

superior conj	12600 Jan 11 19:48	0° \approx 57'39	1°24'32	asc. node	12600 Dec 08 16:26	8° \times 45'38	
minimum elong	12600 Jan 11 22:03	1° \approx 09'15	1°25'10		12600 Dec 19 19:06	0° \approx	
max. Earth dist.	12600 Jan 16 11:03	10° \approx 21'57	1.35237 AU	morning set	12600 Dec 20 00:31	0° \approx 28'45	
evening rise	12600 Jan 20 12:53	18° \approx 14'13					
desc. node	12600 Jan 23 19:48	24° \approx 17'17		superior conj	12600 Dec 26 23:15	15° \approx 26'21	1°34'46
	12600 Jan 27 01:37	0° \approx		minimum elong	12600 Dec 27 00:29	15° \approx 32'57	1°35'38
	12600 Feb 16 02:05	0° \approx		max. Earth dist.	12600 Dec 30 04:39	22° \approx 16'10	1.33540 AU
evening max el	12600 Feb 24 20:28	9° \approx 54'32	26°31'20		12601 Jan 02 23:29	0° \approx	
retrograde	12600 Mar 09 20:39	17° \approx 15'09		evening rise	12601 Jan 03 20:51	1° \approx 45'57	
evening set	12600 Mar 16 04:52	14° \approx 43'25		desc. node	12601 Jan 10 16:34	14° \approx 33'44	
asc. node	12600 Mar 19 16:51	11° \approx 13'57			12601 Jan 20 00:11	0° \approx	
min. Earth dist.	12600 Mar 20 07:05	10° \approx 32'29	0.66530 AU	evening max el	12601 Feb 07 10:01	23° \approx 28'40	27°15'18
inferior conj	12600 Mar 22 03:48	8° \approx 18'01	0°46'34		12601 Feb 16 14:36	0° \approx	
minimum elong	12600 Mar 22 02:38	8° \approx 21'32	0°46'04	retrograde	12601 Feb 20 22:09	0° \approx 54'16	
morning rise	12600 Mar 28 01:24	2° \approx 36'21			12601 Feb 24 23:15	30° \approx	
direct	12600 Mar 31 02:12	1° \approx 44'48		evening set	12601 Feb 27 15:14	28° \approx 22'36	
morning max el	12600 Apr 06 13:35	5° \approx 11'24	18°23'47	min. Earth dist.	12601 Mar 03 12:38	24° \approx 44'32	0.64968 AU
desc. node	12600 Apr 21 21:47	26° \approx 43'34		inferior conj	12601 Mar 05 21:16	22° \approx 08'50	-0°13'49
	12600 Apr 23 23:26	0° \approx		minimum elong	12601 Mar 05 21:40	22° \approx 07'44	0°13'26
morning set	12600 Apr 26 17:26	4° \approx 21'42		transit middle	12601 Mar 05 21:40	22° \approx 07'44	0°13'26
				transit begin	12601 Mar 05 20:01	22° \approx 12'17	
superior conj	12600 May 12 11:24	29° \approx 08'51	-2°00'32	transit end	12601 Mar 05 23:19	22° \approx 03'11	
minimum elong	12600 May 12 03:34	28° \approx 38'13	2°00'49	asc. node	12601 Mar 06 14:17	21° \approx 22'15	
max. Earth dist.	12600 May 13 01:28	0° \approx 03'44	1.45786 AU	morning rise	12601 Mar 12 05:46	16° \approx 40'15	
	12600 May 13 00:30	0° \approx		direct	12601 Mar 14 21:24	16° \approx 03'17	
evening rise	12600 May 28 08:20	23° \approx 59'10		morning max el	12601 Mar 21 05:51	19° \approx 21'42	17°56'30
	12600 Jun 01 04:08	0° \approx			12601 Mar 29 07:24	0° \approx	
greatest brilliancy	12600 Jun 07 01:58	9° \approx 13'39	-0.8m	morning set	12601 Apr 07 22:07	15° \approx 37'54	
asc. node	12600 Jun 15 14:26	21° \approx 38'12		desc. node	12601 Apr 08 18:23	17° \approx 01'37	
evening max el	12600 Jun 19 17:38	26° \approx 28'13	18°55'25		12601 Apr 16 16:43	0° \approx	
	12600 Jun 25 02:03	0° \approx		superior conj	12601 Apr 22 00:35	8° \approx 31'57	-1°30'09
retrograde	12600 Jun 26 11:13	0° \approx 10'38		minimum elong	12601 Apr 21 15:41	7° \approx 56'38	1°29'40
	12600 Jun 27 19:50	30° \approx		max. Earth dist.	12601 Apr 25 21:50	14° \approx 40'04	1.45474 AU
evening set	12600 Jun 29 20:48	29° \approx 03'54			12601 May 05 18:34	0° \approx	
inferior conj	12600 Jul 05 09:23	23° \approx 20'19	3°03'50	evening rise	12601 May 08 01:20	3° \approx 30'35	
minimum elong	12600 Jul 05 10:45	23° \approx 15'57	3°02'46	greatest brilliancy	12601 May 22 07:04	25° \approx 01'33	-0.6m
min. Earth dist.	12600 Jul 07 02:11	21° \approx 11'22	0.66256 AU		12601 May 25 18:14	0° \approx	
morning rise	12600 Jul 11 00:00	16° \approx 57'16		asc. node	12601 Jun 02 11:31	9° \approx 43'02	
direct	12600 Jul 17 06:58	14° \approx 15'58		evening max el	12601 Jun 02 23:43	10° \approx 14'17	19°45'46
desc. node	12600 Jul 18 21:35	14° \approx 25'17		retrograde	12601 Jun 10 09:25	14° \approx 26'25	
morning max el	12600 Jul 30 05:55	21° \approx 58'23	26°27'24	evening set	12601 Jun 14 04:14	13° \approx 03'11	
	12600 Aug 06 06:18	0° \approx		inferior conj	12601 Jun 19 12:14	7° \approx 05'44	3°13'35
	12600 Aug 26 11:35	0° \approx		minimum elong	12601 Jun 19 12:33	7° \approx 04'42	3°12'38
morning set	12600 Sep 04 03:57	15° \approx 28'50		min. Earth dist.	12601 Jun 20 14:28	5° \approx 37'55	0.67576 AU
max. Earth dist.	12600 Sep 08 02:57	23° \approx 05'36	1.34599 AU	morning rise	12601 Jun 24 20:29	0° \approx 43'34	
asc. node	12600 Sep 11 15:20	0° \approx 08'25			12601 Jun 25 17:29	30° \approx	
	12600 Sep 11 13:41	0° \approx		direct	12601 Jun 30 16:59	28° \approx 08'52	
superior conj	12600 Sep 13 03:26	3° \approx 13'38	0°14'22	desc. node	12601 Jul 05 18:48	29° \approx 41'50	
minimum elong	12600 Sep 13 02:40	3° \approx 09'38	0°14'10		12601 Jul 06 07:06	0° \approx	
behind sun begin	12600 Sep 12 23:51	2° \approx 55'06		morning max el	12601 Jul 12 16:25	5° \approx 19'35	25°08'55
behind sun end	12600 Sep 13 05:29	3° \approx 24'09			12601 Jul 31 17:03	0° \approx	
evening rise	12600 Sep 20 15:32	18° \approx 56'31		morning set	12601 Aug 17 14:44	27° \approx 39'47	
	12600 Sep 26 02:54	0° \approx			12601 Aug 18 21:55	0° \approx	
evening max el	12600 Oct 09 18:43	20° \approx 27'30	20°57'46	max. Earth dist.	12601 Aug 21 04:59	4° \approx 12'25	1.36634 AU
desc. node	12600 Oct 14 18:08	24° \approx 21'15					
retrograde	12600 Oct 21 10:05	26° \approx 14'27		superior conj	12601 Aug 27 16:02	16° \approx 35'39	-0°17'15
evening set	12600 Oct 23 20:26	26° \approx 00'24		minimum elong	12601 Aug 27 17:09	16° \approx 41'08	0°17'20
inferior conj	12600 Nov 01 20:50	22° \approx 06'13	-5°01'22	asc. node	12601 Aug 29 11:58	20° \approx 14'09	
minimum elong	12600 Nov 01 11:17	22° \approx 19'45	4°58'31		12601 Sep 03 07:44	0° \approx	
min. Earth dist.	12600 Nov 02 14:29	21° \approx 41'12	0.54569 AU	evening rise	12601 Sep 04 20:47	3° \approx 08'06	
morning rise	12600 Nov 10 02:27	18° \approx 13'07			12601 Sep 20 17:05	0° \approx	
direct	12600 Nov 14 05:27	17° \approx 36'39		evening max el	12601 Sep 22 02:48	1° \approx 29'50	19°42'24
morning max el	12600 Nov 27 05:32	23° \approx 52'51	22°59'10	desc. node	12601 Oct 01 15:35	6° \approx 28'11	
	12600 Dec 02 17:01	0° \approx		retrograde	12601 Oct 02 02:35	6° \approx 28'47	

evening set	12601 Oct 03 23:52	6°♄18'54		inferior conj	12602 Sep 23 12:43	13°♂02'30	-1°34'23
inferior conj	12601 Oct 12 19:36	2°♄15'48	-3°25'19	minimum elong	12602 Sep 23 08:46	13°♂09'38	1°32'42
minimum elong	12601 Oct 12 10:51	2°♄29'26	3°21'52	min. Earth dist.	12602 Sep 26 14:05	10°♂50'30	0.56782 AU
min. Earth dist.	12601 Oct 14 23:39	0°♄54'43	0.55270 AU	morning rise	12602 Oct 01 05:43	8°♂06'10	
	12601 Oct 16 12:27	30°♄		direct	12602 Oct 06 23:21	6°♂46'42	
morning rise	12601 Oct 20 20:07	27°♂56'41		morning max el	12602 Oct 21 05:18	14°♂09'42	26°22'31
direct	12601 Oct 25 19:25	27°♂02'06			12602 Nov 02 19:52	0°♄	
	12601 Nov 03 18:12	0°♄		asc. node	12602 Nov 12 10:13	16°♄33'15	
morning max el	12601 Nov 08 15:50	3°♄55'08	24°47'25	morning set	12602 Nov 18 23:04	29°♄51'45	
asc. node	12601 Nov 25 13:22	27°♄23'43			12602 Nov 19 00:36	0°♄	
	12601 Nov 26 23:25	0°♄					
morning set	12601 Dec 04 12:23	15°♄13'36		superior conj	12602 Nov 25 18:32	14°♄51'20	1°36'15
				minimum elong	12602 Nov 25 17:36	14°♄46'06	1°37'05
superior conj	12601 Dec 11 07:33	0°♂06'20	1°38'32	max. Earth dist.	12602 Nov 26 12:14	16°♄29'41	1.31526 AU
minimum elong	12601 Dec 11 07:39	0°♂06'55	1°39'29	evening rise	12602 Dec 02 16:57	29°♄58'17	
	12601 Dec 11 06:24	0°♂			12602 Dec 02 17:16	0°♂	
max. Earth dist.	12601 Dec 13 05:43	4°♂18'37	1.32288 AU	desc. node	12602 Dec 15 10:26	24°♂05'55	
evening rise	12601 Dec 18 15:07	15°♂42'51			12602 Dec 19 02:24	0°♄	
	12601 Dec 26 00:17	0°♄		evening max el	12603 Jan 03 04:57	19°♄05'00	27°18'04
desc. node	12601 Dec 28 13:27	4°♄32'23		retrograde	12603 Jan 17 03:26	26°♄21'14	
	12602 Jan 14 19:05	0°♄		evening set	12603 Jan 24 00:57	24°♄12'37	
evening max el	12602 Jan 20 21:34	6°♄36'08	27°32'44	min. Earth dist.	12603 Jan 27 19:28	21°♄25'41	0.60988 AU
retrograde	12602 Feb 03 16:42	13°♄59'28		inferior conj	12603 Jan 30 22:17	18°♄42'50	-2°43'09
evening set	12602 Feb 10 14:58	11°♄35'01		minimum elong	12603 Jan 31 04:02	18°♄30'19	2°40'17
min. Earth dist.	12602 Feb 14 09:09	8°♄26'07	0.63087 AU	morning rise	12603 Feb 07 10:05	13°♄49'00	
inferior conj	12602 Feb 17 04:32	5°♄39'53	-1°24'28	asc. node	12603 Feb 08 09:03	13°♄36'05	
minimum elong	12602 Feb 17 07:19	5°♄32'59	1°22'51	direct	12603 Feb 09 12:58	13°♄30'26	
asc. node	12602 Feb 21 11:42	1°♄52'06		morning max el	12603 Feb 16 15:37	17°♄04'47	17°54'42
morning rise	12602 Feb 24 02:07	0°♄27'16			12603 Feb 25 19:23	0°♄	
direct	12602 Feb 26 10:11	0°♄01'20		morning set	12603 Mar 04 06:04	11°♄30'31	
morning max el	12602 Mar 04 23:38	3°♄22'33	17°46'32	desc. node	12603 Mar 13 11:33	28°♄05'20	
morning set	12602 Mar 21 04:24	28°♄07'04					
	12602 Mar 22 06:26	0°♄		superior conj	12603 Mar 14 19:10	0°♄23'07	-0°10'18
desc. node	12602 Mar 26 14:58	7°♄30'09		minimum elong	12603 Mar 14 18:16	0°♄19'13	0°10'04
				behind sun begin	12603 Mar 14 11:49	29°♄51'11	
superior conj	12602 Apr 02 09:38	18°♄53'11	-0°50'34	behind sun end	12603 Mar 15 00:43	0°♄47'11	
minimum elong	12602 Apr 02 04:30	18°♄32'00	0°50'01		12603 Mar 14 13:50	0°♄	
max. Earth dist.	12602 Apr 08 15:58	29°♄02'54	1.44451 AU	max. Earth dist.	12603 Mar 22 05:52	12°♄57'27	1.42831 AU
	12602 Apr 09 06:17	0°♄		evening rise	12603 Mar 28 10:03	22°♄53'30	
evening rise	12602 Apr 17 12:45	12°♄55'52			12603 Apr 01 23:46	0°♄	
	12602 Apr 28 20:47	0°♄			12603 Apr 23 00:37	0°♄	
evening max el	12602 May 16 23:55	24°♄00'49	20°50'17	evening max el	12603 Apr 29 18:50	7°♄48'17	22°05'20
asc. node	12602 May 20 08:42	26°♄56'41		asc. node	12603 May 07 05:56	13°♄04'03	
retrograde	12602 May 25 08:22	28°♄52'10		retrograde	12603 May 09 06:13	13°♄22'59	
evening set	12602 May 29 13:08	27°♄12'35		evening set	12603 May 13 21:43	11°♄27'53	
inferior conj	12602 Jun 03 19:21	21°♄02'57	3°10'58	inferior conj	12603 May 19 04:31	5°♄08'13	2°57'28
minimum elong	12602 Jun 03 18:38	21°♄05'24	3°10'01	minimum elong	12603 May 19 03:00	5°♄13'32	2°56'26
min. Earth dist.	12602 Jun 04 07:46	20°♄19'57	0.68431 AU	min. Earth dist.	12603 May 19 03:54	5°♄10'22	0.68820 AU
morning rise	12602 Jun 08 23:54	14°♄44'30			12603 May 23 05:07	30°♄	
direct	12602 Jun 14 08:06	12°♄23'29		morning rise	12603 May 24 08:06	28°♄55'22	
desc. node	12602 Jun 22 15:55	16°♄30'57		direct	12603 May 29 03:22	26°♄52'44	
morning max el	12602 Jun 25 02:38	18°♄49'26	23°40'29		12603 Jun 04 22:46	0°♄	
	12602 Jul 04 12:41	0°♄		morning max el	12603 Jun 07 14:43	2°♄26'34	22°11'29
	12602 Jul 24 19:46	0°♄		desc. node	12603 Jun 09 12:57	4°♄28'32	
morning set	12602 Jul 30 05:01	8°♄54'47			12603 Jun 28 11:44	0°♄	
max. Earth dist.	12602 Aug 03 02:33	15°♄38'03	1.38922 AU	morning set	12603 Jul 10 18:25	19°♄02'37	
				max. Earth dist.	12603 Jul 16 02:04	27°♄47'14	1.41222 AU
superior conj	12602 Aug 10 15:23	29°♄19'08	-0°51'28		12603 Jul 17 09:37	0°♄	
minimum elong	12602 Aug 10 19:02	29°♄36'16	0°51'24				
	12602 Aug 11 00:05	0°♄		superior conj	12603 Jul 23 21:06	11°♄13'39	-1°25'23
asc. node	12602 Aug 16 08:39	10°♄16'10		minimum elong	12603 Jul 24 03:15	11°♄40'58	1°25'20
evening rise	12602 Aug 19 19:16	16°♄59'05		evening rise	12603 Aug 03 07:25	0°♄19'41	
	12602 Aug 26 16:47	0°♄		asc. node	12603 Aug 03 05:20	0°♄09'58	
evening max el	12602 Sep 05 00:12	13°♄20'43	18°48'46		12603 Aug 03 03:12	0°♄	
retrograde	12602 Sep 13 11:00	17°♄35'02		evening max el	12603 Aug 19 07:14	25°♄52'14	18°16'16
evening set	12602 Sep 15 08:31	17°♄23'01		retrograde	12603 Aug 26 14:18	29°♄33'51	
desc. node	12602 Sep 18 13:03	16°♄13'49		evening set	12603 Aug 28 18:10	29°♄15'06	


































































































































inferior conj	12603 Sep 05 03:33	24° \mathbb{M} 33'56	0°05'24	evening max el	12604 Aug 01 19:43	8° \mathbb{M} 54'39	18°03'32
minimum elong	12603 Sep 05 03:43	24° \mathbb{M} 33'33	0°05'09	retrograde	12604 Aug 08 10:16	12° \mathbb{M} 18'29	
transit middle	12603 Sep 05 03:43	24° \mathbb{M} 33'33	0°05'09	evening set	12604 Aug 10 22:06	11° \mathbb{M} 49'16	
transit begin	12603 Sep 05 00:27	24° \mathbb{M} 40'29		inferior conj	12604 Aug 17 14:16	6° \mathbb{M} 47'57	1°22'55
transit end	12603 Sep 05 07:00	24° \mathbb{M} 26'36		minimum elong	12604 Aug 17 16:29	6° \mathbb{M} 42'32	1°21'44
desc. node	12603 Sep 05 10:32	24° \mathbb{M} 19'06		min. Earth dist.	12604 Aug 20 17:07	3° \mathbb{M} 46'33	0.61123 AU
min. Earth dist.	12603 Sep 08 11:22	21° \mathbb{M} 46'24	0.58841 AU	desc. node	12604 Aug 22 07:59	2° \mathbb{M} 20'42	
morning rise	12603 Sep 12 09:49	19° \mathbb{M} 02'28		morning rise	12604 Aug 24 08:09	0° \mathbb{M} 50'06	
direct	12603 Sep 18 17:31	17° \mathbb{M} 14'42			12604 Aug 25 17:33	30° \mathbb{R} \mathbb{L}	
morning max el	12603 Oct 03 01:36	24° \mathbb{M} 59'05	27°28'39	direct	12604 Aug 30 23:22	28° \mathbb{L} 36'43	
	12603 Oct 07 16:39	0° \mathbb{L}			12604 Sep 05 12:33	0° \mathbb{M}	
	12603 Oct 27 03:41	0° \mathbb{M}		morning max el	12604 Sep 14 04:58	6° \mathbb{M} 34'01	27°57'13
asc. node	12603 Oct 30 07:00	6° \mathbb{M} 05'05			12604 Oct 01 22:26	0° \mathbb{L}	
morning set	12603 Nov 03 06:44	14° \mathbb{M} 17'27		asc. node	12604 Oct 16 03:42	25° \mathbb{L} 52'44	
				morning set	12604 Oct 17 09:32	28° \mathbb{L} 25'55	
					12604 Oct 18 03:36	0° \mathbb{M}	
superior conj	12603 Nov 10 06:13	29° \mathbb{M} 34'29	1°28'10	max. Earth dist.	12604 Oct 23 04:00	10° \mathbb{M} 47'33	1.31527 AU
minimum elong	12603 Nov 10 04:28	29° \mathbb{M} 24'42	1°28'45				
max. Earth dist.	12603 Nov 09 20:52	28° \mathbb{M} 42'18	1.31270 AU				
	12603 Nov 10 10:47	0° \mathbb{X}		superior conj	12604 Oct 24 16:46	14° \mathbb{M} 10'27	1°14'26
evening rise	12603 Nov 16 23:53	14° \mathbb{X} 25'07		minimum elong	12604 Oct 24 14:33	13° \mathbb{M} 58'12	1°14'42
	12603 Nov 24 17:25	0° \mathbb{Z}		evening rise	12604 Oct 31 09:53	28° \mathbb{M} 57'59	
desc. node	12603 Dec 02 07:30	13° \mathbb{Z} 03'39			12604 Oct 31 21:26	0° \mathbb{X}	
	12603 Dec 15 11:04	0° \mathbb{Z}			12604 Nov 17 08:27	0° \mathbb{Z}	
evening max el	12603 Dec 16 05:38	0° \mathbb{Z} 44'48	26°28'56	desc. node	12604 Nov 18 04:39	1° \mathbb{Z} 12'06	
retrograde	12603 Dec 30 04:31	7° \mathbb{Z} 51'21		evening max el	12604 Nov 26 22:03	11° \mathbb{Z} 32'53	25°08'55
evening set	12604 Jan 05 17:12	6° \mathbb{Z} 07'10		retrograde	12604 Dec 10 17:49	18° \mathbb{Z} 28'48	
min. Earth dist.	12604 Jan 09 19:26	3° \mathbb{Z} 30'43	0.58835 AU	evening set	12604 Dec 16 11:23	17° \mathbb{Z} 14'51	
inferior conj	12604 Jan 12 22:56	1° \mathbb{Z} 07'40	-4°03'51	min. Earth dist.	12604 Dec 21 10:04	14° \mathbb{Z} 33'11	0.56861 AU
minimum elong	12604 Jan 13 07:09	0° \mathbb{Z} 52'05	4°00'27	inferior conj	12604 Dec 24 03:32	12° \mathbb{Z} 45'32	-5°13'46
	12604 Jan 14 11:07	30° \mathbb{R} \mathbb{Z}		minimum elong	12604 Dec 24 11:23	12° \mathbb{Z} 32'36	5°11'18
morning rise	12604 Jan 20 24:00	26° \mathbb{Z} 34'56		morning rise	12605 Jan 01 13:39	8° \mathbb{Z} 34'52	
direct	12604 Jan 23 01:33	26° \mathbb{Z} 20'05		direct	12605 Jan 03 20:11	8° \mathbb{Z} 19'57	
asc. node	12604 Jan 26 06:20	26° \mathbb{Z} 57'37		asc. node	12605 Jan 12 03:36	11° \mathbb{Z} 55'37	
	12604 Jan 30 18:49	0° \mathbb{Z}		morning max el	12605 Jan 13 02:54	12° \mathbb{Z} 49'08	19°11'56
morning max el	12604 Jan 31 02:02	0° \mathbb{Z} 17'19	18°22'32		12605 Jan 24 19:03	0° \mathbb{Z}	
morning set	12604 Feb 15 21:24	25° \mathbb{Z} 30'59		morning set	12605 Jan 29 22:02	9° \mathbb{Z} 55'24	
	12604 Feb 18 05:46	0° \mathbb{X}					
				superior conj	12605 Feb 07 03:55	26° \mathbb{Z} 12'40	0°54'10
superior conj	12604 Feb 25 02:47	12° \mathbb{X} 53'54	0°25'24	minimum elong	12605 Feb 07 06:43	26° \mathbb{Z} 26'12	0°54'21
minimum elong	12604 Feb 25 04:34	13° \mathbb{X} 02'06	0°25'27		12605 Feb 09 03:26	0° \mathbb{X}	
desc. node	12604 Feb 28 08:07	18° \mathbb{X} 43'17		max. Earth dist.	12605 Feb 13 22:01	8° \mathbb{X} 50'10	1.38558 AU
max. Earth dist.	12604 Mar 03 15:20	26° \mathbb{X} 14'01	1.40790 AU	desc. node	12605 Feb 14 04:41	9° \mathbb{X} 20'12	
	12604 Mar 05 20:38	0° \mathbb{Y}		evening rise	12605 Feb 17 16:17	15° \mathbb{X} 29'15	
evening rise	12604 Mar 08 02:34	3° \mathbb{Y} 44'04			12605 Feb 26 10:54	0° \mathbb{Y}	
	12604 Mar 25 05:50	0° \mathbb{Z}			12605 Mar 19 22:25	0° \mathbb{Z}	
evening max el	12604 Apr 11 10:11	21° \mathbb{Z} 38'26	23°25'45	evening max el	12605 Mar 24 23:54	5° \mathbb{Z} 30'18	24°45'12
retrograde	12604 Apr 22 01:26	27° \mathbb{Z} 54'20		retrograde	12605 Apr 05 16:53	12° \mathbb{Z} 19'57	
asc. node	12604 Apr 23 03:13	27° \mathbb{Z} 49'00		asc. node	12605 Apr 10 00:34	10° \mathbb{Z} 57'35	
evening set	12604 Apr 27 04:27	25° \mathbb{Z} 45'05		evening set	12605 Apr 11 07:45	9° \mathbb{Z} 58'49	
min. Earth dist.	12604 May 02 00:41	20° \mathbb{Z} 03'35	0.68746 AU	min. Earth dist.	12605 Apr 15 19:52	4° \mathbb{Z} 53'17	0.68222 AU
inferior conj	12604 May 02 13:50	19° \mathbb{Z} 18'19	2°33'51	inferior conj	12605 Apr 16 21:23	3° \mathbb{Z} 28'36	2°00'16
minimum elong	12604 May 02 11:48	19° \mathbb{Z} 25'19	2°32'44	minimum elong	12605 Apr 16 19:14	3° \mathbb{Z} 35'44	1°59'11
morning rise	12604 May 07 19:05	13° \mathbb{Z} 12'27			12605 Apr 19 15:41	30° \mathbb{R} \mathbb{Y}	
direct	12604 May 12 01:30	11° \mathbb{Z} 30'36		morning rise	12605 Apr 22 06:56	27° \mathbb{Y} 31'07	
morning max el	12604 May 20 08:01	16° \mathbb{Z} 14'20	20°49'54	direct	12605 Apr 26 01:04	26° \mathbb{Y} 10'17	
desc. node	12604 May 26 09:52	23° \mathbb{Z} 16'22			12605 May 03 03:05	0° \mathbb{Z}	
	12604 May 31 09:58	0° \mathbb{I}		morning max el	12605 May 03 08:46	0° \mathbb{Z} 13'49	19°40'53
morning set	12604 Jun 19 07:32	28° \mathbb{I} 07'05		desc. node	12605 May 13 06:39	12° \mathbb{Z} 40'13	
	12604 Jun 20 12:28	0° \mathbb{S}		greatest brilliancy	12605 May 16 02:08	16° \mathbb{Z} 43'41	-0.6m
max. Earth dist.	12604 Jun 27 08:16	10° \mathbb{S} 51'39	1.43255 AU		12605 May 24 22:48	0° \mathbb{I}	
				morning set	12605 May 29 08:14	6° \mathbb{I} 43'08	
superior conj	12604 Jul 04 04:59	22° \mathbb{S} 10'53	-1°54'13	max. Earth dist.	12605 Jun 09 21:30	24° \mathbb{I} 43'07	1.44777 AU
minimum elong	12604 Jul 04 11:50	22° \mathbb{S} 39'43	1°54'33		12605 Jun 13 05:09	0° \mathbb{S}	
	12604 Jul 08 19:06	0° \mathbb{L}					
evening rise	12604 Jul 16 04:54	12° \mathbb{L} 59'45		superior conj	12605 Jun 14 12:52	2° \mathbb{S} 07'10	-2°11'23
asc. node	12604 Jul 20 02:05	19° \mathbb{L} 51'45		minimum elong	12605 Jun 14 16:07	2° \mathbb{S} 20'14	2°12'14
	12604 Jul 26 02:14	0° \mathbb{M}		evening rise	12605 Jun 28 06:39	24° \mathbb{S} 47'13	

	12605 Jul 01 08:53	0°♎				12606 Jun 25 01:16	0°♎	
asc. node	12605 Jul 06 22:53	9°♎15'59		evening max el	12606 Jun 29 22:43	5°♎54'53	18°33'41	
evening max el	12605 Jul 16 09:54	22°♎18'05	18°09'34	retrograde	12606 Jul 06 10:43	9°♎26'00		
retrograde	12605 Jul 22 18:29	25°♎38'46		evening set	12606 Jul 09 15:09	8°♎28'36		
evening set	12605 Jul 25 14:32	24°♎56'22		inferior conj	12606 Jul 15 07:47	2°♎53'18	2°51'44	
inferior conj	12605 Jul 31 17:01	19°♎37'00	2°17'22	minimum elong	12606 Jul 15 09:43	2°♎47'26	2°50'33	
minimum elong	12605 Jul 31 19:34	19°♎29'57	2°16'01	min. Earth dist.	12606 Jul 17 09:03	0°♎24'17	0.65297 AU	
min. Earth dist.	12605 Aug 03 08:24	16°♎43'10	0.63342 AU		12606 Jul 17 17:19	30°♎☾		
morning rise	12605 Aug 06 22:49	13°♎22'47		morning rise	12606 Jul 21 03:14	26°♎31'22		
desc. node	12605 Aug 09 05:24	11°♎56'10		desc. node	12606 Jul 27 02:46	23°♎51'27		
direct	12605 Aug 13 14:51	10°♎50'56		direct	12606 Jul 27 14:39	23°♎50'35		
morning max el	12605 Aug 27 13:32	18°♎52'38	27°47'27		12606 Aug 08 05:09	0°♎		
	12605 Sep 05 23:26	0°♎		morning max el	12606 Aug 10 00:28	1°♎44'59	27°04'12	
	12605 Sep 24 20:55	0°♎			12606 Aug 31 03:22	0°♎		
morning set	12605 Oct 01 05:14	12°♎11'42		morning set	12606 Sep 14 15:02	25°♎27'53		
asc. node	12605 Oct 03 00:22	15°♎50'47			12606 Sep 16 22:40	0°♎		
max. Earth dist.	12605 Oct 06 05:50	22°♎36'11	1.32306 AU	max. Earth dist.	12606 Sep 18 22:47	4°♎01'32	1.33614 AU	
				asc. node	12606 Sep 19 20:59	5°♎54'44		
superior conj	12605 Oct 09 00:17	28°♎33'45	0°55'12					
minimum elong	12605 Oct 08 22:06	28°♎21'57	0°55'11	superior conj	12606 Sep 23 02:35	12°♎38'35	0°30'40	
	12605 Oct 09 16:08	0°♎		minimum elong	12606 Sep 23 01:05	12°♎30'40	0°30'30	
evening rise	12605 Oct 15 21:07	13°♎31'42		evening rise	12606 Sep 30 07:42	28°♎00'58		
	12605 Oct 24 01:25	0°♎			12606 Oct 01 06:18	0°♎		
desc. node	12605 Nov 05 01:53	18°♎12'43			12606 Oct 19 04:07	0°♎		
evening max el	12605 Nov 08 08:26	21°♎42'35	23°30'06	evening max el	12606 Oct 20 21:05	1°♎47'04	21°49'54	
retrograde	12605 Nov 21 18:31	28°♎23'43		desc. node	12606 Oct 22 23:14	3°♎40'30		
evening set	12605 Nov 26 05:49	27°♎40'15		retrograde	12606 Nov 02 08:37	7°♎59'07		
min. Earth dist.	12605 Dec 02 18:29	24°♎34'20	0.55345 AU	evening set	12606 Nov 05 09:46	7°♎38'12		
inferior conj	12605 Dec 04 11:56	23°♎33'34	-5°52'09	inferior conj	12606 Nov 14 06:03	3°♎42'48	-5°37'07	
minimum elong	12605 Dec 04 14:02	23°♎30'27	5°51'08	minimum elong	12606 Nov 13 23:31	3°♎51'57	5°35'26	
morning rise	12605 Dec 13 00:02	19°♎41'13		min. Earth dist.	12606 Nov 14 00:56	3°♎49'58	0.54580 AU	
direct	12605 Dec 15 19:23	19°♎22'02			12606 Nov 22 07:29	30°♎♎		
morning max el	12605 Dec 26 14:45	24°♎30'56	20°24'26	morning rise	12606 Nov 22 14:23	29°♎55'25		
asc. node	12605 Dec 30 00:46	28°♎16'10		direct	12606 Nov 26 04:48	29°♎27'00		
	12605 Dec 31 08:53	0°♎			12606 Nov 29 23:19	0°♎		
morning set	12606 Jan 14 04:45	24°♎34'31		morning max el	12606 Dec 08 12:35	5°♎19'44	21°58'24	
	12606 Jan 16 19:50	0°♎		asc. node	12606 Dec 16 21:52	15°♎41'22		
					12606 Dec 25 01:26	0°♎		
superior conj	12606 Jan 21 18:11	10°♎07'27	1°15'31	morning set	12606 Dec 29 15:00	9°♎19'50		
minimum elong	12606 Jan 21 20:50	10°♎20'51	1°15'59					
max. Earth dist.	12606 Jan 27 05:38	20°♎55'13	1.36377 AU	superior conj	12607 Jan 05 17:42	24°♎26'06	1°29'41	
evening rise	12606 Jan 31 01:12	28°♎03'23		minimum elong	12607 Jan 05 19:33	24°♎35'48	1°30'26	
desc. node	12606 Feb 01 01:19	29°♎52'50			12607 Jan 08 09:51	0°♎		
	12606 Feb 01 02:54	0°♎		max. Earth dist.	12607 Jan 09 18:24	2°♎46'08	1.34458 AU	
	12606 Feb 19 19:03	0°♎		evening rise	12607 Jan 14 01:46	11°♎16'20		
evening max el	12606 Mar 07 13:21	19°♎20'54	25°56'34	desc. node	12607 Jan 18 22:02	20°♎16'12		
retrograde	12606 Mar 20 03:41	26°♎33'51			12607 Jan 24 13:29	0°♎		
evening set	12606 Mar 26 06:01	24°♎04'19			12607 Feb 15 03:37	0°♎		
asc. node	12606 Mar 27 21:59	22°♎30'43		evening max el	12607 Feb 18 02:54	3°♎03'06	26°52'45	
min. Earth dist.	12606 Mar 30 11:25	19°♎34'00	0.67270 AU	retrograde	12607 Mar 03 09:02	10°♎27'50		
inferior conj	12606 Apr 01 01:15	17°♎35'27	1°16'32	evening set	12607 Mar 09 21:22	7°♎55'03		
minimum elong	12606 Mar 31 23:32	17°♎40'50	1°15'43	min. Earth dist.	12607 Mar 13 21:15	3°♎58'31	0.65910 AU	
morning rise	12606 Apr 06 17:44	11°♎47'41		asc. node	12607 Mar 14 19:25	2°♎54'40		
direct	12606 Apr 10 00:28	10°♎46'20		inferior conj	12607 Mar 15 23:13	1°♎33'30	0°22'16	
morning max el	12606 Apr 16 17:03	14°♎22'41	18°47'10	minimum elong	12607 Mar 15 22:37	1°♎35'16	0°22'05	
	12606 Apr 28 11:45	0°♎			12607 Mar 17 07:58	30°♎♎		
desc. node	12606 Apr 30 03:22	2°♎30'30		morning rise	12607 Mar 22 01:11	25°♎57'18		
morning set	12606 May 08 18:24	15°♎52'23		direct	12607 Mar 24 21:48	25°♎12'32		
	12606 May 17 19:55	0°♎		morning max el	12607 Mar 31 07:08	28°♎34'25	18°10'02	
max. Earth dist.	12606 May 23 15:16	9°♎03'51	1.45630 AU		12607 Apr 01 15:49	0°♎		
				desc. node	12607 Apr 17 00:01	22°♎39'48		
superior conj	12606 May 25 01:32	11°♎17'58	-2°10'23	morning set	12607 Apr 19 06:24	26°♎19'10		
minimum elong	12606 May 24 21:17	11°♎01'17	2°11'07		12607 Apr 21 13:15	0°♎		
	12606 Jun 05 21:16	0°♎						
evening rise	12606 Jun 09 08:37	5°♎34'06		superior conj	12607 May 04 09:22	20°♎23'11	-1°49'23	
greatest brilliancy	12606 Jun 15 05:23	14°♎59'43	-0.9m	minimum elong	12607 May 04 00:15	19°♎47'24	1°49'16	
asc. node	12606 Jun 23 19:48	28°♎16'21		max. Earth dist.	12607 May 06 10:49	23°♎36'42	1.45743 AU	

	12607 May 10 13:07	0° Π		max. Earth dist.	12608 Apr 18 06:10	8° \mathcal{B} 07'42	1.45121 AU
evening rise	12607 May 20 11:19	15° Π 25'27		evening rise	12608 Apr 28 23:53	24° \mathcal{B} 48'42	
	12607 May 29 21:43	0° \mathcal{E}			12608 May 02 09:31	0° Π	
greatest brilliancy	12607 Jun 01 07:58	3° \mathcal{E} 40'56	-0.7m		12608 May 23 09:19	0° \mathcal{E}	
asc. node	12607 Jun 10 16:50	16° \mathcal{E} 44'30		evening max el	12608 May 26 11:25	3° \mathcal{E} 25'32	20°11'45
evening max el	12607 Jun 13 07:44	19° \mathcal{E} 38'55	19°14'58	asc. node	12608 May 27 13:57	4° \mathcal{E} 29'12	
retrograde	12607 Jun 20 07:29	23° \mathcal{E} 32'59		retrograde	12608 Jun 03 06:08	7° \mathcal{E} 53'14	
evening set	12607 Jun 23 20:49	22° \mathcal{E} 19'28		evening set	12608 Jun 07 05:04	6° \mathcal{E} 23'08	
inferior conj	12607 Jun 29 07:05	16° \mathcal{E} 29'52	3°09'35	inferior conj	12608 Jun 12 12:01	0° \mathcal{E} 20'34	3°13'51
minimum elong	12607 Jun 29 08:01	16° \mathcal{E} 26'51	3°08'35	minimum elong	12608 Jun 12 11:53	0° \mathcal{E} 21'02	3°12'55
min. Earth dist.	12607 Jun 30 17:42	14° \mathcal{E} 37'23	0.66869 AU		12608 Jun 12 18:03	30° \mathcal{R} Π	
morning rise	12607 Jul 04 18:39	10° \mathcal{E} 06'31		min. Earth dist.	12608 Jun 13 08:21	29° \mathcal{R} Π 11'19	0.68000 AU
direct	12607 Jul 10 21:26	7° \mathcal{E} 26'45		morning rise	12608 Jun 17 18:22	23° Π 59'43	
desc. node	12607 Jul 14 00:04	8° \mathcal{E} 01'44		direct	12608 Jun 23 09:54	21° Π 29'48	
morning max el	12607 Jul 23 11:22	14° \mathcal{E} 58'23	25°55'48	desc. node	12608 Jun 29 21:16	24° Π 00'41	
	12607 Aug 04 18:52	0° \mathcal{Q}		morning max el	12608 Jul 04 21:21	28° Π 22'44	24°31'49
	12607 Aug 23 23:01	0° \mathcal{P}			12608 Jul 06 10:28	0° \mathcal{E}	
morning set	12607 Aug 28 11:30	8° \mathcal{P} 06'09			12608 Jul 28 12:12	0° \mathcal{Q}	
max. Earth dist.	12607 Sep 01 05:25	15° \mathcal{P} 08'37	1.35414 AU	morning set	12608 Aug 09 14:04	19° \mathcal{Q} 54'14	
				max. Earth dist.	12608 Aug 13 04:25	26° \mathcal{Q} 18'09	1.37592 AU
superior conj	12607 Sep 06 21:06	26° \mathcal{P} 18'48	0°01'24		12608 Aug 15 04:57	0° \mathcal{P}	
minimum elong	12607 Sep 06 21:02	26° \mathcal{P} 18'26	0°01'14				
behind sun begin	12607 Sep 06 14:57	25° \mathcal{P} 47'37		superior conj	12608 Aug 20 04:32	9° \mathcal{P} 25'28	-0°31'35
behind sun end	12607 Sep 07 03:07	26° \mathcal{P} 49'20		minimum elong	12608 Aug 20 06:40	9° \mathcal{P} 35'46	0°31'36
asc. node	12607 Sep 06 17:36	26° \mathcal{P} 01'00		asc. node	12608 Aug 23 14:13	16° \mathcal{P} 05'20	
	12607 Sep 08 16:27	0° \mathcal{A}		evening rise	12608 Aug 28 18:17	26° \mathcal{P} 24'04	
evening rise	12607 Sep 14 15:35	12° \mathcal{A} 20'51			12608 Aug 30 13:48	0° \mathcal{A}	
	12607 Sep 23 19:40	0° \mathcal{L}		evening max el	12608 Sep 14 11:15	23° \mathcal{A} 46'40	19°16'56
evening max el	12607 Oct 02 21:06	12° \mathcal{L} 23'20	20°23'12	retrograde	12608 Sep 23 18:06	28° \mathcal{A} 24'56	
desc. node	12607 Oct 09 20:40	17° \mathcal{L} 07'49		evening set	12608 Sep 25 14:32	28° \mathcal{A} 14'41	
retrograde	12607 Oct 13 20:10	17° \mathcal{L} 50'06		desc. node	12608 Sep 25 18:08	28° \mathcal{A} 12'59	
evening set	12607 Oct 15 22:43	17° \mathcal{L} 38'56		inferior conj	12608 Oct 04 04:32	24° \mathcal{A} 05'05	-2°38'10
inferior conj	12607 Oct 24 22:58	13° \mathcal{L} 42'46	-4°24'38	minimum elong	12608 Oct 03 21:41	24° \mathcal{A} 16'25	2°35'17
minimum elong	12607 Oct 24 12:54	13° \mathcal{L} 57'29	4°21'10	min. Earth dist.	12608 Oct 06 19:40	22° \mathcal{A} 21'05	0.55834 AU
min. Earth dist.	12607 Oct 26 08:39	12° \mathcal{L} 53'26	0.54752 AU	morning rise	12608 Oct 12 02:18	19° \mathcal{A} 30'58	
morning rise	12607 Nov 02 02:26	9° \mathcal{L} 40'21		direct	12608 Oct 17 10:09	18° \mathcal{A} 26'14	
direct	12607 Nov 06 14:14	8° \mathcal{L} 56'49		morning max el	12608 Oct 31 11:13	25° \mathcal{A} 32'38	25°30'31
morning max el	12607 Nov 20 00:39	15° \mathcal{L} 30'20	23°45'35		12608 Nov 04 15:46	0° \mathcal{L}	
	12607 Dec 01 09:41	0° \mathcal{J}		asc. node	12608 Nov 19 15:46	22° \mathcal{L} 48'42	
asc. node	12607 Dec 03 18:52	3° \mathcal{J} 56'25			12608 Nov 23 08:55	0° \mathcal{J}	
morning set	12607 Dec 14 02:47	24° \mathcal{J} 05'49		morning set	12608 Nov 27 14:19	8° \mathcal{J} 47'46	
	12607 Dec 16 20:23	0° \mathcal{Z}					
superior conj	12607 Dec 20 23:31	9° \mathcal{Z} 00'06	1°37'07	superior conj	12608 Dec 04 09:10	23° \mathcal{J} 42'22	1°38'17
minimum elong	12607 Dec 21 00:16	9° \mathcal{Z} 04'13	1°38'02	minimum elong	12608 Dec 04 08:49	23° \mathcal{J} 40'24	1°39'12
max. Earth dist.	12607 Dec 23 15:01	14° \mathcal{Z} 41'24	1.32947 AU	max. Earth dist.	12608 Dec 05 18:48	26° \mathcal{J} 47'51	1.31905 AU
evening rise	12607 Dec 28 14:29	24° \mathcal{Z} 59'25			12608 Dec 07 05:55	0° \mathcal{Z}	
	12607 Dec 31 03:35	0° \mathcal{A}		evening rise	12608 Dec 11 12:17	9° \mathcal{Z} 04'49	
desc. node	12608 Jan 05 18:51	10° \mathcal{A} 25'21		desc. node	12608 Dec 22 15:46	0° \mathcal{A} 14'09	
	12608 Jan 18 01:20	0° \mathcal{H}			12608 Dec 22 12:29	0° \mathcal{A}	
evening max el	12608 Jan 31 15:52	16° \mathcal{H} 27'11	27°26'23	evening max el	12609 Jan 13 02:14	29° \mathcal{A} 20'29	27°30'49
retrograde	12608 Feb 14 07:54	23° \mathcal{H} 53'02		retrograde	12609 Jan 13 19:11	0° \mathcal{H}	
evening set	12608 Feb 21 03:32	21° \mathcal{H} 23'38		evening set	12609 Jan 26 23:09	6° \mathcal{H} 40'31	
min. Earth dist.	12608 Feb 24 23:19	17° \mathcal{H} 58'19	0.64197 AU	min. Earth dist.	12609 Feb 02 21:50	4° \mathcal{H} 22'07	
inferior conj	12608 Feb 27 12:42	15° \mathcal{H} 16'36	-0°42'37		12609 Feb 06 15:45	1° \mathcal{H} 23'25	0.62208 AU
minimum elong	12608 Feb 27 14:01	15° \mathcal{H} 13'07	0°41'45	inferior conj	12609 Feb 08 03:43	30° \mathcal{R} \mathcal{A}	
asc. node	12608 Feb 29 16:52	13° \mathcal{H} 03'53		minimum elong	12609 Feb 09 14:42	28° \mathcal{A} 37'06	-1°57'07
morning rise	12608 Mar 05 02:33	9° \mathcal{H} 54'16		asc. node	12609 Feb 09 18:42	28° \mathcal{A} 27'41	1°54'55
direct	12608 Mar 07 14:37	9° \mathcal{H} 22'32		morning rise	12609 Feb 15 14:16	24° \mathcal{A} 00'23	
morning max el	12608 Mar 14 00:23	12° \mathcal{H} 41'14	17°50'02	direct	12609 Feb 16 18:13	23° \mathcal{A} 31'46	
	12608 Mar 26 02:30	0° \mathcal{Y}		morning max el	12609 Feb 18 23:47	23° \mathcal{A} 09'20	
morning set	12608 Mar 30 22:42	8° \mathcal{Y} 08'22			12609 Feb 25 17:46	26° \mathcal{A} 35'00	17°47'43
desc. node	12608 Apr 02 20:36	13° \mathcal{Y} 02'32		morning set	12609 Feb 28 17:09	0° \mathcal{H}	
					12609 Mar 13 14:05	21° \mathcal{H} 03'38	
superior conj	12608 Apr 13 05:48	0° \mathcal{B} 07'49	-1°13'55	desc. node	12609 Mar 18 15:48	0° \mathcal{Y}	
minimum elong	12608 Apr 12 22:11	29° \mathcal{Y} 37'09	1°13'20		12609 Mar 20 17:10	3° \mathcal{Y} 34'26	
	12608 Apr 13 03:52	0° \mathcal{B}		superior conj	12609 Mar 25 01:15	10° \mathcal{Y} 58'27	-0°33'10

minimum elong	12609 Mar 24 22:02	10° Υ 44'54	0°32'46	behind sun end	12610 Mar 07 04:27	23° X 30'10	
max. Earth dist.	12609 Mar 31 23:09	22° Υ 22'07	1.43829 AU	desc. node	12610 Mar 07 13:42	24° X 10'59	
	12609 Apr 05 18:08	0° B			12610 Mar 10 21:50	0° Υ	
evening rise	12609 Apr 08 14:02	4° B 24'58		max. Earth dist.	12610 Mar 14 11:35	6° Υ 03'08	1.42000 AU
	12609 Apr 25 18:57	0° Π		evening rise	12610 Mar 19 18:48	14° Υ 43'25	
evening max el	12609 May 09 09:23	17° Π 13'19	21°21'10		12610 Mar 29 15:33	0° B	
asc. node	12609 May 14 11:09	21° Π 17'16			12610 Apr 21 02:35	0° Π	
retrograde	12609 May 18 04:42	22° Π 22'18		evening max el	12610 Apr 22 02:29	1° Π 01'25	22°39'08
evening set	12609 May 22 14:03	20° Π 35'52		asc. node	12610 May 01 08:26	6° Π 51'45	
inferior conj	12609 May 27 20:16	14° Π 21'51	3°06'29	retrograde	12610 May 02 01:36	6° Π 54'09	
minimum elong	12609 May 27 19:11	14° Π 25'37	3°05'30	evening set	12610 May 06 22:03	4° Π 52'31	
min. Earth dist.	12609 May 28 03:02	13° Π 58'14	0.68662 AU		12610 May 11 03:31	30° R B	
morning rise	12609 Jun 02 00:06	8° Π 05'51		inferior conj	12610 May 12 05:42	28° B 29'21	2°48'40
direct	12609 Jun 07 02:56	5° Π 52'11		minimum elong	12610 May 12 03:56	28° B 35'33	2°47'35
desc. node	12609 Jun 16 18:20	11° Π 21'49		min. Earth dist.	12610 May 11 23:37	28° B 50'32	0.68848 AU
morning max el	12609 Jun 17 07:55	11° Π 55'30	23°02'09	morning rise	12610 May 17 09:42	22° B 19'31	
	12609 Jul 01 18:16	0° C		direct	12610 May 21 23:24	20° B 25'49	
	12609 Jul 21 08:10	0° Ω		morning max el	12610 May 30 22:00	25° B 37'19	21°35'34
morning set	12609 Jul 21 18:06	0° Ω 41'07		desc. node	12610 Jun 03 15:17	29° B 42'36	
max. Earth dist.	12609 Jul 26 02:28	8° Ω 01'32	1.39929 AU		12610 Jun 03 21:09	0° Π	
					12610 Jun 25 05:09	0° C	
superior conj	12609 Aug 02 20:56	21° Ω 49'24	-1°06'07	morning set	12610 Jul 01 20:41	10° C 20'41	
minimum elong	12609 Aug 03 01:43	22° Ω 11'22	1°06'02	max. Earth dist.	12610 Jul 08 04:59	20° C 36'01	1.42139 AU
	12609 Aug 07 06:17	0° D			12610 Jul 13 19:18	0° Ω	
asc. node	12609 Aug 10 10:51	6° D 04'13					
evening rise	12609 Aug 12 12:49	10° D 03'17		superior conj	12610 Jul 15 17:49	3° Ω 20'25	-1°38'36
	12609 Aug 23 19:13	0° E		minimum elong	12610 Jul 16 00:38	3° Ω 50'00	1°38'39
evening max el	12609 Aug 28 13:11	5° E 55'27	18°32'20	evening rise	12610 Jul 26 19:21	23° Ω 08'34	
retrograde	12609 Sep 05 10:43	9° E 54'08		asc. node	12610 Jul 28 07:34	25° Ω 53'44	
evening set	12609 Sep 07 10:38	9° E 39'40			12610 Jul 30 13:57	0° D	
desc. node	12609 Sep 12 15:37	7° E 06'55		evening max el	12610 Aug 11 22:57	18° D 41'11	18°08'24
inferior conj	12609 Sep 15 06:48	5° E 10'00	-0°49'39	retrograde	12610 Aug 18 21:50	22° D 13'50	
minimum elong	12609 Sep 15 04:51	5° E 13'48	0°48'52	evening set	12610 Aug 21 04:53	21° D 51'07	
min. Earth dist.	12609 Sep 18 12:26	2° E 40'50	0.57617 AU	inferior conj	12610 Aug 28 06:34	17° D 01'00	0°41'13
morning rise	12609 Sep 22 19:36	29° D 58'09		minimum elong	12610 Aug 28 07:52	16° D 58'05	0°40'26
	12609 Sep 22 18:07	30° R D		desc. node	12610 Aug 30 13:04	14° D 57'42	
direct	12609 Sep 28 19:53	28° D 27'00		min. Earth dist.	12610 Aug 31 13:16	14° D 04'45	0.59800 AU
	12609 Oct 05 00:56	0° E		morning rise	12610 Sep 04 07:36	11° D 16'42	
morning max el	12609 Oct 13 03:17	5° E 59'10	26°55'00	direct	12610 Sep 10 19:05	9° D 17'37	
	12609 Oct 30 21:14	0° M		morning max el	12610 Sep 25 03:04	17° D 08'56	27°45'42
asc. node	12609 Nov 06 12:33	12° M 08'25			12610 Oct 05 18:54	0° E	
morning set	12609 Nov 11 23:54	23° M 20'52			12610 Oct 23 11:40	0° M	
	12609 Nov 15 01:27	0° X		asc. node	12610 Oct 24 09:16	1° M 47'59	
				morning set	12610 Oct 27 05:47	7° M 40'33	
superior conj	12609 Nov 18 20:38	8° X 26'41	1°33'31	max. Earth dist.	12610 Nov 02 11:25	21° M 12'52	1.31312 AU
minimum elong	12609 Nov 18 19:19	8° X 19'19	1°34'15				
max. Earth dist.	12609 Nov 19 02:49	9° X 01'12	1.31356 AU	superior conj	12610 Nov 03 08:04	23° M 07'47	1°23'01
evening rise	12609 Nov 25 16:31	23° X 25'26		minimum elong	12610 Nov 03 06:04	22° M 56'39	1°23'29
	12609 Nov 28 20:32	0° B			12610 Nov 06 10:07	0° X	
desc. node	12609 Dec 09 12:46	19° B 33'44		evening rise	12610 Nov 10 01:00	7° X 55'42	
	12609 Dec 16 11:15	0° \approx			12610 Nov 21 08:01	0° B	
evening max el	12609 Dec 26 07:05	11° \approx 29'13	27°01'23	desc. node	12610 Nov 26 09:52	8° B 12'55	
retrograde	12610 Jan 09 05:37	18° \approx 40'53		evening max el	12610 Dec 08 04:04	22° B 46'00	25°58'06
evening set	12610 Jan 16 00:45	16° \approx 41'37		retrograde	12610 Dec 22 02:06	29° B 48'53	
min. Earth dist.	12610 Jan 19 21:22	14° \approx 01'06	0.60066 AU	evening set	12610 Dec 28 08:11	28° B 16'43	
inferior conj	12610 Jan 23 01:36	11° \approx 24'46	-3°17'44	min. Earth dist.	12611 Jan 01 16:54	25° B 40'28	0.57955 AU
minimum elong	12610 Jan 23 08:33	11° \approx 10'28	3°14'29	inferior conj	12611 Jan 04 17:57	23° B 30'22	-4°35'54
morning rise	12610 Jan 30 19:17	6° \approx 39'41		minimum elong	12611 Jan 05 02:32	23° B 15'02	4°32'42
direct	12610 Feb 01 21:12	6° \approx 23'02		morning rise	12611 Jan 12 23:40	19° B 07'32	
asc. node	12610 Feb 02 11:37	6° \approx 24'28		direct	12611 Jan 15 02:23	18° B 53'12	
morning max el	12610 Feb 09 07:49	10° \approx 05'34	18°04'07	asc. node	12611 Jan 20 08:53	20° B 28'25	
	12610 Feb 22 08:39	0° X		morning max el	12611 Jan 23 14:45	23° B 02'40	18°40'52
morning set	12610 Feb 24 22:10	4° X 44'32			12611 Jan 29 04:01	0° \approx	
				morning set	12611 Feb 08 17:53	18° \approx 56'19	
superior conj	12610 Mar 06 20:40	22° X 55'37	0°05'36		12611 Feb 14 10:50	0° X	
minimum elong	12610 Mar 06 21:08	22° X 57'42	0°05'44				
behind sun begin	12610 Mar 06 13:48	22° X 25'08		superior conj	12611 Feb 17 12:21	5° X 48'43	0°38'28

minimum elong	12611 Feb 17 14:45	5° X 59'56	0°38'34		12612 Feb 06 08:05	0° X	
desc. node	12611 Feb 22 10:16	14° X 48'56		max. Earth dist.	12612 Feb 07 01:14	1° X 19'40	1.37607 AU
max. Earth dist.	12611 Feb 24 19:14	19° X 00'56	1.39845 AU	desc. node	12612 Feb 09 06:52	5° X 24'31	
evening rise	12611 Feb 28 20:22	25° X 57'11		evening rise	12612 Feb 10 18:38	8° X 04'23	
	12611 Mar 03 06:50	0° Y			12612 Feb 24 02:52	0° Y	
	12611 Mar 23 07:43	0° Z		evening max el	12612 Mar 17 06:12	28° Y 43'33	25°17'05
evening max el	12611 Apr 04 16:42	14° Z 51'28	24°00'01		12612 Mar 18 14:20	0° Z	
retrograde	12611 Apr 15 19:30	21° Z 23'38		retrograde	12612 Mar 29 09:14	5° Z 45'01	
asc. node	12611 Apr 18 05:46	20° Z 56'47		evening set	12612 Apr 04 04:55	3° Z 20'01	
evening set	12611 Apr 21 03:31	19° Z 08'50		asc. node	12612 Apr 04 03:10	3° Z 23'43	
min. Earth dist.	12611 Apr 25 20:01	13° Z 42'37	0.68573 AU		12612 Apr 07 09:12	30° R Y	
inferior conj	12611 Apr 26 14:30	12° Z 39'47	2°20'51	min. Earth dist.	12612 Apr 08 14:05	28° Y 29'18	0.67859 AU
minimum elong	12611 Apr 26 12:22	12° Z 47'03	2°19'43	inferior conj	12612 Apr 09 20:47	26° Y 49'32	1°43'01
morning rise	12611 May 01 21:16	6° Z 37'17		minimum elong	12612 Apr 09 18:44	26° Y 56'10	1°42'01
direct	12611 May 05 22:14	5° Z 04'40		morning rise	12612 Apr 15 08:55	20° Y 55'44	
morning max el	12611 May 13 18:24	9° Z 30'18	20°18'47	direct	12612 Apr 18 22:02	19° Y 43'27	
desc. node	12611 May 21 12:09	18° Z 47'00		morning max el	12612 Apr 25 22:25	23° Y 34'11	19°16'02
	12611 May 29 10:15	0° II			12612 May 01 09:52	0° Z	
morning set	12611 Jun 11 02:16	19° II 06'43		desc. node	12612 May 07 08:55	8° Z 23'21	
	12611 Jun 18 01:28	0° S		greatest brilliancy	12612 May 08 18:15	10° Z 26'32	-0.7m
max. Earth dist.	12611 Jun 20 13:53	4° S 00'25	1.43970 AU	morning set	12612 May 20 04:15	27° Z 49'11	
					12612 May 21 14:09	0° II	
superior conj	12611 Jun 26 15:27	13° S 51'10	-2°03'22	max. Earth dist.	12612 Jun 02 04:56	18° II 05'05	1.45222 AU
minimum elong	12611 Jun 26 21:25	14° S 15'45	2°03'56				
	12611 Jul 06 05:16	0° Q		superior conj	12612 Jun 05 14:09	23° II 25'43	-2°13'27
evening rise	12611 Jul 09 09:05	5° Q 27'50		minimum elong	12612 Jun 05 14:25	23° II 26'46	2°14'23
asc. node	12611 Jul 15 04:21	15° Q 28'57			12612 Jun 09 17:03	0° S	
	12611 Jul 24 18:47	0° P		evening rise	12612 Jun 20 01:05	16° S 50'09	
evening max el	12611 Jul 26 12:36	1° P 53'50	18°03'52		12612 Jun 28 01:21	0° Q	
retrograde	12611 Aug 01 23:33	5° P 14'46		asc. node	12612 Jul 01 01:14	4° Q 44'26	
evening set	12611 Aug 04 14:45	4° P 40'23		evening max el	12612 Jul 09 02:40	15° Q 24'49	18°17'44
	12611 Aug 10 13:31	30° R Q		retrograde	12612 Jul 15 11:33	18° Q 48'02	
inferior conj	12611 Aug 11 00:39	29° Q 31'24	1°48'41	evening set	12612 Jul 18 11:10	17° Q 59'26	
minimum elong	12611 Aug 11 03:11	29° Q 24'54	1°47'21	inferior conj	12612 Jul 24 09:02	12° Q 33'22	2°34'06
min. Earth dist.	12611 Aug 13 23:17	26° Q 30'26	0.62085 AU	minimum elong	12612 Jul 24 11:24	12° Q 26'33	2°32'49
desc. node	12611 Aug 17 10:32	23° Q 30'01		min. Earth dist.	12612 Jul 26 18:41	9° Q 48'10	0.64217 AU
morning rise	12611 Aug 17 13:14	23° Q 25'11		morning rise	12612 Jul 30 10:11	6° Q 15'10	
direct	12611 Aug 24 05:34	21° Q 02'33		desc. node	12612 Aug 03 07:56	4° Q 03'35	
morning max el	12611 Sep 07 09:03	29° Q 03'56	27°57'31	direct	12612 Aug 06 01:02	3° Q 38'00	
	12611 Sep 08 07:04	0° P		morning max el	12612 Aug 19 18:44	11° Q 38'03	27°32'36
	12611 Sep 29 17:17	0° U			12612 Sep 03 08:55	0° P	
morning set	12611 Oct 11 05:52	21° U 40'28			12612 Sep 21 04:53	0° U	
asc. node	12611 Oct 11 05:55	21° U 40'43		morning set	12612 Sep 23 21:45	5° U 14'46	
	12611 Oct 15 05:07	0° M		asc. node	12612 Sep 27 02:34	11° U 42'01	
max. Earth dist.	12611 Oct 16 16:34	3° M 11'23	1.31790 AU	max. Earth dist.	12612 Sep 28 14:48	14° U 49'44	1.32803 AU
superior conj	12611 Oct 18 17:35	7° M 39'21	1°06'57	superior conj	12612 Oct 01 23:12	21° U 56'03	0°45'26
minimum elong	12611 Oct 18 15:19	7° M 26'55	1°07'05	minimum elong	12612 Oct 01 21:14	21° U 45'27	0°45'20
evening rise	12611 Oct 25 11:45	22° M 29'30			12612 Oct 05 16:41	0° M	
	12611 Oct 29 01:20	0° X		evening rise	12612 Oct 08 22:58	7° M 02'13	
desc. node	12611 Nov 13 07:04	25° X 55'20			12612 Oct 20 22:34	0° X	
	12611 Nov 16 14:49	0° Z		desc. node	12612 Oct 30 04:23	12° X 19'59	
evening max el	12611 Nov 19 17:10	3° Z 14'37	24°28'12	evening max el	12612 Oct 31 03:30	13° X 18'06	22°46'36
retrograde	12611 Dec 03 10:30	10° Z 05'52		retrograde	12612 Nov 13 05:45	19° X 48'12	
evening set	12611 Dec 08 16:04	9° Z 05'28		evening set	12612 Nov 17 02:04	19° X 15'59	
min. Earth dist.	12611 Dec 14 04:45	6° Z 15'30	0.56139 AU	min. Earth dist.	12612 Nov 24 12:01	15° X 54'05	0.54920 AU
inferior conj	12611 Dec 16 13:40	4° Z 46'41	-5°35'23	inferior conj	12612 Nov 25 14:50	15° X 15'56	-5°53'09
minimum elong	12611 Dec 16 19:47	4° Z 37'07	5°33'37	minimum elong	12612 Nov 25 13:10	15° X 18'19	5°52'13
morning rise	12611 Dec 25 01:34	0° Z 44'36		morning rise	12612 Dec 04 01:41	11° X 27'29	
direct	12611 Dec 27 12:17	0° Z 28'35		direct	12612 Dec 07 04:48	11° X 04'52	
morning max el	12612 Jan 06 10:30	5° Z 14'22	19°39'57	morning max el	12612 Dec 18 16:07	16° X 32'38	21°02'00
asc. node	12612 Jan 07 06:05	6° Z 03'22		asc. node	12612 Dec 24 03:13	22° X 53'18	
	12612 Jan 22 04:00	0° Z			12612 Dec 28 18:43	0° Z	
morning set	12612 Jan 23 21:26	3° Z 27'37		morning set	12613 Jan 07 05:55	18° Z 10'02	
					12613 Jan 12 21:40	0° Z	
superior conj	12612 Jan 31 19:35	19° Z 24'02	1°04'07				
minimum elong	12612 Jan 31 22:26	19° Z 38'05	1°04'24	superior conj	12613 Jan 14 14:09	3° Z 29'45	1°22'23

minimum elong	12613 Jan 14 16:31	3°  41'56	1°22'58	minimum elong	12613 Dec 29 18:07	18°  04'03	1°34'28
max. Earth dist.	12613 Jan 19 10:42	13°  16'42	1.35523 AU	max. Earth dist.	12614 Jan 02 03:09	25°  10'31	1.33765 AU
evening rise	12613 Jan 23 10:40	20°  56'14			12614 Jan 04 11:47	0° 	
desc. node	12613 Jan 26 03:32	25°  53'44		evening rise	12614 Jan 06 16:52	4°  23'45	
	12613 Jan 28 11:02	0° 		desc. node	12614 Jan 13 00:18	16° 	
	12613 Feb 17 00:49	0° 			12614 Jan 21 05:36	0° 	
evening max el	12613 Feb 27 19:58	12°  32'27	26°22'56	evening max el	12614 Feb 10 09:32	26°  09'04	27°10'10
retrograde	12613 Mar 12 17:43	19°  51'09			12614 Feb 14 21:56	0° 	
evening set	12613 Mar 19 00:28	17°  19'51		retrograde	12614 Feb 23 20:10	3°  34'39	
asc. node	12613 Mar 22 00:36	14°  22'18		evening set	12614 Mar 02 12:12	1°  02'25	
min. Earth dist.	12613 Mar 23 03:31	13°  03'58	0.66735 AU		12614 Mar 03 18:13	30° 	
inferior conj	12613 Mar 24 22:26	10°  53'28	0°54'50	min. Earth dist.	12614 Mar 06 10:10	27°  19'45	0.65228 AU
minimum elong	12613 Mar 24 21:06	10°  57'32	0°54'15	inferior conj	12614 Mar 08 17:09	24°  46'26	-0°03'57
morning rise	12613 Mar 30 18:37	5°  10'09		minimum elong	12614 Mar 08 17:15	24°  46'08	0°03'43
direct	12613 Apr 02 20:58	4°  16'04		transit middle	12614 Mar 08 17:15	24°  46'08	0°03'43
morning max el	12613 Apr 09 09:22	7°  44'42	18°29'19	transit begin	12614 Mar 08 14:19	24°  54'22	
desc. node	12613 Apr 24 05:35	28°  22'30		transit end	12614 Mar 08 20:11	24°  37'56	
	12613 Apr 25 06:26	0° 		asc. node	12614 Mar 08 22:01	24°  32'48	
morning set	12613 Apr 30 00:17	7°  28'37		morning rise	12614 Mar 14 23:54	19°  15'54	
	12613 May 14 08:38	0° 		direct	12614 Mar 17 16:47	18°  37'01	
				morning max el	12614 Mar 24 01:11	21°  55'49	17°59'27
superior conj	12613 May 15 22:31	2°  27'59	-2°03'46		12614 Mar 30 10:35	0° 	
minimum elong	12613 May 15 15:27	2°  00'20	2°04'09	morning set	12614 Apr 11 00:41	18°  32'08	
max. Earth dist.	12613 May 16 00:09	2°  34'22	1.45772 AU	desc. node	12614 Apr 11 02:13	18°  38'24	
evening rise	12613 May 31 16:36	27°  11'26			12614 Apr 18 01:21	0° 	
	12613 Jun 02 11:15	0° 					
greatest brilliancy	12613 Jun 09 14:37	11°  14'26	-0.8m	superior conj	12614 Apr 25 09:46	11°  44'55	-1°35'34
asc. node	12613 Jun 17 22:14	23°  32'19		minimum elong	12614 Apr 25 00:38	11°  08'45	1°35'10
evening max el	12613 Jun 22 14:12	29°  05'38	18°49'15	max. Earth dist.	12614 Apr 28 20:25	17°  10'16	1.45571 AU
	12613 Jun 23 13:13	0° 			12614 May 07 02:16	0° 	
retrograde	12613 Jun 29 06:02	2°  04'40		evening rise	12614 May 11 11:43	6°  46'43	
evening set	12613 Jul 02 14:18	1°  40'19		greatest brilliancy	12614 May 25 04:13	27°  12'50	-0.7m
	12613 Jul 04 15:46	30°  46'19			12614 May 26 20:32	0° 	
inferior conj	12613 Jul 08 03:48	25°  58'44	3°01'04	asc. node	12614 Jun 04 19:17	11°  43'22	
minimum elong	12613 Jul 08 05:20	25°  53'56	2°59'59	evening max el	12614 Jun 05 21:01	12°  50'44	19°37'18
min. Earth dist.	12613 Jul 09 22:46	23°  44'25	0.66021 AU	retrograde	12614 Jun 13 03:57	16°  57'59	
morning rise	12613 Jul 13 19:37	19°  53'52		evening set	12614 Jun 16 21:19	15°  53'15	
direct	12613 Jul 20 03:50	16°  54'31		inferior conj	12614 Jun 22 05:48	9°  41'42	3°12'54
desc. node	12613 Jul 21 05:17	16°  58'33		minimum elong	12614 Jun 22 06:16	9°  40'08	3°11'57
morning max el	12613 Aug 02 05:47	24°  40'17	26°37'40	min. Earth dist.	12614 Jun 23 10:09	8°  50'23	0.67407 AU
	12613 Aug 07 01:20	0° 		morning rise	12614 Jun 27 14:49	3°  51'03	
	12613 Aug 27 19:36	0° 		direct	12614 Jul 03 12:56	0° 	
morning set	12613 Sep 07 02:21	18°  15'54		desc. node	12614 Jul 08 02:32	1°  58'14	
max. Earth dist.	12613 Sep 11 03:30	26°  06'42	1.34330 AU	morning max el	12614 Jul 15 16:26	7°  59'39	25°21'28
	12613 Sep 13 02:03	0° 			12614 Aug 01 21:38	0° 	
asc. node	12613 Sep 13 23:13	1°  47'36			12614 Aug 20 08:11	0° 	
				morning set	12614 Aug 20 15:47	0° 	
superior conj	12613 Sep 15 22:35	5°  51'36	0°18'49	max. Earth dist.	12614 Aug 24 06:38	7°  12'49	1.36304 AU
minimum elong	12613 Sep 15 21:35	5°  46'26	0°18'38				
evening rise	12613 Sep 23 08:41	21°  48'40		superior conj	12614 Aug 30 12:48	19°  18'20	-0°12'14
	12613 Sep 27 12:33	0° 		minimum elong	12614 Aug 30 13:34	19°  22'11	0°12'21
evening max el	12613 Oct 12 20:14	23°  33'06	21°10'44	behind sun begin	12614 Aug 30 09:27	19°  01'40	
desc. node	12613 Oct 17 01:46	27°  00'35		behind sun end	12614 Aug 30 17:41	19°  42'43	
retrograde	12613 Oct 24 17:06	29°  27'01		asc. node	12614 Aug 31 19:50	21°  53'27	
evening set	12613 Oct 27 06:53	29°  11'31			12614 Sep 04 19:39	0° 	
inferior conj	12613 Nov 05 06:38	25°  17'21	-5°12'30	evening rise	12614 Sep 07 14:42	5°  42'29	
minimum elong	12613 Nov 04 21:37	25°  30'02	5°09'57		12614 Sep 21 06:39	0° 	
min. Earth dist.	12613 Nov 05 18:20	25°  00'51	0.54541 AU	evening max el	12614 Sep 25 02:08	4°  28'09	19°52'20
morning rise	12613 Nov 13 12:56	21°  26'34		desc. node	12614 Oct 03 23:13	9°  29'15	
direct	12613 Nov 17 12:42	20°  52'24		retrograde	12614 Oct 05 08:04	9°  34'31	
morning max el	12613 Nov 30 08:52	27°  02'26	22°43'09	evening set	12614 Oct 07 06:10	9°  24'33	
	12613 Dec 03 05:24	0° 		inferior conj	12614 Oct 16 03:27	5°  23'33	-3°41'41
asc. node	12613 Dec 11 00:16	10°  41'53		minimum elong	12614 Oct 15 18:12	5°  37'43	3°38'07
	12613 Dec 21 07:24	0° 		min. Earth dist.	12614 Oct 18 03:07	4°  10'35	0.55103 AU
morning set	12613 Dec 22 17:07	2°  57'18		morning rise	12614 Oct 24 04:46	1°  09'08	
				direct	12614 Oct 29 01:02	0° 	
superior conj	12613 Dec 29 16:43	17°  56'35	1°33'38	morning max el	12614 Nov 11 19:24	7°  06'04	24°31'42

asc. node	12614 Nov 27 21:13	29°♄14'13		asc. node	12615 Nov 14 18:04	18°♄19'23	
	12614 Nov 28 07:25	0°♄			12615 Nov 20 13:17	0°♄	
morning set	12614 Dec 07 05:00	17°♄42'38		morning set	12615 Nov 21 15:54	2°♄21'37	
	12614 Dec 12 20:07	0°♄					
superior conj	12614 Dec 14 00:26	2°♄35'18	1°38'22	superior conj	12615 Nov 28 11:06	17°♄19'34	1°36'58
minimum elong	12614 Dec 14 00:43	2°♄36'50	1°39'18	minimum elong	12615 Nov 28 10:19	17°♄15'11	1°37'50
max. Earth dist.	12614 Dec 16 03:02	7°♄10'41	1.32442 AU	max. Earth dist.	12615 Nov 29 08:49	19°♄20'07	1.31608 AU
evening rise	12614 Dec 21 09:46	18°♄17'13			12615 Dec 04 06:12	0°♄	
	12614 Dec 27 10:10	0°♄		evening rise	12615 Dec 05 10:35	2°♄30'02	
desc. node	12614 Dec 30 21:08	6°♄13'54		desc. node	12615 Dec 17 18:04	25°♄51'28	
	12615 Jan 15 13:36	0°♄			12615 Dec 20 06:33	0°♄	
evening max el	12615 Jan 23 21:25	9°♄20'57	27°32'01	evening max el	12616 Jan 06 05:38	21°♄56'19	27°22'29
retrograde	12615 Feb 06 15:58	16°♄45'24		retrograde	12616 Jan 20 03:56	29°♄13'45	
evening set	12615 Feb 13 13:40	14°♄19'18		evening set	12616 Jan 27 01:54	27°♄02'23	
min. Earth dist.	12615 Feb 17 08:08	11°♄06'23	0.63384 AU	min. Earth dist.	12616 Jan 30 20:07	24°♄12'36	0.61306 AU
inferior conj	12615 Feb 20 02:06	8°♄20'46	-1°13'09	inferior conj	12616 Feb 02 22:04	21°♄28'22	-2°30'55
minimum elong	12615 Feb 20 04:28	8°♄14'47	1°11'44	minimum elong	12616 Feb 03 03:21	21°♄16'36	2°28'13
asc. node	12615 Feb 23 19:26	4°♄55'09		morning rise	12616 Feb 10 07:43	16°♄31'24	
morning rise	12615 Feb 26 21:38	3°♄05'38		asc. node	12616 Feb 10 16:48	16°♄25'13	
direct	12615 Mar 01 06:38	2°♄38'22		direct	12616 Feb 12 11:07	16°♄12'00	
morning max el	12615 Mar 07 18:56	5°♄58'39	17°46'51	morning max el	12616 Feb 19 11:20	19°♄43'55	17°52'16
	12615 Mar 23 15:32	0°♄			12616 Feb 27 01:17	0°♄	
morning set	12615 Mar 24 03:31	0°♄51'34		morning set	12616 Mar 06 02:40	14°♄08'06	
desc. node	12615 Mar 28 22:46	9°♄05'32		desc. node	12616 Mar 14 19:17	29°♄39'45	
					12616 Mar 14 23:56	0°♄	
superior conj	12615 Apr 05 15:22	21°♄56'30	-0°56'46	superior conj	12616 Mar 16 21:13	3°♄16'10	-0°16'11
minimum elong	12615 Apr 05 09:32	21°♄32'37	0°56'13	minimum elong	12616 Mar 16 19:46	3°♄09'53	0°15'55
	12615 Apr 10 14:53	0°♄		behind sun begin	12616 Mar 16 18:58	3°♄06'28	
max. Earth dist.	12615 Apr 11 14:47	1°♄35'17	1.44645 AU	behind sun end	12616 Mar 16 20:33	3°♄13'17	
evening rise	12615 Apr 20 22:54	16°♄10'15		max. Earth dist.	12616 Mar 24 05:22	15°♄34'52	1.43104 AU
	12615 Apr 30 02:25	0°♄		evening rise	12616 Mar 30 17:56	26°♄01'30	
evening max el	12615 May 19 22:05	26°♄37'24	20°39'55		12616 Apr 02 07:12	0°♄	
asc. node	12615 May 22 16:25	29°♄05'48			12616 Apr 22 23:39	0°♄	
	12615 May 23 23:29	0°♄		evening max el	12616 May 01 17:44	10°♄25'08	21°53'41
retrograde	12615 May 28 02:53	1°♄22'34		asc. node	12616 May 08 13:38	15°♄24'36	
	12615 May 31 22:26	30°♄		retrograde	12616 May 11 00:54	15°♄53'08	
evening set	12615 Jun 01 06:04	29°♄45'30		evening set	12616 May 15 14:47	14°♄00'19	
inferior conj	12615 Jun 06 12:24	23°♄37'38	3°12'05	inferior conj	12616 May 20 21:22	7°♄42'08	3°00'12
minimum elong	12615 Jun 06 11:50	23°♄39'34	3°11'08	minimum elong	12616 May 20 19:57	7°♄47'04	2°59'10
min. Earth dist.	12615 Jun 07 02:52	22°♄47'41	0.68333 AU	min. Earth dist.	12616 May 20 22:41	7°♄37'32	0.68795 AU
morning rise	12615 Jun 11 17:20	17°♄18'24		morning rise	12616 May 26 00:56	1°♄28'22	
direct	12615 Jun 17 03:27	14°♄54'52			12616 May 28 05:30	30°♄	
desc. node	12615 Jun 24 23:41	18°♄35'10		direct	12616 May 30 22:11	29°♄22'42	
morning max el	12615 Jun 28 02:32	21°♄28'22	23°53'51		12616 Jun 02 19:20	0°♄	
	12615 Jul 05 11:37	0°♄		morning max el	12616 Jun 09 14:01	5°♄04'08	22°24'24
	12615 Jul 26 03:37	0°♄		desc. node	12616 Jun 10 20:43	6°♄23'52	
morning set	12615 Aug 02 09:23	11°♄58'13			12616 Jun 28 17:07	0°♄	
max. Earth dist.	12615 Aug 06 04:12	18°♄32'50	1.38572 AU	morning set	12616 Jul 13 02:35	22°♄16'09	
	12615 Aug 12 11:08	0°♄			12616 Jul 17 18:51	0°♄	
superior conj	12615 Aug 13 14:20	2°♄08'04	-0°46'13	max. Earth dist.	12616 Jul 18 03:03	0°♄34'29	1.40897 AU
minimum elong	12615 Aug 13 17:35	2°♄23'25	0°46'10	superior conj	12616 Jul 25 22:56	14°♄10'34	-1°20'27
asc. node	12615 Aug 18 16:27	11°♄56'08		minimum elong	12616 Jul 26 04:46	14°♄36'40	1°20'22
evening rise	12615 Aug 22 14:20	19°♄36'48			12616 Aug 03 13:22	0°♄	
	12615 Aug 28 00:14	0°♄		asc. node	12616 Aug 04 13:06	1°♄51'23	
evening max el	12615 Sep 07 21:46	16°♄12'04	18°55'26	evening rise	12616 Aug 05 04:14	3°♄02'24	
retrograde	12615 Sep 16 13:30	20°♄32'11		evening max el	12616 Aug 21 03:35	28°♄37'56	18°19'48
evening set	12615 Sep 18 10:28	20°♄20'48			12616 Aug 22 16:07	0°♄	
desc. node	12615 Sep 20 20:41	19°♄34'50		retrograde	12616 Aug 28 13:58	2°♄23'21	
inferior conj	12615 Sep 26 17:24	16°♄03'24	-1°50'57	evening set	12616 Aug 30 16:47	2°♄05'48	
minimum elong	12615 Sep 26 12:41	16°♄11'43	1°48'55		12616 Sep 03 21:59	30°♄	
min. Earth dist.	12615 Sep 29 16:39	13°♄58'10	0.56515 AU	desc. node	12616 Sep 06 18:11	27°♄49'44	
morning rise	12615 Oct 04 11:42	11°♄12'49		inferior conj	12616 Sep 07 04:56	27°♄27'37	-0°08'21
direct	12615 Oct 10 02:58	9°♄57'12		minimum elong	12616 Sep 07 04:38	27°♄28'16	0°08'22
morning max el	12615 Oct 24 07:54	17°♄16'24	26°09'51	transit middle	12616 Sep 07 04:38	27°♄28'16	0°08'22
	12615 Nov 03 19:55	0°♄		transit begin	12616 Sep 07 01:38	27°♄34'27	


































































































































