10:01	0°♈		
desc. node	12155 Apr 21	06:36	18°♈20'09		
	12155 Apr 30	16:22	0°♉		
	12155 May 24	17:56	0°♊		
morning set	12155 May 28	10:42	4°♊37'38		
	12155 Jun 17	16:23	0°♋		
superior conj	12155 Jul 07	13:41	24°♋58'28	-1°13'02	
minimum elong	12155 Jul 08	00:38	25°♋32'49	1°13'32	
max. Earth dist.	12155 Jul 07	22:28	25°♋26'03	1.71383 AU	
	12155 Jul 11	13:44	0°♌		
	12155 Aug 04	11:54	0°♍		
asc. node	12155 Aug 11	21:44	9°♍16'22		
evening rise	12155 Aug 16	17:05	15°♍16'48		
	12155 Aug 28	12:14	0°♎		
	12155 Sep 21	15:55	0°♏		
	12155 Oct 16	00:44	0°♐		
	12155 Nov 09	17:39	0°♑		
desc. node	12155 Dec 01	16:02	26°♑08'12		
	12155 Dec 04	22:49	0°♒		
	12155 Dec 30	22:27	0°♓		
	12156 Jan 27	06:44	0°♈		
evening max el	12156 Feb 12	02:09	16°♈04'00	46°04'01	
	12156 Feb 27	10:11	0°♉		
greatest brilliancy	12156 Mar 22	14:02	15°♉13'26	-4.8m	
asc. node	12156 Mar 23	16:44	15°♉35'49		
retrograde	12156 Apr 01	12:11	17°♉03'12		
evening set	12156 Apr 17	04:01	12°♉14'40		
inferior conj	12156 Apr 22	07:56	9°♉08'22	6°43'44	
minimum elong	12156 Apr 21	21:00	9°♉25'19	6°40'54	
min. Earth dist.	12156 Apr 22	07:22	9°♉09'15	0.27610 AU	

morning rise	12156 Apr 26 13:51	6°♉33'23	
direct	12156 May 13 06:26	1°♉08'05	
greatest brilliancy	12156 May 23 07:07	3°♉02'15	-4.9m
	12156 Jun 28 18:58	0°♊	
morning max el	12156 Jul 02 18:59	3°♊58'02	46°57'57
desc. node	12156 Jul 13 18:00	15°♊21'29	
	12156 Jul 27 02:22	0°♋	
	12156 Aug 22 03:28	0°♌	
	12156 Sep 16 08:49	0°♍	
	12156 Oct 11 05:30	0°♎	
asc. node	12156 Nov 03 13:36	28°♎23'13	
	12156 Nov 04 21:19	0°♏	
	12156 Nov 29 09:34	0°♐	
	12156 Dec 23 19:12	0°♑	
morning set	12157 Jan 01 13:03	10°♑46'11	
	12157 Jan 17 03:21	0°♒	
max. Earth dist.	12157 Feb 06 16:47	25°♒22'13	1.73040 AU
superior conj	12157 Feb 07 13:06	26°♒24'55	0°36'39
minimum elong	12157 Feb 07 20:47	26°♒48'38	0°36'51
	12157 Feb 10 10:47	0°♓	
desc. node	12157 Feb 23 04:25	15°♓43'56	
	12157 Mar 06 17:25	0°♈	
evening rise	12157 Mar 17 19:35	13°♈43'34	
	12157 Mar 30 22:46	0°♉	
	12157 Apr 24 02:49	0°♊	
	12157 May 18 06:50	0°♋	
	12157 Jun 11 13:27	0°♌	
asc. node	12157 Jun 15 21:54	5°♌21'07	
	12157 Jul 06 02:28	0°♍	
	12157 Jul 31 03:52	0°♎	
	12157 Aug 26 06:18	0°♏	
evening max el	12157 Sep 19 08:52	25°♏30'20	46°17'43
	12157 Sep 24 00:01	0°♐	
desc. node	12157 Oct 05 21:20	10°♐37'09	
greatest brilliancy	12157 Oct 28 09:40	24°♐48'08	-4.8m
retrograde	12157 Nov 08 00:55	26°♐51'27	
evening set	12157 Nov 26 07:49	20°♐33'05	
min. Earth dist.	12157 Nov 29 04:12	18°♐46'55	0.28919 AU
inferior conj	12157 Nov 29 12:13	18°♐34'21	-8°45'56
minimum elong	12157 Nov 29 11:21	18°♐35'43	8°45'05
morning rise	12157 Dec 02 15:00	16°♐38'28	
direct	12157 Dec 20 22:11	10°♐23'27	
greatest brilliancy	12157 Dec 31 00:09	12°♐14'52	-4.7m
asc. node	12158 Jan 26 23:11	29°♐46'10	
	12158 Jan 27 05:34	0°♑	
morning max el	12158 Feb 07 23:16	10°♑50'10	45°46'06
	12158 Feb 26 14:27	0°♒	
	12158 Mar 25 09:16	0°♓	
	12158 Apr 19 20:28	0°♈	
	12158 May 14 15:17	0°♉	
desc. node	12158 May 18 20:06	5°♉08'25	
	12158 Jun 08 00:10	0°♊	
	12158 Jul 02 03:07	0°♋	
	12158 Jul 26 03:17	0°♌	
morning set	12158 Aug 11 06:08	20°♌09'45	
	12158 Aug 19 03:01	0°♍	
asc. node	12158 Sep 08 11:34	25°♍25'17	
	12158 Sep 12 03:42	0°♎	
superior conj	12158 Sep 19 08:36	8°♎58'43	0°26'04
minimum elong	12158 Sep 19 02:39	8°♎40'11	0°25'50
max. Earth dist.	12158 Sep 21 20:59	12°♎06'46	1.72175 AU
	12158 Oct 06 05:59	0°♏	
evening rise	12158 Oct 27 02:01	25°♏50'41	
	12158 Oct 30 10:36	0°♐	
	12158 Nov 23 18:43	0°♑	
	12158 Dec 18 07:48	0°♒	
desc. node	12158 Dec 29 03:52	13°♒08'57	
	12159 Jan 12 03:03	0°♓	
	12159 Feb 06 05:22	0°♈	
	12159 Mar 03 17:21	0°♉	
	12159 Mar 29 23:52	0°♊	
asc. node	12159 Apr 21 02:19	23°♊44'59	
evening max el	12159 Apr 25 18:01	28°♊27'23	46°37'46
	12159 Apr 27 07:24	0°♋	
greatest brilliancy	12159 Jun 05 06:01	28°♋57'05	-4.9m
	12159 Jun 08 21:57	0°♌	
retrograde	12159 Jun 14 19:57	0°♌40'32	
	12159 Jun 20 14:29	30°℞♋	
evening set	12159 Jul 02 00:36	25°♋00'39	
inferior conj	12159 Jul 05 11:42	22°♋54'33	7°57'16
minimum elong	12159 Jul 05 21:41	22°♋39'12	7°54'47
min. Earth dist.	12159 Jul 05 22:02	22°♋38'40	0.27113 AU
morning rise	12159 Jul 09 18:43	20°♋19'16	
direct	12159 Jul 26 05:21	15°♋05'46	
greatest brilliancy	12159 Aug 05 05:13	16°♋58'01	-4.9m
desc. node	12159 Aug 11 04:05	19°♋37'13	
	12159 Aug 26 09:25	0°♌	
morning max el	12159 Sep 14 08:27	17°♌15'31	46°36'40
	12159 Sep 26 18:39	0°♍	
	12159 Oct 24 00:49	0°♎	
	12159 Nov 18 23:48	0°♏	
asc. node	12159 Dec 02 02:40	15°♏28'59	
	12159 Dec 14 06:49	0°♐	
	12160 Jan 08 03:43	0°♑	
	12160 Feb 01 17:56	0°♒	
	12160 Feb 26 03:43	0°♓	
morning set	12160 Mar 12 00:20	18°♓20'52	
	12160 Mar 21 10:11	0°♈	
desc. node	12160 Mar 22 18:27	1°♈39'58	
	12160 Apr 14 13:36	0°♉	
max. Earth dist.	12160 Apr 16 20:47	2°♉51'56	1.72029 AU
superior conj	12160 Apr 20 07:44	7°♉10'30	-1°02'24
minimum elong	12160 Apr 19 20:23	6°♉35'10	1°02'26
	12160 May 08 14:13	0°♊	
evening rise	12160 May 29 22:57	26°♊45'24	
	12160 Jun 01 13:04	0°♋	
	12160 Jun 25 11:59	0°♌	
asc. node	12160 Jul 13 10:14	22°♌22'57	
	12160 Jul 19 13:06	0°♍	
	12160 Aug 12 18:42	0°♎	
	12160 Sep 06 07:51	0°♏	
	12160 Oct 01 09:57	0°♐	
	12160 Oct 27 12:02	0°♑	
desc. node	12160 Nov 02 07:15	6°♑25'33	
	12160 Nov 24 17:40	0°♒	
evening max el	12160 Nov 29 08:11	4°♒30'02	45°52'22
	12160 Dec 31 22:19	0°♓	
greatest brilliancy	12161 Jan 07 12:29	2°♓50'54	-4.7m
retrograde	12161 Jan 17 05:27	4°♓34'19	
evening set	12161 Feb 01 23:50	29°♒48'17	
	12161 Feb 01 15:26	30°℞♒	
inferior conj	12161 Feb 07 13:10	26°♒26'55	-3°47'22
minimum elong	12161 Feb 07 20:59	26°♒14'40	3°44'38
min. Earth dist.	12161 Feb 08 02:57	26°♒05'19	0.28466 AU
morning rise	12161 Feb 13 17:35	22°♒43'05	
asc. node	12161 Feb 23 09:07	18°♒50'22	
direct	12161 Feb 28 19:48	18°♒14'22	
greatest brilliancy	12161 Mar 11 20:13	20°♒27'50	-4.8m
	12161 Mar 28 03:08	0°♓	
morning max el	12161 Apr 19 14:59	19°♓56'33	46°23'52
	12161 Apr 29 10:38	0°♈	

	12161 May 26 12:52	0°♉		
desc. node	12161 Jun 15 08:41	23°♉13'23		
	12161 Jun 21 00:56	0°♊		
	12161 Jul 15 19:26	0°♋		
	12161 Aug 09 05:29	0°♌		
	12161 Sep 02 12:10	0°♍		
	12161 Sep 26 17:53	0°♎		
asc. node	12161 Oct 06 01:45	11°♎32'54		
	12161 Oct 20 23:26	0°♏		
morning set	12161 Oct 22 01:48	1°♏21'38		
	12161 Nov 14 05:04	0°♐		
superior conj	12161 Nov 28 08:14	17°♐28'57	1°25'54	
minimum elong	12161 Nov 28 06:49	17°♐24'35	1°26'43	
max. Earth dist.	12161 Nov 29 16:48	19°♐09'34	1.73039 AU	
	12161 Dec 08 11:23	0°♑		
	12162 Jan 01 19:19	0°♒		
evening rise	12162 Jan 04 07:52	3°♒06'14		
desc. node	12162 Jan 25 16:35	29°♒20'46		
	12162 Jan 26 05:23	0°♓		
	12162 Feb 19 17:16	0°♈		
	12162 Mar 16 06:31	0°♉		
	12162 Apr 09 21:55	0°♊		
	12162 May 04 19:02	0°♋		
asc. node	12162 May 18 12:35	16°♋18'16		
	12162 May 30 05:55	0°♌		
	12162 Jun 26 01:17	0°♍		
evening max el	12162 Jul 07 12:33	11°♍55'07	46°47'32	
	12162 Jul 27 05:10	0°♎		
greatest brilliancy	12162 Aug 16 01:41	12°♎22'09	-4.9m	
retrograde	12162 Aug 26 21:44	14°♎34'02		
desc. node	12162 Sep 07 13:46	11°♎49'34		
evening set	12162 Sep 10 14:21	10°♎19'13		
inferior conj	12162 Sep 16 22:03	6°♎36'11	-2°21'43	
minimum elong	12162 Sep 16 16:44	6°♎44'21	2°20'04	
min. Earth dist.	12162 Sep 16 06:58	6°♎59'18	0.27489 AU	
morning rise	12162 Sep 22 19:40	3°♎07'42		
	12162 Sep 29 23:32	30°℞♍		
direct	12162 Oct 07 19:02	28°♍46'31		
	12162 Oct 15 22:12	0°♎		
greatest brilliancy	12162 Oct 17 11:06	0°♎29'01	-4.8m	
morning max el	12162 Nov 25 20:40	29°♎01'59	45°53'16	
	12162 Nov 26 20:43	0°♏		
	12162 Dec 25 14:50	0°♐		
asc. node	12162 Dec 29 14:30	4°♐24'32		
	12163 Jan 21 01:54	0°♑		
	12163 Feb 15 12:15	0°♒		
	12163 Mar 12 09:01	0°♓		
	12163 Apr 05 21:19	0°♈		
desc. node	12163 Apr 20 08:30	17°♈51'33		
	12163 Apr 30 03:29	0°♉		
	12163 May 24 04:56	0°♊		
morning set	12163 May 25 22:02	2°♊08'30		
	12163 Jun 17 03:19	0°♋		
superior conj	12163 Jul 05 01:28	22°♋30'29	-1°15'06	
minimum elong	12163 Jul 05 11:59	23°♋03'29	1°15'39	
max. Earth dist.	12163 Jul 05 09:15	22°♋54'53	1.71374 AU	
	12163 Jul 11 00:39	0°♌		
	12163 Aug 03 22:48	0°♍		
asc. node	12163 Aug 10 23:30	8°♍47'50		
evening rise	12163 Aug 14 06:10	12°♍53'40		
	12163 Aug 27 23:10	0°♎		
	12163 Sep 21 02:59	0°♏		
	12163 Oct 15 12:05	0°♐		
	12163 Nov 09 05:31	0°♑		
desc. node	12163 Nov 30 17:57	25°♑36'37		
	12163 Dec 04 11:36	0°♒		
	12163 Dec 30 13:00	0°♓		
	12164 Jan 27 01:14	0°♈		
evening max el	12164 Feb 09 17:34	13°♈49'11	46°03'03	
	12164 Feb 27 20:30	0°♉		
greatest brilliancy	12164 Mar 20 03:09	12°♉52'22	-4.8m	
asc. node	12164 Mar 22 18:46	13°♉41'44		
retrograde	12164 Mar 30 02:03	14°♉42'12		
evening set	12164 Apr 14 14:32	9°♉58'36		
inferior conj	12164 Apr 19 21:49	6°♉47'09	6°27'31	
minimum elong	12164 Apr 19 10:54	7°♉04'05	6°24'37	
min. Earth dist.	12164 Apr 19 21:03	6°♉48'20	0.27625 AU	
morning rise	12164 Apr 24 07:10	4°♉06'58		
	12164 May 03 03:58	30°℞♈		
direct	12164 May 10 21:09	28°♈46'48		
	12164 May 18 20:10	0°♉		
greatest brilliancy	12164 May 20 21:16	0°♉40'32	-4.9m	
	12164 Jun 28 18:38	0°♊		
morning max el	12164 Jun 30 09:07	1°♊36'15	46°57'37	
desc. node	12164 Jul 12 19:50	14°♊35'20		
	12164 Jul 26 18:56	0°♋		
	12164 Aug 21 17:28	0°♌		
	12164 Sep 15 21:30	0°♍		
	12164 Oct 10 17:23	0°♎		
asc. node	12164 Nov 02 15:34	27°♎54'31		
	12164 Nov 04 08:40	0°♏		
	12164 Nov 28 20:36	0°♐		
	12164 Dec 23 06:04	0°♑		
morning set	12164 Dec 30 06:16	8°♑37'59		
	12165 Jan 16 14:10	0°♒		
max. Earth dist.	12165 Feb 04 10:09	23°♒14'19	1.73058 AU	
superior conj	12165 Feb 05 05:03	24°♒12'39	0°39'44	
minimum elong	12165 Feb 05 13:11	24°♒37'45	0°39'55	
	12165 Feb 09 21:36	0°♓		
desc. node	12165 Feb 22 06:15	15°♓16'05		
	12165 Mar 06 04:19	0°♈		
evening rise	12165 Mar 15 10:18	11°♈26'37		
	12165 Mar 30 09:48	0°♉		
	12165 Apr 23 14:05	0°♊		
	12165 May 17 18:26	0°♋		
	12165 Jun 11 01:29	0°♌		
asc. node	12165 Jun 14 23:45	4°♌49'34		
	12165 Jul 05 15:10	0°♍		
	12165 Jul 30 17:46	0°♎		
	12165 Aug 25 22:45	0°♏		
evening max el	12165 Sep 17 00:07	23°♏15'00	46°18'56	
	12165 Sep 24 00:31	0°♐		
desc. node	12165 Oct 04 23:26	9°♐34'19		
greatest brilliancy	12165 Oct 26 01:16	22°♐36'14	-4.8m	
retrograde	12165 Nov 05 16:30	24°♐39'39		
evening set	12165 Nov 23 22:25	18°♐23'45		
inferior conj	12165 Nov 27 04:07	16°♐22'55	-8°44'48	
minimum elong	12165 Nov 27 02:26	16°♐25'33	8°43'57	
min. Earth dist.	12165 Nov 26 19:03	16°♐37'10	0.28895 AU	
morning rise	12165 Nov 30 06:35	14°♐27'22		
direct	12165 Dec 18 13:58	8°♐12'43		
greatest brilliancy	12165 Dec 28 14:32	10°♐02'32	-4.7m	
asc. node	12166 Jan 26 01:08	28°♐48'57		
	12166 Jan 27 09:14	0°♑		
morning max el	12166 Feb 05 13:28	8°♑34'16	45°45'18	
	12166 Feb 26 07:26	0°♒		
	12166 Mar 24 23:14	0°♓		
	12166 Apr 19 09:06	0°♈		
	12166 May 14 03:13	0°♉		
desc. node	12166 May 17 22:03	4°♉38'05		
	12166 Jun 07 11:42	0°♊		

	12166 Jul 01	14:24	0°♋		
	12166 Jul 25	14:23	0°♌		
morning set	12166 Aug 08	19:06	17°♌45'46		
	12166 Aug 18	13:59	0°♍		
asc. node	12166 Sep 07	13:30	24°♍57'20		
	12166 Sep 11	14:34	0°♎		
superior conj	12166 Sep 16	22:56	6°♎40'00	0°22'37	
minimum elong	12166 Sep 16	17:42	6°♎23'43	0°22'23	
max. Earth dist.	12166 Sep 19	11:13	9°♎47'47	1.72133 AU	
	12166 Oct 05	16:49	0°♏		
evening rise	12166 Oct 24	18:15	23°♏38'51		
	12166 Oct 29	21:26	0°♐		
	12166 Nov 23	05:39	0°♑		
	12166 Dec 17	19:02	0°♒		
desc. node	12166 Dec 28	05:42	12°♒39'56		
	12167 Jan 11	14:46	0°♓		
	12167 Feb 05	17:55	0°♈		
	12167 Mar 03	07:17	0°♉		
	12167 Mar 29	16:32	0°♊		
asc. node	12167 Apr 20	04:24	22°♊55'16		
evening max el	12167 Apr 23	05:56	26°♊00'08	46°36'42	
	12167 Apr 27	07:39	0°♋		
greatest brilliancy	12167 Jun 02	19:52	26°♋32'36	-4.9m	
retrograde	12167 Jun 12	08:15	28°♋15'12		
evening set	12167 Jun 29	16:55	22°♋30'01		
inferior conj	12167 Jul 03	00:33	20°♋29'09	8°09'03	
minimum elong	12167 Jul 03	10:02	20°♋14'34	8°06'46	
min. Earth dist.	12167 Jul 03	11:17	20°♋12'38	0.27130 AU	
morning rise	12167 Jul 07	03:05	18°♋00'16		
direct	12167 Jul 23	17:38	12°♋39'44		
greatest brilliancy	12167 Aug 02	18:42	14°♋32'50	-4.9m	
desc. node	12167 Aug 10	06:07	18°♋01'57		
	12167 Aug 26	20:26	0°♌		
morning max el	12167 Sep 11	21:25	14°♌51'16	46°38'14	
	12167 Sep 26	13:38	0°♍		
	12167 Oct 23	15:41	0°♎		
	12167 Nov 18	12:47	0°♏		
asc. node	12167 Dec 01	04:29	14°♏57'39		
	12167 Dec 13	18:46	0°♐		
	12168 Jan 07	15:04	0°♑		
	12168 Feb 01	04:55	0°♒		
	12168 Feb 25	14:33	0°♓		
morning set	12168 Mar 09	15:11	16°♓04'53		
	12168 Mar 20	21:00	0°♈		
desc. node	12168 Mar 21	20:24	1°♈12'30		
	12168 Apr 14	00:27	0°♉		
max. Earth dist.	12168 Apr 14	11:00	0°♉32'53	1.72075 AU	
superior conj	12168 Apr 17	20:38	4°♉47'16	-0°59'42	
minimum elong	12168 Apr 17	09:23	4°♉12'11	0°59'42	
	12168 May 08	01:08	0°♊		
evening rise	12168 May 27	10:31	24°♊16'57		
	12168 Jun 01	00:03	0°♋		
	12168 Jun 24	23:05	0°♌		
asc. node	12168 Jul 12	12:04	21°♌53'37		
	12168 Jul 19	00:24	0°♍		
	12168 Aug 12	06:20	0°♎		
	12168 Sep 05	20:00	0°♏		
	12168 Sep 30	23:05	0°♐		
	12168 Oct 27	03:13	0°♑		
desc. node	12168 Nov 01	09:13	5°♑47'22		
	12168 Nov 24	14:34	0°♒		
evening max el	12168 Nov 26	22:49	2°♒16'26	45°52'55	
	12169 Jan 03	09:03	0°♓		
greatest brilliancy	12169 Jan 05	03:11	0°♓38'39	-4.7m	
retrograde	12169 Jan 14	21:16	2°♓22'59		
	12169 Jan 25	20:08	30°℞♒		
evening set	12169 Jan 30	17:48	27°♒32'48		
inferior conj	12169 Feb 05	04:51	24°♒14'45	-4°05'59	
minimum elong	12169 Feb 05	13:09	24°♒01'44	4°03'09	
min. Earth dist.	12169 Feb 05	18:36	23°♒53'13	0.28506 AU	
morning rise	12169 Feb 11	08:01	20°♒32'57		
asc. node	12169 Feb 22	11:08	16°♒21'24		
direct	12169 Feb 26	11:44	16°♒01'43		
greatest brilliancy	12169 Mar 09	12:32	18°♒15'48	-4.8m	
	12169 Mar 28	16:10	0°♓		
morning max el	12169 Apr 17	07:02	17°♓43'13	46°22'12	
	12169 Apr 29	05:16	0°♈		
	12169 May 26	03:34	0°♉		
desc. node	12169 Jun 14	10:29	22°♉39'05		
	12169 Jun 20	13:59	0°♊		
	12169 Jul 15	07:35	0°♋		
	12169 Aug 08	17:06	0°♌		
	12169 Sep 01	23:23	0°♍		
	12169 Sep 26	04:50	0°♎		
asc. node	12169 Oct 05	03:38	11°♎05'09		
morning set	12169 Oct 19	17:17	29°♎07'41		
	12169 Oct 20	10:11	0°♏		
	12169 Nov 13	15:41	0°♐		
superior conj	12169 Nov 26	01:11	15°♐20'15	1°25'36	
minimum elong	12169 Nov 25	23:02	15°♐13'34	1°26'25	
max. Earth dist.	12169 Nov 27	11:34	17°♐06'32	1.73020 AU	
	12169 Dec 07	21:57	0°♑		
	12170 Jan 01	05:57	0°♒		
evening rise	12170 Jan 02	00:28	0°♒56'57		
desc. node	12170 Jan 24	18:29	28°♒53'34		
	12170 Jan 25	16:10	0°♓		
	12170 Feb 19	04:19	0°♈		
	12170 Mar 15	17:58	0°♉		
	12170 Apr 09	09:59	0°♊		
	12170 May 04	08:07	0°♋		
asc. node	12170 May 17	14:25	15°♋42'39		
	12170 May 29	20:52	0°♌		
	12170 Jun 25	20:29	0°♍		
evening max el	12170 Jul 05	03:34	9°♍36'11	46°48'00	
	12170 Jul 27	19:10	0°♎		
greatest brilliancy	12170 Aug 13	15:58	10°♎01'11	-4.9m	
retrograde	12170 Aug 24	12:33	12°♎13'11		
desc. node	12170 Sep 06	15:51	8°♎45'58		
evening set	12170 Sep 08	03:43	7°♎59'23		
inferior conj	12170 Sep 14	11:40	4°♎16'00	-1°59'22	
minimum elong	12170 Sep 14	07:08	4°♎22'57	1°57'58	
min. Earth dist.	12170 Sep 13	21:04	4°♎38'20	0.27441 AU	
morning rise	12170 Sep 20	11:13	0°♎45'24		
	12170 Sep 21	22:04	30°℞♍		
direct	12170 Oct 05	08:50	26°♍27'01		
greatest brilliancy	12170 Oct 15	00:11	28°♍09'28	-4.8m	
	12170 Oct 19	13:32	0°♎		
morning max el	12170 Nov 23	11:36	26°♎47'45	45°54'23	
	12170 Nov 26	18:38	0°♏		
	12170 Dec 25	06:15	0°♐		
asc. node	12170 Dec 28	16:23	3°♐48'08		
	12171 Jan 20	14:55	0°♑		
	12171 Feb 15	00:08	0°♒		
	12171 Mar 11	20:18	0°♓		
	12171 Apr 05	08:16	0°♈		
desc. node	12171 Apr 19	10:23	17°♈23'54		
	12171 Apr 29	14:15	0°♉		
morning set	12171 May 23	09:33	29°♉41'00		
	12171 May 23	15:38	0°♊		
	12171 Jun 16	14:00	0°♋		

superior conj	12171 Jul 02	13:06	20°♋02'38	-1°17'01
minimum elong	12171 Jul 02	23:05	20°♋34'00	1°17'38
max. Earth dist.	12171 Jul 02	18:56	20°♋20'57	1.71372 AU
	12171 Jul 10	11:21	0°♌	
	12171 Aug 03	09:32	0°♍	
asc. node	12171 Aug 10	01:28	8°♍20'24	
evening rise	12171 Aug 11	18:39	10°♍29'09	
	12171 Aug 27	09:57	0°♎	
	12171 Sep 20	13:51	0°♏	
	12171 Oct 14	23:13	0°♐	
	12171 Nov 08	17:09	0°♑	
desc. node	12171 Nov 29	19:49	25°♑05'44	
	12171 Dec 04	00:10	0°♒	
	12171 Dec 30	03:20	0°♓	
	12172 Jan 26	19:47	0°♈	
evening max el	12172 Feb 07	08:46	11°♈35'08	46°02'08
	12172 Feb 28	09:31	0°♉	
greatest brilliancy	12172 Mar 17	17:11	10°♉34'14	-4.8m
asc. node	12172 Mar 21	20:49	11°♉45'10	
retrograde	12172 Mar 27	15:43	12°♉23'28	
evening set	12172 Apr 12	01:33	7°♉44'36	
inferior conj	12172 Apr 17	12:00	4°♉28'22	6°10'48
minimum elong	12172 Apr 17	01:11	4°♉45'12	6°07'51
min. Earth dist.	12172 Apr 17	11:21	4°♉29'22	0.27639 AU
morning rise	12172 Apr 22	00:40	1°♉43'03	
	12172 Apr 25	04:08	30°℞♈	
direct	12172 May 08	11:38	26°♈27'56	
greatest brilliancy	12172 May 18	12:03	28°♈21'33	-4.9m
	12172 May 22	09:39	0°♉	
morning max el	12172 Jun 27	22:24	29°♉13'45	46°57'03
	12172 Jun 28	16:44	0°♊	
desc. node	12172 Jul 11	21:54	13°♊51'48	
	12172 Jul 26	10:47	0°♋	
	12172 Aug 21	07:01	0°♌	
	12172 Sep 15	09:51	0°♍	
	12172 Oct 10	04:57	0°♎	
asc. node	12172 Nov 01	17:22	27°♎26'13	
	12172 Nov 03	19:43	0°♏	
	12172 Nov 28	07:18	0°♐	
	12172 Dec 22	16:34	0°♑	
morning set	12172 Dec 27	23:19	6°♑30'26	
	12173 Jan 16	00:35	0°♒	
max. Earth dist.	12173 Feb 02	02:46	21°♒05'25	1.73075 AU
superior conj	12173 Feb 02	21:09	22°♒02'08	0°42'42
minimum elong	12173 Feb 03	05:41	22°♒28'28	0°42'56
	12173 Feb 09	08:01	0°♓	
desc. node	12173 Feb 21	08:12	14°♓49'48	
	12173 Mar 05	14:49	0°♈	
evening rise	12173 Mar 13	01:19	9°♈11'53	
	12173 Mar 29	20:27	0°♉	
	12173 Apr 23	00:56	0°♊	
	12173 May 17	05:35	0°♋	
	12173 Jun 10	13:05	0°♌	
asc. node	12173 Jun 14	01:41	4°♌19'38	
	12173 Jul 05	03:28	0°♍	
	12173 Jul 30	07:22	0°♎	
	12173 Aug 25	15:08	0°♏	
evening max el	12173 Sep 14	14:31	20°♏58'16	46°20'00
	12173 Sep 24	01:59	0°♐	
desc. node	12173 Oct 04	01:24	8°♐30'15	
greatest brilliancy	12173 Oct 23	17:03	20°♐24'48	-4.8m
retrograde	12173 Nov 03	07:50	22°♐28'15	
evening set	12173 Nov 21	12:30	16°♐15'20	
inferior conj	12173 Nov 24	19:53	14°♐11'57	-8°42'55
minimum elong	12173 Nov 24	17:22	14°♐15'54	8°42'02
min. Earth dist.	12173 Nov 24	10:02	14°♐27'25	0.28867 AU
morning rise	12173 Nov 27	22:21	12°♐16'19	
direct	12173 Dec 16	05:06	6°♐02'23	
greatest brilliancy	12173 Dec 26	05:20	7°♐51'24	-4.7m
asc. node	12174 Jan 25	03:14	27°♐54'22	
	12174 Jan 27	10:50	0°♑	
morning max el	12174 Feb 03	03:13	6°♑18'24	45°44'44
	12174 Feb 25	23:37	0°♒	
	12174 Mar 24	12:35	0°♓	
	12174 Apr 18	21:12	0°♈	
	12174 May 13	14:39	0°♉	
desc. node	12174 May 16	23:48	4°♉08'36	
	12174 Jun 06	22:46	0°♊	
	12174 Jul 01	01:13	0°♋	
	12174 Jul 25	01:02	0°♌	
morning set	12174 Aug 06	08:20	15°♌24'00	
	12174 Aug 18	00:30	0°♍	
asc. node	12174 Sep 06	15:23	24°♍30'32	
	12174 Sep 11	01:01	0°♎	
superior conj	12174 Sep 14	13:21	4°♎22'50	0°19'08
minimum elong	12174 Sep 14	08:52	4°♎08'54	0°18'53
max. Earth dist.	12174 Sep 16	23:33	7°♎24'10	1.72099 AU
	12174 Oct 05	03:15	0°♏	
evening rise	12174 Oct 22	10:22	21°♏27'41	
	12174 Oct 29	07:56	0°♐	
	12174 Nov 22	16:18	0°♑	
	12174 Dec 17	05:56	0°♒	
desc. node	12174 Dec 27	07:36	12°♒12'07	
	12175 Jan 11	02:10	0°♓	
	12175 Feb 05	06:09	0°♈	
	12175 Mar 02	20:57	0°♉	
	12175 Mar 29	09:06	0°♊	
asc. node	12175 Apr 19	06:17	22°♊05'28	
evening max el	12175 Apr 20	18:10	23°♊35'10	46°35'42
	12175 Apr 27	08:36	0°♋	
greatest brilliancy	12175 May 31	09:20	24°♋09'08	-4.9m
retrograde	12175 Jun 09	21:10	25°♋51'38	
evening set	12175 Jun 27	09:11	20°♋01'05	
inferior conj	12175 Jun 30	13:31	18°♋05'17	8°19'50
minimum elong	12175 Jun 30	22:25	17°♋51'36	8°17'46
min. Earth dist.	12175 Jul 01	00:22	17°♋48'36	0.27147 AU
morning rise	12175 Jul 04	11:33	15°♋43'03	
direct	12175 Jul 21	06:15	10°♋15'12	
greatest brilliancy	12175 Jul 31	07:56	12°♋09'00	-4.9m
desc. node	12175 Aug 09	08:07	16°♋31'37	
	12175 Aug 27	03:54	0°♌	
morning max el	12175 Sep 09	11:19	12°♌30'42	46°39'47
	12175 Sep 26	07:37	0°♍	
	12175 Oct 23	05:56	0°♎	
	12175 Nov 18	01:19	0°♏	
asc. node	12175 Nov 30	06:23	14°♏27'38	
	12175 Dec 13	06:22	0°♐	
	12176 Jan 07	02:07	0°♑	
	12176 Jan 31	15:39	0°♒	
	12176 Feb 25	01:06	0°♓	
morning set	12176 Mar 07	06:05	13°♓50'05	
	12176 Mar 20	07:30	0°♈	
desc. node	12176 Mar 20	22:09	0°♈45'24	
max. Earth dist.	12176 Apr 12	03:27	28°♈21'51	1.72118 AU
	12176 Apr 13	10:58	0°♉	
superior conj	12176 Apr 15	09:36	2°♉25'15	-0°56'54
minimum elong	12176 Apr 14	22:31	1°♉50'42	0°56'52
	12176 May 07	11:43	0°♊	
evening rise	12176 May 24	22:24	21°♊50'26	
	12176 May 31	10:45	0°♋	
	12176 Jun 24	09:55	0°♌	

asc. node	12176 Jul 11 14:02	21°♌25'36		
	12176 Jul 18 11:26	0°♍		
	12176 Aug 11 17:40	0°♎		
	12176 Sep 05 07:52	0°♏		
	12176 Sep 30 11:58	0°♐		
	12176 Oct 26 18:20	0°♑		
desc. node	12176 Oct 31 11:04	5°♑09'21		
evening max el	12176 Nov 24 14:17	0°♒05'28	45°53'16	
	12176 Nov 24 12:01	0°♒		
greatest brilliancy	12177 Jan 02 17:38	28°♒26'23	-4.7m	
	12177 Jan 09 09:12	0°♓		
retrograde	12177 Jan 12 13:05	0°♓11'32		
	12177 Jan 15 15:40	30°℞♒		
evening set	12177 Jan 28 11:47	25°♒17'19		
inferior conj	12177 Feb 02 20:23	22°♒02'33	-4°24'18	
minimum elong	12177 Feb 03 05:09	21°♒48'51	4°21'23	
min. Earth dist.	12177 Feb 03 09:53	21°♒41'27	0.28544 AU	
morning rise	12177 Feb 08 22:07	18°♒23'03		
asc. node	12177 Feb 21 13:08	13°♒57'32		
direct	12177 Feb 24 04:00	13°♒49'12		
greatest brilliancy	12177 Mar 07 04:08	16°♒03'08	-4.8m	
	12177 Mar 29 01:40	0°♓		
morning max el	12177 Apr 14 23:16	15°♓30'54	46°20'35	
	12177 Apr 28 23:15	0°♈		
	12177 May 25 17:52	0°♉		
desc. node	12177 Jun 13 12:30	22°♉06'17		
	12177 Jun 20 02:44	0°♊		
	12177 Jul 14 19:30	0°♋		
	12177 Aug 08 04:30	0°♌		
	12177 Sep 01 10:26	0°♍		
	12177 Sep 25 15:37	0°♎		
asc. node	12177 Oct 04 05:25	10°♎37'34		
morning set	12177 Oct 17 08:56	26°♎54'41		
	12177 Oct 19 20:46	0°♏		
	12177 Nov 13 02:08	0°♐		
superior conj	12177 Nov 23 18:12	13°♐12'03	1°25'12	
minimum elong	12177 Nov 23 15:18	13°♐03'07	1°25'59	
max. Earth dist.	12177 Nov 25 08:00	15°♐08'59	1.73002 AU	
	12177 Dec 07 08:24	0°♑		
evening rise	12177 Dec 30 17:00	28°♑47'42		
	12177 Dec 31 16:30	0°♒		
desc. node	12178 Jan 23 20:26	28°♒26'34		
	12178 Jan 25 02:56	0°♓		
	12178 Feb 18 15:23	0°♈		
	12178 Mar 15 05:27	0°♉		
	12178 Apr 08 22:07	0°♊		
	12178 May 03 21:18	0°♋		
asc. node	12178 May 16 16:23	15°♋07'18		
	12178 May 29 12:00	0°♌		
	12178 Jun 25 16:13	0°♍		
evening max el	12178 Jul 02 18:45	7°♍17'43	46°48'20	
	12178 Jul 28 13:57	0°♎		
greatest brilliancy	12178 Aug 11 06:49	7°♎40'50	-4.9m	
retrograde	12178 Aug 22 03:05	9°♎51'58		
evening set	12178 Sep 05 17:19	5°♎39'13		
desc. node	12178 Sep 05 17:50	5°♎38'32		
min. Earth dist.	12178 Sep 11 11:21	2°♎16'53	0.27394 AU	
inferior conj	12178 Sep 12 01:14	1°♎55'37	-1°36'40	
minimum elong	12178 Sep 11 21:32	2°♎01'17	1°35'32	
	12178 Sep 15 05:45	30°℞♍		
morning rise	12178 Sep 18 02:30	28°♍22'53		
direct	12178 Oct 02 22:40	24°♍07'26		
greatest brilliancy	12178 Oct 12 13:08	25°♍49'26	-4.8m	
	12178 Oct 21 13:52	0°♎		
morning max el	12178 Nov 21 01:48	24°♎31'41	45°55'33	
	12178 Nov 26 15:43	0°♏		
	12178 Dec 24 21:25	0°♐		
asc. node	12178 Dec 27 18:28	3°♐12'35		
	12179 Jan 20 03:53	0°♑		
	12179 Feb 14 12:04	0°♒		
	12179 Mar 11 07:43	0°♓		
	12179 Apr 04 19:23	0°♈		
desc. node	12179 Apr 18 12:12	16°♈55'28		
	12179 Apr 29 01:12	0°♉		
morning set	12179 May 20 20:52	27°♉12'22		
	12179 May 23 02:29	0°♊		
	12179 Jun 16 00:49	0°♋		
superior conj	12179 Jun 30 00:38	17°♋34'14	-1°18'48	
minimum elong	12179 Jun 30 10:01	18°♋03'41	1°19'27	
max. Earth dist.	12179 Jun 30 02:59	17°♋41'36	1.71367 AU	
	12179 Jul 09 22:10	0°♌		
	12179 Aug 02 20:23	0°♍		
evening rise	12179 Aug 09 07:01	8°♍03'47		
asc. node	12179 Aug 09 03:18	7°♍52'09		
	12179 Aug 26 20:52	0°♎		
	12179 Sep 20 00:55	0°♏		
	12179 Oct 14 10:33	0°♐		
	12179 Nov 08 05:00	0°♑		
desc. node	12179 Nov 28 21:51	24°♑34'42		
	12179 Dec 03 12:59	0°♒		
	12179 Dec 29 18:04	0°♓		
	12180 Jan 26 15:07	0°♈		
evening max el	12180 Feb 04 22:53	9°♈17'47	46°01'02	
	12180 Feb 29 03:39	0°♉		
greatest brilliancy	12180 Mar 15 07:28	8°♉15'07	-4.8m	
asc. node	12180 Mar 20 22:43	9°♉42'29		
retrograde	12180 Mar 25 04:51	10°♉03'24		
evening set	12180 Apr 09 12:32	5°♉28'46		
inferior conj	12180 Apr 15 02:02	2°♉08'13	5°53'24	
minimum elong	12180 Apr 14 15:22	2°♉24'50	5°50'24	
min. Earth dist.	12180 Apr 15 01:58	2°♉08'19	0.27657 AU	
	12180 Apr 18 13:21	30°℞♈		
morning rise	12180 Apr 19 18:00	29°♈17'46		
direct	12180 May 06 01:26	24°♈07'22		
greatest brilliancy	12180 May 16 03:28	26°♈01'48	-4.9m	
	12180 May 24 09:55	0°♉		
morning max el	12180 Jun 25 11:09	26°♉48'38	46°56'38	
	12180 Jun 28 14:29	0°♊		
desc. node	12180 Jul 10 23:54	13°♊07'37		
	12180 Jul 26 02:44	0°♋		
	12180 Aug 20 20:44	0°♌		
	12180 Sep 14 22:22	0°♍		
	12180 Oct 09 16:45	0°♎		
asc. node	12180 Oct 31 19:16	26°♎57'19		
	12180 Nov 03 07:02	0°♏		
	12180 Nov 27 18:18	0°♐		
	12180 Dec 22 03:23	0°♑		
morning set	12180 Dec 25 16:29	4°♑22'16		
	12181 Jan 15 11:18	0°♒		
max. Earth dist.	12181 Jan 30 20:01	18°♒57'30	1.73092 AU	
superior conj	12181 Jan 31 13:31	19°♒51'28	0°45'36	
minimum elong	12181 Jan 31 22:24	20°♒18'54	0°45'51	
	12181 Feb 08 18:45	0°♓		
desc. node	12181 Feb 20 09:59	14°♓22'00		
	12181 Mar 05 01:39	0°♈		
evening rise	12181 Mar 10 16:31	6°♈56'49		
	12181 Mar 29 07:28	0°♉		
	12181 Apr 22 12:14	0°♊		
	12181 May 16 17:12	0°♋		
	12181 Jun 10 01:09	0°♌		
asc. node	12181 Jun 13 03:40	3°♌48'24		

	12181 Jul 04 16:17	0°♍	
	12181 Jul 29 21:32	0°♎	
	12181 Aug 25 08:18	0°♏	
evening max el	12181 Sep 12 04:20	18°♏38'52	46°21'15
	12181 Sep 24 05:30	0°♐	
desc. node	12181 Oct 03 03:19	7°♐23'19	
greatest brilliancy	12181 Oct 21 08:27	18°♐11'39	-4.8m
retrograde	12181 Oct 31 23:22	20°♐15'48	
evening set	12181 Nov 19 02:14	14°♐05'59	
inferior conj	12181 Nov 22 11:38	11°♐59'44	-8°40'16
minimum elong	12181 Nov 22 08:19	12°♐04'56	8°39'19
min. Earth dist.	12181 Nov 22 01:02	12°♐16'22	0.28840 AU
morning rise	12181 Nov 25 14:30	10°♐03'32	
direct	12181 Dec 13 19:53	3°♐50'34	
greatest brilliancy	12181 Dec 23 20:24	5°♐39'23	-4.7m
asc. node	12182 Jan 24 05:07	26°♐59'22	
	12182 Jan 27 11:36	0°♑	
morning max el	12182 Jan 31 17:42	4°♑03'12	45°44'20
	12182 Feb 25 15:54	0°♒	
	12182 Mar 24 02:13	0°♓	
	12182 Apr 18 09:38	0°♈	
	12182 May 13 02:29	0°♉	
desc. node	12182 May 16 01:48	3°♉38'39	
	12182 Jun 06 10:16	0°♊	
	12182 Jun 30 12:31	0°♋	
	12182 Jul 24 12:09	0°♌	
morning set	12182 Aug 03 21:04	12°♌59'00	
	12182 Aug 17 11:30	0°♍	
asc. node	12182 Sep 05 17:09	24°♍01'56	
	12182 Sep 10 11:56	0°♎	
superior conj	12182 Sep 12 03:17	2°♎02'44	0°15'34
minimum elong	12182 Sep 11 23:37	1°♎51'16	0°15'20
behind sun begin	12182 Sep 11 16:01	1°♎27'34	
behind sun end	12182 Sep 12 07:13	2°♎14'59	
max. Earth dist.	12182 Sep 14 10:53	4°♎56'01	1.72061 AU
	12182 Oct 04 14:08	0°♏	
evening rise	12182 Oct 20 02:19	19°♏14'42	
	12182 Oct 28 18:51	0°♐	
	12182 Nov 22 03:22	0°♑	
	12182 Dec 16 17:19	0°♒	
desc. node	12182 Dec 26 09:35	11°♒43'07	
	12183 Jan 10 14:04	0°♓	
	12183 Feb 04 18:54	0°♈	
	12183 Mar 02 11:12	0°♉	
	12183 Mar 29 02:25	0°♊	
asc. node	12183 Apr 18 08:18	21°♊13'54	
evening max el	12183 Apr 18 07:14	21°♊11'15	46°34'37
	12183 Apr 27 11:30	0°♋	
greatest brilliancy	12183 May 28 21:53	21°♋43'15	-4.9m
retrograde	12183 Jun 07 10:21	23°♋26'19	
evening set	12183 Jun 25 01:10	17°♋30'24	
inferior conj	12183 Jun 28 02:18	15°♋39'27	8°29'47
minimum elong	12183 Jun 28 10:35	15°♋26'46	8°27'52
min. Earth dist.	12183 Jun 28 12:54	15°♋23'12	0.27170 AU
morning rise	12183 Jul 01 19:54	13°♋23'55	
direct	12183 Jul 18 19:20	7°♋48'45	
greatest brilliancy	12183 Jul 28 20:34	9°♋42'40	-4.9m
desc. node	12183 Aug 08 10:04	15°♋02'40	
	12183 Aug 27 09:53	0°♌	
morning max el	12183 Sep 07 02:07	10°♌10'33	46°41'17
	12183 Sep 26 01:47	0°♍	
	12183 Oct 22 20:32	0°♎	
	12183 Nov 17 14:14	0°♏	
asc. node	12183 Nov 29 08:24	13°♏56'50	
	12183 Dec 12 18:20	0°♐	
	12184 Jan 06 13:31	0°♑	
	12184 Jan 31 02:44	0°♒	
	12184 Feb 24 12:03	0°♓	
morning set	12184 Mar 04 21:19	11°♓35'06	
	12184 Mar 19 18:24	0°♈	
desc. node	12184 Mar 20 00:02	0°♈17'27	
max. Earth dist.	12184 Apr 09 19:15	26°♈07'41	1.72155 AU
superior conj	12184 Apr 12 22:53	0°♉03'09	-0°54'02
minimum elong	12184 Apr 12 12:03	29°♈29'23	0°53'57
	12184 Apr 12 21:53	0°♉	
	12184 May 06 22:40	0°♊	
evening rise	12184 May 22 10:36	19°♊23'55	
	12184 May 30 21:47	0°♋	
	12184 Jun 23 21:06	0°♌	
asc. node	12184 Jul 10 15:54	20°♌56'02	
	12184 Jul 17 22:51	0°♍	
	12184 Aug 11 05:27	0°♎	
	12184 Sep 04 20:13	0°♏	
	12184 Sep 30 01:25	0°♐	
	12184 Oct 26 10:07	0°♑	
desc. node	12184 Oct 30 13:11	4°♑30'28	
evening max el	12184 Nov 22 06:24	27°♑54'58	45°53'48
	12184 Nov 24 10:48	0°♒	
greatest brilliancy	12184 Dec 31 08:22	26°♒13'49	-4.7m
retrograde	12185 Jan 10 04:47	27°♒59'19	
evening set	12185 Jan 26 05:59	23°♒01'15	
inferior conj	12185 Jan 31 12:02	19°♒49'44	-4°42'12
minimum elong	12185 Jan 31 21:10	19°♒35'25	4°39'13
min. Earth dist.	12185 Feb 01 01:09	19°♒29'11	0.28580 AU
morning rise	12185 Feb 06 12:04	16°♒12'37	
asc. node	12185 Feb 20 15:05	11°♒38'04	
direct	12185 Feb 21 20:31	11°♒36'15	
greatest brilliancy	12185 Mar 04 19:21	13°♒49'13	-4.8m
	12185 Mar 29 08:54	0°♓	
morning max el	12185 Apr 12 15:18	13°♓17'18	46°18'59
	12185 Apr 28 17:06	0°♈	
	12185 May 25 08:17	0°♉	
desc. node	12185 Jun 12 14:27	21°♉32'43	
	12185 Jun 19 15:38	0°♊	
	12185 Jul 14 07:35	0°♋	
	12185 Aug 07 16:06	0°♌	
	12185 Aug 31 21:43	0°♍	
	12185 Sep 25 02:40	0°♎	
asc. node	12185 Oct 03 07:21	10°♎09'33	
morning set	12185 Oct 15 00:23	24°♎40'13	
	12185 Oct 19 07:37	0°♏	
	12185 Nov 12 12:53	0°♐	
superior conj	12185 Nov 21 11:00	11°♐02'23	1°24'39
minimum elong	12185 Nov 21 07:22	10°♐51'10	1°25'24
max. Earth dist.	12185 Nov 23 03:46	13°♐08'30	1.72979 AU
	12185 Dec 06 19:07	0°♑	
evening rise	12185 Dec 28 09:23	26°♑37'17	
	12185 Dec 31 03:17	0°♒	
desc. node	12186 Jan 22 22:13	27°♒58'26	
	12186 Jan 24 13:54	0°♓	
	12186 Feb 18 02:40	0°♈	
	12186 Mar 14 17:11	0°♉	
	12186 Apr 08 10:30	0°♊	
	12186 May 03 10:45	0°♋	
asc. node	12186 May 15 18:28	14°♋31'37	
	12186 May 29 03:28	0°♌	
	12186 Jun 25 12:39	0°♍	
evening max el	12186 Jun 30 09:39	4°♍58'23	46°48'39
	12186 Jul 29 15:28	0°♎	
greatest brilliancy	12186 Aug 08 22:21	5°♎21'28	-4.9m
retrograde	12186 Aug 19 17:18	7°♎30'58	

evening set	12186 Sep 03 07:19	3°♎19'08	
desc. node	12186 Sep 04 19:46	2°♎28'32	
	12186 Sep 08 23:08	30°℞♍	
min. Earth dist.	12186 Sep 09 02:11	29°♍55'20	0.27350 AU
inferior conj	12186 Sep 09 15:01	29°♍35'38	-1°13'48
minimum elong	12186 Sep 09 12:10	29°♍40'00	1°12'59
morning rise	12186 Sep 15 17:46	26°♍00'46	
direct	12186 Sep 30 12:21	21°♍48'11	
greatest brilliancy	12186 Oct 10 02:48	23°♍30'01	-4.8m
	12186 Oct 22 22:15	0°♎	
morning max el	12186 Nov 18 15:25	22°♎13'39	45°56'38
	12186 Nov 26 12:11	0°♏	
	12186 Dec 24 12:30	0°♐	
asc. node	12186 Dec 26 20:20	2°♐36'19	
	12187 Jan 19 16:52	0°♑	
	12187 Feb 14 00:01	0°♒	
	12187 Mar 10 19:07	0°♓	
	12187 Apr 04 06:29	0°♈	
desc. node	12187 Apr 17 14:08	16°♈27'20	
	12187 Apr 28 12:09	0°♉	
morning set	12187 May 18 08:15	24°♉43'55	
	12187 May 22 13:21	0°♊	
	12187 Jun 15 11:39	0°♋	
superior conj	12187 Jun 27 12:26	15°♋06'37	-1°20'25
minimum elong	12187 Jun 27 21:07	15°♋33'53	1°21'06
max. Earth dist.	12187 Jun 27 08:00	14°♋52'41	1.71362 AU
	12187 Jul 09 08:59	0°♌	
	12187 Aug 02 07:11	0°♍	
evening rise	12187 Aug 06 19:32	5°♍39'00	
asc. node	12187 Aug 08 05:07	7°♍24'01	
	12187 Aug 26 07:42	0°♎	
	12187 Sep 19 11:54	0°♏	
	12187 Oct 13 21:51	0°♐	
	12187 Nov 07 16:51	0°♑	
desc. node	12187 Nov 27 23:46	24°♑03'24	
	12187 Dec 03 01:50	0°♒	
	12187 Dec 29 08:55	0°♓	
	12188 Jan 26 10:57	0°♈	
evening max el	12188 Feb 02 12:33	6°♈59'42	46°00'08
	12188 Mar 01 03:59	0°♉	
greatest brilliancy	12188 Mar 12 21:48	5°♉56'45	-4.8m
asc. node	12188 Mar 20 00:46	7°♉35'52	
retrograde	12188 Mar 22 18:13	7°♉44'33	
evening set	12188 Apr 06 23:53	3°♉13'23	
	12188 Apr 12 09:18	30°℞♈	
inferior conj	12188 Apr 12 16:16	29°♈49'08	5°35'25
minimum elong	12188 Apr 12 05:50	0°♉05'24	5°32'26
min. Earth dist.	12188 Apr 12 16:53	29°♈48'11	0.27677 AU
morning rise	12188 Apr 17 11:27	26°♈53'51	
direct	12188 May 03 15:16	21°♈47'38	
greatest brilliancy	12188 May 13 19:31	23°♈43'40	-4.9m
	12188 May 25 17:51	0°♉	
morning max el	12188 Jun 23 00:30	24°♉25'31	46°56'10
	12188 Jun 28 11:16	0°♊	
desc. node	12188 Jul 10 01:45	12°♊24'03	
	12188 Jul 25 18:17	0°♋	
	12188 Aug 20 10:09	0°♌	
	12188 Sep 14 10:38	0°♍	
	12188 Oct 09 04:15	0°♎	
asc. node	12188 Oct 30 21:13	26°♎29'26	
	12188 Nov 02 18:03	0°♏	
	12188 Nov 27 05:02	0°♐	
	12188 Dec 21 13:57	0°♑	
morning set	12188 Dec 23 09:44	2°♑14'56	
	12189 Jan 14 21:49	0°♒	
max. Earth dist.	12189 Jan 28 14:05	16°♒52'42	1.73110 AU
superior conj	12189 Jan 29 05:55	17°♒41'34	0°48'26
minimum elong	12189 Jan 29 15:06	18°♒09'55	0°48'41
	12189 Feb 08 05:17	0°♓	
desc. node	12189 Feb 19 11:52	13°♓55'08	
	12189 Mar 04 12:16	0°♈	
evening rise	12189 Mar 08 07:45	4°♈42'39	
	12189 Mar 28 18:16	0°♉	
	12189 Apr 21 23:16	0°♊	
	12189 May 16 04:36	0°♋	
	12189 Jun 09 13:02	0°♌	
asc. node	12189 Jun 12 05:31	3°♌17'27	
	12189 Jul 04 04:57	0°♍	
	12189 Jul 29 11:36	0°♎	
	12189 Aug 25 01:32	0°♏	
evening max el	12189 Sep 09 18:42	16°♏21'46	46°22'40
	12189 Sep 24 10:21	0°♐	
desc. node	12189 Oct 02 05:27	6°♐16'08	
greatest brilliancy	12189 Oct 18 23:22	15°♐59'09	-4.8m
retrograde	12189 Oct 29 15:27	18°♐04'52	
evening set	12189 Nov 16 15:44	11°♐58'25	
min. Earth dist.	12189 Nov 19 15:54	10°♐07'05	0.28810 AU
inferior conj	12189 Nov 20 03:28	9°♐48'56	-8°36'46
minimum elong	12189 Nov 19 23:24	9°♐55'20	8°35'45
morning rise	12189 Nov 23 07:10	7°♐51'44	
direct	12189 Dec 11 10:56	1°♐40'09	
greatest brilliancy	12189 Dec 21 11:23	3°♐28'50	-4.7m
asc. node	12190 Jan 23 07:06	26°♐06'52	
	12190 Jan 27 10:42	0°♑	
morning max el	12190 Jan 29 09:12	1°♑51'42	45°43'52
	12190 Feb 25 07:32	0°♒	
	12190 Mar 23 15:24	0°♓	
	12190 Apr 17 21:42	0°♈	
	12190 May 12 13:58	0°♉	
desc. node	12190 May 15 03:45	3°♉09'32	
	12190 Jun 05 21:24	0°♊	
	12190 Jun 29 23:26	0°♋	
	12190 Jul 23 22:55	0°♌	
morning set	12190 Aug 01 09:40	10°♌34'36	
	12190 Aug 16 22:10	0°♍	
asc. node	12190 Sep 04 19:05	23°♍34'53	
superior conj	12190 Sep 09 17:08	29°♍43'12	0°11'58
minimum elong	12190 Sep 09 14:17	29°♍34'19	0°11'44
behind sun begin	12190 Sep 08 21:18	28°♍41'18	
behind sun end	12190 Sep 10 07:17	0°♎27'20	
	12190 Sep 09 22:31	0°♎	
max. Earth dist.	12190 Sep 11 22:56	2°♎31'00	1.72026 AU
	12190 Oct 04 00:41	0°♏	
evening rise	12190 Oct 17 18:22	17°♏03'07	
	12190 Oct 28 05:25	0°♐	
	12190 Nov 21 14:03	0°♑	
	12190 Dec 16 04:18	0°♒	
desc. node	12190 Dec 25 11:26	11°♒15'01	
	12191 Jan 10 01:35	0°♓	
	12191 Feb 04 07:20	0°♈	
	12191 Mar 02 01:13	0°♉	
	12191 Mar 28 19:45	0°♊	
evening max el	12191 Apr 15 21:26	18°♊51'20	46°33'33
asc. node	12191 Apr 17 10:22	20°♊22'33	
	12191 Apr 27 15:36	0°♋	
greatest brilliancy	12191 May 26 10:13	19°♋18'33	-4.9m
retrograde	12191 Jun 04 23:51	21°♋02'17	
evening set	12191 Jun 22 17:07	15°♋01'28	
inferior conj	12191 Jun 25 15:12	13°♋14'59	8°38'40
minimum elong	12191 Jun 25 22:47	13°♋03'20	8°36'56
min. Earth dist.	12191 Jun 26 01:12	12°♋59'39	0.27190 AU
morning rise	12191 Jun 29 04:25	11°♋05'58	

direct	12191 Jul 16 08:56	5°♋23'58	
greatest brilliancy	12191 Jul 26 08:46	7°♋17'11	-4.9m
desc. node	12191 Aug 07 12:07	13°♋38'16	
	12191 Aug 27 13:24	0°♌	
morning max el	12191 Sep 04 17:03	7°♌52'04	46°42'33
	12191 Sep 25 19:05	0°♍	
	12191 Oct 22 10:35	0°♎	
	12191 Nov 17 02:41	0°♏	
asc. node	12191 Nov 28 10:12	13°♏26'36	
	12191 Dec 12 05:51	0°♐	
	12192 Jan 06 00:28	0°♑	
	12192 Jan 30 13:23	0°♒	
	12192 Feb 23 22:34	0°♓	
morning set	12192 Mar 02 12:50	9°♓22'24	
desc. node	12192 Mar 19 01:59	29°♓50'58	
	12192 Mar 19 04:54	0°♈	
max. Earth dist.	12192 Apr 07 09:02	23°♈48'26	1.72197 AU
superior conj	12192 Apr 10 12:14	27°♈42'27	-0°51'04
minimum elong	12192 Apr 10 01:43	27°♈09'43	0°50'57
	12192 Apr 12 08:25	0°♉	
	12192 May 06 09:16	0°♊	
evening rise	12192 May 19 22:35	16°♊57'45	
	12192 May 30 08:29	0°♋	
	12192 Jun 23 07:58	0°♌	
asc. node	12192 Jul 09 17:44	20°♌27'28	
	12192 Jul 17 09:57	0°♍	
	12192 Aug 10 16:55	0°♎	
	12192 Sep 04 08:18	0°♏	
	12192 Sep 29 14:38	0°♐	
	12192 Oct 26 01:50	0°♑	
desc. node	12192 Oct 29 15:08	3°♑51'42	
evening max el	12192 Nov 19 22:29	25°♑45'17	45°54'19
	12192 Nov 24 10:11	0°♒	
greatest brilliancy	12192 Dec 28 23:43	24°♒03'18	-4.7m
retrograde	12193 Jan 07 20:11	25°♒48'28	
evening set	12193 Jan 24 00:21	20°♒46'43	
inferior conj	12193 Jan 29 03:46	17°♒38'34	-4°59'34
minimum elong	12193 Jan 29 13:14	17°♒23'43	4°56'31
min. Earth dist.	12193 Jan 29 16:40	17°♒18'21	0.28612 AU
morning rise	12193 Feb 04 01:53	14°♒03'53	
direct	12193 Feb 19 12:51	9°♒25'07	
asc. node	12193 Feb 19 17:08	9°♒25'09	
greatest brilliancy	12193 Mar 02 10:35	11°♒36'51	-4.8m
	12193 Mar 29 13:19	0°♓	
morning max el	12193 Apr 10 06:25	11°♓02'47	46°17'16
	12193 Apr 28 10:07	0°♈	
	12193 May 24 22:11	0°♉	
desc. node	12193 Jun 11 16:17	20°♉59'51	
	12193 Jun 19 04:09	0°♊	
	12193 Jul 13 19:21	0°♋	
	12193 Aug 07 03:24	0°♌	
	12193 Aug 31 08:41	0°♍	
	12193 Sep 24 13:23	0°♎	
asc. node	12193 Oct 02 09:13	9°♎42'19	
morning set	12193 Oct 12 15:36	22°♎25'54	
	12193 Oct 18 18:10	0°♏	
	12193 Nov 11 23:19	0°♐	
superior conj	12193 Nov 19 03:43	8°♐53'20	1°23'58
minimum elong	12193 Nov 18 23:23	8°♐39'56	1°24'42
max. Earth dist.	12193 Nov 20 22:11	11°♐04'43	1.72955 AU
	12193 Dec 06 05:33	0°♑	
evening rise	12193 Dec 26 01:48	24°♑27'43	
	12193 Dec 30 13:49	0°♒	
desc. node	12194 Jan 22 00:09	27°♒31'37	
	12194 Jan 24 00:36	0°♓	
	12194 Feb 17 13:38	0°♈	
	12194 Mar 14 04:35	0°♉	
	12194 Apr 07 22:37	0°♊	
	12194 May 03 00:02	0°♋	
asc. node	12194 May 14 20:17	13°♋55'45	
	12194 May 28 18:57	0°♌	
	12194 Jun 25 09:39	0°♍	
evening max el	12194 Jun 27 23:34	2°♍36'46	46°48'45
	12194 Jul 31 03:44	0°♎	
greatest brilliancy	12194 Aug 06 14:04	3°♎01'55	-4.9m
retrograde	12194 Aug 17 06:45	5°♎09'22	
evening set	12194 Aug 31 21:12	0°♎58'00	
	12194 Sep 02 14:53	30°℞♍	
desc. node	12194 Sep 03 21:52	29°♍14'43	
min. Earth dist.	12194 Sep 06 17:06	27°♍32'41	0.27308 AU
inferior conj	12194 Sep 07 04:31	27°♍15'09	-0°50'33
minimum elong	12194 Sep 07 02:33	27°♍18'10	0°50'03
morning rise	12194 Sep 13 08:32	23°♍38'16	
direct	12194 Sep 28 01:10	19°♍28'13	
greatest brilliancy	12194 Oct 07 16:46	21°♍10'36	-4.8m
	12194 Oct 23 21:28	0°♎	
morning max el	12194 Nov 16 04:14	19°♎53'58	45°57'51
	12194 Nov 26 07:50	0°♏	
	12194 Dec 24 03:11	0°♐	
asc. node	12194 Dec 25 22:16	2°♐01'04	
	12195 Jan 19 05:35	0°♑	
	12195 Feb 13 11:45	0°♒	
	12195 Mar 10 06:18	0°♓	
	12195 Apr 03 17:22	0°♈	
desc. node	12195 Apr 16 16:00	15°♈59'45	
	12195 Apr 27 22:51	0°♉	
morning set	12195 May 15 19:50	22°♉16'51	
	12195 May 21 24:00	0°♊	
	12195 Jun 14 22:18	0°♋	
max. Earth dist.	12195 Jun 24 12:28	12°♋02'37	1.71368 AU
superior conj	12195 Jun 25 00:13	12°♋39'29	-1°21'52
minimum elong	12195 Jun 25 08:08	13°♋04'22	1°22'36
	12195 Jul 08 19:39	0°♌	
	12195 Aug 01 17:54	0°♍	
evening rise	12195 Aug 04 07:38	3°♍13'10	
asc. node	12195 Aug 07 07:04	6°♍56'33	
	12195 Aug 25 18:29	0°♎	
	12195 Sep 18 22:51	0°♏	
	12195 Oct 13 09:06	0°♐	
	12195 Nov 07 04:41	0°♑	
desc. node	12195 Nov 27 01:39	23°♑32'01	
	12195 Dec 02 14:44	0°♒	
	12195 Dec 28 23:57	0°♓	
	12196 Jan 26 07:25	0°♈	
evening max el	12196 Jan 31 02:15	4°♈42'03	45°59'22
	12196 Mar 02 13:58	0°♉	
greatest brilliancy	12196 Mar 10 11:42	3°♉38'16	-4.8m
asc. node	12196 Mar 19 02:49	5°♉24'39	
retrograde	12196 Mar 20 08:00	5°♉26'24	
evening set	12196 Apr 04 11:28	0°♉58'06	
	12196 Apr 06 04:21	30°℞♈	
inferior conj	12196 Apr 10 06:31	27°♈30'32	5°16'52
minimum elong	12196 Apr 09 20:22	27°♈46'19	5°13'55
min. Earth dist.	12196 Apr 10 07:35	27°♈28'52	0.27695 AU
morning rise	12196 Apr 15 04:53	24°♈30'48	
direct	12196 May 01 05:21	19°♈28'25	
greatest brilliancy	12196 May 11 11:20	21°♈26'05	-4.9m
	12196 May 26 16:25	0°♉	
morning max el	12196 Jun 20 14:39	22°♉05'07	46°55'39
	12196 Jun 28 07:10	0°♊	
desc. node	12196 Jul 09 03:51	11°♊42'15	

	12196 Jul 25 09:27	0°♋	
	12196 Aug 19 23:24	0°♌	
	12196 Sep 13 22:50	0°♍	
	12196 Oct 08 15:48	0°♎	
asc. node	12196 Oct 29 23:01	26°♎00'51	
	12196 Nov 02 05:09	0°♏	
	12196 Nov 26 15:50	0°♐	
morning set	12196 Dec 21 02:38	0°♑06'20	
	12196 Dec 21 00:35	0°♑	
	12197 Jan 14 08:22	0°♒	
superior conj	12197 Jan 26 22:05	15°♒30'45	0°51'12
minimum elong	12197 Jan 27 07:31	15°♒59'51	0°51'29
max. Earth dist.	12197 Jan 26 09:46	14°♒52'44	1.73127 AU
	12197 Feb 07 15:52	0°♓	
desc. node	12197 Feb 18 13:47	13°♓28'13	
	12197 Mar 03 22:59	0°♈	
evening rise	12197 Mar 05 22:58	2°♈28'13	
	12197 Mar 28 05:09	0°♉	
	12197 Apr 21 10:23	0°♊	
	12197 May 15 16:01	0°♋	
	12197 Jun 09 00:56	0°♌	
asc. node	12197 Jun 11 07:28	2°♌46'49	
	12197 Jul 03 17:39	0°♍	
	12197 Jul 29 01:51	0°♎	
	12197 Aug 24 19:16	0°♏	
evening max el	12197 Sep 07 09:54	14°♏06'16	46°23'51
	12197 Sep 24 17:44	0°♐	
desc. node	12197 Oct 01 07:24	5°♐05'52	
greatest brilliancy	12197 Oct 16 13:32	13°♐44'38	-4.8m
retrograde	12197 Oct 27 07:38	15°♐52'22	
evening set	12197 Nov 14 04:39	9°♐49'42	
inferior conj	12197 Nov 17 19:02	7°♐36'31	-8°32'22
minimum elong	12197 Nov 17 14:11	7°♐44'04	8°31'17
min. Earth dist.	12197 Nov 17 06:12	7°♐56'33	0.28780 AU
morning rise	12197 Nov 20 23:52	5°♐37'52	
	12197 Dec 03 22:36	30°℞♏	
direct	12197 Dec 09 02:18	29°♏28'13	
	12197 Dec 14 09:34	0°♐	
greatest brilliancy	12197 Dec 19 01:42	1°♐16'23	-4.7m
asc. node	12198 Jan 22 09:11	25°♐14'54	
morning max el	12198 Jan 27 01:05	29°♐40'30	45°43'27
	12198 Jan 27 09:08	0°♑	
	12198 Feb 24 23:07	0°♒	
	12198 Mar 23 04:41	0°♓	
	12198 Apr 17 09:54	0°♈	
	12198 May 12 01:36	0°♉	
desc. node	12198 May 14 05:30	2°♉39'21	
	12198 Jun 05 08:41	0°♊	
	12198 Jun 29 10:28	0°♋	
	12198 Jul 23 09:47	0°♌	
morning set	12198 Jul 29 22:42	8°♌11'12	
	12198 Aug 16 08:55	0°♍	
asc. node	12198 Sep 03 20:57	23°♍07'14	
superior conj	12198 Sep 07 07:10	27°♍23'52	0°08'22
minimum elong	12198 Sep 07 05:11	27°♍17'39	0°08'08
behind sun begin	12198 Sep 06 07:45	26°♍10'47	
behind sun end	12198 Sep 08 02:36	28°♍24'31	
	12198 Sep 09 09:13	0°♎	
max. Earth dist.	12198 Sep 09 14:05	0°♎15'12	1.71995 AU
	12198 Oct 03 11:24	0°♏	
evening rise	12198 Oct 15 10:30	14°♏51'08	
	12198 Oct 27 16:11	0°♐	
	12198 Nov 21 01:00	0°♑	
	12198 Dec 15 15:34	0°♒	
desc. node	12198 Dec 24 13:22	10°♒46'17	
	12199 Jan 09 13:26	0°♓	
	12199 Feb 03 20:08	0°♈	
	12199 Mar 01 15:43	0°♉	
	12199 Mar 28 13:49	0°♊	
evening max el	12199 Apr 13 12:02	16°♊31'34	46°32'25
asc. node	12199 Apr 16 12:15	19°♊28'49	
	12199 Apr 27 22:08	0°♋	
greatest brilliancy	12199 May 23 22:47	16°♋53'19	-4.9m
retrograde	12199 Jun 02 13:08	18°♋37'12	
evening set	12199 Jun 20 08:51	12°♋32'10	
inferior conj	12199 Jun 23 04:05	10°♋49'44	8°46'37
minimum elong	12199 Jun 23 10:54	10°♋39'14	8°45'04
min. Earth dist.	12199 Jun 23 13:28	10°♋35'18	0.27205 AU
morning rise	12199 Jun 26 12:56	8°♋47'01	
direct	12199 Jul 13 22:34	2°♋58'38	
greatest brilliancy	12199 Jul 23 20:49	4°♋50'42	-4.9m
desc. node	12199 Aug 06 14:06	12°♋15'58	
	12199 Aug 27 15:34	0°♌	
morning max el	12199 Sep 02 07:10	5°♌30'56	46°43'55
	12199 Sep 25 12:11	0°♍	
	12199 Oct 22 00:39	0°♎	
	12199 Nov 16 15:15	0°♏	
asc. node	12199 Nov 27 12:08	12°♏56'08	
	12199 Dec 11 17:35	0°♐	
	12200 Jan 05 11:43	0°♑	
	12200 Jan 30 00:22	0°♒	
	12200 Feb 23 09:25	0°♓	
morning set	12200 Mar 01 04:11	7°♓08'11	
desc. node	12200 Mar 19 03:44	29°♓22'53	
	12200 Mar 19 15:43	0°♈	
max. Earth dist.	12200 Apr 05 21:18	21°♈23'40	1.72239 AU
superior conj	12200 Apr 09 01:28	25°♈20'30	-0°48'00
minimum elong	12200 Apr 08 15:21	24°♈49'03	0°47'52
	12200 Apr 12 19:16	0°♉	
	12200 May 06 20:12	0°♊	
evening rise	12200 May 18 10:31	14°♊30'24	
	12200 May 30 19:33	0°♋	
	12200 Jun 23 19:12	0°♌	
asc. node	12200 Jul 09 19:43	19°♌58'19	
	12200 Jul 17 21:24	0°♍	
	12200 Aug 11 04:42	0°♎	
	12200 Sep 04 20:40	0°♏	
	12200 Sep 30 04:10	0°♐	
	12200 Oct 26 18:03	0°♑	
desc. node	12200 Oct 29 17:02	3°♑11'44	
evening max el	12200 Nov 18 13:44	23°♑32'49	45°54'42
	12200 Nov 25 11:04	0°♒	
greatest brilliancy	12200 Dec 27 15:32	21°♒52'21	-4.7m
retrograde	12201 Jan 06 11:06	23°♒36'49	
evening set	12201 Jan 22 18:50	18°♒31'11	
inferior conj	12201 Jan 27 19:36	15°♒26'38	-5°16'17
minimum elong	12201 Jan 28 05:20	15°♒11'20	5°13'15
min. Earth dist.	12201 Jan 28 08:32	15°♒06'18	0.28646 AU
morning rise	12201 Feb 02 15:34	11°♒54'29	
direct	12201 Feb 18 04:51	7°♒13'00	
asc. node	12201 Feb 19 19:06	7°♒15'59	
greatest brilliancy	12201 Mar 01 02:31	9°♒24'09	-4.8m
	12201 Mar 30 16:31	0°♓	
morning max el	12201 Apr 08 20:41	8°♓44'54	46°15'35
	12201 Apr 29 03:13	0°♈	
	12201 May 25 12:20	0°♉	
desc. node	12201 Jun 11 18:19	20°♉26'39	
	12201 Jun 19 16:57	0°♊	
	12201 Jul 14 07:26	0°♋	
	12201 Aug 07 15:02	0°♌	
	12201 Aug 31 20:00	0°♍	

	12201 Sep 25 00:25	0°♎	
asc. node	12201 Oct 02 11:01	9°♎13'51	
morning set	12201 Oct 11 07:04	20°♎11'22	
	12201 Oct 19 04:59	0°♏	
	12201 Nov 12 10:02	0°♐	
superior conj	12201 Nov 17 20:48	6°♐44'38	1°23'11
minimum elong	12201 Nov 17 15:48	6°♐29'10	1°23'53
max. Earth dist.	12201 Nov 19 15:55	8°♐58'01	1.72928 AU
	12201 Dec 06 16:16	0°♑	
evening rise	12201 Dec 24 18:33	22°♑18'21	
	12201 Dec 31 00:38	0°♒	
desc. node	12202 Jan 22 02:06	27°♒03'56	
	12202 Jan 24 11:38	0°♓	
	12202 Feb 18 01:00	0°♈	
	12202 Mar 14 16:26	0°♉	
	12202 Apr 08 11:12	0°♊	
	12202 May 03 13:50	0°♋	
asc. node	12202 May 14 22:17	13°♋18'59	
	12202 May 29 11:06	0°♌	
	12202 Jun 26 07:55	0°♍	
evening max el	12202 Jun 26 12:26	0°♍11'21	46°48'50
	12202 Aug 03 13:15	0°♎	
greatest brilliancy	12202 Aug 05 05:43	0°♎40'55	-4.9m
retrograde	12202 Aug 15 20:01	2°♎46'39	
	12202 Aug 27 15:02	30°℞♍	
evening set	12202 Aug 30 11:13	28°♍35'05	
desc. node	12202 Sep 03 23:49	25°♍57'57	
inferior conj	12202 Sep 05 17:58	24°♍53'26	-0°27'10
minimum elong	12202 Sep 05 16:54	24°♍55'04	0°26'58
min. Earth dist.	12202 Sep 05 08:10	25°♍08'29	0.27269 AU
morning rise	12202 Sep 11 23:05	21°♍14'50	
direct	12202 Sep 26 13:38	17°♍06'42	
greatest brilliancy	12202 Oct 06 07:12	18°♍50'28	-4.8m
	12202 Oct 25 15:07	0°♎	
morning max el	12202 Nov 14 17:23	17°♎33'59	45°59'23
	12202 Nov 27 03:12	0°♏	
	12202 Dec 24 17:57	0°♐	
asc. node	12202 Dec 26 00:19	1°♐25'41	
	12203 Jan 19 18:27	0°♑	
	12203 Feb 13 23:41	0°♒	
	12203 Mar 10 17:45	0°♓	
	12203 Apr 04 04:34	0°♈	
desc. node	12203 Apr 16 17:50	15°♈30'58	
	12203 Apr 28 09:55	0°♉	
morning set	12203 May 14 07:13	19°♉48'01	
	12203 May 22 11:00	0°♊	
	12203 Jun 15 09:17	0°♋	
superior conj	12203 Jun 23 11:46	10°♋10'36	-1°23'10
minimum elong	12203 Jun 23 18:52	10°♋32'57	1°23'56
max. Earth dist.	12203 Jun 22 18:06	9°♋15'11	1.71375 AU
	12203 Jul 09 06:38	0°♌	
	12203 Aug 02 04:55	0°♍	
evening rise	12203 Aug 02 19:38	0°♍46'02	
asc. node	12203 Aug 07 08:54	6°♍27'46	
	12203 Aug 26 05:35	0°♎	
	12203 Sep 19 10:08	0°♏	
	12203 Oct 13 20:42	0°♐	
	12203 Nov 07 16:49	0°♑	
desc. node	12203 Nov 27 03:42	23°♑00'21	
	12203 Dec 03 03:55	0°♒	
	12203 Dec 29 15:21	0°♓	
	12204 Jan 27 04:45	0°♈	
evening max el	12204 Jan 29 16:31	2°♈25'34	45°58'38
	12204 Mar 05 17:58	0°♉	
greatest brilliancy	12204 Mar 09 01:02	1°♉18'54	-4.8m
retrograde	12204 Mar 18 22:20	3°♉07'56	
asc. node	12204 Mar 19 04:42	3°♉07'51	
	12204 Mar 31 11:01	30°℞♈	
evening set	12204 Apr 02 23:22	28°♈42'05	
inferior conj	12204 Apr 08 20:49	25°♈11'20	4°57'51
minimum elong	12204 Apr 08 11:01	25°♈26'32	4°54'56
min. Earth dist.	12204 Apr 08 22:02	25°♈09'25	0.27720 AU
morning rise	12204 Apr 13 22:19	22°♈07'24	
direct	12204 Apr 29 20:03	17°♈08'37	
greatest brilliancy	12204 May 10 02:54	19°♈07'31	-4.9m
	12204 May 28 09:32	0°♉	
morning max el	12204 Jun 19 05:46	19°♉46'11	46°54'59
	12204 Jun 29 02:52	0°♊	
desc. node	12204 Jul 09 05:48	10°♊59'30	
	12204 Jul 26 00:45	0°♋	
	12204 Aug 20 12:49	0°♌	
	12204 Sep 14 11:12	0°♍	
	12204 Oct 09 03:30	0°♎	
asc. node	12204 Oct 30 00:55	25°♎31'59	
	12204 Nov 02 16:25	0°♏	
	12204 Nov 27 02:48	0°♐	
morning set	12204 Dec 19 19:48	27°♐58'02	
	12204 Dec 21 11:22	0°♑	
	12205 Jan 14 19:03	0°♒	
superior conj	12205 Jan 25 14:38	13°♒20'46	0°53'51
minimum elong	12205 Jan 26 00:16	13°♒50'28	0°54'10
max. Earth dist.	12205 Jan 25 06:57	12°♒57'02	1.73137 AU
	12205 Feb 08 02:33	0°♓	
desc. node	12205 Feb 18 15:34	13°♓00'33	
	12205 Mar 04 09:47	0°♈	
evening rise	12205 Mar 04 14:34	0°♈14'47	
	12205 Mar 28 16:09	0°♉	
	12205 Apr 21 21:40	0°♊	
	12205 May 16 03:39	0°♋	
	12205 Jun 09 13:06	0°♌	
asc. node	12205 Jun 11 09:26	2°♌15'29	
	12205 Jul 04 06:42	0°♍	
	12205 Jul 29 16:30	0°♎	
	12205 Aug 25 13:40	0°♏	
evening max el	12205 Sep 06 01:41	11°♏51'38	46°25'09
	12205 Sep 26 04:09	0°♐	
desc. node	12205 Oct 01 09:19	3°♐53'00	
greatest brilliancy	12205 Oct 15 03:38	11°♐29'35	-4.8m
retrograde	12205 Oct 25 23:57	13°♐39'07	
evening set	12205 Nov 12 17:20	7°♐40'45	
inferior conj	12205 Nov 16 10:29	5°♐23'27	-8°27'23
minimum elong	12205 Nov 16 04:56	5°♐32'07	8°26'10
min. Earth dist.	12205 Nov 15 20:13	5°♐45'43	0.28743 AU
morning rise	12205 Nov 19 16:42	3°♐22'57	
	12205 Nov 25 23:52	30°℞♏	
direct	12205 Dec 07 17:58	27°♏15'56	
greatest brilliancy	12205 Dec 17 15:21	29°♏02'50	-4.7m
	12205 Dec 20 03:24	0°♐	
asc. node	12206 Jan 22 11:04	24°♐23'21	
morning max el	12206 Jan 25 17:02	27°♐29'28	45°43'10
	12206 Jan 28 06:42	0°♑	
	12206 Feb 25 14:26	0°♒	
	12206 Mar 23 17:46	0°♓	
	12206 Apr 17 21:59	0°♈	
	12206 May 12 13:08	0°♉	
desc. node	12206 May 14 07:31	2°♉10'10	
	12206 Jun 05 19:56	0°♊	
	12206 Jun 29 21:31	0°♋	
	12206 Jul 23 20:43	0°♌	
morning set	12206 Jul 28 11:16	5°♌46'06	
	12206 Aug 16 19:45	0°♍	

asc. node	12206 Sep 03	22:43	22°♍39'07		
superior conj	12206 Sep 05	20:36	25°♍02'20	0°04'41	
minimum elong	12206 Sep 05	19:30	24°♍58'54	0°04'28	
behind sun begin	12206 Sep 04	19:43	23°♍44'38		
behind sun end	12206 Sep 06	19:18	26°♍13'11		
max. Earth dist.	12206 Sep 08	05:54	28°♍01'11	1.71959 AU	
	12206 Sep 09	19:59	0°♎		
	12206 Oct 03	22:08	0°♏		
evening rise	12206 Oct 14	02:09	12°♏37'33		
	12206 Oct 28	02:58	0°♐		
	12206 Nov 21	11:56	0°♑		
	12206 Dec 16	02:51	0°♒		
desc. node	12206 Dec 24	15:18	10°♒17'40		
	12207 Jan 10	01:16	0°♓		
	12207 Feb 04	08:55	0°♈		
	12207 Mar 02	06:11	0°♉		
	12207 Mar 29	08:04	0°♊		
evening max el	12207 Apr 12	02:10	14°♊11'23	46°31'11	
asc. node	12207 Apr 16	14:17	18°♊35'11		
	12207 Apr 29	06:47	0°♋		
greatest brilliancy	12207 May 22	11:41	14°♋29'28	-4.9m	
retrograde	12207 Jun 01	01:56	16°♋12'54		
evening set	12207 Jun 19	00:21	10°♋04'19		
inferior conj	12207 Jun 21	17:04	8°♋25'21	8°53'32	
minimum elong	12207 Jun 21	23:04	8°♋16'07	8°52'09	
min. Earth dist.	12207 Jun 22	02:00	8°♋11'36	0.27226 AU	
morning rise	12207 Jun 24	21:46	6°♋28'32		
direct	12207 Jul 12	11:59	0°♋34'04		
greatest brilliancy	12207 Jul 22	09:26	2°♋25'13	-4.9m	
desc. node	12207 Aug 06	16:03	10°♋56'28		
	12207 Aug 28	16:23	0°♌		
morning max el	12207 Aug 31	20:23	3°♌07'25	46°45'03	
	12207 Sep 26	04:58	0°♍		
	12207 Oct 22	14:34	0°♎		
	12207 Nov 17	03:42	0°♏		
asc. node	12207 Nov 27	14:08	12°♏26'13		
	12207 Dec 12	05:10	0°♐		
	12208 Jan 05	22:47	0°♑		
	12208 Jan 30	11:09	0°♒		
	12208 Feb 23	20:05	0°♓		
morning set	12208 Feb 27	19:41	4°♓55'03		
desc. node	12208 Mar 18	05:37	28°♓55'48		
	12208 Mar 19	02:20	0°♈		
max. Earth dist.	12208 Apr 03	09:12	18°♈58'33	1.72276 AU	
superior conj	12208 Apr 06	15:09	23°♈00'51	-0°44'54	
minimum elong	12208 Apr 06	05:30	22°♈30'52	0°44'44	
	12208 Apr 12	05:52	0°♉		
	12208 May 06	06:51	0°♊		
evening rise	12208 May 15	23:00	12°♊05'49		
	12208 May 30	06:18	0°♋		
	12208 Jun 23	06:07	0°♌		
asc. node	12208 Jul 08	21:33	19°♌29'34		
	12208 Jul 17	08:36	0°♍		
	12208 Aug 10	16:17	0°♎		
	12208 Sep 04	08:56	0°♏		
	12208 Sep 29	17:42	0°♐		
	12208 Oct 26	10:27	0°♑		
desc. node	12208 Oct 28	19:08	2°♑32'15		
evening max el	12208 Nov 16	03:56	21°♑18'04	45°55'14	
	12208 Nov 25	13:10	0°♒		
greatest brilliancy	12208 Dec 25	07:21	19°♒41'48	-4.7m	
retrograde	12209 Jan 04	01:52	21°♒25'47		
evening set	12209 Jan 20	13:14	16°♒15'55		
inferior conj	12209 Jan 25	11:21	13°♒15'15	-5°32'37	
minimum elong	12209 Jan 25	21:17	12°♒59'38	5°29'35	
min. Earth dist.	12209 Jan 26	00:27	12°♒54'39	0.28679 AU	
morning rise	12209 Jan 31	05:01	9°♒46'01		
direct	12209 Feb 15	20:22	5°♒01'18		
asc. node	12209 Feb 18	21:05	5°♒11'59		
greatest brilliancy	12209 Feb 26	18:47	7°♒12'36	-4.8m	
	12209 Mar 30	17:52	0°♓		
morning max el	12209 Apr 06	10:50	6°♓27'35	46°14'07	
	12209 Apr 28	19:36	0°♈		
	12209 May 25	01:56	0°♉		
desc. node	12209 Jun 10	20:13	19°♉54'25		
	12209 Jun 19	05:16	0°♊		
	12209 Jul 13	19:02	0°♋		
	12209 Aug 07	02:13	0°♌		
	12209 Aug 31	06:53	0°♍		
	12209 Sep 24	11:06	0°♎		
asc. node	12209 Oct 01	12:56	8°♎46'49		
morning set	12209 Oct 08	22:10	17°♎56'33		
	12209 Oct 18	15:31	0°♏		
	12209 Nov 11	20:29	0°♐		
superior conj	12209 Nov 15	13:26	4°♐35'16	1°22'15	
minimum elong	12209 Nov 15	07:46	4°♐17'45	1°22'54	
max. Earth dist.	12209 Nov 17	07:02	6°♐44'00	1.72904 AU	
	12209 Dec 06	02:43	0°♑		
evening rise	12209 Dec 22	10:50	20°♑08'29		
	12209 Dec 30	11:11	0°♒		
desc. node	12210 Jan 21	03:51	26°♒36'31		
	12210 Jan 23	22:22	0°♓		
	12210 Feb 17	12:03	0°♈		
	12210 Mar 14	03:59	0°♉		
	12210 Apr 07	23:30	0°♊		
	12210 May 03	03:22	0°♋		
asc. node	12210 May 14	00:20	12°♋43'18		
	12210 May 29	03:03	0°♌		
evening max el	12210 Jun 24	01:12	27°♌47'21	46°49'06	
	12210 Jun 26	06:26	0°♍		
greatest brilliancy	12210 Aug 02	20:51	28°♍21'11	-4.9m	
	12210 Aug 08	16:23	0°♎		
retrograde	12210 Aug 13	09:39	0°♎26'11		
	12210 Aug 18	00:57	30°℞♍		
evening set	12210 Aug 28	01:32	26°♍13'41		
inferior conj	12210 Sep 03	07:33	22°♍33'35	-0°03'44	
minimum elong	12210 Sep 03	07:24	22°♍33'49	0°03'52	
transit middle	12210 Sep 03	07:24	22°♍33'49	0°03'52	
transit begin	12210 Sep 03	03:26	22°♍39'53		
transit end	12210 Sep 03	11:21	22°♍27'45		
min. Earth dist.	12210 Sep 02	23:05	22°♍46'32	0.27237 AU	
desc. node	12210 Sep 03	01:46	22°♍42'26		
morning rise	12210 Sep 09	13:39	18°♍53'48		
direct	12210 Sep 24	02:26	14°♍46'52		
greatest brilliancy	12210 Oct 03	21:40	16°♍32'11	-4.8m	
	12210 Oct 26	03:33	0°♎		
morning max el	12210 Nov 12	07:25	15°♎17'21	46°00'42	
	12210 Nov 26	21:36	0°♏		
	12210 Dec 24	08:10	0°♐		
asc. node	12210 Dec 25	02:09	0°♐50'55		
	12211 Jan 19	06:55	0°♑		
	12211 Feb 13	11:15	0°♒		
	12211 Mar 10	04:49	0°♓		
	12211 Apr 03	15:21	0°♈		
desc. node	12211 Apr 15	19:43	15°♈03'35		
	12211 Apr 27	20:34	0°♉		
morning set	12211 May 11	18:37	17°♉20'33		
	12211 May 21	21:36	0°♊		
	12211 Jun 14	19:52	0°♋		
max. Earth dist.	12211 Jun 20	01:56	6°♋35'52	1.71380 AU	

superior conj	12211 Jun 20 23:24	7°♋43'15	-1°24'18
minimum elong	12211 Jun 21 05:38	8°♋02'51	1°25'05
	12211 Jul 08 17:12	0°♌	
evening rise	12211 Jul 31 07:49	28°♌20'59	
	12211 Aug 01 15:28	0°♍	
asc. node	12211 Aug 06 10:43	6°♍00'20	
	12211 Aug 25 16:13	0°♎	
	12211 Sep 18 20:56	0°♏	
	12211 Oct 13 07:50	0°♐	
	12211 Nov 07 04:36	0°♑	
desc. node	12211 Nov 26 05:34	22°♑29'09	
	12211 Dec 02 16:51	0°♒	
	12211 Dec 29 06:41	0°♓	
	12212 Jan 27 02:37	0°♈	
evening max el	12212 Jan 27 07:35	0°♈11'59	45°57'57
greatest brilliancy	12212 Mar 06 14:07	29°♈00'06	-4.8m
	12212 Mar 09 22:12	0°♉	
retrograde	12212 Mar 16 12:50	0°♉49'57	
asc. node	12212 Mar 18 06:47	0°♉46'16	
	12212 Mar 22 22:21	30°℞♈	
evening set	12212 Mar 31 11:25	26°♈26'34	
inferior conj	12212 Apr 06 10:57	22°♈52'44	4°38'18
minimum elong	12212 Apr 06 01:36	23°♈07'15	4°35'28
min. Earth dist.	12212 Apr 06 12:09	22°♈50'53	0.27742 AU
morning rise	12212 Apr 11 15:30	19°♈44'43	
direct	12212 Apr 27 10:59	14°♈49'42	
greatest brilliancy	12212 May 07 17:41	16°♈48'55	-4.9m
	12212 May 28 21:51	0°♉	
morning max el	12212 Jun 16 21:01	17°♉28'51	46°54'14
	12212 Jun 28 21:36	0°♊	
desc. node	12212 Jul 08 07:40	10°♊18'06	
	12212 Jul 25 15:26	0°♋	
	12212 Aug 20 01:42	0°♌	
	12212 Sep 13 23:05	0°♍	
	12212 Oct 08 14:45	0°♎	
asc. node	12212 Oct 29 02:51	25°♎04'33	
	12212 Nov 02 03:15	0°♏	
	12212 Nov 26 13:22	0°♐	
morning set	12212 Dec 17 12:58	25°♐50'56	
	12212 Dec 20 21:47	0°♑	
	12213 Jan 14 05:26	0°♒	
superior conj	12213 Jan 23 07:04	11°♒11'13	0°56'26
minimum elong	12213 Jan 23 16:49	11°♒41'19	0°56'47
max. Earth dist.	12213 Jan 23 03:22	10°♒59'49	1.73150 AU
	12213 Feb 07 13:00	0°♓	
desc. node	12213 Feb 17 17:27	12°♓33'59	
evening rise	12213 Mar 02 05:49	28°♓01'02	
	12213 Mar 03 20:21	0°♈	
	12213 Mar 28 02:55	0°♉	
	12213 Apr 21 08:41	0°♊	
	12213 May 15 15:03	0°♋	
	12213 Jun 09 01:03	0°♌	
asc. node	12213 Jun 10 11:17	1°♌44'30	
	12213 Jul 03 19:33	0°♍	
	12213 Jul 29 07:02	0°♎	
	12213 Aug 25 08:11	0°♏	
evening max el	12213 Sep 03 17:53	9°♏38'59	46°26'29
	12213 Sep 26 17:30	0°♐	
desc. node	12213 Sep 30 11:27	2°♐39'32	
greatest brilliancy	12213 Oct 12 18:27	9°♐16'40	-4.8m
retrograde	12213 Oct 23 16:14	11°♐27'09	
evening set	12213 Nov 10 06:02	5°♐33'40	
min. Earth dist.	12213 Nov 13 10:28	3°♐36'14	0.28702 AU
inferior conj	12213 Nov 14 02:05	3°♐11'52	-8°21'35
minimum elong	12213 Nov 13 19:52	3°♐21'34	8°20'16
morning rise	12213 Nov 17 09:57	1°♐08'58	
	12213 Nov 19 09:13	30°℞♏	
direct	12213 Dec 05 09:52	25°♏05'20	
greatest brilliancy	12213 Dec 15 04:51	26°♏50'23	-4.7m
	12213 Dec 22 08:43	0°♐	
asc. node	12214 Jan 21 13:03	23°♐33'55	
morning max el	12214 Jan 23 08:14	25°♐17'34	45°42'40
	12214 Jan 28 03:08	0°♑	
	12214 Feb 25 05:19	0°♒	
	12214 Mar 23 06:40	0°♓	
	12214 Apr 17 09:55	0°♈	
	12214 May 12 00:33	0°♉	
desc. node	12214 May 13 09:25	1°♉40'58	
	12214 Jun 05 07:02	0°♊	
	12214 Jun 29 08:25	0°♋	
	12214 Jul 23 07:28	0°♌	
morning set	12214 Jul 25 23:44	3°♌21'14	
	12214 Aug 16 06:25	0°♍	
superior conj	12214 Sep 03 10:03	22°♍41'19	0°00'58
minimum elong	12214 Sep 03 09:53	22°♍40'46	0°00'46
behind sun begin	12214 Sep 02 09:21	21°♍24'09	
behind sun end	12214 Sep 04 10:25	23°♍57'23	
asc. node	12214 Sep 03 00:41	22°♍12'00	
max. Earth dist.	12214 Sep 05 21:19	25°♍46'19	1.71922 AU
	12214 Sep 09 06:37	0°♎	
	12214 Oct 03 08:43	0°♏	
evening rise	12214 Oct 11 17:54	10°♏24'38	
	12214 Oct 27 13:36	0°♐	
	12214 Nov 20 22:43	0°♑	
	12214 Dec 15 13:59	0°♒	
desc. node	12214 Dec 23 17:09	9°♒49'13	
	12215 Jan 09 13:01	0°♓	
	12215 Feb 03 21:42	0°♈	
	12215 Mar 01 20:51	0°♉	
	12215 Mar 29 02:55	0°♊	
evening max el	12215 Apr 09 15:21	11°♊48'28	46°29'50
asc. node	12215 Apr 15 16:20	17°♊39'57	
	12215 Apr 29 18:47	0°♋	
greatest brilliancy	12215 May 20 01:09	12°♋05'37	-4.9m
retrograde	12215 May 29 14:14	13°♋48'04	
evening set	12215 Jun 16 15:27	7°♋36'26	
inferior conj	12215 Jun 19 06:00	6°♋00'37	8°59'30
minimum elong	12215 Jun 19 11:07	5°♋52'43	8°58'15
min. Earth dist.	12215 Jun 19 14:48	5°♋47'01	0.27242 AU
morning rise	12215 Jun 22 06:45	4°♋09'23	
	12215 Jun 30 11:32	30°℞♊	
direct	12215 Jul 10 00:45	28°♊08'59	
	12215 Jul 19 22:33	0°♋	
greatest brilliancy	12215 Jul 19 22:28	29°♊59'56	-4.9m
desc. node	12215 Aug 05 18:06	9°♋39'28	
	12215 Aug 28 16:02	0°♌	
morning max el	12215 Aug 29 08:41	0°♌41'26	46°46'18
	12215 Sep 25 21:23	0°♍	
	12215 Oct 22 04:17	0°♎	
	12215 Nov 16 16:02	0°♏	
asc. node	12215 Nov 26 15:55	11°♏55'46	
	12215 Dec 11 16:40	0°♐	
	12216 Jan 05 09:48	0°♑	
	12216 Jan 29 21:55	0°♒	
	12216 Feb 23 06:45	0°♓	
morning set	12216 Feb 25 11:29	2°♓42'45	
desc. node	12216 Mar 17 07:33	28°♓28'48	
	12216 Mar 18 12:59	0°♈	
max. Earth dist.	12216 Mar 31 22:43	16°♈38'13	1.72324 AU
superior conj	12216 Apr 04 04:52	20°♈41'02	-0°41'43
minimum elong	12216 Apr 03 19:44	20°♈12'39	0°41'31

