

	8100 Jan 22 08:57	15°♄	morning rise	8105 Mar 29 21:04	0°♃54'41	
retrograde	8100 Feb 28 09:06	17°♄07'36	retrograde	8105 Jul 31 22:09	18°♃50'12	
	8100 Apr 06 05:25	15°♄	opposition	8105 Sep 30 15:28	13°♃56'54	-0°36'24
min. Earth dist.	8100 Apr 28 06:41	12°♄14'59 4.28427 AU	min. Earth dist.	8105 Oct 02 06:11	13°♃44'27	4.23103 AU
opposition	8100 Apr 29 10:55	12°♄05'33 1°01'33	direct	8105 Dec 01 01:14	8°♃58'13	
direct	8100 Jun 28 15:45	7°♄04'53	evening set	8106 Apr 05 17:03	27°♃33'17	
	8100 Sep 13 09:33	15°♄	max. Earth dist.	8106 Apr 16 11:37	0°♄03'37	6.14549 AU
evening set	8100 Nov 01 21:39	25°♄03'59		8106 Apr 16 05:26	0°♄	
conjunction	8100 Nov 15 07:48	28°♄00'07 0°47'37	conjunction	8106 Apr 18 11:59	0°♄31'51	-0°35'52
minimum elong	8100 Nov 15 07:47	28°♄00'07 0°47'44	minimum elong	8106 Apr 18 11:58	0°♄31'50	0°35'56
max. Earth dist.	8100 Nov 16 12:22	28°♄15'46 6.36124 AU	morning rise	8106 May 01 07:15	3°♄30'52	
	8100 Nov 24 10:59	0°♄		8106 Jun 23 20:50	15°♄	
morning rise	8100 Nov 28 16:44	0°♄55'22	retrograde	8106 Sep 05 20:44	22°♄40'48	
retrograde	8101 Mar 31 02:10	18°♄12'16	opposition	8106 Nov 05 03:07	17°♄45'35	-1°06'00
opposition	8101 May 30 13:01	13°♄13'38 1°12'08	min. Earth dist.	8106 Nov 06 04:53	17°♄37'10	4.06213 AU
min. Earth dist.	8101 May 30 03:32	13°♄16'45 4.42391 AU		8106 Nov 27 14:03	15°♄	
direct	8101 Jul 31 01:42	8°♄11'59	direct	8107 Jan 04 03:29	12°♄49'14	
evening set	8101 Dec 03 20:37	25°♄36'45		8107 Feb 10 05:15	15°♄	
conjunction	8101 Dec 17 01:23	28°♄26'26 0°48'10	evening set	8107 Apr 30 17:43	0°♄	
minimum elong	8101 Dec 17 01:24	28°♄26'26 0°48'20	max. Earth dist.	8107 May 10 05:32	2°♄15'20	
max. Earth dist.	8101 Dec 17 01:01	28°♄26'14 6.46954 AU		8107 May 22 07:17	5°♄09'35	5.99090 AU
	8101 Dec 24 07:45	0°♄	conjunction	8107 May 23 04:42	5°♄22'30	-0°48'37
morning rise	8101 Dec 30 03:59	1°♄14'59	minimum elong	8107 May 23 04:42	5°♄22'30	0°48'44
retrograde	8102 Apr 29 17:42	17°♄55'59	morning rise	8107 Jun 05 05:15	8°♄30'45	
opposition	8102 Jun 29 13:30	13°♄00'33 1°03'00	retrograde	8107 Oct 14 02:32	28°♄51'53	
min. Earth dist.	8102 Jun 29 23:09	12°♄57'26 4.49513 AU	opposition	8107 Dec 12 20:02	23°♄53'43	-1°12'57
direct	8102 Aug 30 22:53	7°♄58'41	min. Earth dist.	8107 Dec 12 22:50	23°♄52'47	3.93750 AU
evening set	8103 Jan 03 11:02	25°♄09'31	direct	8108 Feb 09 11:42	18°♄59'12	
max. Earth dist.	8103 Jan 15 06:42	27°♄41'06 6.49870 AU	evening set	8108 May 07 05:06	0°♄	
conjunction	8103 Jan 16 10:48	27°♄56'09 0°35'55		8108 Jun 15 00:11	9°♄00'43	
minimum elong	8103 Jan 16 10:49	27°♄56'10 0°36'02	conjunction	8108 Jun 28 06:10	12°♄15'02	-0°43'10
	8103 Jan 26 01:57	0°♄	minimum elong	8108 Jun 28 06:11	12°♄15'02	0°43'19
morning rise	8103 Jan 29 08:13	0°♄41'45	max. Earth dist.	8108 Jun 28 20:38	12°♄23'53	5.90855 AU
	8103 Apr 20 08:04	15°♄	morning rise	8108 Jul 11 14:49	15°♄30'48	
retrograde	8103 May 29 14:35	17°♄17'14		8108 Sep 16 01:28	0°♄	
	8103 Jul 08 01:57	15°♄	retrograde	8108 Nov 20 22:45	6°♄25'26	
opposition	8103 Jul 29 14:16	12°♄23'57 0°37'51	min. Earth dist.	8109 Jan 18 10:57	1°♄31'25	3.90810 AU
min. Earth dist.	8103 Jul 30 18:08	12°♄15'03 4.48125 AU	opposition	8109 Jan 19 09:44	1°♄23'43	-0°50'12
direct	8103 Sep 30 08:32	7°♄22'29		8109 Jan 29 21:18	30°♄	
	8103 Dec 16 05:13	15°♄	direct	8109 Mar 18 06:35	26°♄29'05	
evening set	8104 Feb 02 15:09	24°♄41'26		8109 May 03 18:48	0°♄	
max. Earth dist.	8104 Feb 13 10:01	27°♄01'57 6.44225 AU	evening set	8109 Jul 16 16:25	15°♄	
conjunction	8104 Feb 15 11:12	27°♄28'45 0°14'13		8109 Jul 23 01:46	16°♄31'56	
minimum elong	8104 Feb 15 11:13	27°♄28'45 0°14'19	conjunction	8109 Aug 05 14:45	19°♄48'19	-0°20'07
behind sun begin	8104 Feb 15 07:26	27°♄26'42	minimum elong	8109 Aug 05 14:47	19°♄48'19	0°20'14
behind sun end	8104 Feb 15 15:00	27°♄30'49	max. Earth dist.	8109 Aug 07 14:35	20°♄17'16	5.93490 AU
	8104 Feb 27 01:11	0°♄	morning rise	8109 Aug 19 06:10	23°♄05'48	
morning rise	8104 Feb 28 05:29	0°♄15'20		8109 Sep 17 22:43	0°♄	
retrograde	8104 Jun 28 16:41	17°♄16'27	retrograde	8109 Dec 28 12:58	13°♄36'04	
opposition	8104 Aug 28 15:42	12°♄23'47 0°02'06	min. Earth dist.	8110 Feb 24 10:31	8°♄44'21	3.98715 AU
min. Earth dist.	8104 Aug 30 06:11	12°♄11'29 4.38536 AU	opposition	8110 Feb 25 23:12	8°♄31'52	-0°07'09
desc. node	8104 Sep 19 00:27	9°♄48'09	direct	8110 Apr 25 02:24	3°♄35'13	
direct	8104 Oct 30 01:36	7°♄23'16	asc. node	8110 Apr 28 11:01	3°♄36'23	
evening set	8105 Mar 04 09:31	25°♄11'55	evening set	8110 Aug 29 19:14	23°♄04'43	
max. Earth dist.	8105 Mar 14 20:15	27°♄32'10 6.31338 AU	conjunction	8110 Sep 12 11:26	26°♄16'42	0°10'24
conjunction	8105 Mar 17 03:56	28°♄03'26 -0°12'04	minimum elong	8110 Sep 12 11:25	26°♄16'41	0°10'23
minimum elong	8105 Mar 17 03:55	28°♄03'26 0°12'04	behind sun begin	8110 Sep 12 04:53	26°♄12'53	
behind sun begin	8105 Mar 16 22:25	28°♄00'21	behind sun end	8110 Sep 12 17:57	26°♄20'30	
behind sun end	8105 Mar 17 09:24	28°♄06'30	max. Earth dist.	8110 Sep 15 01:04	26°♄52'48	6.05802 AU
	8105 Mar 25 19:25	0°♄	morning rise	8110 Sep 26 04:45	29°♄28'57	

	8110 Sep 28 10:21	0°♏		min. Earth dist.	8116 Sep 03 19:56	16°♋40'58	4.36446 AU
retrograde	8111 Feb 01 11:32	18°♏52'31		direct	8116 Nov 03 11:31	11°♋53'21	
min. Earth dist.	8111 Mar 31 15:14	14°♏01'09	4.14006 AU	evening set	8117 Mar 08 21:00	29°♋48'29	
opposition	8111 Apr 02 04:43	13°♏48'27	0°36'09		8117 Mar 09 17:34	0°♐	
direct	8111 May 31 06:27	8°♏49'23		max. Earth dist.	8117 Mar 19 06:38	2°♐08'57	6.28936 AU
evening set	8111 Oct 04 19:04	27°♏29'00					
	8111 Oct 15 23:35	0°♌		conjunction	8117 Mar 21 15:13	2°♐40'55	-0°15'48
				minimum elong	8117 Mar 21 15:12	2°♐40'55	0°15'48
conjunction	8111 Oct 18 09:14	0°♌32'30	0°35'44	behind sun begin	8117 Mar 21 13:22	2°♐39'53	
minimum elong	8111 Oct 18 09:12	0°♌32'29	0°35'49	behind sun end	8117 Mar 21 17:02	2°♐41'56	
max. Earth dist.	8111 Oct 20 10:43	1°♌00'23	6.22646 AU	morning rise	8117 Apr 03 08:41	5°♐33'14	
morning rise	8111 Oct 31 23:19	3°♌35'34		retrograde	8117 Aug 05 21:20	23°♐39'01	
	8111 Dec 26 18:37	15°♌		opposition	8117 Oct 05 12:56	18°♐45'31	-0°41'30
retrograde	8112 Mar 04 19:14	21°♌44'09		min. Earth dist.	8117 Oct 07 02:11	18°♐33'31	4.20565 AU
opposition	8112 May 03 22:10	16°♌42'34	1°04'17	direct	8117 Dec 05 18:21	13°♐47'11	
min. Earth dist.	8112 May 02 21:07	16°♌50'56	4.30827 AU		8118 Mar 30 15:14	0°♄	
	8112 May 17 00:46	15°♌		evening set	8118 Apr 10 11:36	2°♄29'58	
direct	8112 Jul 03 08:33	11°♌41'43		max. Earth dist.	8118 Apr 21 11:09	5°♄04'00	6.12120 AU
	8112 Aug 19 21:03	15°♌					
evening set	8112 Nov 06 11:48	29°♌34'37		conjunction	8118 Apr 23 07:05	5°♄29'46	-0°38'34
	8112 Nov 08 10:37	0°♊		minimum elong	8118 Apr 23 07:03	5°♄29'45	0°38'40
				morning rise	8118 May 06 02:44	8°♄30'03	
conjunction	8112 Nov 19 21:21	2°♊29'40	0°48'32		8118 Jun 03 18:57	15°♄	
minimum elong	8112 Nov 19 21:20	2°♊29'39	0°48'40	retrograde	8118 Sep 11 04:55	27°♄50'53	
max. Earth dist.	8112 Nov 20 22:59	2°♊43'39	6.38134 AU	opposition	8118 Nov 10 09:15	22°♄55'21	-1°08'40
morning rise	8112 Dec 03 05:13	5°♊23'43		min. Earth dist.	8118 Nov 11 08:11	22°♄47'52	4.04142 AU
retrograde	8113 Apr 04 05:35	22°♊33'44		direct	8119 Jan 09 04:46	17°♄59'25	
opposition	8113 Jun 03 18:47	17°♊35'38	1°11'56		8119 Apr 12 19:23	0°♊	
min. Earth dist.	8113 Jun 03 11:25	17°♊38'03	4.43898 AU	evening set	8119 May 15 08:14	7°♊31'25	
direct	8113 Aug 04 10:05	12°♊33'59					
evening set	8113 Dec 08 05:00	29°♊55'33		conjunction	8119 May 28 08:02	10°♊39'37	-0°49'02
	8113 Dec 08 13:21	0°♉		minimum elong	8119 May 28 08:02	10°♊39'37	0°49'11
				max. Earth dist.	8119 May 27 14:41	10°♊29'07	5.97575 AU
conjunction	8113 Dec 21 08:54	2°♉44'36	0°47'07	morning rise	8119 Jun 10 09:44	13°♊49'02	
minimum elong	8113 Dec 21 08:55	2°♉44'36	0°47'17		8119 Aug 27 10:08	0°♊	
max. Earth dist.	8113 Dec 21 03:13	2°♉41'33	6.47852 AU	retrograde	8119 Oct 19 13:11	4°♊16'46	
morning rise	8114 Jan 03 10:47	5°♉32'33			8119 Dec 13 00:23	30°♊	
retrograde	8114 May 03 22:40	22°♉11'10		opposition	8119 Dec 18 06:40	29°♊18'02	-1°11'28
opposition	8114 Jul 03 18:06	17°♉16'10	1°00'17	min. Earth dist.	8119 Dec 18 04:33	29°♊18'45	3.92989 AU
min. Earth dist.	8114 Jul 04 07:34	17°♉11'50	4.49764 AU	direct	8120 Feb 14 18:15	24°♊23'36	
direct	8114 Sep 04 06:26	12°♉14'21			8120 Apr 14 18:10	0°♊	
evening set	8115 Jan 07 16:40	29°♉25'21		evening set	8120 Jun 20 07:56	14°♊26'11	
	8115 Jan 10 09:39	0°♈					
max. Earth dist.	8115 Jan 19 07:38	1°♈54'39	6.49443 AU	conjunction	8120 Jul 03 14:59	17°♈40'57	-0°40'49
				minimum elong	8120 Jul 03 15:01	17°♈40'58	0°40'58
conjunction	8115 Jan 20 15:53	2°♈11'57	0°33'18	max. Earth dist.	8120 Jul 04 11:48	17°♈53'40	5.90930 AU
minimum elong	8115 Jan 20 15:54	2°♈11'58	0°33'26	morning rise	8120 Jul 17 00:33	20°♈57'07	
morning rise	8115 Feb 02 12:48	4°♈57'32			8120 Aug 25 01:01	0°♈	
	8115 Mar 25 12:29	15°♈		retrograde	8120 Nov 26 07:58	11°♈50'00	
retrograde	8115 Jun 02 21:20	21°♈35'21		opposition	8121 Jan 24 18:23	6°♈47'46	-0°44'56
opposition	8115 Aug 02 21:06	16°♈42'14	0°33'16	min. Earth dist.	8121 Jan 23 17:41	6°♈56'08	3.91709 AU
min. Earth dist.	8115 Aug 04 02:27	16°♈32'51	4.47063 AU	direct	8121 Mar 23 16:22	1°♈52'55	
	8115 Aug 16 11:39	15°♈			8121 Jun 28 23:44	15°♈	
direct	8115 Oct 04 14:05	11°♈40'51		evening set	8121 Jul 28 09:05	21°♈51'02	
	8115 Nov 22 09:11	15°♈					
evening set	8116 Feb 06 21:59	29°♈03'29		conjunction	8121 Aug 10 22:47	25°♈06'57	-0°16'01
	8116 Feb 11 06:03	0°♋		minimum elong	8121 Aug 10 22:48	25°♈06'58	0°16'07
max. Earth dist.	8116 Feb 17 15:55	1°♋24'00	6.42600 AU	max. Earth dist.	8121 Aug 13 02:40	25°♈38'12	5.95106 AU
				morning rise	8121 Aug 24 14:40	28°♈23'52	
conjunction	8116 Feb 19 17:47	1°♋51'17	0°10'37		8121 Aug 31 08:32	0°♎	
minimum elong	8116 Feb 19 17:48	1°♋51'18	0°10'42	retrograde	8122 Jan 02 12:35	18°♎44'59	
behind sun begin	8116 Feb 19 11:39	1°♋47'57		min. Earth dist.	8122 Mar 01 10:00	13°♎53'31	4.00860 AU
behind sun end	8116 Feb 19 23:57	1°♋54'39		opposition	8122 Mar 02 23:50	13°♎40'39	-0°00'43
morning rise	8116 Mar 03 11:40	4°♋38'24		asc. node	8122 Mar 09 02:23	12°♎51'04	
retrograde	8116 Jul 03 06:18	21°♋46'12		direct	8122 Apr 30 04:54	8°♎43'39	
desc. node	8116 Jul 29 04:16	20°♋44'37		evening set	8122 Sep 03 21:16	28°♎05'29	
opposition	8116 Sep 02 04:25	16°♋53'35	-0°03'27		8122 Sep 12 02:20	0°♎	

conjunction	8122 Sep 17 13:14	1°♏16'15	0°14'26	opposition	8128 Sep 06 17:49	21°♎23'17	-0°08'59
minimum elong	8122 Sep 17 13:13	1°♏16'14	0°14'25	min. Earth dist.	8128 Sep 08 08:46	21°♎10'49	4.34432 AU
behind sun begin	8122 Sep 17 09:39	1°♏14'10		direct	8128 Nov 07 21:27	16°♎23'17	
behind sun end	8122 Sep 17 16:47	1°♏18'18			8129 Feb 21 08:24	0°♑	
max. Earth dist.	8122 Sep 20 00:34	1°♏50'48	6.08247 AU	evening set	8129 Mar 13 08:19	4°♑24'19	
morning rise	8122 Oct 01 06:26	4°♏27'15		max. Earth dist.	8129 Mar 23 20:26	6°♑46'51	6.26737 AU
retrograde	8123 Feb 06 00:39	23°♏39'29					
min. Earth dist.	8123 Apr 05 08:07	18°♏47'42	4.16503 AU	conjunction	8129 Mar 26 02:37	7°♑17'37	-0°19'25
opposition	8123 Apr 06 19:48	18°♏35'38	0°41'07	minimum elong	8129 Mar 26 02:36	7°♑17'37	0°19'25
direct	8123 Jun 05 02:18	13°♏36'13		morning rise	8129 Apr 07 20:02	10°♑10'50	
	8123 Sep 29 20:57	0°♎		retrograde	8129 Aug 10 19:48	28°♑26'03	
evening set	8123 Oct 09 13:07	2°♎08'32		opposition	8129 Oct 10 10:02	23°♑32'22	-0°46'17
				min. Earth dist.	8129 Oct 11 22:28	23°♑20'37	4.18323 AU
conjunction	8123 Oct 23 02:55	5°♎10'49	0°38'19	direct	8129 Dec 10 11:51	18°♑34'24	
minimum elong	8123 Oct 23 02:54	5°♎10'49	0°38'24		8130 Mar 13 06:21	0°♎	
max. Earth dist.	8123 Oct 25 02:12	5°♎37'19	6.25006 AU	evening set	8130 Apr 15 05:34	7°♎23'44	
morning rise	8123 Nov 05 16:06	8°♎12'31		max. Earth dist.	8130 Apr 26 07:00	9°♎59'40	6.10004 AU
	8123 Dec 07 09:03	15°♎					
retrograde	8124 Mar 09 01:34	26°♎11'50		conjunction	8130 Apr 28 01:17	10°♎24'35	-0°40'58
min. Earth dist.	8124 May 07 07:10	21°♎18'21	4.32869 AU	minimum elong	8130 Apr 28 01:15	10°♎24'34	0°41'04
opposition	8124 May 08 06:00	21°♎10'46	1°06'34	morning rise	8130 May 10 21:41	13°♎26'04	
direct	8124 Jul 07 20:30	16°♎09'48			8130 May 17 14:39	15°♎	
	8124 Oct 23 07:38	0°♎			8130 Aug 03 11:47	0°♎	
evening set	8124 Nov 10 22:54	3°♎57'42		retrograde	8130 Sep 16 09:56	2°♎56'39	
					8130 Oct 30 22:27	30°♎	
conjunction	8124 Nov 24 07:34	6°♎51'48	0°49'09	opposition	8130 Nov 15 13:39	28°♎00'43	-1°10'45
minimum elong	8124 Nov 24 07:33	6°♎51'48	0°49'18	min. Earth dist.	8130 Nov 16 08:46	27°♎54'26	4.02334 AU
max. Earth dist.	8124 Nov 25 03:19	7°♎02'32	6.39709 AU	direct	8131 Jan 14 04:08	23°♎05'02	
morning rise	8124 Dec 07 14:48	9°♎44'57			8131 Mar 23 09:32	0°♎	
retrograde	8125 Apr 08 09:24	26°♎49'41		evening set	8131 May 20 09:03	12°♎42'12	
opposition	8125 Jun 07 22:56	21°♎52'04	1°11'24				
min. Earth dist.	8125 Jun 07 19:13	21°♎53'16	4.44935 AU	conjunction	8131 Jun 02 09:48	15°♎51'26	-0°49'03
direct	8125 Aug 08 18:13	16°♎50'20		minimum elong	8131 Jun 02 09:48	15°♎51'26	0°49'12
	8125 Nov 22 12:20	0°♎		max. Earth dist.	8131 Jun 01 22:26	15°♎44'33	5.96248 AU
evening set	8125 Dec 12 11:32	4°♎10'03		morning rise	8131 Jun 15 12:20	19°♎01'54	
					8131 Aug 03 01:05	0°♎	
conjunction	8125 Dec 25 14:57	6°♎58'42	0°45'52	retrograde	8131 Oct 24 23:29	9°♎35'43	
minimum elong	8125 Dec 25 14:58	6°♎58'43	0°46'01	opposition	8131 Dec 23 15:08	4°♎36'30	-1°09'24
max. Earth dist.	8125 Dec 25 06:21	6°♎54'06	6.48295 AU	min. Earth dist.	8131 Dec 23 10:35	4°♎38'02	3.92287 AU
morning rise	8126 Jan 07 15:59	9°♎46'13			8132 Feb 06 20:01	30°♎	
retrograde	8126 May 08 00:58	26°♎23'50		direct	8132 Feb 20 00:30	29°♎42'10	
opposition	8126 Jul 07 21:54	21°♎29'11	0°57'19		8132 Mar 04 04:04	0°♎	
min. Earth dist.	8126 Jul 08 12:55	21°♎24'21	4.49619 AU	evening set	8132 Jun 25 13:45	19°♎45'57	
direct	8126 Sep 08 10:40	16°♎27'26					
	8126 Dec 25 10:58	0°♎		conjunction	8132 Jul 08 21:49	23°♎01'13	-0°38'10
evening set	8127 Jan 11 22:02	3°♎39'42		minimum elong	8132 Jul 08 21:50	23°♎01'14	0°38'18
max. Earth dist.	8127 Jan 23 09:22	6°♎07'22	6.48730 AU	max. Earth dist.	8132 Jul 09 23:30	23°♎16'54	5.90920 AU
				morning rise	8132 Jul 22 08:27	26°♎17'53	
conjunction	8127 Jan 24 20:39	6°♎26'21	0°30'32		8132 Aug 06 19:33	0°♎	
minimum elong	8127 Jan 24 20:40	6°♎26'21	0°30'40		8132 Oct 25 19:46	15°♎	
morning rise	8127 Feb 06 17:07	9°♎12'02		retrograde	8132 Dec 01 14:59	17°♎09'27	
	8127 Mar 06 16:15	15°♎			8133 Jan 07 07:43	15°♎	
retrograde	8127 Jun 07 05:31	25°♎52'56		min. Earth dist.	8133 Jan 28 21:03	12°♎16'15	3.92415 AU
opposition	8127 Aug 07 04:24	21°♎00'01	0°28'31	opposition	8133 Jan 30 00:41	12°♎06'54	-0°39'22
min. Earth dist.	8127 Aug 08 12:14	20°♎49'51	4.45826 AU	direct	8133 Mar 28 21:41	7°♎11'51	
direct	8127 Oct 08 21:41	15°♎58'48			8133 Jun 08 22:12	15°♎	
	8128 Jan 26 05:29	0°♎		evening set	8133 Aug 02 15:32	27°♎06'42	
evening set	8128 Feb 11 04:50	3°♎25'18			8133 Aug 14 16:39	0°♎	
max. Earth dist.	8128 Feb 21 20:17	5°♎45'03	6.40924 AU				
				conjunction	8133 Aug 16 05:42	0°♎22'14	-0°11'49
conjunction	8128 Feb 24 00:20	6°♎13'38	0°07'00	minimum elong	8133 Aug 16 05:42	0°♎22'14	0°11'53
minimum elong	8128 Feb 24 00:20	6°♎13'38	0°07'03	behind sun begin	8133 Aug 15 23:57	0°♎18'48	
behind sun begin	8128 Feb 23 16:58	6°♎09'36		behind sun end	8133 Aug 16 11:27	0°♎25'41	
behind sun end	8128 Feb 24 07:43	6°♎17'40		max. Earth dist.	8133 Aug 18 10:20	0°♎33'50	5.96430 AU
morning rise	8128 Mar 07 18:08	9°♎01'20		morning rise	8133 Aug 29 22:13	3°♎38'43	
desc. node	8128 Jun 07 19:32	24°♎53'48		retrograde	8134 Jan 07 10:37	23°♎52'13	
retrograde	8128 Jul 07 19:48	26°♎15'59		asc. node	8134 Jan 17 08:55	23°♎42'15	

min. Earth dist.	8134 Mar 06 09:14	19° \mathbb{M} 00'46	4.02640 AU	direct	8139 Oct 13 03:58	20° \approx 17'40	
opposition	8134 Mar 07 23:24	18° \mathbb{M} 47'47	0°05'42		8140 Jan 08 23:49	0° \mathbb{H}	
direct	8134 May 05 07:06	13° \mathbb{M} 50'25		evening set	8140 Feb 15 10:57	7° \mathbb{H} 46'01	
	8134 Aug 26 08:49	0° $\underline{\mathbb{A}}$		max. Earth dist.	8140 Feb 26 01:44	10° \mathbb{H} 05'46	6.39863 AU
evening set	8134 Sep 08 23:10	3° $\underline{\mathbb{A}}$ 06'21					
				conjunction	8140 Feb 28 06:00	10° \mathbb{H} 34'33	0°03'26
conjunction	8134 Sep 22 15:16	6° $\underline{\mathbb{A}}$ 16'11	0°18'22	minimum elong	8140 Feb 28 05:59	10° \mathbb{H} 34'33	0°03'30
minimum elong	8134 Sep 22 15:15	6° $\underline{\mathbb{A}}$ 16'10	0°18'23	behind sun begin	8140 Feb 27 22:05	10° \mathbb{H} 30'13	
max. Earth dist.	8134 Sep 25 02:51	6° $\underline{\mathbb{A}}$ 50'42	6.10324 AU	behind sun end	8140 Feb 28 13:54	10° \mathbb{H} 38'53	
morning rise	8134 Oct 06 08:02	9° $\underline{\mathbb{A}}$ 26'03		morning rise	8140 Mar 11 23:26	13° \mathbb{H} 22'32	
retrograde	8135 Feb 10 16:14	28° $\underline{\mathbb{A}}$ 28'33		desc. node	8140 Apr 19 02:11	21° \mathbb{H} 19'48	
min. Earth dist.	8135 Apr 10 01:30	23° $\underline{\mathbb{A}}$ 36'34	4.18662 AU		8140 Jun 21 00:19	0° \mathbb{Y}	
opposition	8135 Apr 11 11:40	23° $\underline{\mathbb{A}}$ 25'03	0°45'52	retrograde	8140 Jul 12 07:59	0° \mathbb{Y} 41'56	
direct	8135 Jun 09 22:40	18° $\underline{\mathbb{A}}$ 25'25			8140 Aug 02 14:19	30° \mathbb{R} \mathbb{H}	
	8135 Sep 12 09:29	0° \mathbb{M}		opposition	8140 Sep 11 05:28	25° \mathbb{H} 49'09	-0°14'15
evening set	8135 Oct 14 08:25	6° \mathbb{M} 51'42		min. Earth dist.	8140 Sep 12 21:39	25° \mathbb{H} 36'18	4.33031 AU
				direct	8140 Nov 12 08:28	20° \mathbb{H} 49'20	
conjunction	8135 Oct 27 21:32	9° \mathbb{M} 52'50	0°40'41		8141 Feb 03 19:52	0° \mathbb{Y}	
minimum elong	8135 Oct 27 21:30	9° \mathbb{M} 52'50	0°40'47	evening set	8141 Mar 17 17:04	8° \mathbb{Y} 54'08	
max. Earth dist.	8135 Oct 29 17:02	10° \mathbb{M} 17'07	6.27062 AU	max. Earth dist.	8141 Mar 28 04:20	11° \mathbb{Y} 16'46	6.25090 AU
morning rise	8135 Nov 10 10:07	12° \mathbb{M} 53'23					
	8135 Nov 20 00:47	15° \mathbb{M}		conjunction	8141 Mar 30 11:14	11° \mathbb{Y} 48'02	-0°22'45
	8136 Feb 20 19:29	0° \mathbb{Z}		minimum elong	8141 Mar 30 11:13	11° \mathbb{Y} 48'02	0°22'46
retrograde	8136 Mar 13 09:25	0° \mathbb{Z} 44'33		morning rise	8141 Apr 12 04:51	14° \mathbb{Y} 41'58	
	8136 Apr 03 21:11	30° \mathbb{R} \mathbb{M}			8141 Jul 01 03:56	0° \mathbb{B}	
opposition	8136 May 12 15:31	25° \mathbb{M} 43'57	1°08'29	retrograde	8141 Aug 15 12:58	3° \mathbb{B} 04'49	
min. Earth dist.	8136 May 11 18:53	25° \mathbb{M} 50'48	4.34691 AU		8141 Sep 30 16:48	30° \mathbb{R} \mathbb{Y}	
direct	8136 Jul 12 10:07	20° \mathbb{M} 42'50		opposition	8141 Oct 15 03:34	28° \mathbb{Y} 10'49	-0°50'31
	8136 Oct 05 05:44	0° \mathbb{Z}		min. Earth dist.	8141 Oct 16 13:59	27° \mathbb{Y} 59'41	4.16534 AU
evening set	8136 Nov 15 11:50	8° \mathbb{Z} 26'25		direct	8141 Dec 15 00:57	23° \mathbb{Y} 13'02	
					8142 Feb 21 21:43	0° \mathbb{B}	
conjunction	8136 Nov 28 19:53	11° \mathbb{Z} 19'40	0°49'30	evening set	8142 Apr 19 19:19	12° \mathbb{B} 07'29	
minimum elong	8136 Nov 28 19:53	11° \mathbb{Z} 19'40	0°49'40	max. Earth dist.	8142 May 01 00:43	14° \mathbb{B} 46'19	6.08224 AU
max. Earth dist.	8136 Nov 29 13:09	11° \mathbb{Z} 29'02	6.41196 AU		8142 May 01 23:51	15° \mathbb{B}	
morning rise	8136 Dec 12 02:04	14° \mathbb{Z} 11'51					
	8137 Mar 15 19:32	0° \mathbb{B}		conjunction	8142 May 02 15:29	15° \mathbb{B} 09'15	-0°42'57
retrograde	8137 Apr 12 13:59	1° \mathbb{B} 11'28		minimum elong	8142 May 02 15:28	15° \mathbb{B} 09'14	0°43'03
	8137 May 10 05:56	30° \mathbb{R} \mathbb{Z}		morning rise	8142 May 15 12:19	18° \mathbb{B} 11'43	
opposition	8137 Jun 12 04:58	26° \mathbb{Z} 14'22	1°10'28		8142 Jul 08 20:33	0° \mathbb{I}	
min. Earth dist.	8137 Jun 12 03:10	26° \mathbb{Z} 14'57	4.46028 AU	retrograde	8142 Sep 21 12:25	7° \mathbb{I} 50'59	
direct	8137 Aug 13 03:23	21° \mathbb{Z} 12'42		opposition	8142 Nov 20 13:24	2° \mathbb{I} 54'40	-1°12'11
	8137 Nov 04 11:18	0° \mathbb{B}		min. Earth dist.	8142 Nov 21 07:21	2° \mathbb{I} 48'46	4.00711 AU
evening set	8137 Dec 16 19:57	8° \mathbb{B} 30'08			8142 Dec 14 06:49	30° \mathbb{R} \mathbb{B}	
				direct	8143 Jan 19 00:34	27° \mathbb{B} 59'09	
conjunction	8137 Dec 29 22:28	11° \mathbb{B} 18'14	0°44'22		8143 Feb 23 07:13	0° \mathbb{I}	
minimum elong	8137 Dec 29 22:28	11° \mathbb{B} 18'15	0°44'31	evening set	8143 May 25 05:28	17° \mathbb{I} 41'06	
max. Earth dist.	8137 Dec 29 09:14	11° \mathbb{B} 11'09	6.48941 AU				
morning rise	8138 Jan 11 22:54	14° \mathbb{B} 05'15		conjunction	8143 Jun 07 07:04	20° \mathbb{I} 51'21	-0°48'41
	8138 Apr 21 04:08	0° \approx		minimum elong	8143 Jun 07 07:05	20° \mathbb{I} 51'21	0°48'51
retrograde	8138 May 12 06:28	0° \approx 41'07		max. Earth dist.	8143 Jun 06 22:46	20° \mathbb{I} 46'18	5.94936 AU
	8138 Jun 02 06:19	30° \mathbb{R} \mathbb{B}		morning rise	8143 Jun 20 10:43	24° \mathbb{I} 02'54	
opposition	8138 Jul 12 03:35	25° \mathbb{B} 46'47	0°54'03		8143 Jul 15 16:14	0° \mathbb{B}	
min. Earth dist.	8138 Jul 12 21:23	25° \mathbb{B} 41'04	4.49814 AU	retrograde	8143 Oct 30 03:45	14° \mathbb{B} 42'37	
direct	8138 Sep 12 18:57	20° \mathbb{B} 45'04		opposition	8143 Dec 28 18:20	9° \mathbb{B} 43'00	-1°06'54
	8138 Dec 07 21:09	0° \approx		min. Earth dist.	8143 Dec 28 10:30	9° \mathbb{B} 45'37	3.91453 AU
evening set	8139 Jan 16 03:50	7° \approx 57'04		direct	8144 Feb 24 23:35	4° \mathbb{B} 48'39	
max. Earth dist.	8139 Jan 27 13:12	10° \approx 23'48	6.48474 AU	evening set	8144 Jun 30 15:47	24° \mathbb{B} 54'44	
conjunction	8139 Jan 29 01:59	10° \approx 43'36	0°27'39	conjunction	8144 Jul 14 00:49	28° \mathbb{B} 10'37	-0°35'19
minimum elong	8139 Jan 29 02:00	10° \approx 43'37	0°27'46	minimum elong	8144 Jul 14 00:50	28° \mathbb{B} 10'38	0°35'28
morning rise	8139 Feb 10 21:47	13° \approx 29'10		max. Earth dist.	8144 Jul 15 05:09	28° \mathbb{B} 27'56	5.90644 AU
	8139 Feb 18 00:21	15° \approx			8144 Jul 21 11:57	0° \mathbb{Q}	
	8139 May 31 07:22	0° \mathbb{H}		morning rise	8144 Jul 27 12:37	1° \mathbb{Q} 27'56	
retrograde	8139 Jun 11 10:48	0° \mathbb{H} 11'37			8144 Sep 26 21:29	15° \mathbb{Q}	
	8139 Jun 22 15:02	30° \mathbb{R} \approx		retrograde	8144 Dec 06 17:41	22° \mathbb{Q} 19'32	
opposition	8139 Aug 11 11:49	25° \approx 18'45	0°23'42	min. Earth dist.	8145 Feb 02 21:46	17° \mathbb{Q} 26'36	3.92723 AU
min. Earth dist.	8139 Aug 12 19:54	25° \approx 08'31	4.45146 AU	opposition	8145 Feb 04 03:13	17° \mathbb{Q} 16'35	-0°33'47

	8145 Feb 21 14:41	15° κ δ Ω			8150 Jul 16 20:58	30° κ ζ	
direct	8145 Apr 03 00:08	12° Ω 21'15		min. Earth dist.	8150 Jul 17 04:49	29° ζ 57'29	4.49829 AU
	8145 May 13 01:48	15° Ω		direct	8150 Sep 17 01:35	25° ζ 02'09	
	8145 Jul 29 07:37	0° η			8150 Nov 16 19:54	0° \approx	
evening set	8145 Aug 07 19:10	2° η 14'42		evening set	8151 Jan 20 09:49	12° \approx 14'33	
				max. Earth dist.	8151 Jan 31 14:40	14° \approx 39'09	6.47908 AU
conjunction	8145 Aug 21 10:11	5° η 30'10 -0°07'41					
minimum elong	8145 Aug 21 10:11	5° η 30'10 0°07'46		conjunction	8151 Feb 02 07:16	15° \approx 01'03	0°24'32
behind sun begin	8145 Aug 21 02:39	5° η 25'41		minimum elong	8151 Feb 02 07:17	15° \approx 01'04	0°24'38
behind sun end	8145 Aug 21 17:44	5° η 34'40			8151 Feb 02 05:18	15° \approx	
max. Earth dist.	8145 Aug 23 18:08	6° η 03'39 5.97312 AU		morning rise	8151 Feb 15 02:44	17° \approx 46'41	
morning rise	8145 Sep 04 03:05	8° η 46'25			8151 Apr 20 08:58	0° \mathcal{H}	
asc. node	8145 Nov 29 06:19	25° η 51'32		retrograde	8151 Jun 15 20:08	4° \mathcal{H} 32'00	
retrograde	8146 Jan 12 09:29	28° η 54'06			8151 Aug 13 03:10	30° κ \approx	
min. Earth dist.	8146 Mar 11 07:09	24° η 02'38 4.03981 AU		opposition	8151 Aug 15 20:20	29° \approx 39'14	0°18'36
opposition	8146 Mar 12 21:16	23° η 49'40 0°11'49		min. Earth dist.	8151 Aug 17 06:58	29° \approx 28'11	4.44005 AU
direct	8146 May 10 07:18	18° η 52'01		direct	8151 Oct 17 12:49	24° \approx 38'15	
	8146 Aug 08 12:33	0° $\underline{\Omega}$			8151 Dec 19 08:49	0° \mathcal{H}	
evening set	8146 Sep 14 00:17	8° $\underline{\Omega}$ 03'42		evening set	8152 Feb 19 17:59	12° \mathcal{H} 10'06	
				desc. node	8152 Feb 27 03:47	13° \mathcal{H} 47'53	
conjunction	8146 Sep 27 16:14	11° $\underline{\Omega}$ 12'44 0°22'03		max. Earth dist.	8152 Mar 01 07:05	14° \mathcal{H} 29'28	6.38216 AU
minimum elong	8146 Sep 27 16:13	11° $\underline{\Omega}$ 12'43 0°22'05					
max. Earth dist.	8146 Sep 30 03:01	11° $\underline{\Omega}$ 46'37 6.11993 AU		conjunction	8152 Mar 03 12:52	14° \mathcal{H} 59'11	-0°00'22
morning rise	8146 Oct 11 08:55	14° $\underline{\Omega}$ 21'44		minimum elong	8152 Mar 03 12:52	14° \mathcal{H} 59'11	0°00'19
	8146 Dec 31 02:29	0° \mathcal{M}		behind sun begin	8152 Mar 03 04:55	14° \mathcal{H} 54'49	
retrograde	8147 Feb 15 05:47	3° \mathcal{M} 15'50		behind sun end	8152 Mar 03 20:49	15° \mathcal{H} 03'33	
	8147 Apr 02 13:04	30° κ $\underline{\Omega}$		morning rise	8152 Mar 16 06:08	17° \mathcal{H} 47'45	
min. Earth dist.	8147 Apr 14 17:02	28° $\underline{\Omega}$ 24'01 4.20502 AU			8152 May 17 04:07	0° γ	
opposition	8147 Apr 16 02:56	28° $\underline{\Omega}$ 12'36 0°50'09		retrograde	8152 Jul 16 21:46	5° γ 14'19	
direct	8147 Jun 14 17:06	23° $\underline{\Omega}$ 12'41		opposition	8152 Sep 15 19:48	0° γ 21'26	-0°19'43
	8147 Aug 23 05:32	0° \mathcal{M}		min. Earth dist.	8152 Sep 17 11:15	0° γ 08'48	4.30970 AU
evening set	8147 Oct 19 03:45	11° \mathcal{M} 33'54			8152 Sep 18 14:47	30° κ \mathcal{H}	
				direct	8152 Nov 16 18:31	25° \mathcal{H} 21'52	
conjunction	8147 Nov 01 16:22	14° \mathcal{M} 34'02 0°42'43			8153 Jan 12 20:56	0° γ	
minimum elong	8147 Nov 01 16:21	14° \mathcal{M} 34'01 0°42'50		evening set	8153 Mar 22 05:00	13° γ 32'54	
max. Earth dist.	8147 Nov 03 09:32	14° \mathcal{M} 56'55 6.28935 AU		max. Earth dist.	8153 Apr 01 17:48	15° γ 57'09	6.22769 AU
	8147 Nov 03 15:04	15° \mathcal{M}					
morning rise	8147 Nov 15 04:06	17° \mathcal{M} 33'26		conjunction	8153 Apr 03 23:14	16° γ 27'46	-0°26'08
	8148 Jan 17 05:58	0° \mathcal{J}		minimum elong	8153 Apr 03 23:13	16° γ 27'45	0°26'11
retrograde	8148 Mar 17 19:01	5° \mathcal{J} 16'51		morning rise	8153 Apr 16 17:03	19° γ 22'44	
min. Earth dist.	8148 May 16 07:03	0° \mathcal{J} 22'47 4.36429 AU			8153 Jun 05 19:20	0° \mathcal{B}	
opposition	8148 May 17 01:24	0° \mathcal{J} 16'42 1°09'54		retrograde	8153 Aug 20 14:34	7° \mathcal{B} 56'01	
	8148 May 19 03:56	30° κ \mathcal{M}		opposition	8153 Oct 20 02:11	3° \mathcal{B} 01'48	-0°54'45
direct	8148 Jul 17 00:45	25° \mathcal{M} 15'28		min. Earth dist.	8153 Oct 21 12:07	2° \mathcal{B} 50'48	4.14110 AU
	8148 Sep 13 05:46	0° \mathcal{J}			8153 Nov 14 06:46	30° κ γ	
evening set	8148 Nov 20 00:42	12° \mathcal{J} 54'35		direct	8153 Dec 19 19:53	28° γ 04'20	
					8154 Jan 23 23:22	0° \mathcal{B}	
conjunction	8148 Dec 03 07:55	15° \mathcal{J} 46'56 0°49'32			8154 Apr 15 15:02	15° \mathcal{B}	
minimum elong	8148 Dec 03 07:55	15° \mathcal{J} 46'56 0°49'40		evening set	8154 Apr 24 14:50	17° \mathcal{B} 06'17	
max. Earth dist.	8148 Dec 03 21:07	15° \mathcal{J} 54'05 6.42647 AU		max. Earth dist.	8154 May 05 23:10	19° \mathcal{B} 47'40	6.05914 AU
morning rise	8148 Dec 16 13:22	18° \mathcal{J} 38'15					
	8149 Feb 13 01:34	0° ζ		conjunction	8154 May 07 11:36	20° \mathcal{B} 09'19	-0°44'47
retrograde	8149 Apr 16 18:59	5° ζ 32'46		minimum elong	8154 May 07 11:35	20° \mathcal{B} 09'19	0°44'54
opposition	8149 Jun 16 11:21	0° ζ 36'01 1°09'05		morning rise	8154 May 20 09:16	23° \mathcal{B} 13'10	
min. Earth dist.	8149 Jun 16 11:53	0° ζ 35'50 4.47085 AU			8154 Jun 18 22:33	0° Π	
	8149 Jun 21 02:22	30° κ \mathcal{J}		retrograde	8154 Sep 26 19:44	13° Π 03'06	
direct	8149 Aug 17 12:34	25° \mathcal{J} 34'14		opposition	8154 Nov 25 19:50	8° Π 06'23	-1°13'14
	8149 Oct 13 10:40	0° ζ		min. Earth dist.	8154 Nov 26 09:56	8° Π 01'45	3.98753 AU
evening set	8149 Dec 21 03:51	12° ζ 49'16		direct	8155 Jan 24 00:49	3° Π 11'09	
				evening set	8155 May 30 09:13	22° Π 59'05	
conjunction	8150 Jan 03 05:47	15° ζ 36'53 0°42'34					
minimum elong	8150 Jan 03 05:48	15° ζ 36'54 0°42'43		conjunction	8155 Jun 12 11:47	26° Π 10'28	-0°47'56
max. Earth dist.	8150 Jan 02 14:26	15° ζ 28'40 6.49507 AU		minimum elong	8155 Jun 12 11:48	26° Π 10'28	0°48'05
morning rise	8150 Jan 16 05:18	18° ζ 23'23		max. Earth dist.	8155 Jun 12 08:10	26° Π 08'16	5.93523 AU
	8150 Mar 18 03:20	0° \approx		morning rise	8155 Jun 25 16:39	29° Π 23'14	
retrograde	8150 May 16 10:20	4° \approx 57'49			8155 Jun 28 05:28	0° \mathfrak{G}	
opposition	8150 Jul 16 09:12	0° \approx 03'46 0°50'24		retrograde	8155 Nov 04 15:54	20° \mathfrak{G} 09'02	

opposition	8156 Jan 03 05:01	15°☾08'55	-1°03'40	opposition	8161 Jun 20 15:16	4°☾51'14	1°07'23
min. Earth dist.	8156 Jan 02 17:52	15°☾12'39	3.90755 AU	min. Earth dist.	8161 Jun 20 19:19	4°☾49'55	4.48195 AU
direct	8156 Mar 01 08:32	10°☾14'32			8161 Aug 11 00:55	30°☾☿	
	8156 Jul 04 12:43	0°♏		direct	8161 Aug 21 20:19	29°☿49'24	
evening set	8156 Jul 06 00:54	0°♏21'56			8161 Sep 01 16:24	0°☾	
				evening set	8161 Dec 25 09:11	17°☾02'03	
conjunction	8156 Jul 19 11:10	3°♏38'19	-0°32'00	conjunction	8162 Jan 07 10:20	19°☾49'13	0°40'36
minimum elong	8156 Jul 19 11:11	3°♏38'20	0°32'08	minimum elong	8162 Jan 07 10:21	19°☾49'14	0°40'46
max. Earth dist.	8156 Jul 20 21:59	3°♏59'35	5.90759 AU	max. Earth dist.	8162 Jan 06 13:34	19°☾38'06	6.49932 AU
morning rise	8156 Aug 01 23:51	6°♏56'00		morning rise	8162 Jan 20 09:18	22°☾35'19	
	8156 Sep 05 14:37	15°♏			8162 Feb 25 21:36	0°♏	
retrograde	8156 Dec 12 02:55	27°♏45'12		retrograde	8162 May 20 14:01	9°♏09'06	
min. Earth dist.	8157 Feb 08 04:06	22°♏52'35	3.93661 AU		8162 Jul 20 13:05	4°♏15'16	0°46'36
opposition	8157 Feb 09 11:29	22°♏41'55	-0°27'32	opposition	8162 Jul 21 11:38	4°♏08'02	4.49553 AU
direct	8157 Apr 08 08:41	17°♏46'22		min. Earth dist.	8162 Aug 29 10:41	30°☾☾	
	8157 Jul 11 02:08	0°♏		direct	8162 Sep 21 06:14	29°☾13'35	
evening set	8157 Aug 13 04:15	7°♏35'35			8162 Oct 14 05:47	0°♏	
					8163 Jan 17 17:45	15°♏	
conjunction	8157 Aug 26 19:35	10°♏50'26	-0°03'17	evening set	8163 Jan 24 13:43	16°♏27'24	
minimum elong	8157 Aug 26 19:36	10°♏50'27	0°03'21	max. Earth dist.	8163 Feb 04 16:23	18°♏51'07	6.46940 AU
behind sun begin	8157 Aug 26 11:16	10°♏45'30					
behind sun end	8157 Aug 27 03:57	10°♏55'24		conjunction	8163 Feb 06 10:52	19°♏14'06	0°21'21
max. Earth dist.	8157 Aug 29 05:29	11°♏24'56	5.98970 AU	minimum elong	8163 Feb 06 10:53	19°♏14'06	0°21'27
morning rise	8157 Sep 09 12:57	14°♏06'02		morning rise	8163 Feb 19 05:45	21°♏59'55	
asc. node	8157 Oct 08 00:58	20°♏37'57			8163 Mar 30 09:39	0°☿	
	8157 Nov 26 18:49	0°♏		retrograde	8163 Jun 20 03:07	8°☿49'33	
retrograde	8158 Jan 17 07:49	4°♏04'11		opposition	8163 Aug 20 03:57	3°☿56'52	0°13'27
	8158 Mar 10 11:18	30°☾☿		min. Earth dist.	8163 Aug 21 15:46	3°☿45'27	4.42396 AU
min. Earth dist.	8158 Mar 16 06:11	29°☿13'07	4.06186 AU		8163 Sep 24 22:51	30°☾☿	
opposition	8158 Mar 17 21:39	28°☿59'42	0°18'05	direct	8163 Oct 21 18:04	28°♏56'01	
direct	8158 May 15 10:37	24°☿01'41			8163 Nov 17 15:29	0°☿	
	8158 Jul 17 19:33	0°♏		desc. node	8164 Jan 06 20:56	6°☿43'11	
evening set	8158 Sep 19 03:11	13°♏05'48		evening set	8164 Feb 24 00:57	16°☿32'59	
				max. Earth dist.	8164 Mar 05 11:48	18°☿51'50	6.36067 AU
conjunction	8158 Oct 02 18:52	16°♏13'32	0°25'42	conjunction	8164 Mar 07 19:30	19°☿22'47	-0°04'08
minimum elong	8158 Oct 02 18:50	16°♏13'31	0°25'44	minimum elong	8164 Mar 07 19:30	19°☿22'47	0°04'05
max. Earth dist.	8158 Oct 05 04:11	16°♏46'25	6.14544 AU	behind sun begin	8164 Mar 07 11:39	19°☿18'26	
morning rise	8158 Oct 16 10:58	19°♏21'07		behind sun end	8164 Mar 08 03:22	19°☿27'08	
	8158 Dec 05 20:33	0°♏		morning rise	8164 Mar 20 12:50	22°☿12'11	
retrograde	8159 Feb 19 20:40	8°♏03'42			8164 Apr 26 10:41	0°☿	
min. Earth dist.	8159 Apr 19 10:49	3°♏11'22	4.23136 AU	retrograde	8164 Jul 21 15:47	9°☿47'45	
opposition	8159 Apr 20 18:28	3°♏00'44	0°54'09	opposition	8164 Sep 20 11:02	4°☿54'47	-0°25'05
	8159 May 14 23:01	30°☾☿		min. Earth dist.	8164 Sep 22 03:26	4°☿41'49	4.28400 AU
direct	8159 Jun 19 14:30	28°♏00'32			8164 Nov 14 06:45	30°☿☿	
	8159 Jul 25 13:19	0°♏		direct	8164 Nov 21 06:49	29°☿55'25	
evening set	8159 Oct 18 06:51	15°♏			8164 Nov 28 06:17	0°☿	
	8159 Oct 23 21:49	16°♏13'55		evening set	8165 Mar 26 18:21	18°☿14'32	
conjunction	8159 Nov 06 09:42	19°♏12'40	0°44'31	max. Earth dist.	8165 Apr 06 08:30	20°☿40'26	6.19989 AU
minimum elong	8159 Nov 06 09:41	19°♏12'40	0°44'39				
max. Earth dist.	8159 Nov 08 00:14	19°♏33'58	6.31429 AU	conjunction	8165 Apr 08 12:55	21°☿10'39	-0°29'22
morning rise	8159 Nov 19 20:32	22°♏10'39		minimum elong	8165 Apr 08 12:54	21°☿10'38	0°29'25
	8159 Dec 27 06:17	0°☿		morning rise	8165 Apr 21 07:08	24°☿06'57	
retrograde	8160 Mar 22 00:10	9°☿44'36			8165 May 17 15:10	0°☿	
opposition	8160 May 21 09:21	4°☿44'51	1°10'56	retrograde	8165 Aug 25 16:57	12°☿52'21	
min. Earth dist.	8160 May 20 16:45	4°☿50'20	4.38604 AU	opposition	8165 Oct 25 03:09	7°☿57'53	-0°58'41
	8160 Jul 08 06:06	30°☿♏		min. Earth dist.	8165 Oct 26 10:18	7°☿47'47	4.11352 AU
direct	8160 Jul 21 12:04	29°♏43'26		direct	8165 Dec 24 13:53	3°☿00'49	
	8160 Aug 03 21:43	0°☿			8166 Mar 29 01:41	15°☿	
evening set	8160 Nov 24 11:03	17°☿16'55		evening set	8166 Apr 29 13:17	22°☿11'31	
				max. Earth dist.	8166 May 11 02:17	24°☿56'37	6.03429 AU
conjunction	8160 Dec 07 17:26	20°☿08'16	0°49'18	conjunction	8166 May 12 10:39	25°☿15'58	-0°46'18
minimum elong	8160 Dec 07 17:26	20°☿08'16	0°49'27	minimum elong	8166 May 12 10:38	25°☿15'57	0°46'26
max. Earth dist.	8160 Dec 08 02:18	20°☿13'03	6.44345 AU	morning rise	8166 May 25 09:16	28°☿21'20	
morning rise	8160 Dec 20 21:54	22°☿58'32			8166 Jun 01 08:05	0°♏	
	8161 Jan 24 03:15	0°☾					
retrograde	8161 Apr 20 22:21	9°☾47'33					