transit end	12616 Sep 07 07:37	27° \mathbb{M} 22'05		inferior conj	12617 Aug 20 12:55	9° \mathbb{M} 35'50	1°12'45
min. Earth dist.	12616 Sep 10 12:37	24° \mathbb{M} 44'13	0.58517 AU	minimum elong	12617 Aug 20 14:58	9° \mathbb{M} 30'57	1°11'37
morning rise	12616 Sep 14 12:59	22° \mathbb{M} 01'07		min. Earth dist.	12617 Aug 23 16:58	6° \mathbb{M} 35'09	0.60785 AU
direct	12616 Sep 20 19:04	20° \mathbb{M} 17'34		desc. node	12617 Aug 24 15:40	5° \mathbb{M} 44'54	
morning max el	12616 Oct 05 02:57	27° \mathbb{M} 58'49	27°21'07	morning rise	12617 Aug 27 08:40	3° \mathbb{M} 41'11	
	12616 Oct 07 02:21	0° \mathbb{L}		direct	12617 Sep 02 23:06	1° \mathbb{M} 31'23	
	12616 Oct 27 12:52	0° \mathbb{M}		morning max el	12617 Sep 17 05:27	9° \mathbb{M} 27'08	27°55'30
asc. node	12616 Oct 31 14:49	7° \mathbb{M} 48'06			12617 Oct 03 02:34	0° \mathbb{L}	
morning set	12616 Nov 05 00:07	16° \mathbb{M} 49'11		asc. node	12617 Oct 18 11:31	27° \mathbb{L} 33'39	
	12616 Nov 11 00:42	0° \mathbb{X}			12617 Oct 19 16:05	0° \mathbb{M}	
				morning set	12617 Oct 20 03:46	1° \mathbb{M} 00'36	
superior conj	12616 Nov 11 22:46	2° \mathbb{X} 03'09	1°29'45	max. Earth dist.	12617 Oct 26 01:05	13° \mathbb{M} 40'27	1.31453 AU
minimum elong	12616 Nov 11 21:07	1° \mathbb{X} 53'56	1°30'23				
max. Earth dist.	12616 Nov 11 17:23	1° \mathbb{X} 33'03	1.31274 AU	superior conj	12617 Oct 27 09:36	16° \mathbb{M} 40'24	1°16'52
evening rise	12616 Nov 18 16:52	16° \mathbb{X} 55'28		minimum elong	12617 Oct 27 07:26	16° \mathbb{M} 28'22	1°17'12
	12616 Nov 25 03:03	0° \mathbb{Z}			12617 Nov 02 10:20	0° \mathbb{X}	
desc. node	12616 Dec 03 15:08	14° \mathbb{Z} 55'33		evening rise	12617 Nov 03 02:33	1° \mathbb{X} 27'46	
	12616 Dec 14 16:52	0° \mathbb{M}			12617 Nov 18 08:29	0° \mathbb{Z}	
evening max el	12616 Dec 18 07:35	3° \mathbb{M} 44'29	26°38'30	desc. node	12617 Nov 20 12:18	3° \mathbb{Z} 12'42	
retrograde	12617 Jan 01 06:27	10° \mathbb{M} 52'09		evening max el	12617 Nov 30 01:10	14° \mathbb{Z} 39'40	25°22'28
evening set	12617 Jan 07 21:06	9° \mathbb{M} 03'59		retrograde	12617 Dec 13 21:34	21° \mathbb{Z} 37'25	
min. Earth dist.	12617 Jan 11 21:34	6° \mathbb{M} 26'54	0.59148 AU	evening set	12617 Dec 19 18:49	20° \mathbb{Z} 18'35	
inferior conj	12617 Jan 15 01:32	3° \mathbb{M} 59'58	-3°51'57	min. Earth dist.	12617 Dec 24 13:17	17° \mathbb{Z} 39'05	0.57128 AU
minimum elong	12617 Jan 15 09:28	3° \mathbb{M} 44'34	3°48'33	inferior conj	12617 Dec 27 09:12	15° \mathbb{Z} 45'13	-5°04'44
	12617 Jan 21 05:55	30° \mathbb{R} \mathbb{Z}		minimum elong	12617 Dec 27 17:25	15° \mathbb{Z} 31'24	5°02'00
morning rise	12617 Jan 23 00:46	29° \mathbb{Z} 23'52		morning rise	12618 Jan 04 18:25	11° \mathbb{Z} 31'31	
direct	12617 Jan 25 02:17	29° \mathbb{Z} 08'38		direct	12618 Jan 06 23:44	11° \mathbb{Z} 16'52	
asc. node	12617 Jan 27 14:07	29° \mathbb{Z} 31'58		asc. node	12618 Jan 14 11:23	14° \mathbb{Z} 16'16	
	12617 Jan 28 18:50	0° \mathbb{M}		morning max el	12618 Jan 16 01:24	15° \mathbb{Z} 40'33	19°03'13
morning max el	12617 Feb 01 22:49	3° \mathbb{M} 01'48	18°17'04		12618 Jan 26 03:06	0° \mathbb{M}	
morning set	12617 Feb 17 16:19	28° \mathbb{M} 04'29		morning set	12618 Feb 01 15:49	12° \mathbb{M} 26'17	
	12617 Feb 18 16:41	0° \mathbb{X}					
				superior conj	12618 Feb 10 00:44	28° \mathbb{M} 51'53	0°50'15
superior conj	12617 Feb 27 01:50	15° \mathbb{X} 39'00	0°20'22	minimum elong	12618 Feb 10 03:28	29° \mathbb{M} 05'00	0°50'25
minimum elong	12617 Feb 27 03:20	15° \mathbb{X} 45'48	0°20'28		12618 Feb 10 14:59	0° \mathbb{X}	
desc. node	12617 Mar 01 15:49	20° \mathbb{X} 17'34		desc. node	12618 Feb 16 12:24	10° \mathbb{X} 55'00	
max. Earth dist.	12617 Mar 06 15:43	28° \mathbb{X} 58'52	1.41114 AU	max. Earth dist.	12618 Feb 16 22:46	11° \mathbb{X} 41'32	1.38892 AU
	12617 Mar 07 06:08	0° \mathbb{Y}		evening rise	12618 Feb 20 18:00	18° \mathbb{X} 21'32	
evening rise	12617 Mar 11 07:22	6° \mathbb{Y} 44'08			12618 Feb 27 18:33	0° \mathbb{Y}	
	12617 Mar 26 10:19	0° \mathbb{X}			12618 Mar 20 18:10	0° \mathbb{X}	
evening max el	12617 Apr 14 09:33	24° \mathbb{X} 15'19	23°13'37	evening max el	12618 Mar 27 23:21	8° \mathbb{X} 06'53	24°33'37
	12617 Apr 22 10:25	0° \mathbb{I}		retrograde	12618 Apr 08 12:42	14° \mathbb{X} 52'15	
retrograde	12617 Apr 24 20:34	0° \mathbb{I} 25'09		asc. node	12618 Apr 12 08:21	13° \mathbb{X} 47'16	
asc. node	12617 Apr 25 10:58	0° \mathbb{I} 23'29		evening set	12618 Apr 14 01:51	12° \mathbb{X} 32'32	
	12617 Apr 27 03:30	30° \mathbb{R} \mathbb{X}		min. Earth dist.	12618 Apr 18 15:01	7° \mathbb{X} 21'47	0.68331 AU
evening set	12617 Apr 29 21:54	28° \mathbb{X} 17'48		inferior conj	12618 Apr 19 14:45	6° \mathbb{X} 02'29	2°06'02
inferior conj	12617 May 05 06:47	21° \mathbb{X} 51'56	2°38'06	minimum elong	12618 Apr 19 12:36	6° \mathbb{X} 09'42	2°04'56
minimum elong	12617 May 05 04:49	21° \mathbb{X} 58'47	2°36'58	morning rise	12618 Apr 24 23:30	0° \mathbb{X} 03'45	
min. Earth dist.	12617 May 04 19:28	22° \mathbb{X} 31'04	0.68791 AU		12618 Apr 25 01:35	30° \mathbb{R} \mathbb{Y}	
morning rise	12617 May 10 11:38	15° \mathbb{X} 45'05		direct	12618 Apr 28 19:22	28° \mathbb{Y} 39'57	
direct	12617 May 14 19:58	14° \mathbb{X} 00'05			12618 May 02 19:39	0° \mathbb{X}	
morning max el	12617 May 23 06:23	18° \mathbb{X} 50'32	21°01'21	morning max el	12618 May 06 06:04	2° \mathbb{X} 48'43	19°50'13
desc. node	12617 May 28 17:36	25° \mathbb{X} 05'11		desc. node	12618 May 15 14:24	14° \mathbb{X} 24'15	
	12617 Jun 01 11:35	0° \mathbb{I}		greatest brilliancy	12618 May 19 09:41	19° \mathbb{X} 51'27	-0.6m
	12617 Jun 21 20:04	0° \mathbb{L}			12618 May 26 05:11	0° \mathbb{I}	
morning set	12617 Jun 22 18:55	1° \mathbb{L} 29'06		morning set	12618 Jun 01 20:15	10° \mathbb{I} 06'11	
max. Earth dist.	12617 Jun 30 08:29	13° \mathbb{L} 32'25	1.42988 AU	max. Earth dist.	12618 Jun 12 20:47	27° \mathbb{I} 17'57	1.44589 AU
					12618 Jun 14 13:30	0° \mathbb{L}	
superior conj	12617 Jul 07 10:17	25° \mathbb{L} 16'57	-1°50'26				
minimum elong	12617 Jul 07 17:16	25° \mathbb{L} 46'31	1°50'41	superior conj	12618 Jun 17 21:42	5° \mathbb{L} 22'06	-2°09'49
	12617 Jul 10 04:33	0° \mathbb{L}		minimum elong	12618 Jun 18 01:50	5° \mathbb{L} 38'49	2°10'38
evening rise	12617 Jul 19 04:14	15° \mathbb{L} 49'33		evening rise	12618 Jul 01 09:17	27° \mathbb{L} 46'08	
asc. node	12617 Jul 22 09:51	21° \mathbb{L} 35'30			12618 Jul 02 16:49	0° \mathbb{L}	
	12617 Jul 27 06:31	0° \mathbb{M}		asc. node	12618 Jul 09 06:42	11° \mathbb{L} 03'22	
evening max el	12617 Aug 04 15:29	11° \mathbb{M} 36'16	18°04'08	evening max el	12618 Jul 19 05:39	24° \mathbb{L} 57'38	18°07'30
retrograde	12617 Aug 11 07:48	15° \mathbb{M} 01'56		retrograde	12618 Jul 25 14:35	28° \mathbb{L} 18'04	
evening set	12617 Aug 13 18:25	14° \mathbb{M} 34'27		evening set	12618 Jul 28 09:21	27° \mathbb{L} 37'51	

inferior conj	12618 Aug 03 13:37	22° Ω 21'04	2°10'26	evening set	12619 Jul 12 09:00	11° Ω 06'58	
minimum elong	12618 Aug 03 16:12	22° Ω 14'03	2°09'05	inferior conj	12619 Jul 18 02:52	5° Ω 34'05	2°47'35
min. Earth dist.	12618 Aug 06 06:58	19° Ω 24'47	0.63022 AU	minimum elong	12619 Jul 18 04:56	5° Ω 27'54	2°46'23
morning rise	12618 Aug 09 21:07	16° Ω 08'30		min. Earth dist.	12619 Jul 20 06:22	3° Ω 00'20	0.65026 AU
desc. node	12618 Aug 11 13:05	15° Ω 02'42			12619 Jul 23 02:17	30° \mathbb{R} \mathfrak{E}	
direct	12618 Aug 16 13:21	13° Ω 38'49		morning rise	12619 Jul 23 23:43	29° \mathfrak{E} 12'50	
morning max el	12618 Aug 30 13:35	21° Ω 40'59	27°51'11	desc. node	12619 Jul 29 10:28	26° \mathfrak{E} 36'38	
	12618 Sep 06 19:56	0° \mathfrak{M}		direct	12619 Jul 30 12:09	26° \mathfrak{E} 32'34	
	12618 Sep 26 06:16	0° \mathfrak{A}			12619 Aug 07 22:36	0° Ω	
morning set	12618 Oct 04 00:45	14° \mathfrak{A} 50'52		morning max el	12619 Aug 13 00:18	4° Ω 29'14	27°12'25
asc. node	12618 Oct 05 08:11	17° \mathfrak{A} 30'52			12619 Sep 01 08:54	0° \mathfrak{M}	
max. Earth dist.	12618 Oct 09 03:59	25° \mathfrak{A} 32'40	1.32156 AU	morning set	12619 Sep 17 12:14	28° \mathfrak{M} 12'21	
	12618 Oct 11 05:31	0° \mathfrak{M}			12619 Sep 18 10:17	0° \mathfrak{A}	
				max. Earth dist.	12619 Sep 21 22:20	7° \mathfrak{A} 01'25	1.33387 AU
superior conj	12618 Oct 11 17:45	1° \mathfrak{M} 06'32	0°58'29	asc. node	12619 Sep 22 04:48	7° \mathfrak{A} 34'31	
minimum elong	12618 Oct 11 15:32	0° \mathfrak{M} 54'27	0°58'30				
evening rise	12618 Oct 18 13:46	16° \mathfrak{M} 02'07		superior conj	12619 Sep 25 20:59	15° \mathfrak{A} 14'53	0°34'45
	12618 Oct 25 09:45	0° \mathfrak{A}		minimum elong	12619 Sep 25 19:20	15° \mathfrak{A} 06'08	0°34'34
desc. node	12618 Nov 07 09:35	20° \mathfrak{A} 25'20			12619 Oct 02 18:25	0° \mathfrak{M}	
evening max el	12618 Nov 11 11:56	24° \mathfrak{A} 53'05	23°45'17	evening rise	12619 Oct 03 00:34	0° \mathfrak{M} 32'35	
	12618 Nov 18 11:14	0° \mathfrak{E}			12619 Oct 19 15:13	0° \mathfrak{A}	
retrograde	12618 Nov 25 00:18	1° \mathfrak{E} 37'29		evening max el	12619 Oct 23 23:40	4° \mathfrak{A} 56'18	22°04'13
evening set	12618 Nov 29 16:34	0° \mathfrak{E} 49'45		desc. node	12619 Oct 25 06:56	6° \mathfrak{A} 09'13	
	12618 Dec 01 19:21	30° \mathfrak{R} \mathfrak{A}		retrograde	12619 Nov 05 15:37	11° \mathfrak{A} 13'36	
min. Earth dist.	12618 Dec 05 22:27	27° \mathfrak{A} 48'32	0.55527 AU	evening set	12619 Nov 08 21:23	10° \mathfrak{A} 50'14	
inferior conj	12618 Dec 07 20:22	26° \mathfrak{A} 40'13	-5°49'24	min. Earth dist.	12619 Nov 17 05:08	7° \mathfrak{A} 09'14	0.54640 AU
minimum elong	12618 Dec 07 23:41	26° \mathfrak{A} 35'15	5°48'15	inferior conj	12619 Nov 17 15:58	6° \mathfrak{A} 54'01	-5°43'16
morning rise	12618 Dec 16 08:41	22° \mathfrak{A} 45'46		minimum elong	12619 Nov 17 10:35	7° \mathfrak{A} 01'35	5°41'52
direct	12618 Dec 19 01:28	22° \mathfrak{A} 27'38		morning rise	12619 Nov 26 00:59	3° \mathfrak{A} 06'52	
morning max el	12618 Dec 29 15:24	27° \mathfrak{A} 30'22	20°12'15	direct	12619 Nov 29 12:22	2° \mathfrak{A} 40'07	
	12618 Dec 31 23:56	0° \mathfrak{E}		morning max el	12619 Dec 11 15:11	8° \mathfrak{A} 26'41	21°43'16
asc. node	12619 Jan 01 08:34	0° \mathfrak{E} 25'19		asc. node	12619 Dec 19 05:39	17° \mathfrak{A} 41'45	
morning set	12619 Jan 16 21:48	27° \mathfrak{E} 03'31			12619 Dec 26 11:06	0° \mathfrak{E}	
	12619 Jan 18 08:13	0° \mathfrak{A}		morning set	12620 Jan 01 07:39	11° \mathfrak{E} 48'08	
superior conj	12619 Jan 24 13:18	12° \mathfrak{A} 42'00	1°12'45	superior conj	12620 Jan 08 11:38	26° \mathfrak{E} 57'32	1°27'59
minimum elong	12619 Jan 24 16:02	12° \mathfrak{A} 55'42	1°13'09	minimum elong	12620 Jan 08 13:38	27° \mathfrak{E} 07'58	1°28'40
max. Earth dist.	12619 Jan 30 05:40	23° \mathfrak{A} 48'46	1.36686 AU		12620 Jan 09 22:42	0° \mathfrak{A}	
	12619 Feb 02 13:31	0° \mathfrak{A}		max. Earth dist.	12620 Jan 12 17:19	5° \mathfrak{A} 39'54	1.34720 AU
evening rise	12619 Feb 03 00:16	0° \mathfrak{A} 48'48		evening rise	12620 Jan 16 22:43	13° \mathfrak{A} 56'38	
desc. node	12619 Feb 03 09:03	1° \mathfrak{A} 28'34		desc. node	12620 Jan 21 05:47	21° \mathfrak{A} 53'48	
	12619 Feb 20 22:42	0° \mathfrak{Y}			12620 Jan 25 21:34	0° \mathfrak{A}	
evening max el	12619 Mar 10 12:42	21° \mathfrak{Y} 57'43	25°46'45		12620 Feb 15 18:38	0° \mathfrak{Y}	
retrograde	12619 Mar 23 00:21	29° \mathfrak{Y} 08'22		evening max el	12620 Feb 21 02:21	5° \mathfrak{Y} 42'16	26°45'46
evening set	12619 Mar 29 01:00	26° \mathfrak{Y} 39'47		retrograde	12620 Mar 05 06:39	13° \mathfrak{Y} 05'59	
asc. node	12619 Mar 30 05:46	25° \mathfrak{Y} 33'57		evening set	12620 Mar 11 17:31	10° \mathfrak{Y} 33'29	
min. Earth dist.	12619 Apr 02 07:18	22° \mathfrak{Y} 04'14	0.67435 AU	min. Earth dist.	12620 Mar 15 18:12	6° \mathfrak{Y} 31'56	0.66131 AU
inferior conj	12619 Apr 03 19:19	20° \mathfrak{Y} 10'12	1°23'51	asc. node	12620 Mar 16 03:11	6° \mathfrak{Y} 05'51	
minimum elong	12619 Apr 03 17:30	20° \mathfrak{Y} 15'59	1°22'59	inferior conj	12620 Mar 17 18:20	4° \mathfrak{Y} 10'22	0°31'13
morning rise	12619 Apr 09 10:36	14° \mathfrak{Y} 20'51		minimum elong	12620 Mar 17 17:31	4° \mathfrak{Y} 12'48	0°30'55
direct	12619 Apr 12 18:54	13° \mathfrak{Y} 16'50			12620 Mar 21 16:47	30° \mathfrak{R} \mathfrak{A}	
morning max el	12619 Apr 19 13:20	16° \mathfrak{Y} 56'35	18°54'06	morning rise	12620 Mar 23 18:43	28° \mathfrak{A} 32'11	
	12619 Apr 29 15:59	0° \mathfrak{E}		direct	12620 Mar 26 16:45	27° \mathfrak{A} 45'08	
desc. node	12619 May 02 11:07	4° \mathfrak{E} 11'03			12620 Mar 31 20:17	0° \mathfrak{Y}	
greatest brilliancy	12619 May 03 04:23	5° \mathfrak{E} 16'35	-0.8m	morning max el	12620 Apr 02 02:41	1° \mathfrak{Y} 08'32	18°14'30
morning set	12619 May 12 03:38	19° \mathfrak{E} 06'40		desc. node	12620 Apr 18 07:46	24° \mathfrak{Y} 18'13	
	12619 May 19 03:43	0° \mathfrak{II}		morning set	12620 Apr 21 11:25	29° \mathfrak{Y} 21'19	
max. Earth dist.	12619 May 26 13:43	11° \mathfrak{II} 34'19	1.45545 AU		12620 Apr 21 21:04	0° \mathfrak{E}	
superior conj	12619 May 28 12:33	14° \mathfrak{II} 37'56	-2°11'52	superior conj	12620 May 06 20:01	23° \mathfrak{E} 41'33	-1°53'42
minimum elong	12619 May 28 09:27	14° \mathfrak{II} 25'47	2°12'40	minimum elong	12620 May 06 11:12	23° \mathfrak{E} 07'03	1°53'43
	12619 Jun 07 05:14	0° \mathfrak{E}		max. Earth dist.	12620 May 08 09:14	26° \mathfrak{E} 07'01	1.45774 AU
evening rise	12619 Jun 12 14:55	8° \mathfrak{E} 42'09			12620 May 10 20:56	0° \mathfrak{II}	
asc. node	12619 Jun 26 03:38	0° Ω 08'13		evening rise	12620 May 22 20:45	18° \mathfrak{II} 40'56	
	12619 Jun 26 01:24	0° Ω			12620 May 30 03:23	0° \mathfrak{E}	
evening max el	12619 Jul 02 18:52	8° Ω 33'12	18°29'02	greatest brilliancy	12620 Jun 03 00:19	5° \mathfrak{E} 56'32	-0.8m
retrograde	12619 Jul 09 05:51	12° Ω 01'59		asc. node	12620 Jun 12 00:39	18° \mathfrak{E} 42'15	

evening max el	12620 Jun 15 04:38	22°☿17'01	19°07'48	evening max el	12621 May 29 09:11	6°☿03'38	20°02'21
retrograde	12620 Jun 22 02:04	26°☿06'40		asc. node	12621 May 29 21:45	6°☿34'32	
evening set	12620 Jun 25 14:04	24°☿55'34		retrograde	12621 Jun 06 00:33	10°☿25'33	
inferior conj	12620 Jul 01 01:05	19°☿08'08	3°07'45	evening set	12621 Jun 09 22:03	8°☿57'48	
minimum elong	12620 Jul 01 02:11	19°☿04'36	3°06'44	inferior conj	12621 Jun 15 05:19	2°☿57'02	3°13'58
min. Earth dist.	12620 Jul 02 13:54	17°☿09'39	0.66666 AU	minimum elong	12621 Jun 15 05:20	2°☿56'58	3°13'01
morning rise	12620 Jul 06 13:41	12°☿44'46		min. Earth dist.	12621 Jun 16 03:42	1°☿41'15	0.67866 AU
direct	12620 Jul 12 18:02	10°☿04'14			12621 Jun 17 10:28	30°☿II	
desc. node	12620 Jul 15 07:45	10°☿28'10		morning rise	12621 Jun 20 12:18	26°II35'45	
morning max el	12620 Jul 25 11:11	17°☿39'58	26°07'09	direct	12621 Jun 26 05:37	24°II04'01	
	12620 Aug 04 19:08	0°♂		desc. node	12621 Jul 02 04:57	26°II12'35	
	12620 Aug 24 08:01	0°♂			12621 Jul 06 19:41	0°☿	
morning set	12620 Aug 30 10:53	10°♂56'43		morning max el	12621 Jul 07 21:16	1°☿03'11	24°44'55
max. Earth dist.	12620 Sep 03 06:21	18°♂09'57	1.35121 AU		12621 Jul 29 18:11	0°♂	
asc. node	12620 Sep 08 01:25	27°♂40'54		morning set	12621 Aug 12 16:24	22°♂53'00	
				max. Earth dist.	12621 Aug 16 06:15	29°♂17'50	1.37254 AU
superior conj	12620 Sep 08 16:50	28°♂59'20	0°06'08		12621 Aug 16 15:28	0°♂	
minimum elong	12620 Sep 08 16:29	28°♂57'35	0°05'57	superior conj	12621 Aug 23 02:08	12°♂11'38	-0°26'25
behind sun begin	12620 Sep 08 10:51	28°♂28'52		minimum elong	12621 Aug 23 03:53	12°♂20'11	0°26'27
behind sun end	12620 Sep 08 22:07	29°♂26'22		asc. node	12621 Aug 25 22:03	17°♂46'00	
	12620 Sep 09 04:42	0°♂		evening rise	12621 Aug 31 12:35	29°♂00'36	
evening rise	12620 Sep 16 08:57	14°♂54'13			12621 Sep 01 00:26	0°♂	
	12620 Sep 24 01:18	0°♂		evening max el	12621 Sep 17 09:43	26°♂42'39	19°25'24
evening max el	12620 Oct 04 21:41	15°♂26'32	20°34'52		12621 Sep 21 14:49	0°♂	
desc. node	12620 Oct 11 04:20	19°♂56'37		retrograde	12621 Sep 26 22:20	1°♂28'01	
retrograde	12620 Oct 16 02:30	21°♂00'17		desc. node	12621 Sep 28 01:46	1°♂24'10	
evening set	12620 Oct 18 07:27	20°♂48'18		evening set	12621 Sep 28 18:53	1°♂17'58	
inferior conj	12620 Oct 27 08:04	16°♂53'11	-4°38'32		12621 Oct 02 15:21	30°☿♂	
minimum elong	12620 Oct 26 22:01	17°♂07'41	4°35'14	inferior conj	12621 Oct 07 11:03	27°♂10'46	-2°55'07
min. Earth dist.	12620 Oct 28 12:21	16°♂12'18	0.54671 AU	minimum elong	12621 Oct 07 03:28	27°♂23'02	2°51'58
morning rise	12620 Nov 04 12:16	12°♂54'24		min. Earth dist.	12621 Oct 09 22:35	25°♂34'41	0.55619 AU
direct	12620 Nov 08 21:05	12°♂13'23		morning rise	12621 Oct 15 09:50	22°♂42'12	
morning max el	12620 Nov 22 04:05	18°♂41'01	23°29'20	direct	12621 Oct 20 14:47	21°♂41'09	
	12620 Dec 01 10:32	0°♂		morning max el	12621 Nov 03 14:22	28°♂42'50	25°15'51
asc. node	12620 Dec 05 02:37	5°♂50'13			12621 Nov 04 21:39	0°♂	
morning set	12620 Dec 15 19:17	26°♂34'29		asc. node	12621 Nov 21 23:31	24°♂38'02	
	12620 Dec 17 09:34	0°♂			12621 Nov 24 19:18	0°♂	
superior conj	12620 Dec 22 16:38	11°♂29'44	1°36'24	morning set	12621 Nov 30 06:58	11°♂18'00	
minimum elong	12620 Dec 22 17:33	11°♂34'45	1°37'18	superior conj	12621 Dec 07 01:50	26°♂11'40	1°38'29
max. Earth dist.	12620 Dec 25 12:53	17°♂34'46	1.33145 AU	minimum elong	12621 Dec 07 01:39	26°♂10'37	1°39'25
evening rise	12620 Dec 30 09:49	27°♂35'57		max. Earth dist.	12621 Dec 08 15:51	29°♂40'42	1.32030 AU
	12620 Dec 31 14:59	0°♂			12621 Dec 08 19:23	0°♂	
desc. node	12621 Jan 07 02:35	12°♂05'45		evening rise	12621 Dec 14 06:26	11°♂38'55	
	12621 Jan 18 03:38	0°♂			12621 Dec 23 20:18	0°♂	
evening max el	12621 Feb 02 15:35	19°♂10'14	27°23'10	desc. node	12621 Dec 24 23:28	1°♂58'30	
retrograde	12621 Feb 16 06:24	26°♂36'05			12622 Jan 13 22:49	0°♂	
evening set	12621 Feb 23 01:11	24°♂05'51		evening max el	12622 Jan 16 02:26	2°♂08'59	27°32'09
min. Earth dist.	12621 Feb 26 21:31	20°♂36'06	0.64470 AU	retrograde	12622 Jan 29 22:43	9°♂30'03	
inferior conj	12621 Mar 01 09:15	17°♂56'19	-0°32'06	evening set	12622 Feb 05 21:24	7°♂09'24	
minimum elong	12621 Mar 01 10:13	17°♂53'43	0°31'24	min. Earth dist.	12622 Feb 09 15:21	4°♂07'18	0.62522 AU
asc. node	12621 Mar 03 00:36	16°♂13'14		inferior conj	12622 Feb 12 13:08	1°♂20'46	-1°45'16
morning rise	12621 Mar 07 21:10	12°♂31'40		minimum elong	12622 Feb 12 16:41	1°♂12'14	1°43'17
direct	12621 Mar 10 10:27	11°♂58'09			12622 Feb 13 23:29	30°☿♂	
morning max el	12621 Mar 16 19:35	15°♂16'34	17°51'56	asc. node	12622 Feb 17 21:58	26°♂59'14	
	12621 Mar 27 09:08	0°♂		morning rise	12622 Feb 19 14:33	26°♂12'48	
morning set	12621 Apr 02 23:44	10°♂59'22		direct	12622 Feb 21 20:59	25°♂49'11	
desc. node	12621 Apr 05 04:21	14°♂39'22		morning max el	12622 Feb 28 13:09	29°♂12'59	17°46'55
	12621 Apr 14 12:24	0°♂			12622 Mar 01 07:29	0°♂	
superior conj	12621 Apr 16 13:38	3°♂18'00	-1°19'50	morning set	12622 Mar 16 12:01	23°♂45'51	
minimum elong	12621 Apr 16 05:30	2°♂45'22	1°19'17		12622 Mar 20 01:21	0°♂	
max. Earth dist.	12621 Apr 21 05:00	10°♂40'20	1.45260 AU	desc. node	12622 Mar 23 00:55	5°♂10'11	
evening rise	12621 May 02 10:34	28°♂06'22		superior conj	12622 Mar 28 05:22	13°♂58'09	-0°39'21
	12621 May 03 16:16	0°♂		minimum elong	12622 Mar 28 01:29	13°♂41'53	0°38'54
greatest brilliancy	12621 May 17 10:18	20°♂36'59	-0.6m	max. Earth dist.	12622 Apr 03 22:30	24°♂58'17	1.44060 AU
	12621 May 24 04:44	0°♂					

	12622 Apr 07 02:12	0°♄		evening rise	12623 Mar 23 01:21	17°♄48'30	
evening rise	12622 Apr 11 23:25	7°♄37'58			12623 Mar 30 21:53	0°♄	
	12622 Apr 26 22:33	0°♄			12623 Apr 21 16:54	0°♄	
evening max el	12622 May 12 07:53	19°♄50'50	21°10'07	evening max el	12623 Apr 25 01:32	3°♄38'37	22°27'14
asc. node	12622 May 16 18:55	23°♄32'00		asc. node	12623 May 03 16:11	9°♄18'46	
retrograde	12622 May 20 23:16	24°♄53'30		retrograde	12623 May 04 20:35	9°♄25'19	
evening set	12622 May 25 07:01	23°♄09'23		evening set	12623 May 09 15:17	7°♄25'54	
inferior conj	12622 May 30 13:10	16°♄56'50	3°08'19	inferior conj	12623 May 14 22:35	1°♄03'50	2°52'04
minimum elong	12622 May 30 12:13	17°♄00'08	3°07'20	minimum elong	12623 May 14 20:53	1°♄09'45	2°50'59
min. Earth dist.	12622 May 30 21:54	16°♄26'31	0.68594 AU	min. Earth dist.	12623 May 14 18:23	1°♄18'28	0.68844 AU
morning rise	12622 Jun 04 17:14	10°♄39'58			12623 May 15 16:58	30°♄	
direct	12622 Jun 09 21:56	8°♄23'44		morning rise	12623 May 20 02:22	24°♄52'55	
desc. node	12622 Jun 19 02:02	13°♄22'44		direct	12623 May 24 17:59	22°♄56'05	
morning max el	12622 Jun 20 07:40	14°♄34'57	23°15'31	morning max el	12623 Jun 02 21:03	28°♄15'30	21°48'00
	12622 Jul 02 20:40	0°♄			12623 Jun 04 12:57	0°♄	
	12622 Jul 22 16:31	0°♄		desc. node	12623 Jun 05 23:01	1°♄35'46	
morning set	12622 Jul 25 00:06	3°♄49'51			12623 Jun 26 11:29	0°♄	
max. Earth dist.	12622 Jul 29 04:09	10°♄55'12	1.39579 AU	morning set	12623 Jul 05 06:31	13°♄39'51	
				max. Earth dist.	12623 Jul 11 05:36	23°♄21'15	1.41825 AU
superior conj	12622 Aug 05 21:02	24°♄42'30	-1°00'56		12623 Jul 15 04:32	0°♄	
minimum elong	12622 Aug 06 01:26	25°♄02'48	1°00'50				
	12622 Aug 08 17:01	0°♄		superior conj	12623 Jul 18 21:09	6°♄22'21	-1°34'01
asc. node	12622 Aug 12 18:42	7°♄46'04		minimum elong	12623 Jul 19 03:47	6°♄51'22	1°34'01
evening rise	12622 Aug 15 08:34	12°♄44'08		evening rise	12623 Jul 29 17:13	25°♄55'32	
	12622 Aug 24 20:06	0°♄		asc. node	12623 Jul 30 15:25	27°♄37'30	
evening max el	12622 Aug 31 10:06	8°♄45'01	18°37'37		12623 Jul 31 22:30	0°♄	
retrograde	12622 Sep 08 12:05	12°♄49'01		evening max el	12623 Aug 14 19:02	21°♄26'21	18°10'44
evening set	12622 Sep 10 11:03	12°♄35'31		retrograde	12623 Aug 21 20:36	25°♄01'53	
desc. node	12622 Sep 14 23:15	10°♄35'15		evening set	12623 Aug 24 02:28	24°♄40'40	
inferior conj	12622 Sep 18 10:03	8°♄09'01	-1°05'14	inferior conj	12623 Aug 31 06:49	19°♄53'42	0°28'54
minimum elong	12622 Sep 18 07:25	8°♄14'00	1°04'08	minimum elong	12623 Aug 31 07:45	19°♄51'37	0°28'17
min. Earth dist.	12622 Sep 21 14:28	5°♄45'30	0.57313 AU	desc. node	12623 Sep 01 20:44	18°♄29'31	
morning rise	12622 Sep 26 00:21	3°♄02'29		min. Earth dist.	12623 Sep 03 14:08	16°♄59'59	0.59462 AU
direct	12622 Oct 01 22:22	1°♄35'32		morning rise	12623 Sep 07 09:42	14°♄13'36	
morning max el	12622 Oct 16 05:30	9°♄04'42	26°44'24	direct	12623 Sep 13 19:59	12°♄18'20	
	12622 Nov 01 02:09	0°♄		morning max el	12623 Sep 28 04:09	20°♄07'34	27°40'31
asc. node	12622 Nov 08 20:20	13°♄54'15			12623 Oct 06 15:43	0°♄	
morning set	12622 Nov 14 16:57	25°♄52'53			12623 Oct 24 22:23	0°♄	
	12622 Nov 16 14:42	0°♄		asc. node	12623 Oct 26 17:05	3°♄31'10	
superior conj	12622 Nov 21 13:09	10°♄56'11	1°34'36	morning set	12623 Oct 29 23:31	10°♄14'42	
minimum elong	12622 Nov 21 11:58	10°♄49'33	1°35'23	max. Earth dist.	12623 Nov 05 08:02	24°♄05'04	1.31285 AU
max. Earth dist.	12622 Nov 21 23:25	11°♄53'24	1.31403 AU				
evening rise	12622 Nov 28 09:50	25°♄57'35		superior conj	12623 Nov 06 00:44	25°♄38'04	1°24'58
	12622 Nov 30 08:14	0°♄		minimum elong	12623 Nov 05 22:49	25°♄27'22	1°25'29
desc. node	12622 Dec 11 20:27	21°♄23'14			12623 Nov 07 23:43	0°♄	
	12622 Dec 17 09:58	0°♄		evening rise	12623 Nov 12 17:50	10°♄26'36	
evening max el	12622 Dec 29 08:09	14°♄24'39	27°07'55		12623 Nov 22 14:47	0°♄	
retrograde	12623 Jan 12 06:41	21°♄38'01		desc. node	12623 Nov 28 17:33	10°♄09'11	
evening set	12623 Jan 19 02:51	19°♄35'13		evening max el	12623 Dec 11 06:25	25°♄49'12	26°09'30
min. Earth dist.	12623 Jan 22 22:33	16°♄52'46	0.60390 AU		12623 Dec 16 12:11	0°♄	
inferior conj	12623 Jan 26 02:28	14°♄13'46	-3°05'24	retrograde	12623 Dec 25 04:54	2°♄53'36	
minimum elong	12623 Jan 26 09:01	14°♄00'02	3°02'16	evening set	12623 Dec 31 13:29	1°♄17'06	
morning rise	12623 Feb 02 18:09	9°♄25'39			12624 Jan 02 20:23	30°♄	
direct	12623 Feb 04 20:18	9°♄08'24		min. Earth dist.	12624 Jan 04 19:38	28°♄41'06	0.58256 AU
asc. node	12623 Feb 04 19:19	9°♄08'25		inferior conj	12624 Jan 07 21:47	26°♄26'06	-4°24'53
morning max el	12623 Feb 12 03:57	12°♄47'47	18°00'25	minimum elong	12624 Jan 08 06:19	26°♄10'32	4°21'33
	12623 Feb 23 17:34	0°♄		morning rise	12624 Jan 16 02:00	21°♄59'51	
morning set	12623 Feb 27 17:56	7°♄20'43		direct	12624 Jan 18 04:07	21°♄45'27	
				asc. node	12624 Jan 22 16:38	22°♄57'11	
superior conj	12623 Mar 09 21:22	25°♄45'51	0°00'02	morning max el	12624 Jan 26 12:13	25°♄50'30	18°33'59
minimum elong	12623 Mar 09 21:23	25°♄45'57	0°00'12		12624 Jan 30 02:02	0°♄	
behind sun begin	12623 Mar 09 13:29	25°♄11'05		morning set	12624 Feb 11 12:12	21°♄28'36	
behind sun end	12623 Mar 10 05:18	26°♄20'44			12624 Feb 15 22:12	0°♄	
desc. node	12623 Mar 09 21:26	25°♄46'10		superior conj	12624 Feb 20 10:20	8°♄31'17	0°33'56
	12623 Mar 12 07:39	0°♄		minimum elong	12624 Feb 20 12:32	8°♄41'34	0°34'01
max. Earth dist.	12623 Mar 17 11:25	8°♄43'59	1.42297 AU	desc. node	12624 Feb 24 18:00	16°♄24'01	

max. Earth dist.	12624 Feb 27 19:28	21° H 47'36	1.40177 AU	desc. node	12625 Feb 10 14:37	7° H 00'22	
evening rise	12624 Mar 02 23:44	28° H 54'01		evening rise	12625 Feb 12 19:10	10° H 54'15	
	12624 Mar 03 15:36	0° Y			12625 Feb 24 09:07	0° Y	
	12624 Mar 23 09:40	0° B			12625 Mar 18 21:45	0° B	
evening max el	12624 Apr 06 16:06	17° B 28'32	23°48'09	evening max el	12625 Mar 20 05:45	1° B 21'03	25°06'08
retrograde	12624 Apr 17 15:00	23° B 55'22		retrograde	12625 Apr 01 05:21	8° B 18'28	
asc. node	12624 Apr 19 13:32	23° B 38'10		asc. node	12625 Apr 06 10:55	6° B 20'00	
evening set	12624 Apr 22 21:15	21° B 42'30		evening set	12625 Apr 06 23:21	5° B 54'47	
min. Earth dist.	12624 Apr 27 15:01	16° B 10'54	0.68639 AU	min. Earth dist.	12625 Apr 11 09:32	0° B 58'53	0.67997 AU
inferior conj	12624 Apr 28 07:38	15° B 14'08	2°25'44		12625 Apr 12 03:33	30° K Y	
minimum elong	12624 Apr 28 05:31	15° B 21'21	2°24'36	inferior conj	12625 Apr 12 14:24	29° Y 24'20	1°49'25
morning rise	12624 May 03 13:47	9° B 10'23		minimum elong	12625 Apr 12 12:19	29° Y 31'11	1°48'23
direct	12624 May 07 16:38	7° B 34'32		morning rise	12625 Apr 18 01:35	23° Y 29'09	
morning max el	12624 May 15 16:19	12° B 06'23	20°29'22	direct	12625 Apr 21 16:27	22° Y 13'51	
desc. node	12624 May 22 19:52	20° B 34'17		morning max el	12625 Apr 28 19:12	26° Y 08'45	19°24'21
	12624 May 29 14:26	0° II			12625 May 02 06:23	0° B	
morning set	12624 Jun 13 14:23	22° II 31'10		desc. node	12625 May 09 16:38	10° B 06'14	
	12624 Jun 18 09:19	0° E		greatest brilliancy	12625 May 11 12:15	12° B 45'59	-0.7m
max. Earth dist.	12624 Jun 22 13:24	6° E 38'10	1.43731 AU		12625 May 22 21:16	0° II	
				morning set	12625 May 23 15:24	1° II 09'47	
superior conj	12624 Jun 28 22:24	17° E 02'20	-2°00'23	max. Earth dist.	12625 Jun 05 03:55	20° II 38'33	1.45083 AU
minimum elong	12624 Jun 29 04:47	17° E 28'51	2°00'53				
	12624 Jul 06 14:14	0° O		superior conj	12625 Jun 09 00:09	26° II 43'50	-2°13'08
evening rise	12624 Jul 11 09:47	8° O 22'14		minimum elong	12625 Jun 09 01:33	26° II 49'23	2°14'03
asc. node	12624 Jul 16 12:13	17° O 15'13			12625 Jun 11 01:16	0° E	
	12624 Jul 24 12:15	0° M		evening rise	12625 Jun 23 05:15	19° E 53'11	
evening max el	12624 Jul 28 08:23	4° M 35'46	18°03'22		12625 Jun 29 07:31	0° O	
retrograde	12624 Aug 03 20:23	7° M 57'21		asc. node	12625 Jul 03 09:06	6° O 33'50	
evening set	12624 Aug 06 10:24	7° M 24'50		evening max el	12625 Jul 11 22:35	18° O 04'10	18°14'31
inferior conj	12624 Aug 12 22:26	2° M 18'33	1°39'53	retrograde	12625 Jul 18 07:07	21° O 26'07	
minimum elong	12624 Aug 13 00:53	2° M 12'22	1°38'35	evening set	12625 Jul 21 05:31	20° O 39'40	
	12624 Aug 15 05:08	30° K O		inferior conj	12625 Jul 27 04:55	15° O 15'55	2°28'27
min. Earth dist.	12624 Aug 15 22:41	29° O 16'59	0.61754 AU	minimum elong	12625 Jul 27 07:22	15° O 08'57	2°27'08
desc. node	12624 Aug 18 18:13	26° O 49'12		min. Earth dist.	12625 Jul 29 16:36	12° O 27'27	0.63919 AU
morning rise	12624 Aug 19 12:52	26° O 15'06		morning rise	12625 Aug 02 07:40	8° O 59'00	
direct	12624 Aug 26 05:00	23° O 55'26		desc. node	12625 Aug 05 15:37	7° O 01'18	
	12624 Sep 07 08:28	0° M		direct	12625 Aug 08 23:03	6° O 23'32	
morning max el	12624 Sep 09 09:14	1° M 55'33	27°58'07	morning max el	12625 Aug 22 18:33	14° O 24'13	27°38'26
	12624 Sep 30 00:02	0° A			12625 Sep 04 10:26	0° M	
asc. node	12624 Oct 12 13:47	23° A 22'07			12625 Sep 22 15:25	0° A	
morning set	12624 Oct 13 00:38	24° A 17'41		morning set	12625 Sep 26 17:55	7° A 56'08	
	12624 Oct 15 18:04	0° M		asc. node	12625 Sep 29 10:27	13° A 22'19	
max. Earth dist.	12624 Oct 18 13:57	6° M 05'51	1.31687 AU	max. Earth dist.	12625 Oct 01 13:33	17° A 48'04	1.32620 AU
superior conj	12624 Oct 20 10:42	10° M 11'21	1°09'45	superior conj	12625 Oct 04 17:03	24° A 30'35	0°49'04
minimum elong	12624 Oct 20 08:26	9° M 58'55	1°09'56	minimum elong	12625 Oct 04 14:59	24° A 19'28	0°48'59
evening rise	12624 Oct 27 04:24	25° M 00'12			12625 Oct 07 05:48	0° M	
	12624 Oct 29 12:50	0° A		evening rise	12625 Oct 11 15:41	9° M 33'30	
desc. node	12624 Nov 14 14:47	28° A 01'20			12625 Oct 22 02:18	0° A	
	12624 Nov 16 02:57	0° B		desc. node	12625 Nov 01 12:05	14° A 39'19	
evening max el	12624 Nov 21 20:42	6° B 24'31	24°42'47	evening max el	12625 Nov 03 06:53	16° A 29'27	23°01'43
retrograde	12624 Dec 05 15:08	13° B 17'27		retrograde	12625 Nov 16 12:04	23° A 03'33	
evening set	12624 Dec 11 01:02	12° B 12'27		evening set	12625 Nov 20 13:42	22° A 27'35	
min. Earth dist.	12624 Dec 16 08:29	9° B 25'45	0.56376 AU	min. Earth dist.	12625 Nov 27 16:02	19° A 11'39	0.55051 AU
inferior conj	12624 Dec 18 20:38	7° B 50'13	-5°28'34	inferior conj	12625 Nov 29 00:09	18° A 25'35	-5°54'02
minimum elong	12624 Dec 19 03:30	7° B 39'17	5°26'32	minimum elong	12625 Nov 28 23:51	18° A 26'00	5°53'08
morning rise	12624 Dec 27 08:05	3° B 45'09		morning rise	12625 Dec 07 11:33	14° A 36'05	
direct	12624 Dec 29 17:08	3° B 29'37		direct	12625 Dec 10 11:53	14° A 14'45	
morning max el	12625 Jan 08 09:51	8° B 09'39	19°29'41	morning max el	12625 Dec 21 17:37	19° A 35'50	20°48'28
asc. node	12625 Jan 08 13:51	8° B 19'22		asc. node	12625 Dec 26 11:00	24° A 58'57	
	12625 Jan 22 14:34	0° A			12625 Dec 29 21:58	0° B	
morning set	12625 Jan 25 14:52	5° A 58'06		morning set	12626 Jan 09 22:48	20° B 39'31	
					12626 Jan 14 10:24	0° A	
superior conj	12625 Feb 02 15:35	22° A 01'27	1°00'42				
minimum elong	12625 Feb 02 18:26	22° A 15'24	1°00'56	superior conj	12626 Jan 17 08:44	6° A 03'26	1°20'03
	12625 Feb 06 19:17	0° H		minimum elong	12626 Jan 17 11:12	6° A 16'07	1°20'36
max. Earth dist.	12625 Feb 09 01:45	4° H 12'51	1.37938 AU	max. Earth dist.	12626 Jan 22 10:35	16° A 12'36	1.35814 AU

evening rise	12626 Jan 26 08:48	23°  40'01		minimum elong	12627 Jan 01 11:49	20°  35'45	1°33'09
desc. node	12626 Jan 28 11:17	27°  30'50		max. Earth dist.	12627 Jan 05 01:40	28°  04'47	1.34000 AU
	12626 Jan 29 20:40	0° 			12627 Jan 06 00:12	0° 	
	12626 Feb 18 01:04	0° 		evening rise	12627 Jan 09 13:04	7° 	02'20
evening max el	12626 Mar 02 19:24	15°  10'41	26°14'02	desc. node	12627 Jan 15 08:03	17° 	51'09
retrograde	12626 Mar 15 14:35	22°  27'26			12627 Jan 22 11:48	0° 	
evening set	12626 Mar 21 19:52	19°  56'38		evening max el	12627 Feb 13 08:55	28°  49'04	27°04'32
asc. node	12626 Mar 24 08:20	17°  30'09			12627 Feb 14 15:15	0° 	
min. Earth dist.	12626 Mar 25 23:44	15°  35'47	0.66934 AU	retrograde	12627 Feb 26 18:04	6° 	14'35
inferior conj	12626 Mar 27 16:53	13°  29'18	1°02'50	evening set	12627 Mar 05 08:53	3°  41'56	
minimum elong	12626 Mar 27 15:23	13°  33'54	1°02'10		12627 Mar 09 05:30	30° 	
morning rise	12626 Apr 02 11:42	7°  44'25		min. Earth dist.	12627 Mar 09 07:28	29°  54'35	0.65475 AU
direct	12626 Apr 05 15:36	6°  47'49		asc. node	12627 Mar 11 05:43	27°  43'50	
morning max el	12626 Apr 12 05:15	10°  18'45	18°35'12	inferior conj	12627 Mar 11 12:45	27°  23'52	0°05'40
desc. node	12626 Apr 26 13:19	0°  30'21		minimum elong	12627 Mar 11 12:35	27°  24'20	0°05'44
	12626 Apr 26 12:45	0° 		transit middle	12627 Mar 11 12:35	27°  24'20	0°05'44
morning set	12626 May 03 07:44	10°  37'56		transit begin	12627 Mar 11 09:47	27°  32'17	
	12626 May 15 16:35	0° 		transit end	12627 Mar 11 15:23	27°  16'24	
				morning rise	12627 Mar 17 17:47	21°  51'22	
superior conj	12626 May 19 09:39	5°  47'53	-2°06'32	direct	12627 Mar 20 11:57	21°  10'31	
minimum elong	12626 May 19 03:28	5°  23'45	2°07'03	morning max el	12627 Mar 26 20:30	24°  30'06	18°02'47
max. Earth dist.	12626 May 18 22:46	5°  05'20	1.45740 AU		12627 Mar 31 10:59	0° 	
	12626 Jun 03 18:33	0° 		desc. node	12627 Apr 13 09:56	20° 	15'37
evening rise	12626 Jun 04 00:21	0°  23'02		morning set	12627 Apr 14 03:47	21° 	28'27
greatest brilliancy	12626 Jun 12 01:32	13°  09'04	-0.8m		12627 Apr 19 09:42	0° 	
asc. node	12626 Jun 20 06:02	25°  26'15					
	12626 Jun 23 20:02	0° 		superior conj	12627 Apr 28 19:19	14°  59'38	-1°40'43
evening max el	12626 Jun 25 10:35	1°  43'30	18°43'29	minimum elong	12627 Apr 28 10:03	14°  23'06	1°40'26
retrograde	12626 Jul 02 00:54	5°  19'32		max. Earth dist.	12627 May 01 18:50	19°  40'26	1.45646 AU
evening set	12626 Jul 05 07:50	4°  17'37			12627 May 08 09:55	0° 	
	12626 Jul 09 19:35	30° 		evening rise	12627 May 14 21:50	10° 	03'02
inferior conj	12626 Jul 10 22:21	28°  38'08	2°58'01		12627 May 27 23:55	0° 	
minimum elong	12626 Jul 11 00:02	28°  32'55	2°56'54	greatest brilliancy	12627 May 27 23:52	29°  59'49	-0.7m
min. Earth dist.	12626 Jul 12 19:30	26°  18'31	0.65772 AU	asc. node	12627 Jun 07 03:03	13° 	43'22
morning rise	12626 Jul 16 15:23	22°  15'30		evening max el	12627 Jun 08 18:08	15°  27'51	19°29'11
direct	12626 Jul 23 00:45	19°  34'14		retrograde	12627 Jun 15 22:26	19°  30'23	
desc. node	12626 Jul 23 12:56	19°  35'10		evening set	12627 Jun 19 14:22	18°  12'11	
morning max el	12626 Aug 05 05:38	27°  23'19	26°47'30	inferior conj	12627 Jun 24 23:25	12°  18'38	3°11'59
	12626 Aug 07 16:37	0° 		minimum elong	12627 Jun 25 00:03	12°  16'32	3°11'00
	12626 Aug 29 02:52	0° 		min. Earth dist.	12627 Jun 26 05:57	10°  37'49	0.67226 AU
morning set	12626 Sep 10 00:26	21°  03'00		morning rise	12627 Jun 30 09:16	5° 	55'35
max. Earth dist.	12626 Sep 14 03:53	29°  08'39	1.34067 AU	direct	12627 Jul 06 09:01	3° 	18'02
	12626 Sep 14 14:07	0° 		desc. node	12627 Jul 10 10:11	4° 	17'20
asc. node	12626 Sep 16 07:04	3°  27'38		morning max el	12627 Jul 18 16:23	10°  40'31	25°33'45
					12627 Aug 03 01:10	0° 	
superior conj	12626 Sep 18 17:30	8°  29'45	0°23'11		12627 Aug 21 17:59	0° 	
minimum elong	12626 Sep 18 16:18	8°  23'31	0°22'59	morning set	12627 Aug 23 16:20	3° 	27'55
evening rise	12626 Sep 26 01:45	24°  01'24		max. Earth dist.	12627 Aug 27 08:05	10° 	13'57
	12626 Sep 28 22:57	0° 					1.35982 AU
evening max el	12626 Oct 15 22:00	26°  40'19	21°24'06	superior conj	12627 Sep 02 09:13	22°  00'42	-0°07'18
desc. node	12626 Oct 19 09:27	29°  37'39		minimum elong	12627 Sep 02 09:40	22°  03'00	0°07'26
	12626 Oct 19 22:26	0° 		behind sun begin	12627 Sep 02 04:04	21° 	34'57
retrograde	12626 Oct 28 00:14	2°  40'58		behind sun end	12627 Sep 02 15:16	22° 	31'05
evening set	12626 Oct 30 17:45	2°  23'47		asc. node	12627 Sep 03 03:40	23° 	33'24
	12626 Nov 05 22:24	30° 			12627 Sep 06 07:39	0° 	
inferior conj	12626 Nov 08 16:31	28°  29'22	-5°22'26	evening rise	12627 Sep 10 08:24	8° 	16'52
minimum elong	12626 Nov 08 08:14	28°  40'59	5°20'12		12627 Sep 22 03:17	0° 	
min. Earth dist.	12626 Nov 08 22:18	28°  21'15	0.54537 AU	evening max el	12627 Sep 28 01:46	7° 	28'09
morning rise	12626 Nov 16 23:33	24°  40'15		desc. node	12627 Oct 06 06:53	12° 	27'20
direct	12626 Nov 20 20:00	24°  08'16		retrograde	12627 Oct 08 13:48	12° 	41'47
	12626 Dec 03 06:51	0° 		evening set	12627 Oct 10 13:05	12° 	31'34
morning max el	12626 Dec 03 12:04	0°  12'10	22°27'14	inferior conj	12627 Oct 19 11:41	8° 	32'31
asc. node	12626 Dec 13 08:02	12°  39'25		minimum elong	12627 Oct 19 02:01	8° 	47'04
	12626 Dec 22 19:03	0° 		min. Earth dist.	12627 Oct 21 06:40	7° 	27'47
morning set	12626 Dec 25 09:40	5°  26'06		morning rise	12627 Oct 27 13:45	4° 	22'34
				direct	12627 Nov 01 07:04	3° 	34'02
superior conj	12627 Jan 01 10:15	20°  27'26	1°32'20	morning max el	12627 Nov 14 22:59	10° 	17'32

	12627 Nov 29 13:56	0°♊		asc. node	12628 Nov 16 01:51	20°♎06'12	
asc. node	12627 Nov 30 04:59	1°♊05'38			12628 Nov 21 01:29	0°♊	
morning set	12627 Dec 09 21:32	20°♊11'37		morning set	12628 Nov 23 08:41	4°♊51'30	
	12627 Dec 14 09:43	0°♋					
superior conj	12627 Dec 16 17:20	5°♋04'33	1°38'02	superior conj	12628 Nov 30 03:41	19°♊48'08	1°37'33
minimum elong	12627 Dec 16 17:47	5°♋07'01	1°38'58	minimum elong	12628 Nov 30 03:03	19°♊44'36	1°38'27
max. Earth dist.	12627 Dec 19 00:23	10°♋02'53	1.32610 AU	max. Earth dist.	12628 Dec 01 05:29	22°♊11'04	1.31700 AU
evening rise	12627 Dec 24 04:33	20°♋52'13		evening rise	12628 Dec 04 19:19	0°♋	
	12627 Dec 28 20:30	0°♌		evening set	12628 Dec 07 04:21	5°♋02'30	
desc. node	12628 Jan 02 04:54	7°♌55'31		desc. node	12628 Dec 19 01:50	27°♋37'12	
	12628 Jan 16 10:55	0°♍		evening max el	12628 Dec 20 11:56	0°♌	
evening max el	12628 Jan 26 21:11	12°♍05'17	27°30'40		12629 Jan 08 06:14	24°♌47'18	27°26'09
retrograde	12628 Feb 09 15:02	19°♍30'35		retrograde	12629 Jan 15 01:45	0°♍	
evening set	12628 Feb 16 12:04	17°♍03'09			12629 Jan 22 04:13	2°♍05'44	
min. Earth dist.	12628 Feb 20 06:55	13°♍45'59	0.63672 AU	evening set	12629 Jan 28 21:18	30°♌♌	
inferior conj	12628 Feb 22 23:21	11°♍01'24	-1°02'01	min. Earth dist.	12629 Jan 29 02:30	29°♌51'50	
minimum elong	12628 Feb 23 01:20	10°♍56'19	1°00'49	inferior conj	12629 Feb 01 20:33	26°♌59'01	0.61624 AU
asc. node	12628 Feb 26 03:06	8°♍00'09		minimum elong	12629 Feb 04 21:31	24°♌13'46	-2°18'44
morning rise	12628 Feb 29 16:51	5°♍43'44		morning rise	12629 Feb 05 02:21	24°♌02'48	2°16'13
direct	12628 Mar 03 02:51	5°♍15'01		morning set	12629 Feb 12 05:01	19°♌13'44	
morning max el	12628 Mar 09 14:09	8°♍34'36	17°47'36	asc. node	12629 Feb 12 00:30	19°♌17'21	
	12628 Mar 24 00:05	0°♎		direct	12629 Feb 14 09:06	18°♌53'21	
morning set	12628 Mar 26 03:04	3°♎37'51		morning max el	12629 Feb 21 06:58	22°♌22'57	17°50'15
desc. node	12628 Mar 30 06:31	10°♎41'24		morning set	12629 Feb 27 04:58	0°♍	
					12629 Mar 08 23:38	16°♍47'12	
superior conj	12628 Apr 07 21:37	25°♎01'51	-1°02'57	desc. node	12629 Mar 16 09:56	0°♎	
minimum elong	12628 Apr 07 15:08	24°♎35'24	1°02'22		12629 Mar 17 03:04	1°♎14'43	
	12628 Apr 10 23:24	0°♏		superior conj	12629 Mar 19 23:51	6°♎11'11	-0°22'11
max. Earth dist.	12628 Apr 13 13:30	4°♏07'42	1.44824 AU	minimum elong	12629 Mar 19 21:47	6°♎02'23	0°21'51
evening rise	12628 Apr 23 09:14	19°♏25'58		max. Earth dist.	12629 Mar 27 04:52	18°♎12'16	1.43369 AU
	12628 Apr 30 08:22	0°♐		evening rise	12629 Apr 03 02:18	29°♎11'16	
evening max el	12628 May 21 20:07	29°♐14'47	20°29'46		12629 Apr 03 14:48	0°♏	
	12628 May 22 14:38	0°♑			12629 Apr 24 00:24	0°♐	
asc. node	12628 May 24 00:10	1°♑14'15		evening max el	12629 May 04 16:37	13°♐02'35	21°42'08
retrograde	12628 May 29 21:20	3°♑53'43		asc. node	12629 May 10 21:24	17°♐43'51	
evening set	12628 Jun 02 22:59	2°♑19'08		retrograde	12629 May 13 19:33	18°♐23'47	
	12628 Jun 05 07:37	30°♌♐		evening set	12629 May 18 07:50	16°♐33'12	
inferior conj	12628 Jun 08 05:29	26°♐13'05	3°12'56	inferior conj	12629 May 23 14:15	10°♐16'31	3°02'39
minimum elong	12628 Jun 08 05:04	26°♐14'30	3°11'59	minimum elong	12629 May 23 12:58	10°♐21'03	3°01'38
min. Earth dist.	12628 Jun 08 22:01	25°♐16'16	0.68229 AU	min. Earth dist.	12629 May 23 17:30	10°♐05'12	0.68761 AU
morning rise	12628 Jun 13 10:51	19°♐53'10		morning rise	12629 May 28 17:52	4°♐01'55	
direct	12628 Jun 18 22:54	17°♐27'13		direct	12629 Jun 02 17:06	1°♐53'20	
desc. node	12628 Jun 26 07:19	20°♐41'16		morning max el	12629 Jun 12 13:27	7°♐42'19	22°37'28
morning max el	12628 Jun 30 02:23	24°♐07'51	24°07'09	desc. node	12629 Jun 13 04:22	8°♐20'25	
	12628 Jul 05 08:10	0°♑			12629 Jun 29 21:47	0°♑	
	12628 Jul 26 10:59	0°♒		morning set	12629 Jul 16 10:12	25°♑28'34	
morning set	12628 Aug 04 13:08	15°♒00'22			12629 Jul 19 03:53	0°♒	
max. Earth dist.	12628 Aug 08 05:48	21°♒28'39	1.38229 AU	max. Earth dist.	12629 Jul 21 04:18	3°♒23'45	1.40566 AU
	12628 Aug 12 22:00	0°♓					
superior conj	12628 Aug 15 12:52	4°♓56'15	-0°40'59	superior conj	12629 Jul 29 00:21	17°♒06'37	-1°15'25
minimum elong	12628 Aug 15 15:43	5°♓09'48	0°40'57	minimum elong	12629 Jul 29 05:49	17°♒31'22	1°15'19
asc. node	12628 Aug 20 00:18	13°♓36'36			12629 Aug 04 23:46	0°♓	
evening rise	12628 Aug 24 09:09	22°♓14'04		asc. node	12629 Aug 06 21:00	3°♓33'19	
	12628 Aug 28 08:55	0°♔		evening rise	12629 Aug 08 00:47	5°♓44'38	
evening max el	12628 Sep 09 19:31	19°♔04'33	19°02'32		12629 Aug 22 16:28	0°♔	
retrograde	12628 Sep 18 16:22	23°♔30'42		evening max el	12629 Aug 24 00:05	1°♔24'36	18°23'44
evening set	12628 Sep 20 12:58	23°♔19'49		retrograde	12629 Aug 31 14:04	5°♔14'18	
desc. node	12628 Sep 22 04:19	22°♔53'12		evening set	12629 Sep 02 15:52	4°♔57'52	
inferior conj	12628 Sep 28 22:30	19°♔05'20	-2°07'37	desc. node	12629 Sep 09 01:47	1°♔20'22	
minimum elong	12628 Sep 28 17:01	19°♔14'46	2°05'16	inferior conj	12629 Sep 10 06:48	0°♔22'38	-0°22'39
min. Earth dist.	12628 Oct 01 19:17	17°♔07'13	0.56262 AU	minimum elong	12629 Sep 10 05:57	0°♔24'22	0°22'23
morning rise	12628 Oct 06 18:03	14°♔20'35			12629 Sep 10 17:58	30°♌♓	
direct	12628 Oct 12 06:53	13°♔08'45		min. Earth dist.	12629 Sep 13 14:03	27°♓43'48	0.58195 AU
morning max el	12628 Oct 26 10:35	20°♔23'44	25°56'38	morning rise	12629 Sep 17 16:33	25°♓01'12	
	12628 Nov 03 16:53	0°♕		direct	12629 Sep 23 20:47	23°♓21'59	
					12629 Oct 07 03:09	0°♕	

morning max el	12629 Oct 08 04:32	1°♊00'02	27°12'50	direct	12630 Sep 05 23:08	4°♍27'39	
	12629 Oct 28 21:06	0°♌		morning max el	12630 Sep 20 06:11	12°♍21'55	27°52'57
asc. node	12629 Nov 02 22:40	9°♌31'59			12630 Oct 04 05:14	0°♊	
morning set	12629 Nov 07 17:27	19°♌21'12		asc. node	12630 Oct 20 19:24	29°♊15'26	
	12629 Nov 12 14:32	0°♈			12630 Oct 21 04:10	0°♌	
				morning set	12630 Oct 22 21:56	3°♌35'19	
superior conj	12629 Nov 14 15:21	4°♈32'10	1°31'13	max. Earth dist.	12630 Oct 28 22:08	16°♌33'35	1.31391 AU
minimum elong	12629 Nov 14 13:49	4°♈23'35	1°31'54				
max. Earth dist.	12629 Nov 14 14:01	4°♈24'41	1.31288 AU	superior conj	12630 Oct 30 02:26	19°♌10'31	1°19'12
evening rise	12629 Nov 21 09:59	19°♈26'33		minimum elong	12630 Oct 30 00:19	18°♌58'45	1°19'34
	12629 Nov 26 13:24	0°♈			12630 Nov 03 23:34	0°♈	
desc. node	12629 Dec 05 22:52	16°♈47'05		evening rise	12630 Nov 05 19:18	3°♈57'54	
	12629 Dec 15 05:50	0°♏			12630 Nov 19 10:58	0°♈	
evening max el	12629 Dec 21 09:23	6°♏43'22	26°47'16	desc. node	12630 Nov 22 20:01	5°♈12'08	
retrograde	12630 Jan 04 08:07	13°♏52'13		evening max el	12630 Dec 03 04:05	17°♈45'26	25°35'28
evening set	12630 Jan 11 00:33	12°♏00'05		retrograde	12630 Dec 17 01:06	24°♈45'04	
min. Earth dist.	12630 Jan 14 23:29	9°♏22'07	0.59469 AU	evening set	12630 Dec 23 01:44	23°♈21'26	
inferior conj	12630 Jan 18 03:44	6°♏51'35	-3°39'51	min. Earth dist.	12630 Dec 27 16:24	20°♈43'32	0.57409 AU
minimum elong	12630 Jan 18 11:21	6°♏36'28	3°36'28	inferior conj	12630 Dec 30 14:27	18°♈43'41	-4°54'59
morning rise	12630 Jan 26 01:05	2°♏12'14		minimum elong	12630 Dec 30 22:54	18°♈29'11	4°52'04
direct	12630 Jan 28 02:39	1°♏56'33		morning rise	12631 Jan 07 22:36	14°♈26'55	
asc. node	12630 Jan 29 21:51	2°♏08'58		direct	12631 Jan 10 02:51	14°♈12'27	
morning max el	12630 Feb 04 19:29	5°♏45'45	18°12'04	asc. node	12631 Jan 16 19:08	16°♈38'45	
morning set	12630 Feb 20 11:29	0°♏38'45		morning max el	12631 Jan 18 23:40	18°♈30'53	18°54'56
	12630 Feb 20 03:15	0°♏			12631 Jan 27 09:35	0°♏	
				morning set	12631 Feb 04 09:45	14°♏57'09	
superior conj	12630 Mar 02 01:23	18°♏25'26	0°15'13		12631 Feb 12 02:38	0°♏	
minimum elong	12630 Mar 02 02:32	18°♏30'41	0°15'18				
behind sun begin	12630 Mar 02 00:24	18°♏21'03		superior conj	12631 Feb 12 21:52	1°♏31'39	0°46'11
behind sun end	12630 Mar 02 04:41	18°♏40'18		minimum elong	12631 Feb 13 00:30	1°♏44'12	0°46'18
desc. node	12630 Mar 03 23:39	21°♏52'16		desc. node	12631 Feb 18 20:14	12°♏29'54	
	12630 Mar 08 15:50	0°♏		max. Earth dist.	12631 Feb 19 23:23	14°♏31'05	1.39227 AU
max. Earth dist.	12630 Mar 09 16:09	1°♏43'08	1.41435 AU	evening rise	12631 Feb 23 20:09	21°♏14'32	
evening rise	12630 Mar 14 12:40	9°♏45'24			12631 Mar 01 02:44	0°♏	
	12630 Mar 27 15:29	0°♏			12631 Mar 21 16:24	0°♏	
evening max el	12630 Apr 17 08:53	26°♏51'55	23°01'30	evening max el	12631 Mar 30 22:45	10°♏42'54	24°21'57
	12630 Apr 20 20:55	0°♏		retrograde	12631 Apr 11 08:29	17°♏23'57	
retrograde	12630 Apr 27 15:41	2°♏55'41		asc. node	12631 Apr 14 16:04	16°♏34'33	
asc. node	12630 Apr 27 18:42	2°♏55'36		evening set	12631 Apr 16 19:53	15°♏05'48	
evening set	12630 May 02 15:20	0°♏50'14		min. Earth dist.	12631 Apr 21 10:09	9°♏49'42	0.68427 AU
	12630 May 03 12:58	30°♏		inferior conj	12631 Apr 22 08:04	8°♏35'59	2°11'33
inferior conj	12630 May 07 23:45	24°♏25'18	2°42'04	minimum elong	12631 Apr 22 05:55	8°♏43'16	2°10'27
minimum elong	12630 May 07 21:50	24°♏31'55	2°40'58	morning rise	12631 Apr 27 16:05	2°♏35'57	
min. Earth dist.	12630 May 07 14:15	24°♏58'14	0.68825 AU	direct	12631 May 01 13:41	1°♏09'09	
morning rise	12630 May 13 04:15	18°♏17'27		morning max el	12631 May 09 03:34	5°♏23'33	19°59'52
direct	12630 May 17 14:28	16°♏29'23		desc. node	12631 May 17 22:09	16°♏08'38	
morning max el	12630 May 26 05:00	21°♏26'53	21°13'03		12631 May 27 11:15	0°♏	
desc. node	12630 May 31 01:19	26°♏54'29		morning set	12631 May 05 08:26	13°♏29'28	
	12630 Jun 02 11:41	0°♏			12631 Jun 15 21:52	0°♏	
	12630 Jun 23 03:29	0°♏		max. Earth dist.	12631 Jun 15 20:02	29°♏52'43	1.44385 AU
morning set	12630 Jun 26 05:59	4°♏50'13					
max. Earth dist.	12630 Jul 03 08:54	16°♏14'12	1.42702 AU	superior conj	12631 Jun 21 06:04	8°♏35'37	-2°07'52
				minimum elong	12631 Jun 21 10:58	8°♏55'33	2°08'36
superior conj	12630 Jul 10 15:07	28°♏21'38	-1°46'24	evening rise	12631 Jul 04 11:25	0°♏43'23	
minimum elong	12630 Jul 10 22:06	28°♏51'31	1°46'35		12631 Jul 04 01:16	0°♏	
	12630 Jul 11 14:04	0°♏		asc. node	12631 Jul 11 14:33	12°♏50'05	
evening rise	12630 Jul 22 03:11	18°♏38'25		evening max el	12631 Jul 22 01:24	27°♏37'16	18°05'51
asc. node	12630 Jul 24 17:44	23°♏19'24			12631 Jul 25 02:14	0°♏	
	12630 Jul 28 12:34	0°♏		retrograde	12631 Jul 28 10:54	0°♏57'43	
evening max el	12630 Aug 07 11:21	14°♏18'42	18°05'13	evening set	12631 Jul 31 04:23	0°♏19'38	
retrograde	12630 Aug 14 05:44	17°♏46'33			12631 Jul 31 19:49	30°♏	
evening set	12630 Aug 16 15:05	17°♏20'48		inferior conj	12631 Aug 06 10:33	25°♏05'30	2°03'02
inferior conj	12630 Aug 23 12:02	12°♏25'01	1°01'56	minimum elong	12631 Aug 06 13:08	24°♏58'37	2°01'41
minimum elong	12630 Aug 23 13:51	12°♏20'45	1°00'55	min. Earth dist.	12631 Aug 09 05:48	22°♏07'11	0.62698 AU
min. Earth dist.	12630 Aug 26 17:07	9°♏25'28	0.60439 AU	morning rise	12631 Aug 12 19:47	18°♏54'53	
desc. node	12630 Aug 26 23:16	9°♏11'52		desc. node	12631 Aug 13 20:42	18°♏12'26	
morning rise	12630 Aug 30 09:38	6°♏33'44		direct	12631 Aug 19 12:07	16°♏27'28	