	12216 Apr 11 16:36	0°♉	
	12216 May 05 17:41	0°♊	
evening rise	12216 May 13 11:16	9°♊40'01	
	12216 May 29 17:16	0°♋	
	12216 Jun 22 17:16	0°♌	
asc. node	12216 Jul 07 23:25	19°♌00'20	
	12216 Jul 16 19:59	0°♍	
	12216 Aug 10 04:03	0°♎	
	12216 Sep 03 21:23	0°♏	
	12216 Sep 29 07:29	0°♐	
	12216 Oct 26 03:18	0°♑	
desc. node	12216 Oct 27 21:03	1°♑51'28	
evening max el	12216 Nov 13 17:49	19°♑02'18	45°55'56
	12216 Nov 25 16:56	0°♒	
greatest brilliancy	12216 Dec 22 23:04	17°♒31'20	-4.7m
retrograde	12217 Jan 01 17:16	19°♒15'28	
evening set	12217 Jan 18 07:54	14°♒00'59	
inferior conj	12217 Jan 23 03:21	11°♒04'23	-5°48'16
minimum elong	12217 Jan 23 13:25	10°♒48'32	5°45'15
min. Earth dist.	12217 Jan 23 16:30	10°♒43'42	0.28711 AU
morning rise	12217 Jan 28 18:37	7°♒38'30	
direct	12217 Feb 13 11:57	2°♒50'02	
asc. node	12217 Feb 17 23:07	3°♒12'57	
greatest brilliancy	12217 Feb 24 11:22	5°♒01'52	-4.8m
	12217 Mar 30 18:00	0°♓	
morning max el	12217 Apr 04 01:38	4°♓11'47	46°12'33
	12217 Apr 28 11:51	0°♈	
	12217 May 24 15:39	0°♉	
desc. node	12217 Jun 09 22:04	19°♉21'11	
	12217 Jun 18 17:50	0°♊	
	12217 Jul 13 06:59	0°♋	
	12217 Aug 06 13:44	0°♌	
	12217 Aug 30 18:05	0°♍	
	12217 Sep 23 22:03	0°♎	
asc. node	12217 Sep 30 14:48	8°♎18'47	
morning set	12217 Oct 06 13:04	15°♎40'13	
	12217 Oct 18 02:18	0°♏	
	12217 Nov 11 07:11	0°♐	
superior conj	12217 Nov 13 06:05	2°♐25'10	1°21'12
minimum elong	12217 Nov 12 23:47	2°♐05'40	1°21'49
max. Earth dist.	12217 Nov 14 22:34	4°♐30'29	1.72879 AU
	12217 Dec 05 13:26	0°♑	
evening rise	12217 Dec 20 03:27	17°♑58'50	
	12217 Dec 29 21:59	0°♒	
desc. node	12218 Jan 20 05:48	26°♒08'59	
	12218 Jan 23 09:22	0°♓	
	12218 Feb 16 23:22	0°♈	
	12218 Mar 13 15:48	0°♉	
	12218 Apr 07 12:07	0°♊	
	12218 May 02 17:21	0°♋	
asc. node	12218 May 13 02:10	12°♋05'39	
	12218 May 28 19:43	0°♌	
evening max el	12218 Jun 21 14:30	25°♌23'16	46°49'09
	12218 Jun 26 06:39	0°♍	
greatest brilliancy	12218 Jul 31 11:21	25°♍58'30	-4.9m
retrograde	12218 Aug 10 23:39	28°♍03'15	
evening set	12218 Aug 25 15:48	23°♍49'29	
inferior conj	12218 Aug 31 20:49	20°♍11'07	0°20'03
minimum elong	12218 Aug 31 21:35	20°♍09'56	0°19'33
min. Earth dist.	12218 Aug 31 13:28	20°♍22'21	0.27205 AU
desc. node	12218 Sep 02 03:52	19°♍23'46	
morning rise	12218 Sep 07 03:45	16°♍30'40	
direct	12218 Sep 21 15:18	12°♍24'31	
greatest brilliancy	12218 Oct 01 11:22	14°♍10'57	-4.8m
	12218 Oct 26 13:27	0°♎	
morning max el	12218 Nov 09 22:06	13°♎00'54	46°02'10
	12218 Nov 26 15:59	0°♏	
	12218 Dec 23 22:36	0°♐	
asc. node	12218 Dec 24 04:08	0°♐15'42	
	12219 Jan 18 19:38	0°♑	
	12219 Feb 12 23:06	0°♒	
	12219 Mar 09 16:10	0°♓	
	12219 Apr 03 02:26	0°♈	
desc. node	12219 Apr 14 21:37	14°♈35'16	
	12219 Apr 27 07:32	0°♉	
morning set	12219 May 09 06:37	14°♉54'06	
	12219 May 21 08:32	0°♊	
	12219 Jun 14 06:48	0°♋	
max. Earth dist.	12219 Jun 17 12:32	4°♋04'04	1.71394 AU
superior conj	12219 Jun 18 11:11	5°♋15'10	-1°25'16
minimum elong	12219 Jun 18 16:29	5°♋31'47	1°26'05
	12219 Jul 08 04:10	0°♌	
evening rise	12219 Jul 28 19:46	25°♌53'39	
	12219 Aug 01 02:30	0°♍	
asc. node	12219 Aug 05 12:42	5°♍32'00	
	12219 Aug 25 03:22	0°♎	
	12219 Sep 18 08:16	0°♏	
	12219 Oct 12 19:30	0°♐	
	12219 Nov 06 16:52	0°♑	
desc. node	12219 Nov 25 07:29	21°♑56'35	
	12219 Dec 02 06:20	0°♒	
	12219 Dec 28 22:43	0°♓	
evening max el	12220 Jan 24 23:28	27°♓59'27	45°57'19
	12220 Jan 27 01:51	0°♈	
greatest brilliancy	12220 Mar 04 03:52	26°♈41'43	-4.8m
retrograde	12220 Mar 14 03:30	28°♈31'44	
asc. node	12220 Mar 17 08:48	28°♈19'11	
evening set	12220 Mar 29 00:04	24°♈10'53	
inferior conj	12220 Apr 04 01:24	20°♈34'09	4°18'24
minimum elong	12220 Apr 03 16:32	20°♈47'55	4°15'42
min. Earth dist.	12220 Apr 04 02:36	20°♈32'16	0.27760 AU
morning rise	12220 Apr 09 08:48	17°♈22'04	
direct	12220 Apr 25 02:16	12°♈31'03	
greatest brilliancy	12220 May 05 08:21	14°♈29'53	-4.9m
	12220 May 29 07:09	0°♉	
morning max el	12220 Jun 14 12:00	15°♉10'14	46°53'21
	12220 Jun 28 16:07	0°♊	
desc. node	12220 Jul 07 09:46	9°♊37'00	
	12220 Jul 25 06:15	0°♋	
	12220 Aug 19 14:54	0°♌	
	12220 Sep 13 11:22	0°♍	
	12220 Oct 08 02:28	0°♎	
asc. node	12220 Oct 28 04:40	24°♎35'18	
	12220 Nov 01 14:33	0°♏	
	12220 Nov 26 00:22	0°♐	
morning set	12220 Dec 15 06:01	23°♐42'05	
	12220 Dec 20 08:36	0°♑	
	12221 Jan 13 16:12	0°♒	
superior conj	12221 Jan 20 23:35	9°♒00'53	0°58'56
minimum elong	12221 Jan 21 09:23	9°♒31'08	0°59'18
max. Earth dist.	12221 Jan 20 23:12	8°♒59'43	1.73157 AU
	12221 Feb 06 23:48	0°♓	
desc. node	12221 Feb 16 19:23	12°♓06'30	
evening rise	12221 Feb 27 21:17	25°♓46'54	
	12221 Mar 03 07:18	0°♈	
	12221 Mar 27 14:03	0°♉	
	12221 Apr 20 20:04	0°♊	
	12221 May 15 02:46	0°♋	
	12221 Jun 08 13:19	0°♌	
asc. node	12221 Jun 09 13:15	1°♌12'59	
	12221 Jul 03 08:46	0°♍	

	12221 Jul 28 22:04	0°♎	
	12221 Aug 25 03:39	0°♏	
evening max el	12221 Sep 01 09:38	7°♏23'47	46°27'28
	12221 Sep 27 12:28	0°♐	
desc. node	12221 Sep 29 13:22	1°♐21'46	
greatest brilliancy	12221 Oct 10 09:52	7°♐02'33	-4.8m
retrograde	12221 Oct 21 07:52	9°♐13'02	
evening set	12221 Nov 07 18:22	3°♐25'02	
min. Earth dist.	12221 Nov 11 01:00	1°♐24'15	0.28659 AU
inferior conj	12221 Nov 11 17:32	0°♐58'26	-8°14'53
minimum elong	12221 Nov 11 10:40	1°♐09'09	8°13'28
	12221 Nov 13 07:04	30°℞♏	
morning rise	12221 Nov 15 03:14	28°♏52'40	
direct	12221 Dec 03 01:20	22°♏52'54	
greatest brilliancy	12221 Dec 12 18:35	24°♏36'20	-4.7m
	12221 Dec 23 20:16	0°♐	
asc. node	12222 Jan 20 15:08	22°♐44'16	
morning max el	12222 Jan 20 22:29	23°♐02'00	45°42'24
	12222 Jan 27 23:23	0°♑	
	12222 Feb 24 20:21	0°♒	
	12222 Mar 22 19:44	0°♓	
	12222 Apr 16 22:04	0°♈	
	12222 May 11 12:11	0°♉	
desc. node	12222 May 12 11:11	1°♉10'44	
	12222 Jun 04 18:20	0°♊	
	12222 Jun 28 19:31	0°♋	
	12222 Jul 22 18:26	0°♌	
morning set	12222 Jul 23 12:30	0°♌56'36	
	12222 Aug 15 17:17	0°♍	
superior conj	12222 Aug 31 23:46	20°♍20'31	-0°02'45
minimum elong	12222 Sep 01 00:30	20°♍22'47	0°02'56
behind sun begin	12222 Aug 31 00:09	19°♍06'43	
behind sun end	12222 Sep 02 00:51	21°♍38'49	
asc. node	12222 Sep 02 02:30	21°♍43'59	
max. Earth dist.	12222 Sep 03 11:32	23°♍27'05	1.71886 AU
	12222 Sep 08 17:25	0°♎	
	12222 Oct 02 19:32	0°♏	
evening rise	12222 Oct 09 09:39	8°♏10'58	
	12222 Oct 27 00:29	0°♐	
	12222 Nov 20 09:49	0°♑	
	12222 Dec 15 01:26	0°♒	
desc. node	12222 Dec 22 19:07	9°♒20'09	
	12223 Jan 09 01:06	0°♓	
	12223 Feb 03 10:50	0°♈	
	12223 Mar 01 11:55	0°♉	
	12223 Mar 28 22:29	0°♊	
evening max el	12223 Apr 07 03:51	9°♊23'35	46°28'35
asc. node	12223 Apr 14 18:13	16°♊42'48	
	12223 Apr 30 11:00	0°♋	
greatest brilliancy	12223 May 17 14:55	9°♋42'04	-4.9m
retrograde	12223 May 27 02:39	11°♋23'43	
evening set	12223 Jun 14 06:17	5°♋09'27	
inferior conj	12223 Jun 16 19:08	3°♋36'11	9°04'20
minimum elong	12223 Jun 16 23:20	3°♋29'41	9°03'13
min. Earth dist.	12223 Jun 17 03:58	3°♋22'32	0.27260 AU
morning rise	12223 Jun 19 16:22	1°♋50'08	
	12223 Jun 22 20:51	30°℞♊	
direct	12223 Jul 07 13:21	25°♊43'59	
greatest brilliancy	12223 Jul 17 12:07	27°♊35'28	-4.9m
	12223 Jul 22 23:44	0°♋	
desc. node	12223 Aug 04 20:05	8°♋24'37	
morning max el	12223 Aug 26 21:21	28°♋16'09	46°47'38
	12223 Aug 28 14:43	0°♌	
	12223 Sep 25 13:33	0°♍	
	12223 Oct 21 17:56	0°♎	
	12223 Nov 16 04:22	0°♏	
asc. node	12223 Nov 25 17:52	11°♏25'36	
	12223 Dec 11 04:16	0°♐	
	12224 Jan 04 20:58	0°♑	
	12224 Jan 29 08:50	0°♒	
	12224 Feb 22 17:32	0°♓	
morning set	12224 Feb 23 03:12	0°♓29'48	
desc. node	12224 Mar 16 09:19	28°♓00'57	
	12224 Mar 17 23:45	0°♈	
max. Earth dist.	12224 Mar 29 14:43	14°♈25'24	1.72367 AU
superior conj	12224 Apr 01 18:32	18°♈20'55	-0°38'26
minimum elong	12224 Apr 01 09:58	17°♈54'17	0°38'15
	12224 Apr 11 03:22	0°♉	
	12224 May 05 04:32	0°♊	
evening rise	12224 May 10 23:44	7°♊14'55	
	12224 May 29 04:16	0°♋	
	12224 Jun 22 04:28	0°♌	
asc. node	12224 Jul 07 01:24	18°♌31'20	
	12224 Jul 16 07:26	0°♍	
	12224 Aug 09 15:53	0°♎	
	12224 Sep 03 09:54	0°♏	
	12224 Sep 28 21:23	0°♐	
	12224 Oct 25 20:29	0°♑	
desc. node	12224 Oct 26 23:00	1°♑10'20	
evening max el	12224 Nov 11 07:57	16°♑47'15	45°56'34
	12224 Nov 25 22:42	0°♒	
greatest brilliancy	12224 Dec 20 14:01	15°♒19'42	-4.7m
retrograde	12224 Dec 30 08:57	17°♒04'42	
evening set	12225 Jan 16 02:26	11°♒45'22	
inferior conj	12225 Jan 20 19:10	8°♒52'55	-6°03'22
minimum elong	12225 Jan 21 05:21	8°♒36'56	6°00'24
min. Earth dist.	12225 Jan 21 08:09	8°♒32'33	0.28747 AU
morning rise	12225 Jan 26 07:57	5°♒30'47	
direct	12225 Feb 11 03:38	0°♒38'06	
asc. node	12225 Feb 17 01:05	1°♒17'42	
greatest brilliancy	12225 Feb 22 03:42	2°♒50'33	-4.8m
	12225 Mar 30 17:07	0°♓	
morning max el	12225 Apr 01 17:22	1°♓58'09	46°11'07
	12225 Apr 28 03:49	0°♈	
	12225 May 24 05:12	0°♉	
desc. node	12225 Jun 09 00:08	18°♉49'03	
	12225 Jun 18 06:14	0°♊	
	12225 Jul 12 18:44	0°♋	
	12225 Aug 06 01:06	0°♌	
	12225 Aug 30 05:09	0°♍	
	12225 Sep 23 08:52	0°♎	
asc. node	12225 Sep 29 16:35	7°♎50'53	
morning set	12225 Oct 04 04:07	13°♎24'36	
	12225 Oct 17 12:56	0°♏	
superior conj	12225 Nov 10 22:51	0°♐15'49	1°20'01
minimum elong	12225 Nov 10 15:58	29°♏54'30	1°20'37
	12225 Nov 10 17:44	0°♐	
max. Earth dist.	12225 Nov 12 15:55	2°♐22'58	1.72855 AU
	12225 Dec 04 23:59	0°♑	
evening rise	12225 Dec 17 20:16	15°♑50'15	
	12225 Dec 29 08:39	0°♒	
desc. node	12226 Jan 19 07:46	25°♒41'48	
	12226 Jan 22 20:15	0°♓	
	12226 Feb 16 10:37	0°♈	
	12226 Mar 13 03:35	0°♉	
	12226 Apr 07 00:43	0°♊	
	12226 May 02 07:20	0°♋	
asc. node	12226 May 12 04:12	11°♋28'48	
	12226 May 28 12:30	0°♌	
evening max el	12226 Jun 19 04:37	23°♌01'59	46°49'17
	12226 Jun 26 07:47	0°♍	

greatest brilliancy	12226 Jul	29	01:31	23°♍36'11	-4.9m
retrograde	12226 Aug	08	14:00	25°♍40'49	
evening set	12226 Aug	23	06:17	21°♍25'38	
inferior conj	12226 Aug	29	10:02	17°♍49'02	0°43'50
minimum elong	12226 Aug	29	11:44	17°♍46'27	0°43'00
min. Earth dist.	12226 Aug	29	03:32	17°♍58'57	0.27176 AU
desc. node	12226 Sep	01	05:50	16°♍06'34	
morning rise	12226 Sep	04	17:36	14°♍08'12	
direct	12226 Sep	19	04:37	10°♍02'40	
greatest brilliancy	12226 Sep	29	00:30	11°♍49'31	-4.8m
	12226 Oct	26	20:22	0°♎	
morning max el	12226 Nov	07	13:10	10°♎46'04	46°03'40
	12226 Nov	26	09:38	0°♏	
asc. node	12226 Dec	23	06:09	29°♏41'38	
	12226 Dec	23	12:35	0°♐	
	12227 Jan	18	08:00	0°♑	
	12227 Feb	12	10:38	0°♒	
	12227 Mar	09	03:16	0°♓	
	12227 Apr	02	13:19	0°♈	
desc. node	12227 Apr	13	23:27	14°♈07'25	
	12227 Apr	26	18:19	0°♉	
morning set	12227 May	06	18:21	12°♉27'28	
	12227 May	20	19:16	0°♊	
	12227 Jun	13	17:30	0°♋	
max. Earth dist.	12227 Jun	14	22:38	1°♋31'29	1.71403 AU
superior conj	12227 Jun	15	22:40	2°♋46'55	-1°26'03
minimum elong	12227 Jun	16	02:59	3°♋00'27	1°26'54
	12227 Jul	07	14:51	0°♌	
evening rise	12227 Jul	26	07:28	23°♌26'24	
	12227 Jul	31	13:14	0°♍	
asc. node	12227 Aug	04	14:29	5°♍04'01	
	12227 Aug	24	14:13	0°♎	
	12227 Sep	17	19:19	0°♏	
	12227 Oct	12	06:54	0°♐	
	12227 Nov	06	04:54	0°♑	
desc. node	12227 Nov	24	09:33	21°♑25'15	
	12227 Dec	01	19:35	0°♒	
	12227 Dec	28	14:38	0°♓	
evening max el	12228 Jan	22	15:03	25°♓47'18	45°56'35
	12228 Jan	27	01:44	0°♈	
greatest brilliancy	12228 Mar	01	18:01	24°♈24'46	-4.8m
retrograde	12228 Mar	11	17:30	26°♈14'11	
asc. node	12228 Mar	16	10:42	25°♈47'20	
evening set	12228 Mar	26	12:50	21°♈55'44	
inferior conj	12228 Apr	01	15:46	18°♈16'24	3°58'05
minimum elong	12228 Apr	01	07:27	18°♈29'20	3°55'31
min. Earth dist.	12228 Apr	01	17:21	18°♈13'56	0.27782 AU
morning rise	12228 Apr	07	01:51	15°♈00'12	
direct	12228 Apr	22	17:17	10°♈13'08	
greatest brilliancy	12228 May	02	23:26	12°♈11'51	-4.8m
	12228 May	29	13:38	0°♉	
morning max el	12228 Jun	12	02:05	12°♉49'57	46°52'23
	12228 Jun	28	09:57	0°♊	
desc. node	12228 Jul	06	11:42	8°♊56'32	
	12228 Jul	24	20:37	0°♋	
	12228 Aug	19	03:40	0°♌	
	12228 Sep	12	23:14	0°♍	
	12228 Oct	07	13:45	0°♎	
asc. node	12228 Oct	27	06:34	24°♎07'31	
	12228 Nov	01	01:27	0°♏	
	12228 Nov	25	11:00	0°♐	
morning set	12228 Dec	12	23:03	21°♐34'18	
	12228 Dec	19	19:04	0°♑	
	12229 Jan	13	02:36	0°♒	
superior conj	12229 Jan	18	16:18	6°♒52'20	1°01'19
minimum elong	12229 Jan	19	02:07	7°♒22'35	1°01'43
max. Earth dist.	12229 Jan	18	17:24	6°♒55'44	1.73161 AU
	12229 Feb	06	10:14	0°♓	
desc. node	12229 Feb	15	21:10	11°♓39'41	
evening rise	12229 Feb	25	12:53	23°♓34'22	
	12229 Mar	02	17:51	0°♈	
	12229 Mar	27	00:49	0°♉	
	12229 Apr	20	07:07	0°♊	
	12229 May	14	14:13	0°♋	
	12229 Jun	08	01:23	0°♌	
asc. node	12229 Jun	08	15:13	0°♌42'08	
	12229 Jul	02	21:50	0°♍	
	12229 Jul	28	13:01	0°♎	
	12229 Aug	24	23:21	0°♏	
evening max el	12229 Aug	30	00:22	5°♏06'47	46°28'37
desc. node	12229 Sep	28	15:20	0°♐02'33	
	12229 Sep	28	13:42	0°♐	
greatest brilliancy	12229 Oct	08	01:40	4°♐49'42	-4.8m
retrograde	12229 Oct	18	23:03	6°♐59'49	
evening set	12229 Nov	05	06:31	1°♐17'26	
	12229 Nov	07	09:25	30°℞♏	
min. Earth dist.	12229 Nov	08	15:50	29°♏12'38	0.28614 AU
inferior conj	12229 Nov	09	08:55	28°♏45'55	-8°07'32
minimum elong	12229 Nov	09	01:26	28°♏57'37	8°05'58
morning rise	12229 Nov	12	20:38	26°♏37'01	
direct	12229 Nov	30	16:11	20°♏41'14	
greatest brilliancy	12229 Dec	10	08:49	22°♏23'40	-4.7m
	12229 Dec	24	20:48	0°♐	
morning max el	12230 Jan	18	12:13	20°♐46'12	45°42'16
asc. node	12230 Jan	19	17:00	21°♐56'02	
	12230 Jan	27	18:34	0°♑	
	12230 Feb	24	10:47	0°♒	
	12230 Mar	22	08:20	0°♓	
	12230 Apr	16	09:46	0°♈	
	12230 May	10	23:25	0°♉	
desc. node	12230 May	11	13:13	0°♉42'26	
	12230 Jun	04	05:18	0°♊	
	12230 Jun	28	06:19	0°♋	
morning set	12230 Jul	21	00:45	28°♋31'06	
	12230 Jul	22	05:07	0°♌	
	12230 Aug	15	03:54	0°♍	
superior conj	12230 Aug	29	13:00	17°♍58'59	-0°06'27
minimum elong	12230 Aug	29	14:39	18°♍04'07	0°06'39
behind sun begin	12230 Aug	28	15:53	16°♍53'00	
behind sun end	12230 Aug	30	13:25	19°♍15'14	
max. Earth dist.	12230 Aug	31	22:27	20°♍58'23	1.71848 AU
asc. node	12230 Sep	01	04:18	21°♍16'39	
	12230 Sep	08	03:58	0°♎	
	12230 Oct	02	06:03	0°♏	
evening rise	12230 Oct	07	01:02	5°♏57'01	
	12230 Oct	26	11:04	0°♐	
	12230 Nov	19	20:37	0°♑	
	12230 Dec	14	12:37	0°♒	
desc. node	12230 Dec	21	21:03	8°♒51'55	
	12231 Jan	08	12:55	0°♓	
	12231 Feb	02	23:43	0°♈	
	12231 Mar	01	02:49	0°♉	
	12231 Mar	28	18:12	0°♊	
evening max el	12231 Apr	04	16:11	6°♊59'40	46°27'26
asc. node	12231 Apr	13	20:18	15°♊45'59	
	12231 May	01	08:07	0°♋	
greatest brilliancy	12231 May	15	04:09	7°♋19'10	-4.9m
retrograde	12231 May	24	15:23	9°♋00'47	
evening set	12231 Jun	11	20:34	2°♋44'19	
inferior conj	12231 Jun	14	08:18	1°♋12'52	9°08'05
minimum elong	12231 Jun	14	11:33	1°♋07'51	9°07'04

min. Earth dist.	12231 Jun	14	16:58	0°♋59'29	0.27283 AU
	12231 Jun	16	07:39	30℞♊	
morning rise	12231 Jun	17	02:28	29°♊31'27	
direct	12231 Jul	05	02:03	23°♊19'52	
greatest brilliancy	12231 Jul	15	01:50	25°♊12'08	-4.9m
	12231 Jul	24	18:43	0°♋	
desc. node	12231 Aug	03	22:03	7°♋12'39	
morning max el	12231 Aug	24	11:03	25°♋54'01	46°48'48
	12231 Aug	28	12:16	0°♌	
	12231 Sep	25	05:15	0°♍	
	12231 Oct	21	07:16	0°♎	
	12231 Nov	15	16:26	0°♏	
asc. node	12231 Nov	24	19:52	10°♏56'22	
	12231 Dec	10	15:34	0°♐	
	12232 Jan	04	07:50	0°♑	
	12232 Jan	28	19:28	0°♒	
morning set	12232 Feb	20	19:03	28°♒18'03	
	12232 Feb	22	04:05	0°♓	
desc. node	12232 Mar	15	11:13	27°♓34'17	
	12232 Mar	17	10:15	0°♈	
max. Earth dist.	12232 Mar	27	07:56	12°♈17'08	1.72406 AU
superior conj	12232 Mar	30	08:24	16°♈02'08	-0°35'08
minimum elong	12232 Mar	30	00:27	15°♈37'28	0°34'55
	12232 Apr	10	13:54	0°♉	
	12232 May	04	15:09	0°♊	
evening rise	12232 May	08	12:36	4°♊51'53	
	12232 May	28	15:01	0°♋	
	12232 Jun	21	15:24	0°♌	
asc. node	12232 Jul	06	03:14	18°♌02'37	
	12232 Jul	15	18:39	0°♍	
	12232 Aug	09	03:32	0°♎	
	12232 Sep	02	22:20	0°♏	
	12232 Sep	28	11:19	0°♐	
	12232 Oct	25	13:56	0°♑	
desc. node	12232 Oct	26	01:06	0°♑29'24	
evening max el	12232 Nov	08	23:06	14°♑35'02	45°57'25
	12232 Nov	26	06:38	0°♒	
greatest brilliancy	12232 Dec	18	04:30	13°♒08'15	-4.7m
retrograde	12232 Dec	28	01:04	14°♒54'33	
evening set	12233 Jan	13	21:03	9°♒30'23	
inferior conj	12233 Jan	18	11:03	6°♒42'01	-6°17'53
minimum elong	12233 Jan	18	21:15	6°♒26'01	6°14'59
min. Earth dist.	12233 Jan	18	23:25	6°♒22'38	0.28779 AU
morning rise	12233 Jan	23	21:12	3°♒23'57	
	12233 Jan	31	01:53	30℞♑	
direct	12233 Feb	08	19:50	28°♑26'56	
asc. node	12233 Feb	16	03:04	29°♑27'16	
	12233 Feb	17	23:08	0°♒	
greatest brilliancy	12233 Feb	19	19:25	0°♒39'16	-4.8m
morning max el	12233 Mar	30	09:57	29°♒47'21	46°09'37
	12233 Mar	30	15:04	0°♓	
	12233 Apr	27	19:20	0°♈	
	12233 May	23	18:27	0°♉	
desc. node	12233 Jun	08	02:00	18°♉16'58	
	12233 Jun	17	18:24	0°♊	
	12233 Jul	12	06:18	0°♋	
	12233 Aug	05	12:15	0°♌	
	12233 Aug	29	16:02	0°♍	
	12233 Sep	22	19:33	0°♎	
asc. node	12233 Sep	28	18:31	7°♎23'49	
morning set	12233 Oct	01	19:07	11°♎09'10	
	12233 Oct	16	23:30	0°♏	
superior conj	12233 Nov	08	15:21	28°♏05'43	1°18'43
minimum elong	12233 Nov	08	07:55	27°♏42'41	1°19'15
	12233 Nov	10	04:15	0°♐	
max. Earth dist.	12233 Nov	10	10:08	0°♐18'15	1.72830 AU
	12233 Dec	04	10:30	0°♑	
evening rise	12233 Dec	15	12:48	13°♑40'57	
	12233 Dec	28	19:16	0°♒	
desc. node	12234 Jan	18	09:30	25°♒14'10	
	12234 Jan	22	07:05	0°♓	
	12234 Feb	15	21:49	0°♈	
	12234 Mar	12	15:22	0°♉	
	12234 Apr	06	13:22	0°♊	
	12234 May	01	21:26	0°♋	
asc. node	12234 May	11	06:13	10°♋51'37	
	12234 May	28	05:35	0°♌	
evening max el	12234 Jun	16	19:42	20°♌43'23	46°49'22
	12234 Jun	26	10:12	0°♍	
greatest brilliancy	12234 Jul	26	15:53	21°♍14'39	-4.9m
retrograde	12234 Aug	06	04:17	23°♍18'43	
evening set	12234 Aug	20	21:06	19°♍02'13	
inferior conj	12234 Aug	26	23:20	15°♍27'27	1°07'26
minimum elong	12234 Aug	27	01:57	15°♍23'28	1°06'18
min. Earth dist.	12234 Aug	26	17:37	15°♍36'11	0.27147 AU
desc. node	12234 Aug	31	07:47	12°♍51'43	
morning rise	12234 Sep	02	07:17	11°♍46'22	
direct	12234 Sep	16	18:19	7°♍41'31	
greatest brilliancy	12234 Sep	26	13:21	9°♍28'05	-4.8m
	12234 Oct	27	01:03	0°♎	
morning max el	12234 Nov	05	03:56	8°♎30'32	46°04'58
	12234 Nov	26	02:54	0°♏	
asc. node	12234 Dec	22	07:59	29°♏07'04	
	12234 Dec	23	02:30	0°♐	
	12235 Jan	17	20:23	0°♑	
	12235 Feb	11	22:13	0°♒	
	12235 Mar	08	14:24	0°♓	
	12235 Apr	02	00:13	0°♈	
desc. node	12235 Apr	13	01:22	13°♈39'41	
	12235 Apr	26	05:08	0°♉	
morning set	12235 May	04	06:07	10°♉00'53	
	12235 May	20	06:04	0°♊	
max. Earth dist.	12235 Jun	12	06:18	28°♊50'58	1.71413 AU
superior conj	12235 Jun	13	10:17	0°♋18'48	-1°26'41
minimum elong	12235 Jun	13	13:35	0°♋29'10	1°27'32
	12235 Jun	13	04:18	0°♋	
	12235 Jul	07	01:40	0°♌	
evening rise	12235 Jul	23	19:12	20°♌58'53	
	12235 Jul	31	00:05	0°♍	
asc. node	12235 Aug	03	16:20	4°♍35'53	
	12235 Aug	24	01:09	0°♎	
	12235 Sep	17	06:27	0°♏	
	12235 Oct	11	18:23	0°♐	
	12235 Nov	05	17:05	0°♑	
desc. node	12235 Nov	23	11:25	20°♑52'46	
	12235 Dec	01	09:06	0°♒	
	12235 Dec	28	07:03	0°♓	
evening max el	12236 Jan	20	06:12	23°♓33'32	45°55'52
	12236 Jan	27	03:06	0°♈	
greatest brilliancy	12236 Feb	28	08:51	22°♈08'18	-4.8m
retrograde	12236 Mar	09	07:12	23°♈56'39	
asc. node	12236 Mar	15	12:47	23°♈09'56	
evening set	12236 Mar	24	01:59	19°♈40'11	
inferior conj	12236 Mar	30	06:20	15°♈58'47	3°37'34
minimum elong	12236 Mar	29	22:37	16°♈10'49	3°35'09
min. Earth dist.	12236 Mar	30	08:37	15°♈55'13	0.27804 AU
morning rise	12236 Apr	04	18:57	12°♈38'35	
direct	12236 Apr	20	07:58	7°♈55'13	
greatest brilliancy	12236 Apr	30	15:15	9°♈54'27	-4.8m
	12236 May	29	18:14	0°♉	
morning max el	12236 Jun	09	15:25	10°♉27'16	46°51'19

	12236 Jun 28	03:33	0°♊		
desc. node	12236 Jul 05	13:35	8°♊15'45		
	12236 Jul 24	11:02	0°♋		
	12236 Aug 18	16:36	0°♌		
	12236 Sep 12	11:18	0°♍		
	12236 Oct 07	01:14	0°♎		
asc. node	12236 Oct 26	08:30	23°♎39'15		
	12236 Oct 31	12:32	0°♏		
	12236 Nov 24	21:49	0°♐		
morning set	12236 Dec 10	16:13	19°♐26'13		
	12236 Dec 19	05:45	0°♑		
	12237 Jan 12	13:15	0°♒		
superior conj	12237 Jan 16	09:09	4°♒43'24	1°03'36	
minimum elong	12237 Jan 16	18:55	5°♒13'30	1°04'03	
max. Earth dist.	12237 Jan 16	10:21	4°♒47'05	1.73169 AU	
	12237 Feb 05	20:58	0°♓		
desc. node	12237 Feb 14	23:04	11°♓12'23		
evening rise	12237 Feb 23	04:26	21°♓20'53		
	12237 Mar 02	04:44	0°♈		
	12237 Mar 26	11:54	0°♉		
	12237 Apr 19	18:28	0°♊		
	12237 May 14	02:00	0°♋		
asc. node	12237 Jun 07	17:04	0°♌09'51		
	12237 Jun 07	13:50	0°♌		
	12237 Jul 02	11:21	0°♍		
	12237 Jul 28	04:34	0°♎		
	12237 Aug 24	20:07	0°♏		
evening max el	12237 Aug 27	14:33	2°♏47'18	46°29'48	
desc. node	12237 Sep 27	17:28	28°♏40'03		
	12237 Sep 30	02:18	0°♐		
greatest brilliancy	12237 Oct 05	17:31	2°♐35'50	-4.8m	
retrograde	12237 Oct 16	14:18	4°♐45'57		
	12237 Nov 01	07:21	30°℞♏		
evening set	12237 Nov 02	18:37	29°♏09'04		
min. Earth dist.	12237 Nov 06	06:59	27°♏00'00	0.28567 AU	
inferior conj	12237 Nov 07	00:23	26°♏32'48	-7°59'26	
minimum elong	12237 Nov 06	16:20	26°♏45'23	7°57'43	
morning rise	12237 Nov 10	14:17	24°♏20'34		
direct	12237 Nov 28	06:38	18°♏28'49		
greatest brilliancy	12237 Dec 07	23:37	20°♏11'02	-4.7m	
	12237 Dec 25	15:05	0°♐		
morning max el	12238 Jan 16	02:05	18°♐29'57	45°42'12	
asc. node	12238 Jan 18	19:01	21°♐08'11		
	12238 Jan 27	13:30	0°♑		
	12238 Feb 24	01:22	0°♒		
	12238 Mar 21	21:14	0°♓		
	12238 Apr 15	21:50	0°♈		
	12238 May 10	11:00	0°♉		
desc. node	12238 May 10	15:05	0°♉12'33		
	12238 Jun 03	16:35	0°♊		
	12238 Jun 27	17:26	0°♋		
morning set	12238 Jul 18	12:51	26°♋04'03		
	12238 Jul 21	16:09	0°♌		
	12238 Aug 14	14:53	0°♍		
superior conj	12238 Aug 27	02:10	15°♍35'58	-0°10'10	
minimum elong	12238 Aug 27	04:44	15°♍44'00	0°10'20	
behind sun begin	12238 Aug 26	09:27	14°♍43'44		
behind sun end	12238 Aug 28	00:01	16°♍44'15		
max. Earth dist.	12238 Aug 29	07:35	18°♍22'51	1.71816 AU	
asc. node	12238 Aug 31	06:15	20°♍48'37		
	12238 Sep 07	14:55	0°♎		
	12238 Oct 01	16:59	0°♏		
evening rise	12238 Oct 04	16:24	3°♏41'47		
	12238 Oct 25	22:04	0°♐		
	12238 Nov 19	07:47	0°♑		
	12238 Dec 14	00:10	0°♒		
desc. node	12238 Dec 20	22:54	8°♒22'19		
	12239 Jan 08	01:08	0°♓		
	12239 Feb 02	13:05	0°♈		
	12239 Feb 28	18:22	0°♉		
	12239 Mar 28	15:08	0°♊		
evening max el	12239 Apr 02	05:12	4°♊36'10	46°26'14	
asc. node	12239 Apr 12	22:18	14°♊46'07		
	12239 May 02	14:26	0°♋		
greatest brilliancy	12239 May 12	16:42	4°♋53'54	-4.9m	
retrograde	12239 May 22	04:30	6°♋36'13		
evening set	12239 Jun 09	10:13	0°♋18'10		
	12239 Jun 09	22:13	30°℞♊		
inferior conj	12239 Jun 11	21:20	28°♊47'46	9°10'50	
minimum elong	12239 Jun 11	23:37	28°♊44'15	9°09'53	
min. Earth dist.	12239 Jun 12	05:32	28°♊35'08	0.27305 AU	
morning rise	12239 Jun 14	12:58	27°♊10'18		
direct	12239 Jul 02	15:12	20°♊54'05		
greatest brilliancy	12239 Jul 12	15:01	22°♊46'49	-4.9m	
	12239 Jul 26	01:00	0°♋		
desc. node	12239 Aug 03	00:05	6°♋01'34		
morning max el	12239 Aug 22	01:25	23°♋32'20	46°49'54	
	12239 Aug 28	09:31	0°♌		
	12239 Sep 24	21:07	0°♍		
	12239 Oct 20	20:54	0°♎		
	12239 Nov 15	04:50	0°♏		
asc. node	12239 Nov 23	21:38	10°♏25'16		
	12239 Dec 10	03:15	0°♐		
	12240 Jan 03	19:04	0°♑		
	12240 Jan 28	06:27	0°♒		
morning set	12240 Feb 18	11:11	26°♒06'18		
	12240 Feb 21	14:56	0°♓		
desc. node	12240 Mar 14	13:08	27°♓06'39		
	12240 Mar 16	21:06	0°♈		
max. Earth dist.	12240 Mar 25	01:59	10°♈10'26	1.72448 AU	
superior conj	12240 Mar 27	22:20	13°♈42'35	-0°31'46	
minimum elong	12240 Mar 27	15:04	13°♈20'01	0°31'32	
	12240 Apr 10	00:49	0°♉		
	12240 May 04	02:10	0°♊		
evening rise	12240 May 06	01:23	2°♊27'26		
	12240 May 28	02:12	0°♋		
	12240 Jun 21	02:46	0°♌		
asc. node	12240 Jul 05	05:07	17°♌32'41		
	12240 Jul 15	06:17	0°♍		
	12240 Aug 08	15:38	0°♎		
	12240 Sep 02	11:14	0°♏		
	12240 Sep 28	01:49	0°♐		
desc. node	12240 Oct 25	02:59	29°♐46'11		
	12240 Oct 25	08:16	0°♑		
evening max el	12240 Nov 06	15:01	12°♑23'30	45°58'14	
	12240 Nov 26	18:09	0°♒		
greatest brilliancy	12240 Dec 15	18:57	10°♒55'44	-4.7m	
retrograde	12240 Dec 25	17:11	12°♒43'08		
evening set	12241 Jan 11	15:42	7°♒14'25		
inferior conj	12241 Jan 16	02:51	4°♒30'03	-6°31'55	
minimum elong	12241 Jan 16	13:02	4°♒14'05	6°29'06	
min. Earth dist.	12241 Jan 16	14:23	4°♒11'59	0.28806 AU	
morning rise	12241 Jan 21	10:12	1°♒16'11		
	12241 Jan 23	17:58	30°℞♑		
direct	12241 Feb 06	12:20	26°♑14'58		
asc. node	12241 Feb 15	05:06	27°♑39'57		
greatest brilliancy	12241 Feb 17	10:25	28°♑26'19	-4.8m	
	12241 Feb 21	01:07	0°♒		
morning max el	12241 Mar 28	02:18	27°♒35'24	46°08'05	
	12241 Mar 30	12:28	0°♓		
	12241 Apr 27	10:53	0°♈		

	12241 May 23 07:54	0°♉	
desc. node	12241 Jun 07 03:50	17°♉43'58	
	12241 Jun 17 06:51	0°♊	
	12241 Jul 11 18:11	0°♋	
	12241 Aug 04 23:45	0°♌	
	12241 Aug 29 03:14	0°♍	
	12241 Sep 22 06:32	0°♎	
asc. node	12241 Sep 27 20:22	6°♎55'32	
morning set	12241 Sep 29 09:48	8°♎51'48	
	12241 Oct 16 10:21	0°♏	
superior conj	12241 Nov 06 07:34	25°♏53'51	1°17'17
minimum elong	12241 Nov 05 23:37	25°♏29'12	1°17'47
max. Earth dist.	12241 Nov 08 05:40	28°♏16'38	1.72805 AU
	12241 Nov 09 15:02	0°♐	
	12241 Dec 03 21:19	0°♑	
evening rise	12241 Dec 13 05:15	11°♑30'24	
	12241 Dec 28 06:10	0°♒	
desc. node	12242 Jan 17 11:28	24°♒46'17	
	12242 Jan 21 18:12	0°♓	
	12242 Feb 15 09:18	0°♈	
	12242 Mar 12 03:24	0°♉	
	12242 Apr 06 02:16	0°♊	
	12242 May 01 11:52	0°♋	
asc. node	12242 May 10 08:04	10°♋13'00	
	12242 May 27 23:17	0°♌	
evening max el	12242 Jun 14 10:31	18°♌23'09	46°49'08
	12242 Jun 26 14:43	0°♍	
greatest brilliancy	12242 Jul 24 06:34	18°♍52'00	-4.9m
retrograde	12242 Aug 03 17:55	20°♍54'36	
evening set	12242 Aug 18 11:54	16°♍36'50	
inferior conj	12242 Aug 24 12:23	13°♍04'07	1°31'17
minimum elong	12242 Aug 24 15:54	12°♍58'45	1°29'48
min. Earth dist.	12242 Aug 24 07:44	13°♍11'14	0.27119 AU
desc. node	12242 Aug 30 09:52	9°♍36'54	
morning rise	12242 Aug 30 20:25	9°♍22'50	
direct	12242 Sep 14 07:36	5°♍18'42	
greatest brilliancy	12242 Sep 24 02:16	7°♍05'02	-4.8m
	12242 Oct 27 04:23	0°♎	
morning max el	12242 Nov 02 17:34	6°♎11'17	46°06'21
	12242 Nov 25 20:02	0°♏	
asc. node	12242 Dec 21 09:58	28°♏32'40	
	12242 Dec 22 16:26	0°♐	
	12243 Jan 17 08:50	0°♑	
	12243 Feb 11 09:52	0°♒	
	12243 Mar 08 01:38	0°♓	
	12243 Apr 01 11:13	0°♈	
desc. node	12243 Apr 12 03:11	13°♈11'30	
	12243 Apr 25 16:01	0°♉	
morning set	12243 May 01 18:16	7°♉35'22	
	12243 May 19 16:53	0°♊	
max. Earth dist.	12243 Jun 09 12:21	26°♊05'27	1.71427 AU
superior conj	12243 Jun 10 22:13	27°♊51'42	-1°27'08
minimum elong	12243 Jun 11 00:27	27°♊58'45	1°28'00
	12243 Jun 12 15:06	0°♋	
	12243 Jul 06 12:30	0°♌	
evening rise	12243 Jul 21 06:49	18°♌30'48	
	12243 Jul 30 11:00	0°♍	
asc. node	12243 Aug 02 18:19	4°♍07'55	
	12243 Aug 23 12:12	0°♎	
	12243 Sep 16 17:41	0°♏	
	12243 Oct 11 06:00	0°♐	
	12243 Nov 05 05:24	0°♑	
desc. node	12243 Nov 22 13:20	20°♑20'05	
	12243 Nov 30 22:49	0°♒	
	12243 Dec 27 23:52	0°♓	
evening max el	12244 Jan 17 20:19	21°♓17'11	45°55'12
	12244 Jan 27 06:01	0°♈	
greatest brilliancy	12244 Feb 25 23:49	19°♈51'51	-4.8m
retrograde	12244 Mar 06 20:46	21°♈39'17	
asc. node	12244 Mar 14 14:48	20°♈27'09	
evening set	12244 Mar 21 15:16	17°♈24'12	
inferior conj	12244 Mar 27 20:52	13°♈41'17	3°16'36
minimum elong	12244 Mar 27 13:48	13°♈52'19	3°14'23
min. Earth dist.	12244 Mar 28 00:06	13°♈36'14	0.27825 AU
morning rise	12244 Apr 02 11:53	10°♈17'22	
direct	12244 Apr 17 22:10	5°♈37'15	
greatest brilliancy	12244 Apr 28 07:31	7°♈37'51	-4.8m
	12244 May 29 20:56	0°♉	
morning max el	12244 Jun 07 04:35	8°♉04'35	46°50'28
	12244 Jun 27 20:35	0°♊	
desc. node	12244 Jul 04 15:39	7°♊36'29	
	12244 Jul 24 01:05	0°♋	
	12244 Aug 18 05:16	0°♌	
	12244 Sep 11 23:11	0°♍	
	12244 Oct 06 12:36	0°♎	
asc. node	12244 Oct 25 10:17	23°♎10'48	
	12244 Oct 30 23:31	0°♏	
	12244 Nov 24 08:32	0°♐	
morning set	12244 Dec 08 08:57	17°♐17'04	
	12244 Dec 18 16:18	0°♑	
	12245 Jan 11 23:47	0°♒	
superior conj	12245 Jan 14 01:44	2°♒34'05	1°05'49
minimum elong	12245 Jan 14 11:23	3°♒03'51	1°06'17
max. Earth dist.	12245 Jan 14 03:31	2°♒39'36	1.73176 AU
	12245 Feb 05 07:34	0°♓	
desc. node	12245 Feb 14 00:58	10°♓45'29	
evening rise	12245 Feb 20 19:55	19°♓07'44	
	12245 Mar 01 15:28	0°♈	
	12245 Mar 25 22:50	0°♉	
	12245 Apr 19 05:41	0°♊	
	12245 May 13 13:37	0°♋	
asc. node	12245 Jun 06 19:03	29°♋38'44	
	12245 Jun 07 02:03	0°♌	
	12245 Jul 02 00:37	0°♍	
	12245 Jul 27 19:57	0°♎	
	12245 Aug 24 17:13	0°♏	
evening max el	12245 Aug 25 04:29	0°♏28'10	46°30'53
desc. node	12245 Sep 26 19:21	27°♏15'10	
	12245 Oct 02 10:53	0°♐	
greatest brilliancy	12245 Oct 03 08:37	0°♐21'33	-4.8m
retrograde	12245 Oct 14 05:38	2°♐32'35	
	12245 Oct 25 12:54	30°℞♏	
evening set	12245 Oct 31 06:28	27°♏00'57	
min. Earth dist.	12245 Nov 03 21:54	24°♏47'44	0.28524 AU
inferior conj	12245 Nov 04 15:43	24°♏19'56	-7°50'20
minimum elong	12245 Nov 04 07:09	24°♏33'18	7°48'30
morning rise	12245 Nov 08 08:05	22°♏04'13	
direct	12245 Nov 25 20:58	16°♏16'26	
greatest brilliancy	12245 Dec 05 14:36	17°♏59'00	-4.7m
	12245 Dec 26 04:25	0°♐	
morning max el	12246 Jan 13 16:39	16°♐16'02	45°42'12
asc. node	12246 Jan 17 21:03	20°♐21'45	
	12246 Jan 27 07:42	0°♑	
	12246 Feb 23 15:32	0°♒	
	12246 Mar 21 09:45	0°♓	
	12246 Apr 15 09:32	0°♈	
desc. node	12246 May 09 16:51	29°♈43'23	
	12246 May 09 22:15	0°♉	
	12246 Jun 03 03:34	0°♊	
	12246 Jun 27 04:13	0°♋	
morning set	12246 Jul 16 01:13	23°♋38'51	

	12246 Jul 21 02:48	0°♌	
	12246 Aug 14 01:26	0°♍	
superior conj	12246 Aug 24 15:34	13°♍15'03	-0°13'50
minimum elong	12246 Aug 24 19:03	13°♍25'55	0°13'59
behind sun begin	12246 Aug 24 06:25	12°♍46'26	
behind sun end	12246 Aug 25 07:40	14°♍05'23	
max. Earth dist.	12246 Aug 26 18:41	15°♍54'49	1.71784 AU
asc. node	12246 Aug 30 08:04	20°♍21'33	
	12246 Sep 07 01:23	0°♎	
	12246 Oct 01 03:28	0°♏	
evening rise	12246 Oct 02 08:03	1°♏28'47	
	12246 Oct 25 08:39	0°♐	
	12246 Nov 18 18:36	0°♑	
	12246 Dec 13 11:24	0°♒	
desc. node	12246 Dec 20 00:51	7°♒54'02	
	12247 Jan 07 13:03	0°♓	
	12247 Feb 02 02:11	0°♈	
	12247 Feb 28 09:47	0°♉	
	12247 Mar 28 12:25	0°♊	
evening max el	12247 Mar 30 19:02	2°♊15'57	46°25'03
asc. node	12247 Apr 12 00:12	13°♊45'40	
	12247 May 04 09:54	0°♋	
greatest brilliancy	12247 May 10 04:37	2°♋29'06	-4.9m
retrograde	12247 May 19 17:53	4°♋12'36	
	12247 Jun 03 07:27	30°℞♊	
evening set	12247 Jun 06 23:15	27°♊53'47	
inferior conj	12247 Jun 09 10:18	26°♊23'33	9°12'35
minimum elong	12247 Jun 09 11:38	26°♊21'30	9°11'42
min. Earth dist.	12247 Jun 09 17:41	26°♊12'11	0.27325 AU
morning rise	12247 Jun 11 23:57	24°♊49'13	
direct	12247 Jun 30 04:51	18°♊29'28	
greatest brilliancy	12247 Jul 10 03:34	20°♊21'51	-4.9m
	12247 Jul 26 22:21	0°♋	
desc. node	12247 Aug 02 02:03	4°♋53'31	
morning max el	12247 Aug 19 16:16	21°♋13'14	46°51'07
	12247 Aug 28 05:31	0°♌	
	12247 Sep 24 12:10	0°♍	
	12247 Oct 20 09:50	0°♎	
	12247 Nov 14 16:38	0°♏	
asc. node	12247 Nov 22 23:36	9°♏56'32	
	12247 Dec 09 14:23	0°♐	
	12248 Jan 03 05:50	0°♑	
	12248 Jan 27 17:01	0°♒	
morning set	12248 Feb 16 03:22	23°♒55'54	
	12248 Feb 21 01:24	0°♓	
desc. node	12248 Mar 13 14:54	26°♓39'48	
	12248 Mar 16 07:33	0°♈	
max. Earth dist.	12248 Mar 22 18:54	8°♈01'32	1.72486 AU
superior conj	12248 Mar 25 12:14	11°♈24'13	-0°28'21
minimum elong	12248 Mar 25 05:41	11°♈03'54	0°28'07
	12248 Apr 09 11:19	0°♉	
evening rise	12248 May 03 14:09	0°♊04'13	
	12248 May 03 12:48	0°♊	
	12248 May 27 12:59	0°♋	
	12248 Jun 20 13:45	0°♌	
asc. node	12248 Jul 04 07:06	17°♌04'16	
	12248 Jul 14 17:33	0°♍	
	12248 Aug 08 03:20	0°♎	
	12248 Sep 01 23:44	0°♏	
	12248 Sep 27 15:54	0°♐	
desc. node	12248 Oct 24 04:58	29°♐04'25	
	12248 Oct 25 02:24	0°♑	
evening max el	12248 Nov 04 07:17	10°♑14'29	45°59'00
	12248 Nov 27 08:32	0°♒	
greatest brilliancy	12248 Dec 13 09:50	8°♒45'46	-4.7m
retrograde	12248 Dec 23 09:09	10°♒33'42	
evening set	12249 Jan 09 10:34	5°♒00'40	
inferior conj	12249 Jan 13 18:53	2°♒20'08	-6°45'14
minimum elong	12249 Jan 14 04:59	2°♒04'18	6°42'29
min. Earth dist.	12249 Jan 14 05:33	2°♒03'24	0.28834 AU
	12249 Jan 17 13:33	30°℞♑	
morning rise	12249 Jan 18 23:18	29°♑10'27	
direct	12249 Feb 04 05:11	24°♑05'10	
asc. node	12249 Feb 14 07:04	25°♑58'03	
greatest brilliancy	12249 Feb 15 01:28	26°♑15'00	-4.8m
	12249 Feb 22 19:21	0°♒	
morning max el	12249 Mar 25 18:05	25°♒23'15	46°06'27
	12249 Mar 30 08:40	0°♓	
	12249 Apr 27 01:49	0°♈	
	12249 May 22 20:52	0°♉	
desc. node	12249 Jun 06 05:55	17°♉13'00	
	12249 Jun 16 18:52	0°♊	
	12249 Jul 11 05:39	0°♋	
	12249 Aug 04 10:51	0°♌	
	12249 Aug 28 14:03	0°♍	
	12249 Sep 21 17:09	0°♎	
asc. node	12249 Sep 26 22:10	6°♎28'20	
morning set	12249 Sep 27 00:40	6°♎36'06	
	12249 Oct 15 20:48	0°♏	
superior conj	12249 Nov 04 00:07	23°♏44'16	1°15'44
minimum elong	12249 Nov 03 15:42	23°♏18'12	1°16'12
max. Earth dist.	12249 Nov 06 01:24	26°♏16'56	1.72771 AU
	12249 Nov 09 01:24	0°♐	
	12249 Dec 03 07:41	0°♑	
evening rise	12249 Dec 10 22:05	9°♑22'22	
	12249 Dec 27 16:39	0°♒	
desc. node	12250 Jan 16 13:25	24°♒19'35	
	12250 Jan 21 04:56	0°♓	
	12250 Feb 14 20:27	0°♈	
	12250 Mar 11 15:10	0°♉	
	12250 Apr 05 14:58	0°♊	
	12250 May 01 02:10	0°♋	
asc. node	12250 May 09 10:07	9°♋35'29	
	12250 May 27 17:05	0°♌	
evening max el	12250 Jun 12 00:23	16°♌01'20	46°48'53
	12250 Jun 26 20:52	0°♍	
greatest brilliancy	12250 Jul 21 21:47	16°♍30'50	-4.9m
retrograde	12250 Aug 01 07:01	18°♍31'21	
evening set	12250 Aug 16 02:53	14°♍12'01	
inferior conj	12250 Aug 22 01:28	10°♍41'44	1°54'57
minimum elong	12250 Aug 22 05:52	10°♍35'00	1°53'10
min. Earth dist.	12250 Aug 21 22:13	10°♍46'43	0.27094 AU
morning rise	12250 Aug 28 09:18	7°♍00'20	
desc. node	12250 Aug 29 11:49	6°♍26'14	
direct	12250 Sep 11 20:27	2°♍56'36	
greatest brilliancy	12250 Sep 21 15:49	4°♍43'17	-4.8m
	12250 Oct 27 05:50	0°♎	
morning max el	12250 Oct 31 06:28	3°♎50'49	46°07'56
	12250 Nov 25 12:28	0°♏	
asc. node	12250 Dec 20 11:58	27°♏59'35	
	12250 Dec 22 05:52	0°♐	
	12251 Jan 16 20:52	0°♑	
	12251 Feb 10 21:10	0°♒	
	12251 Mar 07 12:33	0°♓	
	12251 Mar 31 21:58	0°♈	
desc. node	12251 Apr 11 05:03	12°♈44'09	
	12251 Apr 25 02:42	0°♉	
morning set	12251 Apr 29 06:17	5°♉10'02	
	12251 May 19 03:33	0°♊	
max. Earth dist.	12251 Jun 06 16:03	23°♊13'04	1.71445 AU

superior conj	12251 Jun 08	09:55	25°♊24'23	-1°27'25
minimum elong	12251 Jun 08	11:05	25°♊28'03	1°28'17
	12251 Jun 12	01:45	0°♋	
	12251 Jul 05	23:12	0°♌	
evening rise	12251 Jul 18	18:07	16°♌02'10	
	12251 Jul 29	21:46	0°♍	
asc. node	12251 Aug 01	20:05	3°♍39'48	
	12251 Aug 22	23:06	0°♎	
	12251 Sep 16	04:49	0°♏	
	12251 Oct 10	17:31	0°♐	
	12251 Nov 04	17:38	0°♑	
desc. node	12251 Nov 21	15:24	19°♑48'08	
	12251 Nov 30	12:29	0°♒	
	12251 Dec 27	16:46	0°♓	
evening max el	12252 Jan 15	09:59	19°♓00'42	45°54'41
	12252 Jan 27	10:14	0°♈	
greatest brilliancy	12252 Feb 23	14:30	17°♈36'19	-4.8m
retrograde	12252 Mar 04	10:44	19°♈23'33	
asc. node	12252 Mar 13	16:41	17°♈40'55	
evening set	12252 Mar 19	04:58	15°♈09'04	
inferior conj	12252 Mar 25	11:36	11°♈25'03	2°55'25
minimum elong	12252 Mar 25	05:13	11°♈35'01	2°53'26
min. Earth dist.	12252 Mar 25	15:40	11°♈18'42	0.27855 AU
morning rise	12252 Mar 31	04:57	7°♈57'49	
direct	12252 Apr 15	12:42	3°♈20'16	
greatest brilliancy	12252 Apr 26	00:14	5°♈22'42	-4.8m
	12252 May 29	22:08	0°♉	
morning max el	12252 Jun 04	18:33	5°♉44'03	46°49'24
	12252 Jun 27	13:18	0°♊	
desc. node	12252 Jul 03	17:35	6°♊57'05	
	12252 Jul 23	15:04	0°♋	
	12252 Aug 17	17:55	0°♌	
	12252 Sep 11	11:03	0°♍	
	12252 Oct 05	23:56	0°♎	
asc. node	12252 Oct 24	12:13	22°♎42'52	
	12252 Oct 30	10:29	0°♏	
	12252 Nov 23	19:15	0°♐	
morning set	12252 Dec 06	01:46	15°♐08'06	
	12252 Dec 18	02:53	0°♑	
	12253 Jan 11	10:18	0°♒	
superior conj	12253 Jan 11	18:42	0°♒25'54	1°07'54
minimum elong	12253 Jan 12	04:12	0°♒55'11	1°08'25
max. Earth dist.	12253 Jan 11	21:54	0°♒35'46	1.73179 AU
	12253 Feb 04	18:09	0°♓	
desc. node	12253 Feb 13	02:45	10°♓18'18	
evening rise	12253 Feb 18	11:56	16°♓56'23	
	12253 Mar 01	02:11	0°♈	
	12253 Mar 25	09:46	0°♉	
	12253 Apr 18	16:56	0°♊	
	12253 May 13	01:20	0°♋	
asc. node	12253 Jun 05	21:00	29°♋06'56	
	12253 Jun 06	14:29	0°♌	
	12253 Jul 01	14:14	0°♍	
	12253 Jul 27	11:52	0°♎	
evening max el	12253 Aug 22	18:50	28°♎09'15	46°32'08
	12253 Aug 24	15:28	0°♏	
desc. node	12253 Sep 25	21:21	25°♏46'43	
greatest brilliancy	12253 Sep 30	23:06	28°♏05'36	-4.8m
	12253 Oct 07	22:45	0°♐	
retrograde	12253 Oct 11	21:20	0°♐18'11	
	12253 Oct 15	18:22	30°℞♏	
evening set	12253 Oct 28	18:07	24°♏51'39	
min. Earth dist.	12253 Nov 01	12:22	22°♏34'42	0.28476 AU
inferior conj	12253 Nov 02	06:53	22°♏05'53	-7°40'30
minimum elong	12253 Nov 01	21:51	22°♏19'57	7°38'31
morning rise	12253 Nov 06	01:50	19°♏46'40	
direct	12253 Nov 23	11:34	14°♏02'53	
greatest brilliancy	12253 Dec 03	05:03	15°♏45'35	-4.7m
	12253 Dec 26	14:33	0°♐	
morning max el	12254 Jan 11	08:01	14°♐03'35	45°42'22
asc. node	12254 Jan 16	22:57	19°♐35'11	
	12254 Jan 27	01:38	0°♑	
	12254 Feb 23	05:40	0°♒	
	12254 Mar 20	22:19	0°♓	
	12254 Apr 14	21:18	0°♈	
desc. node	12254 May 08	18:54	29°♈14'45	
	12254 May 09	09:35	0°♉	
	12254 Jun 02	14:40	0°♊	
	12254 Jun 26	15:12	0°♋	
morning set	12254 Jul 13	13:17	21°♋11'56	
	12254 Jul 20	13:44	0°♌	
	12254 Aug 13	12:18	0°♍	
superior conj	12254 Aug 22	04:22	10°♍51'02	-0°17'32
minimum elong	12254 Aug 22	08:45	11°♍04'45	0°17'42
max. Earth dist.	12254 Aug 24	06:25	13°♍27'32	1.71755 AU
asc. node	12254 Aug 29	09:53	19°♍53'22	
	12254 Sep 06	12:13	0°♎	
evening rise	12254 Sep 29	23:08	29°♎12'56	
	12254 Sep 30	14:18	0°♏	
	12254 Oct 24	19:35	0°♐	
	12254 Nov 18	05:46	0°♑	
	12254 Dec 12	22:59	0°♒	
desc. node	12254 Dec 19	02:48	7°♒24'36	
	12255 Jan 07	01:20	0°♓	
	12255 Feb 01	15:42	0°♈	
	12255 Feb 28	01:42	0°♉	
	12255 Mar 28	10:42	0°♊	
evening max el	12255 Mar 28	09:45	29°♉57'39	46°23'58
asc. node	12255 Apr 11	02:18	12°♊43'59	
	12255 May 07	11:03	0°♋	
greatest brilliancy	12255 May 07	16:40	0°♋04'55	-4.9m
retrograde	12255 May 17	07:38	1°♋49'24	
	12255 May 26	18:01	30°℞♊	
evening set	12255 Jun 04	12:01	25°♊31'03	
inferior conj	12255 Jun 06	23:36	23°♊59'50	9°13'15
minimum elong	12255 Jun 06	23:58	23°♊59'17	9°12'24
min. Earth dist.	12255 Jun 07	05:54	23°♊50'09	0.27345 AU
morning rise	12255 Jun 09	11:53	22°♊27'34	
direct	12255 Jun 27	19:00	16°♊05'36	
greatest brilliancy	12255 Jul 07	16:04	17°♊56'50	-4.9m
	12255 Jul 27	14:22	0°♋	
desc. node	12255 Aug 01	04:02	3°♋46'49	
morning max el	12255 Aug 17	06:55	18°♋52'48	46°51'51
	12255 Aug 28	01:16	0°♌	
	12255 Sep 24	03:28	0°♍	
	12255 Oct 19	23:10	0°♎	
	12255 Nov 14	04:51	0°♏	
asc. node	12255 Nov 22	01:34	9°♏26'25	
	12255 Dec 09	01:57	0°♐	
	12256 Jan 02	16:59	0°♑	
	12256 Jan 27	03:57	0°♒	
morning set	12256 Feb 13	19:34	21°♒44'25	
	12256 Feb 20	12:14	0°♓	
desc. node	12256 Mar 12	16:48	26°♓12'12	
	12256 Mar 15	18:22	0°♈	
max. Earth dist.	12256 Mar 20	09:50	5°♈45'22	1.72519 AU
superior conj	12256 Mar 23	02:24	9°♈05'38	-0°24'54
minimum elong	12256 Mar 22	20:37	8°♈47'40	0°24'41
	12256 Apr 08	22:11	0°♉	
evening rise	12256 May 01	03:18	27°♉41'14	
	12256 May 02	23:45	0°♊	

	12256 May 27 00:04	0°♋	
	12256 Jun 20 01:02	0°♌	
asc. node	12256 Jul 03 08:55	16°♌34'25	
	12256 Jul 14 05:08	0°♍	
	12256 Aug 07 15:27	0°♎	
	12256 Sep 01 12:46	0°♏	
	12256 Sep 27 06:45	0°♐	
desc. node	12256 Oct 23 07:04	28°♐20'36	
	12256 Oct 24 21:45	0°♑	
evening max el	12256 Nov 01 22:51	8°♑01'49	45°59'44
	12256 Nov 28 05:19	0°♒	
greatest brilliancy	12256 Dec 11 01:12	6°♒34'13	-4.7m
retrograde	12256 Dec 21 00:32	8°♒21'58	
evening set	12257 Jan 07 05:14	2°♒44'51	
inferior conj	12257 Jan 11 10:43	0°♒08'12	-6°57'57
minimum elong	12257 Jan 11 20:39	29°♑52'35	6°55'20
	12257 Jan 11 15:56	30°℞♑	
min. Earth dist.	12257 Jan 11 20:43	29°♑52'28	0.28856 AU
morning rise	12257 Jan 16 11:59	27°♑02'45	
direct	12257 Feb 01 21:24	21°♑53'23	
greatest brilliancy	12257 Feb 12 16:23	24°♑01'42	-4.8m
asc. node	12257 Feb 13 09:03	24°♑17'53	
	12257 Feb 24 01:08	0°♒	
morning max el	12257 Mar 23 08:48	23°♒07'00	46°04'58
	12257 Mar 30 04:46	0°♓	
	12257 Apr 26 16:59	0°♈	
	12257 May 22 10:08	0°♉	
desc. node	12257 Jun 05 07:45	16°♉40'22	
	12257 Jun 16 07:10	0°♊	
	12257 Jul 10 17:23	0°♋	
	12257 Aug 03 22:12	0°♌	
	12257 Aug 28 01:09	0°♍	
	12257 Sep 21 04:05	0°♎	
morning set	12257 Sep 24 15:29	4°♎19'09	
asc. node	12257 Sep 26 00:06	6°♎00'28	
	12257 Oct 15 07:39	0°♏	
superior conj	12257 Nov 01 16:25	21°♏32'32	1°14'04
minimum elong	12257 Nov 01 07:37	21°♏05'16	1°14'28
max. Earth dist.	12257 Nov 03 18:38	24°♏08'11	1.72743 AU
	12257 Nov 08 12:13	0°♐	
	12257 Dec 02 18:30	0°♑	
evening rise	12257 Dec 08 14:29	7°♑11'31	
	12257 Dec 27 03:36	0°♒	
desc. node	12258 Jan 15 15:10	23°♒50'54	
	12258 Jan 20 16:08	0°♓	
	12258 Feb 14 08:04	0°♈	
	12258 Mar 11 03:24	0°♉	
	12258 Apr 05 04:09	0°♊	
	12258 Apr 30 17:03	0°♋	
asc. node	12258 May 08 12:07	8°♋56'22	
	12258 May 27 11:42	0°♌	
evening max el	12258 Jun 09 13:27	13°♌36'37	46°48'46
	12258 Jun 27 05:47	0°♍	
greatest brilliancy	12258 Jul 19 13:20	14°♍09'38	-4.9m
retrograde	12258 Jul 29 20:01	16°♍08'10	
evening set	12258 Aug 13 18:14	11°♍46'44	
inferior conj	12258 Aug 19 14:49	8°♍19'22	2°18'09
minimum elong	12258 Aug 19 20:03	8°♍11'21	2°16'05
min. Earth dist.	12258 Aug 19 13:02	8°♍22'06	0.27072 AU
morning rise	12258 Aug 25 22:12	4°♍38'10	
desc. node	12258 Aug 28 13:48	3°♍19'41	
direct	12258 Sep 09 09:03	0°♍34'18	
greatest brilliancy	12258 Sep 19 05:54	2°♍21'55	-4.8m
	12258 Oct 27 06:16	0°♎	
morning max el	12258 Oct 28 19:18	1°♎29'21	46°09'22
	12258 Nov 25 04:56	0°♏	
asc. node	12258 Dec 19 13:47	27°♏25'00	
	12258 Dec 21 19:34	0°♐	
	12259 Jan 16 09:15	0°♑	
	12259 Feb 10 08:51	0°♒	
	12259 Mar 06 23:51	0°♓	
	12259 Mar 31 09:04	0°♈	
desc. node	12259 Apr 10 06:58	12°♈15'55	
	12259 Apr 24 13:42	0°♉	
morning set	12259 Apr 26 18:13	2°♉43'27	
	12259 May 18 14:30	0°♊	
max. Earth dist.	12259 Jun 03 21:42	20°♊25'51	1.71466 AU
superior conj	12259 Jun 05 21:38	22°♊56'12	-1°27'31
minimum elong	12259 Jun 05 21:45	22°♊56'34	1°28'23
	12259 Jun 11 12:43	0°♋	
	12259 Jul 05 10:10	0°♌	
evening rise	12259 Jul 16 05:33	13°♌33'10	
	12259 Jul 29 08:48	0°♍	
asc. node	12259 Jul 31 21:57	3°♍11'09	
	12259 Aug 22 10:14	0°♎	
	12259 Sep 15 16:09	0°♏	
	12259 Oct 10 05:16	0°♐	
	12259 Nov 04 06:10	0°♑	
desc. node	12259 Nov 20 17:16	19°♑14'41	
	12259 Nov 30 02:36	0°♒	
	12259 Dec 27 10:28	0°♓	
evening max el	12260 Jan 12 23:59	16°♓44'02	45°54'10
	12260 Jan 27 17:09	0°♈	
greatest brilliancy	12260 Feb 21 04:40	15°♈18'52	-4.8m
retrograde	12260 Mar 02 01:08	17°♈06'30	
asc. node	12260 Mar 12 18:47	14°♈48'13	
evening set	12260 Mar 16 18:44	12°♈52'16	
inferior conj	12260 Mar 23 02:11	9°♈07'22	2°33'59
minimum elong	12260 Mar 22 20:30	9°♈16'13	2°32'12
min. Earth dist.	12260 Mar 23 06:51	9°♈00'07	0.27884 AU
morning rise	12260 Mar 28 21:46	5°♈37'17	
direct	12260 Apr 13 03:22	1°♈01'58	
greatest brilliancy	12260 Apr 23 16:25	3°♈05'58	-4.8m
	12260 May 29 22:25	0°♉	
morning max el	12260 Jun 02 09:18	3°♉24'55	46°48'22
	12260 Jun 27 05:55	0°♊	
desc. node	12260 Jul 02 19:30	6°♊17'26	
	12260 Jul 23 05:05	0°♋	
	12260 Aug 17 06:38	0°♌	
	12260 Sep 10 23:00	0°♍	
	12260 Oct 05 11:21	0°♎	
asc. node	12260 Oct 23 14:08	22°♎14'38	
	12260 Oct 29 21:31	0°♏	
	12260 Nov 23 06:02	0°♐	
morning set	12260 Dec 03 18:47	12°♐59'23	
	12260 Dec 17 13:33	0°♑	
superior conj	12261 Jan 09 11:38	28°♑17'09	1°09'53
minimum elong	12261 Jan 09 20:56	28°♑45'48	1°10'26
max. Earth dist.	12261 Jan 09 17:53	28°♑36'25	1.73188 AU
	12261 Jan 10 20:59	0°♒	
	12261 Feb 04 04:55	0°♓	
desc. node	12261 Feb 12 04:42	9°♓51'01	
evening rise	12261 Feb 16 03:43	14°♓43'48	
	12261 Feb 28 13:06	0°♈	
	12261 Mar 24 20:53	0°♉	
	12261 Apr 18 04:22	0°♊	
	12261 May 12 13:14	0°♋	
asc. node	12261 Jun 04 22:51	28°♋34'23	
	12261 Jun 06 03:06	0°♌	
	12261 Jul 01 04:03	0°♍	
	12261 Jul 27 04:07	0°♎	

evening max el	12261 Aug 20	10:10	25°♎52'44	46°33'24
	12261 Aug 24	14:42	0°♏	
desc. node	12261 Sep 24	23:29	24°♏15'29	
greatest brilliancy	12261 Sep 28	13:28	25°♏49'33	-4.8m
retrograde	12261 Oct 09	13:31	28°♏03'49	
evening set	12261 Oct 26	05:52	22°♏42'28	
min. Earth dist.	12261 Oct 30	02:34	20°♏22'10	0.28425 AU
inferior conj	12261 Oct 30	22:04	19°♏51'54	-7°29'59
minimum elong	12261 Oct 30	12:38	20°♏06'33	7°27'51
morning rise	12261 Nov 03	19:44	17°♏29'05	
direct	12261 Nov 21	02:39	11°♏49'42	
greatest brilliancy	12261 Nov 30	18:51	13°♏31'49	-4.8m
	12261 Dec 26	21:45	0°♐	
morning max el	12262 Jan 08	23:39	11°♐52'08	45°42'25
asc. node	12262 Jan 16	00:57	18°♐49'56	
	12262 Jan 26	19:03	0°♑	
	12262 Feb 22	19:39	0°♒	
	12262 Mar 20	10:52	0°♓	
	12262 Apr 14	09:07	0°♈	
desc. node	12262 May 07	20:45	28°♈45'21	
	12262 May 08	20:58	0°♉	
	12262 Jun 02	01:48	0°♊	
	12262 Jun 26	02:11	0°♋	
morning set	12262 Jul 11	01:11	18°♋44'37	
	12262 Jul 20	00:36	0°♌	
	12262 Aug 12	23:06	0°♍	
superior conj	12262 Aug 19	17:04	8°♍26'52	-0°21'13
minimum elong	12262 Aug 19	22:20	8°♍43'22	0°21'22
max. Earth dist.	12262 Aug 21	20:02	11°♍06'19	1.71725 AU
asc. node	12262 Aug 28	11:50	19°♍25'50	
	12262 Sep 05	22:58	0°♎	
evening rise	12262 Sep 27	14:16	26°♎57'24	
	12262 Sep 30	01:03	0°♏	
	12262 Oct 24	06:25	0°♐	
	12262 Nov 17	16:49	0°♑	
	12262 Dec 12	10:25	0°♒	
desc. node	12262 Dec 18	04:40	6°♒55'28	
	12263 Jan 06	13:29	0°♓	
	12263 Feb 01	05:10	0°♈	
	12263 Feb 27	17:49	0°♉	
evening max el	12263 Mar 26	00:21	27°♉39'03	46°22'34
	12263 Mar 28	10:00	0°♊	
asc. node	12263 Apr 10	04:16	11°♊40'14	
greatest brilliancy	12263 May 05	05:10	27°♊40'44	-4.9m
retrograde	12263 May 14	20:48	29°♊25'14	
evening set	12263 Jun 01	23:59	23°♊08'41	
inferior conj	12263 Jun 04	12:41	21°♊35'33	9°12'59
minimum elong	12263 Jun 04	12:03	21°♊36'32	9°12'08
min. Earth dist.	12263 Jun 04	18:11	21°♊27'04	0.27362 AU
morning rise	12263 Jun 07	00:06	20°♊04'23	
direct	12263 Jun 25	08:40	13°♊41'15	
greatest brilliancy	12263 Jul 05	04:36	15°♊31'24	-4.9m
	12263 Jul 28	02:19	0°♋	
desc. node	12263 Jul 31	06:05	2°♋42'07	
morning max el	12263 Aug 14	20:21	16°♋29'29	46°52'42
	12263 Aug 27	20:18	0°♌	
	12263 Sep 23	18:20	0°♍	
	12263 Oct 19	12:08	0°♎	
	12263 Nov 13	16:46	0°♏	
asc. node	12263 Nov 21	03:20	8°♏56'34	
	12263 Dec 08	13:13	0°♐	
	12264 Jan 02	03:52	0°♑	
	12264 Jan 26	14:35	0°♒	
morning set	12264 Feb 11	12:09	19°♒35'03	
	12264 Feb 19	22:46	0°♓	
desc. node	12264 Mar 11	18:43	25°♓45'32	
	12264 Mar 15	04:54	0°♈	
max. Earth dist.	12264 Mar 18	00:33	3°♈29'33	1.72560 AU
superior conj	12264 Mar 20	16:52	6°♈48'54	-0°21'27
minimum elong	12264 Mar 20	11:52	6°♈33'23	0°21'13
	12264 Apr 08	08:48	0°♉	
evening rise	12264 Apr 28	16:25	25°♉18'48	
	12264 May 02	10:31	0°♊	
	12264 May 26	11:00	0°♋	
	12264 Jun 19	12:10	0°♌	
asc. node	12264 Jul 02	10:49	16°♌05'14	
	12264 Jul 13	16:35	0°♍	
	12264 Aug 07	03:25	0°♎	
	12264 Sep 01	01:39	0°♏	
	12264 Sep 26	21:28	0°♐	
desc. node	12264 Oct 22	08:57	27°♐36'40	
	12264 Oct 24	17:16	0°♑	
evening max el	12264 Oct 30	13:39	5°♑48'10	46°00'32
	12264 Nov 29	09:01	0°♒	
greatest brilliancy	12264 Dec 08	17:16	4°♒24'47	-4.7m
retrograde	12264 Dec 18	15:50	6°♒12'04	
evening set	12265 Jan 05	00:03	0°♒30'51	
	12265 Jan 05	20:34	30°℞♑	
inferior conj	12265 Jan 09	02:47	27°♑58'12	-7°10'03
minimum elong	12265 Jan 09	12:29	27°♑42'56	7°07'33
min. Earth dist.	12265 Jan 09	12:22	27°♑43'06	0.28875 AU
morning rise	12265 Jan 14	00:49	24°♑57'07	
direct	12265 Jan 30	13:16	19°♑43'28	
greatest brilliancy	12265 Feb 10	07:55	21°♑50'50	-4.8m
asc. node	12265 Feb 12	11:06	22°♑42'59	
	12265 Feb 24	21:45	0°♒	
morning max el	12265 Mar 20	22:59	20°♒50'55	46°03'33
	12265 Mar 29	23:42	0°♓	
	12265 Apr 26	07:30	0°♈	
	12265 May 21	22:56	0°♉	
desc. node	12265 Jun 04	09:38	16°♉09'00	
	12265 Jun 15	19:08	0°♊	
	12265 Jul 10	04:50	0°♋	
	12265 Aug 03	09:19	0°♌	
	12265 Aug 27	12:00	0°♍	
	12265 Sep 20	14:45	0°♎	
morning set	12265 Sep 22	05:57	2°♎01'54	
asc. node	12265 Sep 25	01:56	5°♎33'12	
	12265 Oct 14	18:11	0°♏	
superior conj	12265 Oct 30	08:36	19°♏21'34	1°12'17
minimum elong	12265 Oct 29	23:26	18°♏53'09	1°12'38
max. Earth dist.	12265 Nov 01	10:21	21°♏55'44	1.72711 AU
	12265 Nov 07	22:40	0°♐	
	12265 Dec 02	04:58	0°♑	
evening rise	12265 Dec 06	07:02	5°♑02'16	
	12265 Dec 26	14:11	0°♒	
desc. node	12266 Jan 14	17:09	23°♒24'02	
	12266 Jan 20	02:58	0°♓	
	12266 Feb 13	19:17	0°♈	
	12266 Mar 10	15:13	0°♉	
	12266 Apr 04	16:57	0°♊	
	12266 Apr 30	07:39	0°♋	
asc. node	12266 May 07	13:59	8°♋17'50	
	12266 May 27	06:24	0°♌	
evening max el	12266 Jun 07	01:36	11°♌10'33	46°48'19
	12266 Jun 27	17:33	0°♍	
greatest brilliancy	12266 Jul 17	04:24	11°♍47'49	-4.9m
retrograde	12266 Jul 27	08:51	13°♍44'51	
evening set	12266 Aug 11	09:23	9°♍20'37	
inferior conj	12266 Aug 17	03:49	5°♍56'36	2°41'27
minimum elong	12266 Aug 17	09:52	5°♍47'19	2°39'07