retrograde	8166 Oct 02 07:41	18° Π 22'37		min. Earth dist.	8172 May 25 03:58	9° X 15'40	4.40481 AU
opposition	8166 Dec 01 05:38	13° Π 25'27	-1°13'41	direct	8172 Jul 26 00:34	4° X 09'58	
min. Earth dist.	8166 Dec 01 16:13	13° Π 21'57	3.96797 AU	evening set	8172 Nov 28 20:51	21° X 39'04	
direct	8167 Jan 29 06:31	8° Π 30'30					
evening set	8167 Jun 04 16:17	28° Π 24'10		conjunction	8172 Dec 12 02:33	24° X 29'37	0°48'48
	8167 Jun 11 05:47	0° E		minimum elong	8172 Dec 12 02:33	24° X 29'37	0°48'58
				max. Earth dist.	8172 Dec 12 07:19	24° X 32'11	6.45655 AU
conjunction	8167 Jun 17 20:06	1° E 36'41	-0°46'45	morning rise	8172 Dec 25 06:10	27° X 19'04	
minimum elong	8167 Jun 17 20:06	1° E 36'42	0°46'54		8173 Jan 06 22:48	0° Z	
max. Earth dist.	8167 Jun 17 23:40	1° E 38'52	5.92315 AU	retrograde	8173 Apr 25 01:05	14° Z 04'08	
morning rise	8167 Jul 01 02:02	4° E 50'34		opposition	8173 Jun 24 19:46	9° Z 08'14	1°05'21
retrograde	8167 Nov 10 06:58	25° E 40'51		min. Earth dist.	8173 Jun 25 02:05	9° Z 06'11	4.48887 AU
opposition	8168 Jan 08 17:45	20° E 40'14	-0°59'47	direct	8173 Aug 26 02:07	4° Z 06'23	
min. Earth dist.	8168 Jan 08 03:08	20° E 45'10	3.90465 AU	evening set	8173 Dec 29 15:18	21° Z 18'01	
direct	8168 Mar 06 18:42	15° E 45'53					
	8168 Jun 16 16:37	0° Ω		conjunction	8174 Jan 11 15:51	24° Z 04'56	0°38'25
evening set	8168 Jul 11 12:21	5° Ω 52'51		minimum elong	8174 Jan 11 15:52	24° Z 04'57	0°38'33
				max. Earth dist.	8174 Jan 10 15:53	23° Z 52'06	6.49962 AU
conjunction	8168 Jul 24 23:25	9° Ω 09'21	-0°28'22	morning rise	8174 Jan 24 14:04	26° Z 50'47	
minimum elong	8168 Jul 24 23:26	9° Ω 09'22	0°28'29		8174 Feb 08 14:28	0° \approx	
max. Earth dist.	8168 Jul 26 14:16	9° Ω 33'01	5.91386 AU	retrograde	8174 May 24 19:35	13° \approx 25'11	
morning rise	8168 Aug 07 13:13	12° Ω 27'10		opposition	8174 Jul 24 18:39	8° \approx 31'39	0°42'30
	8168 Aug 18 04:19	15° Ω		min. Earth dist.	8174 Jul 25 19:59	8° \approx 23'33	4.48923 AU
	8168 Nov 02 07:39	0° Π		direct	8174 Sep 25 12:32	3° \approx 30'04	
retrograde	8168 Dec 17 09:26	3° Π 11'15			8175 Jan 01 02:29	15° \approx	
	8169 Jan 31 17:15	30° R Ω		evening set	8175 Jan 28 19:47	20° \approx 46'18	
min. Earth dist.	8169 Feb 13 09:09	28° Ω 19'20	3.95123 AU	max. Earth dist.	8175 Feb 08 17:43	23° \approx 07'58	6.45682 AU
opposition	8169 Feb 14 19:35	28° Ω 07'37	-0°21'02				
direct	8169 Apr 13 17:16	23° Ω 11'45		conjunction	8175 Feb 10 16:23	23° \approx 33'18	0°17'59
	8169 Jun 19 17:45	0° Π		minimum elong	8175 Feb 10 16:24	23° \approx 33'18	0°18'06
asc. node	8169 Aug 16 09:03	12° Π 24'20		morning rise	8175 Feb 23 11:07	26° \approx 19'30	
evening set	8169 Aug 18 12:58	12° Π 54'55			8175 Mar 12 18:06	0° H	
				retrograde	8175 Jun 24 15:10	13° H 14'23	
conjunction	8169 Sep 01 04:41	16° Π 08'55	0°01'15	opposition	8175 Aug 24 14:25	8° H 21'43	0°08'06
minimum elong	8169 Sep 01 04:39	16° Π 08'54	0°01'12	min. Earth dist.	8175 Aug 26 03:43	8° H 09'48	4.40581 AU
behind sun begin	8169 Aug 31 20:15	16° Π 03'57		direct	8175 Oct 26 02:35	3° H 20'58	
behind sun end	8169 Sep 01 13:03	16° Π 13'51		desc. node	8175 Nov 15 20:48	3° H 59'38	
max. Earth dist.	8169 Sep 03 15:42	16° Π 43'54	6.01095 AU	evening set	8176 Feb 28 10:15	21° H 03'34	
morning rise	8169 Sep 14 22:03	19° Π 23'28		max. Earth dist.	8176 Mar 09 21:33	23° H 23'19	6.33831 AU
	8169 Nov 02 04:12	0° L					
retrograde	8170 Jan 22 06:34	9° L 10'41		conjunction	8176 Mar 12 04:53	23° H 54'13	-0°07'54
min. Earth dist.	8170 Mar 21 06:28	4° L 19'17	4.08697 AU	minimum elong	8176 Mar 12 04:52	23° H 54'12	0°07'53
opposition	8170 Mar 22 20:46	4° L 06'16	0°24'09	behind sun begin	8176 Mar 11 21:42	23° H 50'13	
	8170 Apr 27 18:38	30° R Π		behind sun end	8176 Mar 12 12:02	23° H 58'11	
direct	8170 May 20 14:51	29° Π 07'53		morning rise	8176 Mar 24 22:03	26° H 44'29	
	8170 Jun 12 13:39	0° L			8176 Apr 08 18:24	0° Y	
evening set	8170 Sep 24 04:31	18° L 03'49		retrograde	8176 Jul 26 10:49	14° Y 29'20	
				opposition	8176 Sep 25 05:23	9° Y 36'14	-0°30'29
conjunction	8170 Oct 07 19:53	21° L 10'12	0°29'08	min. Earth dist.	8176 Sep 26 20:49	9° Y 23'35	4.25899 AU
minimum elong	8170 Oct 07 19:51	21° L 10'11	0°29'11	direct	8176 Nov 25 19:54	4° Y 37'13	
max. Earth dist.	8170 Oct 10 04:22	21° L 42'24	6.17211 AU	evening set	8177 Mar 31 10:30	23° Y 03'57	
morning rise	8170 Oct 21 11:18	24° L 16'18		max. Earth dist.	8177 Apr 11 02:22	25° Y 31'45	6.17431 AU
	8170 Nov 16 12:38	0° M					
retrograde	8171 Feb 24 07:58	12° M 47'29		conjunction	8177 Apr 13 05:08	26° Y 01'12	-0°32'30
min. Earth dist.	8171 Apr 24 01:30	7° M 55'13	4.25723 AU	minimum elong	8177 Apr 13 05:07	26° Y 01'11	0°32'34
opposition	8171 Apr 25 08:06	7° M 44'58	0°57'45	morning rise	8177 Apr 25 23:52	28° Y 58'46	
direct	8171 Jun 24 07:27	2° M 44'35			8177 Apr 30 10:21	0° B	
	8171 Oct 01 03:31	15° M			8177 Jul 17 22:41	15° B	
evening set	8171 Oct 28 14:45	20° M 50'54		retrograde	8177 Aug 30 22:35	17° B 55'32	
					8177 Oct 14 12:20	15° R B	
conjunction	8171 Nov 11 01:46	23° M 48'23	0°46'03	opposition	8177 Oct 30 06:44	13° B 00'43	-1°02'17
minimum elong	8171 Nov 11 01:45	23° M 48'23	0°46'11	min. Earth dist.	8177 Oct 31 11:27	12° B 51'23	4.08961 AU
max. Earth dist.	8171 Nov 12 10:55	24° M 06'38	6.33739 AU	direct	8177 Dec 29 13:15	8° B 03'59	
morning rise	8171 Nov 24 11:46	26° M 45'03			8178 Mar 08 12:16	15° B	
	8171 Dec 09 13:52	0° X		evening set	8178 May 04 13:34	27° B 21'49	
retrograde	8172 Mar 26 07:26	14° X 10'41			8178 May 15 14:00	0° H	
opposition	8172 May 25 16:42	9° X 11'29	1°11'35	max. Earth dist.	8178 May 16 09:14	0° H 11'32	6.01458 AU

conjunction	8178 May 17 11:48	0° Π 27'29	-0°47'31	max. Earth dist.	8183 Nov 16 20:28	28° Π 31'28	6.35665 AU
minimum elong	8178 May 17 11:47	0° Π 27'29	0°47'40		8183 Nov 23 14:07	0° \mathcal{A}	
morning rise	8178 May 30 11:10	3° Π 34'07		morning rise	8183 Nov 28 23:10	1° \mathcal{A} 10'22	
retrograde	8178 Oct 07 20:01	23° Π 44'09		retrograde	8184 Mar 30 10:02	18° \mathcal{A} 29'18	
opposition	8178 Dec 06 15:51	18° Π 46'33	-1°13'33	opposition	8184 May 29 21:29	13° \mathcal{A} 30'39	1°11'51
min. Earth dist.	8178 Dec 06 22:42	18° Π 44'17	3.95492 AU	min. Earth dist.	8184 May 29 10:48	13° \mathcal{A} 34'09	4.41917 AU
direct	8179 Feb 03 12:31	13° Π 51'50		direct	8184 Jul 30 07:54	8° \mathcal{A} 29'07	
	8179 May 25 01:59	0° \mathcal{E}		evening set	8184 Dec 03 04:34	25° \mathcal{A} 55'18	
evening set	8179 Jun 09 23:19	3° \mathcal{E} 48'30					
conjunction	8179 Jun 23 03:57	7° \mathcal{E} 01'43	-0°45'13	conjunction	8184 Dec 16 09:25	28° \mathcal{A} 45'14	0°48'05
minimum elong	8179 Jun 23 03:58	7° \mathcal{E} 01'44	0°45'23	minimum elong	8184 Dec 16 09:26	28° \mathcal{A} 45'14	0°48'16
max. Earth dist.	8179 Jun 23 12:01	7° \mathcal{E} 06'39	5.91793 AU	max. Earth dist.	8184 Dec 16 08:51	28° \mathcal{A} 44'56	6.46512 AU
morning rise	8179 Jul 06 11:10	10° \mathcal{E} 16'23			8184 Dec 22 04:33	0° \mathcal{B}	
	8179 Oct 20 07:05	0° Ω		morning rise	8184 Dec 29 12:20	1° \mathcal{B} 34'06	
retrograde	8179 Nov 15 16:07	1° Ω 07'54		retrograde	8185 Apr 29 05:10	18° \mathcal{B} 16'47	
	8179 Dec 11 23:48	30° \mathcal{R} \mathcal{E}		opposition	8185 Jun 28 23:17	13° \mathcal{B} 21'21	1°03'05
min. Earth dist.	8180 Jan 13 09:13	26° \mathcal{E} 13'09	3.90812 AU	min. Earth dist.	8185 Jun 29 09:20	13° \mathcal{B} 18'06	4.49140 AU
opposition	8180 Jan 14 04:15	26° \mathcal{E} 06'44	-0°55'29	direct	8185 Aug 30 08:38	8° \mathcal{B} 19'32	
direct	8180 Mar 12 03:17	21° \mathcal{E} 12'14		evening set	8186 Jan 02 20:29	25° \mathcal{B} 31'29	
	8180 May 28 00:19	0° Ω					
evening set	8180 Jul 16 20:58	11° Ω 16'18		conjunction	8186 Jan 15 20:31	28° \mathcal{B} 18'21	0°36'04
conjunction	8180 Jul 30 08:53	14° Ω 32'37	-0°24'36	minimum elong	8186 Jan 15 20:32	28° \mathcal{B} 18'22	0°36'12
minimum elong	8180 Jul 30 08:54	14° Ω 32'38	0°24'43	max. Earth dist.	8186 Jan 14 16:46	28° \mathcal{B} 03'28	6.49596 AU
max. Earth dist.	8180 Aug 01 04:13	14° Ω 58'56	5.92557 AU		8186 Jan 23 18:08	0° \approx	
	8180 Aug 01 05:59	15° Ω		morning rise	8186 Jan 28 18:14	1° \approx 04'10	
morning rise	8180 Aug 12 23:16	17° Ω 50'08			8186 Apr 16 10:38	15° \approx	
	8180 Oct 06 15:46	0° \mathcal{P}		retrograde	8186 May 29 01:11	17° \approx 40'32	
retrograde	8180 Dec 22 13:31	8° \mathcal{P} 27'03			8186 Jul 11 00:28	15° \mathcal{R} \approx	
opposition	8181 Feb 19 23:42	3° \mathcal{P} 23'07	-0°14'37	opposition	8186 Jul 29 00:26	12° \approx 47'12	0°38'14
min. Earth dist.	8181 Feb 18 12:47	3° \mathcal{P} 35'00	3.96962 AU	min. Earth dist.	8186 Jul 30 03:02	12° \approx 38'41	4.47989 AU
	8181 Mar 19 13:35	30° \mathcal{R} Ω		direct	8186 Sep 29 17:10	7° \approx 45'45	
direct	8181 Apr 19 00:57	28° Ω 26'52			8186 Dec 13 09:19	15° \approx	
	8181 May 19 12:40	0° \mathcal{P}		evening set	8187 Feb 02 01:41	25° \approx 05'14	
asc. node	8181 Jun 26 09:59	5° \mathcal{P} 28'40		max. Earth dist.	8187 Feb 12 22:53	27° \approx 26'58	6.44251 AU
evening set	8181 Aug 23 17:31	18° \mathcal{P} 02'51					
conjunction	8181 Sep 06 09:25	21° \mathcal{P} 15'49	0°05'31	conjunction	8187 Feb 14 22:00	27° \approx 52'38	0°14'33
minimum elong	8181 Sep 06 09:25	21° \mathcal{P} 15'49	0°05'29	minimum elong	8187 Feb 14 22:01	27° \approx 52'38	0°14'39
behind sun begin	8181 Sep 06 01:21	21° \mathcal{P} 11'05		behind sun begin	8187 Feb 14 18:36	27° \approx 50'47	
behind sun end	8181 Sep 06 17:29	21° \mathcal{P} 20'33		behind sun end	8187 Feb 15 01:26	27° \approx 54'30	
max. Earth dist.	8181 Sep 08 22:11	21° \mathcal{P} 51'37	6.03406 AU		8187 Feb 24 15:55	0° \mathcal{H}	
morning rise	8181 Sep 20 02:43	24° \mathcal{P} 29'14		morning rise	8187 Feb 27 16:17	0° \mathcal{H} 39'15	
	8181 Oct 14 07:13	0° \mathcal{E}		retrograde	8187 Jun 29 02:56	17° \mathcal{H} 40'01	
retrograde	8182 Jan 26 23:10	14° \mathcal{E} 05'02		opposition	8187 Aug 29 01:38	12° \mathcal{H} 47'26	0°02'42
min. Earth dist.	8182 Mar 26 00:55	9° \mathcal{E} 13'44	4.11235 AU	min. Earth dist.	8187 Aug 30 15:51	12° \mathcal{H} 35'14	4.38738 AU
opposition	8182 Mar 27 15:05	9° \mathcal{E} 00'48	0°29'47	desc. node	8187 Sep 25 17:09	9° \mathcal{H} 33'03	
direct	8182 May 25 12:09	4° \mathcal{E} 02'07		direct	8187 Oct 30 11:33	7° \mathcal{H} 46'59	
evening set	8182 Sep 29 01:29	22° \mathcal{E} 50'11		evening set	8188 Mar 03 20:08	25° \mathcal{H} 35'06	
conjunction	8182 Oct 12 16:13	25° \mathcal{E} 55'12	0°32'15	max. Earth dist.	8188 Mar 14 06:09	27° \mathcal{H} 54'53	6.31705 AU
minimum elong	8182 Oct 12 16:12	25° \mathcal{E} 55'11	0°32'19				
max. Earth dist.	8182 Oct 14 20:23	26° \mathcal{E} 24'47	6.19741 AU	conjunction	8188 Mar 16 14:27	28° \mathcal{H} 26'29	-0°11'36
morning rise	8182 Oct 26 07:08	28° \mathcal{E} 59'55		minimum elong	8188 Mar 16 14:27	28° \mathcal{H} 26'29	0°11'36
	8182 Oct 30 18:28	0° \mathcal{M}		behind sun begin	8188 Mar 16 08:42	28° \mathcal{H} 23'16	
	8183 Jan 20 17:42	15° \mathcal{M}		behind sun end	8188 Mar 16 20:12	28° \mathcal{H} 29'42	
retrograde	8183 Feb 28 17:05	17° \mathcal{M} 20'48			8188 Mar 23 13:05	0° \mathcal{Y}	
	8183 Apr 08 12:20	15° \mathcal{R} \mathcal{M}		morning rise	8188 Mar 29 07:50	1° \mathcal{Y} 17'39	
opposition	8183 Apr 29 18:11	12° \mathcal{M} 18'42	1°00'53	retrograde	8188 Jul 31 06:59	19° \mathcal{Y} 11'28	
min. Earth dist.	8183 Apr 28 14:46	12° \mathcal{M} 27'52	4.28033 AU	opposition	8188 Sep 30 00:06	14° \mathcal{Y} 18'11	-0°35'40
direct	8183 Jun 28 22:52	7° \mathcal{M} 18'06		min. Earth dist.	8188 Oct 01 14:25	14° \mathcal{Y} 05'51	4.23621 AU
	8183 Sep 12 08:54	15° \mathcal{M}		direct	8188 Nov 30 10:50	9° \mathcal{Y} 19'27	
evening set	8183 Nov 02 03:41	25° \mathcal{M} 18'25		evening set	8189 Apr 05 02:18	27° \mathcal{Y} 52'54	
conjunction	8183 Nov 15 14:10	28° \mathcal{M} 14'52	0°47'17		8189 Apr 14 05:26	0° \mathcal{B}	
minimum elong	8183 Nov 15 14:09	28° \mathcal{M} 14'51	0°47'24	max. Earth dist.	8189 Apr 15 22:17	0° \mathcal{B} 23'47	6.15189 AU
				conjunction	8189 Apr 17 21:22	0° \mathcal{B} 51'13	-0°35'24
				minimum elong	8189 Apr 17 21:20	0° \mathcal{B} 51'13	0°35'28
				morning rise	8189 Apr 30 16:21	3° \mathcal{B} 49'54	
					8189 Jun 21 15:26	15° \mathcal{B}	

retrograde	8189 Sep 05 02:39	22°♄56'43		opposition	8195 May 04 05:12	16°♄55'52	1°03'41
opposition	8189 Nov 04 09:24	18°♄01'38	-1°05'22		8195 May 19 02:40	15°♄	
min. Earth dist.	8189 Nov 05 11:49	17°♄53'01	4.06934 AU	direct	8195 Jul 03 13:58	11°♄55'08	
	8189 Nov 29 09:39	15°♄			8195 Aug 18 07:48	15°♄	
direct	8190 Jan 03 11:09	13°♄05'16		evening set	8195 Nov 06 18:26	29°♄50'25	
	8190 Feb 07 03:38	15°♄			8195 Nov 07 12:06	0°♄	
	8190 Apr 29 01:09	0°♄					
evening set	8190 May 09 12:34	2°♄28'55		conjunction	8195 Nov 20 04:02	2°♄45'51	0°48'14
max. Earth dist.	8190 May 21 11:51	5°♄21'29	5.99809 AU	minimum elong	8195 Nov 20 04:02	2°♄45'50	0°48'22
				max. Earth dist.	8195 Nov 21 05:10	2°♄59'35	6.37359 AU
conjunction	8190 May 22 11:19	5°♄35'37	-0°48'20	morning rise	8195 Dec 03 12:22	5°♄40'22	
minimum elong	8190 May 22 11:19	5°♄35'37	0°48'28	retrograde	8196 Apr 03 16:13	22°♄53'12	
morning rise	8190 Jun 04 11:45	8°♄43'27		opposition	8196 Jun 03 04:17	17°♄55'00	1°11'44
retrograde	8190 Oct 13 04:26	29°♄01'08		min. Earth dist.	8196 Jun 02 20:45	17°♄57'28	4.43228 AU
opposition	8190 Dec 11 23:43	24°♄03'02	-1°12'47	direct	8196 Aug 03 19:02	12°♄53'24	
min. Earth dist.	8190 Dec 12 02:19	24°♄02'11	3.94394 AU		8196 Dec 06 06:24	0°♄	
direct	8191 Feb 08 16:10	19°♄08'27		evening set	8196 Dec 07 13:52	0°♄16'45	
	8191 May 06 18:50	0°♄					
evening set	8191 Jun 15 04:10	9°♄07'43		conjunction	8196 Dec 20 18:11	3°♄06'06	0°47'06
				minimum elong	8196 Dec 20 18:12	3°♄06'07	0°47'15
conjunction	8191 Jun 28 09:55	12°♄21'39	-0°43'18	max. Earth dist.	8196 Dec 20 15:26	3°♄04'37	6.47378 AU
minimum elong	8191 Jun 28 09:56	12°♄21'40	0°43'28	morning rise	8197 Jan 02 20:11	5°♄54'19	
max. Earth dist.	8191 Jun 29 00:01	12°♄30'16	5.91366 AU	retrograde	8197 May 03 08:31	22°♄34'24	
morning rise	8191 Jul 11 18:03	15°♄36'58		opposition	8197 Jul 03 04:46	17°♄39'19	1°00'26
	8191 Sep 15 17:04	0°♄		min. Earth dist.	8197 Jul 03 15:56	17°♄35'43	4.49554 AU
retrograde	8191 Nov 21 01:08	6°♄29'33		direct	8197 Sep 03 15:22	12°♄37'37	
opposition	8192 Jan 19 11:59	1°♄27'55	-0°50'45	evening set	8198 Jan 07 03:05	29°♄48'53	
min. Earth dist.	8192 Jan 18 15:08	1°♄34'58	3.91104 AU		8198 Jan 07 23:58	0°♄	
	8192 Jan 30 12:27	30°♄		max. Earth dist.	8198 Jan 18 19:51	2°♄19'07	6.49556 AU
direct	8192 Mar 17 10:52	26°♄33'16					
	8192 May 02 10:26	0°♄		conjunction	8198 Jan 20 02:22	2°♄35'30	0°33'31
	8192 Jul 15 13:02	15°♄		minimum elong	8198 Jan 20 02:23	2°♄35'31	0°33'39
evening set	8192 Jul 22 03:48	16°♄35'11		morning rise	8198 Feb 01 23:29	5°♄21'06	
					8198 Mar 22 16:50	15°♄	
conjunction	8192 Aug 04 16:33	19°♄51'25	-0°20'41	retrograde	8198 Jun 02 08:09	21°♄58'12	
minimum elong	8192 Aug 04 16:34	19°♄51'26	0°20'48	opposition	8198 Aug 02 07:24	17°♄05'04	0°33'45
max. Earth dist.	8192 Aug 06 15:50	20°♄20'01	5.93533 AU	min. Earth dist.	8198 Aug 03 12:22	16°♄55'48	4.47509 AU
morning rise	8192 Aug 18 07:40	23°♄08'46			8198 Aug 19 03:10	15°♄	
	8192 Sep 16 18:44	0°♄		direct	8198 Oct 04 01:41	12°♄03'44	
retrograde	8192 Dec 27 15:24	13°♄39'23			8198 Nov 18 18:48	15°♄	
min. Earth dist.	8193 Feb 23 13:08	8°♄47'44	3.98512 AU	evening set	8199 Feb 06 07:48	29°♄24'36	
opposition	8193 Feb 25 01:43	8°♄35'17	-0°08'10		8199 Feb 09 01:07	0°♄	
direct	8193 Apr 24 03:46	3°♄38'44		max. Earth dist.	8199 Feb 17 02:19	1°♄45'13	6.43367 AU
asc. node	8193 May 06 12:59	3°♄54'26					
evening set	8193 Aug 28 21:13	23°♄09'05		conjunction	8199 Feb 19 03:38	2°♄12'09	0°11'06
				minimum elong	8199 Feb 19 03:38	2°♄12'09	0°11'11
conjunction	8193 Sep 11 13:08	26°♄21'10	0°09'41	behind sun begin	8199 Feb 18 21:42	2°♄08'55	
minimum elong	8193 Sep 11 13:07	26°♄21'10	0°09'40	behind sun end	8199 Feb 19 09:34	2°♄15'22	
behind sun begin	8193 Sep 11 06:16	26°♄17'10		morning rise	8199 Mar 03 21:38	4°♄58'59	
behind sun end	8193 Sep 11 19:58	26°♄25'10		retrograde	8199 Jul 03 12:39	22°♄03'43	
max. Earth dist.	8193 Sep 14 00:28	26°♄55'58	6.05357 AU	desc. node	8199 Aug 07 03:45	20°♄16'31	
morning rise	8193 Sep 25 06:32	29°♄33'39		opposition	8199 Sep 02 12:10	17°♄11'01	-0°02'35
	8193 Sep 27 03:58	0°♄		min. Earth dist.	8199 Sep 04 02:11	16°♄58'52	4.37501 AU
retrograde	8194 Jan 31 15:45	18°♄59'46		direct	8199 Nov 03 19:50	12°♄10'45	
min. Earth dist.	8194 Mar 30 20:18	14°♄08'09	4.13374 AU	evening set	8200 Mar 09 04:06	0°♄02'10	
opposition	8194 Apr 01 09:13	13°♄55'39	0°35'11		8200 Mar 09 00:13	0°♄	
direct	8194 May 30 10:21	8°♄56'37		max. Earth dist.	8200 Mar 19 15:45	2°♄23'18	6.30205 AU
evening set	8194 Oct 03 22:43	27°♄38'19					
	8194 Oct 14 10:22	0°♄		conjunction	8200 Mar 21 22:21	2°♄54'04	-0°15'07
				minimum elong	8200 Mar 21 22:20	2°♄54'04	0°15'07
conjunction	8194 Oct 17 13:12	0°♄42'15	0°35'09	behind sun begin	8200 Mar 21 19:23	2°♄52'24	
minimum elong	8194 Oct 17 13:11	0°♄42'14	0°35'15	behind sun end	8200 Mar 22 01:18	2°♄55'43	
max. Earth dist.	8194 Oct 19 16:08	1°♄10'59	6.21898 AU	morning rise	8200 Apr 03 15:31	5°♄45'46	
morning rise	8194 Oct 31 03:18	3°♄45'41		retrograde	8200 Aug 05 23:40	23°♄46'27	
	8194 Dec 24 20:31	15°♄		opposition	8200 Oct 05 16:17	18°♄52'59	-0°40'24
retrograde	8195 Mar 05 02:41	21°♄57'30		min. Earth dist.	8200 Oct 07 06:27	18°♄40'42	4.21940 AU
min. Earth dist.	8195 May 03 03:27	17°♄04'27	4.30031 AU	direct	8200 Dec 06 00:23	13°♄54'32	





























































































































	8201 Mar 30 12:49	0°♄		minimum elong	8206 Oct 23 09:14	5°♎27'03	0°37'49
evening set	8201 Apr 10 14:43	2°♄32'37		max. Earth dist.	8206 Oct 25 09:25	5°♎54'07	6.23707 AU
max. Earth dist.	8201 Apr 21 11:14	5°♄04'28	6.13451 AU	morning rise	8206 Nov 05 22:55	8°♎29'30	
					8206 Dec 06 04:18	15°♎	
conjunction	8201 Apr 23 09:50	5°♄31'43	-0°37'54	retrograde	8207 Mar 10 11:56	26°♎33'28	
minimum elong	8201 Apr 23 09:49	5°♄31'42	0°38'00	opposition	8207 May 09 16:05	21°♎32'12	1°05'58
morning rise	8201 May 06 05:24	8°♄31'20		min. Earth dist.	8207 May 08 15:55	21°♎40'15	4.31781 AU
	8201 Jun 03 21:25	15°♄		direct	8207 Jul 09 04:48	16°♎31'16	
retrograde	8201 Sep 11 01:04	27°♄46'35			8207 Oct 22 19:22	0°♄	
opposition	8201 Nov 10 07:31	22°♄51'06	-1°07'49	evening set	8207 Nov 12 08:39	4°♄22'04	
min. Earth dist.	8201 Nov 11 07:09	22°♄43'23	4.05278 AU				
direct	8202 Jan 09 04:58	17°♄54'57		conjunction	8207 Nov 25 17:41	7°♄16'37	0°48'50
	8202 Apr 13 07:03	0°♄		minimum elong	8207 Nov 25 17:41	7°♄16'36	0°49'00
evening set	8202 May 15 06:59	7°♄23'25		max. Earth dist.	8207 Nov 26 16:56	7°♄29'16	6.38924 AU
max. Earth dist.	8202 May 27 11:53	10°♄19'49	5.98398 AU	morning rise	8207 Dec 09 01:00	10°♄10'08	
				retrograde	8208 Apr 08 21:30	27°♄17'09	
conjunction	8202 May 28 06:35	10°♄31'07	-0°48'44	opposition	8208 Jun 08 11:09	22°♄19'24	1°11'08
minimum elong	8202 May 28 06:35	10°♄31'07	0°48'54	min. Earth dist.	8208 Jun 08 05:25	22°♄21'16	4.44486 AU
morning rise	8202 Jun 10 07:45	13°♄39'57		direct	8208 Aug 09 05:28	17°♄17'46	
	8202 Aug 28 13:24	0°♄			8208 Nov 20 16:28	0°♄	
retrograde	8202 Oct 19 09:25	4°♄04'32		evening set	8208 Dec 12 23:02	4°♄38'07	
	8202 Dec 11 07:06	30°♄					
opposition	8202 Dec 18 02:16	29°♄06'00	-1°11'29	conjunction	8208 Dec 26 02:25	7°♄26'50	0°45'48
min. Earth dist.	8202 Dec 18 03:16	29°♄05'40	3.93374 AU	minimum elong	8208 Dec 26 02:26	7°♄26'50	0°45'58
direct	8203 Feb 14 16:05	24°♄11'29		max. Earth dist.	8208 Dec 25 18:45	7°♄22'43	6.48207 AU
	8203 Apr 16 19:43	0°♄		morning rise	8209 Jan 08 03:48	10°♄14'27	
evening set	8203 Jun 21 04:20	14°♄13'35		retrograde	8209 May 08 13:37	26°♄51'58	
				opposition	8209 Jul 08 10:11	21°♄57'10	0°57'24
conjunction	8203 Jul 04 11:07	17°♄28'15	-0°41'09	min. Earth dist.	8209 Jul 09 00:31	21°♄52'33	4.49884 AU
minimum elong	8203 Jul 04 11:08	17°♄28'16	0°41'18	direct	8209 Sep 08 23:47	16°♄55'24	
max. Earth dist.	8203 Jul 05 04:49	17°♄39'05	5.90836 AU		8209 Dec 23 17:31	0°♄	
morning rise	8203 Jul 17 20:28	20°♄44'23		evening set	8210 Jan 12 09:05	4°♄06'12	
	8203 Aug 26 19:48	0°♄		max. Earth dist.	8210 Jan 23 23:10	6°♄35'05	6.49333 AU
retrograde	8203 Nov 27 04:55	11°♄38'34					
opposition	8204 Jan 25 14:47	6°♄36'36	-0°45'53	conjunction	8210 Jan 25 07:56	6°♄52'41	0°30'45
min. Earth dist.	8204 Jan 24 15:02	6°♄44'38	3.91151 AU	minimum elong	8210 Jan 25 07:57	6°♄52'42	0°30'53
direct	8204 Mar 23 11:26	1°♄41'49		morning rise	8210 Feb 07 04:23	9°♄38'09	
	8204 Jun 29 13:20	15°♄			8210 Mar 05 00:03	15°♄	
evening set	8204 Jul 28 06:48	21°♄43'07		retrograde	8210 Jun 07 13:15	26°♄16'42	
				opposition	8210 Aug 07 14:24	21°♄23'39	0°29'01
conjunction	8204 Aug 10 20:14	24°♄59'26	-0°16'48	min. Earth dist.	8210 Aug 08 20:17	21°♄14'07	4.46724 AU
minimum elong	8204 Aug 10 20:15	24°♄59'26	0°16'53	direct	8210 Oct 09 07:36	16°♄22'26	
max. Earth dist.	8204 Aug 12 20:39	25°♄28'40	5.94139 AU		8211 Jan 24 22:31	0°♄	
morning rise	8204 Aug 24 12:12	28°♄16'49		evening set	8211 Feb 11 14:01	3°♄45'44	
	8204 Aug 31 17:30	0°♄		max. Earth dist.	8211 Feb 22 06:53	6°♄05'54	6.42055 AU
retrograde	8205 Jan 02 13:37	18°♄43'07					
min. Earth dist.	8205 Mar 01 11:20	13°♄51'32	3.99599 AU	conjunction	8211 Feb 24 09:26	6°♄33'37	0°07'30
opposition	8205 Mar 03 00:30	13°♄38'52	-0°01'58	minimum elong	8211 Feb 24 09:26	6°♄33'37	0°07'34
asc. node	8205 Mar 19 23:01	11°♄25'49		behind sun begin	8211 Feb 24 02:12	6°♄29'40	
direct	8205 Apr 30 04:17	8°♄41'59		behind sun end	8211 Feb 24 16:40	6°♄37'33	
evening set	8205 Sep 03 22:40	28°♄08'50		morning rise	8211 Mar 09 03:08	9°♄20'50	
	8205 Sep 11 21:26	0°♄		desc. node	8211 Jun 17 18:37	25°♄49'30	
				retrograde	8211 Jul 09 01:41	26°♄31'16	
conjunction	8205 Sep 17 14:56	1°♄20'21	0°13'38	opposition	8211 Sep 08 00:14	21°♄38'34	-0°08'03
minimum elong	8205 Sep 17 14:56	1°♄20'21	0°13'37	min. Earth dist.	8211 Sep 09 16:00	21°♄25'52	4.35708 AU
behind sun begin	8205 Sep 17 10:31	1°♄17'47		direct	8211 Nov 09 07:01	16°♄38'28	
behind sun end	8205 Sep 17 19:20	1°♄22'55			8212 Feb 21 16:04	0°♄	
max. Earth dist.	8205 Sep 20 03:41	1°♄55'50	6.06844 AU	evening set	8212 Mar 13 14:03	4°♄35'11	
morning rise	8205 Oct 01 08:09	4°♄32'04		max. Earth dist.	8212 Mar 24 00:17	6°♄56'16	6.28057 AU
retrograde	8206 Feb 06 08:38	23°♄50'22					
min. Earth dist.	8206 Apr 05 13:43	18°♄58'42	4.15098 AU	conjunction	8212 Mar 26 08:12	7°♄27'55	-0°18'42
opposition	8206 Apr 07 01:50	18°♄46'30	0°40'08	minimum elong	8212 Mar 26 08:11	7°♄27'54	0°18'42
direct	8206 Jun 05 06:30	13°♄47'15		morning rise	8212 Apr 08 01:36	10°♄20'33	
	8206 Sep 28 23:28	0°♄		retrograde	8212 Aug 10 19:16	28°♄30'35	
evening set	8206 Oct 09 19:19	2°♄24'07		opposition	8212 Oct 10 11:39	23°♄36'52	-0°45'10
				min. Earth dist.	8212 Oct 12 00:03	23°♄25'08	4.19579 AU
conjunction	8206 Oct 23 09:16	5°♄27'04	0°37'44	direct	8212 Dec 10 14:52	18°♄38'39	

	8213 Mar 13 05:21	0°♄		8218 Sep 11 06:30	0°♍	
evening set	8213 Apr 15 07:23	7°♄23'59		evening set	8218 Oct 14 16:15	7°♍10'09
max. Earth dist.	8213 Apr 26 08:00	9°♄58'59 6.11081 AU				
			conjunction	8218 Oct 28 05:35	10°♍11'42 0°40'09	
conjunction	8213 Apr 28 03:01	10°♄24'17 -0°40'19	minimum elong	8218 Oct 28 05:34	10°♍11'41 0°40'14	
minimum elong	8213 Apr 28 03:00	10°♄24'16 0°40'25	max. Earth dist.	8218 Oct 30 03:10	10°♍37'11 6.26298 AU	
morning rise	8213 May 10 23:02	13°♄25'09	morning rise	8218 Nov 10 18:17	13°♍12'37	
	8213 May 17 18:03	15°♄		8218 Nov 18 21:25	15°♍	
	8213 Aug 04 00:59	0°♂		8219 Feb 16 09:44	0°♂	
retrograde	8213 Sep 16 08:19	2°♂51'16	retrograde	8219 Mar 14 21:00	1°♂06'12	
	8213 Oct 30 01:52	30°♄		8219 Apr 10 03:02	30°♄	
opposition	8213 Nov 15 11:25	27°♄55'27 -1°09'59	min. Earth dist.	8219 May 13 04:33	26°♍12'33 4.34181 AU	
min. Earth dist.	8213 Nov 16 09:29	27°♄48'13 4.03102 AU	opposition	8219 May 14 02:03	26°♍05'25 1°07'53	
direct	8214 Jan 14 04:39	22°♄59'33	direct	8219 Jul 13 20:25	21°♍04'19	
	8214 Mar 23 22:42	0°♂		8219 Oct 04 16:09	0°♂	
evening set	8214 May 20 07:48	12°♂34'39	evening set	8219 Nov 16 21:19	8°♂48'39	
conjunction	8214 Jun 02 08:17	15°♂43'35 -0°48'50	conjunction	8219 Nov 30 05:25	11°♂42'02 0°49'12	
minimum elong	8214 Jun 02 08:17	15°♂43'35 0°49'00	minimum elong	8219 Nov 30 05:25	11°♂42'02 0°49'21	
max. Earth dist.	8214 Jun 01 17:11	15°♂34'26 5.96625 AU	max. Earth dist.	8219 Nov 30 23:49	11°♂52'01 6.40939 AU	
morning rise	8214 Jun 15 10:38	18°♂53'45	morning rise	8219 Dec 13 11:55	14°♂34'24	
	8214 Aug 03 16:24	0°♄		8220 Mar 11 22:35	0°♄	
retrograde	8214 Oct 24 19:34	9°♄26'11	retrograde	8220 Apr 13 00:28	1°♄34'34	
opposition	8214 Dec 23 11:40	4°♄27'11 -1°09'33		8220 May 15 00:19	30°♄	
min. Earth dist.	8214 Dec 23 08:22	4°♄28'17 3.92224 AU	opposition	8220 Jun 12 15:50	26°♂37'13 1°10'12	
	8215 Feb 03 14:05	30°♄	min. Earth dist.	8220 Jun 12 12:58	26°♂38'09 4.45995 AU	
direct	8215 Feb 19 20:37	29°♂32'46	direct	8220 Aug 13 13:28	21°♂35'27	
	8215 Mar 08 04:32	0°♄		8220 Nov 02 19:24	0°♄	
evening set	8215 Jun 26 12:01	19°♄37'52	evening set	8220 Dec 17 05:23	8°♄52'19	
conjunction	8215 Jul 09 19:50	22°♄53'16 -0°38'32	conjunction	8220 Dec 30 08:11	11°♄30'26 0°44'19	
minimum elong	8215 Jul 09 19:51	22°♄53'16 0°38'41	minimum elong	8220 Dec 30 08:11	11°♄30'26 0°44'28	
max. Earth dist.	8215 Jul 10 18:00	23°♄06'50 5.90431 AU	max. Earth dist.	8220 Dec 29 21:26	11°♄34'41 6.49101 AU	
morning rise	8215 Jul 23 06:21	26°♄10'06	morning rise	8221 Jan 12 08:36	14°♄27'24	
	8215 Aug 08 06:01	0°♂		8221 Apr 16 12:38	0°♂	
	8215 Oct 27 13:46	15°♂	retrograde	8221 May 12 15:12	1°♂02'37	
retrograde	8215 Dec 02 14:25	17°♂04'38		8221 Jun 07 17:11	30°♄	
	8216 Jan 07 13:34	15°♄	opposition	8221 Jul 12 13:25	26°♄08'10 0°54'09	
opposition	8216 Jan 30 23:50	12°♂02'13 -0°40'18	min. Earth dist.	8221 Jul 13 06:11	26°♄02'46 4.50107 AU	
min. Earth dist.	8216 Jan 29 21:30	12°♂11'09 3.91549 AU	direct	8221 Sep 13 04:24	21°♄06'27	
direct	8216 Mar 28 20:41	7°♂07'11		8221 Dec 06 09:17	0°♂	
	8216 Jun 09 04:16	15°♂	evening set	8222 Jan 16 12:57	8°♂17'19	
evening set	8216 Aug 02 16:10	27°♂06'06	max. Earth dist.	8222 Jan 27 21:33	10°♂43'33 6.48849 AU	
	8216 Aug 14 17:36	0°♄				
			conjunction	8222 Jan 29 11:04	11°♂03'44 0°27'53	
conjunction	8216 Aug 16 06:31	0°♄22'13 -0°12'32	minimum elong	8222 Jan 29 11:05	11°♂03'44 0°28'00	
minimum elong	8216 Aug 16 06:31	0°♄22'13 0°12'36	morning rise	8222 Feb 11 07:09	13°♂49'13	
behind sun begin	8216 Aug 16 01:14	0°♄19'03		8222 Feb 16 20:00	15°♂	
behind sun end	8216 Aug 16 11:48	0°♄25'23		8222 May 24 16:18	0°♂	
max. Earth dist.	8216 Aug 18 11:43	0°♄54'14 5.95328 AU	retrograde	8222 Jun 11 20:04	0°♂30'25	
morning rise	8216 Aug 29 22:52	3°♄39'14		8222 Jun 29 22:10	30°♄	
retrograde	8217 Jan 07 16:48	23°♄57'54	opposition	8222 Aug 11 20:11	25°♂37'32 0°24'13	
asc. node	8217 Jan 27 07:44	23°♄19'08	min. Earth dist.	8222 Aug 13 05:12	25°♂26'59 4.45553 AU	
min. Earth dist.	8217 Mar 06 13:32	19°♄06'27 4.01446 AU	direct	8222 Oct 13 13:54	20°♂36'21	
opposition	8217 Mar 08 03:28	18°♄53'32 0°04'35		8223 Jan 07 18:10	0°♂	
direct	8217 May 05 09:42	13°♄56'21	evening set	8223 Feb 15 19:10	8°♂03'35	
	8217 Aug 25 20:19	0°♄	max. Earth dist.	8223 Feb 26 09:40	10°♂23'02 6.40267 AU	
evening set	8217 Sep 09 03:46	3°♄16'29				
			conjunction	8223 Feb 28 14:26	10°♂52'03 0°03'54	
conjunction	8217 Sep 22 19:51	6°♄26'53 0°17'39	minimum elong	8223 Feb 28 14:26	10°♂52'03 0°03'58	
minimum elong	8217 Sep 22 19:50	6°♄26'52 0°17'40	behind sun begin	8223 Feb 28 06:34	10°♂47'44	
max. Earth dist.	8217 Sep 25 08:11	7°♄01'54 6.09162 AU	behind sun end	8223 Feb 28 22:18	10°♂56'21	
morning rise	8217 Oct 06 12:58	9°♄37'24	morning rise	8223 Mar 13 07:55	13°♂39'54	
retrograde	8218 Feb 11 00:01	28°♄44'24	desc. node	8223 Apr 27 17:52	22°♂59'00	
min. Earth dist.	8218 Apr 10 07:55	23°♄52'52 4.17657 AU		8223 Jun 18 12:26	0°♄	
opposition	8218 Apr 11 19:51	23°♄40'44 0°44'57	retrograde	8223 Jul 13 13:24	0°♄57'51	
direct	8218 Jun 10 04:40	18°♄41'09		8223 Aug 07 16:42	30°♄	