morning max el	12631 Sep 02 13:40	24°Ω29'43	27°54'07	morning rise	12632 Jul 25 20:26	1°Ω54'11	
	12631 Sep 07 13:29	0°ྐ			12632 Jul 28 20:59	30°᠕ᠭ	
	12631 Sep 27 15:07	0°᠘		desc. node	12632 Jul 30 18:05	29°ᠭ24'23	
morning set	12631 Oct 06 20:02	17°᠘29'02		direct	12632 Aug 01 09:49	29°ᠭ14'43	
asc. node	12631 Oct 07 16:04	19°᠘11'13			12632 Aug 05 04:16	0°Ω	
max. Earth dist.	12631 Oct 12 01:53	28°᠘28'00	1.32017 AU	morning max el	12632 Aug 15 00:03	7°Ω13'01	27°20'01
	12631 Oct 12 18:56	0°᠓			12632 Sep 01 13:44	0°ྐ	
					12632 Sep 18 21:48	0°᠘	
superior conj	12631 Oct 14 11:05	3°᠓38'30	1°01'37	morning set	12632 Sep 19 09:06	0°᠘55'01	
minimum elong	12631 Oct 14 08:50	3°᠓26'14	1°01'41	asc. node	12632 Sep 23 12:41	9°᠘14'03	
evening rise	12631 Oct 21 06:23	18°᠓31'56		max. Earth dist.	12632 Sep 23 21:32	9°᠘59'35	1.33171 AU
	12631 Oct 26 19:20	0°ᠰ					
desc. node	12631 Nov 09 17:14	22°ᠰ35'30		superior conj	12632 Sep 27 15:11	17°᠘49'48	0°38'40
evening max el	12631 Nov 14 15:27	28°ᠰ02'55	24°00'25	minimum elong	12632 Sep 27 13:24	17°᠘40'19	0°38'32
	12631 Nov 16 19:55	0°᠊			12632 Oct 03 07:04	0°᠓	
retrograde	12631 Nov 28 05:50	4°᠊50'06		evening rise	12632 Oct 04 17:19	3°᠓03'06	
evening set	12631 Dec 03 02:55	3°᠊58'02			12632 Oct 19 09:41	0°ᠰ	
min. Earth dist.	12631 Dec 09 02:23	1°᠊01'05	0.55725 AU	evening max el	12632 Oct 26 02:29	8°ᠰ05'30	22°18'50
	12631 Dec 10 18:50	30°᠕ᠰ		desc. node	12632 Oct 26 14:33	8°ᠰ34'26	
inferior conj	12631 Dec 11 04:26	29°ᠰ45'25	-5°45'28	retrograde	12632 Nov 07 22:25	14°ᠰ27'33	
minimum elong	12631 Dec 11 08:52	29°ᠰ38'42	5°44'07	evening set	12632 Nov 11 09:05	14°ᠰ01'25	
morning rise	12631 Dec 19 16:47	25°ᠰ48'32		min. Earth dist.	12632 Nov 19 09:15	10°ᠰ27'23	0.54717 AU
direct	12631 Dec 22 07:13	25°ᠰ31'17		inferior conj	12632 Nov 20 01:44	10°ᠰ04'10	-5°48'08
	12632 Jan 01 03:42	0°᠊		minimum elong	12632 Nov 19 21:37	10°ᠰ09'59	5°46'56
morning max el	12632 Jan 01 15:42	0°᠊28'03	20°00'32	morning rise	12632 Nov 28 11:25	6°ᠰ16'52	
asc. node	12632 Jan 03 16:19	2°᠊35'32		direct	12632 Dec 01 19:52	5°ᠰ51'38	
morning set	12632 Jan 19 14:54	29°᠊32'02		morning max el	12632 Dec 13 17:27	11°ᠰ31'54	21°28'31
	12632 Jan 19 20:24	0°᠗		asc. node	12632 Dec 20 13:25	19°ᠰ42'54	
					12632 Dec 26 19:35	0°᠊	
superior conj	12632 Jan 27 08:37	15°᠗16'29	1°09'47	morning set	12633 Jan 03 00:17	14°᠊16'01	
minimum elong	12632 Jan 27 11:24	15°᠗30'23	1°10'09				
max. Earth dist.	12632 Feb 02 05:43	26°᠗41'08	1.37001 AU	superior conj	12633 Jan 10 05:40	29°᠊28'51	1°26'06
	12632 Feb 04 00:28	0°ᠠ		minimum elong	12633 Jan 10 07:48	29°᠊39'57	1°26'46
evening rise	12632 Feb 05 23:39	3°ᠠ34'38			12633 Jan 10 11:39	0°᠗	
desc. node	12632 Feb 05 16:52	3°ᠠ04'04		max. Earth dist.	12633 Jan 14 16:30	8°᠗33'59	1.34989 AU
	12632 Feb 22 03:25	0°ᠡ		evening rise	12633 Jan 18 19:56	16°᠗37'17	
evening max el	12632 Mar 12 12:06	24°ᠡ34'07	25°36'39	desc. node	12633 Jan 22 13:33	23°᠗30'56	
	12632 Mar 19 07:52	0°ᠢ			12633 Jan 26 06:15	0°ᠠ	
retrograde	12632 Mar 24 20:56	1°ᠢ42'01			12633 Feb 15 13:23	0°ᠡ	
	12632 Mar 29 20:17	30°᠕ᠡ		evening max el	12633 Feb 23 01:49	8°ᠡ20'42	26°38'14
evening set	12632 Mar 30 19:50	29°ᠡ14'35		retrograde	12633 Mar 08 04:00	15°ᠡ42'57	
asc. node	12632 Mar 31 13:27	28°ᠡ35'21		evening set	12633 Mar 14 13:26	13°ᠡ10'49	
min. Earth dist.	12632 Apr 04 03:05	24°ᠡ33'45	0.67591 AU	asc. node	12633 Mar 18 10:51	9°ᠡ16'05	
inferior conj	12632 Apr 05 13:15	22°ᠡ44'29	1°30'58	min. Earth dist.	12633 Mar 18 14:56	9°ᠡ04'13	0.66349 AU
minimum elong	12632 Apr 05 11:21	22°ᠡ50'36	1°30'02	inferior conj	12633 Mar 20 13:14	6°ᠡ46'23	0°39'57
morning rise	12632 Apr 11 03:23	16°ᠡ53'32		minimum elong	12633 Mar 20 12:12	6°ᠡ49'27	0°39'32
direct	12632 Apr 14 13:20	15°ᠡ46'42		morning rise	12633 Mar 26 12:04	1°ᠡ06'16	
morning max el	12632 Apr 21 09:43	19°ᠡ30'07	19°01'24	direct	12633 Mar 29 11:35	0°ᠡ16'49	
	12632 Apr 29 18:59	0°ᠢ		morning max el	12633 Apr 04 22:14	3°ᠡ41'51	18°19'20
desc. node	12632 May 03 18:54	5°ᠢ51'53		desc. node	12633 Apr 20 15:33	25°ᠡ56'32	
greatest brilliancy	12632 May 04 15:24	7°ᠢ08'58	-0.7m		12633 Apr 23 04:44	0°ᠢ	
morning set	12632 May 14 13:28	22°ᠢ22'18		morning set	12633 Apr 24 17:03	2°ᠢ24'43	
	12632 May 19 11:31	0°ᠣ					
max. Earth dist.	12632 May 28 12:14	14°ᠣ04'48	1.45449 AU	superior conj	12633 May 10 06:53	26°ᠢ59'52	-1°57'38
				minimum elong	12633 May 09 22:32	26°ᠢ27'15	1°57'48
superior conj	12632 May 30 23:25	17°ᠣ57'18	-2°12'52	max. Earth dist.	12633 May 11 07:41	28°ᠢ36'46	1.45793 AU
minimum elong	12632 May 30 21:32	17°ᠣ49'50	2°13'44		12633 May 12 05:00	0°ᠣ	
	12632 Jun 07 13:27	0°ᠤ		evening rise	12633 May 26 05:48	21°ᠣ54'54	
evening rise	12632 Jun 14 20:42	11°ᠤ48'25			12633 May 31 09:49	0°ᠤ	
	12632 Jun 26 04:06	0°Ω		greatest brilliancy	12633 Jun 05 15:18	8°ᠤ06'10	-0.8m
asc. node	12632 Jun 27 11:26	1°Ω58'41		asc. node	12633 Jun 14 08:24	20°ᠤ37'52	
evening max el	12632 Jul 04 14:57	11°Ω11'08	18°24'43	evening max el	12633 Jun 18 01:22	24°ᠤ54'07	19°00'56
retrograde	12632 Jul 11 01:02	14°Ω37'41		retrograde	12633 Jun 24 20:38	28°ᠤ39'40	
evening set	12632 Jul 14 02:55	13°Ω45'00		evening set	12633 Jun 28 07:20	27°ᠤ30'56	
inferior conj	12632 Jul 19 22:07	8°Ω14'32	2°43'06	inferior conj	12633 Jul 03 19:11	21°ᠤ45'33	3°05'38
minimum elong	12632 Jul 20 00:18	8°Ω08'05	2°41'51	minimum elong	12633 Jul 03 20:26	21°ᠤ41'34	3°04'35
min. Earth dist.	12632 Jul 22 03:50	5°Ω36'24	0.64752 AU	min. Earth dist.	12633 Jul 05 10:08	19°ᠤ41'22	0.66455 AU

morning rise	12633 Jul 09 08:52	15°☿22'20		min. Earth dist.	12634 Jun 18 23:08	4°☿10'26	0.67717 AU
direct	12633 Jul 15 14:39	12°☿41'18			12634 Jun 22 09:55	30°♊II	
desc. node	12633 Jul 17 15:24	12°☿56'12		morning rise	12634 Jun 23 06:20	29°♊10'57	
morning max el	12633 Jul 28 10:56	20°☿20'41	26°18'08	direct	12634 Jun 29 01:22	26°♊37'36	
	12633 Aug 05 17:59	0°♊		desc. node	12634 Jul 04 12:37	28°♊25'31	
	12633 Aug 25 16:49	0°♊			12634 Jul 06 18:43	0°☿	
morning set	12633 Sep 02 09:52	13°♊45'11		morning max el	12634 Jul 10 21:14	3°☿43'00	24°57'53
max. Earth dist.	12633 Sep 06 07:04	21°♊10'15	1.34836 AU		12634 Jul 30 23:48	0°♊	
asc. node	12633 Sep 10 09:17	29°♊20'07		morning set	12634 Aug 15 18:17	25°♊49'46	
	12633 Sep 10 17:07	0°♊			12634 Aug 18 02:01	0°♊	
				max. Earth dist.	12634 Aug 19 08:11	2°♊18'02	1.36918 AU
superior conj	12633 Sep 11 12:18	1°♊38'10	0°10'45				
minimum elong	12633 Sep 11 11:43	1°♊35'08	0°10'34	superior conj	12634 Aug 25 23:26	14°♊56'06	-0°21'18
behind sun begin	12633 Sep 11 07:11	1°♊11'55		minimum elong	12634 Aug 26 00:49	15°♊02'56	0°21'22
behind sun end	12633 Sep 11 16:14	1°♊58'23		asc. node	12634 Aug 28 05:55	19°♊25'48	
evening rise	12633 Sep 19 02:11	17°♊26'23			12634 Sep 02 11:43	0°♊	
	12633 Sep 25 08:54	0°♊		evening rise	12634 Sep 03 06:44	1°♊36'00	
evening max el	12633 Oct 07 22:32	18°♊29'54	20°47'01	evening max el	12634 Sep 20 08:29	29°♊38'53	19°34'22
desc. node	12633 Oct 13 11:56	22°♊41'24			12634 Sep 20 17:05	0°♊	
retrograde	12633 Oct 19 09:04	24°♊10'46		retrograde	12634 Sep 30 03:03	4°♊31'36	
evening set	12633 Oct 21 16:48	23°♊57'45		desc. node	12634 Sep 30 09:23	4°♊31'24	
inferior conj	12633 Oct 30 17:24	20°♊03'18	-4°51'34	evening set	12634 Oct 01 23:55	4°♊21'40	
minimum elong	12633 Oct 30 07:33	20°♊17'22	4°48'29	inferior conj	12634 Oct 10 18:04	0°♊16'44	-3°11'53
min. Earth dist.	12633 Oct 31 16:04	19°♊30'55	0.54605 AU	minimum elong	12634 Oct 10 09:50	0°♊29'49	3°08'33
morning rise	12633 Nov 07 22:20	16°♊07'49			12634 Oct 11 04:35	30°♊♊	
direct	12633 Nov 12 04:04	15°♊29'15		min. Earth dist.	12634 Oct 13 01:42	28°♊48'42	0.55422 AU
morning max el	12633 Nov 25 07:27	21°♊50'47	23°13'08	morning rise	12634 Oct 18 17:47	25°♊53'24	
	12633 Dec 02 08:04	0°♊		direct	12634 Oct 23 19:43	24°♊55'54	
asc. node	12633 Dec 07 10:26	7°♊44'39			12634 Nov 04 14:47	0°♊	
morning set	12633 Dec 18 11:46	29°♊02'40		morning max el	12634 Nov 06 17:43	1°♊52'56	25°00'42
	12633 Dec 18 22:32	0°♊		asc. node	12634 Nov 24 07:21	26°♊27'24	
					12634 Nov 26 05:01	0°♊	
superior conj	12633 Dec 25 09:49	13°♊59'03	1°35'32	morning set	12634 Dec 02 23:35	13°♊47'08	
minimum elong	12633 Dec 25 10:55	14°♊04'58	1°36'25				
max. Earth dist.	12633 Dec 28 10:58	20°♊28'15	1.33351 AU	superior conj	12634 Dec 09 18:34	28°♊40'07	1°38'34
evening rise	12634 Jan 02 05:21	0°♊12'26		minimum elong	12634 Dec 09 18:33	28°♊39'59	1°39'30
	12634 Jan 02 02:50	0°♊			12634 Dec 10 09:06	0°♊	
desc. node	12634 Jan 09 10:18	13°♊45'14		max. Earth dist.	12634 Dec 11 13:00	2°♊32'38	1.32165 AU
	12634 Jan 19 07:23	0°♊		evening rise	12634 Dec 17 00:44	14°♊12'17	
evening max el	12634 Feb 05 15:13	21°♊51'54	27°19'14		12634 Dec 25 05:08	0°♊	
retrograde	12634 Feb 19 04:39	29°♊17'40		desc. node	12634 Dec 27 07:12	3°♊41'19	
evening set	12634 Feb 25 22:32	26°♊46'40			12635 Jan 14 10:20	0°♊	
min. Earth dist.	12634 Mar 01 19:26	23°♊12'28	0.64741 AU	evening max el	12635 Jan 19 02:29	4°♊55'21	27°32'46
inferior conj	12634 Mar 04 05:31	20°♊34'46	-0°21'47	retrograde	12635 Feb 01 22:07	12°♊17'35	
minimum elong	12634 Mar 04 06:09	20°♊33'01	0°21'16	evening set	12635 Feb 08 20:39	9°♊54'47	
asc. node	12634 Mar 05 08:17	19°♊22'51		min. Earth dist.	12635 Feb 12 14:41	6°♊49'08	0.62829 AU
morning rise	12634 Mar 10 15:34	15°♊07'58		inferior conj	12635 Feb 15 11:14	4°♊02'37	-1°33'39
direct	12634 Mar 13 06:07	14°♊32'35		minimum elong	12635 Feb 15 14:21	3°♊54'59	1°31'52
morning max el	12634 Mar 19 14:47	17°♊50'52	17°54'14	asc. node	12635 Feb 20 05:41	29°♊58'56	
	12634 Mar 28 14:53	0°♊			12635 Feb 20 05:01	30°♊♊	
morning set	12634 Apr 06 01:16	13°♊50'57		morning rise	12635 Feb 22 10:34	28°♊52'07	
desc. node	12634 Apr 07 12:08	16°♊15'52		direct	12635 Feb 24 17:52	28°♊27'17	
	12634 Apr 15 21:07	0°♊			12635 Mar 01 04:06	0°♊	
				morning max el	12635 Mar 03 08:28	1°♊49'32	17°46'32
superior conj	12634 Apr 19 21:57	6°♊28'39	-1°25'37	morning set	12635 Mar 19 10:19	26°♊28'00	
minimum elong	12634 Apr 19 13:21	5°♊54'23	1°25'06		12635 Mar 21 10:56	0°♊	
max. Earth dist.	12634 Apr 24 03:46	13°♊11'42	1.45386 AU	desc. node	12635 Mar 25 08:42	6°♊45'19	
	12634 May 04 23:30	0°♊					
evening rise	12634 May 05 21:09	1°♊23'04		superior conj	12635 Mar 31 10:01	16°♊58'21	-0°45'33
greatest brilliancy	12634 May 20 12:39	23°♊26'40	-0.6m	minimum elong	12635 Mar 31 05:26	16°♊39'22	0°45'03
	12634 May 25 03:42	0°☿		max. Earth dist.	12635 Apr 06 21:41	27°♊32'33	1.44275 AU
asc. node	12634 Jun 01 05:28	8°☿37'22			12635 Apr 08 10:39	0°♊	
evening max el	12634 Jun 01 06:45	8°☿40'35	19°53'16	evening rise	12635 Apr 15 09:03	10°♊50'45	
retrograde	12634 Jun 08 18:58	12°☿57'04			12635 Apr 28 03:09	0°♊	
evening set	12634 Jun 12 15:03	11°☿31'43		evening max el	12635 May 15 06:15	22°♊27'34	20°59'21
inferior conj	12634 Jun 17 22:41	5°☿32'43	3°13'49	asc. node	12635 May 19 02:39	25°♊44'14	
minimum elong	12634 Jun 17 22:52	5°☿32'07	3°12'52	retrograde	12635 May 23 17:51	27°♊24'07	

evening set	12635 May 28 00:00	25° Π 42'23		evening set	12636 May 11 08:30	9° Π 58'46	
inferior conj	12635 Jun 02 06:10	19° Π 31'22	3°09'51	inferior conj	12636 May 16 15:29	3° Π 37'58	2°55'10
minimum elong	12635 Jun 02 05:21	19° Π 34'12	3°08'54	minimum elong	12636 May 16 13:54	3° Π 43'32	2°54'07
min. Earth dist.	12635 Jun 02 16:51	18° Π 54'16	0.68511 AU	min. Earth dist.	12636 May 16 13:14	3° Π 45'52	0.68834 AU
morning rise	12635 Jun 07 10:28	13° Π 13'38			12636 May 19 08:38	30° \mathbb{R} 8	
direct	12635 Jun 12 17:02	10° Π 54'50		morning rise	12636 May 21 19:08	27° \mathbb{S} 25'57	
desc. node	12635 Jun 21 09:44	15° Π 24'23		direct	12636 May 26 12:42	25° \mathbb{S} 25'59	
morning max el	12635 Jun 23 07:33	17° Π 14'04	23°28'56		12636 Jun 03 22:23	0° Π	
	12635 Jul 03 22:06	0° \mathbb{S}		morning max el	12636 Jun 04 20:15	0° Π 53'14	22°00'36
	12635 Jul 24 00:46	0° \mathbb{Q}		desc. node	12636 Jun 07 06:44	3° Π 29'21	
morning set	12635 Jul 28 05:33	6° \mathbb{Q} 56'36			12636 Jun 26 17:37	0° \mathbb{S}	
max. Earth dist.	12635 Aug 01 05:55	13° \mathbb{Q} 49'18	1.39229 AU	morning set	12636 Jul 07 15:48	16° \mathbb{S} 56'48	
				max. Earth dist.	12636 Jul 13 06:18	26° \mathbb{S} 06'32	1.41507 AU
					12636 Jul 15 13:52	0° \mathbb{Q}	
superior conj	12635 Aug 08 20:46	27° \mathbb{Q} 33'55	-0°55'40	superior conj	12636 Jul 20 23:59	9° \mathbb{Q} 22'15	-1°29'17
minimum elong	12635 Aug 09 00:45	27° \mathbb{Q} 52'30	0°55'36	minimum elong	12636 Jul 21 06:23	9° \mathbb{Q} 50'26	1°29'15
	12635 Aug 10 03:58	0° \mathbb{P}		evening rise	12636 Jul 31 14:45	28° \mathbb{Q} 40'41	
asc. node	12635 Aug 15 02:34	9° \mathbb{P} 26'58		asc. node	12636 Jul 31 23:17	29° \mathbb{Q} 20'08	
evening rise	12635 Aug 18 04:08	15° \mathbb{P} 23'44			12636 Aug 01 07:54	0° \mathbb{P}	
	12635 Aug 26 00:17	0° \mathbb{Q}		evening max el	12636 Aug 16 15:15	24° \mathbb{P} 11'23	18°13'27
evening max el	12635 Sep 03 07:17	11° \mathbb{Q} 34'57	18°43'23	retrograde	12636 Aug 23 19:40	27° \mathbb{P} 50'03	
retrograde	12635 Sep 11 13:55	15° \mathbb{Q} 44'25		evening set	12636 Aug 26 00:25	27° \mathbb{P} 30'12	
evening set	12635 Sep 13 12:02	15° \mathbb{Q} 31'46		inferior conj	12636 Sep 02 07:29	22° \mathbb{P} 46'20	0°16'01
desc. node	12635 Sep 17 06:52	14° \mathbb{Q} 01'09		minimum elong	12636 Sep 02 08:01	22° \mathbb{P} 45'11	0°15'37
inferior conj	12635 Sep 21 13:52	11° \mathbb{Q} 08'30	-1°21'14	transit middle	12636 Sep 02 08:01	22° \mathbb{P} 45'11	0°15'37
minimum elong	12635 Sep 21 10:31	11° \mathbb{Q} 14'41	1°19'48	transit begin	12636 Sep 02 07:07	22° \mathbb{P} 47'06	
min. Earth dist.	12635 Sep 24 16:45	8° \mathbb{Q} 51'02	0.57024 AU	transit end	12636 Sep 02 08:55	22° \mathbb{P} 43'15	
morning rise	12635 Sep 29 05:37	6° \mathbb{Q} 07'25		desc. node	12636 Sep 03 04:21	22° \mathbb{P} 01'05	
direct	12635 Oct 05 01:21	4° \mathbb{Q} 44'29		min. Earth dist.	12636 Sep 05 15:11	19° \mathbb{P} 55'42	0.59132 AU
morning max el	12635 Oct 19 07:55	12° \mathbb{Q} 10'28	26°32'58	morning rise	12636 Sep 09 12:11	17° \mathbb{P} 10'47	
	12635 Nov 02 05:42	0° \mathbb{P}		direct	12636 Sep 15 21:10	15° \mathbb{P} 19'26	
asc. node	12635 Nov 11 04:12	15° \mathbb{P} 39'51		morning max el	12636 Sep 30 05:19	23° \mathbb{P} 06'07	27°34'29
morning set	12635 Nov 17 09:58	28° \mathbb{P} 23'40			12636 Oct 06 09:30	0° \mathbb{Q}	
	12635 Nov 18 03:54	0° \mathbb{S}			12636 Oct 25 08:42	0° \mathbb{P}	
superior conj	12635 Nov 24 05:44	13° \mathbb{S} 24'48	1°35'35	asc. node	12636 Oct 28 00:59	5° \mathbb{P} 14'03	
minimum elong	12635 Nov 24 04:41	13° \mathbb{S} 18'57	1°36'23	morning set	12636 Oct 31 17:10	12° \mathbb{P} 47'39	
max. Earth dist.	12635 Nov 24 20:00	14° \mathbb{S} 44'13	1.31463 AU	max. Earth dist.	12636 Nov 07 04:37	26° \mathbb{P} 56'11	1.31270 AU
evening rise	12635 Dec 01 03:18	28° \mathbb{S} 29'04					
	12635 Dec 01 20:37	0° \mathbb{S}		superior conj	12636 Nov 07 17:24	28° \mathbb{P} 07'30	1°26'49
desc. node	12635 Dec 14 04:11	23° \mathbb{S} 10'51		minimum elong	12636 Nov 07 15:35	27° \mathbb{P} 57'17	1°27'21
	12635 Dec 18 11:16	0° \mathbb{Q}			12636 Nov 08 13:34	0° \mathbb{S}	
evening max el	12636 Jan 01 09:05	17° \mathbb{Q} 18'00	27°13'44	evening rise	12636 Nov 14 10:45	12° \mathbb{S} 57'00	
retrograde	12636 Jan 15 07:38	24° \mathbb{Q} 33'04			12636 Nov 22 22:56	0° \mathbb{S}	
evening set	12636 Jan 22 04:35	22° \mathbb{Q} 27'04		desc. node	12636 Nov 30 01:15	12° \mathbb{S} 03'29	
min. Earth dist.	12636 Jan 25 23:35	19° \mathbb{Q} 42'18	0.60709 AU	evening max el	12636 Dec 13 08:41	28° \mathbb{S} 51'00	26°20'18
inferior conj	12636 Jan 29 03:00	17° \mathbb{Q} 01'03	-2°53'06		12636 Dec 14 14:57	0° \mathbb{Q}	
minimum elong	12636 Jan 29 09:06	16° \mathbb{Q} 47'58	2°50'06	retrograde	12636 Dec 27 07:30	5° \mathbb{Q} 56'40	
morning rise	12636 Feb 05 16:36	12° \mathbb{Q} 09'54		evening set	12637 Jan 02 18:19	4° \mathbb{Q} 16'03	
asc. node	12636 Feb 07 03:04	11° \mathbb{Q} 53'50		min. Earth dist.	12637 Jan 06 22:14	1° \mathbb{Q} 39'58	0.58560 AU
direct	12636 Feb 07 19:05	11° \mathbb{Q} 52'00			12637 Jan 09 04:12	30° \mathbb{R} 3	
morning max el	12636 Feb 14 23:58	15° \mathbb{Q} 28'34	17°57'10	inferior conj	12637 Jan 10 01:14	29° \mathbb{S} 20'28	-4°13'26
	12636 Feb 25 01:43	0° \mathbb{P}		minimum elong	12637 Jan 10 09:37	29° \mathbb{S} 04'50	4°10'03
morning set	12636 Mar 01 14:01	9° \mathbb{P} 57'01		morning rise	12637 Jan 18 03:48	24° \mathbb{S} 50'45	
desc. node	12636 Mar 11 05:16	27° \mathbb{P} 21'01		direct	12637 Jan 20 05:31	24° \mathbb{S} 36'10	
superior conj	12636 Mar 11 22:35	28° \mathbb{P} 36'50	-0°05'40	asc. node	12637 Jan 24 00:24	25° \mathbb{S} 27'42	
minimum elong	12636 Mar 11 22:07	28° \mathbb{P} 34'45	0°05'29	morning max el	12637 Jan 28 09:28	28° \mathbb{S} 37'02	18°27'38
behind sun begin	12636 Mar 11 14:27	28° \mathbb{P} 01'16			12637 Jan 29 17:07	0° \mathbb{Q}	
behind sun end	12636 Mar 12 05:46	29° \mathbb{P} 08'11		morning set	12637 Feb 13 06:47	24° \mathbb{Q} 01'17	
	12636 Mar 12 17:41	0° \mathbb{P}			12637 Feb 16 09:32	0° \mathbb{P}	
max. Earth dist.	12636 Mar 19 11:05	11° \mathbb{P} 23'07	1.42584 AU	superior conj	12637 Feb 22 08:44	11° \mathbb{P} 14'41	0°29'14
evening rise	12636 Mar 25 08:26	20° \mathbb{P} 54'23		minimum elong	12637 Feb 22 10:43	11° \mathbb{P} 23'51	0°29'18
	12636 Mar 31 04:47	0° \mathbb{S}		desc. node	12637 Feb 26 01:49	17° \mathbb{P} 58'58	
	12636 Apr 21 11:41	0° Π		max. Earth dist.	12637 Mar 01 19:51	24° \mathbb{P} 33'45	1.40506 AU
evening max el	12636 Apr 27 00:34	6° Π 15'30	22°15'25		12637 Mar 05 00:44	0° \mathbb{P}	
asc. node	12636 May 04 23:55	11° Π 43'09		evening rise	12637 Mar 06 03:39	1° \mathbb{P} 52'02	
retrograde	12636 May 06 15:31	11° Π 55'54					

	12637 Mar 24 12:47	0°♄				12638 Mar 19 11:37	0°♄	
evening max el	12637 Apr 09 15:33	20°♄05'33	23°36'08		evening max el	12638 Mar 23 05:14	3°♄57'58	24°54'55
retrograde	12637 Apr 20 10:23	26°♄26'35			retrograde	12638 Apr 04 01:17	10°♄51'10	
asc. node	12637 Apr 21 21:15	26°♄16'53			asc. node	12638 Apr 08 18:36	9°♄13'41	
evening set	12637 Apr 25 14:53	24°♄15'40			evening set	12638 Apr 09 17:38	8°♄28'49	
min. Earth dist.	12637 Apr 30 09:57	18°♄38'43	0.68702 AU		min. Earth dist.	12638 Apr 14 04:51	3°♄27'44	0.68128 AU
inferior conj	12637 May 01 00:42	17°♄48'07	2°30'22		inferior conj	12638 Apr 15 07:55	1°♄58'28	1°55'37
minimum elong	12637 Apr 30 22:38	17°♄55'14	2°29'15		minimum elong	12638 Apr 15 05:48	2°♄05'30	1°54'32
morning rise	12637 May 06 06:20	11°♄43'11				12638 Apr 16 20:30	30°♄°	
direct	12637 May 10 11:06	10°♄04'05			morning rise	12638 Apr 20 18:12	26°♄°02'01	
morning max el	12637 May 18 14:24	14°♄42'15	20°40'16		direct	12638 Apr 24 10:49	24°♄°43'43	
desc. node	12637 May 25 03:37	22°♄21'55			morning max el	12638 May 01 16:07	28°♄°43'03	19°33'01
	12637 May 30 17:53	0°♄				12638 May 02 21:55	0°♄	
morning set	12637 Jun 17 02:19	25°♄54'40			desc. node	12638 May 12 00:25	11°♄49'28	
	12637 Jun 19 17:11	0°♄			greatest brilliancy	12638 May 14 08:14	15°♄12'14	-0.7m
max. Earth dist.	12637 Jun 25 13:11	9°♄16'40	1.43482 AU			12638 May 24 04:10	0°♄	
					morning set	12638 May 27 02:52	4°♄30'59	
superior conj	12637 Jul 02 04:47	20°♄11'29	-1°57'06		max. Earth dist.	12638 Jun 08 02:58	23°♄12'08	1.44926 AU
minimum elong	12637 Jul 02 11:29	20°♄39'28	1°57'30					
	12637 Jul 07 23:28	0°♄			superior conj	12638 Jun 12 09:42	0°♄00'27	-2°12'21
evening rise	12637 Jul 14 09:59	11°♄14'37			minimum elong	12638 Jun 12 12:10	0°♄10'17	2°13'15
asc. node	12637 Jul 18 20:02	19°♄00'14				12638 Jun 12 09:35	0°♄	
	12637 Jul 25 11:36	0°♄			evening rise	12638 Jun 26 08:48	22°♄54'18	
evening max el	12637 Jul 31 04:11	7°♄17'23	18°03'16			12638 Jun 30 14:30	0°♄	
retrograde	12637 Aug 06 17:26	10°♄40'01			asc. node	12638 Jul 05 16:51	8°♄22'00	
evening set	12637 Aug 09 06:17	10°♄09'17			evening max el	12638 Jul 14 18:23	20°♄43'13	18°11'44
inferior conj	12637 Aug 15 20:31	5°♄05'41	1°30'35		retrograde	12638 Jul 21 02:51	24°♄04'22	
minimum elong	12637 Aug 15 22:51	4°♄59'54	1°29'21		evening set	12638 Jul 23 23:59	23°♄20'06	
min. Earth dist.	12637 Aug 18 22:13	2°♄04'01	0.61417 AU		inferior conj	12638 Jul 30 01:00	17°♄58'40	2°22'24
desc. node	12637 Aug 21 01:48	0°♄10'20			minimum elong	12638 Jul 30 03:31	17°♄51'38	2°21'04
	12637 Aug 21 06:59	30°♄°			min. Earth dist.	12638 Aug 01 14:41	15°♄07'13	0.63608 AU
morning rise	12637 Aug 22 12:48	29°♄05'11			morning rise	12638 Aug 05 05:23	11°♄43'10	
direct	12637 Aug 29 04:31	26°♄48'48			desc. node	12638 Aug 07 23:13	10°♄01'53	
	12637 Sep 06 18:18	0°♄			direct	12638 Aug 11 21:10	9°♄09'36	
morning max el	12637 Sep 12 09:30	4°♄47'28	27°58'01		morning max el	12638 Aug 25 18:24	17°♄10'53	27°43'39
	12637 Oct 01 05:54	0°♄				12638 Sep 05 10:23	0°♄	
asc. node	12637 Oct 14 21:41	25°♄03'37				12638 Sep 24 01:29	0°♄	
morning set	12637 Oct 15 19:14	26°♄54'09			morning set	12638 Sep 29 13:48	10°♄36'44	
	12637 Oct 17 06:53	0°♄			asc. node	12638 Oct 01 18:18	15°♄02'46	
max. Earth dist.	12637 Oct 21 11:16	9°♄00'08	1.31594 AU		max. Earth dist.	12638 Oct 04 12:06	20°♄46'09	1.32446 AU
superior conj	12637 Oct 23 03:44	12°♄42'50	1°12'25		superior conj	12638 Oct 07 10:42	27°♄04'29	0°52'32
minimum elong	12637 Oct 23 01:30	12°♄30'29	1°12'40		minimum elong	12638 Oct 07 08:34	26°♄52'56	0°52'31
evening rise	12637 Oct 29 21:04	27°♄30'49				12638 Oct 08 19:01	0°♄	
	12637 Oct 31 00:56	0°♄			evening rise	12638 Oct 14 08:20	12°♄04'36	
desc. node	12637 Nov 16 22:25	0°♄05'13				12638 Oct 23 08:04	0°♄	
	12637 Nov 16 20:55	0°♄			desc. node	12638 Nov 03 19:42	16°♄56'07	
evening max el	12637 Nov 25 00:10	9°♄33'45	24°57'04		evening max el	12638 Nov 06 10:20	19°♄40'49	23°16'57
retrograde	12637 Dec 08 19:24	16°♄28'16			retrograde	12638 Nov 19 18:12	26°♄18'45	
evening set	12637 Dec 14 09:30	15°♄18'29			evening set	12638 Nov 24 01:08	25°♄38'49	
min. Earth dist.	12637 Dec 19 12:05	12°♄34'41	0.56630 AU		min. Earth dist.	12638 Nov 30 20:00	22°♄28'26	0.55205 AU
inferior conj	12637 Dec 22 03:13	10°♄52'35	-5°20'47		inferior conj	12638 Dec 02 09:14	21°♄34'27	-5°53'36
minimum elong	12637 Dec 22 10:41	10°♄40'28	5°18'30		minimum elong	12638 Dec 02 10:17	21°♄32'55	5°52'39
morning rise	12637 Dec 30 14:02	6°♄44'31			morning rise	12638 Dec 10 21:05	17°♄43'33	
direct	12638 Jan 01 21:37	6°♄29'22			direct	12638 Dec 13 18:41	17°♄23'26	
asc. node	12638 Jan 10 21:38	10°♄37'00			morning max el	12638 Dec 24 18:50	22°♄37'53	20°35'19
morning max el	12638 Jan 11 08:55	11°♄03'34	19°19'54		asc. node	12638 Dec 28 18:47	27°♄05'56	
	12638 Jan 24 00:23	0°♄				12638 Dec 30 21:57	0°♄	
morning set	12638 Jan 28 08:25	8°♄28'40			morning set	12639 Jan 12 15:41	23°♄08'42	
						12639 Jan 15 23:02	0°♄	
superior conj	12638 Feb 05 11:51	24°♄39'19	0°57'05					
minimum elong	12638 Feb 05 14:41	24°♄53'04	0°57'18		superior conj	12639 Jan 20 03:26	8°♄37'16	1°17'34
	12638 Feb 08 06:42	0°♄			minimum elong	12639 Jan 20 06:01	8°♄50'22	1°18'04
max. Earth dist.	12638 Feb 12 02:25	7°♄05'30	1.38273 AU		max. Earth dist.	12639 Jan 25 10:29	19°♄07'31	1.36116 AU
desc. node	12638 Feb 12 22:25	8°♄35'58			evening rise	12639 Jan 29 07:12	26°♄24'10	
evening rise	12638 Feb 15 20:06	13°♄44'49			desc. node	12639 Jan 30 19:03	29°♄07'30	
	12638 Feb 25 15:58	0°♄				12639 Jan 31 06:44	0°♄	

	12639 Feb 19 02:49	0°♿		evening rise	12640 Jan 12 09:29	9°♿41'24	
evening max el	12639 Mar 05 18:45	17°♿48'07	26°04'46	desc. node	12640 Jan 17 15:46	19°♿29'25	
retrograde	12639 Mar 18 11:22	25°♿02'55			12640 Jan 23 18:49	0°♿	
evening set	12639 Mar 24 15:05	22°♿32'45			12640 Feb 14 20:43	0°♿	
asc. node	12639 Mar 26 16:00	20°♿36'22		evening max el	12640 Feb 16 08:16	1°♿28'36	26°58'26
min. Earth dist.	12639 Mar 28 19:45	18°♿06'52	0.67120 AU	retrograde	12640 Feb 29 15:52	8°♿53'53	
inferior conj	12639 Mar 30 11:08	16°♿04'32	1°10'38	evening set	12640 Mar 07 05:22	6°♿21'04	
minimum elong	12639 Mar 30 09:31	16°♿09'35	1°09'51	min. Earth dist.	12640 Mar 11 04:37	2°♿28'52	0.65711 AU
morning rise	12639 Apr 05 04:41	10°♿18'08		asc. node	12640 Mar 12 13:26	0°♿55'05	
direct	12639 Apr 08 10:06	9°♿19'00		inferior conj	12640 Mar 13 08:09	0°♿01'03	0°15'02
morning max el	12639 Apr 15 01:14	12°♿52'39	18°41'28	minimum elong	12640 Mar 13 07:43	0°♿02'16	0°14'57
	12639 Apr 27 18:25	0°♿		transit middle	12640 Mar 13 07:43	0°♿02'16	0°14'57
desc. node	12639 Apr 28 21:08	1°♿42'30		transit begin	12640 Mar 13 06:40	0°♿05'20	
morning set	12639 May 06 15:48	13°♿49'01		transit end	12640 Mar 13 08:47	29°♿59'12	
	12639 May 17 00:27	0°♿			12640 Mar 13 08:31	30°♿	
max. Earth dist.	12639 May 21 21:20	7°♿36'19	1.45687 AU	morning rise	12640 Mar 19 11:30	24°♿26'35	
				direct	12640 Mar 22 06:58	23°♿43'40	
superior conj	12639 May 22 20:47	9°♿08'01	-2°08'50	morning max el	12640 Mar 28 15:53	27°♿04'25	18°06'33
minimum elong	12639 May 22 15:37	8°♿47'50	2°09'30		12640 Mar 31 07:11	0°♿	
	12639 Jun 05 02:05	0°♿		desc. node	12640 Apr 14 17:45	21°♿53'47	
evening rise	12639 Jun 07 07:36	3°♿33'35		morning set	12640 Apr 16 07:32	24°♿26'57	
greatest brilliancy	12639 Jun 14 09:29	14°♿51'53	-0.9m		12640 Apr 19 17:53	0°♿	
asc. node	12639 Jun 22 13:45	27°♿19'06					
	12639 Jun 24 13:03	0°♿		superior conj	12640 May 01 05:20	18°♿16'06	-1°45'38
evening max el	12639 Jun 28 06:49	4°♿21'21	18°38'04	minimum elong	12640 Apr 30 20:05	17°♿39'46	1°45'26
retrograde	12639 Jul 04 19:49	7°♿54'40		max. Earth dist.	12640 May 03 17:12	22°♿10'44	1.45705 AU
evening set	12639 Jul 08 01:24	6°♿55'11			12640 May 08 17:35	0°♿	
inferior conj	12639 Jul 13 17:01	1°♿17'55	2°54'36	evening rise	12640 May 17 07:48	13°♿19'33	
minimum elong	12639 Jul 13 18:50	1°♿12'19	2°53'27		12640 May 28 04:16	0°♿	
	12639 Jul 14 18:21	30°♿		greatest brilliancy	12640 May 29 18:22	2°♿23'10	-0.7m
min. Earth dist.	12639 Jul 15 16:23	28°♿53'08	0.65518 AU	asc. node	12640 Jun 08 10:47	15°♿42'36	
morning rise	12639 Jul 19 11:20	24°♿55'34		evening max el	12640 Jun 10 15:10	18°♿05'33	19°21'21
direct	12639 Jul 25 21:47	22°♿14'32		retrograde	12640 Jun 17 16:58	22°♿03'25	
desc. node	12639 Jul 25 20:35	22°♿14'32		evening set	12640 Jun 21 07:28	20°♿47'46	
morning max el	12639 Aug 08 05:26	0°♿06'39	26°56'45	inferior conj	12640 Jun 26 17:09	14°♿56'20	3°10'42
	12639 Aug 08 02:48	0°♿		minimum elong	12640 Jun 26 17:57	14°♿53'43	3°09'43
	12639 Aug 30 09:32	0°♿		min. Earth dist.	12640 Jun 28 01:53	13°♿09'09	0.67040 AU
morning set	12639 Sep 12 22:06	23°♿48'44		morning rise	12640 Jul 02 03:54	8°♿33'01	
	12639 Sep 16 02:02	0°♿		direct	12640 Jul 08 05:18	5°♿54'12	
max. Earth dist.	12639 Sep 17 03:53	2°♿09'33	1.33818 AU	desc. node	12640 Jul 11 17:53	6°♿39'11	
asc. node	12639 Sep 18 14:53	5°♿07'26		morning max el	12640 Jul 20 16:17	13°♿21'52	25°45'42
					12640 Aug 03 03:34	0°♿	
superior conj	12639 Sep 21 12:08	11°♿06'45	0°27'25		12640 Aug 22 03:29	0°♿	
minimum elong	12639 Sep 21 10:46	10°♿59'33	0°27'14	morning set	12640 Aug 25 16:27	6°♿20'33	
evening rise	12639 Sep 28 18:39	26°♿33'18		max. Earth dist.	12640 Aug 29 09:14	13°♿14'43	1.35672 AU
	12639 Sep 30 10:08	0°♿					
evening max el	12639 Oct 18 23:59	29°♿47'55	21°37'50	superior conj	12640 Sep 04 05:22	24°♿42'23	-0°02'27
	12639 Oct 19 04:56	0°♿		minimum elong	12640 Sep 04 05:31	24°♿43'09	0°02'36
desc. node	12639 Oct 21 17:02	2°♿11'10		behind sun begin	12640 Sep 03 23:24	24°♿12'22	
retrograde	12639 Oct 31 07:20	5°♿54'52		behind sun end	12640 Sep 04 11:38	25°♿14'01	
evening set	12639 Nov 03 04:53	5°♿35'46		asc. node	12640 Sep 04 11:29	25°♿13'19	
inferior conj	12639 Nov 12 02:23	1°♿40'53	-5°31'06		12640 Sep 06 19:47	0°♿	
minimum elong	12639 Nov 11 19:00	1°♿51'14	5°29'10	evening rise	12640 Sep 12 01:57	10°♿50'46	
min. Earth dist.	12639 Nov 12 02:16	1°♿41'02	0.54554 AU		12640 Sep 22 04:25	0°♿	
	12639 Nov 15 04:21	30°♿		evening max el	12640 Sep 30 01:40	10°♿29'07	20°13'35
morning rise	12639 Nov 20 10:07	27°♿52'54		desc. node	12640 Oct 07 14:28	15°♿21'46	
direct	12639 Nov 24 03:20	27°♿22'54		retrograde	12640 Oct 10 19:43	15°♿49'51	
	12639 Dec 02 09:17	0°♿		evening set	12640 Oct 12 20:35	15°♿39'13	
morning max el	12639 Dec 06 15:02	3°♿20'48	22°11'35	inferior conj	12640 Oct 21 20:10	11°♿41'52	-4°12'46
asc. node	12639 Dec 15 15:51	14°♿38'06		minimum elong	12640 Oct 21 10:13	11°♿56'36	4°09'13
	12639 Dec 24 06:03	0°♿		min. Earth dist.	12640 Oct 23 10:17	10°♿45'22	0.54836 AU
morning set	12639 Dec 28 02:12	7°♿54'34		morning rise	12640 Oct 29 22:58	7°♿36'08	
				direct	12640 Nov 03 13:21	6°♿50'18	
superior conj	12640 Jan 04 03:54	22°♿58'25	1°30'54	morning max el	12640 Nov 17 02:28	13°♿28'40	23°59'36
minimum elong	12640 Jan 04 05:37	23°♿07'31	1°31'41		12640 Nov 29 18:39	0°♿	
	12640 Jan 07 12:47	0°♿		asc. node	12640 Dec 01 12:50	2°♿58'23	
max. Earth dist.	12640 Jan 08 00:17	0°♿58'46	1.34244 AU	morning set	12640 Dec 11 14:04	22°♿40'49	

	12640 Dec 14 23:09	0°♄		superior conj	12641 Dec 02 20:19	22°♄17'18	1°38'01
				minimum elong	12641 Dec 02 19:50	22°♄14'39	1°38'55
superior conj	12640 Dec 18 10:19	7°♄34'21	1°37'34	max. Earth dist.	12641 Dec 04 02:19	25°♄03'06	1.31800 AU
minimum elong	12640 Dec 18 10:57	7°♄37'45	1°38'30		12641 Dec 06 08:34	0°♄	
max. Earth dist.	12640 Dec 20 21:54	12°♄55'49	1.32783 AU	evening rise	12641 Dec 09 22:15	7°♄35'56	
evening rise	12640 Dec 25 23:31	23°♄28'12		desc. node	12641 Dec 21 09:30	29°♄22'30	
	12640 Dec 29 07:13	0°♄			12641 Dec 21 18:18	0°♄	
desc. node	12641 Jan 03 12:35	9°♄36'48		evening max el	12642 Jan 11 06:47	27°♄38'11	27°29'03
	12641 Jan 16 10:21	0°♄			12642 Jan 13 23:07	0°♄	
evening max el	12641 Jan 28 20:57	14°♄49'44	27°28'41	retrograde	12642 Jan 25 04:17	4°♄57'29	
retrograde	12641 Feb 11 13:56	22°♄15'33		evening set	12642 Feb 01 02:48	2°♄41'09	
evening set	12641 Feb 18 10:14	19°♄47'01			12642 Feb 04 14:03	30°♄	
min. Earth dist.	12641 Feb 22 05:34	16°♄25'30	0.63956 AU	min. Earth dist.	12642 Feb 04 20:44	29°♄45'15	0.61940 AU
inferior conj	12641 Feb 24 20:23	13°♄42'16	-0°51'07	inferior conj	12642 Feb 07 20:40	26°♄59'15	-2°06'40
minimum elong	12641 Feb 24 21:59	13°♄38'05	0°50'05	minimum elong	12642 Feb 08 01:02	26°♄49'08	2°04'19
asc. node	12641 Feb 27 10:53	11°♄07'23		asc. node	12642 Feb 14 08:19	22°♄12'39	
morning rise	12641 Mar 03 11:54	8°♄22'05		morning rise	12642 Feb 15 02:01	21°♄56'17	
direct	12641 Mar 05 22:59	7°♄51'47		direct	12642 Feb 17 06:52	21°♄34'49	
morning max el	12641 Mar 12 09:23	11°♄10'48	17°48'44	morning max el	12642 Feb 24 02:33	25°♄02'13	17°48'40
	12641 Mar 25 07:59	0°♄			12642 Feb 28 05:20	0°♄	
morning set	12641 Mar 29 03:09	6°♄26'07		morning set	12642 Mar 11 20:58	19°♄27'59	
desc. node	12641 Apr 01 14:20	12°♄18'06		desc. node	12642 Mar 17 19:44	0°♄	
					12642 Mar 19 10:52	2°♄50'29	
superior conj	12641 Apr 11 04:27	28°♄09'13	-1°09'03	superior conj	12642 Mar 23 03:01	9°♄08'18	-0°28'15
minimum elong	12641 Apr 10 21:20	27°♄40'21	1°08'29	minimum elong	12642 Mar 23 00:19	8°♄56'54	0°27'53
	12641 Apr 12 07:54	0°♄		max. Earth dist.	12642 Mar 30 04:27	20°♄50'07	1.43626 AU
max. Earth dist.	12641 Apr 16 12:11	6°♄40'07	1.44992 AU		12642 Apr 04 22:31	0°♄	
evening rise	12641 Apr 26 19:44	22°♄42'45		evening rise	12642 Apr 06 11:04	2°♄22'42	
	12641 May 01 14:38	0°♄			12642 Apr 25 02:23	0°♄	
	12641 May 22 23:51	0°♄		evening max el	12642 May 07 15:25	15°♄40'29	21°30'46
evening max el	12641 May 24 18:07	1°♄52'45	20°19'54	asc. node	12642 May 13 05:10	20°♄01'45	
asc. node	12641 May 26 07:55	3°♄21'45		retrograde	12642 May 16 14:12	20°♄54'59	
retrograde	12641 Jun 01 15:46	6°♄25'31		evening set	12642 May 21 00:55	19°♄06'36	
evening set	12641 Jun 05 15:57	4°♄53'22		inferior conj	12642 May 26 07:12	12°♄51'22	3°04'51
	12641 Jun 10 01:50	30°♄		minimum elong	12642 May 26 06:01	12°♄55'29	3°03'51
inferior conj	12641 Jun 10 22:40	28°♄49'12	3°13'29	min. Earth dist.	12642 May 26 12:20	12°♄33'26	0.68716 AU
minimum elong	12641 Jun 10 22:25	28°♄50'06	3°12'33	morning rise	12642 May 31 10:55	6°♄36'01	
min. Earth dist.	12641 Jun 11 17:16	27°♄45'37	0.68116 AU	direct	12642 Jun 05 12:05	4°♄24'41	
morning rise	12641 Jun 16 04:34	22°♄28'44		morning max el	12642 Jun 15 13:03	10°♄21'19	22°50'39
direct	12641 Jun 21 18:30	20°♄00'35		desc. node	12642 Jun 15 12:07	10°♄19'00	
desc. node	12641 Jun 28 15:04	22°♄49'49			12642 Jul 01 01:36	0°♄	
morning max el	12641 Jul 03 02:16	26°♄47'52	24°20'22	morning set	12642 Jul 19 17:17	28°♄40'12	
	12641 Jul 06 01:36	0°♄			12642 Jul 20 12:36	0°♄	
	12641 Jul 27 17:50	0°♄		max. Earth dist.	12642 Jul 24 05:52	6°♄15'36	1.40226 AU
morning set	12641 Aug 07 16:25	18°♄01'36					
max. Earth dist.	12641 Aug 11 07:31	24°♄26'08	1.37888 AU	superior conj	12642 Aug 01 01:20	20°♄02'16	-1°10'17
	12641 Aug 14 08:43	0°♄		minimum elong	12642 Aug 01 06:26	20°♄25'32	1°10'11
superior conj	12641 Aug 18 11:07	7°♄44'05	-0°35'45		12642 Aug 06 10:14	0°♄	
minimum elong	12641 Aug 18 13:33	7°♄55'50	0°35'45	asc. node	12642 Aug 09 04:49	5°♄15'30	
asc. node	12641 Aug 22 08:08	15°♄17'12		evening rise	12642 Aug 10 21:06	8°♄27'06	
evening rise	12641 Aug 27 03:48	24°♄51'20			12642 Aug 23 07:41	0°♄	
	12641 Aug 29 18:30	0°♄		evening max el	12642 Aug 26 20:47	4°♄12'59	18°28'08
evening max el	12641 Sep 12 17:31	21°♄58'28	19°10'04	retrograde	12642 Sep 03 14:40	8°♄07'23	
retrograde	12641 Sep 21 19:40	26°♄31'01		evening set	12642 Sep 05 15:27	7°♄52'02	
evening set	12641 Sep 23 16:06	26°♄20'30		desc. node	12642 Sep 11 09:26	4°♄51'18	
desc. node	12641 Sep 24 11:57	26°♄09'19		inferior conj	12642 Sep 13 09:12	3°♄19'46	-0°37'27
inferior conj	12641 Oct 02 04:05	22°♄08'45	-2°24'28	minimum elong	12642 Sep 13 07:45	3°♄22'38	0°36'54
minimum elong	12641 Oct 01 21:50	22°♄19'16	2°21'48	min. Earth dist.	12642 Sep 16 15:41	0°♄45'59	0.57881 AU
min. Earth dist.	12641 Oct 04 22:02	20°♄18'04	0.56023 AU		12642 Sep 17 16:52	30°♄	
morning rise	12641 Oct 10 00:49	17°♄29'49		morning rise	12642 Sep 20 20:35	28°♄03'28	
direct	12641 Oct 15 11:03	16°♄21'46		direct	12642 Sep 26 22:47	26°♄28'36	
morning max el	12641 Oct 29 13:24	23°♄32'14	25°42'55		12642 Oct 06 10:35	0°♄	
	12641 Nov 04 09:43	0°♄		morning max el	12642 Oct 11 06:23	4°♄03'28	27°03'40
asc. node	12641 Nov 18 09:43	21°♄54'27			12642 Oct 30 04:08	0°♄	
	12641 Nov 22 13:02	0°♄		asc. node	12642 Nov 05 06:30	11°♄16'58	
morning set	12641 Nov 26 01:27	7°♄21'50		morning set	12642 Nov 10 10:41	21°♄53'29	

	12642 Nov 14 04:09	0°♊		asc. node	12643 Oct 23 03:13	0°♎58'06	
				morning set	12643 Oct 25 15:55	6°♎10'19	
superior conj	12642 Nov 17 07:55	7°♊01'33	1°32'33	max. Earth dist.	12643 Oct 31 19:01	19°♎26'47	1.31344 AU
minimum elong	12642 Nov 17 06:30	6°♊53'38	1°33'16				
max. Earth dist.	12642 Nov 17 10:39	7°♊16'48	1.31318 AU	superior conj	12643 Nov 01 19:11	21°♎41'06	1°21'23
evening rise	12642 Nov 24 03:11	21°♊58'15		minimum elong	12643 Nov 01 17:08	21°♎29'40	1°21'48
	12642 Nov 28 00:18	0°♊			12643 Nov 05 12:55	0°♊	
desc. node	12642 Dec 08 06:32	18°♊37'52		evening rise	12643 Nov 08 12:03	6°♊28'39	
	12642 Dec 15 23:30	0°♊			12643 Nov 20 15:17	0°♊	
evening max el	12642 Dec 24 10:53	9°♊41'01	26°55'13	desc. node	12643 Nov 25 03:39	7°♊10'31	
retrograde	12643 Jan 07 09:28	16°♊51'18		evening max el	12643 Dec 06 06:44	20°♊50'19	25°47'52
evening set	12643 Jan 14 03:28	14°♊55'16		retrograde	12643 Dec 20 04:19	27°♊51'47	
min. Earth dist.	12643 Jan 18 01:05	12°♊16'04	0.59790 AU	evening set	12643 Dec 26 08:00	26°♊23'31	
inferior conj	12643 Jan 21 05:24	9°♊42'16	-3°27'38	min. Earth dist.	12643 Dec 30 19:19	23°♊46'40	0.57695 AU
minimum elong	12643 Jan 21 12:40	9°♊27'34	3°24'19	inferior conj	12644 Jan 02 19:06	21°♊41'12	-4°44'43
morning rise	12643 Jan 29 00:49	4°♊59'48		minimum elong	12644 Jan 03 03:41	21°♊26'10	4°41'38
direct	12643 Jan 31 02:31	4°♊43'38		morning rise	12644 Jan 11 02:01	17°♊21'15	
asc. node	12643 Feb 01 05:38	4°♊48'37		direct	12644 Jan 13 05:23	17°♊06'54	
morning max el	12643 Feb 07 15:54	8°♊29'04	18°07'35	asc. node	12644 Jan 19 02:53	19°♊03'41	
	12643 Feb 21 13:14	0°♊		morning max el	12644 Jan 21 21:35	21°♊20'27	18°47'13
morning set	12643 Feb 23 06:50	3°♊13'53			12644 Jan 28 13:40	0°♊	
				morning set	12644 Feb 07 03:46	17°♊28'44	
					12644 Feb 13 14:08	0°♊	
superior conj	12643 Mar 05 01:17	21°♊13'26	0°09'55				
minimum elong	12643 Mar 05 02:05	21°♊16'58	0°10'01				
behind sun begin	12643 Mar 04 20:03	20°♊50'02		superior conj	12644 Feb 15 19:14	4°♊12'43	0°41'56
behind sun end	12643 Mar 05 08:06	21°♊43'51		minimum elong	12644 Feb 15 21:45	4°♊24'35	0°42'02
desc. node	12643 Mar 06 07:25	23°♊27'25		desc. node	12644 Feb 21 03:59	14°♊05'14	
	12643 Mar 10 01:32	0°♊		max. Earth dist.	12644 Feb 22 23:48	17°♊19'50	1.39556 AU
max. Earth dist.	12643 Mar 12 16:25	4°♊26'43	1.41745 AU	evening rise	12644 Feb 26 22:41	24°♊09'13	
evening rise	12643 Mar 17 18:23	12°♊48'15			12644 Mar 01 11:03	0°♊	
	12643 Mar 28 21:02	0°♊			12644 Mar 21 16:06	0°♊	
evening max el	12643 Apr 20 08:05	29°♊29'08	22°49'27	evening max el	12644 Apr 01 22:07	13°♊19'52	24°10'12
	12643 Apr 20 20:36	0°♊		retrograde	12644 Apr 13 04:10	19°♊56'20	
retrograde	12643 Apr 30 10:44	5°♊26'58		asc. node	12644 Apr 15 23:47	19°♊20'23	
asc. node	12643 Apr 30 02:28	5°♊26'25		evening set	12644 Apr 18 13:46	17°♊39'54	
evening set	12643 May 05 08:41	3°♊23'30		min. Earth dist.	12644 Apr 23 05:11	12°♊18'24	0.68510 AU
	12643 May 08 11:25	30°♊		inferior conj	12644 Apr 24 01:17	11°♊10'26	2°16'54
inferior conj	12643 May 10 16:41	26°♊59'29	2°45'51	minimum elong	12644 Apr 23 23:08	11°♊17'43	2°15'45
minimum elong	12643 May 10 14:50	27°♊05'53	2°44'45	morning rise	12644 Apr 29 08:35	5°♊09'04	
min. Earth dist.	12643 May 10 09:00	27°♊26'09	0.68844 AU	direct	12644 May 03 07:59	3°♊39'10	
morning rise	12643 May 15 20:53	20°♊50'35		morning max el	12644 May 11 01:13	7°♊59'30	20°09'54
direct	12643 May 20 08:58	18°♊59'30		desc. node	12644 May 19 05:55	17°♊54'50	
morning max el	12643 May 29 03:47	24°♊04'25	21°25'01		12644 May 27 16:33	0°♊	
desc. node	12643 Jun 02 09:04	28°♊45'48		morning set	12644 Jun 07 20:40	16°♊54'02	
	12643 Jun 03 09:19	0°♊			12644 Jun 16 05:54	0°♊	
	12643 Jun 24 10:22	0°♊		max. Earth dist.	12644 Jun 17 19:20	2°♊28'52	1.44170 AU
morning set	12643 Jun 29 16:40	8°♊11'18					
max. Earth dist.	12643 Jul 06 09:22	18°♊57'39	1.42404 AU	superior conj	12644 Jun 23 13:56	11°♊48'55	-2°05'32
	12643 Jul 12 23:24	0°♊		minimum elong	12644 Jun 23 19:29	12°♊11'38	2°06'10
					12644 Jul 04 09:51	0°♊	
superior conj	12643 Jul 13 19:24	1°♊25'51	-1°42'11	evening rise	12644 Jul 06 13:01	3°♊40'03	
minimum elong	12643 Jul 14 02:20	1°♊55'44	1°42'16	asc. node	12644 Jul 12 22:20	14°♊36'51	
evening rise	12643 Jul 25 01:46	21°♊27'13			12644 Jul 23 13:58	0°♊	
asc. node	12643 Jul 27 01:32	25°♊03'32		evening max el	12644 Jul 23 21:07	0°♊17'57	18°04'34
	12643 Jul 29 19:41	0°♊		retrograde	12644 Jul 30 07:19	3°♊38'33	
evening max el	12643 Aug 10 07:16	17°♊02'35	18°06'43	evening set	12644 Aug 01 23:33	3°♊02'31	
retrograde	12643 Aug 17 03:59	20°♊32'56			12644 Aug 06 04:33	30°♊	
evening set	12643 Aug 19 12:04	20°♊08'52		inferior conj	12644 Aug 08 07:43	27°♊51'08	1°55'10
inferior conj	12643 Aug 26 11:32	15°♊16'04	0°50'37	minimum elong	12644 Aug 08 10:16	27°♊44'26	1°53'50
minimum elong	12643 Aug 26 13:04	15°♊12'30	0°49'43	min. Earth dist.	12644 Aug 11 04:49	24°♊51'10	0.62372 AU
desc. node	12643 Aug 29 06:55	12°♊41'30		morning rise	12644 Aug 14 18:44	21°♊42'45	
min. Earth dist.	12643 Aug 29 17:31	12°♊18'08	0.60096 AU	desc. node	12644 Aug 15 04:21	21°♊25'51	
morning rise	12643 Sep 02 10:58	9°♊28'26		direct	12644 Aug 21 11:06	19°♊17'48	
direct	12643 Sep 08 23:27	7°♊26'03		morning max el	12644 Sep 04 13:46	27°♊19'44	27°56'14
morning max el	12643 Sep 23 07:03	15°♊18'46	27°49'27		12644 Sep 07 02:38	0°♊	
	12643 Oct 05 05:55	0°♊			12644 Sep 27 23:09	0°♊	
	12643 Oct 22 15:40	0°♊		morning set	12644 Oct 08 15:05	20°♊07'12	

asc. node	12644 Oct 08 23:53	20° Ω 52'07			12645 Sep 02 17:20	0° Π		
	12644 Oct 13 08:06	0° Π			12645 Sep 20 08:51	0° Ω		
max. Earth dist.	12644 Oct 13 23:32	1° Π 23'13	1.31890 AU	morning set	12645 Sep 22 05:42	3° Ω 37'44		
				asc. node	12645 Sep 25 20:31	10° Ω 54'10		
superior conj	12644 Oct 16 04:18	6° Π 10'49	1°04'38	max. Earth dist.	12645 Sep 26 20:33	12° Ω 58'16	1.32964 AU	
minimum elong	12644 Oct 16 02:02	5° Π 58'25	1°04'46					
evening rise	12644 Oct 22 22:57	21° Π 02'20		superior conj	12645 Sep 30 09:15	20° Ω 25'12	0°42'30	
	12644 Oct 27 05:41	0° Σ		minimum elong	12645 Sep 30 07:21	20° Ω 15'03	0°42'23	
desc. node	12644 Nov 11 00:52	24° Σ 44'29			12645 Oct 04 19:49	0° Π		
	12644 Nov 15 13:29	0° Σ		evening rise	12645 Oct 07 10:03	5° Π 34'28		
evening max el	12644 Nov 16 18:58	1° Σ 13'20	24°15'26		12645 Oct 20 08:31	0° Σ		
retrograde	12644 Nov 30 11:06	8° Σ 02'50		desc. node	12645 Oct 28 22:11	10° Σ 58'17		
evening set	12644 Dec 05 12:46	7° Σ 06'21		evening max el	12645 Oct 29 05:36	11° Σ 16'34	22°33'47	
min. Earth dist.	12644 Dec 11 06:16	4° Σ 13'18	0.55937 AU	retrograde	12645 Nov 11 05:05	17° Σ 43'04		
inferior conj	12644 Dec 13 12:07	2° Σ 50'31	-5°40'27	evening set	12645 Nov 14 20:56	17° Σ 13'46		
minimum elong	12644 Dec 13 17:32	2° Σ 42'10	5°38'52	min. Earth dist.	12645 Nov 22 13:25	13° Σ 46'27	0.54815 AU	
	12644 Dec 18 14:51	30° Σ 47		inferior conj	12645 Nov 23 11:30	13° Σ 15'13	-5°51'33	
morning rise	12644 Dec 22 00:19	28° Σ 50'55		minimum elong	12645 Nov 23 08:42	13° Σ 19'10	5°50'31	
direct	12644 Dec 24 12:37	28° Σ 34'24		morning rise	12645 Dec 01 21:50	9° Σ 27'25		
	12644 Dec 30 01:05	0° Σ		direct	12645 Dec 05 03:21	9° Σ 03'38		
morning max el	12645 Jan 03 15:38	3° Σ 25'21	19°49'18	morning max el	12645 Dec 16 19:29	14° Σ 37'16	21°14'03	
asc. node	12645 Jan 05 00:05	4° Σ 48'19		asc. node	12645 Dec 22 21:12	21° Σ 46'24		
	12645 Jan 20 07:58	0° \approx			12645 Dec 28 02:20	0° Σ		
morning set	12645 Jan 21 08:03	2° \approx 01'33		morning set	12646 Jan 05 17:00	16° Σ 44'58		
					12646 Jan 12 00:30	0° \approx		
superior conj	12645 Jan 29 04:06	17° \approx 52'21	1°06'41					
minimum elong	12645 Jan 29 06:55	18° \approx 06'22	1°07'00	superior conj	12646 Jan 12 23:52	2° \approx 01'22	1°24'04	
max. Earth dist.	12645 Feb 04 05:52	29° \approx 34'10	1.37321 AU	minimum elong	12646 Jan 13 02:08	2° \approx 13'06	1°24'41	
	12645 Feb 04 11:25	0° X		max. Earth dist.	12646 Jan 17 15:56	11° \approx 29'13	1.35274 AU	
desc. node	12645 Feb 07 00:35	4° X 40'01		evening rise	12646 Jan 21 17:27	19° \approx 19'28		
evening rise	12645 Feb 07 23:23	6° X 22'18		desc. node	12646 Jan 24 21:15	25° \approx 08'14		
	12645 Feb 22 08:39	0° Υ			12646 Jan 27 15:15	0° X		
evening max el	12645 Mar 15 11:30	27° Υ 11'25	25°26'15		12646 Feb 16 10:39	0° Υ		
	12645 Mar 18 13:52	0° X		evening max el	12646 Feb 26 01:17	10° Υ 59'18	26°30'09	
retrograde	12645 Mar 27 17:19	4° X 16'04		retrograde	12646 Mar 11 01:08	18° Υ 19'42		
evening set	12645 Apr 02 14:29	1° X 49'54		evening set	12646 Mar 17 09:08	15° Υ 48'01		
asc. node	12645 Apr 02 21:10	1° X 35'27		asc. node	12646 Mar 20 18:35	12° Υ 25'33		
	12645 Apr 04 11:48	30° Σ 47		min. Earth dist.	12646 Mar 21 11:28	11° Υ 36'24	0.66563 AU	
min. Earth dist.	12645 Apr 06 22:44	27° Υ 03'45	0.67740 AU	inferior conj	12646 Mar 23 07:57	9° Υ 22'26	0°48'24	
inferior conj	12645 Apr 08 07:03	25° Υ 19'30	1°37'51	minimum elong	12646 Mar 23 06:44	9° Υ 26'05	0°47'52	
minimum elong	12645 Apr 08 05:03	25° Υ 25'56	1°36'51	morning rise	12646 Mar 29 05:19	3° Υ 40'32		
morning rise	12645 Apr 13 20:04	19° Υ 26'58		direct	12646 Apr 01 06:22	2° Υ 48'35		
direct	12645 Apr 17 07:43	18° Υ 17'13		morning max el	12646 Apr 07 17:52	6° Υ 15'24	18°24'31	
morning max el	12645 Apr 24 06:12	22° Υ 04'30	19°09'07	desc. node	12646 Apr 22 23:20	27° Υ 35'36		
	12645 Apr 30 19:57	0° X			12646 Apr 24 11:53	0° X		
desc. node	12645 May 06 02:39	7° X 34'07		morning set	12646 Apr 27 23:16	5° X 30'15		
greatest brilliancy	12645 May 07 05:54	9° X 15'33	-0.7m					
morning set	12645 May 17 23:49	25° X 40'31		superior conj	12646 May 13 17:50	0° Π 18'55	-2°01'11	
	12645 May 20 18:56	0° Π		minimum elong	12646 May 13 10:08	29° X 48'49	2°01'29	
max. Earth dist.	12645 May 31 10:52	16° Π 36'47	1.45338 AU		12646 May 13 12:59	0° Π		
				max. Earth dist.	12646 May 14 06:09	1° Π 07'02	1.45793 AU	
superior conj	12645 Jun 03 10:03	21° Π 17'04	-2°13'23	evening rise	12646 May 29 14:24	25° Π 08'15		
minimum elong	12645 Jun 03 09:21	21° Π 14'18	2°14'18		12646 Jun 01 16:34	0° X		
	12645 Jun 08 21:31	0° X		greatest brilliancy	12646 Jun 08 05:07	10° X 12'00	-0.8m	
evening rise	12645 Jun 18 01:53	14° X 54'06		asc. node	12646 Jun 16 16:10	22° X 33'12		
	12645 Jun 27 08:19	0° Ω		evening max el	12646 Jun 20 22:00	27° X 31'54	18°54'29	
asc. node	12645 Jun 29 19:11	3° Ω 49'09			12646 Jun 23 21:49	0° Ω		
evening max el	12645 Jul 07 10:57	13° Ω 50'06	18°20'47	retrograde	12646 Jun 27 15:19	1° Ω 13'46		
retrograde	12645 Jul 13 20:18	17° Ω 14'40		evening set	12646 Jul 01 00:43	0° Ω 07'22		
evening set	12645 Jul 16 20:58	16° Ω 24'13			12646 Jul 01 05:08	30° Σ 47		
inferior conj	12645 Jul 22 17:34	10° Ω 56'08	2°38'10	inferior conj	12646 Jul 06 13:25	24° X 24'02	3°03'09	
minimum elong	12645 Jul 22 19:52	10° Ω 49'27	2°36'55	minimum elong	12646 Jul 06 14:50	24° X 19'34	3°02'06	
min. Earth dist.	12645 Jul 25 01:26	8° Ω 14'02	0.64470 AU	min. Earth dist.	12646 Jul 08 06:32	22° X 14'19	0.66228 AU	
morning rise	12645 Jul 28 17:24	4° Ω 36'50		morning rise	12646 Jul 12 04:14	18° X 00'58		
desc. node	12645 Aug 02 01:46	2° Ω 16'10		direct	12646 Jul 18 11:22	15° X 19'41		
direct	12645 Aug 04 07:38	1° Ω 58'30		desc. node	12646 Jul 19 23:06	15° X 27'41		
morning max el	12645 Aug 17 23:47	9° Ω 57'55	27°27'02	morning max el	12646 Jul 31 10:43	23° X 02'31	26°28'48	