min. Earth dist.	12266 Aug 17 03:36	5°♍56'55	0.27057 AU
morning rise	12266 Aug 23 10:33	2°♍16'08	
desc. node	12266 Aug 27 15:53	0°♍16'45	
	12266 Aug 28 09:03	30℞♌	
direct	12266 Sep 06 21:13	28°♌11'18	
	12266 Sep 16 19:28	0°♍	
greatest brilliancy	12266 Sep 16 19:57	0°♍00'25	-4.8m
morning max el	12266 Oct 26 08:37	29°♍09'31	46°11'03
	12266 Oct 27 05:21	0°♎	
	12266 Nov 24 20:46	0°♏	
asc. node	12266 Dec 18 15:49	26°♏52'23	
	12266 Dec 21 08:46	0°♐	
	12267 Jan 15 21:09	0°♑	
	12267 Feb 09 20:04	0°♒	
	12267 Mar 06 10:42	0°♓	
	12267 Mar 30 19:44	0°♈	
desc. node	12267 Apr 09 08:47	11°♈48'44	
morning set	12267 Apr 24 06:44	0°♉20'10	
	12267 Apr 24 00:15	0°♉	
	12267 May 18 01:01	0°♊	
max. Earth dist.	12267 Jun 01 07:42	17°♊53'40	1.71491 AU
superior conj	12267 Jun 03 09:44	20°♊30'35	-1°27'28
minimum elong	12267 Jun 03 08:47	20°♊27'37	1°28'19
	12267 Jun 10 23:14	0°♋	
	12267 Jul 04 20:46	0°♌	
evening rise	12267 Jul 13 17:09	11°♌05'49	
	12267 Jul 28 19:30	0°♍	
asc. node	12267 Jul 30 23:56	2°♍43'50	
	12267 Aug 21 21:05	0°♎	
	12267 Sep 15 03:14	0°♏	
	12267 Oct 09 16:46	0°♐	
	12267 Nov 03 18:28	0°♑	
desc. node	12267 Nov 19 19:13	18°♑42'14	
	12267 Nov 29 16:30	0°♒	
	12267 Dec 27 04:09	0°♓	
evening max el	12268 Jan 10 14:50	14°♓30'51	45°53'50
	12268 Jan 28 01:59	0°♈	
greatest brilliancy	12268 Feb 18 18:38	13°♈02'57	-4.8m
retrograde	12268 Feb 28 16:10	14°♈51'12	
asc. node	12268 Mar 11 20:47	11°♈53'11	
evening set	12268 Mar 14 08:55	10°♈37'02	
inferior conj	12268 Mar 20 16:54	6°♈51'23	2°12'22
minimum elong	12268 Mar 20 11:58	6°♈59'03	2°10'50
min. Earth dist.	12268 Mar 20 21:53	6°♈43'38	0.27911 AU
morning rise	12268 Mar 26 14:34	3°♈18'42	
	12268 Apr 03 00:02	30℞♓	
direct	12268 Apr 10 18:36	28°♓45'31	
	12268 Apr 18 20:19	0°♈	
greatest brilliancy	12268 Apr 21 08:06	0°♈50'22	-4.8m
	12268 May 29 21:00	0°♉	
morning max el	12268 May 31 01:00	1°♉09'47	46°47'20
	12268 Jun 26 21:43	0°♊	
desc. node	12268 Jul 01 21:33	5°♊40'05	
	12268 Jul 22 18:30	0°♋	
	12268 Aug 16 18:54	0°♌	
	12268 Sep 10 10:34	0°♍	
	12268 Oct 04 22:28	0°♎	
asc. node	12268 Oct 22 15:55	21°♎46'47	
	12268 Oct 29 08:18	0°♏	
	12268 Nov 22 16:34	0°♐	
morning set	12268 Dec 01 11:28	10°♐50'26	
	12268 Dec 16 23:57	0°♑	
superior conj	12269 Jan 07 04:20	26°♑08'33	1°11'47
minimum elong	12269 Jan 07 13:21	26°♑36'23	1°12'22
max. Earth dist.	12269 Jan 07 15:02	26°♑41'33	1.73188 AU
	12269 Jan 10 07:22	0°♒	
	12269 Feb 03 15:22	0°♓	
desc. node	12269 Feb 11 06:33	9°♓24'24	
evening rise	12269 Feb 13 19:27	12°♓32'01	
	12269 Feb 27 23:42	0°♈	
	12269 Mar 24 07:44	0°♉	
	12269 Apr 17 15:32	0°♊	
	12269 May 12 00:52	0°♋	
asc. node	12269 Jun 04 00:51	28°♋03'13	
	12269 Jun 05 15:26	0°♌	
	12269 Jun 30 17:36	0°♍	
	12269 Jul 26 20:15	0°♎	
evening max el	12269 Aug 18 02:06	23°♎38'34	46°34'25
	12269 Aug 24 14:38	0°♏	
desc. node	12269 Sep 24 01:21	22°♏41'12	
greatest brilliancy	12269 Sep 26 03:56	23°♏34'04	-4.8m
retrograde	12269 Oct 07 05:33	25°♏49'20	
evening set	12269 Oct 23 17:31	20°♏33'26	
min. Earth dist.	12269 Oct 27 16:41	18°♏09'33	0.28375 AU
inferior conj	12269 Oct 28 13:05	17°♏37'54	-7°18'36
minimum elong	12269 Oct 28 03:19	17°♏53'03	7°16'21
morning rise	12269 Nov 01 13:33	15°♏11'12	
direct	12269 Nov 18 17:51	9°♏36'39	
greatest brilliancy	12269 Nov 28 08:09	11°♏17'30	-4.8m
	12269 Dec 27 02:38	0°♐	
morning max el	12270 Jan 06 15:00	9°♐40'20	45°42'31
asc. node	12270 Jan 15 02:59	18°♐05'46	
	12270 Jan 26 11:58	0°♑	
	12270 Feb 22 09:19	0°♒	
	12270 Mar 19 23:06	0°♓	
	12270 Apr 13 20:38	0°♈	
desc. node	12270 May 06 22:31	28°♈16'32	
	12270 May 08 08:06	0°♉	
	12270 Jun 01 12:42	0°♊	
	12270 Jun 25 12:57	0°♋	
morning set	12270 Jul 08 13:23	16°♋18'56	
	12270 Jul 19 11:16	0°♌	
	12270 Aug 12 09:40	0°♍	
superior conj	12270 Aug 17 06:04	6°♍04'19	-0°24'51
minimum elong	12270 Aug 17 12:11	6°♍23'27	0°24'58
max. Earth dist.	12270 Aug 19 10:45	8°♍49'08	1.71693 AU
asc. node	12270 Aug 27 13:38	18°♍58'28	
	12270 Sep 05 09:30	0°♎	
evening rise	12270 Sep 25 05:34	24°♎42'51	
	12270 Sep 29 11:37	0°♏	
	12270 Oct 23 17:08	0°♐	
	12270 Nov 17 03:47	0°♑	
	12270 Dec 11 21:50	0°♒	
desc. node	12270 Dec 17 06:38	6°♒26'38	
	12271 Jan 06 01:40	0°♓	
	12271 Jan 31 18:43	0°♈	
	12271 Feb 27 10:09	0°♉	
evening max el	12271 Mar 23 14:20	25°♉19'14	46°21'16
	12271 Mar 28 10:17	0°♊	
asc. node	12271 Apr 09 06:11	10°♊35'07	
greatest brilliancy	12271 May 02 18:20	25°♊17'51	-4.9m
retrograde	12271 May 12 09:29	27°♊01'45	
evening set	12271 May 30 11:31	20°♊47'59	
inferior conj	12271 Jun 02 01:56	19°♊12'03	9°11'44
minimum elong	12271 Jun 02 00:19	19°♊14'33	9°10'51
min. Earth dist.	12271 Jun 02 06:59	19°♊04'13	0.27378 AU
morning rise	12271 Jun 04 13:06	17°♊41'01	
direct	12271 Jun 22 21:59	11°♊17'30	
greatest brilliancy	12271 Jul 02 17:51	13°♊07'09	-4.9m
	12271 Jul 28 11:03	0°♋	
desc. node	12271 Jul 30 08:02	1°♋39'07	

morning max el	12271 Aug 12 09:10	14°♋04'41	46°53'36
	12271 Aug 27 14:45	0°♌	
	12271 Sep 23 08:56	0°♍	
	12271 Oct 19 00:58	0°♎	
	12271 Nov 13 04:37	0°♏	
asc. node	12271 Nov 20 05:20	8°♏27'33	
	12271 Dec 08 00:29	0°♐	
	12272 Jan 01 14:47	0°♑	
	12272 Jan 26 01:19	0°♒	
morning set	12272 Feb 09 04:30	17°♒24'35	
	12272 Feb 19 09:25	0°♓	
desc. node	12272 Mar 10 20:28	25°♓17'59	
	12272 Mar 14 15:33	0°♈	
max. Earth dist.	12272 Mar 15 14:53	1°♈12'18	1.72597 AU
superior conj	12272 Mar 18 07:09	4°♈31'24	-0°17'57
minimum elong	12272 Mar 18 02:57	4°♈18'23	0°17'43
	12272 Apr 07 19:31	0°♉	
evening rise	12272 Apr 26 05:28	22°♉56'08	
	12272 May 01 21:22	0°♊	
	12272 May 25 22:01	0°♋	
	12272 Jun 18 23:25	0°♌	
asc. node	12272 Jul 01 12:48	15°♌35'54	
	12272 Jul 13 04:11	0°♍	
	12272 Aug 06 15:33	0°♎	
	12272 Aug 31 14:42	0°♏	
	12272 Sep 26 12:27	0°♐	
desc. node	12272 Oct 21 10:56	26°♐52'12	
	12272 Oct 24 13:30	0°♑	
evening max el	12272 Oct 28 03:41	3°♑32'22	46°01'23
	12272 Dec 01 01:27	0°♒	
greatest brilliancy	12272 Dec 06 09:01	2°♒14'32	-4.7m
retrograde	12272 Dec 16 07:04	4°♒01'52	
	12272 Dec 30 17:27	30°℞♑	
evening set	12273 Jan 02 18:47	28°♑16'13	
inferior conj	12273 Jan 06 18:50	25°♑47'38	-7°21'27
minimum elong	12273 Jan 07 04:15	25°♑32'48	7°19'04
min. Earth dist.	12273 Jan 07 04:07	25°♑33'01	0.28898 AU
morning rise	12273 Jan 11 13:36	22°♑51'08	
direct	12273 Jan 28 04:53	17°♑32'42	
greatest brilliancy	12273 Feb 07 23:59	19°♑39'55	-4.8m
asc. node	12273 Feb 11 13:03	21°♑10'33	
	12273 Feb 25 13:22	0°♒	
morning max el	12273 Mar 18 13:31	18°♒34'45	46°02'11
	12273 Mar 29 18:28	0°♓	
	12273 Apr 25 22:09	0°♈	
	12273 May 21 11:55	0°♉	
desc. node	12273 Jun 03 11:40	15°♉37'34	
	12273 Jun 15 07:15	0°♊	
	12273 Jul 09 16:26	0°♋	
	12273 Aug 02 20:35	0°♌	
	12273 Aug 26 23:04	0°♍	
morning set	12273 Sep 19 20:22	29°♍43'35	
	12273 Sep 20 01:38	0°♎	
asc. node	12273 Sep 24 03:44	5°♎05'02	
	12273 Oct 14 04:56	0°♏	
superior conj	12273 Oct 28 00:50	17°♏09'54	1°10'22
minimum elong	12273 Oct 27 15:20	16°♏40'29	1°10'41
max. Earth dist.	12273 Oct 30 00:39	19°♏38'09	1.72678 AU
	12273 Nov 07 09:21	0°♐	
	12273 Dec 01 15:40	0°♑	
evening rise	12273 Dec 03 23:43	2°♑52'45	
	12273 Dec 26 01:02	0°♒	
desc. node	12274 Jan 13 19:04	22°♒56'04	
	12274 Jan 19 14:07	0°♓	
	12274 Feb 13 06:53	0°♈	
	12274 Mar 10 03:29	0°♉	
	12274 Apr 04 06:17	0°♊	
	12274 Apr 29 22:53	0°♋	
asc. node	12274 May 06 16:02	7°♋38'13	
	12274 May 27 02:07	0°♌	
evening max el	12274 Jun 04 14:03	8°♌44'17	46°48'06
	12274 Jun 28 09:58	0°♍	
greatest brilliancy	12274 Jul 14 18:50	9°♍24'15	-4.9m
retrograde	12274 Jul 24 22:08	11°♍20'34	
evening set	12274 Aug 09 00:39	6°♍52'58	
inferior conj	12274 Aug 14 16:45	3°♍32'32	3°04'30
minimum elong	12274 Aug 14 23:36	3°♍22'04	3°01'54
min. Earth dist.	12274 Aug 14 17:48	3°♍30'55	0.27046 AU
morning rise	12274 Aug 20 22:40	29°♌53'23	
	12274 Aug 20 17:43	30°℞♌	
desc. node	12274 Aug 26 17:48	27°♌17'52	
direct	12274 Sep 04 09:38	25°♌46'55	
greatest brilliancy	12274 Sep 14 09:37	27°♌37'23	-4.8m
	12274 Sep 19 21:58	0°♍	
morning max el	12274 Oct 23 22:57	26°♍51'03	46°12'45
	12274 Oct 27 03:53	0°♎	
	12274 Nov 24 12:41	0°♏	
asc. node	12274 Dec 17 17:46	26°♏18'42	
	12274 Dec 20 22:11	0°♐	
	12275 Jan 15 09:21	0°♑	
	12275 Feb 09 07:37	0°♒	
	12275 Mar 05 21:55	0°♓	
	12275 Mar 30 06:47	0°♈	
desc. node	12275 Apr 08 10:39	11°♈20'23	
morning set	12275 Apr 21 19:03	27°♈54'55	
	12275 Apr 23 11:15	0°♉	
	12275 May 17 11:59	0°♊	
max. Earth dist.	12275 May 29 18:31	15°♊22'33	1.71514 AU
superior conj	12275 May 31 21:22	18°♊02'03	-1°27'13
minimum elong	12275 May 31 19:21	17°♊55'44	1°28'03
	12275 Jun 10 10:13	0°♋	
	12275 Jul 04 07:48	0°♌	
evening rise	12275 Jul 11 04:20	8°♌35'54	
	12275 Jul 28 06:37	0°♍	
asc. node	12275 Jul 30 01:41	2°♍14'37	
	12275 Aug 21 08:20	0°♎	
	12275 Sep 14 14:44	0°♏	
	12275 Oct 09 04:43	0°♐	
	12275 Nov 03 07:17	0°♑	
desc. node	12275 Nov 18 21:15	18°♑08'39	
	12275 Nov 29 07:01	0°♒	
	12275 Dec 26 22:45	0°♓	
evening max el	12276 Jan 08 06:32	12°♓18'42	45°53'32
	12276 Jan 28 14:37	0°♈	
greatest brilliancy	12276 Feb 16 08:30	10°♈46'00	-4.8m
retrograde	12276 Feb 26 07:04	12°♈34'39	
asc. node	12276 Mar 10 22:41	8°♈53'10	
evening set	12276 Mar 11 23:20	8°♈20'36	
inferior conj	12276 Mar 18 07:36	4°♈34'14	1°50'33
minimum elong	12276 Mar 18 03:27	4°♈40'42	1°49'17
min. Earth dist.	12276 Mar 18 12:47	4°♈26'10	0.27941 AU
morning rise	12276 Mar 24 07:10	0°♈59'02	
	12276 Mar 26 03:40	30°℞♓	
direct	12276 Apr 08 10:11	26°♓28'03	
greatest brilliancy	12276 Apr 18 23:23	28°♓32'59	-4.8m
	12276 Apr 22 09:09	0°♈	
morning max el	12276 May 28 16:39	28°♈53'02	46°46'01
	12276 May 29 19:19	0°♉	
	12276 Jun 26 13:51	0°♊	
desc. node	12276 Jun 30 23:27	5°♊00'55	
	12276 Jul 22 08:22	0°♋	

	12276 Aug 16 07:36	0°♌	
	12276 Sep 09 22:34	0°♍	
	12276 Oct 04 09:58	0°♎	
asc. node	12276 Oct 21 17:52	21°♎18'15	
	12276 Oct 28 19:26	0°♏	
	12276 Nov 22 03:30	0°♐	
morning set	12276 Nov 29 04:09	8°♐40'13	
	12276 Dec 16 10:47	0°♑	
superior conj	12277 Jan 04 21:13	23°♑59'12	1°13'34
minimum elong	12277 Jan 05 05:54	24°♑26'00	1°14'11
max. Earth dist.	12277 Jan 05 11:41	24°♑43'52	1.73185 AU
	12277 Jan 09 18:10	0°♒	
	12277 Feb 03 02:14	0°♓	
desc. node	12277 Feb 10 08:20	8°♓56'20	
evening rise	12277 Feb 11 11:22	10°♓19'34	
	12277 Feb 27 10:42	0°♈	
	12277 Mar 23 18:57	0°♉	
	12277 Apr 17 03:07	0°♊	
	12277 May 11 12:58	0°♋	
asc. node	12277 Jun 03 02:48	27°♋30'17	
	12277 Jun 05 04:20	0°♌	
	12277 Jun 30 07:50	0°♍	
	12277 Jul 26 13:16	0°♎	
evening max el	12277 Aug 15 18:00	21°♎22'39	46°35'33
	12277 Aug 24 16:28	0°♏	
desc. node	12277 Sep 23 03:21	21°♏02'14	
greatest brilliancy	12277 Sep 23 19:05	21°♏17'52	-4.8m
retrograde	12277 Oct 04 21:12	23°♏33'09	
evening set	12277 Oct 21 05:13	18°♏22'57	
min. Earth dist.	12277 Oct 25 07:03	15°♏55'06	0.28318 AU
inferior conj	12277 Oct 26 04:02	15°♏22'30	-7°06'30
minimum elong	12277 Oct 25 18:01	15°♏38'05	7°04'08
morning rise	12277 Oct 30 07:19	12°♏51'43	
direct	12277 Nov 16 08:53	7°♏22'21	
greatest brilliancy	12277 Nov 25 21:27	9°♏01'48	-4.8m
	12277 Dec 27 06:10	0°♐	
morning max el	12278 Jan 04 05:35	7°♐25'35	45°42'37
asc. node	12278 Jan 14 04:52	17°♐20'53	
	12278 Jan 26 04:55	0°♑	
	12278 Feb 21 23:11	0°♒	
	12278 Mar 19 11:37	0°♓	
	12278 Apr 13 08:25	0°♈	
desc. node	12278 May 06 00:34	27°♈47'37	
	12278 May 07 19:29	0°♉	
	12278 May 31 23:53	0°♊	
	12278 Jun 25 00:02	0°♋	
morning set	12278 Jul 06 01:19	13°♋51'19	
	12278 Jul 18 22:17	0°♌	
	12278 Aug 11 20:37	0°♍	
superior conj	12278 Aug 14 18:39	3°♍39'13	-0°28'28
minimum elong	12278 Aug 15 01:34	4°♍00'52	0°28'35
max. Earth dist.	12278 Aug 16 22:53	6°♍22'39	1.71661 AU
asc. node	12278 Aug 26 15:29	18°♍30'06	
	12278 Sep 04 20:24	0°♎	
evening rise	12278 Sep 22 20:16	22°♎25'21	
	12278 Sep 28 22:33	0°♏	
	12278 Oct 23 04:09	0°♐	
	12278 Nov 16 15:03	0°♑	
	12278 Dec 11 09:34	0°♒	
desc. node	12278 Dec 16 08:32	5°♒56'48	
	12279 Jan 05 14:12	0°♓	
	12279 Jan 31 08:41	0°♈	
	12279 Feb 27 03:05	0°♉	
evening max el	12279 Mar 21 03:34	22°♉57'06	46°20'00
	12279 Mar 28 12:05	0°♊	

asc. node	12279 Apr 08 08:18	9°♊28'18	
greatest brilliancy	12279 Apr 30 07:53	22°♊55'13	-4.8m
retrograde	12279 May 09 22:02	24°♊38'29	
evening set	12279 May 27 22:33	18°♊28'16	
inferior conj	12279 May 30 15:19	16°♊48'44	9°09'22
minimum elong	12279 May 30 12:45	16°♊52'44	9°08'26
min. Earth dist.	12279 May 30 20:13	16°♊41'07	0.27396 AU
morning rise	12279 Jun 02 02:54	15°♊16'54	
direct	12279 Jun 20 11:00	8°♊53'42	
greatest brilliancy	12279 Jun 30 07:52	10°♊43'43	-4.9m
	12279 Jul 28 17:27	0°♋	
desc. node	12279 Jul 29 10:00	0°♋37'23	
morning max el	12279 Aug 09 21:48	11°♋38'47	46°54'20
	12279 Aug 27 08:57	0°♌	
	12279 Sep 22 23:36	0°♍	
	12279 Oct 18 13:57	0°♎	
	12279 Nov 12 16:37	0°♏	
asc. node	12279 Nov 19 07:16	7°♏57'50	
	12279 Dec 07 11:52	0°♐	
	12280 Jan 01 01:47	0°♑	
	12280 Jan 25 12:06	0°♒	
morning set	12280 Feb 06 20:51	15°♒13'56	
	12280 Feb 18 20:08	0°♓	
desc. node	12280 Mar 09 22:23	24°♓50'40	
max. Earth dist.	12280 Mar 13 06:28	28°♓58'37	1.72636 AU
	12280 Mar 14 02:17	0°♈	
superior conj	12280 Mar 15 21:38	2°♈14'19	-0°14'26
minimum elong	12280 Mar 15 18:15	2°♈03'50	0°14'13
behind sun begin	12280 Mar 15 06:53	1°♈28'35	
behind sun end	12280 Mar 16 05:38	2°♈39'04	
	12280 Apr 07 06:20	0°♉	
evening rise	12280 Apr 23 18:55	20°♉34'34	
	12280 May 01 08:16	0°♊	
	12280 May 25 09:03	0°♋	
	12280 Jun 18 10:40	0°♌	
asc. node	12280 Jun 30 14:37	15°♌06'09	
	12280 Jul 12 15:47	0°♍	
	12280 Aug 06 03:44	0°♎	
	12280 Aug 31 03:54	0°♏	
	12280 Sep 26 03:43	0°♐	
desc. node	12280 Oct 20 13:01	26°♐07'06	
	12280 Oct 24 10:32	0°♑	
evening max el	12280 Oct 25 17:46	1°♑16'26	46°02'21
	12280 Dec 03 20:07	0°♒	
greatest brilliancy	12280 Dec 04 00:21	0°♒03'42	-4.8m
retrograde	12280 Dec 13 22:48	1°♒51'50	
	12280 Dec 23 15:31	30°℞♑	
evening set	12280 Dec 31 13:26	26°♑01'39	
inferior conj	12281 Jan 04 10:55	23°♑37'08	-7°32'04
minimum elong	12281 Jan 04 20:00	23°♑22'51	7°29'50
min. Earth dist.	12281 Jan 04 19:42	23°♑23'18	0.28918 AU
morning rise	12281 Jan 09 02:25	20°♑45'31	
direct	12281 Jan 25 20:24	15°♑22'00	
greatest brilliancy	12281 Feb 05 16:04	17°♑29'24	-4.8m
asc. node	12281 Feb 10 15:03	19°♑41'34	
	12281 Feb 26 00:50	0°♒	
morning max el	12281 Mar 16 04:55	16°♒21'07	46°00'51
	12281 Mar 29 12:38	0°♓	
	12281 Apr 25 12:31	0°♈	
	12281 May 21 00:43	0°♉	
desc. node	12281 Jun 02 13:29	15°♉05'52	
	12281 Jun 14 19:12	0°♊	
	12281 Jul 09 03:52	0°♋	
	12281 Aug 02 07:41	0°♌	
	12281 Aug 26 09:56	0°♍	
morning set	12281 Sep 17 10:54	27°♍26'11	

	12281 Sep 19	12:21	0°♎		
asc. node	12281 Sep 23	05:41	4°♎37'51		
	12281 Oct 13	15:32	0°♏		
superior conj	12281 Oct 25	16:58	14°♏58'23	1°08'21	
minimum elong	12281 Oct 25	07:14	14°♏28'11	1°08'37	
max. Earth dist.	12281 Oct 27	15:27	17°♏22'30	1.72650 AU	
	12281 Nov 06	19:54	0°♐		
	12281 Dec 01	02:15	0°♑		
evening rise	12281 Dec 01	16:21	0°♑43'27		
	12281 Dec 25	11:45	0°♒		
desc. node	12282 Jan 12	20:50	22°♒28'11		
	12282 Jan 19	01:07	0°♓		
	12282 Feb 12	18:19	0°♈		
	12282 Mar 09	15:36	0°♉		
	12282 Apr 03	19:29	0°♊		
	12282 Apr 29	14:06	0°♋		
asc. node	12282 May 05	18:01	6°♋58'45		
	12282 May 26	22:09	0°♌		
evening max el	12282 Jun 02	03:48	6°♌22'08	46°47'53	
	12282 Jun 29	07:29	0°♍		
greatest brilliancy	12282 Jul 12	08:53	7°♍01'23	-4.9m	
retrograde	12282 Jul 22	12:02	8°♍57'34		
evening set	12282 Aug 06	16:14	4°♍26'29		
inferior conj	12282 Aug 12	05:48	1°♍09'42	3°27'02	
minimum elong	12282 Aug 12	13:24	0°♍58'08	3°24'14	
min. Earth dist.	12282 Aug 12	07:45	1°♍06'44	0.27034 AU	
	12282 Aug 14	03:42	30°℞♌		
morning rise	12282 Aug 18	10:40	27°♌32'20		
desc. node	12282 Aug 25	19:48	24°♌25'53		
direct	12282 Sep 01	22:42	23°♌24'00		
greatest brilliancy	12282 Sep 11	22:46	25°♌15'07	-4.8m	
	12282 Sep 21	17:16	0°♍		
morning max el	12282 Oct 21	14:06	24°♍35'46	46°14'20	
	12282 Oct 27	01:03	0°♎		
	12282 Nov 24	03:58	0°♏		
asc. node	12282 Dec 16	19:36	25°♏45'50		
	12282 Dec 20	11:11	0°♐		
	12283 Jan 14	21:12	0°♑		
	12283 Feb 08	18:50	0°♒		
	12283 Mar 05	08:49	0°♓		
	12283 Mar 29	17:30	0°♈		
desc. node	12283 Apr 07	12:34	10°♈53'15		
morning set	12283 Apr 19	07:36	25°♈31'38		
	12283 Apr 22	21:53	0°♉		
	12283 May 16	22:37	0°♊		
max. Earth dist.	12283 May 27	05:31	12°♊53'11	1.71539 AU	
superior conj	12283 May 29	09:09	15°♊35'04	-1°26'49	
minimum elong	12283 May 29	06:06	15°♊25'31	1°27'38	
	12283 Jun 09	20:53	0°♋		
	12283 Jul 03	18:30	0°♌		
evening rise	12283 Jul 08	15:39	6°♌07'19		
	12283 Jul 27	17:24	0°♍		
asc. node	12283 Jul 29	03:35	1°♍46'50		
	12283 Aug 20	19:13	0°♎		
	12283 Sep 14	01:50	0°♏		
	12283 Oct 08	16:17	0°♐		
	12283 Nov 02	19:44	0°♑		
desc. node	12283 Nov 17	23:08	17°♑35'44		
	12283 Nov 28	21:16	0°♒		
	12283 Dec 26	17:25	0°♓		
evening max el	12284 Jan 05	22:47	10°♓09'01	45°53'07	
	12284 Jan 29	06:52	0°♈		
greatest brilliancy	12284 Feb 13	22:58	8°♈31'10	-4.8m	
retrograde	12284 Feb 23	21:45	10°♈19'30		
evening set	12284 Mar 09	14:09	6°♈05'37		
asc. node	12284 Mar 10	00:48	5°♈51'03		
inferior conj	12284 Mar 15	22:27	2°♈18'45	1°28'42	
minimum elong	12284 Mar 15	19:06	2°♈23'58	1°27'42	
min. Earth dist.	12284 Mar 16	03:58	2°♈10'09	0.27969 AU	
	12284 Mar 19	16:48	30°℞♓		
morning rise	12284 Mar 21	23:42	28°♓41'05		
direct	12284 Apr 06	01:55	24°♓12'26		
greatest brilliancy	12284 Apr 16	14:42	26°♓17'06	-4.8m	
	12284 Apr 24	07:23	0°♈		
morning max el	12284 May 26	07:33	26°♈35'55	46°44'37	
	12284 May 29	16:15	0°♉		
	12284 Jun 26	05:15	0°♊		
desc. node	12284 Jun 30	01:23	4°♊23'36		
	12284 Jul 21	21:39	0°♋		
	12284 Aug 15	19:49	0°♌		
	12284 Sep 09	10:06	0°♍		
	12284 Oct 03	21:00	0°♎		
asc. node	12284 Oct 20	19:44	20°♎50'50		
	12284 Oct 28	06:07	0°♏		
	12284 Nov 21	13:57	0°♐		
morning set	12284 Nov 26	21:06	6°♐32'16		
	12284 Dec 15	21:08	0°♑		
superior conj	12285 Jan 02	14:22	21°♑52'10	1°15'13	
minimum elong	12285 Jan 02	22:40	22°♑17'47	1°15'53	
max. Earth dist.	12285 Jan 03	07:41	22°♑45'35	1.73184 AU	
	12285 Jan 09	04:32	0°♒		
	12285 Feb 02	12:40	0°♓		
evening rise	12285 Feb 09	03:21	8°♓08'41		
desc. node	12285 Feb 09	10:18	8°♓30'04		
	12285 Feb 26	21:18	0°♈		
	12285 Mar 23	05:48	0°♉		
	12285 Apr 16	14:20	0°♊		
	12285 May 11	00:42	0°♋		
asc. node	12285 Jun 02	04:40	26°♋58'21		
	12285 Jun 04	16:51	0°♌		
	12285 Jun 29	21:45	0°♍		
	12285 Jul 26	06:11	0°♎		
evening max el	12285 Aug 13	09:21	19°♎06'21	46°36'30	
	12285 Aug 24	19:19	0°♏		
greatest brilliancy	12285 Sep 21	10:51	19°♏03'17	-4.8m	
desc. node	12285 Sep 22	05:29	19°♏20'47		
retrograde	12285 Oct 02	12:17	21°♏17'53		
evening set	12285 Oct 18	16:56	16°♏13'28		
min. Earth dist.	12285 Oct 22	21:52	13°♏41'08	0.28259 AU	
inferior conj	12285 Oct 23	18:59	13°♏08'18	-6°53'42	
minimum elong	12285 Oct 23	08:44	13°♏24'13	6°51'12	
morning rise	12285 Oct 28	01:02	10°♏33'18		
direct	12285 Nov 13	23:29	5°♏09'13		
greatest brilliancy	12285 Nov 23	11:18	6°♏47'47	-4.8m	
	12285 Dec 27	07:31	0°♐		
morning max el	12286 Jan 01	19:15	5°♐09'58	45°42'54	
asc. node	12286 Jan 13	06:53	16°♐38'26		
	12286 Jan 25	21:00	0°♑		
	12286 Feb 21	12:27	0°♒		
	12286 Mar 18	23:38	0°♓		
	12286 Apr 12	19:49	0°♈		
desc. node	12286 May 05	02:23	27°♈19'05		
	12286 May 07	06:32	0°♉		
	12286 May 31	10:44	0°♊		
	12286 Jun 24	10:45	0°♋		
morning set	12286 Jul 03	13:03	11°♋24'11		
	12286 Jul 18	08:54	0°♌		
	12286 Aug 11	07:11	0°♍		
superior conj	12286 Aug 12	07:08	1°♍14'56	-0°32'01	
minimum elong	12286 Aug 12	14:49	1°♍39'00	0°32'10	

max. Earth dist.	12286 Aug 14 09:03	3°♍51'13	1.71632 AU
asc. node	12286 Aug 25 17:24	18°♍03'03	
	12286 Sep 04 06:58	0°♎	
evening rise	12286 Sep 20 10:51	20°♎08'26	
	12286 Sep 28 09:10	0°♏	
	12286 Oct 22 14:53	0°♐	
	12286 Nov 16 02:01	0°♑	
	12286 Dec 10 20:57	0°♒	
desc. node	12286 Dec 15 10:26	5°♒28'00	
	12287 Jan 05 02:24	0°♓	
	12287 Jan 30 22:24	0°♈	
	12287 Feb 26 19:59	0°♉	
evening max el	12287 Mar 18 16:17	20°♉34'44	46°18'39
	12287 Mar 28 15:01	0°♊	
asc. node	12287 Apr 07 10:14	8°♊20'02	
greatest brilliancy	12287 Apr 27 21:11	20°♊32'54	-4.8m
retrograde	12287 May 07 10:41	22°♊16'03	
evening set	12287 May 25 08:59	16°♊09'53	
inferior conj	12287 May 28 04:41	14°♊26'03	9°05'56
minimum elong	12287 May 28 01:09	14°♊31'32	9°04'57
min. Earth dist.	12287 May 28 09:28	14°♊18'39	0.27416 AU
morning rise	12287 May 30 17:16	12°♊52'42	
direct	12287 Jun 17 23:56	6°♊30'20	
greatest brilliancy	12287 Jun 27 22:11	8°♊21'23	-4.9m
desc. node	12287 Jul 28 12:04	29°♊38'05	
	12287 Jul 28 21:32	0°♋	
morning max el	12287 Aug 07 10:49	9°♋14'36	46°55'06
	12287 Aug 27 02:24	0°♌	
	12287 Sep 22 13:47	0°♍	
	12287 Oct 18 02:33	0°♎	
	12287 Nov 12 04:20	0°♏	
asc. node	12287 Nov 18 09:02	7°♏28'24	
	12287 Dec 06 23:00	0°♐	
	12287 Dec 31 12:33	0°♑	
	12288 Jan 24 22:39	0°♒	
morning set	12288 Feb 04 13:34	13°♒05'03	
	12288 Feb 18 06:36	0°♓	
desc. node	12288 Mar 09 00:17	24°♓24'06	
max. Earth dist.	12288 Mar 11 00:55	26°♓54'38	1.72674 AU
superior conj	12288 Mar 13 12:25	29°♓58'53	-0°10'55
minimum elong	12288 Mar 13 09:52	29°♓50'58	0°10'42
behind sun begin	12288 Mar 12 15:39	28°♓54'33	
behind sun end	12288 Mar 14 04:04	0°♈47'24	
	12288 Mar 13 12:46	0°♈	
	12288 Apr 06 16:56	0°♉	
evening rise	12288 Apr 21 08:36	18°♉14'25	
	12288 Apr 30 19:00	0°♊	
	12288 May 24 19:58	0°♋	
	12288 Jun 17 21:49	0°♌	
asc. node	12288 Jun 29 16:32	14°♌36'59	
	12288 Jul 12 03:19	0°♍	
	12288 Aug 05 15:51	0°♎	
	12288 Aug 30 17:05	0°♏	
	12288 Sep 25 19:07	0°♐	
desc. node	12288 Oct 19 14:55	25°♐21'01	
evening max el	12288 Oct 23 08:21	29°♐01'52	46°03'21
	12288 Oct 24 08:17	0°♑	
greatest brilliancy	12288 Dec 01 14:57	27°♑52'04	-4.8m
retrograde	12288 Dec 11 14:51	29°♑41'40	
evening set	12288 Dec 29 07:53	23°♑46'56	
inferior conj	12289 Jan 02 02:50	21°♑26'27	-7°42'08
minimum elong	12289 Jan 02 11:31	21°♑12'47	7°40'02
min. Earth dist.	12289 Jan 02 10:50	21°♑13'53	0.28935 AU
morning rise	12289 Jan 06 15:03	18°♑39'56	
direct	12289 Jan 23 12:12	13°♑11'08	
greatest brilliancy	12289 Feb 03 07:39	15°♑18'32	-4.8m
asc. node	12289 Feb 09 17:05	18°♑15'47	
	12289 Feb 26 09:06	0°♒	
morning max el	12289 Mar 13 20:58	14°♒09'38	45°59'41
	12289 Mar 29 06:14	0°♓	
	12289 Apr 25 02:35	0°♈	
	12289 May 20 13:19	0°♉	
desc. node	12289 Jun 01 15:23	14°♉34'49	
	12289 Jun 14 07:03	0°♊	
	12289 Jul 08 15:17	0°♋	
	12289 Aug 01 18:48	0°♌	
	12289 Aug 25 20:50	0°♍	
morning set	12289 Sep 15 01:03	25°♍07'23	
	12289 Sep 18 23:05	0°♎	
asc. node	12289 Sep 22 07:30	4°♎10'12	
	12289 Oct 13 02:10	0°♏	
superior conj	12289 Oct 23 08:44	12°♏45'29	1°06'12
minimum elong	12289 Oct 22 22:48	12°♏14'40	1°06'24
max. Earth dist.	12289 Oct 25 08:14	15°♏12'52	1.72622 AU
	12289 Nov 06 06:28	0°♐	
evening rise	12289 Nov 29 08:52	28°♐33'37	
	12289 Nov 30 12:53	0°♑	
	12289 Dec 24 22:33	0°♒	
desc. node	12290 Jan 11 22:50	22°♒00'45	
	12290 Jan 18 12:12	0°♓	
	12290 Feb 12 05:50	0°♈	
	12290 Mar 09 03:47	0°♉	
	12290 Apr 03 08:46	0°♊	
	12290 Apr 29 05:32	0°♋	
asc. node	12290 May 04 19:54	6°♋18'38	
	12290 May 26 18:55	0°♌	
evening max el	12290 May 30 18:09	4°♌01'27	46°47'25
	12290 Jun 30 13:36	0°♍	
greatest brilliancy	12290 Jul 09 22:30	4°♍37'25	-4.9m
retrograde	12290 Jul 20 01:45	6°♍33'19	
evening set	12290 Aug 04 07:50	1°♍58'44	
	12290 Aug 07 17:40	30°℞♌	
inferior conj	12290 Aug 09 18:39	28°♌45'37	3°49'24
minimum elong	12290 Aug 10 02:56	28°♌33'00	3°46'24
min. Earth dist.	12290 Aug 09 21:17	28°♌41'36	0.27027 AU
morning rise	12290 Aug 15 22:12	25°♌10'16	
desc. node	12290 Aug 24 21:53	21°♌38'08	
direct	12290 Aug 30 12:05	20°♌59'56	
greatest brilliancy	12290 Sep 09 11:25	22°♌51'01	-4.8m
	12290 Sep 22 23:30	0°♍	
morning max el	12290 Oct 19 04:57	22°♍18'49	46°15'51
	12290 Oct 26 21:48	0°♎	
	12290 Nov 23 19:16	0°♏	
asc. node	12290 Dec 15 21:39	25°♏13'10	
	12290 Dec 20 00:16	0°♐	
	12291 Jan 14 09:11	0°♑	
	12291 Feb 08 06:14	0°♒	
	12291 Mar 04 19:53	0°♓	
	12291 Mar 29 04:24	0°♈	
desc. node	12291 Apr 06 14:23	10°♈25'14	
morning set	12291 Apr 16 20:29	23°♈08'58	
	12291 Apr 22 08:40	0°♉	
	12291 May 16 09:22	0°♊	
max. Earth dist.	12291 May 24 15:16	10°♊19'38	1.71562 AU
superior conj	12291 May 26 21:18	13°♊08'55	-1°26'15
minimum elong	12291 May 26 17:16	12°♊56'18	1°27'02
	12291 Jun 09 07:39	0°♋	
	12291 Jul 03 05:21	0°♌	
evening rise	12291 Jul 06 03:06	3°♌38'44	
	12291 Jul 27 04:21	0°♍	
asc. node	12291 Jul 28 05:32	1°♍18'40	

	12291 Aug 20 06:21	0°♎	
	12291 Sep 13 13:15	0°♏	
	12291 Oct 08 04:12	0°♐	
	12291 Nov 02 08:37	0°♑	
desc. node	12291 Nov 17 01:06	17°♑01'54	
	12291 Nov 28 12:04	0°♒	
	12291 Dec 26 13:01	0°♓	
evening max el	12292 Jan 03 14:13	7°♓56'21	45°52'43
	12292 Jan 30 05:38	0°♈	
greatest brilliancy	12292 Feb 11 13:56	6°♈15'50	-4.8m
retrograde	12292 Feb 21 11:53	8°♈03'12	
evening set	12292 Mar 07 05:04	3°♈49'17	
asc. node	12292 Mar 09 02:46	2°♈44'50	
inferior conj	12292 Mar 13 13:13	0°♈02'14	1°06'44
minimum elong	12292 Mar 13 10:41	0°♈06'11	1°06'02
	12292 Mar 13 14:39	30°♄♓	
min. Earth dist.	12292 Mar 13 19:24	29°♓52'35	0.27995 AU
morning rise	12292 Mar 19 15:57	26°♓22'09	
direct	12292 Apr 03 17:09	21°♓55'42	
greatest brilliancy	12292 Apr 14 06:23	24°♓00'27	-4.8m
	12292 Apr 25 15:04	0°♈	
morning max el	12292 May 23 21:29	24°♈15'28	46°43'25
	12292 May 29 12:47	0°♉	
	12292 Jun 25 20:38	0°♊	
desc. node	12292 Jun 29 03:26	3°♊46'19	
	12292 Jul 21 11:03	0°♋	
	12292 Aug 15 08:11	0°♌	
	12292 Sep 08 21:50	0°♍	
	12292 Oct 03 08:19	0°♎	
asc. node	12292 Oct 19 21:32	20°♎22'12	
	12292 Oct 27 17:08	0°♏	
	12292 Nov 21 00:47	0°♐	
morning set	12292 Nov 24 13:40	4°♐21'58	
	12292 Dec 15 07:52	0°♑	
superior conj	12292 Dec 31 07:15	19°♑43'11	1°16'47
minimum elong	12292 Dec 31 15:08	20°♑07'29	1°17'28
max. Earth dist.	12293 Jan 01 01:32	20°♑39'35	1.73179 AU
	12293 Jan 08 15:15	0°♒	
	12293 Feb 01 23:28	0°♓	
evening rise	12293 Feb 06 19:06	5°♓55'57	
desc. node	12293 Feb 08 12:09	8°♓02'22	
	12293 Feb 26 08:17	0°♈	
	12293 Mar 22 17:03	0°♉	
	12293 Apr 16 01:57	0°♊	
	12293 May 10 12:50	0°♋	
asc. node	12293 Jun 01 06:40	26°♋25'48	
	12293 Jun 04 05:45	0°♌	
	12293 Jun 29 12:06	0°♍	
	12293 Jul 25 23:43	0°♎	
evening max el	12293 Aug 10 23:44	16°♎46'54	46°37'24
	12293 Aug 25 00:10	0°♏	
greatest brilliancy	12293 Sep 19 02:42	16°♏47'58	-4.8m
desc. node	12293 Sep 21 07:20	17°♏34'32	
retrograde	12293 Sep 30 03:03	19°♏01'57	
evening set	12293 Oct 16 04:46	14°♏02'51	
min. Earth dist.	12293 Oct 20 13:02	11°♏25'53	0.28207 AU
inferior conj	12293 Oct 21 09:59	10°♏53'18	-6°40'11
minimum elong	12293 Oct 20 23:36	11°♏09'27	6°37'34
morning rise	12293 Oct 25 18:54	8°♏14'01	
direct	12293 Nov 11 13:43	2°♏55'00	
greatest brilliancy	12293 Nov 21 02:00	4°♏33'30	-4.8m
	12293 Dec 27 08:09	0°♐	
morning max el	12293 Dec 30 08:44	2°♐52'29	45°43'11
asc. node	12294 Jan 12 08:54	15°♐55'14	
	12294 Jan 25 13:17	0°♑	
	12294 Feb 21 02:03	0°♒	
	12294 Mar 18 12:01	0°♓	
	12294 Apr 12 07:33	0°♈	
desc. node	12294 May 04 04:13	26°♈49'30	
	12294 May 06 17:56	0°♉	
	12294 May 30 21:57	0°♊	
	12294 Jun 23 21:50	0°♋	
morning set	12294 Jul 01 00:46	8°♋55'51	
	12294 Jul 17 19:52	0°♌	
superior conj	12294 Aug 09 19:53	28°♌50'33	-0°35'31
minimum elong	12294 Aug 10 04:17	29°♌16'52	0°35'39
	12294 Aug 10 18:04	0°♍	
max. Earth dist.	12294 Aug 11 17:46	1°♍14'13	1.71599 AU
asc. node	12294 Aug 24 19:12	17°♍34'43	
	12294 Sep 03 17:49	0°♎	
evening rise	12294 Sep 18 01:46	17°♎51'42	
	12294 Sep 27 20:03	0°♏	
	12294 Oct 22 01:55	0°♐	
	12294 Nov 15 13:18	0°♑	
	12294 Dec 10 08:45	0°♒	
desc. node	12294 Dec 14 12:24	4°♒58'15	
	12295 Jan 04 15:05	0°♓	
	12295 Jan 30 12:42	0°♈	
	12295 Feb 26 13:44	0°♉	
evening max el	12295 Mar 16 05:08	18°♉11'41	46°17'27
	12295 Mar 28 20:18	0°♊	
asc. node	12295 Apr 06 12:11	7°♊08'36	
greatest brilliancy	12295 Apr 25 09:48	18°♊08'43	-4.8m
retrograde	12295 May 04 23:46	19°♊52'39	
evening set	12295 May 22 18:58	13°♊50'45	
inferior conj	12295 May 25 18:01	12°♊02'04	9°01'37
minimum elong	12295 May 25 13:33	12°♊08'58	9°00'31
min. Earth dist.	12295 May 25 22:21	11°♊55'22	0.27436 AU
morning rise	12295 May 28 08:05	10°♊26'35	
direct	12295 Jun 15 13:10	4°♊05'38	
greatest brilliancy	12295 Jun 25 12:09	5°♊57'33	-4.9m
desc. node	12295 Jul 27 14:01	28°♊38'48	
	12295 Jul 29 00:26	0°♋	
morning max el	12295 Aug 05 00:54	6°♋51'59	46°55'58
	12295 Aug 26 19:50	0°♌	
	12295 Sep 22 04:07	0°♍	
	12295 Oct 17 15:21	0°♎	
	12295 Nov 11 16:13	0°♏	
asc. node	12295 Nov 17 11:04	6°♏59'08	
	12295 Dec 06 10:21	0°♐	
	12295 Dec 30 23:34	0°♑	
	12296 Jan 24 09:31	0°♒	
morning set	12296 Feb 02 06:17	10°♒55'14	
	12296 Feb 17 17:24	0°♓	
desc. node	12296 Mar 08 02:04	23°♓56'04	
max. Earth dist.	12296 Mar 08 19:58	24°♓51'30	1.72711 AU
superior conj	12296 Mar 11 03:02	27°♓41'57	-0°07'23
minimum elong	12296 Mar 11 01:19	27°♓36'38	0°07'10
behind sun begin	12296 Mar 10 03:31	26°♓29'08	
behind sun end	12296 Mar 11 23:07	28°♓44'09	
	12296 Mar 12 23:36	0°♈	
	12296 Apr 06 03:50	0°♉	
evening rise	12296 Apr 18 22:10	15°♉53'02	
	12296 Apr 30 06:03	0°♊	
	12296 May 24 07:11	0°♋	
	12296 Jun 17 09:20	0°♌	
asc. node	12296 Jun 28 18:30	14°♌06'57	
	12296 Jul 11 15:12	0°♍	
	12296 Aug 05 04:21	0°♎	
	12296 Aug 30 06:39	0°♏	
	12296 Sep 25 10:58	0°♐	

desc. node	12296 Oct 18 16:56	24°♐34'12	
evening max el	12296 Oct 20 23:54	26°♐49'22	46°04'31
	12296 Oct 24 07:05	0°♑	
greatest brilliancy	12296 Nov 29 05:08	25°♑40'09	-4.8m
retrograde	12296 Dec 09 07:19	27°♑31'37	
evening set	12296 Dec 27 02:26	21°♑32'34	
inferior conj	12296 Dec 30 18:56	19°♑15'47	-7°51'28
minimum elong	12296 Dec 31 03:12	19°♑02'50	7°49'30
min. Earth dist.	12296 Dec 31 01:41	19°♑05'12	0.28953 AU
morning rise	12297 Jan 04 03:53	16°♑34'23	
direct	12297 Jan 21 04:47	11°♑00'32	
greatest brilliancy	12297 Jan 31 22:51	13°♑07'09	-4.8m
asc. node	12297 Feb 08 19:02	16°♑52'27	
	12297 Feb 26 15:11	0°♒	
morning max el	12297 Mar 11 13:34	11°♒58'57	45°58'18
	12297 Mar 28 23:43	0°♓	
	12297 Apr 24 16:49	0°♈	
	12297 May 20 02:07	0°♉	
desc. node	12297 May 31 17:27	14°♉03'31	
	12297 Jun 13 19:05	0°♊	
	12297 Jul 08 02:52	0°♋	
	12297 Aug 01 06:06	0°♌	
	12297 Aug 25 07:56	0°♍	
morning set	12297 Sep 12 15:13	22°♍48'01	
	12297 Sep 18 10:01	0°♎	
asc. node	12297 Sep 21 09:19	3°♎41'53	
	12297 Oct 12 12:57	0°♏	
superior conj	12297 Oct 21 00:35	10°♏32'20	1°03'57
minimum elong	12297 Oct 20 14:31	10°♏01'03	1°04'07
max. Earth dist.	12297 Oct 23 02:25	13°♏07'00	1.72587 AU
	12297 Nov 05 17:11	0°♐	
evening rise	12297 Nov 27 01:39	26°♐24'18	
	12297 Nov 29 23:37	0°♑	
	12297 Dec 24 09:26	0°♒	
desc. node	12298 Jan 11 00:44	21°♒32'48	
	12298 Jan 17 23:23	0°♓	
	12298 Feb 11 17:30	0°♈	
	12298 Mar 08 16:10	0°♉	
	12298 Apr 02 22:23	0°♊	
	12298 Apr 28 21:27	0°♋	
asc. node	12298 May 03 21:59	5°♋37'59	
	12298 May 26 16:42	0°♌	
evening max el	12298 May 28 08:43	1°♌40'41	46°46'56
	12298 Jul 02 10:12	0°♍	
greatest brilliancy	12298 Jul 07 12:23	2°♍13'18	-4.9m
retrograde	12298 Jul 17 15:11	4°♍08'19	
	12298 Aug 01 01:52	30°℞♌	
evening set	12298 Aug 01 23:35	29°♌30'22	
inferior conj	12298 Aug 07 07:28	26°♌20'57	4°11'25
minimum elong	12298 Aug 07 16:22	26°♌07'22	4°08'15
min. Earth dist.	12298 Aug 07 10:48	26°♌15'51	0.27020 AU
morning rise	12298 Aug 13 09:22	22°♌47'46	
desc. node	12298 Aug 23 23:49	18°♌55'35	
direct	12298 Aug 28 01:30	18°♌35'27	
greatest brilliancy	12298 Sep 06 23:56	20°♌26'06	-4.8m
	12298 Sep 23 21:37	0°♍	
morning max el	12298 Oct 16 18:57	19°♍59'23	46°17'26
	12298 Oct 26 17:57	0°♎	
	12298 Nov 23 10:23	0°♏	
asc. node	12298 Dec 14 23:33	24°♏40'13	
	12298 Dec 19 13:15	0°♐	
	12299 Jan 13 21:05	0°♑	
	12299 Feb 07 17:33	0°♒	
	12299 Mar 04 06:53	0°♓	
	12299 Mar 28 15:15	0°♈	
desc. node	12299 Apr 05 16:16	9°♈57'28	
morning set	12299 Apr 14 09:24	20°♈46'21	
	12299 Apr 21 19:29	0°♉	
	12299 May 15 20:11	0°♊	
max. Earth dist.	12299 May 21 21:38	7°♊35'16	1.71590 AU
superior conj	12299 May 24 09:15	10°♊42'01	-1°25'30
minimum elong	12299 May 24 04:15	10°♊26'22	1°26'15
	12299 Jun 08 18:31	0°♋	
	12299 Jul 02 16:16	0°♌	
evening rise	12299 Jul 03 14:07	1°♌08'30	
	12299 Jul 26 15:22	0°♍	
asc. node	12299 Jul 27 07:18	0°♍49'47	
	12299 Aug 19 17:30	0°♎	
	12299 Sep 13 00:41	0°♏	
	12299 Oct 07 16:10	0°♐	
	12299 Nov 01 21:32	0°♑	
desc. node	12299 Nov 16 03:08	16°♑28'18	
	12299 Nov 28 02:57	0°♒	
	12299 Dec 26 09:02	0°♓	
evening max el	12300 Jan 01 04:59	5°♓42'42	45°52'29
	12300 Jan 31 12:29	0°♈	
greatest brilliancy	12300 Feb 09 05:29	4°♈02'29	-4.8m
retrograde	12300 Feb 19 02:02	5°♈48'45	
evening set	12300 Mar 05 20:29	1°♈34'17	
	12300 Mar 08 14:24	30°℞♓	
asc. node	12300 Mar 09 04:41	29°♓38'29	
inferior conj	12300 Mar 12 04:21	27°♓47'35	0°44'54
minimum elong	12300 Mar 12 02:39	27°♓50'15	0°44'29
min. Earth dist.	12300 Mar 12 11:22	27°♓36'36	0.28025 AU
morning rise	12300 Mar 18 08:22	24°♓05'16	
direct	12300 Apr 02 08:14	19°♓40'39	
greatest brilliancy	12300 Apr 12 22:51	21°♓46'07	-4.8m
	12300 Apr 27 13:15	0°♈	
morning max el	12300 May 22 10:54	21°♈54'15	46°41'55
	12300 May 30 08:29	0°♉	
	12300 Jun 26 11:45	0°♊	
desc. node	12300 Jun 29 05:18	3°♊08'58	
	12300 Jul 22 00:19	0°♋	
	12300 Aug 15 20:27	0°♌	
	12300 Sep 09 09:28	0°♍	
	12300 Oct 03 19:29	0°♎	
asc. node	12300 Oct 19 23:29	19°♎54'25	
	12300 Oct 28 04:00	0°♏	
	12300 Nov 21 11:27	0°♐	
morning set	12300 Nov 23 06:06	2°♐11'41	
	12300 Dec 15 18:26	0°♑	
superior conj	12300 Dec 30 00:19	17°♑35'19	1°18'14
minimum elong	12300 Dec 30 07:44	17°♑58'09	1°18'57
max. Earth dist.	12300 Dec 30 17:45	18°♑29'06	1.73171 AU
	12301 Jan 09 01:47	0°♒	
	12301 Feb 02 10:03	0°♓	
evening rise	12301 Feb 05 11:09	3°♓44'59	
desc. node	12301 Feb 08 13:57	7°♓35'10	
	12301 Feb 26 19:00	0°♈	
	12301 Mar 23 04:02	0°♉	
	12301 Apr 16 13:19	0°♊	
	12301 May 11 00:45	0°♋	
asc. node	12301 Jun 01 08:37	25°♋53'28	
	12301 Jun 04 18:34	0°♌	
	12301 Jun 30 02:29	0°♍	
	12301 Jul 26 17:36	0°♎	
evening max el	12301 Aug 09 13:14	14°♎25'15	46°38'20
	12301 Aug 26 07:12	0°♏	
greatest brilliancy	12301 Sep 17 18:11	14°♏31'48	-4.8m
desc. node	12301 Sep 21 09:22	15°♏44'03	
retrograde	12301 Sep 28 17:43	16°♏45'41	

evening set	12301 Oct 14 16:23	11°♏51'27	
min. Earth dist.	12301 Oct 19 04:00	9°♏10'05	0.28151 AU
inferior conj	12301 Oct 20 00:42	8°♏37'56	-6°25'48
minimum elong	12301 Oct 19 14:15	8°♏54'11	6°23'06
morning rise	12301 Oct 24 12:32	5°♏54'29	
direct	12301 Nov 10 03:21	0°♏40'15	
greatest brilliancy	12301 Nov 19 16:46	2°♏19'23	-4.8m
	12301 Dec 28 07:21	0°♐	
morning max el	12301 Dec 28 22:26	0°♐36'11	45°43'41
asc. node	12302 Jan 12 10:47	15°♐13'00	
	12302 Jan 26 04:58	0°♑	
	12302 Feb 21 15:12	0°♒	
	12302 Mar 18 23:58	0°♓	
	12302 Apr 12 18:52	0°♈	
desc. node	12302 May 04 06:12	26°♈21'38	
	12302 May 07 04:55	0°♉	
	12302 May 31 08:45	0°♊	
	12302 Jun 24 08:32	0°♋	
morning set	12302 Jun 29 12:30	6°♋28'37	
	12302 Jul 18 06:30	0°♌	
superior conj	12302 Aug 08 08:18	26°♌25'52	-0°38'58
minimum elong	12302 Aug 08 17:22	26°♌54'15	0°39'07
max. Earth dist.	12302 Aug 10 01:15	28°♌34'07	1.71577 AU
	12302 Aug 11 04:41	0°♍	
asc. node	12302 Aug 24 21:03	17°♍07'17	
	12302 Sep 04 04:26	0°♎	
evening rise	12302 Sep 16 16:08	15°♎33'58	
	12302 Sep 28 06:43	0°♏	
	12302 Oct 22 12:41	0°♐	
	12302 Nov 16 00:21	0°♑	
	12302 Dec 10 20:18	0°♒	
desc. node	12302 Dec 14 14:18	4°♒29'03	
	12303 Jan 05 03:33	0°♓	
	12303 Jan 31 02:50	0°♈	
	12303 Feb 27 07:28	0°♉	
evening max el	12303 Mar 14 18:57	15°♉52'35	46°16'28
	12303 Mar 30 03:04	0°♊	
asc. node	12303 Apr 06 14:19	5°♊57'02	
greatest brilliancy	12303 Apr 23 22:04	15°♊46'11	-4.8m
retrograde	12303 May 03 13:35	17°♊31'27	
evening set	12303 May 21 04:49	11°♊34'17	
inferior conj	12303 May 24 07:32	9°♊40'14	8°56'16
minimum elong	12303 May 24 02:14	9°♊48'25	8°55'03
min. Earth dist.	12303 May 24 11:01	9°♊34'50	0.27454 AU
morning rise	12303 May 26 23:34	8°♊01'56	
direct	12303 Jun 14 03:07	1°♊43'21	
greatest brilliancy	12303 Jun 24 01:35	3°♊35'18	-4.9m
desc. node	12303 Jul 27 15:58	27°♊42'25	
	12303 Jul 30 01:14	0°♋	
morning max el	12303 Aug 03 15:41	4°♋32'49	46°56'27
	12303 Aug 27 12:27	0°♌	
	12303 Sep 22 17:57	0°♍	
	12303 Oct 18 03:47	0°♎	
	12303 Nov 12 03:49	0°♏	
asc. node	12303 Nov 17 12:57	6°♏30'14	
	12303 Dec 06 21:23	0°♐	
	12303 Dec 31 10:16	0°♑	
	12304 Jan 24 20:01	0°♒	
morning set	12304 Jan 31 22:50	8°♒46'03	
	12304 Feb 18 03:51	0°♓	
max. Earth dist.	12304 Mar 07 14:49	22°♓48'52	1.72742 AU
desc. node	12304 Mar 08 03:58	23°♓29'32	
superior conj	12304 Mar 09 17:38	25°♓26'07	-0°03'50
minimum elong	12304 Mar 09 16:45	25°♓23'24	0°03'38
behind sun begin	12304 Mar 08 17:11	24°♓10'27	
behind sun end	12304 Mar 10 16:20	26°♓36'23	
	12304 Mar 13 10:06	0°♈	
	12304 Apr 06 14:24	0°♉	
evening rise	12304 Apr 17 11:54	13°♉33'22	
	12304 Apr 30 16:42	0°♊	
	12304 May 24 18:00	0°♋	
	12304 Jun 17 20:23	0°♌	
asc. node	12304 Jun 28 20:19	13°♌37'54	
	12304 Jul 12 02:39	0°♍	
	12304 Aug 05 16:27	0°♎	
	12304 Aug 30 19:54	0°♏	
	12304 Sep 26 02:44	0°♐	
desc. node	12304 Oct 18 18:59	23°♐47'19	
evening max el	12304 Oct 19 15:56	24°♐38'38	46°05'28
	12304 Oct 25 06:39	0°♑	
greatest brilliancy	12304 Nov 27 19:31	23°♑28'40	-4.8m
retrograde	12304 Dec 07 23:34	25°♑21'22	
evening set	12304 Dec 25 20:42	19°♑18'29	
inferior conj	12304 Dec 29 10:47	17°♑05'10	-8°00'09
minimum elong	12304 Dec 29 18:34	16°♑52'57	7°58'19
min. Earth dist.	12304 Dec 29 16:09	16°♑56'44	0.28965 AU
morning rise	12305 Jan 02 16:27	14°♑28'45	
direct	12305 Jan 19 21:18	8°♑50'15	
greatest brilliancy	12305 Jan 30 13:11	10°♑55'13	-4.8m
asc. node	12305 Feb 08 21:01	15°♑32'21	
	12305 Feb 27 18:56	0°♒	
morning max el	12305 Mar 10 05:33	9°♒47'41	45°56'58
	12305 Mar 29 16:28	0°♓	
	12305 Apr 25 06:31	0°♈	
	12305 May 20 14:27	0°♉	
desc. node	12305 May 31 19:12	13°♉32'34	
	12305 Jun 14 06:41	0°♊	
	12305 Jul 08 14:01	0°♋	
	12305 Aug 01 16:57	0°♌	
	12305 Aug 25 18:34	0°♍	
morning set	12305 Sep 11 05:41	20°♍30'50	
	12305 Sep 18 20:31	0°♎	
asc. node	12305 Sep 21 11:15	3°♎15'17	
	12305 Oct 12 23:22	0°♏	
superior conj	12305 Oct 19 16:24	8°♏20'06	1°01'35
minimum elong	12305 Oct 19 06:17	7°♏48'40	1°01'43
max. Earth dist.	12305 Oct 21 21:20	11°♏04'25	1.72558 AU
	12305 Nov 06 03:35	0°♐	
evening rise	12305 Nov 25 18:11	24°♐14'56	
	12305 Nov 30 10:05	0°♑	
	12305 Dec 24 20:05	0°♒	
desc. node	12306 Jan 11 02:30	21°♒05'10	
	12306 Jan 18 10:20	0°♓	
	12306 Feb 12 04:56	0°♈	
	12306 Mar 09 04:22	0°♉	
	12306 Apr 03 11:50	0°♊	
	12306 Apr 29 13:21	0°♋	
asc. node	12306 May 03 23:55	4°♋57'23	
evening max el	12306 May 26 22:49	29°♋19'35	46°46'24
	12306 May 27 15:00	0°♌	
greatest brilliancy	12306 Jul 06 02:57	29°♌51'11	-4.9m
	12306 Jul 06 12:56	0°♍	
retrograde	12306 Jul 16 04:18	1°♍44'34	
	12306 Jul 25 10:27	30°℞♌	
evening set	12306 Jul 31 15:35	27°♌03'16	
inferior conj	12306 Aug 05 20:24	23°♌57'46	4°32'50
minimum elong	12306 Aug 06 05:51	23°♌43'19	4°29'33
min. Earth dist.	12306 Aug 06 00:38	23°♌51'18	0.27010 AU
morning rise	12306 Aug 11 20:20	20°♌26'55	
desc. node	12306 Aug 24 01:49	16°♌20'12	
direct	12306 Aug 26 14:30	16°♌12'30	

greatest brilliancy	12306 Sep 05 12:46	18°♌02'50	-4.8m	
	12306 Sep 25 13:21	0°♍		
morning max el	12306 Oct 15 08:00	17°♍38'41	46°18'58	
	12306 Oct 27 13:00	0°♎		
	12306 Nov 24 00:55	0°♏		
asc. node	12306 Dec 15 01:24	24°♏08'03		
	12306 Dec 20 01:53	0°♐		
	12307 Jan 14 08:45	0°♑		
	12307 Feb 08 04:41	0°♒		
	12307 Mar 04 17:44	0°♓		
	12307 Mar 29 01:56	0°♈		
desc. node	12307 Apr 05 18:09	9°♈30'18		
morning set	12307 Apr 12 22:08	18°♈23'49		
	12307 Apr 22 06:06	0°♉		
	12307 May 16 06:48	0°♊		
max. Earth dist.	12307 May 20 03:27	4°♊49'55	1.71621 AU	
superior conj	12307 May 22 21:10	8°♊15'42	-1°24'36	
minimum elong	12307 May 22 15:15	7°♊57'09	1°25'19	
	12307 Jun 09 05:11	0°♋		
evening rise	12307 Jul 02 01:08	28°♋38'51		
	12307 Jul 03 03:01	0°♌		
asc. node	12307 Jul 27 09:13	0°♍21'57		
	12307 Jul 27 02:11	0°♍		
	12307 Aug 20 04:27	0°♎		
	12307 Sep 13 11:55	0°♏		
	12307 Oct 08 03:55	0°♐		
	12307 Nov 02 10:18	0°♑		
desc. node	12307 Nov 16 04:59	15°♑54'32		
	12307 Nov 28 17:51	0°♒		
	12307 Dec 27 05:38	0°♓		
evening max el	12307 Dec 30 18:53	3°♓27'10	45°52'05	
	12308 Feb 03 10:27	0°♈		
greatest brilliancy	12308 Feb 07 20:50	1°♈48'32	-4.8m	
retrograde	12308 Feb 17 16:04	3°♈34'01		
	12308 Mar 02 04:05	30°℞♓		
evening set	12308 Mar 03 11:51	29°♓18'22		
asc. node	12308 Mar 08 06:48	26°♓29'23		
inferior conj	12308 Mar 09 19:18	25°♓32'28	0°22'53	
minimum elong	12308 Mar 09 18:26	25°♓33'50	0°22'46	
min. Earth dist.	12308 Mar 10 03:19	25°♓19'56	0.28058 AU	
morning rise	12308 Mar 16 00:27	21°♓48'19		
direct	12308 Mar 30 22:52	17°♓24'55		
greatest brilliancy	12308 Apr 10 15:33	19°♓31'48	-4.8m	
	12308 Apr 28 05:43	0°♈		
morning max el	12308 May 20 00:30	19°♈33'30	46°40'36	
	12308 May 30 03:37	0°♉		
	12308 Jun 26 02:37	0°♊		
desc. node	12308 Jun 28 07:16	2°♊32'17		
	12308 Jul 21 13:25	0°♋		
	12308 Aug 15 08:36	0°♌		
	12308 Sep 08 21:00	0°♍		
	12308 Oct 03 06:34	0°♎		
asc. node	12308 Oct 19 01:20	19°♎26'35		
	12308 Oct 27 14:46	0°♏		
morning set	12308 Nov 20 22:44	0°♐02'11		
	12308 Nov 20 22:02	0°♐		
	12308 Dec 15 04:55	0°♑		
superior conj	12308 Dec 27 17:34	15°♑28'05	1°19'32	
minimum elong	12308 Dec 28 00:27	15°♑49'21	1°20'18	
max. Earth dist.	12308 Dec 28 11:07	16°♑22'15	1.73170 AU	
	12309 Jan 08 12:17	0°♒		
	12309 Feb 01 20:41	0°♓		
evening rise	12309 Feb 03 03:16	1°♓34'08		
desc. node	12309 Feb 07 15:54	7°♓08'21		
	12309 Feb 26 05:50	0°♈		
	12309 Mar 22 15:10	0°♉		
	12309 Apr 16 00:51	0°♊		
	12309 May 10 12:51	0°♋		
asc. node	12309 May 31 10:28	25°♋20'26		
	12309 Jun 04 07:34	0°♌		
	12309 Jun 29 17:08	0°♍		
	12309 Jul 26 12:02	0°♎		
evening max el	12309 Aug 07 02:58	12°♎03'55	46°39'21	
	12309 Aug 26 17:01	0°♏		
greatest brilliancy	12309 Sep 15 09:15	12°♏14'48	-4.8m	
desc. node	12309 Sep 20 11:28	13°♏49'04		
retrograde	12309 Sep 26 08:50	14°♏29'19		
evening set	12309 Oct 12 04:08	9°♏39'28		
min. Earth dist.	12309 Oct 16 18:46	6°♏54'17	0.28094 AU	
inferior conj	12309 Oct 17 15:27	6°♏22'16	-6°10'43	
minimum elong	12309 Oct 17 04:58	6°♏38'30	6°07'57	
morning rise	12309 Oct 22 06:14	3°♏34'54		
	12309 Oct 29 18:57	30°℞♎		
direct	12309 Nov 07 17:10	28°♎25'09		
	12309 Nov 17 01:16	0°♏		
greatest brilliancy	12309 Nov 17 07:17	0°♏04'57	-4.8m	
morning max el	12309 Dec 26 12:59	28°♏21'51	45°44'17	
	12309 Dec 28 05:35	0°♐		
asc. node	12310 Jan 11 12:49	14°♐31'35		
	12310 Jan 25 20:27	0°♑		
	12310 Feb 21 04:21	0°♒		
	12310 Mar 18 12:03	0°♓		
	12310 Apr 12 06:25	0°♈		
desc. node	12310 May 03 08:01	25°♈52'21		
	12310 May 06 16:11	0°♉		
	12310 May 30 19:50	0°♊		
	12310 Jun 23 19:29	0°♋		
morning set	12310 Jun 26 23:57	3°♋59'41		
	12310 Jul 17 17:22	0°♌		
superior conj	12310 Aug 05 20:30	23°♌59'41	-0°42'21	
minimum elong	12310 Aug 06 06:10	24°♌30'01	0°42'31	
max. Earth dist.	12310 Aug 07 10:43	25°♌59'28	1.71555 AU	
	12310 Aug 10 15:31	0°♍		
asc. node	12310 Aug 23 22:59	16°♍39'25		
	12310 Sep 03 15:17	0°♎		
evening rise	12310 Sep 14 06:30	13°♎15'31		
	12310 Sep 27 17:37	0°♏		
	12310 Oct 21 23:43	0°♐		
	12310 Nov 15 11:38	0°♑		
	12310 Dec 10 08:06	0°♒		
desc. node	12310 Dec 13 16:12	3°♒59'14		
	12311 Jan 04 16:17	0°♓		
	12311 Jan 30 17:20	0°♈		
	12311 Feb 27 01:58	0°♉		
evening max el	12311 Mar 12 09:34	13°♉34'38	46°15'11	
	12311 Mar 30 13:05	0°♊		
asc. node	12311 Apr 05 16:13	4°♊41'30		
greatest brilliancy	12311 Apr 21 09:59	13°♊21'50	-4.8m	
retrograde	12311 May 01 03:21	15°♊08'15		
evening set	12311 May 18 14:10	9°♊16'31		
inferior conj	12311 May 21 20:50	7°♊16'26	8°49'50	
minimum elong	12311 May 21 14:43	7°♊25'53	8°48'31	
min. Earth dist.	12311 May 21 23:23	7°♊12'29	0.27473 AU	
morning rise	12311 May 24 15:13	5°♊34'37		
	12311 Jun 05 23:41	30°℞♉		
direct	12311 Jun 11 17:13	29°♉19'17		
	12311 Jun 17 14:26	0°♊		
greatest brilliancy	12311 Jun 21 14:29	1°♊10'34	-4.9m	
desc. node	12311 Jul 26 18:02	26°♊46'00		
	12311 Jul 30 01:27	0°♋		
morning max el	12311 Aug 01 06:25	2°♋12'02	46°56'58	

	12311 Aug 27 05:13	0°♌	
	12311 Sep 22 08:01	0°♍	
	12311 Oct 17 16:29	0°♎	
	12311 Nov 11 15:41	0°♏	
asc. node	12311 Nov 16 14:44	6°♏00'08	
	12311 Dec 06 08:43	0°♐	
	12311 Dec 30 21:15	0°♑	
	12312 Jan 24 06:49	0°♒	
morning set	12312 Jan 29 15:54	6°♒37'32	
	12312 Feb 17 14:36	0°♓	
max. Earth dist.	12312 Mar 05 09:39	20°♓45'20	1.72774 AU
superior conj	12312 Mar 07 08:43	23°♓10'55	-0°00'18
minimum elong	12312 Mar 07 08:42	23°♓10'52	0°00'06
behind sun begin	12312 Mar 06 09:08	21°♓57'56	
behind sun end	12312 Mar 08 08:16	24°♓23'48	
desc. node	12312 Mar 07 05:52	23°♓02'04	
	12312 Mar 12 20:53	0°♈	
	12312 Apr 06 01:17	0°♉	
evening rise	12312 Apr 15 01:54	11°♉13'30	
	12312 Apr 30 03:45	0°♊	
	12312 May 24 05:16	0°♋	
	12312 Jun 17 07:57	0°♌	
asc. node	12312 Jun 27 22:16	13°♌07'40	
	12312 Jul 11 14:38	0°♍	
	12312 Aug 05 05:06	0°♎	
	12312 Aug 30 09:45	0°♏	
	12312 Sep 25 19:15	0°♐	
evening max el	12312 Oct 17 07:56	22°♐26'30	46°06'32
desc. node	12312 Oct 17 20:52	22°♐58'02	
	12312 Oct 25 07:55	0°♑	
greatest brilliancy	12312 Nov 25 10:44	21°♑17'17	-4.8m
retrograde	12312 Dec 05 15:39	23°♑10'20	
evening set	12312 Dec 23 15:01	17°♑04'11	
inferior conj	12312 Dec 27 02:49	14°♑54'01	-8°08'07
minimum elong	12312 Dec 27 10:04	14°♑42'38	8°06'26
min. Earth dist.	12312 Dec 27 06:58	14°♑47'31	0.28970 AU
morning rise	12312 Dec 31 05:10	12°♑22'25	
direct	12313 Jan 17 13:47	6°♑39'35	
greatest brilliancy	12313 Jan 28 03:31	8°♑42'30	-4.7m
asc. node	12313 Feb 07 23:04	14°♑14'01	
	12313 Feb 27 21:24	0°♒	
morning max el	12313 Mar 07 20:52	7°♒34'00	45°55'44
	12313 Mar 29 09:12	0°♓	
	12313 Apr 24 20:24	0°♈	
	12313 May 20 03:05	0°♉	
desc. node	12313 May 30 21:08	13°♉01'05	
	12313 Jun 13 18:38	0°♊	
	12313 Jul 08 01:36	0°♋	
	12313 Aug 01 04:18	0°♌	
	12313 Aug 25 05:44	0°♍	
morning set	12313 Sep 08 19:39	18°♍10'30	
	12313 Sep 18 07:30	0°♎	
asc. node	12313 Sep 20 13:04	2°♎46'45	
	12313 Oct 12 10:13	0°♏	
superior conj	12313 Oct 17 07:51	6°♏05'21	0°59'07
minimum elong	12313 Oct 16 21:44	5°♏33'56	0°59'11
max. Earth dist.	12313 Oct 19 15:09	8°♏57'04	1.72521 AU
	12313 Nov 05 14:24	0°♐	
evening rise	12313 Nov 23 10:35	22°♐03'52	
	12313 Nov 29 20:58	0°♑	
	12313 Dec 24 07:09	0°♒	
desc. node	12314 Jan 10 04:31	20°♒37'05	
	12314 Jan 17 21:42	0°♓	
	12314 Feb 11 16:46	0°♈	
	12314 Mar 08 16:57	0°♉	
	12314 Apr 03 01:43	0°♊	
	12314 Apr 29 05:50	0°♋	
asc. node	12314 May 03 01:51	4°♋15'20	
evening max el	12314 May 24 11:44	26°♋54'33	46°45'36
	12314 May 27 14:42	0°♌	
greatest brilliancy	12314 Jul 03 17:48	27°♌27'50	-4.9m
retrograde	12314 Jul 13 16:48	29°♌19'09	
evening set	12314 Jul 29 07:34	24°♌34'06	
inferior conj	12314 Aug 03 09:15	21°♌32'54	4°53'45
minimum elong	12314 Aug 03 19:11	21°♌17'41	4°50'23
min. Earth dist.	12314 Aug 03 14:42	21°♌24'33	0.27009 AU
morning rise	12314 Aug 09 06:56	18°♌04'35	
desc. node	12314 Aug 23 03:52	13°♌48'32	
direct	12314 Aug 24 02:54	13°♌47'26	
greatest brilliancy	12314 Sep 03 02:13	15°♌38'14	-4.8m
	12314 Sep 26 01:55	0°♍	
morning max el	12314 Oct 12 20:35	15°♍14'50	46°20'38
	12314 Oct 27 08:08	0°♎	
	12314 Nov 23 15:45	0°♏	
asc. node	12314 Dec 14 03:27	23°♏35'21	
	12314 Dec 19 14:50	0°♐	
	12315 Jan 13 20:43	0°♑	
	12315 Feb 07 16:07	0°♒	
	12315 Mar 04 04:51	0°♓	
	12315 Mar 28 12:54	0°♈	
desc. node	12315 Apr 04 19:57	9°♈01'56	
morning set	12315 Apr 10 11:25	16°♈02'06	
	12315 Apr 21 16:59	0°♉	
	12315 May 15 17:41	0°♊	
max. Earth dist.	12315 May 17 12:00	2°♊12'25	1.71653 AU
superior conj	12315 May 20 09:40	5°♊50'30	-1°23'32
minimum elong	12315 May 20 02:54	5°♊29'18	1°24'13
	12315 Jun 08 16:06	0°♋	
evening rise	12315 Jun 29 12:36	26°♋09'53	
	12315 Jul 02 14:00	0°♌	
asc. node	12315 Jul 26 11:10	29°♌53'22	
	12315 Jul 26 13:17	0°♍	
	12315 Aug 19 15:45	0°♎	
	12315 Sep 12 23:33	0°♏	
	12315 Oct 07 16:08	0°♐	
	12315 Nov 01 23:35	0°♑	
desc. node	12315 Nov 15 06:59	15°♑19'51	
	12315 Nov 28 09:22	0°♒	
	12315 Dec 27 03:21	0°♓	
evening max el	12315 Dec 28 08:40	1°♓10'39	45°52'00
greatest brilliancy	12316 Feb 05 11:55	29°♓33'56	-4.8m
	12316 Feb 06 20:08	0°♈	
retrograde	12316 Feb 15 06:40	1°♈19'20	
	12316 Feb 23 09:52	30°℞♓	
evening set	12316 Mar 01 03:32	27°♓01'58	
inferior conj	12316 Mar 07 10:24	23°♓17'11	0°01'02
minimum elong	12316 Mar 07 10:21	23°♓17'15	0°01'13
transit middle	12316 Mar 07 10:21	23°♓17'15	0°01'13
transit begin	12316 Mar 07 06:19	23°♓23'34	
transit end	12316 Mar 07 14:24	23°♓10'57	
asc. node	12316 Mar 07 08:45	23°♓19'46	
min. Earth dist.	12316 Mar 07 19:15	23°♓03'22	0.28091 AU
morning rise	12316 Mar 13 16:33	19°♓31'41	
direct	12316 Mar 28 13:46	15°♓08'54	
greatest brilliancy	12316 Apr 08 08:21	17°♓17'29	-4.8m
	12316 Apr 28 18:08	0°♈	
morning max el	12316 May 17 15:21	17°♈15'34	46°39'23
	12316 May 29 22:22	0°♉	
	12316 Jun 25 17:24	0°♊	
desc. node	12316 Jun 27 09:17	1°♊55'45	
	12316 Jul 21 02:31	0°♋	

	12316 Aug 14 20:48	0°♌	
	12316 Sep 08 08:37	0°♍	
	12316 Oct 02 17:49	0°♎	
asc. node	12316 Oct 18 03:08	18°♎57'58	
	12316 Oct 27 01:45	0°♏	
morning set	12316 Nov 18 15:02	27°♏50'52	
	12316 Nov 20 08:50	0°♐	
	12316 Dec 14 15:37	0°♑	
superior conj	12316 Dec 25 10:31	13°♑19'21	1°20'45
minimum elong	12316 Dec 25 16:52	13°♑38'57	1°21'32
max. Earth dist.	12316 Dec 26 05:25	14°♑17'42	1.73164 AU
	12317 Jan 07 22:58	0°♒	
evening rise	12317 Jan 31 19:18	29°♒22'41	
	12317 Feb 01 07:26	0°♓	
desc. node	12317 Feb 06 17:45	6°♓40'48	
	12317 Feb 25 16:47	0°♈	
	12317 Mar 22 02:25	0°♉	
	12317 Apr 15 12:29	0°♊	
	12317 May 10 01:03	0°♋	
asc. node	12317 May 30 12:30	24°♋47'43	
	12317 Jun 03 20:40	0°♌	
	12317 Jun 29 07:57	0°♍	
	12317 Jul 26 06:53	0°♎	
evening max el	12317 Aug 04 17:31	9°♎44'58	46°40'19
	12317 Aug 27 06:08	0°♏	
greatest brilliancy	12317 Sep 12 23:44	9°♏57'12	-4.8m
desc. node	12317 Sep 19 13:19	11°♏49'30	
retrograde	12317 Sep 24 00:25	12°♏12'54	
evening set	12317 Oct 09 16:01	7°♏27'06	
min. Earth dist.	12317 Oct 14 09:16	4°♏38'33	0.28043 AU
inferior conj	12317 Oct 15 06:08	4°♏06'19	-5°54'58
minimum elong	12317 Oct 14 19:43	4°♏22'25	5°52'08
morning rise	12317 Oct 19 23:54	1°♏15'09	
	12317 Oct 22 06:53	30°℞♎	
direct	12317 Nov 05 07:28	26°♎09'47	
greatest brilliancy	12317 Nov 14 21:23	27°♎49'47	-4.8m
	12317 Nov 20 04:50	0°♏	
morning max el	12317 Dec 24 04:27	26°♏09'29	45°44'48
	12317 Dec 28 03:04	0°♐	
asc. node	12318 Jan 10 14:47	13°♐50'12	
	12318 Jan 25 11:46	0°♑	
	12318 Feb 20 17:26	0°♒	
	12318 Mar 18 00:03	0°♓	
	12318 Apr 11 17:52	0°♈	
desc. node	12318 May 02 09:51	25°♈23'29	
	12318 May 06 03:20	0°♉	
	12318 May 30 06:49	0°♊	
	12318 Jun 23 06:21	0°♋	
morning set	12318 Jun 24 11:35	1°♋31'37	
	12318 Jul 17 04:09	0°♌	
superior conj	12318 Aug 03 08:50	21°♌34'18	-0°45'40
minimum elong	12318 Aug 03 19:04	22°♌06'22	0°45'50
max. Earth dist.	12318 Aug 04 22:28	23°♌32'15	1.71530 AU
	12318 Aug 10 02:14	0°♍	
asc. node	12318 Aug 23 00:46	16°♍11'33	
	12318 Sep 03 01:59	0°♎	
evening rise	12318 Sep 11 21:02	10°♎57'58	
	12318 Sep 27 04:21	0°♏	
	12318 Oct 21 10:36	0°♐	
	12318 Nov 14 22:50	0°♑	
	12318 Dec 09 19:52	0°♒	
desc. node	12318 Dec 12 18:11	3°♒29'50	
	12319 Jan 04 05:02	0°♓	
	12319 Jan 30 07:57	0°♈	
	12319 Feb 26 20:50	0°♉	
evening max el	12319 Mar 10 00:41	11°♉18'26	46°14'02
	12319 Mar 31 02:15	0°♊	
asc. node	12319 Apr 04 18:11	3°♊24'16	
greatest brilliancy	12319 Apr 18 22:23	10°♊59'00	-4.8m
retrograde	12319 Apr 28 17:02	12°♊45'55	
evening set	12319 May 15 23:33	7°♊00'12	
inferior conj	12319 May 19 10:17	4°♊53'47	8°42'40
minimum elong	12319 May 19 03:23	5°♊04'27	8°41'12
min. Earth dist.	12319 May 19 12:00	4°♊51'07	0.27488 AU
morning rise	12319 May 22 07:13	3°♊07'59	
	12319 May 28 00:12	30°℞♉	
direct	12319 Jun 09 07:24	26°♉56'33	
greatest brilliancy	12319 Jun 19 03:31	28°♉46'52	-4.9m
	12319 Jun 22 03:56	0°♊	
desc. node	12319 Jul 25 19:58	25°♊51'15	
morning max el	12319 Jul 29 20:44	29°♊51'04	46°57'22
	12319 Jul 30 00:17	0°♋	
	12319 Aug 26 21:22	0°♌	
	12319 Sep 21 21:40	0°♍	
	12319 Oct 17 04:48	0°♎	
	12319 Nov 11 03:12	0°♏	
asc. node	12319 Nov 15 16:45	5°♏31'43	
	12319 Dec 05 19:43	0°♐	
	12319 Dec 30 07:58	0°♑	
	12320 Jan 23 17:24	0°♒	
morning set	12320 Jan 27 08:48	4°♒29'11	
	12320 Feb 17 01:09	0°♓	
max. Earth dist.	12320 Mar 03 01:48	18°♓34'10	1.72803 AU
superior conj	12320 Mar 04 23:40	20°♓56'00	0°03'16
minimum elong	12320 Mar 05 00:28	20°♓58'31	0°03'27
behind sun begin	12320 Mar 04 00:58	19°♓45'50	
behind sun end	12320 Mar 05 23:58	22°♓11'12	
desc. node	12320 Mar 06 07:38	22°♓34'55	
	12320 Mar 12 07:28	0°♈	
	12320 Apr 05 11:57	0°♉	
evening rise	12320 Apr 12 15:42	8°♉53'47	
	12320 Apr 29 14:32	0°♊	
	12320 May 23 16:15	0°♋	
	12320 Jun 16 19:14	0°♌	
asc. node	12320 Jun 27 00:13	12°♌38'22	
	12320 Jul 11 02:22	0°♍	
	12320 Aug 04 17:29	0°♎	
	12320 Aug 29 23:24	0°♏	
	12320 Sep 25 11:43	0°♐	
evening max el	12320 Oct 14 23:20	20°♐13'48	46°07'34
desc. node	12320 Oct 16 22:56	22°♐09'26	
	12320 Oct 25 10:05	0°♑	
greatest brilliancy	12320 Nov 23 02:20	19°♑07'24	-4.8m
retrograde	12320 Dec 03 07:12	21°♑00'23	
evening set	12320 Dec 21 09:09	14°♑51'17	
inferior conj	12320 Dec 24 18:52	12°♑44'05	-8°15'24
minimum elong	12320 Dec 25 01:30	12°♑33'38	8°13'50
min. Earth dist.	12320 Dec 24 22:03	12°♑39'05	0.28976 AU
morning rise	12320 Dec 28 17:56	10°♑17'06	
direct	12321 Jan 15 05:52	4°♑30'01	
greatest brilliancy	12321 Jan 25 18:13	6°♑31'12	-4.7m
asc. node	12321 Feb 07 01:00	12°♑58'47	
	12321 Feb 27 22:07	0°♒	
morning max el	12321 Mar 05 11:27	5°♒19'16	45°54'27
	12321 Mar 29 01:22	0°♓	
	12321 Apr 24 09:54	0°♈	
	12321 May 19 15:21	0°♉	
desc. node	12321 May 29 23:11	12°♉30'56	
	12321 Jun 13 06:14	0°♊	
	12321 Jul 07 12:47	0°♋	
	12321 Jul 31 15:14	0°♌	

