




















































































































superior conj	4600 Apr 28 19:20	9°♄30'25	-1°11'29	superior conj	4601 Apr 11 19:18	22°♄16'02	-1°38'08
minimum elong	4600 Apr 28 23:13	9°♄49'33	1°10'51	minimum elong	4601 Apr 12 00:09	22°♄38'54	1°37'33
asc. node	4600 May 06 08:00	24°♄39'27			4601 Apr 15 20:28	0°♄	
evening rise	4600 May 07 01:51	26°♄09'38		evening rise	4601 Apr 20 22:47	9°♄55'43	
	4600 May 08 23:52	0°♄		asc. node	4601 Apr 23 05:03	14°♄18'37	
evening max el	4600 May 24 08:01	24°♄14'27	19°39'26		4601 May 02 04:12	0°♄	
retrograde	4600 Jun 03 02:30	29°♄00'19		evening max el	4601 May 07 06:48	6°♄19'45	18°48'24
evening set	4600 Jun 05 01:08	28°♄49'51		retrograde	4601 May 15 12:41	10°♄22'24	
desc. node	4600 Jun 12 00:03	25°♄53'45		evening set	4601 May 17 15:55	10°♄07'10	
inferior conj	4600 Jun 13 19:45	24°♄46'33	-0°32'29	inferior conj	4601 May 25 14:58	5°♄47'06	1°12'44
minimum elong	4600 Jun 13 18:16	24°♄48'51	0°31'57	minimum elong	4601 May 25 17:35	5°♄42'19	1°11'50
min. Earth dist.	4600 Jun 16 04:00	23°♄18'40	0.55572 AU	min. Earth dist.	4601 May 28 20:24	3°♄26'55	0.57116 AU
morning rise	4600 Jun 22 09:02	20°♄14'47		desc. node	4601 May 29 21:05	2°♄45'07	
direct	4600 Jun 26 21:01	19°♄29'46		morning rise	4601 Jun 02 15:59	0°♄39'10	
morning max el	4600 Jul 10 19:53	26°♄28'09	24°40'35		4601 Jun 04 10:45	30°♄	
	4600 Jul 14 05:09	0°♄		direct	4601 Jun 08 02:48	29°♄27'02	
asc. node	4600 Aug 02 07:14	0°♄28'19			4601 Jun 11 19:41	0°♄	
	4600 Aug 02 01:37	0°♄		morning max el	4601 Jun 22 11:09	6°♄56'09	26°13'03
morning set	4600 Aug 05 11:19	7°♄02'30			4601 Jul 09 12:52	0°♄	
				asc. node	4601 Jul 20 04:17	20°♄17'26	
superior conj	4600 Aug 12 10:00	22°♄06'18	1°28'20	morning set	4601 Jul 20 22:16	21°♄52'04	
minimum elong	4600 Aug 12 07:53	21°♄54'43	1°28'06		4601 Jul 24 16:48	0°♄	
max. Earth dist.	4600 Aug 14 01:45	25°♄42'14	1.32784 AU				
	4600 Aug 16 01:45	0°♄		superior conj	4601 Jul 27 21:17	7°♄00'50	1°12'55
evening rise	4600 Aug 19 15:57	7°♄29'57		minimum elong	4601 Jul 27 18:57	6°♄48'02	1°12'33
	4600 Aug 31 18:09	0°♄		max. Earth dist.	4601 Jul 28 11:05	8°♄16'54	1.32170 AU
desc. node	4600 Sep 07 23:20	11°♄17'30		evening rise	4601 Aug 03 19:59	22°♄02'12	
evening max el	4600 Sep 21 16:52	28°♄01'03	27°26'46		4601 Aug 07 17:58	0°♄	
	4600 Sep 23 22:10	0°♄		desc. node	4601 Aug 25 20:21	0°♄00'02	
retrograde	4600 Oct 05 09:44	5°♄16'42			4601 Aug 25 20:21	0°♄	
evening set	4600 Oct 12 14:00	2°♄43'34		evening max el	4601 Sep 03 22:56	10°♄27'50	27°05'49
	4600 Oct 15 20:42	30°♄		retrograde	4601 Sep 17 19:42	17°♄39'55	
min. Earth dist.	4600 Oct 16 05:36	29°♄39'02	0.63120 AU	evening set	4601 Sep 24 21:30	15°♄25'59	
inferior conj	4600 Oct 18 23:10	26°♄58'07	-3°15'19	min. Earth dist.	4601 Sep 28 13:16	12°♄44'05	0.61177 AU
minimum elong	4600 Oct 19 04:38	26°♄44'41	3°13'31	inferior conj	4601 Oct 01 16:26	10°♄01'24	-4°12'35
morning rise	4600 Oct 25 20:47	21°♄45'07		minimum elong	4601 Oct 01 22:35	9°♄48'04	4°11'03
direct	4600 Oct 28 06:43	21°♄17'40		morning rise	4601 Oct 09 01:33	5°♄08'57	
asc. node	4600 Oct 29 06:28	21°♄22'23		direct	4601 Oct 11 09:37	4°♄46'45	
morning max el	4600 Nov 03 22:10	24°♄43'24	17°49'50	asc. node	4601 Oct 16 03:30	6°♄22'19	
	4600 Nov 08 05:49	0°♄		morning max el	4601 Oct 18 12:36	8°♄20'09	17°58'23
morning set	4600 Nov 20 04:29	19°♄51'05			4601 Nov 01 13:20	0°♄	
	4600 Nov 26 00:22	0°♄		morning set	4601 Nov 03 06:57	3°♄11'03	
superior conj	4600 Dec 02 01:08	10°♄12'50	0°20'12	superior conj	4601 Nov 13 12:18	21°♄40'10	0°56'30
minimum elong	4600 Dec 02 03:09	10°♄21'14	0°19'55	minimum elong	4601 Nov 13 16:17	21°♄57'38	0°55'59
desc. node	4600 Dec 04 22:38	14°♄59'39			4601 Nov 18 08:28	0°♄	
max. Earth dist.	4600 Dec 08 13:28	20°♄51'39	1.43942 AU	max. Earth dist.	4601 Nov 21 02:11	4°♄34'40	1.42334 AU
	4600 Dec 14 07:57	0°♄		desc. node	4601 Nov 21 19:38	5°♄46'40	
evening rise	4600 Dec 17 08:40	4°♄42'21		evening rise	4601 Nov 27 03:21	14°♄22'31	
	4601 Jan 03 07:31	0°♄			4601 Dec 07 07:22	0°♄	
evening max el	4601 Jan 16 00:46	16°♄17'59	21°02'20		4601 Dec 29 22:09	0°♄	
retrograde	4601 Jan 24 12:55	21°♄20'03		evening max el	4601 Dec 29 19:16	29°♄52'42	22°17'45
asc. node	4601 Jan 25 05:45	21°♄17'23		retrograde	4602 Jan 08 09:28	5°♄35'06	
evening set	4601 Jan 28 15:13	19°♄45'06		asc. node	4602 Jan 12 02:46	4°♄21'53	
inferior conj	4601 Feb 02 23:30	13°♄32'20	2°36'27	evening set	4602 Jan 12 22:49	3°♄44'29	
minimum elong	4601 Feb 02 21:03	13°♄40'46	2°35'46		4602 Jan 16 09:13	30°♄	
min. Earth dist.	4601 Feb 03 09:06	12°♄59'12	0.67770 AU	inferior conj	4602 Jan 18 07:15	27°♄23'20	1°57'56
morning rise	4601 Feb 08 02:43	7°♄19'23		minimum elong	4602 Jan 18 05:00	27°♄31'08	1°57'10
direct	4601 Feb 13 10:34	4°♄58'51		min. Earth dist.	4602 Jan 18 05:07	27°♄30'47	0.68052 AU
morning max el	4601 Feb 24 02:55	11°♄20'29	23°42'57	morning rise	4602 Jan 23 11:05	21°♄13'05	
desc. node	4601 Mar 02 21:53	19°♄07'48		direct	4602 Jan 28 04:09	19°♄14'43	
	4601 Mar 10 23:54	0°♄		morning max el	4602 Feb 06 14:13	24°♄47'02	22°14'32
	4601 Mar 30 07:49	0°♄			4602 Feb 11 06:05	0°♄	
morning set	4601 Mar 31 12:20	2°♄00'55		desc. node	4602 Feb 17 18:53	8°♄29'57	
max. Earth dist.	4601 Apr 04 09:47	8°♄46'10	1.38710 AU		4602 Mar 04 11:08	0°♄	

morning set	4602 Mar 11 22:30	11° K 49'04		superior conj	4603 Mar 06 09:11	14° K 57'53	-2°08'13
max. Earth dist.	4602 Mar 17 06:53	20° K 39'15	1.40889 AU	minimum elong	4603 Mar 06 09:50	15° K 00'39	2°08'13
	4602 Mar 22 17:21	0° Y			4603 Mar 15 01:21	0° Y	
				evening rise	4603 Mar 18 04:20	5° Y 33'27	
superior conj	4602 Mar 25 01:32	4° Y 08'34	-1°58'41	asc. node	4603 Mar 27 23:05	22° Y 31'23	
minimum elong	4602 Mar 25 05:44	4° Y 27'19	1°58'25		4603 Apr 02 05:00	0° B	
evening rise	4602 Apr 04 08:56	23° Y 06'33		evening max el	4603 Apr 04 01:03	2° B 00'39	18°06'43
	4602 Apr 08 01:57	0° B		retrograde	4603 Apr 10 14:57	5° B 23'23	
asc. node	4602 Apr 10 02:04	3° B 38'02		evening set	4603 Apr 13 07:27	4° B 49'25	
evening max el	4602 Apr 20 13:37	18° B 58'03	18°17'42	inferior conj	4603 Apr 19 19:50	29° Y 48'56	3°12'29
retrograde	4602 Apr 27 17:47	22° B 32'49		minimum elong	4603 Apr 19 22:19	29° Y 42'48	3°12'06
evening set	4602 Apr 30 03:45	22° B 09'22			4603 Apr 19 15:20	30° R Y	
inferior conj	4602 May 07 07:44	17° B 29'14	2°27'52	min. Earth dist.	4603 Apr 22 22:56	26° Y 45'24	0.61361 AU
minimum elong	4602 May 07 11:18	17° B 21'37	2°26'57	morning rise	4603 Apr 26 11:17	23° Y 52'02	
min. Earth dist.	4602 May 10 18:02	14° B 34'56	0.59159 AU	direct	4603 May 03 05:37	21° Y 32'31	
morning rise	4602 May 14 15:57	11° B 51'24		desc. node	4603 May 03 15:08	21° Y 32'58	
desc. node	4602 May 16 18:06	10° B 52'15		morning max el	4603 May 17 10:43	29° Y 30'32	27°50'28
direct	4602 May 20 22:32	10° B 04'30			4603 May 17 22:26	0° B	
morning max el	4602 Jun 04 07:51	17° B 53'02	27°19'30		4603 Jun 08 09:12	0° II	
	4602 Jun 14 10:15	0° II		morning set	4603 Jun 19 10:51	20° II 57'09	
	4602 Jul 02 02:01	0° E		asc. node	4603 Jun 23 22:20	0° E 23'28	
morning set	4602 Jul 05 06:45	6° E 32'23			4603 Jun 23 17:59	0° E	
asc. node	4602 Jul 07 01:19	10° E 17'27		max. Earth dist.	4603 Jun 25 08:16	3° E 27'11	1.32181 AU
superior conj	4602 Jul 12 09:03	21° E 54'07	0°53'12	superior conj	4603 Jun 26 19:36	6° E 40'06	0°29'49
minimum elong	4602 Jul 12 07:00	21° E 42'49	0°52'49	minimum elong	4603 Jun 26 18:17	6° E 32'53	0°29'31
max. Earth dist.	4602 Jul 11 22:30	20° E 55'54	1.31966 AU	evening rise	4603 Jul 03 15:48	21° E 34'31	
	4602 Jul 16 01:18	0° O			4603 Jul 07 17:24	0° O	
evening rise	4602 Jul 19 04:37	6° O 46'02			4603 Jul 26 16:28	0° H	
	4602 Jul 31 07:45	0° H		evening max el	4603 Jul 29 14:09	3° H 01'10	24°50'22
desc. node	4602 Aug 12 17:22	17° H 41'42		desc. node	4603 Jul 30 14:23	3° H 57'29	
evening max el	4602 Aug 16 22:06	22° H 07'34	26°11'50	retrograde	4603 Aug 12 12:19	10° H 03'12	
retrograde	4602 Aug 30 21:23	29° H 16'20		evening set	4603 Aug 17 20:09	8° H 59'03	
evening set	4602 Sep 06 08:54	27° H 33'57		min. Earth dist.	4603 Aug 23 01:35	6° H 12'24	0.57144 AU
min. Earth dist.	4602 Sep 10 11:04	24° H 58'58	0.59101 AU	inferior conj	4603 Aug 25 22:25	4° H 19'31	-5°14'31
inferior conj	4602 Sep 13 17:12	22° H 31'39	-4°56'42	minimum elong	4603 Aug 25 22:20	4° H 19'39	5°14'31
minimum elong	4602 Sep 13 21:49	22° H 22'53	4°56'03	morning rise	4603 Sep 03 02:57	0° H 11'40	
morning rise	4602 Sep 21 12:58	18° H 01'58			4603 Sep 04 02:42	30° R O	
direct	4602 Sep 23 22:25	17° H 42'26		direct	4603 Sep 05 17:12	29° O 52'36	
morning max el	4602 Oct 01 21:29	21° H 33'03	18°26'47		4603 Sep 07 07:01	0° H	
asc. node	4602 Oct 03 00:32	22° H 42'10		morning max el	4603 Sep 14 21:24	4° H 11'21	19°16'28
	4602 Oct 08 10:26	0° A		asc. node	4603 Sep 19 21:34	10° H 06'05	
morning set	4602 Oct 17 22:16	17° A 07'34			4603 Oct 01 04:32	0° A	
	4602 Oct 24 15:52	0° M		morning set	4603 Oct 01 22:27	1° A 28'55	
superior conj	4602 Oct 26 22:24	4° M 14'27	1°21'58	superior conj	4603 Oct 10 01:54	17° A 39'17	1°37'10
minimum elong	4602 Oct 27 01:59	4° M 31'02	1°21'35	minimum elong	4603 Oct 10 04:03	17° A 49'42	1°37'02
max. Earth dist.	4602 Nov 03 09:22	17° M 34'59	1.40355 AU	max. Earth dist.	4603 Oct 16 13:52	29° A 54'35	1.38257 AU
evening rise	4602 Nov 07 18:19	24° M 59'09			4603 Oct 16 15:04	0° M	
desc. node	4602 Nov 08 16:39	26° M 31'23		evening rise	4603 Oct 20 08:26	6° M 38'49	
	4602 Nov 10 19:51	0° J		desc. node	4603 Oct 26 13:40	17° M 09'21	
	4602 Dec 01 02:34	0° Z			4603 Nov 03 18:48	0° J	
evening max el	4602 Dec 12 09:53	13° Z 30'51	23°37'36	evening max el	4603 Nov 24 22:43	27° J 12'49	24°55'29
retrograde	4602 Dec 23 03:05	19° Z 50'40			4603 Nov 28 00:30	0° Z	
evening set	4602 Dec 28 04:56	17° Z 44'20		retrograde	4603 Dec 06 16:33	4° Z 01'45	
asc. node	4602 Dec 29 23:46	15° Z 58'52		evening set	4603 Dec 12 07:57	1° Z 40'42	
min. Earth dist.	4603 Jan 02 01:53	12° Z 03'36	0.67967 AU		4603 Dec 14 01:24	30° R J	
inferior conj	4603 Jan 02 14:59	11° Z 18'50	1°12'17	asc. node	4603 Dec 16 20:48	26° J 34'38	
minimum elong	4603 Jan 02 13:24	11° Z 24'17	1°11'40	min. Earth dist.	4603 Dec 16 21:00	26° J 34'01	0.67529 AU
morning rise	4603 Jan 07 21:49	5° Z 13'00		inferior conj	4603 Dec 17 20:53	25° J 15'19	0°20'28
direct	4603 Jan 12 00:51	3° Z 37'21		minimum elong	4603 Dec 17 20:23	25° J 16'59	0°20'15
morning max el	4603 Jan 20 07:27	8° Z 23'42	20°53'20	morning rise	4603 Dec 23 08:58	19° J 16'07	
desc. node	4603 Feb 04 15:55	28° Z 21'22		direct	4603 Dec 26 23:21	18° J 01'32	
	4603 Feb 05 18:55	0° A		morning max el	4604 Jan 03 08:32	22° J 11'20	19°44'35
morning set	4603 Feb 19 05:44	20° A 23'42			4604 Jan 09 20:18	0° Z	
	4603 Feb 25 07:15	0° K		greatest brilliancy	4604 Jan 16 11:50	9° Z 28'40	-0.7m
max. Earth dist.	4603 Feb 27 10:21	3° K 26'30	1.42848 AU	desc. node	4604 Jan 22 12:56	18° Z 33'34	

morning set	4604 Jan 29 01:51	28°  34'35		desc. node	4605 Jan 08 09:57	9°  00'35	
	4604 Jan 29 23:59	0° 			4605 Jan 21 19:25	0° 	
max. Earth dist.	4604 Feb 09 21:43	17°  04'23	1.44328 AU	max. Earth dist.	4605 Jan 22 14:51	1°  16'16	1.45155 AU
superior conj	4604 Feb 14 15:12	24°  38'49	-2°01'16	superior conj	4605 Jan 23 23:42	3°  25'22	-1°34'36
minimum elong	4604 Feb 14 09:45	24°  16'52	2°01'00	minimum elong	4605 Jan 23 14:22	2°  48'41	1°33'42
	4604 Feb 17 22:13	0° 		evening rise	4605 Feb 08 06:03	27°  45'01	
evening rise	4604 Feb 28 04:33	17°  07'56			4605 Feb 09 15:26	0° 	
	4604 Mar 06 19:23	0° 		asc. node	4605 Feb 28 17:09	28°  04'37	
asc. node	4604 Mar 13 20:06	10°  05'32		evening max el	4605 Mar 01 01:30	28°  04'10	18°41'06
evening max el	4604 Mar 17 13:57	15°  09'15	18°14'46		4605 Mar 02 08:54	0° 	
retrograde	4604 Mar 23 23:55	18°  04'23		retrograde	4605 Mar 07 16:31	2°  09'26'31	
evening set	4604 Mar 26 22:32	17°  05'8'35		evening set	4605 Mar 10 21:26	1°  09'28'06	
inferior conj	4604 Apr 01 23:18	12°  09'38'42	3°32'17		4605 Mar 12 19:39	30°  08'00'00	
minimum elong	4604 Apr 02 00:06	12°  09'36'28	3°32'14	inferior conj	4605 Mar 16 14:08	25°  05'50'22	3°33'10
min. Earth dist.	4604 Apr 04 12:43	9°  09'49'14	0.63424 AU	minimum elong	4605 Mar 16 13:25	25°  05'52'33	3°33'07
morning rise	4604 Apr 08 00:38	6°  09'31'20		min. Earth dist.	4605 Mar 18 11:54	23°  05'31'19	0.65166 AU
direct	4604 Apr 14 21:33	3°  09'49'46		morning rise	4605 Mar 22 04:54	19°  05'37'53	
desc. node	4604 Apr 19 12:10	4°  09'52'45		direct	4605 Mar 28 20:41	16°  05'47'49	
morning max el	4604 Apr 28 18:22	11°  09'48'23	27°43'57	desc. node	4605 Apr 06 09:13	20°  05'42'10	
	4604 May 13 04:29	0° 		morning max el	4605 Apr 11 04:18	24°  05'37'02	27°03'37
	4604 May 30 19:24	0° 			4605 Apr 16 01:12	0° 	
morning set	4604 Jun 02 08:21	4°  09'59'29			4605 May 06 14:48	0° 	
max. Earth dist.	4604 Jun 07 12:36	15°  09'39'10	1.32832 AU	morning set	4605 May 16 20:14	18°  05'29'40	
asc. node	4604 Jun 09 19:23	20°  09'31'25		max. Earth dist.	4605 May 21 07:45	27°  05'21'40	1.33939 AU
					4605 May 22 14:47	0° 	
superior conj	4604 Jun 10 03:08	21°  09'13'05	0°03'23	superior conj	4605 May 25 05:31	5°  05'25'42	-0°25'16
minimum elong	4604 Jun 10 02:58	21°  09'12'11	0°03'20	minimum elong	4605 May 25 06:50	5°  05'32'41	0°25'00
behind sun begin	4604 Jun 09 21:45	20°  09'44'11		asc. node	4605 May 27 16:26	10°  05'36'34	
behind sun end	4604 Jun 10 08:10	21°  09'40'12		evening rise	4605 Jun 01 14:11	20°  05'59'45	
	4604 Jun 14 04:32	0° 			4605 Jun 06 00:18	0° 	
evening rise	4604 Jun 17 03:38	6°  05'21'28		evening max el	4605 Jun 21 20:16	23°  05'55'02	21°39'22
	4604 Jun 29 16:08	0° 		desc. node	4605 Jul 03 08:27	0° 	
evening max el	4604 Jul 10 03:00	13°  05'26'40	23°14'15		4605 Jul 03 03:31	0° 	
desc. node	4604 Jul 16 11:24	18°  05'15'24		retrograde	4605 Jul 04 05:55	0° 	
retrograde	4604 Jul 23 14:26	20°  05'10'52			4605 Jul 05 08:34	30°  05'08'34	
evening set	4604 Jul 27 10:11	19°  05'38'56		evening set	4605 Jul 06 18:53	29°  05'48'13	
min. Earth dist.	4604 Aug 03 12:19	16°  05'25'14	0.55629 AU	inferior conj	4605 Jul 16 03:23	25°  05'46'56	-3°34'09
inferior conj	4604 Aug 05 07:53	15°  05'21'32	-4°49'55	minimum elong	4605 Jul 15 18:46	25°  05'58'58	3°31'39
minimum elong	4604 Aug 05 01:36	15°  05'30'46	4°48'57	min. Earth dist.	4605 Jul 15 22:34	25°  05'53'40	0.54860 AU
morning rise	4604 Aug 13 19:20	11°  05'29'05		morning rise	4605 Jul 24 19:53	21°  05'54'33	
direct	4604 Aug 16 17:12	11°  05'08'41		direct	4605 Jul 28 03:48	21°  05'30'23	
morning max el	4604 Aug 27 09:49	16°  05'06'46	20°27'56	morning max el	4605 Aug 09 10:32	27°  05'16'44	21°58'51
asc. node	4604 Sep 05 18:38	28°  05'20'05			4605 Aug 12 02:26	0° 	
	4604 Sep 06 18:23	0° 		asc. node	4605 Aug 23 15:41	17°  05'11'46	
morning set	4604 Sep 15 04:33	16°  05'07'20			4605 Aug 30 03:33	0° 	
	4604 Sep 21 22:08	0° 		morning set	4605 Aug 30 14:18	0° 	
superior conj	4604 Sep 22 18:02	1°  05'41'22	1°43'29	superior conj	4605 Sep 06 18:58	16°  05'09'15	1°42'23
minimum elong	4604 Sep 22 18:34	1°  05'44'01	1°43'29	minimum elong	4605 Sep 06 18:07	16°  05'04'49	1°42'22
max. Earth dist.	4604 Sep 27 20:57	11°  05'50'52	1.36283 AU	max. Earth dist.	4605 Sep 10 11:02	23°  05'45'31	1.34604 AU
evening rise	4604 Oct 01 19:13	19°  05'15'33			4605 Sep 13 13:52	0° 	
	4604 Oct 07 20:34	0° 		evening rise	4605 Sep 14 22:24	2°  05'38'23	
desc. node	4604 Oct 12 10:41	7°  05'36'06		desc. node	4605 Sep 29 07:43	27°  05'45'59	
	4604 Oct 27 21:26	0° 			4605 Sep 30 18:18	0° 	
evening max el	4604 Nov 06 11:19	10°  05'55'46	26°04'03	evening max el	4605 Oct 19 23:58	24°  05'32'39	26°55'52
retrograde	4604 Nov 19 01:03	18°  05'03'28			4605 Oct 27 01:00	0° 	
evening set	4604 Nov 25 06:08	15°  05'30'12		retrograde	4605 Nov 02 04:12	1°  05'49'31	
min. Earth dist.	4604 Nov 29 12:03	10°  05'58'47	0.66742 AU		4605 Nov 07 17:50	30°  05'08'00	
inferior conj	4604 Nov 30 23:07	9°  05'09'46	-0°36'33	evening set	4605 Nov 08 21:28	29°  05'09'12	
minimum elong	4604 Dec 01 00:05	9° 05'06'43	0°36'07	min. Earth dist.	4605 Nov 12 20:43	25° 05'13'31	0.65601 AU
asc. node	4604 Dec 02 17:52	7° 05'00'09		inferior conj	4605 Nov 14 19:37	22° 05'58'29	-1°37'20
morning rise	4604 Dec 06 18:31	3° 05'19'44		minimum elong	4605 Nov 14 22:22	22° 05'50'33	1°36'12
direct	4604 Dec 09 22:00	2° 05'23'13		asc. node	4605 Nov 19 14:56	18° 05'11'43	
morning max el	4604 Dec 16 17:05	6° 05'07'55	18°50'58	morning rise	4605 Nov 21 00:10	17° 05'20'32	
	4605 Jan 02 15:56	0°		direct	4605 Nov 23 18:50	16° 05'38'22	
morning set	4605 Jan 07 12:09	7° 05'35'08					

morning max el	4605 Nov 30 07:06	20° \mathbb{M} 08'42	18°13'41	morning set	4606 Nov 30 21:50	29° \mathbb{M} 52'35	
	4605 Dec 07 20:23	0° \mathbb{A}			4606 Nov 30 23:35	0° \mathbb{A}	
morning set	4605 Dec 19 02:59	18° \mathbb{A} 02'57		desc. node	4606 Dec 13 03:59	20° \mathbb{A} 22'08	
desc. node	4605 Dec 26 06:58	29° \mathbb{A} 38'11					
	4605 Dec 26 12:25	0° \mathbb{B}		superior conj	4606 Dec 13 21:18	21° \mathbb{A} 32'26	-0°05'02
				minimum elong	4606 Dec 13 20:43	21° \mathbb{A} 30'08	0°04'55
superior conj	4606 Jan 03 03:00	12° \mathbb{B} 05'00	-0°52'14	behind sun begin	4606 Dec 13 11:06	20° \mathbb{A} 51'01	
minimum elong	4606 Jan 02 20:31	11° \mathbb{B} 39'26	0°51'23	behind sun end	4606 Dec 14 06:21	22° \mathbb{A} 09'11	
max. Earth dist.	4606 Jan 05 10:17	15° \mathbb{B} 42'23	1.45245 AU	max. Earth dist.	4606 Dec 19 04:42	0° \mathbb{B} 03'23	1.44607 AU
	4606 Jan 14 13:42	0° \mathbb{C}			4606 Dec 19 03:50	0° \mathbb{B}	
evening rise	4606 Jan 19 09:07	7° \mathbb{C} 29'58		evening rise	4606 Dec 29 21:02	16° \mathbb{B} 43'03	
greatest brilliancy	4606 Jan 31 05:37	25° \mathbb{C} 51'24	-0.7m		4607 Jan 07 14:33	0° \mathbb{C}	
	4606 Feb 02 23:56	0° \mathbb{H}		evening max el	4607 Jan 26 12:27	25° \mathbb{C} 49'32	20°23'06
evening max el	4606 Feb 12 09:30	12° \mathbb{H} 17'14	19°24'32		4607 Feb 01 02:02	0° \mathbb{H}	
asc. node	4606 Feb 15 14:13	15° \mathbb{H} 01'02		asc. node	4607 Feb 02 11:15	0° \mathbb{H} 24'27	
retrograde	4606 Feb 19 13:18	16° \mathbb{H} 23'33		retrograde	4607 Feb 03 11:30	0° \mathbb{H} 29'58	
evening set	4606 Feb 23 01:20	15° \mathbb{H} 11'46			4607 Feb 05 18:23	30° \mathbb{R} \mathbb{C}	
inferior conj	4606 Feb 28 12:57	9° \mathbb{H} 18'23	3°19'41	evening set	4607 Feb 07 08:02	29° \mathbb{C} 03'54	
minimum elong	4606 Feb 28 11:10	9° \mathbb{H} 24'12	3°19'25	inferior conj	4607 Feb 12 16:58	22° \mathbb{C} 57'25	2°54'56
min. Earth dist.	4606 Mar 01 19:38	7° \mathbb{H} 38'27	0.66504 AU	minimum elong	4607 Feb 12 14:37	23° \mathbb{C} 05'25	2°54'23
morning rise	4606 Mar 05 20:44	3° \mathbb{H} 03'58		min. Earth dist.	4607 Feb 13 09:55	21° \mathbb{C} 59'46	0.67424 AU
direct	4606 Mar 12 02:11	0° \mathbb{H} 18'05		morning rise	4607 Feb 17 20:59	16° \mathbb{C} 43'18	
desc. node	4606 Mar 24 06:14	7° \mathbb{H} 24'54		direct	4607 Feb 23 13:10	14° \mathbb{C} 11'23	
morning max el	4606 Mar 24 14:09	7° \mathbb{H} 44'47	25°57'02	morning max el	4607 Mar 06 22:47	21° \mathbb{C} 00'35	24°33'59
	4606 Apr 10 22:38	0° \mathbb{Y}		desc. node	4607 Mar 11 03:14	25° \mathbb{C} 36'29	
	4606 Apr 29 01:50	0° \mathbb{B}			4607 Mar 14 17:03	0° \mathbb{H}	
morning set	4606 Apr 29 18:33	1° \mathbb{B} 16'50			4607 Apr 04 04:11	0° \mathbb{Y}	
max. Earth dist.	4606 May 03 15:29	8° \mathbb{B} 34'56	1.35504 AU	morning set	4607 Apr 11 22:03	13° \mathbb{Y} 05'59	
				max. Earth dist.	4607 Apr 15 13:15	19° \mathbb{Y} 35'47	1.37460 AU
					4607 Apr 21 02:49	0° \mathbb{B}	
superior conj	4606 May 09 00:16	19° \mathbb{B} 11'24	-0°54'47				
minimum elong	4606 May 09 03:15	19° \mathbb{B} 26'31	0°54'14				
	4606 May 14 06:41	0° \mathbb{H}		superior conj	4607 Apr 22 08:11	2° \mathbb{B} 21'30	-1°23'17
asc. node	4606 May 14 13:29	0° \mathbb{H} 35'07		minimum elong	4607 Apr 22 12:36	2° \mathbb{B} 42'53	1°22'38
evening rise	4606 May 16 21:25	5° \mathbb{H} 23'15		evening rise	4607 Apr 30 22:53	19° \mathbb{B} 24'45	
	4606 May 30 18:41	0° \mathbb{C}		asc. node	4607 May 01 10:32	20° \mathbb{B} 22'40	
evening max el	4606 Jun 04 00:35	4° \mathbb{C} 55'26	20°17'50		4607 May 06 10:03	0° \mathbb{H}	
retrograde	4606 Jun 14 19:30	10° \mathbb{C} 11'50		evening max el	4607 May 17 17:19	16° \mathbb{H} 38'23	19°15'19
evening set	4606 Jun 16 18:35	10° \mathbb{C} 02'06		retrograde	4607 May 26 19:16	21° \mathbb{H} 04'05	
desc. node	4606 Jun 20 05:29	9° \mathbb{C} 02'06		evening set	4607 May 28 19:08	20° \mathbb{H} 52'12	
inferior conj	4606 Jun 25 22:02	6° \mathbb{C} 03'50	-1°41'18	inferior conj	4607 Jun 06 05:47	16° \mathbb{H} 43'01	0°15'12
minimum elong	4606 Jun 25 17:16	6° \mathbb{C} 10'50	1°39'34	minimum elong	4607 Jun 06 06:25	16° \mathbb{H} 41'57	0°14'57
min. Earth dist.	4606 Jun 27 10:37	5° \mathbb{C} 10'04	0.55037 AU	transit middle	4607 Jun 06 06:25	16° \mathbb{H} 41'57	0°14'57
morning rise	4606 Jul 04 14:43	1° \mathbb{C} 50'29		transit begin	4607 Jun 06 05:03	16° \mathbb{H} 44'15	
direct	4606 Jul 08 14:16	1° \mathbb{C} 16'10		transit end	4607 Jun 06 07:48	16° \mathbb{H} 39'40	
morning max el	4606 Jul 22 02:53	7° \mathbb{C} 51'33	23°41'24	desc. node	4607 Jun 07 02:29	16° \mathbb{H} 08'24	
	4606 Aug 07 01:45	0° \mathbb{O}		min. Earth dist.	4607 Jun 09 01:20	14° \mathbb{H} 51'03	0.56141 AU
asc. node	4606 Aug 10 12:43	6° \mathbb{O} 31'34		morning rise	4607 Jun 14 14:39	11° \mathbb{H} 55'29	
morning set	4606 Aug 15 01:48	15° \mathbb{O} 49'08		direct	4607 Jun 19 12:22	11° \mathbb{H} 00'02	
	4606 Aug 21 15:46	0° \mathbb{P}		morning max el	4607 Jul 03 16:41	18° \mathbb{H} 13'57	25°22'08
					4607 Jul 13 11:39	0° \mathbb{C}	
superior conj	4606 Aug 22 01:41	0° \mathbb{P} 53'36	1°35'03	asc. node	4607 Jul 28 09:46	26° \mathbb{C} 12'13	
minimum elong	4606 Aug 21 23:54	0° \mathbb{P} 43'56	1°34'54		4607 Jul 30 05:29	0° \mathbb{O}	
max. Earth dist.	4606 Aug 24 09:50	5° \mathbb{P} 54'22	1.33323 AU	morning set	4607 Jul 30 13:26	0° \mathbb{O} 42'00	
evening rise	4606 Aug 29 13:53	16° \mathbb{P} 36'09					
	4606 Sep 05 14:34	0° \mathbb{L}		superior conj	4607 Aug 06 11:54	15° \mathbb{O} 47'04	1°22'23
desc. node	4606 Sep 16 04:46	17° \mathbb{L} 31'02		minimum elong	4607 Aug 06 09:38	15° \mathbb{O} 34'39	1°22'04
	4606 Sep 25 07:24	0° \mathbb{M}		max. Earth dist.	4607 Aug 07 16:08	18° \mathbb{O} 21'33	1.32470 AU
evening max el	4606 Oct 02 11:45	7° \mathbb{M} 52'36	27°23'52		4607 Aug 13 02:46	0° \mathbb{P}	
retrograde	4606 Oct 16 01:27	15° \mathbb{M} 10'52		evening rise	4607 Aug 13 14:12	0° \mathbb{P} 59'16	
evening set	4606 Oct 23 03:17	12° \mathbb{M} 31'52			4607 Aug 29 13:43	0° \mathbb{L}	
min. Earth dist.	4606 Oct 26 20:54	9° \mathbb{M} 10'07	0.64114 AU	desc. node	4607 Sep 03 01:48	6° \mathbb{L} 40'58	
inferior conj	4606 Oct 29 07:55	6° \mathbb{M} 35'42	-2°39'53	evening max el	4607 Sep 14 20:50	20° \mathbb{L} 43'42	27°22'00
minimum elong	4606 Oct 29 12:29	6° \mathbb{M} 23'42	2°38'11	retrograde	4607 Sep 28 16:01	27° \mathbb{L} 58'24	
morning rise	4606 Nov 04 23:03	1° \mathbb{M} 12'45		evening set	4607 Oct 05 20:12	25° \mathbb{L} 32'02	
asc. node	4606 Nov 06 11:58	0° \mathbb{M} 45'54		min. Earth dist.	4607 Oct 09 11:05	22° \mathbb{L} 38'19	0.62319 AU
direct	4606 Nov 07 11:17	0° \mathbb{M} 41'06		inferior conj	4607 Oct 12 09:09	19° \mathbb{L} 54'46	-3°40'38
morning max el	4606 Nov 13 23:43	4° \mathbb{M} 06'21	17°53'25	minimum elong	4607 Oct 12 15:04	19° \mathbb{L} 40'53	3°38'50

morning rise	4607 Oct 19 11:41	14°♄50'01		inferior conj	4608 Sep 23 19:51	2°♄45'45	-4°33'32
direct	4607 Oct 21 20:18	14°♄25'17		minimum elong	4608 Sep 24 01:42	2°♄33'45	4°32'20
asc. node	4607 Oct 24 08:58	14°♄54'35			4608 Sep 27 10:40	30°♄	
morning max el	4607 Oct 28 15:52	17°♄53'35	17°51'03	morning rise	4608 Oct 01 09:38	28°♄02'23	
	4607 Nov 06 08:16	0°♄		direct	4608 Oct 03 17:55	27°♄41'32	
morning set	4607 Nov 13 14:40	12°♄45'46			4608 Oct 09 15:13	0°♄	
	4607 Nov 23 09:31	0°♄		asc. node	4608 Oct 10 05:59	0°♄30'14	
				morning max el	4608 Oct 11 04:17	1°♄21'11	18°07'50
superior conj	4607 Nov 24 17:22	2°♄16'02	0°36'53	morning set	4608 Oct 26 23:12	26°♄23'20	
minimum elong	4607 Nov 24 20:36	2°♄29'46	0°36'25		4608 Oct 28 21:25	0°♄	
desc. node	4607 Nov 30 01:03	11°♄09'26					
max. Earth dist.	4607 Dec 01 19:53	14°♄04'21	1.43322 AU	superior conj	4608 Nov 05 14:55	14°♄13'34	1°08'38
evening rise	4607 Dec 09 08:50	26°♄03'15		minimum elong	4608 Nov 05 18:56	14°♄31'36	1°08'08
	4607 Dec 11 22:03	0°♄		max. Earth dist.	4608 Nov 13 06:30	27°♄31'26	1.41534 AU
	4608 Jan 01 13:40	0°♄			4608 Nov 14 18:02	0°♄	
evening max el	4608 Jan 09 09:59	9°♄23'41	21°33'34	desc. node	4608 Nov 15 22:05	1°♄56'06	
retrograde	4608 Jan 18 09:00	14°♄42'46		evening rise	4608 Nov 18 11:21	6°♄05'52	
asc. node	4608 Jan 20 08:15	14°♄21'54			4608 Dec 04 03:30	0°♄	
evening set	4608 Jan 22 15:45	13°♄01'27		evening max el	4608 Dec 22 02:47	23°♄00'31	22°51'34
inferior conj	4608 Jan 27 23:55	6°♄44'53	2°21'01	retrograde	4609 Jan 01 04:19	28°♄58'46	
minimum elong	4608 Jan 27 21:30	6°♄53'15	2°20'17	evening set	4609 Jan 05 22:54	27°♄01'26	
min. Earth dist.	4608 Jan 28 04:30	6°♄29'00	0.67939 AU	asc. node	4609 Jan 06 05:15	26°♄47'51	
morning rise	4608 Feb 02 03:04	0°♄32'45		inferior conj	4609 Jan 11 07:53	20°♄38'11	1°39'23
	4608 Feb 02 19:00	30°♄		minimum elong	4609 Jan 11 05:52	20°♄45'11	1°38'39
direct	4608 Feb 07 04:42	28°♄21'05		min. Earth dist.	4609 Jan 11 01:03	21°♄01'50	0.68067 AU
	4608 Feb 12 02:26	0°♄		morning rise	4609 Jan 16 12:43	14°♄29'46	
morning max el	4608 Feb 17 07:55	4°♄21'50	23°04'47	direct	4609 Jan 20 23:48	12°♄40'59	
desc. node	4608 Feb 26 00:16	14°♄37'03		morning max el	4609 Jan 29 21:20	17°♄52'15	21°38'43
	4608 Mar 07 23:15	0°♄			4609 Feb 08 20:19	0°♄	
morning set	4608 Mar 23 00:36	23°♄40'50		desc. node	4609 Feb 11 21:18	4°♄13'02	
	4608 Mar 26 18:10	0°♄			4609 Mar 01 02:22	0°♄	
max. Earth dist.	4608 Mar 27 08:14	1°♄00'36	1.39642 AU	morning set	4609 Mar 02 22:29	2°♄54'39	
				max. Earth dist.	4609 Mar 09 08:13	13°♄18'41	1.41769 AU
superior conj	4608 Apr 04 01:11	14°♄45'50	-1°47'52				
minimum elong	4608 Apr 04 06:02	15°♄08'11	1°47'24	superior conj	4609 Mar 16 22:26	26°♄13'09	-2°04'25
	4608 Apr 12 02:51	0°♄		minimum elong	4609 Mar 17 01:32	26°♄26'41	2°04'17
evening rise	4608 Apr 13 15:37	2°♄56'20			4609 Mar 19 02:05	0°♄	
asc. node	4608 Apr 17 07:34	9°♄53'54		evening rise	4609 Mar 27 20:02	15°♄49'52	
evening max el	4608 Apr 29 20:00	28°♄59'03	18°33'00	asc. node	4609 Apr 04 04:35	29°♄03'15	
	4608 Apr 30 22:49	0°♄			4609 Apr 04 17:55	0°♄	
retrograde	4608 May 07 13:17	2°♄47'26		evening max el	4609 Apr 13 05:12	11°♄48'51	18°10'40
evening set	4608 May 09 19:29	2°♄28'57		retrograde	4609 Apr 20 01:48	15°♄16'36	
	4608 May 14 18:00	30°♄		evening set	4609 Apr 22 14:43	14°♄48'45	
inferior conj	4608 May 17 10:07	28°♄00'41	1°48'32	inferior conj	4609 Apr 29 11:32	9°♄59'35	2°50'15
minimum elong	4608 May 17 13:29	27°♄54'07	1°47'30	minimum elong	4609 Apr 29 14:47	9°♄52'09	2°49'33
min. Earth dist.	4608 May 20 19:34	25°♄23'14	0.57941 AU	min. Earth dist.	4609 May 02 19:45	6°♄58'36	0.60093 AU
desc. node	4608 May 23 23:30	23°♄17'19		morning rise	4609 May 06 12:26	4°♄12'34	
morning rise	4608 May 25 04:17	22°♄39'14		desc. node	4609 May 10 20:30	2°♄24'53	
direct	4608 May 31 00:32	21°♄12'30		direct	4609 May 13 01:06	2°♄11'20	
morning max el	4608 Jun 14 09:38	28°♄50'50	26°45'13	morning max el	4609 May 27 09:00	10°♄04'08	27°37'27
	4608 Jun 15 13:14	0°♄			4609 Jun 11 18:43	0°♄	
	4608 Jul 06 04:12	0°♄		morning set	4609 Jun 28 06:24	0°♄02'48	
morning set	4608 Jul 13 23:32	15°♄28'21			4609 Jun 28 05:52	0°♄	
asc. node	4608 Jul 14 06:47	16°♄06'40		asc. node	4609 Jul 01 03:51	6°♄09'51	
				max. Earth dist.	4609 Jul 04 14:13	13°♄38'07	1.32009 AU
superior conj	4608 Jul 20 23:36	0°♄42'02	1°05'04				
minimum elong	4608 Jul 20 21:20	0°♄29'33	1°04'40	superior conj	4609 Jul 05 11:03	15°♄32'41	0°43'43
	4608 Jul 20 15:59	0°♄		minimum elong	4609 Jul 05 09:15	15°♄22'49	0°43'21
max. Earth dist.	4608 Jul 21 02:50	0°♄59'57	1.32035 AU	evening rise	4609 Jul 12 06:27	0°♄24'32	
evening rise	4608 Jul 27 20:29	15°♄37'51			4609 Jul 12 01:51	0°♄	
	4608 Aug 04 01:30	0°♄			4609 Jul 28 09:18	0°♄	
desc. node	4608 Aug 19 22:48	25°♄00'25		desc. node	4609 Aug 06 19:48	12°♄09'00	
	4608 Aug 24 04:34	0°♄		evening max el	4609 Aug 08 20:30	14°♄11'38	25°39'53
evening max el	4608 Aug 27 00:28	2°♄52'28	26°46'47	retrograde	4609 Aug 22 19:27	21°♄17'36	
retrograde	4608 Sep 09 22:31	10°♄02'21		evening set	4609 Aug 28 21:07	19°♄51'06	
evening set	4608 Sep 16 19:44	8°♄00'53		min. Earth dist.	4609 Sep 02 08:30	17°♄13'40	0.58247 AU
min. Earth dist.	4608 Sep 20 14:29	5°♄23'51	0.60305 AU	inferior conj	4609 Sep 05 12:34	14°♄58'53	-5°08'21

minimum elong	4609 Sep 05 15:36	14° \mathbb{M} 53'29	5°08'07	inferior conj	4610 Aug 17 09:06	26° Ω 26'52	-5°10'11
morning rise	4609 Sep 13 12:20	10° \mathbb{M} 38'52		minimum elong	4610 Aug 17 06:19	26° Ω 31'13	5°10'00
direct	4609 Sep 15 23:39	10° \mathbb{M} 19'37		morning rise	4610 Aug 25 16:50	22° Ω 27'20	
morning max el	4609 Sep 24 09:41	14° \mathbb{M} 20'17	18°45'13	direct	4610 Aug 28 09:57	22° Ω 08'01	
asc. node	4609 Sep 27 03:02	17° \mathbb{M} 19'04		morning max el	4610 Sep 07 05:03	26° Ω 41'52	19°44'21
	4609 Oct 05 05:50	0° Ω			4610 Sep 10 06:44	0° \mathbb{M}	
morning set	4609 Oct 10 18:42	10° Ω 31'43		asc. node	4610 Sep 14 00:07	5° \mathbb{M} 06'11	
				morning set	4610 Sep 24 21:45	25° \mathbb{M} 01'46	
					4610 Sep 27 08:35	0° Ω	
superior conj	4609 Oct 19 09:04	27° Ω 11'20	1°29'35				
minimum elong	4609 Oct 19 12:06	27° Ω 25'41	1°29'19				
	4609 Oct 20 20:59	0° \mathbb{M}		superior conj	4610 Oct 02 18:34	10° Ω 54'36	1°40'50
max. Earth dist.	4609 Oct 26 12:31	10° \mathbb{M} 15'19	1.39469 AU	minimum elong	4610 Oct 02 20:00	11° Ω 01'45	1°40'47
evening rise	4609 Oct 30 12:09	17° \mathbb{M} 09'06		max. Earth dist.	4610 Oct 08 17:17	22° Ω 22'14	1.37386 AU
desc. node	4609 Nov 02 19:06	22° \mathbb{M} 38'27		evening rise	4610 Oct 12 11:34	29° Ω 14'51	
	4609 Nov 07 09:03	0° \mathbb{M}			4610 Oct 12 21:42	0° \mathbb{M}	
	4609 Nov 28 16:13	0° \mathbb{Z}		desc. node	4610 Oct 20 16:07	13° \mathbb{M} 12'46	
evening max el	4609 Dec 04 16:20	6° \mathbb{Z} 40'11	24°11'21		4610 Oct 31 16:25	0° \mathbb{M}	
retrograde	4609 Dec 15 20:14	13° \mathbb{Z} 13'21		evening max el	4610 Nov 17 04:47	20° \mathbb{M} 23'12	25°26'07
evening set	4609 Dec 21 03:54	11° \mathbb{Z} 00'17		retrograde	4610 Nov 29 07:53	27° \mathbb{M} 22'10	
asc. node	4609 Dec 24 02:17	7° \mathbb{Z} 54'01		evening set	4610 Dec 05 05:10	24° \mathbb{M} 55'13	
min. Earth dist.	4609 Dec 25 21:18	5° \mathbb{Z} 34'11	0.67827 AU	min. Earth dist.	4610 Dec 09 14:59	20° \mathbb{M} 03'30	0.67237 AU
inferior conj	4609 Dec 26 15:03	4° \mathbb{Z} 34'20	0°51'00	inferior conj	4610 Dec 10 19:40	18° \mathbb{M} 31'06	-0°03'08
minimum elong	4609 Dec 26 13:52	4° \mathbb{Z} 38'19	0°50'31	minimum elong	4610 Dec 10 19:44	18° \mathbb{M} 30'51	0°03'06
	4609 Dec 30 08:01	30° \mathbb{R} \mathbb{M}		transit middle	4610 Dec 10 19:44	18° \mathbb{M} 30'51	0°03'06
morning rise	4609 Dec 31 23:54	28° \mathbb{M} 31'20		transit begin	4610 Dec 10 17:00	18° \mathbb{M} 39'42	
direct	4610 Jan 04 21:19	27° \mathbb{M} 05'05		transit end	4610 Dec 10 22:29	18° \mathbb{M} 22'00	
	4610 Jan 11 01:24	0° \mathbb{Z}		asc. node	4610 Dec 10 23:20	18° \mathbb{M} 19'17	
morning max el	4610 Jan 12 17:57	1° \mathbb{Z} 34'15	20°22'23	morning rise	4610 Dec 16 10:39	12° \mathbb{M} 35'35	
desc. node	4610 Jan 29 18:20	24° \mathbb{Z} 14'08		direct	4610 Dec 19 20:02	11° \mathbb{M} 29'19	
	4610 Feb 02 14:39	0° \approx		morning max el	4610 Dec 26 22:30	15° \mathbb{M} 27'20	19°19'48
morning set	4610 Feb 09 22:07	11° \approx 10'52			4611 Jan 07 01:27	0° \mathbb{Z}	
max. Earth dist.	4610 Feb 19 15:36	26° \approx 30'49	1.43548 AU	greatest brilliancy	4611 Jan 09 07:12	3° \mathbb{Z} 20'35	-0.7m
	4610 Feb 21 19:23	0° \mathbb{H}		desc. node	4611 Jan 16 15:22	14° \mathbb{Z} 33'40	
				morning set	4611 Jan 19 21:26	19° \mathbb{Z} 35'22	
superior conj	4610 Feb 25 19:13	6° \mathbb{H} 32'51	-2°07'35		4611 Jan 26 14:11	0° \approx	
minimum elong	4610 Feb 25 17:26	6° \mathbb{H} 25'28	2°07'33	max. Earth dist.	4611 Feb 02 05:22	10° \approx 24'16	1.44766 AU
evening rise	4610 Mar 10 07:50	27° \mathbb{H} 55'44					
	4610 Mar 11 12:17	0° \mathbb{Y}		superior conj	4611 Feb 05 14:54	15° \approx 47'19	-1°52'20
asc. node	4610 Mar 22 01:37	17° \mathbb{Y} 43'12		minimum elong	4611 Feb 05 07:09	15° \approx 16'28	1°51'47
evening max el	4610 Mar 27 17:32	24° \mathbb{Y} 58'39	18°07'48		4611 Feb 14 10:15	0° \mathbb{H}	
retrograde	4610 Apr 03 04:43	28° \mathbb{Y} 21'06		evening rise	4611 Feb 19 22:43	9° \mathbb{H} 06'19	
evening set	4610 Apr 05 23:46	27° \mathbb{Y} 42'18			4611 Mar 04 19:02	0° \mathbb{Y}	
inferior conj	4610 Apr 12 06:42	22° \mathbb{Y} 33'09	3°23'34	asc. node	4611 Mar 08 22:39	5° \mathbb{Y} 44'46	
minimum elong	4610 Apr 12 08:29	22° \mathbb{Y} 28'29	3°23'21	evening max el	4611 Mar 11 06:08	8° \mathbb{Y} 21'24	18°23'46
min. Earth dist.	4610 Apr 15 04:21	19° \mathbb{Y} 33'09	0.62264 AU	retrograde	4611 Mar 17 17:25	11° \mathbb{Y} 51'49	
morning rise	4610 Apr 18 15:42	16° \mathbb{Y} 30'39		evening set	4611 Mar 20 18:32	11° \mathbb{Y} 00'54	
direct	4610 Apr 25 11:59	14° \mathbb{Y} 00'24		inferior conj	4611 Mar 26 15:29	5° \mathbb{Y} 33'20	3°34'38
desc. node	4610 Apr 27 17:32	14° \mathbb{Y} 15'06		minimum elong	4611 Mar 26 15:36	5° \mathbb{Y} 33'01	3°34'37
morning max el	4610 May 09 14:26	22° \mathbb{Y} 00'05	27°52'18	min. Earth dist.	4611 Mar 28 22:23	2° \mathbb{Y} 54'55	0.64213 AU
	4610 May 16 14:40	0° \mathbb{B}			4611 Mar 31 18:40	30° \mathbb{R} \mathbb{H}	
	4610 Jun 04 21:54	0° \mathbb{I}		morning rise	4611 Apr 01 11:51	29° \mathbb{H} 23'01	
morning set	4610 Jun 12 08:01	14° \mathbb{I} 18'48		direct	4611 Apr 08 07:20	26° \mathbb{H} 35'52	
max. Earth dist.	4610 Jun 17 22:13	26° \mathbb{I} 02'34	1.32399 AU	desc. node	4611 Apr 14 14:35	28° \mathbb{H} 33'37	
asc. node	4610 Jun 18 00:55	26° \mathbb{I} 17'03			4611 Apr 16 19:01	0° \mathbb{Y}	
				morning max el	4611 Apr 21 23:29	4° \mathbb{Y} 32'51	27°30'26
superior conj	4610 Jun 19 20:31	0° \mathbb{E} 13'21	0°18'55		4611 May 11 04:51	0° \mathbb{B}	
minimum elong	4610 Jun 19 19:38	0° \mathbb{E} 08'35	0°18'43	morning set	4611 May 27 01:50	28° \mathbb{B} 08'38	
	4610 Jun 19 18:04	0° \mathbb{E}			4611 May 28 00:19	0° \mathbb{I}	
evening rise	4610 Jun 26 18:07	15° \mathbb{E} 12'39		max. Earth dist.	4611 May 31 22:52	8° \mathbb{I} 01'39	1.33239 AU
	4610 Jul 04 02:35	0° Ω					
evening max el	4610 Jul 21 10:08	24° Ω 48'58	24°10'19	superior conj	4611 Jun 04 02:08	14° \mathbb{I} 38'18	-0°08'37
desc. node	4610 Jul 24 16:49	27° Ω 38'52		minimum elong	4611 Jun 04 02:34	14° \mathbb{I} 40'36	0°08'31
	4610 Jul 28 09:18	0° \mathbb{M}		behind sun begin	4611 Jun 03 21:56	14° \mathbb{I} 15'59	
retrograde	4610 Aug 04 05:22	1° \mathbb{M} 46'15		behind sun end	4611 Jun 04 07:11	15° \mathbb{I} 05'16	
evening set	4610 Aug 08 22:22	0° \mathbb{M} 57'02		asc. node	4611 Jun 04 21:58	16° \mathbb{I} 24'11	
	4610 Aug 11 06:01	30° \mathbb{R} Ω		evening rise	4611 Jun 11 05:38	29° \mathbb{I} 56'12	
min. Earth dist.	4610 Aug 14 20:47	28° Ω 00'34	0.56421 AU		4611 Jun 11 06:21	0° \mathbb{E}	

	4611 Jun 28 09:16	0°♎			4612 Jun 02 13:26	0°♏	
evening max el	4611 Jul 02 23:48	5°♎11'14	22°32'57	evening max el	4612 Jun 13 21:29	15°♏51'57	21°02'40
desc. node	4611 Jul 11 13:50	10°♎55'24		retrograde	4612 Jun 25 15:32	21°♏38'13	
retrograde	4611 Jul 16 02:47	11°♎42'50		desc. node	4612 Jun 27 10:52	21°♏30'31	
evening set	4611 Jul 19 07:26	11°♎20'24		evening set	4612 Jun 27 20:24	21°♏26'50	
min. Earth dist.	4611 Jul 27 07:17	7°♎50'56	0.55181 AU	inferior conj	4612 Jul 07 04:45	17°♏29'16	-2°49'04
inferior conj	4611 Jul 28 11:25	7°♎10'56	-4°23'56	minimum elong	4612 Jul 06 21:11	17°♏39'56	2°46'33
minimum elong	4611 Jul 28 03:20	7°♎22'25	4°22'11	min. Earth dist.	4612 Jul 07 18:17	17°♏10'11	0.54814 AU
morning rise	4611 Aug 06 01:16	3°♎20'39		morning rise	4612 Jul 15 22:06	13°♏30'13	
direct	4611 Aug 09 02:42	2°♎59'13		direct	4612 Jul 19 12:04	13°♏02'34	
morning max el	4611 Aug 20 12:23	8°♎17'54	21°04'40	morning max el	4612 Aug 01 08:47	19°♏10'42	22°41'42
asc. node	4611 Aug 31 21:11	23°♎37'31			4612 Aug 10 06:33	0°♎	
	4611 Sep 04 08:48	0°♏		asc. node	4612 Aug 17 18:15	12°♎42'31	
morning set	4611 Sep 09 05:38	9°♏45'09		morning set	4612 Aug 23 16:20	24°♎36'21	
					4612 Aug 26 05:19	0°♏	
superior conj	4611 Sep 16 14:51	25°♏09'04	1°43'51	superior conj	4612 Aug 30 18:32	9°♏44'49	1°39'59
minimum elong	4611 Sep 16 14:45	25°♏08'32	1°43'52	minimum elong	4612 Aug 30 17:14	9°♏37'53	1°39'54
	4611 Sep 18 23:47	0°♎		max. Earth dist.	4612 Sep 02 20:24	16°♏13'42	1.34009 AU
max. Earth dist.	4611 Sep 21 02:33	4°♎13'52	1.35517 AU	evening rise	4612 Sep 07 14:47	25°♏52'17	
evening rise	4611 Sep 25 05:53	12°♎13'01			4612 Sep 09 17:59	0°♎	
	4611 Oct 05 08:25	0°♏		desc. node	4612 Sep 23 10:10	23°♎33'44	
desc. node	4611 Oct 07 13:09	3°♏33'22			4612 Sep 27 18:00	0°♏	
	4611 Oct 26 19:29	0°♏		evening max el	4612 Oct 12 06:07	17°♏37'03	27°11'09
evening max el	4611 Oct 30 17:26	4°♏05'05	26°28'35	retrograde	4612 Oct 25 14:56	24°♏54'40	
retrograde	4611 Nov 12 14:22	11°♏18'22		evening set	4612 Nov 01 12:20	22°♏14'08	
evening set	4611 Nov 19 00:44	8°♏41'27		min. Earth dist.	4612 Nov 05 09:09	18°♏33'00	0.65012 AU
min. Earth dist.	4611 Nov 23 03:45	4°♏25'00	0.66299 AU	inferior conj	4612 Nov 07 13:04	16°♏09'04	-2°03'48
inferior conj	4611 Nov 24 19:45	2°♏24'15	-1°01'56	minimum elong	4612 Nov 07 16:37	15°♏59'14	2°02'23
minimum elong	4611 Nov 24 21:27	2°♏19'07	1°01'12	morning rise	4612 Nov 13 21:57	10°♏36'46	
	4611 Nov 26 21:07	30°♏♏		asc. node	4612 Nov 13 17:26	10°♏42'10	
asc. node	4611 Nov 27 20:23	28°♏58'36		direct	4612 Nov 16 13:37	9°♏59'25	
morning rise	4611 Nov 30 18:49	26°♏38'47		morning max el	4612 Nov 23 01:02	13°♏26'31	18°02'52
direct	4611 Dec 03 18:13	25°♏48'55			4612 Dec 04 17:23	0°♏	
morning max el	4611 Dec 10 09:39	29°♏26'39	18°32'57	morning set	4612 Dec 10 22:31	10°♏16'40	
	4611 Dec 10 22:40	0°♏		desc. node	4612 Dec 20 09:25	25°♏46'44	
morning set	4611 Dec 30 19:08	29°♏11'32			4612 Dec 23 00:25	0°♏	
	4611 Dec 31 07:20	0°♏		superior conj	4612 Dec 25 02:12	3°♏18'39	-0°32'05
desc. node	4612 Jan 03 12:24	5°♏05'53		minimum elong	4612 Dec 24 22:14	3°♏02'52	0°31'31
superior conj	4612 Jan 15 18:42	24°♏24'32	-1°18'01	max. Earth dist.	4612 Dec 28 19:00	9°♏10'07	1.45070 AU
minimum elong	4612 Jan 15 09:48	23°♏49'36	1°17'00	evening rise	4613 Jan 10 09:26	28°♏47'39	
max. Earth dist.	4612 Jan 15 23:23	24°♏42'53	1.45290 AU		4613 Jan 11 04:11	0°♏	
	4612 Jan 19 08:16	0°♏		greatest brilliancy	4613 Jan 24 01:08	19°♏37'31	-0.7m
evening rise	4612 Jan 31 14:14	19°♏19'35			4613 Jan 31 09:07	0°♏	
	4612 Feb 07 07:25	0°♏		evening max el	4613 Feb 04 22:30	5°♏23'25	19°47'46
greatest brilliancy	4612 Feb 09 13:36	3°♏33'48	-0.8m	asc. node	4613 Feb 09 16:42	9°♏03'54	
evening max el	4612 Feb 22 16:27	21°♏51'06	18°57'38	retrograde	4613 Feb 12 09:35	9°♏42'55	
asc. node	4612 Feb 23 19:41	22°♏56'22		evening set	4613 Feb 16 01:10	8°♏25'02	
retrograde	4612 Feb 29 12:03	25°♏41'05		inferior conj	4613 Feb 21 11:23	2°♏25'52	3°10'22
evening set	4612 Mar 03 19:50	24°♏37'10		minimum elong	4613 Feb 21 09:18	2°♏32'49	3°10'00
inferior conj	4612 Mar 09 10:05	18°♏52'48	3°28'56	min. Earth dist.	4613 Feb 22 12:01	1°♏03'56	0.66954 AU
minimum elong	4612 Mar 09 08:51	18°♏56'40	3°28'49		4613 Feb 23 07:37	30°♏♏	
min. Earth dist.	4612 Mar 11 01:24	16°♏49'27	0.65792 AU	morning rise	4613 Feb 26 17:13	26°♏11'38	
morning rise	4612 Mar 14 21:28	12°♏39'17		direct	4613 Mar 04 17:22	23°♏30'45	
direct	4612 Mar 21 09:32	9°♏49'16			4613 Mar 16 01:31	0°♏	
desc. node	4612 Mar 31 11:37	14°♏46'31		morning max el	4613 Mar 16 18:31	0°♏42'17	25°23'04
morning max el	4612 Apr 03 09:25	17°♏30'45	26°37'49	desc. node	4613 Mar 18 08:38	2°♏21'58	
	4612 Apr 13 20:05	0°♏			4613 Apr 07 19:20	0°♏	
	4612 May 03 02:54	0°♏		morning set	4613 Apr 21 23:26	23°♏46'40	
morning set	4612 May 09 08:30	11°♏22'34			4613 Apr 25 08:32	0°♏	
max. Earth dist.	4612 May 13 12:58	19°♏29'58	1.34547 AU	max. Earth dist.	4613 Apr 25 16:04	0°♏35'18	1.36301 AU
superior conj	4612 May 18 01:39	28°♏41'10	-0°37'46	superior conj	4613 May 01 16:12	12°♏13'00	-1°07'08
minimum elong	4612 May 18 03:41	28°♏51'40	0°37'22	minimum elong	4613 May 01 19:51	12°♏31'11	1°06'32
	4612 May 18 16:52	0°♏		asc. node	4613 May 08 16:01	26°♏22'00	
asc. node	4612 May 21 19:00	6°♏27'30		evening rise	4613 May 09 20:07	28°♏44'40	
evening rise	4612 May 25 15:03	14°♏29'27					

	4613 May 10 11:02	0°♊		minimum elong	4614 Apr 14 23:05	25°♎27'46	1°33'48
evening max el	4613 May 27 07:08	27°♊10'00	19°48'44		4614 Apr 17 07:54	0°♎	
	4613 May 30 19:12	0°♎		evening rise	4614 Apr 23 18:17	12°♎34'55	
retrograde	4613 Jun 06 07:50	2°♎03'40		asc. node	4614 Apr 25 13:01	16°♎03'24	
evening set	4613 Jun 08 06:16	1°♎53'32			4614 May 03 05:37	0°♊	
	4613 Jun 13 11:08	30°♎♊		evening max el	4614 May 10 04:22	9°♊09'20	18°54'42
desc. node	4613 Jun 14 07:53	29°♊32'02		retrograde	4614 May 18 15:13	13°♊17'37	
inferior conj	4613 Jun 17 03:26	27°♊51'49	-0°50'18	evening set	4614 May 20 17:24	13°♊03'25	
minimum elong	4613 Jun 17 01:07	27°♊55'22	0°49'27	inferior conj	4614 May 28 19:29	8°♊46'17	0°58'32
min. Earth dist.	4613 Jun 19 06:58	26°♊32'45	0.55408 AU	minimum elong	4614 May 28 21:42	8°♊42'21	0°57'46
morning rise	4613 Jun 25 17:54	23°♊25'14		min. Earth dist.	4614 May 31 22:52	6°♊32'54	0.56844 AU
direct	4613 Jun 30 02:29	22°♊43'26		desc. node	4614 Jun 01 04:53	6°♊22'41	
morning max el	4613 Jul 13 23:06	29°♊35'58	24°25'27	morning rise	4614 Jun 05 22:42	3°♊43'24	
	4613 Jul 14 09:07	0°♎		direct	4614 Jun 11 06:06	2°♊35'55	
	4613 Aug 03 12:42	0°♏		morning max el	4614 Jun 25 13:51	10°♊01'42	26°00'37
asc. node	4613 Aug 04 15:16	2°♏11'55			4614 Jul 10 18:17	0°♎	
morning set	4613 Aug 08 04:04	9°♏29'44		asc. node	4614 Jul 22 12:18	21°♎58'58	
				morning set	4614 Jul 23 15:13	24°♎20'19	
superior conj	4613 Aug 15 02:57	24°♏33'17	1°30'17		4614 Jul 26 06:31	0°♏	
minimum elong	4613 Aug 15 00:54	24°♏22'07	1°30'03				
max. Earth dist.	4613 Aug 16 22:53	28°♏31'14	1.32911 AU	superior conj	4614 Jul 30 13:59	9°♏27'47	1°15'33
	4613 Aug 17 15:24	0°♎		minimum elong	4614 Jul 30 11:40	9°♏15'00	1°15'12
evening rise	4613 Aug 22 10:22	10°♎01'26		max. Earth dist.	4614 Jul 31 07:29	11°♏04'03	1.32232 AU
	4613 Sep 02 01:53	0°♏		evening rise	4614 Aug 06 13:29	24°♏31'29	
desc. node	4613 Sep 10 07:12	13°♏05'08			4614 Aug 09 05:41	0°♎	
	4613 Sep 23 21:57	0°♎			4614 Aug 26 18:46	0°♏	
evening max el	4613 Sep 24 17:08	0°♎46'18	27°27'02	desc. node	4614 Aug 28 04:13	1°♏55'28	
retrograde	4613 Oct 08 09:09	8°♎02'38		evening max el	4614 Sep 06 23:56	13°♏19'26	27°11'06
evening set	4613 Oct 15 13:05	5°♎27'33		retrograde	4614 Sep 20 20:25	20°♏32'32	
min. Earth dist.	4613 Oct 19 05:04	2°♎18'53	0.63385 AU	evening set	4614 Sep 27 23:10	18°♏14'51	
inferior conj	4613 Oct 21 21:01	29°♏39'18	-3°06'10	min. Earth dist.	4614 Oct 01 14:23	15°♏30'23	0.61475 AU
minimum elong	4613 Oct 22 02:16	29°♏26'09	3°04'20	inferior conj	4614 Oct 04 16:26	12°♏46'51	-4°04'35
	4613 Oct 21 12:47	30°♎♏		minimum elong	4614 Oct 04 22:35	12°♏33'15	4°02'57
morning rise	4613 Oct 28 16:56	24°♏23'42		morning rise	4614 Oct 11 23:53	7°♏51'16	
direct	4613 Oct 31 03:24	23°♏55'15		direct	4614 Oct 14 07:57	7°♏28'33	
asc. node	4613 Oct 31 14:28	23°♏56'17		asc. node	4614 Oct 18 11:30	8°♏43'07	
morning max el	4613 Nov 06 17:48	27°♏20'29	17°50'14	morning max el	4614 Oct 21 08:48	11°♏00'23	17°55'54
	4613 Nov 09 02:29	0°♎			4614 Nov 02 22:49	0°♎	
morning set	4613 Nov 23 03:34	22°♎36'13		morning set	4614 Nov 06 03:41	5°♎49'37	
	4613 Nov 27 09:58	0°♎					
superior conj	4613 Dec 05 06:56	13°♎17'28	0°13'50	superior conj	4614 Nov 16 14:16	24°♎33'49	0°51'41
minimum elong	4613 Dec 05 08:22	13°♎23'24	0°13'37	minimum elong	4614 Nov 16 18:09	24°♎50'39	0°51'10
behind sun begin	4613 Dec 05 03:14	13°♎02'11			4614 Nov 19 18:11	0°♎	
behind sun end	4613 Dec 05 13:30	13°♎44'36		max. Earth dist.	4614 Nov 24 02:08	7°♎14'34	1.42599 AU
desc. node	4613 Dec 07 06:27	16°♎32'47		desc. node	4614 Nov 24 03:29	7°♎20'06	
max. Earth dist.	4613 Dec 11 12:57	23°♎27'15	1.44132 AU	evening rise	4614 Nov 30 11:48	17°♎33'27	
	4613 Dec 15 16:03	0°♎			4614 Dec 08 13:39	0°♎	
evening rise	4613 Dec 20 19:22	7°♎59'37			4614 Dec 30 10:03	0°♎	
	4614 Jan 04 11:14	0°♎		evening max el	4615 Jan 01 18:22	2°♎31'31	22°06'05
evening max el	4614 Jan 18 23:10	18°♎57'03	20°51'45	retrograde	4615 Jan 11 04:40	8°♎08'10	
retrograde	4614 Jan 27 07:47	23°♎53'27		asc. node	4615 Jan 14 10:44	7°♎11'51	
asc. node	4614 Jan 27 13:43	23°♎53'07		evening set	4615 Jan 15 16:13	6°♎20'01	
evening set	4614 Jan 31 08:32	22°♎20'47		inferior conj	4615 Jan 21 00:32	29°♎59'53	2°04'16
inferior conj	4614 Feb 05 16:55	16°♎09'25	2°41'34	minimum elong	4615 Jan 20 22:14	0°♎07'53	2°03'30
minimum elong	4614 Feb 05 14:29	16°♎17'48	2°40'56	min. Earth dist.	4615 Jan 21 00:07	0°♎01'20	0.68034 AU
min. Earth dist.	4614 Feb 06 04:21	15°♎30'05	0.67694 AU		4615 Jan 21 00:30	30°♎♎	
morning rise	4614 Feb 10 20:15	9°♎56'06		morning rise	4615 Jan 26 04:05	23°♎48'59	
direct	4614 Feb 16 06:15	7°♎32'34		direct	4615 Jan 30 23:20	21°♎47'06	
morning max el	4614 Feb 27 03:14	14°♎01'39	23°56'15	morning max el	4615 Feb 09 13:52	27°♎26'58	22°27'21
desc. node	4614 Mar 05 05:39	20°♎56'51			4615 Feb 11 23:11	0°♎	
	4614 Mar 12 02:33	0°♎		desc. node	4615 Feb 20 02:41	10°♎13'58	
	4614 Mar 31 16:44	0°♎			4615 Mar 05 17:50	0°♎	
morning set	4614 Apr 03 17:04	5°♎06'21		morning set	4615 Mar 15 07:37	15°♎07'12	
max. Earth dist.	4614 Apr 07 12:11	11°♎44'35	1.38385 AU	max. Earth dist.	4615 Mar 20 08:21	23°♎29'10	1.40571 AU
					4615 Mar 24 03:16	0°♎	
superior conj	4614 Apr 14 18:18	25°♎05'04	-1°34'24	superior conj	4615 Mar 28 03:31	7°♎06'30	-1°56'10

minimum elong	4615 Mar 28 07:58	7°♿26'34	1°55'50		4616 Mar 15 11:00	0°♿	
evening rise	4615 Apr 07 06:18	25°♿51'40		evening rise	4616 Mar 20 04:11	8°♿25'50	
	4615 Apr 09 11:13	0°♿		asc. node	4616 Mar 29 07:05	24°♿24'20	
asc. node	4615 Apr 12 10:03	5°♿26'21			4616 Apr 01 23:03	0°♿	
evening max el	4615 Apr 23 10:15	21°♿43'45	18°21'03	evening max el	4616 Apr 05 21:17	4°♿43'46	18°07'09
retrograde	4615 Apr 30 17:28	25°♿21'30		retrograde	4616 Apr 12 12:31	8°♿07'10	
evening set	4615 May 03 02:26	24°♿59'27		evening set	4616 Apr 15 04:08	7°♿34'48	
inferior conj	4615 May 10 09:06	20°♿22'33	2°18'31	inferior conj	4616 Apr 21 18:35	2°♿37'16	3°07'28
minimum elong	4615 May 10 12:41	20°♿15'04	2°17'33	minimum elong	4616 Apr 21 21:18	2°♿30'42	3°06'59
min. Earth dist.	4615 May 13 19:41	17°♿31'43	0.58834 AU		4616 Apr 24 11:54	30°♿	
morning rise	4615 May 17 19:55	14°♿48'35		min. Earth dist.	4616 Apr 24 23:17	29°♿33'38	0.61034 AU
desc. node	4615 May 19 01:53	14°♿11'52		morning rise	4616 Apr 28 12:26	26°♿42'45	
direct	4615 May 24 00:05	13°♿06'49		desc. node	4616 May 04 22:56	24°♿27'53	
morning max el	4615 Jun 07 09:32	20°♿53'19	27°11'43	direct	4616 May 05 05:40	24°♿27'39	
	4615 Jun 15 06:45	0°♿			4616 May 16 21:21	0°♿	
	4615 Jul 03 13:14	0°♿		morning max el	4616 May 19 11:29	2°♿24'26	27°48'19
morning set	4615 Jul 08 00:12	9°♿02'55			4616 Jun 08 16:17	0°♿	
asc. node	4615 Jul 09 09:21	11°♿58'05		morning set	4616 Jun 21 05:07	23°♿30'30	
					4616 Jun 24 07:20	0°♿	
superior conj	4615 Jul 15 01:50	24°♿22'20	0°56'28	asc. node	4616 Jun 25 06:23	2°♿03'34	
minimum elong	4615 Jul 14 23:43	24°♿10'39	0°56'04	max. Earth dist.	4616 Jun 27 05:08	6°♿17'08	1.32122 AU
max. Earth dist.	4615 Jul 14 18:49	23°♿43'33	1.31968 AU				
	4615 Jul 17 15:03	0°♿		superior conj	4616 Jun 28 12:41	9°♿09'54	0°33'35
evening rise	4615 Jul 21 21:37	9°♿14'46		minimum elong	4616 Jun 28 11:14	9°♿01'55	0°33'17
	4615 Aug 01 14:18	0°♿		evening rise	4616 Jul 05 08:33	24°♿03'13	
desc. node	4615 Aug 15 01:13	19°♿48'14			4616 Jul 08 04:49	0°♿	
evening max el	4615 Aug 20 00:21	25°♿07'24	26°21'53		4616 Jul 26 04:34	0°♿	
	4615 Aug 26 08:32	0°♿		evening max el	4616 Jul 31 17:28	6°♿07'41	25°03'50
retrograde	4615 Sep 02 23:32	2°♿16'35		desc. node	4616 Jul 31 22:14	6°♿19'02	
evening set	4615 Sep 09 13:56	0°♿29'02		retrograde	4616 Aug 14 16:01	13°♿10'42	
	4615 Sep 10 10:43	30°♿		evening set	4616 Aug 20 04:51	12°♿00'53	
min. Earth dist.	4615 Sep 13 13:41	27°♿54'02	0.59412 AU	min. Earth dist.	4616 Aug 25 05:04	9°♿17'10	0.57422 AU
inferior conj	4615 Sep 16 19:56	25°♿23'17	-4°51'21	inferior conj	4616 Aug 28 04:13	7°♿18'12	-5°14'12
minimum elong	4615 Sep 17 00:59	25°♿13'31	4°50'35	minimum elong	4616 Aug 28 05:03	7°♿16'48	5°14'11
morning rise	4615 Sep 24 14:13	20°♿49'59		morning rise	4616 Sep 05 07:34	3°♿07'12	
direct	4615 Sep 26 23:11	20°♿30'13		direct	4616 Sep 07 20:59	2°♿48'07	
morning max el	4615 Oct 04 18:45	24°♿17'50	18°21'10	morning max el	4616 Sep 16 20:11	7°♿01'50	19°07'37
asc. node	4615 Oct 05 08:33	24°♿52'10		asc. node	4616 Sep 21 05:38	12°♿07'28	
	4615 Oct 09 11:38	0°♿			4616 Oct 01 15:39	0°♿	
morning set	4615 Oct 20 17:25	19°♿41'46		morning set	4616 Oct 03 16:30	4°♿00'16	
	4615 Oct 26 03:15	0°♿					
superior conj	4615 Oct 29 21:18	6°♿59'04	1°18'46	superior conj	4616 Oct 11 22:33	20°♿17'25	1°35'27
minimum elong	4615 Oct 30 01:02	7°♿16'15	1°18'22	minimum elong	4616 Oct 12 00:56	20°♿28'56	1°35'17
max. Earth dist.	4615 Nov 06 10:01	20°♿21'23	1.40669 AU		4616 Oct 17 02:09	0°♿	
evening rise	4615 Nov 10 23:25	28°♿00'59		max. Earth dist.	4616 Oct 18 14:56	2°♿47'33	1.38574 AU
desc. node	4615 Nov 11 00:32	28°♿05'34		evening rise	4616 Oct 22 10:10	9°♿31'33	
	4615 Nov 12 04:29	0°♿		desc. node	4616 Oct 27 21:34	18°♿44'58	
	4615 Dec 02 04:10	0°♿			4616 Nov 04 00:48	0°♿	
evening max el	4615 Dec 15 09:32	16°♿09'19	23°25'43	evening max el	4616 Nov 26 22:35	29°♿51'06	24°44'19
retrograde	4615 Dec 25 22:46	22°♿23'42			4616 Nov 27 02:12	0°♿	
evening set	4615 Dec 30 22:39	20°♿19'49		retrograde	4616 Dec 08 12:51	6°♿36'02	
asc. node	4616 Jan 01 07:47	19°♿00'53		evening set	4616 Dec 14 02:16	4°♿17'00	
inferior conj	4616 Jan 05 08:24	13°♿54'47	1°19'40		4616 Dec 17 23:41	30°♿	
minimum elong	4616 Jan 05 06:41	14°♿00'41	1°19'00	asc. node	4616 Dec 18 04:50	29°♿43'18	
min. Earth dist.	4616 Jan 04 20:57	14°♿34'04	0.68004 AU	min. Earth dist.	4616 Dec 18 16:26	29°♿05'17	0.67618 AU
morning rise	4616 Jan 10 14:38	7°♿48'09		inferior conj	4616 Dec 19 14:43	27°♿51'27	0°28'43
direct	4616 Jan 14 19:44	6°♿09'02		minimum elong	4616 Dec 19 14:01	27°♿53'45	0°28'25
morning max el	4616 Jan 23 05:59	11°♿01'35	21°04'42	morning rise	4616 Dec 25 01:54	21°♿51'12	
desc. node	4616 Feb 06 23:44	0°♿01'35		direct	4616 Dec 28 18:04	20°♿33'37	
	4616 Feb 06 23:18	0°♿		morning max el	4617 Jan 05 05:55	24°♿47'55	19°53'55
morning set	4616 Feb 22 18:16	23°♿50'41			4617 Jan 09 18:26	0°♿	
	4616 Feb 26 15:33	0°♿		desc. node	4617 Jan 23 20:47	20°♿11'19	
max. Earth dist.	4616 Mar 01 10:50	6°♿08'49	1.42581 AU		4617 Jan 30 07:09	0°♿	
				morning set	4617 Jan 31 14:30	2°♿00'43	
superior conj	4616 Mar 08 14:52	18°♿06'12	-2°07'44	max. Earth dist.	4617 Feb 11 21:25	19°♿41'25	1.44145 AU
minimum elong	4616 Mar 08 16:16	18°♿12'11	2°07'42				
				superior conj	4617 Feb 17 00:41	27°♿57'14	-2°03'34

minimum elong	4617 Feb 16 20:12	27° \approx 38'59	2°03'24	minimum elong	4618 Jan 27 02:27	6° \approx 13'21	1°39'01
	4617 Feb 18 06:50	0° H			4618 Feb 10 23:07	0° H	
evening rise	4617 Mar 02 07:34	20° H 08'58		evening rise	4618 Feb 11 12:33	0° H 54'36	
	4617 Mar 08 02:05	0° Y			4618 Mar 02 14:08	0° Y	
asc. node	4617 Mar 16 04:08	12° Y 49'31		asc. node	4618 Mar 03 01:11	0° Y 31'07	
evening max el	4617 Mar 20 10:10	18° Y 00'38	18°12'23	evening max el	4618 Mar 03 22:01	1° Y 26'19	18°36'03
retrograde	4617 Mar 26 20:07	21° Y 24'37		retrograde	4618 Mar 10 11:51	5° Y 03'52	
evening set	4617 Mar 29 17:51	20° Y 40'36		evening set	4618 Mar 13 15:44	4° Y 07'25	
inferior conj	4617 Apr 04 20:04	15° Y 23'21	3°30'35		4618 Mar 18 03:46	30° R H	
minimum elong	4617 Apr 04 21:07	15° Y 20'27	3°30'30	inferior conj	4618 Mar 19 09:26	28° H 32'10	3°33'59
min. Earth dist.	4617 Apr 07 11:39	12° Y 30'43	0.63133 AU	minimum elong	4618 Mar 19 08:55	28° H 33'42	3°33'58
morning rise	4617 Apr 10 23:18	9° Y 17'05		min. Earth dist.	4618 Mar 21 09:32	26° H 07'47	0.64929 AU
direct	4617 Apr 17 20:17	6° Y 38'10		morning rise	4618 Mar 25 01:32	22° H 20'02	
desc. node	4617 Apr 21 19:58	7° Y 25'15		direct	4618 Mar 31 18:23	19° H 30'24	
morning max el	4617 May 01 18:40	14° Y 37'03	27°47'15	desc. node	4618 Apr 08 17:00	22° H 36'13	
	4617 May 14 06:05	0° B		morning max el	4618 Apr 14 04:32	27° H 22'10	27°11'29
	4617 Jun 01 06:23	0° II			4618 Apr 16 16:07	0° Y	
morning set	4617 Jun 05 03:46	7° II 36'32			4618 May 07 22:28	0° B	
max. Earth dist.	4617 Jun 10 10:35	18° II 32'55	1.32709 AU	morning set	4618 May 19 17:17	21° B 12'11	
asc. node	4617 Jun 12 03:26	22° II 11'24			4618 May 24 03:23	0° II	
				max. Earth dist.	4618 May 24 07:20	0° II 20'12	1.33743 AU
superior conj	4617 Jun 12 20:47	23° II 44'57	0°07'33				
minimum elong	4617 Jun 12 20:25	23° II 42'59	0°07'29	superior conj	4618 May 28 00:04	8° II 00'53	-0°20'50
behind sun begin	4617 Jun 12 15:44	23° II 17'42		minimum elong	4618 May 28 01:10	8° II 06'37	0°20'37
behind sun end	4617 Jun 13 01:06	24° II 08'17		asc. node	4618 May 30 00:28	12° II 17'08	
	4617 Jun 15 17:56	0° E		evening rise	4618 Jun 04 07:17	23° II 30'30	
evening rise	4617 Jun 19 20:26	8° E 50'40			4618 Jun 07 10:52	0° E	
	4617 Jun 30 19:47	0° O		evening max el	4618 Jun 24 22:15	27° E 00'23	21°52'51
evening max el	4617 Jul 13 06:14	16° O 34'48	23°28'47		4618 Jun 28 11:06	0° O	
desc. node	4617 Jul 18 19:14	20° O 56'44		desc. node	4618 Jul 05 16:14	3° O 07'06	
retrograde	4617 Jul 26 19:58	23° O 22'54		retrograde	4618 Jul 07 12:57	3° O 15'12	
evening set	4617 Jul 30 21:19	22° O 46'52		evening set	4618 Jul 10 05:26	2° O 59'00	
min. Earth dist.	4617 Aug 06 15:55	19° O 38'06	0.55815 AU		4618 Jul 17 15:02	30° R E	
inferior conj	4617 Aug 08 16:22	18° O 26'20	-4°56'58	min. Earth dist.	4618 Jul 19 02:08	29° E 11'24	0.54911 AU
minimum elong	4617 Aug 08 10:54	18° O 34'28	4°56'15	inferior conj	4618 Jul 19 13:14	28° E 55'51	-3°48'40
morning rise	4617 Aug 17 02:54	14° O 32'34		minimum elong	4618 Jul 19 04:32	29° E 08'02	3°46'18
direct	4617 Aug 19 23:33	14° O 12'29		morning rise	4618 Jul 28 05:09	25° E 04'45	
morning max el	4617 Aug 30 10:22	19° O 03'46	20°16'00	direct	4618 Jul 31 11:12	24° E 41'31	
	4617 Sep 07 23:04	0° H			4618 Aug 12 03:44	0° O	
asc. node	4617 Sep 08 02:41	0° H 14'34		morning max el	4618 Aug 12 12:45	0° O 20'37	21°44'25
morning set	4617 Sep 17 21:53	18° H 36'40		asc. node	4618 Aug 25 23:43	19° O 01'21	
	4617 Sep 23 10:56	0° A			4618 Aug 31 15:38	0° H	
				morning set	4618 Sep 02 07:12	3° H 24'24	
superior conj	4617 Sep 25 13:05	4° A 14'54	1°43'02				
minimum elong	4617 Sep 25 13:50	4° A 18'43	1°43'01	superior conj	4618 Sep 09 12:55	18° H 40'00	1°43'00
max. Earth dist.	4617 Sep 30 21:19	14° A 46'10	1.36560 AU	minimum elong	4618 Sep 09 12:15	18° H 36'33	1°42'58
evening rise	4617 Oct 04 18:07	22° A 00'24		max. Earth dist.	4618 Sep 13 10:02	26° H 39'34	1.34824 AU
	4617 Oct 09 05:59	0° M			4618 Sep 15 02:03	0° A	
desc. node	4617 Oct 14 18:35	9° M 13'53		evening rise	4618 Sep 17 19:08	5° A 17'28	
	4617 Oct 28 20:53	0° J		desc. node	4618 Oct 01 15:35	29° A 26'55	
evening max el	4617 Nov 09 11:05	13° J 34'10	25°54'41		4618 Oct 02 00:00	0° M	
retrograde	4617 Nov 21 22:10	20° J 39'53		evening max el	4618 Oct 22 23:40	27° M 12'41	26°49'28
evening set	4617 Nov 28 01:18	18° J 08'02			4618 Oct 26 03:14	0° J	
min. Earth dist.	4617 Dec 02 08:11	13° J 31'27	0.66883 AU	retrograde	4618 Nov 05 02:13	4° J 29'10	
inferior conj	4617 Dec 03 17:37	11° J 46'30	-0°27'36	evening set	4618 Nov 11 17:48	1° J 49'24	
minimum elong	4617 Dec 03 18:21	11° J 44'13	0°27'17		4618 Nov 13 17:35	30° R M	
asc. node	4617 Dec 05 01:54	10° J 06'45		min. Earth dist.	4618 Nov 15 17:58	27° M 48'25	0.65794 AU
morning rise	4617 Dec 09 11:49	5° J 55'07		inferior conj	4618 Nov 17 15:06	25° M 36'46	-1°27'57
direct	4617 Dec 12 16:47	4° J 56'12		minimum elong	4618 Nov 17 17:34	25° M 29'33	1°26'54
morning max el	4617 Dec 19 13:31	8° J 43'52	18°57'55	asc. node	4618 Nov 21 22:56	21° M 08'36	
	4618 Jan 03 22:18	0° B		morning rise	4618 Nov 23 18:11	19° M 56'50	
morning set	4618 Jan 10 21:19	10° B 50'13		direct	4618 Nov 26 13:58	19° M 12'52	
desc. node	4618 Jan 10 17:49	10° B 36'33		morning max el	4618 Dec 03 02:54	22° M 44'52	18°18'07
	4618 Jan 23 03:26	0° \approx			4618 Dec 08 22:24	0° J	
max. Earth dist.	4618 Jan 25 13:53	3° \approx 49'24	1.45076 AU	morning set	4618 Dec 22 07:39	21° J 04'39	
					4618 Dec 27 20:37	0° B	
superior conj	4618 Jan 27 11:36	6° \approx 49'24	-1°39'51	desc. node	4618 Dec 28 14:52	1° B 13'00	

superior conj	4619 Jan 06 14:21	15° Z 26'38	-0°59'15	behind sun begin	4619 Dec 16 20:59	24° Z 10'19	
minimum elong	4619 Jan 06 07:05	14° Z 58'02	0°58'19	behind sun end	4619 Dec 17 11:04	25° Z 07'11	
max. Earth dist.	4619 Jan 08 08:55	18° Z 13'42	1.45283 AU		4619 Dec 20 12:11	0° Z	
	4619 Jan 15 21:27	0° \approx		max. Earth dist.	4619 Dec 22 03:30	2° Z 36'06	1.44752 AU
evening rise	4619 Jan 22 18:39	10° \approx 46'09		evening rise	4620 Jan 02 08:01	20° Z 02'04	
greatest brilliancy	4619 Feb 02 22:31	28° \approx 09'16	-0.8m		4620 Jan 08 20:34	0° \approx	
	4619 Feb 04 03:35	0° H		greatest brilliancy	4620 Jan 16 23:11	12° \approx 07'49	-0.6m
evening max el	4619 Feb 15 06:36	14° H 56'37	19°17'02	evening max el	4620 Jan 29 10:24	28° \approx 29'10	20°13'32
asc. node	4619 Feb 17 22:12	17° H 16'51			4620 Jan 31 00:18	0° H	
retrograde	4619 Feb 22 08:08	18° H 58'31		asc. node	4620 Feb 04 19:12	2° H 52'27	
evening set	4619 Feb 25 19:00	17° H 48'52		retrograde	4620 Feb 06 06:11	3° H 03'54	
inferior conj	4619 Mar 03 07:13	11° H 57'45	3°22'27	evening set	4620 Feb 10 01:23	1° H 40'03	
minimum elong	4619 Mar 03 05:34	12° H 03'07	3°22'14		4620 Feb 11 21:43	30° R \approx	
min. Earth dist.	4619 Mar 04 16:07	10° H 11'31	0.66334 AU	inferior conj	4620 Feb 15 10:36	25° \approx 35'29	2°59'18
morning rise	4619 Mar 08 15:49	5° H 43'24		minimum elong	4620 Feb 15 08:18	25° \approx 43'15	2°58'48
direct	4619 Mar 14 23:04	2° H 56'01		min. Earth dist.	4620 Feb 16 05:32	24° \approx 31'23	0.67317 AU
desc. node	4619 Mar 26 14:02	9° H 27'08		morning rise	4620 Feb 20 15:00	19° \approx 21'17	
morning max el	4619 Mar 27 14:26	10° H 27'23	26°08'10	direct	4620 Feb 26 09:20	16° \approx 46'41	
	4619 Apr 12 02:21	0° Y		morning max el	4620 Mar 08 23:05	23° \approx 42'05	24°46'56
	4619 Apr 30 12:10	0° B		desc. node	4620 Mar 12 11:05	27° \approx 30'03	
morning set	4619 May 02 17:53	4° B 06'27			4620 Mar 14 13:39	0° H	
max. Earth dist.	4619 May 06 16:32	11° B 36'01	1.35238 AU		4620 Apr 04 11:51	0° Y	
				morning set	4620 Apr 14 00:34	16° Y 05'18	
superior conj	4619 May 11 20:07	21° B 50'57	-0°50'20	max. Earth dist.	4620 Apr 17 15:23	22° Y 36'35	1.37149 AU
minimum elong	4619 May 11 22:51	22° B 04'53	0°49'49		4620 Apr 21 14:11	0° B	
	4619 May 15 19:08	0° II					
asc. node	4619 May 16 21:29	2° II 16'47		superior conj	4620 Apr 24 05:53	5° B 07'11	-1°19'09
evening rise	4619 May 19 15:07	7° II 56'21		minimum elong	4620 Apr 24 10:07	5° B 27'51	1°18'30
	4619 May 31 15:34	0° E		evening rise	4620 May 02 17:35	22° B 01'41	
evening max el	4619 Jun 07 00:45	7° E 55'16	20°28'56	asc. node	4620 May 02 18:30	22° B 06'15	
retrograde	4619 Jun 18 01:58	13° E 19'32			4620 May 06 18:58	0° II	
evening set	4619 Jun 20 01:54	13° E 09'40		evening max el	4620 May 19 15:46	19° II 32'06	19°23'24
desc. node	4619 Jun 22 13:15	12° E 32'05		retrograde	4620 May 28 23:20	24° II 04'33	
inferior conj	4619 Jun 29 07:04	9° E 12'09	-1°59'31	evening set	4620 May 30 22:39	23° II 53'14	
minimum elong	4619 Jun 29 01:29	9° E 20'16	1°57'31	desc. node	4620 Jun 08 10:16	19° II 49'32	
min. Earth dist.	4619 Jun 30 14:00	8° E 27'19	0.54944 AU	inferior conj	4620 Jun 08 12:12	19° II 46'23	-0°01'26
morning rise	4619 Jul 08 00:08	5° E 02'57		minimum elong	4620 Jun 08 12:08	19° II 46'29	0°01'25
direct	4619 Jul 11 20:58	4° E 30'38		transit middle	4620 Jun 08 12:08	19° II 46'29	0°01'25
morning max el	4619 Jul 25 05:58	10° E 59'30	23°25'52	transit begin	4620 Jun 08 08:17	19° II 52'46	
	4619 Aug 08 08:47	0° Ω		transit end	4620 Jun 08 16:00	19° II 40'11	
asc. node	4619 Aug 12 20:45	8° Ω 17'26		min. Earth dist.	4620 Jun 11 04:10	18° II 02'39	0.55925 AU
morning set	4619 Aug 17 18:31	18° Ω 17'03		morning rise	4620 Jun 16 22:46	15° II 04'28	
	4619 Aug 23 05:23	0° np		direct	4620 Jun 21 17:05	14° II 12'51	
				morning max el	4620 Jul 05 19:40	21° II 21'34	25°07'50
superior conj	4619 Aug 24 18:54	3° np 22'19	1°36'32		4620 Jul 13 08:10	0° E	
minimum elong	4619 Aug 24 17:14	3° np 13'18	1°36'24	asc. node	4620 Jul 29 17:47	27° E 55'13	
max. Earth dist.	4619 Aug 27 07:27	8° np 45'21	1.33485 AU		4620 Jul 30 18:00	0° Ω	
evening rise	4619 Sep 01 09:00	19° np 10'44		morning set	4620 Aug 01 06:13	3° Ω 09'58	
	4619 Sep 07 00:31	0° $\underline{\Omega}$					
desc. node	4619 Sep 18 12:35	19° $\underline{\Omega}$ 16'07		superior conj	4620 Aug 08 04:42	18° Ω 14'29	1°24'36
	4619 Sep 26 03:29	0° ml		minimum elong	4620 Aug 08 02:29	18° Ω 02'19	1°24'20
evening max el	4619 Oct 05 11:43	10° ml 36'04	27°21'30	max. Earth dist.	4620 Aug 09 12:52	21° Ω 10'06	1.32574 AU
retrograde	4619 Oct 19 00:26	17° ml 54'34			4620 Aug 13 15:44	0° np	
evening set	4619 Oct 26 01:12	15° ml 14'54		evening rise	4620 Aug 15 08:11	3° np 30'23	
min. Earth dist.	4619 Oct 29 19:36	11° ml 48'09	0.64356 AU		4620 Aug 29 18:40	0° $\underline{\Omega}$	
inferior conj	4619 Nov 01 04:46	9° ml 16'08	-2°30'25	desc. node	4620 Sep 04 09:35	8° $\underline{\Omega}$ 31'39	
minimum elong	4619 Nov 01 09:05	9° ml 04'39	2°28'46	evening max el	4620 Sep 16 21:28	23° $\underline{\Omega}$ 32'11	27°24'20
morning rise	4619 Nov 07 18:15	3° ml 50'37			4620 Sep 26 10:37	0° ml	
asc. node	4619 Nov 08 19:57	3° ml 28'47		retrograde	4620 Sep 30 15:54	0° ml 47'03	
direct	4619 Nov 10 07:15	3° ml 17'39			4620 Oct 04 16:56	30° R $\underline{\Omega}$	
morning max el	4619 Nov 16 19:15	6° ml 43'15	17°55'17	evening set	4620 Oct 07 20:15	28° $\underline{\Omega}$ 18'09	
	4619 Dec 02 08:06	0° Z		min. Earth dist.	4620 Oct 11 11:19	25° $\underline{\Omega}$ 20'46	0.62605 AU
morning set	4619 Dec 03 22:41	2° Z 43'25		inferior conj	4620 Oct 14 07:50	22° $\underline{\Omega}$ 37'57	-3°31'47
desc. node	4619 Dec 15 11:53	21° Z 56'15		minimum elong	4620 Oct 14 13:37	22° $\underline{\Omega}$ 24'09	3°29'58
				morning rise	4620 Oct 21 08:38	17° $\underline{\Omega}$ 30'08	
superior conj	4619 Dec 17 05:26	24° Z 44'28	-0°12'01	direct	4620 Oct 23 17:38	17° $\underline{\Omega}$ 04'31	
minimum elong	4619 Dec 17 04:01	24° Z 38'46	0°11'48	asc. node	4620 Oct 25 17:00	17° $\underline{\Omega}$ 22'42	

morning max el	4620 Oct 30 11:37	20°♄31'47	17°50'13	morning max el	4621 Oct 14 00:49	4°♄02'46	18°04'06
	4620 Nov 06 13:34	0°♄		morning set	4621 Oct 29 19:11	28°♄59'52	
morning set	4620 Nov 15 12:38	15°♄28'02			4621 Oct 30 08:05	0°♄	
	4620 Nov 23 19:18	0°♄					
superior conj	4620 Nov 26 21:24	5°♄15'40	0°31'08	superior conj	4621 Nov 08 15:27	17°♄03'00	1°04'30
minimum elong	4620 Nov 27 00:16	5°♄27'46	0°30'44	minimum elong	4621 Nov 08 19:30	17°♄21'01	1°04'01
desc. node	4620 Dec 01 08:54	12°♄42'52			4621 Nov 16 03:27	0°♄	
max. Earth dist.	4620 Dec 03 19:34	16°♄41'50	1.43550 AU	max. Earth dist.	4621 Nov 16 07:06	0°♄15'16	1.41820 AU
evening rise	4620 Dec 11 18:46	29°♄18'33		desc. node	4621 Nov 18 05:55	3°♄29'37	
	4620 Dec 12 05:28	0°♄		evening rise	4621 Nov 21 18:24	9°♄12'56	
	4621 Jan 01 14:02	0°♄			4621 Dec 05 08:20	0°♄	
evening max el	4621 Jan 11 08:47	12°♄03'15	21°22'29	evening max el	4621 Dec 25 02:09	25°♄39'21	22°39'40
retrograde	4621 Jan 20 03:53	17°♄16'11			4621 Dec 30 07:40	0°♄	
asc. node	4621 Jan 21 16:14	17°♄03'48		retrograde	4622 Jan 03 23:41	1°♄32'05	
evening set	4621 Jan 24 09:04	15°♄37'05			4622 Jan 08 04:45	30°♄	
inferior conj	4621 Jan 29 17:15	9°♄21'50	2°26'43	evening set	4622 Jan 08 16:26	29°♄37'02	
minimum elong	4621 Jan 29 14:48	9°♄30'17	2°25'59	asc. node	4622 Jan 08 13:17	29°♄43'29	
min. Earth dist.	4621 Jan 29 23:33	8°♄59'59	0.67890 AU	inferior conj	4622 Jan 14 01:12	23°♄14'27	1°46'11
morning rise	4621 Feb 03 20:22	3°♄09'27		minimum elong	4622 Jan 13 23:05	23°♄21'45	1°45'25
direct	4621 Feb 09 00:13	0°♄54'35		min. Earth dist.	4622 Jan 13 19:58	23°♄32'33	0.68070 AU
morning max el	4621 Feb 19 07:57	7°♄02'32	23°18'04	morning rise	4622 Jan 19 05:38	17°♄05'25	
desc. node	4621 Feb 27 08:08	16°♄24'16		direct	4622 Jan 23 18:47	15°♄13'18	
	4621 Mar 09 03:59	0°♄		morning max el	4622 Feb 01 20:36	20°♄31'42	21°51'04
morning set	4621 Mar 26 07:10	26°♄51'51			4622 Feb 09 20:31	0°♄	
	4621 Mar 28 03:37	0°♄		desc. node	4622 Feb 14 05:11	5°♄55'32	
max. Earth dist.	4621 Mar 30 10:34	3°♄56'49	1.39320 AU	morning set	4622 Mar 02 09:52	0°♄	
				max. Earth dist.	4622 Mar 06 09:21	6°♄17'36	
superior conj	4621 Apr 07 01:24	17°♄38'55	-1°44'34		4622 Mar 12 09:37	16°♄06'37	1.41471 AU
minimum elong	4621 Apr 07 06:17	18°♄01'39	1°44'03	superior conj	4622 Mar 20 01:56	29°♄15'22	-2°02'38
	4621 Apr 13 13:45	0°♄		minimum elong	4622 Mar 20 05:30	29°♄31'02	2°02'28
evening rise	4621 Apr 16 11:51	5°♄38'11			4622 Mar 20 12:04	0°♄	
asc. node	4621 Apr 19 15:32	11°♄40'06		evening rise	4622 Mar 30 18:25	18°♄38'08	
	4621 May 01 01:05	0°♄			4622 Apr 06 00:25	0°♄	
evening max el	4621 May 02 17:08	1°♄47'04	18°37'58	asc. node	4622 Apr 06 12:35	0°♄53'10	
retrograde	4621 May 10 14:32	5°♄40'04		evening max el	4622 Apr 16 01:34	14°♄32'49	18°12'39
evening set	4621 May 12 19:43	5°♄22'46		retrograde	4622 Apr 23 00:37	18°♄02'46	
inferior conj	4621 May 20 13:15	0°♄57'22	1°36'25	evening set	4622 Apr 25 12:29	17°♄36'32	
minimum elong	4621 May 20 16:25	0°♄51'20	1°35'24	inferior conj	4622 May 02 11:43	12°♄50'24	2°42'52
	4621 May 21 19:13	30°♄		minimum elong	4622 May 02 15:07	12°♄42'49	2°42'03
min. Earth dist.	4621 May 23 21:36	28°♄25'36	0.57645 AU	min. Earth dist.	4622 May 05 20:51	9°♄51'14	0.59767 AU
desc. node	4621 May 26 07:18	26°♄48'51		morning rise	4622 May 09 15:10	7°♄06'19	
morning rise	4621 May 28 09:54	25°♄40'33		desc. node	4622 May 13 04:21	5°♄33'28	
direct	4621 Jun 03 02:59	24°♄19'06		direct	4622 May 16 01:49	5°♄10'03	
	4621 Jun 15 10:05	0°♄		morning max el	4622 May 30 10:22	13°♄01'30	27°31'59
morning max el	4621 Jun 17 11:54	1°♄54'14	26°34'36		4622 Jun 12 21:27	0°♄	
	4621 Jul 07 12:46	0°♄			4622 Jun 29 18:23	0°♄	
morning set	4621 Jul 16 16:40	17°♄57'18		morning set	4622 Jul 01 00:10	2°♄33'46	
asc. node	4621 Jul 16 14:49	17°♄47'34		asc. node	4622 Jul 03 11:52	7°♄49'25	
	4621 Jul 22 06:02	0°♄		max. Earth dist.	4622 Jul 07 10:44	16°♄25'53	1.31983 AU
superior conj	4621 Jul 23 16:18	3°♄09'07	1°07'57	superior conj	4622 Jul 08 03:55	18°♄00'36	0°47'11
minimum elong	4621 Jul 23 14:00	2°♄56'28	1°07'35	minimum elong	4622 Jul 08 02:01	17°♄50'10	0°46'48
max. Earth dist.	4621 Jul 23 23:14	3°♄47'23	1.32075 AU		4622 Jul 13 15:08	0°♄	
evening rise	4621 Jul 30 13:44	18°♄06'42		evening rise	4622 Jul 14 23:18	2°♄52'18	
	4621 Aug 05 11:38	0°♄			4622 Jul 29 11:33	0°♄	
desc. node	4621 Aug 22 06:36	26°♄59'34		desc. node	4622 Aug 09 03:37	14°♄20'21	
	4621 Aug 24 16:36	0°♄		evening max el	4622 Aug 11 23:08	17°♄13'29	25°51'35
evening max el	4621 Aug 30 02:03	5°♄47'30	26°54'08	retrograde	4622 Aug 25 22:15	24°♄20'37	
retrograde	4621 Sep 12 23:34	12°♄57'56		evening set	4622 Sep 01 03:42	22°♄48'22	
evening set	4621 Sep 19 22:42	10°♄51'52		min. Earth dist.	4622 Sep 05 11:24	20°♄12'17	0.58540 AU
min. Earth dist.	4621 Sep 23 16:13	8°♄13'30	0.60613 AU	inferior conj	4622 Sep 08 16:32	17°♄52'40	-5°04'55
inferior conj	4621 Sep 26 20:57	5°♄33'30	-4°26'26	minimum elong	4622 Sep 08 20:12	17°♄45'59	5°04'33
minimum elong	4621 Sep 27 02:57	5°♄20'56	4°25'07	morning rise	4622 Sep 16 14:58	13°♄29'24	
morning rise	4621 Oct 04 09:07	0°♄46'53		direct	4622 Sep 19 01:33	13°♄10'07	
direct	4621 Oct 06 17:17	0°♄25'35		morning max el	4622 Sep 27 07:34	17°♄06'59	18°38'21
asc. node	4621 Oct 12 14:03	2°♄45'58		asc. node	4622 Sep 29 11:08	19°♄24'49	

































































































































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morning set	4622 Oct 13 13:20	13°♄04'20		morning max el	4623 Sep 10 04:38	29°♄34'54	19°34'08
					4623 Sep 10 15:06	0°♄	
superior conj	4622 Oct 22 06:57	29°♄52'59	1°27'03	asc. node	4623 Sep 16 08:11	7°♄04'01	
minimum elong	4622 Oct 22 10:12	0°♄08'12	1°26'45	morning set	4623 Sep 27 15:27	27°♄31'34	
	4622 Oct 22 08:27	0°♄			4623 Sep 28 20:55	0°♄	
max. Earth dist.	4622 Oct 29 13:28	13°♄04'45	1.39779 AU				
evening rise	4622 Nov 02 15:46	20°♄06'43		superior conj	4623 Oct 05 14:28	13°♄30'12	1°39'41
desc. node	4622 Nov 05 02:55	24°♄12'41		minimum elong	4623 Oct 05 16:09	13°♄38'32	1°39'35
	4622 Nov 08 16:52	0°♄		max. Earth dist.	4623 Oct 11 17:57	25°♄15'26	1.37688 AU
	4622 Nov 29 13:15	0°♄			4623 Oct 14 08:20	0°♄	
evening max el	4622 Dec 07 16:01	9°♄18'09	23°59'37	evening rise	4623 Oct 15 12:02	2°♄03'42	
retrograde	4622 Dec 18 16:15	15°♄46'58		desc. node	4623 Oct 22 23:57	14°♄48'24	
evening set	4622 Dec 23 21:53	13°♄36'11			4623 Nov 01 20:36	0°♄	
asc. node	4622 Dec 26 10:21	10°♄59'44		evening max el	4623 Nov 20 04:33	23°♄00'44	25°15'37
min. Earth dist.	4622 Dec 28 16:28	8°♄04'58	0.67883 AU	retrograde	4623 Dec 02 04:36	29°♄56'33	
inferior conj	4622 Dec 29 08:37	7°♄10'12	0°58'44	evening set	4623 Dec 07 23:47	27°♄31'37	
minimum elong	4622 Dec 29 07:17	7°♄14'45	0°58'13	min. Earth dist.	4623 Dec 12 10:44	22°♄34'34	0.67349 AU
morning rise	4623 Jan 03 16:43	1°♄06'11		asc. node	4623 Dec 13 07:24	21°♄27'27	
	4623 Jan 05 15:02	30°♄		inferior conj	4623 Dec 13 13:43	21°♄06'52	0°05'24
direct	4623 Jan 07 16:02	29°♄36'45		minimum elong	4623 Dec 13 13:35	21°♄07'19	0°05'21
	4623 Jan 09 19:10	0°♄		transit middle	4623 Dec 13 13:35	21°♄07'19	0°05'21
morning max el	4623 Jan 15 16:03	4°♄11'46	20°32'55	transit begin	4623 Dec 13 10:57	21°♄15'52	
desc. node	4623 Feb 01 02:12	25°♄53'04		transit end	4623 Dec 13 16:13	20°♄58'46	
	4623 Feb 03 20:40	0°♄		morning rise	4623 Dec 19 03:39	15°♄09'56	
morning set	4623 Feb 13 11:14	14°♄38'51		direct	4623 Dec 22 14:43	14°♄00'51	
max. Earth dist.	4623 Feb 22 15:35	29°♄09'52	1.43313 AU	morning max el	4623 Dec 29 19:25	18°♄02'49	19°28'03
	4623 Feb 23 04:00	0°♄			4624 Jan 08 04:53	0°♄	
				greatest brilliancy	4624 Jan 11 23:18	5°♄32'19	-0.7m
superior conj	4623 Mar 01 02:33	9°♄45'17	-2°08'12	desc. node	4624 Jan 18 23:13	16°♄09'48	
minimum elong	4623 Mar 01 01:41	9°♄41'40	2°08'12	morning set	4624 Jan 23 08:47	22°♄56'24	
	4623 Mar 12 21:16	0°♄			4624 Jan 27 22:02	0°♄	
evening rise	4623 Mar 13 08:58	0°♄51'28		max. Earth dist.	4624 Feb 05 04:21	12°♄57'11	1.44627 AU
asc. node	4623 Mar 24 09:37	19°♄38'13					
evening max el	4623 Mar 30 13:41	27°♄40'20	18°07'02	superior conj	4624 Feb 09 01:38	19°♄08'04	-1°55'56
	4623 Apr 02 12:12	0°♄		minimum elong	4624 Feb 08 18:37	18°♄40'01	1°55'29
retrograde	4623 Apr 06 01:39	1°♄02'40			4624 Feb 15 18:51	0°♄	
evening set	4623 Apr 08 19:46	0°♄25'37		evening rise	4624 Feb 23 03:06	12°♄09'53	
	4623 Apr 09 16:11	30°♄			4624 Mar 04 22:10	0°♄	
inferior conj	4623 Apr 15 04:32	25°♄19'32	3°20'02	asc. node	4624 Mar 10 06:40	7°♄46'07	
minimum elong	4623 Apr 15 06:35	25°♄14'18	3°19'46	evening max el	4624 Mar 13 02:25	11°♄01'29	18°20'18
min. Earth dist.	4623 Apr 18 04:14	22°♄17'44	0.61950 AU	retrograde	4624 Mar 19 13:04	14°♄29'46	
morning rise	4623 Apr 21 15:44	19°♄18'43		evening set	4624 Mar 22 13:18	13°♄40'41	
direct	4623 Apr 28 11:29	16°♄51'58		inferior conj	4624 Mar 28 11:31	8°♄15'51	3°34'05
desc. node	4623 Apr 30 01:23	16°♄59'19		minimum elong	4624 Mar 28 11:52	8°♄14'50	3°34'05
morning max el	4623 May 12 15:02	24°♄51'32	27°52'28	min. Earth dist.	4624 Mar 30 20:45	5°♄33'12	0.63942 AU
	4623 May 17 07:34	0°♄		morning rise	4624 Apr 03 09:33	2°♄06'28	
	4623 May 06 07:07	0°♄			4624 Apr 06 21:02	30°♄	
morning set	4623 Jun 15 02:45	16°♄53'22		direct	4624 Apr 10 05:43	29°♄20'54	
asc. node	4623 Jun 20 08:55	27°♄56'26			4624 Apr 13 19:00	0°♄	
max. Earth dist.	4623 Jun 20 19:28	28°♄53'20	1.32310 AU	desc. node	4624 Apr 15 22:26	0°♄57'15	
	4623 Jun 21 07:47	0°♄		morning max el	4624 Apr 23 23:34	7°♄18'49	27°35'51
					4624 May 11 09:51	0°♄	
superior conj	4623 Jun 22 13:51	2°♄43'35	0°22'53	morning set	4624 May 28 21:51	0°♄47'28	
minimum elong	4623 Jun 22 12:48	2°♄37'54	0°22'39		4624 May 28 12:15	0°♄	
evening rise	4623 Jun 29 10:53	17°♄40'54		max. Earth dist.	4624 Jun 02 21:21	10°♄56'28	1.33084 AU
	4623 Jul 05 11:59	0°♄					
evening max el	4623 Jul 24 13:31	27°♄56'16	24°24'35	superior conj	4624 Jun 05 20:08	17°♄11'15	-0°04'16
	4623 Jul 26 20:57	0°♄		minimum elong	4624 Jun 05 20:21	17°♄12'24	0°04'15
desc. node	4623 Jul 27 00:38	0°♄07'32		behind sun begin	4624 Jun 05 15:08	16°♄44'33	
retrograde	4623 Aug 07 10:07	4°♄55'39		behind sun end	4624 Jun 06 01:33	17°♄40'17	
evening set	4623 Aug 12 08:24	4°♄01'22		asc. node	4624 Jun 06 05:56	18°♄03'45	
min. Earth dist.	4623 Aug 18 00:29	1°♄08'38	0.56662 AU		4624 Jun 11 19:07	0°♄	
	4623 Aug 19 20:01	30°♄		evening rise	4624 Jun 12 22:30	2°♄25'31	
inferior conj	4623 Aug 20 16:08	29°♄27'54	-5°12'48		4624 Jun 28 03:48	0°♄	
minimum elong	4623 Aug 20 14:20	29°♄30'46	5°12'43	evening max el	4624 Jul 05 02:44	8°♄18'51	22°47'20
morning rise	4623 Aug 28 22:48	25°♄25'38		desc. node	4624 Jul 12 21:40	13°♄46'33	

retrograde	4624 Jul 18 09:03	14°♎55'12		desc. node	4625 Jun 29 18:39	24°♎46'41	
evening set	4624 Jul 21 18:46	14°♎29'49		evening set	4625 Jul 01 05:45	24°♎36'02	
min. Earth dist.	4624 Jul 29 11:03	11°♎06'08	0.55321 AU	inferior conj	4625 Jul 10 14:30	20°♎37'31	-3°05'46
inferior conj	4624 Jul 30 20:46	10°♎17'47	-4°34'18	minimum elong	4625 Jul 10 06:26	20°♎48'49	3°03'12
minimum elong	4624 Jul 30 13:13	10°♎28'38	4°32'51	min. Earth dist.	4625 Jul 10 21:37	20°♎27'31	0.54811 AU
morning rise	4624 Aug 08 09:48	6°♎27'01		morning rise	4625 Jul 19 07:39	16°♎41'17	
direct	4624 Aug 11 09:56	6°♎06'00		direct	4625 Jul 22 19:28	16°♎14'58	
morning max el	4624 Aug 22 13:41	11°♎17'25	20°51'24	morning max el	4625 Aug 04 11:24	22°♎15'23	22°26'32
asc. node	4624 Sep 02 05:12	25°♎29'07			4625 Aug 11 04:45	0°♎	
	4624 Sep 04 18:06	0°♎		asc. node	4625 Aug 20 02:13	14°♎29'14	
morning set	4624 Sep 10 22:44	12°♎13'06		morning set	4625 Aug 26 09:06	27°♎03'15	
					4625 Aug 27 18:36	0°♎	
superior conj	4624 Sep 18 09:21	27°♎40'17	1°43'52				
minimum elong	4624 Sep 18 09:27	27°♎40'53	1°43'51	superior conj	4625 Sep 02 12:05	12°♎13'07	1°40'58
	4624 Sep 19 12:42	0°♎		minimum elong	4625 Sep 02 10:56	12°♎07'03	1°40'54
max. Earth dist.	4624 Sep 23 02:19	7°♎07'53	1.35780 AU	max. Earth dist.	4625 Sep 05 18:52	19°♎05'43	1.34209 AU
evening rise	4624 Sep 27 03:47	14°♎54'31		evening rise	4625 Sep 10 10:44	28°♎27'55	
	4624 Oct 05 16:48	0°♎			4625 Sep 11 05:42	0°♎	
desc. node	4624 Oct 08 20:58	5°♎11'14		desc. node	4625 Sep 25 17:59	25°♎14'59	
	4624 Oct 26 12:33	0°♎			4625 Sep 28 21:18	0°♎	
evening max el	4624 Nov 01 17:14	6°♎43'21	26°20'23	evening max el	4625 Oct 15 05:57	20°♎17'16	27°06'20
retrograde	4624 Nov 14 11:47	13°♎54'48		retrograde	4625 Oct 28 13:11	27°♎34'34	
evening set	4624 Nov 20 20:18	11°♎19'10		evening set	4625 Nov 04 09:14	24°♎53'57	
min. Earth dist.	4624 Nov 25 00:22	6°♎57'24	0.66462 AU	min. Earth dist.	4625 Nov 08 06:54	21°♎07'49	0.65226 AU
inferior conj	4624 Nov 26 14:36	5°♎00'43	-0°52'47	inferior conj	4625 Nov 10 09:03	18°♎46'54	-1°54'19
minimum elong	4624 Nov 26 16:02	4°♎56'20	0°52'09	minimum elong	4625 Nov 10 12:19	18°♎37'43	1°53'00
asc. node	4624 Nov 29 04:25	2°♎00'56		asc. node	4625 Nov 16 01:27	13°♎32'18	
	4624 Dec 01 08:38	30°♎		morning rise	4625 Nov 16 16:23	13°♎12'34	
morning rise	4624 Dec 02 12:20	29°♎13'32		direct	4625 Nov 19 09:05	12°♎33'34	
direct	4624 Dec 05 13:08	28°♎21'23		morning max el	4625 Nov 25 20:37	16°♎01'32	18°06'18
	4624 Dec 09 21:34	0°♎			4625 Dec 05 23:45	0°♎	
morning max el	4624 Dec 12 05:40	2°♎01'18	18°38'52	morning set	4625 Dec 14 01:27	13°♎12'34	
	4624 Dec 31 14:57	0°♎		desc. node	4625 Dec 22 17:16	27°♎20'13	
morning set	4625 Jan 02 02:22	2°♎20'05			4625 Dec 24 09:02	0°♎	
desc. node	4625 Jan 04 20:15	6°♎40'27					
				superior conj	4625 Dec 28 12:23	6°♎35'51	-0°39'18
superior conj	4625 Jan 18 06:46	27°♎47'53	-1°24'13	minimum elong	4625 Dec 28 07:30	6°♎16'27	0°38'38
minimum elong	4625 Jan 17 21:33	27°♎11'44	1°23'13	max. Earth dist.	4625 Dec 31 18:01	11°♎42'13	1.45148 AU
max. Earth dist.	4625 Jan 17 22:11	27°♎14'13	1.45260 AU		4626 Jan 12 11:35	0°♎	
	4625 Jan 19 16:26	0°♎		evening rise	4626 Jan 13 19:54	2°♎05'12	
evening rise	4625 Feb 02 22:06	22°♎31'35		greatest brilliancy	4626 Jan 26 21:15	22°♎06'07	-0.7m
	4625 Feb 07 14:14	0°♎			4626 Feb 01 07:56	0°♎	
greatest brilliancy	4625 Feb 11 00:11	5°♎26'30	-0.8m	evening max el	4626 Feb 07 19:58	8°♎02'22	19°39'17
evening max el	4625 Feb 24 13:13	24°♎30'29	18°51'31	asc. node	4626 Feb 12 00:43	11°♎24'16	
asc. node	4625 Feb 25 03:41	25°♎06'08		retrograde	4626 Feb 15 04:20	12°♎17'00	
retrograde	4625 Mar 03 07:00	28°♎16'46		evening set	4626 Feb 18 18:40	11°♎01'14	
evening set	4625 Mar 06 13:48	27°♎14'44		inferior conj	4626 Feb 24 05:19	5°♎03'57	3°13'54
inferior conj	4625 Mar 12 04:51	21°♎32'40	3°30'39	minimum elong	4626 Feb 24 03:20	5°♎10'32	3°13'33
minimum elong	4625 Mar 12 03:47	21°♎35'57	3°30'35	min. Earth dist.	4626 Feb 25 08:01	3°♎35'46	0.66808 AU
min. Earth dist.	4625 Mar 13 22:24	19°♎23'41	0.65584 AU		4626 Feb 28 07:16	30°♎	
morning rise	4625 Mar 17 17:22	15°♎19'31		morning rise	4626 Mar 01 11:47	28°♎49'38	
direct	4625 Mar 24 06:49	12°♎29'14		direct	4626 Mar 07 13:49	26°♎06'54	
desc. node	4625 Apr 02 19:27	16°♎54'57			4626 Mar 16 01:58	0°♎	
morning max el	4625 Apr 06 09:28	20°♎13'30	26°47'20	morning max el	4626 Mar 19 18:53	3°♎23'56	25°35'13
	4625 Apr 14 18:52	0°♎		desc. node	4626 Mar 20 16:29	4°♎19'35	
	4625 May 04 12:05	0°♎			4626 Apr 09 01:17	0°♎	
morning set	4625 May 12 06:22	14°♎07'01		morning set	4626 Apr 24 24:00	26°♎39'12	
max. Earth dist.	4625 May 16 13:14	22°♎29'32	1.34325 AU		4626 Apr 26 19:39	0°♎	
	4625 May 20 05:43	0°♎		max. Earth dist.	4626 Apr 28 17:57	3°♎37'12	1.36016 AU
superior conj	4625 May 20 20:40	1°♎17'29	-0°33'17	superior conj	4626 May 04 12:44	14°♎54'03	-1°02'47
minimum elong	4625 May 20 22:27	1°♎26'44	0°32'56	minimum elong	4626 May 04 16:10	15°♎11'12	1°02'10
asc. node	4625 May 24 02:57	8°♎07'41		asc. node	4626 May 10 23:59	28°♎03'36	
evening rise	4625 May 28 08:19	17°♎00'27			4626 May 11 22:46	0°♎	
	4625 Jun 03 21:03	0°♎		evening rise	4626 May 12 14:11	1°♎18'31	
evening max el	4625 Jun 16 22:43	18°♎54'26	21°15'11		4626 May 30 04:05	0°♎	
retrograde	4625 Jun 28 22:22	24°♎48'22		evening max el	4626 May 30 06:27	0°♎05'51	19°58'30

retrograde	4626 Jun 09 13:30	5°☿07'30		asc. node	4627 Apr 27 21:01	17°♄47'15	
evening set	4626 Jun 11 11:55	4°☿57'37			4627 May 04 10:14	0°♊	
desc. node	4626 Jun 16 15:40	3°☿08'03		evening max el	4627 May 13 02:10	11°♊59'27	19°01'30
inferior conj	4626 Jun 20 11:28	0°☿57'18	-1°08'24	retrograde	4627 May 21 18:12	16°♊13'38	
minimum elong	4626 Jun 20 08:17	1°☿02'07	1°07'12	evening set	4627 May 23 19:25	16°♊00'22	
	4626 Jun 22 01:21	30°♋♊		inferior conj	4627 Jun 01 00:32	11°♊46'09	0°43'41
min. Earth dist.	4626 Jun 22 09:59	29°♊47'05	0.55256 AU	minimum elong	4627 Jun 01 02:15	11°♊43'10	0°43'04
morning rise	4626 Jun 29 02:52	26°♊35'39		desc. node	4627 Jun 03 12:43	10°♊01'30	
direct	4626 Jul 03 08:09	25°♊56'45		min. Earth dist.	4627 Jun 04 01:33	9°♊39'52	0.56581 AU
	4626 Jul 13 21:04	0°☿		morning rise	4627 Jun 09 05:49	6°♊48'30	
morning max el	4626 Jul 17 02:18	2°☿43'29	24°10'15	direct	4627 Jun 14 09:49	5°♊45'24	
	4626 Aug 04 22:59	0°♌		morning max el	4627 Jun 28 16:40	13°♊07'32	25°47'41
asc. node	4626 Aug 06 23:15	3°♌55'30			4627 Jul 11 22:04	0°☿	
morning set	4626 Aug 10 20:48	11°♌56'55		asc. node	4627 Jul 24 20:18	23°☿40'19	
				morning set	4627 Jul 26 08:10	26°☿48'19	
					4627 Jul 27 20:04	0°♌	
superior conj	4626 Aug 17 19:57	27°♌00'29	1°32'05				
minimum elong	4626 Aug 17 17:59	26°♌49'49	1°31'54				
	4626 Aug 19 05:09	0°♍		superior conj	4627 Aug 02 06:45	11°♌54'44	1°18'05
max. Earth dist.	4626 Aug 19 20:09	1°♍20'37	1.33043 AU	minimum elong	4627 Aug 02 04:26	11°♌42'02	1°17'45
evening rise	4626 Aug 25 04:57	12°♍33'25		max. Earth dist.	4627 Aug 03 03:57	13°♌51'15	1.32302 AU
	4626 Sep 03 10:27	0°♎		evening rise	4627 Aug 09 07:08	27°♌01'02	
desc. node	4626 Sep 12 14:59	14°♎51'34			4627 Aug 10 17:54	0°♍	
	4626 Sep 24 06:58	0°♎			4627 Aug 27 19:35	0°♎	
evening max el	4626 Sep 27 17:15	3°♎30'38	27°26'34	desc. node	4627 Aug 30 12:00	3°♎49'12	
retrograde	4626 Oct 11 08:28	10°♎47'47		evening max el	4627 Sep 10 00:53	16°♎10'06	27°15'39
evening set	4626 Oct 18 11:51	8°♎11'01		retrograde	4627 Sep 23 21:03	23°♎24'01	
min. Earth dist.	4626 Oct 22 04:20	4°♎57'59	0.63647 AU	evening set	4627 Oct 01 00:28	21°♎02'58	
inferior conj	4626 Oct 24 18:37	2°♎19'55	-2°56'49	min. Earth dist.	4627 Oct 04 15:22	18°♎15'33	0.61773 AU
minimum elong	4626 Oct 24 23:38	2°♎07'09	2°55'03	inferior conj	4627 Oct 07 16:09	15°♎31'37	-3°56'16
	4626 Oct 27 03:58	30°♋♎		minimum elong	4627 Oct 07 22:16	15°♎17'49	3°54'34
morning rise	4626 Oct 31 12:51	27°♎01'46		morning rise	4627 Oct 14 21:55	10°♎32'48	
direct	4626 Nov 02 23:52	26°♎32'17		direct	4627 Oct 17 06:03	10°♎09'29	
asc. node	4626 Nov 02 22:29	26°♎32'18		asc. node	4627 Oct 20 19:33	11°♎05'36	
morning max el	4626 Nov 09 13:26	29°♎57'16	17°51'00	morning max el	4627 Oct 24 04:56	13°♎39'58	17°53'47
	4626 Nov 09 14:31	0°♏			4627 Nov 04 07:39	0°♏	
morning set	4626 Nov 26 03:05	25°♏22'15		morning set	4627 Nov 09 00:46	8°♏28'45	
	4626 Nov 28 19:30	0°♐					
				superior conj	4627 Nov 19 16:49	27°♏28'34	0°46'35
superior conj	4626 Dec 08 13:23	16°♐23'40	0°07'16	minimum elong	4627 Nov 19 20:31	27°♏44'31	0°46'06
minimum elong	4626 Dec 08 14:10	16°♐26'52	0°07'09		4627 Nov 21 04:06	0°♐	
behind sun begin	4626 Dec 08 05:23	15°♐50'49		desc. node	4627 Nov 26 11:19	8°♐52'50	
behind sun end	4626 Dec 08 22:56	17°♐02'51		max. Earth dist.	4627 Nov 27 01:57	9°♐52'53	1.42862 AU
desc. node	4626 Dec 09 14:18	18°♐05'41		evening rise	4627 Dec 03 20:44	20°♐45'09	
max. Earth dist.	4626 Dec 14 12:11	26°♐01'12	1.44313 AU		4627 Dec 09 20:31	0°♑	
	4626 Dec 17 00:24	0°♑			4627 Dec 31 03:38	0°♑	
evening rise	4626 Dec 24 06:15	11°♑17'00		evening max el	4628 Jan 04 17:28	5°♑10'00	21°54'35
	4627 Jan 05 15:55	0°♒		retrograde	4628 Jan 13 23:50	10°♑40'38	
evening max el	4627 Jan 21 21:26	21°♑35'32	20°41'25	asc. node	4628 Jan 16 18:48	9°♑58'59	
asc. node	4627 Jan 29 21:45	26°♑26'08		evening set	4628 Jan 18 09:38	8°♑54'55	
retrograde	4627 Jan 30 02:38	26°♑26'22		inferior conj	4628 Jan 23 17:52	2°♑35'57	2°10'28
evening set	4627 Feb 03 01:52	24°♑56'01		minimum elong	4628 Jan 23 15:31	2°♑44'08	2°09'41
inferior conj	4627 Feb 08 10:24	18°♑46'14	2°46'33	min. Earth dist.	4628 Jan 23 19:12	2°♑31'20	0.68008 AU
minimum elong	4627 Feb 08 07:59	18°♑54'31	2°45'56		4628 Jan 25 15:39	30°♋♑	
min. Earth dist.	4627 Feb 08 23:44	18°♑00'31	0.67611 AU	morning rise	4628 Jan 28 21:13	26°♑24'32	
morning rise	4627 Feb 13 13:55	12°♑32'32		direct	4628 Feb 02 18:42	24°♑19'09	
direct	4627 Feb 19 02:04	10°♑06'00			4628 Feb 12 11:05	0°♒	
morning max el	4627 Mar 02 03:36	16°♑42'23	24°09'29	morning max el	4628 Feb 12 13:40	0°♑06'28	22°40'20
desc. node	4627 Mar 07 13:33	22°♑46'45		desc. node	4628 Feb 22 10:35	11°♑58'26	
	4627 Mar 13 04:11	0°♋			4628 Mar 06 00:17	0°♋	
	4627 Apr 02 01:31	0°♌		morning set	4628 Mar 17 16:10	18°♋23'13	
morning set	4627 Apr 06 21:14	8°♌09'39		max. Earth dist.	4628 Mar 22 10:07	26°♋20'18	1.40249 AU
max. Earth dist.	4627 Apr 10 14:29	14°♌42'44	1.38060 AU		4628 Mar 24 13:12	0°♌	
superior conj	4627 Apr 17 16:58	27°♌52'34	-1°30'33	superior conj	4628 Mar 30 05:06	10°♌02'55	-1°53'24
minimum elong	4627 Apr 17 21:39	28°♌14'57	1°29'55	minimum elong	4628 Mar 30 09:45	10°♌24'02	1°53'02
	4627 Apr 18 19:32	0°♍		evening rise	4628 Apr 09 03:25	28°♌35'35	
evening rise	4627 Apr 26 13:35	15°♍12'53			4628 Apr 09 21:14	0°♍	

asc. node	4628 Apr 13 18:05	7°♄13'39			4629 Apr 02 23:01	0°♄	
evening max el	4628 Apr 25 07:06	24°♄29'53	18°24'48	evening max el	4629 Apr 08 17:35	7°♄26'38	18°07'57
retrograde	4628 May 02 17:34	28°♄10'57		retrograde	4629 Apr 15 10:25	10°♄51'08	
evening set	4628 May 05 01:34	27°♄50'12		evening set	4629 Apr 18 01:08	10°♄20'21	
inferior conj	4628 May 12 10:59	23°♄16'26	2°08'26	inferior conj	4629 Apr 24 17:43	5°♄25'42	3°01'48
minimum elong	4628 May 12 14:33	23°♄09'10	2°07'25	minimum elong	4629 Apr 24 20:38	5°♄18'46	3°01'14
min. Earth dist.	4628 May 15 21:31	20°♄29'44	0.58517 AU	min. Earth dist.	4629 Apr 27 23:48	2°♄22'33	0.60709 AU
morning rise	4628 May 20 00:24	17°♄46'37			4629 Apr 30 22:23	30°♄	
desc. node	4628 May 20 09:46	17°♄34'46		morning rise	4629 May 01 14:00	29°♄33'40	
direct	4628 May 26 02:00	16°♄10'04		desc. node	4629 May 07 06:49	27°♄25'57	
morning max el	4628 Jun 09 11:24	23°♄54'00	27°03'07	direct	4629 May 08 05:53	27°♄23'17	
	4628 Jun 14 23:50	0°♄			4629 May 16 01:11	0°♄	
	4628 Jul 04 00:01	0°♄		morning max el	4629 May 22 12:24	5°♄18'35	27°45'17
morning set	4628 Jul 09 17:36	11°♄32'22			4629 Jun 09 22:33	0°♄	
asc. node	4628 Jul 10 17:21	13°♄37'52		morning set	4629 Jun 23 23:14	26°♄02'20	
					4629 Jun 25 20:41	0°♄	
superior conj	4628 Jul 16 18:37	26°♄49'38	0°59'38	asc. node	4629 Jun 27 14:23	3°♄42'29	
minimum elong	4628 Jul 16 16:26	26°♄37'35	0°59'14	max. Earth dist.	4629 Jun 30 01:54	9°♄05'42	1.32076 AU
max. Earth dist.	4628 Jul 16 15:08	26°♄30'24	1.31982 AU				
	4628 Jul 18 05:05	0°♄		superior conj	4629 Jul 01 05:43	11°♄38'21	0°37'18
evening rise	4628 Jul 23 14:41	11°♄42'54		minimum elong	4629 Jul 01 04:08	11°♄29'38	0°36'57
	4628 Aug 01 22:16	0°♄		evening rise	4629 Jul 08 01:21	26°♄30'51	
desc. node	4628 Aug 16 09:01	21°♄51'48			4629 Jul 09 17:02	0°♄	
evening max el	4628 Aug 22 02:30	28°♄05'24	26°31'16		4629 Jul 26 22:41	0°♄	
	4628 Aug 24 06:00	0°♄		desc. node	4629 Aug 03 06:03	8°♄36'39	
retrograde	4628 Sep 05 01:23	5°♄14'48		evening max el	4629 Aug 03 20:36	9°♄12'02	25°16'51
evening set	4628 Sep 11 18:24	3°♄22'13		retrograde	4629 Aug 17 19:21	16°♄16'00	
min. Earth dist.	4628 Sep 15 16:09	0°♄46'49	0.59724 AU	evening set	4629 Aug 23 12:58	15°♄00'25	
	4628 Sep 16 16:26	30°♄		min. Earth dist.	4629 Aug 28 08:20	12°♄19'16	0.57703 AU
inferior conj	4628 Sep 18 22:14	28°♄13'10	-4°45'33	inferior conj	4629 Aug 31 09:29	10°♄14'32	-5°13'00
minimum elong	4628 Sep 19 03:38	28°♄02'29	4°44'36	minimum elong	4629 Aug 31 11:09	10°♄11'40	5°12'56
morning rise	4628 Sep 26 14:59	23°♄36'13		morning rise	4629 Sep 08 11:37	6°♄00'26	
direct	4628 Sep 28 23:36	23°♄16'09		direct	4629 Sep 11 00:17	5°♄41'17	
morning max el	4628 Oct 06 15:48	27°♄00'51	18°16'02	morning max el	4629 Sep 19 18:39	9°♄50'13	18°59'21
asc. node	4628 Oct 06 16:36	27°♄02'48		asc. node	4629 Sep 23 13:38	14°♄08'53	
	4628 Oct 09 08:06	0°♄			4629 Oct 03 02:16	0°♄	
morning set	4628 Oct 22 12:45	22°♄15'45		morning set	4629 Oct 06 10:41	6°♄31'12	
	4628 Oct 26 14:43	0°♄					
				superior conj	4629 Oct 14 19:28	22°♄55'39	1°33'32
superior conj	4628 Oct 31 20:35	9°♄44'01	1°15'21	minimum elong	4629 Oct 14 22:06	23°♄08'13	1°33'20
minimum elong	4628 Nov 01 00:27	10°♄01'37	1°14'55		4629 Oct 18 13:32	0°♄	
max. Earth dist.	4628 Nov 08 10:43	23°♄06'31	1.40977 AU	max. Earth dist.	4629 Oct 21 16:03	5°♄39'25	1.38886 AU
desc. node	4628 Nov 12 08:19	29°♄38'30		evening rise	4629 Oct 25 12:21	12°♄24'47	
	4628 Nov 12 13:33	0°♄		desc. node	4629 Oct 30 05:20	20°♄19'10	
evening rise	4628 Nov 13 05:01	1°♄03'26			4629 Nov 05 07:31	0°♄	
	4628 Dec 02 07:09	0°♄			4629 Nov 27 13:10	0°♄	
evening max el	4628 Dec 17 09:10	18°♄47'20	23°13'49	evening max el	4629 Nov 29 22:23	2°♄28'42	24°32'56
retrograde	4628 Dec 27 18:21	24°♄56'09		retrograde	4629 Dec 11 09:02	9°♄09'33	
evening set	4629 Jan 01 16:21	22°♄54'36		evening set	4629 Dec 16 20:28	6°♄52'32	
asc. node	4629 Jan 02 15:52	22°♄00'32		asc. node	4629 Dec 20 12:54	2°♄50'36	
min. Earth dist.	4629 Jan 06 15:59	17°♄03'59	0.68033 AU	min. Earth dist.	4629 Dec 21 11:45	1°♄35'51	0.67700 AU
inferior conj	4629 Jan 07 01:49	16°♄30'10	1°26'51	inferior conj	4629 Dec 22 08:27	0°♄26'48	0°36'47
minimum elong	4629 Jan 06 23:59	16°♄36'29	1°26'10	minimum elong	4629 Dec 22 07:34	0°♄29'45	0°36'26
morning rise	4629 Jan 12 07:30	10°♄22'51			4629 Dec 22 16:30	30°♄	
direct	4629 Jan 16 14:41	8°♄40'19		morning rise	4629 Dec 27 18:46	24°♄25'37	
morning max el	4629 Jan 25 04:44	13°♄39'12	21°16'21	direct	4629 Dec 31 12:46	23°♄05'01	
	4629 Feb 07 03:00	0°♄		morning max el	4630 Jan 08 03:29	27°♄24'07	20°03'34
desc. node	4629 Feb 08 07:36	1°♄41'53			4630 Jan 10 12:57	0°♄	
morning set	4629 Feb 25 06:30	27°♄16'24		desc. node	4630 Jan 26 04:37	21°♄48'36	
	4629 Feb 26 23:50	0°♄			4630 Jan 31 14:14	0°♄	
max. Earth dist.	4629 Mar 04 11:39	8°♄52'17	1.42305 AU	morning set	4630 Feb 04 03:22	5°♄26'58	
				max. Earth dist.	4630 Feb 14 21:15	22°♄18'26	1.43950 AU
superior conj	4629 Mar 11 20:01	21°♄12'30	-2°06'52		4630 Feb 19 15:40	0°♄	
minimum elong	4629 Mar 11 22:06	21°♄21'26	2°06'50				
	4629 Mar 16 20:55	0°♄		superior conj	4630 Feb 20 09:37	1°♄13'17	-2°05'25
evening rise	4629 Mar 23 03:41	11°♄16'40		minimum elong	4630 Feb 20 06:06	0°♄58'52	2°05'18
asc. node	4629 Mar 31 15:08	26°♄15'55		evening rise	4630 Mar 05 10:03	23°♄07'47	

	4630 Mar 09 09:48	0°♿			4631 Mar 03 07:10	0°♿	
asc. node	4630 Mar 18 12:11	14°♿46'34		asc. node	4631 Mar 05 09:12	2°♿35'26	
evening max el	4630 Mar 23 06:19	20°♿41'00	18°10'22	evening max el	4631 Mar 06 18:24	4°♿05'28	18°31'24
retrograde	4630 Mar 29 16:29	24°♿04'13		retrograde	4631 Mar 13 07:13	7°♿40'23	
evening set	4630 Apr 01 13:16	23°♿22'00		evening set	4631 Mar 16 10:06	6°♿45'55	
inferior conj	4630 Apr 07 17:03	18°♿07'28	3°28'25	inferior conj	4631 Mar 22 04:52	1°♿13'18	3°34'30
minimum elong	4630 Apr 07 18:22	18°♿03'55	3°28'19	minimum elong	4631 Mar 22 04:34	1°♿14'11	3°34'30
min. Earth dist.	4630 Apr 10 10:48	15°♿11'56	0.62835 AU	min. Earth dist.	4631 Mar 23 05:26	30°♿	
morning rise	4630 Apr 13 22:15	12°♿02'23		morning rise	4631 Mar 24 07:21	28°♿43'43	0.64683 AU
direct	4630 Apr 20 19:06	9°♿26'19		direct	4631 Mar 27 22:23	25°♿01'38	
desc. node	4630 Apr 24 03:51	9°♿59'51		desc. node	4631 Apr 03 16:14	22°♿12'38	
morning max el	4630 May 04 19:01	17°♿25'32	27°49'45	morning max el	4631 Apr 11 00:51	24°♿52'39	
	4630 May 15 06:14	0°♿			4631 Apr 17 04:43	0°♿06'46	27°18'46
	4630 Jun 02 17:06	0°♿			4631 Apr 17 02:01	0°♿	
morning set	4630 Jun 07 22:57	10°♿12'01			4631 May 09 05:41	0°♿	
max. Earth dist.	4630 Jun 13 08:23	21°♿25'08	1.32594 AU	morning set	4631 May 22 14:03	23°♿53'11	
asc. node	4630 Jun 14 11:25	23°♿50'06			4631 May 25 15:55	0°♿	
				max. Earth dist.	4631 May 27 06:35	3°♿17'06	1.33553 AU
superior conj	4630 Jun 15 14:19	26°♿15'25	0°11'42	superior conj	4631 May 30 18:27	10°♿34'55	-0°16'25
minimum elong	4630 Jun 15 13:46	26°♿12'23	0°11'33	minimum elong	4631 May 30 19:18	10°♿39'24	0°16'15
behind sun begin	4630 Jun 15 10:08	25°♿52'44		asc. node	4631 Jun 01 08:27	13°♿56'47	
behind sun end	4630 Jun 15 17:23	26°♿32'04		evening rise	4631 Jun 07 00:17	26°♿00'15	
	4630 Jun 17 07:39	0°♿			4631 Jun 08 22:19	0°♿	
evening rise	4630 Jun 22 13:10	11°♿18'41			4631 Jun 27 21:57	0°♿	
	4630 Jul 02 01:40	0°♿		evening max el	4631 Jun 28 00:31	0°♿06'15	22°06'43
evening max el	4630 Jul 16 09:28	19°♿41'54	23°43'19	desc. node	4631 Jul 08 00:06	6°♿08'57	
desc. node	4630 Jul 21 03:04	23°♿33'44		retrograde	4631 Jul 10 19:56	6°♿27'32	
retrograde	4630 Jul 30 01:21	26°♿33'35		evening set	4631 Jul 13 16:20	6°♿09'27	
evening set	4630 Aug 03 08:14	25°♿53'11		min. Earth dist.	4631 Jul 22 05:49	2°♿28'30	0.54987 AU
min. Earth dist.	4630 Aug 09 19:29	22°♿49'00	0.56013 AU	inferior conj	4631 Jul 22 23:05	2°♿04'13	-4°02'15
inferior conj	4630 Aug 12 00:26	21°♿29'21	-5°02'46	minimum elong	4631 Jul 22 14:28	2°♿16'21	4°00'05
minimum elong	4630 Aug 11 19:53	21°♿36'14	5°02'18		4631 Jul 26 19:45	30°♿	
morning rise	4630 Aug 20 10:03	17°♿33'56		morning rise	4631 Jul 31 14:20	28°♿13'49	
direct	4630 Aug 23 05:26	17°♿14'09		direct	4631 Aug 03 18:36	27°♿51'21	
morning max el	4630 Sep 02 10:39	21°♿59'01	20°04'34		4631 Aug 11 03:24	0°♿	
	4630 Sep 09 01:02	0°♿		morning max el	4631 Aug 15 14:48	3°♿23'14	21°30'09
asc. node	4630 Sep 10 10:39	2°♿08'57		asc. node	4631 Aug 28 07:40	20°♿50'38	
morning set	4630 Sep 20 15:16	21°♿05'29			4631 Sep 02 03:15	0°♿	
	4630 Sep 24 23:45	0°♿		morning set	4631 Sep 05 00:07	5°♿52'02	
superior conj	4630 Sep 28 08:18	6°♿48'23	1°42'24	superior conj	4631 Sep 12 06:58	21°♿10'19	1°43'26
minimum elong	4630 Sep 28 09:18	6°♿53'24	1°42'22	minimum elong	4631 Sep 12 06:30	21°♿07'53	1°43'25
max. Earth dist.	4630 Oct 03 21:46	17°♿40'34	1.36840 AU	max. Earth dist.	4631 Sep 16 09:08	29°♿32'46	1.35060 AU
evening rise	4630 Oct 07 17:21	24°♿45'35			4631 Sep 16 14:34	0°♿	
	4630 Oct 10 15:54	0°♿		evening rise	4631 Sep 20 16:08	7°♿56'34	
desc. node	4630 Oct 17 02:20	10°♿50'07		desc. node	4631 Oct 03 06:44	0°♿	
	4630 Oct 29 22:04	0°♿			4631 Oct 03 23:23	1°♿06'11	
evening max el	4630 Nov 12 10:46	16°♿11'39	25°44'58	evening max el	4631 Oct 25 23:20	29°♿51'24	26°42'33
retrograde	4630 Nov 24 19:09	23°♿15'16			4631 Oct 26 02:55	0°♿	
evening set	4630 Nov 30 20:17	20°♿44'59		retrograde	4631 Nov 08 00:06	7°♿07'11	
min. Earth dist.	4630 Dec 05 04:09	16°♿03'10	0.67015 AU	evening set	4631 Nov 14 13:53	4°♿28'14	
inferior conj	4630 Dec 06 11:56	14°♿22'26	-0°18'47	min. Earth dist.	4631 Nov 18 15:01	0°♿21'51	0.65979 AU
minimum elong	4630 Dec 06 12:26	14°♿20'52	0°18'33		4631 Nov 18 22:30	30°♿	
asc. node	4630 Dec 07 09:55	13°♿13'22		inferior conj	4631 Nov 20 10:22	28°♿13'49	-1°18'35
morning rise	4630 Dec 12 04:59	8°♿29'38		minimum elong	4631 Nov 20 12:33	28°♿07'20	1°17'39
direct	4630 Dec 15 11:27	7°♿28'15		asc. node	4631 Nov 24 06:55	24°♿06'14	
morning max el	4630 Dec 22 10:03	11°♿19'14	19°05'14	morning rise	4631 Nov 26 12:01	22°♿31'53	
	4631 Jan 05 04:14	0°♿		direct	4631 Nov 29 08:58	21°♿45'59	
desc. node	4631 Jan 13 01:37	12°♿11'45		morning max el	4631 Dec 05 22:41	25°♿19'51	18°22'56
morning set	4631 Jan 14 07:05	14°♿06'23			4631 Dec 09 21:44	0°♿	
	4631 Jan 24 11:33	0°♿		morning set	4631 Dec 25 12:54	24°♿07'15	
max. Earth dist.	4631 Jan 28 12:49	6°♿21'39	1.44984 AU	desc. node	4631 Dec 29 04:52	0°♿	
superior conj	4631 Jan 30 23:16	10°♿12'09	-1°44'41		4631 Dec 30 22:38	2°♿46'47	
minimum elong	4631 Jan 30 14:28	9°♿37'24	1°43'56	superior conj	4632 Jan 10 01:56	18°♿48'15	-1°06'06
	4631 Feb 12 07:17	0°♿		minimum elong	4632 Jan 09 17:58	18°♿16'58	1°05'08
evening rise	4631 Feb 14 18:28	4°♿01'52					

max. Earth dist.	4632 Jan 11 07:21	20°  43'38	1.45302 AU	evening rise	4633 Jan 04 18:57	23°  20'39	
	4632 Jan 17 05:27	0° 			4633 Jan 09 03:06	0° 	
evening rise	4632 Jan 26 03:44	14°  00'36		greatest brilliancy	4633 Jan 19 07:47	15°  21'15	-0.6m
	4632 Feb 05 08:30	0° 			4633 Jan 30 06:31	0° 	
greatest brilliancy	4632 Feb 05 14:14	0°  22'08	-0.8m	evening max el	4633 Jan 31 08:16	1°  08'41	20°04'14
evening max el	4632 Feb 18 03:36	17°  35'30	19°09'57	asc. node	4633 Feb 06 03:14	5°  18'23	
asc. node	4632 Feb 20 06:13	19°  30'37		retrograde	4633 Feb 08 00:52	5°  37'48	
retrograde	4632 Feb 25 02:57	21°  33'06		evening set	4633 Feb 11 18:46	4°  16'04	
evening set	4632 Feb 28 12:42	20°  25'30			4633 Feb 15 20:10	30° 	
inferior conj	4632 Mar 05 01:34	14°  36'45	3°25'00	inferior conj	4633 Feb 17 04:18	28°  13'24	3°03'28
minimum elong	4632 Mar 05 00:04	14°  41'36	3°24'49	minimum elong	4633 Feb 17 02:04	28°  20'55	3°02'59
min. Earth dist.	4632 Mar 06 12:43	12°  44'19	0.66153 AU	min. Earth dist.	4633 Feb 18 01:13	27°  03'00	0.67202 AU
morning rise	4632 Mar 10 11:05	8°  22'36		morning rise	4633 Feb 22 09:09	21°  59'11	
direct	4632 Mar 16 20:05	5°  33'58		direct	4633 Feb 28 05:36	19°  22'11	
desc. node	4632 Mar 27 21:53	11°  30'28		morning max el	4633 Mar 11 23:22	26°  23'21	24°59'44
morning max el	4632 Mar 29 14:36	13°  09'23	26°18'56	desc. node	4633 Mar 14 18:55	29°  24'22	
	4632 Apr 12 05:07	0° 			4633 Mar 15 07:28	0° 	
	4632 Apr 30 22:18	0° 			4633 Apr 05 19:11	0° 	
morning set	4632 May 04 16:50	6°  54'23		morning set	4633 Apr 17 02:32	19°  02'26	
max. Earth dist.	4632 May 08 17:21	14°  36'17	1.34982 AU	max. Earth dist.	4633 Apr 20 17:34	25°  07'49	1.36849 AU
					4633 Apr 23 01:34	0° 	
superior conj	4632 May 13 15:44	24°  29'22	-0°45'52				
minimum elong	4632 May 13 18:13	24°  42'06	0°45'23	superior conj	4633 Apr 27 03:17	7°  51'23	-1°14'56
	4632 May 16 07:49	0° 		minimum elong	4633 Apr 27 07:19	8°  11'16	1°14'17
asc. node	4632 May 18 05:29	3°  15'49		asc. node	4633 May 05 02:33	23°  49'19	
evening rise	4632 May 21 08:41	10°  28'33		evening rise	4633 May 05 12:08	24°  37'29	
	4632 May 31 16:56	0° 			4633 May 08 05:02	0° 	
evening max el	4632 Jun 09 01:16	10°  55'48	20°40'27	evening max el	4633 May 22 14:27	22°  25'51	19°31'50
retrograde	4632 Jun 20 08:33	16°  27'52		retrograde	4633 Jun 01 03:47	27°  10'23	
evening set	4632 Jun 22 09:50	16°  17'40		evening set	4633 Jun 03 02:40	26°  15'34	
desc. node	4632 Jun 23 21:07	15°  18'28		desc. node	4633 Jun 10 18:08	23°  12'05	
inferior conj	4632 Jul 01 16:26	12°  20'34	-2°17'34	inferior conj	4633 Jun 11 19:01	22°  14'45	-0°18'28
minimum elong	4632 Jul 01 10:03	12°  29'42	2°15'19	minimum elong	4633 Jun 11 18:12	22°  15'03	0°18'10
min. Earth dist.	4632 Jul 02 17:26	11°  24'44	0.54877 AU	min. Earth dist.	4633 Jun 14 06:59	21°  14'30	0.55728 AU
morning rise	4632 Jul 10 09:42	8°  15'14		morning rise	4633 Jun 20 07:06	18°  13'23	
direct	4632 Jul 14 04:00	7°  14'44		direct	4633 Jun 24 22:03	17°  12'24	
morning max el	4632 Jul 27 09:00	14°  06'38	23°10'17	morning max el	4633 Jul 08 22:42	24°  12'39	24°53'19
	4632 Aug 08 14:12	0° 			4633 Jul 14 00:33	0° 	
asc. node	4632 Aug 14 04:43	10°  02'57		asc. node	4633 Aug 01 01:48	29°  03'54	
morning set	4632 Aug 19 11:16	20°  04'20			4633 Aug 01 06:08	0° 	
	4632 Aug 23 19:05	0° 		morning set	4633 Aug 03 23:01	5°  03'26	
superior conj	4632 Aug 26 12:13	5°  05'35	1°37'53	superior conj	4633 Aug 10 21:35	20°  04'29	1°26'44
minimum elong	4632 Aug 26 10:40	5°  42'16	1°37'46	minimum elong	4633 Aug 10 19:25	20°  02'37	1°26'29
max. Earth dist.	4632 Aug 29 05:17	11°  36'14	1.33663 AU	max. Earth dist.	4633 Aug 12 09:48	23°  05'44	1.32683 AU
evening rise	4632 Sep 03 04:22	21°  45'20			4633 Aug 15 05:04	0° 	
	4632 Sep 07 11:07	0° 		evening rise	4633 Aug 18 02:21	6°  01'27	
desc. node	4632 Sep 19 20:25	20°  05'38			4633 Aug 31 00:52	0° 	
	4632 Sep 26 02:21	0° 		desc. node	4633 Sep 06 17:26	10°  02'08	
evening max el	4632 Oct 07 11:42	13°  18'16	27°18'26	evening max el	4633 Sep 19 22:01	26°  09'37	27°25'58
retrograde	4632 Oct 20 23:13	20°  13'34			4633 Sep 24 07:47	0° 	
evening set	4632 Oct 27 22:50	17°  15'30		retrograde	4633 Oct 03 15:36	3°  13'47	
min. Earth dist.	4632 Oct 31 18:05	14°  12'41	0.64592 AU	evening set	4633 Oct 10 19:59	1°  03'33	
inferior conj	4632 Nov 03 01:23	11°  15'22	-2°20'54		4633 Oct 12 05:44	30° 	
minimum elong	4632 Nov 03 05:26	11°  14'26	2°19'21	min. Earth dist.	4633 Oct 14 11:20	28°  02'22	0.62884 AU
morning rise	4632 Nov 09 13:14	6°  12'21		inferior conj	4633 Oct 17 06:16	25°  02'31	-3°22'46
asc. node	4632 Nov 10 03:56	6°  13'02		minimum elong	4633 Oct 17 11:53	25°  06'53	3°20'57
direct	4632 Nov 12 03:06	5°  15'25		morning rise	4633 Oct 24 05:21	20°  09'49	
morning max el	4632 Nov 18 14:46	9°  18'58	17°57'34	direct	4633 Oct 26 14:49	19°  04'16	
	4632 Dec 02 16:19	0° 		asc. node	4633 Oct 28 01:01	19°  05'54	
morning set	4632 Dec 06 00:03	5°  35'01		morning max el	4633 Nov 02 07:21	23°  09'37	17°49'49
desc. node	4632 Dec 16 19:41	23°  29'28			4633 Nov 07 16:40	0° 	
				morning set	4633 Nov 18 11:01	18°  11'22	
superior conj	4632 Dec 19 14:07	27°  57'27	-0°19'06		4633 Nov 25 05:06	0° 	
minimum elong	4632 Dec 19 11:50	27°  48'14	0°18'46				
	4632 Dec 20 20:44	0° 		superior conj	4633 Nov 30 02:06	8°  17'05	0°25'09
max. Earth dist.	4632 Dec 24 02:24	5°  08'27	1.44877 AU	minimum elong	4633 Nov 30 04:31	8°  27'14	0°24'49

desc. node	4633 Dec 03 16:42	14°♊15'53		max. Earth dist.	4634 Nov 19 07:33	2°♊58'17	1.42104 AU
max. Earth dist.	4633 Dec 06 19:18	19°♊18'55	1.43767 AU	desc. node	4634 Nov 20 13:43	5°♊03'09	
	4633 Dec 13 13:13	0°♊		evening rise	4634 Nov 25 02:01	12°♊21'50	
evening rise	4633 Dec 15 05:05	2°♊34'43			4634 Dec 06 13:44	0°♊	
	4634 Jan 02 15:59	0°♊		evening max el	4634 Dec 28 01:28	28°♊18'16	22°27'47
evening max el	4634 Jan 14 07:29	14°♊42'42	21°11'32		4634 Dec 29 19:57	0°♊	
retrograde	4634 Jan 22 22:47	19°♊49'44		retrograde	4635 Jan 06 19:02	4°♊05'28	
asc. node	4634 Jan 24 00:17	19°♊43'37		asc. node	4635 Jan 10 21:20	2°♊37'20	
evening set	4634 Jan 27 02:25	18°♊12'49		evening set	4635 Jan 11 09:57	2°♊12'46	
inferior conj	4634 Feb 01 10:38	11°♊58'54	2°32'11		4635 Jan 13 14:42	30°♋♊	
minimum elong	4634 Feb 01 08:11	12°♊07'21	2°31'29	inferior conj	4635 Jan 16 18:31	25°♊50'52	1°52'47
min. Earth dist.	4634 Feb 01 18:41	11°♊31'02	0.67832 AU	minimum elong	4635 Jan 16 16:20	25°♊58'28	1°52'01
morning rise	4634 Feb 06 13:46	5°♊46'14		min. Earth dist.	4635 Jan 16 14:56	26°♊03'19	0.68069 AU
direct	4634 Feb 11 19:47	3°♊28'16		morning rise	4635 Jan 21 22:36	19°♊41'11	
morning max el	4634 Feb 22 08:09	9°♊43'32	23°31'25	direct	4635 Jan 26 13:51	17°♊45'44	
desc. node	4634 Mar 01 15:57	18°♊12'01		morning max el	4635 Feb 04 20:04	23°♊11'30	22°03'33
	4634 Mar 10 08:02	0°♋			4635 Feb 10 18:41	0°♋	
morning set	4634 Mar 29 13:08	0°♋01'01		desc. node	4635 Feb 16 12:59	7°♋38'23	
	4634 Mar 29 12:54	0°♋			4635 Mar 03 17:05	0°♋	
max. Earth dist.	4634 Apr 02 13:03	6°♋54'12	1.38996 AU	morning set	4635 Mar 09 19:36	9°♋38'57	
				max. Earth dist.	4635 Mar 15 11:02	18°♋55'10	1.41162 AU
superior conj	4634 Apr 10 01:13	20°♋30'40	-1°41'05		4635 Mar 21 22:02	0°♋	
minimum elong	4634 Apr 10 06:07	20°♋53'34	1°40'32	superior conj	4635 Mar 23 04:52	2°♋16'00	-2°00'35
	4634 Apr 15 00:54	0°♌		minimum elong	4635 Mar 23 08:49	2°♋33'31	2°00'22
evening rise	4634 Apr 19 07:52	8°♌19'12		evening rise	4635 Apr 02 16:25	21°♋25'21	
asc. node	4634 Apr 21 23:36	13°♌26'08			4635 Apr 07 08:10	0°♌	
	4634 May 01 17:14	0°♌		asc. node	4635 Apr 08 20:38	2°♌42'59	
evening max el	4634 May 05 14:26	4°♌35'28	18°43'21	evening max el	4635 Apr 18 22:01	17°♌17'29	18°15'09
retrograde	4634 May 13 16:16	8°♌33'31		retrograde	4635 Apr 25 23:44	20°♌49'56	
evening set	4634 May 15 20:22	8°♌17'22		evening set	4635 Apr 28 10:33	20°♌25'15	
inferior conj	4634 May 23 16:52	3°♌54'48	1°23'34	inferior conj	4635 May 05 12:18	15°♌42'18	2°34'44
minimum elong	4634 May 23 19:45	3°♌49'25	1°22'36	minimum elong	4635 May 05 15:48	15°♌34'40	2°33'53
min. Earth dist.	4634 May 26 23:47	1°♌29'06	0.57355 AU	min. Earth dist.	4635 May 08 22:11	12°♌45'28	0.59437 AU
desc. node	4634 May 28 15:11	0°♌22'33		morning rise	4635 May 12 18:18	10°♌01'25	
	4634 May 29 05:40	30°♌♋		desc. node	4635 May 15 12:13	8°♌46'08	
morning rise	4634 May 31 15:53	28°♌42'45		direct	4635 May 19 02:49	8°♌10'10	
direct	4634 Jun 06 05:40	27°♌26'22		morning max el	4635 Jun 02 11:53	16°♌00'14	27°25'42
	4634 Jun 14 08:17	0°♌			4635 Jun 13 22:12	0°♌	
morning max el	4634 Jun 20 14:20	4°♌58'19	26°23'25		4635 Jun 01 06:24	0°♌	
	4634 Jul 08 20:19	0°♍		morning set	4635 Jul 03 17:49	5°♍04'54	
asc. node	4634 Jul 18 22:52	19°♍28'43		asc. node	4635 Jul 05 19:54	9°♍29'41	
morning set	4634 Jul 19 09:47	20°♍26'13					
	4634 Jul 23 20:00	0°♎		superior conj	4635 Jul 10 20:45	20°♍28'53	0°50'36
superior conj	4634 Jul 26 09:02	5°♎36'20	1°10'46	minimum elong	4635 Jul 10 18:46	20°♍17'57	0°50'12
minimum elong	4634 Jul 26 06:44	5°♎23'35	1°10'24	max. Earth dist.	4635 Jul 10 07:09	19°♍13'54	1.31965 AU
max. Earth dist.	4634 Jul 26 19:40	6°♎34'56	1.32116 AU		4635 Jul 15 04:37	0°♎	
evening rise	4634 Aug 02 07:07	20°♎35'53		evening rise	4635 Jul 17 16:11	5°♎20'37	
	4634 Aug 06 22:26	0°♏			4635 Jul 30 15:39	0°♏	
desc. node	4634 Aug 24 14:27	28°♏57'44		desc. node	4635 Aug 11 11:29	16°♏30'24	
	4634 Aug 25 09:35	0°♏		evening max el	4635 Aug 15 01:39	20°♏15'03	26°02'48
evening max el	4634 Sep 02 03:28	8°♏41'48	27°00'50	retrograde	4635 Aug 29 00:55	27°♏23'10	
retrograde	4634 Sep 16 00:34	15°♏53'08		evening set	4635 Sep 04 09:46	25°♏45'21	
evening set	4634 Sep 23 01:18	13°♏42'43		min. Earth dist.	4635 Sep 08 14:15	23°♏10'07	0.58839 AU
min. Earth dist.	4634 Sep 26 17:44	11°♏02'39	0.60916 AU	inferior conj	4635 Sep 11 20:05	20°♏46'09	-5°00'45
inferior conj	4634 Sep 29 21:43	8°♏21'01	-4°19'00	minimum elong	4635 Sep 12 00:19	20°♏38'16	5°00'14
minimum elong	4634 Sep 30 03:50	8°♏07'58	4°17'32	morning rise	4635 Sep 19 17:08	16°♏19'28	
morning rise	4634 Oct 07 08:17	3°♏31'17		direct	4635 Sep 22 03:02	16°♏00'06	
direct	4634 Oct 09 16:21	3°♏09'31		morning max el	4635 Sep 30 05:15	19°♏53'32	18°31'54
asc. node	4634 Oct 14 22:05	5°♏03'58		asc. node	4635 Oct 01 19:07	21°♏32'18	
morning max el	4634 Oct 16 21:19	6°♏44'32	18°00'48		4635 Oct 07 19:20	0°♏	
	4634 Oct 31 18:21	0°♐		morning set	4635 Oct 16 08:08	15°♏37'55	
morning set	4634 Nov 01 15:28	1°♐37'38			4635 Oct 23 19:49	0°♐	
				superior conj	4635 Oct 25 05:11	2°♐36'09	1°24'17
superior conj	4634 Nov 11 16:33	19°♐54'26	1°00'08	minimum elong	4635 Oct 25 08:37	2°♐52'10	1°23'56
minimum elong	4634 Nov 11 20:35	20°♐12'12	0°59'37	max. Earth dist.	4635 Nov 01 14:20	15°♐53'38	1.40093 AU
	4634 Nov 17 12:57	0°♑					

evening rise	4635 Nov 05 19:55	23° M 06'21		max. Earth dist.	4636 Oct 13 18:38	28° A 08'18	1.37994 AU
desc. node	4635 Nov 07 10:45	25° M 47'13			4636 Oct 14 19:07	0° M	
	4635 Nov 10 00:56	0° A		evening rise	4636 Oct 17 12:52	4° M 53'53	
	4635 Nov 30 12:15	0° B		desc. node	4636 Oct 24 07:46	16° M 24'09	
evening max el	4635 Dec 10 15:41	11° B 56'38	23°47'46		4636 Nov 02 01:30	0° A	
retrograde	4635 Dec 21 12:11	18° B 20'44		evening max el	4636 Nov 22 04:20	25° A 38'51	25°04'54
evening set	4635 Dec 26 15:46	16° B 12'20			4636 Nov 27 08:01	0° B	
asc. node	4635 Dec 28 18:22	14° B 04'50		retrograde	4636 Dec 04 01:08	2° B 31'09	
min. Earth dist.	4635 Dec 31 11:36	10° B 35'59	0.67935 AU	evening set	4636 Dec 09 18:16	0° B 08'19	
inferior conj	4636 Jan 01 02:07	9° B 46'31	1°06'21		4636 Dec 09 22:07	30° R A	
minimum elong	4636 Jan 01 00:39	9° B 51'34	1°05'46	min. Earth dist.	4636 Dec 14 06:21	25° A 06'02	0.67449 AU
morning rise	4636 Jan 06 09:31	3° B 41'30		asc. node	4636 Dec 14 15:23	24° A 36'34	
direct	4636 Jan 10 10:48	2° B 08'44		inferior conj	4636 Dec 15 07:40	23° A 43'09	0°13'51
morning max el	4636 Jan 18 14:19	6° B 49'47	20°43'42	minimum elong	4636 Dec 15 07:19	23° A 44'18	0°13'43
desc. node	4636 Feb 03 10:00	27° B 32'34		transit middle	4636 Dec 15 07:19	23° A 44'18	0°13'43
	4636 Feb 05 02:03	0° \approx		transit begin	4636 Dec 15 05:50	23° A 49'07	
morning set	4636 Feb 17 00:12	18° \approx 07'00		transit end	4636 Dec 15 08:47	23° A 39'28	
	4636 Feb 24 12:24	0° H		morning rise	4636 Dec 20 20:34	17° A 44'57	
max. Earth dist.	4636 Feb 25 15:38	1° H 49'58	1.43066 AU	direct	4636 Dec 24 09:24	16° A 32'56	
				morning max el	4636 Dec 31 16:26	20° A 39'00	19°36'45
superior conj	4636 Mar 03 09:18	12° H 56'35	-2°08'24		4637 Jan 08 06:36	0° B	
minimum elong	4636 Mar 03 09:18	12° H 56'35	2°08'24	greatest brilliancy	4637 Jan 13 18:26	7° B 56'04	-0.7m
	4636 Mar 13 06:28	0° Y		desc. node	4637 Jan 20 07:01	17° B 46'50	
evening rise	4636 Mar 15 09:38	3° Y 46'20		morning set	4637 Jan 25 20:42	26° B 20'10	
asc. node	4636 Mar 25 17:39	21° Y 33'02			4637 Jan 28 05:32	0° \approx	
	4636 Apr 01 00:46	0° B		max. Earth dist.	4637 Feb 07 03:35	15° \approx 32'05	1.44473 AU
evening max el	4636 Apr 01 09:50	0° B 22'54	18°06'41				
retrograde	4636 Apr 07 22:45	3° B 45'19		superior conj	4637 Feb 11 12:02	22° \approx 28'54	-1°59'06
evening set	4636 Apr 10 15:59	3° B 09'58		minimum elong	4637 Feb 11 05:51	22° \approx 04'05	1°58'45
	4636 Apr 15 03:58	30° R Y			4637 Feb 16 03:20	0° H	
inferior conj	4636 Apr 17 02:40	28° Y 06'57	3°15'58	evening rise	4637 Feb 25 07:01	15° H 13'13	
minimum elong	4636 Apr 17 04:57	28° Y 01'11	3°15'38		4637 Mar 06 02:53	0° Y	
min. Earth dist.	4636 Apr 20 04:15	25° Y 03'57	0.61632 AU	asc. node	4637 Mar 12 14:41	9° Y 47'12	
morning rise	4636 Apr 23 16:07	22° Y 08'06		evening max el	4637 Mar 15 22:40	13° Y 42'35	18°17'10
direct	4636 Apr 30 11:11	19° Y 45'08		retrograde	4637 Mar 22 08:51	17° Y 09'01	
desc. node	4636 May 01 09:13	19° Y 47'36		evening set	4637 Mar 25 08:14	16° Y 21'42	
morning max el	4636 May 14 15:38	27° Y 44'06	27°51'47	inferior conj	4637 Mar 31 07:46	10° Y 59'32	3°33'10
	4636 May 16 19:42	0° B		minimum elong	4637 Mar 31 08:22	10° Y 57'51	3°33'08
	4636 Jun 06 15:30	0° II		min. Earth dist.	4637 Apr 02 19:17	8° Y 13'03	0.63667 AU
morning set	4636 Jun 16 21:13	19° II 27'34		morning rise	4637 Apr 06 07:34	4° Y 51'13	
asc. node	4636 Jun 21 16:55	29° II 36'24		direct	4637 Apr 13 04:12	2° Y 07'39	
	4636 Jun 21 21:18	0° B		desc. node	4637 Apr 18 06:15	3° Y 24'28	
max. Earth dist.	4636 Jun 22 16:27	1° B 43'37	1.32236 AU	morning max el	4637 Apr 26 23:39	10° Y 06'02	27°40'31
					4637 May 12 13:34	0° B	
superior conj	4636 Jun 24 07:01	5° B 13'46	0°26'48		4637 May 29 23:45	0° II	
minimum elong	4636 Jun 24 05:49	5° B 07'12	0°26'31	morning set	4637 May 31 17:36	3° II 25'52	
evening rise	4636 Jul 01 03:34	20° B 09'21		max. Earth dist.	4637 Jun 05 19:37	13° II 51'11	1.32945 AU
	4636 Jul 05 22:15	0° Q					
	4636 Jul 25 15:17	0° M		superior conj	4637 Jun 08 13:58	19° II 44'07	0°00'01
evening max el	4636 Jul 26 16:50	1° M 03'15	24°38'34	minimum elong	4637 Jun 08 13:58	19° II 44'05	0°00'00
desc. node	4636 Jul 28 08:30	2° M 33'38		behind sun begin	4637 Jun 08 10:26	19° II 25'07	
retrograde	4636 Aug 09 14:22	8° M 04'10		behind sun end	4637 Jun 08 17:30	20° II 03'03	
evening set	4636 Aug 14 17:54	7° M 04'37		asc. node	4637 Jun 08 13:57	19° II 43'59	
min. Earth dist.	4636 Aug 20 04:05	4° M 15'16	0.56918 AU		4637 Jun 13 08:06	0° B	
inferior conj	4636 Aug 22 22:38	2° M 27'54	-5°14'17	evening rise	4637 Jun 15 15:17	4° B 55'01	
minimum elong	4636 Aug 22 21:48	2° M 29'16	5°14'16		4637 Jun 29 02:42	0° Q	
	4636 Aug 27 00:53	30° R Q		evening max el	4637 Jul 08 05:43	11° Q 26'45	23°01'44
morning rise	4636 Aug 31 04:10	28° Q 22'40		desc. node	4637 Jul 15 05:30	16° Q 34'14	
direct	4636 Sep 02 19:11	28° Q 03'36		retrograde	4637 Jul 21 14:54	18° Q 07'25	
	4636 Sep 09 01:00	0° M		evening set	4637 Jul 25 05:59	17° Q 38'40	
morning max el	4636 Sep 12 03:49	2° M 26'46	19°24'26	min. Earth dist.	4637 Aug 01 14:40	14° Q 20'27	0.55479 AU
asc. node	4636 Sep 17 16:09	9° M 02'54		inferior conj	4637 Aug 03 05:45	13° Q 23'52	-4°43'32
morning set	4636 Sep 29 09:12	0° A 01'47		minimum elong	4637 Aug 02 22:50	13° Q 33'55	4°42'20
	4636 Sep 29 08:51	0° A		morning rise	4637 Aug 11 17:55	9° Q 32'20	
				direct	4637 Aug 14 16:53	9° Q 11'38	
superior conj	4636 Oct 07 10:33	16° A 06'34	1°38'19	morning max el	4637 Aug 25 14:37	14° Q 15'52	20°38'39
minimum elong	4636 Oct 07 12:30	16° A 16'04	1°38'13	asc. node	4637 Sep 04 13:10	27° Q 21'44	

	4637 Sep 06 01:54	0°♍		asc. node	4638 Aug 22 10:13	16°♎17'20	
morning set	4637 Sep 13 15:52	14°♍41'37		morning set	4638 Aug 29 01:54	29°♎31'01	
					4638 Aug 29 07:26	0°♍	
superior conj	4637 Sep 21 03:58	0°♊12'21	1°43'42	superior conj	4638 Sep 05 05:44	14°♍42'32	1°41'48
minimum elong	4637 Sep 21 04:18	0°♊14'05	1°43'42	minimum elong	4638 Sep 05 04:45	14°♍37'21	1°41'46
	4637 Sep 21 01:33	0°♊		max. Earth dist.	4638 Sep 08 17:32	21°♍58'55	1.34415 AU
max. Earth dist.	4637 Sep 26 02:15	10°♊02'36	1.36044 AU		4638 Sep 12 17:34	0°♊	
evening rise	4637 Sep 30 01:58	17°♊37'13		evening rise	4638 Sep 13 06:55	1°♊04'58	
	4637 Oct 07 01:31	0°♌		desc. node	4638 Sep 28 01:50	26°♊56'36	
desc. node	4637 Oct 11 04:48	6°♌49'23			4638 Sep 30 01:33	0°♌	
	4637 Oct 27 08:31	0°♌		evening max el	4638 Oct 18 05:42	22°♌57'40	27°00'58
evening max el	4637 Nov 04 17:01	9°♌22'11	26°11'49		4638 Oct 29 07:07	0°♌	
retrograde	4637 Nov 17 09:02	16°♌31'40		retrograde	4638 Oct 31 11:20	0°♌14'46	
evening set	4637 Nov 23 15:42	13°♌57'19			4638 Nov 02 13:42	30°♌	
min. Earth dist.	4637 Nov 27 20:45	9°♌30'23	0.66614 AU	evening set	4638 Nov 07 05:56	27°♌34'14	
inferior conj	4637 Nov 29 09:17	7°♌37'45	-0°43'40	min. Earth dist.	4638 Nov 11 04:27	23°♌43'01	0.65430 AU
minimum elong	4637 Nov 29 10:28	7°♌34'07	0°43'10	inferior conj	4638 Nov 13 04:52	21°♌25'11	-1°44'52
asc. node	4637 Dec 01 12:24	5°♌05'33		minimum elong	4638 Nov 13 07:50	21°♌16'42	1°43'39
morning rise	4637 Dec 05 05:45	1°♌49'01		asc. node	4638 Nov 18 09:27	16°♌25'18	
direct	4637 Dec 08 07:59	0°♌54'31		morning rise	4638 Nov 19 10:41	15°♌48'54	
morning max el	4637 Dec 15 01:49	4°♌36'52	18°45'14	direct	4638 Nov 22 04:26	15°♌08'14	
	4638 Jan 01 22:01	0°♎		morning max el	4638 Nov 28 16:16	18°♌37'21	18°10'08
morning set	4638 Jan 05 10:20	5°♎31'43			4638 Dec 07 04:47	0°♎	
desc. node	4638 Jan 07 04:02	8°♎15'48		morning set	4638 Dec 17 04:59	16°♎10'50	
max. Earth dist.	4638 Jan 20 21:13	29°♎47'20	1.45214 AU	desc. node	4638 Dec 25 01:04	28°♎54'19	
	4638 Jan 21 00:26	0°♏			4638 Dec 25 17:26	0°♎	
superior conj	4638 Jan 21 18:53	1°♏12'22	-1°30'06	superior conj	4638 Dec 31 23:03	9°♎55'10	-0°46'29
minimum elong	4638 Jan 21 09:31	0°♏35'39	1°29'10	minimum elong	4638 Dec 31 17:15	9°♎32'17	0°45'42
evening rise	4638 Feb 06 05:33	25°♏43'30		max. Earth dist.	4639 Jan 03 16:54	14°♎14'32	1.45210 AU
	4638 Feb 08 21:18	0°♐			4639 Jan 13 19:02	0°♏	
greatest brilliancy	4638 Feb 13 05:37	6°♐59'17	-0.9m	evening rise	4639 Jan 17 06:06	5°♏22'53	
asc. node	4638 Feb 27 11:42	27°♐15'14		greatest brilliancy	4639 Jan 29 16:07	24°♏31'02	-0.7m
evening max el	4638 Feb 27 09:54	27°♐10'41	18°45'43		4639 Feb 02 09:00	0°♐	
	4638 Mar 02 22:41	0°♑		evening max el	4639 Feb 10 17:20	10°♐41'59	19°31'10
retrograde	4638 Mar 06 02:05	0°♑53'34		asc. node	4639 Feb 14 08:45	13°♐43'33	
evening set	4638 Mar 09 07:53	29°♐53'27		retrograde	4639 Feb 17 23:11	14°♐52'03	
	4638 Mar 09 03:29	30°♐		evening set	4639 Feb 21 12:16	13°♐38'25	
inferior conj	4638 Mar 14 23:47	24°♐13'43	3°32'07	inferior conj	4639 Feb 26 23:25	7°♐43'09	3°17'09
minimum elong	4638 Mar 14 22:55	24°♐16'23	3°32'03	minimum elong	4639 Feb 26 21:32	7°♐49'19	3°16'52
min. Earth dist.	4638 Mar 16 19:37	21°♐59'14	0.65367 AU	min. Earth dist.	4639 Feb 28 04:14	6°♐08'39	0.66652 AU
morning rise	4638 Mar 20 13:30	18°♐00'52		morning rise	4639 Mar 04 06:34	1°♐28'45	
direct	4638 Mar 27 04:15	15°♐10'38			4639 Mar 06 05:13	30°♐	
desc. node	4638 Apr 05 03:17	19°♐06'12		direct	4639 Mar 10 10:27	28°♏44'16	
morning max el	4638 Apr 09 09:37	22°♐57'34	26°56'16		4639 Mar 15 01:46	0°♐	
	4638 Apr 15 15:13	0°♑		morning max el	4639 Mar 22 19:18	6°♐06'39	25°47'04
	4638 May 05 20:39	0°♒		desc. node	4639 Mar 23 00:18	6°♐19'20	
morning set	4638 May 15 03:57	16°♒51'00			4639 Apr 10 06:21	0°♑	
max. Earth dist.	4638 May 19 13:17	25°♒29'11	1.34115 AU	morning set	4639 Apr 28 00:11	29°♑31'31	
	4638 May 21 18:27	0°♓			4639 Apr 28 06:23	0°♒	
superior conj	4638 May 23 15:31	3°♓53'41	-0°28'50	max. Earth dist.	4639 May 01 19:37	6°♒39'44	1.35734 AU
minimum elong	4638 May 23 17:02	4°♓01'40	0°28'31	superior conj	4639 May 07 09:05	17°♒35'19	-0°58'22
asc. node	4638 May 26 10:59	9°♓48'32		minimum elong	4639 May 07 12:16	17°♒51'22	0°57'47
evening rise	4638 May 31 01:31	19°♓31'40		asc. node	4639 May 13 08:03	29°♒46'08	
	4638 Jun 05 05:58	0°♈			4639 May 13 10:45	0°♓	
evening max el	4638 Jun 20 00:12	21°♈58'12	21°28'02	evening rise	4639 May 15 08:10	3°♓52'57	
retrograde	4638 Jul 02 05:19	27°♈59'42			4639 May 30 11:18	0°♈	
desc. node	4638 Jul 02 02:32	27°♈59'40		evening max el	4639 Jun 02 06:08	3°♈03'57	20°08'47
evening set	4638 Jul 04 15:33	27°♈46'15		retrograde	4639 Jun 12 19:39	8°♈13'41	
inferior conj	4638 Jul 14 00:19	23°♈46'21	-3°21'48	evening set	4639 Jun 14 18:15	8°♈03'57	
minimum elong	4638 Jul 13 15:53	23°♈58'09	3°19'14	desc. node	4639 Jun 18 23:33	6°♈43'16	
min. Earth dist.	4638 Jul 14 00:59	23°♈45'25	0.54827 AU	inferior conj	4639 Jun 23 20:00	4°♈04'51	-1°26'37
morning rise	4638 Jul 22 17:08	19°♈52'28		minimum elong	4639 Jun 23 15:56	4°♈10'54	1°25'08
direct	4638 Jul 26 02:52	19°♈27'20		min. Earth dist.	4639 Jun 25 13:15	3°♈03'31	0.55125 AU
morning max el	4638 Aug 07 13:53	25°♈20'08	22°11'36		4639 Jul 01 20:28	30°♒	
	4638 Aug 11 21:49	0°♉					

morning rise	4639 Jul 02 12:08	29° Π 47'50		desc. node	4640 Jun 04 20:35	13° Π 42'31	
direct	4639 Jul 06 14:14	29° Π 11'32		min. Earth dist.	4640 Jun 06 04:22	12° Π 49'22	0.56336 AU
	4639 Jul 11 05:56	0° \mathfrak{S}		morning rise	4640 Jun 11 13:22	9° Π 55'53	
morning max el	4639 Jul 20 05:35	5° \mathfrak{S} 52'15	23°54'47	direct	4640 Jun 16 13:59	8° Π 56'58	
	4639 Aug 06 08:07	0° Ω		morning max el	4640 Jun 30 19:37	16° Π 14'54	25°34'09
asc. node	4639 Aug 09 07:17	5° Ω 40'30			4640 Jul 11 23:29	0° \mathfrak{S}	
morning set	4639 Aug 13 13:33	14° Ω 24'56		asc. node	4640 Jul 26 04:21	25° \mathfrak{S} 22'50	
				morning set	4640 Jul 28 01:05	29° \mathfrak{S} 16'52	
					4640 Jul 28 09:13	0° Ω	
superior conj	4639 Aug 20 13:04	29° Ω 28'49	1°33'48				
minimum elong	4639 Aug 20 11:12	29° Ω 18'42	1°33'37				
	4639 Aug 20 18:50	0° \mathfrak{M}		superior conj	4640 Aug 03 23:35	14° Ω 22'27	1°20'32
max. Earth dist.	4639 Aug 22 17:33	4° \mathfrak{M} 10'58	1.33189 AU	minimum elong	4640 Aug 03 21:17	14° Ω 09'53	1°20'12
evening rise	4639 Aug 27 23:44	15° \mathfrak{M} 06'47		max. Earth dist.	4640 Aug 05 00:32	16° Ω 39'20	1.32387 AU
	4639 Sep 04 19:33	0° \mathfrak{L}		evening rise	4640 Aug 11 00:56	29° Ω 31'44	
desc. node	4639 Sep 14 22:52	16° \mathfrak{L} 38'08			4640 Aug 11 06:24	0° \mathfrak{M}	
	4639 Sep 24 21:25	0° \mathfrak{M}			4640 Aug 27 22:11	0° \mathfrak{L}	
evening max el	4639 Sep 30 17:17	6° \mathfrak{M} 14'40	27°25'21	desc. node	4640 Aug 31 19:54	5° \mathfrak{L} 42'24	
retrograde	4639 Oct 14 07:43	13° \mathfrak{M} 32'31		evening max el	4640 Sep 12 01:43	19° \mathfrak{L} 00'14	27°19'22
evening set	4639 Oct 21 10:20	10° \mathfrak{M} 54'25		retrograde	4640 Sep 25 21:24	26° \mathfrak{L} 14'34	
min. Earth dist.	4639 Oct 25 03:23	7° \mathfrak{M} 36'45	0.63903 AU	evening set	4640 Oct 03 01:18	23° \mathfrak{L} 50'32	
inferior conj	4639 Oct 27 15:56	5° \mathfrak{M} 00'30	-2°47'29	min. Earth dist.	4640 Oct 06 16:08	20° \mathfrak{L} 59'48	0.62069 AU
minimum elong	4639 Oct 27 20:43	4° \mathfrak{M} 48'08	2°45'44	inferior conj	4640 Oct 09 15:29	18° \mathfrak{L} 15'56	-3°47'46
	4639 Nov 02 14:56	30° \mathfrak{R} \mathfrak{L}		minimum elong	4640 Oct 09 21:31	18° \mathfrak{L} 02'03	3°46'00
morning rise	4639 Nov 03 08:31	29° \mathfrak{L} 39'46		morning rise	4640 Oct 16 19:32	13° \mathfrak{L} 13'53	
asc. node	4639 Nov 05 06:29	29° \mathfrak{L} 10'48		direct	4640 Oct 19 03:51	12° \mathfrak{L} 49'51	
direct	4639 Nov 05 20:08	29° \mathfrak{L} 09'10		asc. node	4640 Oct 22 03:33	13° \mathfrak{L} 30'06	
	4639 Nov 09 00:44	0° \mathfrak{M}		morning max el	4640 Oct 26 00:55	16° \mathfrak{L} 19'08	17°52'06
morning max el	4639 Nov 12 09:01	2° \mathfrak{M} 34'11	17°52'06		4640 Nov 04 15:23	0° \mathfrak{M}	
morning set	4639 Nov 29 03:00	28° \mathfrak{M} 09'44		morning set	4640 Nov 10 22:07	11° \mathfrak{M} 08'55	
	4639 Nov 30 04:43	0° \mathfrak{X}					
				superior conj	4640 Nov 21 19:48	0° \mathfrak{X} 24'54	0°41'18
superior conj	4639 Dec 11 20:21	19° \mathfrak{X} 31'42	0°00'31	minimum elong	4640 Nov 21 23:16	0° \mathfrak{X} 39'43	0°40'49
minimum elong	4639 Dec 11 20:25	19° \mathfrak{X} 31'58	0°00'32		4640 Nov 21 14:00	0° \mathfrak{X}	
behind sun begin	4639 Dec 11 10:33	18° \mathfrak{X} 51'41		desc. node	4640 Nov 27 19:09	10° \mathfrak{X} 26'03	
behind sun end	4639 Dec 12 06:17	20° \mathfrak{X} 12'10		max. Earth dist.	4640 Nov 29 01:37	12° \mathfrak{X} 30'44	1.43112 AU
desc. node	4639 Dec 11 22:07	19° \mathfrak{X} 38'57		evening rise	4640 Dec 06 06:00	23° \mathfrak{X} 58'08	
max. Earth dist.	4639 Dec 17 11:08	28° \mathfrak{X} 34'15	1.44478 AU		4640 Dec 10 03:36	0° \mathfrak{Z}	
	4639 Dec 18 08:44	0° \mathfrak{Z}			4640 Dec 31 00:30	0° \mathfrak{A}	
evening rise	4639 Dec 27 17:08	14° \mathfrak{Z} 34'52		evening max el	4641 Jan 06 16:27	7° \mathfrak{A} 49'05	21°43'16
	4640 Jan 06 21:09	0° \mathfrak{A}		retrograde	4641 Jan 15 18:53	13° \mathfrak{A} 13'33	
evening max el	4640 Jan 24 19:36	24° \mathfrak{A} 14'43	20°31'27	asc. node	4641 Jan 18 02:49	12° \mathfrak{A} 44'23	
asc. node	4640 Feb 01 05:48	28° \mathfrak{A} 57'39		evening set	4641 Jan 20 03:00	11° \mathfrak{A} 30'13	
retrograde	4640 Feb 01 21:28	28° \mathfrak{A} 59'58		inferior conj	4641 Jan 25 11:11	5° \mathfrak{A} 12'31	2°16'25
evening set	4640 Feb 05 19:15	27° \mathfrak{A} 31'56		minimum elong	4641 Jan 25 08:47	5° \mathfrak{A} 20'49	2°15'40
inferior conj	4640 Feb 11 03:58	21° \mathfrak{A} 23'53	2°51'16	min. Earth dist.	4641 Jan 25 14:15	5° \mathfrak{A} 01'50	0.67973 AU
minimum elong	4640 Feb 11 01:35	21° \mathfrak{A} 32'01	2°50'42		4641 Jan 29 13:39	30° \mathfrak{R} \mathfrak{Z}	
min. Earth dist.	4640 Feb 11 19:14	20° \mathfrak{A} 31'43	0.67514 AU	morning rise	4641 Jan 30 14:23	29° \mathfrak{Z} 00'42	
morning rise	4640 Feb 16 07:43	15° \mathfrak{A} 09'54		direct	4641 Feb 04 14:07	26° \mathfrak{Z} 51'51	
direct	4640 Feb 21 22:01	12° \mathfrak{A} 40'25			4641 Feb 11 12:39	0° \mathfrak{A}	
morning max el	4640 Mar 04 03:59	19° \mathfrak{A} 23'52	24°22'42	morning max el	4641 Feb 14 13:31	2° \mathfrak{A} 46'30	22°53'28
desc. node	4640 Mar 08 21:20	24° \mathfrak{A} 38'06		desc. node	4641 Feb 23 18:22	13° \mathfrak{A} 43'46	
	4640 Mar 13 04:06	0° \mathfrak{X}			4641 Mar 07 06:05	0° \mathfrak{X}	
	4640 Apr 02 09:46	0° \mathfrak{Y}		morning set	4641 Mar 21 00:00	21° \mathfrak{X} 37'45	
morning set	4640 Apr 09 00:54	11° \mathfrak{Y} 12'24		max. Earth dist.	4641 Mar 25 12:03	29° \mathfrak{X} 13'24	1.39925 AU
max. Earth dist.	4640 Apr 12 16:50	17° \mathfrak{Y} 42'45	1.37735 AU		4641 Mar 25 22:53	0° \mathfrak{Y}	
	4640 Apr 19 06:59	0° \mathfrak{B}					
				superior conj	4641 Apr 02 06:12	12° \mathfrak{Y} 58'29	-1°50'26
superior conj	4640 Apr 19 15:22	0° \mathfrak{B} 40'17	-1°26'34	minimum elong	4641 Apr 02 10:59	13° \mathfrak{Y} 20'23	1°50'00
minimum elong	4640 Apr 19 19:55	1° \mathfrak{B} 02'11	1°25'56		4641 Apr 11 07:38	0° \mathfrak{B}	
evening rise	4640 Apr 28 08:45	17° \mathfrak{B} 51'19		evening rise	4641 Apr 12 00:12	1° \mathfrak{B} 19'02	
asc. node	4640 Apr 29 05:06	19° \mathfrak{B} 31'54		asc. node	4641 Apr 16 02:09	9° \mathfrak{B} 01'04	
	4640 May 04 16:49	0° \mathfrak{H}		evening max el	4641 Apr 28 04:03	27° \mathfrak{B} 17'00	18°28'58
evening max el	4640 May 15 00:16	14° \mathfrak{H} 51'41	19°08'43		4641 May 01 18:44	0° \mathfrak{H}	
retrograde	4640 May 23 21:34	19° \mathfrak{H} 11'58		retrograde	4641 May 05 18:02	1° \mathfrak{H} 01'44	
evening set	4640 May 25 21:59	18° \mathfrak{H} 59'30		evening set	4641 May 08 01:03	0° \mathfrak{H} 42'15	
inferior conj	4640 Jun 03 06:07	14° \mathfrak{H} 48'07	0°28'07		4641 May 09 21:41	30° \mathfrak{R} \mathfrak{B}	
minimum elong	4640 Jun 03 07:16	14° \mathfrak{H} 46'10	0°27'41	inferior conj	4641 May 15 13:17	26° \mathfrak{B} 11'27	1°57'36

minimum elong	4641 May 15 16:45	26°♄04'32	1°56'34	minimum elong	4642 Apr 27 20:17	8°♄07'45	2°54'55
min. Earth dist.	4641 May 18 23:22	23°♄29'31	0.58208 AU	min. Earth dist.	4642 May 01 00:29	5°♄12'48	0.60379 AU
desc. node	4641 May 22 17:35	21°♄01'16		morning rise	4642 May 04 15:57	2°♄25'35	
morning rise	4641 May 23 05:17	20°♄46'03		desc. node	4642 May 09 14:36	0°♄27'50	
direct	4641 May 29 04:07	19°♄14'46		direct	4642 May 11 06:10	0°♄20'05	
morning max el	4641 Jun 12 13:21	26°♄55'43	26°53'47	morning max el	4642 May 25 13:26	8°♄13'57	27°41'26
	4641 Jun 15 11:47	0°♄			4642 Jun 11 03:34	0°♄	
	4641 Jul 05 10:00	0°♄		morning set	4642 Jun 26 17:12	28°♄34'09	
morning set	4641 Jul 12 10:53	14°♄01'46			4642 Jun 27 09:42	0°♄	
asc. node	4641 Jul 13 01:24	15°♄18'25		asc. node	4642 Jun 29 22:26	5°♄22'11	
				max. Earth dist.	4642 Jul 02 22:36	11°♄54'34	1.32035 AU
superior conj	4641 Jul 19 11:21	29°♄17'03	1°02'43	superior conj	4642 Jul 03 22:40	14°♄06'51	0°40'55
minimum elong	4641 Jul 19 09:08	29°♄04'44	1°02'18	minimum elong	4642 Jul 03 20:58	13°♄57'28	0°40'34
max. Earth dist.	4641 Jul 19 11:26	29°♄17'31	1.32006 AU	evening rise	4642 Jul 10 18:08	28°♄58'53	
	4641 Jul 19 19:08	0°♄			4642 Jul 11 05:39	0°♄	
evening rise	4641 Jul 26 07:49	14°♄11'31			4642 Jul 27 20:31	0°♄	
	4641 Aug 03 07:06	0°♄		desc. node	4642 Aug 05 13:54	10°♄52'32	
desc. node	4641 Aug 18 16:54	23°♄54'12		evening max el	4642 Aug 06 23:37	12°♄16'12	25°29'30
	4641 Aug 24 02:42	0°♄		retrograde	4642 Aug 20 22:30	19°♄21'15	
evening max el	4641 Aug 25 04:27	1°♄02'39	26°39'57	evening set	4642 Aug 26 20:36	17°♄59'46	
retrograde	4641 Sep 08 02:53	8°♄12'15		min. Earth dist.	4642 Aug 31 11:27	15°♄20'52	0.57991 AU
evening set	4641 Sep 14 22:18	6°♄14'50		inferior conj	4642 Sep 03 14:20	13°♄10'34	-5°10'54
min. Earth dist.	4641 Sep 18 18:20	3°♄38'43	0.60035 AU	minimum elong	4642 Sep 03 16:47	13°♄06'16	5°10'45
inferior conj	4641 Sep 22 00:05	1°♄02'32	-4°39'11	morning rise	4642 Sep 11 15:13	8°♄53'20	
minimum elong	4641 Sep 22 05:46	0°♄51'05	4°38'06	direct	4642 Sep 14 03:09	8°♄34'09	
	4641 Sep 23 07:31	30°♄		morning max el	4642 Sep 22 16:55	12°♄38'33	18°51'32
morning rise	4641 Sep 29 15:16	26°♄22'06		asc. node	4642 Sep 25 21:38	16°♄12'09	
direct	4641 Oct 01 23:39	26°♄01'39			4642 Oct 04 11:53	0°♄	
asc. node	4641 Oct 09 00:36	29°♄15'19		morning set	4642 Oct 09 05:00	9°♄03'10	
morning max el	4641 Oct 09 12:38	29°♄43'34	18°11'24				
	4641 Oct 09 19:19	0°♄		superior conj	4642 Oct 17 16:43	25°♄35'30	1°31'23
morning set	4641 Oct 25 08:18	24°♄50'56		minimum elong	4642 Oct 17 19:35	25°♄49'06	1°31'09
	4641 Oct 28 01:51	0°♄			4642 Oct 20 00:54	0°♄	
superior conj	4641 Nov 03 20:16	12°♄30'42	1°11'42	max. Earth dist.	4642 Oct 24 17:13	8°♄31'14	1.39201 AU
minimum elong	4641 Nov 04 00:14	12°♄48'35	1°11'14	evening rise	4642 Oct 28 15:03	15°♄19'57	
max. Earth dist.	4641 Nov 11 11:23	25°♄51'36	1.41279 AU	desc. node	4642 Nov 01 13:12	21°♄53'58	
	4641 Nov 13 22:42	0°♄			4642 Nov 06 14:38	0°♄	
desc. node	4641 Nov 14 16:10	1°♄12'07			4642 Nov 28 05:14	0°♄	
evening rise	4641 Nov 16 11:07	4°♄07'45		evening max el	4642 Dec 02 22:06	5°♄06'27	24°21'18
	4641 Dec 03 10:52	0°♄		retrograde	4642 Dec 14 05:07	11°♄43'08	
evening max el	4641 Dec 20 08:42	21°♄25'47	23°01'52	evening set	4642 Dec 19 14:32	9°♄28'12	
retrograde	4641 Dec 30 13:46	27°♄28'57		asc. node	4642 Dec 22 20:50	5°♄57'39	
evening set	4642 Jan 04 09:56	25°♄29'39		min. Earth dist.	4642 Dec 24 06:56	4°♄06'28	0.67778 AU
asc. node	4642 Jan 04 23:50	24°♄58'55		inferior conj	4642 Dec 25 02:04	3°♄02'16	0°44'48
inferior conj	4642 Jan 09 19:08	19°♄05'52	1°33'54	minimum elong	4642 Dec 25 01:01	3°♄05'48	0°44'21
minimum elong	4642 Jan 09 17:11	19°♄12'34	1°33'11		4642 Dec 27 10:33	30°♄	
min. Earth dist.	4642 Jan 09 10:55	19°♄34'13	0.68055 AU	morning rise	4642 Dec 30 11:34	27°♄00'08	
morning rise	4642 Jan 15 00:20	12°♄57'56		direct	4643 Jan 03 07:25	25°♄36'30	
direct	4642 Jan 19 09:36	11°♄12'01		morning max el	4643 Jan 11 01:12	0°♄00'47	20°13'29
morning max el	4642 Jan 28 03:36	16°♄17'24	21°28'16		4643 Jan 11 00:53	0°♄	
	4642 Feb 08 05:35	0°♄		desc. node	4643 Jan 28 12:24	23°♄26'17	
desc. node	4642 Feb 10 15:22	3°♄22'43			4643 Feb 01 20:57	0°♄	
	4642 Feb 28 07:50	0°♄		morning set	4643 Feb 07 16:18	8°♄53'39	
morning set	4642 Feb 28 18:15	0°♄41'11		max. Earth dist.	4643 Feb 17 21:05	24°♄55'51	1.43741 AU
max. Earth dist.	4642 Mar 07 12:39	11°♄37'20	1.42021 AU		4643 Feb 21 00:27	0°♄	
superior conj	4642 Mar 15 00:30	24°♄17'13	-2°05'41	superior conj	4643 Feb 23 17:53	4°♄27'35	-2°06'49
minimum elong	4642 Mar 15 03:10	24°♄28'49	2°05'35	minimum elong	4643 Feb 23 15:20	4°♄17'03	2°06'45
	4642 Mar 18 06:49	0°♄		evening rise	4643 Mar 08 11:57	26°♄05'04	
evening rise	4642 Mar 26 02:41	14°♄06'27			4643 Mar 10 18:05	0°♄	
asc. node	4642 Apr 02 23:09	28°♄07'04		asc. node	4643 Mar 20 20:09	16°♄42'34	
	4642 Apr 04 02:16	0°♄		evening max el	4643 Mar 26 02:22	23°♄21'27	18°08'50
evening max el	4642 Apr 11 13:51	10°♄09'52	18°09'13	retrograde	4643 Apr 01 13:00	26°♄44'11	
retrograde	4642 Apr 18 08:35	13°♄35'57		evening set	4643 Apr 04 08:51	26°♄03'48	
evening set	4642 Apr 20 22:21	13°♄06'45		inferior conj	4643 Apr 10 14:17	20°♄52'08	3°25'51
inferior conj	4642 Apr 27 17:10	8°♄14'59	2°55'33	minimum elong	4643 Apr 10 15:52	20°♄47'56	3°25'41

min. Earth dist.	4643 Apr 13 10:09	17° Υ 53'59	0.62527 AU	retrograde	4644 Mar 15 02:41	10° Υ 17'21	
morning rise	4643 Apr 16 21:30	14° Υ 48'18		evening set	4644 Mar 18 04:36	9° Υ 24'50	
direct	4643 Apr 23 18:05	12° Υ 15'19		inferior conj	4644 Mar 24 00:30	3° Υ 54'57	3°34'40
desc. node	4643 Apr 26 11:37	12° Υ 37'23		minimum elong	4644 Mar 24 00:25	3° Υ 55'09	3°34'39
morning max el	4643 May 07 19:27	20° Υ 14'58	27°51'32	min. Earth dist.	4644 Mar 26 05:23	1° Υ 20'26	0.64428 AU
	4643 May 16 04:13	0° \mathcal{B}			4644 Mar 27 10:30	30° $\mathcal{R}\mathcal{H}$	
	4643 Jun 04 03:15	0° Π		morning rise	4644 Mar 29 19:31	27° \mathcal{H} 43'54	
morning set	4643 Jun 10 17:57	12° Π 47'18		direct	4644 Apr 05 14:16	24° \mathcal{H} 55'46	
max. Earth dist.	4643 Jun 16 05:59	24° Π 17'07	1.32483 AU	desc. node	4644 Apr 12 08:39	27° \mathcal{H} 11'24	
asc. node	4643 Jun 16 19:27	25° Π 29'31			4644 Apr 16 03:18	0° Υ	
				morning max el	4644 Apr 19 04:51	2° Υ 51'46	27°25'25
superior conj	4643 Jun 18 07:45	28° Π 45'53	0°15'45		4644 May 09 12:11	0° \mathcal{B}	
minimum elong	4643 Jun 18 07:00	28° Π 41'52	0°15'36	morning set	4644 May 24 10:33	26° \mathcal{B} 33'18	
behind sun begin	4643 Jun 18 05:57	28° Π 36'09			4644 May 26 04:16	0° Π	
behind sun end	4643 Jun 18 08:03	28° Π 47'35		max. Earth dist.	4644 May 29 05:31	6° Π 12'57	1.33376 AU
	4643 Jun 18 21:22	0° \mathcal{E}					
evening rise	4643 Jun 25 05:53	13° \mathcal{E} 46'57		superior conj	4644 Jun 01 12:42	13° Π 08'25	-0°12'02
	4643 Jul 03 09:02	0° \mathcal{Q}		minimum elong	4644 Jun 01 13:19	13° Π 11'41	0°11'54
evening max el	4643 Jul 19 12:48	22° \mathcal{Q} 49'41	23°57'55	behind sun begin	4644 Jun 01 09:38	12° Π 52'10	
desc. node	4643 Jul 23 10:55	26° \mathcal{Q} 08'05		behind sun end	4644 Jun 01 16:59	13° Π 31'13	
retrograde	4643 Aug 02 06:36	29° \mathcal{Q} 44'33		asc. node	4644 Jun 02 16:29	15° Π 36'29	
evening set	4643 Aug 06 19:00	28° \mathcal{Q} 59'27		evening rise	4644 Jun 08 17:14	28° Π 29'39	
min. Earth dist.	4643 Aug 12 23:08	25° \mathcal{Q} 59'34	0.56227 AU		4644 Jun 09 10:26	0° \mathcal{E}	
inferior conj	4643 Aug 15 08:15	24° \mathcal{Q} 32'14	-5°07'29		4644 Jun 27 03:26	0° \mathcal{Q}	
minimum elong	4643 Aug 15 04:39	24° \mathcal{Q} 37'45	5°07'10	evening max el	4644 Jun 30 03:01	3° \mathcal{Q} 12'37	22°20'48
morning rise	4643 Aug 23 16:52	20° \mathcal{Q} 34'44		desc. node	4644 Jul 09 07:55	9° \mathcal{Q} 06'36	
direct	4643 Aug 26 11:00	20° \mathcal{Q} 15'13		retrograde	4644 Jul 13 02:42	9° \mathcal{Q} 39'43	
morning max el	4643 Sep 05 10:44	24° \mathcal{Q} 54'00	19°53'29	evening set	4644 Jul 16 03:26	9° \mathcal{Q} 19'24	
	4643 Sep 09 22:41	0° \mathcal{M}		min. Earth dist.	4644 Jul 24 09:36	5° \mathcal{Q} 44'45	0.55086 AU
asc. node	4643 Sep 12 18:40	4° \mathcal{M} 04'49		inferior conj	4644 Jul 25 08:48	5° \mathcal{Q} 11'56	-4°14'48
morning set	4643 Sep 23 08:46	23° \mathcal{M} 34'54		minimum elong	4644 Jul 25 00:25	5° \mathcal{Q} 23'49	4°12'50
	4643 Sep 26 12:25	0° \mathcal{L}		morning rise	4644 Aug 02 23:18	1° \mathcal{Q} 21'45	
				direct	4644 Aug 06 02:00	0° \mathcal{Q} 59'53	
superior conj	4643 Oct 01 03:47	9° \mathcal{L} 22'59	1°41'35	morning max el	4644 Aug 17 16:36	6° \mathcal{Q} 24'35	21°16'13
minimum elong	4643 Oct 01 05:02	9° \mathcal{L} 29'11	1°41'32	asc. node	4644 Aug 29 15:44	22° \mathcal{Q} 40'48	
max. Earth dist.	4643 Oct 06 22:21	20° \mathcal{L} 34'53	1.37133 AU		4644 Sep 02 14:13	0° \mathcal{M}	
evening rise	4643 Oct 10 17:04	27° \mathcal{L} 32'25		morning set	4644 Sep 06 17:07	8° \mathcal{M} 19'33	
	4643 Oct 12 02:07	0° \mathcal{M}					
desc. node	4643 Oct 19 10:14	12° \mathcal{M} 26'36		superior conj	4644 Sep 14 01:12	23° \mathcal{M} 40'43	1°43'43
	4643 Oct 31 00:32	0° \mathcal{J}		minimum elong	4644 Sep 14 00:56	23° \mathcal{M} 39'20	1°43'43
evening max el	4643 Nov 15 10:29	18° \mathcal{J} 49'07	25°34'53		4644 Sep 17 03:20	0° \mathcal{L}	
retrograde	4643 Nov 27 16:04	25° \mathcal{J} 50'25		max. Earth dist.	4644 Sep 18 08:26	2° \mathcal{L} 25'48	1.35306 AU
evening set	4643 Dec 03 15:08	23° \mathcal{J} 21'51		evening rise	4644 Sep 22 13:28	10° \mathcal{L} 36'18	
min. Earth dist.	4643 Dec 08 00:03	18° \mathcal{J} 34'43	0.67142 AU		4644 Oct 03 14:16	0° \mathcal{M}	
inferior conj	4643 Dec 09 06:11	16° \mathcal{J} 58'22	-0°09'59	desc. node	4644 Oct 05 07:15	2° \mathcal{M} 44'50	
minimum elong	4643 Dec 09 06:26	16° \mathcal{J} 57'33	0°09'53		4644 Oct 25 12:01	0° \mathcal{J}	
transit middle	4643 Dec 09 06:26	16° \mathcal{J} 57'33	0°09'53	evening max el	4644 Oct 27 23:05	2° \mathcal{J} 29'47	26°35'13
transit begin	4643 Dec 09 04:13	17° \mathcal{J} 04'40		retrograde	4644 Nov 09 21:54	9° \mathcal{J} 44'23	
transit end	4643 Dec 09 08:39	16° \mathcal{J} 50'26		evening set	4644 Nov 16 09:50	7° \mathcal{J} 06'32	
asc. node	4643 Dec 09 17:52	16° \mathcal{J} 21'04		min. Earth dist.	4644 Nov 20 11:58	2° \mathcal{J} 54'42	0.66153 AU
morning rise	4643 Dec 14 22:06	11° \mathcal{J} 04'06		inferior conj	4644 Nov 22 05:31	0° \mathcal{J} 50'30	-1°09'18
direct	4643 Dec 18 06:06	10° \mathcal{J} 00'09		minimum elong	4644 Nov 22 07:26	0° \mathcal{J} 44'46	1°08'29
morning max el	4643 Dec 25 06:44	13° \mathcal{J} 54'47	19°12'52		4644 Nov 22 22:30	30° $\mathcal{R}\mathcal{M}$	
	4644 Jan 06 09:24	0° \mathcal{Z}		asc. node	4644 Nov 25 14:56	27° \mathcal{M} 05'35	
greatest brilliancy	4644 Jan 07 23:37	2° \mathcal{Z} 24'11	-0.7m	morning rise	4644 Nov 28 05:46	25° \mathcal{M} 06'40	
desc. node	4644 Jan 15 09:28	13° \mathcal{Z} 47'24		direct	4644 Dec 01 04:00	24° \mathcal{M} 18'40	
morning set	4644 Jan 17 17:28	17° \mathcal{Z} 24'28		morning max el	4644 Dec 07 18:36	27° \mathcal{M} 54'33	18°28'09
	4644 Jan 25 19:35	0° \approx			4644 Dec 09 16:32	0° \mathcal{J}	
max. Earth dist.	4644 Jan 31 11:40	8° \approx 53'43	1.44874 AU	morning set	4644 Dec 27 18:55	27° \mathcal{J} 11'57	
					4644 Dec 29 13:00	0° \mathcal{Z}	
superior conj	4644 Feb 03 10:42	13° \approx 34'31	-1°49'05	desc. node	4645 Jan 01 06:31	4° \mathcal{Z} 20'50	
minimum elong	4644 Feb 03 02:25	13° \approx 01'40	1°48'28				
	4644 Feb 13 15:39	0° \mathcal{H}		superior conj	4645 Jan 12 13:51	22° \mathcal{Z} 10'51	-1°12'47
evening rise	4644 Feb 17 23:53	7° \mathcal{H} 07'59		minimum elong	4645 Jan 12 05:18	21° \mathcal{Z} 37'19	1°11'47
	4644 Mar 03 05:36	0° Υ		max. Earth dist.	4645 Jan 13 05:57	23° \mathcal{Z} 14'00	1.45303 AU
asc. node	4644 Mar 06 17:10	4° Υ 38'29			4645 Jan 17 13:34	0° \approx	
evening max el	4644 Mar 08 14:44	6° Υ 44'55	18°27'09	evening rise	4645 Jan 28 12:30	17° \approx 14'27	

	4645 Feb 05 14:19	0° H			4646 Jan 30 22:23	0° H	
greatest brilliancy	4645 Feb 07 04:44	2° H 30'18	-0.8m	evening max el	4646 Feb 03 06:04	3° H 47'48	19°55'12
evening max el	4645 Feb 20 00:35	20° H 14'45	19°03'09	asc. node	4646 Feb 08 11:15	7° H 42'04	
asc. node	4645 Feb 21 14:12	21° H 42'53		retrograde	4646 Feb 10 19:36	8° H 11'34	
retrograde	4645 Feb 26 21:50	24° H 08'07		evening set	4646 Feb 14 12:15	6° H 51'54	
evening set	4645 Mar 02 06:31	23° H 02'31		inferior conj	4646 Feb 19 22:08	0° H 51'06	3°07'21
inferior conj	4645 Mar 07 20:07	17° H 16'08	3°27'14	minimum elong	4646 Feb 19 19:59	0° H 58'19	3°06'56
minimum elong	4645 Mar 07 18:45	17° H 20'27	3°27'06		4646 Feb 20 13:23	30° R \approx	
min. Earth dist.	4645 Mar 09 09:31	15° H 17'42	0.65964 AU	min. Earth dist.	4646 Feb 20 21:02	29° \approx 34'30	0.67078 AU
morning rise	4645 Mar 13 06:36	11° H 02'17		morning rise	4646 Feb 25 03:29	24° \approx 36'52	
direct	4645 Mar 19 17:17	8° H 12'45		direct	4646 Mar 03 01:58	21° \approx 57'42	
desc. node	4645 Mar 30 05:43	13° H 35'25		morning max el	4646 Mar 14 23:43	29° \approx 04'28	25°12'19
morning max el	4645 Apr 01 14:45	15° H 51'37	26°29'17		4646 Mar 15 21:15	0° H	
	4645 Apr 13 06:37	0° Y		desc. node	4646 Mar 17 02:45	1° H 19'23	
	4645 May 02 08:11	0° B			4646 Apr 07 02:07	0° Y	
morning set	4645 May 07 15:25	9° B 40'51		morning set	4646 Apr 20 03:59	21° Y 57'29	
max. Earth dist.	4645 May 11 18:00	17° B 36'05	1.34743 AU	max. Earth dist.	4646 Apr 23 19:41	28° Y 39'01	1.36555 AU
					4646 Apr 24 12:58	0° B	
superior conj	4645 May 16 11:10	27° B 06'51	-0°41'22				
minimum elong	4645 May 16 13:24	27° B 18'21	0°40'56	superior conj	4646 Apr 30 00:23	10° B 34'07	-1°10'38
	4645 May 17 20:40	0° II		minimum elong	4646 Apr 30 04:13	10° B 53'05	1°10'01
asc. node	4645 May 20 13:31	5° II 38'20		asc. node	4646 May 07 10:34	25° B 31'20	
evening rise	4645 May 24 02:10	13° II 00'01		evening rise	4646 May 08 06:32	27° B 12'14	
	4645 Jun 01 21:26	0° E			4646 May 09 15:57	0° II	
evening max el	4645 Jun 12 02:02	13° E 56'35	20°52'16	evening max el	4646 May 25 13:20	25° II 19'49	19°40'42
retrograde	4645 Jun 23 15:12	19° E 36'20			4646 Jun 02 19:48	0° E	
evening set	4645 Jun 25 18:15	19° E 25'34		retrograde	4646 Jun 04 08:42	0° E 06'49	
desc. node	4645 Jun 26 04:57	19° E 20'41			4646 Jun 05 22:16	30° R II	
inferior conj	4645 Jul 05 01:56	15° E 28'26	-2°35'11	evening set	4646 Jun 06 07:15	29° II 56'25	
minimum elong	4645 Jul 04 18:52	15° E 38'29	2°32'46	desc. node	4646 Jun 13 01:58	27° II 07'13	
min. Earth dist.	4645 Jul 05 20:50	15° E 01'37	0.54832 AU	inferior conj	4646 Jun 15 02:15	25° II 53'20	-0°35'56
morning rise	4645 Jul 13 19:17	11° E 26'40		minimum elong	4646 Jun 15 00:38	25° II 55'53	0°35'19
direct	4645 Jul 17 11:16	10° E 57'45		min. Earth dist.	4646 Jun 17 09:50	24° II 26'44	0.55546 AU
morning max el	4645 Jul 30 11:54	17° E 12'21	22°54'53	morning rise	4646 Jun 23 15:40	21° II 22'23	
	4645 Aug 09 17:34	0° O		direct	4646 Jun 28 03:14	20° II 37'47	
asc. node	4645 Aug 16 12:49	11° O 48'56		morning max el	4646 Jul 12 01:47	27° II 35'20	24°38'34
morning set	4645 Aug 22 04:03	23° O 11'08			4646 Jul 14 10:47	0° E	
	4645 Aug 25 08:47	0° P			4646 Aug 02 17:45	0° O	
				asc. node	4646 Aug 03 09:51	1° O 20'44	
superior conj	4645 Aug 29 05:38	8° P 18'29	1°39'06	morning set	4646 Aug 06 15:48	8° O 04'21	
minimum elong	4645 Aug 29 04:13	8° P 10'56	1°39'00				
max. Earth dist.	4645 Sep 01 03:24	14° P 27'19	1.33844 AU	superior conj	4646 Aug 13 14:30	23° O 08'02	1°28'46
evening rise	4645 Sep 05 23:56	24° P 19'56		minimum elong	4646 Aug 13 12:23	22° O 56'33	1°28'31
	4645 Sep 08 22:16	0° A		max. Earth dist.	4646 Aug 15 06:51	26° O 47'16	1.32797 AU
desc. node	4645 Sep 22 04:16	22° A 42'10			4646 Aug 16 18:42	0° P	
	4645 Sep 27 03:17	0° M		evening rise	4646 Aug 20 20:38	8° P 32'21	
evening max el	4645 Oct 10 11:43	15° M 59'51	27°14'49		4646 Sep 01 08:09	0° A	
retrograde	4645 Oct 23 21:50	23° M 17'48		desc. node	4646 Sep 09 01:17	12° A 09'16	
evening set	4645 Oct 30 20:17	20° M 37'27		evening max el	4646 Sep 22 22:26	29° A 05'41	27°26'55
min. Earth dist.	4645 Nov 03 16:22	17° M 00'37	0.64820 AU		4646 Sep 23 21:58	0° M	
inferior conj	4645 Nov 05 21:51	14° M 34'08	-2°11'26	retrograde	4646 Oct 06 15:11	6° M 21'27	
minimum elong	4645 Nov 06 01:37	14° M 23'48	2°09'56	evening set	4646 Oct 13 19:25	3° M 48'03	
morning rise	4645 Nov 12 08:05	9° M 03'45		min. Earth dist.	4646 Oct 17 11:04	0° M 42'56	0.63157 AU
asc. node	4645 Nov 12 12:00	8° M 59'27			4646 Oct 18 04:50	30° R A	
direct	4645 Nov 14 22:53	8° M 27'48		inferior conj	4646 Oct 20 04:25	28° A 02'11	-3°13'39
morning max el	4645 Nov 21 10:21	11° M 54'20	18°00'14	minimum elong	4646 Oct 20 09:51	27° A 48'48	3°11'48
	4645 Dec 04 00:02	0° J		morning rise	4646 Oct 27 01:49	22° A 48'49	
morning set	4645 Dec 09 01:58	8° J 27'56		direct	4646 Oct 29 11:48	22° A 21'16	
desc. node	4645 Dec 19 03:33	25° J 02'34		asc. node	4646 Oct 30 09:05	22° A 25'04	
	4645 Dec 22 05:27	0° Z		morning max el	4646 Nov 05 03:04	25° A 46'52	17°49'50
					4646 Nov 08 16:26	0° M	
superior conj	4645 Dec 22 23:23	1° Z 11'44	-0°26'17	morning set	4646 Nov 21 09:48	20° M 55'22	
minimum elong	4645 Dec 22 20:10	0° Z 58'54	0°25'49		4646 Nov 26 14:54	0° J	
max. Earth dist.	4645 Dec 27 01:26	7° Z 40'44	1.44988 AU				
evening rise	4646 Jan 08 05:48	26° Z 38'47		superior conj	4646 Dec 03 07:24	11° J 19'54	0°18'57
	4646 Jan 10 10:05	0° \approx		minimum elong	4646 Dec 03 09:19	11° J 27'49	0°18'41
greatest brilliancy	4646 Jan 22 08:30	18° \approx 05'50	-0.6m	desc. node	4646 Dec 06 00:33	15° J 48'39	

































































































































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	4646 Dec 14 21:19	0° ♄			4647 Dec 30 02:58	0° ♄	
evening rise	4646 Dec 18 15:38	5° ♄ 51'08		evening max el	4647 Dec 31 00:37	0° ♄ 56'11	22°16'02
	4647 Jan 03 19:16	0° ♄		retrograde	4648 Jan 09 14:17	6° ♄ 37'44	
evening max el	4647 Jan 17 06:02	17° ♄ 21'19	21°00'46	asc. node	4648 Jan 13 05:20	5° ♄ 28'06	
retrograde	4647 Jan 25 17:40	22° ♄ 22'35		evening set	4648 Jan 14 03:23	4° ♄ 47'27	
asc. node	4647 Jan 26 08:18	22° ♄ 20'34			4648 Jan 18 08:40	30° ♄	
evening set	4647 Jan 29 19:46	20° ♄ 47'54		inferior conj	4648 Jan 19 11:48	28° ♄ 26'25	1°59'15
inferior conj	4647 Feb 04 04:03	14° ♄ 35'19	2°37'28	minimum elong	4648 Jan 19 09:32	28° ♄ 34'15	1°58'29
minimum elong	4647 Feb 04 01:36	14° ♄ 43'45	2°36'48	min. Earth dist.	4648 Jan 19 09:54	28° ♄ 33'01	0.68057 AU
min. Earth dist.	4647 Feb 04 13:54	14° ♄ 01'19	0.67766 AU	morning rise	4648 Jan 24 15:34	22° ♄ 16'04	
morning rise	4647 Feb 09 07:16	8° ♄ 22'19		direct	4648 Jan 29 08:57	20° ♄ 17'11	
direct	4647 Feb 14 15:25	6° ♄ 01'20		morning max el	4648 Feb 07 19:37	25° ♄ 50'31	22°16'13
morning max el	4647 Feb 25 08:25	12° ♄ 24'00	23°44'44		4648 Feb 11 14:19	0° ♄	
desc. node	4647 Mar 03 23:46	19° ♄ 59'52		desc. node	4648 Feb 18 20:48	9° ♄ 21'07	
	4647 Mar 11 11:27	0° ♄			4648 Mar 04 00:10	0° ♄	
	4647 Mar 30 22:05	0° ♄		morning set	4648 Mar 12 05:15	12° ♄ 57'52	
morning set	4647 Apr 01 18:27	3° ♄ 07'40		max. Earth dist.	4648 Mar 17 12:30	21° ♄ 43'51	1.40846 AU
max. Earth dist.	4647 Apr 05 15:30	9° ♄ 51'35	1.38667 AU		4648 Mar 22 08:07	0° ♄	
superior conj	4647 Apr 13 00:37	23° ♄ 20'28	-1°37'27	superior conj	4648 Mar 25 07:17	5° ♄ 14'30	-1°58'17
minimum elong	4647 Apr 13 05:28	23° ♄ 43'21	1°36'52	minimum elong	4648 Mar 25 11:32	5° ♄ 33'34	1°57'59
	4647 Apr 16 12:21	0° ♄		evening rise	4648 Apr 04 14:04	24° ♄ 10'48	
evening rise	4647 Apr 22 03:37	10° ♄ 58'51			4648 Apr 07 17:02	0° ♄	
asc. node	4647 Apr 24 07:36	15° ♄ 10'56		asc. node	4648 Apr 10 04:37	4° ♄ 31'16	
	4647 May 02 16:08	0° ♄		evening max el	4648 Apr 20 18:35	20° ♄ 02'13	18°18'08
evening max el	4647 May 08 11:52	7° ♄ 24'10	18°49'14	retrograde	4648 Apr 27 23:09	23° ♄ 37'24	
retrograde	4647 May 16 18:29	11° ♄ 27'41		evening set	4648 Apr 30 08:57	23° ♄ 14'11	
evening set	4647 May 18 21:30	11° ♄ 12'37		inferior conj	4648 May 07 13:20	18° ♄ 34'32	2°25'58
inferior conj	4647 May 26 21:00	6° ♄ 52'59	1°09'57	minimum elong	4648 May 07 16:53	18° ♄ 26'56	2°25'02
minimum elong	4647 May 26 23:32	6° ♄ 48'22	1°09'05	min. Earth dist.	4648 May 10 23:42	15° ♄ 40'39	0.59109 AU
min. Earth dist.	4647 May 30 02:09	4° ♄ 33'44	0.57071 AU	morning rise	4648 May 14 21:55	12° ♄ 57'13	
desc. node	4647 May 30 22:57	3° ♄ 58'27		desc. node	4648 May 16 19:59	12° ♄ 02'18	
morning rise	4647 Jun 03 22:17	1° ♄ 45'49		direct	4648 May 21 04:09	11° ♄ 11'03	
direct	4647 Jun 09 08:38	0° ♄ 34'19		morning max el	4648 Jun 04 13:30	18° ♄ 59'25	27°18'34
morning max el	4647 Jun 23 16:56	8° ♄ 03'04	26°11'31		4648 Jun 13 20:41	0° ♄	
	4647 Jul 10 02:40	0° ♄			4648 Jul 01 18:01	0° ♄	
asc. node	4647 Jul 21 06:52	21° ♄ 09'40		morning set	4648 Jul 05 11:20	7° ♄ 35'03	
morning set	4647 Jul 22 02:49	22° ♄ 54'29		asc. node	4648 Jul 07 03:53	11° ♄ 09'26	
	4647 Jul 25 09:54	0° ♄		max. Earth dist.	4648 Jul 12 03:29	22° ♄ 01'00	1.31960 AU
superior conj	4647 Jul 29 01:45	8° ♄ 03'03	1°13'29	superior conj	4648 Jul 12 13:31	22° ♄ 56'28	0°53'55
minimum elong	4647 Jul 28 23:26	7° ♄ 50'15	1°13'07	minimum elong	4648 Jul 12 11:28	22° ♄ 45'04	0°53'31
max. Earth dist.	4647 Jul 29 16:06	9° ♄ 22'03	1.32170 AU		4648 Jul 15 18:23	0° ♄	
evening rise	4647 Aug 05 00:33	23° ♄ 04'44		evening rise	4648 Jul 19 09:06	7° ♄ 48'24	
	4647 Aug 08 09:55	0° ♄			4648 Jul 30 21:32	0° ♄	
	4647 Aug 26 06:22	0° ♄		desc. node	4648 Aug 12 19:18	18° ♄ 37'31	
desc. node	4647 Aug 26 22:17	0° ♄ 53'49		evening max el	4648 Aug 17 03:57	23° ♄ 14'39	26°13'20
evening max el	4647 Sep 05 04:38	11° ♄ 34'02	27°06'42		4648 Aug 28 00:41	0° ♄	
retrograde	4647 Sep 19 01:23	18° ♄ 46'18		retrograde	4648 Aug 31 03:13	0° ♄ 23'25	
evening set	4647 Sep 26 03:20	16° ♄ 31'47			4648 Sep 03 04:58	30° ♄	
min. Earth dist.	4647 Sep 29 18:59	13° ♄ 49'33	0.61220 AU	evening set	4648 Sep 06 15:11	28° ♄ 40'15	
inferior conj	4647 Oct 02 22:02	11° ♄ 06'42	-4°11'10	min. Earth dist.	4648 Sep 10 16:58	26° ♄ 05'18	0.59145 AU
minimum elong	4647 Oct 03 04:11	10° ♄ 53'18	4°09'37	inferior conj	4648 Sep 13 23:07	23° ♄ 37'32	-4°55'54
morning rise	4647 Oct 10 06:57	6° ♄ 13'48		minimum elong	4648 Sep 14 03:50	23° ♄ 28'33	4°55'15
direct	4647 Oct 12 14:58	5° ♄ 51'34		morning rise	4648 Sep 21 18:42	19° ♄ 07'18	
asc. node	4647 Oct 17 06:06	7° ♄ 22'52		direct	4648 Sep 24 04:02	18° ♄ 47'46	
morning max el	4647 Oct 19 17:38	9° ♄ 24'44	17°57'57	morning max el	4648 Oct 02 02:38	22° ♄ 38'00	18°25'57
	4647 Nov 02 04:20	0° ♄		asc. node	4648 Oct 03 03:07	23° ♄ 40'14	
morning set	4647 Nov 04 11:59	4° ♄ 15'00			4648 Oct 07 22:48	0° ♄	
				morning set	4648 Oct 18 03:04	18° ♄ 10'47	
superior conj	4647 Nov 14 18:05	22° ♄ 46'15	0°55'31		4648 Oct 24 07:24	0° ♄	
minimum elong	4647 Nov 14 22:03	23° ♄ 03'35	0°55'00				
	4647 Nov 18 22:47	0° ♄		superior conj	4648 Oct 27 03:43	5° ♄ 19'07	1°21'17
max. Earth dist.	4647 Nov 22 07:42	5° ♄ 38'46	1.42379 AU	minimum elong	4648 Oct 27 07:20	5° ♄ 35'49	1°20'55
desc. node	4647 Nov 22 21:36	6° ♄ 36'04		max. Earth dist.	4648 Nov 03 14:58	18° ♄ 39'57	1.40403 AU
evening rise	4647 Nov 28 10:04	15° ♄ 30'56		evening rise	4648 Nov 08 00:31	26° ♄ 06'13	

desc. node	4648 Nov 08 18:37	27°♄20'57		desc. node	4649 Oct 26 15:38	17°♄59'21	
	4648 Nov 10 09:33	0°♄			4649 Nov 03 07:16	0°♄	
	4648 Nov 30 13:09	0°♄		evening max el	4649 Nov 25 04:11	28°♄16'42	24°53'56
evening max el	4648 Dec 12 15:18	14°♄34'26	23°35'56		4649 Nov 27 00:09	0°♄	
retrograde	4648 Dec 23 07:58	20°♄53'31		retrograde	4649 Dec 06 21:32	5°♄05'07	
evening set	4648 Dec 28 09:33	18°♄47'32		evening set	4649 Dec 12 12:39	2°♄44'23	
asc. node	4648 Dec 30 02:20	17°♄07'45			4649 Dec 15 04:28	30°♄♂	
inferior conj	4649 Jan 02 19:34	12°♄22'04	1°13'52	asc. node	4649 Dec 16 23:23	27°♄45'07	
minimum elong	4649 Jan 02 17:57	12°♄27'37	1°13'13	min. Earth dist.	4649 Dec 17 01:51	27°♄37'01	0.67543 AU
min. Earth dist.	4649 Jan 02 06:41	13°♄06'06	0.67976 AU	inferior conj	4649 Dec 18 01:32	26°♄18'57	0°22'12
morning rise	4649 Jan 08 02:18	6°♄16'09		minimum elong	4649 Dec 18 00:59	26°♄20'45	0°21'59
direct	4649 Jan 12 05:38	4°♄39'58		morning rise	4649 Dec 23 13:29	20°♄19'37	
morning max el	4649 Jan 20 12:44	9°♄27'10	20°54'51	direct	4649 Dec 27 04:07	19°♄04'36	
desc. node	4649 Feb 04 17:51	29°♄12'03		morning max el	4650 Jan 03 13:39	23°♄14'56	19°45'50
	4649 Feb 05 07:01	0°♄			4650 Jan 09 06:28	0°♄	
morning set	4649 Feb 19 12:59	21°♄34'06		greatest brilliancy	4650 Jan 16 17:43	10°♄34'20	-0.7m
	4649 Feb 24 20:52	0°♄		desc. node	4650 Jan 22 14:53	19°♄23'59	
max. Earth dist.	4649 Feb 27 15:52	4°♄30'30	1.42810 AU	morning set	4650 Jan 29 09:05	29°♄44'55	
					4650 Jan 29 12:59	0°♄	
superior conj	4649 Mar 06 15:28	16°♄05'40	-2°08'13	max. Earth dist.	4650 Feb 10 03:08	18°♄07'50	1.44306 AU
minimum elong	4649 Mar 06 16:16	16°♄09'04	2°08'12				
	4649 Mar 14 16:05	0°♄		superior conj	4650 Feb 14 21:59	25°♄48'00	-2°01'46
evening rise	4649 Mar 18 09:50	6°♄39'08		minimum elong	4650 Feb 14 16:42	25°♄26'42	2°01'32
asc. node	4649 Mar 28 01:38	23°♄25'57			4650 Feb 17 12:01	0°♄	
	4649 Apr 01 13:16	0°♄		evening rise	4650 Feb 28 10:28	18°♄14'45	
evening max el	4649 Apr 04 06:01	3°♄04'59	18°06'46		4650 Mar 07 09:04	0°♄	
retrograde	4649 Apr 10 20:05	6°♄27'46		asc. node	4650 Mar 14 22:41	11°♄46'19	
evening set	4649 Apr 13 12:27	5°♄54'03		evening max el	4650 Mar 18 18:54	16°♄23'10	18°14'24
inferior conj	4649 Apr 20 01:07	0°♄54'00	3°11'23	retrograde	4650 Mar 25 04:50	19°♄48'05	
minimum elong	4649 Apr 20 03:39	0°♄47'46	3°10'58	evening set	4650 Mar 28 03:21	19°♄02'31	
	4649 Apr 20 22:59	30°♄♂		inferior conj	4650 Apr 03 04:18	13°♄43'00	3°31'47
min. Earth dist.	4649 Apr 23 04:27	27°♄50'26	0.61313 AU	minimum elong	4650 Apr 03 05:09	13°♄40'38	3°31'45
morning rise	4649 Apr 26 16:56	24°♄57'24		min. Earth dist.	4650 Apr 05 18:02	10°♄53'03	0.63386 AU
direct	4649 May 03 11:06	22°♄38'33		morning rise	4650 Apr 09 05:56	7°♄35'44	
desc. node	4649 May 03 17:00	22°♄38'43		direct	4650 Apr 16 02:49	4°♄54'35	
	4649 May 17 01:25	0°♄		desc. node	4650 Apr 20 14:03	5°♄53'50	
morning max el	4649 May 17 16:17	0°♄36'26	27°50'15	morning max el	4650 Apr 29 23:51	12°♄53'14	27°44'25
	4649 Jun 07 23:19	0°♄			4650 May 13 16:15	0°♄	
morning set	4649 Jun 19 15:33	22°♄00'17			4650 May 31 11:07	0°♄	
	4649 Jun 23 10:52	0°♄		morning set	4650 Jun 03 13:11	6°♄02'47	
asc. node	4649 Jun 24 00:55	1°♄15'30		max. Earth dist.	4650 Jun 08 17:45	16°♄44'40	1.32812 AU
max. Earth dist.	4649 Jun 25 13:18	4°♄32'31	1.32171 AU	asc. node	4650 Jun 10 21:58	21°♄23'19	
superior conj	4649 Jun 27 00:07	7°♄42'45	0°30'37	superior conj	4650 Jun 11 07:43	22°♄15'43	0°04'15
minimum elong	4649 Jun 26 22:46	7°♄35'23	0°30'20	minimum elong	4650 Jun 11 07:30	22°♄14'36	0°04'12
evening rise	4649 Jul 03 20:16	22°♄36'56		behind sun begin	4650 Jun 11 02:22	21°♄46'58	
	4649 Jul 07 09:27	0°♄		behind sun end	4650 Jun 11 12:38	22°♄42'17	
	4649 Jul 25 22:41	0°♄			4650 Jun 14 21:30	0°♄	
evening max el	4649 Jul 29 20:07	4°♄09'02	24°52'18	evening rise	4650 Jun 18 08:05	7°♄23'42	
desc. node	4649 Jul 30 16:18	4°♄56'09			4650 Jun 30 04:57	0°♄	
retrograde	4649 Aug 12 18:19	11°♄11'08		evening max el	4650 Jul 11 08:56	14°♄34'37	23°16'20
evening set	4649 Aug 18 02:56	10°♄06'07		desc. node	4650 Jul 17 13:18	19°♄18'02	
min. Earth dist.	4649 Aug 23 07:36	7°♄19'55	0.57184 AU	retrograde	4650 Jul 24 20:43	21°♄19'26	
inferior conj	4649 Aug 26 04:44	5°♄26'15	-5°14'48	evening set	4650 Jul 28 17:18	20°♄46'55	
minimum elong	4649 Aug 26 04:49	5°♄26'05	5°14'47	min. Earth dist.	4650 Aug 04 18:18	17°♄33'58	0.55650 AU
morning rise	4649 Sep 03 09:06	1°♄17'56		inferior conj	4650 Aug 06 14:34	16°♄29'09	-4°51'35
direct	4649 Sep 05 23:14	0°♄58'52		minimum elong	4650 Aug 06 08:24	16°♄38'12	4°50'39
morning max el	4649 Sep 15 02:44	5°♄16'57	19°15'12	morning rise	4650 Aug 15 01:51	12°♄36'36	
asc. node	4649 Sep 20 00:09	11°♄02'23		direct	4650 Aug 17 23:35	12°♄16'13	
	4649 Sep 30 20:27	0°♄		morning max el	4650 Aug 28 15:24	17°♄13'26	20°26'18
morning set	4649 Oct 02 03:05	2°♄31'50		asc. node	4650 Sep 06 21:13	29°♄15'16	
					4650 Sep 07 08:00	0°♄	
superior conj	4649 Oct 10 06:54	18°♄43'05	1°36'47	morning set	4650 Sep 16 09:07	17°♄10'24	
minimum elong	4649 Oct 10 09:06	18°♄53'43	1°36'39		4650 Sep 22 14:28	0°♄	
	4649 Oct 16 06:14	0°♄					
max. Earth dist.	4649 Oct 16 19:30	1°♄00'34	1.38302 AU	superior conj	4650 Sep 23 22:50	2°♄45'00	1°43'23
evening rise	4649 Oct 20 14:09	7°♄44'46		minimum elong	4650 Sep 23 23:25	2°♄47'54	1°43'22

max. Earth dist.	4650 Sep 29 02:34	12°♊57'56	1.36318 AU	minimum elong	4651 Sep 07 22:47	17°♏08'20	1°42'29
evening rise	4650 Oct 03 00:34	20°♊20'55		max. Earth dist.	4651 Sep 11 16:26	24°♏52'29	1.34632 AU
	4650 Oct 08 10:47	0°♏			4651 Sep 14 05:45	0°♊	
desc. node	4650 Oct 13 12:39	8°♏26'56		evening rise	4651 Sep 16 03:26	3°♊42'58	
	4650 Oct 28 06:58	0°♊		desc. node	4651 Sep 30 09:39	28°♊37'21	
evening max el	4650 Nov 07 16:50	12°♊00'27	26°02'44		4651 Oct 01 06:52	0°♏	
retrograde	4650 Nov 20 06:12	19°♊07'55		evening max el	4651 Oct 21 05:26	25°♏37'24	26°54'58
evening set	4650 Nov 26 10:59	16°♊34'52			4651 Oct 26 12:29	0°♊	
min. Earth dist.	4650 Nov 30 17:01	12°♊02'45	0.66764 AU	retrograde	4651 Nov 03 09:26	2°♊54'17	
inferior conj	4650 Dec 02 03:53	10°♊14'14	-0°34'39	evening set	4651 Nov 10 02:27	0°♊14'05	
minimum elong	4650 Dec 02 04:48	10°♊11'21	0°34'15		4651 Nov 10 09:20	30°♏♏	
asc. node	4650 Dec 03 20:25	8°♊10'55		min. Earth dist.	4651 Nov 14 01:50	26°♏17'38	0.65631 AU
morning rise	4650 Dec 07 23:06	4°♊24'02		inferior conj	4651 Nov 16 00:30	24°♏03'02	-1°35'27
direct	4650 Dec 11 02:49	3°♊27'10		minimum elong	4651 Nov 16 03:12	23°♏55'15	1°34'19
morning max el	4650 Dec 17 22:07	7°♊12'13	18°51'55	asc. node	4651 Nov 20 17:29	19°♏20'02	
	4651 Jan 03 04:49	0°♊		morning rise	4651 Nov 22 04:51	18°♏24'49	
morning set	4651 Jan 08 18:58	8°♊44'43		direct	4651 Nov 24 23:40	17°♏42'25	
desc. node	4651 Jan 09 11:57	9°♊51'16		morning max el	4651 Dec 01 12:01	21°♏12'55	18°14'15
	4651 Jan 22 08:37	0°♊			4651 Dec 08 08:15	0°♊	
max. Earth dist.	4651 Jan 23 20:18	2°♊20'03	1.45152 AU	morning set	4651 Dec 20 09:06	19°♊10'28	
				desc. node	4651 Dec 27 08:58	0°♊28'38	
superior conj	4651 Jan 25 06:55	4°♊36'09	-1°35'39		4651 Dec 27 01:50	0°♊	
minimum elong	4651 Jan 24 21:36	3°♊59'31	1°34'46	superior conj	4652 Jan 04 10:06	13°♊15'26	-0°53'35
evening rise	4651 Feb 09 12:31	28°♊53'39		minimum elong	4652 Jan 04 03:28	12°♊49'17	0°52'44
	4651 Feb 10 04:55	0°♊		max. Earth dist.	4652 Jan 06 15:34	16°♊45'36	1.45256 AU
asc. node	4651 Mar 01 19:43	29°♊22'12			4652 Jan 15 02:46	0°♊	
	4651 Mar 02 10:23	0°♊		evening rise	4652 Jan 20 15:58	8°♊39'32	
evening max el	4651 Mar 02 06:30	29°♊50'14	18°40'18	greatest brilliancy	4652 Feb 01 10:11	26°♊52'58	-0.7m
retrograde	4651 Mar 08 21:20	3°♊30'05			4652 Feb 03 11:51	0°♊	
evening set	4651 Mar 12 02:06	2°♊31'55		evening max el	4652 Feb 13 14:35	13°♊21'26	19°23'25
	4651 Mar 15 02:30	30°♊		asc. node	4652 Feb 16 16:45	16°♊00'50	
inferior conj	4651 Mar 17 18:56	26°♊54'31	3°33'12	retrograde	4652 Feb 20 18:03	17°♊27'05	
minimum elong	4651 Mar 17 18:15	26°♊56'34	3°33'10	evening set	4652 Feb 24 05:55	16°♊15'35	
min. Earth dist.	4651 Mar 19 17:03	24°♊34'39	0.65139 AU	inferior conj	4652 Feb 29 17:37	10°♊22'32	3°20'11
morning rise	4651 Mar 23 09:55	20°♊42'01		minimum elong	4652 Feb 29 15:51	10°♊28'15	3°19'56
direct	4651 Mar 30 01:50	17°♊52'02		min. Earth dist.	4652 Mar 02 00:37	8°♊41'38	0.66483 AU
desc. node	4651 Apr 07 11:07	21°♊19'02		morning rise	4652 Mar 06 01:31	4°♊08'05	
morning max el	4651 Apr 12 09:50	25°♊41'39	27°04'41	direct	4652 Mar 12 07:12	1°♊21'59	
	4651 Apr 16 08:46	0°♊		desc. node	4652 Mar 24 08:11	8°♊20'40	
	4651 May 07 04:48	0°♊		morning max el	4652 Mar 24 19:41	8°♊49'26	25°58'38
morning set	4651 May 18 01:17	19°♊33'51			4652 Apr 10 10:37	0°♊	
max. Earth dist.	4651 May 22 13:07	28°♊27'52	1.33909 AU		4652 Apr 28 16:52	0°♊	
	4651 May 23 07:12	0°♊		morning set	4652 Apr 29 23:58	2°♊22'36	
superior conj	4651 May 26 10:14	6°♊28'59	-0°24'22	max. Earth dist.	4652 May 03 21:06	9°♊42'02	1.35463 AU
minimum elong	4651 May 26 11:31	6°♊35'42	0°24'06				
asc. node	4651 May 28 19:01	11°♊28'43		superior conj	4652 May 09 05:12	20°♊15'48	-0°53'53
evening rise	4651 Jun 02 18:42	22°♊02'22		minimum elong	4652 May 09 08:09	20°♊30'42	0°53'21
	4651 Jun 06 16:04	0°♊			4652 May 13 23:04	0°♊	
evening max el	4651 Jun 23 02:01	25°♊02'44	21°41'17	asc. node	4652 May 14 16:03	1°♊27'51	
	4651 Jun 30 01:01	0°♊		evening rise	4652 May 17 02:03	6°♊26'45	
desc. node	4651 Jul 04 10:19	1°♊08'52			4652 May 30 04:27	0°♊	
retrograde	4651 Jul 05 12:26	1°♊11'39		evening max el	4652 Jun 04 06:05	6°♊02'47	20°19'25
evening set	4651 Jul 08 01:53	0°♊56'49		retrograde	4652 Jun 15 01:57	11°♊20'25	
	4651 Jul 11 07:03	30°♊		evening set	4652 Jun 17 01:06	11°♊10'41	
inferior conj	4651 Jul 17 10:15	26°♊55'18	-3°37'05	desc. node	4652 Jun 20 07:21	10°♊15'26	
minimum elong	4651 Jul 17 01:36	27°♊07'23	3°34'36	inferior conj	4652 Jun 26 04:49	7°♊12'35	-1°44'55
min. Earth dist.	4651 Jul 17 04:32	27°♊03'18	0.54861 AU	minimum elong	4652 Jun 25 23:54	7°♊19'49	1°43'07
morning rise	4651 Jul 26 02:36	23°♊03'12		min. Earth dist.	4652 Jun 27 16:36	6°♊20'08	0.55019 AU
direct	4651 Jul 29 10:18	22°♊39'08		morning rise	4652 Jul 04 21:30	2°♊59'54	
morning max el	4651 Aug 10 16:19	28°♊24'30	21°56'52	direct	4652 Jul 08 20:41	2°♊25'52	
	4651 Aug 12 07:05	0°♊		morning max el	4652 Jul 22 08:49	9°♊00'20	23°39'13
asc. node	4651 Aug 24 18:17	18°♊06'10			4652 Aug 06 16:07	0°♊	
	4651 Aug 30 19:53	0°♊		asc. node	4652 Aug 10 15:20	7°♊25'37	
morning set	4651 Aug 31 18:48	1°♊59'04		morning set	4652 Aug 15 06:18	16°♊52'23	
					4652 Aug 21 08:36	0°♊	
superior conj	4651 Sep 07 23:36	17°♊12'34	1°42'31				

superior conj	4652 Aug 22 06:14	1°♍56'52	1°35'21	asc. node	4653 Jul 28 12:21	27°♊05'13	
minimum elong	4652 Aug 22 04:28	1°♍47'21	1°35'13		4653 Jul 29 22:03	0°♊	
max. Earth dist.	4652 Aug 24 15:01	7°♍00'57	1.33345 AU	morning set	4653 Jul 30 17:55	1°♊44'42	
evening rise	4652 Aug 29 18:41	17°♍40'14					
	4652 Sep 05 05:21	0°♊		superior conj	4653 Aug 06 16:22	16°♊49'38	1°22'50
desc. node	4652 Sep 16 06:39	18°♊23'05		minimum elong	4653 Aug 06 14:06	16°♊37'16	1°22'33
	4652 Sep 24 15:53	0°♌		max. Earth dist.	4653 Aug 07 21:08	19°♊27'04	1.32482 AU
evening max el	4652 Oct 02 17:15	8°♌57'50	27°23'33		4653 Aug 12 19:15	0°♍	
retrograde	4652 Oct 16 06:50	16°♌16'07		evening rise	4653 Aug 13 18:49	2°♍02'19	
evening set	4652 Oct 23 08:29	13°♌37'04			4653 Aug 29 02:23	0°♊	
min. Earth dist.	4652 Oct 27 02:14	10°♌14'34	0.64151 AU	desc. node	4653 Sep 03 03:40	7°♊33'51	
inferior conj	4652 Oct 29 12:59	7°♌40'28	-2°38'04	evening max el	4653 Sep 15 02:25	21°♊49'26	27°22'26
minimum elong	4652 Oct 29 17:31	7°♌28'34	2°36'22	retrograde	4653 Sep 28 21:30	29°♊04'08	
morning rise	4652 Nov 05 03:54	2°♌17'09		evening set	4653 Oct 06 01:42	26°♊37'25	
asc. node	4652 Nov 06 14:33	1°♌51'09		min. Earth dist.	4653 Oct 09 16:38	23°♊43'11	0.62357 AU
direct	4652 Nov 07 16:13	1°♌45'20		inferior conj	4653 Oct 12 14:28	20°♊59'45	-3°39'02
morning max el	4652 Nov 14 04:34	5°♌10'36	17°53'36	minimum elong	4653 Oct 12 20:23	20°♊45'52	3°37'14
	4652 Nov 30 13:39	0°♌		morning rise	4653 Oct 19 16:47	15°♊54'34	
morning set	4652 Dec 01 03:22	0°♌58'28		direct	4653 Oct 22 01:25	15°♊29'45	
desc. node	4652 Dec 13 05:58	21°♌12'21		asc. node	4653 Oct 24 11:36	15°♊56'46	
				morning max el	4653 Oct 28 20:45	18°♊57'54	17°50'53
superior conj	4652 Dec 14 03:54	22°♌41'26	-0°06'22		4653 Nov 05 21:42	0°♌	
minimum elong	4652 Dec 14 03:09	22°♌38'27	0°06'16	morning set	4653 Nov 13 19:48	13°♌50'26	
behind sun begin	4652 Dec 13 17:48	22°♌00'29			4653 Nov 22 23:49	0°♌	
behind sun end	4652 Dec 14 12:31	23°♌16'22					
	4652 Dec 18 17:09	0°♊		superior conj	4653 Nov 24 23:21	3°♌23'11	0°35'44
max. Earth dist.	4652 Dec 19 09:57	1°♊06'44	1.44629 AU	minimum elong	4653 Nov 25 02:31	3°♌36'35	0°35'18
evening rise	4652 Dec 30 04:02	17°♊52'58		desc. node	4653 Nov 30 02:58	11°♌59'22	
	4653 Jan 07 02:56	0°♋		max. Earth dist.	4653 Dec 02 01:19	15°♌08'35	1.43353 AU
evening max el	4653 Jan 26 17:39	26°♋54'03	20°21'43	evening rise	4653 Dec 09 15:39	27°♌12'36	
	4653 Jan 30 07:52	0°♋			4653 Dec 11 10:52	0°♊	
asc. node	4653 Feb 02 13:47	1°♋27'06			4653 Dec 31 23:43	0°♋	
retrograde	4653 Feb 03 16:13	1°♋33'39		evening max el	4654 Jan 09 15:19	10°♋28'23	21°32'01
evening set	4653 Feb 07 12:35	0°♋07'53		retrograde	4654 Jan 18 13:47	15°♋46'38	
	4653 Feb 07 16:43	30°♋		asc. node	4654 Jan 20 10:49	15°♋27'39	
inferior conj	4653 Feb 12 21:32	24°♋01'42	2°55'50	evening set	4654 Jan 22 20:18	14°♋05'35	
minimum elong	4653 Feb 12 19:12	24°♋09'39	2°55'17	inferior conj	4654 Jan 28 04:28	7°♋49'12	2°22'14
min. Earth dist.	4653 Feb 13 14:47	23°♋03'05	0.67410 AU	minimum elong	4654 Jan 28 02:03	7°♋57'36	2°21'29
morning rise	4653 Feb 18 01:36	17°♋47'33		min. Earth dist.	4654 Jan 28 09:17	7°♋32'30	0.67934 AU
direct	4653 Feb 23 18:06	15°♋15'14		morning rise	4654 Feb 02 07:36	1°♋37'04	
morning max el	4653 Mar 07 04:19	22°♋05'21	24°35'49		4654 Feb 04 17:48	30°♋	
desc. node	4653 Mar 11 05:12	26°♋30'49		direct	4654 Feb 07 09:33	29°♋24'55	
	4653 Mar 14 02:07	0°♋			4654 Feb 10 05:39	0°♋	
	4653 Apr 03 17:40	0°♍		morning max el	4654 Feb 17 13:25	5°♋26'43	23°06'39
morning set	4653 Apr 12 03:55	14°♍13'17		desc. node	4654 Feb 26 02:13	15°♋30'13	
max. Earth dist.	4653 Apr 15 19:04	20°♍43'17	1.37419 AU		4654 Mar 08 11:14	0°♋	
	4653 Apr 20 18:22	0°♌		morning set	4654 Mar 24 07:04	24°♋50'06	
					4654 Mar 27 08:24	0°♍	
superior conj	4653 Apr 22 13:22	3°♌26'52	-1°22'29	max. Earth dist.	4654 Mar 28 14:05	2°♍07'46	1.39601 AU
minimum elong	4653 Apr 22 17:45	3°♌48'09	1°21'51				
evening rise	4653 May 01 03:39	20°♌28'51		superior conj	4654 Apr 05 06:44	15°♍52'29	-1°47'17
asc. node	4653 May 01 13:04	21°♌15'41		minimum elong	4654 Apr 05 11:36	16°♍14'57	1°46'48
	4653 May 06 01:00	0°♎			4654 Apr 12 18:19	0°♌	
evening max el	4653 May 17 22:32	17°♎44'33	19°16'22	evening rise	4654 Apr 14 20:37	4°♌01'25	
retrograde	4653 May 27 01:15	22°♎11'11		asc. node	4654 Apr 18 10:05	10°♌47'38	
evening set	4653 May 29 01:01	21°♎59'24			4654 Apr 30 23:11	0°♎	
inferior conj	4653 Jun 06 12:07	17°♎50'33	0°11'58	evening max el	4654 May 01 01:03	0°♎04'35	18°33'36
minimum elong	4653 Jun 06 12:37	17°♎49'43	0°11'47	retrograde	4654 May 08 18:53	3°♎53'34	
transit middle	4653 Jun 06 12:37	17°♎49'43	0°11'47	evening set	4654 May 11 00:55	3°♎35'17	
transit begin	4653 Jun 06 10:01	17°♎54'02			4654 May 17 12:32	30°♎	
transit end	4653 Jun 06 15:14	17°♎45'23		inferior conj	4654 May 18 15:59	29°♎07'22	1°46'07
desc. node	4653 Jun 07 04:23	17°♎23'26		minimum elong	4654 May 18 19:19	29°♎00'53	1°45'04
min. Earth dist.	4653 Jun 09 07:10	15°♎59'45	0.56111 AU	min. Earth dist.	4654 May 22 01:17	26°♎30'43	0.57903 AU
morning rise	4653 Jun 14 21:12	13°♎03'51		desc. node	4654 May 25 01:25	24°♎30'38	
direct	4653 Jun 19 18:29	12°♎08'54		morning rise	4654 May 26 10:30	23°♎46'32	
morning max el	4653 Jul 03 22:33	19°♎22'03	25°20'11	direct	4654 Jun 01 06:21	22°♎20'32	
	4653 Jul 12 22:14	0°♏		morning max el	4654 Jun 15 15:23	29°♎58'18	26°43'47

	4654 Jun 15 16:05	0°♂	direct	4655 May 14 06:37	3°♂18'24	
	4654 Jul 06 19:05	0°♂	morning max el	4655 May 28 14:40	11°♂11'05	27°36'48
morning set	4654 Jul 15 04:04	16°♂31'06		4655 Jun 12 07:02	0°♂	
asc. node	4654 Jul 15 09:22	16°♂59'04		4655 Jun 28 22:14	0°♂	
	4654 Jul 21 09:08	0°♂	morning set	4655 Jun 29 11:04	1°♂06'24	
			asc. node	4655 Jul 02 06:24	7°♂02'15	
superior conj	4654 Jul 22 04:03	1°♂44'32 1°05'41	max. Earth dist.	4655 Jul 05 19:16	14°♂44'05	1.32001 AU
minimum elong	4654 Jul 22 01:47	1°♂32'00 1°05'17				
max. Earth dist.	4654 Jul 22 07:46	2°♂05'03 1.32038 AU	superior conj	4655 Jul 06 15:35	16°♂35'53 0°44'28	
evening rise	4654 Jul 29 01:00	16°♂40'32	minimum elong	4655 Jul 06 13:46	16°♂25'52 0°44'06	
	4654 Aug 04 16:43	0°♂		4655 Jul 12 18:33	0°♂	
desc. node	4654 Aug 21 00:41	25°♂54'59	evening rise	4655 Jul 13 10:58	1°♂27'40	
	4654 Aug 24 10:11	0°♂		4655 Jul 28 21:06	0°♂	
evening max el	4654 Aug 28 06:13	3°♂59'09 26°47'56	desc. node	4655 Aug 07 21:43	13°♂06'31	
retrograde	4654 Sep 11 04:10	11°♂09'07	evening max el	4655 Aug 10 02:27	15°♂19'54 25°41'37	
evening set	4654 Sep 18 01:42	9°♂06'59	retrograde	4655 Aug 24 01:25	22°♂25'59	
min. Earth dist.	4654 Sep 21 20:15	6°♂29'49 0.60344 AU	evening set	4655 Aug 30 03:41	20°♂58'36	
inferior conj	4654 Sep 25 01:32	3°♂51'28 -4°32'24	min. Earth dist.	4655 Sep 03 14:28	18°♂21'26 0.58287 AU	
minimum elong	4654 Sep 25 07:25	3°♂39'20 4°31'11	inferior conj	4655 Sep 06 18:42	16°♂05'57 -5°08'01	
	4654 Sep 30 11:58	30°♂	minimum elong	4655 Sep 06 21:52	16°♂00'18 5°07'45	
morning rise	4654 Oct 02 15:07	29°♂07'40	morning rise	4655 Sep 14 18:18	11°♂45'29	
direct	4654 Oct 04 23:20	28°♂46'47	direct	4655 Sep 17 05:29	11°♂26'15	
	4654 Oct 09 05:55	0°♂	morning max el	4655 Sep 25 14:58	15°♂26'26 18°44'13	
asc. node	4654 Oct 11 08:37	1°♂30'02	asc. node	4655 Sep 28 05:39	18°♂17'07	
morning max el	4654 Oct 12 09:19	2°♂26'06 18°07'17		4655 Oct 05 20:20	0°♂	
morning set	4654 Oct 28 04:06	27°♂27'27	morning set	4655 Oct 11 23:29	11°♂35'48	
	4654 Oct 29 12:40	0°♂				
			superior conj	4655 Oct 20 14:19	28°♂16'40 1°29'02	
superior conj	4654 Nov 06 20:27	15°♂19'28 1°07'46	minimum elong	4655 Oct 20 17:23	28°♂31'11 1°28'45	
minimum elong	4654 Nov 07 00:28	15°♂37'29 1°07'18		4655 Oct 21 12:17	0°♂	
max. Earth dist.	4654 Nov 14 12:07	28°♂36'47 1.41576 AU	max. Earth dist.	4655 Oct 27 18:16	11°♂22'01 1.39516 AU	
	4654 Nov 15 07:58	0°♂	evening rise	4655 Oct 31 18:14	18°♂16'43	
desc. node	4654 Nov 16 23:59	2°♂45'57	desc. node	4655 Nov 03 21:01	23°♂28'39	
evening rise	4654 Nov 19 17:48	7°♂14'13		4655 Nov 07 22:09	0°♂	
	4654 Dec 04 15:13	0°♂		4655 Nov 29 00:38	0°♂	
evening max el	4654 Dec 23 08:09	24°♂04'48 22°49'52	evening max el	4655 Dec 05 21:47	7°♂44'32 24°09'37	
	4655 Jan 01 16:19	0°♂	retrograde	4655 Dec 17 01:10	14°♂17'02	
retrograde	4655 Jan 02 09:08	0°♂02'17	evening set	4655 Dec 22 08:33	12°♂04'18	
	4655 Jan 03 01:39	30°♂	asc. node	4655 Dec 25 04:54	9°♂04'13	
evening set	4655 Jan 07 03:28	28°♂05'16	min. Earth dist.	4655 Dec 27 02:06	6°♂37'28 0.67843 AU	
asc. node	4655 Jan 07 07:52	27°♂55'57	inferior conj	4655 Dec 27 19:39	5°♂38'15 0°52'37	
min. Earth dist.	4655 Jan 12 05:48	22°♂04'59 0.68072 AU	minimum elong	4655 Dec 27 18:26	5°♂42'22 0°52'08	
inferior conj	4655 Jan 12 12:26	21°♂42'05 1°40'48		4656 Jan 01 15:50	30°♂	
minimum elong	4655 Jan 12 10:23	21°♂49'09 1°40'04	morning rise	4656 Jan 02 04:23	29°♂35'08	
morning rise	4655 Jan 17 17:12	15°♂33'35	direct	4656 Jan 06 02:05	28°♂08'24	
direct	4655 Jan 22 04:34	13°♂44'19		4656 Jan 10 22:04	0°♂	
morning max el	4655 Jan 31 02:40	18°♂56'31 21°40'22	morning max el	4656 Jan 13 23:09	2°♂38'18 20°23'45	
	4655 Feb 09 06:45	0°♂	desc. node	4656 Jan 30 20:17	25°♂05'08	
desc. node	4655 Feb 12 23:14	5°♂04'49		4656 Feb 03 03:10	0°♂	
	4655 Mar 01 15:29	0°♂	morning set	4656 Feb 11 05:23	12°♂21'36	
morning set	4655 Mar 04 05:29	4°♂05'02	max. Earth dist.	4656 Feb 20 21:00	27°♂34'31 1.43517 AU	
max. Earth dist.	4655 Mar 10 13:50	14°♂23'56 1.41727 AU		4656 Feb 22 09:03	0°♂	
			superior conj	4656 Feb 27 01:40	7°♂41'20 -2°07'46	
superior conj	4655 Mar 18 04:23	27°♂20'35 -2°04'09	minimum elong	4656 Feb 27 00:04	7°♂34'38 2°07'45	
minimum elong	4655 Mar 18 07:36	27°♂34'34 2°04'01	evening rise	4656 Mar 10 13:27	29°♂02'00	
	4655 Mar 19 16:43	0°♂		4656 Mar 11 02:43	0°♂	
evening rise	4655 Mar 29 01:18	16°♂55'28	asc. node	4656 Mar 22 04:10	18°♂38'30	
asc. node	4655 Apr 05 07:08	29°♂57'43	evening max el	4656 Mar 27 22:28	26°♂02'59 18°07'43	
	4655 Apr 05 07:39	0°♂	retrograde	4656 Apr 03 09:45	29°♂25'25	
evening max el	4655 Apr 14 10:09	12°♂53'47 18°10'56	evening set	4656 Apr 06 04:39	28°♂46'51	
retrograde	4655 Apr 21 07:06	16°♂21'53	inferior conj	4656 Apr 12 11:50	23°♂38'11 3°22'44	
evening set	4655 Apr 23 19:51	15°♂54'17	minimum elong	4656 Apr 12 13:40	23°♂33'24 3°22'31	
inferior conj	4655 Apr 30 17:00	11°♂05'32 2°48'41	min. Earth dist.	4656 Apr 15 09:48	20°♂37'51 0.62213 AU	
minimum elong	4655 Apr 30 20:17	10°♂58'04 2°47'58	morning rise	4656 Apr 18 21:10	17°♂35'52	
min. Earth dist.	4655 May 04 01:22	8°♂04'46 0.60043 AU	direct	4656 Apr 25 17:20	15°♂06'09	
morning rise	4655 May 07 18:17	5°♂18'54	desc. node	4656 Apr 27 19:29	15°♂19'03	
desc. node	4655 May 11 22:26	3°♂33'52				

morning max el	4656 May 09 20:00	23°  06'01	27°52'29	min. Earth dist.	4657 Mar 29 03:38	3°  58'44	0.64172 AU
	4656 May 15 23:12	0° 		morning rise	4657 Apr 01 17:00	0°  27'36	
	4656 Jun 04 12:42	0° 			4657 Apr 02 07:01	30° 	
morning set	4656 Jun 12 12:48	15°  22'47		direct	4657 Apr 08 12:33	27°  40'41	
max. Earth dist.	4656 Jun 18 03:22	27°  08'58	1.32382 AU	desc. node	4657 Apr 14 16:32	29°  33'33	
asc. node	4656 Jun 18 03:26	27°  09'17			4657 Apr 15 10:12	0° 	
	4656 Jun 19 10:59	0° 		morning max el	4657 Apr 22 04:58	5°  37'54	27°31'18
					4657 May 10 17:41	0° 	
superior conj	4656 Jun 20 01:06	1°  06'47	0°19'47	morning set	4657 May 27 06:46	29°  12'59	
minimum elong	4656 Jun 20 00:11	1°  11'48	0°19'34		4657 May 27 16:18	0° 	
evening rise	4656 Jun 26 22:36	16°  05'43		max. Earth dist.	4657 Jun 01 04:09	9°  08'16	1.33213 AU
	4656 Jul 03 17:37	0° 					
evening max el	4656 Jul 21 16:10	25°  05'48	24°12'23	superior conj	4657 Jun 04 06:47	15°  41'51	-0°07'41
desc. node	4656 Jul 24 18:45	28°  03'49		minimum elong	4657 Jun 04 07:11	15°  43'56	0°07'37
	4656 Jul 26 15:54	0° 		behind sun begin	4657 Jun 04 02:23	15°  18'22	
retrograde	4656 Aug 04 11:34	2°  05'55'19		behind sun end	4657 Jun 04 11:58	16°  09'31	
evening set	4656 Aug 09 05:25	2°  05'19		asc. node	4657 Jun 05 00:29	17°  16'24	
	4656 Aug 13 16:36	30° 			4657 Jun 10 22:56	0° 	
min. Earth dist.	4656 Aug 15 02:52	29°  09'24	0.56458 AU	evening rise	4657 Jun 11 10:07	0°  05'59'11	
inferior conj	4656 Aug 17 15:39	27°  03'42	-5°10'59		4657 Jun 27 18:04	0° 	
minimum elong	4656 Aug 17 13:03	27°  03'47	5°10'49	evening max el	4657 Jul 03 05:44	6°  19'51	22°35'02
morning rise	4656 Aug 25 23:15	23°  03'45		desc. node	4657 Jul 11 15:45	12°  00'45	
direct	4656 Aug 28 16:12	23°  01'52'8		retrograde	4657 Jul 16 09:11	12°  05'2'08	
morning max el	4656 Sep 07 10:33	27°  04'8'31	19°42'50	evening set	4657 Jul 19 14:38	12°  02'9'16	
	4656 Sep 09 13:27	0° 		min. Earth dist.	4657 Jul 27 13:21	9°  00'40	0.55203 AU
asc. node	4656 Sep 14 02:42	6°  02'13		inferior conj	4657 Jul 28 18:18	8°  19'26	-4°26'08
morning set	4656 Sep 25 02:22	26°  04'54		minimum elong	4657 Jul 28 10:18	8°  30'51	4°24'27
	4656 Sep 27 00:49	0° 		morning rise	4657 Aug 06 07:59	4°  02'9'06	
				direct	4657 Aug 09 09:18	4°  07'42	
superior conj	4656 Oct 02 23:29	11°  05'8'29	1°40'35	morning max el	4657 Aug 20 18:06	9°  02'5'18	21°02'42
minimum elong	4656 Oct 03 00:59	12°  05'52	1°40'30	asc. node	4657 Aug 31 23:45	24°  02'32'09	
max. Earth dist.	4656 Oct 08 22:52	23°  05'28'32	1.37431 AU		4657 Sep 04 00:06	0° 	
evening rise	4656 Oct 12 17:09	0° 		morning set	4657 Sep 09 10:10	10°  07'47'51	
	4656 Oct 12 12:32	0° 					
desc. node	4656 Oct 20 18:03	14°  02'51		superior conj	4657 Sep 16 19:33	26°  07'12'09	1°43'51
	4656 Oct 31 04:00	0° 		minimum elong	4657 Sep 16 19:30	26°  07'11'52	1°43'51
evening max el	4656 Nov 17 10:14	21°  07'27'09	25°24'39		4657 Sep 18 16:05	0° 	
retrograde	4656 Nov 29 12:56	28°  07'25'46		max. Earth dist.	4657 Sep 21 08:00	5°  02'20'10	1.35557 AU
evening set	4656 Dec 05 09:54	25°  07'59'08		evening rise	4657 Sep 25 11:05	13°  02'17'36	
min. Earth dist.	4656 Dec 09 19:54	21°  07'06'40	0.67254 AU		4657 Oct 04 22:12	0° 	
inferior conj	4656 Dec 11 00:21	19°  07'34'53	-0°01'22	desc. node	4657 Oct 07 15:04	4°  07'23'39	
minimum elong	4656 Dec 11 00:23	19°  07'34'46	0°01'20		4657 Oct 26 02:22	0° 	
transit middle	4656 Dec 11 00:23	19°  07'34'46	0°01'20	evening max el	4657 Oct 30 22:55	5°  07'09'03	26°27'27
transit begin	4656 Dec 10 21:35	19°  07'43'47		retrograde	4657 Nov 12 19:32	12°  07'22'04	
transit end	4656 Dec 11 03:10	19°  07'25'47		evening set	4657 Nov 19 05:36	9°  07'45'24	
asc. node	4656 Dec 11 01:56	19°  07'29'44		min. Earth dist.	4657 Nov 23 08:47	5°  07'28'12	0.66322 AU
morning rise	4656 Dec 16 15:10	13°  07'39'10		inferior conj	4657 Nov 25 00:32	3°  07'27'58	-1°00'04
direct	4656 Dec 20 00:47	12°  07'32'31		minimum elong	4657 Nov 25 02:11	3°  07'22'58	0°59'21
morning max el	4656 Dec 27 03:33	16°  07'31'01	19°20'53	asc. node	4657 Nov 27 23:00	0° 	
	4657 Jan 06 13:23	0° 			4657 Nov 28 01:59	30° 	
greatest brilliancy	4657 Jan 09 11:20	4°  07'19'58	-0.7m	morning rise	4657 Nov 30 23:25	27°  07'42'16	
desc. node	4657 Jan 16 17:20	15°  07'24'05		direct	4657 Dec 03 23:00	26°  07'45'2'04	
morning set	4657 Jan 20 04:29	20°  07'34'5'16			4657 Dec 10 02:11	0° 	
	4657 Jan 26 03:19	0° 		morning max el	4657 Dec 10 14:34	0°  07'30'03	18°33'44
max. Earth dist.	4657 Feb 02 10:39	11°  07'27'17	1.44748 AU		4657 Dec 30 20:40	0° 	
				morning set	4657 Dec 31 01:35	0° 	
superior conj	4657 Feb 05 21:53	16°  07'27'14	-1°53'05	desc. node	4658 Jan 03 14:20	5°  07'55'45	
minimum elong	4657 Feb 05 14:15	16°  07'26'49	1°52'33				
	4657 Feb 13 23:59	0° 		superior conj	4658 Jan 16 01:53	25°  07'34'43	-1°19'13
evening rise	4657 Feb 20 04:50	10°  07'41'3'51		minimum elong	4658 Jan 15 16:54	24°  07'35'9'31	1°18'12
	4657 Mar 04 07:06	0° 		max. Earth dist.	4658 Jan 16 04:44	25°  07'34'5'53	1.45288 AU
asc. node	4657 Mar 09 01:13	6°  07'41'3'1			4658 Jan 18 21:32	0° 	
evening max el	4657 Mar 11 11:06	9°  07'25'34	18°23'16	evening rise	4658 Jan 31 20:50	20°  07'28'8'11	
retrograde	4657 Mar 17 22:16	12°  07'55'38			4658 Feb 06 20:36	0° 	
evening set	4657 Mar 20 23:16	12°  07'04'59		greatest brilliancy	4658 Feb 09 17:31	4°  07'41'32'25	-0.8m
inferior conj	4657 Mar 26 20:22	6°  07'37'49	3°34'23	evening max el	4658 Feb 22 21:29	22°  07'45'54'56	18°56'41
minimum elong	4657 Mar 26 20:32	6°  07'37'21	3°34'24	asc. node	4658 Feb 23 22:17	23°  07'45'41	

retrograde	4658 Mar 01 16:47	26° K 44'17		evening set	4659 Feb 17 05:44	9° K 28'18	
evening set	4658 Mar 05 00:27	25° K 40'37		inferior conj	4659 Feb 22 16:00	3° K 29'23	3°11'03
inferior conj	4658 Mar 10 14:47	19° K 56'34	3°29'11	minimum elong	4659 Feb 22 13:56	3° K 36'14	3°10'40
minimum elong	4658 Mar 10 13:36	20° K 00'19	3°29'05	min. Earth dist.	4659 Feb 23 16:55	2° K 06'33	0.66941 AU
min. Earth dist.	4658 Mar 12 06:26	17° K 52'22	0.65768 AU		4659 Feb 25 08:32	30° R \approx	
morning rise	4658 Mar 16 02:21	13° K 43'02		morning rise	4659 Feb 27 21:55	27° \approx 15'06	
direct	4658 Mar 22 14:35	10° K 52'59		direct	4659 Mar 05 22:20	24° \approx 33'57	
desc. node	4658 Apr 01 13:34	15° K 43'04			4659 Mar 16 04:06	0° K	
morning max el	4658 Apr 04 14:52	18° K 34'51	26°39'08	morning max el	4659 Mar 18 00:03	1° K 46'15	25°24'43
	4658 Apr 14 06:22	0° Y		desc. node	4659 Mar 19 10:36	3° K 16'20	
	4658 May 03 17:31	0° B			4659 Apr 08 08:17	0° Y	
morning set	4658 May 10 13:38	12° B 26'44		morning set	4659 Apr 23 04:58	24° Y 51'53	
max. Earth dist.	4658 May 14 18:24	20° B 36'00	1.34515 AU		4659 Apr 26 00:03	0° B	
				max. Earth dist.	4659 Apr 26 21:43	1° B 41'28	1.36262 AU
superior conj	4658 May 19 06:24	29° B 44'18	-0°36'53				
minimum elong	4658 May 19 08:23	29° B 54'33	0°36'29	superior conj	4659 May 02 21:11	13° B 16'40	-1°06'18
	4658 May 19 09:26	0° II		minimum elong	4659 May 03 00:48	13° B 34'40	1°05'41
asc. node	4658 May 22 21:32	7° II 19'17		asc. node	4659 May 09 18:34	27° B 13'58	
evening rise	4658 May 26 19:33	15° II 31'47		evening rise	4659 May 11 00:45	29° B 47'17	
	4658 Jun 03 03:57	0° B			4659 May 11 03:15	0° II	
evening max el	4658 Jun 15 03:04	16° B 58'49	21°04'26	evening max el	4659 May 28 12:27	28° II 15'35	19°50'03
retrograde	4658 Jun 26 21:58	22° B 46'14			4659 May 30 11:42	0° B	
desc. node	4658 Jun 28 12:45	22° B 40'04		retrograde	4659 Jun 07 14:03	3° B 10'27	
evening set	4658 Jun 29 03:09	22° B 34'45		evening set	4659 Jun 09 12:26	3° B 00'23	
inferior conj	4658 Jul 08 11:33	18° B 37'06	-2°52'23	desc. node	4659 Jun 15 09:47	0° B 45'13	
minimum elong	4658 Jul 08 03:53	18° B 47'54	2°49'51		4659 Jun 16 17:30	30° R II	
min. Earth dist.	4658 Jul 09 00:11	18° B 19'19	0.54807 AU	inferior conj	4659 Jun 18 09:57	28° II 58'52	-0°53'47
morning rise	4658 Jul 17 04:49	14° B 38'35		minimum elong	4659 Jun 18 07:28	29° II 02'41	0°52'51
direct	4658 Jul 20 18:33	14° B 11'05		min. Earth dist.	4659 Jun 20 12:48	27° II 41'03	0.55380 AU
morning max el	4658 Aug 02 14:37	20° B 18'10	22°39'40	morning rise	4659 Jun 27 00:29	24° II 33'05	
	4658 Aug 10 17:50	0° Q		direct	4659 Jul 01 08:38	23° II 51'40	
asc. node	4658 Aug 18 20:48	13° Q 35'59			4659 Jul 14 10:08	0° B	
morning set	4658 Aug 24 20:50	25° Q 38'56		morning max el	4659 Jul 15 04:57	0° B 43'26	24°23'30
	4658 Aug 26 22:06	0° np			4659 Aug 04 04:24	0° Q	
				asc. node	4659 Aug 05 17:49	3° Q 04'32	
superior conj	4658 Aug 31 23:06	10° np 47'31	1°40'11	morning set	4659 Aug 09 08:33	10° Q 32'12	
minimum elong	4658 Aug 31 21:50	10° np 40'47	1°40'07				
max. Earth dist.	4658 Sep 04 01:45	17° np 20'09	1.34033 AU	superior conj	4659 Aug 16 07:27	25° Q 35'41	1°30'39
evening rise	4658 Sep 08 19:42	26° np 56'06		minimum elong	4659 Aug 16 05:25	25° Q 24'38	1°30'27
	4658 Sep 10 09:36	0° Q		max. Earth dist.	4659 Aug 18 04:01	29° Q 37'01	1.32922 AU
desc. node	4658 Sep 24 12:03	24° Q 24'47			4659 Aug 18 08:18	0° np	
	4658 Sep 28 05:31	0° ml		evening rise	4659 Aug 23 15:04	11° np 04'32	
evening max el	4658 Oct 13 11:38	18° ml 41'42	27°10'31		4659 Sep 02 16:05	0° Q	
retrograde	4658 Oct 26 20:13	25° ml 59'17		desc. node	4659 Sep 11 09:04	13° Q 57'04	
evening set	4658 Nov 02 17:25	23° ml 18'45			4659 Sep 24 01:40	0° ml	
min. Earth dist.	4658 Nov 06 14:23	19° ml 36'54	0.65044 AU	evening max el	4659 Sep 25 22:39	1° ml 51'23	27°27'02
inferior conj	4658 Nov 08 18:04	17° ml 13'22	-2°01'53	retrograde	4659 Oct 09 14:35	9° ml 07'51	
minimum elong	4658 Nov 08 21:33	17° ml 03'40	2°00'29	evening set	4659 Oct 16 18:26	6° ml 32'32	
asc. node	4658 Nov 14 20:02	11° ml 48'56		min. Earth dist.	4659 Oct 20 10:29	3° ml 23'16	0.63425 AU
morning rise	4658 Nov 15 02:43	11° ml 40'46		inferior conj	4659 Oct 23 02:14	0° ml 43'50	-3°04'21
direct	4658 Nov 17 18:31	11° ml 03'12		minimum elong	4659 Oct 23 07:27	0° ml 30'45	3°02'33
morning max el	4658 Nov 24 05:55	14° ml 30'21	18°03'17		4659 Oct 23 19:49	30° R Q	
	4658 Dec 05 06:47	0° X		morning rise	4659 Oct 29 21:56	25° Q 27'52	
morning set	4658 Dec 12 04:24	11° X 23'07		direct	4659 Nov 01 08:27	24° Q 59'18	
desc. node	4658 Dec 21 11:21	26° X 36'23		asc. node	4659 Nov 01 17:03	24° Q 59'56	
	4658 Dec 23 13:58	0° Z		morning max el	4659 Nov 07 22:42	28° Q 24'26	17°50'15
					4659 Nov 09 10:11	0° ml	
superior conj	4658 Dec 26 09:08	4° Z 28'09	-0°33'29	morning set	4659 Nov 24 08:57	23° ml 40'59	
minimum elong	4658 Dec 26 05:00	4° Z 11'41	0°32'54		4659 Nov 28 00:25	0° X	
max. Earth dist.	4658 Dec 30 00:24	10° Z 13'20	1.45087 AU				
evening rise	4659 Jan 11 16:26	29° Z 57'07		superior conj	4659 Dec 06 13:18	14° X 25'03	0°12'32
	4659 Jan 11 17:11	0° \approx		minimum elong	4659 Dec 06 14:37	14° X 30'28	0°12'22
greatest brilliancy	4659 Jan 25 06:12	20° \approx 40'21	-0.7m	behind sun begin	4659 Dec 06 08:26	14° X 04'55	
	4659 Jan 31 19:02	0° K		behind sun end	4659 Dec 06 20:48	14° X 55'58	
evening max el	4659 Feb 06 03:39	6° K 27'12	19°46'29	desc. node	4659 Dec 08 08:22	17° X 21'54	
asc. node	4659 Feb 10 19:18	10° K 04'22		max. Earth dist.	4659 Dec 12 18:18	24° X 30'08	1.44165 AU
retrograde	4659 Feb 13 14:19	10° K 45'55			4659 Dec 16 05:26	0° Z	

evening rise	4659 Dec 22 02:21	9° ♁ 08'33		evening max el	4661 Jan 01 23:43	3° ♁ 34'49	22°04'28
	4660 Jan 04 23:16	0° ♁		retrograde	4661 Jan 11 09:29	9° ♁ 10'37	
evening max el	4660 Jan 20 04:24	20° ♁ 00'24	20°50'17	asc. node	4661 Jan 14 13:21	8° ♁ 17'23	
retrograde	4660 Jan 28 12:32	24° ♁ 56'01		evening set	4661 Jan 15 20:47	7° ♁ 22'46	
asc. node	4660 Jan 28 16:19	24° ♁ 55'53		inferior conj	4661 Jan 21 05:06	1° ♁ 02'46	2°05'33
evening set	4660 Feb 01 13:05	23° ♁ 23'38		minimum elong	4661 Jan 21 02:47	1° ♁ 10'49	2°04'47
inferior conj	4660 Feb 06 21:29	17° ♁ 12'30	2°42'36	min. Earth dist.	4661 Jan 21 04:55	1° ♁ 03'24	0.68035 AU
minimum elong	4660 Feb 06 19:03	17° ♁ 20'52	2°41'57		4661 Jan 21 23:13	30° ♁	
min. Earth dist.	4660 Feb 07 09:11	16° ♁ 32'14	0.67686 AU	morning rise	4661 Jan 26 08:36	24° ♁ 51'48	
morning rise	4660 Feb 12 00:50	10° ♁ 59'06		direct	4661 Jan 31 04:11	22° ♁ 49'24	
direct	4660 Feb 17 11:07	8° ♁ 35'09		morning max el	4661 Feb 09 19:19	28° ♁ 30'18	22°29'06
morning max el	4660 Feb 28 08:45	15° ♁ 05'17	23°58'05		4661 Feb 11 05:40	0° ♁	
desc. node	4660 Mar 05 07:38	21° ♁ 49'30		desc. node	4661 Feb 20 04:39	11° ♁ 05'18	
	4660 Mar 11 13:39	0° ♁			4661 Mar 05 06:45	0° ♁	
	4660 Mar 31 06:50	0° ♁		morning set	4661 Mar 15 14:18	16° ♁ 15'40	
morning set	4660 Apr 03 23:10	6° ♁ 13'21		max. Earth dist.	4661 Mar 20 14:04	24° ♁ 34'03	1.40527 AU
max. Earth dist.	4660 Apr 07 17:59	12° ♁ 50'41	1.38337 AU		4661 Mar 23 17:59	0° ♁	
superior conj	4660 Apr 14 23:37	26° ♁ 09'51	-1°33'41	superior conj	4661 Mar 28 09:13	8° ♁ 12'12	-1°55'42
minimum elong	4660 Apr 15 04:24	26° ♁ 32'33	1°33'04	minimum elong	4661 Mar 28 13:44	8° ♁ 32'31	1°55'22
	4660 Apr 16 23:44	0° ♁		evening rise	4661 Apr 07 11:24	26° ♁ 55'44	
evening rise	4660 Apr 23 23:08	13° ♁ 38'26			4661 Apr 09 02:35	0° ♁	
asc. node	4660 Apr 25 15:36	16° ♁ 56'01		asc. node	4661 Apr 12 12:38	6° ♁ 19'27	
	4660 May 02 18:49	0° ♁		evening max el	4661 Apr 23 15:17	22° ♁ 48'01	18°21'33
evening max el	4660 May 10 09:32	10° ♁ 14'27	18°55'38	retrograde	4661 Apr 30 22:56	26° ♁ 26'13	
retrograde	4660 May 18 21:07	14° ♁ 23'39		evening set	4661 May 03 07:45	26° ♁ 04'23	
evening set	4660 May 20 23:07	14° ♁ 09'36		inferior conj	4661 May 10 14:49	21° ♁ 27'55	2°16'27
inferior conj	4660 May 29 01:40	9° ♁ 52'54	0°55'38	minimum elong	4661 May 10 18:24	21° ♁ 20'28	2°15'28
minimum elong	4660 May 29 03:46	9° ♁ 49'09	0°54'52	min. Earth dist.	4661 May 14 01:23	18° ♁ 37'40	0.58789 AU
min. Earth dist.	4660 Jun 01 04:43	7° ♁ 40'30	0.56802 AU	morning rise	4661 May 18 02:01	15° ♁ 54'30	
desc. node	4660 Jun 01 06:49	7° ♁ 36'55		desc. node	4661 May 19 03:52	15° ♁ 22'32	
morning rise	4660 Jun 06 05:08	4° ♁ 50'47		direct	4661 May 24 05:50	14° ♁ 13'28	
direct	4660 Jun 11 12:04	3° ♁ 43'54		morning max el	4661 Jun 07 15:15	21° ♁ 59'36	27°10'35
morning max el	4660 Jun 25 19:43	11° ♁ 09'12	25°58'55		4661 Jun 14 16:06	0° ♁	
	4660 Jul 10 07:26	0° ♁			4661 Jul 03 05:07	0° ♁	
asc. node	4660 Jul 22 14:51	22° ♁ 51'06		morning set	4661 Jul 08 04:46	10° ♁ 04'53	
morning set	4660 Jul 23 19:46	25° ♁ 22'51		asc. node	4661 Jul 09 11:53	12° ♁ 49'20	
	4660 Jul 25 23:31	0° ♁		superior conj	4661 Jul 15 06:18	25° ♁ 23'59	0°57'09
superior conj	4660 Jul 30 18:28	10° ♁ 30'06	1°16'06	minimum elong	4661 Jul 15 04:10	25° ♁ 12'13	0°56'45
minimum elong	4660 Jul 30 16:09	10° ♁ 17'20	1°15'45	max. Earth dist.	4661 Jul 14 23:45	24° ♁ 47'47	1.31968 AU
max. Earth dist.	4660 Jul 31 12:31	12° ♁ 09'22	1.32237 AU		4661 Jul 17 08:19	0° ♁	
evening rise	4660 Aug 06 18:05	25° ♁ 34'08		evening rise	4661 Jul 22 02:07	10° ♁ 16'27	
	4660 Aug 08 21:52	0° ♁			4661 Aug 01 04:46	0° ♁	
	4660 Aug 26 05:47	0° ♁		desc. node	4661 Aug 15 03:08	20° ♁ 42'50	
desc. node	4660 Aug 28 06:05	2° ♁ 48'39		evening max el	4661 Aug 20 06:10	26° ♁ 13'30	26°23'17
evening max el	4660 Sep 07 05:37	14° ♁ 25'15	27°11'48		4661 Aug 24 20:30	0° ♁	
retrograde	4660 Sep 21 02:03	21° ♁ 38'26		retrograde	4661 Sep 03 05:18	3° ♁ 22'42	
evening set	4660 Sep 28 04:54	19° ♁ 20'14		evening set	4661 Sep 09 20:06	1° ♁ 34'25	
min. Earth dist.	4660 Oct 01 20:04	16° ♁ 35'21	0.61519 AU		4661 Sep 12 09:42	30° ♁	
inferior conj	4660 Oct 04 21:57	13° ♁ 51'46	-4°03'07	min. Earth dist.	4661 Sep 13 19:34	28° ♁ 59'22	0.59452 AU
minimum elong	4660 Oct 05 04:06	13° ♁ 38'06	4°01'28	inferior conj	4661 Sep 17 01:45	26° ♁ 28'17	-4°50'33
morning rise	4660 Oct 12 05:11	8° ♁ 55'41		minimum elong	4661 Sep 17 06:53	26° ♁ 18'18	4°49'43
direct	4660 Oct 14 13:12	8° ♁ 32'55		morning rise	4661 Sep 24 19:51	21° ♁ 54'28	
asc. node	4660 Oct 18 14:05	9° ♁ 43'43		direct	4661 Sep 27 04:44	21° ♁ 34'41	
morning max el	4660 Oct 21 13:47	12° ♁ 04'34	17°55'32	morning max el	4661 Oct 04 23:51	25° ♁ 21'57	18°20'27
	4660 Nov 02 13:36	0° ♁		asc. node	4661 Oct 05 11:07	25° ♁ 49'51	
morning set	4660 Nov 06 08:44	6° ♁ 53'20			4661 Oct 08 22:26	0° ♁	
superior conj	4660 Nov 16 20:06	25° ♁ 39'44	0°50'39	morning set	4661 Oct 20 22:14	20° ♁ 44'39	
minimum elong	4660 Nov 16 23:56	25° ♁ 56'23	0°50'08		4661 Oct 25 18:53	0° ♁	
	4660 Nov 19 08:36	0° ♁		superior conj	4661 Oct 30 02:41	8° ♁ 03'31	1°18'04
desc. node	4660 Nov 24 05:22	8° ♁ 09'00		minimum elong	4661 Oct 30 06:27	8° ♁ 20'46	1°17'39
max. Earth dist.	4660 Nov 24 07:36	8° ♁ 18'09	1.42642 AU	max. Earth dist.	4661 Nov 06 15:39	21° ♁ 26'02	1.40711 AU
evening rise	4660 Nov 30 18:32	18° ♁ 41'36		evening rise	4661 Nov 11 05:42	29° ♁ 07'59	
	4660 Dec 08 02:25	0° ♁		desc. node	4661 Nov 11 02:25	28° ♁ 54'25	
	4660 Dec 29 17:27	0° ♁			4661 Nov 11 18:23	0° ♁	