	12646 Aug 06 14:29	0°♎		minimum elong	12647 Jun 20 16:30	8°♊08'05	3°12'25
	12646 Aug 27 00:59	0°♏		min. Earth dist.	12647 Jun 21 18:42	6°♊40'27	0.67554 AU
morning set	12646 Sep 05 08:33	16°♏33'38		morning rise	12647 Jun 26 00:32	1°♊46'57	
max. Earth dist.	12646 Sep 09 07:47	24°♏12'04	1.34558 AU		12647 Jun 28 13:50	30°♏II	
	12646 Sep 12 05:22	0°♎		direct	12647 Jul 01 21:14	29°♏II2'05	
asc. node	12646 Sep 12 17:07	0°♎59'47			12647 Jul 05 11:03	0°♊	
				desc. node	12647 Jul 06 20:21	0°♊41'04	
superior conj	12646 Sep 14 07:36	4°♎17'18	0°15'18	morning max el	12647 Jul 13 21:16	6°♊23'41	25°10'41
minimum elong	12646 Sep 14 06:47	4°♎13'02	0°15'06		12647 Aug 01 04:39	0°♎	
behind sun begin	12646 Sep 14 04:44	4°♎02'28		morning set	12647 Aug 18 19:44	28°♎45'49	
behind sun end	12646 Sep 14 08:50	4°♎23'37			12647 Aug 19 12:16	0°♏	
evening rise	12646 Sep 21 19:24	19°♎59'19		max. Earth dist.	12647 Aug 22 10:04	5°♏19'14	1.36588 AU
	12646 Sep 26 17:44	0°♏					
evening max el	12646 Oct 10 23:47	21°♏35'16	20°59'38	superior conj	12647 Aug 28 20:28	17°♏40'08	-0°16'13
desc. node	12646 Oct 15 19:35	25°♏23'58		minimum elong	12647 Aug 28 21:30	17°♏45'18	0°16'19
retrograde	12646 Oct 22 15:54	27°♏23'14		asc. node	12647 Aug 30 13:45	21°♏05'38	
evening set	12646 Oct 25 02:49	27°♏08'57			12647 Sep 03 23:20	0°♎	
inferior conj	12646 Nov 03 03:03	23°♏14'50	-5°03'35	evening rise	12647 Sep 06 00:48	4°♎11'21	
minimum elong	12646 Nov 02 17:35	23°♏28'14	5°00'47		12647 Sep 20 23:09	0°♏	
min. Earth dist.	12646 Nov 03 19:53	22°♏51'00	0.54561 AU	evening max el	12647 Sep 23 07:33	2°♏36'27	19°43'46
morning rise	12646 Nov 11 08:43	19°♏22'07		desc. node	12647 Oct 02 17:03	7°♏35'21	
direct	12646 Nov 15 11:17	18°♏45'58		retrograde	12647 Oct 03 08:11	7°♏36'29	
morning max el	12646 Nov 28 10:52	25°♏01'19	22°56'56	evening set	12647 Oct 05 05:36	7°♏26'35	
	12646 Dec 03 00:34	0°♏		inferior conj	12647 Oct 14 01:32	3°♏23'48	-3°28'30
asc. node	12646 Dec 09 18:14	9°♏40'36		minimum elong	12647 Oct 13 16:42	3°♏37'33	3°24'59
	12646 Dec 20 11:01	0°♊		min. Earth dist.	12647 Oct 16 04:59	2°♏03'50	0.55245 AU
morning set	12646 Dec 21 04:21	1°♊31'36			12647 Oct 19 22:04	30°♏♎	
				morning rise	12647 Oct 22 02:06	29°♎05'24	
superior conj	12646 Dec 28 03:11	16°♊29'22	1°34'31	direct	12647 Oct 27 01:03	28°♎11'12	
minimum elong	12646 Dec 28 04:27	16°♊36'11	1°35'22		12647 Nov 03 00:11	0°♏	
max. Earth dist.	12646 Dec 31 09:19	23°♊22'46	1.33571 AU	morning max el	12647 Nov 09 21:12	5°♏03'36	24°45'15
	12647 Jan 03 14:56	0°♏		asc. node	12647 Nov 26 15:12	28°♏17'25	
evening rise	12647 Jan 05 01:09	2°♏50'07			12647 Nov 27 13:43	0°♏	
desc. node	12647 Jan 11 18:01	15°♏24'32		morning set	12647 Dec 05 16:14	16°♏16'20	
	12647 Jan 20 12:09	0°♏			12647 Dec 11 22:51	0°♊	
evening max el	12647 Feb 08 14:48	24°♏33'09	27°14'36				
	12647 Feb 15 14:24	0°♏		superior conj	12647 Dec 12 11:24	1°♊08'57	1°38'29
retrograde	12647 Feb 22 02:45	1°♏58'47		minimum elong	12647 Dec 12 11:33	1°♊09'45	1°39'26
	12647 Feb 28 01:18	30°♏♏		max. Earth dist.	12647 Dec 14 10:14	5°♊24'40	1.32309 AU
evening set	12647 Feb 28 19:40	29°♏27'04		evening rise	12647 Dec 19 19:14	16°♊46'16	
min. Earth dist.	12647 Mar 04 17:08	25°♏48'22	0.65007 AU		12647 Dec 26 14:39	0°♏	
inferior conj	12647 Mar 07 01:34	23°♏12'55	-0°11'45	desc. node	12647 Dec 29 14:53	5°♏23'23	
minimum elong	12647 Mar 07 01:54	23°♏11'59	0°11'24		12648 Jan 15 02:36	0°♏	
transit middle	12647 Mar 07 01:54	23°♏11'59	0°11'24	evening max el	12648 Jan 22 02:24	7°♏40'56	27°32'41
transit begin	12647 Mar 06 23:46	23°♏17'53		retrograde	12648 Feb 04 21:28	15°♏04'28	
transit end	12647 Mar 07 04:02	23°♏06'06		evening set	12648 Feb 11 19:38	12°♏39'48	
asc. node	12647 Mar 07 16:02	22°♏33'09		min. Earth dist.	12648 Feb 15 13:51	9°♏30'20	0.63128 AU
morning rise	12647 Mar 13 09:48	17°♏44'06		inferior conj	12648 Feb 18 09:04	6°♏44'07	-1°22'11
direct	12647 Mar 16 01:37	17°♏06'50		minimum elong	12648 Feb 18 11:46	6°♏37'25	1°20'36
morning max el	12647 Mar 22 10:02	20°♏25'14	17°56'52	asc. node	12648 Feb 22 13:28	3°♏00'44	
	12647 Mar 29 19:08	0°♏		morning rise	12648 Feb 25 06:21	1°♏31'09	
morning set	12647 Apr 09 03:19	16°♏44'10		direct	12648 Feb 27 14:32	1°♏05'03	
desc. node	12647 Apr 09 19:56	17°♏52'45		morning max el	12648 Mar 05 03:49	4°♏26'06	17°46'32
	12647 Apr 17 05:43	0°♏		morning set	12648 Mar 21 09:04	29°♏11'38	
					12648 Mar 21 20:14	0°♏	
superior conj	12647 Apr 23 06:43	9°♏40'52	-1°31'11	desc. node	12648 Mar 26 16:28	8°♏20'37	
minimum elong	12647 Apr 22 21:47	9°♏05'22	1°30'45				
max. Earth dist.	12647 Apr 27 02:30	15°♏43'02	1.45490 AU	superior conj	12648 Apr 02 15:15	20°♏00'29	-0°51'45
	12647 May 06 06:55	0°♏		minimum elong	12648 Apr 02 09:59	19°♏38'47	0°51'14
evening rise	12647 May 09 07:39	4°♏39'57			12648 Apr 08 19:09	0°♏	
greatest brilliancy	12647 May 23 11:38	26°♏04'55	-0.6m	max. Earth dist.	12648 Apr 08 20:40	0°♏06'01	1.44477 AU
	12647 May 26 04:46	0°♏		evening rise	12648 Apr 17 18:59	14°♏04'41	
asc. node	12647 Jun 03 13:15	10°♏39'28			12648 Apr 28 08:21	0°♏	
evening max el	12647 Jun 04 04:12	11°♏17'56	19°44'31	evening max el	12648 May 17 04:31	25°♏04'29	20°48'47
retrograde	12647 Jun 11 13:29	15°♏29'18		asc. node	12648 May 20 10:26	27°♏55'04	
evening set	12647 Jun 15 08:06	14°♏06'24		retrograde	12648 May 25 12:26	29°♏54'56	
inferior conj	12647 Jun 20 16:10	8°♏09'14	3°13'23	evening set	12648 May 29 16:59	28°♏15'41	

inferior conj	12648 Jun 03 23:12	22°II06'19	3°11'11	inferior conj	12649 May 19 08:22	6°II11'47	2°58'04
minimum elong	12648 Jun 03 22:32	22°II08'39	3°10'13	minimum elong	12649 May 19 06:53	6°II17'01	2°57'01
min. Earth dist.	12648 Jun 04 11:55	21°II22'18	0.68419 AU	min. Earth dist.	12649 May 19 08:03	6°II12'56	0.68820 AU
morning rise	12648 Jun 09 03:49	15°II47'43		morning rise	12649 May 24 11:57	29°R8'46	
direct	12648 Jun 14 12:17	13°II26'21			12649 May 24 11:22	30°R8	
desc. node	12648 Jun 22 17:28	17°II27'46		direct	12649 May 29 07:30	27°R55'42	
morning max el	12648 Jun 25 07:28	19°II53'25	23°42'21		12649 Jun 03 17:56	0°II	
	12648 Jul 03 22:00	0°☾		morning max el	12649 Jun 07 19:28	3°II30'36	22°13'16
	12648 Jul 24 08:41	0°♂		desc. node	12649 Jun 09 14:27	5°II23'37	
morning set	12648 Jul 30 10:27	10°♂01'51			12649 Jun 27 23:22	0°☾	
max. Earth dist.	12648 Aug 03 07:36	16°♂43'51	1.38879 AU	morning set	12649 Jul 11 00:25	20°☾11'26	
				max. Earth dist.	12649 Jul 16 07:02	28°☾52'16	1.41184 AU
					12649 Jul 16 23:10	0°♂	
superior conj	12648 Aug 10 20:05	0°♂24'12	-0°50'26				
minimum elong	12648 Aug 10 23:40	0°♂41'00	0°50'21	superior conj	12649 Jul 24 02:14	12°♂20'06	-1°24'27
	12648 Aug 10 14:56	0°♂		minimum elong	12649 Jul 24 08:20	12°♂47'14	1°24'22
asc. node	12648 Aug 16 10:23	11°♂07'31			12649 Aug 02 17:49	0°♂	
evening rise	12648 Aug 19 23:26	18°♂02'30		evening rise	12649 Aug 03 11:51	1°♂24'04	
	12648 Aug 26 06:39	0°♂		asc. node	12649 Aug 03 07:04	1°♂01'49	
evening max el	12648 Sep 05 04:39	14°♂25'43	18°49'36	evening max el	12649 Aug 19 11:31	26°♂56'36	18°16'39
retrograde	12648 Sep 13 16:07	18°♂40'47			12649 Aug 23 18:01	0°♂	
evening set	12648 Sep 15 13:31	18°♂28'52		retrograde	12649 Aug 26 19:01	0°♂38'43	
desc. node	12648 Sep 18 14:32	17°♂24'23		evening set	12649 Aug 28 22:43	0°♂20'09	
inferior conj	12648 Sep 23 18:08	14°♂08'46	-1°37'32		12649 Aug 29 22:16	30°R♂	
minimum elong	12648 Sep 23 14:02	14°♂16'09	1°35'46	inferior conj	12649 Sep 05 08:30	25°♂39'21	0°02'43
min. Earth dist.	12648 Sep 26 19:14	11°♂57'41	0.56747 AU	minimum elong	12649 Sep 05 08:36	25°♂39'10	0°02'30
morning rise	12648 Oct 01 11:15	9°♂13'17		transit middle	12649 Sep 05 08:36	25°♂39'10	0°02'30
direct	12648 Oct 07 04:39	7°♂54'14		transit begin	12649 Sep 05 05:10	25°♂46'23	
morning max el	12648 Oct 21 10:26	15°♂16'42	26°20'53	transit end	12649 Sep 05 12:01	25°♂31'56	
	12648 Nov 02 07:15	0°♂		desc. node	12649 Sep 05 12:01	25°♂31'57	
asc. node	12648 Nov 12 12:02	17°♂25'37		min. Earth dist.	12649 Sep 08 16:19	22°♂52'22	0.58800 AU
	12648 Nov 18 16:47	0°♂		morning rise	12649 Sep 12 15:00	20°♂08'36	
morning set	12648 Nov 19 02:55	0°♂54'07		direct	12649 Sep 18 22:32	18°♂21'20	
				morning max el	12649 Oct 03 06:34	26°♂05'10	27°27'41
superior conj	12648 Nov 25 22:20	15°♂53'23	1°36'23		12649 Oct 06 22:55	0°♂	
minimum elong	12648 Nov 25 21:25	15°♂48'21	1°37'15		12649 Oct 26 18:20	0°♂	
max. Earth dist.	12648 Nov 26 16:34	17°♂34'47	1.31530 AU	asc. node	12649 Oct 30 08:46	6°♂56'44	
	12648 Dec 02 09:21	0°♂		morning set	12649 Nov 03 10:39	15°♂19'59	
evening rise	12648 Dec 02 20:52	1°♂00'51					
desc. node	12648 Dec 15 11:51	24°♂57'31		superior conj	12649 Nov 10 10:00	0°♂36'33	1°28'30
	12648 Dec 18 14:22	0°♂		minimum elong	12649 Nov 10 08:16	0°♂26'53	1°29'07
evening max el	12649 Jan 03 09:55	20°♂10'46	27°18'52	max. Earth dist.	12649 Nov 10 01:11	29°♂47'18	1.31264 AU
retrograde	12649 Jan 17 08:26	27°♂27'19			12649 Nov 10 03:27	0°♂	
evening set	12649 Jan 24 05:58	25°♂18'23		evening rise	12649 Nov 17 03:43	15°♂27'26	
min. Earth dist.	12649 Jan 28 00:27	22°♂31'04	0.61027 AU		12649 Nov 24 08:03	0°♂	
inferior conj	12649 Jan 31 03:11	19°♂47'56	-2°40'46	desc. node	12649 Dec 02 08:56	13°♂56'30	
minimum elong	12649 Jan 31 08:50	19°♂35'34	2°37'56		12649 Dec 14 13:48	0°♂	
morning rise	12649 Feb 07 14:40	14°♂53'41		evening max el	12649 Dec 16 10:49	1°♂51'49	26°30'27
asc. node	12649 Feb 08 10:51	14°♂41'54		retrograde	12649 Dec 30 09:44	8°♂58'35	
direct	12649 Feb 09 17:36	14°♂35'02		evening set	12650 Jan 05 22:39	7°♂13'53	
morning max el	12649 Feb 16 19:54	18°♂09'02	17°54'20	min. Earth dist.	12650 Jan 10 00:37	4°♂37'24	0.58871 AU
	12649 Feb 25 08:33	0°♂		inferior conj	12650 Jan 13 04:14	2°♂13'47	-4°01'41
morning set	12649 Mar 04 10:25	12°♂34'24		minimum elong	12650 Jan 13 12:24	1°♂58'12	3°58'16
desc. node	12649 Mar 13 13:00	28°♂55'32			12650 Jan 16 06:13	30°R♂	
	12649 Mar 14 03:45	0°♂		morning rise	12650 Jan 21 05:03	27°♂40'35	
superior conj	12649 Mar 15 00:18	1°♂29'15	-0°11'30	direct	12650 Jan 23 06:33	27°♂25'42	
minimum elong	12649 Mar 14 23:17	1°♂24'53	0°11'15	asc. node	12650 Jan 26 08:09	28°♂00'18	
behind sun begin	12649 Mar 14 17:22	0°♂59'12			12650 Jan 29 17:21	0°♂	
behind sun end	12649 Mar 15 05:12	1°♂50'31		morning max el	12650 Jan 31 06:29	1°♂22'25	18°21'44
max. Earth dist.	12649 Mar 22 10:40	14°♂01'30	1.42868 AU	morning set	12650 Feb 16 01:32	26°♂34'22	
evening rise	12649 Mar 28 15:59	24°♂01'42			12650 Feb 17 20:40	0°♂	
	12649 Apr 01 12:01	0°♂					
	12649 Apr 22 09:24	0°II		superior conj	12650 Feb 25 07:30	13°♂58'57	0°24'20
evening max el	12649 Apr 29 23:33	8°II52'17	22°03'38	minimum elong	12650 Feb 25 09:14	14°♂06'51	0°24'25
asc. node	12649 May 07 07:41	14°II05'12		desc. node	12650 Feb 28 09:33	19°♂33'15	
retrograde	12649 May 09 10:19	14°II26'01		max. Earth dist.	12650 Mar 04 20:18	27°♂19'17	1.40838 AU
evening set	12649 May 14 01:37	12°II31'13			12650 Mar 06 10:09	0°♂	

evening rise	12650 Mar 09 08:05	4°♿51'07			12651 Feb 26 23:31	0°♿	
	12650 Mar 25 16:52	0°♿			12651 Mar 20 05:45	0°♿	
evening max el	12650 Apr 12 14:57	22°♿42'07	23°24'00	evening max el	12651 Mar 26 04:40	6°♿34'00	24°43'31
retrograde	12650 Apr 23 05:35	28°♿57'05		retrograde	12651 Apr 06 21:08	13°♿23'01	
asc. node	12650 Apr 24 05:00	28°♿52'42		asc. node	12651 Apr 11 02:21	12°♿04'28	
evening set	12650 Apr 28 08:23	26°♿48'04		evening set	12651 Apr 12 11:47	11°♿02'03	
min. Earth dist.	12650 May 03 04:48	21°♿05'50	0.68759 AU	min. Earth dist.	12651 Apr 17 00:02	5°♿55'47	0.68244 AU
inferior conj	12650 May 03 17:42	20°♿21'25	2°34'47	inferior conj	12651 Apr 18 01:19	4°♿31'51	2°01'33
minimum elong	12650 May 03 15:40	20°♿28'24	2°33'39	minimum elong	12651 Apr 17 23:10	4°♿38'59	2°00'27
morning rise	12650 May 08 22:53	14°♿15'25			12651 Apr 21 19:07	30°♿♿	
direct	12650 May 13 05:34	12°♿33'06		morning rise	12651 Apr 23 10:45	28°♿34'10	
morning max el	12650 May 21 12:37	17°♿17'46	20°51'25	direct	12651 Apr 27 05:07	27°♿12'55	
desc. node	12650 May 27 11:20	24°♿09'38			12651 May 03 03:43	0°♿	
	12650 May 31 20:23	0°♿		morning max el	12651 May 04 13:13	1°♿17'06	19°42'06
morning set	12650 Jun 20 13:56	29°♿16'47		desc. node	12651 May 14 08:09	13°♿32'29	
	12650 Jun 21 01:01	0°♿		greatest brilliancy	12651 May 17 07:21	17°♿49'02	-0.6m
max. Earth dist.	12650 Jun 28 13:06	11°♿55'36	1.43220 AU		12651 May 25 10:54	0°♿	
				morning set	12651 May 30 14:42	7°♿52'54	
superior conj	12650 Jul 05 10:33	23°♿18'26	-1°53'32	max. Earth dist.	12651 Jun 11 02:10	25°♿46'01	1.44753 AU
minimum elong	12650 Jul 05 17:27	23°♿47'28	1°53'51		12651 Jun 13 18:03	0°♿	
	12650 Jul 09 08:53	0°♿					
evening rise	12650 Jul 17 09:40	14°♿05'07		superior conj	12651 Jun 15 18:54	3°♿15'45	-2°11'08
asc. node	12650 Jul 21 03:50	20°♿44'15		minimum elong	12651 Jun 15 22:19	3°♿29'32	2°11'59
	12650 Jul 26 14:27	0°♿		evening rise	12651 Jun 29 11:52	25°♿53'47	
evening max el	12650 Aug 02 23:56	9°♿58'45	18°03'36		12651 Jul 01 22:14	0°♿	
retrograde	12650 Aug 09 14:44	13°♿22'53		asc. node	12651 Jul 08 00:39	10°♿09'16	
evening set	12650 Aug 12 02:23	12°♿53'55		evening max el	12651 Jul 17 14:07	23°♿21'52	18°09'17
inferior conj	12650 Aug 18 18:53	7°♿52'59	1°20'49	retrograde	12651 Jul 23 22:46	26°♿42'32	
minimum elong	12650 Aug 18 21:04	7°♿47'40	1°19'38	evening set	12651 Jul 26 18:37	26°♿00'29	
min. Earth dist.	12650 Aug 21 21:53	4°♿51'43	0.61074 AU	inferior conj	12651 Aug 01 21:21	20°♿41'28	2°15'51
desc. node	12650 Aug 23 09:27	3°♿32'58		minimum elong	12651 Aug 01 23:54	20°♿34'26	2°14'31
morning rise	12650 Aug 25 13:01	1°♿55'36		min. Earth dist.	12651 Aug 04 13:00	17°♿47'19	0.63293 AU
	12650 Aug 29 18:20	30°♿♿		morning rise	12651 Aug 08 03:23	14°♿27'29	
direct	12650 Sep 01 04:08	29°♿42'43		desc. node	12651 Aug 10 06:54	13°♿05'01	
	12650 Sep 03 15:31	0°♿		direct	12651 Aug 14 19:26	11°♿55'59	
morning max el	12650 Sep 15 09:51	7°♿39'48	27°57'04	morning max el	12651 Aug 28 18:20	19°♿57'47	27°48'03
	12650 Oct 02 10:44	0°♿			12651 Sep 06 08:34	0°♿	
asc. node	12650 Oct 17 05:27	26°♿44'19			12651 Sep 25 11:13	0°♿	
morning set	12650 Oct 18 13:36	29°♿29'25		morning set	12651 Oct 02 09:27	13°♿15'49	
	12650 Oct 18 19:29	0°♿		asc. node	12651 Oct 04 02:05	16°♿42'14	
max. Earth dist.	12650 Oct 24 08:27	11°♿53'35	1.31514 AU	max. Earth dist.	12651 Oct 07 10:26	23°♿42'47	1.32284 AU
superior conj	12650 Oct 25 20:37	15°♿13'16	1°14'58	superior conj	12651 Oct 10 04:12	29°♿36'57	0°55'55
minimum elong	12650 Oct 25 18:25	15°♿01'04	1°15'16	minimum elong	12651 Oct 10 02:01	29°♿25'05	0°55'55
evening rise	12650 Nov 01 13:43	0°♿00'46			12651 Oct 10 08:27	0°♿	
	12650 Nov 01 13:34	0°♿		evening rise	12651 Oct 17 00:55	14°♿34'31	
	12650 Nov 17 19:03	0°♿			12651 Oct 24 15:38	0°♿	
desc. node	12650 Nov 19 06:06	2°♿07'02		desc. node	12651 Nov 06 03:23	19°♿09'59	
evening max el	12650 Nov 28 03:23	12°♿41'06	25°10'54	evening max el	12651 Nov 09 13:46	22°♿50'57	23°32'12
retrograde	12650 Dec 11 23:13	19°♿37'14		retrograde	12651 Nov 23 00:08	29°♿32'28	
evening set	12650 Dec 17 17:20	18°♿22'35		evening set	12651 Nov 27 12:11	28°♿48'22	
min. Earth dist.	12650 Dec 22 15:26	15°♿41'13	0.56896 AU	min. Earth dist.	12651 Dec 03 23:54	25°♿43'04	0.55372 AU
inferior conj	12650 Dec 25 09:14	13°♿52'46	-5°12'17	inferior conj	12651 Dec 05 17:56	24°♿41'18	-5°51'51
minimum elong	12650 Dec 25 17:10	13°♿39'38	5°09'44	minimum elong	12651 Dec 05 20:16	24°♿37'52	5°50'49
morning rise	12651 Jan 02 19:17	9°♿41'39		morning rise	12651 Dec 14 06:07	20°♿48'39	
direct	12651 Jan 05 01:34	9°♿26'48		direct	12651 Dec 17 01:05	20°♿29'38	
asc. node	12651 Jan 13 05:22	12°♿55'24		morning max el	12651 Dec 27 19:42	25°♿37'43	20°22'43
morning max el	12651 Jan 14 07:35	13°♿55'15	19°10'42	asc. node	12651 Dec 31 02:31	29°♿13'11	
	12651 Jan 25 09:17	0°♿			12651 Dec 31 17:26	0°♿	
morning set	12651 Jan 31 02:02	10°♿58'33		morning set	12652 Jan 15 08:37	25°♿37'00	
					12652 Jan 17 11:39	0°♿	
superior conj	12651 Feb 08 08:22	27°♿17'02	0°53'20				
minimum elong	12651 Feb 08 11:09	27°♿30'28	0°53'30	superior conj	12652 Jan 22 22:21	11°♿10'43	1°14'56
	12651 Feb 09 18:22	0°♿		minimum elong	12652 Jan 23 01:01	11°♿24'11	1°15'22
max. Earth dist.	12651 Feb 15 03:03	9°♿56'24	1.38607 AU	max. Earth dist.	12652 Jan 28 10:26	22°♿00'57	1.36419 AU
desc. node	12651 Feb 15 06:09	10°♿10'22		evening rise	12652 Feb 01 05:55	29°♿08'11	
evening rise	12651 Feb 18 21:25	16°♿35'25			12652 Feb 01 17:18	0°♿	

desc. node	12652 Feb 02 02:48	0° H 43'00		desc. node	12653 Jan 18 23:32	21° \approx 06'53	
	12652 Feb 20 05:57	0° Y			12653 Jan 24 02:38	0° H	
evening max el	12652 Mar 07 18:07	20° Y 24'46	25°55'16		12653 Feb 14 09:04	0° Y	
retrograde	12652 Mar 20 08:06	27° Y 37'31		evening max el	12653 Feb 18 07:41	4° Y 07'28	26°51'51
evening set	12652 Mar 26 10:12	25° Y 08'06		retrograde	12653 Mar 03 13:36	11° Y 32'11	
asc. node	12652 Mar 27 23:45	23° Y 40'37		evening set	12653 Mar 10 01:43	8° Y 59'27	
min. Earth dist.	12652 Mar 30 15:42	20° Y 37'07	0.67291 AU	min. Earth dist.	12653 Mar 14 01:42	5° Y 02'14	0.65939 AU
inferior conj	12652 Apr 01 05:18	18° Y 39'06	1°18'08	asc. node	12653 Mar 14 21:12	4° Y 06'02	
minimum elong	12652 Apr 01 03:33	18° Y 44'35	1°17'19	inferior conj	12653 Mar 16 03:26	2° Y 37'38	0°24'11
morning rise	12652 Apr 06 21:35	12° Y 51'10		minimum elong	12653 Mar 16 02:47	2° Y 39'32	0°23'59
direct	12652 Apr 10 04:34	11° Y 49'25			12653 Mar 18 11:57	30° R H	
morning max el	12652 Apr 16 21:24	15° Y 26'14	18°48'09	morning rise	12653 Mar 22 05:09	27° H 01'10	
	12652 Apr 27 23:23	0° B		direct	12653 Mar 25 01:59	26° H 16'04	
desc. node	12652 Apr 30 04:52	3° B 22'21		morning max el	12653 Mar 31 11:23	29° H 38'09	18°10'40
greatest brilliancy	12652 May 01 04:24	4° B 52'23	-0.8m		12653 Mar 31 20:09	0° Y	
morning set	12652 May 09 00:36	17° B 01'44		desc. node	12653 Apr 17 01:29	23° Y 31'13	
	12652 May 17 08:23	0° II		morning set	12653 Apr 19 11:59	27° Y 26'52	
max. Earth dist.	12652 May 23 19:58	10° II 07'06	1.45620 AU		12653 Apr 21 02:01	0° B	
superior conj	12652 May 25 07:58	12° II 28'01	-2°10'43	superior conj	12653 May 04 15:45	21° B 33'10	-1°50'13
minimum elong	12652 May 25 03:55	12° II 12'10	2°11'27	minimum elong	12653 May 04 06:40	20° B 57'36	1°50'09
	12652 Jun 05 10:01	0° B		max. Earth dist.	12653 May 06 15:33	24° B 40'13	1.45750 AU
evening rise	12652 Jun 09 14:26	6° B 42'36			12653 May 10 01:32	0° II	
asc. node	12652 Jun 23 21:35	29° B 11'01		evening rise	12653 May 20 17:34	16° II 35'07	
	12652 Jun 24 11:19	0° Q			12653 May 29 09:38	0° B	
evening max el	12652 Jun 30 03:02	6° Q 58'52	18°32'59	greatest brilliancy	12653 Jun 01 11:47	4° B 41'59	-0.7m
retrograde	12652 Jul 06 14:52	10° Q 29'36		asc. node	12653 Jun 10 18:38	17° B 40'36	
evening set	12652 Jul 09 19:07	9° Q 32'34		evening max el	12653 Jun 13 12:10	20° B 42'57	19°13'52
inferior conj	12652 Jul 15 11:55	3° Q 57'38	2°50'45	retrograde	12653 Jun 20 11:34	24° B 36'17	
minimum elong	12652 Jul 15 13:53	3° Q 51'40	2°49'35	evening set	12653 Jun 24 00:42	23° B 23'08	
min. Earth dist.	12652 Jul 17 13:31	1° Q 27'53	0.65260 AU	inferior conj	12653 Jun 29 11:05	17° B 33'49	3°09'07
	12652 Jul 18 20:20	30° R B		minimum elong	12653 Jun 29 12:02	17° B 30'41	3°08'06
morning rise	12652 Jul 21 07:36	27° B 35'43		min. Earth dist.	12653 Jun 30 22:00	15° B 40'27	0.66847 AU
desc. node	12652 Jul 27 04:16	24° B 56'25		morning rise	12653 Jul 04 22:48	11° B 10'24	
direct	12652 Jul 27 19:07	24° B 55'03		direct	12653 Jul 11 01:49	8° B 30'34	
	12652 Aug 07 05:02	0° Q		desc. node	12653 Jul 14 01:33	9° B 02'56	
morning max el	12652 Aug 10 05:18	2° Q 49'49	27°05'22	morning max el	12653 Jul 23 16:10	16° B 02'45	25°57'19
	12652 Aug 30 15:45	0° M			12653 Aug 04 04:56	0° Q	
morning set	12652 Sep 14 19:30	26° M 32'42			12653 Aug 23 12:51	0° M	
	12652 Sep 16 13:59	0° A		morning set	12653 Aug 28 16:13	9° M 11'30	
max. Earth dist.	12652 Sep 19 03:34	5° A 08'29	1.33581 AU	max. Earth dist.	12653 Sep 01 10:15	16° M 14'58	1.35372 AU
asc. node	12652 Sep 19 22:44	6° A 46'19		asc. node	12653 Sep 06 19:23	26° M 52'38	
superior conj	12652 Sep 23 06:38	13° A 42'17	0°31'33	superior conj	12653 Sep 07 01:21	27° M 22'54	0°02'23
minimum elong	12652 Sep 23 05:06	13° A 34'11	0°31'22	minimum elong	12653 Sep 07 01:13	27° M 22'13	0°02'13
evening rise	12652 Sep 30 11:31	29° A 03'55		behind sun begin	12653 Sep 06 19:10	26° M 51'34	
	12652 Sep 30 22:08	0° M		behind sun end	12653 Sep 07 07:15	27° M 52'56	
	12652 Oct 18 09:23	0° A			12653 Sep 08 08:09	0° A	
evening max el	12652 Oct 21 02:17	2° A 55'26	21°51'56	evening rise	12653 Sep 14 19:28	13° A 23'51	
desc. node	12652 Oct 23 00:44	4° A 41'07			12653 Sep 23 08:48	0° M	
retrograde	12652 Nov 02 14:28	9° A 08'10		evening max el	12653 Oct 03 02:00	13° M 30'47	20°24'52
evening set	12652 Nov 05 16:18	8° A 46'54		desc. node	12653 Oct 09 22:08	18° M 12'33	
inferior conj	12652 Nov 14 12:17	4° A 51'25	-5°38'25	retrograde	12653 Oct 14 01:54	18° M 58'36	
minimum elong	12652 Nov 14 05:56	5° A 00'18	5°36'48	evening set	12653 Oct 16 04:48	18° M 47'19	
min. Earth dist.	12652 Nov 14 06:23	4° A 59'41	0.54588 AU	inferior conj	12653 Oct 25 05:03	14° M 51'23	-4°27'23
morning rise	12652 Nov 22 20:42	1° A 04'04		minimum elong	12653 Oct 24 18:59	15° M 06'05	4°23'55
direct	12652 Nov 26 10:43	0° A 35'53		min. Earth dist.	12653 Oct 26 14:02	14° M 03'13	0.54733 AU
morning max el	12652 Dec 08 17:49	6° A 27'50	21°56'15	morning rise	12653 Nov 02 08:34	10° M 49'35	
asc. node	12652 Dec 16 23:36	16° A 36'53		direct	12653 Nov 06 19:59	10° M 06'23	
	12652 Dec 24 16:23	0° B		morning max el	12653 Nov 20 05:59	16° M 39'11	23°43'23
morning set	12652 Dec 29 18:48	10° B 22'26			12653 Nov 30 21:18	0° A	
superior conj	12653 Jan 05 21:41	25° B 29'08	1°29'19	asc. node	12653 Dec 03 20:37	4° A 51'04	
minimum elong	12653 Jan 05 23:33	25° B 38'59	1°30'03	morning set	12653 Dec 14 06:36	25° A 09'13	
	12653 Jan 08 01:39	0° \approx			12653 Dec 16 12:33	0° B	
max. Earth dist.	12653 Jan 09 23:05	3° \approx 52'19	1.34494 AU	superior conj	12653 Dec 21 03:24	10° B 03'35	1°36'57
evening rise	12653 Jan 14 06:10	12° \approx 20'39		minimum elong	12653 Dec 21 04:12	10° B 07'54	1°37'52























































































































max. Earth dist.	12653 Dec 23 19:37	15° ♁ 48'32	1.32971 AU	max. Earth dist.	12654 Dec 06 23:17	27° ♁ 54'49	1.31918 AU
evening rise	12653 Dec 28 18:43	26° ♁ 04'00			12654 Dec 07 22:08	0° ♁	
	12653 Dec 30 18:31	0° ♁		evening rise	12654 Dec 12 16:18	10° ♁ 08'56	
desc. node	12654 Jan 05 20:20	11° ♁ 17'10			12654 Dec 23 01:50	0° ♁	
	12654 Jan 17 11:52	0° ♁		desc. node	12654 Dec 23 17:14	1° ♁ 06'38	
evening max el	12654 Jan 31 20:44	17° ♁ 32'49	27°25'58		12655 Jan 13 19:59	0° ♁	
retrograde	12654 Feb 14 12:38	24° ♁ 58'44		evening max el	12655 Jan 14 07:08	0° ♁ 26'45	27°31'03
evening set	12654 Feb 21 08:07	22° ♁ 29'16		retrograde	12655 Jan 28 03:58	7° ♁ 46'56	
min. Earth dist.	12654 Feb 25 03:58	19° ♁ 03'20	0.64239 AU	evening set	12655 Feb 04 02:38	5° ♁ 28'15	
inferior conj	12654 Feb 27 17:09	16° ♁ 21'46	-0°40'23	min. Earth dist.	12655 Feb 07 20:34	2° ♁ 29'04	0.62256 AU
minimum elong	12654 Feb 27 18:24	16° ♁ 18'29	0°39'33	inferior conj	12655 Feb 10 19:22	29° ♁ 42'40	-1°54'42
asc. node	12654 Mar 01 18:37	14° ♁ 15'15		minimum elong	12655 Feb 10 23:17	29° ♁ 33'25	1°52'34
morning rise	12654 Mar 06 06:42	10° ♁ 59'07			12655 Feb 10 12:03	30° ♁	
direct	12654 Mar 08 18:58	10° ♁ 27'07		asc. node	12655 Feb 16 15:59	25° ♁ 08'59	
morning max el	12654 Mar 15 04:36	13° ♁ 45'42	17°50'14	morning rise	12655 Feb 17 22:36	24° ♁ 36'57	
	12654 Mar 26 15:22	0° ♁		direct	12655 Feb 20 04:17	24° ♁ 14'21	
morning set	12654 Apr 01 03:42	9° ♁ 14'47		morning max el	12655 Feb 26 21:58	27° ♁ 39'41	17°47'31
desc. node	12654 Apr 03 22:05	13° ♁ 53'53			12655 Mar 01 00:51	0° ♁	
	12654 Apr 13 16:41	0° ♁		morning set	12655 Mar 14 18:35	22° ♁ 08'33	
					12655 Mar 19 05:35	0° ♁	
superior conj	12654 Apr 14 11:47	1° ♁ 16'56	-1°15'03	desc. node	12655 Mar 21 18:38	4° ♁ 25'26	
minimum elong	12654 Apr 14 04:04	0° ♁ 45'53	1°14'30				
max. Earth dist.	12654 Apr 19 10:53	9° ♁ 11'29	1.45147 AU	superior conj	12655 Mar 26 06:38	12° ♁ 05'48	-0°34'23
evening rise	12654 Apr 30 06:17	25° ♁ 58'49		minimum elong	12655 Mar 26 03:18	11° ♁ 51'44	0°33'58
	12654 May 02 21:28	0° ♁		max. Earth dist.	12655 Apr 02 03:54	23° ♁ 26'13	1.43866 AU
greatest brilliancy	12654 May 15 04:16	18° ♁ 20'52	-0.6m		12655 Apr 06 06:39	0° ♁	
	12654 May 23 16:50	0° ♁		evening rise	12655 Apr 09 20:07	5° ♁ 34'01	
evening max el	12654 May 27 15:59	4° ♁ 29'50	20°10'20		12655 Apr 26 05:38	0° ♁	
asc. node	12654 May 28 15:45	5° ♁ 27'09		evening max el	12655 May 10 14:01	18° ♁ 17'31	21°19'37
retrograde	12654 Jun 04 10:11	8° ♁ 56'37		asc. node	12655 May 15 12:55	22° ♁ 17'15	
evening set	12654 Jun 08 08:56	7° ♁ 26'49		retrograde	12655 May 19 08:47	23° ♁ 25'34	
inferior conj	12654 Jun 13 15:56	1° ♁ 24'32	3°13'50	evening set	12655 May 23 17:55	21° ♁ 39'26	
minimum elong	12654 Jun 13 15:49	1° ♁ 24'53	3°12'52	inferior conj	12655 May 29 00:06	15° ♁ 25'39	3°06'53
min. Earth dist.	12654 Jun 14 12:34	0° ♁ 14'19	0.67988 AU	minimum elong	12655 May 28 23:03	15° ♁ 29'18	3°05'53
	12654 Jun 14 16:48	30° ♁		min. Earth dist.	12655 May 29 07:09	15° ♁ 01'04	0.68654 AU
morning rise	12654 Jun 18 22:23	25° ♁ 03'35		morning rise	12655 Jun 03 03:59	9° ♁ 09'30	
direct	12654 Jun 24 14:09	22° ♁ 33'27		direct	12655 Jun 08 07:03	6° ♁ 55'30	
desc. node	12654 Jun 30 22:44	24° ♁ 59'11		desc. node	12655 Jun 17 19:48	12° ♁ 18'12	
morning max el	12654 Jul 06 02:10	29° ♁ 27'11	24°33'35	morning max el	12655 Jun 18 12:44	13° ♁ 00'00	23°04'01
	12654 Jul 06 14:58	0° ♁			12655 Jul 02 04:44	0° ♁	
	12654 Jul 29 00:21	0° ♁			12655 Jul 21 21:13	0° ♁	
morning set	12654 Aug 10 19:13	21° ♁ 01'00		morning set	12655 Jul 22 23:48	1° ♁ 49'50	
max. Earth dist.	12654 Aug 14 09:26	27° ♁ 24'41	1.37546 AU	max. Earth dist.	12655 Jul 27 07:34	9° ♁ 08'11	1.39880 AU
	12654 Aug 15 19:28	0° ♁					
superior conj	12654 Aug 21 09:03	10° ♁ 30'37	-0°30'33	superior conj	12655 Aug 04 01:50	22° ♁ 56'04	-1°05'07
minimum elong	12654 Aug 21 11:07	10° ♁ 40'34	0°30'34	minimum elong	12655 Aug 04 06:33	23° ♁ 17'44	1°05'00
asc. node	12654 Aug 24 16:02	16° ♁ 57'30			12655 Aug 07 20:57	0° ♁	
evening rise	12654 Aug 29 22:19	27° ♁ 27'47		asc. node	12655 Aug 11 12:41	6° ♁ 57'08	
	12654 Aug 31 04:55	0° ♁		evening rise	12655 Aug 13 17:06	11° ♁ 08'14	
evening max el	12654 Sep 15 15:49	24° ♁ 53'02	19°18'04		12655 Aug 24 06:02	0° ♁	
retrograde	12654 Sep 24 23:28	29° ♁ 32'21		evening max el	12655 Aug 29 17:35	7° ♁ 01'27	18°33'01
evening set	12654 Sep 26 19:54	29° ♁ 22'07		retrograde	12655 Sep 06 15:44	11° ♁ 00'55	
desc. node	12654 Sep 26 19:36	29° ♁ 22'16		evening set	12655 Sep 08 15:29	10° ♁ 46'36	
inferior conj	12654 Oct 05 10:12	25° ♁ 12'54	-2°41'24	desc. node	12655 Sep 13 17:04	8° ♁ 20'25	
minimum elong	12654 Oct 05 03:13	25° ♁ 24'25	2°38'27	inferior conj	12655 Sep 16 12:04	6° ♁ 17'22	-0°52'41
min. Earth dist.	12654 Oct 08 00:52	23° ♁ 29'58	0.55799 AU	minimum elong	12655 Sep 16 09:59	6° ♁ 21'24	0°51'50
morning rise	12654 Oct 13 08:02	20° ♁ 39'39		min. Earth dist.	12655 Sep 19 17:31	3° ♁ 49'00	0.57574 AU
direct	12654 Oct 18 15:33	19° ♁ 35'23		morning rise	12655 Sep 24 01:02	1° ♁ 06'18	
morning max el	12654 Nov 01 16:27	26° ♁ 41'10	25°28'37		12655 Sep 26 22:48	30° ♁	
	12654 Nov 04 21:04	0° ♁		direct	12655 Sep 30 01:03	29° ♁ 35'41	
asc. node	12654 Nov 20 17:31	23° ♁ 42'29			12655 Oct 03 04:18	0° ♁	
	12654 Nov 24 00:03	0° ♁		morning max el	12655 Oct 14 08:25	7° ♁ 07'24	26°53'37
morning set	12654 Nov 28 18:09	9° ♁ 51'21			12655 Oct 31 10:05	0° ♁	
				asc. node	12655 Nov 07 14:20	13° ♁ 01'44	
superior conj	12654 Dec 05 12:59	24° ♁ 45'43	1°38'19	morning set	12655 Nov 13 03:48	24° ♁ 24'43	
minimum elong	12654 Dec 05 12:40	24° ♁ 43'58	1°39'15		12655 Nov 15 17:43	0° ♁	

superior conj	12655 Nov 20 00:26	9° ♁ 30'04	1°33'44	max. Earth dist.	12656 Nov 02 15:44	22° ♁ 18'55	1.31305 AU
minimum elong	12655 Nov 19 23:08	9° ♁ 22'52	1°34'30				
max. Earth dist.	12655 Nov 20 07:12	10° ♁ 07'52	1.31360 AU	superior conj	12656 Nov 03 11:52	24° ♁ 10'58	1°23'26
evening rise	12655 Nov 26 20:25	24° ♁ 29'13		minimum elong	12656 Nov 03 09:53	23° ♁ 59'55	1°23'55
	12655 Nov 29 11:55	0° ♁			12656 Nov 06 02:31	0° ♁	
desc. node	12655 Dec 10 14:14	20° ♁ 27'09		evening rise	12656 Nov 10 04:49	8° ♁ 58'57	
	12655 Dec 16 20:50	0° ♁			12656 Nov 20 21:18	0° ♁	
evening max el	12655 Dec 27 12:05	12° ♁ 36'20	27°02'22	desc. node	12656 Nov 26 11:21	9° ♁ 07'33	
retrograde	12656 Jan 10 10:37	19° ♁ 48'17		evening max el	12656 Dec 08 09:15	23° ♁ 54'07	25°59'49
evening set	12656 Jan 17 05:53	17° ♁ 48'35			12656 Dec 17 09:00	0° ♁	
min. Earth dist.	12656 Jan 21 02:23	15° ♁ 07'47	0.60110 AU	retrograde	12656 Dec 22 07:24	0° ♁ 57'18	
inferior conj	12656 Jan 24 06:35	12° ♁ 31'02	-3°15'23		12656 Dec 27 04:59	30° ♁	
minimum elong	12656 Jan 24 13:28	12° ♁ 16'50	3°12'10	evening set	12656 Dec 28 13:47	29° ♁ 24'34	
morning rise	12656 Feb 01 00:01	7° ♁ 45'34		min. Earth dist.	12657 Jan 01 22:08	26° ♁ 48'23	0.57989 AU
direct	12656 Feb 03 01:56	7° ♁ 28'51		inferior conj	12657 Jan 04 23:21	24° ♁ 37'37	-4°34'01
asc. node	12656 Feb 03 13:20	7° ♁ 29'45		minimum elong	12657 Jan 05 07:57	24° ♁ 22'13	4°30'46
morning max el	12656 Feb 10 12:07	11° ♁ 10'54	18°03'33	morning rise	12657 Jan 13 04:53	20° ♁ 14'21	
	12656 Feb 22 22:46	0° ♁		direct	12657 Jan 15 07:28	20° ♁ 00'02	
morning set	12656 Feb 26 02:22	5° ♁ 48'46		asc. node	12657 Jan 20 10:36	21° ♁ 30'34	
				morning max el	12657 Jan 23 19:16	24° ♁ 09'00	18°39'56
superior conj	12656 Mar 07 01:35	24° ♁ 01'55	0°04'29		12657 Jan 28 14:29	0° ♁	
minimum elong	12656 Mar 07 01:57	24° ♁ 03'34	0°04'37	morning set	12657 Feb 08 21:56	20° ♁ 00'31	
behind sun begin	12656 Mar 06 18:25	23° ♁ 30'09			12657 Feb 14 01:37	0° ♁	
behind sun end	12656 Mar 07 09:28	24° ♁ 36'53					
desc. node	12656 Mar 07 15:10	25° ♁ 02'01		superior conj	12657 Feb 17 16:56	6° ♁ 54'28	0°37'32
	12656 Mar 10 11:27	0° ♁		minimum elong	12657 Feb 17 19:17	7° ♁ 05'29	0°37'36
max. Earth dist.	12656 Mar 14 16:23	7° ♁ 08'06	1.42043 AU	desc. node	12657 Feb 22 11:45	15° ♁ 40'18	
evening rise	12656 Mar 20 00:29	15° ♁ 51'34		max. Earth dist.	12657 Feb 25 00:10	20° ♁ 07'30	1.39889 AU
	12656 Mar 29 03:12	0° ♁		evening rise	12657 Mar 01 01:41	27° ♁ 04'56	
	12656 Apr 20 07:21	0° ♁			12657 Mar 02 19:45	0° ♁	
evening max el	12656 Apr 22 07:09	2° ♁ 05'46	22°37'28		12657 Mar 22 17:22	0° ♁	
asc. node	12656 May 01 10:10	7° ♁ 54'35		evening max el	12657 Apr 04 21:28	15° ♁ 56'30	23°58'18
retrograde	12656 May 02 05:43	7° ♁ 57'41		retrograde	12657 Apr 15 23:45	22° ♁ 27'55	
evening set	12656 May 07 01:57	5° ♁ 56'19		asc. node	12657 Apr 18 07:30	22° ♁ 03'20	
inferior conj	12656 May 12 09:32	29° ♁ 33'19	2°49'25	evening set	12657 Apr 21 07:31	20° ♁ 13'22	
minimum elong	12656 May 12 07:47	29° ♁ 39'27	2°48'19	min. Earth dist.	12657 Apr 26 00:10	14° ♁ 46'24	0.68588 AU
min. Earth dist.	12656 May 12 03:43	29° ♁ 53'34	0.68850 AU	inferior conj	12657 Apr 26 18:24	13° ♁ 44'24	2°21'56
	12656 May 12 01:52	30° ♁		minimum elong	12657 Apr 26 16:16	13° ♁ 51'39	2°20'48
morning rise	12656 May 17 13:30	23° ♁ 23'19		morning rise	12657 May 02 01:04	7° ♁ 41'43	
direct	12656 May 22 03:28	21° ♁ 29'11		direct	12657 May 06 02:19	6° ♁ 08'37	
morning max el	12656 May 31 02:41	26° ♁ 41'48	21°37'15	morning max el	12657 May 13 22:58	10° ♁ 35'05	20°20'11
	12656 Jun 03 03:54	0° ♁		desc. node	12657 May 21 13:37	19° ♁ 41'09	
desc. node	12656 Jun 03 16:46	0° ♁ 37'34			12657 May 28 21:18	0° ♁	
	12656 Jun 24 17:02	0° ♁		morning set	12657 Jun 11 08:47	20° ♁ 17'53	
morning set	12656 Jul 02 02:52	11° ♁ 30'46			12657 Jun 17 13:55	0° ♁	
max. Earth dist.	12656 Jul 08 09:52	21° ♁ 41'24	1.42098 AU	max. Earth dist.	12657 Jun 20 18:38	5° ♁ 05'03	1.43944 AU
	12656 Jul 13 08:47	0° ♁					
superior conj	12656 Jul 15 23:07	4° ♁ 28'08	-1°37'44	superior conj	12657 Jun 26 21:14	15° ♁ 00'21	-2°02'50
minimum elong	12656 Jul 16 05:55	4° ♁ 57'40	1°37'47	minimum elong	12657 Jun 27 03:18	15° ♁ 25'20	2°03'24
evening rise	12656 Jul 26 23:54	24° ♁ 14'17			12657 Jul 05 18:46	0° ♁	
asc. node	12656 Jul 28 09:22	26° ♁ 47'01		evening rise	12657 Jul 09 14:03	6° ♁ 34'43	
	12656 Jul 30 03:51	0° ♁		asc. node	12657 Jul 15 06:09	16° ♁ 22'52	
evening max el	12656 Aug 12 03:13	19° ♁ 46'26	18°08'41		12657 Jul 24 01:54	0° ♁	
retrograde	12656 Aug 19 02:28	23° ♁ 19'32		evening max el	12657 Jul 26 16:49	2° ♁ 58'40	18°03'45
evening set	12656 Aug 21 09:20	22° ♁ 57'03		retrograde	12657 Aug 02 03:54	6° ♁ 19'39	
inferior conj	12656 Aug 28 11:24	18° ♁ 07'20	0°38'44	evening set	12657 Aug 04 18:56	5° ♁ 45'33	
minimum elong	12656 Aug 28 12:38	18° ♁ 04'34	0°38'00	inferior conj	12657 Aug 11 05:09	0° ♁ 36'56	1°46'49
desc. node	12656 Aug 30 14:33	16° ♁ 11'52		minimum elong	12657 Aug 11 07:39	0° ♁ 30'29	1°45'30
min. Earth dist.	12656 Aug 31 18:11	15° ♁ 11'28	0.59756 AU		12657 Aug 11 19:27	30° ♁	
morning rise	12656 Sep 04 12:41	12° ♁ 23'37		min. Earth dist.	12657 Aug 14 04:00	27° ♁ 35'53	0.62041 AU
direct	12656 Sep 11 00:01	10° ♁ 25'01		morning rise	12657 Aug 17 17:59	24° ♁ 31'05	
morning max el	12656 Sep 25 08:00	18° ♁ 15'57	27°45'01	desc. node	12657 Aug 17 12:00	24° ♁ 41'51	
	12656 Oct 05 04:34	0° ♁		direct	12657 Aug 24 10:18	22° ♁ 08'51	
	12656 Oct 23 02:46	0° ♁			12657 Sep 07 09:49	0° ♁	
asc. node	12656 Oct 24 11:03	2° ♁ 40'39		morning max el	12657 Sep 07 13:52	0° ♁ 10'02	27°57'37
morning set	12656 Oct 27 09:45	8° ♁ 44'19			12657 Sep 29 06:29	0° ♁	
				morning set	12657 Oct 11 09:59	22° ♁ 44'44	

asc. node	12657 Oct 11 07:44	22°♄33'13		morning set	12658 Sep 25 02:05	6°♄20'02	
	12657 Oct 14 21:09	0°♄		asc. node	12658 Sep 28 04:23	12°♄34'41	
max. Earth dist.	12657 Oct 16 21:00	4°♄17'52	1.31771 AU	max. Earth dist.	12658 Sep 29 19:28	15°♄57'13	1.32771 AU
superior conj	12657 Oct 18 21:27	8°♄42'54	1°07'33	superior conj	12658 Oct 03 03:13	23°♄00'27	0°46'13
minimum elong	12657 Oct 18 19:12	8°♄30'27	1°07'42	minimum elong	12658 Oct 03 01:13	22°♄49'43	0°46'08
evening rise	12657 Oct 25 15:33	23°♄32'50			12658 Oct 06 08:46	0°♄	
	12657 Oct 28 16:48	0°♄		evening rise	12658 Oct 10 02:47	8°♄06'06	
desc. node	12657 Nov 13 08:34	26°♄52'01			12658 Oct 21 10:39	0°♄	
	12657 Nov 15 20:21	0°♄		desc. node	12658 Oct 31 05:53	13°♄19'49	
evening max el	12657 Nov 19 22:33	4°♄23'49	24°30'21	evening max el	12658 Nov 01 08:53	14°♄28'02	22°48'49
retrograde	12657 Dec 03 16:03	11°♄15'17		retrograde	12658 Nov 14 11:32	20°♄58'42	
evening set	12657 Dec 08 22:13	10°♄14'14		evening set	12658 Nov 18 08:42	20°♄25'54	
min. Earth dist.	12657 Dec 14 10:09	7°♄24'46	0.56164 AU	min. Earth dist.	12658 Nov 25 17:31	17°♄04'53	0.54935 AU
inferior conj	12657 Dec 16 19:30	5°♄55'05	-5°34'22	inferior conj	12658 Nov 26 21:03	16°♄25'40	-5°53'33
minimum elong	12657 Dec 17 01:46	5°♄45'14	5°32'33	minimum elong	12658 Nov 26 19:38	16°♄27'41	5°52'37
morning rise	12657 Dec 25 07:23	1°♄52'34		morning rise	12658 Dec 05 08:01	12°♄37'04	
direct	12657 Dec 27 17:47	1°♄36'39		direct	12658 Dec 08 10:42	12°♄14'39	
morning max el	12658 Jan 06 15:17	6°♄21'47	19°38'33	morning max el	12658 Dec 19 21:16	17°♄41'32	21°00'04
asc. node	12658 Jan 07 07:50	7°♄02'57		asc. node	12658 Dec 25 04:59	23°♄51'05	
	12658 Jan 21 18:59	0°♄			12658 Dec 29 07:05	0°♄	
morning set	12658 Jan 24 01:23	4°♄31'39		morning set	12659 Jan 08 09:48	19°♄14'08	
					12659 Jan 13 13:20	0°♄	
superior conj	12658 Jan 31 23:53	20°♄29'07	1°03'23	superior conj	12659 Jan 15 18:16	4°♄34'24	1°21'52
minimum elong	12658 Feb 01 02:44	20°♄43'08	1°03'40	minimum elong	12659 Jan 15 20:40	4°♄46'42	1°22'27
	12658 Feb 05 22:35	0°♄		max. Earth dist.	12659 Jan 20 15:36	14°♄24'36	1.35564 AU
max. Earth dist.	12658 Feb 07 06:14	2°♄27'16	1.37652 AU	evening rise	12659 Jan 24 15:18	22°♄02'22	
desc. node	12658 Feb 09 08:22	6°♄16'01		desc. node	12659 Jan 27 05:03	26°♄45'32	
evening rise	12658 Feb 10 23:35	9°♄11'16			12659 Jan 29 00:42	0°♄	
	12658 Feb 23 14:36	0°♄			12659 Feb 17 09:58	0°♄	
evening max el	12658 Mar 18 11:00	29°♄48'39	25°15'30	evening max el	12659 Mar 01 00:46	13°♄37'40	26°21'39
	12658 Mar 18 15:38	0°♄		retrograde	12659 Mar 13 22:09	20°♄56'07	
retrograde	12658 Mar 30 13:32	6°♄49'33		evening set	12659 Mar 20 04:42	18°♄24'53	
evening set	12658 Apr 05 09:00	4°♄24'43		asc. node	12659 Mar 23 02:20	15°♄34'08	
asc. node	12658 Apr 05 04:53	4°♄33'18		min. Earth dist.	12659 Mar 24 07:50	14°♄08'20	0.66767 AU
	12658 Apr 09 09:58	30°♄		inferior conj	12659 Mar 26 02:32	11°♄58'19	0°56'35
min. Earth dist.	12658 Apr 09 18:18	29°♄33'17	0.67886 AU	minimum elong	12659 Mar 26 01:10	12°♄02'30	0°55'58
inferior conj	12658 Apr 11 00:45	27°♄54'15	1°44'26	morning rise	12659 Mar 31 22:30	6°♄14'48	
minimum elong	12658 Apr 10 22:42	28°♄00'55	1°43'25	direct	12659 Apr 04 01:05	5°♄20'20	
morning rise	12658 Apr 16 12:45	22°♄00'13		morning max el	12659 Apr 10 13:38	8°♄49'12	18°30'05
direct	12658 Apr 20 02:07	20°♄47'29		desc. node	12659 Apr 25 07:04	29°♄15'03	
morning max el	12658 Apr 27 02:49	24°♄38'44	19°17'07		12659 Apr 25 18:33	0°♄	
	12658 May 01 18:31	0°♄		morning set	12659 May 01 06:11	8°♄37'58	
desc. node	12658 May 08 10:23	9°♄16'32			12659 May 14 20:56	0°♄	
greatest brilliancy	12658 May 09 22:25	11°♄29'30	-0.7m	superior conj	12659 May 17 04:56	3°♄38'43	-2°04'18
morning set	12658 May 21 10:38	28°♄59'54		minimum elong	12659 May 16 22:00	3°♄11'42	2°04'45
	12658 May 22 02:13	0°♄		max. Earth dist.	12659 May 17 04:49	3°♄38'18	1.45772 AU
max. Earth dist.	12658 Jun 03 09:36	19°♄09'04	1.45210 AU	evening rise	12659 Jun 01 22:35	28°♄21'06	
superior conj	12658 Jun 06 20:22	24°♄35'54	-2°13'27		12659 Jun 02 23:36	0°♄	
minimum elong	12658 Jun 06 20:51	24°♄37'48	2°14'22	greatest brilliancy	12659 Jun 10 17:43	12°♄13'26	-0.8m
	12658 Jun 10 05:42	0°♄		asc. node	12659 Jun 18 23:59	24°♄28'08	
evening rise	12658 Jun 21 06:32	17°♄58'18			12659 Jun 23 14:28	0°♄	
	12658 Jun 28 13:49	0°♄		evening max el	12659 Jun 23 18:31	0°♄10'11	18°48'23
asc. node	12658 Jul 02 03:01	5°♄39'06		retrograde	12659 Jun 30 10:07	3°♄48'44	
evening max el	12658 Jul 10 06:54	16°♄29'21	18°17'16	evening set	12659 Jul 03 18:11	2°♄44'44	
retrograde	12658 Jul 16 15:44	19°♄52'22			12659 Jul 06 20:39	30°♄	
evening set	12658 Jul 19 15:10	19°♄04'05		inferior conj	12659 Jul 09 07:50	27°♄03'26	3°00'23
inferior conj	12658 Jul 25 13:15	13°♄38'20	2°32'52	minimum elong	12659 Jul 09 09:24	26°♄58'32	2°59'16
minimum elong	12658 Jul 25 15:38	13°♄31'28	2°31'35	min. Earth dist.	12659 Jul 11 03:07	24°♄48'20	0.65988 AU
min. Earth dist.	12658 Jul 27 23:12	10°♄52'40	0.64175 AU	morning rise	12659 Jul 14 23:51	20°♄40'33	
morning rise	12658 Jul 31 14:39	7°♄20'17		direct	12659 Jul 21 08:12	17°♄59'16	
desc. node	12658 Aug 04 09:24	5°♄11'26		desc. node	12659 Jul 22 06:45	18°♄02'27	
direct	12658 Aug 07 05:33	4°♄43'24		morning max el	12659 Aug 03 10:33	25°♄45'29	26°39'02
morning max el	12658 Aug 20 23:31	12°♄43'34	27°33'29		12659 Aug 07 07:58	0°♄	
	12658 Sep 03 19:39	0°♄			12659 Aug 28 08:31	0°♄	
	12658 Sep 21 19:32	0°♄					

morning set	12659 Sep 08 06:55	19° \mathbb{M} 21'39		morning rise	12660 Jun 27 18:54	4° \mathbb{B} 23'51	
max. Earth dist.	12659 Sep 12 08:22	27° \mathbb{M} 14'28	1.34292 AU	direct	12660 Jul 03 17:14	1° \mathbb{B} 47'32	
	12659 Sep 13 17:27	0° \mathbb{B}		desc. node	12660 Jul 08 03:58	2° \mathbb{B} 59'05	
asc. node	12659 Sep 15 01:00	2° \mathbb{B} 40'04		morning max el	12660 Jul 15 21:17	9° \mathbb{B} 05'08	25°23'10
					12660 Aug 01 08:35	0° \mathbb{M}	
superior conj	12659 Sep 17 02:42	6° \mathbb{B} 56'10	0°19'44		12660 Aug 19 22:09	0° \mathbb{M}	
minimum elong	12659 Sep 17 01:40	6° \mathbb{B} 50'46	0°19'32	morning set	12660 Aug 20 20:41	1° \mathbb{M} 41'00	
evening rise	12659 Sep 24 12:31	22° \mathbb{B} 32'25		max. Earth dist.	12660 Aug 24 11:39	8° \mathbb{M} 20'37	1.36264 AU
	12659 Sep 28 03:34	0° \mathbb{M}					
evening max el	12659 Oct 14 01:18	24° \mathbb{M} 41'44	21°12'36	superior conj	12660 Aug 30 17:08	20° \mathbb{M} 23'37	-0°11'14
desc. node	12659 Oct 18 03:16	28° \mathbb{M} 03'33		minimum elong	12660 Aug 30 17:51	20° \mathbb{M} 27'09	0°11'20
	12659 Oct 22 02:36	0° \mathbb{M}		behind sun begin	12660 Aug 30 13:18	20° \mathbb{M} 04'30	
retrograde	12659 Oct 25 22:55	0° \mathbb{M} 36'37		behind sun end	12660 Aug 30 22:24	20° \mathbb{M} 49'50	
evening set	12659 Oct 28 13:16	0° \mathbb{M} 20'51		asc. node	12660 Aug 31 21:38	22° \mathbb{M} 46'08	
	12659 Oct 29 23:02	30° \mathbb{R} \mathbb{M}			12660 Sep 04 11:07	0° \mathbb{B}	
inferior conj	12659 Nov 06 12:49	26° \mathbb{M} 26'41	-5°14'30	evening rise	12660 Sep 07 18:38	6° \mathbb{B} 46'33	
minimum elong	12659 Nov 06 03:56	26° \mathbb{M} 39'13	5°11'59		12660 Sep 20 15:43	0° \mathbb{M}	
min. Earth dist.	12659 Nov 06 23:43	26° \mathbb{M} 11'20	0.54539 AU	evening max el	12660 Sep 25 06:52	5° \mathbb{M} 35'34	19°53'42
morning rise	12659 Nov 14 19:13	22° \mathbb{M} 36'11		desc. node	12660 Oct 04 00:40	10° \mathbb{M} 36'15	
direct	12659 Nov 18 18:33	22° \mathbb{M} 02'19		retrograde	12660 Oct 05 13:39	10° \mathbb{M} 42'54	
morning max el	12659 Dec 01 14:10	28° \mathbb{M} 11'32	22°40'56	evening set	12660 Oct 07 11:54	10° \mathbb{M} 32'54	
	12659 Dec 03 09:28	0° \mathbb{M}		inferior conj	12660 Oct 16 09:22	6° \mathbb{M} 32'10	-3°44'40
asc. node	12659 Dec 12 02:02	11° \mathbb{M} 37'36		minimum elong	12660 Oct 16 00:01	6° \mathbb{M} 46'27	3°41'05
	12659 Dec 21 23:00	0° \mathbb{B}		min. Earth dist.	12660 Oct 18 08:24	5° \mathbb{M} 20'19	0.55084 AU
morning set	12659 Dec 23 20:55	4° \mathbb{B} 00'43		morning rise	12660 Oct 24 10:43	2° \mathbb{M} 18'26	
				direct	12660 Oct 29 06:40	1° \mathbb{M} 27'18	
superior conj	12659 Dec 30 20:38	19° \mathbb{B} 00'12	1°33'20	morning max el	12660 Nov 12 00:42	8° \mathbb{M} 15'02	24°29'32
minimum elong	12659 Dec 30 22:04	19° \mathbb{B} 07'52	1°34'10	asc. node	12660 Nov 27 22:59	0° \mathbb{M} 08'38	
max. Earth dist.	12660 Jan 03 07:47	26° \mathbb{B} 17'29	1.33795 AU		12660 Nov 27 21:03	0° \mathbb{M}	
	12660 Jan 05 03:13	0° \mathbb{M}		morning set	12660 Dec 07 08:48	18° \mathbb{M} 45'59	
evening rise	12660 Jan 07 21:10	5° \mathbb{M} 28'29			12660 Dec 12 12:25	0° \mathbb{B}	
desc. node	12660 Jan 14 01:49	17° \mathbb{M} 04'07					
	12660 Jan 21 17:47	0° \mathbb{M}		superior conj	12660 Dec 14 04:16	3° \mathbb{B} 38'37	1°38'17
evening max el	12660 Feb 11 14:18	27° \mathbb{M} 14'14	27°09'30	minimum elong	12660 Dec 14 04:35	3° \mathbb{B} 40'21	1°39'13
	12660 Feb 14 16:52	0° \mathbb{M}		max. Earth dist.	12660 Dec 16 07:29	8° \mathbb{B} 17'16	1.32461 AU
retrograde	12660 Feb 25 00:46	4° \mathbb{M} 39'55		evening rise	12660 Dec 21 13:52	19° \mathbb{B} 21'23	
evening set	12660 Mar 02 16:37	2° \mathbb{M} 07'37			12660 Dec 27 00:34	0° \mathbb{M}	
	12660 Mar 05 02:06	30° \mathbb{R} \mathbb{M}		desc. node	12660 Dec 30 22:39	7° \mathbb{M} 06'08	
min. Earth dist.	12660 Mar 06 14:39	28° \mathbb{M} 24'21	0.65260 AU		12661 Jan 14 22:00	0° \mathbb{M}	
inferior conj	12660 Mar 08 21:25	25° \mathbb{M} 51'18	-0°01'53	evening max el	12661 Jan 24 02:14	10° \mathbb{M} 26'40	27°31'58
minimum elong	12660 Mar 08 21:28	25° \mathbb{M} 51'10	0°01'43	retrograde	12661 Feb 06 20:44	17° \mathbb{M} 51'24	
transit middle	12660 Mar 08 21:28	25° \mathbb{M} 51'10	0°01'43	evening set	12661 Feb 13 18:20	15° \mathbb{M} 25'09	
transit begin	12660 Mar 08 18:28	25° \mathbb{M} 59'35		min. Earth dist.	12661 Feb 17 12:50	12° \mathbb{M} 11'39	0.63421 AU
transit end	12660 Mar 09 00:28	25° \mathbb{M} 42'46		inferior conj	12661 Feb 20 06:37	9° \mathbb{M} 26'04	-1°10'52
asc. node	12660 Mar 08 23:45	25° \mathbb{M} 44'45		minimum elong	12661 Feb 20 08:54	9° \mathbb{M} 20'16	1°09'30
morning rise	12660 Mar 15 03:54	20° \mathbb{M} 20'31		asc. node	12661 Feb 23 21:10	6° \mathbb{M} 05'26	
direct	12660 Mar 17 20:58	19° \mathbb{M} 41'21		morning rise	12661 Feb 27 01:51	4° \mathbb{M} 10'37	
morning max el	12660 Mar 24 05:22	23° \mathbb{M} 00'14	17°59'54	direct	12661 Mar 01 10:59	3° \mathbb{M} 43'09	
	12660 Mar 29 21:07	0° \mathbb{M}		morning max el	12661 Mar 07 23:07	7° \mathbb{M} 03'17	17°46'56
morning set	12660 Apr 11 05:58	19° \mathbb{M} 39'43			12661 Mar 23 04:57	0° \mathbb{M}	
desc. node	12660 Apr 11 03:41	19° \mathbb{M} 30'22		morning set	12661 Mar 24 08:16	1° \mathbb{M} 57'31	
	12660 Apr 17 14:03	0° \mathbb{B}		desc. node	12661 Mar 29 00:15	9° \mathbb{M} 57'03	
superior conj	12660 Apr 25 15:58	12° \mathbb{B} 55'11	-1°36'34	superior conj	12661 Apr 05 21:04	23° \mathbb{M} 05'12	-0°57'59
minimum elong	12660 Apr 25 06:48	12° \mathbb{B} 18'55	1°36'12	minimum elong	12661 Apr 05 15:07	22° \mathbb{M} 40'50	0°57'25
max. Earth dist.	12660 Apr 29 01:08	18° \mathbb{B} 14'35	1.45580 AU		12661 Apr 10 03:31	0° \mathbb{B}	
	12660 May 06 14:21	0° \mathbb{M}		max. Earth dist.	12661 Apr 11 19:28	2° \mathbb{B} 39'30	1.44670 AU
evening rise	12660 May 11 18:02	7° \mathbb{B} 57'22		evening rise	12661 Apr 21 05:10	17° \mathbb{B} 20'24	
greatest brilliancy	12660 May 25 08:36	28° \mathbb{B} 36'53	-0.7m		12661 Apr 29 13:52	0° \mathbb{M}	
	12660 May 26 07:16	0° \mathbb{B}		evening max el	12661 May 20 02:40	27° \mathbb{B} 42'14	20°38'25
asc. node	12660 Jun 04 21:03	12° \mathbb{B} 40'58		asc. node	12661 May 22 18:11	0° \mathbb{B} 05'04	
evening max el	12660 Jun 06 01:29	13° \mathbb{B} 55'45	19°36'04		12661 May 22 15:36	0° \mathbb{B}	
retrograde	12660 Jun 13 08:01	18° \mathbb{B} 02'15		retrograde	12661 May 28 06:57	2° \mathbb{B} 26'28	
evening set	12660 Jun 17 01:11	16° \mathbb{B} 41'53		evening set	12661 Jun 01 09:56	0° \mathbb{B} 49'44	
inferior conj	12660 Jun 22 09:44	10° \mathbb{B} 46'37	3°12'39		12661 Jun 02 08:42	30° \mathbb{R} \mathbb{B}	
minimum elong	12660 Jun 22 10:15	10° \mathbb{B} 44'56	3°11'41	inferior conj	12661 Jun 06 16:16	24° \mathbb{B} 42'08	3°12'13
min. Earth dist.	12660 Jun 23 14:24	9° \mathbb{B} 11'21	0.67384 AU	minimum elong	12661 Jun 06 15:44	24° \mathbb{B} 43'57	3°11'16

min. Earth dist.	12661 Jun 07 07:03	23° Π 51'10	0.68323 AU	min. Earth dist.	12662 May 22 02:49	8° Π 40'37	0.68796 AU
morning rise	12661 Jun 11 21:16	18° Π 22'45		morning rise	12662 May 27 04:48	2° Π 32'18	
direct	12661 Jun 17 07:39	15° Π 58'53		direct	12662 Jun 01 02:20	0° Π 26'13	
desc. node	12661 Jun 25 01:05	19° Π 33'05		morning max el	12662 Jun 10 18:47	6° Π 08'42	22°26'10
morning max el	12661 Jun 28 07:21	22° Π 33'24	23°55'40	desc. node	12662 Jun 11 22:09	7° Π 19'33	
	12661 Jul 04 19:48	0° \mathfrak{E}			12662 Jun 29 04:21	0° \mathfrak{E}	
	12661 Jul 25 16:07	0° Ω		morning set	12662 Jul 14 08:29	23° \mathfrak{E} 25'21	
morning set	12661 Aug 02 14:43	13° Ω 06'04			12662 Jul 18 08:09	0° Ω	
max. Earth dist.	12661 Aug 06 09:11	19° Ω 39'32	1.38529 AU	max. Earth dist.	12662 Jul 19 08:01	1° Ω 40'20	1.40852 AU
	12661 Aug 12 01:41	0° \mathfrak{M}					
superior conj	12661 Aug 13 18:59	3° \mathfrak{M} 14'02	-0°45'11	superior conj	12662 Jul 27 04:00	15° Ω 17'35	-1°19'29
minimum elong	12661 Aug 13 22:09	3° \mathfrak{M} 29'02	0°45'07	minimum elong	12662 Jul 27 09:46	15° Ω 43'29	1°19'24
asc. node	12661 Aug 18 18:16	12° \mathfrak{M} 48'54		asc. node	12662 Aug 05 14:56	2° \mathfrak{M} 44'24	
evening rise	12661 Aug 22 18:27	20° \mathfrak{M} 41'10		evening rise	12662 Aug 06 08:37	4° \mathfrak{M} 07'28	
	12661 Aug 27 14:24	0° \mathfrak{L}		evening max el	12662 Aug 22 07:55	29° \mathfrak{M} 43'32	18°20'19
evening max el	12661 Sep 08 02:13	17° \mathfrak{L} 18'18	18°56'21		12662 Aug 22 14:40	0° \mathfrak{L}	
retrograde	12661 Sep 16 18:39	21° \mathfrak{L} 39'16		retrograde	12662 Aug 29 18:47	3° \mathfrak{L} 29'34	
evening set	12661 Sep 18 15:33	21° \mathfrak{L} 27'57		evening set	12662 Aug 31 21:26	3° \mathfrak{L} 12'11	
desc. node	12661 Sep 20 22:06	20° \mathfrak{L} 46'01			12662 Sep 06 15:20	30° \mathfrak{R} \mathfrak{M}	
inferior conj	12661 Sep 26 22:51	17° \mathfrak{L} 10'57	-1°54'07	desc. node	12662 Sep 07 19:35	29° \mathfrak{M} 03'55	
minimum elong	12661 Sep 26 18:00	17° \mathfrak{L} 19'30	1°52'01	inferior conj	12662 Sep 08 10:00	28° \mathfrak{M} 34'24	-0°11'13
min. Earth dist.	12661 Sep 29 21:49	15° \mathfrak{L} 06'40	0.56480 AU	minimum elong	12662 Sep 08 09:35	28° \mathfrak{M} 35'16	0°11'09
morning rise	12661 Oct 04 17:16	12° \mathfrak{L} 21'15		transit middle	12662 Sep 08 09:35	28° \mathfrak{M} 35'16	0°11'09
direct	12661 Oct 10 08:17	11° \mathfrak{L} 06'04		transit begin	12662 Sep 08 07:03	28° \mathfrak{M} 40'29	
morning max el	12661 Oct 24 13:03	18° \mathfrak{L} 24'41	26°08'09	transit end	12662 Sep 08 12:07	28° \mathfrak{M} 30'02	
	12661 Nov 03 05:55	0° \mathfrak{M}		min. Earth dist.	12662 Sep 11 17:36	25° \mathfrak{M} 51'40	0.58471 AU
asc. node	12661 Nov 14 19:51	19° \mathfrak{M} 13'00		morning rise	12662 Sep 15 18:15	23° \mathfrak{M} 08'39	
	12661 Nov 20 05:03	0° \mathfrak{J}		direct	12662 Sep 22 00:07	21° \mathfrak{M} 25'41	
morning set	12661 Nov 21 19:46	3° \mathfrak{J} 25'16		morning max el	12662 Oct 06 07:58	29° \mathfrak{M} 06'25	27°20'04
					12662 Oct 07 05:28	0° \mathfrak{L}	
superior conj	12661 Nov 28 14:54	18° \mathfrak{J} 23'00	1°37'06		12662 Oct 28 02:54	0° \mathfrak{M}	
minimum elong	12661 Nov 28 14:09	18° \mathfrak{J} 18'48	1°37'58	asc. node	12662 Nov 01 16:37	8° \mathfrak{M} 41'13	
max. Earth dist.	12661 Nov 29 13:11	20° \mathfrak{J} 26'41	1.31614 AU	morning set	12662 Nov 06 04:03	17° \mathfrak{M} 53'02	
	12661 Dec 03 22:09	0° \mathfrak{Z}			12662 Nov 11 17:08	0° \mathfrak{J}	
evening rise	12661 Dec 05 14:33	3° \mathfrak{Z} 34'03					
desc. node	12661 Dec 17 19:35	26° \mathfrak{Z} 44'35		superior conj	12662 Nov 13 02:34	3° \mathfrak{J} 06'31	1°30'04
	12661 Dec 19 18:45	0° \mathfrak{A}		minimum elong	12662 Nov 13 00:57	2° \mathfrak{J} 57'26	1°30'43
evening max el	12662 Jan 06 10:37	23° \mathfrak{A} 03'25	27°23'09	max. Earth dist.	12662 Nov 12 21:46	2° \mathfrak{J} 39'43	1.31273 AU
	12662 Jan 17 12:47	0° \mathfrak{H}		evening rise	12662 Nov 19 20:44	17° \mathfrak{J} 59'09	
retrograde	12662 Jan 20 08:55	0° \mathfrak{H} 21'04			12662 Nov 25 17:47	0° \mathfrak{Z}	
	12662 Jan 23 03:26	30° \mathfrak{R} \mathfrak{A}		desc. node	12662 Dec 04 16:37	15° \mathfrak{Z} 49'25	
evening set	12662 Jan 27 06:53	28° \mathfrak{A} 09'25			12662 Dec 14 22:21	0° \mathfrak{A}	
min. Earth dist.	12662 Jan 31 01:05	25° \mathfrak{A} 19'13	0.61348 AU	evening max el	12662 Dec 19 12:43	4° \mathfrak{A} 52'11	26°39'48
inferior conj	12662 Feb 03 02:56	22° \mathfrak{A} 34'45	-2°28'30	retrograde	12663 Jan 02 11:33	11° \mathfrak{A} 59'59	
minimum elong	12662 Feb 03 08:08	22° \mathfrak{A} 23'08	2°25'50	evening set	12663 Jan 09 02:26	10° \mathfrak{A} 11'18	
morning rise	12662 Feb 10 12:16	17° \mathfrak{A} 37'20		min. Earth dist.	12663 Jan 13 02:43	7° \mathfrak{A} 34'04	0.59192 AU
asc. node	12662 Feb 10 18:31	17° \mathfrak{A} 32'57		inferior conj	12663 Jan 16 06:44	5° \mathfrak{A} 06'39	-3°49'43
direct	12662 Feb 12 15:46	17° \mathfrak{A} 17'49		minimum elong	12663 Jan 16 14:37	4° \mathfrak{A} 51'17	3°46'18
morning max el	12662 Feb 19 15:38	20° \mathfrak{A} 49'23	17°51'56	morning rise	12663 Jan 24 05:44	0° \mathfrak{A} 30'04	
	12662 Feb 26 13:25	0° \mathfrak{H}		direct	12663 Jan 26 07:12	0° \mathfrak{A} 14'48	
morning set	12662 Mar 07 07:07	15° \mathfrak{H} 13'20		asc. node	12663 Jan 28 15:50	0° \mathfrak{A} 35'45	
desc. node	12662 Mar 15 20:49	0° \mathfrak{Y} 31'15		morning max el	12663 Feb 03 03:14	4° \mathfrak{A} 07'24	18°16'20
	12662 Mar 15 13:40	0° \mathfrak{Y}		morning set	12663 Feb 18 20:29	29° \mathfrak{A} 08'33	
					12663 Feb 19 07:21	0° \mathfrak{H}	
superior conj	12662 Mar 18 02:29	4° \mathfrak{Y} 23'40	-0°17'24				
minimum elong	12662 Mar 18 00:54	4° \mathfrak{Y} 16'53	0°17'07	superior conj	12663 Feb 28 06:39	16° \mathfrak{H} 44'49	0°19'20
max. Earth dist.	12662 Mar 25 10:12	16° \mathfrak{Y} 39'54	1.43146 AU	minimum elong	12663 Feb 28 08:04	16° \mathfrak{H} 51'17	0°19'23
evening rise	12662 Mar 31 23:58	27° \mathfrak{Y} 10'54		desc. node	12663 Mar 02 17:23	21° \mathfrak{H} 08'40	
	12662 Apr 02 19:21	0° \mathfrak{B}			12663 Mar 07 19:37	0° \mathfrak{Y}	
	12662 Apr 23 09:00	0° Π		max. Earth dist.	12663 Mar 07 20:39	0° \mathfrak{Y} 04'22	1.41162 AU
evening max el	12662 May 02 22:27	11° Π 29'48	21°52'00	evening rise	12663 Mar 12 12:57	7° \mathfrak{Y} 51'52	
asc. node	12662 May 09 15:23	16° Π 25'55			12663 Mar 26 21:29	0° \mathfrak{B}	
retrograde	12662 May 12 05:00	16° Π 56'43		evening max el	12663 Apr 15 14:18	25° \mathfrak{B} 19'29	23°11'54
evening set	12662 May 16 18:40	15° Π 04'11			12663 Apr 21 08:09	0° Π	
inferior conj	12662 May 22 01:13	8° Π 46'13	3°00'42	retrograde	12663 Apr 26 00:43	1° Π 28'26	
minimum elong	12662 May 21 23:50	8° Π 51'04	2°59'40	asc. node	12663 Apr 26 12:40	1° Π 27'17	

	12663 Apr 30 06:07	30° 		min. Earth dist.	12664 Apr 18 19:11	8° 	0.68346 AU
evening set	12663 May 01 01:51	29° 		inferior conj	12664 Apr 19 18:41	7° 	2°07'16
inferior conj	12663 May 06 10:40	22° 	2°38'58	minimum elong	12664 Apr 19 16:31	7° 	2°06'09
minimum elong	12663 May 06 08:42	23° 	2°37'51	morning rise	12664 Apr 25 03:19	1° 	
min. Earth dist.	12663 May 05 23:36	23° 	0.68800 AU		12664 Apr 27 05:42	30° 	
morning rise	12663 May 11 15:27	16° 		direct	12664 Apr 28 23:27	29° 	
direct	12663 May 16 00:03	15° 			12664 Apr 30 18:36	0° 	
morning max el	12663 May 24 11:03	19° 	21°02'57	morning max el	12664 May 06 10:34	3° 	19°51'32
desc. node	12663 May 29 19:06	25° 		desc. node	12664 May 15 15:56	15° 	
	12663 Jun 01 21:18	0° 			12664 May 25 17:02	0° 	
morning set	12663 Jun 22 08:23	0° 		morning set	12664 Jun 02 02:48	11° 	
	12663 Jun 24 01:19	2° 		max. Earth dist.	12664 Jun 13 01:32	28° 	1.44564 AU
max. Earth dist.	12663 Jul 01 13:21	14° 	1.42947 AU		12664 Jun 14 02:17	0° 	
superior conj	12663 Jul 08 15:50	26° 	-1°49'42	superior conj	12664 Jun 18 03:42	6° 	-2°09'30
minimum elong	12663 Jul 08 22:49	26° 	1°49'56	minimum elong	12664 Jun 18 07:59	6° 	2°10'17
	12663 Jul 10 18:11	0° 		evening rise	12664 Jul 01 14:28	28° 	
evening rise	12663 Jul 20 08:57	16° 			12664 Jul 02 06:16	0° 	
asc. node	12663 Jul 23 11:39	22° 		asc. node	12664 Jul 09 08:28	11° 	
	12663 Jul 27 19:20	0° 		evening max el	12664 Jul 19 09:53	26° 	18°07'13
evening max el	12663 Aug 05 19:45	12° 	18°04'19	retrograde	12664 Jul 25 18:54	29° 	
retrograde	12663 Aug 12 12:23	16° 		evening set	12664 Jul 28 13:27	28° 	
evening set	12663 Aug 14 22:47	15° 		inferior conj	12664 Aug 03 18:01	23° 	2°08'52
inferior conj	12663 Aug 21 17:39	10° 	1°10'28	minimum elong	12664 Aug 03 20:35	23° 	2°07'31
minimum elong	12663 Aug 21 19:39	10° 	1°09'23	min. Earth dist.	12664 Aug 06 11:37	20° 	0.62977 AU
min. Earth dist.	12663 Aug 24 21:49	7° 	0.60732 AU	morning rise	12664 Aug 10 01:45	17° 	
desc. node	12663 Aug 25 17:04	6° 		desc. node	12664 Aug 11 14:32	16° 	
morning rise	12663 Aug 28 13:39	4° 		direct	12664 Aug 16 17:59	14° 	
direct	12663 Sep 04 03:57	2° 		morning max el	12664 Aug 30 18:24	22° 	27°51'38
morning max el	12663 Sep 18 10:24	10° 	27°55'14		12664 Sep 06 04:03	0° 	
	12663 Oct 03 14:09	0° 			12664 Sep 25 20:21	0° 	
asc. node	12663 Oct 19 13:21	28° 		morning set	12664 Oct 04 04:56	15° 	
	12663 Oct 20 07:40	0° 		asc. node	12664 Oct 05 10:01	18° 	
morning set	12663 Oct 21 07:50	2° 		max. Earth dist.	12664 Oct 09 08:31	26° 	1.32132 AU
max. Earth dist.	12663 Oct 27 05:34	14° 	1.31444 AU		12664 Oct 10 21:49	0° 	
superior conj	12663 Oct 28 13:28	17° 	1°17'23	superior conj	12664 Oct 11 21:39	2° 	0°59'09
minimum elong	12663 Oct 28 11:18	17° 	1°17'44	minimum elong	12664 Oct 11 19:25	1° 	0°59'12
	12663 Nov 03 02:30	0° 		evening rise	12664 Oct 18 17:33	17° 	
evening rise	12663 Nov 04 06:24	2° 			12664 Oct 25 00:27	0° 	
	12663 Nov 18 19:57	0° 		desc. node	12664 Nov 07 11:01	21° 	
desc. node	12663 Nov 21 13:46	4° 		evening max el	12664 Nov 11 17:18	26° 	23°47'30
evening max el	12663 Dec 01 06:27	15° 	25°24'18		12664 Nov 16 16:01	0° 	
retrograde	12663 Dec 15 02:54	22° 		retrograde	12664 Nov 25 05:59	2° 	
evening set	12663 Dec 21 00:40	21° 		evening set	12664 Nov 29 22:58	1° 	
min. Earth dist.	12663 Dec 25 18:36	18° 	0.57170 AU		12664 Dec 04 08:01	30° 	
inferior conj	12663 Dec 28 14:49	16° 	-5°03'02	min. Earth dist.	12664 Dec 06 03:52	28° 	0.55550 AU
minimum elong	12663 Dec 28 23:06	16° 	5°00'17	inferior conj	12664 Dec 08 02:22	27° 	-5°48'55
morning rise	12664 Jan 05 23:56	12° 		minimum elong	12664 Dec 08 05:55	27° 	5°47'43
direct	12664 Jan 08 05:04	12° 		morning rise	12664 Dec 16 14:44	23° 	
asc. node	12664 Jan 15 13:07	15° 		direct	12664 Dec 19 07:08	23° 	
morning max el	12664 Jan 17 06:02	16° 	19°02'00	morning max el	12664 Dec 29 20:20	28° 	20°10'35
	12664 Jan 26 16:41	0° 			12664 Dec 31 04:49	0° 	
morning set	12664 Feb 02 19:48	13° 		asc. node	12665 Jan 01 10:20	1° 	
				morning set	12665 Jan 17 01:41	28° 	
superior conj	12664 Feb 11 05:10	29° 	0°49'24		12665 Jan 17 23:51	0° 	
minimum elong	12664 Feb 11 07:53	0° 	0°49'33				
	12664 Feb 11 05:56	0° 		superior conj	12665 Jan 24 17:30	13° 	1°12'05
desc. node	12664 Feb 17 13:58	11° 		minimum elong	12665 Jan 24 20:14	13° 	1°12'30
max. Earth dist.	12664 Feb 18 03:40	12° 	1.38940 AU	max. Earth dist.	12665 Jan 30 10:34	24° 	1.36729 AU
evening rise	12664 Feb 21 23:08	19° 			12665 Feb 02 03:57	0° 	
	12664 Feb 28 07:19	0° 		evening rise	12665 Feb 03 05:02	1° 	
	12664 Mar 20 02:26	0°		desc. node	12665 Feb 03 10:35	2°	
evening max el	12664 Mar 28 04:07	9°	24°32'00		12665 Feb 20 09:53	0°	
retrograde	12664 Apr 08 16:58	15°		evening max el	12665 Mar 10 17:29	23°	25°45'20
asc. node	12664 Apr 12 10:03	14°			12665 Mar 21 08:18	0°	
evening set	12664 Apr 14 05:53	13°		retrograde	12665 Mar 23 04:47	0°	