	12321 Aug 24 16:29	0°♍	
morning set	12321 Sep 06 09:33	15°♍51'05	
	12321 Sep 17 18:06	0°♎	
asc. node	12321 Sep 19 14:53	2°♎19'25	
	12321 Oct 11 20:43	0°♏	
superior conj	12321 Oct 14 23:23	3°♏51'57	0°56'33
minimum elong	12321 Oct 14 13:20	3°♏20'44	0°56'34
max. Earth dist.	12321 Oct 17 06:39	6°♏43'34	1.72483 AU
	12321 Nov 05 00:51	0°♐	
evening rise	12321 Nov 21 03:08	19°♐54'23	
	12321 Nov 29 07:29	0°♑	
	12321 Dec 23 17:50	0°♒	
desc. node	12322 Jan 09 06:25	20°♒09'47	
	12322 Jan 17 08:42	0°♓	
	12322 Feb 11 04:17	0°♈	
	12322 Mar 08 05:17	0°♉	
	12322 Apr 02 15:28	0°♊	
	12322 Apr 28 22:22	0°♋	
asc. node	12322 May 02 03:55	3°♋33'59	
evening max el	12322 May 22 00:01	24°♋28'46	46°44'59
	12322 May 27 15:12	0°♌	
greatest brilliancy	12322 Jul 01 08:42	25°♌05'33	-4.9m
retrograde	12322 Jul 11 05:15	26°♌55'08	
evening set	12322 Jul 26 23:38	22°♌05'46	
inferior conj	12322 Jul 31 22:09	19°♌09'16	5°14'08
minimum elong	12322 Aug 01 08:29	18°♌53'25	5°10'42
min. Earth dist.	12322 Aug 01 04:51	18°♌58'59	0.27009 AU
morning rise	12322 Aug 06 17:20	15°♌43'59	
direct	12322 Aug 21 15:04	11°♌23'23	
desc. node	12322 Aug 22 05:49	11°♌23'50	
greatest brilliancy	12322 Aug 31 15:58	13°♌15'17	-4.8m
	12322 Sep 26 10:40	0°♍	
morning max el	12322 Oct 10 09:37	12°♍53'14	46°22'18
	12322 Oct 27 02:17	0°♎	
	12322 Nov 23 05:59	0°♏	
asc. node	12322 Dec 13 05:20	23°♏03'31	
	12322 Dec 19 03:19	0°♐	
	12323 Jan 13 08:15	0°♑	
	12323 Feb 07 03:08	0°♒	
	12323 Mar 03 15:35	0°♓	
	12323 Mar 27 23:30	0°♈	
desc. node	12323 Apr 03 21:52	8°♈35'02	
morning set	12323 Apr 08 00:38	13°♈41'18	
	12323 Apr 21 03:34	0°♉	
max. Earth dist.	12323 May 14 22:11	29°♉40'53	1.71690 AU
	12323 May 15 04:17	0°♊	
superior conj	12323 May 17 21:47	3°♊24'59	-1°22'19
minimum elong	12323 May 17 14:13	3°♊01'16	1°22'56
	12323 Jun 08 02:46	0°♋	
evening rise	12323 Jun 26 23:38	23°♋40'27	
	12323 Jul 02 00:43	0°♌	
asc. node	12323 Jul 25 12:55	29°♌25'07	
	12323 Jul 26 00:05	0°♍	
	12323 Aug 19 02:45	0°♎	
	12323 Sep 12 10:53	0°♏	
	12323 Oct 07 04:03	0°♐	
	12323 Nov 01 12:36	0°♑	
desc. node	12323 Nov 14 09:01	14°♑46'01	
	12323 Nov 28 00:44	0°♒	
evening max el	12323 Dec 25 23:16	28°♒57'19	45°52'01
	12323 Dec 27 01:30	0°♓	
greatest brilliancy	12324 Feb 03 02:24	27°♓20'01	-4.8m
retrograde	12324 Feb 12 21:46	29°♓05'59	
evening set	12324 Feb 27 19:25	24°♓46'38	
inferior conj	12324 Mar 05 01:30	21°♓03'04	-0°20'45
minimum elong	12324 Mar 05 02:17	21°♓01'51	0°20'17
min. Earth dist.	12324 Mar 05 10:50	20°♓48'29	0.28127 AU
asc. node	12324 Mar 06 10:42	20°♓11'20	
morning rise	12324 Mar 11 08:32	17°♓16'38	
direct	12324 Mar 26 05:08	12°♓54'11	
greatest brilliancy	12324 Apr 06 00:43	15°♓03'59	-4.8m
	12324 Apr 29 02:50	0°♈	
morning max el	12324 May 15 07:01	15°♈00'45	46°37'55
	12324 May 29 16:21	0°♉	
	12324 Jun 25 07:48	0°♊	
desc. node	12324 Jun 26 11:10	1°♊19'42	
	12324 Jul 20 15:21	0°♋	
	12324 Aug 14 08:45	0°♌	
	12324 Sep 07 19:59	0°♍	
	12324 Oct 02 04:46	0°♎	
asc. node	12324 Oct 17 05:06	18°♎30'47	
	12324 Oct 26 12:27	0°♏	
morning set	12324 Nov 16 07:15	25°♏40'09	
	12324 Nov 19 19:21	0°♐	
	12324 Dec 14 02:03	0°♑	
superior conj	12324 Dec 23 03:30	11°♑11'25	1°21'51
minimum elong	12324 Dec 23 09:16	11°♑29'13	1°22'39
max. Earth dist.	12324 Dec 24 01:09	12°♑18'15	1.73158 AU
	12325 Jan 07 09:24	0°♒	
evening rise	12325 Jan 29 11:29	27°♒12'24	
	12325 Jan 31 17:58	0°♓	
desc. node	12325 Feb 05 19:33	6°♓13'54	
	12325 Feb 25 03:30	0°♈	
	12325 Mar 21 13:25	0°♉	
	12325 Apr 14 23:54	0°♊	
	12325 May 09 13:04	0°♋	
asc. node	12325 May 29 14:25	24°♋15'02	
	12325 Jun 03 09:42	0°♌	
	12325 Jun 28 22:51	0°♍	
	12325 Jul 26 02:15	0°♎	
evening max el	12325 Aug 02 08:59	7°♎28'22	46°41'17
	12325 Aug 27 23:49	0°♏	
greatest brilliancy	12325 Sep 10 14:10	7°♏39'21	-4.8m
desc. node	12325 Sep 18 15:24	9°♏45'01	
retrograde	12325 Sep 21 16:06	9°♏55'53	
evening set	12325 Oct 07 03:54	5°♏14'13	
min. Earth dist.	12325 Oct 11 23:27	2°♏22'32	0.27985 AU
inferior conj	12325 Oct 12 20:36	1°♏49'56	-5°38'28
minimum elong	12325 Oct 12 10:19	2°♏05'47	5°35'36
	12325 Oct 15 20:41	30°℞♎	
morning rise	12325 Oct 17 17:19	28°♎54'57	
direct	12325 Nov 02 21:53	23°♎54'14	
greatest brilliancy	12325 Nov 12 10:43	25°♎33'45	-4.8m
	12325 Nov 22 00:50	0°♏	
morning max el	12325 Dec 21 19:50	23°♏57'24	45°45'20
	12325 Dec 27 23:36	0°♐	
asc. node	12326 Jan 09 16:43	13°♐09'37	
	12326 Jan 25 02:42	0°♑	
	12326 Feb 20 06:15	0°♒	
	12326 Mar 17 11:52	0°♓	
	12326 Apr 11 05:10	0°♈	
desc. node	12326 May 01 11:52	24°♈55'39	
	12326 May 05 14:20	0°♉	
	12326 May 29 17:38	0°♊	
morning set	12326 Jun 21 23:15	29°♊04'10	
	12326 Jun 22 17:04	0°♋	
	12326 Jul 16 14:50	0°♌	
superior conj	12326 Jul 31 20:57	19°♌08'13	-0°48'54
minimum elong	12326 Aug 01 07:38	19°♌41'44	0°49'06
max. Earth dist.	12326 Aug 02 10:41	21°♌06'34	1.71511 AU

	12326 Aug 09 12:55	0°♍	
asc. node	12326 Aug 22 02:39	15°♍44'03	
	12326 Sep 02 12:42	0°♎	
evening rise	12326 Sep 09 11:03	8°♎38'47	
	12326 Sep 26 15:06	0°♏	
	12326 Oct 20 21:29	0°♐	
	12326 Nov 14 10:01	0°♑	
	12326 Dec 09 07:38	0°♒	
desc. node	12326 Dec 11 20:04	3°♒00'08	
	12327 Jan 03 17:51	0°♓	
	12327 Jan 29 22:44	0°♈	
	12327 Feb 26 16:14	0°♉	
evening max el	12327 Mar 07 15:38	9°♉02'01	46°12'52
	12327 Mar 31 19:46	0°♊	
asc. node	12327 Apr 03 20:19	2°♊05'07	
greatest brilliancy	12327 Apr 16 11:36	8°♊37'39	-4.8m
retrograde	12327 Apr 26 06:19	10°♊24'16	
evening set	12327 May 13 09:02	4°♊44'59	
inferior conj	12327 May 16 23:56	2°♊32'07	8°34'37
minimum elong	12327 May 16 16:21	2°♊43'54	8°33'00
min. Earth dist.	12327 May 17 01:12	2°♊30'09	0.27500 AU
morning rise	12327 May 19 23:37	0°♊41'56	
	12327 May 21 03:51	30°℞♉	
direct	12327 Jun 06 21:26	24°♉34'48	
greatest brilliancy	12327 Jun 16 17:14	26°♉24'34	-4.9m
	12327 Jun 24 09:27	0°♊	
desc. node	12327 Jul 24 21:57	24°♊57'57	
morning max el	12327 Jul 27 10:04	27°♊27'51	46°57'35
	12327 Jul 29 22:05	0°♋	
	12327 Aug 26 13:15	0°♌	
	12327 Sep 21 11:15	0°♍	
	12327 Oct 16 17:10	0°♎	
	12327 Nov 10 14:48	0°♏	
asc. node	12327 Nov 14 18:38	5°♏02'32	
	12327 Dec 05 06:49	0°♐	
	12327 Dec 29 18:45	0°♑	
	12328 Jan 23 04:03	0°♒	
morning set	12328 Jan 25 01:39	2°♒20'30	
	12328 Feb 16 11:46	0°♓	
max. Earth dist.	12328 Feb 29 17:00	16°♓19'57	1.72834 AU
superior conj	12328 Mar 02 14:46	18°♓41'25	0°06'46
minimum elong	12328 Mar 02 16:23	18°♓46'27	0°06'57
behind sun begin	12328 Mar 01 18:38	17°♓39'12	
behind sun end	12328 Mar 03 14:08	19°♓53'41	
desc. node	12328 Mar 05 09:33	22°♓07'57	
	12328 Mar 11 18:08	0°♈	
	12328 Apr 04 22:42	0°♉	
evening rise	12328 Apr 10 05:42	6°♉34'31	
	12328 Apr 29 01:26	0°♊	
	12328 May 23 03:21	0°♋	
	12328 Jun 16 06:37	0°♌	
asc. node	12328 Jun 26 02:03	12°♌08'27	
	12328 Jul 10 14:10	0°♍	
	12328 Aug 04 06:01	0°♎	
	12328 Aug 29 13:18	0°♏	
	12328 Sep 25 04:42	0°♐	
evening max el	12328 Oct 12 13:58	17°♐58'26	46°08'29
desc. node	12328 Oct 16 00:58	21°♐19'08	
	12328 Oct 25 14:15	0°♑	
greatest brilliancy	12328 Nov 20 18:14	16°♑56'52	-4.8m
retrograde	12328 Nov 30 22:32	18°♑49'46	
evening set	12328 Dec 19 03:04	12°♑37'54	
inferior conj	12328 Dec 22 10:56	10°♑33'31	-8°21'55
minimum elong	12328 Dec 22 16:56	10°♑24'03	8°20'29
min. Earth dist.	12328 Dec 22 13:28	10°♑29'32	0.28979 AU
morning rise	12328 Dec 26 06:51	8°♑11'03	
direct	12329 Jan 12 21:28	2°♑19'41	
greatest brilliancy	12329 Jan 23 09:30	4°♑19'57	-4.7m
asc. node	12329 Feb 06 03:00	11°♑45'13	
	12329 Feb 27 21:53	0°♒	
morning max el	12329 Mar 03 01:42	3°♒03'11	45°53'18
	12329 Mar 28 17:25	0°♓	
	12329 Apr 23 23:27	0°♈	
	12329 May 19 03:44	0°♉	
desc. node	12329 May 29 00:56	11°♉59'25	
	12329 Jun 12 17:59	0°♊	
	12329 Jul 07 00:10	0°♋	
	12329 Jul 31 02:21	0°♌	
	12329 Aug 24 03:23	0°♍	
morning set	12329 Sep 03 23:43	13°♍31'53	
	12329 Sep 17 04:51	0°♎	
asc. node	12329 Sep 18 16:49	1°♎51'59	
	12329 Oct 11 07:24	0°♏	
superior conj	12329 Oct 12 15:05	1°♏38'27	0°53'53
minimum elong	12329 Oct 12 05:10	1°♏07'38	0°53'53
max. Earth dist.	12329 Oct 14 21:00	4°♏25'53	1.72450 AU
	12329 Nov 04 11:32	0°♐	
evening rise	12329 Nov 18 19:45	17°♐44'22	
	12329 Nov 28 18:15	0°♑	
	12329 Dec 23 04:48	0°♒	
desc. node	12330 Jan 08 08:12	19°♒41'20	
	12330 Jan 16 19:59	0°♓	
	12330 Feb 10 16:06	0°♈	
	12330 Mar 07 17:58	0°♉	
	12330 Apr 02 05:38	0°♊	
	12330 Apr 28 15:33	0°♋	
asc. node	12330 May 01 05:51	2°♋50'52	
evening max el	12330 May 19 12:17	22°♋02'12	46°44'20
	12330 May 27 17:24	0°♌	
greatest brilliancy	12330 Jun 28 23:09	22°♌41'49	-4.9m
retrograde	12330 Jul 08 18:05	24°♌30'28	
evening set	12330 Jul 24 15:49	19°♌36'16	
inferior conj	12330 Jul 29 11:03	16°♌44'42	5°33'54
minimum elong	12330 Jul 29 21:44	16°♌28'21	5°30'25
min. Earth dist.	12330 Jul 29 18:51	16°♌32'45	0.27012 AU
morning rise	12330 Aug 04 03:34	13°♌23'06	
direct	12330 Aug 19 03:20	8°♌58'18	
desc. node	12330 Aug 21 07:50	9°♌03'56	
greatest brilliancy	12330 Aug 29 05:34	10°♌51'28	-4.9m
	12330 Sep 26 17:13	0°♍	
morning max el	12330 Oct 07 23:34	10°♍33'07	46°24'05
	12330 Oct 26 20:14	0°♎	
	12330 Nov 22 20:18	0°♏	
asc. node	12330 Dec 12 07:11	22°♏30'53	
	12330 Dec 18 15:59	0°♐	
	12331 Jan 12 20:04	0°♑	
	12331 Feb 06 14:28	0°♒	
	12331 Mar 03 02:39	0°♓	
	12331 Mar 27 10:25	0°♈	
desc. node	12331 Apr 02 23:45	8°♈07'04	
morning set	12331 Apr 05 13:57	11°♈19'55	
	12331 Apr 20 14:26	0°♉	
max. Earth dist.	12331 May 12 10:45	27°♉15'57	1.71728 AU
	12331 May 14 15:12	0°♊	
superior conj	12331 May 15 09:53	0°♊58'27	-1°20'56
minimum elong	12331 May 15 01:33	0°♊32'23	1°21'30
	12331 Jun 07 13:44	0°♋	
evening rise	12331 Jun 24 10:47	21°♋10'23	
	12331 Jul 01 11:46	0°♌	
asc. node	12331 Jul 24 14:51	28°♌56'20	
	12331 Jul 25 11:16	0°♍	

	12331 Aug 18 14:06	0°♎	
	12331 Sep 11 22:33	0°♏	
	12331 Oct 06 16:19	0°♐	
	12331 Nov 01 02:00	0°♑	
desc. node	12331 Nov 13 10:52	14°♑10'37	
	12331 Nov 27 16:40	0°♒	
evening max el	12331 Dec 23 14:48	26°♒45'27	45°51'57
	12331 Dec 27 01:01	0°♓	
greatest brilliancy	12332 Jan 31 16:37	25°♓04'59	-4.8m
retrograde	12332 Feb 10 13:07	26°♓51'36	
evening set	12332 Feb 25 11:36	22°♓30'19	
inferior conj	12332 Mar 02 16:39	18°♓47'59	-0°42'31
minimum elong	12332 Mar 02 18:15	18°♓45'29	0°41'45
min. Earth dist.	12332 Mar 03 02:13	18°♓33'03	0.28164 AU
asc. node	12332 Mar 05 12:48	17°♓02'31	
morning rise	12332 Mar 09 00:23	15°♓00'53	
direct	12332 Mar 23 21:02	10°♓38'42	
greatest brilliancy	12332 Apr 03 16:36	12°♓48'58	-4.8m
	12332 Apr 29 09:30	0°♈	
morning max el	12332 May 12 23:07	12°♈46'09	46°36'23
	12332 May 29 10:17	0°♉	
	12332 Jun 24 22:22	0°♊	
desc. node	12332 Jun 25 13:07	0°♊43'07	
	12332 Jul 20 04:25	0°♋	
	12332 Aug 13 20:58	0°♌	
	12332 Sep 07 07:40	0°♍	
	12332 Oct 01 16:05	0°♎	
asc. node	12332 Oct 16 06:56	18°♎02'06	
	12332 Oct 25 23:28	0°♏	
morning set	12332 Nov 13 23:44	23°♏29'15	
	12332 Nov 19 06:11	0°♐	
	12332 Dec 13 12:46	0°♑	
superior conj	12332 Dec 20 20:44	9°♑03'19	1°22'48
minimum elong	12332 Dec 21 01:52	9°♑19'11	1°23'38
max. Earth dist.	12332 Dec 21 22:46	10°♑23'41	1.73149 AU
	12333 Jan 06 20:08	0°♒	
evening rise	12333 Jan 27 03:49	25°♒01'39	
	12333 Jan 31 04:49	0°♓	
desc. node	12333 Feb 04 21:32	5°♓46'31	
	12333 Feb 24 14:35	0°♈	
	12333 Mar 21 00:48	0°♉	
	12333 Apr 14 11:42	0°♊	
	12333 May 09 01:30	0°♋	
asc. node	12333 May 28 16:17	23°♋40'58	
	12333 Jun 02 23:11	0°♌	
	12333 Jun 28 14:21	0°♍	
	12333 Jul 25 22:38	0°♎	
evening max el	12333 Jul 31 00:51	5°♎11'36	46°42'03
	12333 Aug 29 00:41	0°♏	
greatest brilliancy	12333 Sep 08 04:56	5°♏20'33	-4.8m
desc. node	12333 Sep 17 17:27	7°♏34'08	
retrograde	12333 Sep 19 07:23	7°♏37'06	
evening set	12333 Oct 04 15:51	2°♏59'44	
min. Earth dist.	12333 Oct 09 13:43	0°♏04'43	0.27925 AU
	12333 Oct 09 16:46	30°℞♎	
inferior conj	12333 Oct 10 10:54	29°♎32'01	-5°21'13
minimum elong	12333 Oct 10 00:51	29°♎47'32	5°18'22
morning rise	12333 Oct 15 10:31	26°♎33'10	
direct	12333 Oct 31 12:21	21°♎37'20	
greatest brilliancy	12333 Nov 09 23:50	23°♎16'02	-4.8m
	12333 Nov 23 07:26	0°♏	
morning max el	12333 Dec 19 10:32	21°♏42'49	45°46'02
	12333 Dec 27 19:46	0°♐	
asc. node	12334 Jan 08 18:43	12°♐28'56	
	12334 Jan 24 17:39	0°♑	
	12334 Feb 19 19:13	0°♒	
	12334 Mar 16 23:54	0°♓	
	12334 Apr 10 16:43	0°♈	
desc. node	12334 Apr 30 13:38	24°♈26'09	
	12334 May 05 01:37	0°♉	
	12334 May 29 04:45	0°♊	
morning set	12334 Jun 19 10:42	26°♊35'05	
	12334 Jun 22 04:05	0°♋	
	12334 Jul 16 01:47	0°♌	
superior conj	12334 Jul 29 08:54	16°♌40'55	-0°52'03
minimum elong	12334 Jul 29 19:57	17°♌15'35	0°52'16
max. Earth dist.	12334 Jul 30 22:29	18°♌38'47	1.71489 AU
	12334 Aug 08 23:51	0°♍	
asc. node	12334 Aug 21 04:33	15°♍15'53	
	12334 Sep 01 23:39	0°♎	
evening rise	12334 Sep 07 00:55	6°♎18'14	
	12334 Sep 26 02:07	0°♏	
	12334 Oct 20 08:40	0°♐	
	12334 Nov 13 21:30	0°♑	
	12334 Dec 08 19:41	0°♒	
desc. node	12334 Dec 10 21:59	2°♒29'45	
	12335 Jan 03 06:57	0°♓	
	12335 Jan 29 13:54	0°♈	
	12335 Feb 26 12:24	0°♉	
evening max el	12335 Mar 05 05:36	6°♉42'42	46°11'34
	12335 Apr 01 19:58	0°♊	
asc. node	12335 Apr 02 22:11	0°♊42'07	
greatest brilliancy	12335 Apr 14 01:04	6°♊15'46	-4.8m
retrograde	12335 Apr 23 19:00	8°♊01'50	
evening set	12335 May 10 18:17	2°♊29'04	
inferior conj	12335 May 14 13:33	0°♊09'38	8°25'28
minimum elong	12335 May 14 05:19	0°♊22'26	8°23'42
min. Earth dist.	12335 May 14 14:44	0°♊07'48	0.27516 AU
	12335 May 14 19:44	30°℞♉	
morning rise	12335 May 17 16:16	28°♉14'39	
direct	12335 Jun 04 10:58	22°♉11'59	
greatest brilliancy	12335 Jun 14 07:40	24°♉02'06	-4.9m
	12335 Jun 25 20:58	0°♊	
desc. node	12335 Jul 23 23:59	24°♊04'53	
morning max el	12335 Jul 24 22:38	25°♊01'40	46°57'50
	12335 Jul 29 19:27	0°♋	
	12335 Aug 26 05:07	0°♌	
	12335 Sep 21 00:54	0°♍	
	12335 Oct 16 05:37	0°♎	
	12335 Nov 10 02:30	0°♏	
asc. node	12335 Nov 13 20:25	4°♏32'42	
	12335 Dec 04 18:03	0°♐	
	12335 Dec 29 05:41	0°♑	
morning set	12336 Jan 22 18:37	0°♒11'44	
	12336 Jan 22 14:48	0°♒	
	12336 Feb 15 22:28	0°♓	
max. Earth dist.	12336 Feb 27 09:19	14°♓09'03	1.72863 AU
superior conj	12336 Feb 29 06:08	16°♓27'32	0°10'13
minimum elong	12336 Feb 29 08:33	16°♓35'01	0°10'23
behind sun begin	12336 Feb 28 14:12	15°♓38'16	
behind sun end	12336 Mar 01 02:54	17°♓31'46	
desc. node	12336 Mar 04 11:25	21°♓40'39	
	12336 Mar 11 04:51	0°♈	
	12336 Apr 04 09:31	0°♉	
evening rise	12336 Apr 07 19:59	4°♉16'05	
	12336 Apr 28 12:25	0°♊	
	12336 May 22 14:34	0°♋	
	12336 Jun 15 18:09	0°♌	
asc. node	12336 Jun 25 03:59	11°♌38'22	
	12336 Jul 10 02:10	0°♍	
	12336 Aug 03 18:46	0°♎	

	12336 Aug 29 03:27	0°♏	
	12336 Sep 24 22:10	0°♐	
evening max el	12336 Oct 10 03:47	15°♐40'44	46°09'34
desc. node	12336 Oct 15 02:50	20°♐27'11	
	12336 Oct 25 20:34	0°♑	
greatest brilliancy	12336 Nov 18 09:35	14°♑45'16	-4.8m
retrograde	12336 Nov 28 13:55	16°♑38'48	
evening set	12336 Dec 16 20:35	10°♑24'13	
inferior conj	12336 Dec 20 02:51	8°♑22'27	-8°27'40
minimum elong	12336 Dec 20 08:11	8°♑14'03	8°26'22
min. Earth dist.	12336 Dec 20 04:45	8°♑19'27	0.28981 AU
morning rise	12336 Dec 23 19:47	6°♑04'28	
direct	12337 Jan 10 12:43	0°♑08'40	
greatest brilliancy	12337 Jan 21 01:08	2°♑08'51	-4.7m
asc. node	12337 Feb 05 05:02	10°♑33'34	
	12337 Feb 27 20:35	0°♒	
morning max el	12337 Feb 28 16:20	0°♒48'06	45°52'25
	12337 Mar 28 09:07	0°♓	
	12337 Apr 23 12:46	0°♈	
	12337 May 18 15:57	0°♉	
desc. node	12337 May 28 02:53	11°♉28'55	
	12337 Jun 12 05:37	0°♊	
	12337 Jul 06 11:27	0°♋	
	12337 Jul 30 13:25	0°♌	
	12337 Aug 23 14:17	0°♍	
morning set	12337 Sep 01 13:20	11°♍10'54	
	12337 Sep 16 15:36	0°♎	
asc. node	12337 Sep 17 18:37	1°♎24'10	
superior conj	12337 Oct 10 06:15	29°♎23'21	0°51'06
minimum elong	12337 Oct 09 20:31	28°♎53'08	0°51'04
	12337 Oct 10 18:02	0°♏	
max. Earth dist.	12337 Oct 12 10:27	2°♏05'34	1.72416 AU
	12337 Nov 03 22:09	0°♐	
evening rise	12337 Nov 16 12:05	15°♐33'43	
	12337 Nov 28 04:58	0°♑	
	12337 Dec 22 15:42	0°♒	
desc. node	12338 Jan 07 10:12	19°♒13'41	
	12338 Jan 16 07:13	0°♓	
	12338 Feb 10 03:51	0°♈	
	12338 Mar 07 06:35	0°♉	
	12338 Apr 01 19:45	0°♊	
	12338 Apr 28 08:49	0°♋	
asc. node	12338 Apr 30 07:47	2°♋08'00	
evening max el	12338 May 17 01:04	19°♋37'55	46°43'40
	12338 May 27 20:49	0°♌	
greatest brilliancy	12338 Jun 26 12:40	20°♌17'46	-4.9m
retrograde	12338 Jul 06 07:17	22°♌06'18	
evening set	12338 Jul 22 08:00	17°♌06'54	
inferior conj	12338 Jul 26 23:51	14°♌20'21	5°52'57
minimum elong	12338 Jul 27 10:48	14°♌03'36	5°49'30
min. Earth dist.	12338 Jul 27 08:21	14°♌07'20	0.27022 AU
morning rise	12338 Aug 01 13:30	11°♌02'55	
direct	12338 Aug 16 16:10	6°♌33'23	
desc. node	12338 Aug 20 09:52	6°♌49'49	
greatest brilliancy	12338 Aug 26 18:46	8°♌27'26	-4.9m
	12338 Sep 26 21:37	0°♍	
morning max el	12338 Oct 05 14:15	8°♍15'00	46°25'43
	12338 Oct 26 13:39	0°♎	
	12338 Nov 22 10:20	0°♏	
asc. node	12338 Dec 11 09:15	21°♏59'33	
	12338 Dec 18 04:25	0°♐	
	12339 Jan 12 07:37	0°♑	
	12339 Feb 06 01:32	0°♒	
	12339 Mar 02 13:26	0°♓	
	12339 Mar 26 21:05	0°♈	
desc. node	12339 Apr 02 01:31	7°♈39'33	
morning set	12339 Apr 03 03:31	9°♈00'09	
	12339 Apr 20 01:03	0°♉	
max. Earth dist.	12339 May 09 23:49	24°♉53'31	1.71758 AU
superior conj	12339 May 12 22:17	28°♉33'52	-1°19'23
minimum elong	12339 May 12 13:17	28°♉05'44	1°19'55
	12339 May 14 01:49	0°♊	
	12339 Jun 07 00:22	0°♋	
evening rise	12339 Jun 21 22:19	18°♋42'38	
	12339 Jun 30 22:28	0°♌	
asc. node	12339 Jul 23 16:47	28°♌28'36	
	12339 Jul 24 22:05	0°♍	
	12339 Aug 18 01:09	0°♎	
	12339 Sep 11 09:59	0°♏	
	12339 Oct 06 04:21	0°♐	
	12339 Oct 31 15:15	0°♑	
desc. node	12339 Nov 12 12:53	13°♑36'04	
	12339 Nov 27 08:36	0°♒	
evening max el	12339 Dec 21 06:41	24°♒35'09	45°51'58
	12339 Dec 27 01:22	0°♓	
greatest brilliancy	12340 Jan 29 06:59	22°♓51'03	-4.8m
retrograde	12340 Feb 08 04:14	24°♓37'49	
evening set	12340 Feb 23 03:55	20°♓14'42	
inferior conj	12340 Feb 29 07:42	16°♓33'38	-1°04'09
minimum elong	12340 Feb 29 10:07	16°♓29'52	1°03'06
min. Earth dist.	12340 Feb 29 17:25	16°♓18'28	0.28198 AU
asc. node	12340 Mar 04 14:44	13°♓55'53	
morning rise	12340 Mar 06 15:54	12°♓45'57	
direct	12340 Mar 21 13:05	8°♓24'07	
greatest brilliancy	12340 Apr 01 08:02	10°♓34'10	-4.8m
	12340 Apr 29 13:43	0°♈	
morning max el	12340 May 10 14:42	10°♈31'21	46°34'56
	12340 May 29 03:26	0°♉	
desc. node	12340 Jun 24 15:08	0°♊08'11	
	12340 Jun 24 12:20	0°♊	
	12340 Jul 19 16:56	0°♋	
	12340 Aug 13 08:40	0°♌	
	12340 Sep 06 18:51	0°♍	
	12340 Oct 01 02:56	0°♎	
asc. node	12340 Oct 15 08:44	17°♎34'41	
	12340 Oct 25 10:05	0°♏	
morning set	12340 Nov 11 15:58	21°♏18'45	
	12340 Nov 18 16:38	0°♐	
	12340 Dec 12 23:08	0°♑	
superior conj	12340 Dec 18 13:41	6°♑55'25	1°23'39
minimum elong	12340 Dec 18 18:10	7°♑09'15	1°24'30
max. Earth dist.	12340 Dec 19 19:07	8°♑26'17	1.73138 AU
	12341 Jan 06 06:31	0°♒	
evening rise	12341 Jan 24 19:48	22°♒50'56	
	12341 Jan 30 15:19	0°♓	
desc. node	12341 Feb 03 23:19	5°♓19'41	
	12341 Feb 24 01:18	0°♈	
	12341 Mar 20 11:51	0°♉	
	12341 Apr 13 23:11	0°♊	
	12341 May 08 13:38	0°♋	
asc. node	12341 May 27 18:19	23°♋08'23	
	12341 Jun 02 12:22	0°♌	
	12341 Jun 28 05:35	0°♍	
	12341 Jul 25 19:04	0°♎	
evening max el	12341 Jul 28 16:21	2°♎55'30	46°42'53
	12341 Aug 30 10:14	0°♏	
greatest brilliancy	12341 Sep 05 20:21	3°♏04'29	-4.8m
retrograde	12341 Sep 16 22:20	5°♏20'19	
desc. node	12341 Sep 16 19:19	5°♏20'18	
evening set	12341 Oct 02 04:13	0°♏47'07	
	12341 Oct 03 13:22	30°℞♎	

min. Earth dist.	12341 Oct 07 04:27	27°♎48'37	0.27867 AU
inferior conj	12341 Oct 08 01:25	27°♎16'14	-5°03'34
minimum elong	12341 Oct 07 15:38	27°♎31'20	5°00'43
morning rise	12341 Oct 13 03:47	24°♎13'27	
direct	12341 Oct 29 02:51	19°♎22'34	
greatest brilliancy	12341 Nov 07 13:33	21°♎00'35	-4.8m
	12341 Nov 24 04:37	0°♏	
morning max el	12341 Dec 17 00:30	19°♏27'39	45°46'33
	12341 Dec 27 14:48	0°♐	
asc. node	12342 Jan 07 20:41	11°♐49'50	
	12342 Jan 24 08:00	0°♑	
	12342 Feb 19 07:44	0°♒	
	12342 Mar 16 11:31	0°♓	
	12342 Apr 10 03:51	0°♈	
desc. node	12342 Apr 29 15:30	23°♈58'14	
	12342 May 04 12:29	0°♉	
	12342 May 28 15:28	0°♊	
morning set	12342 Jun 16 22:01	24°♊06'50	
	12342 Jun 21 14:43	0°♋	
	12342 Jul 15 12:22	0°♌	
superior conj	12342 Jul 26 21:00	14°♌15'19	-0°55'06
minimum elong	12342 Jul 27 08:21	14°♌50'55	0°55'21
max. Earth dist.	12342 Jul 28 07:33	16°♌03'37	1.71463 AU
	12342 Aug 08 10:23	0°♍	
asc. node	12342 Aug 20 06:19	14°♍48'36	
	12342 Sep 01 10:09	0°♎	
evening rise	12342 Sep 04 14:54	3°♎59'23	
	12342 Sep 25 12:40	0°♏	
	12342 Oct 19 19:21	0°♐	
	12342 Nov 13 08:33	0°♑	
	12342 Dec 08 07:23	0°♒	
desc. node	12342 Dec 09 23:57	2°♒00'42	
	12343 Jan 02 19:47	0°♓	
	12343 Jan 29 04:55	0°♈	
	12343 Feb 26 08:53	0°♉	
evening max el	12343 Mar 02 18:44	4°♉22'21	46°10'21
asc. node	12343 Apr 02 00:11	29°♉17'30	
	12343 Apr 03 05:11	0°♊	
greatest brilliancy	12343 Apr 11 14:36	3°♊55'00	-4.8m
retrograde	12343 Apr 21 07:48	5°♊40'48	
evening set	12343 May 08 03:30	0°♊14'15	
	12343 May 08 13:10	30°℞♉	
inferior conj	12343 May 12 03:12	27°♉48'22	8°15'28
minimum elong	12343 May 11 18:21	28°♉02'07	8°13'32
min. Earth dist.	12343 May 12 04:24	27°♉46'29	0.27534 AU
morning rise	12343 May 15 09:05	25°♉48'30	
direct	12343 Jun 02 00:12	19°♉50'08	
greatest brilliancy	12343 Jun 11 22:33	21°♉41'16	-4.9m
	12343 Jun 26 21:39	0°♊	
morning max el	12343 Jul 22 11:25	22°♊36'57	46°58'08
desc. node	12343 Jul 23 01:56	23°♊13'32	
	12343 Jul 29 15:43	0°♋	
	12343 Aug 25 20:24	0°♌	
	12343 Sep 20 14:05	0°♍	
	12343 Oct 15 17:38	0°♎	
	12343 Nov 09 13:47	0°♏	
asc. node	12343 Nov 12 22:27	4°♏04'50	
	12343 Dec 04 04:51	0°♐	
	12343 Dec 28 16:14	0°♑	
morning set	12344 Jan 20 11:42	28°♑04'18	
	12344 Jan 22 01:15	0°♒	
	12344 Feb 15 08:55	0°♓	
max. Earth dist.	12344 Feb 25 02:42	12°♓02'08	1.72896 AU
superior conj	12344 Feb 26 21:32	14°♓14'29	0°13'39
minimum elong	12344 Feb 27 00:44	14°♓24'22	0°13'50
behind sun begin	12344 Feb 26 12:38	13°♓46'59	
behind sun end	12344 Feb 27 12:49	15°♓01'45	
desc. node	12344 Mar 03 13:12	21°♓13'50	
	12344 Mar 10 15:20	0°♈	
	12344 Apr 03 20:07	0°♉	
evening rise	12344 Apr 05 10:15	1°♉58'23	
	12344 Apr 27 23:11	0°♊	
	12344 May 22 01:35	0°♋	
	12344 Jun 15 05:31	0°♌	
asc. node	12344 Jun 24 05:56	11°♌08'50	
	12344 Jul 09 14:01	0°♍	
	12344 Aug 03 07:23	0°♎	
	12344 Aug 28 17:34	0°♏	
	12344 Sep 24 15:46	0°♐	
evening max el	12344 Oct 07 18:04	13°♐25'02	46°10'53
desc. node	12344 Oct 14 04:56	19°♐35'43	
	12344 Oct 26 04:50	0°♑	
greatest brilliancy	12344 Nov 16 00:29	12°♑34'30	-4.8m
retrograde	12344 Nov 26 06:03	14°♑29'37	
evening set	12344 Dec 14 14:05	8°♑12'28	
inferior conj	12344 Dec 17 19:02	6°♑12'56	-8°32'38
minimum elong	12344 Dec 17 23:39	6°♑05'41	8°31'26
min. Earth dist.	12344 Dec 17 19:53	6°♑11'36	0.28981 AU
morning rise	12344 Dec 21 09:13	3°♑59'19	
	12344 Dec 29 03:23	30°℞♐	
direct	12345 Jan 08 04:23	27°♐59'13	
greatest brilliancy	12345 Jan 18 16:46	29°♐59'18	-4.7m
	12345 Jan 18 17:31	0°♑	
asc. node	12345 Feb 04 06:58	9°♑24'52	
morning max el	12345 Feb 26 07:59	28°♑36'21	45°51'22
	12345 Feb 27 18:04	0°♒	
	12345 Mar 28 00:24	0°♓	
	12345 Apr 23 01:54	0°♈	
	12345 May 18 04:03	0°♉	
desc. node	12345 May 27 04:54	10°♉58'52	
	12345 Jun 11 17:09	0°♊	
	12345 Jul 05 22:40	0°♋	
	12345 Jul 30 00:24	0°♌	
	12345 Aug 23 01:05	0°♍	
morning set	12345 Aug 30 02:51	8°♍49'44	
	12345 Sep 16 02:16	0°♎	
asc. node	12345 Sep 16 20:27	0°♎56'36	
superior conj	12345 Oct 07 21:22	27°♎08'11	0°48'14
minimum elong	12345 Oct 07 11:53	26°♎38'43	0°48'09
max. Earth dist.	12345 Oct 10 00:26	29°♎46'57	1.72381 AU
	12345 Oct 10 04:38	0°♏	
	12345 Nov 03 08:45	0°♐	
evening rise	12345 Nov 14 04:37	13°♐23'53	
	12345 Nov 27 15:36	0°♑	
	12345 Dec 22 02:30	0°♒	
desc. node	12346 Jan 06 12:05	18°♒45'56	
	12346 Jan 15 18:22	0°♓	
	12346 Feb 09 15:36	0°♈	
	12346 Mar 06 19:17	0°♉	
	12346 Apr 01 10:06	0°♊	
	12346 Apr 28 02:38	0°♋	
asc. node	12346 Apr 29 09:51	1°♋24'28	
evening max el	12346 May 14 14:52	17°♋15'49	46°42'56
	12346 May 28 02:19	0°♌	
greatest brilliancy	12346 Jun 24 01:41	17°♌52'39	-4.9m
retrograde	12346 Jul 03 20:42	19°♌41'25	
evening set	12346 Jul 20 00:13	14°♌36'51	
inferior conj	12346 Jul 24 12:33	11°♌55'14	6°11'23
minimum elong	12346 Jul 24 23:41	11°♌38'15	6°07'58
min. Earth dist.	12346 Jul 24 21:19	11°♌41'51	0.27031 AU
morning rise	12346 Jul 29 23:06	8°♌42'22	

direct	12346 Aug 14 05:28	4°♌08'01	
desc. node	12346 Aug 19 11:47	4°♌40'26	
greatest brilliancy	12346 Aug 24 07:11	6°♌01'59	-4.9m
	12346 Sep 27 00:27	0°♍	
morning max el	12346 Oct 03 05:05	5°♍56'55	46°27'18
	12346 Oct 26 06:48	0°♎	
	12346 Nov 22 00:18	0°♏	
asc. node	12346 Dec 10 11:05	21°♏27'26	
	12346 Dec 17 16:52	0°♐	
	12347 Jan 11 19:13	0°♑	
	12347 Feb 05 12:38	0°♒	
	12347 Mar 02 00:17	0°♓	
	12347 Mar 26 07:50	0°♈	
morning set	12347 Mar 31 17:30	6°♈41'26	
desc. node	12347 Apr 01 03:27	7°♈12'15	
	12347 Apr 19 11:49	0°♉	
max. Earth dist.	12347 May 07 11:22	22°♉25'51	1.71796 AU
superior conj	12347 May 10 10:43	26°♉08'50	-1°17'43
minimum elong	12347 May 10 01:09	25°♉38'58	1°18'11
	12347 May 13 12:37	0°♊	
	12347 Jun 06 11:15	0°♋	
evening rise	12347 Jun 19 09:31	16°♋12'58	
	12347 Jun 30 09:26	0°♌	
asc. node	12347 Jul 22 18:32	27°♌59'27	
	12347 Jul 24 09:11	0°♍	
	12347 Aug 17 12:29	0°♎	
	12347 Sep 10 21:41	0°♏	
	12347 Oct 05 16:44	0°♐	
	12347 Oct 31 04:55	0°♑	
desc. node	12347 Nov 11 14:53	13°♑00'28	
	12347 Nov 27 01:07	0°♒	
evening max el	12347 Dec 18 22:42	22°♒24'36	45°52'04
	12347 Dec 27 03:15	0°♓	
greatest brilliancy	12348 Jan 26 22:08	20°♓38'05	-4.8m
retrograde	12348 Feb 05 19:15	22°♓24'18	
evening set	12348 Feb 20 20:40	17°♓59'23	
inferior conj	12348 Feb 26 23:03	14°♓19'46	-1°25'22
minimum elong	12348 Feb 27 02:14	14°♓14'47	1°24'04
min. Earth dist.	12348 Feb 27 09:01	14°♓04'11	0.28230 AU
asc. node	12348 Mar 03 16:41	10°♓52'02	
morning rise	12348 Mar 04 07:27	10°♓31'35	
direct	12348 Mar 19 05:12	6°♓10'11	
greatest brilliancy	12348 Mar 29 23:36	8°♓19'39	-4.8m
	12348 Apr 29 16:22	0°♈	
morning max el	12348 May 08 05:24	8°♈13'52	46°33'14
	12348 May 28 20:28	0°♉	
desc. node	12348 Jun 23 16:59	29°♉32'06	
	12348 Jun 24 02:30	0°♊	
	12348 Jul 19 05:46	0°♋	
	12348 Aug 12 20:45	0°♌	
	12348 Sep 06 06:26	0°♍	
	12348 Sep 30 14:10	0°♎	
asc. node	12348 Oct 14 10:42	17°♎06'36	
	12348 Oct 24 21:04	0°♏	
morning set	12348 Nov 09 07:58	19°♏06'22	
	12348 Nov 18 03:26	0°♐	
	12348 Dec 12 09:52	0°♑	
superior conj	12348 Dec 16 06:40	4°♑46'32	1°24'23
minimum elong	12348 Dec 16 10:28	4°♑58'16	1°25'15
max. Earth dist.	12348 Dec 17 13:36	6°♑22'03	1.73123 AU
	12349 Jan 05 17:16	0°♒	
evening rise	12349 Jan 22 11:58	20°♒39'40	
	12349 Jan 30 02:11	0°♓	
desc. node	12349 Feb 03 01:09	4°♓51'52	
	12349 Feb 23 12:22	0°♈	
	12349 Mar 19 23:12	0°♉	
	12349 Apr 13 10:58	0°♊	
	12349 May 08 02:07	0°♋	
asc. node	12349 May 26 20:14	22°♋34'15	
	12349 Jun 02 02:02	0°♌	
	12349 Jun 27 21:32	0°♍	
	12349 Jul 25 16:56	0°♎	
evening max el	12349 Jul 26 06:48	0°♎34'54	46°43'27
	12349 Sep 01 15:32	0°♏	
greatest brilliancy	12349 Sep 03 12:09	0°♏46'24	-4.8m
retrograde	12349 Sep 14 12:37	3°♏00'53	
desc. node	12349 Sep 15 21:24	2°♏58'39	
	12349 Sep 26 19:45	30°℞♎	
evening set	12349 Sep 29 16:27	28°♎31'36	
min. Earth dist.	12349 Oct 04 19:23	25°♎29'19	0.27809 AU
inferior conj	12349 Oct 05 15:40	24°♎57'58	-4°45'10
minimum elong	12349 Oct 05 06:15	25°♎12'32	4°42'21
morning rise	12349 Oct 10 20:44	21°♎51'14	
direct	12349 Oct 26 16:34	17°♎05'11	
greatest brilliancy	12349 Nov 05 03:38	18°♎43'12	-4.8m
	12349 Nov 24 21:12	0°♏	
morning max el	12349 Dec 14 13:24	17°♏08'11	45°47'17
	12349 Dec 27 09:52	0°♐	
asc. node	12350 Jan 06 22:36	11°♐09'33	
	12350 Jan 23 22:40	0°♑	
	12350 Feb 18 20:36	0°♒	
	12350 Mar 15 23:30	0°♓	
	12350 Apr 09 15:21	0°♈	
desc. node	12350 Apr 28 17:29	23°♈29'37	
	12350 May 03 23:42	0°♉	
	12350 May 28 02:31	0°♊	
morning set	12350 Jun 14 09:40	21°♊38'29	
	12350 Jun 21 01:40	0°♋	
	12350 Jul 14 23:19	0°♌	
superior conj	12350 Jul 24 09:11	11°♌48'38	-0°58'02
minimum elong	12350 Jul 24 20:44	12°♌24'52	0°58'19
max. Earth dist.	12350 Jul 25 13:58	13°♌18'55	1.71449 AU
	12350 Aug 07 21:21	0°♍	
asc. node	12350 Aug 19 08:14	14°♍20'17	
	12350 Aug 31 21:09	0°♎	
evening rise	12350 Sep 02 04:29	1°♎37'42	
	12350 Sep 24 23:45	0°♏	
	12350 Oct 19 06:37	0°♐	
	12350 Nov 12 20:10	0°♑	
	12350 Dec 07 19:39	0°♒	
desc. node	12350 Dec 09 01:50	1°♒29'39	
	12351 Jan 02 09:14	0°♓	
	12351 Jan 28 20:41	0°♈	
	12351 Feb 26 06:40	0°♉	
evening max el	12351 Feb 28 07:46	2°♉00'44	46°09'20
asc. node	12351 Apr 01 02:19	27°♉49'11	
	12351 Apr 05 08:06	0°♊	
greatest brilliancy	12351 Apr 09 04:00	1°♊33'18	-4.8m
retrograde	12351 Apr 18 21:12	3°♊19'29	
	12351 May 01 19:20	30°℞♉	
evening set	12351 May 05 12:55	27°♉58'46	
inferior conj	12351 May 09 17:02	25°♉26'42	8°04'43
minimum elong	12351 May 09 07:39	25°♉41'16	8°02'37
min. Earth dist.	12351 May 09 18:07	25°♉25'00	0.27549 AU
morning rise	12351 May 13 02:13	23°♉21'59	
direct	12351 May 30 13:40	17°♉27'53	
greatest brilliancy	12351 Jun 09 13:23	19°♉20'11	-4.9m
	12351 Jun 27 16:01	0°♊	
morning max el	12351 Jul 20 01:00	20°♊13'39	46°58'20
desc. node	12351 Jul 22 03:54	22°♊22'35	
	12351 Jul 29 11:37	0°♋	

	12351 Aug 25 11:46	0°♌	
	12351 Sep 20 03:32	0°♍	
	12351 Oct 15 06:01	0°♎	
	12351 Nov 09 01:29	0°♏	
asc. node	12351 Nov 12 00:18	3°♏35'03	
	12351 Dec 03 16:08	0°♐	
	12351 Dec 28 03:14	0°♑	
morning set	12352 Jan 18 04:31	25°♑54'41	
	12352 Jan 21 12:07	0°♒	
	12352 Feb 14 19:44	0°♓	
max. Earth dist.	12352 Feb 22 22:02	10°♓00'04	1.72924 AU
superior conj	12352 Feb 24 12:46	11°♓59'44	0°17'05
minimum elong	12352 Feb 24 16:43	12°♓11'57	0°17'16
desc. node	12352 Mar 02 15:08	20°♓46'17	
	12352 Mar 10 02:12	0°♈	
evening rise	12352 Apr 03 00:37	29°♈39'54	
	12352 Apr 03 07:05	0°♉	
	12352 Apr 27 10:18	0°♊	
	12352 May 21 12:55	0°♋	
	12352 Jun 14 17:09	0°♌	
asc. node	12352 Jun 23 07:45	10°♌38'10	
	12352 Jul 09 02:06	0°♍	
	12352 Aug 02 20:18	0°♎	
	12352 Aug 28 08:05	0°♏	
	12352 Sep 24 10:12	0°♐	
evening max el	12352 Oct 05 08:58	11°♐09'39	46°11'57
desc. node	12352 Oct 13 06:56	18°♐41'45	
	12352 Oct 26 16:59	0°♑	
greatest brilliancy	12352 Nov 13 14:43	10°♑21'09	-4.8m
retrograde	12352 Nov 23 22:21	12°♑18'11	
evening set	12352 Dec 12 07:01	5°♑58'52	
inferior conj	12352 Dec 15 10:53	4°♑01'10	-8°36'55
minimum elong	12352 Dec 15 14:46	3°♑55'03	8°35'48
min. Earth dist.	12352 Dec 15 10:24	4°♑01'54	0.28981 AU
morning rise	12352 Dec 18 22:33	1°♑51'36	
	12352 Dec 22 04:13	30°℞♐	
direct	12353 Jan 05 20:12	25°♐47'37	
greatest brilliancy	12353 Jan 16 07:37	27°♐47'09	-4.7m
	12353 Jan 21 10:04	0°♑	
asc. node	12353 Feb 03 08:59	8°♑16'39	
morning max el	12353 Feb 24 00:01	26°♑24'27	45°50'25
	12353 Feb 27 15:15	0°♒	
	12353 Mar 27 15:48	0°♓	
	12353 Apr 22 15:12	0°♈	
	12353 May 17 16:20	0°♉	
desc. node	12353 May 26 06:39	10°♉27'27	
	12353 Jun 11 04:53	0°♊	
	12353 Jul 05 10:02	0°♋	
	12353 Jul 29 11:31	0°♌	
	12353 Aug 22 12:00	0°♍	
morning set	12353 Aug 27 16:46	6°♍29'23	
asc. node	12353 Sep 15 22:23	0°♎29'04	
	12353 Sep 15 13:03	0°♎	
superior conj	12353 Oct 05 12:38	24°♎53'00	0°45'18
minimum elong	12353 Oct 05 03:28	24°♎24'30	0°45'11
max. Earth dist.	12353 Oct 07 17:13	27°♎36'33	1.72351 AU
	12353 Oct 09 15:21	0°♏	
	12353 Nov 02 19:29	0°♐	
evening rise	12353 Nov 11 21:14	11°♐13'39	
	12353 Nov 27 02:27	0°♑	
	12353 Dec 21 13:33	0°♒	
desc. node	12354 Jan 05 13:54	18°♒17'14	
	12354 Jan 15 05:47	0°♓	
	12354 Feb 09 03:37	0°♈	
	12354 Mar 06 08:16	0°♉	
	12354 Apr 01 00:48	0°♊	
	12354 Apr 27 21:03	0°♋	
asc. node	12354 Apr 28 11:47	0°♋39'33	
evening max el	12354 May 12 05:12	14°♋54'45	46°42'11
	12354 May 28 10:15	0°♌	
greatest brilliancy	12354 Jun 21 14:55	15°♌27'47	-4.9m
retrograde	12354 Jul 01 10:12	17°♌16'18	
evening set	12354 Jul 17 16:39	12°♌06'48	
inferior conj	12354 Jul 22 01:19	9°♌30'07	6°29'14
minimum elong	12354 Jul 22 12:33	9°♌12'57	6°25'52
min. Earth dist.	12354 Jul 22 10:12	9°♌16'33	0.27036 AU
morning rise	12354 Jul 27 08:29	6°♌22'00	
direct	12354 Aug 11 18:53	1°♌42'58	
desc. node	12354 Aug 18 13:51	2°♌36'24	
greatest brilliancy	12354 Aug 21 19:14	3°♌36'07	-4.9m
	12354 Sep 27 01:45	0°♍	
morning max el	12354 Sep 30 19:26	3°♍37'47	46°28'54
	12354 Oct 25 23:31	0°♎	
	12354 Nov 21 14:05	0°♏	
asc. node	12354 Dec 09 12:59	20°♏55'40	
	12354 Dec 17 05:14	0°♐	
	12355 Jan 11 06:50	0°♑	
	12355 Feb 04 23:48	0°♒	
	12355 Mar 01 11:13	0°♓	
	12355 Mar 25 18:39	0°♈	
morning set	12355 Mar 29 07:18	4°♈22'04	
desc. node	12355 Mar 31 05:20	6°♈44'39	
	12355 Apr 18 22:36	0°♉	
max. Earth dist.	12355 May 04 21:09	19°♉52'46	1.71831 AU
superior conj	12355 May 07 23:01	23°♉43'32	-1°15'54
minimum elong	12355 May 07 12:57	23°♉12'06	1°16'18
	12355 May 12 23:26	0°♊	
	12355 Jun 05 22:06	0°♋	
evening rise	12355 Jun 16 20:39	13°♋43'11	
	12355 Jun 29 20:22	0°♌	
asc. node	12355 Jul 21 20:30	27°♌31'02	
	12355 Jul 23 20:16	0°♍	
	12355 Aug 16 23:46	0°♎	
	12355 Sep 10 09:19	0°♏	
	12355 Oct 05 05:01	0°♐	
	12355 Oct 30 18:30	0°♑	
desc. node	12355 Nov 10 16:47	12°♑24'48	
	12355 Nov 26 17:46	0°♒	
evening max el	12355 Dec 16 13:53	20°♒12'17	45°51'54
	12355 Dec 27 06:34	0°♓	
greatest brilliancy	12356 Jan 24 13:44	18°♓25'33	-4.8m
retrograde	12356 Feb 03 09:43	20°♓10'39	
evening set	12356 Feb 18 13:26	15°♓43'40	
inferior conj	12356 Feb 24 14:19	12°♓05'52	-1°46'37
minimum elong	12356 Feb 24 18:16	11°♓59'40	1°45'03
min. Earth dist.	12356 Feb 25 00:53	11°♓49'18	0.28266 AU
morning rise	12356 Mar 01 22:42	8°♓17'16	
asc. node	12356 Mar 02 18:48	7°♓50'17	
direct	12356 Mar 16 20:38	3°♓56'00	
greatest brilliancy	12356 Mar 27 15:36	6°♓05'25	-4.8m
	12356 Apr 29 17:36	0°♈	
morning max el	12356 May 05 19:17	5°♈54'23	46°31'40
	12356 May 28 13:05	0°♉	
desc. node	12356 Jun 22 19:00	28°♉57'05	
	12356 Jun 23 16:23	0°♊	
	12356 Jul 18 18:21	0°♋	
	12356 Aug 12 08:35	0°♌	
	12356 Sep 05 17:48	0°♍	
	12356 Sep 30 01:10	0°♎	
asc. node	12356 Oct 13 12:31	16°♎38'46	
	12356 Oct 24 07:47	0°♏	

morning set	12356 Nov 07 00:15	16°♏55'33	
	12356 Nov 17 13:58	0°♐	
	12356 Dec 11 20:19	0°♑	
superior conj	12356 Dec 14 00:01	2°♑39'39	1°24'58
minimum elong	12356 Dec 14 03:07	2°♑49'12	1°25'51
max. Earth dist.	12356 Dec 15 07:25	4°♑16'33	1.73108 AU
	12357 Jan 05 03:45	0°♒	
evening rise	12357 Jan 20 04:22	18°♒29'56	
	12357 Jan 29 12:49	0°♓	
desc. node	12357 Feb 02 03:09	4°♓25'14	
	12357 Feb 22 23:14	0°♈	
	12357 Mar 19 10:24	0°♉	
	12357 Apr 12 22:39	0°♊	
	12357 May 07 14:30	0°♋	
asc. node	12357 May 25 22:08	22°♋00'28	
	12357 Jun 01 15:37	0°♌	
	12357 Jun 27 13:29	0°♍	
evening max el	12357 Jul 23 20:18	28°♍12'40	46°44'07
	12357 Jul 25 15:19	0°♎	
greatest brilliancy	12357 Sep 01 04:03	28°♎29'12	-4.8m
	12357 Sep 06 01:02	0°♏	
retrograde	12357 Sep 12 02:49	0°♏42'34	
desc. node	12357 Sep 14 23:28	0°♏32'42	
	12357 Sep 18 01:06	30°℞♎	
evening set	12357 Sep 27 04:51	26°♎16'34	
min. Earth dist.	12357 Oct 02 10:33	23°♎10'42	0.27752 AU
inferior conj	12357 Oct 03 05:57	22°♎40'45	-4°26'05
minimum elong	12357 Oct 02 20:56	22°♎54'40	4°23'23
morning rise	12357 Oct 08 13:38	19°♎30'14	
direct	12357 Oct 24 05:49	14°♎48'37	
greatest brilliancy	12357 Nov 02 18:12	16°♎27'19	-4.8m
	12357 Nov 25 08:59	0°♏	
morning max el	12357 Dec 12 02:35	14°♏50'28	45°48'15
	12357 Dec 27 03:57	0°♐	
asc. node	12358 Jan 06 00:37	10°♐31'16	
	12358 Jan 23 12:42	0°♑	
	12358 Feb 18 08:59	0°♒	
	12358 Mar 15 11:05	0°♓	
	12358 Apr 09 02:31	0°♈	
desc. node	12358 Apr 27 19:16	23°♈01'13	
	12358 May 03 10:38	0°♉	
	12358 May 27 13:19	0°♊	
morning set	12358 Jun 11 20:49	19°♊09'21	
	12358 Jun 20 12:24	0°♋	
	12358 Jul 14 09:59	0°♌	
superior conj	12358 Jul 21 20:59	9°♌21'42	-1°00'53
minimum elong	12358 Jul 22 08:39	9°♌58'19	1°01'11
max. Earth dist.	12358 Jul 22 19:22	10°♌31'57	1.71432 AU
	12358 Aug 07 08:00	0°♍	
asc. node	12358 Aug 18 10:08	13°♍52'56	
evening rise	12358 Aug 30 17:54	29°♍16'36	
	12358 Aug 31 07:49	0°♎	
	12358 Sep 24 10:28	0°♏	
	12358 Oct 18 17:31	0°♐	
	12358 Nov 12 07:26	0°♑	
	12358 Dec 07 07:33	0°♒	
desc. node	12358 Dec 08 03:47	1°♒00'03	
	12359 Jan 01 22:18	0°♓	
	12359 Jan 28 12:10	0°♈	
evening max el	12359 Feb 25 21:25	29°♈42'12	46°08'14
	12359 Feb 26 04:43	0°♉	
asc. node	12359 Mar 31 04:11	26°♉18'31	
greatest brilliancy	12359 Apr 06 16:37	29°♉11'51	-4.8m
	12359 Apr 09 06:53	0°♊	
retrograde	12359 Apr 16 10:55	0°♊59'06	
	12359 Apr 23 09:37	30°℞♉	
evening set	12359 May 02 22:15	25°♉43'52	
inferior conj	12359 May 07 06:43	23°♉05'38	7°52'55
minimum elong	12359 May 06 20:54	23°♉20'52	7°50'39
min. Earth dist.	12359 May 07 07:29	23°♉04'28	0.27570 AU
morning rise	12359 May 10 19:25	20°♉55'54	
direct	12359 May 28 03:35	15°♉06'12	
greatest brilliancy	12359 Jun 07 03:50	16°♉59'18	-4.9m
	12359 Jun 28 05:27	0°♊	
morning max el	12359 Jul 17 15:38	17°♊53'41	46°58'29
desc. node	12359 Jul 21 05:57	21°♊33'20	
	12359 Jul 29 06:42	0°♋	
	12359 Aug 25 02:39	0°♌	
	12359 Sep 19 16:33	0°♍	
	12359 Oct 14 17:58	0°♎	
	12359 Nov 08 12:45	0°♏	
asc. node	12359 Nov 11 02:06	3°♏06'30	
	12359 Dec 03 02:57	0°♐	
	12359 Dec 27 13:48	0°♑	
morning set	12360 Jan 15 21:44	23°♑47'40	
	12360 Jan 20 22:33	0°♒	
	12360 Feb 14 06:07	0°♓	
max. Earth dist.	12360 Feb 20 19:10	8°♓04'59	1.72949 AU
superior conj	12360 Feb 22 04:27	9°♓47'48	0°20'27
minimum elong	12360 Feb 22 09:08	10°♓02'14	0°20'37
desc. node	12360 Mar 01 16:59	20°♓19'52	
	12360 Mar 09 12:37	0°♈	
evening rise	12360 Mar 31 15:22	27°♈24'08	
	12360 Apr 02 17:37	0°♉	
	12360 Apr 26 21:03	0°♊	
	12360 May 20 23:56	0°♋	
	12360 Jun 14 04:31	0°♌	
asc. node	12360 Jun 22 09:44	10°♌08'41	
	12360 Jul 08 14:00	0°♍	
	12360 Aug 02 09:03	0°♎	
	12360 Aug 27 22:32	0°♏	
	12360 Sep 24 04:47	0°♐	
evening max el	12360 Oct 03 00:42	8°♐57'17	46°13'14
desc. node	12360 Oct 12 08:50	17°♐47'30	
	12360 Oct 27 08:38	0°♑	
greatest brilliancy	12360 Nov 11 04:57	8°♑09'06	-4.8m
retrograde	12360 Nov 21 14:53	10°♑07'54	
evening set	12360 Dec 09 23:45	3°♑47'02	
inferior conj	12360 Dec 13 02:46	1°♑50'37	-8°40'28
minimum elong	12360 Dec 13 05:55	1°♑45'40	8°39'26
min. Earth dist.	12360 Dec 13 00:43	1°♑53'49	0.28973 AU
	12360 Dec 16 02:04	30°℞♐	
morning rise	12360 Dec 16 12:09	29°♐44'43	
direct	12361 Jan 03 12:27	23°♐37'31	
greatest brilliancy	12361 Jan 13 21:47	25°♐35'37	-4.7m
	12361 Jan 23 00:50	0°♑	
asc. node	12361 Feb 02 11:01	7°♑11'39	
morning max el	12361 Feb 21 16:18	24°♑14'39	45°49'34
	12361 Feb 27 11:10	0°♒	
	12361 Mar 27 06:30	0°♓	
	12361 Apr 22 03:56	0°♈	
	12361 May 17 04:09	0°♉	
desc. node	12361 May 25 08:37	9°♉58'01	
	12361 Jun 10 16:13	0°♊	
	12361 Jul 04 21:05	0°♋	
	12361 Jul 28 22:22	0°♌	
	12361 Aug 21 22:41	0°♍	
morning set	12361 Aug 25 06:14	4°♍08'17	
	12361 Sep 14 23:37	0°♎	
asc. node	12361 Sep 15 00:10	0°♎01'43	

superior conj	12361 Oct 03 03:23	22°♎36'51	0°42'14
minimum elong	12361 Oct 02 18:37	22°♎09'34	0°42'06
max. Earth dist.	12361 Oct 05 10:21	25°♎27'53	1.72315 AU
	12361 Oct 09 01:51	0°♏	
	12361 Nov 02 05:58	0°♐	
evening rise	12361 Nov 09 13:32	9°♐03'15	
	12361 Nov 26 13:00	0°♑	
	12361 Dec 21 00:19	0°♒	
desc. node	12362 Jan 04 15:55	17°♒50'00	
	12362 Jan 14 16:56	0°♓	
	12362 Feb 08 15:22	0°♈	
	12362 Mar 05 21:00	0°♉	
	12362 Mar 31 15:17	0°♊	
asc. node	12362 Apr 27 13:45	29°♊55'26	
	12362 Apr 27 15:28	0°♋	
evening max el	12362 May 09 19:24	12°♋34'34	46°41'17
	12362 May 28 20:26	0°♌	
greatest brilliancy	12362 Jun 19 04:34	13°♌04'37	-4.9m
retrograde	12362 Jun 28 23:17	14°♌52'05	
evening set	12362 Jul 15 09:10	9°♌37'49	
inferior conj	12362 Jul 19 14:10	7°♌06'02	6°46'09
minimum elong	12362 Jul 20 01:24	6°♌48'49	6°42'53
min. Earth dist.	12362 Jul 19 23:20	6°♌51'59	0.27048 AU
morning rise	12362 Jul 24 17:40	4°♌02'39	
	12362 Aug 03 12:40	30°℞♋	
direct	12362 Aug 09 08:09	29°♋18'47	
	12362 Aug 15 07:01	0°♌	
desc. node	12362 Aug 17 15:52	0°♌37'56	
greatest brilliancy	12362 Aug 19 07:43	1°♌11'09	-4.9m
	12362 Sep 27 01:42	0°♍	
morning max el	12362 Sep 28 08:59	1°♍16'44	46°30'21
	12362 Oct 25 15:50	0°♎	
	12362 Nov 21 03:38	0°♏	
asc. node	12362 Dec 08 15:01	20°♏24'55	
	12362 Dec 16 17:23	0°♐	
	12363 Jan 10 18:12	0°♑	
	12363 Feb 04 10:43	0°♒	
	12363 Feb 28 21:55	0°♓	
	12363 Mar 25 05:15	0°♈	
morning set	12363 Mar 26 21:22	2°♈04'10	
desc. node	12363 Mar 30 07:06	6°♈17'19	
	12363 Apr 18 09:11	0°♉	
max. Earth dist.	12363 May 02 05:53	17°♉17'11	1.71866 AU
superior conj	12363 May 05 11:46	21°♉20'24	-1°13'56
minimum elong	12363 May 05 01:18	20°♉47'40	1°14'18
	12363 May 12 10:01	0°♊	
	12363 Jun 05 08:44	0°♋	
evening rise	12363 Jun 14 08:12	11°♋15'25	
	12363 Jun 29 07:06	0°♌	
asc. node	12363 Jul 20 22:24	27°♌03'04	
	12363 Jul 23 07:09	0°♍	
	12363 Aug 16 10:56	0°♎	
	12363 Sep 09 20:54	0°♏	
	12363 Oct 04 17:19	0°♐	
	12363 Oct 30 08:13	0°♑	
desc. node	12363 Nov 09 18:47	11°♑49'13	
	12363 Nov 26 10:46	0°♒	
evening max el	12363 Dec 14 04:14	17°♒58'08	45°52'01
	12363 Dec 27 11:39	0°♓	
greatest brilliancy	12364 Jan 22 05:41	16°♓13'52	-4.8m
retrograde	12364 Feb 01 00:08	17°♓57'56	
evening set	12364 Feb 16 06:27	13°♓28'20	
inferior conj	12364 Feb 22 05:44	9°♓52'50	-2°07'29
minimum elong	12364 Feb 22 10:25	9°♓45'29	2°05'40
min. Earth dist.	12364 Feb 22 17:06	9°♓34'59	0.28300 AU
morning rise	12364 Feb 28 13:54	6°♓04'04	
asc. node	12364 Mar 01 20:42	4°♓53'01	
direct	12364 Mar 14 11:49	1°♓42'27	
greatest brilliancy	12364 Mar 25 08:12	3°♓52'34	-4.8m
	12364 Apr 29 17:27	0°♈	
morning max el	12364 May 03 09:13	3°♈35'25	46°30'10
	12364 May 28 05:16	0°♉	
desc. node	12364 Jun 21 20:57	28°♉22'34	
	12364 Jun 23 05:59	0°♊	
	12364 Jul 18 06:43	0°♋	
	12364 Aug 11 20:16	0°♌	
	12364 Sep 05 05:02	0°♍	
	12364 Sep 29 12:07	0°♎	
asc. node	12364 Oct 12 14:20	16°♎11'01	
	12364 Oct 23 18:31	0°♏	
morning set	12364 Nov 04 16:11	14°♏43'30	
	12364 Nov 17 00:34	0°♐	
	12364 Dec 11 06:51	0°♑	
superior conj	12364 Dec 11 17:03	0°♑31'30	1°25'26
minimum elong	12364 Dec 11 19:25	0°♑38'47	1°26'20
max. Earth dist.	12364 Dec 12 23:08	2°♑04'23	1.73094 AU
	12365 Jan 04 14:19	0°♒	
evening rise	12365 Jan 17 20:28	16°♒19'10	
	12365 Jan 28 23:31	0°♓	
desc. node	12365 Feb 01 04:56	3°♓57'46	
	12365 Feb 22 10:10	0°♈	
	12365 Mar 18 21:40	0°♉	
	12365 Apr 12 10:24	0°♊	
	12365 May 07 03:00	0°♋	
asc. node	12365 May 25 00:09	21°♋26'43	
	12365 Jun 01 05:24	0°♌	
	12365 Jun 27 05:46	0°♍	
evening max el	12365 Jul 21 09:31	25°♍49'46	46°44'51
	12365 Jul 25 14:42	0°♎	
greatest brilliancy	12365 Aug 29 19:28	26°♎11'17	-4.8m
retrograde	12365 Sep 09 17:14	28°♎24'16	
desc. node	12365 Sep 14 01:18	28°♎01'26	
evening set	12365 Sep 24 17:24	24°♎00'50	
min. Earth dist.	12365 Sep 30 01:37	20°♎51'55	0.27700 AU
inferior conj	12365 Sep 30 20:12	20°♎23'16	-4°06'33
minimum elong	12365 Sep 30 11:39	20°♎36'26	4°03'56
morning rise	12365 Oct 06 06:27	17°♎09'19	
direct	12365 Oct 21 18:59	12°♎31'30	
greatest brilliancy	12365 Oct 31 08:51	14°♎11'17	-4.8m
	12365 Nov 25 17:50	0°♏	
morning max el	12365 Dec 09 16:42	12°♏34'27	45°49'08
	12365 Dec 26 21:49	0°♐	
asc. node	12366 Jan 05 02:34	9°♐52'33	
	12366 Jan 23 02:50	0°♑	
	12366 Feb 17 21:32	0°♒	
	12366 Mar 14 22:50	0°♓	
	12366 Apr 08 13:49	0°♈	
desc. node	12366 Apr 26 21:10	22°♈32'48	
	12366 May 02 21:41	0°♉	
	12366 May 27 00:15	0°♊	
morning set	12366 Jun 09 08:00	16°♊39'52	
	12366 Jun 19 23:16	0°♋	
	12366 Jul 13 20:50	0°♌	
superior conj	12366 Jul 19 08:52	6°♌54'25	-1°03'36
minimum elong	12366 Jul 19 20:35	7°♌31'11	1°03'57
max. Earth dist.	12366 Jul 20 02:27	7°♌49'35	1.71419 AU
	12366 Aug 06 18:50	0°♍	
asc. node	12366 Aug 17 11:54	13°♍24'38	
evening rise	12366 Aug 28 07:28	26°♍55'25	
	12366 Aug 30 18:38	0°♎	
	12366 Sep 23 21:22	0°♏	

	12366 Oct 18 04:37	0°♐	
	12366 Nov 11 18:56	0°♑	
	12366 Dec 06 19:46	0°♒	
desc. node	12366 Dec 07 05:45	0°♒29'34	
	12367 Jan 01 11:49	0°♓	
	12367 Jan 28 04:19	0°♈	
evening max el	12367 Feb 23 12:07	27°♈25'24	46°07'17
	12367 Feb 26 04:12	0°♉	
asc. node	12367 Mar 30 06:12	24°♉43'54	
greatest brilliancy	12367 Apr 04 05:01	26°♉49'27	-4.8m
retrograde	12367 Apr 14 01:04	28°♉37'54	
evening set	12367 Apr 30 07:45	23°♉28'13	
inferior conj	12367 May 04 20:28	20°♉43'49	7°40'21
minimum elong	12367 May 04 10:16	20°♉59'37	7°37'56
min. Earth dist.	12367 May 04 20:37	20°♉43'35	0.27587 AU
morning rise	12367 May 08 12:39	18°♉29'01	
direct	12367 May 25 17:57	12°♉44'03	
greatest brilliancy	12367 Jun 04 17:44	14°♉37'11	-4.9m
	12367 Jun 28 15:45	0°♊	
morning max el	12367 Jul 15 06:52	15°♊34'36	46°58'25
desc. node	12367 Jul 20 07:53	20°♊43'54	
	12367 Jul 29 01:33	0°♋	
	12367 Aug 24 17:38	0°♌	
	12367 Sep 19 05:45	0°♍	
	12367 Oct 14 06:08	0°♎	
	12367 Nov 08 00:16	0°♏	
asc. node	12367 Nov 10 04:08	2°♏37'47	
	12367 Dec 02 14:04	0°♐	
	12367 Dec 27 00:41	0°♑	
morning set	12368 Jan 13 14:55	21°♑39'30	
	12368 Jan 20 09:20	0°♒	
	12368 Feb 13 16:54	0°♓	
max. Earth dist.	12368 Feb 18 14:59	6°♓04'35	1.72974 AU
superior conj	12368 Feb 19 19:58	7°♓34'05	0°23'48
minimum elong	12368 Feb 20 01:19	7°♓50'37	0°23'58
desc. node	12368 Feb 29 18:47	19°♓51'59	
	12368 Mar 08 23:27	0°♈	
evening rise	12368 Mar 29 05:49	25°♈06'07	
	12368 Apr 02 04:35	0°♉	
	12368 Apr 26 08:12	0°♊	
	12368 May 20 11:20	0°♋	
	12368 Jun 13 16:16	0°♌	
asc. node	12368 Jun 21 11:39	9°♌37'50	
	12368 Jul 08 02:18	0°♍	
	12368 Aug 01 22:18	0°♎	
	12368 Aug 27 13:34	0°♏	
	12368 Sep 24 00:20	0°♐	
evening max el	12368 Sep 30 17:00	6°♐45'05	46°14'30
desc. node	12368 Oct 11 10:56	16°♐51'31	
	12368 Oct 28 06:32	0°♑	
greatest brilliancy	12368 Nov 08 19:36	5°♑56'31	-4.8m
retrograde	12368 Nov 19 07:15	7°♑56'24	
evening set	12368 Dec 07 16:11	1°♑34'52	
	12368 Dec 10 05:19	30°℞♐	
inferior conj	12368 Dec 10 18:39	29°♐39'06	-8°43'14
minimum elong	12368 Dec 10 21:02	29°♐35'22	8°42'16
min. Earth dist.	12368 Dec 10 15:01	29°♐44'48	0.28961 AU
morning rise	12368 Dec 14 01:59	27°♐36'18	
direct	12369 Jan 01 04:46	21°♐26'40	
greatest brilliancy	12369 Jan 11 11:29	23°♐22'34	-4.7m
	12369 Jan 24 04:13	0°♑	
asc. node	12369 Feb 01 12:56	6°♑07'09	
morning max el	12369 Feb 19 08:02	22°♑02'22	45°48'31
	12369 Feb 27 06:55	0°♒	
	12369 Mar 26 21:28	0°♓	
	12369 Apr 21 17:05	0°♈	
	12369 May 16 16:24	0°♉	
desc. node	12369 May 24 10:36	9°♉27'17	
	12369 Jun 10 03:57	0°♊	
	12369 Jul 04 08:30	0°♋	
	12369 Jul 28 09:33	0°♌	
	12369 Aug 21 09:44	0°♍	
morning set	12369 Aug 22 19:36	1°♍45'46	
asc. node	12369 Sep 14 02:01	29°♍33'20	
	12369 Sep 14 10:34	0°♎	
superior conj	12369 Sep 30 18:03	20°♎19'14	0°39'06
minimum elong	12369 Sep 30 09:45	19°♎53'24	0°38'56
max. Earth dist.	12369 Oct 03 03:14	23°♎17'09	1.72279 AU
	12369 Oct 08 12:45	0°♏	
	12369 Nov 01 16:51	0°♐	
evening rise	12369 Nov 07 05:49	6°♐51'29	
	12369 Nov 25 23:57	0°♑	
	12369 Dec 20 11:28	0°♒	
desc. node	12370 Jan 03 17:45	17°♒21'04	
	12370 Jan 14 04:28	0°♓	
	12370 Feb 08 03:33	0°♈	
	12370 Mar 05 10:16	0°♉	
	12370 Mar 31 06:29	0°♊	
asc. node	12370 Apr 26 15:48	29°♊09'13	
	12370 Apr 27 11:03	0°♋	
evening max el	12370 May 07 08:50	10°♋10'45	46°40'16
	12370 May 29 11:09	0°♌	
greatest brilliancy	12370 Jun 16 18:42	10°♌40'06	-4.9m
retrograde	12370 Jun 26 11:42	12°♌25'56	
evening set	12370 Jul 13 01:35	7°♌06'56	
inferior conj	12370 Jul 17 02:54	4°♌40'14	7°02'19
minimum elong	12370 Jul 17 14:02	4°♌23'09	6°59'11
min. Earth dist.	12370 Jul 17 12:37	4°♌25'18	0.27058 AU
morning rise	12370 Jul 22 02:29	1°♌41'53	
	12370 Jul 25 08:21	30°℞♋	
direct	12370 Aug 06 20:43	26°♋52'48	
desc. node	12370 Aug 16 17:47	28°♋42'32	
greatest brilliancy	12370 Aug 16 20:32	28°♋45'00	-4.9m
	12370 Aug 19 22:32	0°♌	
morning max el	12370 Sep 25 21:39	28°♌52'08	46°31'52
	12370 Sep 27 01:03	0°♍	
	12370 Oct 25 08:14	0°♎	
	12370 Nov 20 17:25	0°♏	
asc. node	12370 Dec 07 16:51	19°♏52'38	
	12370 Dec 16 05:50	0°♐	
	12371 Jan 10 05:52	0°♑	
	12371 Feb 03 21:57	0°♒	
	12371 Feb 28 08:55	0°♓	
morning set	12371 Mar 24 11:33	29°♓45'42	
	12371 Mar 24 16:10	0°♈	
desc. node	12371 Mar 29 09:02	5°♈49'33	
	12371 Apr 17 20:06	0°♉	
max. Earth dist.	12371 Apr 29 15:18	14°♉42'43	1.71909 AU
superior conj	12371 May 03 00:26	18°♉55'55	-1°11'51
minimum elong	12371 May 02 13:38	18°♉22'11	1°12'09
	12371 May 11 20:58	0°♊	
	12371 Jun 04 19:45	0°♋	
evening rise	12371 Jun 11 19:24	8°♋45'24	
	12371 Jun 28 18:14	0°♌	
asc. node	12371 Jul 20 00:10	26°♌33'23	
	12371 Jul 22 18:27	0°♍	
	12371 Aug 15 22:27	0°♎	
	12371 Sep 09 08:49	0°♏	
	12371 Oct 04 05:59	0°♐	
	12371 Oct 29 22:23	0°♑	
desc. node	12371 Nov 08 20:47	11°♑12'28	