	4661 Dec 01 15:17	0°♄			4662 Nov 27 06:22	0°♄	
evening max el	4661 Dec 15 14:58	17°♄12'52	23°24'01	evening max el	4662 Nov 28 04:04	0°♄54'34	24°42'42
retrograde	4661 Dec 26 03:39	23°♄26'30		retrograde	4662 Dec 09 17:50	7°♄38'56	
evening set	4661 Dec 31 03:17	21°♄22'57		evening set	4662 Dec 15 06:57	5°♄20'12	
asc. node	4662 Jan 01 10:23	20°♄09'21		asc. node	4662 Dec 19 07:25	0°♄53'08	
min. Earth dist.	4662 Jan 05 01:45	15°♄36'32	0.68012 AU		4662 Dec 19 23:38	30°♄♂	
inferior conj	4662 Jan 05 12:59	14°♄57'59	1°21'10	min. Earth dist.	4662 Dec 19 21:16	0°♄07'50	0.67634 AU
minimum elong	4662 Jan 05 11:15	15°♄03'58	1°20'31	inferior conj	4662 Dec 20 19:21	28°♄54'34	0°30'24
morning rise	4662 Jan 10 19:08	8°♄51'15		minimum elong	4662 Dec 20 18:36	28°♄57'01	0°30'07
direct	4662 Jan 15 00:33	7°♄11'38		morning rise	4662 Dec 26 06:23	22°♄54'14	
morning max el	4662 Jan 23 11:19	12°♄04'59	21°06'17	direct	4662 Dec 29 22:50	21°♄36'12	
	4662 Feb 06 11:10	0°♄		morning max el	4663 Jan 06 11:04	25°♄51'04	19°55'13
desc. node	4662 Feb 07 01:41	0°♄52'12			4663 Jan 10 03:27	0°♄	
morning set	4662 Feb 23 01:31	25°♄00'45		desc. node	4663 Jan 24 22:42	21°♄01'05	
	4662 Feb 26 05:10	0°♄			4663 Jan 30 20:14	0°♄	
max. Earth dist.	4662 Mar 02 16:25	7°♄12'45	1.42547 AU	morning set	4663 Feb 01 21:47	3°♄10'37	
				max. Earth dist.	4663 Feb 13 02:53	20°♄44'22	1.44125 AU
superior conj	4662 Mar 09 21:05	19°♄13'23	-2°07'38				
minimum elong	4662 Mar 09 22:38	19°♄19'57	2°07'37	superior conj	4663 Feb 18 07:25	29°♄05'31	-2°04'00
	4662 Mar 16 01:52	0°♄		minimum elong	4663 Feb 18 03:05	28°♄47'57	2°03'49
evening rise	4662 Mar 21 09:39	9°♄30'54			4663 Feb 18 20:48	0°♄	
asc. node	4662 Mar 30 09:41	25°♄18'16		evening rise	4663 Mar 03 13:24	21°♄14'49	
	4662 Apr 02 10:10	0°♄			4663 Mar 08 16:17	0°♄	
evening max el	4662 Apr 07 02:15	5°♄47'26	18°07'12	asc. node	4663 Mar 17 06:44	13°♄44'20	
retrograde	4662 Apr 13 17:41	9°♄10'57		evening max el	4663 Mar 21 15:05	19°♄03'37	18°12'02
evening set	4662 Apr 16 09:10	8°♄38'49		retrograde	4663 Mar 28 01:02	22°♄27'26	
inferior conj	4662 Apr 22 23:55	3°♄41'40	3°06'12	evening set	4663 Mar 30 22:38	21°♄43'40	
minimum elong	4662 Apr 23 02:40	3°♄35'01	3°05'43	inferior conj	4663 Apr 06 01:04	16°♄26'48	3°30'02
min. Earth dist.	4662 Apr 26 04:50	0°♄38'03	0.60991 AU	minimum elong	4663 Apr 06 02:11	16°♄23'45	3°29'57
	4662 Apr 26 21:50	30°♄♂		min. Earth dist.	4663 Apr 08 16:59	13°♄33'40	0.63092 AU
morning rise	4662 Apr 29 18:08	27°♄47'27		morning rise	4663 Apr 12 04:36	10°♄20'38	
direct	4662 May 06 11:10	25°♄33'02		direct	4663 Apr 19 01:32	7°♄42'09	
desc. node	4662 May 06 00:55	25°♄33'34		desc. node	4663 Apr 22 21:57	8°♄26'07	
	4662 May 16 19:26	0°♄		morning max el	4663 May 03 00:10	15°♄41'11	27°47'42
morning max el	4662 May 20 17:03	3°♄29'32	27°47'57		4663 May 14 17:28	0°♄	
	4662 Jun 09 06:14	0°♄			4663 Jun 01 22:04	0°♄	
morning set	4662 Jun 22 09:47	24°♄32'34		morning set	4663 Jun 06 08:36	8°♄39'14	
	4662 Jun 25 00:19	0°♄		max. Earth dist.	4663 Jun 11 15:46	19°♄37'53	1.32686 AU
asc. node	4662 Jun 26 08:57	2°♄54'34		asc. node	4663 Jun 13 06:00	23°♄02'31	
max. Earth dist.	4662 Jun 28 10:08	7°♄21'22	1.32114 AU				
				superior conj	4663 Jun 14 01:23	24°♄47'02	0°08'26
superior conj	4662 Jun 29 17:12	10°♄11'33	0°34'23	minimum elong	4663 Jun 14 00:59	24°♄44'50	0°08'20
minimum elong	4662 Jun 29 15:43	10°♄03'24	0°34'03	behind sun begin	4663 Jun 13 20:28	24°♄20'27	
evening rise	4662 Jul 06 13:01	25°♄04'39		behind sun end	4663 Jun 14 05:30	25°♄09'15	
	4662 Jul 08 21:19	0°♄			4663 Jun 16 11:05	0°♄	
	4662 Jul 26 13:26	0°♄		evening rise	4663 Jun 21 00:53	9°♄52'20	
evening max el	4662 Aug 01 23:24	7°♄14'28	25°05'43		4663 Jul 01 09:34	0°♄	
desc. node	4662 Aug 02 00:10	7°♄16'17		evening max el	4663 Jul 14 12:14	17°♄42'31	23°30'57
retrograde	4662 Aug 15 21:59	14°♄17'34		desc. node	4663 Jul 19 21:11	21°♄58'25	
evening set	4662 Aug 21 11:33	13°♄06'54		retrograde	4663 Jul 28 02:18	24°♄31'11	
min. Earth dist.	4662 Aug 26 11:01	10°♄23'35	0.57457 AU	evening set	4663 Aug 01 04:31	23°♄54'29	
inferior conj	4662 Aug 29 10:26	8°♄23'52	-5°14'19	min. Earth dist.	4663 Aug 07 21:57	20°♄46'27	0.55839 AU
minimum elong	4662 Aug 29 11:25	8°♄22'12	5°14'18	inferior conj	4663 Aug 09 23:04	19°♄33'32	-4°58'23
morning rise	4662 Sep 06 13:37	4°♄12'26		minimum elong	4663 Aug 09 17:46	19°♄41'27	4°57'44
direct	4662 Sep 09 02:56	3°♄53'20		morning rise	4663 Aug 18 09:28	15°♄39'35	
morning max el	4662 Sep 18 01:28	8°♄06'29	19°06'29	direct	4663 Aug 21 05:55	15°♄19'32	
asc. node	4662 Sep 22 08:11	13°♄03'06		morning max el	4663 Aug 31 15:58	20°♄09'54	20°14'21
	4662 Oct 02 07:28	0°♄			4663 Sep 08 11:48	0°♄	
morning set	4662 Oct 04 21:11	5°♄02'38		asc. node	4663 Sep 09 05:14	1°♄09'09	
				morning set	4663 Sep 19 02:28	19°♄39'06	
superior conj	4662 Oct 13 03:36	21°♄20'47	1°35'02		4663 Sep 24 03:24	0°♄	
minimum elong	4662 Oct 13 06:02	21°♄32'31	1°34'52				
	4662 Oct 17 17:33	0°♄		superior conj	4663 Sep 26 17:54	5°♄17'54	1°42'53
max. Earth dist.	4662 Oct 19 20:38	3°♄53'12	1.38615 AU	minimum elong	4663 Sep 26 18:43	5°♄21'59	1°42'52
evening rise	4662 Oct 23 15:58	10°♄37'09		max. Earth dist.	4663 Oct 02 02:58	15°♄52'34	1.36599 AU
desc. node	4662 Oct 28 23:26	19°♄33'57		evening rise	4663 Oct 05 23:31	23°♄05'09	
	4662 Nov 04 13:39	0°♄			4663 Oct 09 20:34	0°♄	

desc. node	4663 Oct 15 20:27	10°♄03'24		evening rise	4664 Sep 18 00:11	6°♂20'55	
	4663 Oct 29 07:22	0°♂		desc. node	4664 Oct 01 17:29	0°♄16'47	
evening max el	4663 Nov 10 16:33	14°♂37'41	25°53'17		4664 Oct 01 13:14	0°♄	
retrograde	4663 Nov 23 03:15	21°♂43'08		evening max el	4664 Oct 23 05:06	28°♄15'57	26°48'31
evening set	4663 Nov 29 06:06	19°♂11'32			4664 Oct 25 02:29	0°♂	
min. Earth dist.	4663 Dec 03 13:07	14°♂34'13	0.66906 AU	retrograde	4664 Nov 05 07:26	5°♂32'24	
inferior conj	4663 Dec 04 22:20	12°♂49'48	-0°25'45	evening set	4664 Nov 11 22:44	2°♂52'47	
minimum elong	4663 Dec 04 23:01	12°♂47'40	0°25'27		4664 Nov 14 22:28	30°♄♄	
asc. node	4663 Dec 06 04:28	11°♂16'25		min. Earth dist.	4664 Nov 15 23:02	28°♄51'03	0.65820 AU
morning rise	4663 Dec 10 16:22	6°♂58'13		inferior conj	4664 Nov 17 19:56	26°♄39'50	-1°26'02
direct	4663 Dec 13 21:32	5°♂58'58		minimum elong	4664 Nov 17 22:21	26°♄32'46	1°25'02
morning max el	4663 Dec 20 18:31	9°♂47'00	18°58'53	asc. node	4664 Nov 22 01:29	22°♄15'51	
	4664 Jan 04 11:14	0°♂		morning rise	4664 Nov 23 22:49	20°♄59'39	
desc. node	4664 Jan 11 19:42	11°♂25'53		direct	4664 Nov 26 18:45	20°♄15'26	
morning set	4664 Jan 12 04:08	11°♂58'48		morning max el	4664 Dec 03 07:46	23°♄47'39	18°18'44
	4664 Jan 23 16:50	0°♄			4664 Dec 08 09:36	0°♂	
max. Earth dist.	4664 Jan 26 19:12	4°♄51'47	1.45069 AU	morning set	4664 Dec 22 13:47	22°♂11'07	
					4664 Dec 27 10:16	0°♂	
superior conj	4664 Jan 28 18:44	7°♄58'55	-1°40'49	desc. node	4664 Dec 28 16:44	2°♂01'56	
minimum elong	4664 Jan 28 09:38	7°♄23'03	1°40'00				
	4664 Feb 11 12:55	0°♂		superior conj	4665 Jan 06 21:27	16°♂36'01	-1°00'34
evening rise	4664 Feb 12 18:53	2°♂01'54		minimum elong	4665 Jan 06 14:02	16°♂06'52	0°59'39
	4664 Mar 01 21:51	0°♂		max. Earth dist.	4665 Jan 08 14:08	19°♂15'44	1.45284 AU
asc. node	4664 Mar 03 03:45	1°♂27'35			4665 Jan 15 10:47	0°♄	
evening max el	4664 Mar 04 02:58	2°♂29'21	18°35'19	evening rise	4665 Jan 23 01:25	11°♄54'37	
retrograde	4664 Mar 10 16:39	6°♂06'27		greatest brilliancy	4665 Feb 03 03:08	29°♄10'18	-0.8m
evening set	4664 Mar 13 20:23	5°♂10'17			4665 Feb 03 16:08	0°♂	
	4664 Mar 19 06:00	30°♄♂		evening max el	4665 Feb 15 11:40	16°♂00'10	19°16'00
inferior conj	4664 Mar 19 14:13	29°♂35'25	3°34'00	asc. node	4665 Feb 18 00:47	18°♂15'46	
minimum elong	4664 Mar 19 13:45	29°♂36'48	3°33'59	retrograde	4665 Feb 22 12:52	20°♂01'25	
min. Earth dist.	4664 Mar 21 14:40	27°♂10'12	0.64897 AU	evening set	4665 Feb 25 23:35	18°♂52'03	
morning rise	4664 Mar 25 06:32	23°♂23'17		inferior conj	4665 Mar 03 11:53	13°♂01'19	3°22'55
direct	4664 Mar 31 23:31	20°♂33'44		minimum elong	4665 Mar 03 10:15	13°♂06'33	3°22'42
desc. node	4664 Apr 08 18:58	23°♂33'45		min. Earth dist.	4665 Mar 04 21:07	11°♂14'06	0.66309 AU
morning max el	4664 Apr 14 10:01	28°♂25'56	27°12'33	morning rise	4665 Mar 08 20:36	6°♂46'56	
	4664 Apr 15 22:12	0°♂		direct	4665 Mar 15 04:06	3°♂59'23	
	4664 May 07 12:24	0°♂		desc. node	4665 Mar 26 15:58	10°♂22'31	
morning set	4664 May 19 22:19	22°♂15'36		morning max el	4665 Mar 27 19:56	11°♂31'23	26°09'43
	4664 May 23 19:51	0°♄			4665 Apr 11 14:06	0°♂	
max. Earth dist.	4664 May 24 12:41	1°♄25'43	1.33712 AU		4665 Apr 30 03:12	0°♂	
				morning set	4665 May 02 23:14	5°♂11'16	
superior conj	4664 May 28 04:46	9°♄03'25	-0°19'55	max. Earth dist.	4665 May 06 22:10	12°♂42'36	1.35204 AU
minimum elong	4664 May 28 05:48	9°♄08'53	0°19'43				
asc. node	4664 May 30 03:02	13°♄08'27		superior conj	4665 May 12 01:00	22°♂54'27	-0°49'26
evening rise	4664 Jun 04 11:46	24°♄32'23		minimum elong	4665 May 12 03:42	23°♂08'10	0°48'55
	4664 Jun 07 03:06	0°♂			4665 May 15 11:43	0°♄	
evening max el	4664 Jun 25 04:02	28°♂07'37	21°54'51	asc. node	4665 May 17 00:04	3°♄08'43	
	4664 Jun 27 05:56	0°♄		evening rise	4665 May 19 19:42	8°♄58'55	
desc. node	4664 Jul 05 18:13	4°♄13'39			4665 May 31 03:30	0°♂	
retrograde	4664 Jul 07 19:28	4°♄23'29		evening max el	4665 Jun 07 06:16	9°♂01'38	20°30'29
evening set	4664 Jul 10 12:31	4°♄07'00		retrograde	4665 Jun 18 08:21	14°♂27'01	
inferior conj	4664 Jul 19 20:09	0°♄03'36	-3°51'29	evening set	4665 Jun 20 08:27	14°♂17'07	
minimum elong	4664 Jul 19 11:27	0°♄15'48	3°49'08	desc. node	4665 Jun 22 15:13	13°♂43'23	
min. Earth dist.	4664 Jul 19 08:09	0°♄20'25	0.54919 AU	inferior conj	4665 Jun 29 13:51	10°♂19'42	-2°03'02
	4664 Jul 19 22:43	30°♄♂		minimum elong	4665 Jun 29 08:06	10°♂28'01	2°00'58
morning rise	4664 Jul 28 11:55	26°♂12'40		min. Earth dist.	4665 Jun 30 19:56	9°♂36'09	0.54935 AU
direct	4664 Jul 31 17:45	25°♂49'31		morning rise	4665 Jul 08 06:53	6°♂11'06	
	4664 Aug 11 02:05	0°♄		direct	4665 Jul 12 03:27	5°♂39'00	
morning max el	4664 Aug 12 18:34	1°♄27'35	21°42'21	morning max el	4665 Jul 25 11:53	12°♂06'52	23°23'43
asc. node	4664 Aug 26 02:16	19°♄54'42			4665 Aug 07 22:48	0°♄	
	4664 Aug 31 07:57	0°♄		asc. node	4665 Aug 12 23:18	9°♄10'00	
morning set	4664 Sep 02 11:42	4°♄26'20		morning set	4665 Aug 17 23:00	19°♄18'55	
					4665 Aug 22 22:27	0°♄	
superior conj	4664 Sep 09 17:33	19°♄42'13	1°43'04				
minimum elong	4664 Sep 09 16:55	19°♄38'58	1°43'03	superior conj	4665 Aug 24 23:27	4°♄24'15	1°36'48
max. Earth dist.	4664 Sep 13 15:23	27°♄45'06	1.34859 AU	minimum elong	4665 Aug 24 21:48	4°♄15'23	1°36'41
	4664 Sep 14 18:16	0°♄		max. Earth dist.	4665 Aug 27 12:38	9°♄50'32	1.33509 AU

evening rise	4665 Sep 01 13:49	20° \mathbb{M} 13'33		morning set	4666 Aug 02 10:44	4° \mathcal{Q} 11'57	
	4665 Sep 06 15:49	0° \mathcal{Q}					
desc. node	4665 Sep 18 14:30	20° \mathcal{Q} 06'54		superior conj	4666 Aug 09 09:12	19° \mathcal{Q} 16'23	1°25'04
	4665 Sep 25 13:24	0° \mathbb{M}		minimum elong	4666 Aug 09 06:59	19° \mathcal{Q} 04'17	1°24'47
evening max el	4665 Oct 05 17:13	11° \mathbb{M} 39'59	27°21'07	max. Earth dist.	4666 Aug 10 17:55	22° \mathcal{Q} 14'59	1.32583 AU
retrograde	4665 Oct 19 05:47	18° \mathbb{M} 58'26			4666 Aug 14 08:30	0° \mathbb{M}	
evening set	4665 Oct 26 06:21	16° \mathbb{M} 18'44		evening rise	4666 Aug 16 12:51	4° \mathbb{M} 32'52	
min. Earth dist.	4665 Oct 30 00:54	12° \mathbb{M} 51'15	0.64389 AU		4666 Aug 30 08:00	0° \mathcal{Q}	
inferior conj	4665 Nov 01 09:48	10° \mathbb{M} 19'36	-2°28'35	desc. node	4666 Sep 05 11:32	9° \mathcal{Q} 24'01	
minimum elong	4665 Nov 01 14:04	10° \mathbb{M} 08'13	2°26'57	evening max el	4666 Sep 18 03:05	24° \mathcal{Q} 37'29	27°24'43
morning rise	4665 Nov 07 23:04	4° \mathbb{M} 53'44			4666 Sep 25 06:13	0° \mathbb{M}	
asc. node	4665 Nov 08 22:31	4° \mathbb{M} 33'15		retrograde	4666 Oct 01 21:25	1° \mathbb{M} 52'26	
direct	4665 Nov 10 12:10	4° \mathbb{M} 20'34			4666 Oct 08 02:56	30° \mathbb{R} \mathcal{Q}	
morning max el	4665 Nov 17 00:06	7° \mathbb{M} 46'13	17°55'32	evening set	4666 Oct 09 01:46	29° \mathcal{Q} 23'15	
	4665 Dec 01 22:18	0° \mathcal{Z}		min. Earth dist.	4666 Oct 12 16:53	26° \mathcal{Q} 25'21	0.62641 AU
morning set	4665 Dec 04 04:17	3° \mathcal{Z} 48'19		inferior conj	4666 Oct 15 13:10	23° \mathcal{Q} 42'39	-3°30'08
desc. node	4665 Dec 15 13:44	22° \mathcal{Z} 44'59		minimum elong	4666 Oct 15 18:56	23° \mathcal{Q} 28'52	3°28'18
				morning rise	4666 Oct 22 13:45	18° \mathcal{Q} 34'26	
superior conj	4665 Dec 17 12:04	25° \mathcal{Z} 52'28	-0°13'23	direct	4666 Oct 24 22:48	18° \mathcal{Q} 08'42	
minimum elong	4665 Dec 17 10:30	25° \mathcal{Z} 46'06	0°13'08	asc. node	4666 Oct 26 19:33	18° \mathcal{Q} 24'59	
behind sun begin	4665 Dec 17 04:28	25° \mathcal{Z} 21'48		morning max el	4666 Oct 31 16:34	21° \mathcal{Q} 35'50	17°50'08
behind sun end	4665 Dec 17 16:31	26° \mathcal{Z} 10'23			4666 Nov 07 02:19	0° \mathbb{M}	
	4665 Dec 20 01:48	0° \mathcal{Z}		morning set	4666 Nov 16 17:54	16° \mathbb{M} 32'40	
max. Earth dist.	4665 Dec 22 08:49	3° \mathcal{Z} 38'34	1.44769 AU		4666 Nov 24 09:47	0° \mathcal{Z}	
evening rise	4666 Jan 02 14:58	21° \mathcal{Z} 10'52					
	4666 Jan 08 09:22	0° \approx		superior conj	4666 Nov 28 03:35	6° \mathcal{Z} 22'52	0°29'56
greatest brilliancy	4666 Jan 17 07:31	13° \approx 22'10	-0.6m	minimum elong	4666 Nov 28 06:22	6° \mathcal{Z} 34'34	0°29'33
evening max el	4666 Jan 29 15:35	29° \approx 32'47	20°12'13	desc. node	4666 Dec 02 10:47	13° \mathcal{Z} 32'03	
	4666 Jan 30 02:24	0° \mathcal{H}		max. Earth dist.	4666 Dec 05 01:04	17° \mathcal{Z} 45'37	1.43585 AU
asc. node	4666 Feb 04 21:49	3° \mathcal{H} 53'50			4666 Dec 12 18:35	0° \mathcal{Z}	
retrograde	4666 Feb 06 10:55	4° \mathcal{H} 06'42		evening rise	4666 Dec 13 01:44	0° \mathcal{Z} 27'43	
evening set	4666 Feb 10 05:56	2° \mathcal{H} 43'07			4667 Jan 02 00:57	0° \approx	
	4666 Feb 13 00:51	30° \mathbb{R} \approx		evening max el	4667 Jan 12 14:06	13° \approx 07'05	21°20'53
inferior conj	4666 Feb 15 15:11	26° \approx 38'50	3°00'07	retrograde	4667 Jan 21 08:39	18° \approx 19'09	
minimum elong	4666 Feb 15 12:54	26° \approx 46'33	2°59'37	asc. node	4667 Jan 22 18:50	18° \approx 08'12	
min. Earth dist.	4666 Feb 16 10:24	25° \approx 33'50	0.67303 AU	evening set	4667 Jan 25 13:38	16° \approx 40'19	
morning rise	4666 Feb 20 19:38	20° \approx 24'37		inferior conj	4667 Jan 30 21:49	10° \approx 25'16	2°27'49
direct	4666 Feb 26 14:17	17° \approx 49'40		minimum elong	4667 Jan 30 19:22	10° \approx 33'43	2°27'07
morning max el	4666 Mar 10 04:36	24° \approx 45'55	24°48'44	min. Earth dist.	4667 Jan 31 04:22	10° \approx 02'33	0.67888 AU
desc. node	4666 Mar 13 12:59	28° \approx 23'28		morning rise	4667 Feb 05 00:56	4° \approx 12'50	
	4666 Mar 14 21:59	0° \mathcal{H}		direct	4667 Feb 10 05:05	1° \approx 57'31	
	4666 Apr 05 01:22	0° \mathcal{Y}		morning max el	4667 Feb 20 13:28	8° \approx 06'27	23°19'54
morning set	4666 Apr 15 06:19	17° \mathcal{Y} 11'16		desc. node	4667 Feb 28 10:01	17° \approx 16'24	
max. Earth dist.	4666 Apr 18 21:09	23° \mathcal{Y} 43'03	1.37111 AU		4667 Mar 09 15:58	0° \mathcal{H}	
	4666 Apr 22 05:52	0° \mathcal{B}		morning set	4667 Mar 27 13:30	27° \mathcal{H} 59'44	
					4667 Mar 28 17:58	0° \mathcal{Y}	
superior conj	4666 Apr 25 11:00	6° \mathcal{B} 11'21	-1°18'20	max. Earth dist.	4667 Mar 31 16:22	5° \mathcal{Y} 02'50	1.39275 AU
minimum elong	4666 Apr 25 15:13	6° \mathcal{B} 31'54	1°17'41				
evening rise	4666 May 03 22:19	23° \mathcal{B} 04'39		superior conj	4667 Apr 08 06:52	18° \mathcal{Y} 44'21	-1°43'56
asc. node	4666 May 03 21:06	22° \mathcal{B} 58'35		minimum elong	4667 Apr 08 11:46	19° \mathcal{Y} 07'10	1°43'25
	4666 May 07 10:33	0° \mathbb{I}			4667 Apr 14 05:28	0° \mathcal{B}	
evening max el	4666 May 20 21:00	20° \mathbb{I} 37'15	19°24'29	evening rise	4667 Apr 17 16:48	6° \mathcal{B} 42'09	
retrograde	4666 May 30 05:21	25° \mathbb{I} 10'40		asc. node	4667 Apr 20 18:09	12° \mathcal{B} 33'19	
evening set	4666 Jun 01 04:34	24° \mathbb{I} 59'27			4667 May 01 08:39	0° \mathbb{I}	
inferior conj	4666 Jun 09 18:33	20° \mathbb{I} 52'52	-0°04'41	evening max el	4667 May 03 22:13	2° \mathbb{I} 51'56	18°38'42
minimum elong	4666 Jun 09 18:20	20° \mathbb{I} 53'12	0°04'37	retrograde	4667 May 11 20:14	6° \mathbb{I} 45'42	
transit middle	4666 Jun 09 18:20	20° \mathbb{I} 53'12	0°04'37	evening set	4667 May 14 01:14	6° \mathbb{I} 28'35	
transit begin	4666 Jun 09 14:38	20° \mathbb{I} 59'13		inferior conj	4667 May 21 19:13	2° \mathbb{I} 03'33	1°33'50
transit end	4666 Jun 09 22:03	20° \mathbb{I} 47'10		minimum elong	4667 May 21 22:19	1° \mathbb{I} 57'39	1°32'50
desc. node	4666 Jun 09 12:13	21° \mathbb{I} 03'08			4667 May 24 12:23	30° \mathbb{R} \mathcal{B}	
min. Earth dist.	4666 Jun 12 09:58	19° \mathbb{I} 10'20	0.55898 AU	min. Earth dist.	4667 May 25 03:21	29° \mathcal{B} 32'39	0.57601 AU
morning rise	4666 Jun 18 05:17	16° \mathbb{I} 11'47		desc. node	4667 May 27 09:15	28° \mathcal{B} 02'00	
direct	4666 Jun 22 23:12	15° \mathbb{I} 20'38		morning rise	4667 May 29 16:10	26° \mathcal{B} 47'26	
morning max el	4666 Jul 07 01:30	22° \mathbb{I} 28'34	25°05'57	direct	4667 Jun 04 08:48	25° \mathcal{B} 26'42	
	4666 Jul 13 17:36	0° \mathcal{B}			4667 Jun 15 07:14	0° \mathbb{I}	
asc. node	4666 Jul 30 20:21	28° \mathcal{B} 47'17		morning max el	4667 Jun 18 17:41	3° \mathbb{I} 01'22	26°33'08
	4666 Jul 31 10:32	0° \mathcal{Q}			4667 Jul 08 03:19	0° \mathcal{B}	

morning set	4667 Jul 17 21:13	18°☿59'50		morning set	4668 Jul 01 04:48	3°☿37'12	
asc. node	4667 Jul 17 17:23	18°☿39'40		asc. node	4668 Jul 03 14:27	8°☿41'55	
	4667 Jul 22 23:12	0°♊		max. Earth dist.	4668 Jul 07 15:47	17°☿31'52	1.31979 AU
superior conj	4667 Jul 24 20:47	4°♊11'25	1°08'35	superior conj	4668 Jul 08 08:26	19°☿03'37	0°47'56
minimum elong	4667 Jul 24 18:29	3°♊58'44	1°08'11	minimum elong	4668 Jul 08 06:31	18°☿53'04	0°47'33
max. Earth dist.	4667 Jul 25 04:14	4°♊52'33	1.32076 AU		4668 Jul 13 07:59	0°♊	
evening rise	4667 Jul 31 18:18	19°♊09'15		evening rise	4668 Jul 15 03:49	3°♊55'16	
	4667 Aug 06 03:12	0°♊			4668 Jul 29 00:13	0°♊	
desc. node	4667 Aug 23 08:34	27°♊53'56		desc. node	4668 Aug 09 05:35	15°♊17'22	
	4667 Aug 25 00:25	0°♊		evening max el	4668 Aug 12 05:03	18°♊21'17	25°53'13
evening max el	4667 Aug 31 07:49	6°♊53'58	26°55'11	retrograde	4668 Aug 26 04:09	25°♊28'27	
retrograde	4667 Sep 14 05:16	14°♊04'31		evening set	4668 Sep 01 10:09	23°♊55'20	
evening set	4667 Sep 21 04:39	11°♊57'49		min. Earth dist.	4668 Sep 05 17:22	21°♊19'23	0.58587 AU
min. Earth dist.	4667 Sep 24 21:58	9°♊19'14	0.60654 AU	inferior conj	4668 Sep 08 22:35	18°♊59'10	-5°04'22
inferior conj	4667 Sep 28 02:37	6°♊39'01	-4°25'13	minimum elong	4668 Sep 09 02:23	18°♊52'15	5°03'59
minimum elong	4667 Sep 28 08:39	6°♊26'20	4°23'51	morning rise	4668 Sep 16 20:52	14°♊35'22	
morning rise	4667 Oct 05 14:36	1°♊51'58		direct	4668 Sep 19 07:18	14°♊16'06	
direct	4667 Oct 07 22:43	1°♊30'38		morning max el	4668 Sep 27 12:47	18°♊12'28	18°37'21
asc. node	4667 Oct 13 16:37	3°♊45'47		asc. node	4668 Sep 29 13:40	20°♊22'29	
morning max el	4667 Oct 15 05:54	5°♊07'32	18°03'37		4668 Oct 06 03:30	0°♊	
	4667 Oct 30 23:20	0°♊		morning set	4668 Oct 13 18:05	14°♊07'43	
morning set	4667 Oct 31 00:10	0°♊03'55			4668 Oct 21 23:54	0°♊	
superior conj	4667 Nov 09 21:08	18°♊08'58	1°03'37	superior conj	4668 Oct 22 12:11	0°♊57'42	1°26'28
minimum elong	4667 Nov 10 01:10	18°♊26'54	1°03'06	minimum elong	4668 Oct 22 15:28	1°♊13'05	1°26'09
	4667 Nov 16 17:36	0°♊		max. Earth dist.	4668 Oct 29 19:05	14°♊10'16	1.39828 AU
max. Earth dist.	4667 Nov 17 12:44	1°♊20'13	1.41865 AU	evening rise	4668 Nov 02 21:52	21°♊13'47	
desc. node	4667 Nov 19 07:50	4°♊19'03		desc. node	4668 Nov 05 04:52	25°♊02'26	
evening rise	4667 Nov 23 01:00	10°♊21'17			4668 Nov 08 06:17	0°♊	
	4667 Dec 05 20:27	0°♊			4668 Nov 28 22:42	0°♊	
evening max el	4667 Dec 26 07:34	26°♊43'11	22°37'57	evening max el	4668 Dec 07 21:27	10°♊22'01	23°57'56
	4667 Dec 29 23:52	0°♊		retrograde	4668 Dec 18 21:11	16°♊50'15	
retrograde	4668 Jan 05 04:31	2°♊35'07		evening set	4668 Dec 24 02:31	14°♊39'48	
evening set	4668 Jan 09 21:02	0°♊40'22		asc. node	4668 Dec 26 12:54	12°♊09'33	
asc. node	4668 Jan 09 15:52	0°♊50'50		min. Earth dist.	4668 Dec 28 21:16	9°♊07'52	0.67894 AU
	4668 Jan 10 15:06	30°♊		inferior conj	4668 Dec 29 13:13	8°♊13'49	1°00'21
inferior conj	4668 Jan 15 05:46	24°♊17'49	1°47'33	minimum elong	4668 Dec 29 11:51	8°♊18'27	0°59'48
minimum elong	4668 Jan 15 03:38	24°♊25'12	1°46'48	morning rise	4669 Jan 03 21:11	2°♊09'39	
min. Earth dist.	4668 Jan 15 00:45	24°♊35'11	0.68076 AU	direct	4669 Jan 07 20:47	0°♊39'44	
morning rise	4668 Jan 20 10:08	18°♊08'44		morning max el	4669 Jan 15 21:17	5°♊15'32	20°34'21
direct	4668 Jan 24 23:36	16°♊16'08		desc. node	4669 Feb 01 04:06	26°♊43'45	
morning max el	4668 Feb 03 02:01	21°♊35'31	21°52'44		4669 Feb 03 09:04	0°♊	
	4668 Feb 10 06:26	0°♊		morning set	4669 Feb 13 18:32	15°♊49'36	
desc. node	4668 Feb 15 07:04	6°♊46'42			4669 Feb 22 17:38	0°♊	
	4668 Mar 01 23:02	0°♊		max. Earth dist.	4669 Feb 22 21:01	0°♊13'39	1.43280 AU
morning set	4668 Mar 06 16:17	7°♊27'17		superior conj	4669 Mar 01 08:59	10°♊53'36	-2°08'19
max. Earth dist.	4668 Mar 12 15:16	17°♊11'29	1.41425 AU	minimum elong	4669 Mar 01 08:17	10°♊50'40	2°08'19
superior conj	4668 Mar 20 07:50	0°♊22'06	-2°02'19		4669 Mar 12 11:51	0°♊	
minimum elong	4668 Mar 20 11:28	0°♊38'10	2°02'08	evening rise	4669 Mar 13 14:34	1°♊57'37	
	4668 Mar 20 02:48	0°♊		asc. node	4669 Mar 24 12:13	20°♊33'22	
evening rise	4668 Mar 30 23:38	19°♊43'09		evening max el	4669 Mar 30 18:36	28°♊44'35	18°06'57
	4668 Apr 05 14:48	0°♊			4669 Apr 01 04:08	0°♊	
asc. node	4668 Apr 06 15:11	1°♊47'23		retrograde	4669 Apr 06 06:42	2°♊06'54	
evening max el	4668 Apr 16 06:34	15°♊37'33	18°13'03	evening set	4669 Apr 09 00:41	1°♊30'06	
retrograde	4668 Apr 23 06:00	19°♊07'55			4669 Apr 11 11:59	30°♊	
evening set	4668 Apr 25 17:41	18°♊41'55		inferior conj	4669 Apr 15 09:42	26°♊24'28	3°19'07
inferior conj	4668 May 02 17:17	13°♊56'16	2°41'07	minimum elong	4669 Apr 15 11:48	26°♊19'08	3°18'50
minimum elong	4668 May 02 20:42	13°♊48'41	2°40'19	min. Earth dist.	4669 Apr 18 09:41	23°♊22'26	0.61903 AU
min. Earth dist.	4668 May 06 02:31	10°♊57'27	0.59712 AU	morning rise	4669 Apr 21 21:14	20°♊23'53	
morning rise	4668 May 09 21:06	8°♊12'38		direct	4669 Apr 28 16:52	17°♊57'41	
desc. node	4668 May 13 06:17	6°♊43'04		desc. node	4669 Apr 30 03:19	18°♊03'45	
direct	4668 May 16 07:25	6°♊17'09		morning max el	4669 May 12 20:34	25°♊57'16	27°52'29
morning max el	4668 May 30 16:05	14°♊08'32	27°31'13		4669 May 16 14:40	0°♊	
	4668 Jun 12 09:09	0°♊			4669 Jun 05 21:42	0°♊	
	4668 Jun 29 10:36	0°♊		morning set	4669 Jun 15 07:27	17°♊56'46	

asc. node	4669 Jun 20 11:30	28° Π 48'41		direct	4670 Apr 11 10:58	0° Υ 26'01	
max. Earth dist.	4669 Jun 21 00:30	29° Π 58'55	1.32297 AU	desc. node	4670 Apr 17 00:20	1° Υ 57'50	
	4669 Jun 21 00:42	0° \mathfrak{S}		morning max el	4670 Apr 25 05:03	8° Υ 24'00	27°36'32
					4670 May 11 22:17	0° \mathfrak{B}	
superior conj	4669 Jun 22 18:22	3° \mathfrak{S} 46'27	0°23'43		4670 May 29 04:07	0° Π	
minimum elong	4669 Jun 22 17:17	3° \mathfrak{S} 40'34	0°23'29	morning set	4670 May 30 02:44	1° Π 51'22	
evening rise	4669 Jun 29 15:18	18° \mathfrak{S} 43'26		max. Earth dist.	4670 Jun 04 02:33	12° Π 02'27	1.33063 AU
	4669 Jul 05 03:29	0° Ω					
evening max el	4669 Jul 24 19:28	29° Ω 04'22	24°26'35	superior conj	4670 Jun 07 00:45	18° Π 14'26	-0°03'24
	4669 Jul 25 19:20	0° \mathfrak{M}		minimum elong	4670 Jun 07 00:55	18° Π 15'19	0°03'22
desc. node	4669 Jul 27 02:35	1° \mathfrak{M} 07'27		behind sun begin	4670 Jun 06 19:39	17° Π 47'07	
retrograde	4669 Aug 07 16:11	6° \mathfrak{M} 03'57		behind sun end	4670 Jun 07 06:11	18° Π 43'33	
evening set	4669 Aug 12 15:18	5° \mathfrak{M} 08'53		asc. node	4670 Jun 07 08:33	18° Π 56'11	
min. Earth dist.	4669 Aug 18 06:29	2° \mathfrak{M} 16'40	0.56699 AU		4670 Jun 12 11:52	0° \mathfrak{S}	
inferior conj	4669 Aug 20 22:33	0° \mathfrak{M} 35'01	-5°13'23	evening rise	4670 Jun 14 02:56	3° \mathfrak{S} 28'06	
minimum elong	4669 Aug 20 20:55	0° \mathfrak{M} 37'36	5°13'20		4670 Jun 28 14:33	0° Ω	
	4669 Aug 21 20:39	30° \mathfrak{R} Ω		evening max el	4670 Jul 06 08:36	9° Ω 26'59	22°49'22
morning rise	4669 Aug 29 05:03	26° Ω 32'20		desc. node	4670 Jul 13 23:36	14° Ω 50'44	
direct	4669 Aug 31 20:55	26° Ω 13'12		retrograde	4670 Jul 19 15:21	16° Ω 03'58	
	4669 Sep 09 15:51	0° \mathfrak{M}		evening set	4670 Jul 23 01:51	15° Ω 38'06	
morning max el	4669 Sep 10 10:01	0° \mathfrak{M} 40'55	19°32'43	min. Earth dist.	4670 Jul 30 17:00	12° Ω 15'16	0.55340 AU
asc. node	4669 Sep 16 10:43	7° \mathfrak{M} 59'55		inferior conj	4670 Aug 01 03:30	11° Ω 25'45	-4°36'22
morning set	4669 Sep 27 20:02	28° \mathfrak{M} 34'26		minimum elong	4670 Jul 31 20:02	11° Ω 36'29	4°34'56
	4669 Sep 28 13:03	0° \mathfrak{L}		morning rise	4670 Aug 09 16:22	7° Ω 34'57	
				direct	4670 Aug 12 16:23	7° Ω 13'56	
superior conj	4669 Oct 05 19:22	14° \mathfrak{L} 33'53	1°39'22	morning max el	4670 Aug 23 19:17	12° Ω 24'24	20°49'37
minimum elong	4669 Oct 05 21:06	14° \mathfrak{L} 42'27	1°39'17	asc. node	4670 Sep 03 07:46	26° Ω 24'03	
max. Earth dist.	4669 Oct 11 23:29	26° \mathfrak{L} 21'24	1.37732 AU		4670 Sep 05 08:50	0° \mathfrak{M}	
	4669 Oct 13 23:17	0° \mathfrak{M}		morning set	4670 Sep 12 03:14	13° \mathfrak{M} 15'59	
evening rise	4669 Oct 15 17:37	3° \mathfrak{M} 09'25					
desc. node	4669 Oct 23 01:53	15° \mathfrak{M} 38'28		superior conj	4670 Sep 19 14:02	28° \mathfrak{M} 43'36	1°43'48
	4669 Nov 01 08:32	0° \mathfrak{J}		minimum elong	4670 Sep 19 14:12	28° \mathfrak{M} 44'26	1°43'49
evening max el	4669 Nov 20 10:00	24° \mathfrak{J} 04'52	25°14'09		4670 Sep 20 04:58	0° \mathfrak{L}	
	4669 Nov 28 06:46	0° \mathfrak{B}		max. Earth dist.	4670 Sep 24 07:48	8° \mathfrak{L} 14'43	1.35815 AU
retrograde	4669 Dec 02 09:38	1° \mathfrak{B} 00'16		evening rise	4670 Sep 28 08:59	15° \mathfrak{L} 59'24	
	4669 Dec 06 04:16	30° \mathfrak{R} \mathfrak{J}			4670 Oct 06 06:41	0° \mathfrak{M}	
evening set	4669 Dec 08 04:30	28° \mathfrak{J} 35'41		desc. node	4670 Oct 09 22:53	6° \mathfrak{M} 01'56	
min. Earth dist.	4669 Dec 12 15:37	23° \mathfrak{J} 37'55	0.67362 AU		4670 Oct 26 20:37	0° \mathfrak{J}	
asc. node	4669 Dec 13 09:56	22° \mathfrak{J} 38'21		evening max el	4670 Nov 02 22:41	7° \mathfrak{J} 47'44	26°19'12
inferior conj	4669 Dec 13 18:23	22° \mathfrak{J} 10'50	0°07'12	retrograde	4670 Nov 15 16:53	14° \mathfrak{J} 58'54	
minimum elong	4669 Dec 13 18:12	22° \mathfrak{J} 11'26	0°07'07	evening set	4670 Nov 22 01:08	12° \mathfrak{J} 23'29	
transit middle	4669 Dec 13 18:12	22° \mathfrak{J} 11'26	0°07'07	min. Earth dist.	4670 Nov 26 05:20	8° \mathfrak{J} 01'01	0.66486 AU
transit begin	4669 Dec 13 15:42	22° \mathfrak{J} 19'35		inferior conj	4670 Nov 27 19:21	6° \mathfrak{J} 04'50	-0°50'54
transit end	4669 Dec 13 20:42	22° \mathfrak{J} 03'18		minimum elong	4670 Nov 27 20:44	6° \mathfrak{J} 00'37	0°50'18
morning rise	4669 Dec 19 08:08	16° \mathfrak{J} 13'46		asc. node	4670 Nov 30 06:58	3° \mathfrak{J} 10'41	
direct	4669 Dec 22 19:29	15° \mathfrak{J} 04'14		morning rise	4670 Dec 03 16:54	0° \mathfrak{J} 17'27	
morning max el	4669 Dec 30 00:28	19° \mathfrak{J} 06'45	19°29'16		4670 Dec 04 06:18	30° \mathfrak{R} \mathfrak{M}	
	4670 Jan 07 16:13	0° \mathfrak{B}		direct	4670 Dec 06 17:54	29° \mathfrak{M} 24'58	
greatest brilliancy	4670 Jan 12 03:35	6° \mathfrak{B} 32'33	-0.7m		4670 Dec 09 06:59	0° \mathfrak{J}	
desc. node	4670 Jan 19 01:07	17° \mathfrak{B} 00'22		morning max el	4670 Dec 13 10:36	3° \mathfrak{J} 05'09	18°39'41
morning set	4670 Jan 23 15:59	24° \mathfrak{B} 07'12			4671 Jan 01 04:05	0° \mathfrak{B}	
	4670 Jan 27 11:03	0° \approx		morning set	4671 Jan 03 08:53	3° \mathfrak{B} 28'39	
max. Earth dist.	4670 Feb 05 09:46	14° \approx 01'05	1.44608 AU	desc. node	4671 Jan 05 22:07	7° \mathfrak{B} 30'29	
				max. Earth dist.	4671 Jan 19 03:31	28° \mathfrak{B} 17'35	1.45259 AU
superior conj	4670 Feb 09 08:40	20° \approx 18'31	-1°56'36				
minimum elong	4670 Feb 09 01:47	19° \approx 51'01	1°56'11	superior conj	4671 Jan 19 13:54	28° \mathfrak{B} 58'17	-1°25'21
	4670 Feb 15 08:31	0° \mathfrak{H}		minimum elong	4671 Jan 19 04:38	28° \mathfrak{B} 21'58	1°24'22
evening rise	4670 Feb 23 09:14	13° \mathfrak{H} 17'52			4671 Jan 20 05:38	0° \approx	
	4670 Mar 05 10:55	0° Υ		evening rise	4671 Feb 04 04:37	23° \approx 40'14	
asc. node	4670 Mar 11 09:15	8° Υ 42'55			4671 Feb 08 03:30	0° \mathfrak{H}	
evening max el	4670 Mar 14 07:23	12° Υ 05'58	18°19'46	greatest brilliancy	4671 Feb 12 03:32	6° \mathfrak{H} 23'16	-0.9m
retrograde	4670 Mar 20 17:56	15° Υ 33'53		evening max el	4671 Feb 25 18:14	25° \mathfrak{H} 34'37	18°50'39
evening set	4670 Mar 23 18:03	14° Υ 45'02		asc. node	4671 Feb 26 06:16	26° \mathfrak{H} 04'26	
inferior conj	4670 Mar 29 16:26	9° Υ 20'35	3°33'48	retrograde	4671 Mar 04 11:46	29° \mathfrak{H} 20'20	
minimum elong	4670 Mar 29 16:50	9° Υ 19'26	3°33'46	evening set	4671 Mar 07 18:26	28° \mathfrak{H} 18'33	
min. Earth dist.	4670 Apr 01 02:01	6° Υ 37'19	0.63907 AU	inferior conj	4671 Mar 13 09:35	22° \mathfrak{H} 36'49	3°30'52
morning rise	4670 Apr 04 14:44	3° Υ 11'17		minimum elong	4671 Mar 13 08:34	22° \mathfrak{H} 39'58	3°30'47

min. Earth dist.	4671 Mar 15 03:28	20° H 27'01	0.65556 AU	morning rise	4672 Mar 01 16:31	29° \approx 53'35	
morning rise	4671 Mar 18 22:16	16° H 23'39			4672 Mar 01 13:42	30° R \approx	
direct	4671 Mar 25 11:55	13° H 33'24		direct	4672 Mar 07 18:47	27° \approx 10'37	
desc. node	4671 Apr 03 21:21	17° H 52'11			4672 Mar 14 21:50	0° H	
morning max el	4671 Apr 07 14:57	21° H 18'06	26°48'37	morning max el	4672 Mar 20 00:25	4° H 28'27	25°36'53
	4671 Apr 15 04:14	0° Y		desc. node	4672 Mar 20 18:22	5° H 14'36	
	4671 May 05 02:23	0° B			4672 Apr 08 13:46	0° Y	
morning set	4671 May 13 11:31	15° B 11'45		morning set	4672 Apr 25 05:31	27° Y 45'19	
max. Earth dist.	4671 May 17 18:40	23° B 36'09	1.34292 AU		4672 Apr 26 10:52	0° B	
	4671 May 20 22:10	0° II		max. Earth dist.	4672 Apr 28 23:39	4° B 44'39	1.35973 AU
superior conj	4671 May 22 01:26	2° II 21'15	-0°32'23	superior conj	4672 May 04 17:44	15° B 58'43	-1°01'54
minimum elong	4671 May 22 03:10	2° II 30'15	0°32'02	minimum elong	4672 May 04 21:07	16° B 15'40	1°01'19
asc. node	4671 May 25 05:34	9° II 00'19		asc. node	4672 May 11 02:36	28° B 56'42	
evening rise	4671 May 29 12:50	18° II 03'28			4672 May 11 14:58	0° II	
	4671 Jun 04 12:03	0° E		evening rise	4672 May 12 18:51	2° II 22'15	
evening max el	4671 Jun 18 04:24	20° E 02'17	21°17'02		4672 May 29 07:37	0° E	
retrograde	4671 Jun 30 04:52	25° E 57'25		evening max el	4672 May 30 11:53	1° E 12'55	19°59'57
desc. node	4671 Jun 30 20:37	25° E 56'24		retrograde	4672 Jun 09 19:52	6° E 15'49	
evening set	4671 Jul 02 12:38	25° E 44'56		evening set	4672 Jun 11 18:16	6° E 05'59	
inferior conj	4671 Jul 11 21:23	21° E 46'17	-3°09'00	desc. node	4672 Jun 16 17:38	4° E 22'16	
minimum elong	4671 Jul 11 13:13	21° E 57'43	3°06'25	inferior conj	4672 Jun 20 18:10	2° E 05'51	-1°11'54
min. Earth dist.	4671 Jul 12 03:34	21° E 37'37	0.54806 AU	minimum elong	4672 Jun 20 14:49	2° E 10'55	1°10'40
morning rise	4671 Jul 20 14:25	17° E 50'31		min. Earth dist.	4672 Jun 22 15:56	0° E 56'55	0.55233 AU
direct	4671 Jul 24 01:59	17° E 24'21			4672 Jun 24 07:22	30° R II	
morning max el	4671 Aug 05 17:15	23° E 23'42	22°24'29	morning rise	4672 Jun 29 09:36	27° II 44'55	
	4671 Aug 11 14:09	0° O		direct	4672 Jul 03 14:29	27° II 06'22	
asc. node	4671 Aug 21 04:48	15° O 23'42			4672 Jul 12 11:17	0° E	
morning set	4671 Aug 27 13:37	28° O 06'42		morning max el	4672 Jul 17 08:15	3° E 52'14	24°08'08
	4671 Aug 28 11:09	0° P			4672 Aug 04 14:09	0° O	
superior conj	4671 Sep 03 16:41	13° P 16'42	1°41'08	asc. node	4672 Aug 07 01:50	4° O 49'09	
minimum elong	4671 Sep 03 15:34	13° P 10'49	1°41'05	morning set	4672 Aug 11 01:19	13° O 00'10	
max. Earth dist.	4671 Sep 07 00:16	20° P 13'05	1.34236 AU	superior conj	4672 Aug 18 00:30	28° O 03'42	1°32'28
evening rise	4671 Sep 11 15:42	29° P 32'39		minimum elong	4672 Aug 17 22:33	27° O 53'10	1°32'16
	4671 Sep 11 21:19	0° A			4672 Aug 18 21:59	0° P	
desc. node	4671 Sep 26 19:55	26° A 06'51		max. Earth dist.	4672 Aug 20 01:19	2° P 27'05	1.33062 AU
	4671 Sep 29 09:08	0° M		evening rise	4672 Aug 25 09:43	13° P 37'21	
evening max el	4671 Oct 16 11:26	21° M 22'21	27°05'33		4672 Sep 03 00:50	0° A	
retrograde	4671 Oct 29 18:26	28° M 39'37		desc. node	4672 Sep 12 16:58	15° A 44'17	
evening set	4671 Nov 05 14:16	25° M 59'03			4672 Sep 23 13:00	0° M	
min. Earth dist.	4671 Nov 09 12:04	22° M 12'10	0.65261 AU	evening max el	4672 Sep 27 22:46	4° M 36'00	27°26'24
inferior conj	4671 Nov 11 14:00	19° M 51'38	-1°52'25	retrograde	4672 Oct 11 13:53	11° M 53'14	
minimum elong	4671 Nov 11 17:12	19° M 42'36	1°51'06	evening set	4672 Oct 18 17:08	9° M 16'18	
asc. node	4671 Nov 17 04:00	14° M 40'03		min. Earth dist.	4672 Oct 22 09:42	6° M 02'36	0.63685 AU
morning rise	4671 Nov 17 21:07	14° M 17'02		inferior conj	4672 Oct 24 23:45	3° M 24'46	-2°55'03
direct	4671 Nov 20 13:58	13° M 37'48		minimum elong	4672 Oct 25 04:44	3° M 12'03	2°53'16
morning max el	4671 Nov 27 01:29	17° M 05'50	18°06'44		4672 Oct 28 15:12	30° R A	
	4671 Dec 06 12:38	0° J		morning rise	4672 Oct 31 17:47	28° A 06'15	
morning set	4671 Dec 15 07:20	14° J 19'25		direct	4672 Nov 03 04:52	27° A 36'39	
desc. node	4671 Dec 23 19:09	28° J 10'09		asc. node	4672 Nov 03 01:02	27° A 36'46	
	4671 Dec 24 22:29	0° S			4672 Nov 08 15:34	0° M	
superior conj	4671 Dec 29 19:18	7° S 45'37	-0°40'41	morning max el	4672 Nov 09 18:19	1° M 01'36	17°51'05
minimum elong	4671 Dec 29 14:15	7° S 25'34	0°39'58	morning set	4672 Nov 26 08:30	26° M 27'41	
max. Earth dist.	4672 Jan 01 23:16	12° S 45'18	1.45164 AU		4672 Nov 28 09:45	0° J	
	4672 Jan 13 00:33	0° \approx		superior conj	4672 Dec 08 19:48	17° J 31'59	0°05'58
evening rise	4672 Jan 15 02:45	3° \approx 14'36		minimum elong	4672 Dec 08 20:27	17° J 34'39	0°05'52
greatest brilliancy	4672 Jan 28 02:08	23° \approx 08'43	-0.7m	behind sun begin	4672 Dec 08 11:18	16° J 57'09	
	4672 Feb 01 18:47	0° H		behind sun end	4672 Dec 09 05:35	18° J 12'04	
evening max el	4672 Feb 09 01:04	9° H 06'27	19°38'08	desc. node	4672 Dec 09 16:13	18° J 55'33	
asc. node	4672 Feb 13 03:17	12° H 24'44		max. Earth dist.	4672 Dec 14 17:30	27° J 04'39	1.44340 AU
retrograde	4672 Feb 16 09:04	13° H 20'28			4672 Dec 16 13:40	0° S	
evening set	4672 Feb 19 23:15	12° H 04'56		evening rise	4672 Dec 24 13:12	12° S 26'34	
inferior conj	4672 Feb 25 09:57	6° H 07'57	3°14'29		4673 Jan 05 04:00	0° \approx	
minimum elong	4672 Feb 25 08:00	6° H 14'26	3°14'10	evening max el	4673 Jan 22 02:39	22° \approx 39'48	20°40'01
min. Earth dist.	4672 Feb 26 12:57	4° H 38'49	0.66789 AU	retrograde	4673 Jan 30 07:23	27° \approx 29'49	

asc. node	4673 Jan 30 00:18	27° \approx 29'21		inferior conj	4674 Jan 23 22:24	3° \approx 39'50	2°11'41
evening set	4673 Feb 03 06:26	25° \approx 59'47		minimum elong	4674 Jan 23 20:03	3° \approx 48'03	2°10'56
inferior conj	4673 Feb 08 14:58	19° \approx 50'15	2°47'29	min. Earth dist.	4674 Jan 23 23:59	3° \approx 34'22	0.68009 AU
minimum elong	4673 Feb 08 12:34	19° \approx 58'30	2°46'53		4674 Jan 26 16:20	30° \approx 3	
min. Earth dist.	4673 Feb 09 04:34	19° \approx 03'36	0.67599 AU	morning rise	4674 Jan 29 01:44	27° \approx 28'21	
morning rise	4673 Feb 13 18:31	13° \approx 36'30		direct	4674 Feb 02 23:32	25° \approx 22'27	
direct	4673 Feb 19 06:58	11° \approx 09'32			4674 Feb 11 13:59	0° \approx	
morning max el	4673 Mar 02 09:09	17° \approx 47'01	24°11'20	morning max el	4674 Feb 12 19:06	1° \approx 10'45	22°42'06
desc. node	4673 Mar 07 15:25	23° \approx 40'13		desc. node	4674 Feb 22 12:28	12° \approx 50'35	
	4673 Mar 12 14:28	0° \approx			4674 Mar 06 12:46	0° \approx	
	4673 Apr 01 15:14	0° \approx		morning set	4674 Mar 18 22:42	19° \approx 32'05	
morning set	4673 Apr 07 03:16	9° \approx 17'26		max. Earth dist.	4674 Mar 23 15:46	27° \approx 25'56	1.40207 AU
max. Earth dist.	4673 Apr 10 20:20	15° \approx 50'10	1.38013 AU		4674 Mar 25 03:39	0° \approx	
superior conj	4673 Apr 17 22:16	28° \approx 58'17	-1°29'48	superior conj	4674 Mar 31 10:42	11° \approx 09'04	-1°52'54
minimum elong	4673 Apr 18 02:56	29° \approx 20'37	1°29'10	minimum elong	4674 Mar 31 15:23	11° \approx 30'23	1°52'30
	4673 Apr 18 11:09	0° \approx		evening rise	4674 Apr 10 08:26	29° \approx 40'08	
evening rise	4673 Apr 26 18:26	16° \approx 17'22			4674 Apr 10 12:37	0° \approx	
asc. node	4673 Apr 27 23:39	18° \approx 40'56		asc. node	4674 Apr 14 20:40	8° \approx 07'25	
	4673 May 04 00:10	0° \approx		evening max el	4674 Apr 26 12:06	25° \approx 34'46	18°25'22
evening max el	4673 May 13 07:24	13° \approx 05'44	19°02'29	retrograde	4674 May 03 23:04	29° \approx 16'20	
retrograde	4673 May 22 00:09	17° \approx 20'47		evening set	4674 May 06 06:54	28° \approx 55'48	
evening set	4673 May 24 01:13	17° \approx 07'40		inferior conj	4674 May 13 16:43	24° \approx 22'25	2°06'14
inferior conj	4673 Jun 01 06:48	12° \approx 53'51	0°40'35	minimum elong	4674 May 13 20:16	24° \approx 15'14	2°05'13
minimum elong	4673 Jun 01 08:24	12° \approx 51'04	0°40'01	min. Earth dist.	4674 May 17 03:12	21° \approx 36'23	0.58473 AU
desc. node	4673 Jun 03 14:38	11° \approx 16'57		morning rise	4674 May 21 06:30	18° \approx 53'14	
min. Earth dist.	4673 Jun 04 07:25	10° \approx 48'40	0.56546 AU	desc. node	4674 May 21 11:40	18° \approx 46'39	
morning rise	4673 Jun 09 12:20	7° \approx 56'59		direct	4674 May 27 07:43	17° \approx 17'25	
direct	4673 Jun 14 15:55	6° \approx 54'26		morning max el	4674 Jun 10 17:05	25° \approx 00'55	27°01'57
morning max el	4673 Jun 28 22:34	14° \approx 15'56	25°45'51		4674 Jun 15 07:19	0° \approx	
	4673 Jul 11 10:17	0° \approx			4674 Jul 04 15:27	0° \approx	
asc. node	4673 Jul 24 22:54	24° \approx 33'23		morning set	4674 Jul 10 22:10	12° \approx 35'14	
morning set	4673 Jul 26 12:42	27° \approx 51'23		asc. node	4674 Jul 11 19:58	14° \approx 30'27	
	4673 Jul 27 12:51	0° \approx		superior conj	4674 Jul 17 23:06	27° \approx 52'15	1°00'18
superior conj	4673 Aug 02 11:15	12° \approx 57'38	1°18'37	minimum elong	4674 Jul 17 20:54	27° \approx 40'09	0°59'54
minimum elong	4673 Aug 02 08:57	12° \approx 44'58	1°18'17	max. Earth dist.	4674 Jul 17 20:05	27° \approx 35'37	1.31979 AU
max. Earth dist.	4673 Aug 03 08:59	14° \approx 56'57	1.32312 AU		4674 Jul 18 22:13	0° \approx	
evening rise	4673 Aug 09 11:45	28° \approx 04'19		evening rise	4674 Jul 24 19:12	12° \approx 45'38	
	4673 Aug 10 10:10	0° \approx			4674 Aug 02 12:54	0° \approx	
	4673 Aug 27 07:16	0° \approx		desc. node	4674 Aug 17 10:59	22° \approx 47'25	
desc. node	4673 Aug 30 13:59	4° \approx 42'57		evening max el	4674 Aug 23 08:20	29° \approx 12'44	26°32'39
evening max el	4673 Sep 10 06:30	17° \approx 16'09	27°16'14		4674 Aug 24 04:47	0° \approx	
retrograde	4673 Sep 24 02:36	24° \approx 30'06		retrograde	4674 Sep 06 07:10	6° \approx 22'09	
evening set	4673 Oct 01 06:06	22° \approx 08'39		evening set	4674 Sep 13 00:33	4° \approx 28'52	
min. Earth dist.	4673 Oct 04 21:00	19° \approx 20'44	0.61812 AU	min. Earth dist.	4674 Sep 16 22:01	1° \approx 53'25	0.59762 AU
inferior conj	4673 Oct 07 21:34	16° \approx 36'50	-3°54'47		4674 Sep 19 07:44	30° \approx 17	
minimum elong	4673 Oct 08 03:41	16° \approx 23'00	3°53'04	inferior conj	4674 Sep 20 04:04	29° \approx 19'25	-4°44'33
morning rise	4673 Oct 15 03:07	11° \approx 37'34		minimum elong	4674 Sep 20 09:32	29° \approx 08'34	4°43'36
direct	4673 Oct 17 11:14	11° \approx 14'10		morning rise	4674 Sep 27 20:36	24° \approx 41'59	
asc. node	4673 Oct 20 22:06	12° \approx 07'02		direct	4674 Sep 30 05:09	24° \approx 21'53	
morning max el	4673 Oct 24 09:53	14° \approx 44'31	17°53'32	asc. node	4674 Oct 07 19:10	28° \approx 02'04	
	4673 Nov 03 21:56	0° \approx		morning max el	4674 Oct 07 20:55	28° \approx 06'16	18°15'22
morning set	4673 Nov 09 05:51	9° \approx 33'16		morning set	4674 Oct 09 15:34	0° \approx	
					4674 Oct 23 17:39	23° \approx 20'06	
superior conj	4673 Nov 19 22:42	28° \approx 35'24	0°45'33		4674 Oct 27 06:03	0° \approx	
minimum elong	4673 Nov 20 02:21	28° \approx 51'07	0°45'02	superior conj	4674 Nov 02 02:04	10° \approx 50'00	1°14'35
	4673 Nov 20 18:24	0° \approx		minimum elong	4674 Nov 02 05:57	11° \approx 07'39	1°14'09
desc. node	4673 Nov 26 13:16	9° \approx 42'50		max. Earth dist.	4674 Nov 09 16:24	24° \approx 12'34	1.41020 AU
max. Earth dist.	4673 Nov 27 07:23	10° \approx 57'11	1.42898 AU	desc. node	4674 Nov 13 10:18	0° \approx 28'55	
evening rise	4673 Dec 04 03:30	21° \approx 54'16			4674 Nov 13 03:17	0° \approx	
	4673 Dec 09 09:11	0° \approx		evening rise	4674 Nov 14 11:26	2° \approx 12'00	
	4673 Dec 30 12:13	0° \approx			4674 Dec 02 18:19	0° \approx	
evening max el	4674 Jan 04 22:47	6° \approx 14'16	21°52'57	evening max el	4674 Dec 18 14:37	19° \approx 52'00	23°12'02
retrograde	4674 Jan 14 04:36	11° \approx 44'02		retrograde	4674 Dec 28 23:12	25° \approx 59'58	
asc. node	4674 Jan 16 21:21	11° \approx 05'06		evening set	4675 Jan 02 20:57	23° \approx 58'44	
evening set	4674 Jan 18 14:11	9° \approx 58'38					

































































































































asc. node	4675 Jan 03 18:22	23°30'51"		asc. node	4675 Dec 21 15:25	4°30'11"	
inferior conj	4675 Jan 08 06:22	17°33'42"	1°28'23"	min. Earth dist.	4675 Dec 22 16:33	2°39'04"	0.67716 AU
minimum elong	4675 Jan 08 04:31	17°34'04"	1°27'40"	inferior conj	4675 Dec 23 13:03	1°30'39"	0°38'31"
min. Earth dist.	4675 Jan 07 20:46	18°30'27"	0.68044 AU	minimum elong	4675 Dec 23 12:08	1°33'43"	0°38'08"
morning rise	4675 Jan 13 11:59	11°32'57"			4675 Dec 24 16:30	30°R21	
direct	4675 Jan 17 19:30	9°34'54"		morning rise	4675 Dec 28 23:14	25°29'20"	
morning max el	4675 Jan 26 10:03	14°34'35"	21°17'56"	direct	4676 Jan 01 17:31	24°28'18"	
	4675 Feb 07 14:15	0°		morning max el	4676 Jan 09 08:38	28°28'03"	20°04'54"
desc. node	4675 Feb 09 09:30	2°33'23"			4676 Jan 10 19:33	0°30'	
morning set	4675 Feb 26 13:38	28°26'57"		desc. node	4676 Jan 27 06:32	22°39'21"	
	4675 Feb 27 13:10	0°			4676 Feb 01 02:58	0°	
max. Earth dist.	4675 Mar 05 17:14	9°57'03"	1.42273 AU	morning set	4676 Feb 05 10:40	6°37'50"	
				max. Earth dist.	4676 Feb 16 02:42	23°22'16"	1.43924 AU
					4676 Feb 20 05:23	0°	
superior conj	4675 Mar 13 02:05	22°20'01"	-2°06'43"	superior conj	4676 Feb 21 16:16	2°22'20"	-2°05'46"
minimum elong	4675 Mar 13 04:18	22°29'30"	2°06'39"	minimum elong	4676 Feb 21 12:55	2°08'38"	2°05'40"
	4675 Mar 17 11:36	0°		evening rise	4676 Mar 05 15:49	24°14'30"	
evening rise	4675 Mar 24 09:01	12°22'07"			4676 Mar 08 23:58	0°	
asc. node	4675 Apr 01 17:41	27°10'18"		asc. node	4676 Mar 18 14:42	15°42'02"	
	4675 Apr 03 11:26	0°		evening max el	4676 Mar 23 11:13	21°45'05"	18°10'06"
evening max el	4675 Apr 09 22:29	8°30'51"	18°08'05"	retrograde	4676 Mar 29 21:26	25°08'11"	
retrograde	4675 Apr 16 15:33	11°55'33"		evening set	4676 Apr 01 18:04	24°26'15"	
evening set	4675 Apr 19 06:08	11°25'00"		inferior conj	4676 Apr 07 22:05	19°12'07"	3°27'49"
inferior conj	4675 Apr 25 23:02	6°30'45"	3°00'28"	minimum elong	4676 Apr 07 23:27	19°08'26"	3°27'41"
minimum elong	4675 Apr 26 02:00	6°23'45"	2°59'54"	min. Earth dist.	4676 Apr 10 16:08	16°16'09"	0.62790 AU
min. Earth dist.	4675 Apr 29 05:20	3°27'39"	0.60662 AU	morning rise	4676 Apr 14 03:35	13°07'08"	
morning rise	4675 May 02 19:42	0°39'02"		direct	4676 Apr 21 00:22	10°31'33"	
	4675 May 03 21:58	30°R1		desc. node	4676 Apr 24 05:43	11°02'20"	
desc. node	4675 May 08 08:41	28°32'55"		morning max el	4676 May 05 00:32	18°30'56"	27°50'08"
direct	4675 May 09 11:19	28°29'23"			4676 May 14 16:33	0°	
	4675 May 15 07:52	0°			4676 Jun 02 08:20	0°	
morning max el	4675 May 23 17:58	6°24'32"	27°44'52"	morning set	4676 Jun 08 03:45	11°15'43"	
	4675 Jun 10 11:50	0°		max. Earth dist.	4676 Jun 13 13:32	22°31'09"	1.32574 AU
morning set	4675 Jun 25 03:52	27°05'25"		asc. node	4676 Jun 14 14:00	24°42'27"	
	4675 Jun 26 13:21	0°		superior conj	4676 Jun 15 18:53	27°18'30"	0°12'33"
asc. node	4675 Jun 28 16:59	4°34'49"		minimum elong	4676 Jun 15 18:17	27°15'15"	0°12'25"
max. Earth dist.	4675 Jul 01 06:54	10°11'11"	1.32064 AU	behind sun begin	4676 Jun 15 15:00	26°15'23"	
				behind sun end	4676 Jun 15 21:35	27°33'08"	
superior conj	4675 Jul 02 10:13	12°41'01"	0°38'04"		4676 Jun 17 00:37	0°	
minimum elong	4675 Jul 02 08:36	12°32'09"	0°37'44"	evening rise	4676 Jun 22 17:37	12°21'24"	
evening rise	4675 Jul 09 05:47	27°33'25"			4676 Jul 01 15:53	0°	
	4675 Jul 10 09:31	0°		evening max el	4676 Jul 16 15:28	20°50'35"	23°45'28"
	4675 Jul 27 08:45	0°		desc. node	4676 Jul 21 04:58	24°35'37"	
desc. node	4675 Aug 04 08:00	9°34'53"		retrograde	4676 Jul 30 07:37	27°42'46"	
evening max el	4675 Aug 05 02:36	10°20'19"	25°18'47"	evening set	4676 Aug 03 15:24	27°01'37"	
retrograde	4675 Aug 19 01:21	17°24'24"		min. Earth dist.	4676 Aug 10 01:32	23°58'07"	0.56043 AU
evening set	4675 Aug 24 19:42	16°07'53"		inferior conj	4676 Aug 12 07:07	22°37'21"	-5°04'02"
min. Earth dist.	4675 Aug 29 14:19	13°27'09"	0.57742 AU	minimum elong	4676 Aug 12 02:44	22°43'59"	5°03'34"
inferior conj	4675 Sep 01 15:44	11°21'37"	-5°12'55"	morning rise	4676 Aug 20 16:34	18°41'38"	
minimum elong	4675 Sep 01 17:34	11°18'28"	5°12'50"	direct	4676 Aug 23 11:47	18°21'54"	
morning rise	4675 Sep 09 17:43	7°07'04"		morning max el	4676 Sep 02 16:13	23°05'52"	20°02'55"
direct	4675 Sep 12 06:15	6°47'56"			4676 Sep 08 12:06	0°	
morning max el	4675 Sep 20 23:57	10°56'14"	18°58'11"	asc. node	4676 Sep 10 13:16	3°04'41"	
asc. node	4675 Sep 24 16:13	15°06'09"		morning set	4676 Sep 20 19:51	22°08'31"	
	4675 Oct 03 17:31	0°			4676 Sep 24 16:05	0°	
morning set	4675 Oct 07 15:23	7°34'47"		superior conj	4676 Sep 28 13:09	7°52'02"	1°42'12"
				minimum elong	4676 Sep 28 14:12	7°57'18"	1°42'10"
superior conj	4675 Oct 16 00:35	24°00'17"	1°33'04"	max. Earth dist.	4676 Oct 04 03:22	18°47'08"	1.36885 AU
minimum elong	4675 Oct 16 03:15	24°13'04"	1°32'52"	evening rise	4676 Oct 07 22:49	25°51'01"	
	4675 Oct 19 04:48	0°			4676 Oct 10 06:33	0°	
max. Earth dist.	4675 Oct 22 21:48	6°46'09"	1.38932 AU	desc. node	4676 Oct 17 04:18	11°40'23"	
evening rise	4675 Oct 26 18:15	13°31'40"			4676 Oct 29 08:59	0°	
desc. node	4675 Oct 31 07:19	21°09'29"		evening max el	4676 Nov 12 16:13	17°15'29"	25°43'33"
	4675 Nov 05 20:22	0°		retrograde	4676 Nov 25 00:13	24°18'49"	
	4675 Nov 27 19:25	0°					
evening max el	4675 Dec 01 03:51	3°32'54"	24°31'15"				
retrograde	4675 Dec 12 13:59	10°13'10"					
evening set	4675 Dec 18 01:07	7°56'27"					

evening set	4676 Dec 01 01:03	21° ♊ 48'48		desc. node	4677 Oct 04 01:19	1° ♋ 56'32	
min. Earth dist.	4676 Dec 05 09:04	17° ♊ 06'14	0.67035 AU		4677 Oct 25 06:17	0° ♊	
inferior conj	4676 Dec 06 16:38	15° ♊ 26'02	-0°16'57	evening max el	4677 Oct 26 04:48	0° ♊ 55'18	26°41'36
minimum elong	4676 Dec 06 17:05	15° ♊ 24'38	0°16'45	retrograde	4677 Nov 08 05:20	8° ♊ 10'58	
asc. node	4676 Dec 07 12:28	14° ♊ 23'34		evening set	4677 Nov 14 18:50	5° ♊ 32'13	
morning rise	4676 Dec 12 09:31	9° ♊ 33'03		min. Earth dist.	4677 Nov 18 20:06	1° ♊ 25'04	0.66001 AU
direct	4676 Dec 15 16:12	8° ♊ 31'19			4677 Nov 20 00:55	30° ♋	
morning max el	4676 Dec 22 15:03	12° ♊ 22'45	19°06'15	inferior conj	4677 Nov 20 15:13	29° ♋ 17'31	-1°16'43
	4677 Jan 04 16:48	0° ♋		minimum elong	4677 Nov 20 17:21	29° ♋ 11'11	1°15'48
desc. node	4677 Jan 13 03:33	13° ♋ 01'54		asc. node	4677 Nov 24 09:31	25° ♋ 14'31	
morning set	4677 Jan 14 13:59	15° ♋ 15'47		morning rise	4677 Nov 26 16:40	23° ♋ 35'20	
	4677 Jan 24 00:46	0° ♋		direct	4677 Nov 29 13:48	22° ♋ 49'08	
max. Earth dist.	4677 Jan 28 18:06	7° ♋ 24'32	1.44968 AU	morning max el	4677 Dec 06 03:37	26° ♋ 23'16	18°23'38
					4677 Dec 09 07:13	0° ♋	
superior conj	4677 Jan 31 06:23	11° ♋ 22'18	-1°45'35	morning set	4677 Dec 25 19:13	25° ♋ 14'44	
minimum elong	4677 Jan 30 21:39	10° ♋ 47'49	1°44'52		4677 Dec 28 18:22	0° ♋	
	4677 Feb 11 20:58	0° ♋		desc. node	4677 Dec 31 00:35	3° ♋ 36'29	
evening rise	4677 Feb 15 00:45	5° ♋ 09'49					
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asc. node	4677 Mar 05 11:44	3° ♌ 32'22		minimum elong	4678 Jan 10 01:02	19° ♋ 26'43	1°06'25
evening max el	4677 Mar 06 23:22	5° ♌ 09'29	18°30'44	max. Earth dist.	4678 Jan 11 12:41	21° ♋ 46'31	1.45301 AU
retrograde	4677 Mar 13 12:02	8° ♌ 44'00			4678 Jan 16 18:42	0° ♋	
evening set	4677 Mar 16 14:47	7° ♌ 49'48		evening rise	4678 Jan 26 10:29	15° ♋ 09'36	
inferior conj	4677 Mar 22 09:41	2° ♌ 17'35	3°34'25		4678 Feb 04 21:17	0° ♋	
minimum elong	4677 Mar 22 09:26	2° ♌ 18'19	3°34'25	greatest brilliancy	4678 Feb 05 18:39	1° ♋ 22'50	-0.8m
	4677 Mar 24 08:08	30° ♋		evening max el	4678 Feb 18 08:42	18° ♋ 39'39	19°08'57
min. Earth dist.	4677 Mar 24 12:32	29° ♋ 47'14	0.64648 AU	asc. node	4678 Feb 20 08:46	20° ♋ 29'37	
morning rise	4677 Mar 28 03:26	26° ♋ 05'56		retrograde	4678 Feb 25 07:44	22° ♋ 36'35	
direct	4677 Apr 03 21:23	23° ♋ 17'04		evening set	4678 Feb 28 17:20	21° ♋ 29'15	
desc. node	4677 Apr 11 02:45	25° ♋ 51'27		inferior conj	4678 Mar 06 06:18	15° ♋ 40'51	3°25'22
	4677 Apr 16 04:59	0° ♌		minimum elong	4678 Mar 06 04:49	15° ♋ 45'35	3°25'12
morning max el	4677 Apr 17 10:11	1° ♌ 11'30	27°19'44	min. Earth dist.	4678 Mar 07 17:47	13° ♋ 47'31	0.66128 AU
	4677 May 08 19:08	0° ♌		morning rise	4678 Mar 11 15:57	9° ♋ 26'41	
morning set	4677 May 22 19:02	24° ♌ 57'07		direct	4678 Mar 18 01:12	6° ♋ 37'56	
	4677 May 25 08:10	0° ♌		desc. node	4678 Mar 28 23:47	12° ♋ 26'33	
max. Earth dist.	4677 May 27 11:54	4° ♌ 23'11	1.33530 AU	morning max el	4678 Mar 30 20:08	14° ♋ 13'53	26°20'24
					4678 Apr 12 16:18	0° ♌	
superior conj	4677 May 30 23:07	11° ♌ 37'56	-0°15'30		4678 May 01 13:09	0° ♌	
minimum elong	4677 May 30 23:55	11° ♌ 42'11	0°15'21	morning set	4678 May 05 22:08	7° ♌ 59'13	
behind sun begin	4677 May 30 22:22	11° ♌ 33'57		max. Earth dist.	4678 May 09 22:56	15° ♌ 42'55	1.34952 AU
behind sun end	4677 May 31 01:28	11° ♌ 50'24					
asc. node	4677 Jun 01 11:01	14° ♌ 48'41		superior conj	4678 May 14 20:36	25° ♌ 32'58	-0°44'56
evening rise	4677 Jun 07 04:45	27° ♌ 02'37		minimum elong	4678 May 14 23:02	25° ♌ 45'28	0°44'29
	4677 Jun 08 14:43	0° ♍			4678 May 17 00:24	0° ♌	
	4677 Jun 27 01:20	0° ♍		asc. node	4678 May 19 08:03	4° ♌ 49'44	
evening max el	4677 Jun 28 06:17	1° ♍ 13'38	22°08'37	evening rise	4678 May 22 13:15	11° ♌ 31'12	
desc. node	4677 Jul 08 01:59	7° ♍ 14'38			4678 Jun 01 06:08	0° ♍	
retrograde	4677 Jul 11 02:19	7° ♍ 35'45		evening max el	4678 Jun 10 06:48	12° ♍ 02'16	20°42'01
evening set	4677 Jul 13 23:20	7° ♍ 17'22		retrograde	4678 Jun 21 14:55	17° ♍ 35'22	
min. Earth dist.	4677 Jul 22 11:47	3° ♍ 37'20	0.55000 AU	evening set	4678 Jun 23 16:24	17° ♍ 25'06	
inferior conj	4677 Jul 23 05:53	3° ♍ 11'52	-4°04'49	desc. node	4678 Jun 24 23:01	17° ♍ 08'58	
minimum elong	4677 Jul 22 21:17	3° ♍ 23'59	4°02'41	inferior conj	4678 Jul 02 23:11	13° ♍ 28'01	-2°20'57
	4677 Jul 29 17:32	30° ♍		minimum elong	4678 Jul 02 16:40	13° ♍ 37'20	2°18'41
morning rise	4677 Jul 31 20:59	29° ♍ 21'33		min. Earth dist.	4678 Jul 03 23:21	12° ♍ 53'25	0.54871 AU
direct	4677 Aug 04 01:05	28° ♍ 59'08		morning rise	4678 Jul 11 16:24	9° ♍ 23'13	
	4677 Aug 09 02:47	0° ♎		direct	4678 Jul 15 10:29	8° ♍ 52'52	
morning max el	4677 Aug 15 20:32	4° ♎ 30'04	21°28'13	morning max el	4678 Jul 28 14:51	15° ♍ 13'43	23°08'12
asc. node	4677 Aug 28 10:18	21° ♎ 44'43			4678 Aug 09 03:25	0° ♎	
	4677 Sep 01 19:15	0° ♎		asc. node	4678 Aug 15 07:20	10° ♎ 55'59	
morning set	4677 Sep 05 04:38	6° ♎ 54'18		morning set	4678 Aug 20 15:45	21° ♎ 46'18	
					4678 Aug 24 12:06	0° ♎	
superior conj	4677 Sep 12 11:38	22° ♎ 12'54	1°43'29				
minimum elong	4677 Sep 12 11:12	22° ♎ 10'42	1°43'28	superior conj	4678 Aug 27 16:46	6° ♎ 52'38	1°38'08
	4677 Sep 16 06:49	0° ♏		minimum elong	4678 Aug 27 15:14	6° ♎ 44'29	1°38'01
max. Earth dist.	4677 Sep 16 14:31	0° ♏ 38'37	1.35092 AU	max. Earth dist.	4678 Aug 30 10:30	12° ♎ 41'38	1.33683 AU
evening rise	4677 Sep 20 21:14	9° ♏ 00'30		evening rise	4678 Sep 04 09:12	22° ♎ 48'22	
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



























































































































desc. node	4678 Sep 20 22:21	21°♄50'37		4679 Aug 31 14:35	0°♄	
	4678 Sep 26 13:00	0°♄		desc. node	4679 Sep 07 19:23	11°♄13'23
evening max el	4678 Oct 08 17:13	14°♄22'35	27°18'01	evening max el	4679 Sep 21 03:39	27°♄24'49 27°26'09
retrograde	4678 Oct 22 04:34	21°♄40'54			4679 Sep 24 02:48	0°♄
evening set	4678 Oct 29 04:00	19°♄00'50		retrograde	4679 Oct 04 21:06	4°♄40'02
min. Earth dist.	4678 Nov 01 23:23	15°♄28'19	0.64623 AU	evening set	4679 Oct 12 01:27	2°♄08'31
inferior conj	4678 Nov 04 06:27	12°♄59'21	-2°19'05		4679 Oct 14 17:36	30°♄
minimum elong	4678 Nov 04 10:26	12°♄48'32	2°17'31	min. Earth dist.	4679 Oct 15 16:51	29°♄06'46 0.62925 AU
morning rise	4678 Nov 10 18:04	7°♄31'00		inferior conj	4679 Oct 18 11:34	26°♄25'04 -3°21'03
asc. node	4678 Nov 11 06:34	7°♄18'32		minimum elong	4679 Oct 18 17:09	26°♄11'28 3°19'13
direct	4678 Nov 13 08:03	6°♄56'23		morning rise	4679 Oct 25 10:26	21°♄13'58
morning max el	4678 Nov 19 19:40	10°♄22'26	17°57'53	direct	4679 Oct 27 19:57	20°♄47'17
	4678 Dec 03 06:17	0°♄		asc. node	4679 Oct 29 03:36	20°♄55'34
morning set	4678 Dec 07 05:46	6°♄40'36		morning max el	4679 Nov 03 12:17	24°♄13'31 17°49'46
desc. node	4678 Dec 17 21:38	24°♄18'40			4679 Nov 08 04:16	0°♄
				morning set	4679 Nov 19 16:20	19°♄15'55
superior conj	4678 Dec 20 20:53	29°♄06'00	-0°20'30		4679 Nov 25 19:38	0°♄
minimum elong	4678 Dec 20 18:25	28°♄56'06	0°20'08	superior conj	4679 Dec 01 08:22	9°♄24'17 0°23'56
	4678 Dec 21 10:22	0°♄		minimum elong	4679 Dec 01 10:41	9°♄34'00 0°23'35
max. Earth dist.	4678 Dec 25 07:45	6°♄11'09	1.44897 AU	desc. node	4679 Dec 04 18:41	15°♄05'07
evening rise	4679 Jan 06 01:55	24°♄29'35		max. Earth dist.	4679 Dec 08 00:47	20°♄22'18 1.43803 AU
	4679 Jan 09 16:01	0°♄			4679 Dec 14 02:31	0°♄
greatest brilliancy	4679 Jan 20 13:38	16°♄26'29	-0.6m	evening rise	4679 Dec 16 12:05	3°♄43'40
	4679 Jan 30 13:22	0°♄			4680 Jan 03 03:30	0°♄
evening max el	4679 Feb 01 13:28	2°♄12'09	20°02'57	evening max el	4680 Jan 15 12:47	15°♄46'00 21°09'58
asc. node	4679 Feb 07 05:49	6°♄19'12		retrograde	4680 Jan 24 03:32	20°♄52'08
retrograde	4679 Feb 09 05:36	6°♄40'28		asc. node	4680 Jan 25 02:52	20°♄47'01
evening set	4679 Feb 12 23:22	5°♄18'59		evening set	4680 Jan 28 06:59	19°♄15'30
	4679 Feb 17 19:59	30°♄		inferior conj	4680 Feb 02 15:11	13°♄01'45 2°33'16
inferior conj	4679 Feb 18 08:56	29°♄16'36	3°04'11	minimum elong	4680 Feb 02 12:45	13°♄10'11 2°32'34
minimum elong	4679 Feb 18 06:43	29°♄24'02	3°03'45	min. Earth dist.	4680 Feb 02 23:31	12°♄33'00 0.67829 AU
min. Earth dist.	4679 Feb 19 06:08	28°♄05'17	0.67188 AU	morning rise	4680 Feb 07 18:21	6°♄49'01
morning rise	4679 Feb 23 13:50	23°♄02'21		direct	4680 Feb 13 00:40	4°♄30'37
direct	4679 Mar 01 10:35	20°♄25'02		morning max el	4680 Feb 23 13:40	10°♄46'53 23°33'13
morning max el	4679 Mar 13 04:54	27°♄27'01	25°01'29	desc. node	4680 Mar 01 17:54	19°♄03'54
desc. node	4679 Mar 15 20:50	0°♄17'50			4680 Mar 09 19:52	0°♄
	4679 Mar 15 14:27	0°♄			4680 Mar 29 03:15	0°♄
	4679 Apr 06 08:32	0°♄		morning set	4680 Mar 29 19:22	1°♄08'06
morning set	4679 Apr 18 08:14	20°♄08'13		max. Earth dist.	4680 Apr 02 18:49	7°♄59'45 1.38946 AU
max. Earth dist.	4679 Apr 21 23:18	26°♄44'13	1.36804 AU			
	4679 Apr 23 17:12	0°♄		superior conj	4680 Apr 10 06:38	21°♄35'27 -1°40'26
superior conj	4679 Apr 28 08:23	8°♄55'32	-1°14'06	minimum elong	4680 Apr 10 11:31	21°♄58'24 1°39'52
minimum elong	4679 Apr 28 12:23	9°♄15'15	1°13'27		4680 Apr 14 16:45	0°♄
asc. node	4679 May 06 05:07	24°♄41'27		evening rise	4680 Apr 19 12:46	9°♄22'39
evening rise	4679 May 06 16:51	25°♄40'31		asc. node	4680 Apr 22 02:09	14°♄18'37
	4679 May 08 20:54	0°♄			4680 May 01 03:57	0°♄
evening max el	4679 May 23 19:46	23°♄31'41	19°33'06	evening max el	4680 May 05 19:33	5°♄40'17 18°44'12
retrograde	4679 Jun 02 10:00	28°♄12'22		retrograde	4680 May 13 22:05	9°♄39'12
evening set	4679 Jun 04 08:47	28°♄01'37		evening set	4680 May 16 02:00	9°♄23'14
desc. node	4679 Jun 11 20:02	24°♄43'27		inferior conj	4680 May 23 22:56	5°♄01'06 1°20'51
inferior conj	4679 Jun 13 01:32	23°♄57'03	-0°21'55	minimum elong	4680 May 24 01:45	4°♄55'52 1°19'54
minimum elong	4679 Jun 13 00:34	23°♄58'36	0°21'33	min. Earth dist.	4680 May 27 05:35	2°♄36'22 0.57307 AU
min. Earth dist.	4679 Jun 15 12:52	22°♄23'05	0.55698 AU	desc. node	4680 May 28 17:04	1°♄36'16
morning rise	4679 Jun 21 13:46	19°♄21'33		morning rise	4680 May 31 22:15	29°♄49'47
direct	4679 Jun 26 04:16	18°♄34'01			4680 May 31 13:21	30°♄
morning max el	4679 Jul 10 04:37	25°♄36'23	24°51'18	direct	4680 Jun 06 11:32	28°♄34'07
	4679 Jul 14 07:48	0°♄			4680 Jun 12 11:45	0°♄
	4679 Aug 01 22:21	0°♄		morning max el	4680 Jun 20 20:11	6°♄05'40 26°21'50
asc. node	4679 Aug 02 04:23	0°♄30'30			4680 Jul 08 10:25	0°♄
morning set	4679 Aug 05 03:32	6°♄39'50		asc. node	4680 Jul 19 01:25	20°♄20'42
				morning set	4680 Jul 19 14:19	21°♄28'38
superior conj	4679 Aug 12 02:06	21°♄43'48	1°27'11		4680 Jul 23 13:09	0°♄
minimum elong	4679 Aug 11 23:57	21°♄32'01	1°26'55	superior conj	4680 Jul 26 13:31	6°♄38'27 1°11'22
max. Earth dist.	4679 Aug 13 14:55	25°♄04'18	1.32697 AU	minimum elong	4680 Jul 26 11:12	6°♄25'41 1°11'00
	4679 Aug 15 21:54	0°♄		max. Earth dist.	4680 Jul 27 00:42	7°♄40'12 1.32123 AU
evening rise	4679 Aug 19 07:04	7°♄04'23				

evening rise	4680 Aug 02 11:41	21°♊38'16		evening rise	4681 Jul 17 20:40	6°♊22'32	
	4680 Aug 06 14:19	0°♎			4681 Jul 30 05:12	0°♎	
desc. node	4680 Aug 24 16:23	29°♎51'11		desc. node	4681 Aug 11 13:22	17°♎25'49	
	4680 Aug 24 19:03	0°♊		evening max el	4681 Aug 15 07:28	21°♎21'33	26°04'21
evening max el	4680 Sep 02 09:09	9°♊47'23	27°01'39	retrograde	4681 Aug 29 06:43	28°♎29'43	
retrograde	4680 Sep 16 06:09	16°♊58'44		evening set	4681 Sep 04 16:05	26°♎51'05	
evening set	4680 Sep 23 07:05	14°♊47'41		min. Earth dist.	4681 Sep 08 20:09	24°♎15'54	0.58884 AU
min. Earth dist.	4680 Sep 26 23:26	12°♊07'16	0.60963 AU	inferior conj	4681 Sep 12 02:01	21°♎51'23	-5°00'06
inferior conj	4680 Sep 30 03:16	9°♊25'31	-4°17'37	minimum elong	4681 Sep 12 06:22	21°♎43'17	4°59'33
minimum elong	4680 Sep 30 09:24	9°♊12'23	4°16'10	morning rise	4681 Sep 19 22:54	17°♎24'12	
morning rise	4680 Oct 07 13:37	4°♊35'18		direct	4681 Sep 22 08:41	17°♎04'49	
direct	4680 Oct 09 21:39	4°♊13'30		morning max el	4681 Sep 30 10:23	20°♎57'48	18°30'59
asc. node	4680 Oct 15 00:39	6°♊03'20		asc. node	4681 Oct 01 21:42	22°♎29'28	
morning max el	4680 Oct 17 02:18	7°♊48'14	18°00'21		4681 Oct 07 08:34	0°♊	
	4680 Oct 31 09:36	0°♌		morning set	4681 Oct 16 12:51	16°♊40'15	
morning set	4680 Nov 01 20:25	2°♌40'41			4681 Oct 23 11:29	0°♌	
superior conj	4680 Nov 11 22:13	20°♌59'34	0°59'12	superior conj	4681 Oct 25 10:24	3°♌39'52	1°23'39
minimum elong	4680 Nov 12 02:14	21°♌17'14	0°58'41	minimum elong	4681 Oct 25 13:52	3°♌56'00	1°23'19
	4680 Nov 17 03:21	0°♌		max. Earth dist.	4681 Nov 01 19:49	16°♌57'44	1.40138 AU
max. Earth dist.	4680 Nov 19 13:02	4°♌01'49	1.42145 AU	evening rise	4681 Nov 06 01:59	24°♌12'26	
desc. node	4680 Nov 20 15:43	5°♌52'09		desc. node	4681 Nov 07 12:41	26°♌36'09	
evening rise	4680 Nov 25 08:37	13°♌29'21			4681 Nov 09 14:42	0°♌	
	4680 Dec 06 02:15	0°♏			4681 Nov 29 22:37	0°♏	
evening max el	4680 Dec 28 06:49	29°♏21'26	22°26'07	evening max el	4681 Dec 10 21:04	12°♏59'40	23°46'07
	4680 Dec 28 22:21	0°♏		retrograde	4681 Dec 21 17:04	19°♏23'09	
retrograde	4681 Jan 06 23:51	5°♏07'54		evening set	4681 Dec 26 20:22	17°♏15'06	
asc. node	4681 Jan 10 23:53	3°♏43'42		asc. node	4681 Dec 28 20:55	15°♏13'26	
evening set	4681 Jan 11 14:31	3°♏15'31		min. Earth dist.	4681 Dec 31 16:22	11°♏38'03	0.67942 AU
	4681 Jan 14 15:49	30°♏		inferior conj	4682 Jan 01 06:41	10°♏49'17	1°07'57
inferior conj	4681 Jan 16 23:03	26°♏53'44	1°54'10	minimum elong	4682 Jan 01 05:10	10°♏54'27	1°07'21
minimum elong	4681 Jan 16 20:51	27°♏01'22	1°53'23	morning rise	4682 Jan 06 13:58	4°♏44'10	
min. Earth dist.	4681 Jan 16 19:42	27°♏05'22	0.68070 AU	direct	4682 Jan 10 15:33	3°♏10'54	
morning rise	4681 Jan 22 03:05	20°♏43'57		morning max el	4682 Jan 18 19:33	7°♏52'46	20°45'13
direct	4681 Jan 26 18:39	18°♏47'59		desc. node	4682 Feb 03 11:57	28°♏22'50	
morning max el	4681 Feb 05 01:29	24°♏14'51	22°05'18		4682 Feb 04 14:26	0°♏	
	4681 Feb 10 03:46	0°♏		morning set	4682 Feb 17 07:28	19°♏16'59	
desc. node	4681 Feb 16 14:56	8°♏29'25			4682 Feb 24 02:09	0°♏	
	4681 Mar 03 06:14	0°♏		max. Earth dist.	4682 Feb 25 21:07	2°♏53'18	1.43034 AU
morning set	4681 Mar 10 02:30	10°♏48'02		superior conj	4682 Mar 04 15:38	14°♏03'55	-2°08'27
max. Earth dist.	4681 Mar 15 16:43	19°♏59'45	1.41118 AU	minimum elong	4682 Mar 04 15:48	14°♏04'35	2°08'27
	4681 Mar 21 12:51	0°♏			4682 Mar 13 21:18	0°♏	
superior conj	4681 Mar 23 10:43	3°♏22'06	-2°00'13	evening rise	4682 Mar 16 15:10	4°♏51'26	
minimum elong	4681 Mar 23 14:44	3°♏39'58	1°59'58	asc. node	4682 Mar 26 20:12	22°♏26'55	
evening rise	4681 Apr 02 21:37	22°♏29'42			4682 Apr 01 06:31	0°♏	
	4681 Apr 06 23:05	0°♏		evening max el	4682 Apr 02 14:44	1°♏26'09	18°06'37
asc. node	4681 Apr 08 23:11	3°♏36'09		retrograde	4682 Apr 09 03:47	4°♏48'33	
evening max el	4681 Apr 19 03:01	18°♏21'33	18°15'33	evening set	4682 Apr 11 20:54	4°♏13'26	
retrograde	4681 Apr 26 05:08	21°♏54'24			4682 Apr 17 11:57	30°♏	
evening set	4681 Apr 28 15:46	21°♏29'57		inferior conj	4682 Apr 18 07:51	29°♏10'49	3°14'56
inferior conj	4681 May 05 17:54	16°♏47'29	2°32'56	minimum elong	4682 Apr 18 10:11	29°♏04'58	3°14'35
minimum elong	4681 May 05 21:25	16°♏39'51	2°32'03	min. Earth dist.	4682 Apr 21 09:43	26°♏07'40	0.61589 AU
min. Earth dist.	4681 May 09 03:51	13°♏51'03	0.59387 AU	morning rise	4682 Apr 24 21:40	23°♏12'14	
morning rise	4681 May 13 00:17	11°♏07'06		direct	4682 May 01 16:35	20°♏49'50	
desc. node	4681 May 15 14:06	9°♏55'40		desc. node	4682 May 02 11:07	20°♏51'36	
direct	4681 May 19 08:28	9°♏16'35		morning max el	4682 May 15 21:10	28°♏48'42	27°51'40
morning max el	4681 Jun 02 17:35	17°♏06'28	27°24'49		4682 May 17 01:04	0°♏	
	4681 Jun 13 09:18	0°♏			4682 Jun 07 06:03	0°♏	
	4681 Jun 30 22:35	0°♏		morning set	4682 Jun 18 01:55	20°♏29'46	
morning set	4681 Jul 03 22:25	6°♏07'17		asc. node	4682 Jun 22 19:30	0°♏27'32	
asc. node	4681 Jul 05 22:28	10°♏21'17			4682 Jun 22 14:23	0°♏	
max. Earth dist.	4681 Jul 10 12:08	20°♏18'39	1.31961 AU	max. Earth dist.	4682 Jun 23 21:27	2°♏47'52	1.32219 AU
superior conj	4681 Jul 11 01:14	21°♏30'53	0°51'18	superior conj	4682 Jun 25 11:32	6°♏15'29	0°27'36
minimum elong	4681 Jul 10 23:14	21°♏19'51	0°50'55	minimum elong	4682 Jun 25 10:18	6°♏08'45	0°27'20
	4681 Jul 14 21:43	0°♏		evening rise	4682 Jul 02 07:59	21°♏10'48	

	4682 Jul 06 14:17	0°♎		superior conj	4683 Jun 09 18:35	20°♊46'13	0°00'55
	4682 Jul 25 19:35	0°♏		minimum elong	4683 Jun 09 18:33	20°♊45'59	0°00'53
evening max el	4682 Jul 27 22:50	2°♏10'46	24°40'40	behind sun begin	4683 Jun 09 13:13	20°♊17'26	
desc. node	4682 Jul 29 10:22	3°♏32'10		behind sun end	4683 Jun 09 23:52	21°♊14'34	
retrograde	4682 Aug 10 20:31	9°♏11'54		asc. node	4683 Jun 09 16:31	20°♊35'05	
evening set	4682 Aug 16 00:49	8°♏11'32			4683 Jun 14 01:09	0°♎	
min. Earth dist.	4682 Aug 21 10:07	5°♏22'45	0.56949 AU	evening rise	4683 Jun 16 19:45	5°♎56'40	
inferior conj	4682 Aug 24 05:04	3°♏34'28	-5°14'47		4683 Jun 29 15:02	0°♎	
minimum elong	4682 Aug 24 04:24	3°♏35'33	5°14'45	evening max el	4683 Jul 09 11:42	12°♎34'24	23°03'53
	4682 Aug 30 17:44	30°♎♎		desc. node	4683 Jul 16 07:23	17°♎37'04	
morning rise	4682 Sep 01 10:26	29°♎28'49		retrograde	4683 Jul 22 21:16	19°♎15'45	
direct	4682 Sep 04 01:17	29°♎09'46		evening set	4683 Jul 26 13:11	18°♎46'26	
	4682 Sep 08 03:57	0°♏		min. Earth dist.	4683 Aug 02 20:42	15°♎29'05	0.55497 AU
morning max el	4682 Sep 13 09:13	3°♏32'18	19°23'05	inferior conj	4683 Aug 04 12:32	14°♎31'19	-4°45'22
asc. node	4682 Sep 18 18:44	9°♏58'46		minimum elong	4683 Aug 04 05:44	14°♎41'13	4°44'14
	4682 Sep 30 00:55	0°♎		morning rise	4683 Aug 13 00:32	10°♎39'44	
morning set	4682 Sep 30 13:50	1°♎04'25		direct	4683 Aug 15 23:20	10°♎19'03	
				morning max el	4683 Aug 26 20:16	15°♎22'21	20°36'55
superior conj	4682 Oct 08 15:31	17°♎10'04	1°37'59	asc. node	4683 Sep 05 15:47	28°♎16'23	
minimum elong	4682 Oct 08 17:31	17°♎19'48	1°37'52		4683 Sep 06 16:08	0°♏	
max. Earth dist.	4682 Oct 15 00:21	29°♎14'29	1.38038 AU	morning set	4683 Sep 14 20:27	15°♏44'13	
	4682 Oct 15 10:18	0°♏			4683 Sep 21 18:00	0°♎	
evening rise	4682 Oct 18 18:33	5°♏59'32					
desc. node	4682 Oct 25 09:41	17°♏13'41		superior conj	4683 Sep 22 08:45	1°♎15'23	1°43'38
	4682 Nov 02 13:54	0°♏		minimum elong	4683 Sep 22 09:08	1°♎17'22	1°43'37
evening max el	4682 Nov 23 09:50	26°♏42'29	25°03'18	max. Earth dist.	4683 Sep 27 07:54	11°♎09'21	1.36083 AU
	4682 Nov 27 02:49	0°♎		evening rise	4683 Oct 01 07:18	18°♎41'56	
retrograde	4682 Dec 05 06:08	3°♎34'12			4683 Oct 07 15:48	0°♏	
evening set	4682 Dec 10 22:58	1°♎11'41		desc. node	4683 Oct 12 06:43	7°♏39'18	
	4682 Dec 12 05:29	30°♏♏			4683 Oct 27 17:50	0°♏	
min. Earth dist.	4682 Dec 15 11:13	26°♏08'42	0.67469 AU	evening max el	4683 Nov 05 22:30	10°♏25'48	26°10'28
asc. node	4682 Dec 15 17:57	25°♏46'41		retrograde	4683 Nov 18 14:08	17°♏34'59	
inferior conj	4682 Dec 16 12:19	24°♏46'26	0°15'37	evening set	4683 Nov 24 20:32	15°♏00'51	
minimum elong	4682 Dec 16 11:55	24°♏47'43	0°15'28	min. Earth dist.	4683 Nov 29 01:44	10°♏33'10	0.66643 AU
transit middle	4682 Dec 16 11:55	24°♏47'43	0°15'28	inferior conj	4683 Nov 30 14:03	8°♏41'04	-0°41'49
transit begin	4682 Dec 16 11:06	24°♏50'24		minimum elong	4683 Nov 30 15:10	8°♏37'36	0°41'19
transit end	4682 Dec 16 12:45	24°♏45'01		asc. node	4683 Dec 02 15:00	6°♏14'43	
morning rise	4682 Dec 22 01:04	18°♏48'05		morning rise	4683 Dec 06 10:20	2°♏52'07	
direct	4682 Dec 25 14:10	17°♏35'36		direct	4683 Dec 09 12:47	1°♏57'18	
morning max el	4683 Jan 01 21:31	21°♏42'11	19°37'56	morning max el	4683 Dec 16 06:46	5°♏39'54	18°46'03
	4683 Jan 08 17:28	0°♎			4684 Jan 02 11:17	0°♎	
greatest brilliancy	4683 Jan 14 23:24	8°♎57'58	-0.7m	morning set	4684 Jan 06 16:56	6°♎39'30	
desc. node	4683 Jan 21 08:58	18°♎36'49		desc. node	4684 Jan 08 06:01	9°♎05'18	
morning set	4683 Jan 27 03:53	27°♎29'53			4684 Jan 21 13:53	0°♏	
	4683 Jan 28 18:43	0°♏		max. Earth dist.	4684 Jan 22 02:29	0°♏49'24	1.45210 AU
max. Earth dist.	4683 Feb 08 08:59	16°♏34'57	1.44456 AU				
				superior conj	4684 Jan 23 01:59	2°♏21'42	-1°31'12
superior conj	4683 Feb 12 18:54	23°♏37'48	-1°59'40	minimum elong	4684 Jan 22 16:37	1°♏44'55	1°30'15
minimum elong	4683 Feb 12 12:52	23°♏13'34	1°59'20	evening rise	4684 Feb 07 11:58	26°♏50'57	
	4683 Feb 16 17:15	0°♏			4684 Feb 09 10:56	0°♏	
evening rise	4683 Feb 26 13:00	16°♏19'41		greatest brilliancy	4684 Feb 14 07:49	7°♏50'24	-0.9m
	4683 Mar 06 16:27	0°♏		evening max el	4684 Feb 28 14:54	28°♏13'55	18°44'57
asc. node	4683 Mar 13 17:14	10°♏42'29		asc. node	4684 Feb 28 14:15	28°♏12'17	
evening max el	4683 Mar 17 03:37	14°♏45'51	18°16'43		4684 Mar 01 13:54	0°♏	
retrograde	4683 Mar 23 13:44	18°♏11'57		retrograde	4684 Mar 06 06:53	1°♏56'22	
evening set	4683 Mar 26 12:59	17°♏24'53		evening set	4684 Mar 09 12:33	0°♏56'30	
inferior conj	4683 Apr 01 12:42	12°♏03'05	3°32'45		4684 Mar 10 19:49	30°♏♏	
minimum elong	4683 Apr 01 13:22	12°♏01'15	3°32'43	inferior conj	4684 Mar 15 04:33	25°♏17'06	3°32'13
min. Earth dist.	4683 Apr 04 00:33	9°♏16'03	0.63631 AU	minimum elong	4684 Mar 15 03:44	25°♏19'38	3°32'11
morning rise	4683 Apr 07 12:47	5°♏54'50		min. Earth dist.	4684 Mar 17 00:43	23°♏01'48	0.65334 AU
direct	4683 Apr 14 09:27	3°♏11'39		morning rise	4684 Mar 20 18:27	19°♏04'16	
desc. node	4683 Apr 19 08:10	4°♏24'23		direct	4684 Mar 27 09:20	16°♏14'06	
morning max el	4683 Apr 28 05:08	11°♏10'05	27°41'06	desc. node	4684 Apr 05 05:13	20°♏03'12	
	4683 May 13 01:50	0°♎		morning max el	4684 Apr 09 15:07	24°♏01'31	26°57'32
	4683 May 30 15:42	0°♊			4684 Apr 14 23:47	0°♏	
morning set	4683 Jun 01 22:28	4°♊28'37			4684 May 05 10:53	0°♎	
max. Earth dist.	4683 Jun 07 00:47	14°♊55'58	1.32922 AU	morning set	4684 May 15 09:06	17°♎55'09	

max. Earth dist.	4684 May 19 18:47	26°  35'31	1.34083 AU		4685 Apr 09 18:42	0° 	
	4684 May 21 10:59	0° 			4685 Apr 27 21:38	0° 	
				morning set	4685 Apr 28 05:37	0°  36'38	
superior conj	4684 May 23 20:18	4°  56'52	-0°27'53	max. Earth dist.	4685 May 02 01:20	7°  46'34	1.35697 AU
minimum elong	4684 May 23 21:47	5°  04'36	0°27'36				
asc. node	4684 May 26 13:33	10°  40'12		superior conj	4685 May 07 14:02	18°  39'02	-0°57'28
evening rise	4684 May 31 06:05	20°  34'12		minimum elong	4685 May 07 17:10	18°  54'52	0°56'54
	4684 Jun 04 21:35	0° 		asc. node	4685 May 13 10:35	0°  37'57	
evening max el	4684 Jun 20 05:58	23°  05'34	21°29'54		4685 May 13 03:13	0° 	
retrograde	4684 Jul 02 11:51	29°  08'13		evening rise	4685 May 15 12:48	4°  55'42	
desc. node	4684 Jul 02 04:25	29°  08'00			4685 May 29 19:41	0° 	
evening set	4684 Jul 04 22:33	28°  54'34		evening max el	4685 Jun 02 11:34	4°  10'03	20°10'12
inferior conj	4684 Jul 14 07:15	24°  54'28	-3°24'54	retrograde	4685 Jun 13 01:58	9°  20'55	
minimum elong	4684 Jul 13 22:45	25°  06'21	3°22'20	evening set	4685 Jun 15 00:37	9°  11'12	
min. Earth dist.	4684 Jul 14 07:00	24°  54'49	0.54829 AU	desc. node	4685 Jun 19 01:28	7°  55'42	
morning rise	4684 Jul 22 23:56	21°  00'55		inferior conj	4685 Jun 24 02:40	5°  12'14	-1°30'10
direct	4684 Jul 26 09:26	20°  35'55		minimum elong	4685 Jun 23 22:27	5°  18'31	1°28'36
morning max el	4684 Aug 07 19:46	26°  27'39	22°09'33	min. Earth dist.	4685 Jun 25 19:09	4°  12'10	0.55111 AU
	4684 Aug 11 05:01	0° 		morning rise	4685 Jul 02 18:50	0°  55'52	
asc. node	4684 Aug 22 12:50	17°  11'04		direct	4685 Jul 06 20:37	0°  19'49	
morning set	4684 Aug 29 06:28	0°  33'36		morning max el	4685 Jul 20 11:30	6°  59'39	23°52'41
	4684 Aug 29 00:02	0° 			4685 Aug 05 23:05	0° 	
				asc. node	4685 Aug 09 09:53	6°  13'04	
superior conj	4684 Sep 05 10:24	15°  45'18	1°41'57	morning set	4685 Aug 13 18:03	15°  12'54	
minimum elong	4684 Sep 05 09:28	15°  40'20	1°41'55		4685 Aug 20 11:54	0° 	
max. Earth dist.	4684 Sep 08 22:57	23°  05'11	1.34445 AU				
	4684 Sep 12 09:34	0° 		superior conj	4685 Aug 20 17:36	0°  30'48	1°34'07
evening rise	4684 Sep 13 11:58	2°  08'53		minimum elong	4685 Aug 20 15:45	0°  20'49	1°33'57
desc. node	4684 Sep 28 03:44	27°  47'05		max. Earth dist.	4685 Aug 22 22:40	5°  16'00	1.33207 AU
	4684 Sep 29 14:06	0° 		evening rise	4685 Aug 28 04:30	16°  09'32	
evening max el	4684 Oct 18 11:12	24°  01'40	27°00'06		4685 Sep 04 10:28	0° 	
	4684 Oct 26 12:29	0° 		desc. node	4685 Sep 15 00:45	17°  29'18	
retrograde	4684 Oct 31 16:36	1°  18'44			4685 Sep 24 05:26	0° 	
	4684 Nov 05 10:58	30°  18'17		evening max el	4685 Sep 30 22:48	7°  19'08	27°25'13
evening set	4684 Nov 07 10:57	28°  38'17		retrograde	4685 Oct 14 13:08	14°  37'08	
min. Earth dist.	4684 Nov 11 09:35	24°  46'19	0.65462 AU	evening set	4685 Oct 21 15:36	11°  58'56	
inferior conj	4684 Nov 13 09:47	22°  28'53	-1°42'58	min. Earth dist.	4685 Oct 25 08:45	8°  40'36	0.63934 AU
minimum elong	4684 Nov 13 12:42	22°  20'32	1°41'46	inferior conj	4685 Oct 27 21:03	6°  14'38	-2°45'39
asc. node	4684 Nov 18 12:03	17°  32'24		minimum elong	4685 Oct 28 01:48	5°  52'21	2°43'56
morning rise	4684 Nov 19 15:24	16°  52'21		morning rise	4685 Nov 03 13:24	0°  43'34	
direct	4684 Nov 22 09:17	16°  11'26		asc. node	4685 Nov 05 09:07	0°  15'04	
morning max el	4684 Nov 28 21:11	19°  40'40	18°10'37	direct	4685 Nov 06 01:06	0°  12'50	
	4684 Dec 06 17:21	0° 		morning max el	4685 Nov 12 13:55	3°  37'53	17°52'18
morning set	4684 Dec 17 10:59	17°  17'06		morning set	4685 Nov 29 08:32	29°  15'02	
desc. node	4684 Dec 25 03:02	29°  14'43			4685 Nov 29 19:02	0° 	
	4684 Dec 25 07:05	0° 					
				superior conj	4685 Dec 12 02:56	20°  14'09	-0°00'51
superior conj	4685 Jan 01 06:02	11°  30'42	-0°47'50	minimum elong	4685 Dec 12 02:50	20°  13'43	0°00'49
minimum elong	4685 Jan 01 00:05	10°  34'05	0°47'03	behind sun begin	4685 Dec 11 16:56	19°  17'59'21	
max. Earth dist.	4685 Jan 03 22:10	15°  31'49	1.45220 AU	behind sun end	4685 Dec 12 12:43	21°  17'20'00	
	4685 Jan 13 08:17	0° 		desc. node	4685 Dec 12 00:04	20°  17'28'25	
evening rise	4685 Jan 17 12:55	6°  31'26		max. Earth dist.	4685 Dec 17 16:31	29°  17'37'30	1.44501 AU
greatest brilliancy	4685 Jan 29 20:55	25°  32'38	-0.7m		4685 Dec 17 22:10	0° 	
	4685 Feb 01 20:46	0° 		evening rise	4685 Dec 28 00:10	15°  17'44'19	
evening max el	4685 Feb 10 22:25	11°  17'45'24	19°30'04		4686 Jan 06 09:33	0° 	
asc. node	4685 Feb 14 11:18	14°  17'42'56		evening max el	4686 Jan 25 00:49	25°  17'18'36	20°30'00
retrograde	4685 Feb 18 03:55	15°  17'54'49		asc. node	4686 Feb 01 08:21	0°  17'00'02	
evening set	4685 Feb 21 16:51	14°  17'41'27			4686 Feb 01 08:16	0° 	
inferior conj	4685 Feb 27 04:04	8°  17'46'31	3°17'43	retrograde	4686 Feb 02 02:12	0°  17'03'01	
minimum elong	4685 Feb 27 02:12	8°  17'52'35	3°17'26		4686 Feb 02 19:52	30°  17'35'17	
min. Earth dist.	4685 Feb 28 09:12	7°  17'11'03	0.66629 AU	evening set	4686 Feb 05 23:48	28°  17'35'17	
morning rise	4685 Mar 04 11:19	2°  17'32'04		inferior conj	4686 Feb 11 08:32	22°  17'27'30	2°52'12
	4685 Mar 08 21:13	30°  17'30'47		minimum elong	4686 Feb 11 06:10	22°  17'35'35	2°51'38
direct	4685 Mar 10 15:26	29°  17'47'22		min. Earth dist.	4686 Feb 12 00:05	21°  17'34'24	0.67506 AU
	4685 Mar 12 11:22	0° 		morning rise	4686 Feb 16 12:20	16°  17'13'28	
morning max el	4685 Mar 23 00:50	7°  17'10'34	25°48'42	direct	4686 Feb 22 02:57	13°  17'43'32	
desc. node	4685 Mar 23 02:16	7°  17'14'12		morning max el	4686 Mar 05 09:31	20°  17'27'57	24°24'29

desc. node	4686 Mar 09 23:18	25° \approx 31'33		desc. node	4687 Feb 24 20:20	14° \approx 36'01	
	4686 Mar 13 13:53	0° \mathbb{H}			4687 Mar 07 18:26	0° \mathbb{H}	
	4686 Apr 02 23:31	0° \mathbb{Y}		morning set	4687 Mar 22 06:26	22° \mathbb{H} 45'56	
morning set	4686 Apr 10 06:46	12° \mathbb{Y} 18'54		max. Earth dist.	4687 Mar 26 17:42	0° \mathbb{Y} 18'43	1.39882 AU
max. Earth dist.	4686 Apr 13 22:33	18° \mathbb{Y} 49'01	1.37694 AU		4687 Mar 26 13:20	0° \mathbb{Y}	
	4686 Apr 19 22:42	0° \mathbb{B}					
superior conj	4686 Apr 20 20:32	1° \mathbb{B} 44'46	-1°25'48	superior conj	4687 Apr 03 11:42	14° \mathbb{Y} 04'02	-1°49'53
minimum elong	4686 Apr 21 01:04	2° \mathbb{B} 06'35	1°25'10	minimum elong	4687 Apr 03 16:32	14° \mathbb{Y} 26'07	1°49'27
evening rise	4686 Apr 29 13:30	18° \mathbb{B} 54'34			4687 Apr 11 23:11	0° \mathbb{B}	
asc. node	4686 Apr 30 07:37	20° \mathbb{B} 24'13		evening rise	4687 Apr 13 05:09	2° \mathbb{B} 23'01	
	4686 May 05 07:37	0° \mathbb{II}		asc. node	4687 Apr 17 04:40	9° \mathbb{B} 54'09	
evening max el	4686 May 16 05:26	15° \mathbb{II} 56'55	19°09'45	evening max el	4687 Apr 29 09:02	28° \mathbb{B} 21'39	18°29'37
retrograde	4686 May 25 03:30	20° \mathbb{II} 18'06			4687 May 01 06:47	0° \mathbb{II}	
evening set	4686 May 27 03:47	20° \mathbb{II} 05'45		retrograde	4687 May 06 23:34	2° \mathbb{II} 07'02	
inferior conj	4686 Jun 04 12:22	15° \mathbb{II} 54'43	0°25'00	evening set	4687 May 09 06:25	1° \mathbb{II} 47'44	
minimum elong	4686 Jun 04 13:24	15° \mathbb{II} 52'58	0°24'37		4687 May 13 02:12	30° \mathbb{R} \mathbb{B}	
desc. node	4686 Jun 05 22:30	14° \mathbb{II} 56'40		inferior conj	4687 May 16 19:03	27° \mathbb{B} 17'22	1°55'19
min. Earth dist.	4686 Jun 07 10:11	13° \mathbb{II} 57'06	0.56304 AU	minimum elong	4687 May 16 22:30	27° \mathbb{B} 10'32	1°54'17
morning rise	4686 Jun 12 19:51	11° \mathbb{II} 03'17		min. Earth dist.	4687 May 20 05:04	24° \mathbb{B} 36'09	0.58159 AU
direct	4686 Jun 17 20:03	10° \mathbb{II} 04'54		desc. node	4687 May 23 19:31	22° \mathbb{B} 13'28	
morning max el	4686 Jul 02 01:26	17° \mathbb{II} 22'07	25°32'17	morning rise	4687 May 24 11:24	21° \mathbb{B} 52'39	
	4686 Jul 12 10:59	0° \mathbb{B}		direct	4687 May 30 09:49	20° \mathbb{B} 22'07	
asc. node	4686 Jul 27 06:54	26° \mathbb{B} 14'55		morning max el	4687 Jun 13 19:02	28° \mathbb{B} 02'41	26°52'33
morning set	4686 Jul 29 05:34	0° \mathbb{Q} 18'54			4687 Jun 15 16:56	0° \mathbb{II}	
	4686 Jul 29 02:00	0° \mathbb{Q}			4687 Jul 06 01:05	0° \mathbb{B}	
				morning set	4687 Jul 13 15:26	15° \mathbb{B} 04'41	
				asc. node	4687 Jul 14 03:55	16° \mathbb{B} 10'38	
superior conj	4686 Aug 05 04:02	15° \mathbb{Q} 24'22	1°21'01				
minimum elong	4686 Aug 05 01:45	15° \mathbb{Q} 11'51	1°20'43	superior conj	4687 Jul 20 15:49	0° \mathbb{Q} 19'42	1°03'21
max. Earth dist.	4686 Aug 06 05:30	17° \mathbb{Q} 43'59	1.32396 AU	minimum elong	4687 Jul 20 13:35	0° \mathbb{Q} 07'20	1°02'58
	4686 Aug 11 22:57	0° \mathbb{P}		max. Earth dist.	4687 Jul 20 16:26	0° \mathbb{Q} 23'06	1.32005 AU
evening rise	4686 Aug 12 05:32	0° \mathbb{P} 34'07			4687 Jul 20 12:15	0° \mathbb{Q}	
	4686 Aug 28 10:41	0° \mathbb{A}		evening rise	4687 Jul 27 12:20	15° \mathbb{Q} 14'22	
desc. node	4686 Sep 01 21:46	6° \mathbb{A} 34'58			4687 Aug 03 22:06	0° \mathbb{P}	
evening max el	4686 Sep 13 07:20	20° \mathbb{A} 05'40	27°19'56	desc. node	4687 Aug 19 18:47	24° \mathbb{P} 49'14	
retrograde	4686 Sep 27 02:58	27° \mathbb{A} 20'06			4687 Aug 24 06:21	0° \mathbb{A}	
evening set	4686 Oct 04 06:54	24° \mathbb{A} 55'44		evening max el	4687 Aug 26 10:16	2° \mathbb{A} 09'52	26°41'12
min. Earth dist.	4686 Oct 07 21:44	22° \mathbb{A} 04'31	0.62105 AU	retrograde	4687 Sep 09 08:37	9° \mathbb{A} 19'26	
inferior conj	4686 Oct 10 20:52	19° \mathbb{A} 20'42	-3°46'12	evening set	4687 Sep 16 04:22	7° \mathbb{A} 21'18	
minimum elong	4686 Oct 11 02:54	19° \mathbb{A} 06'48	3°44'26	min. Earth dist.	4687 Sep 20 00:10	4° \mathbb{A} 45'03	0.60079 AU
morning rise	4686 Oct 18 00:41	14° \mathbb{A} 18'14		inferior conj	4687 Sep 23 05:51	2° \mathbb{A} 08'36	-4°38'07
direct	4686 Oct 20 09:02	13° \mathbb{A} 54'07		minimum elong	4687 Sep 23 11:36	1° \mathbb{A} 56'59	4°36'59
asc. node	4686 Oct 23 06:09	14° \mathbb{A} 31'38			4687 Sep 26 00:24	30° \mathbb{R} \mathbb{P}	
morning max el	4686 Oct 27 05:51	17° \mathbb{A} 23'17	17°51'55	morning rise	4687 Sep 30 20:50	27° \mathbb{P} 27'38	
	4686 Nov 05 05:16	0° \mathbb{M}		direct	4687 Oct 03 05:09	27° \mathbb{P} 07'09	
morning set	4686 Nov 12 03:16	12° \mathbb{M} 13'23			4687 Oct 09 20:25	0° \mathbb{A}	
	4686 Nov 22 04:24	0° \mathbb{X}		asc. node	4687 Oct 10 03:10	0° \mathbb{A} 14'50	
				morning max el	4687 Oct 10 17:43	0° \mathbb{A} 48'43	18°10'46
superior conj	4686 Nov 23 01:48	1° \mathbb{X} 31'48	0°40'10	morning set	4687 Oct 26 13:12	25° \mathbb{A} 55'03	
minimum elong	4686 Nov 23 05:12	1° \mathbb{X} 46'20	0°39'43		4687 Oct 28 17:12	0° \mathbb{M}	
desc. node	4686 Nov 28 21:04	11° \mathbb{X} 15'33					
max. Earth dist.	4686 Nov 30 07:07	13° \mathbb{X} 34'54	1.43148 AU	superior conj	4687 Nov 05 01:48	13° \mathbb{M} 36'34	1°10'53
evening rise	4686 Dec 07 12:52	25° \mathbb{X} 07'20		minimum elong	4687 Nov 05 05:46	13° \mathbb{M} 54'28	1°10'25
	4686 Dec 10 16:28	0° \mathbb{Z}		max. Earth dist.	4687 Nov 12 17:04	26° \mathbb{M} 57'10	1.41325 AU
	4686 Dec 31 10:13	0° \approx			4687 Nov 14 12:39	0° \mathbb{X}	
evening max el	4687 Jan 07 21:47	8° \approx 53'07	21°41'35	desc. node	4687 Nov 15 18:04	2° \mathbb{X} 01'53	
retrograde	4687 Jan 16 23:38	14° \approx 16'38		evening rise	4687 Nov 17 17:36	5° \mathbb{X} 16'10	
asc. node	4687 Jan 19 05:24	13° \approx 49'41			4687 Dec 03 22:28	0° \mathbb{Z}	
evening set	4687 Jan 21 07:33	12° \approx 33'37		evening max el	4687 Dec 21 14:08	22° \mathbb{Z} 30'05	23°00'06
inferior conj	4687 Jan 26 15:43	6° \approx 16'05	2°17'38	retrograde	4687 Dec 31 18:36	28° \mathbb{Z} 32'24	
minimum elong	4687 Jan 26 13:19	6° \approx 24'25	2°16'53	evening set	4688 Jan 05 14:31	26° \mathbb{Z} 33'25	
min. Earth dist.	4687 Jan 26 19:02	6° \approx 04'34	0.67976 AU	asc. node	4688 Jan 06 02:26	26° \mathbb{Z} 07'17	
morning rise	4687 Jan 31 18:54	0° \approx 04'13		inferior conj	4688 Jan 10 23:41	20° \mathbb{Z} 09'42	1°35'21
	4687 Jan 31 20:51	30° \mathbb{R} \mathbb{Z}		minimum elong	4688 Jan 10 21:43	20° \mathbb{Z} 16'28	1°34'38
direct	4687 Feb 05 18:58	27° \mathbb{Z} 54'53		min. Earth dist.	4688 Jan 10 15:40	20° \mathbb{Z} 37'19	0.68064 AU
	4687 Feb 11 08:03	0° \approx		morning rise	4688 Jan 16 04:48	14° \mathbb{Z} 01'42	
morning max el	4687 Feb 15 18:58	3° \approx 50'26	22°55'13	direct	4688 Jan 20 14:24	12° \mathbb{Z} 15'16	

morning max el	4688 Jan 29 08:57	17°  21'33	21°29'54	morning max el	4689 Jan 11 06:24	1°  04'51	20°14'55
	4688 Feb 08 16:26	0° 		desc. node	4689 Jan 28 14:21	24°  17'22	
desc. node	4688 Feb 11 17:20	4°  14'21			4689 Feb 01 09:31	0° 	
	4688 Feb 28 21:05	0° 		morning set	4689 Feb 07 23:43	10°  05'11	
morning set	4688 Mar 01 01:19	1°  51'33		max. Earth dist.	4689 Feb 18 02:36	26°  00'20	1.43709 AU
max. Earth dist.	4688 Mar 07 18:16	12°  42'15	1.41983 AU		4689 Feb 20 14:03	0° 	
superior conj	4688 Mar 15 06:32	25°  24'35	-2°05'27	superior conj	4689 Feb 24 00:33	5°  37'07	-2°07'05
minimum elong	4688 Mar 15 09:19	25°  36'41	2°05'21	minimum elong	4689 Feb 23 22:09	5°  27'18	2°07'02
	4688 Mar 17 21:31	0° 		evening rise	4689 Mar 08 17:44	27°  12'21	
evening rise	4688 Mar 26 08:00	15°  01'18			4689 Mar 10 08:20	0° 	
asc. node	4688 Apr 03 01:42	29°  01'18		asc. node	4689 Mar 20 22:45	17°  01'35	
	4688 Apr 03 15:38	0° 		evening max el	4689 Mar 26 07:20	24°  26'16	18°08'37
evening max el	4688 Apr 11 18:46	11°  14'16	18°09'24	retrograde	4689 Apr 01 18:02	27°  08'55	
retrograde	4688 Apr 18 13:48	14°  40'37		evening set	4689 Apr 04 13:44	27°  08'49	
evening set	4688 Apr 21 03:23	14°  11'40		inferior conj	4689 Apr 10 19:24	21°  05'34	3°25'04
inferior conj	4688 Apr 27 22:32	9°  20'20	2°54'05	minimum elong	4689 Apr 10 21:02	21°  05'15	3°24'54
minimum elong	4688 Apr 28 01:41	9°  13'03	2°53'26	min. Earth dist.	4689 Apr 13 15:35	18°  05'03	0.62483 AU
min. Earth dist.	4688 May 01 06:01	6°  18'18	0.60329 AU	morning rise	4689 Apr 17 02:57	15°  05'54	
morning rise	4688 May 04 21:41	3°  31'16		direct	4689 Apr 23 23:26	13°  02'24	
desc. node	4688 May 09 16:33	1°  35'42		desc. node	4689 Apr 26 13:35	13°  04'15	
direct	4688 May 11 11:38	1°  26'31		morning max el	4689 May 08 01:01	21°  02'06	27°51'43
morning max el	4688 May 25 19:02	9°  20'19	27°40'56		4689 May 15 13:26	0° 	
	4688 Jun 10 16:17	0° 			4689 Jun 03 18:11	0° 	
morning set	4688 Jun 26 21:49	29°  13'24		morning set	4689 Jun 10 22:44	13°  05'11	
	4688 Jun 27 02:11	0° 		max. Earth dist.	4689 Jun 16 11:06	25°  02'12	1.32468 AU
asc. node	4688 Jun 30 00:56	6°  14'15		asc. node	4689 Jun 16 21:59	26°  02'14	
max. Earth dist.	4688 Jul 03 03:36	13°  00'16	1.32025 AU				
superior conj	4688 Jul 04 03:08	15°  09'40	0°41'41	superior conj	4689 Jun 18 12:18	29°  02'06	0°16'37
minimum elong	4688 Jul 04 01:25	15°  00'09	0°41'19	minimum elong	4689 Jun 18 11:32	29°  02'53	0°16'26
evening rise	4688 Jul 10 22:34	0°  01'36		evening rise	4689 Jun 18 14:19	0° 	
	4688 Jul 10 22:16	0° 			4689 Jun 25 10:20	14°  09'47	
	4688 Jul 27 07:46	0° 		evening max el	4689 Jul 02 23:48	0° 	
desc. node	4688 Aug 05 15:48	11°  05'09		desc. node	4689 Jul 19 18:45	23°  05'05	23°59'58
evening max el	4688 Aug 07 05:31	13°  07'24	25°31'17		4689 Jul 23 12:49	27°  09'12	
retrograde	4688 Aug 21 04:22	20°  09'15			4689 Jul 28 16:51	0° 	
evening set	4688 Aug 27 03:10	19°  06'52		retrograde	4689 Aug 02 12:47	0°  05'20	
min. Earth dist.	4688 Aug 31 17:23	16°  08'15	0.58035 AU	evening set	4689 Aug 07 02:02	0°  07'31	
inferior conj	4688 Sep 03 20:27	14°  09'14	-5°10'40		4689 Aug 07 10:54	30°  08'00	
minimum elong	4688 Sep 03 23:03	14°  09'14	5°10'29	min. Earth dist.	4689 Aug 13 05:09	27°  08'14	0.56259 AU
morning rise	4688 Sep 11 21:12	9°  09'32		inferior conj	4689 Aug 15 14:47	25°  09'52	-5°08'26
direct	4688 Sep 14 09:00	9°  09'21		minimum elong	4689 Aug 15 11:22	25°  09'08	5°08'11
morning max el	4688 Sep 22 22:09	13°  09'44	18°50'26	morning rise	4689 Aug 23 23:15	21°  09'42	
asc. node	4688 Sep 26 00:12	17°  09'25		direct	4689 Aug 26 17:14	21°  09'22	
	4688 Oct 04 02:47	0° 		morning max el	4689 Sep 05 16:13	26°  00'35	19°51'57
morning set	4688 Oct 09 09:41	10°  06'25			4689 Sep 09 07:30	0° 	
				asc. node	4689 Sep 12 21:14	5°  00'37	
superior conj	4688 Oct 17 21:50	26°  03'53	1°30'54	morning set	4689 Sep 23 13:20	24°  03'57	
minimum elong	4688 Oct 18 00:44	26°  03'39	1°30'39		4689 Sep 26 04:40	0° 	
	4688 Oct 19 16:17	0° 		superior conj	4689 Oct 01 08:38	10°  02'43	1°41'21
max. Earth dist.	4688 Oct 24 22:49	9°  03'57	1.39247 AU	minimum elong	4689 Oct 01 09:56	10°  03'10	1°41'18
evening rise	4688 Oct 28 20:57	16°  02'32		max. Earth dist.	4689 Oct 07 03:53	21°  04'15	1.37175 AU
desc. node	4688 Nov 01 15:05	22°  04'34		evening rise	4689 Oct 10 22:32	28°  03'58	
	4688 Nov 06 03:44	0° 			4689 Oct 11 16:52	0° 	
	4688 Nov 27 13:03	0° 		desc. node	4689 Oct 19 12:07	13°  03'16	
evening max el	4688 Dec 03 03:32	6°  10'29	24°19'42		4689 Oct 30 11:50	0° 	
retrograde	4688 Dec 14 10:04	12°  04'42		evening max el	4689 Nov 15 15:56	19°  03'16	25°33'31
evening set	4688 Dec 19 19:12	10°  03'20		retrograde	4689 Nov 27 21:09	26°  03'54	
asc. node	4688 Dec 22 23:28	7°  07'53		evening set	4689 Dec 03 19:54	24°  03'26	
min. Earth dist.	4688 Dec 24 11:45	5°  09'40	0.67786 AU	min. Earth dist.	4689 Dec 08 04:58	19°  03'38	0.67157 AU
inferior conj	4688 Dec 25 06:40	4°  06'07	0°46'25	inferior conj	4689 Dec 09 10:53	18°  02'21	-0°08'13
minimum elong	4688 Dec 25 05:35	4°  09'46	0°46'00	minimum elong	4689 Dec 09 11:05	18°  01'40	0°08'07
	4688 Dec 28 13:24	30°  08'00		transit middle	4689 Dec 09 11:05	18°  01'40	0°08'07
morning rise	4688 Dec 30 16:03	28°  03'52		transit begin	4689 Dec 09 08:40	18°  03'09	
direct	4689 Jan 03 12:10	26° 03'48		transit end	4689 Dec 09 13:31	17° 03'53	
	4689 Jan 10 03:10	0°		asc. node	4689 Dec 09 20:31	17° 03'33	

morning rise	4689 Dec 15 02:38	12° ♊ 07'54		inferior conj	4690 Nov 23 10:22	1° ♊ 55'16	-1°07'23
direct	4689 Dec 18 10:52	11° ♊ 03'34		minimum elong	4690 Nov 23 12:14	1° ♊ 49'41	1°06'35
morning max el	4689 Dec 25 11:46	14° ♊ 58'42	19°13'56		4690 Nov 25 01:44	30° ♋	
	4690 Jan 05 21:32	0° ♋		asc. node	4690 Nov 26 17:31	28° ♋ 15'22	
greatest brilliancy	4690 Jan 08 02:31	3° ♋ 19'06	-0.7m	morning rise	4690 Nov 29 10:25	26° ♋ 11'09	
desc. node	4690 Jan 15 11:22	14° ♋ 37'51		direct	4690 Dec 02 08:50	25° ♋ 22'51	
morning set	4690 Jan 18 00:27	18° ♋ 34'32		morning max el	4690 Dec 08 23:33	28° ♋ 58'58	18°28'52
	4690 Jan 25 08:39	0° ♌			4690 Dec 09 22:51	0° ♌	
max. Earth dist.	4690 Jan 31 17:03	9° ♌ 57'25	1.44857 AU	morning set	4690 Dec 29 01:19	28° ♌ 20'28	
					4690 Dec 30 02:15	0° ♌	
superior conj	4690 Feb 03 17:46	14° ♌ 45'00	-1°49'56	desc. node	4691 Jan 02 08:26	5° ♌ 11'11	
minimum elong	4690 Feb 03 09:35	14° ♌ 12'32	1°49'17				
	4690 Feb 13 05:16	0° ♍		superior conj	4691 Jan 13 21:02	23° ♌ 21'39	-1°14'02
evening rise	4690 Feb 18 06:06	8° ♍ 16'13		minimum elong	4691 Jan 13 12:23	22° ♌ 47'46	1°13'02
	4690 Mar 03 16:57	0° ♍		max. Earth dist.	4691 Jan 14 11:16	24° ♌ 17'26	1.45307 AU
asc. node	4690 Mar 07 19:48	5° ♍ 36'00			4691 Jan 18 02:41	0° ♍	
evening max el	4690 Mar 09 19:45	7° ♍ 49'33	18°26'34	evening rise	4691 Jan 29 19:10	18° ♍ 23'44	
retrograde	4690 Mar 16 07:33	11° ♍ 21'35			4691 Feb 06 03:13	0° ♍	
evening set	4690 Mar 19 09:21	10° ♍ 29'19		greatest brilliancy	4691 Feb 08 08:49	3° ♍ 30'06	-0.8m
inferior conj	4690 Mar 25 05:24	4° ♍ 59'50	3°34'28	evening max el	4691 Feb 21 05:39	21° ♍ 19'13	19°02'12
minimum elong	4690 Mar 25 05:23	4° ♍ 59'54	3°34'28	asc. node	4691 Feb 22 16:50	22° ♍ 42'05	
min. Earth dist.	4690 Mar 27 10:38	2° ♍ 24'37	0.64395 AU	retrograde	4691 Feb 28 02:37	25° ♍ 11'58	
	4690 Mar 29 17:05	30° ♎		evening set	4691 Mar 03 11:10	24° ♍ 06'36	
morning rise	4690 Mar 31 00:40	28° ♎ 48'50		inferior conj	4691 Mar 09 00:51	18° ♍ 20'34	3°27'33
direct	4690 Apr 06 19:31	26° ♎ 00'54		minimum elong	4691 Mar 08 23:31	18° ♎ 24'45	3°27'25
desc. node	4690 Apr 13 10:36	28° ♎ 11'17		min. Earth dist.	4691 Mar 10 14:35	16° ♎ 21'15	0.65940 AU
	4690 Apr 16 00:54	0° ♏		morning rise	4691 Mar 14 11:30	12° ♎ 06'43	
morning max el	4690 Apr 20 10:22	3° ♏ 57'08	27°26'14	direct	4691 Mar 20 22:24	9° ♎ 17'07	
	4690 May 10 01:12	0° ♏		desc. node	4691 Mar 31 07:39	14° ♎ 32'19	
morning set	4690 May 25 15:30	27° ♏ 37'35		morning max el	4691 Apr 02 20:15	16° ♎ 56'27	26°30'40
	4690 May 26 20:20	0° ♐			4691 Apr 13 17:06	0° ♏	
max. Earth dist.	4690 May 30 10:47	7° ♐ 19'14	1.33353 AU		4691 May 02 22:43	0° ♏	
				morning set	4691 May 08 20:40	10° ♏ 46'11	
superior conj	4690 Jun 02 17:22	14° ♐ 11'53	-0°11'08	max. Earth dist.	4691 May 12 23:31	18° ♏ 43'08	1.34708 AU
minimum elong	4690 Jun 02 17:56	14° ♐ 14'54	0°11'01				
behind sun begin	4690 Jun 02 13:57	13° ♐ 53'44		superior conj	4691 May 17 16:02	28° ♏ 11'07	-0°40'28
behind sun end	4690 Jun 02 21:55	14° ♐ 36'06		minimum elong	4691 May 17 18:13	28° ♏ 22'22	0°40'01
asc. node	4690 Jun 03 19:03	16° ♐ 28'46			4691 May 18 13:07	0° ♐	
evening rise	4690 Jun 09 21:43	29° ♐ 32'28		asc. node	4691 May 21 16:07	6° ♐ 31'05	
	4690 Jun 10 02:56	0° ♑		evening rise	4691 May 25 06:44	14° ♐ 03'26	
	4690 Jun 27 10:39	0° ♑			4691 Jun 02 11:21	0° ♑	
evening max el	4690 Jul 01 08:52	4° ♑ 20'48	22°22'46	evening max el	4691 Jun 13 07:40	15° ♑ 04'23	20°53'59
desc. node	4690 Jul 10 09:51	10° ♑ 12'13		retrograde	4691 Jun 24 21:39	20° ♑ 45'16	
retrograde	4690 Jul 14 09:07	10° ♑ 48'39		evening set	4691 Jun 27 00:59	20° ♑ 34'25	
evening set	4690 Jul 17 10:31	10° ♑ 28'00		desc. node	4691 Jun 27 06:53	20° ♑ 31'50	
min. Earth dist.	4690 Jul 25 15:36	6° ♑ 54'15	0.55098 AU	inferior conj	4691 Jul 06 08:48	16° ♑ 37'15	-2°38'37
inferior conj	4690 Jul 26 15:37	6° ♑ 20'16	-4°17'11	minimum elong	4691 Jul 06 01:35	16° ♑ 47'28	2°36'10
minimum elong	4690 Jul 26 07:16	6° ♑ 32'05	4°15'16	min. Earth dist.	4691 Jul 07 02:48	16° ♑ 11'44	0.54825 AU
morning rise	4690 Aug 04 05:56	2° ♑ 30'07		morning rise	4691 Jul 15 02:03	12° ♑ 36'02	
direct	4690 Aug 07 08:29	2° ♑ 08'17		direct	4691 Jul 18 17:47	12° ♑ 07'16	
morning max el	4690 Aug 18 22:18	7° ♑ 32'05	21°14'22	morning max el	4691 Jul 31 17:46	18° ♑ 20'46	22°52'47
asc. node	4690 Aug 30 18:17	23° ♑ 35'30			4691 Aug 10 05:27	0° ♒	
	4690 Sep 03 05:41	0° ♒		asc. node	4691 Aug 17 15:20	12° ♒ 42'51	
morning set	4690 Sep 07 21:40	9° ♒ 22'50		morning set	4691 Aug 23 08:33	24° ♒ 14'25	
					4691 Aug 26 01:31	0° ♒	
superior conj	4690 Sep 15 05:54	24° ♒ 44'23	1°43'44	superior conj	4691 Aug 30 10:12	9° ♒ 21'52	1°39'19
minimum elong	4690 Sep 15 05:41	24° ♒ 43'15	1°43'44	minimum elong	4691 Aug 30 08:49	9° ♒ 14'30	1°39'14
	4690 Sep 17 19:29	0° ♓		max. Earth dist.	4691 Sep 02 08:41	15° ♒ 34'14	1.33869 AU
max. Earth dist.	4690 Sep 19 13:56	3° ♓ 33'03	1.35337 AU	evening rise	4691 Sep 07 04:50	25° ♒ 24'24	
evening rise	4690 Sep 23 18:38	11° ♓ 41'28			4691 Sep 09 13:40	0° ♓	
	4690 Oct 04 03:44	0° ♓		desc. node	4691 Sep 23 06:11	23° ♓ 34'00	
desc. node	4690 Oct 06 09:09	3° ♓ 35'56			4691 Sep 27 14:18	0° ♓	
	4690 Oct 25 17:30	0° ♓		evening max el	4691 Oct 11 17:13	17° ♓ 05'05	27°14'13
evening max el	4690 Oct 29 04:35	3° ♓ 34'47	26°34'09	retrograde	4691 Oct 25 03:08	24° ♓ 22'58	
retrograde	4690 Nov 11 03:06	10° ♓ 49'13		evening set	4691 Nov 01 01:22	21° ♓ 42'39	
evening set	4690 Nov 17 14:45	8° ♓ 11'34		min. Earth dist.	4691 Nov 04 21:36	18° ♓ 05'06	0.64855 AU
min. Earth dist.	4690 Nov 21 17:03	3° ♓ 58'58	0.66180 AU				

inferior conj	4691 Nov 07 02:50	15°♍39'00	-2°09'30	retrograde	4692 Oct 06 20:35	7°♍27'06	
minimum elong	4691 Nov 07 06:33	15°♍28'47	2°08'03	evening set	4692 Oct 14 00:45	4°♍53'26	
morning rise	4691 Nov 13 12:51	10°♍08'17		min. Earth dist.	4692 Oct 17 16:30	1°♍47'41	0.63199 AU
asc. node	4691 Nov 13 14:33	10°♍06'23			4692 Oct 19 12:22	30°♌♂	
direct	4691 Nov 16 03:48	9°♍32'07		inferior conj	4692 Oct 20 09:37	29°♌07'09	-3°11'53
morning max el	4691 Nov 22 15:13	12°♍58'40	18°00'36	minimum elong	4692 Oct 20 15:01	28°♌53'48	3°10'03
	4691 Dec 04 13:31	0°♌♂		morning rise	4692 Oct 27 06:47	23°♌53'23	
morning set	4691 Dec 10 07:45	9°♌♂34'37		direct	4692 Oct 29 16:49	23°♌25'43	
desc. node	4691 Dec 20 05:28	25°♌♂52'37		asc. node	4692 Oct 30 11:36	23°♌28'41	
	4691 Dec 22 18:53	0°♌♂		morning max el	4692 Nov 05 07:56	26°♌51'13	17°49'49
					4692 Nov 08 01:52	0°♍	
superior conj	4691 Dec 24 06:14	2°♌♂21'25	-0°27'40	morning set	4692 Nov 21 15:05	22°♍00'31	
minimum elong	4691 Dec 24 02:51	2°♌♂07'53	0°27'11		4692 Nov 26 05:13	0°♌♂	
max. Earth dist.	4691 Dec 28 06:44	8°♌♂44'06	1.45008 AU				
evening rise	4692 Jan 09 12:45	27°♌♂48'33		superior conj	4692 Dec 03 13:40	12°♌♂27'51	0°17'42
	4692 Jan 10 22:53	0°♌♂		minimum elong	4692 Dec 03 15:28	12°♌♂35'17	0°17'27
greatest brilliancy	4692 Jan 23 13:45	19°♌♂09'48	-0.6m	desc. node	4692 Dec 06 02:27	16°♌♂38'25	
	4692 Jan 31 07:14	0°♌♂		max. Earth dist.	4692 Dec 10 00:18	22°♌♂58'40	1.44003 AU
evening max el	4692 Feb 04 11:12	4°♌♂52'02	19°53'57		4692 Dec 14 10:28	0°♌♂	
asc. node	4692 Feb 09 13:51	8°♌♂43'19		evening rise	4692 Dec 18 22:35	7°♌♂00'43	
retrograde	4692 Feb 12 00:18	9°♌♂15'01			4693 Jan 03 06:52	0°♌♂	
evening set	4692 Feb 15 16:49	7°♌♂55'36		evening max el	4693 Jan 17 11:15	18°♌♂25'32	20°59'16
inferior conj	4692 Feb 21 02:44	1°♌♂55'06	3°08'05	retrograde	4693 Jan 25 22:24	23°♌♂25'59	
minimum elong	4692 Feb 21 00:36	2°♌♂02'14	3°07'40	asc. node	4693 Jan 26 10:52	23°♌♂24'31	
min. Earth dist.	4692 Feb 22 01:56	0°♌♂37'33	0.67060 AU	evening set	4693 Jan 30 00:18	21°♌♂51'36	
	4692 Feb 22 13:18	30°♌♂		inferior conj	4693 Feb 04 08:34	15°♌♂39'12	2°38'32
morning rise	4692 Feb 26 08:10	25°♌♂40'50		minimum elong	4693 Feb 04 06:08	15°♌♂47'37	2°37'51
direct	4692 Mar 03 06:55	23°♌♂01'23		min. Earth dist.	4693 Feb 04 18:41	15°♌♂04'20	0.67758 AU
morning max el	4692 Mar 15 05:15	0°♌♂09'01	25°14'06	morning rise	4693 Feb 09 11:48	9°♌♂26'08	
	4692 Mar 15 01:40	0°♌♂		direct	4693 Feb 14 20:16	7°♌♂04'43	
desc. node	4692 Mar 17 04:43	2°♌♂14'08		morning max el	4693 Feb 25 13:56	13°♌♂28'28	23°46'35
	4692 Apr 06 14:59	0°♌♂		desc. node	4693 Mar 04 01:43	20°♌♂53'08	
morning set	4692 Apr 20 09:39	23°♌♂04'12			4693 Mar 10 22:35	0°♌♂	
max. Earth dist.	4692 Apr 24 01:28	29°♌♂46'48	1.36508 AU		4693 Mar 30 12:04	0°♌♂	
	4692 Apr 24 04:18	0°♌♂		morning set	4693 Apr 02 00:35	4°♌♂15'33	
				max. Earth dist.	4693 Apr 05 21:18	10°♌♂58'27	1.38622 AU
superior conj	4692 Apr 30 05:27	11°♌♂39'15	-1°09'48				
minimum elong	4692 Apr 30 09:15	11°♌♂58'03	1°09'09	superior conj	4693 Apr 13 05:57	24°♌♂26'03	-1°36'45
asc. node	4692 May 07 13:09	26°♌♂24'38		minimum elong	4693 Apr 13 10:48	24°♌♂48'57	1°36'10
evening rise	4692 May 08 11:14	28°♌♂16'19			4693 Apr 16 04:00	0°♌♂	
	4692 May 09 07:49	0°♌♂		evening rise	4693 Apr 22 08:28	12°♌♂03'07	
evening max el	4692 May 25 18:42	26°♌♂27'00	19°42'03	asc. node	4693 Apr 24 10:10	16°♌♂04'21	
	4692 May 30 13:36	0°♌♂			4693 May 02 04:24	0°♌♂	
retrograde	4692 Jun 04 15:00	1°♌♂15'16		evening max el	4693 May 08 16:59	8°♌♂29'48	18°50'07
evening set	4692 Jun 06 13:30	1°♌♂04'56		retrograde	4693 May 17 00:19	12°♌♂34'09	
	4692 Jun 10 00:39	30°♌♂		evening set	4693 May 19 03:08	12°♌♂19'17	
desc. node	4692 Jun 13 03:54	28°♌♂22'40		inferior conj	4693 May 27 03:06	8°♌♂00'03	1°07'08
inferior conj	4692 Jun 15 08:54	27°♌♂02'06	-0°39'28	minimum elong	4693 May 27 05:33	7°♌♂55'36	1°06'17
minimum elong	4692 Jun 15 07:06	27°♌♂04'54	0°38'48	min. Earth dist.	4693 May 30 07:57	5°♌♂41'48	0.57031 AU
min. Earth dist.	4692 Jun 17 15:46	25°♌♂36'50	0.55518 AU	desc. node	4693 May 31 00:56	5°♌♂12'57	
morning rise	4692 Jun 23 22:25	22°♌♂31'59		morning rise	4693 Jun 04 04:41	2°♌♂53'37	
direct	4692 Jun 28 09:31	21°♌♂47'50		direct	4693 Jun 09 14:34	1°♌♂42'46	
morning max el	4692 Jul 12 07:45	28°♌♂44'30	24°36'26	morning max el	4693 Jun 23 22:47	9°♌♂11'03	26°09'50
	4692 Jul 13 14:26	0°♌♂			4693 Jul 09 16:05	0°♌♂	
	4692 Aug 02 09:27	0°♌♂		asc. node	4693 Jul 21 09:26	22°♌♂02'18	
asc. node	4692 Aug 03 12:23	2°♌♂14'17		morning set	4693 Jul 22 07:19	23°♌♂57'21	
morning set	4692 Aug 06 20:19	9°♌♂07'49			4693 Jul 25 02:51	0°♌♂	
superior conj	4692 Aug 13 19:00	24°♌♂11'22	1°29'10	superior conj	4693 Jul 29 06:12	9°♌♂05'40	1°14'03
minimum elong	4692 Aug 13 16:55	23°♌♂59'59	1°28'56	minimum elong	4693 Jul 29 03:53	8°♌♂52'53	1°13'41
max. Earth dist.	4692 Aug 15 12:01	27°♌♂53'58	1.32816 AU	max. Earth dist.	4693 Jul 29 21:04	10°♌♂27'33	1.32177 AU
	4692 Aug 16 11:25	0°♌♂		evening rise	4693 Aug 05 05:06	24°♌♂07'38	
evening rise	4692 Aug 21 01:22	9°♌♂36'18			4693 Aug 08 01:54	0°♌♂	
	4692 Aug 31 22:01	0°♌♂			4693 Aug 25 16:43	0°♌♂	
desc. node	4692 Sep 09 03:11	13°♌♂02'00		desc. node	4693 Aug 27 00:11	1°♌♂47'41	
	4692 Sep 22 23:13	0°♌♂		evening max el	4693 Sep 05 10:17	12°♌♂40'11	27°07'30
evening max el	4692 Sep 23 03:59	0°♌♂11'21	27°26'54	retrograde	4693 Sep 19 06:59	19°♌♂52'36	

evening set	4693 Sep 26 09:05	17° Ω 37'33		evening set	4694 Sep 07 10:57	30° \mathbb{R} \mathbb{M}	
min. Earth dist.	4693 Sep 30 00:40	14° Ω 54'57	0.61261 AU	evening set	4694 Sep 07 21:28	29° \mathbb{M} 46'47	
inferior conj	4693 Oct 03 03:32	12° Ω 11'59	-4°09'49	min. Earth dist.	4694 Sep 11 22:52	27° \mathbb{M} 11'54	0.59185 AU
minimum elong	4693 Oct 03 09:43	11° Ω 58'30	4°08'14	inferior conj	4694 Sep 15 05:02	24° \mathbb{M} 43'38	-4°55'12
morning rise	4693 Oct 10 12:15	7° Ω 18'39		minimum elong	4694 Sep 15 09:51	24° \mathbb{M} 34'27	4°54'29
direct	4693 Oct 12 20:14	6° Ω 56'22		morning rise	4694 Sep 23 00:27	20° \mathbb{M} 12'54	
asc. node	4693 Oct 17 08:39	8° Ω 23'31		direct	4694 Sep 25 09:40	19° \mathbb{M} 53'22	
morning max el	4693 Oct 19 22:35	10° Ω 29'20	17°57'33	morning max el	4694 Oct 03 07:47	23° \mathbb{M} 43'15	18°25'07
	4693 Nov 01 19:09	0° \mathbb{M}		asc. node	4694 Oct 04 05:41	24° \mathbb{M} 38'39	
morning set	4693 Nov 04 16:57	5° \mathbb{M} 19'09			4694 Oct 08 10:28	0° Ω	
				morning set	4694 Oct 19 07:52	19° Ω 14'25	
					4694 Oct 24 22:52	0° \mathbb{M}	
superior conj	4693 Nov 14 23:49	23° \mathbb{M} 52'34	0°54'32				
minimum elong	4693 Nov 15 03:45	24° \mathbb{M} 09'45	0°54'01				
	4693 Nov 18 12:59	0° \mathbb{M}		superior conj	4694 Oct 28 09:03	6° \mathbb{M} 24'12	1°20'37
max. Earth dist.	4693 Nov 22 13:09	6° \mathbb{M} 43'10	1.42416 AU	minimum elong	4694 Oct 28 12:41	6° \mathbb{M} 40'59	1°20'14
desc. node	4693 Nov 22 23:27	7° \mathbb{M} 25'39		max. Earth dist.	4694 Nov 04 20:36	19° \mathbb{M} 45'30	1.40449 AU
evening rise	4693 Nov 28 16:42	16° \mathbb{M} 39'41		evening rise	4694 Nov 09 06:44	27° \mathbb{M} 13'46	
	4693 Dec 07 08:19	0° \mathbb{Z}		desc. node	4694 Nov 09 20:28	28° \mathbb{M} 10'27	
	4693 Dec 29 08:37	0° \approx			4694 Nov 10 23:13	0° \mathbb{M}	
evening max el	4693 Dec 31 05:58	2° \approx 00'31	22°14'23		4694 Nov 30 23:47	0° \mathbb{Z}	
retrograde	4694 Jan 09 19:05	7° \approx 41'20		evening max el	4694 Dec 13 20:44	15° \mathbb{Z} 38'30	23°34'13
asc. node	4694 Jan 13 07:54	6° \approx 35'12		retrograde	4694 Dec 24 12:51	21° \mathbb{Z} 56'47	
evening set	4694 Jan 14 07:56	5° \approx 51'23		evening set	4694 Dec 29 14:09	19° \mathbb{Z} 51'09	
	4694 Jan 19 07:50	30° \mathbb{R} \mathbb{Z}		asc. node	4694 Dec 31 04:56	18° \mathbb{Z} 16'52	
inferior conj	4694 Jan 19 16:20	29° \mathbb{Z} 30'29	2°00'34	min. Earth dist.	4695 Jan 03 11:28	14° \mathbb{Z} 09'01	0.67987 AU
minimum elong	4694 Jan 19 14:04	29° \mathbb{Z} 38'22	1°59'48	inferior conj	4695 Jan 04 00:08	13° \mathbb{Z} 25'43	1°15'22
min. Earth dist.	4694 Jan 19 14:40	29° \mathbb{Z} 36'15	0.68057 AU	minimum elong	4695 Jan 03 22:29	13° \mathbb{Z} 31'21	1°14'45
morning rise	4694 Jan 24 20:03	23° \mathbb{Z} 20'01		morning rise	4695 Jan 09 06:46	7° \mathbb{Z} 19'40	
direct	4694 Jan 29 13:45	21° \mathbb{Z} 20'37		direct	4695 Jan 13 10:25	5° \mathbb{Z} 42'58	
morning max el	4694 Feb 08 01:03	26° \mathbb{Z} 55'00	22°18'00	morning max el	4695 Jan 21 17:59	10° \mathbb{Z} 30'58	20°56'21
	4694 Feb 10 21:36	0° \approx		desc. node	4695 Feb 05 19:44	0° \approx 02'55	
desc. node	4694 Feb 18 22:43	10° \approx 13'21			4695 Feb 05 18:56	0° \approx	
	4694 Mar 04 12:54	0° \mathbb{H}		morning set	4695 Feb 20 20:12	22° \approx 44'34	
morning set	4694 Mar 13 12:02	14° \mathbb{H} 07'40			4695 Feb 25 10:23	0° \mathbb{H}	
max. Earth dist.	4694 Mar 18 18:11	22° \mathbb{H} 49'33	1.40806 AU	max. Earth dist.	4695 Feb 28 21:22	5° \mathbb{H} 34'35	1.42777 AU
	4694 Mar 22 22:39	0° \mathbb{Y}					
				superior conj	4695 Mar 07 21:43	17° \mathbb{H} 13'24	-2°08'11
superior conj	4694 Mar 26 13:02	6° \mathbb{Y} 21'17	-1°57'49	minimum elong	4695 Mar 07 22:40	17° \mathbb{H} 17'26	2°08'11
minimum elong	4694 Mar 26 17:22	6° \mathbb{Y} 40'39	1°57'33		4695 Mar 15 06:48	0° \mathbb{Y}	
evening rise	4694 Apr 05 19:12	25° \mathbb{Y} 15'50		evening rise	4695 Mar 19 15:18	7° \mathbb{Y} 44'44	
	4694 Apr 08 08:04	0° \mathbb{B}		asc. node	4695 Mar 29 04:14	24° \mathbb{Y} 20'36	
asc. node	4694 Apr 11 07:12	5° \mathbb{B} 25'14			4695 Apr 01 22:49	0° \mathbb{B}	
evening max el	4694 Apr 21 23:34	21° \mathbb{B} 06'57	18°18'32	evening max el	4695 Apr 05 10:56	4° \mathbb{B} 09'04	18°06'47
retrograde	4694 Apr 29 04:33	24° \mathbb{B} 42'32		retrograde	4695 Apr 12 01:10	7° \mathbb{B} 31'54	
evening set	4694 May 01 14:11	24° \mathbb{B} 19'32		evening set	4695 Apr 14 17:24	6° \mathbb{B} 58'25	
inferior conj	4694 May 08 18:57	19° \mathbb{B} 40'18	2°24'00	inferior conj	4695 Apr 21 06:21	1° \mathbb{B} 58'47	3°10'13
minimum elong	4694 May 08 22:31	19° \mathbb{B} 32'44	2°23'03	minimum elong	4695 Apr 21 08:56	1° \mathbb{B} 52'28	3°09'48
min. Earth dist.	4694 May 12 05:22	16° \mathbb{B} 46'53	0.59065 AU		4695 Apr 23 06:42	30° \mathbb{R} \mathbb{Y}	
morning rise	4694 May 16 03:54	14° \mathbb{B} 03'29		min. Earth dist.	4695 Apr 24 09:56	28° \mathbb{Y} 55'08	0.61265 AU
desc. node	4694 May 17 21:58	13° \mathbb{B} 12'52		morning rise	4695 Apr 27 22:31	26° \mathbb{Y} 02'28	
direct	4694 May 22 09:48	12° \mathbb{B} 18'02		direct	4695 May 04 16:32	23° \mathbb{Y} 44'15	
morning max el	4694 Jun 05 19:11	20° \mathbb{B} 06'05	27°17'33	desc. node	4695 May 04 18:59	23° \mathbb{Y} 44'17	
	4694 Jun 14 06:39	0° \mathbb{I}			4695 May 17 02:56	0° \mathbb{B}	
	4694 Jul 02 09:55	0° \mathbb{E}		morning max el	4695 May 18 21:50	1° \mathbb{B} 42'02	27°50'05
morning set	4694 Jul 06 15:55	8° \mathbb{E} 37'47			4695 Jun 08 13:19	0° \mathbb{I}	
asc. node	4694 Jul 08 06:28	12° \mathbb{E} 01'32		morning set	4695 Jun 20 20:16	23° \mathbb{I} 03'29	
					4695 Jun 24 03:44	0° \mathbb{E}	
superior conj	4694 Jul 13 18:00	23° \mathbb{E} 58'53	0°54'37	asc. node	4695 Jun 25 03:30	2° \mathbb{E} 07'30	
minimum elong	4694 Jul 13 15:55	23° \mathbb{E} 47'24	0°54'13	max. Earth dist.	4695 Jun 26 18:21	5° \mathbb{E} 37'55	1.32156 AU
max. Earth dist.	4694 Jul 13 08:25	23° \mathbb{E} 05'58	1.31956 AU				
	4694 Jul 16 11:29	0° \mathbb{Q}		superior conj	4695 Jun 28 04:41	8° \mathbb{E} 45'32	0°31'26
evening rise	4694 Jul 20 13:35	8° \mathbb{Q} 50'49		minimum elong	4695 Jun 28 03:18	8° \mathbb{E} 37'59	0°31'08
	4694 Jul 31 11:31	0° \mathbb{M}		evening rise	4695 Jul 05 00:44	23° \mathbb{E} 39'29	
desc. node	4694 Aug 13 21:13	19° \mathbb{M} 33'23			4695 Jul 08 01:37	0° \mathbb{Q}	
evening max el	4694 Aug 18 09:48	24° \mathbb{M} 21'53	26°14'53		4695 Jul 26 05:47	0° \mathbb{M}	
	4694 Aug 26 04:39	0° Ω		evening max el	4695 Jul 31 02:10	5° \mathbb{M} 17'32	24°54'20
retrograde	4694 Sep 01 09:04	1° Ω 30'43		desc. node	4695 Jul 31 18:16	5° \mathbb{M} 55'17	

retrograde	4695 Aug 14 00:25	12° \mathbb{M} 19'46		evening max el	4696 Jul 11 14:54	15° \mathcal{O} 42'44	23°18'25
evening set	4695 Aug 19 09:50	11° \mathbb{M} 13'53		desc. node	4696 Jul 17 15:18	20° \mathcal{O} 20'45	
min. Earth dist.	4695 Aug 24 13:40	8° \mathbb{M} 28'11	0.57219 AU	retrograde	4696 Jul 25 02:59	22° \mathcal{O} 28'06	
inferior conj	4695 Aug 27 11:08	6° \mathbb{M} 33'40	-5°15'02	evening set	4696 Jul 29 00:28	21° \mathcal{O} 54'57	
minimum elong	4695 Aug 27 11:24	6° \mathbb{M} 33'13	5°15'02	min. Earth dist.	4696 Aug 05 00:20	18° \mathcal{O} 42'45	0.55676 AU
morning rise	4695 Sep 04 15:22	2° \mathbb{M} 24'55		inferior conj	4696 Aug 06 21:17	17° \mathcal{O} 36'47	-4°53'09
direct	4695 Sep 07 05:20	2° \mathbb{M} 05'52		minimum elong	4696 Aug 06 15:16	17° \mathcal{O} 45'39	4°52'17
morning max el	4695 Sep 16 08:09	6° \mathbb{M} 23'17	19°13'55	morning rise	4696 Aug 15 08:26	13° \mathcal{O} 44'05	
asc. node	4695 Sep 21 02:44	11° \mathbb{M} 59'07		direct	4696 Aug 18 06:01	13° \mathcal{O} 23'44	
	4695 Oct 01 12:13	0° \mathcal{O}		morning max el	4696 Aug 28 21:02	18° \mathcal{O} 19'58	20°24'36
morning set	4695 Oct 03 07:49	3° \mathcal{O} 35'24		asc. node	4696 Sep 06 23:47	0° \mathbb{M} 09'57	
					4696 Sep 06 21:21	0° \mathbb{M}	
superior conj	4695 Oct 11 11:59	19° \mathcal{O} 47'33	1°36'23	morning set	4696 Sep 16 13:43	18° \mathbb{M} 13'03	
minimum elong	4695 Oct 11 14:13	19° \mathcal{O} 58'25	1°36'15		4696 Sep 22 06:55	0° \mathcal{O}	
	4695 Oct 16 21:25	0° \mathbb{M}					
max. Earth dist.	4695 Oct 18 01:18	2° \mathbb{M} 07'31	1.38351 AU	superior conj	4696 Sep 24 03:39	3° \mathcal{O} 48'08	1°43'15
evening rise	4695 Oct 21 19:59	8° \mathbb{M} 51'23		minimum elong	4696 Sep 24 04:16	3° \mathcal{O} 51'17	1°43'15
desc. node	4695 Oct 27 17:31	18° \mathbb{M} 49'09		max. Earth dist.	4696 Sep 29 08:09	14° \mathcal{O} 04'15	1.36358 AU
	4695 Nov 03 19:49	0° \mathcal{O}		evening rise	4696 Oct 03 05:57	21° \mathcal{O} 25'41	
evening max el	4695 Nov 26 09:41	29° \mathcal{O} 20'43	24°52'16		4696 Oct 08 01:16	0° \mathbb{M}	
	4695 Nov 27 01:55	0° \mathcal{O}		desc. node	4696 Oct 13 14:35	9° \mathbb{M} 16'51	
retrograde	4695 Dec 08 02:31	6° \mathcal{O} 08'30			4696 Oct 27 17:03	0° \mathcal{O}	
evening set	4695 Dec 13 17:21	3° \mathcal{O} 48'03		evening max el	4696 Nov 07 22:18	13° \mathcal{O} 04'04	26°01'24
	4695 Dec 17 05:54	30° \mathcal{R}		retrograde	4696 Nov 20 11:18	20° \mathcal{O} 11'16	
asc. node	4695 Dec 18 01:59	28° \mathcal{O} 55'29		evening set	4696 Nov 26 15:48	17° \mathcal{O} 38'28	
min. Earth dist.	4695 Dec 18 06:43	28° \mathcal{O} 39'58	0.67564 AU	min. Earth dist.	4696 Nov 30 21:59	13° \mathcal{O} 05'39	0.66787 AU
inferior conj	4695 Dec 19 06:11	27° \mathcal{O} 22'32	0°23'55	inferior conj	4696 Dec 02 08:38	11° \mathcal{O} 17'37	-0°32'47
minimum elong	4695 Dec 19 05:36	27° \mathcal{O} 24'28	0°23'41	minimum elong	4696 Dec 02 09:31	11° \mathcal{O} 14'54	0°32'25
morning rise	4695 Dec 24 18:00	21° \mathcal{O} 23'03		asc. node	4696 Dec 03 23:00	9° \mathcal{O} 20'30	
direct	4695 Dec 28 08:54	20° \mathcal{O} 07'36		morning rise	4696 Dec 08 03:41	5° \mathcal{O} 27'16	
morning max el	4696 Jan 04 18:45	24° \mathcal{O} 18'25	19°47'01	direct	4696 Dec 11 07:36	4° \mathcal{O} 30'04	
	4696 Jan 09 16:15	0° \mathcal{O}		morning max el	4696 Dec 18 03:06	8° \mathcal{O} 15'26	18°52'48
greatest brilliancy	4696 Jan 18 00:00	11° \mathcal{O} 41'20	-0.6m		4697 Jan 02 17:51	0° \mathcal{O}	
desc. node	4696 Jan 23 16:46	20° \mathcal{O} 13'58		morning set	4697 Jan 09 01:40	9° \mathcal{O} 53'06	
	4696 Jan 30 02:01	0° \approx		desc. node	4697 Jan 09 13:48	10° \mathcal{O} 40'37	
morning set	4696 Jan 30 16:16	0° \approx 54'55			4697 Jan 21 21:58	0° \approx	
max. Earth dist.	4696 Feb 11 08:29	19° \approx 10'46	1.44285 AU	max. Earth dist.	4697 Jan 24 01:35	3° \approx 22'33	1.45142 AU
superior conj	4696 Feb 16 04:44	26° \approx 56'50	-2°02'17	superior conj	4697 Jan 25 14:02	5° \approx 45'48	-1°36'40
minimum elong	4696 Feb 15 23:38	26° \approx 36'11	2°02'01	minimum elong	4697 Jan 25 04:44	5° \approx 09'14	1°35'48
	4696 Feb 18 01:51	0° \mathcal{H}		evening rise	4697 Feb 09 18:53	0° \mathcal{H} 01'19	
evening rise	4696 Feb 29 16:20	19° \mathcal{H} 21'14			4697 Feb 09 18:33	0° \mathcal{H}	
	4696 Mar 06 22:56	0° \mathcal{Y}		asc. node	4697 Mar 01 22:19	0° \mathcal{Y} 19'27	
asc. node	4696 Mar 15 01:17	12° \mathcal{Y} 42'00			4697 Mar 01 15:10	0° \mathcal{Y}	
evening max el	4696 Mar 18 23:50	17° \mathcal{Y} 26'51	18°14'04	evening max el	4697 Mar 02 11:30	0° \mathcal{Y} 53'50	18°39'35
retrograde	4696 Mar 25 09:45	20° \mathcal{Y} 51'35		retrograde	4697 Mar 09 02:08	4° \mathcal{Y} 33'16	
evening set	4696 Mar 28 08:08	20° \mathcal{Y} 06'16		evening set	4697 Mar 12 06:46	3° \mathcal{Y} 35'21	
inferior conj	4696 Apr 03 09:16	14° \mathcal{Y} 47'07	3°31'21		4697 Mar 16 06:35	30° \mathcal{R}	
minimum elong	4696 Apr 03 10:11	14° \mathcal{Y} 44'36	3°31'17	inferior conj	4697 Mar 17 23:43	27° \mathcal{H} 58'21	3°33'17
min. Earth dist.	4696 Apr 05 23:19	11° \mathcal{Y} 56'39	0.63342 AU	minimum elong	4697 Mar 17 23:06	28° \mathcal{H} 00'14	3°33'15
morning rise	4696 Apr 09 11:11	8° \mathcal{Y} 39'57		min. Earth dist.	4697 Mar 19 22:11	25° \mathcal{H} 37'38	0.65104 AU
direct	4696 Apr 16 08:03	5° \mathcal{Y} 59'12		morning rise	4697 Mar 23 14:54	21° \mathcal{H} 45'49	
desc. node	4696 Apr 20 16:01	6° \mathcal{Y} 54'57		direct	4697 Mar 30 06:56	18° \mathcal{H} 55'56	
morning max el	4696 Apr 30 05:20	13° \mathcal{Y} 57'59	27°45'00	desc. node	4697 Apr 07 13:02	22° \mathcal{H} 16'42	
	4696 May 13 03:48	0° \mathcal{O}		morning max el	4697 Apr 12 15:20	26° \mathcal{H} 46'00	27°05'51
	4696 May 31 02:44	0° \mathbb{I}			4697 Apr 15 15:49	0° \mathcal{Y}	
morning set	4696 Jun 03 18:02	7° \mathbb{I} 06'16			4697 May 06 18:44	0° \mathcal{O}	
max. Earth dist.	4696 Jun 08 22:58	17° \mathbb{I} 50'27	1.32791 AU	morning set	4697 May 18 06:21	20° \mathcal{O} 37'53	
asc. node	4696 Jun 11 00:32	22° \mathbb{I} 15'05			4697 May 22 23:37	0° \mathbb{I}	
				max. Earth dist.	4697 May 22 18:34	29° \mathcal{O} 34'19	1.33881 AU
superior conj	4696 Jun 11 12:20	23° \mathbb{I} 18'34	0°05'09	superior conj	4697 May 26 14:58	7° \mathbb{I} 32'03	-0°23'27
minimum elong	4696 Jun 11 12:05	23° \mathbb{I} 17'13	0°05'05	minimum elong	4697 May 26 16:12	7° \mathbb{I} 38'31	0°23'11
behind sun begin	4696 Jun 11 07:03	22° \mathbb{I} 50'03		asc. node	4697 May 28 21:36	12° \mathbb{I} 20'34	
behind sun end	4696 Jun 11 17:08	23° \mathbb{I} 44'25		evening rise	4697 Jun 02 23:12	23° \mathbb{I} 04'45	
	4696 Jun 14 14:29	0° \mathcal{O}			4697 Jun 06 08:02	0° \mathcal{O}	
evening rise	4696 Jun 18 12:34	8° \mathcal{O} 26'06		evening max el	4697 Jun 23 07:45	26° \mathcal{O} 09'57	21°43'09
	4696 Jun 29 18:07	0° \mathcal{O}					

	4697 Jun 28 03:21	0°♎	evening rise	4698 May 18 06:35	7°♊28'42	
desc. node	4697 Jul 04 12:18	2°♎16'04		4698 May 30 15:26	0°♊	
retrograde	4697 Jul 05 18:53	2°♎19'52	evening max el	4698 Jun 05 11:30	7°♊08'29	20°20'57
evening set	4697 Jul 08 08:52	2°♎04'48	retrograde	4698 Jun 16 08:17	12°♊27'16	
	4697 Jul 14 02:24	30°♋♊	evening set	4698 Jun 18 07:31	12°♊17'32	
inferior conj	4697 Jul 17 17:07	28°♊02'59 -3°40'00	desc. node	4698 Jun 21 09:17	11°♊26'42	
minimum elong	4697 Jul 17 08:26	28°♊15'08 3°37'32	inferior conj	4698 Jun 27 11:29	8°♊19'34	-1°48'24
min. Earth dist.	4697 Jul 17 10:29	28°♊12'16 0.54870 AU	minimum elong	4698 Jun 27 06:24	8°♊27'00	1°46'32
morning rise	4697 Jul 26 09:19	24°♊11'05	min. Earth dist.	4698 Jun 28 22:29	7°♊28'21	0.55002 AU
direct	4697 Jul 29 16:50	23°♊47'07	morning rise	4698 Jul 06 04:08	4°♊07'31	
morning max el	4697 Aug 10 22:07	29°♊31'25 21°54'51	direct	4698 Jul 10 03:01	3°♊33'42	
	4697 Aug 11 10:12	0°♎	morning max el	4698 Jul 23 14:40	10°♊07'17	23°37'10
asc. node	4697 Aug 24 20:49	18°♎59'24		4698 Aug 07 06:33	0°♎	
	4697 Aug 30 12:21	0°♐	asc. node	4698 Aug 11 17:52	8°♎17'58	
morning set	4697 Aug 31 23:18	3°♐01'04	morning set	4698 Aug 16 10:46	17°♎54'13	
				4698 Aug 22 01:40	0°♐	
superior conj	4697 Sep 08 04:14	18°♐14'50 1°42'37				
minimum elong	4697 Sep 08 03:28	18°♐10'49 1°42'36	superior conj	4698 Aug 23 10:45	2°♐58'47	1°35'40
max. Earth dist.	4697 Sep 11 21:47	25°♐58'05 1.34661 AU	minimum elong	4698 Aug 23 09:00	2°♐49'25	1°35'32
	4697 Sep 13 21:55	0°♊	max. Earth dist.	4698 Aug 25 20:10	8°♐06'05	1.33362 AU
evening rise	4697 Sep 16 08:28	4°♊46'26	evening rise	4698 Aug 30 23:28	18°♐43'02	
desc. node	4697 Sep 30 11:37	29°♊27'41		4698 Sep 05 20:30	0°♊	
	4697 Sep 30 19:51	0°♌	desc. node	4698 Sep 17 08:37	19°♊14'25	
evening max el	4697 Oct 21 10:53	26°♌41'04 26°54'08		4698 Sep 25 01:06	0°♌	
	4697 Oct 25 06:40	0°♍	evening max el	4698 Oct 03 22:46	10°♌02'16	27°23'19
retrograde	4697 Nov 03 14:41	3°♍57'57	retrograde	4698 Oct 17 12:15	17°♌20'41	
evening set	4697 Nov 10 07:26	1°♍17'53	evening set	4698 Oct 24 13:43	14°♌41'35	
	4697 Nov 11 18:42	30°♋♌	min. Earth dist.	4698 Oct 28 07:35	11°♌18'22	0.64181 AU
min. Earth dist.	4697 Nov 14 06:57	27°♌20'42 0.65657 AU	inferior conj	4698 Oct 30 18:05	8°♌44'34	-2°36'12
inferior conj	4697 Nov 16 05:23	25°♌06'31 -1°33'32	minimum elong	4698 Oct 30 22:34	8°♌32'45	2°34'31
minimum elong	4697 Nov 16 08:02	24°♌58'52 1°32'26	morning rise	4698 Nov 06 08:46	3°♌20'54	
asc. node	4697 Nov 20 20:03	20°♌27'25	asc. node	4698 Nov 07 17:04	2°♌55'55	
morning rise	4697 Nov 22 09:31	19°♌28'02	direct	4698 Nov 08 21:10	2°♌48'55	
direct	4697 Nov 25 04:29	18°♌45'24	morning max el	4698 Nov 15 09:28	6°♌14'14	17°53'52
morning max el	4697 Dec 01 16:55	22°♌16'07 18°14'51		4698 Dec 01 03:53	0°♍	
	4697 Dec 07 20:03	0°♍	morning set	4698 Dec 02 09:00	2°♍03'58	
morning set	4697 Dec 20 15:12	20°♍17'00	desc. node	4698 Dec 14 07:53	22°♍01'32	
	4697 Dec 26 15:28	0°♎				
desc. node	4697 Dec 27 10:50	1°♎17'39	superior conj	4698 Dec 15 10:36	23°♎50'02	-0°07'46
			minimum elong	4698 Dec 15 09:43	23°♎46'25	0°07'37
superior conj	4698 Jan 04 17:11	14°♎24'51 -0°54'57	behind sun begin	4698 Dec 15 00:44	23°♎10'01	
minimum elong	4698 Jan 04 10:23	13°♎58'06 0°54'03	behind sun end	4698 Dec 15 18:42	24°♎22'47	
max. Earth dist.	4698 Jan 06 20:54	17°♎48'08 1.45264 AU		4698 Dec 19 06:43	0°♎	
	4698 Jan 14 16:04	0°♏	max. Earth dist.	4698 Dec 20 15:20	2°♎09'42	1.44654 AU
evening rise	4698 Jan 20 22:46	9°♏48'05	evening rise	4698 Dec 31 11:08	19°♎02'26	
greatest brilliancy	4698 Feb 01 14:43	27°♏53'32 -0.7m		4699 Jan 07 15:37	0°♏	
	4698 Feb 03 00:09	0°♐	evening max el	4699 Jan 27 22:51	27°♏57'32	20°20'15
evening max el	4698 Feb 13 19:38	14°♐24'39 19°22'18		4699 Jan 30 03:25	0°♐	
asc. node	4698 Feb 16 19:21	16°♐59'44	asc. node	4699 Feb 03 16:21	2°♐28'34	
retrograde	4698 Feb 20 22:46	18°♐29'37	retrograde	4699 Feb 04 20:56	2°♐36'13	
evening set	4698 Feb 24 10:29	17°♐18'24	evening set	4699 Feb 08 17:08	1°♐10'45	
inferior conj	4698 Mar 01 22:15	11°♐25'40 3°20'39		4699 Feb 10 01:44	30°♋♏	
minimum elong	4698 Mar 01 20:31	11°♐31'17 3°20'25	inferior conj	4699 Feb 14 02:07	25°♏04'50	2°56'39
min. Earth dist.	4698 Mar 03 05:35	9°♐43'50 0.66465 AU	minimum elong	4699 Feb 13 23:48	25°♏12'43	2°56'08
morning rise	4698 Mar 07 06:16	5°♐11'10	min. Earth dist.	4699 Feb 14 19:39	24°♏05'15	0.67405 AU
direct	4698 Mar 13 12:13	2°♐24'51	morning rise	4699 Feb 19 06:14	18°♏50'38	
desc. node	4698 Mar 25 10:03	9°♐15'17	direct	4699 Feb 24 23:03	16°♏17'54	
morning max el	4698 Mar 26 01:10	9°♐52'59 26°00'07	morning max el	4699 Mar 08 09:49	23°♏08'49	24°37'32
	4698 Apr 10 22:43	0°♑	desc. node	4699 Mar 12 07:05	27°♏23'40	
	4698 Apr 29 08:04	0°♒		4699 Mar 14 11:13	0°♒	
morning set	4698 May 01 05:17	3°♒26'47		4699 Apr 04 07:23	0°♑	
max. Earth dist.	4698 May 05 02:36	10°♒47'37 1.35427 AU	morning set	4699 Apr 13 09:41	15°♑18'50	
			max. Earth dist.	4699 Apr 17 00:42	21°♑48'39	1.37378 AU
superior conj	4698 May 10 10:03	21°♒18'40 -0°53'02		4699 Apr 21 10:10	0°♒	
minimum elong	4698 May 10 12:57	21°♒33'21 0°52'29				
	4698 May 14 15:41	0°♓	superior conj	4699 Apr 23 18:29	4°♓30'32	-1°21'42
asc. node	4698 May 15 18:38	2°♓19'30	minimum elong	4699 Apr 23 22:51	4°♓51'42	1°21'04

evening rise	4699 May 02 08:21	21°♄31'18		superior conj	4700 Apr 06 12:17	16°♄57'46	-1°46'40
asc. node	4699 May 02 15:40	22°♄07'41		minimum elong	4700 Apr 06 17:10	17°♄20'22	1°46'11
	4699 May 06 16:25	0°♄			4700 Apr 13 10:05	0°♄	
evening max el	4699 May 19 03:43	18°♄49'16	19°17'29	evening rise	4700 Apr 16 01:36	5°♄05'08	
retrograde	4699 May 28 07:14	23°♄16'55		asc. node	4700 Apr 19 12:41	11°♄40'29	
evening set	4699 May 30 06:52	23°♄05'14			4700 May 01 03:32	0°♄	
inferior conj	4699 Jun 07 18:25	18°♄56'45	0°08'46	evening max el	4700 May 02 06:07	1°♄09'02	18°34'16
minimum elong	4699 Jun 07 18:47	18°♄56'08	0°08'37	retrograde	4700 May 10 00:32	4°♄58'42	
transit middle	4699 Jun 07 18:47	18°♄56'08	0°08'37	evening set	4700 May 12 06:23	4°♄40'37	
transit begin	4699 Jun 07 15:32	19°♄01'30		inferior conj	4700 May 19 21:53	0°♄13'07	1°43'37
transit end	4699 Jun 07 22:02	18°♄50'45		minimum elong	4700 May 20 01:10	0°♄06'45	1°42'35
desc. node	4699 Jun 08 06:19	18°♄36'59			4700 May 20 04:39	30°♄	
min. Earth dist.	4699 Jun 10 12:59	17°♄07'06	0.56075 AU	min. Earth dist.	4700 May 23 07:01	27°♄37'17	0.57857 AU
morning rise	4699 Jun 16 03:41	14°♄10'54		desc. node	4700 May 26 03:20	25°♄43'07	
direct	4699 Jun 21 00:32	13°♄16'28		morning rise	4700 May 27 16:45	24°♄52'59	
morning max el	4699 Jul 05 04:22	20°♄28'56	25°18'21	direct	4700 Jun 02 12:09	23°♄27'45	
	4699 Jul 13 08:36	0°♄			4700 Jun 15 17:36	0°♄	
asc. node	4699 Jul 29 14:55	27°♄57'12		morning max el	4700 Jun 16 21:11	1°♄05'05	26°42'24
	4699 Jul 30 14:40	0°♄			4700 Jul 07 09:57	0°♄	
morning set	4699 Jul 31 22:23	2°♄46'36		morning set	4700 Jul 16 08:37	17°♄33'19	
				asc. node	4700 Jul 16 11:58	17°♄51'00	
superior conj	4699 Aug 07 20:49	17°♄51'26	1°23'20		4700 Jul 22 02:23	0°♄	
minimum elong	4699 Aug 07 18:34	17°♄39'07	1°23'02	superior conj	4700 Jul 23 08:31	2°♄46'26	1°06'19
max. Earth dist.	4699 Aug 09 02:10	20°♄32'00	1.32490 AU	minimum elong	4700 Jul 23 06:15	2°♄33'52	1°05'55
	4699 Aug 13 11:58	0°♄		max. Earth dist.	4700 Jul 23 12:47	3°♄10'00	1.32040 AU
evening rise	4699 Aug 14 23:25	3°♄04'38		evening rise	4700 Jul 30 05:32	17°♄42'40	
	4699 Aug 29 15:28	0°♄			4700 Aug 05 08:12	0°♄	
desc. node	4699 Sep 04 05:37	8°♄26'17		desc. node	4700 Aug 22 02:38	26°♄49'00	
evening max el	4699 Sep 16 08:02	22°♄54'33	27°22'51		4700 Aug 24 16:57	0°♄	
	4699 Sep 28 06:42	0°♄		evening max el	4700 Aug 29 11:58	5°♄05'08	26°49'02
retrograde	4699 Sep 30 03:01	0°♄09'14		retrograde	4700 Sep 12 09:48	12°♄15'04	
	4699 Oct 01 22:31	30°♄		evening set	4700 Sep 19 07:39	10°♄12'15	
evening set	4699 Oct 07 07:14	27°♄42'11		min. Earth dist.	4700 Sep 23 02:02	7°♄34'53	0.60391 AU
min. Earth dist.	4699 Oct 10 22:11	24°♄47'25	0.62397 AU	inferior conj	4700 Sep 26 07:12	4°♄56'17	-4°31'14
inferior conj	4699 Oct 13 19:49	22°♄04'05	-3°37'26	minimum elong	4700 Sep 26 13:09	4°♄44'02	4°29'58
minimum elong	4699 Oct 14 01:43	21°♄50'12	3°35'37	morning rise	4700 Oct 03 20:36	0°♄11'59	
morning rise	4699 Oct 20 21:54	16°♄58'26			4700 Oct 04 16:18	30°♄	
direct	4699 Oct 23 06:34	16°♄33'30		direct	4700 Oct 06 04:47	29°♄51'04	
asc. node	4699 Oct 25 14:07	16°♄58'12			4700 Oct 07 16:44	0°♄	
morning max el	4699 Oct 30 01:40	20°♄01'32	17°50'44	asc. node	4700 Oct 12 11:10	2°♄28'44	
	4699 Nov 06 11:04	0°♄		morning max el	4700 Oct 13 14:20	3°♄30'01	18°06'41
morning set	4699 Nov 15 01:00	14°♄54'25		morning set	4700 Oct 29 08:59	28°♄30'19	
	4699 Nov 23 14:24	0°♄			4700 Oct 30 04:09	0°♄	
superior conj	4699 Nov 26 05:26	4°♄29'41	0°34'35	superior conj	4700 Nov 08 01:58	16°♄24'08	1°06'56
minimum elong	4699 Nov 26 08:31	4°♄42'45	0°34'09	minimum elong	4700 Nov 08 06:00	16°♄42'07	1°06'26
desc. node	4699 Dec 01 04:53	12°♄48'17		max. Earth dist.	4700 Nov 15 17:39	29°♄40'38	1.41619 AU
max. Earth dist.	4699 Dec 03 06:47	16°♄11'55	1.43389 AU		4700 Nov 15 22:16	0°♄	
evening rise	4699 Dec 10 22:34	28°♄21'14		desc. node	4700 Nov 18 01:54	3°♄34'44	
	4699 Dec 12 00:02	0°♄		evening rise	4700 Nov 21 00:14	8°♄21'19	
	4700 Jan 01 10:23	0°♄			4700 Dec 05 03:23	0°♄	
evening max el	4700 Jan 10 20:39	11°♄31'52	21°30'25	evening max el	4700 Dec 24 13:33	25°♄08'03	22°48'14
retrograde	4700 Jan 19 18:33	16°♄49'13			4700 Dec 30 16:37	0°♄	
asc. node	4700 Jan 21 13:22	16°♄32'04		retrograde	4701 Jan 03 13:59	1°♄04'49	
evening set	4700 Jan 24 00:52	15°♄08'27			4701 Jan 07 03:31	30°♄	
inferior conj	4700 Jan 29 09:02	8°♄52'16	2°23'23	evening set	4701 Jan 08 08:05	29°♄08'04	
minimum elong	4700 Jan 29 06:36	9°♄00'40	2°22'39	asc. node	4701 Jan 08 10:25	29°♄03'10	
min. Earth dist.	4700 Jan 29 14:05	8°♄34'43	0.67931 AU	inferior conj	4701 Jan 13 17:00	22°♄44'59	1°42'13
morning rise	4700 Feb 03 12:08	2°♄40'06		minimum elong	4701 Jan 13 14:56	22°♄52'06	1°41'29
direct	4700 Feb 08 14:26	0°♄27'28		min. Earth dist.	4701 Jan 13 10:35	23°♄07'08	0.68073 AU
morning max el	4700 Feb 18 18:56	6°♄30'16	23°08'30	morning rise	4701 Jan 18 21:41	16°♄36'25	
desc. node	4700 Feb 27 04:07	16°♄21'54		direct	4701 Jan 23 09:22	14°♄46'40	
	4700 Mar 08 23:29	0°♄		morning max el	4701 Feb 01 08:04	19°♄59'52	21°42'06
morning set	4700 Mar 25 13:31	25°♄57'57			4701 Feb 09 17:15	0°♄	
	4700 Mar 27 22:53	0°♄		desc. node	4701 Feb 14 01:08	5°♄55'31	
max. Earth dist.	4700 Mar 29 19:55	3°♄13'24	1.39556 AU		4701 Mar 02 04:49	0°♄	

morning set	4701 Mar 05 12:34	5° H 14'49		max. Earth dist.	4702 Feb 22 02:34	28° \approx 38'26	1.43484 AU
max. Earth dist.	4701 Mar 11 19:35	15° H 28'47	1.41686 AU		4702 Feb 22 22:48	0° H	
superior conj	4701 Mar 19 10:25	28° H 27'21	-2°03'52	superior conj	4702 Feb 28 08:16	8° H 49'52	-2°07'58
minimum elong	4701 Mar 19 13:43	28° H 41'47	2°03'43	minimum elong	4702 Feb 28 06:50	8° H 43'54	2°07'56
	4701 Mar 20 07:33	0° Y		evening rise	4702 Mar 12 19:12	0° Y 08'19	
evening rise	4701 Mar 30 06:38	18° Y 00'23			4702 Mar 12 17:18	0° Y	
	4701 Apr 05 21:52	0° Z		asc. node	4702 Mar 24 06:47	19° Y 33'29	
asc. node	4701 Apr 06 09:44	0° Z 51'24		evening max el	4702 Mar 30 03:27	27° Y 07'02	18°07'33
evening max el	4701 Apr 15 15:09	13° Z 57'46	18°11'09		4702 Apr 03 04:49	0° Z	
retrograde	4701 Apr 22 12:26	17° Z 26'10		retrograde	4702 Apr 05 14:50	0° Z 29'24	
evening set	4701 Apr 25 00:59	16° Z 58'50		evening set	4702 Apr 08 09:35	29° Y 51'06	
inferior conj	4701 May 01 22:30	12° Z 10'29	2°47'04		4702 Apr 08 01:12	30° R Y	
minimum elong	4701 May 02 01:48	12° Z 02'59	2°46'19	inferior conj	4702 Apr 14 17:02	24° Y 42'52	3°21'53
min. Earth dist.	4701 May 05 06:59	9° Z 09'59	0.59999 AU	minimum elong	4702 Apr 14 18:55	24° Y 37'58	3°21'38
morning rise	4701 May 09 00:09	6° Z 24'14		min. Earth dist.	4702 Apr 17 15:18	21° Y 42'14	0.62172 AU
desc. node	4701 May 13 00:22	4° Z 41'58		morning rise	4702 Apr 21 02:42	18° Y 40'43	
direct	4701 May 15 12:12	4° Z 24'27		direct	4702 Apr 27 22:46	16° Y 11'32	
morning max el	4701 May 29 20:20	12° Z 16'53	27°36'03	desc. node	4702 Apr 29 21:24	16° Y 22'41	
	4701 Jun 12 19:27	0° II		morning max el	4702 May 12 01:35	24° Y 11'22	27°52'29
	4701 Jun 29 14:48	0° S			4702 May 17 07:29	0° Z	
morning set	4701 Jun 30 15:40	2° S 08'23			4702 Jun 06 03:37	0° II	
asc. node	4701 Jul 03 09:01	7° S 53'40		morning set	4702 Jun 14 17:34	16° II 25'30	
max. Earth dist.	4701 Jul 07 00:14	15° S 48'14	1.31998 AU	asc. node	4702 Jun 20 06:04	28° II 00'49	
				max. Earth dist.	4702 Jun 20 08:28	28° II 13'45	1.32372 AU
superior conj	4701 Jul 07 20:03	17° S 37'26	0°45'13		4702 Jun 21 04:07	0° S	
minimum elong	4701 Jul 07 18:13	17° S 27'18	0°44'50				
	4701 Jul 13 11:34	0° O		superior conj	4702 Jun 22 05:41	2° S 18'54	0°20'37
evening rise	4701 Jul 14 15:25	2° O 29'07		minimum elong	4702 Jun 22 04:44	2° S 13'44	0°20'24
	4701 Jul 29 09:38	0° P		evening rise	4702 Jun 29 03:05	17° S 17'28	
desc. node	4701 Aug 08 23:40	14° P 02'28			4702 Jul 05 09:06	0° O	
evening max el	4701 Aug 11 08:18	16° P 26'16	25°43'18	evening max el	4702 Jul 23 22:07	27° O 04'58	24°14'21
retrograde	4701 Aug 25 07:18	23° P 32'30		desc. node	4702 Jul 26 20:41	29° O 39'10	
evening set	4701 Aug 31 10:08	22° P 04'16			4702 Jul 27 07:32	0° P	
min. Earth dist.	4701 Sep 04 20:22	19° P 27'20	0.58326 AU	retrograde	4702 Aug 06 17:44	4° P 02'45	
inferior conj	4701 Sep 08 00:44	17° P 11'14	-5°07'37	evening set	4702 Aug 11 12:21	3° P 12'01	
minimum elong	4701 Sep 08 04:02	17° P 05'19	5°07'20	min. Earth dist.	4702 Aug 17 08:51	0° P 16'39	0.56489 AU
morning rise	4701 Sep 16 00:11	12° P 50'19			4702 Aug 17 19:42	30° R O	
direct	4701 Sep 18 11:13	12° P 31'06		inferior conj	4702 Aug 19 22:05	28° O 41'01	-5°11'46
morning max el	4701 Sep 26 20:10	16° P 30'49	18°43'14	minimum elong	4702 Aug 19 19:40	28° O 44'50	5°11'38
asc. node	4701 Sep 29 08:14	19° P 13'39		morning rise	4702 Aug 28 05:32	24° O 40'42	
	4701 Oct 06 10:54	0° A		direct	4702 Aug 30 22:19	24° O 21'27	
morning set	4701 Oct 13 04:12	12° A 38'11		morning max el	4702 Sep 09 15:59	28° O 53'52	19°41'26
					4702 Sep 10 18:46	0° P	
superior conj	4701 Oct 21 19:28	29° A 20'17	1°28'29	asc. node	4702 Sep 16 05:17	6° P 57'19	
minimum elong	4701 Oct 21 22:35	29° A 34'58	1°28'13	morning set	4702 Sep 27 06:58	27° P 07'11	
	4701 Oct 22 03:54	0° M			4702 Sep 28 17:10	0° A	
max. Earth dist.	4701 Oct 28 23:52	12° M 26'49	1.39558 AU				
evening rise	4701 Nov 02 00:12	19° M 22'37		superior conj	4702 Oct 05 04:23	13° A 01'33	1°40'18
desc. node	4701 Nov 04 22:57	24° M 17'39		minimum elong	4702 Oct 05 05:55	13° A 09'11	1°40'14
	4701 Nov 08 11:39	0° X		max. Earth dist.	4702 Oct 11 04:29	24° A 34'24	1.37471 AU
	4701 Nov 29 09:45	0° Z			4702 Oct 14 03:35	0° M	
evening max el	4701 Dec 07 03:14	8° Z 47'53	24°08'01	evening rise	4702 Oct 14 22:42	1° M 25'40	
retrograde	4701 Dec 18 06:08	15° Z 19'53		desc. node	4702 Oct 22 19:59	14° M 52'24	
evening set	4701 Dec 23 13:13	13° Z 07'27			4702 Nov 01 15:54	0° X	
asc. node	4701 Dec 26 07:27	10° Z 13'46		evening max el	4702 Nov 19 15:40	22° X 30'35	25°23'10
min. Earth dist.	4701 Dec 28 06:55	7° Z 39'57	0.67849 AU	retrograde	4702 Dec 01 17:57	29° X 28'47	
inferior conj	4701 Dec 29 00:16	6° Z 41'23	0°54'16	evening set	4702 Dec 07 14:38	27° X 02'28	
minimum elong	4701 Dec 28 23:01	6° Z 45'36	0°53'46	min. Earth dist.	4702 Dec 12 00:47	22° X 09'15	0.67274 AU
morning rise	4702 Jan 03 08:52	0° Z 38'08		inferior conj	4702 Dec 13 05:00	20° X 38'03	0°00'27
	4702 Jan 04 08:10	30° R X		minimum elong	4702 Dec 13 05:00	20° X 38'06	0°00'26
direct	4702 Jan 07 06:51	29° X 10'57		transit middle	4702 Dec 13 05:00	20° X 38'06	0°00'26
	4702 Jan 10 09:55	0° Z		transit begin	4702 Dec 13 02:12	20° X 47'08	
morning max el	4702 Jan 15 04:23	3° Z 41'39	20°25'14	transit end	4702 Dec 13 07:47	20° X 29'05	
desc. node	4702 Jan 31 22:11	25° Z 55'17		asc. node	4702 Dec 13 04:29	20° X 39'44	
	4702 Feb 03 15:48	0° \approx		morning rise	4702 Dec 18 19:40	14° X 42'09	
morning set	4702 Feb 12 12:49	13° \approx 32'24		direct	4702 Dec 22 05:32	13° X 35'05	

morning max el	4702 Dec 29 08:35	17° ♄ 34'04	19°21'59	asc. node	4703 Nov 30 01:31	1° ♄ 16'34	
	4703 Jan 08 01:19	0° ♄			4703 Dec 01 10:01	30° ♄	
greatest brilliancy	4703 Jan 11 15:50	5° ♄ 20'07	-0.7m	morning rise	4703 Dec 03 04:00	28° ♄ 45'38	
desc. node	4703 Jan 18 19:13	16° ♄ 13'34		direct	4703 Dec 06 03:48	27° ♄ 55'07	
morning set	4703 Jan 22 11:30	21° ♄ 54'25			4703 Dec 11 02:03	0° ♄	
	4703 Jan 27 16:37	0° ♄		morning max el	4703 Dec 12 19:29	1° ♄ 33'18	18°34'29
max. Earth dist.	4703 Feb 04 15:56	12° ♄ 29'36	1.44732 AU		4704 Jan 01 10:04	0° ♄	
				morning set	4704 Jan 02 08:01	1° ♄ 27'06	
superior conj	4703 Feb 08 04:50	18° ♄ 06'16	-1°53'48	desc. node	4704 Jan 05 16:15	6° ♄ 45'13	
minimum elong	4703 Feb 07 21:19	17° ♄ 36'20	1°53'18				
	4703 Feb 15 13:53	0° ♄		superior conj	4704 Jan 18 09:00	26° ♄ 44'19	-1°20'25
evening rise	4703 Feb 22 10:54	11° ♄ 20'31		minimum elong	4704 Jan 17 23:57	26° ♄ 08'50	1°19'24
	4703 Mar 05 19:41	0° ♄		max. Earth dist.	4704 Jan 18 09:56	26° ♄ 48'00	1.45290 AU
asc. node	4703 Mar 11 03:48	7° ♄ 37'28			4704 Jan 20 10:54	0° ♄	
evening max el	4703 Mar 13 16:03	10° ♄ 28'59	18°22'47	evening rise	4704 Feb 03 03:21	21° ♄ 36'01	
retrograde	4703 Mar 20 03:07	13° ♄ 58'44			4704 Feb 08 09:56	0° ♄	
evening set	4703 Mar 23 04:00	13° ♄ 08'20		greatest brilliancy	4704 Feb 11 21:13	5° ♄ 29'52	-0.8m
inferior conj	4703 Mar 29 01:16	7° ♄ 41'35	3°34'11	evening max el	4704 Feb 25 02:28	23° ♄ 58'15	18°55'51
minimum elong	4703 Mar 29 01:29	7° ♄ 40'58	3°34'10	asc. node	4704 Feb 26 00:48	24° ♄ 52'21	
min. Earth dist.	4703 Mar 31 08:53	5° ♄ 01'50	0.64132 AU	retrograde	4704 Mar 02 21:30	27° ♄ 47'03	
morning rise	4703 Apr 03 22:09	1° ♄ 31'27		evening set	4704 Mar 06 05:03	26° ♄ 43'36	
	4703 Apr 06 03:15	30° ♄		inferior conj	4704 Mar 11 19:29	20° ♄ 59'54	3°29'27
direct	4703 Apr 10 17:47	28° ♄ 44'47		minimum elong	4704 Mar 11 18:20	21° ♄ 03'32	3°29'21
	4703 Apr 15 17:12	0° ♄		min. Earth dist.	4704 Mar 13 11:28	18° ♄ 54'50	0.65737 AU
desc. node	4703 Apr 16 18:25	0° ♄ 32'47		morning rise	4704 Mar 17 07:12	14° ♄ 46'24	
morning max el	4703 Apr 24 10:28	6° ♄ 42'17	27°32'10	direct	4704 Mar 23 19:38	11° ♄ 56'20	
	4703 May 12 06:32	0° ♄		desc. node	4704 Apr 02 15:27	16° ♄ 39'15	
morning set	4703 May 29 11:45	0° ♄ 16'45		morning max el	4704 Apr 05 20:19	19° ♄ 38'41	26°40'33
	4703 May 29 08:21	0° ♄			4704 Apr 14 16:24	0° ♄	
max. Earth dist.	4703 Jun 03 09:26	10° ♄ 14'09	1.33186 AU		4704 May 04 08:01	0° ♄	
				morning set	4704 May 11 18:50	13° ♄ 31'23	
superior conj	4703 Jun 06 11:29	16° ♄ 44'53	-0°06'47	max. Earth dist.	4704 May 15 23:56	21° ♄ 42'49	1.34476 AU
minimum elong	4703 Jun 06 11:49	16° ♄ 46'43	0°06'43				
behind sun begin	4703 Jun 06 06:53	16° ♄ 20'21		superior conj	4704 May 20 11:13	0° ♄ 47'56	-0°35'57
behind sun end	4703 Jun 06 16:46	17° ♄ 13'06		minimum elong	4704 May 20 13:09	0° ♄ 57'56	0°35'34
asc. node	4703 Jun 07 03:06	18° ♄ 08'19			4704 May 20 01:56	0° ♄	
	4703 Jun 12 15:41	0° ♄		asc. node	4704 May 24 00:06	8° ♄ 11'29	
evening rise	4703 Jun 13 14:37	2° ♄ 01'38		evening rise	4704 May 28 00:05	16° ♄ 34'38	
	4703 Jun 29 03:49	0° ♄			4704 Jun 03 18:40	0° ♄	
evening max el	4703 Jul 05 11:41	7° ♄ 28'00	22°37'07	evening max el	4704 Jun 16 08:46	18° ♄ 06'31	21°06'17
desc. node	4703 Jul 13 17:42	13° ♄ 05'29		retrograde	4704 Jun 28 04:29	23° ♄ 55'10	
retrograde	4703 Jul 18 15:37	14° ♄ 01'00		desc. node	4704 Jun 29 14:42	23° ♄ 50'22	
evening set	4703 Jul 21 21:51	13° ♄ 37'41		evening set	4704 Jun 30 10:04	23° ♄ 43'31	
min. Earth dist.	4703 Jul 29 19:25	10° ♄ 09'58	0.55221 AU	inferior conj	4704 Jul 09 18:32	19° ♄ 45'45	-2°55'42
inferior conj	4703 Jul 31 01:10	9° ♄ 27'34	-4°28'24	minimum elong	4704 Jul 09 10:45	19° ♄ 56'42	2°53'10
minimum elong	4703 Jul 30 17:15	9° ♄ 38'52	4°26'44	min. Earth dist.	4704 Jul 10 06:10	19° ♄ 29'22	0.54806 AU
morning rise	4703 Aug 08 14:42	5° ♄ 37'11		morning rise	4704 Jul 18 11:41	15° ♄ 47'43	
direct	4703 Aug 11 15:52	5° ♄ 15'49		direct	4704 Jul 22 01:11	15° ♄ 20'23	
morning max el	4703 Aug 22 23:50	10° ♄ 32'24	21°00'47	morning max el	4704 Aug 03 20:32	21° ♄ 26'16	22°37'26
asc. node	4703 Sep 03 02:19	25° ♄ 26'37			4704 Aug 11 04:29	0° ♄	
	4703 Sep 05 15:14	0° ♄		asc. node	4704 Aug 19 23:22	14° ♄ 29'41	
morning set	4703 Sep 11 14:43	11° ♄ 50'31		morning set	4704 Aug 26 01:19	26° ♄ 41'28	
					4704 Aug 27 14:52	0° ♄	
superior conj	4703 Sep 19 00:17	27° ♄ 15'11	1°43'49	superior conj	4704 Sep 02 03:41	11° ♄ 50'10	1°40'23
minimum elong	4703 Sep 19 00:16	27° ♄ 15'09	1°43'49	minimum elong	4704 Sep 02 02:27	11° ♄ 43'37	1°40'18
	4703 Sep 20 08:27	0° ♄		max. Earth dist.	4704 Sep 05 07:03	18° ♄ 26'18	1.34066 AU
max. Earth dist.	4703 Sep 23 13:31	6° ♄ 26'39	1.35595 AU	evening rise	4704 Sep 10 00:38	27° ♄ 59'49	
evening rise	4703 Sep 27 16:19	14° ♄ 22'12			4704 Sep 11 01:20	0° ♄	
	4703 Oct 06 12:06	0° ♄		desc. node	4704 Sep 25 14:02	25° ♄ 15'51	
desc. node	4703 Oct 09 17:01	5° ♄ 14'04			4704 Sep 28 17:21	0° ♄	
	4703 Oct 27 09:51	0° ♄		evening max el	4704 Oct 14 17:06	19° ♄ 45'44	27°09'48
evening max el	4703 Nov 02 04:22	6° ♄ 12'55	26°26'15	retrograde	4704 Oct 28 01:28	27° ♄ 03'12	
retrograde	4703 Nov 15 00:39	13° ♄ 25'40		evening set	4704 Nov 03 22:26	24° ♄ 22'43	
evening set	4703 Nov 21 10:27	10° ♄ 49'14		min. Earth dist.	4704 Nov 07 19:32	20° ♄ 40'08	0.65077 AU
min. Earth dist.	4703 Nov 25 13:47	6° ♄ 31'17	0.66350 AU	inferior conj	4704 Nov 09 22:59	18° ♄ 17'01	-2°00'02
inferior conj	4703 Nov 27 05:19	4° ♄ 31'34	-0°58'10	minimum elong	4704 Nov 10 02:25	18° ♄ 07'27	1°58'38
minimum elong	4703 Nov 27 06:54	4° ♄ 26'44	0°57'29				

asc. node	4704 Nov 15 22:33	12° \mathbb{M} 55'11		min. Earth dist.	4705 Oct 21 15:54	4° \mathbb{M} 27'19	0.63464 AU
morning rise	4704 Nov 16 07:25	12° \mathbb{M} 44'09		inferior conj	4705 Oct 24 07:24	1° \mathbb{M} 48'06	-3°02'37
direct	4704 Nov 18 23:21	12° \mathbb{M} 06'22		minimum elong	4705 Oct 24 12:34	1° \mathbb{M} 35'04	3°00'48
morning max el	4704 Nov 25 10:46	15° \mathbb{M} 33'36	18°03'43		4705 Oct 26 03:35	30° \mathbb{R} \mathfrak{A}	
	4704 Dec 05 20:09	0° \mathfrak{A}		morning rise	4705 Oct 31 02:53	26° \mathfrak{A} 31'47	
morning set	4704 Dec 13 10:13	12° \mathfrak{A} 29'03		direct	4705 Nov 02 13:27	26° \mathfrak{A} 03'06	
desc. node	4704 Dec 22 13:17	27° \mathfrak{A} 25'52		asc. node	4705 Nov 02 19:37	26° \mathfrak{A} 03'26	
	4704 Dec 24 03:34	0° \mathfrak{B}		morning max el	4705 Nov 09 03:34	29° \mathfrak{A} 28'10	17°50'18
					4705 Nov 09 16:01	0° \mathbb{M}	
superior conj	4704 Dec 27 16:00	5° \mathfrak{B} 37'12	-0°34'52	morning set	4705 Nov 25 14:17	24° \mathbb{M} 45'43	
minimum elong	4704 Dec 27 11:41	5° \mathfrak{B} 20'03	0°34'15		4705 Nov 28 14:49	0° \mathfrak{A}	
max. Earth dist.	4704 Dec 31 05:43	11° \mathfrak{B} 16'07	1.45098 AU				
	4705 Jan 12 06:12	0° \mathfrak{A}		superior conj	4705 Dec 07 19:38	15° \mathfrak{A} 32'42	0°11'16
evening rise	4705 Jan 12 23:20	1° \mathfrak{A} 06'11		minimum elong	4705 Dec 07 20:49	15° \mathfrak{A} 37'36	0°11'06
greatest brilliancy	4705 Jan 26 11:14	21° \mathfrak{A} 43'07	-0.7m	behind sun begin	4705 Dec 07 13:49	15° \mathfrak{A} 08'40	
	4705 Feb 01 05:23	0° \mathfrak{H}		behind sun end	4705 Dec 08 03:50	16° \mathfrak{A} 06'29	
evening max el	4705 Feb 07 08:45	7° \mathfrak{H} 30'59	19°45'16	desc. node	4705 Dec 09 10:18	18° \mathfrak{A} 11'28	
asc. node	4705 Feb 11 21:49	11° \mathfrak{H} 04'44		max. Earth dist.	4705 Dec 13 23:38	25° \mathfrak{A} 33'20	1.44192 AU
retrograde	4705 Feb 14 19:01	11° \mathfrak{H} 49'00			4705 Dec 16 18:47	0° \mathfrak{B}	
evening set	4705 Feb 18 10:16	10° \mathfrak{H} 31'38		evening rise	4705 Dec 23 09:18	10° \mathfrak{B} 17'44	
inferior conj	4705 Feb 23 20:35	4° \mathfrak{H} 32'59	3°11'41		4706 Jan 05 11:17	0° \mathfrak{A}	
minimum elong	4705 Feb 23 18:33	4° \mathfrak{H} 39'46	3°11'20	evening max el	4706 Jan 21 09:36	21° \mathfrak{A} 04'15	20°48'47
min. Earth dist.	4705 Feb 24 21:48	3° \mathfrak{H} 09'14	0.66921 AU	retrograde	4706 Jan 29 17:16	25° \mathfrak{A} 59'05	
	4705 Feb 27 10:52	30° \mathbb{R} \mathfrak{A}		asc. node	4706 Jan 29 18:52	25° \mathfrak{A} 59'04	
morning rise	4705 Mar 01 02:36	28° \mathfrak{A} 18'41		evening set	4706 Feb 02 17:37	24° \mathfrak{A} 27'01	
direct	4705 Mar 07 03:17	25° \mathfrak{A} 37'16		inferior conj	4706 Feb 08 02:00	18° \mathfrak{A} 16'06	2°43'33
	4705 Mar 16 04:41	0° \mathfrak{H}		minimum elong	4706 Feb 07 23:35	18° \mathfrak{A} 24'26	2°42'56
morning max el	4705 Mar 19 05:34	2° \mathfrak{H} 50'26	25°26'28	min. Earth dist.	4706 Feb 08 13:59	17° \mathfrak{A} 34'55	0.67678 AU
desc. node	4705 Mar 20 12:28	4° \mathfrak{H} 10'45		morning rise	4706 Feb 13 05:23	12° \mathfrak{A} 02'38	
	4705 Apr 08 21:01	0° \mathfrak{Y}		direct	4706 Feb 18 15:59	9° \mathfrak{A} 38'14	
morning set	4705 Apr 24 10:32	25° \mathfrak{Y} 57'45		morning max el	4706 Mar 01 14:15	16° \mathfrak{A} 09'26	23°59'53
	4705 Apr 26 15:22	0° \mathfrak{B}		desc. node	4706 Mar 07 09:30	22° \mathfrak{A} 42'25	
max. Earth dist.	4705 Apr 28 03:28	2° \mathfrak{B} 48'42	1.36220 AU		4706 Mar 13 00:24	0° \mathfrak{H}	
					4706 Apr 01 20:46	0° \mathfrak{Y}	
superior conj	4705 May 04 02:11	14° \mathfrak{B} 21'01	-1°05'26	morning set	4706 Apr 06 05:11	7° \mathfrak{Y} 20'27	
minimum elong	4705 May 04 05:46	14° \mathfrak{B} 38'50	1°04'49	max. Earth dist.	4706 Apr 09 23:42	13° \mathfrak{Y} 56'52	1.38295 AU
asc. node	4705 May 10 21:08	28° \mathfrak{B} 06'34					
	4705 May 11 19:25	0° \mathbb{I}		superior conj	4706 Apr 17 04:53	27° \mathfrak{Y} 14'43	-1°32'58
evening rise	4705 May 12 05:24	0° \mathbb{I} 50'38		minimum elong	4706 Apr 17 09:39	27° \mathfrak{Y} 37'23	1°32'21
evening max el	4705 May 29 17:50	29° \mathbb{I} 22'08	19°51'27		4706 Apr 18 15:28	0° \mathfrak{B}	
	4705 May 30 09:50	0° \mathfrak{B}		evening rise	4706 Apr 26 03:56	14° \mathfrak{B} 42'00	
retrograde	4705 Jun 08 20:23	4° \mathfrak{B} 18'13		asc. node	4706 Apr 27 18:10	17° \mathfrak{B} 48'52	
evening set	4705 Jun 10 18:43	4° \mathfrak{B} 08'12			4706 May 04 08:23	0° \mathbb{I}	
desc. node	4705 Jun 16 11:41	1° \mathfrak{B} 59'27		evening max el	4706 May 12 14:37	11° \mathbb{I} 19'32	18°56'33
inferior conj	4705 Jun 19 16:36	0° \mathfrak{B} 06'53	-0°57'19	retrograde	4706 May 21 02:58	15° \mathbb{I} 29'36	
minimum elong	4705 Jun 19 13:57	0° \mathfrak{B} 10'56	0°56'20	evening set	4706 May 23 04:46	15° \mathbb{I} 15'43	
	4705 Jun 19 21:06	30° \mathbb{R} \mathbb{I}		inferior conj	4706 May 31 07:46	10° \mathbb{I} 59'26	0°52'41
min. Earth dist.	4705 Jun 21 18:42	28° \mathbb{I} 50'24	0.55356 AU	minimum elong	4706 May 31 09:46	10° \mathbb{I} 55'52	0°51'59
morning rise	4705 Jun 28 07:13	25° \mathbb{I} 41'52		desc. node	4706 Jun 03 08:42	8° \mathbb{I} 51'04	
direct	4705 Jul 02 14:57	25° \mathbb{I} 00'50		min. Earth dist.	4706 Jun 03 10:30	8° \mathbb{I} 48'00	0.56761 AU
	4705 Jul 14 08:19	0° \mathfrak{B}		morning rise	4706 Jun 08 11:29	5° \mathbb{I} 58'05	
morning max el	4705 Jul 16 10:54	1° \mathfrak{B} 51'43	24°21'22	direct	4706 Jun 13 17:58	4° \mathbb{I} 51'47	
	4705 Aug 04 19:55	0° \mathfrak{Q}		morning max el	4706 Jun 28 01:32	12° \mathbb{I} 16'39	25°57'18
asc. node	4705 Aug 06 20:25	3° \mathfrak{Q} 57'44			4706 Jul 11 20:16	0° \mathfrak{B}	
morning set	4705 Aug 10 13:03	11° \mathfrak{Q} 34'51		asc. node	4706 Jul 24 17:28	23° \mathfrak{B} 43'55	
				morning set	4706 Jul 26 00:18	26° \mathfrak{B} 25'43	
superior conj	4705 Aug 17 11:58	26° \mathfrak{Q} 38'15	1°31'03		4706 Jul 27 16:25	0° \mathfrak{Q}	
minimum elong	4705 Aug 17 09:57	26° \mathfrak{Q} 27'19	1°30'50				
	4705 Aug 19 01:13	0° \mathbb{M}		superior conj	4706 Aug 01 22:58	11° \mathfrak{Q} 32'49	1°16'39
max. Earth dist.	4705 Aug 19 09:10	0° \mathbb{M} 42'52	1.32942 AU	minimum elong	4706 Aug 01 20:39	11° \mathfrak{Q} 20'05	1°16'18
evening rise	4705 Aug 24 19:48	12° \mathbb{M} 07'48		max. Earth dist.	4706 Aug 02 17:32	13° \mathfrak{Q} 14'54	1.32238 AU
	4705 Sep 03 06:27	0° \mathfrak{A}		evening rise	4706 Aug 08 22:40	26° \mathfrak{Q} 37'12	
desc. node	4705 Sep 12 11:02	14° \mathfrak{A} 49'14			4706 Aug 10 14:03	0° \mathbb{M}	
	4705 Sep 24 06:34	0° \mathbb{M}			4706 Aug 27 16:59	0° \mathfrak{A}	
evening max el	4705 Sep 27 04:11	2° \mathbb{M} 56'11	27°26'57	desc. node	4706 Aug 30 08:02	3° \mathfrak{A} 42'39	
retrograde	4705 Oct 10 19:59	10° \mathbb{M} 12'45		evening max el	4706 Sep 09 11:19	15° \mathfrak{A} 31'50	27°12'35
evening set	4705 Oct 17 23:45	7° \mathbb{M} 37'14		retrograde	4706 Sep 23 07:44	22° \mathfrak{A} 45'11	

evening set	4706 Sep 30 10:41	20° <u>♄</u> 26'30		evening set	4707 Sep 12 02:22	2° <u>♄</u> 41'36	
min. Earth dist.	4706 Oct 04 01:46	17° <u>♄</u> 41'15	0.61559 AU	min. Earth dist.	4707 Sep 16 01:30	0° <u>♄</u> 06'34	0.59494 AU
inferior conj	4706 Oct 07 03:29	14° <u>♄</u> 57'34	-4°01'38		4707 Sep 16 05:01	30° <u>♄</u>	
minimum elong	4706 Oct 07 09:39	14° <u>♄</u> 43'50	3°59'58	inferior conj	4707 Sep 19 07:41	27° <u>♄</u> 35'03	-4°49'37
morning rise	4706 Oct 14 10:31	10° <u>♄</u> 01'02		minimum elong	4707 Sep 19 12:54	27° <u>♄</u> 24'53	4°48'47
direct	4706 Oct 16 18:31	9° <u>♄</u> 38'12		morning rise	4707 Sep 27 01:35	23° <u>♄</u> 00'42	
asc. node	4706 Oct 20 16:41	10° <u>♄</u> 45'19		direct	4707 Sep 29 10:22	22° <u>♄</u> 40'55	
morning max el	4706 Oct 23 18:49	13° <u>♄</u> 09'42	17°55'11	morning max el	4707 Oct 07 05:01	26° <u>♄</u> 27'48	18°19'40
	4706 Nov 04 04:06	0° <u>♄</u>		asc. node	4707 Oct 07 13:44	26° <u>♄</u> 49'15	
morning set	4706 Nov 08 13:50	7° <u>♄</u> 58'08			4707 Oct 10 07:50	0° <u>♄</u>	
				morning set	4707 Oct 23 03:07	21° <u>♄</u> 48'58	
					4707 Oct 27 10:16	0° <u>♄</u>	
superior conj	4706 Nov 19 02:00	26° <u>♄</u> 46'46	0°49'36				
minimum elong	4706 Nov 19 05:48	27° <u>♄</u> 03'14	0°49'06	superior conj	4707 Nov 01 08:07	9° <u>♄</u> 09'21	1°17'19
	4706 Nov 20 22:51	0° <u>♄</u>		minimum elong	4707 Nov 01 11:54	9° <u>♄</u> 26'40	1°16'55
desc. node	4706 Nov 26 07:21	8° <u>♄</u> 59'07		max. Earth dist.	4707 Nov 08 21:20	22° <u>♄</u> 32'03	1.40762 AU
max. Earth dist.	4706 Nov 26 13:08	9° <u>♄</u> 22'54	1.42685 AU	desc. node	4707 Nov 13 04:23	29° <u>♄</u> 44'43	
evening rise	4706 Dec 03 01:20	19° <u>♄</u> 50'58			4707 Nov 13 08:06	0° <u>♄</u>	
	4706 Dec 09 14:59	0° <u>♄</u>		evening rise	4707 Nov 13 12:03	0° <u>♄</u> 16'15	
	4706 Dec 31 01:11	0° <u>♄</u>			4707 Dec 03 02:18	0° <u>♄</u>	
evening max el	4707 Jan 04 05:05	4° <u>♄</u> 39'08	22°02'45	evening max el	4707 Dec 17 20:25	18° <u>♄</u> 17'11	23°22'16
retrograde	4707 Jan 13 14:17	10° <u>♄</u> 14'02		retrograde	4707 Dec 28 08:32	24° <u>♄</u> 30'00	
asc. node	4707 Jan 16 15:54	9° <u>♄</u> 23'55		evening set	4708 Jan 02 07:54	22° <u>♄</u> 26'45	
evening set	4707 Jan 18 01:22	8° <u>♄</u> 26'32		asc. node	4708 Jan 03 12:57	21° <u>♄</u> 18'31	
inferior conj	4707 Jan 23 09:39	2° <u>♄</u> 06'41	2°06'50	inferior conj	4708 Jan 07 17:35	16° <u>♄</u> 01'51	1°22'43
minimum elong	4707 Jan 23 07:19	2° <u>♄</u> 14'46	2°06'04	minimum elong	4708 Jan 07 15:48	16° <u>♄</u> 07'56	1°22'02
min. Earth dist.	4707 Jan 23 09:43	2° <u>♄</u> 06'27	0.68039 AU	min. Earth dist.	4708 Jan 07 06:34	16° <u>♄</u> 39'39	0.68024 AU
	4707 Jan 24 22:35	30° <u>♄</u>		morning rise	4708 Jan 12 23:38	9° <u>♄</u> 55'02	
morning rise	4707 Jan 28 13:07	25° <u>♄</u> 55'38		direct	4708 Jan 17 05:21	8° <u>♄</u> 14'54	
direct	4707 Feb 02 09:02	23° <u>♄</u> 52'43		morning max el	4708 Jan 25 16:36	13° <u>♄</u> 09'05	21°07'47
morning max el	4707 Feb 12 00:46	29° <u>♄</u> 34'36	22°30'49		4708 Feb 07 22:41	0° <u>♄</u>	
	4707 Feb 12 10:45	0° <u>♄</u>		desc. node	4708 Feb 09 03:37	1° <u>♄</u> 43'35	
desc. node	4707 Feb 22 06:33	11° <u>♄</u> 57'24		morning set	4708 Feb 25 08:40	26° <u>♄</u> 11'24	
	4707 Mar 06 19:22	0° <u>♄</u>			4708 Feb 27 18:32	0° <u>♄</u>	
morning set	4707 Mar 17 20:57	17° <u>♄</u> 24'50		max. Earth dist.	4708 Mar 03 21:56	8° <u>♄</u> 17'17	1.42509 AU
max. Earth dist.	4707 Mar 22 19:43	25° <u>♄</u> 39'32	1.40485 AU				
	4707 Mar 25 08:30	0° <u>♄</u>		superior conj	4708 Mar 11 03:15	20° <u>♄</u> 21'18	-2°07'33
superior conj	4707 Mar 30 14:54	9° <u>♄</u> 18'32	-1°55'14	minimum elong	4708 Mar 11 04:56	20° <u>♄</u> 28'28	2°07'31
minimum elong	4707 Mar 30 19:27	9° <u>♄</u> 39'07	1°54'52		4708 Mar 16 16:30	0° <u>♄</u>	
evening rise	4707 Apr 09 16:29	28° <u>♄</u> 00'24		evening rise	4708 Mar 22 15:03	10° <u>♄</u> 36'49	
	4707 Apr 10 17:52	0° <u>♄</u>		asc. node	4708 Mar 31 12:14	26° <u>♄</u> 13'04	
asc. node	4707 Apr 14 15:12	7° <u>♄</u> 13'08			4708 Apr 02 21:39	0° <u>♄</u>	
evening max el	4707 Apr 25 20:17	23° <u>♄</u> 52'46	18°22'02	evening max el	4708 Apr 08 07:12	6° <u>♄</u> 52'14	18°07'20
retrograde	4707 May 03 04:22	27° <u>♄</u> 31'25		retrograde	4708 Apr 14 22:51	10° <u>♄</u> 15'54	
evening set	4707 May 05 13:01	27° <u>♄</u> 09'47		evening set	4708 Apr 17 14:11	9° <u>♄</u> 44'01	
inferior conj	4707 May 12 20:29	22° <u>♄</u> 33'46	2°14'23	inferior conj	4708 Apr 24 05:14	4° <u>♄</u> 47'16	3°04'57
minimum elong	4707 May 13 00:03	22° <u>♄</u> 26'22	2°13'23	minimum elong	4708 Apr 24 08:02	4° <u>♄</u> 40'33	3°04'27
min. Earth dist.	4707 May 16 07:04	19° <u>♄</u> 44'03	0.58741 AU	min. Earth dist.	4708 Apr 27 10:21	1° <u>♄</u> 43'43	0.60940 AU
morning rise	4707 May 20 08:02	17° <u>♄</u> 00'56			4708 Apr 29 11:01	30° <u>♄</u>	
desc. node	4707 May 21 05:45	16° <u>♄</u> 33'50		morning rise	4708 Apr 30 23:48	28° <u>♄</u> 53'24	
direct	4707 May 26 11:30	15° <u>♄</u> 20'37		desc. node	4708 May 07 02:47	26° <u>♄</u> 40'39	
morning max el	4707 Jun 09 20:56	23° <u>♄</u> 06'28	27°09'34	direct	4708 May 07 16:38	26° <u>♄</u> 39'41	
	4707 Jun 16 00:40	0° <u>♄</u>			4708 May 16 13:21	0° <u>♄</u>	
	4707 Jul 04 20:41	0° <u>♄</u>		morning max el	4708 May 21 22:38	4° <u>♄</u> 36'04	27°47'39
morning set	4707 Jul 10 09:22	11° <u>♄</u> 08'04			4708 Jun 09 19:39	0° <u>♄</u>	
asc. node	4707 Jul 11 14:30	13° <u>♄</u> 42'00		morning set	4708 Jun 23 14:28	25° <u>♄</u> 36'20	
					4708 Jun 25 16:56	0° <u>♄</u>	
superior conj	4707 Jul 17 10:48	26° <u>♄</u> 26'53	0°57'50	asc. node	4708 Jun 27 11:32	3° <u>♄</u> 47'19	
minimum elong	4707 Jul 17 08:39	26° <u>♄</u> 15'02	0°57'26	max. Earth dist.	4708 Jun 29 15:10	8° <u>♄</u> 27'29	1.32103 AU
max. Earth dist.	4707 Jul 17 04:44	25° <u>♄</u> 53'24	1.31960 AU				
	4707 Jul 19 01:24	0° <u>♄</u>		superior conj	4708 Jun 30 21:44	11° <u>♄</u> 14'53	0°35'10
evening rise	4707 Jul 24 06:37	11° <u>♄</u> 19'27		minimum elong	4708 Jun 30 20:13	11° <u>♄</u> 06'34	0°34'52
	4707 Aug 02 19:06	0° <u>♄</u>		evening rise	4708 Jul 07 17:30	26° <u>♄</u> 07'50	
desc. node	4707 Aug 17 05:04	21° <u>♄</u> 38'59			4708 Jul 09 13:35	0° <u>♄</u>	
evening max el	4707 Aug 22 12:03	27° <u>♄</u> 21'25	26°24'48		4708 Jul 26 22:26	0° <u>♄</u>	
	4707 Aug 25 13:22	0° <u>♄</u>		evening max el	4708 Aug 03 05:25	8° <u>♄</u> 23'15	25°07'39
retrograde	4707 Sep 05 11:10	4° <u>♄</u> 30'39		desc. node	4708 Aug 03 02:04	8° <u>♄</u> 15'11	

retrograde	4708 Aug 17 03:59	15° \mathbb{M} 26'25		desc. node	4709 Jul 20 23:03	23° Ω 00'28	
evening set	4708 Aug 22 18:20	14° \mathbb{M} 14'52		retrograde	4709 Jul 29 08:29	25° Ω 39'52	
min. Earth dist.	4708 Aug 27 17:03	11° \mathbb{M} 31'58	0.57497 AU	evening set	4709 Aug 02 11:33	25° Ω 02'32	
inferior conj	4708 Aug 30 16:45	9° \mathbb{M} 31'26	-5°14'23	min. Earth dist.	4709 Aug 09 03:53	21° Ω 55'10	0.55865 AU
minimum elong	4708 Aug 30 17:54	9° \mathbb{M} 29'29	5°14'21	inferior conj	4709 Aug 11 05:38	20° Ω 41'10	-4°59'47
morning rise	4708 Sep 07 19:47	5° \mathbb{M} 19'33		minimum elong	4709 Aug 11 00:29	20° Ω 48'52	4°59'09
direct	4708 Sep 10 08:59	5° \mathbb{M} 00'27		morning rise	4709 Aug 19 15:52	16° Ω 47'01	
morning max el	4708 Sep 19 06:48	9° \mathbb{M} 12'56	19°05'16	direct	4709 Aug 22 12:11	16° Ω 27'00	
asc. node	4708 Sep 23 10:47	14° \mathbb{M} 00'33		morning max el	4709 Sep 01 21:28	21° Ω 16'32	20°12'48
	4708 Oct 02 22:52	0° Ω			4709 Sep 08 23:49	0° \mathbb{M}	
morning set	4708 Oct 06 01:53	6° Ω 06'30		asc. node	4709 Sep 10 07:49	2° \mathbb{M} 04'42	
				morning set	4709 Sep 20 07:01	20° \mathbb{M} 42'16	
					4709 Sep 24 19:42	0° Ω	
superior conj	4708 Oct 14 08:41	22° Ω 25'37	1°34'36	superior conj	4709 Sep 27 22:43	6° Ω 21'42	1°42'44
minimum elong	4708 Oct 14 11:10	22° Ω 37'34	1°34'25	minimum elong	4709 Sep 27 23:34	6° Ω 26'02	1°42'42
	4708 Oct 18 08:44	0° \mathbb{M}		max. Earth dist.	4709 Oct 03 08:32	16° Ω 59'29	1.36635 AU
max. Earth dist.	4708 Oct 21 02:21	5° \mathbb{M} 00'04	1.38663 AU	evening rise	4709 Oct 07 04:54	24° Ω 10'42	
evening rise	4708 Oct 24 21:50	11° \mathbb{M} 44'11			4709 Oct 10 11:02	0° \mathbb{M}	
desc. node	4708 Oct 30 01:24	20° \mathbb{M} 24'30		desc. node	4709 Oct 16 22:24	10° \mathbb{M} 54'12	
	4708 Nov 05 02:19	0° \mathbb{X}			4709 Oct 29 17:46	0° \mathbb{X}	
	4708 Nov 27 11:15	0° \mathbb{Z}		evening max el	4709 Nov 11 22:01	15° \mathbb{X} 42'23	25°51'57
evening max el	4708 Nov 29 09:32	1° \mathbb{Z} 59'00	24°41'03	retrograde	4709 Nov 24 08:22	22° \mathbb{X} 47'37	
retrograde	4708 Dec 10 22:47	8° \mathbb{Z} 42'46		evening set	4709 Nov 30 10:54	20° \mathbb{X} 16'15	
evening set	4708 Dec 16 11:38	6° \mathbb{Z} 24'20		min. Earth dist.	4709 Dec 04 18:03	15° \mathbb{X} 38'14	0.66924 AU
asc. node	4708 Dec 20 10:00	2° \mathbb{Z} 04'00		inferior conj	4709 Dec 06 03:03	13° \mathbb{X} 54'21	-0°23'54
min. Earth dist.	4708 Dec 21 02:06	1° \mathbb{Z} 11'17	0.67651 AU	minimum elong	4709 Dec 06 03:41	13° \mathbb{X} 52'22	0°23'37
inferior conj	4708 Dec 21 23:59	29° \mathbb{X} 58'39	0°32'08	asc. node	4709 Dec 07 07:01	12° \mathbb{X} 27'25	
minimum elong	4708 Dec 21 23:12	0° \mathbb{Z} 01'13	0°31'49	morning rise	4709 Dec 11 20:55	8° \mathbb{X} 02'36	
	4708 Dec 21 23:34	30° \mathbb{R} \mathbb{X}		direct	4709 Dec 15 02:19	7° \mathbb{X} 02'58	
morning rise	4708 Dec 27 10:53	23° \mathbb{X} 58'10		morning max el	4709 Dec 21 23:32	10° \mathbb{X} 51'27	18°59'54
direct	4708 Dec 31 03:37	22° \mathbb{X} 39'42			4710 Jan 04 23:47	0° \mathbb{Z}	
morning max el	4709 Jan 07 16:12	26° \mathbb{X} 55'08	19°56'28	desc. node	4710 Jan 12 21:41	12° \mathbb{Z} 16'51	
	4709 Jan 10 11:28	0° \mathbb{Z}		morning set	4710 Jan 13 11:03	13° \mathbb{Z} 08'57	
desc. node	4709 Jan 26 00:39	21° \mathbb{Z} 52'05			4710 Jan 24 05:54	0° \approx	
	4709 Jan 31 08:59	0° \approx		max. Earth dist.	4710 Jan 28 00:37	5° \approx 55'50	1.45060 AU
morning set	4709 Feb 03 05:01	4° \approx 21'27		superior conj	4710 Jan 30 01:55	9° \approx 09'58	-1°41'47
max. Earth dist.	4709 Feb 14 08:17	21° \approx 48'15	1.44100 AU	minimum elong	4710 Jan 29 16:52	8° \approx 34'17	1°40'59
	4709 Feb 19 10:27	0° \mathbb{X}			4710 Feb 12 02:24	0° \mathbb{X}	
superior conj	4709 Feb 19 14:06	0° \mathbb{X} 14'54	-2°04'24	evening rise	4710 Feb 14 01:16	3° \mathbb{X} 10'42	
minimum elong	4709 Feb 19 09:58	29° \approx 58'01	2°04'15		4710 Mar 03 06:20	0° \mathbb{Y}	
evening rise	4709 Mar 04 19:14	22° \mathbb{X} 21'56		asc. node	4710 Mar 05 06:17	2° \mathbb{Y} 25'12	
	4709 Mar 09 06:14	0° \mathbb{Y}		evening max el	4710 Mar 06 07:57	3° \mathbb{Y} 33'49	18°34'35
asc. node	4709 Mar 18 09:16	14° \mathbb{Y} 40'17		retrograde	4710 Mar 12 21:27	7° \mathbb{Y} 10'28	
evening max el	4709 Mar 22 20:01	20° \mathbb{Y} 08'02	18°11'43	evening set	4710 Mar 16 01:03	6° \mathbb{Y} 14'35	
retrograde	4709 Mar 29 05:58	23° \mathbb{Y} 31'43		inferior conj	4710 Mar 21 19:01	0° \mathbb{Y} 40'04	3°33'57
evening set	4709 Apr 01 03:26	22° \mathbb{Y} 48'12		minimum elong	4710 Mar 21 18:36	0° \mathbb{Y} 41'19	3°33'57
inferior conj	4709 Apr 07 06:04	17° \mathbb{Y} 31'44	3°29'27		4710 Mar 22 08:20	30° \mathbb{R} \mathbb{X}	
minimum elong	4709 Apr 07 07:14	17° \mathbb{Y} 28'33	3°29'22	min. Earth dist.	4710 Mar 23 19:50	28° \mathbb{X} 14'04	0.64867 AU
min. Earth dist.	4709 Apr 09 22:18	14° \mathbb{Y} 38'09	0.63050 AU	morning rise	4710 Mar 27 11:34	24° \mathbb{X} 27'55	
morning rise	4709 Apr 13 09:54	11° \mathbb{Y} 25'40		direct	4710 Apr 03 04:40	21° \mathbb{X} 38'30	
direct	4709 Apr 20 06:46	8° \mathbb{Y} 47'39		desc. node	4710 Apr 10 20:52	24° \mathbb{X} 32'36	
desc. node	4709 Apr 23 23:49	9° \mathbb{Y} 28'30		morning max el	4710 Apr 16 15:31	29° \mathbb{X} 31'04	27°13'32
morning max el	4709 May 04 05:39	16° \mathbb{Y} 46'46	27°48'05		4710 Apr 17 02:53	0° \mathbb{Y}	
	4709 May 15 04:10	0° \mathbb{Z}		morning set	4710 May 09 01:55	0° \mathbb{Z}	
	4709 Jun 02 13:21	0° \mathbb{II}			4710 May 22 03:18	23° \mathbb{Z} 19'55	
morning set	4709 Jun 07 13:22	9° \mathbb{II} 42'59			4710 May 25 12:04	0° \mathbb{II}	
max. Earth dist.	4709 Jun 12 20:54	20° \mathbb{II} 43'59	1.32670 AU	max. Earth dist.	4710 May 26 17:59	2° \mathbb{II} 32'06	1.33687 AU
asc. node	4709 Jun 14 08:33	23° \mathbb{II} 54'50		superior conj	4710 May 30 09:26	10° \mathbb{II} 06'49	-0°19'01
superior conj	4709 Jun 15 05:56	25° \mathbb{II} 50'09	0°09'18	minimum elong	4710 May 30 10:26	10° \mathbb{II} 12'03	0°18'49
minimum elong	4709 Jun 15 05:29	25° \mathbb{II} 47'44	0°09'12	asc. node	4710 Jun 01 05:34	14° \mathbb{II} 00'42	
behind sun begin	4709 Jun 15 01:10	25° \mathbb{II} 24'21		evening rise	4710 Jun 06 16:14	25° \mathbb{II} 35'07	
behind sun end	4709 Jun 15 09:49	26° \mathbb{II} 11'07			4710 Jun 08 19:14	0° \mathbb{Z}	
	4709 Jun 17 04:00	0° \mathbb{Z}		evening max el	4710 Jun 27 09:46	29° \mathbb{Z} 15'24	21°56'45
evening rise	4709 Jun 22 05:19	10° \mathbb{Z} 55'03			4710 Jun 28 04:35	0° Ω	
	4709 Jul 01 23:24	0° Ω					
evening max el	4709 Jul 15 18:07	18° Ω 50'44	23°32'58				

desc. node	4710 Jul 07 20:04	5°Ω20'26			4711 Jun 01 15:46	0°☿	
retrograde	4710 Jul 10 01:53	5°Ω32'11		evening max el	4711 Jun 09 11:48	10°☿08'59	20°32'09
evening set	4710 Jul 12 19:29	5°Ω15'27		retrograde	4711 Jun 20 14:46	15°☿35'36	
min. Earth dist.	4710 Jul 21 14:05	1°Ω29'48	0.54927 AU	evening set	4711 Jun 22 15:02	15°☿25'40	
inferior conj	4710 Jul 22 02:57	1°Ω11'46	-3°54'11	desc. node	4711 Jun 24 17:06	14°☿55'43	
minimum elong	4710 Jul 21 18:14	1°Ω23'59	3°51'52	inferior conj	4711 Jul 01 20:40	11°☿28'23	-2°06'34
	4710 Jul 24 06:55	30°☿☿		minimum elong	4711 Jul 01 14:46	11°☿36'54	2°04'27
morning rise	4710 Jul 30 18:33	27°☿20'58		min. Earth dist.	4711 Jul 03 01:55	10°☿46'07	0.54919 AU
direct	4710 Aug 03 00:10	26°☿57'54		morning rise	4711 Jul 10 13:39	7°☿20'25	
	4710 Aug 11 19:37	0°Ω		direct	4711 Jul 14 09:54	6°☿48'33	
morning max el	4710 Aug 15 00:17	2°Ω34'59	21°40'26	morning max el	4711 Jul 27 17:47	13°☿15'27	23°21'33
asc. node	4710 Aug 28 04:51	20°Ω49'10			4711 Aug 09 12:14	0°Ω	
	4710 Sep 01 23:58	0°♊		asc. node	4711 Aug 15 01:53	10°Ω04'01	
morning set	4710 Sep 04 16:11	5°♊29'13		morning set	4711 Aug 20 03:29	20°Ω22'08	
					4711 Aug 24 15:16	0°♊	
superior conj	4710 Sep 11 22:09	20°♊45'24	1°43'09	superior conj	4711 Aug 27 03:59	5°♊27'32	1°37'05
minimum elong	4710 Sep 11 21:35	20°♊42'23	1°43'08	minimum elong	4711 Aug 27 02:22	5°♊18'50	1°36'58
max. Earth dist.	4710 Sep 15 20:44	28°♊51'42	1.34886 AU	max. Earth dist.	4711 Aug 29 17:51	10°♊57'15	1.33531 AU
	4710 Sep 16 10:19	0°♊		evening rise	4711 Sep 03 18:39	21°♊17'47	
evening rise	4710 Sep 20 05:13	7°♊25'26			4711 Sep 08 06:55	0°♊	
	4710 Oct 03 02:17	0°♊		desc. node	4711 Sep 20 16:24	20°♊58'55	
desc. node	4710 Oct 03 19:24	1°♊07'59			4711 Sep 26 23:17	0°♊	
evening max el	4710 Oct 25 10:32	29°♊20'42	26°47'37	evening max el	4711 Oct 07 22:44	12°♊45'20	27°20'43
	4710 Oct 26 03:10	0°♊		retrograde	4711 Oct 21 11:09	20°♊03'45	
retrograde	4710 Nov 07 12:39	6°♊37'11		evening set	4711 Oct 28 11:32	17°♊24'03	
evening set	4710 Nov 14 03:41	3°♊57'44		min. Earth dist.	4711 Nov 01 06:12	13°♊55'49	0.64424 AU
min. Earth dist.	4710 Nov 18 04:07	29°♊55'14	0.65844 AU	inferior conj	4711 Nov 03 14:52	11°♊24'31	-2°26'44
	4710 Nov 18 02:27	30°☿♊		minimum elong	4711 Nov 03 19:05	11°♊13'14	2°25'06
inferior conj	4710 Nov 20 00:47	27°♊44'29	-1°24'10	morning rise	4711 Nov 10 03:53	5°♊58'16	
minimum elong	4710 Nov 20 03:09	27°♊37'33	1°23'10	asc. node	4711 Nov 11 01:07	5°♊39'15	
asc. node	4710 Nov 24 04:04	23°♊24'43		direct	4711 Nov 12 17:06	5°♊24'55	
morning rise	4710 Nov 26 03:27	22°♊04'01		morning max el	4711 Nov 19 04:59	8°♊50'35	17°55'48
direct	4710 Nov 28 23:33	21°♊19'32			4711 Dec 03 12:11	0°♊	
morning max el	4710 Dec 05 12:41	24°♊51'59	18°19'25	morning set	4711 Dec 06 09:56	4°♊54'37	
	4710 Dec 09 19:52	0°♊		desc. node	4711 Dec 17 15:42	23°♊35'12	
morning set	4710 Dec 24 20:02	23°♊19'12					
	4710 Dec 28 23:37	0°♊		superior conj	4711 Dec 19 18:48	27°♊01'52	-0°14'45
desc. node	4710 Dec 30 18:42	2°♊52'27		minimum elong	4711 Dec 19 17:03	26°♊54'50	0°14'30
				behind sun begin	4711 Dec 19 12:29	26°♊36'24	
superior conj	4711 Jan 09 04:37	17°♊46'50	-1°01'55	behind sun end	4711 Dec 19 21:37	27°♊13'14	
minimum elong	4711 Jan 08 21:04	17°♊17'10	1°00'58		4711 Dec 21 15:12	0°♊	
max. Earth dist.	4711 Jan 10 19:26	20°♊19'11	1.45293 AU	max. Earth dist.	4711 Dec 24 14:08	4°♊42'07	1.44791 AU
	4711 Jan 16 23:50	0°♊		evening rise	4712 Jan 04 22:00	22°♊20'54	
evening rise	4711 Jan 25 08:12	13°♊04'12			4712 Jan 09 21:58	0°♊	
	4711 Feb 05 04:35	0°♊		greatest brilliancy	4712 Jan 19 14:44	14°♊33'17	-0.6m
greatest brilliancy	4711 Feb 05 07:26	0°♊10'56	-0.8m		4712 Jan 31 06:35	0°♊	
evening max el	4711 Feb 17 16:44	17°♊04'25	19°14'56	evening max el	4712 Jan 31 20:48	0°♊37'13	20°10'51
asc. node	4711 Feb 20 03:19	19°♊15'13		asc. node	4712 Feb 07 00:22	4°♊55'52	
retrograde	4711 Feb 24 17:36	21°♊04'59		retrograde	4712 Feb 08 15:39	5°♊10'16	
evening set	4711 Feb 28 04:10	19°♊55'53		evening set	4712 Feb 12 10:31	3°♊46'57	
inferior conj	4711 Mar 05 16:33	14°♊05'29	3°23'20		4712 Feb 16 02:18	30°☿♊	
minimum elong	4711 Mar 05 14:58	14°♊10'37	3°23'08	inferior conj	4712 Feb 17 19:47	27°♊42'57	3°00'55
min. Earth dist.	4711 Mar 07 02:07	12°♊17'20	0.66290 AU	minimum elong	4712 Feb 17 17:31	27°♊50'36	3°00'26
morning rise	4711 Mar 11 01:25	7°♊51'05		min. Earth dist.	4712 Feb 18 15:17	26°♊37'01	0.67291 AU
direct	4711 Mar 17 09:09	5°♊03'20		morning rise	4712 Feb 23 00:18	21°♊28'42	
desc. node	4711 Mar 28 17:54	11°♊18'35		direct	4712 Feb 28 19:15	18°♊53'23	
morning max el	4711 Mar 30 01:26	12°♊35'56	26°11'12	morning max el	4712 Mar 11 10:08	25°♊50'27	24°50'30
	4711 Apr 13 01:31	0°♊		desc. node	4712 Mar 14 14:56	29°♊17'47	
	4711 May 01 18:02	0°♊			4712 Mar 15 05:36	0°♊	
morning set	4711 May 05 04:33	6°♊16'34		morning set	4712 Apr 05 14:38	0°♊	
max. Earth dist.	4711 May 09 03:41	13°♊49'18	1.35165 AU	max. Earth dist.	4712 Apr 20 02:56	24°♊50'13	1.37068 AU
					4712 Apr 22 21:22	0°♊	
superior conj	4711 May 14 05:52	23°♊58'30	-0°48'32	superior conj	4712 Apr 26 16:09	7°♊16'20	-1°17'31
minimum elong	4711 May 14 08:31	24°♊11'59	0°48'02	minimum elong	4712 Apr 26 20:19	7°♊36'46	1°16'52
	4711 May 17 04:09	0°♊					
asc. node	4711 May 19 02:36	4°♊01'10					
evening rise	4711 May 22 00:15	10°♊02'04					

asc. node	4712 May 04 23:39	23°♄51'22		superior conj	4713 Apr 09 12:24	19°♄50'41	-1°43'17
evening rise	4712 May 05 03:04	24°♄08'27		minimum elong	4713 Apr 09 17:19	20°♄13'35	1°42'45
	4712 May 08 02:06	0°♄			4713 Apr 14 21:04	0°♄	
evening max el	4712 May 22 02:17	21°♄43'35	19°25'39	evening rise	4713 Apr 18 21:48	7°♄47'01	
retrograde	4712 May 31 11:28	26°♄18'03		asc. node	4713 Apr 21 20:43	13°♄26'50	
evening set	4712 Jun 02 10:35	26°♄06'55			4713 May 01 17:29	0°♄	
desc. node	4712 Jun 10 14:08	22°♄18'10		evening max el	4713 May 05 03:20	3°♄57'30	18°39'22
inferior conj	4712 Jun 11 01:00	22°♄00'39	-0°08'02	retrograde	4713 May 13 01:59	7°♄51'58	
minimum elong	4712 Jun 11 00:38	22°♄01'13	0°07'55	evening set	4713 May 15 06:47	7°♄35'03	
transit middle	4712 Jun 11 00:38	22°♄01'13	0°07'55	inferior conj	4713 May 23 01:12	3°♄10'23	1°31'14
transit begin	4712 Jun 10 21:16	22°♄06'40		minimum elong	4713 May 23 04:15	3°♄04'36	1°30'14
transit end	4712 Jun 11 04:01	21°♄55'45		min. Earth dist.	4713 May 26 09:08	0°♄40'22	0.57562 AU
min. Earth dist.	4712 Jun 13 15:50	20°♄19'22	0.55867 AU		4713 May 27 08:11	30°♄	
morning rise	4712 Jun 19 11:54	17°♄20'26		desc. node	4713 May 28 11:10	29°♄15'56	
direct	4712 Jun 24 05:24	16°♄29'47		morning rise	4713 May 30 22:30	27°♄54'56	
morning max el	4712 Jul 08 07:24	23°♄36'54	25°03'57	direct	4713 Jun 05 14:41	26°♄34'54	
	4712 Jul 14 02:01	0°♄			4713 Jun 15 00:20	0°♄	
asc. node	4712 Jul 31 22:55	29°♄40'22		morning max el	4713 Jun 19 23:31	4°♄09'01	26°31'37
	4712 Aug 01 02:46	0°♄			4713 Jul 08 17:39	0°♄	
morning set	4712 Aug 03 15:13	5°♄14'52		asc. node	4713 Jul 18 19:59	19°♄32'02	
				morning set	4713 Jul 19 01:46	20°♄02'34	
superior conj	4712 Aug 10 13:41	20°♄19'09	1°25'31		4713 Jul 23 16:21	0°♄	
minimum elong	4712 Aug 10 11:29	20°♄07'07	1°25'15	superior conj	4713 Jul 26 01:16	5°♄13'52	1°09'10
max. Earth dist.	4712 Aug 11 23:01	23°♄21'03	1.32598 AU	minimum elong	4713 Jul 25 22:58	5°♄01'10	1°08'47
	4712 Aug 15 01:10	0°♄		max. Earth dist.	4713 Jul 26 09:13	5°♄57'46	1.32081 AU
evening rise	4712 Aug 17 17:31	5°♄36'12		evening rise	4713 Aug 01 22:51	20°♄11'54	
	4712 Aug 30 21:21	0°♄			4713 Aug 06 18:53	0°♄	
desc. node	4712 Sep 06 13:26	10°♄16'43		desc. node	4713 Aug 24 10:27	28°♄47'53	
evening max el	4712 Sep 19 08:40	25°♄43'01	27°24'57		4713 Aug 25 08:53	0°♄	
	4712 Sep 24 15:58	0°♄		evening max el	4713 Sep 01 13:30	8°♄00'07	26°56'09
retrograde	4712 Oct 03 02:51	2°♄57'55		retrograde	4713 Sep 15 10:53	15°♄10'44	
evening set	4712 Oct 10 07:13	0°♄28'24		evening set	4713 Sep 22 10:30	13°♄03'24	
	4712 Oct 10 23:08	30°♄		min. Earth dist.	4713 Sep 26 03:41	10°♄24'36	0.60697 AU
min. Earth dist.	4712 Oct 13 22:24	27°♄29'55	0.62683 AU	inferior conj	4713 Sep 29 08:13	7°♄44'10	-4°23'57
inferior conj	4712 Oct 16 18:27	24°♄47'23	-3°28'27	minimum elong	4713 Sep 29 14:17	7°♄31'22	4°22'34
minimum elong	4712 Oct 17 00:12	24°♄33'38	3°26'38	morning rise	4713 Oct 06 20:00	2°♄56'40	
morning rise	4712 Oct 23 18:49	19°♄38'45		direct	4713 Oct 09 04:05	2°♄35'18	
direct	4712 Oct 26 03:54	19°♄12'55		asc. node	4713 Oct 14 19:13	4°♄45'32	
asc. node	4712 Oct 27 22:10	19°♄27'28		morning max el	4713 Oct 16 10:53	6°♄11'55	18°03'06
morning max el	4712 Nov 01 21:27	22°♄39'53	17°50'00		4713 Oct 31 14:34	0°♄	
	4712 Nov 07 14:36	0°♄		morning set	4713 Nov 01 05:05	1°♄07'29	
morning set	4712 Nov 17 23:06	17°♄37'11					
	4712 Nov 25 00:13	0°♄		superior conj	4713 Nov 11 02:43	19°♄14'26	1°02'43
superior conj	4712 Nov 29 09:41	7°♄29'59	0°28'45	minimum elong	4713 Nov 11 06:45	19°♄32'18	1°02'13
minimum elong	4712 Nov 29 12:22	7°♄41'18	0°28'23		4713 Nov 17 07:49	0°♄	
desc. node	4712 Dec 03 12:44	14°♄21'43		max. Earth dist.	4713 Nov 18 18:14	2°♄24'30	1.41905 AU
max. Earth dist.	4712 Dec 06 06:28	18°♄49'19	1.43616 AU	desc. node	4713 Nov 20 09:45	5°♄08'26	
	4712 Dec 13 07:40	0°♄		evening rise	4713 Nov 24 07:29	11°♄29'08	
evening rise	4712 Dec 14 08:36	1°♄36'52			4713 Dec 06 08:39	0°♄	
	4713 Jan 02 11:57	0°♄		evening max el	4713 Dec 27 12:55	27°♄46'59	22°36'18
evening max el	4713 Jan 13 19:25	14°♄11'24	21°19'22		4713 Dec 29 21:39	0°♄	
retrograde	4713 Jan 22 13:26	19°♄22'41		retrograde	4714 Jan 06 09:20	3°♄38'12	
asc. node	4713 Jan 23 21:25	19°♄13'06		asc. node	4714 Jan 10 18:28	1°♄58'04	
evening set	4713 Jan 26 18:13	17°♄44'07		evening set	4714 Jan 11 01:36	1°♄43'45	
inferior conj	4713 Feb 01 02:22	11°♄29'16	2°28'58		4714 Jan 12 20:07	30°♄	
minimum elong	4713 Jan 31 23:56	11°♄37'42	2°28'15	inferior conj	4714 Jan 16 10:18	25°♄21'18	1°48'56
min. Earth dist.	4713 Feb 01 09:11	11°♄05'42	0.67879 AU	minimum elong	4714 Jan 16 08:10	25°♄28'44	1°48'11
morning rise	4713 Feb 06 05:29	5°♄16'48		min. Earth dist.	4714 Jan 16 05:31	25°♄37'53	0.68076 AU
direct	4713 Feb 11 09:57	3°♄01'00		morning rise	4714 Jan 21 14:37	19°♄12'07	
morning max el	4713 Feb 21 19:00	9°♄11'02	23°21'49	direct	4714 Jan 26 04:23	17°♄19'02	
desc. node	4713 Mar 01 11:59	18°♄09'23		morning max el	4714 Feb 04 07:24	22°♄39'27	21°54'28
	4713 Mar 10 03:39	0°♄			4714 Feb 10 15:57	0°♄	
morning set	4713 Mar 28 19:55	29°♄08'35		desc. node	4714 Feb 16 09:00	7°♄38'13	
	4713 Mar 29 08:06	0°♄			4714 Mar 03 12:05	0°♄	
max. Earth dist.	4713 Apr 01 22:17	6°♄10'01	1.39230 AU	morning set	4714 Mar 08 23:14	8°♄37'12	
				max. Earth dist.	4714 Mar 14 20:58	18°♄16'47	1.41383 AU

	4714 Mar 21 17:28	0°♿		minimum elong	4715 Mar 03 14:48	11°♿59'12	2°08'25
					4715 Mar 14 02:29	0°♿	
superior conj	4714 Mar 22 13:43	1°♿29'00	-2°01'59	evening rise	4715 Mar 15 20:07	3°♿03'15	
minimum elong	4714 Mar 22 17:28	1°♿45'28	2°01'47	asc. node	4715 Mar 26 14:46	21°♿27'59	
evening rise	4714 Apr 02 04:53	20°♿48'15		evening max el	4715 Apr 01 23:31	29°♿48'26	18°06'55
	4714 Apr 07 05:21	0°♿			4715 Apr 02 04:15	0°♿	
asc. node	4714 Apr 08 17:45	2°♿41'17		retrograde	4715 Apr 08 11:44	3°♿10'44	
evening max el	4714 Apr 18 11:32	16°♿42'02	18°13'21	evening set	4715 Apr 11 05:35	2°♿34'11	
retrograde	4714 Apr 25 11:20	20°♿12'44			4715 Apr 15 00:11	30°♿	
evening set	4714 Apr 27 22:51	19°♿46'59		inferior conj	4715 Apr 17 14:53	27°♿28'59	3°18'09
inferior conj	4714 May 04 22:49	15°♿01'46	2°39'24	minimum elong	4715 Apr 17 17:01	27°♿23'32	3°17'51
minimum elong	4714 May 05 02:15	14°♿54'10	2°38'35	min. Earth dist.	4715 Apr 20 15:08	24°♿26'44	0.61855 AU
min. Earth dist.	4714 May 08 08:10	12°♿03'13	0.59666 AU	morning rise	4715 Apr 24 02:45	21°♿28'38	
morning rise	4714 May 12 03:00	9°♿18'31		direct	4715 Apr 30 22:16	19°♿02'59	
desc. node	4714 May 15 08:12	7°♿52'17		desc. node	4715 May 02 05:14	19°♿07'54	
direct	4714 May 18 13:00	7°♿23'45		morning max el	4715 May 15 02:07	27°♿02'35	27°52'30
morning max el	4714 Jun 01 21:46	15°♿14'56	27°30'25		4715 May 17 21:12	0°♿	
	4714 Jun 13 20:42	0°♿			4715 Jun 07 12:15	0°♿	
	4714 Jul 01 02:52	0°♿		morning set	4715 Jun 17 12:11	18°♿59'49	
morning set	4714 Jul 03 09:26	4°♿39'55		asc. node	4715 Jun 22 14:02	29°♿40'18	
asc. node	4714 Jul 05 17:01	9°♿33'44			4715 Jun 22 17:41	0°♿	
max. Earth dist.	4714 Jul 09 20:46	18°♿36'47	1.31971 AU	max. Earth dist.	4715 Jun 23 05:34	1°♿04'10	1.32281 AU
superior conj	4714 Jul 10 12:56	20°♿05'56	0°48'40	superior conj	4715 Jun 24 22:55	4°♿49'01	0°24'34
minimum elong	4714 Jul 10 11:00	19°♿55'16	0°48'17	minimum elong	4715 Jun 24 21:48	4°♿42'57	0°24'19
	4714 Jul 15 01:00	0°♿		evening rise	4715 Jul 01 19:45	19°♿45'41	
evening rise	4714 Jul 17 08:18	4°♿57'31			4715 Jul 06 19:13	0°♿	
	4714 Jul 30 13:18	0°♿			4715 Jul 26 20:18	0°♿	
desc. node	4714 Aug 11 07:28	16°♿13'38		evening max el	4715 Jul 27 01:30	0°♿12'33	24°28'40
evening max el	4714 Aug 14 10:57	19°♿28'37	25°54'54	desc. node	4715 Jul 29 04:29	2°♿07'03	
retrograde	4714 Aug 28 10:06	26°♿35'57		retrograde	4715 Aug 09 22:21	7°♿12'20	
evening set	4714 Sep 03 16:37	25°♿01'59		evening set	4715 Aug 14 22:18	6°♿16'27	
min. Earth dist.	4714 Sep 07 23:19	22°♿26'13	0.58624 AU	min. Earth dist.	4715 Aug 20 12:34	3°♿24'46	0.56733 AU
inferior conj	4714 Sep 11 04:38	20°♿05'25	-5°03'52	inferior conj	4715 Aug 23 05:02	1°♿42'11	-5°13'59
minimum elong	4714 Sep 11 08:32	19°♿58'15	5°03'27	minimum elong	4715 Aug 23 03:35	1°♿44'29	5°13'56
morning rise	4714 Sep 19 02:44	15°♿41'10			4715 Aug 25 23:23	30°♿	
direct	4714 Sep 21 13:02	15°♿21'54		morning rise	4715 Aug 31 11:23	27°♿39'04	
morning max el	4714 Sep 29 18:01	19°♿17'53	18°36'27	direct	4715 Sep 03 03:05	27°♿19'57	
asc. node	4714 Oct 01 16:16	21°♿20'20			4715 Sep 10 12:10	0°♿	
	4714 Oct 07 17:07	0°♿		morning max el	4715 Sep 12 15:28	1°♿46'57	19°31'18
morning set	4714 Oct 15 22:52	15°♿11'17		asc. node	4715 Sep 18 13:17	8°♿55'48	
	4714 Oct 23 15:22	0°♿		morning set	4715 Sep 30 00:40	29°♿37'19	
					4715 Sep 30 05:11	0°♿	
superior conj	4714 Oct 24 17:27	2°♿02'38	1°25'52	superior conj	4715 Oct 08 00:19	15°♿37'35	1°39'04
minimum elong	4714 Oct 24 20:46	2°♿18'09	1°25'32	minimum elong	4715 Oct 08 02:07	15°♿46'23	1°38'58
max. Earth dist.	4714 Nov 01 00:49	15°♿16'23	1.39873 AU	max. Earth dist.	4715 Oct 14 05:08	27°♿27'40	1.37778 AU
evening rise	4714 Nov 05 03:59	22°♿21'05			4715 Oct 15 14:23	0°♿	
desc. node	4714 Nov 07 06:47	25°♿52'11		evening rise	4715 Oct 17 23:16	4°♿15'09	
	4714 Nov 09 19:44	0°♿		desc. node	4715 Oct 25 03:48	16°♿28'10	
	4714 Nov 30 08:24	0°♿			4715 Nov 02 20:43	0°♿	
evening max el	4714 Dec 10 02:53	11°♿26'00	23°56'11	evening max el	4715 Nov 22 15:27	25°♿08'27	25°12'33
retrograde	4714 Dec 21 02:06	17°♿53'32			4715 Nov 28 13:43	0°♿	
evening set	4714 Dec 26 07:09	15°♿43'25		retrograde	4715 Dec 04 14:37	2°♿03'21	
asc. node	4714 Dec 28 15:29	13°♿19'11			4715 Dec 09 22:58	30°♿	
min. Earth dist.	4714 Dec 31 02:04	10°♿10'46	0.67909 AU	evening set	4715 Dec 10 09:12	29°♿39'06	
inferior conj	4714 Dec 31 17:48	9°♿17'23	1°01'58	min. Earth dist.	4715 Dec 14 20:28	24°♿40'35	0.67383 AU
minimum elong	4714 Dec 31 16:23	9°♿22'09	1°01'24	inferior conj	4715 Dec 15 23:01	23°♿14'08	0°08'57
morning rise	4715 Jan 06 01:40	3°♿13'06		minimum elong	4715 Dec 15 22:47	23°♿14'52	0°08'52
direct	4715 Jan 10 01:34	1°♿42'40		transit middle	4715 Dec 15 22:47	23°♿14'52	0°08'52
morning max el	4715 Jan 18 02:31	6°♿19'15	20°35'46	transit begin	4715 Dec 15 20:28	23°♿22'28	
desc. node	4715 Feb 03 06:03	27°♿34'26		transit end	4715 Dec 16 01:07	23°♿07'17	
	4715 Feb 04 21:26	0°♿		asc. node	4715 Dec 15 12:30	23°♿48'27	
morning set	4715 Feb 16 01:47	16°♿59'58		morning rise	4715 Dec 21 12:38	17°♿16'52	
	4715 Feb 24 07:18	0°♿		direct	4715 Dec 25 00:13	16°♿06'56	
max. Earth dist.	4715 Feb 25 02:26	1°♿17'08	1.43249 AU	morning max el	4716 Jan 01 05:30	20°♿09'54	19°30'23
					4716 Jan 09 03:31	0°♿	
superior conj	4715 Mar 03 15:21	12°♿01'27	-2°08'25				

greatest brilliancy	4716 Jan 14 08:25	7° Z 34'06	-0.7m		4717 Jan 01 17:26	0° Z	
desc. node	4716 Jan 21 03:05	17° Z 50'21		morning set	4717 Jan 04 15:27	4° Z 36'26	
morning set	4716 Jan 25 23:04	25° Z 16'37		desc. node	4717 Jan 07 00:05	8° Z 20'01	
	4716 Jan 29 00:15	0° \approx					
max. Earth dist.	4716 Feb 07 15:00	15° \approx 03'21	1.44590 AU	superior conj	4717 Jan 20 21:04	0° \approx 07'58	-1°26'30
				minimum elong	4717 Jan 20 11:47	29° Z 31'29	1°25'31
superior conj	4716 Feb 11 15:31	21° \approx 27'26	-1°57'15	max. Earth dist.	4717 Jan 20 08:52	29° Z 20'03	1.45254 AU
minimum elong	4716 Feb 11 08:47	21° \approx 00'28	1°56'51		4717 Jan 20 19:03	0° \approx	
	4716 Feb 16 22:24	0° X		evening rise	4717 Feb 05 11:08	24° \approx 48'07	
evening rise	4716 Feb 25 15:12	14° X 24'21			4717 Feb 08 17:00	0° X	
	4716 Mar 06 00:07	0° Y		greatest brilliancy	4717 Feb 13 06:55	7° X 19'20	-0.9m
asc. node	4716 Mar 12 11:46	9° Y 38'36		evening max el	4717 Feb 26 23:14	26° X 37'58	18°49'47
evening max el	4716 Mar 15 12:18	13° Y 09'23	18°19'20	asc. node	4717 Feb 27 08:49	27° X 01'50	
retrograde	4716 Mar 21 22:46	16° Y 37'01			4717 Mar 03 15:27	0° Y	
evening set	4716 Mar 24 22:46	15° Y 48'25		retrograde	4717 Mar 05 16:30	0° Y 23'08	
inferior conj	4716 Mar 30 21:20	10° Y 24'22	3°33'28		4717 Mar 07 16:36	30° R X	
minimum elong	4716 Mar 30 21:47	10° Y 23'04	3°33'27	evening set	4717 Mar 08 23:03	29° X 21'36	
min. Earth dist.	4716 Apr 02 07:16	7° Y 40'28	0.63864 AU	inferior conj	4717 Mar 14 14:18	23° X 40'12	3°31'03
morning rise	4716 Apr 05 19:54	4° Y 15'11		minimum elong	4717 Mar 14 13:19	23° X 43'13	3°30'59
direct	4716 Apr 12 16:09	1° Y 30'14		min. Earth dist.	4717 Mar 16 08:31	21° X 29'34	0.65527 AU
desc. node	4716 Apr 18 02:16	2° Y 57'42		morning rise	4717 Mar 20 03:10	17° X 27'02	
morning max el	4716 Apr 26 10:30	9° Y 28'24	27°37'19	direct	4717 Mar 26 16:58	14° X 36'49	
	4716 May 12 10:41	0° B		desc. node	4717 Apr 04 23:19	18° X 48'54	
	4716 May 29 19:59	0° II		morning max el	4717 Apr 08 20:26	22° X 21'57	26°49'53
morning set	4716 May 31 07:39	2° II 55'03			4717 Apr 15 13:28	0° Y	
max. Earth dist.	4716 Jun 05 07:49	13° II 08'30	1.33037 AU		4717 May 05 16:46	0° B	
				morning set	4717 May 14 16:38	16° B 15'33	
superior conj	4716 Jun 08 05:23	19° II 17'26	-0°02'29	max. Earth dist.	4717 May 19 00:08	24° B 42'09	1.34262 AU
minimum elong	4716 Jun 08 05:31	19° II 18'05	0°02'28		4717 May 21 14:44	0° II	
behind sun begin	4716 Jun 08 00:12	18° II 49'38					
behind sun end	4716 Jun 08 10:49	19° II 46'33		superior conj	4717 May 23 06:11	3° II 24'04	-0°31'28
asc. node	4716 Jun 08 11:03	19° II 47'47		minimum elong	4717 May 23 07:52	3° II 32'48	0°31'08
	4716 Jun 13 04:42	0° E		asc. node	4717 May 26 08:05	9° II 51'38	
evening rise	4716 Jun 15 07:25	4° E 30'36		evening rise	4717 May 30 17:20	19° II 05'31	
	4716 Jun 29 01:55	0° O			4717 Jun 05 03:26	0° E	
evening max el	4716 Jul 07 14:35	10° O 35'21	22°51'31	evening max el	4717 Jun 19 10:03	21° E 08'56	21°18'49
desc. node	4716 Jul 15 01:29	15° O 54'51		retrograde	4717 Jul 01 11:19	27° E 05'11	
retrograde	4716 Jul 20 21:44	17° O 12'58		desc. node	4717 Jul 01 22:31	27° E 04'40	
evening set	4716 Jul 24 09:06	16° O 46'34		evening set	4717 Jul 03 19:29	26° E 52'33	
min. Earth dist.	4716 Jul 31 23:04	13° O 24'35	0.55363 AU	inferior conj	4717 Jul 13 04:13	22° E 53'42	-3°12'10
inferior conj	4716 Aug 02 10:22	12° O 33'50	-4°38'21	minimum elong	4717 Jul 12 19:59	23° E 05'14	3°09'35
minimum elong	4716 Aug 02 03:01	12° O 44'27	4°36'59	min. Earth dist.	4717 Jul 13 09:29	22° E 46'20	0.54807 AU
morning rise	4716 Aug 10 23:04	8° O 42'56		morning rise	4717 Jul 21 21:09	18° E 58'20	
direct	4716 Aug 13 22:59	8° O 21'56		direct	4717 Jul 25 08:29	18° E 32'17	
morning max el	4716 Aug 25 00:59	13° O 31'20	20°47'43	morning max el	4717 Aug 06 23:04	24° E 30'32	22°22'26
asc. node	4716 Sep 04 10:19	27° O 18'31			4717 Aug 11 23:09	0° O	
	4716 Sep 05 23:26	0° P		asc. node	4717 Aug 22 07:22	16° O 16'44	
morning set	4716 Sep 13 07:48	14° P 18'28		morning set	4717 Aug 28 18:07	29° O 08'35	
					4717 Aug 29 03:55	0° P	
superior conj	4716 Sep 20 18:47	29° P 46'29	1°43'45				
minimum elong	4716 Sep 20 19:00	29° P 47'35	1°43'45	superior conj	4717 Sep 04 21:17	14° P 18'43	1°41'17
	4716 Sep 20 21:26	0° Q		minimum elong	4717 Sep 04 20:13	14° P 13'03	1°41'15
max. Earth dist.	4716 Sep 25 13:20	9° Q 20'53	1.35858 AU	max. Earth dist.	4717 Sep 08 05:36	21° P 18'39	1.34262 AU
evening rise	4716 Sep 29 14:16	17° Q 03'52		evening rise	4717 Sep 12 20:40	0° Q 35'48	
	4716 Oct 06 20:54	0° M			4717 Sep 12 13:20	0° Q	
desc. node	4716 Oct 11 00:47	6° M 51'42		desc. node	4717 Sep 27 21:48	26° Q 56'57	
	4716 Oct 27 05:26	0° J			4717 Sep 29 21:33	0° M	
evening max el	4716 Nov 04 04:10	8° J 51'15	26°17'57	evening max el	4717 Oct 17 16:55	22° M 26'04	27°04'51
retrograde	4716 Nov 16 22:00	16° J 02'05		retrograde	4717 Oct 30 23:42	29° M 43'20	
evening set	4716 Nov 23 05:58	13° J 26'54		evening set	4717 Nov 06 19:19	27° M 02'50	
min. Earth dist.	4716 Nov 27 10:19	9° J 03'41	0.66511 AU	min. Earth dist.	4717 Nov 10 17:15	23° M 15'14	0.65288 AU
inferior conj	4716 Nov 29 00:06	7° J 08'03	-0°49'03	inferior conj	4717 Nov 12 18:57	20° M 55'06	-1°50'31
minimum elong	4716 Nov 29 01:26	7° J 03'58	0°48'27	minimum elong	4717 Nov 12 22:06	20° M 46'12	1°49'14
asc. node	4716 Dec 01 09:33	4° J 19'32		asc. node	4717 Nov 18 06:37	15° M 46'32	
morning rise	4716 Dec 04 21:28	1° J 20'26		morning rise	4717 Nov 19 01:51	15° M 20'14	
direct	4716 Dec 07 22:41	0° J 27'37		direct	4717 Nov 21 18:50	14° M 40'47	
morning max el	4716 Dec 14 15:31	4° J 08'04	18°40'31	morning max el	4717 Nov 28 06:23	18° M 08'56	18°07'15

	4717 Dec 07 01:38	0°♊	morning rise	4718 Nov 02 22:45	29°♎09'51	
morning set	4717 Dec 16 13:19	15°♊25'34	direct	4718 Nov 05 09:53	28°♎40'06	
desc. node	4717 Dec 24 21:06	28°♊59'20	asc. node	4718 Nov 05 03:40	28°♎40'26	
	4717 Dec 25 12:11	0°♋		4718 Nov 09 10:39	0°♎	
superior conj	4717 Dec 31 02:20	8°♋54'52 -0°42'03	morning max el	4718 Nov 11 23:14	2°♎05'03	17°51'11
minimum elong	4717 Dec 30 21:05	8°♋34'08 0°41'21	morning set	4718 Nov 28 13:58	27°♎32'17	
max. Earth dist.	4718 Jan 03 04:39	13°♋48'01 1.45174 AU		4718 Nov 30 00:15	0°♌	
	4718 Jan 13 13:45	0°♌	superior conj	4718 Dec 11 02:17	18°♌39'33	0°04'38
evening rise	4718 Jan 16 09:42	4°♌23'35	minimum elong	4718 Dec 11 02:47	18°♌41'36	0°04'35
greatest brilliancy	4718 Jan 29 07:02	24°♌10'38 -0.7m	behind sun begin	4718 Dec 10 17:22	18°♌02'59	
	4718 Feb 02 06:09	0°♍	behind sun end	4718 Dec 11 12:12	19°♌20'08	
evening max el	4718 Feb 10 06:12	10°♍09'57 19°36'55	desc. node	4718 Dec 11 18:06	19°♌44'16	
asc. node	4718 Feb 14 05:53	13°♍24'28	max. Earth dist.	4718 Dec 16 22:51	28°♌07'15	1.44368 AU
retrograde	4718 Feb 17 13:50	14°♍23'15		4718 Dec 18 03:14	0°♎	
evening set	4718 Feb 21 03:50	13°♍08'00	evening rise	4718 Dec 26 20:12	13°♎35'18	
inferior conj	4718 Feb 26 14:36	7°♍11'18 3°15'06		4719 Jan 06 16:27	0°♌	
minimum elong	4718 Feb 26 12:40	7°♍17'41 3°14'47	evening max el	4719 Jan 24 07:53	23°♌42'57	20°38'34
min. Earth dist.	4718 Feb 27 17:54	5°♍41'15 0.66772 AU	asc. node	4719 Feb 01 02:56	28°♌31'23	
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direct	4718 Mar 09 23:48	28°♌13'40	inferior conj	4719 Feb 10 19:33	20°♌53'08	2°48'26
	4718 Mar 15 12:39	0°♍	minimum elong	4719 Feb 10 17:09	21°♌01'21	2°47'50
morning max el	4718 Mar 22 05:57	5°♍32'16 25°38'30	min. Earth dist.	4719 Feb 11 09:26	20°♌05'33	0.67591 AU
desc. node	4718 Mar 22 20:22	6°♍09'09	morning rise	4719 Feb 15 23:07	14°♌39'18	
	4718 Apr 10 02:23	0°♎	direct	4719 Feb 21 11:53	12°♌11'55	
morning set	4718 Apr 27 10:59	28°♎50'03	morning max el	4719 Mar 04 14:40	18°♌50'23	24°13'07
	4718 Apr 28 02:16	0°♏	desc. node	4719 Mar 09 17:23	24°♌32'49	
max. Earth dist.	4718 May 01 05:18	5°♏50'39 1.35938 AU		4719 Mar 14 00:53	0°♍	
				4719 Apr 03 05:12	0°♎	
superior conj	4718 May 06 22:41	17°♏01'56 -1°01'02	morning set	4719 Apr 09 09:14	10°♎23'42	
minimum elong	4718 May 07 02:02	17°♏18'41 1°00'27	max. Earth dist.	4719 Apr 13 02:05	16°♎55'50	1.37968 AU
asc. node	4718 May 13 05:08	29°♏48'08				
	4718 May 13 07:27	0°♐	superior conj	4719 Apr 20 03:31	0°♏02'28	-1°29'03
evening rise	4718 May 14 23:28	3°♐24'29	minimum elong	4719 Apr 20 08:10	0°♏24'44	1°28'25
	4718 May 30 13:48	0°♑		4719 Apr 20 03:00	0°♏	
evening max el	4718 Jun 01 17:14	2°♑18'14 20°01'19	evening rise	4719 Apr 28 23:14	17°♏20'16	
retrograde	4718 Jun 12 02:09	7°♑22'19	asc. node	4719 Apr 30 02:12	19°♏32'57	
evening set	4718 Jun 14 00:32	7°♑12'31		4719 May 05 14:41	0°♐	
desc. node	4718 Jun 18 19:34	5°♑34'27	evening max el	4719 May 15 12:34	14°♐10'33	19°03'29
inferior conj	4718 Jun 23 00:45	3°♑12'34 -1°15'25	retrograde	4719 May 24 06:04	18°♐26'31	
minimum elong	4718 Jun 22 21:14	3°♑17'52 1°14'07	evening set	4719 May 26 06:59	18°♐13'32	
min. Earth dist.	4718 Jun 24 21:48	2°♑04'52 0.55213 AU	inferior conj	4719 Jun 03 13:01	14°♐00'09	0°37'34
	4718 Jun 28 18:08	30°♑♐	minimum elong	4719 Jun 03 14:31	13°♐57'34	0°37'01
morning rise	4718 Jul 01 16:14	28°♐52'20	desc. node	4719 Jun 05 16:36	12°♐30'51	
direct	4718 Jul 05 20:42	28°♐14'06	min. Earth dist.	4719 Jun 06 13:16	11°♐56'01	0.56506 AU
	4718 Jul 12 18:15	0°♑	morning rise	4719 Jun 11 18:48	9°♐04'06	
morning max el	4718 Jul 19 14:08	4°♑59'08 24°06'07	direct	4719 Jun 16 21:55	8°♐02'08	
	4718 Aug 06 05:27	0°♒	morning max el	4719 Jul 01 04:26	15°♐23'07	25°44'06
asc. node	4718 Aug 09 04:24	5°♒41'19		4719 Jul 12 22:25	0°♑	
morning set	4718 Aug 13 05:48	14°♒01'54	asc. node	4719 Jul 27 01:27	25°♑25'16	
			morning set	4719 Jul 28 17:14	28°♑53'39	
superior conj	4718 Aug 20 05:00	29°♒05'25 1°32'48		4719 Jul 29 05:44	0°♒	
minimum elong	4718 Aug 20 03:05	28°♒55'00 1°32'38				
	4718 Aug 20 15:05	0°♓	superior conj	4719 Aug 04 15:45	13°♒59'45	1°19'09
max. Earth dist.	4718 Aug 22 06:26	3°♓31'58 1.33075 AU	minimum elong	4719 Aug 04 13:27	13°♒47'07	1°18'49
evening rise	4718 Aug 27 14:26	14°♓39'47	max. Earth dist.	4719 Aug 05 14:02	16°♒02'05	1.32317 AU
	4718 Sep 04 15:38	0°♈	evening rise	4719 Aug 11 16:23	29°♒06'52	
desc. node	4718 Sep 14 18:50	16°♈35'20		4719 Aug 12 02:39	0°♓	
	4718 Sep 24 20:09	0°♈		4719 Aug 28 19:23	0°♈	
evening max el	4718 Sep 30 04:18	5°♈40'21 27°26'21	desc. node	4719 Sep 01 15:52	5°♈35'45	
retrograde	4718 Oct 13 19:20	12°♈57'47	evening max el	4719 Sep 12 12:12	18°♈21'51	27°16'52
evening set	4718 Oct 20 22:28	10°♈20'40	retrograde	4719 Sep 26 08:14	25°♈35'51	
min. Earth dist.	4718 Oct 24 15:06	7°♈06'21 0.63719 AU	evening set	4719 Oct 03 11:48	23°♈13'58	
inferior conj	4718 Oct 27 04:56	4°♈28'42 -2°53'15	min. Earth dist.	4719 Oct 07 02:41	20°♈25'35	0.61856 AU
minimum elong	4718 Oct 27 09:53	4°♈16'04 2°51'28	inferior conj	4719 Oct 10 03:03	17°♈41'41	-3°53'14
	4718 Nov 01 07:47	30°♈♈	minimum elong	4719 Oct 10 09:10	17°♈27'48	3°51'30




































































































































morning rise	4719 Oct 17 08:23	12° Ω 41'55		inferior conj	4720 Sep 21 09:48	0° Ω 24'23	-4°43'35
direct	4719 Oct 19 16:29	12° Ω 18'27		minimum elong	4720 Sep 21 15:21	0° Ω 13'22	4°42'34
asc. node	4719 Oct 23 00:42	13° Ω 08'07			4720 Sep 21 22:06	30° \Re Π	
morning max el	4719 Oct 26 14:52	15° Ω 48'38	17°53'13	morning rise	4720 Sep 29 02:10	25° Π 46'25	
	4719 Nov 05 12:14	0° Π		direct	4720 Oct 01 10:38	25° Π 26'18	
morning set	4719 Nov 11 10:59	10° Π 37'09		asc. node	4720 Oct 08 21:42	29° Π 00'09	
				morning max el	4720 Oct 09 01:58	29° Π 10'19	18°14'42
superior conj	4719 Nov 22 04:39	29° Π 41'35	0°44'27		4720 Oct 09 21:34	0° Ω	
minimum elong	4719 Nov 22 08:15	29° Π 57'04	0°43'58	morning set	4720 Oct 24 22:29	24° Ω 22'59	
	4719 Nov 22 08:56	0° \Re			4720 Oct 27 21:39	0° Π	
desc. node	4719 Nov 28 15:09	10° \Re 31'35		superior conj	4720 Nov 03 07:30	11° Π 54'30	1°13'50
max. Earth dist.	4719 Nov 29 12:53	12° \Re 00'44	1.42941 AU	minimum elong	4720 Nov 03 11:23	12° Π 12'12	1°13'22
evening rise	4719 Dec 06 10:20	23° \Re 02'39		max. Earth dist.	4720 Nov 10 21:58	25° Π 16'47	1.41066 AU
	4719 Dec 10 22:10	0° \Re			4720 Nov 13 17:24	0° \Re	
	4719 Dec 31 21:35	0° \approx		desc. node	4720 Nov 14 12:11	1° \Re 17'39	
evening max el	4720 Jan 07 04:08	7° \approx 17'30	21°51'18	evening rise	4720 Nov 15 17:46	3° \Re 19'00	
retrograde	4720 Jan 16 09:24	12° \approx 46'21			4720 Dec 03 06:00	0° \Re	
asc. node	4720 Jan 18 23:59	12° \approx 09'58		evening max el	4720 Dec 19 20:01	20° \Re 55'17	23°10'22
evening set	4720 Jan 20 18:45	11° \approx 01'16		retrograde	4720 Dec 30 04:02	27° \Re 02'28	
inferior conj	4720 Jan 26 02:58	4° \approx 42'37	2°12'54	evening set	4721 Jan 04 01:32	25° \Re 01'33	
minimum elong	4720 Jan 26 00:36	4° \approx 50'51	2°12'09	asc. node	4721 Jan 04 20:59	24° \Re 17'32	
min. Earth dist.	4720 Jan 26 04:47	4° \approx 36'19	0.68011 AU	inferior conj	4721 Jan 09 10:55	18° \Re 37'16	1°29'50
	4720 Jan 29 18:23	30° \Re \Re		minimum elong	4721 Jan 09 09:03	18° \Re 43'45	1°29'08
morning rise	4720 Jan 31 06:15	28° \Re 31'05		min. Earth dist.	4721 Jan 09 01:32	19° \Re 09'36	0.68050 AU
direct	4720 Feb 05 04:24	26° \Re 24'39		morning rise	4721 Jan 14 16:27	12° \Re 29'47	
	4720 Feb 12 15:12	0° \approx		direct	4721 Jan 19 00:16	10° \Re 46'14	
morning max el	4720 Feb 15 00:34	2° \approx 13'57	22°43'50	morning max el	4721 Jan 27 15:22	15° \Re 46'46	21°19'34
desc. node	4720 Feb 24 14:24	13° \approx 41'54			4721 Feb 08 01:38	0° \approx	
	4720 Mar 07 01:27	0° \Re		desc. node	4721 Feb 10 11:26	3° \approx 23'57	
morning set	4720 Mar 20 05:16	20° \Re 40'03		morning set	4721 Feb 27 20:47	29° \approx 36'49	
max. Earth dist.	4720 Mar 24 21:27	28° \Re 30'40	1.40162 AU		4721 Feb 28 02:39	0° \Re	
	4720 Mar 25 18:17	0° Υ		max. Earth dist.	4721 Mar 06 22:49	11° \Re 01'09	1.42232 AU
superior conj	4720 Apr 01 16:19	12° Υ 14'24	-1°52'23	superior conj	4721 Mar 14 08:12	23° \Re 27'00	-2°06'33
minimum elong	4720 Apr 01 21:03	12° Υ 35'56	1°51'59	minimum elong	4721 Mar 14 10:32	23° \Re 37'01	2°06'29
	4720 Apr 11 04:14	0° \Re			4721 Mar 18 02:25	0° Υ	
evening rise	4720 Apr 11 13:28	0° \Re 43'54		evening rise	4721 Mar 25 14:23	13° Υ 27'07	
asc. node	4720 Apr 15 23:15	9° \Re 00'14		asc. node	4721 Apr 02 20:17	28° Υ 04'16	
evening max el	4720 Apr 27 17:08	26° \Re 39'01	18°25'56		4721 Apr 04 00:24	0° \Re	
	4720 May 02 21:11	0° Π		evening max el	4721 Apr 11 03:27	9° \Re 34'50	18°08'14
retrograde	4720 May 05 04:35	0° Π 21'07		retrograde	4721 Apr 17 20:46	12° \Re 59'45	
evening set	4720 May 07 12:15	0° Π 00'47		evening set	4721 Apr 20 11:12	12° \Re 29'27	
	4720 May 07 13:20	30° \Re \Re		inferior conj	4721 Apr 27 04:25	7° \Re 35'36	2°59'03
inferior conj	4720 May 14 22:29	25° \Re 27'50	2°04'02	minimum elong	4721 Apr 27 07:25	7° \Re 28'32	2°58'29
minimum elong	4720 May 15 02:00	25° \Re 20'43	2°03'00	min. Earth dist.	4721 Apr 30 10:53	4° \Re 32'39	0.60614 AU
min. Earth dist.	4720 May 18 08:53	22° \Re 42'29	0.58425 AU	morning rise	4721 May 04 01:27	1° \Re 44'14	
morning rise	4720 May 22 12:37	19° \Re 59'18			4721 May 07 18:50	30° \Re Υ	
desc. node	4720 May 22 13:38	19° \Re 58'00		desc. node	4721 May 09 10:39	29° Υ 39'51	
direct	4720 May 28 13:27	18° \Re 24'13		direct	4721 May 10 16:48	29° Υ 35'19	
morning max el	4720 Jun 11 22:47	26° \Re 07'19	27°00'45		4721 May 13 16:49	0° \Re	
	4720 Jun 15 14:16	0° Π		morning max el	4721 May 24 23:33	7° \Re 30'15	27°44'23
	4720 Jul 05 06:53	0° \Re			4721 Jun 11 01:02	0° Π	
morning set	4720 Jul 12 02:43	13° \Re 37'24		morning set	4721 Jun 26 08:30	28° Π 07'53	
asc. node	4720 Jul 12 22:29	15° \Re 21'47			4721 Jun 27 06:04	0° \Re	
superior conj	4720 Jul 19 03:33	28° \Re 54'08	1°00'58	asc. node	4721 Jun 29 19:31	5° \Re 26'08	
minimum elong	4720 Jul 19 01:21	28° \Re 41'58	1°00'34	max. Earth dist.	4721 Jul 02 11:55	11° \Re 16'00	1.32058 AU
max. Earth dist.	4720 Jul 19 01:03	28° \Re 40'15	1.31980 AU	superior conj	4721 Jul 03 14:42	13° \Re 43'01	0°38'51
	4720 Jul 19 15:29	0° Ω		minimum elong	4721 Jul 03 13:04	13° \Re 34'01	0°38'30
evening rise	4720 Jul 25 23:42	13° Ω 47'38		evening rise	4721 Jul 10 10:14	28° \Re 35'17	
	4720 Aug 03 03:53	0° Π			4721 Jul 11 02:13	0° Ω	
desc. node	4720 Aug 18 12:54	23° Π 41'49			4721 Jul 27 19:35	0° Π	
	4720 Aug 24 06:12	0° Ω		desc. node	4721 Aug 05 09:55	10° Π 31'52	
evening max el	4720 Aug 24 14:06	0° Ω 18'51	26°33'54	evening max el	4721 Aug 06 08:29	11° Π 27'15	25°20'33
retrograde	4720 Sep 07 12:51	7° Ω 28'13		retrograde	4721 Aug 20 07:14	18° Π 31'24	
evening set	4720 Sep 14 06:36	5° Ω 34'15		evening set	4721 Aug 26 02:16	17° Π 14'01	
min. Earth dist.	4720 Sep 18 03:51	2° Ω 58'41	0.59807 AU				




























































































































min. Earth dist.	4721 Aug 30 20:13	14° \cap 33'37	0.57782 AU	evening set	4722 Aug 05 22:30	28° Ω 09'08	
inferior conj	4721 Sep 02 21:51	12° \cap 27'20	-5°12'48	min. Earth dist.	4722 Aug 12 07:32	25° Ω 06'19	0.56069 AU
minimum elong	4721 Sep 02 23:50	12° \cap 23'56	5°12'43	inferior conj	4722 Aug 14 13:42	23° Ω 44'28	-5°05'11
morning rise	4721 Sep 10 23:41	8° \cap 12'21		minimum elong	4722 Aug 14 09:30	23° Ω 50'52	5°04'47
direct	4721 Sep 13 12:07	7° \cap 53'13		morning rise	4722 Aug 22 23:00	19° Ω 48'31	
morning max el	4721 Sep 22 05:11	12° \cap 00'56	18°57'05	direct	4722 Aug 25 18:02	19° Ω 28'49	
asc. node	4721 Sep 25 18:44	16° \cap 02'12		morning max el	4722 Sep 04 21:44	24° Ω 11'59	20°01'22
	4721 Oct 04 08:50	0° $\underline{\cap}$			4722 Sep 09 22:33	0° \cap	
morning set	4721 Oct 08 20:02	8° $\underline{\cap}$ 37'14		asc. node	4722 Sep 12 15:47	3° \cap 59'39	
				morning set	4722 Sep 23 00:25	23° \cap 11'13	
					4722 Sep 26 08:27	0° $\underline{\cap}$	
superior conj	4721 Oct 17 05:38	25° $\underline{\cap}$ 03'49	1°32'37				
minimum elong	4721 Oct 17 08:21	25° $\underline{\cap}$ 16'48	1°32'23	superior conj	4722 Sep 30 18:00	8° $\underline{\cap}$ 55'27	1°42'01
	4721 Oct 19 20:17	0° \cap		minimum elong	4722 Sep 30 19:06	9° $\underline{\cap}$ 00'58	1°41'58
max. Earth dist.	4721 Oct 24 03:26	7° \cap 51'27	1.38975 AU	max. Earth dist.	4722 Oct 06 09:00	19° $\underline{\cap}$ 53'44	1.36924 AU
evening rise	4721 Oct 28 00:05	14° \cap 37'25		evening rise	4722 Oct 10 04:17	26° $\underline{\cap}$ 56'18	
desc. node	4721 Nov 01 09:11	21° \cap 58'32			4722 Oct 11 21:17	0° \cap	
	4721 Nov 06 09:30	0° \times		desc. node	4722 Oct 19 06:12	12° \cap 30'20	
	4721 Nov 28 02:35	0° Z			4722 Oct 30 20:05	0° \times	
evening max el	4721 Dec 02 09:16	4° Z 36'21	24°29'38	evening max el	4722 Nov 14 21:41	18° \times 19'30	25°42'07
retrograde	4721 Dec 13 18:55	11° Z 16'05		retrograde	4722 Nov 27 05:18	25° \times 22'37	
evening set	4721 Dec 19 05:46	8° Z 59'40		evening set	4722 Dec 03 05:50	22° \times 52'52	
asc. node	4721 Dec 22 17:59	5° Z 10'56		min. Earth dist.	4722 Dec 07 13:59	18° \times 09'33	0.67056 AU
min. Earth dist.	4721 Dec 23 21:20	3° Z 41'37	0.67728 AU	inferior conj	4722 Dec 08 21:21	16° \times 29'55	-0°15'05
inferior conj	4721 Dec 24 17:38	2° Z 33'48	0°40'10	minimum elong	4722 Dec 08 21:44	16° \times 28'41	0°14'55
minimum elong	4721 Dec 24 16:41	2° Z 37'00	0°39'47	transit middle	4722 Dec 08 21:44	16° \times 28'41	0°14'55
	4721 Dec 26 17:01	30° \times		transit begin	4722 Dec 08 20:39	16° \times 32'07	
morning rise	4721 Dec 30 03:42	26° \times 32'24		transit end	4722 Dec 08 22:49	16° \times 25'14	
direct	4722 Jan 02 22:15	25° \times 10'55		asc. node	4722 Dec 09 15:00	15° \times 34'07	
morning max el	4722 Jan 10 13:47	29° \times 31'21	20°06'16	morning rise	4722 Dec 14 14:03	10° \times 36'44	
	4722 Jan 11 01:03	0° Z		direct	4722 Dec 17 20:57	9° \times 34'38	
desc. node	4722 Jan 28 08:26	23° Z 29'24		morning max el	4722 Dec 24 20:05	13° \times 26'31	19°07'17
	4722 Feb 01 15:50	0° \approx			4723 Jan 06 05:14	0° Z	
morning set	4722 Feb 06 17:58	7° \approx 48'04		desc. node	4723 Jan 15 05:28	13° Z 51'56	
max. Earth dist.	4722 Feb 17 08:12	24° \approx 25'42	1.43899 AU	morning set	4723 Jan 16 20:57	16° Z 25'21	
	4722 Feb 20 19:12	0° X			4723 Jan 25 14:00	0° \approx	
superior conj	4722 Feb 22 22:53	3° X 30'39	-2°06'06	max. Earth dist.	4723 Jan 30 23:27	8° \approx 27'33	1.44960 AU
minimum elong	4722 Feb 22 19:42	3° X 17'39	2°06'00	superior conj	4723 Feb 02 13:30	12° \approx 32'22	-1°46'28
evening rise	4722 Mar 07 21:34	25° X 20'29		minimum elong	4723 Feb 02 04:51	11° \approx 58'12	1°45'45
	4722 Mar 10 14:20	0° Y			4723 Feb 13 10:41	0° X	
asc. node	4722 Mar 20 17:18	16° Y 37'01		evening rise	4723 Feb 17 07:01	6° X 17'30	
evening max el	4722 Mar 25 16:07	22° Y 48'27	18°09'50		4723 Mar 04 03:55	0° Y	
retrograde	4722 Apr 01 02:23	26° Y 11'25		asc. node	4723 Mar 07 14:20	4° Y 29'04	
evening set	4722 Apr 03 22:53	25° Y 29'45		evening max el	4723 Mar 09 04:20	6° Y 13'03	18°30'04
inferior conj	4722 Apr 10 03:07	20° Y 16'01	3°27'07	retrograde	4723 Mar 15 16:51	9° Y 47'08	
minimum elong	4722 Apr 10 04:33	20° Y 12'12	3°26'59	evening set	4723 Mar 18 19:28	8° Y 53'12	
min. Earth dist.	4722 Apr 12 21:30	17° Y 19'37	0.62749 AU	inferior conj	4723 Mar 24 14:31	3° Y 21'22	3°34'20
morning rise	4722 Apr 16 08:56	14° Y 11'08		minimum elong	4723 Mar 24 14:19	3° Y 21'57	3°34'19
direct	4722 Apr 23 05:39	11° Y 36'02		min. Earth dist.	4723 Mar 26 17:44	0° Y 50'14	0.64617 AU
desc. node	4722 Apr 26 07:40	12° Y 04'14			4723 Mar 27 11:28	30° \times	
morning max el	4722 May 07 06:03	19° Y 35'32	27°50'24	morning rise	4723 Mar 30 08:30	27° X 09'44	
	4722 May 16 02:46	0° Z		direct	4723 Apr 06 02:34	24° X 20'59	
	4722 Jun 03 23:38	0° \cap		desc. node	4723 Apr 13 04:42	26° X 49'56	
morning set	4722 Jun 10 08:30	12° \cap 18'26			4723 Apr 17 06:37	0° Y	
max. Earth dist.	4722 Jun 15 18:38	23° \cap 36'05	1.32553 AU	morning max el	4723 Apr 19 15:41	2° Y 15'45	27°20'40
asc. node	4722 Jun 16 16:34	25° \cap 33'48			4723 May 10 08:34	0° Z	
superior conj	4722 Jun 17 23:26	28° \cap 20'36	0°13'24	morning set	4723 May 25 00:00	26° Z 00'43	
minimum elong	4722 Jun 17 22:48	28° \cap 17'10	0°13'16		4723 May 27 00:25	0° \cap	
behind sun begin	4722 Jun 17 19:53	28° \cap 01'22		max. Earth dist.	4723 May 29 17:09	5° \cap 28'41	1.33500 AU
behind sun end	4722 Jun 18 01:43	28° \cap 32'58					
	4722 Jun 18 17:44	0° Z		superior conj	4723 Jun 02 03:48	12° \cap 40'44	-0°14'37
evening rise	4722 Jun 24 22:02	13° Z 23'09		minimum elong	4723 Jun 02 04:33	12° \cap 44'43	0°14'27
	4722 Jul 03 06:31	0° Ω		behind sun begin	4723 Jun 02 02:11	12° \cap 32'10	
evening max el	4722 Jul 18 21:26	21° Ω 58'18	23°47'37	behind sun end	4723 Jun 02 06:55	12° \cap 57'16	
desc. node	4722 Jul 23 06:55	25° Ω 36'34		asc. node	4723 Jun 03 13:37	15° \cap 40'26	
retrograde	4722 Aug 01 13:53	28° Ω 50'59		evening rise	4723 Jun 09 09:14	28° \cap 04'48	









































































































































































