	12665 Mar 24 23:34	30° Υ		evening max el	12666 Feb 21 07:07	6° Υ 46'35	26°44'41
evening set	12665 Mar 29 05:10	27° Υ 43'53		retrograde	12666 Mar 06 11:08	14° Υ 10'09	
asc. node	12665 Mar 30 07:28	26° Υ 44'06		evening set	12666 Mar 12 21:49	11° Υ 37'43	
min. Earth dist.	12665 Apr 02 11:35	23° Υ 07'37	0.67459 AU	min. Earth dist.	12666 Mar 16 22:36	7° Υ 35'27	0.66167 AU
inferior conj	12665 Apr 03 23:21	21° Υ 14'13	1°25'27	asc. node	12666 Mar 17 04:54	7° Υ 17'11	
minimum elong	12665 Apr 03 21:31	21° Υ 20'04	1°24'33	inferior conj	12666 Mar 18 22:30	5° Υ 14'20	0°33'07
morning rise	12665 Apr 09 14:27	15° Υ 24'38		minimum elong	12666 Mar 18 21:38	5° Υ 16'54	0°32'47
direct	12665 Apr 12 23:01	14° Υ 20'11			12666 Mar 24 06:23	30° Υ	
morning max el	12665 Apr 19 17:42	18° Υ 00'27	18°55'07	morning rise	12666 Mar 24 22:39	29° Υ 35'52	
	12665 Apr 29 03:06	0° Υ		direct	12666 Mar 27 20:54	28° Υ 48'28	
desc. node	12665 May 02 12:40	5° Υ 03'26			12666 Mar 31 13:32	0° Υ	
greatest brilliancy	12665 May 03 07:03	6° Υ 13'04	-0.8m	morning max el	12666 Apr 03 06:54	2° Υ 11'59	18°15'05
morning set	12665 May 12 09:56	20° Υ 16'27		desc. node	12666 Apr 19 09:17	25° Υ 09'36	
	12665 May 18 16:07	0° Υ			12666 Apr 22 09:50	0° Υ	
max. Earth dist.	12665 May 26 18:27	12° Υ 37'49	1.45538 AU	morning set	12666 Apr 22 17:01	0° Υ 28'43	
superior conj	12665 May 28 19:00	15° Υ 48'08	-2°12'05	superior conj	12666 May 08 02:21	24° Υ 50'57	-1°54'28
minimum elong	12665 May 28 16:07	15° Υ 36'51	2°12'56	minimum elong	12666 May 07 17:37	24° Υ 16'45	1°54'31
	12665 Jun 06 18:02	0° Υ		max. Earth dist.	12666 May 09 13:48	27° Υ 09'30	1.45783 AU
evening rise	12665 Jun 12 20:42	9° Υ 50'34			12666 May 11 09:29	0° Υ	
	12665 Jun 25 12:33	0° Υ		evening rise	12666 May 24 02:53	19° Υ 49'47	
asc. node	12665 Jun 26 05:23	1° Υ 02'26			12666 May 30 15:38	0° Υ	
evening max el	12665 Jul 02 23:10	9° Υ 36'58	18°28'19	greatest brilliancy	12666 Jun 04 03:59	6° Υ 56'34	-0.8m
retrograde	12665 Jul 09 10:00	13° Υ 05'19		asc. node	12666 Jun 13 02:23	19° Υ 37'22	
evening set	12665 Jul 12 12:57	12° Υ 10'40		evening max el	12666 Jun 16 09:01	23° Υ 20'26	19°06'47
inferior conj	12665 Jul 18 07:01	6° Υ 38'06	2°46'35	retrograde	12666 Jun 23 06:07	27° Υ 09'26	
minimum elong	12665 Jul 18 09:06	6° Υ 31'51	2°45'21	evening set	12666 Jun 26 17:56	25° Υ 58'40	
min. Earth dist.	12665 Jul 20 10:50	4° Υ 03'41	0.64994 AU	inferior conj	12666 Jul 02 05:04	20° Υ 11'32	3°07'14
morning rise	12665 Jul 24 04:06	0° Υ 16'54		minimum elong	12666 Jul 02 06:12	20° Υ 07'54	3°06'12
	12665 Jul 24 12:30	30° Υ		min. Earth dist.	12666 Jul 03 18:12	18° Υ 12'12	0.66639 AU
desc. node	12665 Jul 29 11:55	27° Υ 41'51		morning rise	12666 Jul 07 17:50	13° Υ 48'09	
direct	12665 Jul 30 16:40	27° Υ 36'45		direct	12666 Jul 13 22:22	11° Υ 07'34	
	12665 Aug 06 14:11	0° Υ		desc. node	12666 Jul 16 09:12	11° Υ 29'20	
morning max el	12665 Aug 13 05:06	5° Υ 33'38	27°13'27	morning max el	12666 Jul 26 15:58	18° Υ 43'48	26°08'41
	12665 Aug 31 21:05	0° Υ			12666 Aug 05 04:42	0° Υ	
morning set	12665 Sep 17 16:38	29° Υ 16'28			12666 Aug 24 21:45	0° Υ	
	12665 Sep 18 01:35	0° Υ		morning set	12666 Aug 31 15:36	12° Υ 01'44	
max. Earth dist.	12665 Sep 22 02:58	8° Υ 07'14	1.33353 AU	max. Earth dist.	12666 Sep 04 11:13	19° Υ 16'14	1.35078 AU
asc. node	12665 Sep 22 06:39	8° Υ 26'04		asc. node	12666 Sep 09 03:15	28° Υ 32'24	
superior conj	12665 Sep 26 01:01	16° Υ 17'58	0°35'34	superior conj	12666 Sep 09 21:04	0° Υ 03'05	0°07'05
minimum elong	12665 Sep 25 23:20	16° Υ 09'03	0°35'25	minimum elong	12666 Sep 09 20:40	0° Υ 01'05	0°06'55
	12665 Oct 02 10:30	0° Υ		behind sun begin	12666 Sep 09 15:12	29° Υ 33'10	
evening rise	12665 Oct 03 04:21	1° Υ 34'58		behind sun end	12666 Sep 10 02:08	0° Υ 29'02	
	12665 Oct 18 23:39	0° Υ			12666 Sep 09 20:28	0° Υ	
evening max el	12665 Oct 24 04:54	6° Υ 04'26	22°06'20	evening rise	12666 Sep 17 12:50	15° Υ 56'57	
desc. node	12665 Oct 25 08:21	7° Υ 08'49			12666 Sep 24 15:16	0° Υ	
retrograde	12665 Nov 05 21:26	12° Υ 22'25		evening max el	12666 Oct 06 02:38	16° Υ 33'49	20°36'35
evening set	12665 Nov 09 03:56	11° Υ 58'40		desc. node	12666 Oct 12 05:44	21° Υ 00'19	
inferior conj	12665 Nov 17 22:10	8° Υ 02'25	-5°44'27	retrograde	12666 Oct 17 08:16	22° Υ 08'38	
minimum elong	12665 Nov 17 17:00	8° Υ 09'41	5°43'04	evening set	12666 Oct 19 13:38	21° Υ 56'29	
min. Earth dist.	12665 Nov 17 10:34	8° Υ 18'42	0.54643 AU	inferior conj	12666 Oct 28 14:12	18° Υ 01'33	-4°41'06
morning rise	12665 Nov 26 07:16	4° Υ 15'17		minimum elong	12666 Oct 28 04:10	18° Υ 16'00	4°37'49
direct	12665 Nov 29 18:13	3° Υ 48'46		min. Earth dist.	12666 Oct 29 17:45	17° Υ 21'49	0.54655 AU
morning max el	12665 Dec 11 20:22	9° Υ 34'37	21°41'13	morning rise	12666 Nov 05 18:27	14° Υ 03'19	
asc. node	12665 Dec 19 07:27	18° Υ 37'47		direct	12666 Nov 10 02:54	13° Υ 22'38	
	12665 Dec 26 01:34	0° Υ		morning max el	12666 Nov 23 09:26	19° Υ 49'30	23°27'07
morning set	12666 Jan 01 11:28	12° Υ 51'00			12666 Dec 01 21:04	0° Υ	
				asc. node	12666 Dec 06 04:27	6° Υ 44'56	
superior conj	12666 Jan 08 15:38	28° Υ 00'52	1°27'33	morning set	12666 Dec 16 23:06	27° Υ 37'27	
minimum elong	12666 Jan 08 17:40	28° Υ 11'27	1°28'15		12666 Dec 18 01:43	0° Υ	
	12666 Jan 09 14:30	0° Υ					
max. Earth dist.	12666 Jan 12 22:06	6° Υ 46'46	1.34755 AU	superior conj	12666 Dec 23 20:32	12° Υ 32'47	1°36'12
evening rise	12666 Jan 17 03:11	15° Υ 01'22		minimum elong	12666 Dec 23 21:30	12° Υ 38'00	1°37'06
desc. node	12666 Jan 21 07:16	22° Υ 44'40		max. Earth dist.	12666 Dec 26 17:31	18° Υ 41'31	1.33171 AU
	12666 Jan 25 10:55	0° Υ		evening rise	12666 Dec 31 14:04	28° Υ 40'04	
	12666 Feb 15 01:37	0° Υ			12667 Jan 01 06:12	0° Υ	

desc. node	12667 Jan 08 04:03	12° \approx 56'56		max. Earth dist.	12667 Dec 09 20:18	0° \approx 46'16	1.32045 AU
	12667 Jan 18 14:52	0° H		evening rise	12667 Dec 15 10:28	12° \approx 41'51	
evening max el	12667 Feb 03 20:25	20° H 15'03	27°22'37		12667 Dec 24 10:15	0° \approx	
retrograde	12667 Feb 17 11:02	27° H 40'52		desc. node	12667 Dec 26 00:56	2° \approx 49'46	
evening set	12667 Feb 24 05:41	25° H 10'33			12668 Jan 14 03:21	0° H	
min. Earth dist.	12667 Feb 28 02:06	21° H 40'12	0.64514 AU	evening max el	12668 Jan 17 07:18	3° H 13'59	27°32'21
inferior conj	12667 Mar 02 13:37	19° H 00'36	-0°29'55	retrograde	12668 Jan 31 03:30	10° H 35'18	
minimum elong	12667 Mar 02 14:31	18° H 58'10	0°29'16	evening set	12668 Feb 07 02:09	8° H 14'24	
asc. node	12667 Mar 04 02:19	17° H 24'02		min. Earth dist.	12668 Feb 10 20:07	5° H 11'50	0.62562 AU
morning rise	12667 Mar 09 01:16	13° H 35'38		inferior conj	12668 Feb 13 17:45	2° H 25'13	-1°42'56
direct	12667 Mar 11 14:44	13° H 01'51		minimum elong	12668 Feb 13 21:13	2° H 16'52	1°41'00
morning max el	12667 Mar 17 23:45	16° H 20'08	17°52'09		12668 Feb 16 09:17	30° R \approx	
	12667 Mar 27 21:48	0° Y		asc. node	12668 Feb 18 23:42	28° \approx 07'17	
morning set	12667 Apr 04 04:43	12° Y 04'57		morning rise	12668 Feb 20 18:52	27° \approx 16'56	
desc. node	12667 Apr 06 05:52	15° Y 30'12		direct	12668 Feb 23 01:25	26° \approx 53'09	
	12667 Apr 15 01:25	0° B			12668 Feb 29 10:24	0° H	
				morning max el	12668 Feb 29 17:20	0° H 16'41	17°46'51
superior conj	12667 Apr 17 19:35	4° B 26'09	-1°20'57	morning set	12668 Mar 16 16:36	24° H 50'14	
minimum elong	12667 Apr 17 11:21	3° B 53'12	1°20'24		12668 Mar 19 15:16	0° Y	
max. Earth dist.	12667 Apr 22 09:39	11° B 43'04	1.45284 AU	desc. node	12668 Mar 23 02:26	6° Y 00'45	
evening rise	12667 May 03 16:50	29° B 15'16					
	12667 May 04 04:31	0° II		superior conj	12668 Mar 28 10:51	15° Y 05'07	-0°40'34
greatest brilliancy	12667 May 18 15:46	21° II 43'17	-0.6m	minimum elong	12668 Mar 28 06:50	14° Y 48'20	0°40'07
	12667 May 24 13:57	0° D		max. Earth dist.	12668 Apr 04 03:16	26° Y 01'49	1.44091 AU
evening max el	12667 May 30 13:40	7° D 06'56	20°01'03		12668 Apr 06 14:57	0° B	
asc. node	12667 May 30 23:27	7° D 31'06		evening rise	12668 Apr 12 05:34	8° B 46'36	
retrograde	12667 Jun 07 04:34	11° D 28'01			12668 Apr 26 09:42	0° II	
evening set	12667 Jun 11 01:54	10° D 00'35		evening max el	12668 May 12 12:30	20° II 54'29	21°08'34
inferior conj	12667 Jun 16 09:12	4° D 00'04	3°13'52	asc. node	12668 May 16 20:37	24° II 30'58	
minimum elong	12667 Jun 16 09:15	3° D 59'53	3°12'55	retrograde	12668 May 21 03:20	25° II 56'16	
min. Earth dist.	12667 Jun 17 07:53	2° D 43'20	0.67847 AU	evening set	12668 May 25 10:53	24° II 12'27	
	12667 Jun 19 10:45	30° R II		inferior conj	12668 May 30 17:02	18° II 00'07	3°08'36
morning rise	12667 Jun 21 16:17	27° II 38'40		minimum elong	12668 May 30 16:06	18° II 03'19	3°07'38
direct	12667 Jun 27 09:50	25° II 06'46		min. Earth dist.	12668 May 31 02:02	17° II 28'49	0.68585 AU
desc. node	12667 Jul 03 06:24	27° II 10'39		morning rise	12668 Jun 04 21:08	11° II 43'06	
	12667 Jul 06 21:08	0° D		direct	12668 Jun 10 02:04	9° II 26'32	
morning max el	12667 Jul 09 02:04	2° D 06'50	24°46'42	desc. node	12668 Jun 19 03:30	14° II 18'48	
	12667 Jul 30 06:16	0° O		morning max el	12668 Jun 20 12:30	15° II 38'54	23°17'22
morning set	12667 Aug 13 21:29	23° O 58'57			12668 Jul 02 06:54	0° D	
	12667 Aug 17 06:01	0° P			12668 Jul 22 05:37	0° O	
max. Earth dist.	12667 Aug 17 11:20	0° P 24'18	1.37208 AU	morning set	12668 Jul 25 05:40	4° O 57'25	
				max. Earth dist.	12668 Jul 29 09:14	12° O 01'03	1.39535 AU
superior conj	12667 Aug 24 06:36	13° P 16'02	-0°25'23				
minimum elong	12667 Aug 24 08:17	13° P 24'14	0°25'26	superior conj	12668 Aug 06 01:51	25° O 48'01	-0°59'53
asc. node	12667 Aug 26 23:50	18° P 37'24		minimum elong	12668 Aug 06 06:10	26° O 08'00	0°59'48
evening rise	12667 Sep 01 16:36	0° D 03'41			12668 Aug 08 07:51	0° P	
	12667 Sep 01 15:52	0° D		asc. node	12668 Aug 12 20:29	8° P 37'50	
evening max el	12667 Sep 18 14:21	27° D 48'32	19°26'36	evening rise	12668 Aug 15 12:48	13° P 47'59	
	12667 Sep 21 02:46	0° M			12668 Aug 24 08:33	0° D	
retrograde	12667 Sep 28 03:46	2° M 34'55		evening max el	12668 Aug 31 14:31	9° D 50'06	18°38'22
desc. node	12667 Sep 29 03:12	2° M 32'07		retrograde	12668 Sep 08 17:09	13° D 54'52	
evening set	12667 Sep 30 00:22	2° M 24'53		evening set	12668 Sep 10 15:58	13° D 41'30	
	12667 Oct 05 23:12	30° R D		desc. node	12668 Sep 15 00:40	11° D 47'17	
inferior conj	12667 Oct 08 16:48	28° D 17'59	-2°58'16	inferior conj	12668 Sep 18 15:23	9° D 15'24	-1°08'21
minimum elong	12667 Oct 08 09:06	28° D 30'24	2°55'05	minimum elong	12668 Sep 18 12:37	9° D 20'38	1°07'10
min. Earth dist.	12667 Oct 11 03:48	26° D 43'01	0.55592 AU	min. Earth dist.	12668 Sep 21 19:34	6° D 52'44	0.57276 AU
morning rise	12667 Oct 16 15:39	23° D 50'11		morning rise	12668 Sep 26 05:50	4° D 09'39	
direct	12667 Oct 21 20:16	22° D 49'34		direct	12668 Oct 02 03:37	2° D 43'09	
	12667 Nov 04 23:34	0° M		morning max el	12668 Oct 16 10:38	10° D 11'48	26°42'52
morning max el	12667 Nov 04 19:38	29° D 50'35	25°13'50		12668 Oct 31 14:44	0° M	
asc. node	12667 Nov 23 01:20	25° M 31'11		asc. node	12668 Nov 08 22:10	14° M 46'36	
	12667 Nov 25 10:19	0° A		morning set	12668 Nov 14 20:50	26° M 55'21	
morning set	12667 Dec 01 10:47	12° A 20'22			12668 Nov 16 07:06	0° A	
superior conj	12667 Dec 08 05:39	27° A 13'51	1°38'30	superior conj	12668 Nov 21 16:57	11° A 58'17	1°34'49
minimum elong	12667 Dec 08 05:30	27° A 13'00	1°39'26	minimum elong	12668 Nov 21 15:48	11° A 51'50	1°35'36
	12667 Dec 09 11:51	0° B		max. Earth dist.	12668 Nov 22 03:45	12° A 58'28	1.31408 AU

evening rise	12668 Nov 28 13:46	27° ♄ 00'06		minimum elong	12669 Nov 06 02:40	26° ♄ 29'58	1°25'54
	12668 Nov 30 00:05	0° ♄			12669 Nov 07 16:19	0° ♄	
desc. node	12668 Dec 11 21:55	22° ♄ 15'14		evening rise	12669 Nov 12 21:41	11° ♄ 29'15	
	12668 Dec 16 20:50	0° ♄			12669 Nov 22 04:45	0° ♄	
evening max el	12668 Dec 29 13:09	15° ♄ 30'31	27°08'52	desc. node	12669 Nov 28 19:01	11° ♄ 02'45	
retrograde	12669 Jan 12 11:43	22° ♄ 44'15		evening max el	12669 Dec 11 11:39	26° ♄ 56'47	26°11'10
evening set	12669 Jan 19 07:57	20° ♄ 41'04			12669 Dec 15 02:18	0° ♄	
min. Earth dist.	12669 Jan 23 03:33	17° ♄ 58'18	0.60427 AU	retrograde	12669 Dec 25 10:14	4° ♄ 01'25	
inferior conj	12669 Jan 26 07:26	15° ♄ 18'56	-3°03'04	evening set	12669 Dec 31 19:05	2° ♄ 24'23	
minimum elong	12669 Jan 26 13:54	15° ♄ 05'19	2°59'58		12670 Jan 04 18:17	30° ♄	
morning rise	12669 Feb 02 22:49	10° ♄ 30'26		min. Earth dist.	12670 Jan 05 00:55	29° ♄ 48'22	0.58292 AU
asc. node	12669 Feb 04 21:05	10° ♄ 13'14		inferior conj	12670 Jan 08 03:12	27° ♄ 32'45	-4°22'47
direct	12669 Feb 05 01:00	10° ♄ 13'07		minimum elong	12670 Jan 08 11:43	27° ♄ 17'09	4°19'28
morning max el	12669 Feb 12 08:16	13° ♄ 52'09	17°59'59	morning rise	12670 Jan 16 07:13	23° ♄ 06'00	
	12669 Feb 23 07:33	0° ♄		direct	12670 Jan 18 09:12	22° ♄ 51'37	
morning set	12669 Feb 27 22:15	8° ♄ 24'29		asc. node	12670 Jan 22 18:24	23° ♄ 59'15	
desc. node	12669 Mar 09 22:59	26° ♄ 36'41		morning max el	12670 Jan 26 16:45	26° ♄ 56'09	18°33'06
					12670 Jan 29 10:21	0° ♄	
superior conj	12669 Mar 10 02:26	26° ♄ 51'52	-0°01'08	morning set	12670 Feb 11 16:21	22° ♄ 32'17	
minimum elong	12669 Mar 10 02:20	26° ♄ 51'27	0°00'59		12670 Feb 15 13:10	0° ♄	
behind sun begin	12669 Mar 09 18:23	26° ♄ 16'28		superior conj	12670 Feb 20 15:02	9° ♄ 36'35	0°32'57
behind sun end	12669 Mar 10 10:17	27° ♄ 26'22		minimum elong	12670 Feb 20 17:11	9° ♄ 46'38	0°33'01
	12669 Mar 11 21:31	0° ♄		desc. node	12670 Feb 24 19:34	17° ♄ 14'49	
max. Earth dist.	12669 Mar 17 16:17	9° ♄ 48'27	1.42336 AU	max. Earth dist.	12670 Feb 28 00:31	22° ♄ 53'32	1.40224 AU
evening rise	12669 Mar 23 07:12	18° ♄ 56'27		evening rise	12670 Mar 04 05:12	0° ♄ 01'21	
	12669 Mar 30 09:54	0° ♄			12670 Mar 04 04:53	0° ♄	
	12669 Apr 20 23:52	0° ♄			12670 Mar 23 20:03	0° ♄	
evening max el	12669 Apr 25 06:15	4° ♄ 42'27	22°25'30	evening max el	12670 Apr 07 20:54	18° ♄ 32'43	23°46'22
asc. node	12669 May 03 17:53	10° ♄ 20'30		retrograde	12670 Apr 18 19:14	24° ♄ 58'40	
retrograde	12669 May 05 00:43	10° ♄ 28'12		asc. node	12670 Apr 20 15:14	24° ♄ 43'17	
evening set	12669 May 09 19:11	8° ♄ 29'04		evening set	12670 Apr 24 01:14	22° ♄ 46'03	
inferior conj	12669 May 15 02:26	2° ♄ 07'12	2°52'43	inferior conj	12670 Apr 29 11:31	16° ♄ 17'48	2°26'47
minimum elong	12669 May 15 00:46	2° ♄ 13'01	2°51'39	minimum elong	12670 Apr 29 09:25	16° ♄ 24'58	2°25'38
min. Earth dist.	12669 May 14 22:31	2° ♄ 20'51	0.68850 AU	min. Earth dist.	12670 Apr 28 19:11	17° ♄ 13'40	0.68657 AU
	12669 May 16 15:27	30° ♄		morning rise	12670 May 04 17:37	10° ♄ 13'50	
morning rise	12669 May 20 06:13	25° ♄ 56'04		direct	12670 May 08 20:45	8° ♄ 37'30	
direct	12669 May 24 22:06	23° ♄ 58'49		morning max el	12670 May 16 20:55	13° ♄ 10'12	20°30'49
morning max el	12669 Jun 03 01:47	29° ♄ 19'17	21°49'40	desc. node	12670 May 23 21:25	21° ♄ 27'47	
	12669 Jun 03 17:45	0° ♄			12670 May 30 01:28	0° ♄	
desc. node	12669 Jun 06 00:31	2° ♄ 30'14		morning set	12670 Jun 14 20:53	23° ♄ 41'13	
	12669 Jun 25 23:29	0° ♄			12670 Jun 18 21:59	0° ♄	
morning set	12669 Jul 05 12:35	14° ♄ 48'34		max. Earth dist.	12670 Jun 23 18:10	7° ♄ 41'47	1.43703 AU
max. Earth dist.	12669 Jul 11 10:28	24° ♄ 25'30	1.41788 AU				
	12669 Jul 14 18:13	0° ♄		superior conj	12670 Jun 30 04:07	18° ♄ 10'14	-1°59'48
superior conj	12669 Jul 19 02:21	7° ♄ 28'41	-1°33'08	minimum elong	12670 Jun 30 10:35	18° ♄ 37'05	2°00'16
minimum elong	12669 Jul 19 08:57	7° ♄ 57'35	1°33'08		12670 Jul 07 04:00	0° ♄	
evening rise	12669 Jul 29 21:42	26° ♄ 59'50		evening rise	12670 Jul 12 14:40	9° ♄ 27'48	
asc. node	12669 Jul 30 17:11	28° ♄ 29'25		asc. node	12670 Jul 17 13:57	18° ♄ 07'45	
	12669 Jul 31 12:54	0° ♄			12670 Jul 24 22:21	0° ♄	
evening max el	12669 Aug 14 23:17	22° ♄ 30'27	18°11'04	evening max el	12670 Jul 29 12:36	5° ♄ 39'33	18°03'19
retrograde	12669 Aug 22 01:15	26° ♄ 06'26		retrograde	12670 Aug 05 00:45	9° ♄ 01'15	
evening set	12669 Aug 24 06:56	25° ♄ 45'26		evening set	12670 Aug 07 14:36	8° ♄ 29'01	
inferior conj	12669 Aug 31 11:41	20° ♄ 58'54	0°26'19	inferior conj	12670 Aug 14 02:57	3° ♄ 23'06	1°37'58
minimum elong	12669 Aug 31 12:33	20° ♄ 56'59	0°25'46	minimum elong	12670 Aug 14 05:22	3° ♄ 16'59	1°36'41
desc. node	12669 Sep 01 22:09	19° ♄ 42'37		min. Earth dist.	12670 Aug 17 03:23	0° ♄ 21'30	0.61707 AU
min. Earth dist.	12669 Sep 03 19:04	18° ♄ 05'35	0.59416 AU		12670 Aug 17 12:25	30° ♄	
morning rise	12669 Sep 07 14:47	15° ♄ 19'28		desc. node	12670 Aug 19 19:38	28° ♄ 00'29	
direct	12669 Sep 14 00:55	13° ♄ 24'41		morning rise	12670 Aug 20 17:38	27° ♄ 20'03	
morning max el	12669 Sep 28 09:06	21° ♄ 13'36	27°39'48	direct	12670 Aug 27 09:44	25° ♄ 00'51	
	12669 Oct 06 00:35	0° ♄			12670 Sep 07 07:06	0° ♄	
	12669 Oct 24 13:27	0° ♄		morning max el	12670 Sep 10 14:03	3° ♄ 00'47	27°58'12
asc. node	12669 Oct 26 18:56	4° ♄ 23'13			12670 Sep 30 13:03	0° ♄	
morning set	12669 Oct 30 03:30	11° ♄ 17'43		asc. node	12670 Oct 13 15:36	24° ♄ 14'00	
max. Earth dist.	12669 Nov 05 12:25	25° ♄ 10'34	1.31276 AU	morning set	12670 Oct 14 04:43	25° ♄ 21'14	
					12670 Oct 16 10:09	0° ♄	
superior conj	12669 Nov 06 04:34	26° ♄ 40'33	1°25'22	max. Earth dist.	12670 Oct 19 18:24	7° ♄ 11'50	1.31669 AU

superior conj	12670 Oct 21 14:33	11° \mathbb{M} 14'13	1°10'19	superior conj	12671 Oct 05 20:59	25° \mathbb{A} 33'58	0°49'47
minimum elong	12670 Oct 21 12:18	11° \mathbb{M} 01'48	1°10'32	minimum elong	12671 Oct 05 18:55	25° \mathbb{A} 22'45	0°49'45
evening rise	12670 Oct 28 08:12	26° \mathbb{M} 02'56		evening rise	12671 Oct 07 22:03	0° \mathbb{M}	
	12670 Oct 30 04:40	0° \mathbb{A}			12671 Oct 12 19:28	10° \mathbb{M} 36'28	
desc. node	12670 Nov 15 16:12	28° \mathbb{A} 56'49		desc. node	12671 Oct 22 15:27	0° \mathbb{A}	
	12670 Nov 16 11:05	0° \mathbb{B}			12671 Nov 02 13:29	15° \mathbb{A} 37'23	
evening max el	12670 Nov 23 02:05	7° \mathbb{B} 33'04	24°44'55	evening max el	12671 Nov 04 12:13	17° \mathbb{A} 38'12	23°03'53
retrograde	12670 Dec 06 20:37	14° \mathbb{B} 26'11		retrograde	12671 Nov 17 17:46	24° \mathbb{A} 12'48	
evening set	12670 Dec 12 07:09	13° \mathbb{B} 20'30		evening set	12671 Nov 21 20:13	23° \mathbb{A} 36'15	
min. Earth dist.	12670 Dec 17 13:54	10° \mathbb{B} 34'13	0.56409 AU	min. Earth dist.	12671 Nov 28 21:27	20° \mathbb{A} 21'07	0.55073 AU
inferior conj	12670 Dec 20 02:28	8° \mathbb{B} 57'48	-5°27'18	inferior conj	12671 Nov 30 06:16	19° \mathbb{A} 33'58	-5°54'13
minimum elong	12670 Dec 20 09:27	8° \mathbb{B} 46'38	5°25'13	minimum elong	12671 Nov 30 06:13	19° \mathbb{A} 34'02	5°53'17
morning rise	12670 Dec 28 13:53	4° \mathbb{B} 52'19		morning rise	12671 Dec 08 17:47	15° \mathbb{A} 44'17	
direct	12670 Dec 30 22:40	4° \mathbb{B} 36'52		direct	12671 Dec 11 17:42	15° \mathbb{A} 23'08	
morning max el	12671 Jan 09 14:38	9° \mathbb{B} 16'07	19°28'16	morning max el	12671 Dec 22 22:40	20° \mathbb{A} 43'20	20°46'34
asc. node	12671 Jan 09 15:40	9° \mathbb{B} 18'37		asc. node	12671 Dec 27 12:48	25° \mathbb{A} 56'03	
	12671 Jan 23 05:28	0° \approx			12671 Dec 30 09:25	0° \mathbb{B}	
morning set	12671 Jan 26 18:49	7° \approx 01'07		morning set	12672 Jan 11 02:37	21° \mathbb{B} 42'15	
					12672 Jan 15 02:15	0° \approx	
superior conj	12671 Feb 03 19:55	23° \approx 05'29	0°59'55	superior conj	12672 Jan 18 12:48	7° \approx 06'47	1°19'31
minimum elong	12671 Feb 03 22:46	23° \approx 19'24	1°00'10	minimum elong	12672 Jan 18 15:18	7° \approx 19'33	1°20'03
	12671 Feb 07 10:07	0° \mathbb{H}		max. Earth dist.	12672 Jan 23 15:24	17° \approx 18'54	1.35857 AU
max. Earth dist.	12671 Feb 10 06:42	5° \mathbb{H} 18'57	1.37986 AU	evening rise	12672 Jan 27 13:24	24° \approx 44'50	
desc. node	12671 Feb 11 16:09	7° \mathbb{H} 50'55		desc. node	12672 Jan 29 12:47	28° \approx 21'24	
evening rise	12671 Feb 14 00:09	12° \mathbb{H} 00'05			12672 Jan 30 10:46	0° \mathbb{H}	
	12671 Feb 24 21:23	0° \mathbb{Y}			12672 Feb 18 11:08	0° \mathbb{Y}	
	12671 Mar 19 02:25	0° \mathbb{B}		evening max el	12672 Mar 03 00:10	16° \mathbb{Y} 14'43	26°12'48
evening max el	12671 Mar 21 10:32	2° \mathbb{B} 25'02	25°04'34	retrograde	12672 Mar 15 19:00	23° \mathbb{Y} 31'15	
retrograde	12671 Apr 02 09:39	9° \mathbb{B} 21'53		evening set	12672 Mar 22 00:04	21° \mathbb{Y} 00'31	
asc. node	12671 Apr 07 12:38	7° \mathbb{B} 28'08		asc. node	12672 Mar 24 10:04	18° \mathbb{Y} 40'35	
evening set	12671 Apr 08 03:26	6° \mathbb{B} 58'23		min. Earth dist.	12672 Mar 26 04:01	16° \mathbb{Y} 39'00	0.66960 AU
min. Earth dist.	12671 Apr 12 13:45	2° \mathbb{B} 01'47	0.68018 AU	inferior conj	12672 Mar 27 20:56	14° \mathbb{Y} 33'02	1°04'33
inferior conj	12671 Apr 13 18:22	0° \mathbb{B} 27'57	1°50'50	minimum elong	12672 Mar 27 19:25	14° \mathbb{Y} 37'44	1°03'51
minimum elong	12671 Apr 13 16:17	0° \mathbb{B} 34'50	1°49'45	morning rise	12672 Apr 02 15:34	8° \mathbb{Y} 47'59	
	12671 Apr 14 02:54	30° \mathbb{R} \mathbb{Y}		direct	12672 Apr 05 19:41	7° \mathbb{Y} 51'00	
morning rise	12671 Apr 19 05:24	24° \mathbb{Y} 32'35		morning max el	12672 Apr 12 09:31	11° \mathbb{Y} 22'16	18°36'03
direct	12671 Apr 22 20:32	23° \mathbb{Y} 16'51			12672 Apr 26 00:51	0° \mathbb{B}	
morning max el	12671 Apr 29 23:37	27° \mathbb{Y} 12'19	19°25'32	desc. node	12672 Apr 26 14:52	0° \mathbb{B} 54'18	
	12671 May 02 13:35	0° \mathbb{B}		morning set	12672 May 03 13:42	11° \mathbb{B} 46'47	
desc. node	12671 May 10 18:12	10° \mathbb{B} 58'57			12672 May 15 05:02	0° \mathbb{H}	
greatest brilliancy	12671 May 12 16:14	13° \mathbb{B} 47'20	-0.7m	max. Earth dist.	12672 May 19 03:30	6° \mathbb{H} 08'55	1.45733 AU
	12671 May 23 09:27	0° \mathbb{H}		superior conj	12672 May 19 16:04	6° \mathbb{H} 58'02	-2°07'00
morning set	12671 May 24 21:53	2° \mathbb{H} 20'02		minimum elong	12672 May 19 10:04	6° \mathbb{H} 34'35	2°07'34
max. Earth dist.	12671 Jun 06 08:38	21° \mathbb{H} 42'02	1.45064 AU		12672 Jun 03 07:07	0° \mathbb{B}	
superior conj	12671 Jun 10 06:22	27° \mathbb{H} 53'23	-2°13'01	evening rise	12672 Jun 04 06:17	1° \mathbb{B} 32'06	
minimum elong	12671 Jun 10 07:58	27° \mathbb{H} 59'47	2°13'57	greatest brilliancy	12672 Jun 12 04:28	14° \mathbb{B} 06'52	-0.8m
	12671 Jun 11 14:05	0° \mathbb{B}		asc. node	12672 Jun 20 07:45	26° \mathbb{B} 21'11	
evening rise	12671 Jun 24 10:40	21° \mathbb{B} 00'41			12672 Jun 23 02:42	0° \mathbb{B}	
	12671 Jun 29 20:26	0° \mathbb{B}		evening max el	12672 Jun 25 14:54	2° \mathbb{B} 47'36	18°42'38
asc. node	12671 Jul 04 10:48	7° \mathbb{B} 27'32		retrograde	12672 Jul 02 05:00	6° \mathbb{B} 23'10	
evening max el	12671 Jul 13 02:50	19° \mathbb{B} 08'12	18°14'04	evening set	12672 Jul 05 11:44	5° \mathbb{B} 21'37	
retrograde	12671 Jul 19 11:20	22° \mathbb{B} 30'02			12672 Jul 10 20:43	30° \mathbb{R} \mathbb{B}	
evening set	12671 Jul 22 09:32	21° \mathbb{B} 43'55		inferior conj	12672 Jul 11 02:24	29° \mathbb{B} 42'26	2°57'13
inferior conj	12671 Jul 28 09:10	16° \mathbb{B} 20'28	2°27'08	minimum elong	12672 Jul 11 04:07	29° \mathbb{B} 37'08	2°56'05
minimum elong	12671 Jul 28 11:38	16° \mathbb{B} 13'29	2°25'49	min. Earth dist.	12672 Jul 12 23:51	27° \mathbb{B} 22'04	0.65741 AU
min. Earth dist.	12671 Jul 30 21:09	13° \mathbb{B} 31'34	0.63876 AU	morning rise	12672 Jul 16 19:38	23° \mathbb{B} 19'45	
morning rise	12671 Aug 03 12:10	10° \mathbb{B} 03'44		direct	12672 Jul 23 05:08	20° \mathbb{B} 38'36	
desc. node	12671 Aug 06 17:04	8° \mathbb{B} 09'18		desc. node	12672 Jul 23 14:25	20° \mathbb{B} 39'08	
direct	12671 Aug 10 03:35	7° \mathbb{B} 28'34		morning max el	12672 Aug 05 10:24	28° \mathbb{B} 28'05	26°48'45
morning max el	12671 Aug 23 23:20	15° \mathbb{B} 29'18	27°39'12		12672 Aug 06 21:41	0° \mathbb{B}	
	12671 Sep 04 20:45	0° \mathbb{H}			12672 Aug 28 15:41	0° \mathbb{H}	
	12671 Sep 23 06:01	0° \mathbb{A}		morning set	12672 Sep 10 04:54	22° \mathbb{H} 07'43	
morning set	12671 Sep 27 22:11	9° \mathbb{A} 00'27			12672 Sep 14 05:35	0° \mathbb{A}	
asc. node	12671 Sep 30 12:14	14° \mathbb{A} 14'14		max. Earth dist.	12672 Sep 14 08:38	0° \mathbb{A} 15'16	1.34036 AU
max. Earth dist.	12671 Oct 02 18:11	18° \mathbb{A} 54'49	1.32594 AU	asc. node	12672 Sep 16 08:50	4° \mathbb{A} 19'15	

superior conj	12672 Sep 18 21:33	9°♄33'17	0°24'03			12673 Aug 21 07:55	0°♄	
minimum elong	12672 Sep 18 20:19	9°♄26'50	0°23'52	morning set		12673 Aug 23 21:11	4°♄34'09	
evening rise	12672 Sep 26 05:32	25°♄04'08		max. Earth dist.		12673 Aug 27 13:01	11°♄21'01	1.35942 AU
	12672 Sep 28 14:26	0°♄						
evening max el	12672 Oct 16 03:02	27°♄47'55	21°25'57	superior conj		12673 Sep 02 13:32	23°♄05'28	-0°06'18
	12672 Oct 18 14:23	0°♄		minimum elong		12673 Sep 02 13:55	23°♄07'26	0°06'27
desc. node	12672 Oct 19 10:50	0°♄38'45		behind sun begin		12673 Sep 02 08:09	22°♄38'30	
retrograde	12672 Oct 28 05:59	3°♄49'27		behind sun end		12673 Sep 02 19:41	23°♄36'24	
evening set	12672 Oct 31 00:05	3°♄32'00		asc. node		12673 Sep 03 05:26	24°♄25'23	
	12672 Nov 08 06:37	30°♄				12673 Sep 05 23:15	0°♄	
inferior conj	12672 Nov 08 22:37	29°♄37'35	-5°24'11	evening rise		12673 Sep 10 12:19	9°♄20'25	
minimum elong	12672 Nov 08 14:28	29°♄49'00	5°22'00			12673 Sep 21 14:26	0°♄	
min. Earth dist.	12672 Nov 09 03:38	29°♄30'33	0.54536 AU	evening max el		12673 Sep 28 06:31	8°♄35'15	20°04'10
morning rise	12672 Nov 17 05:43	25°♄48'42		desc. node		12673 Oct 06 08:16	13°♄33'09	
direct	12672 Nov 21 01:44	25°♄16'59		retrograde		12673 Oct 08 19:23	13°♄49'51	
	12672 Dec 02 05:12	0°♄		evening set		12673 Oct 10 18:53	13°♄39'35	
morning max el	12672 Dec 03 17:17	1°♄20'13	22°25'09	inferior conj		12673 Oct 19 17:36	9°♄40'47	-4°00'26
asc. node	12672 Dec 13 09:50	13°♄34'53		minimum elong		12673 Oct 19 07:52	9°♄55'24	3°56'50
	12672 Dec 22 10:29	0°♄		min. Earth dist.		12673 Oct 21 11:59	8°♄37'07	0.54942 AU
morning set	12672 Dec 25 13:27	6°♄28'58		morning rise		12673 Oct 27 19:42	5°♄31'28	
				direct		12673 Nov 01 12:41	4°♄43'14	
superior conj	12673 Jan 01 14:11	21°♄30'38	1°32'01	morning max el		12673 Nov 15 04:15	11°♄26'07	24°13'32
minimum elong	12673 Jan 01 15:47	21°♄39'07	1°32'49			12673 Nov 29 02:57	0°♄	
max. Earth dist.	12673 Jan 05 06:19	29°♄11'25	1.34028 AU	asc. node		12673 Nov 30 06:47	2°♄00'11	
	12673 Jan 05 15:48	0°♄		morning set		12673 Dec 10 01:19	21°♄14'52	
evening rise	12673 Jan 09 17:23	8°♄06'45				12673 Dec 14 01:59	0°♄	
desc. node	12673 Jan 15 09:30	18°♄42'09						
	12673 Jan 22 00:24	0°♄		superior conj		12673 Dec 16 21:10	6°♄07'52	1°37'56
evening max el	12673 Feb 13 13:40	29°♄53'53	27°03'47	minimum elong		12673 Dec 16 21:40	6°♄10'31	1°38'52
	12673 Feb 13 16:13	0°♄		max. Earth dist.		12673 Dec 19 04:51	11°♄09'30	1.32627 AU
retrograde	12673 Feb 26 22:39	7°♄19'33		evening rise		12673 Dec 24 08:40	21°♄56'28	
evening set	12673 Mar 05 13:17	4°♄46'53				12673 Dec 28 11:08	0°♄	
min. Earth dist.	12673 Mar 09 11:56	0°♄58'53	0.65507 AU	desc. node		12674 Jan 02 06:18	8°♄47'12	
	12673 Mar 10 08:55	30°♄				12674 Jan 15 20:15	0°♄	
asc. node	12673 Mar 11 07:29	28°♄55'36		evening max el		12674 Jan 27 02:00	13°♄11'03	27°30'29
inferior conj	12673 Mar 11 17:00	28°♄28'29	0°07'40	retrograde		12674 Feb 09 19:47	20°♄36'33	
minimum elong	12673 Mar 11 16:47	28°♄29'06	0°07'43	evening set		12674 Feb 16 16:41	18°♄09'01	
transit middle	12673 Mar 11 16:47	28°♄29'06	0°07'43	min. Earth dist.		12674 Feb 20 11:35	14°♄51'16	0.63712 AU
transit begin	12673 Mar 11 14:09	28°♄36'34		inferior conj		12674 Feb 23 03:50	12°♄06'45	-0°59'47
transit end	12673 Mar 11 19:24	28°♄21'39		minimum elong		12674 Feb 23 05:44	12°♄01'51	0°58'36
morning rise	12673 Mar 17 21:47	22°♄55'44		asc. node		12674 Feb 26 04:54	9°♄10'51	
direct	12673 Mar 20 16:08	22°♄14'35		morning rise		12674 Mar 01 21:03	6°♄48'45	
morning max el	12673 Mar 27 00:43	25°♄34'18	18°03'18	direct		12674 Mar 04 07:13	6°♄19'48	
	12673 Mar 30 20:10	0°♄		morning max el		12674 Mar 10 18:21	9°♄39'15	17°47'43
desc. node	12673 Apr 13 11:29	21°♄07'34				12674 Mar 24 13:22	0°♄	
morning set	12673 Apr 14 09:11	22°♄36'02		morning set		12674 Mar 27 07:55	4°♄43'55	
	12673 Apr 18 22:29	0°♄		desc. node		12674 Mar 31 08:02	11°♄32'55	
superior conj	12673 Apr 29 01:37	16°♄09'49	-1°41'42	superior conj		12674 Apr 09 03:25	26°♄10'34	-1°04'08
minimum elong	12673 Apr 28 16:21	15°♄33'18	1°41'25	minimum elong		12674 Apr 08 20:48	25°♄43'40	1°03'34
max. Earth dist.	12673 May 01 23:31	20°♄44'15	1.45656 AU			12674 Apr 11 12:09	0°♄	
	12673 May 07 22:10	0°♄		max. Earth dist.		12674 Apr 14 18:09	5°♄11'27	1.44852 AU
evening rise	12673 May 15 04:10	11°♄13'20		evening rise		12674 Apr 24 15:31	20°♄35'49	
	12673 May 27 11:12	0°♄				12674 Apr 30 20:05	0°♄	
greatest brilliancy	12673 May 28 04:07	1°♄02'58	-0.7m			12674 May 22 17:09	0°♄	
asc. node	12673 Jun 07 04:47	14°♄40'09		evening max el		12674 May 23 00:42	0°♄19'12	20°28'22
evening max el	12673 Jun 08 22:36	16°♄32'26	19°27'59	asc. node		12674 May 25 01:55	2°♄12'44	
retrograde	12673 Jun 16 02:32	20°♄34'15		retrograde		12674 May 31 01:24	4°♄57'12	
evening set	12673 Jun 19 18:15	19°♄16'24		evening set		12674 Jun 04 02:51	3°♄22'57	
inferior conj	12673 Jun 25 03:23	13°♄23'10	3°11'37			12674 Jun 07 08:33	30°♄	
minimum elong	12673 Jun 25 04:03	13°♄20'57	3°10'38	inferior conj		12674 Jun 09 09:22	27°♄17'12	3°13'00
min. Earth dist.	12673 Jun 26 10:14	11°♄41'24	0.67204 AU	minimum elong		12674 Jun 09 09:00	27°♄18'30	3°12'03
morning rise	12673 Jun 30 13:23	7°♄00'01		min. Earth dist.		12674 Jun 10 02:13	26°♄19'22	0.68215 AU
direct	12673 Jul 06 13:20	4°♄22'18		morning rise		12674 Jun 14 14:50	20°♄57'10	
desc. node	12673 Jul 10 11:41	5°♄18'18		direct		12674 Jun 20 03:08	18°♄30'56	
morning max el	12673 Jul 18 21:13	11°♄45'31	25°35'24	desc. node		12674 Jun 27 08:51	21°♄39'25	
	12673 Aug 02 11:51	0°♄		morning max el		12674 Jul 01 07:13	25°♄12'33	24°08'59

	12674 Jul 05 15:23	0°☿			12675 Jun 30 08:45	0°☿		
	12674 Jul 26 23:21	0°♊		morning set	12675 Jul 17 16:01	26°☿37'40		
morning set	12674 Aug 05 18:27	16°♊08'09			12675 Jul 19 17:03	0°♊		
max. Earth dist.	12674 Aug 09 10:52	22°♊35'45	1.38179 AU	max. Earth dist.	12675 Jul 22 09:19	4°♊30'00	1.40517 AU	
	12674 Aug 13 12:30	0°♋						
				superior conj	12675 Jul 30 05:20	18°♊13'40	-1°14'26	
superior conj	12674 Aug 16 17:31	6°♋02'19	-0°39'55	minimum elong	12675 Jul 30 10:45	18°♊38'10	1°14'19	
minimum elong	12674 Aug 16 20:16	6°♋15'30	0°39'54		12675 Aug 05 14:19	0°♋		
asc. node	12674 Aug 21 02:04	14°♋29'05		asc. node	12675 Aug 07 22:44	4°♋26'08		
evening rise	12674 Aug 25 13:16	23°♋18'35		evening rise	12675 Aug 09 05:08	6°♋49'53		
	12674 Aug 28 23:27	0°♌			12675 Aug 22 22:41	0°♌		
evening max el	12674 Sep 11 00:04	20°♌11'30	19°03'36	evening max el	12675 Aug 25 04:28	2°♌30'48	18°24'22	
retrograde	12674 Sep 19 21:40	24°♌38'36		retrograde	12675 Sep 01 19:01	6°♌21'12		
evening set	12674 Sep 21 18:15	24°♌27'45		evening set	12675 Sep 03 20:39	6°♌04'57		
desc. node	12674 Sep 23 05:46	24°♌04'30		desc. node	12675 Sep 10 03:17	2°♌34'49		
inferior conj	12674 Sep 30 04:08	20°♌13'41	-2°10'55	inferior conj	12675 Sep 11 11:59	1°♌30'07	-0°25'34	
minimum elong	12674 Sep 29 22:30	20°♌23'20	2°08'29	minimum elong	12675 Sep 11 11:01	1°♌32'04	0°25'16	
min. Earth dist.	12674 Oct 03 00:31	18°♌16'38	0.56227 AU		12675 Sep 13 08:33	30°♋♋		
morning rise	12674 Oct 07 23:47	15°♌29'50		min. Earth dist.	12675 Sep 14 19:05	28°♋52'04	0.58149 AU	
direct	12674 Oct 13 12:20	14°♌18'28		morning rise	12675 Sep 18 21:56	26°♋09'28		
morning max el	12674 Oct 27 15:49	21°♌32'47	25°54'46	direct	12675 Sep 25 01:55	24°♋30'49		
	12674 Nov 04 01:26	0°♍			12675 Oct 07 01:21	0°♌		
asc. node	12674 Nov 17 03:39	21°♍00'17		morning max el	12675 Oct 09 09:37	2°♌08'20	27°11'37	
	12674 Nov 21 16:59	0°♎			12675 Oct 29 10:40	0°♍		
morning set	12674 Nov 24 12:33	5°♎55'25		asc. node	12675 Nov 04 00:27	10°♍25'22		
				morning set	12675 Nov 08 21:22	20°♍25'17		
superior conj	12674 Dec 01 07:31	20°♎51'49	1°37'39		12675 Nov 13 06:53	0°♎		
minimum elong	12674 Dec 01 06:54	20°♎48'29	1°38'33					
max. Earth dist.	12674 Dec 02 09:55	23°♎18'08	1.31713 AU	superior conj	12675 Nov 15 19:09	5°♎35'47	1°31'30	
	12674 Dec 05 11:21	0°♏		minimum elong	12675 Nov 15 17:39	5°♎27'20	1°32'12	
evening rise	12674 Dec 08 08:21	6°♏06'50		max. Earth dist.	12675 Nov 15 18:24	5°♎31'35	1.31293 AU	
desc. node	12674 Dec 20 03:15	28°♏29'53		evening rise	12675 Nov 22 13:53	20°♎30'30		
	12674 Dec 21 00:37	0°♐			12675 Nov 27 04:22	0°♏		
evening max el	12675 Jan 09 11:12	25°♐54'10	27°26'36	desc. node	12675 Dec 07 00:18	17°♏40'45		
	12675 Jan 14 11:30	0°♑			12675 Dec 15 13:17	0°♐		
retrograde	12675 Jan 23 09:06	3°♑12'43		evening max el	12675 Dec 22 14:27	7°♐50'50	26°48'24	
evening set	12675 Jan 30 07:24	0°♑58'33		retrograde	12676 Jan 05 13:09	14°♐59'52		
	12675 Jan 31 17:13	30°♋♋		evening set	12676 Jan 12 05:47	13°♐07'15		
min. Earth dist.	12675 Feb 03 01:27	28°♐05'17	0.61669 AU	min. Earth dist.	12676 Jan 16 04:34	10°♐29'03	0.59512 AU	
inferior conj	12675 Feb 06 02:18	25°♐19'53	-2°16'21	inferior conj	12676 Jan 19 08:49	7°♐58'05	-3°37'33	
minimum elong	12675 Feb 06 07:02	25°♐09'05	2°13'51	minimum elong	12676 Jan 19 16:23	7°♐43'03	3°34'12	
morning rise	12675 Feb 13 09:29	20°♐19'26		morning rise	12676 Jan 27 05:55	3°♐18'19		
asc. node	12675 Feb 13 02:17	20°♐25'23		direct	12676 Jan 29 07:29	3°♐02'34		
direct	12675 Feb 15 13:40	19°♐58'55		asc. node	12676 Jan 30 23:37	3°♐13'19		
morning max el	12675 Feb 22 11:13	23°♐28'10	17°49'59	morning max el	12676 Feb 05 23:49	6°♐51'15	18°11'26	
	12675 Feb 27 15:59	0°♑			12676 Feb 20 17:42	0°♑		
morning set	12675 Mar 10 04:06	17°♑52'24		morning set	12676 Feb 21 15:39	1°♑43'05		
	12675 Mar 16 23:41	0°♒						
desc. node	12675 Mar 18 04:35	2°♒06'09		superior conj	12676 Mar 02 06:12	19°♑31'40	0°14'08	
				minimum elong	12676 Mar 02 07:18	19°♑36'34	0°14'13	
superior conj	12675 Mar 21 05:09	7°♒18'42	-0°23'23	behind sun begin	12676 Mar 02 03:51	19°♑21'03		
minimum elong	12675 Mar 21 02:58	7°♒09'24	0°23'04	behind sun end	12676 Mar 02 10:44	19°♑52'04		
max. Earth dist.	12675 Mar 28 09:41	19°♒17'08	1.43410 AU	desc. node	12676 Mar 04 01:09	22°♑43'32		
evening rise	12675 Apr 04 08:21	0°♓20'37			12676 Mar 08 05:19	0°♒		
	12675 Apr 04 03:04	0°♓		max. Earth dist.	12676 Mar 09 21:02	2°♒48'47	1.41477 AU	
	12675 Apr 24 10:19	0°♔		evening rise	12676 Mar 14 18:18	10°♒53'41		
evening max el	12675 May 05 21:18	14°♔07'08	21°40'31		12676 Mar 27 02:44	0°♓		
asc. node	12675 May 11 23:08	18°♔44'42		evening max el	12676 Apr 17 13:38	27°♓56'53	22°59'46	
retrograde	12675 May 14 23:38	19°♔27'18			12676 Apr 19 18:08	0°♔		
evening set	12675 May 19 11:44	17°♔36'59		retrograde	12676 Apr 27 19:50	3°♔59'50		
inferior conj	12675 May 24 18:07	11°♔20'31	3°03'07	asc. node	12676 Apr 27 20:27	3°♔59'50		
minimum elong	12675 May 24 16:51	11°♔24'58	3°02'06	evening set	12676 May 02 19:16	1°♔54'38		
min. Earth dist.	12675 May 24 21:38	11°♔08'15	0.68759 AU		12676 May 04 16:52	30°♋♓		
morning rise	12675 May 29 21:45	5°♔05'48		inferior conj	12676 May 08 03:37	25°♓29'49	2°42'56	
direct	12675 Jun 03 21:15	2°♔56'50		minimum elong	12676 May 08 01:43	25°♓36'24	2°41'49	
morning max el	12675 Jun 13 18:14	8°♔46'54	22°39'16	min. Earth dist.	12676 May 07 18:22	26°♓01'52	0.68830 AU	
desc. node	12675 Jun 14 05:55	9°♔16'39		morning rise	12676 May 13 08:05	19°♓21'49		

direct	12676 May 17 18:34	17° 8 33'20		desc. node	12677 May 17 23:40	17° 8 02'43	
morning max el	12676 May 26 09:42	22° 8 31'52	21°14'44		12677 May 26 22:41	0° II	
desc. node	12676 May 31 02:52	27° 8 49'43		morning set	12677 Jun 05 15:00	14° II 40'57	
	12676 Jun 01 20:21	0° II			12677 Jun 15 10:22	0° 8	
	12676 Jun 22 15:30	0° 8		max. Earth dist.	12677 Jun 16 00:50	0° 8 57'30	1.44362 AU
morning set	12676 Jun 26 12:23	6° 8 01'16					
max. Earth dist.	12676 Jul 03 13:50	17° 8 19'54	1.42665 AU	superior conj	12677 Jun 21 12:01	9° 8 45'22	-2°07'28
				minimum elong	12677 Jun 21 17:03	10° 8 05'52	2°08'11
superior conj	12676 Jul 10 20:36	29° 8 30'15	-1°45'38		12677 Jul 03 14:37	0° 9	
minimum elong	12676 Jul 11 03:36	0° 9 00'12	1°45'47	evening rise	12677 Jul 04 16:32	1° 9 50'50	
	12676 Jul 11 03:33	0° 9		asc. node	12677 Jul 11 16:18	13° 9 44'07	
evening rise	12676 Jul 22 07:54	19° 9 44'54		evening max el	12677 Jul 22 05:36	28° 9 41'59	18°05'35
asc. node	12676 Jul 24 19:29	24° 9 12'55			12677 Jul 23 16:30	0° 10	
	12676 Jul 28 01:49	0° 10		retrograde	12677 Jul 28 15:11	2° 10 02'24	
evening max el	12676 Aug 07 15:36	15° 10 24'10	18°05'22	evening set	12677 Jul 31 08:28	1° 10 24'38	
retrograde	12676 Aug 14 10:20	18° 10 52'24			12677 Aug 02 14:51	30° R 9	
evening set	12676 Aug 16 19:28	18° 10 26'56		inferior conj	12677 Aug 06 14:56	26° 9 10'53	2°01'22
inferior conj	12676 Aug 23 16:47	13° 10 31'31	0°59'38	minimum elong	12677 Aug 06 17:30	26° 9 04'02	2°00'02
minimum elong	12676 Aug 23 18:33	13° 10 27'24	0°58'39	min. Earth dist.	12677 Aug 09 10:27	23° 9 12'17	0.62655 AU
min. Earth dist.	12676 Aug 26 21:59	10° 10 32'13	0.60392 AU	morning rise	12677 Aug 13 00:25	20° 9 00'32	
desc. node	12676 Aug 27 00:45	10° 10 26'05		desc. node	12677 Aug 13 22:12	19° 9 23'09	
morning rise	12676 Aug 30 14:38	7° 10 40'46		direct	12677 Aug 19 16:46	17° 9 33'27	
direct	12676 Sep 06 04:00	5° 10 35'11		morning max el	12677 Sep 02 18:30	25° 9 35'44	27°54'30
morning max el	12676 Sep 20 11:08	13° 10 29'12	27°52'32		12677 Sep 06 19:58	0° 11	
	12676 Oct 03 16:07	0° 11			12677 Sep 27 04:46	0° 11	
asc. node	12676 Oct 20 21:11	0° 11 08'22		morning set	12677 Oct 07 00:13	18° 11 33'47	
	12676 Oct 20 19:32	0° 11		asc. node	12677 Oct 07 17:51	20° 11 03'45	
morning set	12676 Oct 23 01:58	4° 11 39'46			12677 Oct 12 11:02	0° 11	
max. Earth dist.	12676 Oct 29 02:34	17° 11 40'33	1.31381 AU	max. Earth dist.	12677 Oct 12 06:22	29° 11 34'53	1.31991 AU
superior conj	12676 Oct 30 06:16	20° 11 14'16	1°19'40	superior conj	12677 Oct 14 14:59	4° 11 42'26	1°02'16
minimum elong	12676 Oct 30 04:10	20° 11 02'34	1°20'04	minimum elong	12677 Oct 14 12:44	4° 11 30'07	1°02'22
	12676 Nov 03 15:47	0° 12		evening rise	12677 Oct 21 10:09	19° 11 35'32	
evening rise	12676 Nov 05 23:07	5° 12 01'39			12677 Oct 26 10:13	0° 12	
	12676 Nov 18 23:09	0° 12		desc. node	12677 Nov 09 18:40	23° 12 33'09	
desc. node	12676 Nov 22 21:27	6° 12 07'23		evening max el	12677 Nov 14 20:52	29° 12 12'51	24°02'43
evening max el	12676 Dec 03 09:20	18° 12 54'09	25°37'17		12677 Nov 15 17:03	0° 12	
retrograde	12676 Dec 17 06:26	25° 12 54'00		retrograde	12677 Nov 28 11:32	6° 12 00'27	
evening set	12676 Dec 23 07:30	24° 12 29'44		evening set	12677 Dec 03 09:19	5° 12 07'43	
min. Earth dist.	12676 Dec 27 21:40	21° 12 51'59	0.57446 AU	min. Earth dist.	12677 Dec 09 07:52	2° 12 11'25	0.55747 AU
inferior conj	12676 Dec 30 19:58	19° 12 51'21	-4°53'13	inferior conj	12677 Dec 11 10:28	0° 12 54'45	-5°44'49
minimum elong	12676 Dec 31 04:28	19° 12 36'43	4°50'15	minimum elong	12677 Dec 11 15:06	0° 12 47'43	5°43'24
morning rise	12677 Jan 08 04:00	15° 12 34'08			12677 Dec 12 22:59	30° R 12	
direct	12677 Jan 10 08:04	15° 12 31'43		morning rise	12677 Dec 19 22:50	26° 12 57'30	
asc. node	12677 Jan 16 20:55	17° 12 40'17		direct	12677 Dec 22 12:53	26° 12 40'25	
morning max el	12677 Jan 19 04:14	19° 12 37'30	18°53'50		12677 Dec 31 00:30	0° 12	
	12677 Jan 26 22:10	0° 12		morning max el	12678 Jan 01 20:38	1° 12 36'28	19°58'54
morning set	12677 Feb 04 13:44	16° 12 01'06		asc. node	12678 Jan 03 18:07	3° 12 35'07	
	12677 Feb 11 17:26	0° 12			12678 Jan 19 11:39	0° 12	
				morning set	12678 Jan 19 18:48	0° 12 36'21	
superior conj	12677 Feb 13 02:19	2° 12 37'00	0°45'17				
minimum elong	12677 Feb 13 04:56	2° 12 49'24	0°45'24	superior conj	12678 Jan 27 12:51	16° 12 21'42	1°09'07
desc. node	12677 Feb 18 21:41	13° 12 21'06		minimum elong	12678 Jan 27 15:38	16° 12 35'38	1°09'27
max. Earth dist.	12677 Feb 20 04:18	15° 12 37'39	1.39272 AU	max. Earth dist.	12678 Feb 02 10:40	27° 12 49'07	1.37047 AU
evening rise	12677 Feb 24 01:19	22° 12 21'45			12678 Feb 03 14:45	0° 12	
	12677 Feb 28 15:26	0° 12		desc. node	12678 Feb 05 18:18	3° 12 55'41	
	12677 Mar 21 01:08	0° 12		evening rise	12678 Feb 06 04:30	4° 12 41'33	
evening max el	12677 Mar 31 03:30	11° 12 47'49	24°20'17		12678 Feb 21 14:38	0° 12	
retrograde	12677 Apr 11 12:44	18° 12 28'16		evening max el	12678 Mar 13 16:52	25° 12 39'18	25°35'07
asc. node	12677 Apr 14 17:49	17° 12 41'52			12678 Mar 18 19:36	0° 12	
evening set	12677 Apr 16 23:53	16° 12 10'19		retrograde	12678 Mar 26 01:17	2° 12 46'46	
min. Earth dist.	12677 Apr 21 14:17	10° 12 53'30	0.68442 AU	evening set	12678 Mar 31 23:57	0° 12 19'29	
inferior conj	12677 Apr 22 11:58	9° 12 40'34	2°12'45		12678 Apr 01 08:56	30° R 12	
minimum elong	12677 Apr 22 09:48	9° 12 47'50	2°11'37	asc. node	12678 Apr 01 15:13	29° 12 45'44	
morning rise	12677 Apr 27 19:52	3° 12 40'20		min. Earth dist.	12678 Apr 05 07:20	25° 12 37'53	0.67620 AU
direct	12677 May 01 17:44	2° 12 13'05		inferior conj	12678 Apr 06 17:15	23° 12 49'17	1°32'29
morning max el	12677 May 09 08:05	6° 12 28'19	20°01'15	minimum elong	12678 Apr 06 15:19	23° 12 55'29	1°31'32

morning rise	12678 Apr 12 07:13	17° Υ 58'06		direct	12679 Mar 30 15:44	1° Υ 20'50	
direct	12678 Apr 15 17:24	16° Υ 50'50		morning max el	12679 Apr 06 02:27	4° Υ 46'02	18°19'58
morning max el	12678 Apr 22 14:03	20° Υ 34'44	19°02'23	desc. node	12679 Apr 21 17:02	26° Υ 48'44	
	12678 Apr 30 05:13	0° \mathcal{B}			12679 Apr 23 17:09	0° \mathcal{B}	
desc. node	12678 May 04 20:23	6° \mathcal{B} 45'03		morning set	12679 Apr 25 22:41	3° \mathcal{B} 33'06	
greatest brilliancy	12678 May 05 18:47	8° \mathcal{B} 09'04	-0.7m				
morning set	12678 May 15 19:43	23° \mathcal{B} 32'46		superior conj	12679 May 11 13:11	28° \mathcal{B} 10'04	-1°58'20
	12678 May 19 23:39	0° Π		minimum elong	12679 May 11 04:57	27° \mathcal{B} 37'54	1°58'31
max. Earth dist.	12678 May 29 16:50	15° Π 08'37	1.45439 AU	max. Earth dist.	12679 May 12 12:15	29° \mathcal{B} 40'13	1.45796 AU
					12679 May 12 17:19	0° Π	
superior conj	12678 Jun 01 05:44	19° Π 07'53	-2°13'00	evening rise	12679 May 27 11:50	23° Π 04'27	
minimum elong	12678 Jun 01 04:03	19° Π 01'16	2°13'54		12679 May 31 21:58	0° \mathcal{C}	
	12678 Jun 08 02:02	0° \mathcal{C}		greatest brilliancy	12679 Jun 06 18:53	9° \mathcal{C} 07'00	-0.8m
evening rise	12678 Jun 16 02:18	12° \mathcal{C} 57'09		asc. node	12679 Jun 15 10:09	21° \mathcal{C} 33'59	
	12678 Jun 26 15:44	0° Ω		evening max el	12679 Jun 19 05:44	25° \mathcal{C} 58'42	19°00'01
asc. node	12678 Jun 28 13:10	2° Ω 53'39		retrograde	12679 Jun 26 00:42	29° \mathcal{C} 43'41	
evening max el	12678 Jul 05 19:12	12° Ω 15'44	18°24'06	evening set	12679 Jun 29 11:13	28° \mathcal{C} 35'16	
retrograde	12678 Jul 12 05:10	15° Ω 41'58		inferior conj	12679 Jul 04 23:10	22° \mathcal{C} 50'13	3°05'01
evening set	12678 Jul 15 06:52	14° Ω 49'36		minimum elong	12679 Jul 05 00:28	22° \mathcal{C} 46'06	3°03'58
inferior conj	12678 Jul 21 02:16	9° Ω 19'28	2°41'58	min. Earth dist.	12679 Jul 06 14:27	20° \mathcal{C} 45'12	0.66423 AU
minimum elong	12678 Jul 21 04:29	9° Ω 12'57	2°40'44	morning rise	12679 Jul 10 13:02	16° \mathcal{C} 26'58	
min. Earth dist.	12678 Jul 23 08:18	6° Ω 40'45	0.64715 AU	direct	12679 Jul 16 18:59	13° \mathcal{C} 45'57	
morning rise	12678 Jul 27 00:49	2° Ω 59'13		desc. node	12679 Jul 18 16:53	13° \mathcal{C} 59'10	
desc. node	12678 Jul 31 19:35	0° Ω 31'07		morning max el	12679 Jul 29 15:43	21° \mathcal{C} 25'51	26°19'39
direct	12678 Aug 02 14:19	0° Ω 19'55			12679 Aug 06 02:23	0° Ω	
morning max el	12678 Aug 16 04:48	8° Ω 18'22	27°21'01		12679 Aug 26 06:03	0° \mathcal{P}	
	12678 Sep 02 01:14	0° \mathcal{P}		morning set	12679 Sep 03 14:31	14° \mathcal{P} 51'20	
	12678 Sep 19 12:42	0° \mathcal{A}		max. Earth dist.	12679 Sep 07 12:01	22° \mathcal{P} 18'17	1.34798 AU
morning set	12678 Sep 20 13:28	2° \mathcal{A} 00'14		asc. node	12679 Sep 11 11:03	0° \mathcal{A} 12'32	
asc. node	12678 Sep 24 14:27	10° \mathcal{A} 06'23			12679 Sep 11 08:35	0° \mathcal{A}	
max. Earth dist.	12678 Sep 25 02:11	11° \mathcal{A} 06'43	1.33138 AU				
				superior conj	12679 Sep 12 16:30	2° \mathcal{A} 43'08	0°11'42
superior conj	12678 Sep 28 19:12	18° \mathcal{A} 54'04	0°39'29	minimum elong	12679 Sep 12 15:52	2° \mathcal{A} 39'50	0°11'31
minimum elong	12678 Sep 28 17:23	18° \mathcal{A} 44'25	0°39'21	behind sun begin	12679 Sep 12 11:41	2° \mathcal{A} 18'21	
	12678 Oct 03 23:02	0° \mathcal{M}		behind sun end	12679 Sep 12 20:03	3° \mathcal{A} 01'20	
evening rise	12678 Oct 05 21:07	4° \mathcal{M} 06'44		evening rise	12679 Sep 20 06:05	18° \mathcal{A} 30'23	
	12678 Oct 19 19:44	0° \mathcal{X}			12679 Sep 25 23:13	0° \mathcal{M}	
evening max el	12678 Oct 27 07:47	9° \mathcal{X} 15'04	22°21'01	evening max el	12679 Oct 09 03:33	19° \mathcal{M} 38'26	20°48'45
desc. node	12678 Oct 27 16:00	9° \mathcal{X} 34'53		desc. node	12679 Oct 14 13:23	23° \mathcal{M} 45'31	
retrograde	12678 Nov 09 04:13	15° \mathcal{X} 37'46		retrograde	12679 Oct 20 14:50	25° \mathcal{M} 20'14	
evening set	12678 Nov 12 15:41	15° \mathcal{X} 11'10		evening set	12679 Oct 22 23:03	25° \mathcal{M} 07'01	
min. Earth dist.	12678 Nov 20 14:44	11° \mathcal{X} 38'08	0.54725 AU	inferior conj	12679 Oct 31 23:34	21° \mathcal{M} 12'38	-4°53'55
inferior conj	12678 Nov 21 07:59	11° \mathcal{X} 13'51	-5°48'59	minimum elong	12679 Oct 31 13:46	21° \mathcal{M} 26'36	4°50'52
minimum elong	12678 Nov 21 04:05	11° \mathcal{X} 19'20	5°47'50	min. Earth dist.	12679 Nov 01 21:26	20° \mathcal{M} 41'26	0.54599 AU
morning rise	12678 Nov 29 17:46	7° \mathcal{X} 26'31		morning rise	12679 Nov 09 04:33	17° \mathcal{M} 17'35	
direct	12678 Dec 03 01:46	7° \mathcal{X} 01'31		direct	12679 Nov 13 09:56	16° \mathcal{M} 39'19	
morning max el	12678 Dec 14 22:39	12° \mathcal{X} 40'58	21°26'28	morning max el	12679 Nov 26 12:47	23° \mathcal{M} 00'01	23°10'54
asc. node	12678 Dec 21 15:12	20° \mathcal{X} 40'14			12679 Dec 02 16:46	0° \mathcal{X}	
	12678 Dec 27 09:16	0° \mathcal{Z}		asc. node	12679 Dec 08 12:12	8° \mathcal{X} 40'05	
morning set	12679 Jan 04 04:08	15° \mathcal{Z} 19'56		morning set	12679 Dec 19 15:37	0° \mathcal{Z} 06'16	
					12679 Dec 19 14:26	0° \mathcal{Z}	
superior conj	12679 Jan 11 09:42	0° \approx 33'14	1°25'39				
minimum elong	12679 Jan 11 11:52	0° \approx 44'28	1°26'18	superior conj	12679 Dec 26 13:45	15° \mathcal{Z} 02'47	1°35'18
	12679 Jan 11 03:20	0° \approx		minimum elong	12679 Dec 26 14:53	15° \mathcal{Z} 08'54	1°36'11
max. Earth dist.	12679 Jan 15 21:18	9° \approx 41'44	1.35030 AU	max. Earth dist.	12679 Dec 29 15:37	21° \mathcal{Z} 35'30	1.33380 AU
evening rise	12679 Jan 20 00:27	17° \approx 43'04			12680 Jan 02 18:05	0° \approx	
desc. node	12679 Jan 23 14:59	24° \approx 22'27		evening rise	12680 Jan 03 09:38	1° \approx 17'16	
	12679 Jan 26 19:37	0° \mathcal{H}		desc. node	12680 Jan 10 11:46	14° \approx 36'51	
	12679 Feb 15 21:15	0° Υ			12680 Jan 19 18:56	0° \mathcal{H}	
evening max el	12679 Feb 24 06:36	9° Υ 25'47	26°37'04	evening max el	12680 Feb 06 20:01	22° \mathcal{H} 57'15	27°18'37
retrograde	12679 Mar 09 08:27	16° Υ 47'45			12680 Feb 17 14:26	0° Υ	
evening set	12679 Mar 15 17:41	14° Υ 15'42		retrograde	12680 Feb 20 09:15	0° Υ 23'02	
asc. node	12679 Mar 19 12:37	10° Υ 27'50			12680 Feb 23 01:19	30° \mathcal{R} \mathcal{H}	
min. Earth dist.	12679 Mar 19 19:18	10° Υ 08'25	0.66384 AU	evening set	12680 Feb 27 03:00	27° \mathcal{H} 51'57	
inferior conj	12679 Mar 21 17:22	7° Υ 51'02	0°41'46	min. Earth dist.	12680 Mar 01 23:59	24° \mathcal{H} 17'08	0.64779 AU
minimum elong	12679 Mar 21 16:18	7° Υ 54'13	0°41'19	inferior conj	12680 Mar 04 09:51	21° \mathcal{H} 39'40	-0°19'40
morning rise	12679 Mar 27 15:59	2° Υ 10'40		minimum elong	12680 Mar 04 10:25	21° \mathcal{H} 38'06	0°19'12