opposition	8223 Sep 12 12:06	26° H 05'05	-0°13'28	min. Earth dist.	8229 Mar 11 14:22	24° H 21'15	4.03711 AU
min. Earth dist.	8223 Sep 14 03:39	25° H 52'26	4.33411 AU	opposition	8229 Mar 13 05:43	24° H 07'52	0°11'04
direct	8223 Nov 13 14:32	21° H 05'12		direct	8229 May 10 14:54	19° H 10'17	
	8224 Feb 03 18:55	0° Y			8229 Aug 07 08:25	0° A	
evening set	8224 Mar 18 00:32	9° Y 09'13		evening set	8229 Sep 14 07:57	8° A 22'29	
max. Earth dist.	8224 Mar 28 11:48	11° Y 31'43	6.25416 AU				
				conjunction	8229 Sep 27 23:51	11° A 31'34	0°21'31
conjunction	8224 Mar 30 18:45	12° Y 03'01	-0°22'10	minimum elong	8229 Sep 27 23:50	11° A 31'33	0°21'33
minimum elong	8224 Mar 30 18:44	12° Y 03'01	0°22'13	max. Earth dist.	8229 Sep 30 10:54	12° A 05'40	6.11774 AU
morning rise	8224 Apr 12 12:22	14° Y 56'50		morning rise	8229 Oct 11 16:25	14° A 40'38	
	8224 Jun 29 16:04	0° B			8229 Dec 29 00:28	0° M	
retrograde	8224 Aug 15 20:04	3° B 18'21		retrograde	8230 Feb 15 16:15	3° M 35'49	
	8224 Oct 02 19:21	30° R Y			8230 Apr 05 12:48	30° R A	
opposition	8224 Oct 15 09:06	28° Y 24'29	-0°49'42	min. Earth dist.	8230 Apr 15 02:57	28° A 43'46	4.20335 AU
min. Earth dist.	8224 Oct 16 21:14	28° Y 12'48	4.16773 AU	opposition	8230 Apr 16 12:31	28° A 32'28	0°49'25
direct	8224 Dec 15 08:17	23° Y 26'37		direct	8230 Jun 15 03:11	23° A 32'35	
	8225 Feb 20 21:53	0° B			8230 Aug 21 15:44	0° M	
evening set	8225 Apr 20 02:15	12° B 20'52		evening set	8230 Oct 19 11:42	11° M 53'44	
max. Earth dist.	8225 May 01 05:39	14° B 58'28	6.08358 AU				
	8225 May 01 08:14	15° B		conjunction	8230 Nov 02 00:23	14° M 53'55	0°42'17
				minimum elong	8230 Nov 02 00:22	14° M 53'55	0°42'24
conjunction	8225 May 02 22:26	15° B 22'35	-0°42'28		8230 Nov 02 11:19	15° M	
minimum elong	8225 May 02 22:25	15° B 22'35	0°42'35	max. Earth dist.	8230 Nov 03 19:04	15° M 17'39	6.28821 AU
morning rise	8225 May 15 19:17	18° B 25'00		morning rise	8230 Nov 15 12:14	17° M 53'25	
	8225 Jul 07 23:40	0° I			8231 Jan 15 11:57	0° A	
retrograde	8225 Sep 21 16:31	8° I 03'26		retrograde	8231 Mar 19 03:29	5° A 37'22	
opposition	8225 Nov 20 18:15	3° I 07'16	-1°11'40	opposition	8231 May 18 11:02	0° A 37'03	1°09'24
min. Earth dist.	8225 Nov 21 12:08	3° I 01'23	4.00742 AU	min. Earth dist.	8231 May 17 15:24	0° A 43'33	4.36373 AU
	8225 Dec 16 12:38	30° R B			8231 May 23 03:17	30° R M	
direct	8226 Jan 19 04:39	28° B 11'45		direct	8231 Jul 18 08:36	25° M 35'48	
	8226 Feb 21 13:59	0° I			8231 Sep 12 07:16	0° A	
evening set	8226 May 25 12:13	17° I 54'15		evening set	8231 Nov 21 08:56	13° A 14'36	
conjunction	8226 Jun 07 13:39	21° I 04'29	-0°48'31	conjunction	8231 Dec 04 16:15	16° A 06'58	0°49'18
minimum elong	8226 Jun 07 13:39	21° I 04'29	0°48'41	minimum elong	8231 Dec 04 16:15	16° A 06'58	0°49'27
max. Earth dist.	8226 Jun 07 04:07	20° I 58'41	5.94864 AU	max. Earth dist.	8231 Dec 05 06:08	16° A 14'29	6.42651 AU
morning rise	8226 Jun 20 17:09	24° I 16'00		morning rise	8231 Dec 17 21:46	18° A 58'18	
	8226 Jul 14 23:26	0° B			8232 Feb 12 08:38	0° B	
retrograde	8226 Oct 30 09:40	14° B 56'00		retrograde	8232 Apr 17 05:15	5° B 52'56	
opposition	8226 Dec 29 00:03	9° B 56'29	-1°06'56	opposition	8232 Jun 16 20:53	0° B 56'04	1°08'55
min. Earth dist.	8226 Dec 28 17:03	9° B 58'50	3.91277 AU	min. Earth dist.	8232 Jun 16 21:33	0° B 55'52	4.47129 AU
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					8232 Oct 11 10:50	0° B	
conjunction	8227 Jul 15 07:35	28° B 25'11	-0°35'31	evening set	8232 Dec 21 12:12	13° B 08'49	
minimum elong	8227 Jul 15 07:36	28° B 25'12	0°35'40				
max. Earth dist.	8227 Jul 16 13:02	28° B 43'11	5.90405 AU	conjunction	8233 Jan 03 14:13	15° B 56'27	0°42'35
	8227 Jul 21 18:41	0° O		minimum elong	8233 Jan 03 14:14	15° B 56'28	0°42'46
morning rise	8227 Jul 28 19:05	1° O 42'30		max. Earth dist.	8233 Jan 02 22:10	15° B 47'52	6.49573 AU
	8227 Sep 26 19:16	15° O		morning rise	8233 Jan 16 14:03	18° B 43'01	
retrograde	8227 Dec 08 01:46	22° O 35'11			8233 Mar 16 09:57	0° A	
min. Earth dist.	8228 Feb 04 05:28	17° O 42'09	3.92451 AU	retrograde	8233 May 16 19:45	5° A 17'17	
opposition	8228 Feb 05 10:24	17° O 32'20	-0°34'18	opposition	8233 Jul 16 18:08	0° A 23'06	0°50'37
	8228 Feb 25 03:21	15° R O		min. Earth dist.	8233 Jul 17 13:46	0° A 16'47	4.49911 AU
direct	8228 Apr 03 07:01	12° O 37'06			8233 Jul 19 18:06	30° R B	
	8228 May 11 05:17	15° O		direct	8233 Sep 17 10:03	25° B 21'20	
	8228 Jul 28 10:32	0° H			8233 Nov 15 00:37	0° A	
evening set	8228 Aug 08 02:32	2° H 31'30		evening set	8234 Jan 20 18:18	12° A 33'28	
				max. Earth dist.	8234 Feb 01 00:46	14° A 58'48	6.48000 AU
					8234 Feb 01 02:59	15° A	
conjunction	8228 Aug 21 17:15	5° H 47'00	-0°08'09				
minimum elong	8228 Aug 21 17:15	5° H 47'00	0°08'13	conjunction	8234 Feb 02 16:06	15° A 20'01	0°24'49
behind sun begin	8228 Aug 21 09:51	5° H 42'35		minimum elong	8234 Feb 02 16:07	15° A 20'02	0°24'56
behind sun end	8228 Aug 22 00:39	5° H 51'25		morning rise	8234 Feb 15 11:34	18° A 05'39	
max. Earth dist.	8228 Aug 24 00:40	6° H 20'11	5.97019 AU		8234 Apr 18 16:04	0° H	
morning rise	8228 Sep 04 10:11	9° H 03'22		retrograde	8234 Jun 16 03:40	4° H 50'34	
asc. node	8228 Dec 05 23:12	26° H 56'29			8234 Aug 15 21:32	30° R A	
retrograde	8229 Jan 12 16:42	29° H 12'20					
































































































































opposition	8234 Aug 16 04:30	29° \approx 57'47	0°19'09	direct	8240 Apr 08 14:11	17° Ω 58'00	
min. Earth dist.	8234 Aug 17 14:39	29° \approx 46'53	4.44099 AU		8240 Jul 10 11:15	0° Π	
direct	8234 Oct 17 20:10	24° \approx 56'45		evening set	8240 Aug 13 09:21	7° Π 46'22	
	8234 Dec 17 17:28	0° \mathcal{H}					
evening set	8235 Feb 20 02:55	12° \mathcal{H} 28'32		conjunction	8240 Aug 27 00:29	11° Π 01'04	-0°03'51
max. Earth dist.	8235 Mar 02 15:05	14° \mathcal{H} 47'22	6.38301 AU	minimum elong	8240 Aug 27 00:29	11° Π 01'04	0°03'55
				behind sun begin	8240 Aug 26 16:12	10° Π 56'09	
conjunction	8235 Mar 04 21:45	15° \mathcal{H} 17'35	0°00'07	behind sun end	8240 Aug 27 08:46	11° Π 05'58	
minimum elong	8235 Mar 04 21:47	15° \mathcal{H} 17'36	0°00'10	max. Earth dist.	8240 Aug 29 09:33	11° Π 35'04	5.99074 AU
behind sun begin	8235 Mar 04 13:52	15° \mathcal{H} 13'15		morning rise	8240 Sep 09 17:30	14° Π 16'28	
behind sun end	8235 Mar 05 05:42	15° \mathcal{H} 21'57		asc. node	8240 Oct 15 21:50	22° Π 27'52	
desc. node	8235 Mar 06 10:37	15° \mathcal{H} 37'58			8240 Nov 25 19:07	0° Ω	
morning rise	8235 Mar 17 15:17	18° \mathcal{H} 06'12		retrograde	8241 Jan 17 14:23	4° Ω 14'49	
	8235 May 16 15:37	0° Υ			8241 Mar 12 00:55	30° \mathcal{R} Π	
retrograde	8235 Jul 18 07:22	5° Υ 32'18		min. Earth dist.	8241 Mar 16 13:20	29° Π 23'22	4.06151 AU
opposition	8235 Sep 17 03:41	0° Υ 39'28	-0°18'58	opposition	8241 Mar 18 03:35	29° Π 10'21	0°17'10
min. Earth dist.	8235 Sep 18 20:11	0° Υ 26'30	4.31041 AU	direct	8241 May 15 17:36	24° Π 12'26	
	8235 Sep 22 07:08	30° \mathcal{R} \mathcal{H}			8241 Jul 16 23:26	0° Ω	
direct	8235 Nov 18 03:34	25° \mathcal{H} 39'48		evening set	8241 Sep 19 07:37	13° Ω 16'31	
	8236 Jan 12 05:02	0° Υ					
evening set	8236 Mar 22 14:00	13° Υ 51'01		conjunction	8241 Oct 02 23:17	16° Ω 24'19	0°25'06
max. Earth dist.	8236 Apr 02 02:27	16° Υ 15'01	6.22841 AU	minimum elong	8241 Oct 02 23:16	16° Ω 24'18	0°25'08
				max. Earth dist.	8241 Oct 05 09:31	16° Ω 57'44	6.14367 AU
conjunction	8236 Apr 04 08:26	16° Υ 45'55	-0°25'37	morning rise	8241 Oct 16 15:20	19° Ω 31'59	
minimum elong	8236 Apr 04 08:25	16° Υ 45'55	0°25'40		8241 Dec 05 00:54	0° \mathcal{M}	
morning rise	8236 Apr 17 02:17	19° Υ 40'54		retrograde	8242 Feb 20 02:34	8° \mathcal{M} 15'59	
	8236 Jun 04 14:06	0° \mathcal{B}		min. Earth dist.	8242 Apr 19 16:29	3° \mathcal{M} 23'58	4.22849 AU
retrograde	8236 Aug 20 21:20	8° \mathcal{B} 13'31		opposition	8242 Apr 21 01:03	3° \mathcal{M} 13'02	0°53'23
opposition	8236 Oct 20 09:31	3° \mathcal{B} 19'25	-0°54'02		8242 May 17 05:05	30° \mathcal{R} Ω	
min. Earth dist.	8236 Oct 21 18:52	3° \mathcal{B} 08'37	4.14212 AU	direct	8242 Jun 19 18:51	28° Ω 12'58	
	8236 Nov 17 13:34	30° \mathcal{R} Υ			8242 Jul 23 18:25	0° \mathcal{M}	
direct	8236 Dec 20 02:12	28° Υ 21'57			8242 Oct 17 11:55	15° \mathcal{M}	
	8237 Jan 21 10:22	0° \mathcal{B}		evening set	8242 Oct 24 03:16	16° \mathcal{M} 27'14	
	8237 Apr 14 17:22	15° \mathcal{B}					
evening set	8237 Apr 25 00:01	17° \mathcal{B} 24'04		conjunction	8242 Nov 06 15:09	19° \mathcal{M} 26'11	0°44'06
max. Earth dist.	8237 May 06 07:59	20° \mathcal{B} 05'13	6.06055 AU	minimum elong	8242 Nov 06 15:08	19° \mathcal{M} 26'11	0°44'14
				max. Earth dist.	8242 Nov 08 04:31	19° \mathcal{M} 46'52	6.31056 AU
conjunction	8237 May 07 20:39	20° \mathcal{B} 27'01	-0°44'23	morning rise	8242 Nov 20 02:13	22° \mathcal{M} 24'24	
minimum elong	8237 May 07 20:38	20° \mathcal{B} 27'01	0°44'30		8242 Dec 26 06:52	0° \mathcal{J}	
morning rise	8237 May 20 18:17	23° \mathcal{B} 30'47		retrograde	8243 Mar 23 09:47	10° \mathcal{J} 00'16	
	8237 Jun 17 23:42	0° Π		opposition	8243 May 22 17:13	5° \mathcal{J} 00'30	1°10'31
retrograde	8237 Sep 27 03:06	13° Π 19'42		min. Earth dist.	8243 May 22 01:25	5° \mathcal{J} 05'43	4.38180 AU
opposition	8237 Nov 26 03:00	8° Π 23'06	-1°12'49		8243 Jul 19 20:15	30° \mathcal{R} \mathcal{M}	
min. Earth dist.	8237 Nov 26 17:34	8° Π 18'18	3.98937 AU	direct	8243 Jul 22 19:48	29° \mathcal{M} 59'10	
direct	8238 Jan 24 09:36	3° Π 27'51			8243 Jul 25 19:30	0° \mathcal{J}	
evening set	8238 May 30 17:26	23° Π 15'17		evening set	8243 Nov 25 17:58	17° \mathcal{J} 33'56	
conjunction	8238 Jun 12 19:57	26° Π 26'31	-0°47'50	conjunction	8243 Dec 09 00:38	20° \mathcal{J} 25'33	0°49'08
minimum elong	8238 Jun 12 19:58	26° Π 26'31	0°47'59	minimum elong	8243 Dec 09 00:38	20° \mathcal{J} 25'33	0°49'18
max. Earth dist.	8238 Jun 12 17:16	26° Π 24'52	5.93761 AU	max. Earth dist.	8243 Dec 09 10:29	20° \mathcal{J} 30'52	6.43906 AU
morning rise	8238 Jun 26 00:27	29° Π 39'02		morning rise	8243 Dec 22 05:19	23° \mathcal{J} 16'06	
	8238 Jun 27 11:07	0° \mathcal{E}			8244 Jan 23 21:25	0° \mathcal{B}	
retrograde	8238 Nov 04 23:08	20° \mathcal{E} 23'20		retrograde	8244 Apr 21 07:01	10° \mathcal{B} 06'53	
opposition	8239 Jan 03 11:38	15° \mathcal{E} 23'21	-1°03'47	opposition	8244 Jun 21 00:12	5° \mathcal{B} 10'29	1°07'22
min. Earth dist.	8239 Jan 03 00:56	15° \mathcal{E} 26'56	3.91036 AU	min. Earth dist.	8244 Jun 21 03:04	5° \mathcal{B} 09'34	4.47794 AU
direct	8239 Mar 02 15:41	10° \mathcal{E} 29'02		direct	8244 Aug 22 02:50	0° \mathcal{B} 08'43	
	8239 Jul 04 21:31	0° Ω		evening set	8244 Dec 25 17:42	17° \mathcal{B} 22'32	
evening set	8239 Jul 07 07:44	0° Ω 35'16					
				conjunction	8245 Jan 07 19:07	20° \mathcal{B} 09'56	0°40'42
conjunction	8239 Jul 20 17:31	3° Ω 51'20	-0°32'17	minimum elong	8245 Jan 07 19:09	20° \mathcal{B} 09'57	0°40'51
minimum elong	8239 Jul 20 17:33	3° Ω 51'21	0°32'25	max. Earth dist.	8245 Jan 06 23:50	19° \mathcal{B} 59'36	6.49615 AU
max. Earth dist.	8239 Jul 22 02:44	4° Ω 11'37	5.91024 AU	morning rise	8245 Jan 20 18:16	22° \mathcal{B} 56'15	
morning rise	8239 Aug 03 06:05	7° Ω 08'47			8245 Feb 24 09:52	0° \approx	
	8239 Sep 05 22:00	15° Ω		retrograde	8245 May 21 00:35	9° \approx 31'06	
retrograde	8239 Dec 13 06:48	27° Ω 56'46		opposition	8245 Jul 20 22:45	4° \approx 37'17	0°46'54
min. Earth dist.	8240 Feb 09 09:15	23° Ω 04'23	3.93865 AU	min. Earth dist.	8245 Jul 21 21:03	4° \approx 30'08	4.49345 AU
opposition	8240 Feb 10 17:14	22° Ω 53'31	-0°28'12		8245 Sep 05 03:55	30° \mathcal{R} \mathcal{B}	






































































































































direct	8245 Sep 21 15:24	29° ♁ 35'40	conjunction	8251 Jul 26 01:25	9° ♁ 11'59 -0°28'49
	8245 Oct 08 04:43	0° ♁	minimum elong	8251 Jul 26 01:26	9° ♁ 12'00 0°28'57
	8246 Jan 16 08:39	15° ♁	max. Earth dist.	8251 Jul 27 15:23	9° ♁ 35'07 5.91625 AU
evening set	8246 Jan 24 23:36	16° ♁ 50'08	morning rise	8251 Aug 08 14:44	12° ♁ 29'30
max. Earth dist.	8246 Feb 05 01:33	19° ♁ 13'32 6.46860 AU		8251 Aug 19 02:06	15° ♁
				8251 Nov 03 03:27	0° ♁
conjunction	8246 Feb 06 20:49	19° ♁ 36'56 0°21'39	retrograde	8251 Dec 18 12:03	3° ♁ 13'05
minimum elong	8246 Feb 06 20:50	19° ♁ 36'57 0°21'46		8252 Feb 02 00:53	30° ♁
morning rise	8246 Feb 19 16:05	22° ♁ 22'53	opposition	8252 Feb 15 21:42	28° ♁ 09'31 -0°21'58
	8246 Mar 28 19:07	0° ♁	min. Earth dist.	8252 Feb 14 13:05	28° ♁ 20'36 3.95112 AU
retrograde	8246 Jun 20 14:12	9° ♁ 12'35	direct	8252 Apr 13 21:03	23° ♁ 13'39
opposition	8246 Aug 20 13:37	4° ♁ 19'53 0°14'01		8252 Jun 19 15:38	0° ♁
min. Earth dist.	8246 Aug 22 01:07	4° ♁ 08'32 4.42465 AU	evening set	8252 Aug 18 14:20	12° ♁ 56'55
	8246 Sep 30 19:08	30° ♁	asc. node	8252 Aug 25 16:29	14° ♁ 37'37
direct	8246 Oct 22 03:37	29° ♁ 18'59			
	8246 Nov 12 14:07	0° ♁	conjunction	8252 Sep 01 05:54	16° ♁ 10'58 0°00'31
desc. node	8247 Jan 13 19:39	8° ♁ 18'09	minimum elong	8252 Sep 01 05:53	16° ♁ 10'57 0°00'28
evening set	8247 Feb 24 11:07	16° ♁ 55'49	behind sun begin	8252 Aug 31 21:30	16° ♁ 06'01
max. Earth dist.	8247 Mar 06 23:51	19° ♁ 15'34 6.36298 AU	behind sun end	8252 Sep 01 14:16	16° ♁ 15'54
			max. Earth dist.	8252 Sep 03 17:08	16° ♁ 46'05 6.00832 AU
conjunction	8247 Mar 09 05:58	19° ♁ 45'37 -0°03'41	morning rise	8252 Sep 14 23:07	19° ♁ 25'35
minimum elong	8247 Mar 09 05:57	19° ♁ 45'37 0°03'38		8252 Nov 01 23:55	0° ♁
behind sun begin	8247 Mar 08 22:03	19° ♁ 41'15	retrograde	8253 Jan 22 09:37	9° ♁ 14'34
behind sun end	8247 Mar 09 13:52	19° ♁ 49'59	min. Earth dist.	8253 Mar 21 09:25	4° ♁ 23'19 4.08229 AU
morning rise	8247 Mar 21 23:13	22° ♁ 34'57	opposition	8253 Mar 23 00:06	4° ♁ 10'11 0°23'06
	8247 Apr 25 23:31	0° ♁		8253 Apr 28 19:43	30° ♁
retrograde	8247 Jul 22 23:52	10° ♁ 09'14	direct	8253 May 20 16:19	29° ♁ 11'55
opposition	8247 Sep 21 19:46	5° ♁ 16'18 -0°24'22		8253 Jun 11 18:00	0° ♁
min. Earth dist.	8247 Sep 23 11:21	5° ♁ 03'37 4.28805 AU	evening set	8253 Sep 24 07:02	18° ♁ 09'27
direct	8247 Nov 22 14:56	0° ♁ 16'57			
evening set	8248 Mar 27 03:54	18° ♁ 34'47	conjunction	8253 Oct 07 22:16	21° ♁ 16'06 0°28'29
max. Earth dist.	8248 Apr 06 17:42	21° ♁ 00'22 6.20534 AU	minimum elong	8253 Oct 07 22:15	21° ♁ 16'05 0°28'32
			max. Earth dist.	8253 Oct 10 05:05	21° ♁ 47'24 6.16569 AU
conjunction	8248 Apr 08 22:19	21° ♁ 30'39 -0°28'52	morning rise	8253 Oct 21 13:57	24° ♁ 22'34
minimum elong	8248 Apr 08 22:17	21° ♁ 30'39 0°28'56		8253 Nov 16 02:26	0° ♁
morning rise	8248 Apr 21 16:35	24° ♁ 26'44	retrograde	8254 Feb 24 14:39	12° ♁ 56'53
	8248 May 16 12:42	0° ♁	min. Earth dist.	8254 Apr 24 08:00	8° ♁ 04'17 4.24973 AU
retrograde	8248 Aug 25 23:55	13° ♁ 09'32	opposition	8254 Apr 25 13:53	7° ♁ 54'16 0°57'00
opposition	8248 Oct 25 10:03	8° ♁ 15'05 -0°57'58	direct	8254 Jun 24 12:44	2° ♁ 53'56
min. Earth dist.	8248 Oct 26 17:32	8° ♁ 04'51 4.11996 AU		8254 Sep 30 10:45	15° ♁
direct	8248 Dec 24 22:53	3° ♁ 17'54	evening set	8254 Oct 28 19:33	21° ♁ 02'34
	8249 Mar 28 04:12	15° ♁			
evening set	8249 Apr 29 20:46	22° ♁ 26'24	conjunction	8254 Nov 11 06:58	24° ♁ 00'30 0°45'39
max. Earth dist.	8249 May 11 10:17	25° ♁ 11'29 6.04124 AU	minimum elong	8254 Nov 11 06:57	24° ♁ 00'30 0°45'47
			max. Earth dist.	8254 Nov 12 18:12	24° ♁ 19'55 6.32953 AU
conjunction	8249 May 12 18:08	25° ♁ 30'29 -0°45'56	morning rise	8254 Nov 24 17:06	26° ♁ 57'35
minimum elong	8249 May 12 18:07	25° ♁ 30'29 0°46'05		8254 Dec 08 19:05	0° ♁
morning rise	8249 May 25 16:25	28° ♁ 35'25	retrograde	8255 Mar 27 15:06	14° ♁ 26'18
	8249 May 31 15:31	0° ♁	min. Earth dist.	8255 May 26 10:32	9° ♁ 31'42 4.39733 AU
retrograde	8249 Oct 02 11:45	18° ♁ 33'10	opposition	8255 May 27 00:44	9° ♁ 27'02 1°11'15
opposition	8249 Dec 01 09:58	13° ♁ 36'08 -1°13'20	direct	8255 Jul 27 06:02	4° ♁ 25'40
min. Earth dist.	8249 Dec 01 21:17	13° ♁ 32'24 3.97490 AU	evening set	8255 Nov 30 04:31	21° ♁ 56'55
direct	8250 Jan 29 12:07	8° ♁ 41'08			
evening set	8250 Jun 04 21:08	28° ♁ 32'18	conjunction	8255 Dec 13 10:20	24° ♁ 47'49 0°48'41
	8250 Jun 10 21:26	0° ♁	minimum elong	8255 Dec 13 10:20	24° ♁ 47'49 0°48'52
			max. Earth dist.	8255 Dec 13 15:26	24° ♁ 50'34 6.45025 AU
conjunction	8250 Jun 18 00:26	1° ♁ 44'20 -0°46'45	morning rise	8255 Dec 26 14:19	27° ♁ 37'39
minimum elong	8250 Jun 18 00:27	1° ♁ 44'20 0°46'55		8256 Jan 06 19:00	0° ♁
max. Earth dist.	8250 Jun 18 01:26	1° ♁ 44'56 5.92918 AU	retrograde	8256 Apr 25 12:45	14° ♁ 24'54
morning rise	8250 Jul 01 06:11	4° ♁ 57'47	opposition	8256 Jun 25 05:48	9° ♁ 28'59 1°05'24
retrograde	8250 Nov 10 06:54	25° ♁ 45'18	min. Earth dist.	8256 Jun 25 11:57	9° ♁ 26'59 4.48443 AU
opposition	8251 Jan 08 20:06	20° ♁ 44'45 -1°00'07	direct	8256 Aug 26 11:59	4° ♁ 27'16
min. Earth dist.	8251 Jan 08 05:27	20° ♁ 49'41 3.90906 AU	evening set	8256 Dec 30 00:48	21° ♁ 39'59
direct	8251 Mar 07 21:40	15° ♁ 50'19	max. Earth dist.	8257 Jan 11 03:16	24° ♁ 15'08 6.49777 AU
	8251 Jun 17 13:29	0° ♁			
evening set	8251 Jul 12 14:34	5° ♁ 55'45	conjunction	8257 Jan 12 01:37	24° ♁ 27'06 0°38'33
			minimum elong	8257 Jan 12 01:38	24° ♁ 27'07 0°38'42

morning rise	8257 Jan 25 00:07	27°  13'08	opposition	8263 Jan 13 23:08	25°  52'40	-0°56'11
	8257 Feb 07 05:13	0° 	min. Earth dist.	8263 Jan 13 07:04	25°  58'05	3.90703 AU
retrograde	8257 May 25 05:47	13°  48'00	direct	8263 Mar 12 23:25	20°  58'11	
opposition	8257 Jul 25 04:56	8°  54'24	0°42'53	8263 May 29 22:48	0° 	
min. Earth dist.	8257 Jul 26 04:12	8°  46'57	4.49052 AU	evening set	8263 Jul 17 16:39	11°  03'39
direct	8257 Sep 25 21:26	3°  52'55				
	8257 Dec 30 14:51	15° 	conjunction	8263 Jul 31 04:24	14°  02'01	-0°25'19
evening set	8258 Jan 29 05:46	21°  08'30	minimum elong	8263 Jul 31 04:25	14°  02'01	0°25'26
max. Earth dist.	8258 Feb 09 06:58	23°  31'44	6.46157 AU	max. Earth dist.	8263 Aug 01 21:35	14°  04'51
						5.91970 AU
conjunction	8258 Feb 11 02:34	23°  55'24	0°18'23	8263 Aug 02 21:55	15° 	
minimum elong	8258 Feb 11 02:35	23°  55'24	0°18'29	morning rise	8263 Aug 13 18:39	17°  03'56
morning rise	8258 Feb 23 21:15	26°  41'26		8263 Oct 08 09:24	0° 	
	8258 Mar 11 10:43	0° 		retrograde	8263 Dec 23 12:16	8°  18'25
retrograde	8258 Jun 24 23:28	13°  34'21		min. Earth dist.	8264 Feb 19 10:45	3°  18'26
opposition	8258 Aug 24 23:12	8°  41'44	0°08'50	opposition	8264 Feb 20 21:17	3°  14'42
min. Earth dist.	8258 Aug 26 11:39	8°  30'07	4.41389 AU		8264 Mar 18 01:08	30°  18'35
direct	8258 Oct 26 12:09	3°  41'07		direct	8264 Apr 18 20:24	28°  01'83
desc. node	8258 Nov 24 15:42	4°  56'12			8264 May 20 17:17	0° 
evening set	8259 Feb 28 18:41	21°  20'52		asc. node	8264 Jul 07 20:03	7°  34'50
max. Earth dist.	8259 Mar 11 05:38	23°  40'09	6.34923 AU	evening set	8264 Aug 23 16:08	17°  58'53
conjunction	8259 Mar 13 13:05	24°  11'03	-0°07'17	conjunction	8264 Sep 06 07:57	21°  12'27
minimum elong	8259 Mar 13 13:05	24°  11'02	0°07'16	minimum elong	8264 Sep 06 07:56	21°  12'27
behind sun begin	8259 Mar 13 05:46	24°  06'59		behind sun begin	8264 Sep 05 23:44	21°  07'37
behind sun end	8259 Mar 13 20:24	24°  15'06		behind sun end	8264 Sep 06 16:09	21°  17'17
morning rise	8259 Mar 26 06:23	27°  00'54		max. Earth dist.	8264 Sep 08 18:22	21°  14'59
	8259 Apr 08 21:06	0° 		morning rise	8264 Sep 20 01:29	24°  02'33
retrograde	8259 Jul 27 15:19	14°  04'26			8264 Oct 14 08:51	0° 
opposition	8259 Sep 26 10:36	9°  48'20	-0°29'26	retrograde	8265 Jan 27 02:45	14°  08'19
min. Earth dist.	8259 Sep 28 01:38	9°  35'48	4.27199 AU	min. Earth dist.	8265 Mar 26 04:01	9°  16'52
direct	8259 Nov 27 03:00	4°  49'14		opposition	8265 Mar 27 17:51	9°  04'01
evening set	8260 Mar 31 15:07	23°  04'28		direct	8265 May 25 13:15	4°  05'26
max. Earth dist.	8260 Apr 11 07:49	25°  03'14	6.18831 AU	evening set	8265 Sep 29 04:28	22°  05'24
conjunction	8260 Apr 13 09:46	26°  08'06	-0°31'48	conjunction	8265 Oct 12 19:39	26°  04'12
minimum elong	8260 Apr 13 09:45	26°  08'05	0°31'52	minimum elong	8265 Oct 12 19:38	26°  04'11
morning rise	8260 Apr 26 04:07	29°  04'57		max. Earth dist.	8265 Oct 15 02:17	26°  03'17
	8260 Apr 30 04:07	0° 		morning rise	8265 Oct 26 10:42	29°  09'38
retrograde	8260 Jul 17 19:05	15° 			8265 Oct 30 04:20	0° 
	8260 Aug 30 21:09	17°  55'49		retrograde	8266 Jan 18 23:35	15° 
	8260 Oct 14 13:21	15° 			8266 Mar 01 01:27	17°  35'55
opposition	8260 Oct 30 06:44	13°  01'07	-1°01'16		8266 Apr 11 01:06	15°  18'18
min. Earth dist.	8260 Oct 31 12:40	12°  51'24	4.10326 AU	min. Earth dist.	8266 Apr 28 20:51	12°  43'21
direct	8260 Dec 29 15:25	8°  04'17		opposition	8266 Apr 30 01:43	12°  33'42
	8261 Mar 08 16:51	15° 		direct	8266 Jun 29 04:08	7°  33'13
evening set	8261 May 04 13:43	27°  08'17	33		8266 Sep 11 01:54	15° 
	8261 May 15 21:52	0° 		evening set	8266 Nov 02 11:19	25°  37'16
max. Earth dist.	8261 May 16 05:26	0° 	6.02625 AU			
conjunction	8261 May 17 11:28	0°  22'31	-0°47'04	conjunction	8266 Nov 15 21:54	28°  34'13
minimum elong	8261 May 17 11:27	0°  22'30	0°47'12	minimum elong	8266 Nov 15 21:54	28°  34'13
morning rise	8261 May 30 10:38	3°  28'29		max. Earth dist.	8266 Nov 17 04:50	28°  51'12
retrograde	8261 Oct 07 13:59	23°  23'40			8266 Nov 22 10:09	0° 
opposition	8261 Dec 06 11:31	18°  23'33	-1°13'14	morning rise	8266 Nov 29 07:25	1°  30'20
min. Earth dist.	8261 Dec 06 19:33	18°  23'33	3.96307 AU	retrograde	8267 Mar 31 21:40	18°  30'24
direct	8262 Feb 03 09:53	13°  24'12		opposition	8267 May 31 08:11	13°  30'47
	8262 May 25 19:35	0° 		min. Earth dist.	8267 May 30 20:43	13°  30'57
evening set	8262 Jun 09 19:34	3°  35'47		direct	8267 Jul 31 18:04	8°  32'15
				evening set	8267 Dec 04 14:45	26°  32'12
conjunction	8262 Jun 22 23:59	6°  48'40	-0°45'20	conjunction	8267 Dec 17 19:59	29°  31'02
minimum elong	8262 Jun 23 00:00	6°  48'40	0°45'31	minimum elong	8267 Dec 17 20:00	29°  31'02
max. Earth dist.	8262 Jun 23 06:12	6°  52'28	5.92182 AU	max. Earth dist.	8267 Dec 17 23:05	29°  31'05
morning rise	8262 Jul 06 06:38	10°  02'56			8267 Dec 21 16:09	0° 
	8262 Oct 23 01:52	0° 		morning rise	8267 Dec 30 22:59	1°  35'30
retrograde	8262 Nov 15 11:52	0° 	53'36	retrograde	8268 Apr 29 15:33	18°  34'11
	8262 Dec 08 18:43	30° 		opposition	8268 Jun 29 10:56	13°  34'33
				min. Earth dist.	8268 Jun 29 18:24	13°  34'08

direct	8268 Aug 30 18:59	8°♄45'47		8274 May 07 14:51	0°♄	
evening set	8269 Jan 03 07:27	25°♄57'15		evening set	8274 Jun 15 00:56	8°♄55'16
max. Earth dist.	8269 Jan 15 05:32	28°♄30'07	6.49881 AU			
conjunction	8269 Jan 16 07:30	28°♄44'02	0°36'11	conjunction	8274 Jun 28 06:23	12°♄09'06 -0°43'31
minimum elong	8269 Jan 16 07:31	28°♄44'03	0°36'19	minimum elong	8274 Jun 28 06:25	12°♄09'07 0°43'41
	8269 Jan 22 05:14	0°♄		max. Earth dist.	8274 Jun 28 17:04	12°♄15'38 5.91287 AU
morning rise	8269 Jan 29 05:24	1°♄29'47		morning rise	8274 Jul 11 14:21	15°♄24'22
	8269 Apr 13 13:16	15°♄			8274 Sep 16 16:31	0°♄
retrograde	8269 May 29 11:57	18°♄04'46		retrograde	8274 Nov 20 21:40	6°♄17'59
	8269 Jul 14 22:14	15°♄		opposition	8275 Jan 19 08:19	1°♄16'37 -0°51'32
opposition	8269 Jul 29 11:05	13°♄11'19	0°38'35	min. Earth dist.	8275 Jan 18 12:16	1°♄23'23 3.90589 AU
min. Earth dist.	8269 Jul 30 13:20	13°♄02'55	4.48613 AU		8275 Jan 28 22:11	30°♄
direct	8269 Sep 30 05:31	8°♄09'50		direct	8275 Mar 18 05:49	26°♄22'02
	8269 Dec 11 13:22	15°♄			8275 May 04 13:37	0°♄
evening set	8270 Feb 02 11:24	25°♄26'51		evening set	8275 Jul 17 00:56	15°♄
max. Earth dist.	8270 Feb 13 09:03	27°♄48'33	6.45168 AU		8275 Jul 23 01:41	16°♄26'58
conjunction	8270 Feb 15 07:44	28°♄13'55	0°14'58	conjunction	8275 Aug 05 14:14	19°♄43'34 -0°21'23
minimum elong	8270 Feb 15 07:45	28°♄13'55	0°15'03	minimum elong	8275 Aug 05 14:15	19°♄43'35 0°21'30
behind sun begin	8270 Feb 15 04:49	28°♄12'20		max. Earth dist.	8275 Aug 07 10:22	20°♄10'21 5.92649 AU
behind sun end	8270 Feb 15 10:40	28°♄15'30		morning rise	8275 Aug 19 05:22	23°♄01'22
	8270 Feb 23 10:59	0°♄			8275 Sep 18 03:54	0°♄
morning rise	8270 Feb 28 02:07	1°♄00'12		retrograde	8275 Dec 28 16:21	13°♄36'44
retrograde	8270 Jun 29 08:43	17°♄57'25		min. Earth dist.	8276 Feb 24 14:19	8°♄44'58 3.97376 AU
opposition	8270 Aug 29 09:01	13°♄04'42	0°03'30	opposition	8276 Feb 26 02:12	8°♄32'44 -0°09'22
min. Earth dist.	8270 Aug 30 22:00	12°♄52'53	4.39893 AU	direct	8276 Apr 24 03:26	3°♄36'19
desc. node	8270 Oct 04 11:28	9°♄06'22		asc. node	8276 May 17 01:47	4°♄29'42
direct	8270 Oct 30 19:45	8°♄04'10		evening set	8276 Aug 28 22:33	23°♄11'15
evening set	8271 Mar 05 02:54	25°♄48'20		conjunction	8276 Sep 11 14:43	26°♄24'00 0°08'54
max. Earth dist.	8271 Mar 15 14:35	28°♄08'35	6.33017 AU	minimum elong	8276 Sep 11 14:43	26°♄23'59 0°08'52
conjunction	8271 Mar 17 21:15	28°♄39'11	-0°10'57	behind sun begin	8276 Sep 11 07:33	26°♄19'48
minimum elong	8271 Mar 17 21:15	28°♄39'11	0°10'56	behind sun end	8276 Sep 11 21:53	26°♄28'11
behind sun begin	8271 Mar 17 15:11	28°♄35'48		max. Earth dist.	8276 Sep 14 03:50	26°♄59'56 6.04134 AU
behind sun end	8271 Mar 18 03:18	28°♄42'33		morning rise	8276 Sep 25 08:05	29°♄37'05
	8271 Mar 23 21:36	0°♄			8276 Sep 26 23:27	0°♄
morning rise	8271 Mar 30 14:20	1°♄29'44		retrograde	8277 Jan 31 22:48	19°♄08'30
retrograde	8271 Aug 01 08:53	19°♄18'25		min. Earth dist.	8277 Mar 31 00:59	14°♄17'06 4.12204 AU
opposition	8271 Oct 01 03:07	14°♄25'09	-0°34'33	opposition	8277 Apr 01 14:35	14°♄04'22 0°34'08
min. Earth dist.	8271 Oct 02 18:27	14°♄12'31	4.24991 AU	direct	8277 May 30 13:59	9°♄05'32
direct	8271 Dec 01 16:33	9°♄26'18		evening set	8277 Oct 04 04:00	27°♄50'51
evening set	8272 Apr 05 05:08	27°♄55'10			8277 Oct 13 16:47	0°♄
	8272 Apr 14 04:55	0°♄		conjunction	8277 Oct 17 18:31	0°♄55'17 0°34'31
max. Earth dist.	8272 Apr 15 22:03	0°♄23'53	6.16487 AU	minimum elong	8277 Oct 17 18:30	0°♄55'16 0°34'36
conjunction	8272 Apr 17 23:52	0°♄52'50	-0°34'41	max. Earth dist.	8277 Oct 19 22:27	1°♄24'38 6.20879 AU
minimum elong	8272 Apr 17 23:51	0°♄52'49	0°34'46	morning rise	8277 Oct 31 09:02	3°♄59'18
morning rise	8272 Apr 30 18:50	3°♄50'54			8277 Dec 23 16:07	15°♄
	8272 Jun 21 20:16	15°♄		retrograde	8278 Mar 05 11:02	22°♄14'45
retrograde	8272 Sep 04 23:03	22°♄52'22		min. Earth dist.	8278 May 03 10:40	17°♄21'57 4.29242 AU
opposition	8272 Nov 04 07:34	17°♄57'18	-1°04'24	opposition	8278 May 04 13:47	17°♄12'54 1°02'57
min. Earth dist.	8272 Nov 05 10:47	17°♄48'26	4.08031 AU		8278 May 21 19:36	15°♄
	8272 Nov 28 15:31	15°♄		direct	8278 Jul 03 21:08	12°♄12'11
direct	8273 Jan 03 11:17	13°♄00'41			8278 Aug 16 06:47	15°♄
	8273 Feb 07 21:56	15°♄		evening set	8278 Nov 06 09:04	0°♄
	8273 Apr 29 13:03	0°♄			8278 Nov 07 02:09	0°♄09'16
evening set	8273 May 09 11:23	2°♄21'00		conjunction	8278 Nov 20 12:05	3°♄05'00 0°47'50
max. Earth dist.	8273 May 21 09:18	5°♄12'23	6.00602 AU	minimum elong	8278 Nov 20 12:04	3°♄05'00 0°47'58
conjunction	8273 May 22 10:02	5°♄27'15	-0°47'56	max. Earth dist.	8278 Nov 21 16:25	3°♄20'30 6.36852 AU
minimum elong	8273 May 22 10:01	5°♄27'14	0°48'05	morning rise	8278 Dec 03 20:27	5°♄59'47
morning rise	8273 Jun 04 09:58	8°♄34'31		retrograde	8279 Apr 05 01:40	23°♄14'01
retrograde	8273 Oct 13 00:49	28°♄49'02		opposition	8279 Jun 04 14:05	18°♄15'39 1°11'21
opposition	8273 Dec 11 19:14	23°♄51'08	-1°12'36	min. Earth dist.	8279 Jun 04 04:56	18°♄18'38 4.42985 AU
min. Earth dist.	8273 Dec 12 00:59	23°♄49'13	3.94771 AU	direct	8279 Aug 05 04:13	13°♄14'05
direct	8274 Feb 08 13:56	18°♄56'25			8279 Dec 06 00:10	0°♄
				evening set	8279 Dec 08 22:32	0°♄37'24

conjunction	8279 Dec 22 02:48	3°♌26'46	0°46'58	morning rise	8285 Jun 09 12:59	13°♊49'28
minimum elong	8279 Dec 22 02:49	3°♌26'46	0°47'08		8285 Aug 26 16:46	0°♌
max. Earth dist.	8279 Dec 22 00:08	3°♌25'20	6.47373 AU	retrograde	8285 Oct 18 12:23	4°♌13'47
morning rise	8280 Jan 04 05:08	6°♌15'04			8285 Dec 11 15:34	30°♋♊
retrograde	8280 May 03 18:21	22°♌54'57		opposition	8285 Dec 17 06:04	29°♊15'24 -1°11'21
opposition	8280 Jul 03 14:11	17°♌59'41	1°00'27	min. Earth dist.	8285 Dec 17 06:54	29°♊15'07 3.93238 AU
min. Earth dist.	8280 Jul 04 01:21	17°♌56'05	4.49736 AU	direct	8286 Feb 13 19:07	24°♊20'53
direct	8280 Sep 04 01:34	12°♌57'53			8286 Apr 15 02:17	0°♌
	8281 Jan 06 19:54	0°♌		evening set	8286 Jun 20 09:47	14°♌23'57
evening set	8281 Jan 07 11:14	0°♌08'09				
max. Earth dist.	8281 Jan 19 05:50	2°♌39'11	6.49879 AU	conjunction	8286 Jul 03 16:19	17°♌38'39 -0°41'16
				minimum elong	8286 Jul 03 16:21	17°♌38'40 0°41'25
conjunction	8281 Jan 20 10:49	2°♌54'43	0°33'41	max. Earth dist.	8286 Jul 04 08:48	17°♌48'44 5.90603 AU
minimum elong	8281 Jan 20 10:50	2°♌54'43	0°33'50	morning rise	8286 Jul 17 01:29	20°♌54'47
morning rise	8281 Feb 02 07:59	5°♌40'14			8286 Aug 25 04:45	0°♌
	8281 Mar 21 06:50	15°♌		retrograde	8286 Nov 26 10:16	11°♌50'01
retrograde	8281 Jun 02 14:15	22°♌16'09		opposition	8287 Jan 24 20:07	6°♌48'05 -0°46'20
opposition	8281 Aug 02 15:07	17°♌22'54	0°34'11	min. Earth dist.	8287 Jan 23 20:55	6°♌55'57 3.90835 AU
min. Earth dist.	8281 Aug 03 18:54	17°♌14'01	4.47922 AU	direct	8287 Mar 23 17:44	1°♌53'18
	8281 Aug 22 01:42	15°♌			8287 Jun 28 21:13	15°♌
direct	8281 Oct 04 08:41	12°♌21'31		evening set	8287 Jul 28 12:40	21°♌55'50
	8281 Nov 16 15:32	15°♌				
evening set	8282 Feb 06 15:21	29°♌41'06		conjunction	8287 Aug 11 02:08	25°♌12'16 -0°17'13
	8282 Feb 08 02:18	0°♌		minimum elong	8287 Aug 11 02:09	25°♌12'17 0°17'18
max. Earth dist.	8282 Feb 17 10:19	2°♌01'49	6.43824 AU	max. Earth dist.	8287 Aug 13 04:02	25°♌42'26 5.93795 AU
				morning rise	8287 Aug 24 17:47	28°♌29'43
conjunction	8282 Feb 19 11:15	2°♌28'30	0°11'32		8287 Aug 31 01:11	0°♌
minimum elong	8282 Feb 19 11:16	2°♌28'31	0°11'36	retrograde	8288 Jan 02 21:30	18°♌57'29
behind sun begin	8282 Feb 19 05:33	2°♌25'25		min. Earth dist.	8288 Feb 29 18:25	14°♌05'54 3.99264 AU
behind sun end	8282 Feb 19 16:58	2°♌31'36		opposition	8288 Mar 02 07:34	13°♌53'15 -0°02'43
morning rise	8282 Mar 04 05:20	5°♌15'12		asc. node	8288 Mar 25 21:49	10°♌54'30
retrograde	8282 Jul 03 19:20	22°♌18'16		direct	8288 Apr 29 10:53	8°♌56'28
desc. node	8282 Aug 15 03:31	19°♌42'18		evening set	8288 Sep 03 05:21	28°♌24'09
opposition	8282 Sep 02 18:17	17°♌25'37	-0°01'49		8288 Sep 10 01:41	0°♌
min. Earth dist.	8282 Sep 04 09:34	17°♌13'05	4.37950 AU			
direct	8282 Nov 04 04:02	12°♌25'15		conjunction	8288 Sep 16 21:21	1°♌35'44 0°13'05
	8283 Mar 08 06:49	0°♌		minimum elong	8288 Sep 16 21:21	1°♌35'43 0°13'05
evening set	8283 Mar 09 10:40	0°♌15'31		behind sun begin	8288 Sep 16 16:28	1°♌32'53
max. Earth dist.	8283 Mar 19 20:17	2°♌35'25	6.30606 AU	behind sun end	8288 Sep 17 02:14	1°♌38'34
				max. Earth dist.	8288 Sep 19 10:01	2°♌11'11 6.06531 AU
conjunction	8283 Mar 22 04:57	3°♌07'17	-0°14'32	morning rise	8288 Sep 30 14:41	4°♌47'35
minimum elong	8283 Mar 22 04:56	3°♌07'17	0°14'32	retrograde	8289 Feb 05 15:39	24°♌07'11
behind sun begin	8283 Mar 22 01:17	3°♌05'14		min. Earth dist.	8289 Apr 04 20:51	19°♌15'49 4.14846 AU
behind sun end	8283 Mar 22 08:35	3°♌09'19		opposition	8289 Apr 06 10:10	19°♌03'11 0°39'21
morning rise	8283 Apr 03 22:16	5°♌58'52		direct	8289 Jun 04 13:54	14°♌03'58
retrograde	8283 Aug 06 03:05	23°♌57'54			8289 Sep 26 23:44	0°♌
opposition	8283 Oct 05 20:43	19°♌04'27	-0°39'30	evening set	8289 Oct 09 02:18	2°♌41'04
min. Earth dist.	8283 Oct 07 10:39	18°♌52'14	4.22269 AU			
direct	8283 Dec 06 04:57	14°♌05'52		conjunction	8289 Oct 22 16:19	5°♌44'05 0°37'15
	8284 Mar 28 23:28	0°♌		minimum elong	8289 Oct 22 16:18	5°♌44'04 0°37'20
evening set	8284 Apr 09 20:31	2°♌43'23		max. Earth dist.	8289 Oct 24 17:37	6°♌11'48 6.23539 AU
max. Earth dist.	8284 Apr 20 17:15	5°♌15'13	6.13686 AU	morning rise	8289 Nov 05 05:55	8°♌46'34
					8289 Dec 04 01:50	15°♌
conjunction	8284 Apr 22 15:45	5°♌42'24	-0°37'21	retrograde	8290 Mar 09 21:36	26°♌51'19
minimum elong	8284 Apr 22 15:44	5°♌42'23	0°37'27	min. Earth dist.	8290 May 08 00:44	21°♌58'02 4.31689 AU
morning rise	8284 May 05 11:08	8°♌41'53		opposition	8290 May 09 01:04	21°♌49'56 1°05'23
	8284 Jun 02 08:00	15°♌		direct	8290 Jul 08 13:59	16°♌49'02
retrograde	8284 Sep 10 06:15	27°♌55'54			8290 Oct 20 16:54	0°♌
opposition	8284 Nov 09 11:06	23°♌00'34	-1°07'09	evening set	8290 Nov 11 16:05	4°♌39'32
min. Earth dist.	8284 Nov 10 12:41	22°♌52'12	4.05392 AU			
direct	8285 Jan 08 10:06	18°♌04'18		conjunction	8290 Nov 25 01:07	7°♌34'06 0°48'32
	8285 Apr 11 18:56	0°♌		minimum elong	8290 Nov 25 01:07	7°♌34'06 0°48'42
evening set	8285 May 14 12:23	7°♌32'59		max. Earth dist.	8290 Nov 26 00:32	7°♌46'51 6.38894 AU
				morning rise	8290 Dec 08 08:41	10°♌27'42
conjunction	8285 May 27 11:50	10°♌40'39	-0°48'27	retrograde	8291 Apr 09 05:49	27°♌34'57
minimum elong	8285 May 27 11:50	10°♌40'39	0°48'37	opposition	8291 Jun 08 19:54	22°♌37'01 1°10'52
max. Earth dist.	8285 May 26 14:48	10°♌27'57	5.98379 AU	min. Earth dist.	8291 Jun 08 13:39	22°♌39'04 4.44515 AU