	12371 Nov 26 04:29	0°♒	
evening max el	12371 Dec 11 18:14	15°♒42'18	45°52'13
	12371 Dec 27 19:21	0°♓	
greatest brilliancy	12372 Jan 19 21:17	14°♓01'10	-4.8m
retrograde	12372 Jan 29 14:47	15°♓44'54	
evening set	12372 Feb 13 23:36	11°♓12'11	
inferior conj	12372 Feb 19 21:11	7°♓39'19	-2°27'59
minimum elong	12372 Feb 20 02:34	7°♓30'52	2°25'57
min. Earth dist.	12372 Feb 20 09:19	7°♓20'18	0.28336 AU
morning rise	12372 Feb 26 04:59	3°♓50'54	
asc. node	12372 Feb 29 22:42	1°♓59'06	
	12372 Mar 07 00:15	30°℞♒	
direct	12372 Mar 12 02:57	29°♒28'20	
	12372 Mar 17 08:50	0°♓	
greatest brilliancy	12372 Mar 23 01:03	1°♓39'43	-4.8m
	12372 Apr 29 16:26	0°♈	
morning max el	12372 Apr 30 23:41	1°♈17'17	46°28'39
	12372 May 27 21:23	0°♉	
desc. node	12372 Jun 20 22:49	27°♉47'12	
	12372 Jun 22 19:45	0°♊	
	12372 Jul 17 19:20	0°♋	
	12372 Aug 11 08:13	0°♌	
	12372 Sep 04 16:32	0°♍	
	12372 Sep 28 23:16	0°♎	
asc. node	12372 Oct 11 16:18	15°♎43'05	
	12372 Oct 23 05:25	0°♏	
morning set	12372 Nov 02 07:54	12°♏30'08	
	12372 Nov 16 11:18	0°♐	
superior conj	12372 Dec 09 10:02	28°♐22'40	1°25'47
minimum elong	12372 Dec 09 11:40	28°♐27'42	1°26'41
max. Earth dist.	12372 Dec 10 15:46	29°♐54'31	1.73081 AU
	12372 Dec 10 17:33	0°♑	
	12373 Jan 04 01:04	0°♒	
evening rise	12373 Jan 15 12:45	14°♒08'30	
	12373 Jan 28 10:23	0°♓	
desc. node	12373 Jan 31 06:46	3°♓29'59	
	12373 Feb 21 21:14	0°♈	
	12373 Mar 18 09:03	0°♉	
	12373 Apr 11 22:17	0°♊	
	12373 May 06 15:40	0°♋	
asc. node	12373 May 24 02:04	20°♋52'13	
	12373 May 31 19:25	0°♌	
	12373 Jun 26 22:32	0°♍	
evening max el	12373 Jul 18 23:20	23°♍27'43	46°45'27
	12373 Jul 25 15:31	0°♎	
greatest brilliancy	12373 Aug 27 10:15	23°♎51'21	-4.8m
retrograde	12373 Sep 07 07:53	26°♎04'35	
desc. node	12373 Sep 13 03:25	25°♎23'16	
evening set	12373 Sep 22 05:54	21°♎43'20	
min. Earth dist.	12373 Sep 27 16:15	18°♎31'54	0.27648 AU
inferior conj	12373 Sep 28 10:11	18°♎04'19	-3°46'23
minimum elong	12373 Sep 28 02:11	18°♎16'38	3°43'53
morning rise	12373 Oct 03 22:59	14°♎47'16	
direct	12373 Oct 19 08:15	10°♎13'00	
greatest brilliancy	12373 Oct 28 22:59	11°♎53'46	-4.8m
	12373 Nov 26 00:20	0°♏	
morning max el	12373 Dec 07 07:28	10°♏19'47	45°50'08
	12373 Dec 26 15:17	0°♐	
asc. node	12374 Jan 04 04:29	9°♐14'10	
	12374 Jan 22 16:48	0°♑	
	12374 Feb 17 09:59	0°♒	
	12374 Mar 14 10:31	0°♓	
	12374 Apr 08 01:04	0°♈	
desc. node	12374 Apr 25 23:06	22°♈04'41	
	12374 May 02 08:41	0°♉	
	12374 May 26 11:05	0°♊	
morning set	12374 Jun 06 19:34	14°♊11'57	
	12374 Jun 19 10:03	0°♋	
	12374 Jul 13 07:36	0°♌	
superior conj	12374 Jul 16 20:49	4°♌27'32	-1°06'11
minimum elong	12374 Jul 17 08:30	5°♌04'10	1°06'36
max. Earth dist.	12374 Jul 17 12:42	5°♌17'24	1.71412 AU
	12374 Aug 06 05:36	0°♍	
asc. node	12374 Aug 16 13:49	12°♍56'57	
evening rise	12374 Aug 25 20:49	24°♍33'39	
	12374 Aug 30 05:25	0°♎	
	12374 Sep 23 08:14	0°♏	
	12374 Oct 17 15:42	0°♐	
	12374 Nov 11 06:23	0°♑	
desc. node	12374 Dec 06 07:37	29°♑59'02	
	12374 Dec 06 07:56	0°♒	
	12375 Jan 01 01:18	0°♓	
	12375 Jan 27 20:35	0°♈	
evening max el	12375 Feb 21 03:37	25°♈11'12	46°06'16
	12375 Feb 26 04:34	0°♉	
asc. node	12375 Mar 29 08:19	23°♉06'41	
greatest brilliancy	12375 Apr 01 17:43	24°♉28'20	-4.8m
retrograde	12375 Apr 11 15:12	26°♉17'30	
evening set	12375 Apr 27 17:32	21°♉13'33	
inferior conj	12375 May 02 10:17	18°♉23'04	7°27'06
minimum elong	12375 May 01 23:48	18°♉39'20	7°24'32
min. Earth dist.	12375 May 02 09:53	18°♉23'41	0.27600 AU
morning rise	12375 May 06 05:59	16°♉03'05	
direct	12375 May 23 08:37	10°♉23'13	
greatest brilliancy	12375 Jun 02 07:29	12°♉15'50	-4.9m
	12375 Jun 28 22:51	0°♊	
morning max el	12375 Jul 12 21:39	13°♊15'27	46°58'19
desc. node	12375 Jul 19 09:50	19°♊56'21	
	12375 Jul 28 19:35	0°♋	
	12375 Aug 24 08:06	0°♌	
	12375 Sep 18 18:35	0°♍	
	12375 Oct 13 18:02	0°♎	
	12375 Nov 07 11:33	0°♏	
asc. node	12375 Nov 09 05:56	2°♏09'00	
	12375 Dec 02 00:58	0°♐	
	12375 Dec 26 11:20	0°♑	
morning set	12376 Jan 11 07:59	19°♑31'52	
	12376 Jan 19 19:50	0°♒	
	12376 Feb 13 03:22	0°♓	
max. Earth dist.	12376 Feb 16 09:47	4°♓02'03	1.72996 AU
superior conj	12376 Feb 17 11:33	5°♓21'38	0°27'05
minimum elong	12376 Feb 17 17:33	5°♓40'09	0°27'16
desc. node	12376 Feb 28 20:42	19°♓25'24	
	12376 Mar 08 10:00	0°♈	
evening rise	12376 Mar 26 20:26	22°♈49'33	
	12376 Apr 01 15:16	0°♉	
	12376 Apr 25 19:05	0°♊	
	12376 May 19 22:27	0°♋	
	12376 Jun 13 03:42	0°♌	
asc. node	12376 Jun 20 13:30	9°♌07'52	
	12376 Jul 07 14:15	0°♍	
	12376 Aug 01 11:11	0°♎	
	12376 Aug 27 04:21	0°♏	
	12376 Sep 23 20:01	0°♐	
evening max el	12376 Sep 28 08:58	4°♐33'04	46°15'31
desc. node	12376 Oct 10 12:54	15°♐55'08	
	12376 Oct 29 12:17	0°♑	
greatest brilliancy	12376 Nov 06 10:55	3°♑45'31	-4.8m
retrograde	12376 Nov 16 23:07	5°♑45'39	
	12376 Dec 04 08:37	30°℞♐	
evening set	12376 Dec 05 08:17	29°♐24'15	

inferior conj	12376 Dec 08 10:34	27°♐28'37	-8°45'18
minimum elong	12376 Dec 08 12:09	27°♐26'08	8°44'22
min. Earth dist.	12376 Dec 08 05:42	27°♐36'15	0.28946 AU
morning rise	12376 Dec 11 16:07	25°♐28'22	
direct	12376 Dec 29 20:51	19°♐16'53	
greatest brilliancy	12377 Jan 09 01:34	21°♐10'48	-4.7m
	12377 Jan 24 23:34	0°♑	
asc. node	12377 Jan 31 14:56	5°♑05'30	
morning max el	12377 Feb 16 22:54	19°♑49'05	45°47'35
	12377 Feb 27 01:38	0°♒	
	12377 Mar 26 11:48	0°♓	
	12377 Apr 21 05:42	0°♈	
	12377 May 16 04:10	0°♉	
desc. node	12377 May 23 12:20	8°♉57'11	
	12377 Jun 09 15:16	0°♊	
	12377 Jul 03 19:30	0°♋	
	12377 Jul 27 20:19	0°♌	
morning set	12377 Aug 20 09:16	29°♌25'31	
	12377 Aug 20 20:19	0°♍	
asc. node	12377 Sep 13 03:56	29°♍06'41	
	12377 Sep 13 21:02	0°♎	
superior conj	12377 Sep 28 09:01	18°♎03'58	0°35'55
minimum elong	12377 Sep 28 01:13	17°♎39'42	0°35'44
max. Earth dist.	12377 Sep 30 19:53	21°♎07'13	1.72241 AU
	12377 Oct 07 23:09	0°♏	
	12377 Nov 01 03:16	0°♐	
evening rise	12377 Nov 04 22:15	4°♐41'34	
	12377 Nov 25 10:28	0°♑	
	12377 Dec 19 22:13	0°♒	
desc. node	12378 Jan 02 19:36	16°♒53'23	
	12378 Jan 13 15:38	0°♓	
	12378 Feb 07 15:23	0°♈	
	12378 Mar 04 23:11	0°♉	
	12378 Mar 30 21:24	0°♊	
asc. node	12378 Apr 25 17:43	28°♊23'24	
	12378 Apr 27 06:40	0°♋	
evening max el	12378 May 04 21:20	7°♋45'59	46°39'12
	12378 May 30 06:02	0°♌	
greatest brilliancy	12378 Jun 14 09:06	8°♌17'19	-4.9m
retrograde	12378 Jun 23 23:53	10°♌01'33	
evening set	12378 Jul 10 18:04	4°♌37'29	
inferior conj	12378 Jul 14 15:44	2°♌16'08	7°17'41
minimum elong	12378 Jul 15 02:41	1°♌59'19	7°14'42
min. Earth dist.	12378 Jul 15 02:16	1°♌59'57	0.27069 AU
	12378 Jul 18 09:41	30°℞♋	
morning rise	12378 Jul 19 11:13	29°♋23'11	
direct	12378 Aug 04 09:02	24°♋28'11	
greatest brilliancy	12378 Aug 14 10:02	26°♋21'05	-4.9m
desc. node	12378 Aug 15 19:51	26°♋53'18	
	12378 Aug 22 04:29	0°♌	
morning max el	12378 Sep 23 10:21	26°♌28'58	46°33'35
	12378 Sep 26 22:52	0°♍	
	12378 Oct 24 23:47	0°♎	
	12378 Nov 20 06:31	0°♏	
asc. node	12378 Dec 06 18:44	19°♏22'12	
	12378 Dec 15 17:41	0°♐	
	12379 Jan 09 17:02	0°♑	
	12379 Feb 03 08:44	0°♒	
	12379 Feb 27 19:30	0°♓	
morning set	12379 Mar 22 01:52	27°♓28'55	
	12379 Mar 24 02:40	0°♈	
desc. node	12379 Mar 28 10:54	5°♈22'48	
	12379 Apr 17 06:36	0°♉	
max. Earth dist.	12379 Apr 27 03:26	12°♉18'05	1.71953 AU
superior conj	12379 Apr 30 13:11	16°♉33'07	-1°09'38
minimum elong	12379 Apr 30 02:07	15°♉58'35	1°09'52
	12379 May 11 07:30	0°♊	
	12379 Jun 04 06:22	0°♋	
evening rise	12379 Jun 09 06:51	6°♋17'31	
	12379 Jun 28 04:58	0°♌	
asc. node	12379 Jul 19 02:08	26°♌05'34	
	12379 Jul 22 05:22	0°♍	
	12379 Aug 15 09:37	0°♎	
	12379 Sep 08 20:23	0°♏	
	12379 Oct 03 18:17	0°♐	
	12379 Oct 29 12:13	0°♑	
desc. node	12379 Nov 07 22:40	10°♑36'34	
	12379 Nov 25 22:05	0°♒	
evening max el	12379 Dec 09 08:25	13°♒28'28	45°52'26
	12379 Dec 28 05:09	0°♓	
greatest brilliancy	12380 Jan 17 12:16	11°♓49'16	-4.7m
retrograde	12380 Jan 27 05:59	13°♓33'27	
evening set	12380 Feb 11 16:56	8°♓57'11	
inferior conj	12380 Feb 17 12:42	5°♓27'05	-2°48'14
minimum elong	12380 Feb 17 18:45	5°♓17'37	2°46'00
min. Earth dist.	12380 Feb 18 01:19	5°♓07'21	0.28376 AU
morning rise	12380 Feb 23 20:00	1°♓39'31	
	12380 Feb 27 02:30	30°℞♒	
asc. node	12380 Feb 29 00:47	29°♒10'50	
direct	12380 Mar 09 18:27	27°♒15'25	
greatest brilliancy	12380 Mar 20 17:53	29°♒28'09	-4.8m
	12380 Mar 22 01:29	0°♓	
morning max el	12380 Apr 28 15:12	29°♓02'54	46°27'08
	12380 Apr 29 14:07	0°♈	
	12380 May 27 12:53	0°♉	
desc. node	12380 Jun 20 00:49	27°♉13'33	
	12380 Jun 22 09:01	0°♊	
	12380 Jul 17 07:32	0°♋	
	12380 Aug 10 19:47	0°♌	
	12380 Sep 04 03:42	0°♍	
	12380 Sep 28 10:07	0°♎	
asc. node	12380 Oct 10 18:05	15°♎15'28	
	12380 Oct 22 16:02	0°♏	
morning set	12380 Oct 30 23:43	10°♏17'55	
	12380 Nov 15 21:44	0°♐	
superior conj	12380 Dec 07 03:11	26°♐15'18	1°26'01
minimum elong	12380 Dec 07 04:04	26°♐18'01	1°26'54
max. Earth dist.	12380 Dec 08 10:36	27°♐52'24	1.73065 AU
	12380 Dec 10 03:55	0°♑	
	12381 Jan 03 11:28	0°♒	
evening rise	12381 Jan 13 05:19	11°♒59'42	
	12381 Jan 27 20:57	0°♓	
desc. node	12381 Jan 30 08:45	3°♓03'36	
	12381 Feb 21 08:03	0°♈	
	12381 Mar 17 20:14	0°♉	
	12381 Apr 11 09:59	0°♊	
	12381 May 06 04:12	0°♋	
asc. node	12381 May 23 03:57	20°♋18'07	
	12381 May 31 09:21	0°♌	
	12381 Jun 26 15:23	0°♍	
evening max el	12381 Jul 16 13:59	21°♍08'32	46°46'04
	12381 Jul 25 17:22	0°♎	
greatest brilliancy	12381 Aug 25 00:31	21°♎31'24	-4.8m
retrograde	12381 Sep 04 22:50	23°♎45'12	
desc. node	12381 Sep 12 05:26	22°♎40'16	
evening set	12381 Sep 19 18:35	19°♎25'55	
min. Earth dist.	12381 Sep 25 06:34	16°♎12'22	0.27598 AU
inferior conj	12381 Sep 26 00:04	15°♎45'30	-3°25'34
minimum elong	12381 Sep 25 16:40	15°♎56'52	3°23'14
morning rise	12381 Oct 01 15:21	12°♎25'34	
direct	12381 Oct 16 22:00	7°♎54'43	

greatest brilliancy	12381 Oct 26 12:34	9°♎35'53	-4.8m
	12381 Nov 26 04:35	0°♏	
morning max el	12381 Dec 04 22:48	8°♏06'56	45°51'12
	12381 Dec 26 08:12	0°♐	
asc. node	12382 Jan 03 06:30	8°♐36'55	
	12382 Jan 22 06:27	0°♑	
	12382 Feb 16 22:11	0°♒	
	12382 Mar 13 21:59	0°♓	
	12382 Apr 07 12:09	0°♈	
desc. node	12382 Apr 25 00:52	21°♈36'21	
	12382 May 01 19:34	0°♉	
	12382 May 25 21:53	0°♊	
morning set	12382 Jun 04 06:54	11°♊43'29	
	12382 Jun 18 20:48	0°♋	
	12382 Jul 12 18:19	0°♌	
superior conj	12382 Jul 14 08:26	1°♌59'40	-1°08'40
minimum elong	12382 Jul 14 19:56	2°♌35'48	1°09'07
max. Earth dist.	12382 Jul 15 00:13	2°♌49'14	1.71401 AU
	12382 Aug 05 16:18	0°♍	
asc. node	12382 Aug 15 15:41	12°♍29'14	
evening rise	12382 Aug 23 09:51	22°♍11'00	
	12382 Aug 29 16:10	0°♎	
	12382 Sep 22 19:06	0°♏	
	12382 Oct 17 02:48	0°♐	
	12382 Nov 10 17:55	0°♑	
desc. node	12382 Dec 05 09:34	29°♑28'39	
	12382 Dec 05 20:11	0°♒	
	12382 Dec 31 14:55	0°♓	
	12383 Jan 27 13:07	0°♈	
evening max el	12383 Feb 18 19:00	22°♈56'55	46°05'14
	12383 Feb 26 06:10	0°♉	
asc. node	12383 Mar 28 10:09	21°♉25'35	
greatest brilliancy	12383 Mar 30 06:46	22°♉07'53	-4.8m
retrograde	12383 Apr 09 04:50	23°♉57'05	
evening set	12383 Apr 25 03:32	18°♉58'51	
inferior conj	12383 Apr 30 00:10	16°♉02'26	7°13'06
minimum elong	12383 Apr 29 13:28	16°♉19'02	7°10'25
min. Earth dist.	12383 Apr 29 23:27	16°♉03'31	0.27616 AU
morning rise	12383 May 03 23:19	13°♉37'05	
direct	12383 May 20 23:13	8°♉02'28	
greatest brilliancy	12383 May 30 21:37	9°♉54'37	-4.9m
	12383 Jun 29 03:59	0°♊	
morning max el	12383 Jul 10 11:33	10°♊53'32	46°58'02
desc. node	12383 Jul 18 11:54	19°♊09'19	
	12383 Jul 28 13:23	0°♋	
	12383 Aug 23 22:34	0°♌	
	12383 Sep 18 07:28	0°♍	
	12383 Oct 13 05:59	0°♎	
	12383 Nov 06 22:56	0°♏	
asc. node	12383 Nov 08 07:47	1°♏40'06	
	12383 Dec 01 11:58	0°♐	
	12383 Dec 25 22:07	0°♑	
morning set	12384 Jan 09 01:07	17°♑23'51	
	12384 Jan 19 06:30	0°♒	
	12384 Feb 12 14:00	0°♓	
max. Earth dist.	12384 Feb 14 02:47	1°♓53'32	1.73013 AU
superior conj	12384 Feb 15 03:28	3°♓09'43	0°30'19
minimum elong	12384 Feb 15 10:03	3°♓30'04	0°30'30
desc. node	12384 Feb 27 22:33	18°♓58'08	
	12384 Mar 07 20:41	0°♈	
evening rise	12384 Mar 24 11:18	20°♈33'29	
	12384 Apr 01 02:05	0°♉	
	12384 Apr 25 06:06	0°♊	
	12384 May 19 09:45	0°♋	
	12384 Jun 12 15:23	0°♌	
asc. node	12384 Jun 19 15:28	8°♌37'29	
	12384 Jul 07 02:33	0°♍	
	12384 Aug 01 00:31	0°♎	
	12384 Aug 26 19:42	0°♏	
	12384 Sep 23 16:47	0°♐	
evening max el	12384 Sep 25 23:55	2°♐17'18	46°16'39
desc. node	12384 Oct 09 14:49	14°♐56'20	
	12384 Oct 31 09:12	0°♑	
greatest brilliancy	12384 Nov 04 02:30	1°♑33'32	-4.8m
retrograde	12384 Nov 14 14:22	3°♑33'42	
	12384 Nov 28 01:51	30°℞♐	
evening set	12384 Dec 02 23:56	27°♐12'55	
inferior conj	12384 Dec 06 02:23	25°♐16'56	-8°46'37
minimum elong	12384 Dec 06 03:09	25°♐15'43	8°45'42
min. Earth dist.	12384 Dec 05 20:36	25°♐26'01	0.28929 AU
morning rise	12384 Dec 09 06:28	23°♐18'44	
direct	12384 Dec 27 12:25	17°♐05'44	
greatest brilliancy	12385 Jan 06 16:09	18°♐58'21	-4.7m
	12385 Jan 25 14:25	0°♑	
asc. node	12385 Jan 30 16:59	4°♑04'22	
morning max el	12385 Feb 14 13:00	17°♑32'51	45°46'52
	12385 Feb 26 20:14	0°♒	
	12385 Mar 26 02:17	0°♓	
	12385 Apr 20 18:31	0°♈	
	12385 May 15 16:09	0°♉	
desc. node	12385 May 22 14:21	8°♉27'14	
	12385 Jun 09 02:48	0°♊	
	12385 Jul 03 06:45	0°♋	
	12385 Jul 27 07:23	0°♌	
morning set	12385 Aug 17 22:31	27°♌02'39	
	12385 Aug 20 07:16	0°♍	
asc. node	12385 Sep 12 05:43	28°♍38'21	
	12385 Sep 13 07:54	0°♎	
superior conj	12385 Sep 25 23:30	15°♎45'57	0°32'37
minimum elong	12385 Sep 25 16:16	15°♎23'28	0°32'27
max. Earth dist.	12385 Sep 28 09:37	18°♎46'55	1.72203 AU
	12385 Oct 07 09:58	0°♏	
	12385 Oct 31 14:05	0°♐	
evening rise	12385 Nov 02 14:18	2°♐29'15	
	12385 Nov 24 21:23	0°♑	
	12385 Dec 19 09:24	0°♒	
desc. node	12386 Jan 01 21:37	16°♒24'56	
	12386 Jan 13 03:15	0°♓	
	12386 Feb 07 03:42	0°♈	
	12386 Mar 04 12:37	0°♉	
	12386 Mar 30 12:54	0°♊	
asc. node	12386 Apr 24 19:43	27°♊36'19	
	12386 Apr 27 03:16	0°♋	
evening max el	12386 May 02 09:22	5°♋19'23	46°38'19
	12386 May 31 08:13	0°♌	
greatest brilliancy	12386 Jun 11 23:07	5°♌53'36	-4.9m
retrograde	12386 Jun 21 12:22	7°♌37'03	
evening set	12386 Jul 08 10:39	2°♌07'26	
	12386 Jul 11 23:12	30°℞♋	
inferior conj	12386 Jul 12 04:44	29°♋51'30	7°32'06
minimum elong	12386 Jul 12 15:25	29°♋35'05	7°29'15
min. Earth dist.	12386 Jul 12 15:53	29°♋34'22	0.27087 AU
morning rise	12386 Jul 16 20:04	27°♋04'23	
direct	12386 Aug 01 21:32	22°♋02'50	
greatest brilliancy	12386 Aug 11 23:48	23°♋56'47	-4.9m
desc. node	12386 Aug 14 21:51	25°♋07'34	
	12386 Aug 23 16:13	0°♌	
morning max el	12386 Sep 20 23:47	24°♌06'10	46°35'06
	12386 Sep 26 20:21	0°♍	
	12386 Oct 24 15:36	0°♎	
	12386 Nov 19 20:02	0°♏	

asc. node	12386 Dec 05 20:47	18°♏50'54	
	12386 Dec 15 05:58	0°♐	
	12387 Jan 09 04:37	0°♑	
	12387 Feb 02 19:56	0°♒	
	12387 Feb 27 06:31	0°♓	
morning set	12387 Mar 19 16:11	25°♓10'52	
	12387 Mar 23 13:37	0°♈	
desc. node	12387 Mar 27 12:40	4°♈54'25	
	12387 Apr 16 17:31	0°♉	
max. Earth dist.	12387 Apr 24 17:21	9°♉57'40	1.71991 AU
superior conj	12387 Apr 28 02:00	14°♉09'17	-1°07'17
minimum elong	12387 Apr 27 14:45	13°♉34'10	1°07'29
	12387 May 10 18:25	0°♊	
	12387 Jun 03 17:20	0°♋	
evening rise	12387 Jun 06 18:38	3°♋49'38	
	12387 Jun 27 16:02	0°♌	
asc. node	12387 Jul 18 04:02	25°♌36'32	
	12387 Jul 21 16:36	0°♍	
	12387 Aug 14 21:08	0°♎	
	12387 Sep 08 08:22	0°♏	
	12387 Oct 03 07:06	0°♐	
	12387 Oct 29 02:44	0°♑	
desc. node	12387 Nov 07 00:42	9°♑59'18	
	12387 Nov 25 16:44	0°♒	
evening max el	12387 Dec 06 23:15	11°♒14'44	45°52'47
	12387 Dec 28 19:22	0°♓	
greatest brilliancy	12388 Jan 15 02:40	9°♓35'15	-4.7m
retrograde	12388 Jan 24 21:31	11°♓20'18	
evening set	12388 Feb 09 10:19	6°♓40'24	
inferior conj	12388 Feb 15 04:05	3°♓13'06	-3°08'16
minimum elong	12388 Feb 15 10:46	3°♓02'38	3°05'50
min. Earth dist.	12388 Feb 15 16:48	2°♓53'13	0.28415 AU
	12388 Feb 20 11:04	30°♓℞	
morning rise	12388 Feb 21 10:43	29°♒26'46	
asc. node	12388 Feb 28 02:41	26°♒25'36	
direct	12388 Mar 07 10:20	25°♒00'55	
greatest brilliancy	12388 Mar 18 10:04	27°♒14'23	-4.8m
	12388 Mar 24 08:04	0°♓	
morning max el	12388 Apr 26 07:16	26°♓48'40	46°25'36
	12388 Apr 29 11:31	0°♈	
	12388 May 27 04:35	0°♉	
desc. node	12388 Jun 19 02:46	26°♉38'47	
	12388 Jun 21 22:35	0°♊	
	12388 Jul 16 20:00	0°♋	
	12388 Aug 10 07:37	0°♌	
	12388 Sep 03 15:06	0°♍	
	12388 Sep 27 21:14	0°♎	
asc. node	12388 Oct 09 19:55	14°♎47'10	
	12388 Oct 22 02:55	0°♏	
morning set	12388 Oct 28 15:35	8°♏04'50	
	12388 Nov 15 08:31	0°♐	
superior conj	12388 Dec 04 20:11	24°♐06'16	1°26'06
minimum elong	12388 Dec 04 20:18	24°♐06'37	1°26'59
max. Earth dist.	12388 Dec 06 06:09	25°♐51'15	1.73051 AU
	12388 Dec 09 14:40	0°♑	
	12389 Jan 02 22:17	0°♒	
evening rise	12389 Jan 10 21:38	9°♒48'57	
	12389 Jan 27 07:54	0°♓	
desc. node	12389 Jan 29 10:32	2°♓35'24	
	12389 Feb 20 19:15	0°♈	
	12389 Mar 17 07:48	0°♉	
	12389 Apr 10 22:07	0°♊	
	12389 May 05 17:11	0°♋	
asc. node	12389 May 22 06:00	19°♋43'13	
	12389 May 30 23:49	0°♌	
	12389 Jun 26 08:54	0°♍	
evening max el	12389 Jul 14 05:28	18°♍50'45	46°46'47
	12389 Jul 25 21:01	0°♎	
greatest brilliancy	12389 Aug 22 15:07	19°♎11'43	-4.9m
retrograde	12389 Sep 02 14:03	21°♎25'40	
desc. node	12389 Sep 11 07:19	19°♎52'28	
evening set	12389 Sep 17 07:46	17°♎08'23	
min. Earth dist.	12389 Sep 22 20:57	13°♎53'03	0.27546 AU
inferior conj	12389 Sep 23 14:09	13°♎26'41	-3°04'29
minimum elong	12389 Sep 23 07:23	13°♎37'03	3°02'21
morning rise	12389 Sep 29 07:43	10°♎03'58	
direct	12389 Oct 14 12:17	5°♎36'42	
greatest brilliancy	12389 Oct 24 01:55	7°♎17'32	-4.8m
	12389 Nov 26 07:17	0°♏	
morning max el	12389 Dec 02 13:52	5°♏53'00	45°52'03
	12389 Dec 26 01:00	0°♐	
asc. node	12390 Jan 02 08:26	7°♐59'08	
	12390 Jan 21 20:14	0°♑	
	12390 Feb 16 10:38	0°♒	
	12390 Mar 13 09:43	0°♓	
	12390 Apr 06 23:29	0°♈	
desc. node	12390 Apr 24 02:49	21°♈07'47	
	12390 May 01 06:41	0°♉	
	12390 May 25 08:54	0°♊	
morning set	12390 Jun 01 18:07	9°♊14'01	
	12390 Jun 18 07:46	0°♋	
superior conj	12390 Jul 11 20:04	29°♋31'09	-1°11'01
minimum elong	12390 Jul 12 07:19	0°♌06'26	1°11'31
	12390 Jul 12 05:15	0°♌	
max. Earth dist.	12390 Jul 12 10:02	0°♌14'58	1.71389 AU
	12390 Aug 05 03:13	0°♍	
asc. node	12390 Aug 14 17:29	12°♍00'40	
evening rise	12390 Aug 20 22:55	19°♍47'46	
	12390 Aug 29 03:05	0°♎	
	12390 Sep 22 06:07	0°♏	
	12390 Oct 16 14:01	0°♐	
	12390 Nov 10 05:33	0°♑	
desc. node	12390 Dec 04 11:34	28°♑58'00	
	12390 Dec 05 08:35	0°♒	
	12390 Dec 31 04:48	0°♓	
	12391 Jan 27 06:12	0°♈	
evening max el	12391 Feb 16 09:44	20°♈40'29	46°04'07
	12391 Feb 26 09:33	0°♉	
asc. node	12391 Mar 27 12:13	19°♉40'23	
greatest brilliancy	12391 Mar 27 20:36	19°♉47'51	-4.8m
retrograde	12391 Apr 06 18:07	21°♉36'27	
evening set	12391 Apr 22 13:45	16°♉43'46	
inferior conj	12391 Apr 27 14:09	13°♉41'44	6°58'17
minimum elong	12391 Apr 27 03:19	13°♉58'35	6°55'30
min. Earth dist.	12391 Apr 27 13:31	13°♉42'42	0.27631 AU
morning rise	12391 May 01 16:46	11°♉10'59	
direct	12391 May 18 13:24	5°♉41'36	
greatest brilliancy	12391 May 28 12:24	7°♉33'52	-4.9m
	12391 Jun 29 07:26	0°♊	
morning max el	12391 Jul 08 00:29	8°♊28'47	46°57'41
desc. node	12391 Jul 17 13:49	18°♊22'22	
	12391 Jul 28 06:53	0°♋	
	12391 Aug 23 12:57	0°♌	
	12391 Sep 17 20:20	0°♍	
	12391 Oct 12 17:56	0°♎	
	12391 Nov 06 10:17	0°♏	
asc. node	12391 Nov 07 09:48	1°♏11'42	
	12391 Nov 30 22:56	0°♐	
	12391 Dec 25 08:51	0°♑	
morning set	12392 Jan 06 18:31	15°♑16'45	
	12392 Jan 18 17:07	0°♒	

max. Earth dist.	12392 Feb 11 18:56	29°♒42'27	1.73036 AU	
	12392 Feb 12 00:37	0°♓		
superior conj	12392 Feb 12 19:34	0°♓58'29	0°33'29	
minimum elong	12392 Feb 13 02:43	1°♓20'31	0°33'40	
desc. node	12392 Feb 27 00:23	18°♓30'44		
	12392 Mar 07 07:24	0°♈		
evening rise	12392 Mar 22 02:08	18°♈17'17		
	12392 Mar 31 12:58	0°♉		
	12392 Apr 24 17:10	0°♊		
	12392 May 18 21:05	0°♋		
	12392 Jun 12 03:07	0°♌		
asc. node	12392 Jun 18 17:23	8°♌06'50		
	12392 Jul 06 14:55	0°♍		
	12392 Jul 31 13:57	0°♎		
	12392 Aug 26 11:17	0°♏		
evening max el	12392 Sep 23 14:11	29°♏59'52	46°17'53	
	12392 Sep 23 14:14	0°♐		
desc. node	12392 Oct 08 16:56	13°♐56'55		
greatest brilliancy	12392 Nov 01 18:15	29°♐22'15	-4.8m	
	12392 Nov 03 14:52	0°♑		
retrograde	12392 Nov 12 05:53	1°♑22'46		
	12392 Nov 20 13:45	30°℞♐		
evening set	12392 Nov 30 15:20	25°♐03'07		
inferior conj	12392 Dec 03 18:22	23°♐06'18	-8°47'03	
minimum elong	12392 Dec 03 18:19	23°♐06'23	8°46'11	
min. Earth dist.	12392 Dec 03 11:47	23°♐16'40	0.28908 AU	
morning rise	12392 Dec 06 21:23	21°♐09'42		
direct	12392 Dec 25 03:41	14°♐55'37		
greatest brilliancy	12393 Jan 04 07:16	16°♐47'36	-4.7m	
	12393 Jan 26 00:59	0°♑		
asc. node	12393 Jan 29 18:53	3°♑05'17		
morning max el	12393 Feb 12 03:08	15°♑17'28	45°46'09	
	12393 Feb 26 14:05	0°♒		
	12393 Mar 25 16:25	0°♓		
	12393 Apr 20 07:09	0°♈		
	12393 May 15 04:02	0°♉		
desc. node	12393 May 21 16:18	7°♉57'20		
	12393 Jun 08 14:13	0°♊		
	12393 Jul 02 17:53	0°♋		
	12393 Jul 26 18:19	0°♌		
morning set	12393 Aug 15 11:30	24°♌39'24		
	12393 Aug 19 18:04	0°♍		
asc. node	12393 Sep 11 07:35	28°♍10'43		
	12393 Sep 12 18:37	0°♎		
superior conj	12393 Sep 23 13:53	13°♎28'08	0°29'16	
minimum elong	12393 Sep 23 07:18	13°♎07'35	0°29'05	
max. Earth dist.	12393 Sep 25 21:35	16°♎21'32	1.72166 AU	
	12393 Oct 06 20:37	0°♏		
evening rise	12393 Oct 31 06:29	0°♐17'51		
	12393 Oct 31 00:43	0°♐		
	12393 Nov 24 08:07	0°♑		
	12393 Dec 18 20:20	0°♒		
desc. node	12393 Dec 31 23:27	15°♒56'47		
	12394 Jan 12 14:36	0°♓		
	12394 Feb 06 15:45	0°♈		
	12394 Mar 04 01:52	0°♉		
	12394 Mar 30 04:25	0°♊		
asc. node	12394 Apr 23 21:45	26°♊48'56		
	12394 Apr 27 00:27	0°♋		
evening max el	12394 Apr 29 21:45	2°♋54'10	46°37'15	
	12394 Jun 01 21:21	0°♌		
greatest brilliancy	12394 Jun 09 12:21	3°♌28'57	-4.9m	
retrograde	12394 Jun 19 01:14	5°♌12'25		
	12394 Jul 05 11:09	30°℞♋		
evening set	12394 Jul 06 02:59	29°♋37'03		
inferior conj	12394 Jul 09 17:30	27°♋26'31	7°45'34	
minimum elong	12394 Jul 10 03:52	27°♋10'38	7°42'55	
min. Earth dist.	12394 Jul 10 04:54	27°♋09'02	0.27107 AU	
morning rise	12394 Jul 14 04:36	24°♋45'40		
direct	12394 Jul 30 10:09	19°♋37'12		
greatest brilliancy	12394 Aug 09 12:52	21°♋31'53	-4.9m	
desc. node	12394 Aug 13 23:47	23°♋25'52		
	12394 Aug 24 17:29	0°♌		
morning max el	12394 Sep 18 13:53	21°♌45'37	46°36'41	
	12394 Sep 26 16:51	0°♍		
	12394 Oct 24 06:54	0°♎		
	12394 Nov 19 09:07	0°♏		
asc. node	12394 Dec 04 22:35	18°♏19'50		
	12394 Dec 14 17:53	0°♐		
	12395 Jan 08 15:51	0°♑		
	12395 Feb 02 06:46	0°♒		
	12395 Feb 26 17:09	0°♓		
morning set	12395 Mar 17 07:05	22°♓55'52		
	12395 Mar 23 00:10	0°♈		
desc. node	12395 Mar 26 14:38	4°♈27'48		
	12395 Apr 16 04:04	0°♉		
max. Earth dist.	12395 Apr 22 09:11	7°♉44'26	1.72035 AU	
superior conj	12395 Apr 25 15:01	11°♉47'06	-1°04'49	
minimum elong	12395 Apr 25 03:41	11°♉11'46	1°04'59	
	12395 May 10 05:02	0°♊		
	12395 Jun 03 04:03	0°♋		
evening rise	12395 Jun 04 06:20	1°♋22'17		
	12395 Jun 27 02:54	0°♌		
asc. node	12395 Jul 17 05:48	25°♌07'45		
	12395 Jul 21 03:39	0°♍		
	12395 Aug 14 08:27	0°♎		
	12395 Sep 07 20:07	0°♏		
	12395 Oct 02 19:43	0°♐		
	12395 Oct 28 17:06	0°♑		
desc. node	12395 Nov 06 02:41	9°♑22'31		
	12395 Nov 25 11:30	0°♒		
evening max el	12395 Dec 04 15:05	9°♒04'31	45°53'14	
	12395 Dec 29 13:39	0°♓		
greatest brilliancy	12396 Jan 12 17:15	7°♓23'10	-4.7m	
retrograde	12396 Jan 22 13:22	9°♓08'54		
evening set	12396 Feb 07 04:04	4°♓25'36		
inferior conj	12396 Feb 12 19:39	1°♓01'03	-3°27'48	
minimum elong	12396 Feb 13 02:56	0°♓49'40	3°25'13	
min. Earth dist.	12396 Feb 13 08:09	0°♓41'32	0.28449 AU	
	12396 Feb 14 10:48	30°℞♒		
morning rise	12396 Feb 19 01:25	27°♒16'12		
asc. node	12396 Feb 27 04:42	23°♒47'17		
direct	12396 Mar 05 02:44	22°♒48'44		
greatest brilliancy	12396 Mar 16 01:37	25°♒01'53	-4.8m	
	12396 Mar 25 18:12	0°♓		
morning max el	12396 Apr 23 23:23	24°♓36'24	46°23'57	
	12396 Apr 29 07:32	0°♈		
	12396 May 26 19:31	0°♉		
desc. node	12396 Jun 18 04:38	26°♉05'13		
	12396 Jun 21 11:36	0°♊		
	12396 Jul 16 08:05	0°♋		
	12396 Aug 09 19:09	0°♌		
	12396 Sep 03 02:14	0°♍		
	12396 Sep 27 08:03	0°♎		
asc. node	12396 Oct 08 21:53	14°♎20'05		
	12396 Oct 21 13:30	0°♏		
morning set	12396 Oct 26 07:05	5°♏51'34		
	12396 Nov 14 18:58	0°♐		
superior conj	12396 Dec 02 12:58	21°♐57'33	1°26'04	
minimum elong	12396 Dec 02 12:20	21°♐55'33	1°26'57	

max. Earth dist.	12396 Dec 04 02:18	23°♐52'56	1.73033 AU	
	12396 Dec 09 01:05	0°♑		
	12397 Jan 02 08:45	0°♒		
evening rise	12397 Jan 08 13:56	7°♒39'07		
	12397 Jan 26 18:30	0°♓		
desc. node	12397 Jan 28 12:24	2°♓08'30		
	12397 Feb 20 06:04	0°♈		
	12397 Mar 16 18:58	0°♉		
	12397 Apr 10 09:50	0°♊		
	12397 May 05 05:47	0°♋		
asc. node	12397 May 21 07:54	19°♋09'05		
	12397 May 30 13:58	0°♌		
	12397 Jun 26 02:27	0°♍		
evening max el	12397 Jul 11 20:44	16°♍33'02	46°47'01	
	12397 Jul 26 02:19	0°♎		
greatest brilliancy	12397 Aug 20 05:58	16°♎52'02	-4.9m	
retrograde	12397 Aug 31 04:27	19°♎05'04		
desc. node	12397 Sep 10 09:27	16°♎58'11		
evening set	12397 Sep 14 20:44	14°♎49'53		
min. Earth dist.	12397 Sep 20 11:15	11°♎32'24	0.27496 AU	
inferior conj	12397 Sep 21 03:46	11°♎07'03	-2°42'46	
minimum elong	12397 Sep 20 21:43	11°♎16'19	2°40'50	
morning rise	12397 Sep 26 23:30	7°♎41'30		
direct	12397 Oct 12 02:11	3°♎17'56		
greatest brilliancy	12397 Oct 21 15:01	4°♎58'22	-4.8m	
	12397 Nov 26 08:24	0°♏		
morning max el	12397 Nov 30 03:37	3°♏36'14	45°53'05	
	12397 Dec 25 17:13	0°♐		
asc. node	12398 Jan 01 10:22	7°♐22'28		
	12398 Jan 21 09:35	0°♑		
	12398 Feb 15 22:39	0°♒		
	12398 Mar 12 21:03	0°♓		
	12398 Apr 06 10:25	0°♈		
desc. node	12398 Apr 23 04:42	20°♈40'17		
	12398 Apr 30 17:24	0°♉		
	12398 May 24 19:30	0°♊		
morning set	12398 May 30 05:48	6°♊47'19		
	12398 Jun 17 18:19	0°♋		
superior conj	12398 Jul 09 08:03	27°♋05'04	-1°13'12	
minimum elong	12398 Jul 09 18:57	27°♋39'15	1°13'45	
max. Earth dist.	12398 Jul 09 18:21	27°♋37'23	1.71383 AU	
	12398 Jul 11 15:47	0°♌		
	12398 Aug 04 13:46	0°♍		
asc. node	12398 Aug 13 19:24	11°♍33'33		
evening rise	12398 Aug 18 11:49	17°♍24'59		
	12398 Aug 28 13:43	0°♎		
	12398 Sep 21 16:53	0°♏		
	12398 Oct 16 01:02	0°♐		
	12398 Nov 09 16:59	0°♑		
desc. node	12398 Dec 03 13:24	28°♑27'28		
	12398 Dec 04 20:49	0°♒		
	12398 Dec 30 18:35	0°♓		
	12399 Jan 26 23:23	0°♈		
evening max el	12399 Feb 13 23:33	18°♈22'41	46°03'07	
	12399 Feb 26 14:23	0°♉		
greatest brilliancy	12399 Mar 25 10:51	17°♉29'15	-4.8m	
asc. node	12399 Mar 26 14:18	17°♉52'03		
retrograde	12399 Apr 04 07:18	19°♉17'06		
evening set	12399 Apr 20 00:10	14°♉29'30		
inferior conj	12399 Apr 25 04:11	11°♉22'20	6°42'52	
minimum elong	12399 Apr 24 17:17	11°♉39'20	6°39'59	
min. Earth dist.	12399 Apr 25 03:57	11°♉22'42	0.27643 AU	
morning rise	12399 Apr 29 10:12	8°♉46'21		
direct	12399 May 16 03:05	3°♉21'50		
greatest brilliancy	12399 May 26 03:42	5°♉15'00	-4.9m	
	12399 Jun 29 08:50	0°♊		
morning max el	12399 Jul 05 13:04	6°♊04'23	46°57'29	
desc. node	12399 Jul 16 15:47	17°♊37'32		
	12399 Jul 27 23:33	0°♋		
	12399 Aug 23 02:47	0°♌		
	12399 Sep 17 08:47	0°♍		
	12399 Oct 12 05:35	0°♎		
	12399 Nov 05 21:26	0°♏		
asc. node	12399 Nov 06 11:35	0°♏43'10		
	12399 Nov 30 09:44	0°♐		
	12399 Dec 24 19:25	0°♑		
morning set	12400 Jan 04 11:25	13°♑08'32		
	12400 Jan 18 03:35	0°♒		
max. Earth dist.	12400 Feb 09 11:56	27°♒34'32	1.73057 AU	
superior conj	12400 Feb 10 11:21	28°♒46'48	0°36'37	
minimum elong	12400 Feb 10 19:01	29°♒10'26	0°36'49	
	12400 Feb 11 11:05	0°♓		
desc. node	12400 Feb 26 02:16	18°♓04'07		
	12400 Mar 06 17:57	0°♈		
evening rise	12400 Mar 19 16:53	16°♈01'29		
	12400 Mar 30 23:40	0°♉		
	12400 Apr 24 04:04	0°♊		
	12400 May 18 08:14	0°♋		
	12400 Jun 11 14:40	0°♌		
asc. node	12400 Jun 17 19:13	7°♌36'39		
	12400 Jul 06 03:04	0°♍		
	12400 Jul 31 03:12	0°♎		
	12400 Aug 26 02:48	0°♏		
evening max el	12400 Sep 21 03:55	27°♏41'45	46°18'58	
	12400 Sep 23 12:16	0°♐		
desc. node	12400 Oct 07 18:53	12°♐56'05		
greatest brilliancy	12400 Oct 30 09:20	27°♐10'04	-4.8m	
retrograde	12400 Nov 09 21:30	29°♐11'37		
evening set	12400 Nov 28 06:04	22°♐53'24		
inferior conj	12400 Dec 01 10:09	20°♐55'13	-8°46'40	
minimum elong	12400 Dec 01 09:15	20°♐56'37	8°45'47	
min. Earth dist.	12400 Dec 01 02:41	21°♐06'56	0.28891 AU	
morning rise	12400 Dec 04 12:31	18°♐59'43		
direct	12400 Dec 22 18:40	12°♐44'48		
greatest brilliancy	12401 Jan 01 22:31	14°♐36'42	-4.7m	
	12401 Jan 26 08:45	0°♑		
asc. node	12401 Jan 28 20:55	2°♑07'41		
morning max el	12401 Feb 09 17:49	13°♑03'18	45°45'33	
	12401 Feb 26 07:32	0°♒		
	12401 Mar 25 06:23	0°♓		
	12401 Apr 19 19:39	0°♈		
	12401 May 14 15:47	0°♉		
desc. node	12401 May 20 18:03	7°♉27'08		
	12401 Jun 08 01:32	0°♊		
	12401 Jul 02 04:55	0°♋		
	12401 Jul 26 05:09	0°♌		
morning set	12401 Aug 13 00:46	22°♌17'15		
	12401 Aug 19 04:46	0°♍		
asc. node	12401 Sep 10 09:29	27°♍43'37		
	12401 Sep 12 05:12	0°♎		
superior conj	12401 Sep 21 04:32	11°♎11'21	0°25'54	
minimum elong	12401 Sep 20 22:36	10°♎52'51	0°25'41	
max. Earth dist.	12401 Sep 23 10:35	13°♎59'44	1.72131 AU	
	12401 Oct 06 07:10	0°♏		
evening rise	12401 Oct 28 22:54	28°♏07'23		
	12401 Oct 30 11:17	0°♐		
	12401 Nov 23 18:49	0°♑		
	12401 Dec 18 07:20	0°♒		
desc. node	12401 Dec 31 01:19	15°♒28'30		
	12402 Jan 12 02:04	0°♓		
	12402 Feb 06 03:58	0°♈		

	12402 Mar 03 15:20	0°♉	
	12402 Mar 29 20:17	0°♊	
asc. node	12402 Apr 22 23:40	26°♊00'14	
	12402 Apr 26 22:32	0°♋	
evening max el	12402 Apr 27 10:54	0°♋30'48	46°36'19
	12402 Jun 04 07:32	0°♌	
greatest brilliancy	12402 Jun 07 01:02	1°♌03'37	-4.9m
retrograde	12402 Jun 16 14:33	2°♌47'33	
	12402 Jun 28 08:31	30°℞♋	
evening set	12402 Jul 03 19:17	27°♋06'26	
inferior conj	12402 Jul 07 06:14	25°♋01'11	7°58'16
minimum elong	12402 Jul 07 16:10	24°♋45'58	7°55'48
min. Earth dist.	12402 Jul 07 17:28	24°♋43'58	0.27125 AU
morning rise	12402 Jul 11 12:57	22°♋26'51	
direct	12402 Jul 27 23:16	17°♋11'21	
greatest brilliancy	12402 Aug 07 01:15	19°♋05'59	-4.9m
desc. node	12402 Aug 13 01:52	21°♋47'58	
	12402 Aug 25 12:09	0°♌	
morning max el	12402 Sep 16 04:40	19°♌26'38	46°38'20
	12402 Sep 26 12:44	0°♍	
	12402 Oct 23 21:58	0°♎	
	12402 Nov 18 22:08	0°♏	
asc. node	12402 Dec 04 00:31	17°♏49'09	
	12402 Dec 14 05:48	0°♐	
	12403 Jan 08 03:09	0°♑	
	12403 Feb 01 17:46	0°♒	
	12403 Feb 26 03:59	0°♓	
morning set	12403 Mar 14 21:47	20°♓39'39	
	12403 Mar 22 10:56	0°♈	
desc. node	12403 Mar 25 16:27	4°♈00'07	
	12403 Apr 15 14:49	0°♉	
max. Earth dist.	12403 Apr 19 23:46	5°♉26'44	1.72074 AU
superior conj	12403 Apr 23 03:45	9°♉23'32	-1°02'14
minimum elong	12403 Apr 22 16:27	8°♉48'16	1°02'20
	12403 May 09 15:50	0°♊	
evening rise	12403 Jun 01 17:53	28°♊54'00	
	12403 Jun 02 14:58	0°♋	
	12403 Jun 26 13:57	0°♌	
asc. node	12403 Jul 16 07:47	24°♌39'02	
	12403 Jul 20 14:54	0°♍	
	12403 Aug 13 19:58	0°♎	
	12403 Sep 07 08:06	0°♏	
	12403 Oct 02 08:34	0°♐	
	12403 Oct 28 07:47	0°♑	
desc. node	12403 Nov 05 04:35	8°♑44'48	
	12403 Nov 25 06:59	0°♒	
evening max el	12403 Dec 02 07:05	6°♒54'18	45°53'33
	12403 Dec 30 15:05	0°♓	
greatest brilliancy	12404 Jan 10 08:07	5°♓10'51	-4.7m
retrograde	12404 Jan 20 04:51	6°♓56'34	
evening set	12404 Feb 04 21:54	2°♓09'56	
	12404 Feb 08 13:07	30°℞♒	
inferior conj	12404 Feb 10 11:12	28°♒48'09	-3°46'58
minimum elong	12404 Feb 10 19:01	28°♒35'54	3°44'15
min. Earth dist.	12404 Feb 10 23:30	28°♒28'53	0.28487 AU
morning rise	12404 Feb 16 15:50	25°♒04'46	
asc. node	12404 Feb 26 06:46	21°♒12'43	
direct	12404 Mar 02 19:09	20°♒35'41	
greatest brilliancy	12404 Mar 13 16:56	22°♒47'53	-4.8m
	12404 Mar 26 18:58	0°♓	
morning max el	12404 Apr 21 14:58	22°♓21'32	46°22'14
	12404 Apr 29 03:24	0°♈	
	12404 May 26 10:40	0°♉	
desc. node	12404 Jun 17 06:38	25°♉31'07	
	12404 Jun 21 00:53	0°♊	
	12404 Jul 15 20:25	0°♋	
	12404 Aug 09 06:55	0°♌	
	12404 Sep 02 13:37	0°♍	
	12404 Sep 26 19:08	0°♎	
asc. node	12404 Oct 07 23:38	13°♎51'29	
	12404 Oct 21 00:23	0°♏	
morning set	12404 Oct 23 22:45	3°♏37'54	
	12404 Nov 14 05:42	0°♐	
superior conj	12404 Nov 30 06:02	19°♐48'51	1°25'55
minimum elong	12404 Nov 30 04:38	19°♐44'32	1°26'47
max. Earth dist.	12404 Dec 01 22:20	21°♐53'26	1.73009 AU
	12404 Dec 08 11:46	0°♑	
	12405 Jan 01 19:29	0°♒	
evening rise	12405 Jan 06 06:28	5°♒29'13	
	12405 Jan 26 05:23	0°♓	
desc. node	12405 Jan 27 14:22	1°♓41'07	
	12405 Feb 19 17:14	0°♈	
	12405 Mar 16 06:34	0°♉	
	12405 Apr 09 22:04	0°♊	
	12405 May 04 18:57	0°♋	
asc. node	12405 May 20 09:49	18°♋33'18	
	12405 May 30 04:47	0°♌	
	12405 Jun 25 20:54	0°♍	
evening max el	12405 Jul 09 11:12	14°♍11'59	46°47'22
	12405 Jul 26 10:25	0°♎	
greatest brilliancy	12405 Aug 17 21:28	14°♎31'57	-4.9m
retrograde	12405 Aug 28 18:25	16°♎43'19	
desc. node	12405 Sep 09 11:25	13°♎58'10	
evening set	12405 Sep 12 09:57	12°♎29'59	
min. Earth dist.	12405 Sep 18 01:56	9°♎10'13	0.27445 AU
inferior conj	12405 Sep 18 17:26	8°♎46'24	-2°20'42
minimum elong	12405 Sep 18 12:09	8°♎54'31	2°19'01
morning rise	12405 Sep 24 15:07	5°♎18'02	
direct	12405 Oct 09 15:35	0°♎58'05	
greatest brilliancy	12405 Oct 19 04:36	2°♎38'26	-4.8m
	12405 Nov 26 08:41	0°♏	
morning max el	12405 Nov 27 16:46	1°♏16'48	45°54'16
	12405 Dec 25 09:29	0°♐	
asc. node	12405 Dec 31 12:22	6°♐45'19	
	12406 Jan 20 23:08	0°♑	
	12406 Feb 15 10:56	0°♒	
	12406 Mar 12 08:41	0°♓	
	12406 Apr 05 21:43	0°♈	
desc. node	12406 Apr 22 06:29	20°♈11'08	
	12406 Apr 30 04:32	0°♉	
	12406 May 24 06:35	0°♊	
morning set	12406 May 27 17:02	4°♊17'47	
	12406 Jun 17 05:22	0°♋	
superior conj	12406 Jul 06 19:39	24°♋36'14	-1°15'16
minimum elong	12406 Jul 07 06:06	25°♋09'02	1°15'51
max. Earth dist.	12406 Jul 06 23:00	24°♋46'46	1.71376 AU
	12406 Jul 11 02:48	0°♌	
	12406 Aug 04 00:46	0°♍	
asc. node	12406 Aug 12 21:16	11°♍04'54	
evening rise	12406 Aug 16 00:18	14°♍59'31	
	12406 Aug 28 00:46	0°♎	
	12406 Sep 21 04:04	0°♏	
	12406 Oct 15 12:27	0°♐	
	12406 Nov 09 04:51	0°♑	
desc. node	12406 Dec 02 15:23	27°♑56'08	
	12406 Dec 04 09:30	0°♒	
	12406 Dec 30 08:51	0°♓	
	12407 Jan 26 17:16	0°♈	
evening max el	12407 Feb 11 12:57	16°♈03'18	46°02'13
	12407 Feb 26 21:43	0°♉	
greatest brilliancy	12407 Mar 23 00:50	15°♉09'45	-4.8m

asc. node	12407 Mar 25 16:08	15°♉58'36	
retrograde	12407 Apr 01 20:43	16°♉57'29	
evening set	12407 Apr 17 10:51	12°♉14'09	
inferior conj	12407 Apr 22 18:21	9°♉02'20	6°26'47
minimum elong	12407 Apr 22 07:27	9°♉19'18	6°23'48
min. Earth dist.	12407 Apr 22 18:30	9°♉02'06	0.27664 AU
morning rise	12407 Apr 27 03:48	6°♉21'15	
direct	12407 May 13 16:49	1°♉01'08	
greatest brilliancy	12407 May 23 19:28	2°♉55'45	-4.9m
	12407 Jun 29 09:33	0°♊	
morning max el	12407 Jul 03 02:36	3°♊40'52	46°57'06
desc. node	12407 Jul 15 17:49	16°♊51'51	
	12407 Jul 27 16:28	0°♋	
	12407 Aug 22 17:00	0°♌	
	12407 Sep 16 21:38	0°♍	
	12407 Oct 11 17:37	0°♎	
	12407 Nov 05 08:55	0°♏	
asc. node	12407 Nov 05 13:27	0°♏13'50	
	12407 Nov 29 20:52	0°♐	
	12407 Dec 24 06:19	0°♑	
morning set	12408 Jan 02 04:31	10°♑59'51	
	12408 Jan 17 14:22	0°♒	
max. Earth dist.	12408 Feb 07 06:57	25°♒31'50	1.73074 AU
superior conj	12408 Feb 08 03:33	26°♒35'25	0°39'39
minimum elong	12408 Feb 08 11:41	27°♒00'30	0°39'52
	12408 Feb 10 21:51	0°♓	
desc. node	12408 Feb 25 04:07	17°♓36'25	
	12408 Mar 06 04:48	0°♈	
evening rise	12408 Mar 17 08:10	13°♈46'36	
	12408 Mar 30 10:39	0°♉	
	12408 Apr 23 15:16	0°♊	
	12408 May 17 19:45	0°♋	
	12408 Jun 11 02:37	0°♌	
asc. node	12408 Jun 16 21:14	7°♌05'42	
	12408 Jul 05 15:43	0°♍	
	12408 Jul 30 17:03	0°♎	
	12408 Aug 25 19:05	0°♏	
evening max el	12408 Sep 18 18:20	25°♏23'59	46°20'19
	12408 Sep 23 11:48	0°♐	
desc. node	12408 Oct 06 20:48	11°♐52'24	
greatest brilliancy	12408 Oct 27 23:53	24°♐56'05	-4.8m
retrograde	12408 Nov 07 13:36	26°♐59'25	
evening set	12408 Nov 25 20:28	20°♐42'58	
min. Earth dist.	12408 Nov 28 17:16	18°♐56'32	0.28868 AU
inferior conj	12408 Nov 29 01:54	18°♐43'00	-8°45'37
minimum elong	12408 Nov 29 00:11	18°♐45'41	8°44'42
morning rise	12408 Dec 02 03:59	16°♐48'11	
direct	12408 Dec 20 09:52	10°♐32'56	
greatest brilliancy	12408 Dec 30 13:18	12°♐24'33	-4.7m
	12409 Jan 26 14:31	0°♑	
asc. node	12409 Jan 27 22:56	1°♑10'34	
morning max el	12409 Feb 07 09:29	10°♑51'00	45°45'04
	12409 Feb 26 00:50	0°♒	
	12409 Mar 24 20:23	0°♓	
	12409 Apr 19 08:14	0°♈	
	12409 May 14 03:39	0°♉	
desc. node	12409 May 19 20:03	6°♉57'18	
	12409 Jun 07 12:59	0°♊	
	12409 Jul 01 16:07	0°♋	
	12409 Jul 25 16:13	0°♌	
morning set	12409 Aug 10 13:44	19°♌53'17	
	12409 Aug 18 15:43	0°♍	
asc. node	12409 Sep 09 11:17	27°♍15'14	
	12409 Sep 11 16:05	0°♎	
superior conj	12409 Sep 18 18:34	8°♎51'42	0°22'24
minimum elong	12409 Sep 18 13:21	8°♎35'26	0°22'12
max. Earth dist.	12409 Sep 20 23:34	11°♎36'54	1.72097 AU
	12409 Oct 05 17:59	0°♏	
evening rise	12409 Oct 26 14:51	25°♏54'40	
	12409 Oct 29 22:06	0°♐	
	12409 Nov 23 05:45	0°♑	
	12409 Dec 17 18:32	0°♒	
desc. node	12409 Dec 30 03:19	15°♒00'04	
	12410 Jan 11 13:45	0°♓	
	12410 Feb 05 16:24	0°♈	
	12410 Mar 03 05:01	0°♉	
	12410 Mar 29 12:28	0°♊	
asc. node	12410 Apr 22 01:41	25°♊11'02	
evening max el	12410 Apr 25 01:11	28°♊10'31	46°35'24
	12410 Apr 26 21:31	0°♋	
greatest brilliancy	12410 Jun 04 13:36	28°♋38'51	-4.9m
	12410 Jun 09 17:38	0°♌	
retrograde	12410 Jun 14 04:05	0°♌23'13	
	12410 Jun 18 12:16	30°℞♋	
evening set	12410 Jul 01 11:42	24°♋36'44	
inferior conj	12410 Jul 04 19:09	22°♋36'27	8°09'59
minimum elong	12410 Jul 05 04:36	22°♋21'58	8°07'41
min. Earth dist.	12410 Jul 05 05:55	22°♋19'56	0.27145 AU
morning rise	12410 Jul 08 21:27	20°♋08'34	
direct	12410 Jul 25 12:59	14°♋46'21	
greatest brilliancy	12410 Aug 04 13:24	16°♋40'04	-4.9m
desc. node	12410 Aug 12 03:49	20°♋13'44	
	12410 Aug 26 02:02	0°♌	
morning max el	12410 Sep 13 19:28	17°♌07'28	46°39'37
	12410 Sep 26 08:07	0°♍	
	12410 Oct 23 13:00	0°♎	
	12410 Nov 18 11:11	0°♏	
asc. node	12410 Dec 03 02:32	17°♏18'24	
	12410 Dec 13 17:46	0°♐	
	12411 Jan 07 14:29	0°♑	
	12411 Feb 01 04:44	0°♒	
	12411 Feb 25 14:47	0°♓	
morning set	12411 Mar 12 12:43	18°♓24'19	
	12411 Mar 21 21:40	0°♈	
desc. node	12411 Mar 24 18:13	3°♈32'21	
	12411 Apr 15 01:32	0°♉	
max. Earth dist.	12411 Apr 17 12:26	3°♉03'17	1.72111 AU
superior conj	12411 Apr 20 16:54	7°♉01'27	-0°59'34
minimum elong	12411 Apr 20 05:41	6°♉26'30	0°59'36
	12411 May 09 02:35	0°♊	
evening rise	12411 May 30 05:54	26°♊27'22	
	12411 Jun 02 01:47	0°♋	
	12411 Jun 26 00:54	0°♌	
asc. node	12411 Jul 15 09:40	24°♌10'24	
	12411 Jul 20 02:01	0°♍	
	12411 Aug 13 07:23	0°♎	
	12411 Sep 06 20:02	0°♏	
	12411 Oct 01 21:29	0°♐	
	12411 Oct 27 22:40	0°♑	
desc. node	12411 Nov 04 06:37	8°♑07'00	
	12411 Nov 25 03:07	0°♒	
evening max el	12411 Nov 29 22:52	4°♒43'22	45°53'55
	12412 Jan 01 03:11	0°♓	
greatest brilliancy	12412 Jan 07 23:42	2°♓59'30	-4.7m
retrograde	12412 Jan 17 19:57	4°♓44'30	
evening set	12412 Feb 02 15:53	29°♒54'37	
	12412 Feb 02 12:05	30°℞♒	
inferior conj	12412 Feb 08 02:48	26°♒35'49	-4°05'47
minimum elong	12412 Feb 08 11:06	26°♒22'48	4°02'57
min. Earth dist.	12412 Feb 08 15:11	26°♒16'24	0.28520 AU
morning rise	12412 Feb 14 06:03	22°♒54'01	

asc. node	12412 Feb 25 08:39	18°♒43'41	
direct	12412 Feb 29 11:12	18°♒23'19	
greatest brilliancy	12412 Mar 11 08:26	20°♒34'39	-4.8m
	12412 Mar 27 12:49	0°♓	
morning max el	12412 Apr 19 05:41	20°♓05'10	46°20'33
	12412 Apr 28 22:26	0°♈	
	12412 May 26 01:22	0°♉	
desc. node	12412 Jun 16 08:33	24°♉57'41	
	12412 Jun 20 13:50	0°♊	
	12412 Jul 15 08:27	0°♋	
	12412 Aug 08 18:23	0°♌	
	12412 Sep 02 00:42	0°♍	
	12412 Sep 26 05:56	0°♎	
asc. node	12412 Oct 07 01:30	13°♎24'02	
	12412 Oct 20 10:59	0°♏	
morning set	12412 Oct 21 14:23	1°♏24'52	
	12412 Nov 13 16:13	0°♐	
superior conj	12412 Nov 27 22:57	17°♐40'20	1°25'37
minimum elong	12412 Nov 27 20:48	17°♐33'40	1°26'28
max. Earth dist.	12412 Nov 29 16:00	19°♐47'13	1.72988 AU
	12412 Dec 07 22:16	0°♑	
	12413 Jan 01 06:02	0°♒	
evening rise	12413 Jan 03 22:43	3°♒19'01	
	12413 Jan 25 16:05	0°♓	
desc. node	12413 Jan 26 16:08	1°♓13'43	
	12413 Feb 19 04:12	0°♈	
	12413 Mar 15 17:57	0°♉	
	12413 Apr 09 10:03	0°♊	
	12413 May 04 07:54	0°♋	
asc. node	12413 May 19 11:51	17°♋58'39	
	12413 May 29 19:26	0°♌	
	12413 Jun 25 15:25	0°♍	
evening max el	12413 Jul 07 00:58	11°♍50'16	46°47'43
	12413 Jul 26 20:44	0°♎	
greatest brilliancy	12413 Aug 15 13:30	12°♎13'55	-4.9m
retrograde	12413 Aug 26 08:15	14°♎23'24	
desc. node	12413 Sep 08 13:19	10°♎55'48	
evening set	12413 Sep 09 23:32	10°♎11'22	
min. Earth dist.	12413 Sep 15 17:08	6°♎49'25	0.27397 AU
inferior conj	12413 Sep 16 07:18	6°♎27'37	-1°58'23
minimum elong	12413 Sep 16 02:49	6°♎34'31	1°56'58
morning rise	12413 Sep 22 06:46	2°♎56'36	
	12413 Sep 28 23:32	30°℞♍	
direct	12413 Oct 07 04:33	28°♍39'52	
	12413 Oct 15 16:55	0°♎	
greatest brilliancy	12413 Oct 16 18:55	0°♎20'50	-4.8m
morning max el	12413 Nov 25 05:46	28°♎58'08	45°55'22
	12413 Nov 26 07:22	0°♏	
	12413 Dec 25 01:05	0°♐	
asc. node	12413 Dec 30 14:18	6°♐09'18	
	12414 Jan 20 12:15	0°♑	
	12414 Feb 14 22:52	0°♒	
	12414 Mar 11 19:58	0°♓	
	12414 Apr 05 08:40	0°♈	
desc. node	12414 Apr 21 08:26	19°♈43'41	
	12414 Apr 29 15:18	0°♉	
	12414 May 23 17:15	0°♊	
morning set	12414 May 25 04:16	1°♊49'27	
	12414 Jun 16 16:00	0°♋	
superior conj	12414 Jul 04 07:20	22°♋08'57	-1°17'11
minimum elong	12414 Jul 04 17:15	22°♋40'04	1°17'49
max. Earth dist.	12414 Jul 04 03:05	21°♋55'35	1.71375 AU
	12414 Jul 10 13:25	0°♌	
	12414 Aug 03 11:23	0°♍	
asc. node	12414 Aug 11 23:03	10°♍37'13	
evening rise	12414 Aug 13 12:51	12°♍35'25	
	12414 Aug 27 11:26	0°♎	
	12414 Sep 20 14:50	0°♏	
	12414 Oct 14 23:28	0°♐	
	12414 Nov 08 16:19	0°♑	
desc. node	12414 Dec 01 17:21	27°♑25'54	
	12414 Dec 03 21:51	0°♒	
	12414 Dec 29 22:56	0°♓	
	12415 Jan 26 11:18	0°♈	
evening max el	12415 Feb 09 02:40	13°♈45'39	46°01'20
	12415 Feb 27 07:26	0°♉	
greatest brilliancy	12415 Mar 20 14:22	12°♉50'31	-4.8m
asc. node	12415 Mar 24 18:14	14°♉01'30	
retrograde	12415 Mar 30 10:32	14°♉38'46	
evening set	12415 Apr 14 21:37	9°♉59'14	
inferior conj	12415 Apr 20 08:26	6°♉43'07	6°09'55
minimum elong	12415 Apr 19 21:37	6°♉59'57	6°06'54
min. Earth dist.	12415 Apr 20 08:49	6°♉42'32	0.27683 AU
morning rise	12415 Apr 24 21:18	3°♉57'13	
	12415 May 03 07:08	30°℞♈	
direct	12415 May 11 06:48	28°♈41'18	
	12415 May 19 14:14	0°♉	
greatest brilliancy	12415 May 21 10:54	0°♉37'22	-4.9m
	12415 Jun 29 08:37	0°♊	
morning max el	12415 Jun 30 16:59	1°♊20'57	46°56'41
desc. node	12415 Jul 14 19:45	16°♊07'55	
	12415 Jul 27 08:34	0°♋	
	12415 Aug 22 06:37	0°♌	
	12415 Sep 16 09:58	0°♍	
	12415 Oct 11 05:10	0°♎	
asc. node	12415 Nov 04 15:27	29°♎46'14	
	12415 Nov 04 19:57	0°♏	
	12415 Nov 29 07:32	0°♐	
	12415 Dec 23 16:46	0°♑	
morning set	12415 Dec 30 21:44	8°♑52'51	
	12416 Jan 17 00:44	0°♒	
max. Earth dist.	12416 Feb 05 03:17	23°♒34'24	1.73096 AU
superior conj	12416 Feb 05 19:42	24°♒25'03	0°42'38
minimum elong	12416 Feb 06 04:15	24°♒51'25	0°42'52
	12416 Feb 10 08:15	0°♓	
desc. node	12416 Feb 24 05:56	17°♓09'45	
	12416 Mar 05 15:19	0°♈	
evening rise	12416 Mar 14 23:16	11°♈32'12	
	12416 Mar 29 21:20	0°♉	
	12416 Apr 23 02:09	0°♊	
	12416 May 17 06:55	0°♋	
	12416 Jun 10 14:14	0°♌	
asc. node	12416 Jun 15 23:07	6°♌35'31	
	12416 Jul 05 04:02	0°♍	
	12416 Jul 30 06:36	0°♎	
	12416 Aug 25 11:14	0°♏	
evening max el	12416 Sep 16 09:47	23°♏09'55	46°21'39
	12416 Sep 23 11:58	0°♐	
desc. node	12416 Oct 05 22:56	10°♐48'40	
greatest brilliancy	12416 Oct 25 14:06	22°♐42'52	-4.8m
retrograde	12416 Nov 05 06:04	24°♐48'12	
evening set	12416 Nov 23 10:27	18°♐34'11	
inferior conj	12416 Nov 26 17:35	16°♐31'47	-8°43'39
minimum elong	12416 Nov 26 15:05	16°♐35'42	8°42'43
min. Earth dist.	12416 Nov 26 07:30	16°♐47'33	0.28842 AU
morning rise	12416 Nov 29 19:49	14°♐37'00	
direct	12416 Dec 18 01:29	8°♐22'16	
greatest brilliancy	12416 Dec 28 03:21	10°♐12'54	-4.7m
	12417 Jan 26 17:48	0°♑	
asc. node	12417 Jan 27 00:50	0°♑15'41	
morning max el	12417 Feb 05 01:38	8°♑41'15	45°44'31

	12417 Feb 25 17:22	0°♒	
	12417 Mar 24 09:56	0°♓	
	12417 Apr 18 20:30	0°♈	
	12417 May 13 15:14	0°♉	
desc. node	12417 May 18 21:59	6°♉28'00	
	12417 Jun 07 00:10	0°♊	
	12417 Jul 01 03:03	0°♋	
	12417 Jul 25 02:58	0°♌	
morning set	12417 Aug 08 02:35	17°♌29'57	
	12417 Aug 18 02:21	0°♍	
asc. node	12417 Sep 08 13:09	26°♍48'06	
	12417 Sep 11 02:38	0°♎	
superior conj	12417 Sep 16 08:30	6°♎32'36	0°18'52
minimum elong	12417 Sep 16 04:03	6°♎18'44	0°18'40
max. Earth dist.	12417 Sep 18 14:51	9°♎22'04	1.72065 AU
	12417 Oct 05 04:30	0°♏	
evening rise	12417 Oct 24 06:53	23°♏43'00	
	12417 Oct 29 08:39	0°♐	
	12417 Nov 22 16:26	0°♑	
	12417 Dec 17 05:29	0°♒	
desc. node	12417 Dec 29 05:09	14°♒32'00	
	12418 Jan 11 01:09	0°♓	
	12418 Feb 05 04:35	0°♈	
	12418 Mar 02 18:35	0°♉	
	12418 Mar 29 04:46	0°♊	
asc. node	12418 Apr 21 03:43	24°♊21'14	
evening max el	12418 Apr 22 15:45	25°♊51'10	46°34'12
	12418 Apr 26 21:28	0°♋	
greatest brilliancy	12418 Jun 02 02:25	26°♋14'19	-4.9m
retrograde	12418 Jun 11 17:12	27°♋58'24	
evening set	12418 Jun 29 03:56	22°♋07'00	
inferior conj	12418 Jul 02 07:56	20°♋11'33	8°20'50
minimum elong	12418 Jul 02 16:49	19°♋57'54	8°18'43
min. Earth dist.	12418 Jul 02 18:21	19°♋55'32	0.27162 AU
morning rise	12418 Jul 06 05:41	17°♋50'03	
direct	12418 Jul 23 02:23	12°♋21'22	
greatest brilliancy	12418 Aug 02 01:27	14°♋13'57	-4.9m
desc. node	12418 Aug 11 05:48	18°♋42'57	
	12418 Aug 26 12:14	0°♌	
morning max el	12418 Sep 11 09:21	14°♌46'22	46°40'57
	12418 Sep 26 02:45	0°♍	
	12418 Oct 23 03:34	0°♎	
	12418 Nov 17 23:55	0°♏	
asc. node	12418 Dec 02 04:20	16°♏47'43	
	12418 Dec 13 05:30	0°♐	
	12419 Jan 07 01:38	0°♑	
	12419 Jan 31 15:33	0°♒	
	12419 Feb 25 01:25	0°♓	
morning set	12419 Mar 10 03:58	16°♓10'27	
	12419 Mar 21 08:14	0°♈	
desc. node	12419 Mar 23 20:12	3°♈05'43	
	12419 Apr 14 12:08	0°♉	
max. Earth dist.	12419 Apr 14 23:47	0°♉36'17	1.72153 AU
superior conj	12419 Apr 18 06:12	4°♉40'22	-0°56'47
minimum elong	12419 Apr 17 19:10	4°♉05'59	0°56'48
	12419 May 08 13:16	0°♊	
evening rise	12419 May 27 17:45	24°♊00'27	
	12419 Jun 01 12:35	0°♋	
	12419 Jun 25 11:51	0°♌	
asc. node	12419 Jul 14 11:27	23°♌41'31	
	12419 Jul 19 13:09	0°♍	
	12419 Aug 12 18:48	0°♎	
	12419 Sep 06 08:00	0°♏	
	12419 Oct 01 10:26	0°♐	
	12419 Oct 27 13:44	0°♑	
desc. node	12419 Nov 03 08:36	7°♑28'52	
	12419 Nov 24 23:54	0°♒	
evening max el	12419 Nov 27 13:53	2°♒30'43	45°54'17
	12420 Jan 03 11:16	0°♓	
greatest brilliancy	12420 Jan 05 15:40	0°♓48'49	-4.7m
retrograde	12420 Jan 15 10:42	2°♓32'56	
	12420 Jan 26 19:39	30°℞♒	
evening set	12420 Jan 31 10:01	27°♒39'29	
inferior conj	12420 Feb 05 18:30	24°♒24'02	-4°24'06
minimum elong	12420 Feb 06 03:15	24°♒10'18	4°21'10
min. Earth dist.	12420 Feb 06 07:13	24°♒04'03	0.28552 AU
morning rise	12420 Feb 11 20:09	20°♒43'58	
asc. node	12420 Feb 24 10:42	16°♒19'51	
direct	12420 Feb 27 02:51	16°♒11'17	
greatest brilliancy	12420 Mar 09 00:27	18°♒22'21	-4.8m
	12420 Mar 28 01:56	0°♓	
morning max el	12420 Apr 16 19:48	17°♓47'29	46°18'57
	12420 Apr 28 16:53	0°♈	
	12420 May 25 15:53	0°♉	
desc. node	12420 Jun 15 10:26	24°♉24'10	
	12420 Jun 20 02:44	0°♊	
	12420 Jul 14 20:32	0°♋	
	12420 Aug 08 05:58	0°♌	
	12420 Sep 01 11:54	0°♍	
	12420 Sep 25 16:51	0°♎	
asc. node	12420 Oct 06 03:28	12°♎56'33	
morning set	12420 Oct 19 05:43	29°♎10'28	
	12420 Oct 19 21:42	0°♏	
	12420 Nov 13 02:49	0°♐	
superior conj	12420 Nov 25 15:48	15°♐31'22	1°25'12
minimum elong	12420 Nov 25 12:54	15°♐22'23	1°26'02
max. Earth dist.	12420 Nov 27 08:37	17°♐37'33	1.72965 AU
	12420 Dec 07 08:51	0°♑	
	12420 Dec 31 16:41	0°♒	
evening rise	12421 Jan 01 15:06	1°♒08'57	
	12421 Jan 25 02:54	0°♓	
desc. node	12421 Jan 25 18:02	0°♓46'21	
	12421 Feb 18 15:17	0°♈	
	12421 Mar 15 05:27	0°♉	
	12421 Apr 08 22:10	0°♊	
	12421 May 03 21:01	0°♋	
asc. node	12421 May 18 13:45	17°♋23'06	
	12421 May 29 10:23	0°♌	
	12421 Jun 25 10:38	0°♍	
evening max el	12421 Jul 04 13:59	9°♍26'03	46°47'53
	12421 Jul 27 11:10	0°♎	
greatest brilliancy	12421 Aug 13 05:08	9°♎53'58	-4.9m
retrograde	12421 Aug 23 21:49	12°♎02'03	
evening set	12421 Sep 07 13:03	7°♎50'36	
desc. node	12421 Sep 07 15:28	7°♎47'21	
inferior conj	12421 Sep 13 20:57	4°♎07'14	-1°35'37
minimum elong	12421 Sep 13 17:18	4°♎12'52	1°34'29
min. Earth dist.	12421 Sep 13 08:16	4°♎26'44	0.27354 AU
morning rise	12421 Sep 19 22:04	0°♎33'52	
	12421 Sep 20 23:54	30°℞♍	
direct	12421 Oct 04 17:10	26°♍19'41	
greatest brilliancy	12421 Oct 14 09:28	28°♍02'03	-4.8m
	12421 Oct 19 05:00	0°♎	
morning max el	12421 Nov 22 19:11	26°♎39'28	45°56'41
	12421 Nov 26 05:29	0°♏	
	12421 Dec 24 16:41	0°♐	
asc. node	12421 Dec 29 16:15	5°♐32'57	
	12422 Jan 20 01:27	0°♑	
	12422 Feb 14 10:56	0°♒	
	12422 Mar 11 07:26	0°♓	
	12422 Apr 04 19:48	0°♈	

desc. node	12422 Apr 20 10:19	19°♈15'23	
	12422 Apr 29 02:16	0°♉	
morning set	12422 May 22 15:53	29°♉21'44	
	12422 May 23 04:08	0°♊	
	12422 Jun 16 02:49	0°♋	
superior conj	12422 Jul 01 19:17	19°♋41'49	-1°18'55
minimum elong	12422 Jul 02 04:36	20°♋11'03	1°19'37
max. Earth dist.	12422 Jul 01 10:22	19°♋13'49	1.71378 AU
	12422 Jul 10 00:13	0°♌	
	12422 Aug 02 22:14	0°♍	
evening rise	12422 Aug 11 01:28	10°♍10'49	
asc. node	12422 Aug 11 01:00	10°♍09'21	
	12422 Aug 26 22:22	0°♎	
	12422 Sep 20 01:56	0°♏	
	12422 Oct 14 10:49	0°♐	
	12422 Nov 08 04:09	0°♑	
desc. node	12422 Nov 30 19:13	26°♑54'13	
	12422 Dec 03 10:36	0°♒	
	12422 Dec 29 13:29	0°♓	
	12423 Jan 26 06:07	0°♈	
evening max el	12423 Feb 06 17:15	11°♈29'34	46°00'34
	12423 Feb 27 20:57	0°♉	
greatest brilliancy	12423 Mar 18 03:28	10°♉30'21	-4.8m
asc. node	12423 Mar 23 20:17	11°♉59'05	
retrograde	12423 Mar 28 00:53	12°♉19'37	
evening set	12423 Apr 12 08:44	7°♉43'36	
inferior conj	12423 Apr 17 22:35	4°♉23'19	5°52'27
minimum elong	12423 Apr 17 11:55	4°♉39'53	5°49'25
min. Earth dist.	12423 Apr 17 22:56	4°♉22'48	0.27702 AU
morning rise	12423 Apr 22 14:50	1°♉32'48	
	12423 Apr 25 10:25	30°℞♈	
direct	12423 May 08 21:29	26°♈21'02	
greatest brilliancy	12423 May 19 01:57	28°♈17'58	-4.9m
	12423 May 23 02:11	0°♉	
morning max el	12423 Jun 28 08:16	29°♉02'39	46°56'18
	12423 Jun 29 07:01	0°♊	
desc. node	12423 Jul 13 21:43	15°♊23'53	
	12423 Jul 27 00:39	0°♋	
	12423 Aug 21 20:20	0°♌	
	12423 Sep 15 22:30	0°♍	
	12423 Oct 10 17:00	0°♎	
asc. node	12423 Nov 03 17:13	29°♎16'56	
	12423 Nov 04 07:18	0°♏	
	12423 Nov 28 18:33	0°♐	
	12423 Dec 23 03:35	0°♑	
morning set	12423 Dec 28 14:53	6°♑44'33	
	12424 Jan 16 11:28	0°♒	
superior conj	12424 Feb 03 11:52	22°♒13'40	0°45'33
minimum elong	12424 Feb 03 20:45	22°♒41'07	0°45'48
max. Earth dist.	12424 Feb 03 00:31	21°♒38'39	1.73110 AU
	12424 Feb 09 19:00	0°♓	
desc. node	12424 Feb 23 07:52	16°♓42'27	
	12424 Mar 05 02:09	0°♈	
evening rise	12424 Mar 12 14:28	9°♈17'10	
	12424 Mar 29 08:20	0°♉	
	12424 Apr 22 13:23	0°♊	
	12424 May 16 18:27	0°♋	
	12424 Jun 10 02:14	0°♌	
asc. node	12424 Jun 15 00:59	6°♌04'08	
	12424 Jul 04 16:45	0°♍	
	12424 Jul 29 20:35	0°♎	
	12424 Aug 25 03:58	0°♏	
evening max el	12424 Sep 14 01:58	20°♏56'47	46°22'49
	12424 Sep 23 13:46	0°♐	
desc. node	12424 Oct 05 00:51	9°♐41'51	
greatest brilliancy	12424 Oct 23 04:26	20°♐28'50	-4.8m
retrograde	12424 Nov 02 22:30	22°♐35'44	
evening set	12424 Nov 21 00:09	16°♐24'53	
inferior conj	12424 Nov 24 09:17	14°♐19'26	-8°40'56
minimum elong	12424 Nov 24 05:59	14°♐24'35	8°39'57
min. Earth dist.	12424 Nov 23 21:42	14°♐37'33	0.28813 AU
morning rise	12424 Nov 27 11:58	12°♐24'07	
direct	12424 Dec 15 17:30	6°♐10'39	
greatest brilliancy	12424 Dec 25 17:07	7°♐59'41	-4.7m
asc. node	12425 Jan 26 02:53	29°♐21'02	
	12425 Jan 26 20:01	0°♑	
morning max el	12425 Feb 02 17:38	6°♑29'58	45°43'59
	12425 Feb 25 09:59	0°♒	
	12425 Mar 23 23:44	0°♓	
	12425 Apr 18 09:02	0°♈	
	12425 May 13 03:06	0°♉	
desc. node	12425 May 17 23:45	5°♉57'20	
	12425 Jun 06 11:39	0°♊	
	12425 Jun 30 14:17	0°♋	
	12425 Jul 24 14:03	0°♌	
morning set	12425 Aug 05 15:36	15°♌06'07	
	12425 Aug 17 13:19	0°♍	
asc. node	12425 Sep 07 15:03	26°♍20'12	
	12425 Sep 10 13:29	0°♎	
superior conj	12425 Sep 13 22:39	4°♎13'13	0°15'20
minimum elong	12425 Sep 13 19:00	4°♎01'51	0°15'07
behind sun begin	12425 Sep 13 10:25	3°♎35'03	
behind sun end	12425 Sep 14 03:36	4°♎28'39	
max. Earth dist.	12425 Sep 16 07:51	7°♎11'38	1.72028 AU
	12425 Oct 04 15:17	0°♏	
evening rise	12425 Oct 21 23:07	21°♏31'05	
	12425 Oct 28 19:29	0°♐	
	12425 Nov 22 03:25	0°♑	
	12425 Dec 16 16:46	0°♒	
desc. node	12425 Dec 28 07:03	14°♒03'03	
	12426 Jan 10 12:57	0°♓	
	12426 Feb 04 17:12	0°♈	
	12426 Mar 02 08:36	0°♉	
	12426 Mar 28 21:42	0°♊	
evening max el	12426 Apr 20 05:37	23°♊29'18	46°33'00
asc. node	12426 Apr 20 05:37	23°♊29'18	
	12426 Apr 26 23:01	0°♋	
greatest brilliancy	12426 May 30 15:48	23°♋49'45	-4.9m
retrograde	12426 Jun 09 05:47	25°♋32'53	
evening set	12426 Jun 26 20:04	19°♋37'00	
inferior conj	12426 Jun 29 20:49	17°♋46'05	8°30'37
minimum elong	12426 Jun 30 05:02	17°♋33'26	8°28'43
min. Earth dist.	12426 Jun 30 07:09	17°♋30'11	0.27180 AU
morning rise	12426 Jul 03 14:00	15°♋30'55	
direct	12426 Jul 20 15:29	9°♋55'38	
greatest brilliancy	12426 Jul 30 14:12	11°♋47'39	-4.9m
desc. node	12426 Aug 10 07:53	17°♋14'31	
	12426 Aug 26 20:06	0°♌	
morning max el	12426 Sep 08 22:24	12°♌22'03	46°42'22
	12426 Sep 25 21:13	0°♍	
	12426 Oct 22 18:14	0°♎	
	12426 Nov 17 12:48	0°♏	
asc. node	12426 Dec 01 06:16	16°♏16'51	
	12426 Dec 12 17:24	0°♐	
	12427 Jan 06 12:59	0°♑	
	12427 Jan 31 02:37	0°♒	
	12427 Feb 24 12:20	0°♓	
morning set	12427 Mar 07 19:12	13°♓55'41	
	12427 Mar 20 19:05	0°♈	
desc. node	12427 Mar 22 22:02	2°♈37'47	
max. Earth dist.	12427 Apr 12 10:58	28°♈08'00	1.72196 AU

	12427 Apr 13 22:58	0°♉	
superior conj	12427 Apr 15 19:31	2°♉18'37	-0°53'54
minimum elong	12427 Apr 15 08:44	1°♉45'04	0°53'53
	12427 May 08 00:10	0°♊	
evening rise	12427 May 25 05:39	21°♊33'01	
	12427 May 31 23:37	0°♋	
	12427 Jun 24 23:02	0°♌	
asc. node	12427 Jul 13 13:27	23°♌12'25	
	12427 Jul 19 00:33	0°♍	
	12427 Aug 12 06:32	0°♎	
	12427 Sep 05 20:17	0°♏	
	12427 Sep 30 23:44	0°♐	
	12427 Oct 27 05:12	0°♑	
desc. node	12427 Nov 02 10:32	6°♑49'39	
	12427 Nov 24 21:36	0°♒	
evening max el	12427 Nov 25 04:00	0°♒15'28	45°54'44
greatest brilliancy	12428 Jan 03 07:32	28°♒37'49	-4.7m
	12428 Jan 08 17:00	0°♓	
retrograde	12428 Jan 13 01:31	0°♓21'32	
	12428 Jan 17 07:58	30°℞♒	
evening set	12428 Jan 29 04:16	25°♒24'02	
inferior conj	12428 Feb 03 10:20	22°♒12'13	-4°41'49
minimum elong	12428 Feb 03 19:27	21°♒57'53	4°38'50
min. Earth dist.	12428 Feb 03 23:27	21°♒51'36	0.28588 AU
morning rise	12428 Feb 09 10:14	18°♒34'17	
asc. node	12428 Feb 23 12:45	14°♒00'50	
direct	12428 Feb 24 18:23	13°♒59'01	
greatest brilliancy	12428 Mar 06 17:12	16°♒10'41	-4.8m
	12428 Mar 28 11:51	0°♓	
morning max el	12428 Apr 14 10:13	15°♓29'57	46°17'23
	12428 Apr 28 11:06	0°♈	
	12428 May 25 06:25	0°♉	
desc. node	12428 Jun 14 12:27	23°♉50'43	
	12428 Jun 19 15:43	0°♊	
	12428 Jul 14 08:41	0°♋	
	12428 Aug 07 17:36	0°♌	
	12428 Aug 31 23:11	0°♍	
	12428 Sep 25 03:53	0°♎	
asc. node	12428 Oct 05 05:12	12°♎27'59	
morning set	12428 Oct 16 20:56	26°♎55'12	
	12428 Oct 19 08:33	0°♏	
	12428 Nov 12 13:33	0°♐	
superior conj	12428 Nov 23 08:44	13°♐22'13	1°24'39
minimum elong	12428 Nov 23 05:06	13°♐11'01	1°25'28
max. Earth dist.	12428 Nov 25 00:23	15°♐24'53	1.72939 AU
	12428 Dec 06 19:31	0°♑	
evening rise	12428 Dec 30 07:41	28°♑59'23	
	12428 Dec 31 03:24	0°♒	
desc. node	12429 Jan 24 20:00	0°♓19'05	
	12429 Jan 24 13:46	0°♓	
	12429 Feb 18 02:28	0°♈	
	12429 Mar 14 17:05	0°♉	
	12429 Apr 08 10:28	0°♊	
	12429 May 03 10:21	0°♋	
asc. node	12429 May 17 15:41	16°♋46'56	
	12429 May 29 01:39	0°♌	
	12429 Jun 25 06:33	0°♍	
evening max el	12429 Jul 02 02:56	7°♍01'25	46°48'10
	12429 Jul 28 06:45	0°♎	
greatest brilliancy	12429 Aug 10 19:58	7°♎32'37	-4.9m
retrograde	12429 Aug 21 11:33	9°♎40'14	
evening set	12429 Sep 05 02:37	5°♎28'42	
desc. node	12429 Sep 06 17:24	4°♎35'06	
inferior conj	12429 Sep 11 10:26	1°♎46'03	-1°12'34
minimum elong	12429 Sep 11 07:37	1°♎50'20	1°11'43
min. Earth dist.	12429 Sep 10 22:59	2°♎03'34	0.27316 AU
	12429 Sep 14 08:19	30°℞♍	
morning rise	12429 Sep 17 13:05	28°♍10'49	
direct	12429 Oct 02 05:52	23°♍58'35	
greatest brilliancy	12429 Oct 11 23:44	25°♍42'27	-4.8m
	12429 Oct 21 04:36	0°♎	
morning max el	12429 Nov 20 09:29	24°♎22'38	45°58'06
	12429 Nov 26 02:50	0°♏	
	12429 Dec 24 08:03	0°♐	
asc. node	12429 Dec 28 18:14	4°♐56'55	
	12430 Jan 19 14:32	0°♑	
	12430 Feb 13 22:53	0°♒	
	12430 Mar 10 18:48	0°♓	
	12430 Apr 04 06:52	0°♈	
desc. node	12430 Apr 19 12:05	18°♈46'59	
	12430 Apr 28 13:12	0°♉	
morning set	12430 May 20 03:19	26°♉53'32	
	12430 May 22 14:59	0°♊	
	12430 Jun 15 13:38	0°♋	
superior conj	12430 Jun 29 06:48	17°♋13'21	-1°20'32
minimum elong	12430 Jun 29 15:27	17°♋40'29	1°21'15
max. Earth dist.	12430 Jun 28 19:02	16°♋36'22	1.71383 AU
	12430 Jul 09 11:01	0°♌	
	12430 Aug 02 09:03	0°♍	
evening rise	12430 Aug 08 13:41	7°♍45'05	
asc. node	12430 Aug 10 02:50	9°♍41'12	
	12430 Aug 26 09:16	0°♎	
	12430 Sep 19 12:58	0°♏	
	12430 Oct 13 22:07	0°♐	
	12430 Nov 07 15:58	0°♑	
desc. node	12430 Nov 29 21:12	26°♑23'01	
	12430 Dec 02 23:22	0°♒	
	12430 Dec 29 04:07	0°♓	
	12431 Jan 26 01:17	0°♈	
evening max el	12431 Feb 04 08:37	9°♈16'08	45°59'54
	12431 Feb 28 14:40	0°♉	
greatest brilliancy	12431 Mar 15 16:22	8°♉11'03	-4.8m
asc. node	12431 Mar 22 22:08	9°♉52'34	
retrograde	12431 Mar 25 15:25	10°♉01'17	
evening set	12431 Apr 09 20:12	5°♉28'46	
inferior conj	12431 Apr 15 12:48	2°♉04'25	5°34'33
minimum elong	12431 Apr 15 02:22	2°♉20'37	5°31'31
min. Earth dist.	12431 Apr 15 12:51	2°♉04'20	0.27722 AU
	12431 Apr 18 21:52	30°℞♈	
morning rise	12431 Apr 20 08:19	29°♈09'20	
direct	12431 May 06 12:32	24°♈01'56	
greatest brilliancy	12431 May 16 16:33	25°♈58'51	-4.9m
	12431 May 25 00:39	0°♉	
morning max el	12431 Jun 25 23:34	26°♉45'00	46°55'33
	12431 Jun 29 04:23	0°♊	
desc. node	12431 Jul 12 23:45	14°♊40'55	
	12431 Jul 26 16:21	0°♋	
	12431 Aug 21 09:51	0°♌	
	12431 Sep 15 10:52	0°♍	
	12431 Oct 10 04:38	0°♎	
asc. node	12431 Nov 02 19:07	28°♎48'38	
	12431 Nov 03 18:26	0°♏	
	12431 Nov 28 05:21	0°♐	
	12431 Dec 22 14:11	0°♑	
morning set	12431 Dec 26 07:53	4°♑36'24	
	12432 Jan 15 21:59	0°♒	
superior conj	12432 Feb 01 04:04	20°♒03'06	0°48'23
minimum elong	12432 Feb 01 13:16	20°♒31'29	0°48'40
max. Earth dist.	12432 Jan 31 20:32	19°♒39'50	1.73119 AU
	12432 Feb 09 05:31	0°♓	

desc. node	12432 Feb 22 09:40	16°♓15'28	
	12432 Mar 04 12:45	0°♈	
evening rise	12432 Mar 10 05:45	7°♈03'14	
	12432 Mar 28 19:04	0°♉	
	12432 Apr 22 00:20	0°♊	
	12432 May 16 05:44	0°♋	
	12432 Jun 09 14:00	0°♌	
asc. node	12432 Jun 14 02:59	5°♌33'52	
	12432 Jul 04 05:19	0°♍	
	12432 Jul 29 10:31	0°♎	
	12432 Aug 24 20:52	0°♏	
evening max el	12432 Sep 11 18:03	18°♏43'41	46°24'01
	12432 Sep 23 16:56	0°♐	
desc. node	12432 Oct 04 02:48	8°♐33'33	
greatest brilliancy	12432 Oct 20 19:08	18°♐15'25	-4.8m
retrograde	12432 Oct 31 14:24	20°♐23'04	
evening set	12432 Nov 18 13:23	14°♐16'09	
min. Earth dist.	12432 Nov 21 11:50	12°♐27'23	0.28779 AU
inferior conj	12432 Nov 22 00:45	12°♐07'10	-8°37'33
minimum elong	12432 Nov 21 20:41	12°♐13'31	8°36'28
morning rise	12432 Nov 25 04:11	10°♐10'43	
direct	12432 Dec 13 09:16	3°♐59'16	
greatest brilliancy	12432 Dec 23 06:33	5°♐46'24	-4.7m
asc. node	12433 Jan 25 04:53	28°♐28'04	
	12433 Jan 26 20:35	0°♑	
morning max el	12433 Jan 31 08:37	4°♑17'00	45°43'29
	12433 Feb 25 02:00	0°♒	
	12433 Mar 23 13:03	0°♓	
	12433 Apr 17 21:08	0°♈	
	12433 May 12 14:32	0°♉	
desc. node	12433 May 17 01:45	5°♉28'37	
	12433 Jun 05 22:42	0°♊	
	12433 Jun 30 01:07	0°♋	
	12433 Jul 24 00:46	0°♌	
morning set	12433 Aug 03 04:28	12°♌42'49	
	12433 Aug 16 23:56	0°♍	
asc. node	12433 Sep 06 16:49	25°♍52'47	
	12433 Sep 10 00:02	0°♎	
superior conj	12433 Sep 11 12:23	1°♎53'23	0°11'43
minimum elong	12433 Sep 11 09:35	1°♎44'40	0°11'30
behind sun begin	12433 Sep 10 16:12	0°♎50'25	
behind sun end	12433 Sep 12 02:58	2°♎38'54	
max. Earth dist.	12433 Sep 13 23:06	4°♎56'35	1.71993 AU
	12433 Oct 04 01:48	0°♏	
evening rise	12433 Oct 19 14:48	19°♏18'12	
	12433 Oct 28 06:01	0°♐	
	12433 Nov 21 14:06	0°♑	
	12433 Dec 16 03:46	0°♒	
desc. node	12433 Dec 27 09:02	13°♒35'14	
	12434 Jan 10 00:28	0°♓	
	12434 Feb 04 05:33	0°♈	
	12434 Mar 01 22:27	0°♉	
	12434 Mar 28 14:36	0°♊	
evening max el	12434 Apr 17 18:40	21°♊06'39	46°31'55
asc. node	12434 Apr 19 07:41	22°♊38'04	
	12434 Apr 27 01:25	0°♋	
greatest brilliancy	12434 May 28 05:36	21°♋27'26	-4.9m
retrograde	12434 Jun 06 18:07	23°♋09'31	
evening set	12434 Jun 24 12:08	17°♋09'21	
inferior conj	12434 Jun 27 09:55	15°♋22'48	8°39'26
minimum elong	12434 Jun 27 17:24	15°♋11'16	8°37'42
min. Earth dist.	12434 Jun 27 20:18	15°♋06'48	0.27198 AU
morning rise	12434 Jun 30 22:37	13°♋13'56	
direct	12434 Jul 18 04:19	7°♋31'56	
greatest brilliancy	12434 Jul 28 03:33	9°♋24'00	-4.9m
desc. node	12434 Aug 09 09:48	15°♋50'33	
	12434 Aug 27 01:01	0°♌	
morning max el	12434 Sep 06 10:53	9°♌57'37	46°43'35
	12434 Sep 25 14:46	0°♍	
	12434 Oct 22 08:22	0°♎	
	12434 Nov 17 01:17	0°♏	
asc. node	12434 Nov 30 08:16	15°♏47'08	
	12434 Dec 12 04:58	0°♐	
	12435 Jan 06 00:01	0°♑	
	12435 Jan 30 13:19	0°♒	
	12435 Feb 23 22:53	0°♓	
morning set	12435 Mar 05 10:17	11°♓41'32	
	12435 Mar 20 05:34	0°♈	
desc. node	12435 Mar 21 23:48	2°♈10'44	
max. Earth dist.	12435 Apr 09 23:46	25°♈45'51	1.72239 AU
superior conj	12435 Apr 13 08:49	29°♈57'56	-0°50'57
minimum elong	12435 Apr 12 22:21	29°♈25'22	0°50'53
	12435 Apr 13 09:29	0°♉	
	12435 May 07 10:45	0°♊	
evening rise	12435 May 22 17:46	19°♊07'29	
	12435 May 31 10:17	0°♋	
	12435 Jun 24 09:48	0°♌	
asc. node	12435 Jul 12 15:18	22°♌44'15	
	12435 Jul 18 11:31	0°♍	
	12435 Aug 11 17:50	0°♎	
	12435 Sep 05 08:11	0°♏	
	12435 Sep 30 12:44	0°♐	
	12435 Oct 26 20:33	0°♑	
desc. node	12435 Nov 01 12:33	6°♑11'14	
evening max el	12435 Nov 22 17:53	28°♑00'25	45°55'15
	12435 Nov 24 19:51	0°♒	
greatest brilliancy	12435 Dec 31 22:54	26°♒26'55	-4.7m
retrograde	12436 Jan 10 16:42	28°♒10'55	
evening set	12436 Jan 26 22:30	23°♒08'59	
inferior conj	12436 Feb 01 02:04	20°♒00'59	-4°59'08
minimum elong	12436 Feb 01 11:31	19°♒46'09	4°56'06
min. Earth dist.	12436 Feb 01 15:24	19°♒40'03	0.28624 AU
morning rise	12436 Feb 07 00:06	16°♒25'43	
direct	12436 Feb 22 09:52	11°♒47'16	
asc. node	12436 Feb 22 14:38	11°♒47'19	
greatest brilliancy	12436 Mar 04 09:56	13°♒59'56	-4.8m
	12436 Mar 28 18:40	0°♓	
morning max el	12436 Apr 12 01:10	13°♓14'44	46°15'50
	12436 Apr 28 04:33	0°♈	
	12436 May 24 20:29	0°♉	
desc. node	12436 Jun 13 14:20	23°♉18'02	
	12436 Jun 19 04:18	0°♊	
	12436 Jul 13 20:28	0°♋	
	12436 Aug 07 04:51	0°♌	
	12436 Aug 31 10:04	0°♍	
	12436 Sep 24 14:30	0°♎	
asc. node	12436 Oct 04 07:05	12°♎01'07	
morning set	12436 Oct 14 12:22	24°♎41'43	
	12436 Oct 18 19:01	0°♏	
	12436 Nov 11 23:56	0°♐	
superior conj	12436 Nov 21 01:39	11°♐14'03	1°23'59
minimum elong	12436 Nov 20 21:19	11°♐00'37	1°24'46
max. Earth dist.	12436 Nov 22 16:40	13°♐14'45	1.72921 AU
	12436 Dec 06 05:54	0°♑	
evening rise	12436 Dec 28 00:12	26°♑50'22	
	12436 Dec 30 13:51	0°♒	
desc. node	12437 Jan 23 21:45	29°♒51'52	
	12437 Jan 24 00:24	0°♓	
	12437 Feb 17 13:25	0°♈	
	12437 Mar 14 04:30	0°♉	
	12437 Apr 07 22:35	0°♊	