asc. node	12680 Mar 05 10:03	20° H 34'24		min. Earth dist.	12681 Feb 12 19:27	7° H 54'50	0.62865 AU
morning rise	12680 Mar 10 19:38	16° H 12'36		inferior conj	12681 Feb 15 15:52	5° H 08'15	-1°31'17
direct	12680 Mar 13 10:22	15° H 36'57		minimum elong	12681 Feb 15 18:54	5° H 00'49	1°29'33
morning max el	12680 Mar 19 18:58	18° H 55'09	17°54'33	asc. node	12681 Feb 20 07:28	1° H 08'43	
	12680 Mar 28 02:50	0° Y		morning rise	12681 Feb 22 14:54	29° \approx 57'27	
morning set	12680 Apr 06 06:22	14° Y 57'41			12681 Feb 22 12:06	30° R \approx	
desc. node	12680 Apr 07 13:38	17° Y 07'31		direct	12681 Feb 24 22:19	29° \approx 32'26	
	12680 Apr 15 09:55	0° B			12681 Feb 27 07:53	0° H	
superior conj	12680 Apr 20 03:59	7° B 37'59	-1°26'41	morning max el	12681 Mar 03 12:43	2° H 54'30	17°46'33
minimum elong	12680 Apr 19 19:19	7° B 03'29	1°26'12	morning set	12681 Mar 19 15:03	27° H 33'58	
max. Earth dist.	12680 Apr 24 08:28	14° B 15'34	1.45403 AU		12681 Mar 21 00:34	0° Y	
	12680 May 04 11:35	0° II		desc. node	12681 Mar 25 10:12	7° Y 36'47	
evening rise	12680 May 06 03:27	2° II 33'03		superior conj	12681 Mar 31 15:41	18° Y 06'59	-0°46'47
greatest brilliancy	12680 May 20 17:27	24° II 31'37	-0.6m	minimum elong	12681 Mar 31 10:59	17° Y 47'28	0°46'18
	12680 May 24 13:34	0° E		max. Earth dist.	12681 Apr 07 02:31	28° Y 37'17	1.44306 AU
asc. node	12680 Jun 01 07:13	9° E 34'50			12681 Apr 07 23:13	0° B	
evening max el	12680 Jun 01 11:14	9° E 44'58	19°51'59	evening rise	12681 Apr 15 15:22	12° B 00'55	
retrograde	12680 Jun 08 23:01	14° E 00'40			12681 Apr 27 14:18	0° II	
evening set	12680 Jun 12 18:54	12° E 35'38		evening max el	12681 May 15 10:54	23° II 32'11	20°57'44
inferior conj	12680 Jun 18 02:35	6° E 36'53	3°13'40	asc. node	12681 May 19 04:24	26° II 43'49	
minimum elong	12680 Jun 18 02:48	6° E 36'09	3°12'42	retrograde	12681 May 23 21:56	28° II 27'46	
min. Earth dist.	12680 Jun 19 03:20	5° E 13'40	0.67697 AU	evening set	12681 May 28 03:53	26° II 46'22	
morning rise	12680 Jun 23 10:21	0° E 15'00		inferior conj	12681 Jun 02 10:02	20° II 35'35	3°10'08
	12680 Jun 23 17:13	30° R II		minimum elong	12681 Jun 02 09:15	20° II 38'17	3°09'09
direct	12680 Jun 29 05:36	27° II 41'29		min. Earth dist.	12681 Jun 02 21:02	19° II 57'26	0.68506 AU
desc. node	12680 Jul 04 14:07	29° II 25'07		morning rise	12681 Jun 07 14:25	14° II 17'38	
	12680 Jul 05 12:02	0° E		direct	12681 Jun 12 21:14	11° II 58'31	
morning max el	12680 Jul 11 02:03	4° E 47'45	24°59'38	desc. node	12681 Jun 21 11:15	16° II 21'38	
	12680 Jul 30 11:22	0° O		morning max el	12681 Jun 23 12:23	18° II 18'47	23°30'43
morning set	12680 Aug 15 23:16	26° O 56'22			12681 Jul 03 07:36	0° E	
	12680 Aug 17 16:15	0° M			12681 Jul 23 13:36	0° O	
max. Earth dist.	12680 Aug 19 13:13	3° M 25'18	1.36875 AU	morning set	12681 Jul 28 11:01	8° O 04'19	
				max. Earth dist.	12681 Aug 01 10:54	14° O 55'22	1.39186 AU
superior conj	12680 Aug 26 03:50	16° M 01'10	-0°20'16	superior conj	12681 Aug 09 01:29	28° O 39'36	-0°54'40
minimum elong	12680 Aug 26 05:09	16° M 07'39	0°20'20	minimum elong	12681 Aug 09 05:24	28° O 57'51	0°54'34
asc. node	12680 Aug 28 07:40	20° M 17'54			12681 Aug 09 18:40	0° M	
	12680 Sep 02 03:07	0° A		asc. node	12681 Aug 15 04:19	10° M 19'06	
evening rise	12680 Sep 03 10:43	2° A 39'46		evening rise	12681 Aug 18 08:17	16° M 27'46	
	12680 Sep 19 19:30	0° M			12681 Aug 25 13:34	0° A	
evening max el	12680 Sep 20 13:07	0° M 45'34	19°35'36	evening max el	12681 Sep 03 11:41	12° A 40'30	18°44'12
retrograde	12680 Sep 30 08:31	5° M 39'17		retrograde	12681 Sep 11 19:00	16° A 50'46	
desc. node	12680 Sep 30 10:51	5° M 39'16		evening set	12681 Sep 13 16:59	16° A 38'14	
evening set	12680 Oct 02 05:27	5° M 29'22		desc. node	12681 Sep 17 08:21	15° A 12'52	
inferior conj	12680 Oct 10 23:51	1° M 24'42	-3°15'03	inferior conj	12681 Sep 21 19:13	12° A 15'24	-1°24'20
minimum elong	12680 Oct 10 15:30	1° M 37'55	3°11'39	minimum elong	12681 Sep 21 15:44	12° A 21'49	1°22'51
	12680 Oct 13 05:28	30° R A		min. Earth dist.	12681 Sep 24 21:53	9° A 58'47	0.56985 AU
min. Earth dist.	12680 Oct 13 06:56	29° A 57'45	0.55398 AU	morning rise	12681 Sep 29 11:06	7° A 15'07	
morning rise	12680 Oct 18 23:37	27° A 02'05		direct	12681 Oct 05 06:34	5° A 52'39	
direct	12680 Oct 24 01:13	26° A 04'58		morning max el	12681 Oct 19 13:03	13° A 18'09	26°31'25
	12680 Nov 03 08:53	0° M			12681 Nov 01 17:23	0° M	
morning max el	12680 Nov 06 22:58	3° M 01'21	24°58'42	asc. node	12681 Nov 11 05:58	16° M 32'45	
asc. node	12680 Nov 24 09:08	27° M 21'13		morning set	12681 Nov 17 13:50	29° M 26'52	
	12680 Nov 25 19:30	0° X			12681 Nov 17 20:01	0° X	
morning set	12680 Dec 03 03:26	14° X 50'22					
superior conj	12680 Dec 09 22:25	29° X 43'15	1°38'32	superior conj	12681 Nov 24 09:31	14° X 27'40	1°35'44
minimum elong	12680 Dec 09 22:26	29° X 43'19	1°39'29	minimum elong	12681 Nov 24 08:30	14° X 22'00	1°36'35
	12680 Dec 10 01:28	0° B		max. Earth dist.	12681 Nov 25 00:21	15° X 50'14	1.31466 AU
max. Earth dist.	12680 Dec 11 17:27	3° B 39'00	1.32178 AU	evening rise	12681 Dec 01 07:14	29° X 32'27	
evening rise	12680 Dec 17 04:49	15° B 16'13			12681 Dec 01 12:28	0° B	
	12680 Dec 24 19:11	0° \approx		desc. node	12681 Dec 14 05:38	24° B 03'33	
desc. node	12680 Dec 27 08:39	4° \approx 33'17			12681 Dec 17 22:38	0° \approx	
	12681 Jan 13 16:35	0° H		evening max el	12682 Jan 01 14:06	18° \approx 24'49	27°14'37
evening max el	12681 Jan 19 07:21	6° H 01'23	27°32'54	retrograde	12682 Jan 15 12:42	25° \approx 40'13	
retrograde	12681 Feb 02 02:58	13° H 23'59		evening set	12682 Jan 22 09:41	23° \approx 33'50	
evening set	12681 Feb 09 01:25	11° H 00'59		min. Earth dist.	12682 Jan 26 04:36	20° \approx 48'44	0.60748 AU

inferior conj	12682 Jan 29 07:57	18° \approx 07'09	-2°50'42	evening max el	12682 Dec 14 13:52	29° \approx 58'48	26°21'50
minimum elong	12682 Jan 29 13:58	17° \approx 54'12	2°47'44		12682 Dec 14 14:22	0° \approx	
morning rise	12682 Feb 05 21:16	13° \approx 15'35		retrograde	12682 Dec 28 12:42	7° \approx 04'38	
asc. node	12682 Feb 07 04:51	13° \approx 00'10		evening set	12683 Jan 03 23:49	5° \approx 23'28	
direct	12682 Feb 07 23:47	12° \approx 57'36		min. Earth dist.	12683 Jan 08 03:29	2° \approx 47'17	0.58603 AU
morning max el	12682 Feb 15 04:18	16° \approx 33'49	17°56'46	inferior conj	12683 Jan 11 06:34	0° \approx 27'12	-4°11'18
	12682 Feb 24 15:05	0° \approx		minimum elong	12683 Jan 11 14:55	0° \approx 11'33	4°07'54
morning set	12682 Mar 02 18:24	11° \approx 01'43			12683 Jan 11 21:08	30° \approx	
desc. node	12682 Mar 12 06:44	28° \approx 11'52		morning rise	12683 Jan 19 08:55	25° \approx 56'58	
				direct	12683 Jan 21 10:34	25° \approx 42'22	
superior conj	12682 Mar 13 03:44	29° \approx 43'45	-0°06'52	asc. node	12683 Jan 25 02:09	26° \approx 30'23	
minimum elong	12682 Mar 13 03:09	29° \approx 41'12	0°06'40	morning max el	12683 Jan 29 13:56	29° \approx 42'38	18°26'45
behind sun begin	12682 Mar 12 19:42	29° \approx 08'42			12683 Jan 29 20:56	0° \approx	
behind sun end	12682 Mar 13 10:35	0° \approx 13'38		morning set	12683 Feb 14 10:53	25° \approx 04'56	
	12682 Mar 13 07:27	0° \approx			12683 Feb 17 00:25	0° \approx	
max. Earth dist.	12682 Mar 20 15:59	12° \approx 28'13	1.42627 AU				
evening rise	12682 Mar 26 14:22	22° \approx 03'14		superior conj	12683 Feb 23 13:25	12° \approx 19'59	0°28'13
	12682 Mar 31 16:49	0° \approx		minimum elong	12683 Feb 23 15:21	12° \approx 28'53	0°28'17
	12682 Apr 21 19:47	0° \approx		desc. node	12683 Feb 27 03:18	18° \approx 49'27	
evening max el	12682 Apr 28 05:18	7° \approx 19'48	22°13'40	max. Earth dist.	12683 Mar 03 00:46	25° \approx 39'10	1.40556 AU
asc. node	12682 May 06 01:41	12° \approx 44'53			12683 Mar 05 14:07	0° \approx	
retrograde	12682 May 07 19:39	12° \approx 59'10		evening rise	12683 Mar 07 09:08	2° \approx 59'21	
evening set	12682 May 12 12:24	11° \approx 02'20			12683 Mar 24 23:33	0° \approx	
inferior conj	12682 May 17 19:21	4° \approx 41'43	2°55'48	evening max el	12683 Apr 10 20:20	21° \approx 09'38	23°34'23
minimum elong	12682 May 17 17:47	4° \approx 47'13	2°54'44	retrograde	12683 Apr 21 14:34	27° \approx 29'47	
min. Earth dist.	12682 May 17 17:22	4° \approx 48'39	0.68840 AU	asc. node	12683 Apr 22 23:01	27° \approx 21'23	
	12682 May 21 10:17	30° \approx		evening set	12683 Apr 26 18:51	25° \approx 19'06	
morning rise	12682 May 22 23:00	28° \approx 29'32		min. Earth dist.	12683 May 01 14:06	19° \approx 41'24	0.68715 AU
direct	12682 May 27 16:51	26° \approx 29'07		inferior conj	12683 May 02 04:35	18° \approx 51'42	2°31'21
	12682 Jun 03 22:44	0° \approx		minimum elong	12683 May 02 02:31	18° \approx 58'46	2°30'13
morning max el	12682 Jun 06 00:59	1° \approx 57'26	22°02'16	morning rise	12683 May 07 10:09	12° \approx 46'35	
desc. node	12682 Jun 08 08:14	4° \approx 24'25		direct	12683 May 11 15:11	11° \approx 07'01	
	12682 Jun 27 05:20	0° \approx		morning max el	12683 May 19 19:00	15° \approx 46'03	20°41'47
morning set	12682 Jul 08 21:48	18° \approx 05'45		desc. node	12683 May 26 05:07	23° \approx 15'28	
max. Earth dist.	12682 Jul 14 11:09	27° \approx 11'15	1.41466 AU		12683 May 31 04:29	0° \approx	
	12682 Jul 16 03:23	0° \approx		morning set	12683 Jun 18 08:48	27° \approx 04'52	
					12683 Jun 20 05:43	0° \approx	
superior conj	12682 Jul 22 05:07	10° \approx 28'53	-1°28'22	max. Earth dist.	12683 Jun 26 17:58	10° \approx 20'38	1.43449 AU
minimum elong	12682 Jul 22 11:28	10° \approx 56'54	1°28'20				
evening rise	12682 Aug 01 19:10	29° \approx 45'18		superior conj	12683 Jul 03 10:27	21° \approx 19'31	-1°56'27
	12682 Aug 01 22:21	0° \approx		minimum elong	12683 Jul 03 17:12	21° \approx 47'46	1°56'51
asc. node	12682 Aug 02 01:02	0° \approx 12'28			12683 Jul 08 13:11	0° \approx	
evening max el	12682 Aug 17 19:31	25° \approx 16'11	18°13'53	evening rise	12683 Jul 15 14:49	12° \approx 20'24	
retrograde	12682 Aug 25 00:22	28° \approx 55'20		asc. node	12683 Jul 19 21:48	19° \approx 53'04	
evening set	12682 Aug 27 04:57	28° \approx 35'42			12683 Jul 25 23:09	0° \approx	
inferior conj	12682 Sep 03 12:24	23° \approx 52'17	0°13'24	evening max el	12683 Aug 01 08:23	8° \approx 21'31	18°03'14
minimum elong	12682 Sep 03 12:51	23° \approx 51'18	0°13'01	retrograde	12683 Aug 07 21:50	11° \approx 44'20	
transit middle	12682 Sep 03 12:51	23° \approx 51'18	0°13'01	evening set	12683 Aug 10 10:30	11° \approx 13'53	
transit begin	12682 Sep 03 10:49	23° \approx 55'41		inferior conj	12683 Aug 17 01:03	6° \approx 10'37	1°28'35
transit end	12682 Sep 03 14:54	23° \approx 46'55		minimum elong	12683 Aug 17 03:21	6° \approx 04'55	1°27'21
desc. node	12682 Sep 04 05:50	23° \approx 14'36		min. Earth dist.	12683 Aug 20 02:56	3° \approx 09'00	0.61371 AU
min. Earth dist.	12682 Sep 06 20:07	21° \approx 02'09	0.59082 AU	desc. node	12683 Aug 22 03:18	1° \approx 22'11	
morning rise	12682 Sep 10 17:19	18° \approx 17'26		morning rise	12683 Aug 23 17:36	0° \approx 10'33	
direct	12682 Sep 17 02:10	16° \approx 26'37			12683 Aug 23 23:57	30° \approx	
morning max el	12682 Oct 01 10:17	24° \approx 12'56	27°33'41	direct	12683 Aug 30 09:15	27° \approx 54'39	
	12682 Oct 06 16:41	0° \approx			12683 Sep 06 05:41	0° \approx	
	12682 Oct 25 23:20	0° \approx		morning max el	12683 Sep 13 14:18	5° \approx 52'59	27°57'57
asc. node	12682 Oct 29 02:44	6° \approx 06'26			12683 Oct 01 18:28	0° \approx	
morning set	12682 Nov 01 21:07	13° \approx 51'14		asc. node	12683 Oct 15 23:25	25° \approx 55'10	
				morning set	12683 Oct 16 23:15	27° \approx 57'29	
					12683 Oct 17 22:49	0° \approx	
superior conj	12682 Nov 08 21:12	29° \approx 10'34	1°27'10	max. Earth dist.	12683 Oct 22 15:40	10° \approx 05'55	1.31581 AU
minimum elong	12682 Nov 08 19:24	29° \approx 00'28	1°27'45				
max. Earth dist.	12682 Nov 08 09:00	28° \approx 02'28	1.31264 AU				
	12682 Nov 09 06:04	0° \approx		superior conj	12683 Oct 24 07:32	13° \approx 45'27	1°12'58
evening rise	12682 Nov 15 14:36	14° \approx 00'16		minimum elong	12683 Oct 24 05:18	13° \approx 33'08	1°13'14
	12682 Nov 23 13:10	0° \approx		evening rise	12683 Oct 31 00:50	28° \approx 33'20	
desc. node	12682 Dec 01 02:43	12° \approx 57'27			12683 Oct 31 16:58	0° \approx	

































































































































	12683 Nov 17 06:46	0°♄			12684 Oct 22 22:01	0°♄	
desc. node	12683 Nov 17 23:54	1°♄00'20		desc. node	12684 Nov 03 21:10	17°♄53'16	
evening max el	12683 Nov 26 05:26	10°♄41'36	24°59'03	evening max el	12684 Nov 06 15:36	20°♄48'42	23°19'04
retrograde	12683 Dec 10 00:44	17°♄36'16		retrograde	12684 Nov 19 23:50	27°♄27'05	
evening set	12683 Dec 15 15:26	16°♄25'49		evening set	12684 Nov 24 07:30	26°♄46'33	
min. Earth dist.	12683 Dec 20 17:22	13°♄42'22	0.56664 AU	min. Earth dist.	12684 Dec 01 01:21	23°♄36'53	0.55223 AU
inferior conj	12683 Dec 23 08:52	11°♄59'25	-5°19'26	inferior conj	12684 Dec 02 15:13	22°♄41'53	-5°53'30
minimum elong	12683 Dec 23 16:26	11°♄47'06	5°17'05	minimum elong	12684 Dec 02 16:30	22°♄40'01	5°52'33
morning rise	12683 Dec 31 19:39	7°♄50'55		morning rise	12684 Dec 11 03:10	18°♄50'47	
direct	12684 Jan 03 03:00	7°♄35'50		direct	12684 Dec 14 00:20	18°♄30'51	
asc. node	12684 Jan 11 23:22	11°♄36'02		morning max el	12684 Dec 24 23:47	23°♄44'31	20°33'35
morning max el	12684 Jan 12 13:33	12°♄09'18	19°18'36	asc. node	12684 Dec 28 20:31	28°♄02'32	
	12684 Jan 24 14:56	0°♄			12684 Dec 30 07:55	0°♄	
morning set	12684 Jan 29 12:19	9°♄31'16		morning set	12685 Jan 12 19:30	24°♄11'02	
					12685 Jan 15 14:53	0°♄	
superior conj	12684 Feb 06 16:10	25°♄43'03	0°56'19	superior conj	12685 Jan 20 07:31	9°♄40'18	1°17'00
minimum elong	12684 Feb 06 18:59	25°♄56'44	0°56'30	minimum elong	12685 Jan 20 10:07	9°♄53'29	1°17'29
	12684 Feb 08 21:39	0°♄			12685 Jan 25 15:19	20°♄13'35	1.36154 AU
max. Earth dist.	12684 Feb 13 07:18	8°♄11'05	1.38317 AU	max. Earth dist.	12685 Jan 29 11:48	27°♄28'42	
desc. node	12684 Feb 13 23:53	9°♄26'04		evening rise	12685 Jan 30 20:31	29°♄57'40	
evening rise	12684 Feb 17 01:05	14°♄50'20		desc. node	12685 Jan 30 21:02	0°♄	
	12684 Feb 26 04:29	0°♄			12685 Feb 18 13:26	0°♄	
	12684 Mar 18 18:07	0°♄		evening max el	12685 Mar 05 23:29	18°♄51'55	26°03'31
evening max el	12684 Mar 23 10:01	5°♄01'54	24°53'23	retrograde	12685 Mar 18 15:45	26°♄06'32	
retrograde	12684 Apr 04 05:35	11°♄54'35		evening set	12685 Mar 24 19:16	23°♄36'26	
asc. node	12684 Apr 08 20:22	10°♄21'18		asc. node	12685 Mar 26 17:46	21°♄46'21	
evening set	12684 Apr 09 21:42	9°♄32'23		min. Earth dist.	12685 Mar 29 00:02	19°♄09'53	0.67144 AU
min. Earth dist.	12684 Apr 14 09:02	4°♄30'38	0.68143 AU	inferior conj	12685 Mar 30 15:11	17°♄08'05	1°12'15
inferior conj	12684 Apr 15 11:51	3°♄02'04	1°56'56	minimum elong	12685 Mar 30 13:32	17°♄13'14	1°11'29
minimum elong	12684 Apr 15 09:44	3°♄09'07	1°55'51	morning rise	12685 Apr 05 08:32	11°♄21'29	
	12684 Apr 17 21:19	30°♄		direct	12685 Apr 08 14:11	10°♄21'58	
morning rise	12684 Apr 20 22:00	27°♄05'28		morning max el	12685 Apr 15 05:33	13°♄56'01	18°42'23
direct	12684 Apr 24 14:53	25°♄46'43			12685 Apr 27 06:19	0°♄	
morning max el	12684 May 01 20:34	29°♄46'45	19°34'19	desc. node	12685 Apr 28 22:34	2°♄33'58	
	12684 May 02 01:55	0°♄		morning set	12685 May 06 21:53	14°♄57'55	
desc. node	12684 May 12 01:53	12°♄41'59			12685 May 16 12:58	0°♄	
greatest brilliancy	12684 May 14 12:20	16°♄14'00	-0.6m	max. Earth dist.	12685 May 22 02:03	8°♄39'31	1.45681 AU
	12684 May 23 16:14	0°♄					
morning set	12684 May 27 09:29	5°♄41'46		superior conj	12685 May 23 03:12	10°♄17'53	-2°09'15
max. Earth dist.	12684 Jun 08 07:50	24°♄16'16	1.44904 AU	minimum elong	12685 May 22 22:15	9°♄58'29	2°09'54
	12684 Jun 11 22:23	0°♄			12685 Jun 04 14:49	0°♄	
superior conj	12684 Jun 12 15:56	1°♄10'14	-2°12'10	evening rise	12685 Jun 07 13:29	4°♄42'06	
minimum elong	12684 Jun 12 18:35	1°♄20'51	2°13'03	greatest brilliancy	12685 Jun 14 11:32	15°♄45'43	-0.9m
evening rise	12684 Jun 26 14:13	24°♄01'58		asc. node	12685 Jun 22 15:34	28°♄13'48	
	12684 Jun 30 03:39	0°♄			12685 Jun 23 22:14	0°♄	
asc. node	12684 Jul 05 18:39	9°♄15'54		evening max el	12685 Jun 28 11:09	5°♄25'06	18°37'17
evening max el	12684 Jul 14 22:39	21°♄47'22	18°11'17	retrograde	12685 Jul 04 23:59	8°♄58'01	
retrograde	12684 Jul 21 07:07	25°♄08'23		evening set	12685 Jul 08 05:22	7°♄58'54	
evening set	12684 Jul 24 04:02	24°♄24'28		inferior conj	12685 Jul 13 21:09	2°♄21'57	2°53'41
inferior conj	12684 Jul 30 05:19	19°♄03'19	2°20'55	minimum elong	12685 Jul 13 23:00	2°♄16'16	2°52'32
minimum elong	12684 Jul 30 07:50	18°♄56'18	2°19'36		12685 Jul 15 19:38	30°♄	
min. Earth dist.	12684 Aug 01 19:16	16°♄11'30	0.63569 AU	min. Earth dist.	12685 Jul 15 20:49	29°♄56'27	0.65485 AU
morning rise	12684 Aug 05 09:57	12°♄47'59		morning rise	12685 Jul 19 15:41	25°♄59'36	
desc. node	12684 Aug 08 00:41	11°♄10'29		desc. node	12685 Jul 25 22:02	23°♄18'46	
direct	12684 Aug 12 01:45	10°♄14'45		direct	12685 Jul 26 02:16	23°♄18'39	
morning max el	12684 Aug 25 23:13	18°♄16'00	27°44'14		12685 Aug 07 05:20	0°♄	
	12684 Sep 04 20:05	0°♄		morning max el	12685 Aug 08 10:16	1°♄11'09	26°57'56
	12684 Sep 23 15:58	0°♄			12685 Aug 29 22:12	0°♄	
morning set	12684 Sep 29 18:01	11°♄40'25		morning set	12685 Sep 13 02:35	24°♄53'11	
asc. node	12684 Oct 01 20:04	15°♄54'05			12685 Sep 15 17:30	0°♄	
max. Earth dist.	12684 Oct 04 16:40	21°♄52'05	1.32424 AU	max. Earth dist.	12685 Sep 17 08:38	3°♄15'47	1.33784 AU
				asc. node	12685 Sep 18 16:42	5°♄58'48	
superior conj	12684 Oct 07 14:37	28°♄07'13	0°53'16	superior conj	12685 Sep 21 16:14	12°♄10'03	0°28'17
minimum elong	12684 Oct 07 12:28	27°♄55'36	0°53'14	minimum elong	12685 Sep 21 14:49	12°♄02'39	0°28'07
	12684 Oct 08 11:23	0°♄		evening rise	12685 Sep 28 22:29	27°♄35'50	
evening rise	12684 Oct 14 12:05	13°♄06'52					

	12685 Sep 30 01:57	0°♍		behind sun begin	12686 Sep 05 03:39	25°♎16'05	
	12685 Oct 18 07:17	0°♊		behind sun end	12686 Sep 05 15:55	26°♎18'05	
evening max el	12685 Oct 19 05:08	0°♊55'40	21°39'48	asc. node	12686 Sep 05 13:20	26°♎04'58	
desc. node	12685 Oct 21 18:31	3°♊11'45			12686 Sep 07 11:32	0°♊	
retrograde	12685 Oct 31 13:10	7°♊03'27		evening rise	12686 Sep 13 05:55	11°♊53'52	
evening set	12685 Nov 03 11:22	6°♊44'02			12686 Sep 22 17:00	0°♍	
inferior conj	12685 Nov 12 08:36	2°♊49'09	-5°32'39	evening max el	12686 Oct 01 06:35	11°♍36'18	20°15'09
minimum elong	12685 Nov 12 01:23	2°♊59'16	5°30'46	desc. node	12686 Oct 08 15:57	16°♍26'51	
min. Earth dist.	12685 Nov 12 07:44	2°♊50'22	0.54553 AU	retrograde	12686 Oct 12 01:25	16°♍58'02	
	12685 Nov 17 20:24	30°♋♍		evening set	12686 Oct 14 02:37	16°♍47'17	
morning rise	12685 Nov 20 16:24	29°♍01'17		inferior conj	12686 Oct 23 02:16	12°♍50'11	-4°15'38
direct	12685 Nov 24 09:09	28°♍31'33		minimum elong	12686 Oct 22 16:17	13°♍04'56	4°12'04
	12685 Nov 30 13:35	0°♊		min. Earth dist.	12686 Oct 24 15:41	11°♍54'50	0.54821 AU
morning max el	12685 Dec 06 20:18	4°♊28'47	22°09'29	morning rise	12686 Oct 31 05:06	8°♍45'02	
asc. node	12685 Dec 15 17:35	15°♊33'13		direct	12686 Nov 04 19:09	7°♍59'31	
	12685 Dec 23 21:14	0°♊		morning max el	12686 Nov 18 07:50	14°♍37'08	23°57'19
morning set	12685 Dec 28 06:02	8°♊57'20			12686 Nov 30 07:01	0°♊	
				asc. node	12686 Dec 02 14:35	3°♊52'14	
superior conj	12686 Jan 04 07:53	24°♊01'33	1°30'33	morning set	12686 Dec 12 17:53	23°♊43'24	
minimum elong	12686 Jan 04 09:38	24°♊10'49	1°31'19		12686 Dec 15 15:31	0°♊	
	12686 Jan 07 04:32	0°♋					
max. Earth dist.	12686 Jan 08 05:00	2°♋05'19	1.34274 AU	superior conj	12686 Dec 19 14:12	8°♊37'00	1°37'25
evening rise	12686 Jan 12 13:53	10°♋45'49		minimum elong	12686 Dec 19 14:52	8°♊40'36	1°38'21
desc. node	12686 Jan 17 17:16	20°♋20'16		max. Earth dist.	12686 Dec 22 02:27	14°♊01'51	1.32810 AU
	12686 Jan 23 07:48	0°♋		evening rise	12686 Dec 27 03:43	24°♊31'50	
	12686 Feb 14 00:55	0°♌			12686 Dec 29 22:15	0°♋	
evening max el	12686 Feb 16 13:03	2°♌33'01	26°57'31	desc. node	12687 Jan 04 14:06	10°♋27'53	
retrograde	12686 Mar 01 20:27	9°♌58'19			12687 Jan 16 20:46	0°♋	
evening set	12686 Mar 08 09:44	7°♌25'32		evening max el	12687 Jan 30 01:46	15°♋54'16	27°28'19
min. Earth dist.	12686 Mar 12 09:04	3°♌32'37	0.65747 AU	retrograde	12687 Feb 12 18:37	23°♋20'07	
asc. node	12686 Mar 13 15:10	2°♌06'34		evening set	12687 Feb 19 14:46	20°♋51'31	
inferior conj	12686 Mar 14 12:23	1°♌05'10	0°17'02	min. Earth dist.	12687 Feb 23 10:11	17°♋29'22	0.63997 AU
minimum elong	12686 Mar 14 11:55	1°♌06'31	0°16'55	inferior conj	12687 Feb 26 00:48	14°♋46'19	-0°48'52
	12686 Mar 15 11:15	30°♌♋		minimum elong	12687 Feb 26 02:19	14°♋42'19	0°47'54
morning rise	12686 Mar 20 15:30	25°♋30'25		asc. node	12687 Feb 28 12:35	12°♋17'18	
direct	12686 Mar 23 11:10	24°♋47'11		morning rise	12687 Mar 04 16:01	9°♋25'46	
morning max el	12686 Mar 29 20:07	28°♋08'02	18°07'03	direct	12687 Mar 07 03:16	8°♋55'14	
	12686 Mar 31 14:05	0°♌		morning max el	12687 Mar 13 13:33	12°♋14'09	17°48'54
desc. node	12686 Apr 15 19:14	22°♌44'46			12687 Mar 25 21:16	0°♌	
morning set	12686 Apr 17 12:59	25°♌33'55		morning set	12687 Mar 30 08:03	7°♌31'12	
	12686 Apr 20 06:48	0°♍		desc. node	12687 Apr 02 15:50	13°♌08'35	
superior conj	12686 May 02 11:37	19°♍25'23	-1°46'31	superior conj	12687 Apr 12 10:18	29°♌16'58	-1°10'13
minimum elong	12686 May 02 02:24	18°♍49'10	1°46'22	minimum elong	12687 Apr 12 03:04	28°♌47'41	1°09'39
max. Earth dist.	12686 May 04 21:47	23°♍13'17	1.45716 AU		12687 Apr 12 20:57	0°♍	
	12686 May 09 06:06	0°♍		max. Earth dist.	12687 Apr 17 16:50	7°♍42'50	1.45016 AU
evening rise	12686 May 18 14:02	14°♍28'36		evening rise	12687 Apr 28 02:00	23°♍51'33	
	12686 May 28 16:07	0°♎			12687 May 02 02:44	0°♍	
greatest brilliancy	12686 May 30 22:24	3°♎24'36	-0.7m		12687 May 23 06:20	0°♎	
asc. node	12686 Jun 09 12:35	16°♎38'24		evening max el	12687 May 25 22:40	2°♎56'11	20°18'33
evening max el	12686 Jun 11 19:37	19°♎09'08	19°20'17	asc. node	12687 May 27 09:41	4°♎19'01	
retrograde	12686 Jun 18 21:04	23°♎06'19		retrograde	12687 Jun 02 19:49	7°♎28'03	
evening set	12686 Jun 22 11:23	21°♎51'01		evening set	12687 Jun 06 19:49	5°♎56'12	
inferior conj	12686 Jun 27 21:09	15°♎59'54	3°10'19	inferior conj	12687 Jun 12 02:33	29°♎52'20	3°13'34
minimum elong	12686 Jun 27 21:59	15°♎57'10	3°09'19	minimum elong	12687 Jun 12 02:20	29°♎53'06	3°12'36
min. Earth dist.	12686 Jun 29 06:13	14°♎11'46	0.67014 AU		12687 Jun 12 00:19	30°♎♎	
morning rise	12686 Jul 03 08:04	9°♎36'31		min. Earth dist.	12687 Jun 12 21:27	28°♎47'45	0.68097 AU
direct	12686 Jul 09 09:39	6°♎57'36		morning rise	12687 Jun 17 08:32	23°♎31'46	
desc. node	12686 Jul 12 19:20	7°♎39'36		direct	12687 Jun 22 22:43	21°♎03'21	
morning max el	12686 Jul 21 21:07	14°♎25'56	25°47'19	desc. node	12687 Jun 29 16:32	23°♎47'15	
	12686 Aug 03 14:02	0°♎		morning max el	12687 Jul 04 07:06	27°♎51'38	24°22'15
	12686 Aug 22 17:26	0°♏			12687 Jul 06 07:37	0°♎	
morning set	12686 Aug 26 21:17	7°♏26'06			12687 Jul 28 06:13	0°♎	
max. Earth dist.	12686 Aug 30 14:13	14°♏21'27	1.35628 AU	morning set	12687 Aug 08 21:41	19°♏08'25	
				max. Earth dist.	12687 Aug 12 12:38	25°♏32'43	1.37837 AU
					12687 Aug 14 23:20	0°♏	
superior conj	12686 Sep 05 09:41	25°♏46'33	-0°01'27				
minimum elong	12686 Sep 05 09:47	25°♏47'03	0°01'35				

superior conj	12687 Aug 19 15:44	8° \mathbb{M} 49'16	-0°34'43	minimum elong	12688 Aug 01 11:16	21° Ω 30'57	1°09'11
minimum elong	12687 Aug 19 18:06	9° \mathbb{M} 00'39	0°34'42		12688 Aug 06 01:02	0° \mathbb{M}	
asc. node	12687 Aug 23 09:58	16° \mathbb{M} 09'10		asc. node	12688 Aug 09 06:37	6° \mathbb{M} 07'26	
evening rise	12687 Aug 28 07:55	25° \mathbb{M} 55'03		evening rise	12688 Aug 11 01:22	9° \mathbb{M} 31'00	
	12687 Aug 30 09:31	0° $\underline{\Omega}$			12688 Aug 22 17:34	0° $\underline{\Omega}$	
evening max el	12687 Sep 13 22:10	23° $\underline{\Omega}$ 04'53	19°11'12	evening max el	12688 Aug 27 01:07	5° $\underline{\Omega}$ 17'48	18°28'48
retrograde	12687 Sep 23 01:05	27° $\underline{\Omega}$ 38'25		retrograde	12688 Sep 03 19:38	9° $\underline{\Omega}$ 12'58	
evening set	12687 Sep 24 21:31	27° $\underline{\Omega}$ 27'57		evening set	12688 Sep 05 20:14	8° $\underline{\Omega}$ 57'47	
desc. node	12687 Sep 25 13:24	27° $\underline{\Omega}$ 19'19		desc. node	12688 Sep 11 10:54	6° $\underline{\Omega}$ 03'55	
inferior conj	12687 Oct 03 09:50	23° $\underline{\Omega}$ 16'32	-2°27'46	inferior conj	12688 Sep 13 14:24	4° $\underline{\Omega}$ 25'55	-0°40'24
minimum elong	12687 Oct 03 03:27	23° $\underline{\Omega}$ 27'15	2°25'02	minimum elong	12688 Sep 13 12:49	4° $\underline{\Omega}$ 29'00	0°39'48
min. Earth dist.	12687 Oct 06 03:17	21° $\underline{\Omega}$ 27'01	0.55991 AU	min. Earth dist.	12688 Sep 16 20:44	1° $\underline{\Omega}$ 52'53	0.57837 AU
morning rise	12687 Oct 11 06:39	18° $\underline{\Omega}$ 38'30			12688 Sep 19 14:32	30° \mathbb{R} \mathbb{M}	
direct	12687 Oct 16 16:36	17° $\underline{\Omega}$ 30'56		morning rise	12688 Sep 21 01:57	29° \mathbb{M} 10'24	
morning max el	12687 Oct 30 18:42	24° $\underline{\Omega}$ 40'39	25°40'55	direct	12688 Sep 27 03:53	27° \mathbb{M} 36'04	
	12687 Nov 04 16:44	0° \mathbb{M}			12688 Oct 04 22:12	0° $\underline{\Omega}$	
asc. node	12687 Nov 19 11:30	22° \mathbb{M} 47'38		morning max el	12688 Oct 11 11:27	5° $\underline{\Omega}$ 10'28	27°02'23
	12687 Nov 23 04:29	0° \mathbb{M}			12688 Oct 29 17:31	0° \mathbb{M}	
morning set	12687 Nov 27 05:18	8° \mathbb{M} 24'41		asc. node	12688 Nov 05 08:19	12° \mathbb{M} 09'24	
				morning set	12688 Nov 10 14:35	22° \mathbb{M} 56'24	
superior conj	12687 Dec 04 00:09	23° \mathbb{M} 19'54	1°38'03		12688 Nov 13 20:38	0° \mathbb{M}	
minimum elong	12687 Dec 03 23:43	23° \mathbb{M} 17'27	1°38'59				
max. Earth dist.	12687 Dec 05 06:46	26° \mathbb{M} 09'05	1.31820 AU	superior conj	12688 Nov 17 11:42	8° \mathbb{M} 04'01	1°32'48
	12687 Dec 07 00:54	0° \mathbb{M}		minimum elong	12688 Nov 17 10:19	7° \mathbb{M} 56'15	1°33'33
evening rise	12687 Dec 11 02:18	8° \mathbb{M} 39'13		max. Earth dist.	12688 Nov 17 15:01	8° \mathbb{M} 22'31	1.31318 AU
desc. node	12687 Dec 22 11:00	0° \approx 14'13		evening rise	12688 Nov 24 07:04	23° \mathbb{M} 01'05	
	12687 Dec 22 07:41	0° \approx			12688 Nov 27 15:44	0° \mathbb{M}	
evening max el	12688 Jan 12 11:41	28° \approx 43'23	27°29'19	desc. node	12688 Dec 08 08:01	19° \mathbb{M} 30'41	
	12688 Jan 13 21:12	0° \mathbb{M}			12688 Dec 15 08:38	0° \approx	
retrograde	12688 Jan 26 09:04	6° \mathbb{M} 02'46		evening max el	12688 Dec 24 15:57	10° \approx 47'39	26°56'21
evening set	12688 Feb 02 07:35	3° \mathbb{M} 46'11		retrograde	12689 Jan 07 14:33	17° \approx 58'14	
min. Earth dist.	12688 Feb 06 01:33	0° \mathbb{M} 49'46	0.61984 AU	evening set	12689 Jan 14 08:42	16° \approx 01'43	
	12688 Feb 06 23:29	30° \mathbb{R} \approx		min. Earth dist.	12689 Jan 18 06:09	13° \approx 22'19	0.59831 AU
inferior conj	12688 Feb 09 01:20	28° \approx 03'42	-2°04'17	inferior conj	12689 Jan 21 10:29	10° \approx 48'03	-3°25'20
minimum elong	12688 Feb 09 05:37	27° \approx 53'45	2°02'00	minimum elong	12689 Jan 21 17:42	10° \approx 33'26	3°22'01
asc. node	12688 Feb 15 10:00	23° \approx 19'41		morning rise	12689 Jan 29 05:39	6° \approx 05'11	
morning rise	12688 Feb 16 06:23	23° \approx 00'21		direct	12689 Jan 31 07:21	5° \approx 48'57	
direct	12688 Feb 18 11:22	22° \approx 38'45		asc. node	12689 Feb 01 07:22	5° \approx 52'53	
morning max el	12688 Feb 25 06:44	26° \approx 05'48	17°48'29	morning max el	12689 Feb 07 20:15	9° \approx 33'55	18°06'58
	12688 Feb 28 14:57	0° \mathbb{M}			12689 Feb 21 03:39	0° \mathbb{M}	
morning set	12688 Mar 12 01:26	20° \mathbb{M} 31'54		morning set	12689 Feb 23 11:02	4° \mathbb{M} 17'33	
	12688 Mar 17 09:45	0° \mathbb{Y}					
desc. node	12688 Mar 19 12:23	3° \mathbb{Y} 40'47		superior conj	12689 Mar 05 06:11	22° \mathbb{M} 19'06	0°08'48
				minimum elong	12689 Mar 05 06:53	22° \mathbb{M} 22'15	0°08'55
superior conj	12688 Mar 23 08:20	10° \mathbb{Y} 14'39	-0°29'28	behind sun begin	12689 Mar 05 00:27	21° \mathbb{M} 53'29	
minimum elong	12688 Mar 23 05:31	10° \mathbb{Y} 02'44	0°29'05	behind sun end	12689 Mar 05 13:19	22° \mathbb{M} 50'57	
max. Earth dist.	12688 Mar 30 09:11	21° \mathbb{Y} 53'29	1.43659 AU	desc. node	12689 Mar 06 08:55	24° \mathbb{M} 17'55	
	12688 Apr 04 11:10	0° \mathbb{B}			12689 Mar 09 15:17	0° \mathbb{Y}	
evening rise	12688 Apr 06 17:07	3° \mathbb{B} 30'54		max. Earth dist.	12689 Mar 12 21:19	5° \mathbb{Y} 31'35	1.41787 AU
	12688 Apr 24 13:01	0° \mathbb{M}		evening rise	12689 Mar 18 00:04	13° \mathbb{Y} 55'56	
evening max el	12688 May 07 20:03	16° \mathbb{M} 44'04	21°29'10		12689 Mar 28 08:43	0° \mathbb{B}	
asc. node	12688 May 13 06:53	21° \mathbb{M} 01'21			12689 Apr 19 23:46	0° \mathbb{M}	
retrograde	12688 May 16 18:15	21° \mathbb{M} 57'37		evening max el	12689 Apr 20 12:49	0° \mathbb{M} 33'06	22°47'41
evening set	12688 May 21 04:45	20° \mathbb{M} 09'30		asc. node	12689 Apr 30 04:10	6° \mathbb{M} 29'09	
inferior conj	12688 May 26 11:01	13° \mathbb{M} 54'31	3°05'18	retrograde	12689 Apr 30 14:52	6° \mathbb{M} 30'05	
minimum elong	12688 May 26 09:52	13° \mathbb{M} 58'31	3°04'17	evening set	12689 May 05 12:36	4° \mathbb{M} 26'52	
min. Earth dist.	12688 May 26 16:26	13° \mathbb{M} 35'36	0.68710 AU		12689 May 09 10:31	30° \mathbb{R} \mathbb{B}	
morning rise	12688 May 31 14:46	7° \mathbb{M} 39'01		inferior conj	12689 May 10 20:31	28° \mathbb{B} 02'59	2°46'37
direct	12688 Jun 05 16:12	5° \mathbb{M} 27'19		minimum elong	12689 May 10 18:41	28° \mathbb{B} 09'19	2°45'31
morning max el	12688 Jun 15 17:49	11° \mathbb{M} 25'02	22°52'30	min. Earth dist.	12689 May 10 13:06	28° \mathbb{B} 28'46	0.68851 AU
desc. node	12688 Jun 15 13:36	11° \mathbb{M} 14'29		morning rise	12689 May 16 00:41	21° \mathbb{B} 53'55	
	12688 Jun 30 12:30	0° \mathbb{B}		direct	12689 May 20 13:02	20° \mathbb{B} 02'25	
morning set	12688 Jul 19 23:00	29° \mathbb{B} 48'03		morning max el	12689 May 29 08:28	25° \mathbb{B} 08'24	21°26'41
	12688 Jul 20 01:54	0° Ω		desc. node	12689 Jun 02 10:32	29° \mathbb{B} 40'00	
max. Earth dist.	12688 Jul 24 10:54	7° Ω 20'59	1.40181 AU		12689 Jun 02 17:10	0° \mathbb{M}	
					12689 Jun 23 22:31	0° \mathbb{B}	
superior conj	12688 Aug 01 06:14	21° Ω 07'58	-1°09'17	morning set	12689 Jun 29 22:54	9° \mathbb{B} 20'49	

max. Earth dist.	12689 Jul 06 14:16	20°☿02'12	1.42369 AU	superior conj	12690 Jun 24 19:45	12°☿57'15	-2°05'04
	12689 Jul 12 13:06	0°♊		minimum elong	12690 Jun 25 01:25	13°☿20'26	2°05'42
					12690 Jul 04 23:28	0°♊	
superior conj	12689 Jul 14 00:44	2°♊32'52	-1°41'20	evening rise	12690 Jul 07 18:00	4°♊46'12	
minimum elong	12689 Jul 14 07:40	3°♊02'44	1°41'27	asc. node	12690 Jul 14 00:06	15°♊30'04	
evening rise	12689 Jul 25 06:21	22°♊32'05			12690 Jul 23 18:29	0°♋	
asc. node	12689 Jul 27 03:19	25°♊55'57		evening max el	12690 Jul 25 01:18	1°♋21'56	18°04'26
	12689 Jul 29 09:35	0°♋		retrograde	12690 Jul 31 11:38	4°♋42'35	
evening max el	12689 Aug 10 11:28	18°♋06'38	18°06'55	evening set	12690 Aug 03 03:40	4°♋06'51	
retrograde	12689 Aug 17 08:31	21°♋37'21			12690 Aug 08 11:13	30°♋♊	
evening set	12689 Aug 19 16:24	21°♋13'32		inferior conj	12690 Aug 09 12:07	28°♊55'51	1°53'24
inferior conj	12689 Aug 26 16:16	16°♋21'08	0°48'13	minimum elong	12690 Aug 09 14:40	28°♊49'12	1°52'05
minimum elong	12689 Aug 26 17:45	16°♋17'44	0°47'22	min. Earth dist.	12690 Aug 12 09:28	25°♊55'44	0.62325 AU
desc. node	12689 Aug 29 08:21	13°♋54'20		morning rise	12690 Aug 15 23:23	22°♊47'50	
min. Earth dist.	12689 Aug 29 22:22	13°♋23'27	0.60050 AU	desc. node	12690 Aug 16 05:47	22°♊36'32	
morning rise	12689 Sep 02 15:56	10°♋34'02		direct	12690 Aug 22 15:45	20°♊23'14	
direct	12689 Sep 09 04:17	8°♋32'09		morning max el	12690 Sep 05 18:33	28°♊25'07	27°56'33
morning max el	12689 Sep 23 11:57	16°♋24'40	27°48'58		12690 Sep 07 07:20	0°♋	
	12689 Oct 04 16:23	0°♌			12690 Sep 28 12:38	0°♌	
	12689 Oct 22 07:02	0°♌		morning set	12690 Oct 09 19:15	21°♌11'20	
asc. node	12689 Oct 23 05:02	1°♌50'07		asc. node	12690 Oct 10 01:41	21°♌44'15	
morning set	12689 Oct 25 19:55	7°♌13'31			12690 Oct 14 00:14	0°♌	
max. Earth dist.	12689 Oct 31 23:22	20°♌32'28	1.31330 AU	max. Earth dist.	12690 Oct 15 04:00	2°♌29'35	1.31866 AU
superior conj	12689 Nov 01 22:59	22°♌43'41	1°21'50	superior conj	12690 Oct 17 08:12	7°♌14'12	1°05'17
minimum elong	12689 Nov 01 20:57	22°♌32'20	1°22'16	minimum elong	12690 Oct 17 05:56	7°♌01'47	1°05'25
	12689 Nov 05 05:24	0°♍		evening rise	12690 Oct 24 02:45	22°♌05'28	
evening rise	12689 Nov 08 15:51	7°♍31'19			12690 Oct 27 21:01	0°♍	
	12689 Nov 20 04:20	0°♎		desc. node	12690 Nov 12 02:20	25°♍41'15	
desc. node	12689 Nov 25 05:08	8°♎04'56			12690 Nov 15 16:50	0°♎	
evening max el	12689 Dec 06 12:00	21°♎58'22	25°49'45	evening max el	12690 Nov 18 00:23	2°♎22'35	24°17'40
retrograde	12689 Dec 20 09:42	29°♎00'10		retrograde	12690 Dec 01 16:43	9°♎12'23	
evening set	12689 Dec 26 13:46	27°♎31'17		evening set	12690 Dec 06 19:05	8°♎15'15	
min. Earth dist.	12689 Dec 31 00:37	24°♎54'35	0.57731 AU	min. Earth dist.	12690 Dec 12 11:45	5°♎22'45	0.55964 AU
inferior conj	12690 Jan 03 00:38	22°♎48'20	-4°42'52	inferior conj	12690 Dec 14 18:05	3°♎59'02	-5°39'31
minimum elong	12690 Jan 03 09:14	22°♎33'13	4°39'43	minimum elong	12690 Dec 14 23:41	3°♎50'23	5°37'54
morning rise	12690 Jan 11 07:25	18°♎27'56		morning rise	12690 Dec 23 06:18	29°♎59'01	
direct	12690 Jan 13 10:34	18°♎13'38			12690 Dec 23 04:29	30°♎♋	
asc. node	12690 Jan 19 04:39	20°♎05'10		direct	12690 Dec 25 18:16	29°♎42'37	
morning max el	12690 Jan 22 02:10	22°♎26'34	18°46'08		12690 Dec 28 06:20	0°♎	
	12690 Jan 28 01:13	0°♏		morning max el	12691 Jan 04 20:31	4°♎32'51	19°47'44
morning set	12690 Feb 07 07:47	18°♏32'13		asc. node	12691 Jan 06 01:50	5°♎47'24	
	12690 Feb 13 05:05	0°♐			12691 Jan 20 23:12	0°♏	
				morning set	12691 Jan 22 12:00	3°♏05'09	
superior conj	12690 Feb 15 23:46	5°♐17'39	0°41'01				
minimum elong	12690 Feb 16 02:15	5°♐29'20	0°41'06	superior conj	12691 Jan 30 08:24	18°♏56'54	1°05'57
desc. node	12690 Feb 21 05:28	14°♐55'50		minimum elong	12691 Jan 30 11:13	19°♏10'54	1°06'16
max. Earth dist.	12690 Feb 23 04:46	18°♐25'50	1.39607 AU		12691 Feb 05 02:01	0°♐	
evening rise	12690 Feb 27 03:57	25°♐16'02		max. Earth dist.	12691 Feb 05 10:49	0°♐41'03	1.37371 AU
	12690 Mar 02 00:06	0°♑		desc. node	12691 Feb 08 02:06	5°♐31'02	
	12690 Mar 22 01:44	0°♒		evening rise	12691 Feb 09 04:19	7°♐28'34	
evening max el	12690 Apr 03 02:51	14°♒23'42	24°08'27		12691 Feb 22 20:25	0°♑	
retrograde	12690 Apr 14 08:22	20°♒59'27		evening max el	12691 Mar 16 16:17	28°♑15'40	25°24'40
asc. node	12690 Apr 17 01:31	20°♒26'05			12691 Mar 18 12:45	0°♒	
evening set	12690 Apr 19 17:44	18°♒43'15		retrograde	12691 Mar 28 21:39	5°♒19'45	
min. Earth dist.	12690 Apr 24 09:20	13°♒20'57	0.68529 AU	evening set	12691 Apr 03 18:35	2°♒53'46	
inferior conj	12690 Apr 25 05:09	12°♒13'49	2°17'58	asc. node	12691 Apr 03 22:54	2°♒44'31	
minimum elong	12690 Apr 25 03:00	12°♒21'06	2°16'50		12691 Apr 06 14:22	30°♒♑	
morning rise	12690 Apr 30 12:22	6°♒12'15		min. Earth dist.	12691 Apr 08 02:58	28°♑06'52	0.67768 AU
direct	12690 May 04 12:01	4°♒41'53		inferior conj	12691 Apr 09 11:02	26°♑23'19	1°39'17
morning max el	12690 May 12 05:43	9°♒03'03	20°11'14	minimum elong	12691 Apr 09 09:02	26°♑29'48	1°38'17
desc. node	12690 May 20 07:22	18°♒47'43		morning rise	12691 Apr 14 23:54	20°♑30'34	
	12690 May 28 04:02	0°♓		direct	12691 Apr 18 11:48	19°♑20'23	
morning set	12690 Jun 09 03:08	18°♓04'06		morning max el	12691 Apr 25 10:33	23°♑08'07	19°10'07
	12690 Jun 16 18:35	0°♈			12691 May 01 05:34	0°♒	
max. Earth dist.	12690 Jun 18 23:59	3°♈32'08	1.44142 AU	desc. node	12691 May 07 04:08	8°♒26'23	
				greatest brilliancy	12691 May 08 09:35	10°♒15'54	-0.7m

morning set	12691 May 19 06:06	26°♄50'08		superior conj	12692 May 14 00:15	1°♂29'21	-2°01'48
	12691 May 21 07:15	0°♂		minimum elong	12692 May 13 16:41	0°♂59'47	2°02'08
max. Earth dist.	12691 Jun 01 15:27	17°♂39'44	1.45323 AU	max. Earth dist.	12692 May 14 10:54	2°♂10'58	1.45793 AU
				evening rise	12692 May 29 20:27	26°♂17'51	
superior conj	12691 Jun 04 16:16	22°♂26'33	-2°13'27		12692 Jun 01 04:53	0°♂	
minimum elong	12691 Jun 04 15:48	22°♂24'40	2°14'22	greatest brilliancy	12692 Jun 08 08:24	11°♂11'29	-0.8m
	12691 Jun 09 10:19	0°♂		asc. node	12692 Jun 16 17:56	23°♂28'59	
evening rise	12691 Jun 19 07:23	16°♂01'45		evening max el	12692 Jun 21 02:22	28°♂36'23	18°53'34
	12691 Jun 27 20:39	0°♂			12692 Jun 22 14:58	0°♂	
asc. node	12691 Jun 30 20:58	4°♂43'23		retrograde	12692 Jun 27 19:25	2°♂17'42	
evening max el	12691 Jul 08 15:12	14°♂54'07	18°20'16	evening set	12692 Jul 01 04:38	1°♂11'39	
retrograde	12691 Jul 15 00:27	18°♂18'27			12692 Jul 02 17:24	30°♂♂	
evening set	12691 Jul 18 00:56	17°♂28'19		inferior conj	12692 Jul 06 17:28	25°♂28'35	3°02'30
inferior conj	12691 Jul 23 21:45	12°♂00'34	2°37'00	minimum elong	12692 Jul 06 18:55	25°♂24'02	3°01'25
minimum elong	12691 Jul 24 00:04	11°♂53'51	2°35'44	min. Earth dist.	12692 Jul 08 10:54	23°♂18'06	0.66197 AU
min. Earth dist.	12691 Jul 26 05:55	9°♂17'57	0.64428 AU	morning rise	12692 Jul 12 08:29	19°♂05'31	
morning rise	12691 Jul 29 21:49	5°♂41'26		direct	12692 Jul 18 15:45	16°♂24'18	
desc. node	12691 Aug 03 03:11	3°♂23'03		desc. node	12692 Jul 20 00:32	16°♂31'01	
direct	12691 Aug 05 12:07	3°♂03'20		morning max el	12692 Jul 31 15:31	24°♂07'35	26°30'12
morning max el	12691 Aug 19 04:31	11°♂02'51	27°27'58		12692 Aug 05 21:58	0°♂	
	12691 Sep 03 04:29	0°♂			12692 Aug 26 14:05	0°♂	
	12691 Sep 20 23:42	0°♂		morning set	12692 Sep 05 13:08	17°♂39'10	
morning set	12691 Sep 23 10:01	4°♂42'20		max. Earth dist.	12692 Sep 09 12:40	25°♂19'28	1.34523 AU
asc. node	12691 Sep 26 22:19	11°♂46'11			12692 Sep 11 20:51	0°♂	
max. Earth dist.	12691 Sep 28 01:12	14°♂05'05	1.32937 AU	asc. node	12692 Sep 12 18:56	1°♂52'06	
superior conj	12691 Oct 01 13:14	21°♂28'51	0°43'17	superior conj	12692 Sep 14 11:45	5°♂21'38	0°16'12
minimum elong	12691 Oct 01 11:19	21°♂18'34	0°43'11	minimum elong	12692 Sep 14 10:53	5°♂17'08	0°16'02
	12691 Oct 05 11:58	0°♂		behind sun begin	12692 Sep 14 10:24	5°♂14'37	
evening rise	12691 Oct 08 13:50	6°♂37'32		behind sun end	12692 Sep 14 11:22	5°♂19'39	
	12691 Oct 20 20:09	0°♂		evening rise	12692 Sep 21 23:15	21°♂02'46	
desc. node	12691 Oct 29 23:39	11°♂57'26			12692 Sep 26 08:36	0°♂	
evening max el	12691 Oct 30 10:52	12°♂25'14	22°35'51	evening max el	12692 Oct 11 04:47	22°♂43'19	21°01'24
retrograde	12691 Nov 12 10:46	18°♂52'14		desc. node	12692 Oct 15 21:02	26°♂26'51	
evening set	12691 Nov 16 03:25	18°♂22'25		retrograde	12692 Oct 22 21:40	28°♂32'11	
min. Earth dist.	12691 Nov 23 18:49	14°♂55'59	0.54830 AU	evening set	12692 Oct 25 09:05	28°♂17'41	
inferior conj	12691 Nov 24 17:37	14°♂23'43	-5°52'08	inferior conj	12692 Nov 03 09:11	24°♂23'33	-5°05'45
minimum elong	12691 Nov 24 15:04	14°♂27'20	5°51'08	minimum elong	12692 Nov 02 23:48	24°♂36'49	5°02'58
morning rise	12691 Dec 03 04:03	10°♂35'50		min. Earth dist.	12692 Nov 04 01:13	24°♂00'51	0.54557 AU
direct	12691 Dec 06 09:11	10°♂12'14		morning rise	12692 Nov 11 14:54	20°♂31'11	
morning max el	12691 Dec 18 00:35	15°♂45'04	21°12'09	direct	12692 Nov 15 17:04	19°♂55'19	
asc. node	12691 Dec 23 22:58	22°♂42'57		morning max el	12692 Nov 28 16:08	26°♂09'51	22°54'47
	12691 Dec 28 15:28	0°♂			12692 Dec 02 07:01	0°♂	
morning set	12692 Jan 06 20:51	17°♂48'05		asc. node	12692 Dec 09 20:01	10°♂35'48	
	12692 Jan 12 16:21	0°♂			12692 Dec 20 02:48	0°♂	
				morning set	12692 Dec 21 08:09	2°♂34'48	
superior conj	12692 Jan 14 03:56	3°♂05'02	1°23'35	superior conj	12692 Dec 28 07:06	17°♂32'46	1°34'15
minimum elong	12692 Jan 14 06:14	3°♂16'52	1°24'12	minimum elong	12692 Dec 28 08:24	17°♂39'45	1°35'07
max. Earth dist.	12692 Jan 18 20:45	12°♂36'05	1.35311 AU	max. Earth dist.	12692 Dec 31 13:56	24°♂29'36	1.33597 AU
evening rise	12692 Jan 22 22:01	20°♂24'34			12693 Jan 03 06:21	0°♂	
desc. node	12692 Jan 25 22:48	25°♂59'26		evening rise	12693 Jan 05 05:26	3°♂54'40	
	12692 Jan 28 04:59	0°♂		desc. node	12693 Jan 11 19:34	16°♂16'17	
	12692 Feb 16 19:33	0°♂			12693 Jan 20 00:08	0°♂	
evening max el	12692 Feb 27 06:05	12°♂04'03	26°29'01	evening max el	12693 Feb 08 19:37	25°♂38'31	27°14'00
retrograde	12692 Mar 11 05:37	19°♂24'15			12693 Feb 14 01:28	0°♂	
evening set	12692 Mar 17 13:24	16°♂52'37		retrograde	12693 Feb 22 07:24	3°♂04'20	
asc. node	12692 Mar 20 20:18	13°♂37'11		evening set	12693 Mar 01 00:09	0°♂32'33	
min. Earth dist.	12692 Mar 21 15:50	12°♂40'22	0.66592 AU		12693 Mar 01 16:31	30°♂♂	
inferior conj	12692 Mar 23 12:05	10°♂26'54	0°50'13	min. Earth dist.	12693 Mar 04 21:40	26°♂53'17	0.65040 AU
minimum elong	12692 Mar 23 10:51	10°♂30'40	0°49'39	inferior conj	12693 Mar 07 05:54	24°♂18'03	-0°09'37
morning rise	12692 Mar 29 09:15	4°♂44'47		minimum elong	12693 Mar 07 06:10	24°♂17'17	0°09'19
direct	12692 Apr 01 10:31	3°♂52'27		transit middle	12693 Mar 07 06:10	24°♂17'17	0°09'19
morning max el	12692 Apr 07 22:09	7°♂19'31	18°25'16	transit begin	12693 Mar 07 03:42	24°♂24'08	
desc. node	12692 Apr 23 00:50	28°♂27'44		transit end	12693 Mar 07 08:38	24°♂10'28	
	12692 Apr 24 00:14	0°♂		asc. node	12693 Mar 07 17:46	23°♂45'21	
morning set	12692 Apr 28 05:07	6°♂39'05		morning rise	12693 Mar 13 13:52	18°♂49'00	
	12692 May 13 01:22	0°♂					

direct	12693 Mar 16 05:53	18°  11'27"		minimum elong	12694 Feb 18 16:16	7°  43'37"	1°18'18"
morning max el	12693 Mar 22 14:16	21°  29'52"	17°57'17"	asc. node	12694 Feb 22 15:10	4°  11'30"	
	12693 Mar 29 06:18	0°  Y		morning rise	12694 Feb 25 10:37	2°  36'50"	
morning set	12693 Apr 09 08:34	17°  Y51'38"		direct	12694 Feb 27 18:57	2°  310'32"	
desc. node	12693 Apr 09 21:27	18°  Y44'46"		morning max el	12694 Mar 06 08:03	5°  31'25"	17°46'35"
	12693 Apr 16 18:28	0°  8			12694 Mar 22 09:41	0°  Y	
				morning set	12694 Mar 22 13:51	0°  Y18'04"	
superior conj	12693 Apr 23 12:54	10°  850'56"	-1°32'15"	desc. node	12694 Mar 27 18:02	9°  Y12'45"	
minimum elong	12693 Apr 23 03:55	10°  815'17"	1°31'49"				
max. Earth dist.	12693 Apr 27 07:15	16°  847'17"	1.45508 AU	superior conj	12694 Apr 03 21:00	21°  Y09'39"	-0°53'00"
	12693 May 05 19:02	0°  II		minimum elong	12694 Apr 03 15:36	20°  Y47'26"	0°52'28"
evening rise	12693 May 09 14:01	5°  II50'26"			12694 Apr 09 07:43	0°  8	
greatest brilliancy	12693 May 23 16:02	27°  II08'36"	-0.6m	max. Earth dist.	12694 Apr 10 01:28	1°  810'53"	1.44510 AU
	12693 May 25 15:17	0°  6		evening rise	12694 Apr 19 01:20	15°  815'16"	
asc. node	12693 Jun 03 15:00	11°  636'45"			12694 Apr 28 19:39	0°  II	
evening max el	12693 Jun 04 08:41	12°  622'25"	19°43'14"	evening max el	12694 May 18 09:08	26°  II09'18"	20°47'12"
retrograde	12693 Jun 11 17:33	16°  633'01"		asc. node	12694 May 21 12:09	28°  II54'26"	
evening set	12693 Jun 15 11:58	15°  610'28"			12694 May 23 05:12	0°  6	
inferior conj	12693 Jun 20 20:06	9°  613'33"	3°13'09"	retrograde	12694 May 26 16:31	0°  658'45"	
minimum elong	12693 Jun 20 20:29	9°  612'17"	3°12'11"		12694 May 29 22:05	30°  R II	
min. Earth dist.	12693 Jun 21 22:57	7°  643'49"	0.67538 AU	evening set	12694 May 30 20:51	29°  II19'50"	
morning rise	12693 Jun 26 04:37	2°  651'08"		inferior conj	12694 Jun 05 03:04	23°  II10'43"	3°11'21"
direct	12693 Jul 02 01:30	0°  616'07"		minimum elong	12694 Jun 05 02:26	23°  II12'56"	3°10'23"
desc. node	12693 Jul 06 21:47	1°  641'01"		min. Earth dist.	12694 Jun 05 16:05	22°  II25'41"	0.68414 AU
morning max el	12693 Jul 14 02:06	7°  628'31"	25°12'19"	morning rise	12694 Jun 10 07:46	16°  II51'57"	
	12693 Jul 31 15:56	0°  Q		direct	12694 Jun 15 16:29	14°  II30'15"	
morning set	12693 Aug 19 00:39	29°  Q52'11"		desc. node	12694 Jun 23 18:56	18°  II25'25"	
	12693 Aug 19 02:24	0°  P		morning max el	12694 Jun 26 12:18	20°  II58'21"	23°44'06"
max. Earth dist.	12693 Aug 22 15:00	6°  P26'11"	1.36543 AU		12694 Jul 04 06:44	0°  6	
					12694 Jul 24 21:18	0°  Q	
superior conj	12693 Aug 29 00:48	18°  P45'02"	-0°15'14"	morning set	12694 Jul 31 15:50	11°  Q09'42"	
minimum elong	12693 Aug 29 01:47	18°  P49'51"	0°15'18"	max. Earth dist.	12694 Aug 04 12:33	17°  Q50'14"	1.38833 AU
behind sun begin	12693 Aug 28 23:44	18°  P39'41"			12694 Aug 11 05:31	0°  P	
behind sun end	12693 Aug 29 03:50	19°  P00'01"					
asc. node	12693 Aug 30 15:35	21°  P58'05"		superior conj	12694 Aug 12 00:45	1°  P30'09"	-0°49'24"
	12693 Sep 03 14:49	0°  A		minimum elong	12694 Aug 12 04:15	1°  P46'37"	0°49'20"
evening rise	12693 Sep 06 04:44	5°  A15'03"		asc. node	12694 Aug 17 12:12	12°  P00'15"	
	12693 Sep 20 06:27	0°  M		evening rise	12694 Aug 21 03:33	19°  P06'51"	
evening max el	12693 Sep 23 12:14	3°  M43'36"	19°45'10"		12694 Aug 26 20:29	0°  A	
desc. node	12693 Oct 02 18:27	8°  M42'55"		evening max el	12694 Sep 06 09:05	15°  A32'00"	18°50'31"
retrograde	12693 Oct 03 13:45	8°  M44'45"		retrograde	12694 Sep 14 21:14	19°  A47'56"	
evening set	12693 Oct 05 11:17	8°  M34'50"		evening set	12694 Sep 16 18:33	19°  A36'07"	
inferior conj	12693 Oct 14 07:25	4°  M32'22"	-3°31'34"	desc. node	12694 Sep 19 15:56	18°  A36'19"	
minimum elong	12693 Oct 13 22:28	4°  M46'15"	3°28'02"	inferior conj	12694 Sep 24 23:33	15°  A16'30"	-1°40'43"
min. Earth dist.	12693 Oct 16 10:16	3°  M13'31"	0.55217 AU	minimum elong	12694 Sep 24 19:19	15°  A24'06"	1°38'52"
morning rise	12693 Oct 22 08:00	0°  M14'41"		min. Earth dist.	12694 Sep 28 00:22	13°  A06'20"	0.56706 AU
	12693 Oct 23 01:50	30°  R A		morning rise	12694 Oct 02 16:47	10°  A21'53"	
direct	12693 Oct 27 06:34	29°  A20'53"		direct	12694 Oct 08 09:56	9°  A03'19"	
	12693 Oct 31 10:19	0°  M		morning max el	12694 Oct 22 15:35	16°  A25'19"	26°19'15"
morning max el	12693 Nov 10 02:30	6°  M12'43"	24°43'10"		12694 Nov 02 17:50	0°  M	
asc. node	12693 Nov 26 16:58	29°  M11'59"		asc. node	12694 Nov 13 13:50	18°  M19'36"	
	12693 Nov 27 03:36	0°  A			12694 Nov 19 08:35	0°  A	
morning set	12693 Dec 05 20:03	17°  A20'08"		morning set	12694 Nov 20 06:46	1°  A58'04"	
	12693 Dec 11 15:06	0°  3					
				superior conj	12694 Nov 27 02:06	16°  A57'03"	1°36'33"
superior conj	12693 Dec 12 15:14	2°  312'42"	1°38'26"	minimum elong	12694 Nov 27 01:14	16°  A52'11"	1°37'24"
minimum elong	12693 Dec 12 15:25	2°  313'42"	1°39'23"	max. Earth dist.	12694 Nov 27 20:57	18°  A41'46"	1.31538 AU
max. Earth dist.	12693 Dec 14 14:43	6°  331'50"	1.32324 AU		12694 Dec 03 01:10	0°  3	
evening rise	12693 Dec 19 23:20	17°  350'52"		evening rise	12694 Dec 04 00:48	2°  305'03"	
	12693 Dec 26 04:51	0°  A		desc. node	12694 Dec 16 13:20	25°  350'50"	
desc. node	12693 Dec 29 16:24	6°  A16'07"			12694 Dec 19 02:13	0°  A	
	12694 Jan 14 10:09	0°  A		evening max el	12695 Jan 04 14:51	21°  A17'47"	27°19'32"
evening max el	12694 Jan 22 07:17	8°  A47'24"	27°32'41"	retrograde	12695 Jan 18 13:21	28°  A34'32"	
retrograde	12694 Feb 05 02:19	16°  A11'13"		evening set	12695 Jan 25 10:56	26°  A25'16"	
evening set	12694 Feb 12 00:21	13°  A46'22"		min. Earth dist.	12695 Jan 29 05:24	23°  A37'29"	0.61071 AU
min. Earth dist.	12694 Feb 15 18:36	10°  A36'21"	0.63168 AU	inferior conj	12695 Feb 01 08:01	20°  A54'09"	-2°38'24"
inferior conj	12694 Feb 18 13:39	7°  A50'09"	-1°19'49"	minimum elong	12695 Feb 01 13:35	20°  A41'55"	2°35'35"

morning rise	12695 Feb 08 19:12	15° \approx 59'27			12695 Dec 14 17:23	0° \approx	
asc. node	12695 Feb 09 12:33	15° \approx 48'56		evening max el	12695 Dec 17 15:55	2° \approx 59'51	26°31'51
direct	12695 Feb 10 22:11	15° \approx 40'41		retrograde	12695 Dec 31 14:51	10° \approx 06'43	
morning max el	12695 Feb 18 00:08	19° \approx 14'19	17°53'58	evening set	12696 Jan 07 04:01	8° \approx 21'31	
	12695 Feb 25 21:10	0° H		min. Earth dist.	12696 Jan 11 05:45	5° \approx 44'55	0.58915 AU
morning set	12695 Mar 05 14:46	13° H 39'19		inferior conj	12696 Jan 14 09:26	3° \approx 20'44	-3°59'31
desc. node	12695 Mar 14 14:34	29° H 47'15		minimum elong	12696 Jan 14 17:34	3° \approx 05'11	3°56'05
	12695 Mar 14 17:29	0° Y			12696 Jan 19 07:46	30° R Z	
superior conj	12695 Mar 16 05:26	2° Y 36'27	-0°12'40	morning rise	12696 Jan 22 10:02	28° Z 47'03	
minimum elong	12695 Mar 16 04:19	2° Y 31'36	0°12'26	direct	12696 Jan 24 11:30	28° Z 32'08	
behind sun begin	12695 Mar 15 23:04	2° Y 08'51		asc. node	12696 Jan 27 09:53	29° Z 03'53	
behind sun end	12695 Mar 16 09:34	2° Y 54'19			12696 Jan 29 08:11	0° \approx	
max. Earth dist.	12695 Mar 23 15:26	15° Y 06'24	1.42908 AU	morning max el	12696 Feb 01 10:51	2° \approx 28'16	18°20'56
evening rise	12695 Mar 29 21:55	25° Y 10'52		morning set	12696 Feb 17 05:37	27° \approx 38'28	
	12695 Apr 02 00:04	0° B			12696 Feb 18 11:19	0° H	
	12695 Apr 22 18:13	0° II		superior conj	12696 Feb 26 12:10	15° H 04'42	0°23'20
evening max el	12695 May 01 04:15	9° II 57'10	22°01'58	minimum elong	12696 Feb 26 13:50	15° H 12'19	0°23'23
asc. node	12695 May 08 09:22	15° II 07'07		desc. node	12696 Feb 29 11:05	20° H 24'43	
retrograde	12695 May 10 14:25	15° II 29'56		max. Earth dist.	12696 Mar 05 01:07	28° H 24'54	1.40882 AU
evening set	12695 May 15 05:30	13° II 35'25			12696 Mar 05 23:28	0° Y	
inferior conj	12695 May 20 12:13	7° II 16'15	2°58'38	evening rise	12696 Mar 09 13:31	5° Y 58'53	
minimum elong	12695 May 20 10:44	7° II 21'22	2°57'35		12696 Mar 25 03:43	0° B	
min. Earth dist.	12695 May 20 12:10	7° II 16'23	0.68819 AU	evening max el	12696 Apr 12 19:42	23° B 47'00	23°22'20
morning rise	12695 May 25 15:47	1° II 03'04			12696 Apr 22 21:33	0° II	
	12695 May 27 02:02	30° R B		retrograde	12696 Apr 23 09:45	0° II 01'09	
direct	12695 May 30 11:37	28° B 59'34			12696 Apr 23 21:48	30° R B	
	12695 Jun 03 04:17	0° II		asc. node	12696 Apr 24 06:41	29° B 57'39	
morning max el	12695 Jun 09 00:14	4° II 35'34	22°15'05	evening set	12696 Apr 28 12:20	27° B 52'21	
desc. node	12695 Jun 10 15:57	6° II 19'41		inferior conj	12696 May 03 21:33	21° B 25'52	2°35'43
	12695 Jun 28 10:38	0° B		minimum elong	12696 May 03 19:33	21° B 32'48	2°34'35
morning set	12695 Jul 12 06:25	21° B 21'25		min. Earth dist.	12696 May 03 08:55	22° B 09'25	0.68765 AU
max. Earth dist.	12695 Jul 17 12:00	29° B 58'23	1.41140 AU	morning rise	12696 May 09 02:41	15° B 19'44	
	12695 Jul 17 12:23	0° Q		direct	12696 May 13 09:38	13° B 36'58	
superior conj	12695 Jul 25 07:22	13° Q 27'49	-1°23'29	morning max el	12696 May 21 17:14	18° B 22'34	20°53'02
minimum elong	12695 Jul 25 13:25	13° Q 54'45	1°23'25	desc. node	12696 May 27 12:51	25° B 04'27	
	12695 Aug 03 08:12	0° H			12696 May 31 06:13	0° II	
asc. node	12695 Aug 04 08:52	1° H 55'12		morning set	12696 Jun 20 20:24	0° B 28'09	
evening rise	12695 Aug 04 16:17	2° H 29'46			12696 Jun 20 13:11	0° B	
evening max el	12695 Aug 20 15:49	28° H 02'32	18°17'06	max. Earth dist.	12696 Jun 28 18:03	13° B 01'20	1.43186 AU
	12695 Aug 22 23:19	0° A		superior conj	12696 Jul 05 16:11	24° B 27'29	-1°52'50
retrograde	12695 Aug 27 23:48	1° A 45'12		minimum elong	12696 Jul 05 23:06	24° B 56'43	1°53'07
evening set	12695 Aug 30 03:18	1° A 26'49			12696 Jul 08 22:21	0° Q	
	12695 Sep 02 06:58	30° R H		evening rise	12696 Jul 17 14:28	15° Q 11'55	
inferior conj	12695 Sep 06 13:31	26° H 46'26	-0°00'05	asc. node	12696 Jul 21 05:36	21° Q 38'00	
minimum elong	12695 Sep 06 13:30	26° H 46'27	0°00'13		12696 Jul 26 02:43	0° H	
transit middle	12695 Sep 06 13:30	26° H 46'27	0°00'13	evening max el	12696 Aug 03 04:11	11° H 04'01	18°03'36
transit begin	12695 Sep 06 10:02	26° H 53'44		retrograde	12696 Aug 09 19:12	14° H 28'22	
transit end	12695 Sep 06 16:59	26° H 39'09		evening set	12696 Aug 12 06:39	13° H 59'41	
desc. node	12695 Sep 06 13:24	26° H 46'40		inferior conj	12696 Aug 18 23:31	8° H 59'04	1°18'40
min. Earth dist.	12695 Sep 09 21:18	24° H 00'03	0.58755 AU	minimum elong	12696 Aug 19 01:39	8° H 53'52	1°17'31
morning rise	12695 Sep 13 20:14	21° H 16'26		min. Earth dist.	12696 Aug 22 02:39	5° H 57'55	0.61032 AU
direct	12695 Sep 20 03:35	19° H 29'43		desc. node	12696 Aug 23 10:53	4° H 46'28	
morning max el	12695 Oct 04 11:33	27° H 13'02	27°26'42	morning rise	12696 Aug 25 17:55	3° H 02'07	
	12695 Oct 07 03:45	0° A		direct	12696 Sep 01 08:55	0° H 49'44	
	12695 Oct 27 08:29	0° M		morning max el	12696 Sep 15 14:43	8° H 46'29	27°56'49
asc. node	12695 Oct 31 10:36	7° M 50'20			12696 Oct 01 22:38	0° A	
morning set	12695 Nov 04 14:35	16° M 24'10		asc. node	12696 Oct 17 07:18	27° A 37'12	
	12695 Nov 10 19:49	0° J			12696 Oct 18 11:09	0° M	
max. Earth dist.	12695 Nov 11 05:32	0° J 54'10	1.31262 AU	morning set	12696 Oct 18 17:38	0° M 33'30	
				max. Earth dist.	12696 Oct 24 12:50	13° M 00'01	1.31501 AU
superior conj	12695 Nov 11 13:47	1° J 40'14	1°28'50	superior conj	12696 Oct 26 00:26	16° M 16'38	1°15'29
minimum elong	12695 Nov 11 12:05	1° J 30'42	1°29'28	minimum elong	12696 Oct 25 22:15	16° M 04'29	1°15'48
evening rise	12695 Nov 18 07:33	16° J 31'21			12696 Nov 01 05:38	0° J	
	12695 Nov 24 22:31	0° Z		evening rise	12696 Nov 01 17:29	1° J 04'06	
desc. node	12695 Dec 03 10:21	14° Z 50'43					