direct	8291 Aug 09 13:23	17°  35'19		minimum elong	8297 Jun 01 15:45	15°  58'10	0°48'48
	8291 Nov 19 13:49	0°  3		max. Earth dist.	8297 Jun 01 00:33	15°  48'57	5.96762 AU
evening set	8291 Dec 13 06:29	4°  55'13		morning rise	8297 Jun 14 17:54	19°  08'11	
					8297 Aug 01 19:14	0°  36	
conjunction	8291 Dec 26 10:08	7°  343'57	0°45'45	retrograde	8297 Oct 24 01:22	9°  39'43	
minimum elong	8291 Dec 26 10:09	7°  343'58	0°45'55	opposition	8297 Dec 22 17:36	4°  340'50	-1°09'30
max. Earth dist.	8291 Dec 26 04:17	7°  340'49	6.48296 AU	min. Earth dist.	8297 Dec 22 14:52	4°  341'45	3.92390 AU
morning rise	8292 Jan 08 11:30	10°  331'34			8298 Feb 07 16:53	30°  R  II	
retrograde	8292 May 07 21:05	27°  308'54		direct	8298 Feb 19 04:20	29°  II46'27	
opposition	8292 Jul 07 18:22	22°  314'01	0°57'31		8298 Mar 02 15:04	0°  36	
min. Earth dist.	8292 Jul 08 08:01	22°  309'38	4.50012 AU	evening set	8298 Jun 25 18:27	19°  350'56	
direct	8292 Sep 08 07:21	17°  312'15					
	8292 Dec 21 16:34	0°  36		conjunction	8298 Jul 09 02:09	23°  3506'09	-0°38'42
evening set	8293 Jan 11 16:38	4°  322'32		minimum elong	8298 Jul 09 02:10	23°  3506'10	0°38'52
max. Earth dist.	8293 Jan 23 05:42	6°  350'51	6.49479 AU	max. Earth dist.	8298 Jul 10 01:38	23°  3520'31	5.90625 AU
				morning rise	8298 Jul 22 12:15	26°  3522'44	
conjunction	8293 Jan 24 15:29	7°  308'59	0°30'58		8298 Aug 06 14:41	0°  39	
minimum elong	8293 Jan 24 15:30	7°  309'00	0°31'07		8298 Oct 25 01:14	15°  39	
morning rise	8293 Feb 06 12:17	9°  354'30		retrograde	8298 Dec 01 20:22	17°  3916'16	
	8293 Mar 02 23:32	15°  36			8299 Jan 08 13:22	15°  R  39	
retrograde	8293 Jun 06 21:58	26°  332'38		min. Earth dist.	8299 Jan 29 03:32	12°  3922'43	3.91743 AU
opposition	8293 Aug 06 21:53	21°  339'32	0°29'31	opposition	8299 Jan 30 05:28	12°  3913'56	-0°40'51
min. Earth dist.	8293 Aug 08 04:44	21°  329'41	4.46869 AU	direct	8299 Mar 29 02:32	7°  3919'00	
direct	8293 Oct 08 16:12	16°  338'12			8299 Jun 08 10:18	15°  39	
	8294 Jan 22 23:59	0°  38		evening set	8299 Aug 02 21:16	27°  3916'57	
evening set	8294 Feb 10 21:34	4°  3801'17			8299 Aug 14 04:36	0°  39	
max. Earth dist.	8294 Feb 21 14:23	6°  3821'20	6.42183 AU				
				conjunction	8299 Aug 16 11:09	0°  3932'50	-0°13'03
conjunction	8294 Feb 23 17:16	6°  3849'11	0°07'57	minimum elong	8299 Aug 16 11:10	0°  3932'50	0°13'07
minimum elong	8294 Feb 23 17:17	6°  3849'11	0°08'01	behind sun begin	8299 Aug 16 06:16	0°  3929'54	
behind sun begin	8294 Feb 23 10:09	6°  3845'19		behind sun end	8299 Aug 16 16:04	0°  3935'46	
behind sun end	8294 Feb 24 00:24	6°  3853'04		max. Earth dist.	8299 Aug 18 15:02	1°  3904'03	5.95460 AU
morning rise	8294 Mar 08 11:04	9°  3836'25		morning rise	8299 Aug 30 03:27	3°  3949'43	
desc. node	8294 Jun 24 11:42	26°  3828'25		retrograde	8300 Jan 07 20:17	24°  3908'06	
retrograde	8294 Jul 08 07:24	26°  3846'19		asc. node	8300 Feb 04 06:52	22°  3953'46	
opposition	8294 Sep 07 06:47	21°  3853'37	-0°07'17	min. Earth dist.	8300 Mar 06 18:12	19°  3916'52	4.01485 AU
min. Earth dist.	8294 Sep 08 21:50	21°  3841'09	4.35825 AU	opposition	8300 Mar 08 08:45	19°  3903'45	0°03'41
direct	8294 Nov 08 12:36	16°  3853'29		direct	8300 May 05 14:35	14°  3906'38	
	8295 Feb 19 19:15	0°  39			8300 Aug 25 06:54	0°  39	
evening set	8295 Mar 13 21:49	4°  3950'19		evening set	8300 Sep 09 07:46	3°  3926'24	
max. Earth dist.	8295 Mar 24 08:24	7°  3911'32	6.28155 AU				
				conjunction	8300 Sep 22 23:45	6°  3926'45	0°17'01
conjunction	8295 Mar 26 16:03	7°  3943'03	-0°18'09	minimum elong	8300 Sep 22 23:44	6°  3926'45	0°17'02
minimum elong	8295 Mar 26 16:03	7°  3943'02	0°18'10	max. Earth dist.	8300 Sep 25 11:34	7°  3911'31	6.09093 AU
morning rise	8295 Apr 08 09:29	10°  3935'40		morning rise	8300 Oct 06 16:40	9°  3947'15	
retrograde	8295 Aug 11 03:17	28°  3945'11		retrograde	8301 Feb 11 07:03	28°  3955'16	
opposition	8295 Oct 10 17:59	23°  3951'37	-0°44'22	min. Earth dist.	8301 Apr 10 14:48	24°  3903'24	4.17471 AU
min. Earth dist.	8295 Oct 12 07:44	23°  3939'26	4.19659 AU	opposition	8301 Apr 12 01:50	23°  3951'35	0°44'05
direct	8295 Dec 10 22:38	18°  3953'23		direct	8301 Jun 10 11:07	18°  3952'06	
	8296 Mar 11 08:24	0°  38			8301 Sep 10 13:03	0°  39	
evening set	8296 Apr 14 15:11	7°  3839'00		evening set	8301 Oct 14 20:28	7°  3912'28	
max. Earth dist.	8296 Apr 25 14:26	10°  3813'12	6.11155 AU				
				conjunction	8301 Oct 28 09:54	10°  3912'31	0°39'38
conjunction	8296 Apr 27 10:51	10°  3839'18	-0°39'50	minimum elong	8301 Oct 28 09:52	10°  3912'31	0°39'44
minimum elong	8296 Apr 27 10:50	10°  3839'18	0°39'57	max. Earth dist.	8301 Oct 30 08:11	10°  3949'04	6.26005 AU
morning rise	8296 May 10 06:57	13°  3840'11		morning rise	8301 Nov 10 22:45	13°  3912'41	
	8296 May 15 23:57	15°  38			8301 Nov 18 04:21	15°  39	
	8296 Aug 01 10:32	0°  39			8302 Feb 14 01:51	0°  39	
retrograde	8296 Sep 15 13:36	3°  3905'38		retrograde	8302 Mar 15 03:03	1°  3919'33	
	8296 Oct 31 08:33	30°  R  38			8302 Apr 13 00:29	30°  R  38	
opposition	8296 Nov 14 17:21	28°  3809'58	-1°09'27	min. Earth dist.	8302 May 13 10:19	26°  3912'60	4.33822 AU
min. Earth dist.	8296 Nov 15 14:43	28°  3802'58	4.03203 AU	opposition	8302 May 14 08:45	26°  3918'40	1°07'20
direct	8297 Jan 13 09:44	23°  3814'07		direct	8302 Jul 14 00:46	21°  3917'38	
	8297 Mar 21 21:55	0°  39			8302 Oct 03 15:49	0°  39	
evening set	8297 May 19 15:27	12°  3949'21		evening set	8302 Nov 17 02:52	9°  3902'58	
conjunction	8297 Jun 01 15:45	15°  3958'10	-0°48'37	conjunction	8302 Nov 30 11:11	11°  3902'56	0°48'57

minimum elong	8302 Nov 30 11:11	11°  56'34	0°49'07			8308 Apr 30 15:41	15° 	
max. Earth dist.	8302 Dec 01 05:54	12°  06'45	6.40554 AU	max. Earth dist.		8308 May 01 13:14	15°  12'44	6.09007 AU
morning rise	8302 Dec 13 17:51	14°  49'11						
	8303 Mar 10 12:11	0° 		conjunction		8308 May 03 05:56	15°  36'47	-0°42'02
retrograde	8303 Apr 14 09:53	1°  35'10		minimum elong		8308 May 03 05:55	15°  36'47	0°42'08
	8303 May 19 04:01	30°  R 		morning rise		8308 May 16 02:39	18°  38'51	
opposition	8303 Jun 13 23:45	26°  53'38	1°10'04			8308 Jul 07 04:13	0° 	
min. Earth dist.	8303 Jun 13 21:03	26°  54'31	4.45610 AU	retrograde		8308 Sep 21 20:44	8°  14'05	
direct	8303 Aug 14 20:53	21°  51'56		opposition		8308 Nov 20 22:47	3°  11'57	-1°11'09
	8303 Nov 02 12:18	0° 		min. Earth dist.		8308 Nov 21 17:33	3°  11'47	4.01417 AU
evening set	8303 Dec 18 12:31	9°  30'49				8308 Dec 18 12:49	30°  R 	
				direct		8309 Jan 19 11:45	28°  8'22'19	
conjunction	8303 Dec 31 15:27	11°  35'8'08	0°44'21			8309 Feb 20 03:33	0° 	
minimum elong	8303 Dec 31 15:28	11°  35'8'08	0°44'31	evening set		8309 May 25 17:16	18°  12'02'25	
max. Earth dist.	8303 Dec 31 04:23	11°  35'2'12	6.48750 AU					
morning rise	8304 Jan 13 16:16	14°  34'5'22		conjunction		8309 Jun 07 18:34	21°  12'14	-0°48'23
	8304 Apr 13 01:34	0° 		minimum elong		8309 Jun 07 18:34	21°  12'15	0°48'33
retrograde	8304 May 13 00:46	1°  21'50		max. Earth dist.		8309 Jun 07 08:57	21°  12'06'24	5.95509 AU
	8304 Jun 11 22:52	30°  R 		morning rise		8309 Jun 20 21:39	24°  12'3'18	
opposition	8304 Jul 12 22:07	26°  32'7'17	0°54'23			8309 Jul 14 16:05	0° 	
min. Earth dist.	8304 Jul 13 14:28	26°  32'2'01	4.49831 AU	retrograde		8309 Oct 30 12:00	15°  30'0'06	
direct	8304 Sep 13 11:53	21°  32'5'31		opposition		8309 Dec 29 02:25	10°  30'0'44	-1°07'03
	8304 Dec 04 22:42	0° 		min. Earth dist.		8309 Dec 28 20:17	10°  30'2'47	3.91830 AU
evening set	8305 Jan 16 21:21	8°  37'08		direct		8310 Feb 25 10:02	5°  30'6'23	
max. Earth dist.	8305 Jan 28 08:25	11°  37'0'43'9	6.48688 AU	evening set		8310 Jul 02 00:57	25°  30'11'27	
conjunction	8305 Jan 29 19:52	11°  37'2'34'4	0°28'09	conjunction		8310 Jul 15 09:28	28°  30'27'01	-0°35'51
minimum elong	8305 Jan 29 19:54	11°  37'2'45	0°28'16	minimum elong		8310 Jul 15 09:29	28°  30'27'02	0°36'00
morning rise	8305 Feb 11 16:02	14°  37'0'9'21		max. Earth dist.		8310 Jul 16 12:09	28°  30'43'20	5.90786 AU
	8305 Feb 15 15:00	15° 				8310 Jul 21 17:42	0° 	
	8305 May 19 15:45	0° 		morning rise		8310 Jul 28 20:46	1°  30'44'01	
retrograde	8305 Jun 12 04:21	0°  30'50'54				8310 Sep 26 18:58	15° 	
	8305 Jul 05 17:42	30°  R 		retrograde		8310 Dec 08 01:14	22°  30'35'20	
opposition	8305 Aug 12 04:56	25°  37'5'59	0°24'44	min. Earth dist.		8311 Feb 04 06:47	17°  30'42'21	3.92616 AU
min. Earth dist.	8305 Aug 13 12:47	25°  37'4'49	4.45530 AU	opposition		8311 Feb 05 11:40	17°  30'32'33	-0°35'07
direct	8305 Oct 13 21:27	20°  37'5'6'49				8311 Feb 25 05:56	15°  R 	
	8306 Jan 06 07:26	0° 		direct		8311 Apr 04 08:22	12°  30'37'20	
evening set	8306 Feb 16 04:34	8°  37'24'09				8311 May 12 06:21	15° 	
max. Earth dist.	8306 Feb 26 19:01	10°  37'43'33	6.40391 AU			8311 Jul 29 11:50	0° 	
				evening set		8311 Aug 09 03:21	2°  30'31'16	
conjunction	8306 Feb 28 23:50	11°  37'12'36	0°04'20					
minimum elong	8306 Feb 28 23:50	11°  37'12'36	0°04'24	conjunction		8311 Aug 22 17:54	5°  30'46'42	-0°08'49
behind sun begin	8306 Feb 28 16:00	11°  37'08'19		minimum elong		8311 Aug 22 17:55	5°  30'46'42	0°08'54
behind sun end	8306 Mar 01 07:39	11°  37'16'53		behind sun begin		8311 Aug 22 10:45	5°  30'42'26	
morning rise	8306 Mar 13 17:35	14°  37'00'28		behind sun end		8311 Aug 23 01:04	5°  30'50'59	
desc. node	8306 May 05 03:02	24°  37'33'56		max. Earth dist.		8311 Aug 25 00:15	6°  30'19'17	5.96955 AU
	8306 Jun 14 19:10	0° 		morning rise		8311 Sep 05 10:29	9°  30'02'59	
retrograde	8306 Jul 13 23:19	1°  37'17'38		asc. node		8311 Dec 16 12:37	27°  30'55'12	
	8306 Aug 12 03:49	30°  R 		retrograde		8312 Jan 13 19:48	29°  30'13'01	
opposition	8306 Sep 12 20:33	26°  37'24'53	-0°12'44	min. Earth dist.		8312 Mar 11 18:01	24°  30'21'28	4.03413 AU
min. Earth dist.	8306 Sep 14 12:29	26°  37'12'06	4.33682 AU	opposition		8312 Mar 13 07:49	24°  30'08'36	0°09'57
direct	8306 Nov 14 00:13	21°  37'24'55		direct		8312 May 10 17:46	19°  30'11'06	
	8307 Feb 02 11:00	0° 				8312 Aug 07 07:05	0° 	
evening set	8307 Mar 19 09:30	9°  37'28'04		evening set		8312 Sep 14 09:04	8°  30'24'24	
max. Earth dist.	8307 Mar 29 21:08	11°  37'50'37	6.25831 AU					
				conjunction		8312 Sep 28 00:59	11°  30'33'43	0°20'48
conjunction	8307 Apr 01 03:52	12°  37'21'45	-0°21'39	minimum elong		8312 Sep 28 00:58	11°  30'33'42	0°20'50
minimum elong	8307 Apr 01 03:51	12°  37'21'44	0°21'41	max. Earth dist.		8312 Sep 30 12:32	12°  30'30'08	6.11267 AU
morning rise	8307 Apr 13 21:27	15°  37'15'23		morning rise		8312 Oct 11 17:34	14°  30'30'43'03	
	8307 Jun 28 21:42	0° 				8312 Dec 28 14:29	0° 	
retrograde	8307 Aug 17 01:31	3°  37'34'47		retrograde		8313 Feb 15 19:50	3°  37'40'56	
	8307 Oct 06 07:46	30°  R 				8313 Apr 06 08:51	30°  R 	
opposition	8307 Oct 16 15:53	28°  37'40'55	-0°48'55	min. Earth dist.		8313 Apr 15 06:02	28°  37'49'10	4.19688 AU
min. Earth dist.	8307 Oct 18 02:59	28°  37'29'35	4.17329 AU	opposition		8313 Apr 16 16:29	28°  37'37'34	0°48'31
direct	8307 Dec 16 14:34	23°  37'43'01		direct		8313 Jun 15 04:38	23°  37'49'49	
	8308 Feb 20 17:36	0° 				8313 Aug 21 04:32	0° 	
evening set	8308 Apr 20 09:57	12°  37'35'25		evening set		8313 Oct 19 14:50	12°  37'01'05	

conjunction	8313 Nov 02 03:35	15° \mathbb{M} 01'39	0°41'46			8319 Jan 10 20:05	0° Υ
minimum elong	8313 Nov 02 03:34	15° \mathbb{M} 01'39	0°41'54	evening set		8319 Mar 23 20:02	14° Υ 02'30
	8313 Nov 02 00:36	15° \mathbb{M}		max. Earth dist.		8319 Apr 03 08:14	16° Υ 25'57 6.24171 AU
max. Earth dist.	8313 Nov 03 21:18	15° \mathbb{M} 24'54	6.28083 AU				
morning rise	8313 Nov 15 15:44	18° \mathbb{M} 01'35		conjunction		8319 Apr 05 14:11	16° Υ 56'47 -0°24'55
	8314 Jan 14 16:09	0° \mathcal{A}		minimum elong		8319 Apr 05 14:10	16° Υ 56'46 0°24'58
retrograde	8314 Mar 19 12:00	5° \mathcal{A} 48'45		morning rise		8319 Apr 18 07:58	19° Υ 51'09
opposition	8314 May 18 17:31	0° \mathcal{A} 48'22	1°08'55			8319 Jun 05 02:11	0° \mathcal{B}
min. Earth dist.	8314 May 17 22:30	0° \mathcal{A} 54'41	4.35608 AU	retrograde		8319 Aug 21 22:35	8° \mathcal{B} 18'16
	8314 May 24 20:10	30° $\mathcal{R}\mathbb{M}$		opposition		8319 Oct 21 11:10	3° \mathcal{B} 24'10 -0°52'58
direct	8314 Jul 18 14:31	25° \mathbb{M} 47'13		min. Earth dist.		8319 Oct 22 21:17	3° \mathcal{B} 13'07 4.15632 AU
	8314 Sep 11 02:52	0° \mathcal{A}				8319 Nov 19 11:54	30° $\mathcal{R}\Upsilon$
evening set	8314 Nov 21 14:44	13° \mathcal{A} 28'23		direct		8319 Dec 21 06:56	28° Υ 26'32
						8320 Jan 21 20:43	0° \mathcal{B}
conjunction	8314 Dec 04 22:23	16° \mathcal{A} 21'11	0°49'05			8320 Apr 14 18:39	15° \mathcal{B}
minimum elong	8314 Dec 04 22:23	16° \mathcal{A} 21'11	0°49'15	evening set		8320 Apr 25 01:19	17° \mathcal{B} 23'41
max. Earth dist.	8314 Dec 05 13:48	16° \mathcal{A} 29'32	6.41923 AU	max. Earth dist.		8320 May 06 08:33	20° \mathcal{B} 03'51 6.07426 AU
morning rise	8314 Dec 18 04:11	19° \mathcal{A} 12'56					
	8315 Feb 11 00:52	0° \mathcal{B}		conjunction		8320 May 07 21:51	20° \mathcal{B} 25'57 -0°43'48
retrograde	8315 Apr 18 13:30	6° \mathcal{B} 10'13		minimum elong		8320 May 07 21:50	20° \mathcal{B} 25'57 0°43'56
opposition	8315 Jun 18 05:14	1° \mathcal{B} 13'19	1°08'52	morning rise		8320 May 20 19:03	23° \mathcal{B} 28'56
min. Earth dist.	8315 Jun 18 04:19	1° \mathcal{B} 13'37	4.46517 AU			8320 Jun 18 06:01	0° \mathbb{I}
	8315 Jun 27 17:04	30° $\mathcal{R}\mathcal{A}$		retrograde		8320 Sep 26 22:22	13° \mathbb{I} 11'51
direct	8315 Aug 19 03:58	26° \mathcal{A} 11'39		opposition		8320 Nov 25 23:26	8° \mathbb{I} 15'23 -1°12'12
	8315 Oct 10 14:07	0° \mathcal{B}		min. Earth dist.		8320 Nov 26 15:37	8° \mathbb{I} 10'04 4.00108 AU
evening set	8315 Dec 22 20:26	13° \mathcal{B} 28'01		direct		8321 Jan 24 07:54	3° \mathbb{I} 20'01
				evening set		8321 May 30 14:20	23° \mathbb{I} 03'38
conjunction	8316 Jan 04 22:42	16° \mathcal{B} 15'55	0°42'40				
minimum elong	8316 Jan 04 22:43	16° \mathcal{B} 15'56	0°42'50	conjunction		8321 Jun 12 16:17	26° \mathbb{I} 14'15 -0°47'45
max. Earth dist.	8316 Jan 04 08:46	16° \mathcal{B} 08'27	6.49163 AU	minimum elong		8321 Jun 12 16:18	26° \mathbb{I} 14'15 0°47'55
morning rise	8316 Jan 17 22:44	19° \mathcal{B} 02'44		max. Earth dist.		8321 Jun 12 09:20	26° \mathbb{I} 10'02 5.94585 AU
	8316 Mar 14 15:26	0° \approx		morning rise		8321 Jun 25 20:31	29° \mathbb{I} 26'13
retrograde	8316 May 17 06:14	5° \approx 38'19				8321 Jun 28 04:30	0° \mathcal{E}
opposition	8316 Jul 17 03:42	0° \approx 44'11	0°50'55	retrograde		8321 Nov 04 14:54	20° \mathcal{E} 07'21
min. Earth dist.	8316 Jul 17 22:27	0° \approx 38'11	4.49761 AU	opposition		8322 Jan 03 05:16	15° \mathcal{E} 07'31 -1°04'11
	8316 Jul 22 21:51	30° $\mathcal{R}\mathcal{B}$		min. Earth dist.		8322 Jan 02 19:55	15° \mathcal{E} 10'39 3.91397 AU
direct	8316 Sep 17 19:01	25° \mathcal{B} 42'37		direct		8322 Mar 02 10:16	10° \mathcal{E} 13'07
	8316 Nov 12 21:55	0° \approx				8322 Jul 05 18:53	0° \mathcal{Q}
evening set	8317 Jan 21 03:44	12° \approx 55'02		evening set		8322 Jul 07 02:02	0° \mathcal{Q} 18'53
	8317 Jan 30 20:25	15° \approx					
max. Earth dist.	8317 Feb 01 10:37	15° \approx 20'36	6.48155 AU	conjunction		8322 Jul 20 11:39	3° \mathcal{Q} 34'53 -0°32'51
				minimum elong		8322 Jul 20 11:41	3° \mathcal{Q} 34'54 0°33'00
conjunction	8317 Feb 03 01:36	15° \approx 41'37	0°25'08	max. Earth dist.		8322 Jul 21 18:47	3° \mathcal{Q} 53'54 5.90906 AU
minimum elong	8317 Feb 03 01:37	15° \approx 41'37	0°25'15	morning rise		8322 Aug 02 23:45	6° \mathcal{Q} 52'14
morning rise	8317 Feb 15 21:25	18° \approx 27'17				8322 Sep 06 21:11	15° \mathcal{Q}
	8317 Apr 16 18:44	0° \mathcal{H}		retrograde		8322 Dec 13 03:19	27° \mathcal{Q} 41'50
retrograde	8317 Jun 16 13:30	5° \mathcal{H} 11'26		min. Earth dist.		8323 Feb 09 06:52	22° \mathcal{Q} 48'46 3.93269 AU
opposition	8317 Aug 16 13:27	0° \mathcal{H} 18'39	0°19'48	opposition		8323 Feb 10 12:15	22° \mathcal{Q} 38'47 -0°29'26
min. Earth dist.	8317 Aug 17 22:32	0° \mathcal{H} 08'05	4.44587 AU	direct		8323 Apr 09 10:02	17° \mathcal{Q} 43'19
	8317 Aug 18 23:51	30° $\mathcal{R}\approx$				8323 Jul 12 06:27	0° \mathcal{H}
direct	8317 Oct 18 05:15	25° \approx 17'39		evening set		8323 Aug 14 04:59	7° \mathcal{H} 34'40
	8317 Dec 15 19:54	0° \mathcal{H}					
evening set	8318 Feb 20 11:38	12° \mathcal{H} 47'45		conjunction		8323 Aug 27 20:06	10° \mathcal{H} 49'49 -0°04'46
max. Earth dist.	8318 Mar 03 02:35	15° \mathcal{H} 07'48	6.39119 AU	minimum elong		8323 Aug 27 20:07	10° \mathcal{H} 49'50 0°04'50
				behind sun begin		8323 Aug 27 11:56	10° \mathcal{H} 44'58
conjunction	8318 Mar 05 06:44	15° \mathcal{H} 36'34	0°00'41	behind sun end		8323 Aug 28 04:18	10° \mathcal{H} 54'41
minimum elong	8318 Mar 05 06:43	15° \mathcal{H} 36'34	0°00'44	max. Earth dist.		8323 Aug 30 04:26	11° \mathcal{H} 23'27 5.98075 AU
behind sun begin	8318 Mar 04 22:45	15° \mathcal{H} 32'12		morning rise		8323 Sep 10 13:10	14° \mathcal{H} 05'45
behind sun end	8318 Mar 05 14:41	15° \mathcal{H} 40'56		asc. node		8323 Oct 28 22:13	24° \mathcal{H} 49'12
desc. node	8318 Mar 15 06:58	17° \mathcal{H} 49'04				8323 Nov 27 11:52	0° \mathcal{L}
morning rise	8318 Mar 18 00:03	18° \mathcal{H} 24'49		retrograde		8324 Jan 18 14:18	4° \mathcal{L} 09'08
	8318 May 15 06:23	0° Υ				8324 Mar 11 07:27	30° $\mathcal{R}\mathcal{H}$
retrograde	8318 Jul 18 12:02	5° Υ 47'34		min. Earth dist.		8324 Mar 16 12:08	29° \mathcal{H} 17'53 4.04885 AU
opposition	8318 Sep 17 09:49	0° Υ 54'46	-0°18'00	opposition		8324 Mar 18 02:46	29° \mathcal{H} 04'45 0°15'50
min. Earth dist.	8318 Sep 19 01:06	0° Υ 42'12	4.32162 AU	direct		8324 May 15 13:53	24° \mathcal{H} 06'57
	8318 Sep 24 13:56	30° $\mathcal{R}\mathcal{H}$				8324 Jul 17 07:26	0° \mathcal{L}
direct	8318 Nov 18 09:59	25° \mathcal{H} 55'09		evening set		8324 Sep 19 07:19	13° \mathcal{L} 15'46

conjunction	8324 Oct 02 23:03	16° Ω 24'15	0°24'16	behind sun begin	8330 Mar 09 05:18	19° Υ 55'21	
minimum elong	8324 Oct 02 23:01	16° Ω 24'14	0°24'19	behind sun end	8330 Mar 09 21:11	20° Υ 04'06	
max. Earth dist.	8324 Oct 05 08:04	16° Ω 57'05	6.12958 AU	morning rise	8330 Mar 22 06:36	22° Υ 48'36	
morning rise	8324 Oct 16 15:27	19° Ω 32'41			8330 Apr 25 05:51	0° Υ	
	8324 Dec 04 18:50	0° \mathbb{M}		retrograde	8330 Jul 23 03:15	10° Υ 18'21	
retrograde	8325 Feb 20 08:30	8° \mathbb{M} 22'31		opposition	8330 Sep 21 23:54	5° Υ 25'23	-0°23'19
min. Earth dist.	8325 Apr 19 21:05	3° \mathbb{M} 30'17	4.21433 AU	min. Earth dist.	8330 Sep 23 15:22	5° Υ 12'43	4.30140 AU
opposition	8325 Apr 21 05:24	3° \mathbb{M} 19'24	0°52'26	direct	8330 Nov 22 21:04	0° Υ 25'55	
	8325 May 18 10:13	30° \mathbb{R} Ω		evening set	8331 Mar 28 07:28	18° Υ 39'16	
direct	8325 Jun 19 21:55	28° Ω 19'23		max. Earth dist.	8331 Apr 07 21:51	21° Υ 04'39	6.21921 AU
	8325 Jul 22 17:33	0° \mathbb{M}					
	8325 Oct 16 21:00	15° \mathbb{M}		conjunction	8331 Apr 10 01:54	21° Υ 34'32	-0°28'08
evening set	8325 Oct 24 07:30	16° \mathbb{M} 37'59		minimum elong	8331 Apr 10 01:53	21° Υ 34'31	0°28'12
				morning rise	8331 Apr 22 19:48	24° Υ 29'55	
conjunction	8325 Nov 06 19:53	19° \mathbb{M} 37'39	0°43'34		8331 May 17 11:59	0° \mathcal{B}	
minimum elong	8325 Nov 06 19:52	19° \mathbb{M} 37'39	0°43'42	retrograde	8331 Aug 26 21:33	13° \mathcal{B} 07'05	
max. Earth dist.	8325 Nov 08 12:22	20° \mathbb{M} 00'07	6.29763 AU	opposition	8331 Oct 26 09:11	8° \mathcal{B} 12'44	-0°56'52
morning rise	8325 Nov 20 07:11	22° \mathbb{M} 36'32		min. Earth dist.	8331 Oct 27 17:49	8° \mathcal{B} 02'09	4.13321 AU
	8325 Dec 25 08:37	0° \mathcal{A}		direct	8331 Dec 25 23:57	3° \mathcal{B} 15'27	
retrograde	8326 Mar 23 17:41	10° \mathcal{A} 16'45			8332 Mar 28 13:56	15° \mathcal{B}	
min. Earth dist.	8326 May 22 07:23	5° \mathcal{A} 22'43	4.37103 AU	evening set	8332 Apr 29 20:12	22° \mathcal{B} 19'39	
opposition	8326 May 23 01:21	5° \mathcal{A} 16'47	1°10'01	max. Earth dist.	8332 May 11 05:52	25° \mathcal{B} 02'06	6.05245 AU
direct	8326 Jul 23 01:11	0° \mathcal{A} 15'31					
evening set	8326 Nov 26 02:05	17° \mathcal{A} 53'03		conjunction	8332 May 12 17:07	25° \mathcal{B} 23'05	-0°45'23
				minimum elong	8332 May 12 17:06	25° \mathcal{B} 23'05	0°45'32
conjunction	8326 Dec 09 08:53	20° \mathcal{A} 45'04	0°48'54	morning rise	8332 May 25 15:14	28° \mathcal{B} 27'25	
minimum elong	8326 Dec 09 08:53	20° \mathcal{A} 45'04	0°49'04		8332 Jun 01 04:19	0° \mathbb{I}	
max. Earth dist.	8326 Dec 09 19:56	20° \mathcal{A} 51'02	6.43125 AU	retrograde	8332 Oct 02 05:08	18° \mathbb{I} 20'31	
morning rise	8326 Dec 22 13:59	23° \mathcal{A} 36'03		opposition	8332 Dec 01 04:51	13° \mathbb{I} 23'38	-1°12'51
	8327 Jan 22 12:03	0° \mathcal{B}		min. Earth dist.	8332 Dec 01 17:32	13° \mathbb{I} 19'27	3.98271 AU
retrograde	8327 Apr 22 18:44	10° \mathcal{B} 28'58		direct	8333 Jan 29 09:01	8° \mathbb{I} 28'27	
opposition	8327 Jun 22 10:37	5° \mathcal{B} 32'24	1°07'14	evening set	8333 Jun 04 17:00	28° \mathbb{I} 17'38	
min. Earth dist.	8327 Jun 22 12:49	5° \mathcal{B} 31'41	4.47343 AU		8333 Jun 11 17:33	0° \mathcal{E}	
direct	8327 Aug 23 13:23	0° \mathcal{B} 30'39					
evening set	8327 Dec 27 03:23	17° \mathcal{B} 45'06		conjunction	8333 Jun 17 20:08	1° \mathcal{E} 29'22	-0°46'45
max. Earth dist.	8328 Jan 08 12:00	20° \mathcal{B} 23'30	6.49527 AU	minimum elong	8333 Jun 17 20:08	1° \mathcal{E} 29'23	0°46'56
				max. Earth dist.	8333 Jun 17 19:29	1° \mathcal{E} 28'58	5.93290 AU
conjunction	8328 Jan 09 05:03	20° \mathcal{B} 32'38	0°40'44	morning rise	8333 Jul 01 01:19	4° \mathcal{E} 42'27	
minimum elong	8328 Jan 09 05:04	20° \mathcal{B} 32'38	0°40'54	retrograde	8333 Nov 10 02:12	25° \mathcal{E} 29'01	
morning rise	8328 Jan 22 04:23	23° \mathcal{B} 19'02		opposition	8334 Jan 08 14:16	20° \mathcal{E} 28'44	-1°00'39
	8328 Feb 23 20:26	0° \approx		min. Earth dist.	8334 Jan 08 02:32	20° \mathcal{E} 32'41	3.90806 AU
retrograde	8328 May 21 10:05	9° \approx 53'42		direct	8334 Mar 07 17:00	15° \mathcal{E} 34'21	
opposition	8328 Jul 21 08:59	4° \approx 59'41	0°47'08		8334 Jun 18 10:50	0° \mathcal{Q}	
min. Earth dist.	8328 Jul 22 05:02	4° \approx 53'16	4.49624 AU	evening set	8334 Jul 12 09:47	5° \mathcal{Q} 41'13	
	8328 Sep 17 10:18	30° \mathbb{R} \mathcal{B}					
direct	8328 Sep 22 00:40	29° \mathcal{B} 58'05		conjunction	8334 Jul 25 20:22	8° \mathcal{Q} 57'38	-0°29'26
	8328 Sep 26 15:38	0° \approx		minimum elong	8334 Jul 25 20:24	8° \mathcal{Q} 57'38	0°29'34
	8329 Jan 15 01:57	15° \approx		max. Earth dist.	8334 Jul 27 07:51	9° \mathcal{Q} 19'15	5.91072 AU
evening set	8329 Jan 25 09:05	17° \approx 11'06		morning rise	8334 Aug 08 09:35	12° \mathcal{Q} 15'22	
max. Earth dist.	8329 Feb 05 14:12	19° \approx 35'57	6.47498 AU		8334 Aug 19 20:15	15° \mathcal{Q}	
					8334 Nov 04 10:06	0° \mathbb{P}	
conjunction	8329 Feb 07 06:29	19° \approx 57'43	0°21'58	retrograde	8334 Dec 18 09:46	3° \mathbb{P} 02'23	
minimum elong	8329 Feb 07 06:29	19° \approx 57'43	0°22'05		8335 Jan 31 12:37	30° \mathbb{R} \mathcal{Q}	
morning rise	8329 Feb 20 01:41	22° \approx 43'25		min. Earth dist.	8335 Feb 14 10:05	28° \mathcal{Q} 10'06	3.94201 AU
	8329 Mar 27 11:22	0° \mathcal{K}		opposition	8335 Feb 15 18:34	27° \mathcal{Q} 59'04	-0°23'11
retrograde	8329 Jun 20 21:25	9° \mathcal{K} 30'31		direct	8335 Apr 14 15:52	23° \mathcal{Q} 03'24	
opposition	8329 Aug 20 21:37	4° \mathcal{K} 37'47	0°14'41		8335 Jun 21 08:04	0° \mathbb{P}	
min. Earth dist.	8329 Aug 22 08:25	4° \mathcal{K} 26'41	4.43413 AU	evening set	8335 Aug 19 12:21	12° \mathbb{P} 50'50	
	8329 Oct 06 12:38	30° \mathbb{R} \approx					
direct	8329 Oct 22 12:47	29° \approx 36'55		conjunction	8335 Sep 02 03:49	16° \mathbb{P} 05'25	-0°00'23
	8329 Nov 07 13:53	0° \mathcal{K}		minimum elong	8335 Sep 02 03:47	16° \mathbb{P} 05'25	0°00'25
desc. node	8330 Jan 22 15:42	10° \mathcal{K} 12'35		behind sun begin	8335 Sep 01 19:25	16° \mathbb{P} 00'27	
evening set	8330 Feb 24 18:35	17° \mathcal{K} 10'26		behind sun end	8335 Sep 02 12:10	16° \mathbb{P} 10'22	
max. Earth dist.	8330 Mar 07 06:38	19° \mathcal{K} 29'29	6.37483 AU	max. Earth dist.	8335 Sep 04 12:59	16° \mathbb{P} 39'26	5.99678 AU
				asc. node	8335 Sep 06 23:48	17° \mathbb{P} 14'24	
conjunction	8330 Mar 09 13:14	19° \mathcal{K} 59'44	-0°03'05	morning rise	8335 Sep 15 21:10	19° \mathbb{P} 20'40	
minimum elong	8330 Mar 09 13:14	19° \mathcal{K} 59'44	0°03'03		8335 Nov 03 03:45	0° Ω	











































































































































































retrograde	8336 Jan 23 12:13	9°♌15'12		conjunction	8342 Mar 13 18:38	24°♋21'20	-0°06'41
min. Earth dist.	8336 Mar 21 11:23	4°♌23'54	4.06982 AU	minimum elong	8342 Mar 13 18:38	24°♋21'20	0°06'40
opposition	8336 Mar 23 01:50	4°♌10'49	0°21'54	behind sun begin	8342 Mar 13 11:10	24°♋17'12	
	8336 Apr 29 00:33	30°♏♏		behind sun end	8342 Mar 14 02:05	24°♋25'28	
direct	8336 May 20 16:48	29°♏12'42		morning rise	8342 Mar 26 11:48	27°♋10'58	
	8336 Jun 11 12:30	0°♌			8342 Apr 08 08:23	0°♏	
evening set	8336 Sep 24 08:55	18°♌14'34		retrograde	8342 Jul 27 18:30	14°♏49'30	
				opposition	8342 Sep 26 13:50	9°♏56'26	-0°28'29
conjunction	8336 Oct 08 00:29	21°♌21'52	0°27'44	min. Earth dist.	8342 Sep 28 06:03	9°♏43'32	4.27636 AU
minimum elong	8336 Oct 08 00:28	21°♌21'51	0°27'48	direct	8342 Nov 27 07:48	4°♏57'13	
max. Earth dist.	8336 Oct 10 10:09	21°♌54'53	6.15382 AU	evening set	8343 Apr 01 19:31	23°♏18'23	
morning rise	8336 Oct 21 16:12	24°♌28'55		max. Earth dist.	8343 Apr 12 09:33	25°♏44'32	6.19173 AU
	8336 Nov 15 15:00	0°♏					
retrograde	8337 Feb 24 21:04	13°♏07'50		conjunction	8343 Apr 14 14:02	26°♏14'51	-0°31'11
opposition	8337 Apr 25 19:47	8°♏05'06	0°56'08	minimum elong	8343 Apr 14 14:01	26°♏14'50	0°31'15
min. Earth dist.	8337 Apr 24 12:15	8°♏15'41	4.23958 AU	morning rise	8343 Apr 27 08:33	29°♏11'35	
direct	8337 Jun 24 16:32	3°♏04'55			8343 Apr 30 21:01	0°♋	
	8337 Sep 29 14:39	15°♏			8343 Jul 18 05:38	15°♋	
evening set	8337 Oct 29 00:55	21°♏16'13		retrograde	8343 Aug 31 22:34	18°♋00'49	
					8343 Oct 16 08:08	15°♋♋	
conjunction	8337 Nov 11 12:21	24°♏14'32	0°45'09	opposition	8343 Oct 31 08:37	13°♋06'09	-1°00'27
minimum elong	8337 Nov 11 12:21	24°♏14'31	0°45'18	min. Earth dist.	8343 Nov 01 14:54	12°♋56'18	4.10540 AU
max. Earth dist.	8337 Nov 13 00:21	24°♏34'24	6.32175 AU	direct	8343 Dec 30 18:07	8°♋09'07	
morning rise	8337 Nov 24 22:55	27°♏12'04			8344 Mar 08 09:32	15°♋	
	8337 Dec 07 21:06	0°♋		evening set	8344 May 04 17:19	27°♋22'14	
retrograde	8338 Mar 27 23:39	14°♋43'15			8344 May 15 17:46	0°♏	
opposition	8338 May 27 08:53	9°♋43'44	1°10'46	max. Earth dist.	8344 May 16 09:09	0°♏09'12	6.02703 AU
min. Earth dist.	8338 May 26 17:58	9°♋48'39	4.39225 AU				
direct	8338 Jul 27 13:57	4°♋42'19		conjunction	8344 May 17 15:09	0°♏27'10	-0°46'40
evening set	8338 Nov 30 11:29	22°♋14'20		minimum elong	8344 May 17 15:09	0°♏27'10	0°46'49
				morning rise	8344 May 30 14:03	3°♏33'01	
conjunction	8338 Dec 13 17:38	25°♋05'24	0°48'29	retrograde	8344 Oct 07 17:23	23°♏37'34	
minimum elong	8338 Dec 13 17:38	25°♋05'24	0°48'40	opposition	8344 Dec 06 13:20	18°♏40'15	-1°12'56
max. Earth dist.	8338 Dec 14 02:01	25°♋09'55	6.44800 AU	min. Earth dist.	8344 Dec 06 23:20	18°♏36'57	3.96236 AU
morning rise	8338 Dec 26 21:39	27°♋55'21		direct	8345 Feb 03 12:53	13°♏45'19	
	8339 Jan 05 16:37	0°♋			8345 May 25 15:09	0°♋	
retrograde	8339 Apr 26 19:29	14°♋42'58		evening set	8345 Jun 09 23:09	3°♋40'35	
opposition	8339 Jun 26 13:59	9°♋46'49	1°05'19				
min. Earth dist.	8339 Jun 26 18:04	9°♋45'29	4.48468 AU	conjunction	8345 Jun 23 03:20	6°♋53'29	-0°45'21
direct	8339 Aug 27 19:10	4°♋45'04		minimum elong	8345 Jun 23 03:21	6°♋53'30	0°45'32
evening set	8339 Dec 31 08:00	21°♋57'02		max. Earth dist.	8345 Jun 23 07:39	6°♋56'07	5.91967 AU
max. Earth dist.	8340 Jan 12 11:07	24°♋32'27	6.50012 AU	morning rise	8345 Jul 06 09:56	10°♋07'48	
					8345 Oct 21 23:58	0°♏	
conjunction	8340 Jan 13 08:49	24°♋44'04	0°38'39	retrograde	8345 Nov 15 14:27	0°♏59'13	
minimum elong	8340 Jan 13 08:50	24°♋44'05	0°38'49		8345 Dec 10 03:23	30°♋♋	
morning rise	8340 Jan 26 07:31	27°♋30'03		min. Earth dist.	8346 Jan 13 09:35	26°♋03'59	3.90383 AU
	8340 Feb 07 04:17	0°♏		opposition	8346 Jan 14 02:09	25°♋58'24	-0°56'32
retrograde	8340 May 25 13:22	14°♏03'53		direct	8346 Mar 13 01:22	21°♋03'58	
opposition	8340 Jul 25 12:05	9°♏10'09	0°43'14		8346 May 29 14:03	0°♏	
min. Earth dist.	8340 Jul 26 11:48	9°♏02'33	4.49431 AU	evening set	8346 Jul 17 20:47	11°♏10'53	
direct	8340 Sep 26 06:05	4°♏08'33					
	8340 Dec 29 15:21	15°♏		conjunction	8346 Jul 31 08:18	14°♏27'30	-0°25'42
evening set	8341 Jan 29 12:07	21°♏22'41		minimum elong	8346 Jul 31 08:19	14°♏27'31	0°25'49
max. Earth dist.	8341 Feb 09 12:51	23°♏45'30	6.46618 AU	max. Earth dist.	8346 Aug 02 00:10	14°♏51'46	5.91585 AU
					8346 Aug 02 13:41	15°♏	
conjunction	8341 Feb 11 09:03	24°♏09'26	0°18'46	morning rise	8346 Aug 13 22:26	17°♏45'23	
minimum elong	8341 Feb 11 09:04	24°♏09'26	0°18'53		8346 Oct 07 20:07	0°♏	
morning rise	8341 Feb 24 03:56	26°♏55'21		retrograde	8346 Dec 23 16:53	8°♏27'40	
	8341 Mar 10 15:12	0°♋		min. Earth dist.	8347 Feb 19 16:06	3°♏35'36	3.95563 AU
retrograde	8341 Jun 25 03:46	13°♋46'32		opposition	8347 Feb 21 02:23	3°♏23'55	-0°16'40
opposition	8341 Aug 25 04:16	8°♋53'47	0°09'35		8347 Mar 20 19:30	30°♋♏	
min. Earth dist.	8341 Aug 26 16:15	8°♋42'17	4.41887 AU	direct	8347 Apr 20 01:53	28°♏27'51	
direct	8341 Oct 26 17:13	3°♋52'59			8347 May 20 08:50	0°♏	
desc. node	8341 Dec 03 05:19	5°♋55'05		asc. node	8347 Jul 16 07:08	9°♏14'04	
evening set	8342 Mar 01 00:02	21°♋31'19		evening set	8347 Aug 24 21:04	18°♏09'28	
max. Earth dist.	8342 Mar 11 12:00	23°♋50'56	6.35411 AU				
				conjunction	8347 Sep 07 12:57	21°♏23'13	0°04'05