	4723 Jun 10 07:13	0°☿		evening rise	4724 May 23 17:52	12°♊34'23	
	4723 Jun 28 06:24	0°♌			4724 Jun 01 19:35	0°☿	
evening max el	4723 Jun 30 12:08	2°♌21'29	22°10'42	evening max el	4724 Jun 11 12:25	13°☿09'42	20°43'41
desc. node	4723 Jul 10 03:57	8°♌20'43		retrograde	4724 Jun 22 21:23	18°☿43'58	
retrograde	4723 Jul 13 08:50	8°♌44'33		evening set	4724 Jun 24 23:07	18°☿33'38	
evening set	4723 Jul 16 06:30	8°♌25'51		desc. node	4724 Jun 26 00:58	18°☿20'28	
min. Earth dist.	4723 Jul 24 17:50	4°♌46'47	0.55008 AU	inferior conj	4724 Jul 04 06:04	14°☿36'36	-2°24'28
inferior conj	4723 Jul 25 12:48	4°♌20'06	-4°07'27	minimum elong	4724 Jul 03 23:24	14°☿46'06	2°22'08
minimum elong	4723 Jul 25 04:13	4°♌32'12	4°05'20	min. Earth dist.	4724 Jul 05 05:20	14°☿03'20	0.54861 AU
morning rise	4723 Aug 03 03:43	0°♌29'53		morning rise	4724 Jul 12 23:14	10°☿32'25	
direct	4723 Aug 06 07:38	0°♌07'32		direct	4724 Jul 16 17:03	10°☿02'15	
morning max el	4723 Aug 18 02:18	5°♌37'30	21°26'15	morning max el	4724 Jul 29 20:47	16°☿22'04	23°06'03
asc. node	4723 Aug 30 12:50	22°♌38'52			4724 Aug 09 16:03	0°♌	
	4723 Sep 03 11:02	0°♍		asc. node	4724 Aug 16 09:55	11°♌49'39	
morning set	4723 Sep 07 09:10	7°♍57'04		morning set	4724 Aug 21 20:16	22°♌49'14	
					4724 Aug 25 04:58	0°♍	
superior conj	4723 Sep 14 16:18	23°♍16'00	1°43'30				
minimum elong	4723 Sep 14 15:56	23°♍14'02	1°43'31	superior conj	4724 Aug 28 21:21	7°♍55'38	1°38'22
	4723 Sep 17 23:03	0°♎		minimum elong	4724 Aug 28 19:52	7°♍47'40	1°38'17
max. Earth dist.	4723 Sep 18 19:58	1°♎45'12	1.35126 AU	max. Earth dist.	4724 Aug 31 15:48	13°♍48'09	1.33709 AU
evening rise	4723 Sep 23 02:22	10°♎05'00		evening rise	4724 Sep 05 14:06	23°♍52'20	
	4723 Oct 04 09:38	0°♏			4724 Sep 08 17:58	0°♎	
desc. node	4723 Oct 06 03:14	2°♏47'06		desc. node	4724 Sep 22 00:15	22°♎42'01	
	4723 Oct 26 10:41	0°♐			4724 Sep 26 23:47	0°♏	
evening max el	4723 Oct 28 10:16	1°♐59'28	26°40'32	evening max el	4724 Oct 09 22:44	15°♏27'18	27°17'30
retrograde	4723 Nov 10 10:33	9°♐14'59		retrograde	4724 Oct 23 09:52	22°♏45'30	
evening set	4723 Nov 16 23:45	6°♐36'27		evening set	4724 Oct 30 09:08	20°♏05'26	
min. Earth dist.	4723 Nov 21 01:11	2°♐28'31	0.66030 AU	min. Earth dist.	4724 Nov 03 04:39	16°♏32'10	0.64658 AU
inferior conj	4723 Nov 22 20:03	0°♐21'27	-1°14'47	inferior conj	4724 Nov 05 11:27	14°♏03'36	-2°17'11
minimum elong	4723 Nov 22 22:08	0°♐15'16	1°13'55	minimum elong	4724 Nov 05 15:24	13°♏52'54	2°15'39
	4723 Nov 23 03:17	30°♏♏		morning rise	4724 Nov 11 22:52	8°♏34'54	
asc. node	4723 Nov 26 12:03	26°♏23'11		asc. node	4724 Nov 12 09:08	8°♏24'26	
morning rise	4723 Nov 28 21:18	24°♏39'00		direct	4724 Nov 14 12:57	8°♏00'05	
direct	4723 Dec 01 18:36	23°♏52'31		morning max el	4724 Nov 21 00:32	11°♏26'10	17°58'11
morning max el	4723 Dec 08 08:31	27°♏26'52	18°24'18		4724 Dec 03 20:04	0°♐	
	4723 Dec 10 15:41	0°♑		morning set	4724 Dec 08 11:27	7°♐46'27	
morning set	4723 Dec 28 01:30	26°♐22'18		desc. node	4724 Dec 18 23:31	25°♐08'11	
	4723 Dec 30 07:50	0°♑			4724 Dec 21 23:54	0°♑	
desc. node	4724 Jan 02 02:30	4°♑26'13					
				superior conj	4724 Dec 22 03:38	0°♑14'58	-0°21'53
superior conj	4724 Jan 12 16:18	21°♑08'40	-1°08'42	minimum elong	4724 Dec 22 00:59	0°♑04'22	0°21'29
minimum elong	4724 Jan 12 08:06	20°♑36'28	1°07'43	max. Earth dist.	4724 Dec 26 13:03	7°♑14'11	1.44914 AU
max. Earth dist.	4724 Jan 13 17:55	22°♑49'09	1.45305 AU	evening rise	4725 Jan 07 08:53	25°♑39'03	
	4724 Jan 18 07:56	0°♒			4725 Jan 10 04:49	0°♑	
evening rise	4724 Jan 28 17:13	16°♒18'32		greatest brilliancy	4725 Jan 21 19:38	17°♒32'59	-0.6m
	4724 Feb 06 10:08	0°♓			4725 Jan 30 21:01	0°♓	
greatest brilliancy	4724 Feb 07 23:01	2°♓23'20	-0.8m	evening max el	4725 Feb 02 18:39	3°♓16'27	20°01'40
evening max el	4724 Feb 20 13:46	19°♓43'41	19°07'57	asc. node	4725 Feb 08 08:25	7°♓20'48	
asc. node	4724 Feb 22 11:22	21°♓28'35		retrograde	4725 Feb 10 10:21	7°♓44'00	
retrograde	4724 Feb 27 12:29	23°♓39'57		evening set	4725 Feb 14 03:57	6°♓22'46	
evening set	4724 Mar 01 21:57	22°♓32'53		inferior conj	4725 Feb 19 13:32	0°♓20'40	3°04'58
inferior conj	4724 Mar 07 10:59	16°♓44'52	3°25'46	minimum elong	4725 Feb 19 11:20	0°♓28'02	3°04'31
minimum elong	4724 Mar 07 09:33	16°♓49'29	3°25'36		4725 Feb 19 19:40	30°♓♓	
min. Earth dist.	4724 Mar 08 22:49	14°♓50'36	0.66103 AU	min. Earth dist.	4725 Feb 20 11:01	29°♓08'28	0.67170 AU
morning rise	4724 Mar 12 20:47	10°♓30'42		morning rise	4725 Feb 24 18:31	24°♓06'25	
direct	4724 Mar 19 06:16	7°♓41'50		direct	4725 Mar 02 15:32	21°♓28'47	
desc. node	4724 Mar 30 01:45	13°♓22'49		morning max el	4725 Mar 14 10:27	28°♓31'38	25°03'18
morning max el	4724 Apr 01 01:39	15°♓18'21	26°21'54		4725 Mar 15 20:20	0°♓	
	4724 Apr 13 03:15	0°♔		desc. node	4725 Mar 16 22:46	1°♓12'21	
	4724 May 02 03:52	0°♕			4725 Apr 06 21:33	0°♔	
morning set	4724 May 07 03:27	9°♕04'28		morning set	4725 Apr 19 13:57	21°♔14'51	
max. Earth dist.	4724 May 11 04:32	16°♕49'55	1.34916 AU	max. Earth dist.	4725 Apr 23 05:08	27°♔51'47	1.36766 AU
					4725 Apr 24 08:37	0°♕	
superior conj	4724 May 16 01:30	26°♕37'03	-0°44'02				
minimum elong	4724 May 16 03:53	26°♕49'18	0°43'34	superior conj	4725 Apr 29 13:29	10°♕00'27	-1°13'15
	4724 May 17 16:53	0°♖		minimum elong	4725 Apr 29 17:28	10°♕20'02	1°12'37
asc. node	4724 May 20 10:40	5°♖42'19		asc. node	4725 May 07 07:42	25°♕34'27	

evening rise	4725 May 07 21:35	26°♄44'18		asc. node	4726 Apr 24 04:44	15°♄12'20	
	4725 May 09 12:43	0°♄			4726 May 02 15:12	0°♄	
evening max el	4725 May 25 01:04	24°♄37'51	19°34'15	evening max el	4726 May 08 00:38	6°♄45'54	18°44'58
retrograde	4725 Jun 03 16:08	29°♄19'34		retrograde	4726 May 16 03:50	10°♄45'37	
evening set	4725 Jun 05 14:50	29°♄08'55		evening set	4726 May 18 07:34	10°♄29'49	
desc. node	4725 Jun 12 22:01	25°♄57'43		inferior conj	4726 May 26 04:58	6°♄08'04	1°18'07
inferior conj	4725 Jun 14 08:00	25°♄04'32	-0°25'16	minimum elong	4726 May 26 07:42	6°♄02'59	1°17'11
minimum elong	4725 Jun 14 06:52	25°♄06'20	0°24'51	min. Earth dist.	4726 May 29 11:22	3°♄44'14	0.57270 AU
min. Earth dist.	4725 Jun 16 18:43	23°♄31'49	0.55675 AU	desc. node	4726 May 30 19:02	2°♄50'28	
morning rise	4725 Jun 22 20:22	20°♄29'51		morning rise	4726 Jun 03 04:35	0°♄57'24	
direct	4725 Jun 27 10:27	19°♄42'45			4726 Jun 06 01:26	30°♄	
morning max el	4725 Jul 11 10:29	26°♄44'13	24°49'19	direct	4726 Jun 08 17:24	29°♄42'25	
	4725 Jul 14 14:01	0°♄			4726 Jun 11 09:54	0°♄	
	4725 Aug 02 14:24	0°♄		morning max el	4726 Jun 23 02:00	7°♄13'26	26°20'13
asc. node	4725 Aug 03 06:58	1°♄23'19			4726 Jul 10 00:11	0°♄	
morning set	4725 Aug 06 08:03	7°♄42'23		asc. node	4726 Jul 21 03:59	21°♄13'15	
				morning set	4726 Jul 21 18:50	22°♄31'24	
superior conj	4725 Aug 13 06:36	22°♄46'13	1°27'36		4726 Jul 25 06:11	0°♄	
minimum elong	4725 Aug 13 04:27	22°♄34'32	1°27'21	superior conj	4726 Jul 28 17:58	7°♄40'59	1°11'57
max. Earth dist.	4725 Aug 14 19:59	26°♄09'45	1.32708 AU	minimum elong	4726 Jul 28 15:39	7°♄28'13	1°11'34
	4725 Aug 16 14:43	0°♄		max. Earth dist.	4726 Jul 29 05:40	8°♄45'27	1.32127 AU
evening rise	4725 Aug 20 11:44	8°♄07'24		evening rise	4726 Aug 04 16:13	22°♄41'05	
	4725 Sep 01 04:22	0°♄			4726 Aug 08 06:11	0°♄	
desc. node	4725 Sep 08 21:17	12°♄05'53			4726 Aug 26 04:44	0°♄	
evening max el	4725 Sep 22 09:13	28°♄30'18	27°26'23	desc. node	4726 Aug 26 18:20	0°♄45'28	
	4725 Sep 24 00:48	0°♄		evening max el	4726 Sep 04 14:51	10°♄53'54	27°02'36
retrograde	4725 Oct 06 02:34	5°♄45'38		retrograde	4726 Sep 18 11:49	18°♄05'26	
evening set	4725 Oct 13 06:53	3°♄13'50		evening set	4726 Sep 25 12:55	15°♄53'48	
min. Earth dist.	4725 Oct 16 22:20	0°♄11'33	0.62960 AU	min. Earth dist.	4726 Sep 29 05:08	13°♄13'09	0.61001 AU
	4725 Oct 17 03:14	30°♄		inferior conj	4726 Oct 02 08:50	10°♄31'12	-4°16'20
inferior conj	4725 Oct 19 16:50	27°♄29'59	-3°19'22	minimum elong	4726 Oct 02 15:00	10°♄17'59	4°14'50
minimum elong	4725 Oct 19 22:24	27°♄16'25	3°17'31	morning rise	4726 Oct 09 19:00	5°♄40'34	
morning rise	4725 Oct 26 15:29	22°♄18'33		direct	4726 Oct 12 02:58	5°♄18'45	
direct	4725 Oct 29 01:03	21°♄51'45		asc. node	4726 Oct 17 03:12	7°♄04'01	
asc. node	4725 Oct 30 06:11	21°♄58'47		morning max el	4726 Oct 19 07:19	8°♄53'17	17°59'56
morning max el	4725 Nov 04 17:12	25°♄17'52	17°49'44		4726 Nov 02 00:31	0°♄	
	4725 Nov 08 15:01	0°♄		morning set	4726 Nov 04 01:25	3°♄45'14	
morning set	4725 Nov 20 21:37	20°♄21'00					
	4725 Nov 26 10:00	0°♄		superior conj	4726 Nov 14 03:56	22°♄06'11	0°58'15
superior conj	4725 Dec 02 14:34	10°♄32'04	0°22'41	minimum elong	4726 Nov 14 07:56	22°♄23'44	0°57'44
minimum elong	4725 Dec 02 16:47	10°♄41'21	0°22'23		4726 Nov 18 17:29	0°♄	
desc. node	4725 Dec 05 20:32	15°♄54'44		max. Earth dist.	4726 Nov 21 18:38	5°♄07'08	1.42186 AU
max. Earth dist.	4725 Dec 09 06:13	21°♄26'25	1.43832 AU	desc. node	4726 Nov 22 17:34	6°♄41'58	
	4725 Dec 14 15:37	0°♄		evening rise	4726 Nov 27 15:15	14°♄38'22	
evening rise	4725 Dec 17 19:01	4°♄53'19			4726 Dec 07 14:30	0°♄	
	4726 Jan 03 14:50	0°♄			4726 Dec 30 02:05	0°♄	
evening max el	4726 Jan 16 18:03	16°♄50'31	21°08'26	evening max el	4726 Dec 30 12:10	0°♄25'46	22°24'24
retrograde	4726 Jan 25 08:18	21°♄55'52		retrograde	4727 Jan 09 04:39	6°♄11'24	
asc. node	4726 Jan 26 05:26	21°♄51'40		asc. node	4727 Jan 13 02:27	4°♄51'00	
evening set	4726 Jan 29 11:33	20°♄19'31		evening set	4727 Jan 13 19:04	4°♄19'20	
inferior conj	4726 Feb 03 19:45	14°♄05'57	2°34'20		4727 Jan 17 15:55	30°♄	
minimum elong	4726 Feb 03 17:18	14°♄14'24	2°33'39	inferior conj	4727 Jan 19 03:35	27°♄57'38	1°55'28
min. Earth dist.	4726 Feb 04 04:19	13°♄36'21	0.67822 AU	minimum elong	4727 Jan 19 01:22	28°♄05'20	1°54'43
morning rise	4726 Feb 08 22:54	7°♄53'11		min. Earth dist.	4727 Jan 19 00:28	28°♄08'29	0.68075 AU
direct	4726 Feb 14 05:32	5°♄34'20		morning rise	4727 Jan 24 07:34	21°♄47'46	
morning max el	4726 Feb 24 19:11	11°♄51'40	23°35'05	direct	4727 Jan 28 23:26	19°♄51'17	
desc. node	4726 Mar 03 19:47	19°♄57'05		morning max el	4727 Feb 07 06:53	25°♄19'10	22°06'59
	4726 Mar 11 07:09	0°♄			4727 Feb 11 12:02	0°♄	
	4726 Mar 30 17:13	0°♄		desc. node	4727 Feb 18 16:48	9°♄21'12	
morning set	4726 Apr 01 01:37	2°♄16'36			4727 Mar 04 19:04	0°♄	
max. Earth dist.	4726 Apr 05 00:41	9°♄07'00	1.38903 AU	morning set	4727 Mar 12 09:18	11°♄57'48	
				max. Earth dist.	4727 Mar 17 22:18	21°♄05'05	1.41074 AU
superior conj	4726 Apr 12 12:02	22°♄41'30	-1°39'44		4727 Mar 23 03:22	0°♄	
minimum elong	4726 Apr 12 16:56	23°♄04'30	1°39'11				
	4726 Apr 16 08:20	0°♄		superior conj	4727 Mar 25 16:29	4°♄28'58	-1°59'49
evening rise	4726 Apr 21 17:41	10°♄27'19		minimum elong	4727 Mar 25 20:35	4°♄47'10	1°59'34

evening rise	4727 Apr 05 02:45	23° Υ 34'53			4728 Apr 01 13:47	0° \mathcal{B}	
	4727 Apr 08 13:52	0° \mathcal{B}		evening max el	4728 Apr 03 19:39	2° \mathcal{B} 30'46	18°06'39
asc. node	4727 Apr 11 01:45	4° \mathcal{B} 30'33		retrograde	4728 Apr 10 08:52	5° \mathcal{B} 53'14	
evening max el	4727 Apr 21 07:59	19° \mathcal{B} 26'41	18°16'00	evening set	4728 Apr 13 01:49	5° \mathcal{B} 18'21	
retrograde	4727 Apr 28 10:31	22° \mathcal{B} 59'57		inferior conj	4728 Apr 19 13:03	0° \mathcal{B} 16'11	3°13'54
evening set	4727 Apr 30 20:58	22° \mathcal{B} 35'44		minimum elong	4728 Apr 19 15:27	0° \mathcal{B} 10'14	3°13'32
inferior conj	4727 May 07 23:30	17° \mathcal{B} 53'47	2°31'03		4728 Apr 19 19:32	30° $\mathcal{R}\Upsilon$	
minimum elong	4727 May 08 03:01	17° \mathcal{B} 46'09	2°30'10	min. Earth dist.	4728 Apr 22 15:12	27° Υ 12'54	0.61538 AU
min. Earth dist.	4727 May 11 09:31	14° \mathcal{B} 57'45	0.59334 AU	morning rise	4728 Apr 26 03:13	24° Υ 17'55	
morning rise	4727 May 15 06:14	12° \mathcal{B} 13'53		direct	4728 May 02 21:59	21° Υ 56'08	
desc. node	4727 May 17 16:02	11° \mathcal{B} 06'23		desc. node	4728 May 03 13:03	21° Υ 57'18	
direct	4727 May 21 14:05	10° \mathcal{B} 24'08		morning max el	4728 May 17 02:41	29° Υ 54'57	27°51'36
morning max el	4727 Jun 04 23:17	18° \mathcal{B} 13'54	27°23'56		4728 May 17 04:43	0° \mathcal{B}	
	4727 Jun 14 19:42	0° \mathcal{I}			4728 Jun 07 20:03	0° \mathcal{I}	
	4727 Jul 02 14:26	0° \mathcal{E}		morning set	4728 Jun 19 06:37	21° \mathcal{I} 33'45	
morning set	4727 Jul 06 03:01	7° \mathcal{E} 11'00			4728 Jun 23 07:06	0° \mathcal{E}	
asc. node	4727 Jul 08 01:00	11° \mathcal{E} 14'05		asc. node	4728 Jun 23 22:02	1° \mathcal{E} 20'14	
max. Earth dist.	4727 Jul 12 17:08	21° \mathcal{E} 24'50	1.31957 AU	max. Earth dist.	4728 Jun 25 02:30	3° \mathcal{E} 54'12	1.32206 AU
superior conj	4727 Jul 13 05:43	22° \mathcal{E} 34'16	0°52'03	superior conj	4728 Jun 26 16:04	7° \mathcal{E} 19'00	0°28'26
minimum elong	4727 Jul 13 03:42	22° \mathcal{E} 23'07	0°51'39	minimum elong	4728 Jun 26 14:48	7° \mathcal{E} 12'04	0°28'09
	4727 Jul 16 14:38	0° \mathcal{Q}		evening rise	4728 Jul 03 12:26	22° \mathcal{E} 14'01	
evening rise	4727 Jul 20 01:10	7° \mathcal{Q} 25'54			4728 Jul 07 06:08	0° \mathcal{Q}	
	4727 Jul 31 18:40	0° \mathcal{P}			4728 Jul 26 00:42	0° \mathcal{P}	
desc. node	4727 Aug 13 15:20	18° \mathcal{P} 22'54		evening max el	4728 Jul 29 04:49	3° \mathcal{P} 19'35	24°42'39
evening max el	4727 Aug 17 13:22	22° \mathcal{P} 29'45	26°05'55	desc. node	4728 Jul 30 12:21	4° \mathcal{P} 32'11	
retrograde	4727 Aug 31 12:36	29° \mathcal{P} 37'57		retrograde	4728 Aug 12 02:33	10° \mathcal{P} 20'47	
evening set	4727 Sep 06 22:27	27° \mathcal{P} 58'29		evening set	4728 Aug 17 07:41	9° \mathcal{P} 19'34	
min. Earth dist.	4727 Sep 11 02:07	25° \mathcal{P} 23'21	0.58928 AU	min. Earth dist.	4728 Aug 22 16:09	6° \mathcal{P} 31'15	0.56992 AU
inferior conj	4727 Sep 14 08:00	22° \mathcal{P} 58'20	-4°59'24	inferior conj	4728 Aug 25 11:27	4° \mathcal{P} 42'06	-5°15'06
minimum elong	4727 Sep 14 12:27	22° \mathcal{P} 50'00	4°58'50	minimum elong	4728 Aug 25 10:58	4° \mathcal{P} 42'53	5°15'06
morning rise	4727 Sep 22 04:43	18° \mathcal{P} 30'36		morning rise	4728 Sep 02 16:41	0° \mathcal{P} 35'58	
direct	4727 Sep 24 14:22	18° \mathcal{P} 11'14		direct	4728 Sep 05 07:24	0° \mathcal{P} 16'55	
morning max el	4727 Oct 02 15:34	22° \mathcal{P} 03'48	18°30'06	morning max el	4728 Sep 14 14:36	4° \mathcal{P} 38'44	19°21'42
asc. node	4727 Oct 04 00:13	23° \mathcal{P} 28'07		asc. node	4728 Sep 19 21:16	10° \mathcal{P} 55'20	
	4727 Oct 08 20:58	0° \mathcal{A}			4728 Sep 30 16:47	0° \mathcal{A}	
morning set	4727 Oct 18 17:40	17° \mathcal{A} 44'27		morning set	4728 Oct 01 18:28	2° \mathcal{A} 07'46	
	4727 Oct 25 02:52	0° \mathcal{M}					
				superior conj	4728 Oct 09 20:29	18° \mathcal{A} 14'15	1°37'38
superior conj	4727 Oct 27 15:44	4° \mathcal{M} 45'31	1°23'00	minimum elong	4728 Oct 09 22:32	18° \mathcal{A} 24'13	1°37'31
minimum elong	4727 Oct 27 19:14	5° \mathcal{M} 01'47	1°22'39	max. Earth dist.	4728 Oct 16 05:55	0° \mathcal{M} 20'44	1.38086 AU
max. Earth dist.	4727 Nov 04 01:28	18° \mathcal{M} 03'55	1.40187 AU		4728 Oct 16 01:24	0° \mathcal{M}	
evening rise	4727 Nov 08 08:13	25° \mathcal{M} 20'32		evening rise	4728 Oct 20 00:15	7° \mathcal{M} 05'47	
desc. node	4727 Nov 09 14:36	27° \mathcal{M} 26'23		desc. node	4728 Oct 26 11:38	18° \mathcal{M} 03'59	
	4727 Nov 11 04:11	0° \mathcal{X}			4728 Nov 03 02:14	0° \mathcal{X}	
	4727 Dec 01 08:48	0° \mathcal{Z}		evening max el	4728 Nov 24 15:18	27° \mathcal{X} 46'47	25°01'47
evening max el	4727 Dec 13 02:30	14° \mathcal{Z} 04'08	23°44'22		4728 Nov 27 00:59	0° \mathcal{Z}	
retrograde	4727 Dec 23 21:57	20° \mathcal{Z} 26'54		retrograde	4728 Dec 06 11:09	4° \mathcal{Z} 37'59	
evening set	4727 Dec 29 00:58	18° \mathcal{Z} 19'11		evening set	4728 Dec 12 03:40	2° \mathcal{Z} 15'48	
asc. node	4727 Dec 30 23:28	16° \mathcal{Z} 23'25			4728 Dec 14 09:48	30° $\mathcal{R}\mathcal{X}$	
inferior conj	4728 Jan 03 11:15	11° \mathcal{Z} 53'24	1°09'30	min. Earth dist.	4728 Dec 16 16:04	27° \mathcal{X} 12'07	0.67482 AU
minimum elong	4728 Jan 03 09:42	11° \mathcal{Z} 58'39	1°08'55	asc. node	4728 Dec 16 20:30	26° \mathcal{X} 57'38	
min. Earth dist.	4728 Jan 02 21:10	12° \mathcal{Z} 41'24	0.67956 AU	inferior conj	4728 Dec 17 16:57	25° \mathcal{X} 50'29	0°17'23
morning rise	4728 Jan 08 18:26	5° \mathcal{Z} 48'07		minimum elong	4728 Dec 17 16:31	25° \mathcal{X} 51'54	0°17'12
direct	4728 Jan 12 20:19	4° \mathcal{Z} 14'21		morning rise	4728 Dec 23 05:34	19° \mathcal{X} 52'00	
morning max el	4728 Jan 21 00:47	8° \mathcal{Z} 57'00	20°46'41	direct	4728 Dec 26 18:56	18° \mathcal{X} 39'05	
desc. node	4728 Feb 05 13:50	29° \mathcal{Z} 13'58		morning max el	4729 Jan 03 02:36	22° \mathcal{X} 46'12	19°39'11
	4728 Feb 06 02:25	0° \approx			4729 Jan 09 03:43	0° \mathcal{Z}	
morning set	4728 Feb 19 14:43	20° \approx 27'55		greatest brilliancy	4729 Jan 16 04:13	10° \mathcal{Z} 00'12	-0.7m
	4728 Feb 25 15:36	0° \mathcal{H}		desc. node	4729 Jan 22 10:52	19° \mathcal{Z} 27'31	
max. Earth dist.	4728 Feb 28 02:30	3° \mathcal{H} 57'18	1.43000 AU	morning set	4729 Jan 28 11:08	28° \mathcal{Z} 40'55	
					4729 Jan 29 07:37	0° \approx	
superior conj	4728 Mar 05 21:56	15° \mathcal{H} 12'13	-2°08'29	max. Earth dist.	4729 Feb 09 14:25	17° \approx 39'02	1.44432 AU
minimum elong	4728 Mar 05 22:14	15° \mathcal{H} 13'31	2°08'29				
	4728 Mar 14 11:51	0° Υ		superior conj	4729 Feb 14 01:49	24° \approx 48'02	-2°00'14
evening rise	4728 Mar 17 20:39	5° Υ 57'34		minimum elong	4729 Feb 13 19:57	24° \approx 24'26	1°59'56
asc. node	4728 Mar 27 22:46	23° Υ 22'09			4729 Feb 17 06:52	0° \mathcal{H}	

evening rise	4729 Feb 27 19:01	17°  27'29"			4730 Feb 10 00:19	0° 	
	4729 Mar 07 05:51	0° 		greatest brilliancy	4730 Feb 15 09:20	8°  39'44"	-0.9m
asc. node	4729 Mar 14 19:49	11°  39'13"		asc. node	4730 Mar 01 16:53	29°  10'26"	
evening max el	4729 Mar 18 08:34	15°  50'33"	18°16'17"	evening max el	4730 Mar 01 19:55	29°  18'13"	18°44'07"
retrograde	4729 Mar 24 18:37	19°  16'23"			4730 Mar 02 13:02	0° 	
evening set	4729 Mar 27 17:46	18°  29'33"		retrograde	4730 Mar 08 11:41	3°  00'10"	
inferior conj	4729 Apr 02 17:40	13°  08'09"	3°32'22"	evening set	4730 Mar 11 17:13	2°  00'33"	
minimum elong	4729 Apr 02 18:23	13°  06'10"	3°32'19"		4730 Mar 14 04:36	30°  R 	
min. Earth dist.	4729 Apr 05 05:51	10°  20'33"	0.63590 AU	inferior conj	4730 Mar 17 09:20	26°  12'27"	3°32'20"
morning rise	4729 Apr 08 18:02	6°  59'59"		minimum elong	4730 Mar 17 08:33	26°  12'51"	3°32'17"
direct	4729 Apr 15 14:43	4°  17'11"		min. Earth dist.	4730 Mar 19 05:49	24°  10'52"	0.65307 AU
desc. node	4729 Apr 20 10:05	5°  25'56"		morning rise	4730 Mar 22 23:26	20°  18'36"	
morning max el	4729 Apr 29 10:39	12°  15'43"	27°41'43"	direct	4730 Mar 29 14:28	17°  18'29"	
	4729 May 13 13:30	0°  R		desc. node	4730 Apr 07 07:06	21°  10'00"	
	4729 May 31 07:16	0°  II		morning max el	4730 Apr 11 20:36	25°  10'18"	26°58'41"
morning set	4729 Jun 03 03:21	5°  II32'54"			4730 Apr 16 07:35	0° 	
max. Earth dist.	4729 Jun 08 06:01	16°  II02'36"	1.32901 AU		4730 May 07 00:52	0°  R	
				morning set	4730 May 17 14:10	18°  10'59'32"	
superior conj	4729 Jun 10 23:12	21°  II49'47"	0°01'48"	max. Earth dist.	4730 May 22 00:09	27°  10'41'50"	1.34052 AU
minimum elong	4729 Jun 10 23:07	21°  II49'20"	0°01'46"		4730 May 23 03:22	0°  II	
behind sun begin	4729 Jun 10 17:49	21°  II20'53"					
behind sun end	4729 Jun 11 04:25	22°  II17'49"		superior conj	4730 May 26 01:02	6°  II00'17"	-0°27'00"
asc. node	4729 Jun 10 19:05	21°  II27'42"		minimum elong	4730 May 26 02:28	6°  II07'46"	0°26'42"
	4729 Jun 14 17:57	0°  R		asc. node	4730 May 28 16:10	11°  II32'40"	
evening rise	4729 Jun 18 00:12	6°  R59'45"		evening rise	4730 Jun 02 10:34	21°  II36'55"	
	4729 Jun 30 03:26	0°  R			4730 Jun 06 13:15	0°  R	
evening max el	4729 Jul 10 17:39	13°  R43'10"	23°05'57"	evening max el	4730 Jun 22 11:39	24°  R13'12"	21°31'47"
desc. node	4729 Jul 17 09:22	18°  R40'57"			4730 Jul 02 02:15	0°  R	
retrograde	4729 Jul 24 03:35	20°  R25'04"		desc. node	4730 Jul 04 06:22	0°  R16'26"	
evening set	4729 Jul 27 20:21	19°  R55'11"		retrograde	4730 Jul 04 18:20	0°  R17'01"	
min. Earth dist.	4729 Aug 04 02:41	16°  R38'37"	0.55522 AU	evening set	4730 Jul 07 05:29	0°  R03'10"	
inferior conj	4729 Aug 05 19:17	15°  R39'40"	-4°47'09"		4730 Jul 07 12:02	30°  R 	
minimum elong	4729 Aug 05 12:37	15°  R49'23"	4°46'03"	inferior conj	4730 Jul 16 14:06	26°  R02'55"	-3°27'57"
morning rise	4729 Aug 14 07:09	11°  R47'57"		minimum elong	4730 Jul 16 05:33	26°  R14'52"	3°25'24"
direct	4729 Aug 17 05:49	11°  R27'18"		min. Earth dist.	4730 Jul 16 12:57	26°  R04'31"	0.54827 AU
morning max el	4729 Aug 28 01:53	16°  R29'34"	20°35'08"	morning rise	4730 Jul 25 06:39	22°  R09'42"	
asc. node	4729 Sep 06 18:20	29°  R11'38"		direct	4730 Jul 28 15:54	21°  R04'44'50"	
	4729 Sep 07 05:51	0°  R		morning max el	4730 Aug 10 01:35	27°  R35'34"	22°07'34"
morning set	4729 Sep 16 00:59	16°  R47'16"			4730 Aug 12 10:42	0°  R	
	4729 Sep 22 10:20	0°  R		asc. node	4730 Aug 24 15:24	18°  R05'24"	
					4730 Aug 30 16:24	0°  R	
superior conj	4729 Sep 23 13:30	2°  R18'54"	1°43'31"	morning set	4730 Aug 31 10:59	1°  R36'50"	
minimum elong	4729 Sep 23 13:56	2°  R21'08"	1°43'31"				
max. Earth dist.	4729 Sep 28 13:27	12°  R16'13"	1.36123 AU	superior conj	4730 Sep 07 15:02	16°  R48'44"	1°42'05"
evening rise	4729 Oct 02 12:35	19°  R47'03"		minimum elong	4730 Sep 07 14:08	16°  R43'59"	1°42'03"
	4729 Oct 08 06:01	0°  R		max. Earth dist.	4730 Sep 11 04:21	24°  R12'18"	1.34471 AU
desc. node	4729 Oct 13 08:40	8°  R130'01"			4730 Sep 14 01:27	0°  R	
	4729 Oct 28 03:17	0°  R		evening rise	4730 Sep 15 16:59	3°  R13'33"	
evening max el	4729 Nov 07 03:58	11°  R30'08"	26°09'14"	desc. node	4730 Sep 30 05:42	28°  R38'46"	
retrograde	4729 Nov 19 19:15	18°  R39'03"			4730 Oct 01 02:35	0°  R	
evening set	4729 Nov 26 01:22	16°  R05'08"		evening max el	4730 Oct 20 16:41	25°  R06'38"	26°59'16"
min. Earth dist.	4729 Nov 30 06:43	11°  R36'45"	0.66664 AU		4730 Oct 26 18:56	0°  R	
inferior conj	4729 Dec 01 18:49	9°  R45'10"	-0°39'57"	retrograde	4730 Nov 02 21:53	2°  R23'43"	
minimum elong	4729 Dec 01 19:53	9°  R41'51"	0°39'29"		4730 Nov 09 07:26	30°  R 	
asc. node	4729 Dec 03 17:34	7°  R24'50"		evening set	4730 Nov 09 15:59	29°  R43'21"	
morning rise	4729 Dec 07 14:55	3°  R56'03"		min. Earth dist.	4730 Nov 13 14:45	25°  R50'39"	0.65493 AU
direct	4729 Dec 10 17:34	3°  R00'53"		inferior conj	4730 Nov 15 14:43	23°  R33'36"	-1°41'03"
morning max el	4729 Dec 17 11:44	6°  R43'48"	18°46'56"	minimum elong	4730 Nov 15 17:35	23°  R25'24"	1°39'51"
	4730 Jan 03 00:15	0°  R		asc. node	4730 Nov 20 14:36	18°  R40'44"	
morning set	4730 Jan 07 23:35	7°  R348'32"		morning rise	4730 Nov 21 20:08	17°  R56'48"	
desc. node	4730 Jan 09 07:53	9°  R355'26"		direct	4730 Nov 24 14:10	17°  R15'40"	
	4730 Jan 22 03:04	0°  R		morning max el	4730 Dec 01 02:06	20°  R45'01"	18°11'08"
max. Earth dist.	4730 Jan 23 07:53	1°  R53'05"	1.45203 AU		4730 Dec 08 05:25	0°  R	
				morning set	4730 Dec 19 17:01	18°  R24'24"	
superior conj	4730 Jan 24 09:09	3°  R32'18"	-1°32'16"		4730 Dec 26 20:33	0°  R	
minimum elong	4730 Jan 23 23:47	2°  R55'29"	1°31'20"	desc. node	4730 Dec 27 04:56	0°  R33'44"	
evening rise	4730 Feb 08 18:27	27°  R59'41"					

superior conj	4731 Jan 03 13:06	12°  14'34	-0°49'13	behind sun end	4731 Dec 14 19:05	22°  27'43	
minimum elong	4731 Jan 03 06:59	11°  50'26	0°48'24	desc. node	4731 Dec 14 01:59	21°  18'06	
max. Earth dist.	4731 Jan 06 03:28	16°  20'02	1.45233 AU		4731 Dec 19 11:35	0° 	
	4731 Jan 14 21:20	0° 		max. Earth dist.	4731 Dec 19 21:48	0°  40'34	1.44529 AU
evening rise	4731 Jan 19 19:48	7°  40'59		evening rise	4731 Dec 30 07:08	16°  53'43	
greatest brilliancy	4731 Feb 01 01:44	26°  34'59	-0.7m		4732 Jan 07 22:00	0° 	
	4731 Feb 03 08:34	0° 		evening max el	4732 Jan 27 06:01	26°  22'29	20°28'38
evening max el	4731 Feb 13 03:32	12°  49'30	19°28'54		4732 Jan 31 15:54	0° 	
asc. node	4731 Feb 16 13:54	15°  42'57		asc. node	4732 Feb 03 10:54	1°  02'19	
retrograde	4731 Feb 20 08:40	16°  58'14		retrograde	4732 Feb 04 06:56	1°  06'04	
evening set	4731 Feb 23 21:27	15°  45'08			4732 Feb 07 16:13	30° 	
inferior conj	4731 Mar 01 08:43	9°  50'31	3°18'13	evening set	4732 Feb 08 04:21	29°  38'38	
minimum elong	4731 Mar 01 06:54	9°  56'29	3°17'57	inferior conj	4732 Feb 13 13:06	23°  31'08	2°53'04
min. Earth dist.	4731 Mar 02 14:10	8°  14'05	0.66611 AU	minimum elong	4732 Feb 13 10:45	23°  39'10	2°52'31
morning rise	4731 Mar 06 16:04	3°  36'00		min. Earth dist.	4732 Feb 14 04:57	22°  37'04	0.67494 AU
direct	4731 Mar 12 20:27	0°  51'04		morning rise	4732 Feb 18 16:56	17°  17'02	
desc. node	4731 Mar 25 04:08	8°  09'24		direct	4732 Feb 24 07:53	14°  46'42	
morning max el	4731 Mar 25 06:21	8°  14'59	25°50'16	morning max el	4732 Mar 06 15:03	21°  32'08	24°26'18
	4731 Apr 11 06:48	0° 		desc. node	4732 Mar 11 01:11	26°  24'53	
	4731 Apr 29 12:43	0° 			4732 Mar 13 23:19	0° 	
morning set	4731 Apr 30 11:03	1°  42'06			4732 Apr 03 13:06	0° 	
max. Earth dist.	4731 May 04 06:57	8°  53'19	1.35658 AU	morning set	4732 Apr 11 12:41	13°  25'59	
				max. Earth dist.	4732 Apr 15 04:19	19°  55'53	1.37647 AU
					4732 Apr 20 14:19	0° 	
superior conj	4731 May 09 18:58	19°  43'05	-0°56'36				
minimum elong	4731 May 09 22:04	19°  58'43	0°56'02				
	4731 May 14 19:38	0° 		superior conj	4732 Apr 22 01:46	2°  49'54	-1°25'01
asc. node	4731 May 15 13:13	1°  30'38		minimum elong	4732 Apr 22 06:16	3°  11'38	1°24'23
evening rise	4731 May 17 17:25	5°  58'50		evening rise	4732 Apr 30 18:18	19°  58'28	
	4731 May 31 05:01	0° 		asc. node	4732 May 01 10:14	21°  17'23	
evening max el	4731 Jun 04 16:59	5°  16'40	20°11'41		4732 May 05 22:31	0° 	
retrograde	4731 Jun 15 08:19	10°  28'45		evening max el	4732 May 17 10:41	17°  02'59	19°10'50
evening set	4731 Jun 17 07:00	10°  19'03		retrograde	4732 May 26 09:31	21°  25'06	
desc. node	4731 Jun 21 03:23	9°  08'37		evening set	4732 May 28 09:39	21°  12'52	
inferior conj	4731 Jun 26 09:21	6°  20'17	-1°33'40	inferior conj	4732 Jun 05 18:42	17°  02'12	0°21'46
minimum elong	4731 Jun 26 04:57	6°  26'47	1°32'04	minimum elong	4732 Jun 05 19:36	17°  00'41	0°21'27
min. Earth dist.	4731 Jun 28 01:04	5°  21'27	0.55088 AU	desc. node	4732 Jun 07 00:23	16°  11'51	
morning rise	4731 Jul 05 01:30	2°  04'35		min. Earth dist.	4732 Jun 08 16:02	15°  05'45	0.56268 AU
direct	4731 Jul 09 02:55	1°  28'50		morning rise	4732 Jun 14 02:24	12°  11'37	
morning max el	4731 Jul 22 17:24	8°  07'52	23°50'38	direct	4732 Jun 19 02:11	11°  13'45	
	4731 Aug 07 13:38	0° 		morning max el	4732 Jul 03 07:20	18°  30'16	25°30'24
asc. node	4731 Aug 11 12:27	7°  02'33			4732 Jul 12 21:53	0° 	
morning set	4731 Aug 15 22:33	16°  02'55		asc. node	4732 Jul 28 09:29	27°  07'50	
	4731 Aug 22 04:47	0° 			4732 Jul 29 18:35	0° 	
				morning set	4732 Jul 30 10:04	1°  02'14	
superior conj	4731 Aug 22 22:08	1°  33'52	1°34'28				
minimum elong	4731 Aug 22 20:18	1°  24'01	1°34'17	superior conj	4732 Aug 06 08:31	16°  02'70	1°21'32
max. Earth dist.	4731 Aug 25 03:52	6°  22'26	1.33223 AU	minimum elong	4732 Aug 06 06:15	16°  01'43	1°21'13
evening rise	4731 Aug 30 09:17	17°  13'23		max. Earth dist.	4732 Aug 07 10:32	18°  01'49	1.32407 AU
	4731 Sep 06 01:16	0° 			4732 Aug 12 15:27	0° 	
desc. node	4731 Sep 17 02:43	18°  01'42		evening rise	4732 Aug 13 10:09	1°  37'14	
	4731 Sep 25 13:42	0° 			4732 Aug 28 23:17	0° 	
evening max el	4731 Oct 03 04:18	8°  24'25	27°24'59	desc. node	4732 Sep 02 23:43	7°  02'28	10
retrograde	4731 Oct 16 18:33	15°  42'29		evening max el	4732 Sep 14 12:56	21°  01'11	27°20'24
evening set	4731 Oct 23 20:50	13°  04'10		retrograde	4732 Sep 28 08:28	28°  02'50	
min. Earth dist.	4731 Oct 27 14:06	9°  45'08	0.63973 AU	evening set	4732 Oct 05 12:26	26°  01'06	
inferior conj	4731 Oct 30 02:10	7°  09'25	-2°43'50	min. Earth dist.	4732 Oct 09 03:19	23°  09'21	0.62147 AU
minimum elong	4731 Oct 30 06:52	6°  57'13	2°42'06	inferior conj	4732 Oct 12 02:14	20°  02'53	-3°44'38
morning rise	4731 Nov 05 18:18	1°  47'58		minimum elong	4732 Oct 12 08:14	20°  01'41	3°42'51
asc. node	4731 Nov 07 11:38	1°  20'03		morning rise	4732 Oct 19 05:50	15°  02'24	
direct	4731 Nov 08 06:04	1°  17'04		direct	4732 Oct 21 14:11	14°  02'58	
morning max el	4731 Nov 14 18:48	4°  42'08	17°52'26	asc. node	4732 Oct 24 08:40	15°  03'17	
	4731 Dec 01 09:14	0° 		morning max el	4732 Oct 28 10:45	18°  02'27	17°51'41
morning set	4731 Dec 01 14:02	0° 			4732 Nov 05 18:56	0° 	
				morning set	4732 Nov 13 08:23	13° 	
superior conj	4731 Dec 14 09:27	21° 48'32	-0°02'11		4732 Nov 22 18:51	0°	
minimum elong	4731 Dec 14 09:13	21° 47'34	0°02'09				
behind sun begin	4731 Dec 13 23:20	21° 07'20		superior conj	4732 Nov 24 07:45	2° 38'25	0°39'04

minimum elong	4732 Nov 24 11:06	2°  52'39	0°38'36		4733 Oct 29 08:37	0° 	
desc. node	4732 Nov 29 23:00	12°  05'04					
max. Earth dist.	4732 Dec 01 12:30	14°  38'29	1.43186 AU	superior conj	4733 Nov 06 07:18	14°  41'50	1°10'04
evening rise	4732 Dec 08 19:40	26°  16'04		minimum elong	4733 Nov 06 11:17	14°  59'46	1°09'36
	4732 Dec 11 05:25	0° 		max. Earth dist.	4733 Nov 13 22:41	28°  02'10	1.41366 AU
	4732 Dec 31 20:18	0° 			4733 Nov 15 02:44	0° 	
evening max el	4733 Jan 09 03:04	9°  56'48	21°40'00	desc. node	4733 Nov 16 20:01	2°  51'29	
retrograde	4733 Jan 18 04:21	15°  19'27		evening rise	4733 Nov 19 00:02	6°  24'01	
asc. node	4733 Jan 20 07:55	14°  54'41			4733 Dec 04 10:16	0° 	
evening set	4733 Jan 22 12:04	13°  36'43		evening max el	4733 Dec 22 19:33	23°  34'07	22°58'23
inferior conj	4733 Jan 27 20:14	7°  19'23	2°18'49	retrograde	4734 Jan 01 23:27	29°  35'38	
minimum elong	4733 Jan 27 17:50	7°  27'44	2°18'04	evening set	4734 Jan 06 19:06	27°  36'58	
min. Earth dist.	4733 Jan 27 23:48	7°  07'01	0.67973 AU	asc. node	4734 Jan 07 04:56	27°  15'35	
morning rise	4733 Feb 01 23:24	1°  07'28		inferior conj	4734 Jan 12 04:14	21°  13'17	1°36'50
	4733 Feb 03 11:44	30°  R 		minimum elong	4734 Jan 12 02:15	21°  30'09	1°36'06
direct	4733 Feb 06 23:47	28°  35'38		min. Earth dist.	4734 Jan 11 20:26	21°  40'12	0.68070 AU
	4733 Feb 10 19:26	0° 		morning rise	4734 Jan 17 09:17	15°  05'14	
morning max el	4733 Feb 17 00:24	4°  54'10	22°57'02	direct	4734 Jan 21 19:12	13°  18'19	
desc. node	4733 Feb 25 22:12	15°  27'53		morning max el	4734 Jan 30 14:18	18°  25'29	21°31'34
	4733 Mar 08 06:43	0° 			4734 Feb 09 03:09	0° 	
morning set	4733 Mar 23 12:52	23°  H  54'09		desc. node	4734 Feb 12 19:14	5°  05'30	
	4733 Mar 27 03:45	0° 			4734 Mar 01 10:22	0° 	
max. Earth dist.	4733 Mar 27 23:25	1°  Y  24'21	1.39838 AU	morning set	4734 Mar 03 08:24	3°  H  01'38	
				max. Earth dist.	4734 Mar 09 23:57	13°  H  47'08	1.41947 AU
superior conj	4733 Apr 04 17:14	15°  Y  09'41	-1°49'19				
minimum elong	4733 Apr 04 22:05	15°  Y  31'55	1°48'52	superior conj	4734 Mar 17 12:32	26°  H  31'33	-2°05'13
	4733 Apr 12 14:47	0° 		minimum elong	4734 Mar 17 15:26	26°  H  44'09	2°05'07
evening rise	4733 Apr 14 10:08	3°  R  27'07			4734 Mar 19 12:16	0° 	
asc. node	4733 Apr 18 07:14	10°  R  47'22		evening rise	4734 Mar 28 13:18	16°  Y  16'52	
evening max el	4733 Apr 30 14:05	29°  R  26'22	18°30'15	asc. node	4734 Apr 05 04:15	29°  Y  55'05	
	4733 May 01 04:23	0° 			4734 Apr 05 05:24	0° 	
retrograde	4733 May 08 05:09	3°  R  12'22		evening max el	4734 Apr 13 23:43	12°  R  18'16	18°09'36
evening set	4733 May 10 11:50	2°  R  53'16		retrograde	4734 Apr 20 19:02	15°  R  44'52	
	4733 May 15 22:18	30°  R 		evening set	4734 Apr 23 08:28	15°  R  16'10	
inferior conj	4733 May 18 00:53	28°  R  23'15	1°52'57	inferior conj	4734 Apr 30 03:58	10°  R  25'13	2°52'36
minimum elong	4733 May 18 04:18	28°  R  16'30	1°51'55	minimum elong	4734 Apr 30 07:09	10°  R  17'53	2°51'55
min. Earth dist.	4733 May 21 10:46	25°  R  42'49	0.58117 AU	min. Earth dist.	4734 May 03 11:36	7°  R  23'22	0.60283 AU
desc. node	4733 May 24 21:25	23°  R  25'49		morning rise	4734 May 07 03:29	4°  R  36'30	
morning rise	4733 May 25 17:35	22°  R  59'11		desc. node	4734 May 11 18:26	2°  R  43'15	
direct	4733 May 31 15:35	21°  R  29'24		direct	4734 May 13 17:08	2°  R  32'29	
morning max el	4733 Jun 15 00:45	29°  R  09'25	26°51'12	morning max el	4734 May 28 00:40	10°  R  26'05	27°40'20
	4733 Jun 15 21:04	0° 			4734 Jun 12 05:00	0° 	
	4733 Jun 15 21:04	0° 			4734 Jun 28 18:46	0° 	
morning set	4733 Jul 14 19:57	16°  R  06'49		morning set	4734 Jun 29 02:26	0°  R  39'44	
asc. node	4733 Jul 15 06:31	17°  R  02'39		asc. node	4734 Jul 02 03:33	7°  R  05'56	
	4733 Jul 21 05:29	0° 		max. Earth dist.	4734 Jul 05 08:36	14°  R  04'55	1.32018 AU
superior conj	4733 Jul 21 20:16	1°  R  21'35	1°03'59	superior conj	4734 Jul 06 07:38	16°  R  11'34	0°42'26
minimum elong	4733 Jul 21 18:01	1°  R  09'10	1°03'36	minimum elong	4734 Jul 06 05:52	16°  R  01'55	0°42'05
max. Earth dist.	4733 Jul 21 21:21	1°  R  27'39	1.32007 AU		4734 Jul 12 15:09	0° 	
evening rise	4733 Jul 28 16:49	16°  R  16'25		evening rise	4734 Jul 13 03:02	1°  R  03'25	
	4733 Aug 04 13:23	0° 			4734 Jul 28 19:40	0° 	
desc. node	4733 Aug 20 20:43	25°  R  43'35		desc. node	4734 Aug 07 17:44	12°  R  46'51	
	4733 Aug 24 11:31	0° 		evening max el	4734 Aug 09 11:26	14°  R  31'12	25°33'04
evening max el	4733 Aug 27 16:01	3°  R  16'01	26°42'25	retrograde	4734 Aug 23 10:18	21°  R  36'27	
retrograde	4733 Sep 10 14:18	10°  R  25'37		evening set	4734 Aug 29 09:44	20°  R  13'08	
evening set	4733 Sep 17 10:21	8°  R  26'48		min. Earth dist.	4734 Sep 02 23:20	17°  R  34'50	0.58072 AU
min. Earth dist.	4733 Sep 21 05:56	5°  R  50'26	0.60118 AU	inferior conj	4734 Sep 06 02:34	15°  R  23'08	-5°10'24
inferior conj	4733 Sep 24 11:32	3°  R  13'43	-4°37'01	minimum elong	4734 Sep 06 05:19	15°  R  18'18	5°10'13
minimum elong	4733 Sep 24 17:20	3°  R  01'57	4°35'53	morning rise	4734 Sep 14 03:09	11°  R  04'58	
	4733 Sep 28 21:08	30°  R 		direct	4734 Sep 16 14:48	10°  R  45'49	
morning rise	4733 Oct 02 02:19	28°  R  32'17		morning max el	4734 Sep 25 03:24	14°  R  49'04	18°49'26
direct	4733 Oct 04 10:35	28°  R  11'45		asc. node	4734 Sep 28 02:47	18°  R  06'10	
	4733 Oct 09 16:19	0° 			4734 Oct 05 17:36	0° 	
asc. node	4733 Oct 11 05:43	1°  R  13'37		morning set	4734 Oct 11 14:24	11°  R  09'17	
morning max el	4733 Oct 11 22:44	1°  R  53'02	18°10'12				
morning set	4733 Oct 27 18:05	26°  R  58'34		superior conj	4734 Oct 20 02:59	27°  R  43'58	1°30'22

minimum elong	4734 Oct 20 05:55	27° Ω 57'55	1°30'08	superior conj	4735 Oct 03 13:33	11° Ω 30'06	1°41'06
	4734 Oct 21 07:47	0° \mathbb{M}		minimum elong	4735 Oct 03 14:54	11° Ω 36'48	1°41'03
max. Earth dist.	4734 Oct 27 04:33	10° \mathbb{M} 42'50	1.39290 AU	max. Earth dist.	4735 Oct 09 09:31	22° Ω 47'23	1.37219 AU
evening rise	4734 Oct 31 02:55	17° \mathbb{M} 32'56		evening rise	4735 Oct 13 04:05	29° Ω 43'13	
desc. node	4734 Nov 03 17:03	23° \mathbb{M} 33'15			4735 Oct 13 07:50	0° \mathbb{M}	
	4734 Nov 07 17:02	0° \mathbb{A}		desc. node	4735 Oct 21 14:04	14° \mathbb{M} 06'26	
	4734 Nov 28 21:27	0° \mathbb{B}			4735 Oct 31 23:30	0° \mathbb{A}	
evening max el	4734 Dec 05 08:59	7° \mathbb{B} 14'10	24°18'00	evening max el	4735 Nov 17 21:23	20° \mathbb{A} 56'46	25°32'01
retrograde	4734 Dec 16 15:01	13° \mathbb{B} 49'50		retrograde	4735 Nov 30 02:13	27° \mathbb{A} 57'24	
evening set	4734 Dec 21 23:51	11° \mathbb{B} 35'31		evening set	4735 Dec 06 00:40	25° \mathbb{A} 29'26	
asc. node	4734 Dec 25 01:59	8° \mathbb{B} 17'52		min. Earth dist.	4735 Dec 10 09:52	20° \mathbb{A} 40'49	0.67177 AU
min. Earth dist.	4734 Dec 26 16:33	6° \mathbb{B} 12'25	0.67801 AU	inferior conj	4735 Dec 11 15:34	19° \mathbb{A} 05'37	-0°06'24
inferior conj	4734 Dec 27 11:16	5° \mathbb{B} 09'30	0°48'07	minimum elong	4735 Dec 11 15:44	19° \mathbb{A} 05'05	0°06'19
minimum elong	4734 Dec 27 10:09	5° \mathbb{B} 13'17	0°47'39	transit middle	4735 Dec 11 15:44	19° \mathbb{A} 05'05	0°06'19
	4734 Dec 31 19:04	30° \mathbb{R} \mathbb{A}		transit begin	4735 Dec 11 13:09	19° \mathbb{A} 13'23	
morning rise	4735 Jan 01 20:31	29° \mathbb{A} 07'07		transit end	4735 Dec 11 18:19	18° \mathbb{A} 56'49	
direct	4735 Jan 05 16:55	27° \mathbb{A} 42'35		asc. node	4735 Dec 11 23:03	18° \mathbb{A} 41'37	
	4735 Jan 11 02:16	0° \mathbb{B}		morning rise	4735 Dec 17 07:09	13° \mathbb{A} 10'58	
morning max el	4735 Jan 13 11:36	2° \mathbb{B} 08'22	20°16'18	direct	4735 Dec 20 15:37	12° \mathbb{A} 06'15	
desc. node	4735 Jan 30 16:17	25° \mathbb{B} 07'38		morning max el	4735 Dec 27 16:47	16° \mathbb{A} 01'50	19°15'00
	4735 Feb 02 22:14	0° \approx			4736 Jan 07 09:44	0° \mathbb{B}	
morning set	4735 Feb 10 07:02	11° \approx 15'34		greatest brilliancy	4736 Jan 10 05:47	4° \mathbb{B} 14'36	-0.7m
max. Earth dist.	4735 Feb 20 08:03	27° \approx 03'36	1.43683 AU	desc. node	4736 Jan 17 13:19	15° \mathbb{B} 27'34	
	4735 Feb 22 03:51	0° \mathbb{H}		morning set	4736 Jan 20 07:29	19° \mathbb{B} 43'45	
					4736 Jan 26 21:58	0° \approx	
superior conj	4735 Feb 26 07:06	6° \mathbb{H} 45'17	-2°07'20	max. Earth dist.	4736 Feb 02 22:20	10° \approx 59'46	1.44842 AU
minimum elong	4735 Feb 26 04:54	6° \mathbb{H} 36'11	2°07'17				
evening rise	4735 Mar 10 23:27	28° \mathbb{H} 18'11		superior conj	4736 Feb 06 00:50	15° \approx 54'29	-1°50'43
	4735 Mar 11 22:52	0° \mathbb{Y}		minimum elong	4736 Feb 05 16:45	15° \approx 22'25	1°50'07
asc. node	4735 Mar 23 01:17	18° \mathbb{Y} 33'07			4736 Feb 14 19:07	0° \mathbb{H}	
evening max el	4735 Mar 28 12:14	25° \mathbb{Y} 29'38	18°08'24	evening rise	4736 Feb 20 12:18	9° \mathbb{H} 23'20	
retrograde	4735 Apr 03 23:01	28° \mathbb{Y} 52'12			4736 Mar 04 04:59	0° \mathbb{Y}	
evening set	4735 Apr 06 18:34	28° \mathbb{Y} 12'22		asc. node	4736 Mar 08 22:20	6° \mathbb{Y} 32'01	
inferior conj	4735 Apr 13 00:29	23° \mathbb{Y} 01'33	3°24'20	evening max el	4736 Mar 11 00:42	8° \mathbb{Y} 52'57	18°25'59
minimum elong	4735 Apr 13 02:10	22° \mathbb{Y} 57'07	3°24'09	retrograde	4736 Mar 17 12:23	12° \mathbb{Y} 24'36	
min. Earth dist.	4735 Apr 15 20:59	20° \mathbb{Y} 02'40	0.62438 AU	evening set	4736 Mar 20 14:03	11° \mathbb{Y} 32'35	
morning rise	4735 Apr 19 08:21	16° \mathbb{Y} 58'02		inferior conj	4736 Mar 26 10:15	6° \mathbb{Y} 03'31	3°34'18
direct	4735 Apr 26 04:46	14° \mathbb{Y} 26'02		minimum elong	4736 Mar 26 10:17	6° \mathbb{Y} 03'26	3°34'18
desc. node	4735 Apr 28 15:28	14° \mathbb{Y} 43'46		min. Earth dist.	4736 Mar 28 15:52	3° \mathbb{Y} 27'33	0.64358 AU
morning max el	4735 May 10 06:34	22° \mathbb{Y} 25'53	27°51'57	morning rise	4736 Apr 01 05:46	29° \mathbb{H} 52'35	
	4735 May 16 22:36	0° \mathbb{B}			4736 Apr 01 02:13	30° \mathbb{R} \mathbb{H}	
	4735 Jun 05 09:14	0° \mathbb{II}		direct	4736 Apr 08 00:42	27° \mathbb{H} 04'50	
morning set	4735 Jun 13 03:31	14° \mathbb{II} 54'09		desc. node	4736 Apr 14 12:31	29° \mathbb{H} 10'04	
max. Earth dist.	4735 Jun 18 16:13	26° \mathbb{II} 28'20	1.32447 AU		4736 Apr 15 19:29	0° \mathbb{Y}	
asc. node	4735 Jun 19 00:36	27° \mathbb{II} 13'24		morning max el	4736 Apr 21 15:51	5° \mathbb{Y} 01'19	27°27'09
	4735 Jun 20 07:24	0° \mathbb{E}			4736 May 10 14:19	0° \mathbb{B}	
				morning set	4736 May 26 20:29	28° \mathbb{B} 41'06	
superior conj	4735 Jun 20 16:53	0° \mathbb{E} 51'31	0°17'28		4736 May 27 12:29	0° \mathbb{II}	
minimum elong	4735 Jun 20 16:04	0° \mathbb{E} 47'04	0°17'17	max. Earth dist.	4736 May 31 16:05	8° \mathbb{II} 24'55	1.33327 AU
evening rise	4735 Jun 27 14:48	15° \mathbb{E} 51'49					
	4735 Jul 04 14:56	0° Ω		superior conj	4736 Jun 03 22:03	15° \mathbb{II} 14'35	-0°10'13
evening max el	4735 Jul 22 00:47	25° Ω 06'10	24°02'07	minimum elong	4736 Jun 03 22:34	15° \mathbb{II} 17'21	0°10'07
desc. node	4735 Jul 25 14:45	28° Ω 09'45		behind sun begin	4736 Jun 03 18:19	14° \mathbb{II} 54'45	
	4735 Jul 28 11:11	0° \mathbb{M}		behind sun end	4736 Jun 04 02:49	15° \mathbb{II} 39'59	
retrograde	4735 Aug 04 19:04	2° \mathbb{M} 01'51		asc. node	4736 Jun 04 21:38	17° \mathbb{II} 20'16	
evening set	4735 Aug 09 09:10	1° \mathbb{M} 15'16			4736 Jun 10 19:39	0° \mathbb{E}	
	4735 Aug 12 09:03	30° \mathbb{R} Ω		evening rise	4736 Jun 11 02:12	0° \mathbb{E} 34'33	
min. Earth dist.	4735 Aug 15 11:14	28° Ω 16'38	0.56290 AU		4736 Jun 27 19:07	0° Ω	
inferior conj	4735 Aug 17 21:24	26° Ω 47'11	-5°09'27	evening max el	4736 Jul 02 14:45	5° Ω 28'23	22°24'49
minimum elong	4735 Aug 17 18:10	26° Ω 52'12	5°09'12	desc. node	4736 Jul 11 11:47	11° Ω 17'05	
morning rise	4735 Aug 26 05:44	22° Ω 49'02		retrograde	4736 Jul 15 15:34	11° Ω 57'00	
direct	4735 Aug 28 23:32	22° Ω 29'36		evening set	4736 Jul 18 17:41	11° Ω 35'59	
morning max el	4735 Sep 07 21:46	27° Ω 06'50	19°50'24	min. Earth dist.	4736 Jul 26 21:39	8° Ω 03'09	0.55114 AU
	4735 Sep 10 15:15	0° \mathbb{M}		inferior conj	4736 Jul 27 22:29	7° Ω 27'57	-4°19'33
asc. node	4735 Sep 14 23:51	5° \mathbb{M} 56'07		minimum elong	4736 Jul 27 14:12	7° Ω 39'43	4°17'41
morning set	4735 Sep 25 17:58	25° \mathbb{M} 40'38		morning rise	4736 Aug 05 12:40	3° Ω 37'49	
	4735 Sep 27 21:02	0° Ω		direct	4736 Aug 08 15:04	3° Ω 16'01	

morning max el	4736 Aug 20 04:04	8°♄38'49	21°12'24	morning max el	4737 Aug 01 23:37	19°♄27'43	22°50'38
asc. node	4736 Aug 31 20:54	24°♄29'31			4737 Aug 10 17:14	0°♄	
	4736 Sep 03 21:14	0°♄		asc. node	4737 Aug 18 17:56	13°♄35'44	
morning set	4736 Sep 09 02:11	10°♄24'49		morning set	4737 Aug 24 13:02	25°♄16'07	
					4737 Aug 26 18:30	0°♄	
superior conj	4736 Sep 16 10:36	25°♄46'43	1°43'44	superior conj	4737 Aug 31 14:46	10°♄23'40	1°39'33
minimum elong	4736 Sep 16 10:25	25°♄45'49	1°43'43	minimum elong	4737 Aug 31 13:25	10°♄16'29	1°39'27
	4736 Sep 18 11:57	0°♄		max. Earth dist.	4737 Sep 03 13:56	16°♄39'26	1.33895 AU
max. Earth dist.	4736 Sep 20 19:22	4°♄38'42	1.35374 AU	evening rise	4737 Sep 08 09:43	26°♄27'14	
evening rise	4736 Sep 24 23:48	12°♄45'13			4737 Sep 10 05:27	0°♄	
	4736 Oct 04 17:40	0°♄		desc. node	4737 Sep 24 08:07	24°♄24'27	
desc. node	4736 Oct 07 11:06	4°♄25'46			4737 Sep 28 01:59	0°♄	
	4736 Oct 26 00:17	0°♄		evening max el	4737 Oct 12 22:42	18°♄08'44	27°13'40
evening max el	4736 Oct 30 10:03	4°♄38'05	26°33'05	retrograde	4737 Oct 26 08:24	25°♄26'34	
retrograde	4736 Nov 12 08:18	11°♄52'17		evening set	4737 Nov 02 06:27	22°♄46'17	
evening set	4736 Nov 18 19:39	9°♄14'50		min. Earth dist.	4737 Nov 06 02:49	19°♄08'01	0.64885 AU
min. Earth dist.	4736 Nov 22 22:07	5°♄01'29	0.66204 AU	inferior conj	4737 Nov 08 07:49	16°♄42'17	-2°07'40
inferior conj	4736 Nov 24 15:11	2°♄58'18	-1°05'32	minimum elong	4737 Nov 08 11:29	16°♄32'12	2°06'12
minimum elong	4736 Nov 24 16:59	2°♄52'52	1°04'45	morning rise	4737 Nov 14 17:37	11°♄11'17	
	4736 Nov 27 05:38	30°♄		asc. node	4737 Nov 14 17:09	11°♄11'49	
asc. node	4736 Nov 27 20:07	29°♄23'25		direct	4737 Nov 17 08:41	10°♄34'54	
morning rise	4736 Nov 30 15:02	27°♄13'56		morning max el	4737 Nov 23 20:05	14°♄01'29	18°00'58
direct	4736 Dec 03 13:38	26°♄25'20			4737 Dec 05 03:14	0°♄	
morning max el	4736 Dec 10 04:27	0°♄01'42	18°29'35	morning set	4737 Dec 11 13:30	10°♄39'50	
	4736 Dec 10 03:46	0°♄		desc. node	4737 Dec 21 07:23	26°♄41'28	
morning set	4736 Dec 30 07:40	29°♄27'32			4737 Dec 23 08:38	0°♄	
	4736 Dec 30 15:48	0°♄		superior conj	4737 Dec 25 13:01	3°♄29'39	-0°29'03
desc. node	4737 Jan 03 10:21	6°♄00'21		minimum elong	4737 Dec 25 09:27	3°♄15'26	0°28'32
superior conj	4737 Jan 15 04:11	24°♄31'13	-1°15'17	max. Earth dist.	4737 Dec 29 12:02	9°♄46'18	1.45023 AU
minimum elong	4737 Jan 14 19:27	23°♄56'59	1°14'16	evening rise	4738 Jan 10 19:39	28°♄57'01	
max. Earth dist.	4737 Jan 15 16:33	25°♄19'41	1.45302 AU		4738 Jan 11 12:00	0°♄	
	4737 Jan 18 16:04	0°♄		greatest brilliancy	4738 Jan 24 19:11	20°♄13'24	-0.6m
evening rise	4737 Jan 31 01:49	19°♄31'57			4738 Jan 31 17:00	0°♄	
	4737 Feb 06 16:26	0°♄		evening max el	4738 Feb 05 16:20	5°♄55'15	19°52'43
greatest brilliancy	4737 Feb 09 13:01	4°♄29'32	-0.8m	asc. node	4738 Feb 10 16:25	9°♄43'28	
evening max el	4737 Feb 22 10:43	22°♄22'56	19°01'17	retrograde	4738 Feb 13 05:01	10°♄17'31	
asc. node	4737 Feb 23 19:23	23°♄40'17		evening set	4738 Feb 16 21:22	8°♄58'20	
retrograde	4737 Mar 01 07:23	26°♄15'03		inferior conj	4738 Feb 22 07:19	2°♄58'06	3°08'44
evening set	4737 Mar 04 15:48	25°♄09'57		minimum elong	4738 Feb 22 05:13	3°♄05'09	3°08'21
inferior conj	4737 Mar 10 05:34	19°♄24'16	3°27'50	min. Earth dist.	4738 Feb 23 06:49	1°♄39'40	0.67043 AU
minimum elong	4737 Mar 10 04:17	19°♄28'20	3°27'44		4738 Feb 24 13:31	30°♄	
min. Earth dist.	4737 Mar 11 19:38	17°♄24'06	0.65911 AU	morning rise	4738 Feb 27 12:50	26°♄43'49	
morning rise	4737 Mar 15 16:22	13°♄10'26		direct	4738 Mar 05 11:51	24°♄04'05	
direct	4737 Mar 22 03:30	10°♄20'47			4738 Mar 16 05:13	0°♄	
desc. node	4737 Apr 01 09:32	15°♄28'27		morning max el	4738 Mar 17 10:44	1°♄12'30	25°15'50
morning max el	4737 Apr 04 01:46	18°♄00'37	26°32'07	desc. node	4738 Mar 19 06:34	3°♄07'41	
	4737 Apr 14 03:33	0°♄			4738 Apr 08 04:01	0°♄	
	4737 May 03 13:22	0°♄		morning set	4738 Apr 22 15:14	24°♄09'26	
morning set	4737 May 10 01:55	11°♄50'41			4738 Apr 25 19:49	0°♄	
max. Earth dist.	4737 May 14 05:05	19°♄49'40	1.34678 AU	max. Earth dist.	4738 Apr 26 07:12	0°♄53'06	1.36468 AU
superior conj	4737 May 18 20:52	29°♄14'28	-0°39'31	superior conj	4738 May 02 10:28	12°♄42'53	-1°08'56
minimum elong	4737 May 18 23:00	29°♄25'29	0°39'07	minimum elong	4738 May 02 14:14	13°♄01'32	1°08'19
	4737 May 19 05:41	0°♄		asc. node	4738 May 09 15:42	27°♄16'28	
asc. node	4737 May 22 18:40	7°♄22'47		evening rise	4738 May 10 15:53	29°♄18'55	
evening rise	4737 May 26 11:18	15°♄05'54			4738 May 11 00:02	0°♄	
	4737 Jun 03 01:48	0°♄		evening max el	4738 May 28 00:00	27°♄32'24	19°43'20
evening max el	4737 Jun 14 13:17	16°♄10'58	20°55'37		4738 May 30 22:48	0°♄	
retrograde	4737 Jun 26 04:04	21°♄52'56		retrograde	4738 Jun 06 21:12	2°♄21'50	
evening set	4737 Jun 28 07:42	21°♄41'58		evening set	4738 Jun 08 19:37	2°♄11'34	
desc. node	4737 Jun 28 08:47	21°♄41'31			4738 Jun 14 12:45	30°♄	
inferior conj	4737 Jul 07 15:37	17°♄44'43	-2°41'55	desc. node	4738 Jun 15 05:46	29°♄36'03	
minimum elong	4737 Jul 07 08:18	17°♄55'04	2°39'28	inferior conj	4738 Jun 17 15:24	28°♄08'57	-0°42'57
min. Earth dist.	4737 Jul 08 08:44	17°♄20'29	0.54825 AU	minimum elong	4738 Jun 17 13:27	28°♄12'00	0°42'12
morning rise	4737 Jul 16 08:48	13°♄43'59		min. Earth dist.	4738 Jun 19 21:36	26°♄44'57	0.55492 AU
direct	4737 Jul 20 00:19	13°♄15'22					

morning rise	4738 Jun 26 05:02	23° Π 39'37		morning rise	4739 Jun 06 11:04	4° Π 00'40	
direct	4738 Jun 30 15:42	22° Π 55'54		direct	4739 Jun 11 20:28	2° Π 50'28	
morning max el	4738 Jul 14 13:38	29° Π 51'43	24°34'25	morning max el	4739 Jun 26 04:38	10° Π 18'20	26°08'12
	4738 Jul 14 17:07	0° \mathfrak{E}			4739 Jul 11 05:24	0° \mathfrak{E}	
	4738 Aug 04 01:18	0° Ω		asc. node	4739 Jul 23 11:59	22° \mathfrak{E} 54'25	
asc. node	4738 Aug 05 14:57	3° Ω 06'35		morning set	4739 Jul 24 11:50	24° \mathfrak{E} 59'46	
morning set	4738 Aug 09 00:48	10° Ω 09'47			4739 Jul 26 19:52	0° Ω	
superior conj	4738 Aug 15 23:31	25° Ω 13'17	1°29'35	superior conj	4739 Jul 31 10:41	10° Ω 07'52	1°14'37
minimum elong	4738 Aug 15 21:26	25° Ω 02'01	1°29'21	minimum elong	4739 Jul 31 08:22	9° Ω 55'06	1°14'16
max. Earth dist.	4738 Aug 17 17:07	28° Ω 59'04	1.32829 AU	max. Earth dist.	4739 Aug 01 02:06	11° Ω 32'50	1.32182 AU
	4738 Aug 18 04:25	0° \mathfrak{M}		evening rise	4739 Aug 07 09:40	25° Ω 10'10	
evening rise	4738 Aug 23 06:04	10° \mathfrak{M} 38'55			4739 Aug 09 18:04	0° \mathfrak{M}	
	4738 Sep 02 12:17	0° \mathfrak{L}			4739 Aug 27 03:35	0° \mathfrak{L}	
desc. node	4738 Sep 11 05:07	13° \mathfrak{L} 53'51		desc. node	4739 Aug 29 02:07	2° \mathfrak{L} 41'05	
	4738 Sep 24 02:22	0° \mathfrak{M}		evening max el	4739 Sep 07 15:57	13° \mathfrak{L} 45'57	27°08'16
evening max el	4738 Sep 25 09:34	1° \mathfrak{M} 16'11	27°27'00	retrograde	4739 Sep 21 12:36	20° \mathfrak{L} 58'28	
retrograde	4738 Oct 09 02:04	8° \mathfrak{M} 32'05		evening set	4739 Sep 28 14:50	18° \mathfrak{L} 42'53	
evening set	4738 Oct 16 06:09	5° \mathfrak{M} 58'11		min. Earth dist.	4739 Oct 02 06:22	15° \mathfrak{L} 59'53	0.61306 AU
min. Earth dist.	4738 Oct 19 21:57	2° \mathfrak{M} 51'52	0.63235 AU	inferior conj	4739 Oct 05 09:03	13° \mathfrak{L} 16'51	-4°08'21
inferior conj	4738 Oct 22 14:51	0° \mathfrak{M} 11'29	-3°10'07	minimum elong	4739 Oct 05 15:15	13° \mathfrak{L} 03'18	4°06'45
minimum elong	4738 Oct 22 20:13	29° \mathfrak{L} 58'12	3°08'17	morning rise	4739 Oct 12 17:34	8° \mathfrak{L} 23'02	
	4738 Oct 22 19:29	30° \mathfrak{R} \mathfrak{L}		direct	4739 Oct 15 01:30	8° \mathfrak{L} 00'43	
morning rise	4738 Oct 29 11:48	24° \mathfrak{L} 57'23		asc. node	4739 Oct 19 11:12	9° \mathfrak{L} 23'48	
direct	4738 Oct 31 21:53	24° \mathfrak{L} 29'35		morning max el	4739 Oct 22 03:35	11° \mathfrak{L} 33'28	17°57'10
asc. node	4738 Nov 01 14:10	24° \mathfrak{L} 31'49			4739 Nov 03 10:03	0° \mathfrak{M}	
morning max el	4738 Nov 07 12:51	27° \mathfrak{L} 55'01	17°49'52	morning set	4739 Nov 06 21:59	6° \mathfrak{M} 22'48	
	4738 Nov 09 10:18	0° \mathfrak{M}					
morning set	4738 Nov 23 20:29	23° \mathfrak{M} 05'15		superior conj	4739 Nov 17 05:37	24° \mathfrak{M} 58'25	0°53'32
	4738 Nov 27 19:45	0° \mathfrak{X}		minimum elong	4739 Nov 17 09:31	25° \mathfrak{M} 15'27	0°53'01
superior conj	4738 Dec 05 20:03	13° \mathfrak{X} 35'23	0°16'25		4739 Nov 20 03:26	0° \mathfrak{X}	
minimum elong	4738 Dec 05 21:43	13° \mathfrak{X} 42'20	0°16'11	max. Earth dist.	4739 Nov 24 18:39	7° \mathfrak{X} 46'54	1.42459 AU
desc. node	4738 Dec 08 04:26	17° \mathfrak{X} 27'43		desc. node	4739 Nov 25 01:27	8° \mathfrak{X} 14'58	
max. Earth dist.	4738 Dec 12 05:47	24° \mathfrak{X} 02'01	1.44036 AU	evening rise	4739 Nov 30 23:25	17° \mathfrak{X} 47'51	
	4738 Dec 15 23:53	0° \mathfrak{Z}			4739 Dec 08 21:02	0° \mathfrak{Z}	
evening rise	4738 Dec 21 05:37	8° \mathfrak{Z} 09'48			4739 Dec 30 15:34	0° \mathfrak{X}	
	4739 Jan 04 18:50	0° \mathfrak{X}		evening max el	4740 Jan 02 11:19	3° \mathfrak{X} 03'51	22°12'42
evening max el	4739 Jan 19 16:31	19° \mathfrak{X} 28'50	20°57'42	retrograde	4740 Jan 11 23:53	8° \mathfrak{X} 43'51	
retrograde	4739 Jan 28 03:08	24° \mathfrak{X} 28'25		asc. node	4740 Jan 15 10:26	7° \mathfrak{X} 41'11	
asc. node	4739 Jan 28 13:25	24° \mathfrak{X} 27'25		evening set	4740 Jan 16 12:30	6° \mathfrak{X} 54'14	
evening set	4739 Feb 01 04:50	22° \mathfrak{X} 54'20		inferior conj	4740 Jan 21 20:53	0° \mathfrak{X} 33'27	2°01'55
inferior conj	4739 Feb 06 13:07	16° \mathfrak{X} 42'07	2°39'33	minimum elong	4740 Jan 21 18:36	0° \mathfrak{X} 41'23	2°01'08
minimum elong	4739 Feb 06 10:41	16° \mathfrak{X} 50'30	2°38'53	min. Earth dist.	4740 Jan 21 19:27	0° \mathfrak{X} 38'24	0.68059 AU
min. Earth dist.	4739 Feb 06 23:30	16° \mathfrak{X} 06'20	0.67753 AU	morning rise	4740 Jan 22 06:31	30° \mathfrak{R} \mathfrak{Z}	
morning rise	4739 Feb 11 16:22	10° \mathfrak{X} 28'58		direct	4740 Jan 27 00:33	24° \mathfrak{Z} 22'55	
direct	4739 Feb 17 01:09	8° \mathfrak{X} 07'07		morning max el	4740 Jan 31 18:34	22° \mathfrak{Z} 22'58	
morning max el	4739 Feb 27 19:27	14° \mathfrak{X} 31'55	23°48'23		4740 Feb 10 06:30	27° \mathfrak{Z} 58'25	22°19'45
desc. node	4739 Mar 06 03:37	21° \mathfrak{X} 45'13			4740 Feb 12 04:31	0° \mathfrak{X}	
	4739 Mar 12 09:51	0° \mathfrak{X}		desc. node	4740 Feb 21 00:41	11° \mathfrak{X} 04'40	
	4739 Apr 01 02:13	0° \mathfrak{Y}			4740 Mar 05 01:50	0° \mathfrak{X}	
morning set	4739 Apr 04 06:42	5° \mathfrak{Y} 22'18		morning set	4740 Mar 14 18:48	15° \mathfrak{X} 16'27	
max. Earth dist.	4739 Apr 08 03:03	12° \mathfrak{Y} 04'06	1.38574 AU	max. Earth dist.	4740 Mar 19 23:47	23° \mathfrak{X} 54'03	1.40759 AU
					4740 Mar 23 13:19	0° \mathfrak{Y}	
superior conj	4739 Apr 15 11:16	25° \mathfrak{Y} 30'33	-1°36'04	superior conj	4740 Mar 27 18:47	7° \mathfrak{Y} 27'12	-1°57'24
minimum elong	4739 Apr 15 16:07	25° \mathfrak{Y} 53'27	1°35'28	minimum elong	4740 Mar 27 23:10	7° \mathfrak{Y} 46'51	1°57'05
	4739 Apr 17 19:50	0° \mathfrak{X}		evening rise	4740 Apr 07 00:19	26° \mathfrak{Y} 20'05	
evening rise	4739 Apr 24 13:18	13° \mathfrak{X} 06'18			4740 Apr 08 23:19	0° \mathfrak{X}	
asc. node	4739 Apr 26 12:42	16° \mathfrak{X} 56'41		asc. node	4740 Apr 12 09:44	6° \mathfrak{X} 18'25	
	4739 May 03 17:24	0° \mathfrak{I}		evening max el	4740 Apr 23 04:34	22° \mathfrak{X} 11'25	18°19'04
evening max el	4739 May 10 22:06	9° \mathfrak{I} 34'35	18°51'03	retrograde	4740 Apr 30 10:01	25° \mathfrak{X} 47'29	
retrograde	4739 May 19 06:09	13° \mathfrak{I} 39'49		evening set	4740 May 02 19:28	25° \mathfrak{X} 24'43	
evening set	4739 May 21 08:47	13° \mathfrak{I} 25'07		inferior conj	4740 May 10 00:38	20° \mathfrak{X} 45'58	2°22'02
inferior conj	4739 May 29 09:12	9° \mathfrak{I} 06'20	1°04'15	minimum elong	4740 May 10 04:12	20° \mathfrak{X} 38'26	2°21'04
minimum elong	4739 May 29 11:34	9° \mathfrak{I} 02'03	1°03'26	min. Earth dist.	4740 May 13 11:06	17° \mathfrak{X} 53'04	0.59011 AU
min. Earth dist.	4739 Jun 01 13:45	6° \mathfrak{I} 49'05	0.56985 AU	morning rise	4740 May 17 09:58	15° \mathfrak{X} 09'45	
desc. node	4739 Jun 02 02:47	6° \mathfrak{I} 26'53		desc. node	4740 May 18 23:50	14° \mathfrak{X} 23'42	

direct	4740 May 23 15:30	13°♄25'03		direct	4741 May 05 21:59	24°♃49'52	
morning max el	4740 Jun 07 00:55	21°♄12'53	27°16'34	desc. node	4741 May 05 20:53	24°♃49'52	
	4740 Jun 14 16:09	0°♂			4741 May 17 02:34	0°♄	
	4740 Jul 03 01:41	0°♄		morning max el	4741 May 20 03:24	2°♄47'27	27°49'50
morning set	4740 Jul 07 20:31	9°♄40'43			4741 Jun 09 03:13	0°♂	
asc. node	4740 Jul 09 09:02	12°♄53'42		morning set	4741 Jun 22 00:57	24°♂06'10	
					4741 Jun 24 20:36	0°♄	
superior conj	4740 Jul 14 22:30	25°♄01'29	0°55'19	asc. node	4741 Jun 26 06:05	2°♄59'09	
minimum elong	4740 Jul 14 20:24	24°♄49'55	0°54'56	max. Earth dist.	4741 Jun 27 23:22	6°♄42'51	1.32144 AU
max. Earth dist.	4740 Jul 14 13:26	24°♄11'24	1.31953 AU				
	4740 Jul 17 04:36	0°♂		superior conj	4741 Jun 29 09:11	9°♄47'45	0°32'14
evening rise	4740 Jul 21 18:06	9°♂53'26		minimum elong	4741 Jun 29 07:47	9°♄40'02	0°31'56
	4740 Aug 01 01:42	0°♂		evening rise	4741 Jul 06 05:11	24°♄41'29	
desc. node	4740 Aug 14 23:06	20°♂28'59			4741 Jul 08 17:57	0°♂	
evening max el	4740 Aug 19 15:40	25°♂29'02	26°16'21		4741 Jul 26 13:55	0°♂	
	4740 Aug 25 09:20	0°♂		evening max el	4741 Aug 01 08:09	6°♂25'15	24°56'19
retrograde	4740 Sep 02 14:54	2°♂37'50		desc. node	4741 Aug 01 20:07	6°♂53'28	
evening set	4740 Sep 09 03:45	0°♂53'08		retrograde	4741 Aug 15 06:28	13°♂27'35	
	4740 Sep 10 16:59	30°♂♂		evening set	4741 Aug 20 16:39	12°♂20'51	
min. Earth dist.	4740 Sep 13 04:48	28°♂18'13	0.59234 AU	min. Earth dist.	4741 Aug 25 19:40	9°♂35'39	0.57256 AU
inferior conj	4740 Sep 16 10:57	25°♂49'30	-4°54'21	inferior conj	4741 Aug 28 17:27	7°♂40'17	-5°15'17
minimum elong	4740 Sep 16 15:52	25°♂40'06	4°53'37	minimum elong	4741 Aug 28 17:54	7°♂39'32	5°15'16
morning rise	4740 Sep 24 06:12	21°♂18'12		morning rise	4741 Sep 05 21:32	3°♂31'05	
direct	4740 Sep 26 15:19	20°♂58'39		direct	4741 Sep 08 11:22	3°♂12'03	
morning max el	4740 Oct 04 12:56	24°♂48'07	18°24'14	morning max el	4741 Sep 17 13:30	7°♂28'49	19°12'39
asc. node	4740 Oct 05 08:16	25°♂36'46		asc. node	4741 Sep 22 05:20	12°♂55'31	
	4740 Oct 08 21:31	0°♂			4741 Oct 02 03:57	0°♂	
morning set	4740 Oct 20 12:39	20°♂17'27		morning set	4741 Oct 04 12:27	4°♂38'16	
	4740 Oct 25 14:29	0°♂					
superior conj	4740 Oct 29 14:23	7°♂28'42	1°19'55	superior conj	4741 Oct 12 16:59	20°♂51'23	1°36'00
minimum elong	4740 Oct 29 18:03	7°♂45'35	1°19'32	minimum elong	4741 Oct 12 19:16	21°♂02'27	1°35'51
max. Earth dist.	4740 Nov 06 02:07	20°♂50'00	1.40499 AU		4741 Oct 17 12:44	0°♂	
evening rise	4740 Nov 10 12:58	28°♂20'44		max. Earth dist.	4741 Oct 19 06:59	3°♂13'43	1.38396 AU
desc. node	4740 Nov 10 22:27	28°♂59'52		evening rise	4741 Oct 23 01:44	9°♂57'23	
	4740 Nov 11 13:05	0°♂		desc. node	4741 Oct 28 19:27	19°♂38'55	
	4740 Dec 01 10:47	0°♂			4741 Nov 04 08:30	0°♂	
evening max el	4740 Dec 15 02:11	16°♂42'00	23°32'32		4741 Nov 27 05:14	0°♂	
retrograde	4740 Dec 25 17:45	22°♂59'34		evening max el	4741 Nov 27 15:11	0°♂24'43	24°50'41
evening set	4740 Dec 30 18:46	20°♂54'17		retrograde	4741 Dec 09 07:31	7°♂11'58	
asc. node	4741 Jan 01 07:30	19°♂25'37		evening set	4741 Dec 14 22:03	4°♂51'48	
min. Earth dist.	4741 Jan 04 16:16	15°♂11'28	0.67995 AU	asc. node	4741 Dec 19 04:34	0°♂06'00	
inferior conj	4741 Jan 05 04:42	14°♂28'54	1°16'57		4741 Dec 19 06:24	30°♂♂	
minimum elong	4741 Jan 05 03:02	14°♂34'38	1°16'18	min. Earth dist.	4741 Dec 19 11:34	29°♂43'04	0.67580 AU
morning rise	4741 Jan 10 11:15	8°♂22'46		inferior conj	4741 Dec 20 10:50	28°♂26'15	0°25'40
direct	4741 Jan 14 15:12	6°♂45'34		minimum elong	4741 Dec 20 10:12	28°♂28'20	0°25'25
morning max el	4741 Jan 22 23:15	11°♂34'22	20°57'54	morning rise	4741 Dec 25 22:30	22°♂26'39	
	4741 Feb 06 06:50	0°♂		direct	4741 Dec 29 13:41	21°♂10'45	
desc. node	4741 Feb 06 21:43	0°♂53'47		morning max el	4742 Jan 05 23:54	25°♂22'10	19°48'18
morning set	4741 Feb 22 03:27	23°♂54'55			4742 Jan 10 01:25	0°♂	
	4741 Feb 25 23:57	0°♂		greatest brilliancy	4742 Jan 19 05:54	12°♂47'05	-0.6m
max. Earth dist.	4741 Mar 02 02:56	6°♂38'36	1.42742 AU	desc. node	4742 Jan 24 18:45	21°♂04'41	
					4742 Jan 30 14:57	0°♂	
superior conj	4741 Mar 09 03:59	18°♂21'00	-2°08'08	morning set	4742 Jan 31 23:35	2°♂05'41	
minimum elong	4741 Mar 09 05:05	18°♂25'39	2°08'08	max. Earth dist.	4742 Feb 12 14:01	20°♂14'45	1.44263 AU
	4741 Mar 15 21:34	0°♂					
evening rise	4741 Mar 20 20:48	8°♂50'11		superior conj	4742 Feb 17 11:36	28°♂06'24	-2°02'45
asc. node	4741 Mar 30 06:47	25°♂14'45		minimum elong	4742 Feb 17 06:40	27°♂46'25	2°02'32
	4741 Apr 02 09:23	0°♂			4742 Feb 18 15:36	0°♂	
evening max el	4741 Apr 06 15:53	5°♂13'01	18°06'48	evening rise	4742 Mar 02 22:19	20°♂28'24	
retrograde	4741 Apr 13 06:17	8°♂35'55			4742 Mar 08 12:49	0°♂	
evening set	4741 Apr 15 22:23	8°♂02'40		asc. node	4742 Mar 17 03:50	13°♂37'39	
inferior conj	4741 Apr 22 11:38	3°♂03'26	3°09'04	evening max el	4742 Mar 21 04:48	18°♂30'52	18°13'37
minimum elong	4741 Apr 22 14:15	2°♂57'02	3°08'37	retrograde	4742 Mar 27 14:41	21°♂55'20	
min. Earth dist.	4741 Apr 25 15:27	29°♂59'44	0.61220 AU	evening set	4742 Mar 30 12:56	21°♂10'17	
	4741 Apr 25 15:20	30°♂♂		inferior conj	4742 Apr 05 14:16	15°♂51'29	3°30'49
morning rise	4741 Apr 29 04:09	27°♂07'25		minimum elong	4742 Apr 05 15:14	15°♂48'50	3°30'45
				min. Earth dist.	4742 Apr 08 04:38	13°♂00'32	0.63306 AU

morning rise	4742 Apr 11 16:28	9° Υ 44'23		min. Earth dist.	4743 Mar 22 03:19	26° H 40'46	0.65072 AU
direct	4742 Apr 18 13:21	7° Υ 04'04		morning rise	4743 Mar 25 19:53	22° H 49'46	
desc. node	4742 Apr 22 17:57	7° Υ 56'19		direct	4743 Apr 01 12:03	19° H 59'59	
morning max el	4742 May 02 10:51	15° Υ 02'53	27°45'28	desc. node	4743 Apr 09 14:59	23° H 14'43	
	4742 May 14 15:07	0° B		morning max el	4743 Apr 14 20:49	27° H 50'31	27°06'59
	4742 Jun 01 18:19	0° Π			4743 Apr 16 22:05	0° Υ	
morning set	4742 Jun 05 22:52	8° Π 09'27			4743 May 08 08:30	0° B	
max. Earth dist.	4742 Jun 11 04:06	18° Π 55'40	1.32771 AU	morning set	4743 May 20 11:26	21° B 42'16	
asc. node	4742 Jun 13 03:07	23° Π 06'43			4743 May 24 15:57	0° Π	
				max. Earth dist.	4743 May 24 23:58	0° Π 40'44	1.33848 AU
superior conj	4742 Jun 13 16:56	24° Π 21'08	0°06'01	superior conj	4743 May 28 19:42	8° Π 35'30	-0°22'31
minimum elong	4742 Jun 13 16:39	24° Π 19'33	0°05'56	minimum elong	4743 May 28 20:53	8° Π 41'43	0°22'17
behind sun begin	4742 Jun 13 11:42	23° Π 52'56		asc. node	4743 May 31 00:09	13° Π 12'35	
behind sun end	4742 Jun 13 21:35	24° Π 46'11		evening rise	4743 Jun 05 03:43	24° Π 07'33	
	4742 Jun 16 07:32	0° B			4743 Jun 08 00:03	0° B	
evening rise	4742 Jun 20 17:01	9° B 28'12		evening max el	4743 Jun 25 13:31	27° B 17'54	21°45'06
	4742 Jul 01 07:39	0° Ω			4743 Jun 28 16:51	0° Ω	
evening max el	4742 Jul 13 20:50	16° Ω 50'36	23°20'30	desc. node	4743 Jul 06 14:11	3° Ω 23'54	
desc. node	4742 Jul 19 17:09	21° Ω 22'56		retrograde	4743 Jul 08 01:25	3° Ω 28'57	
retrograde	4742 Jul 27 09:15	23° Ω 36'34		evening set	4743 Jul 10 15:54	3° Ω 13'39	
evening set	4742 Jul 31 07:35	23° Ω 02'48			4743 Jul 18 13:17	30° R B	
min. Earth dist.	4742 Aug 07 06:19	19° Ω 51'22	0.55696 AU	min. Earth dist.	4743 Jul 19 16:30	29° B 22'11	0.54871 AU
inferior conj	4742 Aug 09 03:57	18° Ω 44'18	-4°54'45	inferior conj	4743 Jul 20 00:02	29° B 11'38	-3°42'54
minimum elong	4742 Aug 08 22:05	18° Ω 52'58	4°53'55	minimum elong	4743 Jul 19 15:19	29° B 23'50	3°40'28
morning rise	4742 Aug 17 14:56	14° Ω 51'27		morning rise	4743 Jul 28 16:05	25° B 20'00	
direct	4742 Aug 20 12:21	14° Ω 31'09		direct	4743 Jul 31 23:23	24° B 56'09	
morning max el	4742 Aug 31 02:35	19° Ω 26'30	20°22'59		4743 Aug 12 10:27	0° Ω	
	4742 Sep 08 10:11	0° H		morning max el	4743 Aug 13 03:58	0° Ω 39'29	21°52'51
asc. node	4742 Sep 09 02:23	1° H 05'11		asc. node	4743 Aug 26 23:25	19° Ω 53'58	
morning set	4742 Sep 18 18:17	19° H 16'00			4743 Sep 01 04:30	0° H	
	4742 Sep 23 23:18	0° B		morning set	4743 Sep 03 03:51	4° H 04'21	
superior conj	4742 Sep 26 08:26	4° B 51'36	1°43'08	superior conj	4743 Sep 10 08:53	19° H 18'23	1°42'43
minimum elong	4742 Sep 26 09:06	4° B 55'00	1°43'07	minimum elong	4743 Sep 10 08:10	19° H 14'35	1°42'42
max. Earth dist.	4742 Oct 01 13:47	15° B 11'17	1.36395 AU	max. Earth dist.	4743 Sep 14 03:13	27° H 05'12	1.34690 AU
evening rise	4742 Oct 05 11:17	22° B 30'53			4743 Sep 15 13:55	0° B	
	4742 Oct 09 15:42	0° H		evening rise	4743 Sep 18 13:32	5° B 51'13	
desc. node	4742 Oct 15 16:27	10° H 07'05			4743 Oct 02 08:43	0° H	
	4742 Oct 29 03:13	0° A		desc. node	4743 Oct 02 13:28	0° H 18'46	
evening max el	4742 Nov 10 03:45	14° A 08'14	26°00'03	evening max el	4743 Oct 23 16:21	27° H 45'47	26°53'11
retrograde	4742 Nov 22 16:24	21° A 15'11			4743 Oct 26 03:54	0° A	
evening set	4742 Nov 28 20:36	18° A 42'37		retrograde	4743 Nov 05 19:55	5° A 02'37	
min. Earth dist.	4742 Dec 03 02:55	14° A 09'05	0.66812 AU	evening set	4743 Nov 12 12:24	2° A 22'40	
inferior conj	4742 Dec 04 13:22	12° A 21'33	-0°30'58		4743 Nov 15 01:21	30° R H	
minimum elong	4742 Dec 04 14:11	12° A 18'59	0°30'36	min. Earth dist.	4743 Nov 16 12:03	28° H 24'44	0.65689 AU
asc. node	4742 Dec 06 01:37	10° A 30'34		inferior conj	4743 Nov 18 10:16	26° H 10'57	-1°31'38
morning rise	4742 Dec 10 08:15	6° A 31'01		minimum elong	4743 Nov 18 12:51	26° H 03'27	1°30'33
direct	4742 Dec 13 12:22	5° A 33'29		asc. node	4743 Nov 22 22:38	21° H 35'45	
morning max el	4742 Dec 20 08:04	9° A 19'10	18°53'42	morning rise	4743 Nov 24 14:12	20° H 32'12	
	4743 Jan 04 06:43	0° B		direct	4743 Nov 27 09:18	19° H 49'18	
morning set	4743 Jan 11 08:23	11° B 01'58		morning max el	4743 Dec 03 21:48	23° H 20'11	18°15'22
desc. node	4743 Jan 11 15:45	11° B 30'48			4743 Dec 09 07:12	0° A	
	4743 Jan 23 11:13	0° \approx		morning set	4743 Dec 22 21:16	21° A 24'11	
max. Earth dist.	4743 Jan 26 06:52	4° \approx 25'22	1.45137 AU		4743 Dec 28 04:56	0° B	
superior conj	4743 Jan 27 21:08	6° \approx 55'49	-1°37'41	desc. node	4743 Dec 29 12:46	2° B 07'39	
minimum elong	4743 Jan 27 11:52	6° \approx 19'21	1°36'49	superior conj	4744 Jan 07 00:12	15° B 34'47	-0°56'17
	4743 Feb 11 08:08	0° H		minimum elong	4744 Jan 06 17:16	15° B 07'29	0°55'23
evening rise	4743 Feb 12 01:14	1° H 09'16		max. Earth dist.	4744 Jan 09 02:07	18° B 50'54	1.45274 AU
	4743 Mar 02 21:52	0° Υ			4744 Jan 16 05:12	0° \approx	
asc. node	4743 Mar 04 00:52	1° Υ 16'41		evening rise	4744 Jan 23 05:31	10° \approx 57'02	
evening max el	4743 Mar 04 16:28	1° Υ 57'34	18°38'51	greatest brilliancy	4744 Feb 03 19:16	28° \approx 54'48	-0.7m
retrograde	4743 Mar 11 06:56	5° Υ 36'35			4744 Feb 04 12:26	0° H	
evening set	4743 Mar 14 11:26	4° Υ 38'57		evening max el	4744 Feb 16 00:41	15° H 28'32	19°21'15
	4743 Mar 19 09:18	30° R H		asc. node	4744 Feb 18 21:54	17° H 59'09	
inferior conj	4743 Mar 20 04:30	29° H 02'18	3°33'17	retrograde	4744 Feb 23 03:29	19° H 32'49	
minimum elong	4743 Mar 20 03:55	29° H 04'03	3°33'17				

evening set	4744 Feb 26 15:04	18° H 21'53		evening set	4745 Feb 09 21:40	2° H 14'31	
inferior conj	4744 Mar 03 02:53	12° H 29'30	3°21'08		4745 Feb 12 06:20	30° R \approx	
minimum elong	4744 Mar 03 01:12	12° H 35'01	3°20'54	inferior conj	4745 Feb 15 06:41	26° \approx 08'54	2°57'31
min. Earth dist.	4744 Mar 04 10:33	10° H 46'43	0.66442 AU	minimum elong	4745 Feb 15 04:22	26° \approx 16'44	2°57'00
morning rise	4744 Mar 08 11:02	6° H 14'58		min. Earth dist.	4745 Feb 16 00:30	25° \approx 08'23	0.67392 AU
direct	4744 Mar 14 17:13	3° H 28'28		morning rise	4745 Feb 20 10:51	19° \approx 54'41	
desc. node	4744 Mar 26 12:00	10° H 10'59		direct	4745 Feb 26 03:58	17° \approx 21'34	
morning max el	4744 Mar 27 06:40	10° H 57'22	26°01'41	morning max el	4745 Mar 09 15:20	24° \approx 13'23	24°39'20
	4744 Apr 11 10:24	0° Y		desc. node	4745 Mar 13 09:01	28° \approx 17'51	
	4744 Apr 29 22:58	0° B			4745 Mar 14 19:32	0° H	
morning set	4744 May 02 10:39	4° B 32'19			4745 Apr 04 20:42	0° Y	
max. Earth dist.	4744 May 06 08:14	11° B 54'51	1.35388 AU	morning set	4745 Apr 14 15:29	16° Y 25'51	
				max. Earth dist.	4745 Apr 18 06:27	22° Y 55'53	1.37336 AU
					4745 Apr 22 01:38	0° B	
superior conj	4744 May 11 14:57	22° B 22'55	-0°52'07				
minimum elong	4744 May 11 17:48	22° B 37'23	0°51'36				
	4744 May 15 08:05	0° II		superior conj	4745 Apr 24 23:38	5° B 35'43	-1°20'55
asc. node	4744 May 16 21:09	3° II 11'53		minimum elong	4745 Apr 25 03:58	5° B 56'47	1°20'15
evening rise	4744 May 19 11:11	8° II 32'02		evening rise	4745 May 03 13:05	22° B 35'18	
	4744 May 31 02:47	0° E		asc. node	4745 May 03 18:11	23° B 00'42	
evening max el	4744 Jun 06 17:00	8° E 15'41	20°22'31		4745 May 07 07:42	0° II	
retrograde	4744 Jun 17 14:41	13° E 35'37		evening max el	4745 May 20 08:58	19° II 55'36	19°18'36
evening set	4744 Jun 19 14:01	13° E 25'53		retrograde	4745 May 29 13:17	24° II 24'14	
desc. node	4744 Jun 22 11:13	12° E 39'25		evening set	4745 May 31 12:48	24° II 12'38	
inferior conj	4744 Jun 28 18:15	9° E 28'01	-1°51'57	inferior conj	4745 Jun 09 00:47	20° II 04'26	0°05'29
minimum elong	4744 Jun 28 13:01	9° E 35'41	1°50'02	minimum elong	4745 Jun 09 01:01	20° II 04'03	0°05'24
min. Earth dist.	4744 Jun 30 04:25	8° E 38'07	0.54989 AU	transit middle	4745 Jun 09 01:01	20° II 04'03	0°05'24
morning rise	4744 Jul 07 10:53	5° E 16'36		transit begin	4745 Jun 08 21:24	20° II 10'02	
direct	4744 Jul 11 09:29	4° E 43'01		transit end	4745 Jun 09 04:39	19° II 58'03	
morning max el	4744 Jul 24 20:35	11° E 15'38	23°35'01	desc. node	4745 Jun 09 08:14	19° II 52'08	
	4744 Aug 07 20:30	0° O		min. Earth dist.	4745 Jun 11 18:49	18° II 16'00	0.56046 AU
asc. node	4744 Aug 12 20:25	9° O 11'24		morning rise	4745 Jun 17 10:15	15° II 19'26	
morning set	4744 Aug 17 15:15	18° O 57'04		direct	4745 Jun 22 06:41	14° II 25'29	
	4744 Aug 22 18:34	0° P		morning max el	4745 Jul 06 10:14	21° II 37'05	25°16'22
					4745 Jul 13 18:08	0° E	
superior conj	4744 Aug 24 15:17	4° P 01'40	1°35'58	asc. node	4745 Jul 30 17:27	28° E 49'58	
minimum elong	4744 Aug 24 13:34	3° P 52'27	1°35'50		4745 Jul 31 07:04	0° O	
max. Earth dist.	4744 Aug 27 01:20	9° P 12'12	1.33384 AU	morning set	4745 Aug 02 02:53	3° O 49'20	
evening rise	4744 Sep 01 04:16	19° P 46'47					
	4744 Sep 06 11:34	0° A		superior conj	4745 Aug 09 01:18	18° O 54'03	1°23'47
desc. node	4744 Sep 18 10:30	20° A 06'09		minimum elong	4745 Aug 08 23:04	18° O 41'49	1°23'31
	4744 Sep 25 10:32	0° M		max. Earth dist.	4745 Aug 10 07:11	21° O 37'30	1.32504 AU
evening max el	4744 Oct 05 04:16	11° M 07'13	27°23'00		4745 Aug 14 04:36	0° P	
retrograde	4744 Oct 18 17:36	18° M 25'41		evening rise	4745 Aug 16 04:04	4° P 07'48	
evening set	4744 Oct 25 18:54	15° M 46'33			4745 Aug 30 04:34	0° A	
min. Earth dist.	4744 Oct 29 12:54	12° M 22'36	0.64215 AU	desc. node	4745 Sep 05 07:31	9° A 19'08	
inferior conj	4744 Oct 31 23:08	9° M 49'09	-2°34'22	evening max el	4745 Sep 17 13:38	24° A 00'15	27°23'14
minimum elong	4744 Nov 01 03:35	9° M 37'26	2°32'42		4745 Sep 25 23:19	0° M	
morning rise	4744 Nov 07 13:36	4° M 25'06		retrograde	4745 Oct 01 08:31	1° M 14'57	
asc. node	4744 Nov 08 19:39	4° M 01'11			4745 Oct 06 11:17	30° R A	
direct	4744 Nov 10 02:05	3° M 52'58		evening set	4745 Oct 08 12:44	28° A 47'36	
morning max el	4744 Nov 16 14:19	7° M 18'19	17°54'06	min. Earth dist.	4745 Oct 12 03:44	25° A 52'18	0.62433 AU
	4744 Dec 01 17:55	0° X		inferior conj	4745 Oct 15 01:07	23° A 09'06	-3°35'48
morning set	4744 Dec 03 14:34	3° X 09'48		minimum elong	4745 Oct 15 07:00	22° A 55'13	3°33'59
desc. node	4744 Dec 15 09:47	22° X 51'28		morning rise	4745 Oct 22 02:59	18° A 03'02	
				direct	4745 Oct 24 11:41	17° A 37'59	
superior conj	4744 Dec 16 17:13	24° X 58'57	-0°09'07	asc. node	4745 Oct 26 16:42	18° A 00'33	
minimum elong	4744 Dec 16 16:09	24° X 54'40	0°08'57	morning max el	4745 Oct 31 06:34	21° A 05'54	17°50'38
behind sun begin	4744 Dec 16 07:39	24° X 20'14			4745 Nov 06 23:53	0° M	
behind sun end	4744 Dec 17 00:39	25° X 29'03		morning set	4745 Nov 16 06:11	15° M 59'23	
	4744 Dec 19 20:06	0° B			4745 Nov 24 04:46	0° X	
max. Earth dist.	4744 Dec 21 20:38	3° B 13'03	1.44676 AU				
evening rise	4745 Jan 01 18:06	20° B 12'10		superior conj	4745 Nov 27 11:31	5° X 37'10	0°33'25
	4745 Jan 08 04:08	0° \approx		minimum elong	4745 Nov 27 14:31	5° X 49'54	0°33'00
evening max el	4745 Jan 29 04:02	29° \approx 01'51	20°18'54	desc. node	4745 Dec 02 06:49	13° X 38'15	
	4745 Jan 30 03:38	0° H		max. Earth dist.	4745 Dec 04 12:15	17° X 16'20	1.43422 AU
asc. node	4745 Feb 04 18:55	3° H 30'54		evening rise	4745 Dec 12 05:27	29° X 30'53	
retrograde	4745 Feb 06 01:39	3° H 39'44			4745 Dec 12 12:57	0° B	

	4746 Jan 01 20:56	0°♊		evening max el	4746 Dec 25 18:59	26°♊12'55	22°46'27
evening max el	4746 Jan 12 01:57	12°♊36'22	21°28'47		4746 Dec 30 03:50	0°♊	
retrograde	4746 Jan 20 23:17	17°♊52'47		retrograde	4747 Jan 04 18:50	2°♊08'53	
asc. node	4746 Jan 22 15:58	17°♊37'19		evening set	4747 Jan 09 12:40	0°♊12'26	
evening set	4746 Jan 25 05:24	16°♊12'19		asc. node	4747 Jan 09 13:00	0°♊11'45	
inferior conj	4746 Jan 30 13:33	9°♊56'19	2°24'33		4747 Jan 09 18:30	30°♊♊	
minimum elong	4746 Jan 30 11:08	10°♊04'43	2°23'49	inferior conj	4747 Jan 14 21:34	23°♊49'24	1°43'39
min. Earth dist.	4746 Jan 30 18:51	9°♊37'56	0.67931 AU	minimum elong	4747 Jan 14 19:29	23°♊56'35	1°42'54
morning rise	4746 Feb 04 16:40	3°♊44'06		min. Earth dist.	4747 Jan 14 15:22	24°♊10'49	0.68081 AU
direct	4746 Feb 09 19:16	1°♊31'00		morning rise	4747 Jan 20 02:11	17°♊40'46	
morning max el	4746 Feb 20 00:23	7°♊34'44	23°10'17	direct	4747 Jan 24 14:11	15°♊50'30	
desc. node	4746 Feb 28 06:04	17°♊14'45		morning max el	4747 Feb 02 13:29	21°♊04'39	21°43'46
	4746 Mar 09 11:21	0°♊			4747 Feb 10 03:06	0°♊	
morning set	4746 Mar 26 19:50	27°♊06'15		desc. node	4747 Feb 15 03:06	6°♊47'43	
	4746 Mar 28 13:05	0°♊			4747 Mar 02 17:48	0°♊	
max. Earth dist.	4746 Mar 31 01:38	4°♊19'37	1.39516 AU	morning set	4747 Mar 06 19:34	6°♊25'18	
				max. Earth dist.	4747 Mar 13 01:14	16°♊34'15	1.41650 AU
superior conj	4746 Apr 07 17:43	18°♊03'32	-1°46'05	superior conj	4747 Mar 20 16:21	29°♊34'43	-2°03'34
minimum elong	4746 Apr 07 22:38	18°♊26'15	1°45'34	minimum elong	4747 Mar 20 19:45	29°♊49'35	2°03'25
	4746 Apr 14 01:39	0°♊			4747 Mar 20 22:08	0°♊	
evening rise	4746 Apr 17 06:31	6°♊09'24		evening rise	4747 Mar 31 11:53	19°♊05'51	
asc. node	4746 Apr 20 15:14	12°♊33'52			4747 Apr 06 12:04	0°♊	
	4746 May 01 09:58	0°♊		asc. node	4747 Apr 07 12:17	1°♊45'42	
evening max el	4746 May 03 11:08	2°♊14'03	18°34'57	evening max el	4747 Apr 16 20:04	15°♊02'22	18°11'24
retrograde	4746 May 11 06:08	6°♊04'25		retrograde	4747 Apr 23 17:41	18°♊31'03	
evening set	4746 May 13 11:48	5°♊46'31		evening set	4747 Apr 26 06:04	18°♊03'58	
inferior conj	4746 May 21 03:45	1°♊19'24	1°41'11	inferior conj	4747 May 03 03:56	13°♊16'03	2°45'28
minimum elong	4746 May 21 06:59	1°♊13'09	1°40'09	minimum elong	4747 May 03 07:16	13°♊08'32	2°44'42
	4746 May 22 20:40	30°♊♊		min. Earth dist.	4747 May 06 12:34	10°♊15'46	0.59950 AU
min. Earth dist.	4746 May 24 12:43	28°♊44'23	0.57813 AU	morning rise	4747 May 10 05:58	7°♊30'10	
desc. node	4746 May 27 05:15	26°♊56'08		desc. node	4747 May 14 02:19	5°♊50'46	
morning rise	4746 May 28 22:56	25°♊59'57		direct	4747 May 16 17:43	5°♊31'07	
direct	4746 Jun 03 17:53	24°♊35'28		morning max el	4747 May 31 01:57	13°♊23'28	27°35'25
	4746 Jun 15 16:42	0°♊			4747 Jun 13 07:19	0°♊	
morning max el	4746 Jun 18 02:55	2°♊12'24	26°41'03		4747 Jun 30 07:02	0°♊	
	4746 Jul 08 00:28	0°♊		morning set	4747 Jul 01 20:18	3°♊11'44	
morning set	4746 Jul 17 13:09	18°♊36'21		asc. node	4747 Jul 04 11:33	8°♊45'59	
asc. node	4746 Jul 17 14:31	18°♊43'30		max. Earth dist.	4747 Jul 08 05:13	16°♊53'59	1.31987 AU
	4746 Jul 22 19:28	0°♊					
superior conj	4746 Jul 24 13:00	3°♊49'13	1°06'56	superior conj	4747 Jul 09 00:32	18°♊40'23	0°45'58
minimum elong	4746 Jul 24 10:43	3°♊36'37	1°06'33	minimum elong	4747 Jul 08 22:41	18°♊30'09	0°45'35
max. Earth dist.	4746 Jul 24 17:47	4°♊15'41	1.32039 AU		4747 Jul 14 04:23	0°♊	
evening rise	4746 Jul 31 10:04	18°♊45'42		evening rise	4747 Jul 15 19:53	3°♊32'00	
	4746 Aug 05 23:37	0°♊			4747 Jul 29 22:04	0°♊	
desc. node	4746 Aug 23 04:32	27°♊43'54		desc. node	4747 Aug 10 01:34	14°♊59'55	
	4746 Aug 25 00:08	0°♊		evening max el	4747 Aug 12 14:13	17°♊34'28	25°45'05
evening max el	4746 Aug 30 17:45	6°♊12'23	26°50'11	retrograde	4747 Aug 26 13:13	24°♊40'53	
retrograde	4746 Sep 13 15:31	13°♊22'24		evening set	4747 Sep 01 16:41	23°♊11'46	
evening set	4746 Sep 20 13:39	11°♊18'54		min. Earth dist.	4747 Sep 06 02:20	20°♊35'04	0.58368 AU
min. Earth dist.	4746 Sep 24 07:50	8°♊41'22	0.60430 AU	inferior conj	4747 Sep 09 06:51	18°♊18'16	-5°07'13
inferior conj	4746 Sep 27 12:55	6°♊02'33	-4°30'03	minimum elong	4747 Sep 09 10:17	18°♊12'07	5°06'54
minimum elong	4746 Sep 27 18:54	5°♊50'09	4°28'45	morning rise	4747 Sep 17 06:09	13°♊56'53	
morning rise	4746 Oct 05 02:07	1°♊17'46		direct	4747 Sep 19 17:03	13°♊37'42	
direct	4746 Oct 07 10:14	0°♊56'49		morning max el	4747 Sep 28 01:26	17°♊36'53	18°42'12
asc. node	4746 Oct 13 13:45	3°♊29'02		asc. node	4747 Sep 30 10:49	20°♊11'45	
morning max el	4746 Oct 14 19:24	4°♊35'28	18°06'10		4747 Oct 07 00:54	0°♊	
morning set	4746 Oct 30 13:57	29°♊35'05		morning set	4747 Oct 14 08:56	13°♊42'00	
	4746 Oct 30 19:17	0°♊			4747 Oct 22 19:17	0°♊	
superior conj	4746 Nov 09 07:37	17°♊30'48	1°06'03	superior conj	4747 Oct 23 00:40	0°♊25'21	1°27'56
minimum elong	4746 Nov 09 11:38	17°♊48'45	1°05'34	minimum elong	4747 Oct 23 03:49	0°♊40'12	1°27'38
	4746 Nov 16 12:15	0°♊		max. Earth dist.	4747 Oct 30 05:30	13°♊33'00	1.39606 AU
max. Earth dist.	4746 Nov 16 23:22	0°♊46'46	1.41661 AU	evening rise	4747 Nov 03 06:13	20°♊29'58	
desc. node	4746 Nov 19 03:50	4°♊25'02		desc. node	4747 Nov 06 00:51	25°♊07'44	
evening rise	4746 Nov 22 06:50	9°♊30'32			4747 Nov 09 00:56	0°♊	
	4746 Dec 05 15:13	0°♊			4747 Nov 29 18:53	0°♊	

evening max el	4747 Dec 08 08:41	9° S 52'14	24°06'21		4748 Nov 01 03:46	0° S	
retrograde	4747 Dec 19 11:05	16° S 23'41		evening max el	4748 Nov 19 21:08	23° S 34'44	25°21'42
evening set	4747 Dec 24 17:53	14° S 11'35			4748 Nov 28 23:05	0° S	
asc. node	4747 Dec 27 10:04	11° S 24'05		retrograde	4748 Dec 01 23:01	0° S 32'31	
min. Earth dist.	4747 Dec 29 11:44	8° S 43'22	0.67860 AU		4748 Dec 04 18:28	30° R S	
inferior conj	4747 Dec 30 04:52	7° S 45'29	0°55'53	evening set	4748 Dec 07 19:22	28° S 06'30	
minimum elong	4747 Dec 30 03:35	7° S 49'49	0°55'23	min. Earth dist.	4748 Dec 12 05:40	23° S 12'33	0.67290 AU
morning rise	4748 Jan 04 13:21	1° S 42'06		inferior conj	4748 Dec 13 09:41	21° S 41'58	0°02'12
direct	4748 Jan 08 11:36	0° S 14'27		minimum elong	4748 Dec 13 09:37	21° S 42'09	0°02'11
morning max el	4748 Jan 16 09:36	4° S 45'55	20°26'39	transit middle	4748 Dec 13 09:37	21° S 42'09	0°02'11
desc. node	4748 Feb 02 00:08	26° S 46'38		transit begin	4748 Dec 13 06:51	21° S 51'07	
	4748 Feb 04 04:06	0° \approx		transit end	4748 Dec 13 12:23	21° S 33'12	
morning set	4748 Feb 13 20:10	14° \approx 43'51		asc. node	4748 Dec 13 07:06	21° S 50'17	
max. Earth dist.	4748 Feb 23 08:00	29° \approx 42'43	1.43451 AU	morning rise	4748 Dec 19 00:10	15° S 45'53	
	4748 Feb 23 12:17	0° H		direct	4748 Dec 22 10:18	14° S 38'23	
				morning max el	4748 Dec 29 13:37	18° S 37'54	19°23'06
superior conj	4748 Feb 29 14:47	9° H 59'01	-2°08'08		4749 Jan 07 12:49	0° S	
minimum elong	4748 Feb 29 13:31	9° H 53'45	2°08'07	greatest brilliancy	4749 Jan 11 19:34	6° S 18'15	-0.7m
	4748 Mar 12 07:41	0° Y		desc. node	4749 Jan 18 21:08	17° S 04'08	
evening rise	4748 Mar 13 00:52	1° Y 15'13		morning set	4749 Jan 22 18:35	23° S 04'43	
asc. node	4748 Mar 24 09:20	20° Y 29'11			4749 Jan 27 05:38	0° \approx	
evening max el	4748 Mar 30 08:23	28° Y 11'46	18°07'24	max. Earth dist.	4749 Feb 04 21:18	13° \approx 33'16	1.44710 AU
	4748 Apr 01 11:12	0° B					
retrograde	4748 Apr 05 19:51	1° B 34'06		superior conj	4749 Feb 08 11:50	19° \approx 16'39	-1°54'32
evening set	4748 Apr 08 14:28	0° B 56'04		minimum elong	4749 Feb 08 04:27	18° \approx 47'12	1°54'02
	4748 Apr 10 06:02	30° R Y			4749 Feb 15 03:30	0° H	
inferior conj	4748 Apr 14 22:10	25° Y 48'16	3°20'59	evening rise	4749 Feb 22 17:02	12° H 28'35	
minimum elong	4748 Apr 15 00:07	25° Y 43'15	3°20'45		4749 Mar 05 08:13	0° Y	
min. Earth dist.	4748 Apr 17 20:44	22° Y 47'20	0.62126 AU	asc. node	4749 Mar 11 06:23	8° Y 34'38	
morning rise	4748 Apr 21 08:10	19° Y 46'19		evening max el	4749 Mar 13 21:02	11° Y 33'41	18°22'15
direct	4748 Apr 28 04:09	17° Y 17'39		retrograde	4749 Mar 20 07:59	15° Y 03'02	
desc. node	4748 Apr 29 23:21	17° Y 27'14		evening set	4749 Mar 23 08:44	14° Y 12'53	
morning max el	4748 May 12 07:08	25° Y 17'31	27°52'35	inferior conj	4749 Mar 29 06:11	8° Y 46'33	3°33'54
	4748 May 16 14:50	0° B		minimum elong	4749 Mar 29 06:27	8° Y 45'47	3°33'54
	4748 Jun 05 18:09	0° II		min. Earth dist.	4749 Mar 31 14:08	6° Y 06'09	0.64095 AU
morning set	4748 Jun 14 22:18	17° II 29'26		morning rise	4749 Apr 04 03:18	2° Y 36'29	
asc. node	4748 Jun 20 08:36	28° II 53'14			4749 Apr 09 06:09	30° R H	
max. Earth dist.	4748 Jun 20 13:33	29° II 19'55	1.32356 AU	direct	4749 Apr 10 23:01	29° H 50'05	
	4748 Jun 20 20:58	0° S			4749 Apr 12 17:05	0° Y	
				desc. node	4749 Apr 16 20:22	1° Y 33'21	
superior conj	4748 Jun 22 10:13	3° S 22'15	0°21'28	morning max el	4749 Apr 24 15:57	7° Y 47'42	27°32'54
minimum elong	4748 Jun 22 09:14	3° S 16'53	0°21'14		4749 May 11 18:59	0° B	
evening rise	4748 Jun 29 07:31	18° S 20'28			4749 May 29 00:11	0° II	
	4748 Jul 05 00:27	0° Q		morning set	4749 May 29 16:38	1° II 20'50	
evening max el	4748 Jul 24 04:07	28° Q 13'47	24°16'26	max. Earth dist.	4749 Jun 03 14:39	11° II 20'22	1.33168 AU
	4748 Jul 26 03:06	0° R					
desc. node	4748 Jul 26 22:35	0° R 39'52		superior conj	4749 Jun 06 16:06	17° II 48'13	-0°05'53
retrograde	4748 Aug 06 23:55	5° R 11'49		minimum elong	4749 Jun 06 16:24	17° II 49'47	0°05'50
evening set	4748 Aug 11 19:22	4° R 20'19		behind sun begin	4749 Jun 06 11:20	17° II 22'47	
min. Earth dist.	4748 Aug 17 14:54	1° R 25'32	0.56524 AU	behind sun end	4749 Jun 06 21:28	18° II 16'50	
	4748 Aug 19 21:34	30° R Q		asc. node	4749 Jun 07 05:37	19° II 00'28	
inferior conj	4748 Aug 20 04:37	29° Q 48'54	-5°12'31		4749 Jun 12 08:24	0° S	
minimum elong	4748 Aug 20 02:22	29° Q 52'27	5°12'24	evening rise	4749 Jun 13 19:04	3° S 04'19	
morning rise	4748 Aug 28 11:54	25° Q 48'12			4749 Jun 28 14:12	0° Q	
direct	4748 Aug 31 04:32	25° Q 28'57		evening max el	4749 Jul 05 17:31	8° Q 35'55	22°39'03
	4748 Sep 09 21:11	0° R		desc. node	4749 Jul 13 19:36	14° Q 09'50	
morning max el	4748 Sep 09 21:27	0° R 00'38	19°39'55	retrograde	4749 Jul 18 21:54	15° Q 09'31	
asc. node	4748 Sep 16 07:51	7° R 53'39		evening set	4749 Jul 22 04:52	14° Q 45'45	
morning set	4748 Sep 27 11:34	28° R 10'28		min. Earth dist.	4749 Jul 30 01:22	11° Q 18'51	0.55240 AU
	4748 Sep 28 09:16	0° S		inferior conj	4749 Jul 31 07:53	10° Q 35'20	-4°30'30
				minimum elong	4749 Jul 31 00:02	10° Q 46'32	4°28'54
superior conj	4748 Oct 05 09:17	14° S 05'35	1°40'01	morning rise	4749 Aug 08 21:15	6° Q 44'55	
minimum elong	4748 Oct 05 10:52	14° S 13'28	1°39'56	direct	4749 Aug 11 22:17	6° Q 23'35	
max. Earth dist.	4748 Oct 11 10:03	25° S 40'54	1.37517 AU	morning max el	4749 Aug 23 05:27	11° Q 39'12	20°59'01
	4748 Oct 13 18:30	0° R		asc. node	4749 Sep 03 04:52	26° Q 21'10	
evening rise	4748 Oct 15 04:16	2° R 31'37			4749 Sep 05 06:08	0° R	
desc. node	4748 Oct 22 21:52	15° R 42'30		morning set	4749 Sep 11 19:13	12° R 53'16	



































































































































superior conj	4749 Sep 19 04:58	28° \mathbb{M} 18'20	1°43'47	superior conj	4750 Sep 03 08:15	12° \mathbb{M} 52'49	1°40'33
minimum elong	4749 Sep 19 05:01	28° \mathbb{M} 18'33	1°43'47	minimum elong	4750 Sep 03 07:03	12° \mathbb{M} 46'28	1°40'30
	4749 Sep 20 00:47	0° \mathbb{L}		max. Earth dist.	4750 Sep 06 12:19	19° \mathbb{M} 32'25	1.34089 AU
max. Earth dist.	4749 Sep 23 18:59	7° \mathbb{L} 33'15	1.35628 AU	evening rise	4750 Sep 11 05:32	29° \mathbb{M} 03'34	
evening rise	4749 Sep 27 21:30	15° \mathbb{L} 26'54			4750 Sep 11 17:06	0° \mathbb{L}	
	4749 Oct 06 02:01	0° \mathbb{M}		desc. node	4750 Sep 26 15:54	26° \mathbb{L} 06'52	
desc. node	4749 Oct 09 18:53	6° \mathbb{M} 04'30			4750 Sep 29 05:16	0° \mathbb{M}	
	4749 Oct 26 17:41	0° \mathbb{X}		evening max el	4750 Oct 15 22:34	20° \mathbb{M} 50'20	27°09'10
evening max el	4749 Nov 02 09:50	7° \mathbb{X} 17'20	26°25'08	retrograde	4750 Oct 29 06:44	28° \mathbb{M} 07'50	
retrograde	4749 Nov 15 05:48	14° \mathbb{X} 29'52		evening set	4750 Nov 05 03:29	25° \mathbb{M} 27'23	
evening set	4749 Nov 21 15:19	11° \mathbb{X} 53'40		min. Earth dist.	4750 Nov 09 00:42	21° \mathbb{M} 44'07	0.65107 AU
min. Earth dist.	4749 Nov 25 18:48	7° \mathbb{X} 34'58	0.66373 AU	inferior conj	4750 Nov 11 03:55	19° \mathbb{M} 21'21	-1°58'07
inferior conj	4749 Nov 27 10:06	5° \mathbb{X} 35'47	-0°56'17	minimum elong	4750 Nov 11 07:18	19° \mathbb{M} 11'55	1°56'45
minimum elong	4749 Nov 27 11:39	5° \mathbb{X} 31'06	0°55'37	asc. node	4750 Nov 17 01:07	14° \mathbb{M} 02'13	
asc. node	4749 Nov 30 04:07	2° \mathbb{X} 26'09		morning rise	4750 Nov 17 12:09	13° \mathbb{M} 48'14	
morning rise	4749 Dec 03 08:36	29° \mathbb{M} 49'37		direct	4750 Nov 20 04:14	13° \mathbb{M} 10'13	
	4749 Dec 03 01:32	30° \mathbb{R} \mathbb{M}		morning max el	4750 Nov 26 15:38	16° \mathbb{M} 37'32	18°04'10
direct	4749 Dec 06 08:35	28° \mathbb{M} 58'46			4750 Dec 06 09:15	0° \mathbb{X}	
	4749 Dec 09 18:01	0° \mathbb{X}		morning set	4750 Dec 14 16:06	13° \mathbb{X} 35'39	
morning max el	4749 Dec 13 00:25	2° \mathbb{X} 37'12	18°35'17	desc. node	4750 Dec 23 15:10	28° \mathbb{X} 15'28	
	4749 Dec 31 23:16	0° \mathbb{Z}			4750 Dec 24 17:07	0° \mathbb{Z}	
morning set	4750 Jan 02 14:31	2° \mathbb{Z} 35'40					
desc. node	4750 Jan 05 18:09	7° \mathbb{Z} 35'21		superior conj	4750 Dec 28 22:56	6° \mathbb{Z} 46'44	-0°36'15
				minimum elong	4750 Dec 28 18:26	6° \mathbb{Z} 28'54	0°35'38
superior conj	4750 Jan 18 16:11	27° \mathbb{Z} 54'59	-1°21'36	max. Earth dist.	4751 Jan 01 11:03	12° \mathbb{Z} 19'14	1.45115 AU
minimum elong	4750 Jan 18 07:05	27° \mathbb{Z} 19'16	1°20'36		4751 Jan 12 19:13	0° \mathbb{X}	
max. Earth dist.	4750 Jan 18 15:16	27° \mathbb{Z} 51'23	1.45287 AU	evening rise	4751 Jan 14 06:14	2° \mathbb{X} 15'28	
	4750 Jan 20 00:04	0° \mathbb{X}		greatest brilliancy	4751 Jan 27 16:08	22° \mathbb{X} 45'28	-0.7m
evening rise	4750 Feb 03 09:57	22° \mathbb{X} 45'04			4751 Feb 01 16:06	0° \mathbb{X}	
	4750 Feb 07 23:06	0° \mathbb{X}		evening max el	4751 Feb 08 13:52	8° \mathbb{X} 34'45	19°44'04
greatest brilliancy	4750 Feb 12 00:59	6° \mathbb{X} 28'21	-0.8m	asc. node	4751 Feb 13 00:25	12° \mathbb{X} 05'06	
evening max el	4750 Feb 25 07:32	25° \mathbb{X} 02'40	18°54'57	retrograde	4751 Feb 15 23:45	12° \mathbb{X} 52'03	
asc. node	4750 Feb 26 03:24	25° \mathbb{X} 51'05		evening set	4751 Feb 19 14:51	11° \mathbb{X} 34'57	
retrograde	4750 Mar 04 02:16	28° \mathbb{X} 50'53		inferior conj	4751 Feb 25 01:12	5° \mathbb{X} 36'35	3°12'21
evening set	4750 Mar 07 09:42	27° \mathbb{X} 47'41		minimum elong	4751 Feb 24 23:11	5° \mathbb{X} 43'16	3°11'59
inferior conj	4750 Mar 13 00:13	22° \mathbb{X} 04'19	3°29'42	min. Earth dist.	4751 Feb 26 02:44	4° \mathbb{X} 11'52	0.66902 AU
minimum elong	4750 Mar 12 23:07	22° \mathbb{X} 07'48	3°29'36		4751 Mar 01 15:28	30° \mathbb{R} \mathbb{X}	
min. Earth dist.	4750 Mar 14 16:32	19° \mathbb{X} 58'24	0.65710 AU	morning rise	4751 Mar 02 07:19	29° \mathbb{X} 22'13	
morning rise	4750 Mar 18 12:07	15° \mathbb{X} 50'49		direct	4751 Mar 08 08:15	26° \mathbb{X} 40'34	
direct	4750 Mar 25 00:44	13° \mathbb{X} 00'44			4751 Mar 16 02:37	0° \mathbb{X}	
desc. node	4750 Apr 03 17:24	17° \mathbb{X} 36'35		morning max el	4751 Mar 20 11:06	3° \mathbb{X} 54'34	25°28'10
morning max el	4750 Apr 07 01:49	20° \mathbb{X} 43'29	26°41'53	desc. node	4751 Mar 21 14:26	5° \mathbb{X} 05'22	
	4750 Apr 15 01:53	0° \mathbb{Y}			4751 Apr 09 09:39	0° \mathbb{Y}	
	4750 May 04 22:18	0° \mathbb{Z}		morning set	4751 Apr 25 16:06	27° \mathbb{Y} 03'38	
morning set	4750 May 13 00:00	14° \mathbb{Z} 36'13			4751 Apr 27 06:39	0° \mathbb{Z}	
max. Earth dist.	4750 May 17 05:25	22° \mathbb{Z} 49'39	1.34447 AU	max. Earth dist.	4751 Apr 29 09:12	3° \mathbb{Z} 55'52	1.36174 AU
	4750 May 20 18:22	0° \mathbb{I}					
				superior conj	4751 May 05 07:12	15° \mathbb{Z} 25'24	-1°04'34
superior conj	4750 May 21 16:00	1° \mathbb{I} 51'41	-0°35'02	minimum elong	4751 May 05 10:44	15° \mathbb{Z} 43'01	1°03'57
minimum elong	4750 May 21 17:53	2° \mathbb{I} 01'26	0°34'40	asc. node	4751 May 11 23:42	28° \mathbb{Z} 59'10	
asc. node	4750 May 25 02:39	9° \mathbb{I} 03'44			4751 May 12 11:38	0° \mathbb{I}	
evening rise	4750 May 29 04:37	17° \mathbb{I} 37'35		evening rise	4751 May 13 10:03	1° \mathbb{I} 54'02	
	4750 Jun 04 09:35	0° \mathbb{O}			4751 May 30 11:41	0° \mathbb{O}	
evening max el	4750 Jun 17 14:22	19° \mathbb{O} 13'43	21°07'59	evening max el	4751 May 30 23:14	0° \mathbb{O} 28'54	19°52'55
retrograde	4750 Jun 29 10:51	25° \mathbb{O} 03'27		retrograde	4751 Jun 10 02:45	5° \mathbb{O} 26'17	
desc. node	4750 Jun 30 16:37	24° \mathbb{O} 59'49		evening set	4751 Jun 12 01:03	5° \mathbb{O} 16'19	
evening set	4750 Jul 01 16:48	24° \mathbb{O} 51'40		desc. node	4751 Jun 17 13:39	3° \mathbb{O} 13'52	
inferior conj	4750 Jul 11 01:19	20° \mathbb{O} 53'45	-2°58'58	inferior conj	4751 Jun 20 23:18	1° \mathbb{O} 15'14	-1°00'54
minimum elong	4750 Jul 10 17:25	21° \mathbb{O} 04'50	2°56'24	minimum elong	4751 Jun 20 20:29	1° \mathbb{O} 19'32	0°59'51
min. Earth dist.	4750 Jul 11 12:04	20° \mathbb{O} 38'37	0.54805 AU	min. Earth dist.	4751 Jun 23 00:37	0° \mathbb{O} 00'05	0.55329 AU
morning rise	4750 Jul 19 18:22	16° \mathbb{O} 56'08			4751 Jun 23 00:40	30° \mathbb{R} \mathbb{I}	
direct	4750 Jul 23 07:39	16° \mathbb{O} 28'56		morning rise	4751 Jun 29 13:58	26° \mathbb{I} 50'59	
morning max el	4750 Aug 05 02:19	22° \mathbb{O} 33'42	22°35'23	direct	4751 Jul 03 21:18	26° \mathbb{I} 10'21	
	4750 Aug 11 14:33	0° \mathbb{Q}			4751 Jul 14 02:45	0° \mathbb{O}	
asc. node	4750 Aug 21 01:53	15° \mathbb{Q} 23'08		morning max el	4751 Jul 17 16:53	3° \mathbb{O} 00'22	24°19'14
morning set	4750 Aug 27 05:47	27° \mathbb{Q} 44'00			4751 Aug 05 11:12	0° \mathbb{Q}	
	4750 Aug 28 07:34	0° \mathbb{M}		asc. node	4751 Aug 07 22:56	4° \mathbb{Q} 50'49	

morning set	4751 Aug 11 17:33	12° Ω 37'52		asc. node	4752 Jul 24 19:59	24° \mathfrak{D} 36'10	
				morning set	4752 Jul 26 04:49	27° \mathfrak{D} 28'20	
superior conj	4751 Aug 18 16:29	27° Ω 41'11	1°31'25		4752 Jul 27 09:17	0° Ω	
minimum elong	4751 Aug 18 14:30	27° Ω 30'22	1°31'14				
	4751 Aug 19 18:05	0° \mathfrak{M}		superior conj	4752 Aug 02 03:27	12° Ω 35'14	1°17'12
max. Earth dist.	4751 Aug 20 14:21	1° \mathfrak{M} 49'14	1.32960 AU	minimum elong	4752 Aug 02 01:08	12° Ω 22'31	1°16'51
evening rise	4751 Aug 26 00:34	13° \mathfrak{M} 11'25		max. Earth dist.	4752 Aug 02 22:33	14° Ω 20'18	1.32249 AU
	4751 Sep 03 20:52	0° \mathfrak{L}		evening rise	4752 Aug 09 03:16	27° Ω 39'56	
desc. node	4751 Sep 13 12:56	15° \mathfrak{L} 41'24			4752 Aug 10 06:23	0° \mathfrak{M}	
	4751 Sep 24 12:16	0° \mathfrak{M}			4752 Aug 27 04:40	0° \mathfrak{L}	
evening max el	4751 Sep 28 09:44	4° \mathfrak{M} 01'25	27°26'52	desc. node	4752 Aug 30 09:58	4° \mathfrak{L} 35'50	
retrograde	4751 Oct 12 01:24	11° \mathfrak{M} 18'03		evening max el	4752 Sep 09 16:56	16° \mathfrak{L} 37'18	27°13'12
evening set	4751 Oct 19 05:04	8° \mathfrak{M} 42'19		retrograde	4752 Sep 23 13:18	23° \mathfrak{L} 50'41	
min. Earth dist.	4751 Oct 22 21:19	5° \mathfrak{M} 31'44	0.63504 AU	evening set	4752 Sep 30 16:20	21° \mathfrak{L} 31'33	
inferior conj	4751 Oct 25 12:34	2° \mathfrak{M} 52'44	-3°00'49	min. Earth dist.	4752 Oct 04 07:25	18° \mathfrak{L} 45'48	0.61604 AU
minimum elong	4751 Oct 25 17:43	2° \mathfrak{M} 39'46	2°59'00	inferior conj	4752 Oct 07 08:56	16° \mathfrak{L} 02'06	-4°00'10
	4751 Oct 28 13:31	30° \mathfrak{R} \mathfrak{L}		minimum elong	4752 Oct 07 15:06	15° \mathfrak{L} 48'20	3°58'28
morning rise	4751 Nov 01 07:50	27° \mathfrak{L} 36'03		morning rise	4752 Oct 14 15:45	11° \mathfrak{L} 05'06	
direct	4751 Nov 03 18:28	27° \mathfrak{L} 07'14		direct	4752 Oct 16 23:44	10° \mathfrak{L} 42'13	
asc. node	4751 Nov 03 22:10	27° \mathfrak{L} 07'22		asc. node	4752 Oct 20 19:13	11° \mathfrak{L} 45'45	
	4751 Nov 09 18:58	0° \mathfrak{M}		morning max el	4752 Oct 23 23:45	14° \mathfrak{L} 13'31	17°54'50
morning max el	4751 Nov 10 08:28	0° \mathfrak{M} 32'15	17°50'22		4752 Nov 03 18:40	0° \mathfrak{M}	
morning set	4751 Nov 26 19:41	25° \mathfrak{M} 50'48		morning set	4752 Nov 08 18:51	9° \mathfrak{M} 01'39	
	4751 Nov 29 05:13	0° \mathfrak{X}					
superior conj	4751 Dec 09 02:04	16° \mathfrak{X} 40'43	0°09'57	superior conj	4752 Nov 19 07:48	27° \mathfrak{M} 52'33	0°48'35
minimum elong	4751 Dec 09 03:07	16° \mathfrak{X} 45'04	0°09'49	minimum elong	4752 Nov 19 11:33	28° \mathfrak{M} 08'48	0°48'04
behind sun begin	4751 Dec 08 19:26	16° \mathfrak{X} 13'23			4752 Nov 20 13:21	0° \mathfrak{X}	
behind sun end	4751 Dec 09 10:48	17° \mathfrak{X} 16'42		desc. node	4752 Nov 26 09:14	9° \mathfrak{X} 48'02	
desc. node	4751 Dec 10 12:12	19° \mathfrak{X} 00'48		max. Earth dist.	4752 Nov 26 18:30	10° \mathfrak{X} 26'08	1.42722 AU
max. Earth dist.	4751 Dec 15 05:02	26° \mathfrak{X} 36'41	1.44222 AU	evening rise	4752 Dec 03 08:02	20° \mathfrak{X} 59'05	
	4751 Dec 17 08:10	0° \mathfrak{Z}			4752 Dec 09 03:50	0° \mathfrak{Z}	
evening rise	4751 Dec 24 16:19	11° \mathfrak{Z} 27'06		evening max el	4752 Dec 30 09:42	0° \mathfrak{Z}	
	4752 Jan 05 23:25	0° \mathfrak{Z}		retrograde	4753 Jan 04 10:26	5° \mathfrak{Z} 42'46	22°01'08
evening max el	4752 Jan 22 14:50	22° \mathfrak{Z} 07'57	20°47'18	asc. node	4753 Jan 13 19:05	11° \mathfrak{Z} 16'52	
retrograde	4752 Jan 30 22:01	27° \mathfrak{Z} 01'58		evening set	4753 Jan 16 18:30	10° \mathfrak{Z} 29'42	
asc. node	4752 Jan 30 21:27	27° \mathfrak{Z} 01'58		inferior conj	4753 Jan 18 05:55	9° \mathfrak{Z} 29'42	
evening set	4752 Feb 03 22:10	25° \mathfrak{Z} 30'11		minimum elong	4753 Jan 23 14:11	3° \mathfrak{Z} 10'01	2°08'06
inferior conj	4752 Feb 09 06:35	19° \mathfrak{Z} 19'29	2°44'33	min. Earth dist.	4753 Jan 23 11:51	3° \mathfrak{Z} 18'08	2°07'20
minimum elong	4752 Feb 09 04:10	19° \mathfrak{Z} 27'47	2°43'56		4753 Jan 23 14:30	3° \mathfrak{Z} 08'56	0.68036 AU
min. Earth dist.	4752 Feb 09 18:49	18° \mathfrak{Z} 37'23	0.67671 AU		4753 Jan 25 22:34	30° \mathfrak{R} \mathfrak{Z}	
morning rise	4752 Feb 14 09:58	13° \mathfrak{Z} 05'57		morning rise	4753 Jan 28 17:37	26° \mathfrak{Z} 58'54	
direct	4752 Feb 19 20:53	10° \mathfrak{Z} 41'05		direct	4753 Feb 02 13:51	24° \mathfrak{Z} 55'27	
morning max el	4752 Mar 01 19:48	17° \mathfrak{Z} 13'21	24°01'42		4753 Feb 11 14:40	0° \mathfrak{Z}	
desc. node	4752 Mar 07 11:28	23° \mathfrak{Z} 35'19		morning max el	4753 Feb 12 06:13	0° \mathfrak{Z} 38'23	22°32'39
	4752 Mar 12 11:03	0° \mathfrak{H}		desc. node	4753 Feb 22 08:29	12° \mathfrak{Z} 49'08	
	4752 Apr 01 10:41	0° \mathfrak{Y}			4753 Mar 06 08:02	0° \mathfrak{H}	
morning set	4752 Apr 06 11:15	8° \mathfrak{Y} 27'30		morning set	4753 Mar 18 03:41	18° \mathfrak{H} 33'53	
max. Earth dist.	4752 Apr 10 05:28	15° \mathfrak{Y} 03'02	1.38247 AU	max. Earth dist.	4753 Mar 23 01:27	26° \mathfrak{H} 44'54	1.40442 AU
					4753 Mar 24 23:03	0° \mathfrak{Y}	
superior conj	4752 Apr 17 10:11	28° \mathfrak{Y} 19'38	-1°32'14	superior conj	4753 Mar 30 20:38	10° \mathfrak{Y} 24'44	-1°54'43
minimum elong	4752 Apr 17 14:56	28° \mathfrak{Y} 42'17	1°31'37	minimum elong	4753 Mar 31 01:14	10° \mathfrak{Y} 45'34	1°54'22
	4752 Apr 18 07:12	0° \mathfrak{B}		evening rise	4753 Apr 09 21:36	29° \mathfrak{Y} 04'53	
evening rise	4752 Apr 26 08:47	15° \mathfrak{B} 45'41			4753 Apr 10 09:17	0° \mathfrak{B}	
asc. node	4752 Apr 27 20:45	18° \mathfrak{B} 41'41		asc. node	4753 Apr 14 17:49	8° \mathfrak{B} 06'33	
	4752 May 03 22:17	0° \mathfrak{H}		evening max el	4753 Apr 26 01:19	24° \mathfrak{B} 57'20	18°22'31
evening max el	4752 May 12 19:49	12° \mathfrak{H} 25'04	18°57'33	retrograde	4753 May 03 09:51	28° \mathfrak{B} 36'27	
retrograde	4752 May 21 08:55	16° \mathfrak{H} 36'02		evening set	4753 May 05 18:20	28° \mathfrak{B} 15'02	
evening set	4752 May 23 10:32	16° \mathfrak{H} 22'19		inferior conj	4753 May 13 02:13	23° \mathfrak{B} 39'26	2°12'15
inferior conj	4752 May 31 13:59	12° \mathfrak{H} 06'27	0°49'43	minimum elong	4753 May 13 05:46	23° \mathfrak{B} 32'05	2°11'15
minimum elong	4752 May 31 15:54	12° \mathfrak{H} 03'05	0°49'02	min. Earth dist.	4753 May 16 12:48	20° \mathfrak{B} 50'17	0.58696 AU
desc. node	4752 Jun 03 10:42	10° \mathfrak{H} 05'44		morning rise	4753 May 20 14:08	18° \mathfrak{B} 07'12	
min. Earth dist.	4752 Jun 03 16:22	9° \mathfrak{H} 56'07	0.56719 AU	desc. node	4753 May 21 07:44	17° \mathfrak{B} 45'03	
morning rise	4752 Jun 08 17:59	7° \mathfrak{H} 05'55		direct	4753 May 26 17:14	16° \mathfrak{B} 27'37	
direct	4752 Jun 14 00:00	6° \mathfrak{H} 00'13		morning max el	4753 Jun 10 02:39	24° \mathfrak{B} 13'04	27°08'26
morning max el	4752 Jun 28 07:25	13° \mathfrak{H} 24'33	25°55'31		4753 Jun 15 08:47	0° \mathfrak{H}	
	4752 Jul 11 08:47	0° \mathfrak{D}			4753 Jul 04 12:17	0° \mathfrak{D}	

morning set	4753 Jul 10 13:57	12°☿10'28		morning set	4754 Jun 10 09:14	0°♄	
asc. node	4753 Jul 11 17:03	14°☿33'41			4754 Jun 24 19:09	26°♄38'39	
					4754 Jun 26 09:47	0°☿	
superior conj	4753 Jul 17 15:17	27°☿28'59	0°58'31	asc. node	4754 Jun 28 14:07	4°☿38'36	
minimum elong	4753 Jul 17 13:08	27°☿17'04	0°58'07	max. Earth dist.	4754 Jun 30 20:11	9°☿31'59	1.32088 AU
max. Earth dist.	4753 Jul 17 09:43	26°☿58'11	1.31959 AU				
	4753 Jul 18 18:38	0°♄		superior conj	4754 Jul 02 02:15	12°☿16'47	0°35'58
evening rise	4753 Jul 24 11:07	12°♄21'35		minimum elong	4754 Jul 02 00:43	12°☿08'19	0°35'38
	4753 Aug 02 09:50	0°♄		evening rise	4754 Jul 08 21:57	27°☿09'33	
desc. node	4753 Aug 17 07:00	22°♄33'53			4754 Jul 10 06:12	0°♄	
evening max el	4753 Aug 22 17:52	28°♄27'54	26°26'09		4754 Jul 27 08:23	0°♄	
	4753 Aug 24 10:42	0°♄		desc. node	4754 Aug 04 04:01	9°♄12'57	
retrograde	4753 Sep 05 16:55	5°♄37'02		evening max el	4754 Aug 04 11:25	9°♄30'49	25°09'39
evening set	4753 Sep 12 08:31	3°♄47'15		retrograde	4754 Aug 18 10:00	16°♄34'09	
min. Earth dist.	4753 Sep 16 07:21	1°♄12'11	0.59538 AU	evening set	4754 Aug 24 01:07	15°♄21'42	
	4753 Sep 17 20:57	30°♄		min. Earth dist.	4754 Aug 28 23:04	12°♄39'17	0.57532 AU
inferior conj	4753 Sep 19 13:30	28°♄40'17	-4°48'44	inferior conj	4754 Aug 31 23:03	10°♄37'56	-5°14'25
minimum elong	4753 Sep 19 18:48	28°♄29'56	4°47'51	minimum elong	4754 Sep 01 00:22	10°♄35'42	5°14'23
morning rise	4753 Sep 27 07:13	24°♄05'22		morning rise	4754 Sep 09 01:56	6°♄25'39	
direct	4753 Sep 29 15:55	23°♄45'34		direct	4754 Sep 11 14:59	6°♄06'34	
morning max el	4753 Oct 07 10:06	27°♄32'05	18°18'53	morning max el	4754 Sep 20 12:09	10°♄18'24	19°04'04
asc. node	4753 Oct 07 16:17	27°♄47'12		asc. node	4754 Sep 24 13:19	14°♄56'54	
	4753 Oct 09 16:22	0°♄			4754 Oct 03 14:21	0°♄	
morning set	4753 Oct 23 07:54	22°♄51'47		morning set	4754 Oct 07 06:34	7°♄09'28	
	4753 Oct 27 01:53	0°♄					
				superior conj	4754 Oct 15 13:45	23°♄29'34	1°34'09
superior conj	4753 Nov 01 13:28	10°♄13'41	1°16'36	minimum elong	4754 Oct 15 16:17	23°♄41'43	1°33'58
minimum elong	4753 Nov 01 17:16	10°♄31'04	1°16'11		4754 Oct 19 00:09	0°♄	
max. Earth dist.	4753 Nov 09 02:53	23°♄36'28	1.40806 AU	max. Earth dist.	4754 Oct 22 08:06	6°♄06'21	1.38709 AU
	4753 Nov 12 22:07	0°♄		evening rise	4754 Oct 26 03:40	12°♄50'20	
desc. node	4753 Nov 13 06:15	0°♄33'31		desc. node	4754 Oct 31 03:16	21°♄13'48	
evening rise	4753 Nov 13 18:18	1°♄23'04			4754 Nov 05 15:18	0°♄	
	4753 Dec 02 13:44	0°♄			4754 Nov 27 17:19	0°♄	
evening max el	4753 Dec 18 01:50	19°♄20'33	23°20'36	evening max el	4754 Nov 30 14:59	3°♄02'32	24°39'22
retrograde	4753 Dec 28 13:23	25°♄32'35		retrograde	4754 Dec 12 03:43	9°♄45'42	
evening set	4754 Jan 02 12:29	23°♄29'40		evening set	4754 Dec 17 16:17	7°♄27'33	
asc. node	4754 Jan 03 15:33	22°♄26'32		asc. node	4754 Dec 21 12:33	3°♄13'52	
inferior conj	4754 Jan 07 22:07	17°♄04'49	1°24'10	min. Earth dist.	4754 Dec 22 06:55	2°♄13'48	0.67670 AU
minimum elong	4754 Jan 07 20:19	17°♄10'59	1°23'31	inferior conj	4754 Dec 23 04:35	1°♄01'47	0°33'49
min. Earth dist.	4754 Jan 07 11:19	17°♄41'55	0.68031 AU	minimum elong	4754 Dec 23 03:46	1°♄04'30	0°33'30
morning rise	4754 Jan 13 04:05	10°♄57'56			4754 Dec 23 23:17	30°♄	
direct	4754 Jan 17 10:07	9°♄17'17		morning rise	4754 Dec 28 15:22	25°♄01'11	
morning max el	4754 Jan 25 21:53	14°♄12'18	21°09'23	direct	4755 Jan 01 08:22	23°♄42'16	
	4754 Feb 07 10:18	0°♄		morning max el	4755 Jan 08 21:19	27°♄58'17	19°57'43
desc. node	4754 Feb 09 05:29	2°♄34'00			4755 Jan 10 18:51	0°♄	
morning set	4754 Feb 25 15:51	27°♄21'19		desc. node	4755 Jan 27 02:30	22°♄41'45	
	4754 Feb 27 08:04	0°♄			4755 Jan 31 21:58	0°♄	
max. Earth dist.	4754 Mar 05 03:33	9°♄21'22	1.42475 AU	morning set	4755 Feb 04 12:15	5°♄31'15	
				max. Earth dist.	4755 Feb 15 13:41	22°♄51'03	1.44077 AU
					4755 Feb 20 00:20	0°♄	
superior conj	4754 Mar 12 09:25	21°♄28'21	-2°07'26				
minimum elong	4754 Mar 12 11:14	21°♄36'04	2°07'24	superior conj	4755 Feb 20 20:46	1°♄23'06	-2°04'48
	4754 Mar 17 07:20	0°♄		minimum elong	4755 Feb 20 16:47	1°♄06'55	2°04'39
evening rise	4754 Mar 23 20:28	11°♄41'45		evening rise	4755 Mar 06 01:01	23°♄27'48	
asc. node	4754 Apr 01 14:51	27°♄06'59			4755 Mar 09 20:31	0°♄	
	4754 Apr 03 09:59	0°♄		asc. node	4755 Mar 19 11:52	15°♄35'13	
evening max el	4754 Apr 09 12:07	7°♄55'45	18°07'23	evening max el	4755 Mar 24 00:55	21°♄11'11	18°11'26
retrograde	4754 Apr 16 03:58	11°♄19'31		retrograde	4755 Mar 30 10:54	24°♄34'44	
evening set	4754 Apr 18 19:10	10°♄47'52		evening set	4755 Apr 02 08:13	23°♄51'29	
inferior conj	4754 Apr 25 10:31	5°♄51'31	3°03'39	inferior conj	4755 Apr 08 11:04	18°♄35'22	3°28'52
minimum elong	4754 Apr 25 13:21	5°♄44'43	3°03'08	minimum elong	4755 Apr 08 12:18	18°♄32'03	3°28'46
min. Earth dist.	4754 Apr 28 15:50	2°♄47'59	0.60896 AU	min. Earth dist.	4755 Apr 11 03:37	15°♄41'20	0.63008 AU
morning rise	4754 May 02 05:27	29°♄57'55		morning rise	4755 Apr 14 15:11	12°♄29'25	
	4754 May 02 04:12	30°♄		direct	4755 Apr 21 12:01	9°♄51'49	
desc. node	4754 May 08 04:44	27°♄46'26		desc. node	4755 Apr 25 01:45	10°♄29'44	
direct	4754 May 08 22:05	27°♄44'55		morning max el	4755 May 05 11:08	17°♄51'02	27°48'30
	4754 May 16 02:40	0°♄			4755 May 15 14:56	0°♄	
morning max el	4754 May 23 04:12	5°♄41'08	27°47'20				

	4755 Jun 03 04:48	0°♊		morning max el	4756 Apr 16 21:00	0°♑35°05	27°14'38
morning set	4755 Jun 08 18:10	10°♊45'44			4756 May 08 15:32	0°♑	
max. Earth dist.	4755 Jun 14 02:03	21°♊48'55	1.32648 AU	morning set	4756 May 22 08:19	24°♑23'41	
asc. node	4755 Jun 15 11:08	24°♊46'06			4756 May 25 04:22	0°♊	
				max. Earth dist.	4756 May 26 23:23	3°♊38'10	1.33658 AU
superior conj	4755 Jun 16 10:31	26°♊52'16	0°10'10				
minimum elong	4755 Jun 16 10:02	26°♊49'38	0°10'03	superior conj	4756 May 30 14:09	11°♊09'42	-0°18'06
behind sun begin	4755 Jun 16 05:56	26°♊27'26		minimum elong	4756 May 30 15:05	11°♊14'40	0°17'54
behind sun end	4755 Jun 16 14:08	27°♊11'51		asc. node	4756 Jun 01 08:10	14°♊52'24	
	4755 Jun 17 21:08	0°♊		evening rise	4756 Jun 06 20:44	26°♊37'22	
evening rise	4755 Jun 23 09:46	11°♊56'49			4756 Jun 08 11:38	0°♊	
	4755 Jul 02 13:43	0°♊			4756 Jun 27 06:21	0°♊	
evening max el	4755 Jul 17 00:06	19°♊58'29	23°35'08	evening max el	4756 Jun 27 15:36	0°♊22'53	21°58'44
desc. node	4755 Jul 22 01:02	24°♊02'00		desc. node	4756 Jul 07 22:02	6°♊26'48	
retrograde	4755 Jul 30 14:47	26°♊48'14		retrograde	4756 Jul 10 08:23	6°♊40'36	
evening set	4755 Aug 03 18:43	26°♊10'12		evening set	4756 Jul 13 02:35	6°♊23'35	
min. Earth dist.	4755 Aug 10 09:56	23°♊03'34	0.55889 AU	inferior conj	4756 Jul 22 09:51	2°♊19'37	-3°56'57
inferior conj	4755 Aug 12 12:19	21°♊48'27	-5°01'08	minimum elong	4756 Jul 22 01:08	2°♊31'50	3°54'39
minimum elong	4755 Aug 12 07:20	21°♊55'55	5°00'33	min. Earth dist.	4756 Jul 21 20:06	2°♊38'54	0.54938 AU
morning rise	4755 Aug 20 22:25	17°♊54'07			4756 Jul 26 19:36	30°♊	
direct	4755 Aug 23 18:34	17°♊34'08		morning rise	4756 Jul 31 01:18	28°♊28'56	
morning max el	4755 Sep 03 03:04	22°♊22'48	20°11'10	direct	4756 Aug 03 06:45	28°♊05'55	
	4755 Sep 09 11:24	0°♊			4756 Aug 10 05:58	0°♊	
asc. node	4755 Sep 11 10:21	2°♊59'25		morning max el	4756 Aug 15 06:05	3°♊42'00	21°38'26
morning set	4755 Sep 21 11:37	21°♊44'49		asc. node	4756 Aug 28 07:23	21°♊42'40	
	4755 Sep 25 12:10	0°♊			4756 Sep 01 16:04	0°♊	
				morning set	4756 Sep 04 20:43	6°♊31'24	
superior conj	4755 Sep 29 03:33	7°♊24'51	1°42'33				
minimum elong	4755 Sep 29 04:27	7°♊29'26	1°42'32	superior conj	4756 Sep 12 02:51	21°♊47'55	1°43'12
max. Earth dist.	4755 Oct 04 14:10	18°♊05'51	1.36677 AU	minimum elong	4756 Sep 12 02:18	21°♊45'08	1°43'12
evening rise	4755 Oct 08 10:20	25°♊15'34		max. Earth dist.	4756 Sep 16 02:10	29°♊57'36	1.34920 AU
	4755 Oct 11 01:47	0°♊			4756 Sep 16 02:39	0°♊	
desc. node	4755 Oct 18 00:18	11°♊43'48		evening rise	4756 Sep 20 10:20	8°♊29'16	
	4755 Oct 30 04:44	0°♊			4756 Oct 02 15:46	0°♊	
evening max el	4755 Nov 13 03:28	16°♊45'41	25°50'31	desc. node	4756 Oct 03 21:20	1°♊58'04	
retrograde	4755 Nov 25 13:25	23°♊50'37			4756 Oct 25 06:00	0°♊	
evening set	4755 Dec 01 15:40	21°♊19'30		evening max el	4756 Oct 25 16:00	0°♊24'15	26°46'37
min. Earth dist.	4755 Dec 05 22:57	16°♊40'45	0.66949 AU	retrograde	4756 Nov 07 17:52	7°♊40'37	
inferior conj	4755 Dec 07 07:46	14°♊57'21	-0°22'02	evening set	4756 Nov 14 08:37	5°♊01'20	
minimum elong	4755 Dec 07 08:20	14°♊55'32	0°21'48	min. Earth dist.	4756 Nov 18 09:12	0°♊58'03	0.65873 AU
asc. node	4755 Dec 08 09:34	13°♊36'55			4756 Nov 19 05:07	30°♊	
morning rise	4755 Dec 13 01:27	9°♊05'26		inferior conj	4756 Nov 20 05:38	28°♊47'46	-1°22'14
direct	4755 Dec 16 07:04	8°♊05'27		minimum elong	4756 Nov 20 07:56	28°♊41'00	1°21'16
morning max el	4755 Dec 23 04:31	11°♊54'18	19°00'49	asc. node	4756 Nov 24 06:36	24°♊32'26	
	4756 Jan 05 12:37	0°♊		morning rise	4756 Nov 26 08:06	23°♊07'01	
desc. node	4756 Jan 13 23:33	13°♊05'56		direct	4756 Nov 29 04:21	22°♊22'16	
morning set	4756 Jan 14 17:48	14°♊17'07		morning max el	4756 Dec 05 17:35	25°♊54'56	18°20'02
	4756 Jan 24 19:19	0°♊			4756 Dec 09 05:51	0°♊	
max. Earth dist.	4756 Jan 29 05:51	6°♊57'43	1.45049 AU	morning set	4756 Dec 25 02:13	24°♊25'44	
					4756 Dec 28 13:17	0°♊	
superior conj	4756 Jan 31 08:57	10°♊18'59	-1°42'42	desc. node	4756 Dec 30 20:35	3°♊41'22	
minimum elong	4756 Jan 30 23:57	9°♊43'31	1°41'56				
	4756 Feb 12 16:12	0°♊		superior conj	4757 Jan 09 11:42	18°♊56'04	-1°03'13
evening rise	4756 Feb 15 07:30	4°♊17'36		minimum elong	4757 Jan 09 04:01	18°♊25'53	1°02'16
	4756 Mar 02 16:09	0°♊		max. Earth dist.	4757 Jan 11 00:40	21°♊21'06	1.45297 AU
asc. node	4756 Mar 05 08:52	3°♊21'39			4757 Jan 16 13:14	0°♊	
evening max el	4756 Mar 06 12:54	4°♊36'56	18°33'57	evening rise	4757 Jan 25 14:55	14°♊12'18	
retrograde	4756 Mar 13 02:15	8°♊13'12			4757 Feb 04 17:25	0°♊	
evening set	4756 Mar 16 05:43	7°♊17'34		greatest brilliancy	4757 Feb 05 11:49	1°♊10'49	-0.8m
inferior conj	4756 Mar 21 23:49	1°♊43'29	3°33'57	evening max el	4757 Feb 17 21:47	18°♊07'33	19°13'54
minimum elong	4756 Mar 21 23:27	1°♊44'35	3°33'56	asc. node	4757 Feb 20 05:53	20°♊13'34	
	4756 Mar 23 10:18	30°♊		retrograde	4757 Feb 24 22:20	22°♊07'28	
min. Earth dist.	4756 Mar 24 01:00	29°♊16'39	0.64830 AU	evening set	4757 Feb 28 08:45	20°♊58'37	
morning rise	4756 Mar 27 16:34	25°♊31'20		inferior conj	4757 Mar 05 21:12	15°♊08'34	3°23'46
direct	4756 Apr 03 09:47	22°♊42'03		minimum elong	4757 Mar 05 19:39	15°♊13'35	3°23'34
desc. node	4756 Apr 10 22:46	25°♊30'23		min. Earth dist.	4757 Mar 07 07:06	13°♊19'31	0.66266 AU
	4756 Apr 16 06:53	0°♊		morning rise	4757 Mar 11 06:13	8°♊54'10	

direct	4757 Mar 17 14:11	6° X 06'15		min. Earth dist.	4758 Feb 18 20:11	27° \approx 39'27	0.67282 AU
desc. node	4757 Mar 28 19:48	12° X 13'39		morning rise	4758 Feb 23 04:58	22° \approx 32'02	
morning max el	4757 Mar 30 06:55	13° X 39'29	26°12'41	direct	4758 Mar 01 00:14	19° \approx 56'23	
	4757 Apr 12 12:59	0° Y		morning max el	4758 Mar 12 15:39	26° \approx 54'11	24°52'14
	4757 May 01 09:00	0° B		desc. node	4758 Mar 15 16:51	0° X 11'12	
morning set	4757 May 05 09:50	7° B 20'49			4758 Mar 15 12:54	0° X	
max. Earth dist.	4757 May 09 09:13	14° B 55'12	1.35131 AU		4758 Apr 06 04:02	0° Y	
				morning set	4758 Apr 17 17:47	19° Y 23'33	
superior conj	4757 May 14 10:42	25° B 01'30	-0°47'39	max. Earth dist.	4758 Apr 21 08:39	25° Y 56'14	1.37029 AU
minimum elong	4757 May 14 13:18	25° B 14'45	0°47'09		4758 Apr 23 13:01	0° B	
	4757 May 16 20:47	0° II					
asc. node	4757 May 19 05:12	4° II 52'50		superior conj	4758 Apr 27 21:14	8° B 20'07	-1°16'42
evening rise	4757 May 22 04:49	11° II 04'10		minimum elong	4758 Apr 28 01:23	8° B 40'24	1°16'03
	4757 Jun 01 04:48	0° B		evening rise	4758 May 06 07:45	25° B 11'02	
evening max el	4757 Jun 09 17:18	11° B 14'59	20°33'43	asc. node	4758 May 06 02:14	24° B 43'26	
retrograde	4757 Jun 20 21:08	16° B 42'41			4758 May 08 17:57	0° II	
evening set	4757 Jun 22 21:34	16° B 32'42		evening max el	4758 May 23 07:32	22° II 48'36	19°26'49
desc. node	4757 Jun 24 19:03	16° B 06'16		retrograde	4758 Jun 01 17:32	27° II 24'09	
inferior conj	4757 Jul 02 03:24	12° B 35'28	-2°10'01	evening set	4758 Jun 03 16:33	27° II 13'06	
minimum elong	4757 Jul 01 21:21	12° B 44'12	2°07'52	desc. node	4758 Jun 11 16:05	23° II 31'41	
min. Earth dist.	4757 Jul 03 07:49	11° B 54'28	0.54910 AU	inferior conj	4758 Jun 12 07:23	23° II 07'06	-0°11'20
morning rise	4757 Jul 10 20:20	8° B 28'05		minimum elong	4758 Jun 12 06:53	23° II 07'54	0°11'10
direct	4757 Jul 14 16:19	7° B 56'24		transit middle	4758 Jun 12 06:53	23° II 07'54	0°11'10
morning max el	4757 Jul 27 23:38	14° B 22'17	23°19'28	transit begin	4758 Jun 12 04:06	23° II 12'24	
	4757 Aug 09 01:43	0° Q		transit end	4758 Jun 12 09:40	23° II 03'25	
asc. node	4757 Aug 15 04:27	10° Q 56'26		min. Earth dist.	4758 Jun 14 21:39	21° II 27'01	0.55837 AU
morning set	4757 Aug 20 07:59	21° Q 23'49		morning rise	4758 Jun 20 18:27	18° II 27'43	
	4757 Aug 24 08:22	0° P		direct	4758 Jun 25 11:31	17° II 37'32	
				morning max el	4758 Jul 09 13:15	24° II 43'51	25°02'01
superior conj	4757 Aug 27 08:32	6° P 29'18	1°37'21		4758 Jul 14 10:05	0° B	
minimum elong	4757 Aug 27 06:57	6° P 20'46	1°37'14		4758 Aug 01 19:07	0° Q	
max. Earth dist.	4757 Aug 29 23:02	12° P 02'10	1.33551 AU	asc. node	4758 Aug 02 01:30	0° Q 32'26	
evening rise	4757 Sep 03 23:30	22° P 20'31		morning set	4758 Aug 04 19:42	6° Q 16'40	
	4757 Sep 07 22:25	0° L					
desc. node	4757 Sep 20 18:21	21° L 49'45		superior conj	4758 Aug 11 18:09	21° Q 20'51	1°25'58
	4757 Sep 26 09:52	0° M		minimum elong	4758 Aug 11 15:58	21° Q 08'53	1°25'42
evening max el	4757 Oct 08 04:16	13° M 49'31	27°20'23	max. Earth dist.	4758 Aug 13 04:04	24° Q 25'51	1.32608 AU
retrograde	4757 Oct 21 16:32	21° M 07'59			4758 Aug 15 18:04	0° P	
evening set	4757 Oct 28 16:44	18° M 28'19		evening rise	4758 Aug 18 22:09	6° P 38'30	
min. Earth dist.	4757 Nov 01 11:32	14° M 59'22	0.64453 AU		4758 Aug 31 11:04	0° L	
inferior conj	4757 Nov 03 19:56	12° M 28'26	-2°24'51	desc. node	4758 Sep 07 15:23	11° L 08'53	
minimum elong	4757 Nov 04 00:06	12° M 17'15	2°23'15	evening max el	4758 Sep 20 14:18	26° L 48'05	27°25'17
morning rise	4757 Nov 10 08:44	7° M 01'51			4758 Sep 24 08:34	0° M	
asc. node	4757 Nov 11 03:39	6° M 44'27		retrograde	4758 Oct 04 08:23	4° M 03'04	
direct	4757 Nov 12 22:03	6° M 28'19		evening set	4758 Oct 11 12:43	1° M 33'14	
morning max el	4757 Nov 19 09:53	9° M 54'02	17°56'09		4758 Oct 13 13:16	30° R L	
	4757 Dec 03 02:14	0° X		min. Earth dist.	4758 Oct 15 03:56	28° L 34'14	0.62719 AU
morning set	4757 Dec 06 15:40	6° X 00'20		inferior conj	4758 Oct 17 23:47	25° L 51'51	-3°26'49
desc. node	4757 Dec 17 17:37	24° X 24'21		minimum elong	4758 Oct 18 05:31	25° L 38'06	3°24'58
				morning rise	4758 Oct 24 23:55	20° L 42'48	
superior conj	4757 Dec 20 01:36	28° X 10'44	-0°16'10	direct	4758 Oct 27 09:02	20° L 16'51	
minimum elong	4757 Dec 19 23:41	28° X 03'00	0°15'52	asc. node	4758 Oct 29 00:44	20° L 29'44	
behind sun begin	4757 Dec 19 21:46	27° X 55'17		morning max el	4758 Nov 03 02:23	23° L 43'44	17°49'57
behind sun end	4757 Dec 20 01:36	28° X 10'43			4758 Nov 08 02:29	0° M	
	4757 Dec 21 04:49	0° Z		morning set	4758 Nov 19 04:23	18° M 41'43	
max. Earth dist.	4757 Dec 24 19:33	5° Z 45'09	1.44811 AU		4758 Nov 25 14:46	0° X	
evening rise	4758 Jan 05 05:06	23° Z 30'24					
	4758 Jan 09 10:49	0° \approx		superior conj	4758 Nov 30 15:53	8° X 37'10	0°27'33
greatest brilliancy	4758 Jan 19 21:27	15° \approx 41'47	-0.6m	minimum elong	4758 Nov 30 18:29	8° X 48'04	0°27'11
	4758 Jan 30 12:43	0° X		desc. node	4758 Dec 04 14:39	15° X 10'51	
evening max el	4758 Feb 01 02:00	1° X 40'55	20°09'27	max. Earth dist.	4758 Dec 07 12:02	19° X 53'16	1.43650 AU
asc. node	4758 Feb 07 02:56	5° X 57'04			4758 Dec 13 20:54	0° Z	
retrograde	4758 Feb 08 20:22	6° X 13'05		evening rise	4758 Dec 15 15:36	2° Z 46'04	
evening set	4758 Feb 12 15:05	4° X 50'03			4759 Jan 02 23:16	0° \approx	
	4758 Feb 17 02:24	30° R \approx		evening max el	4759 Jan 15 00:45	15° \approx 15'10	21°17'44
inferior conj	4758 Feb 18 00:23	28° \approx 46'20	3°01'43	retrograde	4759 Jan 23 18:12	20° \approx 25'32	
minimum elong	4758 Feb 17 22:08	28° \approx 53'54	3°01'14	asc. node	4759 Jan 24 23:59	20° \approx 17'14	

evening set	4759 Jan 27 22:47	18°  47'15		evening set	4760 Jan 12 06:12	2°  47'05	
inferior conj	4759 Feb 02 06:56	12°  32'33	2°30'04		4760 Jan 14 22:19	30°  R 	
minimum elong	4759 Feb 02 04:30	12°  41'00	2°29'22	inferior conj	4760 Jan 17 14:52	26°  Z4'43	1°50'18
min. Earth dist.	4759 Feb 02 13:59	12°  08'09	0.67878 AU	minimum elong	4760 Jan 17 12:42	26°  Z32'12	1°49'33
morning rise	4759 Feb 07 10:03	6°  20'04		min. Earth dist.	4760 Jan 17 10:18	26°  Z40'31	0.68080 AU
direct	4759 Feb 12 14:50	4°  03'49		morning rise	4760 Jan 22 19:06	20°  Z15'26	
morning max el	4759 Feb 23 00:31	10°  14'51	23°23'37	direct	4760 Jan 27 09:10	18°  Z21'51	
desc. node	4759 Mar 02 13:52	19°  01'26		morning max el	4760 Feb 05 12:49	23°  Z43'19	21°56'11
	4759 Mar 10 15:27	0°  X			4760 Feb 11 01:07	0°  X	
	4759 Mar 29 22:24	0°  Y		desc. node	4760 Feb 17 10:53	8°  X29'28	
morning set	4759 Mar 30 02:12	0°  Y16'02			4760 Mar 03 01:07	0°  X	
max. Earth dist.	4759 Apr 03 04:03	7°  Y15'41	1.39186 AU	morning set	4760 Mar 09 06:12	9°  X46'59	
				max. Earth dist.	4760 Mar 15 02:37	19°  X21'43	1.41341 AU
					4760 Mar 21 08:08	0°  Y	
superior conj	4759 Apr 10 17:50	20°  Y55'42	-1°42'38				
minimum elong	4759 Apr 10 22:46	21°  Y18'40	1°42'06	superior conj	4760 Mar 22 19:38	2°  Y35'46	-2°01'38
	4759 Apr 15 12:50	0°  X		minimum elong	4760 Mar 22 23:27	2°  Y52'37	2°01'26
evening rise	4759 Apr 20 02:43	8°  X50'35		evening rise	4760 Apr 02 10:07	21°  Y53'14	
asc. node	4759 Apr 22 23:17	14°  X19'37			4760 Apr 06 20:04	0°  X	
	4759 May 02 03:41	0°  II		asc. node	4760 Apr 08 20:20	3°  X35'08	
evening max el	4759 May 06 08:24	5°  II02'06	18°40'08	evening max el	4760 Apr 18 16:30	17°  X46'24	18°13'39
retrograde	4759 May 14 07:41	8°  II57'20		retrograde	4760 Apr 25 16:40	21°  X17'28	
evening set	4759 May 16 12:17	8°  II40'36		evening set	4760 Apr 28 03:59	20°  X51'58	
inferior conj	4759 May 24 07:09	4°  II16'22	1°28'37	inferior conj	4760 May 05 04:20	16°  X07'12	2°37'39
minimum elong	4759 May 24 10:09	4°  II10'43	1°27'38	minimum elong	4760 May 05 07:47	15°  X59'35	2°36'49
min. Earth dist.	4759 May 27 14:52	1°  II47'14	0.57514 AU	min. Earth dist.	4760 May 08 13:48	13°  X08'59	0.59618 AU
desc. node	4759 May 29 13:06	0°  II29'00		morning rise	4760 May 12 08:53	10°  X24'24	
	4759 May 30 08:11	30°  R 		desc. node	4760 May 15 10:07	9°  X01'38	
morning rise	4759 Jun 01 04:46	29°  X01'38		direct	4760 May 18 18:34	8°  X30'21	
direct	4759 Jun 06 20:29	27°  X42'20		morning max el	4760 Jun 02 03:25	16°  X21'22	27°29'37
	4759 Jun 14 11:50	0°  II			4760 Jun 13 07:55	0°  II	
morning max el	4759 Jun 21 05:18	5°  II16'05	26°30'10		4760 Jun 30 19:00	0°  X	
	4759 Jul 09 07:49	0°  X		morning set	4760 Jul 03 14:01	5°  X42'37	
asc. node	4759 Jul 19 22:33	20°  X24'17		asc. node	4760 Jul 05 19:35	10°  X25'44	
morning set	4759 Jul 20 06:19	21°  X05'09		max. Earth dist.	4760 Jul 10 01:43	19°  X41'49	1.31967 AU
	4759 Jul 24 09:28	0°  Omega					
superior conj	4759 Jul 27 05:44	6°  Omega16'10	1°09'47	superior conj	4760 Jul 10 17:24	21°  X08'14	0°49'24
minimum elong	4759 Jul 27 03:26	6°  Omega03'27	1°09'24	minimum elong	4760 Jul 10 15:27	20°  X57'28	0°49'00
max. Earth dist.	4759 Jul 27 14:15	7°  Omega03'10	1.32082 AU		4760 Jul 14 18:02	0°  Omega	
evening rise	4759 Aug 03 03:24	21°  Omega14'29		evening rise	4760 Jul 17 12:45	5°  Omega59'45	
	4759 Aug 07 10:40	0°  n			4760 Jul 30 02:38	0°  n	
desc. node	4759 Aug 25 12:25	29°  n42'07		desc. node	4760 Aug 11 09:25	17°  n09'54	
	4759 Aug 25 17:53	0°  u		evening max el	4760 Aug 14 16:46	20°  n35'35	25°56'30
evening max el	4759 Sep 02 19:15	9°  u06'32	26°57'10	retrograde	4760 Aug 28 15:56	27°  n43'00	
retrograde	4759 Sep 16 16:33	16°  u17'14		evening set	4760 Sep 03 22:58	26°  n08'14	
evening set	4759 Sep 23 16:26	14°  u09'15		min. Earth dist.	4760 Sep 08 05:11	23°  n32'35	0.58667 AU
min. Earth dist.	4759 Sep 27 09:27	11°  u30'12	0.60742 AU	inferior conj	4760 Sep 11 10:35	21°  n11'12	-5°03'17
inferior conj	4759 Sep 30 13:52	8°  u49'33	-4°22'40	minimum elong	4760 Sep 11 14:37	21°  n03'48	5°02'50
minimum elong	4759 Sep 30 19:58	8°  u36'38	4°21'15	morning rise	4760 Sep 19 08:32	16°  n46'27	
morning rise	4759 Oct 08 01:28	4°  u01'35		direct	4760 Sep 21 18:42	16°  n27'12	
direct	4759 Oct 10 09:29	3°  u40'11		morning max el	4760 Sep 29 23:10	20°  n22'45	18°35'30
asc. node	4759 Oct 15 21:46	5°  u45'21		asc. node	4760 Oct 01 18:48	22°  n17'43	
morning max el	4759 Oct 17 15:55	7°  u16'28	18°02'34		4760 Oct 07 06:26	0°  u	
	4759 Nov 01 05:45	0°  m		morning set	4760 Oct 16 03:35	16°  u14'08	
morning set	4759 Nov 02 10:02	2°  m11'12			4760 Oct 23 06:57	0°  m	
superior conj	4759 Nov 12 08:22	20°  m20'08	1°01'48	superior conj	4760 Oct 24 22:38	3°  m06'48	1°25'15
minimum elong	4759 Nov 12 12:23	20°  m37'56	1°01'18	minimum elong	4760 Oct 25 01:59	3°  m22'28	1°24'56
	4759 Nov 17 22:06	0°  x		max. Earth dist.	4760 Nov 01 06:20	16°  m21'11	1.39918 AU
max. Earth dist.	4759 Nov 19 23:47	3°  x28'56	1.41950 AU	evening rise	4760 Nov 05 10:00	23°  m27'34	
desc. node	4759 Nov 21 11:40	5°  x57'44		desc. node	4760 Nov 07 08:42	26°  m41'35	
evening rise	4759 Nov 25 14:05	12°  x37'17			4760 Nov 09 09:21	0°  x	
	4759 Dec 06 20:59	0°  Z			4760 Nov 29 18:27	0°  Z	
evening max el	4759 Dec 28 18:19	28°  Z50'44	22°34'35	evening max el	4760 Dec 10 08:18	12°  Z29'40	23°54'35
	4759 Dec 29 22:43	0°  X		retrograde	4760 Dec 21 07:02	18°  Z56'38	
retrograde	4760 Jan 07 14:11	4°  X41'13		evening set	4760 Dec 26 11:47	16°  Z46'52	
asc. node	4760 Jan 11 21:02	3°  X05'17		asc. node	4760 Dec 28 18:03	14°  Z28'43	

inferior conj	4760 Dec 31 22:22	10° Z 20'51	1°03'33	evening set	4761 Dec 10 13:54	0° Z 42'50	
minimum elong	4760 Dec 31 20:56	10° Z 25'42	1°03'00		4761 Dec 11 08:50	30° R Z	
min. Earth dist.	4760 Dec 31 06:52	11° Z 13'31	0.67914 AU	min. Earth dist.	4761 Dec 15 01:20	25° Z 43'37	0.67398 AU
morning rise	4761 Jan 06 06:07	4° Z 16'27		asc. node	4761 Dec 15 15:03	24° Z 58'57	
direct	4761 Jan 10 06:19	2° Z 45'32		inferior conj	4761 Dec 16 03:39	24° Z 17'47	0°10'43
morning max el	4761 Jan 18 07:45	7° Z 22'58	20°37'18	minimum elong	4761 Dec 16 03:23	24° Z 18'40	0°10'37
desc. node	4761 Feb 03 07:54	28° Z 25'05		transit middle	4761 Dec 16 03:23	24° Z 18'40	0°10'37
	4761 Feb 04 09:40	0° \approx		transit begin	4761 Dec 16 01:17	24° Z 25'31	
morning set	4761 Feb 16 09:11	18° \approx 11'14		transit end	4761 Dec 16 05:29	24° Z 11'50	
	4761 Feb 23 20:49	0° H		morning rise	4761 Dec 21 17:07	18° Z 20'22	
max. Earth dist.	4761 Feb 25 07:59	2° H 21'36	1.43212 AU	direct	4761 Dec 25 04:58	17° Z 09'59	
				morning max el	4762 Jan 01 10:33	21° Z 13'29	19°31'33
superior conj	4761 Mar 03 21:50	13° H 10'17	-2°08'32		4762 Jan 08 14:26	0° Z	
minimum elong	4761 Mar 03 21:28	13° H 08'44	2°08'31	greatest brilliancy	4762 Jan 14 13:18	8° Z 36'13	-0.7m
	4761 Mar 13 17:01	0° Y		desc. node	4762 Jan 21 04:56	18° Z 40'26	
evening rise	4761 Mar 16 01:47	4° Y 09'53		morning set	4762 Jan 26 06:11	26° Z 26'46	
asc. node	4761 Mar 26 17:21	22° Y 23'20			4762 Jan 28 13:18	0° \approx	
	4761 Apr 01 08:05	0° Z		max. Earth dist.	4762 Feb 07 20:22	16° \approx 06'45	1.44570 AU
evening max el	4761 Apr 02 04:30	0° Z 53'08	18°06'49				
retrograde	4761 Apr 08 16:49	4° Z 15'24		superior conj	4762 Feb 11 22:25	22° \approx 37'06	-1°57'53
evening set	4761 Apr 11 10:32	3° Z 39'06		minimum elong	4762 Feb 11 15:49	22° \approx 10'42	1°57'30
	4761 Apr 16 09:32	30° R Y			4762 Feb 16 12:05	0° H	
inferior conj	4761 Apr 17 20:06	28° Y 34'22	3°17'10	evening rise	4762 Feb 25 21:13	15° H 31'40	
minimum elong	4761 Apr 17 22:17	28° Y 28'48	3°16'51		4762 Mar 06 13:20	0° Y	
min. Earth dist.	4761 Apr 20 20:38	25° Y 31'55	0.61811 AU	asc. node	4762 Mar 13 14:22	10° Y 35'05	
morning rise	4761 Apr 24 08:19	22° Y 34'14		evening max el	4762 Mar 16 17:16	14° Y 13'36	18°18'54
direct	4761 May 01 03:43	20° Y 09'11		retrograde	4762 Mar 23 03:39	17° Y 40'56	
desc. node	4761 May 02 07:08	20° Y 13'02		evening set	4762 Mar 26 03:33	16° Y 52'34	
morning max el	4761 May 15 07:41	28° Y 08'41	27°52'23	inferior conj	4762 Apr 01 02:16	11° Y 28'54	3°33'07
	4761 May 17 02:39	0° Z		minimum elong	4762 Apr 01 02:47	11° Y 27'27	3°33'06
	4761 Jun 07 02:35	0° II		min. Earth dist.	4762 Apr 03 12:32	8° Y 44'27	0.63826 AU
morning set	4761 Jun 17 16:53	20° II 03'07		morning rise	4762 Apr 07 01:07	5° Y 19'49	
	4761 Jun 22 10:35	0° Z		direct	4762 Apr 13 21:25	2° Y 35'13	
asc. node	4761 Jun 22 16:37	0° Z 32'26		desc. node	4762 Apr 19 04:08	3° Y 58'16	
max. Earth dist.	4761 Jun 23 10:36	2° Z 09'34	1.32272 AU	morning max el	4762 Apr 27 16:00	10° Y 33'29	27°37'59
					4762 May 12 22:46	0° Z	
superior conj	4761 Jun 25 03:26	5° Z 51'45	0°25'23		4762 May 30 11:44	0° II	
minimum elong	4761 Jun 25 02:18	5° Z 45'30	0°25'08	morning set	4762 Jun 01 12:32	3° II 58'57	
evening rise	4761 Jul 02 00:12	20° Z 48'04		max. Earth dist.	4762 Jun 06 13:01	14° II 14'30	1.33015 AU
	4761 Jul 06 11:03	0° Q					
	4761 Jul 25 23:17	0° P		superior conj	4762 Jun 09 10:01	20° II 20'37	-0°01'36
evening max el	4761 Jul 27 07:26	1° P 20'20	24°30'37	minimum elong	4762 Jun 09 10:06	20° II 21'04	0°01'34
desc. node	4761 Jul 29 06:26	3° P 06'25		behind sun begin	4762 Jun 09 04:46	19° II 52'28	
retrograde	4761 Aug 10 04:24	8° P 20'13		behind sun end	4762 Jun 09 15:26	20° II 49'41	
evening set	4761 Aug 15 05:08	7° P 23'33		asc. node	4762 Jun 09 13:40	20° II 40'09	
min. Earth dist.	4761 Aug 20 18:32	4° P 32'22	0.56769 AU		4762 Jun 13 21:32	0° Z	
inferior conj	4761 Aug 23 11:23	2° P 48'55	-5°14'31	evening rise	4762 Jun 16 11:53	5° Z 33'17	
minimum elong	4761 Aug 23 10:07	2° P 50'57	5°14'29		4762 Jun 29 13:44	0° Q	
	4761 Aug 28 07:39	30° R Q		evening max el	4762 Jul 08 20:31	11° Q 43'44	22°53'34
morning rise	4761 Aug 31 17:35	28° Q 45'22		desc. node	4762 Jul 16 03:25	16° Q 58'55	
direct	4761 Sep 03 09:07	28° Q 26'17		retrograde	4762 Jul 22 04:03	18° Q 21'58	
	4761 Sep 09 00:44	0° P		evening set	4762 Jul 25 16:15	17° Q 55'04	
morning max el	4761 Sep 12 20:49	2° P 52'38	19°29'57	min. Earth dist.	4762 Aug 02 05:06	14° Q 33'53	0.55383 AU
asc. node	4761 Sep 18 15:50	9° P 51'39		inferior conj	4762 Aug 03 17:08	13° Q 42'01	-4°40'20
	4761 Sep 29 21:15	0° Z		minimum elong	4762 Aug 03 09:53	13° Q 52'29	4°39'01
morning set	4761 Sep 30 05:15	0° Z 40'02		morning rise	4762 Aug 12 05:41	9° Q 51'03	
				direct	4762 Aug 15 05:28	9° Q 30'04	
superior conj	4761 Oct 08 05:13	16° Z 41'07	1°38'44	morning max el	4762 Aug 26 06:38	14° Q 38'29	20°45'57
minimum elong	4761 Oct 08 07:04	16° Z 50'10	1°38'39	asc. node	4762 Sep 05 12:52	28° Q 13'32	
max. Earth dist.	4761 Oct 14 10:43	28° Z 33'44	1.37820 AU		4762 Sep 06 13:38	0° P	
	4761 Oct 15 05:31	0° M		morning set	4762 Sep 14 12:20	15° P 21'38	
evening rise	4761 Oct 18 04:51	5° M 20'43					
desc. node	4761 Oct 25 05:43	17° M 18'08		superior conj	4762 Sep 21 23:32	0° Z 50'07	1°43'41
	4761 Nov 02 08:58	0° Z		minimum elong	4762 Sep 21 23:47	0° Z 51'27	1°43'41
evening max el	4761 Nov 22 20:53	26° Z 12'21	25°11'05		4762 Sep 21 13:45	0° Z	
	4761 Nov 27 05:47	0° Z		max. Earth dist.	4762 Sep 26 18:53	10° Z 28'00	1.35893 AU
retrograde	4761 Dec 04 19:37	3° Z 06'47		evening rise	4762 Sep 30 19:32	18° Z 09'08	

	4762 Oct 07 10:58	0°♍	evening rise	4763 Sep 14 01:40	1°♌40'25	
desc. node	4762 Oct 12 02:46	7°♍42'46	desc. node	4763 Sep 28 23:47	27°♌48'42	
	4762 Oct 27 14:16	0°♌		4763 Sep 30 09:50	0°♍	
evening max el	4762 Nov 05 09:39	9°♌55'54 26°16'42	evening max el	4763 Oct 18 22:24	23°♍30'51 27°04'01	
retrograde	4762 Nov 18 03:07	17°♌06'29		4763 Oct 28 04:41	0°♌	
evening set	4762 Nov 24 10:48	14°♌31'32	retrograde	4763 Nov 01 04:57	0°♌48'03	
min. Earth dist.	4762 Nov 28 15:18	10°♌07'36 0.66537 AU		4763 Nov 04 23:16	30°♍	
inferior conj	4762 Nov 30 04:53	8°♌12'27 -0°47'07	evening set	4763 Nov 08 00:19	28°♍07'35	
minimum elong	4762 Nov 30 06:09	8°♌08'32 0°46'35	min. Earth dist.	4763 Nov 11 22:23	24°♍19'15 0.65321 AU	
asc. node	4762 Dec 02 12:04	5°♌29'52	inferior conj	4763 Nov 13 23:51	21°♍59'33 -1°48'37	
morning rise	4762 Dec 06 02:04	2°♌24'39	minimum elong	4763 Nov 14 02:57	21°♍50'46 1°47'21	
direct	4762 Dec 09 03:29	1°♌31'29	asc. node	4763 Nov 19 09:07	16°♍54'11	
morning max el	4762 Dec 15 20:28	5°♌12'10 18°41'21	morning rise	4763 Nov 20 06:33	16°♍24'24	
	4763 Jan 02 06:30	0°♌	direct	4763 Nov 22 23:40	15°♍44'44	
morning set	4763 Jan 05 22:01	5°♌45'16	morning max el	4763 Nov 29 11:16	19°♍13'00 18°07'44	
desc. node	4763 Jan 08 02:00	9°♌10'15		4763 Dec 07 14:09	0°♌	
	4763 Jan 21 08:14	0°♌	morning set	4763 Dec 17 19:16	16°♌32'32	
max. Earth dist.	4763 Jan 21 14:09	0°♌23'14 1.45254 AU	desc. node	4763 Dec 25 23:04	29°♌49'34	
				4763 Dec 26 01:39	0°♌	
superior conj	4763 Jan 22 04:14	1°♌18'26 -1°27'38	superior conj	4764 Jan 01 09:18	10°♌04'52 -0°43'26	
minimum elong	4763 Jan 21 18:54	0°♌41'50 1°26'39	minimum elong	4764 Jan 01 03:54	9°♌43'29 0°42'42	
evening rise	4763 Feb 06 17:37	25°♌56'40	max. Earth dist.	4764 Jan 04 09:59	14°♌51'22 1.45185 AU	
	4763 Feb 09 06:20	0°♌		4764 Jan 14 02:44	0°♌	
greatest brilliancy	4763 Feb 14 10:01	8°♌14'57 -0.9m	evening rise	4764 Jan 17 16:35	5°♌33'11	
evening max el	4763 Feb 28 04:14	27°♌42'01 18°48'58	greatest brilliancy	4764 Jan 30 11:49	25°♌13'01 -0.7m	
asc. node	4763 Feb 28 11:23	27°♌59'53		4764 Feb 02 17:30	0°♌	
	4763 Mar 02 20:27	0°♌	evening max el	4764 Feb 11 11:18	11°♌14'14 19°35'45	
retrograde	4763 Mar 06 21:16	1°♌26'41	asc. node	4764 Feb 15 08:24	14°♌24'51	
evening set	4763 Mar 10 03:42	0°♌25'23	retrograde	4764 Feb 18 18:34	15°♌26'50	
	4763 Mar 10 18:44	30°♌	evening set	4764 Feb 22 08:25	14°♌11'52	
inferior conj	4763 Mar 15 19:03	24°♌44'19 3°31'12	inferior conj	4764 Feb 27 19:13	8°♌15'28 3°15'41	
minimum elong	4763 Mar 15 18:07	24°♌47'13 3°31'09	minimum elong	4764 Feb 27 17:19	8°♌21'46 3°15'23	
min. Earth dist.	4763 Mar 17 13:37	22°♌32'50 0.65498 AU	min. Earth dist.	4764 Feb 28 22:51	6°♌44'28 0.66750 AU	
morning rise	4763 Mar 21 08:07	18°♌31'08	morning rise	4764 Mar 04 01:59	2°♌01'01	
direct	4763 Mar 27 22:03	15°♌40'59		4764 Mar 07 00:45	30°♌	
desc. node	4763 Apr 06 01:11	19°♌46'12	direct	4764 Mar 10 04:47	29°♌17'33	
morning max el	4763 Apr 10 01:55	23°♌26'33 26°51'10		4764 Mar 13 14:31	0°♌	
	4763 Apr 15 22:03	0°♌	morning max el	4764 Mar 22 11:31	6°♌37'02 25°40'13	
	4763 May 06 06:51	0°♌	desc. node	4764 Mar 22 22:15	7°♌04'27	
morning set	4763 May 15 21:47	17°♌20'27		4764 Apr 09 14:35	0°♌	
max. Earth dist.	4763 May 20 05:37	25°♌49'15 1.34226 AU	morning set	4764 Apr 27 16:32	29°♌56'26	
	4763 May 22 07:05	0°♌		4764 Apr 27 17:18	0°♌	
superior conj	4763 May 24 10:58	4°♌28'00 -0°30'33	max. Earth dist.	4764 May 01 11:03	6°♌58'24 1.35894 AU	
minimum elong	4763 May 24 12:36	4°♌36'30 0°30'13				
asc. node	4763 May 27 10:42	10°♌44'23	superior conj	4764 May 07 03:42	18°♌06'52 -1°00'09	
evening rise	4763 May 31 21:53	20°♌08'46	minimum elong	4764 May 07 07:00	18°♌23'25 0°59'34	
	4763 Jun 05 18:48	0°♌		4764 May 12 23:41	0°♌	
evening max el	4763 Jun 20 15:47	22°♌17'10 21°20'43	asc. node	4764 May 13 07:45	0°♌41'23	
retrograde	4763 Jul 02 17:52	28°♌14'38	evening rise	4764 May 15 04:08	4°♌28'27	
desc. node	4763 Jul 03 00:27	28°♌14'27		4764 May 29 20:56	0°♌	
evening set	4763 Jul 05 02:28	28°♌01'49	evening max el	4764 Jun 01 22:43	3°♌25'45 20°02'48	
inferior conj	4763 Jul 14 11:11	24°♌02'48 -3°15'21	retrograde	4764 Jun 12 08:36	8°♌31'06	
minimum elong	4763 Jul 14 02:52	24°♌14'27 3°12'46	evening set	4764 Jun 14 06:58	8°♌21'20	
min. Earth dist.	4763 Jul 14 15:28	23°♌56'47 0.54807 AU	desc. node	4764 Jun 18 21:27	6°♌49'04	
morning rise	4763 Jul 23 03:59	20°♌07'50	inferior conj	4764 Jun 23 07:31	4°♌21'34 -1°19'02	
direct	4763 Jul 26 15:05	19°♌41'56	minimum elong	4764 Jun 23 03:50	4°♌27'07 1°17'39	
morning max el	4763 Aug 08 04:58	25°♌39'05 22°20'18	min. Earth dist.	4764 Jun 25 03:46	3°♌15'13 0.55191 AU	
	4763 Aug 12 06:45	0°♌	morning rise	4764 Jul 01 23:02	0°♌02'05	
asc. node	4763 Aug 23 09:56	17°♌11'10		4764 Jul 02 01:52	30°♌	
morning set	4763 Aug 29 22:38	0°♌11'53	direct	4764 Jul 06 03:07	29°♌24'11	
	4763 Aug 29 20:21	0°♌		4764 Jul 10 03:02	0°♌	
superior conj	4763 Sep 06 01:54	15°♌22'12 1°41'28	morning max el	4764 Jul 19 20:08	6°♌08'20 24°03'55	
minimum elong	4763 Sep 06 00:52	15°♌16'43 1°41'24		4764 Aug 05 20:13	0°♌	
max. Earth dist.	4763 Sep 09 10:59	22°♌25'45 1.34294 AU	asc. node	4764 Aug 09 07:01	6°♌35'22	
	4763 Sep 13 05:09	0°♌	morning set	4764 Aug 13 10:19	15°♌05'20	

































































































































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minimum elong	4764 Aug 20 07:39	29° \mathcal{O} 58'32	1°32'59				
	4764 Aug 20 07:55	0° \mathbb{M}		superior conj	4765 Aug 04 20:14	15° \mathcal{O} 02'33	1°19'39
max. Earth dist.	4764 Aug 22 11:38	4° \mathbb{M} 38'42	1.33097 AU	minimum elong	4765 Aug 04 17:56	14° \mathcal{O} 49'57	1°19'20
evening rise	4764 Aug 27 19:14	15° \mathbb{M} 43'54		max. Earth dist.	4765 Aug 05 19:01	17° \mathcal{O} 07'41	1.32324 AU
	4764 Sep 04 06:16	0° \mathcal{O}		evening rise	4765 Aug 11 20:58	0° \mathbb{M} 10'03	
desc. node	4764 Sep 14 20:47	17° \mathcal{O} 27'53			4765 Aug 11 19:02	0° \mathbb{M}	
	4764 Sep 24 03:34	0° \mathbb{M}			4765 Aug 28 07:34	0° \mathcal{O}	
evening max el	4764 Sep 30 09:48	6° \mathbb{M} 45'37	27°26'08	desc. node	4765 Sep 01 17:48	6° \mathcal{O} 29'25	
retrograde	4764 Oct 14 00:43	14° \mathbb{M} 03'05		evening max el	4765 Sep 12 17:50	19° \mathcal{O} 28'08	27°17'29
evening set	4764 Oct 21 03:43	11° \mathbb{M} 25'51		retrograde	4765 Sep 26 13:51	26° \mathcal{O} 42'14	
min. Earth dist.	4764 Oct 24 20:28	8° \mathbb{M} 10'48	0.63759 AU	evening set	4765 Oct 03 17:26	24° \mathcal{O} 19'57	
inferior conj	4764 Oct 27 10:03	5° \mathbb{M} 33'25	-2°51'28	min. Earth dist.	4765 Oct 07 08:19	21° \mathcal{O} 31'07	0.61895 AU
minimum elong	4764 Oct 27 14:58	5° \mathbb{M} 20'51	2°49'41	inferior conj	4765 Oct 10 08:29	18° \mathcal{O} 47'12	-3°51'42
morning rise	4764 Nov 03 03:39	0° \mathbb{M} 14'12		minimum elong	4765 Oct 10 14:36	18° \mathcal{O} 33'18	3°49'57
	4764 Nov 03 20:07	30° \mathcal{R} \mathcal{O}		morning rise	4765 Oct 17 13:36	13° \mathcal{O} 46'59	
asc. node	4764 Nov 05 06:12	29° \mathcal{O} 44'58		direct	4765 Oct 19 21:42	13° \mathcal{O} 23'27	
direct	4764 Nov 05 14:51	29° \mathcal{O} 44'19		asc. node	4765 Oct 23 03:17	14° \mathcal{O} 10'04	
	4764 Nov 07 09:23	0° \mathbb{M}		morning max el	4765 Oct 26 19:49	16° \mathcal{O} 53'30	17°52'56
morning max el	4764 Nov 12 04:05	3° \mathbb{M} 09'14	17°51'17		4765 Nov 05 02:07	0° \mathbb{M}	
morning set	4764 Nov 28 19:22	28° \mathbb{M} 37'37		morning set	4765 Nov 11 16:04	11° \mathbb{M} 41'57	
	4764 Nov 29 14:30	0° \mathcal{X}			4765 Nov 21 23:14	0° \mathcal{X}	
superior conj	4764 Dec 11 08:42	19° \mathcal{X} 47'50	0°03'20	superior conj	4765 Nov 22 10:32	0° \mathcal{X} 48'43	0°43'22
minimum elong	4764 Dec 11 09:04	19° \mathcal{X} 49'21	0°03'17	minimum elong	4765 Nov 22 14:05	1° \mathcal{X} 03'56	0°42'53
behind sun begin	4764 Dec 10 23:26	19° \mathcal{X} 09'56		desc. node	4765 Nov 28 17:05	11° \mathcal{X} 21'49	
behind sun end	4764 Dec 11 18:41	20° \mathcal{X} 28'41		max. Earth dist.	4765 Nov 29 18:19	13° \mathcal{X} 05'17	1.42978 AU
desc. node	4764 Dec 11 20:06	20° \mathcal{X} 34'27		evening rise	4765 Dec 06 17:07	24° \mathcal{X} 12'06	
max. Earth dist.	4764 Dec 17 04:06	29° \mathcal{X} 10'27	1.44392 AU		4765 Dec 10 10:52	0° \mathcal{Z}	
	4764 Dec 17 16:34	0° \mathcal{Z}			4765 Dec 31 06:54	0° \approx	
evening rise	4764 Dec 27 03:09	14° \mathcal{Z} 44'52		evening max el	4766 Jan 07 09:28	8° \approx 22'09	21°49'40
	4765 Jan 06 04:39	0° \approx		retrograde	4766 Jan 16 14:10	13° \approx 50'06	
evening max el	4765 Jan 24 13:04	24° \approx 47'14	20°37'09	asc. node	4766 Jan 19 02:29	13° \approx 16'18	
asc. node	4765 Feb 01 05:27	29° \approx 34'28		evening set	4766 Jan 20 23:18	12° \approx 05'20	
retrograde	4765 Feb 01 16:51	29° \approx 35'41		inferior conj	4766 Jan 26 07:29	5° \approx 46'52	2°14'09
evening set	4765 Feb 05 15:32	28° \approx 06'14		minimum elong	4766 Jan 26 05:07	5° \approx 55'07	2°13'23
inferior conj	4765 Feb 11 00:05	21° \approx 57'13	2°49'21	min. Earth dist.	4766 Jan 26 09:33	5° \approx 39'43	0.68010 AU
minimum elong	4765 Feb 10 21:43	22° \approx 05'22	2°48'47		4766 Jan 30 23:52	30° \mathcal{R} \mathcal{Z}	
min. Earth dist.	4765 Feb 11 14:16	21° \approx 08'40	0.67579 AU	morning rise	4766 Jan 31 10:45	29° \mathcal{Z} 35'16	
morning rise	4765 Feb 16 03:42	15° \approx 43'19		direct	4766 Feb 05 09:14	27° \mathcal{Z} 28'19	
direct	4765 Feb 21 16:45	13° \approx 15'29			4766 Feb 11 12:25	0° \approx	
morning max el	4765 Mar 04 20:11	19° \approx 54'59	24°14'58	morning max el	4766 Feb 15 06:00	3° \approx 18'37	22°45'38
desc. node	4765 Mar 09 19:17	25° \approx 26'33		desc. node	4766 Feb 24 16:19	14° \approx 34'37	
	4765 Mar 13 10:39	0° \mathcal{X}			4766 Mar 07 13:39	0° \mathcal{X}	
	4765 Apr 02 18:47	0° \mathcal{Y}		morning set	4766 Mar 21 11:49	21° \mathcal{X} 49'25	
morning set	4765 Apr 09 15:12	11° \mathcal{Y} 31'09		max. Earth dist.	4766 Mar 26 03:12	29° \mathcal{X} 37'04	1.40120 AU
max. Earth dist.	4765 Apr 13 07:50	18° \mathcal{Y} 02'47	1.37925 AU		4766 Mar 26 08:33	0° \mathcal{Y}	
	4765 Apr 19 18:34	0° \mathcal{B}		superior conj	4766 Apr 02 21:55	13° \mathcal{Y} 21'00	-1°51'51
superior conj	4765 Apr 20 08:45	1° \mathcal{B} 07'49	-1°28'17	minimum elong	4766 Apr 03 02:42	13° \mathcal{Y} 42'43	1°51'26
minimum elong	4765 Apr 20 13:23	1° \mathcal{B} 30'02	1°27'40		4766 Apr 11 19:36	0° \mathcal{B}	
evening rise	4765 Apr 29 04:02	18° \mathcal{B} 24'21		evening rise	4766 Apr 12 18:30	1° \mathcal{B} 48'49	
asc. node	4765 Apr 30 04:46	20° \mathcal{B} 26'12		asc. node	4766 Apr 17 01:47	9° \mathcal{B} 54'02	
	4765 May 05 05:11	0° \mathbb{I}		evening max el	4766 Apr 28 22:08	27° \mathcal{B} 44'12	18°26'28
evening max el	4765 May 15 17:43	15° \mathbb{I} 16'24	19°04'27		4766 May 01 17:57	0° \mathbb{I}	
retrograde	4765 May 24 11:59	19° \mathbb{I} 33'16		retrograde	4766 May 06 10:03	1° \mathbb{I} 26'48	
evening set	4765 May 26 12:44	19° \mathbb{I} 20'24		evening set	4766 May 08 17:34	1° \mathbb{I} 06'39	
inferior conj	4765 Jun 03 19:14	15° \mathbb{I} 07'25	0°34'28		4766 May 11 08:16	30° \mathcal{R} \mathcal{B}	
minimum elong	4765 Jun 03 20:37	15° \mathbb{I} 05'02	0°33'58	inferior conj	4766 May 16 04:13	26° \mathcal{B} 34'06	2°01'48
desc. node	4765 Jun 05 18:29	13° \mathbb{I} 45'49		minimum elong	4766 May 16 07:42	26° \mathcal{B} 27'03	2°00'46
min. Earth dist.	4765 Jun 06 19:06	13° \mathbb{I} 04'20	0.56470 AU	min. Earth dist.	4766 May 19 14:34	23° \mathcal{B} 49'24	0.58382 AU
morning rise	4765 Jun 12 01:15	10° \mathbb{I} 12'10		morning rise	4766 May 23 18:42	21° \mathcal{B} 06'10	
direct	4765 Jun 17 03:56	9° \mathbb{I} 10'45		desc. node	4766 May 23 15:30	21° \mathcal{B} 10'20	
morning max el	4765 Jul 01 10:16	16° \mathbb{I} 31'07	25°42'18	direct	4766 May 29 19:10	19° \mathcal{B} 31'50	
	4765 Jul 12 09:59	0° \mathcal{G}		morning max el	4766 Jun 13 04:29	27° \mathcal{B} 14'30	26°59'33
asc. node	4765 Jul 27 04:04	26° \mathcal{G} 18'28			4766 Jun 15 20:05	0° \mathbb{I}	
morning set	4765 Jul 28 21:45	29° \mathcal{G} 56'36			4766 Jul 05 22:00	0° \mathcal{G}	

morning set	4766 Jul 13 07:16	14°☿40'26			4767 Jun 27 22:31	0°☿	
asc. node	4766 Jul 14 01:05	16°☿14'31		asc. node	4767 Jun 30 22:05	6°☿18'44	
				max. Earth dist.	4767 Jul 03 16:56	12°☿21'57	1.32046 AU
superior conj	4766 Jul 20 08:01	29°☿56'53	1°01'37				
minimum elong	4766 Jul 20 05:48	29°☿44'40	1°01'13	superior conj	4767 Jul 04 19:13	14°☿46'13	0°39'37
max. Earth dist.	4766 Jul 20 06:00	29°☿45'43	1.31977 AU	minimum elong	4767 Jul 04 17:33	14°☿37'04	0°39'17
	4766 Jul 20 08:35	0°♌		evening rise	4767 Jul 11 14:42	29°☿38'22	
evening rise	4766 Jul 27 04:12	14°♌50'33			4767 Jul 11 18:46	0°♌	
	4766 Aug 03 18:47	0°♍			4767 Jul 28 06:30	0°♍	
desc. node	4766 Aug 19 14:48	24°♍37'21		desc. node	4767 Aug 06 11:48	11°♍30'13	
	4766 Aug 24 08:49	0°♎		evening max el	4767 Aug 07 14:28	12°♍35'55	25°22'27
evening max el	4766 Aug 25 19:56	1°♎26'24	26°35'17	retrograde	4767 Aug 21 13:13	19°♍40'13	
retrograde	4766 Sep 08 18:37	8°♎35'48		evening set	4767 Aug 27 08:58	18°♍21'54	
evening set	4766 Sep 15 12:45	6°♎41'06		min. Earth dist.	4767 Sep 01 02:13	15°♍41'53	0.57822 AU
min. Earth dist.	4766 Sep 19 09:43	4°♎05'29	0.59848 AU	inferior conj	4767 Sep 04 04:06	13°♍34'50	-5°12'40
inferior conj	4766 Sep 22 15:37	1°♎30'51	-4°42'33	minimum elong	4767 Sep 04 06:14	13°♍31'08	5°12'33
minimum elong	4766 Sep 22 21:14	1°♎19'40	4°41'31	morning rise	4767 Sep 12 05:47	9°♍19'24	
	4766 Sep 24 14:22	30°♏♍		direct	4767 Sep 14 18:05	9°♍00'16	
morning rise	4766 Sep 30 07:47	26°♍52'23		morning max el	4767 Sep 23 10:30	13°♍07'24	18°55'58
direct	4766 Oct 02 16:11	26°♍32'14		asc. node	4767 Sep 26 21:20	17°♍00'03	
asc. node	4766 Oct 10 00:19	29°♍59'53			4767 Oct 04 23:43	0°♎	
	4766 Oct 10 00:22	0°♎		morning set	4767 Oct 10 00:46	9°♎41'17	
morning max el	4766 Oct 10 07:03	0°♎15'54	18°14'00				
morning set	4766 Oct 26 03:21	25°♎27'20		superior conj	4767 Oct 18 10:47	26°♎08'58	1°32'06
	4766 Oct 28 12:58	0°♏		minimum elong	4767 Oct 18 13:33	26°♎22'08	1°31'53
					4767 Oct 20 11:35	0°♏	
superior conj	4766 Nov 04 12:57	13°♏00'29	1°13'01	max. Earth dist.	4767 Oct 25 09:10	8°♏58'23	1.39025 AU
minimum elong	4766 Nov 04 16:52	13°♏18'13	1°12'35	evening rise	4767 Oct 29 06:03	15°♏44'47	
max. Earth dist.	4766 Nov 12 03:39	26°♏22'50	1.41113 AU	desc. node	4767 Nov 02 11:08	22°♏48'56	
	4766 Nov 14 07:15	0°♐			4767 Nov 06 22:29	0°♐	
desc. node	4766 Nov 15 14:06	2°♐07'54			4767 Nov 28 10:02	0°♑	
evening rise	4766 Nov 17 00:10	4°♐27'29		evening max el	4767 Dec 03 14:44	5°♑40'40	24°27'54
	4766 Dec 03 17:27	0°♑		retrograde	4767 Dec 14 23:51	12°♑19'47	
evening max el	4766 Dec 21 01:26	21°♑59'41	23°08'36	evening set	4767 Dec 20 10:25	10°♑03'40	
retrograde	4766 Dec 31 08:51	28°♑06'01		asc. node	4767 Dec 23 20:33	6°♑21'27	
evening set	4767 Jan 05 06:06	26°♑05'24		min. Earth dist.	4767 Dec 25 02:09	4°♑44'54	0.67747 AU
asc. node	4767 Jan 05 23:31	25°♑26'16		inferior conj	4767 Dec 25 22:15	3°♑37'43	0°41'51
inferior conj	4767 Jan 10 15:28	19°♑41'10	1°31'19	minimum elong	4767 Dec 25 21:15	3°♑41'02	0°41'27
minimum elong	4767 Jan 10 13:33	19°♑47'44	1°30'36		4767 Dec 28 19:07	30°♒♐	
min. Earth dist.	4767 Jan 10 06:17	20°♑12'46	0.68061 AU	morning rise	4767 Dec 31 08:11	27°♒36'11	
morning rise	4767 Jan 15 20:55	13°♑33'37		direct	4768 Jan 04 03:00	26°♒14'15	
direct	4767 Jan 20 05:02	11°♑49'33			4768 Jan 11 04:26	0°♑	
morning max el	4767 Jan 28 20:39	16°♑50'55	21°21'07	morning max el	4768 Jan 11 18:56	0°♑35'18	20°07'33
	4767 Feb 08 12:33	0°♒		desc. node	4768 Jan 29 10:22	24°♑20'13	
desc. node	4767 Feb 11 13:20	4°♒15'28			4768 Feb 02 04:29	0°♒	
	4767 Feb 28 15:52	0°♓		morning set	4768 Feb 08 01:12	8°♒58'43	
morning set	4767 Mar 01 03:50	0°♓47'13		max. Earth dist.	4768 Feb 18 13:33	25°♒59'13	1.43872 AU
max. Earth dist.	4767 Mar 08 04:20	12°♓05'50	1.42195 AU		4768 Feb 21 08:51	0°♓	
superior conj	4767 Mar 15 14:15	24°♓34'33	-2°06'23	superior conj	4768 Feb 24 05:27	4°♓39'27	-2°06'24
minimum elong	4767 Mar 15 16:41	24°♓45'05	2°06'18	minimum elong	4768 Feb 24 02:27	4°♓27'09	2°06'19
	4767 Mar 18 17:01	0°♔		evening rise	4768 Mar 08 03:18	26°♓27'02	
evening rise	4767 Mar 26 19:42	14°♔32'43			4768 Mar 10 04:35	0°♔	
asc. node	4767 Apr 03 22:48	28°♔58'45		asc. node	4768 Mar 20 19:49	17°♔32'28	
	4767 Apr 04 13:31	0°♕		evening max el	4768 Mar 25 21:01	23°♔52'39	18°09'38
evening max el	4767 Apr 12 08:22	10°♕39'28	18°08'25	retrograde	4768 Apr 01 07:20	27°♔15'34	
retrograde	4767 Apr 19 01:58	14°♕04'37		evening set	4768 Apr 04 03:43	26°♔34'09	
evening set	4767 Apr 21 16:13	13°♕34'33		inferior conj	4768 Apr 10 08:10	21°♔20'51	3°26'27
inferior conj	4767 Apr 28 09:45	8°♕41'06	2°57'42	minimum elong	4768 Apr 10 09:39	21°♔16'54	3°26'19
minimum elong	4767 Apr 28 12:47	8°♕33'59	2°57'05	min. Earth dist.	4768 Apr 13 02:52	18°♔24'01	0.62702 AU
min. Earth dist.	4767 May 01 16:23	5°♕38'16	0.60563 AU	morning rise	4768 Apr 16 14:17	15°♔16'06	
morning rise	4767 May 05 07:08	2°♕50'05		direct	4768 Apr 23 10:55	12°♔41'29	
desc. node	4767 May 10 12:31	0°♕47'33		desc. node	4768 Apr 26 09:33	13°♔07'11	
direct	4767 May 11 22:15	0°♕41'53		morning max el	4768 May 07 11:34	20°♔41'09	27°50'45
morning max el	4767 May 26 05:08	8°♕36'41	27°44'00		4768 May 15 12:18	0°♕	
	4767 Jun 11 13:49	0°♖			4768 Jun 03 14:36	0°♖	
morning set	4767 Jun 27 13:10	29°♖11'29		morning set	4768 Jun 10 13:17	13°♖22'17	

max. Earth dist.	4768 Jun 15 23:48	24° Π 42'21	1.32536 AU	desc. node	4769 Apr 13 06:36	27° H 49'07	
asc. node	4768 Jun 16 19:06	26° Π 26'00			4769 Apr 16 05:53	0° Y	
				morning max el	4769 Apr 19 21:11	3° Y 20'45	27°21'36
superior conj	4768 Jun 18 04:00	29° Π 23'49	0°14'16		4769 May 09 21:42	0° B	
minimum elong	4768 Jun 18 03:19	29° Π 20'09	0°14'07	morning set	4769 May 25 04:59	27° B 04'55	
behind sun begin	4768 Jun 18 00:53	29° Π 06'57			4769 May 26 16:30	0° Π	
behind sun end	4768 Jun 18 05:45	29° Π 33'21		max. Earth dist.	4769 May 29 22:28	6° Π 35'03	1.33475 AU
	4768 Jun 18 10:40	0° E					
evening rise	4768 Jun 25 02:29	14° E 25'58		superior conj	4769 Jun 02 08:28	13° Π 44'03	-0°13'41
	4768 Jul 02 21:12	0° Ω		minimum elong	4769 Jun 02 09:11	13° Π 47'48	0°13'33
evening max el	4768 Jul 19 03:23	23° Ω 06'46	23°49'40	behind sun begin	4769 Jun 02 06:14	13° Π 32'14	
desc. node	4768 Jul 23 08:49	26° Ω 38'03		behind sun end	4769 Jun 02 12:07	14° Π 03'22	
retrograde	4768 Aug 01 20:06	29° Ω 59'50		asc. node	4769 Jun 03 16:09	16° Π 32'29	
evening set	4768 Aug 06 05:34	29° Ω 17'17		evening rise	4769 Jun 09 13:42	29° Π 07'28	
min. Earth dist.	4768 Aug 12 13:32	26° Ω 15'04	0.56100 AU		4769 Jun 09 23:42	0° E	
inferior conj	4768 Aug 14 20:17	24° Ω 52'09	-5°06'19		4769 Jun 27 12:50	0° Ω	
minimum elong	4768 Aug 14 16:14	24° Ω 58'18	5°05'56	evening max el	4769 Jun 30 17:57	3° Ω 29'23	22°12'40
morning rise	4768 Aug 23 05:26	20° Ω 55'53		desc. node	4769 Jul 10 05:51	9° Ω 26'31	
direct	4768 Aug 26 00:19	20° Ω 36'13		retrograde	4769 Jul 13 15:14	9° Ω 53'14	
morning max el	4768 Sep 05 03:15	25° Ω 18'35	19°59'49	evening set	4769 Jul 16 13:34	9° Ω 34'11	
	4768 Sep 09 07:58	0° H		min. Earth dist.	4769 Jul 24 23:51	5° Ω 55'59	0.55023 AU
asc. node	4768 Sep 12 18:22	4° H 55'20		inferior conj	4769 Jul 25 19:37	5° Ω 28'07	-4°09'55
morning set	4768 Sep 23 05:02	24° H 14'17		minimum elong	4769 Jul 25 11:04	5° Ω 40'11	4°07'51
	4768 Sep 26 00:46	0° $\underline{\Omega}$		morning rise	4769 Aug 03 10:23	1° Ω 37'54	
				direct	4769 Aug 06 14:08	1° Ω 15'36	
superior conj	4768 Sep 30 22:52	9° $\underline{\Omega}$ 59'12	1°41'48	morning max el	4769 Aug 18 08:01	6° Ω 44'32	21°24'19
minimum elong	4768 Oct 01 00:01	10° $\underline{\Omega}$ 04'58	1°41'45	asc. node	4769 Aug 30 15:25	23° Ω 33'05	
max. Earth dist.	4768 Oct 06 14:35	21° $\underline{\Omega}$ 00'16	1.36965 AU		4769 Sep 03 02:42	0° H	
evening rise	4768 Oct 10 09:45	28° $\underline{\Omega}$ 01'49		morning set	4769 Sep 07 13:39	8° H 59'30	
	4768 Oct 11 12:04	0° H					
desc. node	4768 Oct 19 08:09	13° H 20'41		superior conj	4769 Sep 14 20:58	24° H 18'48	1°43'33
	4768 Oct 30 07:20	0° H		minimum elong	4769 Sep 14 20:38	24° H 17'03	1°43'32
evening max el	4768 Nov 15 03:08	19° H 23'39	25°40'43		4769 Sep 17 15:21	0° $\underline{\Omega}$	
retrograde	4768 Nov 27 10:24	26° H 26'29		max. Earth dist.	4769 Sep 19 01:20	2° $\underline{\Omega}$ 51'14	1.35158 AU
evening set	4768 Dec 03 10:36	23° H 57'00		evening rise	4769 Sep 23 07:28	11° $\underline{\Omega}$ 09'12	
min. Earth dist.	4768 Dec 07 18:55	19° H 12'59	0.67074 AU		4769 Oct 03 23:16	0° H	
inferior conj	4768 Dec 09 02:03	17° H 33'54	-0°13'16	desc. node	4769 Oct 06 05:11	3° H 37'41	
minimum elong	4768 Dec 09 02:24	17° H 32'48	0°13'07		4769 Oct 25 16:01	0° H	
transit middle	4768 Dec 09 02:24	17° H 32'48	0°13'07	evening max el	4769 Oct 28 15:44	3° H 03'37	26°39'34
transit begin	4768 Dec 09 00:45	17° H 38'03		retrograde	4769 Nov 10 15:46	10° H 19'04	
transit end	4768 Dec 09 04:03	17° H 27'34		evening set	4769 Nov 17 04:41	7° H 40'45	
asc. node	4768 Dec 09 17:36	16° H 44'41		min. Earth dist.	4769 Nov 21 06:16	3° H 32'03	0.66052 AU
morning rise	4768 Dec 14 18:35	11° H 40'32		inferior conj	4769 Nov 23 00:54	1° H 25'28	-1°12'55
direct	4768 Dec 18 01:43	10° H 38'02		minimum elong	4769 Nov 23 02:55	1° H 19'26	1°12'03
morning max el	4768 Dec 25 01:07	14° H 30'25	19°08'20		4769 Nov 24 06:04	30° H	
	4769 Jan 05 17:31	0° E		asc. node	4769 Nov 26 14:40	27° H 31'56	
greatest brilliancy	4769 Jan 08 14:16	4° E 20'30	-0.8m	morning rise	4769 Nov 29 01:56	25° H 42'46	
desc. node	4769 Jan 15 07:25	14° E 42'20		direct	4769 Dec 01 23:26	24° H 56'00	
morning set	4769 Jan 17 03:54	17° E 35'07		morning max el	4769 Dec 08 13:27	28° H 30'35	18°25'01
	4769 Jan 25 03:09	0° \approx			4769 Dec 09 22:55	0° H	
max. Earth dist.	4769 Jan 31 04:49	9° \approx 30'56	1.44946 AU	morning set	4769 Dec 28 07:51	27° H 30'08	
					4769 Dec 29 21:16	0° E	
superior conj	4769 Feb 02 20:35	13° \approx 42'42	-1°47'20	desc. node	4770 Jan 02 04:27	5° E 16'10	
minimum elong	4769 Feb 02 12:02	13° \approx 08'50	1°46'39				
	4769 Feb 13 00:19	0° H		superior conj	4770 Jan 12 23:29	22° E 19'00	-1°10'00
evening rise	4769 Feb 17 13:17	7° H 25'32		minimum elong	4770 Jan 12 15:10	21° E 46'23	1°08'59
	4769 Mar 03 15:04	0° Y		max. Earth dist.	4770 Jan 13 23:14	23° E 52'09	1.45309 AU
asc. node	4769 Mar 07 16:52	5° Y 26'07			4770 Jan 17 21:09	0° \approx	
evening max el	4769 Mar 09 09:19	7° Y 17'15	18°29'27	evening rise	4770 Jan 28 23:57	17° \approx 27'28	
retrograde	4769 Mar 15 21:42	10° Y 50'56			4770 Feb 05 23:05	0° H	
evening set	4769 Mar 19 00:11	9° Y 57'17		greatest brilliancy	4770 Feb 08 03:10	3° H 22'58	-0.8m
inferior conj	4769 Mar 24 19:23	4° Y 25'51	3°34'11	evening max el	4770 Feb 20 18:50	20° H 47'29	19°06'55
minimum elong	4769 Mar 24 19:14	4° Y 26'18	3°34'12	asc. node	4770 Feb 22 13:55	22° H 27'13	
min. Earth dist.	4769 Mar 26 22:57	1° Y 53'58	0.64582 AU	retrograde	4770 Feb 27 17:13	24° H 43'05	
	4769 Mar 28 16:31	30° H		evening set	4770 Mar 03 02:33	23° H 36'16	
morning rise	4769 Mar 30 13:36	28° H 14'15		inferior conj	4770 Mar 08 15:41	17° H 48'35	3°26'04
direct	4769 Apr 06 07:47	25° H 25'40		minimum elong	4770 Mar 08 14:17	17° H 53'04	3°25'55

min. Earth dist.	4770 Mar 10 03:51	15° K 53'24	0.66084 AU		4771 Feb 21 19:14	30° R \approx	
morning rise	4770 Mar 14 01:38	11° K 34'24		morning rise	4771 Feb 25 23:12	25° \approx 09'56	
direct	4770 Mar 20 11:20	8° K 45'25		direct	4771 Mar 03 20:31	22° \approx 32'00	
desc. node	4770 Mar 31 03:39	14° K 18'43		morning max el	4771 Mar 15 15:59	29° \approx 35'36	25°04'59
morning max el	4770 Apr 02 07:07	16° K 22'21	26°23'16		4771 Mar 16 01:32	0° K	
	4770 Apr 13 14:04	0° Y		desc. node	4771 Mar 18 00:42	2° K 06'18	
	4770 May 02 18:35	0° B			4771 Apr 07 10:40	0° Y	
morning set	4770 May 08 08:40	10° B 08'49		morning set	4771 Apr 20 19:36	22° Y 20'27	
max. Earth dist.	4770 May 12 09:58	17° B 55'50	1.34881 AU	max. Earth dist.	4771 Apr 24 10:50	28° Y 58'01	1.36725 AU
					4771 Apr 25 00:08	0° B	
superior conj	4770 May 17 06:18	27° B 40'16	-0°43'08				
minimum elong	4770 May 17 08:39	27° B 52'17	0°42'41	superior conj	4771 Apr 30 18:33	11° B 04'25	-1°12'25
	4770 May 18 09:27	0° II		minimum elong	4771 Apr 30 22:30	11° B 23'50	1°11'47
asc. node	4770 May 21 13:13	6° II 34'06		asc. node	4771 May 08 10:15	26° B 26'28	
evening rise	4770 May 24 22:23	13° II 36'44		evening rise	4771 May 09 02:16	27° B 47'07	
	4770 Jun 02 09:31	0° E			4771 May 10 04:46	0° II	
evening max el	4770 Jun 12 17:58	14° E 16'25	20°45'23	evening max el	4771 May 26 06:20	25° II 43'23	19°35'29
retrograde	4770 Jun 24 03:47	19° E 51'52			4771 Jun 01 22:48	0° E	
evening set	4770 Jun 26 05:46	19° E 41'27		retrograde	4771 Jun 04 22:16	0° E 26'16	
desc. node	4770 Jun 27 02:51	19° E 31'05		evening set	4771 Jun 06 20:53	0° E 15'41	
inferior conj	4770 Jul 05 12:52	15° E 44'28	-2°27'53		4771 Jun 08 00:24	30° R II	
minimum elong	4770 Jul 05 06:04	15° E 54'09	2°25'32	desc. node	4771 Jun 13 23:53	27° II 11'37	
min. Earth dist.	4770 Jul 06 11:16	15° E 12'29	0.54849 AU	inferior conj	4771 Jun 15 14:27	26° II 11'36	-0°28'42
morning rise	4770 Jul 14 05:57	11° E 40'52		minimum elong	4771 Jun 15 13:10	26° II 13'38	0°28'13
direct	4770 Jul 17 23:31	11° E 10'53		min. Earth dist.	4771 Jun 18 00:32	24° II 40'07	0.55642 AU
morning max el	4770 Jul 31 02:38	17° E 29'41	23°03'57	morning rise	4771 Jun 24 02:57	21° II 37'46	
	4770 Aug 10 04:22	0° O		direct	4771 Jun 28 16:36	20° II 51'07	
asc. node	4770 Aug 17 12:29	12° O 43'03		morning max el	4771 Jul 12 16:22	27° II 51'50	24°47'21
morning set	4770 Aug 23 00:45	23° O 51'46			4771 Jul 14 19:10	0° E	
	4770 Aug 25 21:50	0° P			4771 Aug 03 06:21	0° O	
				asc. node	4771 Aug 04 09:31	2° O 15'59	
superior conj	4770 Aug 30 01:54	8° P 58'17	1°38'37	morning set	4771 Aug 07 12:31	8° O 44'50	
minimum elong	4770 Aug 30 00:27	8° P 50'29	1°38'31				
max. Earth dist.	4770 Sep 01 21:03	14° P 54'19	1.33730 AU	superior conj	4771 Aug 14 11:04	23° O 48'32	1°28'01
evening rise	4770 Sep 06 18:58	24° P 56'01		minimum elong	4771 Aug 14 08:57	23° O 36'56	1°27'47
	4770 Sep 09 09:30	0° A		max. Earth dist.	4771 Aug 16 01:07	27° O 15'32	1.32721 AU
desc. node	4770 Sep 23 02:11	23° A 33'26			4771 Aug 17 07:35	0° P	
	4770 Sep 27 10:51	0° M		evening rise	4771 Aug 21 16:23	9° P 10'22	
evening max el	4770 Oct 11 04:17	16° M 32'12	27°17'02		4771 Sep 01 18:21	0° A	
retrograde	4770 Oct 24 15:14	23° M 50'20		desc. node	4771 Sep 09 23:11	12° A 58'02	
evening set	4770 Oct 31 14:17	21° M 10'17		evening max el	4771 Sep 23 14:46	29° A 35'21	27°26'31
min. Earth dist.	4770 Nov 04 09:56	17° M 36'18	0.64691 AU		4771 Sep 24 01:18	0° M	
inferior conj	4770 Nov 06 16:30	15° M 08'06	-2°15'18	retrograde	4771 Oct 07 07:59	6° M 50'43	
minimum elong	4770 Nov 06 20:23	14° M 57'31	2°13'46	evening set	4771 Oct 14 12:17	4° M 18'37	
morning rise	4770 Nov 13 03:40	9° M 39'03		min. Earth dist.	4771 Oct 18 03:48	1° M 15'44	0.63002 AU
asc. node	4770 Nov 13 11:42	9° M 30'40			4771 Oct 19 11:13	30° R A	
direct	4770 Nov 15 17:54	9° M 04'01		inferior conj	4771 Oct 20 22:04	28° A 34'20	-3°17'37
morning max el	4770 Nov 22 05:25	12° M 30'09	17°58'32	minimum elong	4771 Oct 21 03:37	28° A 20'48	3°15'47
	4770 Dec 04 09:45	0° J		morning rise	4771 Oct 27 20:30	23° A 22'29	
morning set	4770 Dec 09 17:14	8° J 52'46		direct	4771 Oct 30 06:07	22° A 55'34	
desc. node	4770 Dec 20 01:30	25° J 58'03		asc. node	4771 Oct 31 08:45	23° A 01'28	
	4770 Dec 22 13:27	0° S		morning max el	4771 Nov 05 22:04	26° A 21'32	17°49'40
					4771 Nov 09 01:07	0° M	
superior conj	4770 Dec 23 10:30	1° S 24'24	-0°23'16	morning set	4771 Nov 22 02:52	21° M 25'18	
minimum elong	4770 Dec 23 07:41	1° S 13'07	0°22'52		4771 Nov 27 00:33	0° J	
max. Earth dist.	4770 Dec 27 18:29	8° S 17'38	1.44935 AU				
evening rise	4771 Jan 08 15:58	26° S 48'51		superior conj	4771 Dec 03 20:47	11° J 39'06	0°21'28
	4771 Jan 10 17:41	0° \approx		minimum elong	4771 Dec 03 22:54	11° J 47'55	0°21'10
greatest brilliancy	4771 Jan 23 01:17	18° \approx 37'58	-0.6m	desc. node	4771 Dec 06 22:30	16° J 44'02	
	4771 Jan 31 05:36	0° K		max. Earth dist.	4771 Dec 10 11:36	22° J 29'32	1.43864 AU
evening max el	4771 Feb 03 23:50	4° K 20'22	20°00'17		4771 Dec 15 04:58	0° S	
asc. node	4771 Feb 09 10:58	8° K 21'49		evening rise	4771 Dec 19 01:57	6° S 02'08	
retrograde	4771 Feb 11 15:04	8° K 47'02			4772 Jan 04 02:33	0° \approx	
evening set	4771 Feb 15 08:30	7° K 26'04		evening max el	4772 Jan 17 23:20	17° \approx 54'09	21°06'55
inferior conj	4771 Feb 20 18:08	1° K 24'14	3°05'41	retrograde	4772 Jan 26 13:04	22° \approx 58'42	
minimum elong	4771 Feb 20 15:58	1° K 31'31	3°05'15	asc. node	4772 Jan 27 08:00	22° \approx 55'20	
min. Earth dist.	4771 Feb 21 15:55	0° K 11'06	0.67161 AU	evening set	4772 Jan 30 16:06	21° \approx 22'37	

inferior conj	4772 Feb 05 00:18	15° \approx 09'16	2°35'26	minimum elong	4773 Jan 19 05:53	29° \approx 08'20	1°56'04
minimum elong	4772 Feb 04 21:51	15° \approx 17'41	2°34'45	min. Earth dist.	4773 Jan 19 05:14	29° \approx 10'39	0.68072 AU
min. Earth dist.	4772 Feb 05 09:08	14° \approx 38'46	0.67813 AU	morning rise	4773 Jan 24 12:02	22° \approx 50'38	
morning rise	4772 Feb 10 03:27	8° \approx 56'27		direct	4773 Jan 29 04:13	20° \approx 53'39	
direct	4772 Feb 15 10:23	6° \approx 37'09		morning max el	4773 Feb 07 12:18	26° \approx 22'37	22°08'47
morning max el	4772 Feb 26 00:43	12° \approx 55'36	23°36'59		4773 Feb 10 20:00	0° \approx	
desc. node	4772 Mar 03 21:44	20° \approx 49'39		desc. node	4773 Feb 18 18:45	10° \approx 12'31	
	4772 Mar 10 18:33	0° \approx			4773 Mar 04 08:01	0° \approx	
	4772 Mar 30 07:20	0° \approx		morning set	4773 Mar 12 16:10	13° \approx 07'09	
morning set	4772 Apr 01 07:54	3° \approx 24'22		max. Earth dist.	4773 Mar 18 04:03	22° \approx 10'16	1.41030 AU
max. Earth dist.	4772 Apr 05 06:32	10° \approx 13'23	1.38857 AU		4773 Mar 22 18:02	0° \approx	
superior conj	4772 Apr 12 17:28	23° \approx 46'52	-1°39'04	superior conj	4773 Mar 25 22:19	5° \approx 35'20	-1°59'25
minimum elong	4772 Apr 12 22:23	24° \approx 09'54	1°38'29	minimum elong	4773 Mar 26 02:29	5° \approx 53'53	1°59'09
	4772 Apr 16 00:04	0° \approx		evening rise	4773 Apr 05 07:56	24° \approx 39'31	
evening rise	4772 Apr 21 22:37	11° \approx 31'17			4773 Apr 08 04:57	0° \approx	
asc. node	4772 Apr 24 07:17	16° \approx 05'06		asc. node	4773 Apr 11 04:18	5° \approx 23'53	
	4772 May 02 03:18	0° \approx		evening max el	4773 Apr 21 12:59	20° \approx 30'58	18°16'22
evening max el	4772 May 08 05:45	7° \approx 50'56	18°45'45	retrograde	4773 Apr 28 15:54	24° \approx 04'36	
retrograde	4772 May 16 09:39	11° \approx 51'27		evening set	4773 May 01 02:12	23° \approx 40'37	
evening set	4772 May 18 13:09	11° \approx 35'51		inferior conj	4773 May 08 05:07	18° \approx 59'05	2°29'10
inferior conj	4772 May 26 11:01	7° \approx 14'30	1°15'21	minimum elong	4773 May 08 08:38	18° \approx 51'29	2°28'16
minimum elong	4772 May 26 13:41	7° \approx 09'34	1°14'26	min. Earth dist.	4773 May 11 15:12	16° \approx 03'29	0.59291 AU
min. Earth dist.	4772 May 29 17:09	4° \approx 51'37	0.57228 AU	morning rise	4773 May 15 12:14	13° \approx 19'40	
desc. node	4772 May 30 20:54	4° \approx 04'24		desc. node	4773 May 17 17:56	12° \approx 16'14	
morning rise	4772 Jun 03 10:57	2° \approx 04'34		direct	4773 May 21 19:45	11° \approx 30'38	
direct	4772 Jun 08 23:17	0° \approx 50'16		morning max el	4773 Jun 05 04:59	19° \approx 20'06	27°22'55
morning max el	4772 Jun 23 07:50	8° \approx 20'48	26°18'36		4773 Jun 14 06:06	0° \approx	
	4772 Jul 09 13:52	0° \approx			4773 Jul 02 06:29	0° \approx	
asc. node	4772 Jul 21 06:33	22° \approx 05'23		morning set	4773 Jul 06 07:36	8° \approx 13'00	
morning set	4772 Jul 21 23:22	23° \approx 33'48		asc. node	4773 Jul 08 03:34	12° \approx 05'24	
	4772 Jul 24 23:15	0° \approx		superior conj	4773 Jul 13 10:11	23° \approx 35'53	0°52'44
superior conj	4772 Jul 28 22:26	8° \approx 43'07	1°12'31	minimum elong	4773 Jul 13 08:09	23° \approx 24'39	0°52'21
minimum elong	4772 Jul 28 20:07	8° \approx 30'21	1°12'09	max. Earth dist.	4773 Jul 12 22:04	22° \approx 29'00	1.31954 AU
max. Earth dist.	4772 Jul 29 10:39	9° \approx 50'29	1.32132 AU		4773 Jul 16 07:51	0° \approx	
evening rise	4772 Aug 04 20:46	23° \approx 43'27		evening rise	4773 Jul 20 05:38	8° \approx 27'30	
	4772 Aug 07 22:15	0° \approx			4773 Jul 31 08:45	0° \approx	
	4772 Aug 25 15:02	0° \approx		desc. node	4773 Aug 13 17:11	19° \approx 17'54	
desc. node	4772 Aug 26 20:10	1° \approx 38'47		evening max el	4773 Aug 17 19:12	23° \approx 36'06	26°07'28
evening max el	4772 Sep 04 20:30	11° \approx 59'36	27°03'28		4773 Aug 27 11:13	0° \approx	
retrograde	4772 Sep 18 17:25	19° \approx 11'13		retrograde	4773 Aug 31 18:27	0° \approx 44'23	
evening set	4772 Sep 25 18:42	16° \approx 59'00			4773 Sep 05 00:28	30° \approx 17'00	
min. Earth dist.	4772 Sep 29 10:48	14° \approx 18'01	0.61046 AU	evening set	4773 Sep 07 04:45	29° \approx 04'09	
inferior conj	4772 Oct 02 14:23	11° \approx 35'55	-4°14'57	min. Earth dist.	4773 Sep 11 08:00	26° \approx 29'06	0.58967 AU
minimum elong	4772 Oct 02 20:34	11° \approx 22'36	4°13'26	inferior conj	4773 Sep 14 13:55	24° \approx 03'36	-4°58'45
morning rise	4772 Oct 10 00:20	6° \approx 44'49		minimum elong	4773 Sep 14 18:29	23° \approx 55'03	4°58'08
direct	4772 Oct 12 08:17	6° \approx 22'57		morning rise	4773 Sep 22 10:27	19° \approx 35'23	
asc. node	4772 Oct 17 05:47	8° \approx 03'49		direct	4773 Sep 24 19:59	19° \approx 16'01	
morning max el	4772 Oct 19 12:17	9° \approx 57'13	17°59'27	morning max el	4773 Oct 02 20:43	23° \approx 08'15	18°29'16
	4772 Nov 01 15:36	0° \approx		asc. node	4773 Oct 04 02:49	24° \approx 25'36	
morning set	4772 Nov 04 06:21	4° \approx 48'24			4773 Oct 08 09:08	0° \approx	
				morning set	4773 Oct 18 22:26	18° \approx 47'18	
superior conj	4772 Nov 14 09:35	23° \approx 11'21	0°57'17		4773 Oct 24 18:31	0° \approx	
minimum elong	4772 Nov 14 13:33	23° \approx 12'48	0°56'47	superior conj	4773 Oct 27 21:00	5° \approx 49'49	1°22'21
	4772 Nov 18 07:56	0° \approx		minimum elong	4773 Oct 28 00:32	6° \approx 06'11	1°22'00
max. Earth dist.	4772 Nov 22 00:02	6° \approx 10'28	1.42227 AU	max. Earth dist.	4773 Nov 04 07:07	19° \approx 08'57	1.40230 AU
desc. node	4772 Nov 22 19:29	7° \approx 30'53		evening rise	4773 Nov 08 14:22	26° \approx 12'17	
evening rise	4772 Nov 27 21:47	15° \approx 45'50		desc. node	4773 Nov 09 16:30	28° \approx 15'29	
	4772 Dec 07 03:07	0° \approx			4773 Nov 10 18:00	0° \approx	
	4772 Dec 29 07:34	0° \approx			4773 Nov 30 19:29	0° \approx	
evening max el	4772 Dec 30 17:30	1° \approx 29'01	22°22'48	evening max el	4773 Dec 13 07:57	15° \approx 07'40	23°42'41
retrograde	4773 Jan 09 09:27	7° \approx 13'56		retrograde	4773 Dec 24 02:52	21° \approx 29'44	
asc. node	4773 Jan 13 05:01	5° \approx 57'16		evening set	4773 Dec 29 05:35	19° \approx 22'21	
evening set	4773 Jan 13 23:38	5° \approx 22'11		asc. node	4773 Dec 31 02:03	17° \approx 32'20	
	4773 Jan 18 14:58	30° \approx 17'00		min. Earth dist.	4774 Jan 03 01:58	13° \approx 43'52	0.67965 AU
inferior conj	4773 Jan 19 08:07	29° \approx 00'35	1°56'50				

inferior conj	4774 Jan 03 15:49	12°  56'35	1°11'05	min. Earth dist.	4774 Dec 17 20:55	28°  14'41	0.67502 AU
minimum elong	4774 Jan 03 14:15	13°  01'57	1°10'29	inferior conj	4774 Dec 18 21:36	26°  53'39	0°19'07
morning rise	4774 Jan 08 22:54	6°  51'11		minimum elong	4774 Dec 18 21:07	26°  55'13	0°18'56
direct	4774 Jan 13 01:06	5°  36'53		morning rise	4774 Dec 24 10:04	20°  55'01	
morning max el	4774 Jan 21 06:03	10°  00'22	20°48'13	direct	4774 Dec 27 23:42	19°  41'40	
desc. node	4774 Feb 05 15:47	0°  04'33		morning max el	4775 Jan 04 07:41	23°  49'15	19°40'22
	4774 Feb 05 14:32	0°  00'00			4775 Jan 09 13:53	0°  00'00	
morning set	4774 Feb 19 22:00	21°  03'13		greatest brilliancy	4775 Jan 17 09:52	11°  04'28	-0.7m
	4774 Feb 25 05:13	0°  00'00		desc. node	4775 Jan 23 12:49	20°  03'17	
max. Earth dist.	4774 Feb 28 08:02	5°  01'04	1.42966 AU	morning set	4775 Jan 29 18:19	29°  05'24	
					4775 Jan 29 20:48	0°  00'00	
superior conj	4774 Mar 07 04:16	16°  01'50	-2°08'29	max. Earth dist.	4775 Feb 10 19:44	18°  04'12	1.44414 AU
minimum elong	4774 Mar 07 04:44	16°  01'48	2°08'30				
	4774 Mar 15 02:36	0°  00'00		superior conj	4775 Feb 15 08:37	25°  05'32	-2°00'47
evening rise	4774 Mar 19 02:11	7°  03'01		minimum elong	4775 Feb 15 02:55	25°  03'32	2°00'29
asc. node	4774 Mar 29 01:20	24°  01'16			4775 Feb 17 20:47	0°  00'00	
	4774 Apr 01 22:49	0°  00'00		evening rise	4775 Mar 01 00:56	18°  03'33	
evening max el	4774 Apr 05 00:37	3°  03'43	18°06'39		4775 Mar 07 19:42	0°  00'00	
retrograde	4774 Apr 11 13:58	6°  05'07		asc. node	4775 Mar 15 22:22	12°  01'34	
evening set	4774 Apr 14 06:49	6°  02'27		evening max el	4775 Mar 19 13:30	16°  05'33	18°15'55
inferior conj	4774 Apr 20 18:20	1°  02'42	3°12'47	retrograde	4775 Mar 25 23:31	20°  01'19	
minimum elong	4774 Apr 20 20:45	1°  04'39	3°12'25	evening set	4775 Mar 28 22:32	19°  01'32	
	4774 Apr 22 02:38	30°  08'00		inferior conj	4775 Apr 03 22:38	14°  01'11	3°31'56
min. Earth dist.	4774 Apr 23 20:42	28°  01'17	0.61493 AU	minimum elong	4775 Apr 03 23:23	14°  00'09	3°31'54
morning rise	4774 Apr 27 08:50	25°  02'24		min. Earth dist.	4775 Apr 06 11:09	11°  02'33	0.63546 AU
direct	4774 May 04 03:28	23°  01'32		morning rise	4775 Apr 09 23:15	8°  03'42	
desc. node	4774 May 04 14:59	23°  02'13		direct	4775 Apr 16 19:56	5°  02'11	
	4774 May 17 07:28	0°  00'00		desc. node	4775 Apr 21 12:02	6°  02'16	
morning max el	4774 May 18 08:16	1°  00'12	27°51'24	morning max el	4775 Apr 30 16:08	13°  01'19	27°42'24
	4774 Jun 08 10:15	0°  00'00			4775 May 14 01:16	0°  00'00	
morning set	4774 Jun 20 11:19	22°  03'16			4775 May 31 22:58	0°  00'00	
	4774 Jun 24 00:05	0°  00'00		morning set	4775 Jun 04 08:15	6°  02'16	
asc. node	4774 Jun 25 00:36	2°  01'11		max. Earth dist.	4775 Jun 09 11:17	17°  02'08	1.32875 AU
max. Earth dist.	4774 Jun 26 07:32	4°  05'45	1.32196 AU	asc. node	4775 Jun 11 21:39	22°  02'19	
superior conj	4774 Jun 27 20:36	8°  02'11	0°29'15	superior conj	4775 Jun 12 03:52	22°  02'35	0°02'43
minimum elong	4774 Jun 27 19:18	8°  03'54	0°28'58	minimum elong	4775 Jun 12 03:44	22°  02'51	0°02'40
evening rise	4774 Jul 04 16:54	23°  05'15		behind sun begin	4775 Jun 11 22:28	22°  02'33	
	4774 Jul 07 22:25	0°  00'00		behind sun end	4775 Jun 12 08:59	23°  02'20	
	4774 Jul 26 07:28	0°  00'00			4775 Jun 15 10:58	0°  00'00	
evening max el	4774 Jul 30 10:49	4°  02'26	24°44'37	evening rise	4775 Jun 19 04:43	8°  02'02	
desc. node	4774 Jul 31 14:13	5°  02'30			4775 Jun 30 16:26	0°  00'00	
retrograde	4774 Aug 13 08:37	11°  02'28		evening max el	4775 Jul 11 23:41	14°  02'51	23°08'07
evening set	4774 Aug 18 14:32	10°  02'26		desc. node	4775 Jul 18 11:15	19°  02'44	
min. Earth dist.	4774 Aug 23 22:11	7°  03'21	0.57026 AU	retrograde	4775 Jul 25 09:59	21°  02'33	
inferior conj	4774 Aug 26 17:48	5°  04'48	-5°15'30	evening set	4775 Jul 29 03:37	21°  02'03	
minimum elong	4774 Aug 26 17:30	5°  04'48	5°15'29	min. Earth dist.	4775 Aug 05 08:46	17°  02'47	0.55547 AU
morning rise	4774 Sep 03 22:53	1°  04'15		inferior conj	4775 Aug 07 02:08	16°  02'47	-4°48'54
direct	4774 Sep 06 13:28	1°  02'24		minimum elong	4775 Aug 06 19:35	16°  02'57	4°47'52
morning max el	4774 Sep 15 19:58	5°  02'43	19°20'26	morning rise	4775 Aug 15 13:50	12°  02'55	
asc. node	4774 Sep 20 23:51	11°  02'51		direct	4775 Aug 18 12:22	12°  02'35	
	4774 Oct 01 08:46	0°  00'00		morning max el	4775 Aug 29 07:35	17°  02'36	20°33'19
morning set	4774 Oct 02 23:08	3°  02'10		asc. node	4775 Sep 07 20:55	0°  00'00	
					4775 Sep 07 19:23	0°  00'00	
superior conj	4774 Oct 11 01:30	19°  02'17	1°37'17	morning set	4775 Sep 17 05:34	17°  02'49	
minimum elong	4774 Oct 11 03:35	19°  02'27	1°37'08		4775 Sep 23 02:50	0°  00'00	
	4774 Oct 16 16:45	0°  00'00		superior conj	4775 Sep 24 18:18	3°  02'22	1°43'25
max. Earth dist.	4774 Oct 17 11:37	1°  02'26	1.38129 AU	minimum elong	4775 Sep 24 18:48	3°  02'24	1°43'25
evening rise	4774 Oct 21 05:58	8°  02'11		max. Earth dist.	4775 Sep 29 19:04	13°  02'22	1.36165 AU
desc. node	4774 Oct 27 13:32	18°  02'53		evening rise	4775 Oct 03 17:57	20°  02'51	
	4774 Nov 03 14:53	0°  00'00			4775 Oct 08 20:31	0°  00'00	
evening max el	4774 Nov 25 20:46	28°  02'50	25°00'10	desc. node	4775 Oct 14 10:33	9°  02'19	
	4774 Nov 27 02:00	0°  00'00			4775 Oct 28 13:17	0°  00'00	
retrograde	4774 Dec 07 16:07	5°  04'40		evening max el	4775 Nov 08 09:28	12°  02'33	26°07'53
evening set	4774 Dec 13 08:22	3°  03'19		retrograde	4775 Nov 21 00:21	19°  02'42	
	4774 Dec 16 11:48	30°  08'00		evening set	4775 Nov 27 06:11	17°  02'08	
asc. node	4774 Dec 17 23:05	28°  02'07					

min. Earth dist.	4775 Dec 01 11:40	12°♊39'29	0.66690 AU		4776 Oct 25 10:41	0°♊	
inferior conj	4775 Dec 02 23:33	10°♊48'26	-0°38'06	retrograde	4776 Nov 03 03:06	3°♊27'13	
minimum elong	4775 Dec 03 00:34	10°♊45'16	0°37'38	evening set	4776 Nov 09 20:58	0°♊46'57	
asc. node	4775 Dec 04 20:09	8°♊34'05			4776 Nov 10 19:07	30°♋	
morning rise	4775 Dec 08 19:28	4°♊59'07		min. Earth dist.	4776 Nov 13 19:53	26°♋53'31	0.65522 AU
direct	4775 Dec 11 22:20	4°♊03'37		inferior conj	4776 Nov 15 19:37	24°♋36'53	-1°39'09
morning max el	4775 Dec 18 16:41	7°♊46'50	18°47'49	minimum elong	4776 Nov 15 22:25	24°♋28'48	1°37'59
	4776 Jan 03 13:25	0°♋		asc. node	4776 Nov 20 17:12	19°♋47'32	
morning set	4776 Jan 09 06:15	8°♋56'35		morning rise	4776 Nov 22 00:48	18°♋59'49	
desc. node	4776 Jan 10 09:51	10°♋44'57		direct	4776 Nov 24 18:58	18°♋18'28	
	4776 Jan 22 16:30	0°♌		morning max el	4776 Dec 01 06:58	21°♋47'58	18°11'40
max. Earth dist.	4776 Jan 24 13:13	2°♌55'24	1.45198 AU		4776 Dec 07 17:27	0°♌	
				morning set	4776 Dec 19 23:01	19°♌30'34	
superior conj	4776 Jan 25 16:18	4°♌41'47	-1°33'20		4776 Dec 26 10:14	0°♌	
minimum elong	4776 Jan 25 06:55	4°♌04'58	1°32'25	desc. node	4776 Dec 27 06:51	1°♌22'53	
evening rise	4776 Feb 10 00:52	29°♌07'10					
	4776 Feb 10 13:59	0°♍		superior conj	4777 Jan 03 20:07	13°♌23'48	-0°50'34
greatest brilliancy	4776 Feb 16 09:33	9°♍22'52	-0.9m	minimum elong	4777 Jan 03 13:50	12°♌59'02	0°49'45
asc. node	4776 Mar 01 19:25	0°♎07'14		max. Earth dist.	4777 Jan 06 08:45	17°♌22'22	1.45240 AU
	4776 Mar 01 16:39	0°♎			4777 Jan 14 10:36	0°♌	
evening max el	4776 Mar 02 00:54	0°♎21'19	18°43'20	evening rise	4777 Jan 20 02:39	8°♌49'42	
retrograde	4776 Mar 08 16:27	4°♎02'47		greatest brilliancy	4777 Feb 01 06:29	27°♌36'29	-0.7m
evening set	4776 Mar 11 21:50	3°♎03'26			4777 Feb 02 20:41	0°♍	
	4776 Mar 15 09:19	30°♋		evening max el	4777 Feb 13 08:36	13°♍53'00	19°27'46
inferior conj	4776 Mar 17 14:05	27°♍24'42	3°32'27	asc. node	4777 Feb 16 16:28	16°♍42'17	
minimum elong	4776 Mar 17 13:20	27°♍26'57	3°32'24	retrograde	4777 Feb 20 13:24	18°♍01'06	
min. Earth dist.	4776 Mar 19 10:55	25°♍07'45	0.65273 AU	evening set	4777 Feb 24 02:01	16°♍48'17	
morning rise	4776 Mar 23 04:22	21°♍11'50		inferior conj	4777 Mar 01 13:20	10°♍53'59	3°18'47
direct	4776 Mar 29 19:33	18°♍21'48		minimum elong	4777 Mar 01 11:33	10°♍59'51	3°18'30
desc. node	4776 Apr 07 09:05	21°♍58'05		min. Earth dist.	4777 Mar 02 19:07	9°♍16'36	0.66590 AU
morning max el	4776 Apr 12 02:06	26°♍10'07	26°59'56	morning rise	4777 Mar 06 20:49	4°♍39'25	
	4776 Apr 15 15:09	0°♎		direct	4777 Mar 13 01:26	1°♍54'16	
	4776 May 06 14:55	0°♏		desc. node	4777 Mar 25 06:06	9°♍04'26	
morning set	4776 May 17 19:17	20°♏03'27		morning max el	4777 Mar 25 11:52	9°♍18'57	25°51'53
max. Earth dist.	4776 May 22 05:37	28°♏48'03	1.34019 AU		4777 Apr 10 18:53	0°♎	
	4776 May 22 19:49	0°♐			4777 Apr 29 03:50	0°♏	
superior conj	4776 May 26 05:47	7°♐03'15	-0°26'04	morning set	4777 Apr 30 16:28	2°♏47'02	
minimum elong	4776 May 26 07:10	7°♐10'29	0°25'48	max. Earth dist.	4777 May 04 12:34	9°♏59'43	1.35621 AU
asc. node	4776 May 28 18:41	12°♐24'01		superior conj	4777 May 09 23:53	20°♏46'36	-0°55'42
evening rise	4776 Jun 02 15:05	22°♐39'11		minimum elong	4777 May 10 02:56	21°♏02'01	0°55'09
	4776 Jun 06 05:10	0°♑			4777 May 14 12:08	0°♐	
evening max el	4776 Jun 22 17:25	25°♑20'33	21°33'42	asc. node	4777 May 15 15:43	2°♐22'17	
	4776 Jun 29 01:56	0°♒		evening rise	4777 May 17 22:01	7°♐01'23	
desc. node	4776 Jul 04 08:18	1°♒24'22			4777 May 30 15:25	0°♑	
retrograde	4776 Jul 05 00:54	1°♒25'29		evening max el	4777 Jun 04 22:24	6°♑22'43	20°13'10
evening set	4776 Jul 07 12:31	1°♒11'26		retrograde	4777 Jun 15 14:40	11°♑35'59	
	4776 Jul 11 08:54	30°♒		evening set	4777 Jun 17 13:24	11°♑26'17	
inferior conj	4776 Jul 16 21:03	27°♑10'56	-3°30'59	desc. node	4777 Jun 21 05:19	10°♑20'46	
minimum elong	4776 Jul 16 12:27	27°♑22'57	3°28'27	inferior conj	4777 Jun 26 16:02	7°♑27'40	-1°37'13
min. Earth dist.	4776 Jul 16 18:56	27°♑13'53	0.54833 AU	minimum elong	4777 Jun 26 11:29	7°♑34'24	1°35'33
morning rise	4776 Jul 25 13:28	23°♑18'01		min. Earth dist.	4777 Jun 28 06:59	6°♑30'06	0.55072 AU
direct	4776 Jul 28 22:30	22°♑53'16		morning rise	4777 Jul 05 08:11	3°♑12'37	
morning max el	4776 Aug 10 07:27	28°♑42'53	22°05'26	direct	4777 Jul 09 09:15	2°♑37'09	
	4776 Aug 11 15:05	0°♒		morning max el	4777 Jul 22 23:18	9°♑15'15	23°48'30
asc. node	4776 Aug 24 17:58	18°♒58'47			4777 Aug 07 04:09	0°♒	
	4776 Aug 30 08:53	0°♓		asc. node	4777 Aug 11 14:59	8°♒19'03	
morning set	4776 Aug 31 15:29	2°♓38'56		morning set	4777 Aug 16 03:01	17°♒31'52	
					4777 Aug 21 21:51	0°♓	
superior conj	4776 Sep 07 19:39	17°♓51'01	1°42'12	superior conj	4777 Aug 23 02:38	2°♓35'50	1°34'46
minimum elong	4776 Sep 07 18:47	17°♓46'28	1°42'10	minimum elong	4777 Aug 23 00:51	2°♓26'07	1°34'37
max. Earth dist.	4776 Sep 11 09:43	25°♓18'03	1.34504 AU	max. Earth dist.	4777 Aug 25 08:59	7°♓27'31	1.33243 AU
	4776 Sep 13 17:37	0°♔		evening rise	4777 Aug 30 14:03	18°♓16'08	
evening rise	4776 Sep 15 21:59	4°♔16'59			4777 Sep 05 16:23	0°♔	
desc. node	4776 Sep 30 07:34	29°♔28'48		desc. node	4777 Sep 17 04:35	19°♔12'41	
	4776 Sep 30 15:33	0°♕			4777 Sep 24 22:45	0°♕	
evening max el	4776 Oct 20 22:08	26°♕10'07	26°58'26				

evening max el	4777 Oct 03 09:48	9° \mathbb{M} 28'38	27°24'46	desc. node	4778 Sep 04 01:36	8° \mathbb{A} 21'00	
retrograde	4777 Oct 16 23:57	16° \mathbb{M} 46'47		evening max el	4778 Sep 15 18:36	22° \mathbb{A} 17'17	27°20'57
evening set	4777 Oct 24 02:04	14° \mathbb{M} 08'23		retrograde	4778 Sep 29 14:03	29° \mathbb{A} 31'47	
min. Earth dist.	4777 Oct 27 19:27	10° \mathbb{M} 48'40	0.64006 AU	evening set	4778 Oct 06 18:03	27° \mathbb{A} 06'41	
inferior conj	4777 Oct 30 07:16	8° \mathbb{M} 13'14	-2°42'00	min. Earth dist.	4778 Oct 10 08:57	24° \mathbb{A} 14'26	0.62187 AU
minimum elong	4777 Oct 30 11:56	8° \mathbb{M} 01'07	2°40'17	inferior conj	4778 Oct 13 07:39	21° \mathbb{A} 30'46	-3°43'00
morning rise	4777 Nov 05 23:11	2° \mathbb{M} 51'25		minimum elong	4778 Oct 13 13:39	21° \mathbb{A} 16'50	3°41'13
asc. node	4777 Nov 07 14:15	2° \mathbb{M} 24'10		morning rise	4778 Oct 20 11:01	16° \mathbb{A} 27'21	
direct	4777 Nov 08 11:01	2° \mathbb{M} 20'23		direct	4778 Oct 22 19:23	16° \mathbb{A} 03'04	
morning max el	4777 Nov 14 23:40	5° \mathbb{M} 45'28	17°52'36	asc. node	4778 Oct 25 11:15	16° \mathbb{A} 35'16	
	4777 Nov 30 23:34	0° \mathbb{A}		morning max el	4778 Oct 29 15:43	19° \mathbb{A} 31'55	17°51'29
morning set	4777 Dec 01 19:31	1° \mathbb{A} 25'20			4778 Nov 06 08:18	0° \mathbb{M}	
desc. node	4777 Dec 14 03:51	22° \mathbb{A} 07'01		morning set	4778 Nov 14 13:34	14° \mathbb{M} 22'15	
					4778 Nov 23 09:20	0° \mathbb{A}	
superior conj	4777 Dec 14 15:59	22° \mathbb{A} 56'26	-0°03'33	superior conj	4778 Nov 25 13:49	3° \mathbb{A} 45'28	0°37'55
minimum elong	4777 Dec 14 15:34	22° \mathbb{A} 54'47	0°03'28	minimum elong	4778 Nov 25 17:05	3° \mathbb{A} 59'24	0°37'28
behind sun begin	4777 Dec 14 05:48	22° \mathbb{A} 14'58		desc. node	4778 Dec 01 00:53	12° \mathbb{A} 54'22	
behind sun end	4777 Dec 15 01:21	23° \mathbb{A} 34'31		max. Earth dist.	4778 Dec 02 18:02	15° \mathbb{A} 42'40	1.43227 AU
	4777 Dec 19 01:10	0° \mathbb{B}		evening rise	4778 Dec 10 02:34	27° \mathbb{A} 25'17	
max. Earth dist.	4777 Dec 20 03:05	1° \mathbb{B} 43'09	1.44553 AU		4778 Dec 11 18:26	0° \mathbb{B}	
evening rise	4777 Dec 30 14:07	18° \mathbb{B} 02'37			4779 Jan 01 06:40	0° \mathbb{A}	
	4778 Jan 07 10:37	0° \mathbb{A}		evening max el	4779 Jan 10 08:24	11° \mathbb{A} 00'38	21°38'20
evening max el	4778 Jan 27 11:12	27° \mathbb{A} 25'55	20°27'12	retrograde	4779 Jan 19 09:07	16° \mathbb{A} 22'21	
	4778 Jan 30 07:28	0° \mathbb{H}		asc. node	4779 Jan 21 10:31	15° \mathbb{A} 59'36	
asc. node	4778 Feb 03 13:31	2° \mathbb{H} 04'04		evening set	4779 Jan 23 16:37	14° \mathbb{A} 39'54	
retrograde	4778 Feb 04 11:38	2° \mathbb{H} 08'40		inferior conj	4779 Jan 29 00:46	8° \mathbb{A} 22'45	2°19'59
evening set	4778 Feb 08 08:52	0° \mathbb{H} 41'30		minimum elong	4779 Jan 28 22:22	8° \mathbb{A} 31'06	2°19'15
	4778 Feb 09 04:54	30° \mathbb{R}		min. Earth dist.	4779 Jan 29 04:35	8° \mathbb{A} 09'32	0.67976 AU
inferior conj	4778 Feb 13 17:39	24° \mathbb{A} 34'17	2°53'57	morning rise	4779 Feb 03 03:56	2° \mathbb{A} 10'47	
minimum elong	4778 Feb 13 15:18	24° \mathbb{A} 42'17	2°53'24	direct	4779 Feb 08 04:39	0° \mathbb{A} 00'28	
min. Earth dist.	4778 Feb 14 09:46	23° \mathbb{A} 39'17	0.67485 AU	morning max el	4779 Feb 18 05:52	5° \mathbb{A} 57'57	22°58'46
morning rise	4778 Feb 18 21:32	18° \mathbb{A} 20'09		desc. node	4779 Feb 27 00:08	16° \mathbb{A} 19'54	
direct	4778 Feb 24 12:46	15° \mathbb{A} 49'25			4779 Mar 08 18:55	0° \mathbb{H}	
morning max el	4778 Mar 07 20:31	22° \mathbb{A} 35'44	24°28'03	morning set	4779 Mar 24 19:17	25° \mathbb{H} 02'10	
desc. node	4778 Mar 12 03:07	27° \mathbb{A} 18'00			4779 Mar 27 18:08	0° \mathbb{Y}	
	4778 Mar 14 08:32	0° \mathbb{H}		max. Earth dist.	4779 Mar 29 05:06	2° \mathbb{Y} 29'42	1.39796 AU
	4778 Apr 04 02:45	0° \mathbb{Y}		superior conj	4779 Apr 05 22:45	16° \mathbb{Y} 15'08	-1°48'45
morning set	4778 Apr 12 18:30	14° \mathbb{Y} 32'00		minimum elong	4779 Apr 06 03:38	16° \mathbb{Y} 37'31	1°48'17
max. Earth dist.	4778 Apr 16 10:00	21° \mathbb{Y} 01'41	1.37606 AU		4779 Apr 13 06:25	0° \mathbb{B}	
	4778 Apr 21 06:01	0° \mathbb{B}		evening rise	4779 Apr 15 15:06	4° \mathbb{B} 31'02	
superior conj	4778 Apr 23 06:55	3° \mathbb{B} 53'59	-1°24'15	asc. node	4779 Apr 19 09:48	11° \mathbb{B} 40'25	
minimum elong	4778 Apr 23 11:23	4° \mathbb{B} 15'37	1°23'36		4779 May 01 06:48	0° \mathbb{I}	
evening rise	4778 May 01 23:01	21° \mathbb{B} 01'17		evening max el	4779 May 01 19:05	0° \mathbb{I} 30'53	18°30'52
asc. node	4778 May 02 12:46	22° \mathbb{B} 09'28		retrograde	4779 May 09 10:41	4° \mathbb{I} 17'29	
	4778 May 06 13:45	0° \mathbb{I}		evening set	4779 May 11 17:12	3° \mathbb{I} 58'35	
evening max el	4778 May 18 15:49	18° \mathbb{I} 07'51	19°11'51		4779 May 18 14:49	30° \mathbb{R}	
retrograde	4778 May 27 15:25	22° \mathbb{I} 30'54		inferior conj	4779 May 19 06:40	29° \mathbb{B} 28'58	1°50'36
evening set	4778 May 29 15:26	22° \mathbb{I} 18'47		minimum elong	4779 May 19 10:03	29° \mathbb{B} 22'19	1°49'34
inferior conj	4778 Jun 07 00:55	18° \mathbb{I} 08'30	0°18'40	min. Earth dist.	4779 May 22 16:26	26° \mathbb{B} 49'17	0.58070 AU
minimum elong	4778 Jun 07 01:41	18° \mathbb{I} 07'12	0°18'22	desc. node	4779 May 25 23:21	24° \mathbb{B} 37'56	
desc. node	4778 Jun 08 02:19	17° \mathbb{I} 25'35		morning rise	4779 May 26 23:42	24° \mathbb{B} 05'34	
min. Earth dist.	4778 Jun 09 21:49	16° \mathbb{I} 13'09	0.56232 AU	direct	4779 Jun 01 21:18	22° \mathbb{B} 36'32	
morning rise	4778 Jun 15 08:49	13° \mathbb{I} 18'45			4779 Jun 15 23:47	0° \mathbb{I}	
direct	4778 Jun 20 08:11	12° \mathbb{I} 21'25		morning max el	4779 Jun 16 06:27	0° \mathbb{I} 16'08	26°49'58
morning max el	4778 Jul 04 13:08	19° \mathbb{I} 37'21	25°28'39		4779 Jul 07 07:00	0° \mathbb{B}	
	4778 Jul 13 08:31	0° \mathbb{B}		morning set	4779 Jul 16 00:29	17° \mathbb{B} 09'26	
asc. node	4778 Jul 29 12:01	27° \mathbb{B} 59'54		asc. node	4779 Jul 16 09:02	17° \mathbb{B} 54'32	
	4778 Jul 30 11:11	0° \mathbb{Q}			4779 Jul 21 22:39	0° \mathbb{Q}	
morning set	4778 Jul 31 14:34	2° \mathbb{Q} 24'02		superior conj	4779 Jul 23 00:43	2° \mathbb{Q} 23'57	1°04'38
superior conj	4778 Aug 07 12:59	17° \mathbb{Q} 29'15	1°22'01	minimum elong	4779 Jul 22 22:28	2° \mathbb{Q} 11'29	1°04'14
minimum elong	4778 Aug 07 10:43	17° \mathbb{Q} 16'50	1°21'43	max. Earth dist.	4779 Jul 23 02:20	2° \mathbb{Q} 32'51	1.32005 AU
max. Earth dist.	4778 Aug 08 15:34	19° \mathbb{Q} 54'56	1.32412 AU	evening rise	4779 Jul 29 21:20	17° \mathbb{Q} 18'59	
	4778 Aug 13 08:05	0° \mathbb{P}			4779 Aug 05 04:42	0° \mathbb{P}	
evening rise	4778 Aug 14 14:46	2° \mathbb{P} 39'58		desc. node	4779 Aug 21 22:38	26° \mathbb{P} 38'20	
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































































































































	4779 Aug 24 17:29	0°♄			4780 Jul 28 07:43	0°♎	
evening max el	4779 Aug 28 21:47	4°♄22'50	26°43'38	desc. node	4780 Aug 07 19:39	13°♎44'07	
retrograde	4779 Sep 11 19:59	11°♄32'27		evening max el	4780 Aug 09 17:21	15°♎38'57	25°34'49
evening set	4779 Sep 18 16:23	9°♄32'58		retrograde	4780 Aug 23 16:12	22°♎44'17	
min. Earth dist.	4779 Sep 22 11:45	6°♄56'28	0.60162 AU	evening set	4780 Aug 29 16:17	21°♎20'05	
inferior conj	4779 Sep 25 17:16	4°♄19'27	-4°35'55	min. Earth dist.	4780 Sep 03 05:15	18°♎42'03	0.58114 AU
minimum elong	4779 Sep 25 23:07	4°♄07'32	4°34'44	inferior conj	4780 Sep 06 08:41	16°♎29'39	-5°10'06
	4779 Oct 02 06:00	30°♎		minimum elong	4780 Sep 06 11:34	16°♎24'33	5°09'53
morning rise	4779 Oct 03 07:52	29°♎37'32		morning rise	4780 Sep 14 09:07	12°♎11'01	
direct	4779 Oct 05 16:04	29°♎16'58		direct	4780 Sep 16 20:38	11°♎51'52	
	4779 Oct 08 23:20	0°♄		morning max el	4780 Sep 25 08:38	15°♎54'35	18°48'23
asc. node	4779 Oct 12 08:16	2°♄12'56		asc. node	4780 Sep 28 05:19	19°♎03'22	
morning max el	4779 Oct 13 03:48	2°♄57'53	18°09'35		4780 Oct 05 08:06	0°♄	
morning set	4779 Oct 28 22:59	28°♄02'24		morning set	4780 Oct 11 19:07	12°♄12'37	
	4779 Oct 29 24:00	0°♌					
superior conj	4779 Nov 07 12:50	15°♌47'23	1°09'14	superior conj	4780 Oct 20 08:08	28°♄48'29	1°29'52
minimum elong	4779 Nov 07 16:49	16°♌05'18	1°08'45	minimum elong	4780 Oct 20 11:07	29°♄02'36	1°29'35
max. Earth dist.	4779 Nov 15 04:17	29°♌07'05	1.41413 AU		4780 Oct 20 23:15	0°♌	
	4779 Nov 15 16:51	0°♊		max. Earth dist.	4780 Oct 27 10:12	11°♌48'44	1.39336 AU
desc. node	4779 Nov 17 21:55	3°♊40'52		evening rise	4780 Oct 31 08:52	18°♌39'41	
evening rise	4779 Nov 20 06:29	7°♊31'59		desc. node	4780 Nov 03 18:57	24°♌22'58	
	4779 Dec 04 22:11	0°♋			4780 Nov 07 06:19	0°♊	
evening max el	4779 Dec 24 00:57	24°♋37'55	22°56'41	evening max el	4780 Nov 28 06:09	0°♋	
	4779 Dec 31 04:44	0°♌		retrograde	4780 Dec 05 14:26	8°♋18'13	24°16'22
retrograde	4780 Jan 03 04:16	0°♌38'39			4780 Dec 16 19:58	14°♋53'20	
	4780 Jan 05 23:02	30°♎		evening set	4780 Dec 22 04:31	12°♋39'20	
evening set	4780 Jan 07 23:42	28°♋40'17		asc. node	4780 Dec 25 04:35	9°♋28'01	
asc. node	4780 Jan 08 07:32	28°♋23'21		min. Earth dist.	4780 Dec 26 21:22	7°♋15'32	0.67811 AU
inferior conj	4780 Jan 13 08:47	22°♋16'41	1°38'16	inferior conj	4780 Dec 27 15:53	6°♋13'14	0°49'45
minimum elong	4780 Jan 13 06:47	22°♋23'37	1°37'32	minimum elong	4780 Dec 27 14:43	6°♋17'08	0°49'17
min. Earth dist.	4780 Jan 13 01:13	22°♋42'51	0.68077 AU	morning rise	4781 Jan 02 01:01	0°♋10'46	
morning rise	4780 Jan 18 13:46	16°♋08'34			4781 Jan 02 07:02	30°♎♊	
direct	4780 Jan 22 23:59	14°♋21'09		direct	4781 Jan 05 21:41	28°♊45'46	
morning max el	4780 Jan 31 19:39	19°♋29'14	21°33'11		4781 Jan 09 18:43	0°♋	
	4780 Feb 09 13:40	0°♌		morning max el	4781 Jan 13 16:48	3°♋12'17	20°17'42
desc. node	4780 Feb 13 21:11	5°♌56'44		desc. node	4781 Jan 30 18:12	25°♋58'27	
	4780 Feb 29 23:35	0°♌			4781 Feb 02 10:45	0°♌	
morning set	4780 Mar 03 15:27	4°♌11'38		morning set	4781 Feb 10 14:22	12°♌26'31	
max. Earth dist.	4780 Mar 10 05:33	14°♌51'48	1.41905 AU	max. Earth dist.	4781 Feb 20 13:33	28°♌07'46	1.43654 AU
					4781 Feb 21 17:27	0°♌	
superior conj	4780 Mar 17 18:33	27°♌38'40	-2°04'58	superior conj	4781 Feb 26 13:39	7°♌54'07	-2°07'34
minimum elong	4780 Mar 17 21:33	27°♌51'44	2°04'52	minimum elong	4781 Feb 26 11:37	7°♌45'43	2°07'31
	4780 Mar 19 02:56	0°♍		evening rise	4781 Mar 11 05:09	29°♌24'47	
evening rise	4780 Mar 28 18:36	17°♍22'08			4781 Mar 11 13:15	0°♍	
	4780 Apr 04 19:19	0°♎		asc. node	4781 Mar 23 03:53	19°♍28'40	
asc. node	4780 Apr 05 06:50	0°♎49'25		evening max el	4781 Mar 28 17:10	26°♍33'55	18°08'13
evening max el	4780 Apr 14 04:41	13°♎22'48	18°09'51	retrograde	4781 Apr 04 04:02	29°♍56'24	
retrograde	4780 Apr 21 00:19	16°♎49'45		evening set	4781 Apr 06 23:26	29°♍16'51	
evening set	4780 Apr 23 13:35	16°♎21'17		inferior conj	4781 Apr 13 05:36	24°♍06'27	3°23'31
inferior conj	4780 Apr 30 09:25	11°♎30'47	2°51'03	minimum elong	4781 Apr 13 07:21	24°♍01'54	3°23'19
minimum elong	4780 Apr 30 12:37	11°♎23'24	2°50'22	min. Earth dist.	4781 Apr 16 02:24	21°♍07'14	0.62396 AU
min. Earth dist.	4780 May 03 17:11	8°♎29'08	0.60233 AU	morning rise	4781 Apr 19 13:47	18°♍03'05	
morning rise	4780 May 07 09:17	5°♎42'26		direct	4781 Apr 26 10:07	15°♍31'36	
desc. node	4780 May 11 20:23	3°♎51'38		desc. node	4781 Apr 28 17:26	15°♍47'21	
direct	4780 May 13 22:38	3°♎39'10		morning max el	4781 May 10 12:06	23°♍31'32	27°52'04
morning max el	4780 May 28 06:18	11°♎32'38	27°39'44		4781 May 16 07:02	0°♎	
	4780 Jun 11 17:17	0°♏			4781 Jun 05 00:01	0°♏	
	4780 Jun 28 11:07	0°♐		morning set	4781 Jun 13 08:15	15°♏57'26	
morning set	4780 Jun 29 07:04	1°♐42'56		max. Earth dist.	4781 Jun 18 21:17	27°♏33'48	1.32434 AU
asc. node	4780 Jul 02 06:05	7°♐58'03		asc. node	4781 Jun 19 03:09	28°♏05'22	
max. Earth dist.	4780 Jul 05 13:37	15°♐10'34	1.32011 AU		4781 Jun 20 00:22	0°♐	
superior conj	4780 Jul 06 12:07	17°♐14'20	0°43'12	superior conj	4781 Jun 20 21:25	1°♐54'13	0°18'19
minimum elong	4780 Jul 06 10:21	17°♐04'32	0°42'50	minimum elong	4781 Jun 20 20:34	1°♐49'35	0°18'07
	4780 Jul 12 07:56	0°♑		evening rise	4781 Jun 27 19:13	16°♐54'09	
evening rise	4780 Jul 13 07:30	2°♑06'06			4781 Jul 04 06:10	0°♑	

evening max el	4781 Jul 22 06:43	26° Ω 14'09	24°04'09	superior conj	4782 Jun 05 02:41	16° Π 17'44	-0°09'20
desc. node	4781 Jul 25 16:40	29° Ω 10'14		minimum elong	4782 Jun 05 03:09	16° Π 20'15	0°09'14
	4781 Jul 26 20:36	0° \cap		behind sun begin	4782 Jun 04 22:41	15° Π 56'26	
retrograde	4781 Aug 05 01:13	3° \cap 10'10		behind sun end	4782 Jun 05 07:38	16° Π 44'05	
evening set	4781 Aug 09 16:08	2° \cap 22'51		asc. node	4782 Jun 06 00:12	18° Π 12'27	
	4781 Aug 14 17:26	30° κ Ω			4782 Jun 11 12:18	0° \ominus	
min. Earth dist.	4781 Aug 15 17:14	29° Ω 24'47	0.56319 AU	evening rise	4782 Jun 12 06:39	1° \ominus 37'05	
inferior conj	4781 Aug 18 03:53	27° Ω 54'23	-5°10'21		4782 Jun 28 04:17	0° Ω	
minimum elong	4781 Aug 18 00:49	27° Ω 59'08	5°10'08	evening max el	4782 Jul 03 20:34	6° Ω 36'22	22°26'49
morning rise	4781 Aug 26 12:03	23° Ω 55'54		desc. node	4782 Jul 12 13:42	12° Ω 22'14	
direct	4781 Aug 29 05:40	23° Ω 36'29		retrograde	4782 Jul 16 21:55	13° Ω 05'46	
morning max el	4781 Sep 08 03:12	28° Ω 13'01	19°48'57	evening set	4782 Jul 20 00:45	12° Ω 44'21	
	4781 Sep 09 21:22	0° \cap		min. Earth dist.	4782 Jul 28 03:38	9° Ω 12'25	0.55127 AU
asc. node	4781 Sep 15 02:22	6° \cap 51'41		inferior conj	4782 Jul 29 05:16	8° Ω 36'05	-4°21'54
morning set	4781 Sep 25 22:33	26° \cap 43'39		minimum elong	4782 Jul 28 21:02	8° Ω 47'45	4°20'04
	4781 Sep 27 13:15	0° $\underline{\Omega}$		morning rise	4782 Aug 06 19:16	4° Ω 45'58	
				direct	4782 Aug 09 21:32	4° Ω 24'12	
superior conj	4781 Oct 03 18:25	12° $\underline{\Omega}$ 33'54	1°40'52	morning max el	4782 Aug 21 09:44	9° Ω 46'03	21°10'33
minimum elong	4781 Oct 03 19:48	12° $\underline{\Omega}$ 40'51	1°40'48	asc. node	4782 Sep 01 23:26	25° Ω 24'08	
max. Earth dist.	4781 Oct 09 15:06	23° $\underline{\Omega}$ 53'59	1.37257 AU		4782 Sep 04 12:22	0° \cap	
	4781 Oct 12 22:42	0° \cap		morning set	4782 Sep 10 06:41	11° \cap 27'47	
evening rise	4781 Oct 13 09:36	0° \cap 48'59					
desc. node	4781 Oct 21 15:58	14° \cap 56'43		superior conj	4782 Sep 17 15:15	26° \cap 50'03	1°43'43
	4781 Oct 31 11:06	0° \nearrow		minimum elong	4782 Sep 17 15:07	26° \cap 49'24	1°43'44
evening max el	4781 Nov 18 02:51	22° \nearrow 01'18	25°30'36		4782 Sep 19 04:12	0° $\underline{\Omega}$	
retrograde	4781 Nov 30 07:18	29° \nearrow 01'41		max. Earth dist.	4782 Sep 22 00:48	5° $\underline{\Omega}$ 45'29	1.35406 AU
evening set	4781 Dec 06 05:26	26° \nearrow 34'01		evening rise	4782 Sep 26 04:56	13° $\underline{\Omega}$ 50'04	
min. Earth dist.	4781 Dec 10 14:48	21° \nearrow 44'40	0.67193 AU		4782 Oct 05 07:23	0° \cap	
inferior conj	4781 Dec 11 20:16	20° \nearrow 10'02	-0°04'34	desc. node	4782 Oct 08 12:58	5° \cap 16'35	
minimum elong	4781 Dec 11 20:23	20° \nearrow 09'40	0°04'30		4782 Oct 26 07:13	0° \nearrow	
transit middle	4781 Dec 11 20:23	20° \nearrow 09'40	0°04'30	evening max el	4782 Oct 31 15:31	5° \nearrow 42'45	26°32'00
transit begin	4781 Dec 11 17:41	20° \nearrow 18'20		retrograde	4782 Nov 13 13:28	12° \nearrow 56'47	
transit end	4781 Dec 11 23:04	20° \nearrow 01'02		evening set	4782 Nov 20 00:32	10° \nearrow 19'34	
asc. node	4781 Dec 12 01:37	19° \nearrow 52'52		min. Earth dist.	4782 Nov 24 03:08	6° \nearrow 05'28	0.66228 AU
morning rise	4781 Dec 17 11:40	14° \nearrow 15'12		inferior conj	4782 Nov 25 19:58	4° \nearrow 02'47	-1°03'37
direct	4781 Dec 20 20:23	13° \nearrow 10'05		minimum elong	4782 Nov 25 21:43	3° \nearrow 57'30	1°02'52
morning max el	4781 Dec 27 21:51	17° \nearrow 06'11	19°16'08	asc. node	4782 Nov 28 22:39	0° \nearrow 33'05	
	4782 Jan 06 21:29	0° \ominus			4782 Nov 29 12:33	30° κ \cap	
greatest brilliancy	4782 Jan 10 09:30	5° \ominus 12'57	-0.7m	morning rise	4782 Dec 01 19:37	28° \cap 18'10	
desc. node	4782 Jan 17 15:15	16° \ominus 18'21		direct	4782 Dec 04 18:26	27° \cap 29'14	
morning set	4782 Jan 20 14:35	20° \ominus 54'25			4782 Dec 10 05:06	0° \nearrow	
	4782 Jan 26 10:59	0° \approx		morning max el	4782 Dec 11 09:21	1° \nearrow 05'51	18°30'21
max. Earth dist.	4782 Feb 03 03:43	12° \approx 03'38	1.44829 AU		4782 Dec 31 05:02	0° \ominus	
				morning set	4782 Dec 31 14:05	0° \ominus 36'07	
superior conj	4782 Feb 06 07:57	17° \approx 05'17	-1°51'31	desc. node	4783 Jan 04 12:14	6° \ominus 50'38	
minimum elong	4782 Feb 05 23:59	16° \approx 33'39	1°50'56				
	4782 Feb 14 08:42	0° \times		superior conj	4783 Jan 16 11:23	25° \ominus 42'05	-1°16'31
evening rise	4782 Feb 20 18:32	10° \times 31'39		minimum elong	4783 Jan 16 02:34	25° \ominus 07'31	1°15'30
	4782 Mar 04 17:06	0° Υ		max. Earth dist.	4783 Jan 16 21:51	26° \ominus 23'08	1.45305 AU
asc. node	4782 Mar 10 00:56	7° Υ 29'08			4783 Jan 19 05:11	0° \approx	
evening max el	4782 Mar 12 05:41	9° Υ 57'18	18°25'20	evening rise	4783 Feb 01 08:28	20° \approx 41'14	
retrograde	4782 Mar 18 17:13	13° Υ 28'32			4783 Feb 07 05:26	0° \times	
evening set	4782 Mar 21 18:45	12° Υ 36'47		greatest brilliancy	4783 Feb 10 17:01	5° \times 29'04	-0.8m
inferior conj	4782 Mar 27 15:08	7° Υ 08'06	3°34'07	evening max el	4783 Feb 23 15:46	23° \times 27'20	19°00'19
minimum elong	4782 Mar 27 15:13	7° Υ 07'51	3°34'06	asc. node	4783 Feb 24 21:57	24° \times 39'15	
min. Earth dist.	4782 Mar 29 21:05	4° Υ 31'25	0.64328 AU	retrograde	4783 Mar 02 12:06	27° \times 18'48	
morning rise	4782 Apr 02 10:53	0° Υ 57'12		evening set	4783 Mar 05 20:25	26° \times 13'57	
	4782 Apr 03 17:18	30° κ \times		inferior conj	4783 Mar 11 10:16	20° \times 28'38	3°28'10
direct	4782 Apr 09 05:56	28° \times 09'39		minimum elong	4783 Mar 11 09:01	20° \times 32'34	3°28'02
	4782 Apr 15 07:39	0° Υ		min. Earth dist.	4783 Mar 13 00:40	18° \times 27'33	0.65886 AU
desc. node	4782 Apr 15 14:29	0° Υ 09'52		morning rise	4783 Mar 16 21:14	14° \times 14'47	
morning max el	4782 Apr 22 21:19	6° Υ 06'18	27°27'56	direct	4783 Mar 23 08:34	11° \times 25'05	
	4782 May 11 03:06	0° B		desc. node	4783 Apr 02 11:30	16° \times 25'31	
morning set	4782 May 28 01:24	29° B 45'01		morning max el	4783 Apr 05 07:15	19° \times 05'23	26°33'31
	4782 May 28 04:27	0° Π			4783 Apr 14 13:30	0° Υ	
max. Earth dist.	4782 Jun 01 21:17	9° Π 30'45	1.33303 AU		4783 May 04 03:44	0° B	
				morning set	4783 May 11 07:09	12° B 55'58	

max. Earth dist.	4783 May 15 10:35	20°♄56'46	1.34642 AU		4784 Apr 25 11:00	0°♄	
	4783 May 19 22:04	0°♄		max. Earth dist.	4784 Apr 26 12:59	2°♄00'59	1.36427 AU
superior conj	4783 May 20 01:42	0°♄18'40	-0°38'37	superior conj	4784 May 02 15:32	13°♄48'01	-1°08'05
minimum elong	4783 May 20 03:47	0°♄29'26	0°38'12	minimum elong	4784 May 02 19:15	14°♄06'29	1°07'27
asc. node	4783 May 23 21:14	8°♄15'31		asc. node	4784 May 09 18:16	28°♄09'40	
evening rise	4783 May 27 15:51	16°♄09'15		evening rise	4784 May 10 20:34	0°♄22'59	
	4783 Jun 03 16:16	0°♄			4784 May 10 16:02	0°♄	
evening max el	4783 Jun 15 18:54	17°♄18'53	20°57'23	evening max el	4784 May 28 05:21	28°♄39'16	19°44'37
retrograde	4783 Jun 27 10:33	23°♄02'03			4784 May 29 16:59	0°♄	
desc. node	4783 Jun 29 10:44	22°♄52'31		retrograde	4784 Jun 07 03:27	3°♄29'52	
evening set	4783 Jun 29 14:29	22°♄51'00		evening set	4784 Jun 09 01:48	3°♄19'39	
inferior conj	4783 Jul 08 22:30	18°♄53'43	-2°45'21	desc. node	4784 Jun 15 07:46	0°♄50'39	
minimum elong	4783 Jul 08 15:03	19°♄04'15	2°42'51		4784 Jun 16 18:09	30°♄	
min. Earth dist.	4783 Jul 09 14:41	18°♄30'51	0.54816 AU	inferior conj	4784 Jun 17 21:58	29°♄17'14	-0°46'23
morning rise	4783 Jul 17 15:37	14°♄53'35		minimum elong	4784 Jun 17 19:51	29°♄20'31	0°45'36
direct	4783 Jul 21 06:52	14°♄25'08		min. Earth dist.	4784 Jun 20 03:28	27°♄54'31	0.55469 AU
morning max el	4783 Aug 03 05:30	20°♄36'25	22°48'29	morning rise	4784 Jun 26 11:42	24°♄48'41	
	4783 Aug 11 04:02	0°♄		direct	4784 Jun 30 21:57	24°♄05'22	
asc. node	4783 Aug 19 20:28	14°♄30'01			4784 Jul 13 17:13	0°♄	
morning set	4783 Aug 25 17:31	26°♄19'32		morning max el	4784 Jul 14 19:33	1°♄00'17	24°32'19
	4783 Aug 27 11:07	0°♄			4784 Aug 03 16:47	0°♄	
				asc. node	4784 Aug 05 17:30	3°♄59'52	
superior conj	4783 Sep 01 19:19	11°♄27'09	1°39'44	morning set	4784 Aug 09 05:17	11°♄12'47	
minimum elong	4783 Sep 01 18:01	11°♄20'09	1°39'40				
max. Earth dist.	4783 Sep 04 19:16	17°♄46'41	1.33922 AU	superior conj	4784 Aug 16 04:00	26°♄16'10	1°29'58
evening rise	4783 Sep 09 14:37	27°♄31'46		minimum elong	4784 Aug 16 01:56	26°♄04'59	1°29'44
	4783 Sep 10 20:59	0°♄			4784 Aug 17 21:15	0°♄	
desc. node	4783 Sep 25 09:59	25°♄16'12		max. Earth dist.	4784 Aug 17 22:12	0°♄05'07	1.32846 AU
	4783 Sep 28 13:27	0°♄		evening rise	4784 Aug 23 10:45	11°♄42'24	
evening max el	4783 Oct 14 04:11	19°♄13'53	27°13'01		4784 Sep 02 02:30	0°♄	
retrograde	4783 Oct 27 13:39	26°♄31'36		desc. node	4784 Sep 11 07:02	14°♄46'24	
evening set	4783 Nov 03 11:31	23°♄51'20			4784 Sep 23 06:30	0°♄	
min. Earth dist.	4783 Nov 07 08:02	20°♄12'19	0.64921 AU	evening max el	4784 Sep 25 15:04	2°♄21'28	27°27'01
inferior conj	4783 Nov 09 12:47	17°♄47'00	-2°05'46	retrograde	4784 Oct 09 07:27	9°♄37'29	
minimum elong	4783 Nov 09 16:23	17°♄37'02	2°04'19	evening set	4784 Oct 16 11:29	7°♄03'21	
morning rise	4783 Nov 15 22:22	12°♄15'41		min. Earth dist.	4784 Oct 20 03:21	3°♄56'26	0.63273 AU
asc. node	4783 Nov 15 19:42	12°♄18'47		inferior conj	4784 Oct 22 20:02	1°♄16'13	-3°08'24
direct	4783 Nov 18 13:33	11°♄39'05		minimum elong	4784 Oct 23 01:22	1°♄02'58	3°06'34
morning max el	4783 Nov 25 00:55	15°♄05'42	18°01'20		4784 Oct 24 03:12	30°♄	
	4783 Dec 05 16:29	0°♄		morning rise	4784 Oct 29 16:46	26°♄01'46	
morning set	4783 Dec 12 19:15	11°♄46'26		direct	4784 Nov 01 02:54	25°♄33'51	
desc. node	4783 Dec 22 09:14	27°♄31'23		asc. node	4784 Nov 01 16:43	25°♄35'28	
	4783 Dec 23 22:04	0°♄		morning max el	4784 Nov 07 17:42	28°♄59'11	17°49'52
					4784 Nov 08 16:55	0°♄	
superior conj	4783 Dec 26 19:50	4°♄39'19	-0°30'26	morning set	4784 Nov 24 01:45	24°♄10'15	
minimum elong	4783 Dec 26 16:06	4°♄24'25	0°29'54		4784 Nov 27 10:06	0°♄	
max. Earth dist.	4783 Dec 30 17:20	10°♄49'46	1.45038 AU				
evening rise	4784 Jan 12 02:35	0°♄06'52		superior conj	4784 Dec 06 02:17	14°♄43'13	0°15'09
	4784 Jan 12 00:48	0°♄		minimum elong	4784 Dec 06 03:50	14°♄49'39	0°14'57
greatest brilliancy	4784 Jan 26 00:27	21°♄17'41	-0.6m	behind sun begin	4784 Dec 06 00:18	14°♄34'59	
	4784 Feb 01 02:52	0°♄		behind sun end	4784 Dec 06 07:23	15°♄04'19	
evening max el	4784 Feb 06 21:28	6°♄59'47	19°51'29	desc. node	4784 Dec 08 06:16	18°♄17'18	
asc. node	4784 Feb 11 18:59	10°♄44'51		max. Earth dist.	4784 Dec 12 11:05	25°♄05'33	1.44062 AU
retrograde	4784 Feb 14 09:45	11°♄21'20			4784 Dec 15 13:07	0°♄	
evening set	4784 Feb 18 01:56	10°♄02'24		evening rise	4784 Dec 21 12:30	9°♄19'15	
inferior conj	4784 Feb 23 11:55	4°♄02'27	3°09'27		4785 Jan 04 06:36	0°♄	
minimum elong	4784 Feb 23 09:50	4°♄09'24	3°09'04	evening max el	4785 Jan 19 21:45	20°♄33'21	20°56'16
min. Earth dist.	4784 Feb 24 11:42	2°♄43'05	0.67024 AU	retrograde	4785 Jan 28 07:54	25°♄32'12	
	4784 Feb 26 15:16	30°♄		asc. node	4785 Jan 28 16:00	25°♄31'35	
morning rise	4784 Feb 28 17:31	27°♄48'08		evening set	4785 Feb 01 09:23	23°♄58'24	
direct	4784 Mar 05 16:48	25°♄08'07		inferior conj	4785 Feb 06 17:40	17°♄46'25	2°40'33
	4784 Mar 15 06:34	0°♄		minimum elong	4785 Feb 06 15:14	17°♄54'47	2°39'55
morning max el	4784 Mar 17 16:16	2°♄17'23	25°17'36	min. Earth dist.	4785 Feb 07 04:19	17°♄09'43	0.67740 AU
desc. node	4784 Mar 19 08:30	4°♄02'48		morning rise	4785 Feb 11 20:56	11°♄33'12	
	4784 Apr 07 16:37	0°♄		direct	4785 Feb 17 06:00	9°♄10'55	
morning set	4784 Apr 22 20:52	25°♄16'09		morning max el	4785 Feb 28 00:59	15°♄36'51	23°50'19

desc. node	4785 Mar 06 05:30	22° \approx 38'46		desc. node	4786 Feb 21 02:32	11° \approx 56'34	
	4785 Mar 11 20:29	0° H			4786 Mar 05 14:26	0° H	
	4785 Mar 31 15:56	0° Y		morning set	4786 Mar 16 01:31	16° H 25'59	
morning set	4785 Apr 04 12:53	6° Y 30'55		max. Earth dist.	4786 Mar 21 05:27	24° H 59'41	1.40715 AU
max. Earth dist.	4785 Apr 08 08:58	13° Y 11'56	1.38528 AU		4786 Mar 24 03:45	0° Y	
superior conj	4785 Apr 15 16:39	26° Y 36'50	-1°35'20	superior conj	4786 Mar 29 00:30	8° Y 33'53	-1°56'57
minimum elong	4785 Apr 15 21:29	26° Y 59'44	1°34'44	minimum elong	4786 Mar 29 04:56	8° Y 53'48	1°56'38
	4785 Apr 17 11:20	0° B		evening rise	4786 Apr 08 05:25	27° Y 25'06	
evening rise	4785 Apr 24 18:13	14° B 11'15			4786 Apr 09 14:28	0° B	
asc. node	4785 Apr 26 15:18	17° B 50'37		asc. node	4786 Apr 13 12:20	7° B 12'40	
	4785 May 03 06:31	0° II		evening max el	4786 Apr 24 09:34	23° B 16'32	18°19'33
evening max el	4785 May 11 03:15	10° II 40'47	18°51'54	retrograde	4786 May 01 15:27	26° B 53'01	
retrograde	4785 May 19 12:01	14° II 46'51		evening set	4786 May 04 00:44	26° B 30'28	
evening set	4785 May 21 14:28	14° II 32'18		inferior conj	4786 May 11 06:18	21° B 52'11	2°19'59
inferior conj	4785 May 29 15:21	10° II 13'53	1°01'22	minimum elong	4786 May 11 09:51	21° B 44'41	2°19'02
minimum elong	4785 May 29 17:38	10° II 09'47	1°00'34	min. Earth dist.	4786 May 14 16:47	18° B 59'48	0.58963 AU
min. Earth dist.	4785 Jun 01 19:35	7° II 57'37	0.56950 AU	morning rise	4786 May 18 15:59	16° B 16'31	
desc. node	4785 Jun 02 04:46	7° II 41'59		desc. node	4786 May 20 01:46	15° B 35'03	
morning rise	4785 Jun 06 17:30	5° II 08'55		direct	4786 May 24 21:12	14° B 32'33	
direct	4785 Jun 12 02:27	3° II 59'21		morning max el	4786 Jun 08 06:37	22° B 20'07	27°15'34
morning max el	4785 Jun 26 10:30	11° II 26'37	26°06'26		4786 Jun 15 01:00	0° II	
	4785 Jul 10 18:16	0° D			4786 Jul 03 17:15	0° D	
asc. node	4785 Jul 23 14:32	23° D 47'08		morning set	4786 Jul 09 01:08	10° D 44'03	
morning set	4785 Jul 24 16:22	26° D 02'44		asc. node	4786 Jul 10 11:36	13° D 46'15	
	4785 Jul 26 12:45	0° Q		superior conj	4786 Jul 16 03:01	26° D 04'31	0°56'02
superior conj	4785 Jul 31 15:10	11° Q 10'37	1°15'11	minimum elong	4786 Jul 16 00:54	25° D 52'53	0°55'37
minimum elong	4785 Jul 31 12:51	10° Q 57'51	1°14'49	max. Earth dist.	4786 Jul 15 18:25	25° D 17'05	1.31949 AU
max. Earth dist.	4785 Aug 01 07:05	12° Q 38'17	1.32191 AU	evening rise	4786 Jul 17 21:40	0° Q	
evening rise	4785 Aug 07 14:16	26° Q 13'12			4786 Jul 22 22:37	10° Q 56'30	
	4785 Aug 09 10:15	0° np		desc. node	4786 Aug 01 15:59	0° np	
	4785 Aug 26 14:40	0° u		evening max el	4786 Aug 16 01:05	21° np 25'20	
desc. node	4785 Aug 29 04:04	3° u 35'01			4786 Aug 20 21:33	26° np 36'48	26°17'50
evening max el	4785 Sep 07 21:36	14° u 52'07	27°09'01		4786 Aug 24 22:38	0° u	
retrograde	4785 Sep 21 18:13	22° u 04'45		retrograde	4786 Sep 03 20:45	3° u 45'37	
evening set	4785 Sep 28 20:33	19° u 48'39		evening set	4786 Sep 10 10:02	2° u 00'09	
min. Earth dist.	4785 Oct 02 12:01	17° u 05'17	0.61345 AU		4786 Sep 13 15:26	30° Rnp	
inferior conj	4785 Oct 05 14:33	14° u 22'10	-4°06'58	min. Earth dist.	4786 Sep 14 10:45	29° np 25'14	0.59275 AU
minimum elong	4785 Oct 05 20:45	14° u 08'33	4°05'21	inferior conj	4786 Sep 17 16:53	26° np 56'06	-4°53'31
morning rise	4785 Oct 12 22:51	9° u 27'55		minimum elong	4786 Sep 17 21:53	26° np 46'30	4°52'46
direct	4785 Oct 15 06:44	9° u 05'33		morning rise	4786 Sep 25 11:56	22° np 24'17	
asc. node	4785 Oct 19 13:45	10° u 24'42		direct	4786 Sep 27 20:57	22° np 04'43	
morning max el	4785 Oct 22 08:33	12° u 38'09	17°56'49	morning max el	4786 Oct 05 18:06	25° np 53'49	18°23'27
	4785 Nov 03 00:40	0° ml		asc. node	4786 Oct 06 10:48	26° np 35'38	
morning set	4785 Nov 07 03:00	7° ml 27'08			4786 Oct 09 07:27	0° u	
superior conj	4785 Nov 17 11:23	26° ml 04'55	0°52'32	morning set	4786 Oct 21 17:31	21° u 21'43	
minimum elong	4785 Nov 17 15:15	26° ml 21'47	0°52'01		4786 Oct 26 05:55	0° ml	
	4785 Nov 19 17:44	0° x		superior conj	4786 Oct 30 19:47	8° ml 34'28	1°19'13
max. Earth dist.	4785 Nov 25 00:09	8° x 51'33	1.42498 AU	minimum elong	4786 Oct 30 23:28	8° ml 51'26	1°18'49
desc. node	4785 Nov 25 03:18	9° x 04'35		max. Earth dist.	4786 Nov 07 07:49	21° ml 56'09	1.40545 AU
evening rise	4785 Dec 01 06:04	18° x 56'40		evening rise	4786 Nov 11 19:17	29° ml 29'00	
	4785 Dec 08 09:35	0° Z		desc. node	4786 Nov 12 00:22	29° ml 49'59	
	4785 Dec 29 22:55	0° \approx			4786 Nov 12 02:48	0° x	
evening max el	4786 Jan 02 16:39	4° \approx 08'05	22°11'03		4786 Dec 01 21:40	0° Z	
retrograde	4786 Jan 12 04:41	9° \approx 47'16		evening max el	4786 Dec 16 07:37	17° Z 46'27	23°30'45
asc. node	4786 Jan 15 13:02	8° \approx 47'51		retrograde	4786 Dec 26 22:37	24° Z 03'11	
evening set	4786 Jan 16 17:03	7° \approx 57'58		evening set	4786 Dec 31 23:22	21° Z 58'15	
inferior conj	4786 Jan 22 01:24	1° \approx 37'19	2°03'09	asc. node	4787 Jan 02 10:03	20° Z 35'06	
minimum elong	4786 Jan 21 23:07	1° \approx 45'17	2°02'24	inferior conj	4787 Jan 06 09:17	15° Z 32'54	1°18'28
min. Earth dist.	4786 Jan 22 00:13	1° \approx 41'26	0.68060 AU	minimum elong	4787 Jan 06 07:35	15° Z 38'44	1°17'49
	4786 Jan 23 05:38	30° RZ		min. Earth dist.	4787 Jan 05 21:04	16° Z 14'43	0.68009 AU
morning rise	4786 Jan 27 05:02	25° Z 26'42		morning rise	4787 Jan 11 15:44	9° Z 26'39	
direct	4786 Jan 31 23:23	23° Z 26'13		direct	4787 Jan 15 19:59	7° Z 48'55	
morning max el	4786 Feb 10 11:55	29° Z 02'43	22°21'30	morning max el	4787 Jan 24 04:32	12° Z 38'28	20°59'24
	4786 Feb 11 10:08	0° \approx			4787 Feb 06 18:28	0° \approx	

desc. node	4787 Feb 07 23:35	1° \approx 44'50			4788 Jan 10 09:55	0° \approx	
morning set	4787 Feb 23 10:38	25° \approx 05'26		greatest brilliancy	4788 Jan 20 12:09	13° \approx 54'12	-0.6m
	4787 Feb 26 13:21	0° \approx		desc. node	4788 Jan 25 20:38	21° \approx 55'02	
max. Earth dist.	4787 Mar 03 08:21	7° \approx 42'34	1.42708 AU		4788 Jan 31 03:49	0° \approx	
				morning set	4788 Feb 02 06:49	3° \approx 16'09	
superior conj	4787 Mar 10 10:11	19° \approx 28'44	-2°08'06	max. Earth dist.	4788 Feb 13 19:25	21° \approx 18'16	1.44239 AU
minimum elong	4787 Mar 10 11:25	19° \approx 33'59	2°08'04				
	4787 Mar 16 12:12	0° \approx		superior conj	4788 Feb 18 18:21	29° \approx 15'38	-2°03'13
evening rise	4787 Mar 22 02:12	9° \approx 55'47		minimum elong	4788 Feb 18 13:35	28° \approx 56'19	2°03'01
asc. node	4787 Mar 31 09:23	26° \approx 09'32			4788 Feb 19 05:18	0° \approx	
	4787 Apr 02 20:35	0° \approx		evening rise	4788 Mar 03 04:11	21° \approx 35'15	
evening max el	4787 Apr 07 20:48	6° \approx 17'20	18°06'54		4788 Mar 08 02:45	0° \approx	
retrograde	4787 Apr 14 11:24	9° \approx 40'21		asc. node	4788 Mar 17 06:24	14° \approx 33'32	
evening set	4787 Apr 17 03:21	9° \approx 07'20		evening max el	4788 Mar 21 09:43	19° \approx 34'56	18°13'17
inferior conj	4787 Apr 23 16:54	4° \approx 08'31	3°07'53	retrograde	4788 Mar 27 19:35	22° \approx 59'14	
minimum elong	4787 Apr 23 19:33	4° \approx 02'02	3°07'26	evening set	4788 Mar 30 17:42	22° \approx 14'25	
min. Earth dist.	4787 Apr 26 20:57	1° \approx 04'47	0.61169 AU	inferior conj	4788 Apr 05 19:14	16° \approx 56'01	3°30'20
	4787 Apr 28 02:00	30° \approx 8'00		minimum elong	4788 Apr 05 20:15	16° \approx 53'14	3°30'15
morning rise	4787 Apr 30 09:46	28° \approx 09'12		min. Earth dist.	4788 Apr 08 09:57	14° \approx 04'33	0.63261 AU
desc. node	4787 May 06 22:49	25° \approx 05'03		morning rise	4788 Apr 11 21:44	10° \approx 49'02	
direct	4787 May 07 03:24	25° \approx 05'56		direct	4788 Apr 18 18:34	8° \approx 09'09	
	4787 May 16 23:13	0° \approx		desc. node	4788 Apr 22 19:50	8° \approx 58'01	
morning max el	4787 May 21 08:56	3° \approx 53'25	27°49'40	morning max el	4788 May 02 16:21	16° \approx 08'08	27°46'02
	4787 Jun 09 16:47	0° \approx			4788 May 14 02:02	0° \approx	
morning set	4787 Jun 23 05:39	25° \approx 09'47			4788 Jun 01 09:39	0° \approx	
	4787 Jun 25 13:16	0° \approx		morning set	4788 Jun 06 03:43	9° \approx 13'24	
asc. node	4787 Jun 27 08:39	3° \approx 51'35		max. Earth dist.	4788 Jun 11 09:19	20° \approx 02'06	1.32748 AU
max. Earth dist.	4787 Jun 29 04:26	7° \approx 48'53	1.32129 AU	asc. node	4788 Jun 13 05:42	23° \approx 15'08	
superior conj	4787 Jun 30 13:43	10° \approx 50'56	0°33'03	superior conj	4788 Jun 13 21:32	25° \approx 12'24	0°06'54
minimum elong	4787 Jun 30 12:17	10° \approx 43'03	0°32'44	minimum elong	4788 Jun 13 21:12	25° \approx 12'36	0°06'49
evening rise	4787 Jul 07 09:39	25° \approx 44'29		behind sun begin	4788 Jun 13 16:23	24° \approx 15'64	
	4787 Jul 09 10:13	0° \approx		behind sun end	4788 Jun 14 02:00	25° \approx 14'83	
	4787 Jul 26 22:31	0° \approx			4788 Jun 16 00:26	0° \approx	
evening max el	4787 Aug 02 14:12	7° \approx 34'01	24°58'20	evening rise	4788 Jun 20 21:28	10° \approx 31'03	
desc. node	4787 Aug 02 22:07	7° \approx 52'48			4788 Jun 30 21:18	0° \approx	
retrograde	4787 Aug 16 12:32	14° \approx 36'25		evening max el	4788 Jul 14 02:51	17° \approx 59'25	23°22'40
evening set	4787 Aug 21 23:30	13° \approx 28'48		desc. node	4788 Jul 19 19:07	22° \approx 25'57	
min. Earth dist.	4787 Aug 27 01:43	10° \approx 44'04	0.57297 AU	retrograde	4788 Jul 27 15:35	24° \approx 45'54	
inferior conj	4787 Aug 29 23:50	8° \approx 47'49	-5°15'24	evening set	4788 Jul 31 14:48	24° \approx 11'28	
minimum elong	4787 Aug 30 00:27	8° \approx 46'47	5°15'24	min. Earth dist.	4788 Aug 07 12:21	21° \approx 00'47	0.55725 AU
morning rise	4787 Sep 07 03:46	4° \approx 38'10		inferior conj	4788 Aug 09 10:43	19° \approx 52'31	-4°56'18
direct	4787 Sep 09 17:29	4° \approx 19'06		minimum elong	4788 Aug 09 04:59	20° \approx 00'59	4°55'30
morning max el	4787 Sep 18 18:53	8° \approx 35'11	19°11'20	morning rise	4788 Aug 17 21:33	15° \approx 59'29	
asc. node	4787 Sep 23 07:52	13° \approx 52'19		direct	4788 Aug 20 18:49	15° \approx 39'12	
	4787 Oct 02 19:30	0° \approx		morning max el	4788 Aug 31 08:12	20° \approx 33'32	20°21'13
morning set	4787 Oct 05 17:08	5° \approx 41'43			4788 Sep 07 22:29	0° \approx	
				asc. node	4788 Sep 09 04:56	2° \approx 00'24	
superior conj	4787 Oct 13 22:01	21° \approx 55'43	1°35'35	morning set	4788 Sep 18 22:50	20° \approx 18'54	
minimum elong	4787 Oct 14 00:21	22° \approx 07'01	1°35'26		4788 Sep 23 15:42	0° \approx	
	4787 Oct 18 04:01	0° \approx					
max. Earth dist.	4787 Oct 20 12:39	4° \approx 20'09	1.38445 AU	superior conj	4788 Sep 26 13:14	5° \approx 55'01	1°42'58
evening rise	4787 Oct 24 07:32	11° \approx 03'50		minimum elong	4788 Sep 26 13:57	5° \approx 58'41	1°42'58
desc. node	4787 Oct 29 21:24	20° \approx 29'02		max. Earth dist.	4788 Oct 01 19:22	16° \approx 17'57	1.36439 AU
	4787 Nov 04 21:15	0° \approx		evening rise	4788 Oct 05 16:40	23° \approx 35'57	
	4787 Nov 27 09:44	0° \approx			4788 Oct 09 06:17	0° \approx	
evening max el	4787 Nov 28 20:39	1° \approx 28'44	24°49'04	desc. node	4788 Oct 15 18:25	10° \approx 15'72	
retrograde	4787 Dec 10 12:29	8° \approx 15'23			4788 Oct 28 13:45	0° \approx	
evening set	4787 Dec 16 02:44	5° \approx 55'33		evening max el	4788 Nov 10 09:12	15° \approx 11'58	25°58'42
asc. node	4787 Dec 20 07:05	1° \approx 16'34		retrograde	4788 Nov 22 21:28	22° \approx 18'39	
min. Earth dist.	4787 Dec 20 16:24	0° \approx 46'07	0.67597 AU	evening set	4788 Nov 29 01:24	19° \approx 46'17	
	4787 Dec 21 06:22	30° \approx 8'00		min. Earth dist.	4788 Dec 03 07:51	15° \approx 12'01	0.66834 AU
inferior conj	4787 Dec 21 15:27	29° \approx 29'55	0°27'24	inferior conj	4788 Dec 04 18:05	13° \approx 25'02	-0°29'06
minimum elong	4787 Dec 21 14:47	29° \approx 32'08	0°27'07	minimum elong	4788 Dec 04 18:51	13° \approx 22'37	0°28'46
morning rise	4787 Dec 27 02:59	23° \approx 30'13		asc. node	4788 Dec 06 04:08	11° \approx 40'23	
direct	4787 Dec 30 18:26	22° \approx 13'51		morning rise	4788 Dec 10 12:47	7° \approx 34'19	
morning max el	4788 Jan 07 04:59	26° \approx 25'50	19°49'32	direct	4788 Dec 13 17:07	6° \approx 36'26	