	12696 Nov 17 05:51	0°♄			12697 Oct 24 05:55	0°♄		
desc. node	12696 Nov 19 07:31	3°♄02'33		desc. node	12697 Nov 06 04:47	20°♄07'44		
evening max el	12696 Nov 28 08:41	13°♄49'59	25°12'54	evening max el	12697 Nov 09 19:07	24°♄00'13	23°34'22	
retrograde	12696 Dec 12 04:38	20°♄46'24			12697 Nov 18 22:39	0°♄		
evening set	12696 Dec 17 23:16	19°♄31'04		retrograde	12697 Nov 23 05:49	0°♄42'13		
min. Earth dist.	12696 Dec 22 20:44	16°♄50'04	0.56926 AU	evening set	12697 Nov 27 18:37	29°♄57'30		
inferior conj	12696 Dec 25 14:53	15°♄00'46	-5°10'45		12697 Nov 27 15:26	30°♄♂		
minimum elong	12696 Dec 25 22:54	14°♄47'28	5°08'10	min. Earth dist.	12697 Dec 04 05:20	26°♄52'53	0.55390 AU	
morning rise	12697 Jan 03 00:51	10°♄49'16		inferior conj	12697 Dec 05 23:57	25°♄50'09	-5°51'35	
direct	12697 Jan 05 06:55	10°♄34'30		minimum elong	12697 Dec 06 02:31	25°♄46'22	5°50'31	
asc. node	12697 Jan 13 07:09	13°♄56'17		morning rise	12697 Dec 14 12:13	21°♄57'14		
morning max el	12697 Jan 14 12:15	15°♄02'15	19°09'29	direct	12697 Dec 17 06:44	21°♄38'25		
	12697 Jan 24 23:04	0°♄		morning max el	12697 Dec 28 00:41	26°♄45'47	20°21'03	
morning set	12697 Jan 31 06:00	12°♄02'41		asc. node	12697 Dec 31 04:20	0°♄11'45		
					12697 Dec 31 00:28	0°♄		
superior conj	12697 Feb 08 12:45	28°♄22'23	0°52'30	morning set	12698 Jan 15 12:31	26°♄40'57		
minimum elong	12697 Feb 08 15:31	28°♄35'43	0°52'40		12698 Jan 17 03:12	0°♄		
	12697 Feb 09 09:06	0°♄						
desc. node	12697 Feb 15 07:39	11°♄01'58		superior conj	12698 Jan 23 02:32	12°♄15'29	1°14'18	
max. Earth dist.	12697 Feb 15 08:03	11°♄03'46	1.38651 AU	minimum elong	12698 Jan 23 05:12	12°♄29'00	1°14'45	
evening rise	12697 Feb 19 02:29	17°♄42'36		max. Earth dist.	12698 Jan 28 15:22	23°♄08'42	1.36460 AU	
	12697 Feb 26 11:54	0°♄		evening rise	12698 Feb 01 10:40	0°♄14'32		
	12697 Mar 19 13:05	0°♄			12698 Feb 01 07:28	0°♄		
evening max el	12697 Mar 26 09:28	7°♄39'10	24°41'54	desc. node	12698 Feb 02 04:18	1°♄34'33		
retrograde	12697 Apr 07 01:25	14°♄27'38			12698 Feb 19 16:40	0°♄		
asc. node	12697 Apr 11 04:03	13°♄12'58		evening max el	12698 Mar 08 22:52	21°♄29'43	25°53'50	
evening set	12697 Apr 12 15:50	12°♄06'48		retrograde	12698 Mar 21 12:30	28°♄42'11		
min. Earth dist.	12697 Apr 17 04:14	6°♄59'50	0.68262 AU	evening set	12698 Mar 27 14:21	26°♄12'52		
inferior conj	12697 Apr 18 05:16	5°♄36'37	2°02'50	asc. node	12698 Mar 29 01:28	24°♄51'32		
minimum elong	12697 Apr 18 03:06	5°♄43'47	2°01'43	min. Earth dist.	12698 Mar 31 19:59	21°♄41'10	0.67321 AU	
	12697 Apr 23 03:28	30°♄♂		inferior conj	12698 Apr 02 09:20	19°♄43'43	1°19'46	
morning rise	12697 Apr 23 14:34	29°♄38'46		minimum elong	12698 Apr 02 07:34	19°♄49'17	1°18'55	
direct	12697 Apr 27 09:12	28°♄17'04		morning rise	12698 Apr 08 01:27	13°♄55'32		
	12697 May 01 22:57	0°♄		direct	12698 Apr 11 08:40	12°♄53'24		
morning max el	12697 May 04 17:43	2°♄21'59	19°43'23	morning max el	12698 Apr 18 01:44	16°♄30'37	18°49'02	
desc. node	12697 May 14 09:40	14°♄26'24			12698 Apr 28 10:39	0°♄		
greatest brilliancy	12697 May 17 12:22	18°♄55'12	-0.6m	desc. node	12698 May 01 06:24	4°♄15'10		
	12697 May 24 22:34	0°♄		greatest brilliancy	12698 May 02 04:30	5°♄39'32	-0.8m	
morning set	12697 May 30 21:17	9°♄04'35		morning set	12698 May 10 06:42	18°♄11'27		
max. Earth dist.	12697 Jun 11 07:01	26°♄51'04	1.44731 AU		12698 May 17 20:40	0°♄		
	12697 Jun 13 06:35	0°♄		max. Earth dist.	12698 May 25 00:31	11°♄10'26	1.45612 AU	
superior conj	12697 Jun 16 01:01	4°♄26'08	-2°10'52	superior conj	12698 May 26 14:18	13°♄38'22	-2°11'00	
minimum elong	12697 Jun 16 04:37	4°♄40'38	2°11'43	minimum elong	12698 May 26 10:28	13°♄23'20	2°11'47	
evening rise	12697 Jun 29 17:10	27°♄02'01			12698 Jun 05 22:37	0°♄		
	12697 Jul 01 11:19	0°♄		evening rise	12698 Jun 10 20:10	7°♄51'25		
asc. node	12697 Jul 08 02:24	11°♄03'44		asc. node	12698 Jun 24 23:19	0°♄06'04		
evening max el	12697 Jul 17 18:23	24°♄26'56	18°08'56		12698 Jun 24 21:38	0°♄		
retrograde	12697 Jul 24 03:05	27°♄47'33		evening max el	12698 Jul 01 07:20	8°♄03'25	18°32'20	
evening set	12697 Jul 26 22:43	27°♄05'50		retrograde	12698 Jul 07 19:02	11°♄33'50		
inferior conj	12697 Aug 02 01:43	21°♄47'08	2°14'21	evening set	12698 Jul 10 23:05	10°♄37'09		
minimum elong	12697 Aug 02 04:16	21°♄40'06	2°12'59	inferior conj	12698 Jul 16 16:04	5°♄02'33	2°49'49	
min. Earth dist.	12697 Aug 04 17:38	18°♄52'39	0.63253 AU	minimum elong	12698 Jul 16 18:03	4°♄56'32	2°48'38	
morning rise	12697 Aug 08 08:01	15°♄33'20		min. Earth dist.	12698 Jul 18 17:59	2°♄32'07	0.65219 AU	
desc. node	12697 Aug 10 08:20	14°♄15'14			12698 Jul 21 01:25	30°♄♂		
direct	12697 Aug 15 00:05	13°♄02'09		morning rise	12698 Jul 22 11:57	28°♄40'44		
morning max el	12697 Aug 28 23:11	21°♄03'57	27°48'33	desc. node	12698 Jul 28 05:44	26°♄02'08		
	12697 Sep 05 17:05	0°♄		direct	12698 Jul 28 23:35	26°♄00'09		
	12697 Sep 25 01:17	0°♄			12698 Aug 07 02:10	0°♄		
morning set	12697 Oct 02 13:41	14°♄20'31		morning max el	12698 Aug 11 10:07	3°♄55'19	27°06'35	
asc. node	12697 Oct 04 03:57	17°♄34'55			12698 Aug 31 03:49	0°♄		
max. Earth dist.	12697 Oct 07 14:59	24°♄49'36	1.32262 AU	morning set	12698 Sep 16 00:00	27°♄38'33		
					12698 Sep 17 05:04	0°♄		
superior conj	12697 Oct 10 08:09	0°♄40'47	0°56'36	max. Earth dist.	12698 Sep 20 08:23	6°♄16'25	1.33545 AU	
minimum elong	12697 Oct 10 05:57	0°♄28'51	0°56'38	asc. node	12698 Sep 21 00:34	7°♄39'02		
	12697 Oct 10 00:38	0°♄						
evening rise	12697 Oct 17 04:44	15°♄37'59		superior conj	12698 Sep 24 10:45	14°♄47'03	0°32'24	

minimum elong	12698 Sep 24 09:11	14° Ω 38'45	0°32'15	minimum elong	12699 Sep 08 05:24	28° Π 26'47	0°03'12
evening rise	12698 Oct 01 15:24	0° \mathbb{M} 07'58		behind sun begin	12699 Sep 07 23:25	27° Π 56'25	
	12698 Oct 01 13:54	0° \mathbb{M}		behind sun end	12699 Sep 08 11:23	28° Π 57'12	
	12698 Oct 18 15:40	0° \mathbb{A}			12699 Sep 08 23:42	0° Ω	
evening max el	12698 Oct 22 07:33	4° \mathbb{A} 04'57	21°53'58	evening rise	12699 Sep 15 23:21	14° Ω 27'37	
desc. node	12698 Oct 24 02:09	5° \mathbb{A} 42'29			12699 Sep 23 22:07	0° \mathbb{M}	
retrograde	12698 Nov 03 20:20	10° \mathbb{A} 18'22		evening max el	12699 Oct 04 06:56	14° \mathbb{M} 38'56	20°26'31
evening set	12698 Nov 06 22:54	9° \mathbb{A} 56'44		desc. node	12699 Oct 10 23:34	19° \mathbb{M} 17'42	
inferior conj	12698 Nov 15 18:34	6° \mathbb{A} 01'11	-5°39'46	retrograde	12699 Oct 15 07:38	20° \mathbb{M} 07'41	
minimum elong	12698 Nov 15 12:25	6° \mathbb{A} 09'48	5°38'10	evening set	12699 Oct 17 10:55	19° \mathbb{M} 56'16	
min. Earth dist.	12698 Nov 15 11:53	6° \mathbb{A} 10'34	0.54595 AU	inferior conj	12699 Oct 26 11:11	16° \mathbb{M} 00'29	-4°30'00
morning rise	12698 Nov 24 03:05	2° \mathbb{A} 13'53		minimum elong	12699 Oct 26 01:07	16° \mathbb{M} 15'10	4°26'35
direct	12698 Nov 27 16:41	1° \mathbb{A} 45'55		min. Earth dist.	12699 Oct 27 19:24	15° \mathbb{M} 13'31	0.54724 AU
morning max el	12698 Dec 09 23:07	7° \mathbb{A} 37'06	21°54'06	morning rise	12699 Nov 03 14:46	11° \mathbb{M} 59'14	
asc. node	12698 Dec 18 01:26	17° \mathbb{A} 33'42		direct	12699 Nov 08 01:50	11° \mathbb{M} 16'19	
	12698 Dec 25 06:59	0° \mathbb{B}		morning max el	12699 Nov 21 11:19	17° \mathbb{M} 48'16	23°41'04
morning set	12698 Dec 30 22:40	11° \mathbb{B} 26'12			12699 Dec 01 08:29	0° \mathbb{A}	
				asc. node	12699 Dec 04 22:26	5° \mathbb{A} 46'04	
superior conj	12699 Jan 07 01:43	26° \mathbb{B} 33'20	1°28'55	morning set	12699 Dec 15 10:24	26° \mathbb{A} 12'21	
minimum elong	12699 Jan 07 03:37	26° \mathbb{B} 43'20	1°29'39		12699 Dec 17 04:44	0° \mathbb{B}	
	12699 Jan 08 17:18	0° \approx		superior conj	12699 Dec 22 07:17	11° \mathbb{B} 06'47	1°36'47
max. Earth dist.	12699 Jan 11 03:49	4° \approx 59'43	1.34531 AU	minimum elong	12699 Dec 22 08:07	11° \mathbb{B} 11'18	1°37'42
evening rise	12699 Jan 15 10:39	13° \approx 26'09		max. Earth dist.	12699 Dec 25 00:10	16° \mathbb{B} 55'05	1.33000 AU
desc. node	12699 Jan 20 01:01	21° \approx 58'28		evening rise	12699 Dec 29 22:54	27° \mathbb{B} 08'13	
	12699 Jan 24 15:42	0° \mathbb{H}			12699 Dec 31 09:36	0° \approx	
	12699 Feb 14 14:56	0° \mathbb{Y}		desc. node	12700 Jan 06 21:49	12° \approx 08'39	
evening max el	12699 Feb 19 12:28	5° \mathbb{Y} 12'33	26°50'50		12700 Jan 17 22:44	0° \mathbb{H}	
retrograde	12699 Mar 04 18:09	12° \mathbb{Y} 37'08		evening max el	12700 Feb 02 01:32	18° \mathbb{H} 37'56	27°25'34
evening set	12699 Mar 11 06:01	10° \mathbb{Y} 04'28		retrograde	12700 Feb 15 17:17	26° \mathbb{H} 03'55	
min. Earth dist.	12699 Mar 15 06:07	6° \mathbb{Y} 06'33	0.65975 AU	evening set	12700 Feb 22 12:38	23° \mathbb{H} 34'23	
asc. node	12699 Mar 15 22:55	5° \mathbb{Y} 18'07		min. Earth dist.	12700 Feb 26 08:34	20° \mathbb{H} 07'50	0.64275 AU
inferior conj	12699 Mar 17 07:37	3° \mathbb{Y} 42'22	0°26'08	inferior conj	12700 Feb 28 21:32	17° \mathbb{H} 26'30	-0°38'13
minimum elong	12699 Mar 17 06:55	3° \mathbb{Y} 44'25	0°25'53	minimum elong	12700 Feb 28 22:43	17° \mathbb{H} 23'23	0°37'25
	12699 Mar 20 18:26	30° \mathbb{R} \mathbb{H}		asc. node	12700 Mar 02 20:21	15° \mathbb{H} 26'08	
morning rise	12699 Mar 23 09:06	28° \mathbb{H} 05'36		morning rise	12700 Mar 07 10:48	12° \mathbb{H} 03'33	
direct	12699 Mar 26 06:08	27° \mathbb{H} 20'10		direct	12700 Mar 09 23:14	11° \mathbb{H} 31'17	
	12699 Mar 31 21:23	0° \mathbb{Y}		morning max el	12700 Mar 16 08:45	14° \mathbb{H} 49'47	17°50'29
morning max el	12699 Apr 01 15:36	0° \mathbb{Y} 42'24	18°11'13		12700 Mar 27 04:07	0° \mathbb{Y}	
desc. node	12699 Apr 18 03:03	24° \mathbb{Y} 23'24		morning set	12700 Apr 02 08:41	10° \mathbb{Y} 21'07	
morning set	12699 Apr 20 17:30	28° \mathbb{Y} 34'45		desc. node	12700 Apr 04 23:38	14° \mathbb{Y} 45'31	
	12699 Apr 21 14:41	0° \mathbb{B}			12700 Apr 14 05:31	0° \mathbb{B}	
superior conj	12699 May 05 22:02	22° \mathbb{B} 43'09	-1°51'03	superior conj	12700 Apr 15 17:44	2° \mathbb{B} 26'01	-1°16'13
minimum elong	12699 May 05 13:00	22° \mathbb{B} 07'48	1°51'00	minimum elong	12700 Apr 15 09:55	1° \mathbb{B} 54'36	1°15'40
max. Earth dist.	12699 May 07 20:07	25° \mathbb{B} 43'27	1.45759 AU	max. Earth dist.	12700 Apr 20 15:36	10° \mathbb{B} 15'26	1.45166 AU
	12699 May 10 13:52	0° \mathbb{I}		evening rise	12700 May 01 12:38	27° \mathbb{B} 08'58	
evening rise	12699 May 21 23:41	17° \mathbb{I} 44'37			12700 May 03 09:24	0° \mathbb{I}	
	12699 May 29 21:33	0° \mathbb{E}		greatest brilliancy	12700 May 16 12:21	19° \mathbb{I} 37'35	-0.6m
greatest brilliancy	12699 Jun 02 15:33	5° \mathbb{E} 43'13	-0.7m		12700 May 24 00:54	0° \mathbb{E}	
asc. node	12699 Jun 11 20:19	18° \mathbb{E} 36'34		evening max el	12700 May 28 20:31	5° \mathbb{E} 34'19	20°08'57
evening max el	12699 Jun 14 16:33	21° \mathbb{E} 47'08	19°12'52	asc. node	12700 May 29 17:26	6° \mathbb{E} 25'01	
retrograde	12699 Jun 21 15:37	25° \mathbb{E} 39'47		retrograde	12700 Jun 05 14:13	10° \mathbb{E} 00'12	
evening set	12699 Jun 25 04:34	24° \mathbb{E} 26'58		evening set	12700 Jun 09 12:47	8° \mathbb{E} 30'43	
inferior conj	12699 Jun 30 15:02	18° \mathbb{E} 37'59	3°08'40	inferior conj	12700 Jun 14 19:48	2° \mathbb{E} 28'41	3°13'46
minimum elong	12699 Jun 30 16:02	18° \mathbb{E} 34'45	3°07'39	minimum elong	12700 Jun 14 19:44	2° \mathbb{E} 28'55	3°12'49
min. Earth dist.	12699 Jul 02 02:17	16° \mathbb{E} 43'44	0.66817 AU	min. Earth dist.	12700 Jun 15 16:45	1° \mathbb{E} 17'30	0.67972 AU
morning rise	12699 Jul 06 02:56	12° \mathbb{E} 14'32			12700 Jun 16 16:00	30° \mathbb{R} \mathbb{I}	
direct	12699 Jul 12 06:08	9° \mathbb{E} 34'37		morning rise	12700 Jun 20 02:22	26° \mathbb{I} 07'37	
desc. node	12699 Jul 15 03:03	10° \mathbb{E} 04'31		direct	12700 Jun 25 18:22	23° \mathbb{I} 37'16	
morning max el	12699 Jul 24 20:58	17° \mathbb{E} 07'27	25°58'56	desc. node	12700 Jul 02 00:13	25° \mathbb{I} 58'01	
	12699 Aug 04 14:36	0° \mathbb{Q}			12700 Jul 06 18:15	0° \mathbb{E}	
	12699 Aug 24 02:26	0° \mathbb{P}		morning max el	12700 Jul 07 06:58	0° \mathbb{B} 31'50	24°35'24
morning set	12699 Aug 29 20:58	10° \mathbb{P} 17'39			12700 Jul 29 12:20	0° \mathbb{Q}	
max. Earth dist.	12699 Sep 02 15:13	17° \mathbb{P} 22'37	1.35328 AU	morning set	12700 Aug 12 00:20	22° \mathbb{Q} 07'53	
asc. node	12699 Sep 07 21:09	27° \mathbb{P} 44'55		max. Earth dist.	12700 Aug 15 14:27	28° \mathbb{Q} 31'35	1.37502 AU
					12700 Aug 16 09:52	0° \mathbb{P}	
superior conj	12699 Sep 08 05:36	28° \mathbb{P} 27'44	0°03'22				









































































































































superior conj	12700 Aug 22 13:32	11° \mathbb{M} 35'50	-0°29'30	superior conj	12701 Aug 05 06:39	24° \mathbb{Q} 01'44	-1°04'06
minimum elong	12700 Aug 22 15:31	11° \mathbb{M} 45'26	0°29'32	minimum elong	12701 Aug 05 11:18	24° \mathbb{Q} 23'06	1°04'00
asc. node	12700 Aug 25 17:46	17° \mathbb{M} 49'31			12701 Aug 08 11:43	0° \mathbb{M}	
evening rise	12700 Aug 31 02:19	28° \mathbb{M} 31'34		asc. node	12701 Aug 12 14:25	7° \mathbb{M} 49'02	
	12700 Aug 31 20:04	0° \mathbb{L}		evening rise	12701 Aug 14 21:18	12° \mathbb{M} 12'08	
evening max el	12700 Sep 16 20:24	25° \mathbb{L} 59'34	19°19'15		12701 Aug 24 17:41	0° \mathbb{L}	
	12700 Sep 22 15:29	0° \mathbb{M}		evening max el	12701 Aug 30 21:54	8° \mathbb{L} 06'25	18°33'42
retrograde	12700 Sep 26 04:52	0° \mathbb{M} 39'53		retrograde	12701 Sep 07 20:40	12° \mathbb{L} 06'39	
desc. node	12700 Sep 27 21:01	0° \mathbb{M} 31'32		evening set	12701 Sep 09 20:16	11° \mathbb{L} 52'29	
evening set	12700 Sep 28 01:19	0° \mathbb{M} 29'41		desc. node	12701 Sep 14 18:28	9° \mathbb{L} 32'43	
	12700 Sep 29 22:13	30° \mathbb{R} \mathbb{L}		inferior conj	12701 Sep 17 17:16	7° \mathbb{L} 23'41	-0°55'43
inferior conj	12700 Oct 06 15:55	26° \mathbb{L} 20'45	-2°44'37	minimum elong	12701 Sep 17 15:03	7° \mathbb{L} 27'57	0°54'48
minimum elong	12700 Oct 06 08:48	26° \mathbb{L} 32'27	2°41'36	min. Earth dist.	12701 Sep 20 22:33	4° \mathbb{L} 56'04	0.57529 AU
min. Earth dist.	12700 Oct 09 06:05	24° \mathbb{L} 38'56	0.55770 AU	morning rise	12701 Sep 25 06:22	2° \mathbb{L} 13'24	
morning rise	12700 Oct 14 13:50	21° \mathbb{L} 48'20		direct	12701 Oct 01 06:08	0° \mathbb{L} 43'18	
direct	12700 Oct 19 21:00	20° \mathbb{L} 44'31		morning max el	12701 Oct 15 13:29	8° \mathbb{L} 14'40	26°52'20
morning max el	12700 Nov 02 21:41	27° \mathbb{L} 49'34	25°26'38		12701 Oct 31 22:52	0° \mathbb{M}	
	12700 Nov 05 01:19	0° \mathbb{M}		asc. node	12701 Nov 08 16:07	13° \mathbb{M} 54'35	
asc. node	12700 Nov 21 19:19	24° \mathbb{M} 36'15		morning set	12701 Nov 14 07:42	25° \mathbb{M} 28'04	
	12700 Nov 24 15:08	0° \mathbb{X}			12701 Nov 16 10:01	0° \mathbb{X}	
morning set	12700 Nov 29 21:58	10° \mathbb{X} 54'26					
				superior conj	12701 Nov 21 04:13	10° \mathbb{X} 33'01	1°33'58
superior conj	12700 Dec 06 16:47	25° \mathbb{X} 48'37	1°38'21	minimum elong	12701 Nov 21 02:58	10° \mathbb{X} 25'58	1°34'45
minimum elong	12700 Dec 06 16:30	25° \mathbb{X} 47'04	1°39'17	max. Earth dist.	12701 Nov 21 11:36	11° \mathbb{X} 14'11	1.31357 AU
max. Earth dist.	12700 Dec 08 03:42	29° \mathbb{X} 01'06	1.31932 AU	evening rise	12701 Nov 28 00:19	25° \mathbb{X} 32'36	
	12700 Dec 08 14:27	0° \mathbb{Z}			12701 Nov 30 03:28	0° \mathbb{Z}	
evening rise	12700 Dec 13 20:19	11° \mathbb{Z} 12'34		desc. node	12701 Dec 11 15:40	21° \mathbb{Z} 20'08	
	12700 Dec 23 15:26	0° \mathbb{Z}			12701 Dec 17 06:53	0° \mathbb{Z}	
desc. node	12700 Dec 24 18:41	1° \mathbb{Z} 58'35		evening max el	12701 Dec 28 17:09	13° \mathbb{Z} 43'32	27°03'27
	12701 Jan 13 22:28	0° \mathbb{X}		retrograde	12702 Jan 11 15:43	20° \mathbb{Z} 55'50	
evening max el	12701 Jan 15 12:02	1° \mathbb{X} 32'37	27°31'20	evening set	12702 Jan 18 11:06	18° \mathbb{Z} 55'39	
retrograde	12701 Jan 29 08:49	8° \mathbb{X} 53'01		min. Earth dist.	12702 Jan 22 07:28	16° \mathbb{Z} 14'36	0.60152 AU
evening set	12701 Feb 05 07:26	6° \mathbb{X} 34'04		inferior conj	12702 Jan 25 11:40	13° \mathbb{Z} 37'24	-3°12'59
min. Earth dist.	12701 Feb 09 01:22	3° \mathbb{X} 34'26	0.62296 AU	minimum elong	12702 Jan 25 18:28	13° \mathbb{Z} 23'18	3°09'47
inferior conj	12701 Feb 12 00:03	0° \mathbb{X} 47'55	-1°52'22	morning rise	12702 Feb 02 04:50	8° \mathbb{Z} 51'30	
minimum elong	12701 Feb 12 03:53	0° \mathbb{X} 38'51	1°50'16	direct	12702 Feb 04 06:44	8° \mathbb{Z} 34'43	
	12701 Feb 12 20:29	30° \mathbb{R} \mathbb{Z}		asc. node	12702 Feb 04 15:06	8° \mathbb{Z} 35'12	
asc. node	12701 Feb 17 17:46	26° \mathbb{Z} 17'21		morning max el	12702 Feb 11 16:30	12° \mathbb{Z} 16'17	18°02'59
morning rise	12701 Feb 19 02:58	25° \mathbb{Z} 41'51			12702 Feb 23 12:50	0° \mathbb{X}	
direct	12701 Feb 21 08:47	25° \mathbb{Z} 19'05		morning set	12702 Feb 27 06:39	6° \mathbb{X} 53'05	
morning max el	12701 Feb 28 02:11	28° \mathbb{Z} 44'07	17°47'24				
	12701 Mar 01 07:03	0° \mathbb{X}		superior conj	12702 Mar 09 06:35	25° \mathbb{X} 08'16	0°03'20
morning set	12701 Mar 15 23:08	23° \mathbb{X} 13'30		minimum elong	12702 Mar 09 06:52	25° \mathbb{X} 09'32	0°03'28
	12701 Mar 19 19:24	0° \mathbb{Y}		behind sun begin	12702 Mar 08 23:11	24° \mathbb{X} 35'28	
desc. node	12701 Mar 22 20:09	5° \mathbb{Y} 16'32		behind sun end	12702 Mar 09 14:33	25° \mathbb{X} 43'30	
				desc. node	12702 Mar 09 16:42	25° \mathbb{X} 52'59	
superior conj	12701 Mar 27 12:04	13° \mathbb{Y} 13'18	-0°35'36		12702 Mar 12 01:12	0° \mathbb{Y}	
minimum elong	12701 Mar 27 08:36	12° \mathbb{Y} 58'42	0°35'12	max. Earth dist.	12702 Mar 16 21:19	8° \mathbb{Y} 13'13	1.42091 AU
max. Earth dist.	12701 Apr 03 08:43	24° \mathbb{Y} 30'35	1.43899 AU	evening rise	12702 Mar 22 06:19	16° \mathbb{Y} 59'53	
	12701 Apr 06 19:13	0° \mathbb{Z}			12702 Mar 30 15:04	0° \mathbb{Z}	
evening rise	12701 Apr 11 02:17	6° \mathbb{Z} 43'19			12702 Apr 21 13:13	0° \mathbb{I}	
	12701 Apr 26 16:26	0° \mathbb{I}		evening max el	12702 Apr 24 11:53	3° \mathbb{I} 09'45	22°35'41
evening max el	12701 May 11 18:40	19° \mathbb{I} 21'44	21°17'57	asc. node	12702 May 03 11:54	8° \mathbb{I} 56'50	
asc. node	12701 May 16 14:38	23° \mathbb{I} 17'04		retrograde	12702 May 04 09:51	9° \mathbb{I} 00'44	
retrograde	12701 May 20 12:50	24° \mathbb{I} 28'50		evening set	12702 May 09 05:51	6° \mathbb{I} 59'39	
evening set	12701 May 24 21:46	22° \mathbb{I} 42'59		inferior conj	12702 May 14 13:23	0° \mathbb{I} 36'48	2°50'07
inferior conj	12701 May 30 03:56	16° \mathbb{I} 29'24	3°07'12	minimum elong	12702 May 14 11:39	0° \mathbb{I} 42'51	2°49'01
minimum elong	12701 May 30 02:54	16° \mathbb{I} 32'57	3°06'12	min. Earth dist.	12702 May 14 07:51	0° \mathbb{I} 56'05	0.68858 AU
min. Earth dist.	12701 May 30 11:16	16° \mathbb{I} 03'50	0.68651 AU		12702 May 14 23:58	30° \mathbb{R} \mathbb{Z}	
morning rise	12701 Jun 04 07:51	10° \mathbb{I} 13'05		morning rise	12702 May 19 17:20	24° \mathbb{Z} 26'36	
direct	12701 Jun 09 11:11	7° \mathbb{I} 58'46		direct	12702 May 24 07:33	22° \mathbb{Z} 32'01	
desc. node	12701 Jun 18 21:18	13° \mathbb{I} 14'33		morning max el	12702 Jun 02 07:24	27° \mathbb{Z} 45'45	21°38'54
morning max el	12701 Jun 19 17:31	14° \mathbb{I} 04'18	23°05'48		12702 Jun 04 10:06	0° \mathbb{I}	
	12701 Jul 02 15:08	0° \mathbb{Z}		desc. node	12702 Jun 05 18:17	1° \mathbb{I} 32'04	
	12701 Jul 22 10:18	0° \mathbb{Q}			12702 Jun 26 05:05	0° \mathbb{Z}	
morning set	12701 Jul 24 05:23	2° \mathbb{Q} 57'37		morning set	12702 Jul 04 09:01	12° \mathbb{Z} 40'00	
max. Earth dist.	12701 Jul 28 12:33	10° \mathbb{Q} 13'48	1.39837 AU	max. Earth dist.	12702 Jul 10 14:44	22° \mathbb{Z} 45'48	1.42059 AU

	12702 Jul 14 22:26	0°♎		superior conj	12703 Jun 29 03:04	16°♊08'40	-2°02'18
				minimum elong	12703 Jun 29 09:13	16°♊34'05	2°02'51
superior conj	12702 Jul 18 04:24	5°♎34'58	-1°36'53		12703 Jul 07 08:28	0°♎	
minimum elong	12702 Jul 18 11:10	6°♎04'26	1°36'55	evening rise	12703 Jul 11 19:02	7°♎40'50	
evening rise	12702 Jul 29 04:27	25°♎19'04		asc. node	12703 Jul 17 07:53	17°♎15'44	
asc. node	12702 Jul 30 11:07	27°♎39'13			12703 Jul 25 10:31	0°♐	
	12702 Jul 31 18:02	0°♐		evening max el	12703 Jul 28 21:04	4°♐02'53	18°03'40
evening max el	12702 Aug 14 07:27	20°♐50'44	18°08'58	retrograde	12703 Aug 04 08:18	7°♐23'59	
retrograde	12702 Aug 21 07:04	24°♐24'13		evening set	12703 Aug 06 23:08	6°♐50'10	
evening set	12702 Aug 23 13:44	24°♐01'58		inferior conj	12703 Aug 13 09:40	1°♐41'55	1°44'57
inferior conj	12702 Aug 30 16:12	19°♐12'41	0°36'16	minimum elong	12703 Aug 13 12:09	1°♐35'32	1°43'38
minimum elong	12702 Aug 30 17:21	19°♐10'06	0°35'33		12703 Aug 15 01:13	30°♐♎	
desc. node	12702 Sep 01 15:58	17°♐25'05		min. Earth dist.	12703 Aug 16 08:44	28°♎40'48	0.61994 AU
min. Earth dist.	12702 Sep 02 23:03	16°♐17'09	0.59707 AU	morning rise	12703 Aug 19 22:46	25°♎36'28	
morning rise	12702 Sep 06 17:42	13°♐29'35		desc. node	12703 Aug 19 13:27	25°♎53'21	
direct	12702 Sep 13 04:55	11°♐31'26		direct	12703 Aug 26 15:03	23°♎14'39	
morning max el	12702 Sep 27 12:56	19°♐22'08	27°44'27		12703 Sep 08 11:26	0°♐	
	12702 Oct 06 14:03	0°♑		morning max el	12703 Sep 09 18:42	1°♐15'36	27°57'45
	12702 Oct 24 17:54	0°♑			12703 Sep 30 19:41	0°♑	
asc. node	12702 Oct 26 12:51	3°♑32'47		asc. node	12703 Oct 13 09:32	23°♑25'00	
morning set	12702 Oct 29 13:44	9°♑47'40		morning set	12703 Oct 13 14:06	23°♑48'23	
max. Earth dist.	12702 Nov 04 20:06	23°♑24'45	1.31294 AU		12703 Oct 16 13:17	0°♑	
				max. Earth dist.	12703 Oct 19 01:29	5°♑23'51	1.31756 AU
superior conj	12702 Nov 05 15:40	25°♑13'43	1°23'51				
minimum elong	12702 Nov 05 13:43	25°♑02'47	1°24'22	superior conj	12703 Oct 21 01:20	9°♑45'46	1°08'08
	12702 Nov 07 19:02	0°♒		minimum elong	12703 Oct 20 23:04	9°♑33'19	1°08'20
evening rise	12702 Nov 12 08:38	10°♒01'48		evening rise	12703 Oct 27 19:21	24°♑35'29	
	12702 Nov 22 10:54	0°♒			12703 Oct 30 08:32	0°♒	
desc. node	12702 Nov 28 12:46	10°♒01'26		desc. node	12703 Nov 15 09:58	27°♒47'24	
evening max el	12702 Dec 10 14:27	25°♒01'50	26°01'32		12703 Nov 17 03:12	0°♒	
	12702 Dec 17 04:07	0°♓		evening max el	12703 Nov 22 03:54	5°♒32'01	24°32'25
retrograde	12702 Dec 24 12:41	2°♓05'17		retrograde	12703 Dec 05 21:33	12°♒23'37	
evening set	12702 Dec 30 19:25	0°♓31'59		evening set	12703 Dec 11 04:21	11°♒21'55	
	12702 Dec 31 20:19	30°♓♒		min. Earth dist.	12703 Dec 16 15:33	8°♒32'53	0.56196 AU
min. Earth dist.	12703 Jan 04 03:25	27°♒55'48	0.58028 AU	inferior conj	12703 Dec 19 01:19	7°♒02'19	-5°33'18
inferior conj	12703 Jan 07 04:47	25°♒44'20	-4°31'59	minimum elong	12703 Dec 19 07:44	6°♒52'13	5°31'24
minimum elong	12703 Jan 07 13:23	25°♒28'53	4°28'44	morning rise	12703 Dec 27 13:11	2°♒59'22	
morning rise	12703 Jan 15 10:10	21°♒20'35		direct	12703 Dec 29 23:19	2°♒43'32	
direct	12703 Jan 17 12:36	21°♒06'18		morning max el	12704 Jan 08 20:04	7°♒27'57	19°37'06
asc. node	12703 Jan 22 12:24	22°♒32'15		asc. node	12704 Jan 09 09:38	8°♒01'31	
morning max el	12703 Jan 25 23:49	25°♒14'40	18°38'56		12704 Jan 23 10:08	0°♓	
	12703 Jan 30 00:22	0°♓		morning set	12704 Jan 26 05:18	5°♓34'16	
morning set	12703 Feb 11 02:01	21°♓03'46					
	12703 Feb 15 16:39	0°♔		superior conj	12704 Feb 03 04:11	21°♓32'43	1°02'39
				minimum elong	12704 Feb 03 07:01	21°♓46'42	1°02'55
superior conj	12703 Feb 19 21:32	7°♔59'12	0°36'34		12704 Feb 07 13:27	0°♔	
minimum elong	12703 Feb 19 23:51	8°♔10'01	0°36'38	max. Earth dist.	12704 Feb 09 11:09	3°♔33'03	1.37698 AU
desc. node	12703 Feb 24 13:16	16°♔30'40		desc. node	12704 Feb 11 09:51	7°♔06'08	
max. Earth dist.	12703 Feb 27 05:03	21°♔12'38	1.39939 AU	evening rise	12704 Feb 13 04:30	10°♔16'36	
evening rise	12703 Mar 03 07:01	28°♔11'33			12704 Feb 25 02:49	0°♕	
	12703 Mar 04 09:01	0°♕			12704 Mar 18 18:54	0°♕	
	12703 Mar 24 03:35	0°♕		evening max el	12704 Mar 19 15:48	0°♕52'22	25°14'00
evening max el	12703 Apr 07 02:15	17°♕00'11	23°56'37	retrograde	12704 Mar 31 17:52	7°♕52'42	
retrograde	12703 Apr 18 03:58	23°♕30'50		asc. node	12704 Apr 06 06:39	5°♕41'25	
asc. node	12703 Apr 20 09:14	23°♕08'24		evening set	12704 Apr 06 13:07	5°♕28'02	
evening set	12703 Apr 23 11:31	21°♕16'32		min. Earth dist.	12704 Apr 10 22:32	0°♕35'55	0.67907 AU
min. Earth dist.	12703 Apr 28 04:21	15°♕48'49	0.68602 AU		12704 Apr 11 09:37	30°♕♐	
inferior conj	12703 Apr 28 22:18	14°♕47'40	2°23'02	inferior conj	12704 Apr 12 04:44	28°♐57'32	1°45'53
minimum elong	12703 Apr 28 20:11	14°♕54'54	2°21'52	minimum elong	12704 Apr 12 02:41	29°♐04'16	1°44'50
morning rise	12703 May 04 04:53	8°♕44'47		morning rise	12704 Apr 17 16:35	23°♐03'20	
direct	12703 May 08 06:25	7°♕11'13		direct	12704 Apr 21 06:13	21°♐50'09	
morning max el	12703 May 16 03:32	11°♕38'32	20°21'37	morning max el	12704 Apr 28 07:14	25°♐41'57	19°18'14
desc. node	12703 May 23 15:10	20°♕34'19			12704 May 02 02:59	0°♕	
	12703 May 30 08:35	0°♖		desc. node	12704 May 09 11:57	10°♕08'45	
morning set	12703 Jun 13 15:19	21°♖28'04		greatest brilliancy	12704 May 11 02:18	12°♕30'03	-0.7m
	12703 Jun 19 02:35	0°♗		morning set	12704 May 22 17:01	0°♖09'27	
max. Earth dist.	12703 Jun 22 23:23	6°♗08'33	1.43911 AU		12704 May 22 14:34	0°♖	

max. Earth dist.	12704 Jun 04 14:21	20° Π 12'13	1.45194 AU	minimum elong	12705 May 18 04:38	4° Π 22'16	2°05'19
				max. Earth dist.	12705 May 18 09:34	4° Π 41'32	1.45773 AU
superior conj	12704 Jun 08 02:35	25° Π 44'58	-2°13'24	evening rise	12705 Jun 03 04:37	29° Π 29'53	
minimum elong	12704 Jun 08 03:17	25° Π 47'43	2°14'21		12705 Jun 03 12:13	0° \mathfrak{C}	
	12704 Jun 10 18:36	0° \mathfrak{C}		greatest brilliancy	12705 Jun 11 20:41	13° \mathfrak{C} 10'50	-0.8m
evening rise	12704 Jun 22 11:59	19° \mathfrak{C} 05'25		asc. node	12705 Jun 20 01:43	25° \mathfrak{C} 22'37	
	12704 Jun 29 02:40	0° Ω			12705 Jun 23 18:54	0° Ω	
asc. node	12704 Jul 03 04:46	6° Ω 32'27		evening max el	12705 Jun 24 22:52	1° Ω 13'39	18°47'28
evening max el	12704 Jul 11 11:11	17° Ω 32'54	18°16'46	retrograde	12705 Jul 01 14:14	4° Ω 51'42	
retrograde	12704 Jul 17 19:56	20° Ω 55'41		evening set	12705 Jul 04 22:06	3° Ω 48'03	
evening set	12704 Jul 20 19:11	20° Ω 07'43			12705 Jul 08 22:56	30° \mathfrak{R} \mathfrak{C}	
inferior conj	12704 Jul 26 17:30	14° Ω 42'16	2°31'36	inferior conj	12705 Jul 10 11:54	28° \mathfrak{C} 07'02	2°59'37
minimum elong	12704 Jul 26 19:53	14° Ω 35'23	2°30'18	minimum elong	12705 Jul 10 13:30	28° \mathfrak{C} 02'02	2°58'30
min. Earth dist.	12704 Jul 29 03:43	11° Ω 56'10	0.64137 AU	min. Earth dist.	12705 Jul 12 07:30	25° \mathfrak{C} 51'09	0.65960 AU
morning rise	12704 Aug 01 19:08	8° Ω 24'22		morning rise	12705 Jul 16 04:06	21° \mathfrak{C} 44'06	
desc. node	12704 Aug 05 10:54	6° Ω 18'20		direct	12705 Jul 22 12:35	19° \mathfrak{C} 02'53	
direct	12704 Aug 08 10:06	5° Ω 47'46		desc. node	12705 Jul 23 08:16	19° \mathfrak{C} 05'18	
morning max el	12704 Aug 22 04:18	13° Ω 47'58	27°34'15	morning max el	12705 Aug 04 15:21	26° \mathfrak{C} 49'29	26°40'20
	12704 Sep 04 06:30	0° \mathfrak{M}			12705 Aug 07 14:25	0° Ω	
	12704 Sep 22 10:24	0° $\underline{\mathfrak{C}}$			12705 Aug 28 21:39	0° \mathfrak{M}	
morning set	12704 Sep 26 06:21	7° $\underline{\mathfrak{C}}$ 23'32		morning set	12705 Sep 09 11:26	20° \mathfrak{M} 25'56	
asc. node	12704 Sep 29 06:10	13° $\underline{\mathfrak{C}}$ 25'46		max. Earth dist.	12705 Sep 13 13:10	28° \mathfrak{M} 20'31	1.34255 AU
max. Earth dist.	12704 Oct 01 00:02	17° $\underline{\mathfrak{C}}$ 02'52	1.32746 AU		12705 Sep 14 09:05	0° $\underline{\mathfrak{C}}$	
				asc. node	12705 Sep 16 02:47	3° $\underline{\mathfrak{C}}$ 31'04	
superior conj	12704 Oct 04 07:09	24° $\underline{\mathfrak{C}}$ 03'02	0°46'58				
minimum elong	12704 Oct 04 05:08	23° $\underline{\mathfrak{C}}$ 52'12	0°46'54	superior conj	12705 Sep 18 06:48	7° $\underline{\mathfrak{C}}$ 59'17	0°20'38
	12704 Oct 07 01:09	0° \mathfrak{M}		minimum elong	12705 Sep 18 05:44	7° $\underline{\mathfrak{C}}$ 53'40	0°20'27
evening rise	12704 Oct 11 06:34	9° \mathfrak{M} 08'11		evening rise	12705 Sep 25 16:21	23° $\underline{\mathfrak{C}}$ 34'44	
	12704 Oct 21 23:30	0° \mathfrak{X}			12705 Sep 28 18:59	0° \mathfrak{M}	
desc. node	12704 Nov 01 07:17	14° \mathfrak{X} 17'24		evening max el	12705 Oct 15 06:20	25° \mathfrak{M} 48'57	21°14'28
evening max el	12704 Nov 02 14:10	15° \mathfrak{X} 35'48	22°50'55	desc. node	12705 Oct 19 04:40	29° \mathfrak{M} 04'49	
retrograde	12704 Nov 15 17:12	22° \mathfrak{X} 06'58			12705 Oct 20 17:04	0° \mathfrak{X}	
evening set	12704 Nov 19 15:10	21° \mathfrak{X} 33'37		retrograde	12705 Oct 27 04:41	1° \mathfrak{X} 44'48	
min. Earth dist.	12704 Nov 26 22:54	18° \mathfrak{X} 13'26	0.54948 AU	evening set	12705 Oct 29 19:37	1° \mathfrak{X} 28'47	
inferior conj	12704 Nov 28 03:07	17° \mathfrak{X} 33'13	-5°53'57		12705 Nov 03 04:33	30° \mathfrak{R} \mathfrak{M}	
minimum elong	12704 Nov 28 01:56	17° \mathfrak{X} 34'54	5°53'00	inferior conj	12705 Nov 07 18:58	27° \mathfrak{M} 34'39	-5°16'27
morning rise	12704 Dec 06 14:10	13° \mathfrak{X} 44'30		minimum elong	12705 Nov 07 10:11	27° \mathfrak{M} 47'00	5°13'59
direct	12704 Dec 09 16:27	13° \mathfrak{X} 22'16		min. Earth dist.	12705 Nov 08 05:05	27° \mathfrak{M} 20'24	0.54533 AU
morning max el	12704 Dec 21 02:17	18° \mathfrak{X} 48'21	20°58'15	morning rise	12705 Nov 16 01:25	23° \mathfrak{M} 44'26	
asc. node	12704 Dec 26 06:47	24° \mathfrak{X} 47'20		direct	12705 Nov 20 00:18	23° \mathfrak{M} 10'51	
	12704 Dec 29 19:25	0° \mathfrak{Z}		morning max el	12705 Dec 02 19:26	29° \mathfrak{M} 19'21	22°38'47
morning set	12705 Jan 09 13:39	20° \mathfrak{Z} 16'37			12705 Dec 03 12:16	0° \mathfrak{X}	
	12705 Jan 14 05:17	0° \approx		asc. node	12705 Dec 13 03:50	12° \mathfrak{X} 32'25	
					12705 Dec 22 14:40	0° \mathfrak{Z}	
superior conj	12705 Jan 16 22:21	5° \approx 37'29	1°21'21	morning set	12705 Dec 25 00:42	5° \mathfrak{Z} 03'12	
minimum elong	12705 Jan 17 00:46	5° \approx 49'53	1°21'55				
max. Earth dist.	12705 Jan 21 20:27	15° \approx 31'02	1.35599 AU	superior conj	12706 Jan 01 00:33	20° \mathfrak{Z} 02'58	1°33'03
evening rise	12705 Jan 25 19:53	23° \approx 07'00		minimum elong	12706 Jan 01 02:02	20° \mathfrak{Z} 10'48	1°33'52
desc. node	12705 Jan 28 06:31	27° \approx 35'48		max. Earth dist.	12706 Jan 04 12:26	27° \mathfrak{Z} 23'45	1.33823 AU
	12705 Jan 29 14:45	0° \mathfrak{H}			12706 Jan 05 18:52	0° \approx	
	12705 Feb 17 19:43	0° \mathfrak{Y}		evening rise	12706 Jan 09 01:28	6° \approx 32'25	
evening max el	12705 Mar 02 05:33	14° \mathfrak{Y} 41'52	26°20'27	desc. node	12706 Jan 15 03:14	17° \approx 54'33	
retrograde	12705 Mar 15 02:36	22° \mathfrak{Y} 00'08			12706 Jan 22 06:19	0° \mathfrak{H}	
evening set	12705 Mar 21 08:57	19° \mathfrak{Y} 28'59		evening max el	12706 Feb 12 19:04	28° \mathfrak{H} 18'35	27°08'44
asc. node	12705 Mar 24 04:04	16° \mathfrak{Y} 45'03			12706 Feb 14 15:07	0° \mathfrak{Y}	
min. Earth dist.	12705 Mar 25 12:11	15° \mathfrak{Y} 11'46	0.66795 AU	retrograde	12706 Feb 26 05:21	5° \mathfrak{Y} 44'22	
inferior conj	12705 Mar 27 06:39	13° \mathfrak{Y} 02'15	0°58'22	evening set	12706 Mar 04 21:00	3° \mathfrak{Y} 12'01	
minimum elong	12705 Mar 27 05:15	13° \mathfrak{Y} 06'33	0°57'43		12706 Mar 08 07:18	30° \mathfrak{R} \mathfrak{H}	
morning rise	12705 Apr 02 02:24	7° \mathfrak{Y} 18'32		min. Earth dist.	12706 Mar 08 19:06	29° \mathfrak{H} 28'08	0.65296 AU
direct	12705 Apr 05 05:14	6° \mathfrak{Y} 23'41		inferior conj	12706 Mar 11 01:40	26° \mathfrak{H} 55'21	0°00'08
morning max el	12705 Apr 11 17:57	9° \mathfrak{Y} 52'49	18°30'55	minimum elong	12706 Mar 11 01:39	26° \mathfrak{H} 55'23	0°00'17
desc. node	12705 Apr 26 08:38	0° \mathfrak{B} 06'53		transit middle	12706 Mar 11 01:39	26° \mathfrak{H} 55'23	0°00'17
	12705 Apr 26 06:52	0° \mathfrak{B}		transit begin	12706 Mar 10 22:39	27° \mathfrak{H} 03'51	
morning set	12705 May 02 12:09	9° \mathfrak{B} 46'36		transit end	12706 Mar 11 04:40	26° \mathfrak{H} 46'55	
	12705 May 15 09:29	0° Π		asc. node	12706 Mar 11 01:30	26° \mathfrak{H} 55'48	
				morning rise	12706 Mar 17 07:54	21° \mathfrak{H} 24'19	
superior conj	12705 May 18 11:24	4° Π 48'39	-2°04'51	direct	12706 Mar 20 01:10	20° \mathfrak{H} 44'50	

morning max el	12706 Mar 26 09:34	24° X 03'47	18°00'22	direct	12707 Mar 03 15:18	4° X 46'58	
	12706 Mar 31 07:26	0° Y		morning max el	12707 Mar 10 03:16	8° X 06'57	17°47'00
morning set	12706 Apr 13 11:16	20° Y 46'17			12707 Mar 24 18:33	0° Y	
desc. node	12706 Apr 13 05:13	20° Y 21'28		morning set	12707 Mar 26 13:01	3° Y 02'27	
	12706 Apr 19 03:02	0° X		desc. node	12707 Mar 31 01:44	10° Y 47'38	
superior conj	12706 Apr 27 22:11	14° X 04'16	-1°37'34	superior conj	12707 Apr 08 02:46	24° Y 12'52	-0°59'10
minimum elong	12706 Apr 27 13:00	13° X 27'57	1°37'13	minimum elong	12707 Apr 07 20:42	23° Y 48'01	0°58'38
max. Earth dist.	12706 May 01 05:48	19° X 17'25	1.45596 AU		12707 Apr 11 16:26	0° X	
	12706 May 08 02:48	0° II		max. Earth dist.	12707 Apr 14 00:07	3° X 42'29	1.44697 AU
evening rise	12706 May 14 00:20	9° II 06'35		evening rise	12707 Apr 23 11:26	18° X 29'23	
greatest brilliancy	12706 May 27 12:48	29° II 38'50	-0.7m		12707 May 01 01:40	0° II	
	12706 May 27 18:33	0° X		evening max el	12707 May 22 07:14	28° II 45'51	20°36'58
asc. node	12706 Jun 06 22:46	13° X 36'50			12707 May 23 14:13	0° X	
evening max el	12706 Jun 08 05:55	14° X 59'06	19°34'52	asc. node	12707 May 24 19:55	1° X 03'01	
retrograde	12706 Jun 15 12:04	19° X 04'52		retrograde	12707 May 30 11:00	3° X 29'10	
evening set	12706 Jun 19 05:02	17° X 44'51		evening set	12707 Jun 03 13:46	1° X 52'46	
inferior conj	12706 Jun 24 13:39	11° X 49'53	3°12'22		12707 Jun 05 12:52	30° X II	
minimum elong	12706 Jun 24 14:12	11° X 48'05	3°11'23	inferior conj	12707 Jun 08 20:07	25° II 45'26	3°12'22
min. Earth dist.	12706 Jun 25 18:39	10° X 13'38	0.67362 AU	minimum elong	12707 Jun 08 19:37	25° II 47'08	3°11'24
morning rise	12706 Jun 29 22:57	5° X 27'00		min. Earth dist.	12707 Jun 09 11:12	24° II 53'27	0.68310 AU
direct	12706 Jul 05 21:30	2° X 50'31		morning rise	12707 Jun 14 01:12	19° II 25'55	
desc. node	12706 Jul 10 05:30	3° X 58'33		direct	12707 Jun 19 11:50	17° II 01'44	
morning max el	12706 Jul 18 02:06	10° X 08'57	25°24'51	desc. node	12707 Jun 27 02:38	20° II 30'13	
	12706 Aug 02 19:46	0° Q		morning max el	12707 Jun 30 12:09	23° II 37'18	23°57'31
	12706 Aug 21 12:20	0° P			12707 Jul 06 03:56	0° X	
morning set	12706 Aug 23 01:35	2° P 46'30			12707 Jul 27 04:47	0° Q	
max. Earth dist.	12706 Aug 26 16:38	9° P 26'54	1.36217 AU	morning set	12707 Aug 04 20:04	14° Q 12'59	
				max. Earth dist.	12707 Aug 08 14:12	20° Q 45'28	1.38483 AU
					12707 Aug 13 16:24	0° P	
superior conj	12706 Sep 01 21:29	21° P 27'39	-0°10'13				
minimum elong	12706 Sep 01 22:07	21° P 30'52	0°10'20	superior conj	12707 Aug 15 23:37	4° P 19'06	-0°44'08
behind sun begin	12706 Sep 01 17:13	21° P 06'27		minimum elong	12707 Aug 16 02:42	4° P 33'45	0°44'05
behind sun end	12706 Sep 02 03:01	21° P 55'19		asc. node	12707 Aug 20 20:00	13° P 40'18	
asc. node	12706 Sep 02 23:23	23° P 37'18		evening rise	12707 Aug 24 22:33	21° P 44'39	
	12706 Sep 06 02:50	0° L			12707 Aug 29 04:55	0° L	
evening rise	12706 Sep 09 22:34	7° L 49'24		evening max el	12707 Sep 10 06:42	18° L 23'52	18°57'18
	12706 Sep 22 01:55	0° M		retrograde	12707 Sep 18 23:52	22° L 45'40	
evening max el	12706 Sep 27 11:37	6° M 42'11	19°55'10	evening set	12707 Sep 20 20:42	22° L 34'26	
desc. node	12706 Oct 06 02:07	11° M 42'23		desc. node	12707 Sep 22 23:36	21° L 56'22	
retrograde	12706 Oct 07 19:17	11° M 50'37		inferior conj	12707 Sep 29 04:22	18° L 17'50	-1°57'19
evening set	12706 Oct 09 17:43	11° M 40'35		minimum elong	12707 Sep 28 23:22	18° L 26'36	1°55'08
inferior conj	12706 Oct 18 15:20	7° M 40'11	-3°47'43	min. Earth dist.	12707 Oct 02 02:59	16° L 14'34	0.56446 AU
minimum elong	12706 Oct 18 05:55	7° M 54'32	3°44'07	morning rise	12707 Oct 06 22:54	13° L 29'01	
min. Earth dist.	12706 Oct 20 13:44	6° M 29'29	0.55060 AU	direct	12707 Oct 12 13:39	12° L 14'17	
morning rise	12706 Oct 26 16:44	3° M 27'09		morning max el	12707 Oct 26 18:13	19° L 32'15	26°06'21
direct	12706 Oct 31 12:20	2° M 36'23			12707 Nov 04 15:43	0° M	
morning max el	12706 Nov 14 06:03	9° M 23'32	24°27'19	asc. node	12707 Nov 16 21:37	20° M 05'42	
	12706 Nov 29 10:34	0° X			12707 Nov 21 20:55	0° X	
asc. node	12706 Nov 30 00:46	1° X 02'30		morning set	12707 Nov 23 23:35	4° X 27'49	
morning set	12706 Dec 09 12:36	19° X 48'45					
	12706 Dec 14 04:49	0° Z		superior conj	12707 Nov 30 18:41	19° X 25'18	1°37'12
superior conj	12706 Dec 16 08:05	4° Z 41'20	1°38'11	minimum elong	12707 Nov 30 17:58	19° X 21'18	1°38'06
minimum elong	12706 Dec 16 08:27	4° Z 43'17	1°39'08	max. Earth dist.	12707 Dec 01 17:32	21° X 32'08	1.31625 AU
max. Earth dist.	12706 Dec 18 11:59	9° Z 23'29	1.32482 AU		12707 Dec 05 14:21	0° Z	
evening rise	12706 Dec 23 17:58	20° Z 24'59		evening rise	12707 Dec 07 18:29	4° Z 36'56	
	12706 Dec 28 15:14	0° \approx		desc. node	12707 Dec 19 21:01	27° Z 36'16	
desc. node	12707 Jan 02 00:04	7° \approx 57'08			12707 Dec 21 07:27	0° \approx	
	12707 Jan 16 07:03	0° X		evening max el	12708 Jan 08 15:32	24° \approx 08'59	27°23'44
evening max el	12707 Jan 26 07:02	11° X 31'33	27°31'48		12708 Jan 16 16:56	0° X	
retrograde	12707 Feb 09 01:28	18° X 56'27		retrograde	12708 Jan 22 13:50	1° X 26'51	
evening set	12707 Feb 15 22:56	16° X 30'03			12708 Jan 28 04:17	30° X \approx	
min. Earth dist.	12707 Feb 19 17:30	13° X 15'56	0.63463 AU	evening set	12708 Jan 29 11:48	29° \approx 14'55	
inferior conj	12707 Feb 22 11:05	10° X 30'27	-1°08'36	min. Earth dist.	12708 Feb 02 05:59	26° \approx 24'17	0.61389 AU
minimum elong	12707 Feb 22 13:18	10° X 24'50	1°07'16	inferior conj	12708 Feb 05 07:43	23° \approx 39'38	-2°26'08
asc. node	12707 Feb 25 22:55	7° X 14'46		minimum elong	12708 Feb 05 12:49	23° \approx 28'11	2°23'30
morning rise	12707 Mar 01 06:01	5° X 14'38		morning rise	12708 Feb 12 16:45	18° \approx 41'49	

asc. node	12708 Feb 12 20:18	18° \approx 39'15		inferior conj	12709 Jan 17 11:54	6° \approx 12'41	-3°47'28
direct	12708 Feb 14 20:19	18° \approx 22'10		minimum elong	12709 Jan 17 19:45	5° \approx 57'22	3°44'04
morning max el	12708 Feb 21 19:51	21° \approx 53'24	17°51'38	morning rise	12709 Jan 25 10:40	1° \approx 35'41	
	12708 Feb 28 01:25	0° H		direct	12709 Jan 27 12:07	1° \approx 20'22	
morning set	12708 Mar 08 11:29	16° H 17'17		asc. node	12709 Jan 29 17:38	1° \approx 39'08	
	12708 Mar 16 03:38	0° Y		morning max el	12709 Feb 04 07:37	5° \approx 12'27	18°15'38
desc. node	12708 Mar 16 22:17	1° Y 21'34			12709 Feb 19 22:03	0° H	
				morning set	12709 Feb 20 00:38	0° H 12'12	
superior conj	12708 Mar 19 07:40	5° Y 29'58	-0°18'35				
minimum elong	12708 Mar 19 05:58	5° Y 22'42	0°18'18	superior conj	12709 Mar 01 11:25	17° H 50'15	0°18'15
max. Earth dist.	12708 Mar 26 14:57	17° Y 43'47	1.43180 AU	minimum elong	12709 Mar 01 12:46	17° H 56'24	0°18'20
evening rise	12708 Apr 02 05:56	28° Y 19'15		desc. node	12709 Mar 03 18:50	21° H 59'01	
	12708 Apr 03 07:44	0° B			12709 Mar 08 09:13	0° Y	
	12708 Apr 23 18:43	0° II		max. Earth dist.	12709 Mar 09 01:37	1° Y 09'48	1.41205 AU
evening max el	12708 May 04 03:10	12° II 34'03	21°50'22	evening rise	12709 Mar 13 18:30	8° Y 59'20	
asc. node	12708 May 10 17:09	17° II 26'51			12709 Mar 27 08:47	0° B	
retrograde	12708 May 13 09:06	18° II 00'00		evening max el	12709 Apr 16 19:04	26° B 23'44	23°10'11
evening set	12708 May 17 22:34	16° II 07'45			12709 Apr 20 22:00	0° II	
inferior conj	12708 May 23 05:04	9° II 50'03	3°01'14	retrograde	12709 Apr 27 04:53	2° II 31'49	
minimum elong	12708 May 23 03:43	9° II 54'48	3°00'11	asc. node	12709 Apr 27 14:28	2° II 31'05	
min. Earth dist.	12708 May 23 06:58	9° II 43'28	0.68791 AU	evening set	12709 May 02 05:48	0° II 24'53	
morning rise	12708 May 28 08:39	3° II 35'59			12709 May 02 16:56	30° R B	
direct	12708 Jun 02 06:28	1° II 29'30		min. Earth dist.	12709 May 07 03:43	24° B 36'41	0.68808 AU
morning max el	12708 Jun 11 23:34	7° II 13'04	22°28'02	inferior conj	12709 May 07 14:32	23° B 59'19	2°39'51
desc. node	12708 Jun 12 23:39	8° II 15'12		minimum elong	12709 May 07 12:35	24° B 06'04	2°38'43
	12708 Jun 29 15:33	0° E		morning rise	12709 May 12 19:16	17° B 52'11	
morning set	12708 Jul 15 14:26	24° E 34'31		direct	12709 May 17 04:08	16° B 06'18	
	12708 Jul 18 21:27	0° O		morning max el	12709 May 25 15:42	20° B 58'43	21°04'34
max. Earth dist.	12708 Jul 20 13:07	2° O 46'22	1.40811 AU	desc. node	12709 May 30 20:34	26° B 53'18	
					12709 Jun 02 06:42	0° II	
superior conj	12708 Jul 28 09:05	16° O 24'28	-1°18'30		12709 Jun 22 20:39	0° E	
minimum elong	12708 Jul 28 14:48	16° O 50'07	1°18'24	morning set	12709 Jun 25 07:43	3° E 49'45	
	12708 Aug 04 18:32	0° np		max. Earth dist.	12709 Jul 02 18:18	15° E 42'02	1.42911 AU
asc. node	12708 Aug 06 16:41	3° np 36'41					
evening rise	12708 Aug 07 13:01	5° np 12'19		superior conj	12709 Jul 09 21:22	27° E 33'02	-1°48'57
	12708 Aug 22 17:31	0° E		minimum elong	12709 Jul 10 04:23	28° E 02'50	1°49'10
evening max el	12708 Aug 23 12:15	0° E 48'39	18°20'46		12709 Jul 11 07:50	0° O	
retrograde	12708 Aug 30 23:36	4° E 35'17		evening rise	12709 Jul 21 13:42	18° O 01'22	
evening set	12708 Sep 02 02:06	4° E 18'04		asc. node	12709 Jul 24 13:26	23° O 21'48	
desc. node	12708 Sep 08 21:05	0° E 17'19			12709 Jul 28 08:26	0° np	
	12708 Sep 09 05:37	30° R np		evening max el	12709 Aug 07 00:00	13° np 46'01	18°04'24
inferior conj	12708 Sep 09 15:05	29° np 40'39	-0°14'01	retrograde	12709 Aug 13 16:55	17° np 12'21	
minimum elong	12708 Sep 09 14:34	29° np 41'43	0°13'55	evening set	12709 Aug 16 03:07	16° np 45'26	
transit middle	12708 Sep 09 14:34	29° np 41'43	0°13'55	inferior conj	12709 Aug 22 22:21	11° np 47'33	1°08'14
transit begin	12708 Sep 09 12:47	29° np 45'22		minimum elong	12709 Aug 23 00:17	11° np 42'55	1°07'11
transit end	12708 Sep 09 16:20	29° np 38'04		min. Earth dist.	12709 Aug 26 02:38	8° np 47'17	0.60685 AU
min. Earth dist.	12708 Sep 12 22:37	26° np 58'33	0.58432 AU	desc. node	12709 Aug 26 18:33	8° np 11'57	
morning rise	12708 Sep 16 23:32	24° np 15'37		morning rise	12709 Aug 29 18:35	5° np 53'54	
direct	12708 Sep 23 05:12	22° np 33'11		direct	12709 Sep 05 08:47	3° np 45'08	
	12708 Oct 07 07:30	0° E		morning max el	12709 Sep 19 15:20	11° np 40'26	27°54'57
morning max el	12708 Oct 07 13:00	0° E 13'20	27°18'56		12709 Oct 04 01:37	0° E	
	12708 Oct 28 16:58	0° ml		asc. node	12709 Oct 20 15:07	29° E 18'36	
asc. node	12708 Nov 02 18:23	9° ml 33'20			12709 Oct 20 23:16	0° ml	
morning set	12708 Nov 07 07:58	18° ml 55'59		morning set	12709 Oct 22 11:55	3° ml 08'46	
	12708 Nov 12 09:43	0° X		max. Earth dist.	12709 Oct 28 10:01	15° ml 53'44	1.31431 AU
superior conj	12708 Nov 14 06:22	4° X 08'59	1°30'22	superior conj	12709 Oct 29 17:20	18° ml 47'12	1°17'53
minimum elong	12708 Nov 14 04:46	4° X 00'02	1°31'03	minimum elong	12709 Oct 29 15:11	18° ml 35'16	1°18'15
max. Earth dist.	12708 Nov 14 02:07	3° X 45'14	1.31273 AU		12709 Nov 03 18:47	0° X	
evening rise	12708 Nov 21 00:37	19° X 01'56		evening rise	12709 Nov 05 10:14	3° X 34'32	
	12708 Nov 26 08:49	0° Z			12709 Nov 19 07:47	0° Z	
desc. node	12708 Dec 05 18:04	16° Z 42'23		desc. node	12709 Nov 22 15:14	5° Z 03'00	
	12708 Dec 15 04:55	0° \approx		evening max el	12709 Dec 02 11:47	16° Z 56'45	25°26'15
evening max el	12708 Dec 20 17:51	5° \approx 59'08	26°41'07	retrograde	12709 Dec 16 08:20	23° Z 54'59	
retrograde	12709 Jan 03 16:41	13° \approx 07'08		evening set	12709 Dec 22 06:34	22° Z 34'49	
evening set	12709 Jan 10 07:46	11° \approx 17'56		min. Earth dist.	12709 Dec 26 23:58	19° Z 55'45	0.57202 AU
min. Earth dist.	12709 Jan 14 07:51	8° \approx 40'37	0.59231 AU	inferior conj	12709 Dec 29 20:28	18° Z 00'16	-5°01'22

minimum elong	12709 Dec 30 04:49	17°  46'09	4°58'34	inferior conj	12710 Dec 10 08:24	28°  56'59	-5°48'22
morning rise	12710 Jan 07 05:30	13°  45'43		minimum elong	12710 Dec 10 12:09	28°  51'22	5°47'08
direct	12710 Jan 09 10:24	13°  31'11		morning rise	12710 Dec 18 20:50	25°  01'51	
asc. node	12710 Jan 16 14:54	16°  31'42		direct	12710 Dec 21 12:50	24°  44'02	
morning max el	12710 Jan 18 10:43	17°  53'28	19°00'50	morning max el	12711 Jan 01 01:18	29°  45'16	20°08'53
	12710 Jan 27 05:52	0°  ≈			12711 Jan 01 07:23	0°  ≈	
morning set	12710 Feb 03 23:50	14°  ≈33'28		asc. node	12711 Jan 03 12:05	2°  ≈21'40	
	12710 Feb 11 20:48	0°  ≈		morning set	12711 Jan 19 05:34	29°  ≈09'56	
					12711 Jan 19 15:22	0°  ≈	
superior conj	12710 Feb 12 09:40	1°  ≈01'40	0°48'31	superior conj	12711 Jan 26 21:42	14°  ≈50'08	1°11'27
minimum elong	12710 Feb 12 12:22	1°  ≈14'31	0°48'39	minimum elong	12711 Jan 27 00:27	15°  ≈03'55	1°11'50
desc. node	12710 Feb 18 15:26	12°  ≈36'43		max. Earth dist.	12711 Feb 01 15:25	26°  ≈02'02	1.36775 AU
max. Earth dist.	12710 Feb 19 08:43	13°  ≈54'10	1.38988 AU		12711 Feb 03 18:22	0°  ≈	
evening rise	12710 Feb 23 04:21	20°  ≈34'58		evening rise	12711 Feb 05 09:49	3°  ≈00'10	
	12710 Feb 28 20:02	0°  ≈		desc. node	12711 Feb 05 12:04	3°  ≈10'19	
	12710 Mar 21 10:52	0°  ≈			12711 Feb 21 21:08	0°  ≈	
evening max el	12710 Mar 30 08:53	10°  ≈15'18	24°30'16	evening max el	12711 Mar 12 22:15	24°  ≈06'26	25°43'54
retrograde	12710 Apr 10 21:13	16°  ≈59'29			12711 Mar 20 14:33	0°  ≈	
asc. node	12710 Apr 14 11:49	16°  ≈01'25		retrograde	12711 Mar 25 09:10	1°  ≈16'27	
evening set	12710 Apr 16 09:55	14°  ≈40'09			12711 Mar 29 17:26	30°  ≈R  Y	
min. Earth dist.	12710 Apr 20 23:22	9°  ≈27'54	0.68368 AU	evening set	12711 Mar 31 09:18	28°  ≈Y48'09	
inferior conj	12710 Apr 21 22:36	8°  ≈10'08	2°08'29	asc. node	12711 Apr 01 09:13	27°  ≈Y54'06	
minimum elong	12710 Apr 21 20:27	8°  ≈17'22	2°07'22	min. Earth dist.	12711 Apr 04 15:50	24°  ≈Y11'11	0.67485 AU
morning rise	12710 Apr 27 07:09	2°  ≈11'01		inferior conj	12711 Apr 06 03:22	22°  ≈Y18'22	1°27'00
direct	12710 May 01 03:31	0°  ≈46'21		minimum elong	12711 Apr 06 01:30	22°  ≈Y24'18	1°26'05
morning max el	12710 May 08 15:05	4°  ≈56'36	19°52'48	morning rise	12711 Apr 11 18:17	16°  ≈Y28'35	
desc. node	12710 May 17 17:25	16°  ≈10'23		direct	12711 Apr 15 03:05	15°  ≈Y23'43	
	12710 May 27 04:45	0°  ≈		morning max el	12711 Apr 21 22:02	19°  ≈Y04'28	18°56'04
morning set	12710 Jun 04 09:19	12°  ≈II27'16			12711 Apr 30 13:54	0°  ≈	
max. Earth dist.	12710 Jun 15 06:12	29°  ≈II25'17	1.44539 AU	desc. node	12711 May 04 14:09	5°  ≈855'56	
	12710 Jun 15 14:57	0°  ≈		greatest brilliancy	12711 May 05 09:52	7°  ≈810'29	-0.8m
superior conj	12710 Jun 20 09:40	7°  ≈40'11	-2°09'09	morning set	12711 May 14 16:06	21°  ≈826'12	
minimum elong	12710 Jun 20 14:07	7°  ≈58'11	2°09'57		12711 May 20 04:24	0°  ≈	
evening rise	12710 Jul 03 19:37	29°  ≈59'57		max. Earth dist.	12711 May 28 23:02	13°  ≈II41'10	1.45526 AU
	12710 Jul 03 19:38	0°  ≈					
asc. node	12710 Jul 11 10:15	12°  ≈II50'38		superior conj	12711 May 31 01:18	16°  ≈II58'18	-2°12'18
evening max el	12710 Jul 21 14:07	27°  ≈II06'06	18°07'00	minimum elong	12711 May 30 22:39	16°  ≈II47'52	2°13'10
	12710 Jul 25 16:58	0°  ≈			12711 Jun 08 06:40	0°  ≈	
retrograde	12710 Jul 27 23:13	0°  ≈		evening rise	12711 Jun 15 02:21	10°  ≈59'03	
	12710 Jul 30 05:28	30°  ≈R  II			12711 Jun 26 23:48	0°  ≈	
evening set	12710 Jul 30 17:34	29°  ≈II47'01		asc. node	12711 Jun 28 07:08	1°  ≈II57'22	
inferior conj	12710 Aug 05 22:24	24°  ≈II30'57	2°07'14	evening max el	12711 Jul 05 03:27	10°  ≈II41'27	18°27'43
minimum elong	12710 Aug 06 00:58	24°  ≈II23'59	2°05'54	retrograde	12711 Jul 11 14:09	14°  ≈II09'29	
min. Earth dist.	12710 Aug 08 16:16	21°  ≈II34'05	0.62928 AU	evening set	12711 Jul 14 16:54	13°  ≈II15'11	
morning rise	12710 Aug 12 06:24	18°  ≈II18'54		inferior conj	12711 Jul 20 11:10	7°  ≈II42'59	2°45'31
desc. node	12710 Aug 13 16:01	17°  ≈II22'33		minimum elong	12711 Jul 20 13:17	7°  ≈II36'40	2°44'19
direct	12710 Aug 18 22:36	15°  ≈II49'52		min. Earth dist.	12711 Jul 22 15:18	5°  ≈II07'56	0.64952 AU
morning max el	12710 Sep 01 23:15	23°  ≈II52'07	27°52'09	morning rise	12711 Jul 26 08:28	1°  ≈II21'54	
	12710 Sep 07 11:28	0°  ≈			12711 Jul 28 07:00	30°  ≈R  5	
	12710 Sep 27 10:10	0°  ≈		desc. node	12711 Jul 31 13:23	28°  ≈548'07	
morning set	12710 Oct 06 09:09	16°  ≈II59'35		direct	12711 Aug 01 21:08	28°  ≈541'54	
asc. node	12710 Oct 07 11:46	19°  ≈II15'07			12711 Aug 06 20:56	0°  ≈	
max. Earth dist.	12710 Oct 11 13:06	27°  ≈II46'08	1.32109 AU	morning max el	12711 Aug 15 09:53	6°  ≈II39'06	27°14'36
	12710 Oct 12 13:58	0°  ≈			12711 Sep 02 08:47	0°  ≈	
superior conj	12710 Oct 14 01:35	3°  ≈III13'29	0°59'50	morning set	12711 Sep 19 21:03	0°  ≈	
minimum elong	12710 Oct 13 23:21	3°  ≈III01'18	0°59'54		12711 Sep 19 16:30	0°  ≈	
evening rise	12710 Oct 20 21:22	18°  ≈III08'24		asc. node	12711 Sep 24 08:24	9°  ≈II18'33	
	12710 Oct 26 15:10	0°  ≈		max. Earth dist.	12711 Sep 24 07:43	9°  ≈II15'06	1.33319 AU
desc. node	12710 Nov 09 12:30	22°  ≈  19'54		superior conj	12711 Sep 28 05:03	17°  ≈II22'32	0°36'25
evening max el	12710 Nov 13 22:42	27°  ≈  11'08	23°49'41	minimum elong	12711 Sep 28 03:20	17°  ≈II13'27	0°36'16
	12710 Nov 17 05:25	0°  ≈			12711 Oct 04 02:22	0°  ≈	
retrograde	12710 Nov 27 11:39	3°  ≈III56'17		evening rise	12711 Oct 05 08:10	2°  ≈III38'51	
evening set	12710 Dec 02 05:22	3°  ≈III07'18			12711 Oct 20 08:32	0°  ≈	
min. Earth dist.	12710 Dec 08 09:20	0°  ≈		evening max el	12711 Oct 26 10:11	7°  ≈  14'03	22°08'27
	12710 Dec 08 14:17	30°  ≈R  1		desc. node	12711 Oct 27 09:49	8°  ≈  09'46	