minimum elong	8347 Sep 07 12:57	21° \mathbb{M} 23'13	0°04'03		8353 Feb 22 17:44	0° \mathbb{H}
behind sun begin	8347 Sep 07 04:40	21° \mathbb{M} 18'21		morning rise	8353 Feb 28 08:33	1° \mathbb{H} 12'58
behind sun end	8347 Sep 07 21:13	21° \mathbb{M} 28'05		retrograde	8353 Jun 29 15:08	18° \mathbb{H} 09'29
max. Earth dist.	8347 Sep 10 01:24	21° \mathbb{M} 58'59	6.01740 AU	opposition	8353 Aug 29 14:23	13° \mathbb{H} 16'50 0°04'16
morning rise	8347 Sep 21 06:15	24° \mathbb{M} 37'27		min. Earth dist.	8353 Aug 31 04:37	13° \mathbb{H} 04'38 4.40084 AU
	8347 Oct 14 17:24	0° \mathbb{L}		desc. node	8353 Oct 12 17:10	8° \mathbb{H} 46'45
retrograde	8348 Jan 28 10:13	14° \mathbb{L} 20'56		direct	8353 Oct 31 02:39	8° \mathbb{H} 16'15
min. Earth dist.	8348 Mar 26 10:21	9° \mathbb{L} 29'39	4.09479 AU	evening set	8354 Mar 05 09:01	26° \mathbb{H} 00'14
opposition	8348 Mar 28 00:47	9° \mathbb{L} 16'36	0°27'46	max. Earth dist.	8354 Mar 15 18:51	28° \mathbb{H} 19'26 6.33167 AU
direct	8348 May 25 19:26	4° \mathbb{L} 18'09				
evening set	8348 Sep 29 10:13	23° \mathbb{L} 11'42		conjunction	8354 Mar 18 03:28	28° \mathbb{H} 51'05 -0°10'22
				minimum elong	8354 Mar 18 03:28	28° \mathbb{H} 51'05 0°10'22
conjunction	8348 Oct 13 01:12	26° \mathbb{L} 17'35	0°31'00	behind sun begin	8354 Mar 17 21:08	28° \mathbb{H} 47'34
minimum elong	8348 Oct 13 01:11	26° \mathbb{L} 17'34	0°31'05	behind sun end	8354 Mar 18 09:47	28° \mathbb{H} 54'36
max. Earth dist.	8348 Oct 15 07:58	26° \mathbb{L} 48'44	6.18052 AU		8354 Mar 23 06:40	0° \mathbb{Y}
morning rise	8348 Oct 26 16:28	29° \mathbb{L} 23'11		morning rise	8354 Mar 30 20:47	1° \mathbb{Y} 41'39
	8348 Oct 29 09:53	0° \mathbb{M}		retrograde	8354 Aug 01 12:52	19° \mathbb{Y} 29'40
	8349 Jan 17 07:04	15° \mathbb{M}		opposition	8354 Oct 01 07:43	14° \mathbb{Y} 36'28 -0°33'41
retrograde	8349 Mar 01 08:16	17° \mathbb{M} 50'40		min. Earth dist.	8354 Oct 02 22:36	14° \mathbb{Y} 23'58 4.25101 AU
	8349 Apr 13 10:11	15° \mathbb{R} \mathbb{M}		direct	8354 Dec 01 20:49	9° \mathbb{Y} 37'33
min. Earth dist.	8349 Apr 29 03:53	12° \mathbb{M} 58'12	4.26556 AU	evening set	8355 Apr 06 11:11	28° \mathbb{Y} 06'40
opposition	8349 Apr 30 09:31	12° \mathbb{M} 48'16	0°59'27		8355 Apr 14 15:16	0° \mathbb{B}
direct	8349 Jun 29 11:18	7° \mathbb{M} 47'49		max. Earth dist.	8355 Apr 17 04:56	0° \mathbb{B} 35'48 6.16563 AU
	8349 Sep 09 23:07	15° \mathbb{M}				
evening set	8349 Nov 02 17:21	25° \mathbb{M} 51'50		conjunction	8355 Apr 19 06:06	1° \mathbb{B} 04'22 -0°34'08
				minimum elong	8355 Apr 19 06:05	1° \mathbb{B} 04'21 0°34'13
conjunction	8349 Nov 16 04:10	28° \mathbb{M} 48'53	0°46'29	morning rise	8355 May 02 00:56	4° \mathbb{B} 02'23
minimum elong	8349 Nov 16 04:10	28° \mathbb{M} 48'53	0°46'37		8355 Jun 22 01:55	15° \mathbb{B}
max. Earth dist.	8349 Nov 17 13:16	29° \mathbb{M} 07'05	6.34508 AU	retrograde	8355 Sep 06 05:07	23° \mathbb{B} 03'20
	8349 Nov 21 13:36	0° \mathbb{X}		opposition	8355 Nov 05 12:03	18° \mathbb{B} 08'28 -1°03'44
morning rise	8349 Nov 29 13:38	1° \mathbb{X} 45'03		min. Earth dist.	8355 Nov 06 16:39	17° \mathbb{B} 59'09 4.08084 AU
retrograde	8350 Apr 01 05:05	19° \mathbb{X} 07'49			8355 Dec 01 15:53	15° \mathbb{R} \mathbb{B}
opposition	8350 May 31 15:58	14° \mathbb{X} 08'51	1°11'06	direct	8356 Jan 04 17:04	13° \mathbb{B} 11'52
min. Earth dist.	8350 May 31 03:33	14° \mathbb{X} 12'55	4.41132 AU		8356 Feb 07 09:06	15° \mathbb{B}
direct	8350 Aug 01 01:24	9° \mathbb{X} 07'23			8356 Apr 28 23:30	0° \mathbb{I}
evening set	8350 Dec 04 21:07	26° \mathbb{X} 34'51		evening set	8356 May 09 17:36	2° \mathbb{I} 32'34
conjunction	8350 Dec 18 02:19	29° \mathbb{X} 25'03	0°47'49	conjunction	8356 May 22 16:06	5° \mathbb{I} 38'46 -0°47'38
minimum elong	8350 Dec 18 02:20	29° \mathbb{X} 25'03	0°48'00	minimum elong	8356 May 22 16:05	5° \mathbb{I} 38'46 0°47'47
max. Earth dist.	8350 Dec 18 04:39	29° \mathbb{X} 26'19	6.46144 AU	max. Earth dist.	8356 May 21 13:37	5° \mathbb{I} 22'51 6.00642 AU
	8350 Dec 20 19:19	0° \mathbb{Z}		morning rise	8356 Jun 04 16:04	8° \mathbb{I} 46'01
morning rise	8350 Dec 31 05:40	2° \mathbb{Z} 14'12		retrograde	8356 Oct 13 03:57	28° \mathbb{I} 59'54
retrograde	8351 Apr 30 23:35	18° \mathbb{Z} 57'48		opposition	8356 Dec 11 23:35	24° \mathbb{I} 02'09 -1°12'25
opposition	8351 Jun 30 18:19	14° \mathbb{Z} 02'03	1°03'04	min. Earth dist.	8356 Dec 12 04:35	24° \mathbb{I} 00'29 3.94832 AU
min. Earth dist.	8351 Jul 01 02:10	13° \mathbb{Z} 59'31	4.49191 AU	direct	8357 Feb 08 17:36	19° \mathbb{I} 07'29
direct	8351 Sep 01 02:51	9° \mathbb{Z} 00'15			8357 May 06 23:48	0° \mathbb{E}
evening set	8352 Jan 04 13:29	26° \mathbb{Z} 11'05		evening set	8357 Jun 15 06:40	9° \mathbb{E} 06'24
conjunction	8352 Jan 17 13:52	28° \mathbb{Z} 57'54	0°36'21	conjunction	8357 Jun 28 11:52	12° \mathbb{E} 20'04 -0°43'35
minimum elong	8352 Jan 17 13:53	28° \mathbb{Z} 57'55	0°36'30	minimum elong	8357 Jun 28 11:53	12° \mathbb{E} 20'05 0°43'45
max. Earth dist.	8352 Jan 16 13:11	28° \mathbb{Z} 44'41	6.50063 AU	max. Earth dist.	8357 Jun 28 22:17	12° \mathbb{E} 26'27 5.91377 AU
	8352 Jan 22 09:48	0° \mathbb{A}		morning rise	8357 Jul 11 19:32	15° \mathbb{E} 35'10
morning rise	8352 Jan 30 11:49	1° \mathbb{A} 43'38			8357 Sep 15 21:33	0° \mathbb{O}
	8352 Apr 12 01:59	15° \mathbb{A}		retrograde	8357 Nov 21 02:10	6° \mathbb{O} 28'10
retrograde	8352 May 29 16:57	18° \mathbb{A} 18'10		opposition	8358 Jan 19 13:00	1° \mathbb{O} 26'50 -0°51'56
	8352 Jul 17 01:31	15° \mathbb{R} \mathbb{A}		min. Earth dist.	8358 Jan 18 17:29	1° \mathbb{O} 33'25 3.90687 AU
opposition	8352 Jul 29 17:22	13° \mathbb{A} 24'39	0°39'01		8358 Jan 30 10:23	30° \mathbb{R} \mathbb{E}
min. Earth dist.	8352 Jul 30 18:34	13° \mathbb{A} 16'35	4.48820 AU	direct	8358 Mar 18 12:25	26° \mathbb{E} 32'15
direct	8352 Sep 30 10:36	8° \mathbb{A} 23'10			8358 May 03 14:19	0° \mathbb{O}
	8352 Dec 10 12:15	15° \mathbb{A}			8358 Jul 16 13:25	15° \mathbb{O}
evening set	8353 Feb 02 17:34	25° \mathbb{A} 39'40		evening set	8358 Jul 23 06:07	16° \mathbb{O} 36'33
max. Earth dist.	8353 Feb 13 15:30	28° \mathbb{A} 01'26	6.45381 AU			
conjunction	8353 Feb 15 14:01	28° \mathbb{A} 26'42	0°15'23	conjunction	8358 Aug 05 18:33	19° \mathbb{O} 53'01 -0°21'49
minimum elong	8353 Feb 15 14:01	28° \mathbb{A} 26'43	0°15'29	minimum elong	8358 Aug 05 18:35	19° \mathbb{O} 53'02 0°21'57
behind sun begin	8353 Feb 15 11:46	28° \mathbb{A} 25'30		max. Earth dist.	8358 Aug 07 16:12	20° \mathbb{O} 20'41 5.92747 AU
behind sun end	8353 Feb 15 16:16	28° \mathbb{A} 27'56		morning rise	8358 Aug 19 09:18	23° \mathbb{O} 10'36
					8358 Sep 17 15:19	0° \mathbb{M}

retrograde	8358 Dec 28 21:08	13°♎45'35			8364 Nov 14 11:35	15°♏	
min. Earth dist.	8359 Feb 24 19:10	8°♎53'45	3.97442 AU	evening set	8365 Feb 06 23:15	29°♏58'07	
opposition	8359 Feb 26 06:53	8°♎41'36	-0°10'14		8365 Feb 07 02:45	0°♏	
direct	8359 Apr 25 07:52	3°♎45'14		max. Earth dist.	8365 Feb 17 19:15	2°♏19'20	6.43843 AU
asc. node	8359 May 26 06:43	5°♎20'46					
evening set	8359 Aug 30 02:10	23°♎19'33		conjunction	8365 Feb 19 19:29	2°♏45'37	0°11'57
				minimum elong	8365 Feb 19 19:30	2°♏45'37	0°12'02
conjunction	8359 Sep 12 17:57	26°♎32'10	0°08'15	behind sun begin	8365 Feb 19 14:01	2°♏42'39	
minimum elong	8359 Sep 12 17:57	26°♎32'10	0°08'14	behind sun end	8365 Feb 20 00:59	2°♏48'36	
behind sun begin	8359 Sep 12 10:34	26°♎27'51		morning rise	8365 Mar 04 13:42	5°♏32'22	
behind sun end	8359 Sep 13 01:20	26°♎36'29		retrograde	8365 Jul 04 01:42	22°♏35'03	
max. Earth dist.	8359 Sep 15 05:54	27°♎07'25	6.04112 AU	desc. node	8365 Aug 22 22:10	19°♏06'29	
morning rise	8359 Sep 26 11:21	29°♎45'14		opposition	8365 Sep 03 01:30	17°♏42'23	-0°01'05
	8359 Sep 27 12:42	0°♏		min. Earth dist.	8365 Sep 04 15:24	17°♏30'17	4.38117 AU
retrograde	8360 Feb 02 02:04	19°♏17'08		direct	8365 Nov 04 10:12	12°♏42'00	
min. Earth dist.	8360 Mar 31 05:17	14°♏25'51	4.12089 AU		8366 Mar 07 09:32	0°♏	
opposition	8360 Apr 01 19:24	14°♏12'56	0°33'10	evening set	8366 Mar 09 18:53	0°♏31'52	
direct	8360 May 30 18:19	9°♏14'07		max. Earth dist.	8366 Mar 20 05:44	2°♏52'21	6.30919 AU
evening set	8360 Oct 04 07:16	27°♏59'29					
	8360 Oct 13 04:48	0°♏		conjunction	8366 Mar 22 13:13	3°♏23'33	-0°14'00
				minimum elong	8366 Mar 22 13:12	3°♏23'33	0°13'59
conjunction	8360 Oct 17 21:51	1°♏03'59	0°33'56	behind sun begin	8366 Mar 22 09:03	3°♏21'13	
minimum elong	8360 Oct 17 21:50	1°♏03'59	0°34'01	behind sun end	8366 Mar 22 17:21	3°♏25'52	
max. Earth dist.	8360 Oct 20 02:08	1°♏33'34	6.20680 AU	morning rise	8366 Apr 04 06:32	6°♏15'01	
morning rise	8360 Oct 31 12:16	4°♏08'06		retrograde	8366 Aug 06 10:31	24°♏12'26	
	8360 Dec 22 22:54	15°♏		opposition	8366 Oct 06 03:01	19°♏19'04	-0°38'40
retrograde	8361 Mar 05 17:46	22°♏24'52		min. Earth dist.	8366 Oct 07 17:45	19°♏06'36	4.22717 AU
opposition	8361 May 04 19:30	17°♏22'57	1°02'16	direct	8366 Dec 06 13:06	14°♏20'28	
min. Earth dist.	8361 May 03 16:41	17°♏31'54	4.28969 AU		8367 Mar 29 06:52	0°♏	
	8361 May 23 11:06	15°♏		evening set	8367 Apr 11 03:39	2°♏56'35	
direct	8361 Jul 04 02:43	12°♏22'18		max. Earth dist.	8367 Apr 21 23:24	5°♏27'40	6.14241 AU
	8361 Aug 15 01:27	15°♏					
	8361 Nov 05 17:37	0°♏		conjunction	8367 Apr 23 22:50	5°♏55'22	-0°36'50
evening set	8361 Nov 07 06:21	0°♏19'57		minimum elong	8367 Apr 23 22:49	5°♏55'21	0°36'56
				morning rise	8367 May 06 18:14	8°♏54'35	
conjunction	8361 Nov 20 16:21	3°♏15'52	0°47'29		8367 Jun 02 16:35	15°♏	
minimum elong	8361 Nov 20 16:20	3°♏15'52	0°47'39	retrograde	8367 Sep 11 08:54	28°♏05'48	
max. Earth dist.	8361 Nov 21 20:24	3°♏31'13	6.36515 AU	opposition	8367 Nov 10 15:14	23°♏10'33	-1°06'29
morning rise	8361 Dec 04 01:04	6°♏10'54		min. Earth dist.	8367 Nov 11 16:00	23°♏02'27	4.06028 AU
retrograde	8362 Apr 05 08:16	23°♏26'41		direct	8368 Jan 09 14:14	18°♏14'15	
opposition	8362 Jun 04 20:36	18°♏28'11	1°11'06		8368 Apr 11 08:15	0°♏	
min. Earth dist.	8362 Jun 04 11:06	18°♏31'17	4.42627 AU	evening set	8368 May 14 17:31	7°♏40'52	
direct	8362 Aug 05 09:14	13°♏26'35					
	8362 Dec 05 04:28	0°♏		conjunction	8368 May 27 16:45	10°♏48'08	-0°48'12
evening set	8362 Dec 09 04:09	0°♏50'50		minimum elong	8368 May 27 16:45	10°♏48'07	0°48'22
				max. Earth dist.	8368 May 26 19:33	10°♏35'20	5.99037 AU
conjunction	8362 Dec 22 08:47	3°♏40'27	0°46'55	morning rise	8368 Jun 09 17:35	13°♏56'30	
minimum elong	8362 Dec 22 08:48	3°♏40'27	0°47'06		8368 Aug 26 06:59	0°♏	
max. Earth dist.	8362 Dec 22 07:51	3°♏39'57	6.47036 AU	retrograde	8368 Oct 18 14:04	4°♏17'40	
morning rise	8363 Jan 04 11:12	6°♏28'56			8368 Dec 12 05:40	30°♏	
retrograde	8363 May 05 01:30	23°♏10'03		opposition	8368 Dec 17 08:06	29°♏19'24	-1°11'15
opposition	8363 Jul 04 21:28	18°♏14'44	1°00'35	min. Earth dist.	8368 Dec 17 10:13	29°♏18'42	3.93834 AU
min. Earth dist.	8363 Jul 05 07:49	18°♏11'24	4.49449 AU	direct	8369 Feb 13 23:38	24°♏24'50	
direct	8363 Sep 05 07:39	13°♏12'58			8369 Apr 14 21:44	0°♏	
	8364 Jan 06 21:10	0°♏		evening set	8369 Jun 20 12:03	14°♏25'50	
evening set	8364 Jan 08 18:20	0°♏23'59					
				conjunction	8369 Jul 03 18:23	17°♏40'09	-0°41'27
conjunction	8364 Jan 21 17:59	3°♏10'42	0°33'54	minimum elong	8369 Jul 03 18:24	17°♏40'10	0°41'37
minimum elong	8364 Jan 21 18:00	3°♏10'42	0°34'04	max. Earth dist.	8369 Jul 04 10:48	17°♏50'12	5.91086 AU
max. Earth dist.	8364 Jan 20 12:27	2°♏54'51	6.49671 AU	morning rise	8369 Jul 17 03:04	20°♏55'52	
morning rise	8364 Feb 03 15:33	5°♏56'25			8369 Aug 25 05:16	0°♏	
	8364 Mar 20 01:16	15°♏		retrograde	8369 Nov 26 11:10	11°♏49'05	
retrograde	8364 Jun 02 23:30	22°♏32'56		opposition	8370 Jan 24 20:47	6°♏47'20	-0°46'58
opposition	8364 Aug 02 22:52	17°♏39'38	0°34'40	min. Earth dist.	8370 Jan 23 22:30	6°♏54'52	3.91154 AU
min. Earth dist.	8364 Aug 04 03:05	17°♏30'37	4.47817 AU	direct	8370 Mar 23 18:47	1°♏52'38	
	8364 Aug 24 22:00	15°♏			8370 Jun 29 00:33	15°♏	
direct	8364 Oct 04 17:03	12°♏38'11		evening set	8370 Jul 28 13:03	21°♏54'07	

conjunction	8370 Aug 11 02:02	25° Ω 10'20	-0°17'50	min. Earth dist.	8376 Aug 08 11:12	21° \approx 49'52	4.47048 AU
minimum elong	8370 Aug 11 02:03	25° Ω 10'20	0°17'56	direct	8376 Oct 08 23:25	16° \approx 57'55	
max. Earth dist.	8370 Aug 13 01:25	25° Ω 38'58	5.93896 AU		8377 Jan 21 19:15	0° \mathbb{H}	
morning rise	8370 Aug 24 17:35	28° Ω 27'40		evening set	8377 Feb 11 06:07	4° \mathbb{H} 20'15	
	8370 Aug 31 04:24	0° \mathbb{M}		max. Earth dist.	8377 Feb 21 23:45	6° \mathbb{H} 40'38	6.42694 AU
retrograde	8371 Jan 02 20:38	18° \mathbb{M} 55'39					
min. Earth dist.	8371 Mar 01 19:02	14° \mathbb{M} 04'09	3.99139 AU	conjunction	8377 Feb 24 01:46	7° \mathbb{H} 08'00	0°08'26
opposition	8371 Mar 03 08:13	13° \mathbb{M} 51'30	-0°03'50	minimum elong	8377 Feb 24 01:46	7° \mathbb{H} 08'00	0°08'30
asc. node	8371 Apr 05 16:31	9° \mathbb{M} 57'15		behind sun begin	8377 Feb 23 18:48	7° \mathbb{H} 04'12	
direct	8371 Apr 30 10:53	8° \mathbb{M} 54'48		behind sun end	8377 Feb 24 08:45	7° \mathbb{H} 11'47	
evening set	8371 Sep 04 05:14	28° \mathbb{M} 23'05		morning rise	8377 Mar 08 19:46	9° \mathbb{H} 55'05	
	8371 Sep 11 03:18	0° $\underline{\Omega}$		desc. node	8377 Jul 03 08:08	27° \mathbb{H} 00'08	
				retrograde	8377 Jul 08 15:01	27° \mathbb{H} 02'45	
conjunction	8371 Sep 17 21:13	1° $\underline{\Omega}$ 34'47	0°12'19	opposition	8377 Sep 07 13:35	22° \mathbb{H} 10'06	-0°06'25
minimum elong	8371 Sep 17 21:13	1° $\underline{\Omega}$ 34'47	0°12'18	min. Earth dist.	8377 Sep 09 04:26	21° \mathbb{H} 57'41	4.36658 AU
behind sun begin	8371 Sep 17 15:46	1° $\underline{\Omega}$ 31'37		direct	8377 Nov 08 21:13	17° \mathbb{H} 09'56	
behind sun end	8371 Sep 18 02:39	1° $\underline{\Omega}$ 37'57			8378 Feb 18 22:49	0° \mathbb{Y}	
max. Earth dist.	8371 Sep 20 09:08	2° $\underline{\Omega}$ 09'51	6.06199 AU	evening set	8378 Mar 14 04:28	5° \mathbb{Y} 03'50	
morning rise	8371 Oct 01 14:21	4° $\underline{\Omega}$ 46'46		max. Earth dist.	8378 Mar 24 15:52	7° \mathbb{Y} 25'10	6.29268 AU
retrograde	8372 Feb 06 19:32	24° $\underline{\Omega}$ 08'36					
min. Earth dist.	8372 Apr 05 00:19	19° $\underline{\Omega}$ 16'54	4.14331 AU	conjunction	8378 Mar 26 22:44	7° \mathbb{Y} 56'07	-0°17'29
opposition	8372 Apr 06 12:34	19° $\underline{\Omega}$ 04'39	0°38'18	minimum elong	8378 Mar 26 22:44	7° \mathbb{Y} 56'07	0°17'30
direct	8372 Jun 04 16:20	14° $\underline{\Omega}$ 05'33		morning rise	8378 Apr 08 16:01	10° \mathbb{Y} 48'15	
	8372 Sep 26 19:23	0° \mathbb{M}		retrograde	8378 Aug 11 03:57	28° \mathbb{Y} 52'58	
evening set	8372 Oct 09 03:29	2° \mathbb{M} 44'21		opposition	8378 Oct 10 20:52	23° \mathbb{Y} 59'23	-0°43'17
				min. Earth dist.	8378 Oct 12 09:25	23° \mathbb{Y} 47'37	4.20995 AU
conjunction	8372 Oct 22 17:36	5° \mathbb{M} 47'42	0°36'38	direct	8378 Dec 11 02:03	19° \mathbb{Y} 01'05	
minimum elong	8372 Oct 22 17:34	5° \mathbb{M} 47'42	0°36'44		8379 Mar 12 02:28	0° \mathbb{B}	
max. Earth dist.	8372 Oct 24 19:25	6° \mathbb{M} 15'45	6.22880 AU	evening set	8379 Apr 15 17:56	7° \mathbb{B} 41'56	
morning rise	8372 Nov 05 07:25	8° \mathbb{M} 50'35		max. Earth dist.	8379 Apr 26 16:53	10° \mathbb{B} 15'27	6.12583 AU
	8372 Dec 03 18:24	15° \mathbb{M}					
retrograde	8373 Mar 10 01:42	26° \mathbb{M} 58'24		conjunction	8379 Apr 28 13:17	10° \mathbb{B} 41'29	-0°39'12
min. Earth dist.	8373 May 08 04:09	22° \mathbb{M} 05'24	4.30959 AU	minimum elong	8379 Apr 28 13:16	10° \mathbb{B} 41'29	0°39'18
opposition	8373 May 09 05:30	21° \mathbb{M} 56'57	1°04'44	morning rise	8379 May 11 09:05	13° \mathbb{B} 41'36	
direct	8373 Jul 08 15:42	16° \mathbb{M} 56'09			8379 May 17 00:09	15° \mathbb{B}	
	8373 Oct 20 03:18	0° \mathbb{X}			8379 Aug 02 20:28	0° \mathbb{I}	
evening set	8373 Nov 11 19:46	4° \mathbb{X} 48'57		retrograde	8379 Sep 16 10:28	3° \mathbb{I} 00'50	
					8379 Oct 31 13:43	30° \mathbb{R} \mathbb{B}	
conjunction	8373 Nov 25 05:04	7° \mathbb{X} 43'55	0°48'13	opposition	8379 Nov 15 15:10	28° \mathbb{B} 05'10	-1°08'37
minimum elong	8373 Nov 25 05:03	7° \mathbb{X} 43'55	0°48'23	min. Earth dist.	8379 Nov 16 14:13	27° \mathbb{B} 57'38	4.04565 AU
max. Earth dist.	8373 Nov 26 05:00	7° \mathbb{X} 56'59	6.38160 AU	direct	8380 Jan 14 11:15	23° \mathbb{B} 09'06	
morning rise	8373 Dec 08 12:53	10° \mathbb{X} 37'56			8380 Mar 22 12:00	0° \mathbb{I}	
retrograde	8374 Apr 09 14:25	27° \mathbb{X} 48'02		evening set	8380 May 19 13:10	12° \mathbb{I} 39'32	
opposition	8374 Jun 09 02:31	22° \mathbb{X} 50'06	1°10'41				
min. Earth dist.	8374 Jun 08 20:14	22° \mathbb{X} 52'09	4.43830 AU	conjunction	8380 Jun 01 13:11	15° \mathbb{I} 47'38	-0°48'21
direct	8374 Aug 09 19:05	17° \mathbb{X} 48'31		minimum elong	8380 Jun 01 13:11	15° \mathbb{I} 47'38	0°48'33
	8374 Nov 18 14:25	0° \mathbb{B}		max. Earth dist.	8380 May 31 20:10	15° \mathbb{I} 37'22	5.97909 AU
evening set	8374 Dec 13 12:47	5° \mathbb{B} 10'27		morning rise	8380 Jun 14 14:49	18° \mathbb{I} 56'54	
					8380 Aug 02 18:02	0° \mathbb{G}	
conjunction	8374 Dec 26 16:39	7° \mathbb{B} 59'32	0°45'45	retrograde	8380 Oct 23 18:13	9° \mathbb{G} 23'23	
minimum elong	8374 Dec 26 16:40	7° \mathbb{B} 59'32	0°45'55	opposition	8380 Dec 22 11:05	4° \mathbb{G} 24'42	-1°09'33
max. Earth dist.	8374 Dec 26 11:03	7° \mathbb{B} 56'32	6.47721 AU	min. Earth dist.	8380 Dec 22 10:13	4° \mathbb{G} 24'59	3.93187 AU
morning rise	8375 Jan 08 18:26	10° \mathbb{B} 47'31			8381 Feb 01 21:00	30° \mathbb{R} \mathbb{I}	
retrograde	8375 May 09 06:15	27° \mathbb{B} 26'49		direct	8381 Feb 18 23:14	29° \mathbb{I} 30'13	
opposition	8375 Jul 09 02:34	22° \mathbb{B} 31'53	0°57'44		8381 Mar 08 01:31	0° \mathbb{G}	
min. Earth dist.	8375 Jul 09 15:15	22° \mathbb{B} 27'48	4.49621 AU	evening set	8381 Jun 25 12:25	19° \mathbb{G} 32'21	
direct	8375 Sep 09 13:59	17° \mathbb{B} 30'12					
	8375 Dec 21 11:05	0° \approx		conjunction	8381 Jul 08 19:30	22° \mathbb{G} 47'09	-0°39'06
evening set	8376 Jan 13 00:37	4° \approx 41'33		minimum elong	8381 Jul 08 19:31	22° \mathbb{G} 47'10	0°39'16
				max. Earth dist.	8381 Jul 09 14:18	22° \mathbb{G} 58'38	5.90966 AU
conjunction	8376 Jan 25 23:51	7° \approx 28'12	0°31'14	morning rise	8381 Jul 22 05:20	26° \mathbb{G} 03'24	
minimum elong	8376 Jan 25 23:52	7° \approx 28'12	0°31'23		8381 Aug 07 16:37	0° Ω	
max. Earth dist.	8376 Jan 24 17:07	7° \approx 11'41	6.49347 AU		8381 Oct 27 17:31	15° Ω	
morning rise	8376 Feb 07 20:42	10° \approx 13'49		retrograde	8381 Dec 01 11:43	16° Ω 56'17	
	8376 Mar 01 17:29	15° \approx			8382 Jan 05 04:56	15° \mathbb{R} Ω	
retrograde	8376 Jun 07 05:40	26° \approx 52'10		opposition	8382 Jan 29 22:16	11° Ω 54'06	-0°41'55
opposition	8376 Aug 07 06:15	21° \approx 59'06	0°30'04	min. Earth dist.	8382 Jan 28 21:32	12° Ω 02'29	3.91586 AU

direct	8382 Mar 28 19:27	6°♏59'09			8387 Dec 03 12:06	0°♏	
	8382 Jun 09 19:55	15°♏		evening set	8388 Jan 17 06:01	8°♏56'19	
evening set	8382 Aug 02 14:28	26°♏58'30		max. Earth dist.	8388 Jan 28 17:47	11°♏24'09	6.48984 AU
	8382 Aug 15 04:04	0°♏					
				conjunction	8388 Jan 30 04:34	11°♏42'51	0°28'23
conjunction	8382 Aug 16 04:19	0°♏14'37 -0°13'56		minimum elong	8388 Jan 30 04:35	11°♏42'51	0°28'31
minimum elong	8382 Aug 16 04:19	0°♏14'37 0°14'01		morning rise	8388 Feb 12 01:01	14°♏28'25	
behind sun begin	8382 Aug 16 00:13	0°♏12'09			8388 Feb 14 12:11	15°♏	
behind sun end	8382 Aug 16 08:25	0°♏17'05			8388 May 15 02:08	0°♏	
max. Earth dist.	8382 Aug 18 06:31	0°♏44'53 5.94848 AU		retrograde	8388 Jun 11 12:43	1°♏08'35	
morning rise	8382 Aug 29 20:18	3°♏31'42			8388 Jul 08 22:47	30°♏	
retrograde	8383 Jan 07 18:19	23°♏53'55		opposition	8388 Aug 11 12:56	26°♏15'36	0°25'17
asc. node	8383 Feb 16 15:29	21°♏21'59		min. Earth dist.	8388 Aug 12 19:43	26°♏05'46	4.46172 AU
min. Earth dist.	8383 Mar 06 16:09	19°♏02'07 4.00488 AU		direct	8388 Oct 13 05:52	21°♏14'25	
opposition	8383 Mar 08 04:45	18°♏49'40 0°02'14			8389 Jan 04 03:46	0°♏	
direct	8383 May 05 10:29	13°♏52'37		evening set	8389 Feb 15 11:53	8°♏39'25	
	8383 Aug 25 21:50	0°♏		max. Earth dist.	8389 Feb 26 05:00	10°♏59'55	6.41344 AU
evening set	8383 Sep 09 03:59	3°♏16'25					
				conjunction	8389 Feb 28 07:22	11°♏27'33	0°04'51
conjunction	8383 Sep 22 20:04	6°♏27'25 0°16'05		minimum elong	8389 Feb 28 07:21	11°♏27'33	0°04'56
minimum elong	8383 Sep 22 20:04	6°♏27'25 0°16'07		behind sun begin	8389 Feb 27 23:36	11°♏23'19	
max. Earth dist.	8383 Sep 25 08:08	7°♏02'25 6.07819 AU		behind sun end	8389 Feb 28 15:07	11°♏31'47	
morning rise	8383 Oct 06 13:10	9°♏38'36		morning rise	8389 Mar 13 00:56	14°♏15'02	
retrograde	8384 Feb 11 08:01	28°♏52'18		desc. node	8389 May 13 01:48	26°♏12'41	
min. Earth dist.	8384 Apr 09 14:18	24°♏00'46 4.16075 AU			8389 Jun 11 21:47	0°♏	
opposition	8384 Apr 11 02:27	23°♏48'34 0°42'57		retrograde	8389 Jul 13 02:16	1°♏28'27	
direct	8384 Jun 09 08:25	18°♏49'12			8389 Aug 13 09:21	30°♏	
	8384 Sep 09 13:11	0°♏		opposition	8389 Sep 12 01:10	26°♏35'44 -0°11'47	
evening set	8384 Oct 13 21:18	7°♏23'14		min. Earth dist.	8389 Sep 13 16:06	26°♏23'18	4.34889 AU
				direct	8389 Nov 13 05:22	21°♏35'49	
conjunction	8384 Oct 27 10:54	10°♏25'38 0°38'59			8390 Jan 31 20:54	0°♏	
minimum elong	8384 Oct 27 10:53	10°♏25'37 0°39'05		evening set	8390 Mar 18 13:56	9°♏34'57	
max. Earth dist.	8384 Oct 29 09:07	10°♏51'34 6.24614 AU		max. Earth dist.	8390 Mar 29 01:01	11°♏56'48	6.27192 AU
morning rise	8384 Nov 10 00:08	13°♏27'30					
	8384 Nov 16 23:27	15°♏		conjunction	8390 Mar 31 08:01	12°♏28'00 -0°20'56	
	8385 Feb 11 19:58	0°♏		minimum elong	8390 Mar 31 08:00	12°♏27'59 0°20'58	
retrograde	8385 Mar 14 10:42	1°♏27'57		morning rise	8390 Apr 13 01:32	15°♏21'02	
	8385 Apr 13 19:14	30°♏			8390 Jun 27 18:30	0°♏	
opposition	8385 May 13 14:06	26°♏26'54 1°06'41		retrograde	8390 Aug 16 01:31	3°♏35'02	
min. Earth dist.	8385 May 12 15:38	26°♏34'23 4.32547 AU			8390 Oct 05 08:28	30°♏	
direct	8385 Jul 13 05:03	21°♏25'55		opposition	8390 Oct 15 15:59	28°♏41'15 -0°47'47	
	8385 Oct 01 22:00	0°♏		min. Earth dist.	8390 Oct 17 04:09	28°♏29'34 4.18729 AU	
evening set	8385 Nov 16 07:54	9°♏14'51		direct	8390 Dec 15 17:41	23°♏43'13	
					8391 Feb 19 22:00	0°♏	
conjunction	8385 Nov 29 16:37	12°♏09'02 0°48'37		evening set	8391 Apr 20 09:51	12°♏30'58	
minimum elong	8385 Nov 29 16:37	12°♏09'02 0°48'47			8391 Apr 30 23:55	15°♏	
max. Earth dist.	8385 Nov 30 14:02	12°♏20'42 6.39491 AU		max. Earth dist.	8391 May 01 12:07	15°♏07'11	6.10328 AU
morning rise	8385 Dec 12 23:38	15°♏02'13					
	8386 Mar 07 07:37	0°♏		conjunction	8391 May 03 05:45	15°♏31'42 -0°41'23	
retrograde	8386 Apr 13 17:40	2°♏07'21		minimum elong	8391 May 03 05:43	15°♏31'41 0°41'30	
	8386 May 21 03:09	30°♏		morning rise	8391 May 16 02:04	18°♏33'02	
opposition	8386 Jun 13 07:51	27°♏09'46 1°09'51			8391 Jul 07 20:27	0°♏	
min. Earth dist.	8386 Jun 13 02:56	27°♏11'22 4.44831 AU		retrograde	8391 Sep 21 14:31	8°♏02'39	
direct	8386 Aug 14 02:19	22°♏08'07		opposition	8391 Nov 20 17:53	3°♏06'42 -1°10'24	
	8386 Oct 31 05:04	0°♏		min. Earth dist.	8391 Nov 21 14:07	3°♏00'05 4.02534 AU	
evening set	8386 Dec 17 20:25	9°♏27'50			8391 Dec 16 11:04	30°♏	
				direct	8392 Jan 19 08:14	28°♏10'58	
conjunction	8386 Dec 30 23:36	12°♏16'25 0°44'18			8392 Feb 21 22:16	0°♏	
minimum elong	8386 Dec 30 23:37	12°♏16'25 0°44'29		evening set	8392 May 24 13:06	17°♏47'40	
max. Earth dist.	8386 Dec 30 15:16	12°♏11'57 6.48320 AU					
morning rise	8387 Jan 13 00:35	15°♏03'53		conjunction	8392 Jun 06 13:53	20°♏56'56 -0°48'12	
	8387 Apr 09 23:06	0°♏		minimum elong	8392 Jun 06 13:53	20°♏56'56 0°48'22	
retrograde	8387 May 13 10:29	1°♏41'20		max. Earth dist.	8392 Jun 06 00:17	20°♏48'41 5.96290 AU	
	8387 Jun 15 20:59	30°♏		morning rise	8392 Jun 19 16:43	24°♏07'28	
opposition	8387 Jul 13 07:19	26°♏46'42 0°54'32			8392 Jul 14 15:42	0°♏	
min. Earth dist.	8387 Jul 13 22:28	26°♏41'50 4.49761 AU		retrograde	8392 Oct 29 03:16	14°♏41'18	
direct	8387 Sep 13 20:54	21°♏45'02		opposition	8392 Dec 27 18:53	9°♏42'09 -1°07'17	

min. Earth dist.	8392 Dec 27 14:15	9°  43'42	3.92162 AU	min. Earth dist.	8398 Jun 17 10:49	1°  27'33	4.46332 AU
direct	8393 Feb 24 03:48	4°  47'43			8398 Jun 28 19:43	30°  R 	
evening set	8393 Jun 30 18:20	24°  52'32		direct	8398 Aug 18 11:24	26°  R  25'23	
					8398 Oct 08 02:44	0° 	
conjunction	8393 Jul 14 02:42	28°  08'04	-0°36'19	evening set	8398 Dec 22 02:02	13°  R  41'27	
minimum elong	8393 Jul 14 02:43	28°  08'04	0°36'30				
max. Earth dist.	8393 Jul 15 03:39	28°  23'19	5.90660 AU	conjunction	8399 Jan 04 04:32	16°  R  29'24	0°42'41
	8393 Jul 21 17:51	0° 		minimum elong	8399 Jan 04 04:33	16°  R  29'24	0°42'53
morning rise	8393 Jul 27 13:29	1°  R  24'57		max. Earth dist.	8399 Jan 03 16:16	16°  R  22'50	6.49235 AU
	8393 Sep 27 03:10	15° 		morning rise	8399 Jan 17 04:44	19°  R  16'13	
retrograde	8393 Dec 06 20:39	22°  R  17'54			8399 Mar 13 13:00	0° 	
min. Earth dist.	8394 Feb 03 03:09	17°  R  24'21	3.92038 AU	retrograde	8399 May 17 11:21	5°  R  51'12	
opposition	8394 Feb 04 05:35	17°  R  15'22	-0°36'15	opposition	8399 Jul 17 09:46	0°  R  56'47	0°51'11
	8394 Feb 21 13:18	15°  R 		min. Earth dist.	8399 Jul 18 02:54	0°  R  51'16	4.50045 AU
direct	8394 Apr 03 02:36	12°  R  20'17			8399 Jul 24 19:38	30°  R 	
	8394 May 13 06:46	15°  R 		direct	8399 Sep 18 00:16	25°  R  55'04	
	8394 Jul 29 07:00	0° 			8399 Nov 11 16:49	0° 	
evening set	8394 Aug 07 22:02	2°  R  17'14		evening set	8400 Jan 21 08:48	13°  R  06'04	
					8400 Jan 30 05:19	15° 	
conjunction	8394 Aug 21 12:30	5°  R  33'06	-0°09'42	max. Earth dist.	8400 Feb 01 17:42	15°  R  32'31	6.48601 AU
minimum elong	8394 Aug 21 12:30	5°  R  33'06	0°09'47				
behind sun begin	8394 Aug 21 05:40	5°  R  29'02		conjunction	8400 Feb 03 06:51	15°  R  52'32	0°25'29
behind sun end	8394 Aug 21 19:19	5°  R  37'11		minimum elong	8400 Feb 03 06:52	15°  R  52'32	0°25'36
max. Earth dist.	8394 Aug 23 17:52	6°  R  05'09	5.96008 AU	morning rise	8400 Feb 16 02:41	18°  R  38'02	
morning rise	8394 Sep 04 05:06	8°  R  49'52			8400 Apr 14 23:03	0° 	
asc. node	8394 Dec 27 09:39	28°  R  38'12		retrograde	8400 Jun 15 17:23	5°  R  20'26	
retrograde	8395 Jan 12 18:31	29°  R  04'50		opposition	8400 Aug 15 17:42	0°  R  27'32	0°20'29
min. Earth dist.	8395 Mar 11 15:21	24°  R  13'37	4.02247 AU	min. Earth dist.	8400 Aug 17 02:53	0°  R  16'57	4.45126 AU
opposition	8395 Mar 13 05:47	24°  R  00'33	0°08'36		8400 Aug 19 08:05	30°  R 	
direct	8395 May 10 12:59	19°  R  03'14		direct	8400 Oct 17 10:21	25°  R  26'26	
	8395 Aug 07 15:09	0° 			8400 Dec 14 01:45	0° 	
evening set	8395 Sep 14 07:35	8°  R  20'59		evening set	8401 Feb 19 15:45	12°  R  54'45	
				max. Earth dist.	8401 Mar 02 04:59	15°  R  13'43	6.39682 AU
conjunction	8395 Sep 27 23:30	11°  R  30'54	0°19'57				
minimum elong	8395 Sep 27 23:29	11°  R  30'54	0°19'59	conjunction	8401 Mar 04 10:47	15°  R  43'21	0°01'18
max. Earth dist.	8395 Sep 30 10:18	12°  R  05'00	6.10020 AU	minimum elong	8401 Mar 04 10:47	15°  R  43'21	0°01'21
morning rise	8395 Oct 11 16:22	14°  R  40'55		behind sun begin	8401 Mar 04 02:48	15°  R  38'59	
	8395 Dec 28 10:18	0° 		behind sun end	8401 Mar 04 18:46	15°  R  47'43	
retrograde	8396 Feb 16 00:03	3°  R  44'06		morning rise	8401 Mar 17 04:22	18°  R  31'27	
	8396 Apr 05 21:08	30°  R 		desc. node	8401 Mar 23 15:57	19°  R  56'18	
min. Earth dist.	8396 Apr 14 08:50	28°  R  52'13	4.18500 AU		8401 May 13 21:11	0° 	
opposition	8396 Apr 15 19:18	28°  R  40'35	0°47'29	retrograde	8401 Jul 17 14:20	5°  R  51'58	
direct	8396 Jun 14 06:17	23°  R  40'56		opposition	8401 Sep 16 11:50	0°  R  59'06	-0°17'01
	8396 Aug 19 19:38	0° 		min. Earth dist.	8401 Sep 18 03:43	0°  R  46'20	4.32692 AU
evening set	8396 Oct 18 16:58	12°  R  07'39			8401 Sep 24 05:33	30°  R 	
	8396 Oct 31 14:23	15°  R 		direct	8401 Nov 17 13:08	25°  R  59'16	
					8402 Jan 09 12:15	0° 	
conjunction	8396 Nov 01 06:07	15°  R  08'46	0°41'11	evening set	8402 Mar 22 22:47	14°  R  05'13	
minimum elong	8396 Nov 01 06:05	15°  R  08'46	0°41'19	max. Earth dist.	8402 Apr 02 11:08	16°  R  28'33	6.24628 AU
max. Earth dist.	8396 Nov 03 03:20	15°  R  34'01	6.27075 AU				
morning rise	8396 Nov 14 18:25	18°  R  09'13		conjunction	8402 Apr 04 17:09	16°  R  59'22	-0°24'14
	8397 Jan 12 20:31	0° 		minimum elong	8402 Apr 04 17:08	16°  R  59'21	0°24'17
retrograde	8397 Mar 18 17:03	5° R 59'49		morning rise	8402 Apr 17 10:46	19° R 53'30	
opposition	8397 May 17 23:18	0° R 59'12	1°08'19		8402 Jun 04 01:32	0°	
min. Earth dist.	8397 May 17 01:57	1° R 06'17	4.34849 AU	retrograde	8402 Aug 20 22:20	8° R 18'34	
	8397 May 25 11:16	30° R		opposition	8402 Oct 20 11:25	3° R 24'32	-0°52'01
direct	8397 Jul 17 17:54	25° R 58'06		min. Earth dist.	8402 Oct 21 22:30	3° R 13'12	4.15983 AU
	8397 Sep 08 23:22	0°			8402 Nov 18 13:49	30° R	
evening set	8397 Nov 20 19:39	13° R 40'47		direct	8402 Dec 20 07:46	28° R 26'48	
					8403 Jan 20 21:17	0°	
conjunction	8397 Dec 04 03:23	16° R 33'49	0°48'48		8403 Apr 14 20:57	15° R	
minimum elong	8397 Dec 04 03:23	16° R 33'49	0°48'58	evening set	8403 Apr 25 03:11	17° R 23'19	
max. Earth dist.	8397 Dec 04 19:52	16° R 42'46	6.41457 AU	max. Earth dist.	8403 May 06 07:39	20° R 01'49	6.07627 AU
morning rise	8397 Dec 17 09:33	19° R 25'52					
	8398 Feb 08 22:16	0°		conjunction	8403 May 07 23:31	20° R 25'26	-0°43'18
retrograde	8398 Apr 17 21:14	6° R 24'18		minimum elong	8403 May 07 23:30	20° R 25'25	0°43'26
opposition	8398 Jun 17 12:07	1° R 27'08	1°08'41	morning rise	8403 May 20 20:47		

	8403 Jun 18 09:09	0°♐	opposition	8409 May 22 08:12	5°♏29'37	1°09'33
retrograde	8403 Sep 26 21:41	13°♐10'12	min. Earth dist.	8409 May 21 14:08	5°♏35'36	4.37047 AU
opposition	8403 Nov 25 22:59	8°♐13'49 -1°11'43	direct	8409 Jul 22 08:06	0°♏28'22	
min. Earth dist.	8403 Nov 26 15:52	8°♐08'16 4.00129 AU	evening set	8409 Nov 25 07:05	18°♏05'34	
direct	8404 Jan 24 08:31	3°♐18'19				
evening set	8404 May 29 15:45	23°♐02'36	conjunction	8409 Dec 08 14:12	20°♏57'38	0°48'42
			minimum elong	8409 Dec 08 14:12	20°♏57'38	0°48'53
conjunction	8404 Jun 11 17:45	26°♐13'15 -0°47'39	max. Earth dist.	8409 Dec 09 03:39	21°♏04'55	6.43181 AU
minimum elong	8404 Jun 11 17:45	26°♐13'15 0°47'50	morning rise	8409 Dec 21 19:18	23°♏48'38	
max. Earth dist.	8404 Jun 11 10:55	26°♐09'05 5.94440 AU		8410 Jan 20 15:57	0°♑	
morning rise	8404 Jun 24 21:37	29°♐25'10	retrograde	8410 Apr 21 23:42	10°♑41'33	
	8404 Jun 27 07:19	0°♑	opposition	8410 Jun 21 16:51	5°♑44'53	1°07'09
retrograde	8404 Nov 03 16:56	20°♑06'52	min. Earth dist.	8410 Jun 21 17:34	5°♑44'39	4.47489 AU
opposition	8405 Jan 02 05:52	15°♑07'12 -1°04'24	direct	8410 Aug 22 18:26	0°♑43'11	
min. Earth dist.	8405 Jan 01 22:10	15°♑09'47 3.91097 AU	evening set	8410 Dec 26 08:29	17°♑56'54	
direct	8405 Mar 01 11:33	10°♑12'51				
	8405 Jul 04 18:43	0°♒	conjunction	8411 Jan 08 10:09	20°♑44'22	0°40'50
evening set	8405 Jul 06 04:00	0°♒20'13	minimum elong	8411 Jan 08 10:10	20°♑44'23	0°41'01
			max. Earth dist.	8411 Jan 07 16:57	20°♑35'10	6.49746 AU
conjunction	8405 Jul 19 13:22	3°♒36'19 -0°33'11	morning rise	8411 Jan 21 09:43	23°♑30'46	
minimum elong	8405 Jul 19 13:23	3°♒36'20 0°33'21		8411 Feb 22 02:00	0°♓	
max. Earth dist.	8405 Jul 20 19:24	3°♒54'41 5.90482 AU	retrograde	8411 May 21 16:23	10°♓04'52	
morning rise	8405 Aug 02 01:25	6°♒53'50	opposition	8411 Jul 21 14:23	5°♓10'49	0°47'30
	8405 Sep 05 18:44	15°♒	min. Earth dist.	8411 Jul 22 11:11	5°♓04'08	4.49886 AU
retrograde	8405 Dec 12 05:43	27°♒45'22	direct	8411 Sep 22 07:11	0°♓09'10	
min. Earth dist.	8406 Feb 08 08:36	22°♒52'43 3.92788 AU		8412 Jan 14 10:55	15°♓	
opposition	8406 Feb 09 14:57	22°♒42'25 -0°30'11	evening set	8412 Jan 25 13:45	17°♓21'21	
direct	8406 Apr 08 11:14	17°♒47'04	max. Earth dist.	8412 Feb 05 18:20	19°♓45'48	6.47775 AU
	8406 Jul 11 00:24	0°♓				
evening set	8406 Aug 13 08:04	7°♓40'14	conjunction	8412 Feb 07 11:20	20°♓07'56	0°22'22
			minimum elong	8412 Feb 07 11:20	20°♓07'56	0°22'30
conjunction	8406 Aug 26 22:58	10°♓55'33 -0°05'21	morning rise	8412 Feb 20 06:47	22°♓53'37	
minimum elong	8406 Aug 26 22:59	10°♓55'34 0°05'25		8412 Mar 25 19:49	0°♔	
behind sun begin	8406 Aug 26 14:54	10°♓50'45	retrograde	8412 Jun 20 01:05	9°♔39'49	
behind sun end	8406 Aug 27 07:04	11°♓00'23	opposition	8412 Aug 20 01:35	4°♔47'01	0°15'25
max. Earth dist.	8406 Aug 29 06:23	11°♓28'42 5.97582 AU	min. Earth dist.	8412 Aug 21 11:57	4°♔36'02	4.43685 AU
morning rise	8406 Sep 09 16:01	14°♓11'42		8412 Oct 09 07:02	30°♕♓	
asc. node	8406 Nov 04 23:33	26°♓28'03	direct	8412 Oct 21 16:07	29°♓46'02	
	8406 Nov 25 19:00	0°♕		8412 Nov 03 03:30	0°♔	
retrograde	8407 Jan 17 19:15	4°♕17'26	desc. node	8413 Jan 30 16:12	12°♔08'11	
	8407 Mar 12 13:07	30°♕♓	evening set	8413 Feb 23 23:00	17°♔19'01	
min. Earth dist.	8407 Mar 16 17:16	29°♕26'05 4.04420 AU	max. Earth dist.	8413 Mar 06 12:06	19°♔38'31	6.37728 AU
opposition	8407 Mar 18 07:46	29°♕12'59 0°14'56				
direct	8407 May 15 19:02	24°♕15'16	conjunction	8413 Mar 08 17:55	20°♔08'18	-0°02'29
	8407 Jul 16 15:03	0°♕	minimum elong	8413 Mar 08 17:55	20°♔08'18	0°02'27
evening set	8407 Sep 19 11:25	13°♕25'18	behind sun begin	8413 Mar 08 09:57	20°♔03'55	
			behind sun end	8413 Mar 09 01:53	20°♔12'41	
conjunction	8407 Oct 03 03:16	16°♕34'00 0°23'41	morning rise	8413 Mar 21 11:15	22°♔57'06	
minimum elong	8407 Oct 03 03:15	16°♕33'59 0°23'43		8413 Apr 23 18:02	0°♖	
max. Earth dist.	8407 Oct 05 14:56	17°♕08'23 6.12572 AU	retrograde	8413 Jul 22 06:32	10°♖25'47	
morning rise	8407 Oct 16 19:31	19°♕42'35	opposition	8413 Sep 21 02:45	5°♖32'55	-0°22'22
	8407 Dec 04 00:52	0°♗	min. Earth dist.	8413 Sep 22 19:17	5°♖19'56	4.30337 AU
retrograde	8408 Feb 20 14:38	8°♗34'05	direct	8413 Nov 22 00:57	0°♖33'23	
min. Earth dist.	8408 Apr 19 02:09	3°♗42'13 4.21154 AU	evening set	8414 Mar 27 11:48	18°♖46'37	
opposition	8408 Apr 20 11:49	3°♗30'54 0°51'39	max. Earth dist.	8414 Apr 06 23:47	21°♖10'39	6.22049 AU
	8408 May 19 16:25	30°♕♕				
direct	8408 Jun 19 03:00	28°♕31'02	conjunction	8414 Apr 09 06:10	21°♖41'51	-0°27'31
	8408 Jul 19 22:08	0°♗	minimum elong	8414 Apr 09 06:09	21°♖41'51	0°27'34
	8408 Oct 15 03:59	15°♗	morning rise	8414 Apr 22 00:17	24°♖37'14	
evening set	8408 Oct 23 12:24	16°♗49'56		8414 May 16 03:02	0°♘	
			retrograde	8414 Aug 25 23:43	13°♘13'39	
conjunction	8408 Nov 06 00:39	19°♗49'40 0°43'07	opposition	8414 Oct 25 11:32	8°♘19'22	-0°56'03
minimum elong	8408 Nov 06 00:38	19°♗49'39 0°43'15	min. Earth dist.	8414 Oct 26 20:18	8°♘08'44	4.13377 AU
max. Earth dist.	8408 Nov 07 17:03	20°♗12'05 6.29595 AU	direct	8414 Dec 25 02:54	3°♘21'58	
morning rise	8408 Nov 19 12:14	22°♗48'42		8415 Mar 28 05:04	15°♘	
	8408 Dec 23 12:49	0°♙	evening set	8415 Apr 30 00:27	22°♘26'38	
retrograde	8409 Mar 23 00:31	10°♙29'45	max. Earth dist.	8415 May 11 10:52	25°♘09'28	6.05254 AU