morning max el	4788 Dec 20 13:02	10°  22'29	18°54'37	asc. node	4789 Nov 23 01:10	22°  43'49	
	4789 Jan 03 19:34	0°  3		morning rise	4789 Nov 24 18:52	21°  35'52	
morning set	4789 Jan 11 15:07	12°  10'41		direct	4789 Nov 27 14:08	20°  52'44	
desc. node	4789 Jan 11 17:39	12°  20'34		morning max el	4789 Dec 04 02:43	24°  23'48	18°15'59
	4789 Jan 23 00:30	0°  ≈			4789 Dec 08 17:58	0°  ≈	
max. Earth dist.	4789 Jan 26 12:13	5°  ≈28'19	1.45126 AU	morning set	4789 Dec 23 03:25	22°  ≈31'17	
					4789 Dec 27 18:30	0°  3	
superior conj	4789 Jan 28 04:15	8°  ≈05'49	-1°38'40	desc. node	4789 Dec 29 14:40	2°  357'12	
minimum elong	4789 Jan 27 19:01	7°  ≈29'27	1°37'50				
	4789 Feb 10 21:44	0°  ≈		superior conj	4790 Jan 07 07:20	16°  344'46	-0°57'38
evening rise	4789 Feb 12 07:37	2°  ≈17'17		minimum elong	4790 Jan 07 00:14	16°  316'53	0°56'43
	4789 Mar 02 05:58	0°  ≈		max. Earth dist.	4790 Jan 09 07:24	19°  353'36	1.45281 AU
asc. node	4789 Mar 04 03:26	2°  ≈13'54			4790 Jan 15 18:25	0°  ≈	
evening max el	4789 Mar 04 21:26	3°  ≈01'18	18°38'04	evening rise	4790 Jan 23 12:21	12°  ≈06'07	
retrograde	4789 Mar 11 11:43	6°  ≈39'52		greatest brilliancy	4790 Feb 03 23:54	29°  ≈56'09	-0.7m
evening set	4789 Mar 14 16:04	5°  ≈42'30			4790 Feb 04 00:55	0°  ≈	
inferior conj	4789 Mar 20 09:16	0°  ≈06'12	3°33'20	evening max el	4790 Feb 16 05:46	16°  ≈32'16	19°20'07
minimum elong	4789 Mar 20 08:44	0°  ≈07'49	3°33'18	asc. node	4790 Feb 19 00:27	18°  ≈58'18	
	4789 Mar 20 11:18	30°  ≈		retrograde	4790 Feb 23 08:13	20°  ≈35'52	
min. Earth dist.	4789 Mar 22 08:25	27°  ≈43'53	0.65042 AU	evening set	4790 Feb 26 19:39	19°  ≈25'12	
morning rise	4789 Mar 26 00:51	23°  ≈53'40		inferior conj	4790 Mar 04 07:33	13°  ≈33'10	3°21'35
direct	4789 Apr 01 17:09	21°  ≈03'57		minimum elong	4790 Mar 04 05:53	13°  ≈38'34	3°21'22
desc. node	4789 Apr 09 16:51	24°  ≈12'36		min. Earth dist.	4790 Mar 05 15:33	11°  ≈49'25	0.66423 AU
morning max el	4789 Apr 15 02:17	28°  ≈54'52	27°08'04	morning rise	4790 Mar 09 15:49	7°  ≈18'35	
	4789 Apr 16 03:33	0°  ≈		direct	4790 Mar 15 22:15	4°  ≈31'53	
	4789 May 07 22:12	0°  ≈		desc. node	4790 Mar 27 13:53	11°  ≈06'12	
morning set	4789 May 20 16:26	22°  ≈846'03		morning max el	4790 Mar 28 12:10	12°  ≈01'23	26°03'11
	4789 May 24 08:15	0°  ≈			4790 Apr 11 22:03	0°  ≈	
max. Earth dist.	4789 May 25 05:17	1°  ≈46'32	1.33822 AU		4790 Apr 30 13:56	0°  ≈	
				morning set	4790 May 03 15:59	5°  ≈36'58	
superior conj	4789 May 29 00:23	9°  ≈38'20	-0°21'38	max. Earth dist.	4790 May 07 13:47	13°  ≈00'58	1.35354 AU
minimum elong	4789 May 29 01:31	9°  ≈44'18	0°21'24				
asc. node	4789 May 31 02:43	14°  ≈04'27		superior conj	4790 May 12 19:49	23°  ≈826'12	-0°51'14
evening rise	4789 Jun 05 08:10	25°  ≈09'43		minimum elong	4790 May 12 22:38	23°  ≈840'27	0°50'43
	4789 Jun 07 16:14	0°  ≈			4790 May 16 00:39	0°  ≈	
evening max el	4789 Jun 25 19:13	28°  ≈25'00	21°47'00	asc. node	4790 May 17 23:45	4°  ≈03'48	
	4789 Jun 27 12:48	0°  ≈		evening rise	4790 May 20 15:45	9°  ≈34'22	
desc. node	4789 Jul 06 16:06	4°  ≈030'39			4790 May 31 14:59	0°  ≈	
retrograde	4789 Jul 08 07:50	4°  ≈037'05		evening max el	4790 Jun 07 22:26	9°  ≈21'38	20°24'01
evening set	4789 Jul 10 22:51	4°  ≈021'33		retrograde	4790 Jun 18 20:59	14°  ≈42'42	
inferior conj	4789 Jul 20 06:50	0°  ≈019'19	-3°45'46	evening set	4790 Jun 20 20:26	14°  ≈32'57	
minimum elong	4789 Jul 19 22:06	0°  ≈031'33	3°43'20	desc. node	4790 Jun 23 13:07	13°  ≈50'38	
min. Earth dist.	4789 Jul 19 22:26	0°  ≈031'04	0.54876 AU	inferior conj	4790 Jun 30 00:55	10°  ≈35'14	-1°55'24
	4789 Jul 20 20:39	30°  ≈		minimum elong	4790 Jun 29 19:31	10°  ≈43'07	1°53'27
morning rise	4789 Jul 28 22:44	26°  ≈227'53		min. Earth dist.	4790 Jul 01 10:19	9°  ≈46'33	0.54973 AU
direct	4789 Aug 01 05:49	26°  ≈204'08		morning rise	4790 Jul 08 17:32	6°  ≈24'27	
	4789 Aug 11 07:44	0°  ≈		direct	4790 Jul 12 15:50	5°  ≈51'05	
morning max el	4789 Aug 13 09:43	1°  ≈046'30	21°50'54	morning max el	4790 Jul 26 02:26	12°  ≈22'51	23°32'59
asc. node	4789 Aug 27 01:58	20°  ≈047'43			4790 Aug 08 10:21	0°  ≈	
	4789 Aug 31 20:41	0°  ≈		asc. node	4790 Aug 13 23:00	10°  ≈04'16	
morning set	4789 Sep 03 08:20	5°  ≈06'44		morning set	4790 Aug 18 19:43	19°  ≈059'13	
					4790 Aug 23 11:35	0°  ≈	
superior conj	4789 Sep 10 13:30	20°  ≈021'02	1°42'48	superior conj	4790 Aug 25 19:48	5°  ≈03'53	1°36'16
minimum elong	4789 Sep 10 12:49	20°  ≈017'28	1°42'48	minimum elong	4790 Aug 25 18:07	4°  ≈054'49	1°36'07
max. Earth dist.	4789 Sep 14 08:34	28°  ≈011'18	1.34718 AU	max. Earth dist.	4790 Aug 28 06:30	10°  ≈017'44	1.33400 AU
	4789 Sep 15 06:06	0°  ≈		evening rise	4790 Sep 02 09:03	20°  ≈049'53	
evening rise	4789 Sep 18 18:33	6°  ≈055'08			4790 Sep 07 02:51	0°  ≈	
	4789 Oct 01 21:53	0°  ≈		desc. node	4790 Sep 19 12:26	20°  ≈057'36	
desc. node	4789 Oct 02 15:25	1°  ≈009'29			4790 Sep 25 20:28	0°  ≈	
evening max el	4789 Oct 23 21:48	28°  ≈049'55	26°52'18	evening max el	4790 Oct 06 09:46	12°  ≈011'52	27°22'43
	4789 Oct 25 03:54	0°  ≈		retrograde	4790 Oct 19 23:00	19°  ≈030'22	
retrograde	4789 Nov 06 01:10	6°  ≈006'46		evening set	4790 Oct 27 00:07	16°  ≈051'11	
evening set	4789 Nov 12 17:23	3°  ≈026'56		min. Earth dist.	4790 Oct 30 18:14	13°  ≈026'31	0.64249 AU
	4789 Nov 16 05:55	30°  ≈		inferior conj	4790 Nov 02 04:14	10°  ≈053'23	-2°32'32
min. Earth dist.	4789 Nov 16 17:10	29°  ≈028'16	0.65715 AU	minimum elong	4790 Nov 02 08:37	10°  ≈041'45	2°30'51
inferior conj	4789 Nov 18 15:09	27°  ≈014'53	-1°29'43	morning rise	4790 Nov 08 18:28	5°  ≈028'58	
minimum elong	4789 Nov 18 17:41	27°  ≈007'32	1°28'39				

asc. node	4790 Nov 09 22:12	5°♍06'14		evening set	4791 Oct 09 18:16	29°♊52'44	
direct	4790 Nov 11 07:03	4°♍56'38			4791 Oct 09 13:56	30°♊♊	
morning max el	4790 Nov 17 19:13	8°♍22'01	17°54'19	min. Earth dist.	4791 Oct 13 09:19	26°♊56'53	0.62476 AU
	4790 Dec 02 08:05	0°♊		inferior conj	4791 Oct 16 06:29	24°♊13'47	-3°34'09
morning set	4790 Dec 04 20:10	4°♊15'09		minimum elong	4791 Oct 16 12:21	23°♊59'55	3°32'19
desc. node	4790 Dec 16 11:41	23°♊40'33		morning rise	4791 Oct 23 08:08	19°♊07'16	
				direct	4791 Oct 25 16:51	18°♊42'07	
superior conj	4790 Dec 17 23:52	26°♊07'17	-0°10'29	asc. node	4791 Oct 27 19:15	19°♊02'34	
minimum elong	4790 Dec 17 22:39	26°♊02'21	0°10'18	morning max el	4791 Nov 01 11:30	22°♊09'51	17°50'28
behind sun begin	4790 Dec 17 14:45	25°♊30'25			4791 Nov 07 12:29	0°♍	
behind sun end	4790 Dec 18 06:32	26°♊34'15		morning set	4791 Nov 17 11:24	17°♍03'36	
	4790 Dec 20 09:43	0°♋			4791 Nov 24 19:22	0°♊	
max. Earth dist.	4790 Dec 23 01:58	4°♋15'49	1.44702 AU				
evening rise	4791 Jan 03 01:06	21°♋21'10		superior conj	4791 Nov 28 17:37	6°♊43'53	0°32'15
	4791 Jan 08 16:55	0°♌		minimum elong	4791 Nov 28 20:32	6°♊56'14	0°31'50
	4791 Jan 30 07:11	0°♌		desc. node	4791 Dec 03 08:44	14°♊27'16	
evening max el	4791 Jan 30 09:14	0°♌05'14	20°17'33	max. Earth dist.	4791 Dec 05 17:42	18°♊19'39	1.43461 AU
asc. node	4791 Feb 05 21:29	4°♌32'08			4791 Dec 13 02:11	0°♋	
retrograde	4791 Feb 07 06:23	4°♌42'15		evening rise	4791 Dec 13 12:22	0°♋39'34	
evening set	4791 Feb 11 02:14	3°♌17'19			4792 Jan 02 08:02	0°♌	
	4791 Feb 14 08:07	30°♌		evening max el	4792 Jan 13 07:16	13°♌39'41	21°27'12
inferior conj	4791 Feb 16 11:16	27°♌11'58	2°58'19	retrograde	4792 Jan 22 04:02	18°♌55'13	
minimum elong	4791 Feb 16 08:59	27°♌19'44	2°57'49	asc. node	4792 Jan 23 18:31	18°♌41'23	
min. Earth dist.	4791 Feb 17 05:22	26°♌10'32	0.67381 AU	evening set	4792 Jan 26 09:58	17°♌15'00	
morning rise	4791 Feb 21 15:30	20°♌57'43		inferior conj	4792 Jan 31 18:07	10°♌59'11	2°25'40
direct	4791 Feb 27 08:56	18°♌24'14		minimum elong	4792 Jan 31 15:41	11°♌07'36	2°24'57
morning max el	4791 Mar 10 20:51	25°♌16'56	24°41'06	min. Earth dist.	4792 Jan 31 23:40	10°♌39'56	0.67929 AU
desc. node	4791 Mar 14 10:55	29°♌10'52		morning rise	4792 Feb 05 21:13	4°♌46'55	
	4791 Mar 15 03:45	0°♌		direct	4792 Feb 11 00:08	2°♌33'21	
	4791 Apr 05 10:12	0°♍		morning max el	4792 Feb 21 05:52	8°♌38'02	23°12'05
morning set	4791 Apr 15 21:17	17°♍31'51		desc. node	4792 Feb 29 07:57	18°♌06'18	
max. Earth dist.	4791 Apr 19 12:11	24°♍02'01	1.37291 AU		4792 Mar 08 23:24	0°♌	
	4791 Apr 22 17:17	0°♎		morning set	4792 Mar 27 02:12	28°♌13'45	
					4792 Mar 28 03:28	0°♍	
superior conj	4791 Apr 26 04:47	6°♎39'56	-1°20'06	max. Earth dist.	4792 Mar 31 07:24	5°♍24'58	1.39469 AU
minimum elong	4791 Apr 26 09:06	7°♎00'53	1°19'27				
evening rise	4791 May 04 17:50	23°♎38'20		superior conj	4792 Apr 07 23:13	19°♍08'37	-1°45'27
asc. node	4791 May 04 20:47	23°♎53'02		minimum elong	4792 Apr 08 04:09	19°♍31'26	1°44'57
	4791 May 07 23:18	0°♏			4792 Apr 13 17:24	0°♎	
evening max el	4791 May 21 14:14	21°♏01'05	19°19'45	evening rise	4792 Apr 17 11:29	7°♎13'02	
retrograde	4791 May 30 19:22	25°♏30'44		asc. node	4792 Apr 20 17:49	13°♎26'36	
evening set	4791 Jun 01 18:46	25°♏19'15			4792 Apr 30 18:19	0°♏	
inferior conj	4791 Jun 10 07:11	21°♏11'22	0°02'11	evening max el	4792 May 03 16:14	3°♏18'37	18°35'40
minimum elong	4791 Jun 10 07:16	21°♏11'13	0°02'09	retrograde	4792 May 11 11:50	7°♏09'43	
transit middle	4791 Jun 10 07:16	21°♏11'13	0°02'09	evening set	4792 May 13 17:19	6°♏52'00	
transit begin	4791 Jun 10 03:27	21°♏17'30		inferior conj	4792 May 21 09:41	2°♏25'17	1°38'39
transit end	4791 Jun 10 11:06	21°♏04'55		minimum elong	4792 May 21 12:52	2°♏19'08	1°37'38
desc. node	4791 Jun 10 10:09	21°♏06'29			4792 May 24 13:38	30°♎♎	
min. Earth dist.	4791 Jun 13 00:40	19°♏24'10	0.56012 AU	min. Earth dist.	4792 May 24 18:28	29°♎51'07	0.57768 AU
morning rise	4791 Jun 18 16:50	16°♏27'15		desc. node	4792 May 27 07:11	28°♎08'56	
direct	4791 Jun 23 12:50	15°♏33'49		morning rise	4792 May 29 05:12	27°♎06'30	
morning max el	4791 Jul 07 16:07	22°♏44'39	25°14'28	direct	4792 Jun 03 23:42	25°♎42'46	
	4791 Jul 14 03:15	0°♐			4792 Jun 14 13:15	0°♏	
asc. node	4791 Jul 31 20:02	29°♐42'29		morning max el	4792 Jun 18 08:41	3°♏19'12	26°39'36
	4791 Jul 31 23:28	0°♑			4792 Jul 07 15:00	0°♐	
morning set	4791 Aug 03 07:24	4°♑51'45		morning set	4792 Jul 17 17:41	19°♐38'23	
				asc. node	4792 Jul 17 17:06	19°♐35'15	
					4792 Jul 22 12:43	0°♑	
superior conj	4791 Aug 10 05:48	19°♑56'21	1°24'17				
minimum elong	4791 Aug 10 03:35	19°♑44'10	1°23'59	superior conj	4792 Jul 24 17:28	4°♑50'58	1°07'33
max. Earth dist.	4791 Aug 11 12:16	22°♑42'59	1.32514 AU	minimum elong	4792 Jul 24 15:10	4°♑38'20	1°07'10
	4791 Aug 14 21:22	0°♒		max. Earth dist.	4792 Jul 24 22:46	5°♑20'18	1.32044 AU
evening rise	4791 Aug 17 08:44	5°♒10'39		evening rise	4792 Jul 31 14:36	19°♑47'39	
	4791 Aug 30 17:58	0°♒			4792 Aug 05 15:23	0°♒	
desc. node	4791 Sep 06 09:28	10°♒11'45		desc. node	4792 Aug 23 06:30	28°♒37'37	
evening max el	4791 Sep 18 19:16	25°♒05'43	27°23'35		4792 Aug 24 08:28	0°♒	
	4791 Sep 25 02:37	0°♓		evening max el	4792 Aug 30 23:28	7°♒17'58	26°51'12
retrograde	4791 Oct 02 14:02	2°♓20'25					

retrograde	4792 Sep 13 21:09	14° Ω 28'01		evening set	4793 Sep 01 23:05	24° Π 17'21	
evening set	4792 Sep 20 19:33	12° Ω 23'52		min. Earth dist.	4793 Sep 06 08:14	21° Π 40'49	0.58408 AU
min. Earth dist.	4792 Sep 24 13:34	9° Ω 46'09	0.60473 AU	inferior conj	4793 Sep 09 12:51	19° Π 23'26	-5°06'45
inferior conj	4792 Sep 27 18:32	7° Ω 07'05	-4°28'50	minimum elong	4793 Sep 09 16:24	19° Π 17'02	5°06'25
minimum elong	4792 Sep 28 00:34	6° Ω 54'35	4°27'31	morning rise	4793 Sep 17 11:59	15° Π 01'35	
morning rise	4792 Oct 05 07:32	2° Ω 21'52		direct	4793 Sep 19 22:44	14° Π 42'25	
direct	4792 Oct 07 15:37	2° Ω 00'53		morning max el	4793 Sep 28 06:35	18° Π 41'07	18°41'15
asc. node	4792 Oct 13 16:18	4° Ω 27'47		asc. node	4793 Sep 30 13:22	21° Π 08'18	
morning max el	4792 Oct 15 00:25	5° Ω 39'15	18°05'39		4793 Oct 06 14:54	0° Ω	
	4792 Oct 30 10:42	0° Π		morning set	4793 Oct 14 13:38	14° Ω 44'20	
morning set	4792 Oct 30 18:52	0° Π 38'07			4793 Oct 22 10:58	0° Π	
superior conj	4792 Nov 09 13:12	18° Π 35'43	1°05'11	superior conj	4793 Oct 23 05:49	1° Π 29'01	1°27'21
minimum elong	4792 Nov 09 17:13	18° Π 53'38	1°04'41	minimum elong	4793 Oct 23 09:01	1° Π 44'02	1°27'04
	4792 Nov 16 02:37	0° Σ		max. Earth dist.	4793 Oct 30 11:08	14° Π 37'54	1.39647 AU
max. Earth dist.	4792 Nov 17 04:56	1° Σ 50'49	1.41702 AU	evening rise	4793 Nov 03 12:12	21° Π 35'59	
desc. node	4792 Nov 19 05:47	5° Σ 14'00		desc. node	4793 Nov 06 02:48	25° Π 56'53	
evening rise	4792 Nov 22 13:19	10° Σ 37'55			4793 Nov 08 14:35	0° Σ	
	4792 Dec 05 03:31	0° Σ			4793 Nov 29 04:37	0° Σ	
evening max el	4792 Dec 26 00:23	27° Σ 16'19	22°44'46	evening max el	4793 Dec 08 14:05	10° Σ 55'31	24°04'41
	4792 Dec 28 23:47	0° \approx		retrograde	4793 Dec 19 16:00	17° Σ 26'26	
retrograde	4793 Jan 04 23:40	3° \approx 11'31		evening set	4793 Dec 24 22:30	15° Σ 14'40	
evening set	4793 Jan 09 17:16	1° \approx 15'23		asc. node	4793 Dec 27 12:35	12° Σ 33'28	
asc. node	4793 Jan 09 15:32	1° \approx 18'56		min. Earth dist.	4793 Dec 29 16:31	9° Σ 45'45	0.67871 AU
	4793 Jan 11 01:14	30° κ Σ		inferior conj	4793 Dec 30 09:26	8° Σ 48'32	0°57'32
inferior conj	4793 Jan 15 02:07	24° Σ 52'25	1°45'04	minimum elong	4793 Dec 30 08:07	8° Σ 52'59	0°57'00
minimum elong	4793 Jan 15 00:01	24° Σ 59'40	1°44'19	morning rise	4794 Jan 04 17:48	2° Σ 45'01	
min. Earth dist.	4793 Jan 14 20:08	25° Σ 13'05	0.68083 AU	direct	4794 Jan 08 16:20	1° Σ 16'53	
morning rise	4793 Jan 20 06:40	18° Σ 43'42		morning max el	4794 Jan 16 14:49	5° Σ 49'10	20°28'07
direct	4793 Jan 24 18:59	16° Σ 52'57		desc. node	4794 Feb 02 02:02	27° Σ 36'41	
morning max el	4793 Feb 02 18:53	22° Σ 08'06	21°45'29		4794 Feb 03 16:39	0° \approx	
	4793 Feb 09 12:59	0° \approx		morning set	4794 Feb 14 03:29	15° \approx 54'01	
desc. node	4793 Feb 15 05:00	7° \approx 38'29			4794 Feb 23 02:03	0° H	
	4793 Mar 02 07:01	0° H		max. Earth dist.	4794 Feb 23 13:28	0° H 45'57	1.43424 AU
morning set	4793 Mar 07 02:36	7° H 34'52		superior conj	4794 Mar 01 21:14	11° H 06'42	-2°08'17
max. Earth dist.	4793 Mar 13 06:58	17° H 39'00	1.41609 AU	minimum elong	4794 Mar 01 20:08	11° H 02'09	2°08'16
superior conj	4793 Mar 20 22:19	0° Υ 41'14	-2°03'17		4794 Mar 12 22:23	0° Υ	
minimum elong	4793 Mar 21 01:49	0° Υ 56'32	2°03'06	evening rise	4794 Mar 14 06:29	2° Υ 20'36	
	4793 Mar 20 12:54	0° Υ		asc. node	4794 Mar 25 11:53	21° Υ 23'19	
evening rise	4793 Mar 31 17:10	20° Υ 10'31		evening max el	4794 Mar 31 13:16	29° Υ 14'53	18°07'15
	4793 Apr 06 02:38	0° B			4794 Apr 01 08:27	0° B	
asc. node	4793 Apr 07 14:52	2° B 39'10		retrograde	4794 Apr 07 00:51	2° B 37'08	
evening max el	4793 Apr 17 01:03	16° B 06'18	18°11'40	evening set	4794 Apr 09 19:19	1° B 59'23	
retrograde	4793 Apr 23 23:00	19° B 35'18			4794 Apr 12 20:26	30° κ Υ	
evening set	4793 Apr 26 11:13	19° B 08'28		inferior conj	4794 Apr 16 03:17	26° Υ 52'00	3°20'07
inferior conj	4793 May 03 09:27	14° B 20'59	2°43'49	minimum elong	4794 Apr 16 05:16	26° Υ 46'52	3°19'51
minimum elong	4793 May 03 12:48	14° B 13'26	2°43'02	min. Earth dist.	4794 Apr 19 02:09	23° Υ 50'46	0.62083 AU
min. Earth dist.	4793 May 06 18:12	11° B 20'58	0.59903 AU	morning rise	4794 Apr 22 13:37	20° Υ 50'14	
morning rise	4793 May 10 11:50	8° B 35'29		direct	4794 Apr 29 09:30	18° Υ 22'05	
desc. node	4793 May 14 04:12	6° B 59'08		desc. node	4794 May 01 01:13	18° Υ 30'12	
direct	4793 May 16 23:17	6° B 37'11		morning max el	4794 May 13 12:39	26° Υ 22'00	27°52'39
morning max el	4793 May 31 07:38	14° B 29'22	27°34'40		4794 May 16 22:05	0° B	
	4793 Jun 12 19:11	0° II			4794 Jun 06 08:54	0° II	
	4793 Jun 29 23:24	0° E		morning set	4794 Jun 16 03:02	18° II 31'48	
morning set	4793 Jul 02 00:54	4° E 13'52		asc. node	4794 Jun 21 11:11	29° II 44'34	
asc. node	4793 Jul 04 14:09	9° E 37'27			4794 Jun 21 14:03	0° E	
max. Earth dist.	4793 Jul 08 10:12	17° E 58'25	1.31982 AU	max. Earth dist.	4794 Jun 21 18:34	0° E 24'19	1.32336 AU
superior conj	4793 Jul 09 05:01	19° E 42'04	0°46'42	superior conj	4794 Jun 23 14:45	4° E 24'06	0°22'17
minimum elong	4793 Jul 09 03:08	19° E 31'43	0°46'19	minimum elong	4794 Jun 23 13:44	4° E 18'33	0°22'04
	4793 Jul 13 21:29	0° Ω		evening rise	4794 Jun 30 11:56	19° E 21'58	
evening rise	4793 Jul 16 00:20	4° Ω 33'36			4794 Jul 05 16:13	0° Ω	
	4793 Jul 29 11:11	0° Π		evening max el	4794 Jul 25 10:05	29° Ω 21'20	24°18'34
desc. node	4793 Aug 10 03:30	15° Π 55'42			4794 Jul 26 02:30	0° Π	
evening max el	4793 Aug 12 20:03	18° Π 40'51	25°46'43	desc. node	4794 Jul 28 00:30	1° Π 39'18	
retrograde	4793 Aug 26 19:04	25° Π 47'21		retrograde	4794 Aug 08 06:05	6° Π 19'43	

evening set	4794 Aug 13 02:23	5° \mathbb{M} 27'26		asc. node	4795 Jun 08 08:12	19° \mathbb{I} 51'55	
min. Earth dist.	4794 Aug 18 20:56	2° \mathbb{M} 33'15	0.56554 AU		4795 Jun 13 01:18	0° \mathfrak{C}	
inferior conj	4794 Aug 21 11:07	0° \mathbb{M} 55'39	-5°13'16	evening rise	4795 Jun 14 23:30	4° \mathfrak{C} 06'09	
minimum elong	4794 Aug 21 09:03	0° \mathbb{M} 58'54	5°13'10		4795 Jun 29 01:21	0° Ω	
	4794 Aug 22 22:54	30° \mathbb{R} Ω		evening max el	4795 Jul 06 23:26	9° Ω 43'40	22°41'11
morning rise	4794 Aug 29 18:15	26° Ω 54'34		desc. node	4795 Jul 14 21:30	15° Ω 13'54	
direct	4794 Sep 01 10:43	26° Ω 35'21		retrograde	4795 Jul 20 04:20	16° Ω 17'59	
	4794 Sep 09 20:38	0° \mathbb{M}		evening set	4795 Jul 23 12:04	15° Ω 53'48	
morning max el	4794 Sep 11 02:54	1° \mathbb{M} 06'20	19°38'28	min. Earth dist.	4795 Jul 31 07:23	12° Ω 27'49	0.55256 AU
asc. node	4794 Sep 17 10:25	8° \mathbb{M} 49'04		inferior conj	4795 Aug 01 14:43	11° Ω 43'04	-4°32'40
morning set	4794 Sep 28 16:10	29° \mathbb{M} 12'57		minimum elong	4795 Aug 01 06:58	11° Ω 54'10	4°31'07
	4794 Sep 29 01:30	0° \mathfrak{L}		morning rise	4795 Aug 10 03:57	7° Ω 52'39	
				direct	4795 Aug 13 04:50	7° Ω 31'20	
superior conj	4794 Oct 06 14:10	15° \mathfrak{L} 08'51	1°39'44	morning max el	4795 Aug 24 11:09	12° Ω 45'58	20°57'07
minimum elong	4794 Oct 06 15:49	15° \mathfrak{L} 16'58	1°39'39	asc. node	4795 Sep 04 07:27	27° Ω 15'33	
max. Earth dist.	4794 Oct 12 15:40	26° \mathfrak{L} 46'52	1.37560 AU		4795 Sep 05 20:53	0° \mathbb{M}	
	4794 Oct 14 09:39	0° \mathbb{M}		morning set	4795 Sep 12 23:45	13° \mathbb{M} 55'34	
evening rise	4794 Oct 16 09:50	3° \mathbb{M} 36'54					
desc. node	4794 Oct 23 23:49	16° \mathbb{M} 32'15		superior conj	4795 Sep 20 09:40	29° \mathbb{M} 21'02	1°43'45
	4794 Nov 01 15:56	0° \mathfrak{X}		minimum elong	4795 Sep 20 09:45	29° \mathbb{M} 21'29	1°43'45
evening max el	4794 Nov 21 02:35	24° \mathfrak{X} 38'18	25°20'11		4795 Sep 20 17:15	0° \mathfrak{L}	
	4794 Nov 27 21:06	0° \mathfrak{Z}		max. Earth dist.	4795 Sep 25 00:30	8° \mathfrak{L} 39'30	1.35668 AU
retrograde	4794 Dec 03 04:03	1° \mathfrak{Z} 35'39		evening rise	4795 Sep 29 02:42	16° \mathfrak{L} 31'07	
	4794 Dec 07 22:03	30° \mathbb{R} \mathfrak{X}			4795 Oct 06 16:12	0° \mathbb{M}	
evening set	4794 Dec 09 00:05	29° \mathfrak{X} 09'58		desc. node	4795 Oct 10 20:50	6° \mathbb{M} 54'35	
min. Earth dist.	4794 Dec 13 10:32	24° \mathfrak{X} 15'17	0.67309 AU		4795 Oct 27 02:17	0° \mathfrak{X}	
asc. node	4794 Dec 14 09:37	23° \mathfrak{X} 00'35		evening max el	4795 Nov 03 15:17	8° \mathfrak{X} 20'48	26°23'57
inferior conj	4794 Dec 14 14:19	22° \mathfrak{X} 45'18	0°04'01	retrograde	4795 Nov 16 10:54	15° \mathfrak{X} 33'03	
minimum elong	4794 Dec 14 14:13	22° \mathfrak{X} 45'38	0°03'59	evening set	4795 Nov 22 20:09	12° \mathfrak{X} 57'03	
transit middle	4794 Dec 14 14:13	22° \mathfrak{X} 45'38	0°03'59	min. Earth dist.	4795 Nov 26 23:48	8° \mathfrak{X} 37'36	0.66399 AU
transit begin	4794 Dec 14 11:31	22° \mathfrak{X} 54'24		inferior conj	4795 Nov 28 14:52	6° \mathfrak{X} 38'58	-0°54'25
transit end	4794 Dec 14 16:55	22° \mathfrak{X} 36'52		minimum elong	4795 Nov 28 16:21	6° \mathfrak{X} 34'26	0°53'46
morning rise	4794 Dec 20 04:39	16° \mathfrak{X} 49'02		asc. node	4795 Dec 01 06:39	3° \mathfrak{X} 34'50	
direct	4794 Dec 23 15:02	15° \mathfrak{X} 41'07		morning rise	4795 Dec 04 13:10	0° \mathfrak{X} 52'34	
morning max el	4794 Dec 30 18:39	19° \mathfrak{X} 41'06	19°24'13	direct	4795 Dec 07 13:21	0° \mathfrak{X} 01'24	
	4795 Jan 08 00:17	0° \mathfrak{Z}		morning max el	4795 Dec 14 05:18	3° \mathfrak{X} 40'05	18°36'04
greatest brilliancy	4795 Jan 12 23:46	7° \mathfrak{Z} 17'28	-0.7m		4796 Jan 01 12:39	0° \mathfrak{Z}	
desc. node	4795 Jan 19 23:03	17° \mathfrak{Z} 53'57		morning set	4796 Jan 03 20:58	3° \mathfrak{Z} 43'11	
morning set	4795 Jan 24 01:40	24° \mathfrak{Z} 14'15		desc. node	4796 Jan 06 20:05	8° \mathfrak{Z} 24'49	
	4795 Jan 27 18:51	0° \approx					
max. Earth dist.	4795 Feb 06 02:36	14° \approx 35'47	1.44696 AU	superior conj	4796 Jan 19 23:20	29° \mathfrak{Z} 04'40	-1°22'47
				minimum elong	4796 Jan 19 14:10	28° \mathfrak{Z} 28'42	1°21'46
superior conj	4795 Feb 09 18:48	20° \approx 25'56	-1°55'14	max. Earth dist.	4796 Jan 19 20:34	28° \mathfrak{Z} 53'48	1.45282 AU
minimum elong	4795 Feb 09 11:33	19° \approx 56'59	1°54'46		4796 Jan 20 13:27	0° \approx	
	4795 Feb 15 17:20	0° \mathfrak{H}		evening rise	4796 Feb 04 16:31	23° \approx 53'11	
evening rise	4795 Feb 23 23:07	13° \mathfrak{H} 35'23			4796 Feb 08 12:29	0° \mathfrak{H}	
	4795 Mar 05 21:17	0° \mathbb{Y}		greatest brilliancy	4796 Feb 13 04:47	7° \mathfrak{H} 26'19	-0.8m
asc. node	4795 Mar 12 08:54	9° \mathbb{Y} 30'15		evening max el	4796 Feb 26 12:33	26° \mathfrak{H} 06'24	18°54'04
evening max el	4795 Mar 15 01:57	12° \mathbb{Y} 36'54	18°21'43	asc. node	4796 Feb 27 05:55	26° \mathfrak{H} 48'56	
retrograde	4795 Mar 21 12:47	16° \mathbb{Y} 05'53		retrograde	4796 Mar 04 07:02	29° \mathfrak{H} 54'03	
evening set	4795 Mar 24 13:26	15° \mathbb{Y} 15'59		evening set	4796 Mar 07 14:19	28° \mathfrak{H} 51'06	
inferior conj	4795 Mar 30 11:02	9° \mathbb{Y} 50'02	3°33'38	inferior conj	4796 Mar 13 04:57	23° \mathfrak{H} 08'06	3°29'54
minimum elong	4795 Mar 30 11:21	9° \mathbb{Y} 49'07	3°33'37	minimum elong	4796 Mar 13 03:52	23° \mathfrak{H} 11'27	3°29'50
min. Earth dist.	4795 Apr 01 19:21	7° \mathbb{Y} 08'58	0.64060 AU	min. Earth dist.	4796 Mar 14 21:35	21° \mathfrak{H} 01'21	0.65679 AU
morning rise	4795 Apr 05 08:26	3° \mathbb{Y} 40'02		morning rise	4796 Mar 18 17:01	16° \mathfrak{H} 54'36	
direct	4795 Apr 12 04:13	0° \mathbb{Y} 53'54		direct	4796 Mar 25 05:48	14° \mathfrak{H} 04'33	
desc. node	4795 Apr 17 22:15	2° \mathbb{Y} 32'29		desc. node	4796 Apr 03 19:16	18° \mathfrak{H} 33'17	
morning max el	4795 Apr 25 21:23	8° \mathbb{Y} 51'39	27°33'40	morning max el	4796 Apr 07 07:18	21° \mathfrak{H} 47'47	26°43'16
	4795 May 12 07:35	0° \mathfrak{B}			4796 Apr 14 11:11	0° \mathbb{Y}	
	4795 May 29 16:10	0° \mathbb{I}			4796 May 04 12:36	0° \mathfrak{B}	
morning set	4795 May 30 21:32	2° \mathbb{I} 23'55		morning set	4796 May 13 05:12	15° \mathfrak{B} 40'48	
max. Earth dist.	4795 Jun 04 19:52	12° \mathbb{I} 25'31	1.33141 AU	max. Earth dist.	4796 May 17 10:57	23° \mathfrak{B} 56'22	1.34416 AU
					4796 May 20 10:50	0° \mathbb{I}	
superior conj	4795 Jun 07 20:44	18° \mathbb{I} 50'35	-0°04'59				
minimum elong	4795 Jun 07 20:59	18° \mathbb{I} 51'56	0°04'57	superior conj	4796 May 21 20:49	2° \mathbb{I} 55'14	-0°34'06
behind sun begin	4795 Jun 07 15:49	18° \mathbb{I} 24'22		minimum elong	4796 May 21 22:39	3° \mathbb{I} 04'44	0°33'45
behind sun end	4795 Jun 08 02:09	19° \mathbb{I} 19'30		asc. node	4796 May 25 05:14	9° \mathbb{I} 55'46	

evening rise	4796 May 29 09:10	18° Π 40'20		4797 May 12 03:56	0° Π	
	4796 Jun 04 00:47	0° \mathfrak{D}		evening rise	4797 May 13 14:43	2° Π 57'06
evening max el	4796 Jun 17 20:03	20° \mathfrak{D} 20'57	21°09'44		4797 May 29 16:23	0° \mathfrak{D}
retrograde	4796 Jun 29 17:20	26° \mathfrak{D} 11'48		evening max el	4797 May 31 04:35	1° \mathfrak{D} 34'49 19°54'12
desc. node	4796 Jun 30 18:30	26° \mathfrak{D} 09'12		retrograde	4797 Jun 10 08:59	6° \mathfrak{D} 33'21
evening set	4796 Jul 01 23:39	25° \mathfrak{D} 59'53		evening set	4797 Jun 12 07:15	6° \mathfrak{D} 23'26
inferior conj	4796 Jul 11 08:12	22° \mathfrak{D} 01'49	-3°02'12	desc. node	4797 Jun 17 15:31	4° \mathfrak{D} 27'04
minimum elong	4796 Jul 11 00:13	22° \mathfrak{D} 13'01	2°59'38	inferior conj	4797 Jun 21 05:52	2° \mathfrak{D} 22'30 -1°04'25
min. Earth dist.	4796 Jul 11 18:02	21° \mathfrak{D} 48'00	0.54806 AU	minimum elong	4797 Jun 21 02:53	2° \mathfrak{D} 27'03 1°03'17
morning rise	4796 Jul 20 01:10	18° \mathfrak{D} 04'38		min. Earth dist.	4797 Jun 23 06:30	1° \mathfrak{D} 08'34 0.55311 AU
direct	4796 Jul 23 14:12	17° \mathfrak{D} 37'35			4797 Jun 25 06:07	30° \mathfrak{R} Π
morning max el	4796 Aug 05 08:11	23° \mathfrak{D} 41'12	22°33'16	morning rise	4797 Jun 29 20:36	27° Π 58'57
	4796 Aug 10 23:56	0° Ω		direct	4797 Jul 04 03:32	27° Π 18'40
asc. node	4796 Aug 21 04:30	16° Ω 16'42			4797 Jul 12 16:24	0° \mathfrak{D}
morning set	4796 Aug 27 10:18	28° Ω 46'20		morning max el	4797 Jul 17 22:47	4° \mathfrak{D} 07'49 24°17'11
	4796 Aug 28 00:18	0° \mathfrak{M}			4797 Aug 05 02:30	0° Ω
				asc. node	4797 Aug 08 01:33	5° Ω 43'34
superior conj	4796 Sep 03 12:51	13° \mathfrak{M} 55'15	1°40'45	morning set	4797 Aug 11 22:03	13° Ω 40'00
minimum elong	4796 Sep 03 11:41	13° \mathfrak{M} 49'06	1°40'41			
max. Earth dist.	4796 Sep 06 17:39	20° \mathfrak{M} 38'23	1.34118 AU	superior conj	4797 Aug 18 21:00	28° Ω 43'18 1°31'48
evening rise	4796 Sep 11 10:29	0° \mathfrak{D} 07'06		minimum elong	4797 Aug 18 19:02	28° Ω 32'36 1°31'36
	4796 Sep 11 09:02	0° \mathfrak{D}			4797 Aug 19 11:09	0° \mathfrak{M}
desc. node	4796 Sep 26 17:51	26° \mathfrak{D} 57'38		max. Earth dist.	4797 Aug 20 19:26	2° \mathfrak{M} 54'20 1.32974 AU
	4796 Sep 28 17:33	0° \mathfrak{M}		evening rise	4797 Aug 26 05:18	14° \mathfrak{M} 14'13
evening max el	4796 Oct 16 04:02	21° \mathfrak{M} 54'11	27°08'27		4797 Sep 03 11:34	0° \mathfrak{D}
retrograde	4796 Oct 29 11:58	29° \mathfrak{M} 11'37		desc. node	4797 Sep 13 14:51	16° \mathfrak{D} 33'10
evening set	4796 Nov 05 08:31	26° \mathfrak{M} 31'13			4797 Sep 23 18:54	0° \mathfrak{M}
min. Earth dist.	4796 Nov 09 05:52	22° \mathfrak{M} 47'13	0.65139 AU	evening max el	4797 Sep 28 15:16	5° \mathfrak{M} 06'18 27°26'53
inferior conj	4796 Nov 11 08:51	20° \mathfrak{M} 24'51	-1°56'16	retrograde	4797 Oct 12 06:52	12° \mathfrak{M} 23'07
minimum elong	4796 Nov 11 12:11	20° \mathfrak{M} 15'32	1°54'54	evening set	4797 Oct 19 10:25	9° \mathfrak{M} 47'12
asc. node	4796 Nov 17 03:42	15° \mathfrak{M} 08'27		min. Earth dist.	4797 Oct 23 02:43	6° \mathfrak{M} 36'02 0.63536 AU
morning rise	4796 Nov 17 16:53	14° \mathfrak{M} 51'26		inferior conj	4797 Oct 25 17:46	3° \mathfrak{M} 57'13 -2°59'03
direct	4796 Nov 20 09:06	14° \mathfrak{M} 13'13		minimum elong	4797 Oct 25 22:52	3° \mathfrak{M} 44'19 2°57'14
morning max el	4796 Nov 26 20:29	17° \mathfrak{M} 40'34	18°04'35		4797 Oct 30 03:26	30° \mathfrak{R} \mathfrak{D}
	4796 Dec 05 22:21	0° \mathfrak{X}		morning rise	4797 Nov 01 12:49	28° \mathfrak{D} 40'12
morning set	4796 Dec 14 21:55	14° \mathfrak{X} 41'19		direct	4797 Nov 03 23:29	28° \mathfrak{D} 11'16
desc. node	4796 Dec 23 17:07	29° \mathfrak{X} 04'46		asc. node	4797 Nov 04 00:46	28° \mathfrak{D} 11'16
	4796 Dec 24 06:49	0° \mathfrak{Z}			4797 Nov 08 17:13	0° \mathfrak{M}
				morning max el	4797 Nov 10 13:23	1° \mathfrak{M} 36'16 17°50'29
superior conj	4796 Dec 29 05:47	7° \mathfrak{Z} 55'27	-0°37'37	morning set	4797 Nov 27 01:08	26° \mathfrak{M} 56'01
minimum elong	4796 Dec 29 01:07	7° \mathfrak{Z} 36'56	0°36'58		4797 Nov 28 19:37	0° \mathfrak{X}
max. Earth dist.	4797 Jan 01 16:18	13° \mathfrak{Z} 21'30	1.45126 AU			
	4797 Jan 12 08:21	0° \approx		superior conj	4797 Dec 09 08:30	17° \mathfrak{X} 48'51 0°08'39
evening rise	4797 Jan 14 13:06	3° \approx 24'09		minimum elong	4797 Dec 09 09:25	17° \mathfrak{X} 52'39 0°08'31
greatest brilliancy	4797 Jan 27 21:18	23° \approx 48'32	-0.7m	behind sun begin	4797 Dec 09 01:11	17° \mathfrak{X} 18'41
	4797 Feb 01 03:12	0° \mathfrak{X}		behind sun end	4797 Dec 09 17:40	18° \mathfrak{X} 26'33
evening max el	4797 Feb 08 18:59	9° \mathfrak{X} 38'23	19°42'54	desc. node	4797 Dec 10 14:10	19° \mathfrak{X} 50'31
asc. node	4797 Feb 13 02:57	13° \mathfrak{X} 05'12		max. Earth dist.	4797 Dec 15 10:28	27° \mathfrak{X} 40'17 1.44249 AU
retrograde	4797 Feb 16 04:29	13° \mathfrak{X} 55'02			4797 Dec 16 21:34	0° \mathfrak{Z}
evening set	4797 Feb 19 19:25	12° \mathfrak{X} 38'11		evening rise	4797 Dec 24 23:20	12° \mathfrak{Z} 36'36
inferior conj	4797 Feb 25 05:49	6° \mathfrak{X} 40'07	3°12'57		4798 Jan 05 11:35	0° \approx
minimum elong	4797 Feb 25 03:50	6° \mathfrak{X} 46'43	3°12'38	evening max el	4798 Jan 22 20:05	23° \approx 11'55 20°45'49
min. Earth dist.	4797 Feb 26 07:39	5° \mathfrak{X} 14'29	0.66881 AU	asc. node	4798 Jan 30 24:00	28° \approx 05'02
morning rise	4797 Mar 02 12:01	0° \mathfrak{X} 25'43		retrograde	4798 Jan 31 02:46	28° \approx 05'07
	4797 Mar 02 23:50	30° \mathfrak{R} \approx		evening set	4798 Feb 04 02:44	26° \approx 33'38
direct	4797 Mar 08 13:11	27° \approx 43'49		inferior conj	4798 Feb 09 11:09	20° \approx 23'10 2°45'32
	4797 Mar 14 20:22	0° \mathfrak{X}		minimum elong	4798 Feb 09 08:44	20° \approx 31'26 2°44'55
morning max el	4797 Mar 20 16:37	4° \mathfrak{X} 58'39	25°29'54	min. Earth dist.	4798 Feb 09 23:40	19° \approx 40'09 0.67663 AU
desc. node	4797 Mar 21 16:19	5° \mathfrak{X} 59'51		morning rise	4798 Feb 14 14:34	14° \approx 09'33
	4797 Apr 08 22:10	0° \mathfrak{Y}		direct	4798 Feb 20 01:47	11° \approx 44'16
morning set	4797 Apr 25 21:38	28° \mathfrak{Y} 09'16		morning max el	4798 Mar 03 01:21	18° \approx 17'36 24°03'32
	4797 Apr 26 21:54	0° \mathfrak{Z}		desc. node	4798 Mar 08 13:23	24° \approx 28'26
max. Earth dist.	4797 Apr 29 14:58	5° \mathfrak{Z} 02'58	1.36137 AU		4798 Mar 12 21:22	0° \mathfrak{X}
					4798 Apr 02 00:27	0° \mathfrak{Y}
superior conj	4797 May 05 12:12	16° \mathfrak{Z} 29'28	-1°03'41	morning set	4798 Apr 07 17:17	9° \mathfrak{Y} 34'47
minimum elong	4797 May 05 15:42	16° \mathfrak{Z} 46'54	1°03'05	max. Earth dist.	4798 Apr 11 11:16	16° \mathfrak{Y} 09'43 1.38202 AU
asc. node	4797 May 12 02:15	29° \mathfrak{Z} 51'24				

superior conj	4798 Apr 18 15:28	29° Υ 24'44	-1°31'30	superior conj	4799 Apr 01 02:16	11° Υ 30'51	-1°54'14
minimum elong	4798 Apr 18 20:12	29° Υ 47'20	1°30'52	minimum elong	4799 Apr 01 06:55	11° Υ 51'54	1°53'52
	4798 Apr 18 22:51	0° B		evening rise	4799 Apr 11 02:38	0° B 09'24	
evening rise	4798 Apr 27 13:36	16° B 49'29			4799 Apr 11 00:38	0° B	
asc. node	4798 Apr 28 23:17	19° B 34'29		asc. node	4799 Apr 15 20:19	9° B 00'01	
	4798 May 04 12:28	0° II		evening max el	4799 Apr 27 06:19	26° B 02'21	18°23'07
evening max el	4798 May 14 00:58	13° II 30'34	18°58'30	retrograde	4799 May 04 15:21	29° B 42'02	
retrograde	4798 May 22 14:49	17° II 42'24		evening set	4799 May 06 23:39	29° B 20'49	
evening set	4798 May 24 16:16	17° II 28'50		inferior conj	4799 May 14 07:57	24° B 45'41	2°10'08
inferior conj	4798 Jun 01 20:11	13° II 13'24	0°46'41	minimum elong	4799 May 14 11:29	24° B 38'23	2°09'07
minimum elong	4798 Jun 01 22:00	13° II 10'13	0°46'03	min. Earth dist.	4799 May 17 18:31	21° B 57'11	0.58643 AU
desc. node	4798 Jun 04 12:34	11° II 20'28		morning rise	4799 May 21 20:13	19° B 14'07	
min. Earth dist.	4798 Jun 04 22:12	11° II 04'07	0.56681 AU	desc. node	4799 May 22 09:36	18° B 57'08	
morning rise	4798 Jun 10 00:26	8° II 13'38		direct	4799 May 27 22:56	17° B 35'18	
direct	4798 Jun 15 06:02	7° II 08'31		morning max el	4799 Jun 11 08:22	25° B 20'26	27°07'20
morning max el	4798 Jun 29 13:17	14° II 32'19	25°53'44		4799 Jun 15 15:56	0° II	
	4798 Jul 11 20:59	0° E			4799 Jul 05 03:31	0° E	
asc. node	4798 Jul 25 22:35	25° E 28'46		morning set	4799 Jul 11 18:32	13° E 13'55	
morning set	4798 Jul 27 09:20	28° E 30'57		asc. node	4799 Jul 12 19:37	15° E 26'26	
	4798 Jul 28 02:05	0° O					
superior conj	4798 Aug 03 07:56	13° O 37'42	1°17'44	superior conj	4799 Jul 18 19:46	28° E 32'10	0°59'11
minimum elong	4798 Aug 03 05:37	13° O 25'00	1°17'24	minimum elong	4799 Jul 18 17:36	28° E 20'10	0°58'48
max. Earth dist.	4798 Aug 04 03:33	15° O 25'37	1.32256 AU	max. Earth dist.	4799 Jul 18 14:43	28° E 04'14	1.31958 AU
evening rise	4798 Aug 10 07:52	28° O 42'47			4799 Jul 19 11:40	0° O	
	4798 Aug 10 22:46	0° np		evening rise	4799 Jul 25 15:38	13° O 24'52	
	4798 Aug 27 16:33	0° A			4799 Aug 03 00:29	0° np	
desc. node	4798 Aug 31 11:53	5° A 29'16		desc. node	4799 Aug 18 08:53	23° np 29'43	
evening max el	4798 Sep 10 22:36	17° A 43'23	27°13'55	evening max el	4799 Aug 23 23:44	29° np 35'38	26°27'32
retrograde	4798 Sep 24 18:56	24° A 56'54			4799 Aug 24 10:09	0° A	
evening set	4798 Oct 01 22:03	22° A 37'20		retrograde	4799 Sep 06 22:42	6° A 44'43	
min. Earth dist.	4798 Oct 05 13:07	19° A 51'08	0.61643 AU	evening set	4799 Sep 13 14:43	4° A 54'11	
inferior conj	4798 Oct 08 14:25	17° A 07'26	-3°58'39	min. Earth dist.	4799 Sep 17 13:16	2° A 19'02	0.59586 AU
minimum elong	4798 Oct 08 20:36	16° A 53'36	3°56'57	inferior conj	4799 Sep 20 19:22	29° np 46'45	-4°47'45
morning rise	4798 Oct 15 21:02	12° A 09'58		minimum elong	4799 Sep 21 00:45	29° np 36'13	4°46'50
direct	4798 Oct 18 04:58	11° A 47'02			4799 Sep 20 12:38	30° R np	
asc. node	4798 Oct 21 21:49	12° A 47'07		morning rise	4799 Sep 28 12:54	25° np 11'18	
morning max el	4798 Oct 25 04:44	15° A 18'11	17°54'32	direct	4799 Sep 30 21:31	24° np 51'27	
	4798 Nov 04 08:57	0° M		morning max el	4799 Oct 08 15:13	28° np 37'35	18°18'06
morning set	4798 Nov 09 23:58	10° M 06'10		asc. node	4799 Oct 08 18:52	28° np 46'27	
					4799 Oct 09 22:56	0° A	
superior conj	4798 Nov 20 13:42	28° M 59'22	0°47'31	morning set	4799 Oct 24 12:44	23° A 55'44	
minimum elong	4798 Nov 20 17:25	29° M 15'24	0°47'01		4799 Oct 27 17:19	0° M	
	4798 Nov 21 03:45	0° J		superior conj	4799 Nov 02 18:53	11° M 19'13	1°15'51
desc. node	4798 Nov 27 11:12	10° J 37'55		minimum elong	4799 Nov 02 22:42	11° M 36'39	1°15'26
max. Earth dist.	4798 Nov 28 00:02	11° J 30'41	1.42763 AU	max. Earth dist.	4799 Nov 10 08:29	24° M 41'50	1.40856 AU
evening rise	4798 Dec 04 14:50	22° J 08'13			4799 Nov 13 12:01	0° J	
	4798 Dec 09 16:35	0° Z		desc. node	4799 Nov 14 08:12	1° J 23'33	
	4798 Dec 30 18:32	0° \approx		evening rise	4799 Nov 15 00:38	2° J 31'06	
evening max el	4799 Jan 05 15:46	6° \approx 46'48	21°59'27		4799 Dec 03 01:05	0° Z	
retrograde	4799 Jan 14 23:52	12° \approx 20'01		evening max el	4799 Dec 19 07:16	20° Z 24'45	23°18'52
asc. node	4799 Jan 17 21:03	11° \approx 35'44		retrograde	4799 Dec 29 18:14	26° Z 35'57	
evening set	4799 Jan 19 10:29	10° \approx 33'09		evening set	4800 Jan 03 17:04	24° Z 33'22	
inferior conj	4799 Jan 24 18:44	4° \approx 13'38	2°09'23	asc. node	4800 Jan 04 18:06	23° Z 35'26	
minimum elong	4799 Jan 24 16:23	4° \approx 21'46	2°08'36	min. Earth dist.	4800 Jan 08 16:05	18° Z 44'56	0.68041 AU
min. Earth dist.	4799 Jan 24 19:18	4° \approx 11'41	0.68041 AU	inferior conj	4800 Jan 09 02:40	18° Z 08'35	1°25'42
	4799 Jan 28 00:01	30° R Z		minimum elong	4800 Jan 09 00:51	18° Z 14'50	1°25'01
morning rise	4799 Jan 29 22:08	28° Z 02'26		morning rise	4800 Jan 14 08:33	12° Z 01'37	
direct	4799 Feb 03 18:41	25° Z 58'27		direct	4800 Jan 18 14:53	10° Z 20'27	
	4799 Feb 11 16:38	0° \approx		morning max el	4800 Jan 27 03:10	15° Z 16'16	21°10'57
morning max el	4799 Feb 13 11:39	1° \approx 42'23	22°34'22		4800 Feb 07 21:33	0° \approx	
desc. node	4799 Feb 23 10:26	13° \approx 41'10		desc. node	4800 Feb 10 07:28	3° \approx 25'31	
	4799 Mar 06 20:32	0° H		morning set	4800 Feb 26 23:01	28° \approx 31'55	
morning set	4799 Mar 19 10:17	19° H 42'43			4800 Feb 27 21:22	0° H	
max. Earth dist.	4799 Mar 24 07:02	27° H 49'57	1.40396 AU	max. Earth dist.	4800 Mar 05 09:04	10° H 25'51	1.42437 AU
	4799 Mar 25 13:28	0° Y					
				superior conj	4800 Mar 12 15:34	22° H 36'07	-2°07'18

minimum elong	4800 Mar 12 17:31	22° K 44'25	2°07'16	superior conj	4801 Feb 21 03:31	2° K 32'55	-2°05'11
	4800 Mar 16 21:56	0° Y		minimum elong	4801 Feb 20 23:43	2° K 17'26	2°05'03
evening rise	4800 Mar 24 01:51	12° Y 47'28		evening rise	4801 Mar 06 06:54	24° K 35'17	
asc. node	4800 Apr 01 17:21	28° Y 01'26			4801 Mar 09 10:33	0° Y	
	4800 Apr 02 22:31	0° B		asc. node	4801 Mar 19 14:24	16° Y 31'15	
evening max el	4800 Apr 09 17:03	9° B 00'18	18°07'29	evening max el	4801 Mar 24 05:51	22° Y 15'50	18°11'05
retrograde	4800 Apr 16 09:06	12° B 24'14		retrograde	4801 Mar 30 15:51	25° Y 39'14	
evening set	4800 Apr 19 00:09	11° B 52'49		evening set	4801 Apr 02 13:02	24° Y 56'15	
inferior conj	4800 Apr 25 15:49	6° B 56'54	3°02'24	inferior conj	4801 Apr 08 16:06	19° Y 40'31	3°28'15
minimum elong	4800 Apr 25 18:41	6° B 50'02	3°01'51	minimum elong	4801 Apr 08 17:22	19° Y 37'04	3°28'08
min. Earth dist.	4800 Apr 28 21:21	3° B 53'25	0.60845 AU	min. Earth dist.	4801 Apr 11 08:57	16° Y 46'02	0.62966 AU
morning rise	4800 May 02 11:07	1° B 03'38		morning rise	4801 Apr 14 20:31	13° Y 34'39	
	4800 May 04 07:59	30° R Y		direct	4801 Apr 21 17:19	10° Y 57'31	
desc. node	4800 May 08 06:39	28° Y 53'33		desc. node	4801 Apr 25 03:40	11° Y 32'32	
direct	4800 May 09 03:30	28° Y 51'22		morning max el	4801 May 05 16:39	18° Y 56'50	27°48'52
	4800 May 14 04:42	0° B			4801 May 15 01:00	0° B	
morning max el	4800 May 23 09:45	6° B 47'27	27°47'00		4801 Jun 02 19:54	0° II	
	4800 Jun 09 22:18	0° II		morning set	4801 Jun 08 22:58	11° II 49'36	
morning set	4800 Jun 24 23:47	27° II 42'11		max. Earth dist.	4801 Jun 14 07:10	22° II 55'00	1.32631 AU
	4800 Jun 26 02:18	0° B		asc. node	4801 Jun 15 13:39	25° II 38'18	
asc. node	4800 Jun 28 16:38	5° B 30'56					
max. Earth dist.	4800 Jul 01 01:13	10° B 38'01	1.32079 AU	superior conj	4801 Jun 16 15:05	27° II 55'29	0°11'03
				minimum elong	4801 Jun 16 14:33	27° II 52'37	0°10'54
superior conj	4800 Jul 02 06:44	13° B 19'51	0°36'45	behind sun begin	4801 Jun 16 10:42	27° II 31'47	
minimum elong	4800 Jul 02 05:10	13° B 11'14	0°36'25	behind sun end	4801 Jun 16 18:24	28° II 13'29	
evening rise	4800 Jul 09 02:22	28° B 12'29			4801 Jun 17 14:03	0° B	
	4800 Jul 09 22:39	0° B		evening rise	4801 Jun 23 14:11	12° B 59'35	
	4800 Jul 26 18:36	0° B			4801 Jul 02 04:02	0° B	
desc. node	4800 Aug 04 05:53	10° B 11'18		evening max el	4801 Jul 17 06:01	21° B 06'54	23°37'12
evening max el	4800 Aug 04 17:21	10° B 39'08	25°11'31	desc. node	4801 Jul 22 02:54	25° B 03'57	
retrograde	4800 Aug 18 15:57	17° B 42'30		retrograde	4801 Jul 30 20:59	27° B 57'09	
evening set	4800 Aug 24 07:47	16° B 29'08		evening set	4801 Aug 04 01:47	27° B 18'26	
min. Earth dist.	4800 Aug 29 05:00	13° B 47'08	0.57576 AU	min. Earth dist.	4801 Aug 10 15:54	24° B 12'30	0.55917 AU
inferior conj	4800 Sep 01 05:16	11° B 44'59	-5°14'25	inferior conj	4801 Aug 12 18:55	22° B 56'17	-5°02'26
minimum elong	4800 Sep 01 06:45	11° B 42'28	5°14'21	minimum elong	4801 Aug 12 14:05	23° B 03'32	5°01'53
morning rise	4800 Sep 09 08:01	7° B 32'13		morning rise	4801 Aug 21 04:52	19° B 01'43	
direct	4800 Sep 11 20:56	7° B 13'09		direct	4801 Aug 24 00:50	18° B 41'48	
morning max el	4800 Sep 20 17:25	11° B 24'19	19°02'51	morning max el	4801 Sep 03 08:34	23° B 29'35	20°09'33
asc. node	4800 Sep 24 15:54	15° B 54'02			4801 Sep 08 22:05	0° B	
	4800 Oct 03 05:33	0° B		asc. node	4801 Sep 11 12:55	3° B 55'09	
morning set	4800 Oct 07 11:12	8° B 12'45		morning set	4801 Sep 21 16:09	22° B 47'57	
					4801 Sep 25 04:27	0° B	
superior conj	4800 Oct 15 18:47	24° B 33'52	1°33'43				
minimum elong	4800 Oct 15 21:21	24° B 46'13	1°33'31	superior conj	4801 Sep 29 08:19	8° B 28'34	1°42'23
	4800 Oct 18 15:30	0° B		minimum elong	4801 Sep 29 09:17	8° B 33'24	1°42'21
max. Earth dist.	4800 Oct 22 13:44	7° B 12'34	1.38757 AU	max. Earth dist.	4801 Oct 04 19:43	19° B 12'38	1.36717 AU
evening rise	4800 Oct 26 09:28	13° B 56'48		evening rise	4801 Oct 08 15:42	26° B 21'02	
desc. node	4800 Oct 31 05:12	22° B 03'54			4801 Oct 10 16:25	0° B	
	4800 Nov 05 04:14	0° B		desc. node	4801 Oct 18 02:12	12° B 34'15	
	4800 Nov 26 23:54	0° B			4801 Oct 29 15:38	0° B	
evening max el	4800 Nov 30 20:26	4° B 06'42	24°37'46	evening max el	4801 Nov 13 08:52	17° B 49'57	25°49'09
retrograde	4800 Dec 12 08:40	10° B 49'22		retrograde	4801 Nov 25 18:29	24° B 54'40	
evening set	4800 Dec 17 20:57	8° B 31'30		evening set	4801 Dec 01 20:26	22° B 23'48	
asc. node	4800 Dec 21 15:08	4° B 24'23		min. Earth dist.	4801 Dec 06 03:52	17° B 44'20	0.66969 AU
min. Earth dist.	4800 Dec 22 11:44	3° B 17'05	0.67681 AU	inferior conj	4801 Dec 07 12:27	16° B 01'28	-0°20'16
inferior conj	4800 Dec 23 09:11	2° B 05'42	0°35'31	minimum elong	4801 Dec 07 12:59	15° B 59'47	0°20'00
minimum elong	4800 Dec 23 08:20	2° B 08'32	0°35'10	asc. node	4801 Dec 08 12:10	14° B 47'19	
	4800 Dec 24 23:44	30° R B		morning rise	4801 Dec 13 05:58	10° B 09'22	
morning rise	4800 Dec 28 19:50	26° B 05'00		direct	4801 Dec 16 11:48	9° B 09'02	
direct	4801 Jan 01 13:05	24° B 45'38		morning max el	4801 Dec 23 09:30	12° B 58'18	19°01'48
morning max el	4801 Jan 09 02:27	29° B 02'20	19°59'05		4802 Jan 05 01:03	0° B	
	4801 Jan 10 00:45	0° B		desc. node	4802 Jan 14 01:28	13° B 56'29	
desc. node	4801 Jan 27 04:29	23° B 32'54		morning set	4802 Jan 15 00:38	15° B 26'40	
	4801 Jan 31 10:37	0° B			4802 Jan 24 08:25	0° B	
morning set	4801 Feb 04 19:36	6° B 42'38		max. Earth dist.	4802 Jan 29 11:09	8° B 01'05	1.45038 AU
max. Earth dist.	4801 Feb 15 19:12	23° B 55'34	1.44049 AU				
	4801 Feb 19 13:53	0° K		superior conj	4802 Jan 31 16:01	11° B 29'22	-1°43'38

minimum elong	4802 Jan 31 07:05	10°≈54'07	1°42'51	superior conj	4803 Jan 10 18:49	20°☾06'36	-1°04'32
	4802 Feb 12 05:44	0°☿		minimum elong	4803 Jan 10 11:00	19°☾35'57	1°03'33
evening rise	4802 Feb 15 13:47	5°☿25'50		max. Earth dist.	4803 Jan 12 05:55	22°☾24'19	1.45307 AU
	4802 Mar 03 02:22	0°☿			4803 Jan 17 02:19	0°≈	
asc. node	4802 Mar 06 11:26	4°☿19'04		evening rise	4803 Jan 26 21:38	15°≈21'34	
evening max el	4802 Mar 07 17:52	5°☿41'09	18°33'16		4803 Feb 05 06:04	0°☿	
retrograde	4802 Mar 14 07:03	9°☿17'00		greatest brilliancy	4803 Feb 06 16:12	2°☿11'45	-0.8m
evening set	4802 Mar 17 10:24	8°☿21'38		evening max el	4803 Feb 19 02:50	19°☿11'47	19°12'54
inferior conj	4802 Mar 23 04:38	2°☿47'55	3°33'51	asc. node	4803 Feb 21 08:29	21°☿12'57	
minimum elong	4802 Mar 23 04:19	2°☿48'53	3°33'52	retrograde	4803 Feb 26 03:04	23°☿11'01	
min. Earth dist.	4802 Mar 25 06:10	0°☿20'18	0.64798 AU	evening set	4803 Mar 01 13:21	22°☿02'26	
	4802 Mar 25 13:11	30°☿☿		inferior conj	4803 Mar 07 01:53	16°☿12'44	3°24'08
morning rise	4802 Mar 28 21:36	26°☿35'46		minimum elong	4803 Mar 07 00:22	16°☿17'38	3°23'57
direct	4802 Apr 04 14:56	23°☿46'36		min. Earth dist.	4803 Mar 08 12:07	14°☿22'45	0.66244 AU
desc. node	4802 Apr 12 00:41	26°☿29'16		morning rise	4803 Mar 12 11:02	9°☿58'18	
	4802 Apr 16 09:10	0°☿		direct	4803 Mar 18 19:15	7°☿10'15	
morning max el	4802 Apr 18 02:28	1°☿39'58	27°15'37	desc. node	4803 Mar 29 21:44	13°☿09'53	
	4802 May 09 04:49	0°♄		morning max el	4803 Mar 31 12:25	14°☿44'05	26°14'09
morning set	4802 May 23 13:19	25°♄28'02			4803 Apr 12 23:58	0°☿	
	4802 May 25 20:29	0°♄			4803 May 01 23:39	0°♄	
max. Earth dist.	4802 May 28 04:41	4°♄44'29	1.33628 AU	morning set	4803 May 06 15:09	8°♄26'13	
				max. Earth dist.	4803 May 10 14:45	16°♄02'09	1.35093 AU
superior conj	4802 May 31 18:50	12°♄13'10	-0°17'11	superior conj	4803 May 15 15:35	26°♄05'45	-0°46'44
minimum elong	4802 May 31 19:44	12°♄17'54	0°17'01	minimum elong	4803 May 15 18:08	26°♄18'46	0°46'15
asc. node	4802 Jun 02 10:42	15°♄44'36			4803 May 17 13:12	0°♄	
evening rise	4802 Jun 08 01:12	27°♄40'12		asc. node	4803 May 20 07:45	5°♄45'23	
	4802 Jun 09 03:57	0°♄		evening rise	4803 May 23 09:24	12°♄07'31	
	4802 Jun 27 09:58	0°♄			4803 Jun 01 17:58	0°♄	
evening max el	4802 Jun 28 21:23	1°♄31'06	22°00'44	evening max el	4803 Jun 10 22:52	12°♄22'32	20°35'22
desc. node	4802 Jul 08 23:55	7°♄33'46		retrograde	4803 Jun 22 03:35	17°♄51'24	
retrograde	4802 Jul 11 14:52	7°♄49'50		evening set	4803 Jun 24 04:11	17°♄41'22	
evening set	4802 Jul 14 09:39	7°♄32'32		desc. node	4803 Jun 25 20:57	17°♄18'24	
min. Earth dist.	4802 Jul 23 02:06	3°♄48'52	0.54942 AU	inferior conj	4803 Jul 03 10:13	13°♄44'12	-2°13'32
inferior conj	4802 Jul 23 16:43	3°♄28'21	-3°59'37	minimum elong	4803 Jul 03 04:00	13°♄53'08	2°11'20
minimum elong	4802 Jul 23 08:01	3°♄40'35	3°57'23	min. Earth dist.	4803 Jul 04 13:46	13°♄04'31	0.54896 AU
	4802 Jul 30 23:51	30°♄☿		morning rise	4803 Jul 12 03:06	9°♄37'27	
morning rise	4802 Aug 01 08:00	29°♄37'51		direct	4803 Jul 15 22:49	9°♄05'57	
direct	4802 Aug 04 13:15	29°♄14'55		morning max el	4803 Jul 29 05:32	15°♄30'52	23°17'22
	4802 Aug 08 22:31	0°♄			4803 Aug 09 14:27	0°♄	
morning max el	4802 Aug 16 11:52	4°♄50'06	21°36'30	asc. node	4803 Aug 16 07:00	11°♄50'22	
asc. node	4802 Aug 29 09:57	22°♄37'35		morning set	4803 Aug 21 12:29	22°♄27'11	
	4802 Sep 02 07:46	0°♄			4803 Aug 25 01:09	0°♄	
morning set	4802 Sep 06 01:15	7°♄34'57					
superior conj	4802 Sep 13 07:31	22°♄51'49	1°43'16	superior conj	4803 Aug 28 13:06	7°♄32'45	1°37'37
minimum elong	4802 Sep 13 07:01	22°♄49'16	1°43'15	minimum elong	4803 Aug 28 11:33	7°♄24'23	1°37'31
	4802 Sep 16 18:44	0°♄		max. Earth dist.	4803 Aug 31 04:18	13°♄09'09	1.33574 AU
max. Earth dist.	4802 Sep 17 07:38	1°♄05'06	1.34950 AU	evening rise	4803 Sep 05 04:22	23°♄24'56	
evening rise	4802 Sep 21 15:27	9°♄34'31			4803 Sep 08 13:43	0°♄	
	4802 Oct 03 05:00	0°♄		desc. node	4803 Sep 21 20:16	22°♄41'48	
desc. node	4802 Oct 04 23:14	2°♄49'30			4803 Sep 26 20:22	0°♄	
	4802 Oct 25 09:29	0°♄		evening max el	4803 Oct 09 09:46	14°♄54'52	27°19'55
evening max el	4802 Oct 26 21:29	1°♄29'24	26°45'36	retrograde	4803 Oct 22 21:52	22°♄13'17	
retrograde	4802 Nov 08 23:07	8°♄45'38		evening set	4803 Oct 29 21:53	19°♄33'37	
evening set	4802 Nov 15 13:34	6°♄06'32		min. Earth dist.	4803 Nov 02 16:50	16°♄03'54	0.64490 AU
min. Earth dist.	4802 Nov 19 14:18	2°♄02'29	0.65904 AU	inferior conj	4803 Nov 05 00:58	13°♄33'21	-2°22'58
inferior conj	4802 Nov 21 10:30	29°♄52'38	-1°20'20	minimum elong	4803 Nov 05 05:05	13°♄22'16	2°21'22
minimum elong	4802 Nov 21 12:45	29°♄46'01	1°19'22	morning rise	4803 Nov 11 13:33	8°♄06'24	
	4802 Nov 21 08:00	30°♄♄		asc. node	4803 Nov 12 06:14	7°♄50'40	
asc. node	4802 Nov 25 09:12	25°♄41'44		direct	4803 Nov 14 02:59	7°♄32'40	
morning rise	4802 Nov 27 12:46	24°♄11'37		morning max el	4803 Nov 20 14:45	10°♄58'23	17°56'24
direct	4802 Nov 30 09:12	23°♄26'35			4803 Dec 03 15:59	0°♄	
morning max el	4802 Dec 06 22:30	26°♄59'27	18°20'38	morning set	4803 Dec 07 21:18	7°♄06'34	
	4802 Dec 09 14:33	0°♄		desc. node	4803 Dec 18 19:34	25°♄14'29	
morning set	4802 Dec 26 08:25	25°♄33'42					
	4802 Dec 29 02:38	0°♄		superior conj	4803 Dec 21 08:19	29°♄19'57	-0°17'32
desc. node	4802 Dec 31 22:31	4°♄31'47		minimum elong	4803 Dec 21 06:13	29°♄11'33	0°17'14

	4803 Dec 21 18:17	0°♄		morning set	4804 Nov 19 09:37	19°♄46'45	
max. Earth dist.	4803 Dec 26 00:49	6°♄48'26	1.44834 AU		4804 Nov 25 05:10	0°♄	
evening rise	4804 Jan 06 12:04	24°♄40'08					
	4804 Jan 09 23:30	0°♄		superior conj	4804 Nov 30 22:02	9°♄44'49	0°26'21
greatest brilliancy	4804 Jan 21 03:50	16°♄49'49	-0.6m	minimum elong	4804 Dec 01 00:32	9°♄55'19	0°26'00
	4804 Jan 30 19:48	0°♄		desc. node	4804 Dec 04 16:35	16°♄00'47	
evening max el	4804 Feb 02 07:10	2°♄45'10	20°08'09	max. Earth dist.	4804 Dec 07 17:27	20°♄57'21	1.43683 AU
asc. node	4804 Feb 08 05:30	6°♄58'51			4804 Dec 13 10:00	0°♄	
retrograde	4804 Feb 10 01:05	7°♄16'32		evening rise	4804 Dec 15 22:31	3°♄55'37	
evening set	4804 Feb 13 19:38	5°♄53'45			4805 Jan 02 10:31	0°♄	
inferior conj	4804 Feb 19 04:58	29°♄50'18	3°02'30	evening max el	4805 Jan 15 06:01	16°♄19'26	21°16'10
minimum elong	4804 Feb 19 02:44	29°♄57'49	3°02'02	retrograde	4805 Jan 23 22:56	21°♄28'56	
	4804 Feb 19 02:05	30°♄		asc. node	4805 Jan 25 02:33	21°♄21'48	
min. Earth dist.	4804 Feb 20 01:03	28°♄42'30	0.67268 AU	evening set	4805 Jan 28 03:18	19°♄50'56	
morning rise	4804 Feb 24 09:37	23°♄36'01		inferior conj	4805 Feb 02 11:27	13°♄36'26	2°31'11
direct	4804 Mar 01 05:10	21°♄00'01		minimum elong	4805 Feb 02 09:01	13°♄44'52	2°30'29
morning max el	4804 Mar 12 21:10	27°♄58'41	24°54'01	min. Earth dist.	4805 Feb 02 18:46	13°♄11'11	0.67874 AU
	4804 Mar 14 19:13	0°♄		morning rise	4805 Feb 07 14:34	7°♄23'53	
desc. node	4804 Mar 15 18:48	1°♄05'36		direct	4805 Feb 12 19:40	5°♄07'12	
	4804 Apr 05 17:04	0°♄		morning max el	4805 Feb 23 06:00	11°♄19'13	23°25'26
morning set	4804 Apr 17 23:33	20°♄30'28		desc. node	4805 Mar 02 15:50	19°♄54'26	
max. Earth dist.	4804 Apr 21 14:25	27°♄03'39	1.36984 AU		4805 Mar 10 02:54	0°♄	
	4804 Apr 23 04:22	0°♄		morning set	4805 Mar 29 12:26	0°♄	
				max. Earth dist.	4805 Mar 30 08:26	1°♄24'05	
superior conj	4804 Apr 28 02:22	9°♄25'20	-1°15'53		4805 Apr 03 09:51	8°♄22'17	1.39143 AU
minimum elong	4804 Apr 28 06:29	9°♄45'29	1°15'13				
asc. node	4804 May 06 04:48	25°♄36'35		superior conj	4805 Apr 10 23:13	22°♄01'19	-1°42'00
evening rise	4804 May 06 12:29	26°♄15'08		minimum elong	4805 Apr 11 04:10	22°♄24'21	1°41'27
	4804 May 08 09:39	0°♄			4805 Apr 15 04:26	0°♄	
evening max el	4804 May 23 12:50	23°♄55'20	19°28'02	evening rise	4805 Apr 20 07:36	9°♄54'46	
retrograde	4804 Jun 01 23:42	28°♄31'58		asc. node	4805 Apr 23 01:50	15°♄12'51	
evening set	4804 Jun 03 22:37	28°♄21'00			4805 May 01 14:36	0°♄	
desc. node	4804 Jun 11 17:59	24°♄47'03		evening max el	4805 May 06 13:27	6°♄07'13	18°40'53
inferior conj	4804 Jun 12 13:52	24°♄15'15	-0°14'46	retrograde	4805 May 14 13:22	10°♄03'14	
minimum elong	4804 Jun 12 13:13	24°♄16'18	0°14'31	evening set	4805 May 16 17:47	9°♄46'41	
transit middle	4804 Jun 12 13:13	24°♄16'18	0°14'31	inferior conj	4805 May 24 13:06	5°♄22'49	1°26'01
transit begin	4804 Jun 12 11:35	24°♄18'56		minimum elong	4805 May 24 16:02	5°♄17'18	1°25'02
transit end	4804 Jun 12 14:51	24°♄13'40		min. Earth dist.	4805 May 27 20:36	2°♄54'34	0.57473 AU
min. Earth dist.	4804 Jun 15 03:32	22°♄36'26	0.55807 AU	desc. node	4805 May 29 15:01	1°♄42'34	
morning rise	4804 Jun 21 01:06	19°♄36'44		morning rise	4805 Jun 01 11:01	0°♄08'45	
direct	4804 Jun 25 17:43	18°♄47'01			4805 Jun 01 18:54	30°♄	
morning max el	4804 Jul 09 19:09	25°♄52'26	25°00'01	direct	4805 Jun 07 02:17	28°♄50'10	
	4804 Jul 13 16:48	0°♄			4805 Jun 12 11:38	0°♄	
	4804 Aug 01 11:06	0°♄		morning max el	4805 Jun 21 11:05	6°♄23'27	26°28'40
asc. node	4804 Aug 02 04:04	1°♄25'40			4805 Jul 08 21:45	0°♄	
morning set	4804 Aug 05 00:13	7°♄19'49		morning set	4805 Jul 20 10:49	22°♄07'46	
				asc. node	4805 Jul 20 01:06	21°♄16'36	
					4805 Jul 24 02:32	0°♄	
superior conj	4804 Aug 11 22:40	22°♄23'53	1°26'24				
minimum elong	4804 Aug 11 20:30	22°♄12'00	1°26'09				
max. Earth dist.	4804 Aug 13 09:09	25°♄31'59	1.32622 AU	superior conj	4805 Jul 27 10:10	7°♄18'30	1°10'22
	4804 Aug 15 10:48	0°♄		minimum elong	4805 Jul 27 07:52	7°♄05'46	1°10'00
evening rise	4804 Aug 19 02:50	7°♄42'06		max. Earth dist.	4805 Jul 27 19:12	8°♄08'21	1.32083 AU
	4804 Aug 31 00:43	0°♄		evening rise	4805 Aug 03 07:55	22°♄17'05	
desc. node	4804 Sep 07 17:16	12°♄01'41			4805 Aug 07 02:32	0°♄	
evening max el	4804 Sep 20 19:53	27°♄53'53	27°25'31		4805 Aug 25 03:21	0°♄	
	4804 Sep 23 04:45	0°♄		desc. node	4805 Aug 25 14:17	0°♄36'10	
retrograde	4804 Oct 04 13:49	5°♄08'51		evening max el	4805 Sep 03 00:58	10°♄13'01	26°58'13
evening set	4804 Oct 11 18:09	2°♄38'45		retrograde	4805 Sep 16 22:12	17°♄23'52	
	4804 Oct 15 00:23	30°♄		evening set	4805 Sep 23 22:18	15°♄15'14	
min. Earth dist.	4804 Oct 15 09:26	29°♄39'11	0.62759 AU	min. Earth dist.	4805 Sep 27 15:10	12°♄35'57	0.60779 AU
inferior conj	4804 Oct 18 05:03	26°♄56'56	-3°25'05	inferior conj	4805 Sep 30 19:28	9°♄55'07	-4°21'23
minimum elong	4804 Oct 18 10:45	26°♄43'13	3°23'15	minimum elong	4805 Oct 01 01:36	9°♄42'06	4°19'57
morning rise	4804 Oct 25 04:58	21°♄47'28		morning rise	4805 Oct 08 06:51	5°♄06'43	
direct	4804 Oct 27 14:07	21°♄21'24		direct	4805 Oct 10 14:49	4°♄45'17	
asc. node	4804 Oct 29 03:17	21°♄32'43		asc. node	4805 Oct 16 00:20	6°♄45'39	
morning max el	4804 Nov 03 07:16	24°♄48'09	17°49'52	morning max el	4805 Oct 17 20:55	8°♄21'19	18°02'08
	4804 Nov 07 13:33	0°♄			4805 Oct 31 20:45	0°♄	

morning set	4805 Nov 02 15:00	3°♍15'34			4806 Oct 23 22:27	0°♍	
superior conj	4805 Nov 12 14:02	21°♍26'34	1°00'52	superior conj	4806 Oct 26 03:53	4°♍11'45	1°24'39
minimum elong	4805 Nov 12 18:02	21°♍44'18	1°00'22	minimum elong	4806 Oct 26 07:16	4°♍27'33	1°24'19
	4805 Nov 17 12:16	0°♌		max. Earth dist.	4806 Nov 02 11:58	17°♍27'01	1.39963 AU
max. Earth dist.	4805 Nov 20 05:25	4°♌34'26	1.41988 AU	evening rise	4806 Nov 06 16:06	24°♍34'56	
desc. node	4805 Nov 21 13:35	6°♌47'44		desc. node	4806 Nov 08 10:34	27°♍31'18	
evening rise	4805 Nov 25 20:41	13°♌46'15			4806 Nov 09 22:56	0°♌	
	4805 Dec 06 09:11	0°♋			4806 Nov 30 04:36	0°♋	
evening max el	4805 Dec 28 23:41	29°♋55'20	22°32'50	evening max el	4806 Dec 11 13:44	13°♋33'50	23°52'51
	4805 Dec 29 01:33	0°♊		retrograde	4806 Dec 22 11:56	20°♋00'09	
retrograde	4806 Jan 07 19:00	5°♊45'02		evening set	4806 Dec 27 16:23	17°♋50'44	
asc. node	4806 Jan 11 23:34	4°♊13'12		asc. node	4806 Dec 29 20:37	15°♋38'32	
evening set	4806 Jan 12 10:45	3°♊51'12		min. Earth dist.	4807 Jan 01 11:39	12°♋16'39	0.67926 AU
	4806 Jan 15 23:02	30°♑		inferior conj	4807 Jan 02 02:56	11°♋24'42	1°05'09
inferior conj	4806 Jan 17 19:24	27°♋28'55	1°51'43	minimum elong	4807 Jan 02 01:28	11°♋29'40	1°04'35
minimum elong	4806 Jan 17 17:13	27°♋36'28	1°50'57	morning rise	4807 Jan 07 10:34	5°♋20'09	
min. Earth dist.	4806 Jan 17 15:04	27°♋43'57	0.68086 AU	direct	4807 Jan 11 11:03	3°♋48'44	
morning rise	4806 Jan 22 23:35	21°♋19'33		morning max el	4807 Jan 19 12:58	8°♋26'57	20°38'46
direct	4806 Jan 27 13:58	19°♋25'27		desc. node	4807 Feb 04 09:52	29°♋16'14	
morning max el	4806 Feb 05 18:14	24°♋47'55	21°57'53		4807 Feb 04 21:46	0°♊	
	4806 Feb 10 09:37	0°♊		morning set	4807 Feb 17 16:28	19°♊22'07	
desc. node	4806 Feb 17 12:51	9°♊21'39			4807 Feb 24 10:19	0°♑	
	4806 Mar 03 13:57	0°♑		max. Earth dist.	4807 Feb 26 13:24	3°♑25'26	1.43181 AU
morning set	4806 Mar 10 13:04	10°♑56'58					
max. Earth dist.	4806 Mar 16 08:16	20°♑27'06	1.41305 AU	superior conj	4807 Mar 05 04:13	14°♑18'35	-2°08'35
	4806 Mar 21 22:40	0°♒		minimum elong	4807 Mar 05 04:01	14°♑17'42	2°08'36
					4807 Mar 14 07:36	0°♒	
superior conj	4806 Mar 24 01:28	3°♒42'37	-2°01'16	evening rise	4807 Mar 17 07:20	5°♒15'55	
minimum elong	4806 Mar 24 05:22	3°♒59'51	2°01'03	asc. node	4807 Mar 27 19:53	23°♒18'07	
evening rise	4806 Apr 03 15:17	22°♒58'15			4807 Apr 01 14:34	0°♑	
	4806 Apr 07 10:50	0°♑		evening max el	4807 Apr 03 09:23	1°♑57'12	18°06'44
asc. node	4806 Apr 09 22:51	4°♑28'56		retrograde	4807 Apr 09 21:50	5°♑19'27	
evening max el	4806 Apr 19 21:25	18°♑50'45	18°13'57	evening set	4807 Apr 12 15:24	4°♑43'24	
retrograde	4806 Apr 26 21:57	22°♑22'08			4807 Apr 18 16:56	30°♑	
evening set	4806 Apr 29 09:06	21°♑56'53		inferior conj	4807 Apr 19 01:15	29°♑39'06	3°16'10
inferior conj	4806 May 06 09:50	17°♑12'33	2°35'54	minimum elong	4807 Apr 19 03:29	29°♑33'26	3°15'50
minimum elong	4806 May 06 13:17	17°♑04'56	2°35'03	min. Earth dist.	4807 Apr 22 02:05	26°♑36'26	0.61766 AU
min. Earth dist.	4806 May 09 19:24	14°♑14'38	0.59573 AU	morning rise	4807 Apr 25 13:49	23°♑39'14	
morning rise	4806 May 13 14:45	11°♑30'10		direct	4807 May 02 09:05	21°♑14'44	
desc. node	4806 May 16 12:03	10°♑10'56		desc. node	4807 May 03 09:05	21°♑17'41	
direct	4806 May 20 00:08	9°♑36'49		morning max el	4807 May 16 13:12	29°♑14'11	27°52'21
morning max el	4806 Jun 03 09:03	17°♑27'40	27°28'47		4807 May 17 07:17	0°♑	
	4806 Jun 13 18:48	0°♐			4807 Jun 07 16:48	0°♐	
	4806 Jul 01 11:02	0°♏		morning set	4807 Jun 18 21:36	21°♐06'24	
morning set	4806 Jul 04 18:35	6°♏45'17			4807 Jun 23 03:27	0°♏	
asc. node	4806 Jul 06 22:07	11°♏17'37		asc. node	4807 Jun 23 19:08	1°♏24'17	
				max. Earth dist.	4807 Jun 24 15:39	3°♏15'03	1.32256 AU
superior conj	4806 Jul 11 21:50	22°♏10'32	0°50'07				
minimum elong	4806 Jul 11 19:52	21°♏59'39	0°49'43	superior conj	4807 Jun 26 07:58	6°♏54'32	0°26'14
max. Earth dist.	4806 Jul 11 06:38	20°♏46'41	1.31958 AU	minimum elong	4807 Jun 26 06:48	6°♏48'06	0°25'57
	4806 Jul 15 11:04	0°♎		evening rise	4807 Jul 03 04:38	21°♏50'34	
evening rise	4806 Jul 18 17:11	7°♎01'59			4807 Jul 07 02:59	0°♎	
	4806 Jul 30 16:10	0°♍			4807 Jul 26 03:39	0°♍	
desc. node	4806 Aug 12 11:18	18°♍06'12		evening max el	4807 Jul 28 13:27	2°♍28'49	24°32'43
evening max el	4806 Aug 15 22:37	21°♍43'01	25°58'13	desc. node	4807 Jul 30 08:19	4°♍06'06	
retrograde	4806 Aug 29 21:48	28°♍50'36		retrograde	4807 Aug 11 10:34	9°♍28'53	
evening set	4806 Sep 05 05:23	27°♍14'59		evening set	4807 Aug 16 12:06	8°♍31'25	
min. Earth dist.	4806 Sep 09 11:07	24°♍39'29	0.58705 AU	min. Earth dist.	4807 Aug 22 00:36	5°♍40'47	0.56804 AU
inferior conj	4806 Sep 12 16:36	22°♍17'31	-5°02'45	inferior conj	4807 Aug 24 17:51	3°♍56'23	-5°15'03
minimum elong	4806 Sep 12 20:45	22°♍09'52	5°02'15	minimum elong	4807 Aug 24 16:46	3°♍58'08	5°15'01
morning rise	4806 Sep 20 14:22	17°♍52'17		morning rise	4807 Sep 01 23:54	29°♌52'24	
direct	4806 Sep 23 00:25	17°♍33'03			4807 Sep 01 12:03	30°♌	
morning max el	4806 Oct 01 04:21	21°♍28'10	18°34'35	direct	4807 Sep 04 15:18	29°♌33'19	
asc. node	4806 Oct 02 21:22	23°♍15'45			4807 Sep 07 16:00	0°♍	
	4806 Oct 07 19:12	0°♌		morning max el	4807 Sep 14 02:16	3°♍58'58	19°28'32
morning set	4806 Oct 17 08:20	17°♌17'42		asc. node	4807 Sep 19 18:24	10°♍47'57	



















































































































	4807 Sep 30 13:14	0°♄		minimum elong	4808 Aug 03 16:43	14°♄59'47	4°40'56
morning set	4807 Oct 01 09:54	1°♄43'10		morning rise	4808 Aug 12 12:16	10°♄58'23	
				direct	4808 Aug 15 11:54	10°♄37'26	
superior conj	4807 Oct 09 10:11	17°♄45'04	1°38'25	morning max el	4808 Aug 26 12:15	15°♄44'50	20°44'11
minimum elong	4807 Oct 09 12:05	17°♄54'21	1°38'18	asc. node	4808 Sep 05 15:26	29°♄07'51	
max. Earth dist.	4807 Oct 15 16:23	29°♄40'09	1.37867 AU		4808 Sep 06 03:43	0°♄	
	4807 Oct 15 20:42	0°♄		morning set	4808 Sep 14 16:53	16°♄23'56	
evening rise	4807 Oct 19 10:31	6°♄26'42			4808 Sep 21 06:17	0°♄	
desc. node	4807 Oct 26 07:35	18°♄07'46					
	4807 Nov 02 21:21	0°♄		superior conj	4808 Sep 22 04:16	1°♄52'49	1°43'37
evening max el	4807 Nov 24 02:22	27°♄16'15	25°09'32	minimum elong	4808 Sep 22 04:35	1°♄54'23	1°43'36
	4807 Nov 27 02:37	0°♄		max. Earth dist.	4808 Sep 27 00:24	11°♄34'03	1.35930 AU
retrograde	4807 Dec 06 00:38	4°♄10'08		evening rise	4808 Oct 01 00:48	19°♄13'24	
evening set	4807 Dec 11 18:37	1°♄46'30			4808 Oct 07 01:22	0°♄	
	4807 Dec 13 14:21	30°♄♂		desc. node	4808 Oct 12 04:37	8°♄32'25	
min. Earth dist.	4807 Dec 16 06:12	26°♄46'33	0.67416 AU		4808 Oct 26 23:47	0°♄	
asc. node	4807 Dec 16 17:40	26°♄09'14		evening max el	4808 Nov 05 15:06	10°♄59'30	26°15'32
inferior conj	4807 Dec 17 08:19	25°♄21'20	0°12'28	retrograde	4808 Nov 18 08:14	18°♄09'51	
minimum elong	4807 Dec 17 08:00	25°♄22'22	0°12'21	evening set	4808 Nov 24 15:40	15°♄35'07	
transit middle	4807 Dec 17 08:00	25°♄22'22	0°12'21	min. Earth dist.	4808 Nov 28 20:18	11°♄10'28	0.66557 AU
transit begin	4807 Dec 17 06:12	25°♄28'14		inferior conj	4808 Nov 30 09:39	9°♄15'51	-0°45'17
transit end	4807 Dec 17 09:47	25°♄16'30		minimum elong	4808 Nov 30 10:53	9°♄12'05	0°44'44
morning rise	4807 Dec 22 21:36	19°♄23'45		asc. node	4808 Dec 02 14:42	6°♄38'56	
direct	4807 Dec 26 09:43	18°♄12'55		morning rise	4808 Dec 06 06:39	3°♄27'51	
morning max el	4808 Jan 02 15:37	22°♄16'56	19°32'44	direct	4808 Dec 09 08:16	2°♄34'21	
	4808 Jan 09 01:04	0°♄		morning max el	4808 Dec 16 01:25	6°♄15'19	18°42'14
greatest brilliancy	4808 Jan 15 17:41	9°♄36'22	-0.7m		4809 Jan 01 19:43	0°♄	
desc. node	4808 Jan 22 06:52	19°♄30'41		morning set	4809 Jan 06 04:38	6°♄53'27	
morning set	4808 Jan 27 13:21	27°♄36'52		desc. node	4809 Jan 08 03:53	9°♄59'43	
	4808 Jan 29 02:22	0°♄			4809 Jan 20 21:34	0°♄	
max. Earth dist.	4808 Feb 09 01:45	17°♄09'58	1.44548 AU				
				superior conj	4809 Jan 22 11:25	2°♄28'28	-1°28'46
superior conj	4808 Feb 13 05:21	23°♄46'44	-1°58'31	minimum elong	4809 Jan 22 02:03	1°♄51'45	1°27'47
minimum elong	4808 Feb 12 22:54	23°♄20'54	1°58'08	max. Earth dist.	4809 Jan 21 19:30	1°♄26'03	1.45245 AU
	4808 Feb 17 01:49	0°♄		evening rise	4809 Feb 07 00:09	27°♄05'00	
evening rise	4808 Feb 27 03:15	16°♄38'54			4809 Feb 08 19:47	0°♄	
	4808 Mar 06 02:45	0°♄		greatest brilliancy	4809 Feb 14 13:15	9°♄10'48	-0.9m
asc. node	4808 Mar 13 16:56	11°♄31'16		evening max el	4809 Feb 28 09:17	28°♄46'03	18°48'09
evening max el	4808 Mar 16 22:14	15°♄17'40	18°18'26	asc. node	4809 Feb 28 13:59	28°♄57'51	
retrograde	4808 Mar 23 08:32	18°♄44'41			4809 Mar 01 16:37	0°♄	
evening set	4808 Mar 26 08:17	17°♄56'34		retrograde	4809 Mar 07 02:06	2°♄30'14	
inferior conj	4808 Apr 01 07:12	12°♄33'17	3°32'46	evening set	4809 Mar 10 08:23	1°♄29'10	
minimum elong	4808 Apr 01 07:46	12°♄31'42	3°32'44		4809 Mar 12 06:09	30°♄♂	
min. Earth dist.	4808 Apr 03 17:48	9°♄48'15	0.63786 AU	inferior conj	4809 Mar 15 23:50	25°♄48'27	3°31'23
morning rise	4808 Apr 07 06:19	6°♄24'18		minimum elong	4809 Mar 15 22:57	25°♄51'12	3°31'19
direct	4808 Apr 14 02:40	3°♄40'03		min. Earth dist.	4809 Mar 17 18:44	23°♄36'09	0.65466 AU
desc. node	4808 Apr 19 06:07	4°♄58'58		morning rise	4809 Mar 21 13:05	19°♄35'17	
morning max el	4808 Apr 27 21:29	11°♄38'25	27°38'40	direct	4809 Mar 28 03:11	16°♄45'09	
	4808 May 12 10:41	0°♄		desc. node	4809 Apr 06 03:09	20°♄43'42	
	4808 May 30 03:26	0°♄		morning max el	4809 Apr 10 07:26	24°♄31'08	26°52'27
morning set	4808 Jun 01 17:25	5°♄02'34			4809 Apr 15 06:13	0°♄	
max. Earth dist.	4808 Jun 06 18:14	15°♄20'22	1.32997 AU		4809 May 05 20:54	0°♄	
				morning set	4809 May 16 02:56	18°♄24'51	
superior conj	4808 Jun 09 14:39	21°♄23'34	-0°00'40	max. Earth dist.	4809 May 20 11:08	26°♄55'56	1.34200 AU
minimum elong	4808 Jun 09 14:41	21°♄23'44	0°00'41		4809 May 21 23:30	0°♄	
behind sun begin	4808 Jun 09 09:20	20°♄55'06					
behind sun end	4808 Jun 09 20:02	21°♄52'24		superior conj	4809 May 24 15:45	5°♄31'20	-0°29'37
asc. node	4808 Jun 09 16:10	21°♄31'45		minimum elong	4809 May 24 17:20	5°♄39'34	0°29'18
	4808 Jun 13 14:27	0°♄		asc. node	4809 May 27 13:14	11°♄36'05	
evening rise	4808 Jun 16 16:21	6°♄35'38		evening rise	4809 Jun 01 02:25	21°♄11'21	
	4808 Jun 29 02:07	0°♄			4809 Jun 05 10:28	0°♄	
evening max el	4808 Jul 09 02:25	12°♄51'30	22°55'34	evening max el	4809 Jun 20 21:27	23°♄24'03	21°22'26
desc. node	4808 Jul 16 05:21	18°♄02'13		retrograde	4809 Jul 03 00:16	29°♄22'34	
retrograde	4808 Jul 22 10:20	19°♄30'17		desc. node	4809 Jul 03 02:24	29°♄22'33	
evening set	4808 Jul 25 23:21	19°♄02'51		evening set	4809 Jul 05 09:19	29°♄09'34	
min. Earth dist.	4808 Aug 02 11:05	15°♄42'27	0.55407 AU	inferior conj	4809 Jul 14 18:01	25°♄10'19	-3°18'27
inferior conj	4808 Aug 03 23:52	14°♄49'27	-4°42'11	minimum elong	4809 Jul 14 09:37	25°♄22'04	3°15'52

min. Earth dist.	4809 Jul 14 21:25	25° Ω 05'34	0.54813 AU	minimum elong	4810 Jun 24 10:20	5° Ω 34'47	1°21'09
morning rise	4809 Jul 23 10:42	21° Ω 15'41		min. Earth dist.	4810 Jun 26 09:40	4° Ω 23'57	0.55170 AU
direct	4809 Jul 26 21:36	20° Ω 49'54		morning rise	4810 Jul 03 05:44	1° Ω 10'13	
morning max el	4809 Aug 08 10:46	26° Ω 45'55	22°18'14	direct	4810 Jul 07 09:27	0° Ω 32'38	
	4809 Aug 11 13:43	0° Ω		morning max el	4810 Jul 21 02:03	7° Ω 15'57	24°01'48
asc. node	4809 Aug 23 12:28	18° Ω 04'05			4810 Aug 06 11:01	0° Ω	
	4809 Aug 29 13:00	0° Ω		asc. node	4810 Aug 10 09:31	7° Ω 27'43	
morning set	4809 Aug 30 03:07	1° Ω 13'43		morning set	4810 Aug 14 14:48	16° Ω 07'29	
					4810 Aug 21 00:58	0° Ω	
superior conj	4809 Sep 06 06:29	16° Ω 24'11	1°41'36	superior conj	4810 Aug 21 14:04	1° Ω 10'59	1°33'30
minimum elong	4809 Sep 06 05:29	16° Ω 18'55	1°41'34	minimum elong	4810 Aug 21 12:11	1° Ω 00'49	1°33'20
max. Earth dist.	4809 Sep 09 16:15	23° Ω 31'00	1.34320 AU	max. Earth dist.	4810 Aug 23 16:47	5° Ω 44'10	1.33115 AU
	4809 Sep 12 21:17	0° Ω		evening rise	4810 Aug 28 24:00	16° Ω 46'50	
evening rise	4809 Sep 14 06:36	2° Ω 43'31			4810 Sep 04 21:14	0° Ω	
desc. node	4809 Sep 29 01:40	28° Ω 38'51		desc. node	4810 Sep 15 22:42	18° Ω 19'20	
	4809 Sep 29 22:35	0° Ω			4810 Sep 24 11:50	0° Ω	
evening max el	4809 Oct 19 03:51	24° Ω 34'34	27°03'20	evening max el	4810 Oct 01 15:20	7° Ω 50'12	27°25'59
	4809 Oct 26 04:09	0° Ω		retrograde	4810 Oct 15 06:09	15° Ω 07'48	
retrograde	4809 Nov 01 10:13	1° Ω 51'49		evening set	4810 Oct 22 09:01	12° Ω 30'25	
	4809 Nov 07 02:44	30° Ω		min. Earth dist.	4810 Oct 26 01:52	9° Ω 14'41	0.63795 AU
evening set	4809 Nov 08 05:21	29° Ω 11'26		inferior conj	4810 Oct 28 15:12	6° Ω 37'35	-2°49'37
min. Earth dist.	4809 Nov 12 03:32	25° Ω 22'25	0.65347 AU	minimum elong	4810 Oct 28 20:04	6° Ω 25'05	2°47'51
inferior conj	4809 Nov 14 04:47	23° Ω 03'03	-1°46'43	morning rise	4810 Nov 04 08:34	1° Ω 17'58	
minimum elong	4809 Nov 14 07:50	22° Ω 54'25	1°45'29	asc. node	4810 Nov 06 08:45	0° Ω 49'01	
asc. node	4809 Nov 19 11:44	18° Ω 00'54		direct	4810 Nov 06 19:49	0° Ω 47'58	
morning rise	4809 Nov 20 11:16	17° Ω 27'40		morning max el	4810 Nov 13 08:59	4° Ω 12'53	17°51'26
direct	4809 Nov 23 04:32	16° Ω 47'47		morning set	4810 Nov 30 00:52	29° Ω 42'37	
morning max el	4809 Nov 29 16:10	20° Ω 16'10	18°08'15		4810 Nov 30 04:55	0° Ω	
	4809 Dec 07 02:40	0° Ω					
morning set	4809 Dec 18 01:14	17° Ω 38'38		superior conj	4810 Dec 12 15:15	20° Ω 55'56	0°01'58
	4809 Dec 25 15:22	0° Ω		minimum elong	4810 Dec 12 15:28	20° Ω 56'48	0°01'58
desc. node	4809 Dec 26 00:55	0° Ω 38'28		behind sun begin	4810 Dec 12 05:43	20° Ω 16'52	
				behind sun end	4810 Dec 13 01:13	21° Ω 36'38	
superior conj	4810 Jan 01 16:16	11° Ω 13'54	-0°44'49	desc. node	4810 Dec 12 21:59	21° Ω 23'24	
minimum elong	4810 Jan 01 10:42	10° Ω 51'52	0°44'03		4810 Dec 18 06:08	0° Ω	
max. Earth dist.	4810 Jan 04 15:19	15° Ω 53'51	1.45196 AU	max. Earth dist.	4810 Dec 18 09:30	0° Ω 13'26	1.44421 AU
	4810 Jan 13 15:59	0° Ω		evening rise	4810 Dec 28 10:13	15° Ω 54'02	
evening rise	4810 Jan 17 23:27	6° Ω 41'46			4811 Jan 06 17:11	0° Ω	
greatest brilliancy	4810 Jan 30 16:40	26° Ω 14'42	-0.7m	evening max el	4811 Jan 25 18:17	25° Ω 50'31	20°35'39
	4810 Feb 02 05:22	0° Ω			4811 Jan 31 04:07	0° Ω	
evening max el	4810 Feb 11 16:24	12° Ω 17'30	19°34'36	asc. node	4811 Feb 02 08:03	0° Ω 36'22	
asc. node	4810 Feb 15 11:02	15° Ω 24'20		retrograde	4811 Feb 02 21:35	0° Ω 38'06	
retrograde	4810 Feb 18 23:18	16° Ω 29'25			4811 Feb 05 11:38	30° Ω	
evening set	4810 Feb 22 13:00	15° Ω 14'43		evening set	4811 Feb 06 20:04	29° Ω 08'56	
inferior conj	4810 Feb 27 23:51	9° Ω 18'38	3°16'15	inferior conj	4811 Feb 12 04:39	23° Ω 00'09	2°50'17
minimum elong	4810 Feb 27 21:59	9° Ω 24'49	3°15'57	minimum elong	4811 Feb 12 02:17	23° Ω 08'16	2°49'42
min. Earth dist.	4810 Mar 01 03:48	7° Ω 46'39	0.66731 AU	min. Earth dist.	4811 Feb 12 19:06	22° Ω 10'40	0.67574 AU
morning rise	4810 Mar 05 06:43	3° Ω 04'05		morning rise	4811 Feb 17 08:18	16° Ω 46'11	
direct	4810 Mar 11 09:46	0° Ω 20'23		direct	4811 Feb 22 21:40	14° Ω 17'54	
morning max el	4810 Mar 23 17:02	7° Ω 40'41	25°41'50	morning max el	4811 Mar 06 01:42	20° Ω 58'22	24°16'44
desc. node	4810 Mar 24 00:10	7° Ω 58'50		desc. node	4811 Mar 10 21:13	26° Ω 19'08	
	4810 Apr 10 02:56	0° Ω			4811 Mar 13 20:30	0° Ω	
	4810 Apr 28 08:31	0° Ω			4811 Apr 03 08:36	0° Ω	
morning set	4810 Apr 28 21:59	1° Ω 01'19		morning set	4811 Apr 10 21:07	12° Ω 37'17	
max. Earth dist.	4810 May 02 16:43	8° Ω 04'45	1.35853 AU	max. Earth dist.	4811 Apr 14 13:29	19° Ω 08'09	1.37877 AU
					4811 Apr 20 10:20	0° Ω	
superior conj	4810 May 08 08:38	19° Ω 10'19	-0°59'17	superior conj	4811 Apr 21 13:57	2° Ω 11'55	-1°27'32
minimum elong	4810 May 08 11:53	19° Ω 26'40	0°58'41	minimum elong	4811 Apr 21 18:34	2° Ω 34'03	1°26'54
	4810 May 13 16:09	0° Ω		evening rise	4811 Apr 30 08:47	19° Ω 27'13	
asc. node	4810 May 14 10:18	1° Ω 33'12		asc. node	4811 May 01 07:20	21° Ω 18'21	
evening rise	4810 May 16 08:44	5° Ω 30'57			4811 May 05 20:09	0° Ω	
	4810 May 30 05:47	0° Ω		evening max el	4811 May 16 22:54	16° Ω 21'22	19°05'31
evening max el	4810 Jun 03 04:07	4° Ω 31'45	20°04'17	retrograde	4811 May 25 17:57	20° Ω 39'12	
retrograde	4810 Jun 13 14:57	9° Ω 38'19		evening set	4811 May 27 18:32	20° Ω 26'29	
evening set	4810 Jun 15 13:19	9° Ω 28'35		inferior conj	4811 Jun 05 01:29	16° Ω 13'55	0°31'24
desc. node	4810 Jun 19 23:24	8° Ω 01'47					
inferior conj	4810 Jun 24 14:12	5° Ω 29'00	-1°22'36				

minimum elong	4811 Jun 05 02:44	16° Π 11'44	0°30'55	inferior conj	4812 May 16 10:00	27° \mathcal{B} 39'40	1°59'31
desc. node	4811 Jun 06 20:26	14° Π 59'56		minimum elong	4812 May 16 13:28	27° \mathcal{B} 32'41	1°58'29
min. Earth dist.	4811 Jun 08 00:55	14° Π 11'58	0.56429 AU	min. Earth dist.	4812 May 19 20:17	24° \mathcal{B} 55'39	0.58332 AU
morning rise	4811 Jun 13 07:43	11° Π 19'31		desc. node	4812 May 23 17:27	22° \mathcal{B} 22'04	
direct	4811 Jun 18 09:57	10° Π 18'40		morning rise	4812 May 24 00:51	22° \mathcal{B} 12'24	
morning max el	4811 Jul 02 16:07	17° Π 38'27	25°40'29	direct	4812 May 30 00:54	20° \mathcal{B} 38'50	
	4811 Jul 12 21:19	0° \mathcal{E}		morning max el	4812 Jun 13 10:12	28° \mathcal{B} 21'05	26°58'20
asc. node	4811 Jul 28 06:34	27° \mathcal{E} 10'21			4812 Jun 15 01:08	0° Π	
	4811 Jul 29 15:05	0° \mathcal{O}			4812 Jul 05 13:07	0° \mathcal{E}	
morning set	4811 Jul 30 02:14	0° \mathcal{O} 58'49		morning set	4812 Jul 13 11:49	15° \mathcal{E} 42'45	
				asc. node	4812 Jul 14 03:37	17° \mathcal{E} 06'11	
					4812 Jul 20 01:49	0° \mathcal{O}	
superior conj	4811 Aug 06 00:41	16° \mathcal{O} 04'37	1°20'11	superior conj	4812 Jul 20 12:28	0° \mathcal{O} 58'54	1°02'17
minimum elong	4811 Aug 05 22:24	15° \mathcal{O} 52'04	1°19'51	minimum elong	4812 Jul 20 10:15	0° \mathcal{O} 46'38	1°01'53
max. Earth dist.	4811 Aug 07 00:02	18° \mathcal{O} 12'49	1.32334 AU	max. Earth dist.	4812 Jul 20 10:59	0° \mathcal{O} 50'40	1.31977 AU
	4811 Aug 12 11:38	0° \mathcal{M}		evening rise	4812 Jul 27 08:41	15° \mathcal{O} 52'42	
evening rise	4811 Aug 13 01:34	1° \mathcal{M} 12'33			4812 Aug 03 10:01	0° \mathcal{M}	
	4811 Aug 28 20:13	0° \mathcal{A}		desc. node	4812 Aug 19 16:43	25° \mathcal{M} 31'46	
desc. node	4811 Sep 02 19:43	7° \mathcal{A} 22'04			4812 Aug 23 13:15	0° \mathcal{A}	
evening max el	4811 Sep 13 23:25	20° \mathcal{A} 33'16	27°17'59	evening max el	4812 Aug 26 01:43	2° \mathcal{A} 32'39	26°36'31
retrograde	4811 Sep 27 19:21	27° \mathcal{A} 47'20		retrograde	4812 Sep 09 00:17	9° \mathcal{A} 41'56	
evening set	4811 Oct 04 23:01	25° \mathcal{A} 24'40		evening set	4812 Sep 15 18:47	7° \mathcal{A} 46'30	
min. Earth dist.	4811 Oct 08 13:55	22° \mathcal{A} 35'18	0.61941 AU	min. Earth dist.	4812 Sep 19 15:30	5° \mathcal{A} 10'47	0.59896 AU
inferior conj	4811 Oct 11 13:52	19° \mathcal{A} 51'26	-3°50'08	inferior conj	4812 Sep 22 21:22	2° \mathcal{A} 35'50	-4°41'31
minimum elong	4811 Oct 11 19:58	19° \mathcal{A} 37'30	3°48'22	minimum elong	4812 Sep 23 03:02	2° \mathcal{A} 24'29	4°40'26
morning rise	4811 Oct 18 18:46	14° \mathcal{A} 50'44			4812 Sep 26 08:38	30° \mathcal{R} \mathcal{M}	
direct	4811 Oct 21 02:52	14° \mathcal{A} 27'07		morning rise	4812 Sep 30 13:21	27° \mathcal{M} 56'49	
asc. node	4811 Oct 24 05:47	15° \mathcal{A} 10'42		direct	4812 Oct 02 21:40	27° \mathcal{M} 36'38	
morning max el	4811 Oct 28 00:43	17° \mathcal{A} 56'59	17°52'39		4812 Oct 08 23:37	0° \mathcal{A}	
	4811 Nov 05 16:05	0° \mathcal{M}		asc. node	4812 Oct 10 02:49	0° \mathcal{A} 58'02	
morning set	4811 Nov 12 21:08	12° \mathcal{M} 45'19		morning max el	4812 Oct 10 12:05	1° \mathcal{A} 19'54	18°13'16
	4811 Nov 22 13:53	0° \mathcal{A}		morning set	4812 Oct 26 08:09	26° \mathcal{A} 29'58	
					4812 Oct 28 04:33	0° \mathcal{M}	
superior conj	4811 Nov 23 16:26	1° \mathcal{A} 54'25	0°42'17	superior conj	4812 Nov 04 18:20	14° \mathcal{M} 04'43	1°12'16
minimum elong	4811 Nov 23 19:55	2° \mathcal{A} 09'23	0°41'48	minimum elong	4812 Nov 04 22:16	14° \mathcal{M} 22'28	1°11'48
desc. node	4811 Nov 29 18:59	12° \mathcal{A} 10'27		max. Earth dist.	4812 Nov 12 09:10	27° \mathcal{M} 26'44	1.41159 AU
max. Earth dist.	4811 Nov 30 23:40	14° \mathcal{A} 08'00	1.43017 AU		4812 Nov 13 21:31	0° \mathcal{A}	
evening rise	4811 Dec 07 23:52	25° \mathcal{A} 20'02		desc. node	4812 Nov 15 15:59	2° \mathcal{A} 56'29	
	4811 Dec 11 00:00	0° \mathcal{Z}		evening rise	4812 Nov 17 06:27	5° \mathcal{A} 34'10	
	4811 Dec 31 16:59	0° \approx			4812 Dec 03 05:24	0° \mathcal{Z}	
evening max el	4812 Jan 08 14:46	9° \approx 25'16	21°48'04	evening max el	4812 Dec 21 06:49	23° \mathcal{Z} 02'45	23°06'57
retrograde	4812 Jan 17 18:55	14° \approx 52'20		retrograde	4812 Dec 31 13:40	29° \mathcal{Z} 08'20	
asc. node	4812 Jan 20 05:03	14° \approx 20'57		evening set	4813 Jan 05 10:40	27° \mathcal{Z} 08'00	
evening set	4812 Jan 22 03:50	13° \approx 07'54		asc. node	4813 Jan 06 02:05	26° \mathcal{Z} 33'39	
inferior conj	4812 Jan 27 12:00	6° \approx 49'38	2°15'21	inferior conj	4813 Jan 10 19:59	20° \mathcal{Z} 43'51	1°32'45
minimum elong	4812 Jan 27 09:38	6° \approx 57'53	2°14'37	minimum elong	4813 Jan 10 18:04	20° \mathcal{Z} 50'29	1°32'03
min. Earth dist.	4812 Jan 27 14:19	6° \approx 41'36	0.68008 AU	min. Earth dist.	4813 Jan 10 11:01	21° \mathcal{Z} 14'45	0.68065 AU
morning rise	4812 Feb 01 15:14	0° \approx 37'59		morning rise	4813 Jan 16 01:21	14° \mathcal{Z} 36'16	
	4812 Feb 02 10:11	30° \mathcal{R} \mathcal{Z}		direct	4813 Jan 20 09:47	12° \mathcal{Z} 51'42	
direct	4812 Feb 06 14:03	28° \mathcal{Z} 30'31		morning max el	4813 Jan 29 01:57	17° \mathcal{Z} 53'59	21°22'47
	4812 Feb 11 04:37	0° \approx			4813 Feb 07 23:35	0° \approx	
morning max el	4812 Feb 16 11:26	4° \approx 21'49	22°47'28	desc. node	4813 Feb 11 15:14	5° \approx 05'59	
desc. node	4812 Feb 25 18:15	15° \approx 26'02			4813 Feb 28 05:16	0° \mathcal{H}	
	4812 Mar 07 02:08	0° \mathcal{H}		morning set	4813 Mar 01 10:58	1° \mathcal{H} 56'57	
morning set	4812 Mar 21 18:23	22° \mathcal{H} 57'32		max. Earth dist.	4813 Mar 08 10:02	13° \mathcal{H} 10'16	1.42157 AU
	4812 Mar 25 23:04	0° \mathcal{Y}					
max. Earth dist.	4812 Mar 26 08:54	0° \mathcal{Y} 42'01	1.40074 AU	superior conj	4813 Mar 15 20:20	25° \mathcal{H} 41'20	-2°06'11
				minimum elong	4813 Mar 15 22:54	25° \mathcal{H} 52'24	2°06'06
superior conj	4812 Apr 03 03:32	14° \mathcal{Y} 26'27	-1°51'17		4813 Mar 18 07:49	0° \mathcal{Y}	
minimum elong	4812 Apr 03 08:21	14° \mathcal{Y} 48'22	1°50'53	evening rise	4813 Mar 27 01:03	15° \mathcal{Y} 37'32	
	4812 Apr 11 11:14	0° \mathcal{B}		asc. node	4813 Apr 04 01:24	29° \mathcal{Y} 52'29	
evening rise	4812 Apr 12 23:31	2° \mathcal{B} 52'38			4813 Apr 04 03:11	0° \mathcal{B}	
asc. node	4812 Apr 17 04:22	10° \mathcal{B} 46'58		evening max el	4813 Apr 12 13:18	11° \mathcal{B} 43'07	18°08'33
evening max el	4812 Apr 29 03:10	28° \mathcal{B} 48'32	18°27'04	retrograde	4813 Apr 19 07:09	15° \mathcal{B} 08'28	
	4812 Apr 30 11:06	0° Π		evening set	4813 Apr 21 21:15	14° \mathcal{B} 38'39	
retrograde	4812 May 06 15:36	2° Π 31'44					
evening set	4812 May 08 22:55	2° Π 11'47					
	4812 May 13 07:50	30° \mathcal{R} \mathcal{B}					

inferior conj	4813 Apr 28 15:07	9°8'45"35	2°56'15"	minimum elong	4814 Apr 11 14:47	22°9'20"47	3°25'34"
minimum elong	4813 Apr 28 18:11	9°8'38"24	2°55'38"	min. Earth dist.	4814 Apr 14 08:15	19°9'27"38	0.62662 AU
min. Earth dist.	4813 May 01 21:55	6°8'42"54	0.60518 AU	morning rise	4814 Apr 17 19:40	16°9'20"14	
morning rise	4813 May 05 12:53	3°8'54"52		direct	4814 Apr 24 16:15	13°9'46"04	
desc. node	4813 May 10 14:29	1°8'54"19		desc. node	4814 Apr 27 11:30	14°9'09"24	
direct	4813 May 12 03:44	1°8'47"24		morning max el	4814 May 08 17:05	21°9'45"47	27°50'58"
morning max el	4813 May 26 10:44	9°8'42"01	27°43'29"		4814 May 15 21:46	0°8'	
	4813 Jun 11 02:43	0°II			4814 Jun 04 05:44	0°II	
morning set	4813 Jun 27 17:47	0°8'13"34		morning set	4814 Jun 11 18:04	14°II'24"53	
	4813 Jun 27 15:10	0°8'		max. Earth dist.	4814 Jun 17 04:53	25°II'46"58	1.32518 AU
asc. node	4813 Jul 01 00:39	7°8'09"57		asc. node	4814 Jun 17 21:42	27°II'17"19	
max. Earth dist.	4813 Jul 03 21:55	13°8'26"16	1.32036 AU				
				superior conj	4814 Jun 19 08:34	0°8'25"48	0°15'07"
superior conj	4813 Jul 04 23:41	15°8'47"52	0°40'24"	minimum elong	4814 Jun 19 07:51	0°8'21"56	0°14'58"
minimum elong	4813 Jul 04 22:00	15°8'38"35	0°40'02"	behind sun begin	4814 Jun 19 06:03	0°8'12"11	
	4813 Jul 11 11:39	0°8'		behind sun end	4814 Jun 19 09:39	0°8'31"42	
evening rise	4813 Jul 11 19:08	0°8'39"54			4814 Jun 19 03:49	0°8'	
	4813 Jul 27 18:13	0°8'		evening rise	4814 Jun 26 06:56	15°8'27"37	
desc. node	4813 Aug 06 13:44	12°8'27"03			4814 Jul 03 12:19	0°8'	
evening max el	4813 Aug 07 20:24	13°8'42"56	25°24'20"	evening max el	4814 Jul 20 09:21	24°8'14"15	23°51'47"
retrograde	4813 Aug 21 19:08	20°8'47"23		desc. node	4814 Jul 24 10:46	27°8'38"33	
evening set	4813 Aug 27 15:36	19°8'28"11			4814 Jul 28 15:28	0°8'	
min. Earth dist.	4813 Sep 01 08:10	16°8'48"33	0.57858 AU	retrograde	4814 Aug 03 02:21	1°8'07"51	
inferior conj	4813 Sep 04 10:16	14°8'40"46	-5°12'31"	evening set	4814 Aug 07 12:39	0°8'24"35	
minimum elong	4813 Sep 04 12:34	14°8'36"47	5°12'23"		4814 Aug 08 16:27	30°8'8'	
morning rise	4813 Sep 12 11:48	10°8'24"54		min. Earth dist.	4814 Aug 13 19:33	27°8'23"03	0.56124 AU
direct	4813 Sep 14 23:57	10°8'05"48		inferior conj	4814 Aug 16 02:51	25°8'59"05	-5°07'26"
morning max el	4813 Sep 23 15:46	14°8'12"20	18°54'52"	minimum elong	4814 Aug 15 22:59	26°8'04"59	5°07'05"
asc. node	4813 Sep 26 23:52	17°8'56"25		morning rise	4814 Aug 24 11:51	22°8'02"35	
	4813 Oct 04 14:40	0°8'		direct	4814 Aug 27 06:33	21°8'42"57	
morning set	4813 Oct 10 05:27	10°8'43"59		morning max el	4814 Sep 06 08:46	26°8'24"36	19°58'19"
					4814 Sep 09 16:30	0°8'	
superior conj	4813 Oct 18 15:53	27°8'12"46	1°31'37"	asc. node	4814 Sep 13 20:55	5°8'50"22	
minimum elong	4813 Oct 18 18:41	27°8'26"08	1°31'23"	morning set	4814 Sep 24 09:38	25°8'16"58	
	4813 Oct 20 03:09	0°8'			4814 Sep 26 17:09	0°8'	
max. Earth dist.	4813 Oct 25 14:52	10°8'04"07	1.39069 AU				
evening rise	4813 Oct 29 11:56	16°8'50"50		superior conj	4814 Oct 02 03:44	11°8'02"34	1°41'34"
desc. node	4813 Nov 02 13:00	23°8'38"05		minimum elong	4814 Oct 02 04:56	11°8'08"35	1°41'32"
	4813 Nov 06 11:48	0°8'		max. Earth dist.	4814 Oct 07 20:14	22°8'06"43	1.37004 AU
	4813 Nov 27 18:15	0°8'		evening rise	4814 Oct 11 15:15	29°8'07"02	
evening max el	4813 Dec 03 20:10	6°8'44"10	24°26'14"		4814 Oct 12 03:01	0°8'	
retrograde	4813 Dec 15 04:48	13°8'22"47		desc. node	4814 Oct 20 10:02	14°8'10"21	
evening set	4813 Dec 20 15:05	11°8'06"57			4814 Oct 30 18:52	0°8'	
asc. node	4813 Dec 23 23:06	7°8'31"18		evening max el	4814 Nov 16 08:36	20°8'27"18	25°39'14"
min. Earth dist.	4813 Dec 25 06:58	5°8'47"31	0.67761 AU	retrograde	4814 Nov 28 15:28	27°8'29"49	
inferior conj	4813 Dec 26 02:51	4°8'40"57	0°43'31"	evening set	4814 Dec 04 15:22	25°8'00"37	
minimum elong	4813 Dec 26 01:49	4°8'44"23	0°43'07"	min. Earth dist.	4814 Dec 08 23:49	20°8'15"51	0.67098 AU
	4813 Dec 29 23:20	30°8'8'		inferior conj	4814 Dec 10 06:45	18°8'37"18	-0°11'26"
morning rise	4813 Dec 31 12:40	28°8'39"18		minimum elong	4814 Dec 10 07:03	18°8'36"21	0°11'18"
direct	4814 Jan 04 07:45	27°8'16"55		transit middle	4814 Dec 10 07:03	18°8'36"21	0°11'18"
	4814 Jan 10 05:18	0°8'		transit begin	4814 Dec 10 05:02	18°8'42"46	
morning max el	4814 Jan 12 00:06	1°8'38"39	20°08'53"	transit end	4814 Dec 10 09:04	18°8'29"57	
desc. node	4814 Jan 29 12:16	25°8'10"16		asc. node	4814 Dec 10 20:09	17°8'54"45	
	4814 Feb 01 17:15	0°8'		morning rise	4814 Dec 15 23:07	12°8'43"44	
morning set	4814 Feb 08 08:32	10°8'09"03		direct	4814 Dec 19 06:29	11°8'40"52	
max. Earth dist.	4814 Feb 18 19:01	26°8'32"34	1.43846 AU	morning max el	4814 Dec 26 06:08	15°8'33"40	19°09'18"
	4814 Feb 20 22:37	0°8'			4815 Jan 06 05:50	0°8'	
				greatest brilliancy	4815 Jan 09 05:07	4°8'28"38	-0.8m
superior conj	4814 Feb 24 12:05	5°8'47"50	-2°06'42"	desc. node	4815 Jan 16 09:18	15°8'31"49	
minimum elong	4814 Feb 24 09:16	5°8'36"15	2°06'37"	morning set	4815 Jan 18 10:48	18°8'43"56	
evening rise	4814 Mar 09 09:04	27°8'33"09			4815 Jan 25 16:27	0°8'	
	4814 Mar 10 19:02	0°8'		max. Earth dist.	4815 Feb 01 10:04	10°8'33"10	1.44935 AU
asc. node	4814 Mar 21 22:26	18°8'27"25					
evening max el	4814 Mar 27 01:57	24°8'56"07	18°09'22"	superior conj	4815 Feb 04 03:36	14°8'51"57	-1°48'10"
retrograde	4814 Apr 02 12:20	28°8'18"56		minimum elong	4815 Feb 03 19:08	14°8'18"27	1°47'30"
evening set	4814 Apr 05 08:33	27°8'37"47			4815 Feb 13 14:07	0°8'	
inferior conj	4814 Apr 11 13:15	22°8'24"52	3°25'44"	evening rise	4815 Feb 18 19:28	8°8'32"32	

	4815 Mar 04 02:51	0°♿		max. Earth dist.	4816 Jan 15 04:27	24°♿54'26	1.45314 AU
asc. node	4815 Mar 08 19:27	6°♿22'29			4816 Jan 18 10:28	0°♿	
evening max el	4815 Mar 10 14:16	8°♿20'37	18°28'52	evening rise	4816 Jan 30 06:35	18°♿35'44	
retrograde	4815 Mar 17 02:31	11°♿53'55			4816 Feb 06 12:09	0°♿	
evening set	4815 Mar 20 04:52	11°♿00'31		greatest brilliancy	4816 Feb 09 07:19	4°♿22'16	-0.8m
inferior conj	4815 Mar 26 00:13	5°♿29'32	3°34'06	evening max el	4816 Feb 21 23:51	21°♿51'00	19°05'58
minimum elong	4815 Mar 26 00:07	5°♿29'49	3°34'05	asc. node	4816 Feb 23 16:29	23°♿25'34	
min. Earth dist.	4815 Mar 28 04:09	2°♿56'52	0.64545 AU	retrograde	4816 Feb 28 21:56	25°♿45'58	
	4815 Mar 30 23:34	30°♿		evening set	4816 Mar 03 07:09	24°♿39'24	
morning rise	4815 Mar 31 18:40	29°♿17'57		inferior conj	4816 Mar 08 20:22	18°♿52'04	3°26'26
direct	4815 Apr 07 12:56	26°♿29'34		minimum elong	4816 Mar 08 18:59	18°♿56'26	3°26'17
desc. node	4815 Apr 14 08:32	28°♿47'43		min. Earth dist.	4816 Mar 10 08:51	16°♿56'00	0.66057 AU
	4815 Apr 16 02:39	0°♿		morning rise	4816 Mar 14 06:28	12°♿37'55	
morning max el	4815 Apr 21 02:41	4°♿25'03	27°22'35	direct	4816 Mar 20 16:23	9°♿48'50	
	4815 May 10 10:49	0°♿		desc. node	4816 Mar 31 05:34	15°♿14'39	
morning set	4815 May 26 10:00	28°♿08'49		morning max el	4816 Apr 02 12:35	17°♿26'21	26°24'44
	4815 May 27 08:36	0°♿			4816 Apr 13 00:37	0°♿	
max. Earth dist.	4815 May 31 03:49	7°♿41'05	1.33446 AU		4816 May 02 09:10	0°♿	
				morning set	4816 May 08 13:56	11°♿13'36	
superior conj	4815 Jun 03 13:11	14°♿47'10	-0°12'47	max. Earth dist.	4816 May 12 15:31	19°♿02'29	1.34846 AU
minimum elong	4815 Jun 03 13:51	14°♿50'39	0°12'39				
behind sun begin	4815 Jun 03 10:28	14°♿32'42		superior conj	4816 May 17 11:08	28°♿43'55	-0°42'14
behind sun end	4815 Jun 03 17:14	15°♿08'36		minimum elong	4816 May 17 13:26	28°♿55'42	0°41'47
asc. node	4815 Jun 04 18:45	17°♿24'25			4816 May 18 01:56	0°♿	
evening rise	4815 Jun 10 18:13	0°♿09'56		asc. node	4816 May 21 15:47	7°♿26'17	
	4815 Jun 10 16:20	0°♿		evening rise	4816 May 25 02:56	14°♿39'32	
	4815 Jun 27 20:30	0°♿			4816 Jun 01 23:42	0°♿	
evening max el	4815 Jul 01 23:51	4°♿37'23	22°14'42	evening max el	4816 Jun 12 23:33	15°♿23'27	20°47'03
desc. node	4815 Jul 11 07:48	10°♿32'19		retrograde	4816 Jun 24 10:12	21°♿00'02	
retrograde	4815 Jul 14 21:45	11°♿02'05		evening set	4816 Jun 26 12:27	20°♿49'31	
evening set	4815 Jul 17 20:44	10°♿42'42		desc. node	4816 Jun 27 04:50	20°♿41'44	
min. Earth dist.	4815 Jul 26 05:54	7°♿05'28	0.55034 AU	inferior conj	4816 Jul 05 19:42	16°♿52'30	-2°31'18
inferior conj	4815 Jul 27 02:32	6°♿36'23	-4°12'30	minimum elong	4816 Jul 05 12:46	17°♿02'22	2°28'54
minimum elong	4815 Jul 26 18:01	6°♿48'24	4°10'27	min. Earth dist.	4816 Jul 06 17:13	16°♿21'50	0.54846 AU
morning rise	4815 Aug 04 17:08	2°♿46'14		morning rise	4816 Jul 14 12:43	12°♿49'27	
direct	4815 Aug 07 20:42	2°♿23'59		direct	4816 Jul 18 06:02	12°♿19'38	
morning max el	4815 Aug 19 13:49	7°♿51'58	21°22'23	morning max el	4816 Jul 31 08:31	18°♿37'18	23°01'47
asc. node	4815 Aug 31 17:59	24°♿27'21			4816 Aug 09 16:17	0°♿	
	4815 Sep 03 18:13	0°♿		asc. node	4816 Aug 17 15:02	13°♿36'11	
morning set	4815 Sep 08 18:14	10°♿02'21		morning set	4816 Aug 23 05:14	24°♿54'00	
					4816 Aug 25 14:45	0°♿	
superior conj	4815 Sep 16 01:41	25°♿21'59	1°43'33				
minimum elong	4815 Sep 16 01:24	25°♿20'29	1°43'34	superior conj	4816 Aug 30 06:27	10°♿00'36	1°38'51
	4815 Sep 18 07:42	0°♿		minimum elong	4816 Aug 30 05:02	9°♿52'58	1°38'46
max. Earth dist.	4815 Sep 20 06:51	3°♿57'58	1.35193 AU	max. Earth dist.	4816 Sep 02 02:16	15°♿59'52	1.33756 AU
evening rise	4815 Sep 24 12:39	12°♿13'49		evening rise	4816 Sep 06 23:49	25°♿59'20	
	4815 Oct 04 13:00	0°♿			4816 Sep 09 01:11	0°♿	
desc. node	4815 Oct 07 07:05	4°♿28'07		desc. node	4816 Sep 23 04:07	24°♿24'31	
	4815 Oct 25 22:10	0°♿			4816 Sep 26 22:17	0°♿	
evening max el	4815 Oct 29 21:13	4°♿07'44	26°38'28	evening max el	4816 Oct 11 09:46	17°♿36'31	27°16'33
retrograde	4815 Nov 11 20:58	11°♿22'59		retrograde	4816 Oct 24 20:32	24°♿54'39	
evening set	4815 Nov 18 09:36	8°♿44'51		evening set	4816 Oct 31 19:23	22°♿14'38	
min. Earth dist.	4815 Nov 22 11:20	4°♿35'22	0.66082 AU	min. Earth dist.	4816 Nov 04 15:10	18°♿39'57	0.64720 AU
inferior conj	4815 Nov 24 05:43	2°♿29'18	-1°10'59	inferior conj	4816 Nov 06 21:29	16°♿12'07	-2°13'26
minimum elong	4815 Nov 24 07:42	2°♿23'25	1°10'09	minimum elong	4816 Nov 07 01:20	16°♿01'38	2°11'55
	4815 Nov 26 09:46	30°♿		morning rise	4816 Nov 13 08:26	10°♿42'46	
asc. node	4815 Nov 27 17:12	28°♿40'41		asc. node	4816 Nov 13 14:14	10°♿36'35	
morning rise	4815 Nov 30 06:34	26°♿46'19		direct	4816 Nov 15 22:47	10°♿07'32	
direct	4815 Dec 03 04:14	25°♿59'15		morning max el	4816 Nov 22 10:16	13°♿33'42	17°58'54
morning max el	4815 Dec 09 18:22	29°♿34'03	18°25'41		4816 Dec 03 23:23	0°♿	
	4815 Dec 10 04:32	0°♿		morning set	4816 Dec 09 22:57	9°♿58'45	
morning set	4815 Dec 29 14:07	28°♿37'24		desc. node	4816 Dec 20 03:21	26°♿47'26	
	4815 Dec 30 10:45	0°♿			4816 Dec 22 03:02	0°♿	
desc. node	4816 Jan 03 06:19	6°♿05'31					
				superior conj	4816 Dec 23 17:17	2°♿33'30	-0°24'41
superior conj	4816 Jan 14 06:35	23°♿28'41	-1°11'15	minimum elong	4816 Dec 23 14:18	2°♿21'31	0°24'14
minimum elong	4816 Jan 13 22:10	22°♿55'39	1°10'14	max. Earth dist.	4816 Dec 27 23:48	9°♿20'44	1.44950 AU

evening rise	4817 Jan 08 22:56	27°  58'21		superior conj	4817 Dec 04 03:02	12°  46'51	0°20'13
	4817 Jan 10 06:33	0° 		minimum elong	4817 Dec 04 05:02	12°  55'12	0°19'56
greatest brilliancy	4817 Jan 23 06:51	19°  42'49	-0.6m	desc. node	4817 Dec 07 00:22	17°  33'34	
	4817 Jan 30 14:47	0° 		max. Earth dist.	4817 Dec 10 17:06	23°  33'41	1.43892 AU
evening max el	4817 Feb 04 04:59	5°  24'24	19°58'59		4817 Dec 14 18:12	0° 	
asc. node	4817 Feb 09 13:31	9°  22'59		evening rise	4817 Dec 19 08:54	7°  31'43	
retrograde	4817 Feb 11 19:46	9°  50'18			4818 Jan 03 14:11	0° 	
evening set	4817 Feb 15 13:03	8°  29'35		evening max el	4818 Jan 18 04:35	18°  58'18	21°05'19
inferior conj	4817 Feb 20 22:42	2°  28'02	3°06'25	retrograde	4818 Jan 26 17:47	24°  02'01	
minimum elong	4817 Feb 20 20:33	2°  35'15	3°06'00	asc. node	4818 Jan 27 10:33	23°  59'23	
min. Earth dist.	4817 Feb 21 20:47	1°  13'59	0.67146 AU	evening set	4818 Jan 30 20:37	22°  26'13	
	4817 Feb 22 19:16	30° 		inferior conj	4818 Feb 05 04:49	16°  13'02	2°36'27
morning rise	4817 Feb 26 03:51	26°  13'42		minimum elong	4818 Feb 05 02:23	16°  21'26	2°35'47
direct	4817 Mar 04 01:26	23°  35'28		min. Earth dist.	4818 Feb 05 13:53	15°  41'41	0.67810 AU
	4817 Mar 15 05:28	0° 		morning rise	4818 Feb 10 07:59	10°  00'09	
morning max el	4817 Mar 15 21:28	0°  39'51	25°06'44	direct	4818 Feb 15 15:14	7°  40'25	
desc. node	4817 Mar 18 02:35	3°  00'32		morning max el	4818 Feb 26 06:13	13°  59'54	23°38'47
	4817 Apr 06 23:33	0° 		desc. node	4818 Mar 04 23:35	21°  42'21	
morning set	4817 Apr 21 01:13	23°  06'31			4818 Mar 11 05:38	0° 	
max. Earth dist.	4817 Apr 24 16:35	0°  05'09	1.36686 AU		4818 Mar 30 21:18	0° 	
	4817 Apr 24 15:28	0° 		morning set	4818 Apr 02 14:01	4°  31'50	
				max. Earth dist.	4818 Apr 06 12:15	11°  19'32	1.38815 AU
superior conj	4817 Apr 30 23:35	12°  08'50	-1°11'34	superior conj	4818 Apr 13 22:47	24°  52'00	-1°38'22
minimum elong	4817 May 01 03:29	12°  28'06	1°10'56	minimum elong	4818 Apr 14 03:41	25°  15'03	1°37'48
asc. node	4817 May 08 12:49	27°  19'08			4818 Apr 16 15:43	0° 	
evening rise	4817 May 09 06:55	28°  50'26		evening rise	4818 Apr 23 03:26	12°  35'03	
	4817 May 09 20:46	0° 		asc. node	4818 Apr 25 09:51	16°  38'14	
evening max el	4817 May 26 11:37	26°  49'23	19°36'44		4818 May 02 15:54	0° 	
	4817 May 30 14:21	0° 		evening max el	4818 May 09 10:47	8°  55'55	18°46'34
retrograde	4817 Jun 05 04:25	1°  33'24		retrograde	4818 May 17 15:23	12°  57'15	
evening set	4817 Jun 07 02:58	1°  22'53		evening set	4818 May 19 18:41	12°  41'50	
	4817 Jun 11 04:54	30° 		inferior conj	4818 May 27 16:59	8°  20'54	1°12'36
desc. node	4817 Jun 14 01:50	28°  25'44		minimum elong	4818 May 27 19:35	8°  16'08	1°11'43
inferior conj	4817 Jun 15 20:56	27°  19'02	-0°32'05	min. Earth dist.	4818 May 30 22:53	5°  58'56	0.57184 AU
minimum elong	4817 Jun 15 19:29	27°  21'18	0°31'34	desc. node	4818 May 31 22:49	5°  18'08	
min. Earth dist.	4817 Jun 18 06:21	25°  48'49	0.55618 AU	morning rise	4818 Jun 04 17:13	3°  11'43	
morning rise	4817 Jun 24 09:34	22°  45'59		direct	4818 Jun 10 05:05	1°  58'04	
direct	4817 Jun 28 22:48	21°  59'48		morning max el	4818 Jun 24 13:36	9°  28'15	26°17'05
morning max el	4817 Jul 12 22:14	28°  59'38	24°45'17		4818 Jul 10 03:11	0° 	
	4817 Jul 13 22:54	0° 		asc. node	4818 Jul 22 09:06	22°  58'02	
	4817 Aug 02 22:09	0° 		morning set	4818 Jul 23 03:52	24°  36'42	
asc. node	4817 Aug 04 12:04	3°  08'37			4818 Jul 25 16:11	0° 	
morning set	4817 Aug 07 16:59	9°  04'06					
superior conj	4817 Aug 14 15:32	24°  05'42	1°28'27	superior conj	4818 Jul 30 02:53	9°  45'48	1°13'07
minimum elong	4817 Aug 14 13:25	24°  39'11	1°28'12	minimum elong	4818 Jul 30 00:34	9°  33'02	1°12'44
max. Earth dist.	4817 Aug 16 06:09	28°  20'48	1.32737 AU	max. Earth dist.	4818 Jul 30 15:38	10°  56'08	1.32133 AU
	4817 Aug 17 00:31	0° 		evening rise	4818 Aug 06 01:18	24°  04'26	
evening rise	4817 Aug 21 21:03	10°  13'09			4818 Aug 08 14:17	0° 	
	4817 Sep 01 08:30	0° 			4818 Aug 26 01:30	0° 	
desc. node	4817 Sep 10 01:08	13°  05'21		desc. node	4818 Aug 27 22:09	2°  33'14	
	4817 Sep 23 03:32	0° 		evening max el	4818 Sep 06 02:11	13°  06'14	27°04'22
evening max el	4817 Sep 23 20:19	0°  40'25	27°26'42	retrograde	4818 Sep 19 23:04	20°  18'03	
retrograde	4817 Oct 07 13:25	7°  55'53		evening set	4818 Sep 27 00:32	18°  05'15	
evening set	4817 Oct 14 17:40	5°  23'31		min. Earth dist.	4818 Sep 30 16:32	15°  23'57	0.61087 AU
min. Earth dist.	4817 Oct 18 09:15	2°  20'04	0.63036 AU	inferior conj	4818 Oct 03 19:57	12°  41'41	-4°13'36
	4817 Oct 20 18:41	30° 		minimum elong	4818 Oct 04 02:09	12°  02'18	4°12'02
inferior conj	4817 Oct 21 03:17	29°  03'51	-3°15'57	morning rise	4818 Oct 11 05:43	7°  05'09	
minimum elong	4817 Oct 21 08:48	29°  05'21	3°14'06	direct	4818 Oct 13 13:36	7°  02'15	
morning rise	4817 Oct 28 01:29	24° 02'39		asc. node	4818 Oct 18 08:19	9° 04'39	
direct	4817 Oct 30 11:09	23° 05'37		morning max el	4818 Oct 20 17:17	11° 02'16	17°59'02
asc. node	4817 Oct 31 11:17	24° 04'28			4818 Nov 02 06:22	0°	
morning max el	4817 Nov 06 02:56	27° 25'30	17°49'42	morning set	4818 Nov 05 11:22	5° 52'56	
	4817 Nov 08 10:03	0°					
morning set	4817 Nov 22 08:10	22° 30'15		superior conj	4818 Nov 15 15:20	24° 18'03	0°56'20
	4817 Nov 26 14:59	0°		minimum elong	4818 Nov 15 19:17	24° 35'22	0°55'48
					4818 Nov 18 22:11	0°	

max. Earth dist.	4818 Nov 23 05:35	7°♂15'28	1.42269 AU	minimum elong	4819 Oct 29 05:51	7°♂11'27	1°21'20
desc. node	4818 Nov 23 21:25	8°♂20'54		max. Earth dist.	4819 Nov 05 12:39	20°♂14'21	1.40279 AU
evening rise	4818 Nov 29 04:28	16°♂54'58		evening rise	4819 Nov 09 20:31	27°♂34'47	
	4818 Dec 07 15:33	0°♂		desc. node	4819 Nov 10 18:27	29°♂05'32	
	4818 Dec 29 13:40	0°♂			4819 Nov 11 07:42	0°♂	
evening max el	4818 Dec 31 22:52	2°♂33'27	22°21'04		4819 Dec 01 06:09	0°♂	
retrograde	4819 Jan 10 14:16	8°♂17'34		evening max el	4819 Dec 14 13:23	16°♂11'55	23°41'02
asc. node	4819 Jan 14 07:34	7°♂04'36		retrograde	4819 Dec 25 07:47	22°♂33'17	
evening set	4819 Jan 15 04:12	6°♂26'09		evening set	4819 Dec 30 10:13	20°♂26'16	
inferior conj	4819 Jan 20 12:40	0°♂04'41	1°58'09	asc. node	4820 Jan 01 04:36	18°♂42'03	
minimum elong	4819 Jan 20 10:25	0°♂12'28	1°57'24	inferior conj	4820 Jan 04 20:25	14°♂00'31	1°12'39
min. Earth dist.	4819 Jan 20 10:00	0°♂13'53	0.68076 AU	minimum elong	4820 Jan 04 18:49	14°♂05'59	1°12'02
	4819 Jan 20 14:00	30°♂		min. Earth dist.	4820 Jan 04 06:46	14°♂47'05	0.67972 AU
morning rise	4819 Jan 25 16:31	23°♂54'36		morning rise	4820 Jan 10 03:22	7°♂55'02	
direct	4819 Jan 30 09:01	21°♂57'06		direct	4820 Jan 14 05:52	6°♂20'13	
morning max el	4819 Feb 08 17:43	27°♂27'06	22°10'30	morning max el	4820 Jan 22 11:19	11°♂04'33	20°49'45
	4819 Feb 11 02:57	0°♂			4820 Feb 06 02:18	0°♂	
desc. node	4819 Feb 19 20:37	11°♂04'28		desc. node	4820 Feb 06 17:39	0°♂55'48	
	4819 Mar 04 20:42	0°♂		morning set	4820 Feb 21 05:20	22°♂49'40	
morning set	4819 Mar 13 22:59	14°♂16'59			4820 Feb 25 18:33	0°♂	
max. Earth dist.	4819 Mar 19 09:39	23°♂15'34	1.40989 AU	max. Earth dist.	4820 Feb 29 13:35	6°♂05'57	1.42928 AU
	4819 Mar 23 08:29	0°♂					
superior conj	4819 Mar 27 04:06	6°♂42'11	-1°59'00	superior conj	4820 Mar 07 10:38	17°♂28'43	-2°08'31
minimum elong	4819 Mar 27 08:20	7°♂01'02	1°58'44	minimum elong	4820 Mar 07 11:15	17°♂31'20	2°08'30
evening rise	4819 Apr 06 13:05	25°♂44'35			4820 Mar 14 17:05	0°♂	
	4819 Apr 08 19:58	0°♂		evening rise	4820 Mar 19 07:44	8°♂09'45	
asc. node	4819 Apr 12 06:52	6°♂17'59		asc. node	4820 Mar 29 03:55	25°♂11'55	
evening max el	4819 Apr 22 17:55	21°♂35'43	18°16'45		4820 Apr 01 08:33	0°♂	
retrograde	4819 Apr 29 21:15	25°♂09'45		evening max el	4820 Apr 05 05:35	4°♂39'47	18°06'39
evening set	4819 May 02 07:22	24°♂46'00		retrograde	4820 Apr 11 19:05	8°♂02'17	
inferior conj	4819 May 09 10:40	20°♂04'56	2°27'16	evening set	4820 Apr 14 11:47	7°♂27'54	
minimum elong	4819 May 09 14:12	19°♂57'20	2°26'22	inferior conj	4820 Apr 20 23:36	2°♂26'35	3°11'41
min. Earth dist.	4819 May 12 20:51	17°♂09'43	0.59242 AU	minimum elong	4820 Apr 21 02:04	2°♂20'27	3°11'17
morning rise	4819 May 16 18:09	14°♂26'01			4820 Apr 23 10:47	30°♂	
desc. node	4819 May 18 19:51	13°♂26'42		min. Earth dist.	4820 Apr 24 02:14	29°♂23'08	0.61445 AU
direct	4819 May 23 01:20	12°♂37'41		morning rise	4820 Apr 27 14:28	26°♂28'51	
morning max el	4819 Jun 06 10:37	20°♂26'58	27°22'03	direct	4820 May 04 08:57	24°♂08'21	
	4819 Jun 14 15:48	0°♂		desc. node	4820 May 04 16:52	24°♂08'40	
	4819 Jul 02 22:11	0°♂			4820 May 16 07:56	0°♂	
morning set	4819 Jul 07 12:11	9°♂16'19		morning max el	4820 May 18 13:51	2°♂06'53	27°51'14
asc. node	4819 Jul 09 06:08	12°♂58'03			4820 Jun 07 23:57	0°♂	
max. Earth dist.	4819 Jul 14 03:02	23°♂34'43	1.31947 AU	morning set	4820 Jun 20 16:02	23°♂40'08	
					4820 Jun 23 16:45	0°♂	
superior conj	4819 Jul 14 14:39	24°♂38'52	0°53'28	asc. node	4820 Jun 25 03:12	3°♂04'14	
minimum elong	4819 Jul 14 12:36	24°♂27'33	0°53'03	max. Earth dist.	4820 Jun 26 12:36	6°♂04'57	1.32186 AU
evening rise	4819 Jul 21 10:06	9°♂30'28					
	4819 Jul 31 22:42	0°♂		superior conj	4820 Jun 28 01:09	9°♂24'26	0°30'04
desc. node	4819 Aug 14 19:10	20°♂14'39		minimum elong	4820 Jun 27 23:49	9°♂17'09	0°29'47
evening max el	4819 Aug 19 01:03	24°♂43'57	26°09'03	evening rise	4820 Jul 04 21:22	24°♂18'55	
	4819 Aug 26 02:25	0°♂			4820 Jul 07 14:31	0°♂	
retrograde	4819 Sep 02 00:19	1°♂52'16			4820 Jul 25 14:44	0°♂	
evening set	4819 Sep 08 11:05	0°♂11'16		evening max el	4820 Jul 30 16:49	5°♂35'37	24°46'35
	4819 Sep 08 19:44	30°♂		desc. node	4820 Jul 31 16:11	6°♂29'58	
min. Earth dist.	4819 Sep 12 13:55	27°♂36'17	0.59011 AU	retrograde	4820 Aug 13 14:40	12°♂36'59	
inferior conj	4819 Sep 15 19:53	25°♂10'15	-4°57'59	evening set	4820 Aug 18 21:23	11°♂34'06	
minimum elong	4819 Sep 16 00:32	25°♂01'28	4°57'22	min. Earth dist.	4820 Aug 24 04:12	8°♂46'45	0.57066 AU
morning rise	4819 Sep 23 16:14	20°♂41'29		inferior conj	4820 Aug 27 00:10	6°♂55'56	-5°15'47
direct	4819 Sep 26 01:39	20°♂22'07		minimum elong	4820 Aug 27 00:03	6°♂56'09	5°15'47
morning max el	4819 Oct 04 01:53	24°♂13'57	18°28'22	morning rise	4820 Sep 04 05:06	2°♂48'55	
asc. node	4819 Oct 05 05:22	25°♂24'11		direct	4820 Sep 06 19:33	2°♂29'53	
	4819 Oct 08 20:21	0°♂		morning max el	4820 Sep 16 01:20	6°♂50'21	19°19'05
morning set	4819 Oct 20 03:12	19°♂51'04		asc. node	4820 Sep 21 02:25	12°♂47'52	
	4819 Oct 25 10:00	0°♂			4820 Oct 01 00:27	0°♂	
superior conj	4819 Oct 29 02:18	6°♂54'57	1°21'41	morning set	4820 Oct 03 03:46	4°♂13'47	
				superior conj	4820 Oct 11 06:28	20°♂22'01	1°36'54
				minimum elong	4820 Oct 11 08:36	20°♂32'26	1°36'46

	4820 Oct 16 07:57	0°♄		superior conj	4821 Sep 24 23:04	4°♄25'47	1°43'18
max. Earth dist.	4820 Oct 17 17:16	2°♄33'21	1.38177 AU	minimum elong	4821 Sep 24 23:36	4°♄28'31	1°43'18
evening rise	4820 Oct 21 11:40	9°♄17'48		max. Earth dist.	4821 Sep 30 00:37	14°♄29'51	1.36200 AU
desc. node	4820 Oct 27 15:29	19°♄43'41		evening rise	4821 Oct 03 23:16	21°♄57'16	
	4820 Nov 03 03:26	0°♄			4821 Oct 08 10:52	0°♄	
evening max el	4820 Nov 26 02:14	29°♄54'33	24°58'38	desc. node	4821 Oct 14 12:31	10°♄10'47	
	4820 Nov 26 04:27	0°♄			4821 Oct 27 23:11	0°♄	
retrograde	4820 Dec 07 21:06	6°♄44'40		evening max el	4821 Nov 08 14:56	13°♄38'31	26°06'36
evening set	4820 Dec 13 13:04	4°♄23'06		retrograde	4821 Nov 21 05:28	20°♄46'54	
	4820 Dec 17 12:50	30°♄♂		evening set	4821 Nov 27 11:01	18°♄13'26	
min. Earth dist.	4820 Dec 18 01:47	29°♄18'01	0.67517 AU	min. Earth dist.	4821 Dec 01 16:38	13°♄43'38	0.66712 AU
asc. node	4820 Dec 18 01:39	29°♄18'28		inferior conj	4821 Dec 03 04:19	11°♄53'03	-0°36'11
inferior conj	4820 Dec 19 02:15	27°♄57'38	0°20'52	minimum elong	4821 Dec 03 05:17	11°♄50'02	0°35'46
minimum elong	4820 Dec 19 01:44	27°♄59'19	0°20'39	asc. node	4821 Dec 04 22:40	9°♄44'59	
morning rise	4820 Dec 24 14:34	21°♄58'51		morning rise	4821 Dec 09 00:03	6°♄03'34	
direct	4820 Dec 28 04:28	20°♄45'03		direct	4821 Dec 12 03:08	5°♄07'43	
morning max el	4821 Jan 04 12:46	24°♄53'11	19°41'35	morning max el	4821 Dec 18 21:40	8°♄51'15	18°48'44
	4821 Jan 08 23:15	0°♄			4822 Jan 03 02:12	0°♄	
greatest brilliancy	4821 Jan 17 14:56	12°♄07'38	-0.7m	morning set	4822 Jan 09 12:58	10°♄06'09	
desc. node	4821 Jan 23 14:42	21°♄07'59		desc. node	4822 Jan 10 11:46	11°♄35'35	
	4821 Jan 29 09:38	0°♄			4822 Jan 22 05:36	0°♄	
morning set	4821 Jan 30 01:30	1°♄01'11		max. Earth dist.	4822 Jan 24 18:34	3°♄59'07	1.45194 AU
max. Earth dist.	4821 Feb 11 01:09	19°♄45'21	1.44389 AU				
				superior conj	4822 Jan 25 23:29	5°♄52'42	-1°34'24
superior conj	4821 Feb 15 15:27	27°♄06'29	-2°01'19	minimum elong	4822 Jan 25 14:07	5°♄15'53	1°33'29
minimum elong	4821 Feb 15 09:55	26°♄44'08	2°01'02	evening rise	4822 Feb 10 07:20	0°♄16'04	
	4821 Feb 17 10:21	0°♄			4822 Feb 10 03:21	0°♄	
evening rise	4821 Mar 01 06:54	19°♄41'13			4822 Mar 01 22:12	0°♄	
	4821 Mar 07 09:19	0°♄		asc. node	4822 Mar 02 21:58	1°♄05'18	
asc. node	4821 Mar 16 00:58	13°♄31'03		evening max el	4822 Mar 03 05:54	1°♄25'46	18°42'32
evening max el	4821 Mar 19 18:29	17°♄58'30	18°15'32	retrograde	4822 Mar 09 21:14	5°♄06'45	
retrograde	4821 Mar 26 04:27	21°♄23'55		evening set	4822 Mar 13 02:30	4°♄07'40	
evening set	4821 Mar 29 03:20	20°♄37'34			4822 Mar 17 12:42	30°♄♂	
inferior conj	4821 Apr 04 03:37	15°♄16'54	3°31'29	inferior conj	4822 Mar 18 18:52	28°♄29'16	3°32'31
minimum elong	4821 Apr 04 04:26	15°♄14'38	3°31'26	minimum elong	4822 Mar 18 18:10	28°♄31'24	3°32'29
min. Earth dist.	4821 Apr 06 16:27	12°♄28'16	0.63506 AU	min. Earth dist.	4822 Mar 20 16:02	26°♄11'29	0.65243 AU
morning rise	4821 Apr 10 04:32	9°♄08'58		morning rise	4822 Mar 24 09:20	22°♄16'23	
direct	4821 Apr 17 01:13	6°♄26'57		direct	4822 Mar 31 00:39	19°♄26'25	
desc. node	4821 Apr 21 13:54	7°♄28'05		desc. node	4822 Apr 08 10:57	22°♄56'15	
morning max el	4821 Apr 30 21:37	14°♄25'40	27°42'57	morning max el	4822 Apr 13 07:36	27°♄15'10	27°01'06
	4821 May 13 12:28	0°♄			4822 Apr 15 21:39	0°♄	
	4821 May 31 14:22	0°♄			4822 May 07 04:35	0°♄	
morning set	4821 Jun 04 13:05	7°♄40'22		morning set	4822 May 19 00:22	21°♄08'16	
max. Earth dist.	4821 Jun 09 16:28	18°♄14'38	1.32858 AU	max. Earth dist.	4822 May 23 11:03	29°♄55'04	1.33988 AU
					4822 May 23 12:01	0°♄	
superior conj	4821 Jun 12 08:28	23°♄55'57	0°03'35				
minimum elong	4821 Jun 12 08:17	23°♄55'01	0°03'33	superior conj	4822 May 27 10:31	8°♄07'06	-0°25'10
behind sun begin	4821 Jun 12 03:05	23°♄27'03		minimum elong	4822 May 27 11:51	8°♄14'04	0°24'53
behind sun end	4821 Jun 12 13:29	24°♄23'01		asc. node	4822 May 29 21:17	13°♄16'47	
asc. node	4821 Jun 12 00:15	23°♄11'49		evening rise	4822 Jun 03 19:35	23°♄42'20	
	4821 Jun 15 03:49	0°♄			4822 Jun 06 21:01	0°♄	
evening rise	4821 Jun 19 09:10	9°♄04'58		evening max el	4822 Jun 23 23:07	26°♄28'34	21°35'35
	4821 Jun 30 05:38	0°♄			4822 Jun 28 07:09	0°♄	
evening max el	4821 Jul 12 05:35	15°♄59'49	23°10'08	desc. node	4822 Jul 05 10:11	2°♄32'46	
desc. node	4821 Jul 18 13:11	20°♄47'16		retrograde	4822 Jul 06 07:21	2°♄34'36	
retrograde	4821 Jul 25 16:12	22°♄42'52		evening set	4822 Jul 08 19:28	2°♄20'21	
evening set	4821 Jul 29 10:42	22°♄11'49			4822 Jul 15 02:08	30°♄♂	
min. Earth dist.	4821 Aug 05 14:45	18°♄56'48	0.55570 AU	inferior conj	4822 Jul 18 03:54	28°♄19'36	-3°33'59
inferior conj	4821 Aug 07 08:47	17°♄55'33	-4°50'37	minimum elong	4822 Jul 17 19:15	28°♄31'42	3°31'27
minimum elong	4821 Aug 07 02:23	18°♄04'55	4°49'37	min. Earth dist.	4822 Jul 18 00:52	28°♄23'50	0.54835 AU
morning rise	4821 Aug 15 20:21	14°♄03'36		morning rise	4822 Jul 26 20:11	24°♄26'59	
direct	4821 Aug 18 18:45	13°♄43'00		direct	4822 Jul 30 05:00	24°♄02'20	
morning max el	4821 Aug 29 13:09	18°♄43'20	20°31'39	morning max el	4822 Aug 11 13:15	29°♄50'56	22°03'25
	4821 Sep 07 08:21	0°♄			4822 Aug 11 17:08	0°♄	
asc. node	4821 Sep 07 23:28	1°♄01'39		asc. node	4822 Aug 25 20:31	19°♄53'16	
morning set	4821 Sep 17 10:07	18°♄53'10			4822 Aug 31 01:03	0°♄	
	4821 Sep 22 19:10	0°♄		morning set	4822 Sep 01 19:58	3°♄42'07	

superior conj	4822 Sep 09 00:15	18° \cap 54'26	1°42'20	superior conj	4823 Aug 24 07:10	3° \cap 39'17	1°35'05
minimum elong	4822 Sep 08 23:26	18° \cap 50'07	1°42'18	minimum elong	4823 Aug 24 05:24	3° \cap 29'43	1°34'56
max. Earth dist.	4822 Sep 12 15:04	26° \cap 25'02	1.34531 AU	max. Earth dist.	4823 Aug 26 14:10	8° \cap 34'23	1.33265 AU
	4822 Sep 14 09:36	0° $\underline{\cap}$		evening rise	4823 Aug 31 18:50	19° \cap 20'24	
evening rise	4822 Sep 17 02:59	5° $\underline{\cap}$ 21'37			4823 Sep 06 07:21	0° $\underline{\cap}$	
desc. node	4822 Oct 01 09:31	0° \cap 20'25		desc. node	4823 Sep 18 06:31	20° $\underline{\cap}$ 05'06	
	4822 Oct 01 04:20	0° \cap			4823 Sep 25 07:52	0° \cap	
evening max el	4822 Oct 22 03:34	27° \cap 15'00	26°57'35	evening max el	4823 Oct 04 15:17	10° \cap 33'57	27°24'27
	4822 Oct 25 06:11	0° \nearrow		retrograde	4823 Oct 18 05:18	17° \cap 52'08	
retrograde	4822 Nov 04 08:20	4° \nearrow 32'06		evening set	4823 Oct 25 07:16	15° \cap 13'40	
evening set	4822 Nov 11 01:56	1° \nearrow 51'56		min. Earth dist.	4823 Oct 29 00:47	11° \cap 53'11	0.64045 AU
	4822 Nov 13 03:20	30° \cap		inferior conj	4823 Oct 31 12:20	9° \cap 18'03	-2°40'11
min. Earth dist.	4822 Nov 15 00:59	27° \cap 57'45	0.65551 AU	minimum elong	4823 Oct 31 16:57	9° \cap 06'01	2°38'27
inferior conj	4822 Nov 17 00:29	25° \cap 41'32	-1°37'15	morning rise	4823 Nov 07 04:02	3° \cap 55'51	
minimum elong	4822 Nov 17 03:14	25° \cap 33'36	1°36'06	asc. node	4823 Nov 08 16:46	3° \cap 29'23	
asc. node	4822 Nov 21 19:43	20° \cap 55'57		direct	4823 Nov 09 15:57	3° \cap 24'39	
morning rise	4822 Nov 23 05:28	20° \cap 04'12		morning max el	4823 Nov 16 04:30	6° \cap 49'43	17°52'45
direct	4822 Nov 25 23:47	19° \cap 22'37			4823 Dec 01 13:40	0° \nearrow	
morning max el	4822 Dec 02 11:51	22° \cap 52'18	18°12'14	morning set	4823 Dec 03 01:00	2° \nearrow 31'01	
	4822 Dec 08 04:46	0° \nearrow		desc. node	4823 Dec 15 05:48	22° \nearrow 57'05	
morning set	4822 Dec 21 05:05	20° \nearrow 38'03					
	4822 Dec 26 23:40	0° \searrow		superior conj	4823 Dec 15 22:30	24° \nearrow 05'06	-0°04'53
desc. node	4822 Dec 28 08:47	2° \searrow 13'14		minimum elong	4823 Dec 15 21:58	24° \nearrow 02'52	0°04'48
				behind sun begin	4823 Dec 15 12:21	23° \nearrow 23'48	
superior conj	4823 Jan 05 03:10	14° \searrow 34'09	-0°51'57	behind sun end	4823 Dec 16 07:34	24° \nearrow 41'52	
minimum elong	4823 Jan 04 20:44	14° \searrow 08'48	0°51'05		4823 Dec 19 14:35	0° \searrow	
max. Earth dist.	4823 Jan 07 14:03	18° \searrow 25'44	1.45252 AU	max. Earth dist.	4823 Dec 21 08:19	2° \searrow 46'17	1.44578 AU
	4823 Jan 14 23:38	0° \approx		evening rise	4823 Dec 31 21:05	19° \searrow 12'18	
evening rise	4823 Jan 21 09:28	9° \approx 59'13			4824 Jan 07 23:06	0° \approx	
greatest brilliancy	4823 Feb 02 10:59	28° \approx 37'53	-0.7m	evening max el	4824 Jan 28 16:22	28° \approx 30'03	20°25'48
	4823 Feb 03 08:46	0° \times			4824 Jan 30 05:47	0° \times	
evening max el	4823 Feb 14 13:40	14° \times 57'07	19°26'39	asc. node	4824 Feb 04 16:00	3° \times 06'25	
asc. node	4823 Feb 17 18:59	17° \times 42'04		retrograde	4824 Feb 05 16:20	3° \times 11'58	
retrograde	4823 Feb 21 18:07	19° \times 04'31		evening set	4824 Feb 09 13:23	1° \times 45'06	
evening set	4823 Feb 25 06:35	17° \times 51'59			4824 Feb 11 11:06	30° \cap	
inferior conj	4823 Mar 02 17:58	11° \times 58'01	3°19'16	inferior conj	4824 Feb 14 22:11	25° \approx 38'09	2°54'49
minimum elong	4823 Mar 02 16:12	12° \times 03'46	3°19'01	minimum elong	4824 Feb 14 19:52	25° \approx 46'05	2°54'17
min. Earth dist.	4823 Mar 04 00:04	10° \times 19'40	0.66570 AU	min. Earth dist.	4824 Feb 15 14:37	24° \approx 42'11	0.67474 AU
morning rise	4823 Mar 08 01:34	5° \times 43'24		morning rise	4824 Feb 20 02:07	19° \approx 23'58	
direct	4823 Mar 14 06:26	2° \times 58'01		direct	4824 Feb 25 17:40	16° \approx 52'49	
desc. node	4823 Mar 26 08:00	9° \times 59'57		morning max el	4824 Mar 08 02:01	23° \approx 40'03	24°29'52
morning max el	4823 Mar 26 17:24	10° \times 23'32	25°53'30	desc. node	4824 Mar 12 05:01	28° \approx 11'46	
	4823 Apr 11 06:36	0° Υ			4824 Mar 13 17:10	0° \times	
	4823 Apr 29 18:42	0° \searrow			4824 Apr 03 16:08	0° Υ	
morning set	4823 May 01 21:54	3° \searrow 52'56		morning set	4824 Apr 13 00:22	15° \cap 39'01	
max. Earth dist.	4823 May 05 18:11	11° \searrow 06'57	1.35577 AU	max. Earth dist.	4824 Apr 16 15:43	22° \cap 08'30	1.37561 AU
					4824 Apr 20 21:31	0° \searrow	
superior conj	4823 May 11 04:49	21° \searrow 51'07	-0°54'48				
minimum elong	4823 May 11 07:49	22° \searrow 06'19	0°54'16	superior conj	4824 Apr 23 12:05	4° \searrow 59'04	-1°23'27
	4823 May 15 04:27	0° \cap		minimum elong	4824 Apr 23 16:33	5° \searrow 20'37	1°22'49
asc. node	4823 May 16 18:18	3° \cap 15'15		evening rise	4824 May 02 03:46	22° \searrow 05'09	
evening rise	4823 May 19 02:36	8° \cap 04'58		asc. node	4824 May 02 15:19	23° \searrow 02'25	
	4823 May 31 02:15	0° $\underline{\cap}$			4824 May 06 04:58	0° \cap	
evening max el	4823 Jun 06 03:54	7° $\underline{\cap}$ 30'17	20°14'46	evening max el	4824 May 18 21:02	19° \cap 13'56	19°12'57
retrograde	4823 Jun 16 21:08	12° $\underline{\cap}$ 44'48		retrograde	4824 May 27 21:26	23° \cap 37'59	
evening set	4823 Jun 18 19:54	12° $\underline{\cap}$ 35'07		evening set	4824 May 29 21:19	23° \cap 25'59	
desc. node	4823 Jun 22 07:12	11° $\underline{\cap}$ 34'32		inferior conj	4824 Jun 07 07:15	19° \cap 16'03	0°15'26
inferior conj	4823 Jun 27 22:50	8° $\underline{\cap}$ 36'40	-1°40'49	minimum elong	4824 Jun 07 07:54	19° \cap 14'59	0°15'11
minimum elong	4823 Jun 27 18:07	8° $\underline{\cap}$ 43'39	1°39'06	transit middle	4824 Jun 07 07:54	19° \cap 14'59	0°15'11
min. Earth dist.	4823 Jun 29 12:58	7° $\underline{\cap}$ 40'27	0.55051 AU	transit begin	4824 Jun 07 06:40	19° \cap 17'01	
morning rise	4823 Jul 06 14:59	4° $\underline{\cap}$ 22'21		transit end	4824 Jun 07 09:07	19° \cap 12'56	
direct	4823 Jul 10 15:41	3° $\underline{\cap}$ 47'09		desc. node	4824 Jun 08 04:14	18° \cap 40'44	
morning max el	4823 Jul 24 05:15	10° $\underline{\cap}$ 24'21	23°46'18	min. Earth dist.	4824 Jun 10 03:41	17° \cap 21'53	0.56197 AU
	4823 Aug 07 18:06	0° \cap		morning rise	4824 Jun 15 15:22	14° \cap 27'10	
asc. node	4823 Aug 12 17:34	9° \cap 13'10		direct	4824 Jun 20 14:17	13° \cap 30'22	
morning set	4823 Aug 17 07:30	18° \cap 35'19		morning max el	4824 Jul 04 19:00	20° \cap 45'33	25°26'43
	4823 Aug 22 14:40	0° \cap			4824 Jul 12 18:25	0° $\underline{\cap}$	

asc. node	4824 Jul 29 14:36	28°☿52'57		morning max el	4825 Jun 16 12:12	1°♊23'17	26°48'36
	4824 Jul 30 03:36	0°♊			4825 Jul 06 21:41	0°☿	
morning set	4824 Jul 31 19:04	3°♊26'51		morning set	4825 Jul 16 05:02	18°☿12'02	
				asc. node	4825 Jul 16 11:38	18°☿46'50	
superior conj	4824 Aug 07 17:27	18°♊31'55	1°22'30		4825 Jul 21 15:50	0°♊	
minimum elong	4824 Aug 07 15:12	18°♊19'33	1°22'12				
max. Earth dist.	4824 Aug 08 20:35	21°♊00'37	1.32424 AU	superior conj	4825 Jul 23 05:11	3°♊26'15	1°05'16
	4824 Aug 13 00:42	0°♊		minimum elong	4825 Jul 23 02:56	3°♊13'45	1°04'52
evening rise	4824 Aug 14 19:23	3°♊43'06		max. Earth dist.	4825 Jul 23 07:18	3°♊37'56	1.32007 AU
	4824 Aug 29 01:11	0°♊		evening rise	4825 Jul 30 01:51	18°♊21'28	
desc. node	4824 Sep 04 03:32	9°♊14'07			4825 Aug 04 20:12	0°♊	
evening max el	4824 Sep 16 00:12	23°♊22'59	27°21'23	desc. node	4825 Aug 22 00:33	27°♊32'50	
	4824 Sep 26 00:58	0°♊			4825 Aug 24 00:25	0°♊	
retrograde	4824 Sep 29 19:34	0°♊37'26		evening max el	4825 Aug 29 03:33	5°♊29'21	26°44'48
	4824 Oct 03 10:57	30°♊		retrograde	4825 Sep 12 01:39	12°♊38'59	
evening set	4824 Oct 06 23:35	28°♊11'59		evening set	4825 Sep 18 22:22	10°♊38'49	
min. Earth dist.	4824 Oct 10 14:30	25°♊19'13	0.62228 AU	min. Earth dist.	4825 Sep 22 17:32	8°♊02'10	0.60203 AU
inferior conj	4824 Oct 13 12:59	22°♊35'38	-3°41'25	inferior conj	4825 Sep 25 22:58	5°♊24'54	-4°34'46
minimum elong	4824 Oct 13 18:59	22°♊21'42	3°39'36	minimum elong	4825 Sep 26 04:52	5°♊12'51	4°33'34
morning rise	4824 Oct 20 16:09	17°♊31'44		morning rise	4825 Oct 03 13:22	0°♊42'30	
direct	4824 Oct 23 00:31	17°♊07'22		direct	4825 Oct 05 21:31	0°♊21'54	
asc. node	4824 Oct 25 13:49	17°♊37'07		asc. node	4825 Oct 12 10:53	3°♊12'15	
morning max el	4824 Oct 29 20:36	20°♊36'04	17°51'16	morning max el	4825 Oct 13 08:50	4°♊02'28	18°09'00
	4824 Nov 05 21:22	0°♊		morning set	4825 Oct 29 03:52	29°♊06'02	
morning set	4824 Nov 14 18:40	15°♊26'34			4825 Oct 29 15:21	0°♊	
	4824 Nov 22 23:49	0°♊					
superior conj	4824 Nov 25 19:45	4°♊52'12	0°36'48	superior conj	4825 Nov 07 18:20	16°♊52'46	1°08'23
minimum elong	4824 Nov 25 22:57	5°♊05'49	0°36'21	minimum elong	4825 Nov 07 22:19	17°♊10'40	1°07'55
desc. node	4824 Dec 01 02:49	13°♊44'05			4825 Nov 15 07:02	0°♊	
max. Earth dist.	4824 Dec 02 23:25	16°♊46'27	1.43261 AU	max. Earth dist.	4825 Nov 15 09:54	0°♊12'06	1.41455 AU
evening rise	4824 Dec 10 09:22	28°♊34'14		desc. node	4825 Nov 17 23:50	4°♊30'26	
	4824 Dec 11 07:26	0°♊		evening rise	4825 Nov 20 12:54	8°♊39'50	
	4824 Dec 31 17:09	0°♊			4825 Dec 04 10:10	0°♊	
evening max el	4825 Jan 10 13:43	12°♊04'52	21°36'46	evening max el	4825 Dec 24 06:20	25°♊41'47	22°54'58
retrograde	4825 Jan 19 13:52	17°♊25'41			4825 Dec 29 09:42	0°♊	
asc. node	4825 Jan 21 13:03	17°♊04'57		retrograde	4826 Jan 03 09:05	1°♊41'45	
evening set	4825 Jan 23 21:09	15°♊43'33			4826 Jan 07 20:08	30°♊	
inferior conj	4825 Jan 29 05:18	9°♊26'34	2°21'10	evening set	4826 Jan 08 04:16	29°♊43'39	
minimum elong	4825 Jan 29 02:53	9°♊34'56	2°20'26	asc. node	4826 Jan 08 10:06	29°♊31'10	
min. Earth dist.	4825 Jan 29 09:21	9°♊12'31	0.67971 AU	min. Earth dist.	4826 Jan 13 05:58	23°♊45'33	0.68084 AU
morning rise	4825 Feb 03 08:26	3°♊14'35		inferior conj	4826 Jan 13 13:19	23°♊20'07	1°39'41
direct	4825 Feb 08 09:29	1°♊03'46		minimum elong	4826 Jan 13 11:18	23°♊27'07	1°38'57
morning max el	4825 Feb 18 11:20	7°♊02'17	23°00'39	morning rise	4826 Jan 18 18:14	17°♊11'56	
desc. node	4825 Feb 27 02:02	17°♊12'26		direct	4826 Jan 23 04:45	15°♊24'01	
	4825 Mar 08 06:52	0°♊		morning max el	4826 Feb 01 00:59	20°♊33'01	21°34'50
morning set	4825 Mar 25 01:46	26°♊11'02			4826 Feb 08 23:54	0°♊	
	4825 Mar 27 08:20	0°♊		desc. node	4826 Feb 13 23:04	6°♊47'53	
max. Earth dist.	4825 Mar 29 10:57	3°♊36'18	1.39753 AU		4826 Mar 01 12:45	0°♊	
				morning set	4826 Mar 04 22:28	5°♊21'29	
superior conj	4825 Apr 06 04:19	17°♊21'22	-1°48'09	max. Earth dist.	4826 Mar 11 11:10	15°♊56'28	1.41868 AU
minimum elong	4825 Apr 06 09:14	17°♊43'53	1°47'41				
	4825 Apr 12 21:56	0°♊		superior conj	4826 Mar 19 00:31	28°♊45'30	-2°04'44
evening rise	4825 Apr 15 20:06	5°♊35'40		minimum elong	4826 Mar 19 03:38	28°♊59'03	2°04'36
asc. node	4825 Apr 19 12:21	12°♊33'50			4826 Mar 19 17:36	0°♊	
	4825 Apr 30 11:59	0°♊		evening rise	4826 Mar 29 23:53	18°♊27'05	
evening max el	4825 May 02 00:08	1°♊35'59	18°31'27		4826 Apr 05 09:31	0°♊	
retrograde	4825 May 09 16:16	5°♊23'11		asc. node	4826 Apr 06 09:23	1°♊43'12	
evening set	4825 May 11 22:36	5°♊04'28		evening max el	4826 Apr 15 09:36	14°♊26'48	18°10'03
inferior conj	4825 May 19 12:31	0°♊35'14	1°48'12	retrograde	4826 Apr 22 05:33	17°♊54'01	
minimum elong	4825 May 19 15:51	0°♊28'40	1°47'10	evening set	4826 Apr 24 18:38	17°♊25'49	
	4825 May 20 06:22	30°♊		inferior conj	4826 May 01 14:49	12°♊35'42	2°49'33
min. Earth dist.	4825 May 22 22:09	27°♊56'19	0.58029 AU	minimum elong	4826 May 01 18:03	12°♊28'17	2°48'50
desc. node	4825 May 26 01:15	25°♊50'47		min. Earth dist.	4826 May 04 22:44	9°♊34'14	0.60185 AU
morning rise	4825 May 27 05:54	25°♊12'28		morning rise	4826 May 08 15:03	6°♊47'43	
direct	4825 Jun 02 03:05	23°♊44'10		desc. node	4826 May 12 22:16	4°♊59'27	
	4825 Jun 15 00:39	0°♊		direct	4826 May 15 04:07	4°♊45'09	
				morning max el	4826 May 29 11:54	12°♊38'29	27°39'11

	4826 Jun 12 05:28	0°♊		morning max el	4827 May 11 17:37	24°♊36'26	27°52'17
	4826 Jun 29 03:31	0°♋			4827 May 16 15:07	0°♌	
morning set	4826 Jun 30 11:44	2°♋45'42			4827 Jun 05 14:48	0°♊	
asc. node	4826 Jul 03 08:41	8°♋49'57		morning set	4827 Jun 14 13:00	17°♊00'29	
max. Earth dist.	4826 Jul 06 18:37	16°♋15'32	1.32000 AU	max. Earth dist.	4827 Jun 20 02:23	28°♊39'07	1.32415 AU
				asc. node	4827 Jun 20 05:43	28°♊57'01	
					4827 Jun 20 17:23	0°♋	
superior conj	4826 Jul 07 16:38	18°♋16'41	0°43'57				
minimum elong	4826 Jul 07 14:50	18°♋06'46	0°43'35				
	4826 Jul 13 00:52	0°♌		superior conj	4827 Jun 22 01:58	2°♋56'41	0°19'10
evening rise	4826 Jul 14 11:58	3°♌08'22		minimum elong	4827 Jun 22 01:05	2°♋51'51	0°18'58
	4826 Jul 28 20:10	0°♍		evening rise	4827 Jun 28 23:40	17°♋56'16	
desc. node	4826 Aug 08 21:34	14°♍41'11			4827 Jul 04 21:37	0°♌	
evening max el	4826 Aug 10 23:18	16°♍46'38	25°36'39	evening max el	4827 Jul 23 12:43	27°♌22'12	24°06'16
retrograde	4826 Aug 24 22:11	23°♍52'12		desc. node	4827 Jul 26 18:36	0°♍10'33	
evening set	4826 Aug 30 22:53	22°♍27'07			4827 Jul 26 13:06	0°♎	
min. Earth dist.	4826 Sep 04 11:14	19°♎49'23	0.58151 AU	retrograde	4827 Aug 06 07:28	4°♎18'34	
inferior conj	4826 Sep 07 14:51	17°♎36'16	-5°09'47	evening set	4827 Aug 10 23:12	3°♎30'30	
minimum elong	4826 Sep 07 17:52	17°♎30'54	5°09'32	min. Earth dist.	4827 Aug 16 23:16	0°♎33'03	0.56351 AU
morning rise	4826 Sep 15 15:07	13°♎17'13			4827 Aug 17 20:52	30°♎♌	
direct	4826 Sep 18 02:30	12°♎58'05		inferior conj	4827 Aug 19 10:26	29°♌01'37	-5°11'15
morning max el	4826 Sep 26 13:55	17°♎00'17	18°47'21	minimum elong	4827 Aug 19 07:33	29°♌06'06	5°11'03
asc. node	4826 Sep 29 07:56	20°♎00'56		morning rise	4827 Aug 27 18:28	25°♌02'46	
	4826 Oct 05 22:20	0°♏		direct	4827 Aug 30 11:55	24°♌43'24	
morning set	4826 Oct 12 23:52	13°♏16'08		morning max el	4827 Sep 09 08:43	29°♌19'11	19°47'26
					4827 Sep 10 01:35	0°♎	
superior conj	4826 Oct 21 13:20	29°♏53'12	1°29'18	asc. node	4827 Sep 16 04:58	7°♎47'15	
minimum elong	4826 Oct 21 16:21	0°♐07'30	1°29'03	morning set	4827 Sep 27 03:10	27°♎46'21	
	4826 Oct 21 14:46	0°♑			4827 Sep 28 05:33	0°♏	
max. Earth dist.	4826 Oct 28 15:56	12°♑54'58	1.39383 AU				
evening rise	4826 Nov 01 14:53	19°♑46'39		superior conj	4827 Oct 04 23:19	13°♏37'20	1°40'36
desc. node	4826 Nov 04 20:53	25°♑12'48		minimum elong	4827 Oct 05 00:46	13°♏44'32	1°40'32
	4826 Nov 07 19:42	0°♒		max. Earth dist.	4827 Oct 10 20:43	25°♏00'09	1.37301 AU
	4826 Nov 28 15:15	0°♓			4827 Oct 13 13:47	0°♑	
evening max el	4826 Dec 06 19:53	9°♓22'01	24°14'38	evening rise	4827 Oct 14 15:08	1°♑54'16	
retrograde	4826 Dec 18 00:54	15°♓56'30		desc. node	4827 Oct 22 17:55	15°♑46'31	
evening set	4826 Dec 23 09:09	13°♓42'49			4827 Oct 31 23:04	0°♒	
asc. node	4826 Dec 26 07:09	10°♓37'50		evening max el	4827 Nov 19 08:18	23°♒04'45	25°29'07
min. Earth dist.	4826 Dec 28 02:09	8°♓18'17	0.67828 AU		4827 Nov 30 09:23	0°♓	
inferior conj	4826 Dec 28 20:28	7°♓16'38	0°51'24	retrograde	4827 Dec 01 12:21	0°♓04'44	
minimum elong	4826 Dec 28 19:17	7°♓20'39	0°50'55		4827 Dec 02 14:39	30°♒♒	
morning rise	4827 Jan 03 05:29	1°♓14'01		evening set	4827 Dec 07 10:10	27°♒37'22	
	4827 Jan 05 16:03	30°♒♒		min. Earth dist.	4827 Dec 11 19:41	22°♒47'16	0.67214 AU
direct	4827 Jan 07 02:26	29°♒48'34		inferior conj	4827 Dec 13 00:56	21°♒13'15	-0°02'46
	4827 Jan 08 13:49	0°♔		minimum elong	4827 Dec 13 01:00	21°♒13'01	0°02'44
morning max el	4827 Jan 14 21:59	4°♔15'46	20°19'01	transit middle	4827 Dec 13 01:00	21°♒13'01	0°02'44
desc. node	4827 Jan 31 20:07	26°♔48'45		transit begin	4827 Dec 12 22:14	21°♒21'54	
	4827 Feb 02 23:20	0°♕		transit end	4827 Dec 13 03:46	21°♒04'08	
morning set	4827 Feb 11 21:36	13°♕36'36		asc. node	4827 Dec 13 04:10	21°♒02'49	
max. Earth dist.	4827 Feb 21 18:55	29°♕10'46	1.43626 AU	morning rise	4827 Dec 18 16:11	15°♒18'12	
	4827 Feb 22 07:10	0°♖		direct	4827 Dec 22 01:08	14°♒12'41	
				morning max el	4827 Dec 29 02:52	18°♒09'16	19°17'10
superior conj	4827 Feb 27 20:07	9°♖02'01	-2°07'46		4828 Jan 07 09:21	0°♔	
minimum elong	4827 Feb 27 18:16	8°♖54'20	2°07'44	greatest brilliancy	4828 Jan 11 13:23	6°♔10'49	-0.7m
evening rise	4827 Mar 12 10:47	0°♗30'27		desc. node	4828 Jan 18 17:11	17°♔08'05	
	4827 Mar 12 03:48	0°♘		morning set	4828 Jan 21 21:32	22°♔03'25	
asc. node	4827 Mar 24 06:25	20°♗23'15			4828 Jan 27 00:15	0°♕	
evening max el	4827 Mar 29 22:04	27°♗37'24	18°08'05	max. Earth dist.	4828 Feb 04 08:58	13°♕05'55	1.44812 AU
	4827 Apr 01 22:17	0°♙					
retrograde	4827 Apr 05 09:00	0°♙59'50		superior conj	4828 Feb 07 14:54	18°♕14'27	-1°52'16
evening set	4827 Apr 08 04:17	0°♙20'32		minimum elong	4828 Feb 07 07:02	17°♕43'14	1°51'43
	4827 Apr 08 20:24	30°♒♗			4828 Feb 14 22:31	0°♖	
inferior conj	4827 Apr 14 10:41	25°♗10'35	3°22'44	evening rise	4828 Feb 22 00:38	11°♖38'30	
minimum elong	4827 Apr 14 12:28	25°♗05'55	3°22'31		4828 Mar 04 05:42	0°♗	
min. Earth dist.	4827 Apr 17 07:48	22°♗10'59	0.62349 AU	asc. node	4828 Mar 10 03:27	8°♗25'10	
morning rise	4827 Apr 20 19:11	19°♗07'22		evening max el	4828 Mar 12 10:37	11°♗00'46	18°24'50
direct	4827 Apr 27 15:25	16°♗36'23		retrograde	4828 Mar 18 22:02	14°♗31'38	
desc. node	4827 Apr 29 19:19	16°♗50'15		evening set	4828 Mar 21 23:27	13°♗40'09	

inferior conj	4828 Mar 27 19:59	8°♿11'52	3°33'53	evening max el	4829 Feb 23 20:45	24°♿30'30	18°59'22
minimum elong	4828 Mar 27 20:07	8°♿11'29	3°33'53	asc. node	4829 Feb 25 00:28	25°♿36'52	
min. Earth dist.	4828 Mar 30 02:17	5°♿34'31	0.64288 AU	retrograde	4829 Mar 02 16:48	28°♿21'20	
morning rise	4828 Apr 02 15:59	2°♿01'04		evening set	4829 Mar 06 00:59	27°♿16'43	
	4828 Apr 05 20:25	30°♿♿		inferior conj	4829 Mar 11 14:55	21°♿31'44	3°28'24
direct	4828 Apr 09 11:08	29°♿13'44		minimum elong	4829 Mar 11 13:43	21°♿35'32	3°28'18
	4828 Apr 13 07:26	0°♿		min. Earth dist.	4829 Mar 13 05:40	19°♿29'47	0.65862 AU
desc. node	4828 Apr 15 16:20	1°♿08'56		morning rise	4829 Mar 17 02:04	15°♿17'53	
morning max el	4828 Apr 23 02:47	7°♿10'39	27°28'50	direct	4829 Mar 23 13:35	12°♿28'08	
	4828 May 10 15:50	0°♿		desc. node	4829 Apr 02 13:23	17°♿21'18	
	4828 May 27 20:24	0°♿		morning max el	4829 Apr 05 12:40	20°♿08'49	26°34'51
morning set	4828 May 28 06:20	0°♿48'41			4829 Apr 13 23:29	0°♿	
max. Earth dist.	4828 Jun 02 02:34	10°♿36'38	1.33278 AU		4829 May 03 18:16	0°♿	
				morning set	4829 May 11 12:17	13°♿59'36	
superior conj	4828 Jun 05 07:20	17°♿20'36	-0°08'25	max. Earth dist.	4829 May 15 16:01	22°♿02'19	1.34611 AU
minimum elong	4828 Jun 05 07:45	17°♿22'53	0°08'20		4829 May 19 14:39	0°♿	
behind sun begin	4828 Jun 05 03:05	16°♿58'00					
behind sun end	4828 Jun 05 12:26	17°♿47'47		superior conj	4829 May 20 06:26	1°♿21'14	-0°37'43
asc. node	4828 Jun 06 02:44	19°♿04'08		minimum elong	4829 May 20 08:28	1°♿31'45	0°37'19
	4828 Jun 11 05:04	0°♿		asc. node	4829 May 23 23:45	9°♿06'46	
evening rise	4828 Jun 12 11:06	2°♿39'21		evening rise	4829 May 27 20:19	17°♿11'00	
	4828 Jun 27 14:20	0°♿			4829 Jun 03 07:17	0°♿	
evening max el	4828 Jul 04 02:27	7°♿44'09	22°28'51	evening max el	4829 Jun 16 00:26	18°♿24'58	20°59'05
desc. node	4828 Jul 12 15:35	13°♿26'52		retrograde	4829 Jun 27 16:53	24°♿09'17	
retrograde	4828 Jul 17 04:18	14°♿14'13		evening set	4829 Jun 29 21:09	23°♿58'06	
evening set	4828 Jul 20 07:53	13°♿52'23		desc. node	4829 Jun 29 12:34	24°♿01'26	
min. Earth dist.	4828 Jul 28 09:40	10°♿21'18	0.55147 AU	inferior conj	4829 Jul 09 05:15	20°♿00'45	-2°48'38
inferior conj	4828 Jul 29 12:06	9°♿43'47	-4°24'10	minimum elong	4829 Jul 08 21:41	20°♿11'26	2°46'06
minimum elong	4828 Jul 29 03:56	9°♿55'23	4°22'23	min. Earth dist.	4829 Jul 09 20:33	19°♿39'09	0.54812 AU
morning rise	4828 Aug 07 01:57	5°♿53'37		morning rise	4829 Jul 17 22:16	16°♿01'06	
direct	4828 Aug 10 04:04	5°♿31'54		direct	4829 Jul 21 13:17	15°♿32'49	
morning max el	4828 Aug 21 15:25	10°♿52'41	21°08'37	morning max el	4829 Aug 03 11:17	21°♿43'02	22°46'27
asc. node	4828 Sep 02 02:00	26°♿18'09			4829 Aug 10 14:44	0°♿	
	4828 Sep 04 03:30	0°♿		asc. node	4829 Aug 19 23:02	15°♿22'51	
morning set	4828 Sep 10 11:12	12°♿29'52		morning set	4829 Aug 25 21:59	27°♿21'13	
					4829 Aug 27 04:00	0°♿	
superior conj	4828 Sep 17 19:56	27°♿52'31	1°43'43				
minimum elong	4828 Sep 17 19:51	27°♿52'05	1°43'43	superior conj	4829 Sep 01 23:52	12°♿28'58	1°39'57
	4828 Sep 18 20:42	0°♿		minimum elong	4829 Sep 01 22:35	12°♿22'09	1°39'53
max. Earth dist.	4828 Sep 22 06:13	6°♿51'11	1.35444 AU	max. Earth dist.	4829 Sep 05 00:30	18°♿51'57	1.33944 AU
evening rise	4828 Sep 26 10:06	14°♿54'01		evening rise	4829 Sep 09 19:29	28°♿34'41	
	4828 Oct 04 21:30	0°♿			4829 Sep 10 12:55	0°♿	
desc. node	4828 Oct 08 14:55	6°♿06'33		desc. node	4829 Sep 25 11:54	26°♿06'43	
	4828 Oct 25 15:07	0°♿			4829 Sep 28 01:30	0°♿	
evening max el	4828 Oct 31 20:58	6°♿46'11	26°30'54	evening max el	4829 Oct 14 09:41	20°♿17'55	27°12'29
retrograde	4828 Nov 13 18:36	14°♿00'00		retrograde	4829 Oct 27 18:57	27°♿35'39	
evening set	4828 Nov 20 05:24	11°♿23'01		evening set	4829 Nov 03 16:36	24°♿55'23	
min. Earth dist.	4828 Nov 24 08:09	7°♿08'09	0.66253 AU	min. Earth dist.	4829 Nov 07 13:14	21°♿15'42	0.64948 AU
inferior conj	4828 Nov 26 00:45	5°♿06'00	-1°01'45	inferior conj	4829 Nov 09 17:45	18°♿50'46	-2°03'53
minimum elong	4828 Nov 26 02:27	5°♿00'52	1°01'00	minimum elong	4829 Nov 09 21:19	18°♿40'55	2°02'27
asc. node	4828 Nov 29 01:13	1°♿41'30		asc. node	4829 Nov 15 22:16	13°♿24'56	
	4828 Nov 30 23:52	30°♿♿		morning rise	4829 Nov 16 03:06	13°♿19'09	
morning rise	4828 Dec 02 00:12	29°♿21'08		direct	4829 Nov 18 18:26	12°♿42'20	
direct	4828 Dec 04 23:12	28°♿31'54		morning max el	4829 Nov 25 05:48	16°♿09'03	18°01'48
	4828 Dec 09 01:36	0°♿			4829 Dec 05 05:50	0°♿	
morning max el	4828 Dec 11 14:15	2°♿08'43	18°31'06	morning set	4829 Dec 13 01:08	12°♿52'33	
	4828 Dec 30 18:31	0°♿		desc. node	4829 Dec 22 11:13	28°♿20'55	
morning set	4828 Dec 31 20:28	1°♿43'22			4829 Dec 23 11:46	0°♿	
desc. node	4829 Jan 04 14:12	7°♿40'04					
				superior conj	4829 Dec 27 02:48	5°♿48'35	-0°31'50
superior conj	4829 Jan 16 18:31	26°♿51'36	-1°17'45	minimum elong	4829 Dec 26 22:53	5°♿32'59	0°31'18
minimum elong	4829 Jan 16 09:37	26°♿16'43	1°16'43	max. Earth dist.	4829 Dec 30 22:47	11°♿52'55	1.45054 AU
max. Earth dist.	4829 Jan 17 03:07	27°♿25'19	1.45305 AU		4830 Jan 11 13:53	0°♿	
	4829 Jan 18 18:35	0°♿		evening rise	4830 Jan 12 09:38	1°♿16'13	
evening rise	4829 Feb 01 15:04	21°♿49'12		greatest brilliancy	4830 Jan 26 05:33	22°♿20'22	-0.7m
	4829 Feb 06 18:46	0°♿			4830 Jan 31 13:27	0°♿	
greatest brilliancy	4829 Feb 10 20:56	6°♿27'13	-0.8m	evening max el	4830 Feb 07 02:37	8°♿03'18	19°50'08

asc. node	4830 Feb 11 21:30	11° H 45'01		max. Earth dist.	4830 Dec 13 16:30	26° Z 08'37	1.44093 AU
retrograde	4830 Feb 14 14:27	12° H 24'02			4830 Dec 16 02:37	0° Z	
evening set	4830 Feb 18 06:29	11° H 05'23		evening rise	4830 Dec 22 19:31	10° Z 28'11	
inferior conj	4830 Feb 23 16:31	5° H 05'40	3°10'07		4831 Jan 04 18:45	0° Z	
minimum elong	4830 Feb 23 14:27	5° H 12'33	3°09'45	evening max el	4831 Jan 21 03:01	21° Z 36'45	20°54'44
min. Earth dist.	4830 Feb 24 16:36	3° H 45'23	0.67012 AU	retrograde	4831 Jan 29 12:40	26° Z 34'49	
	4830 Feb 27 18:26	30° R Z		asc. node	4831 Jan 29 18:33	26° Z 34'30	
morning rise	4830 Feb 28 22:13	28° Z 51'18		evening set	4831 Feb 02 13:57	25° Z 01'19	
direct	4830 Mar 06 21:46	26° Z 11'01		inferior conj	4831 Feb 07 22:14	18° Z 49'32	2°41'36
	4830 Mar 15 06:10	0° H		minimum elong	4831 Feb 07 19:49	18° Z 57'52	2°40'57
morning max el	4830 Mar 18 21:48	3° H 21'02	25°19'16	min. Earth dist.	4831 Feb 08 09:09	18° Z 11'56	0.67734 AU
desc. node	4830 Mar 20 10:27	4° H 56'46		morning rise	4831 Feb 13 01:31	12° Z 36'15	
	4830 Apr 08 05:27	0° Y		direct	4831 Feb 18 10:53	10° Z 13'31	
morning set	4830 Apr 24 02:24	26° Y 21'01		morning max el	4831 Mar 01 06:32	16° Z 40'32	23°52'08
	4830 Apr 26 02:26	0° Z		desc. node	4831 Mar 07 07:29	23° Z 31'20	
max. Earth dist.	4830 Apr 27 18:38	3° Z 06'51	1.36389 AU		4831 Mar 12 07:20	0° H	
					4831 Apr 01 05:55	0° Y	
superior conj	4830 May 03 20:31	14° Z 51'18	-1°07'13	morning set	4831 Apr 05 19:01	7° Y 37'51	
minimum elong	4830 May 04 00:12	15° Z 09'35	1°06'37	max. Earth dist.	4831 Apr 09 14:44	14° Y 17'43	1.38482 AU
asc. node	4830 May 10 20:47	29° Z 01'08					
	4830 May 11 08:22	0° II		superior conj	4831 Apr 16 21:59	27° Y 41'29	-1°34'37
evening rise	4830 May 12 01:11	1° II 25'11		minimum elong	4831 Apr 17 02:49	28° Y 04'23	1°34'01
evening max el	4830 May 29 10:38	29° II 44'21	19°45'55		4831 Apr 18 03:07	0° Z	
	4830 May 29 17:07	0° Z		evening rise	4831 Apr 25 23:04	15° Z 14'35	
retrograde	4830 Jun 08 09:38	4° Z 36'07		asc. node	4831 Apr 27 17:49	18° Z 42'48	
evening set	4830 Jun 10 07:55	4° Z 25'59			4831 May 03 20:21	0° II	
desc. node	4830 Jun 16 09:37	2° Z 03'31		evening max el	4831 May 12 08:23	11° II 45'32	18°52'47
inferior conj	4830 Jun 19 04:28	0° Z 23'47	-0°49'52	retrograde	4831 May 20 17:53	15° II 52'28	
minimum elong	4830 Jun 19 02:10	0° Z 27'19	0°49'01	evening set	4831 May 22 20:08	15° II 38'06	
	4830 Jun 19 19:47	30° R II		inferior conj	4831 May 30 21:28	11° II 20'07	0°58'29
min. Earth dist.	4830 Jun 21 09:16	29° II 02'19	0.55441 AU	minimum elong	4831 May 30 23:40	11° II 16'12	0°57'42
morning rise	4830 Jun 27 18:17	25° II 56'02		min. Earth dist.	4831 Jun 03 01:25	9° II 04'50	0.56907 AU
direct	4830 Jul 02 04:07	25° II 13'06		desc. node	4831 Jun 03 06:40	8° II 55'53	
	4830 Jul 13 15:18	0° Z		morning rise	4831 Jun 07 23:54	6° II 15'56	
morning max el	4830 Jul 16 01:24	2° Z 07'15	24°30'21	direct	4831 Jun 13 08:22	5° II 06'59	
	4830 Aug 04 08:21	0° Z		morning max el	4831 Jun 27 16:21	12° II 33'48	26°04'47
asc. node	4830 Aug 06 20:04	4° Z 52'10			4831 Jul 11 07:05	0° Z	
morning set	4830 Aug 10 09:44	12° Z 14'38		asc. node	4831 Jul 24 17:07	24° Z 39'13	
				morning set	4831 Jul 25 20:53	27° Z 05'03	
superior conj	4830 Aug 17 08:27	27° Z 17'55	1°30'21		4831 Jul 27 05:42	0° Z	
minimum elong	4830 Aug 17 06:26	27° Z 06'51	1°30'08				
	4830 Aug 18 14:18	0° R		superior conj	4831 Aug 01 19:38	12° Z 12'43	1°15'44
max. Earth dist.	4830 Aug 19 03:18	1° R 10'15	1.32857 AU	minimum elong	4831 Aug 01 17:19	11° Z 59'58	1°15'23
evening rise	4830 Aug 24 15:25	12° R 44'52		max. Earth dist.	4831 Aug 02 12:06	13° Z 43'20	1.32195 AU
	4830 Sep 02 17:04	0° Z		evening rise	4831 Aug 08 18:50	27° Z 15'36	
desc. node	4830 Sep 12 08:54	15° Z 37'54			4831 Aug 10 02:37	0° R	
	4830 Sep 23 11:56	0° R			4831 Aug 27 02:13	0° Z	
evening max el	4830 Sep 26 20:36	3° R 26'05	27°27'06	desc. node	4831 Aug 30 05:56	4° Z 28'05	
retrograde	4830 Oct 10 12:53	10° R 42'15		evening max el	4831 Sep 09 03:16	15° Z 57'49	27°09'48
evening set	4830 Oct 17 16:51	8° R 07'53		retrograde	4831 Sep 22 23:51	23° Z 10'33	
min. Earth dist.	4830 Oct 21 08:47	5° R 00'21	0.63310 AU	evening set	4831 Sep 30 02:19	20° Z 53'57	
inferior conj	4830 Oct 24 01:15	2° R 20'19	-3°06'38	min. Earth dist.	4831 Oct 03 17:42	18° Z 10'11	0.61390 AU
minimum elong	4830 Oct 24 06:33	2° R 07'07	3°04'48	inferior conj	4831 Oct 06 20:04	15° Z 26'57	-4°05'29
	4830 Oct 26 12:05	30° R Z		minimum elong	4831 Oct 07 02:17	15° Z 13'16	4°03'51
morning rise	4830 Oct 30 21:46	27° Z 05'30		morning rise	4831 Oct 14 04:10	10° Z 32'13	
direct	4830 Nov 02 07:57	26° Z 37'29		direct	4831 Oct 16 12:02	10° Z 09'48	
asc. node	4830 Nov 02 19:19	26° Z 38'34		asc. node	4831 Oct 20 16:22	11° Z 25'06	
	4830 Nov 08 21:30	0° R		morning max el	4831 Oct 23 13:32	13° Z 42'11	17°56'23
morning max el	4830 Nov 08 22:36	0° R 02'44	17°49'54		4831 Nov 03 15:21	0° R	
morning set	4830 Nov 25 07:07	25° R 14'45		morning set	4831 Nov 08 08:01	8° R 30'34	
	4830 Nov 28 00:40	0° Z					
superior conj	4830 Dec 07 08:39	15° Z 50'35	0°13'53	superior conj	4831 Nov 18 17:09	27° R 10'31	0°51'31
minimum elong	4830 Dec 07 10:05	15° Z 56'31	0°13'41	minimum elong	4831 Nov 18 20:59	27° R 27'12	0°51'01
behind sun begin	4830 Dec 07 05:02	15° Z 35'38			4831 Nov 20 08:18	0° Z	
behind sun end	4830 Dec 07 15:07	16° Z 17'23		max. Earth dist.	4831 Nov 26 05:34	9° Z 54'52	1.42540 AU
desc. node	4830 Dec 09 08:13	19° Z 06'27		desc. node	4831 Nov 26 05:14	9° Z 53'31	
				evening rise	4831 Dec 02 12:45	20° Z 04'33	

	4831 Dec 08 22:28	0°♄		evening rise	4832 Nov 12 01:29	0°♄35'40	
	4831 Dec 30 07:14	0°♁		desc. node	4832 Nov 12 02:16	0°♄38'54	
evening max el	4832 Jan 03 22:01	5°♁11'25	22°09'26		4832 Dec 01 09:00	0°♄	
retrograde	4832 Jan 13 09:31	10°♁49'47		evening max el	4832 Dec 16 13:03	18°♄49'53	23°29'07
asc. node	4832 Jan 16 15:37	9°♁53'37		retrograde	4832 Dec 27 03:30	25°♄05'54	
evening set	4832 Jan 17 21:38	9°♁00'49		evening set	4833 Jan 01 03:59	23°♄01'17	
inferior conj	4832 Jan 23 05:58	2°♁40'19	2°04'29	asc. node	4833 Jan 02 12:39	21°♄43'29	
minimum elong	4832 Jan 23 03:40	2°♁48'19	2°03'43	min. Earth dist.	4833 Jan 06 01:51	17°♄17'05	0.68014 AU
min. Earth dist.	4832 Jan 23 05:02	2°♁43'36	0.68059 AU	inferior conj	4833 Jan 06 13:51	16°♄36'00	1°20'00
	4832 Jan 25 05:07	30°♄♄		minimum elong	4833 Jan 06 12:07	16°♄41'55	1°19'21
morning rise	4832 Jan 28 09:33	26°♄29'37		morning rise	4833 Jan 11 20:12	10°♄29'40	
direct	4832 Feb 02 04:13	24°♄28'38		direct	4833 Jan 16 00:46	8°♄51'25	
morning max el	4832 Feb 11 17:22	0°♁06'12	22°23'16	morning max el	4833 Jan 24 09:49	13°♄41'51	21°01'01
	4832 Feb 11 14:53	0°♁			4833 Feb 06 06:08	0°♁	
desc. node	4832 Feb 22 04:30	12°♁48'03		desc. node	4833 Feb 08 01:32	2°♁35'36	
	4832 Mar 05 03:11	0°♄		morning set	4833 Feb 23 17:56	26°♁16'00	
morning set	4832 Mar 16 08:18	17°♄35'00			4833 Feb 26 02:48	0°♄	
max. Earth dist.	4832 Mar 21 11:11	26°♄04'52	1.40669 AU	max. Earth dist.	4833 Mar 03 13:58	8°♄46'56	1.42670 AU
	4832 Mar 23 18:19	0°♄					
superior conj	4832 Mar 29 06:17	9°♄40'04	-1°56'29	superior conj	4833 Mar 10 16:28	20°♄36'34	-2°08'01
minimum elong	4832 Mar 29 10:47	10°♄00'17	1°56'09	minimum elong	4833 Mar 10 17:51	20°♄42'26	2°08'00
evening rise	4832 Apr 08 10:35	28°♄29'35		evening rise	4833 Mar 16 02:54	0°♄	
	4832 Apr 09 05:50	0°♄		asc. node	4833 Mar 22 07:43	11°♄01'32	
asc. node	4832 Apr 13 14:53	8°♄05'47			4833 Mar 31 11:56	27°♄03'51	
evening max el	4832 Apr 24 14:36	24°♄21'00	18°19'59	evening max el	4833 Apr 02 08:28	0°♄	
retrograde	4832 May 01 20:54	27°♄57'55		retrograde	4833 Apr 08 01:48	7°♄21'40	18°06'56
evening set	4832 May 04 06:01	27°♄35'34		evening set	4833 Apr 14 16:34	10°♄44'46	
inferior conj	4832 May 11 11:59	22°♄57'45	2°17'58	inferior conj	4833 Apr 17 08:23	10°♄12'00	
minimum elong	4832 May 11 15:33	22°♄50'17	2°16'59	minimum elong	4833 Apr 23 22:13	5°♄13'34	3°06'38
min. Earth dist.	4832 May 14 22:30	20°♄05'54	0.58918 AU	min. Earth dist.	4833 Apr 24 00:55	5°♄07'00	3°06'10
morning rise	4832 May 18 22:03	17°♄22'37			4833 Apr 27 02:29	2°♄09'53	0.61124 AU
desc. node	4832 May 20 03:42	16°♄45'52		morning rise	4833 Apr 29 15:59	30°♄♄	
direct	4832 May 25 02:55	15°♄39'24		direct	4833 Apr 30 15:28	29°♄18'11	
morning max el	4832 Jun 08 12:20	23°♄26'37	27°14'27	desc. node	4833 May 07 08:55	27°♄02'00	
	4832 Jun 14 09:34	0°♄			4833 May 07 00:44	27°♄02'20	
	4832 Jul 03 08:54	0°♄		morning max el	4833 May 15 16:01	0°♄	
morning set	4832 Jul 09 05:42	11°♄46'15			4833 May 21 14:32	4°♄59'15	27°49'19
asc. node	4832 Jul 10 14:09	14°♄37'42		morning set	4833 Jun 09 06:19	0°♄	
					4833 Jun 23 10:19	26°♄12'25	
superior conj	4832 Jul 16 07:29	27°♄06'22	0°56'42	asc. node	4833 Jun 25 06:02	0°♄	
minimum elong	4832 Jul 16 05:21	26°♄54'39	0°56'18	max. Earth dist.	4833 Jun 27 11:11	4°♄42'57	
max. Earth dist.	4832 Jul 15 23:22	26°♄21'34	1.31950 AU		4833 Jun 29 09:27	8°♄53'41	1.32124 AU
	4832 Jul 17 14:55	0°♄		superior conj	4833 Jun 30 18:14	11°♄53'07	0°33'51
evening rise	4832 Jul 23 03:06	11°♄58'23		minimum elong	4833 Jun 30 16:46	11°♄45'04	0°33'32
	4832 Aug 01 06:42	0°♄		evening rise	4833 Jul 07 14:06	26°♄46'25	
desc. node	4832 Aug 16 02:58	22°♄20'02			4833 Jul 09 02:46	0°♄	
evening max el	4832 Aug 21 03:21	27°♄43'04	26°19'15		4833 Jul 26 08:09	0°♄	
	4832 Aug 23 17:44	0°♄		desc. node	4833 Aug 02 23:59	8°♄50'19	
retrograde	4832 Sep 04 02:31	4°♄51'51		evening max el	4833 Aug 02 20:07	8°♄41'06	25°00'09
evening set	4832 Sep 10 16:13	3°♄05'39		retrograde	4833 Aug 16 18:26	15°♄43'32	
min. Earth dist.	4832 Sep 14 16:37	0°♄30'43	0.59317 AU	evening set	4833 Aug 22 06:11	14°♄35'05	
	4832 Sep 15 09:05	30°♄♄		min. Earth dist.	4833 Aug 27 07:40	11°♄50'45	0.57335 AU
inferior conj	4832 Sep 17 22:43	28°♄01'12	-4°52'42	inferior conj	4833 Aug 30 06:03	9°♄53'45	-5°15'34
minimum elong	4832 Sep 18 03:49	27°♄51'24	4°51'54	minimum elong	4833 Aug 30 06:50	9°♄52'26	5°15'32
morning rise	4832 Sep 25 17:36	23°♄28'51		morning rise	4833 Sep 07 09:49	5°♄43'39	
direct	4832 Sep 28 02:30	23°♄09'17		direct	4833 Sep 09 23:26	5°♄24'36	
morning max el	4832 Oct 05 23:12	26°♄58'02	18°22'40	morning max el	4833 Sep 19 00:09	9°♄40'04	19°10'09
asc. node	4832 Oct 06 13:24	27°♄33'24		asc. node	4833 Sep 23 10:26	14°♄48'15	
	4832 Oct 08 16:39	0°♄			4833 Oct 02 11:06	0°♄	
morning set	4832 Oct 21 22:18	22°♄24'26		morning set	4833 Oct 05 21:45	6°♄44'10	
	4832 Oct 25 21:36	0°♄					
superior conj	4832 Oct 31 01:06	9°♄38'41	1°18'31	superior conj	4833 Oct 14 03:00	22°♄59'07	1°35'11
minimum elong	4832 Oct 31 04:49	9°♄55'44	1°18'07	minimum elong	4833 Oct 14 05:23	23°♄10'37	1°35'01
max. Earth dist.	4832 Nov 07 13:23	23°♄00'40	1.40589 AU		4833 Oct 17 19:29	0°♄	
	4832 Nov 11 16:51	0°♄		max. Earth dist.	4833 Oct 20 18:17	5°♄25'45	1.38486 AU
				evening rise	4833 Oct 24 13:15	12°♄09'26	

desc. node	4833 Oct 29 23:16	21° \mathbb{M} 18'17	evening rise	4834 Oct 06 22:02	24° \mathbb{A} 41'08
	4833 Nov 04 10:13	0° \mathbb{A}		4834 Oct 09 20:56	0° \mathbb{M}
	4833 Nov 26 15:21	0° \mathbb{B}	desc. node	4834 Oct 16 20:17	11° \mathbb{M} 47'26
evening max el	4833 Nov 29 02:04	2° \mathbb{B} 32'15 24°47'28		4834 Oct 29 00:27	0° \mathbb{A}
retrograde	4833 Dec 10 17:24	9° \mathbb{B} 18'23	evening max el	4834 Nov 11 14:39	16° \mathbb{A} 15'59 25°57'18
evening set	4833 Dec 16 07:23	6° \mathbb{B} 58'50	retrograde	4834 Nov 24 02:32	23° \mathbb{A} 22'22
asc. node	4833 Dec 20 09:41	2° \mathbb{B} 26'23	evening set	4834 Nov 30 06:09	20° \mathbb{A} 50'15
min. Earth dist.	4833 Dec 20 21:12	1° \mathbb{B} 48'44 0.67612 AU	min. Earth dist.	4834 Dec 04 12:45	16° \mathbb{A} 15'16 0.66858 AU
inferior conj	4833 Dec 21 20:03	0° \mathbb{B} 33'08 0°29'05	inferior conj	4834 Dec 05 22:47	14° \mathbb{A} 28'47 -0°27'16
minimum elong	4833 Dec 21 19:21	0° \mathbb{B} 35'29 0°28'49	minimum elong	4834 Dec 05 23:30	14° \mathbb{A} 26'31 0°26'56
	4833 Dec 22 06:05	30° \mathbb{R} \mathbb{A}	asc. node	4834 Dec 07 06:42	12° \mathbb{A} 50'25
morning rise	4833 Dec 27 07:27	24° \mathbb{A} 33'18	morning rise	4834 Dec 11 17:18	8° \mathbb{A} 37'54
direct	4833 Dec 30 23:10	23° \mathbb{A} 16'31	direct	4834 Dec 14 21:51	7° \mathbb{A} 39'39
morning max el	4834 Jan 07 10:05	27° \mathbb{A} 29'02 19°50'49	morning max el	4834 Dec 21 17:59	11° \mathbb{A} 26'05 18°55'33
	4834 Jan 09 17:45	0° \mathbb{B}		4835 Jan 04 08:19	0° \mathbb{B}
desc. node	4834 Jan 25 22:33	22° \mathbb{B} 45'06	morning set	4835 Jan 12 21:52	13° \mathbb{B} 19'31
	4834 Jan 30 16:47	0° \approx	desc. node	4835 Jan 12 19:34	13° \mathbb{B} 10'34
morning set	4834 Feb 02 14:01	4° \approx 26'06		4835 Jan 23 13:46	0° \approx
max. Earth dist.	4834 Feb 14 00:48	22° \approx 21'14 1.44217 AU	max. Earth dist.	4835 Jan 27 17:31	6° \approx 31'06 1.45120 AU
	4834 Feb 18 19:05	0° \mathbb{H}			
superior conj	4834 Feb 19 01:03	0° \mathbb{H} 24'11 -2°03'40	superior conj	4835 Jan 29 11:20	9° \approx 15'38 -1°39'40
minimum elong	4834 Feb 18 20:27	0° \mathbb{H} 05'32 2°03'28	minimum elong	4835 Jan 29 02:08	8° \approx 39'24 1°38'49
evening rise	4834 Mar 04 10:01	22° \mathbb{H} 41'27	evening rise	4835 Feb 11 11:21	0° \mathbb{H}
	4834 Mar 08 16:52	0° \mathbb{Y}		4835 Feb 13 13:55	3° \mathbb{H} 24'55
asc. node	4834 Mar 18 08:57	15° \mathbb{Y} 28'45	asc. node	4835 Mar 02 15:12	0° \mathbb{Y}
evening max el	4834 Mar 22 14:37	20° \mathbb{Y} 38'23 18°12'58	evening max el	4835 Mar 05 05:58	3° \mathbb{Y} 10'46
retrograde	4834 Mar 29 00:29	24° \mathbb{Y} 02'33	retrograde	4835 Mar 06 02:22	4° \mathbb{Y} 04'43 18°37'22
evening set	4834 Mar 31 22:29	23° \mathbb{Y} 17'59	evening set	4835 Mar 12 16:28	7° \mathbb{Y} 42'51
inferior conj	4834 Apr 07 00:13	17° \mathbb{Y} 59'59 3°29'46	inferior conj	4835 Mar 15 20:42	6° \mathbb{Y} 45'45
minimum elong	4834 Apr 07 01:18	17° \mathbb{Y} 57'03 3°29'42	minimum elong	4835 Mar 21 14:01	1° \mathbb{Y} 09'49 3°33'20
min. Earth dist.	4834 Apr 09 15:15	15° \mathbb{Y} 08'00 0.63218 AU		4835 Mar 21 13:32	1° \mathbb{Y} 11'18 3°33'19
morning rise	4834 Apr 13 03:00	11° \mathbb{Y} 53'06	min. Earth dist.	4835 Mar 22 13:03	30° \mathbb{R} \mathbb{H}
direct	4834 Apr 19 23:47	9° \mathbb{Y} 13'39	direct	4835 Mar 23 13:32	28° \mathbb{H} 46'40 0.65008 AU
desc. node	4834 Apr 23 21:46	9° \mathbb{Y} 59'18	morning rise	4835 Mar 27 05:49	24° \mathbb{H} 57'16
morning max el	4834 May 03 21:50	17° \mathbb{Y} 12'47 27°46'32	direct	4835 Apr 02 22:15	22° \mathbb{H} 07'39
	4834 May 14 12:51	0° \mathbb{B}	desc. node	4835 Apr 10 18:48	25° \mathbb{H} 10'28
	4834 Jun 02 01:01	0° \mathbb{I}		4835 Apr 16 08:07	0° \mathbb{Y}
morning set	4834 Jun 07 08:33	10° \mathbb{I} 16'45	morning max el	4835 Apr 16 07:45	29° \mathbb{H} 59'05 27°09'12
max. Earth dist.	4834 Jun 12 14:31	21° \mathbb{I} 07'48 1.32725 AU		4835 May 08 11:46	0° \mathbb{B}
asc. node	4834 Jun 14 08:13	24° \mathbb{I} 50'41	morning set	4835 May 21 21:28	23° \mathbb{B} 50'12
				4835 May 25 00:29	0° \mathbb{I}
superior conj	4834 Jun 15 02:08	26° \mathbb{I} 27'08 0°07'47	max. Earth dist.	4835 May 26 10:39	2° \mathbb{I} 52'51 1.33787 AU
minimum elong	4834 Jun 15 01:45	26° \mathbb{I} 25'05 0°07'41			
behind sun begin	4834 Jun 14 21:06	25° \mathbb{I} 59'58	superior conj	4835 May 30 05:05	10° \mathbb{I} 41'36 -0°20'42
behind sun end	4834 Jun 15 06:24	26° \mathbb{I} 50'14	minimum elong	4835 May 30 06:10	10° \mathbb{I} 47'19 0°20'29
	4834 Jun 16 17:27	0° \mathbb{B}	asc. node	4835 Jun 01 05:14	14° \mathbb{I} 56'17
evening rise	4834 Jun 22 01:55	11° \mathbb{B} 33'22	evening rise	4835 Jun 06 12:39	26° \mathbb{I} 12'20
	4834 Jul 01 11:22	0° \mathbb{Q}		4835 Jun 08 08:28	0° \mathbb{B}
evening max el	4834 Jul 15 08:49	19° \mathbb{Q} 07'39 23°24'48	evening max el	4835 Jun 27 01:02	29° \mathbb{B} 33'09 21°49'03
desc. node	4834 Jul 20 21:00	23° \mathbb{Q} 28'14		4835 Jun 27 12:13	0° \mathbb{Q}
retrograde	4834 Jul 28 21:54	25° \mathbb{Q} 54'44	desc. node	4835 Jul 07 18:01	5° \mathbb{Q} 38'18
evening set	4834 Aug 01 21:59	25° \mathbb{Q} 19'39	retrograde	4835 Jul 09 14:25	5° \mathbb{Q} 46'19
min. Earth dist.	4834 Aug 08 18:21	22° \mathbb{Q} 09'45 0.55749 AU	evening set	4835 Jul 12 05:58	5° \mathbb{Q} 30'32
inferior conj	4834 Aug 10 17:25	21° \mathbb{Q} 00'18 -4°57'46	min. Earth dist.	4835 Jul 21 04:27	1° \mathbb{Q} 41'08 0.54882 AU
minimum elong	4834 Aug 10 11:51	21° \mathbb{Q} 08'33 4°57'02	inferior conj	4835 Jul 21 13:48	1° \mathbb{Q} 28'03 -3°48'38
morning rise	4834 Aug 19 04:07	17° \mathbb{Q} 07'06	minimum elong	4835 Jul 21 05:03	1° \mathbb{Q} 40'18 3°46'14
direct	4834 Aug 22 01:13	16° \mathbb{Q} 46'52		4835 Jul 24 06:08	30° \mathbb{R} \mathbb{B}
morning max el	4834 Sep 01 13:48	21° \mathbb{Q} 40'17 20°19'31	morning rise	4835 Jul 30 05:34	27° \mathbb{B} 36'50
	4834 Sep 08 10:17	0° \mathbb{P}	direct	4835 Aug 02 12:24	27° \mathbb{B} 13'11
asc. node	4834 Sep 10 07:28	2° \mathbb{P} 55'29		4835 Aug 10 23:33	0° \mathbb{Q}
morning set	4834 Sep 20 03:23	21° \mathbb{P} 21'47	morning max el	4835 Aug 14 15:33	2° \mathbb{Q} 54'29 21°48'47
	4834 Sep 24 08:06	0° \mathbb{A}	asc. node	4835 Aug 28 04:30	21° \mathbb{Q} 41'54
				4835 Sep 01 12:41	0° \mathbb{P}
superior conj	4834 Sep 27 18:01	6° \mathbb{A} 58'29 1°42'51	morning set	4835 Sep 04 12:50	6° \mathbb{P} 09'36
minimum elong	4834 Sep 27 18:47	7° \mathbb{A} 02'23 1°42'49			
max. Earth dist.	4834 Oct 03 00:58	17° \mathbb{A} 24'43 1.36479 AU	superior conj	4835 Sep 11 18:08	21° \mathbb{P} 24'10 1°42'54
			minimum elong	4835 Sep 11 17:30	21° \mathbb{P} 20'49 1°42'53

max. Earth dist.	4835 Sep 15 13:58	29° ♁ 17'58	1.34755 AU	minimum elong	4836 Aug 25 22:42	5° ♁ 57'57	1°36'25
	4835 Sep 15 22:17	0° ♁		max. Earth dist.	4836 Aug 28 11:43	11° ♁ 23'59	1.33425 AU
evening rise	4835 Sep 19 23:37	7° ♁ 59'31		evening rise	4836 Sep 02 13:54	21° ♁ 53'45	
	4835 Oct 02 11:10	0° ♁			4836 Sep 06 18:09	0° ♁	
desc. node	4835 Oct 03 17:18	2° ♁ 00'08		desc. node	4836 Sep 19 14:19	21° ♁ 49'08	
evening max el	4835 Oct 25 03:14	29° ♁ 53'54	26°51'19		4836 Sep 25 06:40	0° ♁	
	4835 Oct 25 05:46	0° ♁		evening max el	4836 Oct 06 15:17	13° ♁ 16'40	27°22'19
retrograde	4835 Nov 07 06:21	7° ♁ 10'41		retrograde	4836 Oct 20 04:21	20° ♁ 35'07	
evening set	4835 Nov 13 22:18	4° ♁ 31'01		evening set	4836 Oct 27 05:17	17° ♁ 55'55	
min. Earth dist.	4835 Nov 17 22:14	0° ♁ 31'33	0.65746 AU	min. Earth dist.	4836 Oct 30 23:32	14° ♁ 30'31	0.64286 AU
	4835 Nov 18 09:13	30° ♁		inferior conj	4836 Nov 02 09:17	11° ♁ 57'42	-2°30'39
inferior conj	4835 Nov 19 19:59	28° ♁ 18'38	-1°27'49	minimum elong	4836 Nov 02 13:37	11° ♁ 46'11	2°29'00
minimum elong	4835 Nov 19 22:27	28° ♁ 11'26	1°26'47	morning rise	4836 Nov 08 23:18	6° ♁ 32'55	
asc. node	4835 Nov 24 03:44	23° ♁ 51'36		asc. node	4836 Nov 10 00:47	6° ♁ 11'27	
morning rise	4835 Nov 25 23:29	22° ♁ 39'21		direct	4836 Nov 11 11:59	6° ♁ 00'25	
direct	4835 Nov 28 18:54	21° ♁ 55'58		morning max el	4836 Nov 18 00:04	9° ♁ 25'49	17°54'31
morning max el	4835 Dec 05 07:34	25° ♁ 27'13	18°16'33		4836 Dec 01 22:05	0° ♁	
	4835 Dec 09 04:08	0° ♁		morning set	4836 Dec 05 01:43	5° ♁ 20'38	
morning set	4835 Dec 24 09:30	23° ♁ 38'08		desc. node	4836 Dec 16 13:36	24° ♁ 30'12	
	4835 Dec 28 08:03	0° ♁					
desc. node	4835 Dec 30 16:36	3° ♁ 46'59		superior conj	4836 Dec 18 06:27	27° ♁ 15'49	-0°11'50
				minimum elong	4836 Dec 18 05:05	27° ♁ 10'14	0°11'38
superior conj	4836 Jan 08 14:22	17° ♁ 54'31	-0°58'57	behind sun begin	4836 Dec 17 21:57	26° ♁ 41'25	
minimum elong	4836 Jan 08 07:08	17° ♁ 26'05	0°58'02	behind sun end	4836 Dec 18 12:12	27° ♁ 39'01	
max. Earth dist.	4836 Jan 10 12:35	20° ♁ 56'02	1.45287 AU		4836 Dec 19 23:15	0° ♁	
	4836 Jan 16 07:37	0° ♁		max. Earth dist.	4836 Dec 23 07:13	5° ♁ 18'43	1.44722 AU
evening rise	4836 Jan 24 19:06	13° ♁ 14'58		evening rise	4837 Jan 03 08:03	22° ♁ 30'32	
	4836 Feb 04 13:27	0° ♁			4837 Jan 08 05:35	0° ♁	
greatest brilliancy	4836 Feb 05 04:28	0° ♁ 57'26	-0.7m		4837 Jan 29 12:22	0° ♁	
evening max el	4836 Feb 17 10:48	17° ♁ 36'07	19°19'04	evening max el	4837 Jan 30 14:24	1° ♁ 09'19	20°16'12
asc. node	4836 Feb 20 03:00	19° ♁ 57'36		asc. node	4837 Feb 06 00:04	5° ♁ 34'03	
retrograde	4836 Feb 24 12:56	21° ♁ 39'06		retrograde	4837 Feb 07 11:05	5° ♁ 45'30	
evening set	4836 Feb 28 00:12	20° ♁ 28'42		evening set	4837 Feb 11 06:46	4° ♁ 20'51	
inferior conj	4836 Mar 04 12:10	14° ♁ 37'01	3°22'03		4837 Feb 15 08:40	30° ♁	
minimum elong	4836 Mar 04 10:33	14° ♁ 42'18	3°21'50	inferior conj	4837 Feb 16 15:49	28° ♁ 15'47	2°59'09
min. Earth dist.	4836 Mar 05 20:30	12° ♁ 52'18	0.66399 AU	minimum elong	4837 Feb 16 13:33	28° ♁ 23'30	2°58'39
morning rise	4836 Mar 09 20:35	8° ♁ 22'25		min. Earth dist.	4837 Feb 17 10:13	27° ♁ 13'25	0.67368 AU
direct	4836 Mar 16 03:15	5° ♁ 35'30		morning rise	4837 Feb 21 20:07	22° ♁ 01'30	
desc. node	4836 Mar 27 15:50	12° ♁ 02'00		direct	4837 Feb 27 13:50	19° ♁ 27'39	
morning max el	4836 Mar 28 17:40	13° ♁ 05'43	26°04'47	morning max el	4837 Mar 11 02:20	26° ♁ 21'13	24°42'53
	4836 Apr 11 09:23	0° ♁			4837 Mar 14 11:08	0° ♁	
	4836 Apr 30 04:42	0° ♁		desc. node	4837 Mar 14 12:52	0° ♁ 04'58	
morning set	4836 May 03 21:21	6° ♁ 42'26			4837 Apr 04 23:25	0° ♁	
max. Earth dist.	4836 May 07 19:23	14° ♁ 07'58	1.35314 AU	morning set	4837 Apr 16 03:03	18° ♁ 38'24	
				max. Earth dist.	4837 Apr 19 17:56	25° ♁ 08'55	1.37251 AU
					4837 Apr 22 08:44	0° ♁	
superior conj	4836 May 13 00:43	24° ♁ 30'23	-0°50'20				
minimum elong	4836 May 13 03:29	24° ♁ 44'23	0°49'49	superior conj	4837 Apr 26 09:55	7° ♁ 44'39	-1°19'18
	4836 May 15 17:04	0° ♁		minimum elong	4837 Apr 26 14:11	8° ♁ 05'29	1°18'39
asc. node	4836 May 18 02:17	4° ♁ 56'13		evening rise	4837 May 04 22:33	24° ♁ 41'49	
evening rise	4836 May 20 20:20	10° ♁ 37'38		asc. node	4837 May 04 23:20	24° ♁ 45'43	
	4836 May 31 03:28	0° ♁			4837 May 07 14:55	0° ♁	
evening max el	4836 Jun 08 03:57	10° ♁ 28'54	20°25'38	evening max el	4837 May 21 19:26	22° ♁ 06'46	19°20'50
retrograde	4836 Jun 19 03:25	15° ♁ 51'11		retrograde	4837 May 31 01:21	26° ♁ 37'24	
evening set	4836 Jun 21 03:01	15° ♁ 41'24		evening set	4837 Jun 02 00:39	26° ♁ 26'00	
desc. node	4836 Jun 23 15:02	15° ♁ 03'11		inferior conj	4837 Jun 10 13:29	22° ♁ 18'27	-0°01'03
inferior conj	4836 Jun 30 07:44	11° ♁ 43'48	-1°59'00	minimum elong	4837 Jun 10 13:27	22° ♁ 18'31	0°01'03
minimum elong	4836 Jun 30 02:10	11° ♁ 51'54	1°56'59	transit middle	4837 Jun 10 13:27	22° ♁ 18'31	0°01'03
min. Earth dist.	4836 Jul 01 16:18	10° ♁ 56'25	0.54959 AU	transit begin	4837 Jun 10 09:35	22° ♁ 24'50	
morning rise	4836 Jul 09 00:19	7° ♁ 33'40		transit end	4837 Jun 10 17:18	22° ♁ 12'12	
direct	4836 Jul 12 22:18	7° ♁ 00'32		desc. node	4837 Jun 10 12:04	22° ♁ 20'46	
morning max el	4836 Jul 26 08:22	13° ♁ 31'19	23°30'47	min. Earth dist.	4837 Jun 13 06:28	20° ♁ 32'24	0.55981 AU
	4836 Aug 07 23:42	0° ♁		morning rise	4837 Jun 18 23:19	17° ♁ 35'09	
asc. node	4836 Aug 14 01:33	10° ♁ 57'45		direct	4837 Jun 23 18:55	16° ♁ 42'12	
morning set	4836 Aug 19 00:13	21° ♁ 02'08		morning max el	4837 Jul 07 21:57	23° ♁ 52'19	25°12'37
	4836 Aug 23 04:29	0° ♁			4837 Jul 13 11:37	0° ♁	
superior conj	4836 Aug 26 00:21	6° ♁ 06'52	1°36'32	asc. node	4837 Jul 31 22:36	0° ♁ 35'13	

	4837 Jul 31 15:42	0°♎			4838 Jul 08 05:11	0°♏	
morning set	4837 Aug 03 11:54	5°♎54'30		morning set	4838 Jul 18 22:13	20°♏41'20	
				asc. node	4838 Jul 18 19:38	20°♏27'40	
superior conj	4837 Aug 10 10:18	20°♎58'59	1°24'43		4838 Jul 23 05:46	0°♎	
minimum elong	4837 Aug 10 08:05	20°♎46'52	1°24'27				
max. Earth dist.	4837 Aug 11 17:20	23°♎48'41	1.32521 AU	superior conj	4838 Jul 25 21:55	5°♎53'39	1°08'10
	4837 Aug 14 14:07	0°♎		minimum elong	4838 Jul 25 19:38	5°♎41'00	1°07'46
evening rise	4837 Aug 17 13:22	6°♎13'51		max. Earth dist.	4838 Jul 26 03:44	6°♎25'47	1.32041 AU
	4837 Aug 30 07:25	0°♎		evening rise	4838 Aug 01 19:07	20°♎50'35	
desc. node	4837 Sep 06 11:21	11°♎04'39			4838 Aug 06 07:03	0°♎	
evening max el	4837 Sep 19 00:55	26°♎11'50	27°24'01	desc. node	4838 Aug 24 08:23	29°♎32'26	
	4837 Sep 23 15:18	0°♎			4838 Aug 24 16:56	0°♎	
retrograde	4837 Oct 02 19:34	3°♎26'37		evening max el	4838 Sep 01 05:14	8°♎25'12	26°52'23
evening set	4837 Oct 09 23:49	0°♎58'36		retrograde	4838 Sep 15 02:52	15°♎35'24	
	4837 Oct 11 07:48	30°♎		evening set	4838 Sep 22 01:32	13°♎30'36	
min. Earth dist.	4837 Oct 13 14:54	28°♎02'14	0.62513 AU	min. Earth dist.	4838 Sep 25 19:21	10°♎52'43	0.60513 AU
inferior conj	4837 Oct 16 11:51	25°♎19'16	-3°32'28	inferior conj	4838 Sep 29 00:14	8°♎13'24	-4°27'37
minimum elong	4837 Oct 16 17:42	25°♎05'25	3°30'38	minimum elong	4838 Sep 29 06:19	8°♎00'46	4°26'16
morning rise	4837 Oct 23 13:16	20°♎12'19		morning rise	4838 Oct 06 13:03	3°♎27'45	
direct	4837 Oct 25 22:01	19°♎47'05		direct	4838 Oct 08 21:04	3°♎06'43	
asc. node	4837 Oct 27 21:51	20°♎05'32		asc. node	4838 Oct 14 18:53	5°♎28'20	
morning max el	4837 Nov 01 16:27	23°♎14'41	17°50'20	morning max el	4838 Oct 16 05:29	6°♎44'47	18°05'06
	4837 Nov 07 00:23	0°♎			4838 Oct 31 01:47	0°♎	
morning set	4837 Nov 17 16:38	18°♎08'52		morning set	4838 Oct 31 23:50	1°♎42'47	
	4837 Nov 24 09:46	0°♎					
superior conj	4837 Nov 28 23:45	7°♎51'40	0°31'04	superior conj	4838 Nov 10 18:49	19°♎42'16	1°04'17
minimum elong	4837 Nov 29 02:35	8°♎03'40	0°30'40	minimum elong	4838 Nov 10 22:50	20°♎00'08	1°03'47
desc. node	4837 Dec 03 10:38	15°♎17'12			4838 Nov 16 16:44	0°♎	
max. Earth dist.	4837 Dec 05 23:14	19°♎24'24	1.43497 AU	max. Earth dist.	4838 Nov 18 10:35	2°♎56'33	1.41748 AU
	4837 Dec 12 15:12	0°♎		desc. node	4838 Nov 20 07:39	6°♎03'59	
evening rise	4837 Dec 13 19:18	1°♎49'26		evening rise	4838 Nov 23 19:53	11°♎46'53	
	4838 Jan 01 18:59	0°♎			4838 Dec 05 15:35	0°♎	
evening max el	4838 Jan 13 12:35	14°♎44'13	21°25'34	evening max el	4838 Dec 27 05:46	28°♎20'43	22°43'00
retrograde	4838 Jan 22 08:47	19°♎58'51			4838 Dec 28 23:14	0°♎	
asc. node	4838 Jan 23 21:06	19°♎46'31		retrograde	4839 Jan 06 04:29	4°♎15'07	
evening set	4838 Jan 26 14:31	18°♎18'55		evening set	4839 Jan 10 21:50	2°♎19'17	
inferior conj	4838 Jan 31 22:39	12°♎03'17	2°26'48	asc. node	4839 Jan 10 18:09	2°♎26'49	
minimum elong	4838 Jan 31 20:14	12°♎11'41	2°26'05		4839 Jan 13 04:40	30°♎	
min. Earth dist.	4838 Feb 01 04:27	11°♎43'11	0.67929 AU	inferior conj	4839 Jan 16 06:40	25°♎56'22	1°46'27
morning rise	4838 Feb 06 01:45	5°♎50'58		minimum elong	4839 Jan 16 04:33	26°♎03'41	1°45'42
direct	4838 Feb 11 05:00	3°♎36'56		min. Earth dist.	4839 Jan 16 00:54	26°♎16'17	0.68093 AU
morning max el	4838 Feb 21 11:22	9°♎42'36	23°13'52	morning rise	4839 Jan 21 11:09	19°♎47'34	
desc. node	4838 Mar 01 09:54	18°♎59'17		direct	4839 Jan 25 23:45	17°♎56'20	
	4838 Mar 09 11:01	0°♎		morning max el	4839 Feb 04 00:14	23°♎12'25	21°47'05
morning set	4838 Mar 28 08:31	29°♎22'09			4839 Feb 09 22:13	0°♎	
	4838 Mar 28 17:33	0°♎		desc. node	4839 Feb 16 06:55	8°♎30'19	
max. Earth dist.	4838 Apr 01 13:09	6°♎31'20	1.39428 AU		4839 Mar 02 19:56	0°♎	
				morning set	4839 Mar 08 09:30	8°♎44'54	
superior conj	4838 Apr 09 04:41	20°♎14'30	-1°44'50	max. Earth dist.	4839 Mar 14 12:31	18°♎44'00	1.41567 AU
minimum elong	4838 Apr 09 09:37	20°♎37'25	1°44'19		4839 Mar 21 03:24	0°♎	
	4838 Apr 14 08:58	0°♎		superior conj	4839 Mar 22 04:12	1°♎48'20	-2°02'57
evening rise	4838 Apr 18 16:25	8°♎17'26		minimum elong	4839 Mar 22 07:47	2°♎04'03	2°02'47
asc. node	4838 Apr 21 20:23	14°♎20'04		evening rise	4839 Apr 01 22:22	21°♎15'52	
	4838 May 01 03:44	0°♎			4839 Apr 06 17:06	0°♎	
evening max el	4838 May 04 21:15	4°♎23'42	18°36'20	asc. node	4839 Apr 08 17:25	3°♎33'36	
retrograde	4838 May 12 17:27	8°♎15'29		evening max el	4839 Apr 18 05:58	17°♎11'08	18°11'59
evening set	4838 May 14 22:44	7°♎57'57		retrograde	4839 Apr 25 04:18	20°♎40'31	
inferior conj	4838 May 22 15:32	3°♎31'35	1°36'10	evening set	4839 Apr 27 16:20	20°♎13'55	
minimum elong	4838 May 22 18:40	3°♎25'34	1°35'09	inferior conj	4839 May 04 14:55	15°♎26'54	2°42'08
min. Earth dist.	4838 May 26 00:10	0°♎58'14	0.57725 AU	minimum elong	4839 May 04 18:17	15°♎19'20	2°41'21
	4838 May 27 09:27	30°♎		min. Earth dist.	4839 May 07 23:48	12°♎27'08	0.59852 AU
desc. node	4838 May 28 09:07	29°♎22'02		morning rise	4839 May 11 17:40	9°♎41'48	
morning rise	4838 May 30 11:23	28°♎13'29		desc. node	4839 May 15 06:09	8°♎08'33	
direct	4838 Jun 05 05:27	26°♎50'26		direct	4839 May 18 04:46	7°♎44'14	
	4838 Jun 14 05:24	0°♎		morning max el	4839 Jun 01 13:16	15°♎36'19	27°34'00
morning max el	4838 Jun 19 14:25	4°♎26'25	26°38'15		4839 Jun 13 06:23	0°♎	

	4839 Jun 30 15:24	0°☿		morning set	4840 Jun 16 07:43	19°♊35'27	
morning set	4839 Jul 03 05:31	5°☿17'28			4840 Jun 21 06:51	0°☿	
asc. node	4839 Jul 05 16:40	10°☿30'00		asc. node	4840 Jun 21 13:41	0°☿36'47	
max. Earth dist.	4839 Jul 09 15:12	19°☿04'28	1.31974 AU	max. Earth dist.	4840 Jun 21 23:35	1°☿30'11	1.32324 AU
superior conj	4839 Jul 10 09:30	20°☿45'16	0°47'27	superior conj	4840 Jun 23 19:15	5°☿27'13	0°23'08
minimum elong	4839 Jul 10 07:36	20°☿34'48	0°47'03	minimum elong	4840 Jun 23 18:11	5°☿21'27	0°22'54
	4839 Jul 14 14:20	0°♌		evening rise	4840 Jun 30 16:21	20°☿24'43	
evening rise	4839 Jul 17 04:48	5°♌36'45			4840 Jul 05 07:53	0°♌	
	4839 Jul 30 00:09	0°♍			4840 Jul 25 03:53	0°♍	
desc. node	4839 Aug 11 05:24	16°♍53'05		evening max el	4840 Jul 25 16:00	0°♍29'36	24°20'33
evening max el	4839 Aug 14 01:58	19°♍49'11	25°48'27	desc. node	4840 Jul 28 02:25	2°♍39'27	
retrograde	4839 Aug 28 01:00	26°♍55'48		retrograde	4840 Aug 08 12:09	7°♍28'09	
evening set	4839 Sep 03 05:34	25°♍24'56		evening set	4840 Aug 13 09:15	6°♍35'06	
min. Earth dist.	4839 Sep 07 14:10	22°♍48'37	0.58449 AU	min. Earth dist.	4840 Aug 19 02:55	3°♍41'25	0.56589 AU
inferior conj	4839 Sep 10 18:55	20°♍30'34	-5°06'18	inferior conj	4840 Aug 21 17:29	2°♍02'55	-5°13'54
minimum elong	4839 Sep 10 22:36	20°♍23'55	5°05'56	minimum elong	4840 Aug 21 15:36	2°♍05'54	5°13'50
morning rise	4839 Sep 18 17:53	16°♍08'13			4840 Aug 25 03:26	30°♌♌	
direct	4839 Sep 21 04:30	15°♍49'04		morning rise	4840 Aug 30 00:29	28°♌01'25	
morning max el	4839 Sep 29 11:49	19°♍47'18	18°40'17	direct	4840 Sep 01 16:47	27°♌42'13	
asc. node	4839 Oct 01 15:54	22°♍06'36			4840 Sep 08 14:26	0°♎	
	4839 Oct 07 04:10	0°♏		morning max el	4840 Sep 11 08:16	2°♎12'31	19°37'05
morning set	4839 Oct 15 18:23	15°♏48'28		asc. node	4840 Sep 17 12:55	9°♎45'03	
	4839 Oct 23 02:22	0°♐		morning set	4840 Sep 28 20:44	0°♏16'06	
					4840 Sep 28 17:32	0°♏	
superior conj	4839 Oct 24 11:03	2°♐34'27	1°26'47	superior conj	4840 Oct 06 19:04	16°♏12'49	1°39'26
minimum elong	4839 Oct 24 14:17	2°♐49'37	1°26'28	minimum elong	4840 Oct 06 20:45	16°♏21'11	1°39'21
max. Earth dist.	4839 Oct 31 16:49	15°♐44'26	1.39696 AU	max. Earth dist.	4840 Oct 12 21:13	27°♏53'18	1.37600 AU
evening rise	4839 Nov 04 18:17	22°♐43'44			4840 Oct 14 00:42	0°♐	
desc. node	4839 Nov 07 04:40	26°♐47'01		evening rise	4840 Oct 16 15:23	4°♐42'52	
	4839 Nov 09 03:59	0°♑		desc. node	4840 Oct 24 01:41	17°♐22'26	
	4839 Nov 29 14:17	0°♒			4840 Nov 01 04:00	0°♑	
evening max el	4839 Dec 09 19:31	11°♒59'59	24°02'57	evening max el	4840 Nov 21 08:02	25°♑42'48	25°18'44
retrograde	4839 Dec 20 20:55	18°♒30'15			4840 Nov 26 09:28	0°♒	
evening set	4839 Dec 26 03:07	16°♒18'49		retrograde	4840 Dec 03 09:04	2°♒39'46	
asc. node	4839 Dec 28 15:10	13°♒43'42		evening set	4840 Dec 09 04:48	0°♒14'25	
min. Earth dist.	4839 Dec 30 21:19	10°♒49'10	0.67885 AU		4840 Dec 09 11:27	30°♑♑	
inferior conj	4839 Dec 31 14:01	9°♒52'38	0°59'07	min. Earth dist.	4840 Dec 13 15:25	25°♑19'01	0.67323 AU
minimum elong	4839 Dec 31 12:40	9°♒57'12	0°58'36	inferior conj	4840 Dec 14 18:59	23°♑49'38	0°05'48
morning rise	4840 Jan 05 22:16	3°♒48'59		minimum elong	4840 Dec 14 18:50	23°♑50'08	0°05'45
direct	4840 Jan 09 21:05	2°♒20'22		transit middle	4840 Dec 14 18:50	23°♑50'08	0°05'45
morning max el	4840 Jan 17 20:01	6°♒53'24	20°29'30	transit begin	4840 Dec 14 16:14	23°♑58'35	
desc. node	4840 Feb 03 03:56	28°♒27'53		transit end	4840 Dec 14 21:26	23°♑41'40	
	4840 Feb 04 04:50	0°♓		asc. node	4840 Dec 14 12:10	24°♑11'46	
morning set	4840 Feb 15 10:44	17°♓05'03		morning rise	4840 Dec 20 09:09	17°♑53'13	
	4840 Feb 23 15:29	0°♈		direct	4840 Dec 23 19:47	16°♑44'52	
max. Earth dist.	4840 Feb 24 18:52	1°♈50'02	1.43393 AU	morning max el	4840 Dec 30 23:42	20°♑45'23	19°25'25
					4841 Jan 07 11:12	0°♒	
superior conj	4840 Mar 02 03:39	12°♈15'24	-2°08'25	greatest brilliancy	4841 Jan 13 04:10	8°♒18'24	-0.7m
minimum elong	4840 Mar 02 02:43	12°♈11'31	2°08'25	desc. node	4841 Jan 20 00:57	18°♒44'48	
	4840 Mar 12 12:48	0°♉		morning set	4841 Jan 24 08:50	25°♒25'12	
evening rise	4840 Mar 14 12:05	3°♉27'05			4841 Jan 27 07:46	0°♓	
asc. node	4840 Mar 25 14:27	22°♉18'48		max. Earth dist.	4841 Feb 06 07:58	15°♓39'45	1.44679 AU
	4840 Mar 31 10:29	0°♊					
evening max el	4840 Mar 31 18:10	0°♊19'24	18°07'09	superior conj	4841 Feb 10 01:50	21°♓36'36	-1°55'56
retrograde	4840 Apr 07 05:51	3°♊41'37		minimum elong	4841 Feb 09 18:43	21°♓08'11	1°55'28
evening set	4840 Apr 10 00:11	3°♊04'07			4841 Feb 15 06:52	0°♈	
	4840 Apr 14 06:46	30°♌♌		evening rise	4841 Feb 24 05:15	14°♈43'34	
inferior conj	4840 Apr 16 08:24	27°♉57'12	3°19'12		4841 Mar 05 10:14	0°♉	
minimum elong	4840 Apr 16 10:26	27°♉51'58	3°18'56	asc. node	4841 Mar 12 11:28	10°♉27'16	
min. Earth dist.	4840 Apr 19 07:34	24°♉55'43	0.62037 AU	evening max el	4841 Mar 15 06:54	13°♉41'29	18°21'09
morning rise	4840 Apr 22 19:04	21°♉55'39		retrograde	4841 Mar 21 17:37	17°♉10'07	
direct	4840 Apr 29 14:51	19°♉28'03		evening set	4841 Mar 24 18:09	16°♉20'27	
desc. node	4840 May 01 03:11	19°♉34'50		inferior conj	4841 Mar 30 15:56	10°♉54'53	3°33'20
morning max el	4840 May 13 18:09	27°♉27'59	27°52'41	minimum elong	4841 Mar 30 16:18	10°♉53'49	3°33'19
	4840 May 16 04:02	0°♊		min. Earth dist.	4841 Apr 02 00:35	8°♉13'11	0.64026 AU
	4840 Jun 05 23:10	0°♋					

morning rise	4841 Apr 05 13:36	4° Υ 44'58		minimum elong	4842 Mar 14 08:38	24° X 15'33	3°30'02
direct	4841 Apr 12 09:27	1° Υ 59'07		min. Earth dist.	4842 Mar 16 02:39	22° X 04'44	0.65656 AU
desc. node	4841 Apr 18 00:12	3° Υ 33'12		morning rise	4842 Mar 19 21:55	17° X 58'48	
morning max el	4841 Apr 26 02:51	9° Υ 56'56	27°34'21	direct	4842 Mar 26 10:53	15° X 08'46	
	4841 May 11 19:41	0° B		desc. node	4842 Apr 04 21:13	19° X 30'36	
	4841 May 29 07:51	0° II		morning max el	4842 Apr 08 12:47	22° X 52'23	26°44'31
morning set	4841 May 31 02:23	3° II 27'54			4842 Apr 14 20:00	0° Υ	
max. Earth dist.	4841 Jun 05 01:03	13° II 31'36	1.33121 AU		4842 May 05 02:44	0° B	
				morning set	4842 May 14 10:20	16° B 45'20	
superior conj	4841 Jun 08 01:20	19° II 53'50	-0°04'06	max. Earth dist.	4842 May 18 16:23	25° B 02'50	1.34384 AU
minimum elong	4841 Jun 08 01:32	19° II 54'55	0°04'04		4842 May 21 03:12	0° II	
behind sun begin	4841 Jun 07 20:18	19° II 26'56					
behind sun end	4841 Jun 08 06:46	20° II 22'56		superior conj	4842 May 23 01:34	3° II 58'46	-0°33'13
asc. node	4841 Jun 08 10:44	20° II 44'07		minimum elong	4842 May 23 03:21	4° II 08'01	0°32'51
	4841 Jun 12 18:03	0° B		asc. node	4842 May 26 07:47	10° II 48'05	
evening rise	4841 Jun 15 03:56	5° B 08'48		evening rise	4842 May 30 13:40	19° II 43'06	
	4841 Jun 28 12:51	0° Ω			4842 Jun 04 16:06	0° B	
evening max el	4841 Jul 07 05:16	10° Ω 51'42	22°43'11	evening max el	4842 Jun 19 01:41	21° B 28'25	21°11'32
desc. node	4841 Jul 14 23:27	16° Ω 18'09		retrograde	4842 Jun 30 23:48	27° B 20'28	
retrograde	4841 Jul 20 10:34	17° Ω 26'38		desc. node	4842 Jul 01 20:28	27° B 18'43	
evening set	4841 Jul 23 19:07	17° Ω 01'58		evening set	4842 Jul 03 06:29	27° B 08'24	
min. Earth dist.	4841 Jul 31 13:20	13° Ω 36'48	0.55276 AU	inferior conj	4842 Jul 12 15:03	23° B 10'14	-3°05'28
inferior conj	4841 Aug 01 21:25	12° Ω 50'55	-4°34'43	minimum elong	4842 Jul 12 06:58	23° B 21'34	3°02'52
minimum elong	4841 Aug 01 13:46	13° Ω 01'54	4°33'12	min. Earth dist.	4842 Jul 12 23:56	22° B 57'45	0.54800 AU
morning rise	4841 Aug 10 10:29	9° Ω 00'26		morning rise	4842 Jul 21 07:54	19° B 13'33	
direct	4841 Aug 13 11:17	8° Ω 39'08		direct	4842 Jul 24 20:42	18° B 46'40	
morning max el	4841 Aug 24 16:44	13° Ω 52'46	20°55'19	morning max el	4842 Aug 06 14:01	24° B 49'13	22°31'12
asc. node	4841 Sep 04 09:58	28° Ω 10'07			4842 Aug 11 08:17	0° Ω	
	4841 Sep 05 11:15	0° P		asc. node	4842 Aug 22 07:01	17° Ω 10'38	
morning set	4841 Sep 13 04:13	14° P 58'14		morning set	4842 Aug 28 14:47	29° Ω 49'22	
	4841 Sep 20 09:38	0° $\underline{\Omega}$			4842 Aug 28 16:48	0° P	
superior conj	4841 Sep 20 14:19	0° $\underline{\Omega}$ 24'05	1°43'42	superior conj	4842 Sep 04 17:25	14° P 58'25	1°40'55
minimum elong	4841 Sep 20 14:27	0° $\underline{\Omega}$ 24'47	1°43'43	minimum elong	4842 Sep 04 16:17	14° P 52'27	1°40'52
max. Earth dist.	4841 Sep 25 05:54	9° $\underline{\Omega}$ 45'50	1.35700 AU	max. Earth dist.	4842 Sep 07 23:00	21° P 45'19	1.34143 AU
evening rise	4841 Sep 29 07:51	17° $\underline{\Omega}$ 35'44			4842 Sep 12 00:52	0° $\underline{\Omega}$	
	4841 Oct 06 06:19	0° M		evening rise	4842 Sep 12 15:25	1° $\underline{\Omega}$ 11'23	
desc. node	4841 Oct 10 22:42	7° M 45'05		desc. node	4842 Sep 27 19:45	27° $\underline{\Omega}$ 49'07	
	4841 Oct 26 10:59	0° X			4842 Sep 29 05:46	0° M	
evening max el	4841 Nov 03 20:45	9° X 25'16	26°22'51	evening max el	4842 Oct 17 09:31	22° M 59'07	27°07'46
retrograde	4841 Nov 16 16:03	16° X 37'19			4842 Oct 28 09:24	0° X	
evening set	4841 Nov 23 01:00	14° X 01'33		retrograde	4842 Oct 30 17:13	0° X 16'32	
min. Earth dist.	4841 Nov 27 04:47	9° X 41'24	0.66419 AU		4842 Nov 01 23:00	30° R M	
inferior conj	4841 Nov 28 19:38	7° X 43'14	-0°52'32	evening set	4842 Nov 06 13:35	27° M 36'09	
minimum elong	4841 Nov 28 21:04	7° X 38'52	0°51'55	min. Earth dist.	4842 Nov 10 11:04	23° M 51'26	0.65170 AU
asc. node	4841 Dec 01 09:13	4° X 44'40		inferior conj	4842 Nov 12 13:48	21° M 29'27	-1°54'20
morning rise	4841 Dec 04 17:44	1° X 56'39		minimum elong	4842 Nov 12 17:05	21° M 20'16	1°53'00
direct	4841 Dec 07 18:08	1° X 05'08		asc. node	4842 Nov 18 06:15	16° M 15'56	
morning max el	4841 Dec 14 10:14	4° X 44'06	18°36'55	morning rise	4842 Nov 18 21:37	15° M 55'45	
	4842 Jan 01 01:45	0° B		direct	4842 Nov 21 13:58	15° M 17'18	
morning set	4842 Jan 04 03:30	4° B 52'05		morning max el	4842 Nov 28 01:22	18° M 44'45	18°05'03
desc. node	4842 Jan 06 21:57	9° B 15'01			4842 Dec 06 11:01	0° X	
				morning set	4842 Dec 16 03:50	15° X 48'16	
superior conj	4842 Jan 20 06:32	0° \approx 15'32	-1°23'57	desc. node	4842 Dec 24 18:59	29° X 54'39	
minimum elong	4842 Jan 19 21:19	29° B 39'22	1°22'57		4842 Dec 24 20:19	0° B	
max. Earth dist.	4842 Jan 20 01:57	29° B 57'33	1.45281 AU				
	4842 Jan 20 02:35	0° \approx		superior conj	4842 Dec 30 12:45	9° B 05'28	-0°39'01
evening rise	4842 Feb 04 23:06	25° \approx 02'18		minimum elong	4842 Dec 30 07:54	8° B 46'17	0°38'21
	4842 Feb 08 01:42	0° X		max. Earth dist.	4843 Jan 02 21:41	14° B 25'06	1.45139 AU
greatest brilliancy	4842 Feb 13 08:17	8° X 23'50	-0.8m		4843 Jan 12 21:18	0° \approx	
evening max el	4842 Feb 26 17:35	27° X 10'41	18°53'09	evening rise	4843 Jan 15 20:03	4° \approx 34'01	
asc. node	4842 Feb 27 08:31	27° X 47'28		greatest brilliancy	4843 Jan 29 02:17	24° \approx 51'36	-0.7m
	4842 Mar 02 05:22	0° Υ			4843 Feb 01 14:23	0° X	
retrograde	4842 Mar 05 11:46	0° Υ 57'43		evening max el	4843 Feb 10 00:08	10° X 42'44	19°41'40
evening set	4842 Mar 08 18:57	29° X 55'01		asc. node	4843 Feb 14 05:34	14° X 05'58	
	4842 Mar 08 15:42	30° R X		retrograde	4843 Feb 17 09:14	14° X 58'40	
inferior conj	4842 Mar 14 09:40	24° X 12'20	3°30'07	evening set	4843 Feb 21 00:01	13° X 42'06	

inferior conj	4843 Feb 26 10:27	7° H 44'18	3°13'35		4844 Jan 05 23:50	0° \approx	
minimum elong	4843 Feb 26 08:30	7° H 50'48	3°13'15	evening max el	4844 Jan 24 01:19	24° \approx 15'53	20°44'25
min. Earth dist.	4843 Feb 27 12:36	6° H 17'44	0.66864 AU	retrograde	4844 Feb 01 07:31	29° \approx 08'20	
morning rise	4843 Mar 03 16:45	1° H 29'50		asc. node	4844 Feb 01 02:35	29° \approx 08'07	
	4843 Mar 05 16:09	30° R \approx		evening set	4844 Feb 05 07:18	27° \approx 37'09	
direct	4843 Mar 09 18:11	28° \approx 47'40		inferior conj	4844 Feb 10 15:42	21° \approx 26'56	2°46'29
	4843 Mar 14 05:52	0° H		minimum elong	4844 Feb 10 13:19	21° \approx 35'10	2°45'53
morning max el	4843 Mar 21 22:10	6° H 03'19	25°31'33	min. Earth dist.	4844 Feb 11 04:31	20° \approx 42'58	0.67648 AU
desc. node	4843 Mar 22 18:15	6° H 55'00		morning rise	4844 Feb 15 19:09	15° \approx 13'16	
	4843 Apr 09 10:28	0° Y		direct	4844 Feb 21 06:40	12° \approx 47'32	
morning set	4843 Apr 27 03:11	29° Y 15'13		morning max el	4844 Mar 03 06:54	19° \approx 21'58	24°05'27
	4843 Apr 27 13:01	0° B		desc. node	4844 Mar 08 15:17	25° \approx 21'44	
max. Earth dist.	4843 Apr 30 20:40	6° B 10'03	1.36098 AU		4844 Mar 12 07:22	0° H	
					4844 Apr 01 14:05	0° Y	
superior conj	4843 May 06 17:13	17° B 33'54	-1°02'49	morning set	4844 Apr 07 23:24	10° Y 42'40	
minimum elong	4843 May 06 20:40	17° B 51'09	1°02'13	max. Earth dist.	4844 Apr 11 17:09	17° Y 17'02	1.38154 AU
	4843 May 12 20:13	0° II					
asc. node	4843 May 13 04:51	0° II 44'08		superior conj	4844 Apr 18 20:49	0° B 30'26	-1°30'44
evening rise	4843 May 14 19:23	4° II 00'33		minimum elong	4844 Apr 19 01:32	0° B 53'00	1°30'07
	4843 May 29 22:48	0° B			4844 Apr 18 14:25	0° B	
evening max el	4843 Jun 01 09:58	2° B 41'20	19°55'34	evening rise	4844 Apr 27 18:29	17° B 53'52	
retrograde	4843 Jun 11 15:18	7° B 41'04		asc. node	4844 Apr 29 01:55	20° B 27'56	
evening set	4843 Jun 13 13:31	7° B 31'12			4844 May 04 02:50	0° II	
desc. node	4843 Jun 18 17:30	5° B 40'45		evening max el	4844 May 14 06:10	14° II 36'29	18°59'25
inferior conj	4843 Jun 22 12:29	3° B 30'29	-1°07'54	retrograde	4844 May 22 20:44	18° II 49'11	
minimum elong	4843 Jun 22 09:20	3° B 35'16	1°06'44	evening set	4844 May 24 22:01	18° II 35'45	
min. Earth dist.	4843 Jun 24 12:23	2° B 17'50	0.55288 AU	inferior conj	4844 Jun 02 02:25	14° II 20'44	0°43'39
	4843 Jun 28 19:41	30° R II		minimum elong	4844 Jun 02 04:07	14° II 17'44	0°43'02
morning rise	4843 Jul 01 03:17	29° II 07'41		desc. node	4844 Jun 04 14:31	12° II 35'29	
direct	4843 Jul 05 09:47	28° II 27'45		min. Earth dist.	4844 Jun 05 04:04	12° II 12'29	0.56646 AU
	4843 Jul 11 20:02	0° B		morning rise	4844 Jun 10 06:55	9° II 21'43	
morning max el	4843 Jul 19 04:41	5° B 16'05	24°15'05	direct	4844 Jun 15 12:04	8° II 17'12	
	4843 Aug 05 17:27	0° Q		morning max el	4844 Jun 29 19:10	15° II 40'22	25°51'54
asc. node	4843 Aug 09 04:05	6° Q 36'38			4844 Jul 11 08:49	0° B	
morning set	4843 Aug 13 02:32	14° Q 42'49		asc. node	4844 Jul 26 01:08	26° B 21'15	
				morning set	4844 Jul 27 13:51	29° B 33'36	
superior conj	4843 Aug 20 01:30	29° Q 46'03	1°32'10		4844 Jul 27 18:50	0° Q	
minimum elong	4843 Aug 19 23:33	29° Q 35'29	1°31'58				
	4843 Aug 20 04:04	0° P		superior conj	4844 Aug 03 12:24	14° Q 40'08	1°18'16
max. Earth dist.	4843 Aug 22 00:34	4° P 00'23	1.32992 AU	minimum elong	4844 Aug 03 10:06	14° Q 27'28	1°17'55
evening rise	4843 Aug 27 10:01	15° P 17'39		max. Earth dist.	4844 Aug 04 08:33	16° Q 30'52	1.32266 AU
	4843 Sep 04 02:16	0° Q		evening rise	4844 Aug 10 12:28	29° Q 45'33	
desc. node	4843 Sep 14 16:47	17° Q 25'22			4844 Aug 10 15:14	0° P	
	4843 Sep 24 02:07	0° M			4844 Aug 27 04:46	0° Q	
evening max el	4843 Sep 29 20:45	6° M 11'11	27°26'46	desc. node	4844 Aug 31 13:49	6° Q 22'28	
retrograde	4843 Oct 13 12:15	13° M 28'06		evening max el	4844 Sep 11 04:12	18° Q 48'56	27°14'31
evening set	4843 Oct 20 15:42	10° M 51'59		retrograde	4844 Sep 25 00:28	26° Q 02'28	
min. Earth dist.	4843 Oct 24 08:05	7° M 40'09	0.63575 AU	evening set	4844 Oct 02 03:40	23° Q 42'28	
inferior conj	4843 Oct 26 22:54	5° M 01'33	-2°57'15	min. Earth dist.	4844 Oct 05 18:43	20° Q 55'49	0.61685 AU
minimum elong	4843 Oct 27 03:58	4° M 48'42	2°55'27	inferior conj	4844 Oct 08 19:50	18° Q 12'06	-3°57'11
	4843 Nov 02 03:10	30° R Q		minimum elong	4844 Oct 09 02:00	17° Q 58'14	3°55'27
morning rise	4843 Nov 02 17:44	29° Q 44'09		morning rise	4844 Oct 16 02:14	13° Q 14'09	
direct	4843 Nov 05 04:28	29° Q 15'06		direct	4844 Oct 18 10:09	12° Q 51'10	
asc. node	4843 Nov 05 03:18	29° Q 15'07		asc. node	4844 Oct 22 00:20	13° Q 47'52	
	4843 Nov 08 05:00	0° M		morning max el	4844 Oct 25 09:39	16° Q 22'08	17°54'12
morning max el	4843 Nov 11 18:14	2° M 40'02	17°50'32		4844 Nov 03 23:09	0° M	
morning set	4843 Nov 28 06:29	28° M 00'45		morning set	4844 Nov 10 04:58	11° M 09'49	
	4843 Nov 29 10:02	0° J					
superior conj	4843 Dec 10 14:51	18° J 56'30	0°07'22	superior conj	4844 Nov 20 19:29	0° J 05'13	0°46'29
minimum elong	4843 Dec 10 15:38	18° J 59'44	0°07'16	minimum elong	4844 Nov 20 23:09	0° J 21'02	0°45'59
behind sun begin	4843 Dec 10 06:56	18° J 23'58			4844 Nov 20 18:17	0° J	
behind sun end	4843 Dec 11 00:19	19° J 35'26		desc. node	4844 Nov 27 13:03	11° J 26'57	
desc. node	4843 Dec 11 16:02	20° J 39'47		max. Earth dist.	4844 Nov 28 05:24	12° J 34'05	1.42800 AU
max. Earth dist.	4843 Dec 16 15:42	28° J 43'03	1.44274 AU	evening rise	4844 Dec 04 21:28	23° J 16'17	
	4843 Dec 17 11:01	0° B			4844 Dec 09 05:31	0° B	
evening rise	4843 Dec 26 06:15	13° B 45'36		evening max el	4845 Jan 05 21:04	7° \approx 50'22	21°57'54

retrograde	4845 Jan 15 04:38	13° \approx 22'46		evening rise	4845 Nov 15 06:57	3° \approx 38'42	
asc. node	4845 Jan 17 23:37	12° \approx 41'14			4845 Dec 02 12:38	0° \approx	
evening set	4845 Jan 19 15:01	11° \approx 36'13		evening max el	4845 Dec 19 12:40	21° \approx 28'36	23°17'07
inferior conj	4845 Jan 24 23:14	5° \approx 16'52	2°10'35	retrograde	4845 Dec 29 23:02	27° \approx 38'59	
minimum elong	4845 Jan 24 20:54	5° \approx 25'01	2°09'51	evening set	4846 Jan 03 21:38	25° \approx 36'43	
min. Earth dist.	4845 Jan 25 00:03	5° \approx 14'04	0.68036 AU	asc. node	4846 Jan 04 20:37	24° \approx 43'56	
	4845 Jan 29 03:35	30° \approx		inferior conj	4846 Jan 09 07:12	19° \approx 11'59	1°27'12
morning rise	4845 Jan 30 02:36	29° \approx 05'36		minimum elong	4846 Jan 09 05:22	19° \approx 18'19	1°26'30
direct	4845 Feb 03 23:30	27° \approx 01'05		min. Earth dist.	4846 Jan 08 20:51	19° \approx 47'36	0.68051 AU
	4845 Feb 10 16:01	0° \approx		morning rise	4846 Jan 14 13:00	13° \approx 04'55	
morning max el	4845 Feb 13 17:05	2° \approx 46'06	22°36'12	direct	4846 Jan 18 19:39	11° \approx 23'15	
desc. node	4845 Feb 23 12:17	14° \approx 32'47		morning max el	4846 Jan 27 08:26	16° \approx 19'51	21°12'32
	4845 Mar 06 08:59	0° \approx			4846 Feb 07 08:46	0° \approx	
morning set	4845 Mar 19 16:55	20° \approx 51'40		desc. node	4846 Feb 10 09:19	4° \approx 16'13	
max. Earth dist.	4845 Mar 24 12:46	28° \approx 55'40	1.40350 AU	morning set	4846 Feb 27 06:08	29° \approx 41'53	
	4845 Mar 25 03:51	0° \approx			4846 Feb 27 10:44	0° \approx	
				max. Earth dist.	4846 Mar 06 14:34	11° \approx 29'49	1.42402 AU
superior conj	4845 Apr 01 07:55	12° \approx 37'03	-1°53'43	superior conj	4846 Mar 13 21:40	23° \approx 43'09	-2°07'11
minimum elong	4845 Apr 01 12:37	12° \approx 58'20	1°53'21	minimum elong	4846 Mar 13 23:44	23° \approx 52'00	2°07'07
	4845 Apr 10 16:04	0° \approx			4846 Mar 17 12:38	0° \approx	
evening rise	4845 Apr 11 07:42	1° \approx 13'57		evening rise	4846 Mar 25 07:11	13° \approx 52'27	
asc. node	4845 Apr 15 22:56	9° \approx 53'43		asc. node	4846 Apr 02 19:56	28° \approx 55'31	
evening max el	4845 Apr 27 11:21	27° \approx 07'12	18°23'39		4846 Apr 03 11:36	0° \approx	
	4845 May 01 10:42	0° \approx		evening max el	4846 Apr 10 21:57	10° \approx 04'10	18°07'38
retrograde	4845 May 04 20:51	0° \approx 47'20		retrograde	4846 Apr 17 14:16	13° \approx 28'19	
evening set	4845 May 07 04:59	0° \approx 26'20		evening set	4846 Apr 20 05:10	12° \approx 57'08	
	4845 May 08 10:01	30° \approx		inferior conj	4846 Apr 26 21:08	8° \approx 01'35	3°01'03
inferior conj	4845 May 14 13:41	25° \approx 51'36	2°07'55	minimum elong	4846 Apr 27 00:03	7° \approx 54'39	3°00'30
minimum elong	4845 May 14 17:12	25° \approx 44'22	2°06'55	min. Earth dist.	4846 Apr 30 02:52	4° \approx 58'10	0.60796 AU
min. Earth dist.	4845 May 18 00:12	23° \approx 03'45	0.58599 AU	morning rise	4846 May 03 16:48	2° \approx 08'39	
morning rise	4845 May 22 02:20	20° \approx 20'37		desc. node	4846 May 09 08:33	0° \approx 00'04	
desc. node	4845 May 22 11:32	20° \approx 08'51			4846 May 09 08:50	30° \approx	
direct	4845 May 28 04:42	18° \approx 42'33		direct	4846 May 10 08:56	29° \approx 57'05	
morning max el	4845 Jun 11 14:05	26° \approx 27'14	27°06'08		4846 May 11 09:17	0° \approx	
	4845 Jun 14 22:31	0° \approx		morning max el	4846 May 24 15:19	7° \approx 52'58	27°46'38
	4845 Jul 04 18:49	0° \approx			4846 Jun 10 11:24	0° \approx	
morning set	4845 Jul 11 23:05	14° \approx 16'19		morning set	4846 Jun 26 04:26	28° \approx 44'50	
asc. node	4845 Jul 12 22:11	16° \approx 18'20			4846 Jun 26 18:56	0° \approx	
				asc. node	4846 Jun 29 19:12	6° \approx 22'39	
superior conj	4845 Jul 19 00:14	29° \approx 34'16	0°59'52	max. Earth dist.	4846 Jul 02 06:14	11° \approx 43'01	1.32068 AU
minimum elong	4845 Jul 18 22:03	29° \approx 22'13	0°59'28				
max. Earth dist.	4845 Jul 18 19:39	29° \approx 08'55	1.31958 AU	superior conj	4846 Jul 03 11:14	14° \approx 22'05	0°37'33
	4845 Jul 19 04:54	0° \approx		minimum elong	4846 Jul 03 09:38	14° \approx 13'18	0°37'12
evening rise	4845 Jul 25 20:08	14° \approx 27'04		evening rise	4846 Jul 10 06:49	29° \approx 14'34	
	4845 Aug 02 15:31	0° \approx			4846 Jul 10 15:22	0° \approx	
desc. node	4845 Aug 18 10:49	24° \approx 24'39			4846 Jul 27 05:31	0° \approx	
	4845 Aug 23 12:04	0° \approx		desc. node	4846 Aug 05 07:50	11° \approx 09'03	
evening max el	4845 Aug 24 05:32	0° \approx 42'11	26°28'53	evening max el	4846 Aug 05 23:20	11° \approx 46'46	25°13'26
retrograde	4845 Sep 07 04:26	7° \approx 51'16		retrograde	4846 Aug 19 21:56	18° \approx 50'15	
evening set	4845 Sep 13 20:50	6° \approx 00'03		evening set	4846 Aug 25 14:30	17° \approx 36'00	
min. Earth dist.	4845 Sep 17 19:07	3° \approx 24'50	0.59626 AU	min. Earth dist.	4846 Aug 30 10:59	14° \approx 54'24	0.57615 AU
inferior conj	4845 Sep 21 01:09	0° \approx 52'14	-4°46'49	inferior conj	4846 Sep 02 11:31	12° \approx 51'27	-5°14'21
minimum elong	4845 Sep 21 06:37	0° \approx 41'31	4°45'52	minimum elong	4846 Sep 02 13:10	12° \approx 48'38	5°14'17
	4845 Sep 22 04:01	30° \approx		morning rise	4846 Sep 10 14:06	8° \approx 38'14	
morning rise	4845 Sep 28 18:31	26° \approx 16'16		direct	4846 Sep 13 02:54	8° \approx 19'10	
direct	4845 Oct 01 03:03	25° \approx 56'24		morning max el	4846 Sep 21 22:43	12° \approx 29'43	19°01'40
asc. node	4845 Oct 08 21:23	29° \approx 44'49		asc. node	4846 Sep 25 18:25	16° \approx 50'27	
morning max el	4845 Oct 08 20:18	29° \approx 42'11	18°17'24		4846 Oct 03 20:43	0° \approx	
	4845 Oct 09 03:33	0° \approx		morning set	4846 Oct 08 15:53	9° \approx 15'39	
morning set	4845 Oct 24 17:34	24° \approx 59'12					
	4845 Oct 27 08:50	0° \approx		superior conj	4846 Oct 16 23:51	25° \approx 37'47	1°33'15
superior conj	4845 Nov 03 00:17	12° \approx 24'15	1°15'06	minimum elong	4846 Oct 17 02:28	25° \approx 50'21	1°33'03
minimum elong	4845 Nov 03 04:07	12° \approx 41'45	1°14'40		4846 Oct 19 07:01	0° \approx	
max. Earth dist.	4845 Nov 10 14:06	25° \approx 47'03	1.40899 AU	max. Earth dist.	4846 Oct 23 19:26	8° \approx 18'32	1.38804 AU
	4845 Nov 13 02:03	0° \approx		evening rise	4846 Oct 27 15:19	15° \approx 02'56	
desc. node	4845 Nov 14 10:05	2° \approx 12'57		desc. node	4846 Nov 01 07:07	22° \approx 53'21	

	4846 Nov 05 17:24	0°♊			4847 Oct 11 07:20	0°♎	
	4846 Nov 27 07:19	0°♊		desc. node	4847 Oct 19 04:08	13°♎23'57	
evening max el	4846 Dec 02 01:52	5°♊10'14	24°36'05		4847 Oct 30 03:00	0°♊	
retrograde	4846 Dec 13 13:36	11°♊52'17		evening max el	4847 Nov 14 14:19	18°♊53'16	25°47'41
evening set	4846 Dec 19 01:35	9°♊34'43		retrograde	4847 Nov 26 23:32	25°♊57'40	
asc. node	4846 Dec 22 17:38	5°♊34'16		evening set	4847 Dec 03 01:11	23°♊27'04	
min. Earth dist.	4846 Dec 23 16:30	4°♊19'36	0.67699 AU	min. Earth dist.	4847 Dec 07 08:46	18°♊46'50	0.66992 AU
inferior conj	4846 Dec 24 13:46	3°♊08'49	0°37'13	inferior conj	4847 Dec 08 17:09	17°♊04'32	-0°18'24
minimum elong	4846 Dec 24 12:53	3°♊11'47	0°36'51	minimum elong	4847 Dec 08 17:38	17°♊03'01	0°18'11
	4846 Dec 27 00:58	30°♋♊		asc. node	4847 Dec 09 14:41	15°♊56'59	
morning rise	4846 Dec 30 00:17	27°♊08'01		morning rise	4847 Dec 14 10:29	11°♊12'14	
direct	4847 Jan 02 17:49	25°♊48'13		direct	4847 Dec 17 16:32	10°♊11'33	
	4847 Jan 10 05:21	0°♊		morning max el	4847 Dec 24 14:29	14°♊01'14	19°02'46
morning max el	4847 Jan 10 07:33	0°♊05'30	20°00'22		4848 Jan 05 13:40	0°♊	
desc. node	4847 Jan 28 06:21	24°♊22'46		desc. node	4848 Jan 15 03:22	14°♊45'50	
	4847 Jan 31 23:30	0°♋		morning set	4848 Jan 16 07:28	16°♊35'12	
morning set	4847 Feb 06 02:50	7°♋52'32			4848 Jan 24 21:48	0°♋	
max. Earth dist.	4847 Feb 17 00:35	24°♋58'25	1.44024 AU	max. Earth dist.	4848 Jan 30 16:25	9°♋03'17	1.45026 AU
	4847 Feb 20 03:41	0°♋					
				superior conj	4848 Feb 01 23:06	12°♋38'45	-1°44'32
superior conj	4847 Feb 22 10:09	3°♋41'07	-2°05'33	minimum elong	4848 Feb 01 14:14	12°♋03'44	1°43'48
minimum elong	4847 Feb 22 06:31	3°♋26'20	2°05'26		4848 Feb 12 19:31	0°♋	
evening rise	4847 Mar 07 12:39	25°♋41'09		evening rise	4848 Feb 16 20:04	6°♋33'02	
	4847 Mar 10 00:53	0°♌			4848 Mar 02 13:27	0°♌	
asc. node	4847 Mar 20 16:56	17°♌26'07		asc. node	4848 Mar 06 13:58	5°♌15'23	
evening max el	4847 Mar 25 10:44	23°♌19'09	18°10'50	evening max el	4848 Mar 07 22:49	6°♌44'22	18°32'36
retrograde	4847 Mar 31 20:46	26°♌42'26		retrograde	4848 Mar 14 11:51	10°♌19'49	
evening set	4847 Apr 03 17:49	25°♌59'43		evening set	4848 Mar 17 15:03	9°♌24'43	
inferior conj	4847 Apr 09 21:06	20°♌44'24	3°27'40	inferior conj	4848 Mar 23 09:26	3°♌51'24	3°33'50
minimum elong	4847 Apr 09 22:25	20°♌40'49	3°27'32	minimum elong	4848 Mar 23 09:09	3°♌52'13	3°33'49
min. Earth dist.	4847 Apr 12 14:17	17°♌49'26	0.62919 AU	min. Earth dist.	4848 Mar 25 11:19	1°♌23'00	0.64763 AU
morning rise	4847 Apr 16 01:48	14°♌38'39			4848 Mar 26 16:46	30°♋♌	
direct	4847 Apr 22 22:33	12°♌01'59		morning rise	4848 Mar 29 02:37	27°♌39'16	
desc. node	4847 Apr 26 05:34	12°♌34'15		direct	4848 Apr 04 20:04	24°♌50'12	
morning max el	4847 May 06 22:10	20°♌01'32	27°49'21	desc. node	4848 Apr 12 02:37	27°♌27'18	
	4847 May 15 11:00	0°♍			4848 Apr 15 10:05	0°♌	
	4847 Jun 03 11:02	0°♍		morning max el	4848 Apr 18 07:57	2°♌43'59	27°16'41
morning set	4847 Jun 10 03:47	12°♍52'58			4848 May 08 18:11	0°♍	
max. Earth dist.	4847 Jun 15 12:22	24°♍00'49	1.32607 AU	morning set	4848 May 23 18:20	26°♍31'37	
asc. node	4847 Jun 16 16:14	26°♍30'08			4848 May 25 12:42	0°♍	
				max. Earth dist.	4848 May 28 10:00	5°♍50'10	1.33599 AU
superior conj	4847 Jun 17 19:40	28°♍58'14	0°11'55	superior conj	4848 May 31 23:31	13°♍15'51	-0°16'17
minimum elong	4847 Jun 17 19:06	28°♍55'09	0°11'47	minimum elong	4848 Jun 01 00:22	13°♍20'19	0°16'06
behind sun begin	4847 Jun 17 15:33	28°♍35'54		asc. node	4848 Jun 02 13:16	16°♍36'08	
behind sun end	4847 Jun 17 22:39	29°♍14'24		evening rise	4848 Jun 08 05:41	28°♍42'13	
	4847 Jun 18 07:04	0°♎			4848 Jun 08 20:31	0°♎	
evening rise	4847 Jun 24 18:39	14°♎01'58			4848 Jun 26 15:37	0°♎	
	4847 Jul 02 18:42	0°♎		evening max el	4848 Jun 29 03:10	2°♎38'22	22°02'43
evening max el	4847 Jul 18 12:04	22°♎15'24	23°39'23	desc. node	4848 Jul 09 01:52	8°♎39'36	
desc. node	4847 Jul 23 04:51	26°♎05'47		retrograde	4848 Jul 11 21:19	8°♎58'01	
retrograde	4847 Aug 01 03:21	29°♎06'08		evening set	4848 Jul 14 16:43	8°♎40'25	
evening set	4847 Aug 05 09:01	28°♎26'43		inferior conj	4848 Jul 23 23:35	4°♎35'58	-4°02'18
min. Earth dist.	4847 Aug 11 21:58	25°♎21'29	0.55947 AU	minimum elong	4848 Jul 23 14:54	4°♎48'12	4°00'05
inferior conj	4847 Aug 14 01:39	24°♎04'06	-5°03'44	min. Earth dist.	4848 Jul 23 08:07	4°♎57'42	0.54954 AU
minimum elong	4847 Aug 13 20:59	24°♎11'06	5°03'13	morning rise	4848 Aug 01 14:44	0°♎45'33	
morning rise	4847 Aug 22 11:27	20°♎09'16		direct	4848 Aug 04 19:47	0°♎22'42	
direct	4847 Aug 25 07:14	19°♎49'22		morning max el	4848 Aug 16 17:39	5°♎56'52	21°34'30
morning max el	4847 Sep 04 14:11	24°♎36'14	20°07'51	asc. node	4848 Aug 29 12:32	23°♎31'09	
	4847 Sep 09 08:06	0°♏			4848 Sep 01 23:38	0°♏	
asc. node	4847 Sep 12 15:29	4°♏50'18		morning set	4848 Sep 06 05:46	8°♏36'56	
morning set	4847 Sep 22 20:45	23°♏50'39					
	4847 Sep 25 20:53	0°♐		superior conj	4848 Sep 13 12:10	23°♏54'05	1°43'19
				minimum elong	4848 Sep 13 11:44	23°♏51'45	1°43'18
superior conj	4847 Sep 30 13:11	9°♐31'53	1°42'10		4848 Sep 16 11:10	0°♐	
minimum elong	4847 Sep 30 14:12	9°♐36'58	1°42'09				
max. Earth dist.	4847 Oct 06 01:21	20°♐19'02	1.36764 AU	max. Earth dist.	4848 Sep 17 13:00	2°♐10'36	1.34984 AU
evening rise	4847 Oct 09 21:11	27°♐26'06		evening rise	4848 Sep 21 20:32	10°♐38'06	

	4848 Oct 02 18:45	0°♍			4849 Sep 08 05:24	0°♎
desc. node	4848 Oct 05 01:10	3°♍39'28		desc. node	4849 Sep 21 22:13	23°♎32'36
	4848 Oct 24 14:39	0°♌			4849 Sep 26 07:32	0°♍
evening max el	4848 Oct 27 02:57	2°♌32'48 26°44'39		evening max el	4849 Oct 09 15:18	15°♍58'56 27°19'32
retrograde	4848 Nov 09 04:21	9°♌48'57		retrograde	4849 Oct 23 03:13	23°♍17'20
evening set	4848 Nov 15 18:31	7°♌10'02		evening set	4849 Oct 30 03:03	20°♍37'39
min. Earth dist.	4848 Nov 19 19:24	3°♌05'14 0.65929 AU		min. Earth dist.	4849 Nov 02 22:08	17°♍07'15 0.64522 AU
inferior conj	4848 Nov 21 15:22	0°♌55'51 -1°18'26		inferior conj	4849 Nov 05 06:02	14°♍37'01 -2°21'07
minimum elong	4848 Nov 21 17:33	0°♌49'23 1°17'30		minimum elong	4849 Nov 05 10:06	14°♍26'04 2°19'31
	4848 Nov 22 10:28	30°♋♍		morning rise	4849 Nov 11 18:23	9°♍09'44
asc. node	4848 Nov 25 11:45	26°♍49'31		asc. node	4849 Nov 12 08:49	8°♍55'48
morning rise	4848 Nov 27 17:25	25°♍14'34		direct	4849 Nov 14 07:55	8°♍35'49
direct	4848 Nov 30 14:01	24°♍29'15		morning max el	4849 Nov 20 19:38	12°♍01'34 17°56'41
morning max el	4848 Dec 07 03:24	28°♍02'21 18°21'16			4849 Dec 03 05:57	0°♌
	4848 Dec 08 22:39	0°♌		morning set	4849 Dec 08 02:58	8°♌11'42
morning set	4848 Dec 26 14:39	26°♌40'25		desc. node	4849 Dec 18 21:26	26°♌03'12
	4848 Dec 28 16:17	0°♎			4849 Dec 21 08:01	0°♎
desc. node	4849 Jan 01 00:24	5°♎20'46				
				superior conj	4849 Dec 21 15:01	0°♎28'06 -0°18'55
superior conj	4849 Jan 11 01:56	21°♎16'05 -1°05'50		minimum elong	4849 Dec 21 12:45	0°♎19'02 0°18'34
minimum elong	4849 Jan 10 18:00	20°♎44'56 1°04'51		max. Earth dist.	4849 Dec 26 06:11	7°♎51'00 1.44856 AU
max. Earth dist.	4849 Jan 12 11:10	23°♎26'26 1.45309 AU		evening rise	4850 Jan 06 19:02	25°♎48'49
	4849 Jan 16 15:41	0°♍			4850 Jan 09 12:30	0°♍
evening rise	4849 Jan 27 04:23	16°♍29'58		greatest brilliancy	4850 Jan 21 10:09	17°♍56'31 -0.6m
	4849 Feb 04 19:03	0°♋			4850 Jan 30 04:10	0°♋
greatest brilliancy	4849 Feb 06 20:42	3°♋12'15 -0.8m		evening max el	4850 Feb 02 12:20	3°♋48'20 20°06'48
evening max el	4849 Feb 19 07:55	20°♋15'16 19°11'52		asc. node	4850 Feb 08 08:05	7°♋59'26
asc. node	4849 Feb 21 11:02	22°♋11'26		retrograde	4850 Feb 10 05:48	8°♋18'52
retrograde	4849 Feb 26 07:49	24°♋13'50		evening set	4850 Feb 14 00:11	6°♋56'20
evening set	4849 Mar 01 17:58	23°♋05'31		inferior conj	4850 Feb 19 09:33	0°♋53'09 3°03'13
inferior conj	4849 Mar 07 06:34	17°♋16'11 3°24'32		minimum elong	4850 Feb 19 07:20	1°♋00'36 3°02'47
minimum elong	4849 Mar 07 05:05	17°♋20'58 3°24'21		min. Earth dist.	4850 Feb 20 05:55	29°♋44'28 0.67257 AU
min. Earth dist.	4849 Mar 08 17:09	15°♋25'16 0.66221 AU			4850 Feb 20 01:18	30°♋♍
morning rise	4849 Mar 12 15:52	11°♋01'44		morning rise	4850 Feb 24 14:16	24°♋38'50
direct	4849 Mar 19 00:18	8°♋13'32		direct	4850 Mar 02 10:06	22°♋02'32
desc. node	4849 Mar 29 23:38	14°♋05'19		morning max el	4850 Mar 14 02:40	29°♋02'00 24°55'44
morning max el	4849 Mar 31 17:55	15°♋47'55 26°15'38			4850 Mar 15 01:07	0°♋
	4849 Apr 12 10:58	0°♐		desc. node	4850 Mar 16 20:39	1°♋58'38
	4849 May 01 14:26	0°♏			4850 Apr 06 06:18	0°♐
morning set	4849 May 06 20:27	9°♏30'36		morning set	4850 Apr 19 05:12	21°♐35'44
max. Earth dist.	4849 May 10 20:18	17°♏08'13 1.35060 AU		max. Earth dist.	4850 Apr 22 20:05	28°♐09'23 1.36943 AU
					4850 Apr 23 19:56	0°♏
superior conj	4849 May 15 20:27	27°♏08'51 -0°45'50				
minimum elong	4849 May 15 22:57	27°♏21'38 0°45'21		superior conj	4850 Apr 29 07:26	10°♏28'57 -1°15'03
	4849 May 17 05:48	0°♐		minimum elong	4850 Apr 29 11:31	10°♏48'58 1°14'24
asc. node	4849 May 20 10:19	6°♐37'01		asc. node	4850 May 07 07:23	26°♏28'30
evening rise	4849 May 23 13:58	13°♐09'41		evening rise	4850 May 07 17:10	27°♏17'37
	4849 Jun 01 07:48	0°♑			4850 May 09 01:41	0°♐
evening max el	4849 Jun 11 04:22	13°♑28'36 20°36'56		evening max el	4850 May 24 18:05	25°♐00'24 19°29'13
retrograde	4849 Jun 22 09:55	18°♑58'33		retrograde	4850 Jun 03 05:47	29°♐38'07
evening set	4849 Jun 24 10:44	18°♑48'28		evening set	4850 Jun 05 04:36	29°♐27'15
desc. node	4849 Jun 25 22:54	18°♑28'43		desc. node	4850 Jun 12 19:53	26°♐00'32
inferior conj	4849 Jul 03 16:57	14°♑51'22 -2°16'56		inferior conj	4850 Jun 13 20:15	25°♐21'46 -0°18'06
minimum elong	4849 Jul 03 10:36	15°♑00'30 2°14'43		minimum elong	4850 Jun 13 19:27	25°♐23'03 0°17'49
min. Earth dist.	4849 Jul 04 19:41	14°♑12'56 0.54887 AU		min. Earth dist.	4850 Jun 16 09:20	23°♐44'11 0.55775 AU
morning rise	4849 Jul 12 09:48	10°♑45'11		morning rise	4850 Jun 22 07:38	20°♐44'07
direct	4849 Jul 16 05:17	10°♑13'53		direct	4850 Jun 26 23:49	19°♐54'51
morning max el	4849 Jul 29 11:24	16°♑37'48 23°15'16		morning max el	4850 Jul 11 00:59	26°♐59'30 24°58'07
	4849 Aug 09 03:12	0°♑			4850 Jul 13 22:59	0°♑
asc. node	4849 Aug 16 09:35	12°♑42'59			4850 Aug 02 03:10	0°♑
morning set	4849 Aug 21 16:58	23°♑28'54		asc. node	4850 Aug 03 06:37	2°♑17'56
	4849 Aug 24 18:12	0°♒		morning set	4850 Aug 06 04:43	8°♑21'57
superior conj	4849 Aug 28 17:38	8°♒34'33 1°37'53		superior conj	4850 Aug 13 03:09	23°♒25'55 1°26'52
minimum elong	4849 Aug 28 16:07	8°♒26'21 1°37'46		minimum elong	4850 Aug 13 01:00	23°♒14'07 1°26'35
max. Earth dist.	4849 Aug 31 09:30	14°♒14'17 1.33594 AU		max. Earth dist.	4850 Aug 14 14:15	26°♒37'16 1.32631 AU
evening rise	4849 Sep 05 09:11	24°♒27'41			4850 Aug 16 03:45	0°♒

evening rise	4850 Aug 20 07:30	8° \mathbb{M} 44'46		max. Earth dist.	4851 Jul 29 00:11	9° Ω 13'19	1.32086 AU
	4850 Aug 31 14:42	0° $\underline{\Omega}$		evening rise	4851 Aug 04 12:26	23° Ω 19'21	
desc. node	4850 Sep 08 19:14	12° $\underline{\Omega}$ 54'03			4851 Aug 07 18:34	0° \mathbb{M}	
evening max el	4850 Sep 22 01:29	28° $\underline{\Omega}$ 59'08	27°25'47		4851 Aug 25 13:25	0° $\underline{\Omega}$	
	4850 Sep 23 03:59	0° \mathbb{M}		desc. node	4851 Aug 26 16:14	1° $\underline{\Omega}$ 29'58	
retrograde	4850 Oct 05 19:19	6° \mathbb{M} 14'11		evening max el	4851 Sep 04 06:38	11° $\underline{\Omega}$ 18'51	26°59'08
evening set	4850 Oct 12 23:38	3° \mathbb{M} 43'47		retrograde	4851 Sep 18 03:48	18° $\underline{\Omega}$ 29'47	
min. Earth dist.	4850 Oct 16 14:57	0° \mathbb{M} 43'40	0.62798 AU	evening set	4851 Sep 25 04:07	16° $\underline{\Omega}$ 20'33	
	4850 Oct 17 09:27	30° \mathbb{R} $\underline{\Omega}$		min. Earth dist.	4851 Sep 28 20:51	13° $\underline{\Omega}$ 41'00	0.60823 AU
inferior conj	4850 Oct 19 10:21	28° $\underline{\Omega}$ 01'32	-3°23'23	inferior conj	4851 Oct 02 01:01	10° $\underline{\Omega}$ 59'58	-4°20'03
minimum elong	4850 Oct 19 16:02	27° $\underline{\Omega}$ 47'50	3°21'32	minimum elong	4851 Oct 02 07:12	10° $\underline{\Omega}$ 46'52	4°18'36
morning rise	4850 Oct 26 10:03	22° $\underline{\Omega}$ 51'40		morning rise	4851 Oct 09 12:13	6° $\underline{\Omega}$ 11'06	
direct	4850 Oct 28 19:16	22° $\underline{\Omega}$ 25'30		direct	4851 Oct 11 20:08	5° $\underline{\Omega}$ 49'38	
asc. node	4850 Oct 30 05:50	22° $\underline{\Omega}$ 35'18		asc. node	4851 Oct 17 02:51	7° $\underline{\Omega}$ 45'11	
morning max el	4850 Nov 04 12:11	25° $\underline{\Omega}$ 52'05	17°49'47	morning max el	4851 Oct 19 01:55	9° $\underline{\Omega}$ 25'25	18°01'40
	4850 Nov 08 00:03	0° \mathbb{M}			4851 Nov 01 11:53	0° \mathbb{M}	
morning set	4850 Nov 20 14:53	20° \mathbb{M} 51'13		morning set	4851 Nov 03 19:57	4° \mathbb{M} 18'58	
	4850 Nov 25 19:46	0° \mathbb{X}					
superior conj	4850 Dec 02 04:15	10° \mathbb{X} 51'54	0°25'08	superior conj	4851 Nov 13 19:41	22° \mathbb{M} 31'58	0°59'57
minimum elong	4850 Dec 02 06:39	11° \mathbb{X} 01'58	0°24'47	minimum elong	4851 Nov 13 23:40	22° \mathbb{M} 49'36	0°59'26
desc. node	4850 Dec 05 18:30	16° \mathbb{X} 49'51			4851 Nov 18 02:43	0° \mathbb{X}	
max. Earth dist.	4850 Dec 08 22:55	22° \mathbb{X} 00'47	1.43720 AU	max. Earth dist.	4851 Nov 21 10:56	5° \mathbb{X} 38'24	1.42031 AU
	4850 Dec 13 23:22	0° \mathbb{Z}		desc. node	4851 Nov 22 15:32	7° \mathbb{X} 36'55	
evening rise	4850 Dec 17 05:29	5° \mathbb{Z} 04'31		evening rise	4851 Nov 27 03:15	14° \mathbb{X} 54'00	
	4851 Jan 02 22:11	0° \approx			4851 Dec 06 21:45	0° \mathbb{Z}	
evening max el	4851 Jan 16 11:17	17° \approx 22'41	21°14'34	evening max el	4851 Dec 29 06:23	0° \approx	
retrograde	4851 Jan 25 03:39	22° \approx 31'19		retrograde	4851 Dec 30 05:02	0° \approx 58'39	22°31'10
asc. node	4851 Jan 26 05:06	22° \approx 25'15		asc. node	4852 Jan 08 23:48	6° \approx 47'34	
evening set	4851 Jan 29 07:50	20° \approx 53'35		evening set	4852 Jan 13 02:05	5° \approx 19'48	
inferior conj	4851 Feb 03 16:00	14° \approx 39'15	2°32'13		4852 Jan 17 22:22	30° \mathbb{R} \mathbb{Z}	
minimum elong	4851 Feb 03 13:34	14° \approx 47'40	2°31'33	inferior conj	4852 Jan 18 23:55	28° \mathbb{Z} 31'53	1°53'04
min. Earth dist.	4851 Feb 03 23:33	14° \approx 13'08	0.67873 AU	minimum elong	4852 Jan 18 21:44	28° \mathbb{Z} 39'28	1°52'18
morning rise	4851 Feb 08 19:06	8° \approx 26'38		min. Earth dist.	4852 Jan 18 19:49	28° \mathbb{Z} 46'07	0.68088 AU
direct	4851 Feb 14 00:31	6° \approx 09'30		morning rise	4852 Jan 24 04:03	22° \mathbb{Z} 22'25	
morning max el	4851 Feb 24 11:29	12° \approx 22'30	23°27'12	direct	4852 Jan 28 18:45	20° \mathbb{Z} 27'49	
desc. node	4851 Mar 03 17:41	20° \approx 46'05		morning max el	4852 Feb 06 23:38	25° \mathbb{Z} 51'20	21°59'37
	4851 Mar 10 14:30	0° \mathbb{X}			4852 Feb 10 17:55	0° \approx	
	4851 Mar 30 02:39	0° \mathbb{Y}		desc. node	4852 Feb 18 14:44	10° \approx 12'34	
morning set	4851 Mar 31 14:39	2° \mathbb{Y} 31'04			4852 Mar 03 02:57	0° \mathbb{X}	
max. Earth dist.	4851 Apr 04 15:33	9° \mathbb{Y} 27'29	1.39097 AU	morning set	4852 Mar 10 19:57	12° \mathbb{X} 06'12	
				max. Earth dist.	4852 Mar 16 13:55	21° \mathbb{X} 31'47	1.41260 AU
superior conj	4851 Apr 12 04:37	23° \mathbb{Y} 05'57	-1°41'20		4852 Mar 21 13:19	0° \mathbb{Y}	
minimum elong	4851 Apr 12 09:33	23° \mathbb{Y} 29'02	1°40'47				
	4851 Apr 15 20:13	0° \mathbb{Z}		superior conj	4852 Mar 24 07:18	4° \mathbb{Y} 48'54	-2°00'55
evening rise	4851 Apr 21 12:29	10° \mathbb{Z} 58'03		minimum elong	4852 Mar 24 11:17	5° \mathbb{Y} 06'30	2°00'41
asc. node	4851 Apr 24 04:24	16° \mathbb{Z} 05'24		evening rise	4852 Apr 03 20:28	24° \mathbb{Y} 02'48	
	4851 May 02 02:27	0° \mathbb{II}			4852 Apr 07 01:49	0° \mathbb{Z}	
evening max el	4851 May 07 18:29	7° \mathbb{II} 11'36	18°41'39	asc. node	4852 Apr 10 01:25	5° \mathbb{Z} 22'31	
retrograde	4851 May 15 19:05	11° \mathbb{II} 08'27		evening max el	4852 Apr 20 02:23	19° \mathbb{Z} 55'01	18°14'20
evening set	4851 May 17 23:18	10° \mathbb{II} 52'05		retrograde	4852 Apr 27 03:19	23° \mathbb{Z} 26'47	
inferior conj	4851 May 25 19:03	6° \mathbb{II} 28'39	1°23'20	evening set	4852 Apr 29 14:17	23° \mathbb{Z} 01'46	
minimum elong	4851 May 25 21:55	6° \mathbb{II} 23'16	1°22'23	inferior conj	4852 May 06 15:23	18° \mathbb{Z} 17'56	2°34'05
min. Earth dist.	4851 May 29 02:20	4° \mathbb{II} 01'16	0.57427 AU	minimum elong	4852 May 06 18:51	18° \mathbb{Z} 10'19	2°33'13
desc. node	4851 May 30 16:54	2° \mathbb{II} 55'38		min. Earth dist.	4852 May 10 01:03	15° \mathbb{Z} 20'24	0.59523 AU
morning rise	4851 Jun 02 17:16	1° \mathbb{II} 15'17		morning rise	4852 May 13 20:41	12° \mathbb{Z} 36'01	
	4851 Jun 07 07:33	30° \mathbb{R} \mathbb{Z}		desc. node	4852 May 16 13:55	11° \mathbb{Z} 20'35	
direct	4851 Jun 08 08:02	29° \mathbb{Z} 57'24		direct	4852 May 20 05:44	10° \mathbb{Z} 43'25	
	4851 Jun 09 08:37	0° \mathbb{II}		morning max el	4852 Jun 03 14:44	18° \mathbb{Z} 34'08	27°27'56
morning max el	4851 Jun 22 16:50	7° \mathbb{II} 30'17	26°27'11		4852 Jun 13 05:20	0° \mathbb{II}	
	4851 Jul 09 11:33	0° \mathbb{Z}			4852 Jul 01 03:00	0° \mathbb{Z}	
asc. node	4851 Jul 21 03:39	22° \mathbb{Z} 08'33		morning set	4852 Jul 04 23:10	7° \mathbb{Z} 47'53	
morning set	4851 Jul 21 15:20	23° \mathbb{Z} 10'02		asc. node	4852 Jul 07 00:41	12° \mathbb{Z} 09'36	
	4851 Jul 24 19:37	0° Ω		max. Earth dist.	4852 Jul 11 11:36	21° \mathbb{Z} 51'42	1.31955 AU
superior conj	4851 Jul 28 14:37	8° Ω 20'30	1°10'58	superior conj	4852 Jul 12 02:18	23° \mathbb{Z} 12'44	0°50'50
minimum elong	4851 Jul 28 12:19	8° Ω 07'45	1°10'35	minimum elong	4852 Jul 12 00:19	23° \mathbb{Z} 01'46	0°50'27

