conjunction	102 Jan 31 j 09:06	10°♒32'02	-1°04'57
minimum elong	102 Jan 31 j 09:47	10°♒33'24	1°04'58
	102 Feb 25 j 06:59	0°♓	
max. Earth dist.	102 Mar 15 j 19:41	14°♓15'22	2.38791 AU
	102 Apr 05 j 16:17	0°♈	
morning rise	102 Apr 10 j 15:55	3°♈42'35	
	102 May 16 j 21:31	0°♉	
asc. node	102 Jun 24 j 08:41	26°♉33'22	
	102 Jun 29 j 12:07	0°♊	
	102 Aug 15 j 02:53	0°♋	
	102 Oct 05 j 13:10	0°♌	
	102 Dec 18 j 06:38	0°♍	
retrograde	103 Jan 04 j 11:00	1°♍41'37	
	103 Jan 20 j 17:32	30°℞♌	
opposition	103 Feb 12 j 15:48	22°♌34'20	4°27'43
greatest brilliancy	103 Feb 13 j 03:59	22°♌22'24	-1.4m
min. Earth dist.	103 Feb 16 j 03:06	21°♌12'41	0.65740 AU
direct	103 Mar 26 j 01:32	12°♌32'23	
	103 May 26 j 17:39	0°♍	
desc. node	103 Jul 12 j 18:03	25°♍58'11	
	103 Jul 19 j 05:40	0°♎	
	103 Sep 02 j 00:22	0°♏	
	103 Oct 12 j 22:18	0°♐	
	103 Nov 20 j 19:18	0°♑	
	103 Dec 28 j 22:17	0°♒	
evening set	104 Feb 05 j 05:52	29°♒54'05	
	104 Feb 05 j 08:56	0°♓	
	104 Mar 16 j 00:15	0°♈	
conjunction	104 Apr 08 j 19:47	17°♈24'38	-0°20'01
minimum elong	104 Apr 08 j 21:08	17°♈27'04	0°19'59
	104 Apr 26 j 11:20	0°♉	
asc. node	104 May 11 j 07:14	10°♉22'28	
max. Earth dist.	104 May 18 j 00:36	15°♉01'12	2.51998 AU
morning rise	104 Jun 05 j 14:04	27°♉39'20	
	104 Jun 09 j 01:43	0°♊	
	104 Jul 24 j 20:35	0°♋	
	104 Sep 10 j 22:19	0°♌	
	104 Nov 01 j 10:17	0°♍	
	105 Jan 03 j 14:32	0°♎	
retrograde	105 Feb 13 j 06:47	8°♎13'27	
opposition	105 Mar 22 j 06:52	0°♎09'53	2°54'18
	105 Mar 22 j 17:28	30°℞♍	
greatest brilliancy	105 Mar 23 j 01:48	29°♍52'14	-1.7m
min. Earth dist.	105 Mar 29 j 08:51	27°♍31'27	0.57591 AU
direct	105 May 01 j 17:59	20°♍32'10	
desc. node	105 May 29 j 17:26	25°♍09'50	
	105 Jun 12 j 03:29	0°♎	
	105 Aug 06 j 10:26	0°♏	
	105 Sep 18 j 22:45	0°♐	
	105 Oct 28 j 22:20	0°♑	
	105 Dec 06 j 18:17	0°♒	
	106 Jan 14 j 20:12	0°♓	
	106 Feb 24 j 02:57	0°♈	
asc. node	106 Mar 29 j 05:15	23°♈42'57	
evening set	106 Apr 05 j 19:39	29°♈02'23	
	106 Apr 07 j 04:43	0°♉	
	106 May 21 j 05:42	0°♊	
conjunction	106 May 29 j 15:18	5°♊34'58	0°34'52
minimum elong	106 May 29 j 13:55	5°♊32'41	0°34'51
max. Earth dist.	106 Jun 17 j 22:46	18°♊16'25	2.62130 AU
	106 Jul 06 j 00:44	0°♋	
morning rise	106 Jul 17 j 20:39	7°♋36'07	
	106 Aug 22 j 03:23	0°♌	
	106 Oct 09 j 07:20	0°♍	
	106 Nov 27 j 23:45	0°♎	
	107 Jan 20 j 22:22	0°♏	
retrograde	107 Apr 09 j 14:23	25°♏27'53	
desc. node	107 Apr 16 j 16:07	25°♏09'02	
opposition	107 May 12 j 16:38	19°♏12'35	-1°29'32
greatest brilliancy	107 May 13 j 03:16	19°♏04'01	-2.5m
min. Earth dist.	107 May 20 j 20:06	16°♏35'53	0.44799 AU
direct	107 Jun 17 j 17:25	11°♏37'20	
	107 Aug 14 j 07:54	0°♐	
	107 Sep 30 j 21:13	0°♑	
	107 Nov 11 j 21:20	0°♒	
	107 Dec 23 j 00:58	0°♓	
	108 Feb 02 j 22:34	0°♈	
asc. node	108 Feb 14 j 04:49	7°♈53'55	
	108 Mar 17 j 07:31	0°♉	
	108 May 01 j 07:38	0°♊	
evening set	108 May 21 j 00:16	12°♊50'14	
	108 Jun 16 j 15:21	0°♋	
conjunction	108 Jul 08 j 03:32	13°♋45'16	1°04'43
minimum elong	108 Jul 08 j 02:40	13°♋43'54	1°04'44
max. Earth dist.	108 Jul 11 j 13:32	15°♋56'00	2.67024 AU
	108 Aug 02 j 15:28	0°♌	
morning rise	108 Aug 22 j 11:27	12°♌37'51	
	108 Sep 18 j 16:30	0°♍	
	108 Nov 04 j 09:20	0°♎	
	108 Dec 20 j 19:02	0°♏	
	109 Feb 05 j 09:51	0°♐	
desc. node	109 Mar 03 j 15:29	16°♐32'21	
	109 Mar 25 j 17:34	0°♑	
	109 May 23 j 17:06	0°♒	
retrograde	109 Jun 26 j 08:39	6°♒42'29	
min. Earth dist.	109 Jul 25 j 03:43	2°♒00'35	0.37509 AU
opposition	109 Jul 26 j 21:40	1°♒32'38	-6°53'02
greatest brilliancy	109 Jul 26 j 13:40	1°♒37'58	-2.9m
	109 Aug 01 j 19:45	30°℞♑	
direct	109 Aug 25 j 10:57	26°♑37'09	
	109 Sep 17 j 18:08	0°♒	
	109 Nov 19 j 23:39	0°♓	
asc. node	110 Jan 01 j 04:22	26°♓01'16	
	110 Jan 07 j 10:46	0°♈	
	110 Feb 23 j 08:16	0°♉	
	110 Apr 11 j 11:06	0°♊	
	110 May 28 j 23:45	0°♋	
evening set	110 Jun 29 j 04:21	19°♋40'53	
	110 Jul 15 j 11:04	0°♌	
max. Earth dist.	110 Aug 03 j 21:00	12°♌22'34	2.66490 AU
conjunction	110 Aug 14 j 01:39	18°♌54'57	1°07'34
minimum elong	110 Aug 14 j 02:11	18°♌55'49	1°07'34
	110 Aug 31 j 05:29	0°♍	
morning rise	110 Sep 27 j 18:30	18°♍01'44	
	110 Oct 15 j 18:52	0°♎	
	110 Nov 28 j 22:34	0°♏	
	111 Jan 10 j 18:34	0°♐	
desc. node	111 Jan 19 j 14:32	6°♐17'15	
	111 Feb 21 j 13:33	0°♑	
	111 Apr 03 j 21:56	0°♒	
	111 May 16 j 04:53	0°♓	
	111 Jul 02 j 16:41	0°♈	
retrograde	111 Aug 30 j 08:20	19°♈17'13	
min. Earth dist.	111 Sep 27 j 16:54	13°♈46'23	0.46741 AU
opposition	111 Oct 05 j 21:22	10°♈53'14	-2°21'19
greatest brilliancy	111 Oct 05 j 05:49	11°♈06'58	-2.4m

direct	111 Nov 07 j 20:24	4°♈04'44	
asc. node	111 Nov 19 j 02:59	4°♈52'41	
	112 Jan 24 j 19:19	0°♉	
	112 Mar 18 j 19:19	0°♊	
	112 May 08 j 04:38	0°♋	
	112 Jun 25 j 22:04	0°♌	
evening set	112 Aug 04 j 16:16	25°♌15'33	
	112 Aug 11 j 23:51	0°♍	
max. Earth dist.	112 Aug 28 j 01:49	10°♍31'56	2.60616 AU
conjunction	112 Sep 20 j 05:07	25°♍58'42	0°43'24
minimum elong	112 Sep 20 j 06:24	26°♍00'51	0°43'23
	112 Sep 26 j 03:38	0°♎	
morning rise	112 Nov 06 j 19:48	28°♎56'26	
	112 Nov 08 j 07:36	0°♏	
desc. node	112 Dec 06 j 13:03	20°♏20'26	
	112 Dec 19 j 16:37	0°♐	
	113 Jan 28 j 16:46	0°♑	
	113 Mar 08 j 22:45	0°♒	
	113 Apr 17 j 07:11	0°♓	
	113 May 27 j 23:19	0°♈	
	113 Jul 11 j 03:54	0°♉	
	113 Sep 05 j 11:51	0°♊	
asc. node	113 Oct 06 j 01:57	7°♊47'05	
retrograde	113 Oct 12 j 16:20	8°♊04'45	
min. Earth dist.	113 Nov 15 j 10:13	0°♊28'49	0.58996 AU
	113 Nov 16 j 15:38	30°℞♉	
opposition	113 Nov 21 j 02:30	28°♉14'15	1°57'25
greatest brilliancy	113 Nov 20 j 15:49	28°♉24'50	-1.7m
direct	113 Dec 28 j 04:45	19°♉40'45	
	114 Feb 12 j 02:02	0°♊	
	114 Apr 15 j 02:26	0°♋	
	114 Jun 06 j 02:03	0°♌	
	114 Jul 24 j 07:02	0°♍	
	114 Sep 07 j 14:37	0°♎	
evening set	114 Sep 14 j 04:37	4°♎30'37	
max. Earth dist.	114 Sep 29 j 05:15	14°♎57'11	2.49989 AU
	114 Oct 20 j 08:58	0°♏	
desc. node	114 Oct 24 j 12:35	2°♏59'57	
conjunction	114 Nov 04 j 05:18	10°♏47'46	-0°06'51
minimum elong	114 Nov 04 j 04:56	10°♏47'04	0°06'51
behind sun begin	114 Nov 03 j 08:09	10°♏09'00	
behind sun end	114 Nov 05 j 01:42	11°♏25'10	
	114 Nov 30 j 00:50	0°♐	
morning rise	114 Dec 30 j 19:49	23°♐30'45	
	115 Jan 08 j 04:58	0°♑	
	115 Feb 15 j 15:27	0°♒	
	115 Mar 26 j 04:48	0°♓	
	115 May 04 j 19:14	0°♈	
	115 Jun 15 j 12:05	0°♉	
	115 Jul 30 j 21:26	0°♊	
asc. node	115 Aug 24 j 01:19	14°♊24'45	
	115 Sep 23 j 00:25	0°♋	
retrograde	115 Nov 17 j 21:04	15°♋17'27	
min. Earth dist.	115 Dec 26 j 02:24	6°♋10'51	0.66303 AU
opposition	115 Dec 28 j 00:47	5°♋24'18	4°01'43
greatest brilliancy	115 Dec 27 j 16:56	5°♋32'11	-1.4m
	116 Jan 11 j 13:49	30°℞♊	
direct	116 Feb 05 j 20:09	25°♊53'23	
	116 Mar 04 j 14:12	0°♋	
	116 May 12 j 13:45	0°♌	
	116 Jul 03 j 02:44	0°♍	
	116 Aug 18 j 10:07	0°♎	
desc. node	116 Sep 10 j 11:57	15°♎53'33	
	116 Sep 30 j 07:11	0°♏	
evening set	116 Nov 02 j 11:01	24°♏31'13	
	116 Nov 09 j 16:36	0°♐	
max. Earth dist.	116 Dec 09 j 14:14	23°♐03'30	2.37870 AU
	116 Dec 18 j 11:17	0°♑	
conjunction	117 Jan 02 j 20:35	12°♑06'01	-1°00'21
minimum elong	117 Jan 02 j 18:31	12°♑01'55	1°00'20
	117 Jan 25 j 12:59	0°♒	
	117 Mar 04 j 19:46	0°♓	
morning rise	117 Mar 13 j 11:38	6°♓41'41	
	117 Apr 13 j 04:24	0°♈	
	117 May 24 j 09:26	0°♉	
	117 Jul 07 j 04:06	0°♊	
asc. node	117 Jul 10 j 23:26	2°♊30'39	
	117 Aug 23 j 13:14	0°♋	
	117 Oct 17 j 08:22	0°♌	
retrograde	117 Dec 21 j 10:52	18°♌48'52	
opposition	118 Jan 30 j 03:16	9°♌24'28	4°36'04
greatest brilliancy	118 Jan 30 j 09:37	9°♌18'10	-1.3m
min. Earth dist.	118 Feb 01 j 02:03	8°♌38'06	0.67197 AU
	118 Mar 02 j 21:56	30°℞♋	
direct	118 Mar 12 j 08:42	29°♋25'42	
	118 Mar 22 j 03:21	0°♌	
	118 Jun 08 j 13:10	0°♍	
	118 Jul 28 j 07:43	0°♎	
desc. node	118 Jul 29 j 10:22	0°♎43'22	
	118 Sep 10 j 04:54	0°♏	
	118 Oct 20 j 19:56	0°♐	
	118 Nov 28 j 14:18	0°♑	
	119 Jan 05 j 15:09	0°♒	
evening set	119 Jan 08 j 09:16	2°♒10'21	
	119 Feb 12 j 22:56	0°♓	
conjunction	119 Mar 16 j 04:31	23°♓49'54	-0°43'20
minimum elong	119 Mar 16 j 07:20	23°♓55'11	0°43'18
	119 Mar 24 j 10:29	0°♈	
max. Earth dist.	119 May 02 j 13:09	28°♈27'06	2.46826 AU
	119 May 04 j 17:33	0°♉	
morning rise	119 May 17 j 20:15	9°♉12'37	
asc. node	119 May 28 j 22:43	16°♉53'40	
	119 Jun 17 j 05:51	0°♊	
	119 Aug 02 j 04:25	0°♋	
	119 Sep 20 j 01:27	0°♌	
	119 Nov 13 j 14:49	0°♍	
retrograde	120 Jan 28 j 08:03	23°♍29'29	
opposition	120 Mar 06 j 09:00	14°♍57'00	3°44'51
greatest brilliancy	120 Mar 07 j 03:38	14°♍39'10	-1.5m
min. Earth dist.	120 Mar 12 j 03:12	12°♍44'50	0.61504 AU
direct	120 Apr 16 j 11:27	5°♍02'37	
desc. node	120 Jun 15 j 08:53	22°♍25'26	
	120 Jun 29 j 20:47	0°♎	
	120 Aug 17 j 04:39	0°♏	
	120 Sep 28 j 05:17	0°♐	
	120 Nov 06 j 14:17	0°♑	
	120 Dec 15 j 01:01	0°♒	
	121 Jan 22 j 18:51	0°♓	
	121 Mar 03 j 17:42	0°♈	
evening set	121 Mar 15 j 05:57	8°♈24'50	
asc. node	121 Apr 14 j 22:20	0°♉18'24	
	121 Apr 14 j 11:51	0°♉	
conjunction	121 May 11 j 13:04	18°♉41'39	0°16'00
minimum elong	121 May 11 j 12:15	18°♉40'15	0°15'59
	121 May 28 j 06:54	0°♊	
max. Earth dist.	121 Jun 07 j 02:01	6°♊31'58	2.58726 AU
morning rise	121 Jul 02 j 11:07	23°♊11'32	
	121 Jul 12 j 23:39	0°♋	
	121 Aug 29 j 07:36	0°♌	

	121 Oct 17 j 08:04	0°♍	
	121 Dec 08 j 12:46	0°♎	
	122 Feb 13 j 02:04	0°♏	
retrograde	122 Mar 16 j 12:45	5°♏12'47	
	122 Apr 14 j 20:25	30°℞♎	
opposition	122 Apr 20 j 07:51	28°♎08'49	0°40'21
greatest brilliancy	122 Apr 20 j 13:53	28°♎03'34	-2.2m
min. Earth dist.	122 Apr 28 j 17:08	25°♎13'46	0.50019 AU
desc. node	122 May 03 j 08:13	23°♎43'31	
direct	122 May 28 j 16:00	19°♎28'18	
	122 Jul 10 j 05:30	0°♏	
	122 Aug 31 j 14:14	0°♐	
	122 Oct 13 j 00:56	0°♑	
	122 Nov 22 j 03:40	0°♒	
	123 Jan 01 j 03:49	0°♓	
	123 Feb 11 j 05:17	0°♈	
asc. node	123 Mar 02 j 20:34	13°♈56'54	
	123 Mar 25 j 22:38	0°♉	
evening set	123 May 05 j 05:11	27°♉10'39	
	123 May 09 j 11:27	0°♊	
conjunction	123 Jun 24 j 02:27	29°♊44'02	0°56'22
minimum elong	123 Jun 24 j 01:10	29°♊41'58	0°56'22
	123 Jun 24 j 12:22	0°♋	
max. Earth dist.	123 Jul 03 j 10:39	5°♋44'07	2.65751 AU
morning rise	123 Aug 09 j 12:55	29°♋23'59	
	123 Aug 10 j 11:36	0°♌	
	123 Sep 26 j 19:51	0°♍	
	123 Nov 13 j 08:18	0°♎	
	123 Dec 31 j 11:35	0°♏	
	124 Feb 19 j 22:01	0°♐	
desc. node	124 Mar 20 j 07:11	15°♐45'51	
	124 Apr 22 j 15:39	0°♑	
retrograde	124 May 25 j 01:33	5°♑52'22	
opposition	124 Jun 24 j 11:13	0°♑48'08	-5°36'38
greatest brilliancy	124 Jun 25 j 03:24	0°♑37'03	-2.9m
	124 Jun 27 j 09:32	30°℞♐	
min. Earth dist.	124 Jun 28 j 04:41	29°♐46'58	0.38451 AU
direct	124 Jul 25 j 21:37	25°♐17'48	
	124 Aug 21 j 23:15	0°♑	
	124 Oct 19 j 17:38	0°♒	
	124 Dec 04 j 14:26	0°♓	
asc. node	125 Jan 17 j 19:25	29°♓50'04	
	125 Jan 18 j 01:19	0°♈	
	125 Mar 04 j 01:05	0°♉	
	125 Apr 19 j 02:31	0°♊	
	125 Jun 05 j 01:04	0°♋	
evening set	125 Jun 14 j 10:04	5°♋57'18	
	125 Jul 22 j 06:23	0°♌	
max. Earth dist.	125 Jul 25 j 16:30	2°♌10'46	2.67343 AU
conjunction	125 Jul 30 j 19:59	5°♌27'31	1°09'39
minimum elong	125 Jul 30 j 19:58	5°♌27'31	1°09'39
	125 Sep 07 j 01:47	0°♍	
morning rise	125 Sep 13 j 09:49	4°♍06'06	
	125 Oct 22 j 23:10	0°♎	
	125 Dec 06 j 18:45	0°♏	
	126 Jan 19 j 14:52	0°♐	
desc. node	126 Feb 05 j 06:11	11°♐31'16	
	126 Mar 03 j 19:46	0°♑	
	126 Apr 16 j 06:37	0°♒	
	126 Jun 02 j 00:39	0°♓	
retrograde	126 Aug 08 j 09:49	24°♓15'57	
min. Earth dist.	126 Sep 04 j 06:47	19°♓30'34	0.41851 AU
opposition	126 Sep 11 j 16:59	17°♓08'31	-4°39'21
greatest brilliancy	126 Sep 10 j 14:47	17°♓29'28	-2.6m
direct	126 Oct 12 j 18:19	11°♓15'41	
asc. node	126 Dec 05 j 19:13	26°♓01'16	
	126 Dec 14 j 04:23	0°♈	
	127 Feb 06 j 20:06	0°♉	
	127 Mar 28 j 21:28	0°♊	
	127 May 16 j 19:52	0°♋	
	127 Jul 03 j 22:40	0°♌	
evening set	127 Jul 22 j 00:05	11°♌26'29	
max. Earth dist.	127 Aug 18 j 21:30	29°♌22'58	2.63547 AU
	127 Aug 19 j 20:18	0°♍	
conjunction	127 Sep 05 j 21:49	11°♍10'24	0°56'01
minimum elong	127 Sep 05 j 22:58	11°♍12'19	0°56'01
	127 Oct 04 j 02:38	0°♎	
morning rise	127 Oct 21 j 20:24	12°♎05'34	
	127 Nov 16 j 14:12	0°♏	
desc. node	127 Dec 24 j 06:06	26°♏57'58	
	127 Dec 28 j 10:02	0°♐	
	128 Feb 06 j 22:46	0°♑	
	128 Mar 17 j 17:57	0°♒	
	128 Apr 26 j 17:42	0°♓	
	128 Jun 07 j 12:08	0°♈	
	128 Jul 25 j 01:12	0°♉	
retrograde	128 Sep 26 j 22:33	21°♉19'05	
asc. node	128 Oct 22 j 17:17	16°♉36'03	
min. Earth dist.	128 Oct 28 j 14:56	14°♉28'06	0.54618 AU
opposition	128 Nov 04 j 14:17	11°♉47'02	0°36'17
greatest brilliancy	128 Nov 04 j 10:07	11°♉51'03	-2.0m
direct	128 Dec 10 j 06:15	3°♉47'18	
	129 Feb 28 j 13:31	0°♊	
	129 Apr 24 j 10:20	0°♋	
	129 Jun 13 j 17:55	0°♌	
	129 Jul 31 j 09:36	0°♍	
evening set	129 Aug 28 j 16:48	18°♍35'27	
	129 Sep 14 j 14:38	0°♎	
max. Earth dist.	129 Sep 15 j 05:19	0°♎25'01	2.54669 AU
conjunction	129 Oct 16 j 08:19	22°♎02'53	0°15'24
minimum elong	129 Oct 16 j 08:59	22°♎04'05	0°15'23
behind sun begin	129 Oct 16 j 02:11	21°♎52'03	
behind sun end	129 Oct 16 j 15:48	22°♎16'07	
	129 Oct 27 j 12:07	0°♏	
desc. node	129 Nov 10 j 05:10	9°♏54'42	
morning rise	129 Dec 07 j 10:07	0°♐00'40	
	129 Dec 07 j 09:46	0°♐	
	130 Jan 15 j 20:31	0°♑	
	130 Feb 23 j 12:57	0°♒	
	130 Apr 03 j 07:12	0°♓	
	130 May 13 j 03:14	0°♈	
	130 Jun 24 j 07:57	0°♉	
	130 Aug 10 j 09:09	0°♊	
asc. node	130 Sep 09 j 15:59	16°♊11'40	
	130 Oct 18 j 07:39	0°♋	
retrograde	130 Nov 04 j 07:51	1°♋47'27	
	130 Nov 20 j 09:27	30°℞♊	
min. Earth dist.	130 Dec 10 j 22:02	23°♊12'36	0.64177 AU
opposition	130 Dec 14 j 08:27	21°♊49'56	3°26'03
greatest brilliancy	130 Dec 13 j 21:12	22°♊01'14	-1.5m
direct	131 Jan 22 j 05:43	12°♊37'23	
	131 Mar 26 j 10:51	0°♋	
	131 May 23 j 03:20	0°♌	
	131 Jul 11 j 22:43	0°♍	
	131 Aug 26 j 18:05	0°♎	
desc. node	131 Sep 28 j 03:36	22°♎32'19	
	131 Oct 08 j 13:10	0°♏	
evening set	131 Oct 13 j 03:46	3°♏20'27	
max. Earth dist.	131 Oct 31 j 01:14	16°♏30'03	2.42184 AU
	131 Nov 18 j 00:29	0°♐	

conjunction	131 Dec 08 j 18:24	15°♐53'10	-0°43'12
minimum elong	131 Dec 08 j 16:01	15°♐48'33	0°43'11
	131 Dec 26 j 22:19	0°♑	
	132 Feb 03 j 02:45	0°♒	
morning rise	132 Feb 12 j 05:58	7°♒11'05	
	132 Mar 12 j 11:02	0°♓	
	132 Apr 20 j 20:21	0°♈	
	132 Jun 01 j 03:02	0°♉	
	132 Jul 15 j 05:37	0°♊	
asc. node	132 Jul 27 j 16:19	8°♊01'20	
	132 Sep 01 j 22:24	0°♋	
	132 Nov 04 j 05:30	0°♌	
retrograde	132 Dec 07 j 22:11	6°♌05'43	
	133 Jan 07 j 18:31	30°℞♋	
opposition	133 Jan 16 j 21:51	26°♋27'24	4°32'16
greatest brilliancy	133 Jan 16 j 22:09	26°♋27'06	-1.3m
min. Earth dist.	133 Jan 17 j 07:58	26°♋17'17	0.67624 AU
direct	133 Feb 26 j 17:35	16°♋36'20	
	133 Apr 21 j 14:01	0°♌	
	133 Jun 18 j 17:23	0°♍	
	133 Aug 05 j 14:52	0°♎	
desc. node	133 Aug 15 j 02:18	6°♎20'39	
	133 Sep 17 j 23:23	0°♏	
	133 Oct 28 j 10:46	0°♐	
	133 Dec 06 j 04:20	0°♑	
evening set	133 Dec 11 j 14:21	4°♑15'33	
	134 Jan 13 j 04:41	0°♒	
conjunction	134 Feb 16 j 15:36	27°♒02'18	-1°00'37
minimum elong	134 Feb 16 j 17:51	27°♒06'42	1°00'36
	134 Feb 20 j 11:09	0°♓	
	134 Mar 31 j 20:31	0°♈	
max. Earth dist.	134 Apr 08 j 13:46	5°♈44'09	2.41484 AU
morning rise	134 Apr 25 j 02:03	17°♈49'44	
	134 May 12 j 01:20	0°♉	
asc. node	134 Jun 14 j 15:14	23°♉18'20	
	134 Jun 24 j 13:35	0°♊	
	134 Aug 09 j 19:46	0°♋	
	134 Sep 29 j 00:01	0°♌	
	134 Nov 29 j 05:21	0°♍	
retrograde	135 Jan 12 j 20:48	9°♍45'07	
opposition	135 Feb 20 j 16:50	0°♍49'00	4°16'18
greatest brilliancy	135 Feb 21 j 07:48	0°♍34'25	-1.4m
	135 Feb 22 j 19:06	30°℞♌	
min. Earth dist.	135 Feb 24 j 23:49	29°♌08'43	0.64506 AU
direct	135 Apr 03 j 01:39	20°♌47'42	
	135 May 15 j 07:36	0°♍	
desc. node	135 Jul 03 j 01:25	24°♍13'17	
	135 Jul 12 j 18:25	0°♎	
	135 Aug 27 j 12:13	0°♏	
	135 Oct 07 j 18:14	0°♐	
	135 Nov 15 j 18:57	0°♑	
	135 Dec 23 j 23:59	0°♒	
	136 Jan 31 j 12:09	0°♓	
evening set	136 Feb 20 j 01:25	14°♓55'18	
	136 Mar 11 j 05:01	0°♈	
conjunction	136 Apr 21 j 09:24	29°♈45'58	-0°06'19
minimum elong	136 Apr 21 j 09:47	29°♈46'38	0°06'19
behind sun begin	136 Apr 20 j 11:12	29°♈06'49	
behind sun end	136 Apr 22 j 08:22	0°♉26'26	
	136 Apr 21 j 17:22	0°♉	
asc. node	136 May 01 j 13:33	6°♉53'58	
max. Earth dist.	136 May 25 j 22:59	23°♉40'09	2.54588 AU
	136 Jun 04 j 08:11	0°♊	
morning rise	136 Jun 15 j 19:45	7°♊39'51	
	136 Jul 20 j 00:55	0°♋	
	136 Sep 05 j 18:05	0°♌	
	136 Oct 26 j 02:02	0°♍	
	136 Dec 22 j 02:24	0°♎	
retrograde	137 Feb 23 j 21:39	17°♎46'15	
opposition	137 Apr 01 j 04:25	10°♎01'47	2°13'46
greatest brilliancy	137 Apr 01 j 20:54	9°♎46'41	-1.9m
min. Earth dist.	137 Apr 08 j 20:24	7°♎13'26	0.55050 AU
direct	137 May 11 j 00:59	0°♎39'23	
desc. node	137 May 19 j 23:46	1°♎11'02	
	137 Jul 29 j 08:03	0°♏	
	137 Sep 12 j 13:12	0°♐	
	137 Oct 23 j 03:51	0°♑	
	137 Dec 01 j 08:13	0°♒	
	138 Jan 09 j 16:06	0°♓	
	138 Feb 19 j 03:51	0°♈	
asc. node	138 Mar 19 j 13:04	20°♈18'34	
	138 Apr 02 j 09:33	0°♉	
evening set	138 Apr 16 j 23:37	10°♉03'02	
	138 May 16 j 13:23	0°♊	
conjunction	138 Jun 08 j 04:56	14°♊56'35	0°43'55
minimum elong	138 Jun 08 j 03:29	14°♊54'13	0°43'54
max. Earth dist.	138 Jun 23 j 19:13	25°♊05'37	2.63645 AU
	138 Jul 01 j 09:22	0°♋	
morning rise	138 Jul 26 j 06:16	15°♋56'31	
	138 Aug 17 j 09:51	0°♌	
	138 Oct 04 j 05:05	0°♍	
	138 Nov 21 j 22:21	0°♎	
	139 Jan 11 j 23:45	0°♏	
	139 Mar 14 j 03:24	0°♐	
desc. node	139 Apr 06 j 23:45	7°♐07'13	
retrograde	139 Apr 25 j 04:35	9°♐02'34	
opposition	139 May 27 j 04:44	3°♐16'49	-2°58'59
greatest brilliancy	139 May 27 j 22:46	3°♐03'08	-2.6m
min. Earth dist.	139 Jun 03 j 12:20	1°♐04'23	0.42079 AU
	139 Jun 07 j 06:34	30°℞♏	
direct	139 Jun 30 j 14:43	26°♏27'21	
	139 Jul 23 j 20:27	0°♐	
	139 Sep 21 j 10:10	0°♑	
	139 Nov 04 j 14:59	0°♒	
	139 Dec 16 j 19:39	0°♓	
	140 Jan 28 j 09:03	0°♈	
asc. node	140 Feb 04 j 11:28	4°♈55'45	
	140 Mar 12 j 04:43	0°♉	
	140 Apr 26 j 12:05	0°♊	
evening set	140 May 30 j 02:41	21°♊44'25	
	140 Jun 11 j 23:56	0°♋	
conjunction	140 Jul 16 j 11:48	21°♋59'58	1°07'41
minimum elong	140 Jul 16 j 11:14	21°♋59'04	1°07'41
max. Earth dist.	140 Jul 16 j 19:29	22°♋12'13	2.67376 AU
	140 Jul 29 j 01:20	0°♌	
morning rise	140 Aug 30 j 09:52	20°♌39'04	
	140 Sep 13 j 23:49	0°♍	
	140 Oct 30 j 08:52	0°♎	
	140 Dec 15 j 02:49	0°♏	
	141 Jan 29 j 11:48	0°♐	
desc. node	141 Feb 21 j 23:30	15°♐29'24	
	141 Mar 16 j 05:34	0°♑	
	141 May 03 j 23:13	0°♒	
retrograde	141 Jul 13 j 07:31	24°♒52'10	
min. Earth dist.	141 Aug 09 j 10:37	20°♒24'36	0.38320 AU
opposition	141 Aug 13 j 20:32	19°♒10'30	-6°33'00
greatest brilliancy	141 Aug 13 j 00:20	19°♒24'42	-2.9m
direct	141 Sep 12 j 14:22	14°♒05'41	
	141 Nov 06 j 21:07	0°♓	
asc. node	141 Dec 22 j 10:05	25°♓03'01	

	141 Dec 30 j 16:23	0°♈	
	142 Feb 17 j 07:03	0°♉	
	142 Apr 06 j 05:14	0°♊	
	142 May 24 j 03:56	0°♋	
evening set	142 Jul 07 j 12:44	27°♋54'09	
	142 Jul 10 j 20:12	0°♌	
max. Earth dist.	142 Aug 09 j 06:30	18°♌46'25	2.65671 AU
conjunction	142 Aug 22 j 07:02	27°♌10'31	1°04'30
minimum elong	142 Aug 22 j 07:50	27°♌11'49	1°04'30
	142 Aug 26 j 15:34	0°♍	
morning rise	142 Oct 06 j 06:21	26°♍45'40	
	142 Oct 11 j 02:20	0°♎	
	142 Nov 24 j 00:03	0°♏	
	143 Jan 05 j 10:37	0°♐	
desc. node	143 Jan 09 j 21:53	3°♐12'46	
	143 Feb 15 j 17:19	0°♑	
	143 Mar 28 j 09:17	0°♒	
	143 May 08 j 12:58	0°♓	
	143 Jun 21 j 18:14	0°♈	
	143 Aug 24 j 04:54	0°♉	
retrograde	143 Sep 10 j 09:18	2°♉01'38	
	143 Sep 26 j 23:27	30°℞♈	
min. Earth dist.	143 Oct 09 j 20:51	26°♈01'49	0.49588 AU
opposition	143 Oct 17 j 19:32	23°♈06'59	-1°09'38
greatest brilliancy	143 Oct 17 j 11:53	23°♈14'01	-2.2m
asc. node	143 Nov 09 j 09:51	16°♈43'02	
direct	143 Nov 20 j 19:43	15°♈50'32	
	144 Jan 13 j 18:48	0°♉	
	144 Mar 12 j 06:41	0°♊	
	144 May 02 j 21:00	0°♋	
	144 Jun 21 j 02:21	0°♌	
	144 Aug 07 j 08:56	0°♍	
evening set	144 Aug 13 j 05:53	3°♍49'13	
max. Earth dist.	144 Sep 03 j 08:28	17°♍44'28	2.58691 AU
	144 Sep 21 j 13:21	0°♎	
conjunction	144 Sep 29 j 08:21	5°♎19'16	0°34'15
minimum elong	144 Sep 29 j 09:33	5°♎21'19	0°34'14
	144 Nov 03 j 15:13	0°♏	
morning rise	144 Nov 17 j 05:41	9°♏46'11	
desc. node	144 Nov 26 j 20:55	16°♏46'13	
	144 Dec 14 j 20:03	0°♐	
	145 Jan 23 j 15:04	0°♑	
	145 Mar 03 j 15:38	0°♒	
	145 Apr 11 j 17:44	0°♓	
	145 May 22 j 00:09	0°♈	
	145 Jul 04 j 04:10	0°♉	
	145 Aug 23 j 23:31	0°♊	
asc. node	145 Sep 26 j 09:08	13°♊33'28	
retrograde	145 Oct 21 j 04:07	17°♊19'37	
min. Earth dist.	145 Nov 24 j 23:27	9°♊21'11	0.61082 AU
opposition	145 Nov 29 j 20:48	7°♊24'17	2°35'04
greatest brilliancy	145 Nov 29 j 08:46	7°♊36'18	-1.6m
	145 Dec 23 j 01:04	30°℞♉	
direct	146 Jan 06 j 15:13	28°♉35'21	
	146 Jan 22 j 04:25	0°♊	
	146 Apr 08 j 05:08	0°♋	
	146 May 31 j 17:09	0°♌	
	146 Jul 19 j 10:24	0°♍	
	146 Sep 02 j 22:20	0°♎	
evening set	146 Sep 24 j 04:11	14°♎40'25	
max. Earth dist.	146 Oct 08 j 20:51	25°♎04'29	2.47254 AU
desc. node	146 Oct 14 j 20:09	29°♎21'29	
	146 Oct 15 j 17:31	0°♏	
conjunction	146 Nov 15 j 21:25	22°♏54'00	-0°20'19
minimum elong	146 Nov 15 j 20:16	22°♏51'52	0°20'19
	146 Nov 25 j 08:03	0°♐	
	147 Jan 03 j 09:57	0°♑	
morning rise	147 Jan 14 j 12:38	8°♑39'54	
	147 Feb 10 j 17:57	0°♒	
	147 Mar 21 j 04:41	0°♓	
	147 Apr 29 j 16:03	0°♈	
	147 Jun 10 j 03:12	0°♉	
	147 Jul 24 j 20:40	0°♊	
asc. node	147 Aug 14 j 07:39	12°♊40'26	
	147 Sep 14 j 01:48	0°♋	
retrograde	147 Nov 25 j 14:18	23°♋15'47	
opposition	148 Jan 04 j 17:14	13°♋26'51	4°16'34
greatest brilliancy	148 Jan 04 j 12:01	13°♋32'06	-1.3m
min. Earth dist.	148 Jan 03 j 14:58	13°♋53'12	0.67050 AU
direct	148 Feb 13 j 22:03	3°♋47'42	
	148 May 05 j 09:28	0°♌	
	148 Jun 27 j 15:01	0°♍	
	148 Aug 13 j 10:27	0°♎	
desc. node	148 Aug 31 j 18:18	12°♎30'11	
	148 Sep 25 j 11:49	0°♏	
	148 Nov 04 j 22:16	0°♐	
evening set	148 Nov 15 j 18:57	8°♐18'20	
	148 Dec 13 j 16:48	0°♑	
conjunction	149 Jan 18 j 17:37	28°♑24'30	-1°04'51
minimum elong	149 Jan 18 j 16:55	28°♑23'07	1°04'50
	149 Jan 20 j 18:00	0°♒	
max. Earth dist.	149 Feb 06 j 05:49	12°♒59'42	2.37329 AU
	149 Feb 28 j 00:10	0°♓	
morning rise	149 Mar 29 j 17:56	22°♓47'27	
	149 Apr 08 j 08:09	0°♈	
	149 May 19 j 11:49	0°♉	
asc. node	149 Jul 01 j 07:10	29°♉28'31	
	149 Jul 02 j 02:04	0°♊	
	149 Aug 17 j 21:32	0°♋	
	149 Oct 09 j 07:55	0°♌	
retrograde	149 Dec 29 j 10:28	26°♌37'57	
opposition	150 Feb 06 j 20:26	17°♌22'34	4°32'34
greatest brilliancy	150 Feb 07 j 06:05	17°♌13'04	-1.3m
min. Earth dist.	150 Feb 09 j 15:18	16°♌16'38	0.66513 AU
direct	150 Mar 20 j 04:19	7°♌21'21	
	150 May 31 j 19:29	0°♍	
desc. node	150 Jul 19 j 17:24	28°♍12'07	
	150 Jul 22 j 13:23	0°♎	
	150 Sep 04 j 23:46	0°♏	
	150 Oct 15 j 19:30	0°♐	
	150 Nov 23 j 15:48	0°♑	
greatest brilliancy	150 Dec 23 j 09:34	23°♑25'11	1.2m
	150 Dec 31 j 17:50	0°♒	
evening set	151 Jan 24 j 06:55	18°♒29'05	
	151 Feb 08 j 02:34	0°♓	
	151 Mar 19 j 15:13	0°♈	
conjunction	151 Mar 30 j 12:34	8°♈02'46	-0°30'17
minimum elong	151 Mar 30 j 14:39	8°♈06'36	0°30'16
	151 Apr 29 j 23:14	0°♉	
max. Earth dist.	151 May 12 j 11:57	8°♉48'14	2.49750 AU
asc. node	151 May 19 j 05:53	13°♉29'16	
morning rise	151 May 29 j 08:54	20°♉26'54	
	151 Jun 12 j 11:07	0°♊	
	151 Jul 28 j 05:55	0°♋	
	151 Sep 14 j 13:32	0°♌	
	151 Nov 06 j 01:03	0°♍	
	152 Jan 17 j 21:16	0°♎	
retrograde	152 Feb 06 j 18:51	2°♎12'16	
	152 Feb 25 j 09:57	30°℞♍	

opposition	152 Mar 15 j 06:23	23°♍54'55	3°17'58
greatest brilliancy	152 Mar 16 j 01:35	23°♍36'45	-1.6m
min. Earth dist.	152 Mar 21 j 18:13	21°♍27'35	0.59454 AU
direct	152 Apr 25 j 01:06	14°♍08'04	
desc. node	152 Jun 05 j 17:14	23°♍32'54	
	152 Jun 20 j 04:54	0°♎	
	152 Aug 10 j 16:40	0°♏	
	152 Sep 22 j 12:23	0°♐	
	152 Nov 01 j 05:15	0°♑	
	152 Dec 09 j 20:37	0°♒	
	153 Jan 17 j 17:53	0°♓	
	153 Feb 26 j 19:50	0°♈	
evening set	153 Mar 27 j 19:54	20°♈55'41	
asc. node	153 Apr 05 j 03:50	26°♈48'47	
	153 Apr 09 j 16:51	0°♉	
conjunction	153 May 22 j 02:23	29°♉00'39	0°27'23
minimum elong	153 May 22 j 01:10	28°♉58'36	0°27'22
	153 May 23 j 13:51	0°♊	
max. Earth dist.	153 Jun 13 j 11:11	13°♊50'49	2.60718 AU
	153 Jul 08 j 06:46	0°♋	
morning rise	153 Jul 11 j 09:49	2°♋00'58	
	153 Aug 24 j 10:44	0°♌	
	153 Oct 11 j 21:58	0°♍	
	153 Dec 01 j 11:33	0°♎	
	154 Jan 27 j 15:57	0°♏	
retrograde	154 Mar 29 j 14:10	16°♏42'44	
desc. node	154 Apr 23 j 15:41	12°♏52'41	
opposition	154 May 02 j 12:08	10°♏04'30	-0°29'11
greatest brilliancy	154 May 02 j 15:53	10°♏01'21	-2.3m
min. Earth dist.	154 May 10 j 22:21	7°♏15'45	0.47129 AU
direct	154 Jun 08 j 15:58	1°♏56'59	
	154 Aug 22 j 07:57	0°♐	
	154 Oct 05 j 23:21	0°♑	
	154 Nov 15 j 23:33	0°♒	
	154 Dec 26 j 12:32	0°♓	
	155 Feb 05 j 23:06	0°♈	
asc. node	155 Feb 21 j 03:18	10°♈43'20	
	155 Mar 20 j 23:24	0°♉	
	155 May 04 j 17:02	0°♊	
evening set	155 May 14 j 23:29	6°♊44'30	
	155 Jun 19 j 20:49	0°♋	
conjunction	155 Jul 02 j 19:48	8°♋18'33	1°01'44
minimum elong	155 Jul 02 j 18:44	8°♋16'51	1°01'43
max. Earth dist.	155 Jul 08 j 21:27	12°♋11'22	2.66567 AU
	155 Aug 05 j 20:09	0°♌	
morning rise	155 Aug 17 j 13:47	7°♌27'50	
	155 Sep 22 j 00:04	0°♍	
	155 Nov 08 j 01:01	0°♎	
	155 Dec 25 j 02:56	0°♏	
	156 Feb 11 j 01:32	0°♐	
desc. node	156 Mar 10 j 14:37	17°♐04'51	
	156 Apr 02 j 18:37	0°♑	
retrograde	156 Jun 12 j 07:12	23°♑19'23	
opposition	156 Jul 12 j 13:05	18°♑20'17	-6°36'23
greatest brilliancy	156 Jul 12 j 17:15	18°♑17'31	-2.9m
min. Earth dist.	156 Jul 13 j 07:08	18°♑08'19	0.37538 AU
direct	156 Aug 11 j 14:51	13°♑17'34	
	156 Oct 06 j 04:53	0°♒	
	156 Nov 26 j 08:01	0°♓	
asc. node	157 Jan 08 j 02:52	27°♓43'28	
	157 Jan 11 j 14:12	0°♈	
	157 Feb 26 j 12:03	0°♉	
	157 Apr 14 j 01:48	0°♊	
	157 May 31 j 07:19	0°♋	
evening set	157 Jun 22 j 22:44	14°♋19'34	
	157 Jul 17 j 15:53	0°♌	
max. Earth dist.	157 Jul 31 j 00:38	8°♌30'54	2.66975 AU
conjunction	157 Aug 08 j 00:16	13°♌37'07	1°08'54
minimum elong	157 Aug 08 j 00:34	13°♌37'36	1°08'55
	157 Sep 02 j 10:58	0°♍	
morning rise	157 Sep 21 j 13:57	12°♍26'57	
	157 Oct 18 j 04:26	0°♎	
	157 Dec 01 j 15:27	0°♏	
	158 Jan 13 j 21:51	0°♐	
desc. node	158 Jan 26 j 14:07	8°♐55'33	
	158 Feb 25 j 06:23	0°♑	
	158 Apr 08 j 08:47	0°♒	
	158 May 21 j 23:10	0°♓	
	158 Jul 13 j 16:25	0°♈	
retrograde	158 Aug 21 j 07:44	9°♈22'51	
min. Earth dist.	158 Sep 17 j 20:04	4°♈14'30	0.44459 AU
opposition	158 Sep 25 j 22:16	1°♈30'17	-3°19'54
greatest brilliancy	158 Sep 25 j 01:09	1°♈48'13	-2.5m
	158 Sep 30 j 11:20	30°℞♓	
direct	158 Oct 28 j 00:48	25°♓06'18	
asc. node	158 Nov 26 j 01:34	29°♓59'02	
	158 Nov 26 j 02:49	0°♈	
	159 Jan 30 j 01:55	0°♉	
	159 Mar 23 j 01:27	0°♊	
	159 May 11 j 18:10	0°♋	
	159 Jun 29 j 05:16	0°♌	
evening set	159 Jul 30 j 09:13	19°♌45'52	
	159 Aug 15 j 05:47	0°♍	
max. Earth dist.	159 Aug 24 j 18:43	6°♍13'17	2.62025 AU
conjunction	159 Sep 14 j 13:47	19°♍58'24	0°49'11
minimum elong	159 Sep 14 j 15:03	20°♍00'30	0°49'11
	159 Sep 29 j 11:37	0°♎	
morning rise	159 Oct 31 j 08:00	21°♎55'06	
	159 Nov 11 j 19:53	0°♏	
desc. node	159 Dec 14 j 12:49	23°♏29'17	
	159 Dec 23 j 10:24	0°♐	
	160 Feb 01 j 16:22	0°♑	
	160 Mar 12 j 04:02	0°♒	
	160 Apr 20 j 17:53	0°♓	
	160 May 31 j 18:12	0°♈	
	160 Jul 15 j 21:23	0°♉	
	160 Sep 20 j 18:43	0°♊	
retrograde	160 Oct 06 j 03:11	1°♊33'34	
asc. node	160 Oct 13 j 00:20	1°♊13'04	
	160 Oct 20 j 18:34	30°℞♉	
min. Earth dist.	160 Nov 07 j 23:22	24°♉16'43	0.57124 AU
opposition	160 Nov 14 j 05:48	21°♉49'23	1°26'03
greatest brilliancy	160 Nov 13 j 21:01	21°♉58'00	-1.8m
direct	160 Dec 20 j 16:47	13°♉30'04	
	161 Feb 19 j 03:28	0°♊	
	161 Apr 18 j 10:08	0°♋	
	161 Jun 08 j 15:57	0°♌	
	161 Jul 26 j 15:53	0°♍	
evening set	161 Sep 06 j 23:11	27°♍57'06	
	161 Sep 09 j 23:28	0°♎	
max. Earth dist.	161 Sep 22 j 23:53	8°♎56'23	2.52138 AU
	161 Oct 22 j 20:18	0°♏	
conjunction	161 Oct 26 j 19:50	2°♏51'58	0°02'59
minimum elong	161 Oct 26 j 20:00	2°♏52'17	0°02'58
behind sun begin	161 Oct 25 j 22:24	2°♏13'19	
behind sun end	161 Oct 27 j 17:37	3°♏31'17	
desc. node	161 Oct 31 j 11:50	6°♏14'38	
	161 Dec 02 j 15:35	0°♐	
morning rise	161 Dec 20 j 05:59	13°♐19'15	