	12437 May 02 23:34	0°♋	
asc. node	12437 May 16 17:43	16°♋11'28	
	12437 May 28 16:56	0°♌	
	12437 Jun 25 02:52	0°♍	
evening max el	12437 Jun 29 16:46	4°♍39'51	46°48'32
	12437 Jul 29 08:53	0°♎	
greatest brilliancy	12437 Aug 08 10:28	5°♎11'51	-4.9m
retrograde	12437 Aug 19 01:57	7°♎19'34	
evening set	12437 Sep 02 16:30	3°♎07'42	
desc. node	12437 Sep 05 19:19	1°♎21'48	
	12437 Sep 08 01:38	30°℞♍	
inferior conj	12437 Sep 08 23:58	29°♍25'54	-0°49'19
minimum elong	12437 Sep 08 22:02	29°♍28'50	0°48'48
min. Earth dist.	12437 Sep 08 13:26	29°♍41'59	0.27276 AU
morning rise	12437 Sep 15 04:02	25°♍49'16	
direct	12437 Sep 29 19:07	21°♍38'42	
greatest brilliancy	12437 Oct 09 13:28	23°♍23'31	-4.8m
	12437 Oct 22 11:54	0°♎	
morning max el	12437 Nov 18 00:25	22°♎08'30	45°59'25
	12437 Nov 25 23:00	0°♏	
	12437 Dec 23 22:53	0°♐	
asc. node	12437 Dec 27 20:08	4°♐21'47	
	12438 Jan 19 03:17	0°♑	
	12438 Feb 13 10:37	0°♒	
	12438 Mar 10 06:00	0°♓	
	12438 Apr 03 17:47	0°♈	
desc. node	12438 Apr 18 14:03	18°♈19'35	
	12438 Apr 27 23:58	0°♉	
morning set	12438 May 17 14:43	24°♉25'48	
	12438 May 22 01:42	0°♊	
	12438 Jun 15 00:19	0°♋	
max. Earth dist.	12438 Jun 26 04:46	14°♋02'34	1.71389 AU
superior conj	12438 Jun 26 18:16	14°♋44'59	-1°21'59
minimum elong	12438 Jun 27 02:09	15°♋09'43	1°22'45
	12438 Jul 08 21:43	0°♌	
	12438 Aug 01 19:48	0°♍	
evening rise	12438 Aug 06 01:52	5°♍19'27	
asc. node	12438 Aug 09 04:38	9°♍13'16	
	12438 Aug 25 20:04	0°♎	
	12438 Sep 18 23:53	0°♏	
	12438 Oct 13 09:17	0°♐	
	12438 Nov 07 03:38	0°♑	
desc. node	12438 Nov 28 23:10	25°♑52'05	
	12438 Dec 02 12:02	0°♒	
	12438 Dec 28 18:49	0°♓	
	12439 Jan 25 21:00	0°♈	
evening max el	12439 Feb 02 00:22	7°♈03'47	45°59'03
	12439 Mar 01 14:51	0°♉	
greatest brilliancy	12439 Mar 13 05:53	5°♉52'27	-4.8m
asc. node	12439 Mar 22 00:14	7°♉40'59	
retrograde	12439 Mar 23 05:42	7°♉42'46	
evening set	12439 Apr 07 07:57	3°♉13'49	
	12439 Apr 12 17:45	30°℞♈	
inferior conj	12439 Apr 13 03:02	29°♈45'34	5°16'03
minimum elong	12439 Apr 12 16:55	0°♉01'18	5°13'03
min. Earth dist.	12439 Apr 13 03:01	29°♈45'35	0.27741 AU
morning rise	12439 Apr 18 01:43	26°♈45'52	
direct	12439 May 04 03:39	21°♈43'01	
greatest brilliancy	12439 May 14 07:06	23°♈39'34	-4.9m
	12439 May 26 07:58	0°♉	
morning max el	12439 Jun 23 14:00	24°♉25'10	46°54'44
	12439 Jun 29 01:02	0°♊	
desc. node	12439 Jul 12 01:40	13°♊58'05	
	12439 Jul 26 07:50	0°♋	
	12439 Aug 20 23:18	0°♌	
	12439 Sep 14 23:13	0°♍	
	12439 Oct 09 16:16	0°♎	
asc. node	12439 Nov 01 21:05	28°♎20'31	
	12439 Nov 03 05:35	0°♏	
	12439 Nov 27 16:09	0°♐	
	12439 Dec 22 00:47	0°♑	
morning set	12439 Dec 24 01:15	2°♑29'23	
	12440 Jan 15 08:31	0°♒	
superior conj	12440 Jan 29 20:38	17°♒53'35	0°51'08
minimum elong	12440 Jan 30 06:04	18°♒22'40	0°51'25
max. Earth dist.	12440 Jan 29 15:41	17°♒38'21	1.73132 AU
	12440 Feb 08 16:07	0°♓	
desc. node	12440 Feb 21 11:31	15°♓48'23	
	12440 Mar 03 23:28	0°♈	
evening rise	12440 Mar 07 21:07	4°♈49'14	
	12440 Mar 28 05:58	0°♉	
	12440 Apr 21 11:28	0°♊	
	12440 May 15 17:14	0°♋	
	12440 Jun 09 02:01	0°♌	
asc. node	12440 Jun 13 04:51	5°♌02'30	
	12440 Jul 03 18:09	0°♍	
	12440 Jul 29 00:48	0°♎	
	12440 Aug 24 14:22	0°♏	
evening max el	12440 Sep 09 09:32	16°♏28'15	46°25'10
	12440 Sep 23 22:09	0°♐	
desc. node	12440 Oct 03 04:55	7°♐23'06	
greatest brilliancy	12440 Oct 18 10:43	16°♐02'26	-4.8m
retrograde	12440 Oct 29 05:59	18°♐10'04	
evening set	12440 Nov 16 02:31	12°♐07'40	
min. Earth dist.	12440 Nov 19 02:28	10°♐16'33	0.28738 AU
inferior conj	12440 Nov 19 16:22	9°♐54'48	-8°33'22
minimum elong	12440 Nov 19 11:33	10°♐02'19	8°32'13
morning rise	12440 Nov 22 20:48	7°♐56'41	
direct	12440 Dec 11 00:46	1°♐47'51	
greatest brilliancy	12440 Dec 20 20:27	3°♐33'22	-4.7m
asc. node	12441 Jan 24 06:47	27°♐35'39	
	12441 Jan 26 20:04	0°♑	
morning max el	12441 Jan 28 22:42	2°♑01'34	45°43'06
	12441 Feb 24 17:51	0°♒	
	12441 Mar 23 02:27	0°♓	
	12441 Apr 17 09:25	0°♈	
	12441 May 12 02:14	0°♉	
desc. node	12441 May 16 03:39	4°♉58'43	
	12441 Jun 05 10:04	0°♊	
	12441 Jun 29 12:17	0°♋	
	12441 Jul 23 11:47	0°♌	
morning set	12441 Jul 31 17:03	10°♌17'37	
	12441 Aug 16 10:52	0°♍	
asc. node	12441 Sep 05 18:43	25°♍24'50	
superior conj	12441 Sep 09 01:59	29°♍32'13	0°08'04
minimum elong	12441 Sep 09 00:03	29°♍26'12	0°07'52
behind sun begin	12441 Sep 08 02:24	28°♍18'36	
behind sun end	12441 Sep 09 21:43	0°♎33'48	
	12441 Sep 09 10:53	0°♎	
max. Earth dist.	12441 Sep 11 12:43	2°♎35'30	1.71956 AU
	12441 Oct 03 12:37	0°♏	
evening rise	12441 Oct 17 06:28	17°♏04'14	
	12441 Oct 27 16:55	0°♐	
	12441 Nov 21 01:09	0°♑	
	12441 Dec 15 15:05	0°♒	
desc. node	12441 Dec 26 10:50	13°♒06'00	
	12442 Jan 09 12:16	0°♓	
	12442 Feb 03 18:14	0°♈	
	12442 Mar 01 12:43	0°♉	
	12442 Mar 28 08:15	0°♊	
evening max el	12442 Apr 15 06:46	18°♊40'33	46°30'34

asc. node	12442 Apr 18 09:41	21°♊44'23	
	12442 Apr 27 06:07	0°♋	
greatest brilliancy	12442 May 25 19:12	19°♋03'03	-4.9m
retrograde	12442 Jun 04 06:23	20°♋44'25	
evening set	12442 Jun 22 03:48	14°♋39'57	
inferior conj	12442 Jun 24 22:51	12°♋57'31	8°47'14
minimum elong	12442 Jun 25 05:34	12°♋47'10	8°45'39
min. Earth dist.	12442 Jun 25 09:24	12°♋41'15	0.27221 AU
morning rise	12442 Jun 28 07:16	10°♋54'53	
direct	12442 Jul 15 16:45	5°♋05'58	
greatest brilliancy	12442 Jul 25 17:08	6°♋58'44	-4.9m
desc. node	12442 Aug 08 11:47	14°♋27'36	
	12442 Aug 27 04:48	0°♌	
morning max el	12442 Sep 03 23:37	7°♌32'02	46°44'57
	12442 Sep 25 08:26	0°♍	
	12442 Oct 21 22:46	0°♎	
	12442 Nov 16 14:06	0°♏	
asc. node	12442 Nov 29 10:03	15°♏15'46	
	12442 Dec 11 16:52	0°♐	
	12443 Jan 05 11:23	0°♑	
	12443 Jan 30 00:23	0°♒	
	12443 Feb 23 09:45	0°♓	
morning set	12443 Mar 03 01:56	9°♓28'10	
	12443 Mar 19 16:23	0°♈	
desc. node	12443 Mar 21 01:46	1°♈43'22	
max. Earth dist.	12443 Apr 07 16:14	23°♈34'08	1.72283 AU
superior conj	12443 Apr 10 22:34	27°♈37'41	-0°47'55
minimum elong	12443 Apr 10 12:28	27°♈06'17	0°47'50
	12443 Apr 12 20:19	0°♉	
	12443 May 06 21:42	0°♊	
evening rise	12443 May 20 06:14	16°♊41'54	
	12443 May 30 21:21	0°♋	
	12443 Jun 23 21:03	0°♌	
asc. node	12443 Jul 11 17:07	22°♌14'21	
	12443 Jul 17 23:00	0°♍	
	12443 Aug 11 05:41	0°♎	
	12443 Sep 04 20:39	0°♏	
	12443 Sep 30 02:22	0°♐	
	12443 Oct 26 12:42	0°♑	
desc. node	12443 Oct 31 14:31	5°♑30'42	
evening max el	12443 Nov 20 08:14	25°♑45'13	45°55'55
	12443 Nov 24 19:43	0°♒	
greatest brilliancy	12443 Dec 29 13:46	24°♒14'19	-4.7m
retrograde	12444 Jan 08 08:32	25°♒59'14	
evening set	12444 Jan 24 16:52	20°♒52'39	
inferior conj	12444 Jan 29 17:49	17°♒48'34	-5°16'02
minimum elong	12444 Jan 30 03:33	17°♒33'18	5°12'59
min. Earth dist.	12444 Jan 30 07:01	17°♒27'52	0.28657 AU
morning rise	12444 Feb 04 13:51	14°♒16'25	
direct	12444 Feb 20 01:38	9°♒34'27	
asc. node	12444 Feb 21 16:42	9°♒37'35	
greatest brilliancy	12444 Mar 02 02:08	11°♒47'43	-4.8m
	12444 Mar 28 23:44	0°♓	
morning max el	12444 Apr 09 17:03	11°♓01'05	46°14'26
	12444 Apr 27 21:56	0°♈	
	12444 May 24 10:42	0°♉	
desc. node	12444 Jun 12 16:13	22°♉44'29	
	12444 Jun 18 17:09	0°♊	
	12444 Jul 13 08:35	0°♋	
	12444 Aug 06 16:32	0°♌	
	12444 Aug 30 21:26	0°♍	
	12444 Sep 24 01:38	0°♎	
asc. node	12444 Oct 03 09:01	11°♎32'53	
morning set	12444 Oct 12 03:16	22°♎25'00	
	12444 Oct 18 05:58	0°♏	
	12444 Nov 11 10:47	0°♐	
superior conj	12444 Nov 18 18:08	9°♐03'01	1°23'10
minimum elong	12444 Nov 18 13:06	8°♐47'24	1°23'56
max. Earth dist.	12444 Nov 20 10:27	11°♐07'49	1.72899 AU
	12444 Dec 05 16:42	0°♑	
evening rise	12444 Dec 25 16:34	24°♑39'35	
	12444 Dec 30 00:44	0°♒	
desc. node	12445 Jan 22 23:39	29°♒23'46	
	12445 Jan 23 11:29	0°♓	
	12445 Feb 17 00:48	0°♈	
	12445 Mar 13 16:20	0°♉	
	12445 Apr 07 11:03	0°♊	
	12445 May 02 13:10	0°♋	
asc. node	12445 May 15 19:37	15°♋34'36	
	12445 May 28 08:42	0°♌	
	12445 Jun 25 00:13	0°♍	
evening max el	12445 Jun 27 07:19	2°♍19'16	46°48'36
	12445 Jul 30 23:12	0°♎	
greatest brilliancy	12445 Aug 06 00:31	2°♎49'08	-4.9m
retrograde	12445 Aug 16 16:22	4°♎56'50	
evening set	12445 Aug 31 06:28	0°♎44'34	
	12445 Sep 01 14:49	30°℞♍	
desc. node	12445 Sep 04 21:28	28°♍04'14	
min. Earth dist.	12445 Sep 06 03:29	27°♍18'33	0.27242 AU
inferior conj	12445 Sep 06 13:16	27°♍03'37	-0°25'41
minimum elong	12445 Sep 06 12:15	27°♍05'09	0°25'30
morning rise	12445 Sep 12 18:35	23°♍25'48	
direct	12445 Sep 27 08:42	19°♍16'49	
greatest brilliancy	12445 Oct 07 02:35	21°♍01'51	-4.8m
	12445 Oct 23 11:20	0°♎	
morning max el	12445 Nov 15 15:18	19°♎52'38	46°00'42
	12445 Nov 25 19:06	0°♏	
	12445 Dec 23 13:57	0°♐	
asc. node	12445 Dec 26 22:06	3°♐45'45	
	12446 Jan 18 16:19	0°♑	
	12446 Feb 12 22:39	0°♒	
	12446 Mar 09 17:30	0°♓	
	12446 Apr 03 05:00	0°♈	
desc. node	12446 Apr 17 15:53	17°♈50'57	
	12446 Apr 27 11:01	0°♉	
morning set	12446 May 15 02:37	21°♉58'58	
	12446 May 21 12:37	0°♊	
	12446 Jun 14 11:11	0°♋	
max. Earth dist.	12446 Jun 23 15:27	11°♋31'17	1.71392 AU
superior conj	12446 Jun 24 06:13	12°♋17'37	-1°23'15
minimum elong	12446 Jun 24 13:15	12°♋39'43	1°24'03
	12446 Jul 08 08:35	0°♌	
	12446 Aug 01 06:43	0°♍	
evening rise	12446 Aug 03 14:15	2°♍53'50	
asc. node	12446 Aug 08 06:36	8°♍45'14	
	12446 Aug 25 07:05	0°♎	
	12446 Sep 18 11:04	0°♏	
	12446 Oct 12 20:47	0°♐	
	12446 Nov 06 15:42	0°♑	
desc. node	12446 Nov 28 01:01	25°♑19'42	
	12446 Dec 02 01:09	0°♒	
	12446 Dec 28 10:05	0°♓	
	12447 Jan 25 17:43	0°♈	
evening max el	12447 Jan 30 15:39	4°♈49'30	45°58'15
	12447 Mar 03 01:23	0°♉	
greatest brilliancy	12447 Mar 10 20:03	3°♉34'00	-4.8m
retrograde	12447 Mar 20 19:29	5°♉23'36	
asc. node	12447 Mar 21 02:16	5°♉23'31	
evening set	12447 Apr 04 19:56	0°♉58'05	
	12447 Apr 06 12:41	30°℞♈	
inferior conj	12447 Apr 10 17:17	27°♈26'20	4°57'00
minimum elong	12447 Apr 10 07:33	27°♈41'30	4°54'05

min. Earth dist.	12447 Apr 10 17:35	27°♈25'51	0.27756 AU
morning rise	12447 Apr 15 18:59	24°♈21'59	
direct	12447 May 01 18:21	19°♈23'42	
greatest brilliancy	12447 May 11 22:02	21°♈20'10	-4.9m
	12447 May 27 06:42	0°♉	
morning max el	12447 Jun 21 03:36	22°♉02'55	46°54'05
	12447 Jun 28 21:05	0°♊	
desc. node	12447 Jul 11 03:38	13°♊15'49	
	12447 Jul 25 23:07	0°♋	
	12447 Aug 20 12:37	0°♌	
	12447 Sep 14 11:29	0°♍	
	12447 Oct 09 03:54	0°♎	
asc. node	12447 Oct 31 22:50	27°♎51'33	
	12447 Nov 02 16:46	0°♏	
	12447 Nov 27 03:03	0°♐	
	12447 Dec 21 11:31	0°♑	
morning set	12447 Dec 21 18:14	0°♑20'44	
	12448 Jan 14 19:11	0°♒	
superior conj	12448 Jan 27 12:55	15°♒42'57	0°53'49
minimum elong	12448 Jan 27 22:32	16°♒12'34	0°54'08
max. Earth dist.	12448 Jan 27 08:55	15°♒30'37	1.73141 AU
	12448 Feb 08 02:48	0°♓	
desc. node	12448 Feb 20 13:26	15°♓21'13	
	12448 Mar 03 10:15	0°♈	
evening rise	12448 Mar 05 12:16	2°♈34'24	
	12448 Mar 27 16:55	0°♉	
	12448 Apr 20 22:40	0°♊	
	12448 May 15 04:47	0°♋	
	12448 Jun 08 14:03	0°♌	
asc. node	12448 Jun 12 06:45	4°♌31'13	
	12448 Jul 03 06:58	0°♍	
	12448 Jul 28 15:04	0°♎	
	12448 Aug 24 08:02	0°♏	
evening max el	12448 Sep 07 00:01	14°♏10'47	46°26'14
	12448 Sep 24 05:20	0°♐	
desc. node	12448 Oct 02 06:50	6°♐10'47	
greatest brilliancy	12448 Oct 16 02:30	13°♐49'56	-4.8m
retrograde	12448 Oct 26 21:14	15°♐57'27	
evening set	12448 Nov 13 15:19	9°♐59'51	
min. Earth dist.	12448 Nov 16 17:27	8°♐05'30	0.28703 AU
inferior conj	12448 Nov 17 07:59	7°♐42'43	-8°28'15
minimum elong	12448 Nov 17 02:27	7°♐51'24	8°27'01
morning rise	12448 Nov 20 13:46	5°♐42'28	
	12448 Dec 04 04:38	30°℞♏	
direct	12448 Dec 08 15:49	29°♏36'29	
	12448 Dec 13 05:13	0°♐	
greatest brilliancy	12448 Dec 18 11:06	1°♐21'11	-4.7m
asc. node	12449 Jan 23 08:50	26°♐44'33	
morning max el	12449 Jan 26 12:23	29°♐45'00	45°42'45
	12449 Jan 26 18:34	0°♑	
	12449 Feb 24 09:28	0°♒	
	12449 Mar 22 15:43	0°♓	
	12449 Apr 16 21:33	0°♈	
	12449 May 11 13:47	0°♉	
desc. node	12449 May 15 05:26	4°♉28'55	
	12449 Jun 04 21:16	0°♊	
	12449 Jun 28 23:17	0°♋	
	12449 Jul 22 22:38	0°♌	
morning set	12449 Jul 29 05:41	7°♌53'03	
	12449 Aug 15 21:34	0°♍	
asc. node	12449 Sep 04 20:36	24°♍57'35	
superior conj	12449 Sep 06 15:51	27°♍12'37	0°04'26
minimum elong	12449 Sep 06 14:48	27°♍09'19	0°04'14
behind sun begin	12449 Sep 05 14:55	25°♍54'44	
behind sun end	12449 Sep 07 14:41	28°♍23'54	
	12449 Sep 08 21:29	0°♎	
max. Earth dist.	12449 Sep 09 00:31	0°♎09'27	1.71917 AU
	12449 Oct 02 23:11	0°♏	
evening rise	12449 Oct 14 22:25	14°♏52'00	
	12449 Oct 27 03:32	0°♐	
	12449 Nov 20 11:56	0°♑	
	12449 Dec 15 02:12	0°♒	
desc. node	12449 Dec 25 12:47	12°♒37'41	
	12450 Jan 08 23:57	0°♓	
	12450 Feb 03 06:51	0°♈	
	12450 Mar 01 03:00	0°♉	
	12450 Mar 28 02:08	0°♊	
evening max el	12450 Apr 12 18:51	16°♊15'09	46°29'27
asc. node	12450 Apr 17 11:36	20°♊50'01	
	12450 Apr 27 12:38	0°♋	
greatest brilliancy	12450 May 23 08:19	16°♋38'55	-4.9m
retrograde	12450 Jun 01 19:07	18°♋20'18	
evening set	12450 Jun 19 19:08	12°♋11'43	
inferior conj	12450 Jun 22 11:48	10°♋33'01	8°53'58
minimum elong	12450 Jun 22 17:41	10°♋23'57	8°52'34
min. Earth dist.	12450 Jun 22 22:16	10°♋16'53	0.27243 AU
morning rise	12450 Jun 25 16:09	8°♋36'30	
direct	12450 Jul 13 05:20	2°♋40'41	
greatest brilliancy	12450 Jul 23 06:31	4°♋34'14	-4.9m
desc. node	12450 Aug 07 13:53	13°♋08'26	
	12450 Aug 27 06:38	0°♌	
morning max el	12450 Sep 01 13:22	5°♌09'59	46°46'24
	12450 Sep 25 01:20	0°♍	
	12450 Oct 21 12:36	0°♎	
	12450 Nov 16 02:25	0°♏	
asc. node	12450 Nov 28 12:01	14°♏46'14	
	12450 Dec 11 04:21	0°♐	
	12451 Jan 04 22:22	0°♑	
	12451 Jan 29 11:06	0°♒	
	12451 Feb 22 20:21	0°♓	
morning set	12451 Feb 28 17:31	7°♓15'24	
	12451 Mar 19 02:56	0°♈	
desc. node	12451 Mar 20 03:35	1°♈16'19	
max. Earth dist.	12451 Apr 05 09:15	21°♈24'54	1.72325 AU
superior conj	12451 Apr 08 12:00	25°♈17'16	-0°44'47
minimum elong	12451 Apr 08 02:22	24°♈47'18	0°44'40
	12451 Apr 12 06:55	0°♉	
	12451 May 06 08:21	0°♊	
evening rise	12451 May 17 18:29	14°♊16'41	
	12451 May 30 08:07	0°♋	
	12451 Jun 23 07:58	0°♌	
asc. node	12451 Jul 10 19:07	21°♌46'05	
	12451 Jul 17 10:09	0°♍	
	12451 Aug 10 17:13	0°♎	
	12451 Sep 04 08:49	0°♏	
	12451 Sep 29 15:41	0°♐	
	12451 Oct 26 04:36	0°♑	
desc. node	12451 Oct 30 16:28	4°♑51'11	
evening max el	12451 Nov 17 23:32	23°♑33'52	45°56'40
	12451 Nov 24 20:03	0°♒	
greatest brilliancy	12451 Dec 27 04:15	22°♒03'10	-4.7m
retrograde	12452 Jan 06 00:40	23°♒49'15	
evening set	12452 Jan 22 11:23	18°♒38'06	
inferior conj	12452 Jan 27 09:39	15°♒37'48	-5°32'14
minimum elong	12452 Jan 27 19:37	15°♒22'12	5°29'11
min. Earth dist.	12452 Jan 27 22:21	15°♒17'56	0.28693 AU
morning rise	12452 Feb 02 03:33	12°♒08'58	
direct	12452 Feb 17 18:01	7°♒23'24	
asc. node	12452 Feb 20 18:43	7°♒34'10	
greatest brilliancy	12452 Feb 28 17:51	9°♒36'25	-4.8m
	12452 Mar 29 02:32	0°♓	

morning max el	12452 Apr 07 09:35	8°♓50'08	46°12'47
	12452 Apr 27 14:40	0°♈	
	12452 May 24 00:31	0°♉	
desc. node	12452 Jun 11 18:14	22°♉12'23	
	12452 Jun 18 05:38	0°♊	
	12452 Jul 12 20:19	0°♋	
	12452 Aug 06 03:47	0°♌	
	12452 Aug 30 08:22	0°♍	
	12452 Sep 23 12:20	0°♎	
asc. node	12452 Oct 02 10:46	11°♎05'20	
morning set	12452 Oct 09 18:20	20°♎09'59	
	12452 Oct 17 16:31	0°♏	
	12452 Nov 10 21:12	0°♐	
superior conj	12452 Nov 16 10:52	6°♐53'59	1°22'14
minimum elong	12452 Nov 16 05:10	6°♐36'21	1°22'58
max. Earth dist.	12452 Nov 18 05:43	9°♐06'39	1.72872 AU
	12452 Dec 05 03:05	0°♑	
evening rise	12452 Dec 23 09:18	22°♑31'18	
	12452 Dec 29 11:10	0°♒	
desc. node	12453 Jan 22 01:38	28°♒57'20	
	12453 Jan 22 22:07	0°♓	
	12453 Feb 16 11:46	0°♈	
	12453 Mar 13 03:48	0°♉	
	12453 Apr 06 23:16	0°♊	
	12453 May 02 02:35	0°♋	
asc. node	12453 May 14 21:34	14°♋58'20	
	12453 May 28 00:28	0°♌	
	12453 Jun 24 22:06	0°♍	
evening max el	12453 Jun 24 22:20	0°♍00'36	46°48'46
	12453 Aug 02 10:49	0°♎	
greatest brilliancy	12453 Aug 03 15:02	0°♎27'58	-4.9m
retrograde	12453 Aug 14 06:39	2°♎34'52	
	12453 Aug 25 13:30	30°℞♍	
evening set	12453 Aug 28 20:41	28°♍22'17	
min. Earth dist.	12453 Sep 03 17:34	24°♍56'02	0.27205 AU
desc. node	12453 Sep 03 23:24	24°♍47'08	
inferior conj	12453 Sep 04 02:33	24°♍42'19	-0°02'02
minimum elong	12453 Sep 04 02:28	24°♍42'27	0°02'11
transit middle	12453 Sep 04 02:28	24°♍42'27	0°02'11
transit begin	12453 Sep 03 22:25	24°♍48'37	
transit end	12453 Sep 04 06:30	24°♍36'16	
morning rise	12453 Sep 10 08:52	21°♍03'23	
direct	12453 Sep 24 22:19	16°♍56'07	
greatest brilliancy	12453 Oct 04 15:24	18°♍40'47	-4.8m
	12453 Oct 24 04:04	0°♎	
morning max el	12453 Nov 13 05:44	17°♎36'49	46°02'03
	12453 Nov 25 14:05	0°♏	
	12453 Dec 23 04:21	0°♐	
asc. node	12453 Dec 26 00:05	3°♐11'27	
	12454 Jan 18 04:48	0°♑	
	12454 Feb 12 10:11	0°♒	
	12454 Mar 09 04:31	0°♓	
	12454 Apr 02 15:47	0°♈	
desc. node	12454 Apr 16 17:42	17°♈23'30	
	12454 Apr 26 21:41	0°♉	
morning set	12454 May 12 14:20	19°♉32'38	
	12454 May 20 23:15	0°♊	
	12454 Jun 13 21:49	0°♋	
max. Earth dist.	12454 Jun 20 22:21	8°♋48'53	1.71399 AU
superior conj	12454 Jun 21 17:45	9°♋49'46	-1°24'22
minimum elong	12454 Jun 21 23:54	10°♋09'04	1°25'13
	12454 Jul 07 19:14	0°♌	
	12454 Jul 31 17:24	0°♍	
evening rise	12454 Aug 01 01:58	0°♍26'51	
asc. node	12454 Aug 07 08:25	8°♍17'30	
	12454 Aug 24 17:50	0°♎	
	12454 Sep 17 21:58	0°♏	
	12454 Oct 12 07:59	0°♐	
	12454 Nov 06 03:29	0°♑	
desc. node	12454 Nov 27 03:03	24°♑48'39	
	12454 Dec 01 14:01	0°♒	
	12454 Dec 28 01:10	0°♓	
	12455 Jan 25 14:38	0°♈	
evening max el	12455 Jan 28 06:23	2°♈35'17	45°57'33
	12455 Mar 05 04:18	0°♉	
greatest brilliancy	12455 Mar 08 10:51	1°♉18'08	-4.8m
retrograde	12455 Mar 18 09:10	3°♉06'46	
asc. node	12455 Mar 20 04:08	3°♉02'57	
	12455 Mar 30 21:37	30°℞♈	
evening set	12455 Apr 02 08:23	28°♈44'06	
inferior conj	12455 Apr 08 07:50	25°♈09'23	4°37'43
minimum elong	12455 Apr 07 22:32	25°♈23'55	4°34'52
min. Earth dist.	12455 Apr 08 08:46	25°♈07'56	0.27776 AU
morning rise	12455 Apr 13 12:24	22°♈00'33	
direct	12455 Apr 29 08:48	17°♈06'24	
greatest brilliancy	12455 May 09 13:50	19°♈03'28	-4.9m
	12455 May 27 22:51	0°♉	
morning max el	12455 Jun 18 16:48	19°♉40'29	46°53'08
	12455 Jun 28 16:16	0°♊	
desc. node	12455 Jul 10 05:40	12°♊34'49	
	12455 Jul 25 14:02	0°♋	
	12455 Aug 20 01:43	0°♌	
	12455 Sep 13 23:35	0°♍	
	12455 Oct 08 15:20	0°♎	
asc. node	12455 Oct 31 00:46	27°♎23'47	
	12455 Nov 02 03:44	0°♏	
	12455 Nov 26 13:43	0°♐	
morning set	12455 Dec 19 11:15	28°♐12'49	
	12455 Dec 20 22:01	0°♑	
	12456 Jan 14 05:38	0°♒	
superior conj	12456 Jan 25 05:35	13°♒34'08	0°56'23
minimum elong	12456 Jan 25 15:19	14°♒04'09	0°56'44
max. Earth dist.	12456 Jan 25 01:39	13°♒21'59	1.73148 AU
	12456 Feb 07 13:16	0°♓	
desc. node	12456 Feb 19 15:15	14°♓54'27	
	12456 Mar 02 20:48	0°♈	
evening rise	12456 Mar 03 03:54	0°♈21'53	
	12456 Mar 27 03:37	0°♉	
	12456 Apr 20 09:38	0°♊	
	12456 May 14 16:08	0°♋	
	12456 Jun 08 01:59	0°♌	
asc. node	12456 Jun 11 08:46	4°♌00'38	
	12456 Jul 02 19:47	0°♍	
	12456 Jul 28 05:30	0°♎	
	12456 Aug 24 02:12	0°♏	
evening max el	12456 Sep 04 13:56	11°♏51'36	46°27'25
	12456 Sep 24 15:23	0°♐	
desc. node	12456 Oct 01 08:49	4°♐56'07	
greatest brilliancy	12456 Oct 13 18:03	11°♐36'38	-4.8m
retrograde	12456 Oct 24 12:31	13°♐44'30	
evening set	12456 Nov 11 03:45	7°♐51'47	
inferior conj	12456 Nov 14 23:28	5°♐30'19	-8°22'28
minimum elong	12456 Nov 14 17:13	5°♐40'06	8°21'06
min. Earth dist.	12456 Nov 14 08:22	5°♐53'57	0.28663 AU
morning rise	12456 Nov 18 06:51	3°♐27'41	
	12456 Nov 24 18:45	30°℞♏	
direct	12456 Dec 06 06:18	27°♏24'39	
greatest brilliancy	12456 Dec 16 01:55	29°♏09'09	-4.7m
	12456 Dec 18 08:16	0°♐	
asc. node	12457 Jan 22 10:51	25°♐54'34	
morning max el	12457 Jan 24 02:31	27°♐29'48	45°42'37

	12457 Jan 26 16:05	0°♑	
	12457 Feb 24 00:42	0°♒	
	12457 Mar 22 04:44	0°♓	
	12457 Apr 16 09:31	0°♈	
	12457 May 11 01:10	0°♉	
desc. node	12457 May 14 07:28	4°♉00'19	
	12457 Jun 04 08:21	0°♊	
	12457 Jun 28 10:11	0°♋	
	12457 Jul 22 09:26	0°♌	
morning set	12457 Jul 26 18:13	5°♌28'16	
	12457 Aug 15 08:18	0°♍	
asc. node	12457 Sep 03 22:23	24°♍29'47	
superior conj	12457 Sep 04 05:21	24°♍51'33	0°00'43
minimum elong	12457 Sep 04 05:12	24°♍51'05	0°00'31
behind sun begin	12457 Sep 03 04:39	23°♍34'24	
behind sun end	12457 Sep 05 05:45	26°♍07'45	
max. Earth dist.	12457 Sep 06 09:50	27°♍35'25	1.71885 AU
	12457 Sep 08 08:10	0°♎	
	12457 Oct 02 09:51	0°♏	
evening rise	12457 Oct 12 13:55	12°♏38'03	
	12457 Oct 26 14:15	0°♐	
	12457 Nov 19 22:50	0°♑	
	12457 Dec 14 13:25	0°♒	
desc. node	12457 Dec 24 14:45	12°♒09'11	
	12458 Jan 08 11:43	0°♓	
	12458 Feb 02 19:35	0°♈	
	12458 Feb 28 17:29	0°♉	
	12458 Mar 27 20:27	0°♊	
evening max el	12458 Apr 10 08:13	13°♊53'20	46°28'28
asc. node	12458 Apr 16 13:40	19°♊55'11	
	12458 Apr 27 21:30	0°♋	
greatest brilliancy	12458 May 20 21:01	14°♋15'09	-4.9m
retrograde	12458 May 30 08:35	15°♋57'19	
evening set	12458 Jun 17 10:20	9°♋45'02	
inferior conj	12458 Jun 20 01:01	8°♋09'26	8°59'38
minimum elong	12458 Jun 20 06:02	8°♋01'43	8°58'22
min. Earth dist.	12458 Jun 20 10:56	7°♋54'10	0.27266 AU
morning rise	12458 Jun 23 01:39	6°♋18'38	
direct	12458 Jul 10 18:46	0°♋16'28	
greatest brilliancy	12458 Jul 20 19:32	2°♋10'06	-4.9m
desc. node	12458 Aug 06 15:48	11°♋51'53	
	12458 Aug 27 07:06	0°♌	
morning max el	12458 Aug 30 04:13	2°♌50'42	46°47'31
	12458 Sep 24 17:59	0°♍	
	12458 Oct 21 02:29	0°♎	
	12458 Nov 15 14:55	0°♏	
asc. node	12458 Nov 27 13:59	14°♏16'07	
	12458 Dec 10 16:02	0°♐	
	12459 Jan 04 09:33	0°♑	
	12459 Jan 28 21:58	0°♒	
	12459 Feb 22 07:04	0°♓	
morning set	12459 Feb 26 09:11	5°♓02'36	
	12459 Mar 18 13:38	0°♈	
desc. node	12459 Mar 19 05:22	0°♈48'43	
max. Earth dist.	12459 Apr 03 02:21	19°♈15'36	1.72364 AU
superior conj	12459 Apr 06 01:37	22°♈57'00	-0°41'36
minimum elong	12459 Apr 05 16:30	22°♈28'40	0°41'27
	12459 Apr 11 17:40	0°♉	
	12459 May 05 19:11	0°♊	
evening rise	12459 May 15 07:05	11°♊52'06	
	12459 May 29 19:03	0°♋	
	12459 Jun 22 19:03	0°♌	
asc. node	12459 Jul 09 20:57	21°♌16'49	
	12459 Jul 16 21:28	0°♍	
	12459 Aug 10 04:56	0°♎	
	12459 Sep 03 21:13	0°♏	
	12459 Sep 29 05:22	0°♐	
	12459 Oct 25 21:09	0°♑	
desc. node	12459 Oct 29 18:31	4°♑10'26	
evening max el	12459 Nov 15 15:40	21°♑23'26	45°57'18
	12459 Nov 24 22:14	0°♒	
greatest brilliancy	12459 Dec 24 18:54	19°♒51'00	-4.7m
retrograde	12460 Jan 03 16:37	21°♒37'45	
evening set	12460 Jan 20 05:54	16°♒22'19	
inferior conj	12460 Jan 25 01:24	13°♒25'46	-5°48'00
minimum elong	12460 Jan 25 11:31	13°♒09'56	5°44'58
min. Earth dist.	12460 Jan 25 13:26	13°♒06'55	0.28723 AU
morning rise	12460 Jan 30 16:56	10°♒00'25	
direct	12460 Feb 15 10:34	5°♒11'22	
asc. node	12460 Feb 19 20:37	5°♒34'05	
greatest brilliancy	12460 Feb 26 08:53	7°♒23'18	-4.8m
	12460 Mar 29 04:13	0°♓	
morning max el	12460 Apr 05 01:44	6°♓37'34	46°11'11
	12460 Apr 27 07:19	0°♈	
	12460 May 23 14:24	0°♉	
desc. node	12460 Jun 10 20:07	21°♉39'25	
	12460 Jun 17 18:16	0°♊	
	12460 Jul 12 08:14	0°♋	
	12460 Aug 05 15:14	0°♌	
	12460 Aug 29 19:30	0°♍	
	12460 Sep 22 23:16	0°♎	
asc. node	12460 Oct 01 12:40	10°♎37'34	
morning set	12460 Oct 07 09:34	17°♎54'48	
	12460 Oct 17 03:17	0°♏	
	12460 Nov 10 07:54	0°♐	
superior conj	12460 Nov 14 03:31	4°♐43'46	1°21'12
minimum elong	12460 Nov 13 21:13	4°♐24'12	1°21'52
max. Earth dist.	12460 Nov 16 01:15	7°♐05'21	1.72850 AU
	12460 Dec 04 13:48	0°♑	
evening rise	12460 Dec 21 01:47	20°♑21'02	
	12460 Dec 28 21:59	0°♒	
desc. node	12461 Jan 21 03:23	28°♒28'57	
	12461 Jan 22 09:09	0°♓	
	12461 Feb 15 23:08	0°♈	
	12461 Mar 12 15:39	0°♉	
	12461 Apr 06 11:53	0°♊	
	12461 May 01 16:28	0°♋	
asc. node	12461 May 13 23:35	14°♋21'04	
	12461 May 27 16:52	0°♌	
evening max el	12461 Jun 22 13:07	27°♌40'17	46°48'46
	12461 Jun 24 21:18	0°♍	
greatest brilliancy	12461 Aug 01 06:13	28°♍06'36	-4.9m
	12461 Aug 08 16:39	0°♎	
retrograde	12461 Aug 11 20:30	0°♎11'47	
	12461 Aug 14 23:09	30°℞♍	
evening set	12461 Aug 26 11:08	25°♍58'52	
inferior conj	12461 Sep 01 15:52	22°♍20'09	0°21'39
minimum elong	12461 Sep 01 16:42	22°♍18'52	0°21'11
min. Earth dist.	12461 Sep 01 08:01	22°♍32'10	0.27170 AU
desc. node	12461 Sep 03 01:21	21°♍29'05	
morning rise	12461 Sep 07 22:54	18°♍40'07	
direct	12461 Sep 22 11:39	14°♍34'34	
greatest brilliancy	12461 Oct 02 04:36	16°♍19'03	-4.8m
	12461 Oct 24 16:54	0°♎	
morning max el	12461 Nov 10 19:10	15°♎17'32	46°03'21
	12461 Nov 25 08:53	0°♏	
	12461 Dec 22 18:57	0°♐	
asc. node	12461 Dec 25 01:59	2°♐36'03	
	12462 Jan 17 17:38	0°♑	
	12462 Feb 11 22:07	0°♒	
	12462 Mar 08 15:59	0°♓	

	12462 Apr 02 02:58	0°♈	
desc. node	12462 Apr 15 19:40	16°♈55'19	
	12462 Apr 26 08:43	0°♉	
morning set	12462 May 10 01:57	17°♉04'55	
	12462 May 20 10:13	0°♊	
	12462 Jun 13 08:46	0°♋	
max. Earth dist.	12462 Jun 18 03:27	5°♋59'50	1.71409 AU
superior conj	12462 Jun 19 05:21	7°♋21'09	-1°25'19
minimum elong	12462 Jun 19 10:34	7°♋37'29	1°26'11
	12462 Jul 07 06:13	0°♌	
evening rise	12462 Jul 29 13:42	27°♌58'42	
	12462 Jul 31 04:26	0°♍	
asc. node	12462 Aug 06 10:13	7°♍48'36	
	12462 Aug 24 04:57	0°♎	
	12462 Sep 17 09:14	0°♏	
	12462 Oct 11 19:33	0°♐	
	12462 Nov 05 15:39	0°♑	
desc. node	12462 Nov 26 05:00	24°♑16'16	
	12462 Dec 01 03:21	0°♒	
	12462 Dec 27 16:54	0°♓	
	12463 Jan 25 12:58	0°♈	
evening max el	12463 Jan 25 20:18	0°♈17'43	45°56'44
greatest brilliancy	12463 Mar 06 01:36	29°♈00'24	-4.8m
	12463 Mar 09 10:07	0°♉	
retrograde	12463 Mar 15 22:41	0°♉48'16	
asc. node	12463 Mar 19 06:15	0°♉35'07	
	12463 Mar 22 06:40	30°℞♈	
evening set	12463 Mar 30 20:52	26°♈27'50	
inferior conj	12463 Apr 05 22:16	22°♈50'44	4°17'52
minimum elong	12463 Apr 05 13:27	23°♈04'31	4°15'07
min. Earth dist.	12463 Apr 06 00:04	22°♈47'55	0.27797 AU
morning rise	12463 Apr 11 05:38	19°♈37'38	
direct	12463 Apr 26 22:50	14°♈47'11	
greatest brilliancy	12463 May 07 06:06	16°♈45'48	-4.8m
	12463 May 28 11:30	0°♉	
morning max el	12463 Jun 16 05:59	17°♉16'48	46°52'19
	12463 Jun 28 11:19	0°♊	
desc. node	12463 Jul 09 07:35	11°♊52'56	
	12463 Jul 25 05:04	0°♋	
	12463 Aug 19 15:03	0°♌	
	12463 Sep 13 11:57	0°♍	
	12463 Oct 08 03:04	0°♎	
asc. node	12463 Oct 30 02:43	26°♎55'03	
	12463 Nov 01 15:01	0°♏	
	12463 Nov 26 00:42	0°♐	
morning set	12463 Dec 17 04:21	26°♐04'11	
	12463 Dec 20 08:49	0°♑	
	12464 Jan 13 16:23	0°♒	
superior conj	12464 Jan 22 22:18	11°♒24'30	0°58'51
minimum elong	12464 Jan 23 08:07	11°♒54'46	0°59'15
max. Earth dist.	12464 Jan 22 19:39	11°♒16'21	1.73160 AU
	12464 Feb 07 00:04	0°♓	
desc. node	12464 Feb 18 17:07	14°♓26'44	
evening rise	12464 Feb 29 19:28	28°♓08'08	
	12464 Mar 02 07:43	0°♈	
	12464 Mar 26 14:44	0°♉	
	12464 Apr 19 21:02	0°♊	
	12464 May 14 03:54	0°♋	
	12464 Jun 07 14:18	0°♌	
asc. node	12464 Jun 10 10:37	3°♌28'27	
	12464 Jul 02 08:59	0°♍	
	12464 Jul 27 20:25	0°♎	
	12464 Aug 23 21:11	0°♏	
evening max el	12464 Sep 02 03:56	9°♏31'44	46°28'36
	12464 Sep 25 05:30	0°♐	
desc. node	12464 Sep 30 10:56	3°♐38'30	
greatest brilliancy	12464 Oct 11 09:01	9°♐21'32	-4.8m
retrograde	12464 Oct 22 04:07	11°♐30'33	
evening set	12464 Nov 08 15:55	5°♐42'41	
min. Earth dist.	12464 Nov 11 23:05	3°♐41'24	0.28621 AU
inferior conj	12464 Nov 12 14:51	3°♐16'46	-8°15'49
minimum elong	12464 Nov 12 07:56	3°♐27'34	8°14'19
morning rise	12464 Nov 16 00:08	1°♐11'29	
	12464 Nov 18 01:07	30°℞♏	
direct	12464 Dec 03 20:41	25°♏11'35	
greatest brilliancy	12464 Dec 13 16:36	26°♏56'11	-4.7m
	12464 Dec 20 16:33	0°♐	
morning max el	12465 Jan 21 17:26	25°♐15'56	45°42'35
asc. node	12465 Jan 21 12:43	25°♐04'35	
	12465 Jan 26 13:03	0°♑	
	12465 Feb 23 15:56	0°♒	
	12465 Mar 21 17:53	0°♓	
	12465 Apr 15 21:42	0°♈	
	12465 May 10 12:50	0°♉	
desc. node	12465 May 13 09:19	3°♉30'20	
	12465 Jun 03 19:43	0°♊	
	12465 Jun 27 21:22	0°♋	
	12465 Jul 21 20:27	0°♌	
morning set	12465 Jul 24 06:29	3°♌01'47	
	12465 Aug 14 19:12	0°♍	
superior conj	12465 Sep 01 18:35	22°♍29'03	-0°03'03
minimum elong	12465 Sep 01 19:23	22°♍31'32	0°03'13
behind sun begin	12465 Aug 31 19:03	21°♍15'29	
behind sun end	12465 Sep 02 19:42	23°♍47'32	
asc. node	12465 Sep 03 00:17	24°♍01'50	
max. Earth dist.	12465 Sep 03 21:13	25°♍07'11	1.71854 AU
	12465 Sep 07 19:00	0°♎	
	12465 Oct 01 20:42	0°♏	
evening rise	12465 Oct 10 05:26	10°♏23'36	
	12465 Oct 26 01:11	0°♐	
	12465 Nov 19 09:55	0°♑	
	12465 Dec 14 00:48	0°♒	
desc. node	12465 Dec 23 16:34	11°♒39'45	
	12466 Jan 07 23:40	0°♓	
	12466 Feb 02 08:31	0°♈	
	12466 Feb 28 08:17	0°♉	
	12466 Mar 27 15:28	0°♊	
evening max el	12466 Apr 07 22:16	11°♊32'40	46°27'14
asc. node	12466 Apr 15 15:39	18°♊58'13	
	12466 Apr 28 10:01	0°♋	
greatest brilliancy	12466 May 18 09:00	11°♋49'25	-4.9m
retrograde	12466 May 27 21:59	13°♋32'31	
evening set	12466 Jun 15 00:52	7°♋17'14	
inferior conj	12466 Jun 17 13:53	5°♋44'05	9°04'25
minimum elong	12466 Jun 17 18:00	5°♋37'45	9°03'15
min. Earth dist.	12466 Jun 17 23:02	5°♋30'01	0.27290 AU
morning rise	12466 Jun 20 11:06	3°♋58'31	
	12466 Jun 28 02:25	30°℞♊	
direct	12466 Jul 08 08:23	27°♊50'45	
greatest brilliancy	12466 Jul 18 07:51	29°♊43'48	-4.9m
	12466 Jul 19 01:16	0°♋	
desc. node	12466 Aug 05 17:47	10°♋36'48	
	12466 Aug 27 06:44	0°♌	
morning max el	12466 Aug 27 19:05	0°♌30'48	46°48'41
	12466 Sep 24 10:28	0°♍	
	12466 Oct 20 16:18	0°♎	
	12466 Nov 15 03:22	0°♏	
asc. node	12466 Nov 26 15:46	13°♏45'27	
	12466 Dec 10 03:41	0°♐	
	12467 Jan 03 20:43	0°♑	
	12467 Jan 28 08:50	0°♒	

	12467 Feb 21 17:47	0°♓	
morning set	12467 Feb 24 01:11	2°♓50'51	
desc. node	12467 Mar 18 07:21	0°♈21'46	
	12467 Mar 18 00:19	0°♈	
max. Earth dist.	12467 Mar 31 18:29	17°♈03'28	1.72402 AU
superior conj	12467 Apr 03 15:30	20°♈37'44	-0°38'21
minimum elong	12467 Apr 03 06:57	20°♈11'12	0°38'11
	12467 Apr 11 04:23	0°♉	
	12467 May 05 06:00	0°♊	
evening rise	12467 May 12 19:46	9°♊27'47	
	12467 May 29 06:00	0°♋	
	12467 Jun 22 06:11	0°♌	
asc. node	12467 Jul 08 22:47	20°♌47'21	
	12467 Jul 16 08:52	0°♍	
	12467 Aug 09 16:45	0°♎	
	12467 Sep 03 09:42	0°♏	
	12467 Sep 28 19:09	0°♐	
	12467 Oct 25 13:57	0°♑	
desc. node	12467 Oct 28 20:27	3°♑29'13	
evening max el	12467 Nov 13 07:47	19°♑13'05	45°58'00
	12467 Nov 25 01:53	0°♒	
greatest brilliancy	12467 Dec 22 10:04	17°♒39'52	-4.7m
retrograde	12468 Jan 01 08:16	19°♒26'40	
evening set	12468 Jan 18 00:33	14°♒07'07	
inferior conj	12468 Jan 22 17:13	11°♒14'20	-6°03'19
minimum elong	12468 Jan 23 03:25	10°♒58'19	6°00'19
min. Earth dist.	12468 Jan 23 04:42	10°♒56'18	0.28750 AU
morning rise	12468 Jan 28 06:08	7°♒52'29	
direct	12468 Feb 13 03:02	3°♒00'03	
asc. node	12468 Feb 18 22:42	3°♒39'01	
greatest brilliancy	12468 Feb 23 23:50	5°♒10'32	-4.8m
	12468 Mar 29 04:23	0°♓	
morning max el	12468 Apr 02 17:11	4°♓23'54	46°09'39
	12468 Apr 26 23:26	0°♈	
	12468 May 23 03:58	0°♉	
desc. node	12468 Jun 09 22:00	21°♉07'10	
	12468 Jun 17 06:38	0°♊	
	12468 Jul 11 19:57	0°♋	
	12468 Aug 05 02:33	0°♌	
	12468 Aug 29 06:32	0°♍	
	12468 Sep 22 10:05	0°♎	
asc. node	12468 Sep 30 14:35	10°♎10'15	
morning set	12468 Oct 05 00:27	15°♎38'51	
	12468 Oct 16 13:55	0°♏	
	12468 Nov 09 18:25	0°♐	
superior conj	12468 Nov 11 19:56	2°♐33'23	1°20'00
minimum elong	12468 Nov 11 13:01	2°♐11'58	1°20'39
max. Earth dist.	12468 Nov 13 20:13	5°♐02'54	1.72820 AU
	12468 Dec 04 00:18	0°♑	
evening rise	12468 Dec 18 18:10	18°♑11'11	
	12468 Dec 28 08:36	0°♒	
desc. node	12469 Jan 20 05:18	28°♒01'46	
	12469 Jan 21 19:58	0°♓	
	12469 Feb 15 10:17	0°♈	
	12469 Mar 12 03:17	0°♉	
	12469 Apr 06 00:16	0°♊	
	12469 May 01 06:09	0°♋	
asc. node	12469 May 13 01:30	13°♋44'15	
	12469 May 27 09:11	0°♌	
evening max el	12469 Jun 20 02:56	25°♌18'29	46°48'31
	12469 Jun 24 21:10	0°♍	
greatest brilliancy	12469 Jul 29 21:39	25°♍46'03	-4.9m
retrograde	12469 Aug 09 09:39	27°♍49'06	
evening set	12469 Aug 24 01:39	23°♍35'27	
inferior conj	12469 Aug 30 05:06	19°♍58'28	0°45'32
minimum elong	12469 Aug 30 06:52	19°♍55'46	0°44'42
min. Earth dist.	12469 Aug 29 22:46	20°♍08'10	0.27140 AU
desc. node	12469 Sep 02 03:28	18°♍11'51	
morning rise	12469 Sep 05 12:36	16°♍17'25	
direct	12469 Sep 20 00:25	12°♍13'12	
greatest brilliancy	12469 Sep 29 18:26	13°♍58'14	-4.8m
	12469 Oct 25 02:11	0°♎	
morning max el	12469 Nov 08 08:02	12°♎57'13	46°04'48
	12469 Nov 25 02:57	0°♏	
	12469 Dec 22 09:04	0°♐	
asc. node	12469 Dec 24 03:57	2°♐02'00	
	12470 Jan 17 06:01	0°♑	
	12470 Feb 11 09:38	0°♒	
	12470 Mar 08 03:02	0°♓	
	12470 Apr 01 13:46	0°♈	
desc. node	12470 Apr 14 21:28	16°♈27'43	
	12470 Apr 25 19:23	0°♉	
morning set	12470 May 07 13:53	14°♉39'17	
	12470 May 19 20:48	0°♊	
	12470 Jun 12 19:19	0°♋	
max. Earth dist.	12470 Jun 15 08:31	3°♋12'00	1.71420 AU
superior conj	12470 Jun 16 17:24	4°♋55'10	-1°26'06
minimum elong	12470 Jun 16 21:37	5°♋08'24	1°26'58
	12470 Jul 06 16:47	0°♌	
evening rise	12470 Jul 27 01:42	25°♌32'45	
	12470 Jul 30 15:04	0°♍	
asc. node	12470 Aug 05 12:11	7°♍21'29	
	12470 Aug 23 15:40	0°♎	
	12470 Sep 16 20:08	0°♏	
	12470 Oct 11 06:48	0°♐	
	12470 Nov 05 03:32	0°♑	
desc. node	12470 Nov 25 06:51	23°♑44'30	
	12470 Nov 30 16:25	0°♒	
	12470 Dec 27 08:29	0°♓	
evening max el	12471 Jan 23 10:01	28°♓01'10	45°56'09
	12471 Jan 25 11:41	0°♈	
greatest brilliancy	12471 Mar 03 15:56	26°♈43'53	-4.8m
retrograde	12471 Mar 13 12:34	28°♈31'50	
asc. node	12471 Mar 18 08:15	28°♈03'51	
evening set	12471 Mar 28 09:41	24°♈12'54	
inferior conj	12471 Apr 03 12:49	20°♈33'47	3°57'36
minimum elong	12471 Apr 03 04:31	20°♈46'42	3°55'00
min. Earth dist.	12471 Apr 03 15:19	20°♈29'53	0.27822 AU
morning rise	12471 Apr 08 22:54	17°♈16'52	
direct	12471 Apr 24 13:11	12°♈29'31	
greatest brilliancy	12471 May 04 22:31	14°♈30'00	-4.8m
	12471 May 28 20:14	0°♉	
morning max el	12471 Jun 13 20:13	14°♉57'16	46°51'35
	12471 Jun 28 05:22	0°♊	
desc. node	12471 Jul 08 09:32	11°♊13'07	
	12471 Jul 24 19:26	0°♋	
	12471 Aug 19 03:47	0°♌	
	12471 Sep 12 23:46	0°♍	
	12471 Oct 07 14:17	0°♎	
asc. node	12471 Oct 29 04:28	26°♎27'10	
	12471 Nov 01 01:50	0°♏	
	12471 Nov 25 11:15	0°♐	
morning set	12471 Dec 14 21:16	23°♐56'07	
	12471 Dec 19 19:14	0°♑	
	12472 Jan 13 02:44	0°♒	
superior conj	12472 Jan 20 14:51	9°♒15'36	1°01'16
minimum elong	12472 Jan 21 00:40	9°♒45'55	1°01'40
max. Earth dist.	12472 Jan 20 14:49	9°♒15'29	1.73169 AU
	12472 Feb 06 10:26	0°♓	
desc. node	12472 Feb 17 19:00	14°♓00'25	

evening rise	12472 Feb 27 10:59	25°♓55'44	
	12472 Mar 01 18:12	0°♈	
	12472 Mar 26 01:26	0°♉	
	12472 Apr 19 08:01	0°♊	
	12472 May 13 15:17	0°♋	
	12472 Jun 07 02:15	0°♌	
asc. node	12472 Jun 09 12:31	2°♌57'35	
	12472 Jul 01 21:51	0°♍	
	12472 Jul 27 11:01	0°♎	
	12472 Aug 23 16:06	0°♏	
evening max el	12472 Aug 30 18:48	7°♏15'40	46°29'52
	12472 Sep 25 23:25	0°♐	
desc. node	12472 Sep 29 12:49	2°♐19'51	
greatest brilliancy	12472 Oct 08 23:21	7°♐07'24	-4.8m
retrograde	12472 Oct 19 20:10	9°♐18'18	
evening set	12472 Nov 06 04:01	3°♐35'16	
min. Earth dist.	12472 Nov 09 13:34	1°♐30'48	0.28581 AU
inferior conj	12472 Nov 10 06:18	1°♐04'44	-8°08'18
minimum elong	12472 Nov 09 22:47	1°♐16'27	8°06'41
	12472 Nov 12 00:00	30°℞♏	
morning rise	12472 Nov 13 17:45	28°♏56'32	
direct	12472 Dec 01 11:45	23°♏00'04	
greatest brilliancy	12472 Dec 11 07:05	24°♏44'29	-4.7m
	12472 Dec 22 03:46	0°♐	
morning max el	12473 Jan 19 09:13	23°♐05'28	45°42'27
asc. node	12473 Jan 20 14:48	24°♐17'09	
	12473 Jan 26 08:51	0°♑	
	12473 Feb 23 06:34	0°♒	
	12473 Mar 21 06:33	0°♓	
	12473 Apr 15 09:25	0°♈	
	12473 May 10 00:03	0°♉	
desc. node	12473 May 12 11:07	3°♉01'30	
	12473 Jun 03 06:40	0°♊	
	12473 Jun 27 08:09	0°♋	
	12473 Jul 21 07:07	0°♌	
morning set	12473 Jul 21 18:48	0°♌36'35	
	12473 Aug 14 05:45	0°♍	
superior conj	12473 Aug 30 07:54	20°♍07'49	-0°06'45
minimum elong	12473 Aug 30 09:37	20°♍13'12	0°06'54
behind sun begin	12473 Aug 29 10:59	19°♍02'25	
behind sun end	12473 Aug 31 08:16	21°♍23'59	
max. Earth dist.	12473 Sep 01 10:32	22°♍46'02	1.71820 AU
asc. node	12473 Sep 02 02:09	23°♍34'49	
	12473 Sep 07 05:29	0°♎	
	12473 Oct 01 07:10	0°♏	
evening rise	12473 Oct 07 21:09	8°♏10'54	
	12473 Oct 25 11:42	0°♐	
	12473 Nov 18 20:37	0°♑	
	12473 Dec 13 11:52	0°♒	
desc. node	12473 Dec 22 18:31	11°♒11'40	
	12474 Jan 07 11:21	0°♓	
	12474 Feb 01 21:16	0°♈	
	12474 Feb 27 23:00	0°♉	
	12474 Mar 27 10:42	0°♊	
evening max el	12474 Apr 05 12:53	9°♊14'30	46°26'03
asc. node	12474 Apr 14 17:34	18°♊00'52	
	12474 Apr 29 02:13	0°♋	
greatest brilliancy	12474 May 15 21:08	9°♋25'14	-4.9m
retrograde	12474 May 25 11:19	11°♋08'53	
evening set	12474 Jun 12 15:05	4°♋51'35	
inferior conj	12474 Jun 15 02:55	3°♋20'03	9°08'07
minimum elong	12474 Jun 15 06:06	3°♋15'07	9°07'03
min. Earth dist.	12474 Jun 15 11:12	3°♋07'17	0.27312 AU
morning rise	12474 Jun 17 21:07	1°♋38'53	
	12474 Jun 20 17:21	30°℞♊	
direct	12474 Jul 05 22:17	25°♊26'29	
greatest brilliancy	12474 Jul 15 20:10	27°♊18'26	-4.9m
	12474 Jul 21 20:36	0°♋	
desc. node	12474 Aug 04 19:52	9°♋25'04	
morning max el	12474 Aug 25 09:26	28°♋10'18	46°49'44
	12474 Aug 27 05:04	0°♌	
	12474 Sep 24 02:24	0°♍	
	12474 Oct 20 05:45	0°♎	
	12474 Nov 14 15:30	0°♏	
asc. node	12474 Nov 25 17:45	13°♏16'16	
	12474 Dec 09 15:02	0°♐	
	12475 Jan 03 07:36	0°♑	
	12475 Jan 27 19:29	0°♒	
	12475 Feb 21 04:20	0°♓	
morning set	12475 Feb 21 17:16	0°♓39'55	
desc. node	12475 Mar 17 09:08	29°♓54'39	
	12475 Mar 17 10:51	0°♈	
max. Earth dist.	12475 Mar 29 08:13	14°♈44'21	1.72441 AU
superior conj	12475 Apr 01 05:25	18°♈19'05	-0°35'02
minimum elong	12475 Mar 31 21:30	17°♈54'33	0°34'52
	12475 Apr 10 14:59	0°♉	
	12475 May 04 16:41	0°♊	
evening rise	12475 May 10 08:24	7°♊03'51	
	12475 May 28 16:48	0°♋	
	12475 Jun 21 17:10	0°♌	
asc. node	12475 Jul 08 00:47	20°♌18'45	
	12475 Jul 15 20:10	0°♍	
	12475 Aug 09 04:29	0°♎	
	12475 Sep 02 22:10	0°♏	
	12475 Sep 28 08:59	0°♐	
	12475 Oct 25 06:59	0°♑	
desc. node	12475 Oct 27 22:25	2°♑47'53	
evening max el	12475 Nov 10 23:15	17°♑01'24	45°58'45
	12475 Nov 25 07:12	0°♒	
greatest brilliancy	12475 Dec 20 01:46	15°♒30'01	-4.7m
retrograde	12475 Dec 29 23:32	17°♒16'23	
evening set	12476 Jan 15 19:21	11°♒52'44	
inferior conj	12476 Jan 20 09:11	9°♒03'50	-6°17'53
minimum elong	12476 Jan 20 19:25	8°♒47'45	6°14'57
min. Earth dist.	12476 Jan 20 20:20	8°♒46'19	0.28776 AU
morning rise	12476 Jan 25 19:21	5°♒45'32	
direct	12476 Feb 10 19:15	0°♒49'34	
asc. node	12476 Feb 18 00:42	1°♒48'46	
greatest brilliancy	12476 Feb 21 15:19	2°♒58'55	-4.8m
	12476 Mar 29 03:24	0°♓	
morning max el	12476 Mar 31 07:48	2°♓08'11	46°08'00
	12476 Apr 26 15:20	0°♈	
	12476 May 22 17:28	0°♉	
desc. node	12476 Jun 09 00:00	20°♉35'14	
	12476 Jun 16 18:59	0°♊	
	12476 Jul 11 07:39	0°♋	
	12476 Aug 04 13:52	0°♌	
	12476 Aug 28 17:35	0°♍	
	12476 Sep 21 20:56	0°♎	
asc. node	12476 Sep 29 16:19	9°♎42'03	
morning set	12476 Oct 02 15:08	13°♎21'59	
	12476 Oct 16 00:38	0°♏	
	12476 Nov 09 05:02	0°♐	
superior conj	12476 Nov 09 12:20	0°♐22'36	1°18'41
minimum elong	12476 Nov 09 04:52	29°♏59'29	1°19'18
max. Earth dist.	12476 Nov 11 13:01	2°♐53'23	1.72788 AU
	12476 Dec 03 10:54	0°♑	
evening rise	12476 Dec 16 10:39	16°♑01'17	
	12476 Dec 27 19:17	0°♒	
desc. node	12477 Jan 19 07:15	27°♒34'26	
	12477 Jan 21 06:53	0°♓	

	12477 Feb 14 21:33	0°♈	
	12477 Mar 11 15:05	0°♉	
	12477 Apr 05 12:53	0°♊	
	12477 Apr 30 20:12	0°♋	
asc. node	12477 May 12 03:27	13°♋06'30	
	12477 May 27 02:07	0°♌	
evening max el	12477 Jun 17 15:43	22°♌53'18	46°48'23
	12477 Jun 24 22:37	0°♍	
greatest brilliancy	12477 Jul 27 13:04	23°♍24'33	-4.9m
retrograde	12477 Aug 06 22:31	25°♍25'42	
evening set	12477 Aug 21 16:15	21°♍10'37	
inferior conj	12477 Aug 27 18:17	17°♍35'55	1°09'18
minimum elong	12477 Aug 27 20:58	17°♍31'48	1°08'09
min. Earth dist.	12477 Aug 27 13:36	17°♍43'06	0.27114 AU
desc. node	12477 Sep 01 05:22	14°♍55'42	
morning rise	12477 Sep 03 02:02	13°♍54'12	
direct	12477 Sep 17 12:46	9°♍50'39	
greatest brilliancy	12477 Sep 27 08:39	11°♍36'59	-4.8m
	12477 Oct 25 09:12	0°♎	
morning max el	12477 Nov 05 20:58	10°♎36'12	46°06'18
	12477 Nov 24 20:49	0°♏	
	12477 Dec 21 23:16	0°♐	
asc. node	12477 Dec 23 05:55	1°♐27'26	
	12478 Jan 16 18:35	0°♑	
	12478 Feb 10 21:21	0°♒	
	12478 Mar 07 14:18	0°♓	
	12478 Apr 01 00:48	0°♈	
desc. node	12478 Apr 13 23:17	15°♈59'29	
	12478 Apr 25 06:18	0°♉	
morning set	12478 May 05 01:48	12°♉12'47	
	12478 May 19 07:41	0°♊	
	12478 Jun 12 06:13	0°♋	
max. Earth dist.	12478 Jun 12 14:12	0°♋25'02	1.71439 AU
superior conj	12478 Jun 14 05:07	2°♋27'09	-1°26'42
minimum elong	12478 Jun 14 08:19	2°♋37'11	1°27'36
	12478 Jul 06 03:43	0°♌	
evening rise	12478 Jul 24 13:12	23°♌04'07	
	12478 Jul 30 02:03	0°♍	
asc. node	12478 Aug 04 13:59	6°♍52'41	
	12478 Aug 23 02:45	0°♎	
	12478 Sep 16 07:24	0°♏	
	12478 Oct 10 18:26	0°♐	
	12478 Nov 04 15:52	0°♑	
desc. node	12478 Nov 24 08:52	23°♑11'55	
	12478 Nov 30 06:01	0°♒	
	12478 Dec 27 00:46	0°♓	
evening max el	12479 Jan 21 00:14	25°♓44'56	45°55'44
	12479 Jan 25 11:56	0°♈	
greatest brilliancy	12479 Mar 01 05:46	24°♈26'04	-4.8m
retrograde	12479 Mar 11 03:06	26°♈14'45	
asc. node	12479 Mar 17 10:08	25°♈26'43	
evening set	12479 Mar 25 22:46	21°♈56'57	
inferior conj	12479 Apr 01 03:22	18°♈16'01	3°37'01
minimum elong	12479 Mar 31 19:40	18°♈28'00	3°34'35
min. Earth dist.	12479 Apr 01 06:13	18°♈11'35	0.27846 AU
morning rise	12479 Apr 06 16:06	14°♈55'39	
direct	12479 Apr 22 03:59	10°♈11'11	
greatest brilliancy	12479 May 02 14:25	12°♈13'00	-4.8m
	12479 May 29 02:53	0°♉	
morning max el	12479 Jun 11 11:16	12°♉38'52	46°50'35
	12479 Jun 27 23:26	0°♊	
desc. node	12479 Jul 07 11:34	10°♊32'40	
	12479 Jul 24 10:07	0°♋	
	12479 Aug 18 16:55	0°♌	
	12479 Sep 12 12:00	0°♍	
	12479 Oct 07 01:55	0°♎	
asc. node	12479 Oct 28 06:25	25°♎58'33	
	12479 Oct 31 13:04	0°♏	
	12479 Nov 24 22:13	0°♐	
morning set	12479 Dec 12 13:59	21°♐46'10	
	12479 Dec 19 06:04	0°♑	
	12480 Jan 12 13:32	0°♒	
superior conj	12480 Jan 18 07:23	7°♒05'15	1°03'34
minimum elong	12480 Jan 18 17:10	7°♒35'26	1°04'02
max. Earth dist.	12480 Jan 18 10:55	7°♒16'10	1.73175 AU
	12480 Feb 05 21:16	0°♓	
desc. node	12480 Feb 16 20:48	13°♓32'26	
evening rise	12480 Feb 25 02:39	23°♓42'24	
	12480 Mar 01 05:08	0°♈	
	12480 Mar 25 12:32	0°♉	
	12480 Apr 18 19:24	0°♊	
	12480 May 13 03:05	0°♋	
	12480 Jun 06 14:38	0°♌	
asc. node	12480 Jun 08 14:32	2°♌25'47	
	12480 Jul 01 11:15	0°♍	
	12480 Jul 27 02:21	0°♎	
	12480 Aug 23 12:17	0°♏	
evening max el	12480 Aug 28 10:27	4°♏59'44	46°31'04
	12480 Sep 27 01:19	0°♐	
desc. node	12480 Sep 28 14:49	0°♐56'46	
greatest brilliancy	12480 Oct 06 13:25	4°♐50'47	-4.8m
retrograde	12480 Oct 17 12:18	7°♐03'28	
evening set	12480 Nov 03 15:48	1°♐25'40	
	12480 Nov 06 00:29	30°℞♏	
min. Earth dist.	12480 Nov 07 03:32	29°♏18'07	0.28536 AU
inferior conj	12480 Nov 07 21:29	28°♏50'13	-8°00'00
minimum elong	12480 Nov 07 13:24	29°♏02'47	7°58'15
morning rise	12480 Nov 11 11:16	26°♏38'52	
direct	12480 Nov 29 03:02	20°♏46'20	
greatest brilliancy	12480 Dec 08 20:40	22°♏29'50	-4.7m
	12480 Dec 23 05:33	0°♐	
morning max el	12481 Jan 17 00:57	20°♐53'23	45°42'20
asc. node	12481 Jan 19 16:47	23°♐28'48	
	12481 Jan 26 04:37	0°♑	
	12481 Feb 22 21:30	0°♒	
	12481 Mar 20 19:36	0°♓	
	12481 Apr 14 21:32	0°♈	
	12481 May 09 11:39	0°♉	
desc. node	12481 May 11 13:08	2°♉32'07	
	12481 Jun 02 17:59	0°♊	
	12481 Jun 26 19:17	0°♋	
morning set	12481 Jul 19 07:18	28°♋10'52	
	12481 Jul 20 18:08	0°♌	
	12481 Aug 13 16:42	0°♍	
superior conj	12481 Aug 27 21:03	17°♍44'43	-0°10'27
minimum elong	12481 Aug 27 23:42	17°♍53'00	0°10'37
behind sun begin	12481 Aug 27 04:44	16°♍53'41	
behind sun end	12481 Aug 28 18:41	18°♍52'19	
max. Earth dist.	12481 Aug 30 01:16	20°♍27'56	1.71792 AU
asc. node	12481 Sep 01 03:57	23°♍06'19	
	12481 Sep 06 16:24	0°♎	
	12481 Sep 30 18:06	0°♏	
evening rise	12481 Oct 05 12:29	5°♏55'32	
	12481 Oct 24 22:42	0°♐	
	12481 Nov 18 07:48	0°♑	
	12481 Dec 12 23:24	0°♒	
desc. node	12481 Dec 21 20:28	10°♒42'10	
	12482 Jan 06 23:33	0°♓	
	12482 Feb 01 10:36	0°♈	
	12482 Feb 27 14:25	0°♉	
	12482 Mar 27 07:03	0°♊	

evening max el	12482 Apr 03 03:24	6°♊54'49	46°24'51
asc. node	12482 Apr 13 19:40	17°♊01'25	
	12482 Apr 30 00:46	0°♋	
greatest brilliancy	12482 May 13 09:58	7°♋01'06	-4.9m
retrograde	12482 May 23 00:25	8°♋44'35	
evening set	12482 Jun 10 04:56	2°♋26'26	
inferior conj	12482 Jun 12 16:06	0°♋55'42	9°10'50
minimum elong	12482 Jun 12 18:19	0°♋52'15	9°09'52
min. Earth dist.	12482 Jun 12 23:40	0°♋44'00	0.27327 AU
	12482 Jun 14 04:15	30°℞♊	
morning rise	12482 Jun 15 07:42	29°♊18'13	
direct	12482 Jul 03 11:55	23°♊02'05	
greatest brilliancy	12482 Jul 13 08:46	24°♊52'56	-4.9m
	12482 Jul 23 14:04	0°♋	
desc. node	12482 Aug 03 21:46	8°♋14'33	
morning max el	12482 Aug 22 22:45	25°♋46'31	46°50'40
	12482 Aug 27 02:46	0°♌	
	12482 Sep 23 18:20	0°♍	
	12482 Oct 19 19:23	0°♎	
	12482 Nov 14 03:55	0°♏	
asc. node	12482 Nov 24 19:42	12°♏46'00	
	12482 Dec 09 02:44	0°♐	
	12483 Jan 02 18:50	0°♑	
	12483 Jan 27 06:26	0°♒	
morning set	12483 Feb 19 09:12	28°♒27'35	
	12483 Feb 20 15:10	0°♓	
desc. node	12483 Mar 16 10:57	29°♓26'42	
	12483 Mar 16 21:42	0°♈	
max. Earth dist.	12483 Mar 26 21:14	12°♈22'14	1.72481 AU
superior conj	12483 Mar 29 19:19	15°♈59'36	-0°31'40
minimum elong	12483 Mar 29 12:05	15°♈37'11	0°31'30
	12483 Apr 10 01:53	0°♉	
	12483 May 04 03:39	0°♊	
evening rise	12483 May 07 21:07	4°♊39'15	
	12483 May 28 03:53	0°♋	
	12483 Jun 21 04:25	0°♌	
asc. node	12483 Jul 07 02:37	19°♌49'00	
	12483 Jul 15 07:40	0°♍	
	12483 Aug 08 16:24	0°♎	
	12483 Sep 02 10:49	0°♏	
	12483 Sep 27 23:07	0°♐	
	12483 Oct 25 00:38	0°♑	
desc. node	12483 Oct 27 00:27	2°♑05'40	
evening max el	12483 Nov 08 13:50	14°♑46'48	45°59'21
	12483 Nov 25 15:14	0°♒	
greatest brilliancy	12483 Dec 17 17:43	13°♒19'25	-4.7m
retrograde	12483 Dec 27 14:33	15°♒05'21	
evening set	12484 Jan 13 14:06	9°♒37'26	
inferior conj	12484 Jan 18 01:09	6°♒52'35	-6°31'47
minimum elong	12484 Jan 18 11:20	6°♒36'33	6°28'57
min. Earth dist.	12484 Jan 18 12:09	6°♒35'16	0.28803 AU
morning rise	12484 Jan 23 08:25	3°♒38'07	
	12484 Jan 31 04:50	30°℞♑	
direct	12484 Feb 08 11:00	28°♑38'12	
asc. node	12484 Feb 17 02:36	0°♒01'42	
	12484 Feb 17 00:25	0°♒	
greatest brilliancy	12484 Feb 19 07:17	0°♒47'11	-4.8m
morning max el	12484 Mar 28 21:52	29°♒50'28	46°06'29
	12484 Mar 29 01:44	0°♓	
	12484 Apr 26 07:09	0°♈	
	12484 May 22 07:01	0°♉	
desc. node	12484 Jun 08 01:54	20°♉02'38	
	12484 Jun 16 07:26	0°♊	
	12484 Jul 10 19:28	0°♋	
	12484 Aug 04 01:15	0°♌	
	12484 Aug 28 04:41	0°♍	
	12484 Sep 21 07:48	0°♎	
asc. node	12484 Sep 28 18:15	9°♎14'31	
morning set	12484 Sep 30 06:08	11°♎06'02	
	12484 Oct 15 11:20	0°♏	
superior conj	12484 Nov 07 05:02	28°♏12'43	1°17'16
minimum elong	12484 Nov 06 21:04	27°♏48'04	1°17'50
	12484 Nov 08 15:39	0°♐	
max. Earth dist.	12484 Nov 09 04:49	0°♐40'46	1.72760 AU
	12484 Dec 02 21:32	0°♑	
evening rise	12484 Dec 14 03:20	13°♑51'54	
	12484 Dec 27 06:03	0°♒	
desc. node	12485 Jan 18 09:02	27°♒06'21	
	12485 Jan 20 17:52	0°♓	
	12485 Feb 14 08:54	0°♈	
	12485 Mar 11 02:58	0°♉	
	12485 Apr 05 01:38	0°♊	
	12485 Apr 30 10:27	0°♋	
asc. node	12485 May 11 05:29	12°♋28'36	
	12485 May 26 19:27	0°♌	
evening max el	12485 Jun 15 04:11	20°♌27'14	46°48'15
	12485 Jun 25 01:32	0°♍	
greatest brilliancy	12485 Jul 25 04:14	21°♍02'44	-4.9m
retrograde	12485 Aug 04 11:43	23°♍02'42	
evening set	12485 Aug 19 07:05	18°♍45'35	
inferior conj	12485 Aug 25 07:30	15°♍13'33	1°32'57
minimum elong	12485 Aug 25 11:05	15°♍08'05	1°31'30
min. Earth dist.	12485 Aug 25 04:21	15°♍18'23	0.27088 AU
desc. node	12485 Aug 31 07:23	11°♍42'23	
morning rise	12485 Aug 31 15:19	11°♍31'46	
direct	12485 Sep 15 01:10	7°♍28'14	
greatest brilliancy	12485 Sep 24 22:51	9°♍16'11	-4.8m
	12485 Oct 25 13:48	0°♎	
morning max el	12485 Nov 03 10:37	8°♎17'24	46°07'58
	12485 Nov 24 14:02	0°♏	
	12485 Dec 21 13:07	0°♐	
asc. node	12485 Dec 22 07:49	0°♐53'32	
	12486 Jan 16 06:56	0°♑	
	12486 Feb 10 08:56	0°♒	
	12486 Mar 07 01:28	0°♓	
	12486 Mar 31 11:44	0°♈	
desc. node	12486 Apr 13 01:17	15°♈32'04	
	12486 Apr 24 17:06	0°♉	
morning set	12486 May 02 13:46	9°♉46'56	
	12486 May 18 18:26	0°♊	
max. Earth dist.	12486 Jun 09 23:11	27°♊48'52	1.71461 AU
superior conj	12486 Jun 11 16:46	29°♊59'18	-1°27'08
minimum elong	12486 Jun 11 18:56	0°♋06'06	1°28'03
	12486 Jun 11 16:59	0°♋	
	12486 Jul 05 14:32	0°♌	
evening rise	12486 Jul 22 00:42	20°♌35'55	
	12486 Jul 29 12:55	0°♍	
asc. node	12486 Aug 03 15:50	6°♍24'24	
	12486 Aug 22 13:42	0°♎	
	12486 Sep 15 18:31	0°♏	
	12486 Oct 10 05:54	0°♐	
	12486 Nov 04 03:58	0°♑	
desc. node	12486 Nov 23 10:51	22°♑39'59	
	12486 Nov 29 19:24	0°♒	
	12486 Dec 26 16:59	0°♓	
evening max el	12487 Jan 18 15:24	23°♓32'00	45°55'12
	12487 Jan 25 13:03	0°♈	
greatest brilliancy	12487 Feb 26 19:25	22°♈09'00	-4.8m
retrograde	12487 Mar 08 18:02	23°♈58'25	
asc. node	12487 Mar 16 12:16	22°♈45'08	
evening set	12487 Mar 23 12:12	19°♈41'43	

inferior conj	12487 Mar 29 17:59	15°♈59'01	3°16'08
minimum elong	12487 Mar 29 10:54	16°♈10'00	3°13'53
min. Earth dist.	12487 Mar 29 20:58	15°♈54'22	0.27873 AU
morning rise	12487 Apr 04 09:14	12°♈35'25	
direct	12487 Apr 19 19:18	7°♈53'49	
greatest brilliancy	12487 Apr 30 05:53	9°♈56'15	-4.8m
	12487 May 29 07:12	0°♉	
morning max el	12487 Jun 09 02:46	10°♉22'24	46°49'30
	12487 Jun 27 16:49	0°♊	
desc. node	12487 Jul 06 13:29	9°♊53'06	
	12487 Jul 24 00:21	0°♋	
	12487 Aug 18 05:41	0°♌	
	12487 Sep 11 23:55	0°♍	
	12487 Oct 06 13:15	0°♎	
asc. node	12487 Oct 27 08:20	25°♎30'43	
	12487 Oct 30 23:59	0°♏	
	12487 Nov 24 08:52	0°♐	
morning set	12487 Dec 10 07:08	19°♐38'35	
	12487 Dec 18 16:32	0°♑	
	12488 Jan 11 23:57	0°♒	
superior conj	12488 Jan 16 00:22	4°♒57'25	1°05'45
minimum elong	12488 Jan 16 10:03	5°♒27'18	1°06'15
max. Earth dist.	12488 Jan 16 08:34	5°♒22'42	1.73179 AU
	12488 Feb 05 07:43	0°♓	
desc. node	12488 Feb 15 22:42	13°♓05'51	
evening rise	12488 Feb 22 18:37	21°♓31'04	
	12488 Feb 29 15:44	0°♈	
	12488 Mar 24 23:22	0°♉	
	12488 Apr 18 06:33	0°♊	
	12488 May 12 14:38	0°♋	
	12488 Jun 06 02:48	0°♌	
asc. node	12488 Jun 07 16:23	1°♌54'14	
	12488 Jul 01 00:27	0°♍	
	12488 Jul 26 17:36	0°♎	
	12488 Aug 23 08:46	0°♏	
evening max el	12488 Aug 26 02:26	2°♏45'27	46°32'10
desc. node	12488 Sep 27 16:56	29°♏32'01	
	12488 Sep 28 13:26	0°♐	
greatest brilliancy	12488 Oct 04 04:03	2°♐35'42	-4.8m
retrograde	12488 Oct 15 04:20	4°♐49'15	
	12488 Oct 30 21:48	30°℞♏	
evening set	12488 Nov 01 03:33	29°♏17'06	
min. Earth dist.	12488 Nov 04 17:35	27°♏06'08	0.28485 AU
inferior conj	12488 Nov 05 12:37	26°♏36'34	-7°51'01
minimum elong	12488 Nov 05 04:01	26°♏49'56	7°49'06
morning rise	12488 Nov 09 04:50	24°♏21'44	
direct	12488 Nov 26 18:22	18°♏33'45	
greatest brilliancy	12488 Dec 06 09:53	20°♏15'44	-4.8m
	12488 Dec 23 23:46	0°♐	
morning max el	12489 Jan 14 16:05	18°♐41'17	45°42'24
asc. node	12489 Jan 18 18:40	22°♐42'27	
	12489 Jan 25 23:16	0°♑	
	12489 Feb 22 11:43	0°♒	
	12489 Mar 20 08:05	0°♓	
	12489 Apr 14 09:11	0°♈	
	12489 May 08 22:53	0°♉	
desc. node	12489 May 10 14:59	2°♉03'22	
	12489 Jun 02 04:58	0°♊	
	12489 Jun 26 06:06	0°♋	
morning set	12489 Jul 16 19:25	25°♋44'54	
	12489 Jul 20 04:49	0°♌	
	12489 Aug 13 03:18	0°♍	
superior conj	12489 Aug 25 09:53	15°♍21'38	-0°14'10
minimum elong	12489 Aug 25 13:27	15°♍32'47	0°14'19
behind sun begin	12489 Aug 25 01:44	14°♍56'10	
behind sun end	12489 Aug 26 01:09	16°♍09'24	
max. Earth dist.	12489 Aug 27 16:02	18°♍10'59	1.71759 AU
asc. node	12489 Aug 31 05:51	22°♍39'12	
	12489 Sep 06 02:58	0°♎	
	12489 Sep 30 04:40	0°♏	
evening rise	12489 Oct 03 03:37	3°♏40'33	
	12489 Oct 24 09:21	0°♐	
	12489 Nov 17 18:37	0°♑	
	12489 Dec 12 10:35	0°♒	
desc. node	12489 Dec 20 22:18	10°♒13'31	
	12490 Jan 06 11:21	0°♓	
	12490 Jan 31 23:31	0°♈	
	12490 Feb 27 05:29	0°♉	
	12490 Mar 27 03:29	0°♊	
evening max el	12490 Mar 31 16:56	4°♊34'13	46°23'27
asc. node	12490 Apr 12 21:38	16°♊01'43	
	12490 May 01 07:07	0°♋	
greatest brilliancy	12490 May 10 23:15	4°♋38'38	-4.9m
retrograde	12490 May 20 12:58	6°♋21'26	
evening set	12490 Jun 07 18:11	0°♋03'21	
	12490 Jun 07 20:24	30°℞♊	
inferior conj	12490 Jun 10 05:18	28°♊32'29	9°12'31
minimum elong	12490 Jun 10 06:32	28°♊30'34	9°11'35
min. Earth dist.	12490 Jun 10 12:32	28°♊21'18	0.27349 AU
morning rise	12490 Jun 12 18:54	26°♊57'49	
direct	12490 Jul 01 01:06	20°♊38'30	
greatest brilliancy	12490 Jul 10 22:09	22°♊29'03	-4.9m
	12490 Jul 24 18:24	0°♋	
desc. node	12490 Aug 02 23:48	7°♋06'59	
morning max el	12490 Aug 20 11:17	23°♋21'17	46°51'35
	12490 Aug 26 23:27	0°♌	
	12490 Sep 23 09:45	0°♍	
	12490 Oct 19 08:36	0°♎	
	12490 Nov 13 15:56	0°♏	
asc. node	12490 Nov 23 21:29	12°♏16'20	
	12490 Dec 08 14:01	0°♐	
	12491 Jan 02 05:41	0°♑	
	12491 Jan 26 17:01	0°♒	
morning set	12491 Feb 17 01:31	26°♒17'35	
	12491 Feb 20 01:38	0°♓	
desc. node	12491 Mar 15 12:55	29°♓00'29	
	12491 Mar 16 08:08	0°♈	
max. Earth dist.	12491 Mar 24 12:12	10°♈07'28	1.72520 AU
superior conj	12491 Mar 27 09:45	13°♈43'07	-0°28'19
minimum elong	12491 Mar 27 03:13	13°♈22'54	0°28'07
	12491 Apr 09 12:21	0°♉	
	12491 May 03 14:13	0°♊	
evening rise	12491 May 05 10:18	2°♊17'32	
	12491 May 27 14:37	0°♋	
	12491 Jun 20 15:23	0°♌	
asc. node	12491 Jul 06 04:28	19°♌20'08	
	12491 Jul 14 18:57	0°♍	
	12491 Aug 08 04:09	0°♎	
	12491 Sep 01 23:21	0°♏	
	12491 Sep 27 13:11	0°♐	
	12491 Oct 24 18:28	0°♑	
desc. node	12491 Oct 26 02:25	1°♑23'19	
evening max el	12491 Nov 06 03:33	12°♑30'38	46°00'09
	12491 Nov 26 01:51	0°♒	
greatest brilliancy	12491 Dec 15 09:25	11°♒09'11	-4.7m
retrograde	12491 Dec 25 05:49	12°♒55'14	
evening set	12492 Jan 11 08:47	7°♒22'40	
inferior conj	12492 Jan 15 17:04	4°♒42'04	-6°45'14
minimum elong	12492 Jan 16 03:09	4°♒26'12	6°42'30
min. Earth dist.	12492 Jan 16 03:56	4°♒24'58	0.28826 AU
morning rise	12492 Jan 20 21:20	1°♒31'50	