	4852 Jul 15 04:11	0°♎		evening rise	4853 Jul 03 09:02	22°♊52'23	
evening rise	4852 Jul 18 21:38	8°♎04'09			4853 Jul 06 19:08	0°♎	
	4852 Jul 30 06:01	0°♎			4853 Jul 25 09:31	0°♎	
desc. node	4852 Aug 12 13:13	19°♎02'05		evening max el	4853 Jul 28 19:24	3°♎36'27	24°34'46
evening max el	4852 Aug 16 04:27	22°♎49'49	25°59'47	desc. node	4853 Jul 30 10:13	5°♎05'02	
retrograde	4852 Aug 30 03:37	29°♎57'27		retrograde	4853 Aug 11 16:38	10°♎36'44	
evening set	4852 Sep 05 11:42	28°♎21'01		evening set	4853 Aug 16 18:59	9°♎38'28	
min. Earth dist.	4852 Sep 09 17:01	25°♎45'35	0.58749 AU	min. Earth dist.	4853 Aug 22 06:36	6°♎48'22	0.56836 AU
inferior conj	4852 Sep 12 22:31	23°♎23'05	-5°02'06	inferior conj	4853 Aug 25 00:14	5°♎03'06	-5°15'33
minimum elong	4852 Sep 13 02:47	23°♎15'12	5°01'35	minimum elong	4853 Aug 24 23:20	5°♎04'33	5°15'32
morning rise	4852 Sep 20 20:08	18°♎57'20		morning rise	4853 Sep 02 06:08	0°♎58'43	
direct	4852 Sep 23 06:02	18°♎38'07		direct	4853 Sep 04 21:23	0°♎39'38	
morning max el	4852 Oct 01 09:29	22°♎32'48	18°33'41	morning max el	4853 Sep 14 07:38	5°♎04'39	19°27'11
asc. node	4852 Oct 02 23:54	24°♎13'03		asc. node	4853 Sep 19 20:58	11°♎43'54	
	4852 Oct 07 07:36	0°♎			4853 Sep 30 05:10	0°♎	
morning set	4852 Oct 17 13:02	18°♎20'29		morning set	4853 Oct 01 14:30	2°♎46'01	
	4852 Oct 23 14:06	0°♎					
superior conj	4852 Oct 26 09:05	5°♎15'56	1°24'01	superior conj	4853 Oct 09 15:07	18°♎48'47	1°38'04
minimum elong	4852 Oct 26 12:30	5°♎31'51	1°23'41	minimum elong	4853 Oct 09 17:03	18°♎58'18	1°37'58
max. Earth dist.	4852 Nov 02 17:30	18°♎31'51	1.40007 AU	max. Earth dist.	4853 Oct 15 11:57	0°♎	
evening rise	4852 Nov 06 22:10	25°♎41'30		evening rise	4853 Oct 15 22:00	0°♎46'25	1.37908 AU
desc. node	4852 Nov 08 12:32	28°♎20'49		desc. node	4853 Oct 19 16:09	7°♎32'34	
	4852 Nov 09 12:43	0°♎			4853 Oct 26 09:33	18°♎57'59	
	4852 Nov 29 15:08	0°♎		evening max el	4853 Nov 02 09:50	0°♎	
evening max el	4852 Dec 11 19:08	14°♎37'22	23°51'12		4853 Nov 24 07:52	28°♎20'30	25°08'00
retrograde	4852 Dec 22 16:49	21°♎03'06		retrograde	4853 Nov 26 02:14	0°♎	
evening set	4852 Dec 27 21:00	18°♎54'01		evening set	4853 Dec 06 05:41	5°♎13'54	
asc. node	4852 Dec 29 23:07	16°♎47'53			4853 Dec 11 23:20	2°♎50'36	
min. Earth dist.	4853 Jan 01 16:26	13°♎19'14	0.67934 AU	min. Earth dist.	4853 Dec 14 17:31	30°♎	
inferior conj	4853 Jan 02 07:30	12°♎27'59	1°06'46	asc. node	4853 Dec 16 11:04	27°♎49'57	0.67432 AU
minimum elong	4853 Jan 02 06:00	12°♎33'04	1°06'10	inferior conj	4853 Dec 16 20:10	27°♎20'21	
morning rise	4853 Jan 07 15:01	6°♎23'19		minimum elong	4853 Dec 17 12:58	26°♎25'22	0°14'17
direct	4853 Jan 11 15:48	4°♎51'24		transit middle	4853 Dec 17 12:36	26°♎26'32	0°14'08
morning max el	4853 Jan 19 18:12	9°♎30'27	20°40'16	transit begin	4853 Dec 17 12:36	26°♎26'32	0°14'08
desc. node	4853 Feb 04 11:46	0°♎06'45		transit end	4853 Dec 17 11:15	26°♎30'57	
	4853 Feb 04 09:55	0°♎		transit end	4853 Dec 17 13:58	26°♎22'06	
morning set	4853 Feb 17 23:45	20°♎32'34		morning rise	4853 Dec 17 13:58	26°♎22'06	
	4853 Feb 23 23:52	0°♎		direct	4853 Dec 23 02:06	20°♎27'38	
max. Earth dist.	4853 Feb 26 18:53	4°♎29'11	1.43150 AU	morning max el	4853 Dec 26 14:30	19°♎16'21	
					4854 Jan 02 20:42	23°♎20'52	19°33'57
superior conj	4853 Mar 05 10:35	15°♎26'26	-2°08'40	greatest brilliancy	4854 Jan 08 11:12	0°♎	
minimum elong	4853 Mar 05 10:32	15°♎26'14	2°08'39	desc. node	4854 Jan 15 22:21	10°♎37'54	-0.7m
	4853 Mar 13 22:15	0°♎		morning set	4854 Jan 22 08:49	20°♎21'20	
evening rise	4853 Mar 17 12:53	6°♎21'33			4854 Jan 27 20:35	28°♎47'32	
asc. node	4853 Mar 27 22:26	24°♎12'35		max. Earth dist.	4854 Jan 28 15:20	0°♎	
	4853 Mar 31 22:53	0°♎			4854 Feb 09 07:11	18°♎13'40	1.44532 AU
evening max el	4853 Apr 03 14:18	3°♎00'56	18°06'40	superior conj	4854 Feb 13 12:19	24°♎56'41	-1°59'06
retrograde	4853 Apr 10 02:52	6°♎23'11		minimum elong	4854 Feb 13 06:01	24°♎31'28	1°58'46
evening set	4853 Apr 12 20:19	5°♎47'23			4854 Feb 16 15:30	0°♎	
inferior conj	4853 Apr 19 06:26	0°♎43'29	3°15'10	evening rise	4854 Feb 27 09:19	17°♎46'20	
minimum elong	4853 Apr 19 08:43	0°♎37'44	3°14'49		4854 Mar 06 16:17	0°♎	
	4853 Apr 19 23:37	30°♎		asc. node	4854 Mar 14 19:28	12°♎27'15	
min. Earth dist.	4853 Apr 22 07:32	27°♎40'40	0.61723 AU	evening max el	4854 Mar 18 03:11	16°♎21'37	18°17'55
morning rise	4853 Apr 25 19:21	24°♎43'52		retrograde	4854 Mar 24 13:23	19°♎48'17	
direct	4853 May 02 14:29	22°♎19'57		evening set	4854 Mar 27 13:02	19°♎00'25	
desc. node	4853 May 03 10:57	22°♎22'06		inferior conj	4854 Apr 02 12:08	13°♎37'30	3°32'23
	4853 May 16 10:55	0°♎		minimum elong	4854 Apr 02 12:45	13°♎35'46	3°32'21
morning max el	4853 May 16 18:43	0°♎19'17	27°52'15	min. Earth dist.	4854 Apr 04 23:04	10°♎51'53	0.63753 AU
	4853 Jun 07 07:00	0°♎		morning rise	4854 Apr 08 11:32	7°♎28'35	
morning set	4853 Jun 19 02:16	22°♎08'59		direct	4854 Apr 15 07:55	4°♎44'40	
	4853 Jun 22 20:21	0°♎		desc. node	4854 Apr 20 08:00	5°♎59'24	
asc. node	4853 Jun 23 21:44	2°♎16'02		morning max el	4854 Apr 29 02:57	12°♎43'04	27°39'16
max. Earth dist.	4853 Jun 24 20:37	4°♎19'41	1.32242 AU		4854 May 12 22:28	0°♎	
					4854 May 30 19:06	0°♎	
superior conj	4853 Jun 26 12:28	7°♎56'39	0°27'01	morning set	4854 Jun 02 22:17	6°♎05'54	
minimum elong	4853 Jun 26 11:15	7°♎50'01	0°26'46	max. Earth dist.	4854 Jun 07 23:25	16°♎25'46	1.32974 AU

superior conj	4854 Jun 10 19:16	22° Π 26'14	0°00'13	max. Earth dist.	4855 May 21 16:37	28° \mathcal{B} 02'52	1.34168 AU
minimum elong	4854 Jun 10 19:15	22° Π 26'11	0°00'12		4855 May 22 15:48	0° Π	
behind sun begin	4854 Jun 10 13:55	21° Π 57'37					
behind sun end	4854 Jun 11 00:35	22° Π 54'47		superior conj	4855 May 25 20:33	6° Π 35'15	-0°28'41
asc. node	4854 Jun 10 18:47	22° Π 23'37		minimum elong	4855 May 25 22:05	6° Π 43'14	0°28'24
	4854 Jun 14 07:24	0° \mathcal{E}		asc. node	4855 May 28 15:49	12° Π 28'35	
evening rise	4854 Jun 17 20:47	7° \mathcal{E} 37'49		evening rise	4855 Jun 02 06:58	22° Π 14'32	
	4854 Jun 29 14:53	0° \mathcal{Q}			4855 Jun 06 02:10	0° \mathcal{E}	
evening max el	4854 Jul 10 08:21	13° \mathcal{Q} 59'33	22°57'41	evening max el	4855 Jun 22 03:11	24° \mathcal{E} 32'03	21°24'17
desc. node	4854 Jul 17 07:15	19° \mathcal{Q} 05'40			4855 Jun 30 15:49	0° \mathcal{Q}	
retrograde	4854 Jul 23 16:42	20° \mathcal{Q} 39'00		retrograde	4855 Jul 04 06:49	0° \mathcal{Q} 31'44	
evening set	4854 Jul 27 06:31	20° \mathcal{Q} 11'04		desc. node	4855 Jul 04 04:16	0° \mathcal{Q} 31'42	
min. Earth dist.	4854 Aug 03 17:04	16° \mathcal{Q} 51'33	0.55424 AU	evening set	4855 Jul 06 16:17	0° \mathcal{Q} 18'34	
inferior conj	4854 Aug 05 06:38	15° \mathcal{Q} 57'21	-4°44'08		4855 Jul 08 00:56	30° \mathcal{R} \mathcal{E}	
minimum elong	4854 Aug 04 23:36	16° \mathcal{Q} 07'32	4°42'54	inferior conj	4855 Jul 16 00:56	26° \mathcal{E} 19'09	-3°21'34
morning rise	4854 Aug 13 18:52	12° \mathcal{Q} 06'15		minimum elong	4855 Jul 15 16:28	26° \mathcal{E} 30'59	3°19'00
direct	4854 Aug 16 18:22	11° \mathcal{Q} 45'20		min. Earth dist.	4855 Jul 16 03:24	26° \mathcal{E} 15'42	0.54813 AU
morning max el	4854 Aug 27 17:53	16° \mathcal{Q} 51'48	20°42'25	morning rise	4855 Jul 24 17:30	22° \mathcal{E} 24'54	
asc. node	4854 Sep 06 18:02	0° \mathcal{M} 02'58		direct	4855 Jul 28 04:08	21° \mathcal{E} 59'16	
	4854 Sep 06 17:20	0° \mathcal{M}		morning max el	4855 Aug 09 16:39	27° \mathcal{E} 54'13	22°16'08
morning set	4854 Sep 15 21:26	17° \mathcal{M} 26'53			4855 Aug 11 18:54	0° \mathcal{Q}	
	4854 Sep 21 22:41	0° \mathcal{L}		asc. node	4855 Aug 24 15:06	18° \mathcal{Q} 58'41	
					4855 Aug 30 05:20	0° \mathcal{M}	
superior conj	4854 Sep 23 09:00	2° \mathcal{L} 56'12	1°43'32	morning set	4855 Aug 31 07:38	2° \mathcal{M} 16'59	
minimum elong	4854 Sep 23 09:22	2° \mathcal{L} 58'02	1°43'32				
max. Earth dist.	4854 Sep 28 06:00	12° \mathcal{L} 41'07	1.35967 AU	superior conj	4855 Sep 07 11:06	17° \mathcal{M} 27'35	1°41'45
evening rise	4854 Oct 02 06:04	20° \mathcal{L} 18'25		minimum elong	4855 Sep 07 10:09	17° \mathcal{M} 22'31	1°41'42
	4854 Oct 07 15:42	0° \mathcal{M}		max. Earth dist.	4855 Sep 10 21:38	24° \mathcal{M} 38'04	1.34350 AU
desc. node	4854 Oct 13 06:34	9° \mathcal{M} 23'06			4855 Sep 13 13:15	0° \mathcal{L}	
	4854 Oct 27 09:25	0° \mathcal{J}		evening rise	4855 Sep 15 11:36	3° \mathcal{L} 48'04	
evening max el	4854 Nov 06 20:35	12° \mathcal{J} 03'49	26°14'16	desc. node	4855 Sep 30 03:35	29° \mathcal{L} 30'14	
retrograde	4854 Nov 19 13:21	19° \mathcal{J} 13'53			4855 Sep 30 11:13	0° \mathcal{M}	
evening set	4854 Nov 25 20:29	16° \mathcal{J} 39'21		evening max el	4855 Oct 20 09:18	25° \mathcal{M} 39'10	27°02'29
min. Earth dist.	4854 Nov 30 01:17	12° \mathcal{J} 13'59	0.66583 AU		4855 Oct 25 15:46	0° \mathcal{J}	
inferior conj	4854 Dec 01 14:24	10° \mathcal{J} 19'53	-0°43'24	retrograde	4855 Nov 02 15:26	2° \mathcal{J} 56'24	
minimum elong	4854 Dec 01 15:35	10° \mathcal{J} 16'17	0°42'53	evening set	4855 Nov 09 10:21	0° \mathcal{J} 16'04	
asc. node	4854 Dec 03 17:14	7° \mathcal{J} 48'56			4855 Nov 09 18:17	30° \mathcal{R} \mathcal{M}	
morning rise	4854 Dec 07 11:13	4° \mathcal{J} 31'41		min. Earth dist.	4855 Nov 13 08:40	26° \mathcal{M} 26'18	0.65381 AU
direct	4854 Dec 10 13:03	3° \mathcal{J} 37'51		inferior conj	4855 Nov 15 09:41	24° \mathcal{M} 07'20	-1°44'51
morning max el	4854 Dec 17 06:22	7° \mathcal{J} 19'06	18°43'04	minimum elong	4855 Nov 15 12:41	23° \mathcal{M} 58'50	1°43'36
	4855 Jan 02 08:45	0° \mathcal{B}		asc. node	4855 Nov 20 14:18	19° \mathcal{M} 08'31	
morning set	4855 Jan 07 11:14	8° \mathcal{B} 02'10		morning rise	4855 Nov 21 15:58	18° \mathcal{M} 31'42	
desc. node	4855 Jan 09 05:51	10° \mathcal{B} 50'02		direct	4855 Nov 24 09:22	17° \mathcal{M} 51'35	
	4855 Jan 21 10:47	0° \approx		morning max el	4855 Nov 30 21:01	21° \mathcal{M} 20'03	18°08'42
max. Earth dist.	4855 Jan 23 00:51	2° \approx 29'18	1.45241 AU		4855 Dec 07 14:40	0° \mathcal{J}	
				morning set	4855 Dec 19 07:08	18° \mathcal{J} 45'19	
superior conj	4855 Jan 23 18:36	3° \approx 38'57	-1°29'52		4855 Dec 26 04:53	0° \mathcal{B}	
minimum elong	4855 Jan 23 09:13	3° \approx 02'08	1°28'54	desc. node	4855 Dec 27 02:51	1° \mathcal{B} 28'30	
evening rise	4855 Feb 08 06:40	28° \approx 13'40					
	4855 Feb 09 09:10	0° \mathcal{H}		superior conj	4856 Jan 02 23:12	12° \mathcal{B} 23'35	-0°46'11
greatest brilliancy	4855 Feb 15 16:18	10° \mathcal{H} 06'13	-0.9m	minimum elong	4856 Jan 02 17:28	12° \mathcal{B} 00'55	0°45'24
evening max el	4855 Mar 01 14:18	29° \mathcal{H} 50'14	18°47'19	max. Earth dist.	4856 Jan 05 20:31	16° \mathcal{B} 56'40	1.45206 AU
asc. node	4855 Mar 01 16:30	29° \mathcal{H} 55'47			4856 Jan 14 05:02	0° \approx	
	4855 Mar 01 18:11	0° \mathcal{Y}		evening rise	4856 Jan 19 06:16	7° \approx 51'04	
retrograde	4855 Mar 08 06:52	3° \mathcal{Y} 33'54		greatest brilliancy	4856 Jan 31 21:37	27° \approx 17'39	-0.7m
evening set	4855 Mar 11 13:02	2° \mathcal{Y} 33'06			4856 Feb 02 17:08	0° \mathcal{H}	
	4855 Mar 14 12:32	30° \mathcal{R} \mathcal{H}		evening max el	4856 Feb 12 21:29	13° \mathcal{H} 21'45	19°33'29
inferior conj	4855 Mar 17 04:35	26° \mathcal{H} 52'43	3°31'31	asc. node	4856 Feb 16 13:32	16° \mathcal{H} 24'34	
minimum elong	4855 Mar 17 03:45	26° \mathcal{H} 55'19	3°31'28	retrograde	4856 Feb 20 04:02	17° \mathcal{H} 33'02	
min. Earth dist.	4855 Mar 18 23:49	24° \mathcal{H} 39'36	0.65435 AU	evening set	4856 Feb 23 17:34	16° \mathcal{H} 18'37	
morning rise	4855 Mar 22 18:01	20° \mathcal{H} 39'32		inferior conj	4856 Feb 29 04:29	10° \mathcal{H} 22'50	3°16'48
direct	4855 Mar 29 08:17	17° \mathcal{H} 49'28		minimum elong	4856 Feb 29 02:38	10° \mathcal{H} 28'56	3°16'32
desc. node	4855 Apr 07 05:03	21° \mathcal{H} 41'24		min. Earth dist.	4856 Mar 01 08:44	8° \mathcal{H} 49'54	0.66707 AU
morning max el	4855 Apr 11 12:57	25° \mathcal{H} 35'56	26°53'44	morning rise	4856 Mar 05 11:26	4° \mathcal{H} 08'15	
	4855 Apr 15 13:47	0° \mathcal{Y}		direct	4856 Mar 11 14:44	1° \mathcal{H} 24'20	
	4855 May 06 10:47	0° \mathcal{B}		morning max el	4856 Mar 23 22:34	8° \mathcal{H} 45'28	25°43'32
morning set	4855 May 17 08:06	19° \mathcal{B} 29'45		desc. node	4856 Mar 24 02:05	8° \mathcal{H} 54'24	

	4856 Apr 09 14:49	0°♿		desc. node	4857 Mar 10 23:06	27°≈13'05	
	4856 Apr 27 23:25	0°♿			4857 Mar 13 05:35	0°♿	
morning set	4856 Apr 29 03:28	2°♿07'33			4857 Apr 02 21:58	0°♿	
max. Earth dist.	4856 May 02 22:27	9°♿12'37	1.35814 AU	morning set	4857 Apr 11 03:04	13°♿45'01	
				max. Earth dist.	4857 Apr 14 19:18	20°♿15'44	1.37833 AU
superior conj	4856 May 08 13:37	20°♿15'03	-0°58'22		4857 Apr 20 01:44	0°♿	
minimum elong	4856 May 08 16:49	20°♿31'11	0°57'48				
	4856 May 13 08:26	0°♿		superior conj	4857 Apr 21 19:10	3°♿17'35	-1°26'45
asc. node	4856 May 14 12:50	2°♿25'59		minimum elong	4857 Apr 21 23:46	3°♿39'39	1°26'07
evening rise	4856 May 16 13:23	6°♿34'43		evening rise	4857 Apr 30 13:34	20°♿31'37	
	4856 May 29 15:23	0°♿		asc. node	4857 May 01 09:51	22°♿11'40	
evening max el	4856 Jun 03 09:31	5°♿38'41	20°05'41		4857 May 05 10:59	0°♿	
retrograde	4856 Jun 13 21:15	10°♿46'25		evening max el	4857 May 17 04:05	17°♿27'41	19°06'32
evening set	4856 Jun 15 19:39	10°♿36'42		retrograde	4857 May 25 23:53	21°♿46'22	
desc. node	4856 Jun 20 01:18	9°♿15'17		evening set	4857 May 28 00:20	21°♿33'47	
inferior conj	4856 Jun 24 20:52	6°♿37'17	-1°26'07	inferior conj	4857 Jun 05 07:45	17°♿21'34	0°28'14
minimum elong	4856 Jun 24 16:50	6°♿43'18	1°24'37	minimum elong	4857 Jun 05 08:53	17°♿19'36	0°27'49
min. Earth dist.	4856 Jun 26 15:35	5°♿33'29	0.55155 AU	desc. node	4857 Jun 06 22:18	16°♿15'20	
morning rise	4856 Jul 03 12:26	2°♿19'09		min. Earth dist.	4857 Jun 08 06:44	15°♿20'46	0.56397 AU
direct	4856 Jul 07 15:47	1°♿41'52		morning rise	4857 Jun 13 14:13	12°♿27'58	
morning max el	4856 Jul 21 07:58	8°♿24'16	23°59'39	direct	4857 Jun 18 16:04	11°♿27'39	
	4856 Aug 06 01:29	0°♿		morning max el	4857 Jul 02 21:58	18°♿46'42	25°38'35
asc. node	4856 Aug 10 12:07	8°♿21'11			4857 Jul 12 08:00	0°♿	
morning set	4856 Aug 14 19:16	17°♿10'11		asc. node	4857 Jul 28 09:08	28°♿03'17	
	4856 Aug 20 17:55	0°♿			4857 Jul 29 07:36	0°♿	
				morning set	4857 Jul 30 06:42	2°♿01'37	
superior conj	4856 Aug 21 18:34	2°♿13'40	1°33'50				
minimum elong	4856 Aug 21 16:43	2°♿03'39	1°33'40	superior conj	4857 Aug 06 05:08	17°♿07'17	1°20'40
max. Earth dist.	4856 Aug 23 21:53	6°♿49'52	1.33134 AU	minimum elong	4857 Aug 06 02:52	16°♿54'45	1°20'21
evening rise	4856 Aug 29 04:44	17°♿50'14		max. Earth dist.	4857 Aug 07 05:00	19°♿18'15	1.32346 AU
	4856 Sep 04 12:11	0°♿			4857 Aug 12 04:11	0°♿	
desc. node	4856 Sep 16 00:36	19°♿11'20		evening rise	4857 Aug 13 06:09	2°♿15'38	
	4856 Sep 23 20:24	0°♿			4857 Aug 28 08:56	0°♿	
evening max el	4856 Oct 01 20:48	8°♿55'13	27°25'51	desc. node	4857 Sep 02 21:37	8°♿15'21	
retrograde	4856 Oct 15 11:33	16°♿12'57		evening max el	4857 Sep 14 05:02	21°♿39'12	27°18'33
evening set	4856 Oct 22 14:15	13°♿35'27		retrograde	4857 Sep 28 00:53	28°♿53'20	
min. Earth dist.	4856 Oct 26 07:12	10°♿19'04	0.63828 AU	evening set	4857 Oct 05 04:35	26°♿30'19	
inferior conj	4856 Oct 28 20:18	7°♿42'12	-2°47'50	min. Earth dist.	4857 Oct 08 19:30	23°♿40'27	0.61977 AU
minimum elong	4856 Oct 29 01:08	7°♿29'47	2°46'04	inferior conj	4857 Oct 11 19:14	20°♿56'40	-3°48'35
morning rise	4856 Nov 04 13:27	2°♿22'14		minimum elong	4857 Oct 12 01:20	20°♿42'43	3°46'49
asc. node	4856 Nov 06 11:20	1°♿53'40		morning rise	4857 Oct 18 23:54	15°♿55'31	
direct	4856 Nov 07 00:46	1°♿52'06		direct	4857 Oct 21 08:01	15°♿31'50	
morning max el	4856 Nov 13 13:50	5°♿17'03	17°51'34	asc. node	4857 Oct 24 08:22	16°♿12'36	
	4856 Nov 29 19:06	0°♿		morning max el	4857 Oct 28 05:38	19°♿01'34	17°52'27
morning set	4856 Nov 30 06:18	0°♿48'06			4857 Nov 05 05:32	0°♿	
				morning set	4857 Nov 13 02:14	13°♿50'07	
superior conj	4856 Dec 12 21:41	22°♿04'20	0°00'39		4857 Nov 22 04:16	0°♿	
minimum elong	4856 Dec 12 21:45	22°♿04'40	0°00'39				
behind sun begin	4856 Dec 12 11:57	21°♿24'32		superior conj	4857 Nov 23 22:22	3°♿01'36	0°41'11
behind sun end	4856 Dec 13 07:34	22°♿44'43		minimum elong	4857 Nov 24 01:47	3°♿16'18	0°40'43
desc. node	4856 Dec 12 23:53	22°♿13'22		desc. node	4857 Nov 29 20:54	13°♿00'33	
	4856 Dec 17 19:30	0°♿		max. Earth dist.	4857 Dec 01 05:08	15°♿12'39	1.43054 AU
max. Earth dist.	4856 Dec 18 14:48	1°♿16'55	1.44444 AU	evening rise	4857 Dec 08 06:40	26°♿29'30	
evening rise	4856 Dec 28 17:09	17°♿03'41			4857 Dec 10 12:49	0°♿	
	4857 Jan 06 05:29	0°≈			4857 Dec 31 02:57	0°≈	
evening max el	4857 Jan 25 23:29	26°≈54'57	20°34'16	evening max el	4858 Jan 08 20:04	10°≈29'39	21°46'24
	4857 Jan 29 12:31	0°♿		retrograde	4858 Jan 17 23:38	15°≈55'50	
asc. node	4857 Feb 02 10:34	1°♿39'24		asc. node	4858 Jan 20 07:36	15°≈26'44	
retrograde	4857 Feb 03 02:19	1°♿41'44		evening set	4858 Jan 22 08:20	14°≈11'40	
evening set	4857 Feb 07 00:36	0°♿12'52		inferior conj	4858 Jan 27 16:31	7°≈53'35	2°16'34
	4857 Feb 07 07:10	30°≈		minimum elong	4858 Jan 27 14:08	8°≈01'52	2°15'49
inferior conj	4857 Feb 12 09:12	24°≈04'22	2°51'11	min. Earth dist.	4858 Jan 27 19:04	7°≈44'42	0.68010 AU
minimum elong	4857 Feb 12 06:50	24°≈12'27	2°50'37	morning rise	4858 Feb 01 19:44	1°≈41'53	
min. Earth dist.	4857 Feb 12 23:56	23°≈13'56	0.67560 AU		4858 Feb 04 12:10	30°≈	
morning rise	4857 Feb 17 12:52	17°≈50'22		direct	4858 Feb 06 18:51	29°≈33'54	
direct	4857 Feb 23 02:34	15°≈21'39			4858 Feb 09 04:44	0°≈	
morning max el	4857 Mar 06 07:13	22°≈03'10	24°18'35	morning max el	4858 Feb 16 16:51	5°≈26'09	22°49'13

desc. node	4858 Feb 25 20:08	16° \approx 18'33		morning rise	4859 Jan 17 05:49	15° \approx 40'14	
	4858 Mar 07 14:12	0° H		direct	4859 Jan 21 14:34	13° \approx 55'11	
morning set	4858 Mar 23 00:50	24° H 06'17		morning max el	4859 Jan 30 07:16	18° \approx 58'17	21°24'22
	4858 Mar 26 13:15	0° Y			4859 Feb 08 10:04	0° \approx	
max. Earth dist.	4858 Mar 27 14:29	1° Y 47'39	1.40030 AU	desc. node	4859 Feb 12 17:11	5° \approx 57'46	
					4859 Feb 28 18:22	0° H	
superior conj	4858 Apr 04 09:04	15° Y 32'36	-1°50'46	morning set	4859 Mar 02 18:01	3° H 07'22	
minimum elong	4858 Apr 04 13:54	15° Y 54'41	1°50'19	max. Earth dist.	4859 Mar 09 15:34	14° H 15'03	1.42120 AU
	4858 Apr 12 02:38	0° B					
evening rise	4858 Apr 14 04:28	3° B 57'12		superior conj	4859 Mar 17 02:21	26° H 48'47	-2°05'59
asc. node	4858 Apr 18 06:52	11° B 40'35		minimum elong	4859 Mar 17 05:01	27° H 00'22	2°05'54
	4858 Apr 30 10:44	0° II			4859 Mar 18 22:21	0° Y	
evening max el	4858 Apr 30 08:09	29° B 53'45	18°27'42	evening rise	4859 Mar 28 06:21	16° Y 43'00	
retrograde	4858 May 07 21:07	3° II 37'34			4859 Apr 04 16:53	0° B	
evening set	4858 May 10 04:16	3° II 17'49		asc. node	4859 Apr 05 03:54	0° B 46'49	
	4858 May 16 02:03	30° R B		evening max el	4859 Apr 13 18:12	12° B 47'39	18°08'45
inferior conj	4858 May 17 15:45	28° B 46'07	1°57'15	retrograde	4859 Apr 20 12:20	16° B 13'16	
minimum elong	4858 May 17 19:12	28° B 39'12	1°56'13	evening set	4859 Apr 23 02:16	15° B 43'41	
min. Earth dist.	4858 May 21 01:58	26° B 02'50	0.58283 AU	inferior conj	4859 Apr 29 20:28	10° B 51'03	2°54'51
desc. node	4858 May 24 19:18	23° B 34'51		minimum elong	4859 Apr 29 23:33	10° B 43'49	2°54'13
morning rise	4858 May 25 06:57	23° B 19'32		min. Earth dist.	4859 May 03 03:27	7° B 48'27	0.60465 AU
direct	4858 May 31 06:36	21° B 46'43		morning rise	4859 May 06 18:34	5° B 00'41	
morning max el	4858 Jun 14 15:53	29° B 28'33	26°57'08	desc. node	4859 May 11 16:22	3° B 02'14	
	4858 Jun 15 04:36	0° II		direct	4859 May 13 09:09	2° B 53'57	
	4858 Jul 06 03:52	0° E		morning max el	4859 May 27 16:19	10° B 48'31	27°43'05
morning set	4858 Jul 14 16:22	16° E 46'11			4859 Jun 11 15:03	0° II	
asc. node	4858 Jul 15 06:10	17° E 59'01			4859 Jun 28 07:27	0° E	
	4858 Jul 20 18:51	0° O		morning set	4859 Jun 28 22:26	1° E 17'17	
				asc. node	4859 Jul 02 03:11	8° E 02'30	
superior conj	4858 Jul 21 16:57	2° O 02'05	1°02'56	max. Earth dist.	4859 Jul 05 02:58	14° E 32'33	1.32024 AU
minimum elong	4858 Jul 21 14:43	1° O 49'46	1°02'32				
max. Earth dist.	4858 Jul 21 15:58	1° O 56'41	1.31976 AU	superior conj	4859 Jul 06 04:11	16° E 51'09	0°41'10
evening rise	4858 Jul 28 13:12	16° O 56'03		minimum elong	4859 Jul 06 02:28	16° E 41'42	0°40'49
	4858 Aug 04 01:10	0° M			4859 Jul 12 04:19	0° O	
desc. node	4858 Aug 20 18:37	26° M 27'22		evening rise	4859 Jul 12 23:35	1° O 43'04	
	4858 Aug 23 18:20	0° A			4859 Jul 28 05:54	0° M	
evening max el	4858 Aug 27 07:32	3° A 40'19	26°37'47	desc. node	4859 Aug 07 15:38	13° M 25'14	
retrograde	4858 Sep 10 06:01	10° A 49'34		evening max el	4859 Aug 09 02:21	14° M 51'31	25°26'11
evening set	4858 Sep 17 00:52	8° A 53'26		retrograde	4859 Aug 23 01:05	21° M 56'03	
min. Earth dist.	4858 Sep 20 21:21	6° A 17'36	0.59940 AU	evening set	4859 Aug 28 22:14	20° M 35'55	
inferior conj	4858 Sep 24 03:08	3° A 42'19	-4°40'24	min. Earth dist.	4859 Sep 02 14:08	17° M 56'37	0.57903 AU
minimum elong	4858 Sep 24 08:52	3° A 30'49	4°39'19	inferior conj	4859 Sep 05 16:28	15° M 48'03	-5°12'18
	4858 Sep 29 10:38	30° R M		minimum elong	4859 Sep 05 18:55	15° M 43'48	5°12'08
morning rise	4858 Oct 01 18:56	29° M 02'48		morning rise	4859 Sep 13 17:51	11° M 31'42	
direct	4858 Oct 04 03:12	28° M 42'35		direct	4859 Sep 16 05:52	11° M 12'37	
	4858 Oct 08 14:17	0° A		morning max el	4859 Sep 24 21:03	15° M 18'30	18°53'42
asc. node	4858 Oct 11 05:24	1° A 57'52		asc. node	4859 Sep 28 02:28	18° M 54'08	
morning max el	4858 Oct 11 17:10	2° A 25'29	18°12'37		4859 Oct 05 05:11	0° A	
morning set	4858 Oct 27 13:02	27° A 34'26		morning set	4859 Oct 11 10:08	11° A 47'36	
	4858 Oct 28 19:51	0° M					
superior conj	4858 Nov 05 23:51	15° M 10'53	1°11'27	superior conj	4859 Oct 19 20:59	28° A 17'28	1°31'07
minimum elong	4858 Nov 06 03:47	15° M 28'39	1°10'59	minimum elong	4859 Oct 19 23:50	28° A 31'01	1°30'53
max. Earth dist.	4858 Nov 13 14:48	28° M 32'35	1.41206 AU		4859 Oct 20 18:35	0° M	
	4858 Nov 14 11:30	0° A		max. Earth dist.	4859 Oct 26 20:31	11° M 10'22	1.39118 AU
desc. node	4858 Nov 16 17:56	3° A 46'51		evening rise	4859 Oct 30 17:49	17° M 57'41	
evening rise	4858 Nov 18 12:54	6° A 42'49		desc. node	4859 Nov 03 14:58	24° M 28'19	
	4858 Dec 03 17:04	0° B			4859 Nov 07 01:01	0° A	
evening max el	4858 Dec 22 12:14	24° B 07'17	23°05'10	evening max el	4859 Nov 28 02:41	0° B	
	4858 Dec 31 03:09	0° \approx		retrograde	4859 Dec 05 01:36	7° B 48'18	24°24'37
retrograde	4859 Jan 01 18:29	0° \approx 12'01			4859 Dec 16 09:44	14° B 26'23	
	4859 Jan 03 08:19	30° R B		evening set	4859 Dec 21 19:44	12° B 10'51	
evening set	4859 Jan 06 15:14	28° B 12'00		asc. node	4859 Dec 25 01:41	8° B 41'38	
asc. node	4859 Jan 07 04:38	27° B 42'23		min. Earth dist.	4859 Dec 26 11:46	6° B 50'44	0.67772 AU
min. Earth dist.	4859 Jan 11 15:46	22° B 18'04	0.68076 AU	inferior conj	4859 Dec 27 07:27	5° B 44'47	0°45'12
inferior conj	4859 Jan 12 00:31	21° B 47'54	1°34'14	minimum elong	4859 Dec 27 06:23	5° B 48'21	0°44'45
minimum elong	4859 Jan 11 22:35	21° B 54'37	1°33'30		4860 Jan 01 08:14	30° R A	
				morning rise	4860 Jan 01 17:08	29° A 43'03	

direct	4860 Jan 05 12:29	28° ♂ 20'13		transit middle	4860 Dec 10 11:42	19° ♂ 40'20	0°09'32
	4860 Jan 10 01:01	0° ♂		transit begin	4860 Dec 10 09:25	19° ♂ 47'35	
morning max el	4860 Jan 13 05:16	2° ♂ 42'41	20°10'16	transit end	4860 Dec 10 13:58	19° ♂ 33'05	
desc. node	4860 Jan 30 14:14	26° ♂ 01'26		asc. node	4860 Dec 10 22:45	19° ♂ 05'07	
	4860 Feb 02 05:44	0° \approx		morning rise	4860 Dec 16 03:39	13° ♂ 47'23	
morning set	4860 Feb 09 15:51	11° \approx 20'17		direct	4860 Dec 19 11:14	12° ♂ 44'09	
max. Earth dist.	4860 Feb 20 00:29	27° \approx 36'50	1.43815 AU	morning max el	4860 Dec 26 11:08	16° ♂ 37'24	19°10'19
	4860 Feb 21 12:08	0° ♂			4861 Jan 05 17:50	0° ♂	
				greatest brilliancy	4861 Jan 09 06:43	5° ♂ 18'30	-0.7m
superior conj	4860 Feb 25 18:43	6° ♂ 57'12	-2°06'59	desc. node	4861 Jan 16 11:15	16° ♂ 22'19	
minimum elong	4860 Feb 25 16:04	6° ♂ 46'20	2°06'55	morning set	4861 Jan 18 17:42	19° ♂ 53'33	
evening rise	4860 Mar 09 14:50	28° ♂ 40'16			4861 Jan 25 05:33	0° \approx	
	4860 Mar 10 09:16	0° ♀		max. Earth dist.	4861 Feb 01 15:21	11° \approx 36'21	1.44919 AU
asc. node	4860 Mar 22 00:58	19° ♀ 23'12					
evening max el	4860 Mar 27 06:53	26° ♀ 00'46	18°09'08	superior conj	4861 Feb 04 10:38	16° \approx 02'06	-1°49'00
retrograde	4860 Apr 02 17:19	29° ♀ 23'29		minimum elong	4861 Feb 04 02:15	15° \approx 28'56	1°48'21
evening set	4860 Apr 05 13:24	28° ♀ 42'37			4861 Feb 13 03:43	0° ♂	
inferior conj	4860 Apr 11 18:19	23° ♀ 30'07	3°25'00	evening rise	4861 Feb 19 01:41	9° ♂ 40'30	
minimum elong	4860 Apr 11 19:54	23° ♀ 25'55	3°24'50		4861 Mar 03 14:47	0° ♀	
min. Earth dist.	4860 Apr 14 13:38	20° ♀ 32'30	0.62616 AU	asc. node	4861 Mar 08 22:01	7° ♀ 19'30	
morning rise	4860 Apr 18 01:03	17° ♀ 25'37		evening max el	4861 Mar 10 19:14	9° ♀ 24'47	18°28'14
direct	4860 Apr 24 21:34	14° ♀ 51'56		retrograde	4861 Mar 17 07:19	12° ♀ 57'40	
desc. node	4860 Apr 27 13:25	15° ♀ 12'58		evening set	4861 Mar 20 09:33	12° ♀ 04'32	
morning max el	4860 May 08 22:38	22° ♀ 51'48	27°51'16	inferior conj	4861 Mar 26 05:03	6° ♀ 33'56	3°33'54
	4860 May 15 06:21	0° ♂		minimum elong	4861 Mar 26 05:00	6° ♀ 34'04	3°33'54
	4860 Jun 03 20:26	0° ♂		min. Earth dist.	4861 Mar 28 09:20	4° ♀ 00'32	0.64513 AU
morning set	4860 Jun 11 22:51	15° ♂ 28'58		morning rise	4861 Mar 31 23:44	0° ♀ 22'23	
max. Earth dist.	4860 Jun 17 10:01	26° ♂ 53'20	1.32499 AU		4861 Apr 01 10:49	30° ♂	
asc. node	4860 Jun 18 00:14	28° ♂ 09'45		direct	4861 Apr 07 18:06	27° ♂ 34'09	
	4860 Jun 18 20:40	0° ♂		desc. node	4861 Apr 14 10:27	29° ♂ 47'03	
					4861 Apr 14 18:41	0° ♀	
superior conj	4860 Jun 19 13:08	1° ♂ 29'16	0°15'59	morning max el	4861 Apr 21 08:08	5° ♀ 29'51	27°23'27
minimum elong	4860 Jun 19 12:23	1° ♂ 25'11	0°15'49		4861 May 09 23:40	0° ♂	
behind sun begin	4860 Jun 19 11:47	1° ♂ 21'54		morning set	4861 May 26 14:56	29° ♂ 12'42	
behind sun end	4860 Jun 19 12:59	1° ♂ 28'28			4861 May 27 00:34	0° ♂	
evening rise	4860 Jun 26 11:23	16° ♂ 30'40		max. Earth dist.	4861 May 31 09:02	8° ♂ 46'55	1.33422 AU
	4860 Jul 03 03:19	0° ♂					
evening max el	4860 Jul 20 15:20	25° ♂ 23'05	23°53'53	superior conj	4861 Jun 03 17:50	15° ♂ 50'12	-0°11'53
desc. node	4860 Jul 24 12:39	28° ♂ 40'04		minimum elong	4861 Jun 03 18:26	15° ♂ 53'27	0°11'46
	4860 Jul 26 13:53	0° ♂		behind sun begin	4861 Jun 03 14:42	15° ♂ 33'36	
retrograde	4860 Aug 03 08:35	2° ♂ 17'05		behind sun end	4861 Jun 03 22:11	16° ♂ 13'18	
evening set	4860 Aug 07 19:45	1° ♂ 33'05		asc. node	4861 Jun 04 21:17	18° ♂ 16'20	
	4860 Aug 11 11:09	30° ♂			4861 Jun 10 08:58	0° ♂	
min. Earth dist.	4860 Aug 14 01:35	28° ♂ 32'11	0.56156 AU	evening rise	4861 Jun 10 22:40	1° ♂ 12'21	
inferior conj	4860 Aug 16 09:27	27° ♂ 07'08	-5°08'29		4861 Jun 27 05:08	0° ♂	
minimum elong	4860 Aug 16 05:46	27° ♂ 12'47	5°08'10	evening max el	4861 Jul 02 05:37	5° ♂ 45'07	22°16'41
morning rise	4860 Aug 24 18:19	23° ♂ 10'20		desc. node	4861 Jul 11 09:39	11° ♂ 37'42	
direct	4860 Aug 27 12:51	22° ♂ 50'44		retrograde	4861 Jul 15 04:08	12° ♂ 10'39	
morning max el	4860 Sep 06 14:18	27° ♂ 31'32	19°56'42	evening set	4861 Jul 18 03:45	11° ♂ 50'57	
	4860 Sep 08 23:24	0° ♂		min. Earth dist.	4861 Jul 26 11:52	8° ♂ 14'39	0.55043 AU
asc. node	4860 Sep 13 23:31	6° ♂ 46'25		inferior conj	4861 Jul 27 09:18	7° ♂ 44'24	-4°14'55
morning set	4860 Sep 24 14:12	26° ♂ 20'08		minimum elong	4861 Jul 27 00:50	7° ♂ 56'22	4°12'56
	4860 Sep 26 09:23	0° ♂		morning rise	4861 Aug 04 23:44	3° ♂ 54'20	
				direct	4861 Aug 08 03:10	3° ♂ 32'07	
superior conj	4860 Oct 02 08:34	12° ♂ 06'25	1°41'22	morning max el	4861 Aug 19 19:31	8° ♂ 59'13	21°20'31
minimum elong	4860 Oct 02 09:49	12° ♂ 12'40	1°41'18	asc. node	4861 Aug 31 20:33	25° ♂ 21'58	
max. Earth dist.	4860 Oct 08 01:47	23° ♂ 13'15	1.37049 AU		4861 Sep 03 09:28	0° ♂	
evening rise	4860 Oct 11 20:42	0° ♂ 12'39		morning set	4861 Sep 08 22:44	11° ♂ 05'18	
	4860 Oct 11 17:54	0° ♂					
desc. node	4860 Oct 20 11:58	15° ♂ 00'43		superior conj	4861 Sep 16 06:21	26° ♂ 25'19	1°43'35
	4860 Oct 30 06:27	0° ♂		minimum elong	4861 Sep 16 06:06	26° ♂ 24'03	1°43'35
evening max el	4860 Nov 16 14:01	21° ♂ 31'20	25°37'50		4861 Sep 17 24:00	0° ♂	
retrograde	4860 Nov 28 20:32	28° ♂ 33'33		max. Earth dist.	4861 Sep 20 12:17	5° ♂ 04'48	1.35223 AU
evening set	4860 Dec 04 20:08	26° ♂ 04'38		evening rise	4861 Sep 24 17:46	13° ♂ 18'36	
min. Earth dist.	4860 Dec 09 04:43	21° ♂ 19'07	0.67116 AU		4861 Oct 04 02:44	0° ♂	
inferior conj	4860 Dec 10 11:27	19° ♂ 41'08	-0°09'39	desc. node	4861 Oct 07 08:58	5° ♂ 19'00	
minimum elong	4860 Dec 10 11:42	19° ♂ 40'20	0°09'32		4861 Oct 25 04:49	0° ♂	

evening max el	4861 Oct 30 02:42	5° ♊ 12'26	26°37'26	evening max el	4862 Oct 12 15:15	18° ♍ 41'28	27°16'01
retrograde	4861 Nov 12 02:10	12° ♊ 27'31		retrograde	4862 Oct 26 01:49	25° ♍ 59'33	
evening set	4861 Nov 18 14:31	9° ♊ 49'35		evening set	4862 Nov 02 00:29	23° ♍ 19'33	
min. Earth dist.	4861 Nov 22 16:24	5° ♊ 39'21	0.66108 AU	min. Earth dist.	4862 Nov 05 20:24	19° ♍ 44'08	0.64755 AU
inferior conj	4861 Nov 24 10:34	3° ♊ 33'45	-1°09'06	inferior conj	4862 Nov 08 02:29	17° ♍ 16'41	-2°11'31
minimum elong	4861 Nov 24 12:29	3° ♊ 28'01	1°08'16	minimum elong	4862 Nov 08 06:16	17° ♍ 06'19	2°10'01
asc. node	4861 Nov 27 19:47	29° ♍ 50'02		morning rise	4862 Nov 14 13:13	11° ♍ 47'00	
	4861 Nov 27 15:37	30° ♍		asc. node	4862 Nov 14 16:49	11° ♍ 43'04	
morning rise	4861 Nov 30 11:12	27° ♍ 50'29		direct	4862 Nov 17 03:42	11° ♍ 11'33	
direct	4861 Dec 03 09:03	27° ♍ 03'06		morning max el	4862 Nov 23 15:08	14° ♍ 37'43	17°59'15
	4861 Dec 09 07:24	0° ♊			4862 Dec 04 12:50	0° ♊	
morning max el	4861 Dec 09 23:17	0° ♊ 38'08	18°26'22	morning set	4862 Dec 11 04:41	11° ♊ 04'56	
morning set	4861 Dec 29 20:28	29° ♊ 45'28		desc. node	4862 Dec 21 05:17	27° ♊ 37'11	
	4861 Dec 30 00:05	0° ♊			4862 Dec 22 16:37	0° ♊	
desc. node	4862 Jan 03 08:17	6° ♊ 55'48		superior conj	4862 Dec 25 00:05	3° ♊ 42'37	-0°26'03
superior conj	4862 Jan 14 13:45	24° ♊ 39'10	-1°12'31	minimum elong	4862 Dec 24 20:55	3° ♊ 29'56	0°25'36
minimum elong	4862 Jan 14 05:14	24° ♊ 05'45	1°11'30	max. Earth dist.	4862 Dec 29 05:05	10° ♊ 23'40	1.44973 AU
max. Earth dist.	4862 Jan 15 09:46	25° ♊ 57'39	1.45319 AU	evening rise	4863 Jan 10 05:52	29° ♊ 07'38	
	4862 Jan 17 23:38	0° ♊			4863 Jan 10 19:28	0° ♊	
evening rise	4862 Jan 30 13:16	19° ♊ 44'46		greatest brilliancy	4863 Jan 24 12:12	20° ♊ 46'41	-0.6m
	4862 Feb 06 01:10	0° ♊			4863 Jan 31 00:35	0° ♊	
greatest brilliancy	4862 Feb 09 11:31	5° ♊ 22'19	-0.8m	evening max el	4863 Feb 05 10:06	6° ♊ 28'06	19°57'43
evening max el	4862 Feb 22 04:54	22° ♊ 55'04	19°04'58	asc. node	4863 Feb 10 16:04	10° ♊ 23'44	
asc. node	4862 Feb 23 19:03	24° ♊ 24'20		retrograde	4863 Feb 13 00:27	10° ♊ 53'13	
retrograde	4862 Mar 01 02:40	26° ♊ 49'20		evening set	4863 Feb 16 17:35	9° ♊ 32'44	
evening set	4862 Mar 04 11:45	25° ♊ 43'02		inferior conj	4863 Feb 22 03:17	3° ♊ 31'27	3°07'08
inferior conj	4862 Mar 10 01:02	19° ♊ 56'02	3°26'44	minimum elong	4863 Feb 22 01:09	3° ♊ 38'35	3°06'43
minimum elong	4862 Mar 09 23:43	20° ♊ 00'16	3°26'36	min. Earth dist.	4863 Feb 23 01:39	2° ♊ 16'29	0.67131 AU
min. Earth dist.	4862 Mar 11 13:52	17° ♊ 59'05	0.66035 AU		4863 Feb 24 20:02	30° ♊	
morning rise	4862 Mar 15 11:18	13° ♊ 41'52		morning rise	4863 Feb 27 08:30	27° ♊ 17'06	
direct	4862 Mar 21 21:27	10° ♊ 52'41		direct	4863 Mar 05 06:22	24° ♊ 38'35	
desc. node	4862 Apr 01 07:30	16° ♊ 11'03			4863 Mar 15 08:05	0° ♊	
morning max el	4862 Apr 03 18:03	18° ♊ 30'40	26°26'07	morning max el	4863 Mar 17 02:58	1° ♊ 43'46	25°08'29
	4862 Apr 13 10:49	0° ♊		desc. node	4863 Mar 19 04:32	3° ♊ 54'42	
	4862 May 02 23:39	0° ♊			4863 Apr 07 12:22	0° ♊	
morning set	4862 May 09 19:09	12° ♊ 18'17		morning set	4863 Apr 22 06:51	24° ♊ 32'31	
max. Earth dist.	4862 May 13 20:58	20° ♊ 08'47	1.34813 AU		4863 Apr 25 06:47	0° ♊	
				max. Earth dist.	4863 Apr 25 22:18	1° ♊ 11'56	1.36640 AU
superior conj	4862 May 18 15:57	29° ♊ 47'29	-0°41'19	superior conj	4863 May 02 04:38	13° ♊ 13'14	-1°10'44
minimum elong	4862 May 18 18:12	29° ♊ 59'01	0°40'53	minimum elong	4863 May 02 08:30	13° ♊ 32'20	1°10'06
	4862 May 18 18:23	0° ♊		asc. node	4863 May 09 15:20	28° ♊ 11'33	
asc. node	4862 May 22 18:19	8° ♊ 18'18		evening rise	4863 May 10 11:36	29° ♊ 53'46	
evening rise	4862 May 26 07:28	15° ♊ 42'13			4863 May 10 12:50	0° ♊	
	4862 Jun 02 14:10	0° ♊		evening max el	4863 May 27 16:56	27° ♊ 55'37	19°38'02
evening max el	4862 Jun 14 05:05	16° ♊ 30'19	20°48'42		4863 May 30 02:52	0° ♊	
retrograde	4862 Jun 25 16:34	22° ♊ 08'01		retrograde	4863 Jun 06 10:38	2° ♊ 40'50	
evening set	4862 Jun 27 19:03	21° ♊ 57'26		evening set	4863 Jun 08 09:06	2° ♊ 30'23	
desc. node	4862 Jun 28 06:41	21° ♊ 52'06			4863 Jun 14 14:12	30° ♊	
inferior conj	4862 Jul 07 02:26	18° ♊ 00'24	-2°34'41	desc. node	4863 Jun 15 03:43	29° ♊ 40'14	
minimum elong	4862 Jul 06 19:22	18° ♊ 10'27	2°32'16	inferior conj	4863 Jun 17 03:28	28° ♊ 26'46	-0°35'36
min. Earth dist.	4862 Jul 07 23:06	17° ♊ 31'00	0.54835 AU	minimum elong	4863 Jun 17 01:51	28° ♊ 29'18	0°34'59
morning rise	4862 Jul 15 19:23	13° ♊ 57'56		min. Earth dist.	4863 Jun 19 12:13	26° ♊ 57'51	0.55588 AU
direct	4862 Jul 19 12:27	13° ♊ 28'17		morning rise	4863 Jun 25 16:12	23° ♊ 54'33	
morning max el	4862 Aug 01 14:19	19° ♊ 44'56	22°59'46	direct	4863 Jun 30 04:59	23° ♊ 08'49	
	4862 Aug 10 03:37	0° ♊		morning max el	4863 Jul 14 04:08	0° ♊ 07'47	24°43'15
asc. node	4862 Aug 18 17:35	14° ♊ 29'47			4863 Jul 14 00:50	0° ♊	
morning set	4862 Aug 24 09:43	25° ♊ 56'48			4863 Aug 03 13:45	0° ♊	
	4862 Aug 26 07:30	0° ♊		asc. node	4863 Aug 05 14:36	4° ♊ 01'33	
superior conj	4862 Aug 31 11:00	11° ♊ 03'29	1°39'05	morning set	4863 Aug 08 21:28	10° ♊ 49'52	
minimum elong	4862 Aug 31 09:36	10° ♊ 56'03	1°39'00	superior conj	4863 Aug 15 20:01	25° ♊ 53'21	1°28'50
max. Earth dist.	4862 Sep 03 07:32	17° ♊ 06'25	1.33776 AU	minimum elong	4863 Aug 15 17:55	25° ♊ 41'56	1°28'37
evening rise	4862 Sep 08 04:41	27° ♊ 03'17		max. Earth dist.	4863 Aug 17 11:16	29° ♊ 26'44	1.32751 AU
	4862 Sep 09 16:48	0° ♊			4863 Aug 17 17:25	0° ♊	
desc. node	4862 Sep 24 05:59	25° ♊ 15'56		evening rise	4863 Aug 23 01:44	11° ♊ 16'27	
	4862 Sep 27 09:45	0° ♊					

	4863 Sep 01 22:44	0°♄			4864 Aug 25 12:36	0°♄	
desc. node	4863 Sep 11 02:59	14°♄42'31		desc. node	4864 Aug 28 00:01	3°♄26'17	
	4863 Sep 23 07:02	0°♄		evening max el	4864 Sep 06 07:49	14°♄11'42	27°05'12
evening max el	4863 Sep 25 01:52	1°♄45'45	27°26'47	retrograde	4864 Sep 20 04:39	21°♄23'38	
retrograde	4863 Oct 08 18:50	9°♄01'15		evening set	4864 Sep 27 06:16	19°♄10'17	
evening set	4863 Oct 15 23:02	6°♄28'37		min. Earth dist.	4864 Sep 30 22:11	16°♄28'37	0.61127 AU
min. Earth dist.	4863 Oct 19 14:40	3°♄24'35	0.63077 AU	inferior conj	4864 Oct 04 01:27	13°♄46'16	-4°12'13
inferior conj	4863 Oct 22 08:30	0°♄43'31	-3°14'10	minimum elong	4864 Oct 04 07:40	13°♄32'48	4°10'39
minimum elong	4863 Oct 22 13:59	0°♄30'04	3°12'19	morning rise	4864 Oct 11 11:00	8°♄54'17	
	4863 Oct 23 02:21	30°♄		direct	4864 Oct 13 18:50	8°♄32'21	
morning rise	4863 Oct 29 06:29	25°♄30'56		asc. node	4864 Oct 18 10:53	10°♄04'35	
direct	4863 Oct 31 16:12	25°♄03'47		morning max el	4864 Oct 20 22:14	12°♄06'11	17°58'40
asc. node	4863 Nov 01 13:50	25°♄07'41			4864 Nov 01 21:14	0°♄	
morning max el	4863 Nov 07 07:49	28°♄29'33	17°49'40	morning set	4864 Nov 05 16:20	6°♄56'29	
	4863 Nov 08 17:33	0°♄					
morning set	4863 Nov 23 13:27	23°♄34'59		superior conj	4864 Nov 15 21:03	25°♄23'48	0°55'21
	4863 Nov 27 05:29	0°♄		minimum elong	4864 Nov 16 00:58	25°♄40'58	0°54'50
					4864 Nov 18 12:39	0°♄	
superior conj	4863 Dec 05 09:16	13°♄54'18	0°18'58	max. Earth dist.	4864 Nov 23 11:06	8°♄19'35	1.42306 AU
minimum elong	4863 Dec 05 11:10	14°♄02'11	0°18'42	desc. node	4864 Nov 23 23:18	9°♄10'03	
desc. node	4863 Dec 08 02:17	18°♄22'58		evening rise	4864 Nov 29 11:06	18°♄03'09	
max. Earth dist.	4863 Dec 11 22:28	24°♄37'03	1.43926 AU		4864 Dec 07 04:13	0°♄	
	4863 Dec 15 07:34	0°♄			4864 Dec 28 20:49	0°♄	
evening rise	4863 Dec 20 15:50	8°♄20'48		evening max el	4865 Jan 01 04:13	3°♄37'14	22°19'23
	4864 Jan 04 02:04	0°♄		retrograde	4865 Jan 10 19:05	9°♄20'35	
evening max el	4864 Jan 19 09:48	20°♄01'53	21°03'48	asc. node	4865 Jan 14 10:08	8°♄11'12	
retrograde	4864 Jan 27 22:30	25°♄04'45		evening set	4865 Jan 15 08:45	7°♄29'30	
asc. node	4864 Jan 28 13:05	25°♄02'45		inferior conj	4865 Jan 20 17:12	1°♄08'08	1°59'30
evening set	4864 Feb 01 01:08	23°♄29'15		minimum elong	4865 Jan 20 14:56	1°♄15'58	1°58'44
inferior conj	4864 Feb 06 09:20	17°♄16'14	2°37'31	min. Earth dist.	4865 Jan 20 14:46	1°♄16'33	0.68077 AU
minimum elong	4864 Feb 06 06:55	17°♄24'37	2°36'51		4865 Jan 21 12:54	30°♄	
min. Earth dist.	4864 Feb 06 18:41	16°♄44'01	0.67803 AU	morning rise	4865 Jan 25 21:00	24°♄57'59	
morning rise	4864 Feb 11 12:31	11°♄03'17		direct	4865 Jan 30 13:49	22°♄59'57	
direct	4864 Feb 16 20:04	8°♄43'07		morning max el	4865 Feb 08 23:09	28°♄31'00	22°12'16
morning max el	4864 Feb 27 11:43	15°♄03'39	23°40'36		4865 Feb 10 09:14	0°♄	
desc. node	4864 Mar 05 01:34	22°♄34'59		desc. node	4865 Feb 19 22:35	11°♄56'12	
	4864 Mar 10 16:42	0°♄			4865 Mar 04 09:29	0°♄	
	4864 Mar 30 11:16	0°♄		morning set	4865 Mar 14 05:48	15°♄26'16	
morning set	4864 Apr 02 20:10	5°♄39'07		max. Earth dist.	4865 Mar 19 15:20	24°♄20'39	1.40949 AU
max. Earth dist.	4864 Apr 06 18:04	12°♄25'47	1.38768 AU		4865 Mar 22 23:02	0°♄	
superior conj	4864 Apr 14 04:07	25°♄56'59	-1°37'42	superior conj	4865 Mar 27 09:53	7°♄48'25	-1°58'35
minimum elong	4864 Apr 14 09:02	26°♄20'03	1°37'06	minimum elong	4865 Mar 27 14:11	8°♄07'36	1°58'18
	4864 Apr 16 07:24	0°♄		evening rise	4865 Apr 06 18:14	26°♄49'05	
evening rise	4864 Apr 23 08:17	13°♄38'43			4865 Apr 08 11:11	0°♄	
asc. node	4864 Apr 25 12:22	17°♄50'51		asc. node	4865 Apr 12 09:25	7°♄11'13	
	4864 May 02 05:01	0°♄		evening max el	4865 Apr 22 22:54	22°♄39'53	18°17'09
evening max el	4864 May 09 15:53	10°♄00'56	18°47'26	retrograde	4865 Apr 30 02:38	26°♄14'17	
retrograde	4864 May 17 21:11	14°♄03'06		evening set	4865 May 02 12:34	25°♄50'46	
evening set	4864 May 20 00:18	13°♄47'51		inferior conj	4865 May 09 16:17	21°♄10'08	2°25'22
inferior conj	4864 May 27 23:04	9°♄27'20	1°09'50	minimum elong	4865 May 09 19:48	21°♄02'34	2°24'26
minimum elong	4864 May 28 01:35	9°♄22'43	1°08'57	min. Earth dist.	4865 May 13 02:31	18°♄15'22	0.59198 AU
min. Earth dist.	4864 May 31 04:39	7°♄06'21	0.57143 AU	morning rise	4865 May 17 00:08	15°♄31'43	
desc. node	4864 Jun 01 00:45	6°♄32'01		desc. node	4865 May 18 21:48	14°♄36'39	
morning rise	4864 Jun 04 23:34	4°♄18'51		direct	4865 May 23 07:00	13°♄44'06	
direct	4864 Jun 10 10:59	3°♄05'53		morning max el	4865 Jun 06 16:18	21°♄33'05	27°21'04
morning max el	4864 Jun 24 19:26	10°♄35'34	26°15'25		4865 Jun 14 01:19	0°♄	
	4864 Jul 09 16:23	0°♄			4865 Jul 02 14:00	0°♄	
asc. node	4864 Jul 22 11:38	23°♄49'54		morning set	4865 Jul 07 16:45	10°♄18'24	
morning set	4864 Jul 23 08:22	25°♄38'51		asc. node	4865 Jul 09 08:41	13°♄49'22	
	4864 Jul 25 09:11	0°♄					
				superior conj	4865 Jul 14 19:07	25°♄40'37	0°54'09
superior conj	4864 Jul 30 07:19	10°♄47'41	1°13'40	minimum elong	4865 Jul 14 17:03	25°♄29'12	0°53'45
minimum elong	4864 Jul 30 05:00	10°♄34'55	1°13'18	max. Earth dist.	4865 Jul 14 07:57	24°♄38'59	1.31945 AU
max. Earth dist.	4864 Jul 30 20:36	12°♄00'53	1.32141 AU		4865 Jul 16 18:06	0°♄	
evening rise	4864 Aug 06 05:51	25°♄48'36		evening rise	4865 Jul 21 14:34	10°♄32'11	
	4864 Aug 08 06:34	0°♄			4865 Jul 31 13:10	0°♄	

desc. node	4865 Aug 14 21:03	21° \mathbb{M} 09'37		4866 Jul 08 06:58	0° \mathcal{Q}	
evening max el	4865 Aug 19 06:51	25° \mathbb{M} 50'15	26°10'34	4866 Jul 25 23:09	0° \mathbb{M}	
	4865 Aug 24 11:07	0° \mathcal{E}		evening max el	4866 Jul 31 22:50	6° \mathbb{M} 43'23 24°48'39
retrograde	4865 Sep 02 06:06	2° \mathcal{E} 58'38		desc. node	4866 Aug 01 18:05	7° \mathbb{M} 28'23
evening set	4865 Sep 08 17:20	1° \mathcal{E} 16'51		retrograde	4866 Aug 14 20:47	13° \mathbb{M} 44'54
	4865 Sep 10 22:18	30° \mathbb{R} \mathbb{M}		evening set	4866 Aug 20 04:17	12° \mathbb{M} 41'11
min. Earth dist.	4865 Sep 12 19:48	28° \mathbb{M} 41'54	0.59051 AU	min. Earth dist.	4866 Aug 25 10:14	9° \mathbb{M} 54'22 0.57100 AU
inferior conj	4865 Sep 16 01:45	26° \mathbb{M} 15'24	-4°57'18	inferior conj	4866 Aug 28 06:35	8° \mathbb{M} 02'39 -5°16'06
minimum elong	4865 Sep 16 06:31	26° \mathbb{M} 06'24	4°56'37	minimum elong	4866 Aug 28 06:37	8° \mathbb{M} 02'34 5°16'06
morning rise	4865 Sep 23 21:57	21° \mathbb{M} 46'08		morning rise	4866 Sep 05 11:21	3° \mathbb{M} 55'12
direct	4865 Sep 26 07:15	21° \mathbb{M} 26'46		direct	4866 Sep 08 01:39	3° \mathbb{M} 36'10
morning max el	4865 Oct 04 07:00	25° \mathbb{M} 18'14	18°27'33	morning max el	4866 Sep 17 06:44	7° \mathbb{M} 55'59 19°17'46
asc. node	4865 Oct 05 07:56	26° \mathbb{M} 21'40		asc. node	4866 Sep 22 04:59	13° \mathbb{M} 43'55
	4865 Oct 08 07:06	0° \mathcal{E}			4866 Oct 01 16:13	0° \mathcal{E}
morning set	4865 Oct 20 07:58	20° \mathcal{E} 53'50		morning set	4866 Oct 04 08:25	5° \mathcal{E} 16'31
	4865 Oct 25 01:42	0° \mathbb{M}				
superior conj	4865 Oct 29 07:34	7° \mathbb{M} 59'10	1°21'02	superior conj	4866 Oct 12 11:28	21° \mathcal{E} 25'38 1°36'31
minimum elong	4865 Oct 29 11:09	8° \mathbb{M} 15'46	1°20'39	minimum elong	4866 Oct 12 13:39	21° \mathcal{E} 36'16 1°36'22
max. Earth dist.	4865 Nov 05 18:14	21° \mathbb{M} 19'06	1.40321 AU		4866 Oct 16 23:23	0° \mathbb{M}
evening rise	4865 Nov 10 02:40	28° \mathbb{M} 41'30		max. Earth dist.	4866 Oct 18 22:58	3° \mathbb{M} 39'27 1.38222 AU
desc. node	4865 Nov 10 20:19	29° \mathbb{M} 54'31		evening rise	4866 Oct 22 17:24	10° \mathbb{M} 23'32
	4865 Nov 10 21:39	0° \mathcal{A}		desc. node	4866 Oct 28 17:21	20° \mathbb{M} 32'55
	4865 Nov 30 17:12	0° \mathcal{B}			4866 Nov 03 16:17	0° \mathcal{A}
evening max el	4865 Dec 14 18:48	17° \mathcal{B} 15'30	23°39'20	evening max el	4866 Nov 26 08:34	0° \mathcal{B}
retrograde	4865 Dec 25 12:40	23° \mathcal{B} 36'09			4866 Nov 27 07:43	0° \mathcal{B} 58'06 24°57'02
evening set	4865 Dec 30 14:49	21° \mathcal{B} 29'29		retrograde	4866 Dec 09 02:05	7° \mathcal{B} 47'38
asc. node	4866 Jan 01 07:12	19° \mathcal{B} 50'51		evening set	4866 Dec 14 17:45	5° \mathcal{B} 26'21
min. Earth dist.	4866 Jan 04 11:33	15° \mathcal{B} 49'37	0.67982 AU	asc. node	4866 Dec 19 04:15	0° \mathcal{B} 28'22
inferior conj	4866 Jan 05 00:58	15° \mathcal{B} 03'47	1°14'12	min. Earth dist.	4866 Dec 19 06:38	0° \mathcal{B} 20'35 0.67536 AU
minimum elong	4866 Jan 04 23:20	15° \mathcal{B} 09'20	1°13'35		4866 Dec 19 12:54	30° \mathbb{R} \mathcal{A}
morning rise	4866 Jan 10 07:50	8° \mathcal{B} 58'11		inferior conj	4866 Dec 20 06:52	29° \mathcal{A} 00'48 0°22'35
direct	4866 Jan 14 10:38	7° \mathcal{B} 22'51		minimum elong	4866 Dec 20 06:19	29° \mathcal{A} 02'39 0°22'22
morning max el	4866 Jan 22 16:34	12° \mathcal{B} 07'57	20°51'17	morning rise	4866 Dec 25 19:03	23° \mathcal{A} 01'54
	4866 Feb 05 14:11	0° \approx		direct	4866 Dec 29 09:13	21° \mathcal{A} 47'39
desc. node	4866 Feb 06 19:36	1° \approx 46'27		morning max el	4867 Jan 05 17:51	25° \mathcal{A} 56'19 19°42'48
morning set	4866 Feb 21 12:35	23° \approx 59'51			4867 Jan 09 08:17	0° \mathcal{B}
	4866 Feb 25 08:06	0° \mathcal{H}		greatest brilliancy	4867 Jan 18 20:02	13° \mathcal{B} 10'00 -0.7m
max. Earth dist.	4866 Mar 01 19:04	7° \mathcal{H} 09'28	1.42898 AU	desc. node	4867 Jan 24 16:37	21° \mathcal{B} 57'53
					4867 Jan 29 22:42	0° \approx
superior conj	4866 Mar 08 16:56	18° \mathcal{H} 36'06	-2°08'29	morning set	4867 Jan 31 08:43	2° \approx 11'03
minimum elong	4866 Mar 08 17:42	18° \mathcal{H} 39'21	2°08'29	max. Earth dist.	4867 Feb 12 06:34	20° \approx 48'20 1.44369 AU
	4866 Mar 15 07:50	0° \mathbb{Y}				
evening rise	4866 Mar 20 13:14	9° \mathbb{Y} 14'52		superior conj	4867 Feb 16 22:17	28° \approx 15'21 -2°01'51
asc. node	4866 Mar 30 06:28	26° \mathbb{Y} 05'49		minimum elong	4867 Feb 16 16:54	27° \approx 53'38 2°01'34
	4866 Apr 01 19:36	0° \mathcal{B}			4867 Feb 18 00:11	0° \mathcal{H}
evening max el	4866 Apr 06 10:29	5° \mathcal{B} 43'09	18°06'37	evening rise	4867 Mar 02 12:51	20° \mathcal{H} 47'40
retrograde	4866 Apr 13 00:08	9° \mathcal{B} 05'40			4867 Mar 07 23:19	0° \mathbb{Y}
evening set	4866 Apr 15 16:42	8° \mathcal{B} 31'31		asc. node	4867 Mar 17 03:31	14° \mathbb{Y} 26'19
inferior conj	4866 Apr 22 04:48	3° \mathcal{B} 30'37	3°10'33	evening max el	4867 Mar 20 23:24	19° \mathbb{Y} 01'52 18°15'07
minimum elong	4866 Apr 22 07:19	3° \mathcal{B} 24'23	3°10'09	retrograde	4867 Mar 27 09:19	22° \mathbb{Y} 27'00
min. Earth dist.	4866 Apr 25 07:42	0° \mathcal{B} 27'02	0.61401 AU	evening set	4867 Mar 30 08:05	21° \mathbb{Y} 40'54
	4866 Apr 25 19:22	30° \mathbb{R} \mathbb{Y}		inferior conj	4867 Apr 05 08:34	16° \mathbb{Y} 20'37 3°31'00
morning rise	4866 Apr 28 20:01	27° \mathbb{Y} 33'10		minimum elong	4867 Apr 05 09:26	16° \mathbb{Y} 18'12 3°30'58
direct	4866 May 05 14:21	25° \mathbb{Y} 13'17		min. Earth dist.	4867 Apr 07 21:43	13° \mathbb{Y} 31'27 0.63466 AU
desc. node	4866 May 05 18:50	25° \mathbb{Y} 13'23		morning rise	4867 Apr 11 09:45	10° \mathbb{Y} 12'46
	4866 May 16 06:59	0° \mathcal{B}		direct	4867 Apr 18 06:26	7° \mathbb{Y} 31'09
morning max el	4866 May 19 19:22	3° \mathcal{B} 11'41	27°51'05	desc. node	4867 Apr 22 15:52	8° \mathbb{Y} 28'43
	4866 Jun 08 13:51	0° \mathbb{I}		morning max el	4867 May 02 03:06	15° \mathbb{Y} 29'59 27°43'32
morning set	4866 Jun 21 20:44	24° \mathbb{I} 42'36			4867 May 13 23:46	0° \mathcal{B}
	4866 Jun 24 09:38	0° \mathcal{E}			4867 Jun 01 05:55	0° \mathbb{I}
asc. node	4866 Jun 26 05:44	3° \mathcal{E} 55'23		morning set	4867 Jun 05 17:56	8° \mathbb{I} 43'21
max. Earth dist.	4866 Jun 27 17:37	7° \mathcal{E} 09'35	1.32169 AU	max. Earth dist.	4867 Jun 10 21:39	19° \mathbb{I} 19'51 1.32836 AU
				asc. node	4867 Jun 13 02:45	24° \mathbb{I} 02'54
superior conj	4866 Jun 29 05:40	10° \mathcal{E} 26'26	0°30'53			
minimum elong	4866 Jun 29 04:19	10° \mathcal{E} 19'00	0°30'35	superior conj	4867 Jun 13 13:04	24° \mathbb{I} 58'20 0°04'29
evening rise	4866 Jul 06 01:48	25° \mathcal{E} 20'41		minimum elong	4867 Jun 13 12:51	24° \mathbb{I} 57'08 0°04'25
				behind sun begin	4867 Jun 13 07:43	24° \mathbb{I} 29'33

behind sun end	4867 Jun 13 17:58	25° Π 24'44	asc. node	4868 May 29 23:48	14° Π 08'18
	4867 Jun 15 20:53	0° \mathfrak{G}	evening rise	4868 Jun 04 00:06	24° Π 44'44
evening rise	4867 Jun 20 13:37	10° \mathfrak{G} 06'50		4868 Jun 06 13:10	0° \mathfrak{G}
	4867 Jun 30 19:22	0° Ω	evening max el	4868 Jun 24 04:50	27° \mathfrak{G} 35'38 21°37'25
evening max el	4867 Jul 13 11:32	17° Ω 07'32 23°12'15		4868 Jun 26 22:52	0° Ω
desc. node	4867 Jul 19 15:07	21° Ω 49'39	desc. node	4868 Jul 05 12:07	3° Ω 40'01
retrograde	4867 Jul 26 22:30	23° Ω 51'11	retrograde	4868 Jul 06 13:48	3° Ω 42'43
evening set	4867 Jul 30 17:53	23° Ω 19'31	evening set	4868 Jul 09 02:25	3° Ω 28'14
min. Earth dist.	4867 Aug 06 20:46	20° Ω 05'18 0.55593 AU		4868 Jul 17 11:17	30° \mathfrak{R} \mathfrak{G}
inferior conj	4867 Aug 08 15:32	19° Ω 02'54 -4°52'14	inferior conj	4868 Jul 18 10:46	29° \mathfrak{G} 27'14 -3°36'56
minimum elong	4867 Aug 08 09:16	19° Ω 12'05 4°51'18	minimum elong	4868 Jul 18 02:04	29° \mathfrak{G} 39'23 3°34'25
morning rise	4867 Aug 17 02:57	15° Ω 10'48	min. Earth dist.	4868 Jul 18 06:50	29° \mathfrak{G} 32'43 0.54844 AU
direct	4867 Aug 20 01:10	14° Ω 50'16	morning rise	4868 Jul 27 02:55	25° \mathfrak{G} 34'51
morning max el	4867 Aug 30 18:46	19° Ω 49'35 20°29'54	direct	4868 Jul 30 11:32	25° \mathfrak{G} 10'18
	4867 Sep 07 21:06	0° \mathfrak{M}		4868 Aug 10 17:04	0° Ω
asc. node	4867 Sep 09 02:01	1° \mathfrak{M} 56'02	morning max el	4868 Aug 11 19:03	0° Ω 57'49 22°01'21
morning set	4867 Sep 18 14:40	19° \mathfrak{M} 55'23	asc. node	4868 Aug 25 23:02	20° Ω 46'20
	4867 Sep 23 11:44	0° $\underline{\Omega}$		4868 Aug 30 17:23	0° \mathfrak{M}
			morning set	4868 Sep 02 00:27	4° \mathfrak{M} 43'58
superior conj	4867 Sep 26 03:49	5° $\underline{\Omega}$ 28'26 1°43'11			
minimum elong	4867 Sep 26 04:25	5° $\underline{\Omega}$ 31'25 1°43'11	superior conj	4868 Sep 09 04:52	19° \mathfrak{M} 56'32 1°42'25
max. Earth dist.	4867 Oct 01 06:12	15° $\underline{\Omega}$ 35'54 1.36241 AU	minimum elong	4868 Sep 09 04:05	19° \mathfrak{M} 52'25 1°42'24
evening rise	4867 Oct 05 04:34	23° $\underline{\Omega}$ 01'31	max. Earth dist.	4868 Sep 12 20:23	27° \mathfrak{M} 30'23 1.34562 AU
	4867 Oct 09 01:35	0° \mathfrak{M}		4868 Sep 14 01:55	0° $\underline{\Omega}$
desc. node	4867 Oct 15 14:23	11° \mathfrak{M} 00'09	evening rise	4868 Sep 17 07:59	6° $\underline{\Omega}$ 24'52
	4867 Oct 28 09:47	0° \mathfrak{X}		4868 Sep 30 17:38	0° \mathfrak{M}
evening max el	4867 Nov 09 20:21	14° \mathfrak{X} 41'37 26°05'18	desc. node	4868 Oct 01 11:24	1° \mathfrak{M} 10'21
retrograde	4867 Nov 22 10:32	21° \mathfrak{X} 49'43	evening max el	4868 Oct 22 09:00	28° \mathfrak{M} 18'23 26°56'44
evening set	4867 Nov 28 15:48	19° \mathfrak{X} 16'28		4868 Oct 24 05:23	0° \mathfrak{X}
min. Earth dist.	4867 Dec 02 21:34	14° \mathfrak{X} 45'57 0.66735 AU	retrograde	4868 Nov 04 13:33	5° \mathfrak{X} 35'28
inferior conj	4867 Dec 04 09:02	12° \mathfrak{X} 55'53 -0°34'22	evening set	4868 Nov 11 06:54	2° \mathfrak{X} 55'24
minimum elong	4867 Dec 04 09:57	12° \mathfrak{X} 53'02 0°33'57		4868 Nov 14 08:32	30° \mathfrak{R} \mathfrak{M}
asc. node	4867 Dec 06 01:16	10° \mathfrak{X} 53'49	min. Earth dist.	4868 Nov 15 06:04	29° \mathfrak{M} 00'29 0.65579 AU
morning rise	4867 Dec 10 04:35	7° \mathfrak{X} 06'14	inferior conj	4868 Nov 17 05:21	26° \mathfrak{M} 44'39 -1°35'20
direct	4867 Dec 13 07:53	6° \mathfrak{X} 10'03	minimum elong	4868 Nov 17 08:03	26° \mathfrak{M} 36'52 1°34'13
morning max el	4867 Dec 20 02:36	9° \mathfrak{X} 53'53 18°49'36	asc. node	4868 Nov 21 22:17	22° \mathfrak{M} 02'48
	4868 Jan 03 15:16	0° \mathfrak{Z}	morning rise	4868 Nov 23 10:08	21° \mathfrak{M} 07'04
morning set	4868 Jan 10 19:36	11° \mathfrak{Z} 13'57	direct	4868 Nov 26 04:35	20° \mathfrak{M} 25'14
desc. node	4868 Jan 11 13:38	12° \mathfrak{Z} 24'43	morning max el	4868 Dec 02 16:42	23° \mathfrak{M} 55'05 18°12'46
	4868 Jan 22 19:00	0° \approx		4868 Dec 07 16:01	0° \mathfrak{X}
max. Earth dist.	4868 Jan 25 23:49	5° \approx 01'14 1.45182 AU	morning set	4868 Dec 21 11:05	21° \mathfrak{X} 44'00
				4868 Dec 26 13:24	0° \mathfrak{Z}
superior conj	4868 Jan 27 06:34	7° \approx 02'02 -1°35'26	desc. node	4868 Dec 28 10:39	3° \mathfrak{Z} 02'01
minimum elong	4868 Jan 26 21:13	6° \approx 25'15 1°34'32			
	4868 Feb 10 17:00	0° \mathfrak{X}	superior conj	4869 Jan 05 10:08	15° \mathfrak{Z} 43'00 -0°53'17
evening rise	4868 Feb 11 13:43	1° \mathfrak{X} 23'35	minimum elong	4869 Jan 05 03:33	15° \mathfrak{Z} 17'02 0°52'25
	4868 Mar 01 05:45	0° \mathfrak{Y}	max. Earth dist.	4869 Jan 07 19:17	19° \mathfrak{Z} 27'41 1.45258 AU
asc. node	4868 Mar 03 00:33	2° \mathfrak{Y} 02'26		4869 Jan 14 12:59	0° \approx
evening max el	4868 Mar 03 10:53	2° \mathfrak{Y} 29'14 18°41'48	evening rise	4869 Jan 21 16:14	11° \approx 07'23
retrograde	4868 Mar 10 02:02	6° \mathfrak{Y} 09'50	greatest brilliancy	4869 Feb 02 15:44	29° \approx 39'09 -0.7m
evening set	4868 Mar 13 07:09	5° \mathfrak{Y} 11'00		4869 Feb 02 21:15	0° \mathfrak{X}
inferior conj	4868 Mar 18 23:37	29° \mathfrak{X} 32'59 3°32'35	evening max el	4869 Feb 14 18:43	16° \mathfrak{X} 00'16 19°25'34
minimum elong	4868 Mar 18 22:59	29° \mathfrak{X} 34'57 3°32'33	asc. node	4869 Feb 17 21:34	18° \mathfrak{X} 41'00
	4868 Mar 18 14:45	30° \mathfrak{R} \mathfrak{X}	retrograde	4869 Feb 21 22:50	20° \mathfrak{X} 07'00
min. Earth dist.	4868 Mar 20 21:09	27° \mathfrak{X} 14'22 0.65208 AU	evening set	4869 Feb 25 11:08	18° \mathfrak{X} 54'45
morning rise	4868 Mar 24 14:18	23° \mathfrak{X} 20'06	inferior conj	4869 Mar 02 22:35	13° \mathfrak{X} 01'08 3°19'47
direct	4868 Mar 31 05:45	20° \mathfrak{X} 30'12	minimum elong	4869 Mar 02 20:51	13° \mathfrak{X} 06'47 3°19'32
desc. node	4868 Apr 08 12:52	23° \mathfrak{X} 53'51	min. Earth dist.	4869 Mar 04 05:01	11° \mathfrak{X} 21'50 0.66547 AU
morning max el	4868 Apr 13 13:05	28° \mathfrak{X} 19'25 27°02'20	morning rise	4869 Mar 08 06:17	6° \mathfrak{X} 46'28
	4868 Apr 15 03:40	0° \mathfrak{Y}	direct	4869 Mar 14 11:24	4° \mathfrak{X} 00'53
	4868 May 06 18:20	0° \mathfrak{Z}	desc. node	4869 Mar 26 09:54	10° \mathfrak{X} 54'43
morning set	4868 May 19 05:27	22° \mathfrak{Z} 12'21	morning max el	4869 Mar 26 22:53	11° \mathfrak{X} 27'10 25°55'05
	4868 May 23 04:20	0° Π		4869 Apr 10 18:24	0° \mathfrak{Y}
max. Earth dist.	4868 May 23 16:31	1° Π 01'29 1.33961 AU		4869 Apr 29 09:41	0° \mathfrak{Z}
			morning set	4869 May 02 03:15	4° \mathfrak{Z} 57'35
superior conj	4868 May 27 15:15	9° Π 10'10 -0°24'14	max. Earth dist.	4869 May 05 23:48	12° \mathfrak{Z} 13'15 1.35540 AU
minimum elong	4868 May 27 16:32	9° Π 16'53 0°23'58			

superior conj	4869 May 11 09:41	22°♄54'24	-0°53'56		4870 Apr 21 13:08	0°♄	
minimum elong	4869 May 11 12:39	23°♄09'22	0°53'23				
	4869 May 14 20:59	0°♄		superior conj	4870 Apr 24 17:14	6°♄03'06	-1°22'41
asc. node	4869 May 16 20:50	4°♄06'55		minimum elong	4870 Apr 24 21:39	6°♄24'33	1°22'01
evening rise	4869 May 19 07:11	9°♄07'18		evening rise	4870 May 03 08:29	23°♄07'58	
	4869 May 30 14:07	0°♄		asc. node	4870 May 03 17:52	23°♄54'36	
evening max el	4869 Jun 06 09:18	8°♄36'09	20°16'15		4870 May 06 20:29	0°♄	
retrograde	4869 Jun 17 03:27	13°♄51'47		evening max el	4870 May 20 02:14	20°♄19'03	19°14'04
evening set	4869 Jun 19 02:17	13°♄42'07		retrograde	4870 May 29 03:25	24°♄44'06	
desc. node	4869 Jun 22 09:07	12°♄46'09		evening set	4870 May 31 03:10	24°♄32'12	
inferior conj	4869 Jun 28 05:30	9°♄43'48	-1°44'22	inferior conj	4870 Jun 08 13:33	20°♄22'38	0°12'14
minimum elong	4869 Jun 28 00:36	9°♄51'01	1°42'33	minimum elong	4870 Jun 08 14:04	20°♄21'47	0°12'02
min. Earth dist.	4869 Jun 29 18:50	8°♄48'51	0.55037 AU	transit middle	4870 Jun 08 14:04	20°♄21'47	0°12'02
morning rise	4869 Jul 06 21:39	5°♄30'07		transit begin	4870 Jun 08 11:32	20°♄26'00	
direct	4869 Jul 10 22:03	4°♄55'09		transit end	4870 Jun 08 16:35	20°♄17'32	
morning max el	4869 Jul 24 11:07	11°♄31'28	23°44'12	desc. node	4870 Jun 09 06:09	19°♄54'46	
	4869 Aug 07 08:08	0°♄		min. Earth dist.	4870 Jun 11 09:30	18°♄29'38	0.56161 AU
asc. node	4869 Aug 12 20:04	10°♄05'24		morning rise	4870 Jun 16 21:52	15°♄34'37	
morning set	4869 Aug 17 11:58	19°♄37'07		direct	4870 Jun 21 20:21	14°♄38'20	
	4869 Aug 22 07:46	0°♄		morning max el	4870 Jul 06 00:49	21°♄52'48	25°24'51
					4870 Jul 13 04:00	0°♄	
superior conj	4869 Aug 24 11:41	4°♄41'09	1°35'23	asc. node	4870 Jul 30 17:07	29°♄45'02	
minimum elong	4869 Aug 24 09:56	4°♄31'44	1°35'15		4870 Jul 30 20:02	0°♄	
max. Earth dist.	4869 Aug 26 19:18	9°♄39'24	1.33283 AU	morning set	4870 Aug 01 23:32	4°♄29'03	
evening rise	4869 Aug 31 23:37	20°♄23'07					
	4869 Sep 05 22:42	0°♄		superior conj	4870 Aug 08 21:55	19°♄34'02	1°22'59
desc. node	4869 Sep 18 08:24	20°♄56'06		minimum elong	4870 Aug 08 19:40	19°♄21'43	1°22'42
	4869 Sep 24 17:43	0°♄		max. Earth dist.	4870 Aug 10 01:37	22°♄05'46	1.32433 AU
evening max el	4869 Oct 04 20:48	11°♄38'19	27°24'15		4870 Aug 13 17:28	0°♄	
retrograde	4869 Oct 18 10:42	18°♄56'38		evening rise	4870 Aug 15 23:59	4°♄45'44	
evening set	4869 Oct 25 12:30	16°♄18'06			4870 Aug 29 14:31	0°♄	
min. Earth dist.	4869 Oct 29 06:08	12°♄56'55	0.64076 AU	desc. node	4870 Sep 05 05:26	10°♄06'38	
inferior conj	4869 Oct 31 17:26	10°♄22'05	-2°38'18	evening max el	4870 Sep 17 05:49	24°♄28'25	27°21'49
minimum elong	4869 Oct 31 22:00	10°♄10'09	2°36'36		4870 Sep 24 16:19	0°♄	
morning rise	4869 Nov 07 08:54	4°♄59'32		retrograde	4870 Oct 01 01:05	1°♄42'53	
asc. node	4869 Nov 08 19:18	4°♄33'57			4870 Oct 07 01:28	30°♄	
direct	4869 Nov 09 20:54	4°♄28'11		evening set	4870 Oct 08 05:08	29°♄17'06	
morning max el	4869 Nov 16 09:24	7°♄53'19	17°53'00	min. Earth dist.	4870 Oct 11 20:06	26°♄23'48	0.62269 AU
	4869 Dec 01 03:54	0°♄		inferior conj	4870 Oct 14 18:22	23°♄40'18	-3°39'47
morning set	4869 Dec 03 06:36	3°♄36'23		minimum elong	4870 Oct 15 00:20	23°♄26'22	3°37'58
desc. node	4869 Dec 15 07:41	23°♄46'14		morning rise	4870 Oct 21 21:18	18°♄35'58	
				direct	4870 Oct 24 05:41	18°♄11'30	
superior conj	4869 Dec 16 05:10	25°♄13'35	-0°06'15	asc. node	4870 Oct 26 16:21	18°♄38'49	
minimum elong	4869 Dec 16 04:27	25°♄10'41	0°06'08	morning max el	4870 Oct 31 01:32	21°♄40'03	17°51'05
behind sun begin	4869 Dec 15 19:07	24°♄32'44			4870 Nov 06 10:10	0°♄	
behind sun end	4869 Dec 16 13:47	25°♄48'34		morning set	4870 Nov 15 23:51	16°♄30'49	
	4869 Dec 19 04:12	0°♄			4870 Nov 23 14:25	0°♄	
max. Earth dist.	4869 Dec 21 13:43	3°♄49'21	1.44603 AU				
evening rise	4870 Jan 01 04:09	20°♄21'39		superior conj	4870 Nov 27 01:49	5°♄58'54	0°35'39
	4870 Jan 07 11:48	0°♄		minimum elong	4870 Nov 27 04:56	6°♄12'11	0°35'13
evening max el	4870 Jan 28 21:34	29°♄33'33	20°24'21	desc. node	4870 Dec 02 04:43	14°♄33'08	
	4870 Jan 29 08:04	0°♄		max. Earth dist.	4870 Dec 04 04:53	17°♄50'03	1.43299 AU
asc. node	4870 Feb 04 18:35	4°♄08'02		evening rise	4870 Dec 11 16:15	29°♄43'04	
retrograde	4870 Feb 05 21:03	4°♄14'35			4870 Dec 11 20:36	0°♄	
evening set	4870 Feb 09 17:55	2°♄48'00			4871 Jan 01 04:01	0°♄	
	4870 Feb 12 13:46	30°♄		evening max el	4871 Jan 11 19:02	13°♄08'29	21°35'08
inferior conj	4870 Feb 15 02:45	26°♄41'19	2°55'41	retrograde	4871 Jan 20 18:37	18°♄28'23	
minimum elong	4870 Feb 15 00:26	26°♄49'12	2°55'09	asc. node	4871 Jan 22 15:37	18°♄09'31	
min. Earth dist.	4870 Feb 15 19:27	25°♄44'25	0.67467 AU	evening set	4871 Jan 25 01:43	16°♄46'32	
morning rise	4870 Feb 20 06:44	20°♄27'06		inferior conj	4871 Jan 30 09:51	10°♄29'45	2°22'20
direct	4870 Feb 25 22:36	17°♄55'31		minimum elong	4871 Jan 30 07:26	10°♄38'07	2°21'36
morning max el	4870 Mar 09 07:31	24°♄43'38	24°31'38	min. Earth dist.	4871 Jan 30 14:09	10°♄14'50	0.67971 AU
desc. node	4870 Mar 13 06:57	29°♄04'51		morning rise	4871 Feb 04 12:58	4°♄17'43	
	4870 Mar 14 01:37	0°♄		direct	4871 Feb 09 14:20	2°♄06'25	
	4870 Apr 04 05:39	0°♄		morning max el	4871 Feb 19 16:48	8°♄05'53	23°02'26
morning set	4870 Apr 14 06:11	16°♄44'58		desc. node	4871 Feb 28 03:59	18°♄04'24	
max. Earth dist.	4870 Apr 17 21:23	23°♄14'12	1.37518 AU		4871 Mar 08 18:54	0°♄	

morning set	4871 Mar 26 08:12	27° X 18'58		desc. node	4872 Feb 15 01:00	7° \approx 39'04	
	4871 Mar 27 22:38	0° Y			4872 Mar 01 01:52	0° X	
max. Earth dist.	4871 Mar 30 16:39	4° Y 41'36	1.39707 AU	morning set	4872 Mar 05 05:31	6° X 31'28	
				max. Earth dist.	4872 Mar 11 16:52	17° X 01'24	1.41827 AU
superior conj	4871 Apr 07 09:51	18° Y 26'46	-1°47'33	superior conj	4872 Mar 19 06:32	29° X 52'33	-2°04'27
minimum elong	4871 Apr 07 14:46	18° Y 49'25	1°47'05	minimum elong	4872 Mar 19 09:45	0° Y 06'33	2°04'20
	4871 Apr 13 13:36	0° X			4872 Mar 19 08:15	0° Y	
evening rise	4871 Apr 17 01:04	6° X 39'31		evening rise	4872 Mar 30 05:11	19° Y 32'17	
asc. node	4871 Apr 20 14:55	13° X 26'50			4872 Apr 04 23:51	0° X	
	4871 Apr 30 19:21	0° II		asc. node	4872 Apr 06 11:58	2° X 37'14	
evening max el	4871 May 03 05:11	2° II 40'41	18°32'09	evening max el	4872 Apr 15 14:33	15° X 31'05	18°10'15
retrograde	4871 May 10 21:54	6° II 28'36		retrograde	4872 Apr 22 10:49	18° X 58'34	
evening set	4871 May 13 04:03	6° II 10'05		evening set	4872 Apr 24 23:43	18° X 30'37	
inferior conj	4871 May 20 18:23	1° II 41'16	1°45'47	inferior conj	4872 May 01 20:15	13° X 40'56	2°47'57
minimum elong	4871 May 20 21:41	1° II 34'49	1°44'45	minimum elong	4872 May 01 23:30	13° X 33'29	2°47'14
	4871 May 22 21:58	30° R X		min. Earth dist.	4872 May 05 04:18	10° X 39'41	0.60138 AU
min. Earth dist.	4871 May 24 03:53	29° X 03'09	0.57978 AU	morning rise	4872 May 08 20:51	7° X 53'18	
desc. node	4871 May 27 03:12	27° X 03'30		desc. node	4872 May 13 00:15	6° X 07'41	
morning rise	4871 May 28 12:06	26° X 19'13		direct	4872 May 15 09:38	5° X 51'29	
direct	4871 Jun 03 08:50	24° X 51'43		morning max el	4872 May 29 17:32	13° X 44'40	27°38'34
	4871 Jun 14 23:16	0° II			4872 Jun 11 17:20	0° II	
morning max el	4871 Jun 17 17:58	2° II 30'27	26°47'18		4872 Jun 28 19:47	0° X	
	4871 Jul 07 12:09	0° X		morning set	4872 Jun 30 16:20	3° X 48'26	
morning set	4871 Jul 17 09:36	19° X 14'54		asc. node	4872 Jul 03 11:14	9° X 41'43	
asc. node	4871 Jul 17 14:11	19° X 39'04		max. Earth dist.	4872 Jul 06 23:36	17° X 20'37	1.31993 AU
	4871 Jul 22 08:57	0° Q					
superior conj	4871 Jul 24 09:40	4° Q 28'50	1°05'54	superior conj	4872 Jul 07 21:06	19° X 18'59	0°44'43
minimum elong	4871 Jul 24 07:24	4° Q 16'18	1°05'30	minimum elong	4872 Jul 07 19:17	19° X 08'57	0°44'20
max. Earth dist.	4871 Jul 24 12:21	4° Q 43'39	1.32007 AU		4872 Jul 12 17:50	0° Q	
evening rise	4871 Jul 31 06:23	19° Q 24'16		evening rise	4872 Jul 14 16:25	4° Q 10'34	
	4871 Aug 05 11:46	0° P			4872 Jul 28 08:57	0° P	
desc. node	4871 Aug 23 02:28	28° P 27'27		desc. node	4872 Aug 08 23:30	15° P 37'58	
	4871 Aug 24 08:02	0° Q		evening max el	4872 Aug 11 05:09	17° P 53'52	25°38'22
evening max el	4871 Aug 30 09:21	6° Q 36'12	26°45'57	retrograde	4872 Aug 25 04:02	24° P 59'34	
retrograde	4871 Sep 13 07:21	13° Q 45'47		evening set	4872 Aug 31 05:22	23° P 33'37	
evening set	4871 Sep 20 04:23	11° Q 44'54		min. Earth dist.	4872 Sep 04 17:08	20° P 56'09	0.58192 AU
min. Earth dist.	4871 Sep 23 23:21	9° Q 08'06	0.60252 AU	inferior conj	4872 Sep 07 20:55	18° P 42'21	-5°09'26
inferior conj	4871 Sep 27 04:42	6° Q 30'32	-4°33'37	minimum elong	4872 Sep 08 00:04	18° P 36'44	5°09'10
minimum elong	4871 Sep 27 10:39	6° Q 18'21	4°32'21	morning rise	4872 Sep 15 21:02	14° P 22'52	
morning rise	4871 Oct 04 18:55	1° Q 47'37		direct	4872 Sep 18 08:16	14° P 03'45	
direct	4871 Oct 07 03:00	1° Q 27'00		morning max el	4872 Sep 26 19:08	18° P 05'25	18°46'18
asc. node	4871 Oct 13 13:25	4° Q 11'35		asc. node	4872 Sep 29 10:27	20° P 57'59	
morning max el	4871 Oct 14 13:53	5° Q 07'11	18°08'20		4872 Oct 05 12:20	0° Q	
morning set	4871 Oct 30 08:45	0° M 09'32		morning set	4872 Oct 13 04:33	14° Q 19'06	
	4871 Oct 30 06:43	0° M			4872 Oct 21 06:21	0° M	
superior conj	4871 Nov 08 23:52	17° M 58'02	1°07'34	superior conj	4872 Oct 21 18:27	0° M 57'23	1°28'46
minimum elong	4871 Nov 09 03:51	18° M 15'55	1°07'04	minimum elong	4872 Oct 21 21:30	1° M 11'51	1°28'30
	4871 Nov 15 21:20	0° X		max. Earth dist.	4872 Oct 28 21:32	14° M 00'28	1.39428 AU
max. Earth dist.	4871 Nov 16 15:29	1° X 16'41	1.41503 AU	evening rise	4872 Nov 01 20:49	20° M 53'06	
desc. node	4871 Nov 19 01:44	5° X 19'34		desc. node	4872 Nov 04 22:45	26° M 02'11	
evening rise	4871 Nov 21 19:21	9° X 47'32			4872 Nov 07 09:12	0° X	
	4871 Dec 04 22:21	0° Z			4872 Nov 28 00:40	0° Z	
evening max el	4871 Dec 25 11:44	26° Z 45'26	22°53'17	evening max el	4872 Dec 07 01:18	10° Z 25'50	24°13'01
	4871 Dec 29 02:45	0° \approx		retrograde	4872 Dec 18 05:50	16° Z 59'50	
retrograde	4872 Jan 04 13:56	2° \approx 44'38		evening set	4872 Dec 23 13:48	14° Z 46'28	
evening set	4872 Jan 09 08:51	0° \approx 46'49		asc. node	4872 Dec 26 09:43	11° Z 47'48	
asc. node	4872 Jan 09 12:41	0° \approx 38'43		min. Earth dist.	4872 Dec 28 06:58	9° Z 21'14	0.67838 AU
	4872 Jan 10 05:30	30° R Z		inferior conj	4872 Dec 29 01:04	8° Z 20'16	0°53'01
inferior conj	4872 Jan 14 17:53	24° Z 23'22	1°41'06	minimum elong	4872 Dec 28 23:50	8° Z 24'23	0°52'33
minimum elong	4872 Jan 14 15:50	24° Z 30'26	1°40'22	morning rise	4873 Jan 03 09:57	2° Z 17'30	
min. Earth dist.	4872 Jan 14 10:44	24° Z 48'04	0.68088 AU	direct	4873 Jan 07 07:10	0° Z 51'36	
morning rise	4872 Jan 19 22:43	18° Z 15'07		morning max el	4873 Jan 15 03:11	5° Z 19'35	20°20'28
direct	4872 Jan 24 09:32	16° Z 26'43		desc. node	4873 Jan 31 22:01	27° Z 39'27	
morning max el	4872 Feb 02 06:21	21° Z 36'41	21°36'30		4873 Feb 02 11:44	0° \approx	
	4872 Feb 09 09:54	0° \approx		morning set	4873 Feb 12 04:58	14° \approx 47'45	

	4873 Feb 21 20:42	0° H		morning rise	4873 Dec 18 20:40	16° H 21'48	
max. Earth dist.	4873 Feb 22 00:25	0° H 14'55	1.43595 AU	direct	4873 Dec 22 05:51	15° H 15'52	
				morning max el	4873 Dec 29 07:52	19° H 12'56	19°18'14
superior conj	4873 Feb 28 02:42	10° H 10'59	-2°07'59		4874 Jan 06 20:50	0° Z	
minimum elong	4873 Feb 28 01:01	10° H 04'01	2°07'57	greatest brilliancy	4874 Jan 11 17:21	7° Z 09'39	-0.7m
	4873 Mar 11 18:13	0° Y		desc. node	4874 Jan 18 19:01	17° Z 58'05	
evening rise	4873 Mar 12 16:32	1° Y 37'11		morning set	4874 Jan 22 04:30	23° Z 13'05	
asc. node	4873 Mar 24 09:01	21° Y 18'42			4874 Jan 26 13:20	0° \approx	
evening max el	4873 Mar 30 03:00	28° Y 41'41	18°07'51	max. Earth dist.	4874 Feb 04 14:14	14° \approx 08'56	1.44799 AU
	4873 Mar 31 13:51	0° B					
retrograde	4873 Apr 05 14:01	2° B 04'02		superior conj	4874 Feb 07 21:50	19° \approx 24'08	-1°53'01
evening set	4873 Apr 08 09:08	1° B 25'00		minimum elong	4874 Feb 07 14:06	18° \approx 53'23	1°52'28
	4873 Apr 10 16:03	30° R Y			4874 Feb 14 12:10	0° H	
inferior conj	4873 Apr 14 15:48	26° Y 15'27	3°21'53	evening rise	4874 Feb 22 06:43	12° H 45'51	
minimum elong	4873 Apr 14 17:38	26° Y 10'40	3°21'40		4874 Mar 04 18:26	0° Y	
min. Earth dist.	4873 Apr 17 13:13	23° Y 15'32	0.62309 AU	asc. node	4874 Mar 11 06:02	9° Y 21'48	
morning rise	4873 Apr 21 00:37	20° Y 12'23		evening max el	4874 Mar 13 15:33	12° Y 04'38	18°24'17
direct	4873 Apr 27 20:47	17° Y 41'53		retrograde	4874 Mar 20 02:50	15° Y 35'07	
desc. node	4873 Apr 29 21:16	17° Y 54'00		evening set	4874 Mar 23 04:08	14° Y 43'53	
morning max el	4873 May 11 23:08	25° Y 41'56	27°52'22	inferior conj	4874 Mar 29 00:50	9° Y 16'01	3°33'41
	4873 May 15 22:27	0° B		minimum elong	4874 Mar 29 01:01	9° Y 15'29	3°33'40
	4873 Jun 05 05:24	0° II		min. Earth dist.	4874 Mar 31 07:29	6° Y 37'57	0.64252 AU
morning set	4873 Jun 14 17:44	18° II 03'36		morning rise	4874 Apr 03 21:05	3° Y 05'15	
asc. node	4873 Jun 20 08:16	29° II 48'49		direct	4874 Apr 10 16:18	0° Y 18'09	
	4873 Jun 20 10:21	0° E		desc. node	4874 Apr 16 18:16	2° Y 08'32	
max. Earth dist.	4873 Jun 20 07:25	29° II 44'14	1.32400 AU	morning max el	4874 Apr 24 08:14	8° Y 15'20	27°29'39
					4874 May 11 04:18	0° B	
superior conj	4873 Jun 22 06:30	3° E 59'12	0°20'00		4874 May 28 12:13	0° II	
minimum elong	4873 Jun 22 05:35	3° E 54'10	0°19'47	morning set	4874 May 29 11:15	1° II 52'36	
evening rise	4873 Jun 29 04:05	18° E 58'25		max. Earth dist.	4874 Jun 03 07:46	11° II 42'31	1.33251 AU
	4873 Jul 04 13:13	0° Q					
evening max el	4873 Jul 23 18:37	28° Q 29'54	24°08'17	superior conj	4874 Jun 06 11:58	18° II 23'47	-0°07'31
	4873 Jul 25 10:01	0° P		minimum elong	4874 Jun 06 12:21	18° II 25'49	0°07'27
desc. node	4873 Jul 26 20:31	1° P 10'38		behind sun begin	4874 Jun 06 07:31	18° II 00'03	
retrograde	4873 Aug 06 13:35	5° P 26'36		behind sun end	4874 Jun 06 17:12	18° II 51'37	
evening set	4873 Aug 11 06:07	4° P 37'49		asc. node	4874 Jun 07 05:18	19° II 56'17	
min. Earth dist.	4873 Aug 17 05:13	1° P 40'57	0.56380 AU		4874 Jun 11 21:49	0° E	
inferior conj	4873 Aug 19 16:52	0° P 08'33	-5°12'04	evening rise	4874 Jun 13 15:33	3° E 41'55	
minimum elong	4873 Aug 19 14:10	0° P 12'46	5°11'55		4874 Jun 28 00:55	0° Q	
	4873 Aug 19 22:22	30° R Q		evening max el	4874 Jul 05 08:20	8° Q 52'26	22°30'55
morning rise	4873 Aug 28 00:44	26° Q 09'23		desc. node	4874 Jul 13 17:32	14° Q 31'59	
direct	4873 Aug 30 18:02	25° Q 50'02		retrograde	4874 Jul 18 10:43	15° Q 23'15	
	4873 Sep 09 03:06	0° P		evening set	4874 Jul 21 15:00	15° Q 01'01	
morning max el	4873 Sep 09 14:08	0° P 25'10	19°46'00	min. Earth dist.	4874 Jul 29 15:39	11° Q 30'51	0.55159 AU
asc. node	4873 Sep 16 07:29	8° P 42'47		inferior conj	4874 Jul 30 18:54	10° Q 52'09	-4°26'28
morning set	4873 Sep 27 07:43	28° P 49'09		minimum elong	4874 Jul 30 10:49	11° Q 03'40	4°24'43
	4873 Sep 27 21:44	0° E		morning rise	4874 Aug 08 08:35	7° Q 02'01	
				direct	4874 Aug 11 10:32	6° Q 40'20	
superior conj	4873 Oct 05 04:09	14° E 40'53	1°40'20	morning max el	4874 Aug 22 21:06	12° Q 00'11	21°06'47
minimum elong	4873 Oct 05 05:39	14° E 48'19	1°40'16	asc. node	4874 Sep 03 04:31	27° Q 12'58	
max. Earth dist.	4873 Oct 11 02:17	26° E 06'27	1.37341 AU		4874 Sep 04 18:10	0° P	
	4873 Oct 13 04:50	0° M		morning set	4874 Sep 11 15:43	13° P 33'08	
evening rise	4873 Oct 14 20:37	2° M 59'44					
desc. node	4873 Oct 22 19:46	16° M 36'25		superior conj	4874 Sep 19 00:38	28° P 56'10	1°43'41
	4873 Oct 31 11:02	0° H		minimum elong	4874 Sep 19 00:35	28° P 55'59	1°43'42
evening max el	4873 Nov 19 13:43	24° H 08'45	25°27'40		4874 Sep 19 13:01	0° E	
	4873 Nov 27 06:42	0° Z		max. Earth dist.	4874 Sep 23 11:44	7° E 58'32	1.35478 AU
retrograde	4873 Dec 01 17:22	1° Z 08'21		evening rise	4874 Sep 27 15:17	15° E 59'13	
	4873 Dec 05 18:44	30° R H			4874 Oct 05 11:25	0° M	
evening set	4873 Dec 07 14:52	28° H 41'18		desc. node	4874 Oct 09 16:49	6° M 57'32	
min. Earth dist.	4873 Dec 12 00:32	23° H 50'29	0.67233 AU		4874 Oct 25 23:06	0° H	
inferior conj	4873 Dec 13 05:35	22° H 17'01	-0°00'59	evening max el	4874 Nov 02 02:25	7° H 50'52	26°29'44
minimum elong	4873 Dec 13 05:36	22° H 16'57	0°00'57	retrograde	4874 Nov 14 23:44	15° H 04'26	
transit middle	4873 Dec 13 05:36	22° H 16'57	0°00'57	evening set	4874 Nov 21 10:15	12° H 27'41	
transit begin	4873 Dec 13 02:48	22° H 25'57		min. Earth dist.	4874 Nov 25 13:10	8° H 12'03	0.66282 AU
transit end	4873 Dec 13 08:24	22° H 07'57		inferior conj	4874 Nov 27 05:32	6° H 10'24	-0°59'49
asc. node	4873 Dec 13 06:44	22° H 13'17		minimum elong	4874 Nov 27 07:11	6° H 05'26	0°59'07

asc. node	4874 Nov 30 03:44	2°♊51'16	morning rise	4875 Nov 17 07:49	14°♍23'16
morning rise	4874 Dec 03 04:47	0°♊25'18	asc. node	4875 Nov 17 00:45	14°♍31'50
	4874 Dec 04 02:13	30°♍♍	direct	4875 Nov 19 23:18	13°♍46'13
direct	4874 Dec 06 03:59	29°♍35'44	morning max el	4875 Nov 26 10:38	17°♍12'59 18°02'12
	4874 Dec 08 06:40	0°♊		4875 Dec 05 18:51	0°♊
morning max el	4874 Dec 12 19:09	3°♊12'46 18°31'49	morning set	4875 Dec 14 06:54	13°♊59'01
	4874 Dec 31 07:43	0°♊	desc. node	4875 Dec 23 13:05	29°♊10'44
morning set	4875 Jan 02 02:50	2°♊51'33		4875 Dec 24 01:17	0°♊
desc. node	4875 Jan 05 16:02	8°♊29'59			
			superior conj	4875 Dec 28 09:37	6°♊58'04 -0°33'14
superior conj	4875 Jan 18 01:37	28°♊01'53 -1°18'56	minimum elong	4875 Dec 28 05:31	6°♊41'47 0°32'39
minimum elong	4875 Jan 17 16:38	27°♊26'42 1°17'55	max. Earth dist.	4876 Jan 01 04:04	12°♊56'08 1.45069 AU
max. Earth dist.	4875 Jan 18 08:20	28°♊28'16 1.45309 AU		4876 Jan 12 02:46	0°♍
	4875 Jan 19 07:45	0°♍	evening rise	4876 Jan 13 16:30	2°♍25'45
evening rise	4875 Feb 02 21:36	22°♍57'51	greatest brilliancy	4876 Jan 27 10:39	23°♍23'53 -0.7m
	4875 Feb 07 07:55	0°♋		4876 Feb 01 00:09	0°♋
greatest brilliancy	4875 Feb 12 00:41	7°♋25'35 -0.8m	evening max el	4876 Feb 08 07:43	9°♋07'31 19°48'55
evening max el	4875 Feb 25 01:45	25°♋34'30 18°58'29	asc. node	4876 Feb 13 00:03	12°♋45'58
asc. node	4875 Feb 26 03:03	26°♋35'23	retrograde	4876 Feb 15 19:09	13°♋27'32
retrograde	4875 Mar 03 21:31	29°♋24'45	evening set	4876 Feb 19 11:02	12°♋09'08
evening set	4875 Mar 07 05:35	28°♋20'22	inferior conj	4876 Feb 24 21:06	6°♋09'42 3°10'46
inferior conj	4875 Mar 12 19:37	22°♋35'42 3°28'40	minimum elong	4876 Feb 24 19:04	6°♋16'30 3°10'25
minimum elong	4875 Mar 12 18:27	22°♋39'23 3°28'34	min. Earth dist.	4876 Feb 25 21:29	4°♋48'30 0.66993 AU
min. Earth dist.	4875 Mar 14 10:41	20°♋32'55 0.65835 AU	morning rise	4876 Mar 01 02:52	29°♍55'18
morning rise	4875 Mar 18 06:55	16°♋21'53		4876 Mar 01 00:49	30°♍♍
direct	4875 Mar 24 18:38	13°♋32'06	direct	4876 Mar 07 02:41	27°♍14'46
desc. node	4875 Apr 03 15:17	18°♋18'06		4876 Mar 14 01:58	0°♋
morning max el	4875 Apr 06 18:07	21°♋13'15 26°36'14	morning max el	4876 Mar 19 03:18	4°♋25'38 25°21'00
	4875 Apr 14 08:52	0°♎	desc. node	4876 Mar 20 12:18	5°♋51'36
	4875 May 04 08:28	0°♎		4876 Apr 07 17:50	0°♎
morning set	4875 May 12 17:28	15°♎04'36	morning set	4876 Apr 24 07:59	27°♎27'26
max. Earth dist.	4875 May 16 21:30	23°♎09'17 1.34575 AU		4876 Apr 25 17:31	0°♎
	4875 May 20 06:59	0°♎	max. Earth dist.	4876 Apr 28 00:25	4°♎14'36 1.36347 AU
superior conj	4875 May 21 11:14	2°♎25'13 -0°36'48	superior conj	4876 May 04 01:32	15°♎56'10 -1°06'22
minimum elong	4875 May 21 13:13	2°♎35'30 0°36'24	minimum elong	4876 May 04 05:10	16°♎14'17 1°05'45
asc. node	4875 May 25 02:20	9°♎59'27	asc. node	4876 May 10 23:23	29°♎54'25
evening rise	4875 May 29 00:51	18°♎14'13		4876 May 11 00:29	0°♎
	4875 Jun 03 22:14	0°♏	evening rise	4876 May 12 05:51	2°♎29'04
evening max el	4875 Jun 17 06:05	19°♏32'46 21°00'51		4876 May 28 19:51	0°♏
retrograde	4875 Jun 28 23:20	25°♏18'15	evening max el	4876 May 29 15:59	0°♏51'15 19°47'16
desc. node	4875 Jun 30 14:33	25°♏11'55	retrograde	4876 Jun 08 15:54	5°♏44'13
evening set	4875 Jul 01 03:57	25°♏06'56	evening set	4876 Jun 10 14:09	5°♏34'08
inferior conj	4875 Jul 10 12:07	21°♏09'30 -2°51'58	desc. node	4876 Jun 16 11:33	3°♏18'06
minimum elong	4875 Jul 10 04:26	21°♏20'19 2°49'25	inferior conj	4876 Jun 19 11:04	1°♏32'08 -0°53'22
min. Earth dist.	4875 Jul 11 02:29	20°♏49'13 0.54808 AU	minimum elong	4876 Jun 19 08:37	1°♏35'55 0°52'27
morning rise	4875 Jul 19 05:02	17°♏10'20	min. Earth dist.	4876 Jun 21 15:09	0°♏11'58 0.55419 AU
direct	4875 Jul 22 19:49	16°♏42'13		4876 Jun 21 23:07	30°♎♎
morning max el	4875 Aug 04 17:08	22°♏51'17 22°44'19	morning rise	4876 Jun 28 00:58	27°♎05'08
	4875 Aug 11 00:22	0°♏	direct	4876 Jul 02 10:23	26°♎22'36
asc. node	4875 Aug 21 01:33	16°♏16'44		4876 Jul 12 08:52	0°♏
morning set	4875 Aug 27 02:28	28°♏24'16	morning max el	4876 Jul 16 07:19	3°♏15'51 24°28'14
	4875 Aug 27 20:36	0°♐		4876 Aug 03 23:31	0°♏
			asc. node	4876 Aug 06 22:38	5°♏45'30
superior conj	4875 Sep 03 04:26	13°♐32'06 1°40'09	morning set	4876 Aug 10 14:14	13°♏17'36
minimum elong	4875 Sep 03 03:11	13°♐25'29 1°40'05			
max. Earth dist.	4875 Sep 06 05:47	19°♐58'35 1.33972 AU	superior conj	4876 Aug 17 12:58	28°♏20'48 1°30'45
evening rise	4875 Sep 11 00:23	29°♐38'53	minimum elong	4876 Aug 17 10:57	28°♏09'50 1°30'32
	4875 Sep 11 04:41	0°♑		4876 Aug 18 07:13	0°♑
desc. node	4875 Sep 26 13:51	26°♑58'23	max. Earth dist.	4876 Aug 19 08:25	2°♑16'18 1.32876 AU
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evening max el	4875 Oct 15 15:09	21°♑22'40 27°11'49		4876 Sep 02 07:34	0°♑
retrograde	4875 Oct 29 00:12	28°♑40'20	desc. node	4876 Sep 12 10:53	16°♑30'30
evening set	4875 Nov 04 21:38	26°♑00'07		4876 Sep 22 17:59	0°♑
min. Earth dist.	4875 Nov 08 18:24	22°♑19'42 0.64981 AU	evening max el	4876 Sep 27 02:07	4°♑31'22 27°27'06
inferior conj	4875 Nov 10 22:41	19°♑55'09 -2°01'58	retrograde	4876 Oct 10 18:16	11°♑47'37
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


























































































































min. Earth dist.	4876 Oct 21 14:10	6°♍04'51	0.63346 AU	evening set	4877 Sep 30 08:04	22°♎00'08	
inferior conj	4876 Oct 24 06:24	3°♍25'02	-3°04'53	min. Earth dist.	4877 Oct 03 23:24	19°♎15'59	0.61427 AU
minimum elong	4876 Oct 24 11:40	3°♍11'53	3°03'03	inferior conj	4877 Oct 07 01:35	16°♎32'40	-4°04'04
	4876 Oct 28 00:06	30°♎♎		minimum elong	4877 Oct 07 07:48	16°♎18'56	4°02'24
morning rise	4876 Oct 31 02:41	28°♎09'51		morning rise	4877 Oct 14 09:28	11°♎37'30	
direct	4876 Nov 02 12:56	27°♎41'43		direct	4877 Oct 16 17:18	11°♎15'03	
asc. node	4876 Nov 02 21:49	27°♎42'23		asc. node	4877 Oct 20 18:54	12°♎26'31	
	4876 Nov 07 22:07	0°♍		morning max el	4877 Oct 23 18:31	14°♎47'15	17°56'04
morning max el	4876 Nov 09 03:28	1°♍06'55	17°49'59		4877 Nov 03 05:38	0°♍	
morning set	4876 Nov 25 12:27	26°♍20'01		morning set	4877 Nov 08 13:04	9°♍35'26	
	4876 Nov 27 15:01	0°♎					
superior conj	4876 Dec 07 14:58	16°♎58'45	0°12'36	superior conj	4877 Nov 18 22:59	28°♍17'39	0°50'30
minimum elong	4876 Dec 07 16:16	17°♎04'10	0°12'25	minimum elong	4877 Nov 19 02:47	28°♍34'09	0°49'59
behind sun begin	4876 Dec 07 10:10	16°♎38'55			4877 Nov 19 22:35	0°♎	
behind sun end	4876 Dec 07 22:22	17°♎29'22		desc. node	4877 Nov 26 07:10	10°♎43'49	
desc. node	4876 Dec 09 10:07	19°♎56'21		max. Earth dist.	4877 Nov 26 11:05	10°♎59'57	1.42577 AU
max. Earth dist.	4876 Dec 13 21:54	27°♎12'33	1.44118 AU	evening rise	4877 Dec 02 19:29	21°♎14'07	
	4876 Dec 15 15:54	0°♎			4877 Dec 08 11:02	0°♎	
evening rise	4876 Dec 23 02:28	11°♎37'56			4877 Dec 29 15:34	0°♎	
	4877 Jan 04 06:42	0°♎		evening max el	4878 Jan 04 03:23	6°♎16'15	22°07'43
evening max el	4877 Jan 21 08:14	22°♎41'08	20°53'14	retrograde	4878 Jan 13 14:19	11°♎53'47	
retrograde	4877 Jan 29 17:24	27°♎38'24		asc. node	4878 Jan 16 18:08	11°♎00'49	
asc. node	4877 Jan 29 21:06	27°♎38'16		evening set	4878 Jan 18 02:12	10°♎05'08	
evening set	4877 Feb 02 18:29	26°♎05'12		inferior conj	4878 Jan 23 10:30	3°♎44'48	2°05'46
inferior conj	4877 Feb 08 02:46	19°♎53'38	2°42'34	minimum elong	4878 Jan 23 08:12	3°♎52'49	2°05'00
minimum elong	4877 Feb 08 00:21	20°♎01'56	2°41'56	min. Earth dist.	4878 Jan 23 09:49	3°♎47'12	0.68062 AU
min. Earth dist.	4877 Feb 08 13:57	19°♎15'08	0.67727 AU		4878 Jan 26 06:09	30°♎♎	
morning rise	4877 Feb 13 06:04	13°♎40'17		morning rise	4878 Jan 28 14:03	27°♎33'59	
direct	4877 Feb 18 15:45	11°♎17'06		direct	4878 Feb 02 09:02	25°♎32'28	
morning max el	4877 Mar 01 12:03	17°♎45'11	23°53'58		4878 Feb 10 17:29	0°♎	
desc. node	4877 Mar 07 09:21	24°♎24'40		morning max el	4878 Feb 11 22:48	1°♎11'02	22°25'01
	4877 Mar 11 17:38	0°♎		desc. node	4878 Feb 22 06:23	13°♎40'32	
	4877 Mar 31 19:35	0°♎			4878 Mar 05 15:33	0°♎	
morning set	4877 Apr 06 01:04	8°♎45'30		morning set	4878 Mar 17 14:59	18°♎44'44	
max. Earth dist.	4877 Apr 09 20:29	15°♎24'29	1.38441 AU	max. Earth dist.	4878 Mar 22 16:49	27°♎10'38	1.40631 AU
					4878 Mar 24 08:36	0°♎	
superior conj	4877 Apr 17 03:16	28°♎46'52	-1°33'54	superior conj	4878 Mar 30 11:59	10°♎46'50	-1°56'00
minimum elong	4877 Apr 17 08:05	29°♎09'45	1°33'18	minimum elong	4878 Mar 30 16:32	11°♎07'18	1°55'40
	4877 Apr 17 18:40	0°♎		evening rise	4878 Apr 09 15:39	29°♎34'36	
evening rise	4877 Apr 26 03:53	16°♎18'39			4878 Apr 09 21:04	0°♎	
asc. node	4877 Apr 27 20:25	19°♎36'16		asc. node	4878 Apr 14 17:27	8°♎59'50	
	4877 May 03 10:17	0°♎		evening max el	4878 Apr 25 19:33	25°♎25'51	18°20'25
evening max el	4877 May 12 13:28	12°♎51'00	18°53'39	retrograde	4878 May 03 02:17	29°♎03'11	
retrograde	4877 May 20 23:41	16°♎58'46		evening set	4878 May 05 11:14	28°♎41'04	
evening set	4877 May 23 01:45	16°♎44'34		inferior conj	4878 May 12 17:36	24°♎03'39	2°15'54
inferior conj	4877 May 31 03:33	12°♎27'00	0°55'35	minimum elong	4878 May 12 21:09	23°♎56'14	2°14'56
minimum elong	4877 May 31 05:39	12°♎23'15	0°54'50	min. Earth dist.	4878 May 16 04:09	21°♎12'18	0.58873 AU
desc. node	4877 Jun 03 08:35	10°♎10'18		morning rise	4878 May 20 04:02	18°♎29'06	
min. Earth dist.	4877 Jun 03 07:11	10°♎12'41	0.56868 AU	desc. node	4878 May 21 05:37	17°♎57'06	
morning rise	4877 Jun 08 06:14	7°♎23'34		direct	4878 May 26 08:33	16°♎46'35	
direct	4877 Jun 13 14:17	6°♎15'12		morning max el	4878 Jun 09 17:59	24°♎33'28	27°13'26
morning max el	4877 Jun 27 22:09	13°♎41'34	26°03'08		4878 Jun 14 17:18	0°♎	
	4877 Jul 10 19:25	0°♎			4878 Jul 04 00:15	0°♎	
asc. node	4877 Jul 24 19:42	25°♎32'08		morning set	4878 Jul 10 10:15	12°♎49'19	
morning set	4877 Jul 26 01:24	28°♎07'59		asc. node	4878 Jul 11 16:44	15°♎30'22	
	4877 Jul 26 22:28	0°♎					
superior conj	4877 Aug 02 00:06	13°♎15'28	1°16'17	superior conj	4878 Jul 17 11:56	28°♎09'09	0°57'24
minimum elong	4877 Aug 01 21:47	13°♎02'44	1°15'56	minimum elong	4878 Jul 17 09:48	27°♎57'22	0°56'59
max. Earth dist.	4877 Aug 02 17:04	14°♎48'52	1.32198 AU	max. Earth dist.	4878 Jul 17 04:18	27°♎26'59	1.31943 AU
evening rise	4877 Aug 08 23:23	28°♎18'40			4878 Jul 18 07:59	0°♎	
	4877 Aug 09 18:55	0°♎		evening rise	4878 Jul 24 07:34	13°♎01'13	
	4877 Aug 26 13:52	0°♎			4878 Aug 01 21:19	0°♎	
desc. node	4877 Aug 30 07:53	5°♎22'13		desc. node	4878 Aug 17 04:55	23°♎16'17	
evening max el	4877 Sep 09 08:55	17°♎04'19	27°10'37	evening max el	4878 Aug 22 09:12	28°♎50'50	26°20'47
retrograde	4877 Sep 23 05:29	24°♎17'14		retrograde	4878 Aug 23 15:27	0°♎	
					4878 Sep 05 08:21	5°♎59'40	

evening set	4878 Sep 11 22:28	4°♄12'42		retrograde	4879 Aug 18 00:27	16°♄52'23	
min. Earth dist.	4878 Sep 15 22:31	1°♄37'48	0.59358 AU	evening set	4879 Aug 23 12:58	15°♄43'01	
	4878 Sep 18 01:46	30°♄		min. Earth dist.	4879 Aug 28 13:41	12°♄59'08	0.57375 AU
inferior conj	4878 Sep 19 04:37	29°♄07'49	-4°51'49	inferior conj	4879 Aug 31 12:22	11°♄01'19	-5°15'38
minimum elong	4878 Sep 19 09:48	28°♄57'49	4°51'00	minimum elong	4879 Aug 31 13:19	10°♄59'43	5°15'37
morning rise	4878 Sep 26 23:19	24°♄34'55		morning rise	4879 Sep 08 16:00	6°♄50'46	
direct	4878 Sep 29 08:07	24°♄15'21		direct	4879 Sep 11 05:28	6°♄31'43	
morning max el	4878 Oct 07 04:20	28°♄03'43	18°21'51	morning max el	4879 Sep 20 05:29	10°♄46'28	19°08'53
asc. node	4878 Oct 07 15:58	28°♄32'30		asc. node	4879 Sep 24 13:00	15°♄45'27	
	4878 Oct 09 00:02	0°♄			4879 Oct 03 02:21	0°♄	
morning set	4878 Oct 23 03:06	23°♄28'30		morning set	4879 Oct 07 02:25	7°♄47'48	
	4878 Oct 26 13:02	0°♄					
superior conj	4878 Nov 01 06:27	10°♄44'13	1°17'48	superior conj	4879 Oct 15 08:02	24°♄03'40	1°34'45
minimum elong	4878 Nov 01 10:11	11°♄01'22	1°17'23	minimum elong	4879 Oct 15 10:28	24°♄15'23	1°34'35
max. Earth dist.	4878 Nov 08 19:00	24°♄06'30	1.40636 AU		4879 Oct 18 10:50	0°♄	
	4878 Nov 12 06:41	0°♄		max. Earth dist.	4879 Oct 21 23:58	6°♄32'29	1.38536 AU
evening rise	4878 Nov 13 07:43	1°♄43'40		evening rise	4879 Oct 25 19:02	13°♄16'06	
desc. node	4878 Nov 13 04:11	1°♄29'05		desc. node	4879 Oct 31 01:12	22°♄08'32	
	4878 Dec 01 20:12	0°♄			4879 Nov 04 23:07	0°♄	
evening max el	4878 Dec 17 18:29	19°♄54'20	23°27'25	evening max el	4879 Nov 26 21:34	0°♄	
retrograde	4878 Dec 28 08:22	26°♄09'33		retrograde	4879 Nov 30 07:31	3°♄36'22	24°45'52
evening set	4879 Jan 02 08:35	24°♄05'15		evening set	4879 Dec 11 22:20	10°♄21'55	
asc. node	4879 Jan 03 15:11	22°♄52'54		asc. node	4879 Dec 17 12:02	8°♄02'38	
inferior conj	4879 Jan 07 18:24	17°♄40'01	1°21'32	min. Earth dist.	4879 Dec 21 12:13	3°♄36'57	
minimum elong	4879 Jan 07 16:39	17°♄46'02	1°20'51	inferior conj	4879 Dec 22 02:01	2°♄51'50	0.67628 AU
min. Earth dist.	4879 Jan 07 06:38	18°♄20'23	0.68023 AU	minimum elong	4879 Dec 23 00:39	1°♄36'53	0°30'48
morning rise	4879 Jan 13 00:39	11°♄33'36			4879 Dec 22 23:55	1°♄39'21	0°30'30
direct	4879 Jan 17 05:32	9°♄54'50			4879 Dec 24 06:17	30°♄	
morning max el	4879 Jan 25 15:05	14°♄46'05	21°02'34	morning rise	4879 Dec 28 11:55	25°♄36'55	
	4879 Feb 06 17:24	0°♄		direct	4880 Jan 01 03:53	24°♄19'41	
desc. node	4879 Feb 09 03:25	3°♄27'02		morning max el	4880 Jan 08 15:10	28°♄32'47	19°52'04
morning set	4879 Feb 25 01:09	27°♄27'06			4880 Jan 10 00:20	0°♄	
	4879 Feb 26 16:01	0°♄		desc. node	4880 Jan 27 00:25	23°♄35'40	
max. Earth dist.	4879 Mar 04 19:30	9°♄51'48	1.42633 AU		4880 Jan 31 05:32	0°♄	
superior conj	4879 Mar 11 22:42	21°♄44'55	-2°07'57	morning set	4880 Feb 03 21:15	5°♄36'50	
minimum elong	4879 Mar 12 00:13	21°♄51'23	2°07'55	max. Earth dist.	4880 Feb 15 06:11	23°♄24'59	1.44188 AU
	4879 Mar 16 17:23	0°♄			4880 Feb 19 08:40	0°♄	
evening rise	4879 Mar 23 13:09	12°♄07'46		superior conj	4880 Feb 20 07:48	1°♄33'42	-2°04'06
asc. node	4879 Apr 01 14:29	27°♄58'54		minimum elong	4880 Feb 20 03:22	1°♄15'45	2°03'55
	4879 Apr 02 20:40	0°♄		evening rise	4880 Mar 04 15:53	23°♄48'43	
evening max el	4879 Apr 09 06:43	8°♄26'32	18°07'00		4880 Mar 08 06:51	0°♄	
retrograde	4879 Apr 15 21:41	11°♄49'44		asc. node	4880 Mar 18 11:30	16°♄24'55	
evening set	4879 Apr 18 13:21	11°♄17'12		evening max el	4880 Mar 22 19:33	21°♄42'58	18°12'39
inferior conj	4879 Apr 25 03:29	6°♄19'12	3°05'25	retrograde	4880 Mar 29 05:26	25°♄06'59	
minimum elong	4879 Apr 25 06:14	6°♄12'33	3°04'55	evening set	4880 Apr 01 03:17	24°♄22'41	
min. Earth dist.	4879 Apr 28 07:59	3°♄15'30	0.61075 AU	inferior conj	4880 Apr 07 05:13	19°♄05'03	3°29'15
morning rise	4879 May 01 21:06	0°♄24'07		minimum elong	4880 Apr 07 06:21	19°♄01'59	3°29'09
	4879 May 02 12:14	30°♄		min. Earth dist.	4880 Apr 09 20:33	16°♄12'38	0.63173 AU
desc. node	4879 May 08 02:37	28°♄09'20		morning rise	4880 Apr 13 08:17	12°♄58'17	
direct	4879 May 08 14:21	28°♄08'38		direct	4880 Apr 20 05:03	10°♄19'16	
	4879 May 15 01:45	0°♄		desc. node	4880 Apr 23 23:38	11°♄01'44	
morning max el	4879 May 22 20:06	6°♄05'44	27°49'03	morning max el	4880 May 04 03:19	18°♄18'28	27°47'00
	4879 Jun 09 19:27	0°♄			4880 May 13 23:04	0°♄	
morning set	4879 Jun 24 14:59	27°♄16'09			4880 Jun 01 16:07	0°♄	
	4879 Jun 25 22:33	0°♄		morning set	4880 Jun 07 13:20	11°♄20'40	
asc. node	4879 Jun 28 13:46	5°♄35'41		max. Earth dist.	4880 Jun 12 19:41	22°♄14'04	1.32711 AU
max. Earth dist.	4879 Jun 30 14:29	9°♄59'46	1.32113 AU	asc. node	4880 Jun 14 10:46	25°♄43'02	
superior conj	4879 Jul 01 22:45	12°♄56'24	0°34'39	superior conj	4880 Jun 15 06:42	27°♄30'21	0°08'39
minimum elong	4879 Jul 01 21:15	12°♄48'12	0°34'20	minimum elong	4880 Jun 15 06:17	27°♄28'05	0°08'33
evening rise	4879 Jul 08 18:33	27°♄49'31		behind sun begin	4880 Jun 15 01:48	27°♄03'55	
	4879 Jul 09 19:11	0°♄		behind sun end	4880 Jun 15 10:45	27°♄52'18	
	4879 Jul 26 17:58	0°♄			4880 Jun 16 10:21	0°♄	
evening max el	4879 Aug 04 02:07	9°♄49'52	25°02'07	evening rise	4880 Jun 22 06:21	12°♄36'10	
desc. node	4879 Aug 04 01:55	9°♄49'24			4880 Jul 01 01:36	0°♄	
				evening max el	4880 Jul 15 14:42	20°♄15'43	23°26'46

desc. node	4880 Jul 20 22:55	24°♌30'20		desc. node	4881 Jul 07 19:56	6°♌45'10	
retrograde	4880 Jul 29 04:03	27°♌03'16		retrograde	4881 Jul 09 20:50	6°♌54'54	
evening set	4880 Aug 02 05:01	26°♌27'32		evening set	4881 Jul 12 12:57	6°♌38'51	
min. Earth dist.	4880 Aug 09 00:19	23°♌18'17	0.55779 AU	inferior conj	4881 Jul 21 20:37	2°♌36'04	-3°51'24
inferior conj	4880 Aug 10 24:00	22°♌07'46	-4°59'11	minimum elong	4881 Jul 21 11:51	2°♌48'22	3°49'01
minimum elong	4880 Aug 10 18:35	22°♌15'49	4°58'30	min. Earth dist.	4881 Jul 21 10:24	2°♌50'24	0.54893 AU
morning rise	4880 Aug 19 10:33	18°♌14'22			4881 Jul 26 20:57	30°♌☾	
direct	4880 Aug 22 07:31	17°♌54'10		morning rise	4881 Jul 30 12:14	28°♌45'00	
morning max el	4880 Sep 01 19:19	22°♌46'41	20°17'53	direct	4881 Aug 02 18:53	28°♌21'25	
	4880 Sep 07 21:27	0°♌			4881 Aug 09 06:58	0°♌	
asc. node	4880 Sep 10 10:01	3°♌50'36		morning max el	4881 Aug 14 21:18	4°♌01'42	21°46'47
morning set	4880 Sep 20 07:56	22°♌24'33		asc. node	4881 Aug 28 07:03	22°♌35'50	
	4880 Sep 24 00:31	0°♌			4881 Sep 01 04:37	0°♌	
				morning set	4881 Sep 04 17:18	7°♌11'58	
superior conj	4880 Sep 27 22:47	8°♌01'48	1°42'41	superior conj	4881 Sep 11 22:44	22°♌26'50	1°42'58
minimum elong	4880 Sep 27 23:37	8°♌05'57	1°42'40	minimum elong	4881 Sep 11 22:09	22°♌23'42	1°42'57
max. Earth dist.	4880 Oct 03 06:29	18°♌31'02	1.36517 AU		4881 Sep 15 14:34	0°♌	
evening rise	4880 Oct 07 03:22	25°♌46'08		max. Earth dist.	4881 Sep 15 19:17	0°♌23'54	1.34784 AU
	4880 Oct 09 11:40	0°♌		evening rise	4881 Sep 20 04:37	9°♌03'27	
desc. node	4880 Oct 16 22:14	12°♌37'48			4881 Oct 02 00:37	0°♌	
	4880 Oct 28 11:21	0°♌		desc. node	4881 Oct 03 19:15	2°♌50'54	
evening max el	4880 Nov 11 20:04	17°♌20'01	25°56'00		4881 Oct 24 09:00	0°♌	
retrograde	4880 Nov 24 07:37	24°♌26'12		evening max el	4881 Oct 25 08:40	0°♌58'02	26°50'26
evening set	4880 Nov 30 10:56	21°♌54'19		retrograde	4881 Nov 07 11:35	8°♌14'50	
min. Earth dist.	4880 Dec 04 17:40	17°♌18'38	0.66877 AU	evening set	4881 Nov 14 03:15	5°♌35'17	
inferior conj	4880 Dec 06 03:29	15°♌32'38	-0°25'24	min. Earth dist.	4881 Nov 18 03:19	1°♌35'05	0.65770 AU
minimum elong	4880 Dec 06 04:09	15°♌30'32	0°25'06		4881 Nov 19 12:03	30°♌♌	
asc. node	4880 Dec 07 09:14	14°♌00'41		inferior conj	4881 Nov 20 00:49	29°♌22'37	-1°25'56
morning rise	4880 Dec 11 21:50	9°♌41'35		minimum elong	4881 Nov 20 03:15	29°♌15'33	1°24'54
direct	4880 Dec 15 02:36	8°♌43'00		asc. node	4881 Nov 24 06:16	24°♌59'48	
morning max el	4880 Dec 21 22:58	12°♌29'49	18°56'32	morning rise	4881 Nov 26 04:08	23°♌43'03	
	4881 Jan 03 20:55	0°♌		direct	4881 Nov 28 23:42	22°♌59'25	
desc. node	4881 Jan 12 21:28	14°♌00'39		morning max el	4881 Dec 05 12:28	26°♌30'55	18°17'12
morning set	4881 Jan 13 04:40	14°♌28'48			4881 Dec 08 13:30	0°♌	
	4881 Jan 23 02:56	0°♌		morning set	4881 Dec 24 15:40	24°♌45'21	
max. Earth dist.	4881 Jan 27 22:50	7°♌34'20	1.45108 AU		4881 Dec 27 21:35	0°♌	
				desc. node	4881 Dec 30 18:30	4°♌36'37	
superior conj	4881 Jan 29 18:28	10°♌26'00	-1°40'38	superior conj	4882 Jan 08 21:27	19°♌04'27	-1°00'17
minimum elong	4881 Jan 29 09:18	9°♌49'55	1°39'49	minimum elong	4882 Jan 08 14:05	18°♌35'29	0°59'20
	4881 Feb 11 00:52	0°♌		max. Earth dist.	4882 Jan 10 17:53	21°♌58'53	1.45295 AU
evening rise	4881 Feb 13 20:17	4°♌33'13			4882 Jan 15 20:50	0°♌	
	4881 Mar 02 01:02	0°♌		evening rise	4882 Jan 25 01:51	14°♌23'48	
asc. node	4881 Mar 05 08:31	4°♌08'16			4882 Feb 04 02:08	0°♌	
evening max el	4881 Mar 06 07:21	5°♌08'59	18°36'40	greatest brilliancy	4882 Feb 05 08:49	1°♌57'44	-0.7m
retrograde	4881 Mar 12 21:17	8°♌46'41		evening max el	4882 Feb 17 15:51	18°♌39'43	19°18'01
evening set	4881 Mar 16 01:22	7°♌49'52		asc. node	4882 Feb 20 05:33	20°♌56'29	
inferior conj	4881 Mar 21 18:50	2°♌14'19	3°33'20	retrograde	4882 Feb 24 17:39	22°♌42'00	
minimum elong	4881 Mar 21 18:23	2°♌15'39	3°33'19	evening set	4882 Feb 28 04:47	21°♌31'53	
	4881 Mar 23 15:25	30°♌♌		inferior conj	4882 Mar 05 16:50	15°♌40'31	3°22'28
min. Earth dist.	4881 Mar 23 18:42	29°♌50'20	0.64973 AU	minimum elong	4882 Mar 05 15:14	15°♌45'42	3°22'16
morning rise	4881 Mar 27 10:50	26°♌01'45		min. Earth dist.	4882 Mar 07 01:30	13°♌54'53	0.66378 AU
direct	4881 Apr 03 03:23	23°♌12'15		morning rise	4882 Mar 11 01:22	9°♌25'54	
desc. node	4881 Apr 10 20:40	26°♌09'03		direct	4882 Mar 17 08:17	6°♌38'47	
	4881 Apr 15 11:12	0°♌		desc. node	4882 Mar 28 17:42	12°♌57'15	
morning max el	4881 Apr 16 13:16	1°♌04'05	27°10'18	morning max el	4882 Mar 29 23:10	14°♌09'41	26°06'18
	4881 May 08 01:05	0°♌			4882 Apr 11 20:39	0°♌	
morning set	4881 May 22 02:30	24°♌54'40		morning set	4882 Apr 30 19:29	0°♌	
	4881 May 24 16:35	0°♌		max. Earth dist.	4882 May 05 02:41	7°♌47'22	
max. Earth dist.	4881 May 26 16:03	3°♌59'38	1.33760 AU		4882 May 09 00:54	15°♌14'16	1.35272 AU
				superior conj	4882 May 14 05:36	25°♌34'03	-0°49'26
superior conj	4881 May 30 09:47	11°♌45'06	-0°19'47	minimum elong	4882 May 14 08:18	25°♌47'50	0°48'56
minimum elong	4881 May 30 10:49	11°♌50'33	0°19'35		4882 May 16 09:32	0°♌	
asc. node	4881 Jun 01 07:48	15°♌48'35		asc. node	4882 May 19 04:51	5°♌48'27	
evening rise	4881 Jun 06 17:08	27°♌15'09		evening rise	4882 May 22 00:54	11°♌40'23	
	4881 Jun 08 00:45	0°♌					
	4881 Jun 26 14:28	0°♌					
evening max el	4881 Jun 27 06:46	0°♌40'49	21°50'55				

	4882 May 31 16:30	0°☿		evening rise	4883 May 06 03:16	25°♄44'51	
evening max el	4882 Jun 09 09:29	11°☿35'54 20°27'18		asc. node	4883 May 06 01:54	25°♄38'01	
retrograde	4882 Jun 20 09:53	16°☿59'25			4883 May 08 06:43	0°♂	
evening set	4882 Jun 22 09:36	16°☿49'36		evening max el	4883 May 23 00:41	23°♂12'26 19°22'02	
desc. node	4882 Jun 24 16:56	16°☿15'22		retrograde	4883 Jun 01 07:27	27°♂44'10	
inferior conj	4882 Jul 01 14:34	12°☿52'08 -2°02'32		evening set	4883 Jun 03 06:38	27°♂32'52	
minimum elong	4882 Jul 01 08:50	13°☿00'26 2°00'29		inferior conj	4883 Jun 11 19:54	23°♂25'38 -0°04'24	
min. Earth dist.	4882 Jul 02 22:16	12°☿06'05 0.54942 AU		minimum elong	4883 Jun 11 19:43	23°♂25'57 0°04'20	
morning rise	4882 Jul 10 07:06	8°☿42'39		transit middle	4883 Jun 11 19:43	23°♂25'57 0°04'20	
direct	4882 Jul 14 04:46	8°☿09'45		transit begin	4883 Jun 11 16:00	23°♂32'02	
morning max el	4882 Jul 27 14:17	14°☿39'33 23°28'37		transit end	4883 Jun 11 23:26	23°♂19'51	
	4882 Aug 08 12:46	0°♂		desc. node	4883 Jun 11 13:58	23°♂35'19	
asc. node	4882 Aug 15 04:07	11°♂51'15		min. Earth dist.	4883 Jun 14 12:20	21°♂40'49 0.55943 AU	
morning set	4882 Aug 20 04:43	22°♂04'56		morning rise	4883 Jun 20 05:54	18°♂43'15	
	4882 Aug 23 21:23	0°♂		direct	4883 Jun 25 01:03	17°♂50'49	
				morning max el	4883 Jul 09 03:50	25°♂00'10 25°10'41	
superior conj	4882 Aug 27 04:54	7°♂09'43 1°36'50			4883 Jul 13 19:12	0°☿	
minimum elong	4882 Aug 27 03:17	7°♂00'58 1°36'42			4883 Aug 01 07:50	0°♂	
max. Earth dist.	4882 Aug 29 16:56	12°♂30'18 1.33448 AU		asc. node	4883 Aug 02 01:10	1°♂27'55	
evening rise	4882 Sep 03 18:44	22°♂57'32		morning set	4883 Aug 04 16:24	6°♂57'05	
	4882 Sep 07 09:33	0°♂					
desc. node	4882 Sep 20 16:17	22°♂40'54		superior conj	4883 Aug 11 14:46	22°♂01'25 1°25'12	
	4882 Sep 25 17:12	0°♂		minimum elong	4883 Aug 11 12:35	21°♂49'23 1°24'55	
evening max el	4882 Oct 07 20:48	14°♂21'30 27°21'55		max. Earth dist.	4883 Aug 12 22:26	24°♂54'26 1.32535 AU	
retrograde	4882 Oct 21 09:43	21°♂39'55			4883 Aug 15 06:57	0°♂	
evening set	4882 Oct 28 10:28	19°♂00'42		evening rise	4883 Aug 18 18:02	7°♂16'51	
min. Earth dist.	4882 Nov 01 04:52	15°♂34'33 0.64323 AU			4883 Aug 30 21:09	0°♂	
inferior conj	4882 Nov 03 14:21	13°♂02'04 -2°28'47		desc. node	4883 Sep 07 13:18	11°♂57'14	
minimum elong	4882 Nov 03 18:38	12°♂50'39 2°27'08		evening max el	4883 Sep 20 06:31	27°♂17'02 27°24'16	
morning rise	4882 Nov 10 04:08	7°♂36'55			4883 Sep 23 09:44	0°♂	
asc. node	4882 Nov 11 03:19	7°♂16'50		retrograde	4883 Oct 04 01:01	4°♂31'43	
direct	4882 Nov 12 16:56	7°♂04'14		evening set	4883 Oct 11 05:17	2°♂03'22	
morning max el	4882 Nov 19 04:56	10°♂29'37 17°54'45			4883 Oct 13 20:27	30°♂♂	
	4882 Dec 02 12:05	0°♂		min. Earth dist.	4883 Oct 14 20:25	29°♂06'27 0.62559 AU	
morning set	4882 Dec 06 07:20	6°♂26'14		inferior conj	4883 Oct 17 17:09	26°♂23'36 -3°30'48	
desc. node	4882 Dec 17 15:33	25°♂19'43		minimum elong	4883 Oct 17 22:59	26°♂09'46 3°28'57	
				morning rise	4883 Oct 24 18:21	21°♂16'12	
superior conj	4882 Dec 19 13:09	28°♂24'28 -0°13'13		direct	4883 Oct 27 03:08	20°♂50'51	
minimum elong	4882 Dec 19 11:36	28°♂18'13 0°12'59		asc. node	4883 Oct 29 00:23	21°♂07'25	
behind sun begin	4882 Dec 19 05:28	27°♂53'29		morning max el	4883 Nov 02 21:20	24°♂18'16 17°50'09	
behind sun end	4882 Dec 19 17:43	28°♂42'56			4883 Nov 07 12:00	0°♂	
	4882 Dec 20 12:52	0°♂		morning set	4883 Nov 18 21:47	19°♂12'43	
max. Earth dist.	4882 Dec 24 12:31	6°♂21'31 1.44748 AU			4883 Nov 25 00:25	0°♂	
evening rise	4883 Jan 04 15:05	23°♂39'53					
	4883 Jan 08 18:24	0°♂		superior conj	4883 Nov 30 05:48	8°♂58'03 0°29'54	
greatest brilliancy	4883 Jan 19 05:07	15°♂40'50 -0.6m		minimum elong	4883 Nov 30 08:33	9°♂09'39 0°29'31	
	4883 Jan 29 19:06	0°♂		desc. node	4883 Dec 04 12:36	16°♂06'20	
evening max el	4883 Jan 31 19:35	2°♂12'55 20°14'48		max. Earth dist.	4883 Dec 07 04:37	20°♂27'23 1.43532 AU	
asc. node	4883 Feb 07 02:36	6°♂35'19			4883 Dec 13 04:32	0°♂	
retrograde	4883 Feb 08 15:47	6°♂48'12		evening rise	4883 Dec 15 02:09	2°♂57'49	
evening set	4883 Feb 12 11:18	5°♂23'49			4884 Jan 02 06:23	0°♂	
	4883 Feb 17 08:17	30°♂♂		evening max el	4884 Jan 14 17:52	15°♂47'38 21°24'01	
inferior conj	4883 Feb 17 20:24	29°♂19'02 2°59'56		retrograde	4884 Jan 23 13:32	21°♂01'24	
minimum elong	4883 Feb 17 18:09	29°♂26'41 2°59'27		asc. node	4884 Jan 24 23:38	20°♂50'33	
min. Earth dist.	4883 Feb 18 15:05	28°♂15'43 0.67359 AU		evening set	4884 Jan 27 19:03	19°♂21'45	
morning rise	4883 Feb 23 00:45	23°♂04'43		inferior conj	4884 Feb 02 03:11	13°♂06'18 2°27'55	
direct	4883 Feb 28 18:47	20°♂30'29		minimum elong	4884 Feb 02 00:45	13°♂14'42 2°27'13	
morning max el	4883 Mar 12 07:50	27°♂24'51 24°44'38		min. Earth dist.	4884 Feb 02 09:13	12°♂45'22 0.67922 AU	
	4883 Mar 14 18:08	0°♂		morning rise	4884 Feb 07 06:16	6°♂53'58	
desc. node	4883 Mar 15 14:45	0°♂58'15		direct	4884 Feb 12 09:50	4°♂39'28	
	4883 Apr 05 12:42	0°♂		morning max el	4884 Feb 22 16:51	10°♂46'13 23°15'45	
morning set	4883 Apr 17 08:49	19°♂44'22		desc. node	4884 Mar 01 11:48	19°♂51'15	
max. Earth dist.	4883 Apr 20 23:37	26°♂14'55 1.37205 AU			4884 Mar 08 22:44	0°♂	
	4883 Apr 23 00:16	0°♂			4884 Mar 28 07:44	0°♂	
				morning set	4884 Mar 28 14:55	0°♂30'04	
superior conj	4883 Apr 27 15:03	8°♂48'51 -1°18'29		max. Earth dist.	4884 Apr 01 19:00	7°♂37'22 1.39382 AU	
minimum elong	4883 Apr 27 19:18	9°♂09'34 1°17'50					

superior conj	4884 Apr 09 10:11	21°♿19'57	-1°44'12		4885 Mar 20 18:06	0°♿	
minimum elong	4884 Apr 09 15:09	21°♿42'57	1°43'40				
	4884 Apr 14 00:39	0°♿		superior conj	4885 Mar 22 10:05	2°♿54'30	-2°02'39
evening rise	4884 Apr 18 21:23	9°♿21'23		minimum elong	4885 Mar 22 13:45	3°♿10'37	2°02'27
asc. node	4884 Apr 21 22:57	15°♿12'54		evening rise	4885 Apr 02 03:35	22°♿20'14	
	4884 Apr 30 14:19	0°♿			4885 Apr 06 07:57	0°♿	
evening max el	4884 May 05 02:19	5°♿28'26	18°37'01	asc. node	4885 Apr 08 19:58	4°♿26'47	
retrograde	4884 May 12 23:08	9°♿20'55		evening max el	4885 Apr 18 10:53	18°♿14'42	18°12'14
evening set	4884 May 15 04:13	9°♿03'35		retrograde	4885 Apr 25 09:34	21°♿44'24	
inferior conj	4884 May 22 21:28	4°♿37'38	1°33'35	evening set	4885 Apr 27 21:25	21°♿18'04	
minimum elong	4884 May 23 00:33	4°♿31'44	1°32'35	inferior conj	4885 May 04 20:22	16°♿31'26	2°40'28
min. Earth dist.	4884 May 26 05:54	2°♿05'07	0.57680 AU	minimum elong	4885 May 04 23:45	16°♿23'52	2°39'39
desc. node	4884 May 28 10:59	0°♿35'09		min. Earth dist.	4885 May 08 05:23	13°♿31'56	0.59807 AU
	4884 May 29 10:46	30°♿8		morning rise	4885 May 11 23:29	10°♿46'44	
morning rise	4884 May 30 17:38	29°♿20'12		desc. node	4885 May 15 08:01	9°♿16'44	
direct	4884 Jun 05 11:16	27°♿57'54		direct	4885 May 18 10:18	8°♿49'51	
	4884 Jun 12 15:05	0°♿		morning max el	4885 Jun 01 18:53	16°♿41'46	27°33'16
morning max el	4884 Jun 19 20:13	5°♿33'26	26°36'50		4885 Jun 12 17:42	0°♿	
	4884 Jul 07 19:18	0°♿			4885 Jun 30 07:37	0°♿	
asc. node	4884 Jul 18 22:14	21°♿19'46		morning set	4885 Jul 03 10:06	6°♿19'27	
morning set	4884 Jul 19 02:46	21°♿43'42		asc. node	4885 Jul 05 19:15	11°♿21'24	
	4884 Jul 22 22:55	0°♿		max. Earth dist.	4885 Jul 09 20:08	20°♿08'35	1.31963 AU
superior conj	4884 Jul 26 02:23	6°♿55'42	1°08'46	superior conj	4885 Jul 10 13:58	21°♿46'51	0°48'10
minimum elong	4884 Jul 26 00:05	6°♿43'01	1°08'23	minimum elong	4885 Jul 10 12:02	21°♿36'16	0°47'47
max. Earth dist.	4884 Jul 26 08:44	7°♿30'49	1.32044 AU		4885 Jul 14 07:31	0°♿	
evening rise	4884 Aug 01 23:39	21°♿52'51		evening rise	4885 Jul 17 09:14	6°♿38'15	
	4884 Aug 05 22:58	0°♿			4885 Jul 29 13:45	0°♿	
desc. node	4884 Aug 24 10:18	0°♿26'14		desc. node	4885 Aug 11 07:17	17°♿48'57	
	4884 Aug 24 02:17	0°♿		evening max el	4885 Aug 14 07:50	20°♿55'59	25°50'13
evening max el	4884 Sep 01 10:56	9°♿31'05	26°53'24	retrograde	4885 Aug 28 06:55	28°♿02'50	
retrograde	4884 Sep 15 08:28	16°♿41'19		evening set	4885 Sep 03 12:03	26°♿31'07	
evening set	4884 Sep 22 07:25	14°♿35'51		min. Earth dist.	4885 Sep 07 20:05	23°♿55'02	0.58485 AU
min. Earth dist.	4884 Sep 26 01:04	11°♿57'45	0.60558 AU	inferior conj	4885 Sep 11 00:57	21°♿36'20	-5°05'48
inferior conj	4884 Sep 29 05:51	9°♿18'11	-4°26'20	minimum elong	4885 Sep 11 04:46	21°♿29'25	5°05'25
minimum elong	4884 Sep 29 11:58	9°♿05'26	4°24'58	morning rise	4885 Sep 18 23:46	17°♿13'33	
morning rise	4884 Oct 06 18:29	4°♿32'04		direct	4885 Sep 21 10:14	16°♿54'25	
direct	4884 Oct 09 02:27	4°♿11'00		morning max el	4885 Sep 29 17:02	20°♿52'14	18°39'20
asc. node	4884 Oct 14 21:26	6°♿27'28		asc. node	4885 Oct 01 18:29	23°♿03'52	
morning max el	4884 Oct 16 10:28	7°♿48'43	18°04'32		4885 Oct 06 17:18	0°♿	
	4884 Oct 30 17:04	0°♿		morning set	4885 Oct 15 23:07	16°♿51'26	
morning set	4884 Nov 01 04:41	2°♿45'46			4885 Oct 22 18:01	0°♿	
superior conj	4884 Nov 11 00:21	20°♿47'06	1°03'24	superior conj	4885 Oct 24 16:15	3°♿38'45	1°26'11
minimum elong	4884 Nov 11 04:21	21°♿04'54	1°02'55	minimum elong	4885 Oct 24 19:31	3°♿54'03	1°25'53
	4884 Nov 16 07:11	0°♿		max. Earth dist.	4885 Oct 31 22:28	16°♿49'54	1.39741 AU
max. Earth dist.	4884 Nov 18 16:04	4°♿00'21	1.41791 AU	evening rise	4885 Nov 05 00:20	23°♿50'23	
desc. node	4884 Nov 20 09:36	6°♿52'59		desc. node	4885 Nov 07 06:37	27°♿36'28	
evening rise	4884 Nov 24 02:19	12°♿54'05			4885 Nov 08 17:41	0°♿	
	4884 Dec 05 04:04	0°♿			4885 Nov 29 00:29	0°♿	
evening max el	4884 Dec 27 11:06	29°♿23'48	22°41'20	evening max el	4885 Dec 10 00:56	13°♿03'29	24°01'13
	4884 Dec 28 01:42	0°♿		retrograde	4885 Dec 21 01:49	19°♿33'06	
retrograde	4885 Jan 06 09:16	5°♿17'30		evening set	4885 Dec 26 07:44	17°♿22'00	
asc. node	4885 Jan 10 20:40	3°♿33'31		asc. node	4885 Dec 28 17:41	14°♿53'06	
evening set	4885 Jan 11 02:22	3°♿21'58		min. Earth dist.	4885 Dec 31 02:06	11°♿51'39	0.67900 AU
	4885 Jan 14 05:34	30°♿3		inferior conj	4885 Dec 31 18:35	10°♿55'47	1°00'46
inferior conj	4885 Jan 16 11:10	26°♿59'08	1°47'50	minimum elong	4885 Dec 31 17:12	11°♿00'28	1°00'13
minimum elong	4885 Jan 16 09:02	27°♿06'30	1°47'05	morning rise	4886 Jan 06 02:43	4°♿52'00	
min. Earth dist.	4885 Jan 16 05:38	27°♿18'17	0.68095 AU	direct	4886 Jan 10 01:50	3°♿22'53	
morning rise	4885 Jan 21 15:36	20°♿50'15		morning max el	4886 Jan 18 01:13	7°♿56'40	20°30'53
direct	4885 Jan 26 04:30	18°♿58'32		desc. node	4886 Feb 03 05:51	29°♿18'06	
morning max el	4885 Feb 04 05:35	24°♿15'37	21°48'47		4886 Feb 03 17:12	0°♿	
	4885 Feb 09 07:21	0°♿		morning set	4886 Feb 15 17:58	18°♿14'59	
desc. node	4885 Feb 16 08:49	9°♿21'07			4886 Feb 23 05:09	0°♿	
	4885 Mar 02 09:01	0°♿		max. Earth dist.	4886 Feb 25 00:17	2°♿53'07	1.43365 AU
morning set	4885 Mar 08 16:25	9°♿54'04		superior conj	4886 Mar 03 10:02	13°♿22'53	-2°08'33
max. Earth dist.	4885 Mar 14 18:09	19°♿48'25	1.41528 AU				

minimum elong	4886 Mar 03 09:16	13°  19'43	2°08'32	greatest brilliancy	4887 Jan 14 08:54	9°  19'24	-0.7m
	4886 Mar 13 03:29	0° 		desc. node	4887 Jan 21 02:54	19°  34'29	
evening rise	4886 Mar 15 17:39	4°  32'21		morning set	4887 Jan 25 15:52	26°  34'15	
asc. node	4886 Mar 26 16:58	23°  12'52			4887 Jan 27 21:01	0° 	
	4886 Mar 31 16:07	0° 		max. Earth dist.	4887 Feb 07 13:14	16°  41'53	1.44664 AU
evening max el	4886 Apr 01 23:03	1°  22'37	18°07'03				
retrograde	4886 Apr 08 10:50	4°  44'48		superior conj	4887 Feb 11 08:42	22°  45'19	-1°56'35
evening set	4886 Apr 11 05:02	4°  07'32		minimum elong	4887 Feb 11 01:43	22°  17'25	1°56'09
	4886 Apr 16 14:12	30°  14'12			4887 Feb 15 20:44	0° 	
inferior conj	4886 Apr 17 13:31	29°  01'03	3°18'17	evening rise	4887 Feb 25 11:15	15°  49'54	
minimum elong	4886 Apr 17 15:37	28°  05'42	3°17'59		4887 Mar 05 23:41	0° 	
min. Earth dist.	4886 Apr 20 12:59	25°  05'18	0.61994 AU	asc. node	4887 Mar 13 13:59	11°  05'22'39	
morning rise	4886 Apr 24 00:31	22°  05'41		evening max el	4887 Mar 16 11:49	14°  05'44'37	18°20'42
direct	4886 Apr 30 20:11	20°  05'32'38		retrograde	4887 Mar 22 22:27	18°  05'12'56	
desc. node	4886 May 02 05:02	20°  05'38'11		evening set	4887 Mar 25 22:51	17°  05'23'31	
morning max el	4886 May 14 23:39	28°  05'32'34	27°52'42	inferior conj	4887 Mar 31 20:49	11°  05'58'20	3°33'01
	4886 May 16 09:38	0° 		minimum elong	4887 Mar 31 21:14	11°  05'57'08	3°33'01
	4886 Jun 06 13:39	0° 		min. Earth dist.	4887 Apr 03 05:48	9°  05'16'02	0.63986 AU
morning set	4886 Jun 17 12:25	20°  05'37'46		morning rise	4887 Apr 06 18:44	5°  05'48'32	
	4886 Jun 21 23:52	0° 		direct	4887 Apr 13 14:39	3°  05'03'00	
asc. node	4886 Jun 22 16:16	1°  05'28'01		desc. node	4887 Apr 19 02:05	4°  05'32'37	
max. Earth dist.	4886 Jun 23 04:36	2°  05'34'34	1.32307 AU	morning max el	4887 Apr 27 08:17	11°  05'01'00	27°35'09
					4887 May 12 07:51	0° 	
superior conj	4886 Jun 24 23:46	6°  05'29'02	0°23'57		4887 May 29 23:38	0° 	
minimum elong	4886 Jun 24 22:41	6°  05'23'05	0°23'43	morning set	4887 Jun 01 07:18	4°  05'31'14	
evening rise	4886 Jul 01 20:46	21°  05'26'14		max. Earth dist.	4887 Jun 06 06:17	14°  05'37'08	1.33097 AU
	4886 Jul 05 23:57	0° 					
	4886 Jul 25 07:28	0° 		superior conj	4887 Jun 09 05:58	20°  05'56'30	-0°03'11
evening max el	4886 Jul 26 22:00	1°  05'37'11	24°22'41	minimum elong	4887 Jun 09 06:08	20°  05'57'21	0°03'10
desc. node	4886 Jul 29 04:18	3°  05'38'34		behind sun begin	4887 Jun 09 00:50	20°  05'29'02	
retrograde	4886 Aug 09 18:20	8°  05'36'01		behind sun end	4887 Jun 09 11:26	21°  05'25'41	
evening set	4886 Aug 14 16:14	7°  05'42'10		asc. node	4887 Jun 09 13:17	21°  05'35'37	
min. Earth dist.	4886 Aug 20 08:57	4°  05'49'05	0.56618 AU		4887 Jun 13 11:00	0° 	
inferior conj	4886 Aug 22 23:58	3°  05'09'39	-5°14'36	evening rise	4887 Jun 16 08:24	6°  05'10'57	
minimum elong	4886 Aug 22 22:16	3°  05'12'21	5°14'32		4887 Jun 29 01:00	0° 	
	4886 Aug 28 16:07	30°  05'14'07		evening max el	4887 Jul 08 11:13	11°  05'59'37	22°45'16
morning rise	4886 Aug 31 06:47	29°  05'07'45		desc. node	4887 Jul 16 01:18	17°  05'21'57	
direct	4886 Sep 02 22:55	28°  05'08'35		retrograde	4887 Jul 21 16:57	18°  05'35'12	
	4886 Sep 07 22:22	0° 		evening set	4887 Jul 25 02:19	18°  05'10'02	
morning max el	4886 Sep 12 13:43	3°  05'18'14	19°35'42	min. Earth dist.	4887 Aug 01 19:24	14°  05'45'43	0.55296 AU
asc. node	4886 Sep 18 15:31	10°  05'10'40'42		inferior conj	4887 Aug 03 04:15	13°  05'58'40	-4°36'48
	4886 Sep 29 09:40	0° 		minimum elong	4887 Aug 02 20:41	14°  05'09'31	4°35'20
morning set	4886 Sep 30 01:22	1°  05'18'45		morning rise	4887 Aug 11 17:09	10°  05'08'07	
				direct	4887 Aug 14 17:49	9°  05'46'50	
superior conj	4886 Oct 07 24:00	17°  05'16'18	1°39'08	morning max el	4887 Aug 25 22:26	14°  05'59'27	20°53'29
minimum elong	4886 Oct 08 01:45	17°  05'24'54	1°39'02	asc. node	4887 Sep 05 12:34	29°  05'04'34	
max. Earth dist.	4886 Oct 14 02:56	28°  05'59'39	1.37644 AU		4887 Sep 06 01:29	0° 	
	4886 Oct 14 15:59	0° 		morning set	4887 Sep 14 08:48	16°  05'00'42	
evening rise	4886 Oct 17 21:01	5°  05'14'48'24			4887 Sep 21 02:11	0° 	
desc. node	4886 Oct 25 03:38	18°  05'11'20'05					
	4886 Nov 01 16:27	0° 		superior conj	4887 Sep 21 19:05	1°  05'26'59	1°43'39
evening max el	4886 Nov 22 13:29	26°  05'14'46'17	25°17'09	minimum elong	4887 Sep 21 19:16	1°  05'27'55	1°43'39
	4886 Nov 26 04:40	0° 		max. Earth dist.	4887 Sep 26 11:27	10°  05'52'08	1.35739 AU
retrograde	4886 Dec 04 14:05	3°  05'42'44		evening rise	4887 Sep 30 13:08	18°  05'40'12	
evening set	4886 Dec 10 09:30	1°  05'17'41			4887 Oct 06 20:42	0° 	
	4886 Dec 11 18:28	30°  05'14'07		desc. node	4887 Oct 12 00:38	8°  05'11'35'04	
min. Earth dist.	4886 Dec 14 20:17	26°  05'12'32	0.67346 AU		4887 Oct 26 20:20	0° 	
inferior conj	4886 Dec 15 23:38	24°  05'52'47	0°07'35	evening max el	4887 Nov 05 02:14	10°  05'14'28'57	26°21'37
minimum elong	4886 Dec 15 23:26	24°  05'53'25	0°07'31	retrograde	4887 Nov 17 21:10	17°  05'14'40'41	
transit middle	4886 Dec 15 23:26	24°  05'53'25	0°07'31	evening set	4887 Nov 24 05:51	15°  05'14'05'09	
transit begin	4886 Dec 15 20:58	25°  05'01'26		min. Earth dist.	4887 Nov 28 09:47	10°  05'14'44'16	0.66445 AU
transit end	4886 Dec 16 01:54	24°  05'14'45'24		inferior conj	4887 Nov 30 00:24	8°  05'14'46'38	-0°50'39
asc. node	4886 Dec 15 14:43	25°  05'12'14'43		minimum elong	4887 Nov 30 01:47	8°  05'14'42'25	0°50'03
morning rise	4886 Dec 21 13:39	18°  05'15'56'10		asc. node	4887 Dec 02 11:46	5°  05'14'14'42'25	
direct	4886 Dec 25 00:32	17° 05'14'47'23		morning rise	4887 Dec 05 22:19	2° 05'14'59'48	
morning max el	4887 Jan 01 04:44	21° 05'14'48'22	19°26'29	direct	4887 Dec 08 22:55	2° 05'14'07'58	
	4887 Jan 07 22:10	0°		morning max el	4887 Dec 15 15:09	5° 05'14'47'09	18°37'43

	4888 Jan 01 15:05	0°♁		direct	4888 Nov 21 18:50	16°♎20'26	
morning set	4888 Jan 05 10:01	5°♁59'45		morning max el	4888 Nov 28 06:15	19°♎48'01	18°05'34
desc. node	4888 Jan 07 23:56	10°♁04'35			4888 Dec 05 23:40	0°♎	
	4888 Jan 20 15:59	0°♎		morning set	4888 Dec 16 09:46	16°♎54'34	
					4888 Dec 24 10:01	0°♁	
superior conj	4888 Jan 21 13:41	1°♎25'05	-1°25'07	desc. node	4888 Dec 24 20:57	0°♁44'11	
minimum elong	4888 Jan 21 04:25	0°♎48'45	1°24'07				
max. Earth dist.	4888 Jan 21 07:13	0°♎59'44	1.45280 AU	superior conj	4888 Dec 30 19:44	10°♁14'55	-0°40'25
evening rise	4888 Feb 06 05:37	26°♎10'05		minimum elong	4888 Dec 30 14:44	9°♁55'04	0°39'43
	4888 Feb 08 15:12	0°♎		max. Earth dist.	4889 Jan 03 03:06	15°♁28'14	1.45149 AU
greatest brilliancy	4888 Feb 14 11:49	9°♎20'24	-0.8m		4889 Jan 12 10:26	0°♎	
evening max el	4888 Feb 27 22:34	28°♎13'53	18°52'17	evening rise	4889 Jan 16 03:01	5°♎43'18	
asc. node	4888 Feb 28 11:01	28°♎44'42		greatest brilliancy	4889 Jan 29 07:09	25°♎53'41	-0.7m
	4888 Feb 29 21:20	0°♎			4889 Feb 01 01:58	0°♎	
retrograde	4888 Mar 05 16:30	2°♎00'24		evening max el	4889 Feb 10 05:15	11°♎46'29	19°40'25
evening set	4888 Mar 08 23:33	0°♎57'55		asc. node	4889 Feb 14 08:05	15°♎05'56	
	4888 Mar 10 06:51	30°♎		retrograde	4889 Feb 17 13:58	16°♎01'40	
inferior conj	4888 Mar 14 14:23	25°♎15'35	3°30'18	evening set	4889 Feb 21 04:35	14°♎45'23	
minimum elong	4888 Mar 14 13:23	25°♎18'40	3°30'14	inferior conj	4889 Feb 26 15:05	8°♎47'52	3°14'12
min. Earth dist.	4888 Mar 16 07:41	23°♎07'08	0.65627 AU	minimum elong	4889 Feb 26 13:08	8°♎54'16	3°13'52
morning rise	4888 Mar 20 02:49	19°♎02'04		min. Earth dist.	4889 Feb 27 17:31	7°♎20'22	0.66848 AU
direct	4888 Mar 26 15:56	16°♎12'03		morning rise	4889 Mar 03 21:28	2°♎33'21	
desc. node	4888 Apr 04 23:08	20°♎27'03			4889 Mar 08 11:39	30°♎	
morning max el	4888 Apr 08 18:14	23°♎56'06	26°45'50	direct	4889 Mar 09 23:11	29°♎50'56	
	4888 Apr 14 04:38	0°♎			4889 Mar 11 11:56	0°♎	
	4888 May 04 16:55	0°♎		morning max el	4889 Mar 22 03:43	7°♎07'22	25°33'12
morning set	4888 May 14 15:27	17°♎49'13		desc. node	4889 Mar 22 20:11	7°♎49'39	
max. Earth dist.	4888 May 18 21:52	26°♎08'58	1.34354 AU		4889 Apr 08 22:47	0°♎	
	4888 May 20 19:40	0°♎		morning set	4889 Apr 27 08:39	0°♎20'18	
					4889 Apr 27 04:11	0°♎	
superior conj	4888 May 23 06:19	5°♎01'39	-0°32'17	max. Earth dist.	4889 May 01 02:21	7°♎16'30	1.36062 AU
minimum elong	4888 May 23 08:03	5°♎10'39	0°31'57				
asc. node	4888 May 26 10:19	11°♎39'28		superior conj	4889 May 06 22:10	18°♎37'27	-1°01'56
evening rise	4888 May 30 18:11	20°♎45'13		minimum elong	4889 May 07 01:34	18°♎54'30	1°01'21
	4888 Jun 04 07:45	0°♎			4889 May 12 12:38	0°♎	
evening max el	4888 Jun 19 07:18	22°♎35'01	21°13'17	asc. node	4889 May 13 07:21	1°♎35'47	
retrograde	4888 Jul 01 06:12	28°♎28'12		evening rise	4889 May 14 23:59	5°♎03'04	
desc. node	4888 Jul 01 22:21	28°♎27'08			4889 May 29 06:57	0°♎	
evening set	4888 Jul 03 13:17	28°♎15'59		evening max el	4889 Jun 01 15:17	3°♎46'55	19°56'55
inferior conj	4888 Jul 12 21:52	24°♎17'38	-3°08'37	retrograde	4889 Jun 11 21:33	8°♎47'49	
minimum elong	4888 Jul 12 13:42	24°♎29'05	3°06'01	evening set	4889 Jun 13 19:45	8°♎38'00	
min. Earth dist.	4888 Jul 13 05:51	24°♎06'26	0.54803 AU	desc. node	4889 Jun 18 19:23	6°♎53'24	
morning rise	4888 Jul 21 14:38	20°♎21'21		inferior conj	4889 Jun 22 19:03	4°♎37'27	-1°11'24
direct	4888 Jul 25 03:12	19°♎54'36		minimum elong	4889 Jun 22 15:44	4°♎42'30	1°10'10
morning max el	4888 Aug 06 19:50	25°♎56'02	22°29'07	min. Earth dist.	4889 Jun 24 18:14	3°♎26'04	0.55268 AU
	4888 Aug 10 16:02	0°♎		morning rise	4889 Jul 01 09:54	0°♎15'23	
asc. node	4888 Aug 22 09:37	18°♎03'45			4889 Jul 02 08:30	30°♎	
	4888 Aug 28 09:30	0°♎		direct	4889 Jul 05 16:01	29°♎35'47	
morning set	4888 Aug 28 19:16	0°♎51'08			4889 Jul 08 22:45	0°♎	
				morning max el	4889 Jul 19 10:33	6°♎23'16	24°13'00
superior conj	4888 Sep 04 22:00	16°♎00'19	1°41'05		4889 Aug 05 08:24	0°♎	
minimum elong	4888 Sep 04 20:54	15°♎54'33	1°41'02	asc. node	4889 Aug 09 06:39	7°♎29'07	
max. Earth dist.	4888 Sep 08 04:16	22°♎50'33	1.34169 AU	morning set	4889 Aug 13 06:59	15°♎44'36	
	4888 Sep 11 17:02	0°♎			4889 Aug 19 21:10	0°♎	
evening rise	4888 Sep 12 20:20	2°♎14'23					
desc. node	4888 Sep 27 21:39	28°♎39'24		superior conj	4889 Aug 20 05:58	0°♎47'47	1°32'30
	4888 Sep 28 18:28	0°♎		minimum elong	4889 Aug 20 04:03	0°♎37'20	1°32'19
evening max el	4888 Oct 17 15:00	24°♎02'56	27°07'08	max. Earth dist.	4889 Aug 22 05:39	5°♎05'16	1.33008 AU
	4888 Oct 25 16:00	0°♎		evening rise	4889 Aug 27 14:42	16°♎20'06	
retrograde	4888 Oct 30 22:31	1°♎20'23			4889 Sep 03 17:15	0°♎	
	4888 Nov 04 19:17	30°♎		desc. node	4889 Sep 14 18:41	18°♎16'40	
evening set	4888 Nov 06 18:38	28°♎40'03			4889 Sep 23 10:08	0°♎	
min. Earth dist.	4888 Nov 10 16:14	24°♎54'39	0.65195 AU	evening max el	4889 Sep 30 02:15	7°♎15'35	27°26'46
inferior conj	4888 Nov 12 18:45	22°♎33'03	-1°52'28	retrograde	4889 Oct 13 17:40	14°♎32'43	
minimum elong	4888 Nov 12 21:58	22°♎24'00	1°51'08	evening set	4889 Oct 20 21:00	11°♎56'26	
asc. node	4888 Nov 18 08:51	17°♎22'29		min. Earth dist.	4889 Oct 24 13:29	8°♎43'58	0.63607 AU
morning rise	4888 Nov 19 02:20	16°♎59'07		inferior conj	4889 Oct 27 04:03	6°♎05'34	-2°55'29

minimum elong	4889 Oct 27 09:05	5° \mathbb{M} 52'48	2°53'41	inferior conj	4890 Oct 10 01:17	19° \mathbb{A} 17'11	-3°55'37
morning rise	4889 Nov 02 22:40	0° \mathbb{M} 47'51		minimum elong	4890 Oct 10 07:28	19° \mathbb{A} 03'16	3°53'53
direct	4889 Nov 05 09:27	0° \mathbb{M} 18'41		morning rise	4890 Oct 17 07:28	14° \mathbb{A} 18'45	
asc. node	4889 Nov 05 05:55	0° \mathbb{M} 18'47		direct	4890 Oct 19 15:23	13° \mathbb{A} 55'42	
morning max el	4889 Nov 11 23:07	3° \mathbb{M} 43'37	17°50'39	asc. node	4890 Oct 23 02:56	14° \mathbb{A} 49'09	
morning set	4889 Nov 28 11:54	29° \mathbb{M} 05'38		morning max el	4890 Oct 26 14:36	17° \mathbb{A} 26'31	17°53'53
	4889 Nov 29 00:28	0° \mathbb{A}			4890 Nov 04 13:05	0° \mathbb{M}	
				morning set	4890 Nov 11 10:02	12° \mathbb{M} 13'56	
					4890 Nov 21 08:48	0° \mathbb{A}	
superior conj	4889 Dec 10 21:17	20° \mathbb{A} 04'23	0°06'03				
minimum elong	4889 Dec 10 21:56	20° \mathbb{A} 07'04	0°05'58				
behind sun begin	4889 Dec 10 12:52	19° \mathbb{A} 29'49		superior conj	4890 Nov 22 01:21	1° \mathbb{A} 11'37	0°45'24
behind sun end	4889 Dec 11 06:59	20° \mathbb{A} 44'15		minimum elong	4890 Nov 22 04:58	1° \mathbb{A} 27'13	0°44'56
desc. node	4889 Dec 11 17:58	21° \mathbb{A} 29'09		desc. node	4890 Nov 28 14:59	12° \mathbb{A} 16'25	
max. Earth dist.	4889 Dec 16 21:06	29° \mathbb{A} 46'21	1.44299 AU	max. Earth dist.	4890 Nov 29 10:49	13° \mathbb{A} 37'55	1.42841 AU
	4889 Dec 17 00:31	0° \mathbb{B}		evening rise	4890 Dec 06 04:14	24° \mathbb{A} 24'58	
evening rise	4889 Dec 26 13:16	14° \mathbb{B} 54'56			4890 Dec 09 18:26	0° \mathbb{B}	
	4890 Jan 05 12:11	0° \mathbb{A}			4890 Dec 30 13:34	0° \mathbb{A}	
evening max el	4890 Jan 24 06:32	25° \mathbb{A} 19'40	20°42'54	evening max el	4891 Jan 07 02:25	8° \mathbb{A} 54'14	21°56'14
	4890 Jan 31 01:04	0° \mathbb{H}		retrograde	4891 Jan 16 09:25	14° \mathbb{A} 25'43	
asc. node	4890 Feb 01 05:09	0° \mathbb{H} 10'50		asc. node	4891 Jan 19 02:11	13° \mathbb{A} 46'53	
retrograde	4890 Feb 01 12:16	0° \mathbb{H} 11'18		evening set	4891 Jan 20 19:34	12° \mathbb{A} 39'30	
	4890 Feb 02 22:24	30° \mathbb{R} \mathbb{A}		inferior conj	4891 Jan 26 03:46	6° \mathbb{A} 20'19	2°11'51
evening set	4890 Feb 05 11:50	28° \mathbb{A} 40'25		minimum elong	4891 Jan 26 01:25	6° \mathbb{A} 28'30	2°11'05
inferior conj	4890 Feb 10 20:16	22° \mathbb{A} 30'26	2°47'27	min. Earth dist.	4891 Jan 26 04:49	6° \mathbb{A} 16'40	0.68037 AU
minimum elong	4890 Feb 10 17:52	22° \mathbb{A} 38'38	2°46'51	morning rise	4891 Jan 31 07:06	0° \mathbb{A} 09'00	
min. Earth dist.	4890 Feb 11 09:20	21° \mathbb{A} 45'32	0.67642 AU		4891 Jan 31 11:20	30° \mathbb{R} \mathbb{B}	
morning rise	4890 Feb 15 23:43	16° \mathbb{A} 16'41		direct	4891 Feb 05 04:19	28° \mathbb{B} 03'57	
direct	4890 Feb 21 11:33	13° \mathbb{A} 50'30			4891 Feb 10 10:56	0° \mathbb{A}	
morning max el	4890 Mar 04 12:25	20° \mathbb{A} 25'56	24°07'13	morning max el	4891 Feb 14 22:30	3° \mathbb{A} 49'59	22°37'58
desc. node	4890 Mar 09 17:13	26° \mathbb{A} 14'49		desc. node	4891 Feb 24 14:14	15° \mathbb{A} 24'50	
	4890 Mar 12 17:13	0° \mathbb{H}			4891 Mar 06 21:20	0° \mathbb{H}	
	4890 Apr 02 03:47	0° \mathbb{Y}		morning set	4891 Mar 20 23:31	22° \mathbb{H} 00'32	
morning set	4890 Apr 09 05:22	11° \mathbb{Y} 49'20			4891 Mar 25 18:12	0° \mathbb{Y}	
max. Earth dist.	4890 Apr 12 22:49	18° \mathbb{Y} 22'49	1.38112 AU	max. Earth dist.	4891 Mar 25 18:27	0° \mathbb{Y} 01'06	1.40306 AU
	4890 Apr 19 06:04	0° \mathbb{B}					
				superior conj	4891 Apr 02 13:34	13° \mathbb{Y} 43'11	-1°53'13
superior conj	4890 Apr 20 02:02	1° \mathbb{B} 34'56	-1°30'00	minimum elong	4891 Apr 02 18:19	14° \mathbb{Y} 04'41	1°52'49
minimum elong	4890 Apr 20 06:45	1° \mathbb{B} 57'27	1°29'22		4891 Apr 11 07:31	0° \mathbb{B}	
evening rise	4890 Apr 28 23:15	18° \mathbb{B} 57'04		evening rise	4891 Apr 12 12:45	2° \mathbb{B} 18'25	
asc. node	4890 Apr 30 04:24	21° \mathbb{B} 20'09		asc. node	4891 Apr 17 01:26	10° \mathbb{B} 46'57	
	4890 May 04 17:36	0° \mathbb{I}		evening max el	4891 Apr 28 16:20	28° \mathbb{B} 11'53	18°24'09
evening max el	4890 May 15 11:16	15° \mathbb{I} 41'22	19°00'22		4891 Apr 30 19:32	0° \mathbb{I}	
retrograde	4890 May 24 02:35	19° \mathbb{I} 54'57		retrograde	4891 May 06 02:17	1° \mathbb{I} 52'31	
evening set	4890 May 26 03:41	19° \mathbb{I} 41'41		evening set	4891 May 08 10:15	1° \mathbb{I} 31'43	
inferior conj	4890 Jun 03 08:32	15° \mathbb{I} 27'04	0°40'40		4891 May 11 16:56	30° \mathbb{R} \mathbb{B}	
minimum elong	4890 Jun 03 10:08	15° \mathbb{I} 24'17	0°40'05	inferior conj	4891 May 15 19:22	26° \mathbb{B} 57'26	2°05'47
desc. node	4890 Jun 05 16:24	13° \mathbb{I} 49'28		minimum elong	4891 May 15 22:52	26° \mathbb{B} 50'15	2°04'45
min. Earth dist.	4890 Jun 06 09:51	13° \mathbb{I} 19'50	0.56606 AU	min. Earth dist.	4891 May 19 05:52	24° \mathbb{B} 10'12	0.58552 AU
morning rise	4890 Jun 11 13:17	10° \mathbb{I} 28'53		morning rise	4891 May 23 08:22	21° \mathbb{B} 27'04	
direct	4890 Jun 16 18:00	9° \mathbb{I} 24'55		desc. node	4891 May 23 13:26	21° \mathbb{B} 20'33	
morning max el	4890 Jul 01 00:58	16° \mathbb{I} 47'36	25°50'12	direct	4891 May 29 10:22	19° \mathbb{B} 49'45	
	4890 Jul 11 20:23	0° \mathbb{E}		morning max el	4891 Jun 12 19:45	27° \mathbb{B} 34'04	27°05'00
asc. node	4890 Jul 27 03:41	27° \mathbb{E} 13'32			4891 Jun 15 04:09	0° \mathbb{I}	
	4890 Jul 28 11:31	0° \mathbb{Q}			4891 Jul 05 09:53	0° \mathbb{E}	
morning set	4890 Jul 28 18:20	0° \mathbb{Q} 36'02		morning set	4891 Jul 13 03:37	15° \mathbb{E} 19'04	
				asc. node	4891 Jul 14 00:41	17° \mathbb{E} 10'20	
					4891 Jul 19 22:02	0° \mathbb{Q}	
superior conj	4890 Aug 04 16:51	15° \mathbb{Q} 42'25	1°18'47				
minimum elong	4890 Aug 04 14:33	15° \mathbb{Q} 29'47	1°18'27				
max. Earth dist.	4890 Aug 05 13:32	17° \mathbb{Q} 36'05	1.32271 AU	superior conj	4891 Jul 20 04:40	0° \mathbb{Q} 36'42	1°00'32
	4890 Aug 11 07:46	0° \mathbb{P}		minimum elong	4891 Jul 20 02:29	0° \mathbb{Q} 24'35	1°00'08
evening rise	4890 Aug 11 17:01	0° \mathbb{P} 48'14		max. Earth dist.	4891 Jul 20 00:36	0° \mathbb{Q} 14'10	1.31957 AU
	4890 Aug 27 17:11	0° \mathbb{A}		evening rise	4891 Jul 27 00:36	15° \mathbb{Q} 29'36	
desc. node	4890 Sep 01 15:41	7° \mathbb{A} 15'39			4891 Aug 03 06:36	0° \mathbb{P}	
evening max el	4890 Sep 12 09:50	19° \mathbb{A} 54'50	27°15'12	desc. node	4891 Aug 19 12:42	25° \mathbb{P} 19'42	
retrograde	4890 Sep 26 06:05	27° \mathbb{A} 08'28			4891 Aug 23 15:24	0° \mathbb{A}	
evening set	4890 Oct 03 09:20	24° \mathbb{A} 48'02		evening max el	4891 Aug 25 11:17	1° \mathbb{A} 49'02	26°30'12
min. Earth dist.	4890 Oct 07 00:21	22° \mathbb{A} 00'56	0.61728 AU	retrograde	4891 Sep 08 10:07	8° \mathbb{A} 58'03	

































































































































evening set	4891 Sep 15 02:54	7° Ω 06'06		min. Earth dist.	4892 Aug 30 16:54	16° Π 01'42	0.57657 AU
min. Earth dist.	4891 Sep 19 00:56	4° Ω 30'49	0.59672 AU	inferior conj	4892 Sep 02 17:40	13° Π 58'01	-5°14'17
inferior conj	4891 Sep 22 06:55	1° Ω 57'53	-4°45'49	minimum elong	4892 Sep 02 19:28	13° Π 54'56	5°14'12
minimum elong	4891 Sep 22 12:27	1° Ω 47'00	4°44'51	morning rise	4892 Sep 10 20:07	9° Π 44'22	
	4891 Sep 24 21:14	30° \mathbb{R} Π		direct	4892 Sep 13 08:48	9° Π 25'18	
morning rise	4891 Sep 30 00:06	27° Π 21'23		morning max el	4892 Sep 22 03:58	13° Π 35'13	19°00'31
direct	4891 Oct 02 08:33	27° Π 01'31		asc. node	4892 Sep 25 20:58	17° Π 47'19	
	4891 Oct 09 04:51	0° Ω			4892 Oct 03 11:38	0° Ω	
asc. node	4891 Oct 09 23:57	0° Ω 43'32		morning set	4892 Oct 08 20:31	10° Ω 18'44	
morning max el	4891 Oct 10 01:20	0° Ω 46'54	18°16'40				
morning set	4891 Oct 25 22:22	26° Ω 02'30		superior conj	4892 Oct 17 04:52	26° Ω 41'54	1°32'48
	4891 Oct 28 00:21	0° \mathbb{L}		minimum elong	4892 Oct 17 07:32	26° Ω 54'39	1°32'35
					4892 Oct 18 22:29	0° \mathbb{L}	
superior conj	4891 Nov 04 05:38	13° \mathbb{L} 29'06	1°14'21	max. Earth dist.	4892 Oct 24 01:02	9° \mathbb{L} 24'27	1.38849 AU
minimum elong	4891 Nov 04 09:29	13° \mathbb{L} 46'38	1°13'54	evening rise	4892 Oct 27 21:06	16° \mathbb{L} 09'12	
max. Earth dist.	4891 Nov 11 19:38	26° \mathbb{L} 51'45	1.40946 AU	desc. node	4892 Nov 01 09:00	23° \mathbb{L} 43'09	
	4891 Nov 13 16:10	0° \mathbb{X}			4892 Nov 05 06:34	0° \mathbb{X}	
desc. node	4891 Nov 15 12:00	3° \mathbb{X} 02'23			4892 Nov 26 15:07	0° \mathbb{Z}	
evening rise	4891 Nov 16 13:12	4° \mathbb{X} 45'57		evening max el	4892 Dec 02 07:16	6° \mathbb{Z} 14'07	24°34'29
	4891 Dec 03 00:20	0° \mathbb{Z}		retrograde	4892 Dec 13 18:31	12° \mathbb{Z} 55'40	
evening max el	4891 Dec 20 18:03	22° \mathbb{Z} 32'19	23°15'30	evening set	4892 Dec 19 06:13	10° \mathbb{Z} 38'23	
retrograde	4891 Dec 31 03:52	28° \mathbb{Z} 41'58		asc. node	4892 Dec 22 20:13	6° \mathbb{Z} 44'23	
evening set	4892 Jan 05 02:13	26° \mathbb{Z} 39'59		min. Earth dist.	4892 Dec 23 21:18	5° \mathbb{Z} 22'37	0.67712 AU
asc. node	4892 Jan 05 23:12	25° \mathbb{Z} 52'08		inferior conj	4892 Dec 24 18:22	4° \mathbb{Z} 12'26	0°38'53
inferior conj	4892 Jan 10 11:44	20° \mathbb{Z} 15'22	1°28'41	minimum elong	4892 Dec 24 17:26	4° \mathbb{Z} 15'32	0°38'31
minimum elong	4892 Jan 10 09:52	20° \mathbb{Z} 21'46	1°27'59		4892 Dec 28 04:13	30° \mathbb{R} \mathbb{X}	
min. Earth dist.	4892 Jan 10 01:36	20° \mathbb{Z} 50'14	0.68054 AU	morning rise	4892 Dec 30 04:45	28° \mathbb{X} 11'32	
morning rise	4892 Jan 15 17:27	14° \mathbb{Z} 08'14		direct	4893 Jan 02 22:33	26° \mathbb{X} 51'18	
direct	4892 Jan 20 00:24	12° \mathbb{Z} 26'03			4893 Jan 09 07:25	0° \mathbb{Z}	
morning max el	4892 Jan 28 13:44	17° \mathbb{Z} 23'34	21°14'11	morning max el	4893 Jan 10 12:41	1° \mathbb{Z} 09'13	20°01'41
	4892 Feb 07 19:43	0° \approx		desc. node	4893 Jan 28 08:17	25° \mathbb{Z} 13'30	
desc. node	4892 Feb 11 11:15	5° \approx 07'31			4893 Jan 31 12:09	0° \approx	
	4892 Feb 27 23:56	0° \mathbb{H}		morning set	4893 Feb 06 10:04	9° \approx 03'11	
morning set	4892 Feb 28 13:20	0° \mathbb{H} 52'42		max. Earth dist.	4893 Feb 17 06:00	26° \approx 02'12	1.43997 AU
max. Earth dist.	4892 Mar 06 20:11	12° \mathbb{H} 34'48	1.42359 AU		4893 Feb 19 17:16	0° \mathbb{H}	
superior conj	4892 Mar 14 03:50	24° \mathbb{H} 51'12	-2°07'02	superior conj	4893 Feb 22 16:46	4° \mathbb{H} 50'06	-2°05'54
minimum elong	4892 Mar 14 06:02	25° \mathbb{H} 00'37	2°06'58	minimum elong	4893 Feb 22 13:19	4° \mathbb{H} 36'01	2°05'47
	4892 Mar 17 03:10	0° Υ		evening rise	4893 Mar 07 18:25	26° \mathbb{H} 47'55	
evening rise	4892 Mar 25 12:36	14° Υ 58'31			4893 Mar 09 15:04	0° Υ	
asc. node	4892 Apr 02 22:28	29° Υ 50'16		asc. node	4893 Mar 20 19:31	18° Υ 21'53	
	4892 Apr 03 00:49	0° \mathbb{B}		evening max el	4893 Mar 25 15:40	24° Υ 23'26	18°10'36
evening max el	4892 Apr 11 02:56	11° \mathbb{B} 09'11	18°07'47	retrograde	4893 Apr 01 01:44	27° Υ 46'39	
retrograde	4892 Apr 17 19:29	14° \mathbb{B} 33'31		evening set	4893 Apr 03 22:39	27° Υ 04'11	
evening set	4892 Apr 20 10:14	14° \mathbb{B} 02'35		inferior conj	4893 Apr 10 02:09	21° Υ 49'16	3°26'58
inferior conj	4892 Apr 27 02:31	9° \mathbb{B} 07'27	2°59'40	minimum elong	4893 Apr 10 03:32	21° Υ 45'33	3°26'51
minimum elong	4892 Apr 27 05:27	9° \mathbb{B} 00'27	2°59'06	min. Earth dist.	4893 Apr 12 19:39	18° Υ 53'52	0.62875 AU
min. Earth dist.	4892 Apr 30 08:24	6° \mathbb{B} 04'10	0.60747 AU	morning rise	4893 Apr 16 07:10	15° Υ 43'37	
morning rise	4892 May 03 22:32	3° \mathbb{B} 14'52		direct	4893 Apr 23 03:49	13° Υ 07'25	
desc. node	4892 May 09 10:27	1° \mathbb{B} 07'58		desc. node	4893 Apr 26 07:29	13° Υ 37'01	
direct	4892 May 10 14:27	1° \mathbb{B} 04'02		morning max el	4893 May 07 03:41	21° Υ 07'05	27°49'40
morning max el	4892 May 24 20:55	8° \mathbb{B} 59'42	27°46'11		4893 May 14 20:24	0° \mathbb{B}	
	4892 Jun 10 00:04	0° \mathbb{I}			4893 Jun 03 01:57	0° \mathbb{I}	
morning set	4892 Jun 26 09:05	29° \mathbb{I} 48'15		morning set	4893 Jun 10 08:34	13° \mathbb{I} 56'38	
	4892 Jun 26 11:21	0° \mathbb{G}		max. Earth dist.	4893 Jun 15 17:30	25° \mathbb{I} 06'48	1.32589 AU
asc. node	4892 Jun 29 21:43	7° \mathbb{G} 14'49		asc. node	4893 Jun 16 18:46	27° \mathbb{I} 22'13	
max. Earth dist.	4892 Jul 02 11:15	12° \mathbb{G} 48'47	1.32063 AU		4893 Jun 17 24:00	0° \mathbb{G}	
superior conj	4892 Jul 03 15:44	15° \mathbb{G} 25'02	0°38'20	superior conj	4893 Jun 18 00:14	0° \mathbb{G} 01'15	0°12'47
minimum elong	4892 Jul 03 14:06	15° \mathbb{G} 16'07	0°37'59	minimum elong	4893 Jun 17 23:37	29° \mathbb{I} 57'58	0°12'38
evening rise	4892 Jul 10 11:16	0° \mathbb{Q} 17'21		behind sun begin	4893 Jun 17 20:24	29° \mathbb{I} 40'33	
	4892 Jul 10 08:01	0° \mathbb{Q}		behind sun end	4893 Jun 18 02:50	0° \mathbb{G} 15'23	
	4892 Jul 26 16:44	0° Π		evening rise	4893 Jun 24 23:05	15° \mathbb{G} 04'37	
desc. node	4892 Aug 05 09:42	12° Π 06'49			4893 Jul 02 09:30	0° \mathbb{Q}	
evening max el	4892 Aug 06 05:14	12° Π 54'34	25°15'12	evening max el	4893 Jul 18 18:01	23° \mathbb{Q} 23'47	23°41'28
retrograde	4892 Aug 20 03:48	19° Π 58'05		desc. node	4893 Jul 23 06:43	27° \mathbb{Q} 07'25	
evening set	4892 Aug 25 21:06	18° Π 42'58			4893 Jul 29 20:04	0° Π	

retrograde	4893 Aug 01 09:35	0° \mathbb{M} 15'01		4894 Jun 26 22:15	0° \mathcal{Q}	
	4893 Aug 03 23:47	30° $\mathcal{R}\mathcal{Q}$		evening max el	4894 Jun 30 09:01	3° \mathcal{Q} 46'55 22°04'46
evening set	4893 Aug 05 16:06	29° \mathcal{Q} 34'54		desc. node	4894 Jul 10 03:45	9° \mathcal{Q} 46'29
min. Earth dist.	4893 Aug 12 03:57	26° \mathcal{Q} 30'20 0.55974 AU		retrograde	4894 Jul 13 03:51	10° \mathcal{Q} 07'31
inferior conj	4893 Aug 14 08:14	25° \mathcal{Q} 11'52 -5°04'57		evening set	4894 Jul 15 23:52	9° \mathcal{Q} 49'37
minimum elong	4893 Aug 14 03:45	25° \mathcal{Q} 18'38 5°04'29		min. Earth dist.	4894 Jul 24 14:09	6° \mathcal{Q} 07'54 0.54961 AU
morning rise	4893 Aug 22 17:53	21° \mathcal{Q} 16'48		inferior conj	4894 Jul 25 06:30	5° \mathcal{Q} 44'56 -4°04'57
direct	4893 Aug 25 13:31	20° \mathcal{Q} 56'56		minimum elong	4894 Jul 24 21:49	5° \mathcal{Q} 57'08 4°02'46
morning max el	4893 Sep 04 19:42	25° \mathcal{Q} 43'00 20°06'17		morning rise	4894 Aug 02 21:28	1° \mathcal{Q} 54'37
	4893 Sep 08 17:01	0° \mathbb{M}		direct	4894 Aug 06 02:19	1° \mathcal{Q} 31'51
asc. node	4893 Sep 12 18:01	5° \mathbb{M} 45'56		morning max el	4894 Aug 17 23:26	7° \mathcal{Q} 05'02 21°32'31
morning set	4893 Sep 23 01:19	24° \mathbb{M} 53'55		asc. node	4894 Aug 30 15:05	24° \mathcal{Q} 26'00
	4893 Sep 25 13:09	0° \mathcal{Q}			4894 Sep 02 15:03	0° \mathbb{M}
				morning set	4894 Sep 07 10:17	9° \mathbb{M} 40'21
superior conj	4893 Sep 30 18:01	10° \mathcal{Q} 35'50 1°42'00		superior conj	4894 Sep 14 16:50	24° \mathbb{M} 57'50 1°43'21
minimum elong	4893 Sep 30 19:04	10° \mathcal{Q} 41'10 1°41'57		minimum elong	4894 Sep 14 16:26	24° \mathbb{M} 55'45 1°43'21
max. Earth dist.	4893 Oct 06 06:57	21° \mathcal{Q} 26'04 1.36801 AU			4894 Sep 17 03:22	0° \mathcal{Q}
evening rise	4893 Oct 10 02:36	28° \mathcal{Q} 31'51		max. Earth dist.	4894 Sep 18 18:27	3° \mathcal{Q} 17'56 1.35018 AU
	4893 Oct 10 22:07	0° \mathbb{M}		evening rise	4894 Sep 23 01:39	11° \mathcal{Q} 43'15
desc. node	4893 Oct 19 06:02	14° \mathbb{M} 14'32			4894 Oct 03 08:18	0° \mathbb{M}
	4893 Oct 29 14:14	0° \mathcal{Q}		desc. node	4894 Oct 06 03:03	4° \mathbb{M} 30'37
evening max el	4893 Nov 14 19:46	19° \mathcal{Q} 57'53 25°46'17			4894 Oct 24 20:10	0° \mathcal{Q}
retrograde	4893 Nov 27 04:38	27° \mathcal{Q} 02'03		evening max el	4894 Oct 28 08:23	3° \mathcal{Q} 37'34 26°43'35
evening set	4893 Dec 03 05:58	24° \mathcal{Q} 31'43		retrograde	4894 Nov 10 09:32	10° \mathcal{Q} 53'36
min. Earth dist.	4893 Dec 07 13:41	19° \mathcal{Q} 50'46 0.67013 AU		evening set	4894 Nov 16 23:26	8° \mathcal{Q} 14'52
inferior conj	4893 Dec 08 21:51	18° \mathcal{Q} 08'59 -0°16'34		min. Earth dist.	4894 Nov 21 00:28	4° \mathcal{Q} 09'16 0.65959 AU
minimum elong	4893 Dec 08 22:17	18° \mathcal{Q} 07'37 0°16'22		inferior conj	4894 Nov 22 20:11	2° \mathcal{Q} 00'23 -1°16'31
asc. node	4893 Dec 09 17:15	17° \mathcal{Q} 08'00		minimum elong	4894 Nov 22 22:19	1° \mathcal{Q} 54'03 1°15'36
morning rise	4893 Dec 14 15:01	12° \mathcal{Q} 16'30			4894 Nov 24 14:02	30° $\mathcal{R}\mathbb{M}$
direct	4893 Dec 17 21:17	11° \mathcal{Q} 15'27		asc. node	4894 Nov 26 14:19	27° \mathbb{M} 58'37
morning max el	4893 Dec 24 19:30	15° \mathcal{Q} 05'35 19°03'47		morning rise	4894 Nov 28 22:02	26° \mathbb{M} 18'49
	4894 Jan 05 01:49	0° \mathcal{Q}		direct	4894 Dec 01 18:48	25° \mathbb{M} 33'14
desc. node	4894 Jan 15 05:20	15° \mathcal{Q} 36'38		morning max el	4894 Dec 08 08:18	29° \mathbb{M} 06'31 18°21'55
morning set	4894 Jan 16 14:22	17° \mathcal{Q} 45'10			4894 Dec 09 04:49	0° \mathcal{Q}
	4894 Jan 24 10:51	0° \approx		morning set	4894 Dec 27 20:53	27° \mathcal{Q} 48'22
max. Earth dist.	4894 Jan 30 21:46	10° \approx 06'54 1.45019 AU			4894 Dec 29 05:38	0° \mathcal{Q}
superior conj	4894 Feb 02 06:12	13° \approx 49'19 -1°45'27		desc. node	4895 Jan 02 02:22	6° \mathcal{Q} 11'13
minimum elong	4894 Feb 01 21:24	13° \approx 14'35 1°44'42		superior conj	4895 Jan 12 09:04	22° \mathcal{Q} 26'39 -1°07'07
	4894 Feb 12 09:03	0° \mathcal{H}		minimum elong	4895 Jan 12 01:01	21° \mathcal{Q} 55'02 1°06'08
evening rise	4894 Feb 17 02:21	7° \mathcal{H} 41'17		max. Earth dist.	4895 Jan 13 16:23	24° \mathcal{Q} 29'29 1.45315 AU
	4894 Mar 03 00:44	0° \mathbb{Y}			4895 Jan 17 04:47	0° \approx
asc. node	4894 Mar 07 16:33	6° \mathbb{Y} 12'40		evening rise	4895 Jan 28 11:06	17° \approx 39'17
evening max el	4894 Mar 09 03:46	7° \mathbb{Y} 48'32 18°31'56			4895 Feb 05 07:50	0° \mathcal{H}
retrograde	4894 Mar 15 16:40	11° \mathbb{Y} 23'32		greatest brilliancy	4895 Feb 08 01:00	4° \mathcal{H} 12'57 -0.8m
evening set	4894 Mar 18 19:44	10° \mathbb{Y} 28'43		evening max el	4895 Feb 20 12:57	21° \mathcal{H} 19'32 19°10'51
inferior conj	4894 Mar 24 14:15	4° \mathbb{Y} 55'47 3°33'43		asc. node	4895 Feb 22 13:35	23° \mathcal{H} 10'41
minimum elong	4894 Mar 24 14:02	4° \mathbb{Y} 56'28 3°33'43		retrograde	4895 Feb 27 12:31	25° \mathcal{H} 17'26
min. Earth dist.	4894 Mar 26 16:30	2° \mathbb{Y} 26'35 0.64730 AU		evening set	4895 Mar 02 22:32	24° \mathcal{H} 09'23
	4894 Mar 28 22:29	30° $\mathcal{R}\mathcal{H}$		inferior conj	4895 Mar 08 11:13	18° \mathcal{H} 20'24 3°24'55
morning rise	4894 Mar 30 07:40	28° \mathcal{H} 43'40		minimum elong	4895 Mar 08 09:46	18° \mathcal{H} 25'04 3°24'45
direct	4894 Apr 06 01:14	25° \mathcal{H} 54'44		min. Earth dist.	4895 Mar 09 22:08	16° \mathcal{H} 28'32 0.66197 AU
desc. node	4894 Apr 13 04:33	28° \mathcal{H} 26'19		morning rise	4895 Mar 13 20:40	12° \mathcal{H} 05'58
	4894 Apr 15 08:16	0° \mathbb{Y}		direct	4895 Mar 20 05:20	9° \mathcal{H} 17'37
morning max el	4894 Apr 19 13:27	3° \mathbb{Y} 48'55 27°17'40		desc. node	4895 Mar 31 01:37	15° \mathcal{H} 01'54
	4894 May 09 07:12	0° \mathcal{B}		morning max el	4895 Apr 01 23:23	16° \mathcal{H} 52'35 26°17'09
morning set	4894 May 24 23:20	27° \mathcal{B} 36'04			4895 Apr 12 21:28	0° \mathbb{Y}
	4894 May 26 04:40	0° \mathbb{I}			4895 May 02 04:54	0° \mathcal{B}
max. Earth dist.	4894 May 29 15:19	6° \mathbb{I} 56'37 1.33568 AU		morning set	4895 May 08 01:46	10° \mathcal{B} 36'17
superior conj	4894 Jun 02 04:13	14° \mathbb{I} 19'28 -0°15'22		max. Earth dist.	4895 May 12 01:51	18° \mathcal{B} 15'27 1.35020 AU
minimum elong	4894 Jun 02 05:00	14° \mathbb{I} 23'40 0°15'13		superior conj	4895 May 17 01:20	28° \mathcal{B} 13'21 -0°44'55
behind sun begin	4894 Jun 02 03:17	14° \mathbb{I} 14'34		minimum elong	4895 May 17 03:47	28° \mathcal{B} 25'54 0°44'27
behind sun end	4894 Jun 02 06:44	14° \mathbb{I} 32'47			4895 May 17 22:08	0° \mathbb{I}
asc. node	4894 Jun 03 15:49	17° \mathbb{I} 28'28		asc. node	4895 May 21 12:52	7° \mathbb{I} 29'48
evening rise	4894 Jun 09 10:10	29° \mathbb{I} 45'11		evening rise	4895 May 24 18:33	14° \mathbb{I} 13'18
	4894 Jun 09 12:59	0° \mathcal{Q}				

	4895 Jun 01 21:38	0°☿			4896 May 08 17:32	0°♊	
evening max el	4895 Jun 12 09:57	14°☿36'34	20°38'39	evening max el	4896 May 24 23:20	26°♊06'48	19°30'23
retrograde	4895 Jun 23 16:24	20°☿07'46			4896 May 30 14:41	0°☿	
evening set	4895 Jun 25 17:26	19°☿57'37		retrograde	4896 Jun 03 11:53	0°☿45'36	
desc. node	4895 Jun 27 00:48	19°☿41'02		evening set	4896 Jun 05 10:37	0°☿34'48	
inferior conj	4895 Jul 04 23:50	16°☿00'36	-2°20'31		4896 Jun 07 13:45	30°♊	
minimum elong	4895 Jul 04 17:20	16°☿09'55	2°18'13	desc. node	4896 Jun 12 21:50	27°♊15'15	
min. Earth dist.	4895 Jul 06 01:41	15°☿23'30	0.54874 AU	inferior conj	4896 Jun 14 02:41	26°♊29'35	-0°21'27
morning rise	4895 Jul 13 16:37	11°☿55'04		minimum elong	4896 Jun 14 01:44	26°♊31'07	0°21'07
direct	4895 Jul 17 11:48	11°☿23'57		min. Earth dist.	4896 Jun 16 15:09	24°♊53'15	0.55747 AU
morning max el	4895 Jul 30 17:20	17°☿46'51	23°13'05	morning rise	4896 Jun 22 14:13	21°♊52'46	
	4895 Aug 09 15:05	0°♊		direct	4896 Jun 27 05:59	21°♊03'59	
asc. node	4895 Aug 17 12:08	13°♊37'15		morning max el	4896 Jul 11 06:52	28°♊07'48	24°56'08
morning set	4895 Aug 22 21:28	24°♊32'28			4896 Jul 13 03:37	0°☿	
	4895 Aug 25 10:54	0°♊			4896 Aug 01 18:56	0°♊	
				asc. node	4896 Aug 03 09:10	3°♊11'01	
superior conj	4895 Aug 29 22:12	9°♊38'10	1°38'07	morning set	4896 Aug 06 09:11	9°♊24'53	
minimum elong	4895 Aug 29 20:42	9°♊30'08	1°38'02				
max. Earth dist.	4895 Sep 01 14:46	15°♊21'26	1.33620 AU	superior conj	4896 Aug 13 07:37	24°♊28'41	1°27'16
evening rise	4895 Sep 06 14:03	25°♊32'16		minimum elong	4896 Aug 13 05:28	24°♊16'59	1°27'01
	4895 Sep 08 20:50	0°♊		max. Earth dist.	4896 Aug 14 19:18	27°♊43'14	1.32644 AU
desc. node	4895 Sep 23 00:03	24°♊24'27			4896 Aug 15 20:34	0°♊	
	4895 Sep 26 18:34	0°♊		evening rise	4896 Aug 20 12:08	9°♊48'08	
evening max el	4895 Oct 10 20:48	17°♊04'14	27°19'01		4896 Aug 31 04:40	0°♊	
retrograde	4895 Oct 24 08:32	24°♊22'30		desc. node	4896 Sep 08 21:05	13°♊46'42	
evening set	4895 Oct 31 08:10	21°♊42'49			4896 Sep 22 04:59	0°♊	
min. Earth dist.	4895 Nov 04 03:23	18°♊11'40	0.64560 AU	evening max el	4896 Sep 22 07:03	0°♊04'52	27°26'02
inferior conj	4895 Nov 06 11:02	15°♊41'48	-2°19'13	retrograde	4896 Oct 06 00:45	7°♊19'59	
minimum elong	4895 Nov 06 15:03	15°♊30'57	2°17'39	evening set	4896 Oct 13 05:03	4°♊49'17	
morning rise	4895 Nov 12 23:10	10°♊14'09		min. Earth dist.	4896 Oct 16 20:26	1°♊48'37	0.62836 AU
asc. node	4895 Nov 13 11:22	10°♊02'04			4896 Oct 18 17:42	30°♊	
direct	4895 Nov 15 12:49	9°♊40'01		inferior conj	4896 Oct 19 15:37	29°♊06'38	-3°21'40
morning max el	4895 Nov 22 00:27	13°♊05'46	17°56'56	minimum elong	4896 Oct 19 21:16	28°♊52'59	3°19'49
	4895 Dec 03 19:32	0°♊		morning rise	4896 Oct 26 15:05	23°♊56'23	
morning set	4895 Dec 09 08:35	9°♊17'50		direct	4896 Oct 29 00:20	23°♊30'06	
desc. node	4895 Dec 19 23:21	26°♊53'16		asc. node	4896 Oct 30 08:24	23°♊38'34	
	4895 Dec 21 21:30	0°♊		morning max el	4896 Nov 04 17:03	26°♊56'33	17°49'42
					4896 Nov 07 09:21	0°♊	
superior conj	4895 Dec 22 21:41	1°♊37'16	-0°20'17	morning set	4896 Nov 20 20:06	21°♊56'17	
minimum elong	4895 Dec 22 19:15	1°♊27'31	0°19'55		4896 Nov 25 10:10	0°♊	
max. Earth dist.	4895 Dec 27 11:25	8°♊54'13	1.44876 AU				
evening rise	4896 Jan 08 01:57	26°♊58'30		superior conj	4896 Dec 02 10:22	11°♊59'37	0°23'54
	4896 Jan 10 01:13	0°♊		minimum elong	4896 Dec 02 12:41	12°♊09'16	0°23'35
greatest brilliancy	4896 Jan 22 16:28	19°♊04'26	-0.6m	desc. node	4896 Dec 05 20:21	17°♊39'40	
	4896 Jan 30 12:52	0°♊		max. Earth dist.	4896 Dec 09 04:20	23°♊05'01	1.43751 AU
evening max el	4896 Feb 03 17:28	4°♊52'42	20°05'30		4896 Dec 13 12:30	0°♊	
asc. node	4896 Feb 09 10:38	9°♊01'08		evening rise	4896 Dec 17 12:22	6°♊14'09	
retrograde	4896 Feb 11 10:29	9°♊22'24			4897 Jan 02 09:38	0°♊	
evening set	4896 Feb 15 04:42	8°♊00'08		evening max el	4897 Jan 16 16:32	18°♊27'13	21°13'01
inferior conj	4896 Feb 20 14:06	1°♊57'15	3°04'01	retrograde	4897 Jan 25 08:23	23°♊35'02	
minimum elong	4896 Feb 20 11:54	2°♊04'37	3°03'34	asc. node	4897 Jan 26 07:40	23°♊29'58	
min. Earth dist.	4896 Feb 21 10:45	0°♊47'38	0.67241 AU	evening set	4897 Jan 29 12:22	21°♊57'34	
	4896 Feb 22 01:04	30°♊		inferior conj	4897 Feb 03 20:31	15°♊43'25	2°33'19
morning rise	4896 Feb 25 18:53	25°♊42'54		minimum elong	4897 Feb 03 18:05	15°♊51'50	2°32'38
direct	4896 Mar 02 15:01	23°♊06'17		min. Earth dist.	4897 Feb 04 04:19	15°♊16'27	0.67867 AU
	4896 Mar 14 05:32	0°♊		morning rise	4897 Feb 08 23:37	9°♊30'46	
morning max el	4896 Mar 14 08:09	0°♊06'36	24°57'31	direct	4897 Feb 14 05:20	7°♊13'11	
desc. node	4896 Mar 16 22:38	2°♊53'24		morning max el	4897 Feb 24 16:58	13°♊27'15	23°29'03
	4896 Apr 05 19:06	0°♊		desc. node	4897 Mar 03 19:37	21°♊39'28	
morning set	4896 Apr 19 10:54	22°♊42'29			4897 Mar 10 01:32	0°♊	
max. Earth dist.	4896 Apr 23 01:52	29°♊16'56	1.36902 AU		4897 Mar 29 16:28	0°♊	
	4896 Apr 23 11:10	0°♊		morning set	4897 Mar 31 20:53	3°♊39'30	
				max. Earth dist.	4897 Apr 04 21:22	10°♊34'33	1.39055 AU
superior conj	4896 Apr 29 12:31	11°♊34'00	-1°14'13				
minimum elong	4896 Apr 29 16:34	11°♊53'52	1°13'34	superior conj	4897 Apr 12 10:00	24°♊11'57	-1°40'40
asc. node	4896 May 07 09:54	27°♊21'24		minimum elong	4897 Apr 12 14:57	24°♊35'05	1°40'07
evening rise	4896 May 07 21:51	28°♊21'30			4897 Apr 15 11:43	0°♊	

evening rise	4897 Apr 21 17:22	12°♄02'38			4898 Apr 07 16:45	0°♄	
asc. node	4897 Apr 24 06:55	16°♄58'52		asc. node	4898 Apr 11 03:58	6°♄16'32	
	4897 May 01 14:38	0°♄		evening max el	4898 Apr 21 07:18	20°♄59'35	18°14'43
evening max el	4897 May 07 23:32	8°♄17'02	18°42'23	retrograde	4898 Apr 28 08:37	24°♄31'44	
retrograde	4897 May 16 00:47	12°♄14'37		evening set	4898 Apr 30 19:25	24°♄06'58	
evening set	4897 May 18 04:47	11°♄58'26		inferior conj	4898 May 07 20:53	19°♄23'34	2°32'16
inferior conj	4897 May 26 01:00	7°♄35'21	1°20'42	minimum elong	4898 May 08 00:22	19°♄15'58	2°31'24
minimum elong	4897 May 26 03:48	7°♄30'08	1°19'45	min. Earth dist.	4898 May 11 06:39	16°♄26'22	0.59473 AU
min. Earth dist.	4897 May 29 08:03	5°♄08'52	0.57389 AU	morning rise	4898 May 15 02:32	13°♄42'07	
desc. node	4897 May 30 18:51	4°♄09'29		desc. node	4898 May 17 15:52	12°♄30'25	
morning rise	4897 Jun 02 23:32	2°♄22'40		direct	4898 May 21 11:17	11°♄50'14	
direct	4897 Jun 08 13:51	1°♄05'27		morning max el	4898 Jun 04 20:21	19°♄40'48	27°27'08
morning max el	4897 Jun 22 22:35	8°♄37'49	26°25'39		4898 Jun 13 15:21	0°♄	
	4897 Jul 09 01:00	0°♄			4898 Jul 01 18:45	0°♄	
asc. node	4897 Jul 21 06:10	23°♄00'57		morning set	4898 Jul 06 03:46	8°♄51'06	
morning set	4897 Jul 21 19:50	24°♄12'48		asc. node	4898 Jul 08 03:12	13°♄01'48	
	4897 Jul 24 12:35	0°♄		max. Earth dist.	4898 Jul 12 16:35	22°♄57'16	1.31947 AU
superior conj	4897 Jul 28 19:04	9°♄23'02	1°11'33	superior conj	4898 Jul 13 06:47	24°♄15'37	0°51'34
minimum elong	4897 Jul 28 16:45	9°♄10'16	1°11'10	minimum elong	4898 Jul 13 04:47	24°♄04'32	0°51'10
max. Earth dist.	4897 Jul 29 05:07	10°♄18'33	1.32089 AU		4898 Jul 15 21:13	0°♄	
evening rise	4897 Aug 04 16:57	24°♄22'07		evening rise	4898 Jul 20 02:06	9°♄07'01	
	4897 Aug 07 10:37	0°♄			4898 Jul 30 19:55	0°♄	
	4897 Aug 24 23:43	0°♄		desc. node	4898 Aug 13 15:08	19°♄58'48	
desc. node	4897 Aug 26 18:07	2°♄24'07		evening max el	4898 Aug 17 10:21	23°♄57'49	26°01'26
evening max el	4897 Sep 04 12:18	12°♄25'22	27°00'08		4898 Aug 26 03:25	0°♄	
retrograde	4897 Sep 18 09:26	19°♄36'30		retrograde	4898 Aug 31 09:33	1°♄05'33	
evening set	4897 Sep 25 09:57	17°♄26'39			4898 Sep 05 14:15	30°♄	
min. Earth dist.	4897 Sep 29 02:33	14°♄46'52	0.60861 AU	evening set	4898 Sep 06 18:07	29°♄28'17	
inferior conj	4897 Oct 02 06:36	12°♄05'38	-4°18'46	min. Earth dist.	4898 Sep 10 22:57	26°♄53'00	0.58788 AU
minimum elong	4897 Oct 02 12:48	11°♄52'26	4°17'16	inferior conj	4898 Sep 14 04:32	24°♄29'56	-5°01'29
morning rise	4897 Oct 09 17:35	7°♄16'21		minimum elong	4898 Sep 14 08:54	24°♄21'49	5°00'56
direct	4897 Oct 12 01:28	6°♄54'51		morning rise	4898 Sep 22 01:58	20°♄03'40	
asc. node	4897 Oct 17 05:26	8°♄45'46		direct	4898 Sep 24 11:45	19°♄44'27	
morning max el	4897 Oct 19 06:54	10°♄30'23	18°01'13	morning max el	4898 Oct 02 14:42	23°♄38'45	18°32'47
	4897 Nov 01 02:44	0°♄		asc. node	4898 Oct 04 02:27	25°♄11'35	
morning set	4897 Nov 04 00:53	5°♄23'20			4898 Oct 07 19:08	0°♄	
				morning set	4898 Oct 18 17:51	19°♄24'38	
superior conj	4897 Nov 14 01:20	23°♄38'21	0°59'00		4898 Oct 24 05:36	0°♄	
minimum elong	4897 Nov 14 05:18	23°♄55'52	0°58'30	superior conj	4898 Oct 27 14:24	6°♄21'28	1°23'23
	4897 Nov 17 16:59	0°♄		minimum elong	4898 Oct 27 17:51	6°♄37'31	1°23'02
max. Earth dist.	4897 Nov 21 16:29	6°♄43'30	1.42072 AU	max. Earth dist.	4898 Nov 03 23:12	19°♄38'11	1.40056 AU
desc. node	4897 Nov 22 17:22	8°♄26'35		evening rise	4898 Nov 08 04:22	26°♄49'26	
evening rise	4897 Nov 27 09:49	16°♄02'46		desc. node	4898 Nov 09 14:24	29°♄10'44	
	4897 Dec 06 10:07	0°♄			4898 Nov 10 02:23	0°♄	
	4897 Dec 28 12:01	0°♄			4898 Nov 30 01:39	0°♄	
evening max el	4897 Dec 30 10:22	2°♄02'53	22°29'27	evening max el	4898 Dec 13 00:34	15°♄41'41	23°49'26
retrograde	4898 Jan 09 04:35	7°♄51'00		retrograde	4898 Dec 23 21:43	22°♄06'38	
asc. node	4898 Jan 13 04:41	6°♄27'00		evening set	4898 Dec 29 01:36	19°♄57'54	
evening set	4898 Jan 13 19:51	5°♄57'49		asc. node	4898 Dec 31 01:43	17°♄57'32	
	4898 Jan 18 21:26	30°♄		min. Earth dist.	4899 Jan 02 21:13	14°♄22'24	0.67950 AU
inferior conj	4898 Jan 19 04:26	29°♄35'41	1°54'23	inferior conj	4899 Jan 03 12:04	13°♄31'52	1°08'19
minimum elong	4898 Jan 19 02:14	29°♄43'20	1°53'38	minimum elong	4899 Jan 03 10:33	13°♄37'03	1°07'44
min. Earth dist.	4898 Jan 19 00:33	29°♄49'10	0.68094 AU	morning rise	4899 Jan 08 19:29	7°♄27'03	
morning rise	4898 Jan 24 08:30	23°♄26'08		direct	4899 Jan 12 20:34	5°♄54'37	
direct	4898 Jan 28 23:31	21°♄31'02		morning max el	4899 Jan 20 23:26	10°♄34'25	20°41'41
morning max el	4898 Feb 07 04:59	26°♄55'31	22°01'16		4899 Feb 04 21:51	0°♄	
	4898 Feb 10 01:18	0°♄		desc. node	4899 Feb 05 13:40	0°♄57'42	
desc. node	4898 Feb 18 16:38	11°♄04'25		morning set	4899 Feb 19 06:58	21°♄43'06	
	4898 Mar 03 15:41	0°♄			4899 Feb 24 13:18	0°♄	
morning set	4898 Mar 12 02:44	13°♄15'46		max. Earth dist.	4899 Feb 28 00:16	5°♄32'53	1.43119 AU
max. Earth dist.	4898 Mar 17 19:28	22°♄36'45	1.41220 AU				
	4898 Mar 22 03:45	0°♄		superior conj	4899 Mar 06 16:53	16°♄34'23	-2°08'42
superior conj	4898 Mar 25 13:04	5°♄55'31	-2°00'32	minimum elong	4899 Mar 06 16:59	16°♄34'50	2°08'42
minimum elong	4898 Mar 25 17:07	6°♄13'29	2°00'18		4899 Mar 14 12:48	0°♄	
evening rise	4898 Apr 05 01:36	25°♄07'42		evening rise	4899 Mar 18 18:22	7°♄27'19	

asc. node	4899 Mar 29 01:00	25° Υ 07'27		superior conj	4900 Feb 14 19:11	26° \approx 06'16	-1°59'43
	4899 Apr 01 08:18	0° B		minimum elong	4900 Feb 14 13:03	25° \approx 41'39	1°59'22
evening max el	4899 Apr 04 19:12	4° B 05'04	18°06'40		4900 Feb 17 05:09	0° H	
retrograde	4899 Apr 11 07:54	7° B 27'19		evening rise	4900 Feb 28 15:18	18° H 53'30	
evening set	4899 Apr 14 01:12	6° B 51'46			4900 Mar 07 05:55	0° Υ	
inferior conj	4899 Apr 20 11:36	1° B 48'18	3°14'07	asc. node	4900 Mar 15 22:03	13° Υ 23'30	
minimum elong	4899 Apr 20 13:56	1° B 42'27	3°13'46	evening max el	4900 Mar 19 08:07	17° Υ 25'40	18°17'30
	4899 Apr 22 06:32	30° $\text{R}\Upsilon$		retrograde	4900 Mar 25 18:15	20° Υ 52'05	
min. Earth dist.	4899 Apr 23 12:59	28° Υ 45'19	0.61674 AU	evening set	4900 Mar 28 17:47	20° Υ 04'27	
morning rise	4899 Apr 27 00:51	25° Υ 48'57		inferior conj	4900 Apr 03 17:04	14° Υ 41'55	3°31'59
direct	4899 May 03 19:52	23° Υ 25'37		minimum elong	4900 Apr 03 17:44	14° Υ 40'01	3°31'57
desc. node	4899 May 04 12:54	23° Υ 27'07		min. Earth dist.	4900 Apr 06 04:20	11° Υ 55'43	0.63712 AU
	4899 May 16 12:53	0° B		morning rise	4900 Apr 09 16:44	8° Υ 33'06	
morning max el	4899 May 18 00:13	1° B 24'57	27°52'13	direct	4900 Apr 16 13:08	5° Υ 49'32	
	4899 Jun 07 20:53	0° II		desc. node	4900 Apr 21 09:56	7° Υ 00'18	
morning set	4899 Jun 20 06:58	23° II 12'24		morning max el	4900 Apr 30 08:24	13° Υ 48'00	27°39'56
	4899 Jun 23 13:05	0° E			4900 May 13 09:56	0° B	
asc. node	4899 Jun 25 00:15	3° E 08'01			4900 May 31 10:35	0° II	
max. Earth dist.	4899 Jun 26 01:40	5° E 25'22	1.32227 AU	morning set	4900 Jun 04 03:08	7° II 09'38	
				max. Earth dist.	4900 Jun 09 04:38	17° II 31'51	1.32953 AU
superior conj	4899 Jun 27 16:59	8° E 59'36	0°27'52				
minimum elong	4899 Jun 27 15:45	8° E 52'47	0°27'35	superior conj	4900 Jun 11 23:52	23° II 29'16	0°01'07
evening rise	4899 Jul 04 13:29	23° E 55'02		minimum elong	4900 Jun 11 23:48	23° II 28'59	0°01'06
	4899 Jul 07 11:16	0° Ω		behind sun begin	4900 Jun 11 18:29	23° II 00'24	
	4899 Jul 25 16:13	0° M		behind sun end	4900 Jun 12 05:08	23° II 57'36	
evening max el	4899 Jul 30 01:23	4° M 44'49	24°36'47	asc. node	4900 Jun 11 21:18	23° II 15'30	
desc. node	4899 Jul 31 12:10	6° M 04'36			4900 Jun 15 00:18	0° E	
retrograde	4899 Aug 12 22:42	11° M 45'13		evening rise	4900 Jun 19 01:14	8° E 40'21	
evening set	4899 Aug 18 01:52	10° M 46'07			4900 Jun 30 03:57	0° Ω	
min. Earth dist.	4899 Aug 23 12:39	7° M 56'30	0.56874 AU	evening max el	4900 Jul 11 14:16	15° Ω 07'40	22°59'44
inferior conj	4899 Aug 26 06:38	6° M 10'22	-5°15'57	desc. node	4900 Jul 18 09:12	20° Ω 09'03	
minimum elong	4899 Aug 26 05:54	6° M 11'33	5°15'57	retrograde	4900 Jul 24 22:57	21° Ω 47'40	
morning rise	4899 Sep 03 12:23	2° M 05'31		evening set	4900 Jul 28 13:39	21° Ω 19'10	
direct	4899 Sep 06 03:30	1° M 46'27		min. Earth dist.	4900 Aug 04 23:04	18° Ω 00'26	0.55449 AU
morning max el	4899 Sep 15 13:01	6° M 10'46	19°25'50	inferior conj	4900 Aug 06 13:22	17° Ω 05'04	-4°45'55
asc. node	4899 Sep 20 23:29	12° M 40'05		minimum elong	4900 Aug 06 06:27	17° Ω 15'05	4°44'45
	4899 Sep 30 21:00	0° A		morning rise	4900 Aug 15 01:28	13° Ω 13'50	
morning set	4899 Oct 02 19:08	3° A 49'08		direct	4900 Aug 18 00:50	12° Ω 52'57	
				morning max el	4900 Aug 28 23:29	17° Ω 58'22	20°40'37
superior conj	4899 Oct 10 20:05	19° A 52'44	1°37'44		4900 Sep 07 06:39	0° M	
minimum elong	4899 Oct 10 22:05	20° A 02'29	1°37'37	asc. node	4900 Sep 07 20:33	0° M 57'24	
	4899 Oct 16 03:15	0° M		morning set	4900 Sep 17 01:56	18° M 29'18	
max. Earth dist.	4899 Oct 17 03:38	1° M 52'39	1.37954 AU		4900 Sep 22 15:12	0° A	
evening rise	4899 Oct 20 21:50	8° M 38'34					
desc. node	4899 Oct 27 11:27	19° M 47'48		superior conj	4900 Sep 24 13:43	3° A 59'04	1°43'26
	4899 Nov 02 22:26	0° A		minimum elong	4900 Sep 24 14:08	4° A 01'08	1°43'26
evening max el	4899 Nov 25 13:19	29° A 24'29	25°06'28	max. Earth dist.	4900 Sep 29 11:29	13° A 47'14	1.36005 AU
	4899 Nov 26 04:00	0° B		evening rise	4900 Oct 03 11:18	21° A 22'52	
retrograde	4899 Dec 07 10:40	6° B 17'23			4900 Oct 08 06:14	0° M	
evening set	4899 Dec 13 04:02	3° B 54'25		desc. node	4900 Oct 14 08:29	10° M 13'06	
	4899 Dec 16 19:02	30° RA			4900 Oct 27 19:29	0° A	
min. Earth dist.	4899 Dec 17 15:57	28° A 53'03	0.67449 AU	evening max el	4900 Nov 08 02:03	13° A 07'41	26°13'04
asc. node	4899 Dec 17 22:45	28° A 30'54		retrograde	4900 Nov 20 18:28	20° A 17'31	
inferior conj	4899 Dec 18 17:37	27° A 29'05	0°16'02	evening set	4900 Nov 27 01:20	17° A 43'11	
minimum elong	4899 Dec 18 17:13	27° A 30'24	0°15'52	min. Earth dist.	4900 Dec 01 06:15	13° A 17'08	0.66603 AU
transit middle	4899 Dec 18 17:13	27° A 30'24	0°15'52	inferior conj	4900 Dec 02 19:10	11° A 23'31	-0°41'31
transit begin	4899 Dec 18 16:40	27° A 32'11		minimum elong	4900 Dec 02 20:17	11° A 20'04	0°41'02
transit end	4899 Dec 18 17:46	27° A 28'37		asc. node	4900 Dec 04 19:48	8° A 58'30	
morning rise	4899 Dec 24 06:36	21° A 31'12		morning rise	4900 Dec 08 15:47	5° A 35'09	
direct	4899 Dec 27 19:15	20° A 19'29		direct	4900 Dec 11 17:49	4° A 40'59	
morning max el	4900 Jan 04 01:46	24° A 24'30	19°35'08	morning max el	4900 Dec 18 11:18	8° A 22'32	18°43'57
	4900 Jan 08 20:57	0° B			4901 Jan 02 21:48	0° B	
greatest brilliancy	4900 Jan 17 03:15	11° B 40'03	-0.7m	morning set	4901 Jan 08 17:52	9° B 10'42	
desc. node	4900 Jan 23 10:42	21° B 11'36		desc. node	4901 Jan 10 07:43	11° B 39'45	
morning set	4900 Jan 29 03:45	29° B 57'49			4901 Jan 22 00:04	0° \approx	
	4900 Jan 29 04:19	0° \approx		max. Earth dist.	4901 Jan 24 06:15	3° \approx 32'31	1.45236 AU
max. Earth dist.	4900 Feb 10 12:32	19° \approx 16'56	1.44511 AU				

superior conj	4901 Jan 25 01:46	4°  49'08	-1°30'58			4901 Dec 26 18:30	0° 	
minimum elong	4901 Jan 24 16:23	4°  12'16	1°30'01	desc. node		4901 Dec 28 04:45	2°  18'04	
evening rise	4901 Feb 09 13:10	29°  22'00						
	4901 Feb 09 22:38	0° 		superior conj		4902 Jan 04 06:17	13°  33'34	-0°47'34
greatest brilliancy	4901 Feb 16 19:09	11°  00'34	-0.9m	minimum elong		4902 Jan 04 00:23	13°  10'15	0°46'46
	4901 Mar 01 22:57	0° 		max. Earth dist.		4902 Jan 07 01:54	17°  59'50	1.45218 AU
asc. node	4901 Mar 02 19:06	0°  53'24				4902 Jan 14 18:11	0° 	
evening max el	4901 Mar 02 19:18	0°  53'53	18°46'26	evening rise		4902 Jan 20 13:14	9°  00'33	
retrograde	4901 Mar 09 11:37	4°  37'01		greatest brilliancy		4902 Feb 02 02:24	28°  19'34	-0.7m
evening set	4901 Mar 12 17:38	3°  36'28				4902 Feb 03 05:13	0° 	
	4901 Mar 16 16:09	30°  16'09		evening max el		4902 Feb 14 02:36	14°  25'31	19°32'14
inferior conj	4901 Mar 18 09:19	27°  56'25	3°31'38	asc. node		4902 Feb 17 16:08	17°  24'17	
minimum elong	4901 Mar 18 08:31	27°  58'53	3°31'35	retrograde		4902 Feb 21 08:46	18°  36'05	
min. Earth dist.	4901 Mar 20 04:53	25°  42'27	0.65409 AU	evening set		4902 Feb 24 22:08	17°  21'57	
morning rise	4901 Mar 23 22:56	21°  43'12		inferior conj		4902 Mar 02 09:06	11°  26'27	3°17'22
direct	4901 Mar 30 13:22	18°  53'11		minimum elong		4902 Mar 02 07:17	11°  32'27	3°17'05
desc. node	4901 Apr 08 06:58	22°  38'36		min. Earth dist.		4902 Mar 03 13:41	9°  52'35	0.66692 AU
morning max el	4901 Apr 12 18:25	26°  40'01	26°54'54	morning rise		4902 Mar 07 16:11	5°  11'49	
	4901 Apr 15 20:57	0° 		direct		4902 Mar 13 19:44	2°  27'38	
	4901 May 07 00:41	0°  8		morning max el		4902 Mar 26 04:05	9°  49'30	25°45'06
morning set	4901 May 18 13:08	20°  833'24		desc. node		4902 Mar 26 04:00	9°  49'17	
max. Earth dist.	4901 May 22 21:58	29°  808'32	1.34139 AU			4902 Apr 11 02:48	0° 	
	4901 May 23 08:10	0°  II		morning set		4902 Apr 29 14:29	0°  8	
				max. Earth dist.		4902 May 01 08:53	3°  812'22	
superior conj	4901 May 27 01:14	7°  II37'56	-0°27'48			4902 May 05 04:01	10°  818'33	1.35778 AU
minimum elong	4901 May 27 02:43	7°  II45'40	0°27'30					
asc. node	4901 May 29 18:22	13°  II20'12		superior conj		4902 May 10 18:31	21°  818'24	-0°57'30
evening rise	4901 Jun 03 11:25	23°  II16'29		minimum elong		4902 May 10 21:41	21°  834'19	0°56'56
	4901 Jun 06 18:08	0° 				4902 May 15 00:56	0°  II	
evening max el	4901 Jun 23 08:48	25°  538'47	21°26'07	asc. node		4902 May 16 15:24	3°  II17'49	
	4901 Jun 29 03:36	0°  Omega		evening rise		4902 May 18 17:58	7°  II37'04	
desc. node	4901 Jul 05 06:12	1°  Omega39'23				4902 May 31 02:09	0°  56	
retrograde	4901 Jul 05 13:14	1°  Omega39'35		evening max el		4902 Jun 05 14:52	6°  544'20	20°07'06
evening set	4901 Jul 07 23:07	1°  Omega26'16		retrograde		4902 Jun 16 03:32	11°  553'15	
	4901 Jul 12 09:55	30°  R56		evening set		4902 Jun 18 01:56	11°  543'34	
inferior conj	4901 Jul 17 07:43	27°  526'39	-3°24'40	desc. node		4902 Jun 22 03:14	10°  527'16	
minimum elong	4901 Jul 16 23:12	27°  538'35	3°22'05	inferior conj		4902 Jun 27 03:27	7°  544'20	-1°29'36
min. Earth dist.	4901 Jul 17 09:16	27°  524'29	0.54811 AU	minimum elong		4902 Jun 26 23:15	7°  550'36	1°28'04
morning rise	4901 Jul 26 00:10	23°  532'47		min. Earth dist.		4902 Jun 28 21:27	6°  541'45	0.55132 AU
direct	4901 Jul 29 10:35	23°  5307'16		morning rise		4902 Jul 05 19:02	3°  526'54	
morning max el	4901 Aug 10 22:24	29°  5301'12	22°14'09	direct		4902 Jul 09 22:00	2°  549'55	
	4901 Aug 11 22:48	0°  Omega		morning max el		4902 Jul 23 13:49	9°  531'32	23°57'38
asc. node	4901 Aug 25 17:36	19°  Omega51'58				4902 Aug 07 15:50	0°  Omega	
	4901 Aug 30 21:43	0°  M		asc. node		4902 Aug 12 14:38	9°  Omega13'44	
morning set	4901 Sep 01 12:06	3°  M19'11		morning set		4902 Aug 16 23:43	18°  Omega12'21	
						4902 Aug 22 10:57	0°  M	
superior conj	4901 Sep 08 15:40	18°  M30'00	1°41'52					
minimum elong	4901 Sep 08 14:45	18°  M25'09	1°41'51	superior conj		4902 Aug 23 23:03	3°  M15'50	1°34'10
max. Earth dist.	4901 Sep 12 02:58	25°  M44'07	1.34375 AU	minimum elong		4902 Aug 23 21:13	3°  M05'57	1°34'00
	4901 Sep 14 05:25	0°  Omega		max. Earth dist.		4902 Aug 26 02:59	7°  M55'19	1.33148 AU
evening rise	4901 Sep 16 16:32	4°  Omega51'40		evening rise		4902 Aug 31 09:26	18°  M53'10	
desc. node	4901 Oct 01 05:29	0°  M20'57				4902 Sep 06 03:20	0°  Omega	
	4901 Oct 01 00:09	0°  M		desc. node		4902 Sep 18 02:30	20°  Omega2'50	
evening max el	4901 Oct 21 14:46	26°  M43'24	27°01'46			4902 Sep 25 05:34	0°  M	
	4901 Oct 25 09:36	0°  x		evening max el		4902 Oct 04 02:16	9°  M59'44	27°25'41
retrograde	4901 Nov 03 20:42	4°  x00'42		retrograde		4902 Oct 17 16:56	17°  M17'36	
evening set	4901 Nov 10 15:23	1°  x20'26		evening set		4902 Oct 24 19:30	14°  M39'57	
	4901 Nov 12 04:11	30°  R16		min. Earth dist.		4902 Oct 28 12:32	11°  M22'53	0.63865 AU
min. Earth dist.	4901 Nov 14 13:49	27°  M29'57	0.65407 AU	inferior conj		4902 Oct 31 01:24	8°  M46'15	-2°46'00
inferior conj	4901 Nov 16 14:36	25°  M11'22	-1°42'54	minimum elong		4902 Oct 31 06:11	8°  M33'55	2°44'14
minimum elong	4901 Nov 16 17:32	25°  M03'00	1°41'42	morning rise		4902 Nov 06 18:19	3°  M25'55	
asc. node	4901 Nov 21 16:50	20°  M16'02		asc. node		4902 Nov 08 13:51	2°  M57'49	
morning rise	4901 Nov 22 20:40	19°  M35'28		direct		4902 Nov 09 05:43	2°  M55'38	
direct	4901 Nov 25 14:12	18°  M55'07		morning max el		4902 Nov 15 18:41	6°  M20'34	17°51'42
morning max el	4901 Dec 02 01:54	22°  M23'45	18°09'16			4902 Dec 01 09:28	0°  x	
	4901 Dec 08 02:23	0°  x		morning set		4902 Dec 02 11:44	1°  x52'53	
morning set	4901 Dec 20 13:10	19°  x52'12						

superior conj	4902 Dec 15 04:11	23° ♊ 12'11	-0°00'43		4903 Nov 23 18:57	0° ♊	
minimum elong	4902 Dec 15 04:06	23° ♊ 11'50	0°00'41				
behind sun begin	4902 Dec 14 18:15	22° ♊ 31'38		superior conj	4903 Nov 26 04:15	4° ♊ 07'27	0°40'05
behind sun end	4902 Dec 15 13:56	23° ♊ 51'57		minimum elong	4903 Nov 26 07:37	4° ♊ 21'52	0°39'37
desc. node	4902 Dec 15 01:45	23° ♊ 02'17		desc. node	4903 Dec 01 22:46	13° ♊ 49'11	
	4902 Dec 19 09:07	0° ♋		max. Earth dist.	4903 Dec 03 10:31	16° ♊ 15'40	1.43093 AU
max. Earth dist.	4902 Dec 20 20:03	2° ♋ 19'24	1.44470 AU	evening rise	4903 Dec 10 13:24	27° ♊ 37'28	
evening rise	4902 Dec 31 00:07	18° ♋ 12'34			4903 Dec 12 02:01	0° ♋	
	4903 Jan 07 18:06	0° ♌			4904 Jan 01 13:32	0° ♌	
evening max el	4903 Jan 28 04:42	27° ♌ 58'28	20°32'52	evening max el	4904 Jan 11 01:22	11° ♌ 32'54	21°44'52
	4903 Jan 30 08:38	0° ♍		retrograde	4904 Jan 20 04:24	16° ♌ 58'12	
asc. node	4903 Feb 04 13:08	2° ♍ 41'25		asc. node	4904 Jan 22 10:09	16° ♌ 31'21	
retrograde	4903 Feb 05 07:03	2° ♍ 44'25		evening set	4904 Jan 24 12:53	15° ♌ 14'20	
evening set	4903 Feb 09 05:09	1° ♍ 15'51		inferior conj	4904 Jan 29 21:03	8° ♌ 56'26	2°17'44
	4903 Feb 10 15:24	30° ♎		minimum elong	4904 Jan 29 18:39	9° ♌ 04'44	2°17'01
inferior conj	4903 Feb 14 13:46	25° ♎ 07'38	2°52'06	min. Earth dist.	4904 Jan 29 23:50	8° ♌ 46'43	0.68005 AU
minimum elong	4903 Feb 14 11:25	25° ♎ 15'40	2°51'32	morning rise	4904 Feb 04 00:14	2° ♌ 44'42	
min. Earth dist.	4903 Feb 15 04:47	24° ♎ 16'15	0.67549 AU	direct	4904 Feb 08 23:41	0° ♌ 36'13	
morning rise	4903 Feb 19 17:28	18° ♎ 53'35		morning max el	4904 Feb 18 22:18	6° ♌ 29'31	22°51'04
direct	4903 Feb 25 07:28	16° ♎ 24'27		desc. node	4904 Feb 27 22:01	17° ♌ 10'02	
morning max el	4903 Mar 08 12:45	23° ♎ 06'58	24°20'26		4904 Mar 08 02:25	0° ♍	
desc. node	4903 Mar 13 01:01	28° ♎ 06'09		morning set	4904 Mar 24 07:23	25° ♍ 14'39	
	4903 Mar 14 14:37	0° ♎			4904 Mar 27 03:36	0° ♍	
	4903 Apr 04 11:31	0° ♏		max. Earth dist.	4904 Mar 28 20:18	2° ♍ 53'21	1.39984 AU
morning set	4903 Apr 13 09:02	14° ♏ 51'48					
max. Earth dist.	4903 Apr 17 01:06	21° ♏ 22'10	1.37788 AU	superior conj	4904 Apr 05 14:41	16° ♏ 38'22	-1°50'11
	4903 Apr 21 17:20	0° ♐		minimum elong	4904 Apr 05 19:33	17° ♏ 00'37	1°49'45
					4904 Apr 12 18:14	0° ♐	
superior conj	4903 Apr 24 00:26	4° ♐ 22'19	-1°25'58	evening rise	4904 Apr 15 09:31	5° ♐ 01'24	
minimum elong	4903 Apr 24 05:00	4° ♐ 44'19	1°25'20	asc. node	4904 Apr 19 09:28	12° ♐ 33'44	
evening rise	4903 May 02 18:23	21° ♐ 35'03			4904 Apr 30 14:33	0° ♑	
asc. node	4903 May 03 12:26	23° ♐ 04'13		evening max el	4904 May 01 13:14	0° ♑ 58'28	18°28'18
	4903 May 07 02:14	0° ♑		retrograde	4904 May 09 02:42	4° ♑ 42'50	
evening max el	4903 May 19 09:16	18° ♑ 33'02	19°07'32	evening set	4904 May 11 09:41	4° ♑ 23'17	
retrograde	4903 May 28 05:50	22° ♑ 52'39		inferior conj	4904 May 18 21:36	29° ♑ 51'57	1°54'53
evening set	4903 May 30 06:09	22° ♑ 40'10		minimum elong	4904 May 19 01:00	29° ♑ 45'08	1°53'51
inferior conj	4903 Jun 07 14:01	18° ♑ 28'22	0°25'06		4904 May 18 17:34	30° ♒	
minimum elong	4903 Jun 07 15:02	18° ♑ 26'37	0°24'42	min. Earth dist.	4904 May 22 07:41	27° ♑ 09'28	0.58242 AU
desc. node	4903 Jun 09 00:15	17° ♑ 29'44		desc. node	4904 May 25 21:16	24° ♑ 47'04	
min. Earth dist.	4903 Jun 10 12:35	16° ♑ 28'40	0.56362 AU	morning rise	4904 May 26 13:10	24° ♑ 26'01	
morning rise	4903 Jun 15 20:43	13° ♑ 35'36		direct	4904 Jun 01 12:25	22° ♑ 53'58	
direct	4903 Jun 20 22:08	12° ♑ 35'49			4904 Jun 15 06:58	0° ♒	
morning max el	4903 Jul 05 03:50	19° ♒ 54'14	25°36'43	morning max el	4904 Jun 15 21:38	0° ♒ 35'15	26°55'45
	4903 Jul 13 18:27	0° ♒			4904 Jul 06 18:43	0° ♒	
asc. node	4903 Jul 30 11:40	28° ♒ 55'26		morning set	4904 Jul 15 20:54	17° ♒ 48'05	
	4903 Jul 31 00:09	0° ♓		asc. node	4904 Jul 16 08:43	18° ♒ 50'28	
morning set	4903 Aug 01 11:12	3° ♓ 03'52			4904 Jul 21 12:08	0° ♓	
superior conj	4903 Aug 08 09:36	18° ♓ 09'22	1°21'11	superior conj	4904 Jul 22 21:24	3° ♓ 03'42	1°03'35
minimum elong	4903 Aug 08 07:20	17° ♓ 56'54	1°20'52	minimum elong	4904 Jul 22 19:09	2° ♓ 51'19	1°03'10
max. Earth dist.	4903 Aug 09 10:01	20° ♓ 23'21	1.32355 AU	max. Earth dist.	4904 Jul 22 20:54	3° ♓ 00'58	1.31982 AU
	4903 Aug 13 20:54	0° ♔		evening rise	4904 Jul 29 17:42	17° ♓ 57'48	
evening rise	4903 Aug 15 10:45	3° ♔ 18'09			4904 Aug 04 16:46	0° ♔	
	4903 Aug 29 22:00	0° ♕		desc. node	4904 Aug 21 20:33	27° ♔ 21'19	
desc. node	4903 Sep 04 23:31	9° ♕ 07'58			4904 Aug 24 01:01	0° ♕	
evening max el	4903 Sep 16 10:38	22° ♕ 44'31	27°19'04	evening max el	4904 Aug 28 13:16	4° ♕ 45'59	26°38'59
retrograde	4903 Sep 30 06:24	29° ♕ 58'39		retrograde	4904 Sep 11 11:40	11° ♕ 55'14	
evening set	4903 Oct 07 10:10	27° ♕ 35'14		evening set	4904 Sep 18 06:51	9° ♕ 58'27	
min. Earth dist.	4903 Oct 11 01:06	24° ♕ 44'52	0.62021 AU	min. Earth dist.	4904 Sep 22 03:07	7° ♕ 22'28	0.59981 AU
inferior conj	4903 Oct 14 00:37	22° ♕ 01'07	-3°47'02	inferior conj	4904 Sep 25 08:49	4° ♕ 46'57	-4°39'22
minimum elong	4903 Oct 14 06:42	21° ♕ 47'08	3°45'13	minimum elong	4904 Sep 25 14:37	4° ♕ 35'17	4°38'14
morning rise	4903 Oct 21 05:04	16° ♕ 59'28		morning rise	4904 Oct 03 00:26	0° ♖ 06'57	
direct	4903 Oct 23 13:11	16° ♕ 35'43			4904 Oct 03 11:14	30° ♖	
asc. node	4903 Oct 26 10:53	17° ♕ 13'40		direct	4904 Oct 05 08:39	29° ♖ 46'41	
morning max el	4903 Oct 30 10:32	20° ♕ 05'16	17°52'10		4904 Oct 07 05:11	0° ♖	
	4903 Nov 06 18:55	0° ♗		asc. node	4904 Oct 12 07:56	2° ♖ 56'01	
morning set	4903 Nov 15 07:18	14° ♗ 53'41		morning max el	4904 Oct 12 22:11	3° ♖ 29'17	18°12'01

morning set	4904 Oct 28 17:53	28° Ω 37'20		morning set	4905 Oct 12 14:49	12° Ω 49'57	
	4904 Oct 29 11:24	0° \mathbb{M}					
superior conj	4904 Nov 07 05:18	16° \mathbb{M} 15'28	1°10'39	superior conj	4905 Oct 21 02:05	29° Ω 20'59	1°30'37
minimum elong	4904 Nov 07 09:14	16° \mathbb{M} 33'15	1°10'11	minimum elong	4905 Oct 21 04:58	29° Ω 34'42	1°30'23
max. Earth dist.	4904 Nov 14 20:23	29° \mathbb{M} 36'55	1.41247 AU		4905 Oct 21 10:17	0° \mathbb{M}	
	4904 Nov 15 01:50	0° \mathbb{A}		max. Earth dist.	4905 Oct 28 02:10	12° \mathbb{M} 15'36	1.39160 AU
desc. node	4904 Nov 17 19:48	4° \mathbb{A} 35'36		evening rise	4905 Oct 31 23:42	19° \mathbb{M} 03'27	
evening rise	4904 Nov 19 19:15	7° \mathbb{A} 49'56		desc. node	4905 Nov 04 16:51	25° \mathbb{M} 17'16	
	4904 Dec 04 05:09	0° \mathbb{B}			4905 Nov 07 14:33	0° \mathbb{A}	
evening max el	4904 Dec 23 17:38	25° \mathbb{B} 10'44	23°03'30	evening max el	4905 Nov 28 11:46	0° \mathbb{B}	
	4904 Dec 29 17:37	0° \approx		retrograde	4905 Dec 06 07:01	8° \mathbb{B} 51'34	24°22'58
retrograde	4905 Jan 02 23:19	1° \approx 14'42			4905 Dec 17 14:40	15° \mathbb{B} 29'06	
	4905 Jan 06 19:47	30° \mathbb{R} \mathbb{B}		evening set	4905 Dec 23 00:22	13° \mathbb{B} 13'53	
evening set	4905 Jan 07 19:49	29° \mathbb{B} 14'58		asc. node	4905 Dec 26 04:13	9° \mathbb{B} 51'06	
asc. node	4905 Jan 08 07:11	28° \mathbb{B} 50'04		min. Earth dist.	4905 Dec 27 16:32	7° \mathbb{B} 53'04	0.67786 AU
inferior conj	4905 Jan 13 05:04	22° \mathbb{B} 50'57	1°35'40	inferior conj	4905 Dec 28 12:01	6° \mathbb{B} 47'45	0°46'50
minimum elong	4905 Jan 13 03:06	22° \mathbb{B} 57'44	1°34'58	minimum elong	4905 Dec 28 10:55	6° \mathbb{B} 51'25	0°46'24
min. Earth dist.	4905 Jan 12 20:32	23° \mathbb{B} 20'23	0.68080 AU	morning rise	4906 Jan 02 21:35	0° \mathbb{B} 45'53	
morning rise	4905 Jan 18 10:17	16° \mathbb{B} 43'13			4906 Jan 04 03:35	30° \mathbb{R} \mathbb{A}	
direct	4905 Jan 22 19:20	14° \mathbb{B} 57'39		direct	4906 Jan 06 17:13	29° \mathbb{A} 22'36	
morning max el	4905 Jan 31 12:36	20° \mathbb{B} 01'40	21°26'03		4906 Jan 09 10:02	0° \mathbb{B}	
	4905 Feb 08 20:36	0° \approx		morning max el	4906 Jan 14 10:26	3° \mathbb{B} 45'45	20°11'37
desc. node	4905 Feb 13 19:03	6° \approx 48'22		desc. node	4906 Jan 31 16:05	26° \mathbb{B} 51'11	
	4905 Mar 01 07:38	0° \mathbb{H}			4906 Feb 02 18:28	0° \approx	
morning set	4905 Mar 04 01:08	4° \mathbb{H} 17'17		morning set	4906 Feb 10 23:07	12° \approx 30'09	
max. Earth dist.	4905 Mar 10 21:14	15° \mathbb{H} 19'32	1.42081 AU	max. Earth dist.	4906 Feb 21 05:54	28° \approx 39'43	1.43790 AU
					4906 Feb 22 01:55	0° \mathbb{H}	
superior conj	4905 Mar 18 08:25	27° \mathbb{H} 55'44	-2°05'46	superior conj	4906 Feb 27 01:15	8° \mathbb{H} 04'59	-2°07'15
minimum elong	4905 Mar 18 11:13	28° \mathbb{H} 07'48	2°05'40	minimum elong	4906 Feb 26 22:47	7° \mathbb{H} 54'50	2°07'11
	4905 Mar 19 13:03	0° \mathbb{Y}		evening rise	4906 Mar 11 20:31	29° \mathbb{H} 45'45	
evening rise	4905 Mar 29 11:42	17° \mathbb{Y} 48'00			4906 Mar 11 23:49	0° \mathbb{Y}	
	4905 Apr 05 06:58	0° \mathbb{B}		asc. node	4906 Mar 24 03:32	20° \mathbb{Y} 17'42	
asc. node	4905 Apr 06 06:30	1° \mathbb{B} 40'41		evening max el	4906 Mar 29 11:46	27° \mathbb{Y} 03'52	18°08'57
evening max el	4905 Apr 14 23:10	13° \mathbb{B} 51'40	18°08'56		4906 Apr 02 15:43	0° \mathbb{B}	
retrograde	4905 Apr 21 17:36	17° \mathbb{B} 17'33		retrograde	4906 Apr 04 22:17	0° \mathbb{B} 26'30	
evening set	4905 Apr 24 07:22	16° \mathbb{B} 48'13			4906 Apr 07 05:01	30° \mathbb{R} \mathbb{Y}	
inferior conj	4905 May 01 01:54	11° \mathbb{B} 55'58	2°53'20	evening set	4906 Apr 07 18:13	29° \mathbb{Y} 45'55	
minimum elong	4905 May 01 05:01	11° \mathbb{B} 48'42	2°52'41	inferior conj	4906 Apr 13 23:22	24° \mathbb{Y} 33'51	3°24'17
min. Earth dist.	4905 May 04 09:02	8° \mathbb{B} 53'34	0.60419 AU	minimum elong	4906 Apr 14 01:00	24° \mathbb{Y} 29'31	3°24'06
morning rise	4905 May 08 00:23	6° \mathbb{B} 05'57		min. Earth dist.	4906 Apr 16 19:01	21° \mathbb{Y} 35'49	0.62570 AU
desc. node	4905 May 12 18:18	4° \mathbb{B} 09'44		morning rise	4906 Apr 20 06:25	18° \mathbb{Y} 29'30	
direct	4905 May 14 14:40	3° \mathbb{B} 59'57		direct	4906 Apr 27 02:51	15° \mathbb{Y} 56'18	
morning max el	4905 May 28 21:56	11° \mathbb{B} 54'17	27°42'29	desc. node	4906 Apr 29 15:20	16° \mathbb{Y} 15'11	
	4905 Jun 12 03:26	0° \mathbb{I}		morning max el	4906 May 11 04:09	23° \mathbb{Y} 56'23	27°51'34
	4905 Jun 28 23:56	0° \mathbb{E}			4906 May 16 14:54	0° \mathbb{B}	
morning set	4905 Jun 30 03:04	2° \mathbb{E} 19'33			4906 Jun 05 11:18	0° \mathbb{I}	
asc. node	4905 Jul 03 05:46	8° \mathbb{E} 53'53		morning set	4906 Jun 14 03:39	16° \mathbb{I} 31'56	
max. Earth dist.	4905 Jul 06 07:58	15° \mathbb{E} 37'07	1.32020 AU	max. Earth dist.	4906 Jun 19 15:09	27° \mathbb{I} 58'35	1.32477 AU
				asc. node	4906 Jun 20 02:50	29° \mathbb{I} 01'20	
superior conj	4905 Jul 07 08:41	17° \mathbb{E} 52'57	0°41'56		4906 Jun 20 13:43	0° \mathbb{E}	
minimum elong	4905 Jul 07 06:57	17° \mathbb{E} 43'23	0°41'34				
	4905 Jul 12 21:20	0° \mathbb{Q}		superior conj	4906 Jun 21 17:43	2° \mathbb{E} 31'39	0°16'51
evening rise	4905 Jul 14 04:03	2° \mathbb{Q} 44'47		minimum elong	4906 Jun 21 16:55	2° \mathbb{E} 27'21	0°16'40
	4905 Jul 28 18:22	0° \mathbb{P}		evening rise	4906 Jun 28 15:50	17° \mathbb{E} 32'41	
desc. node	4905 Aug 08 17:35	14° \mathbb{P} 21'42			4906 Jul 04 18:44	0° \mathbb{Q}	
evening max el	4905 Aug 10 08:15	15° \mathbb{P} 58'09	25°27'54	evening max el	4906 Jul 22 21:21	26° \mathbb{Q} 31'10	23°56'02
retrograde	4905 Aug 24 06:58	23° \mathbb{P} 02'46		desc. node	4906 Jul 26 14:36	29° \mathbb{Q} 40'48	
evening set	4905 Aug 30 04:46	21° \mathbb{P} 41'45			4906 Jul 27 01:21	0° \mathbb{P}	
min. Earth dist.	4905 Sep 03 20:02	19° \mathbb{P} 02'45	0.57942 AU	retrograde	4906 Aug 05 14:52	3° \mathbb{P} 25'36	
inferior conj	4905 Sep 06 22:34	16° \mathbb{P} 53'30	-5°12'03	evening set	4906 Aug 10 02:53	2° \mathbb{P} 40'51	
minimum elong	4905 Sep 07 01:09	16° \mathbb{P} 48'59	5°11'53		4906 Aug 15 18:34	30° \mathbb{R} \mathbb{Q}	
morning rise	4905 Sep 14 23:47	12° \mathbb{P} 36'43		min. Earth dist.	4906 Aug 16 07:39	29° \mathbb{Q} 40'37	0.56187 AU
direct	4905 Sep 17 11:40	12° \mathbb{P} 17'38		inferior conj	4906 Aug 18 16:06	28° \mathbb{Q} 14'30	-5°09'30
morning max el	4905 Sep 26 02:16	16° \mathbb{P} 22'59	18°52'40	minimum elong	4906 Aug 18 12:35	28° \mathbb{Q} 19'53	5°09'13
asc. node	4905 Sep 29 04:59	19° \mathbb{P} 50'15		morning rise	4906 Aug 27 00:49	24° \mathbb{Q} 17'22	
	4905 Oct 05 19:45	0° \mathbb{U}		direct	4906 Aug 29 19:08	23° \mathbb{Q} 57'49	




















































































































morning max el	4906 Sep 08 19:50	28°Ω37'48	19°55'06	evening set	4907 Jul 20 10:56	12°Ω59'19	
	4906 Sep 10 04:51	0°ྐ		min. Earth dist.	4907 Jul 28 17:55	9°Ω23'59	0.55058 AU
asc. node	4906 Sep 16 02:03	7°ྐ41'38		inferior conj	4907 Jul 29 16:13	8°Ω52'30	-4°17'24
morning set	4906 Sep 26 18:47	27°ྐ22'43		minimum elong	4907 Jul 29 07:47	9°Ω04'25	4°15'26
	4906 Sep 28 01:44	0°Ω		morning rise	4907 Aug 07 06:30	5°Ω02'29	
				direct	4907 Aug 10 09:45	4°Ω40'20	
superior conj	4906 Oct 04 13:26	13°Ω09'41	1°41'06	morning max el	4907 Aug 22 01:17	10°Ω06'23	21°18'29
minimum elong	4906 Oct 04 14:44	13°Ω16'12	1°41'04	asc. node	4907 Sep 02 23:06	26°Ω16'00	
max. Earth dist.	4906 Oct 10 07:24	24°Ω19'26	1.37094 AU		4907 Sep 05 00:38	0°ྐ	
	4906 Oct 13 09:01	0°ྐ		morning set	4907 Sep 11 03:14	12°ྐ07'34	
evening rise	4906 Oct 14 02:12	1°ྐ17'46					
desc. node	4906 Oct 22 13:53	15°ྐ50'18		superior conj	4907 Sep 18 11:01	27°ྐ27'54	1°43'35
	4906 Oct 31 18:23	0°♌		minimum elong	4907 Sep 18 10:49	27°ྐ26'52	1°43'35
evening max el	4906 Nov 18 19:27	22°♌34'40	25°36'21		4907 Sep 19 16:29	0°Ω	
retrograde	4906 Dec 01 01:34	29°♌36'33		max. Earth dist.	4907 Sep 22 17:41	6°Ω10'42	1.35263 AU
evening set	4906 Dec 07 00:51	27°♌07'56		evening rise	4907 Sep 26 22:54	14°Ω22'35	
min. Earth dist.	4906 Dec 11 09:36	22°♌21'40	0.67137 AU		4907 Oct 05 16:49	0°ྐ	
inferior conj	4906 Dec 12 16:06	20°♌44'15	-0°07'49	desc. node	4907 Oct 09 10:55	6°ྐ09'06	
minimum elong	4906 Dec 12 16:18	20°♌43'37	0°07'44		4907 Oct 26 12:27	0°♌	
transit middle	4906 Dec 12 16:18	20°♌43'37	0°07'44	evening max el	4907 Nov 01 08:07	6°♌15'46	26°36'20
transit begin	4906 Dec 12 13:50	20°♌51'31		retrograde	4907 Nov 14 07:19	13°♌30'38	
transit end	4906 Dec 12 18:46	20°♌35'44		evening set	4907 Nov 20 19:22	10°♌52'55	
asc. node	4906 Dec 13 01:16	20°♌15'02		min. Earth dist.	4907 Nov 24 21:25	6°♌41'55	0.66136 AU
morning rise	4906 Dec 18 08:08	14°♌50'18		inferior conj	4907 Nov 26 15:20	4°♌36'49	-1°07'11
direct	4906 Dec 21 15:56	13°♌46'42		minimum elong	4907 Nov 26 17:12	4°♌31'15	1°06'24
morning max el	4906 Dec 28 16:07	17°♌40'24	19°11'21	asc. node	4907 Nov 29 22:18	0°♌58'08	
	4907 Jan 07 05:51	0°♌			4907 Dec 01 00:30	30°♌	
greatest brilliancy	4907 Jan 11 09:43	6°♌12'59	-0.7m	morning rise	4907 Dec 02 15:46	28°ྐ53'19	
desc. node	4907 Jan 18 13:07	17°♌11'43		direct	4907 Dec 05 13:49	28°ྐ05'38	
morning set	4907 Jan 21 00:37	21°♌02'26			4907 Dec 10 06:40	0°♌	
	4907 Jan 26 18:51	0°♌		morning max el	4907 Dec 12 04:08	1°♌40'53	18°27'02
max. Earth dist.	4907 Feb 03 20:35	12°♌38'31	1.44906 AU		4907 Dec 31 13:38	0°♌	
				morning set	4908 Jan 01 02:42	0°♌52'16	
superior conj	4907 Feb 06 17:39	17°♌11'22	-1°49'49	desc. node	4908 Jan 05 10:09	7°♌44'52	
minimum elong	4907 Feb 06 09:22	16°♌38'34	1°49'11				
	4907 Feb 14 17:31	0°♌		superior conj	4908 Jan 16 20:48	25°♌48'28	-1°13'45
evening rise	4907 Feb 21 07:51	10°♌47'24		minimum elong	4908 Jan 16 12:11	25°♌14'40	1°12'44
	4907 Mar 05 03:15	0°ྐ		max. Earth dist.	4908 Jan 17 14:57	26°♌59'35	1.45318 AU
asc. node	4907 Mar 11 00:34	8°ྐ15'32			4908 Jan 19 12:59	0°♌	
evening max el	4907 Mar 13 00:09	10°ྐ27'56	18°27'39	evening rise	4908 Feb 01 19:51	20°♌52'47	
retrograde	4907 Mar 19 12:06	14°ྐ00'26			4908 Feb 07 14:22	0°♌	
evening set	4907 Mar 22 14:13	13°ྐ07'34		greatest brilliancy	4908 Feb 11 15:46	6°♌22'00	-0.8m
inferior conj	4907 Mar 28 09:52	7°ྐ37'21	3°33'47	evening max el	4908 Feb 24 09:55	23°♌58'33	19°04'03
minimum elong	4907 Mar 28 09:52	7°ྐ37'21	3°33'46	asc. node	4908 Feb 25 21:35	25°♌22'30	
min. Earth dist.	4907 Mar 30 14:30	5°ྐ03'12	0.64476 AU	retrograde	4908 Mar 02 07:22	27°♌52'12	
morning rise	4907 Apr 03 04:46	1°ྐ25'52		evening set	4908 Mar 05 16:19	26°♌46'08	
	4907 Apr 05 05:00	30°♌		inferior conj	4908 Mar 11 05:42	20°♌59'30	3°27'03
direct	4907 Apr 09 23:15	28°♌37'47		minimum elong	4908 Mar 11 04:24	21°♌03'38	3°26'55
	4907 Apr 15 03:28	0°ྐ		min. Earth dist.	4908 Mar 12 18:51	19°♌01'40	0.66007 AU
desc. node	4907 Apr 16 12:21	0°ྐ45'34		morning rise	4908 Mar 16 16:06	14°♌45'21	
morning max el	4907 Apr 23 13:35	6°ྐ33'49	27°24'25	direct	4908 Mar 23 02:28	11°♌56'06	
	4907 May 11 12:32	0°♌		desc. node	4908 Apr 02 09:21	17°♌07'00	
morning set	4907 May 28 19:54	0°ྐ16'19		morning max el	4908 Apr 04 23:29	19°♌34'35	26°27'36
	4907 May 28 16:34	0°ྐ			4908 Apr 13 20:50	0°ྐ	
max. Earth dist.	4907 Jun 02 14:19	9°ྐ52'38	1.33391 AU		4908 May 03 14:04	0°♌	
				morning set	4908 May 11 00:22	13°♌22'53	
superior conj	4907 Jun 05 22:29	16°ྐ53'00	-0°10'58	max. Earth dist.	4908 May 15 02:30	21°♌15'20	1.34778 AU
minimum elong	4907 Jun 05 23:03	16°ྐ56'00	0°10'52		4908 May 19 10:50	0°ྐ	
behind sun begin	4907 Jun 05 19:00	16°ྐ34'31					
behind sun end	4907 Jun 06 03:06	17°ྐ17'30		superior conj	4908 May 19 20:46	0°ྐ50'57	-0°40'24
asc. node	4907 Jun 06 23:51	19°ྐ08'02		minimum elong	4908 May 19 22:58	1°ྐ02'14	0°39'59
	4907 Jun 12 01:43	0°♌		asc. node	4908 May 23 20:53	9°ྐ10'23	
evening rise	4907 Jun 13 03:07	2°♌14'32		evening rise	4908 May 27 12:00	16°ྐ44'48	
	4907 Jun 28 14:40	0°Ω			4908 Jun 03 04:55	0°♌	
evening max el	4907 Jul 04 11:30	6°Ω53'01	22°18'46	evening max el	4908 Jun 15 10:39	17°♌37'12	20°50'23
desc. node	4907 Jul 13 11:38	12°Ω43'07		retrograde	4908 Jun 26 22:58	23°♌16'02	
retrograde	4907 Jul 17 10:36	13°Ω19'24		evening set	4908 Jun 29 01:45	23°♌05'22	

desc. node	4908 Jun 29 08:37	23°☾02'20	evening set	4909 Jun 09 15:09	3°☾37'04
inferior conj	4908 Jul 08 09:15	19°☾08'18 -2°38'03	desc. node	4909 Jun 16 05:36	0°☾53'37
minimum elong	4908 Jul 08 02:04	19°☾18'31 2°35'37		4909 Jun 17 17:00	30°☾II
min. Earth dist.	4908 Jul 09 05:01	18°☾40'13 0.54830 AU	inferior conj	4909 Jun 18 09:53	29°II33'39 -0°38'59
morning rise	4908 Jul 17 02:08	15°☾06'23	minimum elong	4909 Jun 18 08:07	29°II36'25 0°38'19
direct	4908 Jul 20 18:58	14°☾36'54	min. Earth dist.	4909 Jun 20 18:00	28°II05'58 0.55561 AU
morning max el	4908 Aug 02 20:10	20°☾52'27 22°57'37	morning rise	4909 Jun 26 22:44	25°II02'15
	4908 Aug 10 14:31	0°♊	direct	4909 Jul 01 11:06	24°II16'55
asc. node	4908 Aug 19 20:08	15°♊22'57		4909 Jul 14 00:55	0°☾
morning set	4908 Aug 25 14:11	26°♊59'00	morning max el	4909 Jul 15 09:57	1°☾15'06 24°41'21
	4908 Aug 27 00:20	0°♊		4909 Aug 04 05:18	0°♊
			asc. node	4909 Aug 06 17:10	4°♊54'15
superior conj	4908 Sep 01 15:32	12°♊05'46 1°39'18	morning set	4909 Aug 10 01:57	11°♊52'16
minimum elong	4908 Sep 01 14:11	11°♊58'30 1°39'13			
max. Earth dist.	4908 Sep 04 12:47	18°♊12'12 1.33803 AU	superior conj	4909 Aug 17 00:30	26°♊55'41 1°29'16
evening rise	4908 Sep 09 09:33	28°♊06'35	minimum elong	4909 Aug 16 22:26	26°♊44'23 1°29'02
	4908 Sep 10 08:40	0°♊		4909 Aug 18 10:24	0°♊
desc. node	4908 Sep 25 07:56	26°♊06'56	max. Earth dist.	4909 Aug 18 16:21	0°♊32'17 1.32760 AU
	4908 Sep 27 21:41	0°♊	evening rise	4909 Aug 24 06:25	12°♊19'27
evening max el	4908 Oct 13 20:43	19°♊45'31 27°15'27		4909 Sep 02 13:08	0°♊
retrograde	4908 Oct 27 07:04	27°♊03'30	desc. node	4909 Sep 12 04:57	15°♊35'02
evening set	4908 Nov 03 05:33	24°♊23'30		4909 Sep 23 11:41	0°♊
min. Earth dist.	4908 Nov 07 01:37	20°♊47'23 0.64789 AU	evening max el	4909 Sep 26 07:26	2°♊51'10 27°26'57
inferior conj	4908 Nov 09 07:27	18°♊20'19 -2°09'39	retrograde	4909 Oct 10 00:19	10°♊06'51
minimum elong	4908 Nov 09 11:11	18°♊10'04 2°08'10	evening set	4909 Oct 17 04:28	7°♊33'58
morning rise	4908 Nov 15 17:58	12°♊50'19	min. Earth dist.	4909 Oct 20 20:08	4°♊29'23 0.63113 AU
asc. node	4908 Nov 15 19:20	12°♊48'46	inferior conj	4909 Oct 23 13:46	1°♊48'27 -3°12'26
direct	4908 Nov 18 08:34	12°♊14'40	minimum elong	4909 Oct 23 19:13	1°♊35'02 3°10'34
morning max el	4908 Nov 24 19:57	15°♊40'51 17°59'34		4909 Oct 25 11:07	30°☾♊
	4908 Dec 05 02:19	0°♊	morning rise	4909 Oct 30 11:32	26°♊35'31
morning set	4908 Dec 12 10:22	12°♊10'17	direct	4909 Nov 01 21:17	26°♊08'14
desc. node	4908 Dec 22 07:10	28°♊26'17	asc. node	4909 Nov 02 16:22	26°♊11'17
	4908 Dec 23 06:20	0°♊	morning max el	4909 Nov 08 12:44	29°♊33'55 17°49'40
				4909 Nov 08 23:01	0°♊
superior conj	4908 Dec 26 06:48	4°♊51'00 -0°27'26	morning set	4909 Nov 24 18:48	24°♊40'11
minimum elong	4908 Dec 26 03:27	4°♊37'39 0°26'56		4909 Nov 27 19:56	0°♊
max. Earth dist.	4908 Dec 30 10:23	11°♊26'14 1.44989 AU			
	4909 Jan 11 08:30	0°♊	superior conj	4909 Dec 06 15:35	15°♊02'16 0°17'42
evening rise	4909 Jan 11 12:45	0°♊16'22	minimum elong	4909 Dec 06 17:22	15°♊09'40 0°17'27
greatest brilliancy	4909 Jan 25 17:42	21°♊50'53 -0.6m	desc. node	4909 Dec 09 04:13	19°♊12'41
	4909 Jan 31 10:53	0°♊	max. Earth dist.	4909 Dec 13 03:56	25°♊40'58 1.43960 AU
evening max el	4909 Feb 06 15:12	7°♊31'32 19°56'27		4909 Dec 15 20:54	0°♊
asc. node	4909 Feb 11 18:37	11°♊24'12	evening rise	4909 Dec 21 22:51	9°♊30'25
retrograde	4909 Feb 14 05:08	11°♊55'54		4910 Jan 04 13:58	0°♊
evening set	4909 Feb 17 22:07	10°♊35'41	evening max el	4910 Jan 20 15:03	21°♊05'47 21°02'13
inferior conj	4909 Feb 23 07:50	4°♊34'40 3°07'48	retrograde	4910 Jan 29 03:14	26°♊07'49
minimum elong	4909 Feb 23 05:44	4°♊41'44 3°07'25	asc. node	4910 Jan 29 15:38	26°♊06'22
min. Earth dist.	4909 Feb 24 06:29	3°♊18'49 0.67115 AU	evening set	4910 Feb 02 05:41	24°♊32'36
	4909 Feb 26 22:07	30°☾♊	inferior conj	4910 Feb 07 13:53	18°♊19'47 2°38'31
morning rise	4909 Feb 28 13:08	28°♊20'18	minimum elong	4910 Feb 07 11:27	18°♊28'08 2°37'52
direct	4909 Mar 06 11:16	25°♊41'29	min. Earth dist.	4910 Feb 07 23:29	17°♊46'39 0.67801 AU
	4909 Mar 15 08:51	0°♊	morning rise	4910 Feb 12 17:05	12°♊06'44
morning max el	4909 Mar 18 08:26	2°♊47'30 25°10'12	direct	4910 Feb 18 00:56	9°♊46'09
desc. node	4909 Mar 20 06:22	4°♊48'29	morning max el	4910 Feb 28 17:13	16°♊07'42 23°42'22
	4909 Apr 08 01:07	0°♊	desc. node	4910 Mar 07 03:25	23°♊27'32
morning set	4909 Apr 23 12:25	25°♊37'59		4910 Mar 12 03:31	0°♊
	4909 Apr 25 22:06	0°♊		4910 Apr 01 01:09	0°♊
max. Earth dist.	4909 Apr 27 03:58	2°♊18'18 1.36602 AU	morning set	4910 Apr 05 02:16	6°♊46'23
			max. Earth dist.	4910 Apr 08 23:47	13°♊31'45 1.38724 AU
superior conj	4909 May 03 09:38	14°♊17'06 -1°09'53			
minimum elong	4909 May 03 13:28	14°♊36'02 1°09'15	superior conj	4910 Apr 16 09:26	27°♊01'57 -1°37'00
asc. node	4909 May 10 17:55	29°♊03'51	minimum elong	4910 Apr 16 14:20	27°♊25'02 1°36'24
	4909 May 11 05:01	0°♊		4910 Apr 17 23:03	0°♊
evening rise	4909 May 11 16:14	0°♊56'34	evening rise	4910 Apr 25 13:07	14°♊42'21
evening max el	4909 May 28 22:10	29°♊01'06 19°39'15	asc. node	4910 Apr 27 14:56	18°♊43'49
	4909 May 29 23:37	0°☾		4910 May 03 18:32	0°♊
retrograde	4909 Jun 07 16:45	3°☾47'26	evening max el	4910 May 11 20:57	11°♊05'50 18°48'17

retrograde	4910 May 20 02:56	15° Π 08'51		evening set	4911 May 04 17:49	26° \mathcal{B} 56'21	
evening set	4910 May 22 05:51	14° Π 53'47		inferior conj	4911 May 11 21:54	22° \mathcal{B} 16'12	2°23'24
inferior conj	4910 May 30 05:04	10° Π 33'40	1°07'01	minimum elong	4911 May 12 01:26	22° \mathcal{B} 08'40	2°22'28
minimum elong	4910 May 30 07:30	10° Π 29'13	1°06'11	min. Earth dist.	4911 May 15 08:11	19° \mathcal{B} 21'55	0.59145 AU
min. Earth dist.	4910 Jun 02 10:25	8° Π 13'35	0.57100 AU	morning rise	4911 May 19 06:08	16° \mathcal{B} 38'20	
desc. node	4910 Jun 03 02:38	7° Π 45'50		desc. node	4911 May 20 23:40	15° \mathcal{B} 47'44	
morning rise	4910 Jun 07 05:51	5° Π 25'54		direct	4911 May 25 12:39	14° \mathcal{B} 51'28	
direct	4910 Jun 12 16:48	4° Π 13'33		morning max el	4911 Jun 08 21:59	22° \mathcal{B} 40'15	27°20'07
morning max el	4910 Jun 27 01:12	11° Π 42'50	26°13'52		4911 Jun 15 09:59	0° Π	
	4910 Jul 11 05:15	0° \mathcal{E}			4911 Jul 04 05:28	0° \mathcal{E}	
asc. node	4910 Jul 24 14:12	24° \mathcal{E} 42'28		morning set	4911 Jul 09 21:20	11° \mathcal{E} 21'46	
morning set	4910 Jul 25 12:53	26° \mathcal{E} 41'34		asc. node	4911 Jul 11 11:16	14° \mathcal{E} 42'10	
	4910 Jul 27 02:04	0° Ω					
superior conj	4910 Aug 01 11:47	11° Ω 50'12	1°14'14	superior conj	4911 Jul 16 23:36	26° \mathcal{E} 43'39	0°54'51
minimum elong	4910 Aug 01 09:28	11° Ω 37'26	1°13'53	minimum elong	4911 Jul 16 21:31	26° \mathcal{E} 32'09	0°54'28
max. Earth dist.	4910 Aug 02 01:35	13° Ω 06'18	1.32140 AU	max. Earth dist.	4911 Jul 16 12:56	25° \mathcal{E} 44'48	1.31940 AU
evening rise	4910 Aug 08 10:23	26° Ω 51'26		evening rise	4911 Jul 23 19:03	11° Ω 35'14	
	4910 Aug 09 22:48	0° \mathcal{N}			4911 Aug 02 03:32	0° \mathcal{N}	
	4910 Aug 26 23:49	0° \mathcal{E}		desc. node	4911 Aug 16 22:58	22° \mathcal{N} 06'01	
desc. node	4910 Aug 30 01:58	4° \mathcal{E} 20'29		evening max el	4911 Aug 21 12:43	26° \mathcal{N} 58'03	26°12'06
evening max el	4910 Sep 08 13:31	15° \mathcal{E} 18'14	27°06'07		4911 Aug 25 02:14	0° \mathcal{E}	
retrograde	4910 Sep 22 10:19	22° \mathcal{E} 30'21		retrograde	4911 Sep 04 11:56	4° \mathcal{E} 06'26	
evening set	4910 Sep 29 12:05	20° \mathcal{E} 16'26		evening set	4911 Sep 10 23:38	2° \mathcal{E} 23'52	
min. Earth dist.	4910 Oct 03 03:53	17° \mathcal{E} 34'29	0.61167 AU		4911 Sep 14 19:36	30° \mathcal{R} \mathcal{N}	
inferior conj	4910 Oct 06 07:01	14° \mathcal{E} 51'58	-4°10'48	min. Earth dist.	4911 Sep 15 01:44	29° \mathcal{N} 48'55	0.59095 AU
minimum elong	4910 Oct 06 13:15	14° \mathcal{E} 38'25	4°09'12	inferior conj	4911 Sep 18 07:42	27° \mathcal{N} 21'58	-4°56'29
morning rise	4910 Oct 13 16:21	9° \mathcal{E} 59'31		minimum elong	4911 Sep 18 12:33	27° \mathcal{N} 12'45	4°55'48
direct	4910 Oct 16 00:09	9° \mathcal{E} 37'33		morning rise	4911 Sep 26 03:42	22° \mathcal{N} 52'09	
asc. node	4910 Oct 20 13:26	11° \mathcal{E} 05'33		direct	4911 Sep 28 12:53	22° \mathcal{N} 32'47	
morning max el	4910 Oct 23 03:16	13° \mathcal{E} 11'11	17°58'16	morning max el	4911 Oct 06 12:09	26° \mathcal{N} 23'50	18°26'42
	4910 Nov 03 11:50	0° \mathcal{M}		asc. node	4911 Oct 07 10:29	27° \mathcal{N} 20'21	
morning set	4910 Nov 07 21:22	8° \mathcal{M} 00'58			4911 Oct 09 16:31	0° \mathcal{E}	
				morning set	4911 Oct 22 12:46	21° \mathcal{E} 57'43	
superior conj	4910 Nov 18 02:50	26° \mathcal{M} 30'23	0°54'22		4911 Oct 26 17:12	0° \mathcal{M}	
minimum elong	4910 Nov 18 06:44	26° \mathcal{M} 47'25	0°53'50	superior conj	4911 Oct 31 12:54	9° \mathcal{M} 04'33	1°20'20
	4910 Nov 20 03:03	0° \mathcal{X}		minimum elong	4911 Oct 31 16:31	9° \mathcal{M} 21'15	1°19'58
max. Earth dist.	4910 Nov 25 16:39	9° \mathcal{X} 24'24	1.42350 AU	max. Earth dist.	4911 Nov 07 23:51	22° \mathcal{M} 24'51	1.40369 AU
desc. node	4910 Nov 26 01:15	9° \mathcal{X} 59'57		evening rise	4911 Nov 12 08:54	29° \mathcal{M} 49'20	
evening rise	4910 Dec 01 17:48	19° \mathcal{X} 12'03			4911 Nov 12 11:28	0° \mathcal{X}	
	4910 Dec 08 16:51	0° \mathcal{Z}		desc. node	4911 Nov 12 22:17	0° \mathcal{X} 44'44	
	4910 Dec 30 04:33	0° \approx			4911 Dec 02 04:11	0° \mathcal{Z}	
evening max el	4911 Jan 03 09:35	4° \approx 41'16	22°17'41	evening max el	4911 Dec 17 00:14	18° \mathcal{Z} 19'48	23°37'37
retrograde	4911 Jan 12 23:53	10° \approx 23'46		retrograde	4911 Dec 27 17:33	24° \mathcal{Z} 39'43	
asc. node	4911 Jan 16 12:39	9° \approx 17'57		evening set	4912 Jan 01 19:26	22° \mathcal{Z} 33'23	
evening set	4911 Jan 17 13:19	8° \approx 33'01		asc. node	4912 Jan 03 09:43	21° \mathcal{Z} 00'30	
inferior conj	4911 Jan 22 21:45	2° \approx 11'46	2°00'49	min. Earth dist.	4912 Jan 06 16:21	16° \mathcal{Z} 52'49	0.67992 AU
minimum elong	4911 Jan 22 19:29	2° \approx 19'38	2°00'03	inferior conj	4912 Jan 07 05:33	16° \mathcal{Z} 07'43	1°15'47
min. Earth dist.	4911 Jan 22 19:33	2° \approx 19'21	0.68082 AU	minimum elong	4912 Jan 07 03:53	16° \mathcal{Z} 13'23	1°15'08
	4911 Jan 24 12:15	30° \mathcal{R} \mathcal{Z}		morning rise	4912 Jan 12 12:18	10° \mathcal{Z} 02'00	
morning rise	4911 Jan 28 01:30	26° \mathcal{Z} 01'31		direct	4912 Jan 16 15:25	8° \mathcal{Z} 26'10	
direct	4911 Feb 01 18:38	24° \mathcal{Z} 02'58		morning max el	4912 Jan 24 21:50	13° \mathcal{Z} 12'04	20°52'47
morning max el	4911 Feb 11 04:35	29° \mathcal{Z} 35'04	22°13'57		4912 Feb 07 01:45	0° \approx	
	4911 Feb 11 14:23	0° \approx		desc. node	4912 Feb 08 21:31	2° \approx 37'43	
desc. node	4911 Feb 22 00:28	12° \approx 47'53		morning set	4912 Feb 23 19:50	25° \approx 10'45	
	4911 Mar 05 22:07	0° \mathcal{H}			4912 Feb 26 21:24	0° \mathcal{H}	
morning set	4911 Mar 16 12:32	16° \mathcal{H} 35'36		max. Earth dist.	4912 Mar 03 00:32	8° \mathcal{H} 13'49	1.42864 AU
max. Earth dist.	4911 Mar 21 20:56	25° \mathcal{H} 25'44	1.40904 AU				
	4911 Mar 24 13:27	0° \mathcal{Y}		superior conj	4912 Mar 09 23:12	19° \mathcal{H} 44'20	-2°08'28
superior conj	4911 Mar 29 15:38	8° \mathcal{Y} 54'54	-1°58'09	minimum elong	4912 Mar 10 00:07	19° \mathcal{H} 48'13	2°08'27
minimum elong	4911 Mar 29 19:59	9° \mathcal{Y} 14'23	1°57'52		4912 Mar 15 22:21	0° \mathcal{Y}	
evening rise	4911 Apr 08 23:21	27° \mathcal{Y} 53'54		evening rise	4912 Mar 21 18:43	10° \mathcal{Y} 20'58	
	4911 Apr 10 02:20	0° \mathcal{B}		asc. node	4912 Mar 31 09:01	27° \mathcal{Y} 00'42	
asc. node	4911 Apr 14 11:58	8° \mathcal{B} 05'09			4912 Apr 02 07:01	0° \mathcal{B}	
evening max el	4911 Apr 25 03:53	23° \mathcal{B} 44'48	18°17'38	evening max el	4912 Apr 07 15:25	6° \mathcal{B} 47'41	18°06'38
retrograde	4911 May 02 08:03	27° \mathcal{B} 19'38		retrograde	4912 Apr 14 05:13	10° \mathcal{B} 10'16	

evening set	4912 Apr 16 21:38	9°♄36'22		evening max el	4913 Mar 22 04:20	20°♄06'27	18°14'38
inferior conj	4912 Apr 23 10:02	4°♄35'51	3°09'26	retrograde	4913 Mar 28 14:12	23°♄31'19	
minimum elong	4912 Apr 23 12:35	4°♄29'32	3°09'00	evening set	4913 Mar 31 12:50	22°♄45'29	
min. Earth dist.	4912 Apr 26 13:10	1°♄32'14	0.61355 AU	inferior conj	4913 Apr 06 13:31	17°♄25'34	3°30'32
	4912 Apr 28 06:46	30°♄		minimum elong	4913 Apr 06 14:26	17°♄23'01	3°30'28
morning rise	4912 Apr 30 01:36	28°♄38'43		min. Earth dist.	4913 Apr 09 03:00	14°♄35'51	0.63431 AU
direct	4912 May 06 19:46	26°♄19'29		morning rise	4913 Apr 12 15:00	11°♄17'46	
desc. node	4912 May 06 20:42	26°♄19'29		direct	4913 Apr 19 11:41	8°♄36'35	
	4912 May 16 02:23	0°♄		desc. node	4913 Apr 23 17:45	9°♄30'34	
morning max el	4912 May 21 00:53	4°♄17'42	27°50'52	morning max el	4913 May 03 08:35	16°♄35'26	27°44'01
	4912 Jun 09 03:18	0°♄			4913 May 14 10:30	0°♄	
morning set	4912 Jun 23 01:23	25°♄45'53			4913 Jun 01 21:10	0°♄	
	4912 Jun 25 02:15	0°♄		morning set	4913 Jun 06 22:44	9°♄47'05	
asc. node	4912 Jun 27 08:18	4°♄47'48		max. Earth dist.	4913 Jun 12 02:47	20°♄25'47	1.32818 AU
max. Earth dist.	4912 Jun 28 22:36	8°♄15'07	1.32160 AU	asc. node	4913 Jun 14 05:20	24°♄55'17	
superior conj	4912 Jun 30 10:09	11°♄29'15	0°31'40	superior conj	4913 Jun 14 17:37	26°♄01'22	0°05'21
minimum elong	4912 Jun 30 08:46	11°♄21'38	0°31'23	minimum elong	4913 Jun 14 17:22	25°♄59'57	0°05'17
evening rise	4912 Jul 07 06:13	26°♄23'16		behind sun begin	4913 Jun 14 12:20	25°♄32'52	
	4912 Jul 08 23:19	0°♄		behind sun end	4913 Jun 14 22:24	26°♄27'04	
	4912 Jul 26 08:06	0°♄			4913 Jun 16 13:47	0°♄	
evening max el	4912 Aug 02 04:45	7°♄51'24	24°50'34	evening rise	4913 Jun 21 18:01	11°♄09'25	
desc. node	4912 Aug 02 19:59	8°♄27'11			4913 Jul 01 09:11	0°♄	
retrograde	4912 Aug 16 02:45	14°♄52'59		evening max el	4913 Jul 14 17:24	18°♄15'43	23°14'18
evening set	4912 Aug 21 11:01	13°♄48'26		desc. node	4913 Jul 20 17:00	22°♄52'24	
min. Earth dist.	4912 Aug 26 16:11	11°♄02'04	0.57137 AU	retrograde	4913 Jul 28 04:44	24°♄59'56	
inferior conj	4912 Aug 29 12:50	9°♄09'33	-5°16'21	evening set	4913 Aug 01 00:56	24°♄27'40	
minimum elong	4912 Aug 29 13:04	9°♄09'10	5°16'21	min. Earth dist.	4913 Aug 08 02:40	21°♄14'13	0.55616 AU
morning rise	4912 Sep 06 17:28	5°♄01'39		inferior conj	4913 Aug 09 22:09	20°♄10'41	-4°53'53
direct	4912 Sep 09 07:39	4°♄42'37		minimum elong	4913 Aug 09 16:01	20°♄19'41	4°52'59
morning max el	4912 Sep 18 12:02	9°♄01'48	19°16'31	morning rise	4913 Aug 18 09:25	16°♄18'28	
asc. node	4912 Sep 23 07:32	14°♄40'30		direct	4913 Aug 21 07:30	15°♄57'57	
	4912 Oct 02 07:43	0°♄		morning max el	4913 Sep 01 00:17	20°♄56'20	20°28'13
morning set	4912 Oct 05 13:01	6°♄19'43			4913 Sep 08 09:07	0°♄	
superior conj	4912 Oct 13 16:25	22°♄29'45	1°36'08	asc. node	4913 Sep 10 04:35	2°♄51'27	
minimum elong	4912 Oct 13 18:39	22°♄40'36	1°36'00	morning set	4913 Sep 19 19:10	20°♄58'22	
	4912 Oct 17 14:42	0°♄			4913 Sep 24 04:05	0°♄	
max. Earth dist.	4912 Oct 20 04:34	4°♄45'50	1.38263 AU	superior conj	4913 Sep 27 08:32	6°♄31'55	1°43'04
evening rise	4912 Oct 23 23:05	11°♄29'49		minimum elong	4913 Sep 27 09:10	6°♄35'09	1°43'03
desc. node	4912 Oct 29 19:18	21°♄23'22		max. Earth dist.	4913 Oct 02 11:43	16°♄42'48	1.36276 AU
	4912 Nov 04 05:02	0°♄		evening rise	4913 Oct 06 09:49	24°♄06'40	
	4912 Nov 26 13:22	0°♄			4913 Oct 09 16:07	0°♄	
evening max el	4912 Nov 28 13:11	2°♄02'42	24°55'30	desc. node	4913 Oct 16 16:18	11°♄50'56	
retrograde	4912 Dec 10 07:05	8°♄51'44			4913 Oct 28 20:14	0°♄	
evening set	4912 Dec 15 22:27	6°♄30'47		evening max el	4913 Nov 11 01:47	15°♄46'07	26°04'03
asc. node	4912 Dec 20 06:45	1°♄39'43		retrograde	4913 Nov 23 15:36	22°♄54'03	
min. Earth dist.	4912 Dec 20 11:28	1°♄24'20	0.67548 AU	evening set	4913 Nov 29 20:35	20°♄21'00	
inferior conj	4912 Dec 21 11:30	0°♄05'11	0°24'21	min. Earth dist.	4913 Dec 04 02:29	15°♄49'46	0.66755 AU
minimum elong	4912 Dec 21 10:54	0°♄07'09	0°24'07	inferior conj	4913 Dec 05 13:44	14°♄00'14	-0°32'31
	4912 Dec 21 13:04	30°♄		minimum elong	4913 Dec 05 14:36	13°♄57'32	0°32'07
morning rise	4912 Dec 26 23:31	24°♄06'09		asc. node	4913 Dec 07 03:48	12°♄04'21	
direct	4912 Dec 30 13:58	22°♄51'27		morning rise	4913 Dec 11 09:06	8°♄10'24	
morning max el	4913 Jan 06 22:57	27°♄00'42	19°44'07	direct	4913 Dec 14 12:36	7°♄13'52	
	4913 Jan 09 16:11	0°♄		morning max el	4913 Dec 21 07:32	10°♄58'04	18°50'33
greatest brilliancy	4913 Jan 20 01:09	14°♄13'36	-0.7m		4914 Jan 04 03:55	0°♄	
desc. node	4913 Jan 25 18:33	22°♄49'06		morning set	4914 Jan 12 02:19	12°♄23'31	
	4913 Jan 30 11:24	0°♄		desc. node	4914 Jan 12 15:33	13°♄15'25	
morning set	4913 Feb 01 16:02	3°♄22'32			4914 Jan 23 08:05	0°♄	
max. Earth dist.	4913 Feb 13 12:05	21°♄52'53	1.44348 AU	max. Earth dist.	4914 Jan 27 05:12	6°♄05'06	1.45176 AU
superior conj	4913 Feb 18 05:11	29°♄25'43	-2°02'20	superior conj	4914 Jan 28 13:44	8°♄12'57	-1°36'29
minimum elong	4913 Feb 17 23:58	29°♄04'41	2°02'06	minimum elong	4914 Jan 28 04:23	7°♄36'13	1°35'35
	4913 Feb 18 13:40	0°♄			4914 Feb 11 06:21	0°♄	
evening rise	4913 Mar 03 18:50	21°♄55'34		evening rise	4914 Feb 12 20:09	2°♄32'28	
	4913 Mar 08 13:05	0°♄			4914 Mar 02 14:10	0°♄	
asc. node	4913 Mar 18 06:02	15°♄22'37		asc. node	4914 Mar 05 03:04	3°♄00'17	