	162 Jan 10 j 23:06	0°♉	
	162 Feb 18 j 12:22	0°♒	
	162 Mar 29 j 03:23	0°♓	
	162 May 07 j 19:02	0°♈	
	162 Jun 18 j 14:46	0°♉	
	162 Aug 03 j 11:10	0°♊	
asc. node	162 Aug 30 j 23:56	15°♊52'11	
	162 Sep 29 j 14:13	0°♋	
retrograde	162 Nov 12 j 04:10	10°♋03'44	
min. Earth dist.	162 Dec 19 j 16:01	1°♋10'52	0.65474 AU
opposition	162 Dec 22 j 06:37	0°♋07'57	3°48'34
greatest brilliancy	162 Dec 21 j 20:57	0°♋17'40	-1.4m
	162 Dec 22 j 14:32	30°℞♊	
direct	163 Jan 30 j 16:16	20°♊44'49	
	163 Mar 15 j 07:25	0°♋	
	163 May 17 j 00:17	0°♌	
	163 Jul 06 j 19:28	0°♍	
	163 Aug 21 j 22:58	0°♎	
desc. node	163 Sep 18 j 11:22	19°♎01'05	
	163 Oct 03 j 20:29	0°♏	
evening set	163 Oct 24 j 21:14	15°♏24'20	
	163 Nov 13 j 07:38	0°♐	
max. Earth dist.	163 Nov 17 j 17:58	3°♐22'20	2.39562 AU
	163 Dec 22 j 04:03	0°♑	
conjunction	163 Dec 23 j 02:35	0°♑44'06	-0°54'06
minimum elong	163 Dec 23 j 00:03	0°♑39'08	0°54'06
	164 Jan 29 j 06:54	0°♒	
morning rise	164 Feb 29 j 08:30	24°♒23'07	
	164 Mar 07 j 13:45	0°♓	
	164 Apr 15 j 21:34	0°♈	
	164 May 27 j 01:51	0°♉	
	164 Jul 09 j 21:32	0°♊	
asc. node	164 Jul 17 j 22:13	5°♊15'23	
	164 Aug 26 j 15:45	0°♋	
	164 Oct 22 j 15:26	0°♌	
retrograde	164 Dec 15 j 16:24	13°♌51'07	
opposition	165 Jan 24 j 11:57	4°♌20'07	4°35'46
greatest brilliancy	165 Jan 24 j 15:36	4°♌16'29	-1.3m
min. Earth dist.	165 Jan 25 j 18:16	3°♌49'58	0.67520 AU
	165 Feb 04 j 18:49	30°℞♋	
direct	165 Mar 06 j 13:04	24°♋24'21	
	165 Apr 08 j 06:14	0°♌	
	165 Jun 12 j 07:42	0°♍	
	165 Jul 31 j 07:07	0°♎	
desc. node	165 Aug 05 j 10:03	3°♎22'30	
	165 Sep 13 j 00:07	0°♏	
	165 Oct 23 j 14:34	0°♐	
	165 Dec 01 j 08:59	0°♑	
evening set	165 Dec 27 j 01:54	20°♑15'59	
	166 Jan 08 j 09:34	0°♒	
	166 Feb 15 j 16:03	0°♓	
conjunction	166 Mar 04 j 11:41	12°♓56'52	-0°51'57
minimum elong	166 Mar 04 j 14:39	13°♓02'32	0°51'55
	166 Mar 27 j 01:23	0°♈	
max. Earth dist.	166 Apr 23 j 11:35	20°♈08'29	2.44412 AU
	166 May 07 j 06:02	0°♉	
morning rise	166 May 08 j 09:54	0°♉49'25	
asc. node	166 Jun 04 j 21:03	19°♉57'22	
	166 Jun 19 j 16:29	0°♊	
	166 Aug 04 j 16:21	0°♋	
	166 Sep 22 j 22:56	0°♌	
	166 Nov 18 j 09:55	0°♍	
retrograde	167 Jan 21 j 14:09	17°♍59'04	
opposition	167 Feb 28 j 23:42	9°♍15'24	3°59'45
greatest brilliancy	167 Mar 01 j 16:55	8°♍58'46	-1.5m
min. Earth dist.	167 Mar 06 j 02:02	7°♍17'15	0.62972 AU
	167 Mar 31 j 18:52	30°℞♌	
direct	167 Apr 11 j 05:14	29°♌16'53	
	167 Apr 22 j 00:39	0°♍	
desc. node	167 Jun 23 j 08:39	23°♍10'33	
	167 Jul 05 j 14:24	0°♎	
	167 Aug 21 j 17:14	0°♏	
	167 Oct 02 j 10:15	0°♐	
	167 Nov 10 j 15:48	0°♑	
	167 Dec 18 j 23:51	0°♒	
	168 Jan 26 j 14:25	0°♓	
evening set	168 Mar 05 j 01:26	29°♓01'02	
	168 Mar 06 j 09:20	0°♈	
	168 Apr 16 j 23:32	0°♉	
asc. node	168 Apr 21 j 20:49	3°♉25'52	
conjunction	168 May 03 j 03:12	11°♉16'12	0°06'55
minimum elong	168 May 03 j 02:47	11°♉15'29	0°06'55
behind sun begin	168 May 02 j 05:30	10°♉38'43	
behind sun end	168 May 04 j 00:04	11°♉52'14	
	168 May 30 j 15:08	0°♊	
max. Earth dist.	168 Jun 02 j 04:34	1°♊43'00	2.56958 AU
morning rise	168 Jun 25 j 12:23	17°♊09'56	
	168 Jul 15 j 06:32	0°♋	
	168 Aug 31 j 16:56	0°♌	
	168 Oct 20 j 04:14	0°♍	
	168 Dec 12 j 21:50	0°♎	
retrograde	169 Mar 07 j 05:04	27°♎51'14	
opposition	169 Apr 11 j 17:08	20°♎27'53	1°24'04
greatest brilliancy	169 Apr 12 j 04:43	20°♎17'32	-2.0m
min. Earth dist.	169 Apr 19 j 20:22	17°♎33'40	0.52335 AU
desc. node	169 May 10 j 07:42	12°♎11'52	
direct	169 May 20 j 19:06	11°♎26'01	
	169 Jul 19 j 06:49	0°♏	
	169 Sep 05 j 12:53	0°♐	
	169 Oct 17 j 01:09	0°♑	
	169 Nov 25 j 16:33	0°♒	
	170 Jan 04 j 08:07	0°♓	
	170 Feb 14 j 01:52	0°♈	
asc. node	170 Mar 09 j 19:39	16°♈56'31	
	170 Mar 28 j 12:37	0°♉	
evening set	170 Apr 27 j 13:54	20°♉28'44	
	170 May 11 j 19:59	0°♊	
conjunction	170 Jun 17 j 10:16	23°♊59'00	0°51'39
minimum elong	170 Jun 17 j 08:53	23°♊56'45	0°51'37
	170 Jun 26 j 17:44	0°♋	
max. Earth dist.	170 Jun 29 j 11:05	1°♋45'18	2.64910 AU
morning rise	170 Aug 03 j 12:12	24°♋09'58	
	170 Aug 12 j 16:43	0°♌	
	170 Sep 29 j 05:03	0°♍	
	170 Nov 16 j 04:45	0°♎	
	171 Jan 04 j 09:14	0°♏	
	171 Feb 26 j 17:54	0°♐	
desc. node	171 Mar 28 j 06:46	13°♐42'34	
retrograde	171 May 12 j 03:17	23°♐59'40	
opposition	171 Jun 12 j 02:12	18°♐40'06	-4°31'26
greatest brilliancy	171 Jun 12 j 22:34	18°♐25'34	-2.8m
min. Earth dist.	171 Jun 17 j 18:05	17°♐03'16	0.39820 AU
direct	171 Jul 14 j 20:35	12°♐36'31	
	171 Sep 08 j 11:48	0°♑	
	171 Oct 27 j 07:07	0°♒	
	171 Dec 10 j 02:56	0°♓	
	172 Jan 22 j 13:29	0°♈	
asc. node	172 Jan 25 j 18:17	2°♈11'25	
	172 Mar 06 j 22:31	0°♉	
	172 Apr 21 j 14:20	0°♊	

evening set	172 Jun 07 j 22:53	0°♋24'44	
	172 Jun 07 j 07:23	0°♋	
max. Earth dist.	172 Jul 22 j 01:01	28°♋28'16	2.67459 AU
conjunction	172 Jul 24 j 17:53	0°♌11'30	1°09'18
minimum elong	172 Jul 24 j 17:38	0°♌11'06	1°09'18
	172 Jul 24 j 10:40	0°♌	
morning rise	172 Sep 07 j 09:54	28°♌46'36	
	172 Sep 09 j 07:27	0°♍	
	172 Oct 25 j 10:10	0°♎	
	172 Dec 09 j 15:11	0°♏	
	173 Jan 23 j 02:12	0°♐	
desc. node	173 Feb 12 j 05:47	13°♐41'58	
	173 Mar 08 j 05:18	0°♑	
	173 Apr 22 j 06:50	0°♒	
	173 Jun 13 j 03:03	0°♓	
retrograde	173 Jul 28 j 13:57	12°♓19'57	
min. Earth dist.	173 Aug 24 j 06:23	7°♓47'51	0.40023 AU
opposition	173 Aug 30 j 16:05	5°♓52'04	-5°36'15
greatest brilliancy	173 Aug 29 j 13:49	6°♓11'56	-2.8m
direct	173 Sep 30 j 00:15	0°♓23'15	
asc. node	173 Dec 12 j 17:53	25°♓15'22	
	173 Dec 21 j 12:11	0°♈	
	174 Feb 10 j 19:47	0°♉	
	174 Mar 31 j 19:22	0°♊	
	174 May 19 j 06:26	0°♋	
	174 Jul 06 j 04:34	0°♌	
evening set	174 Jul 15 j 19:18	6°♌05'13	
max. Earth dist.	174 Aug 14 j 18:34	25°♌16'22	2.64602 AU
	174 Aug 22 j 01:40	0°♍	
conjunction	174 Aug 30 j 14:13	5°♍33'08	1°00'04
minimum elong	174 Aug 30 j 15:14	5°♍34'49	1°00'04
	174 Oct 06 j 10:49	0°♎	
morning rise	174 Oct 15 j 00:34	5°♎47'49	
	174 Nov 19 j 03:26	0°♏	
desc. node	174 Dec 31 j 05:47	29°♏59'14	
	174 Dec 31 j 06:13	0°♐	
	175 Feb 10 j 02:34	0°♑	
	175 Mar 22 j 06:02	0°♒	
	175 May 01 j 15:27	0°♓	
	175 Jun 13 j 03:30	0°♈	
	175 Aug 02 j 15:13	0°♉	
retrograde	175 Sep 20 j 16:05	13°♉47'23	
min. Earth dist.	175 Oct 21 j 09:12	7°♉18'03	0.52435 AU
opposition	175 Oct 28 j 19:48	4°♉29'02	-0°05'28
greatest brilliancy	175 Feb 04 j 12:10	25°♐50'36	0.8m
asc. node	175 Oct 30 j 16:18	3°♉47'05	
	175 Nov 10 j 21:24	30°℞♈	
direct	175 Dec 02 j 18:19	26°♈47'17	
	175 Dec 26 j 07:33	0°♉	
	176 Mar 05 j 01:55	0°♊	
	176 Apr 27 j 08:43	0°♋	
	176 Jun 16 j 04:47	0°♌	
	176 Aug 02 j 17:14	0°♍	
evening set	176 Aug 21 j 23:06	12°♍34'27	
max. Earth dist.	176 Sep 10 j 01:39	25°♍19'37	2.56563 AU
	176 Sep 16 j 23:12	0°♎	
conjunction	176 Oct 08 j 19:49	15°♎03'26	0°23'50
minimum elong	176 Oct 08 j 20:46	15°♎05'06	0°23'50
	176 Oct 29 j 23:39	0°♏	
desc. node	176 Nov 17 j 04:53	13°♏08'58	
morning rise	176 Nov 28 j 07:41	21°♏17'59	
	176 Dec 10 j 01:23	0°♐	
	177 Jan 18 j 16:08	0°♑	
	177 Feb 26 j 12:02	0°♒	
	177 Apr 06 j 09:01	0°♓	
	177 May 16 j 07:44	0°♈	
	177 Jun 27 j 18:56	0°♉	
	177 Aug 14 j 20:53	0°♊	
asc. node	177 Sep 16 j 14:44	16°♊11'02	
retrograde	177 Oct 29 j 09:40	26°♊11'57	
min. Earth dist.	177 Dec 04 j 04:51	17°♊52'48	0.62914 AU
opposition	177 Dec 08 j 07:13	16°♊14'16	3°06'53
greatest brilliancy	177 Dec 07 j 19:05	16°♊26'26	-1.5m
direct	178 Jan 15 j 16:53	7°♊11'39	
	178 Mar 31 j 10:30	0°♋	
	178 May 26 j 03:04	0°♌	
	178 Jul 14 j 11:47	0°♍	
	178 Aug 29 j 05:17	0°♎	
evening set	178 Oct 04 j 16:19	25°♎24'46	
desc. node	178 Oct 05 j 03:20	25°♎44'29	
	178 Oct 11 j 01:38	0°♏	
max. Earth dist.	178 Oct 20 j 08:23	6°♏43'55	2.44447 AU
	178 Nov 20 j 15:27	0°♐	
conjunction	178 Nov 28 j 09:50	5°♐53'51	-0°33'41
minimum elong	178 Nov 28 j 07:55	5°♐50'11	0°33'40
	178 Dec 29 j 15:35	0°♑	
morning rise	179 Jan 30 j 07:34	24°♑49'15	
	179 Feb 05 j 21:41	0°♒	
	179 Mar 16 j 06:38	0°♓	
	179 Apr 24 j 15:41	0°♈	
	179 Jun 04 j 22:30	0°♉	
	179 Jul 19 j 04:21	0°♊	
asc. node	179 Aug 04 j 14:51	10°♊27'35	
	179 Sep 06 j 14:33	0°♋	
	179 Nov 19 j 15:03	0°♌	
retrograde	179 Dec 03 j 06:35	1°♌06'58	
	179 Dec 16 j 05:45	30°℞♋	
opposition	180 Jan 12 j 07:45	21°♋23'22	4°27'09
greatest brilliancy	180 Jan 12 j 05:28	21°♋25'39	-1.3m
min. Earth dist.	180 Jan 12 j 01:19	21°♋29'49	0.67496 AU
direct	180 Feb 21 j 21:06	11°♋37'10	
	180 Apr 27 j 02:56	0°♌	
	180 Jun 21 j 21:47	0°♍	
	180 Aug 08 j 09:10	0°♎	
desc. node	180 Aug 22 j 01:54	9°♎14'32	
	180 Sep 20 j 15:47	0°♏	
	180 Oct 31 j 03:48	0°♐	
evening set	180 Nov 29 j 23:48	23°♐00'26	
	180 Dec 08 j 22:11	0°♑	
	181 Jan 15 j 22:54	0°♒	
conjunction	181 Feb 04 j 00:29	15°♒01'21	-1°04'20
minimum elong	181 Feb 04 j 01:35	15°♒03'30	1°04'20
	181 Feb 23 j 04:46	0°♓	
max. Earth dist.	181 Mar 22 j 18:44	21°♓09'46	2.39263 AU
	181 Apr 03 j 12:30	0°♈	
morning rise	181 Apr 14 j 01:54	7°♈50'51	
	181 May 14 j 15:26	0°♉	
asc. node	181 Jun 21 j 14:02	26°♉17'00	
	181 Jun 27 j 02:42	0°♊	
	181 Aug 12 j 11:58	0°♋	
	181 Oct 02 j 08:33	0°♌	
	181 Dec 08 j 10:46	0°♍	
retrograde	182 Jan 06 j 15:10	4°♍33'30	
	182 Feb 02 j 09:38	30°℞♌	
opposition	182 Feb 14 j 17:26	25°♌28'17	4°24'30
greatest brilliancy	182 Feb 15 j 06:08	25°♌15'50	-1.4m
min. Earth dist.	182 Feb 18 j 07:59	24°♌03'24	0.65531 AU
direct	182 Mar 28 j 02:01	15°♌26'19	
	182 May 22 j 11:04	0°♍	

desc. node	182 Jul 10 j 01:08	26°♍04'13	
	182 Jul 16 j 10:58	0°♎	
	182 Aug 30 j 15:32	0°♏	
	182 Oct 10 j 18:01	0°♐	
	182 Nov 18 j 17:05	0°♑	
	182 Dec 26 j 20:33	0°♒	
	183 Feb 03 j 06:31	0°♓	
evening set	183 Feb 08 j 15:40	4°♓08'44	
	183 Mar 14 j 20:16	0°♈	
conjunction	183 Apr 12 j 20:01	21°♈10'25	-0°16'30
minimum elong	183 Apr 12 j 21:07	21°♈12'25	0°16'30
	183 Apr 25 j 05:17	0°♉	
asc. node	183 May 09 j 12:05	10°♉01'05	
max. Earth dist.	183 May 21 j 06:17	18°♉08'25	2.52495 AU
	183 Jun 07 j 17:17	0°♊	
morning rise	183 Jun 09 j 03:16	0°♊57'06	
	183 Jul 23 j 09:23	0°♋	
	183 Sep 09 j 06:40	0°♌	
	183 Oct 30 j 07:39	0°♍	
	183 Dec 29 j 21:08	0°♎	
retrograde	184 Feb 16 j 20:22	11°♎21'31	
opposition	184 Mar 24 j 16:35	3°♎21'26	2°43'40
greatest brilliancy	184 Mar 25 j 10:48	3°♎04'27	-1.8m
min. Earth dist.	184 Mar 31 j 20:16	0°♎41'39	0.57116 AU
	184 Apr 02 j 18:21	30°℞♍	
direct	184 May 03 j 23:50	23°♍46'23	
desc. node	184 May 26 j 23:34	26°♍58'18	
	184 Jun 05 j 20:02	0°♎	
	184 Aug 03 j 09:50	0°♏	
	184 Sep 16 j 11:06	0°♐	
	184 Oct 26 j 15:38	0°♑	
	184 Dec 04 j 13:35	0°♒	
	185 Jan 12 j 15:49	0°♓	
	185 Feb 21 j 21:47	0°♈	
asc. node	185 Mar 26 j 11:47	23°♈23'12	
	185 Apr 04 j 22:07	0°♉	
evening set	185 Apr 08 j 12:57	2°♉31'08	
	185 May 18 j 21:27	0°♊	
conjunction	185 Jun 01 j 00:50	8°♊43'42	0°37'26
minimum elong	185 May 31 j 23:25	8°♊41'22	0°37'26
max. Earth dist.	185 Jun 19 j 12:32	20°♊51'23	2.62431 AU
	185 Jul 03 j 14:56	0°♋	
morning rise	185 Jul 20 j 00:11	10°♋31'51	
	185 Aug 19 j 15:56	0°♌	
	185 Oct 06 j 17:01	0°♍	
	185 Nov 25 j 02:27	0°♎	
	186 Jan 17 j 01:59	0°♏	
retrograde	186 Apr 13 j 00:49	29°♏18'11	
desc. node	186 Apr 13 j 22:51	29°♏17'53	
opposition	186 May 15 j 22:09	23°♏08'51	-1°50'41
greatest brilliancy	186 May 16 j 10:58	22°♏58'39	-2.5m
min. Earth dist.	186 May 24 j 00:03	20°♏35'28	0.44240 AU
direct	186 Jun 20 j 16:05	15°♏42'26	
	186 Aug 09 j 09:39	0°♐	
	186 Sep 27 j 18:57	0°♑	
	186 Nov 09 j 05:44	0°♒	
	186 Dec 20 j 13:35	0°♓	
	187 Jan 31 j 12:49	0°♈	
asc. node	187 Feb 11 j 10:31	7°♈38'42	
	187 Mar 15 j 22:06	0°♉	
	187 Apr 29 j 21:57	0°♊	
evening set	187 May 24 j 07:39	15°♊53'36	
	187 Jun 15 j 05:21	0°♋	
conjunction	187 Jul 11 j 06:54	16°♋39'47	1°05'40
minimum elong	187 Jul 11 j 06:08	16°♋38'33	1°05'40
max. Earth dist.	187 Jul 14 j 04:47	18°♋31'08	2.67122 AU
	187 Aug 01 j 05:19	0°♌	
morning rise	187 Aug 25 j 12:16	15°♌28'25	
	187 Sep 17 j 06:10	0°♍	
	187 Nov 02 j 22:03	0°♎	
	187 Dec 19 j 04:52	0°♏	
	188 Feb 03 j 12:56	0°♐	
desc. node	188 Feb 29 j 22:52	16°♐50'33	
	188 Mar 22 j 03:17	0°♑	
	188 May 15 j 23:09	0°♒	
retrograde	188 Jun 30 j 07:21	11°♒30'55	
min. Earth dist.	188 Jul 28 j 16:20	6°♒52'59	0.37563 AU
opposition	188 Jul 30 j 22:14	6°♒16'52	-6°52'40
greatest brilliancy	188 Jul 30 j 11:52	6°♒23'49	-2.9m
direct	188 Aug 29 j 11:39	1°♒21'23	
	188 Nov 16 j 01:12	0°♓	
asc. node	188 Dec 29 j 08:30	26°♓10'12	
	189 Jan 04 j 10:49	0°♈	
	189 Feb 20 j 15:41	0°♉	
	189 Apr 08 j 21:39	0°♊	
	189 May 26 j 12:03	0°♋	
evening set	189 Jul 01 j 08:21	22°♋35'57	
	189 Jul 13 j 00:45	0°♌	
max. Earth dist.	189 Aug 05 j 08:12	14°♌51'20	2.66360 AU
conjunction	189 Aug 16 j 04:19	21°♌48'51	1°06'49
minimum elong	189 Aug 16 j 04:56	21°♌49'49	1°06'48
	189 Aug 28 j 20:24	0°♍	
morning rise	189 Sep 29 j 21:24	20°♍59'08	
	189 Oct 13 j 10:44	0°♎	
	189 Nov 26 j 14:48	0°♏	
	190 Jan 08 j 10:21	0°♐	
desc. node	190 Jan 16 j 21:37	6°♐02'06	
	190 Feb 19 j 03:48	0°♑	
	190 Apr 01 j 08:49	0°♒	
	190 May 13 j 07:35	0°♓	
	190 Jun 28 j 13:50	0°♈	
retrograde	190 Sep 02 j 02:59	23°♈07'28	
min. Earth dist.	190 Sep 30 j 15:21	17°♈31'02	0.47258 AU
opposition	190 Oct 08 j 18:51	14°♈37'20	-2°02'55
greatest brilliancy	190 Oct 08 j 05:18	14°♈49'25	-2.3m
direct	190 Nov 10 j 23:29	7°♈43'18	
asc. node	190 Nov 16 j 08:05	7°♈54'31	
	191 Jan 20 j 19:37	0°♉	
	191 Mar 16 j 20:00	0°♊	
	191 May 06 j 12:44	0°♋	
	191 Jun 24 j 10:07	0°♌	
evening set	191 Aug 07 j 20:07	28°♌11'57	
	191 Aug 10 j 14:50	0°♍	
max. Earth dist.	191 Aug 30 j 19:27	13°♍13'10	2.60283 AU
conjunction	191 Sep 23 j 10:58	29°♍02'27	0°41'01
minimum elong	191 Sep 23 j 12:13	29°♍04'34	0°41'01
	191 Sep 24 j 20:57	0°♎	
	191 Nov 07 j 02:31	0°♏	
morning rise	191 Nov 10 j 06:26	2°♏14'57	
desc. node	191 Dec 04 j 20:24	19°♏58'08	
	191 Dec 18 j 12:24	0°♐	
	192 Jan 27 j 12:37	0°♑	
	192 Mar 06 j 17:52	0°♒	
	192 Apr 15 j 00:21	0°♓	
	192 May 25 j 12:12	0°♈	
	192 Jul 08 j 05:55	0°♉	
	192 Aug 31 j 01:45	0°♊	
asc. node	192 Oct 03 j 07:47	10°♊19'28	
retrograde	192 Oct 14 j 21:18	11°♊12'46	

min. Earth dist.	192 Nov 17 j 19:55	3°♊32'12	0.59410 AU
opposition	192 Nov 23 j 08:29	1°♊20'51	2°08'38
greatest brilliancy	192 Nov 22 j 21:06	1°♊32'09	-1.7m
	192 Nov 26 j 19:01	30°℞♉	
direct	192 Dec 30 j 12:59	22°♉44'25	
	193 Feb 06 j 02:54	0°♊	
	193 Apr 11 j 22:17	0°♋	
	193 Jun 03 j 09:43	0°♌	
	193 Jul 21 j 20:23	0°♍	
	193 Sep 05 j 07:50	0°♎	
evening set	193 Sep 16 j 13:52	7°♎42'35	
max. Earth dist.	193 Oct 01 j 15:30	18°♎12'50	2.49499 AU
	193 Oct 18 j 04:57	0°♏	
desc. node	193 Oct 21 j 19:26	2°♏35'49	
conjunction	193 Nov 06 j 21:20	14°♏19'21	-0°10'14
minimum elong	193 Nov 06 j 20:47	14°♏18'21	0°10'14
behind sun begin	193 Nov 06 j 02:48	13°♏45'16	
behind sun end	193 Nov 07 j 14:46	14°♏51'27	
	193 Nov 27 j 22:35	0°♐	
morning rise	194 Jan 03 j 01:01	27°♐35'43	
	194 Jan 06 j 03:29	0°♑	
	194 Feb 13 j 13:44	0°♒	
	194 Mar 24 j 01:52	0°♓	
	194 May 02 j 13:55	0°♈	
	194 Jun 13 j 02:36	0°♉	
	194 Jul 28 j 03:20	0°♊	
asc. node	194 Aug 21 j 06:15	14°♊36'09	
	194 Sep 18 j 22:28	0°♋	
retrograde	194 Nov 19 j 22:28	18°♋09'34	
min. Earth dist.	194 Dec 28 j 06:31	8°♋59'59	0.66469 AU
opposition	194 Dec 30 j 01:24	8°♋16'53	4°06'33
greatest brilliancy	194 Dec 29 j 17:57	8°♋24'22	-1.3m
	195 Jan 24 j 23:30	30°℞♊	
direct	195 Feb 07 j 21:56	28°♊44'29	
	195 Feb 22 j 18:14	0°♋	
	195 May 10 j 07:23	0°♌	
	195 Jul 01 j 11:17	0°♍	
	195 Aug 17 j 01:15	0°♎	
desc. node	195 Sep 08 j 17:55	15°♎33'30	
	195 Sep 29 j 02:16	0°♏	
evening set	195 Nov 06 j 11:29	28°♏23'52	
	195 Nov 08 j 14:12	0°♐	
	195 Dec 17 j 10:11	0°♑	
max. Earth dist.	195 Dec 18 j 15:48	0°♑58'01	2.37606 AU
conjunction	196 Jan 07 j 08:40	16°♑27'59	-1°01'50
minimum elong	196 Jan 07 j 06:51	16°♑24'24	1°01'50
	196 Jan 24 j 12:07	0°♒	
	196 Mar 02 j 18:07	0°♓	
morning rise	196 Mar 17 j 03:46	11°♓07'26	
	196 Apr 11 j 00:59	0°♈	
	196 May 22 j 03:17	0°♉	
	196 Jul 04 j 17:52	0°♊	
asc. node	196 Jul 08 j 05:28	2°♊18'37	
	196 Aug 20 j 19:24	0°♋	
	196 Oct 13 j 13:16	0°♌	
retrograde	196 Dec 23 j 13:06	21°♌37'15	
opposition	197 Feb 01 j 03:21	12°♌14'25	4°35'16
greatest brilliancy	197 Feb 01 j 10:21	12°♌07'29	-1.3m
min. Earth dist.	197 Mar 03 j 05:33	11°♌24'40	0.67083 AU
direct	197 Mar 14 j 08:30	2°♌15'06	
	197 Jun 05 j 05:58	0°♍	
	197 Jul 25 j 17:42	0°♎	
desc. node	197 Jul 26 j 16:47	0°♎37'13	
	197 Sep 07 j 21:29	0°♏	
	197 Oct 18 j 15:55	0°♐	
	197 Nov 26 j 11:55	0°♑	
	198 Jan 03 j 13:14	0°♒	
evening set	198 Jan 12 j 00:37	6°♒40'47	
	198 Feb 10 j 20:32	0°♓	
conjunction	198 Mar 19 j 13:45	27°♓58'36	-0°40'14
minimum elong	198 Mar 19 j 16:27	28°♓03'39	0°40'12
	198 Mar 22 j 06:47	0°♈	
	198 May 02 j 11:55	0°♉	
max. Earth dist.	198 May 05 j 02:53	1°♉51'32	2.47404 AU
morning rise	198 May 20 j 15:37	12°♉44'28	
asc. node	198 May 26 j 04:40	16°♉34'35	
	198 Jun 14 j 21:41	0°♊	
	198 Jul 30 j 16:46	0°♋	
	198 Sep 17 j 07:23	0°♌	
	198 Nov 10 j 00:42	0°♍	
retrograde	199 Jan 30 j 15:37	26°♍25'43	
opposition	199 Mar 09 j 13:25	17°♍55'47	3°37'35
greatest brilliancy	199 Mar 10 j 08:02	17°♍37'59	-1.6m
min. Earth dist.	199 Mar 15 j 10:07	15°♍41'14	0.61147 AU
direct	199 Apr 19 j 13:38	8°♍02'24	
desc. node	199 Jun 13 j 16:45	23°♍09'30	
	199 Jun 27 j 07:24	0°♎	
	199 Aug 15 j 14:12	0°♏	
	199 Sep 26 j 21:58	0°♐	
	199 Nov 05 j 09:50	0°♑	
	199 Dec 13 j 21:25	0°♒	
	200 Jan 21 j 14:53	0°♓	
	200 Mar 01 j 12:33	0°♈	
evening set	200 Mar 18 j 07:43	12°♈15'35	
asc. node	200 Apr 12 j 02:34	29°♈55'28	
	200 Apr 12 j 05:09	0°♉	
conjunction	200 May 14 j 04:48	22°♉04'49	0°19'10
minimum elong	200 May 14 j 03:50	22°♉03'11	0°19'10
	200 May 25 j 22:32	0°♊	
max. Earth dist.	200 Jun 08 j 21:10	9°♊17'37	2.59147 AU
morning rise	200 Jul 04 j 18:13	26°♊14'43	
	200 Jul 10 j 13:32	0°♋	
	200 Aug 26 j 19:07	0°♌	
	200 Oct 14 j 14:55	0°♍	
	200 Dec 05 j 06:23	0°♎	
	201 Feb 05 j 20:08	0°♏	
retrograde	201 Mar 19 j 09:20	8°♏37'54	
opposition	201 Apr 23 j 01:44	1°♏38'13	0°23'43
greatest brilliancy	201 Apr 23 j 05:21	1°♏35'06	-2.2m
	201 Apr 27 j 18:45	30°℞♎	
desc. node	201 Apr 30 j 15:16	29°♎01'16	
min. Earth dist.	201 May 01 j 12:10	28°♎43'41	0.49494 AU
direct	201 May 31 j 04:38	23°♎03'28	
	201 Jul 03 j 23:45	0°♏	
	201 Aug 28 j 12:46	0°♐	
	201 Oct 10 j 12:02	0°♑	
	201 Nov 19 j 19:06	0°♒	
	201 Dec 29 j 20:38	0°♓	
	202 Feb 08 j 21:57	0°♈	
asc. node	202 Feb 28 j 01:59	13°♈37'40	
	202 Mar 23 j 14:26	0°♉	
evening set	202 May 07 j 16:49	0°♊24'13	
	202 May 07 j 02:11	0°♊	
	202 Jun 22 j 02:15	0°♋	
conjunction	202 Jun 26 j 08:35	2°♋44'36	0°58'01
minimum elong	202 Jun 26 j 07:22	2°♋42'38	0°58'00
max. Earth dist.	202 Jul 05 j 00:19	8°♋17'55	2.65937 AU
	202 Aug 08 j 00:50	0°♌	
morning rise	202 Aug 11 j 14:51	2°♌16'38	

	202 Sep 24 j 08:08	0°♍	
	202 Nov 10 j 18:06	0°♎	
	202 Dec 28 j 15:04	0°♏	
	203 Feb 16 j 08:16	0°♐	
desc. node	203 Mar 18 j 14:01	16°♐45'39	
	203 Apr 15 j 14:12	0°♑	
retrograde	203 May 29 j 23:22	10°♑25'21	
opposition	203 Jun 29 j 08:51	5°♑23'21	-5°53'14
greatest brilliancy	203 Jun 29 j 23:12	5°♑13'37	-2.9m
min. Earth dist.	203 Jul 02 j 12:40	4°♑31'59	0.38212 AU
	203 Jul 29 j 13:04	30°℞♐	
direct	203 Jul 30 j 10:57	29°♐59'39	
	203 Jul 31 j 08:50	0°♑	
	203 Oct 16 j 22:10	0°♒	
	203 Dec 02 j 16:11	0°♓	
asc. node	204 Jan 16 j 01:36	29°♓45'43	
	204 Jan 16 j 10:07	0°♈	
	204 Mar 01 j 12:33	0°♉	
	204 Apr 16 j 14:58	0°♊	
	204 Jun 02 j 14:01	0°♋	
evening set	204 Jun 16 j 14:39	8°♋54'17	
	204 Jul 19 j 19:58	0°♌	
max. Earth dist.	204 Jul 27 j 08:04	4°♌46'40	2.67297 AU
conjunction	204 Aug 01 j 22:36	8°♌21'06	1°09'33
minimum elong	204 Aug 01 j 22:41	8°♌21'15	1°09'33
	204 Sep 04 j 16:08	0°♍	
morning rise	204 Sep 15 j 11:37	7°♍00'13	
	204 Oct 20 j 13:59	0°♎	
	204 Dec 04 j 09:07	0°♏	
	205 Jan 17 j 03:28	0°♐	
desc. node	205 Feb 02 j 13:52	11°♐24'47	
	205 Mar 01 j 04:28	0°♑	
	205 Apr 13 j 06:55	0°♒	
	205 May 28 j 23:27	0°♓	
retrograde	205 Aug 11 j 13:13	28°♓35'20	
min. Earth dist.	205 Sep 07 j 10:07	23°♓46'55	0.42315 AU
greatest brilliancy	205 Sep 14 j 00:38	21°♓39'28	-2.6m
opposition	205 Sep 15 j 01:49	21°♓19'07	-4°20'40
direct	205 Oct 16 j 07:51	15°♓20'26	
asc. node	205 Dec 03 j 00:20	27°♓14'39	
	205 Dec 09 j 05:44	0°♈	
	206 Feb 03 j 16:14	0°♉	
	206 Mar 26 j 03:31	0°♊	
	206 May 14 j 06:00	0°♋	
	206 Jul 01 j 11:17	0°♌	
evening set	206 Jul 24 j 03:20	14°♌21'22	
	206 Aug 17 j 10:58	0°♍	
max. Earth dist.	206 Aug 20 j 12:09	1°♍58'55	2.63281 AU
conjunction	206 Sep 08 j 02:10	14°♍10'02	0°54'14
minimum elong	206 Sep 08 j 03:22	14°♍12'00	0°54'13
	206 Oct 01 j 19:07	0°♎	
morning rise	206 Oct 24 j 03:54	15°♎15'29	
	206 Nov 14 j 08:01	0°♏	
desc. node	206 Dec 21 j 12:45	26°♏36'27	
	206 Dec 26 j 04:34	0°♐	
	207 Feb 04 j 17:13	0°♑	
	207 Mar 16 j 11:17	0°♒	
	207 Apr 25 j 08:10	0°♓	
	207 Jun 05 j 19:29	0°♈	
	207 Jul 22 j 08:40	0°♉	
retrograde	207 Sep 30 j 06:27	24°♉38'39	
asc. node	207 Oct 20 j 23:00	21°♉32'20	
min. Earth dist.	207 Nov 01 j 04:18	17°♉42'16	0.55097 AU
opposition	207 Nov 08 j 00:10	15°♉03'40	0°50'23
greatest brilliancy	207 Nov 07 j 18:28	15°♉09'11	-1.9m
direct	207 Dec 13 j 18:51	7°♉00'11	
	208 Feb 25 j 18:30	0°♊	
	208 Apr 21 j 13:06	0°♋	
	208 Jun 11 j 03:58	0°♌	
	208 Jul 28 j 23:47	0°♍	
evening set	208 Aug 30 j 23:35	21°♍40'20	
	208 Sep 12 j 07:44	0°♎	
max. Earth dist.	208 Sep 17 j 07:33	3°♎24'15	2.54186 AU
conjunction	208 Oct 18 j 20:30	25°♎23'55	0°12'12
minimum elong	208 Oct 18 j 21:03	25°♎24'54	0°12'12
behind sun begin	208 Oct 18 j 06:47	24°♎59'35	
behind sun end	208 Oct 19 j 11:18	25°♎50'14	
	208 Oct 25 j 07:17	0°♏	
desc. node	208 Nov 07 j 11:13	9°♏29'54	
	208 Dec 05 j 06:14	0°♐	
morning rise	208 Dec 10 j 08:31	3°♐49'08	
	209 Jan 13 j 17:34	0°♑	
	209 Feb 21 j 09:48	0°♒	
	209 Apr 01 j 02:58	0°♓	
	209 May 10 j 20:31	0°♈	
	209 Jun 21 j 20:05	0°♉	
	209 Aug 07 j 07:47	0°♊	
asc. node	209 Sep 06 j 22:47	16°♊50'26	
	209 Oct 08 j 23:33	0°♋	
retrograde	209 Nov 06 j 08:45	4°♋41'50	
	209 Dec 02 j 15:39	30°℞♊	
min. Earth dist.	209 Dec 13 j 02:40	26°♊03'46	0.64445 AU
opposition	209 Dec 16 j 09:44	24°♊44'22	3°33'04
greatest brilliancy	209 Dec 15 j 22:33	24°♊55'36	-1.4m
direct	210 Jan 24 j 09:10	15°♊29'59	
	210 Mar 22 j 02:17	0°♋	
	210 May 20 j 05:29	0°♌	
	210 Jul 09 j 10:23	0°♍	
	210 Aug 24 j 10:49	0°♎	
desc. node	210 Sep 25 j 10:54	22°♎11'05	
	210 Oct 06 j 09:06	0°♏	
evening set	210 Oct 15 j 19:51	6°♏51'18	
max. Earth dist.	210 Nov 03 j 06:46	20°♏29'06	2.41646 AU
	210 Nov 15 j 22:18	0°♐	
conjunction	210 Dec 11 j 22:52	19°♐57'02	-0°46'04
minimum elong	210 Dec 11 j 20:24	19°♐52'15	0°46'03
	210 Dec 24 j 20:54	0°♑	
	211 Feb 01 j 01:07	0°♒	
morning rise	211 Feb 16 j 02:18	11°♒50'15	
	211 Mar 11 j 08:21	0°♓	
	211 Apr 19 j 15:47	0°♈	
	211 May 30 j 19:31	0°♉	
	211 Jul 13 j 17:14	0°♊	
asc. node	211 Jul 25 j 21:08	7°♊53'38	
	211 Aug 30 j 22:50	0°♋	
	211 Oct 30 j 06:34	0°♌	
retrograde	211 Dec 10 j 23:11	8°♌53'28	
	212 Jan 18 j 01:34	30°℞♋	
opposition	212 Jan 19 j 21:25	29°♋16'17	4°33'31
greatest brilliancy	212 Jan 19 j 22:20	29°♋15'22	-1.3m
min. Earth dist.	212 Jan 20 j 10:54	29°♋02'49	0.67643 AU
direct	212 Feb 29 j 17:39	19°♋24'24	
	212 Apr 16 j 17:31	0°♌	
	212 Jun 15 j 19:53	0°♍	
	212 Aug 03 j 04:21	0°♎	
desc. node	212 Aug 12 j 09:56	6°♎08'29	
	212 Sep 15 j 18:11	0°♏	
	212 Oct 26 j 08:33	0°♐	
	212 Dec 04 j 03:32	0°♑	
evening set	212 Dec 14 j 23:11	8°♑30'38	

	213 Jan 11 j 04:01	0°♒	
	213 Feb 18 j 09:34	0°♓	
conjunction	213 Feb 20 j 06:15	1°♓26'40	-0°58'51
minimum elong	213 Feb 20 j 08:46	1°♓31'33	0°58'50
	213 Mar 29 j 17:10	0°♈	
max. Earth dist.	213 Apr 12 j 04:39	10°♈00'19	2.42011 AU
morning rise	213 Apr 28 j 07:48	21°♈45'56	
	213 May 09 j 19:32	0°♉	
asc. node	213 Jun 11 j 19:33	22°♉58'42	
	213 Jun 22 j 04:40	0°♊	
	213 Aug 07 j 06:15	0°♋	
	213 Sep 26 j 00:36	0°♌	
	213 Nov 24 j 04:01	0°♍	
retrograde	214 Jan 15 j 02:02	12°♍37'26	
opposition	214 Feb 22 j 19:15	3°♍43'30	4°11'42
greatest brilliancy	214 Feb 23 j 10:36	3°♍28'33	-1.4m
min. Earth dist.	214 Feb 27 j 05:16	2°♍00'17	0.64244 AU
	214 Mar 04 j 12:39	30°℞♌	
direct	214 Apr 05 j 02:37	23°♌42'38	
	214 May 09 j 06:49	0°♍	
desc. node	214 Jun 30 j 08:23	24°♍28'16	
	214 Jul 09 j 19:31	0°♎	
	214 Aug 25 j 01:52	0°♏	
	214 Oct 05 j 13:08	0°♐	
	214 Nov 13 j 16:18	0°♑	
	214 Dec 21 j 22:08	0°♒	
	215 Jan 29 j 09:55	0°♓	
evening set	215 Feb 23 j 07:25	18°♓58'33	
	215 Mar 10 j 01:27	0°♈	
	215 Apr 20 j 11:49	0°♉	
conjunction	215 Apr 25 j 05:48	3°♉20'48	-0°02'52
minimum elong	215 Apr 25 j 05:56	3°♉21'02	0°02'52
behind sun begin	215 Apr 24 j 06:06	2°♉39'10	
behind sun end	215 Apr 26 j 05:46	4°♉02'52	
asc. node	215 Apr 29 j 19:28	6°♉32'54	
max. Earth dist.	215 May 29 j 01:52	26°♉40'10	2.55035 AU
	215 Jun 03 j 00:21	0°♊	
morning rise	215 Jun 19 j 06:24	10°♊50'52	
	215 Jul 18 j 14:29	0°♋	
	215 Sep 04 j 04:01	0°♌	
	215 Oct 24 j 04:10	0°♍	
	215 Dec 18 j 22:43	0°♎	
retrograde	216 Feb 27 j 12:18	20°♎57'04	
opposition	216 Apr 03 j 15:42	13°♎16'08	2°01'14
greatest brilliancy	216 Apr 04 j 06:58	13°♎02'12	-1.9m
min. Earth dist.	216 Apr 11 j 09:49	10°♎26'36	0.54556 AU
direct	216 May 13 j 08:22	3°♎57'15	
desc. node	216 May 17 j 07:14	4°♎03'31	
	216 Jul 25 j 22:17	0°♏	
	216 Sep 09 j 22:48	0°♐	
	216 Oct 20 j 19:37	0°♑	
	216 Nov 29 j 02:16	0°♒	
	217 Jan 07 j 10:39	0°♓	
	217 Feb 16 j 21:53	0°♈	
asc. node	217 Mar 16 j 18:44	19°♈58'00	
	217 Mar 31 j 02:28	0°♉	
evening set	217 Apr 19 j 14:29	13°♉25'16	
	217 May 14 j 04:58	0°♊	
conjunction	217 Jun 10 j 13:21	18°♊02'09	0°46'10
minimum elong	217 Jun 10 j 11:54	17°♊59'47	0°46'10
max. Earth dist.	217 Jun 25 j 08:07	27°♊38'38	2.63899 AU
	217 Jun 28 j 23:36	0°♋	
morning rise	217 Jul 28 j 09:38	18°♋51'37	
	217 Aug 14 j 22:41	0°♌	
	217 Oct 01 j 15:42	0°♍	
	217 Nov 19 j 04:02	0°♎	
	218 Jan 08 j 16:02	0°♏	
	218 Mar 07 j 20:59	0°♐	
desc. node	218 Apr 04 j 06:18	9°♐40'58	
retrograde	218 Apr 28 j 21:17	13°♐04'53	
opposition	218 May 30 j 15:08	7°♐24'21	-3°20'44
greatest brilliancy	218 May 31 j 10:39	7°♐09'43	-2.6m
min. Earth dist.	218 Jun 06 j 16:39	5°♐17'32	0.41627 AU
direct	218 Jul 03 j 19:37	0°♐43'07	
	218 Sep 17 j 18:31	0°♑	
	218 Nov 01 j 19:05	0°♒	
	218 Dec 14 j 06:12	0°♓	
	219 Jan 25 j 22:02	0°♈	
asc. node	219 Feb 01 j 16:58	4°♈42'30	
	219 Mar 10 j 18:19	0°♉	
	219 Apr 25 j 01:39	0°♊	
evening set	219 Jun 02 j 08:47	24°♊45'07	
	219 Jun 10 j 13:26	0°♋	
conjunction	219 Jul 19 j 15:06	24°♋54'36	1°08'16
minimum elong	219 Jul 19 j 14:39	24°♋53'52	1°08'16
max. Earth dist.	219 Jul 19 j 11:08	24°♋48'17	2.67413 AU
	219 Jul 27 j 14:56	0°♌	
morning rise	219 Sep 02 j 11:39	23°♌32'10	
	219 Sep 12 j 13:29	0°♍	
	219 Oct 28 j 21:51	0°♎	
	219 Dec 13 j 13:43	0°♏	
	220 Jan 27 j 18:10	0°♐	
desc. node	220 Feb 20 j 05:13	15°♐34'56	
	220 Mar 13 j 02:23	0°♑	
	220 Apr 29 j 16:22	0°♒	
retrograde	220 Jul 16 j 18:54	29°♒35'52	
min. Earth dist.	220 Aug 12 j 20:22	25°♒08'20	0.38595 AU
opposition	220 Aug 17 j 16:26	23°♒45'44	-6°22'41
greatest brilliancy	220 Aug 16 j 18:34	24°♒01'21	-2.8m
direct	220 Sep 16 j 12:17	18°♒36'53	
	220 Nov 01 j 01:54	0°♓	
asc. node	220 Dec 19 j 16:12	25°♓28'08	
	220 Dec 27 j 09:11	0°♈	
	221 Feb 14 j 12:08	0°♉	
	221 Apr 03 j 14:47	0°♊	
	221 May 21 j 15:41	0°♋	
	221 Jul 08 j 09:34	0°♌	
evening set	221 Jul 09 j 15:27	0°♌47'18	
max. Earth dist.	221 Aug 10 j 17:52	21°♌15'51	2.65486 AU
conjunction	221 Aug 24 j 09:29	0°♍04'51	1°03'22
minimum elong	221 Aug 24 j 10:22	0°♍06'16	1°03'22
	221 Aug 24 j 06:30	0°♍	
morning rise	221 Oct 08 j 10:19	29°♍46'18	
	221 Oct 08 j 18:29	0°♎	
	221 Nov 21 j 16:47	0°♏	
	222 Jan 03 j 03:03	0°♐	
desc. node	222 Jan 07 j 05:09	2°♐56'26	
	222 Feb 13 j 08:27	0°♑	
	222 Mar 25 j 21:44	0°♒	
	222 May 05 j 19:51	0°♓	
	222 Jun 18 j 09:49	0°♈	
	222 Aug 14 j 04:49	0°♉	
retrograde	222 Sep 12 j 23:48	5°♉43'06	
	222 Oct 11 j 15:22	30°℞♈	
min. Earth dist.	222 Oct 12 j 17:32	29°♈36'37	0.50157 AU
opposition	222 Oct 20 j 13:18	26°♈42'54	-0°52'18
greatest brilliancy	222 Oct 20 j 07:34	26°♈48'13	-2.2m
asc. node	222 Nov 06 j 15:07	21°♈20'02	
direct	222 Nov 23 j 17:15	19°♈21'09	