	12492 Jan 23 16:47	30°℞♋	
direct	12492 Feb 06 02:26	26°♋27'26	
asc. node	12492 Feb 16 04:43	28°♋19'27	
greatest brilliancy	12492 Feb 16 23:29	28°♋36'39	-4.8m
	12492 Feb 20 05:56	0°♒	
morning max el	12492 Mar 26 12:32	27°♒35'18	46°05'15
	12492 Mar 28 22:48	0°♓	
	12492 Apr 25 22:18	0°♈	
	12492 May 21 20:02	0°♉	
desc. node	12492 Jun 07 03:47	19°♉31'21	
	12492 Jun 15 19:25	0°♊	
	12492 Jul 10 06:54	0°♋	
	12492 Aug 03 12:22	0°♌	
	12492 Aug 27 15:34	0°♍	
	12492 Sep 20 18:30	0°♎	
morning set	12492 Sep 27 20:36	8°♎48'44	
asc. node	12492 Sep 27 20:08	8°♎47'18	
	12492 Oct 14 21:53	0°♏	
superior conj	12492 Nov 04 21:11	26°♏01'37	1°15'43
minimum elong	12492 Nov 04 12:45	25°♏35'27	1°16'13
max. Earth dist.	12492 Nov 06 19:18	28°♏24'31	1.72731 AU
	12492 Nov 08 02:07	0°♐	
	12492 Dec 02 08:01	0°♑	
evening rise	12492 Dec 11 19:43	11°♑42'08	
	12492 Dec 26 16:39	0°♒	
desc. node	12493 Jan 17 10:58	26°♒39'14	
	12493 Jan 20 04:43	0°♓	
	12493 Feb 13 20:06	0°♈	
	12493 Mar 10 14:42	0°♉	
	12493 Apr 04 14:13	0°♊	
	12493 Apr 30 00:33	0°♋	
asc. node	12493 May 10 07:24	11°♋51'01	
	12493 May 26 12:48	0°♌	
evening max el	12493 Jun 12 17:01	18°♌03'15	46°48'05
	12493 Jun 25 05:45	0°♍	
greatest brilliancy	12493 Jul 22 18:33	18°♍40'36	-4.9m
retrograde	12493 Aug 02 01:18	20°♍40'12	
evening set	12493 Aug 16 22:00	16°♍20'29	
inferior conj	12493 Aug 22 20:37	12°♍51'14	1°56'36
minimum elong	12493 Aug 23 01:04	12°♍44'25	1°54'49
min. Earth dist.	12493 Aug 22 18:38	12°♍54'15	0.27074 AU
morning rise	12493 Aug 29 04:21	9°♍09'53	
desc. node	12493 Aug 30 09:29	8°♍32'21	
direct	12493 Sep 12 13:56	5°♍05'41	
greatest brilliancy	12493 Sep 22 12:37	6°♍54'51	-4.8m
	12493 Oct 25 16:42	0°♎	
morning max el	12493 Nov 01 01:13	6°♎00'43	46°09'30
	12493 Nov 24 06:56	0°♏	
asc. node	12493 Dec 21 09:47	0°♐19'55	
	12493 Dec 21 02:51	0°♐	
	12494 Jan 15 19:11	0°♑	
	12494 Feb 09 20:25	0°♒	
	12494 Mar 06 12:32	0°♓	
	12494 Mar 30 22:34	0°♈	
desc. node	12494 Apr 12 03:02	15°♈04'07	
	12494 Apr 24 03:49	0°♉	
morning set	12494 Apr 30 01:57	7°♉22'05	
	12494 May 18 05:06	0°♊	
max. Earth dist.	12494 Jun 07 10:36	25°♊20'40	1.71476 AU
superior conj	12494 Jun 09 04:43	27°♊32'45	-1°27'24
minimum elong	12494 Jun 09 05:49	27°♊36'14	1°28'19
	12494 Jun 11 03:38	0°♋	
	12494 Jul 05 01:12	0°♌	
evening rise	12494 Jul 19 12:34	18°♌09'16	
	12494 Jul 28 23:38	0°♍	
asc. node	12494 Aug 02 17:47	5°♍56'55	
	12494 Aug 22 00:32	0°♎	
	12494 Sep 15 05:36	0°♏	
	12494 Oct 09 17:24	0°♐	
	12494 Nov 03 16:12	0°♑	
desc. node	12494 Nov 22 12:42	22°♑07'14	
	12494 Nov 29 09:02	0°♒	
	12494 Dec 26 09:41	0°♓	
evening max el	12495 Jan 16 07:06	21°♓20'07	45°54'47
	12495 Jan 25 15:47	0°♈	
greatest brilliancy	12495 Feb 24 09:12	19°♈51'52	-4.8m
retrograde	12495 Mar 06 08:46	21°♈41'30	
asc. node	12495 Mar 15 14:14	19°♈58'07	
evening set	12495 Mar 21 01:49	17°♈25'56	
inferior conj	12495 Mar 27 08:29	13°♈41'36	2°54'56
minimum elong	12495 Mar 27 02:06	13°♈51'32	2°52'53
min. Earth dist.	12495 Mar 27 11:36	13°♈36'46	0.27896 AU
morning rise	12495 Apr 02 02:06	10°♈14'47	
direct	12495 Apr 17 10:42	5°♈36'13	
greatest brilliancy	12495 Apr 27 20:48	7°♈38'28	-4.8m
	12495 May 29 09:54	0°♉	
morning max el	12495 Jun 06 18:04	8°♉05'23	46°48'28
	12495 Jun 27 09:52	0°♊	
desc. node	12495 Jul 05 15:27	9°♊14'01	
	12495 Jul 23 14:25	0°♋	
	12495 Aug 17 18:20	0°♌	
	12495 Sep 11 11:45	0°♍	
	12495 Oct 06 00:33	0°♎	
asc. node	12495 Oct 26 10:05	25°♎02'14	
	12495 Oct 30 10:57	0°♏	
	12495 Nov 23 19:37	0°♐	
morning set	12495 Dec 07 23:58	17°♐29'33	
	12495 Dec 18 03:11	0°♑	
	12496 Jan 11 10:33	0°♒	
superior conj	12496 Jan 13 16:58	2°♒47'50	1°07'52
minimum elong	12496 Jan 14 02:29	3°♒17'12	1°08'24
max. Earth dist.	12496 Jan 14 04:32	3°♒23'33	1.73180 AU
	12496 Feb 04 18:22	0°♓	
desc. node	12496 Feb 15 00:35	12°♓38'39	
evening rise	12496 Feb 20 10:06	19°♓17'46	
	12496 Feb 29 02:31	0°♈	
	12496 Mar 24 10:23	0°♉	
	12496 Apr 17 17:53	0°♊	
	12496 May 12 02:23	0°♋	
	12496 Jun 05 15:12	0°♌	
asc. node	12496 Jun 06 18:18	1°♌22'17	
	12496 Jun 30 13:55	0°♍	
	12496 Jul 26 09:11	0°♎	
	12496 Aug 23 06:04	0°♏	
evening max el	12496 Aug 23 18:12	0°♏30'22	46°33'16
desc. node	12496 Sep 26 18:49	28°♏03'57	
	12496 Sep 30 22:00	0°♐	
greatest brilliancy	12496 Oct 01 19:17	0°♐21'11	-4.8m
retrograde	12496 Oct 12 19:57	2°♐34'46	
	12496 Oct 24 04:08	30°℞♏	
evening set	12496 Oct 29 15:23	27°♏08'29	
min. Earth dist.	12496 Nov 02 08:04	24°♏53'33	0.28436 AU
inferior conj	12496 Nov 03 03:49	24°♏22'47	-7°41'14
minimum elong	12496 Nov 02 18:48	24°♏36'51	7°39'11
morning rise	12496 Nov 06 22:36	22°♏04'08	
direct	12496 Nov 24 09:42	16°♏20'59	
greatest brilliancy	12496 Dec 03 23:27	18°♏01'29	-4.8m
	12496 Dec 24 13:33	0°♐	
morning max el	12497 Jan 12 06:26	16°♐26'21	45°42'18
asc. node	12497 Jan 17 20:45	21°♐56'25	
	12497 Jan 25 17:45	0°♑	

	12497 Feb 22 02:07	0°♒	
	12497 Mar 19 20:50	0°♓	
	12497 Apr 13 21:06	0°♈	
	12497 May 08 10:22	0°♉	
desc. node	12497 May 09 16:49	1°♉33'44	
	12497 Jun 01 16:11	0°♊	
	12497 Jun 25 17:10	0°♋	
morning set	12497 Jul 14 07:28	23°♋17'53	
	12497 Jul 19 15:46	0°♌	
	12497 Aug 12 14:10	0°♍	
superior conj	12497 Aug 22 22:53	12°♍58'18	-0°17'52
minimum elong	12497 Aug 23 03:21	13°♍12'16	0°18'00
max. Earth dist.	12497 Aug 25 04:35	15°♍46'15	1.71722 AU
asc. node	12497 Aug 30 07:42	22°♍11'10	
	12497 Sep 05 13:47	0°♎	
	12497 Sep 29 15:28	0°♏	
evening rise	12497 Sep 30 18:55	1°♏25'20	
	12497 Oct 23 20:14	0°♐	
	12497 Nov 17 05:42	0°♑	
	12497 Dec 11 22:04	0°♒	
desc. node	12497 Dec 20 00:17	9°♒44'22	
	12498 Jan 05 23:34	0°♓	
	12498 Jan 31 12:58	0°♈	
	12498 Feb 26 21:17	0°♉	
	12498 Mar 27 01:13	0°♊	
evening max el	12498 Mar 29 05:40	2°♊10'20	46°22'12
asc. node	12498 Apr 11 23:34	14°♊59'07	
	12498 May 03 04:55	0°♋	
greatest brilliancy	12498 May 08 12:46	2°♋15'09	-4.9m
retrograde	12498 May 18 01:21	3°♋57'16	
	12498 Jun 01 04:52	30°℞♊	
evening set	12498 Jun 05 06:47	27°♊39'58	
inferior conj	12498 Jun 07 18:31	26°♊08'09	9°13'10
minimum elong	12498 Jun 07 18:46	26°♊07'46	9°12'15
min. Earth dist.	12498 Jun 08 01:37	25°♊57'08	0.27369 AU
morning rise	12498 Jun 10 06:42	24°♊35'28	
direct	12498 Jun 28 13:52	18°♊13'34	
greatest brilliancy	12498 Jul 08 11:58	20°♊04'37	-4.9m
	12498 Jul 25 15:35	0°♋	
desc. node	12498 Aug 02 01:52	6°♋00'15	
morning max el	12498 Aug 17 23:52	20°♋54'58	46°52'36
	12498 Aug 26 19:50	0°♌	
	12498 Sep 23 01:16	0°♍	
	12498 Oct 18 22:01	0°♎	
	12498 Nov 13 04:11	0°♏	
asc. node	12498 Nov 22 23:29	11°♏46'30	
	12498 Dec 08 01:34	0°♐	
	12499 Jan 01 16:48	0°♑	
	12499 Jan 26 03:56	0°♒	
morning set	12499 Feb 14 17:46	24°♒06'12	
	12499 Feb 19 12:29	0°♓	
desc. node	12499 Mar 14 14:42	28°♓32'22	
	12499 Mar 15 19:00	0°♈	
max. Earth dist.	12499 Mar 22 04:09	7°♈54'26	1.72563 AU
superior conj	12499 Mar 24 23:54	11°♈24'27	-0°24'52
minimum elong	12499 Mar 24 18:07	11°♈06'33	0°24'40
	12499 Apr 08 23:16	0°♉	
evening rise	12499 May 02 23:13	29°♉53'42	
	12499 May 03 01:14	0°♊	
	12499 May 27 01:46	0°♋	
	12499 Jun 20 02:46	0°♌	
asc. node	12499 Jul 05 06:28	18°♌50'28	
	12499 Jul 14 06:39	0°♍	
	12499 Aug 07 16:20	0°♎	
	12499 Sep 01 12:21	0°♏	
	12499 Sep 27 03:47	0°♐	
	12499 Oct 24 13:06	0°♑	
desc. node	12499 Oct 25 04:22	0°♑39'29	
evening max el	12499 Nov 03 17:37	10°♑14'36	46°01'10
	12499 Nov 26 16:34	0°♒	
greatest brilliancy	12499 Dec 13 00:37	8°♒57'58	-4.7m
retrograde	12499 Dec 22 21:42	10°♒44'55	
evening set	12500 Jan 09 03:34	5°♒07'30	
inferior conj	12500 Jan 13 09:08	2°♒31'09	-6°57'55
minimum elong	12500 Jan 13 19:05	2°♒15'32	6°55'16
min. Earth dist.	12500 Jan 13 19:35	2°♒14'45	0.28852 AU
	12500 Jan 17 10:55	30°℞♑	
morning rise	12500 Jan 18 10:23	29°♑25'28	
direct	12500 Feb 03 18:08	24°♑16'14	
greatest brilliancy	12500 Feb 14 15:41	26°♑25'45	-4.8m
asc. node	12500 Feb 15 06:40	26°♑40'15	
	12500 Feb 22 02:35	0°♒	
morning max el	12500 Mar 25 04:09	25°♒21'33	46°03'46
	12500 Mar 29 19:33	0°♓	
	12500 Apr 26 13:43	0°♈	
	12500 May 22 09:27	0°♉	
desc. node	12500 Jun 07 05:47	18°♉59'02	
	12500 Jun 16 07:51	0°♊	
	12500 Jul 10 18:45	0°♋	
	12500 Aug 03 23:51	0°♌	
	12500 Aug 28 02:47	0°♍	
	12500 Sep 21 05:31	0°♎	
morning set	12500 Sep 26 11:02	6°♎30'13	
asc. node	12500 Sep 27 21:53	8°♎18'34	
	12500 Oct 15 08:45	0°♏	
superior conj	12500 Nov 03 13:25	23°♏49'38	1°14'02
minimum elong	12500 Nov 03 04:33	23°♏22'08	1°14'29
max. Earth dist.	12500 Nov 05 10:41	26°♏09'57	1.72701 AU
	12500 Nov 08 12:55	0°♐	
	12500 Dec 02 18:49	0°♑	
evening rise	12500 Dec 10 12:23	9°♑32'18	
	12500 Dec 27 03:33	0°♒	
desc. node	12501 Jan 17 12:54	26°♒11'19	
	12501 Jan 20 15:50	0°♓	
	12501 Feb 14 07:35	0°♈	
	12501 Mar 11 02:48	0°♉	
	12501 Apr 05 03:17	0°♊	
	12501 Apr 30 15:17	0°♋	
asc. node	12501 May 10 09:22	11°♋11'47	
	12501 May 27 07:09	0°♌	
evening max el	12501 Jun 11 06:48	15°♌40'10	46°47'53
	12501 Jun 26 12:47	0°♍	
greatest brilliancy	12501 Jul 21 08:27	16°♍16'18	-4.9m
retrograde	12501 Jul 31 15:15	18°♍15'43	
evening set	12501 Aug 15 12:58	13°♍53'20	
inferior conj	12501 Aug 21 09:31	10°♍27'00	2°20'11
minimum elong	12501 Aug 21 14:50	10°♍18'52	2°18'05
min. Earth dist.	12501 Aug 21 08:27	10°♍28'37	0.27056 AU
morning rise	12501 Aug 27 16:57	6°♍46'28	
desc. node	12501 Aug 30 11:22	5°♍24'38	
direct	12501 Sep 11 02:57	2°♍41'28	
greatest brilliancy	12501 Sep 21 01:32	4°♍31'08	-4.8m
	12501 Oct 26 18:31	0°♎	
morning max el	12501 Oct 30 16:11	3°♎44'03	46°11'05
	12501 Nov 24 23:46	0°♏	
asc. node	12501 Dec 21 11:45	29°♏45'47	
	12501 Dec 21 16:41	0°♐	
	12502 Jan 16 07:36	0°♑	
	12502 Feb 10 08:05	0°♒	
	12502 Mar 06 23:46	0°♓	
	12502 Mar 31 09:34	0°♈	

desc. node	12502 Apr 12 04:54	14°♈35'54	
	12502 Apr 24 14:44	0°♉	
morning set	12502 Apr 28 14:23	4°♉57'25	
	12502 May 18 16:01	0°♊	
max. Earth dist.	12502 Jun 05 20:57	22°♊48'13	1.71499 AU
superior conj	12502 Jun 07 16:28	25°♊04'42	-1°27'30
minimum elong	12502 Jun 07 16:29	25°♊04'47	1°28'24
	12502 Jun 11 14:35	0°♋	
	12502 Jul 05 12:12	0°♌	
evening rise	12502 Jul 17 23:53	15°♌39'48	
	12502 Jul 29 10:41	0°♍	
asc. node	12502 Aug 02 19:34	5°♍27'53	
	12502 Aug 22 11:42	0°♎	
	12502 Sep 15 16:59	0°♏	
	12502 Oct 10 05:11	0°♐	
	12502 Nov 04 04:43	0°♑	
desc. node	12502 Nov 22 14:44	21°♑34'19	
	12502 Nov 29 22:58	0°♒	
	12502 Dec 27 02:51	0°♓	
evening max el	12503 Jan 14 23:10	19°♓08'56	45°54'26
	12503 Jan 26 20:15	0°♈	
greatest brilliancy	12503 Feb 22 23:51	17°♈36'17	-4.8m
retrograde	12503 Mar 04 23:23	19°♈25'23	
asc. node	12503 Mar 15 16:08	17°♈07'30	
evening set	12503 Mar 19 16:00	15°♈10'56	
inferior conj	12503 Mar 25 23:20	11°♈25'15	2°33'38
minimum elong	12503 Mar 25 17:41	11°♈34'05	2°31'50
min. Earth dist.	12503 Mar 26 02:47	11°♈19'52	0.27919 AU
morning rise	12503 Mar 31 19:04	7°♈55'14	
direct	12503 Apr 16 02:15	3°♈19'47	
greatest brilliancy	12503 Apr 26 12:05	5°♈21'43	-4.8m
	12503 May 30 11:08	0°♉	
morning max el	12503 Jun 05 08:39	5°♉46'38	46°47'06
	12503 Jun 28 02:40	0°♊	
desc. node	12503 Jul 05 17:27	8°♊35'05	
	12503 Jul 24 04:31	0°♋	
	12503 Aug 18 07:08	0°♌	
	12503 Sep 11 23:45	0°♍	
	12503 Oct 06 12:01	0°♎	
asc. node	12503 Oct 26 12:03	24°♎34'01	
	12503 Oct 30 22:02	0°♏	
	12503 Nov 24 06:27	0°♐	
morning set	12503 Dec 06 16:43	15°♐20'03	
	12503 Dec 18 13:52	0°♑	
	12504 Jan 11 21:11	0°♒	
superior conj	12504 Jan 12 09:45	0°♒38'48	1°09'52
minimum elong	12504 Jan 12 19:03	1°♒07'27	1°10'26
max. Earth dist.	12504 Jan 12 23:16	1°♒20'27	1.73177 AU
	12504 Feb 05 05:02	0°♓	
desc. node	12504 Feb 15 02:22	12°♓11'06	
evening rise	12504 Feb 19 01:53	17°♓05'21	
	12504 Feb 29 13:19	0°♈	
	12504 Mar 24 21:23	0°♉	
	12504 Apr 18 05:10	0°♊	
	12504 May 12 14:06	0°♋	
	12504 Jun 06 03:36	0°♌	
asc. node	12504 Jun 06 20:20	0°♌50'44	
	12504 Jul 01 03:29	0°♍	
	12504 Jul 27 01:07	0°♎	
evening max el	12504 Aug 22 09:12	28°♎12'43	46°34'10
	12504 Aug 24 04:24	0°♏	
desc. node	12504 Sep 26 20:50	26°♏32'08	
greatest brilliancy	12504 Sep 30 11:03	28°♏06'17	-4.8m
	12504 Oct 07 09:03	0°♐	
retrograde	12504 Oct 11 10:59	0°♐19'16	
	12504 Oct 15 11:03	30°℞♏	
evening set	12504 Oct 28 02:59	24°♏59'03	
min. Earth dist.	12504 Oct 31 22:48	22°♏39'31	0.28381 AU
inferior conj	12504 Nov 01 18:51	22°♏08'16	-7°30'36
minimum elong	12504 Nov 01 09:25	22°♏22'59	7°28'26
morning rise	12504 Nov 05 16:15	19°♏45'37	
direct	12504 Nov 23 00:14	14°♏07'31	
greatest brilliancy	12504 Dec 02 13:22	15°♏47'05	-4.8m
	12504 Dec 25 23:46	0°♐	
morning max el	12505 Jan 10 19:57	14°♐09'31	45°42'25
asc. node	12505 Jan 17 22:42	21°♐11'03	
	12505 Jan 26 11:38	0°♑	
	12505 Feb 22 16:12	0°♒	
	12505 Mar 20 09:19	0°♓	
	12505 Apr 14 08:48	0°♈	
	12505 May 08 21:37	0°♉	
desc. node	12505 May 09 18:47	1°♉05'11	
	12505 Jun 02 03:10	0°♊	
	12505 Jun 26 03:58	0°♋	
morning set	12505 Jul 12 19:45	20°♋52'18	
	12505 Jul 20 02:29	0°♌	
	12505 Aug 13 00:50	0°♍	
superior conj	12505 Aug 21 11:53	10°♍35'30	-0°21'31
minimum elong	12505 Aug 21 17:13	10°♍52'10	0°21'39
max. Earth dist.	12505 Aug 23 14:37	13°♍14'12	1.71694 AU
asc. node	12505 Aug 30 09:30	21°♍43'25	
	12505 Sep 06 00:27	0°♎	
evening rise	12505 Sep 29 09:52	29°♎09'21	
	12505 Sep 30 02:10	0°♏	
	12505 Oct 24 06:59	0°♐	
	12505 Nov 17 16:39	0°♑	
	12505 Dec 12 09:26	0°♒	
desc. node	12505 Dec 20 02:11	9°♒15'30	
	12506 Jan 06 11:38	0°♓	
	12506 Feb 01 02:17	0°♈	
	12506 Feb 27 13:04	0°♉	
	12506 Mar 27 23:27	0°♊	
evening max el	12506 Mar 27 18:21	29°♉47'25	46°21'03
asc. node	12506 Apr 12 01:40	13°♊56'19	
greatest brilliancy	12506 May 07 02:09	29°♊52'51	-4.9m
	12506 May 07 10:35	0°♋	
retrograde	12506 May 16 14:15	1°♋34'58	
	12506 May 25 10:11	30°℞♊	
evening set	12506 Jun 03 18:54	25°♊19'12	
inferior conj	12506 Jun 06 07:54	23°♊45'33	9°12'41
minimum elong	12506 Jun 06 07:10	23°♊46'42	9°11'47
min. Earth dist.	12506 Jun 06 14:47	23°♊34'54	0.27388 AU
morning rise	12506 Jun 08 19:24	22°♊13'57	
direct	12506 Jun 27 02:43	15°♊50'17	
greatest brilliancy	12506 Jul 07 01:58	17°♊42'08	-4.9m
	12506 Jul 27 06:36	0°♋	
desc. node	12506 Aug 02 03:43	4°♋56'14	
morning max el	12506 Aug 16 13:20	18°♋32'16	46°53'31
	12506 Aug 27 15:06	0°♌	
	12506 Sep 23 16:09	0°♍	
	12506 Oct 19 11:00	0°♎	
	12506 Nov 13 16:06	0°♏	
asc. node	12506 Nov 23 01:23	11°♏17'12	
	12506 Dec 08 12:49	0°♐	
	12507 Jan 02 03:38	0°♑	
	12507 Jan 26 14:32	0°♒	
morning set	12507 Feb 13 09:58	21°♒55'45	
	12507 Feb 19 22:59	0°♓	
desc. node	12507 Mar 14 16:30	28°♓05'29	
	12507 Mar 16 05:29	0°♈	
max. Earth dist.	12507 Mar 20 22:16	5°♈49'18	1.72602 AU

superior conj	12507 Mar 23 14:07	9°♈07'09	-0°21'23
minimum elong	12507 Mar 23 09:06	8°♈51'38	0°21'12
	12507 Apr 09 09:49	0°♉	
evening rise	12507 May 01 12:29	27°♉32'11	
	12507 May 03 11:53	0°♊	
	12507 May 27 12:34	0°♋	
	12507 Jun 20 13:45	0°♌	
asc. node	12507 Jul 05 08:17	18°♌21'33	
	12507 Jul 14 17:55	0°♍	
	12507 Aug 08 04:05	0°♎	
	12507 Sep 02 00:56	0°♏	
	12507 Sep 27 18:07	0°♐	
desc. node	12507 Oct 25 06:25	29°♐56'19	
	12507 Oct 25 07:51	0°♑	
evening max el	12507 Nov 02 08:36	8°♑01'44	46°02'00
	12507 Nov 28 11:59	0°♒	
greatest brilliancy	12507 Dec 11 15:08	6°♒46'36	-4.7m
retrograde	12507 Dec 21 13:49	8°♒34'58	
evening set	12508 Jan 07 22:11	2°♒52'46	
inferior conj	12508 Jan 12 01:02	0°♒20'37	-7°09'56
minimum elong	12508 Jan 12 10:46	0°♒05'21	7°07'25
min. Earth dist.	12508 Jan 12 10:44	0°♒05'24	0.28877 AU
	12508 Jan 12 14:11	30°℞♑	
morning rise	12508 Jan 16 23:11	27°♑19'44	
direct	12508 Feb 02 10:07	22°♑05'32	
greatest brilliancy	12508 Feb 13 07:17	24°♑14'57	-4.8m
asc. node	12508 Feb 15 08:35	25°♑05'07	
	12508 Feb 24 08:19	0°♒	
morning max el	12508 Mar 22 20:27	23°♒10'44	46°02'25
	12508 Mar 29 15:12	0°♓	
	12508 Apr 26 04:27	0°♈	
	12508 May 21 22:18	0°♉	
desc. node	12508 Jun 06 07:38	18°♉27'43	
	12508 Jun 15 19:45	0°♊	
	12508 Jul 10 06:07	0°♋	
	12508 Aug 03 10:52	0°♌	
	12508 Aug 27 13:33	0°♍	
	12508 Sep 20 16:04	0°♎	
morning set	12508 Sep 24 01:43	4°♎13'56	
asc. node	12508 Sep 26 23:49	7°♎51'54	
	12508 Oct 14 19:10	0°♏	
superior conj	12508 Nov 01 05:42	21°♏39'06	1°12'14
minimum elong	12508 Oct 31 20:28	21°♏10'29	1°12'39
max. Earth dist.	12508 Nov 03 04:24	24°♏03'56	1.72676 AU
	12508 Nov 07 23:16	0°♐	
	12508 Dec 02 05:13	0°♑	
evening rise	12508 Dec 08 05:03	7°♑23'39	
	12508 Dec 26 14:06	0°♒	
desc. node	12509 Jan 16 14:40	25°♒43'56	
	12509 Jan 20 02:37	0°♓	
	12509 Feb 13 18:45	0°♈	
	12509 Mar 10 14:34	0°♉	
	12509 Apr 04 16:02	0°♊	
	12509 Apr 30 05:47	0°♋	
asc. node	12509 May 09 11:23	10°♋33'37	
	12509 May 27 01:29	0°♌	
evening max el	12509 Jun 08 21:29	13°♌20'45	46°47'37
	12509 Jun 26 21:45	0°♍	
greatest brilliancy	12509 Jul 18 22:27	13°♍53'36	-4.9m
retrograde	12509 Jul 29 05:10	15°♍52'28	
evening set	12509 Aug 13 04:12	11°♍27'32	
inferior conj	12509 Aug 18 22:27	8°♍04'07	2°43'27
minimum elong	12509 Aug 19 04:36	7°♍54'44	2°41'06
min. Earth dist.	12509 Aug 18 22:11	8°♍04'31	0.27038 AU
morning rise	12509 Aug 25 05:18	4°♍24'37	
desc. node	12509 Aug 29 13:24	2°♍22'41	
direct	12509 Sep 08 16:21	0°♍18'50	
greatest brilliancy	12509 Sep 18 14:07	2°♍08'20	-4.8m
	12509 Oct 26 18:25	0°♎	
morning max el	12509 Oct 28 06:51	1°♎28'03	46°12'39
	12509 Nov 24 15:45	0°♏	
asc. node	12509 Dec 20 13:38	29°♏12'59	
	12509 Dec 21 05:55	0°♐	
	12510 Jan 15 19:34	0°♑	
	12510 Feb 09 19:22	0°♒	
	12510 Mar 06 10:41	0°♓	
	12510 Mar 30 20:16	0°♈	
desc. node	12510 Apr 11 06:52	14°♈08'59	
	12510 Apr 24 01:19	0°♉	
morning set	12510 Apr 26 02:43	2°♉33'33	
	12510 May 18 02:35	0°♊	
max. Earth dist.	12510 Jun 03 05:45	20°♊12'09	1.71520 AU
superior conj	12510 Jun 05 04:12	22°♊37'46	-1°27'25
minimum elong	12510 Jun 05 03:10	22°♊34'32	1°28'19
	12510 Jun 11 01:11	0°♋	
	12510 Jul 04 22:50	0°♌	
evening rise	12510 Jul 15 11:10	13°♌11'15	
	12510 Jul 28 21:23	0°♍	
asc. node	12510 Aug 01 21:25	5°♍00'08	
	12510 Aug 21 22:32	0°♎	
	12510 Sep 15 04:03	0°♏	
	12510 Oct 09 16:38	0°♐	
	12510 Nov 03 16:55	0°♑	
desc. node	12510 Nov 21 16:40	21°♑02'04	
	12510 Nov 29 12:39	0°♒	
	12510 Dec 26 20:01	0°♓	
evening max el	12511 Jan 12 14:28	16°♓56'42	45°53'51
	12511 Jan 27 02:27	0°♈	
greatest brilliancy	12511 Feb 20 14:48	15°♈21'25	-4.8m
retrograde	12511 Mar 02 13:16	17°♈09'26	
asc. node	12511 Mar 14 18:16	14°♈11'56	
evening set	12511 Mar 17 06:12	12°♈55'46	
inferior conj	12511 Mar 23 14:02	9°♈09'10	2°12'02
minimum elong	12511 Mar 23 09:08	9°♈16'50	2°10'29
min. Earth dist.	12511 Mar 23 18:15	9°♈02'36	0.27945 AU
morning rise	12511 Mar 29 11:43	5°♈35'59	
direct	12511 Apr 13 17:14	1°♈03'26	
greatest brilliancy	12511 Apr 24 03:55	3°♈05'43	-4.8m
	12511 May 30 11:00	0°♉	
morning max el	12511 Jun 02 22:12	3°♉25'40	46°45'52
	12511 Jun 27 18:56	0°♊	
desc. node	12511 Jul 04 19:21	7°♊56'50	
	12511 Jul 23 18:13	0°♋	
	12511 Aug 17 19:34	0°♌	
	12511 Sep 11 11:26	0°♍	
	12511 Oct 05 23:12	0°♎	
asc. node	12511 Oct 25 13:56	24°♎06'14	
	12511 Oct 30 08:53	0°♏	
	12511 Nov 23 17:03	0°♐	
morning set	12511 Dec 04 09:33	13°♐11'30	
	12511 Dec 18 00:19	0°♑	
superior conj	12512 Jan 10 02:48	28°♑31'13	1°11'45
minimum elong	12512 Jan 10 11:49	28°♑59'02	1°12'22
max. Earth dist.	12512 Jan 10 17:08	29°♑15'25	1.73176 AU
	12512 Jan 11 07:35	0°♒	
	12512 Feb 04 15:31	0°♓	
desc. node	12512 Feb 14 04:17	11°♓44'30	
evening rise	12512 Feb 16 17:47	14°♓53'56	
	12512 Feb 28 23:58	0°♈	
	12512 Mar 24 08:18	0°♉	
	12512 Apr 17 16:25	0°♊	

	12512 May 12	01:48	0°♋		
asc. node	12512 Jun 05	22:09	0°♌18'38		
	12512 Jun 05	15:59	0°♌		
	12512 Jun 30	17:06	0°♍		
	12512 Jul 26	17:11	0°♎		
evening max el	12512 Aug 19	23:13	25°♎52'54	46°35'10	
	12512 Aug 24	03:31	0°♏		
desc. node	12512 Sep 25	22:55	24°♏57'24		
greatest brilliancy	12512 Sep 28	02:53	25°♏51'37	-4.8m	
retrograde	12512 Oct 09	01:49	28°♏04'08		
evening set	12512 Oct 25	14:34	22°♏49'37		
min. Earth dist.	12512 Oct 29	13:51	20°♏25'14	0.28327 AU	
inferior conj	12512 Oct 30	09:53	19°♏54'02	-7°19'16	
minimum elong	12512 Oct 30	00:06	20°♏09'17	7°16'57	
morning rise	12512 Nov 03	10:00	17°♏27'17		
direct	12512 Nov 20	14:17	11°♏54'00		
greatest brilliancy	12512 Nov 30	03:59	13°♏33'31	-4.8m	
	12512 Dec 26	07:04	0°♐		
morning max el	12513 Jan 08	09:31	11°♐52'57	45°42'44	
asc. node	12513 Jan 17	00:37	20°♐26'26		
	12513 Jan 26	05:00	0°♑		
	12513 Feb 22	06:02	0°♒		
	12513 Mar 19	21:41	0°♓		
	12513 Apr 13	20:27	0°♈		
	12513 May 08	08:54	0°♉		
desc. node	12513 May 08	20:38	0°♉36'08		
	12513 Jun 01	14:14	0°♊		
	12513 Jun 25	14:53	0°♋		
morning set	12513 Jul 10	07:31	18°♋24'41		
	12513 Jul 19	13:17	0°♌		
	12513 Aug 12	11:35	0°♍		
superior conj	12513 Aug 19	00:31	8°♍11'19	-0°25'10	
minimum elong	12513 Aug 19	06:42	8°♍30'39	0°25'18	
max. Earth dist.	12513 Aug 20	23:14	10°♍37'31	1.71664 AU	
asc. node	12513 Aug 29	11:25	21°♍15'57		
	12513 Sep 05	11:09	0°♎		
evening rise	12513 Sep 27	00:40	26°♎52'47		
	12513 Sep 29	12:53	0°♏		
	12513 Oct 23	17:49	0°♐		
	12513 Nov 17	03:43	0°♑		
	12513 Dec 11	20:55	0°♒		
desc. node	12513 Dec 19	04:02	8°♒46'06		
	12514 Jan 05	23:51	0°♓		
	12514 Jan 31	15:48	0°♈		
	12514 Feb 27	05:11	0°♉		
evening max el	12514 Mar 25	07:17	27°♉25'04	46°19'49	
	12514 Mar 27	22:46	0°♊		
asc. node	12514 Apr 11	03:36	12°♊51'02		
greatest brilliancy	12514 May 04	14:36	27°♊28'50	-4.8m	
retrograde	12514 May 14	03:22	29°♊11'48		
evening set	12514 Jun 01	06:12	22°♊58'07		
inferior conj	12514 Jun 03	21:07	21°♊21'44	9°11'12	
minimum elong	12514 Jun 03	19:24	21°♊24'25	9°10'17	
min. Earth dist.	12514 Jun 04	03:29	21°♊11'53	0.27412 AU	
morning rise	12514 Jun 06	08:33	19°♊50'22		
direct	12514 Jun 24	16:02	13°♊25'41		
greatest brilliancy	12514 Jul 04	15:37	15°♊18'13	-4.9m	
	12514 Jul 27	18:18	0°♋		
desc. node	12514 Aug 01	05:48	3°♋53'12		
morning max el	12514 Aug 14	03:41	16°♋10'46	46°54'25	
	12514 Aug 27	10:12	0°♌		
	12514 Sep 23	07:09	0°♍		
	12514 Oct 19	00:07	0°♎		
	12514 Nov 13	04:10	0°♏		
asc. node	12514 Nov 22	03:12	10°♏47'09		
	12514 Dec 08	00:13	0°♐		
	12515 Jan 01	14:39	0°♑		
	12515 Jan 26	01:21	0°♒		
morning set	12515 Feb 11	02:32	19°♒45'43		
	12515 Feb 19	09:43	0°♓		
desc. node	12515 Mar 13	18:29	27°♓38'28		
	12515 Mar 15	16:12	0°♈		
max. Earth dist.	12515 Mar 18	17:27	3°♈46'48	1.72636 AU	
superior conj	12515 Mar 21	04:41	6°♈50'19	-0°17'54	
minimum elong	12515 Mar 21	00:29	6°♈37'18	0°17'43	
	12515 Apr 08	20:35	0°♉		
evening rise	12515 Apr 29	02:05	25°♉11'08		
	12515 May 02	22:46	0°♊		
	12515 May 26	23:37	0°♋		
	12515 Jun 20	01:04	0°♌		
asc. node	12515 Jul 04	10:10	17°♌51'48		
	12515 Jul 14	05:35	0°♍		
	12515 Aug 07	16:15	0°♎		
	12515 Sep 01	14:00	0°♏		
	12515 Sep 27	09:01	0°♐		
desc. node	12515 Oct 24	08:22	29°♐11'17		
	12515 Oct 25	03:33	0°♑		
evening max el	12515 Oct 31	00:19	5°♑49'42	46°03'01	
	12515 Nov 29	15:17	0°♒		
greatest brilliancy	12515 Dec 09	05:27	4°♒34'24	-4.8m	
retrograde	12515 Dec 19	06:07	6°♒24'14		
evening set	12516 Jan 05	16:52	0°♒37'26		
	12516 Jan 06	17:43	30°℞♑		
inferior conj	12516 Jan 09	16:59	28°♑09'18	-7°21'25	
minimum elong	12516 Jan 10	02:26	27°♑54'27	7°19'01	
min. Earth dist.	12516 Jan 10	01:36	27°♑55'47	0.28897 AU	
morning rise	12516 Jan 14	11:55	25°♑13'19		
direct	12516 Jan 31	02:38	19°♑54'13		
greatest brilliancy	12516 Feb 10	22:17	22°♑02'42	-4.8m	
asc. node	12516 Feb 14	10:43	23°♑32'41		
	12516 Feb 25	06:07	0°♒		
morning max el	12516 Mar 20	13:06	21°♒00'00	46°01'06	
	12516 Mar 29	10:35	0°♓		
	12516 Apr 25	19:18	0°♈		
	12516 May 21	11:21	0°♉		
desc. node	12516 Jun 05	09:33	17°♉55'50		
	12516 Jun 15	07:55	0°♊		
	12516 Jul 09	17:47	0°♋		
	12516 Aug 02	22:14	0°♌		
	12516 Aug 27	00:42	0°♍		
	12516 Sep 20	03:02	0°♎		
morning set	12516 Sep 21	16:04	1°♎55'11		
asc. node	12516 Sep 26	01:42	7°♎23'45		
	12516 Oct 14	05:59	0°♏		
superior conj	12516 Oct 29	21:34	19°♏25'57	1°10'19	
minimum elong	12516 Oct 29	12:02	18°♏56'22	1°10'40	
max. Earth dist.	12516 Oct 31	23:11	21°♏59'51	1.72644 AU	
	12516 Nov 07	10:02	0°♐		
	12516 Dec 01	16:00	0°♑		
evening rise	12516 Dec 05	21:31	5°♑13'11		
	12516 Dec 26	01:01	0°♒		
desc. node	12517 Jan 15	16:38	25°♒16'01		
	12517 Jan 19	13:48	0°♓		
	12517 Feb 13	06:21	0°♈		
	12517 Mar 10	02:47	0°♉		
	12517 Apr 04	05:15	0°♊		
	12517 Apr 29	20:49	0°♋		
asc. node	12517 May 08	13:19	9°♋53'52		
	12517 May 26	20:38	0°♌		
evening max el	12517 Jun 06	12:16	11°♌00'41	46°47'13	
	12517 Jun 27	10:19	0°♍		

greatest brilliancy	12517 Jul 16	12:46	11°♍30'31	-4.9m	
retrograde	12517 Jul 26	18:42	13°♍28'11		
evening set	12517 Aug 10	19:41	9°♍00'42		
inferior conj	12517 Aug 16	11:28	5°♍40'18	3°06'25	
minimum elong	12517 Aug 16	18:23	5°♍29'44	3°03'50	
min. Earth dist.	12517 Aug 16	12:06	5°♍39'19	0.27025 AU	
morning rise	12517 Aug 22	17:24	2°♍01'52		
	12517 Aug 27	01:23	30°℞♌		
desc. node	12517 Aug 28	15:30	29°♌24'34		
direct	12517 Sep 06	05:48	27°♌55'16		
greatest brilliancy	12517 Sep 16	03:00	29°♌44'25	-4.8m	
	12517 Sep 16	20:09	0°♍		
morning max el	12517 Oct 25	20:50	29°♍08'45	46°14'07	
	12517 Oct 26	17:50	0°♎		
	12517 Nov 24	07:58	0°♏		
asc. node	12517 Dec 19	15:37	28°♏39'14		
	12517 Dec 20	19:31	0°♐		
	12518 Jan 15	07:53	0°♑		
	12518 Feb 09	06:59	0°♒		
	12518 Mar 05	21:55	0°♓		
	12518 Mar 30	07:18	0°♈		
desc. node	12518 Apr 10	08:37	13°♈40'19		
morning set	12518 Apr 23	15:17	0°♉09'19		
	12518 Apr 23	12:17	0°♉		
	12518 May 17	13:32	0°♊		
max. Earth dist.	12518 May 31	11:45	17°♊26'17	1.71540 AU	
superior conj	12518 Jun 02	16:19	20°♊11'02	-1°27'10	
minimum elong	12518 Jun 02	14:15	20°♊04'33	1°28'03	
	12518 Jun 10	12:07	0°♋		
	12518 Jul 04	09:47	0°♌		
evening rise	12518 Jul 12	22:41	10°♌42'31		
	12518 Jul 28	08:24	0°♍		
asc. node	12518 Jul 31	23:23	4°♍31'48		
	12518 Aug 21	09:42	0°♎		
	12518 Sep 14	15:28	0°♏		
	12518 Oct 09	04:31	0°♐		
	12518 Nov 03	05:36	0°♑		
desc. node	12518 Nov 20	18:33	20°♑28'10		
	12518 Nov 29	02:56	0°♒		
	12518 Dec 26	14:04	0°♓		
evening max el	12519 Jan 10	04:58	14°♓41'28	45°53'28	
	12519 Jan 27	11:40	0°♈		
greatest brilliancy	12519 Feb 18	06:08	13°♈06'17	-4.8m	
retrograde	12519 Feb 28	03:09	14°♈53'19		
asc. node	12519 Mar 13	20:13	11°♈12'14		
evening set	12519 Mar 14	20:46	10°♈39'49		
inferior conj	12519 Mar 21	04:57	6°♈52'50	1°50'26	
minimum elong	12519 Mar 21	00:49	6°♈59'18	1°49'08	
min. Earth dist.	12519 Mar 21	10:05	6°♈44'48	0.27972 AU	
morning rise	12519 Mar 27	04:25	3°♈16'45		
	12519 Apr 03	13:33	30°℞♓		
direct	12519 Apr 11	07:58	28°♓46'37		
	12519 Apr 19	08:48	0°♈		
greatest brilliancy	12519 Apr 21	20:28	0°♈50'01	-4.8m	
	12519 May 30	10:10	0°♉		
morning max el	12519 May 31	11:41	1°♉03'35	46°44'40	
	12519 Jun 27	11:15	0°♊		
desc. node	12519 Jul 03	21:21	7°♊18'15		
	12519 Jul 23	08:05	0°♋		
	12519 Aug 17	08:12	0°♌		
	12519 Sep 10	23:19	0°♍		
	12519 Oct 05	10:37	0°♎		
asc. node	12519 Oct 24	15:42	23°♎37'21		
	12519 Oct 29	19:58	0°♏		
	12519 Nov 23	03:56	0°♐		
morning set	12519 Dec 02	02:19	11°♐01'44		
	12519 Dec 17	11:04	0°♑		
superior conj	12520 Jan 07	19:48	26°♑22'34	1°13'32	
minimum elong	12520 Jan 08	04:31	26°♑49'25	1°14'10	
max. Earth dist.	12520 Jan 08	09:47	27°♑05'40	1.73174 AU	
	12520 Jan 10	18:18	0°♒		
	12520 Feb 04	02:18	0°♓		
desc. node	12520 Feb 13	06:10	11°♓17'01		
evening rise	12520 Feb 14	09:39	12°♓41'37		
	12520 Feb 28	10:54	0°♈		
	12520 Mar 23	19:28	0°♉		
	12520 Apr 17	03:55	0°♊		
	12520 May 11	13:47	0°♋		
asc. node	12520 Jun 05	00:06	29°♋46'02		
	12520 Jun 05	04:43	0°♌		
	12520 Jun 30	07:07	0°♍		
	12520 Jul 26	09:48	0°♎		
evening max el	12520 Aug 17	13:04	23°♎32'06	46°36'15	
	12520 Aug 24	03:57	0°♏		
desc. node	12520 Sep 25	00:49	23°♏18'40		
greatest brilliancy	12520 Sep 25	18:15	23°♏35'59	-4.8m	
retrograde	12520 Oct 06	16:56	25°♏48'59		
evening set	12520 Oct 23	02:16	20°♏39'39		
min. Earth dist.	12520 Oct 27	04:55	18°♏10'51	0.28276 AU	
inferior conj	12520 Oct 28	01:01	17°♏39'36	-7°07'13	
minimum elong	12520 Oct 27	14:56	17°♏55'16	7°04'45	
morning rise	12520 Nov 01	03:56	15°♏08'50		
direct	12520 Nov 18	04:21	9°♏40'07		
greatest brilliancy	12520 Nov 27	18:57	11°♏20'09	-4.8m	
	12520 Dec 26	12:18	0°♐		
morning max el	12521 Jan 05	23:49	9°♐37'41	45°43'02	
asc. node	12521 Jan 16	02:41	19°♐42'19		
	12521 Jan 25	22:12	0°♑		
	12521 Feb 21	19:58	0°♒		
	12521 Mar 19	10:12	0°♓		
	12521 Apr 13	08:15	0°♈		
desc. node	12521 May 07	22:29	0°♉06'45		
	12521 May 07	20:17	0°♉		
	12521 Jun 01	01:23	0°♊		
	12521 Jun 25	01:54	0°♋		
morning set	12521 Jul 07	19:14	15°♋56'29		
	12521 Jul 19	00:14	0°♌		
	12521 Aug 11	22:28	0°♍		
superior conj	12521 Aug 16	13:09	5°♍46'37	-0°28'46	
minimum elong	12521 Aug 16	20:09	6°♍08'32	0°28'54	
max. Earth dist.	12521 Aug 18	07:44	7°♍59'54	1.71636 AU	
asc. node	12521 Aug 28	13:15	20°♍47'46		
	12521 Sep 04	22:00	0°♎		
evening rise	12521 Sep 24	15:36	24°♎36'15		
	12521 Sep 28	23:43	0°♏		
	12521 Oct 23	04:43	0°♐		
	12521 Nov 16	14:50	0°♑		
	12521 Dec 11	08:29	0°♒		
desc. node	12521 Dec 18	06:03	8°♒17'00		
	12522 Jan 05	12:12	0°♓		
	12522 Jan 31	05:32	0°♈		
	12522 Feb 26	21:41	0°♉		
evening max el	12522 Mar 22	21:21	25°♉05'31	46°18'44	
	12522 Mar 27	23:17	0°♊		
asc. node	12522 Apr 10	05:34	11°♊43'53		
greatest brilliancy	12522 May 02	02:38	25°♊04'42	-4.8m	
retrograde	12522 May 11	17:02	26°♊49'01		
evening set	12522 May 29	17:08	20°♊38'13		
inferior conj	12522 Jun 01	10:29	18°♊58'16	9°08'45	
minimum elong	12522 Jun 01	07:48	19°♊02'24	9°07'46	
min. Earth dist.	12522 Jun 01	15:55	18°♊49'52	0.27435 AU	

morning rise	12522 Jun 03 22:26	17°♊26'15	
direct	12522 Jun 22 06:03	11°♊01'47	
greatest brilliancy	12522 Jul 02 04:47	12°♊54'09	-4.9m
	12522 Jul 28 02:51	0°♋	
desc. node	12522 Jul 31 07:51	2°♋51'50	
morning max el	12522 Aug 11 18:37	13°♋50'57	46°55'04
	12522 Aug 27 04:46	0°♌	
	12522 Sep 22 21:56	0°♍	
	12522 Oct 18 13:08	0°♎	
	12522 Nov 12 16:08	0°♏	
asc. node	12522 Nov 21 05:11	10°♏17'43	
	12522 Dec 07 11:33	0°♐	
	12523 Jan 01 01:35	0°♑	
	12523 Jan 25 12:05	0°♒	
morning set	12523 Feb 08 19:14	17°♒36'24	
	12523 Feb 18 20:22	0°♓	
desc. node	12523 Mar 12 20:15	27°♓10'56	
	12523 Mar 15 02:52	0°♈	
max. Earth dist.	12523 Mar 16 11:39	1°♈41'28	1.72672 AU
superior conj	12523 Mar 18 19:13	4°♈33'33	-0°14'24
minimum elong	12523 Mar 18 15:51	4°♈23'05	0°14'12
behind sun begin	12523 Mar 18 04:28	3°♈47'51	
behind sun end	12523 Mar 19 03:13	4°♈58'20	
	12523 Apr 08 07:19	0°♉	
evening rise	12523 Apr 26 15:31	22°♉49'42	
	12523 May 02 09:36	0°♊	
	12523 May 26 10:37	0°♋	
	12523 Jun 19 12:18	0°♌	
asc. node	12523 Jul 03 12:09	17°♌22'37	
	12523 Jul 13 17:10	0°♍	
	12523 Aug 07 04:23	0°♎	
	12523 Sep 01 03:06	0°♏	
	12523 Sep 27 00:03	0°♐	
desc. node	12523 Oct 23 10:21	28°♐25'53	
	12523 Oct 24 23:48	0°♑	
evening max el	12523 Oct 28 16:31	3°♑39'00	46°04'03
	12523 Dec 01 06:18	0°♒	
greatest brilliancy	12523 Dec 06 20:08	2°♒23'07	-4.8m
retrograde	12523 Dec 16 22:17	4°♒13'52	
	12523 Dec 31 15:41	30°℞♑	
evening set	12524 Jan 03 11:32	28°♑22'55	
inferior conj	12524 Jan 07 08:55	25°♑58'36	-7°32'16
minimum elong	12524 Jan 07 18:04	25°♑44'16	7°29'59
min. Earth dist.	12524 Jan 07 16:23	25°♑46'54	0.28912 AU
morning rise	12524 Jan 12 00:34	23°♑07'30	
direct	12524 Jan 28 19:18	17°♑43'51	
greatest brilliancy	12524 Feb 08 12:48	19°♑50'38	-4.8m
asc. node	12524 Feb 13 12:38	22°♑03'47	
	12524 Feb 25 21:50	0°♒	
morning max el	12524 Mar 18 04:57	18°♒48'01	45°59'39
	12524 Mar 29 05:12	0°♓	
	12524 Apr 25 09:47	0°♈	
	12524 May 21 00:10	0°♉	
desc. node	12524 Jun 04 11:32	17°♉24'39	
	12524 Jun 14 19:53	0°♊	
	12524 Jul 09 05:16	0°♋	
	12524 Aug 02 09:23	0°♌	
	12524 Aug 26 11:36	0°♍	
morning set	12524 Sep 19 06:16	29°♍36'44	
	12524 Sep 19 13:45	0°♎	
asc. node	12524 Sep 25 03:25	6°♎55'50	
	12524 Oct 13 16:36	0°♏	
superior conj	12524 Oct 27 13:22	17°♏13'11	1°08'16
minimum elong	12524 Oct 27 03:35	16°♏42'49	1°08'35
max. Earth dist.	12524 Oct 29 17:41	19°♏55'32	1.72612 AU
	12524 Nov 06 20:36	0°♐	
	12524 Dec 01 02:36	0°♑	
evening rise	12524 Dec 03 13:59	3°♑03'13	
	12524 Dec 25 11:43	0°♒	
desc. node	12525 Jan 14 18:33	24°♒48'44	
	12525 Jan 19 00:43	0°♓	
	12525 Feb 12 17:40	0°♈	
	12525 Mar 09 14:46	0°♉	
	12525 Apr 03 18:18	0°♊	
	12525 Apr 29 11:49	0°♋	
asc. node	12525 May 07 15:17	9°♋14'26	
	12525 May 26 16:10	0°♌	
evening max el	12525 Jun 04 02:09	8°♌38'44	46°46'41
	12525 Jun 28 02:59	0°♍	
greatest brilliancy	12525 Jul 14 03:34	9°♍08'12	-4.9m
retrograde	12525 Jul 24 07:35	11°♍03'54	
evening set	12525 Aug 08 11:12	6°♍33'45	
inferior conj	12525 Aug 14 00:21	3°♍16'44	3°29'11
minimum elong	12525 Aug 14 08:00	3°♍05'02	3°26'22
min. Earth dist.	12525 Aug 14 02:11	3°♍13'56	0.27013 AU
	12525 Aug 19 13:52	30°℞♌	
morning rise	12525 Aug 20 05:04	29°♌39'31	
desc. node	12525 Aug 27 17:22	26°♌31'50	
direct	12525 Sep 03 18:35	25°♌31'52	
greatest brilliancy	12525 Sep 13 16:10	27°♌21'07	-4.8m
	12525 Sep 19 16:52	0°♍	
morning max el	12525 Oct 23 09:38	26°♍47'09	46°15'36
	12525 Oct 26 15:57	0°♎	
	12525 Nov 23 23:37	0°♏	
asc. node	12525 Dec 18 17:33	28°♏06'23	
	12525 Dec 20 08:43	0°♐	
	12526 Jan 14 19:51	0°♑	
	12526 Feb 08 18:16	0°♒	
	12526 Mar 05 08:48	0°♓	
	12526 Mar 29 17:59	0°♈	
desc. node	12526 Apr 09 10:30	13°♈13'11	
morning set	12526 Apr 21 04:00	27°♈46'40	
	12526 Apr 22 22:54	0°♉	
	12526 May 17 00:08	0°♊	
max. Earth dist.	12526 May 28 16:52	14°♊38'44	1.71569 AU
superior conj	12526 May 31 04:22	17°♊45'07	-1°26'46
minimum elong	12526 May 31 01:16	17°♊35'24	1°27'37
	12526 Jun 09 22:46	0°♋	
	12526 Jul 03 20:29	0°♌	
evening rise	12526 Jul 10 09:49	8°♌13'17	
	12526 Jul 27 19:10	0°♍	
asc. node	12526 Jul 31 01:10	4°♍03'40	
	12526 Aug 20 20:37	0°♎	
	12526 Sep 14 02:38	0°♏	
	12526 Oct 08 16:07	0°♐	
	12526 Nov 02 18:02	0°♑	
desc. node	12526 Nov 19 20:36	19°♑55'26	
	12526 Nov 28 17:04	0°♒	
	12526 Dec 26 08:13	0°♓	
evening max el	12527 Jan 07 18:46	12°♓25'34	45°53'11
	12527 Jan 27 23:34	0°♈	
greatest brilliancy	12527 Feb 15 21:20	10°♈52'10	-4.8m
retrograde	12527 Feb 25 17:18	12°♈38'43	
evening set	12527 Mar 12 11:32	8°♈24'47	
asc. node	12527 Mar 12 22:09	8°♈10'18	
inferior conj	12527 Mar 18 19:54	4°♈37'53	1°28'39
minimum elong	12527 Mar 18 16:33	4°♈43'07	1°27'38
min. Earth dist.	12527 Mar 19 01:57	4°♈28'25	0.27998 AU
morning rise	12527 Mar 24 21:02	0°♈59'22	
	12527 Mar 26 17:44	30°℞♓	
direct	12527 Apr 08 22:33	26°♓31'06	

greatest brilliancy	12527 Apr 19 13:13	28°♓36'09	-4.8m
	12527 Apr 22 20:22	0°♈	
morning max el	12527 May 29 01:28	28°♈43'46	46°43'25
	12527 May 30 07:50	0°♉	
	12527 Jun 27 02:50	0°♊	
desc. node	12527 Jul 02 23:21	6°♊41'12	
	12527 Jul 22 21:28	0°♋	
	12527 Aug 16 20:27	0°♌	
	12527 Sep 10 10:54	0°♍	
	12527 Oct 04 21:44	0°♎	
asc. node	12527 Oct 23 17:41	23°♎10'06	
	12527 Oct 29 06:45	0°♏	
	12527 Nov 22 14:29	0°♐	
morning set	12527 Nov 29 18:42	8°♐51'42	
	12527 Dec 16 21:29	0°♑	
superior conj	12528 Jan 05 12:36	24°♑14'13	1°15'13
minimum elong	12528 Jan 05 20:55	24°♑39'54	1°15'53
max. Earth dist.	12528 Jan 06 03:00	24°♑58'38	1.73174 AU
	12528 Jan 10 04:42	0°♒	
	12528 Feb 03 12:47	0°♓	
evening rise	12528 Feb 12 01:29	10°♓30'13	
desc. node	12528 Feb 12 07:57	10°♓50'07	
	12528 Feb 27 21:32	0°♈	
	12528 Mar 23 06:19	0°♉	
	12528 Apr 16 15:04	0°♊	
	12528 May 11 01:24	0°♋	
asc. node	12528 Jun 04 02:07	29°♋14'44	
	12528 Jun 04 17:07	0°♌	
	12528 Jun 29 20:52	0°♍	
	12528 Jul 26 02:24	0°♎	
evening max el	12528 Aug 15 03:07	21°♎12'30	46°37'11
	12528 Aug 24 05:25	0°♏	
greatest brilliancy	12528 Sep 23 08:49	21°♏19'22	-4.8m
desc. node	12528 Sep 24 02:51	21°♏36'22	
retrograde	12528 Oct 04 08:09	23°♏33'30	
evening set	12528 Oct 20 13:39	18°♏29'05	
min. Earth dist.	12528 Oct 24 19:23	15°♏56'17	0.28224 AU
inferior conj	12528 Oct 25 15:46	15°♏24'41	-6°54'09
minimum elong	12528 Oct 25 05:29	15°♏40'39	6°51'35
morning rise	12528 Oct 29 21:40	12°♏49'58	
direct	12528 Nov 15 18:22	7°♏25'44	
greatest brilliancy	12528 Nov 25 09:18	9°♏06'15	-4.8m
	12528 Dec 26 15:26	0°♐	
morning max el	12529 Jan 03 14:38	7°♐24'23	45°43'25
asc. node	12529 Jan 15 04:38	18°♐59'12	
	12529 Jan 25 14:44	0°♑	
	12529 Feb 21 09:27	0°♒	
	12529 Mar 18 22:21	0°♓	
	12529 Apr 12 19:43	0°♈	
desc. node	12529 May 07 00:27	29°♈38'43	
	12529 May 07 07:21	0°♉	
	12529 May 31 12:12	0°♊	
	12529 Jun 24 12:33	0°♋	
morning set	12529 Jul 05 07:16	13°♋30'27	
	12529 Jul 18 10:48	0°♌	
	12529 Aug 11 09:00	0°♍	
superior conj	12529 Aug 14 01:52	3°♍23'09	-0°32'19
minimum elong	12529 Aug 14 09:38	3°♍47'29	0°32'26
max. Earth dist.	12529 Aug 15 19:05	5°♍32'13	1.71614 AU
asc. node	12529 Aug 27 15:04	20°♍20'34	
	12529 Sep 04 08:32	0°♎	
evening rise	12529 Sep 22 06:25	22°♎20'13	
	12529 Sep 28 10:17	0°♏	
	12529 Oct 22 15:24	0°♐	
	12529 Nov 16 01:46	0°♑	
	12529 Dec 10 19:53	0°♒	
desc. node	12529 Dec 17 07:56	7°♒48'03	
	12530 Jan 05 00:24	0°♓	
	12530 Jan 30 19:10	0°♈	
	12530 Feb 26 14:19	0°♉	
evening max el	12530 Mar 20 12:06	22°♉48'18	46°17'36
	12530 Mar 28 00:51	0°♊	
asc. node	12530 Apr 09 07:40	10°♊35'40	
greatest brilliancy	12530 Apr 29 14:38	22°♊41'18	-4.8m
retrograde	12530 May 09 06:50	24°♊26'42	
evening set	12530 May 27 03:38	18°♊19'49	
inferior conj	12530 May 29 23:48	16°♊35'28	9°05'21
minimum elong	12530 May 29 20:13	16°♊41'00	9°04'18
min. Earth dist.	12530 May 30 04:11	16°♊28'42	0.27450 AU
morning rise	12530 Jun 01 12:46	15°♊01'54	
direct	12530 Jun 19 20:09	8°♊38'53	
greatest brilliancy	12530 Jun 29 17:22	10°♊30'16	-4.9m
	12530 Jul 28 08:34	0°♋	
desc. node	12530 Jul 30 09:43	1°♋52'24	
morning max el	12530 Aug 09 09:15	11°♋31'24	46°55'45
	12530 Aug 26 22:30	0°♌	
	12530 Sep 22 12:13	0°♍	
	12530 Oct 18 01:47	0°♎	
	12530 Nov 12 03:51	0°♏	
asc. node	12530 Nov 20 07:05	9°♏48'45	
	12530 Dec 06 22:41	0°♐	
	12530 Dec 31 12:23	0°♑	
	12531 Jan 24 22:41	0°♒	
morning set	12531 Feb 06 11:46	15°♒27'01	
	12531 Feb 18 06:54	0°♓	
desc. node	12531 Mar 11 22:05	26°♓44'03	
max. Earth dist.	12531 Mar 14 04:33	29°♓32'37	1.72706 AU
	12531 Mar 14 13:24	0°♈	
superior conj	12531 Mar 16 09:39	2°♈16'57	-0°10'51
minimum elong	12531 Mar 16 07:06	2°♈09'05	0°10'41
behind sun begin	12531 Mar 15 12:53	1°♈12'41	
behind sun end	12531 Mar 17 01:19	3°♈05'29	
	12531 Apr 07 17:55	0°♉	
evening rise	12531 Apr 24 04:54	20°♉28'30	
	12531 May 01 20:21	0°♊	
	12531 May 25 21:33	0°♋	
	12531 Jun 18 23:28	0°♌	
asc. node	12531 Jul 02 13:57	16°♌53'10	
	12531 Jul 13 04:38	0°♍	
	12531 Aug 06 16:22	0°♎	
	12531 Aug 31 16:04	0°♏	
	12531 Sep 26 15:05	0°♐	
desc. node	12531 Oct 22 12:23	27°♐40'22	
	12531 Oct 24 20:33	0°♑	
evening max el	12531 Oct 26 08:24	1°♑27'55	46°04'51
	12531 Dec 03 21:14	0°♒	
greatest brilliancy	12531 Dec 04 11:24	0°♒12'42	-4.8m
retrograde	12531 Dec 14 14:01	2°♒03'36	
	12531 Dec 24 18:19	30°℞♑	
evening set	12532 Jan 01 06:11	26°♑08'49	
inferior conj	12532 Jan 05 00:56	23°♑48'10	-7°42'21
minimum elong	12532 Jan 05 09:41	23°♑34'25	7°40'12
min. Earth dist.	12532 Jan 05 07:24	23°♑37'59	0.28927 AU
morning rise	12532 Jan 09 13:12	21°♑01'48	
direct	12532 Jan 26 11:46	15°♑33'46	
greatest brilliancy	12532 Feb 06 03:31	17°♑38'44	-4.8m
asc. node	12532 Feb 12 14:35	20°♑37'49	
	12532 Feb 26 09:28	0°♒	
morning max el	12532 Mar 15 19:55	16°♒33'46	45°58'13
	12532 Mar 28 23:20	0°♓	
	12532 Apr 25 00:05	0°♈	

	12532 May 20	12:54	0°♉		
desc. node	12532 Jun 03	13:24	16°♉53'13		
	12532 Jun 14	07:49	0°♊		
	12532 Jul 08	16:44	0°♋		
	12532 Aug 01	20:32	0°♌		
	12532 Aug 25	22:29	0°♍		
morning set	12532 Sep 16	20:51	27°♍19'24		
	12532 Sep 19	00:27	0°♎		
asc. node	12532 Sep 24	05:23	6°♎28'47		
	12532 Oct 13	03:10	0°♏		
superior conj	12532 Oct 25	05:32	15°♏01'43	1°06'08	
minimum elong	12532 Oct 24	19:35	14°♏30'48	1°06'25	
max. Earth dist.	12532 Oct 27	11:57	17°♏50'36	1.72578 AU	
	12532 Nov 06	07:07	0°♐		
	12532 Nov 30	13:10	0°♑		
evening rise	12532 Dec 01	06:43	0°♑54'08		
	12532 Dec 24	22:27	0°♒		
desc. node	12533 Jan 13	20:19	24°♒20'46		
	12533 Jan 18	11:43	0°♓		
	12533 Feb 12	05:07	0°♈		
	12533 Mar 09	02:55	0°♉		
	12533 Apr 03	07:36	0°♊		
	12533 Apr 29	03:11	0°♋		
asc. node	12533 May 06	17:18	8°♋34'14		
	12533 May 26	12:29	0°♌		
evening max el	12533 Jun 01	14:55	6°♌13'30	46°46'05	
	12533 Jun 29	01:51	0°♍		
greatest brilliancy	12533 Jul 11	18:41	6°♍45'33	-4.9m	
retrograde	12533 Jul 21	20:04	8°♍39'09		
evening set	12533 Aug 06	02:48	4°♍05'50		
inferior conj	12533 Aug 11	13:13	0°♍52'39	3°51'33	
minimum elong	12533 Aug 11	21:32	0°♍39'54	3°48'32	
min. Earth dist.	12533 Aug 11	16:31	0°♍47'36	0.27002 AU	
	12533 Aug 12	23:41	30°℞♌		
morning rise	12533 Aug 17	16:26	27°♌16'59		
desc. node	12533 Aug 26	19:26	23°♌43'46		
direct	12533 Sep 01	06:53	23°♌07'39		
greatest brilliancy	12533 Sep 11	05:49	24°♌57'44	-4.8m	
	12533 Sep 21	11:03	0°♍		
morning max el	12533 Oct 20	22:08	24°♍24'16	46°17'24	
	12533 Oct 26	13:21	0°♎		
	12533 Nov 23	15:05	0°♏		
asc. node	12533 Dec 17	19:27	27°♏33'23		
	12533 Dec 19	21:52	0°♐		
	12534 Jan 14	07:51	0°♑		
	12534 Feb 08	05:39	0°♒		
	12534 Mar 04	19:52	0°♓		
	12534 Mar 29	04:54	0°♈		
desc. node	12534 Apr 08	12:27	12°♈45'31		
morning set	12534 Apr 18	16:39	25°♈23'05		
	12534 Apr 22	09:45	0°♉		
	12534 May 16	10:59	0°♊		
max. Earth dist.	12534 May 26	00:37	11°♊58'41	1.71601 AU	
superior conj	12534 May 28	16:19	15°♊18'13	-1°26'10	
minimum elong	12534 May 28	12:12	15°♊05'21	1°27'00	
	12534 Jun 09	09:38	0°♋		
	12534 Jul 03	07:24	0°♌		
evening rise	12534 Jul 07	20:55	5°♌43'18		
	12534 Jul 27	06:13	0°♍		
asc. node	12534 Jul 30	03:02	3°♍34'59		
	12534 Aug 20	07:49	0°♎		
	12534 Sep 13	14:06	0°♏		
	12534 Oct 08	04:01	0°♐		
	12534 Nov 02	06:45	0°♑		
desc. node	12534 Nov 18	22:31	19°♑21'35		
	12534 Nov 28	07:31	0°♒		
	12534 Dec 26	03:02	0°♓		
evening max el	12535 Jan 05	08:41	10°♓09'38	45°52'56	
	12535 Jan 28	15:56	0°♈		
greatest brilliancy	12535 Feb 13	12:00	8°♈36'57	-4.8m	
retrograde	12535 Feb 23	07:57	10°♈23'44		
evening set	12535 Mar 10	02:33	6°♈08'48		
asc. node	12535 Mar 12	00:16	5°♈04'36		
inferior conj	12535 Mar 16	10:54	2°♈22'11	1°06'45	
minimum elong	12535 Mar 16	08:22	2°♈26'08	1°06'02	
min. Earth dist.	12535 Mar 16	17:39	2°♈11'39	0.28033 AU	
	12535 Mar 20	07:17	30°℞♓		
morning rise	12535 Mar 22	13:36	28°♓41'40		
direct	12535 Apr 06	13:34	24°♓14'41		
greatest brilliancy	12535 Apr 17	05:56	26°♓21'25	-4.8m	
	12535 Apr 24	19:27	0°♈		
morning max el	12535 May 26	16:20	26°♈25'31	46°42'09	
	12535 May 30	05:11	0°♉		
	12535 Jun 26	18:35	0°♊		
desc. node	12535 Jul 02	01:13	6°♊02'58		
	12535 Jul 22	11:05	0°♋		
	12535 Aug 16	08:59	0°♌		
	12535 Sep 09	22:47	0°♍		
	12535 Oct 04	09:11	0°♎		
asc. node	12535 Oct 22	19:31	22°♎41'20		
	12535 Oct 28	17:52	0°♏		
	12535 Nov 22	01:21	0°♐		
morning set	12535 Nov 27	11:19	6°♐41'17		
	12535 Dec 16	08:13	0°♑		
superior conj	12536 Jan 03	05:44	22°♑06'00	1°16'45	
minimum elong	12536 Jan 03	13:39	22°♑30'25	1°17'28	
max. Earth dist.	12536 Jan 03	22:33	22°♑57'54	1.73169 AU	
	12536 Jan 09	15:24	0°♒		
	12536 Feb 02	23:33	0°♓		
evening rise	12536 Feb 09	17:44	8°♓19'14		
desc. node	12536 Feb 11	09:52	10°♓22'44		
	12536 Feb 27	08:30	0°♈		
	12536 Mar 22	17:33	0°♉		
	12536 Apr 16	02:40	0°♊		
	12536 May 10	13:32	0°♋		
asc. node	12536 Jun 03	03:56	28°♋41'14		
	12536 Jun 04	06:03	0°♌		
	12536 Jun 29	11:15	0°♍		
	12536 Jul 25	19:51	0°♎		
evening max el	12536 Aug 12	17:51	18°♎53'22	46°38'14	
	12536 Aug 24	08:56	0°♏		
greatest brilliancy	12536 Sep 20	23:05	19°♏01'01	-4.8m	
desc. node	12536 Sep 23	04:54	19°♏48'49		
retrograde	12536 Oct 01	23:50	21°♏16'31		
evening set	12536 Oct 18	01:06	16°♏16'53		
min. Earth dist.	12536 Oct 22	09:33	13°♏40'29	0.28169 AU	
inferior conj	12536 Oct 23	06:27	13°♏08'10	-6°40'25	
minimum elong	12536 Oct 22	20:00	13°♏24'19	6°37'45	
morning rise	12536 Oct 27	15:19	10°♏29'34		
direct	12536 Nov 13	08:49	5°♏09'54		
greatest brilliancy	12536 Nov 22	23:03	6°♏50'19	-4.8m	
	12536 Dec 26	17:31	0°♐		
morning max el	12537 Jan 01	06:03	5°♐11'31	45°43'58	
asc. node	12537 Jan 14	06:32	18°♐15'31		
	12537 Jan 25	07:19	0°♑		
	12537 Feb 20	23:08	0°♒		
	12537 Mar 18	10:45	0°♓		
	12537 Apr 12	07:28	0°♈		
desc. node	12537 May 06	02:15	29°♈09'05		
	12537 May 06	18:46	0°♉		
	12537 May 30	23:25	0°♊		

	12537 Jun 23 23:40	0°♋	
morning set	12537 Jul 02 18:57	11°♋01'53	
	12537 Jul 17 21:50	0°♌	
	12537 Aug 10 20:00	0°♍	
superior conj	12537 Aug 11 14:06	0°♍56'44	-0°35'50
minimum elong	12537 Aug 11 22:35	1°♍23'20	0°35'58
max. Earth dist.	12537 Aug 13 07:32	3°♍06'30	1.71589 AU
asc. node	12537 Aug 26 16:59	19°♍52'21	
	12537 Sep 03 19:30	0°♎	
evening rise	12537 Sep 19 20:54	20°♎01'44	
	12537 Sep 27 21:17	0°♏	
	12537 Oct 22 02:30	0°♐	
	12537 Nov 15 13:08	0°♑	
	12537 Dec 10 07:43	0°♒	
desc. node	12537 Dec 16 09:47	7°♒17'43	
	12538 Jan 04 13:02	0°♓	
	12538 Jan 30 09:16	0°♈	
	12538 Feb 26 07:33	0°♉	
evening max el	12538 Mar 18 02:58	20°♉30'45	46°16'24
	12538 Mar 28 04:14	0°♊	
asc. node	12538 Apr 08 09:35	9°♊24'24	
greatest brilliancy	12538 Apr 27 03:07	20°♊17'53	-4.8m
retrograde	12538 May 06 20:21	22°♊03'35	
evening set	12538 May 24 13:47	16°♊01'36	
inferior conj	12538 May 27 13:14	14°♊12'03	9°00'52
minimum elong	12538 May 27 08:46	14°♊18'58	8°59'44
min. Earth dist.	12538 May 27 16:44	14°♊06'37	0.27470 AU
morning rise	12538 May 30 03:44	12°♊36'00	
direct	12538 Jun 17 10:18	6°♊15'19	
greatest brilliancy	12538 Jun 27 06:23	8°♊05'38	-4.9m
	12538 Jul 28 12:58	0°♋	
desc. node	12538 Jul 29 11:46	0°♋53'18	
morning max el	12538 Aug 06 23:10	9°♋08'29	46°56'10
	12538 Aug 26 16:23	0°♌	
	12538 Sep 22 02:50	0°♍	
	12538 Oct 17 14:47	0°♎	
	12538 Nov 11 15:54	0°♏	
asc. node	12538 Nov 19 08:53	9°♏18'23	
	12538 Dec 06 10:09	0°♐	
	12538 Dec 30 23:29	0°♑	
	12539 Jan 24 09:36	0°♒	
morning set	12539 Feb 04 04:31	13°♒17'19	
	12539 Feb 17 17:43	0°♓	
desc. node	12539 Mar 11 00:01	26°♓16'44	
max. Earth dist.	12539 Mar 11 20:19	27°♓19'30	1.72734 AU
superior conj	12539 Mar 14 00:35	0°♈01'12	-0°07'21
minimum elong	12539 Mar 13 22:52	29°♓55'55	0°07'11
behind sun begin	12539 Mar 13 01:07	28°♓48'37	
behind sun end	12539 Mar 14 20:37	1°♈03'14	
	12539 Mar 14 00:12	0°♈	
	12539 Apr 07 04:45	0°♉	
evening rise	12539 Apr 21 18:48	18°♉08'18	
	12539 May 01 07:18	0°♊	
	12539 May 25 08:43	0°♋	
	12539 Jun 18 10:53	0°♌	
asc. node	12539 Jul 01 15:53	16°♌23'09	
	12539 Jul 12 16:26	0°♍	
	12539 Aug 06 04:46	0°♎	
	12539 Aug 31 05:32	0°♏	
	12539 Sep 26 06:47	0°♐	
desc. node	12539 Oct 21 14:19	26°♐52'41	
evening max el	12539 Oct 23 23:15	29°♐12'55	46°05'47
	12539 Oct 24 18:35	0°♑	
greatest brilliancy	12539 Dec 02 03:08	28°♑01'36	-4.8m
retrograde	12539 Dec 12 05:18	29°♑52'11	
evening set	12539 Dec 30 00:37	23°♑53'45	
inferior conj	12540 Jan 02 16:51	21°♑36'44	-7°51'48
minimum elong	12540 Jan 03 01:08	21°♑23'41	7°49'49
min. Earth dist.	12540 Jan 02 22:37	21°♑27'39	0.28937 AU
morning rise	12540 Jan 07 01:40	18°♑55'10	
direct	12540 Jan 24 03:34	13°♑22'34	
greatest brilliancy	12540 Feb 03 18:30	15°♑26'14	-4.8m
asc. node	12540 Feb 11 16:42	19°♑13'53	
	12540 Feb 26 18:21	0°♒	
morning max el	12540 Mar 13 10:13	14°♒17'14	45°57'03
	12540 Mar 28 17:13	0°♓	
	12540 Apr 24 14:21	0°♈	
	12540 May 20 01:38	0°♉	
desc. node	12540 Jun 02 15:17	16°♉21'45	
	12540 Jun 13 19:46	0°♊	
	12540 Jul 08 04:15	0°♋	
	12540 Aug 01 07:46	0°♌	
	12540 Aug 25 09:31	0°♍	
morning set	12540 Sep 14 10:55	24°♍59'49	
	12540 Sep 18 11:19	0°♎	
asc. node	12540 Sep 23 07:14	6°♎00'44	
	12540 Oct 12 13:57	0°♏	
superior conj	12540 Oct 22 21:07	12°♏47'45	1°03'52
minimum elong	12540 Oct 22 11:03	12°♏16'29	1°04'05
max. Earth dist.	12540 Oct 25 03:01	15°♏35'05	1.72543 AU
	12540 Nov 05 17:51	0°♐	
evening rise	12540 Nov 28 22:56	28°♐42'52	
	12540 Nov 29 23:56	0°♑	
	12540 Dec 24 09:20	0°♒	
desc. node	12541 Jan 12 22:17	23°♒52'54	
	12541 Jan 17 22:53	0°♓	
	12541 Feb 11 16:45	0°♈	
	12541 Mar 08 15:15	0°♉	
	12541 Apr 02 21:03	0°♊	
	12541 Apr 28 18:45	0°♋	
asc. node	12541 May 05 19:13	7°♋53'28	
	12541 May 26 09:21	0°♌	
evening max el	12541 May 30 03:02	3°♌47'06	46°45'37
	12541 Jun 30 09:08	0°♍	
greatest brilliancy	12541 Jul 09 09:35	4°♍23'23	-4.9m
retrograde	12541 Jul 19 08:47	6°♍15'31	
evening set	12541 Aug 03 18:38	1°♍38'22	
	12541 Aug 06 14:37	30°℞♌	
inferior conj	12541 Aug 09 02:16	28°♌29'21	4°13'15
minimum elong	12541 Aug 09 11:12	28°♌15'40	4°10'06
min. Earth dist.	12541 Aug 09 06:55	28°♌22'13	0.27000 AU
morning rise	12541 Aug 15 03:47	24°♌55'44	
desc. node	12541 Aug 25 21:29	21°♌02'18	
direct	12541 Aug 29 19:11	20°♌43'57	
greatest brilliancy	12541 Sep 08 19:49	22°♌35'19	-4.8m
	12541 Sep 22 15:59	0°♍	
morning max el	12541 Oct 18 11:28	22°♍03'15	46°18'58
	12541 Oct 26 10:01	0°♎	
	12541 Nov 23 06:23	0°♏	
asc. node	12541 Dec 16 21:25	27°♏00'35	
	12541 Dec 19 10:59	0°♐	
	12542 Jan 13 19:50	0°♑	
	12542 Feb 07 17:00	0°♒	
	12542 Mar 04 06:52	0°♓	
	12542 Mar 28 15:44	0°♈	
desc. node	12542 Apr 07 14:10	12°♈17'25	
morning set	12542 Apr 16 05:24	23°♈00'07	
	12542 Apr 21 20:31	0°♉	
	12542 May 15 21:43	0°♊	
max. Earth dist.	12542 May 23 10:49	9°♊26'43	1.71629 AU

superior conj	12542 May 26 04:27	12°♊52'17	-1°25'25
minimum elong	12542 May 25 23:24	12°♊36'27	1°26'13
	12542 Jun 08 20:21	0°♋	
	12542 Jul 02 18:09	0°♌	
evening rise	12542 Jul 05 08:23	3°♌15'07	
	12542 Jul 26 17:02	0°♍	
asc. node	12542 Jul 29 04:59	3°♍07'16	
	12542 Aug 19 18:48	0°♎	
	12542 Sep 13 01:21	0°♏	
	12542 Oct 07 15:46	0°♐	
	12542 Nov 01 19:27	0°♑	
desc. node	12542 Nov 18 00:25	18°♑47'40	
	12542 Nov 27 22:06	0°♒	
	12542 Dec 25 22:22	0°♓	
evening max el	12543 Jan 02 23:23	7°♓55'51	45°52'48
	12543 Jan 29 13:59	0°♈	
greatest brilliancy	12543 Feb 11 02:09	6°♈21'29	-4.8m
retrograde	12543 Feb 20 23:01	8°♈08'53	
evening set	12543 Mar 07 17:41	3°♈52'50	
asc. node	12543 Mar 11 02:12	1°♈56'57	
inferior conj	12543 Mar 14 01:46	0°♈06'37	0°44'50
minimum elong	12543 Mar 14 00:03	0°♈09'16	0°44'23
	12543 Mar 14 06:00	30°℞♓	
min. Earth dist.	12543 Mar 14 08:55	29°♓55'27	0.28065 AU
morning rise	12543 Mar 20 05:53	26°♓24'27	
direct	12543 Apr 04 04:50	21°♓58'36	
greatest brilliancy	12543 Apr 14 21:55	24°♓06'20	-4.8m
	12543 Apr 26 02:45	0°♈	
morning max el	12543 May 24 08:04	24°♈10'17	46°40'52
	12543 May 30 01:32	0°♉	
	12543 Jun 26 09:49	0°♊	
desc. node	12543 Jul 01 03:13	5°♊26'11	
	12543 Jul 22 00:17	0°♋	
	12543 Aug 15 21:07	0°♌	
	12543 Sep 09 10:15	0°♍	
	12543 Oct 03 20:13	0°♎	
asc. node	12543 Oct 21 21:18	22°♎13'34	
	12543 Oct 28 04:36	0°♏	
	12543 Nov 21 11:53	0°♐	
morning set	12543 Nov 25 03:53	4°♐31'43	
	12543 Dec 15 18:39	0°♑	
superior conj	12543 Dec 31 22:39	19°♑57'50	1°18'12
minimum elong	12544 Jan 01 06:07	20°♑20'50	1°18'57
max. Earth dist.	12544 Jan 01 18:48	20°♑59'59	1.73168 AU
	12544 Jan 09 01:51	0°♒	
	12544 Feb 02 10:05	0°♓	
evening rise	12544 Feb 07 09:38	6°♓07'58	
desc. node	12544 Feb 10 11:45	9°♓56'00	
	12544 Feb 26 19:12	0°♈	
	12544 Mar 22 04:30	0°♉	
	12544 Apr 15 13:59	0°♊	
	12544 May 10 01:23	0°♋	
asc. node	12544 Jun 02 05:54	28°♋09'04	
	12544 Jun 03 18:45	0°♌	
	12544 Jun 29 01:25	0°♍	
	12544 Jul 25 13:12	0°♎	
evening max el	12544 Aug 10 09:39	16°♎38'17	46°39'22
	12544 Aug 24 13:34	0°♏	
greatest brilliancy	12544 Sep 18 13:36	16°♏44'48	-4.8m
desc. node	12544 Sep 22 06:48	17°♏58'59	
retrograde	12544 Sep 29 15:48	19°♏01'15	
evening set	12544 Oct 15 12:55	14°♏06'30	
min. Earth dist.	12544 Oct 19 23:44	11°♏26'44	0.28112 AU
inferior conj	12544 Oct 20 21:16	10°♏53'29	-6°26'08
minimum elong	12544 Oct 20 10:45	11°♏09'44	6°23'21
morning rise	12544 Oct 25 09:07	8°♏10'56	
direct	12544 Nov 10 23:45	2°♏56'12	
greatest brilliancy	12544 Nov 20 12:21	4°♏35'39	-4.8m
	12544 Dec 26 17:37	0°♐	
morning max el	12544 Dec 29 21:27	3°♐00'02	45°44'14
asc. node	12545 Jan 13 08:37	17°♐34'09	
	12545 Jan 24 23:09	0°♑	
	12545 Feb 20 12:21	0°♒	
	12545 Mar 17 22:47	0°♓	
	12545 Apr 11 18:52	0°♈	
desc. node	12545 May 05 04:09	28°♈40'53	
	12545 May 06 05:47	0°♉	
	12545 May 30 10:14	0°♊	
	12545 Jun 23 10:22	0°♋	
morning set	12545 Jun 30 06:32	8°♋34'17	
	12545 Jul 17 08:29	0°♌	
superior conj	12545 Aug 09 02:20	28°♌31'28	-0°39'18
minimum elong	12545 Aug 09 11:29	29°♌00'11	0°39'27
	12545 Aug 10 06:35	0°♍	
max. Earth dist.	12545 Aug 10 19:57	0°♍41'52	1.71562 AU
asc. node	12545 Aug 25 18:48	19°♍25'02	
	12545 Sep 03 06:03	0°♎	
evening rise	12545 Sep 17 11:23	17°♎44'34	
	12545 Sep 27 07:49	0°♏	
	12545 Oct 21 13:09	0°♐	
	12545 Nov 15 00:02	0°♑	
	12545 Dec 09 19:06	0°♒	
desc. node	12545 Dec 15 11:48	6°♒49'16	
	12546 Jan 04 01:18	0°♓	
	12546 Jan 29 23:08	0°♈	
	12546 Feb 26 00:51	0°♉	
evening max el	12546 Mar 15 17:24	18°♉12'59	46°15'04
	12546 Mar 28 09:05	0°♊	
asc. node	12546 Apr 07 11:34	8°♊11'53	
greatest brilliancy	12546 Apr 24 16:13	17°♊55'57	-4.8m
retrograde	12546 May 04 09:15	19°♊41'13	
evening set	12546 May 21 23:34	13°♊44'52	
inferior conj	12546 May 25 02:38	11°♊49'39	8°55'33
minimum elong	12546 May 24 21:17	11°♊57'57	8°54'17
min. Earth dist.	12546 May 25 05:39	11°♊44'57	0.27486 AU
morning rise	12546 May 27 18:59	10°♊10'32	
direct	12546 Jun 14 23:54	3°♊52'45	
greatest brilliancy	12546 Jun 24 19:51	5°♊42'33	-4.9m
desc. node	12546 Jul 28 13:50	29°♊56'42	
	12546 Jul 28 15:13	0°♋	
morning max el	12546 Aug 04 12:05	6°♋44'12	46°56'37
	12546 Aug 26 09:26	0°♌	
	12546 Sep 21 16:49	0°♍	
	12546 Oct 17 03:15	0°♎	
	12546 Nov 11 03:27	0°♏	
asc. node	12546 Nov 18 10:53	8°♏50'04	
	12546 Dec 05 21:07	0°♐	
	12546 Dec 30 10:07	0°♑	
	12547 Jan 23 20:04	0°♒	
morning set	12547 Feb 01 21:27	11°♒09'31	
	12547 Feb 17 04:07	0°♓	
max. Earth dist.	12547 Mar 09 11:27	25°♓05'36	1.72771 AU
desc. node	12547 Mar 10 01:47	25°♓49'55	
superior conj	12547 Mar 11 15:35	27°♓46'50	-0°03'51
minimum elong	12547 Mar 11 14:42	27°♓44'06	0°03'40
behind sun begin	12547 Mar 10 15:12	26°♓31'24	
behind sun end	12547 Mar 12 14:13	28°♓56'49	
	12547 Mar 13 10:38	0°♈	
	12547 Apr 06 15:18	0°♉	
evening rise	12547 Apr 19 08:30	15°♉48'31	
	12547 Apr 30 18:00	0°♊	