evening max el	4914 Mar 05 15:51	3° Υ 33'38	18°41'00	evening rise	4915 Jan 23 23:00	12° \approx 16'55	
retrograde	4914 Mar 12 06:49	7° Υ 13'45			4915 Feb 04 09:31	0° H	
evening set	4914 Mar 15 11:47	6° Υ 15'11		greatest brilliancy	4915 Feb 04 20:27	0° H 41'34	-0.7m
inferior conj	4914 Mar 21 04:23	0° Υ 37'30	3°32'37	evening max el	4915 Feb 16 23:47	17° H 04'42	19°24'29
minimum elong	4914 Mar 21 03:47	0° Υ 39'20	3°32'36	asc. node	4915 Feb 20 00:05	19° H 41'00	
	4914 Mar 21 16:39	30° R H		retrograde	4915 Feb 24 03:33	21° H 10'48	
min. Earth dist.	4914 Mar 23 02:15	28° H 18'05	0.65179 AU	evening set	4915 Feb 27 15:43	19° H 58'49	
morning rise	4914 Mar 26 19:16	24° H 24'36		inferior conj	4915 Mar 05 03:13	14° H 05'32	3°20'15
direct	4914 Apr 02 10:51	21° H 34'47		minimum elong	4915 Mar 05 01:31	14° H 11'05	3°20'02
desc. node	4914 Apr 10 14:46	24° H 52'14		min. Earth dist.	4915 Mar 06 09:59	12° H 25'16	0.66523 AU
morning max el	4914 Apr 15 18:35	29° H 24'26	27°03'28	morning rise	4915 Mar 10 11:03	7° H 50'50	
	4914 Apr 16 08:30	0° Υ		direct	4915 Mar 16 16:24	5° H 05'01	
	4914 May 08 07:46	0° B		desc. node	4915 Mar 28 11:47	11° H 50'43	
morning set	4914 May 21 10:30	23° B 17'03		morning max el	4915 Mar 29 04:23	12° H 32'02	25°56'42
	4914 May 24 20:27	0° II			4915 Apr 12 05:41	0° Υ	
max. Earth dist.	4914 May 25 21:52	2° II 08'08	1.33929 AU		4915 May 01 00:20	0° B	
				morning set	4915 May 04 08:40	6° B 03'38	
superior conj	4914 May 29 19:58	10° II 13'55	-0°23'19	max. Earth dist.	4915 May 08 05:27	13° B 20'52	1.35501 AU
minimum elong	4914 May 29 21:12	10° II 20'23	0°23'04				
asc. node	4914 Jun 01 02:21	15° II 00'50		superior conj	4915 May 13 14:37	23° B 59'06	-0°53'01
evening rise	4914 Jun 06 04:35	25° II 47'48		minimum elong	4915 May 13 17:32	24° B 13'51	0°52'29
	4914 Jun 08 05:15	0° B			4915 May 16 13:18	0° II	
evening max el	4914 Jun 26 10:33	28° B 43'47	21°39'20	asc. node	4915 May 18 23:23	4° II 59'46	
	4914 Jun 27 19:26	0° Ω		evening rise	4915 May 21 11:48	10° II 11'03	
desc. node	4914 Jul 07 14:00	4° Ω 48'15			4915 Jun 01 02:14	0° B	
retrograde	4914 Jul 08 20:19	4° Ω 52'00		evening max el	4915 Jun 08 14:47	9° B 43'35	20°17'46
evening set	4914 Jul 11 09:24	4° Ω 37'19		retrograde	4915 Jun 19 09:49	15° B 00'23	
inferior conj	4914 Jul 20 17:39	0° Ω 36'08	-3°39'52	evening set	4915 Jun 21 08:45	14° B 50'43	
minimum elong	4914 Jul 20 08:55	0° Ω 48'20	3°37'23	desc. node	4915 Jun 24 11:01	13° B 59'17	
min. Earth dist.	4914 Jul 20 12:49	0° Ω 42'54	0.54845 AU	inferior conj	4915 Jun 30 12:15	10° B 52'33	-1°47'53
	4914 Jul 21 19:35	30° R B		minimum elong	4915 Jun 30 07:12	10° B 59'58	1°46'03
morning rise	4914 Jul 29 09:40	26° B 44'02		min. Earth dist.	4915 Jul 02 00:47	9° B 58'52	0.55022 AU
direct	4914 Aug 01 18:01	26° B 19'38		morning rise	4915 Jul 09 04:23	6° B 39'31	
	4914 Aug 11 12:40	0° Ω		direct	4915 Jul 13 04:29	6° B 04'49	
morning max el	4914 Aug 14 00:52	2° Ω 06'10	21°59'19	morning max el	4915 Jul 26 17:03	12° B 40'12	23°42'02
asc. node	4914 Aug 28 01:37	21° Ω 41'12			4915 Aug 08 21:35	0° Ω	
	4914 Sep 01 09:18	0° M		asc. node	4915 Aug 14 22:39	10° Ω 59'14	
morning set	4914 Sep 04 04:57	5° M 47'26		morning set	4915 Aug 19 16:27	20° Ω 40'15	
					4915 Aug 24 00:37	0° M	
superior conj	4914 Sep 11 09:28	21° M 00'12	1°42'32				
minimum elong	4914 Sep 11 08:43	20° M 56'19	1°42'30	superior conj	4915 Aug 26 16:12	5° M 44'20	1°35'42
max. Earth dist.	4914 Sep 15 01:45	28° M 37'42	1.34592 AU	minimum elong	4915 Aug 26 14:29	5° M 35'04	1°35'33
	4914 Sep 15 17:58	0° A		max. Earth dist.	4915 Aug 29 00:28	10° M 45'49	1.33306 AU
evening rise	4914 Sep 19 12:58	7° A 29'46		evening rise	4915 Sep 03 04:24	21° M 27'07	
	4914 Oct 02 06:40	0° M			4915 Sep 07 13:55	0° A	
desc. node	4914 Oct 03 13:19	2° M 01'59		desc. node	4915 Sep 20 10:21	21° A 48'18	
evening max el	4914 Oct 24 14:26	29° M 23'16	26°55'50		4915 Sep 26 03:39	0° M	
	4914 Oct 25 05:59	0° A		evening max el	4915 Oct 07 02:16	12° M 43'26	27°23'56
retrograde	4914 Nov 06 18:46	6° A 40'20		retrograde	4915 Oct 20 16:03	20° M 01'44	
evening set	4914 Nov 13 11:52	4° A 00'22		evening set	4915 Oct 27 17:41	17° M 23'08	
min. Earth dist.	4914 Nov 17 11:09	0° A 04'41	0.65610 AU	min. Earth dist.	4915 Oct 31 11:26	14° M 01'13	0.64113 AU
	4914 Nov 17 12:49	30° R M		inferior conj	4915 Nov 02 22:29	11° M 26'43	-2°36'29
inferior conj	4914 Nov 19 10:12	27° M 49'15	-1°33'28	minimum elong	4915 Nov 03 03:01	11° M 14'52	2°34'47
minimum elong	4914 Nov 19 12:51	27° M 41'37	1°32'20	morning rise	4915 Nov 09 13:44	6° M 03'46	
asc. node	4914 Nov 24 00:50	23° M 11'16		asc. node	4915 Nov 10 21:52	5° M 39'09	
morning rise	4914 Nov 25 14:47	22° M 11'25		direct	4915 Nov 12 01:49	5° M 32'16	
direct	4914 Nov 28 09:24	21° M 29'20		morning max el	4915 Nov 18 14:14	8° M 57'24	17°53'10
morning max el	4914 Dec 04 21:34	24° M 59'20	18°13'18		4915 Dec 02 17:56	0° A	
	4914 Dec 09 02:18	0° A		morning set	4915 Dec 05 12:04	4° A 41'55	
morning set	4914 Dec 23 17:06	22° A 51'23		desc. node	4915 Dec 17 09:38	24° A 36'12	
	4914 Dec 28 02:50	0° B					
desc. node	4914 Dec 30 12:34	3° B 52'21		superior conj	4915 Dec 18 11:40	26° A 22'05	-0°07'35
				minimum elong	4915 Dec 18 10:48	26° A 18'34	0°07'27
superior conj	4915 Jan 07 17:08	16° B 53'17	-0°54'38	behind sun begin	4915 Dec 18 01:49	25° A 42'05	
minimum elong	4915 Jan 07 10:24	16° B 26'44	0°53'44	behind sun end	4915 Dec 18 19:47	26° A 54'59	
max. Earth dist.	4915 Jan 10 00:28	20° B 30'46	1.45267 AU		4915 Dec 20 17:40	0° B	
	4915 Jan 16 02:00	0° \approx		max. Earth dist.	4915 Dec 23 18:56	4° B 52'25	1.44625 AU

evening rise	4916 Jan 03 11:03	21°  31'05		superior conj	4916 Nov 28 07:48	7°  05'57	0°34'31
	4916 Jan 09 00:21	0° 		minimum elong	4916 Nov 28 10:51	7°  18'55	0°34'05
	4916 Jan 30 12:16	0° 		desc. node	4916 Dec 03 06:40	15°  23'03	
evening max el	4916 Jan 31 02:45	0°  37'56	20°23'03	max. Earth dist.	4916 Dec 05 10:17	18°  54'05	1.43334 AU
asc. node	4916 Feb 06 21:07	5°  10'29			4916 Dec 12 09:40	0° 	
retrograde	4916 Feb 08 01:46	5°  18'09		evening rise	4916 Dec 12 23:04	0°  52'13	
evening set	4916 Feb 11 22:28	3°  51'51			4917 Jan 01 14:54	0° 	
	4916 Feb 15 14:56	30° 		evening max el	4917 Jan 13 00:19	14° 	21°33'33
inferior conj	4916 Feb 17 07:19	27°  45'27	2°56'31	retrograde	4917 Jan 21 23:20	19° 	31'39
minimum elong	4916 Feb 17 05:01	27°  53'17	2°56'01	asc. node	4917 Jan 23 18:10	19° 	14'33
min. Earth dist.	4916 Feb 18 00:18	26°  47'37	0.67449 AU	evening set	4917 Jan 26 06:14	17° 	50'03
morning rise	4916 Feb 22 11:20	21°  31'13		inferior conj	4917 Jan 31 14:21	11° 	33'29
direct	4916 Feb 28 03:31	18°  59'14		minimum elong	4917 Jan 31 11:56	11° 	41'51
morning max el	4916 Mar 10 13:03	25°  48'23	24°33'32	min. Earth dist.	4917 Jan 31 18:54	11° 	17'42
desc. node	4916 Mar 14 08:49	29°  58'59		morning rise	4917 Feb 05 17:28	5° 	21'24
	4916 Mar 14 09:10	0° 		direct	4917 Feb 10 19:09	3° 	09'37
	4916 Apr 04 18:45	0° 		morning max el	4917 Feb 20 22:14	9° 	10'03
morning set	4916 Apr 15 12:05	17°  52'40		desc. node	4917 Mar 01 05:53	18° 	56'52
max. Earth dist.	4916 Apr 19 03:14	24°  22'08	1.37471 AU		4917 Mar 09 06:37	0° 	
	4916 Apr 22 04:25	0° 		morning set	4917 Mar 27 14:35	28° 	27'27
					4917 Mar 28 12:43	0° 	
superior conj	4916 Apr 25 22:27	7°  08'55	-1°21'52	max. Earth dist.	4917 Mar 31 22:22	5° 	47'44
minimum elong	4916 Apr 26 02:51	7°  30'15	1°21'12				1.39662 AU
evening rise	4916 May 04 13:16	24°  12'32		superior conj	4917 Apr 08 15:20	19° 	32'43
asc. node	4916 May 04 20:25	24°  48'04		minimum elong	4917 Apr 08 20:17	19° 	55'29
	4916 May 07 11:52	0° 			4917 Apr 14 05:06	0° 	
evening max el	4916 May 21 07:31	21°  25'50	19°15'10	evening rise	4917 Apr 18 06:01	7° 	43'57
retrograde	4916 May 30 09:29	25°  51'50		asc. node	4917 Apr 21 17:27	14° 	20'18
evening set	4916 Jun 01 09:07	25°  40'02			4917 May 01 04:03	0° 	
inferior conj	4916 Jun 09 19:57	21°  30'46	0°08'55	evening max el	4917 May 04 10:13	3° 	45'53
minimum elong	4916 Jun 09 20:19	21°  30'09	0°08'47	retrograde	4917 May 12 03:31	7° 	34'29
transit middle	4916 Jun 09 20:19	21°  30'09	0°08'47	evening set	4917 May 14 09:29	7° 	16'09
transit begin	4916 Jun 09 17:07	21°  35'30		inferior conj	4917 May 22 00:15	2° 	47'43
transit end	4916 Jun 09 23:32	21°  24'47		minimum elong	4917 May 22 03:30	2° 	41'22
desc. node	4916 Jun 10 08:02	21°  10'34		min. Earth dist.	4917 May 25 09:36	0° 	10'24
min. Earth dist.	4916 Jun 12 15:22	19°  39'00	0.56132 AU		4917 May 25 15:16	30° 	
morning rise	4916 Jun 18 04:28	16°  43'36		desc. node	4917 May 28 05:04	28° 	16'47
direct	4916 Jun 23 02:33	15°  47'48		morning rise	4917 May 29 18:18	27° 	26'20
morning max el	4916 Jul 07 06:44	23°  01'26	25°22'51	direct	4917 Jun 04 14:36	25° 	59'34
	4916 Jul 13 12:38	0° 			4917 Jun 14 18:39	0° 	
asc. node	4916 Jul 31 19:42	0°  38'11		morning max el	4917 Jun 18 23:43	3° 	37'50
	4916 Jul 31 12:14	0° 			4917 Jul 08 02:25	0° 	
morning set	4916 Aug 03 04:03	5°  32'06		morning set	4917 Jul 18 14:09	20° 	17'55
				asc. node	4917 Jul 18 16:46	20° 	31'41
superior conj	4916 Aug 10 02:25	20°  36'55	1°23'28		4917 Jul 23 02:01	0° 	
minimum elong	4916 Aug 10 00:11	20°  24'40	1°23'10	superior conj	4917 Jul 25 14:08	5° 	31'34
max. Earth dist.	4916 Aug 11 06:39	23°  01'34	1.32449 AU	minimum elong	4917 Jul 25 11:52	5° 	19'00
	4916 Aug 14 10:12	0° 		max. Earth dist.	4917 Jul 25 17:20	5° 	49'13
evening rise	4916 Aug 17 04:39	5°  49'07		evening rise	4917 Aug 01 10:55	20° 	27'13
	4916 Aug 30 03:55	0° 			4917 Aug 06 03:25	0° 	
desc. node	4916 Sep 06 07:22	10°  45'59'41		desc. node	4917 Aug 24 04:22	29° 	22'14
evening max el	4916 Sep 18 11:24	25°  34'09	27°22'12		4917 Aug 24 16:14	0° 	
	4916 Sep 24 00:25	0° 		evening max el	4917 Aug 31 15:08	7° 	43'14
retrograde	4916 Oct 02 06:33	2°  48'36		retrograde	4917 Sep 14 13:03	14° 	52'52
evening set	4916 Oct 09 10:38	0° 		evening set	4917 Sep 21 10:23	12° 	51'18
	4916 Oct 09 23:38	30° 		min. Earth dist.	4917 Sep 25 05:08	10° 	14'21
min. Earth dist.	4916 Oct 13 01:39	27°  48'39	0.62309 AU	inferior conj	4917 Sep 28 10:25	7° 	36'32
inferior conj	4916 Oct 15 23:40	24°  45'18	-3°38'09	minimum elong	4917 Sep 28 16:25	7° 	24'13
minimum elong	4916 Oct 16 05:38	24°  31'21	3°36'20	morning rise	4917 Oct 06 00:26	2° 	53'09
morning rise	4916 Oct 23 02:23	19° 40'31		direct	4917 Oct 08 08:28	2°	32'29
direct	4916 Oct 25 10:49	19° 15'57		asc. node	4917 Oct 14 15:59	5°	11'32
asc. node	4916 Oct 27 18:55	19° 41'01		morning max el	4917 Oct 15 18:57	6°	12'22
morning max el	4916 Nov 01 06:25	22° 44'20	17°50'55		4917 Oct 30 21:54	0°	
	4916 Nov 06 22:24	0°		morning set	4917 Oct 31 13:40	1°	13'52
morning set	4916 Nov 17 04:59	17° 35'26					
	4916 Nov 24 04:55	0°		superior conj	4917 Nov 10 05:26	19°	04'12
							1°06'41

minimum elong	4917 Nov 10 09:25	19° \mathbb{M} 22'03	1°06'12	minimum elong	4918 Oct 24 02:43	2° \mathbb{M} 16'46	1°27'56
	4917 Nov 16 11:30	0° \mathbb{M}		max. Earth dist.	4918 Oct 31 03:12	15° \mathbb{M} 06'36	1.39478 AU
max. Earth dist.	4917 Nov 17 21:08	2° \mathbb{M} 22'22	1.41546 AU	evening rise	4918 Nov 04 02:49	22° \mathbb{M} 00'08	
desc. node	4917 Nov 20 03:41	6° \mathbb{M} 09'45		desc. node	4918 Nov 07 00:42	26° \mathbb{M} 52'08	
evening rise	4917 Nov 23 01:52	10° \mathbb{M} 56'12			4918 Nov 08 22:43	0° \mathbb{M}	
	4917 Dec 05 10:23	0° \mathbb{B}			4918 Nov 29 10:21	0° \mathbb{B}	
evening max el	4917 Dec 26 17:08	27° \mathbb{B} 49'51	22°51'29	evening max el	4918 Dec 09 06:42	11° \mathbb{B} 29'40	24°11'17
	4917 Dec 29 00:35	0° \approx		retrograde	4918 Dec 20 10:44	18° \mathbb{B} 03'06	
retrograde	4918 Jan 05 18:44	3° \approx 48'12		evening set	4918 Dec 25 18:25	15° \mathbb{B} 50'02	
evening set	4918 Jan 10 13:25	1° \approx 50'42		asc. node	4918 Dec 28 12:15	12° \mathbb{B} 57'40	
asc. node	4918 Jan 10 15:12	1° \approx 46'56		min. Earth dist.	4918 Dec 30 11:44	10° \mathbb{B} 24'06	0.67853 AU
	4918 Jan 12 10:18	30° \mathbb{R} \mathbb{B}		inferior conj	4918 Dec 31 05:38	9° \mathbb{B} 23'47	0°54'41
inferior conj	4918 Jan 15 22:24	25° \mathbb{B} 27'17	1°42'33	minimum elong	4918 Dec 31 04:22	9° \mathbb{B} 28'02	0°54'10
minimum elong	4918 Jan 15 20:21	25° \mathbb{B} 34'25	1°41'48	morning rise	4919 Jan 05 14:23	3° \mathbb{B} 20'54	
min. Earth dist.	4918 Jan 15 15:28	25° \mathbb{B} 51'16	0.68098 AU	direct	4919 Jan 09 11:53	1° \mathbb{B} 54'32	
morning rise	4918 Jan 21 03:11	19° \mathbb{B} 18'57		morning max el	4919 Jan 17 08:21	6° \mathbb{B} 23'17	20°21'50
direct	4918 Jan 25 14:19	17° \mathbb{B} 30'03		desc. node	4919 Feb 02 23:58	28° \mathbb{B} 30'17	
morning max el	4918 Feb 03 11:42	22° \mathbb{B} 40'55	21°38'07		4919 Feb 04 00:07	0° \approx	
	4918 Feb 09 19:23	0° \approx		morning set	4919 Feb 14 12:14	15° \approx 58'19	
desc. node	4918 Feb 16 02:56	8° \approx 30'44			4919 Feb 23 10:15	0° \mathbb{H}	
	4918 Mar 02 14:51	0° \mathbb{H}		max. Earth dist.	4919 Feb 24 05:47	1° \mathbb{H} 18'24	1.43565 AU
morning set	4918 Mar 07 12:29	7° \mathbb{H} 41'26					
max. Earth dist.	4918 Mar 13 22:26	18° \mathbb{H} 06'10	1.41791 AU	superior conj	4919 Mar 02 09:11	11° \mathbb{H} 19'20	-2°08'09
	4918 Mar 20 22:47	0° \mathbb{Y}		minimum elong	4919 Mar 02 07:40	11° \mathbb{H} 13'05	2°08'09
					4919 Mar 13 08:41	0° \mathbb{Y}	
superior conj	4918 Mar 21 12:27	0° \mathbb{Y} 59'26	-2°04'11	evening rise	4919 Mar 14 22:09	2° \mathbb{Y} 43'17	
minimum elong	4918 Mar 21 15:46	1° \mathbb{Y} 13'53	2°04'03	asc. node	4919 Mar 26 11:30	22° \mathbb{Y} 13'30	
evening rise	4918 Apr 01 10:24	20° \mathbb{Y} 37'15		evening max el	4919 Apr 01 07:52	29° \mathbb{Y} 45'34	18°07'42
	4918 Apr 06 14:19	0° \mathbb{B}			4919 Apr 01 13:46	0° \mathbb{B}	
asc. node	4918 Apr 08 14:29	3° \mathbb{B} 31'03		retrograde	4919 Apr 07 18:59	3° \mathbb{B} 07'52	
evening max el	4918 Apr 17 19:27	16° \mathbb{B} 35'16	18°10'31	evening set	4919 Apr 10 13:57	2° \mathbb{B} 29'06	
retrograde	4918 Apr 24 16:03	20° \mathbb{B} 03'04			4919 Apr 14 03:49	30° \mathbb{R} \mathbb{Y}	
evening set	4918 Apr 27 04:47	19° \mathbb{B} 35'22		inferior conj	4919 Apr 16 20:52	27° \mathbb{Y} 20'00	3°21'03
inferior conj	4918 May 04 01:39	14° \mathbb{B} 46'06	2°46'25	minimum elong	4919 Apr 16 22:45	27° \mathbb{Y} 15'06	3°20'49
minimum elong	4918 May 04 04:55	14° \mathbb{B} 38'38	2°45'40	min. Earth dist.	4919 Apr 19 18:36	24° \mathbb{Y} 19'44	0.62261 AU
min. Earth dist.	4918 May 07 09:52	11° \mathbb{B} 45'02	0.60086 AU	morning rise	4919 Apr 23 06:01	21° \mathbb{Y} 17'08	
morning rise	4918 May 11 02:36	8° \mathbb{B} 58'50		direct	4919 Apr 30 02:05	18° \mathbb{Y} 47'07	
desc. node	4918 May 15 02:07	7° \mathbb{B} 16'02		desc. node	4919 May 01 23:09	18° \mathbb{Y} 57'36	
direct	4918 May 17 15:06	6° \mathbb{B} 57'45		morning max el	4919 May 14 04:38	26° \mathbb{Y} 47'17	27°52'34
morning max el	4918 May 31 23:08	14° \mathbb{B} 50'53	27°38'01		4919 May 17 05:06	0° \mathbb{B}	
	4918 Jun 13 04:53	0° \mathbb{I}			4919 Jun 06 19:49	0° \mathbb{I}	
	4918 Jun 30 11:54	0° \mathbb{E}		morning set	4919 Jun 16 22:29	19° \mathbb{I} 07'07	
morning set	4918 Jul 02 20:57	4° \mathbb{E} 51'35		asc. node	4919 Jun 22 10:48	0° \mathbb{E} 40'50	
asc. node	4918 Jul 05 13:47	10° \mathbb{E} 33'57			4919 Jun 22 03:12	0° \mathbb{E}	
max. Earth dist.	4918 Jul 09 04:37	18° \mathbb{E} 26'14	1.31980 AU	max. Earth dist.	4919 Jun 22 12:30	0° \mathbb{E} 50'00	1.32380 AU
superior conj	4918 Jul 10 01:35	20° \mathbb{E} 21'42	0°45'27	superior conj	4919 Jun 24 11:02	5° \mathbb{E} 02'09	0°20'51
minimum elong	4918 Jul 09 23:44	20° \mathbb{E} 11'32	0°45'05	minimum elong	4919 Jun 24 10:05	4° \mathbb{E} 56'55	0°20'38
	4918 Jul 14 10:45	0° \mathbb{Q}		evening rise	4919 Jul 01 08:31	20° \mathbb{E} 01'00	
evening rise	4918 Jul 16 20:51	5° \mathbb{Q} 13'13			4919 Jul 06 04:52	0° \mathbb{Q}	
	4918 Jul 29 21:53	0° \mathbb{N}		evening max el	4919 Jul 26 00:38	29° \mathbb{Q} 38'35	24°10'27
desc. node	4918 Aug 11 01:23	16° \mathbb{N} 35'14			4919 Jul 26 09:37	0° \mathbb{N}	
evening max el	4918 Aug 13 11:06	19° \mathbb{N} 02'01	25°40'13	desc. node	4919 Jul 28 22:22	2° \mathbb{N} 11'10	
retrograde	4918 Aug 27 10:00	26° \mathbb{N} 07'52		retrograde	4919 Aug 08 19:48	6° \mathbb{N} 35'37	
evening set	4918 Sep 02 11:58	24° \mathbb{N} 40'59		evening set	4919 Aug 13 13:13	5° \mathbb{N} 46'02	
min. Earth dist.	4918 Sep 06 23:07	22° \mathbb{N} 03'48	0.58233 AU	min. Earth dist.	4919 Aug 19 11:18	2° \mathbb{N} 49'47	0.56413 AU
inferior conj	4918 Sep 10 03:04	19° \mathbb{N} 49'17	-5°09'02	inferior conj	4919 Aug 21 23:27	1° \mathbb{N} 16'21	-5°12'55
minimum elong	4918 Sep 10 06:22	19° \mathbb{N} 43'24	5°08'44	minimum elong	4919 Aug 21 20:55	1° \mathbb{N} 20'17	5°12'46
morning rise	4918 Sep 18 03:02	15° \mathbb{N} 29'18			4919 Aug 24 01:32	30° \mathbb{R} \mathbb{Q}	
direct	4918 Sep 20 14:07	15° \mathbb{N} 10'13		morning rise	4919 Aug 30 07:11	27° \mathbb{Q} 16'47	
morning max el	4918 Sep 29 00:23	19° \mathbb{N} 11'19	18°45'13	direct	4919 Sep 02 00:17	26° \mathbb{Q} 57'29	
asc. node	4918 Oct 01 13:03	21° \mathbb{N} 55'51			4919 Sep 10 00:28	0° \mathbb{N}	
	4918 Oct 07 01:53	0° \mathbb{L}		morning max el	4919 Sep 11 19:38	1° \mathbb{N} 31'49	19°44'27
morning set	4918 Oct 15 09:16	15° \mathbb{L} 22'38		asc. node	4919 Sep 18 10:05	9° \mathbb{N} 38'54	
	4918 Oct 22 21:53	0° \mathbb{L}		morning set	4919 Sep 28 12:19	29° \mathbb{N} 52'12	
					4919 Sep 29 13:52	0° \mathbb{L}	
superior conj	4918 Oct 23 23:37	2° \mathbb{L} 02'09	1°28'12				

superior conj	4919 Oct 07 09:03	15° Ω 44'40	1°40'04	morning max el	4920 Aug 24 02:45	13° Ω 06'36	21°04'58
minimum elong	4919 Oct 07 10:36	15° Ω 52'21	1°39'59	asc. node	4920 Sep 04 07:06	28° Ω 07'08	
max. Earth dist.	4919 Oct 13 07:52	27° Ω 12'49	1.37389 AU		4920 Sep 05 08:49	0° Π	
	4919 Oct 14 19:59	0° Π		morning set	4920 Sep 12 20:14	14° Π 35'20	
evening rise	4919 Oct 17 02:11	4° Π 05'26					
desc. node	4919 Oct 24 21:41	17° Π 26'19		superior conj	4920 Sep 20 05:18	29° Π 58'46	1°43'40
	4919 Nov 01 23:13	0° Σ		minimum elong	4920 Sep 20 05:19	29° Π 58'49	1°43'40
evening max el	4919 Nov 21 19:09	25° Σ 12'25	25°26'08		4920 Sep 20 05:33	0° Ω	
	4919 Nov 27 14:56	0° Σ		max. Earth dist.	4920 Sep 24 17:11	9° Ω 04'30	1.35511 AU
retrograde	4919 Dec 03 22:24	2° Σ 11'35		evening rise	4920 Sep 28 20:26	17° Ω 03'18	
evening set	4919 Dec 09 19:35	29° Σ 44'51			4920 Oct 06 01:41	0° Π	
	4919 Dec 09 12:15	30° Σ		desc. node	4920 Oct 10 18:41	7° Π 47'27	
min. Earth dist.	4919 Dec 14 05:25	24° Σ 53'16	0.67254 AU		4920 Oct 26 07:49	0° Σ	
inferior conj	4919 Dec 15 10:14	23° Σ 20'24	0°00'48	evening max el	4920 Nov 03 07:53	8° Σ 54'42	26°28'39
minimum elong	4919 Dec 15 10:12	23° Σ 20'28	0°00'48	retrograde	4920 Nov 16 04:53	16° Σ 08'02	
transit middle	4919 Dec 15 10:12	23° Σ 20'28	0°00'48	evening set	4920 Nov 22 15:07	13° Σ 31'29	
transit begin	4919 Dec 15 07:25	23° Σ 29'29		min. Earth dist.	4920 Nov 26 18:11	9° Σ 15'08	0.66305 AU
transit end	4919 Dec 15 13:00	23° Σ 11'28		inferior conj	4920 Nov 28 10:20	7° Σ 13'59	-0°57'57
asc. node	4919 Dec 15 09:18	23° Σ 23'24		minimum elong	4920 Nov 28 11:55	7° Σ 09'10	0°57'15
morning rise	4919 Dec 21 01:09	17° Σ 25'00		asc. node	4920 Dec 01 06:20	4° Σ 00'08	
direct	4919 Dec 24 10:35	16° Σ 18'39		morning rise	4920 Dec 04 09:23	1° Σ 28'38	
morning max el	4919 Dec 31 12:52	20° Σ 16'10	19°19'17	direct	4920 Dec 07 08:47	0° Σ 38'46	
	4920 Jan 08 08:11	0° Σ		morning max el	4920 Dec 14 00:04	4° Σ 16'02	18°32'36
greatest brilliancy	4920 Jan 13 21:03	8° Σ 07'09	-0.7m		4920 Dec 31 21:05	0° Σ	
desc. node	4920 Jan 20 20:59	18° Σ 48'14		morning set	4921 Jan 03 09:17	3° Σ 59'20	
morning set	4920 Jan 24 11:29	24° Σ 22'28		desc. node	4921 Jan 06 17:59	9° Σ 19'42	
	4920 Jan 28 02:30	0° \approx					
max. Earth dist.	4920 Feb 06 19:29	15° \approx 11'30	1.44782 AU	superior conj	4921 Jan 19 08:47	29° Σ 11'51	-1°20'09
				minimum elong	4921 Jan 18 23:45	28° Σ 36'24	1°19'08
superior conj	4920 Feb 10 04:48	20° \approx 33'40	-1°53'45	max. Earth dist.	4921 Jan 19 13:41	29° Σ 31'05	1.45308 AU
minimum elong	4920 Feb 09 21:11	20° \approx 03'21	1°53'14		4921 Jan 19 21:04	0° \approx	
	4920 Feb 16 01:53	0° H		evening rise	4921 Feb 04 04:14	24° \approx 06'16	
evening rise	4920 Feb 24 12:50	13° H 53'04			4921 Feb 07 21:15	0° H	
	4920 Mar 05 07:26	0° Υ		greatest brilliancy	4921 Feb 13 04:35	8° H 24'00	-0.8m
asc. node	4920 Mar 12 08:32	10° Υ 17'55		evening max el	4921 Feb 26 06:48	26° H 38'11	18°57'33
evening max el	4920 Mar 14 20:28	13° Υ 08'18	18°23'43	asc. node	4921 Feb 27 05:35	27° H 33'21	
retrograde	4920 Mar 21 07:38	16° Υ 38'25			4921 Mar 02 20:22	0° Υ	
evening set	4920 Mar 24 08:49	15° Υ 47'25		retrograde	4921 Mar 05 02:16	0° Υ 27'49	
inferior conj	4920 Mar 30 05:40	10° Υ 19'57	3°33'25		4921 Mar 07 06:52	30° R H	
minimum elong	4920 Mar 30 05:54	10° Υ 19'16	3°33'25	evening set	4921 Mar 08 10:12	29° H 23'41	
min. Earth dist.	4920 Apr 01 12:40	7° Υ 41'13	0.64217 AU	inferior conj	4921 Mar 14 00:19	23° H 39'22	3°28'54
morning rise	4920 Apr 05 02:10	4° Υ 09'16		minimum elong	4921 Mar 13 23:12	23° H 42'54	3°28'48
direct	4920 Apr 11 21:28	1° Υ 22'24		min. Earth dist.	4921 Mar 15 15:43	21° H 35'44	0.65810 AU
desc. node	4920 Apr 17 20:11	3° Υ 08'04		morning rise	4921 Mar 19 11:48	17° H 25'31	
morning max el	4920 Apr 25 13:39	9° Υ 19'42	27°30'27	direct	4921 Mar 25 23:43	14° H 35'44	
	4920 May 11 16:40	0° B		desc. node	4921 Apr 04 17:13	19° H 14'40	
	4920 May 29 04:03	0° Π		morning max el	4921 Apr 07 23:35	22° H 17'18	26°37'33
morning set	4920 May 30 16:08	2° Π 55'59			4921 Apr 14 18:03	0° Υ	
max. Earth dist.	4920 Jun 04 12:59	12° Π 48'00	1.33229 AU		4921 May 04 22:45	0° B	
				morning set	4921 May 13 22:37	16° B 08'36	
superior conj	4920 Jun 07 16:35	19° Π 26'24	-0°06'36	max. Earth dist.	4921 May 18 02:57	24° B 15'11	1.34547 AU
minimum elong	4920 Jun 07 16:55	19° Π 28'11	0°06'34		4921 May 20 23:28	0° Π	
behind sun begin	4920 Jun 07 11:56	19° Π 01'39					
behind sun end	4920 Jun 07 21:54	19° Π 54'44		superior conj	4921 May 22 16:00	3° Π 28'09	-0°35'53
asc. node	4920 Jun 08 07:48	20° Π 47'41		minimum elong	4921 May 22 17:56	3° Π 38'11	0°35'31
	4920 Jun 12 14:40	0° E		asc. node	4921 May 26 04:50	10° Π 50'46	
evening rise	4920 Jun 14 19:59	4° E 43'55		evening rise	4921 May 30 05:22	19° Π 16'18	
	4920 Jun 28 12:15	0° Ω			4921 Jun 04 13:37	0° E	
evening max el	4920 Jul 06 14:08	9° Ω 59'48	22°32'54	evening max el	4921 Jun 18 11:38	20° E 39'02	21°02'31
desc. node	4920 Jul 14 19:23	15° Ω 35'58		retrograde	4921 Jun 30 05:41	26° E 25'36	
retrograde	4920 Jul 19 17:01	16° Ω 31'17		desc. node	4921 Jul 01 16:26	26° E 20'37	
evening set	4920 Jul 22 22:02	16° Ω 08'39		evening set	4921 Jul 02 10:37	26° E 14'10	
min. Earth dist.	4920 Jul 30 21:36	12° Ω 39'20	0.55176 AU	inferior conj	4921 Jul 11 18:51	22° E 16'37	-2°55'12
inferior conj	4920 Aug 01 01:38	11° Ω 59'29	-4°28'38	minimum elong	4921 Jul 11 11:04	22° E 27'35	2°52'38
minimum elong	4920 Jul 31 17:36	12° Ω 10'55	4°26'57	min. Earth dist.	4921 Jul 12 08:21	21° E 57'35	0.54804 AU
morning rise	4920 Aug 09 15:10	8° Ω 09'21		morning rise	4921 Jul 20 11:41	18° E 17'56	
direct	4920 Aug 12 17:00	7° Ω 47'41		direct	4921 Jul 24 02:14	17° E 49'57	

morning max el	4921 Aug 05 22:54	23°☿57'56	22°42'18	morning rise	4922 Jun 30 07:35	28°♊12'57	
	4921 Aug 11 09:39	0°♊		direct	4922 Jul 04 16:35	27°♊30'50	
asc. node	4921 Aug 22 04:07	17°♊09'40			4922 Jul 12 21:16	0°☿	
morning set	4921 Aug 28 06:56	29°♊26'08		morning max el	4922 Jul 18 13:13	4°☿23'16	24°26'12
	4921 Aug 28 13:22	0°♊			4922 Aug 05 14:43	0°♊	
				asc. node	4922 Aug 09 01:09	6°♊37'51	
superior conj	4921 Sep 04 08:58	14°♊34'05	1°40'20	morning set	4922 Aug 12 18:43	14°♊19'47	
minimum elong	4921 Sep 04 07:46	14°♊27'38	1°40'16				
max. Earth dist.	4921 Sep 07 11:02	21°♊04'05	1.33993 AU	superior conj	4922 Aug 19 17:28	29°♊22'55	1°31'07
	4921 Sep 11 20:44	0°♊		minimum elong	4922 Aug 19 15:28	29°♊12'04	1°30'55
evening rise	4921 Sep 12 05:16	0°♊41'57			4922 Aug 20 00:17	0°♊	
desc. node	4921 Sep 27 15:42	27°♊48'49		max. Earth dist.	4922 Aug 21 13:32	3°♊21'41	1.32889 AU
	4921 Sep 29 01:53	0°♊		evening rise	4922 Aug 27 00:51	14°♊51'12	
evening max el	4921 Oct 16 20:37	22°♊26'44	27°11'16		4922 Sep 03 22:22	0°♊	
retrograde	4921 Oct 30 05:28	29°♊44'27		desc. node	4922 Sep 14 12:45	17°♊22'06	
evening set	4921 Nov 06 02:43	27°♊04'15			4922 Sep 24 00:58	0°♊	
min. Earth dist.	4921 Nov 09 23:36	23°♊23'10	0.65010 AU	evening max el	4922 Sep 29 07:40	5°♊36'11	27°27'07
inferior conj	4921 Nov 12 03:40	20°♊58'58	-2°00'06	retrograde	4922 Oct 12 23:43	12°♊52'34	
minimum elong	4921 Nov 12 07:07	20°♊49'22	1°58'41	evening set	4922 Oct 20 03:31	10°♊17'43	
asc. node	4921 Nov 18 03:23	15°♊38'11		min. Earth dist.	4922 Oct 23 19:35	7°♊08'59	0.63384 AU
morning rise	4921 Nov 18 12:35	15°♊26'48		inferior conj	4922 Oct 26 11:36	4°♊29'19	-3°03'04
direct	4921 Nov 21 04:12	14°♊49'32		minimum elong	4922 Oct 26 16:50	4°♊16'14	3°01'15
morning max el	4921 Nov 27 15:31	18°♊16'21	18°02'38		4922 Oct 31 18:12	30°♊	
	4921 Dec 06 07:52	0°♊		morning rise	4922 Nov 02 07:40	29°♊13'46	
morning set	4921 Dec 15 12:45	15°♊04'57		direct	4922 Nov 04 17:58	28°♊45'30	
desc. node	4921 Dec 24 15:00	29°♊59'55		asc. node	4922 Nov 05 00:25	28°♊45'51	
	4921 Dec 24 15:01	0°♊			4922 Nov 08 16:05	0°♊	
				morning max el	4922 Nov 11 08:22	2°♊10'38	17°50'01
superior conj	4921 Dec 29 16:30	8°♊06'58	-0°34'37	morning set	4922 Nov 27 17:51	27°♊24'40	
minimum elong	4921 Dec 29 12:14	7°♊50'00	0°34'01		4922 Nov 29 05:34	0°♊	
max. Earth dist.	4922 Jan 02 09:25	13°♊58'51	1.45087 AU				
	4922 Jan 12 15:55	0°♊		superior conj	4922 Dec 09 21:21	18°♊06'13	0°11'18
evening rise	4922 Jan 14 23:26	3°♊34'35		minimum elong	4922 Dec 09 22:32	18°♊11'07	0°11'09
greatest brilliancy	4922 Jan 28 15:39	24°♊26'04	-0.7m	behind sun begin	4922 Dec 09 15:36	17°♊42'26	
	4922 Feb 01 11:25	0°♊		behind sun end	4922 Dec 10 05:28	18°♊39'44	
evening max el	4922 Feb 09 12:50	10°♊10'46	19°47'41	desc. node	4922 Dec 11 12:03	20°♊45'23	
asc. node	4922 Feb 14 02:38	13°♊45'51		max. Earth dist.	4922 Dec 16 03:18	28°♊15'33	1.44151 AU
retrograde	4922 Feb 16 23:52	14°♊30'03			4922 Dec 17 05:29	0°♊	
evening set	4922 Feb 20 15:36	13°♊11'54		evening rise	4922 Dec 25 09:28	12°♊46'48	
inferior conj	4922 Feb 26 01:43	7°♊12'45	3°11'25		4923 Jan 05 19:03	0°♊	
minimum elong	4922 Feb 25 23:42	7°♊19'27	3°11'03	evening max el	4923 Jan 23 13:28	23°♊44'18	20°51'43
min. Earth dist.	4922 Feb 27 02:24	5°♊50'37	0.66979 AU	retrograde	4923 Jan 31 22:08	28°♊40'42	
morning rise	4922 Mar 03 07:35	0°♊58'17		asc. node	4923 Jan 31 23:41	28°♊40'41	
	4922 Mar 04 12:04	30°♊		evening set	4923 Feb 04 23:01	27°♊07'48	
direct	4922 Mar 09 07:39	28°♊17'30		inferior conj	4923 Feb 10 07:19	20°♊56'25	2°43'33
	4922 Mar 14 16:45	0°♊		minimum elong	4923 Feb 10 04:55	21°♊04'42	2°42'56
morning max el	4922 Mar 21 08:49	5°♊29'08	25°22'39	min. Earth dist.	4923 Feb 10 18:46	20°♊17'01	0.67721 AU
desc. node	4922 Mar 22 14:15	6°♊45'36		morning rise	4923 Feb 15 10:38	14°♊42'59	
	4922 Apr 09 06:26	0°♊		direct	4923 Feb 20 20:38	12°♊19'23	
morning set	4922 Apr 26 13:31	28°♊32'28		morning max el	4923 Mar 03 17:34	18°♊48'29	23°55'44
	4922 Apr 27 08:48	0°♊		desc. node	4923 Mar 09 11:18	25°♊16'59	
max. Earth dist.	4922 Apr 30 06:06	5°♊20'44	1.36306 AU		4923 Mar 13 04:06	0°♊	
					4923 Apr 02 09:29	0°♊	
superior conj	4922 May 06 06:31	16°♊59'40	-1°05'30	morning set	4923 Apr 08 07:06	9°♊51'55	
minimum elong	4922 May 06 10:08	17°♊17'36	1°04'53	max. Earth dist.	4923 Apr 12 02:13	16°♊29'58	1.38394 AU
	4922 May 12 16:51	0°♊					
asc. node	4922 May 13 01:54	0°♊46'02		superior conj	4923 Apr 19 08:33	29°♊51'10	-1°33'11
evening rise	4922 May 14 10:30	3°♊31'34		minimum elong	4923 Apr 19 13:22	0°♊14'01	1°32'34
	4922 May 30 01:24	0°☿			4923 Apr 19 10:25	0°♊	
evening max el	4922 May 31 21:19	1°☿56'48	19°48'36	evening rise	4923 Apr 28 08:42	17°♊21'41	
retrograde	4922 Jun 10 22:09	6°☿51'01		asc. node	4923 Apr 29 22:57	20°♊28'20	
evening set	4922 Jun 12 20:21	6°☿40'58			4923 May 05 00:44	0°♊	
desc. node	4922 Jun 18 13:27	4°☿31'17		evening max el	4923 May 14 18:36	13°♊55'43	18°54'36
inferior conj	4922 Jun 21 17:37	2°☿39'11	-0°56'53	retrograde	4923 May 23 05:33	18°♊04'20	
minimum elong	4922 Jun 21 15:00	2°☿43'13	0°55'54	evening set	4923 May 25 07:25	17°♊50'18	
min. Earth dist.	4922 Jun 23 21:01	1°☿20'17	0.55392 AU	inferior conj	4923 Jun 02 09:41	13°♊33'11	0°52'40
	4922 Jun 26 04:57	30°♊		minimum elong	4923 Jun 02 11:41	13°♊29'37	0°51'57

desc. node	4923 Jun 05 10:30	11° Π 24'08		minimum elong	4924 May 14 02:49	25° \mathcal{B} 01'39	2°12'50
min. Earth dist.	4923 Jun 05 12:58	11° Π 19'54	0.56827 AU	min. Earth dist.	4924 May 17 09:50	22° \mathcal{B} 18'15	0.58826 AU
morning rise	4923 Jun 10 12:38	8° Π 30'31		morning rise	4924 May 21 10:06	19° \mathcal{B} 35'05	
direct	4923 Jun 15 20:14	7° Π 22'46		desc. node	4924 May 22 07:32	19° \mathcal{B} 08'01	
morning max el	4923 Jun 30 03:59	14° Π 48'40	26°01'24	direct	4924 May 27 14:15	17° \mathcal{B} 53'18	
	4923 Jul 12 07:38	0° \mathcal{E}		morning max el	4924 Jun 10 23:40	25° \mathcal{B} 39'48	27°12'19
asc. node	4923 Jul 26 22:12	26° \mathcal{E} 23'45			4924 Jun 15 00:34	0° Π	
morning set	4923 Jul 28 05:53	29° \mathcal{E} 09'57			4924 Jul 04 15:39	0° \mathcal{E}	
	4923 Jul 28 15:19	0° \mathcal{O}		morning set	4924 Jul 11 14:48	13° \mathcal{E} 51'26	
				asc. node	4924 Jul 12 19:15	16° \mathcal{E} 21'44	
superior conj	4923 Aug 04 04:33	14° \mathcal{O} 17'14	1°16'49	superior conj	4924 Jul 18 16:23	29° \mathcal{E} 10'57	0°58'04
minimum elong	4923 Aug 04 02:14	14° \mathcal{O} 04'31	1°16'29	minimum elong	4924 Jul 18 14:14	28° \mathcal{E} 59'05	0°57'40
max. Earth dist.	4923 Aug 04 22:03	15° \mathcal{O} 53'35	1.32207 AU	max. Earth dist.	4924 Jul 18 09:13	28° \mathcal{E} 31'27	1.31944 AU
evening rise	4923 Aug 11 03:57	29° \mathcal{O} 20'46			4924 Jul 19 01:15	0° \mathcal{O}	
	4923 Aug 11 11:29	0° \mathcal{N}		evening rise	4924 Jul 25 12:02	14° \mathcal{O} 03'03	
	4923 Aug 28 02:05	0° \mathcal{A}			4924 Aug 02 12:21	0° \mathcal{N}	
desc. node	4923 Sep 01 09:46	6° \mathcal{A} 14'51		desc. node	4924 Aug 18 06:47	24° \mathcal{N} 10'45	
evening max el	4923 Sep 11 14:31	18° \mathcal{A} 09'22	27°11'18	evening max el	4924 Aug 23 14:57	29° \mathcal{N} 56'52	26°22'09
retrograde	4923 Sep 25 11:02	25° \mathcal{A} 22'22			4924 Aug 23 16:17	0° \mathcal{A}	
evening set	4923 Oct 02 13:43	23° \mathcal{A} 04'47		retrograde	4924 Sep 06 14:03	7° \mathcal{A} 05'38	
min. Earth dist.	4923 Oct 06 05:01	20° \mathcal{A} 20'10	0.61469 AU	evening set	4924 Sep 13 04:35	5° \mathcal{A} 17'57	
inferior conj	4923 Oct 09 07:01	17° \mathcal{A} 36'51	-4°02'35	min. Earth dist.	4924 Sep 17 04:20	2° \mathcal{A} 42'59	0.59403 AU
minimum elong	4923 Oct 09 13:14	17° \mathcal{A} 23'03	4°00'54	inferior conj	4924 Sep 20 10:24	0° \mathcal{A} 12'38	-4°50'57
morning rise	4923 Oct 16 14:41	12° \mathcal{A} 41'12		minimum elong	4924 Sep 20 15:40	0° \mathcal{A} 02'26	4°50'05
direct	4923 Oct 18 22:29	12° \mathcal{A} 18'42			4924 Sep 20 16:56	30° \mathcal{R} \mathcal{N}	
asc. node	4923 Oct 22 21:27	13° \mathcal{A} 26'32		morning rise	4924 Sep 28 04:55	25° \mathcal{N} 39'12	
morning max el	4923 Oct 25 23:26	15° \mathcal{A} 50'44	17°55'44	direct	4924 Sep 30 13:38	25° \mathcal{N} 19'37	
	4923 Nov 04 20:04	0° \mathcal{M}		morning max el	4924 Oct 08 09:22	29° \mathcal{N} 07'37	18°21'05
morning set	4923 Nov 10 18:04	10° \mathcal{M} 38'39		asc. node	4924 Oct 08 18:29	29° \mathcal{N} 30'04	
					4924 Oct 09 06:05	0° \mathcal{A}	
superior conj	4923 Nov 21 04:46	29° \mathcal{M} 23'07	0°49'28	morning set	4924 Oct 24 07:51	24° \mathcal{A} 30'59	
minimum elong	4923 Nov 21 08:31	29° \mathcal{M} 39'26	0°48'58		4924 Oct 27 04:44	0° \mathcal{M}	
	4923 Nov 21 13:16	0° \mathcal{X}		superior conj	4924 Nov 02 11:44	11° \mathcal{M} 48'13	1°17'05
desc. node	4923 Nov 28 09:05	11° \mathcal{X} 32'36		minimum elong	4924 Nov 02 15:29	12° \mathcal{M} 05'25	1°16'40
max. Earth dist.	4923 Nov 28 16:29	12° \mathcal{X} 03'08	1.42615 AU	max. Earth dist.	4924 Nov 10 00:30	25° \mathcal{M} 10'35	1.40679 AU
evening rise	4923 Dec 05 02:10	22° \mathcal{X} 21'55			4924 Nov 12 20:52	0° \mathcal{X}	
	4923 Dec 10 00:03	0° \mathcal{Z}		desc. node	4924 Nov 14 06:04	2° \mathcal{X} 17'52	
	4923 Dec 31 00:49	0° \mathcal{A}		evening rise	4924 Nov 14 13:54	2° \mathcal{X} 50'10	
evening max el	4924 Jan 06 08:42	7° \mathcal{A} 19'28	22°06'06		4924 Dec 02 07:50	0° \mathcal{Z}	
retrograde	4924 Jan 15 19:05	12° \mathcal{A} 56'12		evening max el	4924 Dec 18 23:52	20° \mathcal{Z} 57'38	23°25'45
asc. node	4924 Jan 18 20:43	12° \mathcal{A} 06'15		retrograde	4924 Dec 29 13:12	27° \mathcal{Z} 12'06	
evening set	4924 Jan 20 06:44	11° \mathcal{A} 07'52		evening set	4925 Jan 03 13:08	25° \mathcal{Z} 08'09	
inferior conj	4924 Jan 25 15:02	4° \mathcal{A} 47'41	2°07'03	asc. node	4925 Jan 04 17:45	24° \mathcal{Z} 01'01	
minimum elong	4924 Jan 25 12:42	4° \mathcal{A} 55'45	2°06'17	inferior conj	4925 Jan 08 22:55	18° \mathcal{Z} 43'00	1°23'02
min. Earth dist.	4924 Jan 25 14:35	4° \mathcal{A} 49'15	0.68061 AU	minimum elong	4925 Jan 08 21:09	18° \mathcal{Z} 49'05	1°22'22
morning rise	4924 Jan 29 08:28	30° \mathcal{R} \mathcal{Z}		min. Earth dist.	4925 Jan 08 11:22	19° \mathcal{Z} 22'37	0.68029 AU
direct	4924 Jan 30 18:31	28° \mathcal{Z} 36'49		morning rise	4925 Jan 14 05:05	12° \mathcal{Z} 36'30	
	4924 Feb 04 13:51	26° \mathcal{Z} 34'44		direct	4925 Jan 18 10:16	10° \mathcal{Z} 57'12	
	4924 Feb 11 18:25	0° \mathcal{A}		morning max el	4925 Jan 26 20:20	15° \mathcal{Z} 49'16	21°04'10
morning max el	4924 Feb 14 04:14	2° \mathcal{A} 14'23	22°26'50		4925 Feb 07 04:48	0° \mathcal{A}	
desc. node	4924 Feb 24 08:20	14° \mathcal{A} 31'56		desc. node	4925 Feb 10 05:20	4° \mathcal{A} 17'39	
	4924 Mar 06 04:10	0° \mathcal{X}		morning set	4925 Feb 26 08:21	28° \mathcal{A} 37'04	
morning set	4924 Mar 18 21:43	19° \mathcal{X} 53'24			4925 Feb 27 05:27	0° \mathcal{X}	
max. Earth dist.	4924 Mar 23 22:30	28° \mathcal{X} 15'27	1.40586 AU	max. Earth dist.	4925 Mar 06 01:04	10° \mathcal{X} 55'42	1.42600 AU
	4924 Mar 24 23:05	0° \mathcal{Y}					
superior conj	4924 Mar 31 17:42	11° \mathcal{Y} 52'40	-1°55'32	superior conj	4925 Mar 13 04:53	22° \mathcal{X} 51'59	-2°07'50
minimum elong	4924 Mar 31 22:18	12° \mathcal{Y} 13'24	1°55'11	minimum elong	4925 Mar 13 06:32	22° \mathcal{X} 59'03	2°07'49
evening rise	4924 Apr 10 20:46	0° \mathcal{B} 38'44			4925 Mar 17 08:06	0° \mathcal{Y}	
	4924 Apr 10 12:32	0° \mathcal{B}		evening rise	4925 Mar 24 18:34	13° \mathcal{Y} 12'40	
asc. node	4924 Apr 15 20:00	9° \mathcal{B} 52'50		asc. node	4925 Apr 02 17:01	28° \mathcal{Y} 52'37	
evening max el	4924 Apr 27 00:34	26° \mathcal{B} 30'06	18°20'55		4925 Apr 03 09:37	0° \mathcal{B}	
	4924 May 02 22:19	0° Π		evening max el	4925 Apr 10 11:36	9° \mathcal{B} 29'54	18°07'01
retrograde	4924 May 04 07:44	0° Π 07'54		retrograde	4925 Apr 17 02:45	12° \mathcal{B} 53'12	
	4924 May 05 17:36	30° \mathcal{R} \mathcal{B}		evening set	4925 Apr 19 18:17	12° \mathcal{B} 20'54	
evening set	4924 May 06 16:30	29° \mathcal{B} 46'00		inferior conj	4925 Apr 26 08:44	7° \mathcal{B} 23'17	3°04'09
inferior conj	4924 May 13 23:17	25° \mathcal{B} 09'02	2°13'50				

minimum elong	4925 Apr 26 11:31	7°♄16'34	3°03'39	inferior conj	4926 Apr 09 10:12	20°♃08'57	3°28'38
min. Earth dist.	4925 Apr 29 13:27	4°♄19'35	0.61032 AU	minimum elong	4926 Apr 09 11:22	20°♃05'45	3°28'33
morning rise	4925 May 03 02:42	1°♄28'30		min. Earth dist.	4926 Apr 12 01:51	17°♃16'04	0.63135 AU
	4925 May 05 21:13	30°♄		morning rise	4926 Apr 15 13:34	14°♃02'16	
desc. node	4925 May 09 04:34	29°♃14'52		direct	4926 Apr 22 10:18	11°♃23'41	
direct	4925 May 09 19:46	29°♃13'41		desc. node	4926 Apr 26 01:35	12°♃03'09	
	4925 May 13 22:20	0°♄		morning max el	4926 May 06 08:49	19°♃22'59	27°47'26
morning max el	4925 May 24 01:37	7°♄10'35	27°48'44		4926 May 15 09:19	0°♄	
	4925 Jun 10 08:46	0°♄			4926 Jun 03 07:21	0°♄	
morning set	4925 Jun 25 19:37	28°♄18'14		morning set	4926 Jun 09 18:08	12°♄23'30	
	4925 Jun 26 15:16	0°♄		max. Earth dist.	4926 Jun 15 00:48	23°♄19'02	1.32689 AU
asc. node	4925 Jun 29 16:17	6°♄26'43		asc. node	4926 Jun 16 13:18	26°♄34'15	
max. Earth dist.	4925 Jul 01 19:27	11°♄04'05	1.32099 AU				
				superior conj	4926 Jun 17 11:16	28°♄32'34	0°09'32
superior conj	4925 Jul 03 03:13	13°♄58'03	0°35'26	minimum elong	4926 Jun 17 10:48	28°♄30'06	0°09'25
minimum elong	4925 Jul 03 01:41	13°♄49'41	0°35'06	behind sun begin	4926 Jun 17 06:31	28°♄06'58	
evening rise	4925 Jul 09 22:57	28°♄50'59		behind sun end	4926 Jun 17 15:05	28°♄53'14	
	4925 Jul 10 11:56	0°♄			4926 Jun 18 03:25	0°♄	
	4925 Jul 27 04:41	0°♄		evening rise	4926 Jun 24 10:47	13°♄37'58	
desc. node	4925 Aug 05 03:47	10°♄46'51			4926 Jul 02 16:14	0°♄	
evening max el	4925 Aug 05 08:04	10°♄57'08	25°04'06	evening max el	4926 Jul 17 20:40	21°♄23'34	23°28'57
retrograde	4925 Aug 19 06:26	17°♄59'47		desc. node	4926 Jul 23 00:49	25°♄32'01	
evening set	4925 Aug 24 19:43	16°♄49'33		retrograde	4926 Jul 31 10:21	28°♄11'45	
min. Earth dist.	4925 Aug 29 19:37	14°♄06'10	0.57410 AU	evening set	4926 Aug 04 12:11	27°♄35'21	
inferior conj	4925 Sep 01 18:38	12°♄07'31	-5°15'44	min. Earth dist.	4926 Aug 11 06:19	24°♄26'52	0.55801 AU
minimum elong	4925 Sep 01 19:45	12°♄05'38	5°15'42	inferior conj	4926 Aug 13 06:41	23°♄15'14	-5°00'36
morning rise	4925 Sep 09 22:07	7°♄56'32		minimum elong	4926 Aug 13 01:26	23°♄23'03	4°59'57
direct	4925 Sep 12 11:26	7°♄37'30		morning rise	4926 Aug 21 17:06	19°♄21'40	
morning max el	4925 Sep 21 10:47	11°♄51'38	19°07'39	direct	4926 Aug 24 13:51	19°♄01'31	
asc. node	4925 Sep 25 15:32	16°♄41'33		morning max el	4926 Sep 04 00:53	23°♄53'09	20°16'13
	4925 Oct 03 17:38	0°♄			4926 Sep 09 07:57	0°♄	
morning set	4925 Oct 08 07:02	8°♄50'24		asc. node	4926 Sep 12 12:33	4°♄45'34	
				morning set	4926 Sep 22 12:29	23°♄27'14	
					4926 Sep 25 16:57	0°♄	
superior conj	4925 Oct 16 13:02	25°♄07'16	1°34'20	superior conj	4926 Sep 30 03:35	9°♄05'02	1°42'31
minimum elong	4925 Oct 16 15:30	25°♄19'12	1°34'09	minimum elong	4926 Sep 30 04:27	9°♄09'27	1°42'29
	4925 Oct 19 02:22	0°♄		max. Earth dist.	4926 Oct 05 12:06	19°♄37'39	1.36558 AU
max. Earth dist.	4925 Oct 23 05:40	7°♄38'28	1.38580 AU	evening rise	4926 Oct 09 08:45	26°♄51'06	
evening rise	4925 Oct 27 00:47	14°♄21'54			4926 Oct 11 02:31	0°♄	
desc. node	4925 Nov 01 03:04	22°♄57'51		desc. node	4926 Oct 19 00:05	13°♄27'30	
	4925 Nov 05 12:16	0°♄			4926 Oct 29 22:33	0°♄	
	4925 Nov 27 04:38	0°♄		evening max el	4926 Nov 14 01:29	18°♄23'33	25°54'35
evening max el	4925 Dec 01 12:58	4°♄40'04	24°44'14	retrograde	4926 Nov 26 12:40	25°♄29'29	
retrograde	4925 Dec 13 03:17	11°♄25'05		evening set	4926 Dec 02 15:42	22°♄57'51	
evening set	4925 Dec 18 16:42	9°♄06'05		min. Earth dist.	4926 Dec 06 22:35	18°♄21'24	0.66901 AU
asc. node	4925 Dec 22 14:46	4°♄47'03		inferior conj	4926 Dec 08 08:11	16°♄35'57	-0°23'34
min. Earth dist.	4925 Dec 23 06:49	3°♄54'37	0.67644 AU	minimum elong	4926 Dec 08 08:48	16°♄34'00	0°23'18
inferior conj	4925 Dec 24 05:15	2°♄40'16	0°32'31	asc. node	4926 Dec 09 11:48	15°♄10'19	
minimum elong	4925 Dec 24 04:28	2°♄42'53	0°32'12	morning rise	4926 Dec 14 02:21	10°♄44'43	
	4925 Dec 26 07:10	30°♄		direct	4926 Dec 17 07:20	9°♄45'47	
morning rise	4925 Dec 29 16:22	26°♄40'12		morning max el	4926 Dec 24 03:55	13°♄32'58	18°57'28
direct	4926 Jan 02 08:37	25°♄22'31			4927 Jan 05 09:33	0°♄	
morning max el	4926 Jan 09 20:16	29°♄36'13	19°53'22	desc. node	4927 Jan 14 23:22	14°♄50'22	
	4926 Jan 10 05:39	0°♄		morning set	4927 Jan 15 11:25	15°♄37'24	
desc. node	4926 Jan 28 02:21	24°♄25'58			4927 Jan 24 16:13	0°♄	
	4926 Jan 31 18:22	0°♄		max. Earth dist.	4927 Jan 30 04:05	8°♄36'44	1.45096 AU
morning set	4926 Feb 05 04:33	6°♄47'15					
max. Earth dist.	4926 Feb 16 11:40	24°♄28'30	1.44167 AU	superior conj	4927 Feb 01 01:33	11°♄35'43	-1°41'36
	4926 Feb 19 22:22	0°♄		minimum elong	4927 Jan 31 16:27	10°♄59'48	1°40'47
					4927 Feb 12 14:30	0°♄	
superior conj	4926 Feb 21 14:33	2°♄42'37	-2°04'31	evening rise	4927 Feb 16 02:36	5°♄40'55	
minimum elong	4926 Feb 21 10:18	2°♄25'20	2°04'21		4927 Mar 03 11:40	0°♄	
evening rise	4926 Mar 06 21:45	24°♄55'13		asc. node	4927 Mar 07 11:05	5°♄05'18	
	4926 Mar 09 21:03	0°♄		evening max el	4927 Mar 08 12:19	6°♄12'44	18°35'59
asc. node	4926 Mar 20 14:03	17°♄20'03		retrograde	4927 Mar 15 02:06	9°♄50'03	
evening max el	4926 Mar 25 00:28	22°♄46'27	18°12'17	evening set	4927 Mar 18 06:03	8°♄53'30	
retrograde	4926 Mar 31 10:20	26°♄10'16					
evening set	4926 Apr 03 08:03	25°♄26'14					

inferior conj	4927 Mar 23 23:38	3°♿18'21	3°33'20	evening max el	4928 Feb 19 20:55	19°♿43'30	19°17'01
minimum elong	4927 Mar 23 23:14	3°♿19'32	3°33'18	asc. node	4928 Feb 22 08:08	21°♿55'34	
min. Earth dist.	4927 Mar 25 23:51	0°♿53'33	0.64936 AU	retrograde	4928 Feb 26 22:23	23°♿45'09	
	4927 Mar 26 18:24	30°♿		evening set	4928 Mar 01 09:23	22°♿35'17	
morning rise	4927 Mar 29 15:51	27°♿05'48		inferior conj	4928 Mar 06 21:29	16°♿44'19	3°22'56
direct	4927 Apr 05 08:30	24°♿16'24		minimum elong	4928 Mar 06 19:56	16°♿49'22	3°22'43
desc. node	4927 Apr 12 22:37	27°♿07'29		min. Earth dist.	4928 Mar 08 06:29	14°♿57'43	0.66350 AU
	4927 Apr 16 12:55	0°♿		morning rise	4928 Mar 12 06:09	10°♿29'41	
morning max el	4927 Apr 18 18:45	2°♿08'41	27°11'26	direct	4928 Mar 18 13:18	7°♿42'24	
	4927 May 09 14:21	0°♿		desc. node	4928 Mar 29 19:40	13°♿53'09	
morning set	4927 May 24 07:34	25°♿59'03		morning max el	4928 Mar 31 04:40	15°♿14'02	26°07'53
	4927 May 26 08:41	0°♿			4928 Apr 12 07:36	0°♿	
max. Earth dist.	4927 May 28 21:29	5°♿06'15	1.33732 AU		4928 May 01 10:05	0°♿	
				morning set	4928 May 06 08:03	8°♿52'45	
superior conj	4927 Jun 01 14:31	12°♿48'33	-0°18'51	max. Earth dist.	4928 May 10 06:33	16°♿21'28	1.35237 AU
minimum elong	4927 Jun 01 15:31	12°♿53'45	0°18'40				
asc. node	4927 Jun 03 10:21	16°♿40'31		superior conj	4928 May 15 10:30	26°♿38'08	-0°48'32
evening rise	4927 Jun 08 21:40	28°♿17'57		minimum elong	4928 May 15 13:09	26°♿51'40	0°48'01
	4927 Jun 09 17:11	0°♿			4928 May 17 01:57	0°♿	
	4927 Jun 27 18:45	0°♿		asc. node	4928 May 20 07:24	6°♿40'43	
evening max el	4927 Jun 29 12:34	1°♿48'42	21°52'51	evening rise	4928 May 23 05:30	12°♿43'31	
desc. node	4927 Jul 09 21:51	7°♿52'08			4928 Jun 01 05:56	0°♿	
retrograde	4927 Jul 12 03:20	8°♿03'46		evening max el	4928 Jun 10 15:00	12°♿42'49	20°28'50
evening set	4927 Jul 14 20:01	7°♿47'28		retrograde	4928 Jun 21 16:16	18°♿07'23	
min. Earth dist.	4927 Jul 23 16:26	4°♿00'00	0.54902 AU	evening set	4928 Jun 23 16:08	17°♿57'33	
inferior conj	4927 Jul 24 03:32	3°♿44'26	-3°54'12	desc. node	4928 Jun 25 18:53	17°♿27'01	
minimum elong	4927 Jul 23 18:46	3°♿56'44	3°51'51	inferior conj	4928 Jul 02 21:19	14°♿00'07	-2°06'03
	4927 Aug 01 08:35	30°♿		minimum elong	4928 Jul 02 15:27	14°♿08'38	2°03'56
morning rise	4927 Aug 01 19:00	29°♿53'31		min. Earth dist.	4928 Jul 04 04:11	13°♿15'22	0.54935 AU
direct	4927 Aug 05 01:28	29°♿30'02		morning rise	4928 Jul 11 13:50	9°♿51'14	
	4927 Aug 08 15:43	0°♿		direct	4928 Jul 15 11:16	9°♿18'31	
morning max el	4927 Aug 17 03:08	5°♿09'19	21°44'46	morning max el	4928 Jul 28 20:11	15°♿47'18	23°26'28
asc. node	4927 Aug 30 09:36	23°♿29'51			4928 Aug 09 01:34	0°♿	
	4927 Sep 02 20:25	0°♿		asc. node	4928 Aug 16 06:39	12°♿44'11	
morning set	4927 Sep 06 21:51	8°♿14'42		morning set	4928 Aug 21 09:12	23°♿07'13	
					4928 Aug 24 14:21	0°♿	
superior conj	4927 Sep 14 03:25	23°♿29'51	1°43'02	superior conj	4928 Aug 28 09:26	8°♿12'04	1°37'05
minimum elong	4927 Sep 14 02:52	23°♿26'57	1°43'02	minimum elong	4928 Aug 28 07:51	8°♿03'29	1°36'59
	4927 Sep 17 06:54	0°♿		max. Earth dist.	4928 Aug 30 22:06	13°♿35'47	1.33470 AU
max. Earth dist.	4927 Sep 18 00:42	1°♿30'18	1.34818 AU	evening rise	4928 Sep 04 23:33	24°♿00'47	
evening rise	4927 Sep 22 09:43	10°♿07'45			4928 Sep 08 01:07	0°♿	
	4927 Oct 03 14:12	0°♿		desc. node	4928 Sep 21 18:09	23°♿32'02	
desc. node	4927 Oct 05 21:07	3°♿41'15			4928 Sep 26 04:06	0°♿	
	4927 Oct 25 13:27	0°♿		evening max el	4928 Oct 09 02:18	15°♿26'07	27°21'37
evening max el	4927 Oct 27 14:07	2°♿02'02	26°49'27	retrograde	4928 Oct 22 15:05	22°♿44'37	
retrograde	4927 Nov 09 16:48	9°♿18'43		evening set	4928 Oct 29 15:39	20°♿05'24	
evening set	4927 Nov 16 08:11	6°♿39'19		min. Earth dist.	4928 Nov 02 10:10	16°♿38'32	0.64353 AU
min. Earth dist.	4927 Nov 20 08:24	2°♿38'21	0.65801 AU	inferior conj	4928 Nov 04 19:24	14°♿06'24	-2°26'54
inferior conj	4927 Nov 22 05:41	0°♿26'19	-1°24'00	minimum elong	4928 Nov 04 23:39	13°♿55'06	2°25'17
minimum elong	4927 Nov 22 08:03	0°♿19'25	1°23'01	morning rise	4928 Nov 11 08:58	8°♿40'55	
	4927 Nov 22 14:43	30°♿		asc. node	4928 Nov 12 05:54	8°♿22'19	
asc. node	4927 Nov 26 08:51	26°♿07'45		direct	4928 Nov 13 21:51	8°♿08'04	
morning rise	4927 Nov 28 08:47	24°♿46'29		morning max el	4928 Nov 20 09:48	11°♿33'30	17°55'03
direct	4927 Dec 01 04:31	24°♿02'35			4928 Dec 03 01:57	0°♿	
morning max el	4927 Dec 07 17:21	27°♿34'16	18°17'45	morning set	4928 Dec 07 12:58	7°♿32'08	
	4927 Dec 09 22:00	0°♿		desc. node	4928 Dec 18 17:26	26°♿09'15	
morning set	4927 Dec 26 21:46	25°♿52'04					
	4927 Dec 29 11:12	0°♿		superior conj	4928 Dec 20 19:50	29°♿33'27	-0°14'36
desc. node	4928 Jan 01 20:24	5°♿26'01		minimum elong	4928 Dec 20 18:07	29°♿26'31	0°14'20
				behind sun begin	4928 Dec 20 13:22	29°♿07'21	
superior conj	4928 Jan 11 04:29	20°♿13'55	-1°01'35	behind sun end	4928 Dec 20 22:52	29°♿45'41	
minimum elong	4928 Jan 10 20:59	19°♿44'25	1°00'39		4928 Dec 21 02:25	0°♿	
max. Earth dist.	4928 Jan 12 23:04	23°♿01'04	1.45300 AU	max. Earth dist.	4928 Dec 25 17:52	7°♿24'54	1.44768 AU
	4928 Jan 17 10:06	0°♿		evening rise	4929 Jan 05 22:05	24°♿49'35	
evening rise	4928 Jan 27 08:33	15°♿32'18			4929 Jan 09 07:07	0°♿	
	4928 Feb 05 14:54	0°♿		greatest brilliancy	4929 Jan 20 13:48	16°♿57'03	-0.6m
greatest brilliancy	4928 Feb 07 13:27	2°♿59'05	-0.8m				

	4929 Jan 30 02:40	0° H		desc. node	4929 Dec 05 14:27	16° X 55'53	
evening max el	4929 Feb 02 00:46	3° H 17'04 20°13'26		max. Earth dist.	4929 Dec 08 10:06	21° X 31'44	1.43566 AU
asc. node	4929 Feb 08 05:10	7° H 37'08			4929 Dec 13 17:41	0° Z	
retrograde	4929 Feb 09 20:29	7° H 51'32		evening rise	4929 Dec 16 09:04	4° Z 07'23	
evening set	4929 Feb 13 15:51	6° H 27'25			4930 Jan 02 17:41	0° \approx	
inferior conj	4929 Feb 19 00:58	0° H 22'55 3°00'45		evening max el	4930 Jan 15 23:09	16° \approx 51'49	21°22'22
minimum elong	4929 Feb 18 22:44	0° H 30'29 3°00'16		retrograde	4930 Jan 24 18:15	22° \approx 04'41	
	4929 Feb 19 07:44	30° $\text{R}\approx$		asc. node	4930 Jan 26 02:12	21° \approx 55'09	
min. Earth dist.	4929 Feb 19 19:57	29° \approx 18'40	0.67347 AU	evening set	4930 Jan 28 23:34	20° \approx 25'19	
morning rise	4929 Feb 24 05:23	24° \approx 08'35		inferior conj	4930 Feb 03 07:42	14° \approx 10'01	2°29'01
direct	4929 Mar 01 23:43	21° \approx 33'59		minimum elong	4930 Feb 03 05:16	14° \approx 18'26	2°28'19
morning max el	4929 Mar 13 13:21	28° \approx 29'12 24°46'25		min. Earth dist.	4930 Feb 03 13:59	13° \approx 48'15	0.67923 AU
	4929 Mar 15 00:08	0° H		morning rise	4930 Feb 08 10:47	7° \approx 57'38	
desc. node	4929 Mar 16 16:41	1° H 52'23		direct	4930 Feb 13 14:39	5° \approx 42'42	
	4929 Apr 06 01:43	0° Y		morning max el	4930 Feb 23 22:18	11° \approx 50'23	23°17'30
morning set	4929 Apr 18 14:34	20° Y 50'57		desc. node	4930 Mar 03 13:42	20° \approx 43'53	
max. Earth dist.	4929 Apr 22 05:21	27° Y 21'52 1.37163 AU			4930 Mar 10 10:09	0° H	
	4929 Apr 23 15:35	0° B			4930 Mar 29 21:44	0° Y	
				morning set	4930 Mar 30 21:10	1° Y 38'00	
superior conj	4929 Apr 28 20:09	9° B 53'39 -1°17'40		max. Earth dist.	4930 Apr 04 00:40	8° Y 43'17	1.39337 AU
minimum elong	4929 Apr 29 00:22	10° B 14'14 1°17'01					
evening rise	4929 May 07 07:58	26° B 48'27		superior conj	4930 Apr 11 15:35	22° Y 25'27	-1°43'34
asc. node	4929 May 07 04:26	26° B 30'49		minimum elong	4930 Apr 11 20:33	22° Y 48'32	1°43'02
	4929 May 08 22:29	0° II			4930 Apr 15 16:12	0° B	
evening max el	4929 May 24 05:56	24° II 18'28 19°23'12		evening rise	4930 Apr 21 02:15	10° B 25'26	
retrograde	4929 Jun 02 13:31	28° II 51'15		asc. node	4930 Apr 24 01:29	16° B 06'14	
evening set	4929 Jun 04 12:36	28° II 40'02			4930 May 02 01:34	0° II	
desc. node	4929 Jun 12 15:55	24° II 49'57		evening max el	4930 May 07 07:20	6° II 33'32	18°37'47
inferior conj	4929 Jun 13 02:18	24° II 33'05 -0°07'42		retrograde	4930 May 15 04:47	10° II 26'50	
minimum elong	4929 Jun 13 01:58	24° II 33'38 0°07'36		evening set	4930 May 17 09:41	10° II 09'42	
transit middle	4929 Jun 13 01:58	24° II 33'38 0°07'36		inferior conj	4930 May 25 03:22	5° II 44'10	1°31'02
transit begin	4929 Jun 12 22:33	24° II 39'11		minimum elong	4930 May 25 06:23	5° II 38'24	1°30'02
transit end	4929 Jun 13 05:22	24° II 28'04		min. Earth dist.	4930 May 28 11:37	3° II 12'31	0.57631 AU
min. Earth dist.	4929 Jun 15 18:10	22° II 49'30 0.55915 AU		desc. node	4930 May 30 12:56	1° II 48'41	
morning rise	4929 Jun 21 12:28	19° II 51'32		morning rise	4930 Jun 01 23:51	0° II 27'28	
direct	4929 Jun 26 07:11	18° II 59'35			4930 Jun 03 01:36	30° RB	
morning max el	4929 Jul 10 09:40	26° II 08'04 25°08'41		direct	4930 Jun 07 17:00	29° B 05'55	
	4929 Jul 14 01:52	0° B			4930 Jun 12 10:10	0° II	
	4929 Aug 01 23:50	0° Ω		morning max el	4930 Jun 22 01:58	6° II 41'06	26°35'26
asc. node	4929 Aug 03 03:42	2° Ω 20'30			4930 Jul 09 08:59	0° B	
morning set	4929 Aug 05 20:52	7° Ω 59'35		morning set	4930 Jul 21 07:18	22° B 47'01	
				asc. node	4930 Jul 21 00:44	22° B 12'26	
superior conj	4929 Aug 12 19:14	23° Ω 03'50 1°25'38			4930 Jul 24 15:50	0° Ω	
minimum elong	4929 Aug 12 17:03	22° Ω 51'52 1°25'22		superior conj	4930 Jul 28 06:50	7° Ω 58'45	1°09'23
max. Earth dist.	4929 Aug 14 03:27	25° Ω 59'51 1.32548 AU		minimum elong	4930 Jul 28 04:32	7° Ω 46'03	1°09'00
	4929 Aug 15 23:48	0° B		max. Earth dist.	4930 Jul 28 13:45	8° Ω 37'00	1.32044 AU
evening rise	4929 Aug 19 22:39	8° B 19'49		evening rise	4930 Aug 04 04:10	22° Ω 56'11	
	4929 Aug 31 11:00	0° B			4930 Aug 07 14:47	0° B	
desc. node	4929 Sep 08 15:12	12° B 49'48			4930 Aug 25 11:46	0° B	
evening max el	4929 Sep 21 12:06	28° B 22'37 27°24'36		desc. node	4930 Aug 26 12:13	1° B 21'09	
	4929 Sep 23 07:20	0° B		evening max el	4930 Sep 03 16:41	10° B 38'20	26°54'27
retrograde	4929 Oct 05 06:30	5° B 37'21		retrograde	4930 Sep 17 14:08	17° B 48'38	
evening set	4929 Oct 12 10:46	3° B 08'43		evening set	4930 Sep 24 13:21	15° B 42'29	
min. Earth dist.	4929 Oct 16 01:57	0° B 11'16 0.62595 AU		min. Earth dist.	4930 Sep 28 06:50	13° B 04'09	0.60604 AU
	4929 Oct 16 06:50	30° RB		inferior conj	4930 Oct 01 11:31	10° B 24'22	-4°25'04
inferior conj	4929 Oct 18 22:27	27° B 28'33 -3°29'08		minimum elong	4930 Oct 01 17:40	10° B 11'30	4°23'39
minimum elong	4929 Oct 19 04:16	27° B 14'43 3°27'17		morning rise	4930 Oct 08 23:56	5° B 37'45	
morning rise	4929 Oct 25 23:26	22° B 20'44		direct	4930 Oct 11 07:51	5° B 16'39	
direct	4929 Oct 28 08:15	21° B 55'17		asc. node	4930 Oct 16 23:58	7° B 27'55	
asc. node	4929 Oct 30 02:56	22° B 10'04		morning max el	4930 Oct 18 15:30	8° B 54'02	18°03'59
morning max el	4929 Nov 04 02:14	25° B 22'34 17°50'04			4930 Nov 01 08:03	0° B	
	4929 Nov 07 22:43	0° B		morning set	4930 Nov 03 09:37	3° B 50'09	
morning set	4929 Nov 20 03:00	20° B 17'38					
	4929 Nov 25 14:55	0° X		superior conj	4930 Nov 13 05:58	21° B 53'25	1°02'30
superior conj	4929 Dec 01 11:55	10° X 05'33 0°28'42		minimum elong	4930 Nov 13 09:58	22° B 11'09	1°02'00
minimum elong	4929 Dec 01 14:34	10° X 16'47 0°28'20			4930 Nov 17 21:26	0° X	

max. Earth dist.	4930 Nov 20 21:39	5° \mathbb{A} 05'38	1.41837 AU	evening rise	4931 Nov 07 06:21	24° \mathbb{M} 57'31	
desc. node	4930 Nov 22 11:28	7° \mathbb{A} 42'46		desc. node	4931 Nov 09 08:29	28° \mathbb{M} 26'19	
evening rise	4930 Nov 26 08:52	14° \mathbb{A} 02'50			4931 Nov 10 07:19	0° \mathbb{A}	
	4930 Dec 06 16:20	0° \mathbb{B}			4931 Nov 30 10:42	0° \mathbb{B}	
	4930 Dec 29 05:28	0° \mathbb{A}		evening max el	4931 Dec 12 06:20	14° \mathbb{B} 07'34	23°59'36
evening max el	4930 Dec 29 16:28	0° \mathbb{A} 28'05	22°39'35	retrograde	4931 Dec 23 06:43	20° \mathbb{B} 36'38	
retrograde	4931 Jan 08 14:05	6° \mathbb{A} 20'58		evening set	4931 Dec 28 12:21	18° \mathbb{B} 25'52	
asc. node	4931 Jan 12 23:14	4° \mathbb{A} 41'09		asc. node	4931 Dec 30 20:15	16° \mathbb{B} 02'59	
evening set	4931 Jan 13 06:55	4° \mathbb{A} 25'45		inferior conj	4932 Jan 02 23:09	11° \mathbb{B} 59'39	1°02'20
	4931 Jan 17 05:33	30° \mathbb{R} \mathbb{B}		minimum elong	4932 Jan 02 21:44	12° \mathbb{B} 04'25	1°01'48
inferior conj	4931 Jan 18 15:41	28° \mathbb{B} 02'59	1°49'11	min. Earth dist.	4932 Jan 02 06:53	12° \mathbb{B} 54'48	0.67908 AU
minimum elong	4931 Jan 18 13:32	28° \mathbb{B} 10'25	1°48'27	morning rise	4932 Jan 08 07:10	5° \mathbb{B} 55'43	
min. Earth dist.	4931 Jan 18 10:22	28° \mathbb{B} 21'22	0.68102 AU	direct	4932 Jan 12 06:33	4° \mathbb{B} 26'09	
morning rise	4931 Jan 23 20:03	21° \mathbb{B} 54'01		morning max el	4932 Jan 20 06:25	9° \mathbb{B} 00'44	20°32'22
direct	4931 Jan 28 09:15	20° \mathbb{B} 01'47		desc. node	4932 Feb 05 07:44	0° \mathbb{A} 09'13	
morning max el	4931 Feb 06 10:57	25° \mathbb{B} 19'54	21°50'28		4932 Feb 05 05:13	0° \mathbb{A}	
	4931 Feb 10 15:40	0° \mathbb{A}		morning set	4932 Feb 18 01:18	19° \mathbb{A} 26'23	
desc. node	4931 Feb 18 10:43	10° \mathbb{A} 12'55			4932 Feb 24 18:29	0° \mathbb{H}	
	4931 Mar 03 21:49	0° \mathbb{H}		max. Earth dist.	4932 Feb 27 05:44	3° \mathbb{H} 57'33	1.43330 AU
morning set	4931 Mar 10 23:20	11° \mathbb{H} 04'08		superior conj	4932 Mar 04 16:30	14° \mathbb{H} 31'57	-2°08'40
max. Earth dist.	4931 Mar 16 23:44	20° \mathbb{H} 53'31	1.41487 AU	minimum elong	4932 Mar 04 15:54	14° \mathbb{H} 29'27	2°08'39
	4931 Mar 22 08:32	0° \mathbb{Y}			4932 Mar 13 17:52	0° \mathbb{Y}	
superior conj	4931 Mar 24 15:57	4° \mathbb{Y} 01'34	-2°02'18	evening rise	4932 Mar 16 23:17	5° \mathbb{Y} 39'13	
minimum elong	4931 Mar 24 19:42	4° \mathbb{Y} 18'05	2°02'07	asc. node	4932 Mar 27 19:33	24° \mathbb{Y} 08'36	
evening rise	4931 Apr 04 08:47	23° \mathbb{Y} 25'30			4932 Mar 31 23:14	0° \mathbb{B}	
	4931 Apr 07 22:40	0° \mathbb{B}		evening max el	4932 Apr 03 03:59	2° \mathbb{B} 27'28	18°06'56
asc. node	4931 Apr 10 22:31	5° \mathbb{B} 21'03		retrograde	4932 Apr 09 15:52	5° \mathbb{B} 49'37	
evening max el	4931 Apr 20 15:48	19° \mathbb{B} 19'23	18°12'33	evening set	4932 Apr 12 09:56	5° \mathbb{B} 12'37	
retrograde	4931 Apr 27 14:51	22° \mathbb{B} 49'25		inferior conj	4932 Apr 18 18:41	0° \mathbb{B} 06'34	3°17'18
evening set	4931 Apr 30 02:30	22° \mathbb{B} 23'20		minimum elong	4932 Apr 18 20:49	0° \mathbb{B} 01'07	3°17'01
inferior conj	4931 May 07 01:49	17° \mathbb{B} 37'11	2°38'45		4932 Apr 18 21:15	30° \mathbb{R} \mathbb{Y}	
minimum elong	4931 May 07 05:13	17° \mathbb{B} 29'36	2°37'57	min. Earth dist.	4932 Apr 21 18:26	27° \mathbb{Y} 04'34	0.61949 AU
min. Earth dist.	4931 May 10 10:57	14° \mathbb{B} 37'58	0.59755 AU	morning rise	4932 Apr 25 06:01	24° \mathbb{Y} 05'26	
morning rise	4931 May 14 05:17	11° \mathbb{B} 52'55		direct	4932 May 02 01:34	21° \mathbb{Y} 38'55	
desc. node	4931 May 17 09:58	10° \mathbb{B} 26'14		desc. node	4932 May 03 06:58	21° \mathbb{Y} 43'22	
direct	4931 May 20 15:49	9° \mathbb{B} 56'45		morning max el	4932 May 16 05:10	29° \mathbb{Y} 38'47	27°52'42
morning max el	4931 Jun 04 00:29	17° \mathbb{B} 48'37	27°32'35		4932 May 16 13:37	0° \mathbb{B}	
	4931 Jun 14 04:16	0° \mathbb{II}			4932 Jun 07 03:38	0° \mathbb{II}	
	4931 Jul 01 23:26	0° \mathbb{E}		morning set	4932 Jun 18 17:08	21° \mathbb{II} 41'36	
morning set	4931 Jul 05 14:41	7° \mathbb{E} 22'58			4932 Jun 22 16:35	0° \mathbb{E}	
asc. node	4931 Jul 07 21:45	12° \mathbb{E} 13'50		asc. node	4932 Jun 23 18:48	2° \mathbb{E} 20'28	
max. Earth dist.	4931 Jul 12 01:06	21° \mathbb{E} 14'30	1.31956 AU	max. Earth dist.	4932 Jun 24 09:39	3° \mathbb{E} 40'33	1.32294 AU
superior conj	4931 Jul 12 18:25	22° \mathbb{E} 49'57	0°48'55	superior conj	4932 Jun 26 04:17	7° \mathbb{E} 32'18	0°24'48
minimum elong	4931 Jul 12 16:28	22° \mathbb{E} 39'15	0°48'31	minimum elong	4932 Jun 26 03:10	7° \mathbb{E} 26'10	0°24'32
	4931 Jul 16 00:27	0° \mathbb{Q}		evening rise	4932 Jul 03 01:11	22° \mathbb{E} 29'09	
evening rise	4931 Jul 19 13:40	7° \mathbb{Q} 41'17			4932 Jul 06 15:52	0° \mathbb{Q}	
	4931 Jul 31 03:14	0° \mathbb{P}			4932 Jul 25 12:07	0° \mathbb{P}	
desc. node	4931 Aug 13 09:14	18° \mathbb{P} 46'09		evening max el	4932 Jul 28 03:57	2° \mathbb{P} 45'43	24°24'42
evening max el	4931 Aug 16 13:40	22° \mathbb{P} 03'57	25°51'53	desc. node	4932 Jul 30 06:15	4° \mathbb{P} 38'47	
retrograde	4931 Aug 30 12:45	29° \mathbb{P} 10'54		retrograde	4932 Aug 11 00:26	9° \mathbb{P} 44'44	
evening set	4931 Sep 05 18:27	27° \mathbb{P} 38'20		evening set	4932 Aug 15 23:08	8° \mathbb{P} 50'08	
min. Earth dist.	4931 Sep 10 01:59	25° \mathbb{P} 02'23	0.58530 AU	min. Earth dist.	4932 Aug 21 14:57	5° \mathbb{P} 57'35	0.56653 AU
inferior conj	4931 Sep 13 06:58	22° \mathbb{P} 43'04	-5°05'15	inferior conj	4932 Aug 24 06:23	4° \mathbb{P} 17'12	-5°15'09
minimum elong	4931 Sep 13 10:54	22° \mathbb{P} 35'55	5°04'50	minimum elong	4932 Aug 24 04:51	4° \mathbb{P} 19'38	5°15'07
morning rise	4931 Sep 21 05:38	18° \mathbb{P} 19'47		morning rise	4932 Sep 01 13:04	0° \mathbb{P} 14'54	
direct	4931 Sep 23 15:57	18° \mathbb{P} 00'39			4932 Sep 02 23:13	30° \mathbb{R} \mathbb{Q}	
morning max el	4931 Oct 01 22:12	21° \mathbb{P} 57'59	18°38'19	direct	4932 Sep 04 05:02	29° \mathbb{Q} 55'45	
asc. node	4931 Oct 03 20:59	24° \mathbb{P} 01'54			4932 Sep 05 10:28	0° \mathbb{P}	
	4931 Oct 08 05:45	0° \mathbb{L}		morning max el	4932 Sep 13 19:07	4° \mathbb{P} 24'43	19°34'16
morning set	4931 Oct 18 03:49	17° \mathbb{L} 55'00		asc. node	4932 Sep 19 18:01	11° \mathbb{P} 36'59	
	4931 Oct 24 09:33	0° \mathbb{M}			4932 Sep 30 01:33	0° \mathbb{L}	
superior conj	4931 Oct 26 21:26	4° \mathbb{M} 43'36	1°25'36	morning set	4932 Oct 01 05:57	2° \mathbb{L} 22'01	
minimum elong	4931 Oct 27 00:43	4° \mathbb{M} 59'03	1°25'16	superior conj	4932 Oct 09 04:53	18° \mathbb{L} 20'21	1°38'49
max. Earth dist.	4931 Nov 03 03:59	17° \mathbb{M} 55'26	1.39789 AU	minimum elong	4932 Oct 09 06:41	18° \mathbb{L} 29'11	1°38'43

	4932 Oct 15 07:09	0°♍				4933 Sep 06 15:09	0°♎	
max. Earth dist.	4932 Oct 15 08:29	0°♍06'10	1.37688 AU	morning set		4933 Sep 15 13:20	17°♎04'10	
evening rise	4932 Oct 19 02:34	6°♍54'25				4933 Sep 21 18:32	0°♏	
desc. node	4932 Oct 26 05:31	19°♍02'21						
	4932 Nov 02 04:48	0°♐		superior conj		4933 Sep 22 23:49	2°♏30'53	1°43'35
evening max el	4932 Nov 23 18:55	27°♐50'36	25°15'41	minimum elong		4933 Sep 23 00:03	2°♏32'04	1°43'36
	4932 Nov 26 02:57	0°♑		max. Earth dist.		4933 Sep 27 17:02	11°♏59'45	1.35772 AU
retrograde	4932 Dec 05 19:05	4°♑46'35		evening rise		4933 Oct 01 18:22	19°♏45'44	
evening set	4932 Dec 11 14:13	2°♑21'51				4933 Oct 07 10:54	0°♒	
	4932 Dec 13 22:42	30°♒♐		desc. node		4933 Oct 13 02:33	9°♒26'15	
min. Earth dist.	4932 Dec 16 01:09	27°♒24'59	0.67363 AU			4933 Oct 27 05:37	0°♓	
asc. node	4932 Dec 16 17:17	26°♒32'38		evening max el		4933 Nov 06 07:43	11°♓33'58	26°20'25
inferior conj	4932 Dec 17 04:17	25°♒56'50	0°09'21	retrograde		4933 Nov 19 02:18	18°♓45'28	
minimum elong	4932 Dec 17 04:02	25°♒57'37	0°09'16	evening set		4933 Nov 25 10:43	16°♓10'09	
transit middle	4932 Dec 17 04:02	25°♒57'37	0°09'16	min. Earth dist.		4933 Nov 29 14:48	11°♓48'31	0.66472 AU
transit begin	4932 Dec 17 01:45	26°♒05'02		inferior conj		4933 Dec 01 05:12	9°♓51'24	-0°48'43
transit end	4932 Dec 17 06:19	25°♒50'11		minimum elong		4933 Dec 01 06:31	9°♓47'21	0°48'09
morning rise	4932 Dec 22 18:08	20°♓00'03		asc. node		4933 Dec 03 14:18	7°♓04'20	
direct	4932 Dec 26 05:17	18°♓50'50		morning rise		4933 Dec 07 02:55	4°♓04'21	
morning max el	4933 Jan 02 09:46	22°♓52'19	19°27'37	direct		4933 Dec 10 03:44	3°♓12'11	
	4933 Jan 08 08:29	0°♑		morning max el		4933 Dec 16 20:06	6°♓51'36	18°38'31
greatest brilliancy	4933 Jan 15 13:19	10°♑20'12	-0.7m			4934 Jan 02 04:03	0°♑	
desc. node	4933 Jan 22 04:44	20°♑24'56		morning set		4934 Jan 06 16:33	7°♑08'46	
morning set	4933 Jan 26 22:55	27°♑44'35		desc. node		4934 Jan 09 01:48	10°♑54'57	
	4933 Jan 28 09:56	0°♒				4934 Jan 21 05:06	0°♒	
max. Earth dist.	4933 Feb 08 18:36	17°♒45'38	1.44645 AU					
				superior conj		4934 Jan 22 20:51	2°♒35'54	-1°26'15
superior conj	4933 Feb 12 15:36	23°♒55'20	-1°57'15	minimum elong		4934 Jan 22 11:33	1°♒59'23	1°25'16
minimum elong	4933 Feb 12 08:46	23°♒27'59	1°56'49	max. Earth dist.		4934 Jan 22 12:33	2°♒03'19	1.45281 AU
	4933 Feb 16 10:16	0°♐		evening rise		4934 Feb 07 12:10	27°♒19'05	
evening rise	4933 Feb 26 17:17	16°♐57'35				4934 Feb 09 04:26	0°♐	
	4933 Mar 06 12:59	0°♑		greatest brilliancy		4934 Feb 15 15:14	10°♐17'36	-0.8m
asc. node	4933 Mar 14 16:36	12°♑19'32		evening max el		4934 Mar 01 03:35	29°♐18'11	18°51'25
evening max el	4933 Mar 17 16:46	15°♑49'02	18°20'13	asc. node		4934 Mar 01 13:38	29°♐43'10	
retrograde	4933 Mar 24 03:18	19°♑17'00				4934 Mar 01 20:40	0°♑	
evening set	4933 Mar 27 03:35	18°♑27'50		retrograde		4934 Mar 07 21:16	3°♑04'09	
inferior conj	4933 Apr 02 01:43	13°♑03'02	3°32'41	evening set		4934 Mar 11 04:11	2°♑01'55	
minimum elong	4933 Apr 02 02:11	13°♑01'40	3°32'40			4934 Mar 13 15:01	30°♒♐	
min. Earth dist.	4933 Apr 04 11:02	10°♑20'07	0.63951 AU	inferior conj		4934 Mar 16 19:07	26°♐19'53	3°30'29
morning rise	4933 Apr 07 23:54	6°♑53'18		minimum elong		4934 Mar 16 18:10	26°♐22'50	3°30'24
direct	4933 Apr 14 19:52	4°♑08'04		min. Earth dist.		4934 Mar 18 12:45	24°♐10'37	0.65601 AU
desc. node	4933 Apr 20 04:00	5°♑33'19		morning rise		4934 Mar 22 07:44	20°♐06'21	
morning max el	4933 Apr 28 13:45	12°♑06'09	27°35'49	direct		4934 Mar 28 21:01	17°♐16'21	
	4933 May 12 19:35	0°♑		desc. node		4934 Apr 07 01:02	21°♐24'31	
	4933 May 30 15:11	5°♒35'09		morning max el		4934 Apr 10 23:43	25°♐00'48	26°47'05
morning set	4933 Jun 02 12:10	5°♒35'09				4934 Apr 15 12:28	0°♑	
max. Earth dist.	4933 Jun 07 11:27	15°♒43'03	1.33074 AU			4934 May 06 06:48	0°♑	
				morning set		4934 May 16 20:35	18°♑54'01	
superior conj	4933 Jun 10 10:35	21°♒59'42	-0°02'18	max. Earth dist.		4934 May 21 03:18	27°♑15'41	1.34321 AU
minimum elong	4933 Jun 10 10:42	22°♒00'20	0°02'17			4934 May 22 11:56	0°♒	
behind sun begin	4933 Jun 10 05:22	21°♒31'49						
behind sun end	4933 Jun 10 16:02	22°♒28'54		superior conj		4934 May 25 11:06	6°♒05'27	-0°31'23
asc. node	4933 Jun 10 15:53	22°♒28'04		minimum elong		4934 May 25 12:47	6°♒14'12	0°31'02
	4933 Jun 14 03:50	0°♑		asc. node		4934 May 28 12:55	12°♒32'08	
evening rise	4933 Jun 17 12:50	7°♑13'37		evening rise		4934 Jun 01 22:42	21°♒48'18	
	4933 Jun 29 13:25	0°♒				4934 Jun 05 23:22	0°♑	
evening max el	4933 Jul 09 17:06	13°♒07'59	22°47'20	evening max el		4934 Jun 21 12:58	23°♑42'45	21°15'05
desc. node	4933 Jul 17 03:16	18°♒26'14		retrograde		4934 Jul 03 12:39	29°♑37'06	
retrograde	4933 Jul 22 23:17	19°♒44'14		desc. node		4934 Jul 04 00:17	29°♑36'32	
evening set	4933 Jul 26 09:25	19°♒18'36		evening set		4934 Jul 05 20:08	29°♑24'43	
min. Earth dist.	4933 Aug 03 01:22	15°♒55'08	0.55311 AU	inferior conj		4934 Jul 15 04:43	25°♑26'14	-3°11'50
inferior conj	4933 Aug 04 11:00	15°♒06'57	-4°38'49	minimum elong		4934 Jul 14 20:27	25°♑37'49	3°09'13
minimum elong	4933 Aug 04 03:32	15°♒17'40	4°37'24	min. Earth dist.		4934 Jul 15 11:47	25°♑16'19	0.54798 AU
morning rise	4933 Aug 12 23:44	11°♒16'22		morning rise		4934 Jul 23 21:21	21°♑30'24	
direct	4933 Aug 16 00:14	10°♒55'08		direct		4934 Jul 27 09:40	21°♑03'47	
morning max el	4933 Aug 27 04:03	16°♒06'49	20°51'44	morning max el		4934 Aug 09 01:39	27°♑04'11	22°27'05
asc. node	4933 Sep 06 15:05	29°♒59'41				4934 Aug 11 22:11	0°♒	

asc. node	4934 Aug 24 12:08	18°♎57'55			4935 Aug 06 22:53	0°♎	
	4934 Aug 30 01:50	0°♎		asc. node	4935 Aug 11 09:12	8°♎22'41	
morning set	4934 Aug 30 23:46	1°♎54'27		morning set	4935 Aug 15 11:28	16°♎47'44	
					4935 Aug 21 14:04	0°♎	
superior conj	4934 Sep 07 02:35	17°♎03'48	1°41'14	superior conj	4935 Aug 22 10:29	1°♎50'53	1°32'52
minimum elong	4934 Sep 07 01:32	16°♎58'14	1°41'12	minimum elong	4935 Aug 22 08:34	1°♎40'33	1°32'41
max. Earth dist.	4934 Sep 10 09:37	23°♎57'40	1.34194 AU	max. Earth dist.	4935 Aug 24 10:47	6°♎11'38	1.33026 AU
	4934 Sep 13 08:58	0°♎		evening rise	4935 Aug 29 19:26	17°♎23'54	
evening rise	4934 Sep 15 01:17	3°♎19'00			4935 Sep 05 08:07	0°♎	
desc. node	4934 Sep 29 23:35	29°♎31'12		desc. node	4935 Sep 16 20:36	19°♎09'05	
	4934 Sep 30 06:59	0°♎			4935 Sep 24 18:23	0°♎	
evening max el	4934 Oct 19 20:28	25°♎08'01	27°06'22	evening max el	4935 Oct 02 07:44	8°♎20'53	27°26'38
	4934 Oct 25 22:23	0°♎		retrograde	4935 Oct 15 23:02	15°♎38'07	
retrograde	4934 Nov 02 03:45	2°♎25'27		evening set	4935 Oct 23 02:16	13°♎01'39	
evening set	4934 Nov 08 23:39	29°♎45'10		min. Earth dist.	4935 Oct 26 18:50	9°♎48'30	0.63644 AU
	4934 Nov 08 15:57	30°♎		inferior conj	4935 Oct 29 09:10	7°♎10'21	-2°53'41
min. Earth dist.	4934 Nov 12 21:23	25°♎59'03	0.65229 AU	minimum elong	4935 Oct 29 14:10	6°♎57'39	2°51'53
inferior conj	4934 Nov 14 23:41	23°♎37'49	-1°50'31	morning rise	4935 Nov 05 03:33	1°♎52'15	
minimum elong	4934 Nov 15 02:51	23°♎28'54	1°49'13	asc. node	4935 Nov 07 08:24	1°♎23'16	
asc. node	4934 Nov 20 11:21	18°♎30'25		direct	4935 Nov 07 14:24	1°♎22'57	
morning rise	4934 Nov 21 07:03	18°♎03'37		morning max el	4935 Nov 14 03:57	4°♎47'52	17°50'45
direct	4934 Nov 23 23:41	17°♎24'42		morning set	4935 Nov 30 17:17	0°♎11'02	
morning max el	4934 Nov 30 11:07	20°♎52'21	18°06'01		4935 Nov 30 14:44	0°♎	
	4934 Dec 07 11:46	0°♎					
morning set	4934 Dec 18 15:41	18°♎01'35		superior conj	4935 Dec 13 03:42	21°♎12'47	0°04'44
	4934 Dec 25 23:31	0°♎		minimum elong	4935 Dec 13 04:12	21°♎14'52	0°04'41
desc. node	4934 Dec 26 22:51	1°♎34'13		behind sun begin	4935 Dec 12 18:51	20°♎36'28	
				behind sun end	4935 Dec 13 13:33	21°♎53'10	
superior conj	4935 Jan 02 02:41	11°♎24'53	-0°41'48	desc. node	4935 Dec 13 19:51	22°♎18'58	
minimum elong	4935 Jan 01 21:30	11°♎04'22	0°41'05		4935 Dec 18 13:55	0°♎	
max. Earth dist.	4935 Jan 05 08:23	16°♎31'30	1.45165 AU	max. Earth dist.	4935 Dec 19 02:25	0°♎49'51	1.44326 AU
	4935 Jan 13 23:25	0°♎		evening rise	4935 Dec 28 20:13	16°♎04'33	
evening rise	4935 Jan 18 09:54	6°♎52'54			4936 Jan 07 00:28	0°♎	
greatest brilliancy	4935 Jan 31 11:59	26°♎56'14	-0.7m	evening max el	4936 Jan 26 11:43	26°♎23'46	20°41'27
	4935 Feb 02 13:36	0°♎			4936 Jan 30 19:34	0°♎	
evening max el	4935 Feb 12 10:20	12°♎50'37	19°39'14	asc. node	4936 Feb 03 07:40	1°♎13'46	
asc. node	4935 Feb 16 10:38	16°♎06'19		retrograde	4936 Feb 03 16:58	1°♎14'35	
retrograde	4935 Feb 19 18:41	17°♎05'06			4936 Feb 07 07:35	30°♎	
evening set	4935 Feb 23 09:08	15°♎49'05		evening set	4936 Feb 07 16:21	29°♎44'00	
inferior conj	4935 Feb 28 19:41	9°♎51'51	3°14'47	inferior conj	4936 Feb 13 00:47	23°♎34'16	2°48'22
minimum elong	4935 Feb 28 17:46	9°♎58'11	3°14'29	minimum elong	4936 Feb 12 22:24	23°♎42'25	2°47'47
min. Earth dist.	4935 Mar 01 22:26	8°♎23'24	0.66828 AU	min. Earth dist.	4936 Feb 13 14:08	22°♎48'26	0.67633 AU
morning rise	4935 Mar 06 02:10	3°♎37'17		morning rise	4936 Feb 18 04:17	17°♎20'27	
direct	4935 Mar 12 04:08	0°♎54'38		direct	4936 Feb 23 16:25	14°♎53'49	
morning max el	4935 Mar 24 09:14	8°♎11'55	25°34'53	morning max el	4936 Mar 05 17:55	21°♎30'18	24°09'03
desc. node	4935 Mar 24 22:05	8°♎44'46		desc. node	4936 Mar 10 19:06	27°♎08'14	
	4935 Apr 10 10:47	0°♎			4936 Mar 13 02:36	0°♎	
	4935 Apr 28 19:06	0°♎			4936 Apr 02 17:15	0°♎	
morning set	4935 Apr 29 14:11	1°♎26'27		morning set	4936 Apr 10 11:19	12°♎56'36	
max. Earth dist.	4935 May 03 08:04	8°♎24'02	1.36018 AU	max. Earth dist.	4936 Apr 14 04:33	19°♎29'30	1.38068 AU
					4936 Apr 19 21:33	0°♎	
superior conj	4935 May 09 03:09	19°♎42'07	-1°01'04	superior conj	4936 Apr 21 07:15	2°♎40'04	-1°29'14
minimum elong	4935 May 09 06:31	19°♎58'58	1°00'29	minimum elong	4936 Apr 21 11:57	3°♎02'31	1°28'37
	4935 May 14 04:53	0°♎		evening rise	4936 Apr 30 04:02	20°♎00'55	
asc. node	4935 May 15 09:58	2°♎28'55		asc. node	4936 May 01 06:58	22°♎13'18	
evening rise	4935 May 17 04:38	6°♎06'47			4936 May 05 08:26	0°♎	
	4935 May 30 15:54	0°♎		evening max el	4936 May 16 16:24	16°♎46'59	19°01'20
evening max el	4935 Jun 03 20:42	4°♎53'59	19°58'22	retrograde	4936 May 25 08:28	21°♎01'26	
retrograde	4935 Jun 14 03:54	9°♎56'08		evening set	4936 May 27 09:25	20°♎48'18	
evening set	4935 Jun 16 02:05	9°♎46'21		inferior conj	4936 Jun 04 14:43	16°♎34'05	0°37'37
desc. node	4935 Jun 20 21:18	8°♎07'33		minimum elong	4936 Jun 04 16:12	16°♎31'29	0°37'05
inferior conj	4935 Jun 25 01:44	5°♎46'00	-1°14'58	desc. node	4936 Jun 06 18:20	15°♎04'06	
minimum elong	4935 Jun 24 22:14	5°♎51'17	1°13'40	min. Earth dist.	4936 Jun 07 15:39	14°♎27'56	0.56571 AU
min. Earth dist.	4935 Jun 27 00:08	4°♎35'56	0.55245 AU	morning rise	4936 Jun 12 19:43	11°♎36'41	
morning rise	4935 Jul 03 16:37	1°♎24'39		direct	4936 Jun 18 00:00	10°♎33'16	
direct	4935 Jul 07 22:21	0°♎45'24					
morning max el	4935 Jul 21 16:30	7°♎32'02	24°10'52				

morning max el	4936 Jul 02 06:47	17° Π 55'18	25°48'22	direct	4937 May 30 16:04	20° \mathcal{B} 56'49	
	4936 Jul 12 07:28	0° \mathcal{B}		morning max el	4937 Jun 14 01:24	28° \mathcal{B} 40'39	27°03'47
asc. node	4936 Jul 28 06:14	28° \mathcal{B} 06'07			4937 Jun 15 08:50	0° Π	
	4936 Jul 29 04:06	0° \mathcal{Q}			4937 Jul 06 00:53	0° \mathcal{B}	
morning set	4936 Jul 29 22:48	1° \mathcal{Q} 38'28		morning set	4937 Jul 14 08:08	16° \mathcal{B} 21'22	
				asc. node	4937 Jul 15 03:16	18° \mathcal{B} 02'23	
					4937 Jul 20 15:14	0° \mathcal{Q}	
superior conj	4936 Aug 05 21:17	16° \mathcal{Q} 44'41	1°19'18	superior conj	4937 Jul 21 09:06	1° \mathcal{Q} 38'44	1°01'11
minimum elong	4936 Aug 05 18:59	16° \mathcal{Q} 32'05	1°18'58	minimum elong	4937 Jul 21 06:54	1° \mathcal{Q} 26'33	1°00'47
max. Earth dist.	4936 Aug 06 18:27	18° \mathcal{Q} 41'06	1.32280 AU	max. Earth dist.	4937 Jul 21 05:30	1° \mathcal{Q} 18'50	1.31956 AU
	4936 Aug 12 00:22	0° \mathcal{M}		evening rise	4937 Jul 28 05:03	16° \mathcal{Q} 31'45	
evening rise	4936 Aug 12 21:34	1° \mathcal{M} 50'51			4937 Aug 03 21:54	0° \mathcal{M}	
	4936 Aug 28 05:52	0° \mathcal{L}		desc. node	4937 Aug 20 14:38	26° \mathcal{M} 14'38	
desc. node	4936 Sep 02 17:37	8° \mathcal{L} 08'53			4937 Aug 23 20:08	0° \mathcal{L}	
evening max el	4936 Sep 13 15:25	21° \mathcal{L} 00'29	27°15'51	evening max el	4937 Aug 26 17:04	2° \mathcal{L} 55'39	26°31'34
retrograde	4936 Sep 27 11:37	28° \mathcal{L} 14'13		retrograde	4937 Sep 09 15:51	10° \mathcal{L} 04'39	
evening set	4936 Oct 04 14:57	25° \mathcal{L} 53'23		evening set	4937 Sep 16 09:00	8° \mathcal{L} 11'59	
min. Earth dist.	4936 Oct 08 05:57	23° \mathcal{L} 05'49	0.61764 AU	min. Earth dist.	4937 Sep 20 06:44	5° \mathcal{L} 36'39	0.59712 AU
inferior conj	4936 Oct 11 06:41	20° \mathcal{L} 22'04	-3°54'09	inferior conj	4937 Sep 23 12:41	3° \mathcal{L} 03'21	-4°44'51
minimum elong	4936 Oct 11 12:51	20° \mathcal{L} 08'07	3°52'23	minimum elong	4937 Sep 23 18:17	2° \mathcal{L} 52'18	4°43'50
morning rise	4936 Oct 18 12:38	15° \mathcal{L} 23'12			4937 Sep 27 18:33	30° \mathcal{R} \mathcal{M}	
direct	4936 Oct 20 20:32	15° \mathcal{L} 00'05		morning rise	4937 Oct 01 05:40	28° \mathcal{M} 26'20	
asc. node	4936 Oct 24 05:27	15° \mathcal{L} 50'20		direct	4937 Oct 03 14:02	28° \mathcal{M} 06'26	
morning max el	4936 Oct 27 19:30	18° \mathcal{L} 30'45	17°53'37		4937 Oct 09 00:49	0° \mathcal{L}	
	4936 Nov 05 02:45	0° \mathcal{M}		asc. node	4937 Oct 11 02:29	1° \mathcal{L} 42'10	
morning set	4936 Nov 12 15:04	13° \mathcal{M} 18'16		morning max el	4937 Oct 11 06:23	1° \mathcal{L} 51'29	18°15'59
	4936 Nov 21 23:17	0° \mathcal{X}		morning set	4937 Oct 27 03:10	27° \mathcal{L} 05'54	
					4937 Oct 28 15:51	0° \mathcal{M}	
superior conj	4936 Nov 23 07:12	2° \mathcal{X} 18'19	0°44'21	superior conj	4937 Nov 05 11:01	14° \mathcal{M} 34'06	1°13'35
minimum elong	4936 Nov 23 10:46	2° \mathcal{X} 33'40	0°43'51	minimum elong	4937 Nov 05 14:53	14° \mathcal{M} 51'41	1°13'08
desc. node	4936 Nov 29 16:52	13° \mathcal{X} 06'08		max. Earth dist.	4937 Nov 13 01:15	27° \mathcal{M} 56'54	1.40988 AU
max. Earth dist.	4936 Nov 30 16:15	14° \mathcal{X} 42'10	1.42874 AU		4937 Nov 14 06:18	0° \mathcal{X}	
evening rise	4936 Dec 07 10:59	25° \mathcal{X} 34'06		desc. node	4937 Nov 16 13:53	3° \mathcal{X} 51'52	
	4936 Dec 10 07:18	0° \mathcal{B}		evening rise	4937 Nov 17 19:29	5° \mathcal{X} 53'29	
	4936 Dec 30 23:22	0° \approx			4937 Dec 03 12:06	0° \mathcal{B}	
evening max el	4937 Jan 08 07:44	9° \approx 58'42	21°54'35	evening max el	4937 Dec 21 23:28	23° \mathcal{B} 36'19	23°13'47
retrograde	4937 Jan 17 14:10	15° \approx 29'20		retrograde	4938 Jan 01 08:42	29° \mathcal{B} 45'10	
asc. node	4937 Jan 20 04:41	14° \approx 53'09		evening set	4938 Jan 06 06:47	27° \mathcal{B} 43'29	
evening set	4937 Jan 22 00:06	13° \approx 43'26		asc. node	4938 Jan 07 01:43	27° \mathcal{B} 00'38	
inferior conj	4937 Jan 27 08:17	7° \approx 24'26	2°13'05	inferior conj	4938 Jan 11 16:16	21° \mathcal{B} 18'55	1°30'09
minimum elong	4937 Jan 27 05:55	7° \approx 32'38	2°12'20	minimum elong	4938 Jan 11 14:23	21° \mathcal{B} 25'25	1°29'27
min. Earth dist.	4937 Jan 27 09:35	7° \approx 19'55	0.68037 AU	min. Earth dist.	4938 Jan 11 06:20	21° \mathcal{B} 53'05	0.68063 AU
morning rise	4937 Feb 01 11:35	1° \approx 13'02		morning rise	4938 Jan 16 21:53	15° \mathcal{B} 11'44	
	4937 Feb 03 04:26	30° \mathcal{R} \mathcal{B}		direct	4938 Jan 21 05:10	13° \mathcal{B} 29'02	
direct	4937 Feb 06 09:08	29° \mathcal{B} 07'28		morning max el	4938 Jan 29 19:01	18° \mathcal{B} 27'24	21°15'47
	4937 Feb 09 20:07	0° \approx			4938 Feb 08 06:28	0° \approx	
morning max el	4937 Feb 16 03:56	4° \approx 54'29	22°39'47	desc. node	4938 Feb 12 13:07	5° \approx 58'33	
desc. node	4937 Feb 25 16:06	16° \approx 17'13			4938 Feb 28 13:08	0° \mathcal{H}	
	4937 Mar 07 09:27	0° \mathcal{H}		morning set	4938 Mar 01 20:29	2° \mathcal{H} 03'02	
morning set	4937 Mar 22 06:07	23° \mathcal{H} 09'44		max. Earth dist.	4938 Mar 09 01:48	13° \mathcal{H} 39'26	1.42324 AU
	4937 Mar 26 08:24	0° \mathcal{Y}					
max. Earth dist.	4937 Mar 27 00:10	1° \mathcal{Y} 07'03	1.40267 AU	superior conj	4938 Mar 16 09:57	25° \mathcal{H} 58'36	-2°06'52
				minimum elong	4938 Mar 16 12:16	26° \mathcal{H} 08'34	2°06'48
superior conj	4937 Apr 03 19:11	14° \mathcal{Y} 49'32	-1°52'40		4938 Mar 18 17:45	0° \mathcal{Y}	
minimum elong	4937 Apr 03 23:58	15° \mathcal{Y} 11'13	1°52'17	evening rise	4938 Mar 27 17:58	16° \mathcal{Y} 03'51	
	4937 Apr 11 22:55	0° \mathcal{B}			4938 Apr 04 14:27	0° \mathcal{B}	
evening rise	4937 Apr 13 17:47	3° \mathcal{B} 23'01		asc. node	4938 Apr 05 01:01	0° \mathcal{B} 44'24	
asc. node	4937 Apr 18 03:59	11° \mathcal{B} 40'29		evening max el	4938 Apr 13 07:50	12° \mathcal{B} 13'14	18°07'53
evening max el	4937 Apr 29 21:18	29° \mathcal{B} 16'34	18°24'39	retrograde	4938 Apr 20 00:37	15° \mathcal{B} 37'44	
	4937 Apr 30 16:00	0° Π		evening set	4938 Apr 22 15:12	15° \mathcal{B} 07'03	
retrograde	4937 May 07 07:43	2° Π 57'41		inferior conj	4938 Apr 29 07:49	10° \mathcal{B} 12'18	2°58'19
evening set	4937 May 09 15:32	2° Π 37'04		minimum elong	4938 Apr 29 10:47	10° \mathcal{B} 05'15	2°57'44
	4937 May 14 13:10	30° \mathcal{R} \mathcal{B}		min. Earth dist.	4938 May 02 13:54	7° \mathcal{B} 09'06	0.60700 AU
inferior conj	4937 May 17 01:04	28° \mathcal{B} 03'10	2°03'34	morning rise	4938 May 06 04:12	4° \mathcal{B} 20'02	
minimum elong	4937 May 17 04:33	27° \mathcal{B} 56'04	2°02'33	desc. node	4938 May 11 12:21	2° \mathcal{B} 14'54	
min. Earth dist.	4937 May 20 11:32	25° \mathcal{B} 16'34	0.58511 AU				
morning rise	4937 May 24 14:26	22° \mathcal{B} 33'24					
desc. node	4937 May 24 15:21	22° \mathcal{B} 32'13					

direct	4938 May 12 19:53	2°♄09'55		morning max el	4939 May 09 09:12	22°♄12'19	27°50'03
morning max el	4938 May 27 02:29	10°♄05'27	27°45'48		4939 May 16 05:29	0°♄	
	4938 Jun 11 12:42	0°♄			4939 Jun 04 16:51	0°♄	
	4938 Jun 28 03:49	0°♄		morning set	4939 Jun 12 13:22	15°♄00'05	
morning set	4938 Jun 28 13:44	0°♄51'08		max. Earth dist.	4939 Jun 17 22:41	26°♄12'34	1.32572 AU
asc. node	4938 Jul 02 00:18	8°♄06'44		asc. node	4939 Jun 18 21:20	28°♄14'01	
max. Earth dist.	4938 Jul 04 16:15	13°♄53'56	1.32051 AU		4939 Jun 19 16:59	0°♄	
superior conj	4938 Jul 05 20:14	16°♄27'29	0°39'07	superior conj	4939 Jun 20 04:49	1°♄04'02	0°13'39
minimum elong	4938 Jul 05 18:35	16°♄18'25	0°38'46	minimum elong	4939 Jun 20 04:10	1°♄00'31	0°13'30
	4938 Jul 12 00:49	0°♄		behind sun begin	4939 Jun 20 01:22	0°♄45'21	
evening rise	4938 Jul 12 15:44	1°♄19'40		behind sun end	4939 Jun 20 06:58	1°♄15'42	
	4938 Jul 28 04:26	0°♄		evening rise	4939 Jun 27 03:33	16°♄06'59	
desc. node	4938 Aug 07 11:40	13°♄04'40			4939 Jul 04 00:35	0°♄	
evening max el	4938 Aug 08 11:12	14°♄02'30	25°17'08	evening max el	4939 Jul 20 23:58	24°♄31'41	23°43'31
retrograde	4938 Aug 22 09:46	21°♄06'10		desc. node	4939 Jul 25 08:42	28°♄08'36	
evening set	4938 Aug 28 03:49	19°♄50'07			4939 Jul 28 14:37	0°♄	
min. Earth dist.	4938 Sep 01 22:54	17°♄09'16	0.57695 AU	retrograde	4939 Aug 03 15:48	1°♄23'21	
inferior conj	4938 Sep 04 23:55	15°♄04'48	-5°14'09	evening set	4939 Aug 07 23:11	0°♄42'33	
minimum elong	4938 Sep 05 01:53	15°♄01'26	5°14'04		4939 Aug 09 21:30	30°♄	
morning rise	4938 Sep 13 02:14	10°♄50'42		min. Earth dist.	4939 Aug 14 09:58	27°♄38'37	0.56005 AU
direct	4938 Sep 15 14:46	10°♄31'39		inferior conj	4939 Aug 16 14:50	26°♄19'04	-5°06'07
morning max el	4938 Sep 24 09:16	14°♄40'55	18°59'21	minimum elong	4939 Aug 16 10:31	26°♄25'36	5°05'41
asc. node	4938 Sep 27 23:32	18°♄44'15		morning rise	4939 Aug 25 00:22	22°♄23'44	
	4938 Oct 05 02:24	0°♄		direct	4939 Aug 27 19:50	22°♄03'55	
morning set	4938 Oct 11 01:13	11°♄21'56		morning max el	4939 Sep 07 01:15	26°♄49'09	20°04'41
					4939 Sep 10 01:01	0°♄	
superior conj	4938 Oct 19 09:58	27°♄46'07	1°32'19	asc. node	4939 Sep 14 20:35	6°♄40'54	
minimum elong	4938 Oct 19 12:41	27°♄59'04	1°32'06	morning set	4939 Sep 25 05:54	25°♄56'18	
	4938 Oct 20 14:03	0°♄			4939 Sep 27 05:36	0°♄	
max. Earth dist.	4938 Oct 26 06:45	10°♄30'38	1.38897 AU	superior conj	4939 Oct 02 22:51	11°♄38'50	1°41'47
evening rise	4938 Oct 30 02:59	17°♄15'35		minimum elong	4939 Oct 02 23:57	11°♄44'25	1°41'45
desc. node	4938 Nov 03 10:56	24°♄32'47		max. Earth dist.	4939 Oct 08 12:29	22°♄31'49	1.36844 AU
	4938 Nov 06 19:53	0°♄		evening rise	4939 Oct 12 08:02	29°♄36'33	
	4938 Nov 27 23:29	0°♄			4939 Oct 12 13:12	0°♄	
evening max el	4938 Dec 04 12:43	7°♄17'45	24°32'50	desc. node	4939 Oct 21 07:59	15°♄04'14	
retrograde	4938 Dec 15 23:26	13°♄58'43			4939 Oct 31 01:58	0°♄	
evening set	4938 Dec 21 10:53	11°♄41'44		evening max el	4939 Nov 17 01:12	21°♄01'08	25°44'55
asc. node	4938 Dec 24 22:46	7°♄54'19		retrograde	4939 Nov 29 09:42	28°♄05'01	
min. Earth dist.	4938 Dec 26 02:06	6°♄25'15	0.67727 AU	evening set	4939 Dec 05 10:44	25°♄34'56	
inferior conj	4938 Dec 26 22:57	5°♄15'42	0°40'34	min. Earth dist.	4939 Dec 09 18:35	20°♄53'16	0.67032 AU
minimum elong	4938 Dec 26 22:00	5°♄18'55	0°40'10	inferior conj	4939 Dec 11 02:33	19°♄12'00	-0°14'44
	4938 Dec 31 10:40	30°♄		minimum elong	4939 Dec 11 02:56	19°♄10'47	0°14'34
morning rise	4939 Jan 01 09:13	29°♄14'41		transit middle	4939 Dec 11 02:56	19°♄10'47	0°14'34
direct	4939 Jan 05 03:17	27°♄54'00		transit begin	4939 Dec 11 01:42	19°♄14'39	
	4939 Jan 10 05:55	0°♄		transit end	4939 Dec 11 04:09	19°♄06'55	
morning max el	4939 Jan 12 17:49	2°♄12'33	20°03'00	asc. node	4939 Dec 11 19:48	18°♄17'36	
desc. node	4939 Jan 30 10:09	26°♄03'35		morning rise	4939 Dec 16 19:33	13°♄19'20	
	4939 Feb 02 00:52	0°♄		direct	4939 Dec 20 02:02	12°♄17'56	
morning set	4939 Feb 08 17:21	10°♄13'35		morning max el	4939 Dec 27 00:29	16°♄08'29	19°04'46
max. Earth dist.	4939 Feb 19 11:24	27°♄05'30	1.43968 AU		4940 Jan 06 14:10	0°♄	
	4939 Feb 21 06:56	0°♄		desc. node	4940 Jan 17 07:12	16°♄25'59	
superior conj	4939 Feb 24 23:26	5°♄58'49	-2°06'14	morning set	4940 Jan 18 21:12	18°♄53'47	
minimum elong	4939 Feb 24 20:09	5°♄45'27	2°06'08		4940 Jan 26 00:10	0°♄	
evening rise	4939 Mar 10 00:13	27°♄54'23		max. Earth dist.	4940 Feb 02 03:02	11°♄09'12	1.45001 AU
	4939 Mar 11 05:23	0°♄		superior conj	4940 Feb 04 13:14	14°♄58'43	-1°46'19
asc. node	4939 Mar 22 22:04	19°♄17'09		minimum elong	4940 Feb 04 04:31	14°♄24'16	1°45'36
evening max el	4939 Mar 27 20:35	25°♄27'22	18°10'21		4940 Feb 13 22:46	0°♄	
retrograde	4939 Apr 03 06:43	28°♄50'29		evening rise	4940 Feb 19 08:35	8°♄48'36	
evening set	4939 Apr 06 03:29	28°♄08'18			4940 Mar 03 12:35	0°♄	
inferior conj	4939 Apr 12 07:12	22°♄53'46	3°26'20	asc. node	4940 Mar 08 19:06	7°♄09'21	
minimum elong	4939 Apr 12 08:38	22°♄49'56	3°26'11	evening max el	4940 Mar 10 08:45	8°♄52'16	18°31'21
min. Earth dist.	4939 Apr 15 01:01	19°♄57'58	0.62829 AU	retrograde	4940 Mar 16 21:29	12°♄26'54	
morning rise	4939 Apr 18 12:31	16°♄48'16		evening set	4940 Mar 20 00:26	11°♄32'21	
direct	4939 Apr 25 09:07	14°♄12'32		inferior conj	4940 Mar 25 19:06	5°♄59'50	3°33'38
desc. node	4939 Apr 28 09:23	14°♄39'33					

minimum elong	4940 Mar 25 18:55	6° Υ 00'22	3°33'38	asc. node	4941 Feb 23 16:08	24° X 08'45	
min. Earth dist.	4940 Mar 27 21:42	3° Υ 29'52	0.64691 AU	retrograde	4941 Feb 28 17:14	26° X 19'54	
	4940 Mar 31 07:00	30° R X		evening set	4941 Mar 04 03:07	25° X 12'06	
morning rise	4940 Mar 31 12:44	29° X 47'45		inferior conj	4941 Mar 09 15:52	19° X 23'28	3°25'14
direct	4940 Apr 07 06:24	26° X 58'59		minimum elong	4941 Mar 09 14:27	19° X 28'00	3°25'06
desc. node	4940 Apr 14 06:24	29° X 24'59		min. Earth dist.	4941 Mar 11 03:07	17° X 30'42	0.66173 AU
	4940 Apr 15 03:13	0° Υ		morning rise	4941 Mar 15 01:27	13° X 09'01	
morning max el	4940 Apr 20 18:57	4° Υ 53'34	27°18'42	direct	4941 Mar 21 10:22	10° X 20'32	
	4940 May 09 20:10	0° S		desc. node	4941 Apr 01 03:26	15° X 57'04	
morning set	4940 May 26 04:21	28° S 40'08		morning max el	4941 Apr 03 04:50	17° X 56'03	26°18'37
	4940 May 26 20:40	0° Π			4941 Apr 13 08:01	0° Υ	
max. Earth dist.	4940 May 30 20:42	8° Π 03'04	1.33543 AU		4941 May 02 19:30	0° S	
				morning set	4941 May 09 07:00	11° S 40'28	
superior conj	4940 Jun 03 08:54	15° Π 22'38	-0°14'27	max. Earth dist.	4941 May 13 07:19	19° S 21'14	1.34983 AU
minimum elong	4940 Jun 03 09:39	15° Π 26'35	0°14'17				
behind sun begin	4940 Jun 03 07:09	15° Π 13'23		superior conj	4941 May 18 06:08	29° S 16'22	-0°44'01
behind sun end	4940 Jun 03 12:09	15° Π 39'49		minimum elong	4941 May 18 08:32	29° S 28'40	0°43'33
asc. node	4940 Jun 04 18:23	18° Π 20'23			4941 May 18 14:39	0° Π	
	4940 Jun 10 05:37	0° S		asc. node	4941 May 22 15:26	8° Π 21'32	
evening rise	4940 Jun 10 14:39	0° S 47'40		evening rise	4941 May 25 23:03	15° Π 15'26	
	4940 Jun 27 06:19	0° Ω			4941 Jun 02 12:03	0° S	
evening max el	4940 Jul 01 14:50	4° Ω 54'29	22°06'41	evening max el	4941 Jun 13 15:29	15° S 43'00	20°40'20
desc. node	4940 Jul 11 05:41	10° Ω 52'08		retrograde	4941 Jun 24 22:47	21° S 15'22	
retrograde	4940 Jul 14 10:17	11° Ω 15'52		evening set	4941 Jun 27 00:03	21° S 05'09	
evening set	4940 Jul 17 06:55	10° Ω 57'39		desc. node	4941 Jun 28 02:40	20° S 51'33	
min. Earth dist.	4940 Jul 25 20:09	7° Ω 16'49	0.54979 AU	inferior conj	4941 Jul 06 06:37	17° S 08'10	-2°23'57
inferior conj	4940 Jul 26 13:21	6° Ω 52'38	-4°07'31	minimum elong	4941 Jul 05 23:59	17° S 17'41	2°21'38
minimum elong	4940 Jul 26 04:41	7° Ω 04'49	4°05'22	min. Earth dist.	4941 Jul 07 07:36	16° S 32'23	0.54863 AU
morning rise	4940 Aug 04 04:11	3° Ω 02'21		morning rise	4941 Jul 14 23:21	13° S 03'14	
direct	4940 Aug 07 08:52	2° Ω 39'37		direct	4941 Jul 18 18:15	12° S 32'19	
morning max el	4940 Aug 19 05:11	8° Ω 11'46	21°30'30	morning max el	4941 Jul 31 23:11	18° S 54'09	23°10'56
asc. node	4940 Aug 31 17:38	25° Ω 19'35			4941 Aug 10 02:51	0° Ω	
	4940 Sep 03 06:35	0° M		asc. node	4941 Aug 18 14:41	14° Ω 30'12	
morning set	4940 Sep 08 14:46	10° M 42'12		morning set	4941 Aug 24 01:56	25° Ω 34'31	
					4941 Aug 26 03:49	0° M	
superior conj	4940 Sep 15 21:29	26° M 00'01	1°43'24	superior conj	4941 Aug 31 02:44	10° M 40'20	1°38'23
minimum elong	4940 Sep 15 21:07	25° M 58'09	1°43'23	minimum elong	4941 Aug 31 01:16	10° M 32'28	1°38'17
	4940 Sep 17 19:54	0° S		max. Earth dist.	4941 Sep 02 19:59	16° M 27'01	1.33644 AU
max. Earth dist.	4940 Sep 19 23:47	4° S 23'17	1.35052 AU	evening rise	4941 Sep 07 18:54	26° M 35'27	
evening rise	4940 Sep 24 06:44	12° S 46'46			4941 Sep 09 12:37	0° S	
	4940 Oct 03 22:18	0° M		desc. node	4941 Sep 24 02:01	25° S 15'33	
desc. node	4940 Oct 07 05:01	5° M 20'42			4941 Sep 27 06:11	0° M	
	4940 Oct 25 02:54	0° S		evening max el	4941 Oct 12 02:18	18° M 08'31	27°18'33
evening max el	4940 Oct 29 13:50	4° S 40'56	26°42'38	retrograde	4941 Oct 25 13:51	25° M 26'45	
retrograde	4940 Nov 11 14:44	11° S 56'53		evening set	4941 Nov 01 13:18	22° M 47'05	
evening set	4940 Nov 18 04:20	9° S 18'20		min. Earth dist.	4941 Nov 05 08:39	19° M 15'12	0.64592 AU
min. Earth dist.	4940 Nov 22 05:31	5° S 11'58	0.65983 AU	inferior conj	4941 Nov 07 16:03	16° M 45'43	-2°17'20
inferior conj	4940 Nov 24 01:00	3° S 03'34	-1°14'38	minimum elong	4941 Nov 07 20:01	16° M 34'59	2°15'46
minimum elong	4940 Nov 24 03:05	2° S 57'24	1°13'44	morning rise	4941 Nov 14 03:57	11° M 17'43	
	4940 Nov 26 18:36	30° R M		asc. node	4941 Nov 14 13:53	11° M 07'40	
asc. node	4940 Nov 27 16:51	29° M 06'31		direct	4941 Nov 16 17:44	10° M 43'24	
morning rise	4940 Nov 30 02:39	27° M 21'44		morning max el	4941 Nov 23 05:19	14° M 09'10	17°57'17
direct	4940 Dec 02 23:35	26° M 35'52			4941 Dec 04 09:14	0° S	
	4940 Dec 09 09:22	0° S		morning set	4941 Dec 10 14:18	10° S 23'30	
morning max el	4940 Dec 09 13:11	0° S 09'24	18°22'35	desc. node	4941 Dec 21 01:18	27° S 42'34	
morning set	4940 Dec 29 03:06	28° S 55'04			4941 Dec 22 11:15	0° S	
	4940 Dec 29 19:16	0° S		superior conj	4941 Dec 24 04:29	2° S 46'01	-0°21'41
desc. node	4941 Jan 03 04:15	7° S 00'16		minimum elong	4941 Dec 24 01:53	2° S 35'35	0°21'18
superior conj	4941 Jan 13 16:08	23° S 35'55	-1°08'24	max. Earth dist.	4941 Dec 28 16:47	9° S 57'01	1.44898 AU
minimum elong	4941 Jan 13 07:58	23° S 03'51	1°07'24	evening rise	4942 Jan 09 09:00	28° S 07'43	
max. Earth dist.	4941 Jan 14 21:38	25° S 31'36	1.45319 AU		4942 Jan 10 14:13	0° S	
	4941 Jan 17 18:10	0° S		greatest brilliancy	4942 Jan 23 22:21	20° S 09'49	-0.6m
evening rise	4941 Jan 29 17:46	18° S 47'18			4942 Jan 30 22:29	0° X	
	4941 Feb 05 20:58	0° X		evening max el	4942 Feb 04 22:38	5° X 56'00	20°04'07
greatest brilliancy	4941 Feb 09 05:17	5° X 12'28	-0.8m	asc. node	4942 Feb 10 13:08	10° X 01'38	
evening max el	4941 Feb 21 17:59	22° X 22'39	19°09'51				

retrograde	4942 Feb 12 15:09	10° K 24'50		4943 Jan 03 21:33	0° \approx	
evening set	4942 Feb 16 09:13	9° K 02'49		evening max el	4943 Jan 18 21:47	19° \approx 30'23 21°11'28
inferior conj	4942 Feb 21 18:39	3° K 00'12 3°04'43		retrograde	4943 Jan 27 13:07	24° \approx 37'23
minimum elong	4942 Feb 21 16:29	3° K 07'30 3°04'17		asc. node	4943 Jan 28 10:09	24° \approx 33'14
min. Earth dist.	4942 Feb 22 15:36	1° K 49'39 0.67232 AU		evening set	4943 Jan 31 16:53	23° \approx 00'12
	4942 Feb 24 01:08	30° K \approx		inferior conj	4943 Feb 06 01:02	16° \approx 46'14 2°34'24
morning rise	4942 Feb 26 23:31	26° \approx 45'49		minimum elong	4943 Feb 05 22:36	16° \approx 54'37 2°33'43
direct	4942 Mar 04 19:56	24° \approx 08'52		min. Earth dist.	4943 Feb 06 09:05	16° \approx 18'24 0.67861 AU
	4942 Mar 15 09:11	0° K		morning rise	4943 Feb 11 04:09	10° \approx 33'32
morning max el	4942 Mar 16 13:37	1° K 09'55 24°59'14		direct	4943 Feb 16 10:10	8° \approx 15'30
desc. node	4942 Mar 19 00:29	3° K 46'36		morning max el	4943 Feb 26 22:28	14° \approx 30'40 23°30'54
	4942 Apr 07 08:08	0° Y		desc. node	4943 Mar 05 21:32	22° \approx 31'26
morning set	4942 Apr 21 16:33	23° Y 47'42			4943 Mar 11 12:47	0° K
	4942 Apr 25 02:37	0° B			4943 Mar 31 06:32	0° Y
max. Earth dist.	4942 Apr 25 07:30	0° B 22'36 1.36858 AU		morning set	4943 Apr 03 03:08	4° Y 46'46
				max. Earth dist.	4943 Apr 07 03:09	11° Y 40'14 1.39007 AU
superior conj	4942 May 01 17:33	12° B 37'33 -1°13'23		superior conj	4943 Apr 14 15:25	25° Y 16'50 -1°40'00
minimum elong	4942 May 01 21:34	12° B 57'16 1°12'45		minimum elong	4943 Apr 14 20:22	25° Y 40'01 1°39'26
asc. node	4942 May 09 12:27	28° B 13'17			4943 Apr 17 03:26	0° B
evening rise	4942 May 10 02:30	29° B 23'55		evening rise	4943 Apr 23 22:16	13° B 06'07
	4942 May 10 09:41	0° II		asc. node	4943 Apr 26 09:28	17° B 51'23
evening max el	4942 May 27 04:35	27° II 12'00 19°31'39			4943 May 03 03:34	0° II
	4942 May 30 16:27	0° B		evening max el	4943 May 10 04:37	9° II 21'44 18°43'12
retrograde	4942 Jun 05 18:00	1° B 51'59		retrograde	4943 May 18 06:33	13° II 20'08
evening set	4942 Jun 07 16:38	1° B 41'16		evening set	4943 May 20 10:21	13° II 04'09
	4942 Jun 12 08:12	30° K II		inferior conj	4943 May 28 07:00	8° II 41'31 1°17'57
desc. node	4942 Jun 14 23:41	28° II 28'59		minimum elong	4943 May 28 09:44	8° II 36'26 1°17'02
inferior conj	4942 Jun 16 09:06	27° II 36'21 -0°24'53		min. Earth dist.	4943 May 31 13:49	6° II 15'57 0.57341 AU
minimum elong	4942 Jun 16 08:00	27° II 38'08 0°24'28		desc. node	4943 Jun 01 20:42	5° II 23'08
min. Earth dist.	4942 Jun 18 20:58	26° II 01'17 0.55712 AU		morning rise	4943 Jun 05 05:50	3° II 29'34
morning rise	4942 Jun 24 20:46	23° II 00'25		direct	4943 Jun 10 19:41	2° II 13'04
direct	4942 Jun 29 12:06	22° II 12'07		morning max el	4943 Jun 25 04:25	9° II 45'04 26°24'08
morning max el	4942 Jul 13 12:43	29° II 15'11 24°54'11			4943 Jul 10 14:19	0° B
	4942 Jul 14 07:09	0° B		asc. node	4943 Jul 23 08:46	23° B 53'16
	4942 Aug 03 10:41	0° Q		morning set	4943 Jul 24 00:22	25° B 15'21
asc. node	4942 Aug 05 11:43	4° Q 03'33			4943 Jul 26 05:34	0° Q
morning set	4942 Aug 08 13:39	10° Q 27'08				
superior conj	4942 Aug 15 12:04	25° Q 30'49 1°27'43		superior conj	4943 Jul 30 23:31	10° Q 25'17 1°12'08
minimum elong	4942 Aug 15 09:57	25° Q 19'12 1°27'28		minimum elong	4943 Jul 30 21:12	10° Q 12'32 1°11'46
max. Earth dist.	4942 Aug 17 00:25	28° Q 48'50 1.32656 AU		max. Earth dist.	4943 Jul 31 10:09	11° Q 23'55 1.32091 AU
	4942 Aug 17 13:32	0° M		evening rise	4943 Aug 06 21:30	25° Q 24'39
evening rise	4942 Aug 22 16:47	10° M 50'54			4943 Aug 09 02:49	0° M
	4942 Sep 01 18:57	0° B			4943 Aug 26 10:32	0° B
desc. node	4942 Sep 10 23:01	14° B 38'52		desc. node	4943 Aug 28 20:00	3° B 17'48
	4942 Sep 23 07:55	0° M		evening max el	4943 Sep 06 17:59	13° B 31'22 27°01'02
evening max el	4942 Sep 24 12:37	1° M 09'52 27°26'11		retrograde	4943 Sep 20 15:03	20° B 42'36
retrograde	4942 Oct 08 06:10	8° M 24'58		evening set	4943 Sep 27 15:48	18° B 32'09
evening set	4942 Oct 15 10:28	5° M 53'58		min. Earth dist.	4943 Oct 01 08:16	15° B 52'02 0.60909 AU
min. Earth dist.	4942 Oct 19 01:54	2° M 52'43 0.62880 AU		inferior conj	4943 Oct 04 12:11	13° B 10'37 -4°17'22
inferior conj	4942 Oct 21 20:52	0° M 10'53 -3°19'57		minimum elong	4943 Oct 04 18:25	12° B 57'19 4°15'51
minimum elong	4942 Oct 22 02:29	29° B 57'15 3°18'05		morning rise	4943 Oct 11 22:59	8° B 20'52
	4942 Oct 22 01:21	30° K B		direct	4943 Oct 14 06:48	7° B 59'20
morning rise	4942 Oct 28 20:07	25° B 00'13		asc. node	4943 Oct 19 07:59	9° B 45'38
direct	4942 Oct 31 05:25	24° B 33'49		morning max el	4943 Oct 21 11:53	11° B 34'33 18°00'41
asc. node	4942 Nov 01 10:55	24° B 41'00			4943 Nov 02 17:42	0° M
morning max el	4942 Nov 06 21:56	28° B 00'06 17°49'37		morning set	4943 Nov 06 05:48	6° M 26'33
	4942 Nov 08 17:43	0° M				
morning set	4942 Nov 23 01:20	23° M 00'20		superior conj	4943 Nov 16 06:58	24° M 43'35 0°58'04
	4942 Nov 27 00:50	0° X		minimum elong	4943 Nov 16 10:55	25° M 01'00 0°57'33
					4943 Nov 19 07:33	0° X
superior conj	4942 Dec 04 16:33	13° X 06'20 0°22'42		max. Earth dist.	4943 Nov 23 21:55	7° X 47'04 1.42118 AU
minimum elong	4942 Dec 04 18:45	13° X 15'32 0°22'22		desc. node	4943 Nov 24 19:19	9° X 15'41
desc. node	4942 Dec 07 22:19	18° X 28'45		evening rise	4943 Nov 29 16:21	17° X 10'19
max. Earth dist.	4942 Dec 11 09:44	24° X 07'56 1.43787 AU			4943 Dec 07 22:52	0° B
	4942 Dec 15 02:00	0° B			4943 Dec 29 18:57	0° \approx
evening rise	4942 Dec 19 19:16	7° B 22'39		evening max el	4944 Jan 01 15:42	3° \approx 06'00 22°27'48

retrograde	4944 Jan 11 09:23	8° \approx 53'23	evening max el	4944 Dec 14 06:00	16° \approx 45'19	23°47'45
asc. node	4944 Jan 15 07:12	7° \approx 33'17	retrograde	4944 Dec 25 02:38	23° \approx 09'36	
evening set	4944 Jan 16 00:24	7° \approx 00'31	evening set	4944 Dec 30 06:14	21° \approx 01'12	
inferior conj	4944 Jan 21 08:58	0° \approx 38'30 1°55'45	asc. node	4945 Jan 01 04:15	19° \approx 06'46	
minimum elong	4944 Jan 21 06:45	0° \approx 46'12 1°54'59	min. Earth dist.	4945 Jan 04 02:01	15° \approx 25'01	0.67960 AU
min. Earth dist.	4944 Jan 21 05:19	0° \approx 51'10 0.68095 AU	inferior conj	4945 Jan 04 16:39	14° \approx 35'11	1°09'55
	4944 Jan 21 20:04	30° \approx 3	minimum elong	4945 Jan 04 15:06	14° \approx 40'28	1°09'19
morning rise	4944 Jan 26 12:58	24° \approx 28'51	morning rise	4945 Jan 09 23:58	8° \approx 30'15	
direct	4944 Jan 31 04:16	22° \approx 33'15	direct	4945 Jan 14 01:21	6° \approx 57'19	
morning max el	4944 Feb 09 10:22	27° \approx 58'49 22°03'00	morning max el	4945 Jan 22 04:41	11° \approx 37'56	20°43'11
	4944 Feb 11 08:14	0° \approx		4945 Feb 05 09:48	0° \approx	
desc. node	4944 Feb 20 18:33	11° \approx 55'30	desc. node	4945 Feb 06 15:36	1° \approx 48'23	
	4944 Mar 04 04:34	0° \approx	morning set	4945 Feb 20 14:16	22° \approx 53'34	
morning set	4944 Mar 13 09:36	14° \approx 24'54		4945 Feb 25 02:47	0° \approx	
max. Earth dist.	4944 Mar 19 01:08	23° \approx 41'26 1.41176 AU	max. Earth dist.	4945 Mar 01 05:47	6° \approx 36'45	1.43087 AU
	4944 Mar 22 18:20	0° \approx				
superior conj	4944 Mar 26 18:54	7° \approx 01'43 -2°00'09	superior conj	4945 Mar 07 23:15	17° \approx 42'17	-2°08'44
minimum elong	4944 Mar 26 23:02	7° \approx 20'01 1°59'53	minimum elong	4945 Mar 07 23:31	17° \approx 43'24	2°08'44
evening rise	4944 Apr 06 06:47	26° \approx 01'21		4945 Mar 15 03:27	0° \approx	
	4944 Apr 08 07:55	0° \approx	evening rise	4945 Mar 19 23:57	8° \approx 33'01	
asc. node	4944 Apr 12 06:30	7° \approx 09'44	asc. node	4945 Mar 30 03:32	26° \approx 01'45	
evening max el	4944 Apr 22 12:16	22° \approx 03'38 18°15'04		4945 Apr 01 18:48	0° \approx	
retrograde	4944 Apr 29 13:59	25° \approx 36'09	evening max el	4945 Apr 06 00:08	5° \approx 08'56	18°06'35
evening set	4944 May 02 00:36	25° \approx 11'37	retrograde	4945 Apr 12 12:58	8° \approx 31'09	
inferior conj	4944 May 09 02:27	20° \approx 28'40 2°30'27	evening set	4945 Apr 15 06:08	7° \approx 55'51	
minimum elong	4944 May 09 05:56	20° \approx 21'04 2°29'33	inferior conj	4945 Apr 21 16:49	2° \approx 52'48	3°13'04
min. Earth dist.	4944 May 12 12:18	17° \approx 31'50 0.59427 AU	minimum elong	4945 Apr 21 19:11	2° \approx 46'51	3°12'41
morning rise	4944 May 16 08:28	14° \approx 47'41		4945 Apr 24 14:08	30° \approx 0	
desc. node	4944 May 18 17:45	13° \approx 39'57	min. Earth dist.	4945 Apr 24 18:27	29° \approx 49'40	0.61632 AU
direct	4944 May 22 16:54	12° \approx 56'29	morning rise	4945 Apr 28 06:25	26° \approx 53'41	
morning max el	4944 Jun 06 02:01	20° \approx 46'49 27°26'14	direct	4945 May 05 01:18	24° \approx 30'57	
	4944 Jun 14 01:11	0° \approx	desc. node	4945 May 05 14:47	24° \approx 31'53	
	4944 Jul 02 10:36	0° \approx		4945 May 16 13:16	0° \approx	
morning set	4944 Jul 07 08:20	9° \approx 53'17	morning max el	4945 May 19 05:46	2° \approx 30'08	27°52'04
asc. node	4944 Jul 09 05:48	13° \approx 53'24		4945 Jun 08 10:48	0° \approx	
			morning set	4945 Jun 21 11:40	24° \approx 14'56	
superior conj	4944 Jul 14 11:15	25° \approx 17'25 0°52'16		4945 Jun 24 05:57	0° \approx	
minimum elong	4944 Jul 14 09:13	25° \approx 06'14 0°51'52	asc. node	4945 Jun 26 02:50	3° \approx 59'29	
max. Earth dist.	4944 Jul 13 21:30	24° \approx 01'37 1.31942 AU	max. Earth dist.	4945 Jun 27 06:40	6° \approx 29'56	1.32215 AU
	4944 Jul 16 14:26	0° \approx				
evening rise	4944 Jul 21 06:33	10° \approx 08'45	superior conj	4945 Jun 28 21:31	10° \approx 01'39	0°28'40
	4944 Jul 31 10:15	0° \approx	minimum elong	4945 Jun 28 20:14	9° \approx 54'40	0°28'24
desc. node	4944 Aug 14 17:02	20° \approx 54'13	evening rise	4945 Jul 05 17:55	24° \approx 56'48	
evening max el	4944 Aug 18 16:10	25° \approx 04'26 26°03'03		4945 Jul 08 03:41	0° \approx	
	4944 Aug 25 02:36	0° \approx	evening max el	4945 Jul 31 07:22	5° \approx 52'18	24°38'47
retrograde	4944 Sep 01 15:25	2° \approx 12'16	desc. node	4945 Aug 01 14:03	7° \approx 03'05	
evening set	4944 Sep 08 00:27	0° \approx 34'14	retrograde	4945 Aug 14 04:46	12° \approx 52'51	
	4944 Sep 09 02:07	30° \approx 8	evening set	4945 Aug 19 08:43	11° \approx 52'57	
min. Earth dist.	4944 Sep 12 04:50	27° \approx 59'04 0.58828 AU	min. Earth dist.	4945 Aug 24 18:38	9° \approx 03'52	0.56905 AU
inferior conj	4944 Sep 15 10:29	25° \approx 35'27 -5°00'48	inferior conj	4945 Aug 27 12:59	7° \approx 16'53	-5°16'25
minimum elong	4944 Sep 15 14:58	25° \approx 27'07 5°00'14	minimum elong	4945 Aug 27 12:26	7° \approx 17'46	5°16'24
morning rise	4944 Sep 23 07:45	21° \approx 08'42	morning rise	4945 Sep 04 18:35	3° \approx 11'37	
direct	4944 Sep 25 17:24	20° \approx 49'30	direct	4945 Sep 07 09:32	2° \approx 52'35	
morning max el	4944 Oct 03 19:51	24° \approx 43'26 18°31'54	morning max el	4945 Sep 16 18:23	7° \approx 16'16	19°24'33
asc. node	4944 Oct 05 05:02	26° \approx 09'11	asc. node	4945 Sep 22 02:05	13° \approx 36'07	
	4944 Oct 08 06:13	0° \approx		4945 Oct 01 12:49	0° \approx	
morning set	4944 Oct 19 22:36	20° \approx 27'31	morning set	4945 Oct 03 23:46	4° \approx 51'57	
	4944 Oct 24 21:18	0° \approx				
superior conj	4944 Oct 28 19:39	7° \approx 25'46 1°22'44	superior conj	4945 Oct 12 01:03	20° \approx 56'25	1°37'22
minimum elong	4944 Oct 28 23:08	7° \approx 41'57 1°22'23	minimum elong	4945 Oct 12 03:05	21° \approx 06'23	1°37'15
max. Earth dist.	4944 Nov 05 04:48	20° \approx 43'12 1.40101 AU		4945 Oct 16 18:39	0° \approx	
evening rise	4944 Nov 09 10:28	27° \approx 56'10	max. Earth dist.	4945 Oct 18 09:20	2° \approx 59'05	1.37996 AU
desc. node	4944 Nov 10 16:21	0° \approx 00'08	evening rise	4945 Oct 22 03:30	9° \approx 44'23	
	4944 Nov 10 16:19	0° \approx	desc. node	4945 Oct 28 13:22	20° \approx 37'36	
	4944 Nov 30 12:34	0° \approx		4945 Nov 03 11:11	0° \approx	
				4945 Nov 26 07:22	0° \approx	

evening max el	4945 Nov 26 18:46	0° Z 28'19	25°04'53	desc. node	4946 Oct 15 10:23	11° M 03'35	
retrograde	4945 Dec 08 15:38	7° Z 20'41			4946 Oct 28 05:41	0° Z	
evening set	4945 Dec 14 08:44	4° Z 58'01		evening max el	4946 Nov 09 07:31	14° Z 11'54	26°11'44
	4945 Dec 18 19:33	30° R Z		retrograde	4946 Nov 21 23:34	21° Z 21'27	
min. Earth dist.	4945 Dec 18 20:48	29° Z 55'57	0.67470 AU	evening set	4946 Nov 28 06:08	18° Z 47'20	
asc. node	4945 Dec 19 01:18	29° Z 41'16		min. Earth dist.	4946 Dec 02 11:12	14° Z 20'34	0.66631 AU
inferior conj	4945 Dec 19 22:15	28° Z 32'37	0°17'47	inferior conj	4946 Dec 03 23:54	12° Z 27'28	-0°39'39
minimum elong	4945 Dec 19 21:49	28° Z 34'04	0°17'37	minimum elong	4946 Dec 04 00:58	12° Z 24'10	0°39'10
morning rise	4945 Dec 25 11:06	22° Z 34'34		asc. node	4946 Dec 05 22:21	10° Z 08'27	
direct	4945 Dec 29 00:01	21° Z 22'25		morning rise	4946 Dec 09 20:20	6° Z 38'53	
morning max el	4946 Jan 05 06:50	25° Z 27'55	19°36'17	direct	4946 Dec 12 22:36	5° Z 44'23	
	4946 Jan 09 06:13	0° Z		morning max el	4946 Dec 19 16:14	9° Z 26'12	18°44'47
greatest brilliancy	4946 Jan 18 08:33	12° Z 43'30	-0.7m		4947 Jan 03 10:45	0° Z	
desc. node	4946 Jan 24 12:38	22° Z 01'44		morning set	4947 Jan 10 00:27	10° Z 19'08	
	4946 Jan 29 17:21	0° \approx		desc. node	4947 Jan 11 09:39	12° Z 29'47	
morning set	4946 Jan 30 10:52	1° \approx 07'34			4947 Jan 22 13:20	0° \approx	
max. Earth dist.	4946 Feb 11 17:52	20° \approx 19'43	1.44496 AU	max. Earth dist.	4947 Jan 25 11:31	4° \approx 35'11	1.45234 AU
superior conj	4946 Feb 16 02:00	27° \approx 15'12	-2°00'16	superior conj	4947 Jan 26 08:52	5° \approx 59'03	-1°32'03
minimum elong	4946 Feb 15 20:01	26° \approx 51'11	1°59'57	minimum elong	4947 Jan 25 23:28	5° \approx 22'08	1°31'06
	4946 Feb 17 18:54	0° X		evening rise	4947 Feb 10 19:35	0° X 29'57	
evening rise	4946 Mar 01 21:15	20° X 00'01			4947 Feb 10 12:07	0° X	
	4946 Mar 07 19:46	0° Y		greatest brilliancy	4947 Feb 17 21:37	11° X 53'21	-0.9m
asc. node	4946 Mar 17 00:34	14° Y 18'56			4947 Mar 02 05:40	0° Y	
evening max el	4946 Mar 20 13:02	18° Y 29'08	18°17'05	asc. node	4947 Mar 03 21:36	1° Y 50'38	
retrograde	4946 Mar 26 23:07	21° Y 55'16		evening max el	4947 Mar 04 00:15	1° Y 57'24	18°45'38
evening set	4946 Mar 29 22:31	21° Y 07'53		retrograde	4947 Mar 10 16:21	5° Y 40'03	
inferior conj	4946 Apr 04 21:59	15° Y 45'44	3°31'34	evening set	4947 Mar 13 22:14	4° Y 39'46	
minimum elong	4946 Apr 04 22:42	15° Y 43'42	3°31'32		4947 Mar 18 18:23	30° R X	
min. Earth dist.	4946 Apr 07 09:34	12° Y 58'59	0.63672 AU	inferior conj	4947 Mar 19 14:02	29° X 00'04	3°31'43
morning rise	4946 Apr 10 21:55	9° Y 37'01		minimum elong	4947 Mar 19 13:16	29° X 02'23	3°31'41
direct	4946 Apr 17 18:21	6° Y 53'50		min. Earth dist.	4947 Mar 21 09:56	26° X 45'15	0.65378 AU
desc. node	4946 Apr 22 11:50	8° Y 00'43		morning rise	4947 Mar 25 03:50	22° X 46'50	
morning max el	4946 May 01 13:52	14° Y 52'27	27°40'37	direct	4947 Mar 31 18:24	19° X 56'52	
	4946 May 13 21:16	0° Z		desc. node	4947 Apr 09 08:52	23° X 35'56	
	4946 Jun 01 02:05	0° II		morning max el	4947 Apr 13 23:51	27° X 44'12	26°56'09
morning set	4946 Jun 05 08:01	8° II 13'08			4947 Apr 16 03:22	0° Y	
max. Earth dist.	4946 Jun 10 09:50	18° II 37'30	1.32928 AU		4947 May 07 14:24	0° Z	
asc. node	4946 Jun 12 23:52	24° II 07'21		morning set	4947 May 19 18:13	21° Z 37'46	
				max. Earth dist.	4947 May 24 03:25	0° II 15'13	1.34105 AU
					4947 May 24 00:24	0° II	
superior conj	4946 Jun 13 04:29	24° II 32'08	0°02'01				
minimum elong	4946 Jun 13 04:23	24° II 31'36	0°01'59	superior conj	4947 May 28 05:58	8° II 41'20	-0°26'52
behind sun begin	4946 Jun 12 23:05	24° II 03'08		minimum elong	4947 May 28 07:24	8° II 48'49	0°26'36
behind sun end	4946 Jun 13 09:42	25° II 00'06		asc. node	4947 May 30 20:53	14° II 12'10	
	4946 Jun 15 17:17	0° Z		evening rise	4947 Jun 04 15:55	24° II 19'13	
evening rise	4946 Jun 20 05:42	9° Z 42'44			4947 Jun 07 10:08	0° Z	
	4946 Jun 30 17:25	0° Z		evening max el	4947 Jun 24 14:30	26° Z 46'27	21°28'00
evening max el	4946 Jul 12 20:13	16° Z 15'55	23°01'52		4947 Jun 28 11:57	0° Z	
desc. node	4946 Jul 19 11:04	21° Z 12'21		desc. node	4947 Jul 06 08:06	2° Z 47'51	
retrograde	4946 Jul 26 05:17	22° Z 56'36		retrograde	4947 Jul 06 19:43	2° Z 48'24	
evening set	4946 Jul 29 20:51	22° Z 27'32		evening set	4947 Jul 09 06:04	2° Z 34'53	
min. Earth dist.	4946 Aug 06 05:06	19° Z 09'37	0.55468 AU		4947 Jul 16 00:40	30° R Z	
inferior conj	4946 Aug 07 20:08	18° Z 13'07	-4°47'46	inferior conj	4947 Jul 18 14:37	28° Z 35'03	-3°27'41
minimum elong	4946 Aug 07 13:21	18° Z 22'58	4°46'38	minimum elong	4947 Jul 18 06:02	28° Z 47'03	3°25'08
morning rise	4946 Aug 16 08:05	14° Z 21'48		min. Earth dist.	4947 Jul 18 15:13	28° Z 34'12	0.54815 AU
direct	4946 Aug 19 07:19	14° Z 00'57		morning rise	4947 Jul 27 06:56	24° Z 41'30	
morning max el	4946 Aug 30 05:08	19° Z 05'24	20°38'52	direct	4947 Jul 30 17:07	24° Z 16'06	
	4946 Sep 07 19:27	0° M		morning max el	4947 Aug 12 04:15	0° Z 08'57	22°12'02
asc. node	4946 Sep 08 23:08	1° M 52'34			4947 Aug 12 00:22	0° Z	
morning set	4946 Sep 18 06:31	19° M 32'24		asc. node	4947 Aug 26 20:10	20° Z 45'57	
	4946 Sep 23 07:39	0° Z			4947 Aug 31 13:57	0° M	
superior conj	4946 Sep 25 18:29	5° Z 02'37	1°43'21	morning set	4947 Sep 02 16:34	4° M 21'48	
minimum elong	4946 Sep 25 18:57	5° Z 04'56	1°43'20				
max. Earth dist.	4946 Sep 30 17:05	14° Z 54'20	1.36043 AU	superior conj	4947 Sep 09 20:16	19° M 32'47	1°42'01
evening rise	4946 Oct 04 16:37	22° Z 28'05		minimum elong	4947 Sep 09 19:23	19° M 28'09	1°41'58
	4946 Oct 08 20:46	0° M		max. Earth dist.	4947 Sep 13 08:17	26° M 50'21	1.34405 AU

































































































































	4947 Sep 14 21:36	0°♄		max. Earth dist.	4948 Aug 26 08:05	9°♄00'58	1.33169 AU
evening rise	4947 Sep 17 21:30	5°♄55'36		evening rise	4948 Aug 31 14:11	19°♄56'28	
	4947 Oct 01 13:13	0°♄			4948 Sep 05 18:32	0°♄	
desc. node	4947 Oct 02 07:24	1°♄11'51		desc. node	4948 Sep 18 04:24	20°♄54'35	
evening max el	4947 Oct 22 20:12	27°♄47'37	27°00'58		4948 Sep 24 15:04	0°♄	
	4947 Oct 25 07:02	0°♄		evening max el	4948 Oct 04 07:44	11°♄04'29	27°25'31
retrograde	4947 Nov 05 01:55	5°♄04'55		retrograde	4948 Oct 17 22:18	18°♄22'28	
evening set	4947 Nov 11 20:21	2°♄24'44		evening set	4948 Oct 25 00:43	15°♄44'45	
	4947 Nov 14 10:54	30°♄		min. Earth dist.	4948 Oct 28 17:52	12°♄26'58	0.63897 AU
min. Earth dist.	4947 Nov 15 18:55	28°♄33'32	0.65436 AU	inferior conj	4948 Oct 31 06:29	9°♄50'37	-2°44'11
inferior conj	4947 Nov 17 19:28	26°♄15'20	-1°41'01	minimum elong	4948 Oct 31 11:13	9°♄38'22	2°42'26
minimum elong	4947 Nov 17 22:21	26°♄07'07	1°39'49	morning rise	4948 Nov 06 23:10	4°♄29'56	
asc. node	4947 Nov 22 19:23	21°♄23'30		asc. node	4948 Nov 08 16:26	4°♄02'24	
morning rise	4947 Nov 24 01:19	20°♄39'12		direct	4948 Nov 09 10:38	3°♄59'30	
direct	4947 Nov 26 19:00	19°♄58'37		morning max el	4948 Nov 15 23:31	7°♄24'28	17°51'53
morning max el	4947 Dec 03 06:45	23°♄27'24	18°09'47		4948 Nov 30 23:38	0°♄	
	4947 Dec 08 13:39	0°♄		morning set	4948 Dec 02 17:12	2°♄58'22	
morning set	4947 Dec 21 19:08	20°♄58'59					
	4947 Dec 27 08:03	0°♄		superior conj	4948 Dec 15 10:40	24°♄20'42	-0°02'03
desc. node	4947 Dec 29 06:41	3°♄08'02		minimum elong	4948 Dec 15 10:27	24°♄19'48	0°02'01
				behind sun begin	4948 Dec 15 00:37	23°♄39'42	
superior conj	4948 Jan 05 13:16	14°♄43'22	-0°48'56	behind sun end	4948 Dec 15 20:16	24°♄59'50	
minimum elong	4948 Jan 05 07:12	14°♄19'26	0°48'07	desc. node	4948 Dec 15 03:41	23°♄52'12	
max. Earth dist.	4948 Jan 08 07:11	19°♄02'54	1.45226 AU		4948 Dec 18 22:34	0°♄	
	4948 Jan 15 07:16	0°♄		max. Earth dist.	4948 Dec 21 01:22	3°♄22'51	1.44492 AU
evening rise	4948 Jan 21 20:04	10°♄09'52		evening rise	4948 Dec 31 07:07	19°♄22'23	
greatest brilliancy	4948 Feb 03 07:04	29°♄21'28	-0.7m		4949 Jan 07 06:33	0°♄	
	4948 Feb 03 17:19	0°♄		evening max el	4949 Jan 28 09:53	29°♄02'46	20°31'24
evening max el	4948 Feb 15 07:39	15°♄29'33	19°31'05		4949 Jan 29 09:04	0°♄	
asc. node	4948 Feb 18 18:38	18°♄24'09		asc. node	4949 Feb 04 15:40	3°♄44'07	
retrograde	4948 Feb 22 13:28	19°♄39'26		retrograde	4949 Feb 05 11:44	3°♄47'53	
evening set	4948 Feb 26 02:40	18°♄25'36		evening set	4949 Feb 09 09:40	2°♄19'37	
inferior conj	4948 Mar 02 13:42	12°♄30'26	3°17'53		4949 Feb 11 19:30	30°♄	
minimum elong	4948 Mar 02 11:54	12°♄36'19	3°17'37	inferior conj	4949 Feb 14 18:17	26°♄11'40	2°52'59
min. Earth dist.	4948 Mar 03 18:36	10°♄55'36	0.66671 AU	minimum elong	4949 Feb 14 15:57	26°♄19'39	2°52'26
morning rise	4948 Mar 07 20:53	6°♄15'44		min. Earth dist.	4949 Feb 15 09:36	25°♄19'20	0.67541 AU
direct	4948 Mar 14 00:41	3°♄31'20		morning rise	4949 Feb 19 22:02	19°♄57'33	
desc. node	4948 Mar 26 05:53	10°♄44'43		direct	4949 Feb 25 12:21	17°♄27'59	
morning max el	4948 Mar 26 09:35	10°♄54'01	25°46'44	morning max el	4949 Mar 08 18:14	24°♄11'25	24°22'13
	4948 Apr 10 14:26	0°♄		desc. node	4949 Mar 13 02:55	29°♄00'00	
	4948 Apr 29 05:16	0°♄			4949 Mar 13 23:00	0°♄	
morning set	4948 May 01 14:18	4°♄18'00		morning set	4949 Apr 04 00:48	0°♄	
max. Earth dist.	4948 May 05 09:39	11°♄25'42	1.35740 AU	max. Earth dist.	4949 Apr 13 14:53	15°♄58'39	
					4949 Apr 17 06:45	22°♄28'37	1.37749 AU
superior conj	4948 May 10 23:26	22°♄22'36	-0°56'36		4949 Apr 21 08:45	0°♄	
minimum elong	4948 May 11 02:33	22°♄38'19	0°56'03				
	4948 May 14 17:16	0°♄		superior conj	4949 Apr 24 05:34	5°♄27'09	-1°25'12
asc. node	4948 May 16 17:54	4°♄10'14		minimum elong	4949 Apr 24 10:07	5°♄49'03	1°24'33
evening rise	4948 May 18 22:33	8°♄40'20		evening rise	4949 May 02 23:06	22°♄38'35	
	4948 May 30 13:24	0°♄		asc. node	4949 May 03 14:56	23°♄56'55	
evening max el	4948 Jun 05 20:16	7°♄51'06	20°08'34		4949 May 06 17:31	0°♄	
retrograde	4948 Jun 16 09:53	13°♄01'11		evening max el	4949 May 19 14:23	19°♄38'27	19°08'32
evening set	4948 Jun 18 08:18	12°♄51'32		retrograde	4949 May 28 11:42	23°♄58'59	
desc. node	4948 Jun 22 05:06	11°♄40'23		evening set	4949 May 30 11:52	23°♄46'38	
inferior conj	4948 Jun 27 10:08	8°♄52'27	-1°33'10	inferior conj	4949 Jun 07 20:11	19°♄35'12	0°21'58
minimum elong	4948 Jun 27 05:46	8°♄58'57	1°31'33	minimum elong	4949 Jun 07 21:05	19°♄33'41	0°21'38
min. Earth dist.	4948 Jun 29 03:20	7°♄51'10	0.55116 AU	desc. node	4949 Jun 09 02:06	18°♄44'09	
morning rise	4948 Jul 06 01:44	4°♄35'42		min. Earth dist.	4949 Jun 10 18:22	17°♄36'35	0.56326 AU
direct	4948 Jul 10 04:21	3°♄59'00		morning rise	4949 Jun 16 03:07	14°♄43'17	
morning max el	4948 Jul 23 19:42	10°♄39'41	23°55'28	direct	4949 Jun 21 04:05	13°♄44'02	
	4948 Aug 07 05:49	0°♄		morning max el	4949 Jul 05 09:37	21°♄01'50	25°34'57
asc. node	4948 Aug 12 17:11	10°♄07'00			4949 Jul 13 04:15	0°♄	
morning set	4948 Aug 17 04:10	19°♄14'53		asc. node	4949 Jul 30 14:14	29°♄48'16	
	4948 Aug 22 03:55	0°♄			4949 Jul 30 16:30	0°♄	
				morning set	4949 Aug 01 15:41	4°♄06'41	
superior conj	4948 Aug 24 03:32	4°♄18'22	1°34'29				
minimum elong	4948 Aug 24 01:44	4°♄08'37	1°34'20	superior conj	4949 Aug 08 14:03	19°♄12'04	1°21'40

minimum elong	4949 Aug 08 11:48	18°Ω59'39	1°21'22	superior conj	4950 Jul 24 01:51	4°Ω06'35	1°04'13
max. Earth dist.	4949 Aug 09 15:00	21°Ω28'59	1.32361 AU	minimum elong	4950 Jul 23 23:36	3°Ω54'10	1°03'49
	4949 Aug 13 13:33	0°൬		max. Earth dist.	4950 Jul 24 01:52	4°Ω06'44	1.31978 AU
evening rise	4949 Aug 15 15:20	4°൬21'20		evening rise	4950 Jul 30 22:12	19°Ω00'53	
	4949 Aug 29 11:05	0°Ω			4950 Aug 05 08:11	0°൬	
desc. node	4949 Sep 05 01:24	10°Ω01'22		desc. node	4950 Aug 22 22:26	28°൬16'39	
evening max el	4949 Sep 16 16:17	23°Ω50'52	27°19'40		4950 Aug 24 07:57	0°Ω	
	4949 Sep 25 11:17	0°ℳ		evening max el	4950 Aug 29 19:04	5°Ω53'34	26°40'16
retrograde	4949 Sep 30 12:00	1°ℳ05'04		retrograde	4950 Sep 12 17:24	13°Ω02'50	
	4949 Oct 05 07:26	30°℞Ω		evening set	4950 Sep 19 12:56	11°Ω05'20	
evening set	4949 Oct 07 15:47	28°Ω41'17		min. Earth dist.	4950 Sep 23 08:58	8°Ω29'16	0.60024 AU
min. Earth dist.	4949 Oct 11 06:43	25°Ω50'26	0.62058 AU	inferior conj	4950 Sep 26 14:36	5°Ω53'26	-4°38'14
inferior conj	4949 Oct 14 06:02	23°Ω06'43	-3°45'24	minimum elong	4950 Sep 26 20:27	5°Ω41'37	4°37'05
minimum elong	4949 Oct 14 12:06	22°Ω52'44	3°43'36	morning rise	4950 Oct 04 06:02	1°Ω12'56	
morning rise	4949 Oct 21 10:16	18°Ω04'37		direct	4950 Oct 06 14:10	0°Ω52'39	
direct	4949 Oct 23 18:22	17°Ω40'46		asc. node	4950 Oct 13 10:32	3°Ω56'02	
asc. node	4949 Oct 26 13:29	18°Ω16'02		morning max el	4950 Oct 14 03:16	4°Ω34'51	18°11'20
morning max el	4949 Oct 30 15:29	21°Ω10'12	17°51'57	morning set	4950 Oct 29 22:46	29°Ω41'40	
	4949 Nov 06 07:41	0°ℳ			4950 Oct 30 02:39	0°ℳ	
morning set	4949 Nov 15 12:27	15°ℳ58'47					
	4949 Nov 23 09:23	0°♌		superior conj	4950 Nov 08 10:47	17°ℳ21'27	1°09'49
				minimum elong	4950 Nov 08 14:43	17°ℳ39'14	1°09'21
superior conj	4949 Nov 26 10:15	5°♌15'00	0°38'58		4950 Nov 15 15:57	0°♌	
minimum elong	4949 Nov 26 13:33	5°♌29'07	0°38'31	max. Earth dist.	4950 Nov 16 01:59	0°♌42'32	1.41294 AU
desc. node	4949 Dec 02 00:43	14°♌39'29		desc. node	4950 Nov 18 21:44	5°♌25'45	
max. Earth dist.	4949 Dec 03 16:01	17°♌20'30	1.43129 AU	evening rise	4950 Nov 21 01:39	8°♌58'19	
evening rise	4949 Dec 10 20:16	28°♌47'18			4950 Dec 04 17:03	0°♌	
	4949 Dec 11 14:55	0°♌		evening max el	4950 Dec 24 23:02	26°♌15'08	23°01'49
	4949 Dec 31 23:56	0°♌			4950 Dec 29 06:24	0°♌	
evening max el	4950 Jan 11 06:44	12°♌37'41	21°43'12	retrograde	4951 Jan 04 04:09	2°♌18'21	
retrograde	4950 Jan 20 09:11	18°♌02'02		evening set	4951 Jan 09 00:25	0°♌18'54	
asc. node	4950 Jan 22 12:43	17°♌37'22		asc. node	4951 Jan 09 09:46	29°♌58'35	
evening set	4950 Jan 24 17:27	16°♌18'29			4951 Jan 09 09:08	30°℞♌	
inferior conj	4950 Jan 30 01:35	10°♌00'46	2°18'58	inferior conj	4951 Jan 14 09:38	23°♌54'58	1°37'08
minimum elong	4950 Jan 29 23:11	10°♌09'04	2°18'13	minimum elong	4951 Jan 14 07:39	24°♌01'50	1°36'24
min. Earth dist.	4950 Jan 30 04:37	9°♌50'11	0.68006 AU	min. Earth dist.	4951 Jan 14 01:19	24°♌23'40	0.68085 AU
morning rise	4950 Feb 04 04:45	3°♌48'58		morning rise	4951 Jan 19 14:46	17°♌47'10	
direct	4950 Feb 09 04:33	1°♌40'00		direct	4951 Jan 24 00:07	16°♌01'07	
morning max el	4950 Feb 19 03:46	7°♌34'15	22°52'52	morning max el	4951 Feb 01 17:57	21°♌06'03	21°27'41
desc. node	4950 Feb 27 23:58	18°♌03'00			4951 Feb 09 06:33	0°♌	
	4950 Mar 08 14:13	0°♌		desc. node	4951 Feb 14 21:01	7°♌40'21	
morning set	4950 Mar 25 13:53	26°♌23'46			4951 Mar 01 20:34	0°♌	
	4950 Mar 27 17:40	0°♌		morning set	4951 Mar 05 08:16	5°♌28'17	
max. Earth dist.	4950 Mar 30 02:02	3°♌59'42	1.39943 AU	max. Earth dist.	4951 Mar 12 02:51	16°♌25'02	1.42038 AU
superior conj	4950 Apr 06 20:15	17°♌44'47	-1°49'37	superior conj	4951 Mar 19 14:30	29°♌03'50	-2°05'32
minimum elong	4950 Apr 07 01:09	18°♌07'12	1°49'09	minimum elong	4951 Mar 19 17:24	29°♌16'26	2°05'26
	4950 Apr 13 09:40	0°♌			4951 Mar 20 03:27	0°♌	
evening rise	4950 Apr 16 14:31	6°♌06'10		evening rise	4951 Mar 30 17:03	18°♌54'13	
asc. node	4950 Apr 20 11:59	13°♌27'18			4951 Apr 05 20:58	0°♌	
	4950 Apr 30 20:39	0°♌		asc. node	4951 Apr 07 09:02	2°♌35'33	
evening max el	4950 May 02 18:13	2°♌03'34	18°28'51	evening max el	4951 Apr 16 04:08	14°♌56'59	18°09'08
retrograde	4950 May 10 08:12	5°♌48'30		retrograde	4951 Apr 22 22:52	18°♌23'09	
evening set	4950 May 12 15:00	5°♌29'09		evening set	4951 Apr 25 12:28	17°♌54'05	
inferior conj	4950 May 20 03:21	0°♌58'13	1°52'36	inferior conj	4951 May 02 07:19	13°♌02'15	2°51'51
minimum elong	4950 May 20 06:43	0°♌51'29	1°51'33	minimum elong	4951 May 02 10:29	12°♌54'56	2°51'10
	4950 May 21 08:26	30°℞♌		min. Earth dist.	4951 May 05 14:37	10°♌00'02	0.60369 AU
min. Earth dist.	4950 May 23 13:21	28°♌16'25	0.58197 AU	morning rise	4951 May 09 06:10	7°♌12'36	
desc. node	4950 May 26 23:10	25°♌59'43		desc. node	4951 May 13 20:12	5°♌18'46	
morning rise	4950 May 27 19:15	25°♌32'55		direct	4951 May 15 20:11	5°♌07'21	
direct	4950 Jun 02 18:07	24°♌01'37		morning max el	4951 May 30 03:35	13°♌01'31	27°41'57
	4950 Jun 15 07:13	0°♌			4951 Jun 12 15:10	0°♌	
morning max el	4950 Jun 17 03:20	1°♌42'30	26°54'33		4951 Jun 29 16:01	0°♌	
	4950 Jul 07 09:12	0°♌		morning set	4951 Jul 01 07:43	3°♌23'26	
morning set	4950 Jul 17 01:26	18°♌51'15		asc. node	4951 Jul 04 08:18	9°♌46'34	
asc. node	4950 Jul 17 11:15	19°♌43'04		max. Earth dist.	4951 Jul 07 13:00	16°♌43'24	1.32013 AU
	4950 Jul 22 05:10	0°Ω					

superior conj	4951 Jul 08 13:11	18° \mathfrak{D} 56'23	0°42'42	superior conj	4952 Jun 21 22:15	3° \mathfrak{D} 34'55	0°17'43
minimum elong	4951 Jul 08 11:25	18° \mathfrak{D} 46'41	0°42'20	minimum elong	4952 Jun 21 21:25	3° \mathfrak{D} 30'26	0°17'31
	4951 Jul 13 14:06	0° \mathfrak{Q}		evening rise	4952 Jun 28 20:16	18° \mathfrak{D} 35'34	
evening rise	4951 Jul 15 08:32	3° \mathfrak{Q} 48'06			4952 Jul 04 10:07	0° \mathfrak{Q}	
	4951 Jul 29 06:45	0° \mathfrak{P}		evening max el	4952 Jul 23 03:15	27° \mathfrak{Q} 39'27	23°58'01
desc. node	4951 Aug 09 19:27	15° \mathfrak{P} 19'33			4952 Jul 25 18:52	0° \mathfrak{P}	
evening max el	4951 Aug 11 14:10	17° \mathfrak{P} 06'35	25°29'40	desc. node	4952 Jul 26 16:28	0° \mathfrak{P} 41'37	
retrograde	4951 Aug 25 12:53	24° \mathfrak{P} 11'19		retrograde	4952 Aug 05 21:00	4° \mathfrak{P} 34'11	
evening set	4951 Aug 31 11:22	22° \mathfrak{P} 49'26		evening set	4952 Aug 10 09:50	3° \mathfrak{P} 48'44	
min. Earth dist.	4951 Sep 05 02:00	20° \mathfrak{P} 10'43	0.57984 AU	min. Earth dist.	4952 Aug 16 13:36	0° \mathfrak{P} 49'04	0.56219 AU
inferior conj	4951 Sep 08 04:43	18° \mathfrak{P} 00'44	-5°11'47		4952 Aug 17 21:50	30° \mathfrak{R} \mathfrak{Q}	
minimum elong	4951 Sep 08 07:27	17° \mathfrak{P} 55'57	5°11'35	inferior conj	4952 Aug 18 22:33	29° \mathfrak{Q} 21'57	-5°10'27
morning rise	4951 Sep 16 05:49	13° \mathfrak{P} 43'30		minimum elong	4952 Aug 18 19:13	29° \mathfrak{Q} 27'05	5°10'12
direct	4951 Sep 18 17:34	13° \mathfrak{P} 24'26		morning rise	4952 Aug 27 07:08	25° \mathfrak{Q} 24'29	
morning max el	4951 Sep 27 07:32	17° \mathfrak{P} 29'13	18°51'33	direct	4952 Aug 30 01:17	25° \mathfrak{Q} 04'58	
asc. node	4951 Sep 30 07:34	20° \mathfrak{P} 48'09		morning max el	4952 Sep 09 01:16	29° \mathfrak{Q} 44'14	19°53'37
	4951 Oct 06 09:43	0° \mathfrak{L}			4952 Sep 09 07:56	0° \mathfrak{P}	
morning set	4951 Oct 13 19:31	13° \mathfrak{L} 53'49		asc. node	4952 Sep 16 04:35	8° \mathfrak{P} 37'28	
				morning set	4952 Sep 26 23:20	28° \mathfrak{P} 25'48	
superior conj	4951 Oct 22 07:13	0° \mathfrak{M} 25'58	1°30'06		4952 Sep 27 17:54	0° \mathfrak{L}	
minimum elong	4951 Oct 22 10:08	0° \mathfrak{M} 39'53	1°29'51	superior conj	4952 Oct 04 18:16	14° \mathfrak{L} 13'33	1°40'53
	4951 Oct 22 01:45	0° \mathfrak{M}		minimum elong	4952 Oct 04 19:37	14° \mathfrak{L} 20'18	1°40'49
max. Earth dist.	4951 Oct 29 07:49	13° \mathfrak{M} 22'03	1.39209 AU	max. Earth dist.	4952 Oct 10 12:56	25° \mathfrak{L} 26'01	1.37132 AU
evening rise	4951 Nov 02 05:38	20° \mathfrak{M} 10'38			4952 Oct 13 00:01	0° \mathfrak{M}	
desc. node	4951 Nov 05 18:46	26° \mathfrak{M} 07'31		evening rise	4952 Oct 14 07:40	2° \mathfrak{M} 23'30	
	4951 Nov 08 03:53	0° \mathfrak{X}		desc. node	4952 Oct 22 15:46	16° \mathfrak{M} 40'41	
	4951 Nov 28 20:51	0° \mathfrak{Z}			4952 Oct 31 06:12	0° \mathfrak{X}	
evening max el	4951 Dec 07 12:27	9° \mathfrak{Z} 55'54	24°21'19	evening max el	4952 Nov 19 00:53	23° \mathfrak{X} 39'12	25°34'57
retrograde	4951 Dec 18 19:36	16° \mathfrak{Z} 32'52			4952 Nov 27 20:53	0° \mathfrak{Z}	
evening set	4951 Dec 24 05:01	14° \mathfrak{Z} 17'56		retrograde	4952 Dec 01 06:37	0° \mathfrak{Z} 40'48	
asc. node	4951 Dec 27 06:49	11° \mathfrak{Z} 01'29			4952 Dec 04 10:47	30° \mathfrak{R} \mathfrak{X}	
min. Earth dist.	4951 Dec 28 21:20	8° \mathfrak{Z} 56'25	0.67799 AU	evening set	4952 Dec 07 05:36	28° \mathfrak{X} 12'28	
inferior conj	4951 Dec 29 16:37	7° \mathfrak{Z} 51'44	0°48'29	min. Earth dist.	4952 Dec 11 14:29	23° \mathfrak{X} 25'29	0.67154 AU
minimum elong	4951 Dec 29 15:29	7° \mathfrak{Z} 55'32	0°48'02	inferior conj	4952 Dec 12 20:46	21° \mathfrak{X} 48'38	-0°06'01
morning rise	4952 Jan 04 02:03	1° \mathfrak{Z} 49'45		minimum elong	4952 Dec 12 20:55	21° \mathfrak{X} 48'09	0°05'56
direct	4952 Jan 07 21:58	0° \mathfrak{Z} 26'01		transit middle	4952 Dec 12 20:55	21° \mathfrak{X} 48'09	0°05'56
morning max el	4952 Jan 15 15:35	4° \mathfrak{Z} 49'53	20°12'58	transit begin	4952 Dec 12 18:19	21° \mathfrak{X} 56'31	
desc. node	4952 Feb 01 18:02	27° \mathfrak{Z} 42'24		transit end	4952 Dec 12 23:32	21° \mathfrak{X} 39'47	
	4952 Feb 03 06:50	0° \mathfrak{A}		asc. node	4952 Dec 13 03:50	21° \mathfrak{X} 26'03	
morning set	4952 Feb 12 06:24	13° \mathfrak{A} 41'19		morning rise	4952 Dec 18 12:38	15° \mathfrak{X} 54'29	
max. Earth dist.	4952 Feb 22 11:19	29° \mathfrak{A} 43'54	1.43757 AU	direct	4952 Dec 21 20:40	14° \mathfrak{X} 50'29	
	4952 Feb 22 15:20	0° \mathfrak{H}		morning max el	4952 Dec 28 21:09	18° \mathfrak{X} 44'41	19°12'26
superior conj	4952 Feb 28 07:49	9° \mathfrak{H} 14'14	-2°07'30		4953 Jan 06 17:20	0° \mathfrak{Z}	
minimum elong	4952 Feb 28 05:31	9° \mathfrak{H} 04'48	2°07'27	greatest brilliancy	4953 Jan 11 13:05	7° \mathfrak{Z} 10'02	-0.7m
	4952 Mar 11 14:03	0° \mathfrak{Y}		desc. node	4953 Jan 18 15:04	18° \mathfrak{Z} 02'37	
evening rise	4952 Mar 12 02:15	0° \mathfrak{Y} 52'50		morning set	4953 Jan 21 07:37	22° \mathfrak{Z} 12'48	
asc. node	4952 Mar 24 06:05	21° \mathfrak{Y} 13'36			4953 Jan 26 07:49	0° \mathfrak{A}	
evening max el	4952 Mar 29 16:42	28° \mathfrak{Y} 08'41	18°08'45	max. Earth dist.	4953 Feb 04 01:55	13° \mathfrak{A} 42'16	1.44893 AU
	4952 Mar 31 21:03	0° \mathfrak{B}		superior conj	4953 Feb 07 00:43	18° \mathfrak{A} 22'01	-1°50'38
retrograde	4952 Apr 05 03:17	1° \mathfrak{B} 31'17		minimum elong	4953 Feb 06 16:32	17° \mathfrak{A} 49'37	1°50'01
evening set	4952 Apr 07 23:04	0° \mathfrak{B} 50'57			4953 Feb 14 07:01	0° \mathfrak{H}	
	4952 Apr 09 10:25	30° \mathfrak{R} \mathfrak{Y}		evening rise	4953 Feb 21 14:03	11° \mathfrak{H} 55'41	
inferior conj	4952 Apr 14 04:28	25° \mathfrak{Y} 39'19	3°23'29		4953 Mar 04 15:40	0° \mathfrak{Y}	
minimum elong	4952 Apr 14 06:09	25° \mathfrak{Y} 34'52	3°23'18	asc. node	4953 Mar 11 03:06	9° \mathfrak{Y} 12'42	
min. Earth dist.	4952 Apr 17 00:25	22° \mathfrak{Y} 40'55	0.62524 AU	evening max el	4953 Mar 13 05:06	11° \mathfrak{Y} 32'23	18°27'02
morning rise	4952 Apr 20 11:49	19° \mathfrak{Y} 35'06		retrograde	4953 Mar 19 16:55	15° \mathfrak{Y} 04'29	
direct	4952 Apr 27 08:10	17° \mathfrak{Y} 02'24		evening set	4953 Mar 22 18:54	14° \mathfrak{Y} 11'52	
desc. node	4952 Apr 29 17:14	17° \mathfrak{Y} 19'14		inferior conj	4953 Mar 28 14:42	8° \mathfrak{Y} 42'03	3°33'34
morning max el	4952 May 11 09:40	25° \mathfrak{Y} 02'33	27°51'46	minimum elong	4953 Mar 28 14:45	8° \mathfrak{Y} 41'55	3°33'34
	4952 May 15 22:22	0° \mathfrak{B}		min. Earth dist.	4953 Mar 30 19:42	6° \mathfrak{Y} 07'11	0.64441 AU
	4952 Jun 05 01:45	0° \mathfrak{I}		morning rise	4953 Apr 03 09:51	2° \mathfrak{Y} 30'37	
morning set	4952 Jun 14 08:23	17° \mathfrak{I} 35'51			4953 Apr 07 23:14	30° \mathfrak{R} \mathfrak{H}	
max. Earth dist.	4952 Jun 19 20:15	29° \mathfrak{I} 04'48	1.32465 AU	direct	4953 Apr 10 04:27	29° \mathfrak{H} 42'43	
asc. node	4952 Jun 20 05:20	29° \mathfrak{I} 53'37			4953 Apr 12 11:49	0° \mathfrak{Y}	
	4952 Jun 20 06:31	0° \mathfrak{D}		desc. node	4953 Apr 16 14:17	1° \mathfrak{Y} 45'26	

morning max el	4953 Apr 23 19:03	7° Υ 39'01	27°25'18	direct	4954 Mar 24 07:30	13° X 00'03	
	4953 May 11 00:58	0° B		desc. node	4954 Apr 03 11:19	18° X 03'44	
	4953 May 28 08:18	0° Π		morning max el	4954 Apr 06 04:57	20° X 39'00	26°29'01
morning set	4953 May 29 00:49	1° Π 20'38			4954 Apr 14 06:24	0° Υ	
max. Earth dist.	4953 Jun 02 19:33	10° Π 58'58	1.33366 AU		4954 May 04 04:18	0° B	
				morning set	4954 May 12 05:36	14° B 27'57	
superior conj	4953 Jun 06 03:07	17° Π 56'31	-0°10'03	max. Earth dist.	4954 May 16 07:59	22° B 22'07	1.34740 AU
minimum elong	4953 Jun 06 03:38	17° Π 59'15	0°09'58		4954 May 20 03:09	0° Π	
behind sun begin	4953 Jun 05 23:20	17° Π 36'23					
behind sun end	4953 Jun 06 07:57	18° Π 22'08		superior conj	4954 May 21 01:34	1° Π 54'55	-0°39'29
asc. node	4953 Jun 07 02:21	20° Π 00'15		minimum elong	4954 May 21 03:43	2° Π 05'57	0°39'04
	4953 Jun 11 18:21	0° B		asc. node	4954 May 24 23:24	10° Π 02'43	
evening rise	4953 Jun 13 07:33	3° B 17'23		evening rise	4954 May 28 16:31	17° Π 47'56	
	4953 Jun 28 00:45	0° Ω			4954 Jun 03 19:45	0° B	
evening max el	4953 Jul 04 17:18	8° Ω 01'15	22°20'46	evening max el	4954 Jun 16 16:15	18° B 44'57	20°52'10
desc. node	4953 Jul 13 13:29	13° Ω 48'35		retrograde	4954 Jun 28 05:25	24° B 25'02	
retrograde	4953 Jul 17 16:57	14° Ω 28'22		evening set	4954 Jun 30 08:31	24° B 14'16	
evening set	4953 Jul 20 17:59	14° Ω 07'54		desc. node	4954 Jun 30 10:31	24° B 13'25	
min. Earth dist.	4953 Jul 28 23:53	10° Ω 33'27	0.55073 AU	inferior conj	4954 Jul 09 16:08	20° B 17'12	-2°41'31
inferior conj	4953 Jul 29 22:59	10° Ω 00'48	-4°19'45	minimum elong	4954 Jul 09 08:48	20° B 27'35	2°39'02
minimum elong	4953 Jul 29 14:37	10° Ω 12'39	4°17'51	min. Earth dist.	4954 Jul 10 10:58	19° B 50'29	0.54819 AU
morning rise	4953 Aug 07 13:07	6° Ω 10'47		morning rise	4954 Jul 18 08:56	16° B 15'52	
direct	4953 Aug 10 16:13	5° Ω 48'40		direct	4954 Jul 22 01:30	15° B 46'35	
morning max el	4953 Aug 22 06:56	11° Ω 13'43	21°16'35	morning max el	4954 Aug 04 02:04	22° B 01'03	22°55'27
asc. node	4953 Sep 03 01:37	27° Ω 10'40			4954 Aug 11 00:31	0° Ω	
	4953 Sep 04 15:27	0° M		asc. node	4954 Aug 20 22:39	16° Ω 17'02	
morning set	4953 Sep 11 07:42	13° M 10'28		morning set	4954 Aug 26 18:40	28° Ω 02'17	
					4954 Aug 27 16:55	0° M	
superior conj	4953 Sep 18 15:38	28° M 31'09	1°43'35				
minimum elong	4953 Sep 18 15:29	28° M 30'21	1°43'36	superior conj	4954 Sep 02 20:05	13° M 09'07	1°39'30
	4953 Sep 19 08:50	0° B		minimum elong	4954 Sep 02 18:46	13° M 02'03	1°39'26
max. Earth dist.	4953 Sep 22 23:04	7° B 17'20	1.35296 AU	max. Earth dist.	4954 Sep 05 18:05	19° M 19'14	1.33830 AU
evening rise	4953 Sep 27 04:00	15° B 27'19		evening rise	4954 Sep 10 14:26	29° M 10'59	
	4953 Oct 05 06:46	0° M			4954 Sep 11 00:23	0° B	
desc. node	4953 Oct 09 12:46	6° M 59'47		desc. node	4954 Sep 26 09:47	26° B 58'27	
	4953 Oct 25 20:13	0° X			4954 Sep 28 09:32	0° M	
evening max el	4953 Nov 01 13:32	7° X 20'17	26°35'17	evening max el	4954 Oct 15 02:13	20° M 50'33	27°14'50
retrograde	4953 Nov 14 12:27	14° X 35'00		retrograde	4954 Oct 28 12:20	28° M 08'24	
evening set	4953 Nov 21 00:14	11° X 57'31		evening set	4954 Nov 04 10:37	25° M 28'25	
min. Earth dist.	4953 Nov 25 02:25	7° X 45'45	0.66160 AU	min. Earth dist.	4954 Nov 08 06:49	21° M 51'33	0.64826 AU
inferior conj	4953 Nov 26 20:06	5° X 41'10	-1°05'19	inferior conj	4954 Nov 10 12:24	19° M 24'52	-2°07'44
minimum elong	4953 Nov 26 21:55	5° X 35'44	1°04'32	minimum elong	4954 Nov 10 16:06	19° M 14'45	2°06'16
asc. node	4953 Nov 30 00:52	2° X 07'28		morning rise	4954 Nov 16 22:42	13° M 54'32	
morning rise	4953 Dec 02 20:21	29° M 57'24		asc. node	4954 Nov 16 21:54	13° M 55'26	
	4953 Dec 02 18:27	30° R M		direct	4954 Nov 19 13:26	13° M 18'40	
direct	4953 Dec 05 18:35	29° M 09'25		morning max el	4954 Nov 26 00:47	16° M 44'52	17°59'54
	4953 Dec 08 20:25	0° X			4954 Dec 05 15:27	0° X	
morning max el	4953 Dec 12 09:01	2° X 44'53	18°27'47	morning set	4954 Dec 13 16:05	13° X 16'31	
	4953 Dec 31 02:53	0° B		desc. node	4954 Dec 23 09:04	29° X 16'05	
morning set	4954 Jan 01 09:03	2° B 00'34			4954 Dec 23 19:55	0° B	
desc. node	4954 Jan 05 12:03	8° B 35'11					
				superior conj	4954 Dec 27 13:34	6° B 00'15	-0°28'48
superior conj	4954 Jan 17 03:57	26° B 59'07	-1°14'59	minimum elong	4954 Dec 27 10:03	5° B 46'13	0°28'18
minimum elong	4954 Jan 16 19:15	26° B 24'57	1°13'58	max. Earth dist.	4954 Dec 31 15:40	12° B 29'24	1.45009 AU
max. Earth dist.	4954 Jan 17 20:13	28° B 02'49	1.45322 AU		4955 Jan 11 21:24	0° \approx	
	4954 Jan 19 02:07	0° \approx		evening rise	4955 Jan 12 19:40	1° \approx 25'49	
evening rise	4954 Feb 02 02:29	22° \approx 01'53		greatest brilliancy	4955 Jan 26 23:00	22° \approx 54'53	-0.6m
	4954 Feb 07 03:25	0° X			4955 Jan 31 21:25	0° X	
greatest brilliancy	4954 Feb 11 19:43	7° X 21'15	-0.8m	evening max el	4955 Feb 07 20:20	8° X 35'31	19°55'11
evening max el	4954 Feb 24 14:55	25° X 02'39	19°03'04	asc. node	4955 Feb 12 21:10	12° X 25'05	
asc. node	4954 Feb 26 00:08	26° X 21'14		retrograde	4955 Feb 15 09:49	12° X 59'06	
retrograde	4954 Mar 03 12:04	28° X 55'39		evening set	4955 Feb 19 02:39	11° X 39'08	
evening set	4954 Mar 06 20:53	27° X 49'49		inferior conj	4955 Feb 24 12:24	5° X 38'23	3°08'31
inferior conj	4954 Mar 12 10:22	22° X 03'32	3°27'21	minimum elong	4955 Feb 24 10:19	5° X 45'21	3°08'07
minimum elong	4954 Mar 12 09:06	22° X 07'32	3°27'13	min. Earth dist.	4955 Feb 25 11:21	4° X 21'36	0.67099 AU
min. Earth dist.	4954 Mar 13 23:51	20° X 04'47	0.65983 AU		4955 Mar 01 02:41	30° R \approx	
morning rise	4954 Mar 17 20:56	15° X 49'23		morning rise	4955 Mar 01 17:47	29° \approx 23'58	

direct	4955 Mar 07 16:11	26° \approx 44'53		min. Earth dist.	4956 Feb 09 04:16	18° \approx 49'20	0.67791 AU
	4955 Mar 15 06:43	0° \mathbb{H}		morning rise	4956 Feb 13 21:36	13° \approx 10'16	
morning max el	4955 Mar 19 13:56	3° \mathbb{H} 51'43	25°11'56	direct	4956 Feb 19 05:46	10° \approx 49'13	
desc. node	4955 Mar 21 08:20	5° \mathbb{H} 43'05		morning max el	4956 Feb 29 22:43	17° \approx 11'54	23°44'16
	4955 Apr 08 13:40	0° \mathbb{Y}		desc. node	4956 Mar 07 05:22	24° \approx 20'37	
morning set	4955 Apr 24 18:02	26° \mathbb{Y} 44'02			4956 Mar 11 14:03	0° \mathbb{H}	
	4955 Apr 26 13:16	0° \mathbb{B}			4956 Mar 31 14:53	0° \mathbb{Y}	
max. Earth dist.	4955 Apr 28 09:42	3° \mathbb{B} 25'19	1.36558 AU	morning set	4956 Apr 05 08:28	7° \mathbb{Y} 54'18	
				max. Earth dist.	4956 Apr 09 05:37	14° \mathbb{Y} 38'34	1.38679 AU
superior conj	4955 May 04 14:40	15° \mathbb{B} 21'35	-1°09'02	superior conj	4956 Apr 16 14:49	28° \mathbb{Y} 07'32	-1°36'17
minimum elong	4955 May 04 18:28	15° \mathbb{B} 40'21	1°08'24	minimum elong	4956 Apr 16 19:43	28° \mathbb{Y} 30'38	1°35'41
asc. node	4955 May 11 20:26	29° \mathbb{B} 56'21			4956 Apr 17 14:36	0° \mathbb{B}	
	4955 May 11 21:09	0° \mathbb{II}		evening rise	4956 Apr 25 18:01	15° \mathbb{B} 46'37	
evening rise	4955 May 12 20:54	2° \mathbb{II} 00'00		asc. node	4956 Apr 27 17:30	19° \mathbb{B} 36'57	
evening max el	4955 May 30 03:30	0° \mathbb{E} 07'28	19°40'34		4956 May 03 08:20	0° \mathbb{II}	
	4955 May 30 00:27	0° \mathbb{E}		evening max el	4956 May 12 02:04	12° \mathbb{II} 11'16	18°49'06
retrograde	4955 Jun 08 22:59	4° \mathbb{E} 55'00		retrograde	4956 May 20 08:46	16° \mathbb{II} 15'06	
evening set	4955 Jun 10 21:18	4° \mathbb{E} 44'42		evening set	4956 May 22 11:29	16° \mathbb{II} 00'12	
desc. node	4955 Jun 17 07:34	2° \mathbb{E} 07'58		inferior conj	4956 May 30 11:09	11° \mathbb{II} 40'29	1°04'12
inferior conj	4955 Jun 19 16:25	0° \mathbb{E} 41'32	-0°42'26	minimum elong	4956 May 30 13:30	11° \mathbb{II} 36'12	1°03'22
minimum elong	4955 Jun 19 14:30	0° \mathbb{E} 44'33	0°41'44	min. Earth dist.	4956 Jun 02 16:13	9° \mathbb{II} 21'21	0.57061 AU
	4955 Jun 20 18:54	30° \mathbb{R} \mathbb{II}		desc. node	4956 Jun 03 04:35	9° \mathbb{II} 00'09	
min. Earth dist.	4955 Jun 21 23:51	29° \mathbb{II} 15'09	0.55532 AU	morning rise	4956 Jun 07 12:13	6° \mathbb{II} 33'26	
morning rise	4955 Jun 28 05:23	26° \mathbb{II} 10'57		direct	4956 Jun 12 22:43	5° \mathbb{II} 21'42	
direct	4955 Jul 02 17:19	25° \mathbb{II} 26'03		morning max el	4956 Jun 27 07:03	12° \mathbb{II} 50'28	26°12'13
	4955 Jul 13 21:48	0° \mathbb{E}			4956 Jul 10 17:51	0° \mathbb{E}	
morning max el	4955 Jul 16 15:52	2° \mathbb{E} 23'25	24°39'18	asc. node	4956 Jul 24 16:45	25° \mathbb{E} 34'37	
	4955 Aug 04 20:35	0° \mathbb{O}		morning set	4956 Jul 25 17:25	27° \mathbb{E} 44'11	
asc. node	4955 Aug 07 19:41	5° \mathbb{O} 47'11			4956 Jul 26 18:56	0° \mathbb{O}	
morning set	4955 Aug 11 06:26	12° \mathbb{O} 55'07					
superior conj	4955 Aug 18 04:59	27° \mathbb{O} 58'22	1°29'39	superior conj	4956 Aug 01 16:16	12° \mathbb{O} 52'34	1°14'48
minimum elong	4955 Aug 18 02:56	27° \mathbb{O} 47'10	1°29'26	minimum elong	4956 Aug 01 13:57	12° \mathbb{O} 39'49	1°14'26
	4955 Aug 19 03:20	0° \mathbb{P}		max. Earth dist.	4956 Aug 02 06:34	14° \mathbb{O} 11'25	1.32146 AU
max. Earth dist.	4955 Aug 19 21:29	1° \mathbb{P} 38'22	1.32777 AU	evening rise	4956 Aug 08 14:58	27° \mathbb{O} 54'03	
evening rise	4955 Aug 25 11:06	13° \mathbb{P} 22'47			4956 Aug 09 15:12	0° \mathbb{P}	
	4955 Sep 03 03:39	0° \mathbb{A}			4956 Aug 26 11:28	0° \mathbb{A}	
desc. node	4955 Sep 13 06:49	16° \mathbb{A} 27'13		desc. node	4956 Aug 30 03:51	5° \mathbb{A} 13'53	
	4955 Sep 23 17:20	0° \mathbb{M}		evening max el	4956 Sep 08 19:09	16° \mathbb{A} 24'03	27°06'55
evening max el	4955 Sep 27 12:57	3° \mathbb{M} 56'16	27°27'00	retrograde	4956 Sep 22 15:56	23° \mathbb{A} 36'16	
retrograde	4955 Oct 11 05:41	11° \mathbb{M} 12'00		evening set	4956 Sep 29 17:50	21° \mathbb{A} 21'49	
evening set	4955 Oct 18 09:48	8° \mathbb{M} 38'51		min. Earth dist.	4956 Oct 03 09:33	18° \mathbb{A} 39'30	0.61208 AU
min. Earth dist.	4955 Oct 22 01:33	5° \mathbb{M} 33'39	0.63154 AU	inferior conj	4956 Oct 06 12:31	15° \mathbb{A} 56'52	-4°09'23
inferior conj	4955 Oct 24 18:57	2° \mathbb{M} 52'53	-3°10'39	minimum elong	4956 Oct 06 18:46	15° \mathbb{A} 43'15	4°07'46
minimum elong	4955 Oct 25 00:22	2° \mathbb{M} 39'32	3°08'48	morning rise	4956 Oct 13 21:40	11° \mathbb{A} 03'58	
	4955 Oct 27 21:42	30° \mathbb{R} \mathbb{A}		direct	4956 Oct 16 05:25	10° \mathbb{A} 41'57	
morning rise	4955 Oct 31 16:30	27° \mathbb{A} 39'35		asc. node	4956 Oct 20 15:59	12° \mathbb{A} 05'54	
direct	4955 Nov 03 02:19	27° \mathbb{A} 12'12		morning max el	4956 Oct 23 08:13	14° \mathbb{A} 15'23	17°57'52
asc. node	4955 Nov 03 18:56	27° \mathbb{A} 14'31			4956 Nov 03 02:24	0° \mathbb{M}	
	4955 Nov 09 01:39	0° \mathbb{M}		morning set	4956 Nov 08 02:20	9° \mathbb{M} 04'37	
morning max el	4955 Nov 09 17:35	0° \mathbb{M} 37'44	17°49'38	superior conj	4956 Nov 18 08:32	27° \mathbb{M} 36'09	0°53'22
morning set	4955 Nov 26 00:02	25° \mathbb{M} 44'40		minimum elong	4956 Nov 18 12:24	27° \mathbb{M} 53'02	0°52'52
	4955 Nov 28 10:27	0° \mathbb{X}			4956 Nov 19 17:35	0° \mathbb{X}	
superior conj	4955 Dec 07 21:47	16° \mathbb{X} 09'31	0°16'27	max. Earth dist.	4956 Nov 25 22:05	10° \mathbb{X} 28'16	1.42389 AU
minimum elong	4955 Dec 07 23:27	16° \mathbb{X} 16'27	0°16'14	desc. node	4956 Nov 26 03:07	10° \mathbb{X} 49'03	
desc. node	4955 Dec 10 06:06	20° \mathbb{X} 01'58		evening rise	4956 Dec 02 00:24	20° \mathbb{X} 20'08	
max. Earth dist.	4955 Dec 14 09:15	26° \mathbb{X} 44'06	1.43989 AU		4956 Dec 08 05:39	0° \mathbb{Z}	
	4955 Dec 16 10:19	0° \mathbb{Z}			4956 Dec 29 12:56	0° \approx	
evening rise	4955 Dec 23 05:43	10° \mathbb{Z} 39'19		evening max el	4957 Jan 03 14:54	5° \approx 44'52	22°16'02
	4956 Jan 05 01:59	0° \approx		retrograde	4957 Jan 13 04:40	11° \approx 26'35	
evening max el	4956 Jan 21 20:17	22° \approx 09'37	21°00'45	asc. node	4957 Jan 16 15:16	10° \approx 24'03	
retrograde	4956 Jan 30 07:59	27° \approx 10'54		evening set	4957 Jan 17 17:51	9° \approx 36'09	
asc. node	4956 Jan 30 18:13	27° \approx 09'55		inferior conj	4957 Jan 23 02:15	3° \approx 15'01	2°02'05
evening set	4956 Feb 03 10:13	25° \approx 35'58		minimum elong	4957 Jan 22 23:59	3° \approx 22'56	2°01'20
inferior conj	4956 Feb 08 18:25	19° \approx 23'21	2°39'34	min. Earth dist.	4957 Jan 23 00:18	3° \approx 21'48	0.68084 AU
minimum elong	4956 Feb 08 15:59	19° \approx 31'42	2°38'55		4957 Jan 25 12:19	30° \mathbb{R} \mathbb{Z}	

morning rise	4957 Jan 28 05:58	27°  04'41		morning rise	4958 Jan 12 16:46	11°  05'17	
direct	4957 Feb 01 23:25	25°  05'37		direct	4958 Jan 16 20:11	9°  28'55	
	4957 Feb 10 18:15	0°  ≈		morning max el	4958 Jan 25 03:04	14°  15'35	20°54'15
morning max el	4957 Feb 11 09:58	0°  ≈38'43	22°15'40		4958 Feb 06 13:21	0°  ≈	
desc. node	4957 Feb 22 02:23	13°  ≈39'25		desc. node	4958 Feb 08 23:25	3°  ≈28'20	
	4957 Mar 05 10:45	0°  ✕		morning set	4958 Feb 24 02:59	26°  ≈20'41	
morning set	4957 Mar 16 19:16	17°  ✕44'31			4958 Feb 26 10:50	0°  ✕	
max. Earth dist.	4957 Mar 22 02:35	26°  ✕30'40	1.40863 AU	max. Earth dist.	4958 Mar 04 05:59	9°  ✕17'18	1.42833 AU
	4957 Mar 24 03:54	0°  Υ					
superior conj	4957 Mar 29 21:21	10°  Υ00'56	-1°57'43	superior conj	4958 Mar 11 05:24	20°  ✕51'31	-2°08'25
minimum elong	4957 Mar 30 01:47	10°  Υ20'43	1°57'25	minimum elong	4958 Mar 11 06:28	20°  ✕56'01	2°08'25
evening rise	4957 Apr 09 04:27	28°  Υ58'13			4958 Mar 16 13:02	0°  Υ	
	4957 Apr 09 17:40	0°  ♄		evening rise	4958 Mar 23 00:08	11°  Υ25'59	
asc. node	4957 Apr 14 14:33	8°  ♄58'31		asc. node	4958 Apr 01 11:34	27°  Υ54'47	
evening max el	4957 Apr 25 08:50	24°  ♄48'54	18°18'02		4958 Apr 02 19:14	0°  ♄	
retrograde	4957 May 02 13:24	28°  ♄24'08		evening max el	4958 Apr 08 20:18	7°  ♄51'13	18°06'40
evening set	4957 May 04 23:00	28°  ♄01'03		retrograde	4958 Apr 15 10:17	11°  ♄13'52	
inferior conj	4957 May 12 03:29	23°  ♄21'22	2°21'26	evening set	4958 Apr 18 02:34	10°  ♄40'12	
minimum elong	4957 May 12 07:01	23°  ♄13'51	2°20'29	inferior conj	4958 Apr 24 15:14	5°  ♄40'05	3°08'14
min. Earth dist.	4957 May 15 13:50	20°  ♄27'30	0.59100 AU	minimum elong	4958 Apr 24 17:50	5°  ♄33'41	3°07'49
morning rise	4957 May 19 12:04	17°  ♄44'00		min. Earth dist.	4958 Apr 27 18:36	2°  ♄36'24	0.61308 AU
desc. node	4957 May 21 01:37	16°  ♄57'48			4958 Apr 30 21:33	30°  ♄Υ	
direct	4957 May 25 18:16	15°  ♄57'50		morning rise	4958 May 01 07:10	29°  Υ43'15	
morning max el	4957 Jun 09 03:38	23°  ♄46'21	27°19'11	desc. node	4958 May 07 22:39	27°  Υ24'41	
	4957 Jun 14 18:25	0°  ♄		direct	4958 May 08 01:10	27°  Υ24'39	
	4957 Jul 03 21:01	0°  ♄			4958 May 15 17:46	0°  ♄	
morning set	4957 Jul 10 01:55	12°  ♄24'09		morning max el	4958 May 22 06:23	5°  ♄22'44	27°50'42
asc. node	4957 Jul 11 13:48	15°  ♄33'42			4958 Jun 09 16:48	0°  ♄	
max. Earth dist.	4957 Jul 16 17:53	26°  ♄49'24	1.31933 AU	morning set	4958 Jun 24 06:02	26°  ♄48'27	
					4958 Jun 25 18:58	0°  ♄	
superior conj	4957 Jul 17 04:05	27°  ♄45'43	0°55'33	asc. node	4958 Jun 28 10:49	5°  ♄39'08	
minimum elong	4957 Jul 17 01:59	27°  ♄34'07	0°55'09	max. Earth dist.	4958 Jun 30 03:36	9°  ♄19'53	1.32145 AU
	4957 Jul 18 04:23	0°  ♄					
evening rise	4957 Jul 23 23:31	12°  ♄37'18		superior conj	4958 Jul 01 14:39	12°  ♄31'25	0°32'30
	4957 Aug 01 18:17	0°  ♄		minimum elong	4958 Jul 01 13:14	12°  ♄23'38	0°32'11
desc. node	4957 Aug 17 00:53	23°  ♄01'30		evening rise	4958 Jul 08 10:39	27°  ♄25'13	
evening max el	4957 Aug 21 18:35	28°  ♄05'08	26°13'42		4958 Jul 09 15:54	0°  ♄	
	4957 Aug 23 22:10	0°  ♄			4958 Jul 26 17:49	0°  ♄	
retrograde	4957 Sep 04 17:48	5°  ♄13'36		evening max el	4958 Aug 03 10:45	8°  ♄59'15	24°52'37
evening set	4957 Sep 11 05:57	3°  ♄30'15		desc. node	4958 Aug 03 21:54	9°  ♄25'36	
min. Earth dist.	4957 Sep 15 07:39	0°  ♄55'23	0.59132 AU	retrograde	4958 Aug 17 08:47	16°  ♄00'59	
	4957 Sep 16 13:26	30°  ♄♄		evening set	4958 Aug 22 17:52	14°  ♄55'34	
inferior conj	4957 Sep 18 13:38	28°  ♄27'57	-4°55'44	min. Earth dist.	4958 Aug 27 22:13	12°  ♄09'42	0.57172 AU
minimum elong	4957 Sep 18 18:35	28°  ♄18'32	4°54'59	inferior conj	4958 Aug 30 19:12	10°  ♄16'19	-5°16'33
morning rise	4957 Sep 26 09:27	23°  ♄57'37		minimum elong	4958 Aug 30 19:36	10°  ♄15'40	5°16'34
direct	4957 Sep 28 18:31	23°  ♄38'16		morning rise	4958 Sep 07 23:40	6°  ♄07'59	
morning max el	4957 Oct 06 17:19	27°  ♄28'58	18°25'54	direct	4958 Sep 10 13:44	5°  ♄48'58	
asc. node	4957 Oct 07 13:02	28°  ♄18'35		morning max el	4958 Sep 19 17:23	10°  ♄07'29	19°15'14
	4957 Oct 09 00:51	0°  ♄		asc. node	4958 Sep 24 10:04	15°  ♄36'38	
morning set	4957 Oct 22 17:35	23°  ♄01'18			4958 Oct 02 23:12	0°  ♄	
	4957 Oct 26 08:49	0°  ♄		morning set	4958 Oct 06 17:41	7°  ♄22'40	
superior conj	4957 Oct 31 18:15	10°  ♄09'36	1°19'40				
minimum elong	4957 Oct 31 21:53	10°  ♄26'23	1°19'16	superior conj	4958 Oct 14 21:26	23°  ♄33'35	1°35'44
max. Earth dist.	4957 Nov 08 05:33	23°  ♄30'34	1.40415 AU	minimum elong	4958 Oct 14 23:43	23°  ♄44'40	1°35'35
	4957 Nov 12 01:26	0°  ♄			4958 Oct 18 06:13	0°  ♄	
evening rise	4957 Nov 12 15:08	0°  ♄56'51		max. Earth dist.	4958 Oct 21 10:16	5°  ♄52'03	1.38310 AU
desc. node	4957 Nov 13 00:09	1°  ♄34'09		evening rise	4958 Oct 25 04:50	12°  ♄35'48	
	4957 Dec 01 15:27	0°  ♄		desc. node	4958 Oct 30 21:10	22°  ♄12'47	
evening max el	4957 Dec 17 05:40	19°  ♄23'40	23°35'52		4958 Nov 04 18:03	0°  ♄	
retrograde	4957 Dec 27 22:25	25°  ♄42'46			4958 Nov 26 19:24	0°  ♄	
evening set	4958 Jan 02 00:02	23°  ♄36'46		evening max el	4958 Nov 29 18:38	3°  ♄06'15	24°53'51
asc. node	4958 Jan 03 12:17	22°  ♄09'22		retrograde	4958 Dec 11 12:01	9°  ♄54'42	
inferior conj	4958 Jan 07 10:06	17°  ♄11'08	1°17'18	evening set	4958 Dec 17 03:06	7°  ♄34'02	
minimum elong	4958 Jan 07 08:25	17°  ♄16'53	1°16'40	asc. node	4958 Dec 21 09:18	2°  ♄49'41	
min. Earth dist.	4958 Jan 06 21:08	17°  ♄55'30	0.68006 AU	min. Earth dist.	4958 Dec 21 16:17	2°  ♄26'53	0.67568 AU
				inferior conj	4958 Dec 22 16:06	1°  ♄08'21	0°26'05
				minimum elong	4958 Dec 22 15:28	1°  ♄10'28	0°25'49

	4958 Dec 23 12:59	30° RX		minimum elong	4959 Dec 06 19:15	15° X 00'50	0°30'17
morning rise	4958 Dec 28 03:59	25° X 09'11		asc. node	4959 Dec 08 06:20	13° X 13'45	
direct	4958 Dec 31 18:42	23° X 54'03		morning rise	4959 Dec 12 13:38	9° X 13'23	
morning max el	4959 Jan 08 04:01	28° X 03'47	19°45'19	direct	4959 Dec 15 17:21	8° X 16'30	
	4959 Jan 09 23:32	0° Z		morning max el	4959 Dec 22 12:29	12° X 01'03	18°51'28
greatest brilliancy	4959 Jan 21 06:49	15° Z 18'07	-0.7m		4960 Jan 04 16:48	0° Z	
desc. node	4959 Jan 26 20:26	23° Z 38'55		morning set	4960 Jan 13 09:02	13° Z 31'48	
	4959 Jan 31 00:23	0° \approx		desc. node	4960 Jan 13 17:27	14° Z 04'47	
morning set	4959 Feb 02 23:12	4° \approx 32'14			4960 Jan 23 21:27	0° \approx	
max. Earth dist.	4959 Feb 14 17:24	22° \approx 55'30	1.44326 AU	max. Earth dist.	4960 Jan 28 10:32	7° \approx 07'37	1.45167 AU
superior conj	4959 Feb 19 11:55	0° X 34'16	-2°02'50	superior conj	4960 Jan 29 20:52	9° \approx 22'32	-1°37'29
minimum elong	4959 Feb 19 06:52	0° X 13'53	2°02'36	minimum elong	4960 Jan 29 11:33	8° \approx 45'53	1°36'37
	4959 Feb 19 03:26	0° X			4960 Feb 11 20:01	0° X	
evening rise	4959 Mar 05 00:41	23° X 01'45		evening rise	4960 Feb 14 02:32	3° X 40'03	
	4959 Mar 09 03:11	0° Y			4960 Mar 01 23:51	0° Y	
asc. node	4959 Mar 19 08:35	16° Y 17'52		asc. node	4960 Mar 05 05:37	3° Y 57'05	
evening max el	4959 Mar 23 09:14	21° Y 09'47	18°14'18	evening max el	4960 Mar 05 20:48	4° Y 36'51	18°40'13
retrograde	4959 Mar 29 19:04	24° Y 34'29		retrograde	4960 Mar 12 11:33	8° Y 16'29	
evening set	4959 Apr 01 17:34	23° Y 48'53		evening set	4960 Mar 15 16:24	7° Y 18'12	
inferior conj	4959 Apr 07 18:27	18° Y 29'22	3°30'02	inferior conj	4960 Mar 21 09:07	1° Y 40'53	3°32'41
minimum elong	4959 Apr 07 19:25	18° Y 26'40	3°29'58	minimum elong	4960 Mar 21 08:33	1° Y 42'35	3°32'39
min. Earth dist.	4959 Apr 10 08:16	15° Y 39'08	0.63387 AU		4960 Mar 22 18:13	30° RX	
morning rise	4959 Apr 13 20:13	12° Y 21'41		min. Earth dist.	4960 Mar 23 07:20	29° X 20'38	0.65147 AU
direct	4959 Apr 20 16:52	9° Y 40'54		morning rise	4960 Mar 27 00:12	25° X 27'57	
desc. node	4959 Apr 24 19:40	10° Y 31'32		direct	4960 Apr 02 15:55	22° X 38'14	
morning max el	4959 May 04 14:02	17° Y 39'54	27°44'36	desc. node	4960 Apr 10 16:42	25° X 49'41	
	4959 May 14 21:10	0° Z			4960 Apr 15 12:41	0° Y	
	4959 Jun 02 12:27	0° II		morning max el	4960 Apr 16 00:02	0° Y 28'19	27°04'36
morning set	4959 Jun 08 03:33	10° II 50'20			4960 May 07 21:21	0° Z	
max. Earth dist.	4959 Jun 13 07:59	21° II 31'30	1.32796 AU	morning set	4960 May 21 15:30	24° Z 20'28	
asc. node	4959 Jun 15 07:51	25° II 46'49			4960 May 24 12:43	0° II	
				max. Earth dist.	4960 May 26 03:13	3° II 13'46	1.33902 AU
superior conj	4959 Jun 15 22:12	27° II 03'57	0°06'14	superior conj	4960 May 30 00:38	11° II 16'23	-0°22'25
minimum elong	4959 Jun 15 21:54	27° II 02'19	0°06'10	minimum elong	4960 May 30 01:49	11° II 22'35	0°22'10
behind sun begin	4959 Jun 15 16:58	26° II 35'50		asc. node	4960 Jun 01 04:53	15° II 52'06	
behind sun end	4959 Jun 16 02:49	27° II 28'50		evening rise	4960 Jun 06 09:01	26° II 49'34	
	4959 Jun 17 06:47	0° Z			4960 Jun 07 21:39	0° Z	
evening rise	4959 Jun 22 22:27	12° Z 11'36		evening max el	4960 Jun 26 16:13	29° Z 50'24	21°41'12
	4959 Jul 01 23:24	0° Ω			4960 Jun 26 20:10	0° Ω	
evening max el	4959 Jul 15 23:22	19° Ω 23'42	23°16'25	desc. node	4960 Jul 07 15:56	5° Ω 54'41	
desc. node	4959 Jul 21 18:54	23° Ω 54'44		retrograde	4960 Jul 09 02:43	5° Ω 59'38	
retrograde	4959 Jul 29 11:01	26° Ω 08'28		evening set	4960 Jul 11 16:19	5° Ω 44'43	
evening set	4959 Aug 02 08:07	25° Ω 35'35		inferior conj	4960 Jul 21 00:27	1° Ω 43'18	-3°42'46
min. Earth dist.	4959 Aug 09 08:41	22° Ω 22'53	0.55643 AU	minimum elong	4960 Jul 20 15:41	1° Ω 55'33	3°40'17
inferior conj	4959 Aug 11 04:53	21° Ω 18'10	-4°55'27	min. Earth dist.	4960 Jul 20 18:43	1° Ω 51'18	0.54852 AU
minimum elong	4959 Aug 10 22:53	21° Ω 26'57	4°54'36		4960 Jul 24 04:34	30° RZ	
morning rise	4959 Aug 19 16:00	17° Ω 25'46		morning rise	4960 Jul 29 16:19	27° Z 51'25	
direct	4959 Aug 22 13:56	17° Ω 05'17		direct	4960 Aug 02 00:27	27° Z 27'07	
morning max el	4959 Sep 02 05:53	22° Ω 02'42	20°26'29		4960 Aug 10 03:38	0° Ω	
	4959 Sep 08 20:44	0° P		morning max el	4960 Aug 14 06:37	3° Ω 12'38	21°57'19
asc. node	4959 Sep 11 07:06	3° P 45'54		asc. node	4960 Aug 28 04:08	22° Ω 34'12	
morning set	4959 Sep 20 23:42	22° P 00'42			4960 Sep 01 01:27	0° P	
	4959 Sep 24 20:38	0° Z		morning set	4960 Sep 04 09:24	6° P 49'06	
superior conj	4959 Sep 28 13:18	7° Z 34'47	1°42'55	superior conj	4960 Sep 11 14:03	22° P 02'08	1°42'37
minimum elong	4959 Sep 28 13:59	7° Z 38'16	1°42'55	minimum elong	4960 Sep 11 13:21	21° P 58'28	1°42'37
max. Earth dist.	4959 Oct 03 17:16	17° Z 48'52	1.36318 AU		4960 Sep 15 10:25	0° Z	
evening rise	4959 Oct 07 15:09	25° Z 11'12		max. Earth dist.	4960 Sep 15 07:04	29° P 42'59	1.34620 AU
	4959 Oct 10 06:59	0° M		evening rise	4960 Sep 19 17:57	8° Z 32'56	
desc. node	4959 Oct 17 18:11	12° M 40'29			4960 Oct 01 20:15	0° M	
	4959 Oct 29 07:14	0° X		desc. node	4960 Oct 03 15:12	2° M 51'53	
evening max el	4959 Nov 12 07:14	16° X 49'32	26°02'43		4960 Oct 24 08:47	0° X	
retrograde	4959 Nov 24 20:41	23° X 57'11		evening max el	4960 Oct 24 19:52	0° X 26'50	26°55'02
evening set	4959 Dec 01 01:22	21° X 24'21		retrograde	4960 Nov 07 00:00	7° X 43'59	
min. Earth dist.	4959 Dec 05 07:24	16° X 52'25	0.66778 AU	evening set	4960 Nov 13 16:51	5° X 04'09	
inferior conj	4959 Dec 06 18:26	15° X 03'23	-0°30'38				

min. Earth dist.	4960 Nov 17 16:16	1° X 07'44	0.65633 AU	min. Earth dist.	4961 Oct 31 16:46	15° M 04'45	0.64145 AU
	4960 Nov 18 15:53	30° R M		inferior conj	4961 Nov 03 03:35	12° M 30'31	-2°34'38
inferior conj	4960 Nov 19 15:05	28° M 52'44	-1°31'32	minimum elong	4961 Nov 03 08:03	12° M 18'45	2°32'57
minimum elong	4960 Nov 19 17:41	28° M 45'14	1°30'27	morning rise	4961 Nov 09 18:35	7° M 07'13	
asc. node	4960 Nov 24 03:22	24° M 18'42		asc. node	4961 Nov 11 00:26	6° M 43'40	
morning rise	4960 Nov 25 19:26	23° M 14'38		direct	4961 Nov 12 06:46	6° M 35'32	
direct	4960 Nov 28 14:12	22° M 32'19		morning max el	4961 Nov 18 19:06	10° M 00'43	17°53'23
morning max el	4960 Dec 05 02:28	26° M 02'32	18°13'56		4961 Dec 02 08:06	0° X	
	4960 Dec 08 12:13	0° X		morning set	4961 Dec 05 17:38	5° X 46'57	
morning set	4960 Dec 23 23:15	23° X 58'13		desc. node	4961 Dec 17 11:28	25° X 24'59	
	4960 Dec 27 16:30	0° Z					
desc. node	4960 Dec 30 14:28	4° Z 41'35		superior conj	4961 Dec 18 18:17	27° X 30'11	-0°08'58
				minimum elong	4961 Dec 18 17:15	27° X 26'01	0°08'47
superior conj	4961 Jan 08 00:18	18° Z 03'10	-0°56'00	behind sun begin	4961 Dec 18 08:44	26° X 51'26	
minimum elong	4961 Jan 07 17:24	17° Z 36'02	0°55'06	behind sun end	4961 Dec 19 01:46	28° X 00'33	
max. Earth dist.	4961 Jan 10 05:49	21° Z 33'32	1.45272 AU		4961 Dec 20 07:22	0° Z	
	4961 Jan 15 15:16	0° \approx		max. Earth dist.	4961 Dec 24 00:16	5° Z 55'06	1.44648 AU
evening rise	4961 Jan 24 05:55	13° \approx 26'03		evening rise	4962 Jan 03 18:04	22° Z 40'07	
	4961 Feb 03 22:07	0° H			4962 Jan 08 13:10	0° \approx	
greatest brilliancy	4961 Feb 05 01:05	1° H 42'45	-0.7m		4962 Jan 29 18:24	0° H	
evening max el	4961 Feb 17 04:52	18° H 08'21	19°23'19	evening max el	4962 Jan 31 07:58	1° H 41'29	20°21'39
asc. node	4961 Feb 20 02:39	20° H 40'08		asc. node	4962 Feb 06 23:43	6° H 11'59	
retrograde	4961 Feb 24 08:18	22° H 13'45		retrograde	4962 Feb 08 06:31	6° H 20'50	
evening set	4961 Feb 27 20:18	21° H 02'03		evening set	4962 Feb 12 03:02	4° H 54'49	
inferior conj	4961 Mar 05 07:52	15° H 09'06	3°20'45		4962 Feb 16 14:48	30° R \approx	
minimum elong	4961 Mar 05 06:12	15° H 14'32	3°20'31	inferior conj	4962 Feb 17 11:54	28° \approx 48'43	2°57'22
min. Earth dist.	4961 Mar 06 14:58	13° H 27'52	0.66506 AU	minimum elong	4962 Feb 17 09:37	28° \approx 56'29	2°56'51
morning rise	4961 Mar 10 15:50	8° H 54'21		min. Earth dist.	4962 Feb 18 05:11	27° \approx 49'55	0.67440 AU
direct	4961 Mar 16 21:26	6° H 08'18		morning rise	4962 Feb 22 15:58	22° \approx 34'26	
desc. node	4961 Mar 28 13:44	12° H 45'55		direct	4962 Feb 28 08:28	20° \approx 02'04	
morning max el	4961 Mar 29 09:54	13° H 35'58	25°58'14	morning max el	4962 Mar 11 18:34	26° \approx 52'05	24°35'18
	4961 Apr 11 17:06	0° Y			4962 Mar 14 16:31	0° H	
	4961 Apr 30 15:12	0° Z		desc. node	4962 Mar 15 10:45	0° H 52'12	
morning set	4961 May 04 14:01	7° Z 08'08			4962 Apr 05 08:04	0° Y	
max. Earth dist.	4961 May 08 11:00	14° Z 26'43	1.35468 AU	morning set	4962 Apr 16 17:56	18° Y 58'48	
				max. Earth dist.	4962 Apr 20 08:59	25° Y 28'15	1.37429 AU
					4962 Apr 22 19:57	0° Z	
superior conj	4961 May 13 19:30	25° Z 02'11	-0°52'08				
minimum elong	4961 May 13 22:22	25° Z 16'43	0°51'36	superior conj	4962 Apr 27 03:38	8° Z 13'10	-1°21'03
	4961 May 16 05:51	0° II		minimum elong	4962 Apr 27 08:00	8° Z 34'23	1°20'24
asc. node	4961 May 19 01:55	5° II 51'17		evening rise	4962 May 05 18:01	25° Z 15'31	
evening rise	4961 May 21 16:21	11° II 13'09		asc. node	4962 May 05 22:59	25° Z 40'14	
	4961 May 31 15:13	0° E			4962 May 08 03:38	0° II	
evening max el	4961 Jun 08 20:11	10° E 49'11	20°19'14	evening max el	4962 May 22 12:43	22° II 31'02	19°16'15
retrograde	4961 Jun 19 16:07	16° E 07'08		retrograde	4962 May 31 15:28	26° II 58'01	
evening set	4961 Jun 21 15:08	15° E 57'27		evening set	4962 Jun 02 15:00	26° II 46'20	
desc. node	4961 Jun 24 12:58	15° E 10'18		inferior conj	4962 Jun 11 02:16	22° II 37'26	0°05'43
inferior conj	4961 Jun 30 18:54	11° E 59'26	-1°51'22	minimum elong	4962 Jun 11 02:30	22° II 37'02	0°05'36
minimum elong	4961 Jun 30 13:41	12° E 07'05	1°49'28	transit middle	4962 Jun 11 02:30	22° II 37'02	0°05'36
min. Earth dist.	4961 Jul 02 06:40	11° E 06'59	0.55007 AU	transit begin	4962 Jun 10 22:54	22° II 43'01	
morning rise	4961 Jul 09 11:02	7° E 47'03		transit end	4962 Jun 11 06:06	22° II 31'03	
direct	4961 Jul 13 10:47	7° E 12'35		desc. node	4962 Jun 11 10:00	22° II 24'33	
morning max el	4961 Jul 26 22:53	13° E 47'05	23°39'57	min. Earth dist.	4962 Jun 13 21:12	20° II 46'49	0.56097 AU
	4961 Aug 08 11:05	0° O		morning rise	4962 Jun 19 10:59	17° II 51'07	
asc. node	4961 Aug 15 01:11	11° O 51'33		direct	4962 Jun 24 08:38	16° II 55'51	
morning set	4961 Aug 19 20:54	21° O 41'55		morning max el	4962 Jul 08 12:35	24° II 08'47	25°20'59
	4961 Aug 23 17:42	0° P			4962 Jul 13 20:55	0° E	
					4962 Aug 01 04:28	0° O	
superior conj	4961 Aug 26 20:41	6° P 46'02	1°35'59	asc. node	4962 Aug 01 22:14	1° O 30'19	
minimum elong	4961 Aug 26 19:00	6° P 36'55	1°35'51	morning set	4962 Aug 04 08:33	6° O 34'22	
max. Earth dist.	4961 Aug 29 05:34	11° P 50'43	1.33323 AU				
evening rise	4961 Sep 03 09:08	22° P 29'40		superior conj	4962 Aug 11 06:53	21° O 39'04	1°23'57
	4961 Sep 07 05:29	0° U		minimum elong	4962 Aug 11 04:40	21° O 26'52	1°23'39
desc. node	4961 Sep 20 12:14	22° U 39'09		max. Earth dist.	4962 Aug 12 11:43	24° O 16'55	1.32458 AU
	4961 Sep 25 14:14	0° M			4962 Aug 15 03:04	0° P	
evening max el	4961 Oct 07 07:46	13° M 47'36	27°23'43	evening rise	4962 Aug 18 09:17	6° P 51'48	
retrograde	4961 Oct 20 21:28	21° M 05'59			4962 Aug 30 17:37	0° U	
evening set	4961 Oct 27 22:54	18° M 27'21					

































































































































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evening max el	4962 Sep 19 17:02	26°♄39'37	27°22'37	desc. node	4963 Aug 25 06:19	0°♄16'17	
	4962 Sep 23 16:02	0°♄			4963 Aug 25 01:16	0°♄	
retrograde	4962 Oct 03 12:04	3°♄54'04		evening max el	4963 Sep 01 20:49	8°♄49'08	26°48'09
evening set	4962 Oct 10 16:11	1°♄27'37		retrograde	4963 Sep 15 18:39	15°♄58'48	
	4962 Oct 12 15:04	30°♄		evening set	4963 Sep 22 16:17	13°♄56'35	
min. Earth dist.	4962 Oct 14 07:15	28°♄33'15	0.62352 AU	min. Earth dist.	4963 Sep 26 10:51	11°♄19'26	0.60337 AU
inferior conj	4962 Oct 17 05:03	25°♄49'58	-3°36'31	inferior conj	4963 Sep 29 16:02	8°♄41'23	-4°31'12
minimum elong	4962 Oct 17 11:00	25°♄36'02	3°34'39	minimum elong	4963 Sep 29 22:05	8°♄28'56	4°29'54
morning rise	4962 Oct 24 07:33	20°♄44'43		morning rise	4963 Oct 07 05:53	3°♄57'33	
direct	4962 Oct 26 15:59	20°♄20'04		direct	4963 Oct 09 13:52	3°♄36'51	
asc. node	4962 Oct 28 21:28	20°♄42'53		asc. node	4963 Oct 15 18:29	6°♄10'23	
morning max el	4962 Nov 02 11:21	23°♄48'15	17°50'42	morning max el	4963 Oct 16 23:56	7°♄16'24	18°07'12
	4962 Nov 07 10:15	0°♄			4963 Oct 31 13:14	0°♄	
morning set	4962 Nov 18 10:09	18°♄39'27		morning set	4963 Nov 01 18:32	2°♄16'59	
	4962 Nov 24 19:36	0°♄					
superior conj	4962 Nov 29 13:50	8°♄12'24	0°33'21	superior conj	4963 Nov 11 10:57	20°♄09'07	1°05'51
minimum elong	4962 Nov 29 16:48	8°♄25'01	0°32'57	minimum elong	4963 Nov 11 14:55	20°♄26'56	1°05'20
desc. node	4962 Dec 04 08:31	16°♄11'48			4963 Nov 17 01:57	0°♄	
max. Earth dist.	4962 Dec 06 15:44	19°♄57'26	1.43373 AU	max. Earth dist.	4963 Nov 19 02:39	3°♄26'27	1.41589 AU
	4962 Dec 12 22:59	0°♄		desc. node	4963 Nov 21 05:34	6°♄58'37	
evening rise	4962 Dec 14 05:55	2°♄00'44		evening rise	4963 Nov 24 08:16	12°♄03'31	
	4963 Jan 02 02:11	0°♄			4963 Dec 05 22:47	0°♄	
evening max el	4963 Jan 14 05:38	15°♄16'04	21°31'58	evening max el	4963 Dec 27 22:29	28°♄53'12	22°49'50
retrograde	4963 Jan 23 04:06	20°♄34'13			4963 Dec 29 01:53	0°♄	
asc. node	4963 Jan 24 20:45	20°♄18'49		retrograde	4964 Jan 06 23:32	4°♄50'51	
evening set	4963 Jan 27 10:48	18°♄52'54		evening set	4964 Jan 11 17:58	2°♄53'38	
inferior conj	4963 Feb 01 18:54	12°♄36'30	2°24'36	asc. node	4964 Jan 11 17:46	2°♄54'05	
minimum elong	4963 Feb 01 16:29	12°♄44'52	2°23'54		4964 Jan 14 12:07	30°♄	
min. Earth dist.	4963 Feb 01 23:42	12°♄19'53	0.67965 AU	inferior conj	4964 Jan 17 02:56	26°♄30'18	1°43'55
morning rise	4963 Feb 06 22:00	6°♄24'23		minimum elong	4964 Jan 17 00:51	26°♄37'30	1°43'11
direct	4963 Feb 11 24:00	4°♄12'08		min. Earth dist.	4964 Jan 16 20:13	26°♄53'31	0.68099 AU
morning max el	4963 Feb 22 03:43	10°♄13'36	23°06'05	morning rise	4964 Jan 22 07:38	20°♄21'54	
desc. node	4963 Mar 02 07:46	19°♄48'39		direct	4964 Jan 26 19:04	18°♄32'31	
	4963 Mar 09 18:25	0°♄		morning max el	4964 Feb 04 17:03	23°♄44'23	21°39'50
morning set	4963 Mar 28 21:02	29°♄35'32			4964 Feb 10 04:42	0°♄	
	4963 Mar 29 02:54	0°♄		desc. node	4964 Feb 17 04:47	9°♄21'34	
max. Earth dist.	4963 Apr 02 04:09	6°♄53'28	1.39614 AU		4964 Mar 02 03:53	0°♄	
				morning set	4964 Mar 07 19:32	8°♄51'26	
superior conj	4963 Apr 09 20:53	20°♄38'20	-1°46'21	max. Earth dist.	4964 Mar 14 04:06	19°♄11'00	1.41745 AU
minimum elong	4963 Apr 10 01:51	21°♄01'14	1°45'51		4964 Mar 20 13:20	0°♄	
	4963 Apr 14 20:44	0°♄		superior conj	4964 Mar 21 18:27	2°♄06'30	-2°03'54
evening rise	4963 Apr 19 11:01	8°♄48'04		minimum elong	4964 Mar 21 21:52	2°♄21'24	2°03'45
asc. node	4963 Apr 22 20:03	15°♄13'25		evening rise	4964 Apr 01 15:42	21°♄42'31	
	4963 May 01 14:04	0°♄			4964 Apr 06 04:54	0°♄	
evening max el	4963 May 05 15:17	4°♄50'45	18°33'30	asc. node	4964 Apr 08 17:05	4°♄25'17	
retrograde	4963 May 13 09:10	8°♄40'02		evening max el	4964 Apr 18 00:26	17°♄39'52	18°10'47
evening set	4963 May 15 14:56	8°♄21'54		retrograde	4964 Apr 24 21:22	21°♄08'01	
inferior conj	4963 May 23 06:08	3°♄53'51	1°40'50	evening set	4964 Apr 27 09:56	20°♄40'34	
minimum elong	4963 May 23 09:20	3°♄47'37	1°39'49	inferior conj	4964 May 04 07:09	15°♄51'44	2°44'44
min. Earth dist.	4963 May 26 15:19	1°♄17'23	0.57888 AU	minimum elong	4964 May 04 10:27	15°♄44'14	2°43'59
	4963 May 28 11:43	30°♄		min. Earth dist.	4964 May 07 15:30	12°♄50'55	0.60037 AU
desc. node	4963 May 29 07:01	29°♄29'42		morning rise	4964 May 11 08:28	10°♄04'52	
morning rise	4963 May 31 00:32	28°♄33'10		desc. node	4964 May 15 04:01	8°♄25'02	
direct	4963 Jun 05 20:24	27°♄07'08		direct	4964 May 17 20:39	8°♄04'31	
	4963 Jun 14 09:38	0°♄		morning max el	4964 Jun 01 04:48	15°♄57'29	27°37'18
morning max el	4963 Jun 20 05:28	4°♄44'53	26°44'33		4964 Jun 12 16:08	0°♄	
	4963 Jul 08 16:35	0°♄			4964 Jun 30 03:58	0°♄	
morning set	4963 Jul 19 18:41	21°♄20'16		morning set	4964 Jul 03 01:34	5°♄54'25	
asc. node	4963 Jul 19 19:16	21°♄23'26		asc. node	4964 Jul 05 16:19	11°♄25'50	
	4963 Jul 23 19:10	0°♄		max. Earth dist.	4964 Jul 09 09:36	19°♄31'27	1.31978 AU
superior conj	4963 Jul 26 18:35	6°♄33'38	1°07'10	superior conj	4964 Jul 10 06:04	21°♄24'04	0°46'13
minimum elong	4963 Jul 26 16:19	6°♄21'02	1°06'45	minimum elong	4964 Jul 10 04:12	21°♄13'47	0°45'50
max. Earth dist.	4963 Jul 26 22:18	6°♄54'09	1.32013 AU		4964 Jul 14 03:48	0°♄	
evening rise	4963 Aug 02 15:26	21°♄29'28		evening rise	4964 Jul 17 01:19	6°♄15'29	

	4964 Jul 29 11:14	0°♊			4965 Jul 25 11:38	0°♊	
desc. node	4964 Aug 11 03:19	17°♊31'41		evening max el	4965 Jul 26 06:37	0°♊46'51	24°12'36
evening max el	4964 Aug 13 16:56	20°♊08'57	25°41'50	desc. node	4965 Jul 29 00:19	3°♊11'26	
retrograde	4964 Aug 27 15:50	27°♊14'50		retrograde	4965 Aug 09 01:59	7°♊44'12	
evening set	4964 Sep 02 18:22	25°♊47'06		evening set	4965 Aug 13 20:15	6°♊53'51	
min. Earth dist.	4964 Sep 07 04:58	23°♊10'07	0.58276 AU	min. Earth dist.	4965 Aug 19 17:20	3°♊58'12	0.56444 AU
inferior conj	4964 Sep 10 09:03	20°♊54'57	-5°08'35	inferior conj	4965 Aug 22 05:58	2°♊23'47	-5°13'41
minimum elong	4964 Sep 10 12:29	20°♊48'49	5°08'17	minimum elong	4965 Aug 22 03:38	2°♊27'26	5°13'33
morning rise	4964 Sep 18 08:53	16°♊34'29			4965 Aug 26 08:44	30°♋♊	
direct	4964 Sep 20 19:49	16°♊15'25		morning rise	4965 Aug 30 13:32	28°♊23'51	
morning max el	4964 Sep 29 05:33	20°♊16'03	18°44'14	direct	4965 Sep 02 06:28	28°♊04'34	
asc. node	4964 Oct 01 15:31	22°♊52'35			4965 Sep 08 15:20	0°♊	
	4964 Oct 06 15:14	0°♊		morning max el	4965 Sep 12 01:04	2°♊38'11	19°42'57
morning set	4964 Oct 15 13:55	16°♊25'17		asc. node	4965 Sep 18 12:34	10°♊34'40	
	4964 Oct 22 13:34	0°♊			4965 Sep 29 05:55	0°♊	
				morning set	4965 Sep 29 16:53	0°♊55'14	
superior conj	4964 Oct 24 04:44	3°♊06'04	1°27'39	superior conj	4965 Oct 07 13:55	16°♊48'30	1°39'46
minimum elong	4964 Oct 24 07:52	3°♊20'51	1°27'22	minimum elong	4965 Oct 07 15:31	16°♊56'26	1°39'42
max. Earth dist.	4964 Oct 31 08:46	16°♊11'43	1.39520 AU	max. Earth dist.	4965 Oct 13 13:29	28°♊19'27	1.37432 AU
evening rise	4964 Nov 04 08:44	23°♊06'20			4965 Oct 14 11:10	0°♊	
desc. node	4964 Nov 07 02:35	27°♊41'26		evening rise	4965 Oct 17 07:43	5°♊11'15	
	4964 Nov 08 12:25	0°♋		desc. node	4965 Oct 24 23:36	18°♊16'33	
	4964 Nov 28 20:22	0°♋			4965 Nov 01 11:27	0°♋	
evening max el	4964 Dec 09 12:05	12°♋33'13	24°09'39	evening max el	4965 Nov 22 00:35	26°♋16'33	25°24'38
retrograde	4964 Dec 20 15:38	19°♋06'05			4965 Nov 26 07:21	0°♋	
evening set	4964 Dec 25 23:00	16°♋53'21		retrograde	4965 Dec 04 03:25	3°♋15'20	
asc. node	4964 Dec 28 14:46	14°♋07'14		evening set	4965 Dec 10 00:18	0°♋48'55	
min. Earth dist.	4964 Dec 30 16:29	11°♋26'44	0.67863 AU		4965 Dec 10 21:50	30°♋♋	
inferior conj	4964 Dec 31 10:10	10°♋27'04	0°56'17	min. Earth dist.	4965 Dec 14 10:17	25°♋56'35	0.67274 AU
minimum elong	4964 Dec 31 08:53	10°♋31'25	0°55'47	asc. node	4965 Dec 15 11:47	24°♋34'20	
morning rise	4965 Jan 05 18:49	4°♋24'03		inferior conj	4965 Dec 15 14:52	24°♋24'20	0°02'38
direct	4965 Jan 09 16:35	2°♋57'13		minimum elong	4965 Dec 15 14:48	24°♋24'34	0°02'36
morning max el	4965 Jan 17 13:31	7°♋26'44	20°23'15	transit middle	4965 Dec 15 14:48	24°♋24'34	0°02'36
desc. node	4965 Feb 03 01:48	29°♋20'30		transit begin	4965 Dec 15 12:03	24°♋33'29	
	4965 Feb 03 12:28	0°♌		transit end	4965 Dec 15 17:34	24°♋15'39	
morning set	4965 Feb 14 19:30	17°♌08'42		morning rise	4965 Dec 21 05:38	18°♋28'44	
	4965 Feb 22 23:48	0°♌		direct	4965 Dec 24 15:19	17°♋21'59	
max. Earth dist.	4965 Feb 24 11:13	2°♌21'56	1.43537 AU	morning max el	4965 Dec 31 17:53	21°♋19'59	19°20'24
superior conj	4965 Mar 02 15:37	12°♌27'24	-2°08'21		4966 Jan 07 19:06	0°♋	
minimum elong	4965 Mar 02 14:17	12°♌21'51	2°08'19	greatest brilliancy	4966 Jan 14 01:19	9°♋07'10	-0.7m
	4965 Mar 12 23:12	0°♍		desc. node	4966 Jan 20 22:50	19°♋38'27	
evening rise	4965 Mar 15 03:46	3°♍49'06		morning set	4966 Jan 24 18:32	25°♋32'29	
asc. node	4965 Mar 26 14:05	23°♍08'24			4966 Jan 27 15:32	0°♌	
	4965 Mar 31 17:48	0°♌		max. Earth dist.	4966 Feb 07 00:47	16°♌14'35	1.44770 AU
evening max el	4965 Apr 01 12:45	0°♌49'17	18°07'35	superior conj	4966 Feb 10 11:46	21°♌43'32	-1°54'28
retrograde	4965 Apr 07 23:58	4°♌11'31		minimum elong	4966 Feb 10 04:17	21°♌13'44	1°53'59
evening set	4965 Apr 10 18:48	3°♌33'01			4966 Feb 15 15:31	0°♌	
	4965 Apr 15 12:12	30°♋♍		evening rise	4966 Feb 24 18:56	15°♌00'28	
inferior conj	4965 Apr 17 01:58	28°♍24'22	3°20'11		4966 Mar 05 20:34	0°♍	
minimum elong	4965 Apr 17 03:54	28°♍19'21	3°19'56	asc. node	4966 Mar 13 11:06	11°♍14'17	
min. Earth dist.	4965 Apr 20 00:01	25°♍23'47	0.62216 AU	evening max el	4966 Mar 16 01:23	14°♍12'03	18°23'10
morning rise	4965 Apr 23 11:26	22°♍21'40		retrograde	4966 Mar 22 12:26	17°♍41'48	
direct	4965 Apr 30 07:25	19°♍52'11		evening set	4966 Mar 25 13:29	16°♍51'03	
desc. node	4965 May 02 01:02	20°♍01'07		inferior conj	4966 Mar 31 10:31	11°♍23'57	3°33'10
morning max el	4965 May 14 10:09	27°♍52'28	27°52'42	minimum elong	4966 Mar 31 10:48	11°♍23'08	3°33'09
	4965 May 16 11:04	0°♎		min. Earth dist.	4966 Apr 02 17:52	8°♍44'33	0.64182 AU
	4965 Jun 06 10:10	0°♎		morning rise	4966 Apr 06 07:16	5°♍13'21	
morning set	4965 Jun 17 03:12	20°♎10'15		direct	4966 Apr 13 02:39	2°♍26'43	
	4965 Jun 21 20:05	0°♏		desc. node	4966 Apr 18 22:04	4°♍07'41	
max. Earth dist.	4965 Jun 22 17:33	1°♏55'17	1.32361 AU	morning max el	4966 Apr 26 19:05	10°♍24'12	27°31'16
asc. node	4965 Jun 22 13:22	1°♏32'48			4966 May 12 04:48	0°♎	
superior conj	4965 Jun 24 15:34	6°♏04'45	0°21'41		4966 May 29 19:44	0°♎	
minimum elong	4965 Jun 24 14:34	5°♏59'19	0°21'28	morning set	4966 May 31 21:03	3°♎59'50	
evening rise	4965 Jul 01 12:55	21°♏03'14		max. Earth dist.	4966 Jun 05 18:11	13°♎53'50	1.33200 AU
	4965 Jul 05 20:43	0°♏					

superior conj	4966 Jun 08 21:13	20°II29'31	-0°05'44	max. Earth dist.	4967 May 19 08:29	25°822'23	1.34512 AU
minimum elong	4966 Jun 08 21:30	20°II31'04	0°05'40		4967 May 21 15:44	0°II	
behind sun begin	4966 Jun 08 16:24	20°II03'54					
behind sun end	4966 Jun 09 02:36	20°II58'16		superior conj	4967 May 23 20:49	4°II32'17	-0°34'58
asc. node	4966 Jun 09 10:24	21°II39'56		minimum elong	4967 May 23 22:43	4°II42'03	0°34'35
	4966 Jun 13 07:29	0°☾		asc. node	4967 May 27 07:27	11°II43'34	
evening rise	4966 Jun 16 00:26	5°☾46'29		evening rise	4967 May 31 09:55	20°II19'38	
	4966 Jun 28 23:56	0°♊			4967 Jun 05 04:57	0°☾	
evening max el	4966 Jul 07 20:04	11°♊08'22	22°35'04	evening max el	4967 Jun 19 17:19	21°☾47'01	21°04'18
desc. node	4966 Jul 15 21:20	16°♊41'04		retrograde	4967 Jul 01 12:11	27°☾34'47	
retrograde	4966 Jul 20 23:28	17°♊40'39		desc. node	4967 Jul 02 18:21	27°☾31'02	
evening set	4966 Jul 24 05:16	17°♊17'35		evening set	4967 Jul 03 17:29	27°☾23'14	
min. Earth dist.	4966 Aug 01 03:39	13°♊49'14	0.55190 AU	inferior conj	4967 Jul 13 01:46	23°☾25'34	-2°58'32
inferior conj	4966 Aug 02 08:31	13°♊08'09	-4°30'55	minimum elong	4967 Jul 12 17:52	23°☾36'41	2°55'57
minimum elong	4966 Aug 02 00:35	13°♊19'29	4°29'16	min. Earth dist.	4967 Jul 13 14:19	23°☾07'54	0.54800 AU
morning rise	4966 Aug 10 21:53	9°♊18'01		morning rise	4967 Jul 21 18:30	19°☾27'25	
direct	4966 Aug 13 23:35	8°♊56'24		direct	4967 Jul 25 08:48	18°☾59'36	
morning max el	4966 Aug 25 08:28	14°♊14'19	21°03'02	morning max el	4967 Aug 07 04:49	25°☾06'29	22°40'10
asc. node	4966 Sep 05 09:38	29°♊02'07			4967 Aug 11 17:36	0°♊	
	4966 Sep 05 22:59	0°♊		asc. node	4967 Aug 23 06:42	18°♊04'00	
morning set	4966 Sep 14 00:45	15°♊38'33		morning set	4967 Aug 29 11:27	0°♊29'26	
	4966 Sep 20 21:56	0°♊			4967 Aug 29 05:50	0°♊	
superior conj	4966 Sep 21 10:00	1°♊02'21	1°43'38	superior conj	4967 Sep 05 13:35	15°♊37'28	1°40'31
minimum elong	4966 Sep 21 10:04	1°♊02'40	1°43'38	minimum elong	4967 Sep 05 12:24	15°♊31'14	1°40'28
max. Earth dist.	4966 Sep 25 22:42	10°♊11'42	1.35551 AU	max. Earth dist.	4967 Sep 08 16:24	22°♊11'10	1.34022 AU
evening rise	4966 Sep 30 01:39	18°♊08'26			4967 Sep 12 12:39	0°♊	
	4966 Oct 06 15:52	0°♊		evening rise	4967 Sep 13 10:13	1°♊46'25	
desc. node	4966 Oct 11 20:38	8°♊38'22		desc. node	4967 Sep 28 17:40	28°♊40'29	
	4966 Oct 26 16:45	0°♊			4967 Sep 29 14:15	0°♊	
evening max el	4966 Nov 04 13:21	9°♊59'02	26°27'26	evening max el	4967 Oct 18 02:06	23°♊31'33	27°10'33
retrograde	4966 Nov 17 10:01	17°♊12'03			4967 Oct 27 08:29	0°♊	
evening set	4966 Nov 23 19:58	14°♊35'44		retrograde	4967 Oct 31 10:43	0°♊49'10	
min. Earth dist.	4966 Nov 27 23:11	10°♊18'37	0.66335 AU		4967 Nov 04 07:00	30°♊	
inferior conj	4966 Nov 29 15:05	8°♊18'00	-0°56'02	evening set	4967 Nov 07 07:46	28°♊08'59	
minimum elong	4966 Nov 29 16:38	8°♊13'20	0°55'22	min. Earth dist.	4967 Nov 11 04:48	24°♊27'10	0.65046 AU
asc. node	4966 Dec 02 08:50	5°♊09'42		inferior conj	4967 Nov 13 08:36	22°♊03'21	-1°58'11
morning rise	4966 Dec 05 13:57	2°♊32'25		minimum elong	4967 Nov 13 12:00	21°♊53'54	1°56'48
direct	4966 Dec 08 13:34	1°♊42'12		asc. node	4967 Nov 19 05:54	16°♊45'17	
morning max el	4966 Dec 15 04:57	5°♊19'41	18°33'20	morning rise	4967 Nov 19 17:19	16°♊30'54	
	4967 Jan 01 10:18	0°♊		direct	4967 Nov 22 09:04	15°♊53'25	
morning set	4967 Jan 04 15:41	5°♊07'23		morning max el	4967 Nov 28 20:22	19°♊20'15	18°03'00
desc. node	4967 Jan 07 19:53	10°♊09'39			4967 Dec 06 20:30	0°♊	
	4967 Jan 20 10:17	0°♊		morning set	4967 Dec 16 18:32	16°♊11'16	
					4967 Dec 25 04:36	0°♊	
superior conj	4967 Jan 20 15:55	0°♊22'05	-1°21'20	desc. node	4967 Dec 25 16:55	0°♊49'47	
minimum elong	4967 Jan 20 06:48	29°♊46'22	1°20'19				
max. Earth dist.	4967 Jan 20 18:56	0°♊33'55	1.45307 AU	superior conj	4967 Dec 30 23:19	9°♊16'18	-0°35'59
evening rise	4967 Feb 05 10:47	25°♊14'56		minimum elong	4967 Dec 30 18:53	8°♊58'40	0°35'21
	4967 Feb 08 10:28	0°♊		max. Earth dist.	4968 Jan 03 14:42	15°♊01'54	1.45101 AU
greatest brilliancy	4967 Feb 14 08:29	9°♊22'52	-0.8m		4968 Jan 13 04:54	0°♊	
evening max el	4967 Feb 27 11:48	27°♊42'17	18°56'39	evening rise	4968 Jan 16 06:18	4°♊43'57	
asc. node	4967 Feb 28 08:07	28°♊31'44		greatest brilliancy	4968 Jan 29 20:49	25°♊29'42	-0.7m
	4967 Mar 02 03:21	0°♊			4968 Feb 01 22:40	0°♊	
retrograde	4967 Mar 06 07:00	1°♊31'20		evening max el	4968 Feb 10 17:57	11°♊14'56	19°46'29
evening set	4967 Mar 09 14:47	0°♊27'27		asc. node	4968 Feb 15 05:10	14°♊46'34	
	4967 Mar 10 06:36	30°♊		retrograde	4968 Feb 18 04:35	15°♊33'33	
inferior conj	4967 Mar 15 05:01	24°♊43'28	3°29'09	evening set	4968 Feb 21 20:09	14°♊15'39	
minimum elong	4967 Mar 15 03:55	24°♊46'53	3°29'03	inferior conj	4968 Feb 27 06:18	8°♊16'47	3°12'03
min. Earth dist.	4967 Mar 16 20:44	22°♊38'59	0.65781 AU	minimum elong	4968 Feb 27 04:19	8°♊23'24	3°11'42
morning rise	4967 Mar 20 16:40	18°♊29'38		min. Earth dist.	4968 Feb 28 07:17	6°♊53'44	0.66959 AU
direct	4967 Mar 27 04:45	15°♊39'51		morning rise	4968 Mar 03 12:15	2°♊02'17	
desc. node	4967 Apr 05 19:06	20°♊11'42			4968 Mar 06 12:32	30°♊	
morning max el	4967 Apr 09 05:03	23°♊21'55	26°38'58	direct	4968 Mar 09 12:35	29°♊21'14	
	4967 Apr 15 02:38	0°♊			4968 Mar 12 17:49	0°♊	
	4967 May 05 12:44	0°♊		morning max el	4968 Mar 21 14:19	6°♊33'45	25°24'23
morning set	4967 May 15 03:50	17°♊13'45		desc. node	4968 Mar 22 16:08	7°♊40'35	

	4968 Apr 08 18:35	0°♿	direct	4969 Feb 21 01:30	13°≈23'10	
morning set	4968 Apr 26 19:04	29°♿38'40	morning max el	4969 Mar 03 23:04	19°≈53'19	23°57'33
	4968 Apr 26 23:47	0°♿	desc. node	4969 Mar 09 13:10	26°≈10'36	
max. Earth dist.	4968 Apr 30 11:50	6°♿28'13 1.36267 AU		4969 Mar 12 13:50	0°♿	
				4969 Apr 01 22:57	0°♿	
superior conj	4968 May 06 11:31	18°♿04'19 -1°04'38	morning set	4969 Apr 08 13:09	10°♿59'46	
minimum elong	4968 May 06 15:05	18°♿22'03 1°04'01	max. Earth dist.	4969 Apr 12 08:00	17°♿37'04	1.38352 AU
	4968 May 12 09:04	0°♿		4969 Apr 19 01:50	0°♿	
asc. node	4968 May 13 04:28	1°♿38'58				
evening rise	4968 May 14 15:09	4°♿35'11	superior conj	4969 Apr 19 13:49	0°♿56'45 -1°32'26	
	4968 May 29 08:22	0°♿	minimum elong	4969 Apr 19 18:37	1°♿19'34	1°31'50
evening max el	4968 Jun 01 02:38	3°♿03'14 19°49'53	evening rise	4969 Apr 28 13:31	18°♿25'57	
retrograde	4968 Jun 11 04:22	7°♿58'36	asc. node	4969 Apr 30 01:30	21°♿21'44	
evening set	4968 Jun 13 02:31	7°♿48'37		4969 May 04 15:10	0°♿	
desc. node	4968 Jun 18 15:23	5°♿45'03	evening max el	4969 May 14 23:41	15°♿01'21	18°55'28
inferior conj	4968 Jun 22 00:09	3°♿47'01 -1°00'19	retrograde	4969 May 23 11:21	19°♿10'49	
minimum elong	4968 Jun 21 21:22	3°♿51'17 0°59'17	evening set	4969 May 25 13:03	18°♿56'56	
min. Earth dist.	4968 Jun 24 02:52	2°♿29'21 0.55371 AU	inferior conj	4969 Jun 02 15:46	14°♿40'12	0°49'43
	4968 Jun 28 20:18	30°♿♿	minimum elong	4969 Jun 02 17:40	14°♿36'49	0°49'02
morning rise	4968 Jun 30 14:12	29°♿21'30	desc. node	4969 Jun 05 12:24	12°♿38'45	
direct	4968 Jul 04 22:47	28°♿39'45	min. Earth dist.	4969 Jun 05 18:45	12°♿27'53	0.56791 AU
	4968 Jul 10 22:23	0°♿	morning rise	4969 Jun 10 18:59	9°♿38'15	
morning max el	4968 Jul 18 19:06	5°♿31'21 24°24'11	direct	4969 Jun 16 02:09	8°♿31'05	
	4968 Aug 05 05:35	0°♿	morning max el	4969 Jun 30 09:47	15°♿56'26	25°59'42
asc. node	4968 Aug 09 03:45	7°♿31'13		4969 Jul 11 19:19	0°♿	
morning set	4968 Aug 12 23:12	15°♿22'37	asc. node	4969 Jul 27 00:47	27°♿16'38	
			morning set	4969 Jul 28 10:22	0°♿12'45	
				4969 Jul 28 07:57	0°♿	
superior conj	4968 Aug 19 21:58	0°♿25'41 1°31'30				
minimum elong	4968 Aug 19 19:59	0°♿14'57 1°31'17	superior conj	4969 Aug 04 08:59	15°♿19'52	1°17'22
	4968 Aug 19 17:15	0°♿	minimum elong	4969 Aug 04 06:41	15°♿07'11	1°17'01
max. Earth dist.	4968 Aug 21 18:37	4°♿27'31 1.32902 AU	max. Earth dist.	4969 Aug 05 02:59	16°♿58'58	1.32211 AU
evening rise	4968 Aug 27 05:33	15°♿54'37	evening rise	4969 Aug 11 08:30	0°♿23'46	
	4968 Sep 03 13:08	0°♿		4969 Aug 11 03:57	0°♿	
desc. node	4968 Sep 14 14:42	18°♿14'39		4969 Aug 27 14:17	0°♿	
	4968 Sep 23 08:21	0°♿	desc. node	4969 Sep 01 11:43	7°♿08'51	
evening max el	4968 Sep 29 13:11	6°♿41'40 27°27'11	evening max el	4969 Sep 11 20:10	19°♿15'51	27°12'05
retrograde	4968 Oct 13 05:10	13°♿58'16	retrograde	4969 Sep 25 16:40	26°♿29'00	
evening set	4968 Oct 20 08:52	11°♿23'14	evening set	4969 Oct 02 19:26	24°♿10'58	
min. Earth dist.	4968 Oct 24 01:00	8°♿13'54 0.63417 AU	min. Earth dist.	4969 Oct 06 10:40	21°♿25'59	0.61506 AU
inferior conj	4968 Oct 26 16:48	5°♿34'23 -3°01'19	inferior conj	4969 Oct 09 12:30	18°♿42'35	-4°01'07
minimum elong	4968 Oct 26 22:00	5°♿21'22 2°59'28	minimum elong	4969 Oct 09 18:44	18°♿28'44	3°59'25
morning rise	4968 Nov 02 12:39	0°♿18'31	morning rise	4969 Oct 16 19:57	13°♿46'28	
	4968 Nov 03 12:47	30°♿♿	direct	4969 Oct 19 03:42	13°♿23'55	
direct	4968 Nov 04 23:00	29°♿50'08	asc. node	4969 Oct 23 00:00	14°♿28'11	
asc. node	4968 Nov 05 02:58	29°♿50'16	morning max el	4969 Oct 26 04:25	16°♿55'50	17°55'25
	4968 Nov 06 09:02	0°♿		4969 Nov 04 09:59	0°♿	
morning max el	4968 Nov 11 13:16	3°♿15'14 17°50'05	morning set	4969 Nov 10 23:07	11°♿43'29	
morning set	4968 Nov 27 23:13	28°♿30'17				
	4968 Nov 28 19:51	0°♿	superior conj	4969 Nov 21 10:35	0°♿30'11	0°48'26
superior conj	4968 Dec 10 03:43	19°♿14'46 0°10'01	minimum elong	4969 Nov 21 14:18	0°♿46'17	0°47'56
minimum elong	4968 Dec 10 04:46	19°♿19'07 0°09'52		4969 Nov 21 03:38	0°♿	
behind sun begin	4968 Dec 09 21:09	18°♿47'39	desc. node	4969 Nov 28 10:59	12°♿22'45	
behind sun end	4968 Dec 10 12:23	19°♿50'31	max. Earth dist.	4969 Nov 28 22:00	13°♿08'10	1.42656 AU
desc. node	4968 Dec 11 13:57	21°♿35'30	evening rise	4969 Dec 05 08:53	23°♿31'17	
max. Earth dist.	4968 Dec 16 08:41	29°♿19'39 1.44178 AU		4969 Dec 09 12:46	0°♿	
	4968 Dec 16 18:47	0°♿		4969 Dec 30 10:04	0°≈	
evening rise	4968 Dec 25 16:27	13°♿56'50	evening max el	4970 Jan 06 14:01	8°≈23'52	22°04'24
	4969 Jan 05 07:06	0°≈	retrograde	4970 Jan 15 23:51	13°≈59'41	
evening max el	4969 Jan 23 18:41	24°≈48'54 20°50'13	asc. node	4970 Jan 18 23:14	13°≈12'43	
retrograde	4969 Feb 01 02:52	29°≈44'29	evening set	4970 Jan 20 11:16	12°≈11'41	
asc. node	4969 Feb 01 02:12	29°≈44'29	inferior conj	4970 Jan 25 19:32	5°≈51'38	2°08'17
evening set	4969 Feb 05 03:34	28°≈11'52	minimum elong	4970 Jan 25 17:13	5°≈59'44	2°07'32
inferior conj	4969 Feb 10 11:52	22°≈00'45 2°44'31	min. Earth dist.	4970 Jan 25 19:20	5°≈52'22	0.68066 AU
minimum elong	4969 Feb 10 09:28	22°≈08'59 2°43'55	morning rise	4970 Jan 30 23:00	29°♿40'41	
min. Earth dist.	4969 Feb 10 23:35	21°≈20'24 0.67714 AU		4970 Jan 30 14:20	30°♿♿	
morning rise	4969 Feb 15 15:12	15°≈47'13	direct	4970 Feb 04 18:39	27°♿38'05	