	223 Jan 08 j 10:05	0°♉	
	223 Mar 10 j 02:29	0°♊	
	223 May 01 j 03:26	0°♋	
	223 Jun 19 j 13:36	0°♌	
	223 Aug 05 j 23:30	0°♍	
evening set	223 Aug 16 j 09:28	6°♍46'26	
max. Earth dist.	223 Sep 06 j 04:23	20°♍30'40	2.58327 AU
	223 Sep 20 j 06:33	0°♎	
conjunction	223 Oct 02 j 14:50	8°♎25'59	0°31'35
minimum elong	223 Oct 02 j 15:58	8°♎27'56	0°31'34
	223 Nov 02 j 10:26	0°♏	
morning rise	223 Nov 20 j 18:38	13°♏11'06	
desc. node	223 Nov 25 j 04:21	16°♏23'16	
	223 Dec 13 j 16:29	0°♐	
	224 Jan 22 j 11:50	0°♑	
	224 Mar 01 j 11:42	0°♒	
	224 Apr 09 j 11:54	0°♓	
	224 May 19 j 14:28	0°♈	
	224 Jul 01 j 10:08	0°♉	
	224 Aug 20 j 00:14	0°♊	
asc. node	224 Sep 23 j 13:23	15°♊08'34	
retrograde	224 Oct 23 j 07:42	20°♊25'20	
min. Earth dist.	224 Nov 27 j 07:31	12°♊22'55	0.61469 AU
opposition	224 Dec 02 j 01:45	10°♊28'56	2°44'51
greatest brilliancy	224 Dec 01 j 13:17	10°♊41'22	-1.6m
direct	225 Jan 08 j 23:05	1°♊37'19	
	225 Apr 04 j 17:56	0°♋	
	225 May 28 j 22:49	0°♌	
	225 Jul 16 j 22:52	0°♍	
	225 Aug 31 j 14:57	0°♎	
evening set	225 Sep 26 j 15:20	17°♎58'31	
max. Earth dist.	225 Oct 11 j 13:28	28°♎34'33	2.46741 AU
desc. node	225 Oct 12 j 02:42	28°♎58'17	
	225 Oct 13 j 13:03	0°♏	
conjunction	225 Nov 18 j 16:47	26°♏35'26	-0°23'41
minimum elong	225 Nov 18 j 15:27	26°♏32'55	0°23'40
	225 Nov 23 j 05:31	0°♐	
	226 Jan 01 j 08:27	0°♑	
morning rise	226 Jan 17 j 22:56	12°♑57'24	
	226 Feb 08 j 16:31	0°♒	
	226 Mar 19 j 02:18	0°♓	
	226 Apr 27 j 11:32	0°♈	
	226 Jun 07 j 18:53	0°♉	
	226 Jul 22 j 05:15	0°♊	
asc. node	226 Aug 11 j 13:04	12°♊43'56	
	226 Sep 10 j 14:07	0°♋	
retrograde	226 Nov 27 j 14:49	26°♋07'04	
opposition	227 Jan 06 j 17:22	16°♋18'45	4°20'07
min. Earth dist.	227 Jan 05 j 18:09	16°♋42'04	0.67166 AU
greatest brilliancy	227 Jan 06 j 12:35	16°♋23'33	-1.3m
direct	227 Feb 15 j 23:59	6°♋38'20	
	227 May 02 j 19:05	0°♌	
	227 Jun 25 j 21:56	0°♍	
	227 Aug 12 j 01:12	0°♎	
desc. node	227 Aug 30 j 01:25	12°♎13'28	
	227 Sep 24 j 06:50	0°♏	
	227 Nov 03 j 19:45	0°♐	
evening set	227 Nov 19 j 22:48	12°♐20'34	
	227 Dec 12 j 15:27	0°♑	
	228 Jan 19 j 16:45	0°♒	
conjunction	228 Jan 23 j 08:19	2°♒52'51	-1°05'10
minimum elong	228 Jan 23 j 08:02	2°♒52'18	1°05'10
max. Earth dist.	228 Feb 20 j 23:41	25°♒22'41	2.37560 AU
	228 Feb 26 j 22:08	0°♓	
morning rise	228 Apr 02 j 07:22	27°♓05'09	
	228 Apr 06 j 04:33	0°♈	
	228 May 17 j 05:48	0°♉	
asc. node	228 Jun 28 j 12:40	29°♉13'25	
	228 Jun 29 j 16:30	0°♊	
	228 Aug 15 j 05:44	0°♋	
	228 Oct 05 j 23:08	0°♌	
retrograde	228 Dec 31 j 13:27	29°♌28'19	
opposition	229 Feb 08 j 21:22	20°♌14'39	4°30'23
greatest brilliancy	229 Feb 09 j 07:33	20°♌04'36	-1.3m
min. Earth dist.	229 Feb 11 j 19:15	19°♌05'44	0.66353 AU
direct	229 Mar 22 j 04:56	10°♌13'20	
	229 May 28 j 01:24	0°♍	
desc. node	229 Jul 17 j 00:42	28°♍12'25	
	229 Jul 19 j 21:16	0°♎	
	229 Sep 02 j 16:06	0°♏	
	229 Oct 13 j 15:53	0°♐	
	229 Nov 21 j 14:05	0°♑	
	229 Dec 29 j 16:29	0°♒	
evening set	230 Jan 27 j 18:35	22°♒49'09	
	230 Feb 06 j 00:31	0°♓	
	230 Mar 17 j 11:39	0°♈	
conjunction	230 Apr 02 j 16:14	11°♈57'05	-0°26'52
minimum elong	230 Apr 02 j 18:06	12°♈00'30	0°26'50
	230 Apr 27 j 17:37	0°♉	
max. Earth dist.	230 May 15 j 00:12	12°♉07'41	2.50280 AU
asc. node	230 May 16 j 10:52	13°♉07'49	
morning rise	230 Jun 01 j 00:45	23°♉50'15	
	230 Jun 10 j 03:06	0°♊	
	230 Jul 25 j 18:51	0°♋	
	230 Sep 11 j 21:21	0°♌	
	230 Nov 02 j 19:06	0°♍	
	231 Jan 08 j 12:10	0°♎	
retrograde	231 Feb 09 j 05:40	5°♎15'24	
	231 Mar 10 j 08:00	30°℞♍	
opposition	231 Mar 18 j 13:57	27°♍01'00	3°08'47
greatest brilliancy	231 Mar 19 j 08:45	26°♍43'15	-1.7m
min. Earth dist.	231 Mar 25 j 04:01	24°♍31'53	0.59029 AU
direct	231 Apr 28 j 05:44	17°♍16'19	
desc. node	231 Jun 03 j 23:11	24°♍46'54	
	231 Jun 16 j 15:07	0°♎	
	231 Aug 08 j 21:10	0°♏	
	231 Sep 21 j 03:04	0°♐	
	231 Oct 31 j 00:09	0°♑	
	231 Dec 08 j 17:09	0°♒	
	232 Jan 16 j 14:29	0°♓	
	232 Feb 25 j 15:29	0°♈	
evening set	232 Mar 30 j 15:33	24°♈30'11	
asc. node	232 Apr 02 j 10:18	26°♈27'59	
	232 Apr 07 j 10:57	0°♉	
	232 May 21 j 06:14	0°♊	
conjunction	232 May 24 j 13:45	2°♊12'59	0°30'12
minimum elong	232 May 24 j 12:27	2°♊10'48	0°30'11
max. Earth dist.	232 Jun 15 j 04:41	16°♊31'37	2.61058 AU
	232 Jul 05 j 21:27	0°♋	
morning rise	232 Jul 13 j 14:34	4°♋58'20	
	232 Aug 21 j 23:29	0°♌	
	232 Oct 09 j 07:10	0°♍	
	232 Nov 28 j 11:42	0°♎	
	233 Jan 23 j 03:53	0°♏	
retrograde	233 Apr 01 j 18:56	20°♏21'24	
desc. node	233 Apr 20 j 21:59	18°♏05'39	
opposition	233 May 05 j 12:38	13°♏48'51	-0°48'32
greatest brilliancy	233 May 05 j 18:44	13°♏43'47	-2.4m
min. Earth dist.	233 May 13 j 23:25	11°♏01'38	0.46549 AU

direct	233 Jun 11 j 10:49	5°♏49'11	
	233 Aug 18 j 12:44	0°♐	
	233 Oct 03 j 03:45	0°♑	
	233 Nov 13 j 11:23	0°♒	
	233 Dec 24 j 03:23	0°♓	
	234 Feb 03 j 15:00	0°♈	
asc. node	234 Feb 18 j 09:31	10°♈26'17	
	234 Mar 18 j 15:11	0°♉	
	234 May 02 j 08:14	0°♊	
evening set	234 May 17 j 07:50	9°♊49'45	
	234 Jun 17 j 11:23	0°♋	
conjunction	234 Jul 04 j 23:24	11°♋13'07	1°02'56
minimum elong	234 Jul 04 j 22:25	11°♋11'33	1°02'56
max. Earth dist.	234 Jul 10 j 09:48	14°♋41'28	2.66700 AU
	234 Aug 03 j 10:18	0°♌	
morning rise	234 Aug 19 j 14:14	10°♌17'03	
	234 Sep 19 j 13:41	0°♍	
	234 Nov 05 j 13:08	0°♎	
	234 Dec 22 j 11:03	0°♏	
	235 Feb 07 j 23:51	0°♐	
desc. node	235 Mar 08 j 22:23	17°♐37'07	
	235 Mar 30 j 10:03	0°♑	
retrograde	235 Jun 17 j 10:41	28°♑04'13	
opposition	235 Jul 17 j 14:17	23°♑04'39	-6°44'30
greatest brilliancy	235 Jul 17 j 15:58	23°♑03'33	-2.9m
min. Earth dist.	235 Jul 17 j 19:27	23°♑01'15	0.37436 AU
direct	235 Aug 16 j 11:05	18°♑05'38	
	235 Oct 01 j 07:01	0°♒	
	235 Nov 23 j 22:45	0°♓	
asc. node	236 Jan 06 j 07:13	27°♓44'50	
	236 Jan 09 j 18:21	0°♈	
	236 Feb 24 j 21:17	0°♉	
	236 Apr 11 j 13:17	0°♊	
	236 May 28 j 20:04	0°♋	
evening set	236 Jun 25 j 02:19	17°♋14'05	
	236 Jul 15 j 05:42	0°♌	
max. Earth dist.	236 Aug 01 j 14:02	11°♌02'53	2.66888 AU
conjunction	236 Aug 10 j 02:08	16°♌29'15	1°08'25
minimum elong	236 Aug 10 j 02:32	16°♌29'54	1°08'25
	236 Aug 31 j 01:49	0°♍	
morning rise	236 Sep 23 j 15:39	15°♍21'20	
	236 Oct 15 j 19:59	0°♎	
	236 Nov 29 j 07:06	0°♏	
	237 Jan 11 j 12:36	0°♐	
desc. node	237 Jan 23 j 21:31	8°♐43'25	
	237 Feb 22 j 18:54	0°♑	
	237 Apr 05 j 16:29	0°♒	
	237 May 18 j 18:34	0°♓	
	237 Jul 07 j 20:43	0°♈	
retrograde	237 Aug 24 j 05:50	13°♈24'47	
min. Earth dist.	237 Sep 20 j 21:02	8°♈11'13	0.44958 AU
opposition	237 Sep 28 j 23:59	5°♈24'46	-3°00'48
greatest brilliancy	237 Sep 28 j 04:43	5°♈41'19	-2.5m
	237 Oct 18 j 15:23	30°℞♓	
direct	237 Oct 31 j 08:24	28°♓54'54	
	237 Nov 13 j 10:19	0°♈	
asc. node	237 Nov 23 j 06:28	2°♈04'31	
	238 Jan 26 j 12:32	0°♉	
	238 Mar 20 j 04:26	0°♊	
	238 May 09 j 03:01	0°♋	
	238 Jun 26 j 17:28	0°♌	
evening set	238 Aug 01 j 12:20	22°♌40'50	
	238 Aug 12 j 20:35	0°♍	
max. Earth dist.	238 Aug 26 j 08:13	8°♍47'35	2.61729 AU
conjunction	238 Sep 16 j 18:20	22°♍59'09	0°47'04
minimum elong	238 Sep 16 j 19:36	23°♍01'16	0°47'03
	238 Sep 27 j 04:31	0°♎	
morning rise	238 Nov 02 j 16:32	25°♎08'27	
	238 Nov 09 j 14:15	0°♏	
desc. node	238 Dec 11 j 20:04	23°♏07'52	
	238 Dec 21 j 05:30	0°♐	
	239 Jan 30 j 11:29	0°♑	
	239 Mar 10 j 22:16	0°♒	
	239 Apr 19 j 09:53	0°♓	
	239 May 30 j 05:05	0°♈	
	239 Jul 13 j 18:01	0°♉	
	239 Sep 11 j 15:56	0°♊	
retrograde	239 Oct 09 j 08:18	4°♊46'10	
asc. node	239 Oct 11 j 06:34	4°♊44'34	
	239 Nov 04 j 09:17	30°℞♉	
min. Earth dist.	239 Nov 11 j 09:34	27°♉24'55	0.57566 AU
opposition	239 Nov 17 j 13:00	25°♉00'04	1°38'24
greatest brilliancy	239 Nov 17 j 03:11	25°♉09'43	-1.8m
direct	239 Dec 24 j 02:45	16°♉37'36	
	240 Feb 15 j 11:03	0°♊	
	240 Apr 15 j 08:46	0°♋	
	240 Jun 06 j 00:18	0°♌	
	240 Jul 24 j 05:21	0°♍	
	240 Sep 07 j 16:31	0°♎	
evening set	240 Sep 09 j 06:51	1°♎05'09	
max. Earth dist.	240 Sep 25 j 04:23	12°♎00'52	2.51667 AU
	240 Oct 20 j 15:57	0°♏	
desc. node	240 Oct 28 j 18:51	5°♏51'06	
conjunction	240 Oct 29 j 09:06	6°♏16'53	-0°00'23
minimum elong	240 Oct 29 j 09:03	6°♏16'47	0°00'22
behind sun begin	240 Oct 28 j 11:12	5°♏37'15	
behind sun end	240 Oct 30 j 06:54	6°♏56'22	
	240 Nov 30 j 12:48	0°♐	
morning rise	240 Dec 23 j 06:32	17°♐13'49	
	241 Jan 08 j 20:58	0°♑	
	241 Feb 16 j 09:55	0°♒	
	241 Mar 26 j 23:40	0°♓	
	241 May 05 j 12:51	0°♈	
	241 Jun 16 j 04:01	0°♉	
	241 Jul 31 j 14:18	0°♊	
asc. node	241 Aug 28 j 05:18	16°♊13'29	
	241 Sep 24 j 17:24	0°♋	
retrograde	241 Nov 14 j 04:50	12°♋57'49	
min. Earth dist.	241 Dec 21 j 20:04	4°♋02'13	0.65685 AU
opposition	241 Dec 24 j 07:40	3°♋02'19	3°54'20
greatest brilliancy	241 Dec 23 j 22:14	3°♋11'47	-1.4m
	242 Jan 01 j 02:13	30°℞♊	
direct	242 Feb 01 j 19:33	23°♊37'35	
	242 Mar 09 j 03:57	0°♋	
	242 May 13 j 21:05	0°♌	
	242 Jul 04 j 04:41	0°♍	
	242 Aug 19 j 14:09	0°♎	
desc. node	242 Sep 15 j 17:49	18°♎41'11	
	242 Oct 01 j 15:28	0°♏	
evening set	242 Oct 27 j 17:40	19°♏07'14	
	242 Nov 11 j 05:04	0°♐	
max. Earth dist.	242 Nov 22 j 16:09	8°♐44'08	2.39141 AU
	242 Dec 20 j 02:48	0°♑	
conjunction	242 Dec 26 j 10:38	4°♑57'12	-0°56'17
minimum elong	242 Dec 26 j 08:13	4°♑52'28	0°56'15
	243 Jan 27 j 05:53	0°♒	
morning rise	243 Mar 05 j 01:50	28°♒53'50	
	243 Mar 06 j 11:52	0°♓	
	243 Apr 14 j 17:51	0°♈	

	243 May 25 j 19:15	0°♉	
	243 Jul 08 j 10:30	0°♊	
asc. node	243 Jul 16 j 03:57	5°♊05'20	
	243 Aug 24 j 19:52	0°♋	
	243 Oct 19 j 08:35	0°♌	
retrograde	243 Dec 18 j 17:26	16°♌39'43	
opposition	244 Jan 27 j 11:43	7°♌09'56	4°35'53
greatest brilliancy	244 Jan 27 j 15:57	7°♌05'43	-1.3m
min. Earth dist.	244 Jan 28 j 21:04	6°♌36'44	0.67459 AU
	244 Feb 16 j 20:07	30°℞♋	
direct	244 Mar 08 j 13:35	27°♋13'31	
	244 Mar 30 j 23:25	0°♌	
	244 Jun 09 j 04:29	0°♍	
	244 Jul 28 j 18:00	0°♎	
desc. node	244 Aug 02 j 16:25	3°♎13'36	
	244 Sep 10 j 17:01	0°♏	
	244 Oct 21 j 10:42	0°♐	
	244 Nov 29 j 06:50	0°♑	
evening set	244 Dec 30 j 16:12	24°♑44'36	
	245 Jan 06 j 07:56	0°♒	
	245 Feb 13 j 13:59	0°♓	
conjunction	245 Mar 07 j 23:56	17°♓13'53	-0°49'18
minimum elong	245 Mar 08 j 02:54	17°♓19'33	0°49'17
	245 Mar 24 j 22:04	0°♈	
max. Earth dist.	245 Apr 26 j 11:23	23°♈52'51	2.44993 AU
	245 May 05 j 00:43	0°♉	
morning rise	245 May 11 j 08:45	4°♉29'23	
asc. node	245 Jun 02 j 03:36	19°♉39'29	
	245 Jun 17 j 08:26	0°♊	
	245 Aug 02 j 04:24	0°♋	
	245 Sep 20 j 03:24	0°♌	
	245 Nov 14 j 11:13	0°♍	
retrograde	246 Jan 23 j 19:32	20°♍52'31	
opposition	246 Mar 03 j 02:40	12°♍11'03	3°53'45
greatest brilliancy	246 Mar 03 j 20:02	11°♍54'17	-1.5m
min. Earth dist.	246 Mar 08 j 07:40	10°♍10'24	0.62653 AU
direct	246 Apr 13 j 06:56	2°♍13'19	
desc. node	246 Jun 20 j 16:08	23°♍39'31	
	246 Jul 02 j 08:44	0°♎	
	246 Aug 19 j 04:48	0°♏	
	246 Sep 30 j 03:53	0°♐	
	246 Nov 08 j 12:00	0°♑	
	246 Dec 16 j 20:49	0°♒	
	247 Jan 24 j 11:00	0°♓	
	247 Mar 05 j 04:47	0°♈	
evening set	247 Mar 09 j 06:28	3°♈00'13	
	247 Apr 15 j 17:24	0°♉	
asc. node	247 Apr 20 j 01:43	3°♉03'29	
conjunction	247 May 06 j 21:13	14°♉44'43	0°10'15
minimum elong	247 May 06 j 20:39	14°♉43'45	0°10'14
behind sun begin	247 May 06 j 02:43	14°♉12'54	
behind sun end	247 May 07 j 14:34	15°♉14'34	
	247 May 29 j 07:13	0°♊	
max. Earth dist.	247 Jun 05 j 03:57	4°♊36'02	2.57412 AU
morning rise	247 Jun 28 j 20:38	20°♊15'25	
	247 Jul 13 j 20:38	0°♋	
	247 Aug 30 j 04:16	0°♌	
	247 Oct 18 j 09:52	0°♍	
	247 Dec 10 j 09:46	0°♎	
	248 Feb 24 j 22:24	0°♏	
retrograde	248 Mar 09 j 21:58	1°♏08'12	
	248 Mar 23 j 07:49	30°℞♎	
opposition	248 Apr 14 j 07:34	23°♎48'49	1°09'17
greatest brilliancy	248 Apr 14 j 17:17	23°♎40'11	-2.1m
min. Earth dist.	248 Apr 22 j 13:13	20°♎53'47	0.51821 AU
desc. node	248 May 07 j 14:59	16°♎32'38	
direct	248 May 23 j 05:44	14°♎51'41	
	248 Jul 14 j 23:11	0°♏	
	248 Sep 02 j 17:55	0°♐	
	248 Oct 14 j 15:07	0°♑	
	248 Nov 23 j 09:43	0°♒	
	249 Jan 02 j 02:05	0°♓	
	249 Feb 11 j 19:25	0°♈	
asc. node	249 Mar 07 j 00:38	16°♈35'19	
	249 Mar 26 j 05:07	0°♉	
evening set	249 Apr 30 j 03:21	23°♉46'23	
	249 May 09 j 11:18	0°♊	
conjunction	249 Jun 19 j 17:40	27°♊01'41	0°53'33
minimum elong	249 Jun 19 j 16:19	26°♊59'30	0°53'33
	249 Jun 24 j 08:05	0°♋	
max. Earth dist.	249 Jun 30 j 23:45	4°♋17'14	2.65137 AU
morning rise	249 Aug 05 j 14:52	27°♋03'12	
	249 Aug 10 j 06:13	0°♌	
	249 Sep 26 j 17:11	0°♍	
	249 Nov 13 j 13:33	0°♎	
	250 Jan 01 j 09:31	0°♏	
	250 Feb 22 j 14:27	0°♐	
desc. node	250 Mar 25 j 13:32	15°♐12'54	
retrograde	250 May 15 j 22:23	28°♐19'14	
opposition	250 Jun 15 j 19:29	23°♐03'33	-4°51'50
greatest brilliancy	250 Jun 16 j 15:30	22°♐49'21	-2.8m
min. Earth dist.	250 Jun 21 j 00:11	21°♐35'26	0.39469 AU
direct	250 Jul 18 j 05:38	17°♐08'00	
	250 Sep 03 j 00:57	0°♑	
	250 Oct 24 j 01:41	0°♒	
	250 Dec 07 j 09:45	0°♓	
	251 Jan 20 j 00:49	0°♈	
asc. node	251 Jan 23 j 00:06	2°♈01'43	
	251 Mar 05 j 11:27	0°♉	
	251 Apr 20 j 03:40	0°♊	
	251 Jun 05 j 20:54	0°♋	
evening set	251 Jun 11 j 04:31	3°♋23'22	
	251 Jul 23 j 00:36	0°♌	
max. Earth dist.	251 Jul 24 j 17:56	1°♌05'45	2.67459 AU
conjunction	251 Jul 27 j 21:04	3°♌05'21	1°09'29
minimum elong	251 Jul 27 j 20:55	3°♌05'07	1°09'29
	251 Sep 07 j 21:56	0°♍	
morning rise	251 Sep 10 j 11:51	1°♍39'47	
	251 Oct 24 j 00:47	0°♎	
	251 Dec 08 j 04:51	0°♏	
	252 Jan 21 j 13:08	0°♐	
desc. node	252 Feb 10 j 13:14	13°♐39'34	
	252 Mar 05 j 10:35	0°♑	
	252 Apr 18 j 22:59	0°♒	
	252 Jun 07 j 11:49	0°♓	
retrograde	252 Jul 31 j 22:02	16°♓51'58	
min. Earth dist.	252 Aug 27 j 12:22	12°♓18'31	0.40410 AU
greatest brilliancy	252 Sep 02 j 04:11	10°♓35'16	-2.7m
opposition	252 Sep 03 j 06:36	10°♓15'06	-5°19'45
direct	252 Oct 03 j 17:37	4°♓41'06	
asc. node	252 Dec 09 j 23:02	26°♓02'46	
	252 Dec 17 j 13:01	0°♈	
	253 Feb 07 j 20:24	0°♉	
	253 Mar 29 j 03:07	0°♊	
	253 May 16 j 17:20	0°♋	
	253 Jul 03 j 17:30	0°♌	
evening set	253 Jul 17 j 23:03	9°♌00'26	
max. Earth dist.	253 Aug 16 j 08:18	27°♌50'19	2.64369 AU
	253 Aug 19 j 16:22	0°♍	

conjunction	253 Sep 01 j 18:14	8°♍31'15	0°58'32
minimum elong	253 Sep 01 j 19:19	8°♍33'02	0°58'32
	253 Oct 04 j 03:05	0°♎	
morning rise	253 Oct 17 j 06:42	8°♎53'54	
	253 Nov 16 j 20:52	0°♏	
desc. node	253 Dec 28 j 12:20	29°♏38'40	
	253 Dec 29 j 00:07	0°♐	
	254 Feb 07 j 20:08	0°♑	
	254 Mar 19 j 22:06	0°♒	
	254 Apr 29 j 03:49	0°♓	
	254 Jun 10 j 06:31	0°♈	
	254 Jul 29 j 02:49	0°♉	
retrograde	254 Sep 23 j 01:49	17°♉15'37	
min. Earth dist.	254 Oct 24 j 00:52	10°♉41'01	0.52938 AU
asc. node	254 Oct 27 j 21:40	9°♉13'05	
opposition	254 Oct 31 j 08:54	7°♉53'23	0°10'06
greatest brilliancy	255 Jun 27 j 18:24	8°♌07'44	1.8m
direct	254 Dec 05 j 10:20	0°♉07'33	
	255 Mar 02 j 14:05	0°♊	
	255 Apr 25 j 12:48	0°♋	
	255 Jun 14 j 14:57	0°♌	
	255 Aug 01 j 07:05	0°♍	
evening set	255 Aug 25 j 05:05	15°♍37'36	
max. Earth dist.	255 Sep 13 j 00:08	28°♍12'11	2.56118 AU
	255 Sep 15 j 15:46	0°♎	
conjunction	255 Oct 12 j 06:12	18°♎20'11	0°20'49
minimum elong	255 Oct 12 j 07:03	18°♎21'40	0°20'48
	255 Oct 28 j 18:14	0°♏	
desc. node	255 Nov 15 j 10:31	12°♏44'14	
morning rise	255 Dec 02 j 02:44	24°♏58'23	
	255 Dec 08 j 21:16	0°♐	
	256 Jan 17 j 12:37	0°♑	
	256 Feb 25 j 08:21	0°♒	
	256 Apr 04 j 04:09	0°♓	
	256 May 14 j 00:07	0°♈	
	256 Jun 25 j 05:17	0°♉	
	256 Aug 11 j 13:41	0°♊	
asc. node	256 Sep 13 j 21:25	17°♊08'26	
retrograde	256 Oct 31 j 10:33	29°♊10'11	
min. Earth dist.	256 Dec 06 j 10:11	20°♊47'51	0.63227 AU
opposition	256 Dec 10 j 09:36	19°♊12'16	3°14'57
greatest brilliancy	256 Dec 09 j 21:22	19°♊24'32	-1.5m
direct	257 Jan 17 j 22:14	10°♊07'33	
	257 Mar 27 j 12:48	0°♋	
	257 May 23 j 06:28	0°♌	
	257 Jul 11 j 23:25	0°♍	
	257 Aug 26 j 21:33	0°♎	
desc. node	257 Oct 02 j 10:01	25°♎22'41	
evening set	257 Oct 07 j 06:41	28°♎51'20	
	257 Oct 08 j 20:55	0°♏	
max. Earth dist.	257 Oct 23 j 04:08	10°♏23'03	2.43890 AU
	257 Nov 18 j 12:32	0°♐	
conjunction	257 Dec 01 j 11:25	9°♐50'55	-0°36'53
minimum elong	257 Dec 01 j 09:19	9°♐46'54	0°36'51
	257 Dec 27 j 13:28	0°♑	
morning rise	258 Feb 03 j 02:07	29°♑25'57	
	258 Feb 03 j 19:26	0°♒	
	258 Mar 14 j 03:24	0°♓	
	258 Apr 22 j 10:33	0°♈	
	258 Jun 02 j 14:17	0°♉	
	258 Jul 16 j 14:37	0°♊	
asc. node	258 Aug 01 j 19:54	10°♊24'21	
	258 Sep 03 j 11:06	0°♋	
	258 Nov 08 j 19:03	0°♌	
retrograde	258 Dec 05 j 06:32	3°♌56'07	
	258 Dec 29 j 16:48	30°℞♋	
opposition	259 Jan 14 j 07:20	24°♋13'27	4°29'19
greatest brilliancy	259 Jan 14 j 05:35	24°♋15'13	-1.3m
min. Earth dist.	259 Jan 14 j 03:58	24°♋16'49	0.67561 AU
direct	259 Feb 23 j 22:20	14°♋26'21	
	259 Apr 23 j 22:18	0°♌	
	259 Jun 20 j 01:53	0°♍	
	259 Aug 06 j 22:51	0°♎	
desc. node	259 Aug 20 j 09:36	9°♎01'14	
	259 Sep 19 j 10:26	0°♏	
	259 Oct 30 j 01:15	0°♐	
evening set	259 Dec 04 j 06:39	27°♐11'02	
	259 Dec 07 j 20:56	0°♑	
	260 Jan 14 j 21:42	0°♒	
conjunction	260 Feb 08 j 16:33	19°♒31'29	-1°03'26
minimum elong	260 Feb 08 j 18:04	19°♒34'28	1°03'25
	260 Feb 22 j 02:34	0°♓	
max. Earth dist.	260 Mar 28 j 01:48	26°♓47'09	2.39735 AU
	260 Apr 01 j 08:28	0°♈	
morning rise	260 Apr 17 j 12:01	11°♈59'23	
	260 May 12 j 08:55	0°♉	
asc. node	260 Jun 18 j 18:06	25°♉59'05	
	260 Jun 24 j 16:54	0°♊	
	260 Aug 09 j 21:05	0°♋	
	260 Sep 29 j 05:42	0°♌	
	260 Dec 01 j 13:16	0°♍	
retrograde	261 Jan 08 j 18:47	7°♍25'15	
	261 Feb 12 j 13:55	30°℞♌	
opposition	261 Feb 16 j 19:10	28°♌21'55	4°20'58
greatest brilliancy	261 Feb 17 j 08:16	28°♌09'04	-1.4m
min. Earth dist.	261 Feb 20 j 12:42	26°♌54'12	0.65317 AU
direct	261 Mar 30 j 03:27	18°♌20'17	
	261 May 17 j 18:55	0°♍	
desc. node	261 Jul 07 j 08:01	26°♍12'13	
	261 Jul 13 j 14:50	0°♎	
	261 Aug 28 j 05:57	0°♏	
	261 Oct 08 j 13:11	0°♐	
	261 Nov 16 j 14:33	0°♑	
	261 Dec 24 j 18:45	0°♒	
	262 Feb 01 j 04:15	0°♓	
evening set	262 Feb 12 j 00:15	8°♓20'12	
	262 Mar 12 j 16:36	0°♈	
conjunction	262 Apr 15 j 19:42	24°♈54'08	-0°13'00
minimum elong	262 Apr 15 j 20:34	24°♈55'41	0°12'59
behind sun begin	262 Apr 15 j 05:58	24°♈29'35	
behind sun end	262 Apr 16 j 11:10	25°♈21'46	
	262 Apr 22 j 23:35	0°♉	
asc. node	262 May 06 j 18:05	9°♉41'02	
max. Earth dist.	262 May 23 j 13:44	21°♉17'59	2.52978 AU
	262 Jun 05 j 09:09	0°♊	
morning rise	262 Jun 11 j 16:16	4°♊13'56	
	262 Jul 20 j 22:27	0°♋	
	262 Sep 06 j 15:36	0°♌	
	262 Oct 27 j 07:00	0°♍	
	262 Dec 24 j 22:09	0°♎	
retrograde	263 Feb 19 j 08:06	14°♎27'43	
opposition	263 Mar 28 j 01:33	6°♎30'46	2°32'45
greatest brilliancy	263 Mar 28 j 18:58	6°♎14'35	-1.8m
min. Earth dist.	263 Apr 04 j 08:13	3°♎48'57	0.56657 AU
	263 Apr 16 j 01:06	30°℞♍	
direct	263 May 07 j 06:14	26°♍58'31	
desc. node	263 May 25 j 06:31	28°♍59'04	
	263 May 29 j 13:30	0°♎	
	263 Aug 01 j 07:42	0°♏	
	263 Sep 14 j 23:05	0°♐	

	263 Oct 25 j 08:38	0°♉	
	263 Dec 03 j 08:30	0°♒	
	264 Jan 11 j 11:03	0°♓	
	264 Feb 20 j 16:22	0°♈	
asc. node	264 Mar 23 j 17:32	23°♈02'09	
	264 Apr 02 j 15:31	0°♉	
evening set	264 Apr 11 j 05:57	5°♉58'56	
	264 May 16 j 13:23	0°♊	
conjunction	264 Jun 03 j 10:49	11°♊52'36	0°39'57
minimum elong	264 Jun 03 j 09:22	11°♊50'13	0°39'55
max. Earth dist.	264 Jun 21 j 04:43	23°♊29'49	2.62726 AU
	264 Jul 01 j 05:24	0°♋	
morning rise	264 Jul 22 j 04:32	13°♋28'28	
	264 Aug 17 j 04:45	0°♌	
	264 Oct 04 j 03:09	0°♍	
	264 Nov 22 j 06:22	0°♎	
	265 Jan 13 j 10:54	0°♏	
	265 Mar 23 j 21:50	0°♐	
desc. node	265 Apr 11 j 05:49	2°♐56'37	
retrograde	265 Apr 16 j 11:50	3°♐06'33	
	265 May 09 j 01:04	30°℞♏	
opposition	265 May 19 j 02:51	27°♏02'46	-2°11'32
greatest brilliancy	265 May 19 j 17:47	26°♏51'01	-2.5m
min. Earth dist.	265 May 27 j 01:46	24°♏33'02	0.43730 AU
direct	265 Jun 23 j 15:36	19°♏44'11	
	265 Aug 03 j 19:06	0°♐	
	265 Sep 24 j 15:46	0°♑	
	265 Nov 06 j 14:27	0°♒	
	265 Dec 18 j 02:38	0°♓	
	266 Jan 29 j 03:21	0°♈	
asc. node	266 Feb 08 j 15:42	7°♈22'07	
	266 Mar 13 j 12:51	0°♉	
	266 Apr 27 j 12:22	0°♊	
evening set	266 May 26 j 14:49	18°♊56'09	
	266 Jun 12 j 19:29	0°♋	
conjunction	266 Jul 13 j 10:25	19°♋34'14	1°06'31
minimum elong	266 Jul 13 j 09:43	19°♋33'07	1°06'31
max. Earth dist.	266 Jul 15 j 17:38	21°♋02'13	2.67200 AU
	266 Jul 29 j 19:20	0°♌	
morning rise	266 Aug 27 j 13:40	18°♌19'50	
	266 Sep 14 j 19:54	0°♍	
	266 Oct 31 j 10:44	0°♎	
	266 Dec 16 j 14:45	0°♏	
	267 Jan 31 j 16:39	0°♐	
desc. node	267 Feb 27 j 04:58	17°♐04'34	
	267 Mar 19 j 16:26	0°♑	
	267 May 10 j 21:04	0°♒	
retrograde	267 Jul 05 j 00:27	16°♒17'18	
min. Earth dist.	267 Aug 02 j 03:28	11°♒42'16	0.37692 AU
opposition	267 Aug 04 j 21:23	10°♒57'31	-6°49'44
greatest brilliancy	267 Aug 04 j 08:39	11°♒06'11	-2.9m
direct	267 Sep 03 j 12:27	6°♒00'34	
	267 Nov 12 j 21:26	0°♓	
asc. node	267 Dec 27 j 14:43	26°♓22'54	
	268 Jan 02 j 10:37	0°♈	
	268 Feb 18 j 23:34	0°♉	
	268 Apr 06 j 08:41	0°♊	
	268 May 24 j 00:45	0°♋	
evening set	268 Jul 03 j 10:52	25°♋27'56	
	268 Jul 10 j 14:47	0°♌	
max. Earth dist.	268 Aug 06 j 21:41	17°♌23'02	2.66213 AU
conjunction	268 Aug 18 j 06:11	24°♌40'49	1°05'57
minimum elong	268 Aug 18 j 06:52	24°♌41'55	1°05'58
	268 Aug 26 j 11:44	0°♍	
morning rise	268 Oct 02 j 00:21	23°♍56'07	
	268 Oct 11 j 03:04	0°♎	
	268 Nov 24 j 07:21	0°♏	
	269 Jan 06 j 02:14	0°♐	
desc. node	269 Jan 14 j 04:33	5°♐46'35	
	269 Feb 16 j 17:55	0°♑	
	269 Mar 29 j 19:32	0°♒	
	269 May 10 j 10:54	0°♓	
	269 Jun 24 j 17:22	0°♈	
retrograde	269 Sep 04 j 19:16	26°♈56'49	
min. Earth dist.	269 Oct 03 j 14:12	21°♈13'38	0.47829 AU
opposition	269 Oct 11 j 15:40	18°♈19'52	-1°44'26
greatest brilliancy	269 Oct 11 j 04:07	18°♈30'17	-2.3m
asc. node	269 Nov 13 j 14:03	11°♈20'08	
direct	269 Nov 14 j 00:17	11°♈20'04	
	270 Jan 16 j 13:54	0°♉	
	270 Mar 13 j 20:10	0°♊	
	270 May 03 j 21:02	0°♋	
	270 Jun 21 j 22:26	0°♌	
	270 Aug 08 j 06:04	0°♍	
evening set	270 Aug 09 j 22:47	1°♍05'55	
max. Earth dist.	270 Sep 01 j 10:38	15°♍49'51	2.59953 AU
	270 Sep 22 j 14:36	0°♎	
conjunction	270 Sep 25 j 15:55	2°♎04'15	0°38'36
minimum elong	270 Sep 25 j 17:09	2°♎06'21	0°38'35
	270 Nov 04 j 22:00	0°♏	
morning rise	270 Nov 12 j 17:00	5°♏32'40	
desc. node	270 Dec 02 j 03:57	19°♏35'01	
	270 Dec 16 j 08:54	0°♐	
	271 Jan 25 j 09:13	0°♑	
	271 Mar 05 j 13:35	0°♒	
	271 Apr 13 j 17:54	0°♓	
	271 May 24 j 01:22	0°♈	
	271 Jul 06 j 09:00	0°♉	
	271 Aug 27 j 07:24	0°♊	
asc. node	271 Oct 01 j 12:23	12°♊34'44	
retrograde	271 Oct 18 j 00:47	14°♊21'13	
min. Earth dist.	271 Nov 21 j 04:35	6°♊36'48	0.59840 AU
opposition	271 Nov 26 j 14:31	4°♊27'55	2°19'30
greatest brilliancy	271 Nov 26 j 02:28	4°♊39'52	-1.7m
	271 Dec 08 j 18:05	30°℞♉	
direct	272 Jan 02 j 22:50	25°♉48'31	
	272 Jan 30 j 16:35	0°♊	
	272 Apr 08 j 16:20	0°♋	
	272 May 31 j 17:04	0°♌	
	272 Jul 19 j 09:39	0°♍	
	272 Sep 03 j 00:54	0°♎	
evening set	272 Sep 18 j 23:02	10°♎54'45	
max. Earth dist.	272 Oct 03 j 23:52	21°♎25'43	2.49003 AU
	272 Oct 16 j 00:45	0°♏	
desc. node	272 Oct 19 j 02:21	2°♏12'17	
conjunction	272 Nov 09 j 13:12	17°♏51'25	-0°13'36
minimum elong	272 Nov 09 j 12:28	17°♏50'04	0°13'35
behind sun begin	272 Nov 08 j 23:36	17°♏26'19	
behind sun end	272 Nov 10 j 01:20	18°♏13'50	
	272 Nov 25 j 20:13	0°♐	
	273 Jan 04 j 02:02	0°♑	
morning rise	273 Jan 06 j 06:14	1°♑41'16	
	273 Feb 11 j 12:17	0°♒	
	273 Mar 21 j 23:21	0°♓	
	273 Apr 30 j 09:05	0°♈	
	273 Jun 10 j 17:40	0°♉	
	273 Jul 25 j 10:16	0°♊	
asc. node	273 Aug 18 j 11:41	14°♊45'47	
	273 Sep 15 j 02:35	0°♋	

retrograde	273 Nov 21 j 22:12	21°♋01'58	
min. Earth dist.	273 Dec 30 j 09:59	11°♋49'54	0.66632 AU
opposition	274 Jan 01 j 01:57	11°♋09'46	4°10'58
greatest brilliancy	273 Dec 31 j 18:52	11°♋16'53	-1.3m
direct	274 Feb 10 j 01:24	1°♋35'57	
	274 May 06 j 22:35	0°♌	
	274 Jun 28 j 19:21	0°♍	
	274 Aug 14 j 16:15	0°♎	
desc. node	274 Sep 06 j 01:13	15°♎16'06	
	274 Sep 26 j 21:13	0°♏	
	274 Nov 06 j 11:31	0°♐	
evening set	274 Nov 09 j 11:26	2°♐16'26	
	274 Dec 15 j 08:41	0°♑	
max. Earth dist.	274 Dec 27 j 20:55	9°♑49'15	2.37373 AU
conjunction	275 Jan 10 j 20:43	20°♑51'02	-1°03'02
minimum elong	275 Jan 10 j 19:13	20°♑48'04	1°03'01
	275 Jan 22 j 10:48	0°♒	
	275 Mar 01 j 16:05	0°♓	
morning rise	275 Mar 21 j 19:50	15°♓33'16	
	275 Apr 09 j 21:20	0°♈	
	275 May 20 j 21:07	0°♉	
	275 Jul 03 j 07:47	0°♊	
asc. node	275 Jul 06 j 11:28	2°♊06'06	
	275 Aug 19 j 02:10	0°♋	
	275 Oct 10 j 22:11	0°♌	
retrograde	275 Dec 26 j 14:19	24°♌26'58	
opposition	276 Feb 04 j 03:30	15°♌05'31	4°33'59
greatest brilliancy	276 Feb 04 j 11:01	14°♌58'05	-1.3m
min. Earth dist.	276 Feb 06 j 08:44	14°♌12'48	0.66979 AU
direct	276 Mar 16 j 09:27	5°♌05'56	
	276 Jun 01 j 19:14	0°♍	
	276 Jul 23 j 03:00	0°♎	
desc. node	276 Jul 24 j 00:18	0°♎34'02	
	276 Sep 05 j 14:11	0°♏	
	276 Oct 16 j 12:19	0°♐	
	276 Nov 24 j 10:01	0°♑	
	277 Jan 01 j 11:41	0°♒	
evening set	277 Jan 15 j 13:26	11°♒05'17	
	277 Feb 08 j 18:17	0°♓	
	277 Mar 20 j 03:01	0°♈	
conjunction	277 Mar 22 j 21:17	2°♈03'35	-0°37'01
minimum elong	277 Mar 22 j 23:49	2°♈08'19	0°37'00
	277 Apr 30 j 06:07	0°♉	
max. Earth dist.	277 May 07 j 22:08	5°♉25'41	2.47961 AU
morning rise	277 May 23 j 10:47	16°♉16'02	
asc. node	277 May 23 j 10:00	16°♉14'41	
	277 Jun 12 j 13:20	0°♊	
	277 Jul 28 j 05:02	0°♋	
	277 Sep 14 j 13:33	0°♌	
	277 Nov 06 j 13:06	0°♍	
retrograde	278 Feb 01 j 23:46	29°♍25'50	
opposition	278 Mar 11 j 19:03	20°♍58'30	3°29'47
greatest brilliancy	278 Mar 12 j 13:29	20°♍40'53	-1.6m
min. Earth dist.	278 Mar 17 j 18:36	18°♍41'36	0.60769 AU
direct	278 Apr 21 j 17:37	11°♍06'50	
desc. node	278 Jun 10 j 22:47	24°♍00'36	
	278 Jun 23 j 10:43	0°♎	
	278 Aug 12 j 21:39	0°♏	
	278 Sep 24 j 13:55	0°♐	
	278 Nov 03 j 05:24	0°♑	
	278 Dec 11 j 18:20	0°♒	
	279 Jan 19 j 11:39	0°♓	
	279 Feb 28 j 08:10	0°♈	
evening set	279 Mar 22 j 06:16	15°♈58'35	
asc. node	279 Apr 10 j 09:02	29°♈35'20	
	279 Apr 10 j 23:03	0°♉	
conjunction	279 May 17 j 18:11	25°♉22'58	0°22'12
minimum elong	279 May 17 j 17:06	25°♉21'09	0°22'12
	279 May 24 j 14:31	0°♊	
max. Earth dist.	279 Jun 11 j 19:03	12°♊07'15	2.59520 AU
morning rise	279 Jul 08 j 00:08	29°♊15'33	
	279 Jul 09 j 03:37	0°♋	
	279 Aug 25 j 06:53	0°♌	
	279 Oct 12 j 22:19	0°♍	
	279 Dec 03 j 01:56	0°♎	
	280 Jan 31 j 21:27	0°♏	
retrograde	280 Mar 22 j 09:33	12°♏08'28	
opposition	280 Apr 25 j 22:20	5°♏14'05	0°06'12
greatest brilliancy	281 Sep 08 j 14:18	21°♌34'35	1.8m
desc. node	280 Apr 27 j 21:20	4°♏33'41	
min. Earth dist.	280 May 04 j 10:30	2°♏19'47	0.48912 AU
	280 May 11 j 23:25	30°℞♎	
direct	280 Jun 02 j 20:46	26°♎45'57	
	280 Jun 25 j 07:03	0°♏	
	280 Aug 25 j 06:00	0°♐	
	280 Oct 07 j 20:33	0°♑	
	280 Nov 17 j 09:03	0°♒	
	280 Dec 27 j 12:47	0°♓	
	281 Feb 06 j 14:36	0°♈	
asc. node	281 Feb 25 j 08:22	13°♈19'50	
	281 Mar 21 j 06:38	0°♉	
	281 May 04 j 17:29	0°♊	
evening set	281 May 10 j 02:29	3°♊33'15	
	281 Jun 19 j 16:44	0°♋	
conjunction	281 Jun 28 j 13:06	5°♋41'29	0°59'29
minimum elong	281 Jun 28 j 11:56	5°♋39'37	0°59'29
max. Earth dist.	281 Jul 06 j 11:37	10°♋46'57	2.66104 AU
	281 Aug 05 j 14:41	0°♌	
morning rise	281 Aug 13 j 15:54	5°♌07'01	
	281 Sep 21 j 21:07	0°♍	
	281 Nov 08 j 04:56	0°♎	
	281 Dec 25 j 20:25	0°♏	
	282 Feb 12 j 22:59	0°♐	
desc. node	282 Mar 15 j 21:45	17°♐37'50	
	282 Apr 09 j 07:44	0°♑	
retrograde	282 Jun 03 j 02:20	15°♑01'57	
opposition	282 Jul 03 j 08:10	10°♑02'25	-6°08'23
greatest brilliancy	282 Jul 03 j 20:44	9°♑54'00	-2.9m
min. Earth dist.	282 Jul 05 j 23:58	9°♑19'45	0.37969 AU
direct	282 Aug 03 j 01:40	4°♑45'30	
	282 Oct 12 j 17:54	0°♒	
	282 Nov 29 j 14:49	0°♓	
asc. node	283 Jan 13 j 06:00	29°♓41'04	
	283 Jan 13 j 17:21	0°♈	
	283 Feb 27 j 23:20	0°♉	
	283 Apr 15 j 03:17	0°♊	
	283 Jun 01 j 03:13	0°♋	
evening set	283 Jun 19 j 19:01	11°♋50'10	
	283 Jul 18 j 09:58	0°♌	
max. Earth dist.	283 Jul 29 j 23:30	7°♌21'37	2.67253 AU
conjunction	283 Aug 05 j 00:49	11°♌13'22	1°09'20
minimum elong	283 Aug 05 j 00:59	11°♌13'39	1°09'20
	283 Sep 03 j 06:56	0°♍	
morning rise	283 Sep 18 j 13:20	9°♍53'37	
	283 Oct 19 j 05:18	0°♎	
	283 Dec 03 j 00:10	0°♏	
	284 Jan 15 j 17:04	0°♐	
desc. node	284 Jan 31 j 20:59	11°♐15'11	
	284 Feb 27 j 14:47	0°♑	

	284 Apr 10 j 10:12	0°♒	
	284 May 25 j 06:26	0°♓	
	284 Jul 25 j 06:48	0°♈	
retrograde	284 Aug 14 j 15:54	2°♈50'24	
	284 Sep 03 j 16:00	30°℞♓	
min. Earth dist.	284 Sep 10 j 14:18	27°♓57'36	0.42768 AU
greatest brilliancy	284 Sep 17 j 09:09	25°♓45'14	-2.6m
opposition	284 Sep 18 j 09:01	25°♓25'42	-4°01'48
direct	284 Oct 19 j 21:05	19°♓21'10	
asc. node	284 Nov 30 j 04:59	28°♓38'40	
	284 Dec 03 j 13:42	0°♈	
	285 Jan 31 j 09:59	0°♉	
	285 Mar 23 j 08:48	0°♊	
	285 May 11 j 15:58	0°♋	
	285 Jun 29 j 00:06	0°♌	
evening set	285 Jul 26 j 06:50	17°♌16'03	
	285 Aug 15 j 02:01	0°♍	
max. Earth dist.	285 Aug 22 j 00:22	4°♍30'16	2.63010 AU
conjunction	285 Sep 10 j 06:13	17°♍08'38	0°52'22
minimum elong	285 Sep 10 j 07:26	17°♍10'38	0°52'21
	285 Sep 29 j 11:59	0°♎	
morning rise	285 Oct 26 j 11:00	18°♎24'25	
	285 Nov 12 j 02:09	0°♏	
desc. node	285 Dec 18 j 19:26	26°♏14'36	
	285 Dec 23 j 23:19	0°♐	
	286 Feb 02 j 11:51	0°♑	
	286 Mar 14 j 04:55	0°♒	
	286 Apr 22 j 23:14	0°♓	
	286 Jun 03 j 04:18	0°♈	
	286 Jul 18 j 21:35	0°♉	
retrograde	286 Oct 02 j 13:06	27°♉57'00	
asc. node	286 Oct 18 j 05:12	26°♉09'31	
min. Earth dist.	286 Nov 03 j 16:23	20°♉56'19	0.55567 AU
opposition	286 Nov 10 j 09:53	18°♉19'32	1°04'09
greatest brilliancy	286 Nov 10 j 02:46	18°♉26'26	-1.9m
direct	286 Dec 16 j 08:03	10°♉12'35	
	287 Feb 21 j 17:53	0°♊	
	287 Apr 19 j 14:30	0°♋	
	287 Jun 09 j 13:23	0°♌	
	287 Jul 27 j 13:45	0°♍	
evening set	287 Sep 03 j 06:11	24°♍44'48	
	287 Sep 11 j 01:01	0°♎	
max. Earth dist.	287 Sep 20 j 06:36	6°♎17'45	2.53739 AU
conjunction	287 Oct 22 j 07:45	28°♎42'54	0°09'01
minimum elong	287 Oct 22 j 08:09	28°♎43'38	0°09'01
behind sun begin	287 Oct 21 j 14:06	28°♎11'27	
behind sun end	287 Oct 23 j 02:13	29°♎15'50	
	287 Oct 24 j 02:57	0°♏	
desc. node	287 Nov 05 j 18:09	9°♏05'48	
	287 Dec 04 j 03:22	0°♐	
morning rise	287 Dec 14 j 05:43	7°♐34'46	
	288 Jan 12 j 15:14	0°♑	
	288 Feb 20 j 07:08	0°♒	
	288 Mar 29 j 23:02	0°♓	
	288 May 08 j 14:01	0°♈	
	288 Jun 19 j 08:35	0°♉	
	288 Aug 04 j 08:02	0°♊	
asc. node	288 Sep 04 j 04:12	17°♊23'08	
	288 Oct 02 j 08:10	0°♋	
retrograde	288 Nov 08 j 09:20	7°♋37'38	
	288 Dec 12 j 15:44	30°℞♊	
min. Earth dist.	288 Dec 15 j 07:28	28°♊56'43	0.64707 AU
opposition	288 Dec 18 j 11:34	27°♊40'21	3°39'45
greatest brilliancy	288 Dec 18 j 00:31	27°♊51'26	-1.4m
direct	289 Jan 26 j 14:17	18°♊24'04	