	12547 May 24 19:36	0°♋	
	12547 Jun 17 22:01	0°♌	
asc. node	12547 Jun 30 17:51	15°♌54'15	
	12547 Jul 12 03:56	0°♍	
	12547 Aug 05 16:53	0°♎	
	12547 Aug 30 18:46	0°♏	
	12547 Sep 25 22:20	0°♐	
desc. node	12547 Oct 20 16:20	26°♐05'42	
evening max el	12547 Oct 21 13:36	26°♐57'52	46°06'51
	12547 Oct 24 17:00	0°♑	
greatest brilliancy	12547 Nov 29 19:11	25°♑52'25	-4.8m
retrograde	12547 Dec 09 20:46	27°♑42'57	
evening set	12547 Dec 27 19:09	21°♑40'49	
inferior conj	12547 Dec 31 09:01	19°♑27'25	-8°00'31
minimum elong	12547 Dec 31 16:49	19°♑15'09	7°58'39
min. Earth dist.	12547 Dec 31 14:14	19°♑19'12	0.28945 AU
morning rise	12548 Jan 04 14:27	16°♑50'41	
direct	12548 Jan 21 19:12	11°♑13'20	
greatest brilliancy	12548 Feb 01 10:08	13°♑16'22	-4.8m
asc. node	12548 Feb 10 18:36	17°♑54'01	
	12548 Feb 27 00:01	0°♒	
morning max el	12548 Mar 11 00:36	12°♒02'14	45°55'49
	12548 Mar 28 10:16	0°♓	
	12548 Apr 24 04:10	0°♈	
	12548 May 19 14:05	0°♉	
desc. node	12548 Jun 01 17:18	15°♉51'21	
	12548 Jun 13 07:31	0°♊	
	12548 Jul 07 15:34	0°♋	
	12548 Jul 31 18:46	0°♌	
	12548 Aug 24 20:18	0°♍	
morning set	12548 Sep 12 00:48	22°♍40'24	
	12548 Sep 17 21:57	0°♎	
asc. node	12548 Sep 22 08:59	5°♎33'13	
	12548 Oct 12 00:29	0°♏	
superior conj	12548 Oct 20 12:45	10°♏34'41	1°01'30
minimum elong	12548 Oct 20 02:36	10°♏03'10	1°01'40
max. Earth dist.	12548 Oct 22 16:24	13°♏15'02	1.72509 AU
	12548 Nov 05 04:21	0°♐	
evening rise	12548 Nov 26 15:26	26°♐33'16	
	12548 Nov 29 10:27	0°♑	
	12548 Dec 23 19:58	0°♒	
desc. node	12549 Jan 12 00:12	23°♒25'42	
	12549 Jan 17 09:48	0°♓	
	12549 Feb 11 04:07	0°♈	
	12549 Mar 08 03:22	0°♉	
	12549 Apr 02 10:24	0°♊	
	12549 Apr 28 10:26	0°♋	
asc. node	12549 May 04 21:14	7°♋12'47	
	12549 May 26 06:59	0°♌	
evening max el	12549 May 27 15:22	1°♌21'21	46°44'59
	12549 Jul 02 07:47	0°♍	
greatest brilliancy	12549 Jul 06 23:56	2°♍00'00	-4.9m
retrograde	12549 Jul 16 21:46	3°♍51'17	
	12549 Jul 30 21:05	30°℞♌	
evening set	12549 Aug 01 10:24	29°♌09'49	
inferior conj	12549 Aug 06 15:05	26°♌05'15	4°34'44
minimum elong	12549 Aug 07 00:34	25°♌50'44	4°31'26
min. Earth dist.	12549 Aug 06 20:55	25°♌56'19	0.27000 AU
morning rise	12549 Aug 12 14:42	22°♌34'20	
desc. node	12549 Aug 24 23:23	18°♌25'58	
direct	12549 Aug 27 07:28	18°♌19'23	
greatest brilliancy	12549 Sep 06 09:23	20°♌12'04	-4.8m
	12549 Sep 23 13:07	0°♍	
morning max el	12549 Oct 16 01:34	19°♍44'13	46°20'41
	12549 Oct 26 05:56	0°♎	
	12549 Nov 22 21:21	0°♏	
asc. node	12549 Dec 15 23:21	26°♏28'18	
	12549 Dec 18 23:51	0°♐	
	12550 Jan 13 07:38	0°♑	
	12550 Feb 07 04:11	0°♒	
	12550 Mar 03 17:43	0°♓	
	12550 Mar 28 02:26	0°♈	
desc. node	12550 Apr 06 16:05	11°♈50'23	
morning set	12550 Apr 13 18:45	20°♈39'29	
	12550 Apr 21 07:10	0°♉	
	12550 May 15 08:23	0°♊	
max. Earth dist.	12550 May 20 23:35	7°♊03'00	1.71664 AU
superior conj	12550 May 23 16:44	10°♊26'56	-1°24'31
minimum elong	12550 May 23 10:46	10°♊08'15	1°25'16
	12550 Jun 08 07:04	0°♋	
	12550 Jul 02 04:57	0°♌	
evening rise	12550 Jul 02 19:40	0°♌46'08	
	12550 Jul 26 03:58	0°♍	
asc. node	12550 Jul 28 06:45	2°♍38'39	
	12550 Aug 19 05:54	0°♎	
	12550 Sep 12 12:44	0°♏	
	12550 Oct 07 03:38	0°♐	
	12550 Nov 01 08:16	0°♑	
desc. node	12550 Nov 17 02:29	18°♑13'55	
	12550 Nov 27 12:55	0°♒	
	12550 Dec 25 18:19	0°♓	
evening max el	12550 Dec 31 15:10	5°♓44'55	45°52'47
	12551 Jan 30 20:22	0°♈	
greatest brilliancy	12551 Feb 08 16:30	4°♈06'57	-4.8m
retrograde	12551 Feb 18 14:24	5°♈54'47	
evening set	12551 Mar 05 09:19	1°♈37'43	
	12551 Mar 08 05:33	30°℞♓	
asc. node	12551 Mar 10 04:10	28°♓48'59	
inferior conj	12551 Mar 11 16:52	27°♓51'56	0°22'59
minimum elong	12551 Mar 11 15:59	27°♓53'18	0°22'49
min. Earth dist.	12551 Mar 12 00:13	27°♓40'28	0.28094 AU
morning rise	12551 Mar 17 22:13	24°♓08'18	
direct	12551 Apr 01 20:43	19°♓43'38	
greatest brilliancy	12551 Apr 12 13:30	21°♓51'31	-4.8m
	12551 Apr 27 00:53	0°♈	
morning max el	12551 May 22 00:02	21°♈56'02	46°39'25
	12551 May 29 21:10	0°♉	
	12551 Jun 26 00:51	0°♊	
desc. node	12551 Jun 30 05:12	4°♊49'36	
	12551 Jul 21 13:29	0°♋	
	12551 Aug 15 09:23	0°♌	
	12551 Sep 08 21:56	0°♍	
	12551 Oct 03 07:29	0°♎	
asc. node	12551 Oct 20 23:17	21°♎45'46	
	12551 Oct 27 15:33	0°♏	
	12551 Nov 20 22:37	0°♐	
morning set	12551 Nov 22 20:13	2°♐20'52	
	12551 Dec 15 05:16	0°♑	
superior conj	12551 Dec 29 15:33	17°♑49'04	1°19'32
minimum elong	12551 Dec 29 22:29	18°♑10'29	1°20'19
max. Earth dist.	12551 Dec 30 15:48	19°♑03'55	1.73160 AU
	12552 Jan 08 12:27	0°♒	
	12552 Feb 01 20:48	0°♓	
evening rise	12552 Feb 05 01:42	3°♓56'41	
desc. node	12552 Feb 09 13:32	9°♓28'26	
	12552 Feb 26 06:04	0°♈	
	12552 Mar 21 15:36	0°♉	
	12552 Apr 15 01:26	0°♊	
	12552 May 09 13:23	0°♋	
asc. node	12552 Jun 01 07:55	27°♋36'32	
	12552 Jun 03 07:39	0°♌	

	12552 Jun 28	15:55	0°♍		
	12552 Jul 25	07:15	0°♎		
evening max el	12552 Aug 08	01:33	14°♎22'18	46°40'04	
	12552 Aug 24	20:58	0°♏		
greatest brilliancy	12552 Sep 16	04:34	14°♏27'11	-4.8m	
desc. node	12552 Sep 21	08:52	16°♏03'01		
retrograde	12552 Sep 27	07:11	16°♏43'31		
evening set	12552 Oct 13	00:34	11°♏53'52		
min. Earth dist.	12552 Oct 17	14:02	9°♏10'14	0.28054 AU	
inferior conj	12552 Oct 18	11:46	8°♏36'37	-6°10'55	
minimum elong	12552 Oct 18	01:17	8°♏52'51	6°08'04	
morning rise	12552 Oct 23	02:36	5°♏49'54		
direct	12552 Nov 08	14:23	0°♏40'24		
greatest brilliancy	12552 Nov 18	01:30	2°♏18'44	-4.8m	
	12552 Dec 26	17:08	0°♐		
morning max el	12552 Dec 27	11:56	0°♐45'05	45°44'42	
asc. node	12553 Jan 12	10:32	16°♐51'48		
	12553 Jan 24	15:05	0°♑		
	12553 Feb 20	01:44	0°♒		
	12553 Mar 17	11:01	0°♓		
	12553 Apr 11	06:28	0°♈		
desc. node	12553 May 04	06:05	28°♈12'08		
	12553 May 05	17:03	0°♉		
	12553 May 29	21:16	0°♊		
	12553 Jun 22	21:17	0°♋		
morning set	12553 Jun 27	18:33	6°♋07'22		
	12553 Jul 16	19:20	0°♌		
superior conj	12553 Aug 06	14:51	26°♌06'23	-0°42'40	
minimum elong	12553 Aug 07	00:36	26°♌36'54	0°42'49	
max. Earth dist.	12553 Aug 08	08:15	28°♌16'04	1.71540 AU	
	12553 Aug 09	17:25	0°♍		
asc. node	12553 Aug 24	20:37	18°♍56'54		
	12553 Sep 02	16:53	0°♎		
evening rise	12553 Sep 15	01:48	15°♎26'02		
	12553 Sep 26	18:44	0°♏		
	12553 Oct 21	00:13	0°♐		
	12553 Nov 14	11:23	0°♑		
	12553 Dec 09	06:58	0°♒		
desc. node	12553 Dec 14	13:41	6°♒19'00		
	12554 Jan 03	14:03	0°♓		
	12554 Jan 29	13:32	0°♈		
	12554 Feb 25	18:55	0°♉		
evening max el	12554 Mar 13	07:06	15°♉52'35	46°13'51	
	12554 Mar 28	16:29	0°♊		
asc. node	12554 Apr 06	13:39	6°♊56'41		
greatest brilliancy	12554 Apr 22	05:58	15°♊34'15	-4.8m	
retrograde	12554 May 01	22:03	17°♊18'53		
evening set	12554 May 19	09:22	11°♊28'23		
inferior conj	12554 May 22	16:18	9°♊27'17	8°49'17	
minimum elong	12554 May 22	10:09	9°♊36'52	8°47'53	
min. Earth dist.	12554 May 22	19:13	9°♊22'45	0.27500 AU	
morning rise	12554 May 25	10:52	7°♊44'37		
direct	12554 Jun 12	13:15	1°♊30'01		
greatest brilliancy	12554 Jun 22	10:13	3°♊20'12	-4.9m	
desc. node	12554 Jul 27	15:40	29°♊00'16		
	12554 Jul 28	16:18	0°♋		
morning max el	12554 Aug 02	00:47	4°♋18'40	46°57'07	
	12554 Aug 26	02:20	0°♌		
	12554 Sep 21	06:56	0°♍		
	12554 Oct 16	15:57	0°♎		
	12554 Nov 10	15:20	0°♏		
asc. node	12554 Nov 17	12:45	8°♏20'14		
	12554 Dec 05	08:30	0°♐		
	12554 Dec 29	21:12	0°♑		
	12555 Jan 23	06:57	0°♒		
morning set	12555 Jan 30	14:09	8°♒59'39		
	12555 Feb 16	14:55	0°♓		
max. Earth dist.	12555 Mar 07	03:47	22°♓54'16	1.72804 AU	
superior conj	12555 Mar 09	06:29	25°♓31'03	-0°00'17	
minimum elong	12555 Mar 09	06:27	25°♓30'55	0°00'07	
behind sun begin	12555 Mar 08	06:49	24°♓17'50		
behind sun end	12555 Mar 10	06:05	26°♓44'01		
desc. node	12555 Mar 09	03:41	25°♓22'21		
	12555 Mar 12	21:27	0°♈		
	12555 Apr 06	02:12	0°♉		
evening rise	12555 Apr 16	22:22	13°♉28'15		
	12555 Apr 30	05:03	0°♊		
	12555 May 24	06:51	0°♋		
	12555 Jun 17	09:31	0°♌		
asc. node	12555 Jun 29	19:39	15°♌23'42		
	12555 Jul 11	15:48	0°♍		
	12555 Aug 05	05:23	0°♎		
	12555 Aug 30	08:25	0°♏		
	12555 Sep 25	14:31	0°♐		
evening max el	12555 Oct 19	03:33	24°♐40'38	46°07'46	
desc. node	12555 Oct 19	18:21	25°♐16'48		
	12555 Oct 24	16:58	0°♑		
greatest brilliancy	12555 Nov 27	10:28	23°♑40'37	-4.8m	
retrograde	12555 Dec 07	12:19	25°♑31'55		
evening set	12555 Dec 25	13:19	19°♑26'00		
inferior conj	12555 Dec 29	01:00	17°♑16'06	-8°08'30	
minimum elong	12555 Dec 29	08:15	17°♑04'41	8°06'46	
min. Earth dist.	12555 Dec 29	05:39	17°♑08'46	0.28956 AU	
morning rise	12556 Jan 02	03:08	14°♑44'19		
direct	12556 Jan 19	10:33	9°♑01'57		
greatest brilliancy	12556 Jan 30	01:56	11°♑04'59	-4.7m	
asc. node	12556 Feb 09	20:34	16°♑35'00		
	12556 Feb 27	04:26	0°♒		
morning max el	12556 Mar 08	15:38	9°♒47'24	45°54'45	
	12556 Mar 28	03:26	0°♓		
	12556 Apr 23	18:15	0°♈		
	12556 May 19	02:48	0°♉		
desc. node	12556 May 31	19:08	15°♉19'37		
	12556 Jun 12	19:31	0°♊		
	12556 Jul 07	03:09	0°♋		
	12556 Jul 31	06:04	0°♌		
	12556 Aug 24	07:22	0°♍		
morning set	12556 Sep 09	14:54	20°♍20'37		
	12556 Sep 17	08:51	0°♎		
asc. node	12556 Sep 21	10:57	5°♎05'31		
	12556 Oct 11	11:16	0°♏		
superior conj	12556 Oct 18	04:32	8°♏21'12	0°59'02	
minimum elong	12556 Oct 17	18:22	7°♏49'38	0°59'10	
max. Earth dist.	12556 Oct 20	06:43	10°♏57'02	1.72477 AU	
	12556 Nov 04	15:07	0°♐		
evening rise	12556 Nov 24	08:08	24°♐23'19		
	12556 Nov 28	21:16	0°♑		
	12556 Dec 23	06:58	0°♒		
desc. node	12557 Jan 11	02:00	22°♒56'58		
	12557 Jan 16	21:06	0°♓		
	12557 Feb 10	15:56	0°♈		
	12557 Mar 07	15:56	0°♉		
	12557 Apr 02	00:13	0°♊		
	12557 Apr 28	02:42	0°♋		
asc. node	12557 May 03	23:13	6°♋30'39		
evening max el	12557 May 25	04:33	28°♋57'03	46°44'28	
	12557 May 26	05:50	0°♌		
greatest brilliancy	12557 Jul 04	13:36	29°♌35'05	-4.9m	
	12557 Jul 05	18:59	0°♍		
retrograde	12557 Jul 14	11:10	1°♍26'12		
	12557 Jul 22	20:16	30°℞♌		

evening set	12557 Jul 30 02:17	26°♌40'07	
inferior conj	12557 Aug 04 03:50	23°♌40'05	4°55'42
minimum elong	12557 Aug 04 13:50	23°♌24'50	4°52'18
min. Earth dist.	12557 Aug 04 10:30	23°♌29'55	0.27002 AU
morning rise	12557 Aug 10 01:20	20°♌12'20	
desc. node	12557 Aug 24 01:29	15°♌54'34	
direct	12557 Aug 24 20:18	15°♌53'50	
greatest brilliancy	12557 Sep 03 22:23	17°♌47'14	-4.8m
	12557 Sep 24 05:11	0°♍	
morning max el	12557 Oct 13 16:29	17°♍26'26	46°22'26
	12557 Oct 26 01:29	0°♎	
	12557 Nov 22 12:18	0°♏	
asc. node	12557 Dec 15 01:14	25°♏55'24	
	12557 Dec 18 12:50	0°♐	
	12558 Jan 12 19:35	0°♑	
	12558 Feb 06 15:35	0°♒	
	12558 Mar 03 04:50	0°♓	
	12558 Mar 27 13:25	0°♈	
desc. node	12558 Apr 05 18:02	11°♈22'32	
morning set	12558 Apr 11 07:53	18°♈17'24	
	12558 Apr 20 18:05	0°♉	
	12558 May 14 19:17	0°♊	
max. Earth dist.	12558 May 18 11:56	4°♊37'18	1.71694 AU
superior conj	12558 May 21 04:43	8°♊00'02	-1°23'25
minimum elong	12558 May 20 21:53	7°♊38'39	1°24'09
	12558 Jun 07 17:59	0°♋	
evening rise	12558 Jun 30 06:49	28°♋16'10	
	12558 Jul 01 15:56	0°♌	
	12558 Jul 25 15:05	0°♍	
asc. node	12558 Jul 27 08:39	2°♍09'49	
	12558 Aug 18 17:12	0°♎	
	12558 Sep 12 00:19	0°♏	
	12558 Oct 06 15:43	0°♐	
	12558 Oct 31 21:19	0°♑	
desc. node	12558 Nov 16 04:24	17°♑39'10	
	12558 Nov 27 04:03	0°♒	
	12558 Dec 25 15:05	0°♓	
evening max el	12558 Dec 29 07:16	3°♓34'21	45°52'37
	12559 Feb 01 17:44	0°♈	
greatest brilliancy	12559 Feb 06 06:56	1°♈52'01	-4.8m
retrograde	12559 Feb 16 05:17	3°♈39'45	
	12559 Mar 01 20:07	30°℞♓	
evening set	12559 Mar 03 01:02	29°♓21'41	
inferior conj	12559 Mar 09 07:51	25°♓36'26	0°01'00
minimum elong	12559 Mar 09 07:49	25°♓36'30	0°01'09
transit middle	12559 Mar 09 07:49	25°♓36'30	0°01'09
transit begin	12559 Mar 09 03:46	25°♓42'49	
transit end	12559 Mar 09 11:51	25°♓30'12	
asc. node	12559 Mar 09 06:16	25°♓38'55	
min. Earth dist.	12559 Mar 09 15:29	25°♓24'33	0.28126 AU
morning rise	12559 Mar 15 14:13	21°♓51'23	
direct	12559 Mar 30 12:40	17°♓27'56	
greatest brilliancy	12559 Apr 10 04:56	19°♓35'34	-4.8m
	12559 Apr 27 17:39	0°♈	
morning max el	12559 May 19 15:20	19°♈39'24	46°37'54
	12559 May 29 16:29	0°♉	
	12559 Jun 25 15:52	0°♊	
desc. node	12559 Jun 29 07:06	4°♊12'34	
	12559 Jul 21 02:42	0°♋	
	12559 Aug 14 21:38	0°♌	
	12559 Sep 08 09:37	0°♍	
	12559 Oct 02 18:45	0°♎	
asc. node	12559 Oct 20 01:07	21°♎17'23	
	12559 Oct 27 02:31	0°♏	
	12559 Nov 20 09:22	0°♐	
morning set	12559 Nov 20 12:38	0°♐10'06	
	12559 Dec 14 15:54	0°♑	
superior conj	12559 Dec 27 08:38	15°♑40'51	1°20'45
minimum elong	12559 Dec 27 15:00	16°♑00'31	1°21'33
max. Earth dist.	12559 Dec 28 12:06	17°♑05'36	1.73148 AU
	12560 Jan 07 23:05	0°♒	
	12560 Feb 01 07:30	0°♓	
evening rise	12560 Feb 02 17:50	1°♓45'39	
desc. node	12560 Feb 08 15:28	9°♓01'19	
	12560 Feb 25 16:58	0°♈	
	12560 Mar 21 02:46	0°♉	
	12560 Apr 14 13:00	0°♊	
	12560 May 09 01:32	0°♋	
asc. node	12560 May 31 09:44	27°♋02'58	
	12560 Jun 02 20:43	0°♌	
	12560 Jun 28 06:39	0°♍	
	12560 Jul 25 01:46	0°♎	
evening max el	12560 Aug 05 16:45	12°♎04'28	46°40'53
	12560 Aug 25 07:01	0°♏	
greatest brilliancy	12560 Sep 13 20:03	12°♏10'16	-4.8m
desc. node	12560 Sep 20 10:55	14°♏02'40	
retrograde	12560 Sep 24 21:57	14°♏25'44	
evening set	12560 Oct 10 12:20	9°♏41'06	
min. Earth dist.	12560 Oct 15 04:42	6°♏53'17	0.27995 AU
inferior conj	12560 Oct 16 02:15	6°♏19'55	-5°55'01
minimum elong	12560 Oct 15 15:50	6°♏36'02	5°52'08
morning rise	12560 Oct 20 19:58	3°♏28'55	
	12560 Oct 28 05:27	30°℞♎	
direct	12560 Nov 06 04:39	28°♎24'42	
greatest brilliancy	12560 Nov 15 15:11	0°♏02'24	-4.8m
	12560 Nov 15 12:17	0°♏	
morning max el	12560 Dec 25 01:34	28°♏28'17	45°45'17
	12560 Dec 26 15:31	0°♐	
asc. node	12561 Jan 11 12:29	16°♐10'26	
	12561 Jan 24 06:37	0°♑	
	12561 Feb 19 14:53	0°♒	
	12561 Mar 16 23:02	0°♓	
	12561 Apr 10 17:55	0°♈	
desc. node	12561 May 03 07:54	27°♈43'21	
	12561 May 05 04:10	0°♉	
	12561 May 29 08:14	0°♊	
	12561 Jun 22 08:09	0°♋	
morning set	12561 Jun 25 05:59	3°♋38'48	
	12561 Jul 16 06:09	0°♌	
superior conj	12561 Aug 04 02:56	23°♌40'09	-0°45'59
minimum elong	12561 Aug 04 13:11	24°♌12'17	0°46'09
max. Earth dist.	12561 Aug 05 17:05	25°♌39'43	1.71514 AU
	12561 Aug 09 04:09	0°♍	
asc. node	12561 Aug 23 22:33	18°♍29'25	
	12561 Sep 02 03:36	0°♎	
evening rise	12561 Sep 12 15:47	13°♎06'36	
	12561 Sep 26 05:28	0°♏	
	12561 Oct 20 11:06	0°♐	
	12561 Nov 13 22:34	0°♑	
	12561 Dec 08 18:39	0°♒	
desc. node	12561 Dec 13 15:33	5°♒49'15	
	12562 Jan 03 02:38	0°♓	
	12562 Jan 29 03:51	0°♈	
	12562 Feb 25 13:08	0°♉	
evening max el	12562 Mar 10 20:00	13°♉31'13	46°12'41
	12562 Mar 29 02:11	0°♊	
asc. node	12562 Apr 05 15:35	5°♊39'43	
greatest brilliancy	12562 Apr 19 19:20	13°♊12'54	-4.8m
retrograde	12562 Apr 29 10:51	14°♊57'28	
evening set	12562 May 16 18:47	9°♊12'47	
inferior conj	12562 May 20 05:55	7°♊05'35	8°41'55

minimum elong	12562 May 19 22:59	7°♊16'21	8°40'24
min. Earth dist.	12562 May 20 08:46	7°♊01'09	0.27521 AU
morning rise	12562 May 23 03:06	5°♊18'55	
	12562 Jun 03 13:43	30°℞♉	
direct	12562 Jun 10 02:26	29°♉07'37	
	12562 Jun 16 20:04	0°♊	
greatest brilliancy	12562 Jun 20 01:01	0°♊58'55	-4.9m
desc. node	12562 Jul 26 17:46	28°♊06'01	
	12562 Jul 28 16:04	0°♋	
morning max el	12562 Jul 30 13:50	1°♋54'19	46°57'31
	12562 Aug 25 18:48	0°♌	
	12562 Sep 20 20:44	0°♍	
	12562 Oct 16 04:21	0°♎	
	12562 Nov 10 02:54	0°♏	
asc. node	12562 Nov 16 14:35	7°♏51'15	
	12562 Dec 04 19:33	0°♐	
	12562 Dec 29 07:56	0°♑	
	12563 Jan 22 17:30	0°♒	
morning set	12563 Jan 28 06:55	6°♒50'59	
	12563 Feb 16 01:24	0°♓	
max. Earth dist.	12563 Mar 04 21:40	20°♓48'43	1.72834 AU
superior conj	12563 Mar 06 21:36	23°♓16'54	0°03'16
minimum elong	12563 Mar 06 22:24	23°♓19'24	0°03'25
behind sun begin	12563 Mar 05 22:54	22°♓06'44	
behind sun end	12563 Mar 07 21:54	24°♓32'03	
desc. node	12563 Mar 08 05:35	24°♓55'48	
	12563 Mar 12 07:56	0°♈	
	12563 Apr 05 12:46	0°♉	
evening rise	12563 Apr 14 12:35	11°♉10'15	
	12563 Apr 29 15:46	0°♊	
	12563 May 23 17:45	0°♋	
	12563 Jun 16 20:42	0°♌	
asc. node	12563 Jun 28 21:35	14°♌54'28	
	12563 Jul 11 03:25	0°♍	
	12563 Aug 04 17:41	0°♎	
	12563 Aug 29 21:57	0°♏	
	12563 Sep 25 06:41	0°♐	
evening max el	12563 Oct 16 17:54	22°♐25'16	46°08'59
desc. node	12563 Oct 18 20:18	24°♐27'45	
	12563 Oct 24 17:43	0°♑	
greatest brilliancy	12563 Nov 25 01:06	21°♑29'14	-4.8m
retrograde	12563 Dec 05 04:22	23°♑22'06	
evening set	12563 Dec 23 07:19	17°♑12'29	
inferior conj	12563 Dec 26 16:59	15°♑05'52	-8°15'43
minimum elong	12563 Dec 26 23:38	14°♑55'24	8°14'08
min. Earth dist.	12563 Dec 26 20:41	15°♑00'03	0.28963 AU
morning rise	12563 Dec 30 15:56	12°♑39'05	
direct	12564 Jan 17 02:10	6°♑51'40	
greatest brilliancy	12564 Jan 27 17:27	8°♑54'40	-4.7m
asc. node	12564 Feb 08 22:42	15°♑19'56	
	12564 Feb 27 06:35	0°♒	
morning max el	12564 Mar 06 07:34	7°♒36'10	45°53'42
	12564 Mar 27 19:49	0°♓	
	12564 Apr 23 07:45	0°♈	
	12564 May 18 15:01	0°♉	
desc. node	12564 May 30 21:02	14°♉49'28	
	12564 Jun 12 07:03	0°♊	
	12564 Jul 06 14:16	0°♋	
	12564 Jul 30 16:55	0°♌	
	12564 Aug 23 18:03	0°♍	
morning set	12564 Sep 07 04:46	18°♍01'07	
	12564 Sep 16 19:25	0°♎	
asc. node	12564 Sep 20 12:46	4°♎38'20	
	12564 Oct 10 21:45	0°♏	
superior conj	12564 Oct 15 19:53	6°♏07'16	0°56'27
minimum elong	12564 Oct 15 09:48	5°♏35'54	0°56'32
max. Earth dist.	12564 Oct 17 21:45	8°♏42'11	1.72445 AU
	12564 Nov 04 01:33	0°♐	
evening rise	12564 Nov 22 00:32	22°♐13'34	
	12564 Nov 28 07:43	0°♑	
	12564 Dec 22 17:34	0°♒	
desc. node	12565 Jan 10 03:58	22°♒29'56	
	12565 Jan 16 08:02	0°♓	
	12565 Feb 10 03:22	0°♈	
	12565 Mar 07 04:10	0°♉	
	12565 Apr 01 13:45	0°♊	
	12565 Apr 27 18:48	0°♋	
asc. node	12565 May 03 01:10	5°♋49'17	
evening max el	12565 May 22 18:45	26°♋36'52	46°43'56
	12565 May 26 05:05	0°♌	
greatest brilliancy	12565 Jul 02 02:54	27°♌11'45	-4.9m
retrograde	12565 Jul 12 00:50	29°♌02'53	
evening set	12565 Jul 27 18:25	24°♌12'17	
inferior conj	12565 Aug 01 16:43	21°♌16'41	5°15'54
minimum elong	12565 Aug 02 03:07	21°♌00'49	5°12'27
min. Earth dist.	12565 Aug 01 23:49	21°♌05'51	0.27006 AU
morning rise	12565 Aug 07 11:50	17°♌52'24	
direct	12565 Aug 22 09:46	13°♌30'16	
desc. node	12565 Aug 23 03:29	13°♌30'55	
greatest brilliancy	12565 Sep 01 10:58	15°♌23'32	-4.9m
	12565 Sep 24 16:32	0°♍	
morning max el	12565 Oct 11 07:31	15°♍10'10	46°23'56
	12565 Oct 25 20:04	0°♎	
	12565 Nov 22 02:43	0°♏	
asc. node	12565 Dec 14 03:12	25°♏23'54	
	12565 Dec 18 01:24	0°♐	
	12566 Jan 12 07:09	0°♑	
	12566 Feb 06 02:36	0°♒	
	12566 Mar 02 15:33	0°♓	
	12566 Mar 27 00:00	0°♈	
desc. node	12566 Apr 04 19:44	10°♈55'06	
morning set	12566 Apr 08 21:12	15°♈57'08	
	12566 Apr 20 04:38	0°♉	
	12566 May 14 05:49	0°♊	
max. Earth dist.	12566 May 15 21:46	2°♊04'54	1.71724 AU
superior conj	12566 May 18 16:57	5°♊35'03	-1°22'11
minimum elong	12566 May 18 09:20	5°♊11'14	1°22'52
	12566 Jun 07 04:33	0°♋	
evening rise	12566 Jun 27 18:11	25°♋48'03	
	12566 Jul 01 02:34	0°♌	
	12566 Jul 25 01:48	0°♍	
asc. node	12566 Jul 26 10:35	1°♍42'23	
	12566 Aug 18 04:05	0°♎	
	12566 Sep 11 11:30	0°♏	
	12566 Oct 06 03:28	0°♐	
	12566 Oct 31 10:08	0°♑	
desc. node	12566 Nov 15 06:17	17°♑05'05	
	12566 Nov 26 19:06	0°♒	
	12566 Dec 25 12:15	0°♓	
evening max el	12566 Dec 26 23:09	1°♓24'11	45°52'32
greatest brilliancy	12567 Feb 03 22:07	29°♓39'14	-4.8m
	12567 Feb 04 23:24	0°♈	
retrograde	12567 Feb 13 19:56	1°♈26'12	
	12567 Feb 22 07:22	30°℞♓	
evening set	12567 Feb 28 17:08	27°♓07'02	
inferior conj	12567 Mar 06 23:03	23°♓22'35	-0°20'42
minimum elong	12567 Mar 06 23:49	23°♓21'22	0°20'16
min. Earth dist.	12567 Mar 07 07:07	23°♓09'58	0.28157 AU
asc. node	12567 Mar 08 08:11	22°♓30'52	
morning rise	12567 Mar 13 06:10	19°♓36'09	
direct	12567 Mar 28 04:28	15°♓13'57	

greatest brilliancy	12567 Apr 07 20:41	17°♓21'19	-4.8m
	12567 Apr 28 05:32	0°♈	
morning max el	12567 May 17 05:46	17°♈21'40	46°36'18
	12567 May 29 10:53	0°♉	
	12567 Jun 25 06:21	0°♊	
desc. node	12567 Jun 28 09:04	3°♊37'00	
	12567 Jul 20 15:31	0°♋	
	12567 Aug 14 09:33	0°♌	
	12567 Sep 07 20:57	0°♍	
	12567 Oct 02 05:41	0°♎	
asc. node	12567 Oct 19 02:54	20°♎49'51	
	12567 Oct 26 13:10	0°♏	
morning set	12567 Nov 18 05:07	28°♏00'23	
	12567 Nov 19 19:50	0°♐	
	12567 Dec 14 02:18	0°♑	
superior conj	12567 Dec 25 01:45	13°♑33'28	1°21'50
minimum elong	12567 Dec 25 07:32	13°♑51'19	1°22'40
max. Earth dist.	12567 Dec 26 06:27	15°♑02'01	1.73138 AU
	12568 Jan 07 09:30	0°♒	
evening rise	12568 Jan 31 09:52	29°♒34'53	
	12568 Jan 31 18:01	0°♓	
desc. node	12568 Feb 07 17:19	8°♓34'34	
	12568 Feb 25 03:39	0°♈	
	12568 Mar 20 13:44	0°♉	
	12568 Apr 14 00:23	0°♊	
	12568 May 08 13:33	0°♋	
asc. node	12568 May 30 11:43	26°♋30'19	
	12568 Jun 02 09:44	0°♌	
	12568 Jun 27 21:25	0°♍	
	12568 Jul 24 20:36	0°♎	
evening max el	12568 Aug 03 07:13	9°♎45'10	46°41'41
	12568 Aug 25 20:15	0°♏	
greatest brilliancy	12568 Sep 11 11:56	9°♏54'21	-4.8m
desc. node	12568 Sep 19 12:48	11°♏58'22	
retrograde	12568 Sep 22 12:26	12°♏08'48	
evening set	12568 Oct 08 00:19	7°♏28'48	
min. Earth dist.	12568 Oct 12 19:45	4°♏36'46	0.27935 AU
inferior conj	12568 Oct 13 16:50	4°♏04'08	-5°38'37
minimum elong	12568 Oct 13 06:33	4°♏20'04	5°35'42
morning rise	12568 Oct 18 13:22	1°♏08'59	
	12568 Oct 20 16:06	30°℞♎	
direct	12568 Nov 03 18:30	26°♎09'48	
greatest brilliancy	12568 Nov 13 05:31	27°♎47'29	-4.8m
	12568 Nov 18 15:06	0°♏	
morning max el	12568 Dec 22 14:47	26°♏10'55	45°45'52
	12568 Dec 26 12:47	0°♐	
asc. node	12569 Jan 10 14:32	15°♐30'23	
	12569 Jan 23 21:46	0°♑	
	12569 Feb 19 03:50	0°♒	
	12569 Mar 16 10:57	0°♓	
	12569 Apr 10 05:16	0°♈	
desc. node	12569 May 02 09:47	27°♈15'04	
	12569 May 04 15:12	0°♉	
	12569 May 28 19:06	0°♊	
	12569 Jun 21 18:57	0°♋	
morning set	12569 Jun 22 17:20	1°♋10'09	
	12569 Jul 15 16:54	0°♌	
superior conj	12569 Aug 01 15:01	21°♌13'58	-0°49'12
minimum elong	12569 Aug 02 01:44	21°♌47'33	0°49'25
max. Earth dist.	12569 Aug 02 23:27	22°♌55'37	1.71493 AU
	12569 Aug 08 14:53	0°♍	
asc. node	12569 Aug 23 00:20	18°♍01'26	
	12569 Sep 01 14:19	0°♎	
evening rise	12569 Sep 10 05:44	10°♎47'01	
	12569 Sep 25 16:14	0°♏	
	12569 Oct 19 22:00	0°♐	
	12569 Nov 13 09:45	0°♑	
	12569 Dec 08 06:22	0°♒	
desc. node	12569 Dec 12 17:34	5°♒19'55	
	12570 Jan 02 15:19	0°♓	
	12570 Jan 28 18:24	0°♈	
	12570 Feb 25 07:59	0°♉	
evening max el	12570 Mar 08 09:07	11°♉10'10	46°11'32
	12570 Mar 29 15:34	0°♊	
asc. node	12570 Apr 04 17:33	4°♊19'57	
greatest brilliancy	12570 Apr 17 08:15	10°♊50'41	-4.8m
retrograde	12570 Apr 27 00:06	12°♊35'57	
evening set	12570 May 14 04:03	6°♊56'58	
inferior conj	12570 May 17 19:33	4°♊43'32	8°33'38
minimum elong	12570 May 17 11:53	4°♊55'25	8°31'57
min. Earth dist.	12570 May 17 22:02	4°♊39'40	0.27541 AU
morning rise	12570 May 20 19:37	2°♊52'39	
	12570 May 25 23:44	30°℞♉	
direct	12570 Jun 07 15:55	26°♉44'54	
greatest brilliancy	12570 Jun 17 15:29	28°♉37'13	-4.9m
	12570 Jun 21 00:20	0°♊	
desc. node	12570 Jul 25 19:46	27°♊12'21	
morning max el	12570 Jul 28 03:41	29°♊31'45	46°57'50
	12570 Jul 28 14:54	0°♋	
	12570 Aug 25 11:05	0°♌	
	12570 Sep 20 10:32	0°♍	
	12570 Oct 15 16:52	0°♎	
	12570 Nov 09 14:37	0°♏	
asc. node	12570 Nov 15 16:34	7°♏22'13	
	12570 Dec 04 06:45	0°♐	
	12570 Dec 28 18:48	0°♑	
	12571 Jan 22 04:12	0°♒	
morning set	12571 Jan 25 23:58	4°♒42'39	
	12571 Feb 15 12:03	0°♓	
max. Earth dist.	12571 Mar 02 17:29	18°♓48'34	1.72868 AU
superior conj	12571 Mar 04 12:50	21°♓02'34	0°06'44
minimum elong	12571 Mar 04 14:27	21°♓07'33	0°06'54
behind sun begin	12571 Mar 03 16:40	20°♓00'13	
behind sun end	12571 Mar 05 12:14	22°♓14'54	
desc. node	12571 Mar 07 07:20	24°♓28'10	
	12571 Mar 11 18:38	0°♈	
	12571 Apr 04 23:36	0°♉	
evening rise	12571 Apr 12 02:47	8°♉51'33	
	12571 Apr 29 02:45	0°♊	
	12571 May 23 04:56	0°♋	
	12571 Jun 16 08:10	0°♌	
asc. node	12571 Jun 27 23:32	14°♌24'24	
	12571 Jul 10 15:19	0°♍	
	12571 Aug 04 06:19	0°♎	
	12571 Aug 29 11:55	0°♏	
	12571 Sep 24 23:32	0°♐	
evening max el	12571 Oct 14 09:11	20°♐11'12	46°10'11
desc. node	12571 Oct 17 22:17	23°♐37'00	
	12571 Oct 24 20:19	0°♑	
greatest brilliancy	12571 Nov 22 15:18	19°♑16'24	-4.8m
retrograde	12571 Dec 02 20:45	21°♑11'13	
evening set	12571 Dec 21 01:05	14°♑58'16	
inferior conj	12571 Dec 24 08:54	12°♑54'35	-8°22'16
minimum elong	12571 Dec 24 14:56	12°♑45'08	8°20'48
min. Earth dist.	12571 Dec 24 11:16	12°♑50'53	0.28965 AU
morning rise	12571 Dec 28 04:46	10°♑32'43	
direct	12572 Jan 14 18:18	4°♑40'35	
greatest brilliancy	12572 Jan 25 08:15	6°♑42'52	-4.7m
asc. node	12572 Feb 08 00:34	14°♑05'57	
	12572 Feb 27 07:40	0°♒	
morning max el	12572 Mar 03 23:50	5°♒25'06	45°52'38

	12572 Mar 27 12:11	0°♓	
	12572 Apr 22 21:28	0°♈	
	12572 May 18 03:34	0°♉	
desc. node	12572 May 29 23:01	14°♉18'27	
	12572 Jun 11 18:59	0°♊	
	12572 Jul 06 01:48	0°♋	
	12572 Jul 30 04:10	0°♌	
	12572 Aug 23 05:06	0°♍	
morning set	12572 Sep 04 18:26	15°♍39'47	
	12572 Sep 16 06:21	0°♎	
asc. node	12572 Sep 19 14:32	4°♎09'52	
	12572 Oct 10 08:37	0°♏	
superior conj	12572 Oct 13 11:00	3°♏51'19	0°53'45
minimum elong	12572 Oct 13 01:02	3°♏20'19	0°53'47
max. Earth dist.	12572 Oct 15 14:36	6°♏31'43	1.72414 AU
	12572 Nov 03 12:22	0°♐	
evening rise	12572 Nov 19 16:53	20°♐02'18	
	12572 Nov 27 18:36	0°♑	
	12572 Dec 22 04:37	0°♒	
desc. node	12573 Jan 09 05:50	22°♒01'21	
	12573 Jan 15 19:23	0°♓	
	12573 Feb 09 15:14	0°♈	
	12573 Mar 06 16:50	0°♉	
	12573 Apr 01 03:49	0°♊	
	12573 Apr 27 11:43	0°♋	
asc. node	12573 May 02 03:09	5°♋06'09	
evening max el	12573 May 20 09:09	24°♋15'34	46°43'07
	12573 May 26 06:12	0°♌	
greatest brilliancy	12573 Jun 29 16:18	24°♌46'22	-4.9m
retrograde	12573 Jul 09 14:04	26°♌36'53	
evening set	12573 Jul 25 10:29	21°♌41'57	
inferior conj	12573 Jul 30 05:21	18°♌50'49	5°35'44
minimum elong	12573 Jul 30 16:05	18°♌34'26	5°32'16
min. Earth dist.	12573 Jul 30 12:52	18°♌39'20	0.27010 AU
morning rise	12573 Aug 04 21:46	15°♌30'12	
direct	12573 Aug 19 23:07	11°♌04'28	
desc. node	12573 Aug 22 05:22	11°♌10'34	
greatest brilliancy	12573 Aug 29 23:12	12°♌57'08	-4.9m
	12573 Sep 25 01:39	0°♍	
morning max el	12573 Oct 08 21:26	12°♍49'24	46°25'27
	12573 Oct 25 14:41	0°♎	
	12573 Nov 21 17:25	0°♏	
asc. node	12573 Dec 13 05:09	24°♏51'10	
	12573 Dec 17 14:19	0°♐	
	12574 Jan 11 19:07	0°♑	
	12574 Feb 05 14:01	0°♒	
	12574 Mar 02 02:41	0°♓	
	12574 Mar 26 10:59	0°♈	
desc. node	12574 Apr 03 21:40	10°♈27'14	
morning set	12574 Apr 06 10:53	13°♈36'56	
	12574 Apr 19 15:33	0°♉	
max. Earth dist.	12574 May 13 06:37	29°♉28'22	1.71759 AU
	12574 May 13 16:44	0°♊	
superior conj	12574 May 16 05:25	3°♊09'44	-1°20'49
minimum elong	12574 May 15 21:06	2°♊43'43	1°21'26
	12574 Jun 06 15:32	0°♋	
evening rise	12574 Jun 25 05:25	23°♋18'01	
	12574 Jun 30 13:39	0°♌	
	12574 Jul 24 13:01	0°♍	
asc. node	12574 Jul 25 12:21	1°♍12'49	
	12574 Aug 17 15:30	0°♎	
	12574 Sep 10 23:13	0°♏	
	12574 Oct 05 15:45	0°♐	
	12574 Oct 30 23:33	0°♑	
desc. node	12574 Nov 14 08:21	16°♑29'49	
	12574 Nov 26 10:55	0°♒	
evening max el	12574 Dec 24 14:02	29°♒10'04	45°52'26
	12574 Dec 25 10:54	0°♓	
greatest brilliancy	12575 Feb 01 13:49	27°♓25'36	-4.8m
retrograde	12575 Feb 11 10:14	29°♓11'22	
evening set	12575 Feb 26 09:20	24°♓50'46	
inferior conj	12575 Mar 04 14:13	21°♓07'36	-0°42'22
minimum elong	12575 Mar 04 15:49	21°♓05'07	0°41'39
min. Earth dist.	12575 Mar 04 23:04	20°♓53'45	0.28185 AU
asc. node	12575 Mar 07 10:10	19°♓22'00	
morning rise	12575 Mar 10 21:53	17°♓19'58	
direct	12575 Mar 25 19:40	12°♓58'42	
greatest brilliancy	12575 Apr 05 12:50	15°♓06'24	-4.8m
	12575 Apr 28 14:45	0°♈	
morning max el	12575 May 14 19:14	15°♈00'34	46°34'52
	12575 May 29 05:10	0°♉	
	12575 Jun 24 20:59	0°♊	
desc. node	12575 Jun 27 11:02	3°♊00'43	
	12575 Jul 20 04:37	0°♋	
	12575 Aug 13 21:49	0°♌	
	12575 Sep 07 08:42	0°♍	
	12575 Oct 01 17:03	0°♎	
asc. node	12575 Oct 18 04:53	20°♎21'37	
	12575 Oct 26 00:13	0°♏	
morning set	12575 Nov 15 21:09	25°♏47'58	
	12575 Nov 19 06:41	0°♐	
	12575 Dec 13 13:05	0°♑	
superior conj	12575 Dec 22 18:40	11°♑24'18	1°22'48
minimum elong	12575 Dec 22 23:49	11°♑40'13	1°23'40
max. Earth dist.	12575 Dec 23 23:11	12°♑52'21	1.73127 AU
	12576 Jan 06 20:18	0°♒	
evening rise	12576 Jan 29 01:50	27°♒22'51	
	12576 Jan 31 04:55	0°♓	
desc. node	12576 Feb 06 19:06	8°♓06'23	
	12576 Feb 24 14:44	0°♈	
	12576 Mar 20 01:05	0°♉	
	12576 Apr 13 12:08	0°♊	
	12576 May 08 01:54	0°♋	
asc. node	12576 May 29 13:43	25°♋56'54	
	12576 Jun 01 23:03	0°♌	
	12576 Jun 27 12:36	0°♍	
	12576 Jul 24 16:16	0°♎	
evening max el	12576 Jul 31 20:40	7°♎22'23	46°42'18
	12576 Aug 26 14:42	0°♏	
greatest brilliancy	12576 Sep 09 03:33	7°♏36'32	-4.8m
desc. node	12576 Sep 18 14:53	9°♏47'41	
retrograde	12576 Sep 20 02:46	9°♏50'20	
evening set	12576 Oct 05 12:14	5°♏14'22	
min. Earth dist.	12576 Oct 10 10:50	2°♏18'16	0.27880 AU
inferior conj	12576 Oct 11 07:15	1°♏46'40	-5°21'22
minimum elong	12576 Oct 10 21:11	2°♏02'16	5°18'26
	12576 Oct 14 04:57	30°℞♎	
morning rise	12576 Oct 16 06:39	28°♎47'27	
direct	12576 Nov 01 07:50	23°♎52'56	
greatest brilliancy	12576 Nov 10 20:15	25°♎31'27	-4.8m
	12576 Nov 20 11:50	0°♏	
morning max el	12576 Dec 20 04:08	23°♏52'44	45°46'36
	12576 Dec 26 09:43	0°♐	
asc. node	12577 Jan 09 16:26	14°♐49'28	
	12577 Jan 23 13:01	0°♑	
	12577 Feb 18 16:58	0°♒	
	12577 Mar 15 23:03	0°♓	
	12577 Apr 09 16:49	0°♈	
desc. node	12577 May 01 11:43	26°♈46'17	
	12577 May 04 02:26	0°♉	
	12577 May 28 06:09	0°♊	

morning set	12577 Jun 20 05:02	28°♊42'06	
	12577 Jun 21 05:53	0°♋	
	12577 Jul 15 03:45	0°♌	
superior conj	12577 Jul 30 03:26	18°♌48'31	-0°52'19
minimum elong	12577 Jul 30 14:32	19°♌23'18	0°52'33
max. Earth dist.	12577 Jul 31 07:02	20°♌15'04	1.71475 AU
	12577 Aug 08 01:41	0°♍	
asc. node	12577 Aug 22 02:11	17°♍33'26	
	12577 Sep 01 01:07	0°♎	
evening rise	12577 Sep 07 19:52	8°♎27'41	
	12577 Sep 25 03:07	0°♏	
	12577 Oct 19 09:03	0°♐	
	12577 Nov 12 21:07	0°♑	
	12577 Dec 07 18:17	0°♒	
desc. node	12577 Dec 11 19:25	4°♒49'31	
	12578 Jan 02 04:15	0°♓	
	12578 Jan 28 09:18	0°♈	
	12578 Feb 25 03:32	0°♉	
evening max el	12578 Mar 05 22:49	8°♉50'26	46°10'28
	12578 Mar 30 09:43	0°♊	
asc. node	12578 Apr 03 19:39	2°♊57'28	
greatest brilliancy	12578 Apr 14 20:39	8°♊27'41	-4.8m
retrograde	12578 Apr 24 13:53	10°♊14'11	
evening set	12578 May 11 13:15	4°♊40'52	
inferior conj	12578 May 15 09:07	2°♊21'07	8°24'30
minimum elong	12578 May 15 00:48	2°♊33'59	8°22'39
min. Earth dist.	12578 May 15 11:00	2°♊18'11	0.27558 AU
morning rise	12578 May 18 12:15	0°♊25'48	
	12578 May 19 05:32	30°℞♉	
direct	12578 Jun 05 05:49	24°♉21'59	
greatest brilliancy	12578 Jun 15 05:23	26°♉14'44	-4.9m
	12578 Jun 23 04:07	0°♊	
desc. node	12578 Jul 24 21:38	26°♊19'32	
morning max el	12578 Jul 25 18:25	27°♊11'37	46°58'16
	12578 Jul 28 12:47	0°♋	
	12578 Aug 25 02:58	0°♌	
	12578 Sep 20 00:04	0°♍	
	12578 Oct 15 05:10	0°♎	
	12578 Nov 09 02:12	0°♏	
asc. node	12578 Nov 14 18:25	6°♏53'08	
	12578 Dec 03 17:52	0°♐	
	12578 Dec 28 05:38	0°♑	
	12579 Jan 21 14:52	0°♒	
morning set	12579 Jan 23 16:54	2°♒34'09	
	12579 Feb 14 22:38	0°♓	
max. Earth dist.	12579 Feb 28 13:42	16°♓49'50	1.72897 AU
superior conj	12579 Mar 02 03:57	18°♓48'02	0°10'13
minimum elong	12579 Mar 02 06:22	18°♓55'31	0°10'22
behind sun begin	12579 Mar 01 11:59	17°♓58'44	
behind sun end	12579 Mar 03 00:44	19°♓52'18	
desc. node	12579 Mar 06 09:13	24°♓01'06	
	12579 Mar 11 05:16	0°♈	
	12579 Apr 04 10:21	0°♉	
evening rise	12579 Apr 09 16:59	6°♉33'04	
	12579 Apr 28 13:40	0°♊	
	12579 May 22 16:04	0°♋	
	12579 Jun 15 19:34	0°♌	
asc. node	12579 Jun 27 01:20	13°♌54'12	
	12579 Jul 10 03:08	0°♍	
	12579 Aug 03 18:50	0°♎	
	12579 Aug 29 01:44	0°♏	
	12579 Sep 24 16:21	0°♐	
evening max el	12579 Oct 12 01:12	17°♐59'51	46°11'19
desc. node	12579 Oct 17 00:20	22°♐46'27	
	12579 Oct 25 00:06	0°♑	
greatest brilliancy	12579 Nov 20 05:37	17°♑04'46	-4.8m
retrograde	12579 Nov 30 13:17	19°♑01'12	
evening set	12579 Dec 18 18:48	12°♑45'25	
inferior conj	12579 Dec 22 00:55	10°♑44'14	-8°28'05
minimum elong	12579 Dec 22 06:18	10°♑35'47	8°26'44
min. Earth dist.	12579 Dec 22 01:43	10°♑42'58	0.28968 AU
morning rise	12579 Dec 25 17:52	8°♑26'56	
direct	12580 Jan 12 10:53	2°♑30'39	
greatest brilliancy	12580 Jan 22 22:38	4°♑31'20	-4.7m
asc. node	12580 Feb 07 02:34	12°♑55'03	
	12580 Feb 27 07:18	0°♒	
morning max el	12580 Mar 01 16:06	3°♒14'44	45°51'30
	12580 Mar 27 04:03	0°♓	
	12580 Apr 22 10:51	0°♈	
	12580 May 17 15:49	0°♉	
desc. node	12580 May 29 00:52	13°♉47'54	
	12580 Jun 11 06:36	0°♊	
	12580 Jul 05 13:02	0°♋	
	12580 Jul 29 15:09	0°♌	
	12580 Aug 22 15:54	0°♍	
morning set	12580 Sep 02 08:19	13°♍20'01	
	12580 Sep 15 16:59	0°♎	
asc. node	12580 Sep 18 16:30	3°♎42'56	
	12580 Oct 09 19:07	0°♏	
superior conj	12580 Oct 11 02:22	1°♏37'12	0°50'59
minimum elong	12580 Oct 10 16:36	1°♏06'48	0°50'59
max. Earth dist.	12580 Oct 13 09:09	4°♏27'34	1.72377 AU
	12580 Nov 02 22:50	0°♐	
evening rise	12580 Nov 17 09:34	17°♐53'11	
	12580 Nov 27 05:07	0°♑	
	12580 Dec 21 15:19	0°♒	
desc. node	12581 Jan 08 07:40	21°♒33'40	
	12581 Jan 15 06:26	0°♓	
	12581 Feb 09 02:49	0°♈	
	12581 Mar 06 05:16	0°♉	
	12581 Mar 31 17:43	0°♊	
	12581 Apr 27 04:36	0°♋	
asc. node	12581 May 01 05:09	4°♋23'30	
evening max el	12581 May 17 23:06	21°♋54'10	46°42'15
	12581 May 26 08:13	0°♌	
greatest brilliancy	12581 Jun 27 06:16	22°♌22'54	-4.9m
retrograde	12581 Jul 07 02:56	24°♌12'03	
evening set	12581 Jul 23 02:44	19°♌12'50	
inferior conj	12581 Jul 27 18:06	16°♌26'18	5°54'57
minimum elong	12581 Jul 28 05:04	16°♌09'30	5°51'28
min. Earth dist.	12581 Jul 28 02:14	16°♌13'51	0.27015 AU
morning rise	12581 Aug 02 07:29	13°♌09'28	
direct	12581 Aug 17 12:07	8°♌39'57	
desc. node	12581 Aug 21 07:30	8°♌57'00	
greatest brilliancy	12581 Aug 27 11:48	10°♌32'08	-4.9m
	12581 Sep 25 07:47	0°♍	
morning max el	12581 Oct 06 10:37	10°♍27'49	46°27'07
	12581 Oct 25 08:24	0°♎	
	12581 Nov 21 07:28	0°♏	
asc. node	12581 Dec 12 07:00	24°♏19'48	
	12581 Dec 17 02:39	0°♐	
	12582 Jan 11 06:33	0°♑	
	12582 Feb 05 00:58	0°♒	
	12582 Mar 01 13:24	0°♓	
	12582 Mar 25 21:35	0°♈	
desc. node	12582 Apr 02 23:36	10°♈00'25	
morning set	12582 Apr 04 00:36	11°♈17'54	
	12582 Apr 19 02:07	0°♉	
max. Earth dist.	12582 May 10 14:24	26°♉49'41	1.71796 AU
	12582 May 13 03:18	0°♊	

superior conj	12582 May 13 17:52	0°♊45'30	-1°19'17
minimum elong	12582 May 13 08:53	0°♊17'26	1°19'51
	12582 Jun 06 02:09	0°♋	
evening rise	12582 Jun 22 16:33	20°♋48'55	
	12582 Jun 30 00:21	0°♌	
	12582 Jul 23 23:52	0°♍	
asc. node	12582 Jul 24 14:16	0°♍44'54	
	12582 Aug 17 02:33	0°♎	
	12582 Sep 10 10:36	0°♏	
	12582 Oct 05 03:43	0°♐	
	12582 Oct 30 12:37	0°♑	
desc. node	12582 Nov 13 10:16	15°♑55'22	
	12582 Nov 26 02:26	0°♒	
evening max el	12582 Dec 22 04:12	26°♒55'58	45°52'27
	12582 Dec 25 09:48	0°♓	
greatest brilliancy	12583 Jan 30 05:36	25°♓14'06	-4.8m
retrograde	12583 Feb 09 00:40	26°♓59'04	
evening set	12583 Feb 24 01:52	22°♓36'22	
inferior conj	12583 Mar 02 05:39	18°♓54'54	-1°03'49
minimum elong	12583 Mar 02 08:02	18°♓51'09	1°02'48
min. Earth dist.	12583 Mar 02 15:20	18°♓39'42	0.28220 AU
asc. node	12583 Mar 06 12:16	16°♓16'59	
morning rise	12583 Mar 08 13:41	15°♓06'23	
direct	12583 Mar 23 10:48	10°♓45'25	
greatest brilliancy	12583 Apr 03 05:45	12°♓54'12	-4.8m
	12583 Apr 28 20:49	0°♈	
morning max el	12583 May 12 09:09	12°♈41'41	46°33'19
	12583 May 28 22:38	0°♉	
	12583 Jun 24 11:07	0°♊	
desc. node	12583 Jun 26 12:56	2°♊25'29	
	12583 Jul 19 17:16	0°♋	
	12583 Aug 13 09:40	0°♌	
	12583 Sep 06 20:01	0°♍	
	12583 Oct 01 03:59	0°♎	
asc. node	12583 Oct 17 06:41	19°♎53'57	
	12583 Oct 25 10:53	0°♏	
morning set	12583 Nov 13 13:15	23°♏36'50	
	12583 Nov 18 17:10	0°♐	
	12583 Dec 12 23:28	0°♑	
superior conj	12583 Dec 20 11:53	9°♑17'20	1°23'39
minimum elong	12583 Dec 20 16:23	9°♑31'12	1°24'32
max. Earth dist.	12583 Dec 21 15:25	10°♑42'19	1.73112 AU
	12584 Jan 06 06:40	0°♒	
evening rise	12584 Jan 26 18:15	25°♒13'39	
	12584 Jan 30 15:22	0°♓	
desc. node	12584 Feb 05 21:04	7°♓40'10	
	12584 Feb 24 01:22	0°♈	
	12584 Mar 19 12:02	0°♉	
	12584 Apr 12 23:32	0°♊	
	12584 May 07 13:58	0°♋	
asc. node	12584 May 28 15:32	25°♋23'38	
	12584 Jun 01 12:11	0°♌	
	12584 Jun 27 03:43	0°♍	
	12584 Jul 24 12:15	0°♎	
evening max el	12584 Jul 29 09:55	4°♎59'59	46°43'04
	12584 Aug 27 15:19	0°♏	
greatest brilliancy	12584 Sep 06 18:36	5°♏18'40	-4.8m
retrograde	12584 Sep 17 17:18	7°♏32'35	
desc. node	12584 Sep 17 16:54	7°♏32'35	
evening set	12584 Oct 03 00:12	3°♏00'02	
min. Earth dist.	12584 Oct 08 01:38	0°♏00'24	0.27826 AU
	12584 Oct 08 01:53	30°℞♎	
inferior conj	12584 Oct 08 21:32	29°♎29'42	-5°03'24
minimum elong	12584 Oct 08 11:44	29°♎44'49	5°00'30
morning rise	12584 Oct 13 23:46	26°♎26'43	
direct	12584 Oct 29 21:10	21°♎36'23	
greatest brilliancy	12584 Nov 08 10:47	23°♎15'55	-4.8m
	12584 Nov 21 17:50	0°♏	
morning max el	12584 Dec 17 18:22	21°♏37'35	45°47'32
	12584 Dec 26 05:35	0°♐	
asc. node	12585 Jan 08 18:23	14°♐10'09	
	12585 Jan 23 03:40	0°♑	
	12585 Feb 18 05:36	0°♒	
	12585 Mar 15 10:42	0°♓	
	12585 Apr 09 03:57	0°♈	
desc. node	12585 Apr 30 13:31	26°♈18'12	
	12585 May 03 13:18	0°♉	
	12585 May 27 16:54	0°♊	
morning set	12585 Jun 17 16:26	26°♊13'55	
	12585 Jun 20 16:35	0°♋	
	12585 Jul 14 14:24	0°♌	
superior conj	12585 Jul 27 15:18	16°♌21'52	-0°55'22
minimum elong	12585 Jul 28 02:41	16°♌57'34	0°55'37
max. Earth dist.	12585 Jul 28 14:51	17°♌35'44	1.71461 AU
	12585 Aug 07 12:18	0°♍	
asc. node	12585 Aug 21 04:06	17°♍06'09	
	12585 Aug 31 11:45	0°♎	
evening rise	12585 Sep 05 09:29	6°♎07'20	
	12585 Sep 24 13:49	0°♏	
	12585 Oct 18 19:56	0°♐	
	12585 Nov 12 08:18	0°♑	
	12585 Dec 07 06:02	0°♒	
desc. node	12585 Dec 10 21:19	4°♒19'48	
	12586 Jan 01 17:02	0°♓	
	12586 Jan 28 00:06	0°♈	
	12586 Feb 24 23:18	0°♉	
evening max el	12586 Mar 03 13:39	6°♉34'47	46°09'34
	12586 Mar 31 09:29	0°♊	
asc. node	12586 Apr 02 21:33	1°♊33'23	
greatest brilliancy	12586 Apr 12 08:57	6°♊06'23	-4.8m
retrograde	12586 Apr 22 04:08	7°♊54'08	
evening set	12586 May 08 22:44	2°♊26'38	
inferior conj	12586 May 12 22:55	0°♊00'25	8°14'30
minimum elong	12586 May 12 14:03	0°♊14'09	8°12'30
	12586 May 12 23:11	30°℞♉	
min. Earth dist.	12586 May 12 23:58	29°♉58'48	0.27577 AU
morning rise	12586 May 16 05:18	28°♉00'19	
direct	12586 Jun 02 20:24	22°♉01'01	
greatest brilliancy	12586 Jun 12 19:00	23°♉53'19	-4.9m
	12586 Jun 24 13:32	0°♊	
morning max el	12586 Jul 23 09:32	24°♊53'08	46°58'15
desc. node	12586 Jul 23 23:45	25°♊28'56	
	12586 Jul 28 09:39	0°♋	
	12586 Aug 24 18:30	0°♌	
	12586 Sep 19 13:27	0°♍	
	12586 Oct 14 17:23	0°♎	
	12586 Nov 08 13:41	0°♏	
asc. node	12586 Nov 13 20:16	6°♏24'16	
	12586 Dec 03 04:54	0°♐	
	12586 Dec 27 16:22	0°♑	
morning set	12587 Jan 21 09:52	0°♒25'59	
	12587 Jan 21 01:26	0°♒	
	12587 Feb 14 09:10	0°♓	
max. Earth dist.	12587 Feb 26 08:51	14°♓48'07	1.72918 AU
superior conj	12587 Feb 27 19:18	16°♓34'36	0°13'40
minimum elong	12587 Feb 27 22:30	16°♓44'28	0°13'48
behind sun begin	12587 Feb 27 10:22	16°♓06'57	
behind sun end	12587 Feb 28 10:38	17°♓21'59	
desc. node	12587 Mar 05 11:08	23°♓34'25	
	12587 Mar 10 15:50	0°♈	
	12587 Apr 03 20:59	0°♉	

evening rise	12587 Apr 07 07:30	4°♉16'05	
	12587 Apr 28 00:27	0°♊	
	12587 May 22 03:02	0°♋	
	12587 Jun 15 06:52	0°♌	
asc. node	12587 Jun 26 03:18	13°♌24'43	
	12587 Jul 09 14:57	0°♍	
	12587 Aug 03 07:27	0°♎	
	12587 Aug 28 15:49	0°♏	
	12587 Sep 24 09:44	0°♐	
evening max el	12587 Oct 09 17:11	15°♐47'37	46°12'25
desc. node	12587 Oct 16 02:16	21°♐53'59	
	12587 Oct 25 06:12	0°♑	
greatest brilliancy	12587 Nov 17 20:24	14°♑52'42	-4.8m
retrograde	12587 Nov 28 05:21	16°♑49'48	
evening set	12587 Dec 16 12:04	10°♑31'57	
inferior conj	12587 Dec 19 16:42	8°♑32'48	-8°33'13
minimum elong	12587 Dec 19 21:23	8°♑25'26	8°31'58
min. Earth dist.	12587 Dec 19 16:05	8°♑33'46	0.28963 AU
morning rise	12587 Dec 23 06:48	6°♑19'42	
direct	12588 Jan 10 03:07	0°♑19'48	
greatest brilliancy	12588 Jan 20 12:27	2°♑18'21	-4.7m
asc. node	12588 Feb 06 04:41	11°♑45'50	
	12588 Feb 27 06:03	0°♒	
morning max el	12588 Feb 28 07:30	1°♒01'51	45°50'29
	12588 Mar 26 19:46	0°♓	
	12588 Apr 22 00:11	0°♈	
	12588 May 17 04:00	0°♉	
desc. node	12588 May 28 02:47	13°♉17'36	
	12588 Jun 10 18:10	0°♊	
	12588 Jul 05 00:14	0°♋	
	12588 Jul 29 02:07	0°♌	
	12588 Aug 22 02:44	0°♍	
morning set	12588 Aug 30 22:06	10°♍59'40	
	12588 Sep 15 03:43	0°♎	
asc. node	12588 Sep 17 18:18	3°♎15'06	
superior conj	12588 Oct 08 17:22	29°♎21'22	0°48'05
minimum elong	12588 Oct 08 07:53	28°♎51'51	0°48'04
	12588 Oct 09 05:48	0°♏	
max. Earth dist.	12588 Oct 11 02:08	2°♏17'53	1.72343 AU
	12588 Nov 02 09:29	0°♐	
evening rise	12588 Nov 15 01:45	15°♐41'44	
	12588 Nov 26 15:51	0°♑	
	12588 Dec 21 02:15	0°♒	
desc. node	12589 Jan 07 09:38	21°♒05'44	
	12589 Jan 14 17:44	0°♓	
	12589 Feb 08 14:40	0°♈	
	12589 Mar 05 18:00	0°♉	
	12589 Mar 31 07:57	0°♊	
	12589 Apr 26 22:01	0°♋	
asc. node	12589 Apr 30 07:05	3°♋39'47	
evening max el	12589 May 15 12:19	19°♋30'39	46°41'30
	12589 May 26 11:54	0°♌	
greatest brilliancy	12589 Jun 24 20:54	20°♌00'30	-4.9m
retrograde	12589 Jul 04 15:34	21°♌47'52	
evening set	12589 Jul 20 19:17	16°♌44'09	
inferior conj	12589 Jul 25 07:07	14°♌02'28	6°13'12
minimum elong	12589 Jul 25 18:15	13°♌45'23	6°09'46
min. Earth dist.	12589 Jul 25 16:03	13°♌48'45	0.27021 AU
morning rise	12589 Jul 30 17:15	10°♌49'37	
direct	12589 Aug 15 00:47	6°♌15'53	
desc. node	12589 Aug 20 09:29	6°♌49'11	
greatest brilliancy	12589 Aug 25 01:05	8°♌08'08	-4.9m
	12589 Sep 25 11:59	0°♍	
morning max el	12589 Oct 03 23:21	8°♍04'33	46°28'34
	12589 Oct 25 01:54	0°♎	
	12589 Nov 20 21:39	0°♏	
asc. node	12589 Dec 11 09:00	23°♏47'56	
	12589 Dec 16 15:16	0°♐	
	12590 Jan 10 18:18	0°♑	
	12590 Feb 04 12:14	0°♒	
	12590 Mar 01 00:24	0°♓	
	12590 Mar 25 08:28	0°♈	
morning set	12590 Apr 01 14:09	8°♈57'31	
desc. node	12590 Apr 02 01:18	9°♈32'04	
	12590 Apr 18 12:56	0°♉	
max. Earth dist.	12590 May 07 23:17	24°♉13'38	1.71833 AU
superior conj	12590 May 11 06:18	28°♉20'29	-1°17'35
minimum elong	12590 May 10 20:44	27°♉50'35	1°18'07
	12590 May 12 14:09	0°♊	
	12590 Jun 05 13:02	0°♋	
evening rise	12590 Jun 20 03:52	18°♋19'42	
	12590 Jun 29 11:19	0°♌	
	12590 Jul 23 10:57	0°♍	
asc. node	12590 Jul 23 16:11	0°♍16'21	
	12590 Aug 16 13:48	0°♎	
	12590 Sep 09 22:12	0°♏	
	12590 Oct 04 15:58	0°♐	
	12590 Oct 30 02:08	0°♑	
desc. node	12590 Nov 12 12:11	15°♑19'35	
	12590 Nov 25 18:41	0°♒	
evening max el	12590 Dec 19 18:01	24°♒39'41	45°52'28
	12590 Dec 25 10:27	0°♓	
greatest brilliancy	12591 Jan 27 20:55	23°♓00'20	-4.8m
retrograde	12591 Feb 06 15:17	24°♓45'04	
evening set	12591 Feb 21 18:21	20°♓19'47	
inferior conj	12591 Feb 27 20:52	16°♓40'21	-1°25'11
minimum elong	12591 Feb 28 00:03	16°♓35'22	1°23'53
min. Earth dist.	12591 Feb 28 07:22	16°♓23'55	0.28256 AU
asc. node	12591 Mar 05 14:09	13°♓12'20	
morning rise	12591 Mar 06 05:09	12°♓51'27	
direct	12591 Mar 21 01:44	8°♓30'12	
greatest brilliancy	12591 Mar 31 22:32	10°♓40'28	-4.8m
	12591 Apr 29 01:25	0°♈	
morning max el	12591 May 09 23:46	10°♈23'28	46°31'52
	12591 May 28 16:06	0°♉	
	12591 Jun 24 01:26	0°♊	
desc. node	12591 Jun 25 14:56	1°♊49'49	
	12591 Jul 19 06:10	0°♋	
	12591 Aug 12 21:46	0°♌	
	12591 Sep 06 07:35	0°♍	
	12591 Sep 30 15:09	0°♎	
asc. node	12591 Oct 16 08:30	19°♎25'34	
	12591 Oct 24 21:47	0°♏	
morning set	12591 Nov 11 05:26	21°♏25'03	
	12591 Nov 18 03:56	0°♐	
	12591 Dec 12 10:11	0°♑	
superior conj	12591 Dec 18 05:01	7°♑08'54	1°24'22
minimum elong	12591 Dec 18 08:50	7°♑20'41	1°25'16
max. Earth dist.	12591 Dec 19 08:41	8°♑34'21	1.73105 AU
	12592 Jan 05 17:26	0°♒	
evening rise	12592 Jan 24 10:25	23°♒02'26	
	12592 Jan 30 02:15	0°♓	
desc. node	12592 Feb 04 22:54	7°♓12'14	
	12592 Feb 23 12:26	0°♈	
	12592 Mar 18 23:25	0°♉	
	12592 Apr 12 11:23	0°♊	
	12592 May 07 02:31	0°♋	
asc. node	12592 May 27 17:33	24°♋49'38	
	12592 Jun 01 01:50	0°♌	
	12592 Jun 26 19:27	0°♍	
	12592 Jul 24 09:20	0°♎	

evening max el	12592 Jul 27 00:08	2°♎38'59	46°43'56
	12592 Aug 29 02:42	0°♏	
greatest brilliancy	12592 Sep 04 09:17	2°♏59'28	-4.8m
retrograde	12592 Sep 15 08:29	5°♏14'07	
desc. node	12592 Sep 16 18:49	5°♏11'38	
evening set	12592 Sep 30 12:25	0°♏44'37	
	12592 Oct 01 20:10	30°℞♎	
min. Earth dist.	12592 Oct 05 16:09	27°♎42'08	0.27770 AU
inferior conj	12592 Oct 06 11:50	27°♎11'51	-4°44'56
minimum elong	12592 Oct 06 02:23	27°♎26'25	4°42'04
morning rise	12592 Oct 11 16:53	24°♎05'26	
direct	12592 Oct 27 10:55	19°♎19'07	
greatest brilliancy	12592 Nov 06 00:44	20°♎59'09	-4.8m
	12592 Nov 22 15:47	0°♏	
morning max el	12592 Dec 15 09:28	19°♏23'50	45°48'20
	12592 Dec 26 01:08	0°♐	
asc. node	12593 Jan 07 20:27	13°♐30'41	
	12593 Jan 22 18:30	0°♑	
	12593 Feb 17 18:34	0°♒	
	12593 Mar 14 22:45	0°♓	
	12593 Apr 08 15:30	0°♈	
desc. node	12593 Apr 29 15:26	25°♈49'12	
	12593 May 03 00:35	0°♉	
	12593 May 27 04:02	0°♊	
morning set	12593 Jun 15 03:40	23°♊44'10	
	12593 Jun 20 03:37	0°♋	
	12593 Jul 14 01:23	0°♌	
superior conj	12593 Jul 25 03:04	13°♌53'43	-0°58'19
minimum elong	12593 Jul 25 14:40	14°♌30'07	0°58'37
max. Earth dist.	12593 Jul 26 01:08	15°♌02'57	1.71448 AU
	12593 Aug 06 23:16	0°♍	
asc. node	12593 Aug 20 05:53	16°♍37'23	
	12593 Aug 30 22:44	0°♎	
evening rise	12593 Sep 02 23:08	3°♎45'58	
	12593 Sep 24 00:52	0°♏	
	12593 Oct 18 07:06	0°♐	
	12593 Nov 11 19:47	0°♑	
	12593 Dec 06 18:06	0°♒	
desc. node	12593 Dec 09 23:22	3°♒49'41	
	12594 Jan 01 06:14	0°♓	
	12594 Jan 27 15:32	0°♈	
	12594 Feb 24 20:17	0°♉	
evening max el	12594 Mar 01 05:05	4°♉19'18	46°08'24
asc. node	12594 Apr 01 23:34	0°♊04'46	
	12594 Apr 01 20:11	0°♊	
greatest brilliancy	12594 Apr 09 21:31	3°♊43'42	-4.8m
retrograde	12594 Apr 19 18:02	5°♊32'00	
evening set	12594 May 06 08:05	0°♊10'46	
	12594 May 06 15:26	30°℞♉	
inferior conj	12594 May 10 12:34	27°♉37'57	8°03'34
minimum elong	12594 May 10 03:12	27°♉52'30	8°01'25
min. Earth dist.	12594 May 10 12:55	27°♉37'25	0.27592 AU
morning rise	12594 May 13 22:16	25°♉32'48	
direct	12594 May 31 10:49	19°♉38'29	
greatest brilliancy	12594 Jun 10 08:22	21°♉29'59	-4.9m
	12594 Jun 25 14:06	0°♊	
morning max el	12594 Jul 20 23:59	22°♊31'51	46°58'15
desc. node	12594 Jul 23 01:43	24°♊37'49	
	12594 Jul 28 06:14	0°♋	
	12594 Aug 24 10:07	0°♌	
	12594 Sep 19 03:01	0°♍	
	12594 Oct 14 05:49	0°♎	
	12594 Nov 08 01:24	0°♏	
asc. node	12594 Nov 12 22:14	5°♏55'02	
	12594 Dec 02 16:08	0°♐	
	12594 Dec 27 03:17	0°♑	

morning set	12595 Jan 19 03:11	28°♑18'20	
	12595 Jan 20 12:11	0°♒	
	12595 Feb 13 19:54	0°♓	
max. Earth dist.	12595 Feb 24 03:10	12°♓43'13	1.72945 AU
superior conj	12595 Feb 25 10:54	14°♓21'16	0°17'04
minimum elong	12595 Feb 25 14:50	14°♓33'25	0°17'12
desc. node	12595 Mar 04 12:53	23°♓06'29	
	12595 Mar 10 02:38	0°♈	
	12595 Apr 03 07:56	0°♉	
evening rise	12595 Apr 04 21:56	1°♉57'54	
	12595 Apr 27 11:33	0°♊	
	12595 May 21 14:22	0°♋	
	12595 Jun 14 18:31	0°♌	
asc. node	12595 Jun 25 05:15	12°♌54'13	
	12595 Jul 09 03:06	0°♍	
	12595 Aug 02 20:25	0°♎	
	12595 Aug 28 06:16	0°♏	
	12595 Sep 24 03:44	0°♐	
evening max el	12595 Oct 07 08:52	13°♐33'59	46°13'32
desc. node	12595 Oct 15 04:17	21°♐00'14	
	12595 Oct 25 14:56	0°♑	
greatest brilliancy	12595 Nov 15 12:00	12°♑41'20	-4.8m
retrograde	12595 Nov 25 21:07	14°♑38'28	
evening set	12595 Dec 14 05:14	8°♑19'14	
inferior conj	12595 Dec 17 08:40	6°♑21'44	-8°37'34
minimum elong	12595 Dec 17 12:37	6°♑15'31	8°36'25
min. Earth dist.	12595 Dec 17 06:55	6°♑24'29	0.28952 AU
morning rise	12595 Dec 20 20:06	4°♑12'27	
	12595 Dec 29 03:49	30°℞♐	
direct	12596 Jan 07 19:07	28°♐09'23	
	12596 Jan 17 19:58	0°♑	
greatest brilliancy	12596 Jan 18 02:41	0°♑05'59	-4.7m
asc. node	12596 Feb 05 06:31	10°♑38'08	
morning max el	12596 Feb 25 22:05	28°♑46'59	45°49'29
	12596 Feb 27 03:53	0°♒	
	12596 Mar 26 11:16	0°♓	
	12596 Apr 21 13:31	0°♈	
	12596 May 16 16:19	0°♉	
desc. node	12596 May 27 04:44	12°♉46'55	
	12596 Jun 10 05:55	0°♊	
	12596 Jul 04 11:38	0°♋	
	12596 Jul 28 13:17	0°♌	
	12596 Aug 21 13:42	0°♍	
morning set	12596 Aug 28 11:34	8°♍37'49	
	12596 Sep 14 14:34	0°♎	
asc. node	12596 Sep 16 20:06	2°♎46'55	
superior conj	12596 Oct 06 08:16	27°♎04'56	0°45'07
minimum elong	12596 Oct 05 23:07	26°♎36'28	0°45'04
max. Earth dist.	12596 Oct 08 17:33	0°♏03'08	1.72305 AU
	12596 Oct 08 16:33	0°♏	
	12596 Nov 01 20:13	0°♐	
evening rise	12596 Nov 12 18:01	13°♐30'20	
	12596 Nov 26 02:38	0°♑	
	12596 Dec 20 13:13	0°♒	
desc. node	12597 Jan 06 11:30	20°♒37'28	
	12597 Jan 14 05:01	0°♓	
	12597 Feb 08 02:30	0°♈	
	12597 Mar 05 06:44	0°♉	
	12597 Mar 30 22:19	0°♊	
	12597 Apr 26 15:53	0°♋	
asc. node	12597 Apr 29 09:07	2°♋55'32	
evening max el	12597 May 13 00:33	17°♋04'21	46°40'26
	12597 May 26 17:43	0°♌	
greatest brilliancy	12597 Jun 22 11:26	17°♌36'43	-4.9m
retrograde	12597 Jul 02 03:43	19°♌22'23	

evening set	12597 Jul	18	11:32	14°♌13'45	
inferior conj	12597 Jul	22	19:50	11°♌37'16	6°30'49
minimum elong	12597 Jul	23	07:02	11°♌20'04	6°27'29
min. Earth dist.	12597 Jul	23	05:50	11°♌21'55	0.27033 AU
morning rise	12597 Jul	28	02:28	8°♌28'54	
direct	12597 Aug	12	12:54	3°♌50'07	
desc. node	12597 Aug	19	11:22	4°♌45'07	
greatest brilliancy	12597 Aug	22	14:38	5°♌43'19	-4.9m
	12597 Sep	25	14:44	0°♍	
morning max el	12597 Oct	01	12:03	5°♍40'36	46°30'16
	12597 Oct	24	19:04	0°♎	
	12597 Nov	20	11:37	0°♏	
asc. node	12597 Dec	10	10:54	23°♏16'11	
	12597 Dec	16	03:42	0°♐	
	12598 Jan	10	05:53	0°♑	
	12598 Feb	03	23:21	0°♒	
	12598 Feb	28	11:15	0°♓	
	12598 Mar	24	19:10	0°♈	
morning set	12598 Mar	30	04:17	6°♈39'33	
desc. node	12598 Apr	01	03:14	9°♈05'00	
	12598 Apr	17	23:35	0°♉	
max. Earth dist.	12598 May	05	11:56	21°♉49'56	1.71876 AU
superior conj	12598 May	08	19:06	25°♉57'11	-1°15'46
minimum elong	12598 May	08	09:02	25°♉25'45	1°16'15
	12598 May	12	00:49	0°♊	
	12598 Jun	04	23:48	0°♋	
evening rise	12598 Jun	17	15:21	15°♋51'20	
	12598 Jun	28	22:12	0°♌	
asc. node	12598 Jul	22	17:58	29°♌47'29	
	12598 Jul	22	21:59	0°♍	
	12598 Aug	16	01:02	0°♎	
	12598 Sep	09	09:47	0°♏	
	12598 Oct	04	04:12	0°♐	
	12598 Oct	29	15:38	0°♑	
desc. node	12598 Nov	11	14:14	14°♑44'24	
	12598 Nov	25	11:01	0°♒	
evening max el	12598 Dec	17	08:27	22°♒25'46	45°52'43
	12598 Dec	25	12:05	0°♓	
greatest brilliancy	12599 Jan	25	11:52	20°♓47'27	-4.8m
retrograde	12599 Feb	04	06:37	22°♓32'39	
evening set	12599 Feb	19	11:12	18°♓04'29	
inferior conj	12599 Feb	25	12:17	14°♓27'14	-1°46'12
minimum elong	12599 Feb	25	16:13	14°♓21'04	1°44'40
min. Earth dist.	12599 Feb	25	23:16	14°♓10'03	0.28290 AU
morning rise	12599 Mar	03	20:40	10°♓38'27	
asc. node	12599 Mar	04	16:10	10°♓12'08	
direct	12599 Mar	18	17:13	6°♓16'32	
greatest brilliancy	12599 Mar	29	15:08	8°♓28'04	-4.8m
	12599 Apr	29	03:46	0°♈	
morning max el	12599 May	07	15:28	8°♈09'19	46°30'26
	12599 May	28	08:47	0°♉	
	12599 Jun	23	15:15	0°♊	
desc. node	12599 Jun	24	16:52	1°♊15'12	
	12599 Jul	18	18:41	0°♋	
	12599 Aug	12	09:34	0°♌	
	12599 Sep	05	18:55	0°♍	
	12599 Sep	30	02:09	0°♎	
asc. node	12599 Oct	15	10:29	18°♎58'14	
	12599 Oct	24	08:31	0°♏	
morning set	12599 Nov	08	21:14	19°♏12'39	
	12599 Nov	17	14:29	0°♐	
	12599 Dec	11	20:39	0°♑	
superior conj	12599 Dec	15	21:53	5°♑00'30	1°24'58
minimum elong	12599 Dec	16	01:01	5°♑10'08	1°25'53
max. Earth dist.	12599 Dec	17	03:51	6°♑33'03	1.73091 AU

	12600 Jan	05	03:53	0°♒	
evening rise	12600 Jan	22	02:37	20°♒52'18	
	12600 Jan	29	12:48	0°♓	
desc. node	12600 Feb	04	00:41	6°♓45'07	
	12600 Feb	22	23:12	0°♈	
	12600 Mar	19	10:29	0°♉	
	12600 Apr	12	22:54	0°♊	
	12600 May	07	14:41	0°♋	
asc. node	12600 May	27	19:32	24°♋16'42	
	12600 Jun	01	15:08	0°♌	
	12600 Jun	27	10:59	0°♍	
	12600 Jul	25	06:44	0°♎	
evening max el	12600 Jul	25	15:09	0°♎21'08	46°44'29
	12600 Sep	01	08:38	0°♏	
greatest brilliancy	12600 Sep	02	23:33	0°♏40'13	-4.8m
retrograde	12600 Sep	13	23:43	2°♏55'29	
desc. node	12600 Sep	16	20:53	2°♏45'20	
	12600 Sep	26	01:03	30°℞♎	
evening set	12600 Sep	29	00:35	28°♎28'58	
min. Earth dist.	12600 Oct	04	06:22	25°♎23'47	0.27718 AU
inferior conj	12600 Oct	05	01:51	24°♎53'50	-4°25'44
minimum elong	12600 Oct	04	16:49	25°♎07'44	4°22'56
morning rise	12600 Oct	10	09:40	21°♎44'02	
direct	12600 Oct	26	00:53	17°♎01'47	
greatest brilliancy	12600 Nov	04	14:08	18°♎41'48	-4.8m
	12600 Nov	24	07:50	0°♏	
morning max el	12600 Dec	14	00:46	17°♏11'13	45°49'13
	12600 Dec	26	19:51	0°♐	
asc. node	12601 Jan	07	22:19	12°♐51'58	
	12601 Jan	23	08:47	0°♑	
	12601 Feb	18	07:03	0°♒	
	12601 Mar	15	10:19	0°♓	
	12601 Apr	09	02:35	0°♈	
desc. node	12601 Apr	29	17:19	25°♈21'24	
	12601 May	03	11:25	0°♉	
	12601 May	27	14:43	0°♊	
morning set	12601 Jun	13	15:23	21°♊17'22	
	12601 Jun	20	14:13	0°♋	
	12601 Jul	14	11:54	0°♌	
superior conj	12601 Jul	23	15:13	11°♌28'13	-1°01'07
minimum elong	12601 Jul	24	02:56	12°♌05'00	1°01'28
max. Earth dist.	12601 Jul	24	13:46	12°♌39'00	1.71434 AU
	12601 Aug	07	09:46	0°♍	
asc. node	12601 Aug	20	07:45	16°♍10'18	
	12601 Aug	31	09:16	0°♎	
evening rise	12601 Sep	01	12:54	1°♎26'17	
	12601 Sep	24	11:30	0°♏	
	12601 Oct	18	17:56	0°♐	
	12601 Nov	12	06:57	0°♑	
	12601 Dec	07	05:53	0°♒	
desc. node	12601 Dec	10	01:10	3°♒19'46	
	12602 Jan	01	19:10	0°♓	