conjunction	8415 May 12 21:32	25°♄30'07 -0°44'58	morning rise	8420 Nov 24 01:58	27°♑19'25	
minimum elong	8415 May 12 21:32	25°♄30'06 0°45'07		8420 Dec 06 10:22	0°♄	
morning rise	8415 May 25 19:26	28°♄34'23	retrograde	8421 Mar 27 05:01	14°♄51'58	
	8415 May 31 20:40	0°♂	opposition	8421 May 26 14:09	9°♄52'23	1°10'21
retrograde	8415 Oct 02 09:26	18°♂27'02	min. Earth dist.	8421 May 25 22:38	9°♄57'30	4.38930 AU
opposition	8415 Dec 01 07:24	13°♂30'19 -1°12'29	direct	8421 Jul 26 18:18	4°♄51'02	
min. Earth dist.	8415 Dec 01 21:28	13°♂25'41 3.98252 AU	evening set	8421 Nov 29 15:43	22°♄23'45	
direct	8416 Jan 29 12:30	8°♂35'08				
evening set	8416 Jun 03 21:21	28°♂24'49	conjunction	8421 Dec 12 21:54	25°♄14'59	0°48'21
	8416 Jun 10 09:59	0°♂	minimum elong	8421 Dec 12 21:54	25°♄14'59	0°48'33
			max. Earth dist.	8421 Dec 13 05:12	25°♄18'56	6.44492 AU
conjunction	8416 Jun 17 00:13	1°♂36'29 -0°46'43	morning rise	8421 Dec 26 02:21	28°♄05'11	
minimum elong	8416 Jun 17 00:14	1°♂36'29 0°46'54		8422 Jan 04 02:24	0°♂	
max. Earth dist.	8416 Jun 16 22:03	1°♂35'09 5.93257 AU	retrograde	8422 Apr 26 02:40	14°♂54'05	
morning rise	8416 Jun 30 05:23	4°♂49'31	opposition	8422 Jun 25 20:00	9°♂57'50	1°05'22
retrograde	8416 Nov 09 04:05	25°♂35'44	min. Earth dist.	8422 Jun 26 00:32	9°♂56'22	4.48179 AU
opposition	8417 Jan 07 17:16	20°♂35'33 -1°00'56	direct	8422 Aug 27 01:02	4°♂56'03	
min. Earth dist.	8417 Jan 07 04:39	20°♂39'47 3.90788 AU	evening set	8422 Dec 30 13:26	22°♂08'51	
direct	8417 Mar 06 19:23	15°♂41'11				
	8417 Jun 17 02:51	0°♂	conjunction	8423 Jan 12 14:39	24°♂56'06	0°38'49
evening set	8417 Jul 11 13:34	5°♂48'03	minimum elong	8423 Jan 12 14:40	24°♂56'07	0°38'59
			max. Earth dist.	8423 Jan 11 18:30	24°♂45'19	6.49776 AU
conjunction	8417 Jul 24 23:51	9°♂04'19 -0°29'49	morning rise	8423 Jan 25 13:28	27°♂42'15	
minimum elong	8417 Jul 24 23:52	9°♂04'20 0°29'57		8423 Feb 05 10:46	0°♂	
max. Earth dist.	8417 Jul 26 10:44	9°♂25'36 5.91074 AU	retrograde	8423 May 25 18:52	14°♂16'55	
morning rise	8417 Aug 07 12:47	12°♂21'55	opposition	8423 Jul 25 18:25	9°♂23'07	0°43'40
	8417 Aug 18 12:24	15°♂	min. Earth dist.	8423 Jul 26 16:45	9°♂15'57	4.49281 AU
	8417 Nov 02 17:36	0°♂	direct	8423 Sep 26 10:38	4°♂21'33	
retrograde	8417 Dec 17 12:40	3°♂08'49		8423 Dec 28 18:08	15°♂	
	8418 Jan 31 12:24	30°♂	evening set	8424 Jan 29 18:41	21°♂36'12	
opposition	8418 Feb 14 22:13	28°♂05'26 -0°24'00	max. Earth dist.	8424 Feb 09 20:23	23°♂59'33	6.46577 AU
min. Earth dist.	8418 Feb 13 14:11	28°♂16'20 3.94195 AU				
direct	8418 Apr 13 20:46	23°♂09'44	conjunction	8424 Feb 11 15:46	24°♂23'03	0°19'10
	8418 Jun 19 22:04	0°♂	minimum elong	8424 Feb 11 15:46	24°♂23'03	0°19'18
evening set	8418 Aug 18 15:13	12°♂56'44	morning rise	8424 Feb 24 10:52	27°♂09'04	
				8424 Mar 08 19:58	0°♂	
conjunction	8418 Sep 01 06:37	16°♂11'15 -0°01'02	retrograde	8424 Jun 24 11:18	14°♂00'15	
minimum elong	8418 Sep 01 06:36	16°♂11'15 0°01'05	opposition	8424 Aug 24 10:36	9°♂07'33	0°10'18
behind sun begin	8418 Aug 31 22:12	16°♂06'16	min. Earth dist.	8424 Aug 25 23:08	8°♂55'54	4.41966 AU
behind sun end	8418 Sep 01 15:00	16°♂16'13	direct	8424 Oct 26 00:42	4°♂06'46	
max. Earth dist.	8418 Sep 03 17:21	16°♂46'11 5.99654 AU	desc. node	8424 Dec 10 12:16	7°♂03'40	
morning rise	8418 Sep 14 23:38	19°♂26'23	evening set	8425 Feb 28 07:05	21°♂45'03	
asc. node	8418 Sep 14 14:47	19°♂21'10	max. Earth dist.	8425 Mar 10 18:13	24°♂04'10	6.35612 AU
	8418 Nov 01 18:40	0°♂				
retrograde	8419 Jan 22 16:09	9°♂21'09	conjunction	8425 Mar 13 01:48	24°♂35'05	-0°06'08
min. Earth dist.	8419 Mar 21 15:07	4°♂29'51 4.06914 AU	minimum elong	8425 Mar 13 01:47	24°♂35'04	0°06'07
opposition	8419 Mar 23 05:46	4°♂16'44 0°20'53	behind sun begin	8425 Mar 12 18:13	24°♂30'53	
	8419 Apr 30 14:42	30°♂	behind sun end	8425 Mar 13 09:21	24°♂39'16	
direct	8419 May 20 20:12	29°♂18'40	morning rise	8425 Mar 25 19:11	27°♂24'42	
	8419 Jun 10 05:47	0°♂		8425 Apr 06 14:27	0°♂	
evening set	8419 Sep 24 11:32	18°♂20'19	retrograde	8425 Jul 26 23:09	15°♂02'09	
			opposition	8425 Sep 25 19:09	10°♂09'07	-0°27'37
conjunction	8419 Oct 08 02:50	21°♂27'35 0°27'05	min. Earth dist.	8425 Sep 27 10:19	9°♂56'33	4.27971 AU
minimum elong	8419 Oct 08 02:49	21°♂27'35 0°27'09	direct	8425 Nov 26 12:58	5°♂09'52	
max. Earth dist.	8419 Oct 10 11:26	22°♂00'00 6.15233 AU	evening set	8426 Apr 01 02:01	23°♂30'15	
morning rise	8419 Oct 21 18:43	24°♂34'44	max. Earth dist.	8426 Apr 11 17:37	25°♂57'06	6.19630 AU
	8419 Nov 15 06:25	0°♑				
retrograde	8420 Feb 25 00:39	13°♑14'40	conjunction	8426 Apr 13 20:38	26°♂26'33	-0°30'37
min. Earth dist.	8420 Apr 23 16:40	8°♑22'26 4.23741 AU	minimum elong	8426 Apr 13 20:37	26°♂26'32	0°30'41
opposition	8420 Apr 25 00:19	8°♑11'48 0°55'19	morning rise	8426 Apr 26 14:56	29°♂23'03	
direct	8420 Jun 23 20:36	3°♑11'37		8426 Apr 29 07:28	0°♂	
	8420 Sep 28 04:02	15°♑		8426 Jul 16 04:19	15°♂	
evening set	8420 Oct 28 03:44	21°♑23'15	retrograde	8426 Aug 31 03:11	18°♂10'02	
				8426 Oct 16 18:53	15°♂	
conjunction	8420 Nov 10 15:26	24°♑21'44 0°44'43	opposition	8426 Oct 30 12:32	13°♂15'31	-0°59'41
minimum elong	8420 Nov 10 15:25	24°♑21'44 0°44'52	min. Earth dist.	8426 Oct 31 19:47	13°♂05'22	4.11099 AU
max. Earth dist.	8420 Nov 12 04:53	24°♑42'25 6.31911 AU	direct	8426 Dec 29 23:55	8°♂18'30	

	8427 Mar 07 19:09	15°♄			8432 Sep 08 16:13	15°♍
evening set	8427 May 04 22:12	27°♄29'53		evening set	8432 Nov 01 18:53	25°♍56'35
	8427 May 15 10:07	0°♄				
conjunction	8427 May 17 19:47	0°♄34'28 -0°46'18		conjunction	8432 Nov 15 05:49	28°♍54'00 0°46'03
minimum elong	8427 May 17 19:47	0°♄34'28 0°46'27		minimum elong	8432 Nov 15 05:49	28°♍53'59 0°46'12
max. Earth dist.	8427 May 16 12:02	0°♄15'29 6.03308 AU		max. Earth dist.	8432 Nov 16 14:46	29°♍12'07 6.33801 AU
morning rise	8427 May 30 18:38	3°♄40'00			8432 Nov 20 05:49	0°♄
retrograde	8427 Oct 07 17:10	23°♄41'32		morning rise	8432 Nov 28 15:42	1°♄50'36
opposition	8427 Dec 06 14:57	18°♄44'20 -1°12'37		retrograde	8433 Mar 31 10:07	19°♄16'15
min. Earth dist.	8427 Dec 07 00:26	18°♄41'12 3.96843 AU		opposition	8433 May 30 20:39	14°♄17'09 1°10'47
direct	8428 Feb 03 14:45	13°♄49'23		min. Earth dist.	8433 May 30 07:42	14°♄21'24 4.40422 AU
	8428 May 24 13:35	0°♄		direct	8433 Jul 31 04:07	9°♄15'42
evening set	8428 Jun 09 01:32	3°♄42'42		evening set	8433 Dec 04 01:09	26°♄45'13
conjunction	8428 Jun 22 05:23	6°♄55'11 -0°45'24		conjunction	8433 Dec 17 06:47	29°♄35'50 0°47'43
minimum elong	8428 Jun 22 05:24	6°♄55'11 0°45'36		minimum elong	8433 Dec 17 06:47	29°♄35'50 0°47'55
max. Earth dist.	8428 Jun 22 09:02	6°♄57'24 5.92514 AU		max. Earth dist.	8433 Dec 17 11:13	29°♄38'13 6.45500 AU
morning rise	8428 Jul 05 11:32	10°♄09'02			8433 Dec 19 03:39	0°♄
	8428 Oct 21 04:49	0°♄		morning rise	8433 Dec 30 10:17	2°♄25'19
retrograde	8428 Nov 14 14:06	0°♄58'04		retrograde	8434 Apr 30 06:10	19°♄11'09
	8428 Dec 08 21:08	30°♄		opposition	8434 Jun 30 00:44	14°♄15'22 1°03'11
min. Earth dist.	8429 Jan 12 11:05	26°♄02'28 3.90794 AU		min. Earth dist.	8434 Jun 30 07:26	14°♄13'12 4.48663 AU
opposition	8429 Jan 13 02:11	25°♄57'23 -0°56'58		direct	8434 Aug 31 07:42	9°♄13'41
direct	8429 Mar 12 03:55	21°♄02'58		evening set	8435 Jan 03 19:53	26°♄25'58
	8429 May 28 17:55	0°♄				
evening set	8429 Jul 16 20:38	11°♄08'28		conjunction	8435 Jan 16 20:21	29°♄13'00 0°36'33
conjunction	8429 Jul 30 07:54	14°♄24'50 -0°26'13		minimum elong	8435 Jan 16 20:22	29°♄13'00 0°36'43
minimum elong	8429 Jul 30 07:55	14°♄24'51 0°26'22		max. Earth dist.	8435 Jan 15 19:45	28°♄59'49 6.49716 AU
max. Earth dist.	8429 Aug 01 00:07	14°♄49'18 5.91824 AU			8435 Jan 20 12:02	0°♄
	8429 Aug 01 17:42	15°♄		morning rise	8435 Jan 29 18:44	1°♄59'00
morning rise	8429 Aug 12 21:34	17°♄42'25			8435 Apr 10 08:38	15°♄
	8429 Oct 07 01:48	0°♄		retrograde	8435 May 30 01:49	18°♄34'32
retrograde	8429 Dec 22 16:49	8°♄24'11			8435 Jul 19 14:32	15°♄
min. Earth dist.	8430 Feb 18 16:26	3°♄32'01 3.95609 AU		opposition	8435 Jul 30 00:50	13°♄41'00 0°39'30
opposition	8430 Feb 20 02:06	3°♄20'34 -0°17'44		min. Earth dist.	8435 Jul 31 01:47	13°♄33'00 4.48711 AU
	8430 Mar 19 05:59	30°♄		direct	8435 Sep 30 18:30	8°♄39'33
direct	8430 Apr 19 01:11	28°♄24'38			8435 Dec 09 03:19	15°♄
	8430 May 19 21:44	0°♄		evening set	8436 Feb 03 00:55	25°♄56'12
asc. node	8430 Jul 25 11:13	11°♄22'15		max. Earth dist.	8436 Feb 14 01:04	28°♄19'04 6.45565 AU
evening set	8430 Aug 23 19:58	18°♄06'09				
conjunction	8430 Sep 06 11:29	21°♄19'51 0°03'17		conjunction	8436 Feb 15 21:41	28°♄43'17 0°15'50
minimum elong	8430 Sep 06 11:28	21°♄19'51 0°03'15		minimum elong	8436 Feb 15 21:42	28°♄43'17 0°15'56
behind sun begin	8430 Sep 06 03:08	21°♄14'56		behind sun begin	8436 Feb 15 20:32	28°♄42'39
behind sun end	8430 Sep 06 19:49	21°♄24'46		behind sun end	8436 Feb 15 22:52	28°♄43'55
max. Earth dist.	8430 Sep 08 21:48	21°♄54'23 6.01563 AU			8436 Feb 21 18:58	0°♄
morning rise	8430 Sep 20 04:49	24°♄34'10		morning rise	8436 Feb 28 16:19	1°♄29'32
	8430 Oct 13 21:30	0°♄		retrograde	8436 Jun 28 20:20	18°♄24'59
retrograde	8431 Jan 27 09:33	14°♄19'10		opposition	8436 Aug 28 20:55	13°♄32'19 0°05'03
min. Earth dist.	8431 Mar 26 10:52	9°♄27'55 4.09107 AU		min. Earth dist.	8436 Aug 30 08:57	13°♄20'49 4.40599 AU
opposition	8431 Mar 28 01:24	9°♄14'50 0°26'36		desc. node	8436 Oct 20 14:20	8°♄40'26
direct	8431 May 25 19:19	4°♄16'28		direct	8436 Oct 30 08:26	8°♄31'46
evening set	8431 Sep 29 09:41	23°♄11'15		evening set	8437 Mar 04 15:51	26°♄13'54
conjunction	8431 Oct 13 00:49	26°♄17'24 0°30'18		max. Earth dist.	8437 Mar 15 03:48	28°♄34'00 6.34004 AU
minimum elong	8431 Oct 13 00:47	26°♄17'23 0°30'23				
max. Earth dist.	8431 Oct 15 07:46	26°♄48'43 6.17527 AU		conjunction	8437 Mar 17 10:18	29°♄04'26 -0°09'45
morning rise	8431 Oct 26 16:00	29°♄23'15		minimum elong	8437 Mar 17 10:17	29°♄04'26 0°09'44
	8431 Oct 29 09:15	0°♄		behind sun begin	8437 Mar 17 03:43	29°♄00'47
retrograde	8432 Jan 17 01:15	15°♄		behind sun end	8437 Mar 17 16:51	29°♄08'05
	8432 Feb 29 12:22	17°♄53'27			8437 Mar 21 13:45	0°♄
	8432 Apr 12 22:10	13°♄		morning rise	8437 Mar 30 03:33	1°♄54'39
min. Earth dist.	8432 Apr 28 06:54	13°♄00'51 4.25920 AU		retrograde	8437 Jul 31 17:03	19°♄39'00
opposition	8432 Apr 29 12:14	12°♄51'02 0°58'38		opposition	8437 Sep 30 11:41	14°♄45'50 -0°32'39
direct	8432 Jun 28 13:25	7°♄50'41		min. Earth dist.	8437 Oct 02 02:54	14°♄33'15 4.26217 AU
				direct	8437 Dec 01 03:28	9°♄46'53
				evening set	8438 Apr 05 15:00	28°♄11'57
					8438 Apr 13 10:28	0°♄
				max. Earth dist.	8438 Apr 16 07:48	0°♄40'07 6.17874 AU

conjunction	8438 Apr 18 09:43	1°♏09'01 -0°33'27	morning rise	8443 Oct 31 10:10	4°♎02'52	
minimum elong	8438 Apr 18 09:41	1°♏09'00 0°33'33		8443 Dec 23 03:32	15°♎	
morning rise	8438 May 01 04:24	4°♏06'24	retrograde	8444 Mar 04 19:59	22°♎25'13	
	8438 Jun 21 01:31	15°♏	opposition	8444 May 03 21:30	17°♎23'12	1°01'27
retrograde	8438 Sep 05 01:40	23°♏01'30	min. Earth dist.	8444 May 02 17:16	17°♎32'39	4.27609 AU
opposition	8438 Nov 04 11:13	18°♏06'37 -1°02'46		8444 May 22 13:41	15°♎	
min. Earth dist.	8438 Nov 05 15:08	17°♏57'32 4.09485 AU	direct	8444 Jul 03 01:24	12°♎22'40	
	8438 Nov 30 08:19	15°♎♏		8444 Aug 13 22:13	15°♎	
direct	8439 Jan 03 17:24	13°♏09'52		8444 Nov 04 11:09	0°♏	
	8439 Feb 06 19:40	15°♏	evening set	8444 Nov 06 08:07	0°♏24'29	
	8439 Apr 29 09:54	0°♐				
evening set	8439 May 09 16:43	2°♐25'29	conjunction	8444 Nov 19 18:28	3°♏21'03	0°47'03
max. Earth dist.	8439 May 21 11:45	5°♐14'39 6.01987 AU	minimum elong	8444 Nov 19 18:27	3°♏21'02	0°47'13
			max. Earth dist.	8444 Nov 21 00:04	3°♏37'18	6.35286 AU
conjunction	8439 May 22 14:53	5°♐30'55 -0°47'13	morning rise	8444 Dec 03 03:31	6°♏16'43	
minimum elong	8439 May 22 14:52	5°♐30'54 0°47'22	retrograde	8445 Apr 04 16:06	23°♏36'46	
morning rise	8439 Jun 04 14:21	8°♐37'20	opposition	8445 Jun 04 02:20	18°♏38'09	1°10'46
retrograde	8439 Oct 12 21:30	28°♐45'17	min. Earth dist.	8445 Jun 03 16:07	18°♏41'30	4.41606 AU
opposition	8439 Dec 11 17:54	23°♐47'37 -1°12'08	direct	8445 Aug 04 13:44	13°♏36'39	
min. Earth dist.	8439 Dec 12 01:16	23°♐45'10 3.95942 AU		8445 Dec 03 09:58	0°♑	
direct	8440 Feb 08 15:27	18°♐52'47	evening set	8445 Dec 08 09:34	1°♑03'37	
	8440 May 07 02:35	0°♑				
evening set	8440 Jun 14 00:57	8°♑47'55	conjunction	8445 Dec 21 14:26	3°♑53'38	0°46'49
			minimum elong	8445 Dec 21 14:27	3°♑53'39	0°47'00
conjunction	8440 Jun 27 05:47	12°♑01'02 -0°43'46	max. Earth dist.	8445 Dec 21 14:49	3°♑53'51	6.46290 AU
minimum elong	8440 Jun 27 05:49	12°♑01'03 0°43'57	morning rise	8446 Jan 03 17:18	6°♑42'34	
max. Earth dist.	8440 Jun 27 14:01	12°♑06'04 5.92129 AU	retrograde	8446 May 04 09:41	23°♑25'50	
morning rise	8440 Jul 10 12:55	15°♑15'32	opposition	8446 Jul 04 04:59	18°♑30'22	1°00'40
	8440 Sep 16 14:53	0°♒	min. Earth dist.	8446 Jul 04 13:51	18°♑27'30	4.49028 AU
retrograde	8440 Nov 19 18:04	6°♒05'43	direct	8446 Sep 04 13:44	13°♑28'38	
min. Earth dist.	8441 Jan 17 11:10	1°♒10'37 3.90993 AU		8447 Jan 04 21:08	0°♒	
opposition	8441 Jan 18 04:53	1°♒04'39 -0°52'44	evening set	8447 Jan 08 01:28	0°♒40'29	
	8441 Jan 26 06:21	30°♒♑	max. Earth dist.	8447 Jan 19 23:30	3°♒13'24	6.49617 AU
direct	8441 Mar 17 04:38	26°♑10'06				
	8441 May 04 21:05	0°♒	conjunction	8447 Jan 21 01:28	3°♒27'20	0°34'05
	8441 Jul 16 19:12	15°♒	minimum elong	8447 Jan 21 01:29	3°♒27'20	0°34'15
evening set	8441 Jul 21 22:09	16°♒13'58	morning rise	8447 Feb 02 23:03	6°♒13'06	
				8447 Mar 18 19:40	15°♒	
conjunction	8441 Aug 04 10:05	19°♒30'19 -0°22'37	retrograde	8447 Jun 03 05:51	22°♒49'25	
minimum elong	8441 Aug 04 10:06	19°♒30'19 0°22'45	opposition	8447 Aug 03 06:13	17°♒56'04	0°35'07
max. Earth dist.	8441 Aug 06 03:32	19°♒55'29 5.92567 AU	min. Earth dist.	8447 Aug 04 08:21	17°♒47'43	4.48134 AU
morning rise	8441 Aug 18 00:41	22°♒47'54		8447 Aug 27 19:40	15°♒	
	8441 Sep 17 22:49	0°♓	direct	8447 Oct 04 23:35	12°♒54'43	
retrograde	8441 Dec 27 13:39	13°♓24'55		8447 Nov 12 05:58	15°♒	
min. Earth dist.	8442 Feb 23 13:14	8°♓32'58 3.96810 AU		8448 Feb 06 05:37	0°♓	
opposition	8442 Feb 25 00:11	8°♓21'05 -0°11'41	evening set	8448 Feb 07 06:14	0°♓13'16	
direct	8442 Apr 24 00:09	3°♓24'49	max. Earth dist.	8448 Feb 18 03:01	2°♓34'44	6.44507 AU
asc. node	8442 Jun 06 23:49	6°♓32'03				
evening set	8442 Aug 28 19:29	23°♓02'05	conjunction	8448 Feb 20 02:24	3°♓00'33	0°12'24
			minimum elong	8448 Feb 20 02:24	3°♓00'33	0°12'29
conjunction	8442 Sep 11 11:25	26°♓15'12 0°07'16	behind sun begin	8448 Feb 19 21:12	2°♓57'44	
minimum elong	8442 Sep 11 11:24	26°♓15'12 0°07'14	behind sun end	8448 Feb 20 07:36	3°♓03'22	
behind sun begin	8442 Sep 11 03:44	26°♓10'41	morning rise	8448 Mar 03 20:49	5°♓47'05	
behind sun end	8442 Sep 11 19:04	26°♓19'42	retrograde	8448 Jul 03 07:22	22°♓47'07	
max. Earth dist.	8442 Sep 13 22:26	26°♓50'01 6.03121 AU	desc. node	8448 Aug 30 20:46	18°♓12'55	
morning rise	8442 Sep 25 04:41	29°♓28'44	opposition	8448 Sep 02 06:40	17°♓54'27	-0°00'14
	8442 Sep 27 10:18	0°♔	min. Earth dist.	8448 Sep 03 20:29	17°♓42'22	4.39082 AU
retrograde	8443 Feb 01 01:54	19°♔05'47	direct	8448 Nov 03 17:23	12°♓54'01	
min. Earth dist.	8443 Mar 31 03:52	14°♔14'10 4.10851 AU		8449 Mar 05 22:16	0°♕	
opposition	8443 Apr 01 16:52	14°♔01'38 0°31'51	evening set	8449 Mar 08 23:33	0°♕40'37	
direct	8443 May 30 14:43	9°♔02'58	max. Earth dist.	8449 Mar 19 10:59	3°♕01'02	6.32118 AU
evening set	8443 Oct 04 04:36	27°♔52'47				
	8443 Oct 13 13:11	0°♕	conjunction	8449 Mar 21 17:57	3°♕31'50	-0°13'19
			minimum elong	8449 Mar 21 17:56	3°♕31'50	0°13'19
conjunction	8443 Oct 17 19:23	0°♕58'00 0°33'09	behind sun begin	8449 Mar 21 13:15	3°♕29'13	
minimum elong	8443 Oct 17 19:22	0°♕57'59 0°33'15	behind sun end	8449 Mar 21 22:38	3°♕34'27	
max. Earth dist.	8443 Oct 20 00:21	1°♕28'03 6.19308 AU	morning rise	8449 Apr 03 11:09	6°♕22'47	

































































































































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min. Earth dist.	8449 Oct 06 17:37	19°♈09'53 4.24077 AU					
direct	8449 Dec 05 14:35	14°♈23'20	conjunction		8455 Oct 22 16:57	5°♍46'42 0°35'56	
	8450 Mar 28 09:40	0°♈	minimum elong		8455 Oct 22 16:56	5°♍46'42 0°36'01	
evening set	8450 Apr 10 04:33	2°♈54'55	max. Earth dist.		8455 Oct 24 19:13	6°♍15'06 6.21718 AU	
max. Earth dist.	8450 Apr 20 23:53	5°♈25'18 6.15643 AU	morning rise		8455 Nov 05 07:04	8°♍50'13	
					8455 Dec 03 16:58	15°♍	
conjunction	8450 Apr 22 23:27	5°♈53'00 -0°36'08	retrograde		8456 Mar 09 06:55	27°♍02'21	
minimum elong	8450 Apr 22 23:26	5°♈52'59 0°36'15	min. Earth dist.		8456 May 07 07:15	22°♍09'15 4.29978 AU	
morning rise	8450 May 05 18:33	8°♈51'30	opposition		8456 May 08 08:53	22°♍00'42 1°03'59	
	8450 Jun 02 00:45	15°♈	direct		8456 Jul 07 18:23	16°♍59'57	
retrograde	8450 Sep 10 04:44	27°♈56'52			8456 Oct 18 18:36	0°♈	
opposition	8450 Nov 09 11:17	23°♈01'41 -1°05'33	evening set		8456 Nov 10 22:08	4°♈55'05	
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	8451 Apr 12 02:56	0°♈	minimum elong		8456 Nov 24 07:46	7°♈50'27 0°48'01	
evening set	8451 May 14 13:39	7°♈27'28	max. Earth dist.		8456 Nov 25 10:42	8°♈05'10 6.37437 AU	
			morning rise		8456 Dec 07 15:52	10°♈44'53	
conjunction	8451 May 27 12:38	10°♈34'06 -0°47'50	retrograde		8457 Apr 08 18:30	27°♈57'05	
minimum elong	8451 May 27 12:38	10°♈34'06 0°48'01	opposition		8457 Jun 08 07:35	22°♈58'51 1°10'24	
max. Earth dist.	8451 May 26 13:19	10°♈20'04 6.00117 AU	min. Earth dist.		8457 Jun 07 23:03	23°♈01'39 4.43400 AU	
morning rise	8451 Jun 09 13:03	13°♈41'48	direct		8457 Aug 08 22:01	17°♈57'13	
	8451 Aug 28 01:26	0°♈			8457 Nov 17 00:13	0°♈	
retrograde	8451 Oct 18 05:09	3°♈58'19	evening set		8457 Dec 12 16:51	5°♈19'38	
	8451 Dec 09 10:52	30°♈					
opposition	8451 Dec 17 00:05	29°♈00'16 -1°11'09	conjunction		8457 Dec 25 20:55	8°♈08'50 0°45'43	
min. Earth dist.	8451 Dec 17 03:50	28°♈59'01 3.94572 AU	minimum elong		8457 Dec 25 20:56	8°♈08'50 0°45'53	
direct	8452 Feb 13 16:41	24°♈05'36	max. Earth dist.		8457 Dec 25 17:39	8°♈07'04 6.47602 AU	
	8452 Apr 15 13:23	0°♈	morning rise		8458 Jan 07 22:53	10°♈56'55	
evening set	8452 Jun 19 04:53	14°♈04'37	retrograde		8458 May 08 11:26	27°♈36'08	
			opposition		8458 Jul 08 07:36	22°♈41'01 0°57'54	
conjunction	8452 Jul 02 10:38	17°♈18'34 -0°41'45	min. Earth dist.		8458 Jul 08 19:33	22°♈37'10 4.49766 AU	
minimum elong	8452 Jul 02 10:39	17°♈18'35 0°41'56	direct		8458 Sep 08 19:22	17°♈39'16	
max. Earth dist.	8452 Jul 02 22:32	17°♈25'50 5.91386 AU			8458 Dec 19 22:38	0°♈	
morning rise	8452 Jul 15 19:03	20°♈33'59	evening set		8459 Jan 12 04:36	4°♈49'29	
	8452 Aug 25 14:12	0°♈	max. Earth dist.		8459 Jan 23 20:52	7°♈19'23 6.49707 AU	
retrograde	8452 Nov 25 01:15	11°♈26'38					
opposition	8453 Jan 23 12:14	6°♈25'04 -0°47'56	conjunction		8459 Jan 25 03:52	7°♈36'01 0°31'31	
min. Earth dist.	8453 Jan 22 15:18	6°♈32'09 3.90972 AU	minimum elong		8459 Jan 25 03:53	7°♈36'02 0°31'41	
direct	8453 Mar 22 10:35	1°♈30'22	morning rise		8459 Feb 07 01:01	10°♈21'34	
	8453 Jun 29 06:36	15°♈			8459 Mar 01 07:06	15°♈	
evening set	8453 Jul 27 05:11	21°♈33'26	retrograde		8459 Jun 07 09:26	26°♈58'25	
			opposition		8459 Aug 07 09:42	22°♈05'10 0°30'43	
conjunction	8453 Aug 09 18:08	24°♈49'52 -0°18'41	min. Earth dist.		8459 Aug 08 14:21	21°♈56'00 4.47560 AU	
minimum elong	8453 Aug 09 18:09	24°♈49'53 0°18'48	direct		8459 Oct 09 03:18	17°♈03'47	
max. Earth dist.	8453 Aug 11 16:23	25°♈17'53 5.93286 AU			8460 Jan 21 13:23	0°♈	
morning rise	8453 Aug 23 09:19	28°♈07'24	evening set		8460 Feb 11 08:54	4°♈24'19	
	8453 Aug 31 06:06	0°♈	max. Earth dist.		8460 Feb 22 04:06	6°♈45'17 6.43296 AU	
retrograde	8454 Jan 01 17:29	18°♈39'11					
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opposition	8454 Mar 02 02:59	13°♈35'10 -0°05'15	minimum elong		8460 Feb 24 04:51	7°♈11'54 0°09'05	
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direct	8454 Apr 29 05:37	8°♈38'37	behind sun end		8460 Feb 24 11:39	7°♈15'35	
evening set	8454 Sep 03 00:18	28°♈10'48	morning rise		8460 Mar 07 22:48	9°♈58'46	
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			desc. node		8460 Jul 12 09:10	27°♈01'58	
conjunction	8454 Sep 16 16:21	1°♈23'07 0°11'23	opposition		8460 Sep 06 14:24	22°♈11'23 -0°05'25	
minimum elong	8454 Sep 16 16:21	1°♈23'06 0°11'22	min. Earth dist.		8460 Sep 08 05:03	21°♈59'02 4.37289 AU	
behind sun begin	8454 Sep 16 10:19	1°♈19'35	direct		8460 Nov 07 22:04	17°♈11'06	
behind sun end	8454 Sep 16 22:22	1°♈26'38			8461 Feb 18 00:35	0°♈	
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opposition	8455 Apr 06 11:52	18°♈58'55 0°37'06	minimum elong		8461 Mar 26 00:12	7°♈55'18 0°16'47	
direct	8455 Jun 04 12:33	13°♈59'58	morning rise		8461 Apr 07 17:37	10°♈47'13	































































































































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opposition	8461 Oct 09 19:40	23° Υ 56'03 -0°42'13		morning rise	8466 Oct 05 15:41	9° Ω 44'54	
min. Earth dist.	8461 Oct 11 09:50	23° Υ 43'45 4.21472 AU		retrograde	8467 Feb 10 13:35	29° Ω 00'51	
direct	8461 Dec 10 02:49	18° Υ 57'34		min. Earth dist.	8467 Apr 09 19:23	24° Ω 09'12	4.15653 AU
	8462 Mar 11 10:33	0° \mathcal{B}		opposition	8467 Apr 11 07:24	23° Ω 57'01	0°42'04
evening set	8462 Apr 14 17:59	7° \mathcal{B} 37'24		direct	8467 Jun 09 13:22	18° Ω 57'44	
max. Earth dist.	8462 Apr 25 15:44	10° \mathcal{B} 10'04 6.12915 AU			8467 Sep 08 23:04	0° \mathcal{M}	
				evening set	8467 Oct 14 00:50	7° \mathcal{M} 32'34	
conjunction	8462 Apr 27 13:27	10° \mathcal{B} 36'50 -0°38'35					
minimum elong	8462 Apr 27 13:26	10° \mathcal{B} 36'50 0°38'41		conjunction	8467 Oct 27 14:37	10° \mathcal{M} 35'09	0°38'28
morning rise	8462 May 10 09:07	13° \mathcal{B} 36'46		minimum elong	8467 Oct 27 14:36	10° \mathcal{M} 35'09	0°38'35
	8462 May 16 08:35	15° \mathcal{B}		max. Earth dist.	8467 Oct 29 15:43	11° \mathcal{M} 02'43	6.24322 AU
	8462 Aug 02 14:15	0° Π		morning rise	8467 Nov 10 03:49	13° \mathcal{M} 37'09	
retrograde	8462 Sep 15 07:35	2° Π 54'23			8467 Nov 16 09:28	15° \mathcal{M}	
	8462 Oct 29 14:15	30° \mathcal{R} \mathcal{B}			8468 Feb 10 03:52	0° \mathcal{J}	
opposition	8462 Nov 14 12:36	27° \mathcal{B} 58'54 -1°07'56		retrograde	8468 Mar 13 15:11	1° \mathcal{J} 38'46	
min. Earth dist.	8462 Nov 15 12:32	27° \mathcal{B} 51'05 4.04725 AU			8468 Apr 14 22:11	30° \mathcal{R} \mathcal{M}	
direct	8463 Jan 13 08:29	23° \mathcal{B} 02'46		opposition	8468 May 12 19:49	26° \mathcal{M} 37'35	1°06'06
	8463 Mar 23 00:51	0° Π		min. Earth dist.	8468 May 11 19:31	26° \mathcal{M} 45'40	4.32400 AU
evening set	8463 May 19 12:43	12° Π 33'29		direct	8468 Jul 12 08:59	21° \mathcal{M} 36'42	
					8468 Sep 30 02:57	0° \mathcal{J}	
conjunction	8463 Jun 01 12:29	15° Π 41'32 -0°48'07		evening set	8468 Nov 15 11:59	9° \mathcal{J} 25'27	
minimum elong	8463 Jun 01 12:29	15° Π 41'32 0°48'19					
max. Earth dist.	8463 May 31 16:52	15° Π 29'40 5.97872 AU		conjunction	8468 Nov 28 20:40	12° \mathcal{J} 19'39	0°48'21
morning rise	8463 Jun 14 14:05	18° Π 50'47		minimum elong	8468 Nov 28 20:40	12° \mathcal{J} 19'38	0°48'32
	8463 Aug 03 04:59	0° \mathcal{E}		max. Earth dist.	8468 Nov 29 18:15	12° \mathcal{J} 31'24	6.39487 AU
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opposition	8463 Dec 22 08:55	4° \mathcal{E} 18'52 -1°09'36			8469 Mar 04 21:33	0° \mathcal{Z}	
min. Earth dist.	8463 Dec 22 08:45	4° \mathcal{E} 18'55 3.92940 AU		retrograde	8469 Apr 12 23:59	2° \mathcal{Z} 18'10	
	8464 Jan 31 04:15	30° \mathcal{R} Π			8469 May 22 00:34	30° \mathcal{R} \mathcal{J}	
direct	8464 Feb 18 21:52	29° Π 24'20		opposition	8469 Jun 12 13:28	27° \mathcal{J} 20'27	1°09'40
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evening set	8464 Jun 24 12:08	19° \mathcal{E} 28'11		direct	8469 Aug 13 08:32	22° \mathcal{J} 18'47	
					8469 Oct 29 09:51	0° \mathcal{Z}	
conjunction	8464 Jul 07 19:15	22° \mathcal{E} 43'09 -0°39'21		evening set	8469 Dec 17 00:24	9° \mathcal{Z} 37'40	
minimum elong	8464 Jul 07 19:16	22° \mathcal{E} 43'10 0°39'32					
max. Earth dist.	8464 Jul 08 14:20	22° \mathcal{E} 54'50 5.90560 AU		conjunction	8469 Dec 30 03:48	12° \mathcal{Z} 26'14	0°44'20
morning rise	8464 Jul 21 04:42	25° \mathcal{E} 59'30		minimum elong	8469 Dec 30 03:48	12° \mathcal{Z} 26'15	0°44'32
	8464 Aug 06 22:14	0° Ω		max. Earth dist.	8469 Dec 29 20:27	12° \mathcal{Z} 22'18	6.48535 AU
	8464 Oct 27 01:45	15° Ω		morning rise	8470 Jan 12 04:56	15° \mathcal{Z} 13'41	
retrograde	8464 Nov 30 13:27	16° Ω 54'21			8470 Apr 07 14:25	0° \approx	
	8465 Jan 03 22:19	15° \mathcal{R} Ω		retrograde	8470 May 12 14:10	1° \approx 50'28	
opposition	8465 Jan 28 22:29	11° Ω 52'21 -0°42'37			8470 Jun 16 14:20	30° \mathcal{R} \mathcal{Z}	
min. Earth dist.	8465 Jan 27 22:56	12° Ω 00'19 3.91060 AU		opposition	8470 Jul 12 11:43	26° \mathcal{Z} 55'41	0°54'49
direct	8465 Mar 27 19:39	6° Ω 57'32		min. Earth dist.	8470 Jul 13 01:44	26° \mathcal{Z} 51'10	4.50056 AU
	8465 Jun 08 22:04	15° Ω		direct	8470 Sep 13 00:18	21° \mathcal{Z} 53'57	
evening set	8465 Aug 01 15:26	26° Ω 59'05			8470 Dec 01 21:06	0° \approx	
	8465 Aug 14 03:31	0° \mathcal{M}		evening set	8471 Jan 16 09:37	9° \approx 04'09	
				max. Earth dist.	8471 Jan 27 22:49	11° \approx 32'35	6.49336 AU
conjunction	8465 Aug 15 05:04	0° \mathcal{M} 15'25 -0°14'31					
minimum elong	8465 Aug 15 05:05	0° \mathcal{M} 15'26 0°14'36		conjunction	8471 Jan 29 08:21	11° \approx 50'36	0°28'44
behind sun begin	8465 Aug 15 01:37	0° \mathcal{M} 13'21		minimum elong	8471 Jan 29 08:22	11° \approx 50'36	0°28'53
behind sun end	8465 Aug 15 08:32	0° \mathcal{M} 17'30		morning rise	8471 Feb 11 04:50	14° \approx 36'04	
max. Earth dist.	8465 Aug 17 07:17	0° \mathcal{M} 45'44 5.94254 AU			8471 Feb 13 01:44	15° \approx	
morning rise	8465 Aug 28 21:04	3° \mathcal{M} 32'47			8471 May 13 21:57	0° \mathcal{H}	
retrograde	8466 Jan 06 20:54	23° \mathcal{M} 57'43		retrograde	8471 Jun 11 15:53	1° \mathcal{H} 15'03	
asc. node	8466 Feb 24 04:07	20° \mathcal{M} 23'15			8471 Jul 10 09:05	30° \mathcal{R} \approx	
min. Earth dist.	8466 Mar 05 17:35	19° \mathcal{M} 06'25 3.99909 AU		opposition	8471 Aug 11 15:58	26° \approx 22'00	0°26'00
opposition	8466 Mar 07 07:33	18° \mathcal{M} 53'30 0°01'17		min. Earth dist.	8471 Aug 12 23:05	26° \approx 12'04	4.46546 AU
direct	8466 May 04 11:31	13° \mathcal{M} 56'37		direct	8471 Oct 13 09:25	21° \approx 20'45	
	8466 Aug 24 14:35	0° Ω			8472 Jan 03 18:11	0° \mathcal{H}	
evening set	8466 Sep 08 06:36	3° Ω 22'16		evening set	8472 Feb 15 14:57	8° \mathcal{H} 44'40	
				max. Earth dist.	8472 Feb 26 06:15	11° \mathcal{H} 04'06	6.41696 AU
conjunction	8466 Sep 21 22:33	6° Ω 33'28 0°15'26					
minimum elong	8466 Sep 21 22:32	6° Ω 33'27 0°15'28		conjunction	8472 Feb 28 10:26	11° \mathcal{H} 32'42	0°05'27
behind sun begin	8466 Sep 21 20:43	6° Ω 32'24		minimum elong	8472 Feb 28 10:26	11° \mathcal{H} 32'42	0°05'32
behind sun end	8466 Sep 22 00:22	6° Ω 34'31		behind sun begin	8472 Feb 28 02:46	11° \mathcal{H} 28'31	

behind sun end	8472 Feb 28 18:07	11° K 36'53	behind sun begin	8477 Aug 20 07:55	5° M 32'30	
morning rise	8472 Mar 12 04:20	14° K 20'08	behind sun end	8477 Aug 20 21:00	5° M 40'19	
desc. node	8472 May 21 20:52	27° K 43'14	max. Earth dist.	8477 Aug 22 19:05	6° M 08'02	5.95908 AU
	8472 Jun 10 07:29	0° Y	morning rise	8477 Sep 03 06:51	8° M 53'06	
retrograde	8472 Jul 12 04:33	1° Y 32'12	asc. node	8478 Jan 04 07:05	29° M 02'48	
	8472 Aug 13 03:20	30° K 8	retrograde	8478 Jan 11 21:05	29° M 08'36	
opposition	8472 Sep 11 02:41	26° K 39'25 -0°10'48	min. Earth dist.	8478 Mar 10 18:57	24° M 17'08	4.02139 AU
min. Earth dist.	8472 Sep 12 18:17	26° K 26'45 4.35186 AU	opposition	8478 Mar 12 08:55	24° M 04'12	0°07'35
direct	8472 Nov 12 07:32	21° K 39'17	direct	8478 May 09 17:04	19° M 06'54	
	8473 Jan 30 16:20	0° Y		8478 Aug 06 10:33	0° L	
evening set	8473 Mar 17 16:27	9° Y 37'54	evening set	8478 Sep 13 09:21	8° L 24'29	
max. Earth dist.	8473 Mar 28 03:45	11° Y 59'43 6.27413 AU				
conjunction	8473 Mar 30 10:50	12° Y 30'56 -0°20'15	conjunction	8478 Sep 27 01:19	11° L 34'27	0°19'15
minimum elong	8473 Mar 30 10:49	12° Y 30'56 0°20'18	minimum elong	8478 Sep 27 01:18	11° L 34'26	0°19'18
morning rise	8473 Apr 12 04:15	15° Y 23'52	max. Earth dist.	8478 Sep 29 13:57	12° L 09'37	6.09892 AU
	8473 Jun 26 14:42	0° B	morning rise	8478 Oct 10 17:58	14° L 44'28	
retrograde	8473 Aug 15 01:39	3° B 36'40		8478 Dec 27 00:55	0° M	
	8473 Oct 04 14:29	30° K Y	retrograde	8479 Feb 15 03:14	3° M 48'28	
opposition	8473 Oct 14 16:24	28° Y 42'58 -0°46'50		8479 Apr 06 14:00	30° K 2	
min. Earth dist.	8473 Oct 16 05:17	28° Y 31'04 4.18867 AU	min. Earth dist.	8479 Apr 14 11:40	28° L 56'48	4.18337 AU
direct	8473 Dec 14 18:20	23° Y 44'50	opposition	8479 Apr 15 22:58	28° L 44'54	0°46'33
	8474 Feb 18 20:05	0° B	direct	8479 Jun 14 08:47	23° L 45'22	
evening set	8474 Apr 19 12:23	12° B 32'46		8479 Aug 19 11:46	0° M	
	8474 Apr 29 23:20	15° B	evening set	8479 Oct 18 19:01	12° M 12'10	
max. Earth dist.	8474 Apr 30 12:24	15° B 07'42 6.10367 AU		8479 Oct 31 08:05	15° M	
conjunction	8474 May 02 08:07	15° B 33'27 -0°40'51	conjunction	8479 Nov 01 07:59	15° M 13'21	0°40'39
minimum elong	8474 May 02 08:06	15° B 33'26 0°40'58	minimum elong	8479 Nov 01 07:58	15° M 13'20	0°40'47
morning rise	8474 May 15 04:33	18° B 34'47	max. Earth dist.	8479 Nov 03 04:11	15° M 38'01	6.26862 AU
	8474 Jul 06 19:13	0° I	morning rise	8479 Nov 14 20:33	18° M 13'57	
retrograde	8474 Sep 20 15:09	8° I 03'54		8480 Jan 12 10:24	0° J	
opposition	8474 Nov 19 18:21	3° I 08'02 -1°09'52	retrograde	8480 Mar 17 21:37	6° J 05'51	
min. Earth dist.	8474 Nov 20 15:04	3° I 01'14 4.02477 AU	min. Earth dist.	8480 May 16 06:42	1° J 12'05	4.34603 AU
	8474 Dec 15 16:56	30° K B	opposition	8480 May 17 03:41	1° J 05'07	1°07'46
direct	8475 Jan 18 09:50	28° B 12'12		8480 May 25 09:39	30° K M	
	8475 Feb 20 18:41	0° I	direct	8480 Jul 16 22:05	26° M 04'03	
evening set	8475 May 24 15:35	17° I 49'43		8480 Sep 07 08:57	0° J	
			evening set	8480 Nov 19 22:20	13° J 47'14	
conjunction	8475 Jun 06 16:26	20° I 59'02 -0°48'02	conjunction	8480 Dec 03 06:25	16° J 40'29	0°48'34
minimum elong	8475 Jun 06 16:27	20° I 59'02 0°48'14	minimum elong	8480 Dec 03 06:25	16° J 40'29	0°48'44
max. Earth dist.	8475 Jun 06 03:33	20° I 51'12 5.96177 AU	max. Earth dist.	8480 Dec 04 00:48	16° J 50'27	6.41200 AU
morning rise	8475 Jun 19 18:57	24° I 09'31	morning rise	8480 Dec 16 12:39	19° J 32'42	
	8475 Jul 14 14:07	0° L		8481 Feb 07 08:23	0° Z	
retrograde	8475 Oct 29 05:48	14° L 43'26	retrograde	8481 Apr 17 01:18	6° Z 32'23	
opposition	8475 Dec 27 20:12	9° L 44'25 -1°07'24	opposition	8481 Jun 16 16:52	1° Z 35'09	1°08'36
min. Earth dist.	8475 Dec 27 16:43	9° L 45'34 3.92025 AU	min. Earth dist.	8481 Jun 16 14:17	1° Z 36'00	4.46083 AU
direct	8476 Feb 24 05:47	4° L 50'01		8481 Jun 29 02:33	30° K J	
evening set	8476 Jun 29 21:01	24° L 55'32	direct	8481 Aug 17 14:16	26° J 33'30	
				8481 Oct 06 05:18	0° Z	
conjunction	8476 Jul 13 05:01	28° L 10'59 -0°36'37	evening set	8481 Dec 21 06:08	13° Z 50'16	
minimum elong	8476 Jul 13 05:02	28° L 11'00 0°36'48				
max. Earth dist.	8476 Jul 14 04:59	28° L 25'39 5.90515 AU	conjunction	8482 Jan 03 08:44	16° Z 38'22	0°42'47
	8476 Jul 20 15:22	0° O	minimum elong	8482 Jan 03 08:45	16° Z 38'23	0°42'59
morning rise	8476 Jul 26 15:43	1° O 27'52	max. Earth dist.	8482 Jan 02 20:09	16° Z 31'38	6.49021 AU
	8476 Sep 25 22:17	15° O	morning rise	8482 Jan 16 09:16	19° Z 25'24	
retrograde	8476 Dec 05 21:46	22° O 21'05		8482 Mar 11 18:23	0° \approx	
min. Earth dist.	8477 Feb 02 04:15	17° O 27'57 3.91916 AU	retrograde	8482 May 16 18:15	6° \approx 01'17	
opposition	8477 Feb 03 07:51	17° O 18'36 -0°36'59	opposition	8482 Jul 16 15:06	1° \approx 06'52	0°51'32
	8477 Feb 21 02:43	15° K O	min. Earth dist.	8482 Jul 17 08:51	1° \approx 01'10	4.49879 AU
direct	8477 Apr 02 04:11	12° O 23'33		8482 Jul 25 08:55	30° K Z	
	8477 May 11 22:52	15° O	direct	8482 Sep 17 06:00	26° Z 05'12	
	8477 Jul 28 03:31	0° M		8482 Nov 09 15:26	0° \approx	
evening set	8477 Aug 07 00:17	2° M 20'38	evening set	8483 Jan 20 13:50	13° \approx 16'46	
				8483 Jan 28 14:25	15° \approx	
conjunction	8477 Aug 20 14:27	5° M 36'24 -0°10'19	max. Earth dist.	8483 Jan 31 22:50	15° \approx 43'17	6.48507 AU
minimum elong	8477 Aug 20 14:27	5° M 36'24 0°10'24				