	289 Mar 17 j 06:35	0°♋	
	289 May 17 j 05:16	0°♌	
	289 Jul 06 j 20:39	0°♍	
	289 Aug 22 j 02:33	0°♎	
desc. node	289 Sep 22 j 17:16	21°♎49'35	
	289 Oct 04 j 04:25	0°♏	
evening set	289 Oct 18 j 13:43	10°♏26'33	
max. Earth dist.	289 Nov 06 j 15:50	24°♏35'56	2.41164 AU
	289 Nov 13 j 20:00	0°♐	
conjunction	289 Dec 15 j 03:53	24°♐01'58	-0°48'47
minimum elong	289 Dec 15 j 01:21	23°♐57'04	0°48'45
	289 Dec 22 j 19:49	0°♑	
	290 Jan 30 j 00:10	0°♒	
morning rise	290 Feb 19 j 20:22	16°♒23'30	
	290 Mar 09 j 06:30	0°♓	
	290 Apr 17 j 12:01	0°♈	
	290 May 28 j 12:42	0°♉	
	290 Jul 11 j 05:30	0°♊	
asc. node	290 Jul 23 j 02:20	7°♊45'17	
	290 Aug 28 j 00:40	0°♋	
	290 Oct 25 j 03:18	0°♌	
retrograde	290 Dec 12 j 23:16	11°♌42'35	
opposition	291 Jan 21 j 21:19	2°♌06'31	4°34'30
greatest brilliancy	291 Jan 21 j 22:49	2°♌05'01	-1.3m
min. Earth dist.	291 Jan 22 j 13:57	1°♌49'55	0.67631 AU
	291 Jan 27 j 05:14	30°℞♋	
direct	291 Mar 03 j 19:28	22°♋13'52	
	291 Apr 12 j 03:51	0°♌	
	291 Jun 13 j 19:44	0°♍	
	291 Aug 01 j 16:06	0°♎	
desc. node	291 Aug 10 j 15:57	5°♎56'33	
	291 Sep 14 j 11:27	0°♏	
	291 Oct 25 j 04:56	0°♐	
	291 Dec 03 j 01:33	0°♑	
evening set	291 Dec 19 j 12:02	12°♑55'52	
	292 Jan 10 j 02:32	0°♒	
	292 Feb 17 j 07:36	0°♓	
conjunction	292 Feb 24 j 20:57	5°♓51'17	-0°56'52
minimum elong	292 Feb 24 j 23:41	5°♓56'36	0°56'51
	292 Mar 27 j 13:50	0°♈	
max. Earth dist.	292 Apr 15 j 18:49	14°♈14'16	2.42575 AU
morning rise	292 May 01 j 10:16	25°♈35'27	
	292 May 07 j 14:02	0°♉	
asc. node	292 Jun 09 j 02:16	22°♉42'16	
	292 Jun 19 j 20:13	0°♊	
	292 Aug 04 j 17:27	0°♋	
	292 Sep 23 j 02:48	0°♌	
	292 Nov 19 j 15:03	0°♍	
retrograde	293 Jan 17 j 05:52	15°♍29'50	
opposition	293 Feb 24 j 21:32	6°♍37'53	4°06'45
greatest brilliancy	293 Feb 25 j 13:09	6°♍22'41	-1.4m
min. Earth dist.	293 Mar 01 j 10:43	4°♍51'47	0.63964 AU
	293 Mar 15 j 10:58	30°℞♌	
direct	293 Apr 07 j 04:44	26°♌37'38	
	293 May 01 j 13:47	0°♍	
desc. node	293 Jun 27 j 15:20	24°♍46'37	
	293 Jul 06 j 18:23	0°♎	
	293 Aug 22 j 14:22	0°♏	
	293 Oct 03 j 06:58	0°♐	
	293 Nov 11 j 12:28	0°♑	
	293 Dec 19 j 18:59	0°♒	
	294 Jan 27 j 06:24	0°♓	
evening set	294 Feb 26 j 15:46	23°♓07'41	
	294 Mar 07 j 20:49	0°♈	
	294 Apr 18 j 05:35	0°♉	

asc. node	294 Apr 27 j 00:49	6°♉11'52	
conjunction	294 Apr 28 j 02:48	6°♉57'18	0°00'41
minimum elong	294 Apr 28 j 02:42	6°♉57'09	0°00'41
behind sun begin	294 Apr 27 j 02:55	6°♉15'33	
behind sun end	294 Apr 29 j 02:30	7°♉38'43	
max. Earth dist.	294 May 31 j 03:18	29°♉38'13	2.55530 AU
	294 May 31 j 16:13	0°♊	
morning rise	294 Jun 21 j 16:26	14°♊00'58	
	294 Jul 16 j 04:07	0°♋	
	294 Sep 01 j 14:24	0°♌	
	294 Oct 21 j 07:36	0°♍	
	294 Dec 15 j 01:27	0°♎	
retrograde	295 Mar 02 j 01:36	24°♎08'12	
opposition	295 Apr 07 j 03:05	16°♎30'51	1°48'16
greatest brilliancy	295 Apr 07 j 17:02	16°♎18'11	-1.9m
min. Earth dist.	295 Apr 15 j 00:22	13°♎39'30	0.54070 AU
desc. node	295 May 15 j 14:27	7°♎16'07	
direct	295 May 16 j 17:08	7°♎15'37	
	295 Jul 23 j 08:05	0°♏	
	295 Sep 08 j 07:25	0°♐	
	295 Oct 19 j 11:00	0°♑	
	295 Nov 27 j 20:01	0°♒	
	296 Jan 06 j 04:50	0°♓	
	296 Feb 15 j 15:24	0°♈	
asc. node	296 Mar 13 j 23:03	19°♈36'01	
	296 Mar 28 j 18:48	0°♉	
evening set	296 Apr 22 j 06:15	16°♉49'32	
	296 May 11 j 20:04	0°♊	
conjunction	296 Jun 12 j 22:17	21°♊08'56	0°48'22
minimum elong	296 Jun 12 j 20:51	21°♊06'35	0°48'20
	296 Jun 26 j 13:38	0°♋	
max. Earth dist.	296 Jun 26 j 23:24	0°♋15'47	2.64173 AU
morning rise	296 Jul 30 j 13:10	21°♋47'01	
	296 Aug 12 j 11:38	0°♌	
	296 Sep 29 j 02:51	0°♍	
	296 Nov 16 j 10:51	0°♎	
	297 Jan 05 j 11:11	0°♏	
	297 Mar 02 j 13:04	0°♐	
desc. node	297 Apr 01 j 13:09	11°♐56'07	
retrograde	297 May 02 j 12:37	17°♐10'27	
opposition	297 Jun 03 j 02:42	11°♐34'43	-3°42'17
greatest brilliancy	297 Jun 03 j 23:09	11°♐19'28	-2.7m
min. Earth dist.	297 Jun 09 j 20:05	9°♐34'57	0.41187 AU
direct	297 Jul 06 j 23:09	5°♐01'54	
	297 Sep 13 j 20:05	0°♑	
	297 Oct 29 j 21:20	0°♒	
	297 Dec 11 j 16:04	0°♓	
	298 Jan 23 j 10:46	0°♈	
asc. node	298 Jan 29 j 22:33	4°♈29'46	
	298 Mar 08 j 07:51	0°♉	
	298 Apr 22 j 15:09	0°♊	
evening set	298 Jun 04 j 15:20	27°♊46'23	
	298 Jun 08 j 02:52	0°♋	
conjunction	298 Jul 21 j 18:19	27°♋49'04	1°08'44
minimum elong	298 Jul 21 j 17:56	27°♋48'27	1°08'43
max. Earth dist.	298 Jul 21 j 01:09	27°♋21'44	2.67456 AU
	298 Jul 25 j 04:34	0°♌	
morning rise	298 Sep 04 j 13:05	26°♌24'29	
	298 Sep 10 j 03:26	0°♍	
	298 Oct 26 j 11:35	0°♎	
	298 Dec 11 j 01:54	0°♏	
	299 Jan 25 j 02:32	0°♐	
desc. node	299 Feb 17 j 12:47	15°♐39'23	
	299 Mar 11 j 02:30	0°♑	
	299 Apr 26 j 18:10	0°♒	
	299 Jun 25 j 15:14	0°♓	
retrograde	299 Jul 21 j 08:00	4°♓18'10	
	299 Aug 16 j 16:34	30°♑℞	
min. Earth dist.	299 Aug 17 j 04:20	29°♒51'41	0.38874 AU
opposition	299 Aug 22 j 12:01	28°♒19'53	-6°10'34
greatest brilliancy	299 Aug 21 j 12:42	28°♒36'41	-2.8m
direct	299 Sep 21 j 08:16	23°♒07'11	
	299 Oct 25 j 19:27	0°♓	
asc. node	299 Dec 17 j 21:57	25°♓58'06	
	299 Dec 24 j 22:16	0°♈	
	300 Feb 12 j 15:58	0°♉	
	300 Mar 31 j 23:46	0°♊	
	300 May 19 j 03:05	0°♋	
	300 Jul 05 j 22:41	0°♌	
evening set	300 Jul 11 j 18:50	3°♌41'41	
max. Earth dist.	300 Aug 12 j 09:09	23°♌51'49	2.65298 AU
	300 Aug 21 j 21:14	0°♍	
conjunction	300 Aug 26 j 12:34	3°♍00'34	1°02'07
minimum elong	300 Aug 26 j 13:30	3°♍02'05	1°02'07
	300 Oct 06 j 10:40	0°♎	
morning rise	300 Oct 10 j 14:57	2°♎48'15	
	300 Nov 19 j 09:56	0°♏	
	300 Dec 31 j 20:26	0°♐	
desc. node	301 Jan 04 j 11:56	2°♐37'21	
	301 Feb 11 j 01:09	0°♑	
	301 Mar 23 j 12:25	0°♒	
	301 May 03 j 05:47	0°♓	
	301 Jun 15 j 06:47	0°♈	
	301 Aug 07 j 12:06	0°♉	
retrograde	301 Sep 15 j 11:12	9°♉18'59	
min. Earth dist.	301 Oct 15 j 11:12	3°♉07'07	0.50677 AU
opposition	301 Oct 23 j 05:07	0°♉13'50	-0°35'22
greatest brilliancy	301 Oct 23 j 01:15	0°♉17'27	-2.2m
	301 Oct 23 j 20:00	30°♑℞	
asc. node	301 Nov 03 j 20:35	26°♈15'15	
direct	301 Nov 26 j 12:24	22°♈47'31	
	302 Jan 02 j 03:50	0°♉	
	302 Mar 06 j 20:30	0°♊	
	302 Apr 28 j 09:24	0°♋	
	302 Jun 17 j 00:39	0°♌	
	302 Aug 03 j 13:50	0°♍	
evening set	302 Aug 18 j 14:28	9°♍46'16	
max. Earth dist.	302 Sep 07 j 22:22	23°♍14'08	2.57923 AU
	302 Sep 17 j 23:26	0°♎	
conjunction	302 Oct 04 j 23:19	11°♎37'00	0°28'46
minimum elong	302 Oct 05 j 00:23	11°♎38'50	0°28'46
	302 Oct 31 j 05:15	0°♏	
desc. node	302 Nov 22 j 10:13	15°♏58'17	
morning rise	302 Nov 23 j 10:25	16°♏42'19	
	302 Dec 11 j 12:35	0°♐	
	303 Jan 20 j 08:31	0°♑	
	303 Feb 28 j 08:08	0°♒	
	303 Apr 08 j 07:02	0°♓	
	303 May 18 j 06:30	0°♈	
	303 Jun 29 j 19:01	0°♉	
	303 Aug 17 j 09:27	0°♊	
asc. node	303 Sep 21 j 20:09	16°♊30'11	
retrograde	303 Oct 26 j 08:44	23°♊25'20	
min. Earth dist.	303 Nov 30 j 13:21	15°♊19'46	0.61821 AU
opposition	303 Dec 05 j 04:57	13°♊28'27	2°53'58
greatest brilliancy	303 Dec 04 j 16:13	13°♊41'09	-1.6m
direct	304 Jan 12 j 06:10	4°♊34'22	
	304 Apr 01 j 04:48	0°♋	
	304 May 26 j 04:29	0°♌	

	304 Jul 14 j 11:38	0°♍	
	304 Aug 29 j 07:53	0°♎	
evening set	304 Sep 29 j 03:40	21°♎18'27	
desc. node	304 Oct 09 j 09:28	28°♎35'19	
	304 Oct 11 j 08:43	0°♏	
max. Earth dist.	304 Oct 14 j 01:15	1°♏56'01	2.46179 AU
conjunction	304 Nov 21 j 14:34	0°♐22'05	-0°27'03
minimum elong	304 Nov 21 j 13:03	0°♐19'12	0°27'02
	304 Nov 21 j 02:51	0°♐	
	304 Dec 30 j 06:31	0°♑	
morning rise	305 Jan 21 j 12:54	17°♑23'27	
	305 Feb 06 j 14:30	0°♒	
	305 Mar 16 j 23:23	0°♓	
	305 Apr 25 j 06:48	0°♈	
	305 Jun 05 j 10:57	0°♉	
	305 Jul 19 j 15:15	0°♊	
asc. node	305 Aug 08 j 19:06	12°♊45'06	
	305 Sep 07 j 07:07	0°♋	
retrograde	305 Nov 29 j 13:56	28°♋55'24	
opposition	306 Jan 08 j 17:00	19°♋07'58	4°23'06
min. Earth dist.	306 Jan 07 j 20:54	19°♋28'06	0.67276 AU
greatest brilliancy	306 Jan 08 j 12:43	19°♋12'16	-1.3m
direct	306 Feb 18 j 02:13	9°♋26'24	
	306 Apr 29 j 01:33	0°♌	
	306 Jun 23 j 04:31	0°♍	
	306 Aug 09 j 16:05	0°♎	
desc. node	306 Aug 27 j 09:21	11°♎57'54	
	306 Sep 22 j 02:12	0°♏	
	306 Nov 01 j 17:42	0°♐	
evening set	306 Nov 23 j 02:07	16°♐21'20	
	306 Dec 10 j 14:34	0°♑	
	307 Jan 17 j 15:52	0°♒	
conjunction	307 Jan 26 j 23:42	7°♒21'56	-1°05'11
minimum elong	307 Jan 26 j 23:51	7°♒22'14	1°05'11
	307 Feb 24 j 20:16	0°♓	
max. Earth dist.	307 Mar 03 j 01:25	4°♓49'31	2.37839 AU
	307 Apr 05 j 00:54	0°♈	
morning rise	307 Apr 06 j 21:35	1°♈23'45	
	307 May 15 j 23:38	0°♉	
asc. node	307 Jun 26 j 17:00	28°♉56'12	
	307 Jun 28 j 06:58	0°♊	
	307 Aug 13 j 14:34	0°♋	
	307 Oct 03 j 17:21	0°♌	
	307 Dec 14 j 11:04	0°♍	
retrograde	308 Jan 03 j 15:07	2°♍17'34	
	308 Jan 22 j 10:50	30°℞♌	
opposition	308 Feb 11 j 22:04	23°♌05'35	4°27'44
greatest brilliancy	308 Feb 12 j 08:44	22°♌55'05	-1.3m
min. Earth dist.	308 Feb 14 j 23:14	21°♌53'35	0.66196 AU
direct	308 Mar 24 j 06:34	13°♌04'20	
	308 May 24 j 02:00	0°♍	
desc. node	308 Jul 14 j 07:43	28°♍14'00	
	308 Jul 17 j 04:06	0°♎	
	308 Aug 31 j 07:57	0°♏	
	308 Oct 11 j 12:01	0°♐	
	308 Nov 19 j 12:19	0°♑	
	308 Dec 27 j 15:20	0°♒	
evening set	309 Jan 31 j 05:14	27°♒06'16	
	309 Feb 03 j 22:49	0°♓	
	309 Mar 15 j 08:29	0°♈	
conjunction	309 Apr 05 j 19:40	15°♈49'44	-0°23'23
minimum elong	309 Apr 05 j 21:17	15°♈52'42	0°23'22
	309 Apr 25 j 12:18	0°♉	
asc. node	309 May 13 j 16:50	12°♉47'34	
max. Earth dist.	309 May 17 j 10:14	15°♉22'43	2.50790 AU
morning rise	309 Jun 03 j 16:39	27°♉13'08	
	309 Jun 07 j 19:14	0°♊	
	309 Jul 23 j 07:53	0°♋	
	309 Sep 09 j 05:35	0°♌	
	309 Oct 30 j 15:21	0°♍	
	310 Jan 01 j 18:07	0°♎	
retrograde	310 Feb 11 j 14:34	8°♎17'17	
opposition	310 Mar 20 j 20:57	0°♎05'48	2°59'18
	310 Mar 21 j 03:07	30°℞♍	
greatest brilliancy	310 Mar 21 j 15:16	29°♍48'33	-1.7m
min. Earth dist.	310 Mar 27 j 14:35	27°♍34'02	0.58606 AU
direct	310 Apr 30 j 11:25	20°♍23'23	
desc. node	310 Jun 01 j 05:55	26°♍10'31	
	310 Jun 11 j 12:12	0°♎	
	310 Aug 06 j 00:13	0°♏	
	310 Sep 18 j 17:03	0°♐	
	310 Oct 28 j 18:23	0°♑	
	310 Dec 06 j 12:58	0°♒	
	311 Jan 14 j 10:26	0°♓	
	311 Feb 23 j 10:39	0°♈	
asc. node	311 Mar 31 j 16:28	26°♈07'17	
evening set	311 Apr 03 j 10:49	28°♈04'16	
	311 Apr 06 j 04:40	0°♉	
	311 May 19 j 22:15	0°♊	
conjunction	311 May 28 j 01:08	5°♊25'44	0°32'56
minimum elong	311 May 27 j 23:46	5°♊23'28	0°32'56
max. Earth dist.	311 Jun 18 j 00:45	19°♊17'14	2.61384 AU
	311 Jul 04 j 11:41	0°♋	
morning rise	311 Jul 16 j 19:39	7°♋56'58	
	311 Aug 20 j 11:45	0°♌	
	311 Oct 07 j 16:08	0°♍	
	311 Nov 26 j 12:43	0°♎	
	312 Jan 20 j 00:12	0°♏	
retrograde	312 Apr 05 j 00:46	23°♏59'23	
desc. node	312 Apr 18 j 05:22	22°♏54'15	
opposition	312 May 08 j 12:45	17°♏32'21	-1°07'58
greatest brilliancy	312 May 08 j 21:13	17°♏25'25	-2.4m
min. Earth dist.	312 May 16 j 22:26	14°♏47'19	0.46007 AU
direct	312 Jun 14 j 06:30	9°♏39'39	
	312 Aug 14 j 11:50	0°♐	
	312 Sep 30 j 07:19	0°♑	
	312 Nov 10 j 22:52	0°♒	
	312 Dec 21 j 17:46	0°♓	
	313 Feb 01 j 06:12	0°♈	
asc. node	313 Feb 15 j 14:34	10°♈08'27	
	313 Mar 16 j 06:11	0°♉	
	313 Apr 29 j 22:40	0°♊	
evening set	313 May 19 j 16:19	12°♊56'07	
	313 Jun 15 j 01:16	0°♋	
conjunction	313 Jul 07 j 03:43	14°♋09'55	1°04'04
minimum elong	313 Jul 07 j 02:49	14°♋08'28	1°04'03
max. Earth dist.	313 Jul 11 j 20:46	17°♋10'27	2.66812 AU
	313 Jul 31 j 23:46	0°♌	
morning rise	313 Aug 21 j 16:05	13°♌09'41	
	313 Sep 17 j 02:33	0°♍	
	313 Nov 03 j 00:26	0°♎	
	313 Dec 19 j 18:35	0°♏	
	314 Feb 04 j 22:46	0°♐	
desc. node	314 Mar 06 j 04:35	18°♐04'10	
	314 Mar 26 j 08:27	0°♑	
	314 May 30 j 23:15	0°♒	
retrograde	314 Jun 21 j 08:36	2°♒48'54	
	314 Jul 12 j 21:28	30°℞♑	
opposition	314 Jul 21 j 14:21	27°♑46'59	-6°49'48

min. Earth dist.	314 Jul 21 j 07:02	27°♌51'49	0.37416 AU
greatest brilliancy	314 Jul 21 j 13:37	27°♌47'28	-2.9m
direct	314 Aug 20 j 10:31	22°♌49'41	
	314 Sep 23 j 23:26	0°♒	
	314 Nov 20 j 11:03	0°♓	
asc. node	315 Jan 03 j 13:17	27°♓49'33	
	315 Jan 06 j 22:08	0°♈	
	315 Feb 22 j 06:25	0°♉	
	315 Apr 10 j 00:35	0°♊	
	315 May 27 j 08:32	0°♋	
evening set	315 Jun 28 j 05:44	20°♋08'33	
	315 Jul 13 j 19:14	0°♌	
max. Earth dist.	315 Aug 04 j 05:57	13°♌39'16	2.66779 AU
conjunction	315 Aug 13 j 04:28	19°♌22'36	1°07'51
minimum elong	315 Aug 13 j 04:57	19°♌23'23	1°07'50
	315 Aug 29 j 16:24	0°♍	
morning rise	315 Sep 26 j 18:44	18°♍18'36	
	315 Oct 14 j 11:16	0°♎	
	315 Nov 27 j 22:18	0°♏	
	316 Jan 10 j 02:40	0°♐	
desc. node	316 Jan 22 j 03:33	8°♐30'08	
	316 Feb 21 j 06:36	0°♌	
	316 Apr 02 j 23:38	0°♒	
	316 May 15 j 15:10	0°♓	
	316 Jul 02 j 20:24	0°♈	
retrograde	316 Aug 27 j 01:16	17°♈26'04	
min. Earth dist.	316 Sep 23 j 23:03	12°♈05'49	0.45510 AU
greatest brilliancy	316 Oct 01 j 07:38	9°♈33'03	-2.4m
opposition	316 Oct 02 j 01:05	9°♈17'53	-2°41'37
direct	316 Nov 03 j 13:57	2°♈41'51	
asc. node	316 Nov 20 j 13:01	4°♈28'59	
	317 Jan 22 j 19:49	0°♉	
	317 Mar 17 j 07:00	0°♊	
	317 May 06 j 11:53	0°♋	
	317 Jun 24 j 05:43	0°♌	
evening set	317 Aug 03 j 15:05	25°♌35'01	
	317 Aug 10 j 11:26	0°♍	
max. Earth dist.	317 Aug 27 j 21:42	11°♍21'41	2.61418 AU
conjunction	317 Sep 18 j 22:32	25°♍59'23	0°44'52
minimum elong	317 Sep 18 j 23:48	26°♍01'29	0°44'52
	317 Sep 24 j 21:32	0°♎	
morning rise	317 Nov 05 j 01:28	28°♎22'24	
	317 Nov 07 j 08:53	0°♏	
desc. node	317 Dec 09 j 03:14	22°♏45'45	
	317 Dec 19 j 00:56	0°♐	
	318 Jan 28 j 06:51	0°♑	
	318 Mar 08 j 16:35	0°♒	
	318 Apr 17 j 01:49	0°♓	
	318 May 27 j 16:02	0°♈	
	318 Jul 10 j 16:06	0°♉	
	318 Sep 04 j 18:40	0°♊	
asc. node	318 Oct 08 j 11:17	7°♊56'19	
retrograde	318 Oct 11 j 13:15	8°♊00'19	
min. Earth dist.	318 Nov 13 j 20:06	0°♊35'05	0.58040 AU
	318 Nov 15 j 08:00	30°℞♉	
opposition	318 Nov 19 j 21:12	28°♉12'23	1°50'38
greatest brilliancy	318 Nov 19 j 10:26	28°♉22'58	-1.8m
direct	318 Dec 26 j 15:34	19°♉46'31	
	319 Feb 10 j 05:28	0°♊	
	319 Apr 13 j 06:05	0°♋	
	319 Jun 04 j 08:22	0°♌	
	319 Jul 22 j 18:42	0°♍	
	319 Sep 06 j 09:25	0°♎	
evening set	319 Sep 12 j 14:30	4°♎13'24	
max. Earth dist.	319 Sep 28 j 06:28	15°♎01'32	2.51194 AU
	319 Oct 19 j 11:31	0°♏	
desc. node	319 Oct 27 j 01:53	5°♏27'43	
conjunction	319 Nov 01 j 22:28	9°♏42'23	-0°03'44
minimum elong	319 Nov 01 j 22:17	9°♏42'04	0°03'44
behind sun begin	319 Nov 01 j 00:34	9°♏02'37	
behind sun end	319 Nov 02 j 20:00	10°♏21'34	
	319 Nov 29 j 10:09	0°♐	
morning rise	319 Dec 27 j 07:58	21°♐10'10	
	320 Jan 07 j 19:12	0°♑	
	320 Feb 15 j 08:05	0°♒	
	320 Mar 24 j 20:40	0°♓	
	320 May 03 j 07:25	0°♈	
	320 Jun 13 j 18:08	0°♉	
	320 Jul 28 j 18:57	0°♊	
asc. node	320 Aug 25 j 10:05	16°♊30'28	
	320 Sep 20 j 07:57	0°♋	
retrograde	320 Nov 16 j 04:42	15°♋52'03	
min. Earth dist.	320 Dec 24 j 00:35	6°♋53'31	0.65902 AU
opposition	320 Dec 26 j 08:56	5°♋56'58	3°59'43
greatest brilliancy	320 Dec 25 j 23:50	6°♋06'06	-1.4m
	321 Jan 11 j 18:07	30°℞♊	
direct	321 Feb 04 j 00:28	26°♊30'22	
	321 Mar 01 j 09:44	0°♋	
	321 May 10 j 16:29	0°♌	
	321 Jul 01 j 13:55	0°♍	
	321 Aug 17 j 05:34	0°♎	
desc. node	321 Sep 13 j 00:38	18°♎21'42	
	321 Sep 29 j 10:38	0°♏	
evening set	321 Oct 30 j 14:54	22°♏51'51	
	321 Nov 09 j 02:32	0°♐	
max. Earth dist.	321 Nov 28 j 17:03	14°♐58'27	2.38725 AU
	321 Dec 18 j 01:30	0°♑	
conjunction	321 Dec 29 j 20:22	9°♑14'06	-0°58'15
minimum elong	321 Dec 29 j 18:05	9°♑09'37	0°58'14
	322 Jan 25 j 04:48	0°♒	
	322 Mar 04 j 10:06	0°♓	
morning rise	322 Mar 08 j 20:33	3°♓26'46	
	322 Apr 12 j 14:28	0°♈	
	322 May 23 j 13:11	0°♉	
	322 Jul 06 j 00:09	0°♊	
asc. node	322 Jul 13 j 09:56	4°♊54'20	
	322 Aug 22 j 01:15	0°♋	
	322 Oct 15 j 08:53	0°♌	
retrograde	322 Dec 20 j 17:42	19°♌28'46	
opposition	323 Jan 29 j 11:43	10°♌00'15	4°35'30
greatest brilliancy	323 Jan 29 j 16:32	9°♌55'27	-1.3m
min. Earth dist.	323 Jan 31 j 00:28	9°♌23'44	0.67403 AU
direct	323 Mar 11 j 15:29	0°♌03'14	
	323 Jun 06 j 23:28	0°♍	
	323 Jul 27 j 05:02	0°♎	
desc. node	323 Jul 31 j 23:40	3°♎05'50	
	323 Sep 09 j 10:38	0°♏	
	323 Oct 20 j 07:39	0°♐	
	323 Nov 28 j 05:20	0°♑	
evening set	324 Jan 04 j 05:40	29°♑10'35	
	324 Jan 05 j 06:41	0°♒	
	324 Feb 12 j 11:59	0°♓	
conjunction	324 Mar 11 j 11:08	21°♓28'32	-0°46'29
minimum elong	324 Mar 11 j 14:06	21°♓34'08	0°46'27
	324 Mar 22 j 18:36	0°♈	
max. Earth dist.	324 Apr 29 j 15:45	27°♈45'14	2.45568 AU
	324 May 02 j 19:11	0°♉	
morning rise	324 May 14 j 07:26	8°♉09'05	
asc. node	324 May 30 j 08:57	19°♉19'42	

	324 Jun 15 j 00:18	0°♊	
	324 Jul 30 j 16:33	0°♋	
	324 Sep 17 j 08:32	0°♌	
	324 Nov 10 j 16:59	0°♍	
retrograde	325 Jan 26 j 01:45	23°♍49'26	
opposition	325 Mar 05 j 07:12	15°♍10'20	3°47'04
greatest brilliancy	325 Mar 06 j 00:35	14°♍53'35	-1.5m
min. Earth dist.	325 Mar 10 j 15:43	13°♍06'45	0.62322 AU
direct	325 Apr 15 j 11:08	5°♍13'53	
desc. node	325 Jun 17 j 22:18	24°♍13'13	
	325 Jun 28 j 22:32	0°♎	
	325 Aug 16 j 15:07	0°♏	
	325 Sep 27 j 21:19	0°♐	
	325 Nov 06 j 08:35	0°♑	
	325 Dec 14 j 18:28	0°♒	
	326 Jan 22 j 08:19	0°♓	
	326 Mar 03 j 00:52	0°♈	
evening set	326 Mar 12 j 08:29	6°♈52'01	
	326 Apr 13 j 11:41	0°♉	
asc. node	326 Apr 17 j 07:35	2°♉42'00	
conjunction	326 May 09 j 13:28	18°♉09'16	0°13'30
minimum elong	326 May 09 j 12:43	18°♉08'00	0°13'30
behind sun begin	326 May 09 j 00:37	17°♉47'14	
behind sun end	326 May 10 j 00:50	18°♉28'46	
	326 May 26 j 23:30	0°♊	
max. Earth dist.	326 Jun 07 j 03:38	7°♊29'10	2.57829 AU
morning rise	326 Jul 01 j 04:25	23°♊19'49	
	326 Jul 11 j 10:51	0°♋	
	326 Aug 27 j 15:49	0°♌	
	326 Oct 15 j 16:06	0°♍	
	326 Dec 07 j 00:21	0°♎	
	327 Feb 12 j 18:04	0°♏	
retrograde	327 Mar 13 j 17:57	4°♏30'30	
	327 Apr 09 j 21:32	30°℞♎	
opposition	327 Apr 18 j 00:28	27°♎15'55	0°53'43
greatest brilliancy	327 Apr 18 j 08:11	27°♎09'07	-2.1m
min. Earth dist.	327 Apr 26 j 08:41	24°♎20'00	0.51264 AU
desc. node	327 May 05 j 20:39	21°♎21'59	
direct	327 May 26 j 19:23	18°♎24'02	
	327 Jul 10 j 23:15	0°♏	
	327 Aug 31 j 19:04	0°♐	
	327 Oct 13 j 03:02	0°♑	
	327 Nov 22 j 01:47	0°♒	
	327 Dec 31 j 19:38	0°♓	
	328 Feb 10 j 13:02	0°♈	
asc. node	328 Mar 04 j 06:50	16°♈15'47	
	328 Mar 23 j 21:58	0°♉	
evening set	328 May 02 j 14:56	26°♉59'49	
	328 May 07 j 03:05	0°♊	
conjunction	328 Jun 21 j 23:28	0°♋01'03	0°55'19
minimum elong	328 Jun 21 j 22:10	29°♊58'57	0°55'18
	328 Jun 21 j 22:49	0°♋	
max. Earth dist.	328 Jul 02 j 13:46	6°♋50'38	2.65341 AU
morning rise	328 Aug 07 j 16:41	29°♋54'35	
	328 Aug 07 j 20:06	0°♌	
	328 Sep 24 j 05:47	0°♍	
	328 Nov 10 j 23:11	0°♎	
	328 Dec 29 j 11:38	0°♏	
	329 Feb 18 j 17:38	0°♐	
desc. node	329 Mar 22 j 21:04	16°♐32'44	
	329 Apr 28 j 07:56	0°♑	
retrograde	329 May 19 j 20:50	2°♑43'35	
	329 Jun 10 j 07:15	30°℞♐	
opposition	329 Jun 19 j 14:40	27°♐32'22	-5°11'33
greatest brilliancy	329 Jun 20 j 10:00	27°♐18'51	-2.8m
min. Earth dist.	329 Jun 24 j 09:23	26°♐12'34	0.39100 AU
direct	329 Jul 21 j 14:23	21°♐45'45	
	329 Aug 27 j 05:14	0°♑	
	329 Oct 20 j 14:36	0°♒	
	329 Dec 04 j 13:44	0°♓	
	330 Jan 17 j 10:30	0°♈	
asc. node	330 Jan 20 j 04:56	1°♈53'03	
	330 Mar 02 j 23:30	0°♉	
	330 Apr 17 j 16:39	0°♊	
	330 Jun 03 j 10:19	0°♋	
evening set	330 Jun 13 j 09:22	6°♋20'36	
	330 Jul 20 j 14:31	0°♌	
max. Earth dist.	330 Jul 26 j 07:17	3°♌37'35	2.67456 AU
conjunction	330 Jul 29 j 22:59	5°♌57'14	1°09'33
minimum elong	330 Jul 29 j 22:55	5°♌57'09	1°09'32
	330 Sep 05 j 12:24	0°♍	
morning rise	330 Sep 12 j 12:48	4°♍31'30	
	330 Oct 21 j 15:27	0°♎	
	330 Dec 05 j 18:51	0°♏	
	331 Jan 19 j 00:56	0°♐	
desc. node	331 Feb 07 j 20:40	13°♐35'01	
	331 Mar 03 j 17:39	0°♑	
	331 Apr 16 j 19:08	0°♒	
	331 Jun 03 j 16:00	0°♓	
retrograde	331 Aug 05 j 06:40	21°♓20'44	
min. Earth dist.	331 Aug 31 j 19:11	16°♓44'38	0.40792 AU
opposition	331 Sep 07 j 19:37	14°♓35'05	-5°02'26
greatest brilliancy	331 Sep 06 j 17:41	14°♓55'09	-2.7m
direct	331 Oct 08 j 11:49	8°♓55'47	
asc. node	331 Dec 08 j 03:50	26°♓58'33	
	331 Dec 14 j 05:39	0°♈	
	332 Feb 05 j 18:39	0°♉	
	332 Mar 26 j 09:42	0°♊	
	332 May 14 j 03:38	0°♋	
	332 Jul 01 j 06:14	0°♌	
evening set	332 Jul 20 j 02:07	11°♌54'33	
	332 Aug 17 j 07:07	0°♍	
max. Earth dist.	332 Aug 17 j 21:50	0°♍23'51	2.64138 AU
conjunction	332 Sep 03 j 21:16	11°♍27'47	0°56'56
minimum elong	332 Sep 03 j 22:23	11°♍29'37	0°56'55
	332 Oct 01 j 19:27	0°♎	
morning rise	332 Oct 19 j 12:10	11°♎58'56	
	332 Nov 14 j 14:21	0°♏	
desc. node	332 Dec 25 j 18:59	29°♏18'14	
	332 Dec 26 j 18:03	0°♐	
	333 Feb 05 j 13:49	0°♑	
	333 Mar 17 j 14:31	0°♒	
	333 Apr 26 j 17:03	0°♓	
	333 Jun 07 j 11:43	0°♈	
	333 Jul 25 j 01:15	0°♉	
retrograde	333 Sep 25 j 09:50	20°♉40'28	
asc. node	333 Oct 25 j 03:52	14°♉33'38	
min. Earth dist.	333 Oct 26 j 14:21	14°♉01'36	0.53430 AU
opposition	333 Nov 02 j 20:37	11°♉15'07	0°25'10
greatest brilliancy	333 Nov 02 j 17:34	11°♉18'02	-2.0m
direct	333 Dec 08 j 02:02	3°♉25'25	
	334 Feb 26 j 22:42	0°♊	
	334 Apr 22 j 15:54	0°♋	
	334 Jun 12 j 00:48	0°♌	
	334 Jul 29 j 21:02	0°♍	
evening set	334 Aug 27 j 10:27	18°♍39'10	
	334 Sep 13 j 08:47	0°♎	
max. Earth dist.	334 Sep 14 j 17:46	0°♎55'53	2.55699 AU
conjunction	334 Oct 14 j 15:22	21°♎34'03	0°17'48

minimum elong	334 Oct 14 j 16:07	21°♎35'21	0°17'48
	334 Oct 26 j 13:29	0°♏	
desc. node	334 Nov 12 j 17:51	12°♏21'21	
morning rise	334 Dec 04 j 20:29	28°♏35'40	
	334 Dec 06 j 17:52	0°♐	
	335 Jan 15 j 09:40	0°♑	
	335 Feb 23 j 05:03	0°♒	
	335 Apr 02 j 23:30	0°♓	
	335 May 12 j 16:42	0°♈	
	335 Jun 23 j 16:13	0°♉	
	335 Aug 09 j 09:16	0°♊	
asc. node	335 Sep 12 j 03:15	17°♊57'54	
	335 Oct 15 j 23:52	0°♋	
retrograde	335 Nov 03 j 11:21	2°♋07'59	
	335 Nov 21 j 00:30	30℞♊	
min. Earth dist.	335 Dec 09 j 15:39	23°♊42'30	0.63533 AU
opposition	335 Dec 13 j 11:54	22°♊10'11	3°22'40
greatest brilliancy	335 Dec 12 j 23:41	22°♊22'24	-1.5m
direct	336 Jan 21 j 04:27	13°♊03'08	
	336 Mar 23 j 08:54	0°♋	
	336 May 20 j 08:28	0°♌	
	336 Jul 09 j 10:26	0°♍	
	336 Aug 24 j 13:35	0°♎	
desc. node	336 Sep 29 j 17:00	25°♎01'19	
	336 Oct 06 j 16:21	0°♏	
evening set	336 Oct 09 j 21:26	2°♏18'30	
max. Earth dist.	336 Oct 25 j 22:35	13°♏59'41	2.43381 AU
	336 Nov 16 j 10:10	0°♐	
conjunction	336 Dec 04 j 11:52	13°♐44'57	-0°39'55
minimum elong	336 Dec 04 j 09:39	13°♐40'43	0°39'54
	336 Dec 25 j 12:13	0°♑	
	337 Feb 01 j 18:15	0°♒	
morning rise	337 Feb 06 j 17:19	3°♒54'10	
	337 Mar 12 j 01:14	0°♓	
	337 Apr 20 j 06:26	0°♈	
	337 May 31 j 07:03	0°♉	
	337 Jul 14 j 02:01	0°♊	
asc. node	337 Jul 30 j 01:20	10°♊19'32	
	337 Aug 31 j 10:02	0°♋	
	337 Nov 01 j 16:20	0°♌	
retrograde	337 Dec 07 j 05:58	6°♌45'20	
	338 Jan 08 j 19:47	30℞♋	
opposition	338 Jan 16 j 07:17	27°♋03'43	4°31'10
greatest brilliancy	338 Jan 16 j 06:08	27°♋04'52	-1.3m
min. Earth dist.	338 Jan 16 j 07:27	27°♋03'33	0.67599 AU
direct	338 Feb 26 j 00:51	17°♋15'33	
	338 Apr 19 j 09:08	0°♌	
	338 Jun 17 j 04:19	0°♍	
	338 Aug 04 j 11:31	0°♎	
desc. node	338 Aug 17 j 15:41	8°♎46'59	
	338 Sep 17 j 04:14	0°♏	
	338 Oct 27 j 22:04	0°♐	
	338 Dec 05 j 19:24	0°♑	
evening set	338 Dec 07 j 15:44	1°♑26'51	
	339 Jan 12 j 20:41	0°♒	
conjunction	339 Feb 12 j 07:45	23°♒58'38	-1°02'16
minimum elong	339 Feb 12 j 09:38	24°♒02'18	1°02'15
	339 Feb 20 j 01:02	0°♓	
	339 Mar 31 j 05:30	0°♈	
max. Earth dist.	339 Apr 02 j 09:37	1°♈37'45	2.40246 AU
morning rise	339 Apr 21 j 18:05	15°♈57'54	
	339 May 11 j 03:42	0°♉	
asc. node	339 Jun 17 j 01:01	25°♉43'24	
	339 Jun 23 j 08:33	0°♊	
	339 Aug 08 j 07:57	0°♋	
	339 Sep 27 j 05:52	0°♌	
	339 Nov 26 j 22:50	0°♍	
retrograde	340 Jan 11 j 20:52	10°♍15'11	
opposition	340 Feb 19 j 20:20	1°♍13'40	4°17'02
greatest brilliancy	340 Feb 20 j 09:52	1°♍00'26	-1.4m
	340 Feb 22 j 23:40	30℞♌	
min. Earth dist.	340 Feb 23 j 17:41	29°♌42'28	0.65085 AU
direct	340 Apr 01 j 05:27	21°♌12'14	
	340 May 12 j 14:04	0°♍	
desc. node	340 Jul 04 j 14:37	26°♍21'30	
	340 Jul 10 j 17:39	0°♎	
	340 Aug 25 j 19:58	0°♏	
	340 Oct 06 j 07:55	0°♐	
	340 Nov 14 j 11:27	0°♑	
	340 Dec 22 j 16:24	0°♒	
	341 Jan 30 j 01:34	0°♓	
evening set	341 Feb 15 j 11:19	12°♓36'21	
	341 Mar 10 j 12:51	0°♈	
conjunction	341 Apr 18 j 19:43	28°♈37'20	-0°09'27
minimum elong	341 Apr 18 j 20:20	28°♈38'27	0°09'27
behind sun begin	341 Apr 18 j 00:06	28°♈02'27	
behind sun end	341 Apr 19 j 16:35	29°♈14'25	
	341 Apr 20 j 18:14	0°♉	
asc. node	341 May 04 j 00:06	9°♉20'02	
max. Earth dist.	341 May 25 j 14:27	24°♉14'52	2.53499 AU
	341 Jun 03 j 01:46	0°♊	
morning rise	341 Jun 14 j 04:16	7°♊27'32	
	341 Jul 18 j 12:33	0°♋	
	341 Sep 04 j 01:54	0°♌	
	341 Oct 24 j 08:46	0°♍	
	341 Dec 20 j 11:37	0°♎	
retrograde	342 Feb 21 j 18:25	17°♎32'37	
opposition	342 Mar 30 j 10:23	9°♎38'57	2°21'21
greatest brilliancy	342 Mar 31 j 02:55	9°♎23'40	-1.8m
min. Earth dist.	342 Apr 06 j 20:50	6°♎54'32	0.56200 AU
direct	342 May 09 j 13:38	0°♎09'28	
desc. node	342 May 22 j 14:00	1°♎13'59	
	342 Jul 29 j 03:46	0°♏	
	342 Sep 12 j 11:04	0°♐	
	342 Oct 23 j 01:54	0°♑	
	342 Dec 01 j 03:38	0°♒	
	343 Jan 09 j 06:20	0°♓	
	343 Feb 18 j 10:49	0°♈	
asc. node	343 Mar 21 j 21:57	22°♈39'02	
	343 Apr 01 j 08:41	0°♉	
evening set	343 Apr 14 j 23:46	9°♉27'59	
	343 May 15 j 05:10	0°♊	
conjunction	343 Jun 06 j 20:46	15°♊01'25	0°42'23
minimum elong	343 Jun 06 j 19:18	14°♊59'01	0°42'23
max. Earth dist.	343 Jun 23 j 23:25	26°♊12'13	2.63038 AU
	343 Jun 29 j 19:57	0°♋	
morning rise	343 Jul 25 j 08:26	16°♋24'06	
	343 Aug 15 j 17:56	0°♌	
	343 Oct 02 j 14:00	0°♍	
	343 Nov 20 j 11:42	0°♎	
	344 Jan 10 j 23:56	0°♏	
	344 Mar 14 j 10:51	0°♐	
desc. node	344 Apr 08 j 12:53	6°♐11'58	
retrograde	344 Apr 19 j 23:25	6°♐58'27	
opposition	344 May 22 j 09:13	0°♐59'51	-2°32'44
greatest brilliancy	344 May 23 j 02:00	0°♐46'44	-2.5m
	344 May 25 j 13:32	30℞♏	
min. Earth dist.	344 May 30 j 02:28	28°♏35'33	0.43234 AU
direct	344 Jun 26 j 14:50	23°♏49'12	
	344 Jul 27 j 17:52	0°♐	