	4970 Feb 10 15:21	0°♊		morning rise	4971 Jan 15 09:32	13°♊40'27	
morning max el	4970 Feb 14 09:38	3°♊18'43	22°28'31	direct	4971 Jan 19 15:02	12°♊00'39	
desc. node	4970 Feb 24 10:11	15°♊24'05		morning max el	4971 Jan 28 01:35	16°♊53'29	21°05'42
	4970 Mar 06 16:25	0°♋			4971 Feb 07 15:46	0°♊	
morning set	4970 Mar 20 04:17	21°♋02'31		desc. node	4971 Feb 11 07:13	5°♊09'06	
max. Earth dist.	4970 Mar 25 04:03	29°♋20'49	1.40543 AU	morning set	4971 Feb 27 15:29	29°♊47'47	
	4970 Mar 25 13:17	0°♌			4971 Feb 27 18:36	0°♋	
				max. Earth dist.	4971 Mar 07 06:30	12°♋00'06	1.42563 AU
superior conj	4970 Apr 01 23:18	12°♌59'03	-1°55'03				
minimum elong	4970 Apr 02 03:57	13°♌20'01	1°54'41	superior conj	4971 Mar 14 11:01	23°♋59'54	-2°07'44
	4970 Apr 11 03:48	0°♍		minimum elong	4971 Mar 14 12:48	24°♋07'33	2°07'42
evening rise	4970 Apr 12 01:46	1°♍43'29			4971 Mar 17 22:34	0°♌	
asc. node	4970 Apr 16 22:32	10°♍46'45		evening rise	4971 Mar 25 23:55	14°♌18'30	
evening max el	4970 Apr 28 05:31	27°♍35'10	18°21'27	asc. node	4971 Apr 03 19:33	29°♌47'23	
	4970 May 01 07:36	0°♎			4971 Apr 03 22:37	0°♍	
retrograde	4970 May 05 13:08	1°♎13'27		evening max el	4971 Apr 11 16:30	10°♍34'34	18°07'08
evening set	4970 May 07 21:45	0°♎51'45		retrograde	4971 Apr 18 07:52	13°♍58'02	
	4970 May 09 23:20	30°♏		evening set	4971 Apr 20 23:15	13°♍25'58	
inferior conj	4970 May 15 04:56	26°♏15'15	2°11'44	inferior conj	4971 Apr 27 14:00	8°♏28'45	3°02'55
minimum elong	4970 May 15 08:27	26°♏07'55	2°10'45	minimum elong	4971 Apr 27 16:49	8°♏21'58	3°02'23
min. Earth dist.	4970 May 18 15:28	23°♏25'03	0.58776 AU	min. Earth dist.	4971 Apr 30 18:55	5°♏25'05	0.60980 AU
morning rise	4970 May 22 16:05	20°♏41'53		morning rise	4971 May 04 08:19	2°♏34'19	
desc. node	4970 May 23 09:24	20°♏19'51		desc. node	4971 May 10 06:25	0°♏21'59	
direct	4970 May 28 19:54	19°♏00'51		direct	4971 May 11 01:09	0°♏20'12	
morning max el	4970 Jun 12 05:18	26°♏47'04	27°11'17	morning max el	4971 May 25 07:08	8°♏16'57	27°48'28
	4970 Jun 15 06:40	0°♐			4971 Jun 10 21:29	0°♎	
	4970 Jul 05 06:38	0°♑		morning set	4971 Jun 27 00:15	29°♎21'54	
morning set	4970 Jul 12 19:21	14°♑54'52			4971 Jun 27 07:37	0°♑	
asc. node	4970 Jul 13 21:48	17°♑14'37		asc. node	4971 Jun 30 18:49	7°♑19'21	
				max. Earth dist.	4971 Jul 03 00:27	12°♑10'11	1.32089 AU
superior conj	4970 Jul 19 20:50	0°♒14'06	0°58'45				
minimum elong	4970 Jul 19 18:40	0°♒02'10	0°58'21	superior conj	4971 Jul 04 07:41	15°♑01'16	0°36'13
max. Earth dist.	4970 Jul 19 14:10	29°♑37'21	1.31940 AU	minimum elong	4971 Jul 04 06:08	14°♑52'44	0°35'54
	4970 Jul 19 18:16	0°♓		evening rise	4971 Jul 11 03:22	29°♑54'02	
evening rise	4970 Jul 26 16:30	15°♓06'18			4971 Jul 11 04:29	0°♒	
	4970 Aug 03 03:14	0°♑			4971 Jul 27 15:31	0°♑	
desc. node	4970 Aug 19 08:43	25°♑06'59		desc. node	4971 Aug 06 05:43	11°♑45'31	
	4970 Aug 23 18:15	0°♒		evening max el	4971 Aug 06 13:59	12°♑05'29	25°05'58
evening max el	4970 Aug 24 20:47	1°♒04'46	26°23'36	retrograde	4971 Aug 20 12:21	19°♑08'10	
retrograde	4970 Sep 07 19:49	8°♒13'32		evening set	4971 Aug 26 02:23	17°♑57'03	
evening set	4970 Sep 14 10:47	6°♒25'07		min. Earth dist.	4971 Aug 31 01:33	15°♑14'02	0.57453 AU
min. Earth dist.	4970 Sep 18 10:14	3°♒50'06	0.59446 AU	inferior conj	4971 Sep 03 00:50	13°♑14'36	-5°15'44
inferior conj	4970 Sep 21 16:15	1°♒19'22	-4°50'00	minimum elong	4971 Sep 03 02:08	13°♑12'25	5°15'42
minimum elong	4970 Sep 21 21:36	1°♒08'59	4°49'07	morning rise	4971 Sep 11 04:11	9°♑03'09	
	4970 Sep 23 10:02	30°♒		direct	4971 Sep 13 17:23	8°♑44'07	
morning rise	4970 Sep 29 10:35	26°♑45'25		morning max el	4971 Sep 22 16:03	12°♑57'35	19°06'27
direct	4970 Oct 01 19:13	26°♑25'48		asc. node	4971 Sep 26 18:04	17°♑38'33	
	4970 Oct 09 08:50	0°♓			4971 Oct 04 08:35	0°♒	
morning max el	4970 Oct 09 14:29	0°♓13'25	18°20'20	morning set	4971 Oct 09 11:40	9°♓53'47	
asc. node	4970 Oct 09 21:02	0°♓29'27					
morning set	4970 Oct 25 12:41	25°♓35'23		superior conj	4971 Oct 17 18:03	26°♓11'38	1°33'53
	4970 Oct 27 20:07	0°♔		minimum elong	4971 Oct 17 20:34	26°♓23'46	1°33'43
					4971 Oct 19 17:49	0°♔	
superior conj	4970 Nov 03 17:08	12°♔54'10	1°16'20	max. Earth dist.	4971 Oct 24 11:16	8°♔44'44	1.38625 AU
minimum elong	4970 Nov 03 20:55	13°♔11'26	1°15'56	evening rise	4971 Oct 28 06:34	15°♔28'25	
max. Earth dist.	4970 Nov 11 06:08	26°♔16'38	1.40728 AU	desc. node	4971 Nov 02 05:02	23°♔48'14	
	4970 Nov 13 10:48	0°♕			4971 Nov 06 01:20	0°♕	
desc. node	4970 Nov 15 08:00	3°♕08'17			4971 Nov 27 12:02	0°♖	
evening rise	4970 Nov 15 20:13	3°♕58'37		evening max el	4971 Dec 02 18:24	5°♖44'26	24°42'39
	4970 Dec 02 19:15	0°♗		retrograde	4971 Dec 14 08:14	12°♖28'54	
evening max el	4970 Dec 20 05:17	22°♖02'09	23°23'59	evening set	4971 Dec 19 21:21	10°♖10'13	
retrograde	4970 Dec 30 18:01	28°♖15'47		asc. node	4971 Dec 23 17:17	5°♖57'55	
evening set	4971 Jan 04 17:43	26°♖12'09		min. Earth dist.	4971 Dec 24 11:37	4°♖58'05	0.67656 AU
asc. node	4971 Jan 05 20:15	25°♖10'19		inferior conj	4971 Dec 25 09:51	3°♖44'20	0°34'15
min. Earth dist.	4971 Jan 09 16:08	20°♖25'55	0.68041 AU	minimum elong	4971 Dec 25 09:02	3°♖47'05	0°33'54
inferior conj	4971 Jan 10 03:27	19°♖47'03	1°24'33		4971 Dec 28 09:45	30°♕	
minimum elong	4971 Jan 10 01:39	19°♖53'13	1°23'52	morning rise	4971 Dec 30 20:50	27°♕44'11	

direct	4972 Jan 03 13:21	26°  26'03		direct	4972 Dec 17 12:04	10°  49'18	
	4972 Jan 10 08:42	0° 		morning max el	4972 Dec 24 08:54	14°  36'55	18°58'28
morning max el	4972 Jan 11 01:23	0°  40'23	19°54'43		4973 Jan 04 21:53	0° 	
desc. node	4972 Jan 29 04:16	25°  16'59		desc. node	4973 Jan 15 01:17	15°  34'051	
	4972 Feb 01 06:58	0° 		morning set	4973 Jan 15 18:15	16°  34'03	
morning set	4972 Feb 06 11:52	7°  58'34			4973 Jan 24 05:18	0° 	
max. Earth dist.	4972 Feb 17 17:09	25°  32'52	1.44141 AU	max. Earth dist.	4973 Jan 30 09:28	9°  40'27	1.45085 AU
	4972 Feb 20 11:51	0° 					
				superior conj	4973 Feb 01 08:42	12°  46'23	-1°42'33
superior conj	4972 Feb 22 21:18	3°  52'27	-2°04'55	minimum elong	4973 Jan 31 23:38	12°  40'40	1°41'45
minimum elong	4972 Feb 22 17:14	3°  35'54	2°04'46		4973 Feb 12 03:59	0° 	
evening rise	4972 Mar 07 03:37	26°  02'41		evening rise	4973 Feb 16 08:58	6°  49'27	
	4972 Mar 09 11:05	0° 			4973 Mar 02 22:40	0° 	
asc. node	4972 Mar 20 16:34	18°  00'16'08		asc. node	4973 Mar 07 13:38	6°  02'43	
evening max el	4972 Mar 25 05:23	23°  00'51'03	18°11'57	evening max el	4973 Mar 08 17:18	7°  16'58	18°35'15
retrograde	4972 Mar 31 15:15	27°  00'14'42		retrograde	4973 Mar 15 06:54	10°  00'53'49	
evening set	4972 Apr 03 12:50	26°  00'30'56		evening set	4973 Mar 18 10:42	9°  00'57'33	
inferior conj	4972 Apr 09 15:12	21°  00'14'03	3°28'04	inferior conj	4973 Mar 24 04:26	4°  00'22'45	3°33'15
minimum elong	4972 Apr 09 16:26	21°  00'10'42	3°27'57	minimum elong	4973 Mar 24 04:05	4°  00'23'48	3°33'15
min. Earth dist.	4972 Apr 12 07:11	18°  00'20'40	0.63092 AU	min. Earth dist.	4973 Mar 26 05:00	1°  00'57'10	0.64908 AU
morning rise	4972 Apr 15 18:52	15°  00'07'26			4973 Mar 27 22:54	30° 	
direct	4972 Apr 22 15:33	12°  00'29'19		morning rise	4973 Mar 29 20:52	28°  00'10'11	
desc. node	4972 Apr 26 03:27	13°  00'05'47		direct	4973 Apr 05 13:39	25°  00'10'53	
morning max el	4972 May 06 14:20	20°  00'28'43	27°47'51	desc. node	4973 Apr 13 00:29	28°  00'10'07	
	4972 May 14 18:52	0° 			4973 Apr 15 12:31	0° 	
	4972 Jun 02 22:14	0° 		morning max el	4973 Apr 19 00:15	3°  00'13'31	27°12'26
morning set	4972 Jun 09 22:55	13°  00'22'24			4973 May 09 03:28	0° 	
max. Earth dist.	4972 Jun 15 05:57	24°  00'25'19	1.32671 AU	morning set	4973 May 24 12:34	27°  00'03'09	
asc. node	4972 Jun 16 15:52	27°  00'26'42			4973 May 26 00:42	0° 	
				max. Earth dist.	4973 May 29 02:45	6°  00'22'14	1.33703 AU
superior conj	4972 Jun 17 15:49	29°  00'22'35'48	0°10'24				
minimum elong	4972 Jun 17 15:19	29°  00'22'33'06	0°10'17	superior conj	4973 Jun 01 19:12	13°  00'22'51'44	-0°17'57
behind sun begin	4972 Jun 17 11:15	29°  00'22'11'12		minimum elong	4973 Jun 01 20:08	13°  00'22'56'41	0°17'46
behind sun end	4972 Jun 17 19:22	29°  00'22'55'01		asc. node	4973 Jun 03 12:55	17°  00'22'32'40	
	4972 Jun 17 20:17	0° 		evening rise	4973 Jun 09 02:07	29°  00'22'20'28	
evening rise	4972 Jun 24 15:12	14°  00'22'40'46			4973 Jun 09 09:39	0° 	
	4972 Jul 02 06:53	0° 			4973 Jun 27 00:37	0° 	
evening max el	4972 Jul 18 02:35	22°  00'22'32'00	23°31'01	evening max el	4973 Jun 29 18:19	2°  00'22'56'29	21°54'50
desc. node	4972 Jul 23 02:44	26°  00'22'34'09		desc. node	4973 Jul 09 23:44	8°  00'22'58'53	
retrograde	4972 Jul 31 16:34	29°  00'22'20'38		retrograde	4973 Jul 12 09:48	9°  00'22'12'36	
evening set	4972 Aug 04 19:15	28°  00'22'43'34		evening set	4973 Jul 15 03:03	8°  00'22'56'02	
min. Earth dist.	4972 Aug 11 12:16	25°  00'22'35'46	0.55830 AU	inferior conj	4973 Jul 24 10:23	4°  00'22'52'48	-3°56'56
inferior conj	4972 Aug 13 13:18	24°  00'22'23'00	-5°01'58	minimum elong	4973 Jul 24 01:36	5°  00'22'05'07	3°54'37
minimum elong	4972 Aug 13 08:12	24°  00'22'30'36	5°01'21	min. Earth dist.	4973 Jul 23 22:25	5°  00'22'09'34	0.54906 AU
morning rise	4972 Aug 21 23:34	20°  00'22'29'12		morning rise	4973 Aug 02 01:42	1°  00'22'02'04	
direct	4972 Aug 24 20:10	20°  00'22'09'05		direct	4973 Aug 05 07:56	0°  00'22'38'40	
morning max el	4972 Sep 04 06:24	24°  00'22'59'47	20°14'34	morning max el	4973 Aug 17 08:54	6°  00'22'17'01	21°42'48
	4972 Sep 08 17:28	0° 		asc. node	4973 Aug 30 12:11	24°  00'22'24'25	
asc. node	4972 Sep 12 15:07	5°  00'22'10'41'00			4973 Sep 02 11:58	0° 	
morning set	4972 Sep 22 17:00	24°  00'22'10'30'02		morning set	4973 Sep 07 02:20	9°  00'22'17'45	
	4972 Sep 25 09:18	0° 					
superior conj	4972 Sep 30 08:20	10°  00'22'08'25	1°42'21	superior conj	4973 Sep 14 08:03	24°  00'22'10'33'12	1°43'06
minimum elong	4972 Sep 30 09:15	10°  00'22'08'13'04	1°42'19	minimum elong	4973 Sep 14 07:32	24°  00'22'10'30'31	1°43'05
max. Earth dist.	4972 Oct 05 17:36	20°  00'22'08'44'04	1.36597 AU		4973 Sep 16 23:10	0° 	
evening rise	4972 Oct 09 14:04	27°  00'22'08'56'10		max. Earth dist.	4973 Sep 18 06:05	2°  00'22'03'37'10	1.34847 AU
	4972 Oct 10 17:23	0° 		evening rise	4973 Sep 22 14:46	11°  00'22'01'24	
desc. node	4972 Oct 19 02:03	14°  00'22'08'18'01			4973 Oct 03 03:46	0° 	
	4972 Oct 29 09:49	0° 		desc. node	4973 Oct 05 23:04	4°  00'22'08'32'33	
evening max el	4972 Nov 14 06:55	19°  00'22'08'27'42	25°53'18		4973 Oct 24 18:35	0° 	
retrograde	4972 Nov 26 17:44	26°  00'22'08'33'28		evening max el	4973 Oct 27 19:34	3°  00'22'06'44	26°48'31
evening set	4972 Dec 02 20:29	24°  00'22'08'02'04		retrograde	4973 Nov 09 22:02	10°  00'22'08'23'22	
min. Earth dist.	4972 Dec 07 03:30	19°  00'22'08'24'55	0.66918 AU	evening set	4973 Nov 16 13:09	7°  00'22'08'44'08	
inferior conj	4972 Dec 08 12:53	17°  00'22'08'39'59	-0°21'44	min. Earth dist.	4973 Nov 20 13:30	3°  00'22'08'42'24	0.65829 AU
minimum elong	4972 Dec 08 13:27	17°  00'22'08'38'11	0°21'29	inferior conj	4973 Nov 22 10:33	1°  00'22'08'30'48	-1°22'06
asc. node	4972 Dec 09 14:21	16°  00'22'08'20'48		minimum elong	4973 Nov 22 12:51	1°  00'22'08'24'02	1°21'07
morning rise	4972 Dec 14 06:52	11°  00'22'08'48'35			4973 Nov 23 18:06	30° 	
				asc. node	4973 Nov 26 11:23	27°  00'22'08'16'39	

morning rise	4973 Nov 28 13:26	25° \mathbb{M} 50'41		direct	4974 Nov 15 02:46	9° \mathbb{M} 11'53	
direct	4973 Dec 01 09:20	25° \mathbb{M} 06'30		morning max el	4974 Nov 21 14:39	12° \mathbb{M} 37'19	17°55'16
morning max el	4973 Dec 07 22:15	28° \mathbb{M} 38'24	18°18'23		4974 Dec 03 15:46	0° \mathbb{M}	
	4973 Dec 09 04:57	0° \mathbb{M}		morning set	4974 Dec 08 18:32	8° \mathbb{M} 37'38	
morning set	4973 Dec 27 03:58	26° \mathbb{M} 59'49		desc. node	4974 Dec 19 19:23	26° \mathbb{M} 58'56	
	4973 Dec 29 00:37	0° \mathbb{M}			4974 Dec 21 16:04	0° \mathbb{M}	
desc. node	4974 Jan 01 22:20	6° \mathbb{M} 16'17					
				superior conj	4974 Dec 22 02:27	0° \mathbb{M} 41'56	-0°15'57
superior conj	4974 Jan 11 11:38	21° \mathbb{M} 24'28	-1°02'55	minimum elong	4974 Dec 22 00:34	0° \mathbb{M} 34'20	0°15'41
minimum elong	4974 Jan 11 03:59	20° \mathbb{M} 54'28	1°01'57	behind sun begin	4974 Dec 21 22:06	0° \mathbb{M} 24'22	
max. Earth dist.	4974 Jan 13 04:21	24° \mathbb{M} 04'16	1.45307 AU	behind sun end	4974 Dec 22 03:03	0° \mathbb{M} 44'19	
	4974 Jan 16 23:13	0° \mathbb{M}		max. Earth dist.	4974 Dec 26 23:07	8° \mathbb{M} 27'37	1.44791 AU
evening rise	4974 Jan 27 15:22	16° \mathbb{M} 41'48		evening rise	4975 Jan 07 05:01	25° \mathbb{M} 58'42	
	4974 Feb 05 03:38	0° \mathbb{M}			4975 Jan 09 19:57	0° \mathbb{M}	
greatest brilliancy	4974 Feb 07 18:02	4° \mathbb{M} 00'42	-0.8m	greatest brilliancy	4975 Jan 21 21:53	18° \mathbb{M} 10'50	-0.6m
evening max el	4974 Feb 20 02:00	20° \mathbb{M} 47'47	19°15'56		4975 Jan 30 11:08	0° \mathbb{M}	
asc. node	4974 Feb 22 10:40	22° \mathbb{M} 54'57		evening max el	4975 Feb 03 05:56	4° \mathbb{M} 20'58	20°12'09
retrograde	4974 Feb 27 03:08	24° \mathbb{M} 48'44		asc. node	4975 Feb 09 07:41	8° \mathbb{M} 38'35	
evening set	4974 Mar 02 13:59	23° \mathbb{M} 39'08		retrograde	4975 Feb 11 01:12	8° \mathbb{M} 54'37	
inferior conj	4974 Mar 08 02:10	17° \mathbb{M} 48'31	3°23'17	evening set	4975 Feb 14 20:24	7° \mathbb{M} 30'46	
minimum elong	4974 Mar 08 00:38	17° \mathbb{M} 53'27	3°23'07	inferior conj	4975 Feb 20 05:33	1° \mathbb{M} 26'33	3°01'32
min. Earth dist.	4974 Mar 09 11:30	16° \mathbb{M} 00'58	0.66330 AU	minimum elong	4975 Feb 20 03:19	1° \mathbb{M} 34'04	3°01'04
morning rise	4974 Mar 13 10:58	11° \mathbb{M} 33'51		min. Earth dist.	4975 Feb 21 00:48	0° \mathbb{M} 21'23	0.67330 AU
direct	4974 Mar 19 18:22	8° \mathbb{M} 46'23			4975 Feb 21 07:10	30° \mathbb{R}	
desc. node	4974 Mar 30 21:32	14° \mathbb{M} 49'09		morning rise	4975 Feb 25 10:01	25° \mathbb{M} 12'12	
morning max el	4974 Apr 01 10:10	16° \mathbb{M} 18'35	26°09'22	direct	4975 Mar 03 04:39	22° \mathbb{M} 37'16	
	4974 Apr 12 18:17	0° \mathbb{M}		morning max el	4975 Mar 14 18:52	29° \mathbb{M} 33'25	24°48'17
	4974 May 02 00:38	0° \mathbb{M}			4975 Mar 15 05:17	0° \mathbb{M}	
morning set	4974 May 07 13:23	9° \mathbb{M} 57'59		desc. node	4975 Mar 17 18:35	2° \mathbb{M} 46'18	
max. Earth dist.	4974 May 11 12:06	17° \mathbb{M} 28'09	1.35201 AU		4975 Apr 06 14:38	0° \mathbb{M}	
				morning set	4975 Apr 19 20:24	21° \mathbb{M} 57'51	
superior conj	4974 May 16 15:23	27° \mathbb{M} 42'06	-0°47'36	max. Earth dist.	4975 Apr 23 11:10	28° \mathbb{M} 29'13	1.37117 AU
minimum elong	4974 May 16 18:00	27° \mathbb{M} 55'24	0°47'07		4975 Apr 24 06:52	0° \mathbb{M}	
	4974 May 17 18:22	0° \mathbb{M}					
asc. node	4974 May 21 09:58	7° \mathbb{M} 33'01		superior conj	4975 Apr 30 01:20	10° \mathbb{M} 58'48	-1°16'49
evening rise	4974 May 24 10:05	13° \mathbb{M} 46'32		minimum elong	4975 Apr 30 05:31	11° \mathbb{M} 19'14	1°16'10
	4974 Jun 01 19:44	0° \mathbb{M}		asc. node	4975 May 08 07:00	27° \mathbb{M} 23'40	
evening max el	4974 Jun 11 20:30	13° \mathbb{M} 49'42	20°30'24	evening rise	4975 May 08 12:44	27° \mathbb{M} 52'24	
retrograde	4974 Jun 22 22:37	19° \mathbb{M} 15'25			4975 May 09 14:20	0° \mathbb{M}	
evening set	4974 Jun 24 22:39	19° \mathbb{M} 05'33		evening max el	4975 May 25 11:14	25° \mathbb{M} 24'53	19°24'21
desc. node	4974 Jun 26 20:46	18° \mathbb{M} 38'38		retrograde	4975 Jun 03 19:39	29° \mathbb{M} 58'43	
inferior conj	4974 Jul 04 04:04	15° \mathbb{M} 08'15	-2°09'31	evening set	4975 Jun 05 18:38	29° \mathbb{M} 47'35	
minimum elong	4974 Jul 03 22:02	15° \mathbb{M} 16'59	2°07'22	desc. node	4975 Jun 13 17:46	26° \mathbb{M} 05'08	
min. Earth dist.	4974 Jul 05 10:07	14° \mathbb{M} 24'46	0.54919 AU	inferior conj	4975 Jun 14 08:45	25° \mathbb{M} 40'54	-0°11'08
morning rise	4974 Jul 12 20:32	11° \mathbb{M} 00'01		minimum elong	4975 Jun 14 08:16	25° \mathbb{M} 41'42	0°10'57
direct	4974 Jul 16 17:41	16° \mathbb{M} 27'31		transit middle	4975 Jun 14 08:16	25° \mathbb{M} 41'42	0°10'57
morning max el	4974 Jul 30 02:03	10° \mathbb{M} 55'22	23°24'22	transit begin	4975 Jun 14 05:27	25° \mathbb{M} 46'17	
	4974 Aug 09 13:52	0° \mathbb{M}		transit end	4975 Jun 14 11:06	25° \mathbb{M} 37'06	
asc. node	4974 Aug 17 09:14	13° \mathbb{M} 37'49		min. Earth dist.	4975 Jun 17 00:02	23° \mathbb{M} 58'36	0.55885 AU
morning set	4974 Aug 22 13:41	24° \mathbb{M} 10'05		morning rise	4975 Jun 22 19:07	21° \mathbb{M} 00'14	
	4974 Aug 25 07:11	0° \mathbb{M}		direct	4975 Jun 27 13:24	20° \mathbb{M} 08'46	
				morning max el	4975 Jul 11 15:35	27° \mathbb{M} 16'22	25°06'40
superior conj	4974 Aug 29 13:58	9° \mathbb{M} 15'00	1°37'23		4975 Jul 14 07:26	0° \mathbb{M}	
minimum elong	4974 Aug 29 12:24	9° \mathbb{M} 06'35	1°37'15		4975 Aug 02 15:41	0° \mathbb{M}	
max. Earth dist.	4974 Sep 01 03:19	14° \mathbb{M} 42'14	1.33490 AU	asc. node	4975 Aug 04 06:16	3° \mathbb{M} 13'30	
evening rise	4974 Sep 06 04:22	25° \mathbb{M} 04'39		morning set	4975 Aug 07 01:22	9° \mathbb{M} 02'21	
	4974 Sep 08 16:40	0° \mathbb{M}					
desc. node	4974 Sep 22 20:05	24° \mathbb{M} 23'51		superior conj	4975 Aug 13 23:43	24° \mathbb{M} 06'26	1°26'05
	4974 Sep 26 15:08	0° \mathbb{M}		minimum elong	4975 Aug 13 21:33	23° \mathbb{M} 54'33	1°25'49
evening max el	4974 Oct 10 07:47	16° \mathbb{M} 31'04	27°21'12	max. Earth dist.	4975 Aug 15 08:31	27° \mathbb{M} 05'37	1.32563 AU
retrograde	4974 Oct 23 20:24	23° \mathbb{M} 49'28			4975 Aug 16 16:41	0° \mathbb{M}	
evening set	4974 Oct 30 20:48	21° \mathbb{M} 10'12		evening rise	4975 Aug 21 03:19	9° \mathbb{M} 22'59	
min. Earth dist.	4974 Nov 03 15:28	17° \mathbb{M} 42'36	0.64391 AU		4975 Sep 01 01:01	0° \mathbb{M}	
inferior conj	4974 Nov 06 00:26	15° \mathbb{M} 10'49	-2°25'02	desc. node	4975 Sep 09 17:05	13° \mathbb{M} 42'17	
minimum elong	4974 Nov 06 04:38	14° \mathbb{M} 59'37	2°23'25	evening max el	4975 Sep 22 17:40	29° \mathbb{M} 27'58	27°24'51
morning rise	4974 Nov 12 13:47	9° \mathbb{M} 44'56			4975 Sep 23 07:25	0° \mathbb{M}	
asc. node	4974 Nov 13 08:26	9° \mathbb{M} 27'55		retrograde	4975 Oct 06 11:56	6° \mathbb{M} 42'41	

evening set	4975 Oct 13 16:12	4°♍13'45		min. Earth dist.	4976 Sep 28 12:31	14°♏09'12	0.60644 AU
min. Earth dist.	4975 Oct 17 07:26	1°♍15'44	0.62637 AU	inferior conj	4976 Oct 01 17:06	11°♏29'12	-4°23'46
	4975 Oct 18 15:35	30°♏♏		minimum elong	4976 Oct 01 23:16	11°♏16'14	4°22'21
inferior conj	4975 Oct 20 03:43	28°♏33'08	-3°27'26	morning rise	4976 Oct 09 05:19	6°♏42'10	
minimum elong	4975 Oct 20 09:30	28°♏19'20	3°25'34	direct	4976 Oct 11 13:10	6°♏21'02	
morning rise	4975 Oct 27 04:29	23°♏24'55		asc. node	4976 Oct 17 02:31	8°♏27'25	
direct	4975 Oct 29 13:21	22°♏59'21		morning max el	4976 Oct 18 20:28	9°♏58'09	18°03'31
asc. node	4975 Oct 31 05:29	23°♏12'27			4976 Oct 31 23:08	0°♍	
morning max el	4975 Nov 05 07:06	26°♏26'27	17°49'56	morning set	4976 Nov 03 14:32	4°♍53'39	
	4975 Nov 08 08:41	0°♍					
morning set	4975 Nov 21 08:10	21°♍21'53		superior conj	4976 Nov 13 11:34	22°♍58'55	1°01'35
	4975 Nov 26 05:31	0°♏		minimum elong	4976 Nov 13 15:33	23°♍16'35	1°01'05
					4976 Nov 17 11:53	0°♏	
superior conj	4975 Dec 02 17:58	11°♏12'19	0°27'31	max. Earth dist.	4976 Nov 21 03:13	6°♏10'12	1.41876 AU
minimum elong	4975 Dec 02 20:33	11°♏23'09	0°27'09	desc. node	4976 Nov 22 13:24	8°♏32'11	
desc. node	4975 Dec 06 16:23	17°♏45'17		evening rise	4976 Nov 26 15:23	15°♏10'48	
max. Earth dist.	4975 Dec 09 15:27	22°♏34'57	1.43601 AU		4976 Dec 06 04:51	0°♏	
	4975 Dec 14 07:01	0°♏			4976 Dec 28 10:43	0°♏	
evening rise	4975 Dec 17 15:53	5°♏16'01		evening max el	4976 Dec 29 21:49	1°♏31'52	22°37'52
	4976 Jan 03 05:17	0°♏		retrograde	4977 Jan 08 18:53	7°♏23'58	
evening max el	4976 Jan 17 04:23	17°♏55'20	21°20'51	evening set	4977 Jan 13 11:28	5°♏29'03	
retrograde	4976 Jan 25 22:57	23°♏07'22		asc. node	4977 Jan 13 01:44	5°♏48'22	
asc. node	4976 Jan 27 04:42	22°♏59'06			4977 Jan 18 04:41	30°♏♏	
evening set	4976 Jan 30 04:05	21°♏28'15		inferior conj	4977 Jan 18 20:12	29°♏06'21	1°50'36
inferior conj	4976 Feb 04 12:12	15°♏13'10	2°30'08	minimum elong	4977 Jan 18 18:02	29°♏13'50	1°49'50
minimum elong	4976 Feb 04 09:46	15°♏21'34	2°29'26	min. Earth dist.	4977 Jan 18 15:06	29°♏23'59	0.68106 AU
min. Earth dist.	4976 Feb 04 18:44	14°♏50'32	0.67916 AU	morning rise	4977 Jan 24 00:30	22°♏57'18	
morning rise	4976 Feb 09 15:17	9°♏00'44		direct	4977 Jan 28 14:01	21°♏04'34	
direct	4976 Feb 14 19:27	6°♏45'20		morning max el	4977 Feb 06 16:19	26°♏23'40	21°52'10
morning max el	4976 Feb 25 03:45	12°♏54'04	23°19'23		4977 Feb 09 23:35	0°♏	
desc. node	4976 Mar 03 15:37	21°♏36'08		desc. node	4977 Feb 18 12:39	11°♏04'17	
	4976 Mar 09 21:32	0°♏			4977 Mar 03 10:43	0°♏	
	4976 Mar 29 11:44	0°♏		morning set	4977 Mar 11 06:14	12°♏13'35	
morning set	4976 Mar 31 03:29	2°♏45'57		max. Earth dist.	4977 Mar 17 05:23	21°♏58'16	1.41447 AU
max. Earth dist.	4976 Apr 04 06:29	9°♏49'32	1.39289 AU		4977 Mar 21 23:04	0°♏	
superior conj	4976 Apr 11 21:01	23°♏30'57	-1°42'55	superior conj	4977 Mar 24 21:48	5°♏07'56	-2°01'58
minimum elong	4976 Apr 12 02:00	23°♏54'06	1°42'22	minimum elong	4977 Mar 25 01:38	5°♏24'51	2°01'45
	4976 Apr 15 07:47	0°♏		evening rise	4977 Apr 04 13:58	24°♏30'03	
evening rise	4976 Apr 21 07:11	11°♏29'31			4977 Apr 07 13:38	0°♏	
asc. node	4976 Apr 24 04:00	16°♏59'10		asc. node	4977 Apr 11 01:00	6°♏14'20	
	4976 May 01 13:32	0°♏		evening max el	4977 Apr 20 20:44	20°♏23'23	18°12'53
evening max el	4976 May 07 12:24	7°♏38'36	18°38'32	retrograde	4977 Apr 27 20:09	23°♏53'46	
retrograde	4976 May 15 10:30	11°♏32'40		evening set	4977 Apr 30 07:38	23°♏27'56	
evening set	4976 May 17 15:12	11°♏15'43		inferior conj	4977 May 07 07:19	18°♏42'14	2°37'02
inferior conj	4976 May 25 09:20	6°♏50'34	1°28'24	minimum elong	4977 May 07 10:44	18°♏34'38	2°36'12
minimum elong	4976 May 25 12:18	6°♏44'56	1°27'25	min. Earth dist.	4977 May 10 16:34	15°♏43'18	0.59707 AU
min. Earth dist.	4976 May 28 17:22	4°♏19'49	0.57589 AU	morning rise	4977 May 14 11:10	12°♏58'23	
desc. node	4976 May 30 14:48	3°♏02'21		desc. node	4977 May 17 11:50	11°♏35'14	
morning rise	4976 Jun 02 06:08	1°♏34'32		direct	4977 May 20 21:23	11°♏02'56	
direct	4976 Jun 07 22:49	0°♏13'43		morning max el	4977 Jun 04 06:09	18°♏54'39	27°31'48
morning max el	4976 Jun 22 07:45	7°♏48'22	26°33'53		4977 Jun 13 14:45	0°♏	
	4976 Jul 08 22:39	0°♏			4977 Jul 01 15:22	0°♏	
morning set	4976 Jul 21 11:48	23°♏49'17		morning set	4977 Jul 05 19:17	8°♏25'20	
asc. node	4976 Jul 21 03:18	23°♏04'30		asc. node	4977 Jul 08 00:19	13°♏05'27	
	4976 Jul 24 08:54	0°♏					
				superior conj	4977 Jul 12 22:53	23°♏51'56	0°49'38
superior conj	4976 Jul 28 11:16	9°♏00'43	1°09'58	minimum elong	4977 Jul 12 20:55	23°♏41'07	0°49'15
minimum elong	4976 Jul 28 08:58	8°♏48'00	1°09'36	max. Earth dist.	4977 Jul 12 06:04	22°♏19'13	1.31949 AU
max. Earth dist.	4976 Jul 28 18:42	9°♏41'47	1.32050 AU		4977 Jul 15 17:37	0°♏	
evening rise	4976 Aug 04 08:41	23°♏58'22		evening rise	4977 Jul 19 18:07	8°♏43'13	
	4976 Aug 07 06:55	0°♏			4977 Jul 30 17:15	0°♏	
	4976 Aug 24 22:04	0°♏		desc. node	4977 Aug 13 11:05	19°♏41'58	
desc. node	4976 Aug 26 14:05	2°♏14'41		evening max el	4977 Aug 16 19:33	23°♏10'55	25°53'34
evening max el	4976 Sep 03 22:22	11°♏44'09	26°55'27		4977 Aug 28 00:59	0°♏	
retrograde	4976 Sep 17 19:45	18°♏54'32		retrograde	4977 Aug 30 18:39	0°♏17'58	
evening set	4976 Sep 24 19:11	16°♏47'45			4977 Sep 02 11:57	30°♏♏	

evening set	4977 Sep 06 00:53	28° \mathbb{M} 44'33		evening set	4978 Aug 17 06:11	9° \mathbb{M} 57'51	
min. Earth dist.	4977 Sep 10 07:55	26° \mathbb{M} 08'46	0.58570 AU	min. Earth dist.	4978 Aug 22 21:03	7° \mathbb{M} 05'55	0.56687 AU
inferior conj	4977 Sep 13 12:59	23° \mathbb{M} 48'52	-5°04'43	inferior conj	4978 Aug 25 12:55	5° \mathbb{M} 24'33	-5°15'46
minimum elong	4977 Sep 13 17:02	23° \mathbb{M} 41'27	5°04'15	minimum elong	4978 Aug 25 11:35	5° \mathbb{M} 26'41	5°15'43
morning rise	4977 Sep 21 11:29	19° \mathbb{M} 25'04		morning rise	4978 Sep 02 19:28	1° \mathbb{M} 21'49	
direct	4977 Sep 23 21:40	19° \mathbb{M} 05'58		direct	4978 Sep 05 11:17	1° \mathbb{M} 02'42	
morning max el	4977 Oct 02 03:23	23° \mathbb{M} 02'50	18°37'22	morning max el	4978 Sep 15 00:36	5° \mathbb{M} 30'56	19°32'48
asc. node	4977 Oct 03 23:34	24° \mathbb{M} 59'20		asc. node	4978 Sep 20 20:38	12° \mathbb{M} 33'05	
	4977 Oct 07 17:51	0° \mathbb{L}			4978 Sep 30 17:30	0° \mathbb{L}	
morning set	4977 Oct 18 08:33	18° \mathbb{L} 57'53		morning set	4978 Oct 02 10:35	3° \mathbb{L} 24'54	
	4977 Oct 24 01:16	0° \mathbb{M}					
superior conj	4977 Oct 27 02:38	5° \mathbb{M} 47'51	1°24'59	superior conj	4978 Oct 10 09:51	19° \mathbb{L} 24'00	1°38'29
minimum elong	4977 Oct 27 05:58	6° \mathbb{M} 03'26	1°24'40	minimum elong	4978 Oct 10 11:42	19° \mathbb{L} 33'05	1°38'23
max. Earth dist.	4977 Nov 03 09:38	19° \mathbb{M} 00'43	1.39835 AU	max. Earth dist.	4978 Oct 15 22:33	0° \mathbb{M}	
evening rise	4977 Nov 07 12:24	26° \mathbb{M} 04'08		evening rise	4978 Oct 16 14:09	1° \mathbb{M} 12'20	1.37738 AU
desc. node	4977 Nov 09 10:24	29° \mathbb{M} 15'36		desc. node	4978 Oct 20 08:15	8° \mathbb{M} 00'07	
	4977 Nov 09 21:11	0° \mathbb{X}			4978 Oct 27 07:25	19° \mathbb{M} 51'50	
	4977 Nov 29 21:20	0° \mathbb{Z}			4978 Nov 02 17:29	0° \mathbb{X}	
evening max el	4977 Dec 12 11:44	15° \mathbb{Z} 11'01	23°57'52	evening max el	4978 Nov 25 00:23	28° \mathbb{X} 54'01	25°14'05
retrograde	4977 Dec 23 11:36	21° \mathbb{Z} 39'27		retrograde	4978 Nov 26 04:04	0° \mathbb{Z}	
evening set	4977 Dec 28 16:57	19° \mathbb{Z} 29'02		evening set	4978 Dec 07 00:06	5° \mathbb{Z} 49'27	
asc. node	4977 Dec 30 22:47	17° \mathbb{Z} 12'10			4978 Dec 12 18:55	3° \mathbb{Z} 25'03	
min. Earth dist.	4978 Jan 02 11:39	13° \mathbb{Z} 57'14	0.67921 AU	min. Earth dist.	4978 Dec 16 00:41	30° \mathbb{R} \mathbb{X}	
inferior conj	4978 Jan 03 03:42	13° \mathbb{Z} 02'47	1°03'57	inferior conj	4978 Dec 17 06:01	28° \mathbb{X} 27'26	0.67385 AU
minimum elong	4978 Jan 03 02:15	13° \mathbb{Z} 07'41	1°03'23	asc. node	4978 Dec 17 19:51	27° \mathbb{X} 42'30	
morning rise	4978 Jan 08 11:36	6° \mathbb{Z} 58'43		inferior conj	4978 Dec 18 08:55	26° \mathbb{X} 59'55	0°11'07
direct	4978 Jan 12 11:17	5° \mathbb{Z} 28'38		minimum elong	4978 Dec 18 08:38	27° \mathbb{X} 00'50	0°11'01
morning max el	4978 Jan 20 11:37	10° \mathbb{Z} 04'01	20°33'48	transit middle	4978 Dec 18 08:38	27° \mathbb{X} 00'50	0°11'01
	4978 Feb 04 17:25	0° \approx		transit begin	4978 Dec 18 06:36	27° \mathbb{X} 07'28	
desc. node	4978 Feb 05 09:41	0° \approx 59'40		transit end	4978 Dec 18 10:41	26° \mathbb{X} 54'12	
morning set	4978 Feb 18 08:34	20° \approx 36'26		morning rise	4978 Dec 23 22:37	21° \mathbb{X} 02'57	
	4978 Feb 24 08:04	0° \mathbb{X}		direct	4978 Dec 27 10:02	19° \mathbb{X} 53'19	
max. Earth dist.	4978 Feb 27 11:06	5° \mathbb{X} 00'31	1.43301 AU	morning max el	4979 Jan 03 14:48	23° \mathbb{X} 55'15	19°28'44
					4979 Jan 08 18:42	0° \mathbb{Z}	
superior conj	4978 Mar 05 22:52	15° \mathbb{X} 39'28	-2°08'45	greatest brilliancy	4979 Jan 16 17:47	11° \mathbb{Z} 20'07	-0.7m
minimum elong	4978 Mar 05 22:27	15° \mathbb{X} 37'40	2°08'45	desc. node	4979 Jan 23 06:42	21° \mathbb{Z} 14'47	
	4978 Mar 14 08:32	0° \mathbb{Y}		morning set	4979 Jan 28 06:01	28° \mathbb{Z} 53'52	
evening rise	4978 Mar 18 04:50	6° \mathbb{Y} 44'29			4979 Jan 28 23:07	0° \approx	
asc. node	4978 Mar 28 22:03	25° \mathbb{Y} 02'35		max. Earth dist.	4979 Feb 09 23:53	18° \approx 47'57	1.44627 AU
	4978 Apr 01 08:16	0° \mathbb{B}					
evening max el	4978 Apr 04 08:51	3° \mathbb{B} 30'47	18°06'51	superior conj	4979 Feb 13 22:30	25° \approx 04'14	-1°57'53
retrograde	4978 Apr 10 20:52	6° \mathbb{B} 52'55		minimum elong	4979 Feb 13 15:48	24° \approx 37'26	1°57'29
evening set	4978 Apr 13 14:47	6° \mathbb{B} 16'10			4979 Feb 17 00:04	0° \mathbb{X}	
inferior conj	4978 Apr 19 23:48	1° \mathbb{B} 10'33	3°16'22	evening rise	4979 Feb 27 23:19	18° \mathbb{X} 04'05	
minimum elong	4978 Apr 20 01:59	1° \mathbb{B} 05'00	3°16'03		4979 Mar 07 02:41	0° \mathbb{Y}	
	4978 Apr 21 03:21	30° \mathbb{R} \mathbb{Y}		asc. node	4979 Mar 15 19:06	13° \mathbb{Y} 14'54	
min. Earth dist.	4978 Apr 22 23:51	28° \mathbb{Y} 08'19	0.61901 AU	evening max el	4979 Mar 18 21:42	16° \mathbb{Y} 52'17	18°19'44
morning rise	4978 Apr 26 11:28	25° \mathbb{Y} 09'40		retrograde	4979 Mar 25 08:07	20° \mathbb{Y} 19'55	
direct	4978 May 03 06:55	22° \mathbb{Y} 43'41		evening set	4979 Mar 28 08:18	19° \mathbb{Y} 30'59	
desc. node	4978 May 04 08:52	22° \mathbb{Y} 47'09		inferior conj	4979 Apr 03 06:36	14° \mathbb{Y} 06'34	3°32'21
	4978 May 16 16:52	0° \mathbb{B}		minimum elong	4979 Apr 03 07:07	14° \mathbb{Y} 05'05	3°32'20
morning max el	4978 May 17 10:41	0° \mathbb{B} 43'37	27°52'48	min. Earth dist.	4979 Apr 05 16:16	11° \mathbb{Y} 23'02	0.63910 AU
	4978 Jun 07 17:45	0° \mathbb{I}		morning rise	4979 Apr 09 05:02	7° \mathbb{Y} 56'55	
morning set	4978 Jun 19 21:52	22° \mathbb{I} 44'33		direct	4979 Apr 16 01:03	5° \mathbb{Y} 12'00	
	4978 Jun 23 09:27	0° \mathbb{E}		desc. node	4979 Apr 21 05:56	6° \mathbb{Y} 33'04	
asc. node	4978 Jun 24 21:21	3° \mathbb{E} 11'58		morning max el	4979 Apr 29 19:11	13° \mathbb{Y} 10'14	27°36'36
max. Earth dist.	4978 Jun 25 14:43	4° \mathbb{E} 45'40	1.32274 AU		4979 May 13 07:21	0° \mathbb{B}	
					4979 May 31 06:49	0° \mathbb{I}	
superior conj	4978 Jun 27 08:50	8° \mathbb{E} 34'45	0°25'38	morning set	4979 Jun 03 17:04	6° \mathbb{I} 38'24	
minimum elong	4978 Jun 27 07:41	8° \mathbb{E} 28'26	0°25'22	max. Earth dist.	4979 Jun 08 16:41	16° \mathbb{I} 48'34	1.33049 AU
evening rise	4978 Jul 04 05:38	23° \mathbb{E} 31'18					
	4978 Jul 07 08:04	0° \mathbb{O}		superior conj	4979 Jun 11 15:13	23° \mathbb{I} 02'17	-0°01'23
	4978 Jul 25 18:12	0° \mathbb{M}		minimum elong	4979 Jun 11 15:17	23° \mathbb{I} 02'38	0°01'24
evening max el	4978 Jul 29 10:00	3° \mathbb{M} 54'01	24°26'51	behind sun begin	4979 Jun 11 09:55	22° \mathbb{I} 33'59	
desc. node	4978 Jul 31 08:07	5° \mathbb{M} 38'16		behind sun end	4979 Jun 11 20:38	23° \mathbb{I} 31'19	
retrograde	4978 Aug 12 06:38	10° \mathbb{M} 53'17		asc. node	4979 Jun 11 18:22	23° \mathbb{I} 19'13	
					4979 Jun 14 20:49	0° \mathbb{E}	

evening rise	4979 Jun 18 17:18	8°☿15'37		evening rise	4980 Jun 02 03:13	22°♄50'29	
	4979 Jun 30 02:24	0°♄			4980 Jun 05 15:17	0°☿	
evening max el	4979 Jul 10 23:01	14°♄15'45	22°49'26	evening max el	4980 Jun 21 18:36	24°☿49'26	21°16'51
desc. node	4979 Jul 18 05:10	19°♄29'40			4980 Jun 29 12:11	0°♄	
retrograde	4979 Jul 24 05:38	20°♄52'39		retrograde	4980 Jul 03 19:05	0°♄44'53	
evening set	4979 Jul 27 16:36	20°♄26'30		desc. node	4980 Jul 04 02:11	0°♄44'40	
min. Earth dist.	4979 Aug 04 07:23	17°♄03'55	0.55332 AU	evening set	4980 Jul 06 02:58	0°♄32'21	
inferior conj	4979 Aug 05 17:49	16°♄14'31	-4°40'46		4980 Jul 08 06:37	30°☿☿	
minimum elong	4979 Aug 05 10:27	16°♄25'07	4°39'25	inferior conj	4980 Jul 15 11:32	26°☿33'40	-3°14'57
morning rise	4979 Aug 14 06:24	12°♄23'54		minimum elong	4980 Jul 15 03:12	26°☿45'21	3°12'21
direct	4979 Aug 17 06:46	12°♄02'41		min. Earth dist.	4980 Jul 15 17:42	26°☿25'02	0.54800 AU
morning max el	4979 Aug 28 09:44	17°♄13'21	20°49'52	morning rise	4980 Jul 24 04:04	22°☿38'13	
	4979 Sep 07 04:45	0°♄		direct	4980 Jul 27 16:09	22°☿11'44	
asc. node	4979 Sep 07 17:40	0°♄54'02		morning max el	4980 Aug 09 07:28	28°☿11'02	22°25'02
morning set	4979 Sep 16 17:53	18°♄06'22			4980 Aug 11 03:23	0°♄	
	4979 Sep 22 11:09	0°♄		asc. node	4980 Aug 24 14:41	19°♄50'57	
					4980 Aug 29 18:21	0°♄	
superior conj	4979 Sep 24 04:33	3°♄33'28	1°43'31	morning set	4980 Aug 31 04:15	2°♄56'21	
minimum elong	4979 Sep 24 04:49	3°♄34'54	1°43'31				
max. Earth dist.	4979 Sep 28 22:33	13°♄05'47	1.35812 AU	superior conj	4980 Sep 07 07:10	18°♄05'49	1°41'24
evening rise	4979 Oct 02 23:37	20°♄49'51		minimum elong	4980 Sep 07 06:09	18°♄00'27	1°41'21
	4979 Oct 08 01:32	0°♄		max. Earth dist.	4980 Sep 10 14:55	25°♄03'10	1.34221 AU
desc. node	4979 Oct 14 04:27	10°♄15'52			4980 Sep 13 01:15	0°♄	
	4979 Oct 27 15:41	0°♄		evening rise	4980 Sep 15 06:13	4°♄22'08	
evening max el	4979 Nov 07 13:11	12°♄37'19	26°19'12		4980 Sep 29 20:01	0°♄	
retrograde	4979 Nov 20 07:25	19°♄48'32		desc. node	4980 Sep 30 01:29	0°♄21'25	
evening set	4979 Nov 26 15:34	17°♄13'25		evening max el	4980 Oct 20 01:55	26°♄11'41	27°05'40
min. Earth dist.	4979 Nov 30 19:48	12°♄51'05	0.66497 AU		4980 Oct 24 13:57	0°♄	
inferior conj	4979 Dec 02 09:58	10°♄54'28	-0°46'53	retrograde	4980 Nov 02 09:01	3°♄29'10	
minimum elong	4979 Dec 02 11:14	10°♄50'34	0°46'18	evening set	4980 Nov 09 04:41	0°♄48'56	
asc. node	4979 Dec 04 16:55	8°♄13'04			4980 Nov 10 04:01	30°☿♄	
morning rise	4979 Dec 08 07:30	5°♄07'14		min. Earth dist.	4980 Nov 13 02:32	27°♄02'08	0.65258 AU
direct	4979 Dec 11 08:31	4°♄14'44		inferior conj	4980 Nov 15 04:36	24°♄41'14	-1°48'38
morning max el	4979 Dec 18 01:02	7°♄54'24	18°39'18	minimum elong	4980 Nov 15 07:43	24°♄32'28	1°47'20
	4980 Jan 02 17:20	0°♄		asc. node	4980 Nov 20 13:57	19°♄36'57	
morning set	4980 Jan 07 23:03	8°♄16'16		morning rise	4980 Nov 21 11:46	19°♄06'48	
desc. node	4980 Jan 10 03:44	11°♄44'17		direct	4980 Nov 24 04:33	18°♄27'41	
	4980 Jan 21 18:31	0°♄		morning max el	4980 Nov 30 15:59	21°♄55'25	18°06'29
max. Earth dist.	4980 Jan 23 17:51	3°♄05'38	1.45276 AU		4980 Dec 06 23:51	0°♄	
				morning set	4980 Dec 18 21:33	19°♄07'24	
superior conj	4980 Jan 24 03:58	3°♄45'18	-1°27'24		4980 Dec 25 13:17	0°♄	
minimum elong	4980 Jan 23 18:38	3°♄08'39	1°26'24	desc. node	4980 Dec 27 00:45	2°♄23'17	
evening rise	4980 Feb 08 18:40	28°♄26'52					
	4980 Feb 09 17:58	0°♄		superior conj	4981 Jan 02 09:35	12°♄33'41	-0°43'10
greatest brilliancy	4980 Feb 16 18:48	11°♄14'23	-0.9m	minimum elong	4981 Jan 02 04:14	12°♄12'31	0°42'26
	4980 Mar 01 00:15	0°♄		max. Earth dist.	4981 Jan 05 13:40	17°♄33'49	1.45178 AU
evening max el	4980 Mar 01 08:36	0°♄21'36	18°50'34		4981 Jan 13 12:41	0°♄	
asc. node	4980 Mar 01 16:10	0°♄40'31		evening rise	4981 Jan 18 16:46	8°♄01'25	
retrograde	4980 Mar 08 02:02	4°♄07'02		greatest brilliancy	4981 Jan 31 16:55	27°♄58'08	-0.7m
evening set	4980 Mar 11 08:49	3°♄05'03			4981 Feb 02 01:40	0°♄	
	4980 Mar 14 19:26	30°☿♄		evening max el	4981 Feb 12 15:24	13°♄53'43	19°38'02
inferior conj	4980 Mar 16 23:50	27°♄23'22	3°30'37	asc. node	4981 Feb 16 13:13	17°♄05'40	
minimum elong	4980 Mar 16 22:56	27°♄26'10	3°30'34	retrograde	4981 Feb 19 23:23	18°♄07'32	
min. Earth dist.	4980 Mar 18 17:48	25°♄13'17	0.65570 AU	evening set	4981 Feb 23 13:41	16°♄51'46	
morning rise	4980 Mar 22 12:38	21°♄09'50		inferior conj	4981 Mar 01 00:16	10°♄54'51	3°15'20
direct	4980 Mar 29 02:05	18°♄19'52		minimum elong	4981 Feb 28 22:23	11°♄01'03	3°15'02
desc. node	4980 Apr 07 02:57	22°♄21'22		min. Earth dist.	4981 Mar 02 03:20	9°♄25'26	0.66812 AU
morning max el	4980 Apr 11 05:11	26°♄04'47	26°48'24	morning rise	4981 Mar 06 06:52	4°♄40'11	
	4980 Apr 14 20:01	0°♄		direct	4981 Mar 12 09:03	1°♄57'19	
	4980 May 05 20:45	0°♄		morning max el	4981 Mar 24 14:42	9°♄15'22	25°36'29
morning set	4980 May 17 01:43	19°♄57'59		desc. node	4981 Mar 24 23:59	9°♄39'01	
max. Earth dist.	4980 May 21 08:46	28°♄21'47	1.34292 AU		4981 Apr 09 22:54	0°♄	
	4980 May 22 04:18	0°♄			4981 Apr 28 10:12	0°♄	
superior conj	4980 May 25 15:51	7°♄08'24	-0°30'27	morning set	4981 Apr 29 19:36	2°♄31'03	
minimum elong	4980 May 25 17:29	7°♄16'54	0°30'08	max. Earth dist.	4981 May 03 13:40	9°♄29'54	1.35980 AU
asc. node	4980 May 28 15:25	13°♄23'26		superior conj	4981 May 09 08:03	20°♄45'16	-1°00'12

minimum elong	4981 May 09 11:23	21°♄01'54	0°59'37	superior conj	4982 Apr 22 12:26	3°♄44'12	-1°28'30
	4981 May 13 21:22	0°♄		minimum elong	4982 Apr 22 17:07	4°♄06'35	1°27'51
asc. node	4981 May 15 12:28	3°♄20'21		evening rise	4982 May 01 08:46	21°♄03'47	
evening rise	4981 May 17 09:12	7°♄08'58		asc. node	4982 May 02 09:29	23°♄05'20	
	4981 May 30 02:13	0°♄			4982 May 05 23:37	0°♄	
evening max el	4981 Jun 04 02:00	5°♄59'22	19°59'45	evening max el	4982 May 17 21:30	17°♄51'45	19°02'20
retrograde	4981 Jun 14 10:07	11°♄02'43		retrograde	4982 May 26 14:19	22°♄07'05	
evening set	4981 Jun 16 08:18	10°♄52'58		evening set	4982 May 28 15:06	21°♄54'06	
desc. node	4981 Jun 20 23:10	9°♄19'47		inferior conj	4982 Jun 05 20:52	17°♄40'18	0°34'35
inferior conj	4981 Jun 25 08:16	6°♄52'50	-1°18'29	minimum elong	4982 Jun 05 22:14	17°♄37'55	0°34'05
minimum elong	4981 Jun 25 04:37	6°♄58'21	1°17'07	desc. node	4982 Jun 07 20:12	16°♄17'58	
min. Earth dist.	4981 Jun 27 05:58	5°♄43'58	0.55221 AU	min. Earth dist.	4982 Jun 08 21:25	15°♄35'13	0.56531 AU
morning rise	4981 Jul 03 23:12	2°♄32'10		morning rise	4982 Jun 14 02:06	12°♄43'43	
direct	4981 Jul 08 04:32	1°♄53'16		direct	4982 Jun 19 05:58	11°♄40'52	
morning max el	4981 Jul 21 22:21	8°♄39'07	24°08'53	morning max el	4982 Jul 03 12:34	19°♄02'23	25°46'39
	4981 Aug 06 13:24	0°♄			4982 Jul 12 18:15	0°♄	
asc. node	4981 Aug 11 11:43	9°♄15'00		asc. node	4982 Jul 29 08:44	28°♄58'06	
morning set	4981 Aug 15 15:56	17°♄49'49			4982 Jul 29 20:40	0°♄	
	4981 Aug 21 07:09	0°♄		morning set	4982 Jul 31 03:16	2°♄40'42	
superior conj	4981 Aug 22 14:58	2°♄52'58	1°33'13	superior conj	4982 Aug 07 01:43	17°♄46'47	1°19'48
minimum elong	4981 Aug 22 13:05	2°♄42'46	1°33'02	minimum elong	4982 Aug 06 23:26	17°♄34'13	1°19'29
max. Earth dist.	4981 Aug 24 15:54	7°♄16'55	1.33038 AU	max. Earth dist.	4982 Aug 07 23:26	19°♄46'11	1.32285 AU
evening rise	4981 Aug 30 00:10	18°♄26'44			4982 Aug 12 17:03	0°♄	
	4981 Sep 04 23:16	0°♄		evening rise	4982 Aug 14 02:08	2°♄53'23	
desc. node	4981 Sep 16 22:29	20°♄00'38			4982 Aug 28 18:48	0°♄	
	4981 Sep 24 03:18	0°♄		desc. node	4982 Sep 03 19:29	9°♄01'45	
evening max el	4981 Oct 02 13:16	9°♄25'45	27°26'35	evening max el	4982 Sep 14 21:02	22°♄06'08	27°16'30
retrograde	4981 Oct 16 04:29	16°♄43'11		retrograde	4982 Sep 28 17:10	29°♄19'57	
evening set	4981 Oct 23 07:34	14°♄06'33		evening set	4982 Oct 05 20:34	26°♄58'43	
min. Earth dist.	4981 Oct 27 00:13	10°♄52'46	0.63679 AU	min. Earth dist.	4982 Oct 09 11:35	24°♄10'39	0.61805 AU
inferior conj	4981 Oct 29 14:20	8°♄14'49	-2°51'49	inferior conj	4982 Oct 12 12:05	21°♄26'56	-3°52'33
minimum elong	4981 Oct 29 19:17	8°♄02'12	2°50'02	minimum elong	4982 Oct 12 18:15	21°♄12'57	3°50'47
morning rise	4981 Nov 05 08:29	2°♄56'21		morning rise	4982 Oct 19 17:50	16°♄27'35	
asc. node	4981 Nov 07 10:58	2°♄27'32		direct	4982 Oct 22 01:43	16°♄04'24	
direct	4981 Nov 07 19:24	2°♄26'55		asc. node	4982 Oct 25 07:59	16°♄51'33	
morning max el	4981 Nov 14 08:51	5°♄51'51	17°50'53	morning max el	4982 Oct 29 00:26	19°♄34'55	17°53'22
	4981 Nov 30 05:06	0°♄			4982 Nov 05 16:13	0°♄	
morning set	4981 Nov 30 22:46	1°♄16'15		morning set	4982 Nov 13 20:10	14°♄22'23	
					4982 Nov 22 13:54	0°♄	
superior conj	4981 Dec 13 10:12	22°♄20'55	0°03'24	superior conj	4982 Nov 24 13:07	3°♄24'45	0°43'15
minimum elong	4981 Dec 13 10:34	22°♄22'28	0°03'21	minimum elong	4982 Nov 24 16:37	3°♄39'51	0°42'47
behind sun begin	4981 Dec 13 01:01	21°♄43'15		desc. node	4982 Nov 30 18:47	13°♄55'27	
behind sun end	4981 Dec 13 20:08	23°♄01'36		max. Earth dist.	4982 Dec 01 21:41	15°♄45'56	1.42915 AU
desc. node	4981 Dec 13 21:48	23°♄08'26		evening rise	4982 Dec 08 17:46	26°♄42'46	
	4981 Dec 18 03:30	0°♄			4982 Dec 10 20:23	0°♄	
max. Earth dist.	4981 Dec 19 07:49	1°♄53'10	1.44357 AU		4982 Dec 31 09:39	0°♄	
evening rise	4981 Dec 29 03:16	17°♄13'56		evening max el	4983 Jan 09 13:03	11°♄02'19	21°52'56
	4982 Jan 06 12:59	0°♄		retrograde	4983 Jan 18 18:55	16°♄32'03	
evening max el	4982 Jan 26 16:56	27°♄27'12	20°39'56	asc. node	4983 Jan 21 07:14	15°♄58'23	
	4982 Jan 29 12:13	0°♄		evening set	4983 Jan 23 04:38	14°♄46'28	
asc. node	4982 Feb 03 10:13	2°♄15'54		inferior conj	4983 Jan 28 12:49	8°♄27'39	2°14'20
retrograde	4982 Feb 03 21:41	2°♄17'08		minimum elong	4983 Jan 28 10:27	8°♄35'53	2°13'34
evening set	4982 Feb 07 20:52	0°♄46'52		min. Earth dist.	4983 Jan 28 14:21	8°♄22'16	0.68038 AU
	4982 Feb 08 18:58	30°♄		morning rise	4983 Feb 02 16:05	2°♄16'12	
inferior conj	4982 Feb 13 05:19	24°♄37'22	2°49'18	direct	4983 Feb 07 13:58	0°♄10'07	
minimum elong	4982 Feb 13 02:57	24°♄45'29	2°48'43	morning max el	4983 Feb 17 09:23	5°♄58'08	22°41'34
min. Earth dist.	4982 Feb 13 18:57	23°♄50'35	0.67629 AU	desc. node	4983 Feb 26 18:04	17°♄09'07	
morning rise	4982 Feb 18 08:51	18°♄23'28			4983 Mar 07 21:40	0°♄	
direct	4982 Feb 23 21:18	15°♄56'25		morning set	4983 Mar 23 12:41	24°♄18'11	
morning max el	4982 Mar 06 23:24	22°♄33'51	24°10'47		4983 Mar 26 22:41	0°♄	
desc. node	4982 Mar 11 21:01	28°♄01'01		max. Earth dist.	4983 Mar 28 05:48	2°♄12'06	1.40222 AU
	4982 Mar 13 11:54	0°♄					
	4982 Apr 03 06:52	0°♄		superior conj	4983 Apr 05 00:48	15°♄55'18	-1°52'09
morning set	4982 Apr 11 17:13	14°♄02'47		minimum elong	4983 Apr 05 05:37	16°♄17'12	1°51'44
max. Earth dist.	4982 Apr 15 10:13	20°♄35'00	1.38025 AU		4983 Apr 12 14:26	0°♄	
	4982 Apr 20 13:10	0°♄					

evening rise	4983 Apr 14 22:47	4°♄27'11		superior conj	4984 Mar 16 16:04	27°♄06'07	-2°06'40
asc. node	4983 Apr 19 06:31	12°♄33'37		minimum elong	4984 Mar 16 18:31	27°♄16'37	2°06'37
	4983 Apr 30 17:48	0°♄			4984 Mar 18 08:18	0°♄	
evening max el	4983 May 01 02:19	0°♄21'14	18°25'14	evening rise	4984 Mar 27 23:21	17°♄09'20	
retrograde	4983 May 08 13:15	4°♄02'56			4984 Apr 04 04:18	0°♄	
evening set	4983 May 10 20:52	3°♄42'32		asc. node	4984 Apr 05 03:34	1°♄38'33	
	4983 May 17 05:24	30°♄		evening max el	4984 Apr 13 12:46	13°♄17'26	18°07'59
inferior conj	4983 May 18 06:49	29°♄09'03	2°01'20	retrograde	4984 Apr 20 05:47	16°♄42'08	
minimum elong	4983 May 18 10:17	29°♄02'01	2°00'18	evening set	4984 Apr 22 20:13	16°♄11'41	
min. Earth dist.	4983 May 21 17:14	26°♄23'09	0.58462 AU	inferior conj	4984 Apr 29 13:10	11°♄17'20	2°56'54
morning rise	4983 May 25 20:33	23°♄39'58		minimum elong	4984 Apr 29 16:10	11°♄10'13	2°56'18
desc. node	4983 May 25 17:15	23°♄44'18		min. Earth dist.	4984 May 02 19:25	8°♄14'14	0.60656 AU
direct	4983 May 31 21:46	22°♄04'09		morning rise	4984 May 06 09:55	5°♄25'22	
morning max el	4983 Jun 15 07:06	29°♄47'33	27°02'35	desc. node	4984 May 11 14:18	3°♄22'08	
	4983 Jun 15 12:10	0°♄		direct	4984 May 13 01:20	3°♄16'00	
	4983 Jul 06 15:40	0°♄		morning max el	4984 May 27 08:04	11°♄11'19	27°45'18
morning set	4983 Jul 15 12:40	17°♄24'04			4984 Jun 11 01:06	0°♄	
asc. node	4983 Jul 16 05:47	18°♄54'24			4984 Jun 27 20:12	0°♄	
	4983 Jul 21 08:22	0°♄		morning set	4984 Jun 28 18:20	1°♄53'41	
				asc. node	4984 Jul 02 02:50	8°♄58'20	
superior conj	4983 Jul 22 13:33	2°♄41'08	1°01'50	max. Earth dist.	4984 Jul 04 21:13	14°♄58'50	1.32044 AU
minimum elong	4983 Jul 22 11:20	2°♄28'54	1°01'27				
max. Earth dist.	4983 Jul 22 10:28	2°♄24'06	1.31957 AU	superior conj	4984 Jul 06 00:41	17°♄29'35	0°39'53
evening rise	4983 Jul 29 09:32	17°♄34'17		minimum elong	4984 Jul 05 23:01	17°♄20'23	0°39'31
	4983 Aug 04 13:16	0°♄			4984 Jul 11 17:42	0°♄	
desc. node	4983 Aug 21 16:29	27°♄09'22		evening rise	4984 Jul 12 20:08	2°♄21'39	
	4983 Aug 24 01:53	0°♄			4984 Jul 27 16:33	0°♄	
evening max el	4983 Aug 27 22:51	4°♄02'24	26°32'52	desc. node	4984 Aug 07 13:31	14°♄01'47	
retrograde	4983 Sep 10 21:33	11°♄11'20		evening max el	4984 Aug 08 17:06	15°♄09'49	25°18'58
evening set	4983 Sep 17 15:04	9°♄17'58		retrograde	4984 Aug 22 15:40	22°♄13'35	
min. Earth dist.	4983 Sep 21 12:34	6°♄42'32	0.59757 AU	evening set	4984 Aug 28 10:24	20°♄56'39	
inferior conj	4983 Sep 24 18:27	4°♄08'54	-4°43'50	min. Earth dist.	4984 Sep 02 04:48	18°♄16'11	0.57733 AU
minimum elong	4983 Sep 25 00:06	3°♄57'41	4°42'47	inferior conj	4984 Sep 05 06:03	16°♄10'58	-5°14'04
	4983 Oct 01 02:36	30°♄		minimum elong	4984 Sep 05 08:10	16°♄07'19	5°13'57
morning rise	4983 Oct 02 11:14	29°♄31'22		morning rise	4984 Sep 13 08:13	11°♄56'26	
direct	4983 Oct 04 19:33	29°♄11'25		direct	4984 Sep 15 20:37	11°♄37'24	
	4983 Oct 08 09:05	0°♄		morning max el	4984 Sep 24 14:30	15°♄46'05	18°58'15
asc. node	4983 Oct 12 05:02	2°♄40'53		asc. node	4984 Sep 28 02:05	19°♄40'56	
morning max el	4983 Oct 12 11:26	2°♄56'07	18°15'17		4984 Oct 04 16:56	0°♄	
morning set	4983 Oct 28 07:59	28°♄09'18		morning set	4984 Oct 11 05:51	12°♄24'52	
	4983 Oct 29 07:20	0°♄					
				superior conj	4984 Oct 19 15:01	28°♄50'09	1°31'51
superior conj	4983 Nov 06 16:26	15°♄39'08	1°12'48	minimum elong	4984 Oct 19 17:45	29°♄03'18	1°31'37
minimum elong	4983 Nov 06 20:18	15°♄56'44	1°12'21		4984 Oct 20 05:38	0°♄	
max. Earth dist.	4983 Nov 14 06:48	29°♄01'43	1.41033 AU	max. Earth dist.	4984 Oct 26 12:24	11°♄36'41	1.38937 AU
	4983 Nov 14 20:32	0°♄		evening rise	4984 Oct 30 08:48	18°♄21'52	
desc. node	4983 Nov 17 15:47	4°♄41'17		desc. node	4984 Nov 03 12:48	25°♄22'27	
evening rise	4983 Nov 19 01:49	7°♄01'01			4984 Nov 06 09:14	0°♄	
	4983 Dec 04 00:00	0°♄			4984 Nov 27 08:06	0°♄	
evening max el	4983 Dec 23 04:53	24°♄40'16	23°12'05	evening max el	4984 Dec 04 18:10	8°♄22'00	24°31'15
	4983 Dec 30 04:20	0°♄		retrograde	4984 Dec 16 04:25	15°♄02'32	
retrograde	4984 Jan 02 13:32	0°♄48'20		evening set	4984 Dec 21 15:33	12°♄45'49	
	4984 Jan 05 16:40	30°♄		asc. node	4984 Dec 25 01:20	9°♄04'58	
evening set	4984 Jan 07 11:22	28°♄46'58		min. Earth dist.	4984 Dec 26 06:55	7°♄28'40	0.67737 AU
asc. node	4984 Jan 08 04:17	28°♄09'01		inferior conj	4984 Dec 27 03:34	6°♄19'45	0°42'15
inferior conj	4984 Jan 12 20:49	22°♄22'28	1°31'38	minimum elong	4984 Dec 27 02:34	6°♄23'05	0°41'51
minimum elong	4984 Jan 12 18:54	22°♄29'03	1°30'56	morning rise	4985 Jan 01 13:41	0°♄18'37	
min. Earth dist.	4984 Jan 12 11:06	22°♄55'55	0.68068 AU		4985 Jan 02 00:39	30°♄	
morning rise	4984 Jan 18 02:21	16°♄15'14		direct	4985 Jan 05 08:01	28°♄57'28	
direct	4984 Jan 22 09:56	14°♄32'02			4985 Jan 08 20:31	0°♄	
morning max el	4984 Jan 31 00:20	19°♄31'16	21°17'25	morning max el	4985 Jan 12 22:59	3°♄16'46	20°04'25
	4984 Feb 08 17:00	0°♄		desc. node	4985 Jan 30 12:06	26°♄54'45	
desc. node	4984 Feb 13 15:05	6°♄49'57			4985 Feb 01 13:21	0°♄	
	4984 Feb 29 02:17	0°♄		morning set	4985 Feb 09 00:46	11°♄25'06	
morning set	4984 Mar 02 03:38	3°♄13'31		max. Earth dist.	4985 Feb 19 16:59	28°♄10'06	1.43943 AU
max. Earth dist.	4984 Mar 09 07:27	14°♄44'19	1.42288 AU		4985 Feb 20 20:25	0°♄	

superior conj	4985 Feb 25 06:10	7° K 08'28	-2°06'33	morning set	4986 Jan 19 04:06	20° Z 03'35	
minimum elong	4985 Feb 25 03:04	6° K 55'49	2°06'28		4986 Jan 25 13:14	0° \approx	
evening rise	4985 Mar 10 06:04	29° K 01'39		max. Earth dist.	4986 Feb 02 08:18	12° \approx 12'27	1.44988 AU
	4985 Mar 10 19:37	0° Y					
asc. node	4985 Mar 23 00:37	20° Y 12'49		superior conj	4986 Feb 04 20:20	16° \approx 09'13	-1°47'12
evening max el	4985 Mar 28 01:31	26° Y 31'40	18°10'00	minimum elong	4986 Feb 04 11:42	15° \approx 35'04	1°46'30
retrograde	4985 Apr 03 11:41	29° Y 54'36			4986 Feb 13 12:17	0° K	
evening set	4985 Apr 06 08:17	29° Y 12'42		evening rise	4986 Feb 19 14:51	9° K 56'52	
inferior conj	4985 Apr 12 12:15	23° Y 58'34	3°25'36		4986 Mar 04 00:34	0° Y	
minimum elong	4985 Apr 12 13:44	23° Y 54'36	3°25'27	asc. node	4986 Mar 09 21:40	8° Y 06'40	
min. Earth dist.	4985 Apr 15 06:22	21° Y 02'20	0.62793 AU	evening max el	4986 Mar 11 13:43	9° Y 56'38	18°30'42
morning rise	4985 Apr 18 17:53	17° Y 53'09		retrograde	4986 Mar 18 02:18	13° Y 30'52	
direct	4985 Apr 25 14:26	15° Y 17'52		evening set	4986 Mar 21 05:07	12° Y 36'35	
desc. node	4985 Apr 28 11:21	15° Y 42'28		inferior conj	4986 Mar 26 23:55	7° Y 04'29	3°33'31
morning max el	4985 May 09 14:44	23° Y 17'42	27°50'17	minimum elong	4986 Mar 26 23:48	7° Y 04'52	3°33'31
	4985 May 15 14:04	0° B		min. Earth dist.	4986 Mar 29 02:53	4° Y 33'44	0.64656 AU
	4985 Jun 04 07:37	0° II		morning rise	4986 Apr 01 17:47	0° Y 52'26	
morning set	4985 Jun 12 18:08	16° II 03'17			4986 Apr 02 20:57	30° K K	
max. Earth dist.	4985 Jun 18 03:44	27° II 17'46	1.32556 AU	direct	4986 Apr 08 11:34	28° K 03'48	
asc. node	4985 Jun 18 23:53	29° II 05'44			4986 Apr 14 16:15	0° Y	
	4985 Jun 19 09:57	0° E		desc. node	4986 Apr 15 08:23	0° Y 24'31	
				morning max el	4986 Apr 22 00:27	5° Y 58'43	27°19'42
superior conj	4985 Jun 20 09:22	2° E 06'36	0°14'31		4986 May 10 08:50	0° B	
minimum elong	4985 Jun 20 08:41	2° E 02'53	0°14'20	morning set	4986 May 27 09:22	29° B 44'47	
behind sun begin	4985 Jun 20 06:23	1° E 50'27			4986 May 27 12:29	0° II	
behind sun end	4985 Jun 20 10:58	2° E 15'19		max. Earth dist.	4986 Jun 01 02:02	9° II 09'47	1.33515 AU
evening rise	4985 Jun 27 07:58	17° E 09'09					
	4985 Jul 03 15:52	0° O		superior conj	4986 Jun 04 13:37	16° II 26'24	-0°13'31
evening max el	4985 Jul 21 05:52	25° O 39'33	23°45'35	minimum elong	4986 Jun 04 14:19	16° II 30'06	0°13'23
desc. node	4985 Jul 25 10:34	29° O 09'31		behind sun begin	4986 Jun 04 11:17	16° II 14'01	
	4985 Jul 26 17:30	0° np		behind sun end	4986 Jun 04 17:21	16° II 46'12	
retrograde	4985 Aug 03 22:00	2° np 31'44		asc. node	4986 Jun 05 20:55	19° II 12'40	
evening set	4985 Aug 08 06:12	1° np 50'14			4986 Jun 10 22:11	0° E	
	4985 Aug 12 12:21	30° R O		evening rise	4986 Jun 11 19:09	1° E 50'47	
min. Earth dist.	4985 Aug 14 15:56	28° O 46'59	0.56030 AU		4986 Jun 27 15:05	0° O	
inferior conj	4985 Aug 16 21:23	27° O 26'24	-5°07'16	evening max el	4986 Jul 02 20:40	6° O 02'56	22°08'40
minimum elong	4985 Aug 16 17:14	27° O 32'41	5°06'52	desc. node	4986 Jul 12 07:36	11° O 58'35	
morning rise	4985 Aug 25 06:46	23° O 30'50		retrograde	4986 Jul 15 16:45	12° O 25'11	
direct	4985 Aug 28 02:02	23° O 11'04		evening set	4986 Jul 18 14:02	12° O 06'40	
morning max el	4985 Sep 07 06:43	27° O 55'31	20°03'08	min. Earth dist.	4986 Jul 27 02:11	8° O 26'50	0.54989 AU
	4985 Sep 09 07:25	0° np		inferior conj	4986 Jul 27 20:14	8° O 01'26	-4°10'05
asc. node	4985 Sep 14 23:08	7° np 36'23		minimum elong	4986 Jul 27 11:36	8° O 13'35	4°07'58
morning set	4985 Sep 25 10:26	26° np 59'13		morning rise	4986 Aug 05 10:54	4° O 11'17	
	4985 Sep 26 21:53	0° E		direct	4986 Aug 08 15:25	3° O 48'37	
				morning max el	4986 Aug 20 10:57	9° O 19'49	21°28'31
superior conj	4985 Oct 03 03:38	12° E 42'24	1°41'35	asc. node	4986 Sep 01 20:10	26° O 14'24	
minimum elong	4985 Oct 03 04:48	12° E 48'14	1°41'32		4986 Sep 03 21:39	0° np	
max. Earth dist.	4985 Oct 08 18:03	23° E 38'26	1.36882 AU	morning set	4986 Sep 09 19:16	11° np 45'32	
	4985 Oct 12 04:11	0° ml					
evening rise	4985 Oct 12 13:25	0° ml 41'54		superior conj	4986 Sep 17 02:08	27° np 03'40	1°43'25
desc. node	4985 Oct 21 09:49	15° ml 54'16		minimum elong	4986 Sep 17 01:49	27° np 02'03	1°43'25
	4985 Oct 30 13:37	0° x			4986 Sep 18 12:12	0° E	
evening max el	4985 Nov 17 06:36	22° x 05'16	25°43'32	max. Earth dist.	4986 Sep 21 05:13	5° E 30'27	1.35087 AU
retrograde	4985 Nov 29 14:45	29° x 08'56		evening rise	4986 Sep 25 11:50	13° E 51'48	
evening set	4985 Dec 05 15:29	26° x 39'08			4986 Oct 04 12:05	0° ml	
min. Earth dist.	4985 Dec 09 23:29	21° x 56'43	0.67050 AU	desc. node	4986 Oct 08 06:51	6° ml 11'33	
inferior conj	4985 Dec 11 07:13	20° x 16'00	-0°12'56		4986 Oct 25 09:50	0° x	
minimum elong	4985 Dec 11 07:33	20° x 14'56	0°12'46	evening max el	4986 Oct 30 19:15	5° x 45'32	26°41'34
transit middle	4985 Dec 11 07:33	20° x 14'56	0°12'46	retrograde	4986 Nov 12 19:54	13° x 01'17	
transit begin	4985 Dec 11 05:50	20° x 20'26		evening set	4986 Nov 19 09:13	10° x 22'56	
transit end	4985 Dec 11 09:17	20° x 09'28		min. Earth dist.	4986 Nov 23 10:33	6° x 15'47	0.66013 AU
asc. node	4985 Dec 11 22:23	19° x 28'05		inferior conj	4986 Nov 25 05:48	4° x 07'51	-1°12'43
morning rise	4985 Dec 17 00:03	14° x 23'09		minimum elong	4986 Nov 25 07:50	4° x 01'50	1°11'51
direct	4985 Dec 20 06:45	13° x 21'23		asc. node	4986 Nov 28 19:25	0° x 15'30	
morning max el	4985 Dec 27 05:28	17° x 12'23	19°05'48		4986 Nov 29 02:19	30° R ml	
	4986 Jan 06 02:04	0° Z		morning rise	4986 Dec 01 07:15	28° ml 25'44	
desc. node	4986 Jan 17 09:07	17° Z 16'27		direct	4986 Dec 04 04:22	27° ml 39'34	

	4986 Dec 09 10:12	0°♊			4987 Dec 04 22:38	0°♊
morning max el	4986 Dec 10 18:02	1°♊13'18	18°23'12	morning set	4987 Dec 11 19:56	11°♊29'33
morning set	4986 Dec 30 09:17	0°♊02'39		desc. node	4987 Dec 22 03:08	28°♊32'18
	4986 Dec 30 08:37	0°♊			4987 Dec 23 00:47	0°♊
desc. node	4987 Jan 04 06:07	7°♊50'14				
				superior conj	4987 Dec 25 11:09	3°♊55'05 -0°23'03
superior conj	4987 Jan 14 23:10	24°♊46'01	-1°09'40	minimum elong	4987 Dec 25 08:23	3°♊43'58 0°22'38
minimum elong	4987 Jan 14 14:54	24°♊13'32	1°08'40	max. Earth dist.	4987 Dec 29 22:01	11°♊00'11 1.44915 AU
max. Earth dist.	4987 Jan 16 02:48	26°♊34'22	1.45322 AU	evening rise	4988 Jan 10 15:52	29°♊17'16
	4987 Jan 18 07:18	0°♊			4988 Jan 11 02:59	0°♊
evening rise	4987 Jan 31 00:22	19°♊56'10		greatest brilliancy	4988 Jan 25 04:15	21°♊16'20 -0.6m
	4987 Feb 06 09:52	0°♊			4988 Jan 31 08:14	0°♊
greatest brilliancy	4987 Feb 10 09:37	6°♊13'19	-0.8m	evening max el	4988 Feb 06 03:45	7°♊00'23 20°02'52
evening max el	4987 Feb 22 23:00	23°♊26'57	19°08'55	asc. node	4988 Feb 11 15:42	11°♊03'17
asc. node	4987 Feb 24 18:41	25°♊07'58		retrograde	4988 Feb 13 19:50	11°♊28'28
retrograde	4987 Mar 01 21:57	27°♊23'34		evening set	4988 Feb 17 13:45	10°♊06'42
evening set	4987 Mar 05 07:42	26°♊16'01		inferior conj	4988 Feb 22 23:12	4°♊04'22 3°05'28
inferior conj	4987 Mar 10 20:32	20°♊27'45	3°25'38	minimum elong	4988 Feb 22 21:03	4°♊11'35 3°05'03
minimum elong	4987 Mar 10 19:09	20°♊32'10	3°25'28	min. Earth dist.	4988 Feb 23 20:27	2°♊52'53 0.67212 AU
min. Earth dist.	4987 Mar 12 08:06	18°♊34'05	0.66144 AU		4988 Feb 26 02:41	30°♊
morning rise	4987 Mar 16 06:15	14°♊13'19		morning rise	4988 Feb 28 04:08	27°♊49'58
direct	4987 Mar 22 15:24	11°♊24'43		direct	4988 Mar 05 00:50	25°♊12'42
desc. node	4987 Apr 02 05:23	16°♊53'51			4988 Mar 14 10:35	0°♊
morning max el	4987 Apr 04 10:19	19°♊00'53	26°20'10	morning max el	4988 Mar 16 19:06	2°♊14'38 25°01'05
	4987 Apr 13 17:55	0°♊		desc. node	4988 Mar 19 02:23	4°♊41'23
	4987 May 03 09:43	0°♊			4988 Apr 06 20:38	0°♊
morning set	4987 May 10 12:18	12°♊46'15		morning set	4988 Apr 21 22:14	24°♊54'49
max. Earth dist.	4987 May 14 12:55	20°♊28'58	1.34946 AU		4988 Apr 24 17:39	0°♊
				max. Earth dist.	4988 Apr 25 13:18	1°♊30'37 1.36813 AU
superior conj	4987 May 19 11:00	0°♊20'59	-0°43'05	superior conj	4988 May 01 22:38	13°♊42'59 -1°12'32
minimum elong	4987 May 19 13:21	0°♊33'02	0°42'38	minimum elong	4988 May 02 02:37	14°♊02'32 1°11'53
	4987 May 19 06:54	0°♊		asc. node	4988 May 09 14:59	29°♊06'39
asc. node	4987 May 23 17:56	9°♊14'15		evening rise	4988 May 10 07:11	0°♊28'14
evening rise	4987 May 27 03:38	16°♊19'09			4988 May 10 01:34	0°♊
	4987 Jun 03 02:27	0°♊		evening max el	4988 May 27 09:53	28°♊19'03 19°32'55
evening max el	4987 Jun 14 21:03	16°♊50'51	20°41'58		4988 May 29 07:38	0°♊
retrograde	4987 Jun 26 05:12	22°♊24'18		retrograde	4988 Jun 06 00:11	3°♊00'10
evening set	4987 Jun 28 06:42	22°♊14'01		evening set	4988 Jun 07 22:45	2°♊49'31
desc. node	4987 Jun 29 04:38	22°♊03'11			4988 Jun 14 15:16	30°♊
inferior conj	4987 Jul 07 13:27	18°♊17'01	-2°27'25	desc. node	4988 Jun 15 01:38	29°♊44'18
minimum elong	4987 Jul 07 06:40	18°♊26'43	2°25'03	inferior conj	4988 Jun 16 15:38	28°♊44'49 -0°28'19
min. Earth dist.	4987 Jul 08 13:32	17°♊42'34	0.54859 AU	minimum elong	4988 Jun 16 14:22	28°♊46'50 0°27'51
morning rise	4987 Jul 16 06:08	14°♊12'39		min. Earth dist.	4988 Jun 19 02:49	27°♊11'03 0.55687 AU
direct	4987 Jul 20 00:47	13°♊41'55		morning rise	4988 Jun 25 03:26	24°♊09'41
morning max el	4987 Aug 02 05:03	20°♊02'37	23°08'44	direct	4988 Jun 29 18:19	23°♊21'50
	4987 Aug 10 13:51	0°♊			4988 Jul 13 08:25	0°♊
asc. node	4987 Aug 19 17:11	15°♊23'50		morning max el	4988 Jul 13 18:37	0°♊23'57 24°52'04
morning set	4987 Aug 25 06:23	26°♊37'26			4988 Aug 03 02:07	0°♊
	4987 Aug 26 20:32	0°♊		asc. node	4988 Aug 05 14:13	4°♊56'39
				morning set	4988 Aug 08 18:07	11°♊30'10
superior conj	4987 Sep 01 07:16	11°♊43'17	1°38'36	superior conj	4988 Aug 15 16:33	26°♊33'45 1°28'07
minimum elong	4987 Sep 01 05:49	11°♊35'36	1°38'31	minimum elong	4988 Aug 15 14:26	26°♊22'13 1°27'53
max. Earth dist.	4987 Sep 04 01:11	17°♊33'18	1.33671 AU	max. Earth dist.	4988 Aug 17 05:28	29°♊54'49 1.32675 AU
evening rise	4987 Sep 08 23:44	27°♊39'23			4988 Aug 17 06:25	0°♊
	4987 Sep 10 04:19	0°♊		evening rise	4988 Aug 22 21:28	11°♊54'26
desc. node	4987 Sep 25 03:54	26°♊07'03			4988 Sep 01 09:14	0°♊
	4987 Sep 27 17:48	0°♊		desc. node	4988 Sep 11 00:55	15°♊31'32
evening max el	4987 Oct 13 07:44	19°♊13'17	27°18'04		4988 Sep 22 11:53	0°♊
retrograde	4987 Oct 26 19:06	26°♊31'29		evening max el	4988 Sep 24 18:09	2°♊15'22 27°26'19
evening set	4987 Nov 02 18:22	23°♊51'51		retrograde	4988 Oct 08 11:35	9°♊30'31
min. Earth dist.	4987 Nov 06 13:52	20°♊19'15	0.64625 AU	evening set	4988 Oct 15 15:50	6°♊59'14
inferior conj	4987 Nov 08 21:00	17°♊50'08	-2°15'26	min. Earth dist.	4988 Oct 19 07:19	3°♊57'26 0.62918 AU
minimum elong	4987 Nov 09 00:55	17°♊39'31	2°13'54	inferior conj	4988 Oct 22 02:04	1°♊15'46 -3°18'13
morning rise	4987 Nov 15 08:42	12°♊21'49		minimum elong	4988 Oct 22 07:40	1°♊02'10 3°16'22
asc. node	4987 Nov 15 16:25	12°♊13'49			4988 Oct 23 09:45	30°♊
direct	4987 Nov 17 22:36	11°♊47'18				
morning max el	4987 Nov 24 10:07	15°♊13'05	17°57'35			

morning rise	4988 Oct 29 01:06	26° Ω 04'44		asc. node	4989 Oct 19 10:30	10° Ω 46'43	
direct	4988 Oct 31 10:27	25° Ω 38'13		morning max el	4989 Oct 21 16:55	12° Ω 39'58	18°00'14
asc. node	4988 Nov 01 13:27	25° Ω 44'15			4989 Nov 02 08:17	0° \mathbb{M}	
morning max el	4988 Nov 07 02:47	29° Ω 04'24	17°49'36	morning set	4989 Nov 06 10:48	7° \mathbb{M} 31'20	
	4988 Nov 08 00:07	0° \mathbb{M}					
morning set	4988 Nov 23 06:34	24° \mathbb{M} 05'27		superior conj	4989 Nov 16 12:42	25° \mathbb{M} 50'28	0°57'06
	4988 Nov 26 15:16	0° \mathbb{X}		minimum elong	4989 Nov 16 16:37	26° \mathbb{M} 07'46	0°56'35
					4989 Nov 18 21:51	0° \mathbb{X}	
superior conj	4988 Dec 04 22:43	14° \mathbb{X} 14'10	0°21'27	max. Earth dist.	4989 Nov 24 03:30	8° \mathbb{X} 52'29	1.42161 AU
minimum elong	4988 Dec 05 00:49	14° \mathbb{X} 22'56	0°21'10	desc. node	4989 Nov 24 21:12	10° \mathbb{X} 05'46	
desc. node	4988 Dec 08 00:10	19° \mathbb{X} 18'31		evening rise	4989 Nov 29 23:01	18° \mathbb{X} 19'37	
max. Earth dist.	4988 Dec 11 15:09	25° \mathbb{X} 12'11	1.43816 AU		4989 Dec 07 11:20	0° \mathbb{Z}	
	4988 Dec 14 15:14	0° \mathbb{Z}			4989 Dec 29 02:07	0° \approx	
evening rise	4988 Dec 20 02:11	8° \mathbb{Z} 32'21		evening max el	4990 Jan 01 21:03	4° \approx 10'35	22°26'02
	4989 Jan 03 09:13	0° \approx		retrograde	4990 Jan 11 14:12	9° \approx 57'10	
evening max el	4989 Jan 19 03:01	20° \approx 34'45	21°09'54	asc. node	4990 Jan 15 09:46	8° \approx 40'46	
retrograde	4989 Jan 27 17:49	25° \approx 40'53		evening set	4990 Jan 16 04:57	8° \approx 04'38	
asc. node	4989 Jan 28 12:44	25° \approx 37'32		inferior conj	4990 Jan 21 13:29	1° \approx 42'42	1°57'04
evening set	4989 Jan 31 21:23	24° \approx 04'00		minimum elong	4990 Jan 21 11:15	1° \approx 50'26	1°56'19
inferior conj	4989 Feb 06 05:31	17° \approx 50'12	2°35'26	min. Earth dist.	4990 Jan 21 10:04	1° \approx 54'33	0.68102 AU
minimum elong	4989 Feb 06 03:06	17° \approx 58'34	2°34'46		4990 Jan 22 19:21	30° \mathbb{R} \mathbb{Z}	
min. Earth dist.	4989 Feb 06 13:50	17° \approx 21'30	0.67857 AU	morning rise	4990 Jan 26 17:27	25° \mathbb{Z} 32'56	
morning rise	4989 Feb 11 08:39	11° \approx 37'25		direct	4990 Jan 31 09:04	23° \mathbb{Z} 36'49	
direct	4989 Feb 16 14:59	9° \approx 18'58		morning max el	4990 Feb 09 15:47	29° \mathbb{Z} 03'24	22°04'41
morning max el	4989 Feb 27 03:55	15° \approx 35'08	23°32'43		4990 Feb 10 13:45	0° \approx	
desc. node	4989 Mar 05 23:25	23° \approx 24'30		desc. node	4990 Feb 20 20:27	12° \approx 47'39	
	4989 Mar 10 23:33	0° \mathbb{H}			4990 Mar 04 17:06	0° \mathbb{H}	
	4989 Mar 30 20:16	0° \mathbb{Y}		morning set	4990 Mar 14 16:24	15° \mathbb{H} 34'45	
morning set	4989 Apr 03 09:18	5° \mathbb{Y} 54'43		max. Earth dist.	4990 Mar 20 06:42	24° \mathbb{H} 46'39	1.41137 AU
max. Earth dist.	4989 Apr 07 08:52	12° \mathbb{Y} 46'45	1.38963 AU		4990 Mar 23 08:39	0° \mathbb{Y}	
superior conj	4989 Apr 14 20:44	26° \mathbb{Y} 22'25	-1°39'20	superior conj	4990 Mar 28 00:41	8° \mathbb{Y} 08'33	-1°59'44
minimum elong	4989 Apr 15 01:42	26° \mathbb{Y} 45'39	1°38'45	minimum elong	4990 Mar 28 04:53	8° \mathbb{Y} 27'12	1°59'29
	4989 Apr 16 18:54	0° \mathbb{B}		evening rise	4990 Apr 07 11:55	27° \mathbb{Y} 17'14	
evening rise	4989 Apr 24 03:05	14° \mathbb{B} 10'20			4990 Apr 08 22:57	0° \mathbb{B}	
asc. node	4989 Apr 26 12:01	18° \mathbb{B} 44'56		asc. node	4990 Apr 13 09:04	8° \mathbb{B} 03'54	
	4989 May 02 16:43	0° \mathbb{I}		evening max el	4990 Apr 23 17:12	23° \mathbb{B} 08'21	18°15'27
evening max el	4989 May 10 09:39	10° \mathbb{I} 27'10	18°44'02	retrograde	4990 Apr 30 19:18	26° \mathbb{B} 41'15	
retrograde	4989 May 18 12:16	14° \mathbb{I} 26'25		evening set	4990 May 03 05:44	26° \mathbb{B} 16'58	
evening set	4989 May 20 15:52	14° \mathbb{I} 10'37		inferior conj	4990 May 10 07:58	21° \mathbb{B} 34'28	2°28'35
inferior conj	4989 May 28 12:59	9° \mathbb{I} 48'24	1°15'15	minimum elong	4990 May 10 11:27	21° \mathbb{B} 26'53	2°27'41
minimum elong	4989 May 28 15:38	9° \mathbb{I} 43'28	1°14'21	min. Earth dist.	4990 May 13 17:55	18° \mathbb{B} 37'59	0.59376 AU
min. Earth dist.	4989 May 31 19:33	7° \mathbb{I} 23'44	0.57295 AU	morning rise	4990 May 17 14:21	15° \mathbb{B} 53'59	
desc. node	4989 Jun 01 22:39	6° \mathbb{I} 37'19		desc. node	4990 May 19 19:42	14° \mathbb{B} 50'14	
morning rise	4989 Jun 05 12:06	4° \mathbb{I} 37'10		direct	4990 May 23 22:28	14° \mathbb{B} 03'29	
direct	4989 Jun 11 01:29	3° \mathbb{I} 21'21		morning max el	4990 Jun 07 07:39	21° \mathbb{B} 53'41	27°25'28
morning max el	4989 Jun 25 10:12	10° \mathbb{I} 52'59	26°22'39		4990 Jun 14 10:14	0° \mathbb{I}	
	4989 Jul 10 03:10	0° \mathbb{E}			4990 Jul 03 02:05	0° \mathbb{E}	
asc. node	4989 Jul 23 11:17	24° \mathbb{E} 46'06		morning set	4990 Jul 08 12:56	10° \mathbb{E} 56'51	
morning set	4989 Jul 24 04:53	26° \mathbb{E} 18'44		asc. node	4990 Jul 10 08:19	14° \mathbb{E} 46'02	
	4989 Jul 25 22:20	0° \mathbb{Q}		max. Earth dist.	4990 Jul 15 02:29	25° \mathbb{E} 07'35	1.31931 AU
superior conj	4989 Jul 31 03:59	11° \mathbb{Q} 28'25	1°12'43	superior conj	4990 Jul 15 15:43	26° \mathbb{E} 20'38	0°53'00
minimum elong	4989 Jul 31 01:40	11° \mathbb{Q} 15'39	1°12'21	minimum elong	4990 Jul 15 13:41	26° \mathbb{E} 09'22	0°52'35
max. Earth dist.	4989 Jul 31 15:09	12° \mathbb{Q} 30'04	1.32093 AU		4990 Jul 17 07:26	0° \mathbb{Q}	
evening rise	4989 Aug 07 02:03	26° \mathbb{Q} 28'05		evening rise	4990 Jul 22 11:01	11° \mathbb{Q} 11'56	
	4989 Aug 08 18:57	0° \mathbb{P}			4990 Aug 01 00:28	0° \mathbb{P}	
	4989 Aug 25 21:27	0° \mathbb{A}		desc. node	4990 Aug 15 18:58	21° \mathbb{P} 51'16	
desc. node	4989 Aug 28 21:56	4° \mathbb{A} 12'28		evening max el	4990 Aug 19 22:04	26° \mathbb{P} 12'44	26°04'43
evening max el	4989 Sep 06 23:42	14° \mathbb{A} 38'29	27°01'59		4990 Aug 24 12:50	0° \mathbb{A}	
retrograde	4989 Sep 20 20:43	21° \mathbb{A} 49'51		retrograde	4990 Sep 02 21:18	3° \mathbb{A} 20'41	
evening set	4989 Sep 27 21:39	19° \mathbb{A} 38'47		evening set	4990 Sep 09 06:51	1° \mathbb{A} 41'49	
min. Earth dist.	4989 Oct 01 14:00	16° \mathbb{A} 58'23	0.60951 AU		4990 Sep 12 04:01	30° \mathbb{R} \mathbb{P}	
inferior conj	4989 Oct 04 17:47	14° \mathbb{A} 16'47	-4°16'00	min. Earth dist.	4990 Sep 13 10:49	29° \mathbb{P} 06'45	0.58872 AU
minimum elong	4989 Oct 05 00:02	14° \mathbb{A} 03'24	4°14'27	inferior conj	4990 Sep 16 16:31	26° \mathbb{P} 42'34	-5°00'06
morning rise	4989 Oct 12 04:23	9° \mathbb{A} 26'34		minimum elong	4990 Sep 16 21:06	26° \mathbb{P} 34'00	4°59'30
direct	4989 Oct 14 12:09	9° \mathbb{A} 05'00		morning rise	4990 Sep 24 13:37	22° \mathbb{P} 15'17	

direct	4990 Sep 26 23:08	21° \mathbb{M} 56'06		direct	4991 Sep 08 15:40	3° \mathbb{M} 59'55	
morning max el	4990 Oct 05 01:03	25° \mathbb{M} 49'34	18°30'56	morning max el	4991 Sep 17 23:47	8° \mathbb{M} 22'55	19°23'09
asc. node	4990 Oct 06 07:34	27° \mathbb{M} 07'59		asc. node	4991 Sep 23 04:36	14° \mathbb{M} 32'50	
	4990 Oct 08 16:04	0° \mathbb{L}			4991 Oct 02 04:21	0° \mathbb{L}	
morning set	4990 Oct 21 03:22	21° \mathbb{L} 31'34		morning set	4991 Oct 05 04:24	5° \mathbb{L} 55'26	
	4990 Oct 25 12:48	0° \mathbb{M}					
superior conj	4990 Oct 30 00:56	8° \mathbb{M} 31'10	1°22'05	superior conj	4991 Oct 13 06:00	22° \mathbb{L} 00'44	1°37'00
minimum elong	4990 Oct 30 04:26	8° \mathbb{M} 47'27	1°21'43	minimum elong	4991 Oct 13 08:06	22° \mathbb{L} 10'56	1°36'53
max. Earth dist.	4990 Nov 06 10:23	21° \mathbb{M} 49'02	1.40152 AU		4991 Oct 17 10:00	0° \mathbb{M}	
evening rise	4990 Nov 10 16:37	29° \mathbb{M} 03'54		max. Earth dist.	4991 Oct 19 14:58	4° \mathbb{M} 05'47	1.38045 AU
	4990 Nov 11 06:07	0° \mathbb{X}		evening rise	4991 Oct 23 09:11	10° \mathbb{M} 50'44	
desc. node	4990 Nov 11 18:13	0° \mathbb{X} 50'07		desc. node	4991 Oct 29 15:15	21° \mathbb{M} 27'43	
	4990 Nov 30 23:27	0° \mathbb{Z}			4991 Nov 03 23:57	0° \mathbb{X}	
evening max el	4990 Dec 15 11:25	17° \mathbb{Z} 49'33	23°46'03	evening max el	4991 Nov 26 11:47	0° \mathbb{Z}	
retrograde	4990 Dec 26 07:32	24° \mathbb{Z} 13'07		retrograde	4991 Nov 28 00:14	1° \mathbb{Z} 32'29	25°03'19
evening set	4990 Dec 31 10:50	22° \mathbb{Z} 05'05		evening set	4991 Dec 09 20:37	8° \mathbb{Z} 24'16	
asc. node	4991 Jan 02 06:49	20° \mathbb{Z} 16'25		min. Earth dist.	4991 Dec 15 13:25	6° \mathbb{Z} 01'54	
inferior conj	4991 Jan 05 21:13	15° \mathbb{Z} 39'05	1°11'28	asc. node	4991 Dec 20 01:38	0° \mathbb{Z} 59'08	0.67488 AU
minimum elong	4991 Jan 05 19:38	15° \mathbb{Z} 44'28	1°10'51		4991 Dec 20 03:51	0° \mathbb{Z} 51'54	
min. Earth dist.	4991 Jan 05 06:49	16° \mathbb{Z} 28'10	0.67971 AU	inferior conj	4991 Dec 20 19:42	30° \mathbb{R} \mathbb{X}	
morning rise	4991 Jan 11 04:25	9° \mathbb{Z} 34'02		minimum elong	4991 Dec 21 02:53	29° \mathbb{X} 36'24	0°19'32
direct	4991 Jan 15 06:06	8° \mathbb{Z} 00'36		morning rise	4991 Dec 21 02:24	29° \mathbb{X} 37'59	0°19'20
morning max el	4991 Jan 23 09:54	12° \mathbb{Z} 41'59	20°44'38	direct	4991 Dec 26 15:35	23° \mathbb{X} 38'12	
	4991 Feb 05 21:26	0° \mathbb{A}		morning max el	4991 Dec 30 04:46	22° \mathbb{X} 25'37	
desc. node	4991 Feb 07 17:29	2° \mathbb{A} 39'36			4992 Jan 06 11:53	26° \mathbb{X} 31'37	19°37'27
morning set	4991 Feb 21 21:31	24° \mathbb{A} 04'38		greatest brilliancy	4992 Jan 09 14:42	0° \mathbb{Z}	
	4991 Feb 25 16:03	0° \mathbb{H}		desc. node	4992 Jan 19 13:10	13° \mathbb{Z} 44'48	-0.7m
max. Earth dist.	4991 Mar 02 11:13	7° \mathbb{H} 40'59	1.43052 AU		4992 Jan 25 14:30	22° \mathbb{Z} 52'08	
					4992 Jan 30 06:13	0° \mathbb{A}	
superior conj	4991 Mar 09 05:35	18° \mathbb{H} 50'49	-2°08'45	morning set	4992 Jan 31 18:00	2° \mathbb{A} 17'52	
minimum elong	4991 Mar 09 06:01	18° \mathbb{H} 52'36	2°08'45	max. Earth dist.	4992 Feb 12 23:15	21° \mathbb{A} 23'22	1.44474 AU
	4991 Mar 15 17:53	0° \mathbb{Y}					
evening rise	4991 Mar 21 05:29	9° \mathbb{Y} 39'24		superior conj	4992 Feb 17 08:50	28° \mathbb{A} 24'50	-2°00'49
asc. node	4991 Mar 31 06:07	26° \mathbb{Y} 57'04		minimum elong	4992 Feb 17 03:01	28° \mathbb{A} 01'27	2°00'31
	4991 Apr 02 05:48	0° \mathbb{B}			4992 Feb 18 08:28	0° \mathbb{H}	
evening max el	4991 Apr 07 05:03	6° \mathbb{B} 13'38	18°06'34	evening rise	4992 Mar 02 03:13	21° \mathbb{H} 07'22	
retrograde	4991 Apr 13 18:01	9° \mathbb{B} 35'53			4992 Mar 07 09:32	0° \mathbb{Y}	
evening set	4991 Apr 16 11:03	9° \mathbb{B} 00'49		asc. node	4992 Mar 17 03:09	15° \mathbb{Y} 15'17	
inferior conj	4991 Apr 22 22:00	3° \mathbb{B} 58'12	3°11'58	evening max el	4992 Mar 20 17:58	19° \mathbb{Y} 33'23	18°16'37
minimum elong	4991 Apr 23 00:26	3° \mathbb{B} 52'09	3°11'35	retrograde	4992 Mar 27 03:58	22° \mathbb{Y} 59'14	
min. Earth dist.	4991 Apr 25 23:55	0° \mathbb{B} 54'55	0.61584 AU	evening set	4992 Mar 30 03:15	22° \mathbb{Y} 12'06	
	4991 Apr 26 23:41	30° \mathbb{R} \mathbb{Y}		inferior conj	4992 Apr 05 02:54	16° \mathbb{Y} 50'19	3°31'08
morning rise	4991 Apr 29 11:57	27° \mathbb{Y} 59'22		minimum elong	4992 Apr 05 03:40	16° \mathbb{Y} 48'08	3°31'05
direct	4991 May 06 06:42	25° \mathbb{Y} 37'14		min. Earth dist.	4992 Apr 07 14:48	14° \mathbb{Y} 03'02	0.63634 AU
desc. node	4991 May 06 16:43	25° \mathbb{Y} 37'45		morning rise	4992 Apr 11 03:07	10° \mathbb{Y} 41'40	
	4991 May 16 10:45	0° \mathbb{B}		direct	4992 Apr 17 23:33	7° \mathbb{Y} 58'52	
morning max el	4991 May 20 11:18	3° \mathbb{B} 36'19	27°52'01	desc. node	4992 Apr 22 13:44	9° \mathbb{Y} 01'58	
	4991 Jun 09 00:17	0° \mathbb{I}		morning max el	4992 May 01 19:19	15° \mathbb{Y} 57'33	27°41'12
morning set	4991 Jun 22 16:23	25° \mathbb{I} 18'48			4992 May 13 08:11	0° \mathbb{B}	
	4991 Jun 24 22:31	0° \mathbb{E}			4992 May 31 17:22	0° \mathbb{I}	
asc. node	4991 Jun 27 05:23	4° \mathbb{E} 52'02		morning set	4992 Jun 05 12:49	9° \mathbb{I} 16'42	
max. Earth dist.	4991 Jun 28 11:43	7° \mathbb{E} 36'04	1.32200 AU	max. Earth dist.	4992 Jun 10 14:58	19° \mathbb{I} 43'12	1.32910 AU
superior conj	4991 Jun 30 02:02	11° \mathbb{E} 05'00	0°29'30	superior conj	4992 Jun 13 09:03	25° \mathbb{I} 35'01	0°02'54
minimum elong	4991 Jun 30 00:44	10° \mathbb{E} 57'50	0°29'13	minimum elong	4992 Jun 13 08:55	25° \mathbb{I} 34'16	0°02'51
evening rise	4991 Jul 06 22:21	25° \mathbb{E} 59'52		behind sun begin	4992 Jun 13 03:39	25° \mathbb{I} 06'01	
	4991 Jul 08 19:57	0° \mathbb{Q}		behind sun end	4992 Jun 13 14:10	26° \mathbb{I} 02'32	
	4991 Jul 26 08:26	0° \mathbb{M}		asc. node	4992 Jun 13 02:25	24° \mathbb{I} 59'22	
evening max el	4991 Aug 01 13:23	7° \mathbb{M} 01'14	24°40'51		4992 Jun 15 10:11	0° \mathbb{E}	
desc. node	4991 Aug 02 15:59	8° \mathbb{M} 02'55		evening rise	4992 Jun 20 10:06	10° \mathbb{E} 45'06	
retrograde	4991 Aug 15 10:53	14° \mathbb{M} 01'53			4992 Jun 30 07:08	0° \mathbb{Q}	
evening set	4991 Aug 20 15:39	13° \mathbb{M} 01'08		evening max el	4992 Jul 13 02:05	17° \mathbb{Q} 23'49	23°03'54
min. Earth dist.	4991 Aug 26 00:40	10° \mathbb{M} 12'36	0.56943 AU	desc. node	4992 Jul 19 13:00	22° \mathbb{Q} 15'18	
inferior conj	4991 Aug 28 19:25	8° \mathbb{M} 24'41	-5°16'45	retrograde	4992 Jul 26 11:30	22° \mathbb{Q} 05'04	
minimum elong	4991 Aug 28 19:03	8° \mathbb{M} 25'16	5°16'45	evening set	4992 Jul 30 03:54	23° \mathbb{Q} 35'26	
morning rise	4991 Sep 06 00:52	4° \mathbb{M} 18'57		min. Earth dist.	4992 Aug 06 11:02	20° \mathbb{Q} 18'18	0.55489 AU
				inferior conj	4992 Aug 08 02:47	19° \mathbb{Q} 20'42	-4°49'30

minimum elong	4992 Aug 07 20:07	19° Ω 30'23	4°48'26	inferior conj	4993 Jul 18 21:22	29° \mathfrak{G} 42'44	-3°30'43
morning rise	4992 Aug 16 14:34	15° Ω 29'17		minimum elong	4993 Jul 18 12:43	29° \mathfrak{G} 54'49	3°28'09
direct	4992 Aug 19 13:39	15° Ω 08'28		min. Earth dist.	4993 Jul 18 21:07	29° \mathfrak{G} 43'06	0.54816 AU
morning max el	4992 Aug 30 10:41	20° Ω 11'59	20°37'11	morning rise	4993 Jul 27 13:34	25° \mathfrak{G} 49'30	
	4992 Sep 07 07:49	0° \mathfrak{M}		direct	4993 Jul 30 23:32	25° \mathfrak{G} 24'13	
asc. node	4992 Sep 09 01:38	2° \mathfrak{M} 47'21			4993 Aug 10 23:21	0° Ω	
morning set	4992 Sep 18 11:02	20° \mathfrak{M} 35'16		morning max el	4993 Aug 12 09:59	1° Ω 16'05	22°10'05
	4992 Sep 23 00:05	0° $\underline{\mathfrak{A}}$		asc. node	4993 Aug 26 22:40	21° Ω 39'31	
					4993 Aug 31 06:05	0° \mathfrak{M}	
superior conj	4992 Sep 25 23:13	6° $\underline{\mathfrak{A}}$ 05'57	1°43'14	morning set	4993 Sep 02 21:02	5° \mathfrak{M} 24'18	
minimum elong	4992 Sep 25 23:43	6° $\underline{\mathfrak{A}}$ 08'31	1°43'14				
max. Earth dist.	4992 Sep 30 22:37	16° $\underline{\mathfrak{A}}$ 01'09	1.36077 AU	superior conj	4993 Sep 10 00:50	20° \mathfrak{M} 35'30	1°42'07
evening rise	4992 Oct 04 21:53	23° $\underline{\mathfrak{A}}$ 33'04		minimum elong	4993 Sep 09 23:59	20° \mathfrak{M} 31'04	1°42'06
	4992 Oct 08 11:22	0° \mathfrak{M}		max. Earth dist.	4993 Sep 13 13:35	27° \mathfrak{M} 56'32	1.34428 AU
desc. node	4992 Oct 15 12:17	11° \mathfrak{M} 54'03			4993 Sep 14 13:49	0° $\underline{\mathfrak{A}}$	
	4992 Oct 27 16:06	0° \mathfrak{X}		evening rise	4993 Sep 18 02:26	6° $\underline{\mathfrak{A}}$ 59'29	
evening max el	4992 Nov 09 12:57	15° \mathfrak{X} 16'16	26°10'30		4993 Oct 01 02:23	0° \mathfrak{M}	
retrograde	4992 Nov 22 04:39	22° \mathfrak{X} 25'37		desc. node	4993 Oct 02 09:17	2° \mathfrak{M} 02'47	
evening set	4992 Nov 28 10:57	19° \mathfrak{X} 51'43		evening max el	4993 Oct 23 01:38	28° \mathfrak{M} 52'03	27°00'11
min. Earth dist.	4992 Dec 02 16:10	15° \mathfrak{X} 24'14	0.66653 AU		4993 Oct 24 06:51	0° \mathfrak{X}	
inferior conj	4992 Dec 04 04:39	13° \mathfrak{X} 31'38	-0°37'45	retrograde	4993 Nov 05 07:09	6° \mathfrak{X} 09'24	
minimum elong	4992 Dec 04 05:40	13° \mathfrak{X} 28'29	0°37'18	evening set	4993 Nov 12 01:20	3° \mathfrak{X} 29'17	
asc. node	4992 Dec 06 00:52	11° \mathfrak{X} 18'46			4993 Nov 15 15:51	30° \mathfrak{R} \mathfrak{M}	
morning rise	4992 Dec 10 00:54	7° \mathfrak{X} 42'52		min. Earth dist.	4993 Nov 16 00:00	29° \mathfrak{M} 37'22	0.65464 AU
direct	4992 Dec 13 03:22	6° \mathfrak{X} 48'02		inferior conj	4993 Nov 18 00:21	27° \mathfrak{M} 19'33	-1°39'05
morning max el	4992 Dec 19 21:11	10° \mathfrak{X} 30'08	18°45'41	minimum elong	4993 Nov 18 03:11	27° \mathfrak{M} 11'28	1°37'55
	4993 Jan 02 23:35	0° \mathfrak{Z}		asc. node	4993 Nov 22 21:53	22° \mathfrak{M} 31'23	
morning set	4993 Jan 10 07:06	11° \mathfrak{Z} 28'08		morning rise	4993 Nov 24 06:00	21° \mathfrak{M} 43'08	
desc. node	4993 Jan 11 11:31	13° \mathfrak{Z} 19'52		direct	4993 Nov 26 23:49	21° \mathfrak{M} 02'19	
	4993 Jan 22 02:30	0° \approx		morning max el	4993 Dec 03 11:38	24° \mathfrak{M} 31'15	18°10'20
max. Earth dist.	4993 Jan 25 16:52	5° \approx 38'35	1.45230 AU		4993 Dec 08 00:23	0° \mathfrak{X}	
				morning set	4993 Dec 22 01:09	22° \mathfrak{X} 05'52	
superior conj	4993 Jan 26 16:03	7° \approx 09'35	-1°33'07		4993 Dec 26 21:39	0° \mathfrak{Z}	
minimum elong	4993 Jan 26 06:39	6° \approx 32'39	1°32'12	desc. node	4993 Dec 29 08:32	3° \mathfrak{Z} 57'32	
	4993 Feb 10 01:32	0° \mathfrak{X}					
evening rise	4993 Feb 11 02:04	1° \mathfrak{X} 38'34		superior conj	4994 Jan 05 20:16	15° \mathfrak{Z} 53'07	-0°50'18
greatest brilliancy	4993 Feb 17 23:54	12° \mathfrak{X} 45'39	-0.9m	minimum elong	4994 Jan 05 14:03	15° \mathfrak{Z} 28'34	0°49'28
	4993 Mar 01 13:38	0° \mathfrak{Y}		max. Earth dist.	4994 Jan 08 12:28	20° \mathfrak{Z} 05'46	1.45239 AU
evening max el	4993 Mar 04 05:14	3° \mathfrak{Y} 01'25	18°44'48		4994 Jan 14 20:26	0° \approx	
asc. node	4993 Mar 04 00:10	2° \mathfrak{Y} 48'26		evening rise	4994 Jan 22 02:53	11° \approx 18'53	
retrograde	4993 Mar 10 21:07	6° \mathfrak{Y} 43'35			4994 Feb 03 05:40	0° \mathfrak{X}	
evening set	4993 Mar 14 02:52	5° \mathfrak{Y} 43'34		greatest brilliancy	4994 Feb 03 11:41	0° \mathfrak{X} 22'43	-0.7m
inferior conj	4993 Mar 19 18:46	0° \mathfrak{Y} 04'10	3°31'50	evening max el	4994 Feb 15 12:42	16° \mathfrak{X} 33'07	19°29'57
minimum elong	4993 Mar 19 18:04	0° \mathfrak{Y} 06'22	3°31'47	asc. node	4994 Feb 18 21:11	19° \mathfrak{X} 23'33	
	4993 Mar 19 20:08	30° \mathfrak{R} \mathfrak{X}		retrograde	4994 Feb 22 18:10	20° \mathfrak{X} 42'18	
min. Earth dist.	4993 Mar 21 15:01	27° \mathfrak{X} 48'33	0.65351 AU	evening set	4994 Feb 26 07:14	19° \mathfrak{X} 28'44	
morning rise	4993 Mar 25 08:47	23° \mathfrak{X} 50'55		inferior conj	4994 Mar 03 18:19	13° \mathfrak{X} 33'53	3°18'24
direct	4993 Mar 31 23:29	21° \mathfrak{X} 01'01		minimum elong	4994 Mar 03 16:33	13° \mathfrak{X} 39'40	3°18'09
desc. node	4993 Apr 09 10:46	24° \mathfrak{X} 33'42		min. Earth dist.	4994 Mar 04 23:32	11° \mathfrak{X} 58'05	0.66652 AU
morning max el	4993 Apr 14 05:19	28° \mathfrak{X} 48'44	26°57'19	morning rise	4994 Mar 09 01:37	7° \mathfrak{X} 19'07	
	4993 Apr 15 08:54	0° \mathfrak{Y}		direct	4994 Mar 15 05:40	4° \mathfrak{X} 34'30	
	4993 May 07 03:59	0° \mathfrak{Z}		desc. node	4994 Mar 27 07:47	11° \mathfrak{X} 39'37	
morning set	4993 May 19 23:16	22° \mathfrak{Z} 41'55		morning max el	4994 Mar 27 15:05	11° \mathfrak{X} 57'58	25°48'19
	4993 May 23 16:36	0° \mathfrak{I}			4994 Apr 11 02:03	0° \mathfrak{Y}	
max. Earth dist.	4993 May 24 08:48	1° \mathfrak{I} 21'24	1.34078 AU		4994 Apr 29 20:07	0° \mathfrak{Z}	
				morning set	4994 May 02 19:42	5° \mathfrak{Z} 23'10	
superior conj	4993 May 28 10:40	9° \mathfrak{I} 44'29	-0°25'58	max. Earth dist.	4994 May 06 15:16	12° \mathfrak{Z} 32'17	1.35698 AU
minimum elong	4993 May 28 12:03	9° \mathfrak{I} 51'42	0°25'41				
asc. node	4993 May 30 23:26	15° \mathfrak{I} 04'10		superior conj	4994 May 12 04:20	23° \mathfrak{Z} 26'23	-0°55'44
evening rise	4993 Jun 04 20:23	25° \mathfrak{I} 21'39		minimum elong	4994 May 12 07:25	23° \mathfrak{Z} 41'53	0°55'10
	4993 Jun 07 02:16	0° \mathfrak{G}			4994 May 15 09:41	0° \mathfrak{I}	
evening max el	4993 Jun 24 20:07	27° \mathfrak{G} 53'26	21°29'48	asc. node	4994 May 17 20:28	5° \mathfrak{I} 02'30	
	4993 Jun 27 05:08	0° Ω		evening rise	4994 May 20 03:08	9° \mathfrak{I} 43'10	
desc. node	4993 Jul 06 10:01	3° Ω 55'25			4994 May 31 01:22	0° \mathfrak{G}	
retrograde	4993 Jul 07 02:05	3° Ω 56'29		evening max el	4994 Jun 07 01:42	8° \mathfrak{G} 57'39	20°10'06
evening set	4993 Jul 09 12:54	3° Ω 42'46		retrograde	4994 Jun 17 16:15	14° \mathfrak{G} 08'56	
	4993 Jul 18 09:01	30° \mathfrak{R} \mathfrak{G}		evening set	4994 Jun 19 14:43	13° \mathfrak{G} 59'18	


































































































































desc. node	4994 Jun 23 07:02	12° \mathfrak{C} 53'08		evening set	4995 May 31 17:44	24° \mathbb{I} 53'12	
inferior conj	4994 Jun 28 16:50	10° \mathfrak{C} 00'25	-1°36'43	inferior conj	4995 Jun 09 02:30	20° \mathbb{I} 42'08	0°18'48
minimum elong	4994 Jun 28 12:18	10° \mathfrak{C} 07'08	1°35'03	minimum elong	4995 Jun 09 03:16	20° \mathbb{I} 40'49	0°18'30
min. Earth dist.	4994 Jun 30 09:14	9° \mathfrak{C} 00'26	0.55095 AU	desc. node	4995 Jun 10 04:04	19° \mathbb{I} 58'39	
morning rise	4994 Jul 07 08:27	5° \mathfrak{C} 44'22		min. Earth dist.	4995 Jun 12 00:13	18° \mathbb{I} 44'42	0.56291 AU
direct	4994 Jul 11 10:43	5° \mathfrak{C} 07'56		morning rise	4995 Jun 17 09:39	15° \mathbb{I} 51'04	
morning max el	4994 Jul 25 01:37	11° \mathfrak{C} 47'47	23°53'20	direct	4995 Jun 22 10:11	14° \mathbb{I} 52'21	
	4994 Aug 07 19:33	0° \mathfrak{Q}		morning max el	4995 Jul 06 15:28	22° \mathbb{I} 09'24	25°33'02
asc. node	4994 Aug 13 19:43	11° \mathfrak{Q} 00'02			4995 Jul 13 13:36	0° \mathfrak{C}	
morning set	4994 Aug 18 08:38	20° \mathfrak{Q} 17'30			4995 Jul 31 08:53	0° \mathfrak{Q}	
	4994 Aug 22 20:52	0° \mathfrak{M}		asc. node	4995 Jul 31 16:46	0° \mathfrak{Q} 40'27	
				morning set	4995 Aug 02 20:09	5° \mathfrak{Q} 08'50	
superior conj	4994 Aug 25 08:02	5° \mathfrak{M} 21'01	1°34'49				
minimum elong	4994 Aug 25 06:16	5° \mathfrak{M} 11'24	1°34'39	superior conj	4995 Aug 09 18:30	20° \mathfrak{Q} 14'05	1°22'10
max. Earth dist.	4994 Aug 27 13:14	10° \mathfrak{M} 06'58	1.33188 AU	minimum elong	4995 Aug 09 16:15	20° \mathfrak{Q} 01'42	1°21'51
evening rise	4994 Sep 01 18:56	20° \mathfrak{M} 59'56		max. Earth dist.	4995 Aug 10 20:00	22° \mathfrak{Q} 33'55	1.32374 AU
	4994 Sep 06 09:50	0° \mathfrak{L}			4995 Aug 14 06:23	0° \mathfrak{M}	
desc. node	4994 Sep 19 06:19	21° \mathfrak{L} 46'24		evening rise	4995 Aug 16 19:56	5° \mathfrak{M} 23'48	
	4994 Sep 25 00:56	0° \mathfrak{M}			4995 Aug 30 00:35	0° \mathfrak{L}	
evening max el	4994 Oct 05 13:14	12° \mathfrak{M} 09'23	27°25'18	desc. node	4995 Sep 06 03:22	10° \mathfrak{L} 53'55	
retrograde	4994 Oct 19 03:41	19° \mathfrak{M} 27'27		evening max el	4995 Sep 17 21:51	24° \mathfrak{L} 55'52	27°20'07
evening set	4994 Oct 26 05:57	16° \mathfrak{M} 49'37			4995 Sep 24 12:20	0° \mathfrak{M}	
min. Earth dist.	4994 Oct 29 23:13	13° \mathfrak{M} 31'07	0.63934 AU	retrograde	4995 Oct 01 17:29	2° \mathfrak{M} 10'03	
inferior conj	4994 Nov 01 11:34	10° \mathfrak{M} 55'03	-2°42'21	evening set	4995 Oct 08 21:18	29° \mathfrak{L} 45'56	
minimum elong	4994 Nov 01 16:16	10° \mathfrak{M} 42'53	2°40'36		4995 Oct 08 12:36	30° \mathfrak{R} \mathfrak{L}	
morning rise	4994 Nov 08 04:02	5° \mathfrak{M} 33'59		min. Earth dist.	4995 Oct 12 12:17	26° \mathfrak{L} 54'32	0.62099 AU
asc. node	4994 Nov 09 18:55	5° \mathfrak{M} 07'08		inferior conj	4995 Oct 15 11:22	24° \mathfrak{L} 10'55	-3°43'50
direct	4994 Nov 10 15:35	5° \mathfrak{M} 03'24		minimum elong	4995 Oct 15 17:26	23° \mathfrak{L} 56'55	3°42'00
morning max el	4994 Nov 17 04:23	8° \mathfrak{M} 28'21	17°52'02	morning rise	4995 Oct 22 15:22	19° \mathfrak{L} 08'22	
	4994 Dec 01 13:50	0° \mathfrak{X}		direct	4995 Oct 24 23:30	18° \mathfrak{L} 44'25	
morning set	4994 Dec 03 22:42	4° \mathfrak{X} 03'39		asc. node	4995 Oct 27 15:59	19° \mathfrak{L} 17'04	
desc. node	4994 Dec 16 05:33	24° \mathfrak{X} 41'29		morning max el	4995 Oct 31 20:22	22° \mathfrak{L} 13'42	17°51'45
					4995 Nov 06 20:21	0° \mathfrak{M}	
superior conj	4994 Dec 16 17:13	25° \mathfrak{X} 29'02	-0°03'25	morning set	4995 Nov 16 17:33	17° \mathfrak{M} 02'32	
minimum elong	4994 Dec 16 16:50	25° \mathfrak{X} 27'28	0°03'20		4995 Nov 24 00:06	0° \mathfrak{X}	
behind sun begin	4994 Dec 16 07:05	24° \mathfrak{X} 47'45		superior conj	4995 Nov 27 16:12	6° \mathfrak{X} 21'10	0°37'51
behind sun end	4994 Dec 17 02:34	26° \mathfrak{X} 07'06		minimum elong	4995 Nov 27 19:26	6° \mathfrak{X} 35'00	0°37'24
	4994 Dec 19 12:10	0° \mathfrak{Z}		desc. node	4995 Dec 03 02:37	15° \mathfrak{X} 28'27	
max. Earth dist.	4994 Dec 22 06:40	4° \mathfrak{Z} 25'46	1.44520 AU	max. Earth dist.	4995 Dec 04 21:25	18° \mathfrak{X} 23'47	1.43163 AU
evening rise	4995 Jan 01 14:06	20° \mathfrak{Z} 31'36		evening rise	4995 Dec 12 03:04	29° \mathfrak{X} 55'46	
	4995 Jan 07 19:12	0° \mathfrak{A}			4995 Dec 12 04:09	0° \mathfrak{Z}	
evening max el	4995 Jan 29 15:03	0° \mathfrak{X} 06'18	20°29'59		4996 Jan 01 10:51	0° \mathfrak{A}	
	4995 Jan 29 12:36	0° \mathfrak{X}		evening max el	4996 Jan 12 12:03	13° \mathfrak{A} 41'24	21°41'35
asc. node	4995 Feb 05 18:13	4° \mathfrak{X} 45'57		retrograde	4996 Jan 21 13:56	19° \mathfrak{A} 04'52	
retrograde	4995 Feb 06 16:27	4° \mathfrak{X} 50'35		asc. node	4996 Jan 23 15:14	18° \mathfrak{A} 42'17	
evening set	4995 Feb 10 14:11	3° \mathfrak{X} 22'35		evening set	4996 Jan 25 21:59	17° \mathfrak{A} 21'37	
	4995 Feb 13 21:01	30° \mathfrak{R} \mathfrak{A}		inferior conj	4996 Jan 31 06:07	11° \mathfrak{A} 04'05	2°20'08
inferior conj	4995 Feb 15 22:50	27° \mathfrak{A} 14'54	2°53'50	minimum elong	4996 Jan 31 03:43	11° \mathfrak{A} 12'24	2°19'24
minimum elong	4995 Feb 15 20:31	27° \mathfrak{A} 22'49	2°53'19	min. Earth dist.	4996 Jan 31 09:24	10° \mathfrak{A} 52'39	0.68002 AU
min. Earth dist.	4995 Feb 16 14:26	26° \mathfrak{A} 21'37	0.67531 AU	morning rise	4996 Feb 05 09:15	4° \mathfrak{A} 52'15	
morning rise	4995 Feb 21 02:38	21° \mathfrak{A} 00'44		direct	4996 Feb 10 09:22	2° \mathfrak{A} 42'46	
direct	4995 Feb 26 17:16	18° \mathfrak{A} 30'44		morning max el	4996 Feb 20 09:14	8° \mathfrak{A} 38'01	22°54'44
morning max el	4995 Mar 09 23:44	25° \mathfrak{A} 15'07	24°24'00	desc. node	4996 Feb 29 01:50	18° \mathfrak{A} 54'50	
desc. node	4995 Mar 14 04:48	29° \mathfrak{A} 53'00			4996 Mar 08 02:09	0° \mathfrak{X}	
	4995 Mar 14 07:11	0° \mathfrak{X}		morning set	4996 Mar 25 20:25	27° \mathfrak{X} 32'13	
	4995 Apr 04 14:12	0° \mathfrak{Y}			4996 Mar 27 07:52	0° \mathfrak{Y}	
morning set	4995 Apr 14 20:45	17° \mathfrak{Y} 05'03		max. Earth dist.	4996 Mar 30 07:50	5° \mathfrak{Y} 05'28	1.39900 AU
max. Earth dist.	4995 Apr 18 12:27	23° \mathfrak{Y} 34'39	1.37702 AU				
	4995 Apr 22 00:15	0° \mathfrak{B}		superior conj	4996 Apr 07 01:51	18° \mathfrak{Y} 50'33	-1°49'01
superior conj	4995 Apr 25 10:46	6° \mathfrak{B} 31'36	-1°24'24	minimum elong	4996 Apr 07 06:46	19° \mathfrak{Y} 13'07	1°48'34
minimum elong	4995 Apr 25 15:17	6° \mathfrak{B} 53'25	1°23'46		4996 Apr 13 01:16	0° \mathfrak{B}	
evening rise	4995 May 04 03:51	23° \mathfrak{B} 41'50		evening rise	4996 Apr 16 19:33	7° \mathfrak{B} 10'18	
asc. node	4995 May 04 17:31	24° \mathfrak{B} 49'26		asc. node	4996 Apr 20 14:34	14° \mathfrak{B} 20'24	
	4995 May 07 09:02	0° \mathbb{I}			4996 Apr 30 04:46	0° \mathbb{I}	
evening max el	4995 May 20 19:36	20° \mathbb{I} 43'56	19°09'37	evening max el	4996 May 02 23:16	3° \mathbb{I} 08'08	18°29'26
retrograde	4995 May 29 17:42	25° \mathbb{I} 05'26		retrograde	4996 May 10 13:46	6° \mathbb{I} 53'40	

evening set	4996 May 12 20:24	6° Π 34'30		retrograde	4997 Apr 23 04:03	19° \mathcal{B} 26'54	
inferior conj	4996 May 20 09:10	2° Π 03'58	1°50'11	evening set	4997 Apr 25 17:29	18° \mathcal{B} 58'05	
minimum elong	4996 May 20 12:30	1° Π 57'19	1°49'10	inferior conj	4997 May 02 12:41	14° \mathcal{B} 06'39	2°50'20
	4996 May 22 23:39	30° \mathcal{R} 8		minimum elong	4997 May 02 15:52	13° \mathcal{B} 59'17	2°49'39
min. Earth dist.	4996 May 23 19:04	29° \mathcal{B} 22'54	0.58154 AU	min. Earth dist.	4997 May 05 20:08	11° \mathcal{B} 04'35	0.60323 AU
desc. node	4996 May 27 01:05	27° \mathcal{B} 12'00		morning rise	4997 May 09 11:54	8° \mathcal{B} 17'20	
morning rise	4996 May 28 01:26	26° \mathcal{B} 39'18		desc. node	4997 May 13 22:06	6° \mathcal{B} 25'58	
direct	4996 Jun 02 23:53	25° \mathcal{B} 08'45		direct	4997 May 16 01:39	6° \mathcal{B} 12'47	
	4996 Jun 14 05:22	0° Π		morning max el	4997 May 30 09:11	14° \mathcal{B} 06'50	27°41'26
morning max el	4996 Jun 17 09:04	2° Π 49'08	26°53'13		4997 Jun 12 03:07	0° Π	
	4996 Jul 06 23:43	0° \mathcal{B}			4997 Jun 29 08:21	0° \mathcal{B}	
morning set	4996 Jul 17 05:58	19° \mathcal{B} 53'21		morning set	4997 Jul 01 12:21	4° \mathcal{B} 25'37	
asc. node	4996 Jul 17 13:50	20° \mathcal{B} 34'48		asc. node	4997 Jul 04 10:53	10° \mathcal{B} 38'00	
	4996 Jul 21 22:24	0° Ω		max. Earth dist.	4997 Jul 07 17:58	17° \mathcal{B} 47'49	1.32000 AU
superior conj	4996 Jul 24 06:18	5° Ω 08'22	1°04'51	superior conj	4997 Jul 08 17:40	19° \mathcal{B} 58'08	0°43'27
minimum elong	4996 Jul 24 04:03	4° Ω 55'54	1°04'27	minimum elong	4997 Jul 08 15:53	19° \mathcal{B} 48'18	0°43'05
max. Earth dist.	4996 Jul 24 06:50	5° Ω 11'21	1.31982 AU		4997 Jul 13 07:11	0° Ω	
evening rise	4996 Jul 31 02:42	20° Ω 02'49		evening rise	4997 Jul 15 12:58	4° Ω 49'44	
	4996 Aug 04 24:00	0° \mathcal{M}			4997 Jul 28 19:46	0° \mathcal{M}	
desc. node	4996 Aug 23 00:23	29° \mathcal{M} 10'41		desc. node	4997 Aug 09 21:24	16° \mathcal{M} 16'18	
	4996 Aug 23 16:06	0° \mathcal{A}		evening max el	4997 Aug 11 20:05	18° \mathcal{M} 13'47	25°31'33
evening max el	4996 Aug 30 00:49	6° \mathcal{A} 59'25	26°41'26	retrograde	4997 Aug 25 18:50	25° \mathcal{M} 18'44	
retrograde	4996 Sep 12 23:02	14° \mathcal{A} 08'38		evening set	4997 Aug 31 17:58	23° \mathcal{M} 55'56	
evening set	4996 Sep 19 18:54	12° \mathcal{A} 10'25		min. Earth dist.	4997 Sep 05 07:57	21° \mathcal{M} 17'35	0.58021 AU
min. Earth dist.	4996 Sep 23 14:43	9° \mathcal{A} 34'13	0.60067 AU	inferior conj	4997 Sep 08 10:53	19° \mathcal{M} 06'51	-5°11'28
inferior conj	4996 Sep 26 20:17	6° \mathcal{A} 58'06	-4°37'08	minimum elong	4997 Sep 08 13:46	19° \mathcal{M} 01'47	5°11'16
minimum elong	4996 Sep 27 02:11	6° \mathcal{A} 46'09	4°35'56	morning rise	4997 Sep 16 11:49	14° \mathcal{M} 49'11	
morning rise	4996 Oct 04 11:31	2° \mathcal{A} 17'07		direct	4997 Sep 18 23:25	14° \mathcal{M} 30'09	
direct	4996 Oct 06 19:35	1° \mathcal{A} 56'48		morning max el	4997 Sep 27 12:47	18° \mathcal{M} 34'21	18°50'28
asc. node	4996 Oct 13 13:03	4° \mathcal{A} 54'22		asc. node	4997 Sep 30 10:06	21° \mathcal{M} 44'57	
morning max el	4996 Oct 14 08:16	5° \mathcal{A} 38'39	18°10'43		4997 Oct 05 23:37	0° \mathcal{A}	
	4996 Oct 29 18:08	0° \mathcal{M}		morning set	4997 Oct 14 00:12	14° \mathcal{A} 56'38	
morning set	4996 Oct 30 03:35	0° \mathcal{M} 44'28			4997 Oct 21 17:27	0° \mathcal{M}	
superior conj	4996 Nov 08 16:13	18° \mathcal{M} 25'59	1°09'01	superior conj	4997 Oct 22 12:19	1° \mathcal{M} 29'57	1°29'34
minimum elong	4996 Nov 08 20:10	18° \mathcal{M} 43'46	1°08'32	minimum elong	4997 Oct 22 15:17	1° \mathcal{M} 44'02	1°29'19
	4996 Nov 15 06:24	0° \mathcal{X}		max. Earth dist.	4997 Oct 29 13:29	14° \mathcal{M} 27'43	1.39255 AU
max. Earth dist.	4996 Nov 16 07:34	1° \mathcal{X} 46'49	1.41334 AU	evening rise	4997 Nov 02 11:33	21° \mathcal{M} 16'52	
desc. node	4996 Nov 18 23:38	6° \mathcal{X} 14'37		desc. node	4997 Nov 05 20:40	26° \mathcal{M} 56'52	
evening rise	4996 Nov 21 08:00	10° \mathcal{X} 05'21			4997 Nov 07 17:32	0° \mathcal{X}	
	4996 Dec 04 05:20	0° \mathcal{B}			4997 Nov 28 06:30	0° \mathcal{B}	
evening max el	4996 Dec 25 04:25	27° \mathcal{B} 18'37	23°00'08	evening max el	4997 Dec 07 17:52	10° \mathcal{B} 59'18	24°19'38
	4996 Dec 28 02:43	0° \approx		retrograde	4997 Dec 19 00:31	17° \mathcal{B} 35'45	
retrograde	4997 Jan 04 08:59	3° \approx 21'05		evening set	4997 Dec 24 09:38	15° \mathcal{B} 21'08	
evening set	4997 Jan 09 04:59	1° \approx 21'55		asc. node	4997 Dec 27 09:19	12° \mathcal{B} 11'11	
asc. node	4997 Jan 09 12:18	1° \approx 06'10		min. Earth dist.	4997 Dec 29 02:07	9° \mathcal{B} 58'54	0.67813 AU
	4997 Jan 10 15:20	30° \mathcal{R} 3		inferior conj	4997 Dec 29 21:12	8° \mathcal{B} 54'52	0°50'09
inferior conj	4997 Jan 14 14:09	24° \mathcal{B} 58'03	1°38'33	minimum elong	4997 Dec 29 20:02	8° \mathcal{B} 58'47	0°49'41
minimum elong	4997 Jan 14 12:09	25° \mathcal{B} 04'59	1°37'50	morning rise	4998 Jan 04 06:30	2° \mathcal{B} 52'45	
min. Earth dist.	4997 Jan 14 06:03	25° \mathcal{B} 26'02	0.68090 AU	direct	4998 Jan 08 02:41	1° \mathcal{B} 28'34	
morning rise	4997 Jan 19 19:12	18° \mathcal{B} 50'12		morning max el	4998 Jan 15 20:45	5° \mathcal{B} 53'09	20°14'20
direct	4997 Jan 24 04:52	17° \mathcal{B} 03'38		desc. node	4998 Feb 01 19:53	28° \mathcal{B} 32'22	
morning max el	4997 Feb 01 23:16	22° \mathcal{B} 09'31	21°29'22		4998 Feb 02 19:22	0° \approx	
	4997 Feb 08 16:27	0° \approx		morning set	4998 Feb 12 13:43	14° \approx 51'36	
desc. node	4997 Feb 14 22:51	8° \approx 31'01			4998 Feb 22 04:59	0° \mathcal{H}	
	4997 Mar 01 09:43	0° \mathcal{H}		max. Earth dist.	4998 Feb 22 16:44	0° \mathcal{H} 47'04	1.43729 AU
morning set	4997 Mar 05 15:21	6° \mathcal{H} 38'05		superior conj	4998 Feb 28 14:23	10° \mathcal{H} 22'26	-2°07'45
max. Earth dist.	4997 Mar 12 08:33	17° \mathcal{H} 29'36	1.42002 AU	minimum elong	4998 Feb 28 12:16	10° \mathcal{H} 13'44	2°07'42
superior conj	4997 Mar 19 20:32	0° \mathcal{Y} 10'34	-2°05'18		4998 Mar 12 04:34	0° \mathcal{Y}	
minimum elong	4997 Mar 19 23:33	0° \mathcal{Y} 23'38	2°05'11	evening rise	4998 Mar 13 07:57	1° \mathcal{Y} 58'46	
	4997 Mar 19 18:05	0° \mathcal{Y}		asc. node	4998 Mar 25 08:37	22° \mathcal{Y} 08'15	
evening rise	4997 Mar 30 22:21	19° \mathcal{Y} 58'57		evening max el	4998 Mar 30 21:36	29° \mathcal{Y} 12'08	18°08'33
	4997 Apr 05 11:27	0° \mathcal{B}			4998 Mar 31 17:57	0° \mathcal{B}	
asc. node	4997 Apr 07 11:36	3° \mathcal{B} 29'05		retrograde	4998 Apr 06 08:15	2° \mathcal{B} 34'39	
evening max el	4997 Apr 16 09:03	16° \mathcal{B} 00'32	18°09'17	evening set	4998 Apr 09 03:53	1° \mathcal{B} 54'35	

	4998 Apr 12 00:41	30° Υ			4999 Feb 14 20:46	0° X	
inferior conj	4998 Apr 15 09:32	26° Υ 43'22	3°22'43	evening rise	4999 Feb 22 20:10	13° X 02'34	
minimum elong	4998 Apr 15 11:16	26° Υ 38'48	3°22'31		4999 Mar 05 04:33	0° Υ	
min. Earth dist.	4998 Apr 18 05:48	23° Υ 44'35	0.62481 AU	asc. node	4999 Mar 12 05:38	10° Υ 08'51	
morning rise	4998 Apr 21 17:12	20° Υ 39'17		evening max el	4999 Mar 14 10:02	12° Υ 35'55	18°26'31
direct	4998 Apr 28 13:28	18° Υ 07'04		retrograde	4999 Mar 20 21:44	16° Υ 07'39	
desc. node	4998 Apr 30 19:07	18° Υ 21'57		evening set	4999 Mar 23 23:35	15° Υ 15'18	
morning max el	4998 May 12 15:11	26° Υ 07'18	27°51'59	inferior conj	4999 Mar 29 19:33	9° Υ 45'55	3°33'24
	4998 May 16 05:40	0° B		minimum elong	4999 Mar 29 19:39	9° Υ 45'38	3°33'24
	4998 Jun 05 16:22	0° II		min. Earth dist.	4999 Apr 01 00:54	7° Υ 10'20	0.64400 AU
morning set	4998 Jun 15 13:08	18° II 38'38		morning rise	4999 Apr 04 14:56	3° Υ 34'33	
	4998 Jun 20 23:31	0° E		direct	4999 Apr 11 09:37	0° Υ 46'52	
max. Earth dist.	4998 Jun 21 01:20	0° E 09'44	1.32446 AU	desc. node	4999 Apr 17 16:07	2° Υ 44'30	
asc. node	4998 Jun 21 07:54	0° E 45'05		morning max el	4999 Apr 25 00:31	8° Υ 43'29	27°26'15
					4999 May 11 13:23	0° B	
superior conj	4998 Jun 23 02:47	4° E 37'06	0°18'33		4999 May 29 00:05	0° II	
minimum elong	4998 Jun 23 01:56	4° E 32'24	0°18'22	morning set	4999 May 30 05:47	2° II 24'31	
evening rise	4998 Jun 30 00:41	19° E 37'23		max. Earth dist.	4999 Jun 04 00:52	12° II 05'09	1.33341 AU
	4998 Jul 05 01:52	0° O					
evening max el	4998 Jul 24 09:14	28° O 47'14	24°00'10	superior conj	4999 Jun 07 07:47	18° II 59'36	-0°09'09
	4998 Jul 25 16:41	0° P		minimum elong	4999 Jun 07 08:15	19° II 02'05	0°09'03
desc. node	4998 Jul 27 18:25	1° P 41'53		behind sun begin	4999 Jun 07 03:43	18° II 37'59	
retrograde	4998 Aug 07 03:15	5° P 42'24		behind sun end	4999 Jun 07 12:48	19° II 26'12	
evening set	4998 Aug 11 16:55	4° P 56'13		asc. node	4999 Jun 08 04:55	20° II 52'10	
min. Earth dist.	4998 Aug 17 19:39	1° P 57'12	0.56248 AU		4999 Jun 12 11:09	0° E	
inferior conj	4998 Aug 20 05:08	0° P 29'02	-5°11'24	evening rise	4999 Jun 14 12:02	4° E 19'50	
minimum elong	4998 Aug 20 01:58	0° P 33'54	5°11'11		4999 Jun 28 11:40	0° O	
	4998 Aug 21 00:05	30° R O		evening max el	4999 Jul 05 23:11	9° O 09'09	22°22'47
morning rise	4998 Aug 28 13:34	26° O 31'16		desc. node	4999 Jul 14 15:24	14° O 53'31	
direct	4998 Aug 31 07:33	26° O 11'47		retrograde	4999 Jul 18 23:23	15° O 36'57	
	4998 Sep 09 08:12	0° P		evening set	4999 Jul 22 01:07	15° O 16'07	
morning max el	4998 Sep 10 06:47	0° P 50'19	19°52'04	min. Earth dist.	4999 Jul 30 05:55	11° O 42'32	0.55092 AU
asc. node	4998 Sep 17 07:08	9° P 32'41		inferior conj	4999 Jul 31 05:51	11° O 08'40	-4°22'08
morning set	4998 Sep 28 03:55	29° P 28'20		minimum elong	4999 Jul 30 21:31	11° O 20'28	4°20'15
	4998 Sep 28 10:10	0° E		morning rise	4999 Aug 08 19:49	7° O 18'38	
				direct	4999 Aug 11 22:46	6° O 56'33	
superior conj	4998 Oct 05 23:07	15° E 16'46	1°40'37	morning max el	4999 Aug 23 12:39	12° O 20'34	21°14'38
minimum elong	4998 Oct 06 00:32	15° E 23'46	1°40'34	asc. node	4999 Sep 04 04:10	28° O 04'39	
max. Earth dist.	4998 Oct 11 18:33	26° E 32'07	1.37177 AU		4999 Sep 05 06:13	0° P	
	4998 Oct 13 15:17	0° M		morning set	4999 Sep 12 12:13	14° P 12'39	
evening rise	4998 Oct 15 13:09	3° M 28'34					
desc. node	4998 Oct 23 17:42	17° M 30'20		superior conj	4999 Sep 19 20:19	29° P 33'43	1°43'35
	4998 Oct 31 18:27	0° J		minimum elong	4999 Sep 19 20:13	29° P 33'10	1°43'35
evening max el	4998 Nov 20 06:18	24° J 42'25	25°33'27		4999 Sep 20 01:24	0° E	
	4998 Nov 26 21:53	0° B		max. Earth dist.	4999 Sep 24 04:31	8° E 23'15	1.35334 AU
retrograde	4998 Dec 02 11:39	1° B 43'36		evening rise	4999 Sep 28 09:10	16° E 31'21	
	4998 Dec 07 11:27	30° R J			4999 Oct 05 21:04	0° M	
evening set	4998 Dec 08 10:18	29° J 15'34		desc. node	4999 Oct 10 14:43	7° M 49'54	
min. Earth dist.	4998 Dec 12 19:21	24° J 27'50	0.67176 AU		4999 Oct 26 04:49	0° J	
inferior conj	4998 Dec 14 01:25	22° J 51'34	-0°04'11	evening max el	4999 Nov 02 18:59	8° J 23'45	26°34'11
minimum elong	4998 Dec 14 01:32	22° J 51'13	0°04'09	retrograde	4999 Nov 15 17:35	15° J 38'14	
transit middle	4998 Dec 14 01:32	22° J 51'13	0°04'09	evening set	4999 Nov 22 05:05	13° J 00'58	
transit begin	4998 Dec 13 22:49	22° J 59'55		min. Earth dist.	4999 Nov 26 07:27	8° J 48'26	0.66188 AU
transit end	4998 Dec 14 04:14	22° J 42'32		inferior conj	4999 Nov 28 00:53	6° J 44'22	-1°03'25
asc. node	4998 Dec 14 06:20	22° J 35'49		minimum elong	4999 Nov 28 02:38	6° J 39'06	1°02'39
morning rise	4998 Dec 19 17:07	16° J 57'13		asc. node	4999 Dec 01 03:22	3° J 15'54	
direct	4998 Dec 23 01:24	15° J 52'49		morning rise	4999 Dec 04 00:55	1° J 00'21	
morning max el	4998 Dec 30 02:07	19° J 47'29	19°13'26	direct	4999 Dec 06 23:21	0° J 12'04	
	4999 Jan 07 04:58	0° B		morning max el	4999 Dec 13 13:53	3° J 47'44	18°28'29
greatest brilliancy	4999 Jan 12 16:20	8° B 05'22	-0.7m		4999 Dec 31 16:23	0° B	
desc. node	4999 Jan 19 16:56	18° B 51'58		morning set	5000 Jan 02 15:21	3° B 07'32	
morning set	4999 Jan 22 14:31	23° B 21'28		desc. node	5000 Jan 06 13:58	9° B 24'22	
	4999 Jan 26 21:06	0° A					
max. Earth dist.	4999 Feb 05 07:08	14° A 44'18	1.44875 AU	superior conj	5000 Jan 18 11:02	28° B 08'23	-1°16'13
				minimum elong	5000 Jan 18 02:14	27° B 33'53	1°15'12
superior conj	4999 Feb 08 07:40	19° A 31'06	-1°51'24	max. Earth dist.	5000 Jan 19 01:25	29° B 04'45	1.45323 AU
minimum elong	4999 Feb 07 23:36	18° A 59'06	1°50'49		5000 Jan 19 15:31	0° A	

evening rise	5000 Feb 03 09:04	23° \approx 09'45		greatest brilliancy	5001 Jan 28 04:14	23° \approx 58'18	-0.6m
	5000 Feb 07 16:44	0° H			5001 Feb 01 08:21	0° H	
greatest brilliancy	5000 Feb 12 23:46	8° H 19'56	-0.8m	evening max el	5001 Feb 09 01:29	9° H 39'18	19°53'51
evening max el	5000 Feb 25 19:55	26° H 05'55	19°02'09	asc. node	5001 Feb 13 23:40	13° H 25'36	
asc. node	5000 Feb 27 02:39	27° H 19'01		retrograde	5001 Feb 16 14:32	14° H 02'05	
retrograde	5000 Mar 04 16:47	29° H 58'20		evening set	5001 Feb 20 07:11	12° H 42'22	
evening set	5000 Mar 08 01:28	28° H 52'45		inferior conj	5001 Feb 25 17:00	6° H 41'53	3°09'10
inferior conj	5000 Mar 13 15:01	23° H 06'49	3°27'37	minimum elong	5001 Feb 25 14:56	6° H 48'47	3°08'48
minimum elong	5000 Mar 13 13:48	23° H 10'40	3°27'31	min. Earth dist.	5001 Feb 26 16:14	5° H 24'11	0.67086 AU
min. Earth dist.	5000 Mar 15 04:50	21° H 07'12	0.65955 AU	morning rise	5001 Mar 02 22:28	0° H 27'25	
morning rise	5000 Mar 19 01:45	16° H 52'41			5001 Mar 03 11:05	30° R \approx	
direct	5000 Mar 25 12:32	14° H 03'17		direct	5001 Mar 08 21:08	27° \approx 48'04	
desc. node	5000 Apr 04 13:09	18° H 59'38			5001 Mar 15 00:26	0° H	
morning max el	5000 Apr 07 10:23	21° H 42'46	26°30'27	morning max el	5001 Mar 20 19:27	4° H 55'40	25°13'38
	5000 Apr 14 15:48	0° Y		desc. node	5001 Mar 22 10:13	6° H 37'10	
	5000 May 04 18:34	0° B			5001 Apr 09 02:12	0° Y	
morning set	5000 May 13 10:47	15° B 32'16		morning set	5001 Apr 25 23:37	27° Y 49'32	
max. Earth dist.	5000 May 17 13:29	23° B 28'26	1.34707 AU		5001 Apr 27 04:27	0° B	
	5000 May 20 19:34	0° II		max. Earth dist.	5001 Apr 29 15:25	4° B 31'52	1.36518 AU
superior conj	5000 May 22 06:21	2° II 58'09	-0°38'34	superior conj	5001 May 05 19:41	16° B 25'28	-1°08'10
minimum elong	5000 May 22 08:27	3° II 08'56	0°38'10	minimum elong	5001 May 05 23:26	16° B 44'03	1°07'33
asc. node	5000 May 26 01:57	10° II 54'35		asc. node	5001 May 12 22:59	0° II 48'28	
evening rise	5000 May 29 21:02	18° II 50'19			5001 May 12 13:25	0° II	
	5000 Jun 04 10:58	0° E		evening rise	5001 May 14 01:32	3° II 02'47	
evening max el	5000 Jun 17 21:49	19° E 51'36	20°53'51		5001 May 30 04:31	0° E	
retrograde	5000 Jun 29 11:48	25° E 32'48		evening max el	5001 May 31 08:46	1° E 13'07	19°41'52
evening set	5000 Jul 01 15:12	25° E 21'55		retrograde	5001 Jun 10 05:10	6° E 01'51	
desc. node	5000 Jul 01 12:23	25° E 23'03		evening set	5001 Jun 12 03:25	5° E 51'37	
inferior conj	5000 Jul 10 22:55	21° E 24'47	-2°44'50	desc. node	5001 Jun 18 09:26	3° E 21'34	
minimum elong	5000 Jul 10 15:29	21° E 35'19	2°42'20	inferior conj	5001 Jun 20 22:56	1° E 48'41	-0°45'55
min. Earth dist.	5000 Jul 11 16:52	20° E 59'20	0.54817 AU	minimum elong	5001 Jun 20 20:50	1° E 51'56	0°45'08
morning rise	5000 Jul 19 15:39	17° E 23'56		min. Earth dist.	5001 Jun 23 05:41	0° E 23'33	0.55505 AU
direct	5000 Jul 23 07:58	16° E 54'49			5001 Jun 23 21:19	30° R II	
morning max el	5000 Aug 05 07:53	23° E 08'09	22°53'20	morning rise	5001 Jun 29 11:59	27° II 18'54	
	5000 Aug 11 10:13	0° O		direct	5001 Jul 03 23:30	26° II 34'26	
asc. node	5000 Aug 22 01:13	17° O 10'05			5001 Jul 13 15:01	0° E	
morning set	5000 Aug 27 23:07	29° O 04'12		morning max el	5001 Jul 17 21:45	3° E 30'58	24°37'16
	5000 Aug 28 09:42	0° P			5001 Aug 05 11:49	0° O	
superior conj	5000 Sep 04 00:38	14° P 11'09	1°39'43	asc. node	5001 Aug 08 22:16	6° O 39'57	
minimum elong	5000 Sep 03 23:21	14° P 04'16	1°39'39	morning set	5001 Aug 12 10:54	13° O 57'20	
max. Earth dist.	5000 Sep 06 23:18	20° P 24'34	1.33855 AU	superior conj	5001 Aug 19 09:27	29° O 00'30	1°30'03
evening rise	5000 Sep 11 19:18	0° A 14'05		minimum elong	5001 Aug 19 07:25	28° O 49'24	1°29'50
	5000 Sep 11 16:27	0° A			5001 Aug 19 20:22	0° P	
desc. node	5000 Sep 27 11:44	27° A 49'15		max. Earth dist.	5001 Aug 21 02:34	2° P 43'48	1.32790 AU
	5000 Sep 28 21:54	0° M		evening rise	5001 Aug 26 15:46	14° P 25'35	
evening max el	5000 Oct 16 07:42	21° M 54'40	27°14'18		5001 Sep 03 18:22	0° A	
retrograde	5000 Oct 29 17:37	29° M 12'32		desc. node	5001 Sep 14 08:45	17° A 19'15	
evening set	5000 Nov 05 15:43	26° M 32'36			5001 Sep 23 23:53	0° M	
min. Earth dist.	5000 Nov 09 12:02	22° M 55'02	0.64853 AU	evening max el	5001 Sep 28 18:30	5° M 01'16	27°27'06
inferior conj	5000 Nov 11 17:23	20° M 28'43	-2°05'52	retrograde	5001 Oct 12 11:08	12° M 17'07	
minimum elong	5000 Nov 11 21:01	20° M 18'44	2°04'24	evening set	5001 Oct 19 15:11	9° M 43'42	
morning rise	5000 Nov 18 03:27	14° M 58'07		min. Earth dist.	5001 Oct 23 07:00	6° M 37'55	0.63191 AU
asc. node	5000 Nov 18 00:25	15° M 01'38		inferior conj	5001 Oct 26 00:11	3° M 57'20	-3°08'55
direct	5000 Nov 20 18:19	14° M 22'02		minimum elong	5001 Oct 26 05:34	3° M 44'01	3°07'03
morning max el	5000 Nov 27 05:39	17° M 48'18	18°00'21		5001 Oct 30 12:37	30° R A	
	5000 Dec 06 04:34	0° J		morning rise	5001 Nov 01 21:30	28° A 43'39	
morning set	5000 Dec 14 21:55	14° J 22'41		direct	5001 Nov 04 07:21	28° A 16'09	
desc. node	5000 Dec 24 11:00	0° S 05'38		asc. node	5001 Nov 04 21:30	28° A 17'50	
	5000 Dec 24 09:37	0° S			5001 Nov 08 23:18	0° M	
superior conj	5000 Dec 28 20:29	7° S 09'33	-0°30'13	morning max el	5001 Nov 10 22:29	1° M 41'37	17°49'39
minimum elong	5000 Dec 28 16:47	6° S 54'50	0°29'41	morning set	5001 Nov 27 05:22	26° M 49'25	
max. Earth dist.	5001 Jan 01 21:05	13° S 32'37	1.45024 AU		5001 Nov 29 00:59	0° J	
	5001 Jan 12 10:26	0° \approx		superior conj	5001 Dec 09 04:06	17° J 17'06	0°15'11
evening rise	5001 Jan 14 02:41	2° \approx 35'20		minimum elong	5001 Dec 09 05:38	17° J 23'31	0°14'58

behind sun begin	5001 Dec 09 02:10	17° ♊ 09'04		max. Earth dist.	5002 Nov 28 03:30	11° ♊ 32'15	1.42434 AU
behind sun end	5001 Dec 09 09:07	17° ♊ 37'56		desc. node	5002 Nov 28 05:04	11° ♊ 38'41	
desc. node	5001 Dec 11 08:02	20° ♊ 51'26		evening rise	5002 Dec 04 07:03	21° ♊ 28'35	
max. Earth dist.	5001 Dec 15 14:42	27° ♊ 47'42	1.44020 AU		5002 Dec 09 18:29	0° ♋	
	5001 Dec 16 23:49	0° ♋			5002 Dec 30 21:46	0° ♌	
evening rise	5001 Dec 24 12:42	11° ♋ 48'31		evening max el	5003 Jan 05 20:14	6° ♌ 48'36	22°14'22
	5002 Jan 05 14:08	0° ♌		retrograde	5003 Jan 15 09:28	12° ♌ 29'31	
evening max el	5002 Jan 23 01:32	23° ♌ 13'18	20°59'12	asc. node	5003 Jan 18 17:48	11° ♌ 30'20	
retrograde	5002 Jan 31 12:44	28° ♌ 13'45		evening set	5003 Jan 19 22:25	10° ♌ 39'24	
asc. node	5002 Jan 31 20:44	28° ♌ 13'09		inferior conj	5003 Jan 25 06:47	4° ♌ 18'25	2°03'24
evening set	5002 Feb 04 14:45	26° ♌ 39'07		minimum elong	5003 Jan 25 04:30	4° ♌ 26'22	2°02'38
inferior conj	5002 Feb 09 22:57	20° ♌ 26'42	2°40'33	min. Earth dist.	5003 Jan 25 05:05	4° ♌ 24'20	0.68086 AU
minimum elong	5002 Feb 09 20:32	20° ♌ 35'00	2°39'55		5003 Jan 28 13:54	30° ♍	
min. Earth dist.	5002 Feb 10 09:04	19° ♌ 51'47	0.67786 AU	morning rise	5003 Jan 30 10:27	28° ♍ 07'58	
morning rise	5002 Feb 15 02:10	14° ♌ 13'31		direct	5003 Feb 04 04:12	26° ♍ 08'23	
direct	5002 Feb 20 10:37	11° ♌ 52'03			5003 Feb 11 20:07	0° ♎	
morning max el	5002 Mar 03 04:14	18° ♌ 15'48	23°46'03	morning max el	5003 Feb 13 15:22	1° ♎ 42'33	22°17'25
desc. node	5002 Mar 09 07:16	25° ♌ 13'12		desc. node	5003 Feb 24 04:18	14° ♎ 31'09	
	5002 Mar 13 00:29	0° ♏			5003 Mar 06 23:15	0° ♏	
	5002 Apr 02 04:39	0° ♐		morning set	5003 Mar 19 02:01	18° ♏ 53'50	
morning set	5002 Apr 07 14:34	9° ♐ 01'25		max. Earth dist.	5003 Mar 24 08:12	27° ♏ 35'43	1.40818 AU
max. Earth dist.	5002 Apr 11 11:20	15° ♐ 44'22	1.38633 AU		5003 Mar 25 18:14	0° ♑	
superior conj	5002 Apr 18 20:08	29° ♐ 12'24	-1°35'34	superior conj	5003 Apr 01 03:07	11° ♑ 07'26	-1°57'16
minimum elong	5002 Apr 19 01:02	29° ♐ 35'29	1°34'59	minimum elong	5003 Apr 01 07:36	11° ♑ 27'29	1°56'57
	5002 Apr 19 06:13	0° ♒		evening rise	5003 Apr 11 09:35	0° ♒ 03'01	
evening rise	5002 Apr 27 22:51	16° ♒ 50'10			5003 Apr 11 08:56	0° ♒	
asc. node	5002 Apr 29 20:02	20° ♒ 29'36		asc. node	5003 Apr 16 17:04	9° ♒ 52'05	
	5002 May 04 22:30	0° ♓		evening max el	5003 Apr 27 13:49	25° ♒ 53'38	18°18'28
evening max el	5002 May 14 07:09	13° ♓ 16'19	18°50'00	retrograde	5003 May 04 18:47	29° ♒ 29'18	
retrograde	5002 May 22 14:35	17° ♓ 21'01		evening set	5003 May 07 04:13	29° ♒ 06'27	
evening set	5002 May 24 17:06	17° ♓ 06'18		inferior conj	5003 May 14 09:05	24° ♒ 27'13	2°19'28
inferior conj	5002 Jun 01 17:13	12° ♓ 47'03	1°01'19	minimum elong	5003 May 14 12:37	24° ♒ 19'44	2°18'30
minimum elong	5002 Jun 01 19:29	12° ♓ 42'56	1°00'32	min. Earth dist.	5003 May 17 19:30	21° ♒ 33'49	0.59051 AU
min. Earth dist.	5002 Jun 04 22:00	10° ♓ 28'54	0.57015 AU	morning rise	5003 May 21 18:02	18° ♒ 50'24	
desc. node	5002 Jun 05 06:28	10° ♓ 14'23		desc. node	5003 May 23 03:30	18° ♒ 08'51	
morning rise	5002 Jun 09 18:34	7° ♓ 40'47		direct	5003 May 27 23:54	17° ♒ 04'59	
direct	5002 Jun 15 04:37	6° ♓ 29'42		morning max el	5003 Jun 11 09:17	24° ♒ 53'13	27°18'12
morning max el	5002 Jun 29 12:52	13° ♓ 58'06	26°10'38		5003 Jun 16 01:57	0° ♔	
	5002 Jul 12 06:05	0° ♕			5003 Jul 05 12:18	0° ♕	
asc. node	5002 Jul 26 19:19	26° ♕ 27'24		morning set	5003 Jul 12 06:29	13° ♕ 27'10	
morning set	5002 Jul 27 21:56	28° ♕ 47'08		asc. node	5003 Jul 13 16:21	16° ♕ 26'03	
	5002 Jul 28 11:40	0° ♌		superior conj	5003 Jul 19 08:32	28° ♕ 48'23	0°56'15
superior conj	5002 Aug 03 20:43	13° ♌ 55'17	1°15'21	minimum elong	5003 Jul 19 06:25	28° ♕ 36'43	0°55'51
minimum elong	5002 Aug 03 18:25	13° ♌ 42'33	1°15'00	max. Earth dist.	5003 Jul 18 22:49	27° ♕ 54'49	1.31930 AU
max. Earth dist.	5002 Aug 04 11:35	15° ♌ 17'14	1.32149 AU		5003 Jul 19 21:29	0° ♍	
evening rise	5002 Aug 10 19:31	28° ♌ 57'06		evening rise	5003 Jul 26 03:59	13° ♌ 39'59	
	5002 Aug 11 07:36	0° ♎			5003 Aug 03 09:03	0° ♎	
	5002 Aug 27 23:18	0° ♏		desc. node	5003 Aug 19 02:47	23° ♎ 57'18	
desc. node	5002 Sep 01 05:46	6° ♏ 07'50		evening max el	5003 Aug 24 00:23	29° ♎ 12'20	26°15'09
evening max el	5002 Sep 11 00:50	17° ♏ 30'29	27°07'44		5003 Aug 24 20:59	0° ♐	
retrograde	5002 Sep 24 21:34	24° ♏ 42'50		retrograde	5003 Sep 06 23:35	6° ♐ 20'46	
evening set	5002 Oct 01 23:37	22° ♏ 27'51		evening set	5003 Sep 13 12:09	4° ♐ 36'41	
min. Earth dist.	5002 Oct 05 15:15	19° ♏ 45'09	0.61254 AU	min. Earth dist.	5003 Sep 17 13:31	2° ♐ 01'49	0.59178 AU
inferior conj	5002 Oct 08 18:04	17° ♏ 02'22	-4°07'55		5003 Sep 20 05:53	30° ♑	
minimum elong	5002 Oct 09 00:20	16° ♏ 48'41	4°06'16	inferior conj	5003 Sep 20 19:29	29° ♑ 33'56	-4°54'52
morning rise	5002 Oct 16 03:00	12° ♏ 09'00		minimum elong	5003 Sep 21 00:32	29° ♑ 24'19	4°54'07
direct	5002 Oct 18 10:43	11° ♏ 46'56		morning rise	5003 Sep 28 15:09	25° ♑ 03'05	
asc. node	5002 Oct 22 18:33	13° ♏ 06'52		direct	5003 Oct 01 00:06	24° ♑ 43'43	
morning max el	5002 Oct 25 13:12	15° ♏ 20'07	17°57'24	morning max el	5003 Oct 08 22:25	28° ♑ 34'02	18°25'02
	5002 Nov 04 16:45	0° ♒		asc. node	5003 Oct 09 15:35	29° ♑ 17'02	
morning set	5002 Nov 10 07:19	10° ♒ 08'39			5003 Oct 10 07:32	0° ♓	
				morning set	5003 Oct 24 22:19	24° ♓ 04'38	
superior conj	5002 Nov 20 14:17	28° ♒ 42'19	0°52'22		5003 Oct 28 00:24	0° ♔	
minimum elong	5002 Nov 20 18:07	28° ♒ 59'02	0°51'52	superior conj	5003 Nov 02 23:31	11° ♔ 14'23	1°18'57
	5002 Nov 21 08:06	0° ♊					

minimum elong	5003 Nov 03 03:11	11°  31'15	1°18'34			5004 Oct 18 21:40	0° 	
max. Earth dist.	5003 Nov 10 11:04	24°  35'35	1.40462 AU	max. Earth dist.	5004 Oct 22 15:53	6°  58'27	1.38354 AU	
	5003 Nov 13 15:28	0°  ♁		evening rise	5004 Oct 26 10:31	13°  41'58		
evening rise	5003 Nov 14 21:17	2°  ♁04'03		desc. node	5004 Oct 31 23:05	23°  102'57		
desc. node	5003 Nov 15 02:05	2°  ♁23'55			5004 Nov 05 07:02	0°  ♁		
	5003 Dec 03 02:49	0°  ♁			5004 Nov 27 01:55	0°  ♁		
evening max el	5003 Dec 19 11:04	20°  ♁27'36	23°34'13	evening max el	5004 Dec 01 00:02	4°  ♁10'22	24°52'17	
retrograde	5003 Dec 30 03:17	26°  ♁45'58		retrograde	5004 Dec 12 16:55	10°  ♁58'17		
evening set	5004 Jan 04 04:37	24°  ♁40'18		evening set	5004 Dec 18 07:45	8°  ♁37'55		
asc. node	5004 Jan 05 14:49	23°  ♁18'25		asc. node	5004 Dec 22 11:50	4°  ♁00'16		
min. Earth dist.	5004 Jan 09 01:53	18°  ♁58'21	0.68013 AU	min. Earth dist.	5004 Dec 22 21:05	3°  ♁30'06	0.67584 AU	
inferior conj	5004 Jan 09 14:38	18°  ♁14'43	1°18'51	inferior conj	5004 Dec 23 20:42	2°  ♁12'11	0°27'48	
minimum elong	5004 Jan 09 12:56	18°  ♁20'33	1°18'11	minimum elong	5004 Dec 23 20:01	2°  ♁14'25	0°27'31	
morning rise	5004 Jan 14 21:12	12°  ♁08'48			5004 Dec 25 13:40	30°  ♁♁		
direct	5004 Jan 19 00:56	10°  ♁31'55		morning rise	5004 Dec 29 08:26	26°  ♁12'53		
morning max el	5004 Jan 27 08:19	15°  ♁19'25	20°55'49	direct	5005 Jan 01 23:25	24°  ♁57'19		
	5004 Feb 08 00:40	0°  ♁		morning max el	5005 Jan 09 09:05	29°  ♁07'36	19°46'33	
desc. node	5004 Feb 11 01:19	4°  ♁19'33			5005 Jan 10 05:24	0°  ♁		
morning set	5004 Feb 26 10:15	27°  ♁31'40		greatest brilliancy	5005 Jan 22 12:52	16°  ♁24'47	-0.6m	
	5004 Feb 28 00:04	0°  ♁		desc. node	5005 Jan 27 22:20	24°  ♁29'36		
max. Earth dist.	5004 Mar 05 11:32	10°  ♁22'00	1.42795 AU		5005 Jan 31 13:07	0°  ♁		
				morning set	5005 Feb 04 06:22	5°  ♁42'45		
superior conj	5004 Mar 12 11:41	21°  ♁59'51	-2°08'22	max. Earth dist.	5005 Feb 15 22:46	23°  ♁59'10	1.44305 AU	
minimum elong	5004 Mar 12 12:54	22°  ♁04'59	2°08'21		5005 Feb 19 16:58	0°  ♁		
	5004 Mar 17 03:30	0°  ♁						
evening rise	5004 Mar 24 05:38	12°  ♁32'13		superior conj	5005 Feb 20 18:38	1°  ♁43'34	-2°03'17	
asc. node	5004 Apr 02 14:06	28°  ♁49'36		minimum elong	5005 Feb 20 13:45	1°  ♁23'51	2°03'05	
	5004 Apr 03 07:39	0°  ♁		evening rise	5005 Mar 06 06:32	24°  ♁08'43		
evening max el	5004 Apr 10 01:14	8°  ♁55'55	18°06'40		5005 Mar 09 17:10	0°  ♁		
retrograde	5004 Apr 16 15:22	12°  ♁18'37		asc. node	5005 Mar 20 11:07	17°  ♁13'43		
evening set	5004 Apr 19 07:31	11°  ♁45'11		evening max el	5005 Mar 24 14:07	22°  ♁13'52	18°13'56	
inferior conj	5004 Apr 25 20:29	6°  ♁45'29	3°07'04	retrograde	5005 Mar 30 23:57	25°  ♁38'23		
minimum elong	5004 Apr 25 23:08	6°  ♁39'00	3°06'36	evening set	5005 Apr 02 22:20	24°  ♁53'02		
min. Earth dist.	5004 Apr 29 00:05	3°  ♁41'47	0.61263 AU	inferior conj	5005 Apr 08 23:24	19°  ♁33'51	3°29'30	
morning rise	5004 May 02 12:46	0°  ♁48'56		minimum elong	5005 Apr 09 00:25	19°  ♁31'01	3°29'26	
	5004 May 03 20:38	30°  ♁♁		min. Earth dist.	5005 Apr 11 13:31	16°  ♁43'09	0.63347 AU	
direct	5004 May 09 06:36	28°  ♁31'00		morning rise	5005 Apr 15 01:27	13°  ♁26'16		
desc. node	5004 May 09 00:31	28°  ♁31'12		direct	5005 Apr 21 22:05	10°  ♁45'54		
	5004 May 15 00:19	0°  ♁		desc. node	5005 Apr 25 21:32	11°  ♁33'12		
morning max el	5004 May 23 11:56	6°  ♁28'54	27°50'26	morning max el	5005 May 05 19:29	18°  ♁44'59	27°45'08	
	5004 Jun 10 05:54	0°  ♁			5005 May 15 07:22	0°  ♁		
morning set	5004 Jun 25 10:42	27°  ♁51'44			5005 Jun 03 03:31	0°  ♁		
	5004 Jun 26 11:29	0°  ♁		morning set	5005 Jun 09 08:22	11°  ♁54'03		
asc. node	5004 Jun 29 13:22	6°  ♁31'19		max. Earth dist.	5005 Jun 14 13:07	22°  ♁37'22	1.32773 AU	
max. Earth dist.	5004 Jul 01 08:35	10°  ♁25'21	1.32136 AU	asc. node	5005 Jun 16 10:24	26°  ♁39'00		
superior conj	5004 Jul 02 19:08	13°  ♁34'12	0°33'17	superior conj	5005 Jun 17 02:46	28°  ♁07'03	0°07'07	
minimum elong	5004 Jul 02 17:41	13°  ♁26'16	0°32'58	minimum elong	5005 Jun 17 02:25	28°  ♁05'10	0°07'02	
evening rise	5004 Jul 09 15:04	28°  ♁27'45		behind sun begin	5005 Jun 16 21:38	27°  ♁39'23		
	5004 Jul 10 08:26	0°  ♁		behind sun end	5005 Jun 17 07:12	28°  ♁30'58		
	5004 Jul 27 03:59	0°  ♁			5005 Jun 17 23:41	0°  ♁		
evening max el	5004 Aug 04 16:40	10°  ♁07'13	24°54'31	evening rise	5005 Jun 24 02:52	13°  ♁14'14		
desc. node	5004 Aug 04 23:47	10°  ♁24'06			5005 Jul 02 13:44	0°  ♁		
retrograde	5004 Aug 18 14:43	17°  ♁09'00		evening max el	5005 Jul 17 05:17	20°  ♁32'14	23°18'33	
evening set	5004 Aug 24 00:35	16°  ♁02'44		desc. node	5005 Jul 22 20:46	24°  ♁57'31		
min. Earth dist.	5004 Aug 29 04:09	13°  ♁17'19	0.57210 AU	retrograde	5005 Jul 30 17:17	27°  ♁17'39		
inferior conj	5004 Sep 01 01:26	11°  ♁23'10	-5°16'45	evening set	5005 Aug 03 15:15	26°  ♁44'09		
minimum elong	5004 Sep 01 02:00	11°  ♁22'13	5°16'44	min. Earth dist.	5005 Aug 10 14:40	23°  ♁32'14	0.55663 AU	
morning rise	5004 Sep 09 05:46	7°  ♁14'23		inferior conj	5005 Aug 12 11:33	22°  ♁26'23	-4°57'02	
direct	5004 Sep 11 19:41	6°  ♁55'23		minimum elong	5005 Aug 12 05:43	22°  ♁34'59	4°56'13	
morning max el	5004 Sep 20 22:40	11°  ♁13'14	19°13'59	morning rise	5005 Aug 20 22:32	18°  ♁33'53		
asc. node	5004 Sep 25 12:37	16°  ♁33'19		direct	5005 Aug 23 20:18	18°  ♁13'26		
	5004 Oct 03 14:27	0°  ♁		morning max el	5005 Sep 03 11:28	23°  ♁09'58	20°24'49	
morning set	5004 Oct 07 22:17	8°  ♁25'47			5005 Sep 09 07:25	0°  ♁		
				asc. node	5005 Sep 12 09:39	4°  ♁41'39		
superior conj	5004 Oct 16 02:23	24°  ♁37'37	1°35'20	morning set	5005 Sep 22 04:16	23°  ♁04'18		
minimum elong	5004 Oct 16 04:42	24°  ♁48'55	1°35'10		5005 Sep 25 12:55	0°  ♁		

































































































































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minimum elong	5005 Sep 29 18:49	8°♄42'40	1°42'46	minimum elong	5006 Sep 13 18:02	23°♄02'24	1°42'42
max. Earth dist.	5005 Oct 04 22:52	18°♄56'28	1.36355 AU		5006 Sep 17 02:36	0°♄	
evening rise	5005 Oct 08 20:30	26°♄17'04		max. Earth dist.	5006 Sep 17 12:28	0°♄50'17	1.34651 AU
	5005 Oct 10 21:38	0°♄		evening rise	5006 Sep 21 23:00	9°♄37'54	
desc. node	5005 Oct 18 20:07	13°♄31'35			5006 Oct 03 09:35	0°♄	
	5005 Oct 29 18:02	0°♄		desc. node	5006 Oct 05 17:08	3°♄43'26	
evening max el	5005 Nov 13 12:41	17°♄54'22	26°01'20		5006 Oct 25 12:20	0°♄	
retrograde	5005 Nov 26 01:46	25°♄01'46		evening max el	5006 Oct 27 01:19	1°♄31'44	26°54'06
evening set	5005 Dec 02 06:10	22°♄29'10		retrograde	5006 Nov 09 05:13	8°♄48'50	
min. Earth dist.	5005 Dec 06 12:20	17°♄56'31	0.66804 AU	evening set	5006 Nov 15 21:47	6°♄09'07	
inferior conj	5005 Dec 07 23:09	16°♄07'58	-0°28'46	min. Earth dist.	5006 Nov 19 21:22	2°♄11'56	0.65665 AU
minimum elong	5005 Dec 07 23:55	16°♄05'34	0°28'25	inferior conj	5006 Nov 21 19:56	29°♄57'22	-1°29'37
asc. node	5005 Dec 09 08:51	14°♄24'42		minimum elong	5006 Nov 21 22:29	29°♄50'01	1°28'33
morning rise	5005 Dec 13 18:10	10°♄17'47			5006 Nov 21 19:02	30°♄	
direct	5005 Dec 16 22:07	9°♄20'33		asc. node	5006 Nov 26 05:54	25°♄27'23	
morning max el	5005 Dec 23 17:27	13°♄05'26	18°52'22	morning rise	5006 Nov 28 00:05	24°♄18'59	
	5006 Jan 05 05:16	0°♄		direct	5006 Nov 30 19:00	23°♄36'25	
morning set	5006 Jan 14 15:44	14°♄41'14		morning max el	5006 Dec 07 07:20	27°♄06'50	18°14'30
desc. node	5006 Jan 14 19:23	14°♄55'30			5006 Dec 09 20:54	0°♄	
	5006 Jan 24 10:31	0°♄		morning set	5006 Dec 26 05:19	25°♄05'46	
max. Earth dist.	5006 Jan 29 15:49	8°♄11'00	1.45164 AU	desc. node	5006 Dec 29 05:56	0°♄	
					5007 Jan 01 16:26	5°♄32'08	
superior conj	5006 Jan 31 03:57	10°♄33'04	-1°38'30	superior conj	5007 Jan 10 07:20	19°♄13'34	-0°57'20
minimum elong	5006 Jan 30 18:40	9°♄56'31	1°37'38	minimum elong	5007 Jan 10 00:18	18°♄45'52	0°56'25
	5006 Feb 12 09:25	0°♄		max. Earth dist.	5007 Jan 12 11:04	22°♄36'46	1.45282 AU
evening rise	5006 Feb 15 08:53	4°♄48'28			5007 Jan 17 04:19	0°♄	
	5006 Mar 03 09:59	0°♄		evening rise	5007 Jan 26 12:42	14°♄35'33	
asc. node	5006 Mar 07 08:08	4°♄54'35			5007 Feb 05 10:36	0°♄	
evening max el	5006 Mar 08 01:45	5°♄40'57	18°39'29	greatest brilliancy	5007 Feb 07 05:36	2°♄44'20	-0.7m
retrograde	5006 Mar 14 16:19	9°♄20'08		evening max el	5007 Feb 19 09:55	19°♄12'40	19°22'14
evening set	5006 Mar 17 21:02	8°♄22'07		asc. node	5007 Feb 22 05:10	21°♄39'51	
inferior conj	5006 Mar 23 13:52	2°♄45'09	3°32'40	retrograde	5007 Feb 26 13:00	23°♄17'23	
minimum elong	5006 Mar 23 13:22	2°♄46'42	3°32'39	evening set	5007 Mar 02 00:51	22°♄05'58	
min. Earth dist.	5006 Mar 25 12:27	0°♄24'03	0.65116 AU	inferior conj	5007 Mar 07 12:30	16°♄13'22	3°21'12
	5006 Mar 25 20:36	30°♄		minimum elong	5007 Mar 07 10:52	16°♄18'41	3°20'59
morning rise	5006 Mar 29 05:10	26°♄32'11		min. Earth dist.	5007 Mar 08 19:56	14°♄31'10	0.66483 AU
direct	5006 Apr 04 21:00	23°♄42'34		morning rise	5007 Mar 12 20:35	9°♄58'35	
desc. node	5006 Apr 12 18:34	26°♄47'59		direct	5007 Mar 19 02:26	7°♄12'20	
	5006 Apr 16 15:11	0°♄		desc. node	5007 Mar 30 15:38	13°♄41'59	
morning max el	5006 Apr 18 05:30	1°♄33'05	27°05'43	morning max el	5007 Mar 31 15:24	14°♄40'45	25°59'49
	5006 May 09 10:34	0°♄			5007 Apr 13 04:01	0°♄	
morning set	5006 May 23 20:33	25°♄25'05			5007 May 02 05:42	0°♄	
	5006 May 26 04:43	0°♄		morning set	5007 May 06 19:25	8°♄14'06	
max. Earth dist.	5006 May 28 08:36	4°♄20'32	1.33869 AU	max. Earth dist.	5007 May 10 16:36	15°♄34'08	1.35427 AU
superior conj	5006 Jun 01 05:20	12°♄20'05	-0°21'29	superior conj	5007 May 16 00:25	26°♄06'51	-0°51'13
minimum elong	5006 Jun 01 06:28	12°♄26'02	0°21'16	minimum elong	5007 May 16 03:14	26°♄21'09	0°50'42
asc. node	5006 Jun 03 07:26	16°♄44'33			5007 May 17 22:08	0°♄	
evening rise	5006 Jun 08 13:30	27°♄52'38		asc. node	5007 May 21 04:28	6°♄44'13	
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evening max el	5006 Jun 28 21:59	0°♄58'45	21°43'11	evening max el	5007 Jun 11 01:42	11°♄56'54	20°20'50
desc. node	5006 Jul 09 17:48	7°♄02'43		retrograde	5007 Jun 21 22:34	17°♄16'02	
retrograde	5006 Jul 11 09:15	7°♄09'04		evening set	5007 Jun 23 21:41	17°♄06'20	
evening set	5006 Jul 13 23:22	6°♄53'55		desc. node	5007 Jun 26 14:49	16°♄23'31	
inferior conj	5006 Jul 23 07:21	2°♄52'16	-3°45'39	inferior conj	5007 Jul 03 01:42	13°♄08'26	-1°54'58
minimum elong	5006 Jul 22 22:33	3°♄04'34	3°43'12	minimum elong	5007 Jul 02 20:19	13°♄16'18	1°53'00
min. Earth dist.	5006 Jul 23 00:42	3°♄01'34	0.54854 AU	min. Earth dist.	5007 Jul 04 12:38	12°♄17'19	0.54992 AU
	5006 Jul 28 22:48	30°♄		morning rise	5007 Jul 11 17:48	8°♄56'42	
morning rise	5006 Jul 31 23:04	29°♄00'38		direct	5007 Jul 15 17:15	8°♄22'28	
direct	5006 Aug 04 07:00	28°♄36'25		morning max el	5007 Jul 29 04:49	14°♄55'59	23°37'46
	5006 Aug 10 07:14	0°♄			5007 Aug 09 23:51	0°♄	
morning max el	5006 Aug 16 12:26	4°♄20'57	21°55'17	asc. node	5007 Aug 17 03:46	12°♄45'38	
asc. node	5006 Aug 30 06:42	23°♄28'57		morning set	5007 Aug 22 01:23	22°♄45'14	
	5006 Sep 02 17:08	0°♄			5007 Aug 25 10:31	0°♄	
morning set	5006 Sep 06 13:55	7°♄52'32					

superior conj	5007 Aug 29 01:14	7°♎49'23	1°36'17		5008 Aug 01 20:28	0°♎	
minimum elong	5007 Aug 28 23:34	7°♎40'26	1°36'09	asc. node	5008 Aug 03 00:49	2°♎23'25	
max. Earth dist.	5007 Aug 31 10:45	12°♎57'20	1.33346 AU	morning set	5008 Aug 05 13:01	7°♎37'11	
evening rise	5007 Sep 05 13:57	23°♎33'53					
	5007 Sep 08 20:52	0°♎		superior conj	5008 Aug 12 11:20	22°♎41'45	1°24'23
desc. node	5007 Sep 22 14:08	23°♎31'14		minimum elong	5008 Aug 12 09:08	22°♎29'38	1°24'07
	5007 Sep 27 00:47	0°♎		max. Earth dist.	5008 Aug 13 16:43	25°♎22'35	1.32467 AU
evening max el	5007 Oct 09 13:15	14°♎52'53	27°23'24		5008 Aug 15 19:52	0°♎	
retrograde	5007 Oct 23 02:49	22°♎11'17		evening rise	5008 Aug 19 13:52	7°♎55'00	
evening set	5007 Oct 30 04:05	19°♎32'37			5008 Aug 31 07:20	0°♎	
min. Earth dist.	5007 Nov 02 22:04	16°♎09'16	0.64180 AU	desc. node	5008 Sep 08 11:09	12°♎45'12	
inferior conj	5007 Nov 05 08:38	13°♎35'21	-2°32'47	evening max el	5008 Sep 20 22:39	27°♎45'42	27°23'05
minimum elong	5007 Nov 05 13:04	13°♎23'42	2°31'06		5008 Sep 23 11:35	0°♎	
morning rise	5007 Nov 11 23:25	8°♎11'42		retrograde	5008 Oct 04 17:36	5°♎00'11	
asc. node	5007 Nov 13 02:59	7°♎49'19		evening set	5008 Oct 11 21:43	2°♎33'23	
direct	5007 Nov 14 11:42	7°♎39'51			5008 Oct 15 03:13	30°♎	
morning max el	5007 Nov 20 23:57	11°♎05'02	17°53'36	min. Earth dist.	5008 Oct 15 12:48	29°♎38'31	0.62388 AU
	5007 Dec 03 21:57	0°♎		inferior conj	5008 Oct 18 10:23	26°♎55'20	-3°34'51
morning set	5007 Dec 07 23:11	6°♎53'01		minimum elong	5008 Oct 18 16:19	26°♎41'24	3°33'00
desc. node	5007 Dec 19 13:27	26°♎15'21		morning rise	5008 Oct 25 12:39	21°♎49'39	
				direct	5008 Oct 27 21:07	21°♎24'54	
superior conj	5007 Dec 21 00:53	28°♎39'20	-0°10'18	asc. node	5008 Oct 30 00:03	21°♎45'40	
minimum elong	5007 Dec 20 23:41	28°♎34'30	0°10'08	morning max el	5008 Nov 03 16:15	24°♎52'58	17°50'34
behind sun begin	5007 Dec 20 15:46	28°♎02'21			5008 Nov 07 21:14	0°♎	
behind sun end	5007 Dec 21 07:37	29°♎06'37		morning set	5008 Nov 19 15:19	19°♎44'38	
	5007 Dec 21 20:50	0°♎			5008 Nov 25 10:02	0°♎	
max. Earth dist.	5007 Dec 26 05:32	6°♎58'34	1.44670 AU				
evening rise	5008 Jan 06 01:04	23°♎50'11		superior conj	5008 Nov 30 19:53	9°♎20'08	0°32'11
	5008 Jan 10 01:44	0°♎		minimum elong	5008 Nov 30 22:46	9°♎32'24	0°31'47
	5008 Jan 31 01:18	0°♎		desc. node	5008 Dec 05 10:27	17°♎02'07	
evening max el	5008 Feb 02 13:09	2°♎46'02	20°20'15	max. Earth dist.	5008 Dec 07 21:14	21°♎02'18	1.43405 AU
asc. node	5008 Feb 09 02:13	7°♎14'25			5008 Dec 13 12:00	0°♎	
retrograde	5008 Feb 10 11:12	7°♎24'33		evening rise	5008 Dec 15 12:48	3°♎10'42	
evening set	5008 Feb 14 07:33	5°♎58'48			5009 Jan 02 13:13	0°♎	
inferior conj	5008 Feb 19 16:27	29°♎52'59	2°58'12	evening max el	5009 Jan 15 10:57	16°♎21'02	21°30'20
minimum elong	5008 Feb 19 14:11	0°♎00'42	2°57'42	retrograde	5009 Jan 24 08:52	21°♎38'16	
	5008 Feb 19 14:23	30°♎		asc. node	5009 Jan 25 23:17	21°♎24'31	
min. Earth dist.	5008 Feb 20 10:01	28°♎53'15	0.67428 AU	evening set	5009 Jan 28 15:20	19°♎57'14	
morning rise	5008 Feb 24 20:34	23°♎38'41		inferior conj	5009 Feb 02 23:26	13°♎41'01	2°25'47
direct	5008 Mar 01 13:22	21°♎05'55		minimum elong	5009 Feb 02 21:01	13°♎49'23	2°25'04
morning max el	5008 Mar 13 00:04	27°♎56'47	24°37'06	min. Earth dist.	5009 Feb 03 04:28	13°♎23'34	0.67964 AU
	5008 Mar 14 22:47	0°♎		morning rise	5009 Feb 08 02:31	7°♎28'52	
desc. node	5008 Mar 16 12:41	1°♎46'39		direct	5009 Feb 13 04:51	5°♎16'08	
	5008 Apr 05 21:00	0°♎		morning max el	5009 Feb 23 09:12	11°♎18'37	23°07'55
morning set	5008 Apr 17 23:43	20°♎05'50		desc. node	5009 Mar 03 09:43	20°♎42'02	
max. Earth dist.	5008 Apr 21 14:42	26°♎35'25	1.37388 AU		5009 Mar 10 05:43	0°♎	
	5008 Apr 23 11:11	0°♎			5009 Mar 29 16:45	0°♎	
				morning set	5009 Mar 30 03:25	0°♎44'29	
superior conj	5008 Apr 28 08:45	9°♎18'18	-1°20'15	max. Earth dist.	5009 Apr 03 09:58	8°♎00'25	1.39576 AU
minimum elong	5008 Apr 28 13:06	9°♎39'24	1°19'36				
evening rise	5008 May 06 22:44	26°♎19'24		superior conj	5009 Apr 11 02:23	21°♎44'40	-1°45'44
asc. node	5008 May 07 01:30	26°♎33'10		minimum elong	5009 Apr 11 07:22	22°♎07'40	1°45'13
	5008 May 08 19:17	0°♎			5009 Apr 15 12:09	0°♎	
evening max el	5008 May 23 17:54	23°♎37'03	19°17'19	evening rise	5009 Apr 20 15:57	9°♎52'48	
retrograde	5008 Jun 01 21:27	28°♎05'01		asc. node	5009 Apr 23 22:32	16°♎06'50	
evening set	5008 Jun 03 20:51	27°♎53'25			5009 May 02 00:49	0°♎	
inferior conj	5008 Jun 12 08:34	23°♎44'50	0°02'27	evening max el	5009 May 06 20:17	5°♎55'55	18°34'05
minimum elong	5008 Jun 12 08:40	23°♎44'40	0°02'24	retrograde	5009 May 14 14:43	9°♎45'49	
transit middle	5008 Jun 12 08:40	23°♎44'40	0°02'24	evening set	5009 May 16 20:18	9°♎27'53	
transit begin	5008 Jun 12 04:52	23°♎50'57		inferior conj	5009 May 24 11:57	5°♎00'12	1°38'23
transit end	5008 Jun 12 12:28	23°♎38'22		minimum elong	5009 May 24 15:06	4°♎54'05	1°37'22
desc. node	5008 Jun 12 11:52	23°♎39'21		min. Earth dist.	5009 May 27 20:59	2°♎24'30	0.57848 AU
min. Earth dist.	5008 Jun 15 03:01	21°♎55'22	0.56066 AU	desc. node	5009 May 30 08:55	0°♎42'52	
morning rise	5008 Jun 20 17:28	18°♎59'21			5009 May 31 14:56	30°♎	
direct	5008 Jun 25 14:42	18°♎04'36		morning rise	5009 Jun 01 06:41	29°♎40'09	
morning max el	5008 Jul 09 18:25	25°♎16'45	25°19'06	direct	5009 Jun 07 02:08	28°♎14'51	
	5008 Jul 14 04:11	0°♎			5009 Jun 13 16:43	0°♎	

morning max el	5009 Jun 21 11:11	5° Π 52'08	26°43'12		5010 Jun 14 02:55	0° Π	
	5009 Jul 09 06:28	0° \mathfrak{D}			5010 Jul 01 19:50	0° \mathfrak{D}	
morning set	5009 Jul 20 23:11	22° \mathfrak{D} 23'05		morning set	5010 Jul 05 06:10	6° \mathfrak{D} 57'53	
asc. node	5009 Jul 20 21:49	22° \mathfrak{D} 15'54		asc. node	5010 Jul 07 18:49	12° \mathfrak{D} 18'09	
	5009 Jul 24 12:10	0° Ω		max. Earth dist.	5010 Jul 11 14:35	20° \mathfrak{D} 37'13	1.31970 AU
superior conj	5009 Jul 27 23:01	7° Ω 36'09	1°07'45	superior conj	5010 Jul 12 10:32	22° \mathfrak{D} 27'06	0°46'58
minimum elong	5009 Jul 27 20:44	7° Ω 23'32	1°07'22	minimum elong	5010 Jul 12 08:39	22° \mathfrak{D} 16'42	0°46'34
max. Earth dist.	5009 Jul 28 03:14	7° Ω 59'29	1.32011 AU		5010 Jul 15 20:45	0° Ω	
evening rise	5009 Aug 03 19:55	22° Ω 32'13		evening rise	5010 Jul 19 05:46	7° Ω 18'27	
	5009 Aug 07 11:10	0° \mathfrak{N}			5010 Jul 31 00:39	0° \mathfrak{N}	
	5009 Aug 25 10:34	0° \mathfrak{D}		desc. node	5010 Aug 13 05:11	18° \mathfrak{N} 28'52	
desc. node	5009 Aug 26 08:10	1° \mathfrak{D} 10'55		evening max el	5010 Aug 15 22:50	21° \mathfrak{N} 17'07	25°43'36
evening max el	5009 Sep 03 02:34	9° \mathfrak{D} 56'11	26°49'22	retrograde	5010 Aug 29 21:45	28° \mathfrak{N} 23'10	
retrograde	5009 Sep 17 00:19	17° \mathfrak{D} 05'58		evening set	5010 Sep 05 00:53	26° \mathfrak{N} 54'34	
evening set	5009 Sep 23 22:16	15° \mathfrak{D} 03'04		min. Earth dist.	5010 Sep 09 10:55	24° \mathfrak{N} 17'48	0.58317 AU
min. Earth dist.	5009 Sep 27 16:38	12° \mathfrak{D} 25'47	0.60377 AU	inferior conj	5010 Sep 12 15:09	22° \mathfrak{N} 01'57	-5°08'09
inferior conj	5009 Sep 30 21:44	9° \mathfrak{D} 47'26	-4°29'59	minimum elong	5010 Sep 12 18:43	21° \mathfrak{N} 55'34	5°07'49
minimum elong	5009 Oct 01 03:49	9° \mathfrak{D} 34'52	4°28'39	morning rise	5010 Sep 20 14:49	17° \mathfrak{N} 41'02	
morning rise	5009 Oct 08 11:22	5° \mathfrak{D} 03'09		direct	5010 Sep 23 01:37	17° \mathfrak{N} 21'59	
direct	5009 Oct 10 19:18	4° \mathfrak{D} 42'25		morning max el	5010 Oct 01 10:47	21° \mathfrak{N} 22'07	18°43'13
asc. node	5009 Oct 16 21:06	7° \mathfrak{D} 10'39		asc. node	5010 Oct 03 18:06	23° \mathfrak{N} 50'47	
morning max el	5009 Oct 18 04:58	8° \mathfrak{D} 21'37	18°06'37		5010 Oct 08 03:54	0° \mathfrak{D}	
	5009 Nov 01 04:17	0° \mathfrak{M}		morning set	5010 Oct 17 18:39	17° \mathfrak{D} 29'10	
morning set	5009 Nov 02 23:25	3° \mathfrak{M} 21'15			5010 Oct 24 05:07	0° \mathfrak{M}	
superior conj	5009 Nov 12 16:29	21° \mathfrak{M} 15'13	1°04'57	superior conj	5010 Oct 26 09:55	4° \mathfrak{M} 11'10	1°27'05
minimum elong	5009 Nov 12 20:27	21° \mathfrak{M} 32'59	1°04'28	minimum elong	5010 Oct 26 13:06	4° \mathfrak{M} 26'07	1°26'47
	5009 Nov 17 16:12	0° \mathfrak{X}		max. Earth dist.	5010 Nov 02 14:25	17° \mathfrak{M} 17'56	1.39569 AU
max. Earth dist.	5009 Nov 20 08:16	4° \mathfrak{X} 32'00	1.41632 AU	evening rise	5010 Nov 06 14:45	24° \mathfrak{M} 13'41	
desc. node	5009 Nov 22 07:27	7° \mathfrak{X} 48'36		desc. node	5010 Nov 09 04:28	28° \mathfrak{M} 31'24	
evening rise	5009 Nov 25 14:44	13° \mathfrak{X} 12'03			5010 Nov 10 02:02	0° \mathfrak{X}	
	5009 Dec 06 10:59	0° \mathfrak{Z}			5010 Nov 30 06:28	0° \mathfrak{Z}	
evening max el	5009 Dec 29 03:51	29° \mathfrak{Z} 57'35	22°48'07	evening max el	5010 Dec 11 17:30	13° \mathfrak{Z} 37'18	24°07'56
	5009 Dec 29 04:49	0° \approx		retrograde	5010 Dec 22 20:32	20° \mathfrak{Z} 09'31	
retrograde	5010 Jan 08 04:21	5° \approx 54'28		evening set	5010 Dec 28 03:37	17° \mathfrak{Z} 57'07	
evening set	5010 Jan 12 22:32	3° \approx 57'33		asc. node	5010 Dec 30 17:21	15° \mathfrak{Z} 17'04	
asc. node	5010 Jan 12 20:19	4° \approx 02'06		min. Earth dist.	5011 Jan 01 21:16	12° \mathfrak{Z} 29'45	0.67877 AU
	5010 Jan 16 12:39	30° \mathfrak{R} \mathfrak{Z}		inferior conj	5011 Jan 02 14:44	11° \mathfrak{Z} 30'46	0°57'53
inferior conj	5010 Jan 18 07:27	27° \mathfrak{Z} 34'17	1°45'20	minimum elong	5011 Jan 02 13:25	11° \mathfrak{Z} 35'14	0°57'22
minimum elong	5010 Jan 18 05:21	27° \mathfrak{Z} 41'32	1°44'35	morning rise	5011 Jan 07 23:16	5° \mathfrak{Z} 27'37	
min. Earth dist.	5010 Jan 18 00:57	27° \mathfrak{Z} 56'45	0.68106 AU	direct	5011 Jan 11 21:19	4° \mathfrak{Z} 00'18	
morning rise	5010 Jan 23 12:05	21° \mathfrak{Z} 25'48		morning max el	5011 Jan 19 18:41	8° \mathfrak{Z} 30'33	20°24'38
direct	5010 Jan 27 23:49	19° \mathfrak{Z} 35'55		desc. node	5011 Feb 05 03:44	0° \approx 11'28	
morning max el	5010 Feb 05 22:23	24° \mathfrak{Z} 48'45	21°41'30		5011 Feb 05 00:38	0° \approx	
	5010 Feb 10 13:15	0° \approx		morning set	5011 Feb 17 02:45	18° \approx 19'29	
desc. node	5010 Feb 18 06:43	10° \approx 13'34			5011 Feb 24 13:12	0° \mathfrak{H}	
	5010 Mar 03 16:39	0° \mathfrak{H}		max. Earth dist.	5011 Feb 26 16:35	3° \mathfrak{H} 25'39	1.43502 AU
morning set	5010 Mar 10 02:31	10° \mathfrak{H} 01'54		superior conj	5011 Mar 04 22:04	13° \mathfrak{H} 36'01	-2°08'30
max. Earth dist.	5010 Mar 16 09:41	20° \mathfrak{H} 16'18	1.41705 AU	minimum elong	5011 Mar 04 20:54	13° \mathfrak{H} 31'10	2°08'29
	5010 Mar 22 03:42	0° \mathfrak{Y}			5011 Mar 14 13:36	0° \mathfrak{Y}	
superior conj	5010 Mar 24 00:23	3° \mathfrak{Y} 13'59	-2°03'36	evening rise	5011 Mar 17 09:23	4° \mathfrak{Y} 55'33	
minimum elong	5010 Mar 24 03:54	3° \mathfrak{Y} 29'20	2°03'26	asc. node	5011 Mar 28 16:36	24° \mathfrak{Y} 03'39	
evening rise	5010 Apr 03 20:57	22° \mathfrak{Y} 48'09			5011 Apr 02 00:04	0° \mathfrak{B}	
	5010 Apr 07 19:29	0° \mathfrak{B}		evening max el	5011 Apr 03 17:40	1° \mathfrak{B} 53'47	18°07'29
asc. node	5010 Apr 10 19:34	5° \mathfrak{B} 19'32		retrograde	5011 Apr 10 04:58	5° \mathfrak{B} 15'59	
evening max el	5010 Apr 20 05:20	18° \mathfrak{B} 44'43	18°11'03	evening set	5011 Apr 12 23:40	4° \mathfrak{B} 37'45	
retrograde	5010 Apr 27 02:38	22° \mathfrak{B} 13'11			5011 Apr 18 19:16	30° \mathfrak{R} \mathfrak{Y}	
evening set	5010 Apr 29 15:00	21° \mathfrak{B} 46'00		inferior conj	5011 Apr 19 07:06	29° \mathfrak{Y} 29'34	3°19'17
inferior conj	5010 May 06 12:34	16° \mathfrak{B} 57'36	2°43'07	minimum elong	5011 Apr 19 09:05	29° \mathfrak{Y} 24'26	3°19'02
minimum elong	5010 May 06 15:54	16° \mathfrak{B} 50'05	2°42'21	min. Earth dist.	5011 Apr 22 05:26	26° \mathfrak{Y} 28'41	0.62167 AU
min. Earth dist.	5010 May 09 21:04	13° \mathfrak{B} 57'02	0.59988 AU	morning rise	5011 Apr 25 16:53	23° \mathfrak{Y} 27'04	
morning rise	5010 May 13 14:16	11° \mathfrak{B} 11'08		direct	5011 May 02 12:46	20° \mathfrak{Y} 58'08	
desc. node	5010 May 17 05:56	9° \mathfrak{B} 34'20		desc. node	5011 May 04 02:58	21° \mathfrak{Y} 05'40	
direct	5010 May 20 02:09	9° \mathfrak{B} 11'29		morning max el	5011 May 16 15:40	28° \mathfrak{Y} 58'27	27°52'48
morning max el	5010 Jun 03 10:25	17° \mathfrak{B} 04'19	27°36'39		5011 May 17 15:47	0° \mathfrak{B}	

	5011 Jun 08 00:14	0°♊		min. Earth dist.	5012 Apr 03 23:07	9°♎48'25	0.64142 AU
morning set	5011 Jun 19 07:55	21°♊13'59		morning rise	5012 Apr 07 12:25	6°♎17'57	
	5011 Jun 23 12:49	0°♊		direct	5012 Apr 14 07:53	3°♎31'35	
asc. node	5011 Jun 24 15:50	2°♊24'46		desc. node	5012 Apr 19 24:00	5°♎07'58	
max. Earth dist.	5011 Jun 24 22:38	3°♊01'22	1.32349 AU	morning max el	5012 Apr 28 00:34	11°♎29'15	27°32'05
					5012 May 12 16:39	0°♎	
superior conj	5011 Jun 26 20:06	7°♊07'53	0°22'33		5012 May 30 11:17	0°♊	
minimum elong	5011 Jun 26 19:04	7°♊02'16	0°22'18	morning set	5012 Jun 02 01:57	5°♊03'53	
evening rise	5011 Jul 03 17:22	22°♊06'01		max. Earth dist.	5012 Jun 06 23:26	15°♊00'08	1.33178 AU
	5011 Jul 07 12:37	0°♊					
	5011 Jul 26 15:21	0°♊		superior conj	5012 Jun 10 01:51	21°♊32'50	-0°04'48
evening max el	5011 Jul 28 12:33	1°♊55'04	24°14'34	minimum elong	5012 Jun 10 02:05	21°♊34'07	0°04'46
desc. node	5011 Jul 31 02:12	4°♊11'30		behind sun begin	5012 Jun 09 20:54	21°♊06'25	
retrograde	5011 Aug 11 08:05	8°♊52'35		behind sun end	5012 Jun 10 07:17	22°♊01'50	
evening set	5011 Aug 16 03:09	8°♊01'28		asc. node	5012 Jun 10 12:53	22°♊31'48	
min. Earth dist.	5011 Aug 21 23:20	5°♊06'20	0.56481 AU		5012 Jun 14 00:17	0°♊	
inferior conj	5011 Aug 24 12:23	3°♊30'58	-5°14'22	evening rise	5012 Jun 17 04:53	6°♊49'11	
minimum elong	5011 Aug 24 10:14	3°♊34'21	5°14'16		5012 Jun 29 12:08	0°♊	
	5011 Aug 31 04:10	30°♊♊		evening max el	5012 Jul 09 01:56	12°♊16'28	22°37'05
morning rise	5011 Sep 01 19:50	29°♊30'36		desc. node	5012 Jul 16 23:13	17°♊45'24	
direct	5011 Sep 04 12:36	29°♊11'21		retrograde	5012 Jul 22 05:46	18°♊49'21	
	5011 Sep 08 16:08	0°♊		evening set	5012 Jul 25 12:23	18°♊25'48	
morning max el	5011 Sep 14 06:29	3°♊44'15	19°41'31	min. Earth dist.	5012 Aug 02 09:40	14°♊58'16	0.55213 AU
asc. node	5011 Sep 20 15:07	11°♊30'26		inferior conj	5012 Aug 03 15:18	14°♊16'02	-4°32'59
	5011 Sep 30 21:58	0°♊		minimum elong	5012 Aug 03 07:26	14°♊27'15	4°31'24
morning set	5011 Oct 01 21:28	1°♊58'02		morning rise	5012 Aug 12 04:31	10°♊25'49	
				direct	5012 Aug 15 06:05	10°♊04'14	
superior conj	5011 Oct 09 18:48	17°♊52'05	1°39'30	morning max el	5012 Aug 26 14:07	15°♊21'04	21°01'08
minimum elong	5011 Oct 09 20:27	18°♊00'15	1°39'24	asc. node	5012 Sep 06 12:09	29°♊56'23	
max. Earth dist.	5011 Oct 15 19:02	29°♊25'29	1.37475 AU		5012 Sep 06 13:00	0°♊	
	5011 Oct 16 02:27	0°♊		morning set	5012 Sep 15 05:14	16°♊40'51	
evening rise	5011 Oct 19 13:16	6°♊16'46			5012 Sep 21 14:29	0°♊	
desc. node	5011 Oct 27 01:29	19°♊06'21					
	5011 Nov 02 23:53	0°♊		superior conj	5012 Sep 22 14:40	2°♊05'02	1°43'36
evening max el	5011 Nov 24 06:01	27°♊20'28	25°23'11	minimum elong	5012 Sep 22 14:47	2°♊05'35	1°43'36
	5011 Nov 27 04:21	0°♊		max. Earth dist.	5012 Sep 27 04:06	11°♊17'34	1.35588 AU
retrograde	5011 Dec 06 08:26	4°♊18'51		evening rise	5012 Oct 01 06:48	19°♊12'38	
evening set	5011 Dec 12 05:01	1°♊52'44			5012 Oct 07 06:18	0°♊	
	5011 Dec 14 03:14	30°♊♊		desc. node	5012 Oct 12 22:31	9°♊28'21	
min. Earth dist.	5011 Dec 16 15:09	26°♊59'40	0.67289 AU		5012 Oct 27 02:12	0°♊	
inferior conj	5011 Dec 17 19:32	25°♊28'02	0°04'24	evening max el	5012 Nov 05 18:48	11°♊02'53	26°26'20
minimum elong	5011 Dec 17 19:25	25°♊28'24	0°04'22	retrograde	5012 Nov 18 15:09	18°♊15'43	
transit middle	5011 Dec 17 19:25	25°♊28'24	0°04'22	evening set	5012 Nov 25 00:49	15°♊39'37	
transit begin	5011 Dec 17 16:43	25°♊37'06		min. Earth dist.	5012 Nov 29 04:11	11°♊21'47	0.66356 AU
transit end	5011 Dec 17 22:06	25°♊19'42		inferior conj	5012 Nov 30 19:52	9°♊21'40	-0°54'10
asc. node	5011 Dec 17 14:22	25°♊44'44		minimum elong	5012 Nov 30 21:21	9°♊17'10	0°53'31
morning rise	5011 Dec 23 10:07	19°♊32'14		asc. node	5012 Dec 03 11:25	6°♊18'47	
direct	5011 Dec 26 20:03	18°♊25'04		morning rise	5012 Dec 06 18:32	3°♊35'52	
morning max el	5012 Jan 02 22:55	22°♊23'35	19°21'32	direct	5012 Dec 09 18:21	2°♊45'20	
	5012 Jan 09 05:46	0°♊		morning max el	5012 Dec 16 09:52	6°♊23'04	18°34'09
greatest brilliancy	5012 Jan 16 05:42	10°♊07'30	-0.7m		5013 Jan 01 23:33	0°♊	
desc. node	5012 Jan 23 00:46	20°♊28'46		morning set	5013 Jan 05 22:10	6°♊15'26	
morning set	5012 Jan 27 01:36	26°♊42'26		desc. node	5013 Jan 08 21:47	10°♊59'23	
	5012 Jan 29 04:35	0°♊			5013 Jan 20 23:34	0°♊	
max. Earth dist.	5012 Feb 09 06:06	17°♊17'46	1.44750 AU				
				superior conj	5013 Jan 21 23:04	1°♊32'10	-1°22'31
superior conj	5012 Feb 12 18:45	22°♊53'25	-1°55'12	minimum elong	5013 Jan 21 13:54	0°♊56'14	1°21'30
minimum elong	5012 Feb 12 11:23	22°♊24'06	1°54'42	max. Earth dist.	5013 Jan 22 00:16	1°♊36'50	1.45307 AU
	5012 Feb 17 05:07	0°♊		evening rise	5013 Feb 06 17:22	26°♊23'21	
evening rise	5012 Feb 27 01:02	16°♊08'00			5013 Feb 08 23:49	0°♊	
	5012 Mar 06 09:48	0°♊		greatest brilliancy	5013 Feb 15 12:10	10°♊20'31	-0.8m
asc. node	5012 Mar 14 13:38	12°♊10'50		evening max el	5013 Feb 28 16:49	28°♊45'52	18°55'44
evening max el	5012 Mar 17 06:20	15°♊16'15	18°22'41	asc. node	5013 Mar 01 10:42	29°♊29'38	
retrograde	5012 Mar 23 17:17	18°♊45'39			5013 Mar 02 00:07	0°♊	
evening set	5012 Mar 26 18:13	17°♊55'09		retrograde	5013 Mar 07 11:43	2°♊34'19	
inferior conj	5012 Apr 01 15:24	12°♊28'28	3°32'52	evening set	5013 Mar 10 19:24	1°♊30'39	
minimum elong	5012 Apr 01 15:45	12°♊27'30	3°32'52		5013 Mar 12 16:56	30°♊♊	

inferior conj	5013 Mar 16 09:43	25° K 47'00	3°29'20	evening set	5014 Feb 23 00:42	15° K 18'42	
minimum elong	5013 Mar 16 08:40	25° K 50'17	3°29'16	inferior conj	5014 Feb 28 10:54	9° K 20'04	3°12'40
min. Earth dist.	5013 Mar 18 01:46	23° K 41'39	0.65757 AU	minimum elong	5014 Feb 28 08:56	9° K 26'36	3°12'20
morning rise	5013 Mar 21 21:32	19° K 33'09		min. Earth dist.	5014 Mar 01 12:10	7° K 56'06	0.66945 AU
direct	5013 Mar 28 09:49	16° K 43'21		morning rise	5014 Mar 05 16:57	3° K 05'30	
desc. node	5013 Apr 06 21:02	21° K 08'16		direct	5014 Mar 11 17:32	0° K 24'12	
morning max el	5013 Apr 10 10:30	24° K 25'47	26°40'16	morning max el	5014 Mar 23 19:50	7° K 37'30	25°26'02
	5013 Apr 15 11:00	0° Y		desc. node	5014 Mar 24 18:05	8° K 34'55	
	5013 May 06 02:48	0° Z			5014 Apr 10 06:53	0° Y	
morning set	5013 May 16 08:58	18° Z 17'52			5014 Apr 28 14:55	0° Z	
max. Earth dist.	5013 May 20 13:55	26° Z 28'24	1.34477 AU	morning set	5014 Apr 29 00:35	0° Z 43'44	
	5013 May 22 08:05	0° II		max. Earth dist.	5014 May 02 17:28	7° Z 34'16	1.36225 AU
superior conj	5013 May 25 01:34	5° II 35'22	-0°34'03	superior conj	5014 May 08 16:30	19° Z 07'53	-1°03'46
minimum elong	5013 May 25 03:25	5° II 44'54	0°33'41	minimum elong	5014 May 08 20:02	19° Z 25'26	1°03'10
asc. node	5013 May 28 09:58	12° II 35'13			5014 May 14 01:28	0° II	
evening rise	5013 Jun 01 14:24	21° II 21'56		asc. node	5014 May 15 07:01	2° II 30'46	
	5013 Jun 05 20:36	0° III		evening rise	5014 May 16 19:46	5° II 37'45	
evening max el	5013 Jun 20 22:56	22° III 54'05	21°06'08		5014 May 30 16:57	0° III	
retrograde	5013 Jul 02 18:39	28° III 43'05		evening max el	5014 Jun 03 07:58	4° III 08'58	19°51'16
desc. node	5013 Jul 03 20:14	28° III 40'23		retrograde	5014 Jun 13 10:39	9° III 05'34	
evening set	5013 Jul 05 00:18	28° III 31'24		evening set	5014 Jun 15 08:44	8° III 55'39	
inferior conj	5013 Jul 14 08:38	24° III 33'39	-3°01'51	desc. node	5014 Jun 20 17:17	6° III 58'14	
minimum elong	5013 Jul 14 00:38	24° III 44'54	2°59'14	inferior conj	5014 Jun 24 06:43	4° III 54'18	-1°03'52
min. Earth dist.	5013 Jul 14 20:15	24° III 17'19	0.54793 AU	minimum elong	5014 Jun 24 03:46	4° III 58'49	1°02'45
morning rise	5013 Jul 23 01:16	20° III 36'00		min. Earth dist.	5014 Jun 26 08:43	3° III 37'55	0.55342 AU
direct	5013 Jul 26 15:19	20° III 08'21		morning rise	5014 Jul 02 20:50	0° III 29'36	
morning max el	5013 Aug 08 10:40	26° III 14'11	22°38'04		5014 Jul 04 21:52	30° R II	
	5013 Aug 12 00:45	0° II		direct	5014 Jul 07 04:59	29° II 48'14	
asc. node	5013 Aug 24 09:13	18° II 57'28			5014 Jul 09 11:47	0° III	
	5013 Aug 29 22:20	0° III		morning max el	5014 Jul 21 00:59	6° III 39'04	24°22'09
morning set	5013 Aug 30 15:56	1° III 32'03			5014 Aug 06 20:19	0° II	
superior conj	5013 Sep 06 18:09	16° III 40'13	1°40'42	asc. node	5014 Aug 11 06:15	8° II 23'48	
minimum elong	5013 Sep 06 17:01	16° III 34'10	1°40'39	morning set	5014 Aug 15 03:41	16° II 25'05	
max. Earth dist.	5013 Sep 09 21:44	23° III 17'37	1.34048 AU		5014 Aug 21 10:16	0° III	
	5013 Sep 13 04:44	0° IV		superior conj	5014 Aug 22 02:27	1° III 28'04	1°31'51
evening rise	5013 Sep 14 15:08	2° IV 50'17		minimum elong	5014 Aug 22 00:30	1° III 17'27	1°31'40
desc. node	5013 Sep 29 19:32	29° IV 31'24		max. Earth dist.	5014 Aug 23 23:46	5° III 33'23	1.32918 AU
	5013 Sep 30 02:54	0° V		evening rise	5014 Aug 29 10:16	16° III 57'42	
evening max el	5013 Oct 19 07:36	24° V 36'04	27°09'52		5014 Sep 05 04:06	0° IV	
	5013 Oct 26 07:28	0° VI		desc. node	5014 Sep 16 16:33	19° IV 06'20	
retrograde	5013 Nov 01 16:00	1° VI 53'37			5014 Sep 24 16:32	0° V	
	5013 Nov 07 11:05	30° R V		evening max el	5014 Oct 01 18:40	7° V 46'22	27°27'06
evening set	5013 Nov 08 12:50	29° V 13'28		retrograde	5014 Oct 15 10:32	15° V 03'04	
min. Earth dist.	5013 Nov 12 09:59	25° V 30'55	0.65079 AU	evening set	5014 Oct 22 14:10	12° V 27'49	
inferior conj	5013 Nov 14 13:34	23° V 07'30	-1°56'14	min. Earth dist.	5014 Oct 26 06:24	9° V 17'48	0.63460 AU
minimum elong	5013 Nov 14 16:55	22° V 58'10	1°54'53	inferior conj	5014 Oct 28 21:57	6° V 38'30	-2°59'28
asc. node	5013 Nov 20 08:28	17° V 52'12		minimum elong	5014 Oct 29 03:07	6° V 25'33	2°57'39
morning rise	5013 Nov 20 22:04	17° V 34'45		morning rise	5014 Nov 04 17:35	1° V 22'15	
direct	5013 Nov 23 13:57	16° V 57'03		direct	5014 Nov 07 03:59	0° V 53'45	
morning max el	5013 Nov 30 01:14	20° V 23'57	18°03'26	asc. node	5014 Nov 07 05:30	0° V 53'46	
	5013 Dec 07 08:58	0° VI		morning max el	5014 Nov 13 18:07	4° V 18'44	17°50'05
morning set	5013 Dec 18 00:24	17° VI 17'35		morning set	5014 Nov 30 04:32	29° V 34'36	
	5013 Dec 25 18:18	0° VII			5014 Nov 30 10:23	0° VI	
desc. node	5013 Dec 26 18:50	1° VII 39'17		superior conj	5014 Dec 12 10:02	20° VI 21'56	0°08'44
superior conj	5014 Jan 01 06:16	10° VII 25'42	-0°37'22	minimum elong	5014 Dec 12 10:57	20° VI 25'45	0°08'36
minimum elong	5014 Jan 01 01:39	10° VII 07'22	0°36'44	behind sun begin	5014 Dec 12 02:47	19° VI 52'03	
max. Earth dist.	5014 Jan 04 20:05	16° VII 04'58	1.45118 AU	behind sun end	5014 Dec 12 19:07	20° VI 59'22	
	5014 Jan 13 18:01	0° VIII		desc. node	5014 Dec 13 15:51	22° VI 24'26	
evening rise	5014 Jan 17 13:17	5° VIII 53'14			5014 Dec 18 08:25	0° VII	
greatest brilliancy	5014 Jan 31 01:49	26° VIII 32'10	-0.7m	max. Earth dist.	5014 Dec 18 13:57	0° VII 22'05	1.44208 AU
	5014 Feb 02 10:20	0° IX		evening rise	5014 Dec 27 23:22	15° VII 05'23	
evening max el	5014 Feb 11 23:04	12° IX 18'29	19°45'11		5015 Jan 06 19:34	0° VIII	
asc. node	5014 Feb 16 07:45	15° IX 46'34		evening max el	5015 Jan 25 23:53	25° VIII 52'06	20°48'46
retrograde	5014 Feb 19 09:18	16° IX 36'19			5015 Jan 31 06:06	0° IX	

retrograde	5015 Feb 03 07:35	0°  46'56		asc. node	5016 Jan 21 01:47	14°  17'52	
asc. node	5015 Feb 03 04:46	0°  46'51		evening set	5016 Jan 22 15:47	13°  14'20	
	5015 Feb 06 04:40	30°  14'37		inferior conj	5016 Jan 28 00:02	6°  54'27	2°09'32
evening set	5015 Feb 07 08:05	29°  14'37		minimum elong	5016 Jan 27 21:42	7°  02'34	2°08'47
inferior conj	5015 Feb 12 16:23	23°  03'43	2°45'30	min. Earth dist.	5016 Jan 28 00:04	6°  54'20	0.68065 AU
minimum elong	5015 Feb 12 14:00	23°  11'56	2°44'54	morning rise	5016 Feb 02 03:27	0°  43'25	
min. Earth dist.	5015 Feb 13 04:23	22°  22'26	0.67703 AU		5016 Feb 03 01:46	30°  18	
morning rise	5015 Feb 17 19:45	16°  50'07		direct	5016 Feb 06 23:26	28°  40'18	
direct	5015 Feb 23 06:20	14°  25'38			5016 Feb 11 06:28	0° 	
morning max el	5015 Mar 06 04:35	20°  56'53	23°59'25	morning max el	5016 Feb 16 15:01	4°  21'58	22°30'18
desc. node	5015 Mar 11 15:07	27°  03'20		desc. node	5016 Feb 26 12:07	16°  15'31	
	5015 Mar 13 23:39	0° 			5016 Mar 07 04:51	0° 	
	5015 Apr 03 12:37	0° 		morning set	5016 Mar 21 10:55	22°  10'57	
morning set	5015 Apr 10 19:14	12°  06'45			5016 Mar 26 03:40	0° 	
max. Earth dist.	5015 Apr 14 13:45	18°  43'04	1.38304 AU	max. Earth dist.	5016 Mar 26 09:45	0°  25'49	1.40500 AU
	5015 Apr 20 17:26	0° 					
				superior conj	5016 Apr 03 04:58	14°  04'42	-1°54'32
superior conj	5015 Apr 21 19:08	2°  01'32	-1°31'42	minimum elong	5016 Apr 03 09:40	14°  25'54	1°54'10
minimum elong	5015 Apr 21 23:55	2°  24'19	1°31'04		5016 Apr 11 19:19	0° 	
evening rise	5015 Apr 30 18:21	19°  29'25		evening rise	5016 Apr 13 06:50	2°  47'27	
asc. node	5015 May 02 04:03	22°  14'11		asc. node	5016 Apr 18 01:04	11°  39'37	
	5015 May 06 06:00	0° 		evening max el	5016 Apr 29 10:29	28°  39'12	18°21'55
evening max el	5015 May 17 04:49	16°  06'24	18°56'23		5016 Apr 30 23:06	0° 	
retrograde	5015 May 25 17:13	20°  16'44		retrograde	5016 May 06 18:33	2°  17'55	
evening set	5015 May 27 18:44	20°  03'01		evening set	5016 May 09 03:00	1°  15'25	
inferior conj	5015 Jun 04 21:55	15°  46'42	0°46'45		5016 May 12 23:36	30°  18	
minimum elong	5015 Jun 04 23:43	15°  43'31	0°46'05	inferior conj	5016 May 16 10:35	27°  20'19	2°09'37
desc. node	5015 Jun 07 14:19	13°  52'57		minimum elong	5016 May 16 14:06	27°  13'02	2°08'37
min. Earth dist.	5015 Jun 08 00:35	13°  35'24	0.56750 AU	min. Earth dist.	5016 May 19 21:07	24°  30'42	0.58734 AU
morning rise	5015 Jun 13 01:23	10°  45'33		morning rise	5016 May 23 22:07	21°  47'31	
direct	5015 Jun 18 08:07	9°  38'58		desc. node	5016 May 24 11:20	21°  30'32	
morning max el	5015 Jul 02 15:37	17°  03'47	25°57'59	direct	5016 May 30 01:35	20°  07'12	
	5015 Jul 13 06:46	0° 		morning max el	5016 Jun 13 10:58	27°  53'00	27°10'09
asc. node	5015 Jul 29 03:18	28°  08'36			5016 Jun 15 12:20	0° 	
	5015 Jul 30 00:38	0° 			5016 Jul 05 21:50	0° 	
morning set	5015 Jul 30 14:52	1°  01'05		morning set	5016 Jul 13 23:52	15°  05'36	
				asc. node	5016 Jul 15 00:19	18°  05'43	
superior conj	5015 Aug 06 13:26	16°  01'59	1°17'53		5016 Jul 20 11:35	0° 	
minimum elong	5015 Aug 06 11:08	16°  09'19	1°17'33	superior conj	5016 Jul 21 01:15	1°  01'53	0°59'25
max. Earth dist.	5015 Aug 07 07:58	18°  03'58	1.32217 AU	minimum elong	5016 Jul 20 23:05	1°  03'31	0°59'01
	5015 Aug 12 20:35	0° 		max. Earth dist.	5016 Jul 20 19:04	0°  41'20	1.31938 AU
evening rise	5015 Aug 13 13:03	1°  06'11		evening rise	5016 Jul 27 20:57	16°  07'47	
	5015 Aug 29 02:56	0° 			5016 Aug 03 18:37	0° 	
desc. node	5015 Sep 03 13:34	8°  01'38		desc. node	5016 Aug 20 10:35	26°  01'20	
evening max el	5015 Sep 14 01:47	20°  21'17	27°12'46		5016 Aug 23 22:22	0° 	
retrograde	5015 Sep 27 22:14	27°  34'29		evening max el	5016 Aug 26 02:35	2°  10'55	26°25'03
evening set	5015 Oct 05 01:05	25°  15'59		retrograde	5016 Sep 09 01:34	9°  19'42	
min. Earth dist.	5015 Oct 08 16:17	22°  03'34	0.61551 AU	evening set	5016 Sep 15 16:55	7°  30'33	
inferior conj	5015 Oct 11 17:56	19°  47'06	-3°59'36	min. Earth dist.	5016 Sep 19 16:03	4°  55'33	0.59484 AU
minimum elong	5015 Oct 12 00:10	19°  33'12	3°57'52	inferior conj	5016 Sep 22 22:03	2°  24'26	-4°49'07
morning rise	5015 Oct 19 01:11	14°  50'31		minimum elong	5016 Sep 23 03:29	2°  13'52	4°48'11
direct	5015 Oct 21 08:55	14°  27'54			5016 Sep 26 04:49	30°  18	
asc. node	5015 Oct 25 02:32	15°  02'40		morning rise	5016 Sep 30 16:12	27°  09'58	
morning max el	5015 Oct 28 09:20	17°  59'37	17°55'02	direct	5016 Oct 03 00:44	27°  30'21	
	5015 Nov 05 23:57	0° 			5016 Oct 09 08:10	0° 	
morning set	5015 Nov 13 04:06	12°  46'49		asc. node	5016 Oct 10 23:33	1°  27'24	
	5015 Nov 22 18:21	0° 		morning max el	5016 Oct 10 19:33	1°  17'38	18°19'37
superior conj	5015 Nov 23 16:20	1°  35'41	0°47'24	morning set	5016 Oct 26 17:28	26°  38'21	
minimum elong	5015 Nov 23 20:01	1°  51'36	0°46'54		5016 Oct 28 11:45	0° 	
desc. node	5015 Nov 30 12:50	13°  11'27		superior conj	5016 Nov 04 22:29	13°  15'58	1°15'36
max. Earth dist.	5015 Dec 01 03:21	14°  11'15	1.42696 AU	minimum elong	5016 Nov 05 02:17	14°  16'02	1°15'11
evening rise	5015 Dec 07 15:31	24°  39'04		max. Earth dist.	5016 Nov 12 11:46	27°  21'34	1.40771 AU
	5015 Dec 11 01:52	0° 			5016 Nov 14 01:03	0° 	
	5015 Dec 31 20:00	0° 		desc. node	5016 Nov 16 09:51	3°  57'12	
evening max el	5016 Jan 08 19:18	9°  27'01	22°02'48	evening rise	5016 Nov 17 02:29	5°  05'41	
retrograde	5016 Jan 18 04:36	15°  02'00					

	5016 Dec 03 07:05	0° Z		retrograde	5017 Dec 15 13:10	13° Z 31'50	
evening max el	5016 Dec 21 10:41	23° Z 05'41	23°22'16	evening set	5017 Dec 21 02:00	11° Z 13'26	
retrograde	5016 Dec 31 22:51	29° Z 18'32		asc. node	5017 Dec 24 19:50	7° Z 07'43	
evening set	5017 Jan 05 22:17	27° Z 15'12		min. Earth dist.	5017 Dec 25 16:25	6° Z 00'37	0.67674 AU
asc. node	5017 Jan 06 22:48	26° Z 18'30		inferior conj	5017 Dec 26 14:27	4° Z 47'29	0°35'55
inferior conj	5017 Jan 11 08:00	20° Z 50'10	1°26'02	minimum elong	5017 Dec 26 13:35	4° Z 50'21	0°35'35
minimum elong	5017 Jan 11 06:10	20° Z 56'26	1°25'22		5017 Dec 30 14:35	30° R Z	
min. Earth dist.	5017 Jan 10 20:53	21° Z 28'19	0.68052 AU	morning rise	5018 Jan 01 01:18	28° Z 47'11	
morning rise	5017 Jan 16 13:59	14° Z 43'29		direct	5018 Jan 04 18:06	27° Z 28'37	
direct	5017 Jan 20 19:48	13° Z 03'10			5018 Jan 10 09:09	0° Z	
morning max el	5017 Jan 29 06:51	17° Z 56'49	21°07'15	morning max el	5018 Jan 12 06:30	1° Z 43'31	19°55'58
	5017 Feb 08 02:47	0° \approx		desc. node	5018 Jan 30 06:09	26° Z 06'51	
desc. node	5017 Feb 12 09:08	5° \approx 59'45			5018 Feb 01 19:48	0° \approx	
	5017 Feb 28 07:56	0° H		morning set	5018 Feb 07 19:05	9° \approx 08'23	
morning set	5017 Feb 28 22:37	0° H 57'35		max. Earth dist.	5018 Feb 18 22:30	26° \approx 35'34	1.44119 AU
max. Earth dist.	5017 Mar 08 12:03	13° H 04'00	1.42531 AU		5018 Feb 21 01:35	0° H	
superior conj	5017 Mar 15 17:09	25° H 06'50	-2°07'36	superior conj	5018 Feb 24 03:58	5° H 00'40	-2°05'18
minimum elong	5017 Mar 15 19:04	25° H 15'03	2°07'34	minimum elong	5018 Feb 24 00:04	4° H 44'48	2°05'10
	5017 Mar 18 13:13	0° Y		evening rise	5018 Mar 09 09:24	27° H 08'35	
evening rise	5017 Mar 27 05:18	15° Y 23'22			5018 Mar 11 01:26	0° Y	
asc. node	5017 Apr 04 22:05	0° B 41'04		asc. node	5018 Mar 22 19:08	19° Y 10'59	
	5017 Apr 04 12:12	0° B		evening max el	5018 Mar 27 10:16	24° Y 54'15	18°11'39
evening max el	5017 Apr 12 21:24	11° B 38'04	18°07'13	retrograde	5018 Apr 02 20:10	28° Y 17'48	
retrograde	5017 Apr 19 12:59	15° B 01'39		evening set	5018 Apr 05 17:36	27° Y 34'17	
evening set	5017 Apr 22 04:13	14° B 29'50		inferior conj	5018 Apr 11 20:11	22° Y 17'48	3°27'27
inferior conj	5017 Apr 28 19:17	9° B 32'59	3°01'34	minimum elong	5018 Apr 11 21:28	22° Y 14'19	3°27'20
minimum elong	5017 Apr 28 22:08	9° B 26'08	3°01'02	min. Earth dist.	5018 Apr 14 12:30	19° Y 23'57	0.63048 AU
min. Earth dist.	5017 May 02 00:23	6° B 29'23	0.60937 AU	morning rise	5018 Apr 18 00:09	16° Y 11'19	
morning rise	5017 May 05 13:58	3° B 38'51		direct	5018 Apr 24 20:46	13° Y 33'38	
desc. node	5017 May 11 08:22	1° B 27'55		desc. node	5018 Apr 28 05:24	14° Y 07'22	
direct	5017 May 12 06:36	1° B 25'26		morning max el	5018 May 08 19:49	21° Y 33'14	27°48'19
morning max el	5017 May 26 12:39	9° B 21'56	27°48'05		5018 May 16 04:21	0° B	
	5017 Jun 11 10:23	0° II			5018 Jun 04 13:14	0° II	
morning set	5017 Jun 28 04:52	0° E 23'54		morning set	5018 Jun 12 03:44	14° II 30'32	
	5017 Jun 28 00:14	0° E		max. Earth dist.	5018 Jun 17 11:08	25° II 30'49	1.32650 AU
asc. node	5017 Jul 01 21:21	8° E 10'19		asc. node	5018 Jun 18 18:24	28° II 18'06	
max. Earth dist.	5017 Jul 04 05:24	13° E 14'19	1.32079 AU				
superior conj	5017 Jul 05 12:10	16° E 02'51	0°37'01	superior conj	5018 Jun 19 20:24	0° E 38'18	0°11'17
minimum elong	5017 Jul 05 10:35	15° E 54'11	0°36'40	minimum elong	5018 Jun 19 19:52	0° E 35'23	0°11'09
	5017 Jul 11 21:24	0° O		behind sun begin	5018 Jun 19 16:04	0° E 14'54	
evening rise	5017 Jul 12 07:47	0° O 55'28		behind sun end	5018 Jun 19 23:39	0° E 55'52	
	5017 Jul 28 03:12	0° P			5018 Jun 19 13:19	0° E	
desc. node	5017 Aug 07 07:37	12° P 42'39		evening rise	5018 Jun 26 19:39	15° E 42'54	
evening max el	5017 Aug 07 19:55	13° P 12'29	25°07'54		5018 Jul 03 21:56	0° O	
retrograde	5017 Aug 21 18:18	20° P 15'20		evening max el	5018 Jul 20 08:34	23° O 40'01	23°33'08
evening set	5017 Aug 27 09:04	19° P 03'21		desc. node	5018 Jul 25 04:39	27° O 35'41	
min. Earth dist.	5017 Sep 01 07:31	16° P 20'46	0.57485 AU		5018 Jul 30 09:05	0° P	
inferior conj	5017 Sep 04 07:04	14° P 20'33	-5°15'46	retrograde	5018 Aug 02 22:53	0° P 29'11	
minimum elong	5017 Sep 04 08:31	14° P 18'06	5°15'43		5018 Aug 06 14:11	30° R O	
morning rise	5017 Sep 12 10:15	10° P 08'42		evening set	5018 Aug 07 02:26	29° O 51'27	
direct	5017 Sep 14 23:20	9° P 49'41		min. Earth dist.	5018 Aug 13 18:18	26° O 44'21	0.55857 AU
morning max el	5017 Sep 23 21:20	14° P 02'34	19°05'19	inferior conj	5018 Aug 15 19:59	25° O 30'27	-5°03'17
asc. node	5017 Sep 27 20:35	18° P 34'37		minimum elong	5018 Aug 15 15:03	25° O 37'49	5°02'43
	5017 Oct 04 23:33	0° U		morning rise	5018 Aug 24 06:07	21° O 36'26	
morning set	5017 Oct 10 16:21	10° U 56'29		direct	5018 Aug 27 02:32	21° O 16'21	
				morning max el	5018 Sep 06 12:00	26° O 06'12	20°12'55
					5018 Sep 10 02:07	0° P	
superior conj	5017 Oct 18 23:06	27° U 15'19	1°33'27	asc. node	5018 Sep 14 17:39	6° P 35'53	
minimum elong	5017 Oct 19 01:39	27° U 27'40	1°33'15	morning set	5018 Sep 24 21:35	25° P 32'42	
	5017 Oct 20 09:30	0° M			5018 Sep 27 01:45	0° U	
max. Earth dist.	5017 Oct 25 16:59	9° M 50'43	1.38668 AU				
evening rise	5017 Oct 29 12:22	16° M 34'20		superior conj	5018 Oct 02 13:10	11° U 11'42	1°42'09
desc. node	5017 Nov 03 06:53	24° M 37'20		minimum elong	5018 Oct 02 14:09	11° U 16'36	1°42'08
	5017 Nov 06 14:42	0° X		max. Earth dist.	5018 Oct 07 23:13	21° U 50'29	1.36638 AU
	5017 Nov 27 20:12	0° Z		evening rise	5018 Oct 11 19:30	29° U 01'11	
evening max el	5017 Dec 03 23:51	6° Z 47'55	24°40'59		5018 Oct 12 08:27	0° M	

desc. node	5018 Oct 21 03:54	15°♄07'36		desc. node	5019 Oct 08 00:57	5°♄22'28	
	5018 Oct 30 21:25	0°♄			5019 Oct 26 00:55	0°♄	
evening max el	5018 Nov 16 12:22	20°♄31'19	25°51'53	evening max el	5019 Oct 30 00:59	4°♄10'16	26°47'37
retrograde	5018 Nov 28 22:49	27°♄36'48		retrograde	5019 Nov 12 03:14	11°♄26'55	
evening set	5018 Dec 05 01:15	25°♄05'38		evening set	5019 Nov 18 18:05	8°♄47'51	
min. Earth dist.	5018 Dec 09 08:24	20°♄27'46	0.66941 AU	min. Earth dist.	5019 Nov 22 18:35	4°♄45'21	0.65851 AU
inferior conj	5018 Dec 10 17:35	18°♄43'21	-0°19'53	inferior conj	5019 Nov 24 15:23	2°♄34'13	-1°20'11
minimum elong	5018 Dec 10 18:06	18°♄41'42	0°19'39	minimum elong	5019 Nov 24 17:38	2°♄27'36	1°19'14
asc. node	5018 Dec 11 16:53	17°♄30'39			5019 Nov 26 22:11	30°♄♄	
morning rise	5018 Dec 16 11:24	12°♄51'45		asc. node	5019 Nov 28 13:56	28°♄24'30	
direct	5018 Dec 19 16:49	11°♄52'07		morning rise	5019 Nov 30 18:03	26°♄53'51	
morning max el	5018 Dec 26 13:53	15°♄40'08	18°59'26	direct	5019 Dec 03 14:07	26°♄09'25	
	5019 Jan 06 10:17	0°♄		morning max el	5019 Dec 10 03:07	29°♄41'32	18°19'02
desc. node	5019 Jan 17 03:11	16°♄30'22			5019 Dec 10 10:25	0°♄	
morning set	5019 Jan 18 01:04	17°♄55'42		morning set	5019 Dec 29 10:09	28°♄06'49	
	5019 Jan 25 18:37	0°♄			5019 Dec 30 14:13	0°♄	
max. Earth dist.	5019 Feb 01 14:45	10°♄42'52	1.45076 AU	desc. node	5020 Jan 04 00:12	7°♄05'35	
superior conj	5019 Feb 03 15:47	13°♄55'55	-1°43'29	superior conj	5020 Jan 13 18:45	22°♄34'21	-1°04'14
minimum elong	5019 Feb 03 06:47	13°♄20'25	1°42'42	minimum elong	5020 Jan 13 10:58	22°♄03'49	1°03'16
	5019 Feb 13 17:41	0°♄		max. Earth dist.	5020 Jan 15 09:36	25°♄06'49	1.45308 AU
evening rise	5019 Feb 18 15:15	7°♄56'47			5020 Jan 18 12:28	0°♄	
	5019 Mar 04 10:20	0°♄		evening rise	5020 Jan 29 22:08	17°♄50'42	
asc. node	5019 Mar 09 16:10	6°♄59'13			5020 Feb 06 16:31	0°♄	
evening max el	5019 Mar 10 22:14	8°♄20'12	18°34'34	greatest brilliancy	5020 Feb 09 22:29	5°♄01'29	-0.8m
retrograde	5019 Mar 17 11:40	11°♄56'38		evening max el	5020 Feb 22 07:04	21°♄51'37	19°14'52
evening set	5019 Mar 20 15:20	11°♄00'39		asc. node	5020 Feb 24 13:14	23°♄53'55	
inferior conj	5019 Mar 26 09:12	5°♄26'15	3°33'14	retrograde	5020 Feb 29 07:51	25°♄51'54	
minimum elong	5019 Mar 26 08:54	5°♄27'09	3°33'13	evening set	5020 Mar 03 18:33	24°♄42'35	
min. Earth dist.	5019 Mar 28 10:08	2°♄59'51	0.64873 AU	inferior conj	5020 Mar 09 06:49	18°♄52'19	3°23'43
	5019 Mar 31 05:13	30°♄♄		minimum elong	5020 Mar 09 05:19	18°♄57'08	3°23'32
morning rise	5019 Apr 01 01:51	29°♄13'41		min. Earth dist.	5020 Mar 10 16:29	17°♄03'50	0.66308 AU
direct	5019 Apr 07 18:46	26°♄24'31		morning rise	5020 Mar 14 15:45	12°♄37'38	
desc. node	5019 Apr 15 02:27	29°♄04'13		direct	5020 Mar 20 23:23	9°♄50'00	
	5019 Apr 16 09:45	0°♄		desc. node	5020 Mar 31 23:27	15°♄45'02	
morning max el	5019 Apr 21 05:43	4°♄17'37	27°13'31	morning max el	5020 Apr 02 15:39	17°♄22'47	26°10'53
	5019 May 10 16:34	0°♄			5020 Apr 13 04:47	0°♄	
morning set	5019 May 26 17:34	28°♄06'53			5020 May 02 15:08	0°♄	
	5019 May 27 16:44	0°♄		morning set	5020 May 08 18:41	11°♄02'51	
max. Earth dist.	5019 May 31 08:06	7°♄18'12	1.33674 AU	max. Earth dist.	5020 May 12 17:39	18°♄34'40	1.35167 AU
superior conj	5019 Jun 03 23:52	14°♄54'35	-0°17'02	superior conj	5020 May 17 20:14	28°♄45'41	-0°46'42
minimum elong	5019 Jun 04 00:46	14°♄59'16	0°16'52	minimum elong	5020 May 17 22:47	28°♄58'45	0°46'13
asc. node	5019 Jun 05 15:27	18°♄24'11			5020 May 18 10:47	0°♄	
evening rise	5019 Jun 11 06:35	0°♄22'39		asc. node	5020 May 22 12:29	8°♄25'00	
	5019 Jun 11 02:17	0°♄		evening rise	5020 May 25 14:37	14°♄49'10	
	5019 Jun 28 07:57	0°♄			5020 Jun 02 09:55	0°♄	
evening max el	5019 Jul 02 00:05	4°♄03'54	21°56'47	evening max el	5020 Jun 13 01:58	14°♄56'12	20°31'58
desc. node	5019 Jul 12 01:42	10°♄05'01		retrograde	5020 Jun 24 04:57	20°♄23'03	
retrograde	5019 Jul 14 16:16	10°♄20'55		evening set	5020 Jun 26 05:10	20°♄13'08	
evening set	5019 Jul 17 10:06	10°♄04'04		desc. node	5020 Jun 27 22:43	19°♄49'36	
min. Earth dist.	5019 Jul 26 04:24	6°♄18'35	0.54918 AU	inferior conj	5020 Jul 05 10:48	16°♄15'55	-2°12'59
inferior conj	5019 Jul 26 17:15	6°♄00'34	-3°59'39	minimum elong	5020 Jul 05 04:37	16°♄24'51	2°10'48
minimum elong	5019 Jul 26 08:28	6°♄12'53	3°57'21	min. Earth dist.	5020 Jul 06 16:02	15°♄33'42	0.54911 AU
morning rise	5019 Aug 04 08:25	2°♄09'56		morning rise	5020 Jul 14 03:15	12°♄08'17	
direct	5019 Aug 07 14:27	1°♄46'38		direct	5020 Jul 18 00:07	11°♄36'00	
morning max el	5019 Aug 19 14:41	7°♄23'56	21°40'46	morning max el	5020 Jul 31 07:54	18°♄02'49	23°22'12
asc. node	5019 Sep 01 14:42	25°♄17'53			5020 Aug 10 01:54	0°♄	
	5019 Sep 04 03:34	0°♄		asc. node	5020 Aug 18 11:44	14°♄30'35	
morning set	5019 Sep 09 06:49	10°♄19'43		morning set	5020 Aug 23 18:07	25°♄12'03	
					5020 Aug 26 00:07	0°♄	
superior conj	5019 Sep 16 12:40	25°♄35'26	1°43'09	superior conj	5020 Aug 30 18:28	10°♄17'02	1°37'37
minimum elong	5019 Sep 16 12:12	25°♄33'00	1°43'09	minimum elong	5020 Aug 30 16:55	10°♄08'46	1°37'31
	5019 Sep 18 15:41	0°♄		max. Earth dist.	5020 Sep 02 08:27	15°♄47'29	1.33514 AU
max. Earth dist.	5019 Sep 20 11:25	3°♄42'38	1.34880 AU	evening rise	5020 Sep 07 09:09	26°♄07'36	
evening rise	5019 Sep 24 19:48	12°♄15'56			5020 Sep 09 08:26	0°♄	
	5019 Oct 04 17:43	0°♄					




































































































































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	5020 Sep 27 02:39	0°♍		minimum elong	5021 Aug 15 02:00	24°♄57'02	1°26'16
evening max el	5020 Oct 11 13:16	17°♍35'16	27°20'51	max. Earth dist.	5021 Aug 16 13:34	28°♄11'17	1.32572 AU
retrograde	5020 Oct 25 01:45	24°♍53'39			5021 Aug 17 09:36	0°♎	
evening set	5020 Nov 01 01:56	22°♍14'24		evening rise	5021 Aug 22 07:56	10°♎26'00	
min. Earth dist.	5020 Nov 04 20:43	18°♍46'05	0.64421 AU		5021 Sep 01 15:09	0°♏	
inferior conj	5020 Nov 07 05:27	16°♍14'39	-2°23'11	desc. node	5021 Sep 10 19:00	14°♏35'03	
minimum elong	5020 Nov 07 09:36	16°♍03'33	2°21'34		5021 Sep 23 09:12	0°♐	
morning rise	5020 Nov 13 18:34	10°♍48'26		evening max el	5021 Sep 23 23:15	0°♐33'41	27°25'10
asc. node	5020 Nov 14 10:59	10°♍33'04		retrograde	5021 Oct 07 17:24	7°♐48'28	
direct	5020 Nov 16 07:40	10°♍15'12		evening set	5021 Oct 14 21:40	5°♐19'12	
morning max el	5020 Nov 22 19:28	13°♍40'40	17°55'33	min. Earth dist.	5021 Oct 18 12:57	2°♐20'39	0.62677 AU
	5020 Dec 04 05:31	0°♑			5021 Oct 20 23:57	30°♑♏	
morning set	5020 Dec 10 00:08	9°♑43'05		inferior conj	5021 Oct 21 09:01	29°♏38'11	-3°25'43
desc. node	5020 Dec 20 21:12	27°♑48'03		minimum elong	5021 Oct 21 14:47	29°♏24'24	3°23'51
	5020 Dec 22 05:44	0°♒		morning rise	5021 Oct 28 09:34	24°♏29'32	
				direct	5021 Oct 30 18:28	24°♏03'52	
superior conj	5020 Dec 23 09:06	1°♓50'30	-0°17'20	asc. node	5021 Nov 01 08:00	24°♏15'21	
minimum elong	5020 Dec 23 07:04	1°♓42'15	0°17'01	morning max el	5021 Nov 06 12:00	27°♏30'48	17°49'49
max. Earth dist.	5020 Dec 28 04:27	9°♓30'41	1.44808 AU		5021 Nov 08 17:27	0°♐	
evening rise	5021 Jan 08 11:59	27°♓08'05		morning set	5021 Nov 22 13:23	22°♐26'42	
	5021 Jan 10 08:47	0°♈			5021 Nov 26 20:04	0°♑	
greatest brilliancy	5021 Jan 23 05:28	19°♈22'56	-0.6m				
	5021 Jan 30 20:14	0°♉		superior conj	5021 Dec 04 00:06	12°♑19'44	0°26'19
evening max el	5021 Feb 04 11:06	5°♉24'56	20°10'46	minimum elong	5021 Dec 04 02:35	12°♑30'09	0°25'58
asc. node	5021 Feb 10 10:16	9°♉40'02		desc. node	5021 Dec 07 18:15	18°♑34'43	
retrograde	5021 Feb 12 05:54	9°♉57'44		max. Earth dist.	5021 Dec 10 20:54	23°♑38'58	1.43637 AU
evening set	5021 Feb 16 00:56	8°♉34'08			5021 Dec 14 20:18	0°♒	
inferior conj	5021 Feb 21 10:05	2°♉30'12	3°02'18	evening rise	5021 Dec 18 22:48	6°♒25'23	
minimum elong	5021 Feb 21 07:53	2°♉37'39	3°01'50		5022 Jan 03 16:53	0°♈	
min. Earth dist.	5021 Feb 22 05:38	1°♉24'07	0.67319 AU	evening max el	5022 Jan 18 09:40	18°♈59'25	21°19'16
	5021 Feb 23 07:01	30°♈♈		retrograde	5022 Jan 27 03:41	24°♈10'36	
morning rise	5021 Feb 26 14:38	26°♈15'49		asc. node	5022 Jan 28 07:17	24°♈03'30	
direct	5021 Mar 04 09:33	23°♈40'33		evening set	5022 Jan 31 08:37	22°♈31'45	
	5021 Mar 15 09:18	0°♉		inferior conj	5022 Feb 05 16:43	16°♈16'51	2°31'12
morning max el	5021 Mar 16 00:21	0°♉37'30	24°50'02	minimum elong	5022 Feb 05 14:18	16°♈25'14	2°30'31
desc. node	5021 Mar 18 20:28	3°♉40'11		min. Earth dist.	5022 Feb 05 23:30	15°♈53'22	0.67912 AU
	5021 Apr 07 03:30	0°♊		morning rise	5022 Feb 10 19:48	10°♈04'22	
morning set	5021 Apr 21 02:05	23°♊03'54		direct	5022 Feb 16 00:17	7°♈48'31	
max. Earth dist.	5021 Apr 24 16:52	29°♊35'42	1.37078 AU	morning max el	5022 Feb 26 09:14	13°♈58'18	23°21'13
	5021 Apr 24 22:09	0°♋		desc. node	5022 Mar 05 17:28	22°♈28'42	
					5022 Mar 11 08:38	0°♌	
superior conj	5021 May 01 06:24	12°♋03'05	-1°16'00		5022 Mar 31 01:35	0°♍	
minimum elong	5021 May 01 10:33	12°♋23'23	1°15'21	morning set	5022 Apr 02 09:47	3°♍54'09	
asc. node	5021 May 09 09:32	28°♋16'07		max. Earth dist.	5022 Apr 06 12:15	10°♍55'51	1.39244 AU
evening rise	5021 May 09 17:24	28°♋55'29					
	5021 May 10 06:19	0°♎		superior conj	5022 Apr 14 02:28	24°♍36'42	-1°42'15
evening max el	5021 May 26 16:25	26°♎30'18	19°25'28	minimum elong	5022 Apr 14 07:27	24°♍59'56	1°41'43
	5021 May 31 11:19	0°♏			5022 Apr 16 23:17	0°♐	
retrograde	5021 Jun 05 01:39	1°♏05'10		evening rise	5022 Apr 23 12:05	12°♐33'49	
evening set	5021 Jun 07 00:31	0°♏54'08		asc. node	5022 Apr 26 06:34	17°♐52'35	
	5021 Jun 09 22:45	30°♏♏			5022 May 03 02:02	0°♑	
desc. node	5021 Jun 14 19:42	27°♏18'56		evening max el	5022 May 09 17:26	8°♑43'47	18°39'15
inferior conj	5021 Jun 15 15:04	26°♏47'46	-0°14'24	retrograde	5022 May 17 16:10	12°♑38'36	
minimum elong	5021 Jun 15 14:26	26°♏48'47	0°14'11	evening set	5022 May 19 20:40	12°♑21'51	
transit middle	5021 Jun 15 14:26	26°♏48'47	0°14'11	inferior conj	5022 May 27 15:14	7°♑57'06	1°25'46
transit begin	5021 Jun 15 12:38	26°♏51'42		minimum elong	5022 May 27 18:08	7°♑51'36	1°24'48
transit end	5021 Jun 15 16:14	26°♏45'52		min. Earth dist.	5022 May 30 23:04	5°♑27'12	0.57544 AU
min. Earth dist.	5021 Jun 18 05:48	25°♏06'40	0.55854 AU	desc. node	5022 Jun 01 16:44	4°♑16'00	
morning rise	5021 Jun 24 01:35	22°♏07'57		morning rise	5022 Jun 04 12:21	2°♑41'46	
direct	5021 Jun 28 19:27	21°♏16'59		direct	5022 Jun 10 04:35	1°♑21'39	
morning max el	5021 Jul 12 21:24	28°♏23'51	25°04'47	morning max el	5022 Jun 24 13:30	8°♑55'52	26°32'27
	5021 Jul 14 11:58	0°♐			5022 Jul 10 11:58	0°♒	
	5021 Aug 03 07:27	0°♑		asc. node	5022 Jul 23 05:48	23°♒56'55	
asc. node	5021 Aug 05 08:46	4°♑05'59		morning set	5022 Jul 23 16:18	24°♒52'16	
morning set	5021 Aug 08 05:50	10°♑04'52			5022 Jul 26 01:48	0°♓	

superior conj	5022 Jul 30 15:42	10°Ω03'26	1°10'35	superior conj	5023 Jul 15 03:22	24°Ω55'11	0°50'22
minimum elong	5022 Jul 30 13:24	9°Ω50'43	1°10'12	minimum elong	5023 Jul 15 01:23	24°Ω44'17	0°49'59
max. Earth dist.	5022 Jul 30 23:40	10°Ω47'25	1.32051 AU		5023 Jul 17 10:36	0°Ω	
evening rise	5022 Aug 06 13:12	25°Ω01'20		evening rise	5023 Jul 21 22:36	9°Ω46'24	
	5022 Aug 08 23:00	0°Π			5023 Aug 01 07:13	0°Π	
	5022 Aug 26 08:30	0°Ω		desc. node	5023 Aug 15 13:02	20°Π38'53	
desc. node	5022 Aug 28 16:01	3°Ω09'17		evening max el	5023 Aug 19 01:25	24°Π18'45	25°55'09
evening max el	5022 Sep 06 04:03	12°Ω50'49	26°56'27		5023 Aug 26 23:31	0°Ω	
retrograde	5022 Sep 20 01:22	20°Ω01'21		retrograde	5023 Sep 02 00:31	1°Ω25'49	
evening set	5022 Sep 27 01:03	17°Ω53'57		evening set	5023 Sep 08 07:15	29°Π51'34	
min. Earth dist.	5022 Sep 30 18:13	15°Ω15'10	0.60689 AU		5023 Sep 08 00:10	30°RΠ	
inferior conj	5022 Oct 03 22:42	12°Ω34'55	-4°22'28	min. Earth dist.	5023 Sep 12 13:50	27°Π15'54	0.58616 AU
minimum elong	5022 Oct 04 04:54	12°Ω21'51	4°21'00	inferior conj	5023 Sep 15 18:58	24°Π55'25	-5°04'05
morning rise	5022 Oct 11 10:44	7°Ω47'27		minimum elong	5023 Sep 15 23:08	24°Π47'47	5°03'36
direct	5022 Oct 13 18:33	7°Ω26'17		morning rise	5023 Sep 23 17:18	20°Π31'06	
asc. node	5022 Oct 19 05:01	9°Ω27'39		direct	5023 Sep 26 03:21	20°Π12'01	
morning max el	5022 Oct 21 01:28	11°Ω03'05	18°02'59	morning max el	5023 Oct 04 08:33	24°Π08'27	18°36'24
	5022 Nov 02 14:01	0°Π		asc. node	5023 Oct 06 02:03	25°Π57'19	
morning set	5022 Nov 05 19:27	5°Π57'42			5023 Oct 09 05:04	0°Ω	
				morning set	5023 Oct 20 13:15	20°Ω01'27	
superior conj	5022 Nov 15 17:10	24°Π04'53	1°00'41		5023 Oct 25 16:51	0°Π	
minimum elong	5022 Nov 15 21:08	24°Π22'27	1°00'10	superior conj	5023 Oct 29 07:51	6°Π52'46	1°24'22
	5022 Nov 19 02:17	0°♂		minimum elong	5023 Oct 29 11:12	7°Π08'29	1°24'02
max. Earth dist.	5022 Nov 23 08:42	7°♂14'45	1.41922 AU	max. Earth dist.	5023 Nov 05 15:12	20°Π06'24	1.39882 AU
desc. node	5022 Nov 24 15:17	9°♂21'46		evening rise	5023 Nov 09 18:27	27°Π11'23	
evening rise	5022 Nov 28 21:54	16°♂19'03			5023 Nov 11 10:58	0°♂	
	5022 Dec 07 17:21	0°♂		desc. node	5023 Nov 11 12:19	0°♂05'35	
	5022 Dec 29 16:55	0°≈			5023 Dec 01 07:58	0°♂	
evening max el	5023 Jan 01 03:09	2°≈35'46	22°36'13	evening max el	5023 Dec 14 17:08	16°♂15'10	23°56'13
retrograde	5023 Jan 10 23:41	8°≈27'07		retrograde	5023 Dec 25 16:30	22°♂42'58	
asc. node	5023 Jan 15 04:17	6°≈55'35		evening set	5023 Dec 30 21:33	20°♂32'52	
evening set	5023 Jan 15 16:01	6°≈32'31		asc. node	5024 Jan 02 01:19	18°♂22'03	
inferior conj	5023 Jan 21 00:43	0°≈09'55	1°51'56	min. Earth dist.	5024 Jan 04 16:26	15°♂00'23	0.67931 AU
minimum elong	5023 Jan 20 22:33	0°≈17'26	1°51'12	inferior conj	5024 Jan 05 08:16	14°♂06'37	1°05'32
min. Earth dist.	5023 Jan 20 19:52	0°≈26'45	0.68107 AU	minimum elong	5024 Jan 05 06:47	14°♂11'37	1°04'58
	5023 Jan 21 03:35	30°R♂		morning rise	5024 Jan 10 16:03	8°♂02'25	
morning rise	5023 Jan 26 04:58	24°♂00'46		direct	5024 Jan 14 16:02	6°♂31'51	
direct	5023 Jan 30 18:47	22°♂07'33		morning max el	5024 Jan 22 16:50	11°♂08'02	20°35'15
morning max el	5023 Feb 08 21:42	27°♂27'42	21°53'53		5024 Feb 06 05:17	0°≈	
	5023 Feb 11 06:40	0°≈		desc. node	5024 Feb 07 11:33	1°≈50'37	
desc. node	5023 Feb 20 14:30	11°≈55'50		morning set	5024 Feb 20 15:49	21°≈47'25	
	5023 Mar 04 23:24	0°♂			5024 Feb 25 21:23	0°♂	
morning set	5023 Mar 13 13:11	13°♂23'51		max. Earth dist.	5024 Feb 29 16:33	6°♂04'46	1.43267 AU
max. Earth dist.	5023 Mar 19 11:01	23°♂03'41	1.41399 AU				
	5023 Mar 23 13:24	0°Υ		superior conj	5024 Mar 07 05:15	16°♂48'02	-2°08'50
superior conj	5023 Mar 27 03:42	6°Υ15'17	-2°01'36	minimum elong	5024 Mar 07 04:59	16°♂46'55	2°08'50
minimum elong	5023 Mar 27 07:37	6°Υ32'36	2°01'23		5024 Mar 14 22:56	0°Υ	
evening rise	5023 Apr 06 19:11	25°Υ35'41		evening rise	5024 Mar 19 10:24	7°Υ50'53	
	5023 Apr 09 04:28	0°♂		asc. node	5024 Mar 30 00:38	25°Υ58'03	
asc. node	5023 Apr 13 03:36	7°♂09'01			5024 Apr 01 18:01	0°♂	
evening max el	5023 Apr 23 01:43	21°♂28'44	18°13'16	evening max el	5024 Apr 05 13:48	4°♂35'28	18°06'49
retrograde	5023 Apr 30 01:32	24°♂59'32		retrograde	5024 Apr 12 01:55	7°♂57'34	
evening set	5023 May 02 12:50	24°♂33'56		evening set	5024 Apr 14 19:42	7°♂21'05	
inferior conj	5023 May 09 12:53	19°♂48'43	2°35'12	inferior conj	5024 Apr 21 04:59	2°♂15'55	3°15'21
minimum elong	5023 May 09 16:19	19°♂41'07	2°34'22	minimum elong	5024 Apr 21 07:13	2°♂10'15	3°15'02
min. Earth dist.	5023 May 12 22:14	16°♂50'08	0.59655 AU		5024 Apr 23 10:25	30°RΥ	
morning rise	5023 May 16 17:06	14°♂05'19		min. Earth dist.	5024 Apr 24 05:19	29°Υ13'29	0.61854 AU
desc. node	5023 May 19 13:44	12°♂45'52		morning rise	5024 Apr 27 17:00	26°Υ15'15	
direct	5023 May 23 02:59	12°♂10'38		direct	5024 May 04 12:20	23°Υ49'52	
morning max el	5023 Jun 06 11:50	20°♂02'10	27°30'59	desc. node	5024 May 05 10:46	23°Υ52'27	
	5023 Jun 15 00:27	0°Π			5024 May 16 18:05	0°♂	
	5023 Jun 03 06:57	0°Ω		morning max el	5024 May 18 16:13	1°♂49'45	27°52'45
morning set	5023 Jul 07 23:53	9°Ω29'01			5024 Jun 08 07:28	0°Π	
asc. node	5023 Jul 10 02:51	13°Ω58'11		morning set	5024 Jun 21 02:34	23°Π48'12	
max. Earth dist.	5023 Jul 14 11:04	23°Ω25'22	1.31947 AU		5024 Jun 24 02:05	0°Ω	
				asc. node	5024 Jun 25 23:55	4°Ω04'31	

max. Earth dist.	5024 Jun 26 19:44	5°☿51'30	1.32261 AU		5025 May 31 22:10	0°♊	
				morning set	5025 Jun 04 21:56	7°♊42'31	
superior conj	5024 Jun 28 13:21	9°☿37'53	0°26'27	max. Earth dist.	5025 Jun 09 21:52	17°♊54'45	1.33024 AU
minimum elong	5024 Jun 28 12:10	9°☿31'23	0°26'12				
evening rise	5024 Jul 05 10:04	24°☿34'06		superior conj	5025 Jun 12 19:49	24°♊05'41	-0°00'30
	5024 Jul 08 00:13	0°♊		minimum elong	5025 Jun 12 19:51	24°♊05'49	0°00'30
	5024 Jul 26 01:09	0°♊		behind sun begin	5025 Jun 12 14:29	23°♊37'08	
evening max el	5024 Jul 30 15:58	5°♊02'31	24°28'53	behind sun end	5025 Jun 13 01:12	24°♊34'32	
desc. node	5024 Aug 01 10:03	6°♊38'10		asc. node	5025 Jun 12 20:58	24°♊11'49	
retrograde	5024 Aug 13 12:42	12°♊01'56			5025 Jun 15 13:39	0°☿	
evening set	5024 Aug 18 13:05	11°♊05'42		evening rise	5025 Jun 19 21:44	9°☿18'30	
min. Earth dist.	5024 Aug 24 03:04	8°♊14'16	0.56722 AU		5025 Jun 30 15:32	0°♊	
inferior conj	5024 Aug 26 19:19	6°♊32'02	-5°16'16	evening max el	5025 Jul 12 04:56	15°♊24'25	22°51'32
minimum elong	5024 Aug 26 18:10	6°♊33'53	5°16'15	desc. node	5025 Jul 19 07:05	20°♊33'56	
morning rise	5024 Sep 04 01:43	2°♊28'53		retrograde	5025 Jul 25 11:58	22°♊02'00	
direct	5024 Sep 06 17:23	2°♊09'46		evening set	5025 Jul 28 23:45	21°♊35'21	
morning max el	5024 Sep 16 05:58	6°♊37'19	19°31'25	min. Earth dist.	5025 Aug 05 13:23	18°♊13'37	0.55349 AU
asc. node	5024 Sep 21 23:08	13°♊29'27		inferior conj	5025 Aug 07 00:34	17°♊23'03	-4°42'46
	5024 Oct 01 09:13	0°♊		minimum elong	5025 Aug 06 17:19	17°♊33'30	4°41'27
morning set	5024 Oct 03 15:11	4°♊28'17		morning rise	5025 Aug 15 13:01	13°♊32'23	
				direct	5025 Aug 18 13:15	13°♊11'13	
superior conj	5024 Oct 11 14:46	20°♊28'14	1°38'09	morning max el	5025 Aug 29 15:22	18°♊20'54	20°48'04
minimum elong	5024 Oct 11 16:39	20°♊37'33	1°38'03		5025 Sep 07 17:38	0°♊	
	5024 Oct 16 13:50	0°♊		asc. node	5025 Sep 08 20:12	1°♊49'26	
max. Earth dist.	5024 Oct 17 19:44	2°♊19'05	1.37780 AU	morning set	5025 Sep 17 22:23	19°♊09'48	
evening rise	5024 Oct 21 13:51	9°♊06'26			5025 Sep 23 03:30	0°♊	
desc. node	5024 Oct 28 09:21	20°♊42'23					
	5024 Nov 03 06:02	0°♊		superior conj	5025 Sep 25 09:15	4°♊37'19	1°43'26
evening max el	5024 Nov 26 05:51	29°♊58'43	25°12'34	minimum elong	5025 Sep 25 09:34	4°♊39'00	1°43'27
	5024 Nov 26 06:23	0°♊		max. Earth dist.	5025 Sep 30 04:05	14°♊13'13	1.35849 AU
retrograde	5024 Dec 08 05:07	6°♊53'43		evening rise	5025 Oct 04 04:50	21°♊55'20	
evening set	5024 Dec 13 23:37	4°♊29'39			5025 Oct 08 15:55	0°♊	
	5024 Dec 18 01:58	30°♊♊		desc. node	5025 Oct 15 06:22	11°♊06'56	
min. Earth dist.	5024 Dec 18 10:53	29°♊31'19	0.67401 AU		5025 Oct 28 01:36	0°♊	
asc. node	5024 Dec 18 22:21	28°♊54'04		evening max el	5025 Nov 08 18:38	13°♊42'05	26°17'57
inferior conj	5024 Dec 19 13:34	28°♊04'26	0°12'55	retrograde	5025 Nov 21 12:31	20°♊53'01	
minimum elong	5024 Dec 19 13:15	28°♊05'29	0°12'47	evening set	5025 Nov 27 20:22	18°♊18'06	
transit middle	5024 Dec 19 13:15	28°♊05'29	0°12'47	min. Earth dist.	5025 Dec 02 00:45	13°♊55'03	0.66524 AU
transit begin	5024 Dec 19 11:32	28°♊11'02		inferior conj	5025 Dec 03 14:42	11°♊58'57	-0°44'58
transit end	5024 Dec 19 14:57	27°♊59'56		minimum elong	5025 Dec 03 15:55	11°♊55'12	0°44'26
morning rise	5024 Dec 25 03:07	22°♊07'18		asc. node	5025 Dec 05 19:24	9°♊23'28	
direct	5024 Dec 28 14:47	20°♊57'13		morning rise	5025 Dec 09 12:03	6°♊11'30	
morning max el	5025 Jan 04 19:52	24°♊59'40	19°29'56	direct	5025 Dec 12 13:16	5°♊18'40	
	5025 Jan 09 03:58	0°♊		morning max el	5025 Dec 19 05:56	8°♊58'36	18°40'08
greatest brilliancy	5025 Jan 17 22:30	12°♊22'24	-0.7m		5026 Jan 03 06:12	0°♊	
desc. node	5025 Jan 24 08:36	22°♊05'43		morning set	5026 Jan 09 05:35	9°♊25'13	
	5025 Jan 29 11:55	0°♊		desc. node	5026 Jan 11 05:36	12°♊34'42	
morning set	5025 Jan 29 13:12	0°♊04'55			5026 Jan 22 07:37	0°♊	
max. Earth dist.	5025 Feb 11 05:16	19°♊51'59	1.44612 AU				
				superior conj	5026 Jan 25 11:07	4°♊56'02	-1°28'31
superior conj	5025 Feb 15 05:28	26°♊14'43	-1°58'30	minimum elong	5026 Jan 25 01:45	4°♊19'16	1°27'32
minimum elong	5025 Feb 14 22:55	25°♊48'31	1°58'08	max. Earth dist.	5026 Jan 24 23:10	4°♊09'11	1.45275 AU
	5025 Feb 17 13:32	0°♊		evening rise	5026 Feb 10 01:10	29°♊35'48	
evening rise	5025 Mar 01 05:23	19°♊12'04			5026 Feb 10 07:13	0°♊	
	5025 Mar 07 16:11	0°♊		greatest brilliancy	5026 Feb 17 22:08	12°♊11'22	-0.9m
asc. node	5025 Mar 16 21:40	14°♊11'36			5026 Mar 02 05:49	0°♊	
evening max el	5025 Mar 20 02:38	17°♊56'45	18°19'12	evening max el	5026 Mar 03 13:35	1°♊25'54	18°49'42
retrograde	5025 Mar 26 12:58	21°♊24'03		asc. node	5026 Mar 03 18:42	1°♊38'46	
evening set	5025 Mar 29 13:01	20°♊35'21		retrograde	5026 Mar 10 06:45	5°♊10'48	
inferior conj	5025 Apr 04 11:30	15°♊11'19	3°32'00	evening set	5026 Mar 13 13:24	4°♊09'04	
minimum elong	5025 Apr 04 12:04	15°♊09'40	3°31'57		5026 Mar 17 22:18	30°♊♊	
min. Earth dist.	5025 Apr 06 21:31	12°♊27'09	0.63875 AU	inferior conj	5026 Mar 19 04:32	28°♊27'42	3°30'47
morning rise	5025 Apr 10 10:13	9°♊01'45		minimum elong	5026 Mar 19 03:41	28°♊30'23	3°30'44
direct	5025 Apr 17 06:17	6°♊17'08		min. Earth dist.	5026 Mar 20 22:51	26°♊16'46	0.65542 AU
desc. node	5025 Apr 22 07:49	7°♊34'00		morning rise	5026 Mar 24 17:31	22°♊14'10	
morning max el	5025 May 01 00:38	14°♊15'26	27°37'17	direct	5026 Mar 31 07:08	19°♊24'14	
	5025 May 13 18:36	0°♊		desc. node	5026 Apr 09 04:51	23°♊19'07	

morning max el	5026 Apr 13 10:39	27° X 09'38	26°49'43	morning rise	5027 Mar 08 11:33	5° X 44'16	
	5026 Apr 16 02:38	0° Y		direct	5027 Mar 14 13:59	3° X 01'08	
	5026 May 07 10:21	0° B		morning max el	5027 Mar 26 20:12	10° X 20'03	25°38'10
morning set	5026 May 19 06:52	21° B 03'06		desc. node	5027 Mar 27 01:51	10° X 34'27	
max. Earth dist.	5026 May 23 14:13	29° B 28'55	1.34256 AU		5027 Apr 11 10:32	0° Y	
	5026 May 23 20:25	0° II			5027 Apr 30 00:55	0° B	
				morning set	5027 May 02 01:04	3° B 37'12	
superior conj	5026 May 27 20:37	8° II 12'32	-0°29'32	max. Earth dist.	5027 May 05 19:20	10° B 37'24	1.35939 AU
minimum elong	5026 May 27 22:12	8° II 20'46	0°29'13				
asc. node	5026 May 30 18:00	14° II 16'20		superior conj	5027 May 11 13:00	21° B 49'57	-0°59'18
evening rise	5026 Jun 04 07:43	23° II 53'52		minimum elong	5027 May 11 16:17	22° B 06'23	0°58'44
	5026 Jun 07 07:05	0° B			5027 May 15 13:36	0° II	
evening max el	5026 Jun 24 00:18	25° B 57'47	21°18'44	asc. node	5027 May 17 15:01	4° II 13'20	
	5026 Jun 29 05:41	0° Ω		evening rise	5027 May 19 13:49	8° II 12'41	
retrograde	5026 Jul 06 01:37	1° Ω 54'28			5027 May 31 12:57	0° B	
desc. node	5026 Jul 06 04:06	1° Ω 54'26		evening max el	5027 Jun 06 07:23	7° B 06'23	20°01'10
evening set	5026 Jul 08 09:54	1° Ω 41'46		retrograde	5027 Jun 16 16:26	12° B 10'56	
	5026 Jul 13 10:51	30° R B		evening set	5027 Jun 18 14:36	12° B 01'13	
inferior conj	5026 Jul 17 18:27	27° B 42'57	-3°18'10	desc. node	5027 Jun 23 01:07	10° B 33'30	
minimum elong	5026 Jul 17 10:02	27° B 54'44	3°15'33	inferior conj	5027 Jun 27 14:55	8° B 01'16	-1°21'58
min. Earth dist.	5026 Jul 17 23:39	27° B 35'40	0.54795 AU	minimum elong	5027 Jun 27 11:06	8° B 07'02	1°20'34
morning rise	5026 Jul 26 10:52	23° B 47'57		min. Earth dist.	5027 Jun 29 11:52	6° B 53'41	0.55201 AU
direct	5026 Jul 29 22:42	23° B 21'37		morning rise	5027 Jul 06 05:52	3° B 41'19	
morning max el	5026 Aug 11 13:20	29° B 19'52	22°22'55	direct	5027 Jul 10 10:49	3° B 02'44	
	5026 Aug 12 06:10	0° Ω		morning max el	5027 Jul 24 04:15	9° B 47'43	24°06'45
asc. node	5026 Aug 26 17:15	20° Ω 45'47			5027 Aug 08 03:25	0° Ω	
	5026 Aug 31 10:26	0° P		asc. node	5027 Aug 13 14:16	10° Ω 08'37	
morning set	5026 Sep 02 08:44	4° P 00'03		morning set	5027 Aug 17 20:24	18° Ω 52'51	
					5027 Aug 23 00:03	0° P	
superior conj	5026 Sep 09 11:45	19° P 09'38	1°41'32				
minimum elong	5026 Sep 09 10:47	19° P 04'29	1°41'30	superior conj	5027 Aug 24 19:27	3° P 55'58	1°33'34
max. Earth dist.	5026 Sep 12 20:18	26° P 10'50	1.34250 AU	minimum elong	5027 Aug 24 17:36	3° P 45'54	1°33'22
	5026 Sep 14 17:14	0° B		max. Earth dist.	5027 Aug 26 20:59	8° P 23'04	1.33057 AU
evening rise	5026 Sep 17 11:11	5° B 27'06		evening rise	5027 Sep 01 04:53	19° P 30'26	
	5026 Oct 01 08:47	0° M			5027 Sep 06 14:22	0° B	
desc. node	5026 Oct 02 03:23	1° M 13'17		desc. node	5027 Sep 19 00:25	20° B 53'04	
evening max el	5026 Oct 22 07:22	27° M 16'47	27°04'51		5027 Sep 25 12:28	0° M	
	5026 Oct 25 09:19	0° X		evening max el	5027 Oct 04 18:44	10° M 30'57	27°26'28
retrograde	5026 Nov 04 14:13	4° X 34'12		retrograde	5027 Oct 18 09:52	17° M 48'30	
evening set	5026 Nov 11 09:41	1° X 54'00		evening set	5027 Oct 25 12:49	15° M 11'44	
	5026 Nov 13 12:34	30° R M		min. Earth dist.	5027 Oct 29 05:33	11° M 57'18	0.63715 AU
min. Earth dist.	5026 Nov 15 07:39	28° M 06'27	0.65294 AU	inferior conj	5027 Oct 31 19:26	9° M 19'33	-2°50'02
inferior conj	5026 Nov 17 09:30	25° M 45'57	-1°46'42	minimum elong	5027 Nov 01 00:21	9° M 07'01	2°48'14
minimum elong	5026 Nov 17 12:34	25° M 37'19	1°45'26	morning rise	5027 Nov 07 13:22	4° M 00'45	
asc. node	5026 Nov 22 16:27	20° M 44'56		asc. node	5027 Nov 09 13:28	3° M 32'12	
morning rise	5026 Nov 23 16:27	20° M 11'13		direct	5027 Nov 10 00:20	3° M 31'10	
direct	5026 Nov 26 09:22	19° M 31'53		morning max el	5027 Nov 16 13:41	6° M 56'04	17°50'58
morning max el	5026 Dec 02 20:49	22° M 59'40	18°06'54		5027 Dec 01 19:18	0° X	
	5026 Dec 08 11:12	0° X		morning set	5027 Dec 03 04:08	2° X 21'37	
morning set	5026 Dec 21 03:25	20° X 14'16					
	5026 Dec 27 02:47	0° B		superior conj	5027 Dec 15 16:35	23° X 29'19	0°02'05
desc. node	5026 Dec 29 02:37	3° B 13'22		minimum elong	5027 Dec 15 16:48	23° X 30'13	0°02'04
				behind sun begin	5027 Dec 15 07:07	22° X 50'29	
superior conj	5027 Jan 04 16:28	13° B 43'31	-0°44'32	behind sun end	5027 Dec 16 02:30	24° X 09'52	
minimum elong	5027 Jan 04 10:57	13° B 21'42	0°43'46	desc. node	5027 Dec 15 23:39	23° X 58'14	
max. Earth dist.	5027 Jan 07 18:53	18° B 36'56	1.45192 AU		5027 Dec 19 16:56	0° B	
	5027 Jan 15 01:40	0° \approx		max. Earth dist.	5027 Dec 21 13:04	2° B 56'30	1.44382 AU
evening rise	5027 Jan 20 23:34	9° \approx 10'53		evening rise	5027 Dec 31 10:11	18° B 23'31	
greatest brilliancy	5027 Feb 02 21:46	29° \approx 00'54	-0.7m		5028 Jan 08 01:20	0° \approx	
	5027 Feb 03 13:35	0° X		evening max el	5028 Jan 28 22:06	28° \approx 31'33	20°38'31
evening max el	5027 Feb 14 20:27	14° X 57'55	19°36'52		5028 Jan 30 10:47	0° X	
asc. node	5027 Feb 18 15:43	18° X 05'58		asc. node	5028 Feb 05 12:44	3° X 18'57	
retrograde	5027 Feb 22 04:04	19° X 11'04		retrograde	5028 Feb 06 02:23	3° X 20'41	
evening set	5027 Feb 25 18:13	17° X 55'36		evening set	5028 Feb 10 01:23	1° X 50'42	
inferior conj	5027 Mar 03 04:51	11° X 58'57	3°15'54		5028 Feb 12 00:39	30° R \approx	
minimum elong	5027 Mar 03 03:00	12° X 05'05	3°15'37	inferior conj	5028 Feb 15 09:51	25° \approx 41'29	2°50'11
min. Earth dist.	5027 Mar 04 08:14	10° X 28'37	0.66791 AU	minimum elong	5028 Feb 15 07:29	25° \approx 49'33	2°49'38

min. Earth dist.	5028 Feb 15 23:46	24° \approx 53'45	0.67617 AU	min. Earth dist.	5029 Jan 29 19:06	9° \approx 25'12	0.68040 AU
morning rise	5028 Feb 20 13:24	19° \approx 27'31		morning rise	5029 Feb 03 20:34	3° \approx 19'54	
direct	5028 Feb 26 02:10	17° \approx 00'02		direct	5029 Feb 08 18:46	1° \approx 13'18	
morning max el	5028 Mar 08 04:54	23° \approx 38'31	24°12'38	morning max el	5029 Feb 18 14:47	7° \approx 02'16	22°43'18
desc. node	5028 Mar 12 22:51	28° \approx 54'45		desc. node	5029 Feb 27 19:54	18° \approx 01'13	
	5028 Mar 13 20:27	0° \mathbb{H}			5029 Mar 08 09:38	0° \mathbb{H}	
	5028 Apr 03 20:05	0° \mathbb{Y}		morning set	5029 Mar 24 19:09	25° \mathbb{H} 26'48	
morning set	5028 Apr 12 23:10	15° \mathbb{Y} 10'27			5029 Mar 27 12:48	0° \mathbb{Y}	
max. Earth dist.	5028 Apr 16 16:00	21° \mathbb{Y} 42'22	1.37981 AU	max. Earth dist.	5029 Mar 29 11:26	3° \mathbb{Y} 17'37	1.40181 AU
	5028 Apr 21 04:29	0° \mathbb{B}					
superior conj	5028 Apr 23 17:40	4° \mathbb{B} 49'47	-1°27'42	superior conj	5029 Apr 06 06:21	17° \mathbb{Y} 01'16	-1°51'36
minimum elong	5028 Apr 23 22:20	5° \mathbb{B} 12'06	1°27'05	minimum elong	5029 Apr 06 11:12	17° \mathbb{Y} 23'20	1°51'11
evening rise	5028 May 02 13:33	22° \mathbb{B} 08'04		evening rise	5029 Apr 13 05:52	0° \mathbb{B}	
asc. node	5028 May 03 12:02	23° \mathbb{B} 58'42		asc. node	5029 Apr 16 03:46	5° \mathbb{B} 31'32	
	5028 May 06 14:43	0° \mathbb{II}			5029 Apr 20 09:04	13° \mathbb{B} 27'08	
evening max el	5028 May 19 02:40	18° \mathbb{II} 57'46	19°03'17	evening max el	5029 Apr 30 22:42	0° \mathbb{II}	
retrograde	5028 May 27 20:12	23° \mathbb{II} 13'58		retrograde	5029 May 02 07:17	1° \mathbb{II} 25'59	18°25'48
evening set	5028 May 29 20:51	23° \mathbb{II} 01'06		evening set	5029 May 09 18:42	5° \mathbb{II} 08'12	
inferior conj	5028 Jun 07 03:04	18° \mathbb{II} 47'41	0°31'29	inferior conj	5029 May 12 02:09	4° \mathbb{II} 48'00	
minimum elong	5028 Jun 07 04:19	18° \mathbb{II} 45'30	0°31'01	minimum elong	5029 May 19 12:31	0° \mathbb{II} 14'56	1°59'05
desc. node	5028 Jun 08 22:07	17° \mathbb{II} 33'00			5029 May 19 15:57	0° \mathbb{II} 07'58	1°58'04
min. Earth dist.	5028 Jun 10 03:13	16° \mathbb{II} 43'40	0.56498 AU	min. Earth dist.	5029 May 19 19:52	30° \mathbb{R} \mathbb{B}	
morning rise	5028 Jun 15 08:32	13° \mathbb{II} 51'52		desc. node	5029 May 22 22:51	27° \mathbb{B} 29'42	0.58416 AU
direct	5028 Jun 20 11:59	12° \mathbb{II} 49'33		desc. node	5029 May 26 19:07	24° \mathbb{B} 56'22	
morning max el	5028 Jul 04 18:23	20° \mathbb{II} 10'24	25°44'49	morning rise	5029 May 27 02:36	24° \mathbb{B} 46'29	
	5028 Jul 13 04:21	0° \mathbb{B}		direct	5029 Jun 02 03:27	23° \mathbb{B} 11'23	
asc. node	5028 Jul 30 11:18	29° \mathbb{B} 50'55			5029 Jun 15 13:57	0° \mathbb{II}	
	5028 Jul 30 13:03	0° \mathbb{O}		morning max el	5029 Jun 16 12:46	0° \mathbb{II} 54'24	27°01'26
morning set	5028 Aug 01 07:45	3° \mathbb{O} 43'28			5029 Jul 07 06:17	0° \mathbb{B}	
superior conj	5028 Aug 08 06:10	18° \mathbb{O} 49'24	1°20'20	morning set	5029 Jul 16 17:13	18° \mathbb{B} 26'58	
minimum elong	5028 Aug 08 03:54	18° \mathbb{O} 36'52	1°20'00	asc. node	5029 Jul 17 08:21	19° \mathbb{B} 46'50	
max. Earth dist.	5028 Aug 09 04:24	20° \mathbb{O} 51'34	1.32294 AU		5029 Jul 22 01:28	0° \mathbb{O}	
	5028 Aug 13 09:44	0° \mathbb{M}		superior conj	5029 Jul 23 18:01	3° \mathbb{O} 43'47	1°02'30
evening rise	5028 Aug 15 06:43	3° \mathbb{M} 56'24		minimum elong	5029 Jul 23 15:47	3° \mathbb{O} 31'30	1°02'06
	5028 Aug 29 07:51	0° \mathbb{A}		max. Earth dist.	5029 Jul 23 15:25	3° \mathbb{O} 29'25	1.31954 AU
desc. node	5028 Sep 04 21:26	9° \mathbb{A} 55'15		evening rise	5029 Jul 30 14:02	18° \mathbb{O} 37'04	
evening max el	5028 Sep 16 02:39	23° \mathbb{A} 12'08	27°17'07		5029 Aug 05 04:44	0° \mathbb{M}	
	5028 Sep 26 19:06	0° \mathbb{M}		desc. node	5029 Aug 22 18:27	28° \mathbb{M} 04'50	
retrograde	5028 Sep 29 22:43	0° \mathbb{M} 26'00			5029 Aug 24 08:24	0° \mathbb{A}	
	5028 Oct 03 00:16	30° \mathbb{R} \mathbb{A}		evening max el	5029 Aug 29 04:41	5° \mathbb{A} 09'46	26°34'14
evening set	5028 Oct 07 02:10	28° \mathbb{A} 04'21		retrograde	5029 Aug 29 04:41	5° \mathbb{A} 09'46	26°34'14
min. Earth dist.	5028 Oct 10 17:11	25° \mathbb{A} 15'50	0.61843 AU	retrograde	5029 Sep 12 03:18	12° \mathbb{A} 18'45	
inferior conj	5028 Oct 13 17:29	22° \mathbb{A} 32'08	-3°51'02	evening set	5029 Sep 18 21:12	10° \mathbb{A} 24'40	
minimum elong	5028 Oct 13 23:39	22° \mathbb{A} 18'08	3°49'14	min. Earth dist.	5029 Sep 22 18:25	7° \mathbb{A} 49'10	0.59796 AU
morning rise	5028 Oct 20 23:00	17° \mathbb{A} 32'19		inferior conj	5029 Sep 26 00:15	5° \mathbb{A} 15'13	-4°42'45
direct	5028 Oct 23 06:53	17° \mathbb{A} 09'04		minimum elong	5029 Sep 26 05:59	5° \mathbb{A} 03'49	4°41'41
asc. node	5028 Oct 26 10:31	17° \mathbb{A} 53'14		morning rise	5029 Oct 03 16:51	0° \mathbb{A} 37'10	
morning max el	5028 Oct 30 05:21	20° \mathbb{A} 39'27	17°53'07	direct	5029 Oct 06 01:06	0° \mathbb{A} 17'12	
	5028 Nov 06 05:15	0° \mathbb{M}		asc. node	5029 Oct 13 07:34	3° \mathbb{A} 40'21	
morning set	5028 Nov 15 01:14	15° \mathbb{M} 26'56		morning max el	5029 Oct 13 16:32	4° \mathbb{A} 01'32	18°14'38
	5028 Nov 23 04:26	0° \mathbb{A}		morning set	5029 Oct 29 12:53	29° \mathbb{A} 13'38	
superior conj	5028 Nov 25 19:00	4° \mathbb{A} 31'38	0°42'11		5029 Oct 29 22:41	0° \mathbb{M}	
minimum elong	5028 Nov 25 22:27	4° \mathbb{A} 46'28	0°41'42	superior conj	5029 Nov 07 21:56	16° \mathbb{M} 45'08	1°12'00
desc. node	5028 Dec 01 20:41	14° \mathbb{A} 45'17		minimum elong	5029 Nov 08 01:49	17° \mathbb{M} 02'46	1°11'33
max. Earth dist.	5028 Dec 03 03:10	16° \mathbb{A} 50'25	1.42952 AU		5029 Nov 15 10:41	0° \mathbb{A}	
evening rise	5028 Dec 10 00:31	27° \mathbb{A} 51'54		max. Earth dist.	5029 Nov 15 12:29	0° \mathbb{A} 07'38	1.41079 AU
	5028 Dec 11 09:20	0° \mathbb{B}		desc. node	5029 Nov 18 17:45	5° \mathbb{A} 31'28	
	5028 Dec 31 20:00	0° \approx		evening rise	5029 Nov 20 08:14	8° \mathbb{A} 09'32	
evening max el	5029 Jan 10 18:21	12° \approx 06'32	21°51'17		5029 Dec 04 11:53	0° \mathbb{B}	
retrograde	5029 Jan 19 23:40	17° \approx 35'20		evening max el	5029 Dec 24 10:18	25° \mathbb{B} 44'37	23°10'18
asc. node	5029 Jan 22 09:46	17° \approx 04'05			5029 Dec 29 11:27	0° \approx	
evening set	5029 Jan 24 09:08	15° \approx 50'03		retrograde	5030 Jan 03 18:21	1° \approx 51'49	
inferior conj	5029 Jan 29 17:19	9° \approx 31'24	2°15'30		5030 Jan 08 11:27	30° \mathbb{R} \mathbb{B}	
minimum elong	5029 Jan 29 14:56	9° \approx 39'39	2°14'46	evening set	5030 Jan 08 15:56	29° \mathbb{B} 50'45	
				asc. node	5030 Jan 09 06:48	29° \mathbb{B} 17'41	
				min. Earth dist.	5030 Jan 13 15:52	23° \mathbb{B} 59'01	0.68080 AU

inferior conj	5030 Jan 14 01:21	23°  26'19	1°33'07	morning rise	5031 Jan 03 18:09	1°  22'06	
minimum elong	5030 Jan 13 23:26	23°  32'58	1°32'24	direct	5031 Jan 07 12:46	0°  00'31	
morning rise	5030 Jan 19 06:49	17°  18'59		morning max el	5031 Jan 15 04:08	4°  20'28	20°05'44
direct	5030 Jan 23 14:43	15°  35'16		desc. node	5031 Feb 01 14:00	27°  45'16	
morning max el	5030 Feb 01 05:38	20°  35'17	21°18'59		5031 Feb 03 01:54	0° 	
	5030 Feb 09 03:13	0° 		morning set	5031 Feb 11 08:03	12°  35'44	
desc. node	5030 Feb 14 16:57	7°  41'09		max. Earth dist.	5031 Feb 21 22:25	29°  13'44	1.43915 AU
	5030 Mar 01 15:23	0° 			5031 Feb 22 09:59	0° 	
morning set	5030 Mar 04 10:42	4°  23'37		superior conj	5031 Feb 27 12:47	8°  17'16	-2°06'51
max. Earth dist.	5030 Mar 11 12:57	15°  48'37	1.42253 AU	minimum elong	5031 Feb 27 09:52	8°  05'21	2°06'47
				evening rise	5031 Mar 12 11:49	0° 	
superior conj	5030 Mar 18 22:06	28°  13'16	-2°06'30		5031 Mar 12 09:56	0° 	
minimum elong	5030 Mar 19 00:40	28°  24'17	2°06'25	asc. node	5031 Mar 25 03:08	21°  08'01	
	5030 Mar 19 22:49	0° 		evening max el	5031 Mar 30 06:25	27°  35'36	18°09'46
evening rise	5030 Mar 30 04:39	18°  14'28			5031 Apr 02 07:31	0° 	
	5030 Apr 05 18:21	0° 		retrograde	5031 Apr 05 16:37	0°  58'27	
asc. node	5030 Apr 07 06:06	2°  32'40		evening set	5031 Apr 08 13:05	0°  16'49	
evening max el	5030 Apr 15 17:39	14°  21'31	18°08'09		5031 Apr 09 02:01	30°  R 	
retrograde	5030 Apr 22 10:57	17°  46'28		inferior conj	5031 Apr 14 17:17	25°  03'06	3°24'55
evening set	5030 Apr 25 01:14	17°  16'15		minimum elong	5031 Apr 14 18:48	24°  05'00	3°24'45
inferior conj	5030 May 01 18:29	12°  22'18	2°55'31	min. Earth dist.	5031 Apr 17 11:43	22°  06'26	0.62747 AU
minimum elong	5030 May 01 21:31	12°  15'08	2°54'54	morning rise	5031 Apr 20 23:13	18°  05'48	
min. Earth dist.	5030 May 05 00:56	9°  19'18	0.60605 AU	direct	5031 Apr 27 19:42	16°  02'30	
morning rise	5030 May 08 15:35	6°  30'41		desc. node	5031 Apr 30 13:11	16°  04'51	
desc. node	5030 May 13 16:09	4°  29'28		morning max el	5031 May 11 20:15	24°  02'30	27°50'37
direct	5030 May 15 06:44	4°  22'01			5031 May 16 22:09	0° 	
morning max el	5030 May 29 13:37	12°  17'13	27°44'55		5031 Jun 05 22:14	0° 	
	5030 Jun 12 13:13	0° 		morning set	5031 Jun 14 22:54	17°  06'45	
	5030 Jun 29 12:27	0° 		max. Earth dist.	5031 Jun 20 08:52	28°  23'38	1.32537 AU
morning set	5030 Jun 30 22:58	2°  56'49		asc. node	5031 Jun 21 02:26	29°  25'51	
asc. node	5030 Jul 04 05:23	9°  50'32			5031 Jun 21 02:50	0° 	
max. Earth dist.	5030 Jul 07 02:14	16°  04'25	1.32031 AU				
				superior conj	5031 Jun 22 13:54	3°  09'26	0°15'22
superior conj	5030 Jul 08 05:10	18°  32'17	0°40'39	minimum elong	5031 Jun 22 13:11	3°  05'30	0°15'12
minimum elong	5030 Jul 08 03:28	18°  22'56	0°40'18	behind sun begin	5031 Jun 22 11:36	2°  57'00	
	5030 Jul 13 10:34	0° 		behind sun end	5031 Jun 22 14:45	3°  14'01	
evening rise	5030 Jul 15 00:34	3°  02'41		evening rise	5031 Jun 29 12:23	18°  11'35	
	5030 Jul 29 04:53	0° 			5031 Jul 05 07:15	0° 	
desc. node	5030 Aug 09 15:28	14°  19'38		evening max el	5031 Jul 23 11:50	26°  04'48	23°47'41
evening max el	5030 Aug 10 23:03	16°  17'53	25°20'51		5031 Jul 27 06:32	0° 	
retrograde	5030 Aug 24 21:38	23°  11'47		desc. node	5031 Jul 27 12:28	0°  10'37	
evening set	5030 Aug 30 17:05	22°  03'57		retrograde	5031 Aug 06 04:14	3°  14'02	
min. Earth dist.	5030 Sep 04 10:45	19°  17'50	0.57773 AU	evening set	5031 Aug 10 13:18	2°  13'09	
inferior conj	5030 Sep 07 12:16	17°  17'50	-5°13'51		5031 Aug 16 18:55	30°  R 	
minimum elong	5030 Sep 07 14:33	17°  13'55	5°13'44	min. Earth dist.	5031 Aug 16 21:57	29°  05'31	0.56063 AU
morning rise	5030 Sep 15 14:17	13°  10'52		inferior conj	5031 Aug 19 03:59	28°  03'52	-5°08'23
direct	5030 Sep 18 02:33	12°  10'43'50		minimum elong	5031 Aug 19 00:00	28°  03'54	5°08'01
morning max el	5030 Sep 26 19:48	16°  15'55	18°57'06	morning rise	5031 Aug 27 13:13	24°  03'58	
asc. node	5030 Sep 30 04:38	20°  13'07		direct	5031 Aug 30 08:19	24°  03'14	
	5030 Oct 06 07:10	0° 		morning max el	5031 Sep 09 12:14	29°  01'49	20°01'30
morning set	5030 Oct 13 10:33	13°  02'14			5031 Sep 10 12:03	0° 	
				asc. node	5031 Sep 17 01:41	8°  13'43	
superior conj	5030 Oct 21 20:07	29°  05'43	1°31'21	morning set	5031 Sep 27 14:58	28°  01'43	
minimum elong	5030 Oct 21 22:54	0° 	1°31'07		5031 Sep 28 14:12	0° 	
	5030 Oct 21 21:15	0° 		superior conj	5031 Oct 05 08:26	13°  05'35	1°41'21
max. Earth dist.	5030 Oct 28 18:05	12°  42'53	1.38984 AU	minimum elong	5031 Oct 05 09:39	13°  05'39	1°41'19
evening rise	5030 Nov 01 14:41	19°  18'30		max. Earth dist.	5031 Oct 10 23:35	24°  04'26	1.36925 AU
desc. node	5030 Nov 05 14:47	26°  12'30			5031 Oct 13 19:22	0° 	
	5030 Nov 07 22:41	0° 		evening rise	5031 Oct 14 18:50	1°  14'46'52	
	5030 Nov 28 17:08	0° 		desc. node	5031 Oct 23 11:47	16°  14'44'14	
evening max el	5030 Dec 06 23:37	9°  25'57	24°29'35		5031 Nov 01 01:37	0° 	
retrograde	5030 Dec 18 09:21	16°  05'54		evening max el	5031 Nov 19 12:01	23°  08'49	25°42'09
evening set	5030 Dec 23 20:12	13°  04'29			5031 Nov 29 23:38	0° 	
asc. node	5030 Dec 27 03:51	10°  15'16		retrograde	5031 Dec 01 19:48	0°  12'14	
min. Earth dist.	5030 Dec 28 11:43	8°  31'40	0.67752 AU		5031 Dec 03 14:17	30°  R 	
inferior conj	5030 Dec 29 08:10	7°  23'20	0°43'57				
minimum elong	5030 Dec 29 07:08	7°  26'49	0°43'32				

evening set	5031 Dec 07 20:14	27° ♊ 42'41		evening rise	5032 Sep 26 16:53	14° ♊ 55'33	
min. Earth dist.	5031 Dec 12 04:22	22° ♊ 59'32	0.67068 AU		5032 Oct 05 02:13	0° ♊	
inferior conj	5031 Dec 13 11:53	21° ♊ 19'24	-0°11'06	desc. node	5032 Oct 09 08:47	7° ♊ 01'48	
minimum elong	5031 Dec 13 12:11	21° ♊ 18'29	0°10'58		5032 Oct 25 17:37	0° ♊	
transit middle	5031 Dec 13 12:11	21° ♊ 18'29	0°10'58	evening max el	5032 Nov 01 00:42	6° ♊ 49'22	26°40'36
transit begin	5031 Dec 13 10:07	21° ♊ 25'04		retrograde	5032 Nov 14 01:06	14° ♊ 05'02	
transit end	5031 Dec 13 14:15	21° ♊ 11'54		evening set	5032 Nov 20 14:07	11° ♊ 26'52	
asc. node	5031 Dec 14 00:54	20° ♊ 38'11		min. Earth dist.	5032 Nov 24 15:36	7° ♊ 18'58	0.66035 AU
morning rise	5031 Dec 19 04:32	15° ♊ 26'20		inferior conj	5032 Nov 26 10:37	5° ♊ 11'32	-1°10'50
direct	5031 Dec 22 11:28	14° ♊ 24'12		minimum elong	5032 Nov 26 12:35	5° ♊ 05'40	1°09'58
morning max el	5031 Dec 29 10:26	18° ♊ 15'40	19°06'50	asc. node	5032 Nov 29 21:56	1° ♊ 24'04	
	5032 Jan 07 13:57	0° ♋			5032 Dec 01 15:29	30° ♊	
greatest brilliancy	5032 Jan 12 22:25	8° ♋ 01'52	-0.8m	morning rise	5032 Dec 02 11:51	29° ♊ 29'10	
desc. node	5032 Jan 19 11:02	18° ♋ 06'25		direct	5032 Dec 05 09:09	28° ♊ 42'42	
morning set	5032 Jan 21 11:01	21° ♋ 12'49			5032 Dec 09 05:08	0° ♋	
	5032 Jan 27 02:25	0° ♋		morning max el	5032 Dec 11 22:56	2° ♋ 16'40	18°23'56
max. Earth dist.	5032 Feb 04 13:37	13° ♋ 15'18	1.44973 AU		5032 Dec 30 22:06	0° ♋	
				morning set	5032 Dec 31 15:37	1° ♋ 10'17	
superior conj	5032 Feb 07 03:25	17° ♋ 19'08	-1°48'03	desc. node	5033 Jan 05 08:03	8° ♋ 40'01	
minimum elong	5032 Feb 06 18:51	16° ♋ 45'18	1°47'23				
	5032 Feb 15 01:55	0° ♌		superior conj	5033 Jan 16 06:23	25° ♋ 56'19	-1°10'58
evening rise	5032 Feb 21 21:07	11° ♌ 04'33		minimum elong	5033 Jan 15 21:59	25° ♋ 23'24	1°09'57
	5032 Mar 04 13:00	0° ♌		max. Earth dist.	5033 Jan 17 08:07	27° ♋ 37'15	1.45324 AU
asc. node	5032 Mar 11 00:10	9° ♌ 03'07			5033 Jan 18 20:33	0° ♌	
evening max el	5032 Mar 12 18:39	11° ♌ 00'14	18°30'01	evening rise	5033 Feb 01 07:09	21° ♌ 05'13	
retrograde	5032 Mar 19 07:05	14° ♌ 34'03			5033 Feb 06 22:57	0° ♌	
evening set	5032 Mar 22 09:45	13° ♌ 40'02		greatest brilliancy	5033 Feb 11 13:57	7° ♌ 13'34	-0.8m
inferior conj	5032 Mar 28 04:43	8° ♌ 08'19	3°33'22	evening max el	5033 Feb 24 04:04	24° ♌ 30'51	19°07'52
minimum elong	5032 Mar 28 04:38	8° ♌ 08'33	3°33'22	asc. node	5033 Feb 25 21:12	26° ♌ 06'29	
min. Earth dist.	5032 Mar 30 08:02	5° ♌ 36'48	0.64624 AU	retrograde	5033 Mar 03 02:40	28° ♌ 26'45	
morning rise	5032 Apr 02 22:48	1° ♌ 56'17		evening set	5033 Mar 06 12:17	27° ♌ 19'28	
	5032 Apr 05 21:38	30° ♌		inferior conj	5033 Mar 12 01:12	21° ♌ 31'33	3°25'56
direct	5032 Apr 09 16:42	29° ♌ 07'46		minimum elong	5033 Mar 11 23:52	21° ♌ 35'50	3°25'48
	5032 Apr 13 18:14	0° ♍		min. Earth dist.	5033 Mar 13 13:07	19° ♌ 36'57	0.66123 AU
desc. node	5032 Apr 16 10:13	1° ♍ 23'09		morning rise	5033 Mar 17 11:05	15° ♌ 17'05	
morning max el	5032 Apr 23 05:52	7° ♍ 02'57	27°20'37	direct	5033 Mar 23 20:27	12° ♌ 28'22	
	5032 May 10 21:33	0° ♍		desc. node	5033 Apr 03 07:16	17° ♌ 49'52	
	5032 May 28 04:23	0° ♎		morning max el	5033 Apr 05 15:47	20° ♌ 04'58	26°21'34
morning set	5032 May 28 14:16	0° ♎ 48'06			5033 Apr 14 03:47	0° ♍	
max. Earth dist.	5032 Jun 02 07:14	10° ♎ 15'01	1.33491 AU	morning set	5033 May 04 00:07	0° ♍	
					5033 May 11 17:32	13° ♍ 50'34	
superior conj	5032 Jun 05 18:13	17° ♎ 28'51	-0°12'37	max. Earth dist.	5033 May 15 18:24	21° ♍ 34'56	1.34916 AU
minimum elong	5032 Jun 05 18:52	17° ♎ 32'18	0°12'30		5033 May 19 23:21	0° ♎	
behind sun begin	5032 Jun 05 15:25	17° ♎ 13'58					
behind sun end	5032 Jun 05 22:20	17° ♎ 50'39		superior conj	5033 May 20 15:48	1° ♎ 24'05	-0°42'10
asc. node	5032 Jun 06 23:28	20° ♎ 04'12		minimum elong	5033 May 20 18:07	1° ♎ 35'54	0°41'44
	5032 Jun 11 14:58	0° ♏		asc. node	5033 May 24 20:28	10° ♎ 05'50	
evening rise	5032 Jun 12 23:33	2° ♏ 52'33		evening rise	5033 May 28 08:09	17° ♎ 21'18	
	5032 Jun 28 00:59	0° ♏			5033 Jun 03 17:24	0° ♏	
evening max el	5032 Jul 04 02:23	7° ♏ 09'56	22°10'38	evening max el	5033 Jun 16 02:32	17° ♏ 56'55	20°43'32
desc. node	5032 Jul 13 09:27	13° ♏ 03'26		retrograde	5033 Jun 27 11:30	23° ♏ 31'29	
retrograde	5032 Jul 16 23:05	13° ♏ 33'03		evening set	5033 Jun 29 13:14	23° ♏ 21'08	
evening set	5032 Jul 19 21:00	13° ♏ 14'12		desc. node	5033 Jun 30 06:28	23° ♏ 12'54	
min. Earth dist.	5032 Jul 28 08:07	9° ♏ 35'17	0.54999 AU	inferior conj	5033 Jul 08 20:08	19° ♏ 24'10	-2°30'46
inferior conj	5032 Jul 29 02:58	9° ♏ 08'43	-4°12'35	minimum elong	5033 Jul 08 13:13	19° ♏ 34'02	2°28'23
minimum elong	5032 Jul 28 18:22	9° ♏ 20'51	4°10'30	min. Earth dist.	5033 Jul 09 19:23	18° ♏ 50'57	0.54849 AU
morning rise	5032 Aug 06 17:30	5° ♏ 18'39		morning rise	5033 Jul 17 12:46	15° ♏ 20'23	
direct	5032 Aug 09 21:50	4° ♏ 56'03		direct	5033 Jul 21 07:11	14° ♏ 49'49	
morning max el	5032 Aug 21 16:37	10° ♏ 26'18	21°26'37	morning max el	5033 Aug 03 10:51	21° ♏ 09'32	23°06'41
asc. node	5032 Sep 02 22:44	27° ♏ 08'17			5033 Aug 11 00:38	0° ♏	
	5032 Sep 04 12:45	0° ♐		asc. node	5033 Aug 20 19:45	16° ♏ 16'51	
morning set	5032 Sep 10 23:44	12° ♐ 47'32		morning set	5033 Aug 26 10:50	27° ♏ 39'22	
					5033 Aug 27 13:22	0° ♐	
superior conj	5032 Sep 18 06:44	28° ♐ 06'01	1°43'26	superior conj	5033 Sep 02 11:45	12° ♐ 45'18	1°38'51
minimum elong	5032 Sep 18 06:28	28° ♐ 04'37	1°43'26	minimum elong	5033 Sep 02 10:21	12° ♐ 37'48	1°38'45
	5032 Sep 19 04:44	0° ♑		max. Earth dist.	5033 Sep 05 06:23	18° ♐ 38'52	1.33691 AU
max. Earth dist.	5032 Sep 22 10:33	6° ♑ 36'05	1.35117 AU				

evening rise	5033 Sep 10 04:32	28° \mathbb{M} 42'24		minimum elong	5034 Aug 17 18:56	27° Ω 24'29	1°28'18
	5033 Sep 10 20:16	0° \mathbb{A}			5034 Aug 18 23:28	0° \mathbb{M}	
desc. node	5033 Sep 26 05:47	26° \mathbb{A} 57'54		max. Earth dist.	5034 Aug 19 10:34	1° \mathbb{M} 00'17	1.32688 AU
	5033 Sep 28 05:50	0° \mathbb{M}		evening rise	5034 Aug 25 02:08	12° \mathbb{M} 57'13	
evening max el	5033 Oct 14 13:12	20° \mathbb{M} 17'28	27°17'36		5034 Sep 02 23:49	0° \mathbb{A}	
retrograde	5033 Oct 28 00:22	27° \mathbb{M} 35'37		desc. node	5034 Sep 13 02:48	16° \mathbb{A} 23'28	
evening set	5033 Nov 03 23:28	24° \mathbb{M} 55'58			5034 Sep 23 17:08	0° \mathbb{M}	
min. Earth dist.	5033 Nov 07 19:06	21° \mathbb{M} 22'40	0.64659 AU	evening max el	5034 Sep 26 23:41	3° \mathbb{M} 20'17	27°26'28
inferior conj	5033 Nov 10 02:00	18° \mathbb{M} 53'55	-2°13'35	retrograde	5034 Oct 10 17:01	10° \mathbb{M} 35'31	
minimum elong	5033 Nov 10 05:52	18° \mathbb{M} 43'25	2°12'02	evening set	5034 Oct 17 21:13	8° \mathbb{M} 03'58	
morning rise	5033 Nov 16 13:28	13° \mathbb{M} 25'16		min. Earth dist.	5034 Oct 21 12:47	5° \mathbb{M} 01'35	0.62959 AU
asc. node	5033 Nov 16 18:59	13° \mathbb{M} 19'25		inferior conj	5034 Oct 24 07:19	2° \mathbb{M} 20'02	-3°16'28
direct	5033 Nov 19 03:29	12° \mathbb{M} 50'32		minimum elong	5034 Oct 24 12:53	2° \mathbb{M} 06'29	3°14'36
morning max el	5033 Nov 25 14:58	16° \mathbb{M} 16'20	17°57'55		5034 Oct 26 19:24	30° \mathbb{R} \mathbb{A}	
	5033 Dec 05 12:05	0° \mathbb{A}		morning rise	5034 Oct 31 06:08	27° \mathbb{A} 08'37	
morning set	5033 Dec 13 01:36	12° \mathbb{A} 34'55		direct	5034 Nov 02 15:32	26° \mathbb{A} 41'59	
desc. node	5033 Dec 23 05:04	29° \mathbb{A} 21'29		asc. node	5034 Nov 03 16:01	26° \mathbb{A} 46'57	
	5033 Dec 23 14:34	0° \mathbb{B}			5034 Nov 09 04:23	0° \mathbb{M}	
				morning max el	5034 Nov 09 07:40	0° \mathbb{M} 08'01	17°49'31
superior conj	5033 Dec 26 17:53	5° \mathbb{B} 03'27	-0°24'26	morning set	5034 Nov 25 11:48	25° \mathbb{M} 09'34	
minimum elong	5033 Dec 26 14:56	4° \mathbb{B} 51'39	0°24'00		5034 Nov 28 05:56	0° \mathbb{A}	
max. Earth dist.	5033 Dec 31 03:20	12° \mathbb{B} 02'44	1.44935 AU				
evening rise	5034 Jan 11 22:48	0° \approx 26'00		superior conj	5034 Dec 07 04:54	15° \mathbb{A} 20'55	0°20'14
	5034 Jan 11 16:03	0° \approx		minimum elong	5034 Dec 07 06:53	15° \mathbb{A} 29'13	0°19'57
greatest brilliancy	5034 Jan 26 09:59	22° \approx 21'08	-0.6m	desc. node	5034 Dec 10 02:06	20° \mathbb{A} 07'31	
	5034 Jan 31 18:43	0° \mathbb{H}		max. Earth dist.	5034 Dec 13 20:30	26° \mathbb{A} 14'57	1.43851 AU
evening max el	5034 Feb 07 08:54	8° \mathbb{H} 03'47	20°01'36		5034 Dec 16 04:48	0° \mathbb{B}	
asc. node	5034 Feb 12 18:13	12° \mathbb{H} 03'46		evening rise	5034 Dec 22 09:03	9° \mathbb{B} 40'45	
retrograde	5034 Feb 15 00:32	12° \mathbb{H} 31'05			5035 Jan 04 21:20	0° \approx	
evening set	5034 Feb 18 18:18	11° \mathbb{H} 09'34		evening max el	5035 Jan 21 08:15	21° \approx 37'51	21°08'24
inferior conj	5034 Feb 24 03:47	5° \mathbb{H} 07'30	3°06'11	retrograde	5035 Jan 29 22:32	26° \approx 43'12	
minimum elong	5034 Feb 24 01:40	5° \mathbb{H} 14'39	3°05'47	asc. node	5035 Jan 30 15:16	26° \approx 40'35	
min. Earth dist.	5034 Feb 25 01:19	3° \mathbb{H} 55'08	0.67196 AU	evening set	5035 Feb 03 01:56	25° \approx 06'34	
	5034 Feb 28 05:46	30° \mathbb{R} \approx		inferior conj	5035 Feb 08 10:04	18° \approx 52'58	2°36'29
morning rise	5034 Mar 01 08:48	28° \approx 53'05		minimum elong	5035 Feb 08 07:38	19° \approx 01'20	2°35'49
direct	5034 Mar 07 05:46	26° \approx 15'31		min. Earth dist.	5035 Feb 08 18:37	18° \approx 23'23	0.67849 AU
	5034 Mar 15 10:13	0° \mathbb{H}		morning rise	5035 Feb 13 13:11	12° \approx 40'08	
morning max el	5034 Mar 19 00:37	3° \mathbb{H} 18'20	25°02'52	direct	5035 Feb 18 19:49	10° \approx 21'14	
desc. node	5034 Mar 21 04:18	5° \mathbb{H} 35'06		morning max el	5035 Mar 01 09:25	16° \approx 38'31	23°34'34
	5034 Apr 08 09:22	0° \mathbb{Y}		desc. node	5035 Mar 08 01:20	24° \approx 16'36	
morning set	5034 Apr 24 03:56	26° \mathbb{Y} 00'38			5035 Mar 12 10:25	0° \mathbb{H}	
	5034 Apr 26 08:54	0° \mathbb{B}			5035 Apr 01 10:09	0° \mathbb{Y}	
max. Earth dist.	5034 Apr 27 19:03	2° \mathbb{B} 37'10	1.36770 AU	morning set	5035 Apr 05 15:32	7° \mathbb{Y} 02'07	
				max. Earth dist.	5035 Apr 09 14:41	13° \mathbb{Y} 52'47	1.38912 AU
superior conj	5034 May 04 03:43	14° \mathbb{B} 47'09	-1°11'40				
minimum elong	5034 May 04 07:40	15° \mathbb{B} 06'33	1°11'03	superior conj	5035 Apr 17 02:09	27° \mathbb{Y} 27'31	-1°38'38
asc. node	5034 May 11 17:30	29° \mathbb{B} 58'41		minimum elong	5035 Apr 17 07:06	27° \mathbb{Y} 50'46	1°38'03
	5034 May 11 17:46	0° \mathbb{II}			5035 Apr 18 10:32	0° \mathbb{B}	
evening rise	5034 May 12 11:53	1° \mathbb{II} 31'17		evening rise	5035 Apr 26 08:00	15° \mathbb{B} 14'07	
evening max el	5034 May 29 15:11	29° \mathbb{II} 24'48	19°34'09	asc. node	5035 Apr 28 14:32	19° \mathbb{B} 37'29	
	5034 May 30 06:02	0° \mathbb{E}			5035 May 04 06:24	0° \mathbb{II}	
retrograde	5034 Jun 08 06:22	4° \mathbb{E} 07'03		evening max el	5035 May 12 14:47	11° \mathbb{II} 32'17	18°44'53
evening set	5034 Jun 10 04:50	3° \mathbb{E} 56'29		retrograde	5035 May 20 18:06	15° \mathbb{II} 32'23	
desc. node	5034 Jun 17 03:30	0° \mathbb{E} 58'22		evening set	5035 May 22 21:31	15° \mathbb{II} 16'45	
inferior conj	5034 Jun 18 22:07	29° \mathbb{II} 52'01	-0°31'47	inferior conj	5035 May 30 19:04	10° \mathbb{II} 54'57	1°12'27
minimum elong	5034 Jun 18 20:41	29° \mathbb{II} 54'17	0°31'15	minimum elong	5035 May 30 21:39	10° \mathbb{II} 50'10	1°11'33
	5034 Jun 18 17:05	30° \mathbb{R} \mathbb{II}		min. Earth dist.	5035 Jun 03 01:22	8° \mathbb{II} 31'16	0.57252 AU
min. Earth dist.	5034 Jun 21 08:40	28° \mathbb{II} 19'32	0.55658 AU	desc. node	5035 Jun 04 00:32	7° \mathbb{II} 51'28	
morning rise	5034 Jun 27 10:03	25° \mathbb{II} 17'44		morning rise	5035 Jun 07 18:29	5° \mathbb{II} 44'26	
direct	5034 Jul 02 00:31	24° \mathbb{II} 30'21		direct	5035 Jun 13 07:23	4° \mathbb{II} 29'18	
	5034 Jul 14 07:54	0° \mathbb{E}		morning max el	5035 Jun 27 16:03	12° \mathbb{II} 00'25	26°20'58
morning max el	5034 Jul 16 00:30	1° \mathbb{E} 31'35	24°50'03		5035 Jul 11 15:59	0° \mathbb{E}	
	5034 Aug 04 17:35	0° \mathbb{O}		asc. node	5035 Jul 25 13:49	25° \mathbb{E} 38'00	
asc. node	5034 Aug 07 16:47	5° \mathbb{O} 49'14		morning set	5035 Jul 26 09:24	27° \mathbb{E} 20'55	
morning set	5034 Aug 10 22:36	12° \mathbb{O} 32'28			5035 Jul 27 15:17	0° \mathbb{O}	
superior conj	5034 Aug 17 21:02	27° \mathbb{O} 35'54	1°28'33	superior conj	5035 Aug 02 08:26	12° \mathbb{O} 30'20	1°13'17

minimum elong	5035 Aug 02 06:08	12° Ω 17'34	1°12'56	max. Earth dist.	5036 Jul 16 07:27	26° Θ 12'17	1.31930 AU
max. Earth dist.	5035 Aug 02 20:09	13° Ω 34'53	1.32102 AU		5036 Jul 18 00:41	0° Ω	
evening rise	5035 Aug 09 06:36	27° Ω 30'15		evening rise	5036 Jul 23 15:30	12° Ω 13'53	
	5035 Aug 10 11:25	0° Π			5036 Aug 01 15:12	0° Π	
	5035 Aug 27 09:05	0° $\underline{\Omega}$		desc. node	5036 Aug 16 20:51	22° Π 46'22	
desc. node	5035 Aug 30 23:50	5° $\underline{\Omega}$ 05'31		evening max el	5036 Aug 21 03:53	27° Π 19'09	26°06'13
evening max el	5035 Sep 09 05:21	15° $\underline{\Omega}$ 43'47	27°02'47		5036 Aug 24 06:18	0° $\underline{\Omega}$	
retrograde	5035 Sep 23 02:18	22° $\underline{\Omega}$ 55'12		retrograde	5036 Sep 04 03:05	4° $\underline{\Omega}$ 27'05	
evening set	5035 Sep 30 03:24	20° $\underline{\Omega}$ 43'34		evening set	5036 Sep 10 13:07	2° $\underline{\Omega}$ 47'26	
min. Earth dist.	5035 Oct 03 19:39	18° $\underline{\Omega}$ 02'50	0.60994 AU	min. Earth dist.	5036 Sep 14 16:42	0° $\underline{\Omega}$ 12'23	0.58915 AU
inferior conj	5035 Oct 06 23:17	15° $\underline{\Omega}$ 21'07	-4°14'36		5036 Sep 14 23:34	30° \mathbb{R} Π	
minimum elong	5035 Oct 07 05:34	15° $\underline{\Omega}$ 07'39	4°13'03	inferior conj	5036 Sep 17 22:24	27° Π 47'43	-4°59'22
morning rise	5035 Oct 14 09:41	10° $\underline{\Omega}$ 30'27		minimum elong	5036 Sep 18 03:06	27° Π 38'56	4°58'44
direct	5035 Oct 16 17:24	10° $\underline{\Omega}$ 08'51		morning rise	5036 Sep 25 19:20	23° Π 19'55	
asc. node	5035 Oct 21 13:04	11° $\underline{\Omega}$ 46'16		direct	5036 Sep 28 04:44	23° Π 00'44	
morning max el	5035 Oct 23 21:52	13° $\underline{\Omega}$ 43'36	17°59'49	morning max el	5036 Oct 06 06:09	26° Π 53'47	18°30'05
	5035 Nov 03 23:05	0° \mathbb{M}		asc. node	5036 Oct 07 10:08	28° Π 05'20	
morning set	5035 Nov 08 15:45	8° \mathbb{M} 34'27			5036 Oct 09 01:16	0° $\underline{\Omega}$	
				morning set	5036 Oct 22 08:05	22° $\underline{\Omega}$ 34'05	
superior conj	5035 Nov 18 18:22	26° \mathbb{M} 55'41	0°56'08		5036 Oct 26 04:35	0° \mathbb{M}	
minimum elong	5035 Nov 18 22:16	27° \mathbb{M} 12'51	0°55'38				
	5035 Nov 20 12:31	0° \mathbb{A}		superior conj	5036 Oct 31 06:09	9° \mathbb{M} 35'06	1°21'25
max. Earth dist.	5035 Nov 26 08:59	9° \mathbb{A} 56'08	1.42200 AU	minimum elong	5036 Oct 31 09:41	9° \mathbb{M} 51'30	1°21'04
desc. node	5035 Nov 26 23:08	10° \mathbb{A} 54'46		max. Earth dist.	5036 Nov 07 15:56	22° \mathbb{M} 53'33	1.40195 AU
evening rise	5035 Dec 02 05:35	19° \mathbb{A} 27'13		evening rise	5036 Nov 11 22:42	0° \mathbb{A} 10'16	
	5035 Dec 09 00:13	0° \mathbb{B}			5036 Nov 11 20:14	0° \mathbb{A}	
	5035 Dec 30 10:20	0° \approx		desc. node	5036 Nov 12 20:09	1° \mathbb{A} 39'11	
evening max el	5036 Jan 04 02:24	5° \approx 13'53	22°24'23		5036 Dec 01 10:46	0° \mathbb{B}	
retrograde	5036 Jan 13 19:00	10° \approx 59'42		evening max el	5036 Dec 16 16:48	18° \mathbb{B} 52'50	23°44'23
asc. node	5036 Jan 17 12:18	9° \approx 47'00		retrograde	5036 Dec 27 12:23	25° \mathbb{B} 15'45	
evening set	5036 Jan 18 09:30	9° \approx 07'29		evening set	5037 Jan 01 15:25	23° \mathbb{B} 08'03	
inferior conj	5036 Jan 23 18:00	2° \approx 45'40	1°58'25	asc. node	5037 Jan 03 09:21	21° \mathbb{B} 25'03	
minimum elong	5036 Jan 23 15:46	2° \approx 53'27	1°57'39	min. Earth dist.	5037 Jan 06 11:34	17° \mathbb{B} 30'27	0.67981 AU
min. Earth dist.	5036 Jan 23 14:49	2° \approx 56'43	0.68102 AU	inferior conj	5037 Jan 07 01:44	16° \mathbb{B} 42'05	1°13'02
	5036 Jan 25 18:55	30° \mathbb{R} \mathbb{B}		minimum elong	5037 Jan 07 00:08	16° \mathbb{B} 47'34	1°12'25
morning rise	5036 Jan 28 21:55	26° \mathbb{B} 35'49		morning rise	5037 Jan 12 08:50	10° \mathbb{B} 36'55	
direct	5036 Feb 02 13:51	24° \mathbb{B} 39'11		direct	5037 Jan 16 10:49	9° \mathbb{B} 02'57	
	5036 Feb 11 18:27	0° \approx		morning max el	5037 Jan 24 15:06	13° \mathbb{B} 45'09	20°46'09
morning max el	5036 Feb 11 21:11	0° \approx 06'50	22°06'27		5037 Feb 06 09:12	0° \approx	
desc. node	5036 Feb 22 22:23	13° \approx 38'52		desc. node	5037 Feb 08 19:25	3° \approx 30'03	
	5036 Mar 05 05:50	0° \mathbb{H}		morning set	5037 Feb 23 04:45	25° \approx 14'35	
morning set	5036 Mar 15 23:16	16° \mathbb{H} 43'57			5037 Feb 26 05:32	0° \mathbb{H}	
max. Earth dist.	5036 Mar 21 12:24	25° \mathbb{H} 51'32	1.41092 AU	max. Earth dist.	5037 Mar 03 16:39	8° \mathbb{H} 44'14	1.43022 AU
	5036 Mar 23 23:07	0° \mathbb{Y}					
superior conj	5036 Mar 29 06:31	9° \mathbb{Y} 14'49	-1°59'20	superior conj	5037 Mar 10 11:52	19° \mathbb{H} 58'04	-2°08'45
minimum elong	5036 Mar 29 10:47	9° \mathbb{Y} 33'47	1°59'03	minimum elong	5037 Mar 10 12:27	20° \mathbb{H} 00'30	2°08'45
evening rise	5036 Apr 08 17:06	28° \mathbb{Y} 21'46			5037 Mar 16 08:33	0° \mathbb{Y}	
	5036 Apr 09 14:13	0° \mathbb{B}		evening rise	5037 Mar 22 10:57	10° \mathbb{Y} 44'25	
asc. node	5036 Apr 14 11:35	8° \mathbb{B} 57'07		asc. node	5037 Apr 01 08:37	27° \mathbb{Y} 50'51	
evening max el	5036 Apr 24 22:12	24° \mathbb{B} 12'41	18°15'52		5037 Apr 02 17:45	0° \mathbb{B}	
retrograde	5036 May 02 00:42	27° \mathbb{B} 45'58		evening max el	5037 Apr 08 09:56	7° \mathbb{B} 16'55	18°06'32
evening set	5036 May 04 10:58	27° \mathbb{B} 21'54		retrograde	5037 Apr 14 23:03	10° \mathbb{B} 39'12	
inferior conj	5036 May 11 13:35	22° \mathbb{B} 39'54	2°26'42	evening set	5037 Apr 17 15:56	10° \mathbb{B} 04'23	
minimum elong	5036 May 11 17:05	22° \mathbb{B} 32'20	2°25'46	inferior conj	5037 Apr 24 03:10	5° \mathbb{B} 02'10	3°10'53
min. Earth dist.	5036 May 14 23:36	19° \mathbb{B} 43'51	0.59328 AU	minimum elong	5037 Apr 24 05:38	4° \mathbb{B} 56'02	3°10'30
morning rise	5036 May 18 20:20	16° \mathbb{B} 59'54		min. Earth dist.	5037 Apr 27 05:21	1° \mathbb{B} 58'45	0.61537 AU
desc. node	5036 May 20 21:34	16° \mathbb{B} 00'26			5037 Apr 29 11:18	30° \mathbb{R} \mathbb{Y}	
direct	5036 May 25 04:08	15° \mathbb{B} 10'09		morning rise	5037 Apr 30 17:28	29° \mathbb{Y} 03'38	
morning max el	5036 Jun 08 13:21	23° \mathbb{B} 00'07	27°24'31	direct	5037 May 07 12:04	26° \mathbb{Y} 42'06	
	5036 Jun 14 18:59	0° \mathbb{I}		desc. node	5037 May 07 18:36	26° \mathbb{Y} 42'19	
	5036 Jul 03 17:39	0° Θ			5037 May 16 05:29	0° \mathbb{B}	
morning set	5036 Jul 09 17:31	11° Θ 59'13		morning max el	5037 May 21 16:47	4° \mathbb{B} 41'07	27°51'57
asc. node	5036 Jul 11 10:52	15° Θ 37'37			5037 Jun 09 13:53	0° \mathbb{I}	
				morning set	5037 Jun 23 21:04	26° \mathbb{I} 21'29	
superior conj	5036 Jul 16 20:12	27° Θ 22'38	0°53'41		5037 Jun 25 15:15	0° Θ	
minimum elong	5036 Jul 16 18:08	27° Θ 11'16	0°53'18	asc. node	5037 Jun 28 07:55	5° Θ 43'29	
				max. Earth dist.	5037 Jun 29 16:44	8° Θ 40'54	1.32181 AU

superior conj	5037 Jul 01 06:33	12°☿07'13	0°30'19	superior conj	5038 Jun 15 13:39	26°♊37'38	0°03'48
minimum elong	5037 Jul 01 05:13	11°☿59'53	0°30'01	minimum elong	5038 Jun 15 13:27	26°♊36'37	0°03'44
evening rise	5037 Jul 08 02:47	27°☿01'50		behind sun begin	5038 Jun 15 08:15	26°♊08'41	
	5037 Jul 09 12:29	0°♌		behind sun end	5038 Jun 15 18:39	27°♊04'35	
	5037 Jul 26 17:43	0°♍			5038 Jun 17 03:10	0°☿	
evening max el	5037 Aug 02 19:24	8°♍09'17	24°42'57	evening rise	5038 Jun 22 14:32	11°☿47'14	
desc. node	5037 Aug 03 17:51	9°♍01'36			5038 Jul 01 21:12	0°♌	
retrograde	5037 Aug 16 17:00	15°♍10'08		evening max el	5038 Jul 15 08:03	18°♌32'05	23°06'05
evening set	5037 Aug 21 22:35	14°♍08'33		desc. node	5038 Jul 21 14:52	23°♌18'18	
min. Earth dist.	5037 Aug 27 06:43	11°♍20'34	0.56977 AU	retrograde	5038 Jul 28 17:53	25°♌14'00	
inferior conj	5037 Aug 30 01:51	9°♍31'44	-5°17'07	evening set	5038 Aug 01 11:08	24°♌43'48	
minimum elong	5037 Aug 30 01:40	9°♍32'02	5°17'07	min. Earth dist.	5038 Aug 08 17:02	21°♌27'32	0.55510 AU
morning rise	5037 Sep 07 07:09	5°♍25'35		inferior conj	5038 Aug 10 09:34	20°♌28'42	-4°51'15
direct	5037 Sep 09 21:49	5°♍06'33		minimum elong	5038 Aug 10 03:03	20°♌38'12	4°50'13
morning max el	5037 Sep 19 05:11	9°♍28'52	19°21'46	morning rise	5038 Aug 18 21:14	16°♌37'13	
asc. node	5037 Sep 24 07:11	15°♍29'10		direct	5038 Aug 21 20:08	16°♌16'26	
	5037 Oct 02 19:53	0°♎		morning max el	5038 Sep 01 16:20	21°♌18'58	20°35'22
morning set	5037 Oct 06 09:01	6°♎58'21			5038 Sep 08 19:38	0°♍	
				asc. node	5038 Sep 11 04:12	3°♍42'23	
superior conj	5037 Oct 14 10:58	23°♎04'30	1°36'38	morning set	5038 Sep 20 15:34	21°♍38'03	
minimum elong	5037 Oct 14 13:06	23°♎14'56	1°36'30		5038 Sep 24 16:34	0°♎	
	5037 Oct 18 01:30	0°♏		superior conj	5038 Sep 28 03:58	7°♎09'11	1°43'08
max. Earth dist.	5037 Oct 20 20:38	5°♏12'04	1.38092 AU	minimum elong	5038 Sep 28 04:31	7°♎12'00	1°43'07
evening rise	5037 Oct 24 14:52	11°♏56'38		max. Earth dist.	5038 Oct 03 04:13	17°♎07'59	1.36120 AU
desc. node	5037 Oct 30 17:09	22°♏17'24		evening rise	5038 Oct 07 03:10	24°♎37'55	
	5037 Nov 04 12:56	0°♐			5038 Oct 10 02:08	0°♏	
	5037 Nov 26 17:21	0°♑		desc. node	5038 Oct 17 14:10	12°♏44'05	
evening max el	5037 Nov 29 05:41	2°♑36'10	25°01'42		5038 Oct 29 02:55	0°♐	
retrograde	5037 Dec 11 01:35	9°♑27'21		evening max el	5038 Nov 11 18:23	16°♐19'53	26°09'10
evening set	5037 Dec 16 18:05	7°♑05'18		retrograde	5038 Nov 24 09:42	23°♐28'55	
asc. node	5037 Dec 21 06:24	2°♑02'01		evening set	5038 Nov 30 15:44	20°♐55'13	
min. Earth dist.	5037 Dec 21 06:27	2°♑01'49	0.67508 AU	min. Earth dist.	5038 Dec 04 21:05	16°♐27'00	0.66680 AU
inferior conj	5037 Dec 22 07:29	0°♑39'43	0°21'16	inferior conj	5038 Dec 06 09:21	14°♐34'56	-0°35'54
minimum elong	5037 Dec 22 06:58	0°♑41'27	0°21'04	minimum elong	5038 Dec 06 10:19	14°♐31'57	0°35'28
	5037 Dec 22 19:38	30°♒♐		asc. node	5038 Dec 08 03:25	12°♐28'05	
morning rise	5037 Dec 27 20:02	24°♐41'23		morning rise	5038 Dec 12 05:25	8°♐45'59	
direct	5037 Dec 31 09:29	23°♐28'21		direct	5038 Dec 15 08:06	7°♐50'48	
morning max el	5038 Jan 07 16:55	27°♐34'50	19°38'38	morning max el	5038 Dec 22 02:05	11°♐33'12	18°46'30
	5038 Jan 09 22:29	0°♓			5039 Jan 04 12:29	0°♑	
greatest brilliancy	5038 Jan 20 18:04	14°♓46'39	-0.7m	morning set	5039 Jan 12 13:39	12°♑36'05	
desc. node	5038 Jan 26 16:26	23°♓42'17		desc. node	5039 Jan 13 13:27	14°♓09'36	
	5038 Jan 30 19:12	0°♒			5039 Jan 23 15:49	0°♒	
morning set	5038 Feb 02 01:09	3°♒27'40		max. Earth dist.	5039 Jan 27 22:07	6°♒40'58	1.45222 AU
max. Earth dist.	5038 Feb 14 04:35	22°♒26'11	1.44456 AU				
				superior conj	5039 Jan 28 23:06	8°♒19'06	-1°34'11
superior conj	5038 Feb 18 15:38	29°♒33'44	-2°01'21	minimum elong	5039 Jan 28 13:42	7°♒42'10	1°33'15
minimum elong	5038 Feb 18 09:59	29°♒10'58	2°01'04		5039 Feb 11 15:03	0°♓	
	5038 Feb 18 22:10	0°♈		evening rise	5039 Feb 13 08:26	2°♈46'18	
evening rise	5038 Mar 04 09:08	22°♈13'50		greatest brilliancy	5039 Feb 20 02:06	13°♈37'16	-0.9m
	5038 Mar 08 23:32	0°♉			5039 Mar 02 22:45	0°♉	
asc. node	5038 Mar 19 05:39	16°♉10'29		asc. node	5039 Mar 06 02:40	3°♉45'38	
evening max el	5038 Mar 22 22:51	20°♉36'41	18°16'12	evening max el	5039 Mar 06 10:11	4°♉04'59	18°44'02
retrograde	5038 Mar 29 08:47	24°♉02'16		retrograde	5039 Mar 13 01:52	7°♉46'43	
evening set	5038 Apr 01 07:57	23°♉15'22		evening set	5039 Mar 16 07:29	6°♉46'57	
inferior conj	5038 Apr 07 07:47	17°♉53'57	3°30'41	inferior conj	5039 Mar 21 23:29	1°♉07'55	3°31'53
minimum elong	5038 Apr 07 08:37	17°♉51'39	3°30'38	minimum elong	5039 Mar 21 22:49	1°♉09'58	3°31'51
min. Earth dist.	5038 Apr 09 20:02	15°♉06'07	0.63595 AU		5039 Mar 22 21:33	30°♒♈	
morning rise	5038 Apr 13 08:17	11°♉45'24		min. Earth dist.	5039 Mar 23 20:04	28°♈51'28	0.65317 AU
direct	5038 Apr 20 04:43	9°♉02'58		morning rise	5039 Mar 27 13:41	24°♈54'40	
desc. node	5038 Apr 24 15:38	10°♉02'25		direct	5039 Apr 03 04:31	22°♈04'50	
morning max el	5038 May 04 00:45	17°♉01'47	27°41'50	desc. node	5039 Apr 11 12:40	25°♈31'19	
	5038 May 14 19:04	0°♊		morning max el	5039 Apr 16 10:46	29°♈53'03	26°58'34
morning set	5038 Jun 02 08:42	0°♋			5039 Apr 16 13:31	0°♉	
max. Earth dist.	5038 Jun 07 17:40	10°♋19'56			5039 May 08 17:27	0°♈	
asc. node	5038 Jun 12 20:09	20°♋48'42	1.32883 AU	morning set	5039 May 22 04:21	23°♈46'17	
	5038 Jun 15 04:55	25°♋50'47			5039 May 25 08:44	0°♊	