conjunction	8483 Feb 02 12:08	16° \approx 03'22	0°25'51	max. Earth dist.	8488 Jul 19 17:52	3° Ω 51'10	5.90823 AU
minimum elong	8483 Feb 02 12:08	16° \approx 03'22	0°25'59	morning rise	8488 Aug 01 00:35	6° Ω 50'40	
morning rise	8483 Feb 15 08:14	18° \approx 49'01			8488 Sep 05 00:13	15° Ω	
	8483 Apr 14 00:40	0° \mathcal{H}		retrograde	8488 Dec 11 04:36	27° Ω 41'03	
retrograde	8483 Jun 15 22:40	5° \mathcal{H} 31'45		min. Earth dist.	8489 Feb 07 09:02	22° Ω 48'02	3.92949 AU
opposition	8483 Aug 15 22:55	0° \mathcal{H} 38'49	0°21'11	opposition	8489 Feb 08 14:04	22° Ω 38'10	-0°31'07
min. Earth dist.	8483 Aug 17 07:08	0° \mathcal{H} 28'31	4.45130 AU	direct	8489 Apr 07 12:08	17° Ω 42'51	
	8483 Aug 21 00:44	30° $\mathcal{R}\approx$			8489 Jul 10 07:44	0° \mathcal{M}	
direct	8483 Oct 17 14:15	25° \approx 37'43		evening set	8489 Aug 12 06:15	7° \mathcal{M} 35'19	
	8483 Dec 12 23:31	0° \mathcal{H}					
evening set	8484 Feb 19 21:28	13° \mathcal{H} 06'15		conjunction	8489 Aug 25 21:02	10° \mathcal{M} 50'34	-0°06'06
max. Earth dist.	8484 Mar 01 12:43	15° \mathcal{H} 26'14	6.39803 AU	minimum elong	8489 Aug 25 21:03	10° \mathcal{M} 50'35	0°06'11
				behind sun begin	8489 Aug 25 13:07	10° \mathcal{M} 45'51	
conjunction	8484 Mar 03 16:47	15° \mathcal{H} 54'55	0°01'52	behind sun end	8489 Aug 26 04:59	10° \mathcal{M} 55'18	
minimum elong	8484 Mar 03 16:48	15° \mathcal{H} 54'55	0°01'55	max. Earth dist.	8489 Aug 28 05:06	11° \mathcal{M} 24'06	5.97556 AU
behind sun begin	8484 Mar 03 08:49	15° \mathcal{H} 50'33		morning rise	8489 Sep 08 13:43	14° \mathcal{M} 06'36	
behind sun end	8484 Mar 04 00:46	15° \mathcal{H} 59'18		asc. node	8489 Nov 14 09:53	28° \mathcal{M} 16'15	
morning rise	8484 Mar 16 10:23	18° \mathcal{H} 43'01			8489 Nov 25 05:35	0° Ω	
desc. node	8484 Mar 31 13:52	21° \mathcal{H} 59'32		retrograde	8490 Jan 16 18:59	4° Ω 13'06	
	8484 May 11 23:53	0° \mathcal{Y}			8490 Mar 10 23:49	30° $\mathcal{R}\mathcal{M}$	
retrograde	8484 Jul 16 19:22	6° \mathcal{Y} 02'50		min. Earth dist.	8490 Mar 15 16:57	29° \mathcal{M} 21'46	4.04215 AU
opposition	8484 Sep 15 16:23	1° \mathcal{Y} 10'05	-0°16'08	opposition	8490 Mar 17 07:24	29° \mathcal{M} 08'42	0°13'43
min. Earth dist.	8484 Sep 17 08:28	0° \mathcal{Y} 57'16	4.32937 AU	direct	8490 May 14 17:28	24° \mathcal{M} 11'05	
	8484 Sep 24 21:24	30° $\mathcal{R}\mathcal{H}$			8490 Jul 15 23:37	0° Ω	
direct	8484 Nov 16 18:19	26° \mathcal{H} 10'18		evening set	8490 Sep 18 09:52	13° Ω 21'42	
	8485 Jan 07 10:11	0° \mathcal{Y}					
evening set	8485 Mar 22 04:32	14° \mathcal{Y} 15'46		conjunction	8490 Oct 02 01:28	16° Ω 30'30	0°22'54
max. Earth dist.	8485 Apr 01 15:29	16° \mathcal{Y} 38'16	6.24980 AU	minimum elong	8490 Oct 02 01:27	16° Ω 30'29	0°22'56
				max. Earth dist.	8490 Oct 04 11:27	17° Ω 03'56	6.12182 AU
conjunction	8485 Apr 03 22:48	17° \mathcal{Y} 09'48	-0°23'38	morning rise	8490 Oct 15 17:55	19° Ω 39'18	
minimum elong	8485 Apr 03 22:47	17° \mathcal{Y} 09'47	0°23'41		8490 Dec 03 04:44	0° \mathcal{M}	
morning rise	8485 Apr 16 16:37	20° \mathcal{Y} 03'51		retrograde	8491 Feb 19 15:03	8° \mathcal{M} 32'59	
	8485 Jun 02 10:31	0° \mathcal{B}		min. Earth dist.	8491 Apr 19 03:23	3° \mathcal{M} 41'00	4.20628 AU
retrograde	8485 Aug 20 01:09	8° \mathcal{B} 27'10		opposition	8491 Apr 20 12:56	3° \mathcal{M} 29'42	0°50'41
opposition	8485 Oct 19 14:46	3° \mathcal{B} 33'12	-0°51'09		8491 May 19 12:06	30° $\mathcal{R}\Omega$	
min. Earth dist.	8485 Oct 21 01:28	3° \mathcal{B} 21'59	4.16430 AU	direct	8491 Jun 19 03:26	28° Ω 29'51	
	8485 Nov 19 07:23	30° $\mathcal{R}\mathcal{Y}$			8491 Jul 20 02:41	0° \mathcal{M}	
direct	8485 Dec 19 12:05	28° \mathcal{Y} 35'25			8491 Oct 15 03:27	15° \mathcal{M}	
	8486 Jan 18 13:07	0° \mathcal{B}		evening set	8491 Oct 23 12:08	16° \mathcal{M} 50'15	
	8486 Apr 13 12:21	15° \mathcal{B}					
evening set	8486 Apr 24 07:35	17° \mathcal{B} 30'41		conjunction	8491 Nov 06 00:40	19° \mathcal{M} 50'19	0°42'35
max. Earth dist.	8486 May 05 13:14	20° \mathcal{B} 09'39	6.08150 AU	minimum elong	8491 Nov 06 00:39	19° \mathcal{M} 50'18	0°42'44
				max. Earth dist.	8491 Nov 07 18:30	20° \mathcal{M} 13'34	6.28981 AU
conjunction	8486 May 07 03:59	20° \mathcal{B} 32'34	-0°42'50	morning rise	8491 Nov 19 12:16	22° \mathcal{M} 49'39	
minimum elong	8486 May 07 03:58	20° \mathcal{B} 32'34	0°42'59		8491 Dec 23 09:46	0° \mathcal{J}	
morning rise	8486 May 20 00:55	23° \mathcal{B} 35'09		retrograde	8492 Mar 22 03:59	10° \mathcal{J} 33'22	
	8486 Jun 17 01:40	0° \mathcal{H}		opposition	8492 May 21 11:15	5° \mathcal{J} 33'09	1°09'03
retrograde	8486 Sep 26 00:00	13° \mathcal{H} 14'22		min. Earth dist.	8492 May 20 16:30	5° \mathcal{J} 39'21	4.36395 AU
opposition	8486 Nov 25 00:37	8° \mathcal{H} 18'09	-1°11'13	direct	8492 Jul 21 09:45	0° \mathcal{J} 31'58	
min. Earth dist.	8486 Nov 25 18:38	8° \mathcal{H} 12'14	4.00694 AU	evening set	8492 Nov 24 09:10	18° \mathcal{J} 10'55	
direct	8487 Jan 23 11:51	3° \mathcal{H} 22'39					
evening set	8487 May 29 18:15	23° \mathcal{H} 05'03		conjunction	8492 Dec 07 16:23	21° \mathcal{J} 03'20	0°48'31
				minimum elong	8492 Dec 07 16:23	21° \mathcal{J} 03'20	0°48'42
conjunction	8487 Jun 11 19:50	26° \mathcal{H} 15'19	-0°47'33	max. Earth dist.	8492 Dec 08 05:03	21° \mathcal{J} 10'11	6.42528 AU
minimum elong	8487 Jun 11 19:51	26° \mathcal{H} 15'19	0°47'44	morning rise	8492 Dec 20 21:59	23° \mathcal{J} 54'45	
max. Earth dist.	8487 Jun 11 10:53	26° \mathcal{H} 09'52	5.94978 AU		8493 Jan 19 05:18	0° \mathcal{Z}	
morning rise	8487 Jun 24 23:33	29° \mathcal{H} 26'52		retrograde	8493 Apr 21 05:50	10° \mathcal{Z} 50'04	
	8487 Jun 27 06:28	0° \mathcal{E}		opposition	8493 Jun 20 21:40	5° \mathcal{Z} 53'16	1°07'10
retrograde	8487 Nov 03 14:38	20° \mathcal{E} 05'52		min. Earth dist.	8493 Jun 20 22:36	5° \mathcal{Z} 52'57	4.46892 AU
opposition	8488 Jan 02 05:30	15° \mathcal{E} 06'20	-1°04'37	direct	8493 Aug 21 22:44	0° \mathcal{Z} 51'31	
min. Earth dist.	8488 Jan 01 21:27	15° \mathcal{E} 09'02	3.91561 AU	evening set	8493 Dec 25 12:50	18° \mathcal{Z} 06'55	
direct	8488 Feb 29 11:19	10° \mathcal{E} 11'58					
	8488 Jul 03 22:43	0° Ω		conjunction	8494 Jan 07 14:58	20° \mathcal{Z} 54'43	0°40'58
evening set	8488 Jul 05 04:00	0° Ω 17'46		minimum elong	8494 Jan 07 14:59	20° \mathcal{Z} 54'44	0°41'09
				max. Earth dist.	8494 Jan 06 23:56	20° \mathcal{Z} 46'40	6.49265 AU
conjunction	8488 Jul 18 13:00	3° Ω 33'32	-0°33'36	morning rise	8494 Jan 20 14:42	23° \mathcal{Z} 41'24	
minimum elong	8488 Jul 18 13:01	3° Ω 33'33	0°33'46		8494 Feb 20 08:19	0° \approx	

retrograde	8494 May 20 21:28	10° \approx 17'00	evening set	8500 Jul 11 05:25	5° Ω 24'53	
opposition	8494 Jul 20 20:15	5° \approx 22'52 0°47'55				
min. Earth dist.	8494 Jul 21 15:14	5° \approx 16'47 4.49580 AU	conjunction	8500 Jul 24 15:23	8° Ω 40'51 -0°30'27	
direct	8494 Sep 21 11:05	0° \approx 21'19	minimum elong	8500 Jul 24 15:24	8° Ω 40'52 0°30'36	
	8495 Jan 12 16:11	15° \approx	max. Earth dist.	8500 Jul 26 00:37	9° Ω 01'07 5.91324 AU	
evening set	8495 Jan 24 19:55	17° \approx 34'20	morning rise	8500 Aug 07 03:50	11° Ω 58'09	
max. Earth dist.	8495 Feb 05 02:13	19° \approx 59'45 6.47705 AU		8500 Aug 19 19:37	15° Ω	
				8500 Nov 05 10:32	0° Π	
conjunction	8495 Feb 06 17:38	20° \approx 21'02 0°22'46	retrograde	8500 Dec 17 04:59	2° Π 45'02	
minimum elong	8495 Feb 06 17:39	20° \approx 21'02 0°22'54		8501 Jan 27 23:30	30° κ Ω	
morning rise	8495 Feb 19 13:18	23° \approx 06'50	min. Earth dist.	8501 Feb 13 07:18	27° Ω 52'20 3.93991 AU	
	8495 Mar 24 23:01	0° X	opposition	8501 Feb 14 14:00	27° Ω 41'55 -0°25'20	
retrograde	8495 Jun 20 08:10	9° X 52'59	direct	8501 Apr 13 11:50	22° Ω 46'23	
opposition	8495 Aug 20 07:44	5° X 00'13 0°16'09		8501 Jun 21 15:46	0° Π	
min. Earth dist.	8495 Aug 21 17:55	4° X 49'18 4.43894 AU	evening set	8501 Aug 18 06:52	12° Π 34'51	
	8495 Oct 19 04:52	30° κ \approx				
direct	8495 Oct 21 23:27	29° \approx 59'18	conjunction	8501 Aug 31 21:54	15° Π 49'33 -0°02'03	
	8495 Oct 24 17:58	0° X	minimum elong	8501 Aug 31 21:56	15° Π 49'34 0°02'06	
desc. node	8496 Feb 08 19:26	14° X 11'59	behind sun begin	8501 Aug 31 13:32	15° Π 44'35	
evening set	8496 Feb 24 05:22	17° X 31'30	behind sun end	8501 Sep 01 06:19	15° Π 54'33	
max. Earth dist.	8496 Mar 05 18:45	19° X 51'01 6.38237 AU	max. Earth dist.	8501 Sep 03 05:19	16° Π 22'34 5.99016 AU	
			morning rise	8501 Sep 14 15:04	19° Π 05'03	
conjunction	8496 Mar 08 00:23	20° X 20'40 -0°01'53	asc. node	8501 Sep 27 15:46	22° Π 07'44	
minimum elong	8496 Mar 08 00:22	20° X 20'39 0°01'51		8501 Nov 03 02:38	0° Ω	
behind sun begin	8496 Mar 07 16:23	20° X 16'16	retrograde	8502 Jan 22 10:28	9° Ω 03'47	
behind sun end	8496 Mar 08 08:21	20° X 25'03	min. Earth dist.	8502 Mar 21 10:13	4° Ω 12'27 4.05936 AU	
morning rise	8496 Mar 20 17:54	23° X 09'19	opposition	8502 Mar 23 00:27	3° Ω 59'27 0°19'26	
	8496 Apr 22 01:14	0° Υ		8502 Apr 26 10:46	30° κ Π	
retrograde	8496 Jul 21 09:40	10° Υ 35'41	direct	8502 May 20 13:19	29° Π 01'32	
opposition	8496 Sep 20 07:04	5° Υ 42'47 -0°21'24		8502 Jun 13 20:56	0° Ω	
min. Earth dist.	8496 Sep 21 21:53	5° Υ 30'21 4.31156 AU	evening set	8502 Sep 24 05:58	18° Ω 07'02	
direct	8496 Nov 21 05:36	0° Υ 43'15				
evening set	8497 Mar 26 16:24	18° Υ 53'40	conjunction	8502 Oct 07 21:36	21° Ω 14'58 0°26'12	
max. Earth dist.	8497 Apr 06 06:37	21° Υ 18'34 6.23135 AU	minimum elong	8502 Oct 07 21:34	21° Ω 14'57 0°26'16	
			max. Earth dist.	8502 Oct 10 06:31	21° Ω 47'40 6.14033 AU	
conjunction	8497 Apr 08 10:47	21° Υ 48'26 -0°26'51	morning rise	8502 Oct 21 13:32	24° Ω 22'45	
minimum elong	8497 Apr 08 10:46	21° Υ 48'26 0°26'54		8502 Nov 15 21:50	0° Π	
morning rise	8497 Apr 21 04:36	24° Υ 43'17	retrograde	8503 Feb 25 02:01	13° Π 08'06	
	8497 May 14 21:39	0° X	opposition	8503 Apr 25 23:32	8° Π 05'15 0°54'18	
retrograde	8497 Aug 24 23:58	13° X 14'50	min. Earth dist.	8503 Apr 24 15:55	8° Π 15'52 4.22437 AU	
opposition	8497 Oct 24 12:12	8° X 20'39 -0°55'03	direct	8503 Jun 24 18:04	3° Π 05'15	
min. Earth dist.	8497 Oct 25 21:40	8° X 09'49 4.14661 AU		8503 Sep 29 09:23	15° Π	
direct	8497 Dec 24 06:20	3° X 23'13	evening set	8503 Oct 29 02:32	21° Π 21'05	
	8498 Mar 27 09:32	15° X				
evening set	8498 Apr 29 01:07	22° X 23'13	conjunction	8503 Nov 11 14:27	24° Π 20'14 0°44'10	
max. Earth dist.	8498 May 10 09:10	25° X 04'12 6.06606 AU	minimum elong	8503 Nov 11 14:26	24° Π 20'14 0°44'19	
			max. Earth dist.	8503 Nov 13 04:20	24° Π 41'13 6.30610 AU	
conjunction	8498 May 11 21:48	25° X 25'57 -0°44'27	morning rise	8503 Nov 25 01:31	27° Π 18'40	
minimum elong	8498 May 11 21:47	25° X 25'56 0°44'37		8503 Dec 07 10:23	0° X	
morning rise	8498 May 24 19:30	28° X 29'30	retrograde	8504 Mar 27 08:49	14° X 56'03	
	8498 May 31 05:28	0° Π	opposition	8504 May 26 17:16	9° X 56'18 1°09'53	
retrograde	8498 Oct 01 02:20	18° Π 16'02	min. Earth dist.	8504 May 26 00:39	10° X 01'47 4.37749 AU	
opposition	8498 Nov 30 03:01	13° Π 19'23 -1°11'57	direct	8504 Jul 26 18:58	4° X 55'01	
min. Earth dist.	8498 Nov 30 17:04	13° Π 14'45 3.99533 AU	evening set	8504 Nov 29 18:26	22° X 31'05	
direct	8499 Jan 28 09:40	8° Π 24'04				
evening set	8499 Jun 03 16:59	28° Π 09'16	conjunction	8504 Dec 13 01:08	25° X 22'52 0°48'10	
	8499 Jun 11 07:39	0° X	minimum elong	8504 Dec 13 01:08	25° X 22'52 0°48'22	
			max. Earth dist.	8504 Dec 13 11:30	25° X 28'28 6.43532 AU	
conjunction	8499 Jun 16 19:28	1° X 20'14 -0°46'42	morning rise	8504 Dec 26 05:48	28° X 13'34	
minimum elong	8499 Jun 16 19:28	1° X 20'14 0°46'54		8505 Jan 03 13:40	0° X	
max. Earth dist.	8499 Jun 16 15:44	1° X 17'57 5.94320 AU	retrograde	8505 Apr 26 08:31	15° X 05'28	
morning rise	8499 Jun 30 00:01	4° X 32'30	opposition	8505 Jun 26 01:35	10° X 09'07 1°05'21	
retrograde	8499 Nov 08 19:41	25° X 14'24	min. Earth dist.	8505 Jun 26 04:22	10° X 08'13 4.47492 AU	
opposition	8500 Jan 07 09:18	20° X 14'24 -1°01'25	direct	8505 Aug 27 04:58	5° X 07'25	
min. Earth dist.	8500 Jan 06 23:24	20° X 17'43 3.91478 AU	evening set	8505 Dec 30 18:58	22° X 21'53	
direct	8500 Mar 06 14:18	15° X 20'00				
	8500 Jun 18 10:37	0° Ω	conjunction	8506 Jan 12 20:18	25° X 09'21 0°38'56	

minimum elong	8506 Jan 12 20:19	25°  09'22	0°39'06	retrograde	8511 Nov 15 04:21	0°  32'57	
max. Earth dist.	8506 Jan 12 00:53	24°  58'57	6.49410 AU		8511 Dec 03 09:36	30°  R 	
morning rise	8506 Jan 25 19:33	27°  55'46		opposition	8512 Jan 13 16:31	25°  32'31	-0°57'39
	8506 Feb 04 14:45	0° 		min. Earth dist.	8512 Jan 13 03:00	25°  37'03	3.91027 AU
retrograde	8506 May 26 02:31	14°  31'14		direct	8512 Mar 11 18:29	20°  38'04	
opposition	8506 Jul 26 00:58	9°  37'20	0°44'02		8512 May 30 10:36	0° 	
min. Earth dist.	8506 Jul 26 22:41	9°  30'22	4.49255 AU	evening set	8512 Jul 16 11:43	10°  43'30	
direct	8506 Sep 26 17:48	4°  35'47					
	8506 Dec 27 18:59	15° 		conjunction	8512 Jul 29 22:29	13°  45'47	-0°26'57
evening set	8507 Jan 30 00:41	21°  35'02		minimum elong	8512 Jul 29 22:30	13°  45'47	0°27'07
max. Earth dist.	8507 Feb 10 04:57	24°  34'38	6.46905 AU	max. Earth dist.	8512 Jul 31 10:28	14°  42'41	5.91593 AU
					8512 Aug 03 01:24	15° 	
conjunction	8507 Feb 11 22:04	24°  36'52	0°19'34	morning rise	8512 Aug 12 11:59	17°  41'22	
minimum elong	8507 Feb 11 22:05	24°  36'52	0°19'42		8512 Oct 08 18:43	0° 	
morning rise	8507 Feb 24 17:14	27°  22'48		retrograde	8512 Dec 22 08:13	8°  40'12	
	8507 Mar 09 00:32	0° 		min. Earth dist.	8513 Feb 18 09:24	3°  40'52	3.94949 AU
retrograde	8507 Jun 25 14:41	14°  12'24		opposition	8513 Feb 19 18:10	2°  40'57'44	-0°19'08
opposition	8507 Aug 25 15:39	9°  19'37	0°11'03		8513 Mar 15 05:34	30°  R 	
min. Earth dist.	8507 Aug 27 01:57	9°  18'40	4.42639 AU	direct	8513 Apr 18 16:36	28°  41'52	
direct	8507 Oct 27 05:16	4°  18'50			8513 May 23 03:23	0° 	
desc. node	8507 Dec 20 13:59	8°  25'28		asc. node	8513 Aug 07 05:46	13°  40'58'31	
evening set	8508 Feb 29 11:58	21°  15'44'2		evening set	8513 Aug 23 12:18	17°  40'46'26	
max. Earth dist.	8508 Mar 11 00:59	24°  14'33	6.36585 AU				
				conjunction	8513 Sep 06 03:57	21°  40'00'38	0°02'18
conjunction	8508 Mar 13 06:41	24°  14'42'1	-0°05'31	minimum elong	8513 Sep 06 03:56	21°  40'00'37	0°02'16
minimum elong	8508 Mar 13 06:40	24°  14'42'1	0°05'30	behind sun begin	8513 Sep 05 19:32	20°  40'55'40	
behind sun begin	8508 Mar 12 23:00	24°  14'40'06		behind sun end	8513 Sep 06 12:19	21°  40'05'35	
behind sun end	8508 Mar 13 14:20	24°  14'48'35		max. Earth dist.	8513 Sep 08 14:03	21°  40'35'07	6.00584 AU
morning rise	8508 Mar 26 00:01	27°  14'33'35		morning rise	8513 Sep 19 21:07	24°  40'15'23	
	8508 Apr 06 03:36	0° 			8513 Oct 14 22:06	0° 	
retrograde	8508 Jul 27 00:58	15°  15'07'00		retrograde	8514 Jan 27 08:19	14°  40'45'26	
opposition	8508 Sep 25 20:57	10°  15'14'00	-0°26'34	min. Earth dist.	8514 Mar 26 08:07	9°  40'13'57	4.07937 AU
min. Earth dist.	8508 Sep 27 12:42	10°  15'01'16	4.29174 AU	opposition	8514 Mar 27 21:51	9°  40'01'09	0°25'15
direct	8508 Nov 26 17:36	5°  15'14'41		direct	8514 May 25 14:43	4°  40'42'57	
evening set	8509 Apr 01 03:44	23°  15'30'55		evening set	8514 Sep 29 06:01	23°  40'01'52	
max. Earth dist.	8509 Apr 11 17:55	25°  15'56'33	6.20964 AU				
				conjunction	8514 Oct 12 21:15	26°  40'08'38	0°29'29
conjunction	8509 Apr 13 22:11	26°  15'26'37	-0°29'54	minimum elong	8514 Oct 12 21:14	26°  40'08'37	0°29'34
minimum elong	8509 Apr 13 22:10	26°  15'26'36	0°29'59	max. Earth dist.	8514 Oct 15 05:12	26°  40'40'35	6.16297 AU
morning rise	8509 Apr 26 16:24	29°  15'22'30		morning rise	8514 Oct 26 12:47	29°  40'15'10	
	8509 Apr 29 10:03	0° 			8514 Oct 29 20:08	0° 	
	8509 Jul 16 18:28	15° 			8515 Jan 17 13:50	15° 	
retrograde	8509 Aug 30 21:52	18°  15'03'45		retrograde	8515 Mar 01 12:49	17°  40'15'0'18	
	8509 Oct 15 18:57	15°  R 			8515 Apr 13 12:30	15°  R 	
opposition	8509 Oct 30 09:32	13°  15'09'15	-0°58'39	min. Earth dist.	8515 Apr 29 05:50	12°  40'15'8'09	4.24783 AU
min. Earth dist.	8509 Oct 31 16:19	12°  15'09'16	4.12463 AU	opposition	8515 Apr 30 12:50	12°  40'14'7'45	0°57'44
direct	8509 Dec 29 22:05	8°  15'12'04		direct	8515 Jun 29 11:09	7°  40'14'7'31	
	8510 Mar 08 11:38	15° 			8515 Sep 09 19:45	15° 	
evening set	8510 May 04 19:22	27°  15'18'46		evening set	8515 Nov 02 18:57	25°  40'15'56'37	
max. Earth dist.	8510 May 16 08:24	0°  15'03'23	6.04576 AU				
	8510 May 16 02:43	0° 		conjunction	8515 Nov 16 06:09	28°  40'15'54'31	0°45'35
conjunction	8510 May 17 16:41	0°  15'22'39	-0°45'48	minimum elong	8515 Nov 16 06:09	28°  40'15'54'30	0°45'44
minimum elong	8510 May 17 16:40	0°  15'22'38	0°45'58	max. Earth dist.	8515 Nov 17 17:08	29°  40'15'13'48	6.32875 AU
morning rise	8510 May 30 15:03	3°  15'22'24			8515 Nov 21 04:55	0° 	
retrograde	8510 Oct 07 09:18	23°  15'23'27		morning rise	8515 Nov 29 16:14	1°  40'15'51'35	
opposition	8510 Dec 06 07:33	18°  15'22'21	-1°12'13	retrograde	8516 Mar 31 15:06	19°  40'15'20'21	
min. Earth dist.	8510 Dec 06 19:32	18°  15'22'24	3.97863 AU	min. Earth dist.	8516 May 30 10:17	14°  40'15'25'37	4.39763 AU
direct	8511 Feb 03 10:42	13°  15'23'13		opposition	8516 May 31 00:09	14°  40'15'21'04	1°10'23
	8511 May 26 18:26	0° 		direct	8516 Jul 31 06:55	9°  40'15'19'40	
evening set	8511 Jun 09 18:30	3°  15'21'13		evening set	8516 Dec 04 03:33	26°  40'15'20'26	
				conjunction	8516 Dec 17 09:21	29°  40'15'41'16	0°47'36
conjunction	8511 Jun 22 22:01	6°  15'23'31'12	-0°45'30	minimum elong	8516 Dec 17 09:21	29°  40'15'41'16	0°47'49
minimum elong	8511 Jun 22 22:01	6°  15'23'33'13	0°45'42	max. Earth dist.	8516 Dec 17 15:16	29°  40'15'44'27	6.45140 AU
max. Earth dist.	8511 Jun 22 22:59	6°  15'23'33'48	5.93179 AU		8516 Dec 18 20:08	0° 	
morning rise	8511 Jul 06 03:43	9°  15'23'46'32		morning rise	8516 Dec 30 13:15	2°  15'23'31'01	
	8511 Oct 27 20:35	0° 		retrograde	8517 Apr 30 10:11	19°  15'23'17'41	

opposition	8517 Jun 30 04:45	14°  21'40	1°03'17			8523 May 08 17:53	0° 	
min. Earth dist.	8517 Jun 30 10:08	14°  19'55	4.48603 AU	evening set		8523 Jun 14 22:49	8°  38'56	
direct	8517 Aug 31 10:55	9°  19'53						
evening set	8518 Jan 03 22:50	26°  31'43		conjunction		8523 Jun 28 03:22	11°  52'06	-0°43'55
				minimum elong		8523 Jun 28 03:23	11°  52'07	0°44'06
conjunction	8518 Jan 16 23:36	29°  18'43	0°36'47	max. Earth dist.		8523 Jun 28 08:50	11°  55'27	5.91777 AU
minimum elong	8518 Jan 16 23:37	29°  18'44	0°36'57	morning rise		8523 Jul 11 10:24	15°  50'43	
max. Earth dist.	8518 Jan 16 01:59	29°  07'09	6.49941 AU			8523 Sep 18 06:17	0° 	
	8518 Jan 20 04:39	0° 		retrograde		8523 Nov 20 15:09	5°  58'35	
morning rise	8518 Jan 29 21:58	2°  04'39		min. Earth dist.		8524 Jan 18 09:04	1°  50'28	3.90447 AU
	8518 Apr 09 21:24	15° 		opposition		8524 Jan 19 02:19	0°  57'39	-0°53'22
retrograde	8518 May 30 03:19	18°  39'04				8524 Jan 26 06:31	30°  R 	
	8518 Jul 20 07:46	15°  R 		direct		8524 Mar 17 02:15	26°  53'08	
opposition	8518 Jul 30 03:34	13°  45'24	0°40'04			8524 May 05 12:31	0° 	
min. Earth dist.	8518 Jul 31 03:07	13°  37'52	4.49164 AU			8524 Jul 17 01:36	15° 	
direct	8518 Sep 30 20:54	8°  43'55		evening set		8524 Jul 21 21:01	16°  50'35	
	8518 Dec 08 20:45	15° 						
evening set	8519 Feb 03 03:07	25°  58'50		conjunction		8524 Aug 04 08:57	19°  52'13	-0°23'11
max. Earth dist.	8519 Feb 14 02:49	28°  21'17	6.46174 AU	minimum elong		8524 Aug 04 08:58	19°  52'13	0°23'20
				max. Earth dist.		8524 Aug 06 03:18	19°  51'58	5.91912 AU
conjunction	8519 Feb 15 23:49	28°  45'41	0°16'23	morning rise		8524 Aug 17 23:13	22°  50'01	
minimum elong	8519 Feb 15 23:50	28°  45'42	0°16'30			8524 Sep 18 02:55	0° 	
	8519 Feb 21 16:53	0° 		retrograde		8524 Dec 27 15:52	13°  50'24'08	
morning rise	8519 Feb 28 18:41	1°  31'46		min. Earth dist.		8525 Feb 23 14:38	8°  50'32'01	3.96113 AU
retrograde	8519 Jun 29 21:35	18°  32'55		opposition		8525 Feb 25 00:55	8°  50'20'22	-0°12'41
opposition	8519 Aug 29 21:24	13°  32'12	0°06'02	direct		8525 Apr 24 00:56	3°  50'24'14	
min. Earth dist.	8519 Aug 31 10:21	13°  32'24	4.41283 AU	asc. node		8525 Jun 16 01:50	7°  50'50'29	
direct	8519 Oct 31 10:46	8°  31'29		evening set		8525 Aug 28 20:21	23°  50'03'52	
desc. node	8519 Nov 01 06:59	8°  31'32						
evening set	8520 Mar 04 16:17	26°  31'13'5		conjunction		8525 Sep 11 12:09	26°  50'17'17	0°06'34
max. Earth dist.	8520 Mar 15 03:36	28°  31'05	6.34688 AU	minimum elong		8525 Sep 11 12:09	26°  50'17'16	0°06'33
				behind sun begin		8525 Sep 11 04:18	26°  50'12'39	
conjunction	8520 Mar 17 10:56	29°  31'55	-0°09'00	behind sun end		8525 Sep 11 20:00	26°  50'21'53	
minimum elong	8520 Mar 17 10:55	29°  31'54	0°08'59	max. Earth dist.		8525 Sep 14 00:11	26°  50'52'43	6.02445 AU
behind sun begin	8520 Mar 17 04:05	28°  31'58'07		morning rise		8525 Sep 25 05:32	29°  50'31'10	
behind sun end	8520 Mar 17 17:45	29°  31'54'42				8525 Sep 27 06:53	0° 	
	8520 Mar 21 19:07	0° 		retrograde		8526 Feb 01 04:30	19°  50'10'59	
morning rise	8520 Mar 30 04:11	1°  51'52		min. Earth dist.		8526 Mar 31 05:28	14°  50'19'52	4.10269 AU
retrograde	8520 Jul 31 13:22	19°  51'33'30		opposition		8526 Apr 01 20:10	14°  50'10'45	0°30'53
opposition	8520 Sep 30 09:14	14°  51'40'22	-0°31'30	direct		8526 May 30 16:10	9°  50'10'08'10	
min. Earth dist.	8520 Oct 02 00:19	14°  51'27'50	4.26842 AU	evening set		8526 Oct 04 07:09	27°  50'10'59'25	
direct	8520 Dec 01 00:59	9°  51'41'16				8526 Oct 13 03:52	0° 	
evening set	8521 Apr 05 13:57	28°  51'04'53						
	8521 Apr 13 21:54	0° 		conjunction		8526 Oct 17 21:55	1°  50'04'49	0°32'34
max. Earth dist.	8521 Apr 16 05:52	0°  50'32'21	6.18372 AU	minimum elong		8526 Oct 17 21:53	1°  50'04'48	0°32'40
				max. Earth dist.		8526 Oct 20 03:26	1°  50'35'14	6.18867 AU
conjunction	8521 Apr 18 08:37	1°  50'01'43	-0°32'44	morning rise		8526 Oct 31 12:46	4°  50'09'54	
minimum elong	8521 Apr 18 08:36	1°  50'01'43	0°32'50			8526 Dec 22 13:10	15° 	
morning rise	8521 May 01 03:12	3°  50'58'52		retrograde		8527 Mar 06 02:06	22°  50'33'56	
	8521 Jun 21 17:56	15°  50'15'50		min. Earth dist.		8527 May 03 22:14	17°  50'31'41'13	4.27322 AU
retrograde	8521 Sep 04 23:07	22°  50'15'50		opposition		8527 May 05 02:32	17°  50'31'45	1°00'46
opposition	8521 Nov 04 07:04	17°  50'57'05	-1°01'53			8527 May 25 00:01	15°  50'31'45	
min. Earth dist.	8521 Nov 05 13:13	17°  50'47'17	4.09792 AU	direct		8527 Jul 04 06:33	12°  50'31'15	
	8521 Nov 28 15:05	15°  50'31'08				8527 Aug 13 20:38	15° 	
direct	8522 Jan 03 15:23	13°  50'00'12				8527 Nov 04 22:24	0° 	
	8522 Feb 08 05:29	15° 		evening set		8527 Nov 07 11:17	0°  50'33'10	
	8522 Apr 30 00:36	0° 						
evening set	8522 May 09 14:25	2°  50'15'34		conjunction		8527 Nov 20 21:47	3°  50'27'49	0°46'42
max. Earth dist.	8522 May 21 07:19	5°  50'03'25	6.02077 AU	minimum elong		8527 Nov 20 21:47	3°  50'27'49	0°46'53
				max. Earth dist.		8527 Nov 22 05:43	3°  50'27'20	6.35165 AU
conjunction	8522 May 22 12:32	5°  50'20'56	-0°46'50	morning rise		8527 Dec 04 06:58	6°  50'25'35	
minimum elong	8522 May 22 12:32	5°  50'20'56	0°47'00	retrograde		8528 Apr 04 19:36	23°  50'27'46'03	
morning rise	8522 Jun 04 11:53	8°  50'27'15		opposition		8528 Jun 04 07:19	18°  50'27'47'12	1°10'28
retrograde	8522 Oct 12 16:57	28°  50'34'38		min. Earth dist.		8528 Jun 03 19:21	18°  50'27'51'08	4.41649 AU
opposition	8522 Dec 11 13:24	23°  50'37'12	-1°11'59	direct		8528 Aug 04 17:05	13°  50'27'45'41	
min. Earth dist.	8522 Dec 11 21:31	23°  50'34'30	3.95808 AU			8528 Dec 02 21:38	0° 	
direct	8523 Feb 08 10:16	18°  50'42'20		evening set		8528 Dec 08 12:55	1°  50'31'51	

conjunction	8528 Dec 21 17:55	4° Z 01'50	0°46'46	morning rise	8534 Jun 09 13:41	13° II 38'55
minimum elong	8528 Dec 21 17:56	4° Z 01'50	0°46'58		8534 Aug 28 08:45	0° G
max. Earth dist.	8528 Dec 21 19:42	4° Z 02'47	6.46493 AU	retrograde	8534 Oct 18 04:44	3° G 55'46
morning rise	8529 Jan 03 20:53	6° Z 50'43			8534 Dec 09 02:58	30° R II
retrograde	8529 May 04 13:56	23° Z 33'17		opposition	8534 Dec 16 23:30	28° II 57'51 -1°11'06
opposition	8529 Jul 04 09:04	18° Z 37'42	1°00'50	min. Earth dist.	8534 Dec 17 03:45	28° II 56'26 3.94345 AU
min. Earth dist.	8529 Jul 04 17:44	18° Z 34'54	4.49348 AU	direct	8535 Feb 13 17:11	24° II 03'10
direct	8529 Sep 04 18:15	13° Z 35'55			8535 Apr 16 18:39	0° G
	8530 Jan 04 12:48	0° \approx		evening set	8535 Jun 20 06:05	14° G 03'34
evening set	8530 Jan 08 04:22	0° \approx 46'24				
max. Earth dist.	8530 Jan 20 01:31	3° \approx 18'43	6.50017 AU	conjunction	8535 Jul 03 11:51	17° G 17'37 -0°41'56
				minimum elong	8535 Jul 03 11:52	17° G 17'38 0°42'07
conjunction	8530 Jan 21 04:24	3° \approx 33'07	0°34'22	max. Earth dist.	8535 Jul 04 00:49	17° G 25'33 5.91116 AU
minimum elong	8530 Jan 21 04:25	3° \approx 33'08	0°34'33	morning rise	8535 Jul 16 19:53	20° G 33'02
morning rise	8530 Feb 03 02:18	6° \approx 18'49			8535 Aug 26 16:01	0° Ω
	8530 Mar 18 11:30	15° \approx		retrograde	8535 Nov 26 03:32	11° Ω 26'40
retrograde	8530 Jun 03 08:52	22° \approx 53'46		opposition	8536 Jan 24 13:18	6° Ω 25'14 -0°48'33
opposition	8530 Aug 03 08:47	18° \approx 00'16	0°35'46	min. Earth dist.	8536 Jan 23 17:05	6° Ω 32'04 3.90699 AU
min. Earth dist.	8530 Aug 04 10:58	17° \approx 51'54	4.48580 AU	direct	8536 Mar 22 11:52	1° Ω 30'39
	8530 Aug 28 14:37	15° R \approx			8536 Jun 29 06:36	15° Ω
direct	8530 Oct 05 02:20	12° \approx 58'46		evening set	8536 Jul 27 06:47	21° Ω 34'39
	8530 Nov 11 17:17	15° \approx				
	8531 Feb 06 02:40	0° H		conjunction	8536 Aug 09 19:22	24° Ω 51'05 -0°19'15
evening set	8531 Feb 07 08:08	0° H 15'51		minimum elong	8536 Aug 09 19:23	24° Ω 51'05 0°19'22
max. Earth dist.	8531 Feb 18 06:17	2° H 37'50	6.44967 AU	max. Earth dist.	8536 Aug 11 17:23	25° Ω 18'57 5.93027 AU
				morning rise	8536 Aug 23 10:29	28° Ω 08'40
conjunction	8531 Feb 20 04:38	3° H 03'02	0°12'59		8536 Aug 31 04:54	0° H
minimum elong	8531 Feb 20 04:38	3° H 03'02	0°13'04	retrograde	8537 Jan 01 18:44	18° H 41'28
behind sun begin	8531 Feb 19 23:49	3° H 00'26		min. Earth dist.	8537 Feb 28 16:31	13° H 49'59 3.97967 AU
behind sun end	8531 Feb 20 09:26	3° H 05'38		opposition	8537 Mar 02 05:21	13° H 37'27 -0°06'16
morning rise	8531 Mar 04 23:00	5° H 49'25		asc. node	8537 Apr 26 01:20	8° H 42'03
retrograde	8531 Jul 04 07:06	22° H 47'45		direct	8537 Apr 29 06:48	8° H 40'58
opposition	8531 Sep 03 07:14	17° H 55'01	0°00'46	evening set	8537 Sep 03 01:46	28° H 13'27
min. Earth dist.	8531 Sep 04 20:54	17° H 43'00	4.39521 AU		8537 Sep 10 15:39	0° $\underline{\Omega}$
desc. node	8531 Sep 11 05:08	16° H 54'48				
direct	8531 Nov 04 17:39	12° H 54'28		conjunction	8537 Sep 16 17:37	1° $\underline{\Omega}$ 25'44 0°10'40
	8532 Mar 06 00:41	0° Y		minimum elong	8537 Sep 16 17:36	1° $\underline{\Omega}$ 25'44 0°10'39
evening set	8532 Mar 09 00:54	0° Y 39'58		behind sun begin	8537 Sep 16 11:12	1° $\underline{\Omega}$ 22'00
max. Earth dist.	8532 Mar 19 10:56	2° Y 59'30	6.32487 AU	behind sun end	8537 Sep 17 00:00	1° $\underline{\Omega}$ 29'29
				max. Earth dist.	8537 Sep 19 05:28	2° $\underline{\Omega}$ 00'53 6.04834 AU
conjunction	8532 Mar 21 19:16	3° Y 31'03	-0°12'36	morning rise	8537 Sep 30 10:51	4° $\underline{\Omega}$ 38'24
minimum elong	8532 Mar 21 19:15	3° Y 31'03	0°12'36	retrograde	8538 Feb 05 22:36	24° $\underline{\Omega}$ 06'39
behind sun begin	8532 Mar 21 14:05	3° Y 28'10		min. Earth dist.	8538 Apr 05 02:08	19° $\underline{\Omega}$ 15'05 4.12915 AU
behind sun end	8532 Mar 22 00:26	3° Y 33'56		opposition	8538 Apr 06 15:11	19° $\underline{\Omega}$ 02'32 0°36'05
morning rise	8532 Apr 03 12:39	6° Y 21'54		direct	8538 Jun 04 16:29	14° $\underline{\Omega}$ 03'38
retrograde	8532 Aug 05 09:41	24° Y 12'53			8538 Sep 26 17:07	0° M
opposition	8532 Oct 05 02:57	19° Y 19'35	-0°36'30	evening set	8538 Oct 09 04:08	2° M 46'29
min. Earth dist.	8532 Oct 06 18:24	19° Y 06'54	4.24331 AU			
direct	8532 Dec 05 15:24	14° Y 20'42		conjunction	8538 Oct 22 18:29	5° M 50'32 0°35'19
	8533 Mar 28 15:26	0° Z		minimum elong	8538 Oct 22 18:28	5° M 50'31 0°35'26
evening set	8533 Apr 10 05:15	2° Z 52'03		max. Earth dist.	8538 Oct 24 22:48	6° M 20'04 6.21533 AU
max. Earth dist.	8533 Apr 20 23:25	5° Z 21'40	6.15766 AU	morning rise	8538 Nov 05 08:32	8° M 54'07
					8538 Dec 03 10:37	15° M
conjunction	8533 Apr 23 00:20	5° Z 50'07	-0°35'30	retrograde	8539 Mar 10 09:32	27° M 07'22
minimum elong	8533 Apr 23 00:19	5° Z 50'07	0°35'37	min. Earth dist.	8539 May 08 09:38	22° M 14'38 4.29787 AU
morning rise	8533 May 05 19:23	8° Z 48'34		opposition	8539 May 09 12:34	22° M 05'39 1°03'18
	8533 Jun 02 07:10	15° Z		direct	8539 Jul 08 20:10	17° M 05'00
retrograde	8533 Sep 10 02:52	27° Z 53'04			8539 Oct 19 10:36	0° Z
opposition	8533 Nov 09 09:50	22° Z 58'01	-1°04'50	evening set	8539 Nov 12 00:08	5° Z 00'23
min. Earth dist.	8533 Nov 10 13:00	22° Z 49'10	4.07330 AU			
direct	8534 Jan 08 11:48	18° Z 01'30		conjunction	8539 Nov 25 09:45	7° Z 55'52 0°47'31
	8534 Apr 12 09:23	0° II		minimum elong	8539 Nov 25 09:44	7° Z 55'51 0°47'42
evening set	8534 May 14 14:29	7° II 24'32		max. Earth dist.	8539 Nov 26 12:09	8° Z 10'18 6.37239 AU
				morning rise	8539 Dec 08 18:06	10° Z 50'27
conjunction	8534 May 27 13:18	10° II 31'11	-0°47'33	retrograde	8540 Apr 08 23:58	28° Z 03'50
minimum elong	8534 May 27 13:17	10° II 31'11	0°47'45	opposition	8540 Jun 08 11:52	23° Z 05'32 1°10'11
max. Earth dist.	8534 May 26 12:14	10° II 16'05	5.99993 AU	min. Earth dist.	8540 Jun 08 03:52	23° Z 08'09 4.43203 AU