	344 Sep 21 j 09:23	0°♉	
	344 Nov 03 j 22:16	0°♒	
	344 Dec 15 j 15:24	0°♓	
	345 Jan 26 j 17:48	0°♈	
asc. node	345 Feb 05 j 21:13	7°♈06'17	
	345 Mar 11 j 03:30	0°♉	
	345 Apr 25 j 02:38	0°♊	
evening set	345 May 28 j 22:31	21°♊59'29	
	345 Jun 10 j 09:27	0°♋	
conjunction	345 Jul 15 j 14:12	22°♋29'18	1°07'16
minimum elong	345 Jul 15 j 13:36	22°♋28'21	1°07'16
max. Earth dist.	345 Jul 17 j 05:10	23°♋31'22	2.67278 AU
	345 Jul 27 j 09:15	0°♌	
morning rise	345 Aug 29 j 15:17	21°♌11'36	
	345 Sep 12 j 09:48	0°♍	
	345 Oct 28 j 23:58	0°♎	
	345 Dec 14 j 01:38	0°♏	
	346 Jan 28 j 22:06	0°♐	
desc. node	346 Feb 24 j 12:12	17°♐16'39	
	346 Mar 16 j 09:19	0°♉	
	346 May 05 j 16:29	0°♒	
retrograde	346 Jul 08 j 17:07	21°♒04'35	
min. Earth dist.	346 Aug 05 j 12:29	16°♒33'29	0.37844 AU
opposition	346 Aug 08 j 20:27	15°♒38'39	-6°44'23
greatest brilliancy	346 Aug 08 j 05:04	15°♒49'13	-2.9m
direct	346 Sep 07 j 10:00	10°♒39'58	
	346 Nov 08 j 06:49	0°♓	
asc. node	346 Dec 24 j 20:55	26°♓39'52	
	346 Dec 30 j 07:43	0°♈	
	347 Feb 16 j 06:10	0°♉	
	347 Apr 04 j 18:52	0°♊	
	347 May 22 j 12:41	0°♋	
evening set	347 Jul 06 j 14:45	28°♋22'57	
	347 Jul 09 j 04:06	0°♌	
max. Earth dist.	347 Aug 09 j 15:04	20°♌02'00	2.66065 AU
conjunction	347 Aug 21 j 09:16	27°♌35'55	1°04'59
minimum elong	347 Aug 21 j 10:01	27°♌37'09	1°04'58
	347 Aug 25 j 02:26	0°♍	
morning rise	347 Oct 05 j 04:31	26°♍56'05	
	347 Oct 09 j 18:59	0°♎	
	347 Nov 22 j 23:56	0°♏	
	348 Jan 04 j 18:38	0°♐	
desc. node	348 Jan 12 j 11:09	5°♐29'20	
	348 Feb 15 j 09:04	0°♉	
	348 Mar 27 j 07:51	0°♒	
	348 May 07 j 16:42	0°♓	
	348 Jun 21 j 03:33	0°♈	
	348 Aug 28 j 08:52	0°♉	
retrograde	348 Sep 07 j 09:35	0°♉43'28	
	348 Sep 17 j 05:44	30°℞♈	
min. Earth dist.	348 Oct 06 j 10:50	24°♈54'54	0.48358 AU
opposition	348 Oct 14 j 11:25	22°♈00'20	-1°26'16
greatest brilliancy	348 Oct 14 j 01:45	22°♈09'06	-2.3m
asc. node	348 Nov 10 j 19:40	15°♈10'56	
direct	348 Nov 16 j 23:31	14°♈55'30	
	349 Jan 11 j 22:07	0°♉	
	349 Mar 10 j 17:59	0°♊	
	349 May 01 j 03:57	0°♋	
	349 Jun 19 j 09:35	0°♌	
	349 Aug 05 j 20:04	0°♍	
evening set	349 Aug 12 j 03:29	4°♍05'04	
max. Earth dist.	349 Sep 03 j 02:48	18°♍30'16	2.59577 AU
	349 Sep 20 j 06:56	0°♎	
conjunction	349 Sep 27 j 23:04	5°♎12'16	0°36'01
minimum elong	349 Sep 28 j 00:15	5°♎14'17	0°36'00
	349 Nov 02 j 16:08	0°♏	
morning rise	349 Nov 15 j 06:11	8°♏57'51	
desc. node	349 Nov 29 j 09:45	19°♏11'01	
	349 Dec 14 j 04:15	0°♐	
	350 Jan 23 j 05:03	0°♉	
	350 Mar 03 j 09:07	0°♒	
	350 Apr 11 j 11:56	0°♓	
	350 May 21 j 15:46	0°♈	
	350 Jul 03 j 14:37	0°♉	
	350 Aug 23 j 01:42	0°♊	
asc. node	350 Sep 28 j 18:38	14°♊32'51	
retrograde	350 Oct 20 j 03:42	17°♊26'38	
min. Earth dist.	350 Nov 23 j 12:20	9°♊38'49	0.60234 AU
opposition	350 Nov 28 j 19:37	7°♊32'37	2°29'54
greatest brilliancy	350 Nov 28 j 07:05	7°♊45'03	-1.7m
	350 Dec 23 j 00:40	30°℞♉	
direct	351 Jan 05 j 08:15	28°♉50'18	
	351 Jan 19 j 08:55	0°♊	
	351 Apr 06 j 07:44	0°♋	
	351 May 29 j 23:12	0°♌	
	351 Jul 17 j 22:00	0°♍	
	351 Sep 01 j 17:07	0°♎	
evening set	351 Sep 22 j 09:49	14°♎11'20	
max. Earth dist.	351 Oct 07 j 04:59	24°♎34'44	2.48451 AU
	351 Oct 14 j 19:34	0°♏	
desc. node	351 Oct 17 j 08:47	1°♏49'45	
conjunction	351 Nov 13 j 08:17	21°♏31'49	-0°17'02
minimum elong	351 Nov 13 j 07:21	21°♏30'05	0°17'02
	351 Nov 24 j 16:41	0°♐	
	352 Jan 02 j 23:16	0°♉	
morning rise	352 Jan 10 j 16:14	5°♉59'07	
	352 Feb 10 j 09:30	0°♒	
	352 Mar 19 j 19:45	0°♓	
	352 Apr 28 j 03:37	0°♈	
	352 Jun 08 j 08:48	0°♉	
	352 Jul 22 j 18:22	0°♊	
asc. node	352 Aug 15 j 17:57	14°♊53'30	
	352 Sep 11 j 12:27	0°♋	
retrograde	352 Nov 23 j 21:21	23°♋52'13	
min. Earth dist.	353 Jan 01 j 13:29	14°♋37'25	0.66789 AU
opposition	353 Jan 03 j 01:52	14°♋00'57	4°14'55
greatest brilliancy	353 Jan 02 j 19:17	14°♋07'34	-1.3m
direct	353 Feb 12 j 04:13	4°♋25'33	
	353 May 03 j 11:01	0°♌	
	353 Jun 26 j 02:45	0°♍	
	353 Aug 12 j 07:01	0°♎	
desc. node	353 Sep 03 j 08:35	14°♎59'07	
	353 Sep 24 j 16:11	0°♏	
	353 Nov 04 j 08:56	0°♐	
evening set	353 Nov 12 j 12:15	6°♐11'01	
	353 Dec 13 j 07:11	0°♉	
max. Earth dist.	354 Jan 09 j 13:04	21°♉26'03	2.37195 AU
conjunction	354 Jan 14 j 11:26	25°♉19'50	-1°03'58
minimum elong	354 Jan 14 j 10:16	25°♉17'32	1°03'59
	354 Jan 20 j 09:18	0°♒	
	354 Feb 27 j 13:36	0°♓	
morning rise	354 Mar 25 j 14:45	20°♓05'00	
	354 Apr 07 j 17:05	0°♈	
	354 May 18 j 14:19	0°♉	
	354 Jun 30 j 21:21	0°♊	
asc. node	354 Jul 03 j 15:47	1°♊51'12	
	354 Aug 16 j 09:21	0°♋	
	354 Oct 07 j 10:53	0°♌	
retrograde	354 Dec 28 j 14:54	27°♌16'14	

opposition	355 Feb 06 j 03:53	17°♌56'23	4°32'17
greatest brilliancy	355 Feb 06 j 11:59	17°♌48'22	-1.3m
min. Earth dist.	355 Feb 08 j 12:52	17°♌00'06	0.66872 AU
direct	355 Mar 19 j 11:36	7°♌56'28	
	355 May 30 j 04:52	0°♍	
	355 Jul 21 j 11:29	0°♎	
desc. node	355 Jul 22 j 07:14	0°♎31'13	
	355 Sep 04 j 06:37	0°♏	
	355 Oct 15 j 08:44	0°♐	
	355 Nov 23 j 08:21	0°♑	
	355 Dec 31 j 10:29	0°♒	
evening set	356 Jan 20 j 01:47	15°♒27'57	
	356 Feb 07 j 16:24	0°♓	
	356 Mar 17 j 23:33	0°♈	
conjunction	356 Mar 26 j 04:33	6°♈07'04	-0°33'42
minimum elong	356 Mar 26 j 06:55	6°♈11'27	0°33'40
	356 Apr 28 j 00:26	0°♉	
max. Earth dist.	356 May 10 j 11:55	8°♉49'48	2.48498 AU
asc. node	356 May 20 j 15:16	15°♉54'28	
morning rise	356 May 26 j 05:59	19°♉47'17	
	356 Jun 10 j 05:00	0°♊	
	356 Jul 25 j 17:25	0°♋	
	356 Sep 11 j 20:26	0°♌	
	356 Nov 03 j 04:50	0°♍	
	357 Jan 14 j 10:40	0°♎	
retrograde	357 Feb 04 j 06:49	2°♎25'09	
	357 Feb 23 j 19:37	30°℞♍	
opposition	357 Mar 14 j 00:59	24°♍00'32	3°21'32
greatest brilliancy	357 Mar 14 j 19:15	23°♍43'09	-1.6m
min. Earth dist.	357 Mar 20 j 04:34	21°♍40'26	0.60385 AU
direct	357 Apr 23 j 23:15	14°♍10'34	
desc. node	357 Jun 08 j 05:22	24°♍58'26	
	357 Jun 19 j 07:51	0°♎	
	357 Aug 10 j 04:09	0°♏	
	357 Sep 22 j 05:22	0°♐	
	357 Nov 01 j 00:34	0°♑	
	357 Dec 09 j 14:54	0°♒	
	358 Jan 17 j 08:16	0°♓	
	358 Feb 26 j 03:51	0°♈	
evening set	358 Mar 25 j 04:31	19°♈40'18	
asc. node	358 Apr 07 j 15:03	29°♈13'56	
	358 Apr 08 j 17:11	0°♉	
conjunction	358 May 20 j 07:50	28°♉40'55	0°25'12
minimum elong	358 May 20 j 06:39	28°♉38'55	0°25'11
	358 May 22 j 06:47	0°♊	
max. Earth dist.	358 Jun 13 j 16:35	14°♊55'49	2.59887 AU
	358 Jul 06 j 17:57	0°♋	
morning rise	358 Jul 10 j 06:40	2°♋17'01	
	358 Aug 22 j 18:56	0°♌	
	358 Oct 10 j 06:27	0°♍	
	358 Nov 29 j 23:56	0°♎	
	359 Jan 26 j 19:33	0°♏	
retrograde	359 Mar 26 j 10:28	15°♏36'29	
desc. node	359 Apr 26 j 04:40	9°♏58'38	
opposition	359 Apr 29 j 18:05	8°♏47'14	-0°11'22
greatest brilliancy	339 Jul 26 j 17:56	21°♊59'32	1.5m
min. Earth dist.	359 May 08 j 06:47	5°♏53'35	0.48366 AU
direct	359 Jun 06 j 12:59	0°♏24'49	
	359 Aug 22 j 21:17	0°♐	
	359 Oct 06 j 05:01	0°♑	
	359 Nov 15 j 23:05	0°♒	
	359 Dec 26 j 04:49	0°♓	
	360 Feb 05 j 07:00	0°♈	
asc. node	360 Feb 23 j 13:17	12°♈59'45	
	360 Mar 18 j 22:37	0°♉	
	360 May 02 j 08:43	0°♊	
evening set	360 May 12 j 12:48	6°♊43'03	
	360 Jun 17 j 07:16	0°♋	
conjunction	360 Jun 30 j 18:34	8°♋39'46	1°00'54
minimum elong	360 Jun 30 j 17:28	8°♋38'01	1°00'54
max. Earth dist.	360 Jul 08 j 00:27	13°♋18'18	2.66255 AU
	360 Aug 03 j 04:34	0°♌	
morning rise	360 Aug 15 j 18:16	7°♌59'32	
	360 Sep 19 j 10:03	0°♍	
	360 Nov 05 j 15:47	0°♎	
	360 Dec 23 j 02:15	0°♏	
	361 Feb 09 j 16:26	0°♐	
desc. node	361 Mar 13 j 04:07	18°♐21'06	
	361 Apr 04 j 00:44	0°♑	
retrograde	361 Jun 07 j 03:40	19°♑37'13	
opposition	361 Jul 07 j 06:31	14°♑38'47	-6°21'17
greatest brilliancy	361 Jul 07 j 17:21	14°♑31'34	-2.9m
min. Earth dist.	361 Jul 09 j 11:04	14°♑03'49	0.37799 AU
direct	361 Aug 06 j 19:51	9°♑26'56	
	361 Oct 08 j 06:29	0°♒	
	361 Nov 26 j 12:56	0°♓	
asc. node	362 Jan 10 j 11:57	29°♓38'28	
	362 Jan 11 j 00:55	0°♈	
	362 Feb 25 j 10:26	0°♉	
	362 Apr 12 j 15:46	0°♊	
	362 May 29 j 16:28	0°♋	
evening set	362 Jun 21 j 22:57	14°♋45'01	
	362 Jul 15 j 23:59	0°♌	
max. Earth dist.	362 Jul 31 j 13:27	9°♌54'07	2.67185 AU
conjunction	362 Aug 07 j 02:55	14°♌05'27	1°09'02
minimum elong	362 Aug 07 j 03:11	14°♌05'53	1°09'01
	362 Aug 31 j 21:44	0°♍	
morning rise	362 Sep 20 j 15:39	12°♍48'09	
	362 Oct 16 j 20:30	0°♎	
	362 Nov 30 j 14:54	0°♏	
	363 Jan 13 j 06:12	0°♐	
desc. node	363 Jan 29 j 02:53	11°♐04'14	
	363 Feb 25 j 00:43	0°♑	
	363 Apr 08 j 13:49	0°♒	
	363 May 22 j 17:29	0°♓	
	363 Jul 16 j 14:45	0°♈	
retrograde	363 Aug 18 j 15:24	7°♈02'49	
min. Earth dist.	363 Sep 14 j 19:06	2°♈04'04	0.43281 AU
	363 Sep 21 j 01:33	30°℞♓	
opposition	363 Sep 22 j 14:55	29°♓28'52	-3°42'29
greatest brilliancy	363 Sep 21 j 16:29	29°♓47'32	-2.6m
direct	363 Oct 24 j 07:48	23°♓18'00	
	363 Nov 27 j 17:41	0°♈	
asc. node	363 Nov 28 j 12:02	0°♈16'09	
	364 Jan 29 j 02:10	0°♉	
	364 Mar 20 j 14:02	0°♊	
	364 May 09 j 02:05	0°♋	
	364 Jun 26 j 13:03	0°♌	
evening set	364 Jul 28 j 09:05	20°♌08'15	
	364 Aug 12 j 17:16	0°♍	
max. Earth dist.	364 Aug 23 j 14:42	7°♍04'36	2.62733 AU
conjunction	364 Sep 12 j 09:23	20°♍05'27	0°50'26
minimum elong	364 Sep 12 j 10:37	20°♍07'29	0°50'24
	364 Sep 27 j 05:12	0°♎	
morning rise	364 Oct 28 j 18:07	21°♎33'00	
	364 Nov 09 j 20:41	0°♏	
desc. node	364 Dec 16 j 02:35	25°♏52'58	
	364 Dec 21 j 18:25	0°♐	
	365 Jan 31 j 06:38	0°♑	

	365 Mar 11 j 22:26	0°♒	
	365 Apr 20 j 14:01	0°♓	
	365 May 31 j 13:07	0°♈	
	365 Jul 15 j 13:16	0°♉	
	365 Sep 21 j 05:26	0°♊	
retrograde	365 Oct 04 j 19:25	1°♊15'23	
asc. node	365 Oct 15 j 10:19	0°♊26'28	
	365 Oct 17 j 23:49	30°℞♉	
min. Earth dist.	365 Nov 06 j 04:11	24°♉10'35	0.56078 AU
opposition	365 Nov 12 j 19:36	21°♉35'38	1°17'34
greatest brilliancy	365 Nov 12 j 11:13	21°♉43'48	-1.9m
direct	365 Dec 18 j 22:50	13°♉24'48	
	366 Feb 17 j 10:37	0°♊	
	366 Apr 16 j 14:56	0°♋	
	366 Jun 06 j 22:32	0°♌	
	366 Jul 25 j 03:34	0°♍	
evening set	366 Sep 05 j 12:10	27°♍48'22	
	366 Sep 08 j 18:12	0°♎	
max. Earth dist.	366 Sep 22 j 02:53	9°♎06'43	2.53295 AU
	366 Oct 21 j 22:37	0°♏	
conjunction	366 Oct 24 j 18:31	2°♏01'18	0°05'50
minimum elong	366 Oct 24 j 18:48	2°♏01'48	0°05'50
behind sun begin	366 Oct 23 j 22:29	1°♏25'28	
behind sun end	366 Oct 25 j 15:08	2°♏38'10	
desc. node	366 Nov 03 j 01:44	8°♏42'47	
	366 Dec 02 j 00:44	0°♐	
morning rise	366 Dec 17 j 02:58	11°♐20'33	
	367 Jan 10 j 13:21	0°♑	
	367 Feb 18 j 04:59	0°♒	
	367 Mar 28 j 19:34	0°♓	
	367 May 07 j 07:50	0°♈	
	367 Jun 17 j 21:26	0°♉	
	367 Aug 02 j 09:35	0°♊	
asc. node	367 Sep 02 j 08:47	17°♊50'54	
	367 Sep 27 j 20:20	0°♋	
retrograde	367 Nov 11 j 09:39	10°♋33'34	
min. Earth dist.	367 Dec 18 j 12:52	1°♋49'12	0.64974 AU
opposition	367 Dec 21 j 13:17	0°♋36'38	3°46'09
greatest brilliancy	367 Dec 21 j 02:30	0°♋47'27	-1.4m
	367 Dec 23 j 01:57	30°℞♊	
direct	368 Jan 29 j 19:34	21°♊18'03	
	368 Mar 11 j 20:35	0°♋	
	368 May 14 j 03:49	0°♌	
	368 Jul 04 j 06:41	0°♍	
	368 Aug 19 j 18:12	0°♎	
desc. node	368 Sep 20 j 00:19	21°♎29'44	
	368 Oct 01 j 23:32	0°♏	
evening set	368 Oct 21 j 07:15	14°♏01'59	
max. Earth dist.	368 Nov 10 j 17:53	29°♏15'47	2.40671 AU
	368 Nov 11 j 17:20	0°♐	
conjunction	368 Dec 18 j 08:51	28°♐07'59	-0°51'18
minimum elong	368 Dec 18 j 06:20	28°♐03'06	0°51'17
	368 Dec 20 j 18:21	0°♑	
	369 Jan 27 j 22:55	0°♒	
morning rise	369 Feb 23 j 14:03	20°♒56'23	
	369 Mar 07 j 04:34	0°♓	
	369 Apr 15 j 08:22	0°♈	
	369 May 26 j 06:11	0°♉	
	369 Jul 08 j 18:17	0°♊	
asc. node	369 Jul 20 j 08:47	7°♊37'53	
	369 Aug 25 j 03:46	0°♋	
	369 Oct 20 j 12:49	0°♌	
retrograde	369 Dec 14 j 22:49	14°♌31'46	
opposition	370 Jan 23 j 21:08	4°♌56'58	4°35'03
greatest brilliancy	370 Jan 23 j 23:16	4°♌54'50	-1.3m
min. Earth dist.	370 Jan 24 j 17:38	4°♌36'34	0.67625 AU
	370 Feb 05 j 23:02	30°℞♋	
direct	370 Mar 05 j 21:26	25°♋03'22	
	370 Apr 05 j 11:19	0°♌	
	370 Jun 10 j 18:09	0°♍	
	370 Jul 30 j 03:50	0°♎	
desc. node	370 Aug 07 j 23:06	5°♎46'29	
	370 Sep 12 j 05:05	0°♏	
	370 Oct 23 j 01:44	0°♐	
	370 Nov 30 j 23:49	0°♑	
evening set	370 Dec 22 j 23:25	17°♑18'00	
	371 Jan 08 j 01:03	0°♒	
	371 Feb 15 j 05:26	0°♓	
conjunction	371 Feb 28 j 10:19	10°♓13'23	-0°54'39
minimum elong	371 Feb 28 j 13:12	10°♓18'55	0°54'37
	371 Mar 26 j 10:11	0°♈	
max. Earth dist.	371 Apr 20 j 13:38	18°♈36'30	2.43144 AU
morning rise	371 May 05 j 12:18	29°♈24'15	
	371 May 06 j 08:17	0°♉	
asc. node	371 Jun 07 j 08:04	22°♉24'21	
	371 Jun 18 j 11:43	0°♊	
	371 Aug 03 j 04:51	0°♋	
	371 Sep 21 j 05:51	0°♌	
	371 Nov 16 j 09:51	0°♍	
retrograde	372 Jan 20 j 09:40	18°♍24'09	
opposition	372 Feb 28 j 00:23	9°♍34'26	4°01'16
greatest brilliancy	372 Feb 28 j 16:15	9°♍19'03	-1.5m
min. Earth dist.	372 Mar 03 j 17:37	7°♍44'48	0.63687 AU
	372 Apr 01 j 06:40	30°℞♌	
direct	372 Apr 09 j 08:11	29°♌34'51	
	372 Apr 17 j 14:44	0°♍	
desc. node	372 Jun 24 j 21:54	25°♍08'47	
	372 Jul 03 j 14:23	0°♎	
	372 Aug 20 j 02:22	0°♏	
	372 Oct 01 j 01:09	0°♐	
	372 Nov 09 j 09:27	0°♑	
	372 Dec 17 j 16:51	0°♒	
	373 Jan 25 j 03:52	0°♓	
evening set	373 Mar 01 j 20:55	27°♓08'27	
	373 Mar 05 j 16:58	0°♈	
	373 Apr 15 j 23:52	0°♉	
asc. node	373 Apr 24 j 06:29	5°♉50'26	
conjunction	373 Apr 30 j 21:48	10°♉29'05	0°04'08
minimum elong	373 Apr 30 j 21:34	10°♉28'41	0°04'08
behind sun begin	373 Apr 29 j 22:28	9°♉48'25	
behind sun end	373 May 01 j 20:41	11°♉08'54	
	373 May 29 j 08:25	0°♊	
max. Earth dist.	373 Jun 02 j 01:49	2°♊30'43	2.55979 AU
morning rise	373 Jun 24 j 02:00	17°♊09'44	
	373 Jul 13 j 17:59	0°♋	
	373 Aug 30 j 01:06	0°♌	
	373 Oct 18 j 11:48	0°♍	
	373 Dec 11 j 08:16	0°♎	
retrograde	374 Mar 04 j 18:19	27°♎24'09	
opposition	374 Apr 09 j 16:48	19°♎51'07	1°34'27
greatest brilliancy	374 Apr 10 j 05:17	19°♎39'52	-2.0m
min. Earth dist.	374 Apr 17 j 17:15	16°♎58'00	0.53543 AU
desc. node	374 May 12 j 20:15	10°♎56'22	
direct	374 May 19 j 04:50	10°♎39'57	
	374 Jul 19 j 09:37	0°♏	
	374 Sep 05 j 13:35	0°♐	
	374 Oct 17 j 01:24	0°♑	
	374 Nov 25 j 13:42	0°♒	
	375 Jan 03 j 23:33	0°♓	
	375 Feb 13 j 09:48	0°♈	

asc. node	375 Mar 12 j 05:46	19°♈16'29	
	375 Mar 27 j 12:07	0°♉	
evening set	375 Apr 25 j 19:12	20°♉06'57	
	375 May 10 j 12:02	0°♊	
conjunction	375 Jun 16 j 04:42	24°♊10'16	0°50'22
minimum elong	375 Jun 16 j 03:17	24°♊07'57	0°50'23
	375 Jun 25 j 04:22	0°♋	
max. Earth dist.	375 Jun 29 j 16:57	2°♋55'22	2.64409 AU
morning rise	375 Aug 02 j 15:12	24°♋39'04	
	375 Aug 11 j 01:14	0°♌	
	375 Sep 27 j 14:48	0°♍	
	375 Nov 14 j 18:55	0°♎	
	376 Jan 03 j 08:55	0°♏	
	376 Feb 26 j 19:09	0°♐	
desc. node	376 Mar 29 j 20:22	13°♐56'16	
retrograde	376 May 06 j 06:23	21°♐22'19	
opposition	376 Jun 06 j 17:17	15°♐51'55	-4°04'04
greatest brilliancy	376 Jun 07 j 14:19	15°♐36'27	-2.7m
min. Earth dist.	376 Jun 13 j 02:49	13°♐59'38	0.40724 AU
direct	376 Jul 10 j 03:29	9°♐28'45	
	376 Sep 09 j 10:26	0°♑	
	376 Oct 26 j 19:56	0°♒	
	376 Dec 09 j 00:10	0°♓	
	377 Jan 20 j 22:46	0°♈	
asc. node	377 Jan 27 j 04:14	4°♈18'19	
	377 Mar 05 j 21:22	0°♉	
	377 Apr 20 j 05:07	0°♊	
	377 Jun 05 j 16:56	0°♋	
evening set	377 Jun 06 j 20:47	0°♋44'30	
max. Earth dist.	377 Jul 22 j 11:55	29°♋48'59	2.67485 AU
	377 Jul 22 j 18:51	0°♌	
conjunction	377 Jul 23 j 20:21	0°♌40'36	1°09'03
minimum elong	377 Jul 23 j 20:04	0°♌40'08	1°09'04
morning rise	377 Sep 06 j 13:50	29°♌14'47	
	377 Sep 07 j 18:00	0°♍	
	377 Oct 24 j 02:02	0°♎	
	377 Dec 08 j 15:07	0°♏	
	378 Jan 22 j 12:32	0°♐	
desc. node	378 Feb 14 j 20:11	15°♐40'02	
	378 Mar 08 j 05:25	0°♑	
	378 Apr 23 j 03:01	0°♒	
	378 Jun 16 j 15:44	0°♓	
retrograde	378 Jul 24 j 22:15	8°♓57'32	
min. Earth dist.	378 Aug 20 j 12:47	4°♓30'56	0.39160 AU
greatest brilliancy	378 Aug 25 j 06:12	3°♓08'47	-2.8m
opposition	378 Aug 26 j 06:21	2°♓51'12	-5°57'00
	378 Sep 05 j 19:37	30°♒℞	
direct	378 Sep 25 j 05:39	27°♒34'27	
	378 Oct 15 j 00:01	0°♓	
asc. node	378 Dec 15 j 02:50	26°♓32'47	
	378 Dec 21 j 06:56	0°♈	
	379 Feb 09 j 18:22	0°♉	
	379 Mar 30 j 08:17	0°♊	
	379 May 17 j 14:32	0°♋	
	379 Jul 04 j 12:09	0°♌	
evening set	379 Jul 14 j 22:08	6°♌35'07	
max. Earth dist.	379 Aug 15 j 01:12	26°♌28'14	2.65105 AU
	379 Aug 20 j 12:25	0°♍	
conjunction	379 Aug 29 j 15:21	5°♍55'10	1°00'47
minimum elong	379 Aug 29 j 16:20	5°♍56'47	1°00'46
	379 Oct 05 j 03:15	0°♎	
morning rise	379 Oct 13 j 19:36	5°♎49'48	
	379 Nov 18 j 03:23	0°♏	
	379 Dec 30 j 14:05	0°♐	

desc. node	380 Jan 02 j 18:20	2°♐17'08	
	380 Feb 09 j 18:13	0°♑	
	380 Mar 21 j 03:44	0°♒	
	380 Apr 30 j 17:01	0°♓	
	380 Jun 12 j 07:00	0°♈	
	380 Aug 02 j 02:44	0°♉	
retrograde	380 Sep 17 j 21:47	12°♉51'35	
min. Earth dist.	380 Oct 18 j 03:02	6°♉35'29	0.51187 AU
opposition	380 Oct 25 j 20:02	3°♉42'25	-0°18'55
greatest brilliancy	380 Oct 25 j 18:00	3°♉44'19	-2.1m
asc. node	380 Nov 01 j 02:34	1°♉26'23	
	380 Nov 05 j 12:19	30°♑℞	
direct	380 Nov 29 j 07:35	26°♈11'44	
	380 Dec 25 j 02:45	0°♉	
	381 Mar 03 j 12:06	0°♊	
	381 Apr 25 j 14:38	0°♋	
	381 Jun 14 j 11:29	0°♌	
	381 Aug 01 j 04:17	0°♍	
evening set	381 Aug 20 j 19:10	12°♍45'14	
max. Earth dist.	381 Sep 09 j 13:52	25°♍52'57	2.57524 AU
	381 Sep 15 j 16:38	0°♎	
conjunction	381 Oct 07 j 06:54	14°♎46'09	0°25'58
minimum elong	381 Oct 07 j 07:53	14°♎47'51	0°25'56
	381 Oct 29 j 00:25	0°♏	
desc. node	381 Nov 19 j 17:23	15°♏35'07	
morning rise	381 Nov 26 j 01:18	20°♏11'53	
	381 Dec 09 j 08:57	0°♐	
	382 Jan 18 j 05:16	0°♑	
	382 Feb 26 j 04:29	0°♒	
	382 Apr 06 j 02:00	0°♓	
	382 May 15 j 22:28	0°♈	
	382 Jun 27 j 04:24	0°♉	
	382 Aug 13 j 22:37	0°♊	
asc. node	382 Sep 19 j 02:01	17°♊41'53	
retrograde	382 Oct 28 j 11:09	26°♊26'08	
min. Earth dist.	382 Dec 02 j 20:38	18°♊16'53	0.62170 AU
opposition	382 Dec 07 j 08:39	16°♊29'13	3°02'48
greatest brilliancy	382 Dec 06 j 19:47	16°♊42'03	-1.6m
direct	383 Jan 14 j 13:39	7°♊32'26	
	383 Mar 29 j 10:43	0°♋	
	383 May 24 j 08:21	0°♌	
	383 Jul 12 j 23:18	0°♍	
	383 Aug 28 j 00:12	0°♎	
evening set	383 Oct 02 j 16:01	24°♎39'04	
desc. node	383 Oct 07 j 16:30	28°♎13'16	
	383 Oct 10 j 04:14	0°♏	
max. Earth dist.	383 Oct 17 j 09:56	5°♏12'27	2.45664 AU
	383 Nov 20 j 00:26	0°♐	
conjunction	383 Nov 25 j 11:40	4°♐07'22	-0°30'18
minimum elong	383 Nov 25 j 09:57	4°♐04'08	0°30'17
	383 Dec 29 j 05:06	0°♑	
morning rise	384 Jan 26 j 01:05	21°♑45'17	
	384 Feb 05 j 13:01	0°♒	
	384 Mar 14 j 20:54	0°♓	
	384 Apr 23 j 02:20	0°♈	
	384 Jun 03 j 03:10	0°♉	
	384 Jul 17 j 01:31	0°♊	
asc. node	384 Aug 06 j 00:14	12°♊43'59	
	384 Sep 04 j 02:03	0°♋	
	384 Nov 14 j 09:56	0°♌	
retrograde	384 Dec 01 j 13:26	1°♌45'33	
	384 Dec 17 j 20:09	30°♋℞	
opposition	385 Jan 10 j 17:08	21°♋59'18	4°25'52
min. Earth dist.	385 Jan 10 j 01:15	22°♋15'11	0.67365 AU
greatest brilliancy	385 Jan 10 j 13:29	22°♋02'57	-1.3m

direct	385 Feb 20 j 04:48	12°♋16'17	
	385 Apr 25 j 01:14	0°♌	
	385 Jun 20 j 08:41	0°♍	
	385 Aug 07 j 05:11	0°♎	
desc. node	385 Aug 24 j 15:01	11°♎41'25	
	385 Sep 19 j 20:08	0°♏	
	385 Oct 30 j 14:35	0°♐	
evening set	385 Nov 26 j 08:05	20°♐29'15	
	385 Dec 08 j 13:05	0°♑	
	386 Jan 15 j 14:50	0°♒	
conjunction	386 Jan 30 j 15:13	11°♒51'16	-1°04'56
minimum elong	386 Jan 30 j 15:49	11°♒52'26	1°04'57
	386 Feb 22 j 18:38	0°♓	
max. Earth dist.	386 Mar 11 j 22:06	13°♓16'21	2.38220 AU
	386 Apr 02 j 21:42	0°♈	
morning rise	386 Apr 10 j 08:23	5°♈34'43	
	386 May 13 j 17:58	0°♉	
asc. node	386 Jun 23 j 23:31	28°♉41'47	
	386 Jun 25 j 21:53	0°♊	
	386 Aug 11 j 00:01	0°♋	
	386 Sep 30 j 13:38	0°♌	
	386 Dec 05 j 15:10	0°♍	
retrograde	387 Jan 05 j 16:23	5°♍07'38	
	387 Feb 03 j 03:55	30°℞♌	
opposition	387 Feb 13 j 22:57	25°♌57'28	4°24'49
greatest brilliancy	387 Feb 14 j 10:11	25°♌46'25	-1.3m
min. Earth dist.	387 Feb 17 j 04:32	24°♌41'20	0.66008 AU
direct	387 Mar 27 j 08:41	15°♌55'59	
	387 May 20 j 18:28	0°♍	
desc. node	387 Jul 12 j 13:48	28°♍17'18	
	387 Jul 15 j 08:55	0°♎	
	387 Aug 29 j 22:20	0°♏	
	387 Oct 10 j 06:45	0°♐	
	387 Nov 18 j 09:09	0°♑	
	387 Dec 26 j 12:50	0°♒	
	388 Feb 02 j 19:59	0°♓	
evening set	388 Feb 04 j 18:34	1°♓30'14	
	388 Mar 13 j 04:32	0°♈	
conjunction	388 Apr 08 j 22:50	19°♈42'21	-0°19'51
minimum elong	388 Apr 09 j 00:13	19°♈44'51	0°19'50
	388 Apr 23 j 06:36	0°♉	
asc. node	388 May 10 j 23:01	12°♉27'59	
max. Earth dist.	388 May 19 j 11:49	18°♉23'21	2.51337 AU
	388 Jun 05 j 11:19	0°♊	
morning rise	388 Jun 06 j 07:01	0°♊33'19	
	388 Jul 20 j 21:10	0°♋	
	388 Sep 06 j 14:27	0°♌	
	388 Oct 27 j 13:36	0°♍	
	388 Dec 27 j 03:42	0°♎	
retrograde	389 Feb 13 j 23:19	11°♎19'29	
opposition	389 Mar 23 j 04:17	3°♎11'08	2°49'21
greatest brilliancy	389 Mar 23 j 22:08	2°♎54'24	-1.7m
min. Earth dist.	389 Mar 30 j 02:10	0°♎36'04	0.58179 AU
	389 Mar 31 j 17:44	30°℞♍	
direct	389 May 02 j 18:03	23°♍30'42	
desc. node	389 May 29 j 13:28	27°♍45'43	
	389 Jun 05 j 11:07	0°♎	
	389 Aug 03 j 01:26	0°♏	
	389 Sep 16 j 06:21	0°♐	
	389 Oct 26 j 12:05	0°♑	
	389 Dec 04 j 08:11	0°♒	
	390 Jan 12 j 05:40	0°♓	
	390 Feb 21 j 04:58	0°♈	
asc. node	390 Mar 28 j 20:44	25°♈44'31	
	390 Apr 03 j 21:36	0°♉	
evening set	390 Apr 06 j 07:31	1°♉41'40	
	390 May 17 j 13:43	0°♊	
conjunction	390 May 30 j 12:57	8°♊39'51	0°35'40
minimum elong	390 May 30 j 11:32	8°♊37'30	0°35'38
max. Earth dist.	390 Jun 19 j 20:12	22°♊02'22	2.61742 AU
	390 Jul 02 j 01:42	0°♋	
morning rise	390 Jul 19 j 00:35	10°♋55'37	
	390 Aug 18 j 00:08	0°♌	
	390 Oct 05 j 01:40	0°♍	
	390 Nov 23 j 15:13	0°♎	
	391 Jan 16 j 02:54	0°♏	
retrograde	391 Apr 09 j 07:26	27°♏39'49	
desc. node	391 Apr 16 j 12:20	27°♏20'13	
opposition	391 May 12 j 13:42	21°♏17'51	-1°27'43
greatest brilliancy	391 May 13 j 00:25	21°♏09'07	-2.4m
min. Earth dist.	391 May 20 j 20:18	18°♏36'17	0.45486 AU
direct	391 Jun 18 j 01:13	13°♏32'01	
	391 Aug 11 j 01:17	0°♐	
	391 Sep 28 j 09:11	0°♑	
	391 Nov 09 j 09:52	0°♒	
	391 Dec 20 j 08:01	0°♓	
	392 Jan 30 j 21:22	0°♈	
asc. node	392 Feb 13 j 19:45	9°♈50'56	
	392 Mar 13 j 21:07	0°♉	
	392 Apr 27 j 13:00	0°♊	
evening set	392 May 22 j 01:46	16°♊03'47	
	392 Jun 12 j 15:07	0°♋	
conjunction	392 Jul 09 j 08:31	17°♋07'19	1°05'06
minimum elong	392 Jul 09 j 07:41	17°♋05'59	1°05'06
max. Earth dist.	392 Jul 13 j 09:37	19°♋42'14	2.66930 AU
	392 Jul 29 j 13:25	0°♌	
morning rise	392 Aug 23 j 17:57	16°♌02'01	
	392 Sep 14 j 15:54	0°♍	
	392 Oct 31 j 12:35	0°♎	
	392 Dec 17 j 03:29	0°♏	
	393 Feb 02 j 00:02	0°♐	
desc. node	393 Mar 03 j 11:27	18°♐27'14	
	393 Mar 22 j 13:24	0°♑	
	393 May 20 j 01:21	0°♒	
retrograde	393 Jun 25 j 04:55	7°♒35'50	
opposition	393 Jul 25 j 15:02	2°♒30'46	-6°52'53
greatest brilliancy	393 Jul 25 j 11:19	2°♒33'15	-2.9m
min. Earth dist.	393 Jul 24 j 16:49	2°♒45'35	0.37421 AU
	393 Aug 04 j 13:57	30°℞♑	
direct	393 Aug 24 j 09:07	27°♑34'36	
	393 Sep 12 j 18:24	0°♒	
	393 Nov 16 j 18:26	0°♓	
asc. node	393 Dec 31 j 19:44	27°♓57'13	
	394 Jan 04 j 00:32	0°♈	
	394 Feb 19 j 15:07	0°♉	
	394 Apr 07 j 11:45	0°♊	
	394 May 24 j 20:55	0°♋	
evening set	394 Jun 30 j 09:43	23°♋03'45	
	394 Jul 11 j 08:43	0°♌	
max. Earth dist.	394 Aug 05 j 21:32	16°♌15'03	2.66677 AU
conjunction	394 Aug 15 j 06:55	22°♌16'07	1°07'08
minimum elong	394 Aug 15 j 07:29	22°♌17'02	1°07'08
	394 Aug 27 j 07:06	0°♍	
morning rise	394 Sep 28 j 21:39	21°♍15'19	
	394 Oct 12 j 02:59	0°♎	
	394 Nov 25 j 14:25	0°♏	
	395 Jan 07 j 18:11	0°♐	
desc. node	395 Jan 19 j 10:34	8°♐15'41	
	395 Feb 18 j 20:16	0°♑	

	395 Apr 01 j 09:19	0°♒	
	395 May 13 j 15:36	0°♓	
	395 Jun 29 j 10:40	0°♈	
retrograde	395 Aug 30 j 18:53	21°♈24'03	
min. Earth dist.	395 Sep 27 j 22:30	15°♈58'46	0.46035 AU
greatest brilliancy	395 Oct 05 j 09:41	13°♈22'01	-2.4m
opposition	395 Oct 06 j 01:20	13°♈08'17	-2°22'21
direct	395 Nov 07 j 17:27	6°♈26'44	
asc. node	395 Nov 18 j 18:47	7°♈13'11	
	396 Jan 19 j 21:54	0°♉	
	396 Mar 14 j 08:19	0°♊	
	396 May 03 j 20:15	0°♋	
	396 Jun 21 j 17:39	0°♌	
evening set	396 Aug 05 j 19:03	28°♌31'28	
	396 Aug 08 j 01:59	0°♍	
max. Earth dist.	396 Aug 29 j 14:25	14°♍01'29	2.61087 AU
conjunction	396 Sep 21 j 04:11	29°♍02'39	0°42'33
minimum elong	396 Sep 21 j 05:26	29°♍04'44	0°42'32
	396 Sep 22 j 14:15	0°♎	
	396 Nov 05 j 03:19	0°♏	
morning rise	396 Nov 07 j 11:58	1°♏39'54	
desc. node	396 Dec 06 j 09:20	22°♏21'41	
	396 Dec 16 j 20:28	0°♐	
	397 Jan 26 j 02:48	0°♑	
	397 Mar 06 j 12:03	0°♒	
	397 Apr 14 j 19:29	0°♓	
	397 May 25 j 05:25	0°♈	
	397 Jul 07 j 18:25	0°♉	
	397 Aug 30 j 08:11	0°♊	
asc. node	397 Oct 05 j 17:10	10°♊42'43	
retrograde	397 Oct 13 j 17:51	11°♊09'07	
min. Earth dist.	397 Nov 16 j 05:24	3°♊39'59	0.58469 AU
opposition	397 Nov 22 j 03:41	1°♊20'03	2°02'12
greatest brilliancy	397 Nov 21 j 16:09	1°♊31'24	-1.7m
	397 Nov 25 j 14:01	30°℞♉	
direct	397 Dec 29 j 02:31	22°♉50'47	
	398 Feb 04 j 05:50	0°♊	
	398 Apr 10 j 02:10	0°♋	
	398 Jun 01 j 16:10	0°♌	
	398 Jul 20 j 07:57	0°♍	
	398 Sep 04 j 02:13	0°♎	
evening set	398 Sep 14 j 23:33	7°♎24'18	
max. Earth dist.	398 Sep 30 j 06:25	17°♎58'52	2.50669 AU
	398 Oct 17 j 06:48	0°♏	
desc. node	398 Oct 24 j 08:19	5°♏03'55	
conjunction	398 Nov 04 j 14:34	13°♏13'53	-0°07'08
minimum elong	398 Nov 04 j 14:12	13°♏13'13	0°07'08
behind sun begin	398 Nov 03 j 17:49	12°♏36'04	
behind sun end	398 Nov 05 j 10:34	13°♏50'23	
	398 Nov 27 j 07:01	0°♐	
morning rise	398 Dec 30 j 13:03	25°♐15'10	
	399 Jan 05 j 16:51	0°♑	
	399 Feb 13 j 05:43	0°♒	
	399 Mar 23 j 17:28	0°♓	
	399 May 02 j 02:16	0°♈	
	399 Jun 12 j 09:13	0°♉	
	399 Jul 27 j 01:54	0°♊	
asc. node	399 Aug 23 j 16:51	16°♊44'58	
	399 Sep 17 j 08:39	0°♋	
retrograde	399 Nov 19 j 04:06	18°♋42'11	
min. Earth dist.	399 Dec 27 j 04:40	9°♋40'21	0.66101 AU
opposition	399 Dec 29 j 08:58	8°♋47'57	4°04'34
greatest brilliancy	399 Dec 29 j 00:19	8°♋56'38	-1.4m
	400 Jan 27 j 19:39	30°℞♊	
direct	400 Feb 07 j 03:05	29°♊19'24	
	400 Feb 17 j 20:08	0°♋	
	400 May 07 j 10:35	0°♌	
	400 Jun 28 j 23:07	0°♍	
	400 Aug 14 j 21:15	0°♎	
desc. node	400 Sep 10 j 07:55	18°♎02'38	
	400 Sep 27 j 06:07	0°♏	
evening set	400 Nov 02 j 12:02	26°♏36'14	
	400 Nov 07 j 00:13	0°♐	
max. Earth dist.	400 Dec 04 j 03:19	20°♐45'56	2.38302 AU
	400 Dec 16 j 00:12	0°♑	
conjunction	401 Jan 02 j 07:20	13°♑33'59	-0°59'59
minimum elong	401 Jan 02 j 05:16	13°♑29'55	0°59'58
	401 Jan 23 j 03:28	0°♒	
	401 Mar 02 j 07:50	0°♓	
morning rise	401 Mar 12 j 17:01	8°♓03'39	
	401 Apr 10 j 10:30	0°♈	
	401 May 21 j 06:41	0°♉	
	401 Jul 03 j 13:49	0°♊	
asc. node	401 Jul 10 j 15:08	4°♊41'43	
	401 Aug 19 j 07:39	0°♋	
	401 Oct 11 j 15:17	0°♌	
retrograde	401 Dec 22 j 17:23	22°♌16'22	
opposition	402 Jan 31 j 11:37	12°♌49'28	4°34'43
greatest brilliancy	402 Jan 31 j 17:06	12°♌44'02	-1.3m
min. Earth dist.	402 Feb 02 j 04:36	12°♌08'53	0.67345 AU
direct	402 Mar 13 j 17:07	2°♌51'47	
	402 Jun 03 j 15:51	0°♍	
	402 Jul 24 j 15:19	0°♎	
desc. node	402 Jul 29 j 06:46	2°♎59'05	
	402 Sep 07 j 03:56	0°♏	
	402 Oct 18 j 04:37	0°♐	
	402 Nov 26 j 04:05	0°♑	
	403 Jan 03 j 05:49	0°♒	
evening set	403 Jan 07 j 17:26	3°♒32'34	
	403 Feb 10 j 10:20	0°♓	
conjunction	403 Mar 15 j 21:16	25°♓40'12	-0°43'31
minimum elong	403 Mar 16 j 00:09	25°♓45'38	0°43'29
	403 Mar 21 j 15:18	0°♈	
	403 May 01 j 13:36	0°♉	
max. Earth dist.	403 May 03 j 11:52	1°♉22'36	2.46119 AU
morning rise	403 May 18 j 05:49	11°♉47'58	
asc. node	403 May 28 j 13:58	18°♉59'30	
	403 Jun 13 j 15:59	0°♊	
	403 Jul 29 j 04:41	0°♋	
	403 Sep 15 j 14:19	0°♌	
	403 Nov 08 j 03:07	0°♍	
retrograde	404 Jan 29 j 06:39	26°♍45'11	
opposition	404 Mar 07 j 11:17	18°♍08'46	3°40'07
greatest brilliancy	404 Mar 08 j 04:48	17°♍51'57	-1.5m
min. Earth dist.	404 Mar 13 j 00:17	16°♍01'21	0.61985 AU
direct	404 Apr 17 j 15:26	8°♍13'21	
desc. node	404 Jun 15 j 05:00	24°♍52'33	
	404 Jun 25 j 08:13	0°♎	
	404 Aug 14 j 00:14	0°♏	
	404 Sep 25 j 13:57	0°♐	
	404 Nov 04 j 04:33	0°♑	
	404 Dec 12 j 15:42	0°♒	
	405 Jan 20 j 05:28	0°♓	
	405 Feb 28 j 20:59	0°♈	
evening set	405 Mar 15 j 09:27	10°♈41'14	
	405 Apr 11 j 06:04	0°♉	
asc. node	405 Apr 14 j 13:53	2°♉21'02	
conjunction	405 May 12 j 05:14	21°♉32'40	0°16'42
minimum elong	405 May 12 j 04:21	21°♉31'10	0°16'41

	405 May 24 j 15:49	0°♊	
max. Earth dist.	405 Jun 08 j 23:22	10°♊15'44	2.58224 AU
morning rise	405 Jul 03 j 12:05	26°♊24'13	
	405 Jul 09 j 00:56	0°♋	
	405 Aug 25 j 03:14	0°♌	
	405 Oct 12 j 22:42	0°♍	
	405 Dec 03 j 17:36	0°♎	
	406 Feb 05 j 03:28	0°♏	
retrograde	406 Mar 16 j 14:59	7°♏51'13	
opposition	406 Apr 20 j 16:33	0°♏41'22	0°37'56
greatest brilliancy	406 Apr 20 j 22:10	0°♏36'27	-2.1m
	406 Apr 22 j 15:39	30°℞♎	
min. Earth dist.	406 Apr 29 j 02:16	27°♎45'00	0.50725 AU
desc. node	406 May 03 j 04:07	26°♎24'10	
direct	406 May 29 j 08:26	21°♎54'06	
	406 Jul 05 j 04:31	0°♏	
	406 Aug 28 j 18:37	0°♐	
	406 Oct 10 j 14:23	0°♑	
	406 Nov 19 j 17:19	0°♒	
	406 Dec 29 j 12:34	0°♓	
	407 Feb 08 j 05:59	0°♈	
asc. node	407 Mar 02 j 12:35	15°♈56'35	
	407 Mar 22 j 14:11	0°♉	
	407 May 05 j 18:17	0°♊	
evening set	407 May 06 j 02:13	0°♊13'13	
	407 Jun 20 j 13:00	0°♋	
conjunction	407 Jun 25 j 05:12	3°♋01'08	0°56'59
minimum elong	407 Jun 25 j 03:56	2°♋59'05	0°56'59
max. Earth dist.	407 Jul 05 j 05:49	9°♋28'08	2.65527 AU
	407 Aug 06 j 09:22	0°♌	
morning rise	407 Aug 10 j 18:53	2°♌47'38	
	407 Sep 22 j 17:46	0°♍	
	407 Nov 09 j 08:25	0°♎	
	407 Dec 27 j 14:12	0°♏	
	408 Feb 16 j 01:23	0°♐	
desc. node	408 Mar 20 j 03:38	17°♐41'11	
	408 Apr 17 j 15:51	0°♑	
retrograde	408 May 23 j 20:56	7°♑07'50	
opposition	408 Jun 23 j 09:28	2°♑00'12	-5°29'40
greatest brilliancy	408 Jun 24 j 04:13	1°♑47'18	-2.8m
min. Earth dist.	408 Jun 27 j 19:04	0°♑47'40	0.38801 AU
	408 Jun 30 j 18:17	30°℞♐	
direct	408 Jul 25 j 02:08	26°♐21'14	
	408 Aug 17 j 19:29	0°♑	
	408 Oct 17 j 00:36	0°♒	
	408 Dec 01 j 17:18	0°♓	
	409 Jan 14 j 20:06	0°♈	
asc. node	409 Jan 17 j 11:00	1°♈46'42	
	409 Feb 28 j 11:24	0°♉	
	409 Apr 15 j 05:21	0°♊	
	409 May 31 j 23:26	0°♋	
evening set	409 Jun 15 j 13:54	9°♋17'29	
	409 Jul 18 j 04:09	0°♌	
max. Earth dist.	409 Jul 27 j 18:06	6°♌05'51	2.67422 AU
conjunction	409 Aug 01 j 01:11	8°♌50'04	1°09'30
minimum elong	409 Aug 01 j 01:13	8°♌50'07	1°09'31
	409 Sep 03 j 02:31	0°♍	
morning rise	409 Sep 14 j 14:46	7°♍25'35	
	409 Oct 19 j 05:40	0°♎	
	409 Dec 03 j 08:13	0°♏	
	410 Jan 16 j 12:03	0°♐	
desc. node	410 Feb 05 j 02:18	13°♐28'24	
	410 Mar 01 j 00:22	0°♑	
	410 Apr 13 j 16:33	0°♒	
	410 May 30 j 07:27	0°♓	
retrograde	410 Aug 08 j 10:14	25°♓45'09	
min. Earth dist.	410 Sep 04 j 02:16	21°♓04'18	0.41240 AU
greatest brilliancy	410 Sep 10 j 05:01	19°♓09'41	-2.7m
opposition	410 Sep 11 j 06:16	18°♓49'47	-4°44'24
direct	410 Oct 12 j 04:10	13°♓04'20	
asc. node	410 Dec 05 j 10:55	28°♓03'26	
	410 Dec 09 j 14:10	0°♈	
	411 Feb 02 j 16:17	0°♉	
	411 Mar 24 j 16:29	0°♊	
	411 May 12 j 14:13	0°♋	
	411 Jun 29 j 19:14	0°♌	
evening set	411 Jul 23 j 04:31	14°♌46'58	
	411 Aug 15 j 22:09	0°♍	
max. Earth dist.	411 Aug 20 j 14:17	3°♍01'28	2.63892 AU
conjunction	411 Sep 07 j 00:10	14°♍23'37	0°55'14
minimum elong	411 Sep 07 j 01:19	14°♍25'31	0°55'14
	411 Sep 30 j 12:12	0°♎	
morning rise	411 Oct 22 j 18:17	15°♎04'46	
	411 Nov 13 j 08:11	0°♏	
desc. node	411 Dec 24 j 01:48	28°♏57'51	
	411 Dec 25 j 12:08	0°♐	
	412 Feb 04 j 07:19	0°♑	
	412 Mar 15 j 06:27	0°♒	
	412 Apr 24 j 05:45	0°♓	
	412 Jun 04 j 17:03	0°♈	
	412 Jul 21 j 05:31	0°♉	
retrograde	412 Sep 27 j 18:40	24°♉05'28	
asc. node	412 Oct 22 j 09:27	19°♉47'15	
min. Earth dist.	412 Oct 29 j 04:27	17°♉22'03	0.53972 AU
opposition	412 Nov 05 j 08:47	14°♉37'06	0°39'58
greatest brilliancy	412 Nov 05 j 04:03	14°♉41'38	-2.0m
direct	412 Dec 10 j 19:46	6°♉42'55	
	413 Feb 23 j 03:46	0°♊	
	413 Apr 19 j 18:42	0°♋	
	413 Jun 09 j 10:47	0°♌	
	413 Jul 27 j 11:08	0°♍	
evening set	413 Aug 29 j 15:14	21°♍39'23	
	413 Sep 11 j 01:59	0°♎	
max. Earth dist.	413 Sep 16 j 11:53	3°♎40'00	2.55277 AU
conjunction	413 Oct 17 j 00:04	24°♎46'51	0°14'47
minimum elong	413 Oct 17 j 00:43	24°♎47'58	0°14'45
behind sun begin	413 Oct 16 j 15:54	24°♎32'27	
behind sun end	413 Oct 17 j 09:31	25°♎03'29	
	413 Oct 24 j 09:05	0°♏	
desc. node	413 Nov 10 j 01:23	11°♏58'11	
	413 Dec 04 j 14:59	0°♐	
morning rise	413 Dec 07 j 14:13	2°♐12'32	
	414 Jan 13 j 07:26	0°♑	
	414 Feb 21 j 02:28	0°♒	
	414 Mar 31 j 19:27	0°♓	
	414 May 10 j 09:45	0°♈	
	414 Jun 21 j 03:40	0°♉	
	414 Aug 06 j 06:51	0°♊	
asc. node	414 Sep 09 j 07:27	18°♊39'52	
	414 Oct 07 j 00:08	0°♋	
retrograde	414 Nov 05 j 13:15	5°♋06'43	
	414 Dec 03 j 01:08	30°℞♊	
min. Earth dist.	414 Dec 11 j 22:44	26°♊37'11	0.63852 AU
opposition	414 Dec 15 j 14:55	25°♊08'59	3°30'04
greatest brilliancy	414 Dec 15 j 02:51	25°♊21'04	-1.5m
direct	415 Jan 23 j 10:34	15°♊59'17	
	415 Mar 19 j 21:30	0°♋	
	415 May 18 j 09:41	0°♌	
	415 Jul 07 j 21:22	0°♍	
	415 Aug 23 j 05:38	0°♎	