max. Earth dist.	5039 May 26 14:13	2° Π 27'58	1.34046 AU		5040 Apr 30 10:50	0° \mathcal{B}	
				morning set	5040 May 04 01:05	6° \mathcal{B} 28'20	
superior conj	5039 May 30 15:24	10° Π 47'53	-0°25'02	max. Earth dist.	5040 May 07 20:53	13° \mathcal{B} 39'00	1.35662 AU
minimum elong	5039 May 30 16:44	10° Π 54'51	0°24'47				
asc. node	5039 Jun 02 01:57	15° Π 56'02		superior conj	5040 May 13 09:14	24° \mathcal{B} 30'10	-0°54'50
evening rise	5039 Jun 07 00:53	26° Π 24'22		minimum elong	5040 May 13 12:15	24° \mathcal{B} 45'26	0°54'17
	5039 Jun 08 18:29	0° \mathcal{E}			5040 May 16 02:05	0° Π	
evening max el	5039 Jun 27 01:50	29° \mathcal{E} 01'05	21°31'41	asc. node	5040 May 18 22:59	5° Π 54'29	
	5039 Jun 28 02:56	0° Ω		evening rise	5040 May 21 07:42	10° Π 45'59	
desc. node	5039 Jul 08 11:52	5° Ω 03'29			5040 May 31 13:55	0° \mathcal{E}	
retrograde	5039 Jul 09 08:35	5° Ω 05'15		evening max el	5040 Jun 08 07:04	10° \mathcal{E} 03'48	20°11'31
evening set	5039 Jul 11 19:52	4° Ω 51'20		retrograde	5040 Jun 18 22:30	15° \mathcal{E} 16'14	
inferior conj	5039 Jul 21 04:16	0° Ω 51'05	-3°33'43	evening set	5040 Jun 20 21:01	15° \mathcal{E} 06'36	
minimum elong	5039 Jul 20 19:34	1° Ω 03'15	3°31'10	desc. node	5040 Jun 24 08:54	14° \mathcal{E} 05'13	
min. Earth dist.	5039 Jul 21 03:05	0° Ω 52'44	0.54819 AU	inferior conj	5040 Jun 29 23:26	11° \mathcal{E} 07'53	-1°40'14
	5039 Jul 22 17:02	30° \mathcal{R} \mathcal{E}		minimum elong	5040 Jun 29 18:45	11° \mathcal{E} 14'50	1°38'30
morning rise	5039 Jul 29 20:19	26° \mathcal{E} 58'09		min. Earth dist.	5040 Jul 01 15:06	10° \mathcal{E} 09'07	0.55079 AU
direct	5039 Aug 02 06:02	26° \mathcal{E} 33'00		morning rise	5040 Jul 08 15:03	6° \mathcal{E} 52'28	
	5039 Aug 11 18:11	0° Ω		direct	5040 Jul 12 17:00	6° \mathcal{E} 16'18	
morning max el	5039 Aug 14 15:49	2° Ω 23'48	22°08'01	morning max el	5040 Jul 26 07:28	12° \mathcal{E} 55'19	23°51'18
asc. node	5039 Aug 29 01:14	22° Ω 33'29			5040 Aug 08 09:04	0° Ω	
	5039 Sep 01 22:07	0° \mathcal{M}		asc. node	5040 Aug 14 22:16	11° Ω 52'59	
morning set	5039 Sep 05 01:32	6° \mathcal{M} 27'00		morning set	5040 Aug 19 13:07	21° Ω 19'56	
					5040 Aug 23 13:52	0° \mathcal{M}	
superior conj	5039 Sep 12 05:27	21° \mathcal{M} 38'25	1°42'14				
minimum elong	5039 Sep 12 04:39	21° \mathcal{M} 34'12	1°42'13	superior conj	5040 Aug 26 12:33	6° \mathcal{M} 23'31	1°35'07
max. Earth dist.	5039 Sep 15 18:56	29° \mathcal{M} 02'55	1.34460 AU	minimum elong	5040 Aug 26 10:48	6° \mathcal{M} 14'03	1°34'58
	5039 Sep 16 06:07	0° \mathcal{A}		max. Earth dist.	5040 Aug 28 18:22	11° \mathcal{M} 12'34	1.33203 AU
evening rise	5039 Sep 20 07:27	8° \mathcal{A} 03'35		evening rise	5040 Sep 02 23:42	22° \mathcal{M} 03'14	
	5039 Oct 02 15:45	0° \mathcal{M}			5040 Sep 07 01:15	0° \mathcal{A}	
desc. node	5039 Oct 04 11:11	2° \mathcal{M} 53'28		desc. node	5040 Sep 20 08:11	22° \mathcal{A} 38'01	
	5039 Oct 25 08:41	0° \mathcal{J}			5040 Sep 25 11:08	0° \mathcal{M}	
evening max el	5039 Oct 25 07:03	29° \mathcal{M} 56'06	26°59'19	evening max el	5040 Oct 06 18:46	13° \mathcal{M} 14'32	27°25'10
retrograde	5039 Nov 07 12:22	7° \mathcal{J} 13'27		retrograde	5040 Oct 20 09:08	20° \mathcal{M} 32'44	
evening set	5039 Nov 14 06:18	4° \mathcal{J} 33'26		evening set	5040 Oct 27 11:12	17° \mathcal{M} 54'49	
min. Earth dist.	5039 Nov 18 05:07	0° \mathcal{J} 40'47	0.65495 AU	min. Earth dist.	5040 Oct 31 04:35	14° \mathcal{M} 35'40	0.63965 AU
	5039 Nov 18 19:32	30° \mathcal{R} \mathcal{M}		inferior conj	5040 Nov 02 16:42	11° \mathcal{M} 59'51	-2°40'28
inferior conj	5039 Nov 20 05:14	28° \mathcal{M} 23'20	-1°37'11	minimum elong	5040 Nov 02 21:21	11° \mathcal{M} 47'47	2°38'44
minimum elong	5039 Nov 20 08:00	28° \mathcal{M} 15'24	1°36'02	morning rise	5040 Nov 09 08:56	6° \mathcal{M} 38'25	
asc. node	5039 Nov 25 00:28	23° \mathcal{M} 38'49		asc. node	5040 Nov 10 21:30	6° \mathcal{M} 12'20	
morning rise	5039 Nov 26 10:40	22° \mathcal{M} 46'40		direct	5040 Nov 11 20:33	6° \mathcal{M} 07'41	
direct	5039 Nov 29 04:38	22° \mathcal{M} 05'38		morning max el	5040 Nov 18 09:17	9° \mathcal{M} 32'42	17°52'15
morning max el	5039 Dec 05 16:29	25° \mathcal{M} 34'41	18°10'49		5040 Dec 02 03:54	0° \mathcal{J}	
	5039 Dec 09 10:34	0° \mathcal{J}		morning set	5040 Dec 05 04:15	5° \mathcal{J} 09'35	
morning set	5039 Dec 24 07:05	23° \mathcal{J} 12'15		desc. node	5040 Dec 17 07:30	25° \mathcal{J} 31'30	
	5039 Dec 28 11:18	0° \mathcal{Z}					
desc. node	5039 Dec 31 10:28	4° \mathcal{Z} 47'11		superior conj	5040 Dec 17 23:48	26° \mathcal{J} 37'59	-0°04'46
				minimum elong	5040 Dec 17 23:16	26° \mathcal{J} 35'48	0°04'41
superior conj	5040 Jan 08 03:13	17° \mathcal{Z} 02'26	-0°51'38	behind sun begin	5040 Dec 17 13:42	25° \mathcal{J} 56'49	
minimum elong	5040 Jan 07 20:50	16° \mathcal{Z} 37'16	0°50'48	behind sun end	5040 Dec 18 08:50	27° \mathcal{J} 14'43	
max. Earth dist.	5040 Jan 10 17:39	21° \mathcal{Z} 08'07	1.45248 AU		5040 Dec 20 01:41	0° \mathcal{Z}	
	5040 Jan 16 09:38	0° \approx		max. Earth dist.	5040 Dec 23 12:03	5° \mathcal{Z} 29'33	1.44545 AU
evening rise	5040 Jan 24 09:40	12° \approx 27'38		evening rise	5041 Jan 02 21:09	21° \mathcal{Z} 41'35	
	5040 Feb 04 18:06	0° \mathcal{H}			5041 Jan 08 07:45	0° \approx	
greatest brilliancy	5040 Feb 05 16:30	1° \mathcal{H} 24'49	-0.7m		5041 Jan 29 17:44	0° \mathcal{H}	
evening max el	5040 Feb 17 17:45	17° \mathcal{H} 36'45	19°28'50	evening max el	5041 Jan 30 20:16	1° \mathcal{H} 10'32	20°28'32
asc. node	5040 Feb 20 23:43	20° \mathcal{H} 22'58		asc. node	5041 Feb 06 20:45	5° \mathcal{H} 48'21	
retrograde	5040 Feb 24 22:52	21° \mathcal{H} 45'18		retrograde	5041 Feb 07 21:10	5° \mathcal{H} 53'55	
evening set	5040 Feb 28 11:46	20° \mathcal{H} 32'00		evening set	5041 Feb 11 18:43	4° \mathcal{H} 26'13	
inferior conj	5040 Mar 04 22:55	14° \mathcal{H} 37'29	3°18'54		5041 Feb 15 21:23	30° \mathcal{R} \approx	
minimum elong	5040 Mar 04 21:11	14° \mathcal{H} 43'10	3°18'39	inferior conj	5041 Feb 17 03:24	28° \approx 18'47	2°54'44
min. Earth dist.	5040 Mar 06 04:28	13° \mathcal{H} 00'43	0.66631 AU	minimum elong	5041 Feb 17 01:06	28° \approx 26'40	2°54'11
morning rise	5040 Mar 10 06:20	8° \mathcal{H} 22'40		min. Earth dist.	5041 Feb 17 19:17	27° \approx 24'34	0.67525 AU
direct	5040 Mar 16 10:36	5° \mathcal{H} 37'49		morning rise	5041 Feb 22 07:15	22° \approx 04'34	
desc. node	5040 Mar 28 09:42	12° \mathcal{H} 34'54		direct	5041 Feb 27 22:12	19° \approx 34'10	
morning max el	5040 Mar 28 20:33	13° \mathcal{H} 02'03	25°49'56	morning max el	5041 Mar 11 05:15	26° \approx 19'28	24°25'45
	5040 Apr 11 13:25	0° \mathcal{Y}			5041 Mar 14 14:37	0° \mathcal{H}	

desc. node	5041 Mar 15 06:45	0° H 46'52		direct	5042 Feb 11 14:13	3° \approx 46'05	
	5041 Apr 05 03:21	0° Y		morning max el	5042 Feb 21 14:41	9° \approx 42'16	22°56'28
morning set	5041 Apr 16 02:35	18° Y 11'43		desc. node	5042 Mar 02 03:48	19° \approx 47'29	
max. Earth dist.	5041 Apr 19 18:09	24° Y 41'09	1.37661 AU		5042 Mar 09 13:49	0° H	
	5041 Apr 22 15:37	0° B		morning set	5042 Mar 28 02:49	28° H 40'41	
					5042 Mar 28 21:53	0° Y	
superior conj	5041 Apr 26 15:55	7° B 36'20	-1°23'38	max. Earth dist.	5042 Apr 01 13:27	6° Y 11'06	1.39855 AU
minimum elong	5041 Apr 26 20:25	7° B 58'02	1°22'58				
evening rise	5041 May 05 08:34	24° B 45'17		superior conj	5042 Apr 09 07:21	19° Y 56'29	-1°48'27
asc. node	5041 May 05 20:01	25° B 41'59		minimum elong	5042 Apr 09 12:18	20° Y 19'11	1°47'58
	5041 May 08 00:36	0° II			5042 Apr 14 16:43	0° B	
evening max el	5041 May 22 00:45	21° II 49'26	19°10'39	evening rise	5042 Apr 19 00:29	8° B 14'41	
retrograde	5041 May 30 23:37	26° II 11'50		asc. node	5042 Apr 22 17:04	15° B 13'48	
evening set	5041 Jun 01 23:31	25° II 59'43			5042 May 01 14:00	0° II	
inferior conj	5041 Jun 10 08:43	21° II 49'01	0°15'38	evening max el	5042 May 05 04:16	4° II 13'18	18°30'06
minimum elong	5041 Jun 10 09:22	21° II 47'55	0°15'23	retrograde	5042 May 12 19:20	7° II 59'31	
transit middle	5041 Jun 10 09:22	21° II 47'55	0°15'23	evening set	5042 May 15 01:47	7° II 40'33	
transit begin	5041 Jun 10 08:18	21° II 49'43		inferior conj	5042 May 22 14:58	3° II 10'25	1°47'50
transit end	5041 Jun 10 10:26	21° II 46'07		minimum elong	5042 May 22 18:16	3° II 03'52	1°46'48
desc. node	5041 Jun 11 05:57	21° II 13'01		min. Earth dist.	5042 May 26 00:45	0° II 30'07	0.58104 AU
min. Earth dist.	5041 Jun 13 05:59	19° II 52'42	0.56257 AU		5042 May 26 17:09	30° R B	
morning rise	5041 Jun 18 16:04	16° II 58'46		desc. node	5042 May 29 02:59	28° B 25'06	
direct	5041 Jun 23 16:13	16° II 00'34		morning rise	5042 May 30 07:34	27° B 46'28	
morning max el	5041 Jul 07 21:15	23° II 16'56	25°31'14	direct	5042 Jun 05 05:35	26° B 16'40	
	5041 Jul 13 22:15	0° B			5042 Jun 14 23:43	0° II	
	5041 Aug 01 01:04	0° Q		morning max el	5042 Jun 19 14:46	3° II 56'37	26°51'57
asc. node	5041 Aug 01 19:18	1° Q 33'01			5042 Jul 08 13:47	0° B	
morning set	5041 Aug 04 00:37	6° Q 11'26		morning set	5042 Jul 19 10:30	20° B 56'39	
				asc. node	5042 Jul 19 16:20	21° B 27'25	
					5042 Jul 23 15:22	0° Q	
superior conj	5041 Aug 10 22:57	21° Q 16'34	1°22'38				
minimum elong	5041 Aug 10 20:43	21° Q 04'15	1°22'21	superior conj	5042 Jul 26 10:45	6° Q 11'24	1°05'29
max. Earth dist.	5041 Aug 12 00:59	23° Q 39'21	1.32380 AU	minimum elong	5042 Jul 26 08:29	5° Q 58'54	1°05'06
	5041 Aug 14 23:10	0° P		max. Earth dist.	5042 Jul 26 11:49	6° Q 17'20	1.31981 AU
evening rise	5041 Aug 18 00:31	6° P 26'48		evening rise	5042 Aug 02 07:12	21° Q 06'04	
	5041 Aug 30 14:06	0° B			5042 Aug 06 15:39	0° P	
desc. node	5041 Sep 07 05:13	11° B 46'58		desc. node	5042 Aug 25 02:15	0° B 05'48	
evening max el	5041 Sep 19 03:29	26° B 02'03	27°20'41		5042 Aug 25 00:25	0° B	
	5041 Sep 23 23:43	0° P		evening max el	5042 Sep 01 06:36	8° B 06'52	26°42'40
retrograde	5041 Oct 02 23:02	3° P 16'21		retrograde	5042 Sep 15 04:44	15° B 16'06	
evening set	5041 Oct 10 02:54	0° P 51'53		evening set	5042 Sep 22 00:56	13° B 17'11	
	5041 Oct 11 08:06	30° R B		min. Earth dist.	5042 Sep 25 20:31	10° B 40'51	0.60112 AU
min. Earth dist.	5041 Oct 13 17:54	28° B 00'00	0.62136 AU	inferior conj	5042 Sep 29 02:01	8° B 04'26	-4°35'58
inferior conj	5041 Oct 16 16:46	25° B 16'27	-3°42'11	minimum elong	5042 Sep 29 07:59	7° B 52'20	4°34'44
minimum elong	5041 Oct 16 22:49	25° B 02'26	3°40'21	morning rise	5042 Oct 06 17:03	3° B 22'57	
morning rise	5041 Oct 23 20:33	20° B 13'27		direct	5042 Oct 09 01:04	3° B 02'36	
direct	5041 Oct 26 04:42	19° B 49'26		asc. node	5042 Oct 15 15:36	5° B 54'24	
asc. node	5041 Oct 28 18:34	20° B 19'34		morning max el	5042 Oct 16 13:19	6° B 44'06	18°10'06
morning max el	5041 Nov 02 01:19	23° B 18'33	17°51'34		5042 Oct 31 09:18	0° P	
	5041 Nov 07 08:14	0° P		morning set	5042 Nov 01 08:28	1° P 48'52	
morning set	5041 Nov 17 22:44	18° P 07'38					
	5041 Nov 24 14:36	0° X		superior conj	5042 Nov 10 21:45	19° P 32'10	1°08'10
superior conj	5041 Nov 28 22:13	7° X 28'41	0°36'42	minimum elong	5042 Nov 11 01:41	19° P 49'56	1°07'42
minimum elong	5041 Nov 29 01:23	7° X 42'12	0°36'16		5042 Nov 16 20:37	0° X	
desc. node	5041 Dec 04 04:31	16° X 18'25		max. Earth dist.	5042 Nov 18 13:11	2° X 52'31	1.41381 AU
max. Earth dist.	5041 Dec 06 02:56	19° X 28'30	1.43203 AU	desc. node	5042 Nov 21 01:32	7° X 04'40	
	5041 Dec 12 17:12	0° B		evening rise	5042 Nov 23 14:28	11° X 14'01	
evening rise	5041 Dec 13 09:57	1° B 05'27			5042 Dec 05 17:24	0° B	
	5042 Jan 01 21:44	0° \approx		evening max el	5042 Dec 27 09:50	28° B 23'08	22°58'22
evening max el	5042 Jan 13 17:22	14° \approx 45'43	21°39'55		5042 Dec 29 02:17	0° \approx	
retrograde	5042 Jan 22 18:40	20° \approx 08'15		retrograde	5043 Jan 06 13:48	4° \approx 24'46	
asc. node	5042 Jan 24 17:49	19° \approx 47'36		evening set	5043 Jan 11 09:33	2° \approx 25'55	
evening set	5042 Jan 27 02:31	18° \approx 25'16		asc. node	5043 Jan 11 14:52	2° \approx 14'34	
inferior conj	5042 Feb 01 10:39	12° \approx 07'56	2°21'19		5043 Jan 13 18:32	30° R B	
minimum elong	5042 Feb 01 08:15	12° \approx 16'16	2°20'35	inferior conj	5043 Jan 16 18:41	26° B 02'06	1°40'00
min. Earth dist.	5042 Feb 01 14:11	11° \approx 55'39	0.68006 AU	minimum elong	5043 Jan 16 16:40	26° B 09'06	1°39'16
morning rise	5042 Feb 06 13:46	5° \approx 56'03		min. Earth dist.	5043 Jan 16 10:48	26° B 29'21	0.68098 AU

morning rise	5043 Jan 21 23:40	19° Z 54'10		morning max el	5044 Jan 18 01:56	6° Z 57'38	20°15'48
direct	5043 Jan 26 09:39	18° Z 07'07		desc. node	5044 Feb 03 21:49	29° Z 23'53	
morning max el	5043 Feb 04 04:36	23° Z 13'54	21°31'00		5044 Feb 04 07:31	0° \approx	
	5043 Feb 10 01:43	0° \approx		morning set	5044 Feb 14 21:07	16° \approx 03'31	
desc. node	5043 Feb 17 00:49	9° \approx 22'59			5044 Feb 23 18:16	0° X	
	5043 Mar 02 22:35	0° X		max. Earth dist.	5044 Feb 24 22:16	1° X 51'57	1.43700 AU
morning set	5043 Mar 07 22:24	7° X 48'37					
max. Earth dist.	5043 Mar 14 14:08	18° X 34'45	1.41963 AU	superior conj	5044 Mar 01 21:01	11° X 32'13	-2°07'58
	5043 Mar 21 08:28	0° Y		minimum elong	5044 Mar 01 19:04	11° X 24'14	2°07'56
					5044 Mar 12 18:47	0° Y	
superior conj	5043 Mar 22 02:32	1° Y 18'08	-2°05'02	evening rise	5044 Mar 14 13:43	3° Y 06'12	
minimum elong	5043 Mar 22 05:39	1° Y 31'42	2°04'55	asc. node	5044 Mar 26 11:09	23° Y 04'09	
evening rise	5043 Apr 02 03:38	21° Y 04'37			5044 Mar 31 19:48	0° Z	
	5043 Apr 07 01:50	0° Z		evening max el	5044 Apr 01 02:30	0° Z 16'56	18°08'17
asc. node	5043 Apr 09 14:07	4° Z 23'31		retrograde	5044 Apr 07 13:13	3° Z 39'19	
evening max el	5043 Apr 18 13:57	17° Z 05'15	18°09'29	evening set	5044 Apr 10 08:42	2° Z 59'33	
retrograde	5043 Apr 25 09:15	20° Z 31'55			5044 Apr 14 10:39	30° R Y	
evening set	5043 Apr 27 22:31	20° Z 03'21		inferior conj	5044 Apr 16 14:36	27° Y 48'45	3°21'52
inferior conj	5043 May 04 18:03	15° Z 12'20	2°48'48	minimum elong	5044 Apr 16 16:23	27° Y 44'03	3°21'40
minimum elong	5043 May 04 21:16	15° Z 04'57	2°48'06	min. Earth dist.	5044 Apr 19 11:10	24° Y 49'36	0.62440 AU
min. Earth dist.	5043 May 08 01:40	12° Z 10'26	0.60274 AU	morning rise	5044 Apr 22 22:36	21° Y 44'49	
morning rise	5043 May 11 17:38	9° Z 23'23		direct	5044 Apr 29 18:48	19° Y 13'04	
desc. node	5043 May 16 00:02	7° Z 34'36		desc. node	5044 May 01 21:04	19° Y 26'09	
direct	5043 May 18 07:06	7° Z 19'35		morning max el	5044 May 13 20:41	27° Y 13'20	27°52'07
morning max el	5043 Jun 01 14:46	15° Z 13'30	27°40'52		5044 May 16 11:49	0° Z	
	5043 Jun 13 14:24	0° II			5044 Jun 06 06:36	0° II	
	5043 Jul 01 00:18	0° E		morning set	5044 Jun 16 17:51	19° II 42'18	
morning set	5043 Jul 03 16:55	5° E 28'58			5044 Jun 21 16:16	0° E	
asc. node	5043 Jul 06 13:22	11° E 30'13		asc. node	5044 Jun 22 10:24	1° E 37'13	
max. Earth dist.	5043 Jul 09 22:57	18° E 53'39	1.31994 AU	max. Earth dist.	5044 Jun 22 06:21	1° E 15'27	1.32431 AU
superior conj	5043 Jul 10 22:06	21° E 01'01	0°44'13	superior conj	5044 Jun 24 07:17	5° E 40'08	0°19'25
minimum elong	5043 Jul 10 20:17	20° E 51'03	0°43'50	minimum elong	5044 Jun 24 06:23	5° E 35'14	0°19'11
	5043 Jul 15 00:04	0° O		evening rise	5044 Jul 01 05:04	20° E 40'01	
evening rise	5043 Jul 17 17:22	5° O 52'32			5044 Jul 05 17:33	0° O	
	5043 Jul 30 08:48	0° P		evening max el	5044 Jul 25 15:06	29° O 55'27	24°02'12
desc. node	5043 Aug 11 23:16	17° P 13'34			5044 Jul 25 17:00	0° P	
evening max el	5043 Aug 14 01:56	19° P 21'35	25°33'17	desc. node	5044 Jul 28 20:17	2° P 42'29	
retrograde	5043 Aug 28 00:40	26° P 26'36		retrograde	5044 Aug 08 09:21	6° P 50'58	
evening set	5043 Sep 03 00:26	25° P 02'54		evening set	5044 Aug 12 23:51	6° P 04'03	
min. Earth dist.	5043 Sep 07 13:49	22° P 24'49	0.58063 AU	min. Earth dist.	5044 Aug 19 01:36	3° P 05'37	0.56278 AU
inferior conj	5043 Sep 10 16:55	20° P 13'24	-5°11'10	inferior conj	5044 Aug 21 11:34	1° P 36'28	-5°12'17
minimum elong	5043 Sep 10 19:57	20° P 08'04	5°10'56	minimum elong	5044 Aug 21 08:36	1° P 41'04	5°12'05
morning rise	5043 Sep 18 17:43	15° P 55'16			5044 Aug 24 04:15	30° R O	
direct	5043 Sep 21 05:10	15° P 36'15		morning rise	5044 Aug 29 19:52	27° O 38'21	
morning max el	5043 Sep 29 17:58	19° P 39'54	18°49'25	direct	5044 Sep 01 13:41	27° O 18'55	
asc. node	5043 Oct 02 12:37	22° P 42'25			5044 Sep 09 03:37	0° P	
	5043 Oct 07 12:58	0° A		morning max el	5044 Sep 11 12:11	1° P 56'42	19°50'34
morning set	5043 Oct 16 04:51	16° A 00'00		asc. node	5044 Sep 18 09:39	10° P 28'34	
	5043 Oct 23 09:01	0° M		morning set	5044 Sep 29 08:26	0° A 31'18	
					5044 Sep 29 02:14	0° A	
superior conj	5043 Oct 24 17:24	2° M 34'31	1°29'03	superior conj	5044 Oct 07 03:54	16° A 20'27	1°40'22
minimum elong	5043 Oct 24 20:24	2° M 48'46	1°28'47	minimum elong	5044 Oct 07 05:22	16° A 27'41	1°40'18
max. Earth dist.	5043 Oct 31 19:04	15° M 33'43	1.39297 AU	max. Earth dist.	5044 Oct 13 00:00	27° A 38'23	1.37216 AU
evening rise	5043 Nov 04 17:25	22° M 23'42			5044 Oct 14 06:24	0° M	
desc. node	5043 Nov 07 22:32	27° M 46'49		evening rise	5044 Oct 16 18:34	4° M 34'06	
	5043 Nov 09 07:03	0° X		desc. node	5044 Oct 24 19:32	18° M 20'29	
	5043 Nov 29 16:09	0° Z			5044 Nov 01 06:33	0° X	
evening max el	5043 Dec 09 23:16	12° Z 03'45	24°18'02	evening max el	5044 Nov 21 11:41	25° X 46'43	25°32'05
retrograde	5043 Dec 21 05:27	18° Z 39'45			5044 Nov 26 11:00	0° Z	
evening set	5043 Dec 26 14:16	16° Z 25'26		retrograde	5044 Dec 03 16:40	2° Z 47'39	
asc. node	5043 Dec 29 11:53	13° Z 21'47		evening set	5044 Dec 09 15:01	0° Z 19'55	
min. Earth dist.	5043 Dec 31 06:54	11° Z 02'31	0.67821 AU		5044 Dec 10 00:10	30° R X	
inferior conj	5044 Jan 01 01:46	9° Z 59'08	0°51'47	min. Earth dist.	5044 Dec 14 00:13	25° X 31'28	0.67191 AU
minimum elong	5044 Jan 01 00:34	10° Z 03'10	0°51'19	inferior conj	5044 Dec 15 06:04	23° X 55'45	-0°02'26
morning rise	5044 Jan 06 10:56	3° Z 56'54		minimum elong	5044 Dec 15 06:07	23° X 55'34	0°02'23
direct	5044 Jan 10 07:23	2° Z 32'15					

transit middle	5044 Dec 15 06:07	23° ♊ 55'34	0°02'23	evening set	5045 Nov 23 09:57	14° ♊ 05'52	
transit begin	5044 Dec 15 03:21	24° ♊ 04'28		min. Earth dist.	5045 Nov 27 12:28	9° ♊ 52'34	0.66215 AU
transit end	5044 Dec 15 08:54	23° ♊ 46'40		inferior conj	5045 Nov 29 05:41	7° ♊ 49'00	-1°01'30
asc. node	5044 Dec 15 08:55	23° ♊ 46'35		minimum elong	5045 Nov 29 07:23	7° ♊ 43'53	1°00'46
morning rise	5044 Dec 20 21:35	18° ♊ 01'14		asc. node	5045 Dec 02 05:56	4° ♊ 25'43	
direct	5044 Dec 24 06:06	16° ♊ 56'27		morning rise	5045 Dec 05 05:31	2° ♊ 04'43	
morning max el	5044 Dec 31 07:06	20° ♊ 51'36	19°14'33	direct	5045 Dec 08 04:08	1° ♊ 16'06	
	5045 Jan 07 15:58	0° ♋		morning max el	5045 Dec 14 18:47	4° ♊ 51'59	18°29'12
greatest brilliancy	5045 Jan 13 19:31	9° ♋ 01'46	-0.7m		5046 Jan 01 05:32	0° ♋	
desc. node	5045 Jan 20 18:48	19° ♋ 42'43		morning set	5046 Jan 03 21:42	4° ♋ 15'56	
morning set	5045 Jan 23 21:31	24° ♋ 31'56		desc. node	5046 Jan 07 15:50	10° ♋ 14'41	
	5045 Jan 27 10:01	0° ♌					
max. Earth dist.	5045 Feb 06 12:27	15° ♌ 48'08	1.44860 AU	superior conj	5046 Jan 19 18:09	29° ♋ 19'04	-1°17'26
				minimum elong	5046 Jan 19 09:16	28° ♋ 44'16	1°16'25
superior conj	5045 Feb 09 14:42	20° ♌ 41'49	-1°52'12		5046 Jan 20 04:36	0° ♌	
minimum elong	5045 Feb 09 06:45	20° ♌ 10'15	1°51'37	max. Earth dist.	5046 Jan 20 06:41	0° ♌ 08'11	1.45325 AU
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evening rise	5045 Feb 24 02:22	14° ♍ 10'56			5046 Feb 08 05:47	0° ♍	
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asc. node	5045 Mar 13 08:12	11° ♎ 06'07		evening max el	5046 Feb 27 00:58	27° ♍ 10'29	19°01'14
evening max el	5045 Mar 15 14:59	13° ♎ 40'28	18°25'54	asc. node	5046 Feb 28 05:14	28° ♍ 18'06	
retrograde	5045 Mar 22 02:32	17° ♎ 11'48			5046 Mar 02 11:53	0° ♎	
evening set	5045 Mar 25 04:16	16° ♎ 19'42		retrograde	5046 Mar 05 21:31	1° ♎ 02'15	
inferior conj	5045 Mar 31 00:23	10° ♎ 50'43	3°33'09	evening set	5046 Mar 09 06:05	29° ♍ 56'55	
minimum elong	5045 Mar 31 00:32	10° ♎ 50'16	3°33'09		5046 Mar 09 04:09	30° ♍ 11'19	3°27'54
min. Earth dist.	5045 Apr 02 06:06	8° ♎ 14'24	0.64369 AU	inferior conj	5046 Mar 14 19:44	24° ♍ 11'19	3°27'54
morning rise	5045 Apr 05 20:02	4° ♎ 39'23		minimum elong	5046 Mar 14 18:33	24° ♍ 15'03	3°27'47
direct	5045 Apr 12 14:48	1° ♎ 51'54		min. Earth dist.	5046 Mar 16 09:52	22° ♍ 10'51	0.65928 AU
desc. node	5045 Apr 18 18:04	3° ♎ 44'41		morning rise	5046 Mar 20 06:37	17° ♍ 57'11	
morning max el	5045 Apr 26 05:58	9° ♎ 48'41	27°27'04	direct	5046 Mar 26 17:37	15° ♍ 07'45	
	5045 May 12 01:28	0° ♏		desc. node	5046 Apr 05 15:06	19° ♍ 56'56	
	5045 May 29 15:41	0° ♐		morning max el	5046 Apr 08 15:52	22° ♍ 47'43	26°31'51
morning set	5045 May 31 10:42	3° ♐ 28'46			5046 Apr 15 00:31	0° ♐	
max. Earth dist.	5045 Jun 05 06:04	13° ♐ 11'20	1.33316 AU		5046 May 05 08:31	0° ♏	
				morning set	5046 May 14 16:01	16° ♏ 37'39	
superior conj	5045 Jun 08 12:25	20° ♐ 03'03	-0°08'14	max. Earth dist.	5046 May 18 19:00	24° ♏ 35'41	1.34673 AU
minimum elong	5045 Jun 08 12:51	20° ♐ 05'17	0°08'10		5046 May 21 11:46	0° ♐	
behind sun begin	5045 Jun 08 08:07	19° ♐ 40'11		superior conj	5046 May 23 11:11	4° ♐ 02'28	-0°37'39
behind sun end	5045 Jun 08 17:34	20° ♐ 30'25		minimum elong	5046 May 23 13:14	4° ♐ 13'00	0°37'15
asc. node	5045 Jun 09 07:26	21° ♐ 44'22		asc. node	5046 May 27 04:29	11° ♐ 47'13	
	5045 Jun 13 03:52	0° ♑		evening rise	5046 May 31 01:35	19° ♐ 53'48	
evening rise	5045 Jun 15 16:28	5° ♑ 22'39			5046 Jun 05 02:12	0° ♑	
	5045 Jun 28 22:59	0° ♒		evening max el	5046 Jun 19 03:27	20° ♑ 59'27	20°55'33
evening max el	5045 Jul 07 05:01	10° ♒ 17'31	22°24'49	retrograde	5046 Jun 30 18:15	26° ♑ 41'47	
desc. node	5045 Jul 15 17:19	15° ♒ 58'55		evening set	5046 Jul 02 21:57	26° ♑ 30'48	
retrograde	5045 Jul 20 05:47	16° ♒ 46'07		desc. node	5046 Jul 02 14:21	26° ♑ 33'45	
evening set	5045 Jul 23 08:13	16° ♒ 24'55		inferior conj	5046 Jul 12 05:46	22° ♑ 33'35	-2°48'13
min. Earth dist.	5045 Jul 31 11:54	12° ♒ 52'17	0.55103 AU	minimum elong	5046 Jul 11 22:12	22° ♑ 44'17	2°45'41
inferior conj	5045 Aug 01 12:39	12° ♒ 17'15	-4°24'26	min. Earth dist.	5046 Jul 12 22:48	22° ♑ 09'28	0.54812 AU
minimum elong	5045 Aug 01 04:23	12° ♒ 28'57	4°22'38	morning rise	5046 Jul 20 22:25	18° ♑ 33'17	
morning rise	5045 Aug 10 02:27	8° ♒ 27'16		direct	5046 Jul 24 14:29	18° ♑ 04'19	
direct	5045 Aug 13 05:16	8° ♒ 05'14		morning max el	5046 Aug 06 13:44	24° ♑ 16'33	22°51'13
morning max el	5045 Aug 24 18:21	13° ♒ 28'21	21°12'46		5046 Aug 11 18:46	0° ♒	
asc. node	5045 Sep 05 06:41	28° ♒ 59'40		asc. node	5046 Aug 23 03:43	18° ♒ 03'59	
	5045 Sep 05 20:27	0° ♓		morning set	5046 Aug 29 03:37	0° ♓ 07'25	
morning set	5045 Sep 13 16:43	15° ♓ 16'05			5046 Aug 29 02:12	0° ♓	
	5045 Sep 20 17:44	0° ♈					
superior conj	5045 Sep 21 00:59	0° ♈ 37'31	1°43'34	superior conj	5046 Sep 05 05:12	15° ♓ 14'26	1°39'55
minimum elong	5045 Sep 21 00:55	0° ♈ 37'12	1°43'34	minimum elong	5046 Sep 05 03:56	15° ♓ 07'44	1°39'51
max. Earth dist.	5045 Sep 25 09:59	9° ♈ 30'42	1.35367 AU	max. Earth dist.	5046 Sep 08 04:35	21° ♓ 31'27	1.33881 AU
evening rise	5045 Sep 29 14:18	17° ♈ 36'38			5046 Sep 12 08:21	0° ♈	
	5045 Oct 06 11:08	0° ♉		evening rise	5046 Sep 13 00:11	1° ♈ 18'25	
desc. node	5045 Oct 11 16:34	8° ♉ 40'58		desc. node	5046 Sep 28 13:37	28° ♈ 40'52	
	5045 Oct 26 13:23	0° ♊			5046 Sep 29 10:10	0° ♉	
evening max el	5045 Nov 04 00:26	9° ♊ 28'42	26°33'04	evening max el	5046 Oct 17 13:09	22° ♉ 59'35	27°13'41
retrograde	5045 Nov 16 22:45	16° ♊ 42'56			5046 Oct 28 13:06	0° ♊	



















































































































retrograde	5046 Oct 30 22:51	0°♊17'23			5047 Sep 04 09:07	0°♊	
	5046 Nov 02 06:31	30°♋♌		desc. node	5047 Sep 15 10:39	18°♊11'35	
evening set	5046 Nov 06 20:46	27°♌37'28			5047 Sep 24 07:01	0°♌	
min. Earth dist.	5046 Nov 10 17:14	23°♌59'10	0.64889 AU	evening max el	5047 Sep 30 00:01	6°♌06'29	27°27'06
inferior conj	5046 Nov 12 22:20	21°♌33'14	-2°03'55	retrograde	5047 Oct 13 16:31	13°♌22'24	
minimum elong	5046 Nov 13 01:55	21°♌23'22	2°02'30	evening set	5047 Oct 20 20:29	10°♌48'45	
morning rise	5046 Nov 19 08:11	16°♌02'19		min. Earth dist.	5047 Oct 24 12:23	7°♌42'22	0.63230 AU
asc. node	5046 Nov 19 02:57	16°♌08'31		inferior conj	5047 Oct 27 05:20	5°♌01'57	-3°07'07
direct	5046 Nov 21 23:12	15°♌26'01		minimum elong	5047 Oct 27 10:41	4°♌48'42	3°05'17
morning max el	5046 Nov 28 10:29	18°♌52'17	18°00'42		5047 Nov 02 14:41	30°♋♌	
	5046 Dec 06 17:19	0°♊		morning rise	5047 Nov 03 02:27	29°♊47'55	
morning set	5046 Dec 16 03:38	15°♊28'57		direct	5047 Nov 05 12:21	29°♊20'18	
	5046 Dec 24 23:13	0°♊		asc. node	5047 Nov 06 00:01	29°♊21'26	
desc. node	5046 Dec 25 12:53	0°♊55'26			5047 Nov 08 09:07	0°♌	
				morning max el	5047 Nov 12 03:20	2°♌45'41	17°49'41
superior conj	5046 Dec 30 03:14	8°♊18'47	-0°31'35	morning set	5047 Nov 28 10:40	27°♌54'23	
minimum elong	5046 Dec 29 23:22	8°♊03'23	0°31'02		5047 Nov 29 15:25	0°♊	
max. Earth dist.	5047 Jan 03 02:19	14°♊35'36	1.45041 AU				
	5047 Jan 12 23:21	0°♌		superior conj	5047 Dec 10 10:21	18°♊24'52	0°13'55
evening rise	5047 Jan 15 09:33	3°♌44'43		minimum elong	5047 Dec 10 11:47	18°♊30'47	0°13'44
greatest brilliancy	5047 Jan 29 09:35	25°♌02'37	-0.6m	behind sun begin	5047 Dec 10 06:49	18°♊10'12	
	5047 Feb 01 19:25	0°♋		behind sun end	5047 Dec 10 16:44	18°♊51'21	
evening max el	5047 Feb 10 06:35	10°♋43'30	19°52'40	desc. node	5047 Dec 12 09:54	21°♊41'01	
asc. node	5047 Feb 15 02:15	14°♋26'38		max. Earth dist.	5047 Dec 16 20:03	28°♊51'17	1.44048 AU
retrograde	5047 Feb 17 19:14	15°♋05'35			5047 Dec 17 13:14	0°♊	
evening set	5047 Feb 21 11:45	13°♋46'08		evening rise	5047 Dec 25 19:36	12°♊57'52	
inferior conj	5047 Feb 26 21:35	7°♋45'56	3°09'52		5048 Jan 06 02:13	0°♌	
minimum elong	5047 Feb 26 19:33	7°♋52'45	3°09'30	evening max el	5048 Jan 24 06:44	24°♌17'21	20°57'42
min. Earth dist.	5047 Feb 27 21:07	6°♋27'17	0.67064 AU	retrograde	5048 Feb 01 17:26	29°♌16'59	
morning rise	5047 Mar 04 03:08	1°♋31'27		asc. node	5048 Feb 01 23:17	29°♌16'40	
	5047 Mar 06 03:42	30°♋♌		evening set	5048 Feb 05 19:15	27°♌42'39	
direct	5047 Mar 10 02:04	28°♌51'48		inferior conj	5048 Feb 11 03:28	21°♌30'26	2°41'34
	5047 Mar 14 09:29	0°♋		minimum elong	5048 Feb 11 01:03	21°♌38'43	2°40'56
morning max el	5047 Mar 22 00:57	6°♋00'19	25°15'28	min. Earth dist.	5048 Feb 11 13:51	20°♌54'37	0.67777 AU
desc. node	5047 Mar 23 12:08	7°♋32'09		morning rise	5048 Feb 16 06:41	15°♌17'11	
	5047 Apr 09 14:22	0°♎		direct	5048 Feb 21 15:27	12°♌55'16	
morning set	5047 Apr 27 05:17	28°♎56'25		morning max el	5048 Mar 03 09:44	19°♌20'06	23°47'55
	5047 Apr 27 19:22	0°♏		desc. node	5048 Mar 09 09:10	26°♌06'23	
max. Earth dist.	5047 Apr 30 21:14	5°♏39'57	1.36473 AU		5048 Mar 12 10:31	0°♋	
					5048 Apr 01 18:12	0°♎	
superior conj	5047 May 07 00:46	17°♏30'45	-1°07'19	morning set	5048 Apr 07 20:40	10°♎09'08	
minimum elong	5047 May 07 04:29	17°♏49'10	1°06'40	max. Earth dist.	5048 Apr 11 17:07	16°♎51'10	1.38587 AU
	5047 May 13 05:30	0°♐			5048 Apr 18 21:40	0°♏	
asc. node	5047 May 14 01:33	1°♐41'46					
evening rise	5047 May 15 06:14	4°♐07'03		superior conj	5048 Apr 19 01:26	0°♏17'49	-1°34'52
	5047 May 30 10:13	0°♑		minimum elong	5048 Apr 19 06:19	0°♏40'54	1°34'15
evening max el	5047 Jun 01 14:09	2°♑20'17	19°43'11	evening rise	5048 Apr 28 03:41	17°♏54'14	
retrograde	5047 Jun 11 11:27	7°♑10'14		asc. node	5048 Apr 29 22:35	21°♏22'52	
evening set	5047 Jun 13 09:39	7°♑00'03			5048 May 04 12:50	0°♐	
desc. node	5047 Jun 19 11:22	4°♑36'38		evening max el	5048 May 14 12:15	14°♐21'48	18°50'52
inferior conj	5047 Jun 22 05:33	2°♑57'19	-0°49'27	retrograde	5048 May 22 20:23	18°♐27'20	
minimum elong	5047 Jun 22 03:17	3°♑00'50	0°48'37	evening set	5048 May 24 22:43	18°♐12'47	
min. Earth dist.	5047 Jun 24 11:36	1°♑33'30	0.55482 AU	inferior conj	5048 Jun 01 23:19	13°♐53'57	0°58'27
	5047 Jun 27 05:06	30°♋♐		minimum elong	5048 Jun 02 01:29	13°♐50'01	0°57'41
morning rise	5047 Jun 30 18:42	28°♐28'18		min. Earth dist.	5048 Jun 05 03:46	11°♐36'47	0.56975 AU
direct	5047 Jul 05 05:47	27°♐44'16		desc. node	5048 Jun 05 08:24	11°♐28'50	
	5047 Jul 13 01:01	0°♑		morning rise	5048 Jun 10 00:56	8°♐48'25	
morning max el	5047 Jul 19 03:42	4°♑39'51	24°35'07	direct	5048 Jun 15 10:32	7°♐37'58	
	5047 Aug 06 02:41	0°♒		morning max el	5048 Jun 29 18:42	15°♐05'52	26°08'56
asc. node	5047 Aug 10 00:47	7°♒33'10			5048 Jul 11 18:01	0°♑	
morning set	5047 Aug 13 15:23	15°♒00'26		asc. node	5048 Jul 26 21:51	27°♑19'49	
				morning set	5048 Jul 28 02:25	29°♑49'48	
superior conj	5047 Aug 20 13:58	0°♓03'29	1°30'26		5048 Jul 28 04:21	0°♒	
minimum elong	5047 Aug 20 11:57	29°♒52'30	1°30'13				
	5047 Aug 20 13:19	0°♓		superior conj	5048 Aug 04 01:10	14°♒57'43	1°15'54
max. Earth dist.	5047 Aug 22 07:40	3°♓49'53	1.32810 AU	minimum elong	5048 Aug 03 22:51	14°♒45'00	1°15'33
evening rise	5047 Aug 27 20:29	15°♓29'11		max. Earth dist.	5048 Aug 04 16:33	16°♒22'31	1.32156 AU

evening rise	5048 Aug 11 00:04	29°Ω59'50		minimum elong	5049 Jul 19 10:50	29°Ω38'57	0°56'32
	5048 Aug 11 00:06	0°Π			5049 Jul 19 14:39	0°Ω	
	5048 Aug 27 11:28	0°Ω		evening rise	5049 Jul 26 08:25	14°Ω42'20	
desc. node	5048 Sep 01 07:40	7°Ω01'23			5049 Aug 03 00:03	0°Π	
evening max el	5048 Sep 11 06:28	18°Ω36'31	27°08'32	desc. node	5049 Aug 19 04:41	24°Π52'57	
retrograde	5048 Sep 25 03:10	25°Ω49'00			5049 Aug 23 22:02	0°Ω	
evening set	5048 Oct 02 05:20	23°Ω33'30		evening max el	5049 Aug 24 06:13	0°Ω19'35	26°16'43
min. Earth dist.	5048 Oct 05 20:55	20°Ω50'25	0.61294 AU	retrograde	5049 Sep 07 05:24	7°Ω28'04	
inferior conj	5048 Oct 08 23:33	18°Ω07'33	-4°06'30	evening set	5049 Sep 13 18:25	5°Ω43'14	
minimum elong	5048 Oct 09 05:50	17°Ω53'48	4°04'49	min. Earth dist.	5049 Sep 17 19:24	3°Ω08'24	0.59219 AU
morning rise	5048 Oct 16 08:17	13°Ω13'44		inferior conj	5049 Sep 21 01:24	0°Ω40'02	-4°54'03
direct	5048 Oct 18 15:57	12°Ω51'38		minimum elong	5049 Sep 21 06:32	0°Ω30'13	4°53'15
asc. node	5048 Oct 22 21:04	14°Ω07'39			5049 Sep 21 22:30	30°RΠ	
morning max el	5048 Oct 25 18:09	16°Ω24'38	17°57'02	morning rise	5049 Sep 28 20:52	26°Π08'39	
	5048 Nov 04 06:54	0°Π		direct	5049 Oct 01 05:44	25°Π49'16	
morning set	5048 Nov 10 12:18	11°Π12'48		morning max el	5049 Oct 09 03:32	29°Π39'11	18°24'11
				asc. node	5049 Oct 09 18:07	0°Ω15'30	
superior conj	5048 Nov 20 20:02	29°Π48'42	0°51'22		5049 Oct 09 12:01	0°Ω	
minimum elong	5048 Nov 20 23:49	0°Ω05'14	0°50'51	morning set	5049 Oct 25 03:05	25°Ω08'06	
	5048 Nov 20 22:37	0°Ω			5049 Oct 27 15:58	0°Π	
desc. node	5048 Nov 28 06:55	12°Ω28'15		superior conj	5049 Nov 03 04:49	12°Π19'17	1°18'15
max. Earth dist.	5048 Nov 28 09:00	12°Ω36'48	1.42471 AU	minimum elong	5049 Nov 03 08:30	12°Π36'14	1°17'51
evening rise	5048 Dec 04 13:42	22°Ω37'23		max. Earth dist.	5049 Nov 10 16:38	25°Π40'48	1.40510 AU
	5048 Dec 09 07:16	0°Ω			5049 Nov 13 05:34	0°Ω	
	5048 Dec 30 06:51	0°Ω		evening rise	5049 Nov 15 03:29	3°Ω11'25	
evening max el	5049 Jan 06 01:33	7°Ω52'47	22°12'40	desc. node	5049 Nov 15 03:56	3°Ω13'17	
retrograde	5049 Jan 15 14:14	13°Ω32'53			5049 Dec 02 14:22	0°Ω	
asc. node	5049 Jan 18 20:19	12°Ω36'56		evening max el	5049 Dec 19 16:28	21°Ω31'21	23°32'28
evening set	5049 Jan 20 02:56	11°Ω43'06		retrograde	5049 Dec 30 08:06	27°Ω48'55	
inferior conj	5049 Jan 25 11:17	5°Ω22'15	2°04'41	evening set	5050 Jan 04 09:10	25°Ω43'36	
minimum elong	5049 Jan 25 08:59	5°Ω30'14	2°03'55	asc. node	5050 Jan 05 17:21	24°Ω27'03	
min. Earth dist.	5049 Jan 25 09:49	5°Ω27'20	0.68089 AU	inferior conj	5050 Jan 09 19:09	19°Ω18'03	1°20'20
	5049 Jan 29 18:05	30°RΩ		minimum elong	5050 Jan 09 17:25	19°Ω23'59	1°19'42
morning rise	5049 Jan 30 14:54	29°Ω11'42		min. Earth dist.	5050 Jan 09 06:38	20°Ω00'57	0.68025 AU
direct	5049 Feb 04 08:59	27°Ω11'35		morning rise	5050 Jan 15 01:37	13°Ω12'01	
	5049 Feb 10 18:56	0°Ω		direct	5050 Jan 19 05:40	11°Ω34'37	
morning max el	5049 Feb 13 20:46	2°Ω46'45	22°19'09	morning max el	5050 Jan 27 13:31	16°Ω22'54	20°57'20
desc. node	5049 Feb 24 06:12	15°Ω23'11			5050 Feb 07 11:55	0°Ω	
	5049 Mar 06 11:37	0°Ω		desc. node	5050 Feb 11 03:12	5°Ω10'20	
morning set	5049 Mar 19 08:42	20°Ω03'01		morning set	5050 Feb 26 17:25	28°Ω41'54	
max. Earth dist.	5049 Mar 24 13:46	28°Ω40'46	1.40779 AU		5050 Feb 27 13:21	0°Ω	
	5049 Mar 25 08:30	0°Ω		max. Earth dist.	5050 Mar 06 16:58	11°Ω25'48	1.42760 AU
superior conj	5049 Apr 01 08:47	12°Ω13'39	-1°56'47	superior conj	5050 Mar 13 17:53	23°Ω07'22	-2°08'18
minimum elong	5049 Apr 01 13:20	12°Ω33'59	1°56'29	minimum elong	5050 Mar 13 19:14	23°Ω13'06	2°08'17
	5049 Apr 11 00:14	0°Ω			5050 Mar 17 18:03	0°Ω	
evening rise	5049 Apr 11 14:38	1°Ω07'29		evening rise	5050 Mar 25 11:03	13°Ω37'35	
asc. node	5049 Apr 16 19:36	10°Ω45'37		asc. node	5050 Apr 03 16:38	29°Ω43'55	
evening max el	5049 Apr 27 18:44	26°Ω57'59	18°18'54		5050 Apr 03 20:36	0°Ω	
	5049 May 02 03:31	0°Ω		evening max el	5050 Apr 11 06:07	9°Ω59'52	18°06'43
retrograde	5049 May 05 00:08	0°Ω34'03		retrograde	5050 Apr 17 20:25	13°Ω22'39	
evening set	5049 May 07 09:24	0°Ω11'25		evening set	5050 Apr 20 12:26	12°Ω49'28	
	5049 May 07 22:41	30°RΩ		inferior conj	5050 Apr 27 01:41	7°Ω50'10	3°05'52
inferior conj	5049 May 14 14:40	25°Ω32'37	2°17'26	minimum elong	5050 Apr 27 04:22	7°Ω43'37	3°05'23
minimum elong	5049 May 14 18:11	25°Ω25'10	2°16'29	min. Earth dist.	5050 Apr 30 05:32	4°Ω46'24	0.61213 AU
min. Earth dist.	5049 May 18 01:07	22°Ω39'43	0.59004 AU	morning rise	5050 May 03 18:19	1°Ω53'55	
morning rise	5049 May 21 23:59	19°Ω56'22			5050 May 07 16:56	30°RΩ	
desc. node	5049 May 23 05:26	19°Ω19'26		direct	5050 May 10 11:58	29°Ω36'39	
direct	5049 May 28 05:31	18°Ω11'38		desc. node	5050 May 10 02:26	29°Ω37'07	
morning max el	5049 Jun 11 14:54	25°Ω59'34	27°17'14		5050 May 13 09:07	0°Ω	
	5049 Jun 15 08:55	0°Ω		morning max el	5050 May 24 17:26	7°Ω34'26	27°50'17
	5049 Jul 05 03:30	0°Ω			5050 Jun 10 18:54	0°Ω	
morning set	5049 Jul 12 11:01	14°Ω29'46		morning set	5050 Jun 26 15:22	28°Ω54'54	
asc. node	5049 Jul 13 18:52	17°Ω18'01			5050 Jun 27 03:59	0°Ω	
max. Earth dist.	5049 Jul 19 03:44	28°Ω59'44	1.31924 AU	asc. node	5050 Jun 30 15:53	7°Ω23'13	
superior conj	5049 Jul 19 12:57	29°Ω50'42	0°56'56	max. Earth dist.	5050 Jul 02 13:37	11°Ω30'55	1.32121 AU

superior conj	5050 Jul 03 23:38	14°☿36'56	0°34'06	superior conj	5051 Jun 18 07:20	29°♄09'34	0°08'00
minimum elong	5050 Jul 03 22:10	14°☿28'50	0°33'46	minimum elong	5051 Jun 18 06:57	29°♄07'28	0°07'54
evening rise	5050 Jul 10 19:29	29°☿30'18		behind sun begin	5051 Jun 18 02:19	28°♄42'32	
	5050 Jul 11 01:04	0°♄		behind sun end	5051 Jun 18 11:34	29°♄32'27	
	5050 Jul 27 14:38	0°♄			5051 Jun 18 16:40	0°☿	
evening max el	5050 Aug 05 22:41	11°♄15'39	24°56'34	evening rise	5051 Jun 25 07:18	14°☿16'19	
desc. node	5050 Aug 06 01:42	11°♄22'50			5051 Jul 03 04:27	0°♄	
retrograde	5050 Aug 19 20:47	18°♄17'32		evening max el	5051 Jul 18 11:11	21°♄39'54	23°20'36
evening set	5050 Aug 25 07:26	17°♄10'22		desc. node	5051 Jul 23 22:44	25°♄59'22	
min. Earth dist.	5050 Aug 30 10:10	14°♄25'27	0.57249 AU	retrograde	5051 Jul 31 23:30	28°♄25'50	
inferior conj	5050 Sep 02 07:48	12°♄30'24	-5°16'52	evening set	5051 Aug 04 22:20	27°♄51'41	
minimum elong	5050 Sep 02 08:33	12°♄29'10	5°16'52	min. Earth dist.	5051 Aug 11 20:37	24°♄40'29	0.55690 AU
morning rise	5050 Sep 10 12:00	8°♄21'10		inferior conj	5051 Aug 13 18:11	23°♄33'31	-4°58'30
direct	5050 Sep 13 01:46	8°♄02'10		minimum elong	5051 Aug 13 12:30	23°♄41'55	4°57'44
morning max el	5050 Sep 22 04:02	12°♄19'19	19°12'40	morning rise	5051 Aug 22 05:02	19°♄40'50	
asc. node	5050 Sep 26 15:08	17°♄29'56		direct	5051 Aug 25 02:38	19°♄20'26	
	5050 Oct 04 05:34	0°♄		morning max el	5051 Sep 04 17:00	24°♄16'02	20°23'09
morning set	5050 Oct 09 02:56	9°♄28'57			5051 Sep 09 17:38	0°♄	
				asc. node	5051 Sep 13 12:10	5°♄36'06	
superior conj	5050 Oct 17 07:24	25°♄41'42	1°34'54	morning set	5051 Sep 23 08:48	24°♄06'34	
minimum elong	5050 Oct 17 09:46	25°♄53'12	1°34'45		5051 Sep 26 05:27	0°♄	
	5050 Oct 19 13:14	0°♄		superior conj	5051 Sep 30 22:51	9°♄41'42	1°42'38
max. Earth dist.	5050 Oct 23 21:36	8°♄04'50	1.38405 AU	minimum elong	5051 Sep 30 23:38	9°♄45'41	1°42'37
evening rise	5050 Oct 27 16:17	14°♄48'09		max. Earth dist.	5051 Oct 06 04:24	20°♄02'24	1.36394 AU
desc. node	5050 Nov 02 00:57	23°♄52'25		evening rise	5051 Oct 10 01:50	27°♄21'30	
	5050 Nov 05 20:14	0°♄			5051 Oct 11 12:40	0°♄	
	5050 Nov 27 09:16	0°♄		desc. node	5051 Oct 19 22:00	14°♄21'08	
evening max el	5050 Dec 02 05:29	5°♄13'57	24°50'38		5051 Oct 30 05:26	0°♄	
retrograde	5050 Dec 13 21:51	12°♄01'14		evening max el	5051 Nov 14 18:05	18°♄57'43	26°00'02
evening set	5050 Dec 19 12:24	9°♄41'09		retrograde	5051 Nov 27 06:50	26°♄04'56	
asc. node	5050 Dec 23 14:23	5°♄10'07		evening set	5051 Dec 03 10:57	23°♄32'34	
min. Earth dist.	5050 Dec 24 01:53	4°♄32'38	0.67604 AU	min. Earth dist.	5051 Dec 07 17:15	18°♄59'12	0.66824 AU
inferior conj	5050 Dec 25 01:17	3°♄15'20	0°29'29	inferior conj	5051 Dec 09 03:53	17°♄11'09	-0°26'55
minimum elong	5050 Dec 25 00:34	3°♄17'42	0°29'13	minimum elong	5051 Dec 09 04:35	17°♄08'55	0°26'36
	5050 Dec 27 15:17	30°♄		asc. node	5051 Dec 10 11:25	15°♄34'13	
morning rise	5050 Dec 30 12:54	27°♄15'55		morning rise	5051 Dec 14 22:43	11°♄20'48	
direct	5051 Jan 03 04:09	25°♄59'53		direct	5051 Dec 18 02:52	10°♄23'15	
	5051 Jan 10 09:49	0°♄		morning max el	5051 Dec 24 22:25	14°♄08'29	18°53'18
morning max el	5051 Jan 10 14:09	0°♄10'43	19°47'45		5052 Jan 05 17:56	0°♄	
greatest brilliancy	5051 Jan 23 18:35	17°♄29'29	-0.6m	morning set	5052 Jan 15 22:28	15°♄49'38	
desc. node	5051 Jan 29 00:12	25°♄19'28		desc. node	5052 Jan 15 21:13	15°♄44'48	
	5051 Feb 01 02:00	0°♄			5052 Jan 24 23:51	0°♄	
morning set	5051 Feb 05 13:32	6°♄52'34		max. Earth dist.	5052 Jan 30 21:06	9°♄13'29	1.45153 AU
max. Earth dist.	5051 Feb 17 04:08	25°♄02'07	1.44281 AU				
	5051 Feb 20 06:39	0°♄		superior conj	5052 Feb 01 11:04	11°♄42'42	-1°39'29
superior conj	5051 Feb 22 01:22	2°♄52'15	-2°03'45	minimum elong	5052 Feb 01 01:48	11°♄06'17	1°38'38
minimum elong	5051 Feb 21 20:39	2°♄33'13	2°03'33		5052 Feb 12 23:03	0°♄	
evening rise	5051 Mar 07 12:24	25°♄15'07		evening rise	5052 Feb 16 15:15	5°♄56'09	
	5051 Mar 10 07:20	0°♄			5052 Mar 02 20:54	0°♄	
asc. node	5051 Mar 21 13:40	18°♄09'06		asc. node	5052 Mar 07 10:42	5°♄51'34	
evening max el	5051 Mar 25 19:01	23°♄17'28	18°13'35	evening max el	5052 Mar 08 06:44	6°♄44'29	18°38'45
retrograde	5051 Apr 01 04:50	26°♄41'47		retrograde	5052 Mar 14 21:07	10°♄23'15	
evening set	5051 Apr 04 03:04	25°♄56'42		evening set	5052 Mar 18 01:41	9°♄25'30	
inferior conj	5051 Apr 10 04:20	20°♄37'54	3°29'00	inferior conj	5052 Mar 23 18:40	3°♄48'54	3°32'42
minimum elong	5051 Apr 10 05:25	20°♄34'56	3°28'54	minimum elong	5052 Mar 23 18:12	3°♄50'19	3°32'40
min. Earth dist.	5051 Apr 12 18:46	17°♄46'42	0.63303 AU	min. Earth dist.	5052 Mar 25 17:34	1°♄27'01	0.65083 AU
morning rise	5051 Apr 16 06:41	14°♄30'24			5052 Mar 26 23:53	30°♄	
direct	5051 Apr 23 03:17	11°♄50'27		morning rise	5052 Mar 29 10:09	27°♄35'57	
desc. node	5051 Apr 26 23:28	12°♄34'36		direct	5052 Apr 05 02:07	24°♄46'24	
morning max el	5051 May 07 00:57	19°♄49'41	27°45'40	desc. node	5052 Apr 12 20:29	27°♄45'55	
	5051 May 15 17:22	0°♄			5052 Apr 15 16:14	0°♄	
	5051 Jun 03 18:36	0°♄		morning max el	5052 Apr 18 10:59	2°♄37'21	27°06'50
morning set	5051 Jun 10 13:10	12°♄57'14			5052 May 08 23:50	0°♄	
max. Earth dist.	5051 Jun 15 18:16	23°♄42'51	1.32754 AU	morning set	5052 May 24 01:35	26°♄28'51	
asc. node	5051 Jun 17 12:55	27°♄30'27			5052 May 25 20:49	0°♄	
				max. Earth dist.	5052 May 28 13:59	5°♄26'31	1.33842 AU

superior conj	5052 Jun 01 10:02	13° Π 22'53	-0°20'34	max. Earth dist.	5053 May 10 22:07	16° \mathcal{B} 39'52	1.35389 AU
minimum elong	5052 Jun 01 11:07	13° Π 28'34	0°20'21				
asc. node	5052 Jun 03 09:58	17° Π 36'03		superior conj	5053 May 16 05:16	27° \mathcal{B} 09'51	-0°50'20
evening rise	5052 Jun 08 17:59	28° Π 54'44		minimum elong	5053 May 16 08:02	27° \mathcal{B} 23'55	0°49'49
	5052 Jun 09 06:28	0° \mathcal{E}			5053 May 17 14:39	0° Π	
	5052 Jun 27 03:51	0° Ω		asc. node	5053 May 21 07:02	7° Π 35'50	
evening max el	5052 Jun 29 03:41	2° Ω 05'36	21°45'02	evening rise	5053 May 24 01:30	13° Π 18'57	
desc. node	5052 Jul 09 19:46	8° Ω 09'02			5053 Jun 01 18:01	0° \mathcal{E}	
retrograde	5052 Jul 11 15:38	8° Ω 16'54		evening max el	5053 Jun 11 07:09	13° \mathcal{E} 02'52	20°22'24
evening set	5052 Jul 14 06:17	8° Ω 01'31		retrograde	5053 Jun 22 04:55	18° \mathcal{E} 23'09	
inferior conj	5052 Jul 23 14:09	3° Ω 59'36	-3°48'29	evening set	5053 Jun 24 04:08	18° \mathcal{E} 13'27	
minimum elong	5052 Jul 23 05:20	4° Ω 11'56	3°46'02	desc. node	5053 Jun 26 16:46	17° \mathcal{E} 34'39	
min. Earth dist.	5052 Jul 23 06:39	4° Ω 10'06	0.54862 AU	inferior conj	5053 Jul 03 08:24	14° \mathcal{E} 15'41	-1°58'27
morning rise	5052 Aug 01 05:44	0° Ω 08'09		minimum elong	5053 Jul 03 02:51	14° \mathcal{E} 23'46	1°56'27
	5052 Aug 01 20:52	30° $\mathcal{R}\mathcal{E}$		min. Earth dist.	5053 Jul 04 18:31	13° \mathcal{E} 25'50	0.54975 AU
direct	5052 Aug 04 13:28	29° \mathcal{E} 44'02		morning rise	5053 Jul 12 00:28	10° \mathcal{E} 04'37	
	5052 Aug 07 04:44	0° Ω		direct	5053 Jul 15 23:39	9° \mathcal{E} 30'36	
morning max el	5052 Aug 16 18:11	5° Ω 27'35	21°53'18	morning max el	5053 Jul 29 10:41	16° \mathcal{E} 03'14	23°35'41
asc. node	5052 Aug 30 09:12	24° Ω 22'06			5053 Aug 09 12:34	0° Ω	
	5052 Sep 02 08:59	0° \mathcal{M}		asc. node	5053 Aug 17 06:16	13° Ω 38'09	
morning set	5052 Sep 06 18:23	8° \mathcal{M} 54'24		morning set	5053 Aug 22 05:51	23° Ω 47'20	
					5053 Aug 25 03:31	0° \mathcal{M}	
superior conj	5052 Sep 13 23:17	24° \mathcal{M} 07'59	1°42'48	superior conj	5053 Aug 29 05:45	8° \mathcal{M} 51'33	1°36'34
minimum elong	5052 Sep 13 22:40	24° \mathcal{M} 04'45	1°42'47	minimum elong	5053 Aug 29 04:07	8° \mathcal{M} 42'44	1°36'26
	5052 Sep 16 19:06	0° \mathcal{A}		max. Earth dist.	5053 Aug 31 15:56	14° \mathcal{M} 02'54	1.33364 AU
max. Earth dist.	5052 Sep 17 17:46	1° \mathcal{A} 55'40	1.34678 AU	evening rise	5053 Sep 05 18:45	24° \mathcal{M} 36'58	
evening rise	5052 Sep 22 04:00	10° \mathcal{A} 41'15			5053 Sep 08 12:33	0° \mathcal{A}	
	5052 Oct 02 23:24	0° \mathcal{M}		desc. node	5053 Sep 22 16:05	24° \mathcal{A} 22'35	
desc. node	5052 Oct 05 19:02	4° \mathcal{M} 33'34			5053 Sep 26 11:53	0° \mathcal{M}	
	5052 Oct 24 17:24	0° \mathcal{A}		evening max el	5053 Oct 09 18:46	15° \mathcal{M} 57'27	27°23'06
evening max el	5052 Oct 27 06:45	2° \mathcal{A} 35'23	26°53'16	retrograde	5053 Oct 23 08:12	23° \mathcal{M} 15'54	
retrograde	5052 Nov 09 10:28	9° \mathcal{A} 52'31		evening set	5053 Oct 30 09:18	20° \mathcal{M} 37'11	
evening set	5052 Nov 16 02:46	7° \mathcal{A} 12'54		min. Earth dist.	5053 Nov 03 03:25	17° \mathcal{M} 13'06	0.64214 AU
min. Earth dist.	5052 Nov 20 02:27	3° \mathcal{A} 15'01	0.65690 AU	inferior conj	5053 Nov 05 13:43	14° \mathcal{M} 39'32	-2°30'53
inferior conj	5052 Nov 22 00:49	1° \mathcal{A} 00'51	-1°27'42	minimum elong	5053 Nov 05 18:06	14° \mathcal{M} 27'58	2°29'13
minimum elong	5052 Nov 22 03:18	0° \mathcal{A} 53'39	1°26'39	morning rise	5053 Nov 12 04:16	9° \mathcal{M} 15'29	
	5052 Nov 22 22:00	30° $\mathcal{R}\mathcal{M}$		asc. node	5053 Nov 13 05:29	8° \mathcal{M} 54'25	
asc. node	5052 Nov 26 08:28	26° \mathcal{M} 35'01		direct	5053 Nov 14 16:38	8° \mathcal{M} 43'28	
morning rise	5052 Nov 28 04:45	25° \mathcal{M} 22'12		morning max el	5053 Nov 21 04:49	12° \mathcal{M} 08'39	17°53'50
direct	5052 Nov 30 23:49	24° \mathcal{M} 39'23			5053 Dec 03 11:56	0° \mathcal{A}	
morning max el	5052 Dec 07 12:14	28° \mathcal{M} 10'00	18°15'05	morning set	5053 Dec 08 04:47	7° \mathcal{A} 58'23	
	5052 Dec 09 04:49	0° \mathcal{A}		desc. node	5053 Dec 19 15:19	27° \mathcal{A} 04'22	
morning set	5052 Dec 26 11:25	26° \mathcal{A} 12'16					
	5052 Dec 28 19:38	0° \mathcal{B}		superior conj	5053 Dec 21 07:33	29° \mathcal{A} 47'44	-0°11'42
desc. node	5053 Jan 01 18:16	6° \mathcal{B} 21'00		minimum elong	5053 Dec 21 06:12	29° \mathcal{A} 42'15	0°11'29
superior conj	5053 Jan 10 14:23	20° \mathcal{B} 22'51	-0°58'40	behind sun begin	5053 Dec 20 23:01	29° \mathcal{A} 13'10	
minimum elong	5053 Jan 10 07:12	19° \mathcal{B} 54'35	0°57'44	behind sun end	5053 Dec 21 13:23	0° \mathcal{B} 11'17	
max. Earth dist.	5053 Jan 12 16:21	23° \mathcal{B} 39'08	1.45291 AU		5053 Dec 21 10:35	0° \mathcal{B}	
	5053 Jan 16 17:39	0° \approx		max. Earth dist.	5053 Dec 26 10:53	8° \mathcal{B} 01'23	1.44697 AU
evening rise	5053 Jan 26 19:28	15° \approx 43'54		evening rise	5054 Jan 06 08:06	24° \mathcal{B} 59'19	
	5053 Feb 04 23:28	0° \mathcal{H}			5054 Jan 09 14:38	0° \approx	
greatest brilliancy	5053 Feb 07 10:08	3° \mathcal{H} 44'50	-0.7m		5054 Jan 30 09:33	0° \mathcal{H}	
evening max el	5053 Feb 19 14:59	20° \mathcal{H} 15'48	19°21'09	evening max el	5054 Feb 02 18:19	3° \mathcal{H} 49'17	20°18'50
asc. node	5053 Feb 22 07:45	22° \mathcal{H} 38'26		asc. node	5054 Feb 09 04:47	8° \mathcal{H} 15'25	
retrograde	5053 Feb 26 17:43	24° \mathcal{H} 19'49		retrograde	5054 Feb 10 15:54	8° \mathcal{H} 26'54	
evening set	5053 Mar 02 05:25	23° \mathcal{H} 08'40		evening set	5054 Feb 14 12:05	7° \mathcal{H} 01'26	
inferior conj	5053 Mar 07 17:09	17° \mathcal{H} 16'24	3°21'37	inferior conj	5054 Feb 19 21:00	0° \mathcal{H} 55'52	2°58'59
minimum elong	5053 Mar 07 15:32	17° \mathcal{H} 21'37	3°21'25	minimum elong	5054 Feb 19 18:45	1° \mathcal{H} 03'31	2°58'30
min. Earth dist.	5053 Mar 09 00:54	15° \mathcal{H} 33'16	0.66464 AU	min. Earth dist.	5054 Feb 20 14:52	29° \approx 55'12	0.67421 AU
morning rise	5053 Mar 13 01:21	11° \mathcal{H} 01'34			5054 Feb 20 13:27	30° $\mathcal{R}\approx$	
direct	5053 Mar 19 07:27	8° \mathcal{H} 15'08		morning rise	5054 Feb 25 01:12	24° \approx 41'32	
desc. node	5053 Mar 30 17:30	14° \mathcal{H} 36'45		direct	5054 Mar 02 18:18	22° \approx 08'23	
morning max el	5053 Mar 31 20:53	15° \mathcal{H} 44'14	26°01'18	morning max el	5054 Mar 14 05:33	29° \approx 00'05	24°38'49
	5053 Apr 12 15:05	0° \mathcal{Y}			5054 Mar 15 04:44	0° \mathcal{H}	
	5053 May 01 20:26	0° \mathcal{B}		desc. node	5054 Mar 17 14:32	2° \mathcal{H} 39'29	
morning set	5053 May 07 00:44	9° \mathcal{B} 18'23			5054 Apr 06 10:12	0° \mathcal{Y}	

morning set	5054 Apr 19 05:28	21° Υ 11'23		desc. node	5055 Mar 04 11:35	21° \approx 33'45	
max. Earth dist.	5054 Apr 22 20:20	27° Υ 40'48	1.37344 AU		5055 Mar 10 17:16	0° H	
	5054 Apr 24 02:38	0° B			5055 Mar 30 06:50	0° Υ	
superior conj	5054 Apr 29 13:52	10° B 22'05	-1°19'26	morning set	5055 Mar 31 09:49	1° Υ 52'17	
minimum elong	5054 Apr 29 18:11	10° B 43'04	1°18'47	max. Earth dist.	5055 Apr 04 15:45	9° Υ 06'02	1.39529 AU
evening rise	5054 May 08 03:26	27° B 22'00		superior conj	5055 Apr 12 07:53	22° Υ 49'56	-1°45'06
asc. node	5054 May 08 04:05	27° B 25'14		minimum elong	5055 Apr 12 12:53	23° Υ 13'02	1°44'35
	5054 May 09 11:15	0° II			5055 Apr 16 03:46	0° B	
evening max el	5054 May 24 23:07	24° II 42'07	19°18'28	evening rise	5055 Apr 21 20:54	10° B 56'33	
retrograde	5054 Jun 03 03:28	29° II 11'08		asc. node	5055 Apr 25 01:07	16° B 59'45	
evening set	5054 Jun 05 02:45	28° II 59'38			5055 May 02 12:33	0° II	
inferior conj	5054 Jun 13 14:53	24° II 51'23	-0°00'49	evening max el	5055 May 08 01:19	7° II 00'28	18°34'47
minimum elong	5054 Jun 13 14:51	24° II 51'27	0°00'49	retrograde	5055 May 15 20:21	10° II 51'07	
transit middle	5054 Jun 13 14:51	24° II 51'27	0°00'49	evening set	5055 May 18 01:45	10° II 33'22	
transit begin	5054 Jun 13 11:00	24° II 57'47		inferior conj	5055 May 25 17:50	6° II 06'07	1°35'49
transit end	5054 Jun 13 18:42	24° II 45'06		minimum elong	5055 May 25 20:57	6° II 00'07	1°34'49
desc. node	5054 Jun 13 13:47	24° II 53'12		min. Earth dist.	5055 May 29 02:42	3° II 31'15	0.57801 AU
min. Earth dist.	5054 Jun 16 08:49	23° II 03'09	0.56030 AU	desc. node	5055 May 31 10:47	1° II 55'48	
morning rise	5054 Jun 21 23:59	20° II 06'48		morning rise	5055 Jun 02 12:54	0° II 46'45	
direct	5054 Jun 26 20:46	19° II 12'33			5055 Jun 04 11:20	30° R B	
morning max el	5054 Jul 11 00:13	26° II 23'57	25°17'12	direct	5055 Jun 08 07:53	29° B 22'13	
	5054 Jul 14 10:48	0° B			5055 Jun 12 05:53	0° II	
	5054 Aug 02 12:29	0° Ω		morning max el	5055 Jun 22 16:56	6° II 59'04	26°41'46
asc. node	5054 Aug 04 03:19	3° Ω 15'29			5055 Jul 09 20:15	0° B	
morning set	5054 Aug 06 17:29	8° Ω 39'15		morning set	5055 Jul 22 03:41	23° B 25'21	
				asc. node	5055 Jul 22 00:22	23° B 07'53	
superior conj	5054 Aug 13 15:47	23° Ω 43'41	1°24'52		5055 Jul 25 05:14	0° Ω	
minimum elong	5054 Aug 13 13:35	23° Ω 31'38	1°24'35	superior conj	5055 Jul 29 03:26	8° Ω 38'05	1°08'22
max. Earth dist.	5054 Aug 14 21:45	26° Ω 27'41	1.32478 AU	minimum elong	5055 Jul 29 01:09	8° Ω 25'26	1°07'59
	5054 Aug 16 12:50	0° H		max. Earth dist.	5055 Jul 29 08:13	9° Ω 04'28	1.32015 AU
evening rise	5054 Aug 20 18:29	8° H 57'30		evening rise	5055 Aug 05 00:24	23° Ω 34'22	
	5054 Aug 31 21:25	0° $\underline{\text{B}}$			5055 Aug 08 03:16	0° H	
desc. node	5054 Sep 09 13:06	13° $\underline{\text{B}}$ 37'33			5055 Aug 25 20:37	0° $\underline{\text{B}}$	
evening max el	5054 Sep 22 04:13	28° $\underline{\text{B}}$ 50'40	27°23'25	desc. node	5055 Aug 27 10:05	2° $\underline{\text{B}}$ 04'45	
	5054 Sep 23 10:33	0° H		evening max el	5055 Sep 04 08:15	11° $\underline{\text{B}}$ 01'59	26°50'24
retrograde	5054 Oct 05 23:03	6° H 05'08		retrograde	5055 Sep 18 05:54	18° $\underline{\text{B}}$ 11'46	
evening set	5054 Oct 13 03:11	3° H 38'02		evening set	5055 Sep 25 04:07	16° $\underline{\text{B}}$ 08'11	
min. Earth dist.	5054 Oct 16 18:18	0° H 42'36	0.62430 AU	min. Earth dist.	5055 Sep 28 22:19	13° $\underline{\text{B}}$ 30'41	0.60422 AU
	5054 Oct 17 12:47	30° R $\underline{\text{B}}$		inferior conj	5055 Oct 02 03:19	10° $\underline{\text{B}}$ 52'07	-4°28'45
inferior conj	5054 Oct 19 15:41	27° $\underline{\text{B}}$ 59'32	-3°33'11	minimum elong	5055 Oct 02 09:27	10° $\underline{\text{B}}$ 39'26	4°27'24
minimum elong	5054 Oct 19 21:35	27° $\underline{\text{B}}$ 45'36	3°31'19	morning rise	5055 Oct 09 16:46	6° $\underline{\text{B}}$ 07'21	
morning rise	5054 Oct 26 17:43	22° $\underline{\text{B}}$ 53'24		direct	5055 Oct 12 00:39	5° $\underline{\text{B}}$ 46'35	
direct	5054 Oct 29 02:13	22° $\underline{\text{B}}$ 28'32		asc. node	5055 Oct 17 23:34	8° $\underline{\text{B}}$ 09'29	
asc. node	5054 Oct 31 02:31	22° $\underline{\text{B}}$ 47'15		morning max el	5055 Oct 19 09:56	9° $\underline{\text{B}}$ 25'26	18°06'03
morning max el	5054 Nov 04 21:07	25° $\underline{\text{B}}$ 56'26	17°50'25		5055 Nov 01 19:30	0° H	
	5054 Nov 08 07:44	0° H		morning set	5055 Nov 04 04:15	4° H 24'09	
morning set	5054 Nov 20 20:28	20° H 48'30					
	5054 Nov 26 00:47	0° Z		superior conj	5055 Nov 13 21:58	22° H 19'58	1°04'06
superior conj	5054 Dec 02 01:55	10° Z 26'31	0°31'02	minimum elong	5055 Nov 14 01:56	22° H 37'41	1°03'36
minimum elong	5054 Dec 02 04:44	10° Z 38'25	0°30'38		5055 Nov 18 06:46	0° Z	
desc. node	5054 Dec 06 12:21	17° Z 51'01		max. Earth dist.	5055 Nov 21 13:46	5° Z 35'58	1.41673 AU
max. Earth dist.	5054 Dec 09 02:37	22° Z 05'22	1.43441 AU	desc. node	5055 Nov 23 09:21	8° Z 37'32	
	5054 Dec 14 01:25	0° Z		evening rise	5055 Nov 26 21:07	14° Z 19'15	
evening rise	5054 Dec 16 19:39	4° Z 19'09			5055 Dec 06 23:33	0° Z	
	5055 Jan 03 00:47	0° \approx			5055 Dec 29 09:35	0° \approx	
evening max el	5055 Jan 16 16:14	17° \approx 24'22	21°28'44	evening max el	5055 Dec 30 09:12	1° \approx 00'58	22°46'27
retrograde	5055 Jan 25 13:34	22° \approx 40'43		retrograde	5056 Jan 09 09:09	6° \approx 57'08	
asc. node	5055 Jan 27 01:47	22° \approx 28'30		asc. node	5056 Jan 13 22:49	5° \approx 09'13	
evening set	5055 Jan 29 19:51	20° \approx 59'58		evening set	5056 Jan 14 03:04	5° \approx 00'30	
inferior conj	5055 Feb 04 03:56	14° \approx 43'57	2°26'54		5056 Jan 18 11:57	30° R Z	
minimum elong	5055 Feb 04 01:31	14° \approx 52'19	2°26'12	inferior conj	5056 Jan 19 11:57	28° Z 37'19	1°46'44
min. Earth dist.	5055 Feb 04 09:13	14° \approx 25'39	0.67960 AU	minimum elong	5056 Jan 19 09:50	28° Z 44'38	1°45'59
morning rise	5055 Feb 09 07:01	8° \approx 31'45		min. Earth dist.	5056 Jan 19 05:40	28° Z 59'02	0.68107 AU
direct	5055 Feb 14 09:39	6° \approx 18'34		morning rise	5056 Jan 24 16:31	22° Z 28'46	
morning max el	5055 Feb 24 14:39	12° \approx 22'03	23°09'46	direct	5056 Jan 29 04:33	20° Z 38'23	

morning max el	5056 Feb 07 03:44	25°  52'16	21°43'14	desc. node	5057 Feb 05 05:36	1°  02'02	
	5056 Feb 10 21:34	0° 		morning set	5057 Feb 17 10:07	19°  30'25	
desc. node	5056 Feb 19 08:35	11°  04'30			5057 Feb 24 02:39	0° 	
	5056 Mar 03 05:35	0° 		max. Earth dist.	5057 Feb 26 22:03	4°  29'31	1.43473 AU
morning set	5056 Mar 10 09:31	11°  11'35					
max. Earth dist.	5056 Mar 16 15:23	21°  21'09	1.41666 AU	superior conj	5057 Mar 05 04:35	14°  44'33	-2°08'39
	5056 Mar 21 18:13	0° 		minimum elong	5057 Mar 05 03:35	14°  40'25	2°08'38
					5057 Mar 14 04:05	0° 	
superior conj	5056 Mar 24 06:19	4°  20'35	-2°03'17	evening rise	5057 Mar 17 15:03	6°  01'48	
minimum elong	5056 Mar 24 09:55	4°  36'21	2°03'06	asc. node	5057 Mar 28 19:09	24°  05'29	
evening rise	5056 Apr 04 02:12	23°  05'23			5057 Apr 01 08:14	0° 	
	5056 Apr 07 10:23	0° 		evening max el	5057 Apr 03 22:35	2°  57'41	18°07'18
asc. node	5056 Apr 10 22:08	6°  13'06		retrograde	5057 Apr 10 09:58	6°  19'50	
evening max el	5056 Apr 20 10:15	19°  48'31	18°11'16	evening set	5057 Apr 13 04:32	5°  41'51	
retrograde	5056 Apr 27 07:53	23°  17'16		inferior conj	5057 Apr 19 12:13	0° 	3°18'23
evening set	5056 Apr 29 20:04	22°  50'21		minimum elong	5057 Apr 19 14:15	0° 	3°18'06
inferior conj	5056 May 06 18:00	18°  02'22	2°41'27		5057 Apr 20 01:22	30° 	
minimum elong	5056 May 06 21:21	17°  54'50	2°40'40	min. Earth dist.	5057 Apr 22 10:52	27°  32'55	0.62127 AU
min. Earth dist.	5056 May 10 02:37	15°  02'03	0.59944 AU	morning rise	5057 Apr 25 22:21	24°  03'146	
morning rise	5056 May 13 20:05	12°  16'16		direct	5057 May 02 18:08	22°  03'20	
desc. node	5056 May 17 07:49	10°  42'39		desc. node	5057 May 04 04:50	22°  09'34	
direct	5056 May 20 07:41	10°  17'21			5057 May 16 19:44	0° 	
morning max el	5056 Jun 03 16:02	18°  10'00	27°35'55	morning max el	5057 May 16 21:11	0° 	27°52'49
	5056 Jun 13 13:41	0° 			5057 Jun 07 14:23	0° 	
	5056 Jul 01 11:50	0° 		morning set	5057 Jun 19 12:38	22°  16'44	
morning set	5056 Jul 05 10:44	7°  59'57			5057 Jun 23 05:41	0° 	
asc. node	5056 Jul 07 21:24	13°  09'43		asc. node	5057 Jun 24 18:26	3° 	16'28
max. Earth dist.	5056 Jul 11 19:29	21°  41'29	1.31962 AU	max. Earth dist.	5057 Jun 25 03:39	4°  06'06	1.32334 AU
superior conj	5056 Jul 12 14:58	23°  08'46	0°47'41	superior conj	5057 Jun 27 00:37	8°  10'06	0°23'22
minimum elong	5056 Jul 12 13:03	23°  18'15	0°47'18	minimum elong	5057 Jun 26 23:33	8°  04'17	0°23'08
	5056 Jul 15 13:56	0° 		evening rise	5057 Jul 03 21:47	23°  07'53	
evening rise	5056 Jul 19 10:10	8°  02'01			5057 Jul 07 04:49	0° 	
	5056 Jul 30 14:34	0° 			5057 Jul 25 20:42	0° 	
desc. node	5056 Aug 13 07:06	19°  02'456		evening max el	5057 Jul 28 18:31	3°  02'49	24°16'39
evening max el	5056 Aug 16 04:40	22°  23'53	25°45'21	desc. node	5057 Jul 31 04:08	5°  11'03	
retrograde	5056 Aug 30 03:37	29°  30'08		retrograde	5057 Aug 11 14:16	10°  00'39	
evening set	5056 Sep 05 07:20	28°  00'41		evening set	5057 Aug 16 10:08	9°  08'48	
min. Earth dist.	5056 Sep 09 16:49	25°  24'09	0.58354 AU	min. Earth dist.	5057 Aug 22 05:20	6°  14'17	0.56509 AU
inferior conj	5056 Sep 12 21:10	23°  07'40	-5°07'41	inferior conj	5057 Aug 24 18:52	4°  37'58	-5°15'05
minimum elong	5056 Sep 13 00:52	23°  01'01	5°07'19	minimum elong	5057 Aug 24 16:53	4°  41'04	5°15'00
morning rise	5056 Sep 20 20:41	18°  46'17		morning rise	5057 Sep 02 02:09	0° 	37'15
direct	5056 Sep 23 07:20	18°  27'16		direct	5057 Sep 04 18:45	0° 	18'02
morning max el	5056 Oct 01 15:57	22°  26'55	18°42'13	morning max el	5057 Sep 14 11:56	4°  50'18	19°40'05
asc. node	5056 Oct 03 20:37	24°  47'49		asc. node	5057 Sep 20 17:40	12°  26'14	
	5056 Oct 07 16:17	0° 			5057 Sep 30 13:56	0° 	
morning set	5056 Oct 17 23:20	18°  31'55		morning set	5057 Oct 02 02:04	3°  00'54	
	5056 Oct 23 20:51	0° 					
				superior conj	5057 Oct 09 23:42	18°  55'44	1°39'11
superior conj	5056 Oct 26 15:03	5°  15'14	1°26'30	minimum elong	5057 Oct 10 01:24	19°  04'08	1°39'06
minimum elong	5056 Oct 26 18:15	5°  30'20	1°26'12		5057 Oct 15 17:48	0° 	
max. Earth dist.	5056 Nov 02 20:00	18°  23'13	1.39612 AU	max. Earth dist.	5057 Oct 16 00:40	0° 	31'56
evening rise	5056 Nov 06 20:43	25°  20'05		evening rise	5057 Oct 19 18:49	7°  22'24	
desc. node	5056 Nov 09 06:22	29°  20'51		desc. node	5057 Oct 27 03:25	19°  56'19	
	5056 Nov 09 15:53	0° 			5057 Nov 02 12:27	0° 	
	5056 Nov 29 16:55	0° 		evening max el	5057 Nov 24 11:28	28°  24'16	25°21'39
evening max el	5056 Dec 11 22:54	14°  34'01	24°06'18		5057 Nov 26 04:15	0° 	
retrograde	5056 Dec 23 01:27	21°  12'44		retrograde	5057 Dec 06 13:27	5°  22'10	
evening set	5056 Dec 28 08:15	19°  00'39		evening set	5057 Dec 12 09:43	2°  56'22	
asc. node	5056 Dec 30 19:50	16°  26'57			5057 Dec 15 06:12	30° 	
min. Earth dist.	5057 Jan 02 02:03	13° 32'36	0.67886 AU	min. Earth dist.	5057 Dec 16 20:01	28° 02'34	0.67311 AU
inferior conj	5057 Jan 02 19:18	12° 34'17	0°59'33	asc. node	5057 Dec 17 16:53	26° 27'55'08	
minimum elong	5057 Jan 02 17:57	12° 38'52	0°59'00	inferior conj	5057 Dec 18 00:10	26° 31'32	0°06'12
morning rise	5057 Jan 08 03:42	6° 30'59		minimum elong	5057 Dec 18 00:01	26° 27'02	0°06'08
direct	5057 Jan 12 02:02	5° 03'12		transit middle	5057 Dec 18 00:01	26° 27'02	0°06'08
morning max el	5057 Jan 19 23:53	9° 34'15	20°26'06	transit begin	5057 Dec 17 21:26	26° 27'40'24	
	5057 Feb 04 12:46	0°		transit end	5057 Dec 18 02:36	26° 27'41	

morning rise	5057 Dec 23 14:36	20° ♊ 35'33		asc. node	5058 Dec 04 13:56	7° ♊ 28'20	
direct	5057 Dec 27 00:48	19° ♊ 27'56		morning rise	5058 Dec 07 23:07	4° ♊ 39'31	
morning max el	5058 Jan 03 03:56	23° ♊ 26'56	19°22'36	direct	5058 Dec 10 23:07	3° ♊ 48'39	
	5058 Jan 08 16:05	0° ♋		morning max el	5058 Dec 17 14:46	7° ♊ 26'35	18°34'53
greatest brilliancy	5058 Jan 16 09:57	11° ♋ 07'05	-0.7m		5059 Jan 02 12:44	0° ♋	
desc. node	5058 Jan 23 02:39	21° ♋ 18'42		morning set	5059 Jan 07 04:34	7° ♋ 23'16	
morning set	5058 Jan 27 08:37	27° ♋ 51'59		desc. node	5059 Jan 09 23:41	11° ♋ 49'10	
	5058 Jan 28 17:41	0° ♌			5059 Jan 21 12:50	0° ♌	
max. Earth dist.	5058 Feb 09 11:22	18° ♌ 20'31	1.44732 AU				
				superior conj	5059 Jan 23 06:09	2° ♌ 41'58	-1°23'41
superior conj	5058 Feb 13 01:41	24° ♌ 02'55	-1°55'53	minimum elong	5059 Jan 22 20:56	2° ♌ 05'49	1°22'40
minimum elong	5058 Feb 12 18:27	23° ♌ 34'07	1°55'25	max. Earth dist.	5059 Jan 23 05:28	2° ♌ 39'17	1.45306 AU
	5058 Feb 16 18:45	0° ♍		evening rise	5059 Feb 07 23:52	27° ♌ 31'32	
evening rise	5058 Feb 27 07:06	17° ♍ 15'11			5059 Feb 09 13:09	0° ♍	
	5058 Mar 06 23:13	0° ♎		greatest brilliancy	5059 Feb 16 15:55	11° ♍ 18'35	-0.8m
asc. node	5058 Mar 15 16:10	13° ♎ 07'06		evening max el	5059 Mar 01 21:48	29° ♍ 49'42	18°54'54
evening max el	5058 Mar 18 11:18	16° ♎ 20'14	18°22'12		5059 Mar 02 01:53	0° ♎	
retrograde	5058 Mar 24 22:07	19° ♎ 49'17		asc. node	5059 Mar 02 13:12	0° ♏ 27'35	
evening set	5058 Mar 27 22:56	18° ♏ 59'03		retrograde	5059 Mar 08 16:27	3° ♏ 37'38	
inferior conj	5058 Apr 02 20:18	13° ♏ 32'46	3°32'36	evening set	5059 Mar 12 00:00	2° ♏ 34'12	
minimum elong	5058 Apr 02 20:41	13° ♏ 31'39	3°32'35		5059 Mar 14 22:41	30° ♏	
min. Earth dist.	5058 Apr 05 04:21	10° ♏ 52'04	0.64101 AU	inferior conj	5059 Mar 17 14:24	26° ♏ 50'54	3°29'33
morning rise	5058 Apr 08 17:34	7° ♏ 22'21		minimum elong	5059 Mar 17 13:24	26° ♏ 54'03	3°29'29
direct	5058 Apr 15 13:06	4° ♏ 36'16		min. Earth dist.	5059 Mar 19 06:48	24° ♏ 44'42	0.65723 AU
desc. node	5058 Apr 21 01:52	6° ♏ 08'05		morning rise	5059 Mar 23 02:24	20° ♏ 37'05	
morning max el	5058 Apr 29 06:03	12° ♏ 34'10	27°32'56	direct	5059 Mar 29 14:51	17° ♏ 47'17	
	5058 May 13 04:20	0° ♐		desc. node	5059 Apr 07 22:55	22° ♏ 05'18	
	5058 May 31 02:47	0° ♑		morning max el	5059 Apr 11 15:58	25° ♏ 30'15	26°41'42
morning set	5058 Jun 03 06:55	6° ♑ 08'05			5059 Apr 15 18:40	0° ♑	
max. Earth dist.	5058 Jun 08 04:44	16° ♑ 06'33	1.33153 AU		5059 May 06 16:35	0° ♒	
				morning set	5059 May 17 14:10	19° ♒ 22'57	
superior conj	5058 Jun 11 06:32	22° ♑ 36'17	-0°03'53	max. Earth dist.	5059 May 21 19:27	27° ♒ 35'43	1.34443 AU
minimum elong	5058 Jun 11 06:44	22° ♑ 37'20	0°03'51		5059 May 23 00:16	0° ♒	
behind sun begin	5058 Jun 11 01:27	22° ♑ 09'13					
behind sun end	5058 Jun 11 12:00	23° ♑ 05'29		superior conj	5059 May 26 06:22	6° ♑ 39'25	-0°33'07
asc. node	5058 Jun 11 15:29	23° ♑ 24'06		minimum elong	5059 May 26 08:09	6° ♑ 48'40	0°32'46
	5058 Jun 14 17:08	0° ♓		asc. node	5059 May 29 12:30	13° ♑ 27'43	
evening rise	5058 Jun 18 09:23	7° ♓ 52'04		evening rise	5059 Jun 02 18:57	22° ♑ 25'12	
	5058 Jun 30 00:44	0° ♑			5059 Jun 06 12:15	0° ♓	
evening max el	5058 Jul 10 07:53	13° ♑ 25'00	22°39'08	evening max el	5059 Jun 22 04:35	24° ♓ 01'52	21°07'54
desc. node	5058 Jul 18 01:09	18° ♑ 50'01		retrograde	5059 Jul 04 01:06	29° ♓ 52'00	
retrograde	5058 Jul 23 12:11	19° ♑ 58'32		desc. node	5059 Jul 04 22:10	29° ♓ 50'10	
evening set	5058 Jul 26 19:34	19° ♑ 34'32		evening set	5059 Jul 06 07:09	29° ♓ 40'09	
min. Earth dist.	5058 Aug 03 15:42	16° ♑ 07'53	0.55232 AU	inferior conj	5059 Jul 15 15:31	25° ♓ 42'15	-3°05'03
inferior conj	5058 Aug 04 22:09	15° ♑ 24'28	-4°35'09	minimum elong	5059 Jul 15 07:25	25° ♓ 53'37	3°02'28
minimum elong	5058 Aug 04 14:23	15° ♑ 35'34	4°33'36	min. Earth dist.	5059 Jul 16 02:12	25° ♓ 27'15	0.54796 AU
morning rise	5058 Aug 13 11:13	11° ♑ 34'13		morning rise	5059 Jul 24 08:04	21° ♓ 45'01	
direct	5058 Aug 16 12:37	11° ♑ 12'40		direct	5059 Jul 27 21:52	21° ♓ 17'31	
morning max el	5058 Aug 27 19:50	16° ♑ 28'29	20°59'16	morning max el	5059 Aug 09 16:32	27° ♓ 22'09	22°35'53
	5058 Sep 07 02:35	0° ♒			5059 Aug 12 06:37	0° ♑	
asc. node	5058 Sep 07 14:44	0° ♒ 51'20		asc. node	5059 Aug 25 11:47	19° ♑ 51'19	
morning set	5058 Sep 16 09:48	17° ♒ 43'56			5059 Aug 30 14:45	0° ♒	
	5058 Sep 22 06:58	0° ♓		morning set	5059 Aug 31 20:24	2° ♒ 34'38	
superior conj	5058 Sep 23 19:25	3° ♓ 08'30	1°43'32	superior conj	5059 Sep 07 22:43	17° ♒ 42'55	1°40'52
minimum elong	5058 Sep 23 19:34	3° ♓ 09'17	1°43'32	minimum elong	5059 Sep 07 21:37	17° ♒ 37'04	1°40'49
max. Earth dist.	5058 Sep 28 09:40	12° ♓ 24'36	1.35626 AU	max. Earth dist.	5059 Sep 11 02:59	24° ♒ 23'37	1.34077 AU
evening rise	5058 Oct 02 12:03	20° ♓ 17'40			5059 Sep 13 20:53	0° ♓	
	5058 Oct 07 20:44	0° ♔		evening rise	5059 Sep 15 20:03	3° ♓ 54'03	
desc. node	5058 Oct 14 00:27	10° ♔ 19'01		desc. node	5059 Sep 30 21:29	0° ♔ 22'36	
	5058 Oct 27 11:52	0° ♕			5059 Sep 30 15:43	0° ♔	
evening max el	5058 Nov 07 00:15	12° ♕ 07'05	26°25'06	evening max el	5059 Oct 20 13:03	25° ♔ 40'25	27°09'12
retrograde	5058 Nov 19 20:15	19° ♕ 19'36			5059 Oct 25 19:12	0° ♕	
evening set	5058 Nov 26 05:39	16° ♕ 43'44		retrograde	5059 Nov 02 21:14	2° ♕ 58'00	
min. Earth dist.	5058 Nov 30 09:11	12° ♕ 25'09	0.66385 AU	evening set	5059 Nov 09 17:51	0° ♕ 17'54	
inferior conj	5058 Dec 02 00:38	10° ♕ 25'33	-0°52'16		5059 Nov 10 02:47	30° ♕	
minimum elong	5058 Dec 02 02:04	10° ♕ 21'12	0°51'38	min. Earth dist.	5059 Nov 13 15:08	26° ♕ 34'40	0.65108 AU

inferior conj	5059 Nov 15 18:29	24°♍11'36	-1°54'22	minimum elong	5060 Oct 29 08:13	7°♍30'14	2°55'53
minimum elong	5059 Nov 15 21:47	24°♍02'25	1°53'01	morning rise	5060 Nov 04 22:30	2°♍26'32	
asc. node	5059 Nov 21 10:59	18°♍59'14		direct	5060 Nov 07 08:56	1°♍57'55	
morning rise	5059 Nov 22 02:46	18°♍38'37		asc. node	5060 Nov 07 08:02	1°♍57'55	
direct	5059 Nov 24 18:47	18°♍00'42		morning max el	5060 Nov 13 22:57	5°♍22'53	17°50'11
morning max el	5059 Dec 01 06:04	21°♍27'42	18°03'53	morning set	5060 Nov 30 09:53	0°♌39'53	
	5059 Dec 07 21:03	0°♌			5060 Nov 30 00:42	0°♌	
morning set	5059 Dec 19 06:15	18°♌24'08					
	5059 Dec 26 07:54	0°♌		superior conj	5060 Dec 12 16:23	21°♌30'13	0°07'26
desc. node	5059 Dec 27 20:44	2°♌29'10		minimum elong	5060 Dec 12 17:11	21°♌33'28	0°07'20
				behind sun begin	5060 Dec 12 08:33	20°♌57'55	
superior conj	5060 Jan 02 13:08	11°♌35'19	-0°38'46	behind sun end	5060 Dec 13 01:48	22°♌08'56	
minimum elong	5060 Jan 02 08:22	11°♌16'20	0°38'06	desc. node	5060 Dec 13 17:45	23°♌14'22	
max. Earth dist.	5060 Jan 06 01:23	17°♌08'13	1.45130 AU		5060 Dec 17 21:51	0°♌	
	5060 Jan 14 07:00	0°♌		max. Earth dist.	5060 Dec 18 19:20	1°♌25'58	1.44235 AU
evening rise	5060 Jan 18 20:10	7°♌02'47		evening rise	5060 Dec 28 06:20	16°♌15'08	
greatest brilliancy	5060 Feb 01 06:49	27°♌35'17	-0.7m		5061 Jan 06 07:49	0°♌	
	5060 Feb 02 21:59	0°♌		evening max el	5061 Jan 26 05:04	26°♌56'17	20°47'14
evening max el	5060 Feb 13 04:09	13°♌22'39	19°43'58		5061 Jan 29 16:47	0°♌	
asc. node	5060 Feb 17 10:14	16°♌47'04		asc. node	5061 Feb 03 07:17	1°♌50'03	
retrograde	5060 Feb 20 13:59	17°♌39'46		retrograde	5061 Feb 03 12:17	1°♌50'17	
evening set	5060 Feb 24 05:14	16°♌22'25		evening set	5061 Feb 07 12:34	0°♌18'16	
inferior conj	5060 Feb 29 15:28	10°♌24'05	3°13'16		5061 Feb 07 21:39	30°♌	
minimum elong	5060 Feb 29 13:32	10°♌30'31	3°12'57	inferior conj	5061 Feb 12 20:53	24°♌07'35	2°46'25
min. Earth dist.	5060 Mar 01 17:04	8°♌59'09	0.66925 AU	minimum elong	5061 Feb 12 18:31	24°♌15'46	2°45'50
morning rise	5060 Mar 05 21:37	4°♌09'27		min. Earth dist.	5061 Feb 13 09:10	23°♌25'24	0.67699 AU
direct	5060 Mar 11 22:27	1°♌27'54		morning rise	5061 Feb 18 00:16	17°♌53'55	
morning max el	5060 Mar 24 01:20	8°♌42'03	25°27'45	direct	5061 Feb 23 11:10	15°♌28'59	
desc. node	5060 Mar 24 19:56	9°♌29'54		morning max el	5061 Mar 06 10:03	22°♌01'16	24°01'10
	5060 Apr 09 18:46	0°♌		desc. node	5061 Mar 11 16:58	27°♌56'38	
	5060 Apr 28 05:44	0°♌			5061 Mar 13 08:52	0°♌	
morning set	5060 Apr 29 06:06	1°♌49'51			5061 Apr 03 02:00	0°♌	
max. Earth dist.	5060 May 02 23:12	8°♌41'50	1.36184 AU	morning set	5061 Apr 11 01:10	13°♌13'53	
				max. Earth dist.	5061 Apr 14 19:22	19°♌49'10	1.38261 AU
superior conj	5060 May 08 21:28	20°♌12'27	-1°02'53		5061 Apr 20 08:51	0°♌	
minimum elong	5060 May 09 00:56	20°♌29'48	1°02'17				
	5060 May 13 17:40	0°♌		superior conj	5061 Apr 22 00:19	3°♌06'30	-1°30'58
asc. node	5060 May 15 09:32	3°♌23'33		minimum elong	5061 Apr 22 05:06	3°♌29'15	1°30'20
evening rise	5060 May 17 00:23	6°♌41'17		evening rise	5061 Apr 30 23:05	20°♌33'06	
	5060 May 30 02:20	0°♌		asc. node	5061 May 02 06:34	23°♌07'11	
evening max el	5060 Jun 03 13:18	5°♌15'41	19°52'40		5061 May 05 20:53	0°♌	
retrograde	5060 Jun 13 16:54	10°♌13'30		evening max el	5061 May 17 09:53	17°♌11'50	18°57'21
evening set	5060 Jun 15 14:58	10°♌03'38		retrograde	5061 May 25 23:03	21°♌23'03	
desc. node	5060 Jun 20 19:10	8°♌12'17		evening set	5061 May 28 00:22	21°♌09'29	
inferior conj	5060 Jun 24 13:20	6°♌02'28	-1°07'23	inferior conj	5061 Jun 05 04:00	16°♌53'37	0°43'45
minimum elong	5060 Jun 24 10:12	6°♌07'14	1°06'13	minimum elong	5061 Jun 05 05:42	16°♌50'37	0°43'09
min. Earth dist.	5060 Jun 26 14:35	4°♌47'23	0.55320 AU	desc. node	5061 Jun 07 16:10	15°♌07'33	
morning rise	5060 Jul 03 03:30	1°♌38'30		min. Earth dist.	5061 Jun 08 06:20	14°♌43'21	0.56707 AU
direct	5060 Jul 07 11:16	0°♌57'30		morning rise	5061 Jun 13 07:43	11°♌53'18	
morning max el	5060 Jul 21 06:53	7°♌47'28	24°20'00	direct	5061 Jun 18 14:00	10°♌47'17	
	5060 Aug 06 10:44	0°♌		morning max el	5061 Jul 02 21:23	18°♌11'40	25°56'20
asc. node	5060 Aug 11 08:49	9°♌17'09			5061 Jul 12 17:35	0°♌	
morning set	5060 Aug 15 08:07	17°♌27'48		asc. node	5061 Jul 29 05:51	29°♌01'46	
	5060 Aug 21 03:14	0°♌			5061 Jul 29 17:03	0°♌	
				morning set	5061 Jul 30 19:21	2°♌18'19	
superior conj	5060 Aug 22 06:55	2°♌30'43	1°32'14				
minimum elong	5060 Aug 22 04:59	2°♌20'14	1°32'02	superior conj	5061 Aug 06 17:53	17°♌25'04	1°18'25
max. Earth dist.	5060 Aug 24 04:51	6°♌39'14	1.32937 AU	minimum elong	5061 Aug 06 15:35	17°♌12'26	1°18'05
evening rise	5060 Aug 29 14:57	18°♌01'03		max. Earth dist.	5061 Aug 07 12:57	19°♌10'02	1.32220 AU
	5060 Sep 04 19:08	0°♌			5061 Aug 12 13:06	0°♌	
desc. node	5060 Sep 16 18:30	19°♌58'37		evening rise	5061 Aug 13 17:37	2°♌29'39	
	5060 Sep 24 01:06	0°♌			5061 Aug 28 15:32	0°♌	
evening max el	5060 Oct 02 00:10	8°♌51'28	27°27'04	desc. node	5061 Sep 03 15:29	8°♌55'50	
retrograde	5060 Oct 15 15:56	16°♌08'18		evening max el	5061 Sep 14 07:25	21°♌28'04	27°13'30
evening set	5060 Oct 22 19:27	13°♌32'52		retrograde	5061 Sep 28 03:51	28°♌41'24	
min. Earth dist.	5060 Oct 26 11:46	10°♌22'13	0.63494 AU	evening set	5061 Oct 05 06:47	26°♌22'26	
inferior conj	5060 Oct 29 03:06	7°♌43'07	-2°57'43	min. Earth dist.	5061 Oct 08 21:58	23°♌36'35	0.61593 AU

inferior conj	5061 Oct 11 23:25	20°♄53'03	-3°58'03	evening set	5062 Sep 16 23:05	8°♄37'40	
minimum elong	5061 Oct 12 05:39	20°♄39'07	3°56'19	min. Earth dist.	5062 Sep 20 21:54	6°♄02'38	0.59529 AU
morning rise	5061 Oct 19 06:27	15°♄55'59		inferior conj	5062 Sep 24 03:53	3°♄31'06	-4°48'06
direct	5061 Oct 21 14:10	15°♄33'19		minimum elong	5062 Sep 24 09:24	3°♄20'21	4°47'09
asc. node	5061 Oct 25 05:04	16°♄30'38			5062 Sep 29 06:55	30°♄	
morning max el	5061 Oct 28 14:17	19°♄04'50	17°54'41	morning rise	5062 Oct 01 21:51	28°♄56'05	
	5061 Nov 05 13:21	0°♄		direct	5062 Oct 04 06:18	28°♄36'26	
morning set	5061 Nov 13 09:09	13°♄51'41			5062 Oct 08 23:20	0°♄	
	5061 Nov 22 08:48	0°♄		morning max el	5062 Oct 12 00:38	2°♄23'20	18°18'49
				asc. node	5062 Oct 12 02:06	2°♄26'53	
superior conj	5061 Nov 23 22:11	2°♄42'49	0°46'20	morning set	5062 Oct 27 22:17	27°♄42'28	
minimum elong	5061 Nov 24 01:49	2°♄58'30	0°45'51		5062 Oct 29 03:09	0°♄	
desc. node	5061 Nov 30 14:47	14°♄01'44					
max. Earth dist.	5061 Dec 01 08:47	15°♄15'53	1.42740 AU	superior conj	5062 Nov 06 03:52	15°♄04'20	1°14'51
evening rise	5061 Dec 07 22:16	25°♄48'30		minimum elong	5062 Nov 06 07:40	15°♄21'43	1°14'25
	5061 Dec 10 14:43	0°♄		max. Earth dist.	5062 Nov 13 17:20	28°♄27'09	1.40821 AU
	5061 Dec 31 05:52	0°♄			5062 Nov 14 15:08	0°♄	
evening max el	5062 Jan 09 00:38	10°♄31'26	22°01'05	desc. node	5062 Nov 17 11:48	4°♄47'29	
retrograde	5062 Jan 18 09:21	16°♄05'30		evening rise	5062 Nov 18 08:45	6°♄13'43	
asc. node	5062 Jan 21 04:18	15°♄24'10			5062 Dec 03 18:47	0°♄	
evening set	5062 Jan 22 20:18	14°♄18'09		evening max el	5062 Dec 22 16:05	24°♄10'01	23°20'35
inferior conj	5062 Jan 28 04:32	7°♄58'27	2°10'47		5062 Dec 30 21:24	0°♄	
minimum elong	5062 Jan 28 02:12	8°♄06'35	2°10'02	retrograde	5063 Jan 02 03:41	0°♄22'04	
min. Earth dist.	5062 Jan 28 04:49	7°♄57'27	0.68069 AU		5063 Jan 04 07:09	30°♄	
morning rise	5062 Feb 02 07:55	1°♄47'20		evening set	5063 Jan 07 02:52	28°♄19'03	
	5062 Feb 05 09:08	30°♄		asc. node	5063 Jan 08 01:20	27°♄27'30	
direct	5062 Feb 07 04:13	29°♄43'42		min. Earth dist.	5063 Jan 12 01:38	22°♄31'31	0.68059 AU
	5062 Feb 09 01:15	0°♄		inferior conj	5063 Jan 12 12:32	21°♄54'05	1°27'33
morning max el	5062 Feb 16 20:25	5°♄26'20	22°32'02	minimum elong	5063 Jan 12 10:41	22°♄00'26	1°26'51
desc. node	5062 Feb 26 14:00	17°♄07'55		morning rise	5063 Jan 17 18:26	15°♄47'20	
	5062 Mar 07 16:54	0°♄		direct	5063 Jan 22 00:33	14°♄06'31	
morning set	5062 Mar 22 17:30	23°♄20'10		morning max el	5063 Jan 30 12:07	19°♄01'01	21°08'50
	5062 Mar 26 17:46	0°♄			5063 Feb 08 13:19	0°♄	
max. Earth dist.	5062 Mar 27 15:19	1°♄31'14	1.40458 AU	desc. node	5063 Feb 13 11:02	6°♄51'24	
					5063 Feb 28 20:57	0°♄	
superior conj	5062 Apr 04 10:36	15°♄11'09	-1°54'03	morning set	5063 Mar 02 05:48	2°♄08'38	
minimum elong	5062 Apr 04 15:20	15°♄32'35	1°53'39	max. Earth dist.	5063 Mar 09 17:39	14°♄09'11	1.42492 AU
	5062 Apr 12 10:38	0°♄					
evening rise	5062 Apr 14 11:51	3°♄52'13		superior conj	5063 Mar 16 23:19	26°♄15'08	-2°07'29
asc. node	5062 Apr 19 03:35	12°♄33'21		minimum elong	5063 Mar 17 01:23	26°♄23'56	2°07'25
evening max el	5062 Apr 30 15:26	29°♄44'08	18°22'25		5063 Mar 19 03:35	0°♄	
	5062 Apr 30 22:02	0°♄		evening rise	5063 Mar 28 10:43	16°♄29'38	
retrograde	5062 May 07 23:56	3°♄23'20			5063 Apr 05 01:43	0°♄	
evening set	5062 May 10 08:13	3°♄02'03		asc. node	5063 Apr 06 00:37	1°♄36'01	
	5062 May 15 17:29	30°♄		evening max el	5063 Apr 14 02:20	12°♄43'06	18°07'18
inferior conj	5062 May 17 16:12	28°♄26'23	2°07'30	retrograde	5063 Apr 20 21:08	16°♄06'51	
minimum elong	5062 May 17 19:42	28°♄19'10	2°06'30	evening set	5063 Apr 23 09:13	15°♄35'16	
min. Earth dist.	5062 May 21 02:45	25°♄37'20	0.58684 AU	inferior conj	5063 Apr 30 00:35	10°♄38'50	3°00'16
morning rise	5062 May 25 04:05	22°♄54'13		minimum elong	5063 Apr 30 03:28	10°♄31'55	2°59'42
desc. node	5062 May 25 13:11	22°♄42'25		min. Earth dist.	5063 May 03 05:53	7°♄35'17	0.60888 AU
direct	5062 May 31 07:11	21°♄14'38		morning rise	5063 May 06 19:38	4°♄45'00	
morning max el	5062 Jun 14 16:35	29°♄00'07	27°09'08	desc. node	5063 May 12 10:13	2°♄35'40	
	5062 Jun 15 16:27	0°♄		direct	5063 May 13 12:03	2°♄32'19	
	5062 Jul 06 12:33	0°♄		morning max el	5063 May 27 18:14	10°♄28'39	27°47'44
morning set	5062 Jul 15 04:25	17°♄00'03			5063 Jun 11 22:40	0°♄	
asc. node	5062 Jul 16 02:52	18°♄58'36			5063 Jun 28 16:27	0°♄	
	5062 Jul 21 04:35	0°♄		morning set	5063 Jun 29 09:31	1°♄27'39	
				asc. node	5063 Jul 02 23:54	9°♄03'01	
superior conj	5062 Jul 22 05:42	2°♄18'41	1°00'05	max. Earth dist.	5063 Jul 05 10:25	14°♄20'25	1.32070 AU
minimum elong	5062 Jul 22 03:31	2°♄06'37	0°59'41				
max. Earth dist.	5062 Jul 22 00:01	1°♄47'20	1.31932 AU	superior conj	5063 Jul 06 16:39	17°♄06'08	0°37'47
evening rise	5062 Jul 29 01:24	17°♄11'02		minimum elong	5063 Jul 06 15:03	16°♄57'18	0°37'27
	5062 Aug 04 09:46	0°♄			5063 Jul 12 14:05	0°♄	
desc. node	5062 Aug 21 12:30	26°♄57'26		evening rise	5063 Jul 13 12:13	1°♄58'34	
	5062 Aug 24 03:04	0°♄			5063 Jul 28 14:52	0°♄	
evening max el	5062 Aug 27 08:24	3°♄18'49	26°26'28	desc. node	5063 Aug 08 09:30	13°♄41'08	
retrograde	5062 Sep 10 07:20	10°♄27'33		evening max el	5063 Aug 09 01:51	14°♄21'00	25°09'47

retrograde	5063 Aug 23 00:13	21° \cap 23'54		desc. node	5064 Jul 25 06:31	28° Ω 37'18	
evening set	5063 Aug 28 15:45	20° \cap 11'02			5064 Jul 27 15:40	0° \cap	
min. Earth dist.	5063 Sep 02 13:28	17° \cap 28'51	0.57526 AU	retrograde	5064 Aug 03 05:04	1° \cap 37'53	
inferior conj	5063 Sep 05 13:17	15° \cap 27'51	-5°15'43	evening set	5064 Aug 07 09:27	0° \cap 59'30	
minimum elong	5063 Sep 05 14:54	15° \cap 25'07	5°15'40		5064 Aug 10 00:27	30° \Re Ω	
morning rise	5063 Sep 13 16:20	11° \cap 15'33		min. Earth dist.	5064 Aug 14 00:15	27° Ω 53'04	0.55880 AU
direct	5063 Sep 16 05:17	10° \cap 56'32		inferior conj	5064 Aug 16 02:32	26° Ω 38'07	-5°04'36
morning max el	5063 Sep 25 02:36	15° \cap 08'45	19°04'07	minimum elong	5064 Aug 15 21:45	26° Ω 45'16	5°04'03
asc. node	5063 Sep 28 23:09	19° \cap 32'01		morning rise	5064 Aug 24 12:31	22° Ω 43'55	
	5063 Oct 05 14:04	0° $\underline{\Omega}$		direct	5064 Aug 27 08:46	22° Ω 23'53	
morning set	5063 Oct 11 20:59	12° $\underline{\Omega}$ 00'04		morning max el	5064 Sep 06 17:29	27° Ω 12'56	20°11'23
					5064 Sep 09 09:18	0° \cap	
superior conj	5063 Oct 20 04:07	28° $\underline{\Omega}$ 19'53	1°32'59	asc. node	5064 Sep 14 20:13	7° \cap 31'37	
minimum elong	5063 Oct 20 06:43	28° $\underline{\Omega}$ 32'25	1°32'48	morning set	5064 Sep 25 02:08	26° \cap 36'01	
	5063 Oct 21 01:00	0° \cap			5064 Sep 26 18:00	0° $\underline{\Omega}$	
max. Earth dist.	5063 Oct 26 22:37	10° \cap 57'18	1.38715 AU				
evening rise	5063 Oct 30 18:09	17° \cap 41'02		superior conj	5064 Oct 02 17:58	12° $\underline{\Omega}$ 15'40	1°41'59
desc. node	5063 Nov 04 08:50	25° \cap 27'47		minimum elong	5064 Oct 02 18:59	12° $\underline{\Omega}$ 20'49	1°41'57
	5063 Nov 07 03:57	0° \propto		max. Earth dist.	5064 Oct 08 04:47	22° $\underline{\Omega}$ 57'35	1.36674 AU
	5063 Nov 28 04:33	0° \propto			5064 Oct 11 23:22	0° \cap	
evening max el	5063 Dec 05 05:16	7° \propto 52'11	24°39'24	evening rise	5064 Oct 12 00:53	0° \cap 06'55	
retrograde	5063 Dec 16 18:05	14° \propto 35'34		desc. node	5064 Oct 21 05:51	15° \cap 58'31	
evening set	5063 Dec 22 06:40	12° \propto 17'27			5064 Oct 30 08:54	0° \propto	
asc. node	5063 Dec 25 22:23	8° \propto 18'22		evening max el	5064 Nov 16 17:48	21° \propto 36'04	25°50'31
min. Earth dist.	5063 Dec 26 21:14	7° \propto 03'57	0.67688 AU	retrograde	5064 Nov 29 03:54	28° \propto 41'19	
inferior conj	5063 Dec 27 19:03	5° \propto 51'26	0°37'38	evening set	5064 Dec 05 06:03	26° \propto 10'24	
minimum elong	5063 Dec 27 18:09	5° \propto 54'26	0°37'15	min. Earth dist.	5064 Dec 09 13:19	21° \propto 31'49	0.66961 AU
morning rise	5064 Jan 02 05:46	29° \propto 51'02		inferior conj	5064 Dec 10 22:17	19° \propto 47'54	-0°18'02
	5064 Jan 02 00:52	30° \Re \propto		minimum elong	5064 Dec 10 22:46	19° \propto 46'25	0°17'49
direct	5064 Jan 05 22:50	28° \propto 32'01		asc. node	5064 Dec 11 19:26	18° \propto 41'48	
	5064 Jan 10 03:44	0° \propto		morning rise	5064 Dec 16 15:56	13° \propto 56'08	
morning max el	5064 Jan 13 11:36	2° \propto 47'32	19°57'15	direct	5064 Dec 19 21:35	12° \propto 56'08	
desc. node	5064 Jan 31 08:05	26° \propto 57'52		morning max el	5064 Dec 26 18:53	16° \propto 44'33	19°00'25
	5064 Feb 02 08:19	0° \approx			5065 Jan 05 22:14	0° \propto	
morning set	5064 Feb 09 02:18	10° \approx 19'15		desc. node	5065 Jan 17 05:08	17° \propto 21'17	
max. Earth dist.	5064 Feb 20 03:56	27° \approx 39'40	1.44093 AU	morning set	5065 Jan 18 07:55	19° \propto 05'41	
	5064 Feb 21 15:02	0° \propto			5065 Jan 25 07:38	0° \approx	
				max. Earth dist.	5065 Feb 01 20:05	11° \approx 46'35	1.45068 AU
superior conj	5064 Feb 25 10:37	6° \propto 10'01	-2°05'40				
minimum elong	5064 Feb 25 06:53	5° \propto 54'52	2°05'33	superior conj	5065 Feb 03 22:54	15° \approx 06'41	-1°44'24
evening rise	5064 Mar 09 15:13	28° \propto 15'43		minimum elong	5065 Feb 03 13:58	14° \approx 31'26	1°43'38
	5064 Mar 10 15:33	0° Υ			5065 Feb 13 07:06	0° \propto	
asc. node	5064 Mar 22 21:40	20° Υ 06'54		evening rise	5065 Feb 18 21:35	9° \propto 05'20	
evening max el	5064 Mar 27 15:11	25° Υ 58'41	18°11'21		5065 Mar 03 22:06	0° Υ	
retrograde	5064 Apr 03 01:07	29° Υ 22'06		asc. node	5065 Mar 09 18:42	7° Υ 56'34	
evening set	5064 Apr 05 22:24	28° Υ 38'51		evening max el	5065 Mar 11 03:12	9° Υ 24'32	18°33'51
inferior conj	5064 Apr 12 01:12	23° Υ 22'44	3°26'48	retrograde	5065 Mar 17 16:28	13° Υ 00'31	
minimum elong	5064 Apr 12 02:32	23° Υ 19'08	3°26'41	evening set	5065 Mar 20 20:00	12° Υ 04'47	
min. Earth dist.	5064 Apr 14 17:48	20° Υ 28'27	0.63008 AU	inferior conj	5065 Mar 26 14:00	6° Υ 30'47	3°33'07
morning rise	5064 Apr 18 05:27	17° Υ 16'21		minimum elong	5065 Mar 26 13:45	6° Υ 31'32	3°33'07
direct	5064 Apr 25 02:02	14° Υ 39'07		min. Earth dist.	5065 Mar 28 15:17	4° Υ 03'34	0.64842 AU
desc. node	5064 Apr 28 07:16	15° Υ 10'05		morning rise	5065 Apr 01 06:53	0° Υ 18'12	
morning max el	5064 May 09 01:17	22° Υ 38'45	27°48'39		5065 Apr 01 15:42	30° \Re \propto	
	5064 May 15 13:07	0° \propto		direct	5065 Apr 07 23:54	27° \propto 29'08	
	5064 Jun 04 03:56	0° \cap		desc. node	5065 Apr 15 04:19	0° Υ 03'13	
morning set	5064 Jun 12 08:30	15° \cap 34'08			5065 Apr 15 02:22	0° Υ	
max. Earth dist.	5064 Jun 17 16:13	26° \cap 36'32	1.32633 AU	morning max el	5065 Apr 21 11:12	5° Υ 22'36	27°14'29
asc. node	5064 Jun 18 20:57	29° \cap 10'19			5065 May 10 05:19	0° \propto	
	5064 Jun 19 06:11	0° \propto		morning set	5065 May 26 22:33	29° \propto 11'11	
					5065 May 27 08:34	0° \cap	
superior conj	5064 Jun 20 00:56	1° \propto 41'15	0°12'08	max. Earth dist.	5065 May 31 13:24	8° \cap 24'32	1.33647 AU
minimum elong	5064 Jun 20 00:21	1° \propto 38'06	0°12'00				
behind sun begin	5064 Jun 19 20:52	1° \propto 19'15		superior conj	5065 Jun 04 04:32	15° \cap 58'00	-0°16'07
behind sun end	5064 Jun 20 03:50	1° \propto 56'58		minimum elong	5065 Jun 04 05:23	16° \cap 02'26	0°15'58
evening rise	5064 Jun 27 00:04	16° \propto 45'26		behind sun begin	5065 Jun 04 05:01	16° \cap 00'32	
	5064 Jul 03 13:02	0° Ω		behind sun end	5065 Jun 04 05:45	16° \cap 04'21	
evening max el	5064 Jul 20 14:27	24° Ω 48'10	23°35'12	asc. node	5065 Jun 05 17:59	19° \cap 16'26	

	5065 Jun 10 18:50	0°♄		asc. node	5066 May 23 15:01	9°♄17'27	
evening rise	5065 Jun 11 11:02	1°♄25'23		evening rise	5066 May 26 19:10	15°♄52'22	
	5065 Jun 27 16:10	0°♄			5066 Jun 03 00:14	0°♄	
evening max el	5065 Jul 02 05:50	5°♄11'46	21°58'43	evening max el	5066 Jun 14 07:30	16°♄03'39	20°33'38
desc. node	5065 Jul 12 03:32	11°♄11'24		retrograde	5066 Jun 25 11:23	21°♄31'42	
retrograde	5065 Jul 14 22:41	11°♄29'42		evening set	5066 Jun 27 11:46	21°♄21'44	
evening set	5065 Jul 17 17:05	11°♄12'35		desc. node	5066 Jun 29 00:33	21°♄01'33	
min. Earth dist.	5065 Jul 26 10:21	7°♄28'03	0.54924 AU	inferior conj	5066 Jul 06 17:36	17°♄24'35	-2°16'31
inferior conj	5065 Jul 27 00:02	7°♄08'51	-4°02'17	minimum elong	5066 Jul 06 11:16	17°♄33'43	2°14'16
minimum elong	5065 Jul 26 15:16	7°♄21'09	4°00'02	min. Earth dist.	5066 Jul 07 21:58	16°♄43'42	0.54897 AU
morning rise	5065 Aug 04 15:03	3°♄18'22		morning rise	5066 Jul 15 10:00	13°♄17'36	
direct	5065 Aug 07 20:54	2°♄55'07		direct	5066 Jul 19 06:34	12°♄45'31	
morning max el	5065 Aug 19 20:24	8°♄31'31	21°38'51	morning max el	5066 Aug 01 13:47	19°♄11'18	23°20'01
asc. node	5065 Sep 01 17:15	26°♄12'31			5066 Aug 10 13:13	0°♄	
	5065 Sep 03 18:46	0°♄		asc. node	5066 Aug 19 14:18	15°♄24'33	
morning set	5065 Sep 09 11:18	11°♄22'46		morning set	5066 Aug 24 22:34	26°♄15'06	
					5066 Aug 26 16:50	0°♄	
superior conj	5065 Sep 16 17:17	26°♄38'51	1°43'12	superior conj	5066 Aug 31 22:58	11°♄20'07	1°37'52
minimum elong	5065 Sep 16 16:51	26°♄36'38	1°43'12	minimum elong	5066 Aug 31 21:28	11°♄12'02	1°37'46
	5065 Sep 18 08:01	0°♄		max. Earth dist.	5066 Sep 03 13:39	16°♄54'00	1.33538 AU
max. Earth dist.	5065 Sep 20 16:48	4°♄49'33	1.34909 AU	evening rise	5066 Sep 08 13:57	27°♄11'39	
evening rise	5065 Sep 25 00:51	13°♄20'41			5066 Sep 10 00:07	0°♄	
	5065 Oct 04 07:29	0°♄		desc. node	5066 Sep 24 23:51	26°♄06'25	
desc. node	5065 Oct 08 02:51	6°♄13'40			5066 Sep 27 14:09	0°♄	
	5065 Oct 25 07:29	0°♄		evening max el	5066 Oct 12 18:44	18°♄40'15	27°20'25
evening max el	5065 Oct 30 06:25	5°♄15'02	26°46'39	retrograde	5066 Oct 26 07:01	25°♄58'36	
retrograde	5065 Nov 12 08:26	12°♄31'36		evening set	5066 Nov 02 07:03	23°♄19'21	
evening set	5065 Nov 18 22:59	9°♄52'42		min. Earth dist.	5066 Nov 06 01:58	19°♄50'17	0.64457 AU
min. Earth dist.	5065 Nov 22 23:38	5°♄49'26	0.65880 AU	inferior conj	5066 Nov 08 10:27	17°♄19'12	-2°21'18
inferior conj	5065 Nov 24 20:12	3°♄38'46	-1°18'17	minimum elong	5066 Nov 08 14:33	17°♄08'13	2°19'42
minimum elong	5065 Nov 24 22:24	3°♄32'18	1°17'20	morning rise	5066 Nov 14 23:19	11°♄52'38	
	5065 Nov 28 04:48	30°♄		asc. node	5066 Nov 15 13:31	11°♄39'02	
asc. node	5065 Nov 28 16:28	29°♄33'33		direct	5066 Nov 17 12:33	11°♄19'12	
morning rise	5065 Nov 30 22:40	27°♄58'06		morning max el	5066 Nov 24 00:17	14°♄44'40	17°55'49
direct	5065 Dec 03 18:53	27°♄13'23			5066 Dec 04 19:02	0°♄	
	5065 Dec 09 12:46	0°♄		morning set	5066 Dec 11 05:44	10°♄49'02	
morning max el	5065 Dec 10 08:00	0°♄45'43	18°19'40	desc. node	5066 Dec 21 23:08	28°♄38'02	
morning set	5065 Dec 29 16:20	29°♄14'35			5066 Dec 22 19:20	0°♄	
	5065 Dec 30 03:36	0°♄		superior conj	5066 Dec 24 15:46	2°♄59'30	-0°18'42
desc. node	5066 Jan 04 02:09	7°♄55'59		minimum elong	5066 Dec 24 13:33	2°♄50'34	0°18'22
				max. Earth dist.	5066 Dec 29 09:41	10°♄33'46	1.44830 AU
superior conj	5066 Jan 14 01:50	23°♄44'43	-1°05'32	evening rise	5067 Jan 09 18:56	28°♄17'39	
minimum elong	5066 Jan 13 17:56	23°♄13'43	1°04'33		5067 Jan 10 21:35	0°♄	
max. Earth dist.	5066 Jan 15 14:49	26°♄09'52	1.45317 AU	greatest brilliancy	5067 Jan 24 12:08	20°♄31'54	-0.6m
	5066 Jan 18 01:35	0°♄			5067 Jan 31 05:48	0°♄	
evening rise	5066 Jan 30 04:51	18°♄59'50		evening max el	5067 Feb 05 16:14	6°♄28'56	20°09'27
	5066 Feb 06 05:22	0°♄		asc. node	5067 Feb 11 12:45	10°♄41'26	
greatest brilliancy	5066 Feb 10 02:44	6°♄01'51	-0.8m	retrograde	5067 Feb 13 10:33	11°♄00'54	
evening max el	5066 Feb 22 12:04	22°♄55'37	19°13'51	evening set	5067 Feb 17 05:26	9°♄37'33	
asc. node	5066 Feb 24 15:43	24°♄52'53		inferior conj	5067 Feb 22 14:37	3°♄33'54	3°03'04
retrograde	5066 Mar 01 12:33	26°♄55'12		minimum elong	5067 Feb 22 12:26	3°♄41'17	3°02'37
evening set	5066 Mar 04 23:06	25°♄46'09		min. Earth dist.	5067 Feb 23 10:28	2°♄26'53	0.67305 AU
inferior conj	5066 Mar 10 11:27	19°♄56'14	3°24'05		5067 Feb 25 07:45	30°♄	
minimum elong	5066 Mar 10 09:59	20°♄00'56	3°23'55	morning rise	5067 Feb 27 19:14	27°♄19'30	
min. Earth dist.	5066 Mar 11 21:27	18°♄06'49	0.66285 AU	direct	5067 Mar 05 14:27	24°♄43'52	
morning rise	5066 Mar 15 20:31	13°♄41'32			5067 Mar 15 11:50	0°♄	
direct	5066 Mar 22 04:24	10°♄53'44		morning max el	5067 Mar 17 05:48	1°♄41'38	24°51'50
desc. node	5066 Apr 02 01:22	16°♄41'09		desc. node	5067 Mar 19 22:24	4°♄34'24	
morning max el	5066 Apr 03 21:07	18°♄27'09	26°12'24		5067 Apr 07 16:13	0°♄	
	5066 Apr 13 14:58	0°♄		morning set	5067 Apr 22 07:47	24°♄10'18	
	5066 May 03 05:28	0°♄			5067 Apr 25 13:18	0°♄	
morning set	5066 May 09 23:59	12°♄08'10		max. Earth dist.	5067 Apr 25 22:36	0°♄42'40	1.37035 AU
max. Earth dist.	5066 May 13 23:09	19°♄41'26	1.35127 AU				
				superior conj	5067 May 02 11:28	13°♄07'45	-1°15'10
superior conj	5066 May 19 01:05	29°♄49'47	-0°45'47	minimum elong	5067 May 02 15:35	13°♄27'55	1°14'31
minimum elong	5066 May 19 03:35	0°♄02'37	0°45'19				
	5066 May 19 03:05	0°♄					

evening rise	5067 May 10 22:04	29°♄58'59		minimum elong	5068 Apr 14 12:54	26°♄05'45	1°41'02
asc. node	5067 May 10 12:01	29°♄08'35			5068 Apr 16 14:47	0°♄	
	5067 May 10 22:17	0°♄		evening rise	5068 Apr 23 17:00	13°♄38'06	
evening max el	5067 May 27 21:39	27°♄36'23	19°26'40	asc. node	5068 Apr 26 09:03	18°♄45'31	
	5067 May 30 18:50	0°♄			5068 May 02 15:02	0°♄	
retrograde	5067 Jun 06 07:44	2°♄12'21		evening max el	5068 May 09 22:29	9°♄48'47	18°39'57
evening set	5067 Jun 08 06:31	2°♄01'24		retrograde	5068 May 17 21:50	13°♄44'19	
	5067 Jun 13 11:49	30°♄		evening set	5068 May 20 02:09	13°♄27'45	
desc. node	5067 Jun 15 21:36	28°♄33'34		inferior conj	5068 May 27 21:10	9°♄03'22	1°23'09
inferior conj	5067 Jun 16 21:29	27°♄55'18	-0°17'47	minimum elong	5068 May 28 00:01	8°♄58'00	1°22'11
minimum elong	5067 Jun 16 20:42	27°♄56'34	0°17'30	min. Earth dist.	5068 May 31 04:47	6°♄34'21	0.57505 AU
min. Earth dist.	5067 Jun 19 11:37	26°♄15'27	0.55824 AU	desc. node	5068 Jun 01 18:37	5°♄29'29	
morning rise	5067 Jun 25 08:10	23°♄16'20		morning rise	5068 Jun 04 18:36	3°♄48'42	
direct	5067 Jun 30 01:36	22°♄25'51		direct	5068 Jun 10 10:24	2°♄29'16	
morning max el	5067 Jul 14 03:15	29°♄31'51	25°02'45	morning max el	5068 Jun 24 19:16	10°♄03'00	26°30'55
	5067 Jul 14 14:54	0°♄			5068 Jul 10 01:10	0°♄	
	5067 Aug 03 23:02	0°♄		asc. node	5068 Jul 23 08:20	24°♄48'57	
asc. node	5067 Aug 06 11:19	4°♄58'49		morning set	5068 Jul 23 20:48	25°♄54'33	
morning set	5067 Aug 09 10:16	11°♄07'20			5068 Jul 25 18:46	0°♄	
superior conj	5067 Aug 16 08:36	26°♄11'09	1°26'57	superior conj	5068 Jul 30 20:08	11°♄05'25	1°11'09
minimum elong	5067 Aug 16 06:27	25°♄59'26	1°26'42	minimum elong	5068 Jul 30 17:50	10°♄52'41	1°10'47
max. Earth dist.	5067 Aug 17 18:36	29°♄16'46	1.32587 AU	max. Earth dist.	5068 Jul 31 04:37	11°♄52'14	1.32055 AU
	5067 Aug 18 02:33	0°♄		evening rise	5068 Aug 06 17:42	26°♄03'34	
evening rise	5067 Aug 23 12:32	11°♄28'52			5068 Aug 08 15:18	0°♄	
	5067 Sep 02 05:29	0°♄			5068 Aug 25 19:32	0°♄	
desc. node	5067 Sep 11 20:52	15°♄27'14		desc. node	5068 Aug 28 17:53	4°♄02'47	
	5067 Sep 23 12:38	0°♄		evening max el	5068 Sep 06 09:42	13°♄56'40	26°57'26
evening max el	5067 Sep 25 04:47	1°♄38'49	27°25'25	retrograde	5068 Sep 20 06:57	21°♄07'18	
retrograde	5067 Oct 08 22:48	8°♄53'35		evening set	5068 Sep 27 06:52	18°♄59'17	
evening set	5067 Oct 16 03:04	6°♄24'01		min. Earth dist.	5068 Sep 30 23:55	16°♄20'14	0.60729 AU
min. Earth dist.	5067 Oct 19 18:24	3°♄24'55	0.62716 AU	inferior conj	5068 Oct 04 04:16	13°♄39'48	-4°21'09
inferior conj	5067 Oct 22 14:15	0°♄42'36	-3°24'01	minimum elong	5068 Oct 04 10:30	13°♄26'38	4°19'40
minimum elong	5067 Oct 22 19:59	0°♄28'51	3°22'09	morning rise	5068 Oct 11 16:06	8°♄51'53	
	5067 Oct 23 08:07	30°♄		direct	5068 Oct 13 23:52	8°♄30'42	
morning rise	5067 Oct 29 14:33	25°♄33'33		asc. node	5068 Oct 19 07:37	10°♄27'24	
direct	5067 Oct 31 23:30	25°♄07'46		morning max el	5068 Oct 21 06:26	12°♄07'13	18°02'30
asc. node	5067 Nov 02 10:34	25°♄17'49			5068 Nov 02 04:55	0°♄	
morning max el	5067 Nov 07 16:50	28°♄34'36	17°49'45	morning set	5068 Nov 06 00:20	7°♄01'06	
	5067 Nov 09 00:51	0°♄					
morning set	5067 Nov 23 18:34	23°♄31'09		superior conj	5068 Nov 15 22:45	25°♄10'16	0°59'45
	5067 Nov 27 10:38	0°♄		minimum elong	5068 Nov 16 02:41	25°♄27'45	0°59'15
					5068 Nov 18 16:50	0°♄	
superior conj	5067 Dec 05 06:11	13°♄26'50	0°25'07	max. Earth dist.	5068 Nov 23 14:12	8°♄19'01	1.41961 AU
minimum elong	5067 Dec 05 08:34	13°♄36'51	0°24'47	desc. node	5068 Nov 24 17:10	10°♄10'59	
desc. node	5067 Dec 08 20:09	19°♄24'17		evening rise	5068 Nov 29 04:23	17°♄26'52	
max. Earth dist.	5067 Dec 12 02:19	24°♄42'46	1.43665 AU		5068 Dec 07 06:01	0°♄	
	5067 Dec 15 09:38	0°♄			5068 Dec 28 24:00	0°♄	
evening rise	5067 Dec 20 05:40	7°♄34'32		evening max el	5069 Jan 01 08:29	3°♄39'27	22°34'33
	5068 Jan 04 04:33	0°♄		retrograde	5069 Jan 11 04:28	9°♄30'07	
evening max el	5068 Jan 19 14:56	20°♄03'38	21°17'42	asc. node	5069 Jan 15 06:51	8°♄02'30	
retrograde	5068 Jan 28 08:25	25°♄14'00		evening set	5069 Jan 15 20:34	7°♄35'49	
asc. node	5068 Jan 29 09:48	25°♄07'59		inferior conj	5069 Jan 21 05:14	1°♄13'18	1°53'18
evening set	5068 Feb 01 13:08	23°♄35'25		minimum elong	5069 Jan 21 03:02	1°♄20'53	1°52'33
inferior conj	5068 Feb 06 21:14	17°♄20'41	2°32'19	min. Earth dist.	5069 Jan 21 00:36	1°♄29'22	0.68109 AU
minimum elong	5068 Feb 06 18:48	17°♄29'04	2°31'38		5069 Jan 22 02:29	30°♄	
min. Earth dist.	5068 Feb 07 04:15	16°♄56'22	0.67905 AU	morning rise	5069 Jan 26 09:24	25°♄04'04	
morning rise	5068 Feb 12 00:18	11°♄08'11		direct	5069 Jan 30 23:32	23°♄10'20	
direct	5068 Feb 17 05:07	8°♄51'52		morning max el	5069 Feb 09 03:04	28°♄31'32	21°55'37
morning max el	5068 Feb 27 14:43	15°♄02'44	23°23'07		5069 Feb 10 12:58	0°♄	
desc. node	5068 Mar 05 19:25	23°♄21'42		desc. node	5069 Feb 20 16:26	12°♄47'23	
	5068 Mar 10 19:32	0°♄			5069 Mar 04 12:07	0°♄	
	5068 Mar 30 15:22	0°♄		morning set	5069 Mar 13 20:04	14°♄33'26	
morning set	5068 Apr 02 16:05	5°♄02'25		max. Earth dist.	5069 Mar 19 16:38	24°♄08'32	1.41359 AU
max. Earth dist.	5068 Apr 06 18:06	12°♄02'40	1.39202 AU		5069 Mar 23 03:49	0°♄	
superior conj	5068 Apr 14 07:54	25°♄42'28	-1°41'36	superior conj	5069 Mar 27 09:33	7°♄21'50	-2°01'14

minimum elong	5069 Mar 27 13:33	7° Υ 39'31	2°01'00		5070 Mar 15 13:31	0° Υ	
evening rise	5069 Apr 07 00:22	26° Υ 40'25		evening rise	5070 Mar 20 15:57	8° Υ 56'28	
	5069 Apr 08 19:33	0° \mathcal{B}		asc. node	5070 Mar 31 03:09	26° Υ 52'26	
asc. node	5069 Apr 13 06:06	8° \mathcal{B} 02'26			5070 Apr 02 04:52	0° \mathcal{B}	
evening max el	5069 Apr 23 06:38	22° \mathcal{B} 32'49	18°13'34	evening max el	5070 Apr 06 18:42	5° \mathcal{B} 39'17	18°06'47
retrograde	5069 Apr 30 06:49	26° \mathcal{B} 03'57		retrograde	5070 Apr 13 06:56	9° \mathcal{B} 01'23	
evening set	5069 May 02 17:56	25° \mathcal{B} 38'37		evening set	5070 Apr 16 00:36	8° \mathcal{B} 25'08	
inferior conj	5069 May 09 18:22	20° \mathcal{B} 53'49	2°33'27	inferior conj	5070 Apr 22 10:09	3° \mathcal{B} 20'25	3°14'20
minimum elong	5069 May 09 21:48	20° \mathcal{B} 46'13	2°32'36	minimum elong	5070 Apr 22 12:26	3° \mathcal{B} 14'39	3°14'00
min. Earth dist.	5069 May 13 03:50	17° \mathcal{B} 55'32	0.59608 AU	min. Earth dist.	5070 Apr 25 10:46	0° \mathcal{B} 17'47	0.61806 AU
morning rise	5069 May 16 22:57	15° \mathcal{B} 10'52			5070 Apr 25 18:11	30° $\mathcal{R}\Upsilon$	
desc. node	5069 May 19 15:39	13° \mathcal{B} 55'06		morning rise	5070 Apr 28 22:30	27° Υ 20'00	
direct	5069 May 23 08:32	13° \mathcal{B} 16'51		direct	5070 May 05 17:43	24° Υ 55'11	
morning max el	5069 Jun 06 17:28	21° \mathcal{B} 08'13	27°30'13	desc. node	5070 May 06 12:42	24° Υ 57'02	
	5069 Jun 14 10:04	0° Π			5070 May 16 17:38	0° \mathcal{B}	
	5069 Jul 02 22:40	0° \mathcal{E}		morning max el	5070 May 19 21:44	2° \mathcal{B} 55'03	27°52'46
morning set	5069 Jul 08 04:30	10° \mathcal{E} 31'38			5070 Jun 08 21:13	0° Π	
asc. node	5069 Jul 10 05:23	14° \mathcal{E} 49'48		morning set	5070 Jun 22 07:17	24° Π 51'15	
max. Earth dist.	5069 Jul 14 16:01	24° \mathcal{E} 30'09	1.31937 AU		5070 Jun 24 18:49	0° \mathcal{E}	
				asc. node	5070 Jun 27 02:24	4° \mathcal{E} 55'56	
superior conj	5069 Jul 15 07:51	25° \mathcal{E} 57'25	0°51'06	max. Earth dist.	5070 Jun 28 00:48	6° \mathcal{E} 56'48	1.32246 AU
minimum elong	5069 Jul 15 05:51	25° \mathcal{E} 46'24	0°50'42				
	5069 Jul 17 03:47	0° Ω		superior conj	5070 Jun 29 17:53	10° \mathcal{E} 40'25	0°27'18
evening rise	5069 Jul 22 03:04	10° Ω 48'35		minimum elong	5070 Jun 29 16:40	10° \mathcal{E} 33'43	0°27'01
	5069 Jul 31 21:35	0° \mathcal{M}		evening rise	5070 Jul 06 14:30	25° \mathcal{E} 36'19	
desc. node	5069 Aug 15 14:55	21° \mathcal{M} 34'55			5070 Jul 08 16:37	0° Ω	
evening max el	5069 Aug 19 07:18	25° \mathcal{M} 26'06	25°56'51		5070 Jul 26 09:13	0° \mathcal{M}	
	5069 Aug 25 03:01	0° \mathcal{L}		evening max el	5070 Jul 31 21:58	6° \mathcal{M} 10'30	24°30'55
retrograde	5069 Sep 02 06:26	2° \mathcal{L} 33'20		desc. node	5070 Aug 02 11:57	7° \mathcal{M} 37'17	
evening set	5069 Sep 08 13:41	0° \mathcal{L} 58'17		retrograde	5070 Aug 14 18:50	13° \mathcal{M} 10'03	
	5069 Sep 10 08:28	30° $\mathcal{R}\mathcal{M}$		evening set	5070 Aug 19 20:01	12° \mathcal{M} 13'00	
min. Earth dist.	5069 Sep 12 19:46	28° \mathcal{M} 22'47	0.58654 AU	min. Earth dist.	5070 Aug 25 09:06	9° \mathcal{M} 22'06	0.56759 AU
inferior conj	5069 Sep 16 01:00	26° \mathcal{M} 01'41	-5°03'29	inferior conj	5070 Aug 28 01:46	7° \mathcal{M} 38'57	-5°16'45
minimum elong	5069 Sep 16 05:18	25° \mathcal{M} 53'48	5°02'58	minimum elong	5070 Aug 28 00:47	7° \mathcal{M} 40'31	5°16'44
morning rise	5069 Sep 23 23:11	21° \mathcal{M} 36'53		morning rise	5070 Sep 05 08:01	3° \mathcal{M} 35'21	
direct	5069 Sep 26 09:05	21° \mathcal{M} 17'49		direct	5070 Sep 07 23:31	3° \mathcal{M} 16'16	
morning max el	5069 Oct 04 13:47	25° \mathcal{M} 13'50	18°35'28	morning max el	5070 Sep 17 11:24	7° \mathcal{M} 43'07	19°30'00
asc. node	5069 Oct 06 04:39	26° \mathcal{M} 55'19		asc. node	5070 Sep 23 01:41	14° \mathcal{M} 25'15	
	5069 Oct 08 15:36	0° \mathcal{L}			5070 Oct 02 01:01	0° \mathcal{L}	
morning set	5069 Oct 20 18:02	21° \mathcal{L} 04'52		morning set	5070 Oct 04 19:48	5° \mathcal{L} 30'55	
	5069 Oct 25 08:33	0° \mathcal{M}					
superior conj	5069 Oct 29 13:06	7° \mathcal{M} 57'30	1°23'44	superior conj	5070 Oct 12 19:42	21° \mathcal{L} 31'41	1°37'50
minimum elong	5069 Oct 29 16:30	8° \mathcal{M} 13'21	1°23'24	minimum elong	5070 Oct 12 21:39	21° \mathcal{L} 41'13	1°37'42
max. Earth dist.	5069 Nov 05 20:51	21° \mathcal{M} 12'01	1.39930 AU		5070 Oct 17 05:22	0° \mathcal{M}	
evening rise	5069 Nov 10 00:34	28° \mathcal{M} 18'27		max. Earth dist.	5070 Oct 19 01:23	3° \mathcal{M} 25'02	1.37827 AU
	5069 Nov 11 00:55	0° \mathcal{X}		evening rise	5070 Oct 22 19:29	10° \mathcal{M} 11'53	
desc. node	5069 Nov 11 14:12	0° \mathcal{X} 55'02		desc. node	5070 Oct 29 11:14	21° \mathcal{M} 31'47	
	5069 Nov 30 18:55	0° \mathcal{B}			5070 Nov 03 18:58	0° \mathcal{X}	
evening max el	5069 Dec 14 22:34	17° \mathcal{B} 18'48	23°54'29		5070 Nov 26 10:33	0° \mathcal{B}	
retrograde	5069 Dec 25 21:24	23° \mathcal{B} 45'52		evening max el	5070 Nov 27 11:17	1° \mathcal{B} 02'02	25°11'01
evening set	5069 Dec 31 02:10	21° \mathcal{B} 36'07		retrograde	5070 Dec 09 10:05	7° \mathcal{B} 56'30	
asc. node	5070 Jan 02 03:54	19° \mathcal{B} 31'08		evening set	5070 Dec 15 04:18	5° \mathcal{B} 32'45	
min. Earth dist.	5070 Jan 04 21:13	16° \mathcal{B} 02'54	0.67945 AU	min. Earth dist.	5070 Dec 19 15:44	0° \mathcal{B} 33'41	0.67421 AU
inferior conj	5070 Jan 05 12:49	15° \mathcal{B} 09'52	1°07'07	asc. node	5070 Dec 20 00:55	0° \mathcal{B} 03'50	
minimum elong	5070 Jan 05 11:19	15° \mathcal{B} 14'57	1°06'32		5070 Dec 20 02:06	30° $\mathcal{R}\mathcal{X}$	
morning rise	5070 Jan 10 20:30	9° \mathcal{B} 05'32		inferior conj	5070 Dec 20 18:12	29° \mathcal{X} 07'25	0°14'40
direct	5070 Jan 14 20:47	7° \mathcal{B} 34'27		minimum elong	5070 Dec 20 17:50	29° \mathcal{X} 08'37	0°14'31
morning max el	5070 Jan 22 22:02	12° \mathcal{B} 11'23	20°36'40	transit middle	5070 Dec 20 17:50	29° \mathcal{X} 08'37	0°14'31
	5070 Feb 05 17:13	0° \approx		transit begin	5070 Dec 20 16:36	29° \mathcal{X} 12'37	
desc. node	5070 Feb 07 13:28	2° \approx 41'10		transit end	5070 Dec 20 19:03	29° \mathcal{X} 04'38	
morning set	5070 Feb 20 23:04	22° \approx 57'37		morning rise	5070 Dec 26 07:35	23° \mathcal{X} 10'08	
	5070 Feb 25 10:50	0° \mathcal{H}		direct	5070 Dec 29 19:31	21° \mathcal{X} 59'37	
max. Earth dist.	5070 Mar 01 21:57	7° \mathcal{H} 08'04	1.43234 AU	morning max el	5071 Jan 06 00:54	26° \mathcal{X} 02'32	19°31'03
					5071 Jan 09 13:05	0° \mathcal{B}	
superior conj	5070 Mar 08 11:37	17° \mathcal{H} 55'48	-2°08'54	greatest brilliancy	5071 Jan 19 03:17	13° \mathcal{B} 23'32	-0.7m
minimum elong	5070 Mar 08 11:31	17° \mathcal{H} 55'22	2°08'54	desc. node	5071 Jan 25 10:31	22° \mathcal{B} 55'29	
					5071 Jan 30 01:02	0° \approx	

morning set	5071 Jan 30 20:15	1° \approx 14'09			5072 Jan 22 21:01	0° \approx	
max. Earth dist.	5071 Feb 12 10:32	20° \approx 54'19	1.44591 AU	max. Earth dist.	5072 Jan 26 04:28	5° \approx 11'29	1.45271 AU
superior conj	5071 Feb 16 12:18	27° \approx 23'30	-1°59'07	superior conj	5072 Jan 26 18:14	6° \approx 05'28	-1°29'38
minimum elong	5071 Feb 16 05:54	26° \approx 57'52	1°58'45	minimum elong	5072 Jan 26 08:50	5° \approx 28'36	1°28'39
	5071 Feb 18 03:16	0° \approx			5072 Feb 10 20:46	0° \approx	
evening rise	5071 Mar 02 11:21	20° \approx 18'33		evening rise	5072 Feb 11 07:38	0° \approx 43'27	
	5071 Mar 08 06:01	0° \approx		greatest brilliancy	5072 Feb 19 01:25	13° \approx 06'58	-0.9m
asc. node	5071 Mar 18 00:12	15° \approx 07'14			5072 Mar 01 13:24	0° \approx	
evening max el	5071 Mar 21 07:34	19° \approx 00'18	18°18'49	asc. node	5072 Mar 03 21:14	2° \approx 35'47	
retrograde	5071 Mar 27 17:49	22° \approx 07'20		evening max el	5072 Mar 03 18:32	2° \approx 28'57	18°48'50
evening set	5071 Mar 30 17:45	21° \approx 03'54		retrograde	5072 Mar 10 11:28	6° \approx 13'21	
inferior conj	5071 Apr 05 16:24	16° \approx 05'15	3°31'36	evening set	5072 Mar 13 17:59	5° \approx 11'52	
minimum elong	5071 Apr 05 17:02	16° \approx 13'28	3°31'34		5072 Mar 18 23:47	30° \approx 11'52	
min. Earth dist.	5071 Apr 08 02:44	13° \approx 03'02	0.63831 AU	inferior conj	5072 Mar 19 09:13	29° \approx 13'05	3°30'54
morning rise	5071 Apr 11 15:23	10° \approx 05'48		minimum elong	5072 Mar 19 08:24	29° \approx 13'23	3°30'51
direct	5071 Apr 18 11:29	7° \approx 21'32		min. Earth dist.	5072 Mar 21 03:52	27° \approx 19'03	0.65513 AU
desc. node	5071 Apr 23 09:43	8° \approx 03'42		morning rise	5072 Mar 24 22:23	23° \approx 17'16	
morning max el	5071 May 02 06:06	15° \approx 20'01	27°38'03	direct	5072 Mar 31 12:09	20° \approx 27'23	
	5071 May 14 05:46	0° \approx		desc. node	5072 Apr 09 06:45	24° \approx 15'49	
	5071 Jun 01 13:32	0° \approx		morning max el	5072 Apr 13 16:04	28° \approx 13'12	26°50'58
morning set	5071 Jun 06 02:49	8° \approx 14'09			5072 Apr 15 08:55	0° \approx	
max. Earth dist.	5071 Jun 11 03:07	19° \approx 00'47	1.33002 AU		5072 May 07 00:07	0° \approx	
asc. node	5071 Jun 13 23:27	25° \approx 03'18		morning set	5072 May 19 11:55	22° \approx 06'40	
					5072 May 23 12:42	0° \approx	
superior conj	5071 Jun 14 00:26	25° \approx 08'38	0°00'26	max. Earth dist.	5072 May 23 19:37	0° \approx 34'40	1.34225 AU
minimum elong	5071 Jun 14 00:25	25° \approx 08'30	0°00'24				
behind sun begin	5071 Jun 13 19:04	24° \approx 13'51		superior conj	5072 May 28 01:18	9° \approx 15'06	-0°28'37
behind sun end	5071 Jun 14 05:46	25° \approx 13'12		minimum elong	5072 May 28 02:50	9° \approx 23'05	0°28'19
	5071 Jun 16 06:34	0° \approx		asc. node	5072 May 30 20:29	15° \approx 07'32	
evening rise	5071 Jun 21 02:11	10° \approx 20'54		evening rise	5072 Jun 04 12:10	24° \approx 15'42	
	5071 Jul 01 05:08	0° \approx			5072 Jun 06 23:15	0° \approx	
evening max el	5071 Jul 13 10:52	16° \approx 32'26	22°53'36	evening max el	5072 Jun 24 05:54	27° \approx 04'21	21°20'34
desc. node	5071 Jul 20 08:57	21° \approx 37'15			5072 Jun 27 17:11	0° \approx	
retrograde	5071 Jul 26 18:14	23° \approx 10'34		retrograde	5072 Jul 06 08:02	3° \approx 02'11	
evening set	5071 Jul 30 06:55	22° \approx 43'22		desc. node	5072 Jul 06 05:57	3° \approx 02'10	
min. Earth dist.	5071 Aug 06 19:24	19° \approx 22'25	0.55376 AU	evening set	5072 Jul 08 16:44	2° \approx 49'19	
inferior conj	5071 Aug 08 07:21	18° \approx 30'41	-4°44'37		5072 Jul 15 22:48	30° \approx 11'52	
minimum elong	5071 Aug 08 00:13	18° \approx 40'59	4°43'22	inferior conj	5072 Jul 18 01:15	28° \approx 50'19	-3°21'17
morning rise	5071 Aug 16 19:39	14° \approx 39'53		minimum elong	5072 Jul 17 16:46	29° \approx 02'12	3°18'40
direct	5071 Aug 19 19:45	14° \approx 18'44		min. Earth dist.	5072 Jul 18 05:32	28° \approx 44'20	0.54795 AU
morning max el	5071 Aug 30 21:00	19° \approx 27'21	20°46'13	morning rise	5072 Jul 26 17:33	24° \approx 55'43	
	5071 Sep 08 06:22	0° \approx		direct	5072 Jul 30 05:09	24° \approx 29'31	
asc. node	5071 Sep 09 22:43	2° \approx 43'36			5072 Aug 11 07:25	0° \approx	
morning set	5071 Sep 19 02:54	20° \approx 11'53		morning max el	5072 Aug 11 19:07	0° \approx 26'43	22°20'52
	5071 Sep 23 20:08	0° \approx		asc. node	5072 Aug 26 19:45	21° \approx 38'49	
					5072 Aug 31 02:44	0° \approx	
superior conj	5071 Sep 26 13:57	5° \approx 39'50	1°43'22	morning set	5072 Sep 02 13:11	5° \approx 01'57	
minimum elong	5071 Sep 26 14:20	5° \approx 41'45	1°43'21				
max. Earth dist.	5071 Oct 01 09:33	15° \approx 18'55	1.35890 AU	superior conj	5072 Sep 09 16:18	20° \approx 11'43	1°41'40
evening rise	5071 Oct 05 10:05	22° \approx 59'25		minimum elong	5072 Sep 09 15:22	20° \approx 06'47	1°41'39
	5071 Oct 09 06:44	0° \approx		max. Earth dist.	5072 Sep 13 01:35	27° \approx 16'26	1.34276 AU
desc. node	5071 Oct 16 08:15	11° \approx 56'31			5072 Sep 14 09:36	0° \approx	
	5071 Oct 28 12:13	0° \approx		evening rise	5072 Sep 17 16:06	6° \approx 30'21	
evening max el	5071 Nov 10 00:04	14° \approx 45'23	26°16'44		5072 Sep 30 22:06	0° \approx	
retrograde	5071 Nov 22 17:36	21° \approx 56'03		desc. node	5072 Oct 02 05:14	2° \approx 03'30	
evening set	5071 Nov 29 01:11	19° \approx 21'22		evening max el	5072 Oct 22 12:49	28° \approx 12'03	27°04'08
min. Earth dist.	5071 Dec 03 05:41	14° \approx 57'37	0.66546 AU		5072 Oct 24 08:16	0° \approx	
inferior conj	5071 Dec 04 19:26	13° \approx 02'00	-0°43'06	retrograde	5072 Nov 04 19:28	5° \approx 38'05	
minimum elong	5071 Dec 04 20:36	12° \approx 58'25	0°42'35	evening set	5072 Nov 11 14:41	2° \approx 57'56	
asc. node	5071 Dec 06 21:58	10° \approx 32'20			5072 Nov 14 18:16	30° \approx 11'52	
morning rise	5071 Dec 10 16:35	7° \approx 14'22		min. Earth dist.	5072 Nov 15 12:47	29° \approx 09'40	0.65322 AU
direct	5071 Dec 13 18:01	6° \approx 21'12		inferior conj	5072 Nov 17 14:24	26° \approx 14'34	-1°44'46
morning max el	5071 Dec 20 10:50	10° \approx 01'24	18°40'58	minimum elong	5072 Nov 17 17:24	26° \approx 14'04	1°43'32
	5072 Jan 03 19:21	0° \approx		asc. node	5072 Nov 22 19:00	21° \approx 51'53	
morning set	5072 Jan 10 12:07	10° \approx 32'54		morning rise	5072 Nov 23 21:08	21° \approx 14'35	
desc. node	5072 Jan 12 07:32	13° \approx 24'06		direct	5072 Nov 26 14:11	20° \approx 13'50	

morning max el	5072 Dec 03 01:41	24° \mathbb{M} 02'57	18°07'27		5073 Dec 01 09:40	0° \mathbb{A}	
	5072 Dec 07 22:22	0° \mathbb{A}		morning set	5073 Dec 03 09:33	3° \mathbb{A} 26'19	
morning set	5072 Dec 21 09:23	21° \mathbb{A} 20'40					
	5072 Dec 26 16:31	0° \mathbb{B}		superior conj	5073 Dec 15 23:02	24° \mathbb{A} 36'55	0°00'44
desc. node	5072 Dec 29 04:33	4° \mathbb{B} 02'45		minimum elong	5073 Dec 15 23:07	24° \mathbb{A} 37'17	0°00'45
				behind sun begin	5073 Dec 15 13:22	23° \mathbb{A} 57'19	
superior conj	5073 Jan 04 23:30	14° \mathbb{B} 53'00	-0°45'55	behind sun end	5073 Dec 16 08:53	25° \mathbb{A} 17'10	
minimum elong	5073 Jan 04 17:49	14° \mathbb{B} 30'32	0°45'09	desc. node	5073 Dec 16 01:33	24° \mathbb{A} 47'15	
max. Earth dist.	5073 Jan 08 00:16	19° \mathbb{B} 39'51	1.45204 AU		5073 Dec 19 06:39	0° \mathbb{B}	
	5073 Jan 14 14:54	0° \mathbb{A}		max. Earth dist.	5073 Dec 21 18:20	3° \mathbb{B} 58'59	1.44411 AU
evening rise	5073 Jan 21 06:31	10° \mathbb{A} 19'59		evening rise	5073 Dec 31 17:09	19° \mathbb{B} 32'19	
greatest brilliancy	5073 Feb 03 02:31	0° \mathbb{H} 02'22	-0.7m		5074 Jan 07 14:02	0° \mathbb{A}	
	5073 Feb 03 01:53	0° \mathbb{H}		evening max el	5074 Jan 29 03:18	29° \mathbb{A} 34'47	20°37'04
evening max el	5073 Feb 15 01:32	16° \mathbb{H} 01'17	19°35'37		5074 Jan 29 13:18	0° \mathbb{H}	
asc. node	5073 Feb 18 18:15	19° \mathbb{H} 05'19		asc. node	5074 Feb 05 15:18	4° \mathbb{H} 20'47	
retrograde	5073 Feb 22 08:46	20° \mathbb{H} 13'41		retrograde	5074 Feb 06 07:06	4° \mathbb{H} 23'07	
evening set	5073 Feb 25 22:44	18° \mathbb{H} 58'30		evening set	5074 Feb 10 05:54	2° \mathbb{H} 53'25	
inferior conj	5073 Mar 03 09:26	13° \mathbb{H} 02'08	3°16'28		5074 Feb 13 02:54	30° \mathbb{R} \mathbb{A}	
minimum elong	5073 Mar 03 07:37	13° \mathbb{H} 08'10	3°16'10	inferior conj	5074 Feb 15 14:23	26° \mathbb{A} 44'28	2°51'07
min. Earth dist.	5073 Mar 04 13:08	11° \mathbb{H} 30'51	0.66776 AU	minimum elong	5074 Feb 15 12:03	26° \mathbb{A} 52'29	2°50'33
morning rise	5073 Mar 08 16:15	6° \mathbb{H} 47'22		min. Earth dist.	5074 Feb 16 04:36	25° \mathbb{A} 55'47	0.67608 AU
direct	5073 Mar 14 18:57	4° \mathbb{H} 04'00		morning rise	5074 Feb 20 17:59	20° \mathbb{A} 30'26	
morning max el	5073 Mar 27 01:42	11° \mathbb{H} 23'41	25°39'45	direct	5074 Feb 26 07:02	18° \mathbb{A} 02'31	
desc. node	5073 Mar 27 03:48	11° \mathbb{H} 29'01		morning max el	5074 Mar 09 10:24	24° \mathbb{A} 42'00	24°14'26
	5073 Apr 10 22:21	0° \mathbb{Y}		desc. node	5074 Mar 14 00:50	29° \mathbb{A} 47'42	
	5073 Apr 29 15:52	0° \mathbb{B}			5074 Mar 14 04:57	0° \mathbb{H}	
morning set	5073 May 02 06:29	4° \mathbb{B} 41'45			5074 Apr 04 09:32	0° \mathbb{Y}	
max. Earth dist.	5073 May 06 00:53	11° \mathbb{B} 43'04	1.35901 AU	morning set	5074 Apr 14 05:07	16° \mathbb{Y} 16'51	
				max. Earth dist.	5074 Apr 17 21:41	22° \mathbb{Y} 48'02	1.37935 AU
					5074 Apr 21 20:00	0° \mathbb{B}	
superior conj	5073 May 11 17:54	22° \mathbb{B} 53'01	-0°58'26				
minimum elong	5073 May 11 21:08	23° \mathbb{B} 09'15	0°57'52				
	5073 May 15 06:06	0° \mathbb{H}		superior conj	5074 Apr 24 22:54	5° \mathbb{B} 54'08	-1°26'57
asc. node	5073 May 17 17:31	5° \mathbb{H} 04'43		minimum elong	5074 Apr 25 03:32	6° \mathbb{B} 16'22	1°26'18
evening rise	5073 May 19 18:23	9° \mathbb{H} 14'46		evening rise	5074 May 03 18:20	23° \mathbb{B} 11'08	
	5073 May 31 00:45	0° \mathbb{B}		asc. node	5074 May 04 14:33	24° \mathbb{B} 50'49	
evening max el	5073 Jun 06 12:43	8° \mathbb{B} 11'49	20°02'36		5074 May 07 06:11	0° \mathbb{H}	
retrograde	5073 Jun 16 22:43	13° \mathbb{B} 17'34		evening max el	5074 May 20 07:49	20° \mathbb{H} 02'48	19°04'18
evening set	5073 Jun 18 20:51	13° \mathbb{B} 07'54		retrograde	5074 May 29 02:07	24° \mathbb{H} 19'57	
desc. node	5073 Jun 23 02:59	11° \mathbb{B} 45'33		evening set	5074 May 31 02:37	24° \mathbb{H} 07'14	
inferior conj	5073 Jun 27 21:29	9° \mathbb{B} 08'10	-1°25'31	inferior conj	5074 Jun 08 09:17	19° \mathbb{H} 54'14	0°28'25
minimum elong	5073 Jun 27 17:30	9° \mathbb{B} 14'10	1°24'02	minimum elong	5074 Jun 08 10:25	19° \mathbb{H} 52'15	0°27'58
min. Earth dist.	5073 Jun 29 17:42	8° \mathbb{B} 01'50	0.55177 AU	desc. node	5074 Jun 10 00:02	18° \mathbb{H} 47'12	
morning rise	5073 Jul 06 12:28	4° \mathbb{B} 48'57		min. Earth dist.	5074 Jun 11 09:04	17° \mathbb{H} 51'18	0.56458 AU
direct	5073 Jul 10 17:02	4° \mathbb{B} 10'40		morning rise	5074 Jun 16 14:59	14° \mathbb{H} 59'17	
morning max el	5073 Jul 24 10:06	10° \mathbb{B} 54'54	24°04'43	direct	5074 Jun 21 17:59	13° \mathbb{H} 57'32	
	5073 Aug 07 17:25	0° \mathbb{O}		morning max el	5074 Jul 06 00:13	21° \mathbb{H} 17'48	25°43'03
asc. node	5073 Aug 13 16:47	11° \mathbb{O} 01'02			5074 Jul 13 14:07	0° \mathbb{B}	
morning set	5073 Aug 18 00:50	19° \mathbb{O} 54'53			5074 Jul 31 05:26	0° \mathbb{O}	
	5073 Aug 22 17:06	0° \mathbb{H}		asc. node	5074 Jul 31 13:49	0° \mathbb{O} 43'05	
				morning set	5074 Aug 02 12:15	4° \mathbb{O} 45'55	
superior conj	5073 Aug 24 23:55	4° \mathbb{H} 57'59	1°33'53				
minimum elong	5073 Aug 24 22:05	4° \mathbb{H} 48'03	1°33'43	superior conj	5074 Aug 09 10:38	19° \mathbb{O} 51'42	1°20'49
max. Earth dist.	5073 Aug 27 02:06	9° \mathbb{H} 28'28	1.33071 AU	minimum elong	5074 Aug 09 08:22	19° \mathbb{O} 39'13	1°20'31
evening rise	5073 Sep 01 09:35	20° \mathbb{H} 33'14		max. Earth dist.	5074 Aug 10 09:25	21° \mathbb{O} 56'55	1.32301 AU
	5073 Sep 06 05:44	0° \mathbb{B}			5074 Aug 14 02:31	0° \mathbb{H}	
desc. node	5073 Sep 19 02:15	21° \mathbb{B} 44'16		evening rise	5074 Aug 16 11:18	4° \mathbb{H} 59'08	
	5073 Sep 24 22:16	0° \mathbb{M}			5074 Aug 29 21:12	0° \mathbb{B}	
evening max el	5073 Oct 05 00:12	11° \mathbb{M} 35'28	27°26'21	desc. node	5074 Sep 05 23:17	10° \mathbb{B} 47'58	
retrograde	5073 Oct 18 15:15	18° \mathbb{M} 53'10		evening max el	5074 Sep 17 08:17	24° \mathbb{B} 17'50	27°17'41
evening set	5073 Oct 25 18:04	16° \mathbb{M} 16'15			5074 Sep 25 03:42	0° \mathbb{M}	
min. Earth dist.	5073 Oct 29 10:55	13° \mathbb{M} 01'08	0.63752 AU	retrograde	5074 Oct 01 04:18	1° \mathbb{M} 31'43	
inferior conj	5073 Nov 01 00:33	10° \mathbb{M} 23'37	-2°48'10		5074 Oct 06 21:52	30° \mathbb{R} \mathbb{B}	
minimum elong	5073 Nov 01 05:25	10° \mathbb{M} 11'09	2°46'23	evening set	5074 Oct 08 07:48	29° \mathbb{B} 09'41	
morning rise	5073 Nov 07 18:16	5° \mathbb{M} 04'26		min. Earth dist.	5074 Oct 11 22:48	26° \mathbb{B} 20'40	0.61888 AU
asc. node	5073 Nov 09 16:02	4° \mathbb{M} 36'15		inferior conj	5074 Oct 14 22:55	23° \mathbb{B} 36'58	-3°49'25
direct	5073 Nov 10 05:18	4° \mathbb{M} 34'44		minimum elong	5074 Oct 15 05:04	23° \mathbb{B} 22'57	3°47'37
morning max el	5073 Nov 16 18:33	7° \mathbb{M} 59'35	17°51'05	morning rise	5074 Oct 22 04:13	18° \mathbb{B} 36'40	

direct	5074 Oct 24 12:05	18°♄13'20		direct	5075 Oct 07 06:33	1°♄21'48	
asc. node	5074 Oct 27 13:04	18°♄54'34		asc. node	5075 Oct 14 10:06	4°♄38'52	
morning max el	5074 Oct 31 10:17	21°♄43'31	17°52'47	morning max el	5075 Oct 14 21:34	5°♄05'47	18°13'58
	5074 Nov 06 18:03	0°♄		morning set	5075 Oct 30 17:42	0°♄16'46	
morning set	5074 Nov 16 06:18	16°♄30'44			5075 Oct 30 14:10	0°♄	
	5074 Nov 23 19:10	0°♄					
superior conj	5074 Nov 27 00:53	5°♄37'43	0°41'04	superior conj	5075 Nov 09 03:20	17°♄49'55	1°11'13
minimum elong	5074 Nov 27 04:16	5°♄52'17	0°40'37	minimum elong	5075 Nov 09 07:14	18°♄07'33	1°10'45
desc. node	5074 Dec 02 22:33	15°♄34'09			5075 Nov 16 01:06	0°♄	
max. Earth dist.	5074 Dec 04 08:33	17°♄53'44	1.42994 AU	max. Earth dist.	5075 Nov 16 18:04	1°♄12'20	1.41123 AU
evening rise	5074 Dec 11 07:16	29°♄00'10		desc. node	5075 Nov 19 19:35	6°♄20'25	
	5074 Dec 11 22:35	0°♄		evening rise	5075 Nov 21 14:33	9°♄16'48	
	5075 Jan 01 06:50	0°♄			5075 Dec 05 00:03	0°♄	
evening max el	5075 Jan 11 23:40	13°♄09'55	21°49'41	evening max el	5075 Dec 25 15:42	26°♄48'17	23°08'37
retrograde	5075 Jan 21 04:25	18°♄37'48			5075 Dec 29 05:11	0°♄	
asc. node	5075 Jan 23 12:21	18°♄08'51		retrograde	5076 Jan 04 23:10	2°♄54'44	
evening set	5075 Jan 25 13:41	16°♄52'50		evening set	5076 Jan 09 20:31	0°♄53'57	
inferior conj	5075 Jan 30 21:50	10°♄34'21	2°16'43	asc. node	5076 Jan 10 09:23	0°♄25'34	
minimum elong	5075 Jan 30 19:28	10°♄42'37	2°15'58		5076 Jan 10 20:00	30°♄	
min. Earth dist.	5075 Jan 30 23:52	10°♄27'18	0.68039 AU	inferior conj	5076 Jan 15 05:54	24°♄29'36	1°34'33
morning rise	5075 Feb 05 01:03	4°♄22'48		minimum elong	5076 Jan 15 03:57	24°♄36'19	1°33'51
direct	5075 Feb 09 23:36	2°♄15'42		min. Earth dist.	5076 Jan 14 20:37	25°♄01'34	0.68086 AU
morning max el	5075 Feb 19 20:12	8°♄05'40	22°45'05	morning rise	5076 Jan 20 11:16	18°♄22'12	
desc. node	5075 Feb 28 21:51	18°♄52'59		direct	5076 Jan 24 19:29	16°♄37'59	
	5075 Mar 08 21:40	0°♄		morning max el	5076 Feb 02 10:56	21°♄38'55	21°20'38
morning set	5075 Mar 26 01:42	26°♄35'07			5076 Feb 09 13:16	0°♄	
	5075 Mar 28 03:01	0°♄		desc. node	5076 Feb 15 18:52	8°♄32'14	
max. Earth dist.	5075 Mar 30 17:10	4°♄23'01	1.40135 AU		5076 Mar 01 04:28	0°♄	
				morning set	5076 Mar 04 17:50	5°♄33'51	
superior conj	5075 Apr 07 11:58	18°♄06'59	-1°51'02	max. Earth dist.	5076 Mar 11 18:35	16°♄53'18	1.42215 AU
minimum elong	5075 Apr 07 16:51	18°♄29'14	1°50'37				
	5075 Apr 13 21:25	0°♄		superior conj	5076 Mar 19 04:12	29°♄20'35	-2°06'17
evening rise	5075 Apr 17 08:48	6°♄35'39		minimum elong	5076 Mar 19 06:53	29°♄32'09	2°06'12
asc. node	5075 Apr 21 11:37	14°♄20'05			5076 Mar 19 13:21	0°♄	
	5075 May 01 05:53	0°♄		evening rise	5076 Mar 30 10:01	19°♄19'50	
evening max el	5075 May 03 12:19	2°♄30'31	18°26'21		5076 Apr 05 08:37	0°♄	
retrograde	5075 May 11 00:13	6°♄13'17		asc. node	5076 Apr 07 08:40	3°♄26'45	
evening set	5075 May 13 07:30	5°♄53'16		evening max el	5076 Apr 15 22:36	15°♄25'43	18°08'16
inferior conj	5075 May 20 18:17	1°♄20'36	1°56'49	retrograde	5076 Apr 22 16:09	18°♄50'52	
minimum elong	5075 May 20 21:41	1°♄13'43	1°55'47	evening set	5076 Apr 25 06:16	18°♄20'55	
	5075 May 22 10:01	30°♄		inferior conj	5076 May 01 23:51	13°♄27'20	2°54'02
min. Earth dist.	5075 May 24 04:32	28°♄36'04	0.58372 AU	minimum elong	5076 May 02 02:55	13°♄20'08	2°53'24
desc. node	5075 May 27 21:05	26°♄08'14		min. Earth dist.	5076 May 05 06:27	10°♄24'29	0.60561 AU
morning rise	5075 May 28 08:42	25°♄52'46		morning rise	5076 May 08 21:19	7°♄36'03	
direct	5075 Jun 03 09:11	24°♄18'26		desc. node	5076 May 13 18:07	5°♄36'57	
	5075 Jun 15 13:57	0°♄		direct	5076 May 15 12:13	5°♄28'06	
morning max el	5075 Jun 17 18:28	2°♄01'00	27°00'12	morning max el	5076 May 29 19:12	13°♄23'04	27°44'24
	5075 Jul 07 20:50	0°♄			5076 Jun 12 01:10	0°♄	
morning set	5075 Jul 17 21:45	19°♄29'11			5076 Jun 29 04:43	0°♄	
asc. node	5075 Jul 18 10:51	20°♄38'20		morning set	5076 Jul 01 03:35	3°♄59'19	
	5075 Jul 22 18:40	0°♄		asc. node	5076 Jul 04 07:54	10°♄41'56	
superior conj	5075 Jul 24 22:27	4°♄45'41	1°03'09	max. Earth dist.	5076 Jul 07 07:12	17°♄09'06	1.32025 AU
minimum elong	5075 Jul 24 20:13	4°♄33'21	1°02'44				
max. Earth dist.	5075 Jul 24 20:21	4°♄34'07	1.31955 AU	superior conj	5076 Jul 08 09:39	19°♄34'20	0°41'25
evening rise	5075 Jul 31 18:31	19°♄39'08		minimum elong	5076 Jul 08 07:55	19°♄24'50	0°41'03
	5075 Aug 05 20:28	0°♄			5076 Jul 13 03:35	0°♄	
desc. node	5075 Aug 23 20:20	28°♄59'05		evening rise	5076 Jul 15 05:00	4°♄26'08	
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evening max el	5075 Aug 30 10:26	6°♄16'00	26°35'29	desc. node	5076 Aug 09 17:22	15°♄56'26	
retrograde	5075 Sep 13 08:58	13°♄24'57		evening max el	5076 Aug 11 04:55	17°♄24'53	25°22'38
evening set	5075 Sep 20 03:13	11°♄30'10		retrograde	5076 Aug 25 03:30	24°♄28'55	
min. Earth dist.	5075 Sep 24 00:13	8°♄54'34	0.59839 AU	evening set	5076 Aug 30 23:37	23°♄10'14	
inferior conj	5075 Sep 27 05:59	6°♄20'20	-4°41'43	min. Earth dist.	5076 Sep 04 16:38	20°♄30'27	0.57809 AU
minimum elong	5075 Sep 27 11:46	6°♄08'47	4°40'36	inferior conj	5076 Sep 07 18:22	18°♄23'44	-5°13'41
morning rise	5075 Oct 04 22:24	1°♄41'48		minimum elong	5076 Sep 07 20:47	18°♄19'33	5°13'32
				morning rise	5076 Sep 15 20:14	14°♄08'21	
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
































































































































morning max el	5076 Sep 27 01:00	17° \cap 56'53	18°56'02	direct	5077 Aug 30 14:33	25° Ω 25'35	
asc. node	5076 Sep 30 07:09	21° \cap 34'39		morning max el	5077 Sep 09 17:44	0° \cap 08'26	19°59'58
	5076 Oct 05 21:12	0° Ω			5077 Sep 09 14:06	0° \cap	
morning set	5076 Oct 13 15:12	14° Ω 31'04		asc. node	5077 Sep 17 04:11	9° \cap 27'14	
	5076 Oct 21 12:56	0° \cap		morning set	5077 Sep 27 19:32	29° \cap 04'52	
					5077 Sep 28 06:23	0° Ω	
superior conj	5076 Oct 22 01:10	0° \cap 58'32	1°30'52	superior conj	5077 Oct 05 13:16	14° Ω 49'27	1°41'08
minimum elong	5076 Oct 22 04:00	1° \cap 12'03	1°30'37	minimum elong	5077 Oct 05 14:32	14° Ω 55'46	1°41'05
max. Earth dist.	5076 Oct 28 23:43	13° \cap 48'38	1.39026 AU	max. Earth dist.	5077 Oct 11 05:12	25° Ω 51'26	1.36965 AU
evening rise	5076 Nov 01 20:31	20° \cap 34'40			5077 Oct 13 10:28	0° \cap	
desc. node	5076 Nov 05 16:37	27° \cap 01'48		evening rise	5077 Oct 15 00:17	2° \cap 52'35	
	5076 Nov 07 12:15	0° \mathbb{A}		desc. node	5077 Oct 23 13:38	17° \cap 34'25	
	5076 Nov 28 02:32	0° \mathbb{B}			5077 Oct 31 13:34	0° \mathbb{A}	
evening max el	5076 Dec 07 05:00	10° \mathbb{B} 29'41	24°27'56	evening max el	5077 Nov 19 17:27	24° \mathbb{A} 13'05	25°40'41
retrograde	5076 Dec 18 14:15	17° \mathbb{B} 09'07			5077 Nov 27 06:47	0° \mathbb{B}	
evening set	5076 Dec 24 00:49	14° \mathbb{B} 53'00		retrograde	5077 Dec 02 00:51	1° \mathbb{B} 16'11	
asc. node	5076 Dec 27 06:24	11° \mathbb{B} 25'08			5077 Dec 06 08:36	30° \mathbb{A} \mathbb{A}	
min. Earth dist.	5076 Dec 28 16:28	9° \mathbb{B} 34'30	0.67766 AU	evening set	5077 Dec 08 00:57	28° \mathbb{A} 46'55	
inferior conj	5076 Dec 29 12:43	8° \mathbb{B} 26'48	0°45'35	min. Earth dist.	5077 Dec 12 09:15	24° \mathbb{A} 03'02	0.67091 AU
minimum elong	5076 Dec 29 11:39	8° \mathbb{B} 30'23	0°45'10	inferior conj	5077 Dec 13 16:33	22° \mathbb{A} 23'26	-0°09'16
morning rise	5077 Jan 03 22:35	2° \mathbb{B} 25'26		minimum elong	5077 Dec 13 16:47	22° \mathbb{A} 22'40	0°09'09
direct	5077 Jan 07 17:29	1° \mathbb{B} 03'24		transit middle	5077 Dec 13 16:47	22° \mathbb{A} 22'40	0°09'09
morning max el	5077 Jan 15 09:16	5° \mathbb{B} 24'02	20°07'04	transit begin	5077 Dec 13 14:28	22° \mathbb{A} 30'04	
desc. node	5077 Feb 01 15:53	28° \mathbb{B} 35'37		transit end	5077 Dec 13 19:06	22° \mathbb{A} 15'17	
	5077 Feb 02 14:25	0° \approx		asc. node	5077 Dec 14 03:25	21° \mathbb{A} 48'55	
morning set	5077 Feb 11 15:17	13° \approx 46'04		morning rise	5077 Dec 19 09:02	16° \mathbb{A} 30'11	
	5077 Feb 21 23:32	0° \mathbb{H}		direct	5077 Dec 22 16:11	15° \mathbb{A} 27'39	
max. Earth dist.	5077 Feb 22 03:48	0° \mathbb{H} 17'05	1.43891 AU	morning max el	5077 Dec 29 15:25	19° \mathbb{A} 19'34	19°07'49
					5078 Jan 07 01:28	0° \mathbb{B}	
superior conj	5077 Feb 27 19:20	9° \mathbb{H} 25'39	-2°07'09	greatest brilliancy	5078 Jan 12 15:53	8° \mathbb{B} 20'46	-0.8m
minimum elong	5077 Feb 27 16:36	9° \mathbb{H} 14'26	2°07'04	desc. node	5078 Jan 19 12:53	18° \mathbb{B} 56'35	
	5077 Mar 12 00:18	0° \mathbb{Y}		morning set	5078 Jan 21 17:53	22° \mathbb{B} 22'20	
evening rise	5077 Mar 12 17:31	1° \mathbb{Y} 14'14			5078 Jan 26 15:30	0° \approx	
asc. node	5077 Mar 25 05:42	22° \mathbb{Y} 03'05		max. Earth dist.	5078 Feb 04 18:52	14° \approx 18'17	1.44965 AU
evening max el	5077 Mar 30 11:17	28° \mathbb{Y} 39'09	18°09'31				
	5077 Mar 31 23:16	0° \mathbb{B}		superior conj	5078 Feb 07 10:25	18° \approx 29'04	-1°48'54
retrograde	5077 Apr 05 21:33	2° \mathbb{B} 01'55		minimum elong	5078 Feb 07 01:57	17° \approx 55'36	1°48'14
evening set	5077 Apr 08 17:52	1° \mathbb{B} 20'33			5078 Feb 14 15:29	0° \mathbb{H}	
	5077 Apr 10 20:54	30° \mathbb{R} \mathbb{Y}		evening rise	5078 Feb 22 03:17	12° \mathbb{H} 12'08	
inferior conj	5077 Apr 14 22:17	26° \mathbb{Y} 07'15	3°24'10		5078 Mar 05 01:36	0° \mathbb{Y}	
minimum elong	5077 Apr 14 23:52	26° \mathbb{Y} 03'01	3°24'01	asc. node	5078 Mar 12 02:43	9° \mathbb{Y} 59'49	
min. Earth dist.	5077 Apr 17 17:04	23° \mathbb{Y} 10'08	0.62703 AU	evening max el	5078 Mar 13 23:33	12° \mathbb{Y} 03'54	18°29'24
morning rise	5077 Apr 21 04:32	20° \mathbb{Y} 02'04		retrograde	5078 Mar 20 11:50	15° \mathbb{Y} 37'17	
direct	5077 Apr 28 00:57	17° \mathbb{Y} 27'44		evening set	5078 Mar 23 14:23	14° \mathbb{Y} 43'33	
desc. node	5077 Apr 30 15:08	17° \mathbb{Y} 47'48		inferior conj	5078 Mar 29 09:29	9° \mathbb{Y} 12'13	3°33'14
morning max el	5077 May 12 01:43	25° \mathbb{Y} 27'53	27°50'56	minimum elong	5078 Mar 29 09:28	9° \mathbb{Y} 12'19	3°33'13
	5077 May 16 05:45	0° \mathbb{B}		min. Earth dist.	5078 Mar 31 13:10	6° \mathbb{Y} 39'57	0.64590 AU
	5077 Jun 05 12:48	0° \mathbb{H}		morning rise	5078 Apr 04 03:49	3° \mathbb{Y} 00'13	
morning set	5077 Jun 15 03:39	18° \mathbb{H} 09'56		direct	5078 Apr 10 21:50	0° \mathbb{Y} 11'53	
max. Earth dist.	5077 Jun 20 13:58	29° \mathbb{H} 29'03	1.32516 AU	desc. node	5078 Apr 17 12:09	2° \mathbb{Y} 22'09	
	5077 Jun 20 19:45	0° \mathbb{B}		morning max el	5078 Apr 24 11:18	8° \mathbb{Y} 07'24	27°21'34
asc. node	5077 Jun 21 04:57	0° \mathbb{B} 49'29			5078 May 11 10:01	0° \mathbb{B}	
					5078 May 28 20:07	0° \mathbb{H}	
superior conj	5077 Jun 22 18:26	4° \mathbb{B} 12'01	0°16'14	morning set	5078 May 29 19:12	1° \mathbb{H} 52'05	
minimum elong	5077 Jun 22 17:41	4° \mathbb{B} 07'52	0°16'03	max. Earth dist.	5078 Jun 03 12:28	11° \mathbb{H} 21'02	1.33461 AU
evening rise	5077 Jun 29 16:48	19° \mathbb{B} 13'48					
	5077 Jul 04 22:50	0° Ω		superior conj	5078 Jun 06 22:51	18° \mathbb{H} 32'02	-0°11'43
evening max el	5077 Jul 23 17:47	27° Ω 55'59	23°49'50	minimum elong	5078 Jun 06 23:27	18° \mathbb{H} 35'14	0°11'36
	5077 Jul 26 01:14	0° \cap		behind sun begin	5078 Jun 06 19:38	18° \mathbb{H} 15'02	
desc. node	5077 Jul 27 14:23	1° \cap 11'38		behind sun end	5078 Jun 07 03:16	18° \mathbb{H} 55'28	
retrograde	5077 Aug 06 10:29	4° \cap 49'02		asc. node	5078 Jun 08 01:59	20° \mathbb{H} 56'13	
evening set	5077 Aug 10 20:23	4° \cap 06'07			5078 Jun 12 07:40	0° \mathbb{B}	
min. Earth dist.	5077 Aug 17 03:56	1° \cap 04'10	0.56088 AU	evening rise	5078 Jun 14 03:59	3° \mathbb{B} 55'08	
	5077 Aug 18 22:22	30° \mathbb{R} Ω			5078 Jun 28 11:22	0° Ω	
inferior conj	5077 Aug 19 10:33	29° Ω 41'26	-5°09'27	evening max el	5078 Jul 05 08:13	8° Ω 18'10	22°12'42
minimum elong	5077 Aug 19 06:45	29° Ω 47'13	5°09'07	desc. node	5078 Jul 14 11:24	14° Ω 09'21	
morning rise	5077 Aug 27 19:39	25° Ω 45'17					

retrograde	5078 Jul 18 05:32	14°♎42'08		evening set	5079 Jun 30 19:54	24°♊29'44	
evening set	5078 Jul 21 04:07	14°♎22'56		desc. node	5079 Jul 01 08:25	24°♊23'58	
min. Earth dist.	5078 Jul 29 14:07	10°♎44'58	0.55011 AU	inferior conj	5079 Jul 10 02:57	20°♊32'46	-2°34'13
inferior conj	5078 Jul 30 09:50	10°♎17'12	-4°15'05	minimum elong	5079 Jul 09 19:54	20°♊42'49	2°31'47
minimum elong	5078 Jul 30 01:16	10°♎29'16	4°13'03	min. Earth dist.	5079 Jul 11 01:18	20°♊00'52	0.54843 AU
morning rise	5078 Aug 08 00:12	6°♎27'10		morning rise	5079 Jul 18 19:31	16°♊29'33	
direct	5078 Aug 11 04:21	6°♎04'37		direct	5079 Jul 22 13:41	15°♊59'10	
morning max el	5078 Aug 22 22:21	11°♎33'52	21°24'38	morning max el	5079 Aug 04 16:42	22°♊17'47	23°04'30
asc. node	5078 Sep 04 01:13	28°♎02'38			5079 Aug 11 10:29	0°♎	
	5078 Sep 05 03:28	0°♎		asc. node	5079 Aug 21 22:16	17°♎10'30	
morning set	5078 Sep 12 04:12	13°♎50'22		morning set	5079 Aug 27 15:17	28°♎42'10	
					5079 Aug 28 06:01	0°♎	
superior conj	5078 Sep 19 11:22	29°♎09'10	1°43'27	superior conj	5079 Sep 03 16:17	13°♎48'10	1°39'03
minimum elong	5078 Sep 19 11:09	29°♎08'01	1°43'27	minimum elong	5079 Sep 03 14:55	13°♎40'50	1°38'59
	5078 Sep 19 21:10	0°♎		max. Earth dist.	5079 Sep 06 11:35	19°♎45'05	1.33718 AU
max. Earth dist.	5078 Sep 23 15:57	7°♎42'40	1.35153 AU	evening rise	5079 Sep 11 09:22	29°♎46'15	
evening rise	5078 Sep 27 21:58	16°♎00'07			5079 Sep 11 12:09	0°♎	
	5078 Oct 05 16:19	0°♎		desc. node	5079 Sep 27 07:41	27°♎49'20	
desc. node	5078 Oct 10 10:40	7°♎52'27			5079 Sep 28 17:56	0°♎	
	5078 Oct 26 01:44	0°♎		evening max el	5079 Oct 15 18:40	21°♎22'09	27°17'06
evening max el	5078 Nov 02 06:06	7°♎53'33	26°39'33	retrograde	5079 Oct 29 05:38	28°♎40'13	
retrograde	5078 Nov 15 06:14	15°♎09'03		evening set	5079 Nov 05 04:32	26°♎00'35	
evening set	5078 Nov 21 18:59	12°♎31'07		min. Earth dist.	5079 Nov 09 00:18	22°♎26'33	0.64690 AU
min. Earth dist.	5078 Nov 25 20:37	8°♎22'27	0.66062 AU	inferior conj	5079 Nov 11 06:57	19°♎58'11	-2°11'41
inferior conj	5078 Nov 27 15:23	6°♎15'30	-1°08'54	minimum elong	5079 Nov 11 10:46	19°♎47'48	2°10'10
minimum elong	5078 Nov 27 17:18	6°♎09'47	1°08'05	morning rise	5079 Nov 17 18:12	14°♎29'12	
asc. node	5078 Dec 01 00:26	2°♎32'59		asc. node	5079 Nov 17 21:30	14°♎25'38	
morning rise	5078 Dec 03 16:25	0°♎32'53		direct	5079 Nov 20 08:20	13°♎54'17	
	5078 Dec 05 00:05	30°♎		morning max el	5079 Nov 26 19:46	17°♎20'07	17°58'16
direct	5078 Dec 06 13:54	29°♎46'07			5079 Dec 06 01:11	0°♎	
	5078 Dec 08 04:09	0°♎		morning set	5079 Dec 14 07:16	13°♎41'04	
morning max el	5078 Dec 13 03:46	3°♎20'18	18°24'37	desc. node	5079 Dec 24 06:56	0°♎11'16	
	5078 Dec 31 11:26	0°♎			5079 Dec 24 04:09	0°♎	
morning set	5079 Jan 01 21:51	2°♎17'58		superior conj	5079 Dec 28 00:37	6°♎12'46	-0°25'49
desc. node	5079 Jan 06 09:55	9°♎29'56		minimum elong	5079 Dec 27 21:30	6°♎00'17	0°25'21
superior conj	5079 Jan 17 13:28	27°♎06'35	-1°12'12	max. Earth dist.	5080 Jan 01 08:39	13°♎06'14	1.44949 AU
minimum elong	5079 Jan 17 04:58	26°♎33'15	1°11'12		5080 Jan 12 04:52	0°♎	
max. Earth dist.	5079 Jan 18 13:18	28°♎40'02	1.45326 AU	evening rise	5080 Jan 13 05:45	1°♎35'52	
	5079 Jan 19 09:43	0°♎		greatest brilliancy	5080 Jan 27 15:48	23°♎27'23	-0.6m
evening rise	5079 Feb 02 13:47	22°♎14'13			5080 Feb 01 05:14	0°♎	
	5079 Feb 07 11:58	0°♎		evening max el	5080 Feb 08 14:02	9°♎08'18	20°00'17
greatest brilliancy	5079 Feb 12 18:08	8°♎13'47	-0.8m	asc. node	5080 Feb 13 20:47	13°♎05'20	
evening max el	5079 Feb 25 09:04	25°♎35'00	19°06'53	retrograde	5080 Feb 16 05:14	13°♎34'49	
asc. node	5079 Feb 26 23:44	27°♎05'25		evening set	5080 Feb 19 22:50	12°♎13'33	
retrograde	5079 Mar 04 07:21	29°♎30'16		inferior conj	5080 Feb 25 08:20	6°♎11'46	3°06'54
evening set	5079 Mar 07 16:50	28°♎23'13		minimum elong	5080 Feb 25 06:14	6°♎18'50	3°06'30
inferior conj	5079 Mar 13 05:50	22°♎35'39	3°26'17	min. Earth dist.	5080 Feb 26 06:10	4°♎58'29	0.67181 AU
minimum elong	5079 Mar 13 04:32	22°♎39'50	3°26'08	morning rise	5080 Mar 01 13:25	29°♎57'19	
min. Earth dist.	5079 Mar 14 18:05	20°♎40'10	0.66098 AU		5080 Mar 01 12:15	30°♎	
morning rise	5079 Mar 18 15:52	16°♎21'13		direct	5080 Mar 07 10:41	27°♎19'28	
direct	5079 Mar 25 01:28	13°♎32'24			5080 Mar 14 05:51	0°♎	
desc. node	5079 Apr 04 09:10	18°♎46'30		morning max el	5080 Mar 19 06:07	4°♎23'06	25°04'37
morning max el	5079 Apr 06 21:13	21°♎09'31	26°23'03	desc. node	5080 Mar 21 06:11	6°♎29'57	
	5079 Apr 14 13:07	0°♎			5080 Apr 07 21:42	0°♎	
	5079 May 04 14:12	0°♎		morning set	5080 Apr 24 09:33	27°♎07'04	
morning set	5079 May 12 22:46	14°♎55'50			5080 Apr 25 23:54	0°♎	
max. Earth dist.	5079 May 16 23:55	22°♎42'02	1.34881 AU	max. Earth dist.	5080 Apr 28 00:48	3°♎44'36	1.36734 AU
	5079 May 20 15:35	0°♎		superior conj	5080 May 04 08:45	15°♎51'54	-1°10'50
superior conj	5079 May 21 20:37	2°♎28'12	-0°41'16	minimum elong	5080 May 04 12:39	16°♎11'08	1°10'11
minimum elong	5079 May 21 22:52	2°♎39'46	0°40'49		5080 May 11 09:50	0°♎	
asc. node	5079 May 25 23:01	10°♎58'30		asc. node	5080 May 11 20:03	0°♎51'38	
evening rise	5079 May 29 12:40	18°♎24'32		evening rise	5080 May 12 16:32	2°♎34'52	
	5079 Jun 04 08:20	0°♎			5080 May 29 08:07	0°♎	
evening max el	5079 Jun 17 08:05	19°♎04'27	20°45'13	evening max el	5080 May 29 20:24	0°♎30'48	19°35'18
retrograde	5079 Jun 28 17:53	24°♎40'10					

retrograde	5080 Jun 08 12:26	5°☿14'07		evening max el	5081 May 12 19:50	12°♊37'45	18°45'38
evening set	5080 Jun 10 10:48	5°☿03'38		retrograde	5081 May 20 23:49	16°♊38'36	
desc. node	5080 Jun 17 05:26	2°☿12'16		evening set	5081 May 23 03:01	16°♊23'10	
inferior conj	5080 Jun 19 04:30	0°☿59'24	-0°35'07	inferior conj	5081 May 31 01:02	12°♊01'45	1°09'42
minimum elong	5080 Jun 19 02:55	1°☿01'54	0°34'33	minimum elong	5081 May 31 03:32	11°♊57'09	1°08'50
	5080 Jun 20 17:59	30°♋♊		min. Earth dist.	5081 Jun 03 07:05	9°♊38'57	0.57214 AU
min. Earth dist.	5080 Jun 21 14:26	29°♊28'07	0.55633 AU	desc. node	5081 Jun 04 02:28	9°♊05'37	
morning rise	5080 Jun 27 16:34	26°♊25'55		morning rise	5081 Jun 08 00:45	6°♊51'56	
direct	5080 Jul 02 06:37	25°♊38'58		direct	5081 Jun 13 13:12	5°♊37'26	
	5080 Jul 13 04:14	0°☿		morning max el	5081 Jun 27 21:49	13°♊08'05	26°19'25
morning max el	5080 Jul 16 06:20	2°☿39'25	24°48'07		5081 Jul 11 04:22	0°☿	
	5080 Aug 04 08:47	0°♌		asc. node	5081 Jul 25 16:22	26°☿30'43	
asc. node	5080 Aug 07 19:19	6°♌42'14		morning set	5081 Jul 26 13:54	28°☿23'54	
morning set	5080 Aug 11 03:04	13°♌35'13			5081 Jul 27 08:00	0°♌	
superior conj	5080 Aug 18 01:29	28°♌38'32	1°28'57	superior conj	5081 Aug 02 12:53	13°♌33'05	1°13'52
minimum elong	5080 Aug 17 23:25	28°♌27'12	1°28'43	minimum elong	5081 Aug 02 10:34	13°♌20'20	1°13'30
	5080 Aug 18 16:25	0°♍		max. Earth dist.	5081 Aug 03 01:05	14°♌40'23	1.32103 AU
max. Earth dist.	5080 Aug 19 15:37	2°♍06'05	1.32699 AU	evening rise	5081 Aug 09 11:07	28°♌33'16	
evening rise	5080 Aug 25 06:46	14°♍00'29			5081 Aug 10 03:45	0°♍	
	5080 Sep 02 14:23	0°♎			5081 Aug 26 20:42	0°♎	
desc. node	5080 Sep 13 04:43	17°♎16'11		desc. node	5081 Aug 31 01:46	5°♎59'59	
	5080 Sep 22 23:01	0°♏		evening max el	5081 Sep 09 11:01	16°♎50'35	27°03'45
evening max el	5080 Sep 27 05:14	4°♏26'00	27°26'42	retrograde	5081 Sep 23 07:57	24°♎02'13	
retrograde	5080 Oct 10 22:27	11°♏41'22		evening set	5081 Sep 30 09:13	21°♎50'02	
evening set	5080 Oct 18 02:38	9°♏09'32		min. Earth dist.	5081 Oct 04 01:21	19°♎09'02	0.61033 AU
min. Earth dist.	5080 Oct 21 18:15	6°♏06'36	0.62994 AU	inferior conj	5081 Oct 07 04:52	16°♎27'05	-4°13'14
inferior conj	5080 Oct 24 12:34	3°♏25'12	-3°14'44	minimum elong	5081 Oct 07 11:09	16°♎13'33	4°11'38
minimum elong	5080 Oct 24 18:06	3°♏11'41	3°12'52	morning rise	5081 Oct 14 15:04	11°♎36'01	
	5080 Oct 28 08:33	30°♋♎		direct	5081 Oct 16 22:44	11°♎14'22	
morning rise	5080 Oct 31 11:09	28°♎13'25		asc. node	5081 Oct 21 15:36	12°♎47'25	
direct	5080 Nov 02 20:35	27°♎46'41		morning max el	5081 Oct 24 02:52	14°♎48'53	17°59'22
asc. node	5080 Nov 03 18:33	27°♎50'41			5081 Nov 03 13:25	0°♏	
	5080 Nov 08 04:23	0°♐		morning set	5081 Nov 08 20:43	9°♏39'04	
morning max el	5080 Nov 09 12:33	1°♏12'36	17°49'31	superior conj	5081 Nov 19 00:03	28°♏02'18	0°55'10
morning set	5080 Nov 25 17:05	26°♏14'58		minimum elong	5081 Nov 19 03:55	28°♏19'20	0°54'39
	5080 Nov 27 20:20	0°♑			5081 Nov 20 02:56	0°♑	
superior conj	5080 Dec 07 11:07	16°♑29'04	0°18'58	max. Earth dist.	5081 Nov 26 14:28	11°♑01'05	1.42242 AU
minimum elong	5080 Dec 07 13:00	16°♑36'54	0°18'43	desc. node	5081 Nov 27 01:00	11°♑44'41	
desc. node	5080 Dec 10 03:58	20°♑57'29		evening rise	5081 Dec 02 12:10	20°♑36'06	
max. Earth dist.	5080 Dec 14 01:58	27°♑19'26	1.43880 AU		5081 Dec 08 12:51	0°♒	
	5080 Dec 15 18:04	0°♓			5081 Dec 29 18:41	0°♓	
evening rise	5080 Dec 22 16:00	10°♓50'43		evening max el	5082 Jan 04 07:44	6°♓18'13	22°22'43
	5081 Jan 04 09:09	0°♔		retrograde	5082 Jan 13 23:47	12°♓03'15	
evening max el	5081 Jan 21 13:31	22°♓42'36	21°06'50	asc. node	5082 Jan 17 14:51	10°♓54'06	
retrograde	5081 Jan 30 03:18	27°♓47'09		evening set	5082 Jan 18 14:03	10°♓11'21	
asc. node	5081 Jan 30 17:49	27°♓45'10		inferior conj	5082 Jan 23 22:32	3°♓49'39	1°59'42
evening set	5081 Feb 03 06:28	26°♓10'48		minimum elong	5082 Jan 23 20:17	3°♓57'28	1°58'57
inferior conj	5081 Feb 08 14:36	19°♓57'24	2°37'31	min. Earth dist.	5082 Jan 23 19:35	3°♓59'52	0.68104 AU
minimum elong	5081 Feb 08 12:11	20°♓05'44	2°36'52		5082 Jan 26 19:58	30°♋♓	
min. Earth dist.	5081 Feb 08 23:25	19°♓26'55	0.67843 AU	morning rise	5082 Jan 29 02:23	27°♓39'42	
morning rise	5081 Feb 13 17:44	13°♓44'29		direct	5082 Feb 02 18:37	25°♓42'33	
direct	5081 Feb 19 00:40	11°♓25'08			5082 Feb 10 21:04	0°♓	
morning max el	5081 Mar 01 14:56	17°♓43'29	23°36'25	morning max el	5082 Feb 12 02:35	1°♓11'16	22°08'10
desc. node	5081 Mar 08 03:13	25°♓10'07		desc. node	5082 Feb 23 00:15	14°♓30'58	
	5081 Mar 11 20:40	0°♈			5082 Mar 05 18:12	0°♈	
	5081 Mar 31 23:41	0°♉		morning set	5082 Mar 17 06:05	17°♈54'06	
morning set	5081 Apr 05 21:44	8°♉10'31		max. Earth dist.	5082 Mar 22 18:01	26°♈57'15	1.41045 AU
max. Earth dist.	5081 Apr 09 20:28	14°♉59'49	1.38871 AU		5082 Mar 24 13:16	0°♉	
superior conj	5081 Apr 17 07:31	28°♉33'30	-1°37'55	superior conj	5082 Mar 30 12:18	10°♉22'06	-1°58'54
minimum elong	5081 Apr 17 12:29	28°♉56'46	1°37'21	minimum elong	5082 Mar 30 16:38	10°♉41'24	1°58'38
	5081 Apr 18 01:55	0°♊		evening rise	5082 Apr 09 22:14	29°♉27'21	
evening rise	5081 Apr 26 12:53	16°♊18'40			5082 Apr 10 05:15	0°♊	
asc. node	5081 Apr 28 17:06	20°♊31'09		asc. node	5082 Apr 15 14:09	9°♊51'44	
	5081 May 03 20:15	0°♋		evening max el	5082 Apr 26 03:10	25°♊18'13	18°16'18

retrograde	5082 May 03 06:05	28°♄51'56		retrograde	5083 Apr 16 04:07	11°♄44'10	
evening set	5082 May 05 16:11	28°♄28'06		evening set	5083 Apr 18 20:52	11°♄09'36	
inferior conj	5082 May 12 19:11	23°♄46'35	2°24'44	inferior conj	5083 Apr 25 08:23	6°♄07'49	3°09'46
minimum elong	5082 May 12 22:41	23°♄39'02	2°23'49	minimum elong	5083 Apr 25 10:53	6°♄01'35	3°09'21
min. Earth dist.	5082 May 16 05:17	20°♄50'58	0.59277 AU	min. Earth dist.	5083 Apr 28 10:48	3°♄04'20	0.61487 AU
morning rise	5082 May 20 02:18	18°♄07'06		morning rise	5083 May 01 23:01	0°♄09'35	
desc. node	5082 May 21 23:30	17°♄11'58			5083 May 02 04:40	30°♄♂	
direct	5082 May 26 09:46	16°♄18'06		direct	5083 May 08 17:28	27°♄48'42	
morning max el	5082 Jun 09 19:02	24°♄07'51	27°23'35	desc. node	5083 May 08 20:31	27°♄48'45	
	5082 Jun 15 02:43	0°♄♂			5083 May 15 17:48	0°♄	
	5082 Jul 04 08:49	0°♄♂		morning max el	5083 May 22 22:18	5°♄47'36	27°51'49
morning set	5082 Jul 10 22:06	13°♄03'03			5083 Jun 10 02:56	0°♄♂	
asc. node	5082 Jul 12 13:24	16°♄30'34		morning set	5083 Jun 25 01:44	27°♄25'18	
max. Earth dist.	5082 Jul 17 12:26	27°♄18'34	1.31928 AU		5083 Jun 26 07:40	0°♄♂	
				asc. node	5083 Jun 29 10:26	6°♄36'05	
superior conj	5082 Jul 18 00:40	28°♄26'06	0°54'25	max. Earth dist.	5083 Jun 30 21:45	9°♄47'04	1.32173 AU
minimum elong	5082 Jul 17 22:36	28°♄14'39	0°54'00				
	5082 Jul 18 17:40	0°♄♂		superior conj	5083 Jul 02 11:02	13°♄10'34	0°31'08
evening rise	5082 Jul 24 19:59	13°♄17'22		minimum elong	5083 Jul 02 09:40	13°♄03'04	0°30'50
	5082 Aug 02 05:47	0°♄♂		evening rise	5083 Jul 09 07:12	28°♄04'55	
desc. node	5082 Aug 17 22:47	23°♄43'10			5083 Jul 10 04:54	0°♄♂	
evening max el	5082 Aug 22 09:44	28°♄27'17	26°07'45		5083 Jul 27 03:24	0°♄♂	
	5082 Aug 24 02:48	0°♄♂		evening max el	5083 Aug 04 01:18	9°♄17'37	24°44'50
retrograde	5082 Sep 05 08:56	5°♄35'13		desc. node	5083 Aug 04 19:47	10°♄00'54	
evening set	5082 Sep 11 19:25	3°♄54'46		retrograde	5083 Aug 17 22:56	16°♄18'29	
min. Earth dist.	5082 Sep 15 22:36	1°♄19'45	0.58960 AU	evening set	5083 Aug 23 05:19	15°♄16'03	
	5082 Sep 17 17:43	30°♄♂		min. Earth dist.	5083 Aug 28 12:40	12°♄28'30	0.57019 AU
inferior conj	5082 Sep 19 04:20	28°♄54'36	-4°58'36	inferior conj	5083 Aug 31 08:07	10°♄38'51	-5°17'21
minimum elong	5082 Sep 19 09:08	28°♄45'36	4°57'56	minimum elong	5083 Aug 31 08:07	10°♄38'52	5°17'21
morning rise	5082 Sep 27 01:06	24°♄26'15		morning rise	5083 Sep 08 13:17	6°♄32'15	
direct	5082 Sep 29 10:22	24°♄07'04		direct	5083 Sep 11 03:49	6°♄13'13	
morning max el	5082 Oct 07 11:19	27°♄59'44	18°29'11	morning max el	5083 Sep 20 10:29	10°♄34'49	19°20'27
asc. node	5082 Oct 08 12:38	29°♄04'08		asc. node	5083 Sep 25 09:39	16°♄25'34	
	5082 Oct 09 08:35	0°♄♂			5083 Oct 03 11:12	0°♄♂	
morning set	5082 Oct 23 12:51	23°♄38'10		morning set	5083 Oct 07 13:35	8°♄01'28	
	5082 Oct 26 20:06	0°♄♂					
superior conj	5082 Nov 01 11:26	10°♄40'37	1°20'45	superior conj	5083 Oct 15 15:53	24°♄08'30	1°36'15
minimum elong	5082 Nov 01 15:00	10°♄57'07	1°20'23	minimum elong	5083 Oct 15 18:04	24°♄19'09	1°36'07
max. Earth dist.	5082 Nov 08 21:32	23°♄59'33	1.40244 AU		5083 Oct 18 16:58	0°♄♂	
	5082 Nov 12 10:09	0°♄♂		max. Earth dist.	5083 Oct 22 02:10	6°♄18'12	1.38136 AU
evening rise	5082 Nov 13 04:52	1°♄18'10		evening rise	5083 Oct 25 20:30	13°♄02'44	
desc. node	5082 Nov 13 22:02	2°♄29'21		desc. node	5083 Oct 31 19:04	23°♄07'35	
	5082 Dec 01 21:56	0°♄♂			5083 Nov 05 01:53	0°♄♂	
evening max el	5082 Dec 17 22:13	19°♄57'11	23°42'40		5083 Nov 26 23:27	0°♄♂	
retrograde	5082 Dec 28 17:14	26°♄19'20		evening max el	5083 Nov 30 11:06	3°♄40'27	25°00'11
evening set	5083 Jan 02 20:00	24°♄11'57		retrograde	5083 Dec 12 06:31	10°♄31'10	
asc. node	5083 Jan 04 11:53	22°♄34'38		evening set	5083 Dec 17 22:44	8°♄09'26	
min. Earth dist.	5083 Jan 07 16:20	18°♄33'38	0.67992 AU	asc. node	5083 Dec 22 08:54	3°♄12'59	
inferior conj	5083 Jan 08 06:17	17°♄46'00	1°14'34	min. Earth dist.	5083 Dec 22 11:16	3°♄05'16	0.67521 AU
minimum elong	5083 Jan 08 04:39	17°♄51'34	1°13'57	inferior conj	5083 Dec 23 12:05	1°♄43'47	0°23'01
morning rise	5083 Jan 13 13:17	11°♄40'42		minimum elong	5083 Dec 23 11:31	1°♄45'39	0°22'47
direct	5083 Jan 17 15:34	10°♄06'13			5083 Dec 24 20:10	30°♄♂	
morning max el	5083 Jan 25 20:19	14°♄49'13	20°47'37	morning rise	5083 Dec 29 00:29	25°♄45'19	
	5083 Feb 06 20:34	0°♄♂		direct	5084 Jan 01 14:12	24°♄31'50	
desc. node	5083 Feb 09 21:16	4°♄21'14		morning max el	5084 Jan 08 21:58	28°♄38'51	19°39'54
morning set	5083 Feb 24 11:57	26°♄25'30			5084 Jan 10 04:54	0°♄♂	
	5083 Feb 26 18:43	0°♄♂		greatest brilliancy	5084 Jan 21 23:08	15°♄50'00	-0.7m
max. Earth dist.	5083 Mar 04 22:04	9°♄48'32	1.42984 AU	desc. node	5084 Jan 27 18:18	24°♄33'02	
					5084 Jan 31 07:55	0°♄♂	
superior conj	5083 Mar 11 18:08	21°♄06'28	-2°08'46	morning set	5084 Feb 03 08:22	4°♄38'40	
minimum elong	5083 Mar 11 18:52	21°♄09'33	2°08'45	max. Earth dist.	5084 Feb 15 09:59	23°♄30'09	1.44433 AU
	5083 Mar 16 22:55	0°♄♂			5084 Feb 19 11:37	0°♄♂	
evening rise	5083 Mar 23 16:25	11°♄50'44		superior conj	5084 Feb 19 22:29	0°♄43'46	-2°01'53
asc. node	5083 Apr 02 11:11	28°♄46'11		minimum elong	5084 Feb 19 17:00	0°♄21'40	2°01'37
	5083 Apr 03 05:50	0°♄		evening rise	5084 Mar 04 15:05	23°♄21'27	
evening max el	5083 Apr 09 14:51	8°♄21'50	18°06'35		5084 Mar 08 13:21	0°♄♂	

asc. node	5084 Mar 19 08:12	17°♿06'55			5085 Mar 02 08:32	0°♿	
evening max el	5084 Mar 23 03:46	21°♿41'10	18°15'46	asc. node	5085 Mar 06 05:14	4°♿43'16	
retrograde	5084 Mar 29 13:39	25°♿06'32		evening max el	5085 Mar 06 15:08	5°♿08'57	18°43'14
evening set	5084 Apr 01 12:41	24°♿19'53		retrograde	5085 Mar 13 06:36	8°♿50'09	
inferior conj	5084 Apr 07 12:43	18°♿58'50	3°30'14	evening set	5085 Mar 16 12:05	7°♿50'40	
minimum elong	5084 Apr 07 13:35	18°♿56'23	3°30'10	inferior conj	5085 Mar 22 04:13	2°♿11'58	3°31'57
min. Earth dist.	5084 Apr 10 01:17	16°♿10'27	0.63554 AU	minimum elong	5085 Mar 22 03:35	2°♿13'52	3°31'55
morning rise	5084 Apr 13 13:29	12°♿50'22			5085 Mar 23 23:22	30°♿	
direct	5084 Apr 20 09:56	10°♿08'20		min. Earth dist.	5085 Mar 24 01:08	29°♿54'40	0.65288 AU
desc. node	5084 Apr 24 17:32	11°♿04'11		morning rise	5085 Mar 27 18:36	25°♿58'40	
morning max el	5084 May 04 06:12	18°♿07'13	27°42'27	direct	5085 Apr 03 09:36	23°♿08'54	
	5084 May 14 05:20	0°♿		desc. node	5085 Apr 11 14:32	26°♿29'09	
	5084 Jun 01 23:43	0°♿			5085 Apr 15 16:55	0°♿	
morning set	5084 Jun 07 22:29	11°♿23'59		morning max el	5085 Apr 16 16:15	0°♿57'34	26°59'45
max. Earth dist.	5084 Jun 13 01:19	21°♿55'05	1.32862 AU		5085 May 08 06:46	0°♿	
asc. node	5084 Jun 15 07:28	26°♿43'17		morning set	5085 May 22 09:24	24°♿50'39	
					5085 May 25 00:46	0°♿	
superior conj	5084 Jun 15 18:12	27°♿40'58	0°04'40	max. Earth dist.	5085 May 26 19:35	3°♿34'21	1.34012 AU
minimum elong	5084 Jun 15 17:59	27°♿39'44	0°04'37				
behind sun begin	5084 Jun 15 12:51	27°♿12'13		superior conj	5085 May 30 20:06	11°♿51'18	-0°24'08
behind sun end	5084 Jun 15 23:06	28°♿07'17		minimum elong	5085 May 30 21:23	11°♿58'01	0°23'52
	5084 Jun 16 20:00	0°♿		asc. node	5085 Jun 02 04:31	16°♿48'23	
evening rise	5084 Jun 22 18:56	12°♿50'06		evening rise	5085 Jun 07 05:20	27°♿27'05	
	5084 Jul 01 11:22	0°♿			5085 Jun 08 10:45	0°♿	
evening max el	5084 Jul 15 13:56	19°♿40'32	23°08'08		5085 Jun 27 03:53	0°♿	
desc. node	5084 Jul 21 16:48	24°♿21'29		evening max el	5085 Jun 27 07:33	0°♿09'00	21°33'39
retrograde	5084 Jul 29 00:06	26°♿23'00		desc. node	5085 Jul 08 13:48	6°♿11'43	
evening set	5084 Aug 01 18:13	25°♿52'13		retrograde	5085 Jul 09 15:07	6°♿14'21	
min. Earth dist.	5084 Aug 08 22:58	22°♿36'43	0.55535 AU	evening set	5085 Jul 12 02:52	6°♿00'14	
inferior conj	5084 Aug 10 16:14	21°♿36'43	-4°52'56	inferior conj	5085 Jul 21 11:09	1°♿59'49	-3°36'45
minimum elong	5084 Aug 10 09:51	21°♿46'02	4°51'56	minimum elong	5085 Jul 21 02:25	2°♿12'02	3°34'13
morning rise	5084 Aug 19 03:45	17°♿45'06		min. Earth dist.	5085 Jul 21 09:02	2°♿02'46	0.54818 AU
direct	5084 Aug 22 02:32	17°♿24'21			5085 Jul 25 04:21	30°♿	
morning max el	5084 Sep 01 21:53	22°♿25'53	20°33'37	morning rise	5085 Jul 30 03:05	28°♿07'12	
	5084 Sep 08 06:46	0°♿		direct	5085 Aug 02 12:33	27°♿42'11	
asc. node	5084 Sep 11 06:42	4°♿37'29			5085 Aug 10 06:26	0°♿	
morning set	5084 Sep 20 20:03	22°♿40'53		morning max el	5085 Aug 14 21:38	3°♿31'59	22°05'57
	5084 Sep 24 08:58	0°♿		asc. node	5085 Aug 29 03:45	23°♿27'53	
					5085 Sep 01 13:54	0°♿	
superior conj	5084 Sep 28 08:39	8°♿12'30	1°43'00	morning set	5085 Sep 05 06:01	7°♿30'14	
minimum elong	5084 Sep 28 09:15	8°♿15'34	1°43'00				
max. Earth dist.	5084 Oct 03 09:41	18°♿14'32	1.36159 AU	superior conj	5085 Sep 12 10:03	22°♿41'51	1°42'21
evening rise	5084 Oct 07 08:24	25°♿42'51		minimum elong	5085 Sep 12 09:17	22°♿37'51	1°42'19
	5084 Oct 09 16:54	0°♿			5085 Sep 15 22:21	0°♿	
desc. node	5084 Oct 17 16:04	13°♿34'36		max. Earth dist.	5085 Sep 16 00:20	0°♿10'07	1.34489 AU
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evening max el	5084 Nov 11 23:47	17°♿24'04	26°07'54		5085 Oct 02 05:07	0°♿	
retrograde	5084 Nov 24 14:46	24°♿32'52		desc. node	5085 Oct 04 13:06	3°♿44'54	
evening set	5084 Nov 30 20:30	21°♿59'23			5085 Oct 24 11:42	0°♿	
min. Earth dist.	5084 Dec 05 01:59	17°♿30'29	0.66701 AU	evening max el	5085 Oct 25 12:29	1°♿00'46	26°58'26
inferior conj	5084 Dec 06 14:02	15°♿38'54	-0°34'02	retrograde	5085 Nov 07 17:34	8°♿18'06	
minimum elong	5084 Dec 06 14:57	15°♿36'04	0°33'38	evening set	5085 Nov 14 11:16	5°♿38'09	
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morning rise	5084 Dec 12 09:56	9°♿49'47			5085 Nov 19 22:53	30°♿	
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morning max el	5084 Dec 22 07:00	12°♿37'00	18°47'26	minimum elong	5085 Nov 20 12:49	29°♿19'55	1°34'07
	5085 Jan 04 01:08	0°♿		asc. node	5085 Nov 25 02:58	24°♿47'01	
morning set	5085 Jan 12 20:18	13°♿45'06		morning rise	5085 Nov 26 15:20	23°♿50'45	
desc. node	5085 Jan 13 15:18	14°♿59'41		direct	5085 Nov 29 09:27	23°♿09'29	
	5085 Jan 23 04:58	0°♿		morning max el	5085 Dec 05 21:20	26°♿38'40	18°11'19
max. Earth dist.	5085 Jan 28 03:28	7°♿44'29	1.45217 AU		5085 Dec 08 19:49	0°♿	
				morning set	5085 Dec 24 13:04	24°♿19'10	
superior conj	5085 Jan 29 06:13	9°♿29'32	-1°35'13		5085 Dec 28 00:52	0°♿	
minimum elong	5085 Jan 28 20:50	8°♿52'37	1°34'19	desc. node	5085 Dec 31 12:20	5°♿36'56	
	5085 Feb 11 04:27	0°♿					
evening rise	5085 Feb 13 14:51	3°♿54'47		superior conj	5086 Jan 08 10:12	18°♿12'15	-0°53'00
greatest brilliancy	5085 Feb 20 03:06	14°♿24'33	-0.9m	minimum elong	5086 Jan 08 03:40	17°♿46'29	0°52'07






















































































































max. Earth dist.	5086 Jan 10 22:53	22°  10'55	1.45261 AU		5086 Dec 20 15:22	0° 	
	5086 Jan 15 22:46	0° 		max. Earth dist.	5086 Dec 24 17:15	6°  32'01	1.44571 AU
evening rise	5086 Jan 24 16:28	13°  36'45		evening rise	5087 Jan 04 04:04	22°  50'31	
	5086 Feb 04 06:36	0° 			5087 Jan 08 20:30	0° 	
greatest brilliancy	5086 Feb 05 21:11	2°  26'33	-0.7m		5087 Jan 30 00:23	0° 	
evening max el	5086 Feb 17 22:48	18°  40'33	19°27'43	evening max el	5087 Feb 01 01:26	2°  14'11	20°27'10
asc. node	5086 Feb 21 02:16	21°  22'27		asc. node	5087 Feb 07 23:17	6°  50'08	
retrograde	5086 Feb 25 03:35	22°  48'25		retrograde	5087 Feb 09 01:52	6°  56'44	
evening set	5086 Feb 28 16:20	21°  35'24		evening set	5087 Feb 12 23:15	5°  29'20	
inferior conj	5086 Mar 06 03:32	15°  41'12	3°19'23		5087 Feb 17 20:50	30° 	
minimum elong	5086 Mar 06 01:50	15°  46'46	3°19'09	inferior conj	5087 Feb 18 07:56	29°  22'11	2°55'33
min. Earth dist.	5086 Mar 07 09:24	14°  03'29	0.66611 AU	minimum elong	5087 Feb 18 05:39	29°  30'01	2°55'02
morning rise	5086 Mar 11 11:04	9°  26'20		min. Earth dist.	5087 Feb 19 00:07	28°  27'01	0.67511 AU
direct	5086 Mar 17 15:35	6°  41'15		morning rise	5087 Feb 23 11:49	23°  07'56	
desc. node	5086 Mar 29 11:34	13°  30'07		direct	5087 Mar 01 03:04	20°  37'08	
morning max el	5086 Mar 30 02:02	14°  06'13	25°51'30	morning max el	5087 Mar 12 10:44	27°  23'24	24°27'36
	5086 Apr 12 00:36	0° 			5087 Mar 14 21:31	0° 	
	5086 May 01 01:29	0° 		desc. node	5087 Mar 16 08:36	1°  40'11	
morning set	5086 May 05 06:29	7°  33'40			5087 Apr 05 16:28	0° 	
max. Earth dist.	5086 May 09 02:27	14°  45'29	1.35620 AU	morning set	5087 Apr 17 08:29	19°  18'38	
				max. Earth dist.	5087 Apr 20 23:56	25°  47'59	1.37616 AU
					5087 Apr 23 06:56	0° 	
superior conj	5086 May 14 14:09	25°  34'07	-0°53'56				
minimum elong	5086 May 14 17:08	25°  49'10	0°53'24	superior conj	5087 Apr 27 21:08	8°  41'20	-1°22'49
	5086 May 16 18:28	0° 		minimum elong	5087 Apr 28 01:36	9°  02'56	1°22'10
asc. node	5086 May 20 01:34	6°  46'56		evening rise	5087 May 06 13:22	25°  49'01	
evening rise	5086 May 22 12:18	11°  49'00		asc. node	5087 May 06 22:37	26°  34'53	
	5086 Jun 01 02:52	0° 			5087 May 08 16:16	0° 	
evening max el	5086 Jun 09 12:31	11°  10'35	20°13'04	evening max el	5087 May 23 05:59	22°  55'16	19°11'42
retrograde	5086 Jun 20 04:53	16°  24'14		retrograde	5087 Jun 01 05:35	27°  18'37	
evening set	5086 Jun 22 03:27	16°  14'37		evening set	5087 Jun 03 05:23	27°  06'36	
desc. node	5086 Jun 25 10:50	15°  17'54		inferior conj	5087 Jun 11 15:02	22°  56'14	0°12'24
inferior conj	5086 Jul 01 06:09	12°  16'04	-1°43'45	minimum elong	5087 Jun 11 15:33	22°  55'22	0°12'12
minimum elong	5086 Jul 01 01:18	12°  23'15	1°41'59	transit middle	5087 Jun 11 15:33	22°  55'22	0°12'12
min. Earth dist.	5086 Jul 02 21:03	11°  18'34	0.55057 AU	transit begin	5087 Jun 11 13:04	22°  59'33	
morning rise	5086 Jul 09 21:45	8°  01'21		transit end	5087 Jun 11 18:02	22°  51'12	
direct	5086 Jul 13 23:21	7°  25'28		desc. node	5087 Jun 12 07:51	22°  27'50	
morning max el	5086 Jul 27 13:23	14°  03'37	23°49'11	min. Earth dist.	5087 Jun 14 11:50	21°  01'05	0.56223 AU
	5086 Aug 08 22:08	0° 		morning rise	5087 Jun 19 22:35	18°  06'50	
asc. node	5086 Aug 16 00:48	12°  04'23		direct	5087 Jun 24 22:19	17°  09'09	
morning set	5086 Aug 20 17:36	22°  02'51		morning max el	5087 Jul 09 03:08	24°  24'47	25°29'21
	5086 Aug 24 06:46	0° 			5087 Jul 14 06:12	0° 	
					5087 Aug 01 17:11	0° 	
superior conj	5086 Aug 27 17:04	7°  26'26	1°35'26	asc. node	5087 Aug 02 21:52	2°  02'53'38	
minimum elong	5086 Aug 27 15:21	7°  17'07	1°35'17	morning set	5087 Aug 05 05:08	7°  01'40'00	
max. Earth dist.	5086 Aug 29 23:32	12°  18'50	1.33223 AU				
evening rise	5086 Sep 04 04:29	23°  06'57		superior conj	5087 Aug 12 03:26	22°  18'59	1°23'08
	5086 Sep 07 16:43	0° 		minimum elong	5087 Aug 12 01:12	22°  06'43	1°22'49
desc. node	5086 Sep 21 10:09	23°  30'03		max. Earth dist.	5087 Aug 13 06:02	24°  04'47	1.32391 AU
	5086 Sep 25 21:40	0° 			5087 Aug 15 16:04	0° 	
evening max el	5086 Oct 08 00:14	14°  19'22	27°24'51	evening rise	5087 Aug 19 05:09	7°  29'41	
retrograde	5086 Oct 21 14:29	21°  37'35			5087 Aug 31 03:53	0° 	
evening set	5086 Oct 28 16:24	18°  59'35		desc. node	5087 Sep 08 07:10	12°  03'47	
min. Earth dist.	5086 Nov 01 09:54	15°  39'43	0.64005 AU	evening max el	5087 Sep 20 09:05	27°  07'30	27°21'08
inferior conj	5086 Nov 03 21:47	13°  04'10	-2°38'37		5087 Sep 23 17:19	0° 	
minimum elong	5086 Nov 04 02:23	12°  52'11	2°36'53	retrograde	5087 Oct 04 04:31	4°  11'21'45	
morning rise	5086 Nov 10 13:47	7°  11'42'21		evening set	5087 Oct 11 08:25	1°  11'56'55	
asc. node	5086 Nov 12 00:01	7°  11'17'09			5087 Oct 13 21:57	30° 	
direct	5086 Nov 13 01:30	7°  11'11'28		min. Earth dist.	5087 Oct 14 23:27	29°  04'31	0.62178 AU
morning max el	5086 Nov 19 14:07	10°  36'27	17°52'21	inferior conj	5087 Oct 17 22:06	26°  02'11'03	-3°40'34
	5086 Dec 02 17:59	0° 		minimum elong	5087 Oct 18 04:09	26°  07'02	3°38'43
morning set	5086 Dec 06 09:41	6°  14'35		morning rise	5087 Oct 25 01:40	21°  01'17'34	
desc. node	5086 Dec 18 09:24	26°  12'20'51		direct	5087 Oct 27 09:50	20°  05'33'28	
				asc. node	5087 Oct 29 21:04	21°  05'21'11	
superior conj	5086 Dec 19 06:17	27°  14'55'57	-0°06'06	morning max el	5087 Nov 03 06:12	24°  02'22'24	17°51'20
minimum elong	5086 Dec 19 05:36	27°  14'43'08	0°06'00		5087 Nov 07 19:46	0° 	
behind sun begin	5086 Dec 18 20:16	27°  10'51'12		morning set	5087 Nov 19 03:49	19°  11'11'34	
behind sun end	5086 Dec 19 14:55	28°  12'21'01					

	5087 Nov 25 05:19	0°♊		superior conj	5088 Nov 11 03:15	20°♊37'35	1°07'19
				minimum elong	5088 Nov 11 07:12	20°♊55'19	1°06'50
superior conj	5087 Nov 30 04:09	8°♊35'00	0°35'35		5088 Nov 16 11:03	0°♊	
minimum elong	5087 Nov 30 07:15	8°♊48'11	0°35'08	max. Earth dist.	5088 Nov 18 18:50	3°♊57'38	1.41423 AU
desc. node	5087 Dec 05 06:26	17°♊07'38		desc. node	5088 Nov 21 03:28	7°♊54'13	
max. Earth dist.	5087 Dec 07 08:20	20°♊31'57	1.43240 AU	evening rise	5088 Nov 23 20:54	12°♊21'57	
	5087 Dec 13 06:30	0°♊			5088 Dec 05 05:44	0°♊	
evening rise	5087 Dec 14 16:43	2°♊13'52		evening max el	5088 Dec 27 15:12	29°♊26'54	22°56'36
	5088 Jan 02 08:59	0°♊			5088 Dec 28 04:34	0°♊	
evening max el	5088 Jan 14 22:38	15°♊49'12	21°38'20	retrograde	5089 Jan 06 18:35	5°♊27'43	
retrograde	5088 Jan 23 23:23	21°♊10'51		evening set	5089 Jan 11 14:06	3°♊29'10	
asc. node	5088 Jan 25 20:19	20°♊52'05		asc. node	5089 Jan 11 17:20	3°♊22'19	
evening set	5088 Jan 28 07:02	19°♊28'09			5089 Jan 14 19:28	30°♊	
inferior conj	5088 Feb 02 15:08	13°♊10'59	2°22'27	inferior conj	5089 Jan 16 23:12	27°♊05'25	1°41'26
minimum elong	5088 Feb 02 12:44	13°♊19'19	2°21'44	minimum elong	5089 Jan 16 21:09	27°♊12'28	1°40'42
min. Earth dist.	5088 Feb 02 18:55	12°♊57'52	0.68004 AU	min. Earth dist.	5089 Jan 16 15:32	27°♊31'55	0.68108 AU
morning rise	5088 Feb 07 18:15	6°♊59'04		morning rise	5089 Jan 22 04:07	20°♊57'23	
direct	5088 Feb 12 19:01	4°♊48'37		direct	5089 Jan 26 14:24	19°♊09'51	
morning max el	5088 Feb 22 20:06	10°♊45'48	22°58'16	morning max el	5089 Feb 04 09:55	24°♊17'30	21°32'36
desc. node	5088 Mar 02 05:38	20°♊39'12			5089 Feb 09 10:48	0°♊	
	5088 Mar 09 01:31	0°♊		desc. node	5089 Feb 17 02:41	10°♊13'52	
morning set	5088 Mar 28 09:13	29°♊48'33			5089 Mar 02 11:35	0°♊	
	5088 Mar 28 11:58	0°♊		morning set	5089 Mar 08 05:21	8°♊58'02	
max. Earth dist.	5088 Apr 01 19:11	7°♊16'35	1.39813 AU	max. Earth dist.	5089 Mar 14 19:41	19°♊38'52	1.41928 AU
					5089 Mar 20 23:01	0°♊	
superior conj	5088 Apr 09 12:51	21°♊01'49	-1°47'51				
minimum elong	5088 Apr 09 17:49	21°♊24'39	1°47'22	superior conj	5089 Mar 22 08:27	2°♊24'30	-2°04'47
	5088 Apr 14 08:17	0°♊		minimum elong	5089 Mar 22 11:40	2°♊38'31	2°04'39
evening rise	5088 Apr 19 05:26	9°♊18'28		evening rise	5089 Apr 02 08:52	22°♊09'04	
asc. node	5088 Apr 22 19:38	16°♊06'42			5089 Apr 06 16:32	0°♊	
	5088 May 01 00:31	0°♊		asc. node	5089 Apr 09 16:38	5°♊16'52	
evening max el	5088 May 05 09:15	5°♊17'37	18°30'42	evening max el	5089 Apr 18 18:49	18°♊08'45	18°09'42
retrograde	5088 May 13 00:52	9°♊04'26		retrograde	5089 Apr 25 14:27	21°♊35'44	
evening set	5088 May 15 07:08	8°♊45'40		evening set	5089 Apr 28 03:32	21°♊07'25	
inferior conj	5088 May 22 20:45	4°♊15'53	1°45'24	inferior conj	5089 May 04 23:25	16°♊16'48	2°47'16
minimum elong	5088 May 23 00:01	4°♊09'26	1°44'24	minimum elong	5089 May 05 02:39	16°♊09'22	2°46'32
min. Earth dist.	5088 May 26 06:24	1°♊36'21	0.58062 AU	min. Earth dist.	5089 May 08 07:11	13°♊15'04	0.60227 AU
	5088 May 28 13:58	30°♊		morning rise	5089 May 11 23:21	10°♊28'11	
desc. node	5088 May 29 04:52	29°♊37'12		desc. node	5089 May 16 01:53	8°♊42'06	
morning rise	5088 May 30 13:41	28°♊52'34		direct	5089 May 18 12:32	8°♊25'05	
direct	5088 Jun 05 11:19	27°♊23'29		morning max el	5089 Jun 01 20:19	16°♊18'52	27°40'18
	5088 Jun 13 13:37	0°♊			5089 Jun 13 01:43	0°♊	
morning max el	5088 Jun 19 20:28	5°♊02'58	26°50'40		5089 Jun 30 16:25	0°♊	
	5088 Jul 08 03:57	0°♊		morning set	5089 Jul 03 21:30	6°♊31'08	
morning set	5088 Jul 19 15:01	21°♊58'40		asc. node	5089 Jul 06 15:56	12°♊21'45	
asc. node	5088 Jul 19 18:55	22°♊19'14		max. Earth dist.	5089 Jul 10 03:53	19°♊58'07	1.31983 AU
	5088 Jul 23 08:32	0°♊					
superior conj	5088 Jul 26 15:11	7°♊13'09	1°06'06	superior conj	5089 Jul 11 02:32	22°♊02'46	0°44'57
minimum elong	5088 Jul 26 12:55	7°♊00'37	1°05'43	minimum elong	5089 Jul 11 00:42	21°♊52'40	0°44'35
max. Earth dist.	5088 Jul 26 16:44	7°♊21'45	1.31979 AU		5089 Jul 14 17:13	0°♊	
evening rise	5088 Aug 02 11:41	22°♊07'59		evening rise	5089 Jul 17 21:46	6°♊54'12	
	5088 Aug 06 07:39	0°♊			5089 Jul 29 22:21	0°♊	
	5088 Aug 24 09:40	0°♊		desc. node	5089 Aug 12 01:11	18°♊10'05	
desc. node	5088 Aug 25 04:10	1°♊00'01		evening max el	5089 Aug 14 07:50	20°♊28'44	25°35'08
evening max el	5088 Sep 01 12:21	9°♊13'08	26°43'55	retrograde	5089 Aug 28 06:36	27°♊33'56	
retrograde	5088 Sep 15 10:25	16°♊22'28		evening set	5089 Sep 03 07:00	26°♊09'21	
evening set	5088 Sep 22 06:56	14°♊22'53		min. Earth dist.	5089 Sep 07 19:44	23°♊31'34	0.58099 AU
min. Earth dist.	5088 Sep 26 02:17	11°♊46'27	0.60149 AU	inferior conj	5089 Sep 10 23:02	21°♊19'26	-5°10'49
inferior conj	5088 Sep 29 07:43	9°♊09'44	-4°34'48	minimum elong	5089 Sep 11 02:12	21°♊13'50	5°10'33
minimum elong	5088 Sep 29 13:44	8°♊57'30	4°33'33	morning rise	5089 Sep 18 23:40	17°♊00'51	
morning rise	5088 Oct 06 22:33	4°♊27'48		direct	5089 Sep 21 10:58	16°♊41'51	
direct	5088 Oct 09 06:31	4°♊07'25		morning max el	5089 Sep 29 23:12	20°♊45'00	18°48'24
asc. node	5088 Oct 15 18:07	6°♊53'30		asc. node	5089 Oct 02 15:10	23°♊39'23	
morning max el	5088 Oct 16 18:21	7°♊48'36	18°09'31		5089 Oct 07 02:04	0°♊	
	5088 Oct 31 00:34	0°♊		morning set	5089 Oct 16 09:33	17°♊02'58	
morning set	5088 Nov 01 13:21	2°♊52'30			5089 Oct 23 00:45	0°♊	

superior conj	5089 Oct 24 22:32	3° \mathbb{M} 38'44	1°28'29	superior conj	5090 Oct 08 08:47	17° \mathbb{Q} 23'42	1°40'06
minimum elong	5089 Oct 25 01:35	3° \mathbb{M} 53'09	1°28'14	minimum elong	5090 Oct 08 10:17	17° \mathbb{Q} 31'11	1°40'02
max. Earth dist.	5089 Nov 01 00:46	16° \mathbb{M} 39'34	1.39343 AU	max. Earth dist.	5090 Oct 14 05:36	28° \mathbb{Q} 44'22	1.37261 AU
evening rise	5089 Nov 04 23:23	23° \mathbb{M} 30'11			5090 Oct 14 21:48	0° \mathbb{M}	
desc. node	5089 Nov 08 00:28	28° \mathbb{M} 36'22		evening rise	5090 Oct 18 00:06	5° \mathbb{M} 39'16	
	5089 Nov 08 20:50	0° \mathbb{Z}		desc. node	5090 Oct 25 21:29	19° \mathbb{M} 10'08	
	5089 Nov 29 02:18	0° \mathbb{Z}			5090 Nov 01 19:04	0° \mathbb{Z}	
evening max el	5089 Dec 10 04:41	13° \mathbb{Z} 07'15	24°16'17	evening max el	5090 Nov 22 17:07	26° \mathbb{Z} 50'07	25°30'35
retrograde	5089 Dec 21 10:20	19° \mathbb{Z} 42'38			5090 Nov 26 06:30	0° \mathbb{Z}	
evening set	5089 Dec 26 18:53	17° \mathbb{Z} 28'38		retrograde	5090 Dec 04 21:42	3° \mathbb{Z} 50'41	
asc. node	5089 Dec 29 14:22	14° \mathbb{Z} 31'25		evening set	5090 Dec 10 19:44	1° \mathbb{Z} 23'15	
min. Earth dist.	5089 Dec 31 11:40	12° \mathbb{Z} 05'00	0.67838 AU		5090 Dec 12 07:01	30° \mathbb{R} \mathbb{Z}	
inferior conj	5090 Jan 01 06:19	11° \mathbb{Z} 02'15	0°53'28	min. Earth dist.	5090 Dec 15 05:06	26° \mathbb{Z} 34'01	0.67211 AU
minimum elong	5090 Jan 01 05:05	11° \mathbb{Z} 06'25	0°52'58	inferior conj	5090 Dec 16 10:43	24° \mathbb{Z} 58'56	-0°00'36
morning rise	5090 Jan 06 15:22	4° \mathbb{Z} 59'53		minimum elong	5090 Dec 16 10:43	24° \mathbb{Z} 58'53	0°00'35
direct	5090 Jan 10 12:06	3° \mathbb{Z} 34'47		transit middle	5090 Dec 16 10:43	24° \mathbb{Z} 58'53	0°00'35
morning max el	5090 Jan 18 07:05	8° \mathbb{Z} 00'52	20°17'09	transit begin	5090 Dec 16 07:55	25° \mathbb{Z} 07'53	
desc. node	5090 Feb 03 23:43	0° \approx 14'00		transit end	5090 Dec 16 13:31	24° \mathbb{Z} 49'53	
	5090 Feb 03 19:56	0° \approx		asc. node	5090 Dec 16 11:25	24° \mathbb{Z} 56'40	
morning set	5090 Feb 15 04:21	17° \approx 13'28		morning rise	5090 Dec 22 02:04	19° \mathbb{Z} 04'12	
	5090 Feb 23 07:52	0° \mathbb{X}		direct	5090 Dec 25 10:49	17° \mathbb{Z} 59'00	
max. Earth dist.	5090 Feb 25 03:37	2° \mathbb{X} 54'51	1.43673 AU	morning max el	5091 Jan 01 12:06	21° \mathbb{Z} 54'38	19°15'38
					5091 Jan 08 02:59	0° \mathbb{Z}	
superior conj	5090 Mar 03 03:29	12° \mathbb{X} 40'00	-2°08'10	greatest brilliancy	5091 Jan 14 23:14	9° \mathbb{Z} 59'03	-0.7m
minimum elong	5090 Mar 03 01:43	12° \mathbb{X} 32'44	2°08'09	desc. node	5091 Jan 21 20:44	20° \mathbb{Z} 32'27	
	5090 Mar 13 09:19	0° \mathbb{Y}		morning set	5091 Jan 25 04:31	25° \mathbb{Z} 41'05	
evening rise	5090 Mar 15 19:20	4° \mathbb{Y} 11'42			5091 Jan 27 23:14	0° \approx	
asc. node	5090 Mar 27 13:38	23° \mathbb{Y} 58'26		max. Earth dist.	5091 Feb 07 17:43	16° \approx 50'25	1.44845 AU
	5090 Apr 01 01:19	0° \mathbb{B}					
evening max el	5090 Apr 02 07:21	1° \mathbb{B} 20'10	18°08'07	superior conj	5091 Feb 10 21:43	21° \approx 51'09	-1°52'57
retrograde	5090 Apr 08 18:09	4° \mathbb{B} 42'29		minimum elong	5091 Feb 10 13:53	21° \approx 20'02	1°52'24
evening set	5090 Apr 11 13:30	4° \mathbb{B} 02'59			5091 Feb 15 23:56	0° \mathbb{X}	
	5090 Apr 16 17:35	30° \mathbb{R} \mathbb{Y}		evening rise	5091 Feb 25 08:31	15° \mathbb{X} 17'54	
inferior conj	5090 Apr 17 19:38	28° \mathbb{Y} 52'38	3°21'05		5091 Mar 06 06:38	0° \mathbb{Y}	
minimum elong	5090 Apr 17 21:28	28° \mathbb{Y} 47'50	3°20'51	asc. node	5091 Mar 14 10:40	12° \mathbb{Y} 01'51	
min. Earth dist.	5090 Apr 20 16:32	25° \mathbb{Y} 53'08	0.62394 AU	evening max el	5091 Mar 16 19:53	14° \mathbb{Y} 43'43	18°25'18
morning rise	5090 Apr 24 03:57	22° \mathbb{Y} 48'52		retrograde	5091 Mar 23 07:19	18° \mathbb{Y} 14'40	
direct	5090 May 01 00:05	20° \mathbb{Y} 17'38		evening set	5091 Mar 26 08:55	17° \mathbb{Y} 22'49	
desc. node	5090 May 02 22:54	20° \mathbb{Y} 29'00		inferior conj	5091 Apr 01 05:12	11° \mathbb{Y} 54'14	3°32'57
morning max el	5090 May 15 02:11	28° \mathbb{Y} 18'04	27°52'21	minimum elong	5091 Apr 01 05:24	11° \mathbb{Y} 53'39	3°32'56
	5090 May 16 17:34	0° \mathbb{B}		min. Earth dist.	5091 Apr 03 11:16	9° \mathbb{Y} 17'14	0.64333 AU
	5090 Jun 06 20:55	0° \mathbb{I}		morning rise	5091 Apr 07 01:06	5° \mathbb{Y} 43'00	
morning set	5090 Jun 17 22:34	20° \mathbb{I} 45'12		direct	5091 Apr 13 19:57	2° \mathbb{Y} 55'43	
	5090 Jun 22 09:09	0° \mathbb{E}		desc. node	5091 Apr 19 19:57	4° \mathbb{Y} 43'41	
max. Earth dist.	5090 Jun 23 11:25	2° \mathbb{E} 20'40	1.32412 AU	morning max el	5091 Apr 27 11:23	10° \mathbb{Y} 52'41	27°27'56
asc. node	5090 Jun 23 12:57	2° \mathbb{E} 28'51			5091 May 12 13:37	0° \mathbb{B}	
					5091 May 30 07:24	0° \mathbb{I}	
superior conj	5090 Jun 25 11:49	6° \mathbb{E} 42'29	0°20'15	morning set	5091 Jun 01 15:36	4° \mathbb{I} 31'58	
minimum elong	5090 Jun 25 10:52	6° \mathbb{E} 37'23	0°20'02	max. Earth dist.	5091 Jun 06 11:17	14° \mathbb{I} 16'38	1.33292 AU
evening rise	5090 Jul 02 09:29	21° \mathbb{E} 42'00					
	5090 Jul 06 09:32	0° \mathbb{Q}		superior conj	5091 Jun 09 17:02	21° \mathbb{I} 05'27	-0°07'20
	5090 Jul 25 19:37	0° \mathbb{M}		minimum elong	5091 Jun 09 17:24	21° \mathbb{I} 07'26	0°07'16
evening max el	5090 Jul 26 21:06	1° \mathbb{M} 03'28	24°04'21	behind sun begin	5091 Jun 09 12:31	20° \mathbb{I} 41'28	
desc. node	5090 Jul 29 22:10	3° \mathbb{M} 42'33		behind sun end	5091 Jun 09 22:17	21° \mathbb{I} 33'27	
retrograde	5090 Aug 09 15:33	7° \mathbb{M} 59'18		asc. node	5091 Jun 10 09:58	22° \mathbb{I} 35'44	
evening set	5090 Aug 14 06:55	7° \mathbb{M} 11'37			5091 Jun 13 20:48	0° \mathbb{E}	
min. Earth dist.	5090 Aug 20 07:38	4° \mathbb{M} 13'47	0.56311 AU	evening rise	5091 Jun 16 20:53	6° \mathbb{E} 24'26	
inferior conj	5090 Aug 22 18:08	2° \mathbb{M} 43'36	-5°13'11		5091 Jun 29 11:05	0° \mathbb{Q}	
minimum elong	5090 Aug 22 15:20	2° \mathbb{M} 47'56	5°12'59	evening max el	5091 Jul 08 10:49	11° \mathbb{Q} 24'43	22°26'49
	5090 Aug 27 14:19	30° \mathbb{R} \mathbb{Q}		desc. node	5091 Jul 16 19:11	17° \mathbb{Q} 02'55	
morning rise	5090 Aug 31 02:17	28° \mathbb{Q} 45'07		retrograde	5091 Jul 21 12:06	17° \mathbb{Q} 54'01	
direct	5090 Sep 02 19:55	28° \mathbb{Q} 25'42		evening set	5091 Jul 24 15:17	17° \mathbb{Q} 32'25	
	5090 Sep 08 15:14	0° \mathbb{M}		min. Earth dist.	5091 Aug 01 17:52	14° \mathbb{Q} 00'40	0.55121 AU
morning max el	5090 Sep 12 17:40	3° \mathbb{M} 02'43	19°49'02	inferior conj	5091 Aug 02 19:25	13° \mathbb{Q} 24'28	-4°26'42
asc. node	5090 Sep 19 12:13	11° \mathbb{M} 23'59		minimum elong	5091 Aug 02 11:13	13° \mathbb{Q} 36'06	4°24'56
	5090 Sep 29 18:24	0° \mathbb{Q}		morning rise	5091 Aug 11 09:05	9° \mathbb{Q} 34'29	
morning set	5090 Sep 30 13:01	1° \mathbb{Q} 33'48		direct	5091 Aug 14 11:45	9° \mathbb{Q} 12'29	

morning max el	5091 Aug 26 00:01	14° Ω 34'35	21°10'51	morning max el	5092 Aug 06 19:32	25° Θ 23'19	22°49'07
asc. node	5091 Sep 06 09:16	29° Ω 53'30			5092 Aug 11 02:53	0° Ω	
	5091 Sep 06 10:46	0° Π		asc. node	5092 Aug 23 06:18	18° Ω 56'58	
morning set	5091 Sep 14 21:12	16° Π 17'49			5092 Aug 28 18:53	0° Π	
	5091 Sep 21 10:25	0° Ξ		morning set	5092 Aug 29 08:03	1° Π 09'05	
superior conj	5091 Sep 22 05:38	1° Ξ 39'36	1°43'33	superior conj	5092 Sep 05 09:43	16° Π 16'12	1°40'07
minimum elong	5091 Sep 22 05:37	1° Ξ 39'32	1°43'33	minimum elong	5092 Sep 05 08:29	16° Π 09'41	1°40'03
max. Earth dist.	5091 Sep 26 15:21	10° Ξ 35'59	1.35402 AU	max. Earth dist.	5092 Sep 08 09:49	22° Π 36'44	1.33905 AU
evening rise	5091 Sep 30 19:25	18° Ξ 40'11			5092 Sep 12 00:34	0° Ξ	
	5091 Oct 07 01:41	0° Π		evening rise	5092 Sep 13 05:02	2° Ξ 21'14	
desc. node	5091 Oct 12 18:30	9° Π 30'41		desc. node	5092 Sep 28 15:32	29° Ξ 31'20	
	5091 Oct 26 22:49	0° Ξ			5092 Sep 28 22:55	0° Π	
evening max el	5091 Nov 05 05:54	10° Ξ 32'06	26°32'03	evening max el	5092 Oct 17 18:37	24° Π 03'25	27°13'09
retrograde	5091 Nov 18 03:55	17° Ξ 46'10			5092 Oct 25 19:56	0° Ξ	
evening set	5091 Nov 24 14:50	15° Ξ 09'19		retrograde	5092 Oct 31 04:08	1° Ξ 21'13	
min. Earth dist.	5091 Nov 28 17:29	10° Ξ 55'17	0.66236 AU		5092 Nov 05 02:44	30° Π	
inferior conj	5091 Nov 30 10:28	8° Ξ 52'13	-0°59'38	evening set	5092 Nov 07 01:51	28° Π 41'18	
minimum elong	5091 Nov 30 12:07	8° Ξ 47'16	0°58'54	min. Earth dist.	5092 Nov 10 22:26	25° Π 02'20	0.64918 AU
asc. node	5091 Dec 03 08:29	5° Ξ 34'15		inferior conj	5092 Nov 13 03:18	22° Π 36'46	-2°02'05
morning rise	5091 Dec 06 10:06	3° Ξ 07'43		minimum elong	5092 Nov 13 06:50	22° Π 27'02	2°00'38
direct	5091 Dec 09 08:55	2° Ξ 18'47		asc. node	5092 Nov 19 05:33	17° Π 14'29	
morning max el	5091 Dec 15 23:41	5° Ξ 54'56	18°29'59	morning rise	5092 Nov 19 12:56	17° Π 05'34	
	5092 Jan 01 18:56	0° Ξ		direct	5092 Nov 22 04:04	16° Π 29'03	
morning set	5092 Jan 05 04:08	5° Ξ 23'33		morning max el	5092 Nov 28 15:20	19° Π 55'23	18°01'06
desc. node	5092 Jan 08 17:46	11° Ξ 04'11			5092 Dec 06 06:04	0° Ξ	
	5092 Jan 20 17:56	0° \approx		morning set	5092 Dec 16 09:24	16° Ξ 34'33	
					5092 Dec 24 13:01	0° Ξ	
superior conj	5092 Jan 21 01:22	0° \approx 29'07	-1°18'41	desc. node	5092 Dec 25 14:47	1° Ξ 44'34	
minimum elong	5092 Jan 20 16:24	29° Ξ 53'59	1°17'39				
max. Earth dist.	5092 Jan 21 12:02	1° \approx 10'56	1.45321 AU	superior conj	5092 Dec 30 10:03	9° Ξ 27'27	-0°32'58
evening rise	5092 Feb 05 22:22	25° \approx 27'36		minimum elong	5092 Dec 30 06:01	9° Ξ 11'22	0°32'23
	5092 Feb 08 19:06	0° Ξ		max. Earth dist.	5093 Jan 03 07:41	15° Ξ 38'22	1.45055 AU
greatest brilliancy	5092 Feb 15 07:52	10° Ξ 18'54	-0.8m		5093 Jan 12 12:30	0° \approx	
evening max el	5092 Feb 28 06:01	28° Ξ 14'16	19°00'15	evening rise	5093 Jan 15 16:29	4° \approx 53'37	
asc. node	5092 Feb 29 07:44	29° Ξ 16'07		greatest brilliancy	5093 Jan 29 14:54	26° \approx 06'04	-0.6m
	5092 Mar 01 04:21	0° Υ			5093 Feb 01 06:56	0° Ξ	
retrograde	5092 Mar 06 02:15	2° Υ 05'23		evening max el	5093 Feb 10 11:44	11° Ξ 47'02	19°51'24
evening set	5092 Mar 09 10:42	1° Υ 00'18		asc. node	5093 Feb 15 04:48	15° Ξ 26'49	
	5092 Mar 10 18:29	30° Π		retrograde	5093 Feb 17 23:58	16° Ξ 08'23	
inferior conj	5092 Mar 15 00:25	25° Ξ 15'04	3°28'08	evening set	5093 Feb 21 16:19	14° Ξ 49'10	
minimum elong	5092 Mar 14 23:17	25° Ξ 18'39	3°28'02	inferior conj	5093 Feb 27 02:11	8° Ξ 49'14	3°10'29
min. Earth dist.	5092 Mar 16 14:54	23° Ξ 13'43	0.65904 AU	minimum elong	5093 Feb 27 00:10	8° Ξ 55'57	3°10'08
morning rise	5092 Mar 20 11:30	19° Ξ 00'54		min. Earth dist.	5093 Feb 28 02:01	7° Ξ 29'42	0.67049 AU
direct	5092 Mar 26 22:41	16° Ξ 11'27		morning rise	5093 Mar 04 07:49	2° Ξ 34'42	
desc. node	5092 Apr 05 16:59	20° Ξ 53'21			5093 Mar 09 04:14	30° Π	
morning max el	5092 Apr 08 21:21	23° Ξ 51'48	26°33'14	direct	5093 Mar 10 07:01	29° \approx 54'47	
	5092 Apr 14 09:05	0° Υ			5093 Mar 11 10:29	0° Ξ	
	5092 May 04 22:37	0° Ξ		morning max el	5093 Mar 22 06:28	7° Ξ 04'08	25°17'10
morning set	5092 May 14 21:12	17° Ξ 41'48		desc. node	5093 Mar 23 14:01	8° Ξ 26'12	
max. Earth dist.	5092 May 19 00:30	25° Ξ 41'48	1.34645 AU		5093 Apr 09 02:40	0° Υ	
	5092 May 21 04:09	0° Π		morning set	5093 Apr 27 10:51	0° Ξ 01'45	
					5093 Apr 27 10:27	0° Ξ	
superior conj	5092 May 23 15:58	5° Π 05'29	-0°36'43	max. Earth dist.	5093 May 01 02:55	6° Ξ 46'16	1.36434 AU
minimum elong	5092 May 23 17:58	5° Π 15'46	0°36'21				
asc. node	5092 May 27 07:01	12° Π 38'41		superior conj	5093 May 07 05:46	18° Ξ 34'31	-1°06'26
evening rise	5092 May 31 06:06	20° Π 55'56		minimum elong	5093 May 07 09:27	18° Ξ 52'44	1°05'49
	5092 Jun 04 17:50	0° Θ			5093 May 12 21:51	0° Π	
evening max el	5092 Jun 19 08:59	22° Θ 05'41	20°57'11	asc. node	5093 May 14 04:04	2° Π 33'36	
retrograde	5092 Jul 01 00:36	27° Θ 49'07		evening rise	5093 May 15 10:53	5° Π 09'44	
desc. node	5092 Jul 02 16:13	27° Θ 42'38			5093 May 29 18:02	0° Θ	
evening set	5092 Jul 03 04:36	27° Θ 38'01		evening max el	5093 Jun 01 19:26	3° Θ 25'48	19°44'27
inferior conj	5092 Jul 12 12:31	23° Θ 40'45	-2°51'27	retrograde	5093 Jun 11 17:39	8° Θ 16'54	
minimum elong	5092 Jul 12 04:50	23° Θ 51'35	2°48'55	evening set	5093 Jun 13 15:46	8° Θ 06'48	
min. Earth dist.	5092 Jul 13 04:40	23° Θ 17'54	0.54809 AU	desc. node	5093 Jun 19 13:14	5° Θ 49'49	
morning rise	5092 Jul 21 05:06	19° Θ 40'58		inferior conj	5093 Jun 22 12:02	4° Θ 04'17	-0°52'56
direct	5092 Jul 24 20:56	19° Θ 12'10		minimum elong	5093 Jun 22 09:37	4° Θ 08'03	0°52'01

min. Earth dist.	5093 Jun 24 17:25	2°☿41'43	0.55455 AU	inferior conj	5094 Jun 03 05:24	15°♊00'35	0°55'32
	5093 Jun 29 22:25	30°♊II		minimum elong	5094 Jun 03 07:29	14°♊56'50	0°54'47
morning rise	5093 Jul 01 01:17	29°♊36'04		desc. node	5094 Jun 06 10:15	12°♊43'13	
direct	5093 Jul 05 11:56	28°♊52'26		min. Earth dist.	5094 Jun 06 09:34	12°♊44'24	0.56933 AU
	5093 Jul 10 23:25	0°☿		morning rise	5094 Jun 11 07:17	9°♊55'49	
morning max el	5093 Jul 19 09:33	5°☿47'14	24°33'07	direct	5094 Jun 16 16:25	8°♊45'59	
	5093 Aug 05 17:33	0°♊		morning max el	5094 Jul 01 00:30	16°♊13'25	26°07'15
asc. node	5093 Aug 10 03:20	8°♊25'45			5094 Jul 12 05:37	0°☿	
morning set	5093 Aug 13 19:52	16°♊02'40		asc. node	5094 Jul 28 00:21	28°☿12'02	
	5093 Aug 20 06:24	0°♊			5094 Jul 28 21:00	0°♊	
				morning set	5094 Jul 29 06:54	0°♊52'18	
superior conj	5093 Aug 20 18:26	1°♊05'39	1°30'50				
minimum elong	5093 Aug 20 16:26	0°♊54'46	1°30'37	superior conj	5094 Aug 05 05:36	16°♊00'01	1°16'27
max. Earth dist.	5093 Aug 22 12:46	4°♊55'19	1.32822 AU	minimum elong	5094 Aug 05 03:18	15°♊47'19	1°16'06
evening rise	5093 Aug 28 01:10	16°♊32'02		max. Earth dist.	5094 Aug 05 21:32	17°♊27'45	1.32164 AU
	5093 Sep 04 00:06	0°♊			5094 Aug 11 16:41	0°♊	
desc. node	5093 Sep 15 12:34	19°♊03'34		evening rise	5094 Aug 12 04:36	1°♊02'27	
	5093 Sep 23 14:52	0°♊			5094 Aug 27 23:57	0°♊	
evening max el	5093 Sep 30 05:32	7°♊11'26	27°27'10	desc. node	5094 Sep 02 09:34	7°♊54'41	
retrograde	5093 Oct 13 21:57	14°♊27'32		evening max el	5094 Sep 12 12:04	19°♊42'10	27°09'15
evening set	5093 Oct 21 01:51	11°♊53'40		retrograde	5094 Sep 26 08:44	26°♊54'43	
min. Earth dist.	5093 Oct 24 17:48	8°♊46'41	0.63269 AU	evening set	5094 Oct 03 11:00	24°♊38'44	
inferior conj	5093 Oct 27 10:33	6°♊06'23	-3°05'20	min. Earth dist.	5094 Oct 07 02:32	21°♊55'14	0.61338 AU
minimum elong	5093 Oct 27 15:52	5°♊53'12	3°03'29	inferior conj	5094 Oct 10 05:00	19°♊12'18	-4°04'59
morning rise	5093 Nov 03 07:26	0°♊52'00		minimum elong	5094 Oct 10 11:17	18°♊58'30	4°03'19
direct	5093 Nov 05 17:24	0°♊24'17		morning rise	5094 Oct 17 13:31	14°♊18'00	
asc. node	5093 Nov 06 02:34	0°♊24'59		direct	5094 Oct 19 21:09	13°♊55'52	
morning max el	5093 Nov 12 08:13	3°♊49'33	17°49'40	asc. node	5094 Oct 23 23:36	15°♊08'07	
morning set	5093 Nov 28 15:59	28°♊59'00		morning max el	5094 Oct 26 23:05	17°♊28'41	17°56'40
	5093 Nov 29 05:58	0°♊			5094 Nov 04 20:57	0°♊	
				morning set	5094 Nov 11 17:17	12°♊16'25	
superior conj	5093 Dec 10 16:39	19°♊32'16	0°12'39		5094 Nov 21 13:17	0°♊	
minimum elong	5093 Dec 10 17:57	19°♊37'40	0°12'28				
behind sun begin	5093 Dec 10 11:55	19°♊12'40		superior conj	5094 Nov 22 01:46	0°♊54'29	0°50'21
behind sun end	5093 Dec 10 23:59	20°♊02'38		minimum elong	5094 Nov 22 05:31	1°♊10'51	0°49'51
desc. node	5093 Dec 12 11:51	22°♊30'19		desc. node	5094 Nov 29 08:52	13°♊17'38	
max. Earth dist.	5093 Dec 17 01:24	29°♊54'17	1.44081 AU	max. Earth dist.	5094 Nov 29 14:24	13°♊40'27	1.42513 AU
	5093 Dec 17 02:50	0°♊		evening rise	5094 Dec 05 20:20	23°♊45'27	
evening rise	5093 Dec 26 02:33	14°♊06'45			5094 Dec 09 20:17	0°♊	
	5094 Jan 05 14:34	0°♊			5094 Dec 30 16:30	0°♊	
evening max el	5094 Jan 24 11:58	25°♊20'44	20°56'12	evening max el	5095 Jan 07 06:51	8°♊56'15	22°11'03
	5094 Jan 30 23:15	0°♊		retrograde	5095 Jan 16 18:59	14°♊35'31	
retrograde	5094 Feb 01 22:10	0°♊19'34		asc. node	5095 Jan 19 22:50	13°♊42'43	
asc. node	5094 Feb 02 01:50	0°♊19'26		evening set	5095 Jan 21 07:27	12°♊46'03	
	5094 Feb 03 19:10	30°♊		inferior conj	5095 Jan 26 15:47	6°♊25'21	2°05'59
evening set	5094 Feb 05 23:47	28°♊45'31		minimum elong	5095 Jan 26 13:28	6°♊33'22	2°05'13
inferior conj	5094 Feb 11 08:00	22°♊33'30	2°42'32	min. Earth dist.	5095 Jan 26 14:34	6°♊29'36	0.68088 AU
minimum elong	5094 Feb 11 05:36	22°♊41'46	2°41'55	morning rise	5095 Jan 31 19:21	0°♊14'44	
min. Earth dist.	5094 Feb 11 18:39	21°♊56'46	0.67770 AU		5095 Feb 01 02:28	30°♊☿	
morning rise	5094 Feb 16 11:14	16°♊20'10		direct	5095 Feb 05 13:46	28°♊14'05	
direct	5094 Feb 21 20:17	13°♊57'50			5095 Feb 10 13:17	0°♊	
morning max el	5094 Mar 04 15:13	20°♊23'44	23°49'44	morning max el	5095 Feb 15 02:10	3°♊50'21	22°20'56
desc. node	5094 Mar 10 11:03	26°♊58'53		desc. node	5095 Feb 25 08:06	16°♊14'48	
	5094 Mar 12 20:28	0°♊			5095 Mar 06 23:59	0°♊	
	5094 Apr 02 07:50	0°♊		morning set	5095 Mar 20 15:26	21°♊12'12	
morning set	5094 Apr 09 02:47	11°♊16'17			5095 Mar 25 22:45	0°♊	
max. Earth dist.	5094 Apr 12 22:52	17°♊57'10	1.38538 AU	max. Earth dist.	5095 Mar 25 19:25	29°♊45'57	1.40731 AU
	5094 Apr 19 13:12	0°♊					
superior conj	5094 Apr 20 06:46	1°♊22'45	-1°34'08	superior conj	5095 Apr 02 14:31	13°♊20'02	-1°56'20
minimum elong	5094 Apr 20 11:38	1°♊45'49	1°33'31	minimum elong	5095 Apr 02 19:07	13°♊40'38	1°55'59
evening rise	5094 Apr 29 08:31	18°♊57'52			5095 Apr 11 15:34	0°♊	
asc. node	5094 May 01 01:06	22°♊15'25		evening rise	5095 Apr 12 19:44	2°♊12'12	
	5094 May 05 03:29	0°♊		asc. node	5095 Apr 17 22:07	11°♊39'10	
evening max el	5094 May 15 17:21	15°♊26'57	18°51'46	evening max el	5095 Apr 28 23:44	28°♊02'55	18°19'25
retrograde	5094 May 24 02:12	19°♊33'22			5095 May 01 08:12	0°♊	
evening set	5094 May 26 04:21	19°♊18'59		retrograde	5095 May 06 05:34	1°♊39'27	
				evening set	5095 May 08 14:40	1°♊17'02	

	5095 May 11 09:11	30° 		evening set	5096 Apr 20 17:22	13°  48	
inferior conj	5095 May 15 20:20	26°  38'43	2°15'23	inferior conj	5096 Apr 27 06:55	8°  54'53	3°04'39
minimum elong	5095 May 15 23:51	26°  31'18	2°14'24	minimum elong	5096 Apr 27 09:39	8°  48'15	3°04'09
min. Earth dist.	5095 May 19 06:47	23°  46'23	0.58954 AU	min. Earth dist.	5096 Apr 30 10:59	5°  51'06	0.61167 AU
morning rise	5095 May 23 06:01	21°  03'03		morning rise	5096 May 03 23:55	2°  58'57	
desc. node	5095 May 24 07:16	20°  31'06		desc. node	5096 May 10 04:19	0°  43'13	
direct	5095 May 29 11:13	19°  19'05		direct	5096 May 10 17:22	0°  42'21	
morning max el	5095 Jun 12 20:36	27°  06'43	27°16'10	morning max el	5096 May 24 22:56	8°  39'56	27°50'02
	5095 Jun 15 14:51	0° 			5096 Jun 10 07:44	0° 	
	5095 Jul 05 18:31	0° 		morning set	5096 Jun 26 20:00	29°  15'47	
morning set	5095 Jul 13 15:34	15°  32'43			5096 Jun 26 20:26	0° 	
asc. node	5095 Jul 14 21:24	18°  31'14		asc. node	5096 Jun 30 18:26	8°  31'08	
	5095 Jul 20 07:45	0° 		max. Earth dist.	5096 Jul 02 18:36	12°  36'01	1.32108 AU
superior conj	5095 Jul 20 17:24	0°  53'17	0°57'37	superior conj	5096 Jul 04 04:06	15°  39'21	0°34'53
minimum elong	5095 Jul 20 15:16	0°  41'28	0°57'13	minimum elong	5096 Jul 04 02:36	15°  31'05	0°34'34
max. Earth dist.	5095 Jul 20 08:41	0°  05'07	1.31925 AU	evening rise	5096 Jul 10 23:53	0°  32'31	
evening rise	5095 Jul 27 12:53	15°  04'45'56			5096 Jul 10 17:48	0° 	
	5095 Aug 03 15:10	0° 			5096 Jul 27 01:49	0° 	
desc. node	5095 Aug 20 06:33	25°  04'48'12		evening max el	5096 Aug 06 04:38	12°  04'36	24°58'33
	5095 Aug 24 00:56	0° 		desc. node	5096 Aug 06 03:33	12° 	
evening max el	5095 Aug 25 11:59	1°  26'22	26°18'05	retrograde	5096 Aug 20 02:46	19°  02'38	
retrograde	5095 Sep 08 11:06	8°  34'47		evening set	5096 Aug 25 14:11	18°  01'37	
evening set	5095 Sep 15 00:33	6°  49'12		min. Earth dist.	5096 Aug 30 16:07	15°  03'11	0.57285 AU
min. Earth dist.	5095 Sep 19 01:15	4°  14'18	0.59266 AU	inferior conj	5096 Sep 02 14:05	13°  03'17	-5°17'01
inferior conj	5095 Sep 22 07:11	1°  45'33	-4°53'08	minimum elong	5096 Sep 02 15:00	13°  03'54'5	5°16'59
minimum elong	5095 Sep 22 12:25	1°  35'32	4°52'19	morning rise	5096 Sep 10 18:08	9°  02'38	
	5095 Sep 24 16:12	30°  04'00		direct	5096 Sep 13 07:45	9°  08'38	
morning rise	5095 Sep 30 02:30	27°  01'33'37		morning max el	5096 Sep 22 09:20	13°  02'50'9	19°11'25
direct	5095 Oct 02 11:15	26°  05'41'14		asc. node	5096 Sep 26 17:41	18°  02'43	
	5095 Oct 09 13:29	0° 			5096 Oct 03 20:28	0° 	
morning max el	5095 Oct 10 08:34	0°  43'44	18°23'22	morning set	5096 Oct 09 07:32	10°  43'08	
asc. node	5095 Oct 10 20:38	1°  13'37					
morning set	5095 Oct 26 07:48	26°  01'11'04		superior conj	5096 Oct 17 12:22	26°  45'50	1°34'30
	5095 Oct 28 07:36	0° 		minimum elong	5096 Oct 17 14:47	26°  45'33	1°34'19
					5096 Oct 19 04:46	0° 	
superior conj	5095 Nov 04 10:05	13°  01'23'44	1°17'33	max. Earth dist.	5096 Oct 24 03:14	9°  01'16	1.38449 AU
minimum elong	5095 Nov 04 13:47	13°  01'40'46	1°17'09	evening rise	5096 Oct 27 22:01	15°  01'54'28	
max. Earth dist.	5095 Nov 11 22:07	26°  01'45'23	1.40555 AU	desc. node	5096 Nov 02 02:52	24°  01'42'33	
	5095 Nov 13 19:46	0° 			5096 Nov 05 09:25	0° 	
evening rise	5095 Nov 16 09:37	4°  01'18'19			5096 Nov 26 16:57	0° 	
desc. node	5095 Nov 16 05:52	4°  01'02'49		evening max el	5096 Dec 02 10:55	6°  01'18'13	24°49'01
	5095 Dec 03 02:03	0° 		retrograde	5096 Dec 14 02:48	13°  01'04'57	
evening max el	5095 Dec 20 21:49	22°  01'34'59	23°30'49	evening set	5096 Dec 19 17:03	10°  01'45'10	
retrograde	5095 Dec 31 12:54	28°  01'51'50		asc. node	5096 Dec 23 16:54	6°  01'20'52	
evening set	5096 Jan 05 13:43	26°  01'46'50		min. Earth dist.	5096 Dec 24 06:40	5°  01'35'59	0.67620 AU
asc. node	5096 Jan 06 19:52	25°  01'35'39		inferior conj	5096 Dec 25 05:53	4°  01'19'17	0°31'14
inferior conj	5096 Jan 10 23:39	20°  01'21'22	1°21'53	minimum elong	5096 Dec 25 05:07	4°  01'21'47	0°30'55
minimum elong	5096 Jan 10 21:54	20°  01'27'23	1°21'13		5096 Dec 28 19:13	30°  01'04'00	
min. Earth dist.	5096 Jan 10 11:21	21°  01'03'31	0.68032 AU	morning rise	5096 Dec 30 17:21	28°  01'01'46	
morning rise	5096 Jan 16 06:02	14°  01'15'15		direct	5097 Jan 03 08:52	27°  01'03'18	
direct	5096 Jan 20 10:23	12°  01'37'20			5097 Jan 09 11:23	0° 	
morning max el	5096 Jan 28 18:44	17°  01'26'25	20°58'53	morning max el	5097 Jan 10 19:14	1°  01'14'42	19°49'02
	5096 Feb 07 22:58	0° 		greatest brilliancy	5097 Jan 24 00:31	18°  01'35'47	-0.6m
desc. node	5096 Feb 12 05:07	6°  01'01'24		desc. node	5097 Jan 29 02:09	26°  01'01'30	
morning set	5096 Feb 28 00:35	29°  01'52'10			5097 Jan 31 14:38	0° 	
	5096 Feb 28 02:34	0° 		morning set	5097 Feb 05 20:47	8°  01'03'27	
max. Earth dist.	5096 Mar 06 22:27	12°  01'29'50	1.42727 AU	max. Earth dist.	5097 Feb 17 09:36	26°  01'06'09	1.44261 AU
					5097 Feb 19 20:08	0° 	
superior conj	5096 Mar 14 00:03	24°  01'14'52	-2°08'13	superior conj	5097 Feb 22 08:08	4°  01'14'47	-2°04'10
minimum elong	5096 Mar 14 01:33	24°  01'21'13	2°08'12	minimum elong	5097 Feb 22 03:36	3°  01'43'26	2°04'00
	5096 Mar 17 08:33	0°		evening rise	5097 Mar 07 18:17	26° 01'22'15	
evening rise	5096 Mar 25 16:26	14° 01'04'25'59			5097 Mar 09 21:24	0°	
	5096 Apr 03 09:51	0°		asc. node	5097 Mar 21 16:10	19° 01'04'44	
asc. node	5096 Apr 03 19:08	0° 01'38'06		evening max el	5097 Mar 25 23:56	24° 01'21'30	18°13'11
evening max el	5096 Apr 11 11:00	11° 01'03'51	18°06'46	retrograde	5097 Apr 01 09:42	27° 01'04'53'37	
retrograde	5096 Apr 18 01:30	14° 01'26'45					

evening set	5097 Apr 04 07:49	27° Υ 00'47		evening set	5098 Mar 19 06:19	10° Υ 29'26	
inferior conj	5097 Apr 10 09:18	21° Υ 42'21	3°28'24	inferior conj	5098 Mar 24 23:25	4° Υ 53'12	3°32'40
minimum elong	5097 Apr 10 10:26	21° Υ 39'15	3°28'19	minimum elong	5098 Mar 24 23:00	4° Υ 54'28	3°32'39
min. Earth dist.	5097 Apr 13 00:03	18° Υ 50'38	0.63265 AU	min. Earth dist.	5098 Mar 26 22:40	2° Υ 30'29	0.65049 AU
morning rise	5097 Apr 16 11:55	15° Υ 34'55			5098 Mar 29 05:01	30° \Re	
direct	5097 Apr 23 08:30	12° Υ 55'24		morning rise	5098 Mar 30 15:07	28° \Re 40'15	
desc. node	5097 Apr 27 01:22	13° Υ 36'27		direct	5098 Apr 06 07:13	25° \Re 50'47	
morning max el	5097 May 07 06:25	20° Υ 54'44	27°46'09	desc. node	5098 Apr 13 22:25	28° \Re 44'34	
	5097 May 15 02:55	0° \Im			5098 Apr 15 14:44	0° Υ	
	5097 Jun 03 09:30	0° Π		morning max el	5098 Apr 19 16:27	3° Υ 42'13	27°07'59
morning set	5097 Jun 10 17:58	14° Π 00'47			5098 May 09 12:46	0° \Im	
max. Earth dist.	5097 Jun 15 23:24	24° Π 48'34	1.32731 AU	morning set	5098 May 25 06:39	27° \Im 33'38	
asc. node	5097 Jun 17 15:28	28° Π 22'27			5098 May 26 12:42	0° Π	
				max. Earth dist.	5098 May 29 19:21	6° Π 33'17	1.33810 AU
superior conj	5097 Jun 18 11:54	0° \Im 12'29	0°08'52				
minimum elong	5097 Jun 18 11:28	0° \Im 10'10	0°08'45	superior conj	5098 Jun 02 14:46	14° Π 26'44	-0°19'38
behind sun begin	5097 Jun 18 07:01	29° Π 46'11		minimum elong	5098 Jun 02 15:48	14° Π 32'11	0°19'27
behind sun end	5097 Jun 18 15:55	0° \Im 34'11		asc. node	5098 Jun 04 12:30	18° Π 28'25	
	5097 Jun 18 09:35	0° \Im		evening rise	5098 Jun 09 22:29	29° Π 57'56	
evening rise	5097 Jun 25 11:43	15° \Im 18'49			5098 Jun 09 22:53	0° \Im	
	5097 Jul 02 19:16	0° Ω			5098 Jun 27 09:58	0° Ω	
evening max el	5097 Jul 18 17:09	22° Ω 48'28	23°22'46	evening max el	5098 Jun 30 09:28	3° Ω 14'02	21°47'00
desc. node	5097 Jul 24 00:35	27° Ω 01'48		desc. node	5098 Jul 10 21:37	9° Ω 16'47	
retrograde	5097 Aug 01 05:50	29° Ω 35'02		retrograde	5098 Jul 12 22:10	9° Ω 26'24	
evening set	5097 Aug 05 05:30	29° Ω 00'14		evening set	5098 Jul 15 13:21	9° Ω 10'47	
min. Earth dist.	5097 Aug 12 02:37	25° Ω 49'50	0.55710 AU	inferior conj	5098 Jul 24 21:04	5° Ω 08'40	-3°51'19
inferior conj	5097 Aug 14 00:53	24° Ω 41'43	-5°00'00	minimum elong	5098 Jul 24 12:14	5° Ω 21'01	3°48'55
minimum elong	5097 Aug 13 19:21	24° Ω 49'54	4°59'17	min. Earth dist.	5098 Jul 24 12:40	5° Ω 20'25	0.54866 AU
morning rise	5097 Aug 22 11:35	20° Ω 48'53		morning rise	5098 Aug 02 12:30	1° Ω 17'26	
direct	5097 Aug 25 08:59	20° Ω 28'32		direct	5098 Aug 05 20:00	0° Ω 53'26	
morning max el	5097 Sep 04 22:36	25° Ω 23'14	20°21'29	morning max el	5098 Aug 18 00:01	6° Ω 35'59	21°51'16
	5097 Sep 09 02:38	0° \P		asc. node	5098 Aug 31 11:48	25° Ω 17'03	
asc. node	5097 Sep 13 14:44	6° \P 31'54			5098 Sep 03 00:24	0° \P	
morning set	5097 Sep 23 13:21	25° \P 09'57		morning set	5098 Sep 07 22:55	9° \P 57'55	
	5097 Sep 25 21:45	0° Ω					
superior conj	5097 Oct 01 03:38	10° Ω 45'39	1°42'29	superior conj	5098 Sep 15 03:56	25° \P 11'45	1°42'52
minimum elong	5097 Oct 01 04:28	10° Ω 49'53	1°42'27	minimum elong	5098 Sep 15 03:22	25° \P 08'45	1°42'51
max. Earth dist.	5097 Oct 06 10:02	21° Ω 09'53	1.36435 AU		5098 Sep 17 11:23	0° Ω	
evening rise	5097 Oct 10 07:11	28° Ω 27'09		max. Earth dist.	5098 Sep 18 23:11	3° Ω 02'57	1.34711 AU
	5097 Oct 11 03:32	0° \P		evening rise	5098 Sep 23 09:04	11° Ω 46'16	
desc. node	5097 Oct 19 23:53	15° \P 11'43			5098 Oct 03 13:01	0° \P	
	5097 Oct 29 16:44	0° \Re		desc. node	5098 Oct 06 20:54	5° \P 24'44	
evening max el	5097 Nov 14 23:31	20° \Re 02'04	25°58'38		5098 Oct 24 22:55	0° \Re	
retrograde	5097 Nov 27 11:53	27° \Re 08'59		evening max el	5098 Oct 28 12:10	3° \Re 40'06	26°52'18
evening set	5097 Dec 03 15:43	24° \Re 36'51		retrograde	5098 Nov 10 15:40	10° \Re 57'09	
min. Earth dist.	5097 Dec 07 22:10	20° \Re 02'45	0.66850 AU	evening set	5098 Nov 17 07:42	8° \Re 17'41	
inferior conj	5097 Dec 09 08:34	18° \Re 15'13	-0°25'05	min. Earth dist.	5098 Nov 21 07:32	4° \Re 19'02	0.65722 AU
minimum elong	5097 Dec 09 09:14	18° \Re 13'08	0°24'46	inferior conj	5098 Nov 23 05:40	2° \Re 05'16	-1°25'48
asc. node	5097 Dec 10 13:58	16° \Re 44'34		minimum elong	5098 Nov 23 08:05	1° \Re 58'13	1°24'46
morning rise	5097 Dec 15 03:14	12° \Re 24'40			5098 Nov 25 02:03	30° \Re	
direct	5097 Dec 18 07:36	11° \Re 26'47		asc. node	5098 Nov 27 11:02	27° \P 43'34	
morning max el	5097 Dec 25 03:21	15° \Re 12'21	18°54'11	morning rise	5098 Nov 29 09:24	26° \P 26'21	
	5098 Jan 05 06:15	0° \Re		direct	5098 Dec 02 04:37	25° \P 43'17	
desc. node	5098 Jan 15 23:11	16° \Re 35'20		morning max el	5098 Dec 08 17:05	29° \P 14'02	18°15'36
morning set	5098 Jan 16 05:09	16° \Re 58'40			5098 Dec 09 10:50	0° \Re	
	5098 Jan 24 12:58	0° \approx		morning set	5098 Dec 27 17:27	27° \Re 19'28	
max. Earth dist.	5098 Jan 31 02:22	10° \approx 16'31	1.45145 AU		5098 Dec 29 09:06	0° \Re	
				desc. node	5099 Jan 02 20:12	7° \Re 11'15	
superior conj	5098 Feb 01 18:08	12° \approx 52'56	-1°40'28	superior conj	5099 Jan 11 21:22	21° \Re 32'48	-0°59'59
minimum elong	5098 Feb 01 08:55	12° \approx 16'38	1°39'37	minimum elong	5099 Jan 11 14:03	21° \Re 04'01	0°59'02
	5098 Feb 12 12:30	0° \Re		max. Earth dist.	5099 Jan 13 21:29	24° \Re 41'47	1.45299 AU
evening rise	5098 Feb 16 21:35	7° \Re 04'21			5099 Jan 17 06:46	0° \approx	
	5098 Mar 03 08:05	0° Υ		evening rise	5099 Jan 28 02:10	16° \approx 52'57	
asc. node	5098 Mar 08 13:13	6° Υ 48'54			5099 Feb 05 12:09	0° \Re	
evening max el	5098 Mar 09 11:40	7° Υ 48'32	18°38'02	greatest brilliancy	5099 Feb 08 14:47	4° \Re 46'50	-0.7m
retrograde	5098 Mar 16 01:54	11° Υ 26'53		evening max el	5099 Feb 20 20:00	21° \Re 19'56	19°20'07

asc. node	5099 Feb 23 10:16	23° H 37'53		asc. node	5100 Feb 10 07:19	9° H 17'41	
retrograde	5099 Feb 27 22:25	25° H 23'18		retrograde	5100 Feb 11 20:35	9° H 30'36	
evening set	5099 Mar 03 09:58	24° H 12'26		evening set	5100 Feb 15 16:36	8° H 05'24	
inferior conj	5099 Mar 08 21:45	18° H 20'32	3°22'04	inferior conj	5100 Feb 21 01:32	2° H 00'08	2°59'48
minimum elong	5099 Mar 08 20:11	18° H 25'38	3°21'52	minimum elong	5100 Feb 20 23:18	2° H 07'43	2°59'19
min. Earth dist.	5099 Mar 10 05:51	16° H 36'26	0.66439 AU	min. Earth dist.	5100 Feb 21 19:41	0° H 58'32	0.67409 AU
morning rise	5099 Mar 14 06:05	12° H 05'40			5100 Feb 22 13:09	30° R \approx	
direct	5099 Mar 20 12:25	9° H 19'04		morning rise	5100 Feb 26 05:47	25° \approx 45'45	
desc. node	5099 Mar 31 19:27	15° H 33'00		direct	5100 Mar 03 23:12	23° \approx 12'15	
morning max el	5099 Apr 02 02:21	16° H 48'51	26°02'54		5100 Mar 15 09:07	0° H	
	5099 Apr 13 01:33	0° Y		morning max el	5100 Mar 15 11:01	0° H 04'49	24°40'37
	5099 May 02 10:46	0° B		desc. node	5100 Mar 18 16:28	3° H 34'03	
morning set	5099 May 08 06:05	10° B 24'09			5100 Apr 06 22:54	0° Y	
max. Earth dist.	5099 May 12 03:44	17° B 47'19	1.35352 AU	morning set	5100 Apr 20 11:13	22° Y 18'24	
				max. Earth dist.	5100 Apr 24 02:04	28° Y 48'13	1.37304 AU
					5100 Apr 24 17:43	0° B	
superior conj	5099 May 17 10:09	28° B 14'18	-0°49'25				
minimum elong	5099 May 17 12:52	28° B 28'08	0°48'55				
	5099 May 18 06:55	0° II		superior conj	5100 Apr 30 18:58	11° B 27'17	-1°18'37
asc. node	5099 May 22 09:32	8° II 28'21		minimum elong	5100 Apr 30 23:15	11° B 48'08	1°17'58
evening rise	5099 May 25 06:04	14° II 22'28		evening rise	5100 May 09 08:07	28° B 25'59	
	5099 Jun 02 07:51	0° E		asc. node	5100 May 09 06:33	28° B 18'10	
evening max el	5099 Jun 12 12:36	14° E 10'05	20°23'55		5100 May 10 03:01	0° II	
retrograde	5099 Jun 23 11:14	19° E 31'29		evening max el	5100 May 26 04:18	25° II 48'20	19°19'33
evening set	5099 Jun 25 10:36	19° E 21'46			5100 Jun 01 23:09	0° E	
desc. node	5099 Jun 27 18:40	18° E 46'52		retrograde	5100 Jun 04 09:27	0° E 18'18	
inferior conj	5099 Jul 04 15:06	15° E 24'07	-2°01'57	evening set	5100 Jun 06 08:38	0° E 06'54	
minimum elong	5099 Jul 04 09:25	15° E 32'25	1°59'54		5100 Jun 06 21:29	30° R II	
min. Earth dist.	5099 Jul 06 00:26	14° E 35'31	0.54963 AU	inferior conj	5100 Jun 14 21:11	25° II 58'55	-0°04'05
morning rise	5099 Jul 13 07:10	11° E 13'40		minimum elong	5100 Jun 14 21:01	25° II 59'12	0°04'02
direct	5099 Jul 17 06:03	10° E 39'52		transit middle	5100 Jun 14 21:01	25° II 59'12	0°04'02
morning max el	5099 Jul 30 16:34	17° E 11'32	23°33'33	transit begin	5100 Jun 14 17:17	26° II 05'20	
	5099 Aug 10 00:40	0° Q		transit end	5100 Jun 15 00:45	25° II 53'03	
asc. node	5099 Aug 18 08:49	14° Q 31'46		desc. node	5100 Jun 14 15:41	26° II 07'58	
morning set	5099 Aug 23 10:19	24° Q 50'13		min. Earth dist.	5100 Jun 17 14:35	24° II 11'53	0.56003 AU
	5099 Aug 25 20:19	0° P		morning rise	5100 Jun 23 06:28	21° II 15'10	
				direct	5100 Jun 28 02:52	20° II 21'23	
superior conj	5099 Aug 30 10:15	9° P 54'30	1°36'50	morning max el	5100 Jul 12 06:02	27° II 31'56	25°15'16
minimum elong	5099 Aug 30 08:39	9° P 45'51	1°36'43		5100 Jul 14 16:06	0° E	
max. Earth dist.	5099 Sep 01 21:04	15° P 09'00	1.33385 AU		5100 Aug 03 04:13	0° Q	
evening rise	5099 Sep 06 23:32	25° P 40'46		asc. node	5100 Aug 05 05:50	4° Q 08'19	
	5099 Sep 09 04:10	0° A		morning set	5100 Aug 07 21:56	9° Q 41'58	
desc. node	5099 Sep 23 17:56	25° A 14'19					
	5099 Sep 26 23:01	0° M		superior conj	5100 Aug 14 20:13	24° Q 46'17	1°25'18
evening max el	5099 Oct 11 00:15	17° M 02'38	27°22'50	minimum elong	5100 Aug 14 18:01	24° Q 34'18	1°25'02
retrograde	5099 Oct 24 13:33	24° M 21'07		max. Earth dist.	5100 Aug 16 02:43	27° Q 33'13	1.32490 AU
evening set	5099 Oct 31 14:28	21° M 42'22			5100 Aug 17 05:43	0° P	
min. Earth dist.	5099 Nov 04 08:42	18° M 17'35	0.64246 AU	evening rise	5100 Aug 21 23:05	10° P 00'39	
inferior conj	5099 Nov 06 18:46	15° M 44'19	-2°29'01		5100 Sep 01 11:28	0° A	
minimum elong	5099 Nov 06 23:05	15° M 32'53	2°27'21	desc. node	5100 Sep 10 14:57	14° A 30'23	
morning rise	5099 Nov 13 09:05	10° M 19'56			5100 Sep 23 11:14	0° M	
asc. node	5099 Nov 14 08:04	10° M 00'12		evening max el	5100 Sep 23 09:47	29° A 56'33	27°23'50
direct	5099 Nov 15 21:33	9° M 47'44		retrograde	5100 Oct 07 04:30	7° M 11'06	
morning max el	5099 Nov 22 09:40	13° M 12'58	17°54'04	evening set	5100 Oct 14 08:39	4° M 43'42	
	5099 Dec 04 01:36	0° X		min. Earth dist.	5100 Oct 17 23:48	1° M 47'46	0.62465 AU
morning set	5099 Dec 09 10:19	9° X 04'27			5100 Oct 19 21:46	30° R A	
desc. node	5099 Dec 20 17:13	27° X 54'31		inferior conj	5100 Oct 20 20:58	29° A 04'48	-3°31'30
	5099 Dec 22 00:06	0° Z		minimum elong	5100 Oct 21 02:51	28° A 50'53	3°29'39
				morning rise	5100 Oct 27 22:47	23° A 58'16	
superior conj	5099 Dec 22 14:08	0° Z 56'50	-0°13'03	direct	5100 Oct 30 07:19	23° A 33'18	
minimum elong	5099 Dec 22 12:37	0° Z 50'42	0°12'49	asc. node	5100 Nov 01 05:06	23° A 50'09	
behind sun begin	5099 Dec 22 06:24	0° Z 25'32		morning max el	5100 Nov 06 01:59	27° A 01'03	17°50'19
behind sun end	5099 Dec 22 18:50	1° Z 15'50			5100 Nov 08 16:56	0° M	
max. Earth dist.	5099 Dec 27 16:11	9° Z 05'06	1.44718 AU	morning set	5100 Nov 22 01:39	21° M 53'39	
evening rise	5100 Jan 07 15:03	26° Z 09'15			5100 Nov 26 15:16	0° X	
	5100 Jan 10 03:15	0° \approx					
	5100 Jan 30 18:04	0° H		superior conj	5100 Dec 03 07:58	11° X 34'11	0°29'50
evening max el	5100 Feb 03 23:29	4° H 53'50	20°17'28	minimum elong	5100 Dec 03 10:42	11° X 45'43	0°29'28

desc. node	5100 Dec 07 14:13	18° ♄ 41'02		evening rise	5101 Nov 28 03:41	15° ♄ 28'21
max. Earth dist.	5100 Dec 10 08:05	23° ♄ 09'59	1.43475 AU		5101 Dec 07 11:52	0° ♄
	5100 Dec 14 14:34	0° ♄			5101 Dec 29 15:04	0° ♄
evening rise	5100 Dec 18 02:31	5° ♄ 28'53		evening max el	5101 Dec 31 14:34	2° ♄ 05'32 22°44'40
	5101 Jan 03 12:09	0° ♄		retrograde	5102 Jan 10 13:56	8° ♄ 00'51
evening max el	5101 Jan 17 21:29	18° ♄ 28'46	21°27'06	evening set	5102 Jan 15 07:37	6° ♄ 04'32
retrograde	5101 Jan 26 18:15	23° ♄ 44'14		asc. node	5102 Jan 15 01:22	6° ♄ 17'10
asc. node	5101 Jan 28 04:21	23° ♄ 33'24				
evening set	5101 Jan 31 00:20	22° ♄ 03'45				
inferior conj	5101 Feb 05 08:25	15° ♄ 47'53	2°28'01			
minimum elong	5101 Feb 05 06:00	15° ♄ 56'16	2°27'18			
min. Earth dist.	5101 Feb 05 13:57	15° ♄ 28'45	0.67961 AU			
morning rise	5101 Feb 10 11:30	9° ♄ 35'38				
direct	5101 Feb 15 14:27	7° ♄ 21'59				
morning max el	5101 Feb 25 20:04	13° ♄ 26'24	23°11'31			
desc. node	5101 Mar 05 13:29	22° ♄ 26'40				
	5101 Mar 11 04:23	0° ♄				
	5101 Mar 30 20:37	0° ♄				
morning set	5101 Apr 01 16:03	3° ♄ 00'24				
max. Earth dist.	5101 Apr 05 21:22	10° ♄ 11'58	1.39487 AU			
superior conj	5101 Apr 13 13:15	23° ♄ 55'36	-1°44'29			
minimum elong	5101 Apr 13 18:16	24° ♄ 18'48	1°43'57			
	5101 Apr 16 19:11	0° ♄				
evening rise	5101 Apr 23 01:45	12° ♄ 00'46				
asc. node	5101 Apr 26 03:36	17° ♄ 53'04				
	5101 May 03 00:41	0° ♄				
evening max el	5101 May 09 06:17	8° ♄ 05'35	18°35'30			
retrograde	5101 May 17 01:57	11° ♄ 56'59				
evening set	5101 May 19 07:09	11° ♄ 39'26				
inferior conj	5101 May 26 23:39	7° ♄ 12'35	1°33'20			
minimum elong	5101 May 27 02:43	7° ♄ 06'41	1°32'20			
min. Earth dist.	5101 May 30 08:21	4° ♄ 38'31	0.57755 AU			
desc. node	5101 Jun 01 12:41	3° ♄ 09'12				
morning rise	5101 Jun 03 19:02	1° ♄ 53'54				
direct	5101 Jun 09 13:34	0° ♄ 30'06				
morning max el	5101 Jun 23 22:37	8° ♄ 06'32	26°40'25			
	5101 Jul 10 09:36	0° ♄				
morning set	5101 Jul 23 08:11	24° ♄ 28'33				
asc. node	5101 Jul 23 02:51	24° ♄ 00'28				
	5101 Jul 25 22:05	0° ♄				
superior conj	5101 Jul 30 07:52	9° ♄ 41'02	1°08'58			
minimum elong	5101 Jul 30 05:34	9° ♄ 28'22	1°08'36			
max. Earth dist.	5101 Jul 30 13:10	10° ♄ 10'20	1.32014 AU			
evening rise	5101 Aug 06 04:54	24° ♄ 37'35				
	5101 Aug 08 19:16	0° ♄				
	5101 Aug 26 06:44	0° ♄				
desc. node	5101 Aug 28 11:58	2° ♄ 59'38				
evening max el	5101 Sep 05 13:59	12° ♄ 09'17	26°51'32			
retrograde	5101 Sep 19 11:35	19° ♄ 19'10				
evening set	5101 Sep 26 10:04	17° ♄ 14'56				
min. Earth dist.	5101 Sep 30 04:04	14° ♄ 37'15	0.60463 AU			
inferior conj	5101 Oct 03 08:59	11° ♄ 58'25	-4°27'29			
minimum elong	5101 Oct 03 15:09	11° ♄ 45'36	4°26'05			
morning rise	5101 Oct 10 22:14	7° ♄ 13'11				
direct	5101 Oct 13 06:03	6° ♄ 52'23				
asc. node	5101 Oct 19 02:06	9° ♄ 10'04				
morning max el	5101 Oct 20 14:57	10° ♄ 30'57	18°05'32			
	5101 Nov 02 10:21	0° ♄				
morning set	5101 Nov 05 09:11	5° ♄ 28'54				
superior conj	5101 Nov 15 03:35	23° ♄ 26'38	1°03'11			
minimum elong	5101 Nov 15 07:33	23° ♄ 44'17	1°02'42			
	5101 Nov 18 21:04	0° ♄				
max. Earth dist.	5101 Nov 22 19:23	6° ♄ 41'46	1.41718 AU			
desc. node	5101 Nov 24 11:15	9° ♄ 27'44				