direct	8540 Aug 09 02:14	18° ♄ 03'58		conjunction	8546 Jun 01 14:55	15° ♂ 43'50 -0°47'54
	8540 Nov 16 12:50	0° ♄		minimum elong	8546 Jun 01 14:55	15° ♂ 43'50 0°48'05
evening set	8540 Dec 12 19:40	5° ♄ 26'48		max. Earth dist.	8546 May 31 20:03	15° ♂ 32'26 5.98366 AU
				morning rise	8546 Jun 14 16:07	18° ♂ 52'42
conjunction	8540 Dec 26 00:02	8° ♄ 16'10 0°45'43			8546 Aug 03 04:46	0° ♄
minimum elong	8540 Dec 26 00:03	8° ♄ 16'11 0°45'55		retrograde	8546 Oct 23 16:26	9° ♄ 16'42
max. Earth dist.	8540 Dec 25 21:34	8° ♄ 14'51 6.47417 AU		opposition	8546 Dec 22 08:44	4° ♄ 18'18 -1°09'36
morning rise	8541 Jan 08 02:14	11° ♄ 04'26		min. Earth dist.	8546 Dec 22 09:49	4° ♄ 17'56 3.93405 AU
retrograde	8541 May 08 15:41	27° ♄ 44'35			8547 Jan 31 00:48	30° ♂ ♂
opposition	8541 Jul 08 11:57	22° ♄ 49'23 0°58'10		direct	8547 Feb 18 22:57	29° ♂ 23'45
min. Earth dist.	8541 Jul 08 22:49	22° ♄ 45'52 4.49617 AU			8547 Mar 09 19:37	0° ♄
direct	8541 Sep 08 21:47	17° ♄ 47'39		evening set	8547 Jun 25 12:35	19° ♄ 25'58
	8541 Dec 19 08:58	0° ♄				
evening set	8542 Jan 12 08:32	4° ♄ 58'22		conjunction	8547 Jul 08 19:12	22° ♄ 40'33 -0°39'37
max. Earth dist.	8542 Jan 24 02:30	7° ♄ 29'10 6.49620 AU		minimum elong	8547 Jul 08 19:13	22° ♄ 40'34 0°39'48
				max. Earth dist.	8547 Jul 09 12:11	22° ♄ 50'57 5.90931 AU
conjunction	8542 Jan 25 08:04	7° ♄ 45'02 0°31'50		morning rise	8547 Jul 22 04:28	25° ♄ 56'35
minimum elong	8542 Jan 25 08:05	7° ♄ 45'03 0°32'01			8547 Aug 08 03:08	0° ♂
morning rise	8542 Feb 07 05:20	10° ♄ 30'41			8547 Oct 28 16:58	15° ♂
	8542 Feb 28 17:20	15° ♄		retrograde	8547 Dec 01 10:23	16° ♂ 49'40
retrograde	8542 Jun 07 14:35	27° ♄ 07'53			8548 Jan 04 02:54	15° ♂ ♂
opposition	8542 Aug 07 14:05	22° ♄ 14'40 0°31'21		opposition	8548 Jan 29 21:14	11° ♂ 47'46 -0°43'23
min. Earth dist.	8542 Aug 08 18:44	22° ♄ 05'31 4.47545 AU		min. Earth dist.	8548 Jan 28 21:13	11° ♂ 55'53 3.91303 AU
direct	8542 Oct 09 07:29	17° ♄ 13'21		direct	8548 Mar 27 18:20	6° ♂ 52'58
	8543 Jan 20 22:55	0° ♂			8548 Jun 09 07:33	15° ♂
evening set	8543 Feb 11 13:37	4° ♂ 34'03		evening set	8548 Aug 01 13:53	26° ♂ 53'34
max. Earth dist.	8543 Feb 22 07:51	6° ♂ 54'31 6.43365 AU			8548 Aug 14 11:08	0° ♂
conjunction	8543 Feb 24 09:37	7° ♂ 21'41 0°09'33		conjunction	8548 Aug 15 03:11	0° ♂ 09'41 -0°15'12
minimum elong	8543 Feb 24 09:37	7° ♂ 21'41 0°09'38		minimum elong	8548 Aug 15 03:12	0° ♂ 09'41 0°15'18
behind sun begin	8543 Feb 24 03:02	7° ♂ 18'06		behind sun begin	8548 Aug 15 00:47	0° ♂ 08'14
behind sun end	8543 Feb 24 16:13	7° ♂ 25'16		behind sun end	8548 Aug 15 05:36	0° ♂ 11'08
morning rise	8543 Mar 09 03:56	10° ♂ 08'38		max. Earth dist.	8548 Aug 17 03:56	0° ♂ 39'07 5.94346 AU
retrograde	8543 Jul 08 19:52	27° ♂ 13'34		morning rise	8548 Aug 28 18:49	3° ♂ 26'50
desc. node	8543 Jul 22 14:56	26° ♂ 55'44		retrograde	8549 Jan 06 19:42	23° ♂ 51'58
opposition	8543 Sep 07 18:22	22° ♂ 20'52 -0°04'31		min. Earth dist.	8549 Mar 05 17:53	19° ♂ 00'16 3.99824 AU
min. Earth dist.	8543 Sep 09 09:00	22° ♂ 08'31 4.37449 AU		asc. node	8549 Mar 06 12:57	18° ♂ 53'46
direct	8543 Nov 09 02:03	17° ♂ 20'31		opposition	8549 Mar 07 06:42	18° ♂ 47'43 0°00'05
	8544 Feb 18 11:28	0° ♂		direct	8549 May 04 11:43	13° ♂ 50'52
evening set	8544 Mar 13 10:46	5° ♂ 12'27			8549 Aug 24 22:43	0° ♂
max. Earth dist.	8544 Mar 23 22:06	7° ♂ 33'25 6.30115 AU		evening set	8549 Sep 08 04:25	3° ♂ 16'35
conjunction	8544 Mar 26 05:16	8° ♂ 04'30 -0°16'08		conjunction	8549 Sep 21 20:24	6° ♂ 27'52 0°14'37
minimum elong	8544 Mar 26 05:15	8° ♂ 04'29 0°16'09		minimum elong	8549 Sep 21 20:23	6° ♂ 27'51 0°14'39
behind sun begin	8544 Mar 26 04:34	8° ♂ 04'06		behind sun begin	8549 Sep 21 17:06	6° ♂ 25'57
behind sun end	8544 Mar 26 05:56	8° ♂ 04'52		behind sun end	8549 Sep 21 23:40	6° ♂ 29'46
morning rise	8544 Apr 07 22:37	10° ♂ 56'19		max. Earth dist.	8549 Sep 24 09:17	7° ♂ 03'25 6.07053 AU
retrograde	8544 Aug 10 06:13	28° ♂ 57'14		morning rise	8549 Oct 05 13:21	9° ♂ 39'22
opposition	8544 Oct 09 22:27	24° ♂ 03'48 -0°41'18		retrograde	8550 Feb 10 13:27	28° ♂ 56'55
min. Earth dist.	8544 Oct 11 12:25	23° ♂ 51'35 4.21835 AU		min. Earth dist.	8550 Apr 09 18:56	24° ♂ 05'25 4.15271 AU
direct	8544 Dec 10 05:39	19° ♂ 05'20		opposition	8550 Apr 11 07:34	23° ♂ 53'02 0°40'59
	8545 Mar 11 00:42	0° ♂		direct	8550 Jun 09 11:56	18° ♂ 53'51
evening set	8545 Apr 14 22:15	7° ♂ 44'14			8550 Sep 09 04:34	0° ♂
max. Earth dist.	8545 Apr 25 18:48	10° ♂ 16'07 6.13351 AU		evening set	8550 Oct 13 23:46	7° ♂ 29'43
conjunction	8545 Apr 27 17:30	10° ♂ 43'27 -0°38'02		conjunction	8550 Oct 27 13:27	10° ♂ 32'30 0°37'50
minimum elong	8545 Apr 27 17:29	10° ♂ 43'26 0°38'09		minimum elong	8550 Oct 27 13:26	10° ♂ 32'29 0°37'57
morning rise	8545 May 10 13:12	13° ♂ 43'10		max. Earth dist.	8550 Oct 29 13:10	10° ♂ 59'19 6.23820 AU
	8545 May 16 01:45	15° ♂		morning rise	8550 Nov 10 02:58	13° ♂ 34'49
	8545 Aug 02 02:17	0° ♂			8550 Nov 16 12:41	15° ♂
retrograde	8545 Sep 15 08:34	2° ♂ 58'32			8551 Feb 10 06:10	0° ♂
	8545 Oct 30 05:25	30° ♂ ♂		retrograde	8551 Mar 14 17:36	1° ♂ 38'49
opposition	8545 Nov 14 14:02	28° ♂ 03'06 -1°07'17			8551 Apr 16 00:13	30° ♂ ♂
min. Earth dist.	8545 Nov 15 14:12	27° ♂ 55'12 4.05202 AU		opposition	8551 May 13 21:46	26° ♂ 37'29 1°05'27
direct	8546 Jan 13 11:51	23° ♂ 06'53		min. Earth dist.	8551 May 12 21:56	26° ♂ 45'25 4.31825 AU
	8546 Mar 22 19:39	0° ♂		direct	8551 Jul 13 10:29	21° ♂ 36'36
evening set	8546 May 19 15:10	12° ♂ 36'03			8551 Oct 01 02:00	0° ♂

evening set	8551 Nov 16 12:29	9° ♂ 26'52	direct	8556 Dec 14 21:49	23° ♂ 49'22	
				8557 Feb 18 15:01	0° ♂	
conjunction	8551 Nov 29 21:35	12° ♂ 21'26 0°48'03	evening set	8557 Apr 19 14:29	12° ♂ 33'43	
minimum elong	8551 Nov 29 21:34	12° ♂ 21'26 0°48'14		8557 Apr 30 00:35	15° ♂	
max. Earth dist.	8551 Nov 30 21:09	12° ♂ 34'17 6.38884 AU	max. Earth dist.	8557 Apr 30 15:50	15° ♂ 08'57	6.11580 AU
morning rise	8551 Dec 13 04:58	15° ♂ 15'01				
	8552 Mar 04 09:56	0° ♂	conjunction	8557 May 02 10:12	15° ♂ 33'50 -0°40'16	
retrograde	8552 Apr 13 02:56	2° ♂ 22'40	minimum elong	8557 May 02 10:10	15° ♂ 33'49 0°40'24	
	8552 May 22 20:31	30° ♂	morning rise	8557 May 15 06:11	18° ♂ 34'29	
opposition	8552 Jun 12 16:53	27° ♂ 24'49 1°09'32		8557 Jul 07 01:49	0° ♂	
min. Earth dist.	8552 Jun 12 10:45	27° ♂ 26'50 4.44364 AU	retrograde	8557 Sep 20 12:04	7° ♂ 58'04	
direct	8552 Aug 13 09:40	22° ♂ 23'13	opposition	8557 Nov 19 15:59	3° ♂ 02'21 -1°09'09	
	8552 Oct 29 00:28	0° ♂	min. Earth dist.	8557 Nov 20 13:47	2° ♂ 55'13 4.03761 AU	
evening set	8552 Dec 17 03:21	9° ♂ 43'45		8557 Dec 14 16:48	30° ♂	
			direct	8558 Jan 18 10:04	28° ♂ 06'28	
conjunction	8552 Dec 30 06:55	12° ♂ 32'37 0°44'24		8558 Feb 21 17:44	0° ♂	
minimum elong	8552 Dec 30 06:56	12° ♂ 32'37 0°44'36	evening set	8558 May 24 13:11	17° ♂ 39'20	
max. Earth dist.	8552 Dec 29 23:27	12° ♂ 28'37 6.48018 AU				
morning rise	8553 Jan 12 08:28	15° ♂ 20'24	conjunction	8558 Jun 06 13:29	20° ♂ 47'53 -0°47'51	
	8553 Apr 06 11:23	0° ♂	minimum elong	8558 Jun 06 13:29	20° ♂ 47'53 0°48'03	
retrograde	8553 May 12 20:44	1° ♂ 58'58	max. Earth dist.	8558 Jun 05 21:39	20° ♂ 38'18 5.97376 AU	
	8553 Jun 18 05:10	30° ♂	morning rise	8558 Jun 19 15:44	23° ♂ 57'39	
opposition	8553 Jul 12 16:30	27° ♂ 04'08 0°55'08		8558 Jul 15 09:25	0° ♂	
min. Earth dist.	8553 Jul 13 06:52	26° ♂ 59'30 4.49643 AU	retrograde	8558 Oct 28 20:23	14° ♂ 26'16	
direct	8553 Sep 13 05:09	22° ♂ 02'27	opposition	8558 Dec 27 13:20	9° ♂ 27'23 -1°07'33	
	8553 Dec 01 04:39	0° ♂	min. Earth dist.	8558 Dec 27 10:22	9° ♂ 28'23 3.92992 AU	
evening set	8554 Jan 16 14:24	9° ♂ 13'54	direct	8559 Feb 24 00:09	4° ♂ 32'54	
max. Earth dist.	8554 Jan 28 04:25	11° ♂ 42'51 6.49076 AU	evening set	8559 Jun 30 14:07	24° ♂ 35'18	
conjunction	8554 Jan 29 13:26	12° ♂ 00'35 0°29'05	conjunction	8559 Jul 13 21:42	27° ♂ 50'14 -0°37'04	
minimum elong	8554 Jan 29 13:27	12° ♂ 00'36 0°29'14	minimum elong	8559 Jul 13 21:44	27° ♂ 50'15 0°37'15	
morning rise	8554 Feb 11 10:13	14° ♂ 46'17	max. Earth dist.	8559 Jul 14 19:31	28° ♂ 03'34 5.91139 AU	
	8554 Feb 12 11:56	15° ♂		8559 Jul 22 18:15	0° ♂	
	8554 May 12 02:05	0° ♂	morning rise	8559 Jul 27 07:47	1° ♂ 06'33	
retrograde	8554 Jun 11 21:15	1° ♂ 26'00		8559 Sep 28 14:53	15° ♂	
	8554 Jul 12 17:16	30° ♂	retrograde	8559 Dec 06 13:25	21° ♂ 57'55	
opposition	8554 Aug 11 21:16	26° ♂ 32'55 0°26'39	opposition	8560 Feb 03 23:20	16° ♂ 55'39 -0°38'07	
min. Earth dist.	8554 Aug 13 02:52	26° ♂ 23'28 4.46500 AU	min. Earth dist.	8560 Feb 02 22:18	17° ♂ 04'08 3.92105 AU	
direct	8554 Oct 13 13:12	21° ♂ 31'45		8560 Feb 18 14:51	15° ♂	
	8555 Jan 02 23:08	0° ♂	direct	8560 Apr 01 21:46	12° ♂ 00'39	
evening set	8555 Feb 15 20:36	8° ♂ 55'52		8560 May 14 14:16	15° ♂	
max. Earth dist.	8555 Feb 26 14:54	11° ♂ 16'49 6.41914 AU		8560 Jul 29 09:46	0° ♂	
			evening set	8560 Aug 06 15:22	1° ♂ 57'38	
conjunction	8555 Feb 28 16:22	11° ♂ 43'56 0°06'00	conjunction	8560 Aug 20 05:21	5° ♂ 13'26 -0°11'15	
minimum elong	8555 Feb 28 16:23	11° ♂ 43'56 0°06'05	minimum elong	8560 Aug 20 05:21	5° ♂ 13'26 0°11'21	
behind sun begin	8555 Feb 28 08:48	11° ♂ 39'48	behind sun begin	8560 Aug 19 23:17	5° ♂ 09'48	
behind sun end	8555 Feb 28 23:57	11° ♂ 48'04	behind sun end	8560 Aug 20 11:25	5° ♂ 17'04	
morning rise	8555 Mar 13 10:17	14° ♂ 31'20	max. Earth dist.	8560 Aug 22 09:04	5° ♂ 44'32 5.95658 AU	
desc. node	8555 Jun 01 03:06	29° ♂ 03'46	morning rise	8560 Sep 02 21:25	8° ♂ 30'09	
	8555 Jun 09 17:55	0° ♂	retrograde	8561 Jan 11 14:56	28° ♂ 47'59	
retrograde	8555 Jul 13 09:11	1° ♂ 42'16	asc. node	8561 Jan 17 04:58	28° ♂ 44'50	
	8555 Aug 16 03:04	30° ♂	min. Earth dist.	8561 Mar 10 12:37	23° ♂ 56'30 4.01508 AU	
opposition	8555 Sep 12 07:14	26° ♂ 49'36 -0°09'53	opposition	8561 Mar 12 02:02	23° ♂ 43'47 0°06'05	
min. Earth dist.	8555 Sep 13 22:13	26° ♂ 37'09 4.35700 AU	direct	8561 May 09 08:11	18° ♂ 46'40	
direct	8555 Nov 13 12:46	21° ♂ 49'35		8561 Aug 07 15:03	0° ♂	
	8556 Jan 31 00:37	0° ♂	evening set	8561 Sep 13 02:03	8° ♂ 06'58	
evening set	8556 Mar 17 21:36	9° ♂ 46'33				
max. Earth dist.	8556 Mar 28 08:26	12° ♂ 07'56 6.28205 AU				
			conjunction	8561 Sep 26 17:53	11° ♂ 17'21 0°18'18	
conjunction	8556 Mar 30 15:50	12° ♂ 39'17 -0°19'36	minimum elong	8561 Sep 26 17:52	11° ♂ 17'21 0°18'20	
minimum elong	8556 Mar 30 15:49	12° ♂ 39'16 0°19'39	max. Earth dist.	8561 Sep 29 04:08	11° ♂ 51'13 6.08939 AU	
morning rise	8556 Apr 12 09:24	15° ♂ 31'55	morning rise	8561 Oct 10 10:50	14° ♂ 27'55	
	8556 Jun 26 02:09	0° ♂		8561 Dec 28 09:16	0° ♂	
retrograde	8556 Aug 15 02:34	3° ♂ 41'12	retrograde	8562 Feb 15 00:12	3° ♂ 36'43	
	8556 Oct 05 06:56	30° ♂		8562 Apr 04 22:52	30° ♂	
opposition	8556 Oct 14 18:13	28° ♂ 47'32 -0°45'50	min. Earth dist.	8562 Apr 14 08:49	28° ♂ 44'55 4.17182 AU	
min. Earth dist.	8556 Oct 16 06:21	28° ♂ 35'53 4.19906 AU	opposition	8562 Apr 15 19:46	28° ♂ 33'07 0°45'22	

direct	8562 Jun 14 04:05	23°♄33'40		opposition	8567 Sep 16 18:56	1°♃16'13	-0°15'09
	8562 Aug 20 07:28	0°♍		min. Earth dist.	8567 Sep 18 09:30	1°♃03'53	4.33898 AU
evening set	8562 Oct 18 15:19	12°♍04'25			8567 Sep 26 19:47	30°♂	
	8562 Oct 31 17:30	15°♍		direct	8567 Nov 17 21:36	26°♂16'20	
					8568 Jan 07 22:06	0°♃	
conjunction	8562 Nov 01 04:44	15°♍06'17	0°40'00	evening set	8568 Mar 22 07:10	14°♃18'30	
minimum elong	8562 Nov 01 04:42	15°♍06'16	0°40'08	max. Earth dist.	8568 Apr 01 20:00	16°♃41'37	6.26156 AU
max. Earth dist.	8562 Nov 03 02:41	15°♍32'01	6.25624 AU				
morning rise	8562 Nov 14 17:25	18°♍07'32		conjunction	8568 Apr 04 01:30	17°♃12'02	-0°22'56
	8563 Jan 12 17:26	0°♂		minimum elong	8568 Apr 04 01:29	17°♃12'01	0°22'59
retrograde	8563 Mar 18 23:29	6°♂04'19		morning rise	8568 Apr 16 19:02	20°♃05'31	
min. Earth dist.	8563 May 17 06:28	1°♂10'49	4.33391 AU		8568 Jun 02 13:12	0°♂	
opposition	8563 May 18 04:31	1°♂03'30	1°07'09	retrograde	8568 Aug 19 23:06	8°♂23'43	
	8563 May 26 05:26	30°♍		opposition	8568 Oct 19 13:15	3°♂29'49	-0°50'05
direct	8563 Jul 17 20:41	26°♍02'34		min. Earth dist.	8568 Oct 21 00:52	3°♂18'20	4.17734 AU
	8563 Sep 08 10:06	0°♂			8568 Nov 18 15:38	30°♂	
evening set	8563 Nov 20 22:51	13°♂49'16		direct	8568 Dec 19 13:19	28°♃31'57	
					8569 Jan 19 06:07	0°♂	
conjunction	8563 Dec 04 07:07	16°♂43'04	0°48'18		8569 Apr 14 00:13	15°♂	
minimum elong	8563 Dec 04 07:07	16°♂43'04	0°48'29	evening set	8569 Apr 24 06:20	17°♂22'40	
max. Earth dist.	8563 Dec 05 01:33	16°♂53'05	6.40105 AU	max. Earth dist.	8569 May 05 09:11	19°♂59'35	6.09457 AU
morning rise	8563 Dec 17 13:55	19°♂35'54					
	8564 Feb 07 22:40	0°♂		conjunction	8569 May 07 02:20	20°♂23'51	-0°42'15
retrograde	8564 Apr 17 06:43	6°♂39'14		minimum elong	8569 May 07 02:19	20°♂23'50	0°42'24
opposition	8564 Jun 16 20:50	1°♂41'49	1°08'30	morning rise	8569 May 19 23:06	23°♂25'44	
min. Earth dist.	8564 Jun 16 17:51	1°♂42'48	4.45187 AU		8569 Jun 17 19:12	0°♂	
	8564 Jun 30 03:37	30°♂		retrograde	8569 Sep 25 15:14	12°♂59'08	
direct	8564 Aug 17 17:25	26°♂40'09		opposition	8569 Nov 24 18:18	8°♂02'58	-1°10'35
	8564 Oct 05 09:28	0°♂		min. Earth dist.	8569 Nov 25 12:30	7°♂57'00	4.01878 AU
evening set	8564 Dec 21 09:43	13°♂59'13		direct	8570 Jan 23 07:07	3°♂07'17	
				evening set	8570 May 29 12:24	22°♂45'43	
conjunction	8565 Jan 03 12:49	16°♂47'43	0°42'51				
minimum elong	8565 Jan 03 12:50	16°♂47'43	0°43'03	conjunction	8570 Jun 11 13:41	25°♂55'21	-0°47'28
max. Earth dist.	8565 Jan 03 03:22	16°♂42'39	6.48395 AU	minimum elong	8570 Jun 11 13:41	25°♂55'21	0°47'39
morning rise	8565 Jan 16 13:33	19°♂35'05		max. Earth dist.	8570 Jun 11 03:21	25°♂49'05	5.95925 AU
	8565 Mar 10 21:31	0°♂		morning rise	8570 Jun 24 16:48	29°♂06'14	
retrograde	8565 May 16 22:30	6°♂12'37			8570 Jun 28 10:14	0°♂	
opposition	8565 Jul 16 20:23	1°♂18'03	0°51'50	retrograde	8570 Nov 03 05:14	19°♂41'16	
min. Earth dist.	8565 Jul 17 11:50	1°♂13'05	4.49562 AU	opposition	8571 Jan 01 20:01	14°♂41'54	-1°04'58
	8565 Jul 27 02:07	30°♂		min. Earth dist.	8571 Jan 01 14:50	14°♂43'39	3.92136 AU
direct	8565 Sep 17 09:27	26°♂16'25		direct	8571 Mar 01 04:36	9°♂47'27	
	8565 Nov 08 10:26	0°♂		evening set	8571 Jul 05 18:59	29°♂51'45	
evening set	8566 Jan 20 19:12	13°♂28'30			8571 Jul 06 08:34	0°♂	
	8566 Jan 27 22:00	15°♂					
max. Earth dist.	8566 Feb 01 06:16	15°♂56'07	6.48531 AU	conjunction	8571 Jul 19 03:38	3°♂07'17	-0°34'10
				minimum elong	8571 Jul 19 03:40	3°♂07'18	0°34'20
conjunction	8566 Feb 02 17:36	16°♂15'09	0°26'11	max. Earth dist.	8571 Jul 20 06:20	3°♂23'35	5.90966 AU
minimum elong	8566 Feb 02 17:37	16°♂15'09	0°26'19	morning rise	8571 Aug 01 14:49	6°♂24'10	
morning rise	8566 Feb 15 13:55	19°♂00'52			8571 Sep 07 14:45	15°♂	
	8566 Apr 13 01:35	0°♂		retrograde	8571 Dec 11 19:32	27°♂14'44	
retrograde	8566 Jun 16 04:16	5°♂42'58		min. Earth dist.	8572 Feb 08 00:47	22°♂21'33	3.92656 AU
opposition	8566 Aug 16 04:01	0°♂49'59	0°21'50	opposition	8572 Feb 09 04:40	22°♂12'06	-0°32'23
min. Earth dist.	8566 Aug 17 11:52	0°♂39'49	4.45491 AU	direct	8572 Apr 07 01:52	17°♂16'54	
	8566 Aug 22 17:12	30°♂			8572 Jul 11 20:02	0°♂	
direct	8566 Oct 17 20:57	25°♂48'53		evening set	8572 Aug 11 21:16	7°♂11'13	
	8566 Dec 11 22:10	0°♂					
evening set	8567 Feb 20 02:23	13°♂15'53		conjunction	8572 Aug 25 11:43	10°♂26'41	-0°07'04
max. Earth dist.	8567 Mar 02 17:56	15°♂35'50	6.40479 AU	minimum elong	8572 Aug 25 11:43	10°♂26'41	0°07'09
				behind sun begin	8572 Aug 25 04:01	10°♂22'05	
conjunction	8567 Mar 04 21:45	16°♂04'19	0°02'26	behind sun end	8572 Aug 25 19:25	10°♂31'17	
minimum elong	8567 Mar 04 21:47	16°♂04'20	0°02'30	max. Earth dist.	8572 Aug 27 16:27	10°♂58'17	5.96858 AU
behind sun begin	8567 Mar 04 13:49	15°♂59'59		morning rise	8572 Sep 08 04:25	13°♂43'03	
behind sun end	8567 Mar 05 05:45	16°♂08'41		asc. node	8572 Nov 27 08:03	0°♂00'41	
morning rise	8567 Mar 17 15:32	18°♂52'12			8572 Nov 27 06:08	0°♂	
desc. node	8567 Apr 10 19:21	24°♂01'35		retrograde	8573 Jan 16 12:46	3°♂53'40	
	8567 May 12 10:12	0°♂			8573 Mar 08 08:00	30°♂	
retrograde	8567 Jul 17 20:33	6°♂09'04		min. Earth dist.	8573 Mar 15 11:21	29°♂02'18	4.03215 AU

opposition	8573 Mar 17 01:23	28° \mathbb{M} 49'21	0°12'16	conjunction	8579 Mar 09 00:33	20° \mathbb{H} 18'10	-0°01'07
direct	8573 May 14 10:08	23° \mathbb{M} 51'54		minimum elong	8579 Mar 09 00:32	20° \mathbb{H} 18'09	0°01'05
	8573 Jul 17 10:57	0° \mathbb{L}		behind sun begin	8579 Mar 08 16:34	20° \mathbb{H} 13'47	
evening set	8573 Sep 18 03:47	13° \mathbb{L} 06'26		behind sun end	8579 Mar 09 08:30	20° \mathbb{H} 22'32	
				morning rise	8579 Mar 21 18:05	23° \mathbb{H} 06'30	
conjunction	8573 Oct 01 19:40	16° \mathbb{L} 15'52	0°21'59		8579 Apr 23 08:41	0° \mathbb{Y}	
minimum elong	8573 Oct 01 19:39	16° \mathbb{L} 15'51	0°22'02	retrograde	8579 Jul 22 07:36	10° \mathbb{Y} 29'55	
max. Earth dist.	8573 Oct 04 06:37	16° \mathbb{L} 49'58	6.11023 AU	opposition	8579 Sep 21 04:36	5° \mathbb{Y} 37'02	-0°20'12
morning rise	8573 Oct 15 12:07	19° \mathbb{L} 25'16		min. Earth dist.	8579 Sep 22 20:57	5° \mathbb{Y} 24'07	4.31918 AU
	8573 Dec 04 00:34	0° \mathbb{M}		direct	8579 Nov 22 05:32	0° \mathbb{Y} 37'20	
retrograde	8574 Feb 19 15:28	8° \mathbb{M} 24'10		evening set	8580 Mar 26 14:36	18° \mathbb{Y} 45'37	
min. Earth dist.	8574 Apr 19 01:30	3° \mathbb{M} 32'18	4.19448 AU	max. Earth dist.	8580 Apr 06 02:12	21° \mathbb{Y} 08'51	6.23796 AU
opposition	8574 Apr 20 11:22	3° \mathbb{M} 20'54	0°49'37				
	8574 May 17 21:38	30° \mathbb{R} \mathbb{L}		conjunction	8580 Apr 08 08:57	21° \mathbb{Y} 40'07	-0°26'03
direct	8574 Jun 19 00:06	28° \mathbb{L} 21'16		minimum elong	8580 Apr 08 08:56	21° \mathbb{Y} 40'07	0°26'07
	8574 Jul 21 09:58	0° \mathbb{M}		morning rise	8580 Apr 21 02:51	24° \mathbb{Y} 34'43	
	8574 Oct 15 10:54	15° \mathbb{M}			8580 May 15 12:46	0° \mathbb{B}	
evening set	8574 Oct 23 10:12	16° \mathbb{M} 45'23		retrograde	8580 Aug 24 17:42	13° \mathbb{B} 03'28	
				opposition	8580 Oct 24 06:58	8° \mathbb{B} 09'20	-0°54'00
conjunction	8574 Nov 05 22:51	19° \mathbb{M} 46'00	0°42'00	min. Earth dist.	8580 Oct 25 16:42	7° \mathbb{B} 58'24	4.15156 AU
minimum elong	8574 Nov 05 22:50	19° \mathbb{M} 45'59	0°42'10	direct	8580 Dec 24 01:28	3° \mathbb{B} 11'41	
max. Earth dist.	8574 Nov 07 17:34	20° \mathbb{M} 09'47	6.27899 AU		8581 Mar 28 04:48	15° \mathbb{B}	
morning rise	8574 Nov 19 10:55	22° \mathbb{M} 45'58		evening set	8581 Apr 28 21:42	22° \mathbb{B} 10'46	
	8574 Dec 23 13:40	0° \mathbb{X}		max. Earth dist.	8581 May 10 04:56	24° \mathbb{B} 51'07	6.06887 AU
retrograde	8575 Mar 23 06:03	10° \mathbb{X} 33'40					
opposition	8575 May 22 13:08	5° \mathbb{X} 33'16	1°08'32	conjunction	8581 May 11 18:22	25° \mathbb{B} 13'20	-0°43'56
min. Earth dist.	8575 May 21 16:59	5° \mathbb{X} 39'57	4.35521 AU	minimum elong	8581 May 11 18:21	25° \mathbb{B} 13'19	0°44'06
direct	8575 Jul 22 09:41	0° \mathbb{X} 32'10		morning rise	8581 May 24 15:47	28° \mathbb{B} 16'39	
evening set	8575 Nov 25 10:02	18° \mathbb{X} 13'15			8581 May 31 23:52	0° \mathbb{I}	
				retrograde	8581 Sep 30 21:38	18° \mathbb{I} 01'55	
conjunction	8575 Dec 08 17:38	21° \mathbb{X} 06'01	0°48'19	opposition	8581 Nov 29 21:04	13° \mathbb{I} 05'25	-1°11'33
minimum elong	8575 Dec 08 17:38	21° \mathbb{X} 06'01	0°48'31	min. Earth dist.	8581 Nov 30 13:35	12° \mathbb{I} 59'59	3.99549 AU
max. Earth dist.	8575 Dec 09 09:48	21° \mathbb{X} 14'47	6.41949 AU	direct	8582 Jan 28 05:27	8° \mathbb{I} 09'58	
morning rise	8575 Dec 21 23:22	23° \mathbb{X} 57'44		evening set	8582 Jun 03 13:01	27° \mathbb{I} 55'58	
	8576 Jan 19 23:51	0° \mathbb{Z}			8582 Jun 12 01:22	0° \mathbb{G}	
retrograde	8576 Apr 21 08:45	10° \mathbb{Z} 54'48					
opposition	8576 Jun 21 00:57	5° \mathbb{Z} 57'51	1°07'09	conjunction	8582 Jun 16 15:23	1° \mathbb{G} 06'59	-0°46'43
min. Earth dist.	8576 Jun 20 23:59	5° \mathbb{Z} 58'09	4.46624 AU	minimum elong	8582 Jun 16 15:23	1° \mathbb{G} 07'00	0°46'56
direct	8576 Aug 22 00:54	0° \mathbb{Z} 56'11		max. Earth dist.	8582 Jun 16 09:25	1° \mathbb{G} 03'22	5.94070 AU
evening set	8576 Dec 25 15:10	18° \mathbb{Z} 11'43		morning rise	8582 Jun 29 19:48	4° \mathbb{G} 19'19	
				retrograde	8582 Nov 08 15:24	25° \mathbb{G} 02'16	
conjunction	8577 Jan 07 17:19	20° \mathbb{Z} 59'33	0°41'08	opposition	8583 Jan 07 04:34	20° \mathbb{G} 02'28	-1°01'53
minimum elong	8577 Jan 07 17:20	20° \mathbb{Z} 59'33	0°41'19	min. Earth dist.	8583 Jan 06 19:06	20° \mathbb{G} 05'39	3.90993 AU
max. Earth dist.	8577 Jan 07 02:52	20° \mathbb{Z} 51'48	6.49310 AU	direct	8583 Mar 06 08:44	15° \mathbb{G} 08'05	
morning rise	8577 Jan 20 17:26	23° \mathbb{Z} 46'19			8583 Jun 19 01:03	0° \mathbb{Q}	
	8577 Feb 20 01:18	0° \mathbb{A}		evening set	8583 Jul 11 02:40	5° \mathbb{Q} 15'29	
retrograde	8577 May 21 00:47	10° \mathbb{A} 21'26					
opposition	8577 Jul 20 22:57	5° \mathbb{A} 27'09	0°48'23	conjunction	8583 Jul 24 12:19	8° \mathbb{Q} 31'40	-0°30'58
min. Earth dist.	8577 Jul 21 17:42	5° \mathbb{A} 21'07	4.49900 AU	minimum elong	8583 Jul 24 12:20	8° \mathbb{Q} 31'41	0°31'07
direct	8577 Sep 21 14:56	0° \mathbb{A} 25'30		max. Earth dist.	8583 Jul 25 19:08	8° \mathbb{Q} 50'30	5.90647 AU
	8578 Jan 12 12:19	15° \mathbb{A}		morning rise	8583 Aug 07 00:42	11° \mathbb{Q} 49'14	
evening set	8578 Jan 24 21:37	17° \mathbb{A} 37'05			8583 Aug 20 06:53	15° \mathbb{Q}	
max. Earth dist.	8578 Feb 05 05:37	20° \mathbb{A} 03'10	6.48250 AU		8583 Nov 06 04:44	0° \mathbb{P}	
				retrograde	8583 Dec 17 03:03	2° \mathbb{P} 39'19	
conjunction	8578 Feb 06 19:36	20° \mathbb{A} 23'38	0°23'16		8584 Jan 27 03:01	30° \mathbb{R} \mathbb{Q}	
minimum elong	8578 Feb 06 19:37	20° \mathbb{A} 23'38	0°23'24	min. Earth dist.	8584 Feb 13 05:51	27° \mathbb{Q} 46'39	3.93195 AU
morning rise	8578 Feb 19 15:18	23° \mathbb{A} 09'15		opposition	8584 Feb 14 12:32	27° \mathbb{Q} 36'14	-0°26'21
	8578 Mar 24 21:15	0° \mathbb{H}		direct	8584 Apr 12 09:50	22° \mathbb{Q} 40'44	
retrograde	8578 Jun 20 06:54	9° \mathbb{H} 53'17			8584 Jun 21 00:03	0° \mathbb{P}	
opposition	8578 Aug 20 08:07	5° \mathbb{H} 00'23	0°17'04	evening set	8584 Aug 17 06:00	12° \mathbb{P} 32'11	
min. Earth dist.	8578 Aug 21 16:55	4° \mathbb{H} 49'55	4.44598 AU				
	8578 Oct 19 08:40	30° \mathbb{R} \mathbb{A}		conjunction	8584 Aug 30 21:08	15° \mathbb{P} 47'16	-0°02'47
direct	8578 Oct 21 23:35	29° \mathbb{A} 59'23		minimum elong	8584 Aug 30 21:10	15° \mathbb{P} 47'17	0°02'51
	8578 Oct 24 14:30	0° \mathbb{H}		behind sun begin	8584 Aug 30 12:48	15° \mathbb{P} 42'19	
desc. node	8579 Feb 20 05:24	16° \mathbb{H} 36'58		behind sun end	8584 Aug 31 05:32	15° \mathbb{P} 52'16	
evening set	8579 Feb 24 05:29	17° \mathbb{H} 29'17		max. Earth dist.	8584 Sep 02 06:18	16° \mathbb{P} 21'25	5.98205 AU
max. Earth dist.	8579 Mar 06 19:28	19° \mathbb{H} 48'52	6.39016 AU	morning rise	8584 Sep 13 14:05	19° \mathbb{P} 03'06	

asc. node	8584 Oct 06 07:22	24° \mathbb{M} 18'43		max. Earth dist.	8591 Mar 11 00:46	24° \mathbb{H} 11'41	6.37097 AU
	8584 Nov 02 02:54	0° \mathbb{L}					
retrograde	8585 Jan 21 14:11	9° \mathbb{L} 05'21		conjunction	8591 Mar 13 07:24	24° \mathbb{H} 41'57	-0°04'46
min. Earth dist.	8585 Mar 20 12:19	4° \mathbb{L} 13'58	4.05184 AU	minimum elong	8591 Mar 13 07:23	24° \mathbb{H} 41'56	0°04'45
opposition	8585 Mar 22 02:36	4° \mathbb{L} 00'57	0°18'23	behind sun begin	8591 Mar 12 23:36	24° \mathbb{H} 37'39	
	8585 Apr 25 20:12	30° \mathbb{R} \mathbb{M}		behind sun end	8591 Mar 13 15:10	24° \mathbb{H} 46'14	
direct	8585 May 19 15:07	29° \mathbb{M} 03'08		morning rise	8591 Mar 26 00:48	27° \mathbb{H} 31'00	
	8585 Jun 12 13:13	0° \mathbb{L}			8591 Apr 06 09:29	0° \mathbb{Y}	
evening set	8585 Sep 23 07:25	18° \mathbb{L} 10'39		retrograde	8591 Jul 26 22:12	15° \mathbb{Y} 02'27	
				opposition	8591 Sep 25 19:12	10° \mathbb{Y} 09'27	-0°25'26
conjunction	8585 Oct 06 22:59	21° \mathbb{L} 18'52	0°25'33	min. Earth dist.	8591 Sep 27 10:48	9° \mathbb{Y} 56'46	4.29597 AU
minimum elong	8585 Oct 06 22:57	21° \mathbb{L} 18'51	0°25'37	direct	8591 Nov 26 15:30	5° \mathbb{Y} 09'58	
max. Earth dist.	8585 Oct 09 09:18	21° \mathbb{L} 52'24	6.13394 AU	evening set	8592 Mar 31 03:27	23° \mathbb{Y} 25'28	
morning rise	8585 Oct 20 15:08	24° \mathbb{L} 27'00		max. Earth dist.	8592 Apr 10 16:58	25° \mathbb{Y} 50'36	6.21254 AU
	8585 Nov 14 14:40	0° \mathbb{M}					
retrograde	8586 Feb 24 05:09	13° \mathbb{M} 14'43		conjunction	8592 Apr 12 21:56	26° \mathbb{Y} 21'03	-0°29'11
min. Earth dist.	8586 Apr 23 18:25	8° \mathbb{M} 22'51	4.21966 AU	minimum elong	8592 Apr 12 21:55	26° \mathbb{Y} 21'03	0°29'16
opposition	8586 Apr 25 03:43	8° \mathbb{M} 11'39	0°53'31	morning rise	8592 Apr 25 16:07	29° \mathbb{Y} 16'49	
direct	8586 Jun 23 20:37	3° \mathbb{M} 11'40			8592 Apr 28 19:50	0° \mathbb{B}	
	8586 Sep 27 22:37	15° \mathbb{M}			8592 Jul 16 14:03	15° \mathbb{B}	
evening set	8586 Oct 28 05:17	21° \mathbb{M} 28'13		retrograde	8592 Aug 29 20:59	17° \mathbb{B} 56'46	
					8592 Oct 13 16:52	15° \mathbb{R} \mathbb{B}	
conjunction	8586 Nov 10 17:18	24° \mathbb{M} 27'30	0°43'45	opposition	8592 Oct 29 06:48	13° \mathbb{B} 02'26	-0°57'45
minimum elong	8586 Nov 10 17:17	24° \mathbb{M} 27'29	0°43'54	min. Earth dist.	8592 Oct 30 15:47	12° \mathbb{B} 51'43	4.12575 AU
max. Earth dist.	8586 Nov 12 09:00	24° \mathbb{M} 49'30	6.30343 AU	direct	8592 Dec 28 21:12	8° \mathbb{B} 05'07	
morning rise	8586 Nov 24 04:24	27° \mathbb{M} 26'02			8593 Mar 08 01:32	15° \mathbb{B}	
	8586 Dec 05 23:28	0° \mathbb{J}		evening set	8593 May 03 18:40	27° \mathbb{B} 12'16	
retrograde	8587 Mar 27 14:33	15° \mathbb{J} 04'19		max. Earth dist.	8593 May 15 05:37	29° \mathbb{B} 55'42	6.04509 AU
opposition	8587 May 26 22:18	10° \mathbb{J} 04'23	1°09'29		8593 May 15 12:50	0° \mathbb{I}	
min. Earth dist.	8587 May 26 05:05	10° \mathbb{J} 10'03	4.37677 AU				
direct	8587 Jul 27 00:03	5° \mathbb{J} 03'07		conjunction	8593 May 16 16:00	0° \mathbb{I} 16'12	-0°45'23
evening set	8587 Nov 29 21:31	22° \mathbb{J} 38'32		minimum elong	8593 May 16 15:59	0° \mathbb{I} 16'11	0°45'33
				morning rise	8593 May 29 14:19	3° \mathbb{I} 20'58	
conjunction	8587 Dec 13 04:14	25° \mathbb{J} 30'18	0°48'02	retrograde	8593 Oct 06 06:46	23° \mathbb{I} 17'04	
minimum elong	8587 Dec 13 04:14	25° \mathbb{J} 30'18	0°48'15	opposition	8593 Dec 05 05:07	18° \mathbb{I} 20'12	-1°11'58
max. Earth dist.	8587 Dec 13 15:29	25° \mathbb{J} 36'22	6.43645 AU	min. Earth dist.	8593 Dec 05 17:20	18° \mathbb{I} 16'10	3.97642 AU
morning rise	8587 Dec 26 09:12	28° \mathbb{J} 21'02		direct	8594 Feb 02 07:08	13° \mathbb{I} 25'06	
	8588 Jan 03 02:58	0° \mathbb{Z}			8594 May 26 02:08	0° \mathbb{E}	
retrograde	8588 Apr 25 12:19	15° \mathbb{Z} 12'31		evening set	8594 Jun 08 18:28	3° \mathbb{E} 16'48	
opposition	8588 Jun 25 05:50	10° \mathbb{Z} 15'56	1°05'24				
min. Earth dist.	8588 Jun 25 07:47	10° \mathbb{Z} 15'18	4.47769 AU	conjunction	8594 Jun 21 21:45	6° \mathbb{E} 28'52	-0°45'34
direct	8588 Aug 26 08:43	5° \mathbb{Z} 14'10		minimum elong	8594 Jun 21 21:46	6° \mathbb{E} 28'53	0°45'46
evening set	8588 Dec 29 21:32	22° \mathbb{Z} 27'14		max. Earth dist.	8594 Jun 21 21:02	6° \mathbb{E} 28'26	5.92841 AU
				morning rise	8594 Jul 05 03:22	9° \mathbb{E} 42'20	
conjunction	8589 Jan 11 23:09	25° \mathbb{Z} 14'37	0°39'09		8594 Oct 27 16:21	0° \mathbb{O}	
minimum elong	8589 Jan 11 23:10	25° \mathbb{Z} 14'37	0°39'20	retrograde	8594 Nov 14 03:47	0° \mathbb{O} 30'11	
max. Earth dist.	8589 Jan 11 06:01	25° \mathbb{Z} 05'27	6.49830 AU		8594 Dec 01 14:10	30° \mathbb{R} \mathbb{E}	
morning rise	8589 Jan 24 22:23	28° \mathbb{Z} 00'53		opposition	8595 Jan 12 15:55	25° \mathbb{E} 29'53	-0°58'08
	8589 Feb 03 08:11	0° \mathbb{A}		min. Earth dist.	8595 Jan 12 02:40	25° \mathbb{E} 34'20	3.90611 AU
retrograde	8589 May 25 03:50	14° \mathbb{A} 34'56		direct	8595 Mar 11 18:31	20° \mathbb{E} 35'29	
opposition	8589 Jul 25 03:28	9° \mathbb{A} 40'56	0°44'34		8595 May 30 14:17	0° \mathbb{O}	
min. Earth dist.	8589 Jul 26 00:14	9° \mathbb{A} 34'17	4.49771 AU	evening set	8595 Jul 16 12:27	10° \mathbb{O} 42'50	
direct	8589 Sep 25 20:00	4° \mathbb{A} 39'21					
	8589 Dec 26 15:46	15° \mathbb{A}		conjunction	8595 Jul 29 23:14	13° \mathbb{O} 59'16	-0°27'27
evening set	8590 Jan 29 02:29	21° \mathbb{A} 51'50		minimum elong	8595 Jul 29 23:15	13° \mathbb{O} 59'17	0°27'37
max. Earth dist.	8590 Feb 09 05:44	24° \mathbb{A} 15'44	6.47470 AU	max. Earth dist.	8595 Jul 31 12:42	14° \mathbb{O} 22'07	5.91174 AU
					8595 Aug 03 02:50	15° \mathbb{O}	
conjunction	8590 Feb 10 23:48	24° \mathbb{A} 38'27	0°20'06	morning rise	8595 Aug 12 12:22	17° \mathbb{O} 16'57	
minimum elong	8590 Feb 10 23:49	24° \mathbb{A} 38'28	0°20'14		8595 Oct 08 18:00	0° \mathbb{M}	
morning rise	8590 Feb 23 19:13	27° \mathbb{A} 24'14		retrograde	8595 Dec 22 10:58	8° \mathbb{M} 02'34	
	8590 Mar 08 00:09	0° \mathbb{H}		min. Earth dist.	8596 Feb 18 11:26	3° \mathbb{M} 10'11	3.94571 AU
retrograde	8590 Jun 24 16:10	14° \mathbb{H} 11'55		opposition	8596 Feb 19 19:53	2° \mathbb{M} 59'10	-0°20'06
opposition	8590 Aug 24 16:15	9° \mathbb{H} 19'06	0°12'00		8596 Mar 14 12:42	30° \mathbb{R} \mathbb{O}	
min. Earth dist.	8590 Aug 26 03:40	9° \mathbb{H} 07'47	4.43200 AU	direct	8596 Apr 17 18:15	28° \mathbb{O} 03'26	
direct	8590 Oct 26 07:28	4° \mathbb{H} 18'09			8596 May 21 22:56	0° \mathbb{M}	
desc. node	8590 Dec 30 12:51	10° \mathbb{H} 03'25		asc. node	8596 Aug 15 14:39	16° \mathbb{M} 10'40	
evening set	8591 Feb 28 12:27	21° \mathbb{H} 52'25		evening set	8596 Aug 22 13:41	17° \mathbb{M} 49'00	

conjunction	8596 Sep 05 05:04	21° \mathbb{M} 03'16	0°01'35
minimum elong	8596 Sep 05 05:03	21° \mathbb{M} 03'15	0°01'33
behind sun begin	8596 Sep 04 20:38	20° \mathbb{M} 58'17	
behind sun end	8596 Sep 05 13:27	21° \mathbb{M} 08'13	
max. Earth dist.	8596 Sep 07 15:44	21° \mathbb{M} 38'06	6.00257 AU
morning rise	8596 Sep 18 22:15	24° \mathbb{M} 18'08	
	8596 Oct 13 17:46	0° \mathbb{L}	
retrograde	8597 Jan 26 10:03	14° \mathbb{L} 09'34	
min. Earth dist.	8597 Mar 25 09:39	9° \mathbb{L} 18'31	4.07678 AU
opposition	8597 Mar 27 00:51	9° \mathbb{L} 05'12	0°24'12
direct	8597 May 24 16:30	4° \mathbb{L} 07'03	
evening set	8597 Sep 28 07:43	23° \mathbb{L} 06'16	
conjunction	8597 Oct 11 22:53	26° \mathbb{L} 13'06	0°28'49
minimum elong	8597 Oct 11 22:52	26° \mathbb{L} 13'05	0°28'55
max. Earth dist.	8597 Oct 14 06:54	26° \mathbb{L} 45'07	6.16092 AU
morning rise	8597 Oct 25 14:23	29° \mathbb{L} 19'43	
	8597 Oct 28 13:40	0° \mathbb{M}	
	8598 Jan 15 23:14	15° \mathbb{M}	
retrograde	8598 Feb 28 17:41	17° \mathbb{M} 55'56	
	8598 Apr 13 10:22	15° \mathbb{R} \mathbb{M}	
min. Earth dist.	8598 Apr 28 10:06	13° \mathbb{M} 03'30	4.24604 AU
opposition	8598 Apr 29 16:37	12° \mathbb{M} 53'16	0°56'56
direct	8598 Jun 28 15:16	7° \mathbb{M} 53'04	
	8598 Sep 08 09:24	15° \mathbb{M}	
evening set	8598 Nov 01 20:53	26° \mathbb{M} 02'13	
conjunction	8598 Nov 15 08:13	29° \mathbb{M} 00'14	0°45'10
minimum elong	8598 Nov 15 08:12	29° \mathbb{M} 00'13	0°45'20
max. Earth dist.	8598 Nov 16 20:34	29° \mathbb{M} 20'17	6.32704 AU
	8598 Nov 19 20:37	0° \mathbb{J}	
morning rise	8598 Nov 28 18:26	1° \mathbb{J} 57'26	
retrograde	8599 Mar 31 18:03	19° \mathbb{J} 27'08	
opposition	8599 May 31 04:09	14° \mathbb{J} 27'42	1°10'01
min. Earth dist.	8599 May 30 13:03	14° \mathbb{J} 32'41	4.39611 AU
direct	8599 Jul 31 08:56	9° \mathbb{J} 26'20	
evening set	8599 Dec 04 06:03	26° \mathbb{J} 57'16	
conjunction	8599 Dec 17 12:02	29° \mathbb{J} 48'12	0°47'31
minimum elong	8599 Dec 17 12:03	29° \mathbb{J} 48'12	0°47'44
max. Earth dist.	8599 Dec 17 18:46	29° \mathbb{J} 51'50	6.45017 AU
	8599 Dec 18 09:55	0° \mathbb{Z}	
morning rise	8599 Dec 30 16:06	2° \mathbb{Z} 38'05	
retrograde	8600 Apr 30 15:12	19° \mathbb{Z} 25'27	
opposition	8600 Jun 30 08:55	14° \mathbb{Z} 29'22	1°03'24
min. Earth dist.	8600 Jun 30 14:20	14° \mathbb{Z} 27'37	4.48508 AU
direct	8600 Aug 31 14:43	9° \mathbb{Z} 27'37	
evening set	8601 Jan 04 02:14	26° \mathbb{Z} 39'37	
max. Earth dist.	8601 Jan 16 04:32	29° \mathbb{Z} 14'38	6.49875 AU
conjunction	8601 Jan 17 03:08	29° \mathbb{Z} 26'44	0°37'01
minimum elong	8601 Jan 17 03:09	29° \mathbb{Z} 26'44	0°37'12
	8601 Jan 19 17:15	0° \mathbb{X}	
morning rise	8601 Jan 30 01:54	2° \mathbb{X} 12'48	
	8601 Apr 09 01:11	15° \mathbb{X}	
retrograde	8601 May 30 08:24	18° \mathbb{X} 47'31	
	8601 Jul 21 14:47	15° \mathbb{R} \mathbb{X}	
opposition	8601 Jul 30 07:31	13° \mathbb{X} 53'46	0°40'37
min. Earth dist.	8601 Jul 31 07:03	13° \mathbb{X} 46'14	4.49145 AU
direct	8601 Oct 01 00:13	8° \mathbb{X} 52'11	
	8601 Dec 08 03:45	15° \mathbb{X}	