desc. node	415 Sep 27 j 23:50	24°♎39'53	
	415 Oct 05 j 11:46	0°♏	
evening set	415 Oct 13 j 12:07	5°♏45'54	
max. Earth dist.	415 Oct 30 j 01:05	17°♏51'34	2.42865 AU
	415 Nov 15 j 07:46	0°♐	
conjunction	415 Dec 08 j 13:02	17°♐40'50	-0°42'51
minimum elong	415 Dec 08 j 10:43	17°♐36'22	0°42'50
	415 Dec 24 j 11:00	0°♑	
	416 Jan 31 j 17:17	0°♒	
morning rise	416 Feb 11 j 09:28	8°♒23'58	
	416 Mar 09 j 23:32	0°♓	
	416 Apr 18 j 02:58	0°♈	
	416 May 29 j 00:31	0°♉	
	416 Jul 11 j 14:18	0°♊	
asc. node	416 Jul 27 j 07:24	10°♊14'02	
	416 Aug 28 j 10:52	0°♋	
	416 Oct 26 j 22:29	0°♌	
retrograde	416 Dec 09 j 05:34	9°♌34'23	
opposition	417 Jan 18 j 07:10	29°♋54'04	4°32'36
greatest brilliancy	417 Jan 18 j 06:41	29°♋54'33	-1.3m
min. Earth dist.	417 Jan 18 j 11:41	29°♋49'34	0.67640 AU
	417 Jan 18 j 01:13	30°℞♋	
direct	417 Feb 28 j 02:41	20°♋04'32	
	417 Apr 14 j 08:37	0°♌	
	417 Jun 14 j 05:57	0°♍	
	417 Aug 02 j 00:21	0°♎	
desc. node	417 Aug 14 j 22:17	8°♎33'16	
	417 Sep 14 j 22:26	0°♏	
	417 Oct 25 j 19:13	0°♐	
	417 Dec 03 j 18:01	0°♑	
evening set	417 Dec 11 j 01:10	5°♑43'16	
	418 Jan 10 j 19:36	0°♒	
conjunction	418 Feb 15 j 23:24	28°♒26'38	-1°00'48
minimum elong	418 Feb 16 j 01:37	28°♒30'58	1°00'48
	418 Feb 17 j 23:17	0°♓	
	418 Mar 29 j 02:18	0°♈	
max. Earth dist.	418 Apr 07 j 08:04	6°♈54'57	2.40774 AU
morning rise	418 Apr 25 j 00:30	19°♈56'56	
	418 May 08 j 22:19	0°♉	
asc. node	418 Jun 14 j 06:58	25°♉26'04	
	418 Jun 21 j 00:09	0°♊	
	418 Aug 05 j 18:57	0°♋	
	418 Sep 24 j 06:57	0°♌	
	418 Nov 21 j 23:53	0°♍	
retrograde	419 Jan 13 j 23:24	13°♍07'21	
opposition	419 Feb 21 j 22:22	4°♍07'59	4°12'36
greatest brilliancy	419 Feb 22 j 12:20	3°♍54'22	-1.4m
min. Earth dist.	419 Feb 26 j 00:10	2°♍32'44	0.64854 AU
	419 Mar 04 j 18:55	30°℞♌	
direct	419 Apr 04 j 08:30	24°♌06'37	
	419 May 07 j 08:57	0°♍	
desc. node	419 Jul 02 j 21:23	26°♍34'10	
	419 Jul 08 j 18:28	0°♎	
	419 Aug 24 j 09:43	0°♏	
	419 Oct 05 j 03:03	0°♐	
	419 Nov 13 j 09:01	0°♑	
	419 Dec 21 j 14:39	0°♒	
	420 Jan 28 j 23:18	0°♓	
evening set	420 Feb 19 j 19:32	16°♓45'47	
	420 Mar 08 j 09:12	0°♈	
	420 Apr 18 j 12:40	0°♉	
conjunction	420 Apr 21 j 17:58	2°♉17'16	-0°05'56
minimum elong	420 Apr 21 j 18:22	2°♉17'58	0°05'55
behind sun begin	420 Apr 20 j 19:17	1°♉37'03	
behind sun end	420 Apr 22 j 17:27	2°♉58'50	
asc. node	420 May 01 j 05:17	8°♉57'57	
max. Earth dist.	420 May 27 j 12:56	27°♉08'26	2.53986 AU
	420 May 31 j 18:01	0°♊	
morning rise	420 Jun 16 j 16:08	10°♊41'27	
	420 Jul 16 j 02:19	0°♋	
	420 Sep 01 j 12:01	0°♌	
	420 Oct 21 j 10:55	0°♍	
	420 Dec 16 j 07:17	0°♎	
retrograde	421 Feb 24 j 08:59	20°♎43'32	
opposition	421 Apr 01 j 21:55	12°♎53'51	2°09'12
greatest brilliancy	421 Apr 02 j 13:29	12°♎39'33	-1.8m
min. Earth dist.	421 Apr 09 j 11:43	10°♎07'07	0.55707 AU
direct	421 May 11 j 23:36	3°♎27'26	
desc. node	421 May 19 j 19:56	3°♎51'38	
	421 Jul 25 j 17:55	0°♏	
	421 Sep 09 j 20:43	0°♐	
	421 Oct 20 j 18:05	0°♑	
	421 Nov 28 j 22:29	0°♒	
	422 Jan 07 j 01:48	0°♓	
	422 Feb 16 j 05:42	0°♈	
asc. node	422 Mar 19 j 04:28	22°♈18'50	
	422 Mar 30 j 02:15	0°♉	
evening set	422 Apr 17 j 15:10	12°♉51'48	
	422 May 12 j 21:10	0°♊	
conjunction	422 Jun 09 j 04:52	18°♊06'51	0°44'41
minimum elong	422 Jun 09 j 03:23	18°♊04'26	0°44'41
max. Earth dist.	422 Jun 25 j 18:09	28°♊54'36	2.63317 AU
	422 Jun 27 j 10:30	0°♋	
morning rise	422 Jul 27 j 11:31	19°♋18'30	
	422 Aug 13 j 07:07	0°♌	
	422 Sep 30 j 01:01	0°♍	
	422 Nov 17 j 17:41	0°♎	
	423 Jan 07 j 15:33	0°♏	
	423 Mar 08 j 11:32	0°♐	
desc. node	423 Apr 06 j 19:20	9°♐08'11	
retrograde	423 Apr 24 j 11:46	10°♐57'38	
opposition	423 May 26 j 18:12	5°♐04'36	-2°54'25
greatest brilliancy	423 May 27 j 12:32	4°♐50'25	-2.6m
min. Earth dist.	423 Jun 03 j 06:22	2°♐46'03	0.42711 AU
	423 Jun 13 j 17:22	30°℞♏	
direct	423 Jun 30 j 14:14	28°♏03'15	
	423 Jul 17 j 13:48	0°♐	
	423 Sep 18 j 19:58	0°♑	
	423 Nov 02 j 02:41	0°♒	
	423 Dec 14 j 02:10	0°♓	
	424 Jan 25 j 07:11	0°♈	
asc. node	424 Feb 04 j 03:21	6°♈53'06	
	424 Mar 08 j 17:44	0°♉	
	424 Apr 22 j 16:52	0°♊	
evening set	424 May 31 j 05:13	25°♊00'49	
	424 Jun 07 j 23:29	0°♋	
conjunction	424 Jul 17 j 16:55	25°♋22'29	1°07'52
minimum elong	424 Jul 17 j 16:23	25°♋21'39	1°07'53
max. Earth dist.	424 Jul 18 j 16:45	26°♋00'27	2.67341 AU
	424 Jul 24 j 23:14	0°♌	
morning rise	424 Aug 31 j 15:59	24°♌02'00	
	424 Sep 09 j 23:47	0°♍	
	424 Oct 26 j 13:25	0°♎	
	424 Dec 11 j 13:10	0°♏	
	425 Jan 26 j 04:58	0°♐	
desc. node	425 Feb 21 j 19:30	17°♐25'32	
	425 Mar 13 j 05:27	0°♑	
	425 May 01 j 02:10	0°♒	
retrograde	425 Jul 12 j 13:13	25°♒52'35	

min. Earth dist.	425 Aug 08 j 22:25	21°♒24'39	0.38001 AU
opposition	425 Aug 12 j 19:26	20°♒20'38	-6°37'01
greatest brilliancy	425 Aug 12 j 01:57	20°♒32'42	-2.9m
direct	425 Sep 11 j 08:13	15°♒20'08	
	425 Nov 02 j 23:46	0°♓	
asc. node	425 Dec 22 j 01:42	27°♓00'35	
	425 Dec 27 j 00:57	0°♈	
	426 Feb 13 j 10:57	0°♉	
	426 Apr 02 j 04:06	0°♊	
	426 May 20 j 00:11	0°♋	
	426 Jul 06 j 17:15	0°♌	
evening set	426 Jul 08 j 17:53	1°♌16'53	
max. Earth dist.	426 Aug 11 j 06:11	22°♌37'26	2.65919 AU
	426 Aug 22 j 17:02	0°♍	
conjunction	426 Aug 23 j 11:14	0°♍29'24	1°03'54
minimum elong	426 Aug 23 j 12:03	0°♍30'44	1°03'54
morning rise	426 Oct 07 j 07:41	29°♍54'47	
	426 Oct 07 j 10:49	0°♎	
	426 Nov 20 j 16:29	0°♏	
	427 Jan 02 j 11:11	0°♐	
desc. node	427 Jan 09 j 17:56	5°♐12'02	
	427 Feb 13 j 00:41	0°♑	
	427 Mar 25 j 21:05	0°♒	
	427 May 06 j 00:20	0°♓	
	427 Jun 18 j 18:53	0°♈	
	427 Aug 16 j 03:23	0°♉	
retrograde	427 Sep 10 j 23:24	4°♉26'53	
	427 Oct 06 j 01:19	30°℞♈	
min. Earth dist.	427 Oct 10 j 05:12	28°♈34'15	0.48878 AU
opposition	427 Oct 18 j 06:08	25°♈38'33	-1°08'22
greatest brilliancy	427 Oct 17 j 22:28	25°♈45'32	-2.3m
asc. node	427 Nov 09 j 01:11	19°♈26'28	
direct	427 Nov 20 j 22:50	18°♈28'49	
	428 Jan 07 j 16:50	0°♉	
	428 Mar 07 j 13:40	0°♊	
	428 Apr 28 j 10:06	0°♋	
	428 Jun 16 j 20:33	0°♌	
	428 Aug 03 j 10:19	0°♍	
evening set	428 Aug 14 j 07:27	7°♍02'26	
max. Earth dist.	428 Sep 04 j 19:00	21°♍10'01	2.59212 AU
	428 Sep 17 j 23:43	0°♎	
conjunction	428 Sep 30 j 05:09	8°♎17'51	0°33'25
minimum elong	428 Sep 30 j 06:17	8°♎19'49	0°33'24
	428 Oct 31 j 10:46	0°♏	
morning rise	428 Nov 17 j 18:15	12°♏20'41	
desc. node	428 Nov 26 j 16:49	18°♏48'32	
	428 Dec 12 j 00:00	0°♐	
	429 Jan 21 j 01:11	0°♑	
	429 Mar 01 j 04:51	0°♒	
	429 Apr 09 j 06:10	0°♓	
	429 May 19 j 06:38	0°♈	
	429 Jun 30 j 21:37	0°♉	
	429 Aug 19 j 04:06	0°♊	
asc. node	429 Sep 26 j 00:43	16°♊16'21	
retrograde	429 Oct 22 j 07:24	20°♊30'47	
min. Earth dist.	429 Nov 25 j 20:55	12°♊38'38	0.60619 AU
greatest brilliancy	429 Nov 30 j 11:19	10°♊49'09	-1.6m
opposition	429 Dec 01 j 00:12	10°♊36'21	2°39'49
direct	430 Jan 07 j 16:18	1°♊51'00	
	430 Apr 02 j 20:10	0°♋	
	430 May 27 j 04:30	0°♌	
	430 Jul 15 j 10:11	0°♍	
	430 Aug 30 j 09:39	0°♎	
evening set	430 Sep 24 j 19:58	17°♎26'02	
max. Earth dist.	430 Oct 09 j 08:16	27°♎39'26	2.47947 AU
	430 Oct 12 j 15:10	0°♏	
desc. node	430 Oct 14 j 16:00	1°♏27'19	
conjunction	430 Nov 16 j 02:01	25°♏08'17	-0°20'22
minimum elong	430 Nov 16 j 00:54	25°♏06'12	0°20'21
	430 Nov 22 j 14:14	0°♐	
	430 Dec 31 j 21:41	0°♑	
morning rise	431 Jan 13 j 23:55	10°♑10'36	
	431 Feb 08 j 07:49	0°♒	
	431 Mar 18 j 17:01	0°♓	
greatest brilliancy	431 Mar 22 j 02:21	2°♓37'38	1.2m
	431 Apr 26 j 22:49	0°♈	
	431 Jun 07 j 00:29	0°♉	
	431 Jul 21 j 03:21	0°♊	
asc. node	431 Aug 13 j 23:24	14°♊57'53	
	431 Sep 09 j 02:08	0°♋	
retrograde	431 Nov 26 j 21:08	26°♋42'35	
min. Earth dist.	432 Jan 04 j 18:17	17°♋24'10	0.66924 AU
opposition	432 Jan 06 j 02:00	16°♋52'25	4°18'33
greatest brilliancy	432 Jan 05 j 20:01	16°♋58'24	-1.3m
direct	432 Feb 15 j 06:23	7°♋15'15	
	432 Apr 29 j 19:30	0°♌	
	432 Jun 23 j 08:51	0°♍	
	432 Aug 09 j 21:02	0°♎	
desc. node	432 Aug 31 j 14:31	14°♎40'53	
	432 Sep 22 j 10:42	0°♏	
	432 Nov 02 j 06:17	0°♐	
evening set	432 Nov 15 j 13:44	10°♐07'15	
	432 Dec 11 j 06:06	0°♑	
conjunction	433 Jan 18 j 00:04	29°♑43'06	-1°04'39
minimum elong	433 Jan 17 j 23:18	29°♑41'34	1°04'38
	433 Jan 18 j 08:38	0°♒	
max. Earth dist.	433 Jan 23 j 03:19	3°♒46'26	2.37162 AU
	433 Feb 25 j 12:17	0°♓	
morning rise	433 Mar 29 j 04:26	24°♓23'52	
	433 Apr 05 j 14:08	0°♈	
	433 May 16 j 08:53	0°♉	
	433 Jun 28 j 12:18	0°♊	
asc. node	433 Jun 30 j 22:27	1°♊37'47	
	433 Aug 13 j 18:13	0°♋	
	433 Oct 04 j 03:28	0°♌	
	433 Dec 27 j 02:55	0°♍	
retrograde	433 Dec 30 j 15:36	0°♍04'37	
	434 Jan 03 j 03:19	30°℞♌	
opposition	434 Feb 08 j 04:18	20°♌46'34	4°30'17
greatest brilliancy	434 Feb 08 j 13:05	20°♌37'55	-1.3m
min. Earth dist.	434 Feb 10 j 18:01	19°♌45'45	0.66729 AU
direct	434 Mar 21 j 13:05	10°♌46'02	
	434 May 26 j 09:58	0°♍	
	434 Jul 18 j 18:41	0°♎	
desc. node	434 Jul 19 j 13:08	0°♎28'51	
	434 Sep 01 j 22:05	0°♏	
	434 Oct 13 j 04:15	0°♐	
	434 Nov 21 j 05:55	0°♑	
	434 Dec 29 j 08:48	0°♒	
evening set	435 Jan 23 j 15:34	19°♒53'41	
	435 Feb 05 j 14:26	0°♓	
	435 Mar 16 j 20:26	0°♈	
conjunction	435 Mar 30 j 10:16	10°♈06'08	-0°30'20
minimum elong	435 Mar 30 j 12:25	10°♈10'06	0°30'19
	435 Apr 26 j 19:33	0°♉	
max. Earth dist.	435 May 13 j 15:26	11°♉54'09	2.49059 AU
asc. node	435 May 18 j 21:58	15°♉34'57	
morning rise	435 May 29 j 22:34	23°♉11'57	
	435 Jun 08 j 21:46	0°♊	

	435 Jul 24 j 07:09	0°♋	
	435 Sep 10 j 05:07	0°♌	
	435 Nov 01 j 00:18	0°♍	
	436 Jan 06 j 12:50	0°♎	
retrograde	436 Feb 07 j 13:38	5°♎22'08	
	436 Mar 08 j 01:05	30°℞♍	
opposition	436 Mar 16 j 06:07	27°♍00'30	3°13'00
greatest brilliancy	436 Mar 17 j 00:15	26°♍43'19	-1.6m
min. Earth dist.	436 Mar 22 j 14:15	24°♍36'34	0.59991 AU
direct	436 Apr 26 j 04:02	17°♍11'46	
desc. node	436 Jun 05 j 12:58	26°♍03'34	
	436 Jun 14 j 21:02	0°♎	
	436 Aug 07 j 09:50	0°♏	
	436 Sep 19 j 20:34	0°♐	
	436 Oct 29 j 19:28	0°♑	
	436 Dec 07 j 11:09	0°♒	
	437 Jan 15 j 04:29	0°♓	
	437 Feb 23 j 23:09	0°♈	
evening set	437 Mar 28 j 03:52	23°♈23'50	
asc. node	437 Apr 04 j 19:54	28°♈50'44	
	437 Apr 06 j 11:07	0°♉	
	437 May 19 j 23:07	0°♊	
conjunction	437 May 22 j 21:14	1°♊58'03	0°28'08
minimum elong	437 May 22 j 19:58	1°♊55'55	0°28'07
max. Earth dist.	437 Jun 15 j 09:07	17°♊35'45	2.60278 AU
	437 Jul 04 j 08:39	0°♋	
morning rise	437 Jul 12 j 12:07	5°♋16'07	
	437 Aug 20 j 07:37	0°♌	
	437 Oct 07 j 15:35	0°♍	
	437 Nov 27 j 00:04	0°♎	
	438 Jan 22 j 06:21	0°♏	
retrograde	438 Mar 29 j 12:12	19°♏05'46	
desc. node	438 Apr 23 j 11:55	15°♏15'00	
opposition	438 May 02 j 14:18	12°♏21'18	-0°29'22
greatest brilliancy	438 May 02 j 18:08	12°♏18'04	-2.3m
min. Earth dist.	438 May 11 j 01:34	9°♏29'37	0.47836 AU
direct	438 Jun 09 j 03:26	4°♏04'36	
	438 Aug 19 j 08:22	0°♐	
	438 Oct 03 j 12:37	0°♑	
	438 Nov 13 j 12:55	0°♒	
	438 Dec 23 j 20:50	0°♓	
	439 Feb 02 j 23:19	0°♈	
asc. node	439 Feb 20 j 18:47	12°♈40'57	
	439 Mar 17 j 14:22	0°♉	
	439 Apr 30 j 23:38	0°♊	
evening set	439 May 15 j 23:03	9°♊52'50	
	439 Jun 15 j 21:31	0°♋	
conjunction	439 Jul 03 j 23:31	11°♋37'30	1°02'12
minimum elong	439 Jul 03 j 22:29	11°♋35'51	1°02'12
max. Earth dist.	439 Jul 10 j 16:13	15°♋54'37	2.66413 AU
	439 Aug 01 j 18:21	0°♌	
morning rise	439 Aug 18 j 19:46	10°♌50'52	
	439 Sep 17 j 23:13	0°♍	
	439 Nov 04 j 03:13	0°♎	
	439 Dec 21 j 09:13	0°♏	
	440 Feb 07 j 12:27	0°♐	
desc. node	440 Mar 10 j 10:48	18°♐59'07	
	440 Mar 30 j 07:27	0°♑	
retrograde	440 Jun 11 j 02:19	24°♑17'32	
opposition	440 Jul 11 j 06:24	19°♑19'05	-6°32'16
greatest brilliancy	440 Jul 11 j 14:51	19°♑13'27	-2.9m
min. Earth dist.	440 Jul 12 j 20:38	18°♑53'35	0.37657 AU
direct	440 Aug 10 j 16:10	14°♑11'28	
	440 Oct 03 j 04:04	0°♒	
	440 Nov 23 j 07:54	0°♓	

asc. node	441 Jan 07 j 18:36	29°♓39'14	
	441 Jan 08 j 07:12	0°♈	
	441 Feb 22 j 20:51	0°♉	
	441 Apr 10 j 03:45	0°♊	
	441 May 27 j 05:14	0°♋	
evening set	441 Jun 24 j 03:11	17°♋40'52	
	441 Jul 13 j 13:32	0°♌	
max. Earth dist.	441 Aug 02 j 01:41	12°♌24'33	2.67122 AU
conjunction	441 Aug 09 j 05:08	16°♌58'20	1°08'36
minimum elong	441 Aug 09 j 05:29	16°♌58'53	1°08'36
	441 Aug 29 j 12:14	0°♍	
morning rise	441 Sep 22 j 17:49	15°♍42'59	
	441 Oct 14 j 11:46	0°♎	
	441 Nov 28 j 06:10	0°♏	
	442 Jan 10 j 20:20	0°♐	
desc. node	442 Jan 26 j 10:04	10°♐53'29	
	442 Feb 22 j 12:04	0°♑	
	442 Apr 05 j 19:31	0°♒	
	442 May 19 j 09:01	0°♓	
	442 Jul 09 j 20:12	0°♈	
retrograde	442 Aug 21 j 12:22	11°♈13'14	
min. Earth dist.	442 Sep 17 j 21:23	6°♈09'54	0.43777 AU
opposition	442 Sep 25 j 19:41	3°♈30'32	-3°22'56
greatest brilliancy	442 Sep 24 j 22:35	3°♈48'16	-2.5m
	442 Oct 07 j 07:28	30°℞♓	
direct	442 Oct 27 j 15:44	27°♓13'51	
	442 Nov 18 j 01:05	0°♈	
asc. node	442 Nov 25 j 17:48	2°♈08'17	
	443 Jan 25 j 14:12	0°♉	
	443 Mar 18 j 17:31	0°♊	
	443 May 07 j 11:03	0°♋	
	443 Jun 25 j 01:01	0°♌	
evening set	443 Jul 31 j 12:52	23°♌04'18	
	443 Aug 11 j 07:33	0°♍	
max. Earth dist.	443 Aug 26 j 09:32	9°♍47'42	2.62441 AU
conjunction	443 Sep 15 j 14:13	23°♍06'42	0°48'21
minimum elong	443 Sep 15 j 15:27	23°♍08'46	0°48'21
	443 Sep 25 j 21:30	0°♎	
morning rise	443 Nov 01 j 02:42	24°♎45'53	
	443 Nov 08 j 14:32	0°♏	
desc. node	443 Dec 14 j 08:53	25°♏30'29	
	443 Dec 20 j 13:13	0°♐	
	444 Jan 30 j 01:36	0°♑	
	444 Mar 09 j 16:39	0°♒	
	444 Apr 18 j 06:00	0°♓	
	444 May 28 j 23:49	0°♈	
	444 Jul 12 j 09:13	0°♉	
	444 Sep 10 j 08:54	0°♊	
retrograde	444 Oct 07 j 02:37	4°♊31'05	
asc. node	444 Oct 12 j 15:58	4°♊17'51	
	444 Nov 01 j 09:57	30°℞♉	
min. Earth dist.	444 Nov 08 j 16:03	27°♉21'39	0.56542 AU
opposition	444 Nov 15 j 04:19	24°♉49'33	1°30'33
greatest brilliancy	444 Nov 14 j 18:49	24°♉58'49	-1.8m
direct	444 Dec 21 j 12:05	16°♉34'51	
	445 Feb 12 j 17:58	0°♊	
	445 Apr 13 j 13:30	0°♋	
	445 Jun 04 j 06:37	0°♌	
	445 Jul 22 j 16:26	0°♍	
	445 Sep 06 j 10:21	0°♎	
evening set	445 Sep 07 j 19:48	0°♎56'27	
max. Earth dist.	445 Sep 24 j 01:12	12°♎01'01	2.52795 AU
	445 Oct 19 j 17:09	0°♏	
conjunction	445 Oct 27 j 08:03	5°♏26'59	0°02'32

minimum elong	445 Oct 27 j 08:09	5°♏27'08	0°02'31
behind sun begin	445 Oct 26 j 10:40	4°♏48'36	
behind sun end	445 Oct 28 j 05:38	6°♏05'43	
desc. node	445 Oct 31 j 07:46	8°♏19'14	
	445 Nov 29 j 20:53	0°♐	
morning rise	445 Dec 20 j 03:38	15°♐15'39	
	446 Jan 08 j 10:19	0°♑	
	446 Feb 16 j 02:01	0°♒	
	446 Mar 26 j 15:46	0°♓	
	446 May 05 j 01:54	0°♈	
	446 Jun 15 j 11:15	0°♉	
	446 Jul 30 j 13:33	0°♊	
asc. node	446 Aug 30 j 15:35	18°♊15'48	
	446 Sep 23 j 02:37	0°♋	
retrograde	446 Nov 13 j 10:27	13°♋26'54	
min. Earth dist.	446 Dec 20 j 18:13	4°♋38'44	0.65216 AU
opposition	446 Dec 23 j 14:14	3°♋30'35	3°51'59
greatest brilliancy	446 Dec 23 j 03:48	3°♋41'02	-1.4m
	447 Jan 01 j 15:39	30°℞♊	
direct	447 Jan 31 j 22:41	24°♊09'47	
	447 Mar 06 j 12:43	0°♋	
	447 May 12 j 00:45	0°♌	
	447 Jul 02 j 16:09	0°♍	
	447 Aug 18 j 09:34	0°♎	
desc. node	447 Sep 18 j 07:07	21°♎09'55	
	447 Sep 30 j 18:28	0°♏	
evening set	447 Oct 25 j 01:45	17°♏39'57	
	447 Nov 10 j 14:26	0°♐	
max. Earth dist.	447 Nov 16 j 04:27	4°♐13'09	2.40154 AU
	447 Dec 19 j 16:26	0°♑	
conjunction	447 Dec 22 j 16:39	2°♑20'52	-0°53'42
minimum elong	447 Dec 22 j 14:10	2°♑16'02	0°53'41
	448 Jan 26 j 21:02	0°♒	
morning rise	448 Feb 28 j 11:34	25°♒38'00	
	448 Mar 05 j 01:52	0°♓	
	448 Apr 13 j 04:01	0°♈	
	448 May 23 j 23:17	0°♉	
	448 Jul 06 j 07:14	0°♊	
asc. node	448 Jul 17 j 14:21	7°♊28'17	
	448 Aug 22 j 08:16	0°♋	
	448 Oct 16 j 08:15	0°♌	
retrograde	448 Dec 16 j 22:26	17°♌19'31	
opposition	449 Jan 25 j 20:45	7°♌46'21	4°35'07
greatest brilliancy	449 Jan 25 j 23:37	7°♌43'30	-1.3m
min. Earth dist.	449 Jan 26 j 21:50	7°♌21'26	0.67609 AU
	449 Feb 17 j 15:41	30°℞♋	
direct	449 Mar 07 j 22:32	27°♋51'41	
	449 Mar 27 j 09:32	0°♌	
	449 Jun 07 j 14:45	0°♍	
	449 Jul 27 j 15:07	0°♎	
desc. node	449 Aug 05 j 06:06	5°♎36'52	
	449 Sep 09 j 22:42	0°♏	
	449 Oct 20 j 22:48	0°♐	
	449 Nov 28 j 22:34	0°♑	
evening set	449 Dec 26 j 10:52	21°♑39'23	
	450 Jan 06 j 00:07	0°♒	
	450 Feb 13 j 03:41	0°♓	
conjunction	450 Mar 04 j 00:08	14°♓35'13	-0°52'11
minimum elong	450 Mar 04 j 03:08	14°♓40'59	0°52'10
	450 Mar 24 j 06:44	0°♈	
max. Earth dist.	450 Apr 23 j 23:37	22°♈41'57	2.43694 AU
	450 May 04 j 02:31	0°♉	
morning rise	450 May 08 j 14:55	3°♉13'38	
asc. node	450 Jun 04 j 12:39	22°♉04'25	
	450 Jun 16 j 03:05	0°♊	
	450 Jul 31 j 16:21	0°♋	
	450 Sep 18 j 09:55	0°♌	
	450 Nov 12 j 11:32	0°♍	
retrograde	451 Jan 22 j 13:45	21°♍17'49	
opposition	451 Mar 02 j 03:32	12°♍30'39	3°55'23
greatest brilliancy	451 Mar 02 j 19:45	12°♍15'00	-1.5m
min. Earth dist.	451 Mar 07 j 01:25	10°♍36'49	0.63394 AU
direct	451 Apr 12 j 11:37	2°♍31'30	
desc. node	451 Jun 23 j 04:38	25°♍34'36	
	451 Jul 01 j 07:49	0°♎	
	451 Aug 18 j 13:37	0°♏	
	451 Sep 29 j 18:57	0°♐	
	451 Nov 08 j 06:13	0°♑	
	451 Dec 16 j 14:43	0°♒	
	452 Jan 24 j 01:33	0°♓	
	452 Mar 03 j 13:28	0°♈	
evening set	452 Mar 05 j 00:53	1°♈05'54	
	452 Apr 13 j 18:32	0°♉	
asc. node	452 Apr 21 j 12:30	5°♉28'52	
conjunction	452 May 03 j 16:22	13°♉59'12	0°07'30
minimum elong	452 May 03 j 15:56	13°♉58'26	0°07'30
behind sun begin	452 May 02 j 18:55	13°♉21'56	
behind sun end	452 May 04 j 12:57	14°♉34'55	
	452 May 27 j 00:53	0°♊	
max. Earth dist.	452 Jun 03 j 21:25	5°♊17'53	2.56409 AU
morning rise	452 Jun 26 j 11:38	20°♊18'12	
	452 Jul 11 j 08:06	0°♋	
	452 Aug 27 j 12:13	0°♌	
	452 Oct 15 j 17:07	0°♍	
	452 Dec 07 j 19:44	0°♎	
	453 Feb 24 j 23:46	0°♏	
retrograde	453 Mar 07 j 12:25	0°♏38'47	
	453 Mar 17 j 16:43	30°℞♎	
opposition	453 Apr 12 j 06:27	23°♎10'05	1°20'25
greatest brilliancy	453 Apr 12 j 17:24	23°♎00'15	-2.0m
min. Earth dist.	453 Apr 20 j 08:40	20°♎15'57	0.53022 AU
desc. node	453 May 10 j 03:31	14°♎56'46	
direct	453 May 21 j 15:18	14°♎02'34	
	453 Jul 15 j 04:15	0°♏	
	453 Sep 02 j 18:44	0°♐	
	453 Oct 14 j 15:18	0°♑	
	453 Nov 23 j 06:51	0°♒	
	454 Jan 01 j 17:44	0°♓	
	454 Feb 11 j 03:46	0°♈	
asc. node	454 Mar 09 j 11:39	18°♈55'59	
	454 Mar 25 j 05:11	0°♉	
evening set	454 Apr 28 j 08:37	23°♉24'57	
	454 May 08 j 03:53	0°♊	
conjunction	454 Jun 18 j 11:54	27°♊12'51	0°52'20
minimum elong	454 Jun 18 j 10:30	27°♊10'36	0°52'19
	454 Jun 22 j 19:01	0°♋	
max. Earth dist.	454 Jul 01 j 10:19	5°♋34'49	2.64640 AU
morning rise	454 Aug 04 j 18:11	27°♋32'55	
	454 Aug 08 j 14:44	0°♌	
	454 Sep 25 j 02:40	0°♍	
	454 Nov 12 j 03:18	0°♎	
	454 Dec 31 j 08:25	0°♏	
	455 Feb 22 j 12:05	0°♐	
desc. node	455 Mar 28 j 02:48	15°♐38'20	
retrograde	455 May 11 j 00:34	25°♐31'41	
opposition	455 Jun 11 j 06:37	20°♐06'18	-4°24'37
greatest brilliancy	455 Jun 12 j 04:12	19°♐50'41	-2.7m
min. Earth dist.	455 Jun 17 j 10:18	18°♐20'00	0.40320 AU
direct	455 Jul 14 j 08:15	13°♐52'05	
	455 Sep 05 j 14:51	0°♑	

	455 Oct 24 j 17:22	0°♒	
	455 Dec 07 j 08:01	0°♓	
	456 Jan 19 j 10:34	0°♈	
asc. node	456 Jan 25 j 09:57	4°♈07'18	
	456 Mar 03 j 10:36	0°♉	
	456 Apr 17 j 18:44	0°♊	
	456 Jun 03 j 06:43	0°♋	
evening set	456 Jun 09 j 02:41	3°♋43'33	
	456 Jul 20 j 08:50	0°♌	
max. Earth dist.	456 Jul 23 j 22:48	2°♌16'49	2.67487 AU
conjunction	456 Jul 25 j 23:19	3°♌34'01	1°09'18
minimum elong	456 Jul 25 j 23:07	3°♌33'42	1°09'18
	456 Sep 05 j 08:11	0°♍	
morning rise	456 Sep 08 j 15:40	2°♍07'42	
	456 Oct 21 j 15:57	0°♎	
	456 Dec 06 j 03:41	0°♏	
	457 Jan 19 j 22:01	0°♐	
desc. node	457 Feb 12 j 01:40	15°♐37'51	
	457 Mar 05 j 08:40	0°♑	
	457 Apr 19 j 15:30	0°♒	
	457 Jun 10 j 02:13	0°♓	
retrograde	457 Jul 28 j 07:48	13°♓32'42	
min. Earth dist.	457 Aug 23 j 22:25	9°♓03'16	0.39509 AU
opposition	457 Aug 29 j 22:21	7°♓17'13	-5°42'01
greatest brilliancy	457 Aug 28 j 21:56	7°♓35'19	-2.8m
direct	457 Sep 29 j 02:58	1°♓55'21	
asc. node	457 Dec 12 j 09:28	27°♓14'01	
	457 Dec 17 j 11:56	0°♈	
	458 Feb 06 j 20:14	0°♉	
	458 Mar 27 j 16:37	0°♊	
	458 May 15 j 01:47	0°♋	
	458 Jul 02 j 01:21	0°♌	
evening set	458 Jul 17 j 00:27	9°♌27'13	
max. Earth dist.	458 Aug 16 j 16:54	29°♌04'20	2.64900 AU
	458 Aug 18 j 03:24	0°♍	
conjunction	458 Aug 31 j 17:40	8°♍49'21	0°59'21
minimum elong	458 Aug 31 j 18:42	8°♍51'02	0°59'20
	458 Oct 02 j 19:41	0°♎	
morning rise	458 Oct 16 j 00:23	8°♎52'12	
	458 Nov 15 j 20:38	0°♏	
	458 Dec 28 j 07:22	0°♐	
desc. node	458 Dec 31 j 01:07	1°♐58'16	
	459 Feb 07 j 10:38	0°♑	
	459 Mar 19 j 18:13	0°♒	
	459 Apr 29 j 03:32	0°♓	
	459 Jun 10 j 07:47	0°♈	
	459 Jul 29 j 08:53	0°♉	
retrograde	459 Sep 21 j 09:36	16°♉24'22	
min. Earth dist.	459 Oct 21 j 19:40	10°♉03'16	0.51752 AU
opposition	459 Oct 29 j 11:02	7°♉11'10	-0°02'41
greatest brilliancy	458 May 19 j 08:10	2°♋39'12	1.7m
asc. node	459 Oct 30 j 08:31	6°♉51'03	
	459 Nov 25 j 08:11	30°℞♈	
direct	459 Dec 03 j 04:38	29°♈35'28	
	459 Dec 11 j 05:53	0°♉	
	460 Feb 29 j 00:57	0°♊	
	460 Apr 22 j 19:09	0°♋	
	460 Jun 11 j 21:58	0°♌	
	460 Jul 29 j 18:29	0°♍	
evening set	460 Aug 22 j 22:59	15°♍42'57	
max. Earth dist.	460 Sep 11 j 08:14	28°♍36'46	2.57132 AU
	460 Sep 13 j 09:42	0°♎	
conjunction	460 Oct 09 j 13:56	17°♎54'32	0°23'06
minimum elong	460 Oct 09 j 14:50	17°♎56'07	0°23'06
	460 Oct 26 j 19:42	0°♏	
desc. node	460 Nov 17 j 00:45	15°♏12'00	
morning rise	460 Nov 28 j 16:00	23°♏41'11	
	460 Dec 07 j 05:38	0°♐	
	461 Jan 16 j 02:28	0°♑	
	461 Feb 24 j 01:11	0°♒	
	461 Apr 03 j 21:06	0°♓	
	461 May 13 j 14:22	0°♈	
	461 Jun 24 j 13:53	0°♉	
	461 Aug 10 j 14:16	0°♊	
asc. node	461 Sep 16 j 06:22	18°♊44'41	
retrograde	461 Oct 30 j 14:20	29°♊28'02	
min. Earth dist.	461 Dec 05 j 04:48	21°♊14'14	0.62533 AU
opposition	461 Dec 09 j 12:26	19°♊30'50	3°11'18
greatest brilliancy	461 Dec 08 j 23:32	19°♊43'43	-1.5m
direct	462 Jan 16 j 20:05	10°♊31'09	
	462 Mar 25 j 11:36	0°♋	
	462 May 21 j 11:12	0°♌	
	462 Jul 10 j 10:32	0°♍	
	462 Aug 25 j 16:11	0°♎	
desc. node	462 Oct 04 j 23:20	27°♎51'33	
evening set	462 Oct 05 j 04:13	28°♎00'14	
	462 Oct 07 j 23:26	0°♏	
max. Earth dist.	462 Oct 20 j 02:36	8°♏44'02	2.45148 AU
	462 Nov 17 j 21:49	0°♐	
conjunction	462 Nov 28 j 09:04	7°♐53'59	-0°33'29
minimum elong	462 Nov 28 j 07:12	7°♐50'27	0°33'28
	462 Dec 27 j 03:39	0°♑	
morning rise	463 Jan 29 j 13:33	26°♑07'45	
	463 Feb 03 j 11:44	0°♒	
	463 Mar 13 j 18:47	0°♓	
	463 Apr 21 j 22:16	0°♈	
	463 Jun 01 j 19:46	0°♉	
	463 Jul 15 j 12:19	0°♊	
asc. node	463 Aug 04 j 06:14	12°♊42'57	
	463 Sep 01 j 22:59	0°♋	
	463 Nov 05 j 21:42	0°♌	
retrograde	463 Dec 04 j 13:29	4°♌35'34	
	463 Dec 31 j 01:01	30°℞♋	
opposition	464 Jan 13 j 16:59	24°♋50'31	4°28'14
min. Earth dist.	464 Jan 13 j 05:40	25°♋01'50	0.67449 AU
greatest brilliancy	464 Jan 13 j 14:01	24°♋53'29	-1.3m
direct	464 Feb 23 j 06:11	15°♋05'53	
	464 Apr 20 j 18:28	0°♌	
	464 Jun 17 j 12:10	0°♍	
	464 Aug 04 j 18:19	0°♎	
desc. node	464 Aug 21 j 21:42	11°♎26'41	
	464 Sep 17 j 14:09	0°♏	
	464 Oct 28 j 11:25	0°♐	
evening set	464 Nov 29 j 13:43	24°♐37'05	
	464 Dec 06 j 11:22	0°♑	
	465 Jan 13 j 13:27	0°♒	
conjunction	465 Feb 03 j 06:15	16°♒20'04	-1°04'23
minimum elong	465 Feb 03 j 07:17	16°♒22'04	1°04'23
	465 Feb 20 j 16:41	0°♓	
max. Earth dist.	465 Mar 18 j 04:32	19°♓41'46	2.38648 AU
	465 Mar 31 j 18:20	0°♈	
morning rise	465 Apr 13 j 18:14	9°♈43'37	
	465 May 11 j 12:22	0°♉	
asc. node	465 Jun 21 j 06:07	28°♉26'55	
	465 Jun 23 j 13:04	0°♊	
	465 Aug 08 j 10:00	0°♋	
	465 Sep 27 j 11:40	0°♌	
	465 Nov 29 j 01:47	0°♍	
retrograde	466 Jan 07 j 18:05	7°♍58'16	

	466 Feb 13 j 00:19	30°℞♌	
opposition	466 Feb 16 j 00:03	28°♌50'10	4°21'22
greatest brilliancy	466 Feb 16 j 11:52	28°♌38'35	-1.4m
min. Earth dist.	466 Feb 19 j 10:04	27°♌29'49	0.65825 AU
direct	466 Mar 29 j 10:33	18°♌48'19	
	466 May 16 j 00:31	0°♍	
desc. node	466 Jul 09 j 20:53	28°♍23'47	
	466 Jul 12 j 12:43	0°♎	
	466 Aug 27 j 12:56	0°♏	
	466 Oct 08 j 02:10	0°♐	
	466 Nov 16 j 06:47	0°♑	
	466 Dec 24 j 11:04	0°♒	
	467 Jan 31 j 17:41	0°♓	
evening set	467 Feb 08 j 04:56	5°♓46'48	
	467 Mar 12 j 00:53	0°♈	
conjunction	467 Apr 13 j 00:02	23°♈30'28	-0°16'18
minimum elong	467 Apr 13 j 01:09	23°♈32'30	0°16'18
	467 Apr 22 j 01:03	0°♉	
asc. node	467 May 09 j 04:17	12°♉06'28	
max. Earth dist.	467 May 22 j 11:51	21°♉20'58	2.51857 AU
	467 Jun 04 j 03:35	0°♊	
morning rise	467 Jun 09 j 21:02	3°♊52'25	
	467 Jul 19 j 10:45	0°♋	
	467 Sep 04 j 23:53	0°♌	
	467 Oct 25 j 13:19	0°♍	
	467 Dec 23 j 04:44	0°♎	
retrograde	468 Feb 17 j 11:04	14°♎24'39	
opposition	468 Mar 25 j 12:55	6°♎19'55	2°38'45
greatest brilliancy	468 Mar 26 j 06:11	6°♎03'48	-1.7m
min. Earth dist.	468 Apr 01 j 14:04	3°♎42'14	0.57728 AU
	468 Apr 12 j 16:31	30°℞♍	
direct	468 May 05 j 01:12	26°♍41'37	
desc. node	468 May 26 j 19:39	29°♍35'11	
	468 May 28 j 10:02	0°♎	
	468 Jul 30 j 23:25	0°♏	
	468 Sep 13 j 18:44	0°♐	
	468 Oct 24 j 05:53	0°♑	
	468 Dec 02 j 04:08	0°♒	
	469 Jan 10 j 01:59	0°♓	
	469 Feb 19 j 00:32	0°♈	
asc. node	469 Mar 26 j 03:23	25°♈23'48	
	469 Apr 01 j 15:42	0°♉	
evening set	469 Apr 09 j 01:19	5°♉11'25	
	469 May 15 j 06:09	0°♊	
conjunction	469 Jun 01 j 22:31	11°♊48'30	0°38'13
minimum elong	469 Jun 01 j 21:03	11°♊46'06	0°38'12
max. Earth dist.	469 Jun 21 j 12:26	24°♊40'53	2.62055 AU
	469 Jun 29 j 16:31	0°♋	
morning rise	469 Jul 21 j 04:09	13°♋50'57	
	469 Aug 15 j 13:16	0°♌	
	469 Oct 02 j 12:06	0°♍	
	469 Nov 20 j 19:12	0°♎	
	470 Jan 12 j 10:26	0°♏	
	470 Mar 27 j 21:38	0°♐	
retrograde	470 Apr 12 j 14:54	1°♐26'23	
desc. node	470 Apr 13 j 18:29	1°♐25'53	
	470 Apr 27 j 18:15	30°℞♏	
opposition	470 May 15 j 17:22	25°♏09'48	-1°48'14
greatest brilliancy	470 May 16 j 06:11	24°♏59'25	-2.4m
min. Earth dist.	470 May 23 j 20:52	22°♏32'23	0.44929 AU
direct	470 Jun 20 j 20:11	17°♏32'17	
	470 Aug 05 j 21:08	0°♐	
	470 Sep 25 j 06:56	0°♑	
	470 Nov 06 j 18:59	0°♒	
	470 Dec 17 j 21:33	0°♓	

	471 Jan 28 j 12:37	0°♈	
asc. node	471 Feb 11 j 02:46	9°♈36'08	
	471 Mar 12 j 12:38	0°♉	
	471 Apr 26 j 04:10	0°♊	
evening set	471 May 25 j 08:47	19°♊05'48	
	471 Jun 11 j 05:48	0°♋	
conjunction	471 Jul 12 j 11:09	19°♋59'52	1°05'59
minimum elong	471 Jul 12 j 10:24	19°♋58'41	1°05'59
max. Earth dist.	471 Jul 16 j 00:10	22°♋15'25	2.67029 AU
	471 Jul 28 j 03:50	0°♌	
morning rise	471 Aug 26 j 18:10	18°♌50'37	
	471 Sep 13 j 06:06	0°♍	
	471 Oct 30 j 01:50	0°♎	
	471 Dec 15 j 13:56	0°♏	
	472 Jan 31 j 03:49	0°♐	
desc. node	472 Feb 29 j 18:49	18°♐45'45	
	472 Mar 19 j 00:07	0°♑	
	472 May 12 j 16:34	0°♒	
retrograde	472 Jun 29 j 04:04	12°♒25'05	
min. Earth dist.	472 Jul 28 j 02:54	7°♒41'59	0.37434 AU
opposition	472 Jul 29 j 16:38	7°♒16'49	-6°53'29
greatest brilliancy	472 Jul 29 j 09:53	7°♒21'19	-2.9m
direct	472 Aug 28 j 05:53	2°♒21'49	
	472 Nov 12 j 18:20	0°♓	
asc. node	472 Dec 29 j 00:43	28°♓06'37	
	473 Jan 01 j 00:27	0°♈	
	473 Feb 16 j 22:49	0°♉	
	473 Apr 04 j 22:43	0°♊	
	473 May 22 j 09:34	0°♋	
evening set	473 Jul 02 j 12:49	25°♋56'41	
	473 Jul 08 j 22:37	0°♌	
max. Earth dist.	473 Aug 07 j 09:26	18°♌44'15	2.66569 AU
conjunction	473 Aug 17 j 08:28	25°♌07'27	1°06'20
minimum elong	473 Aug 17 j 09:06	25°♌08'29	1°06'20
	473 Aug 24 j 22:13	0°♍	
morning rise	473 Sep 30 j 23:49	24°♍10'26	
	473 Oct 09 j 19:05	0°♎	
	473 Nov 23 j 07:01	0°♏	
	474 Jan 05 j 10:24	0°♐	
desc. node	474 Jan 16 j 17:40	7°♐59'59	
	474 Feb 16 j 11:01	0°♑	
	474 Mar 29 j 20:41	0°♒	
	474 May 10 j 19:04	0°♓	
	474 Jun 25 j 11:25	0°♈	
retrograde	474 Sep 02 j 12:12	25°♈17'25	
min. Earth dist.	474 Sep 30 j 19:36	19°♈48'11	0.46543 AU
opposition	474 Oct 08 j 23:58	16°♈55'17	-2°03'23
greatest brilliancy	474 Oct 08 j 10:13	17°♈07'25	-2.4m
direct	474 Nov 10 j 20:48	10°♈08'31	
asc. node	474 Nov 15 j 23:48	10°♈18'41	
	475 Jan 15 j 17:14	0°♉	
	475 Mar 12 j 08:02	0°♊	
	475 May 02 j 04:03	0°♋	
	475 Jun 20 j 05:32	0°♌	
	475 Aug 06 j 16:46	0°♍	
evening set	475 Aug 08 j 22:46	1°♍27'01	
max. Earth dist.	475 Sep 01 j 08:39	16°♍43'14	2.60754 AU
	475 Sep 21 j 07:16	0°♎	
conjunction	475 Sep 24 j 09:23	2°♎04'49	0°40'10
minimum elong	475 Sep 24 j 10:37	2°♎06'52	0°40'10
	475 Nov 03 j 21:58	0°♏	
morning rise	475 Nov 10 j 21:50	4°♏56'21	
desc. node	475 Dec 04 j 16:16	21°♏59'01	
	475 Dec 15 j 16:04	0°♐	

	476 Jan 24 j 22:41	0°♉	
	476 Mar 04 j 07:24	0°♒	
	476 Apr 12 j 13:10	0°♓	
	476 May 22 j 19:13	0°♈	
	476 Jul 04 j 22:26	0°♉	
	476 Aug 25 j 14:51	0°♊	
asc. node	476 Oct 02 j 23:37	13°♊10'25	
retrograde	476 Oct 15 j 23:28	14°♊17'30	
min. Earth dist.	476 Nov 18 j 15:52	6°♊43'32	0.58886 AU
opposition	476 Nov 24 j 09:53	4°♊27'30	2°13'25
greatest brilliancy	476 Nov 23 j 21:43	4°♊39'31	-1.7m
	476 Dec 06 j 14:12	30°℞♉	
direct	476 Dec 31 j 11:45	25°♉54'57	
	477 Jan 27 j 17:23	0°♊	
	477 Apr 06 j 19:34	0°♋	
	477 May 29 j 22:49	0°♌	
	477 Jul 17 j 20:37	0°♍	
	477 Sep 01 j 18:50	0°♎	
evening set	477 Sep 17 j 07:52	10°♎34'14	
max. Earth dist.	477 Oct 02 j 07:39	20°♎58'31	2.50176 AU
	477 Oct 15 j 02:14	0°♏	
desc. node	477 Oct 21 j 15:22	4°♏41'00	
conjunction	477 Nov 07 j 05:25	16°♏42'57	-0°10'27
minimum elong	477 Nov 07 j 04:52	16°♏41'56	0°10'27
behind sun begin	477 Nov 06 j 11:19	16°♏09'49	
behind sun end	477 Nov 07 j 22:26	17°♏14'06	
	477 Nov 25 j 04:15	0°♐	
morning rise	478 Jan 02 j 16:32	29°♐16'49	
	478 Jan 03 j 14:55	0°♑	
	478 Feb 11 j 03:38	0°♒	
	478 Mar 21 j 14:20	0°♓	
	478 Apr 29 j 21:01	0°♈	
	478 Jun 10 j 00:07	0°♉	
	478 Jul 24 j 09:06	0°♊	
asc. node	478 Aug 20 j 22:35	16°♊56'29	
	478 Sep 13 j 14:10	0°♋	
retrograde	478 Nov 21 j 05:10	21°♋34'36	
min. Earth dist.	478 Dec 29 j 10:11	12°♋28'54	0.66282 AU
opposition	478 Dec 31 j 09:43	11°♋41'15	4°09'10
greatest brilliancy	478 Dec 31 j 01:35	11°♋49'24	-1.4m
direct	479 Feb 09 j 05:18	2°♋10'49	
	479 May 05 j 00:26	0°♌	
	479 Jun 27 j 06:11	0°♍	
	479 Aug 13 j 11:26	0°♎	
desc. node	479 Sep 08 j 13:56	17°♎43'38	
	479 Sep 26 j 00:34	0°♏	
	479 Nov 05 j 21:24	0°♐	
evening set	479 Nov 06 j 10:08	0°♐23'59	
max. Earth dist.	479 Dec 11 j 11:26	27°♐17'27	2.37966 AU
	479 Dec 14 j 22:53	0°♑	
conjunction	480 Jan 06 j 17:19	17°♑51'53	-1°01'28
minimum elong	480 Jan 06 j 15:28	17°♑48'14	1°01'28
	480 Jan 22 j 02:30	0°♒	
	480 Feb 29 j 06:10	0°♓	
morning rise	480 Mar 16 j 10:02	12°♓32'13	
	480 Apr 08 j 07:11	0°♈	
	480 May 19 j 00:43	0°♉	
	480 Jul 01 j 03:57	0°♊	
asc. node	480 Jul 07 j 21:16	4°♊29'47	
	480 Aug 16 j 14:44	0°♋	
	480 Oct 08 j 01:23	0°♌	
retrograde	480 Dec 24 j 18:22	25°♌05'25	
opposition	481 Feb 02 j 11:49	15°♌40'20	4°33'40
greatest brilliancy	481 Feb 02 j 18:04	15°♌34'10	-1.3m
min. Earth dist.	481 Feb 04 j 09:34	14°♌55'03	0.67244 AU
direct	481 Mar 15 j 17:52	5°♌41'46	
	481 May 31 j 03:42	0°♍	
	481 Jul 21 j 23:25	0°♎	
desc. node	481 Jul 26 j 12:22	2°♎53'26	
	481 Sep 04 j 19:28	0°♏	
	481 Oct 16 j 00:01	0°♐	
	481 Nov 24 j 01:33	0°♑	
	482 Jan 01 j 04:01	0°♒	
evening set	482 Jan 11 j 07:48	8°♒01'14	
	482 Feb 08 j 08:14	0°♓	
conjunction	482 Mar 19 j 06:33	29°♓49'45	-0°40'26
minimum elong	482 Mar 19 j 09:20	29°♓54'59	0°40'24
	482 Mar 19 j 12:00	0°♈	
	482 Apr 29 j 08:20	0°♉	
max. Earth dist.	482 May 05 j 20:45	4°♉39'08	2.46684 AU
morning rise	482 May 21 j 01:34	15°♉21'16	
asc. node	482 May 25 j 20:49	18°♉41'38	
	482 Jun 11 j 08:08	0°♊	
	482 Jul 26 j 17:23	0°♋	
	482 Sep 12 j 21:05	0°♌	
	482 Nov 04 j 16:51	0°♍	
retrograde	483 Jan 31 j 12:46	29°♍40'47	
opposition	483 Mar 10 j 15:19	21°♍07'12	3°32'46
greatest brilliancy	483 Mar 11 j 08:58	20°♍50'19	-1.5m
min. Earth dist.	483 Mar 16 j 08:42	18°♍55'50	0.61624 AU
direct	483 Apr 20 j 18:55	11°♍12'25	
desc. node	483 Jun 13 j 12:16	25°♍38'06	
	483 Jun 22 j 12:47	0°♎	
	483 Aug 12 j 08:03	0°♏	
	483 Sep 24 j 05:39	0°♐	
	483 Nov 02 j 23:32	0°♑	
	483 Dec 11 j 11:50	0°♒	
	484 Jan 19 j 01:30	0°♓	
	484 Feb 27 j 16:06	0°♈	
evening set	484 Mar 18 j 11:47	14°♈34'00	
	484 Apr 08 j 23:46	0°♉	
asc. node	484 Apr 11 j 19:01	1°♉59'03	
conjunction	484 May 14 j 20:57	24°♉56'23	0°19'51
minimum elong	484 May 14 j 19:57	24°♉54'39	0°19'50
	484 May 22 j 07:51	0°♊	
max. Earth dist.	484 Jun 10 j 14:56	12°♊55'41	2.58653 AU
morning rise	484 Jul 05 j 19:02	29°♊27'23	
	484 Jul 06 j 15:06	0°♋	
	484 Aug 22 j 15:04	0°♌	
	484 Oct 10 j 06:12	0°♍	
	484 Nov 30 j 13:24	0°♎	
	485 Jan 30 j 02:12	0°♏	
retrograde	485 Mar 19 j 12:44	11°♏13'32	
opposition	485 Apr 23 j 09:25	4°♏08'02	0°21'45
greatest brilliancy	485 Apr 23 j 12:44	4°♏05'09	-2.2m
desc. node	485 Apr 30 j 11:20	1°♏39'26	
min. Earth dist.	485 May 01 j 18:46	1°♏12'32	0.50200 AU
	485 May 05 j 10:50	30°℞♎	
direct	485 May 31 j 19:56	25°♎25'25	
	485 Jun 27 j 20:14	0°♏	
	485 Aug 25 j 15:53	0°♐	
	485 Oct 08 j 01:09	0°♑	
	485 Nov 17 j 08:38	0°♒	
	485 Dec 27 j 05:18	0°♓	
	486 Feb 05 j 22:41	0°♈	
asc. node	486 Feb 27 j 17:36	15°♈36'34	
	486 Mar 20 j 06:04	0°♉	
	486 May 03 j 09:10	0°♊	
evening set	486 May 08 j 14:33	3°♊28'27	
	486 Jun 18 j 03:04	0°♋	

conjunction	486 Jun 27 j 11:35	6°♋02'13	0°58'35
minimum elong	486 Jun 27 j 10:23	6°♋00'16	0°58'35
max. Earth dist.	486 Jul 06 j 23:12	12°♋07'47	2.65736 AU
	486 Aug 03 j 22:50	0°♌	
morning rise	486 Aug 12 j 21:07	5°♌40'34	
	486 Sep 20 j 06:18	0°♍	
	486 Nov 06 j 18:36	0°♎	
	486 Dec 24 j 18:30	0°♏	
	487 Feb 12 j 13:37	0°♐	
desc. node	487 Mar 18 j 09:50	18°♐40'01	
	487 Apr 11 j 07:47	0°♑	
retrograde	487 May 28 j 20:22	11°♑35'56	
opposition	487 Jun 28 j 05:37	6°♑31'07	-5°46'31
greatest brilliancy	487 Jun 28 j 23:18	6°♑19'00	-2.8m
min. Earth dist.	487 Jul 02 j 03:51	5°♑26'40	0.38524 AU
direct	487 Jul 29 j 17:15	0°♑58'57	
	487 Oct 14 j 04:54	0°♒	
	487 Nov 29 j 19:18	0°♓	
	488 Jan 13 j 05:12	0°♈	
asc. node	488 Jan 15 j 17:14	1°♈41'26	
	488 Feb 26 j 23:12	0°♉	
	488 Apr 12 j 18:06	0°♊	
	488 May 29 j 12:37	0°♋	
evening set	488 Jun 17 j 19:21	12°♋15'27	
	488 Jul 15 j 17:55	0°♌	
max. Earth dist.	488 Jul 29 j 05:42	8°♌35'01	2.67392 AU
conjunction	488 Aug 03 j 04:00	11°♌43'30	1°09'22
minimum elong	488 Aug 03 j 04:08	11°♌43'43	1°09'22
	488 Aug 31 j 16:59	0°♍	
morning rise	488 Sep 16 j 16:36	10°♍19'02	
	488 Oct 16 j 20:34	0°♎	
	488 Nov 30 j 22:43	0°♏	
	489 Jan 14 j 00:43	0°♐	
desc. node	489 Feb 02 j 09:21	13°♐21'08	
	489 Feb 26 j 09:09	0°♑	
	489 Apr 10 j 17:04	0°♒	
	489 May 26 j 07:52	0°♓	
	489 Aug 07 j 03:17	0°♈	
retrograde	489 Aug 11 j 12:11	0°♈08'24	
	489 Aug 15 j 20:47	30°℞♓	
min. Earth dist.	489 Sep 07 j 08:04	25°♓23'45	0.41681 AU
opposition	489 Sep 14 j 16:35	23°♓03'25	-4°25'29
greatest brilliancy	489 Sep 13 j 15:55	23°♓23'07	-2.7m
direct	489 Oct 15 j 17:06	17°♓12'11	
asc. node	489 Dec 02 j 16:35	29°♓17'34	
	489 Dec 04 j 07:37	0°♈	
	490 Jan 30 j 11:26	0°♉	
	490 Mar 21 j 22:20	0°♊	
	490 May 10 j 00:16	0°♋	
	490 Jun 27 j 07:47	0°♌	
evening set	490 Jul 25 j 07:57	17°♌41'32	
	490 Aug 13 j 12:47	0°♍	
max. Earth dist.	490 Aug 22 j 08:35	5°♍42'41	2.63647 AU
conjunction	490 Sep 09 j 04:04	17°♍21'47	0°53'26
minimum elong	490 Sep 09 j 05:15	17°♍23'43	0°53'25
	490 Sep 28 j 04:41	0°♎	
morning rise	490 Oct 25 j 01:00	18°♎12'12	
	490 Nov 11 j 02:07	0°♏	
desc. node	490 Dec 21 j 08:25	28°♏36'02	
	490 Dec 23 j 06:49	0°♐	
	491 Feb 02 j 01:58	0°♑	
	491 Mar 14 j 00:01	0°♒	
	491 Apr 22 j 20:31	0°♓	
	491 Jun 03 j 01:14	0°♈	
	491 Jul 18 j 16:48	0°♉	
retrograde	491 Oct 01 j 04:30	27°♉27'40	
asc. node	491 Oct 20 j 14:57	24°♉43'19	
min. Earth dist.	491 Nov 01 j 19:00	20°♉38'55	0.54472 AU
opposition	491 Nov 08 j 20:05	17°♉56'30	0°54'22
greatest brilliancy	491 Nov 08 j 13:48	18°♉02'33	-2.0m
direct	491 Dec 14 j 11:33	9°♉57'58	
	492 Feb 20 j 03:31	0°♊	
	492 Apr 16 j 20:12	0°♋	
	492 Jun 06 j 20:05	0°♌	
	492 Jul 25 j 00:41	0°♍	
evening set	492 Aug 31 j 21:51	24°♍43'43	
	492 Sep 08 j 18:33	0°♎	
max. Earth dist.	492 Sep 18 j 10:45	6°♎33'19	2.54812 AU
conjunction	492 Oct 19 j 11:32	28°♎06'02	0°11'36
minimum elong	492 Oct 19 j 12:03	28°♎06'56	0°11'36
behind sun begin	492 Oct 18 j 21:02	27°♎40'26	
behind sun end	492 Oct 20 j 03:03	28°♎33'27	
	492 Oct 22 j 03:55	0°♏	
desc. node	492 Nov 07 j 06:57	11°♏32'57	
	492 Dec 02 j 11:24	0°♐	
morning rise	492 Dec 10 j 11:08	5°♐57'14	
	493 Jan 11 j 04:42	0°♑	
	493 Feb 18 j 23:47	0°♒	
	493 Mar 29 j 15:51	0°♓	
	493 May 08 j 03:52	0°♈	
	493 Jun 18 j 16:55	0°♉	
	493 Aug 03 j 08:04	0°♊	
asc. node	493 Sep 06 j 14:25	19°♊16'56	
	493 Sep 30 j 14:58	0°♋	
retrograde	493 Nov 07 j 15:09	8°♋01'38	
	493 Dec 12 j 20:33	30°℞♊	
min. Earth dist.	493 Dec 14 j 04:45	29°♊28'01	0.64130 AU
opposition	493 Dec 17 j 16:27	28°♊04'10	3°37'00
greatest brilliancy	493 Dec 17 j 04:34	28°♊16'05	-1.5m
direct	494 Jan 25 j 13:56	18°♊52'09	
	494 Mar 15 j 00:40	0°♋	
	494 May 15 j 09:48	0°♌	
	494 Jul 05 j 07:58	0°♍	
	494 Aug 20 j 21:31	0°♎	
desc. node	494 Sep 25 j 06:16	24°♎18'15	
	494 Oct 03 j 06:57	0°♏	
evening set	494 Oct 16 j 04:23	9°♏16'59	
max. Earth dist.	494 Nov 02 j 15:29	22°♏06'34	2.42306 AU
	494 Nov 13 j 04:57	0°♐	
conjunction	494 Dec 11 j 17:25	21°♐44'31	-0°45'44
minimum elong	494 Dec 11 j 15:02	21°♐39'54	0°45'42
	494 Dec 22 j 09:08	0°♑	
	495 Jan 29 j 15:28	0°♒	
morning rise	495 Feb 15 j 05:19	13°♒02'53	
	495 Mar 08 j 20:55	0°♓	
	495 Apr 16 j 22:45	0°♈	
	495 May 27 j 17:40	0°♉	
	495 Jul 10 j 02:55	0°♊	
asc. node	495 Jul 25 j 13:40	10°♊07'38	
	495 Aug 26 j 13:35	0°♋	
	495 Oct 23 j 00:08	0°♌	
retrograde	495 Dec 12 j 05:34	12°♌21'28	
opposition	496 Jan 21 j 06:29	2°♌42'42	4°33'38
greatest brilliancy	496 Jan 21 j 06:45	2°♌42'26	-1.3m
min. Earth dist.	496 Jan 21 j 15:35	2°♌33'37	0.67665 AU
	496 Jan 28 j 03:50	30°℞♋	
direct	496 Mar 02 j 02:52	22°♋51'58	
	496 Apr 08 j 15:22	0°♌	
	496 Jun 11 j 06:09	0°♍	
	496 Jul 30 j 12:44	0°♎	

desc. node	496 Aug 12 j 05:38	8°♎21'34	
	496 Sep 12 j 16:29	0°♏	
	496 Oct 23 j 16:23	0°♐	
	496 Dec 01 j 16:42	0°♑	
evening set	496 Dec 14 j 10:14	9°♑59'11	
	497 Jan 08 j 18:31	0°♒	
	497 Feb 15 j 21:22	0°♓	
conjunction	497 Feb 19 j 15:05	2°♓54'49	-0°59'05
minimum elong	497 Feb 19 j 17:35	2°♓59'40	0°59'03
	497 Mar 26 j 22:44	0°♈	
max. Earth dist.	497 Apr 11 j 21:03	11°♈54'12	2.41306 AU
morning rise	497 Apr 28 j 07:12	23°♈56'47	
	497 May 06 j 16:28	0°♉	
asc. node	497 Jun 11 j 11:41	25°♉07'15	
	497 Jun 18 j 15:21	0°♊	
	497 Aug 03 j 05:55	0°♋	
	497 Sep 21 j 09:10	0°♌	
	497 Nov 17 j 12:37	0°♍	
retrograde	498 Jan 16 j 02:55	15°♍58'51	
opposition	498 Feb 24 j 00:24	7°♍01'54	4°07'48
greatest brilliancy	498 Feb 24 j 14:53	6°♍47'49	-1.4m
min. Earth dist.	498 Feb 28 j 06:36	5°♍22'28	0.64611 AU
	498 Mar 15 j 22:22	30°℞♌	
direct	498 Apr 06 j 10:11	27°♌00'34	
	498 Apr 29 j 06:48	0°♍	
desc. node	498 Jun 30 j 04:16	26°♍50'21	
	498 Jul 05 j 16:55	0°♎	
	498 Aug 21 j 22:22	0°♏	
	498 Oct 02 j 21:26	0°♐	
	498 Nov 11 j 06:08	0°♑	
	498 Dec 19 j 12:45	0°♒	
	499 Jan 26 j 21:03	0°♓	
evening set	499 Feb 23 j 02:12	20°♓51'36	
	499 Mar 07 j 05:40	0°♈	
	499 Apr 17 j 07:12	0°♉	
conjunction	499 Apr 25 j 15:21	5°♉55'07	-0°02'25
minimum elong	499 Apr 25 j 15:31	5°♉55'24	0°02'25
behind sun begin	499 Apr 24 j 15:23	5°♉12'47	
behind sun end	499 Apr 26 j 15:39	6°♉37'59	
asc. node	499 Apr 29 j 11:12	8°♉36'56	
max. Earth dist.	499 May 30 j 11:20	0°♊01'49	2.54451 AU
	499 May 30 j 10:16	0°♊	
morning rise	499 Jun 20 j 03:44	13°♊54'49	
	499 Jul 14 j 16:04	0°♋	
	499 Aug 30 j 22:22	0°♌	
	499 Oct 19 j 14:14	0°♍	
	499 Dec 13 j 09:52	0°♎	
retrograde	500 Feb 27 j 23:45	23°♎52'30	
opposition	500 Apr 04 j 08:29	16°♎06'45	1°56'49
greatest brilliancy	500 Apr 04 j 22:59	15°♎53'28	-1.9m
min. Earth dist.	500 Apr 12 j 00:19	13°♎18'29	0.55213 AU
direct	500 May 14 j 06:48	6°♎43'10	
desc. node	500 May 17 j 02:56	6°♎46'25	
	500 Jul 22 j 04:14	0°♏	
	500 Sep 07 j 05:15	0°♐	
	500 Oct 18 j 09:28	0°♑	
	500 Nov 26 j 16:33	0°♒	
	501 Jan 04 j 20:37	0°♓	
	501 Feb 14 j 00:06	0°♈	
asc. node	501 Mar 16 j 10:52	21°♈58'53	
	501 Mar 27 j 19:33	0°♉	
evening set	501 Apr 20 j 06:34	16°♉15'26	
	501 May 10 j 13:02	0°♊	
conjunction	501 Jun 11 j 13:10	21°♊12'40	0°46'54
minimum elong	501 Jun 11 j 11:42	21°♊10'15	0°46'54
	501 Jun 25 j 00:54	0°♋	
max. Earth dist.	501 Jun 27 j 08:57	1°♋30'52	2.63582 AU
morning rise	501 Jul 29 j 14:38	22°♋13'27	
	501 Aug 10 j 20:04	0°♌	
	501 Sep 27 j 11:56	0°♍	
	501 Nov 15 j 00:11	0°♎	
	502 Jan 04 j 09:59	0°♏	
	502 Mar 02 j 19:27	0°♐	
desc. node	502 Apr 04 j 02:10	11°♐39'46	
retrograde	502 Apr 27 j 23:36	14°♐53'38	
opposition	502 May 30 j 01:48	9°♐06'06	-3°15'25
greatest brilliancy	502 May 30 j 21:36	8°♐51'00	-2.6m
min. Earth dist.	502 Jun 06 j 10:40	6°♐52'06	0.42232 AU
direct	502 Jul 03 j 13:30	2°♐13'43	
	502 Sep 15 j 03:06	0°♑	
	502 Oct 30 j 06:31	0°♒	
	502 Dec 11 j 12:41	0°♓	
	503 Jan 22 j 20:13	0°♈	
asc. node	503 Feb 01 j 09:16	6°♈40'10	
	503 Mar 07 j 07:33	0°♉	
	503 Apr 21 j 06:41	0°♊	
evening set	503 Jun 03 j 11:27	28°♊01'39	
	503 Jun 06 j 13:10	0°♋	
conjunction	503 Jul 20 j 19:53	28°♋16'27	1°08'23
minimum elong	503 Jul 20 j 19:28	28°♋15'47	1°08'24
max. Earth dist.	503 Jul 21 j 06:14	28°♋32'56	2.67383 AU
	503 Jul 23 j 12:57	0°♌	
morning rise	503 Sep 03 j 17:18	26°♌54'06	
	503 Sep 08 j 13:26	0°♍	
	503 Oct 25 j 02:30	0°♎	
	503 Dec 10 j 00:22	0°♏	
	504 Jan 24 j 11:57	0°♐	
desc. node	504 Feb 20 j 01:14	17°♐30'36	
	504 Mar 10 j 03:23	0°♑	
	504 Apr 26 j 21:55	0°♒	
	504 Jul 06 j 21:24	0°♓	
retrograde	504 Jul 16 j 05:04	0°♓35'07	
	504 Jul 25 j 10:35	30°℞♒	
min. Earth dist.	504 Aug 12 j 08:54	26°♒07'23	0.38230 AU
opposition	504 Aug 16 j 15:44	24°♒55'51	-6°27'26
greatest brilliancy	504 Aug 15 j 20:48	25°♒09'04	-2.9m
direct	504 Sep 15 j 07:49	19°♒52'07	
	504 Oct 27 j 21:14	0°♓	
asc. node	504 Dec 19 j 08:09	27°♓25'17	
	504 Dec 23 j 16:58	0°♈	
	505 Feb 10 j 15:54	0°♉	
	505 Mar 30 j 13:40	0°♊	
	505 May 17 j 11:57	0°♋	
	505 Jul 04 j 06:38	0°♌	
evening set	505 Jul 10 j 20:16	4°♌09'01	
max. Earth dist.	505 Aug 12 j 18:32	25°♌08'00	2.65749 AU
	505 Aug 20 j 07:54	0°♍	
conjunction	505 Aug 25 j 13:18	3°♍22'35	1°02'45
minimum elong	505 Aug 25 j 14:11	3°♍24'02	1°02'44
	505 Oct 05 j 02:55	0°♎	
morning rise	505 Oct 09 j 11:34	2°♎54'33	
	505 Nov 18 j 09:11	0°♏	
	505 Dec 31 j 03:38	0°♐	
desc. node	506 Jan 07 j 00:34	4°♐54'42	
	506 Feb 10 j 15:57	0°♑	
	506 Mar 23 j 09:58	0°♒	
	506 May 03 j 08:10	0°♓	
	506 Jun 15 j 13:08	0°♈	
	506 Aug 08 j 14:39	0°♉	

retrograde	506 Sep 13 j 13:58	8°♉07'12	
min. Earth dist.	506 Oct 13 j 00:10	2°♉09'13	0.49445 AU
	506 Oct 18 j 21:36	30°℞♈	
opposition	506 Oct 20 j 23:52	29°♈13'45	-0°50'52
greatest brilliancy	506 Oct 20 j 18:12	29°♈18'56	-2.2m
asc. node	506 Nov 06 j 07:36	24°♈04'11	
direct	506 Nov 23 j 22:45	21°♈58'36	
	507 Jan 01 j 16:52	0°♉	
	507 Mar 05 j 08:30	0°♊	
	507 Apr 26 j 16:33	0°♋	
	507 Jun 15 j 08:00	0°♌	
	507 Aug 02 j 01:03	0°♍	
evening set	507 Aug 17 j 10:45	9°♍57'50	
max. Earth dist.	507 Sep 07 j 14:37	23°♍54'26	2.58845 AU
	507 Sep 16 j 17:05	0°♎	
conjunction	507 Oct 03 j 11:04	11°♎22'15	0°30'46
minimum elong	507 Oct 03 j 12:09	11°♎24'06	0°30'45
	507 Oct 30 j 06:07	0°♏	
morning rise	507 Nov 21 j 06:23	15°♏42'49	
desc. node	507 Nov 25 j 00:07	18°♏25'12	
	507 Dec 10 j 20:32	0°♐	
	508 Jan 19 j 22:00	0°♑	
	508 Feb 28 j 01:03	0°♒	
	508 Apr 07 j 00:38	0°♓	
	508 May 16 j 21:39	0°♈	
	508 Jun 28 j 05:13	0°♉	
	508 Aug 15 j 11:41	0°♊	
asc. node	508 Sep 23 j 05:44	17°♊47'21	
retrograde	508 Oct 24 j 12:09	23°♊35'38	
min. Earth dist.	508 Nov 28 j 06:22	15°♊38'38	0.61021 AU
opposition	508 Dec 03 j 05:16	13°♊40'23	2°49'28
greatest brilliancy	508 Dec 02 j 16:05	13°♊53'31	-1.6m
direct	509 Jan 09 j 23:47	4°♊51'58	
	509 Mar 30 j 05:54	0°♋	
	509 May 24 j 09:34	0°♌	
	509 Jul 12 j 22:25	0°♍	
	509 Aug 28 j 02:12	0°♎	
evening set	509 Sep 27 j 05:49	20°♎40'21	
	509 Oct 10 j 10:46	0°♏	
desc. node	509 Oct 11 j 22:47	1°♏04'11	
max. Earth dist.	509 Oct 11 j 19:11	0°♏57'46	2.47440 AU
conjunction	509 Nov 18 j 19:53	28°♏45'08	-0°23'39
minimum elong	509 Nov 18 j 18:35	28°♏42'42	0°23'38
	509 Nov 20 j 11:56	0°♐	
	509 Dec 29 j 20:30	0°♑	
morning rise	510 Jan 17 j 08:21	14°♑23'05	
	510 Feb 06 j 06:48	0°♒	
greatest brilliancy	510 Feb 12 j 16:43	5°♒01'52	1.2m
	510 Mar 16 j 15:04	0°♓	
	510 Apr 24 j 18:48	0°♈	
	510 Jun 04 j 16:55	0°♉	
	510 Jul 18 j 13:17	0°♊	
asc. node	510 Aug 11 j 05:02	15°♊00'25	
	510 Sep 05 j 18:56	0°♋	
retrograde	510 Nov 28 j 22:21	29°♋33'23	
min. Earth dist.	511 Jan 06 j 22:57	20°♋11'33	0.67057 AU
opposition	511 Jan 08 j 02:20	19°♋44'06	4°21'51
greatest brilliancy	511 Jan 07 j 20:56	19°♋49'30	-1.3m
direct	511 Feb 17 j 07:45	10°♋05'12	
	511 Apr 26 j 23:56	0°♌	
	511 Jun 21 j 14:29	0°♍	
	511 Aug 08 j 11:03	0°♎	
desc. node	511 Aug 29 j 21:07	14°♎23'51	
	511 Sep 21 j 05:14	0°♏	
	511 Nov 01 j 03:30	0°♐	
evening set	511 Nov 19 j 16:06	14°♐05'49	
	511 Dec 10 j 04:44	0°♑	
	512 Jan 17 j 07:41	0°♒	
conjunction	512 Jan 22 j 14:03	4°♒09'32	-1°05'01
minimum elong	512 Jan 22 j 13:41	4°♒08'48	1°05'02
max. Earth dist.	512 Feb 07 j 03:40	16°♒26'17	2.37261 AU
	512 Feb 24 j 10:50	0°♓	
morning rise	512 Apr 01 j 18:41	28°♓43'18	
	512 Apr 03 j 11:17	0°♈	
	512 May 14 j 03:43	0°♉	
	512 Jun 26 j 03:37	0°♊	
asc. node	512 Jun 28 j 04:59	1°♊23'23	
	512 Aug 11 j 03:40	0°♋	
	512 Sep 30 j 22:15	0°♌	
	512 Dec 09 j 23:01	0°♍	
retrograde	513 Jan 01 j 17:23	2°♍53'56	
	513 Jan 22 j 23:00	30°℞♌	
opposition	513 Feb 10 j 04:51	23°♌37'51	4°27'52
greatest brilliancy	513 Feb 10 j 14:17	23°♌28'33	-1.3m
min. Earth dist.	513 Feb 12 j 22:47	22°♌32'54	0.66588 AU
direct	513 Mar 23 j 13:47	13°♌36'42	
	513 May 22 j 08:56	0°♍	
desc. node	513 Jul 16 j 20:11	0°♎29'31	
	513 Jul 16 j 01:05	0°♎	
	513 Aug 30 j 13:42	0°♏	
	513 Oct 11 j 00:11	0°♐	
	513 Nov 19 j 03:52	0°♑	
	513 Dec 27 j 07:18	0°♒	
greatest brilliancy	514 Jan 05 j 19:41	7°♒30'21	1.2m
evening set	514 Jan 27 j 04:26	24°♒17'08	
	514 Feb 03 j 12:21	0°♓	
	514 Mar 14 j 16:58	0°♈	
conjunction	514 Apr 02 j 15:27	14°♈04'24	-0°26'52
minimum elong	514 Apr 02 j 17:22	14°♈07'55	0°26'50
	514 Apr 24 j 14:10	0°♉	
max. Earth dist.	514 May 15 j 20:45	15°♉02'25	2.49601 AU
asc. node	514 May 16 j 03:20	15°♉13'54	
morning rise	514 Jun 01 j 15:24	26°♉37'44	
	514 Jun 06 j 14:01	0°♊	
	514 Jul 21 j 20:26	0°♋	
	514 Sep 07 j 13:33	0°♌	
	514 Oct 28 j 20:36	0°♍	
	514 Dec 30 j 19:47	0°♎	
retrograde	515 Feb 09 j 23:42	8°♎23'51	
opposition	515 Mar 19 j 13:00	0°♎05'30	3°03'47
	515 Mar 19 j 18:50	30°℞♍	
greatest brilliancy	515 Mar 20 j 06:53	29°♍48'36	-1.6m
min. Earth dist.	515 Mar 26 j 00:09	27°♍38'54	0.59581 AU
direct	515 Apr 29 j 09:01	20°♍18'14	
desc. node	515 Jun 03 j 19:08	27°♍19'40	
	515 Jun 10 j 17:54	0°♎	
	515 Aug 05 j 12:46	0°♏	
	515 Sep 18 j 10:49	0°♐	
	515 Oct 28 j 14:12	0°♑	
	515 Dec 06 j 07:36	0°♒	
	516 Jan 14 j 01:02	0°♓	
	516 Feb 22 j 18:43	0°♈	
evening set	516 Mar 31 j 00:35	27°♈01'52	
asc. node	516 Apr 02 j 02:10	28°♈29'50	
	516 Apr 04 j 05:06	0°♉	
	516 May 17 j 15:17	0°♊	
conjunction	516 May 25 j 09:13	5°♊12'49	0°30'58
minimum elong	516 May 25 j 07:51	5°♊10'33	0°30'57
max. Earth dist.	516 Jun 17 j 00:29	20°♊14'13	2.60631 AU

	516 Jul 01 j 23:03	0°♋	
morning rise	516 Jul 14 j 17:18	8°♋15'21	
	516 Aug 17 j 20:02	0°♌	
	516 Oct 05 j 00:36	0°♍	
	516 Nov 24 j 00:46	0°♎	
	517 Jan 17 j 23:54	0°♏	
retrograde	517 Apr 01 j 15:40	22°♏43'42	
desc. node	517 Apr 20 j 17:30	20°♏26'57	
opposition	517 May 05 j 13:54	16°♏04'12	-0°48'16
greatest brilliancy	517 May 05 j 20:01	15°♏59'03	-2.3m
min. Earth dist.	517 May 13 j 23:47	13°♏15'07	0.47272 AU
direct	517 Jun 11 j 19:40	7°♏54'39	
	517 Aug 15 j 10:01	0°♐	
	517 Sep 30 j 16:36	0°♑	
	517 Nov 11 j 00:48	0°♒	
	517 Dec 21 j 11:51	0°♓	
	518 Jan 31 j 15:18	0°♈	
asc. node	518 Feb 18 j 01:43	12°♈24'57	
	518 Mar 15 j 06:09	0°♉	
	518 Apr 28 j 14:39	0°♊	
evening set	518 May 18 j 07:41	12°♊59'30	
	518 Jun 13 j 11:48	0°♋	
conjunction	518 Jul 06 j 03:25	14°♋33'22	1°03'22
minimum elong	518 Jul 06 j 02:28	14°♋31'50	1°03'22
max. Earth dist.	518 Jul 12 j 08:59	18°♋32'26	2.66556 AU
	518 Jul 30 j 08:10	0°♌	
morning rise	518 Aug 20 j 20:44	13°♌41'27	
	518 Sep 15 j 12:30	0°♍	
	518 Nov 01 j 15:02	0°♎	
	518 Dec 18 j 17:07	0°♏	
	519 Feb 04 j 10:45	0°♐	
desc. node	519 Mar 08 j 17:40	19°♐32'09	
	519 Mar 26 j 23:59	0°♑	
retrograde	519 Jun 16 j 02:46	29°♑03'18	
opposition	519 Jul 16 j 07:59	24°♑04'56	-6°41'24
greatest brilliancy	519 Jul 16 j 13:33	24°♑01'14	-2.9m
min. Earth dist.	519 Jul 17 j 06:42	23°♑49'51	0.37514 AU
direct	519 Aug 15 j 11:16	19°♑01'47	
	519 Sep 27 j 23:32	0°♒	
	519 Nov 20 j 21:27	0°♓	
asc. node	520 Jan 05 j 23:38	29°♓41'31	
	520 Jan 06 j 10:55	0°♈	
	520 Feb 21 j 05:58	0°♉	
	520 Apr 07 j 15:10	0°♊	
	520 May 24 j 17:50	0°♋	
evening set	520 Jun 26 j 07:08	20°♋36'11	
	520 Jul 11 j 03:03	0°♌	
max. Earth dist.	520 Aug 03 j 12:40	14°♌53'00	2.67045 AU
conjunction	520 Aug 11 j 07:01	19°♌50'42	1°08'04
minimum elong	520 Aug 11 j 07:27	19°♌51'25	1°08'04
	520 Aug 27 j 02:40	0°♍	
morning rise	520 Sep 24 j 19:26	18°♍37'16	
	520 Oct 12 j 02:58	0°♎	
	520 Nov 25 j 21:33	0°♏	
	521 Jan 08 j 10:56	0°♐	
desc. node	521 Jan 23 j 17:07	10°♐41'17	
	521 Feb 20 j 00:26	0°♑	
	521 Apr 03 j 03:07	0°♒	
	521 May 16 j 04:42	0°♓	
	521 Jul 04 j 08:48	0°♈	
retrograde	521 Aug 24 j 10:32	15°♈20'44	
min. Earth dist.	521 Sep 20 j 21:55	10°♈13'57	0.44258 AU
opposition	521 Sep 28 j 23:37	7°♈30'25	-3°03'10
greatest brilliancy	521 Sep 28 j 04:07	7°♈46'55	-2.5m
direct	521 Oct 30 j 23:45	1°♈08'18	
asc. node	521 Nov 22 j 22:22	4°♈17'00	
	522 Jan 21 j 21:36	0°♉	
	522 Mar 15 j 19:28	0°♊	
	522 May 04 j 19:21	0°♋	
	522 Jun 22 j 12:47	0°♌	
evening set	522 Aug 02 j 16:06	25°♌59'20	
	522 Aug 08 j 21:54	0°♍	
max. Earth dist.	522 Aug 28 j 03:29	12°♍29'10	2.62150 AU
conjunction	522 Sep 17 j 18:30	26°♍06'53	0°46'13
minimum elong	522 Sep 17 j 19:44	26°♍08'58	0°46'12
	522 Sep 23 j 13:56	0°♎	
morning rise	522 Nov 03 j 10:41	27°♎57'56	
	522 Nov 06 j 08:29	0°♏	
desc. node	522 Dec 11 j 15:37	25°♏08'43	
	522 Dec 18 j 08:03	0°♐	
	523 Jan 27 j 20:38	0°♑	
	523 Mar 08 j 11:04	0°♒	
	523 Apr 16 j 22:30	0°♓	
	523 May 27 j 11:41	0°♈	
	523 Jul 10 j 08:23	0°♉	
	523 Sep 04 j 09:23	0°♊	
retrograde	523 Oct 10 j 10:02	7°♊45'19	
asc. node	523 Oct 10 j 22:28	7°♊45'12	
min. Earth dist.	523 Nov 12 j 04:21	0°♊30'33	0.56994 AU
	523 Nov 13 j 11:56	30°℞♉	
opposition	523 Nov 18 j 12:24	28°♉01'57	1°43'02
greatest brilliancy	523 Nov 18 j 01:54	28°♉12'15	-1.8m
direct	523 Dec 24 j 22:57	19°♉43'37	
	524 Feb 08 j 12:18	0°♊	
	524 Apr 10 j 10:27	0°♋	
	524 Jun 01 j 14:18	0°♌	
	524 Jul 20 j 05:27	0°♍	
	524 Sep 04 j 03:03	0°♎	
evening set	524 Sep 10 j 02:54	4°♎02'48	
max. Earth dist.	524 Sep 26 j 02:28	14°♎59'19	2.52320 AU
	524 Oct 17 j 12:28	0°♏	
desc. node	524 Oct 28 j 14:24	7°♏55'24	
conjunction	524 Oct 29 j 20:44	8°♏49'59	-0°00'49
minimum elong	524 Oct 29 j 20:44	8°♏49'59	0°00'48
behind sun begin	524 Oct 28 j 23:01	8°♏10'54	
behind sun end	524 Oct 30 j 18:27	9°♏29'07	
	524 Nov 27 j 17:54	0°♐	
morning rise	524 Dec 23 j 03:36	19°♐08'19	
	525 Jan 06 j 08:05	0°♑	
	525 Feb 13 j 23:40	0°♒	
	525 Mar 24 j 12:23	0°♓	
	525 May 02 j 20:20	0°♈	
	525 Jun 13 j 01:34	0°♉	
	525 Jul 27 j 18:53	0°♊	
asc. node	525 Aug 27 j 21:43	18°♊36'03	
	525 Sep 18 j 19:38	0°♋	
retrograde	525 Nov 15 j 12:17	16°♋20'32	
min. Earth dist.	525 Dec 22 j 23:43	7°♋28'32	0.65439 AU
opposition	525 Dec 25 j 15:18	6°♋24'43	3°57'32
greatest brilliancy	525 Dec 25 j 05:14	6°♋34'50	-1.4m
	526 Jan 12 j 16:18	30°℞♊	
direct	526 Feb 03 j 00:58	27°♊01'59	
	526 Feb 26 j 07:12	0°♋	
	526 May 08 j 19:19	0°♌	
	526 Jun 30 j 00:46	0°♍	
	526 Aug 16 j 00:37	0°♎	
desc. node	526 Sep 15 j 13:22	20°♎49'18	
	526 Sep 28 j 13:32	0°♏	
evening set	526 Oct 27 j 20:56	21°♏18'54	
	526 Nov 08 j 12:05	0°♐	

max. Earth dist.	526 Nov 20 j 07:03	8°♐55'20	2.39706 AU
	526 Dec 17 j 15:26	0°♑	
conjunction	526 Dec 25 j 23:20	6°♑30'14	-0°55'52
minimum elong	526 Dec 25 j 20:57	6°♑25'35	0°55'51
	527 Jan 24 j 20:17	0°♒	
morning rise	527 Mar 04 j 05:25	0°♓09'53	
	527 Mar 04 j 00:20	0°♓	
	527 Apr 12 j 00:46	0°♈	
	527 May 22 j 17:21	0°♉	
	527 Jul 04 j 21:08	0°♊	
asc. node	527 Jul 15 j 20:09	7°♊17'20	
	527 Aug 20 j 14:13	0°♋	
	527 Oct 13 j 10:37	0°♌	
retrograde	527 Dec 19 j 23:58	20°♌07'33	
opposition	528 Jan 28 j 20:44	10°♌36'01	4°35'00
greatest brilliancy	528 Jan 29 j 00:20	10°♌32'26	-1.3m
min. Earth dist.	528 Jan 30 j 02:11	10°♌06'44	0.67555 AU
direct	528 Mar 09 j 22:27	0°♌40'24	
	528 Jun 04 j 08:33	0°♍	
	528 Jul 25 j 01:05	0°♎	
desc. node	528 Aug 02 j 11:58	5°♎27'34	
	528 Sep 07 j 15:15	0°♏	
	528 Oct 18 j 18:59	0°♐	
	528 Nov 26 j 20:43	0°♑	
evening set	528 Dec 29 j 23:38	26°♑04'06	
	529 Jan 03 j 23:00	0°♒	
	529 Feb 11 j 02:16	0°♓	
conjunction	529 Mar 07 j 12:00	18°♓51'42	-0°49'35
minimum elong	529 Mar 07 j 15:02	18°♓57'29	0°49'34
	529 Mar 22 j 04:04	0°♈	
max. Earth dist.	529 Apr 26 j 16:01	26°♈13'17	2.44259 AU
	529 May 01 j 21:50	0°♉	
morning rise	529 May 11 j 14:03	6°♉54'26	
asc. node	529 Jun 01 j 19:42	21°♉46'34	
	529 Jun 13 j 19:41	0°♊	
	529 Jul 29 j 05:12	0°♋	
	529 Sep 15 j 15:56	0°♌	
	529 Nov 08 j 19:19	0°♍	
retrograde	530 Jan 24 j 19:05	24°♍10'07	
opposition	530 Mar 04 j 06:20	15°♍25'31	3°49'15
greatest brilliancy	530 Mar 04 j 22:50	15°♍09'35	-1.5m
min. Earth dist.	530 Mar 09 j 08:06	13°♍27'58	0.63077 AU
direct	530 Apr 14 j 13:14	5°♍26'37	
desc. node	530 Jun 20 j 11:29	26°♍04'12	
	530 Jun 27 j 22:15	0°♎	
	530 Aug 15 j 23:54	0°♏	
	530 Sep 27 j 11:55	0°♐	
	530 Nov 06 j 02:04	0°♑	
	530 Dec 14 j 11:37	0°♒	
	531 Jan 21 j 22:22	0°♓	
	531 Mar 02 j 09:22	0°♈	
evening set	531 Mar 09 j 06:02	5°♈05'58	
	531 Apr 12 j 13:01	0°♉	
asc. node	531 Apr 19 j 18:14	5°♉06'53	
conjunction	531 May 07 j 10:26	17°♉28'00	0°10'50
minimum elong	531 May 07 j 09:49	17°♉26'56	0°10'49
behind sun begin	531 May 06 j 16:31	16°♉57'00	
behind sun end	531 May 08 j 03:07	17°♉56'49	
	531 May 25 j 17:39	0°♊	
max. Earth dist.	531 Jun 06 j 14:54	8°♊00'50	2.56873 AU
morning rise	531 Jun 29 j 19:57	23°♊23'38	
	531 Jul 09 j 22:52	0°♋	
	531 Aug 26 j 00:15	0°♌	
	531 Oct 13 j 23:56	0°♍	
	531 Dec 05 j 11:13	0°♎	
	532 Feb 12 j 09:51	0°♏	
retrograde	532 Mar 10 j 06:04	3°♏52'33	
	532 Apr 04 j 04:30	30°℞♎	
opposition	532 Apr 14 j 19:29	26°♎27'48	1°06'01
greatest brilliancy	532 Apr 15 j 04:41	26°♎19'34	-2.0m
min. Earth dist.	532 Apr 22 j 22:32	23°♎33'23	0.52512 AU
desc. node	532 May 07 j 10:46	19°♎16'42	
direct	532 May 23 j 23:33	17°♎24'03	
	532 Jul 10 j 12:50	0°♏	
	532 Aug 30 j 22:42	0°♐	
	532 Oct 12 j 04:52	0°♑	
	532 Nov 20 j 23:47	0°♒	
	532 Dec 30 j 11:37	0°♓	
	533 Feb 08 j 21:19	0°♈	
asc. node	533 Mar 06 j 16:36	18°♈34'37	
	533 Mar 22 j 21:46	0°♉	
evening set	533 Apr 30 j 22:49	26°♉44'36	
	533 May 05 j 19:19	0°♊	
conjunction	533 Jun 20 j 19:11	0°♋15'47	0°54'13
minimum elong	533 Jun 20 j 17:50	0°♋13'35	0°54'12
	533 Jun 20 j 09:27	0°♋	
max. Earth dist.	533 Jul 03 j 01:08	8°♋10'24	2.64889 AU
morning rise	533 Aug 06 j 20:21	0°♌25'36	
	533 Aug 06 j 04:15	0°♌	
	533 Sep 22 j 14:53	0°♍	
	533 Nov 09 j 12:25	0°♎	
	533 Dec 28 j 09:40	0°♏	
	534 Feb 18 j 12:17	0°♐	
desc. node	534 Mar 25 j 09:18	17°♐07'38	
retrograde	534 May 14 j 21:36	29°♐44'37	
opposition	534 Jun 14 j 21:18	24°♐23'53	-4°44'39
greatest brilliancy	534 Jun 15 j 19:16	24°♐08'10	-2.7m
min. Earth dist.	534 Jun 20 j 16:53	22°♐44'17	0.39936 AU
direct	534 Jul 17 j 17:09	18°♐17'54	
	534 Aug 31 j 00:23	0°♑	
	534 Oct 21 j 11:50	0°♒	
	534 Dec 04 j 14:47	0°♓	
	535 Jan 16 j 21:48	0°♈	
asc. node	535 Jan 22 j 16:09	3°♈58'05	
	535 Mar 01 j 23:24	0°♉	
	535 Apr 16 j 07:55	0°♊	
	535 Jun 01 j 20:02	0°♋	
evening set	535 Jun 12 j 08:21	6°♋42'44	
	535 Jul 18 j 22:29	0°♌	
max. Earth dist.	535 Jul 26 j 12:40	4°♌49'48	2.67498 AU
conjunction	535 Jul 29 j 02:05	6°♌27'33	1°09'26
minimum elong	535 Jul 29 j 01:59	6°♌27'23	1°09'26
	535 Sep 03 j 22:20	0°♍	
morning rise	535 Sep 11 j 16:53	4°♍59'52	
	535 Oct 20 j 06:12	0°♎	
	535 Dec 04 j 16:59	0°♏	
	536 Jan 18 j 08:39	0°♐	
desc. node	536 Feb 10 j 08:51	15°♐36'05	
	536 Mar 02 j 13:42	0°♑	
	536 Apr 16 j 07:49	0°♒	
	536 Jun 04 j 15:25	0°♓	
retrograde	536 Jul 31 j 14:28	18°♓07'23	
min. Earth dist.	536 Aug 27 j 06:28	13°♓35'39	0.39871 AU
opposition	536 Sep 02 j 13:35	11°♓42'17	-5°25'40
greatest brilliancy	536 Sep 01 j 12:45	12°♓01'01	-2.8m
direct	536 Oct 02 j 21:26	6°♓15'06	
asc. node	536 Dec 09 j 15:32	28°♓02'19	
	536 Dec 13 j 09:49	0°♈	
	537 Feb 03 j 20:02	0°♉	

	537 Mar 24 j 23:55	0°♊	
	537 May 12 j 12:15	0°♋	
	537 Jun 29 j 13:51	0°♌	
evening set	537 Jul 19 j 03:33	12°♌21'29	
	537 Aug 15 j 17:44	0°♍	
max. Earth dist.	537 Aug 18 j 07:30	1°♍39'41	2.64697 AU
conjunction	537 Sep 02 j 20:53	11°♍45'58	0°57'47
minimum elong	537 Sep 02 j 21:58	11°♍47'45	0°57'48
	537 Sep 30 j 11:43	0°♎	
morning rise	537 Oct 18 j 05:37	11°♎56'10	
	537 Nov 13 j 13:55	0°♏	
	537 Dec 26 j 01:11	0°♐	
desc. node	537 Dec 28 j 08:06	1°♐38'44	
	538 Feb 05 j 04:06	0°♑	
	538 Mar 17 j 10:10	0°♒	
	538 Apr 26 j 15:58	0°♓	
	538 Jun 07 j 11:33	0°♈	
	538 Jul 25 j 03:27	0°♉	
retrograde	538 Sep 23 j 21:33	19°♉54'34	
min. Earth dist.	538 Oct 24 j 12:25	13°♉27'43	0.52272 AU
asc. node	538 Oct 27 j 14:12	12°♉18'41	
opposition	538 Nov 01 j 00:48	10°♉37'29	0°13'08
greatest brilliancy	538 Oct 31 j 23:11	10°♉39'01	-2.1m
direct	538 Dec 05 j 22:38	2°♉57'02	
	539 Feb 25 j 09:55	0°♊	
	539 Apr 20 j 22:20	0°♋	
	539 Jun 10 j 07:37	0°♌	
	539 Jul 28 j 07:54	0°♍	
evening set	539 Aug 26 j 04:47	18°♍45'18	
	539 Sep 12 j 01:56	0°♎	
max. Earth dist.	539 Sep 14 j 08:12	1°♎31'20	2.56700 AU
conjunction	539 Oct 12 j 23:34	21°♎09'11	0°20'07
minimum elong	539 Oct 13 j 00:23	21°♎10'36	0°20'06
	539 Oct 25 j 14:04	0°♏	
desc. node	539 Nov 15 j 06:22	14°♏47'23	
morning rise	539 Dec 02 j 09:13	27°♏17'09	
	539 Dec 06 j 01:31	0°♐	
	540 Jan 14 j 23:09	0°♑	
	540 Feb 22 j 21:53	0°♒	
	540 Apr 01 j 16:48	0°♓	
	540 May 11 j 07:30	0°♈	
	540 Jun 22 j 01:25	0°♉	
	540 Aug 07 j 10:32	0°♊	
asc. node	540 Sep 13 j 13:34	19°♊40'07	
	540 Oct 12 j 20:10	0°♋	
retrograde	540 Nov 01 j 17:21	2°♋26'43	
	540 Nov 20 j 09:48	30°℞♊	
min. Earth dist.	540 Dec 07 j 11:39	24°♊08'43	0.62846 AU
opposition	540 Dec 11 j 15:04	22°♊29'14	3°19'16
greatest brilliancy	540 Dec 11 j 02:07	22°♊42'13	-1.5m
direct	541 Jan 19 j 00:37	13°♊27'11	
	541 Mar 21 j 07:03	0°♋	
	541 May 18 j 13:10	0°♌	
	541 Jul 07 j 21:24	0°♍	
	541 Aug 23 j 07:52	0°♎	
desc. node	541 Oct 02 j 05:29	27°♎29'28	
	541 Oct 05 j 18:13	0°♏	
evening set	541 Oct 07 j 18:03	1°♏25'19	
max. Earth dist.	541 Oct 23 j 03:21	12°♏31'28	2.44581 AU
	541 Nov 15 j 18:34	0°♐	
conjunction	541 Dec 01 j 09:42	11°♐48'36	-0°36'39
minimum elong	541 Dec 01 j 07:41	11°♐44'46	0°36'38
	541 Dec 25 j 01:23	0°♑	
	542 Feb 01 j 09:37	0°♒	
morning rise	542 Feb 02 j 06:26	0°♒40'56	
	542 Mar 11 j 16:00	0°♓	
	542 Apr 19 j 17:54	0°♈	
	542 May 30 j 12:38	0°♉	
	542 Jul 13 j 00:12	0°♊	
asc. node	542 Aug 01 j 12:53	12°♊40'19	
	542 Aug 29 j 22:57	0°♋	
	542 Oct 30 j 06:08	0°♌	
retrograde	542 Dec 06 j 14:09	7°♌23'24	
	543 Jan 09 j 18:17	30°℞♋	
opposition	543 Jan 15 j 16:21	27°♋39'30	4°30'07
min. Earth dist.	543 Jan 15 j 09:09	27°♋46'42	0.67520 AU
greatest brilliancy	543 Jan 15 j 14:00	27°♋41'51	-1.3m
direct	543 Feb 25 j 06:05	17°♋53'34	
	543 Apr 17 j 03:47	0°♌	
	543 Jun 15 j 14:56	0°♍	
	543 Aug 03 j 07:31	0°♎	
desc. node	543 Aug 20 j 05:06	11°♎12'59	
	543 Sep 16 j 08:30	0°♏	
	543 Oct 27 j 08:42	0°♐	
evening set	543 Dec 03 j 20:20	28°♐46'24	
	543 Dec 05 j 10:03	0°♑	
	544 Jan 12 j 12:20	0°♒	
conjunction	544 Feb 07 j 23:23	20°♒52'38	-1°03'31
minimum elong	544 Feb 08 j 00:50	20°♒55'28	1°03'31
	544 Feb 19 j 14:48	0°♓	
max. Earth dist.	544 Mar 25 j 07:45	26°♓44'51	2.39096 AU
	544 Mar 29 j 14:53	0°♈	
morning rise	544 Apr 17 j 06:08	13°♈55'59	
	544 May 09 j 06:39	0°♉	
asc. node	544 Jun 18 j 10:39	28°♉08'21	
	544 Jun 21 j 04:20	0°♊	
	544 Aug 05 j 20:34	0°♋	
	544 Sep 24 j 11:47	0°♌	
	544 Nov 23 j 15:10	0°♍	
retrograde	545 Jan 09 j 21:33	10°♍48'06	
opposition	545 Feb 18 j 01:20	1°♍42'10	4°17'35
greatest brilliancy	545 Feb 18 j 13:41	1°♍30'04	-1.4m
min. Earth dist.	545 Feb 21 j 15:18	0°♍17'57	0.65626 AU
	545 Feb 22 j 09:43	30°℞♌	
direct	545 Mar 31 j 10:53	21°♌40'08	
	545 May 10 j 16:12	0°♍	
desc. node	545 Jul 07 j 03:44	28°♍31'49	
	545 Jul 09 j 15:10	0°♎	
	545 Aug 25 j 03:10	0°♏	
	545 Oct 05 j 21:35	0°♐	
	545 Nov 14 j 04:43	0°♑	
	545 Dec 22 j 09:48	0°♒	
	546 Jan 29 j 15:59	0°♓	
evening set	546 Feb 11 j 14:53	10°♓00'58	
	546 Mar 09 j 21:47	0°♈	
conjunction	546 Apr 16 j 01:05	27°♈17'08	-0°12'44
minimum elong	546 Apr 16 j 01:57	27°♈18'42	0°12'43
behind sun begin	546 Apr 15 j 10:37	26°♈51'08	
behind sun end	546 Apr 16 j 17:18	27°♈46'16	
	546 Apr 19 j 19:54	0°♉	
asc. node	546 May 06 j 09:57	11°♉44'59	
max. Earth dist.	546 May 24 j 16:36	24°♉26'06	2.52348 AU
	546 Jun 01 j 20:03	0°♊	
morning rise	546 Jun 12 j 11:04	7°♊11'10	
	546 Jul 17 j 00:30	0°♋	
	546 Sep 02 j 09:46	0°♌	
	546 Oct 22 j 14:40	0°♍	
	546 Dec 18 j 17:45	0°♎	
retrograde	547 Feb 19 j 23:47	17°♎29'13	

opposition	547 Mar 28 j 21:40	9°♎28'00	2°27'53
greatest brilliancy	547 Mar 29 j 14:15	9°♎12'33	-1.8m
min. Earth dist.	547 Apr 05 j 01:06	6°♎48'25	0.57266 AU
	547 May 03 j 19:51	30°℞♍	
direct	547 May 08 j 06:31	29°♍51'58	
	547 May 12 j 18:33	0°♎	
desc. node	547 May 25 j 02:09	1°♎38'04	
	547 Jul 28 j 19:01	0°♏	
	547 Sep 12 j 06:17	0°♐	
	547 Oct 22 j 23:02	0°♑	
	547 Nov 30 j 23:29	0°♒	
	548 Jan 08 j 21:52	0°♓	
	548 Feb 17 j 19:50	0°♈	
asc. node	548 Mar 23 j 09:51	25°♈02'53	
	548 Mar 30 j 09:43	0°♉	
evening set	548 Apr 11 j 19:11	8°♉40'48	
	548 May 12 j 22:33	0°♊	
conjunction	548 Jun 04 j 08:51	14°♊58'13	0°40'43
minimum elong	548 Jun 04 j 07:21	14°♊55'45	0°40'41
max. Earth dist.	548 Jun 23 j 02:13	27°♊15'32	2.62356 AU
	548 Jun 27 j 07:16	0°♋	
morning rise	548 Jul 23 j 08:33	16°♋47'49	
	548 Aug 13 j 02:20	0°♌	
	548 Sep 29 j 22:38	0°♍	
	548 Nov 18 j 00:06	0°♎	
	549 Jan 08 j 22:23	0°♏	
	549 Mar 15 j 20:58	0°♐	
desc. node	549 Apr 11 j 01:18	5°♐02'36	
retrograde	549 Apr 15 j 21:21	5°♐11'12	
	549 May 15 j 16:22	30°℞♏	
opposition	549 May 18 j 20:27	29°♏00'00	-2°08'28
greatest brilliancy	549 May 19 j 11:17	28°♏48'08	-2.5m
min. Earth dist.	549 May 26 j 22:55	26°♏25'29	0.44409 AU
direct	549 Jun 23 j 16:02	21°♏30'44	
	549 Jul 30 j 19:48	0°♐	
	549 Sep 22 j 02:51	0°♑	
	549 Nov 04 j 03:28	0°♒	
	549 Dec 15 j 10:30	0°♓	
	550 Jan 26 j 03:10	0°♈	
asc. node	550 Feb 08 j 08:18	9°♈19'59	
	550 Mar 10 j 03:25	0°♉	
	550 Apr 23 j 18:39	0°♊	
evening set	550 May 27 j 16:28	22°♊09'37	
	550 Jun 08 j 19:53	0°♋	
conjunction	550 Jul 14 j 15:17	22°♋55'37	1°06'47
minimum elong	550 Jul 14 j 14:37	22°♋54'33	1°06'47
max. Earth dist.	550 Jul 17 j 16:01	24°♋51'31	2.67116 AU
	550 Jul 25 j 17:41	0°♌	
morning rise	550 Aug 28 j 20:04	21°♌43'07	
	550 Sep 10 j 19:37	0°♍	
	550 Oct 27 j 14:22	0°♎	
	550 Dec 12 j 23:52	0°♏	
	551 Jan 28 j 07:54	0°♐	
desc. node	551 Feb 27 j 00:27	18°♐59'26	
	551 Mar 16 j 14:12	0°♑	
	551 May 07 j 19:50	0°♒	
retrograde	551 Jul 04 j 02:26	17°♒10'09	
min. Earth dist.	551 Aug 01 j 14:05	12°♒31'01	0.37516 AU
opposition	551 Aug 03 j 15:56	11°♒57'44	-6°51'35
greatest brilliancy	551 Aug 03 j 06:53	12°♒03'47	-2.9m
direct	551 Sep 02 j 04:19	7°♒02'35	
	551 Nov 09 j 11:59	0°♓	
asc. node	551 Dec 27 j 06:48	28°♓19'14	
	551 Dec 29 j 23:19	0°♈	
	552 Feb 15 j 06:07	0°♉	
	552 Apr 02 j 09:17	0°♊	
	552 May 19 j 21:43	0°♋	
evening set	552 Jul 04 j 16:06	28°♋50'35	
	552 Jul 06 j 11:59	0°♌	
max. Earth dist.	552 Aug 08 j 20:05	21°♌12'15	2.66426 AU
conjunction	552 Aug 19 j 10:54	28°♌01'06	1°05'26
minimum elong	552 Aug 19 j 11:37	28°♌02'16	1°05'26
	552 Aug 22 j 12:46	0°♍	
morning rise	552 Oct 03 j 03:09	27°♍08'48	
	552 Oct 07 j 10:31	0°♎	
	552 Nov 20 j 22:43	0°♏	
	553 Jan 03 j 01:31	0°♐	
desc. node	553 Jan 13 j 23:39	7°♐44'20	
	553 Feb 14 j 00:32	0°♑	
	553 Mar 27 j 07:05	0°♒	
	553 May 07 j 22:41	0°♓	
	553 Jun 21 j 17:46	0°♈	
retrograde	553 Sep 05 j 06:30	29°♈08'45	
min. Earth dist.	553 Oct 03 j 17:29	23°♈34'18	0.47105 AU
opposition	553 Oct 11 j 21:49	20°♈40'18	-1°44'34
greatest brilliancy	553 Oct 11 j 10:10	20°♈50'40	-2.4m
asc. node	553 Nov 13 j 06:28	13°♈48'00	
direct	553 Nov 14 j 00:51	13°♈47'46	
	554 Jan 11 j 04:32	0°♉	
	554 Mar 09 j 06:32	0°♊	
	554 Apr 29 j 11:19	0°♋	
	554 Jun 17 j 16:57	0°♌	
	554 Aug 04 j 07:08	0°♍	
evening set	554 Aug 11 j 01:26	4°♍21'30	
max. Earth dist.	554 Sep 03 j 03:28	19°♍26'26	2.60420 AU
	554 Sep 19 j 00:02	0°♎	
conjunction	554 Sep 26 j 14:19	5°♎07'02	0°37'44
minimum elong	554 Sep 26 j 15:31	5°♎09'03	0°37'44
	554 Nov 01 j 16:31	0°♏	
morning rise	554 Nov 13 j 08:02	8°♏14'02	
desc. node	554 Dec 01 j 23:17	21°♏36'40	
	554 Dec 13 j 11:35	0°♐	
	555 Jan 22 j 18:20	0°♑	
	555 Mar 03 j 02:16	0°♒	
	555 Apr 11 j 06:09	0°♓	
	555 May 21 j 08:20	0°♈	
	555 Jul 03 j 02:36	0°♉	
	555 Aug 22 j 07:10	0°♊	
asc. node	555 Oct 01 j 05:01	15°♊22'17	
retrograde	555 Oct 19 j 05:23	17°♊27'26	
min. Earth dist.	555 Nov 22 j 02:35	9°♊48'15	0.59335 AU
opposition	555 Nov 27 j 16:20	7°♊35'54	2°24'12
greatest brilliancy	555 Nov 27 j 03:35	7°♊48'32	-1.7m
	555 Dec 22 j 14:35	30°℞♉	
direct	556 Jan 03 j 20:46	29°♉00'04	
	556 Jan 16 j 19:09	0°♊	
	556 Apr 03 j 10:31	0°♋	
	556 May 27 j 04:45	0°♌	
	556 Jul 15 j 08:52	0°♍	
	556 Aug 30 j 11:06	0°♎	
evening set	556 Sep 19 j 16:00	13°♎44'31	
max. Earth dist.	556 Oct 04 j 15:21	24°♎10'00	2.49686 AU
	556 Oct 12 j 21:26	0°♏	
desc. node	556 Oct 18 j 21:57	4°♏17'44	
conjunction	556 Nov 09 j 20:37	20°♏13'16	-0°13'47
minimum elong	556 Nov 09 j 19:53	20°♏11'56	0°13'46
behind sun begin	556 Nov 09 j 07:34	19°♏49'18	
behind sun end	556 Nov 10 j 08:13	20°♏34'35	
	556 Nov 23 j 01:27	0°♐	

	557 Jan 01 j 13:11	0°♉	
morning rise	557 Jan 05 j 21:17	3°♉21'03	
	557 Feb 09 j 01:57	0°♒	
	557 Mar 19 j 11:37	0°♓	
	557 Apr 27 j 16:05	0°♈	
	557 Jun 07 j 15:18	0°♉	
	557 Jul 21 j 16:53	0°♊	
asc. node	557 Aug 18 j 03:44	17°♊05'19	
	557 Sep 09 j 23:48	0°♋	
retrograde	557 Nov 23 j 06:53	24°♋27'42	
min. Earth dist.	557 Dec 31 j 14:41	15°♋18'43	0.66465 AU
opposition	558 Jan 02 j 10:24	14°♋34'49	4°13'22
greatest brilliancy	558 Jan 02 j 02:42	14°♋42'32	-1.3m
direct	558 Feb 11 j 07:09	5°♋02'38	
	558 May 01 j 11:29	0°♌	
	558 Jun 24 j 12:52	0°♍	
	558 Aug 11 j 01:36	0°♎	
desc. node	558 Sep 05 j 20:36	17°♎25'55	
	558 Sep 23 j 18:59	0°♏	
	558 Nov 03 j 18:25	0°♐	
evening set	558 Nov 09 j 09:17	4°♐14'18	
	558 Dec 12 j 21:19	0°♑	
max. Earth dist.	558 Dec 20 j 04:13	5°♑41'33	2.37665 AU
conjunction	559 Jan 10 j 04:40	22°♑13'07	-1°02'44
minimum elong	559 Jan 10 j 03:08	22°♑10'05	1°02'43
	559 Jan 20 j 01:19	0°♒	
	559 Feb 27 j 04:26	0°♓	
morning rise	559 Mar 21 j 02:55	17°♓00'13	
	559 Apr 07 j 03:59	0°♈	
	559 May 17 j 19:03	0°♉	
	559 Jun 29 j 18:31	0°♊	
asc. node	559 Jul 06 j 03:42	4°♊17'24	
	559 Aug 14 j 22:41	0°♋	
	559 Oct 05 j 15:03	0°♌	
retrograde	559 Dec 27 j 20:19	27°♌54'27	
opposition	560 Feb 05 j 11:58	18°♌31'01	4°32'09
greatest brilliancy	560 Feb 05 j 18:50	18°♌24'12	-1.3m
min. Earth dist.	560 Feb 07 j 13:24	17°♌42'03	0.67149 AU
direct	560 Mar 17 j 17:51	8°♌31'44	
	560 May 27 j 12:21	0°♍	
	560 Jul 19 j 07:34	0°♎	
desc. node	560 Jul 23 j 19:40	2°♎50'22	
	560 Sep 02 j 11:37	0°♏	
	560 Oct 13 j 20:04	0°♐	
	560 Nov 21 j 23:30	0°♑	
	560 Dec 30 j 02:28	0°♒	
evening set	561 Jan 14 j 21:08	12°♒27'12	
	561 Feb 06 j 06:09	0°♓	
	561 Mar 17 j 08:37	0°♈	
conjunction	561 Mar 22 j 15:20	3°♈57'53	-0°37'11
minimum elong	561 Mar 22 j 17:57	4°♈02'47	0°37'10
	561 Apr 27 j 03:01	0°♉	
max. Earth dist.	561 May 08 j 09:31	8°♉02'19	2.47248 AU
morning rise	561 May 23 j 21:28	18°♉54'29	
asc. node	561 May 23 j 02:32	18°♉21'35	
	561 Jun 09 j 00:24	0°♊	
	561 Jul 24 j 06:25	0°♋	
	561 Sep 10 j 04:35	0°♌	
	561 Nov 01 j 09:13	0°♍	
	562 Jan 11 j 23:42	0°♎	
retrograde	562 Feb 02 j 20:54	2°♎38'32	
	562 Feb 23 j 06:19	30°℞♍	
opposition	562 Mar 12 j 20:16	24°♍07'42	3°24'53
greatest brilliancy	562 Mar 13 j 13:51	23°♍50'54	-1.6m
min. Earth dist.	562 Mar 18 j 16:24	21°♍53'44	0.61268 AU
direct	562 Apr 22 j 21:40	14°♍13'52	
desc. node	562 Jun 10 j 18:32	26°♍29'47	
	562 Jun 18 j 10:01	0°♎	
	562 Aug 09 j 14:54	0°♏	
	562 Sep 21 j 21:40	0°♐	
	562 Oct 31 j 19:23	0°♑	
	562 Dec 09 j 09:05	0°♒	
	563 Jan 16 j 22:39	0°♓	
	563 Feb 25 j 12:12	0°♈	
evening set	563 Mar 22 j 11:27	18°♈19'37	
	563 Apr 07 j 18:13	0°♉	
asc. node	563 Apr 10 j 01:04	1°♉37'18	
conjunction	563 May 18 j 11:23	28°♉16'24	0°22'55
minimum elong	563 May 18 j 10:15	28°♉14'29	0°22'55
	563 May 21 j 00:29	0°♊	
max. Earth dist.	563 Jun 13 j 08:39	15°♊38'07	2.59046 AU
	563 Jul 05 j 05:52	0°♋	
morning rise	563 Jul 09 j 01:42	2°♋29'09	
	563 Aug 21 j 03:36	0°♌	
	563 Oct 08 j 14:38	0°♍	
	563 Nov 28 j 11:13	0°♎	
	564 Jan 25 j 20:20	0°♏	
retrograde	564 Mar 22 j 11:42	14°♏40'53	
opposition	564 Apr 26 j 04:26	7°♏39'56	0°04'42
greatest brilliancy	563 Aug 31 j 00:36	6°♌11'46	1.8m
desc. node	564 Apr 27 j 16:46	7°♏08'18	
min. Earth dist.	564 May 04 j 13:59	4°♏45'32	0.49647 AU
	564 May 22 j 18:11	30°℞♎	
direct	564 Jun 03 j 08:49	29°♎03'17	
	564 Jun 15 j 06:14	0°♏	
	564 Aug 22 j 08:20	0°♐	
	564 Oct 05 j 10:16	0°♑	
	564 Nov 14 j 23:33	0°♒	
	564 Dec 24 j 22:26	0°♓	
	565 Feb 03 j 16:15	0°♈	
asc. node	565 Feb 25 j 00:42	15°♈18'22	
	565 Mar 17 j 23:03	0°♉	
	565 May 01 j 01:08	0°♊	
evening set	565 May 11 j 00:30	6°♊37'38	
	565 Jun 15 j 18:04	0°♋	
conjunction	565 Jun 29 j 16:07	8°♋58'40	1°00'02
minimum elong	565 Jun 29 j 14:57	8°♋56'48	1°00'01
max. Earth dist.	565 Jul 08 j 13:35	14°♋41'13	2.65914 AU
	565 Aug 01 j 13:08	0°♌	
morning rise	565 Aug 14 j 21:56	8°♌30'01	
	565 Sep 17 j 19:45	0°♍	
	565 Nov 04 j 05:58	0°♎	
	565 Dec 22 j 00:36	0°♏	
	566 Feb 09 j 05:45	0°♐	
desc. node	566 Mar 15 j 16:54	19°♐31'56	
	566 Apr 05 j 09:17	0°♑	
retrograde	566 Jun 01 j 19:41	16°♑10'15	
opposition	566 Jul 02 j 04:19	11°♑08'11	-6°02'22
greatest brilliancy	566 Jul 02 j 20:13	10°♑57'21	-2.9m
min. Earth dist.	566 Jul 05 j 12:26	10°♑13'43	0.38239 AU
direct	566 Aug 02 j 08:31	5°♑43'10	
	566 Oct 09 j 23:29	0°♒	
	566 Nov 26 j 18:06	0°♓	
	567 Jan 10 j 12:56	0°♈	
asc. node	567 Jan 12 j 22:58	1°♈37'32	
	567 Feb 24 j 10:36	0°♉	
	567 Apr 11 j 07:01	0°♊	
	567 May 28 j 02:14	0°♋	
evening set	567 Jun 20 j 23:09	15°♋09'54	
	567 Jul 14 j 08:10	0°♌	

max. Earth dist.	567 Jul 31 j 18:40	11°♌05'30	2.67354 AU
conjunction	567 Aug 06 j 05:32	14°♌34'02	1°09'06
minimum elong	567 Aug 06 j 05:45	14°♌34'23	1°09'06
	567 Aug 30 j 07:57	0°♍	
morning rise	567 Sep 19 j 17:22	13°♍10'10	
	567 Oct 15 j 12:01	0°♎	
	567 Nov 29 j 13:59	0°♏	
	568 Jan 12 j 14:32	0°♐	
desc. node	568 Jan 31 j 16:45	13°♐12'00	
	568 Feb 24 j 19:42	0°♑	
	568 Apr 07 j 20:33	0°♒	
	568 May 22 j 15:51	0°♓	
	568 Jul 19 j 20:27	0°♈	
retrograde	568 Aug 14 j 14:26	4°♈27'40	
	568 Sep 09 j 10:04	30°℞♓	
min. Earth dist.	568 Sep 10 j 11:04	29°♓40'35	0.42116 AU
greatest brilliancy	568 Sep 17 j 01:42	27°♓33'18	-2.6m
opposition	568 Sep 18 j 01:28	27°♓14'09	-4°06'08
direct	568 Oct 19 j 05:25	21°♓17'29	
	568 Nov 28 j 01:30	0°♈	
asc. node	568 Nov 29 j 21:21	0°♈42'50	
	569 Jan 27 j 03:34	0°♉	
	569 Mar 19 j 03:07	0°♊	
	569 May 07 j 09:58	0°♋	
	569 Jun 24 j 20:21	0°♌	
evening set	569 Jul 27 j 10:40	20°♌34'41	
	569 Aug 11 j 03:35	0°♍	
max. Earth dist.	569 Aug 23 j 23:09	8°♍17'32	2.63397 AU
conjunction	569 Sep 11 j 07:27	20°♍18'48	0°51'32
minimum elong	569 Sep 11 j 08:40	20°♍20'48	0°51'32
	569 Sep 25 j 21:19	0°♎	
morning rise	569 Oct 27 j 07:14	21°♎19'01	
	569 Nov 08 j 20:06	0°♏	
desc. node	569 Dec 18 j 15:12	28°♏14'32	
	569 Dec 21 j 01:32	0°♐	
	570 Jan 30 j 20:43	0°♑	
	570 Mar 11 j 17:54	0°♒	
	570 Apr 20 j 12:02	0°♓	
	570 May 31 j 10:59	0°♈	
	570 Jul 15 j 09:01	0°♉	
	570 Sep 22 j 19:30	0°♊	
retrograde	570 Oct 03 j 13:12	0°♊47'25	
	570 Oct 13 j 22:16	30°℞♉	
asc. node	570 Oct 17 j 21:31	29°♉16'42	
min. Earth dist.	570 Nov 04 j 08:43	23°♉53'11	0.54946 AU
opposition	570 Nov 11 j 06:00	21°♉13'34	1°08'15
greatest brilliancy	570 Nov 10 j 22:18	21°♉21'01	-1.9m
direct	570 Dec 17 j 00:06	13°♉11'10	
	571 Feb 15 j 20:11	0°♊	
	571 Apr 14 j 20:13	0°♋	
	571 Jun 05 j 04:51	0°♌	
	571 Jul 23 j 14:09	0°♍	
evening set	571 Sep 04 j 03:52	27°♍46'52	
	571 Sep 07 j 11:17	0°♎	
max. Earth dist.	571 Sep 21 j 11:41	9°♎29'45	2.54357 AU
	571 Oct 20 j 23:02	0°♏	
conjunction	571 Oct 22 j 22:06	1°♏23'23	0°08'28
minimum elong	571 Oct 22 j 22:29	1°♏24'04	0°08'27
behind sun begin	571 Oct 22 j 04:05	0°♏51'27	
behind sun end	571 Oct 23 j 16:53	1°♏56'43	
desc. node	571 Nov 05 j 13:43	11°♏09'26	
	571 Dec 01 j 08:00	0°♐	
morning rise	571 Dec 14 j 07:02	9°♐40'10	
	572 Jan 10 j 01:58	0°♑	
	572 Feb 17 j 20:55	0°♒	
	572 Mar 27 j 11:55	0°♓	
	572 May 05 j 21:40	0°♈	
	572 Jun 16 j 06:11	0°♉	
	572 Jul 31 j 10:33	0°♊	
asc. node	572 Sep 03 j 21:08	19°♊49'28	
	572 Sep 25 j 06:54	0°♋	
retrograde	572 Nov 09 j 17:24	10°♋57'50	
min. Earth dist.	572 Dec 16 j 10:22	2°♋20'37	0.64393 AU
opposition	572 Dec 19 j 18:13	1°♋00'29	3°43'29
greatest brilliancy	572 Dec 19 j 06:30	1°♋12'15	-1.4m
	572 Dec 22 j 06:45	30°℞♊	
direct	573 Jan 27 j 17:06	21°♊46'35	
	573 Mar 09 j 11:02	0°♋	
	573 May 12 j 07:21	0°♌	
	573 Jul 02 j 17:13	0°♍	
	573 Aug 18 j 12:37	0°♎	
desc. node	573 Sep 22 j 12:52	23°♎57'43	
	573 Oct 01 j 01:51	0°♏	
evening set	573 Oct 18 j 20:19	12°♏48'02	
max. Earth dist.	573 Nov 06 j 01:05	26°♏13'19	2.41812 AU
	573 Nov 11 j 02:17	0°♐	
conjunction	573 Dec 14 j 20:07	25°♐44'45	-0°48'23
minimum elong	573 Dec 14 j 17:41	25°♐40'01	0°48'22
	573 Dec 20 j 07:45	0°♑	
	574 Jan 27 j 14:15	0°♒	
morning rise	574 Feb 18 j 22:13	17°♒34'49	
	574 Mar 06 j 18:52	0°♓	
	574 Apr 14 j 18:56	0°♈	
	574 May 25 j 11:01	0°♉	
	574 Jul 07 j 15:46	0°♊	
asc. node	574 Jul 22 j 19:09	9°♊59'23	
	574 Aug 23 j 17:07	0°♋	
	574 Oct 18 j 12:27	0°♌	
retrograde	574 Dec 14 j 07:20	15°♌10'42	
opposition	575 Jan 23 j 06:19	5°♌33'12	4°34'19
greatest brilliancy	575 Jan 23 j 07:14	5°♌32'18	-1.3m
min. Earth dist.	575 Jan 23 j 19:12	5°♌20'22	0.67663 AU
	575 Feb 07 j 03:41	30°℞♋	
direct	575 Mar 05 j 02:39	25°♋41'30	
	575 Apr 02 j 13:27	0°♌	
	575 Jun 09 j 03:11	0°♍	
	575 Jul 28 j 23:15	0°♎	
desc. node	575 Aug 10 j 11:31	8°♎10'22	
	575 Sep 11 j 09:08	0°♏	
	575 Oct 22 j 12:31	0°♐	
	575 Nov 30 j 14:47	0°♑	
evening set	575 Dec 18 j 20:46	14°♑19'08	
	576 Jan 07 j 17:20	0°♒	
	576 Feb 14 j 19:49	0°♓	
conjunction	576 Feb 24 j 05:17	7°♓18'54	-0°57'08
minimum elong	576 Feb 24 j 08:01	7°♓24'13	0°57'07
	576 Mar 24 j 19:51	0°♈	
max. Earth dist.	576 Apr 15 j 06:48	16°♈00'56	2.41850 AU
morning rise	576 May 01 j 10:48	27°♈49'02	
	576 May 04 j 11:26	0°♉	
asc. node	576 Jun 08 j 18:29	24°♉50'29	
	576 Jun 16 j 07:22	0°♊	
	576 Jul 31 j 17:44	0°♋	
	576 Sep 18 j 12:50	0°♌	
	576 Nov 13 j 09:30	0°♍	
retrograde	577 Jan 18 j 07:46	18°♍50'50	
opposition	577 Feb 26 j 02:29	9°♍56'09	4°02'41
greatest brilliancy	577 Feb 26 j 17:19	9°♍41'43	-1.4m
min. Earth dist.	577 Mar 02 j 11:59	8°♍13'27	0.64333 AU

	577 Apr 04 j 20:19	30°℞♌	
direct	577 Apr 08 j 10:48	29°♌54'58	
	577 Apr 12 j 02:25	0°♍	
desc. node	577 Jun 27 j 10:29	27°♍09'23	
	577 Jul 02 j 12:31	0°♎	
	577 Aug 19 j 09:41	0°♏	
	577 Sep 30 j 14:42	0°♐	
	577 Nov 09 j 02:10	0°♑	
	577 Dec 17 j 09:49	0°♒	
	578 Jan 24 j 17:59	0°♓	
evening set	578 Feb 26 j 10:29	25°♓00'59	
	578 Mar 05 j 01:40	0°♈	
	578 Apr 15 j 01:40	0°♉	
asc. node	578 Apr 26 j 17:38	8°♉16'44	
conjunction	578 Apr 28 j 12:06	9°♉31'28	0°01'07
minimum elong	578 Apr 28 j 12:01	9°♉31'19	0°01'07
behind sun begin	578 Apr 27 j 12:00	8°♉49'05	
behind sun end	578 Apr 29 j 12:02	10°♉13'30	
	578 May 28 j 02:47	0°♊	
max. Earth dist.	578 Jun 01 j 09:39	2°♊54'28	2.54936 AU
morning rise	578 Jun 22 j 13:36	17°♊04'42	
	578 Jul 12 j 06:18	0°♋	
	578 Aug 28 j 09:27	0°♌	
	578 Oct 16 j 18:57	0°♍	
	578 Dec 09 j 17:45	0°♎	
retrograde	579 Mar 02 j 14:36	27°♎01'49	
opposition	579 Apr 07 j 19:13	19°♎19'36	1°44'05
greatest brilliancy	579 Apr 08 j 08:27	19°♎07'30	-1.9m
min. Earth dist.	579 Apr 15 j 12:42	16°♎30'17	0.54722 AU
desc. node	579 May 15 j 09:58	10°♎01'01	
direct	579 May 17 j 13:33	9°♎59'07	
	579 Jul 19 j 09:44	0°♏	
	579 Sep 05 j 13:01	0°♐	
	579 Oct 17 j 00:33	0°♑	
	579 Nov 25 j 10:19	0°♒	
	580 Jan 03 j 14:59	0°♓	
	580 Feb 12 j 17:59	0°♈	
asc. node	580 Mar 13 j 15:41	21°♈37'00	
	580 Mar 25 j 12:22	0°♉	
evening set	580 Apr 22 j 23:00	19°♉40'59	
	580 May 08 j 04:37	0°♊	
conjunction	580 Jun 13 j 22:07	24°♊19'21	0°49'04
minimum elong	580 Jun 13 j 20:40	24°♊16'59	0°49'03
	580 Jun 22 j 15:21	0°♋	
max. Earth dist.	580 Jun 28 j 21:58	4°♋04'09	2.63870 AU
morning rise	580 Jul 31 j 17:44	25°♋07'58	
	580 Aug 08 j 09:23	0°♌	
	580 Sep 24 j 23:28	0°♍	
	580 Nov 12 j 07:44	0°♎	
	581 Jan 01 j 06:55	0°♏	
	581 Feb 25 j 20:17	0°♐	
desc. node	581 Apr 01 j 08:38	13°♐53'15	
retrograde	581 May 01 j 15:17	18°♐53'25	
opposition	581 Jun 02 j 11:20	13°♐11'12	-3°36'20
greatest brilliancy	581 Jun 03 j 08:32	12°♐55'15	-2.6m
min. Earth dist.	581 Jun 09 j 15:33	11°♐02'09	0.41776 AU
direct	581 Jul 06 j 17:14	6°♐27'17	
	581 Sep 11 j 03:49	0°♑	
	581 Oct 27 j 09:03	0°♒	
	581 Dec 08 j 22:54	0°♓	
	582 Jan 20 j 09:16	0°♈	
asc. node	582 Jan 29 j 14:52	6°♈26'41	
	582 Mar 04 j 21:23	0°♉	
	582 Apr 18 j 20:30	0°♊	
	582 Jun 04 j 02:53	0°♋	
evening set	582 Jun 05 j 18:25	1°♋03'25	
	582 Jul 21 j 02:50	0°♌	
conjunction	582 Jul 22 j 23:38	1°♌11'16	1°08'49
minimum elong	582 Jul 22 j 23:18	1°♌10'44	1°08'48
max. Earth dist.	582 Jul 22 j 22:53	1°♌10'05	2.67439 AU
morning rise	582 Sep 05 j 18:58	29°♌46'12	
	582 Sep 06 j 03:35	0°♍	
	582 Oct 22 j 16:23	0°♎	
	582 Dec 07 j 12:41	0°♏	
	583 Jan 21 j 20:26	0°♐	
desc. node	583 Feb 17 j 07:57	17°♐34'16	
	583 Mar 08 j 03:43	0°♑	
	583 Apr 24 j 00:42	0°♒	
	583 Jun 21 j 19:03	0°♓	
retrograde	583 Jul 20 j 17:54	5°♓19'04	
min. Earth dist.	583 Aug 16 j 19:47	0°♓51'05	0.38480 AU
	583 Aug 19 j 20:07	30°℞♒	
opposition	583 Aug 21 j 12:12	29°♒31'29	-6°15'57
greatest brilliancy	583 Aug 20 j 15:47	29°♒46'00	-2.9m
direct	583 Sep 20 j 07:39	24°♒23'54	
	583 Oct 20 j 22:47	0°♓	
asc. node	583 Dec 17 j 14:28	27°♓54'48	
	583 Dec 21 j 05:15	0°♈	
	584 Feb 08 j 19:45	0°♉	
	584 Mar 27 j 22:48	0°♊	
	584 May 14 j 23:28	0°♋	
	584 Jul 01 j 19:46	0°♌	
evening set	584 Jul 12 j 23:48	7°♌03'16	
max. Earth dist.	584 Aug 14 j 06:52	27°♌38'49	2.65577 AU
	584 Aug 17 j 22:36	0°♍	
conjunction	584 Aug 27 j 16:19	6°♍17'36	1°01'27
minimum elong	584 Aug 27 j 17:16	6°♍19'08	1°01'27
	584 Oct 02 j 19:03	0°♎	
morning rise	584 Oct 11 j 15:42	5°♎54'57	
	584 Nov 16 j 02:17	0°♏	
	584 Dec 28 j 20:55	0°♐	
desc. node	585 Jan 04 j 07:18	4°♐35'55	
	585 Feb 08 j 08:29	0°♑	
	585 Mar 21 j 00:26	0°♒	
	585 Apr 30 j 18:02	0°♓	
	585 Jun 12 j 11:04	0°♈	
	585 Aug 02 j 18:20	0°♉	
retrograde	585 Sep 16 j 04:50	11°♉46'53	
min. Earth dist.	585 Oct 15 j 20:04	5°♉42'53	0.49985 AU
opposition	585 Oct 23 j 17:25	2°♉48'15	-0°33'28
greatest brilliancy	585 Oct 23 j 13:44	2°♉51'40	-2.2m
	585 Oct 31 j 16:04	30°℞♈	
asc. node	585 Nov 03 j 13:20	29°♈05'32	
direct	585 Nov 26 j 20:44	25°♈27'52	
	585 Dec 25 j 02:14	0°♉	
	586 Mar 02 j 00:20	0°♊	
	586 Apr 23 j 21:42	0°♋	
	586 Jun 12 j 18:30	0°♌	
	586 Jul 30 j 14:52	0°♍	
evening set	586 Aug 19 j 15:35	12°♍57'14	
max. Earth dist.	586 Sep 09 j 13:08	26°♍45'15	2.58457 AU
	586 Sep 14 j 09:30	0°♎	
conjunction	586 Oct 05 j 19:04	14°♎31'58	0°27'58
minimum elong	586 Oct 05 j 20:05	14°♎33'43	0°27'58
	586 Oct 28 j 00:35	0°♏	
desc. node	586 Nov 22 j 05:39	18°♏00'03	
morning rise	586 Nov 23 j 20:43	19°♏10'47	
	586 Dec 08 j 16:25	0°♐	
	587 Jan 17 j 18:35	0°♑	

	587 Feb 25 j 21:32	0°♒	
	587 Apr 05 j 19:55	0°♓	
	587 May 15 j 14:01	0°♈	
	587 Jun 26 j 14:59	0°♉	
	587 Aug 13 j 01:15	0°♊	
asc. node	587 Sep 21 j 12:26	19°♊06'48	
retrograde	587 Oct 27 j 15:34	26°♊37'56	
min. Earth dist.	587 Dec 01 j 14:06	18°♊36'38	0.61382 AU
opposition	587 Dec 06 j 09:09	16°♊41'53	2°58'36
greatest brilliancy	587 Dec 05 j 19:41	16°♊55'19	-1.6m
direct	588 Jan 13 j 05:55	7°♊50'56	
	588 Mar 26 j 11:36	0°♋	
	588 May 21 j 13:27	0°♌	
	588 Jul 10 j 09:55	0°♍	
	588 Aug 25 j 18:03	0°♎	
evening set	588 Sep 29 j 17:51	24°♎00'06	
	588 Oct 08 j 05:33	0°♏	
desc. node	588 Oct 09 j 04:27	0°♏40'43	
max. Earth dist.	588 Oct 14 j 12:44	4°♏29'42	2.46882 AU
	588 Nov 18 j 08:35	0°♐	
conjunction	588 Nov 21 j 17:26	2°♐31'18	-0°27'00
minimum elong	588 Nov 21 j 15:57	2°♐28'32	0°27'00
	588 Dec 27 j 18:10	0°♑	
morning rise	589 Jan 20 j 21:43	18°♑48'00	
	589 Feb 04 j 04:39	0°♒	
	589 Mar 14 j 12:15	0°♓	
	589 Apr 22 j 14:21	0°♈	
	589 Jun 02 j 09:29	0°♉	
	589 Jul 16 j 00:10	0°♊	
asc. node	589 Aug 08 j 11:47	15°♊02'02	
	589 Sep 02 j 15:08	0°♋	
	589 Nov 10 j 20:14	0°♌	
retrograde	589 Nov 30 j 22:49	2°♌22'12	
	589 Dec 19 j 17:37	30°℞♋	
min. Earth dist.	590 Jan 09 j 01:59	22°♋57'35	0.67175 AU
opposition	590 Jan 10 j 01:46	22°♋33'44	4°24'37
greatest brilliancy	590 Jan 09 j 20:54	22°♋38'37	-1.3m
direct	590 Feb 19 j 08:08	12°♋53'34	
	590 Apr 22 j 23:15	0°♌	
	590 Jun 18 j 19:12	0°♍	
	590 Aug 06 j 00:48	0°♎	
desc. node	590 Aug 27 j 04:27	14°♎08'30	
	590 Sep 18 j 23:42	0°♏	
	590 Oct 30 j 00:39	0°♐	
evening set	590 Nov 22 j 19:56	18°♐07'51	
	590 Dec 08 j 03:08	0°♑	
	591 Jan 15 j 06:12	0°♒	
conjunction	591 Jan 26 j 06:37	8°♒42'17	-1°05'07
minimum elong	591 Jan 26 j 06:42	8°♒42'25	1°05'06
	591 Feb 22 j 08:32	0°♓	
max. Earth dist.	591 Feb 22 j 20:30	0°♓23'22	2.37438 AU
	591 Apr 02 j 07:25	0°♈	
morning rise	591 Apr 06 j 10:39	3°♈07'18	
	591 May 12 j 21:35	0°♉	
	591 Jun 24 j 18:18	0°♊	
asc. node	591 Jun 26 j 09:41	1°♊06'47	
	591 Aug 09 j 13:10	0°♋	
	591 Sep 28 j 19:07	0°♌	
	591 Dec 02 j 20:57	0°♍	
retrograde	592 Jan 04 j 20:26	5°♍43'07	
	592 Feb 03 j 23:00	30°℞♌	
opposition	592 Feb 13 j 05:31	26°♌28'53	4°24'59
greatest brilliancy	592 Feb 13 j 15:29	26°♌19'03	-1.3m
min. Earth dist.	592 Feb 16 j 02:49	25°♌20'35	0.66439 AU
direct	592 Mar 25 j 13:29	16°♌27'33	
	592 May 17 j 23:59	0°♍	
	592 Jul 13 j 06:02	0°♎	
desc. node	592 Jul 14 j 03:18	0°♎32'26	
	592 Aug 28 j 04:40	0°♏	
	592 Oct 08 j 19:51	0°♐	
	592 Nov 17 j 01:48	0°♑	
greatest brilliancy	592 Nov 24 j 02:28	5°♑29'13	1.2m
	592 Dec 25 j 05:55	0°♒	
evening set	593 Jan 30 j 16:19	28°♒37'59	
	593 Feb 01 j 10:25	0°♓	
	593 Mar 12 j 13:33	0°♈	
conjunction	593 Apr 05 j 20:17	18°♈01'39	-0°23'19
minimum elong	593 Apr 05 j 21:57	18°♈04'42	0°23'18
	593 Apr 22 j 08:38	0°♉	
asc. node	593 May 13 j 08:50	14°♉53'22	
max. Earth dist.	593 May 18 j 09:29	18°♉23'44	2.50122 AU
morning rise	593 Jun 04 j 08:13	0°♊03'50	
	593 Jun 04 j 05:59	0°♊	
	593 Jul 19 j 09:29	0°♋	
	593 Sep 04 j 22:11	0°♌	
	593 Oct 25 j 18:46	0°♍	
	593 Dec 25 j 06:30	0°♎	
retrograde	594 Feb 12 j 09:57	11°♎24'55	
opposition	594 Mar 21 j 19:36	3°♎09'35	2°54'16
greatest brilliancy	594 Mar 22 j 13:02	2°♎53'06	-1.7m
min. Earth dist.	594 Mar 28 j 09:09	0°♎40'52	0.59170 AU
	594 Mar 30 j 05:28	30°℞♍	
direct	594 May 01 j 12:33	23°♍24'05	
desc. node	594 Jun 01 j 01:21	28°♍45'19	
	594 Jun 04 j 17:34	0°♎	
	594 Aug 02 j 13:44	0°♏	
	594 Sep 16 j 00:09	0°♐	
	594 Oct 26 j 08:15	0°♑	
	594 Dec 04 j 03:34	0°♒	
	595 Jan 11 j 21:18	0°♓	
	595 Feb 20 j 14:14	0°♈	
asc. node	595 Mar 31 j 08:49	28°♈09'24	
	595 Apr 02 j 23:11	0°♉	
evening set	595 Apr 03 j 20:56	0°♉38'30	
	595 May 16 j 07:35	0°♊	
conjunction	595 May 28 j 21:33	8°♊27'40	0°33'43
minimum elong	595 May 28 j 20:08	8°♊25'18	0°33'42
max. Earth dist.	595 Jun 19 j 16:38	22°♊53'45	2.60967 AU
	595 Jun 30 j 13:33	0°♋	
morning rise	595 Jul 17 j 22:50	11°♋15'01	
	595 Aug 16 j 08:34	0°♌	
	595 Oct 03 j 10:04	0°♍	
	595 Nov 22 j 03:05	0°♎	
	596 Jan 15 j 01:26	0°♏	
retrograde	596 Apr 04 j 16:58	26°♏18'03	
desc. node	596 Apr 18 j 00:32	25°♏11'35	
opposition	596 May 08 j 12:05	19°♏43'40	-1°07'03
greatest brilliancy	596 May 08 j 20:26	19°♏36'43	-2.3m
min. Earth dist.	596 May 16 j 22:36	16°♏55'58	0.46730 AU
direct	596 Jun 14 j 11:30	11°♏41'22	
	596 Aug 11 j 05:24	0°♐	
	596 Sep 27 j 19:42	0°♑	
	596 Nov 08 j 12:19	0°♒	
	596 Dec 19 j 02:31	0°♓	
	597 Jan 29 j 06:54	0°♈	
asc. node	597 Feb 15 j 07:28	12°♈07'28	
	597 Mar 12 j 21:37	0°♉	
	597 Apr 26 j 05:29	0°♊	
evening set	597 May 20 j 16:19	16°♊06'06	
	597 Jun 11 j 02:00	0°♋	

conjunction	597 Jul 08 j 07:50	17°♋30'04	1°04'27
minimum elong	597 Jul 08 j 06:57	17°♋28'40	1°04'26
max. Earth dist.	597 Jul 13 j 22:49	21°♋05'43	2.66683 AU
	597 Jul 27 j 21:51	0°♌	
morning rise	597 Aug 22 j 22:13	16°♌33'13	
	597 Sep 13 j 01:35	0°♍	
	597 Oct 30 j 02:46	0°♎	
	597 Dec 16 j 01:24	0°♏	
	598 Feb 01 j 10:56	0°♐	
desc. node	598 Mar 06 j 00:03	19°♐58'49	
	598 Mar 23 j 01:05	0°♑	
	598 May 26 j 06:23	0°♒	
retrograde	598 Jun 20 j 02:48	3°♒43'24	
	598 Jul 15 j 11:16	30°℞♑	
opposition	598 Jul 20 j 07:09	28°♑44'20	-6°47'44
greatest brilliancy	598 Jul 20 j 10:12	28°♑42'19	-2.9m
min. Earth dist.	598 Jul 20 j 16:37	28°♑38'05	0.37440 AU
direct	598 Aug 19 j 04:20	23°♑44'33	
	598 Sep 20 j 06:00	0°♒	
	598 Nov 17 j 09:08	0°♓	
asc. node	599 Jan 03 j 05:54	29°♓45'44	
	599 Jan 03 j 14:40	0°♈	
	599 Feb 18 j 15:19	0°♉	
	599 Apr 06 j 02:44	0°♊	
	599 May 23 j 06:34	0°♋	
evening set	599 Jun 29 j 10:24	23°♋30'00	
	599 Jul 09 j 16:44	0°♌	
max. Earth dist.	599 Aug 06 j 00:32	17°♌22'29	2.66940 AU
conjunction	599 Aug 14 j 09:10	22°♌43'10	1°07'26
minimum elong	599 Aug 14 j 09:41	22°♌44'00	1°07'25
	599 Aug 25 j 17:18	0°♍	
morning rise	599 Sep 27 j 21:53	21°♍32'55	
	599 Oct 10 j 18:16	0°♎	
	599 Nov 24 j 12:48	0°♏	
	600 Jan 07 j 01:14	0°♐	
desc. node	600 Jan 21 j 22:55	10°♐27'24	
	600 Feb 18 j 12:36	0°♑	
	600 Mar 31 j 11:07	0°♒	
	600 May 13 j 02:56	0°♓	
	600 Jun 29 j 15:59	0°♈	
retrograde	600 Aug 27 j 07:49	19°♈21'24	
min. Earth dist.	600 Sep 23 j 21:54	14°♈09'43	0.44793 AU
greatest brilliancy	600 Oct 01 j 07:32	11°♈38'36	-2.5m
opposition	600 Oct 02 j 01:06	11°♈23'35	-2°43'44
direct	600 Nov 03 j 07:47	4°♈55'24	
asc. node	600 Nov 20 j 05:36	6°♈41'44	
	601 Jan 18 j 02:24	0°♉	
	601 Mar 12 j 21:43	0°♊	
	601 May 02 j 04:17	0°♋	
	601 Jun 20 j 01:09	0°♌	
evening set	601 Aug 04 j 18:11	28°♌51'28	
	601 Aug 06 j 12:51	0°♍	
max. Earth dist.	601 Aug 29 j 18:18	15°♍04'25	2.61852 AU
conjunction	601 Sep 19 j 22:27	29°♍05'27	0°44'00
minimum elong	601 Sep 19 j 23:41	29°♍07'31	0°44'00
	601 Sep 21 j 07:04	0°♎	
	601 Nov 04 j 03:10	0°♏	
morning rise	601 Nov 05 j 19:02	1°♏09'48	
desc. node	601 Dec 08 j 22:33	24°♏46'11	
	601 Dec 16 j 03:31	0°♐	