retrograde	12711 Nov 08 03:17	13°♊32'37		evening max el	12712 Oct 07 07:32	17°♍41'52	20°38'18
evening set	12711 Nov 11 10:32	13°♊08'25		desc. node	12712 Oct 13 07:12	22°♍04'41	
min. Earth dist.	12711 Nov 19 16:03	9°♊29'27	0.54656 AU	retrograde	12712 Oct 18 13:58	23°♍17'40	
inferior conj	12711 Nov 20 04:26	9°♊12'03	-5°45'28	evening set	12712 Oct 20 19:46	23°♍05'22	
minimum elong	12711 Nov 19 23:29	9°♊19'00	5°44'08	inferior conj	12712 Oct 29 20:17	19°♍10'34	-4°43'38
morning rise	12711 Nov 28 13:38	5°♊24'52		minimum elong	12712 Oct 29 10:17	19°♍24'58	4°40'22
direct	12711 Dec 02 00:10	4°♊58'33		min. Earth dist.	12712 Oct 30 23:05	18°♍32'00	0.54642 AU
morning max el	12711 Dec 14 01:35	10°♊43'32	21°39'04	morning rise	12712 Nov 07 00:35	15°♍12'53	
asc. node	12711 Dec 21 09:11	19°♊34'28		direct	12712 Nov 11 08:38	14°♍32'30	
	12711 Dec 27 15:40	0°♊		morning max el	12712 Nov 24 14:42	20°♍58'35	23°24'56
morning set	12712 Jan 03 15:16	13°♊54'24			12712 Dec 02 06:49	0°♊	
				asc. node	12712 Dec 07 06:11	7°♊40'12	
superior conj	12712 Jan 10 19:39	29°♊04'44	1°27'08	morning set	12712 Dec 18 02:54	28°♊41'08	
minimum elong	12712 Jan 10 21:42	29°♊15'27	1°27'49		12712 Dec 18 17:40	0°♊	
	12712 Jan 11 06:14	0°♊					
max. Earth dist.	12712 Jan 15 02:49	7°♊53'47	1.34796 AU	superior conj	12712 Dec 25 00:25	13°♊36'36	1°35'59
evening rise	12712 Jan 19 07:39	16°♊06'36		minimum elong	12712 Dec 25 01:25	13°♊42'02	1°36'54
desc. node	12712 Jan 23 08:45	23°♊35'58		max. Earth dist.	12712 Dec 27 22:07	19°♊48'54	1.33196 AU
	12712 Jan 27 00:16	0°♊		evening rise	12713 Jan 01 18:17	29°♊45'01	
	12712 Feb 16 08:57	0°♊			12713 Jan 01 21:18	0°♊	
evening max el	12712 Feb 23 11:54	7°♊51'24	26°43'39	desc. node	12713 Jan 09 05:31	13°♊48'59	
retrograde	12712 Mar 07 15:38	15°♊14'48			12713 Jan 19 02:04	0°♊	
evening set	12712 Mar 14 02:05	12°♊42'27		evening max el	12713 Feb 05 01:14	21°♊20'58	27°22'08
min. Earth dist.	12712 Mar 18 02:59	8°♊39'29	0.66198 AU	retrograde	12713 Feb 18 15:42	28°♊46'51	
asc. node	12712 Mar 18 06:39	8°♊28'53		evening set	12713 Feb 25 10:11	26°♊16'28	
inferior conj	12712 Mar 20 02:39	6°♊18'51	0°34'58	min. Earth dist.	12713 Mar 01 06:41	22°♊45'31	0.64551 AU
minimum elong	12712 Mar 20 01:44	6°♊21'33	0°34'37	inferior conj	12713 Mar 03 18:00	20°♊06'07	-0°27'44
morning rise	12712 Mar 26 02:33	0°♊40'07		minimum elong	12713 Mar 03 18:50	20°♊03'53	0°27'08
	12712 Mar 27 20:53	30°♊		asc. node	12713 Mar 05 04:04	18°♊36'06	
direct	12712 Mar 29 01:02	29°♊52'22		morning rise	12713 Mar 10 05:21	14°♊40'53	
	12712 Mar 30 05:26	0°♊		direct	12713 Mar 12 19:02	14°♊06'48	
morning max el	12712 Apr 04 11:06	3°♊16'05	18°15'45	morning max el	12713 Mar 19 03:57	17°♊25'01	17°52'28
desc. node	12712 Apr 20 10:47	26°♊01'43			12713 Mar 28 09:59	0°♊	
	12712 Apr 22 22:22	0°♊		morning set	12713 Apr 05 09:50	13°♊12'16	
morning set	12712 Apr 23 22:38	1°♊37'05		desc. node	12713 Apr 07 07:21	16°♊22'16	
					12713 Apr 15 14:08	0°♊	
superior conj	12712 May 09 08:42	26°♊01'24	-1°55'13				
minimum elong	12712 May 09 00:03	25°♊27'33	1°55'19	superior conj	12713 Apr 19 01:40	5°♊36'12	-1°22'04
max. Earth dist.	12712 May 10 18:28	28°♊13'22	1.45787 AU	minimum elong	12713 Apr 18 17:21	5°♊02'56	1°21'33
	12712 May 11 21:47	0°♊		max. Earth dist.	12713 Apr 23 14:24	12°♊47'40	1.45305 AU
evening rise	12712 May 25 09:02	20°♊59'45		evening rise	12713 May 04 23:15	0°♊26'10	
	12712 May 31 03:40	0°♊			12713 May 04 16:25	0°♊	
greatest brilliancy	12712 Jun 05 07:35	7°♊57'26	-0.8m	greatest brilliancy	12713 May 19 21:11	22°♊50'52	-0.6m
asc. node	12712 Jun 14 04:08	20°♊33'38			12713 May 24 23:08	0°♊	
evening max el	12712 Jun 17 13:23	24°♊24'56	19°05'44	evening max el	12713 May 31 18:12	8°♊11'53	19°59'39
retrograde	12712 Jun 24 10:09	28°♊13'17		asc. node	12713 Jun 01 01:13	8°♊29'18	
evening set	12712 Jun 27 21:47	27°♊02'52		retrograde	12713 Jun 08 08:37	12°♊32'05	
inferior conj	12712 Jul 03 09:02	21°♊16'00	3°06'42	evening set	12713 Jun 12 05:45	11°♊04'59	
minimum elong	12712 Jul 03 10:12	21°♊12'16	3°05'39	inferior conj	12713 Jun 17 13:06	5°♊04'44	3°13'47
min. Earth dist.	12712 Jul 04 22:28	19°♊15'51	0.66614 AU	minimum elong	12713 Jun 17 13:11	5°♊04'25	3°12'49
morning rise	12712 Jul 08 21:59	14°♊52'36		min. Earth dist.	12713 Jun 18 12:05	3°♊47'01	0.67834 AU
direct	12712 Jul 15 02:42	12°♊12'00			12713 Jun 21 13:22	30°♊	
desc. node	12712 Jul 17 10:41	12°♊31'44		morning rise	12713 Jun 22 20:18	28°♊43'11	
morning max el	12712 Jul 27 20:43	19°♊48'43	26°10'10	direct	12713 Jun 28 14:04	26°♊11'06	
	12712 Aug 05 13:38	0°♊		desc. node	12713 Jul 04 07:54	28°♊10'19	
	12712 Aug 25 11:08	0°♊			12713 Jul 06 19:42	0°♊	
morning set	12712 Sep 01 20:13	13°♊07'29		morning max el	12713 Jul 10 06:54	3°♊11'58	24°48'26
max. Earth dist.	12712 Sep 05 16:02	20°♊23'20	1.35039 AU		12713 Jul 30 17:55	0°♊	
asc. node	12712 Sep 10 05:00	29°♊24'35		morning set	12713 Aug 15 02:31	25°♊05'55	
	12712 Sep 10 11:58	0°♊			12713 Aug 17 20:16	0°♊	
				max. Earth dist.	12713 Aug 18 16:21	1°♊31'30	1.37166 AU
superior conj	12712 Sep 11 01:14	1°♊07'38	0°08'02				
minimum elong	12712 Sep 11 00:47	1°♊05'20	0°07'52	superior conj	12713 Aug 25 11:02	14°♊21'22	-0°24'22
behind sun begin	12712 Sep 10 19:30	0°♊38'23		minimum elong	12713 Aug 25 12:39	14°♊29'14	0°24'24
behind sun end	12712 Sep 11 06:03	1°♊32'19		asc. node	12713 Aug 28 01:37	19°♊29'52	
evening rise	12712 Sep 18 16:40	17°♊00'28			12713 Sep 02 07:07	0°♊	
	12712 Sep 25 05:17	0°♊		evening rise	12713 Sep 02 20:35	1°♊07'39	

































































































































evening max el	12713 Sep 19 18:55	28° Ω 55'19	19°27'48	evening rise	12714 Aug 17 17:01	14° Π 52'55	
	12713 Sep 20 22:25	0° Π			12714 Aug 25 21:08	0° Ω	
retrograde	12713 Sep 29 09:10	3° Π 42'46		evening max el	12714 Sep 02 18:56	10° Ω 56'26	18°39'09
desc. node	12713 Sep 30 04:39	3° Π 40'50		retrograde	12714 Sep 10 22:14	15° Ω 02'00	
evening set	12713 Oct 01 05:48	3° Π 32'45		evening set	12714 Sep 12 20:53	14° Ω 48'46	
	12713 Oct 09 01:24	30° κ Ω		desc. node	12714 Sep 17 02:08	13° Ω 00'24	
inferior conj	12713 Oct 09 22:31	29° Ω 26'11	-3°01'27	inferior conj	12714 Sep 20 20:43	10° Ω 23'08	-1°11'26
minimum elong	12713 Oct 09 14:41	29° Ω 38'47	2°58'12	minimum elong	12714 Sep 20 17:49	10° Ω 28'36	1°10'12
min. Earth dist.	12713 Oct 12 09:01	27° Ω 52'17	0.55560 AU	min. Earth dist.	12714 Sep 24 00:41	8° Ω 01'19	0.57233 AU
morning rise	12713 Oct 17 21:25	24° Ω 59'11		morning rise	12714 Sep 28 11:19	5° Ω 18'13	
direct	12713 Oct 23 01:41	23° Ω 59'01		direct	12714 Oct 04 08:50	3° Ω 52'12	
	12713 Nov 04 22:59	0° Π		morning max el	12714 Oct 18 15:47	11° Ω 20'27	26°41'25
morning max el	12713 Nov 06 00:52	0° Π 59'28	25°11'54		12714 Nov 02 02:38	0° Π	
asc. node	12713 Nov 24 03:05	26° Π 25'30		asc. node	12714 Nov 10 23:55	15° Π 40'19	
	12713 Nov 26 00:54	0° χ		morning set	12714 Nov 17 00:44	27° Π 59'39	
morning set	12713 Dec 02 14:37	13° χ 24'18			12714 Nov 17 23:08	0° χ	
superior conj	12713 Dec 09 09:28	28° χ 17'37	1°38'29	superior conj	12714 Nov 23 20:46	13° χ 02'12	1°35'00
minimum elong	12713 Dec 09 09:21	28° χ 16'59	1°39'27	minimum elong	12714 Nov 23 19:38	12° χ 55'55	1°35'50
	12713 Dec 10 04:03	0° Ξ		max. Earth dist.	12714 Nov 24 08:09	14° χ 05'42	1.31410 AU
max. Earth dist.	12713 Dec 11 00:47	1° Ξ 53'38	1.32055 AU	evening rise	12714 Nov 30 17:41	28° χ 04'29	
evening rise	12713 Dec 16 14:30	13° Ξ 46'24			12714 Dec 01 15:40	0° Ξ	
	12713 Dec 24 23:58	0° \approx		desc. node	12714 Dec 13 23:24	23° Ξ 09'01	
desc. node	12713 Dec 27 02:23	3° \approx 42'34			12714 Dec 18 07:32	0° \approx	
	12714 Jan 14 08:11	0° H		evening max el	12714 Dec 31 18:10	16° \approx 38'12	27°09'46
evening max el	12714 Jan 18 12:11	4° H 20'46	27°32'33	retrograde	12715 Jan 14 16:46	23° \approx 52'15	
retrograde	12714 Feb 01 08:20	11° H 42'21		evening set	12715 Jan 21 13:05	21° \approx 48'40	
evening set	12714 Feb 08 06:56	9° H 21'10		min. Earth dist.	12715 Jan 25 08:35	19° \approx 05'33	0.60472 AU
min. Earth dist.	12714 Feb 12 00:54	6° H 18'08	0.62605 AU	inferior conj	12715 Jan 28 12:26	16° \approx 25'49	-3°00'40
inferior conj	12714 Feb 14 22:25	3° H 31'25	-1°40'33	minimum elong	12715 Jan 28 18:49	16° \approx 12'19	2°57'35
minimum elong	12714 Feb 15 01:48	3° H 23'15	1°38'39	morning rise	12715 Feb 05 03:33	11° \approx 36'53	
	12714 Feb 18 23:32	30° κ \approx		asc. node	12715 Feb 06 22:49	11° \approx 19'50	
asc. node	12714 Feb 20 01:28	29° \approx 17'13		direct	12715 Feb 07 05:44	11° \approx 19'30	
morning rise	12714 Feb 21 23:14	28° \approx 22'47		morning max el	12715 Feb 14 12:36	14° \approx 58'04	17°59'28
direct	12714 Feb 24 05:54	27° \approx 58'50			12715 Feb 24 21:05	0° H	
	12714 Mar 01 08:14	0° H		morning set	12715 Mar 02 02:32	9° H 29'26	
morning max el	12714 Mar 02 21:34	1° H 22'05	17°46'45	superior conj	12715 Mar 12 07:27	27° H 58'53	-0°02'19
morning set	12714 Mar 18 21:13	25° H 56'08		minimum elong	12715 Mar 12 07:17	27° H 58'05	0°02'08
	12714 Mar 21 04:53	0° Υ		behind sun begin	12715 Mar 11 23:21	27° H 23'12	
desc. node	12714 Mar 25 03:54	6° Υ 52'21		behind sun end	12715 Mar 12 15:12	28° H 32'53	
superior conj	12714 Mar 30 16:23	16° Υ 13'33	-0°41'48	desc. node	12715 Mar 12 00:28	27° H 28'07	
minimum elong	12714 Mar 30 12:14	15° Υ 56'14	0°41'20		12715 Mar 13 11:09	0° Υ	
max. Earth dist.	12714 Apr 06 08:04	27° Υ 06'39	1.44128 AU	max. Earth dist.	12715 Mar 19 21:05	10° Υ 53'41	1.42382 AU
	12714 Apr 08 03:27	0° B		evening rise	12715 Mar 25 13:02	20° Υ 05'23	
evening rise	12714 Apr 14 11:46	9° B 56'33			12715 Mar 31 21:44	0° B	
	12714 Apr 27 20:39	0° Π			12715 Apr 22 07:06	0° Π	
evening max el	12714 May 14 17:08	21° Π 59'12	21°07'00	evening max el	12715 Apr 27 10:58	5° Π 47'07	22°23'48
asc. node	12714 May 18 22:24	25° Π 31'01		asc. node	12715 May 05 19:40	11° Π 23'03	
retrograde	12714 May 23 07:26	27° Π 00'03		retrograde	12715 May 07 04:51	11° Π 31'58	
evening set	12714 May 27 14:46	25° Π 16'32		evening set	12715 May 11 23:06	9° Π 33'07	
inferior conj	12714 Jun 01 20:53	19° Π 04'26	3°08'55	inferior conj	12715 May 17 06:18	3° Π 11'25	2°53'23
minimum elong	12714 Jun 01 20:00	19° Π 07'31	3°07'55	minimum elong	12715 May 17 04:39	3° Π 17'10	2°52'18
min. Earth dist.	12714 Jun 02 06:11	18° Π 32'08	0.68579 AU	min. Earth dist.	12715 May 17 02:40	3° Π 24'06	0.68853 AU
morning rise	12714 Jun 07 01:02	12° Π 47'15			12715 May 19 15:02	30° κ B	
direct	12714 Jun 12 06:14	10° Π 30'21		morning rise	12715 May 22 10:04	27° B 00'06	
desc. node	12714 Jun 21 04:59	15° Π 15'59		direct	12715 May 27 02:13	25° B 02'25	
morning max el	12714 Jun 22 17:20	16° Π 43'53	23°19'11		12715 Jun 04 20:49	0° Π	
	12714 Jul 03 16:39	0° D		morning max el	12715 Jun 05 06:31	0° Π 23'59	21°51'21
	12714 Jul 23 18:24	0° Ω		desc. node	12715 Jun 08 01:59	3° Π 25'35	
morning set	12714 Jul 27 11:14	6° Ω 06'02			12715 Jun 27 11:08	0° D	
max. Earth dist.	12714 Jul 31 14:16	13° Ω 07'46	1.39487 AU	morning set	12715 Jul 07 18:41	15° D 58'34	
				max. Earth dist.	12715 Jul 13 15:21	25° D 31'00	1.41744 AU
superior conj	12714 Aug 08 06:39	26° Ω 54'37	-0°58'52		12715 Jul 16 07:35	0° Ω	
minimum elong	12714 Aug 08 10:54	27° Ω 14'17	0°58'46	superior conj	12715 Jul 21 07:35	8° Ω 36'25	-1°32'14
	12714 Aug 09 22:26	0° Π		minimum elong	12715 Jul 21 14:09	9° Ω 05'13	1°32'14
asc. node	12714 Aug 14 22:17	9° Π 30'48					

evening rise	12715 Aug 01 02:13	28°05'36		evening rise	12716 Jul 13 19:36	10°03'49	
asc. node	12715 Aug 01 18:59	29°02'48		asc. node	12716 Jul 18 15:46	19°01'46	
	12715 Aug 02 03:04	0°00			12716 Jul 25 08:48	0°00	
evening max el	12715 Aug 17 03:35	23°03'05	18°11'25	evening max el	12716 Jul 30 16:51	6°04'44	18°03'14
retrograde	12715 Aug 24 05:57	27°00'12		retrograde	12716 Aug 06 05:10	10°06'33	
evening set	12715 Aug 26 11:27	26°05'14		evening set	12716 Aug 08 18:49	9°03'35	
inferior conj	12715 Sep 02 16:35	22°05'37	0°23'45	inferior conj	12716 Aug 15 07:31	4°02'01	1°35'58
minimum elong	12715 Sep 02 17:23	22°03'54	0°23'13	minimum elong	12716 Aug 15 09:54	4°02'59	1°34'43
desc. node	12715 Sep 03 23:38	20°05'07		min. Earth dist.	12716 Aug 18 08:08	1°02'26	0.61664 AU
min. Earth dist.	12715 Sep 06 00:00	19°00'12	0.59371 AU		12716 Aug 19 22:25	30°00	
morning rise	12715 Sep 09 19:55	16°02'51		desc. node	12716 Aug 20 21:06	29°01'13	
direct	12715 Sep 16 05:54	14°03'23		morning rise	12716 Aug 21 22:27	28°02'23	
morning max el	12715 Sep 30 14:03	22°02'00	27°39'00	direct	12716 Aug 28 14:30	26°00'38	
	12715 Oct 07 08:32	0°00			12716 Sep 07 02:18	0°00	
	12715 Oct 26 04:08	0°00		morning max el	12716 Sep 11 18:54	4°07'14	27°58'10
asc. node	12715 Oct 28 20:41	5°00'16			12716 Oct 01 01:41	0°00	
morning set	12715 Nov 01 07:27	12°00'21		asc. node	12716 Oct 14 17:24	25°06'28	
max. Earth dist.	12715 Nov 07 16:45	26°00'16	1.31273 AU	morning set	12716 Oct 15 08:48	26°02'25	
					12716 Oct 17 02:02	0°00	
superior conj	12715 Nov 08 08:22	27°00'43	1°25'46	max. Earth dist.	12716 Oct 20 22:49	8°00'18	1.31656 AU
minimum elong	12715 Nov 08 06:29	27°00'33	1°26'19				
	12715 Nov 09 08:45	0°00		superior conj	12716 Oct 22 18:24	12°00'17	1°10'54
evening rise	12715 Nov 15 01:31	12°00'32		minimum elong	12716 Oct 22 16:09	12°00'51	1°11'07
	12715 Nov 23 18:41	0°00		evening rise	12716 Oct 29 11:59	27°00'13	
desc. node	12715 Nov 30 20:30	11°00'57			12716 Oct 30 20:29	0°00	
evening max el	12715 Dec 13 16:49	28°00'48	26°12'44	desc. node	12716 Nov 16 17:42	29°00'52	
	12715 Dec 15 20:45	0°00			12716 Nov 16 19:47	0°00	
retrograde	12715 Dec 27 15:27	5°00'09		evening max el	12716 Nov 24 07:23	8°00'41	24°46'55
evening set	12716 Jan 03 00:35	3°00'32		retrograde	12716 Dec 08 02:00	15°00'35	
min. Earth dist.	12716 Jan 07 06:08	0°00'56	0.58329 AU	evening set	12716 Dec 13 13:08	14°00'28	
	12716 Jan 08 13:08	30°00'00		min. Earth dist.	12716 Dec 18 19:14	11°00'42	0.56439 AU
inferior conj	12716 Jan 10 08:31	28°00'39	-4°20'47	inferior conj	12716 Dec 21 08:10	10°00'05	-5°26'05
minimum elong	12716 Jan 10 17:01	28°00'24	4°17'25	minimum elong	12716 Dec 21 15:16	9°00'54	5°23'57
morning rise	12716 Jan 18 12:20	24°00'12		morning rise	12716 Dec 29 19:32	5°00'59	
direct	12716 Jan 20 14:13	23°00'58		direct	12717 Jan 01 04:03	5°00'44	
asc. node	12716 Jan 24 20:07	25°00'01		asc. node	12717 Jan 10 17:22	10°00'00	
morning max el	12716 Jan 28 21:13	28°00'02	18°32'15	morning max el	12717 Jan 10 19:19	10°00'22	19°26'58
	12716 Jan 30 17:03	0°00			12717 Jan 23 20:04	0°00	
morning set	12716 Feb 13 20:25	23°00'36		morning set	12717 Jan 27 22:44	8°00'04	
	12716 Feb 17 03:58	0°00					
superior conj	12716 Feb 22 19:39	10°00'42	0°31'58	superior conj	12717 Feb 05 00:13	24°00'10	0°59'10
minimum elong	12716 Feb 22 21:46	10°00'52	0°32'01	minimum elong	12717 Feb 05 03:04	24°00'24	0°59'23
desc. node	12716 Feb 26 21:03	18°00'06			12717 Feb 08 00:50	0°00	
max. Earth dist.	12716 Mar 01 05:25	23°00'59	1.40268 AU	max. Earth dist.	12717 Feb 11 11:40	6°00'26	1.38027 AU
	12716 Mar 04 18:02	0°00		desc. node	12717 Feb 12 17:38	8°00'42	
evening rise	12716 Mar 05 10:35	1°00'09		evening rise	12717 Feb 15 05:07	13°00'06	
	12716 Mar 24 06:21	0°00			12717 Feb 25 09:31	0°00	
evening max el	12716 Apr 09 01:42	19°00'37	23°44'40	evening max el	12717 Mar 19 07:33	0°00	
retrograde	12716 Apr 19 23:27	26°00'02			12717 Mar 22 15:18	3°00'29	25°03'00
asc. node	12716 Apr 21 16:59	25°00'49		retrograde	12717 Apr 03 13:55	10°00'26	
evening set	12716 Apr 25 05:13	23°00'50		asc. node	12717 Apr 08 14:21	8°00'37	
min. Earth dist.	12716 Apr 29 23:20	18°00'17	0.68668 AU	evening set	12717 Apr 09 07:29	8°00'02	
inferior conj	12716 Apr 30 15:25	17°00'22	2°27'48	min. Earth dist.	12717 Apr 13 17:57	3°00'05	0.68040 AU
minimum elong	12716 Apr 30 13:20	17°00'29	2°26'39	inferior conj	12717 Apr 14 22:19	1°00'32	1°52'10
morning rise	12716 May 05 21:26	11°00'18		minimum elong	12717 Apr 14 20:13	1°00'39	1°51'07
direct	12716 May 10 00:51	9°00'41			12717 Apr 16 02:50	30°00'00	
morning max el	12716 May 18 01:31	14°00'15	20°32'20	morning rise	12717 Apr 20 09:13	25°00'36	
desc. node	12716 May 24 22:53	22°00'22		direct	12717 Apr 24 00:36	24°00'20	
	12716 May 30 12:04	0°00		morning max el	12717 May 01 04:02	28°00'16	19°26'44
morning set	12716 Jun 16 03:25	24°00'52			12717 May 02 19:25	0°00	
	12716 Jun 19 10:18	0°00		desc. node	12717 May 11 19:39	11°00'52	
max. Earth dist.	12716 Jun 24 23:02	8°00'46	1.43673 AU	greatest brilliancy	12717 May 13 20:39	14°00'51	-0.7m
					12717 May 23 21:24	0°00	
superior conj	12716 Jul 01 09:53	19°00'19	-1°59'11	morning set	12717 May 26 04:22	3°00'30	
minimum elong	12716 Jul 01 16:25	19°00'46	1°59'39	max. Earth dist.	12717 Jun 07 13:23	22°00'46	1.45049 AU
	12716 Jul 07 17:29	0°00					
				superior conj	12717 Jun 11 12:32	29°00'03	-2°12'55

minimum elong	12717 Jun 11 14:20	29° Π 10'35	2°13'50	evening rise	12718 Jun 06 12:11	2° \mathfrak{G} 41'17	
	12717 Jun 12 02:43	0° \mathfrak{G}		greatest brilliancy	12718 Jun 14 07:03	15° \mathfrak{G} 03'33	-0.9m
evening rise	12717 Jun 25 16:02	22° \mathfrak{G} 08'32		asc. node	12718 Jun 22 09:30	27° \mathfrak{G} 16'24	
	12717 Jun 30 09:18	0° Ω			12718 Jun 24 10:27	0° Ω	
asc. node	12717 Jul 05 12:36	8° Ω 21'54		evening max el	12718 Jun 27 19:12	3° Ω 51'44	18°41'49
evening max el	12717 Jul 14 07:03	20° Ω 12'33	18°13'38	retrograde	12718 Jul 04 09:05	7° Ω 26'52	
retrograde	12717 Jul 20 15:33	23° Ω 34'13		evening set	12718 Jul 07 15:37	6° Ω 25'39	
evening set	12717 Jul 23 13:33	22° Ω 48'26		inferior conj	12718 Jul 13 06:27	0° Ω 46'47	2°56'25
inferior conj	12717 Jul 29 13:26	17° Ω 25'16	2°25'46	minimum elong	12718 Jul 13 08:12	0° Ω 41'23	2°55'16
minimum elong	12717 Jul 29 15:54	17° Ω 18'16	2°24'27		12718 Jul 13 21:32	30° \mathfrak{R} \mathfrak{G}	
min. Earth dist.	12717 Aug 01 01:40	14° Ω 35'58	0.63835 AU	min. Earth dist.	12718 Jul 15 04:14	28° \mathfrak{G} 25'38	0.65708 AU
morning rise	12717 Aug 04 16:40	11° Ω 08'42		morning rise	12718 Jul 18 23:54	24° \mathfrak{G} 24'04	
desc. node	12717 Aug 07 18:30	9° Ω 17'38		direct	12718 Jul 25 09:31	21° \mathfrak{G} 42'59	
direct	12717 Aug 11 08:08	8° Ω 33'50		desc. node	12718 Jul 25 15:51	21° \mathfrak{G} 43'14	
morning max el	12717 Aug 25 04:07	16° Ω 34'37	27°39'57	morning max el	12718 Aug 07 15:12	29° \mathfrak{G} 32'53	26°50'02
	12717 Sep 05 06:44	0° \mathfrak{M}			12718 Aug 08 01:49	0° Ω	
	12717 Sep 23 20:28	0° $\underline{\mathfrak{A}}$			12718 Aug 30 04:21	0° \mathfrak{M}	
morning set	12717 Sep 29 02:26	10° $\underline{\mathfrak{A}}$ 05'05		morning set	12718 Sep 12 09:24	23° \mathfrak{M} 12'51	
asc. node	12717 Oct 01 14:03	15° $\underline{\mathfrak{A}}$ 06'32			12718 Sep 15 20:56	0° $\underline{\mathfrak{A}}$	
max. Earth dist.	12717 Oct 03 22:46	20° $\underline{\mathfrak{A}}$ 01'40	1.32564 AU	max. Earth dist.	12718 Sep 16 13:26	1° $\underline{\mathfrak{A}}$ 22'25	1.33997 AU
				asc. node	12718 Sep 18 10:39	5° $\underline{\mathfrak{A}}$ 11'21	
superior conj	12717 Oct 07 00:56	26° $\underline{\mathfrak{A}}$ 37'43	0°50'32				
minimum elong	12717 Oct 06 22:50	26° $\underline{\mathfrak{A}}$ 26'24	0°50'30	superior conj	12718 Sep 21 01:38	10° $\underline{\mathfrak{A}}$ 37'17	0°24'56
	12717 Oct 08 14:15	0° \mathfrak{M}		minimum elong	12718 Sep 21 00:22	10° $\underline{\mathfrak{A}}$ 30'38	0°24'46
evening rise	12717 Oct 13 23:15	11° \mathfrak{M} 39'46		evening rise	12718 Sep 28 09:21	26° $\underline{\mathfrak{A}}$ 07'23	
	12717 Oct 23 04:47	0° \mathfrak{X}			12718 Sep 30 05:56	0° \mathfrak{M}	
desc. node	12717 Nov 03 14:57	16° \mathfrak{X} 36'08		evening max el	12718 Oct 18 08:09	28° \mathfrak{M} 56'30	21°27'57
evening max el	12717 Nov 05 17:34	18° \mathfrak{X} 47'32	23°06'07		12718 Oct 19 11:05	0° \mathfrak{X}	
retrograde	12717 Nov 18 23:29	25° \mathfrak{X} 22'42		desc. node	12718 Oct 21 12:19	1° \mathfrak{X} 40'43	
evening set	12717 Nov 23 02:46	24° \mathfrak{X} 45'33		retrograde	12718 Oct 30 11:51	4° \mathfrak{X} 58'57	
min. Earth dist.	12717 Nov 30 02:53	21° \mathfrak{X} 31'15	0.55088 AU	evening set	12718 Nov 02 06:35	4° \mathfrak{X} 41'12	
inferior conj	12717 Dec 01 12:24	20° \mathfrak{X} 43'01	-5°54'19	inferior conj	12718 Nov 11 04:52	0° \mathfrak{X} 46'46	-5°25'58
minimum elong	12717 Dec 01 12:36	20° \mathfrak{X} 42'44	5°53'24	minimum elong	12718 Nov 10 20:52	0° \mathfrak{X} 57'58	5°23'48
morning rise	12717 Dec 10 00:01	16° \mathfrak{X} 53'11		min. Earth dist.	12718 Nov 11 09:03	0° \mathfrak{X} 40'54	0.54535 AU
direct	12717 Dec 12 23:30	16° \mathfrak{X} 32'14			12718 Nov 12 14:22	30° \mathfrak{R} \mathfrak{M}	
morning max el	12717 Dec 24 03:43	21° \mathfrak{X} 51'37	20°44'44	morning rise	12718 Nov 19 12:03	26° \mathfrak{M} 58'04	
asc. node	12717 Dec 28 14:31	26° \mathfrak{X} 53'41		direct	12718 Nov 23 07:37	26° \mathfrak{M} 26'38	
	12717 Dec 30 20:07	0° \mathfrak{Z}			12718 Dec 02 23:22	0° \mathfrak{X}	
morning set	12718 Jan 12 06:29	22° \mathfrak{Z} 45'59		morning max el	12718 Dec 05 22:35	2° \mathfrak{X} 29'05	22°22'55
	12718 Jan 15 17:56	0° \approx		asc. node	12718 Dec 15 11:35	14° \mathfrak{X} 30'34	
					12718 Dec 24 01:44	0° \mathfrak{Z}	
superior conj	12718 Jan 19 16:55	8° \approx 11'10	1°18'58	morning set	12718 Dec 27 17:15	7° \mathfrak{Z} 32'07	
minimum elong	12718 Jan 19 19:26	8° \approx 24'02	1°19'29				
max. Earth dist.	12718 Jan 24 20:17	18° \approx 26'31	1.35897 AU	superior conj	12719 Jan 03 18:07	22° \mathfrak{Z} 34'05	1°31'41
evening rise	12718 Jan 28 18:02	25° \approx 50'45		minimum elong	12719 Jan 03 19:45	22° \mathfrak{Z} 42'43	1°32'29
desc. node	12718 Jan 30 14:17	29° \approx 12'57			12719 Jan 07 07:26	0° \approx	
	12718 Jan 31 00:44	0° \mathfrak{H}		max. Earth dist.	12719 Jan 07 10:59	0° \approx 18'15	1.34063 AU
	12718 Feb 18 21:10	0° \mathfrak{Y}		evening rise	12719 Jan 11 21:43	9° \approx 11'22	
evening max el	12718 Mar 05 04:55	17° \mathfrak{Y} 19'42	26°11'28	desc. node	12719 Jan 17 11:01	19° \approx 33'31	
retrograde	12718 Mar 17 23:25	24° \mathfrak{Y} 36'00			12719 Jan 23 13:09	0° \mathfrak{H}	
evening set	12718 Mar 24 04:16	22° \mathfrak{Y} 05'21			12719 Feb 14 18:43	0° \mathfrak{Y}	
asc. node	12718 Mar 26 11:45	19° \mathfrak{Y} 52'04		evening max el	12719 Feb 15 18:25	0° \mathfrak{Y} 58'25	27°02'56
min. Earth dist.	12718 Mar 28 08:18	17° \mathfrak{Y} 43'10	0.66990 AU	retrograde	12719 Mar 01 03:11	8° \mathfrak{Y} 24'06	
inferior conj	12718 Mar 30 01:00	15° \mathfrak{Y} 37'42	1°06'16	evening set	12719 Mar 07 17:37	5° \mathfrak{Y} 51'25	
minimum elong	12718 Mar 29 23:27	15° \mathfrak{Y} 42'30	1°05'32	min. Earth dist.	12719 Mar 11 16:22	2° \mathfrak{Y} 02'44	0.65542 AU
morning rise	12718 Apr 04 19:25	9° \mathfrak{Y} 52'27		asc. node	12719 Mar 13 09:10	0° \mathfrak{Y} 07'04	
direct	12718 Apr 07 23:47	8° \mathfrak{Y} 55'04			12719 Mar 13 11:38	30° \mathfrak{R} \mathfrak{H}	
morning max el	12718 Apr 14 13:48	12° \mathfrak{Y} 26'39	18°36'54	inferior conj	12719 Mar 13 21:12	29° \mathfrak{H} 32'41	0°09'41
	12718 Apr 27 12:42	0° \mathfrak{B}		minimum elong	12719 Mar 13 20:56	29° \mathfrak{H} 33'28	0°09'40
desc. node	12718 Apr 28 16:20	1° \mathfrak{B} 46'43		transit middle	12719 Mar 13 20:56	29° \mathfrak{H} 33'28	0°09'40
morning set	12718 May 05 19:42	12° \mathfrak{B} 56'16		transit begin	12719 Mar 13 18:33	29° \mathfrak{H} 40'16	
	12718 May 16 17:21	0° Π		transit end	12719 Mar 13 23:19	29° \mathfrak{H} 26'40	
				morning rise	12719 Mar 20 01:43	23° \mathfrak{H} 59'40	
superior conj	12718 May 21 22:28	8° Π 08'34	-2°07'27	direct	12719 Mar 22 20:16	23° \mathfrak{H} 18'13	
minimum elong	12718 May 21 16:40	7° Π 45'52	2°08'03	morning max el	12719 Mar 29 04:54	26° \mathfrak{H} 38'03	18°03'48
max. Earth dist.	12718 May 21 08:09	7° Π 12'37	1.45732 AU		12719 Apr 01 04:36	0° \mathfrak{Y}	
	12718 Jun 04 19:37	0° \mathfrak{G}		desc. node	12719 Apr 15 12:58	21° \mathfrak{Y} 59'05	

morning set	12719 Apr 16 14:31	23° Υ 43'07		morning set	12720 Mar 28 12:43	5° Υ 49'11	
	12719 Apr 20 11:19	0° \mathcal{B}		desc. node	12720 Apr 01 09:33	12° Υ 23'51	
superior conj	12719 May 01 07:50	17° \mathcal{B} 19'27	-1°42'37	superior conj	12720 Apr 10 09:11	27° Υ 18'35	-1°05'19
minimum elong	12719 Apr 30 22:34	16° \mathcal{B} 42'57	1°42'23	minimum elong	12720 Apr 10 02:27	26° Υ 51'13	1°04'45
max. Earth dist.	12719 May 04 04:08	21° \mathcal{B} 47'30	1.45664 AU		12720 Apr 12 01:03	0° \mathcal{B}	
	12719 May 09 10:29	0° Π		max. Earth dist.	12720 Apr 15 22:46	6° \mathcal{B} 14'35	1.44874 AU
evening rise	12719 May 17 10:25	12° Π 23'02		evening rise	12720 Apr 25 21:47	21° \mathcal{B} 45'11	
	12719 May 28 22:40	0° \mathcal{E}			12720 May 01 07:56	0° Π	
greatest brilliancy	12719 May 30 08:16	2° \mathcal{E} 05'29	-0.7m		12720 May 22 21:35	0° \mathcal{E}	
asc. node	12719 Jun 09 06:32	15° \mathcal{E} 36'41		evening max el	12720 May 24 05:17	1° \mathcal{E} 23'21	20°26'57
evening max el	12719 Jun 11 03:01	17° \mathcal{E} 36'37	19°26'51	asc. node	12720 May 26 03:39	3° \mathcal{E} 10'54	
retrograde	12719 Jun 18 06:35	21° \mathcal{E} 37'43		retrograde	12720 Jun 01 05:27	6° \mathcal{E} 00'26	
evening set	12719 Jun 21 22:06	20° \mathcal{E} 20'16		evening set	12720 Jun 05 06:43	4° \mathcal{E} 26'30	
inferior conj	12719 Jun 27 07:19	14° \mathcal{E} 27'19	3°11'18		12720 Jun 09 08:04	30° \mathcal{R} Π	
minimum elong	12719 Jun 27 08:01	14° \mathcal{E} 25'00	3°10'18	inferior conj	12720 Jun 10 13:15	28° Π 21'04	3°13'06
min. Earth dist.	12719 Jun 28 14:29	12° \mathcal{E} 44'37	0.67178 AU	minimum elong	12720 Jun 10 12:54	28° Π 22'14	3°12'08
morning rise	12719 Jul 02 17:27	8° \mathcal{E} 04'05		min. Earth dist.	12720 Jun 11 06:24	27° Π 22'13	0.68200 AU
direct	12719 Jul 08 17:39	5° \mathcal{E} 26'14		morning rise	12720 Jun 15 18:47	22° Π 00'54	
desc. node	12719 Jul 12 13:06	6° \mathcal{E} 18'56		direct	12720 Jun 21 07:20	19° Π 34'23	
morning max el	12719 Jul 21 02:02	12° \mathcal{E} 50'14	25°37'05	desc. node	12720 Jun 28 10:17	22° Π 37'12	
	12719 Aug 03 22:23	0° Ω		morning max el	12720 Jul 02 12:02	26° Π 16'56	24°10'50
	12719 Aug 22 21:48	0° \mathcal{N}			12720 Jul 05 22:09	0° \mathcal{E}	
morning set	12719 Aug 26 02:02	5° \mathcal{N} 40'19			12720 Jul 27 11:44	0° Ω	
max. Earth dist.	12719 Aug 29 17:59	12° \mathcal{N} 28'12	1.35899 AU	morning set	12720 Aug 06 23:44	17° Ω 15'16	
				max. Earth dist.	12720 Aug 10 15:56	23° Ω 42'18	1.38136 AU
					12720 Aug 14 03:05	0° \mathcal{N}	
superior conj	12719 Sep 04 17:51	24° \mathcal{N} 10'11	-0°05'19				
minimum elong	12719 Sep 04 18:11	24° \mathcal{N} 11'50	0°05'26	superior conj	12720 Aug 17 22:07	7° \mathcal{N} 07'36	-0°38'53
behind sun begin	12719 Sep 04 12:16	23° \mathcal{N} 42'11		minimum elong	12720 Aug 18 00:48	7° \mathcal{N} 20'27	0°38'51
behind sun end	12719 Sep 05 00:05	24° \mathcal{N} 41'32		asc. node	12720 Aug 22 03:53	15° \mathcal{N} 21'11	
asc. node	12719 Sep 05 07:16	25° \mathcal{N} 17'38		evening rise	12720 Aug 26 17:21	24° \mathcal{N} 22'17	
	12719 Sep 07 14:51	0° \mathcal{A}			12720 Aug 29 14:17	0° \mathcal{A}	
evening rise	12719 Sep 12 16:16	10° \mathcal{A} 23'58		evening max el	12720 Sep 12 04:35	21° \mathcal{A} 17'14	19°04'33
	12719 Sep 23 02:08	0° \mathcal{M}		retrograde	12720 Sep 21 02:53	25° \mathcal{A} 45'11	
evening max el	12719 Sep 30 11:20	9° \mathcal{M} 42'38	20°05'40	evening set	12720 Sep 22 23:27	25° \mathcal{A} 34'24	
desc. node	12719 Oct 08 09:43	14° \mathcal{M} 39'04		desc. node	12720 Sep 24 07:11	25° \mathcal{A} 14'16	
retrograde	12719 Oct 11 01:03	14° \mathcal{M} 58'12		inferior conj	12720 Oct 01 09:40	21° \mathcal{A} 20'40	-2°14'05
evening set	12719 Oct 13 00:47	14° \mathcal{M} 47'51		minimum elong	12720 Oct 01 03:54	21° \mathcal{A} 30'33	2°11'35
inferior conj	12719 Oct 21 23:37	10° \mathcal{M} 49'19	-4°03'21	min. Earth dist.	12720 Oct 04 05:42	19° \mathcal{A} 24'37	0.56196 AU
minimum elong	12719 Oct 21 13:50	11° \mathcal{M} 03'59	3°59'44	morning rise	12720 Oct 09 05:26	16° \mathcal{A} 37'40	
min. Earth dist.	12719 Oct 23 17:20	9° \mathcal{M} 46'47	0.54925 AU	direct	12720 Oct 14 17:43	15° \mathcal{A} 26'45	
morning rise	12719 Oct 30 01:46	6° \mathcal{M} 40'37		morning max el	12720 Oct 28 21:00	22° \mathcal{A} 40'24	25°52'58
direct	12719 Nov 03 18:25	5° \mathcal{M} 52'42			12720 Nov 04 09:46	0° \mathcal{M}	
morning max el	12719 Nov 17 09:35	12° \mathcal{M} 34'51	24°11'17	asc. node	12720 Nov 18 05:28	21° \mathcal{M} 53'21	
	12719 Nov 30 15:44	0° \mathcal{J}			12720 Nov 22 08:37	0° \mathcal{J}	
asc. node	12719 Dec 02 08:34	2° \mathcal{J} 54'25		morning set	12720 Nov 25 16:24	6° \mathcal{J} 58'12	
morning set	12719 Dec 12 05:08	22° \mathcal{J} 17'48					
	12719 Dec 15 18:20	0° \mathcal{Z}		superior conj	12720 Dec 02 11:20	21° \mathcal{J} 54'23	1°37'44
superior conj	12719 Dec 19 01:02	7° \mathcal{Z} 10'48	1°37'48	minimum elong	12720 Dec 02 10:46	21° \mathcal{J} 51'15	1°38'39
minimum elong	12719 Dec 19 01:34	7° \mathcal{Z} 13'40	1°38'45	max. Earth dist.	12720 Dec 03 14:19	24° \mathcal{J} 23'53	1.31720 AU
max. Earth dist.	12719 Dec 21 09:22	12° \mathcal{Z} 15'45	1.32652 AU		12720 Dec 06 03:39	0° \mathcal{Z}	
evening rise	12719 Dec 26 12:49	23° \mathcal{Z} 00'19		evening rise	12720 Dec 09 12:21	7° \mathcal{Z} 10'03	
	12719 Dec 30 02:00	0° \approx		desc. node	12720 Dec 21 04:45	29° \mathcal{Z} 21'58	
desc. node	12720 Jan 04 07:50	9° \approx 38'44			12720 Dec 21 13:43	0° \approx	
	12720 Jan 17 06:09	0° \mathcal{H}		evening max el	12721 Jan 10 16:11	27° \approx 00'16	27°27'10
evening max el	12720 Jan 29 06:48	14° \mathcal{H} 15'54	27°30'15		12721 Jan 14 03:49	0° \mathcal{H}	
retrograde	12720 Feb 12 00:29	21° \mathcal{H} 41'31		retrograde	12721 Jan 24 14:04	4° \mathcal{H} 19'01	
evening set	12720 Feb 18 21:16	19° \mathcal{H} 13'53		evening set	12721 Jan 31 12:20	2° \mathcal{H} 04'34	
min. Earth dist.	12720 Feb 22 16:14	15° \mathcal{H} 55'31	0.63751 AU		12721 Feb 03 07:26	30° \mathcal{R} \approx	
inferior conj	12720 Feb 25 08:17	13° \mathcal{H} 11'07	-0°57'31	min. Earth dist.	12721 Feb 04 06:22	29° \approx 10'54	0.61708 AU
minimum elong	12720 Feb 25 10:06	13° \mathcal{H} 06'24	0°56'24	inferior conj	12721 Feb 07 07:06	26° \approx 25'19	-2°13'57
asc. node	12720 Feb 28 06:36	10° \mathcal{H} 20'44		minimum elong	12721 Feb 07 11:45	26° \approx 14'41	2°11'30
morning rise	12720 Mar 03 01:12	7° \mathcal{H} 52'47		asc. node	12721 Feb 14 04:01	21° \approx 32'55	
direct	12720 Mar 05 11:31	7° \mathcal{H} 23'36		morning rise	12721 Feb 14 14:00	21° \approx 24'27	
morning max el	12720 Mar 11 22:30	10° \mathcal{H} 42'56	17°47'50	direct	12721 Feb 16 18:16	21° \approx 03'47	
	12720 Mar 25 02:44	0° Υ		morning max el	12721 Feb 23 15:30	24° \approx 32'43	17°49'45

	12721 Feb 28 02:35	0° H			12722 Feb 21 08:16	0° H	
morning set	12721 Mar 11 08:36	18° H 57'03		morning set	12722 Feb 22 19:53	2° H 46'50	
	12721 Mar 17 13:37	0° Y					
desc. node	12721 Mar 19 06:07	2° Y 56'59		superior conj	12722 Mar 04 11:05	20° H 37'16	0°13'02
				minimum elong	12722 Mar 04 12:05	20° H 41'48	0°13'07
superior conj	12721 Mar 22 10:28	8° Y 25'41	-0°24'36	behind sun begin	12722 Mar 04 07:45	20° H 22'16	
minimum elong	12721 Mar 22 08:10	8° Y 15'53	0°24'17	behind sun end	12722 Mar 04 16:26	21° H 01'19	
max. Earth dist.	12721 Mar 29 14:33	20° Y 21'33	1.43447 AU	desc. node	12722 Mar 06 02:40	23° H 34'02	
	12721 Apr 04 15:33	0° B			12722 Mar 09 19:03	0° Y	
evening rise	12721 Apr 05 14:26	1° B 29'30		max. Earth dist.	12722 Mar 12 02:01	3° Y 53'58	1.41524 AU
	12721 Apr 24 20:35	0° II		evening rise	12722 Mar 16 23:57	12° Y 01'12	
evening max el	12721 May 07 02:01	15° II 11'18	21°38'51		12722 Mar 28 14:21	0° B	
asc. node	12721 May 13 00:52	19° II 45'04		evening max el	12722 Apr 19 18:22	29° B 00'28	22°58'01
retrograde	12721 May 16 03:44	20° II 30'27			12722 Apr 20 18:51	0° II	
evening set	12721 May 20 15:37	18° II 40'24		retrograde	12722 Apr 29 23:58	5° II 02'31	
inferior conj	12721 May 25 21:58	12° II 24'10	3°03'34	asc. node	12722 Apr 29 22:10	5° II 02'29	
minimum elong	12721 May 25 20:44	12° II 28'30	3°02'32	evening set	12722 May 04 23:12	2° II 57'32	
min. Earth dist.	12721 May 26 01:46	12° II 10'55	0.68757 AU		12722 May 07 17:45	30° R 8	
morning rise	12721 May 31 01:38	6° II 09'19		inferior conj	12722 May 10 07:28	26° B 32'51	2°43'43
direct	12721 Jun 05 01:25	3° II 59'58		minimum elong	12722 May 10 05:35	26° B 39'23	2°42'36
morning max el	12721 Jun 14 23:02	9° II 51'06	22°41'04	min. Earth dist.	12722 May 09 22:29	27° B 04'00	0.68840 AU
desc. node	12721 Jun 15 07:22	10° II 12'14		morning rise	12722 May 15 11:54	20° B 24'41	
	12721 Jun 30 19:44	0° B		direct	12722 May 19 22:38	18° B 35'47	
morning set	12721 Jul 18 21:50	27° B 46'05		morning max el	12722 May 28 14:21	23° B 35'19	21°16'19
	12721 Jul 20 06:20	0° Q		desc. node	12722 Jun 02 04:19	28° B 43'18	
max. Earth dist.	12721 Jul 23 14:23	5° Q 35'45	1.40475 AU		12722 Jun 03 05:04	0° II	
					12722 Jun 24 03:48	0° B	
superior conj	12721 Jul 31 10:20	19° Q 19'54	-1°13'25	morning set	12722 Jun 28 18:39	7° B 10'33	
minimum elong	12721 Jul 31 15:41	19° Q 44'09	1°13'19	max. Earth dist.	12722 Jul 05 18:39	18° B 23'48	1.42623 AU
	12721 Aug 06 05:03	0° P			12722 Jul 12 17:17	0° Q	
asc. node	12721 Aug 09 00:33	5° P 18'23					
evening rise	12721 Aug 10 09:28	7° P 54'13		superior conj	12722 Jul 13 02:00	0° Q 37'16	-1°44'50
	12721 Aug 23 06:49	0° A		minimum elong	12722 Jul 13 09:00	1° Q 07'16	1°44'59
evening max el	12721 Aug 26 08:49	3° A 35'41	18°24'55	evening rise	12722 Jul 24 12:31	20° Q 49'53	
retrograde	12721 Sep 02 23:53	7° A 26'46		asc. node	12722 Jul 26 21:16	25° Q 05'24	
evening set	12721 Sep 05 01:21	7° A 10'40			12722 Jul 29 15:28	0° P	
desc. node	12721 Sep 11 04:41	3° A 47'50		evening max el	12722 Aug 09 19:51	16° P 28'32	18°05'37
inferior conj	12721 Sep 12 17:07	2° A 36'12	-0°28'30	retrograde	12722 Aug 16 14:56	19° P 57'12	
minimum elong	12721 Sep 12 16:02	2° A 38'22	0°28'07	evening set	12722 Aug 18 23:51	19° P 31'59	
	12721 Sep 15 23:30	30° R 17		inferior conj	12722 Aug 25 21:32	14° P 37'00	0°57'16
min. Earth dist.	12721 Sep 16 00:06	29° P 58'52	0.58107 AU	minimum elong	12722 Aug 25 23:14	14° P 33'01	0°56'19
morning rise	12721 Sep 20 03:14	27° P 16'18		min. Earth dist.	12722 Aug 29 02:51	11° P 37'58	0.60339 AU
direct	12721 Sep 26 07:00	25° P 38'12		desc. node	12722 Aug 29 02:10	11° P 39'30	
	12721 Oct 06 21:23	0° A		morning rise	12722 Sep 01 19:37	8° P 46'48	
morning max el	12721 Oct 10 14:40	3° A 15'12	27°10'26	direct	12722 Sep 08 08:51	6° P 41'43	
	12721 Oct 30 00:20	0° M		morning max el	12722 Sep 22 16:03	14° P 35'33	27°52'10
asc. node	12721 Nov 05 02:16	11° M 17'46			12722 Oct 05 02:57	0° A	
morning set	12721 Nov 10 01:17	21° M 28'11			12722 Oct 22 10:56	0° M	
	12721 Nov 13 23:25	0° J		asc. node	12722 Oct 22 22:59	1° M 00'38	
				morning set	12722 Oct 25 05:59	5° M 43'27	
superior conj	12721 Nov 16 22:57	6° J 38'13	1°31'47	max. Earth dist.	12722 Oct 31 07:00	18° M 46'53	1.31371 AU
minimum elong	12721 Nov 16 21:28	6° J 29'55	1°32'30				
max. Earth dist.	12721 Nov 16 22:46	6° J 37'12	1.31292 AU	superior conj	12722 Nov 01 10:06	21° M 17'17	1°20'09
evening rise	12721 Nov 23 17:46	21° J 33'19		minimum elong	12722 Nov 01 08:01	21° M 05'39	1°20'34
	12721 Nov 27 19:41	0° Z			12722 Nov 05 08:11	0° J	
desc. node	12721 Dec 08 01:47	18° Z 33'41		evening rise	12722 Nov 08 02:57	6° J 04'42	
	12721 Dec 15 21:36	0° A			12722 Nov 20 11:48	0° Z	
evening max el	12721 Dec 23 19:34	8° A 57'46	26°49'40	desc. node	12722 Nov 24 22:54	7° Z 01'56	
retrograde	12722 Jan 06 18:15	16° A 07'05		evening max el	12722 Dec 05 14:37	20° Z 02'09	25°39'06
evening set	12722 Jan 13 11:05	14° A 13'57		retrograde	12722 Dec 19 11:46	27° Z 02'15	
min. Earth dist.	12722 Jan 17 09:42	11° A 35'37	0.59552 AU	evening set	12722 Dec 25 13:17	25° Z 37'19	
inferior conj	12722 Jan 20 13:59	9° A 04'10	-3°35'18	min. Earth dist.	12722 Dec 30 02:59	22° Z 59'41	0.57486 AU
minimum elong	12722 Jan 20 21:29	8° A 49'11	3°31'55	inferior conj	12723 Jan 02 01:32	20° Z 58'16	-4°51'24
morning rise	12722 Jan 28 10:50	4° A 23'58		minimum elong	12723 Jan 02 10:04	20° Z 43'32	4°48'23
direct	12722 Jan 30 12:23	4° A 08'11		morning rise	12723 Jan 10 09:26	16° Z 40'36	
asc. node	12722 Feb 01 01:23	4° A 17'21		direct	12723 Jan 12 13:20	16° Z 26'13	
morning max el	12722 Feb 07 04:13	7° A 56'19	18°10'47	asc. node	12723 Jan 18 22:39	18° Z 40'59	

morning max el	12723 Jan 21 08:51	20°  43'20	18°52'42			12723 Dec 31 16:23	0° 	
	12723 Jan 28 10:35	0° 		morning max el		12724 Jan 04 01:28	2°  42'47	19°57'18
morning set	12723 Feb 06 17:45	17°  04'10		asc. node		12724 Jan 05 19:50	4°  32'47	
	12723 Feb 13 08:30	0° 				12724 Jan 21 03:11	0° 	
				morning set		12724 Jan 21 22:40	1°  38'40	
superior conj	12723 Feb 15 06:50	3°  41'27	0°44'23					
minimum elong	12723 Feb 15 09:25	3°  53'42	0°44'29	superior conj		12724 Jan 29 17:02	17°  24'59	1°08'26
desc. node	12723 Feb 20 23:14	14°  11'32		minimum elong		12724 Jan 29 19:50	17°  38'55	1°08'47
max. Earth dist.	12723 Feb 22 09:13	16°  43'04	1.39322 AU	max. Earth dist.		12724 Feb 04 15:30	28°  54'40	1.37092 AU
evening rise	12723 Feb 26 06:34	23°  28'03				12724 Feb 05 05:29	0° 	
	12723 Mar 02 04:32	0° 		desc. node		12724 Feb 07 19:50	4°  45'58	
	12723 Mar 22 10:32	0° 		evening rise		12724 Feb 08 09:17	5°  46'30	
evening max el	12723 Apr 02 08:15	12°  51'21	24°18'34			12724 Feb 23 02:26	0° 	
retrograde	12723 Apr 13 16:58	19°  31'08		evening max el		12724 Mar 14 21:38	26°  42'59	25°33'42
asc. node	12723 Apr 16 19:31	18°  47'44				12724 Mar 18 14:08	0° 	
evening set	12723 Apr 19 03:52	17°  13'24		retrograde		12724 Mar 27 05:39	3°  50'05	
min. Earth dist.	12723 Apr 23 18:26	11°  55'48	0.68460 AU	evening set		12724 Apr 02 04:04	1°  22'58	
inferior conj	12723 Apr 24 15:52	10°  43'38	2°13'54	asc. node		12724 Apr 02 16:54	0°  54'47	
minimum elong	12723 Apr 24 13:42	10°  50'55	2°12'46			12724 Apr 03 15:23	30°  4'00	
morning rise	12723 Apr 29 23:39	4°  43'13		min. Earth dist.		12724 Apr 06 11:35	26°  40'39	0.67640 AU
direct	12723 May 03 21:47	3°  15'31		inferior conj		12724 Apr 07 21:15	24°  45'24	1°34'01
morning max el	12723 May 11 12:35	7°  31'32	20°02'34	minimum elong		12724 Apr 07 19:18	24°  58'59	1°33'02
desc. node	12723 May 20 01:10	17°  55'15		morning rise		12724 Apr 13 11:02	19°  01'20	
	12723 May 28 10:25	0° 		direct		12724 Apr 16 21:29	17°  53'37	
morning set	12723 Jun 07 21:29	15°  50'42		morning max el		12724 Apr 23 18:25	21°  38'05	19°03'30
	12723 Jun 16 23:11	0° 				12724 Apr 30 15:30	0° 	
max. Earth dist.	12723 Jun 18 05:29	2°  00'21	1.44334 AU	desc. node		12724 May 05 21:55	7°  37'06	
				greatest brilliancy		12724 May 06 22:10	9°  07'57	-0.7m
superior conj	12723 Jun 23 17:54	10°  53'28	-2°07'04	morning set		12724 May 17 02:05	24°  42'29	
minimum elong	12723 Jun 23 23:04	11°  14'32	2°07'46			12724 May 20 12:04	0° 	
	12723 Jul 05 04:16	0° 		max. Earth dist.		12724 May 30 21:34	16°  11'54	1.45426 AU
evening rise	12723 Jul 06 21:35	2°  56'47						
asc. node	12723 Jul 13 18:02	14°  36'56		superior conj		12724 Jun 02 12:07	20°  11'43	-2°13'08
evening max el	12723 Jul 24 09:48	29°  45'36	18°05'24	minimum elong		12724 Jun 02 10:40	20°  12'00	2°14'02
	12723 Jul 24 15:44	0° 				12724 Jun 08 14:53	0° 	
retrograde	12723 Jul 30 19:30	3°  06'04		evening rise		12724 Jun 17 07:58	14°  50'05	
evening set	12723 Aug 02 12:34	2°  28'37				12724 Jun 27 03:50	0° 	
	12723 Aug 06 01:31	30°  4'00		asc. node		12724 Jun 29 14:55	3°  47'32	
inferior conj	12723 Aug 08 19:19	27°  15'15	1°59'42	evening max el		12724 Jul 06 23:29	13°  49'26	18°23'28
minimum elong	12723 Aug 08 21:53	27°  08'26	1°58'21	retrograde		12724 Jul 13 09:19	16°  45'18	
min. Earth dist.	12723 Aug 11 15:06	24°  16'25	0.62606 AU	evening set		12724 Jul 16 10:50	15°  45'17	
morning rise	12723 Aug 15 05:04	21°  05'13		inferior conj		12724 Jul 22 06:27	10°  42'28	2°40'52
desc. node	12723 Aug 15 23:37	20°  33'07		minimum elong		12724 Jul 22 08:40	10°  46'54	2°39'37
direct	12723 Aug 21 21:24	18°  38'30		min. Earth dist.		12724 Jul 24 12:46	7°  44'11	0.64679 AU
morning max el	12723 Sep 04 23:18	26°  40'47	27°54'52	morning rise		12724 Jul 28 05:14	4°  40'19	
	12723 Sep 08 02:04	0° 		desc. node		12724 Aug 01 21:00	1°  37'05	
	12723 Sep 28 18:30	0° 		direct		12724 Aug 03 18:50	1°  42'13	
morning set	12723 Oct 09 04:21	19°  43'26		morning max el		12724 Aug 17 09:35	9°  42'47	27°21'59
asc. node	12723 Oct 09 19:38	20°  45'24				12724 Sep 02 12:51	0° 	
	12723 Oct 14 03:16	0° 				12724 Sep 20 03:46	0° 	
max. Earth dist.	12723 Oct 14 10:53	0°  41'00	1.31971 AU	morning set		12724 Sep 21 17:48	3°  40'13	
				asc. node		12724 Sep 25 16:16	10°  45'49	
superior conj	12723 Oct 16 18:51	5°  45'14	1°02'55	max. Earth dist.		12724 Sep 26 06:48	12°  42'38	1.33107 AU
minimum elong	12723 Oct 16 16:36	5°  32'53	1°03'02					
evening rise	12723 Oct 23 13:55	20°  48'02		superior conj		12724 Sep 29 23:11	19°  45'03	0°40'17
	12723 Oct 28 01:29	0° 		minimum elong		12724 Sep 29 21:21	19°  47'16	0°40'10
desc. node	12723 Nov 11 20:07	24°  29'19				12724 Oct 04 15:15	0° 	
	12723 Nov 16 17:32	0° 		evening rise		12724 Oct 07 00:54	5°  49'04	
evening max el	12723 Nov 17 02:12	0°  21'02	24°04'50			12724 Oct 20 06:43	0° 	
retrograde	12723 Nov 30 17:07	7°  30'51		evening max el		12724 Oct 28 13:02	10°  47'23	22°23'08
evening set	12723 Dec 05 15:33	6°  31'52		desc. node		12724 Oct 28 17:25	10°  47'33	46
min. Earth dist.	12723 Dec 11 13:15	3°  31'42	0.55777 AU	retrograde		12724 Nov 10 09:57	16°  47'26	
inferior conj	12723 Dec 13 16:22	2°  02'06	-5°44'01	evening set		12724 Nov 13 22:13	16°  47'21	
minimum elong	12723 Dec 13 21:11	1°  35'46	5°42'35	min. Earth dist.		12724 Nov 21 20:10	12°  47'17	0.54735 AU
	12723 Dec 17 04:53	30°  4'21		inferior conj		12724 Nov 22 14:09	12°  47'57	-5°49'50
morning rise	12723 Dec 22 04:46	28°  47'25		minimum elong		12724 Nov 22 10:29	12°  47'07	5°48'41
direct	12723 Dec 24 18:26	27°  47'28		morning rise		12724 Dec 01 00:02	8°  47'33	

direct	12724 Dec 04 07:37	8° ♁ 09'46		min. Earth dist.	12725 Nov 03 02:49	21° ♁ 51'00	0.54585 AU
morning max el	12724 Dec 16 03:46	13° ♁ 48'23	21°24'27	morning rise	12725 Nov 10 10:47	18° ♁ 26'29	
asc. node	12724 Dec 22 16:58	21° ♁ 36'11		direct	12725 Nov 14 15:45	17° ♁ 48'34	
	12724 Dec 27 22:57	0° ♁		morning max el	12725 Nov 27 18:07	24° ♁ 08'32	23°08'42
morning set	12725 Jan 05 07:56	16° ♁ 22'24			12725 Dec 03 00:54	0° ♁	
	12725 Jan 11 19:15	0° ♁		asc. node	12725 Dec 09 14:00	9° ♁ 35'00	
					12725 Dec 20 06:22	0° ♁	
superior conj	12725 Jan 12 13:43	1° ♁ 36'10	1°25'11	morning set	12725 Dec 20 19:27	1° ♁ 09'23	
minimum elong	12725 Jan 12 15:54	1° ♁ 47'32	1°25'50				
max. Earth dist.	12725 Jan 17 02:04	10° ♁ 48'00	1.35067 AU	superior conj	12725 Dec 27 17:40	16° ♁ 06'03	1°35'03
evening rise	12725 Jan 21 04:56	18° ♁ 47'27		minimum elong	12725 Dec 27 18:51	16° ♁ 12'21	1°35'56
desc. node	12725 Jan 24 16:30	25° ♁ 13'03		max. Earth dist.	12725 Dec 30 20:19	22° ♁ 42'35	1.33407 AU
	12725 Jan 27 09:22	0° ♁			12726 Jan 03 09:29	0° ♁	
	12725 Feb 16 05:50	0° ♁		evening rise	12726 Jan 04 13:55	2° ♁ 21'41	
evening max el	12725 Feb 25 11:22	10° ♁ 29'52	26°35'59	desc. node	12726 Jan 11 13:16	15° ♁ 28'16	
retrograde	12725 Mar 10 12:56	17° ♁ 51'40			12726 Jan 20 06:47	0° ♁	
evening set	12725 Mar 16 21:57	15° ♁ 19'41		evening max el	12726 Feb 08 00:52	24° ♁ 02'19	27°17'59
asc. node	12725 Mar 20 14:20	11° ♁ 38'53			12726 Feb 15 23:55	0° ♁	
min. Earth dist.	12725 Mar 20 23:40	11° ♁ 11'44	0.66415 AU	retrograde	12726 Feb 21 13:54	1° ♁ 28'06	
inferior conj	12725 Mar 22 21:30	8° ♁ 54'49	0°43'37		12726 Feb 26 17:39	30° ♁	
minimum elong	12725 Mar 22 20:24	8° ♁ 58'08	0°43'08	evening set	12726 Feb 28 07:29	28° ♁ 56'56	
morning rise	12725 Mar 28 19:53	3° ♁ 14'13		min. Earth dist.	12726 Mar 04 04:32	25° ♁ 21'31	0.64822 AU
direct	12725 Mar 31 19:53	2° ♁ 24'01		inferior conj	12726 Mar 06 14:13	22° ♁ 44'16	-0°17'30
morning max el	12725 Apr 07 06:42	5° ♁ 49'24	18°20'40	minimum elong	12726 Mar 06 14:44	22° ♁ 42'52	0°17'05
desc. node	12725 Apr 22 18:33	27° ♁ 40'11		asc. node	12726 Mar 07 11:45	21° ♁ 45'56	
	12725 Apr 24 05:47	0° ♁		morning rise	12726 Mar 12 23:43	17° ♁ 16'55	
morning set	12725 Apr 27 04:26	4° ♁ 40'59		direct	12726 Mar 15 14:39	16° ♁ 40'59	
				morning max el	12726 Mar 21 23:11	19° ♁ 59'06	17°54'51
superior conj	12725 May 12 19:35	29° ♁ 19'46	-1°59'01		12726 Mar 29 14:41	0° ♁	
minimum elong	12725 May 12 11:28	28° ♁ 48'02	1°59'15	morning set	12726 Apr 08 11:30	16° ♁ 03'59	
	12725 May 13 05:53	0° ♁		desc. node	12726 Apr 09 15:11	17° ♁ 58'47	
max. Earth dist.	12725 May 13 16:56	0° ♁ 43'12	1.45800 AU		12726 Apr 16 22:55	0° ♁	
evening rise	12725 May 28 17:57	24° ♁ 13'25					
	12725 Jun 01 10:24	0° ♁		superior conj	12726 Apr 22 10:04	8° ♁ 46'52	-1°27'46
greatest brilliancy	12725 Jun 07 22:17	10° ♁ 06'09	-0.8m	minimum elong	12726 Apr 22 01:21	8° ♁ 12'08	1°27'17
asc. node	12725 Jun 16 11:54	22° ♁ 28'59		max. Earth dist.	12726 Apr 26 13:11	15° ♁ 18'47	1.45425 AU
evening max el	12725 Jun 20 10:07	27° ♁ 02'16	18°59'02		12726 May 05 23:53	0° ♁	
	12725 Jun 24 06:11	0° ♁		evening rise	12726 May 08 09:47	3° ♁ 42'28	
retrograde	12725 Jun 27 04:47	0° ♁ 46'38		greatest brilliancy	12726 May 22 22:13	25° ♁ 35'39	-0.6m
	12725 Jun 30 00:54	30° ♁			12726 May 25 23:57	0° ♁	
evening set	12725 Jun 30 15:07	29° ♁ 38'33		asc. node	12726 Jun 03 08:58	10° ♁ 31'25	
inferior conj	12725 Jul 06 03:12	23° ♁ 53'46	3°04'25	evening max el	12726 Jun 03 15:44	10° ♁ 48'36	19°50'42
minimum elong	12725 Jul 06 04:31	23° ♁ 49'33	3°03'21	retrograde	12726 Jun 11 03:06	15° ♁ 03'30	
min. Earth dist.	12725 Jul 07 18:47	21° ♁ 47'57	0.66396 AU	evening set	12726 Jun 14 22:47	13° ♁ 38'49	
morning rise	12725 Jul 11 17:14	17° ♁ 30'29		inferior conj	12726 Jun 20 06:31	7° ♁ 40'19	3°13'29
direct	12725 Jul 17 23:21	14° ♁ 49'29		minimum elong	12726 Jun 20 06:46	7° ♁ 39'28	3°12'31
desc. node	12725 Jul 19 18:19	15° ♁ 01'05		min. Earth dist.	12726 Jun 21 07:34	6° ♁ 16'09	0.67679 AU
morning max el	12725 Jul 30 20:30	22° ♁ 29'47	26°21'05	morning rise	12726 Jun 25 14:24	1° ♁ 18'18	
	12725 Aug 06 10:49	0° ♁			12726 Jun 27 07:23	30° ♁	
	12725 Aug 26 19:31	0° ♁		direct	12726 Jul 01 09:52	28° ♁ 44'38	
morning set	12725 Sep 04 19:09	15° ♁ 56'03			12726 Jul 05 22:19	0° ♁	
max. Earth dist.	12725 Sep 08 16:51	23° ♁ 24'27	1.34757 AU	desc. node	12726 Jul 06 15:34	0° ♁ 23'56	
	12725 Sep 12 00:17	0° ♁		morning max el	12726 Jul 13 06:54	5° ♁ 51'48	25°01'21
asc. node	12725 Sep 12 12:53	1° ♁ 03'58			12726 Jul 31 23:02	0° ♁	
				morning set	12726 Aug 18 04:17	28° ♁ 02'21	
superior conj	12725 Sep 13 20:41	3° ♁ 46'38	0°12'37		12726 Aug 19 06:36	0° ♁	
minimum elong	12725 Sep 13 19:59	3° ♁ 43'05	0°12'28	max. Earth dist.	12726 Aug 21 18:16	4° ♁ 31'50	1.36829 AU
behind sun begin	12725 Sep 13 16:13	3° ♁ 23'38					
behind sun end	12725 Sep 13 23:46	4° ♁ 02'32		superior conj	12726 Aug 28 08:17	17° ♁ 05'39	-0°19'15
evening rise	12725 Sep 21 09:56	19° ♁ 32'57		minimum elong	12726 Aug 28 09:32	17° ♁ 11'48	0°19'19
	12725 Sep 26 13:59	0° ♁		asc. node	12726 Aug 30 09:30	21° ♁ 09'37	
evening max el	12725 Oct 10 08:32	20° ♁ 45'49	20°50'33		12726 Sep 03 18:41	0° ♁	
desc. node	12725 Oct 15 14:48	24° ♁ 48'23		evening rise	12726 Sep 05 14:44	3° ♁ 43'00	
retrograde	12725 Oct 21 20:38	26° ♁ 28'42			12726 Sep 21 00:25	0° ♁	
evening set	12725 Oct 24 05:20	26° ♁ 15'18		evening max el	12726 Sep 22 17:49	1° ♁ 52'00	19°36'54
inferior conj	12725 Nov 02 05:44	22° ♁ 21'03	-4°56'17	retrograde	12726 Oct 02 14:04	6° ♁ 46'47	
minimum elong	12725 Nov 01 20:00	22° ♁ 34'55	4°53'16	desc. node	12726 Oct 02 12:15	6° ♁ 46'46	

evening set	12726 Oct 04 11:05	6°♄36'52		inferior conj	12727 Sep 24 00:39	13°♂22'39	-1°27'33
inferior conj	12726 Oct 13 05:42	2°♄32'32	-3°18'10	minimum elong	12727 Sep 23 21:01	13°♂29'18	1°25'58
minimum elong	12726 Oct 12 21:14	2°♄45'53	3°14'45	min. Earth dist.	12727 Sep 27 03:03	11°♂06'55	0.56947 AU
min. Earth dist.	12726 Oct 15 12:12	1°♄06'41	0.55370 AU	morning rise	12727 Oct 01 16:39	8°♂23'12	
	12726 Oct 17 09:05	30°♄		direct	12727 Oct 07 11:52	7°♂01'11	
morning rise	12726 Oct 21 05:30	28°♂10'40		morning max el	12727 Oct 21 18:13	14°♂26'08	26°29'47
direct	12726 Oct 26 06:46	27°♂13'58			12727 Nov 03 04:45	0°♄	
	12726 Nov 03 21:53	0°♄		asc. node	12727 Nov 13 07:49	17°♄25'58	
morning max el	12726 Nov 09 04:17	4°♄09'47	24°56'39	morning set	12727 Nov 19 17:43	0°♂30'05	
asc. node	12726 Nov 26 10:57	28°♄15'04			12727 Nov 19 12:06	0°♂	
	12726 Nov 27 09:51	0°♂					
morning set	12726 Dec 05 07:17	15°♂53'27		superior conj	12727 Nov 26 13:20	15°♂30'33	1°35'55
	12726 Dec 11 17:52	0°♂		minimum elong	12727 Nov 26 12:21	15°♂25'04	1°36'46
				max. Earth dist.	12727 Nov 27 04:43	16°♂56'10	1.31473 AU
superior conj	12726 Dec 12 02:16	0°♂46'11	1°38'31	evening rise	12727 Dec 03 11:11	0°♂35'47	
minimum elong	12726 Dec 12 02:19	0°♂46'28	1°39'27		12727 Dec 03 04:24	0°♂	
max. Earth dist.	12726 Dec 13 21:58	4°♂45'28	1.32195 AU	desc. node	12727 Dec 16 07:05	24°♂55'55	
evening rise	12726 Dec 19 08:54	16°♂19'57			12727 Dec 19 10:21	0°♄	
	12726 Dec 26 09:27	0°♄		evening max el	12728 Jan 03 19:03	19°♄31'06	27°15'23
desc. node	12726 Dec 29 10:08	5°♄25'00		retrograde	12728 Jan 17 17:40	26°♄46'45	
	12727 Jan 14 23:38	0°♂		evening set	12728 Jan 24 14:42	24°♄40'02	
evening max el	12727 Jan 21 12:12	7°♂06'44	27°32'55	min. Earth dist.	12728 Jan 28 09:33	21°♄54'34	0.60790 AU
retrograde	12727 Feb 04 07:45	14°♂29'36		inferior conj	12728 Jan 31 12:50	19°♄12'41	-2°48'21
evening set	12727 Feb 11 06:07	12°♂06'23		minimum elong	12728 Jan 31 18:46	18°♄59'52	2°45'24
min. Earth dist.	12727 Feb 15 00:12	8°♂59'41	0.62909 AU	morning rise	12728 Feb 08 01:51	14°♄20'41	
inferior conj	12727 Feb 17 20:27	6°♂13'05	-1°28'57	asc. node	12728 Feb 09 06:35	14°♄06'02	
minimum elong	12727 Feb 17 23:24	6°♂05'49	1°27'16	direct	12728 Feb 10 04:25	14°♄02'37	
asc. node	12727 Feb 22 09:11	2°♂17'49		morning max el	12728 Feb 17 08:34	17°♄38'29	17°56'22
morning rise	12727 Feb 24 19:11	1°♂01'57			12728 Feb 26 04:18	0°♂	
direct	12727 Feb 27 02:44	0°♂36'46		morning set	12728 Mar 03 22:42	12°♂05'50	
morning max el	12727 Mar 05 16:55	3°♂58'35	17°46'30	desc. node	12728 Mar 13 08:17	29°♂02'51	
morning set	12727 Mar 21 19:42	28°♂38'46			12728 Mar 13 21:20	0°♂	
	12727 Mar 22 14:21	0°♂					
desc. node	12727 Mar 27 11:46	8°♂27'46		superior conj	12728 Mar 14 08:48	0°♂50'03	-0°08'01
				minimum elong	12728 Mar 14 08:07	0°♂47'03	0°07'50
superior conj	12727 Apr 02 21:15	19°♂14'25	-0°48'00	behind sun begin	12728 Mar 14 00:57	0°♂15'50	
minimum elong	12727 Apr 02 16:25	18°♂54'24	0°47'31	behind sun end	12728 Mar 14 15:16	1°♂18'13	
max. Earth dist.	12727 Apr 09 07:11	29°♂40'38	1.44338 AU	max. Earth dist.	12728 Mar 21 20:45	13°♂32'32	1.42667 AU
	12727 Apr 09 12:02	0°♂		evening rise	12728 Mar 27 20:14	23°♂11'31	
evening rise	12727 Apr 17 21:33	13°♂09'50			12728 Apr 01 04:58	0°♂	
	12727 Apr 29 01:45	0°♂			12728 Apr 22 04:17	0°♂	
evening max el	12727 May 17 15:29	24°♂35'57	20°56'14	evening max el	12728 Apr 29 09:59	8°♂23'55	22°11'59
asc. node	12727 May 21 06:07	27°♂42'30		asc. node	12728 May 07 03:22	13°♂46'21	
retrograde	12727 May 26 02:01	29°♂30'40		retrograde	12728 May 08 23:44	14°♂02'19	
evening set	12727 May 30 07:45	27°♂49'35		evening set	12728 May 13 16:16	12°♂05'47	
inferior conj	12727 Jun 04 13:54	21°♂39'04	3°10'21	inferior conj	12728 May 18 23:11	5°♂45'24	2°56'24
minimum elong	12727 Jun 04 13:09	21°♂41'40	3°09'22	minimum elong	12728 May 18 21:38	5°♂50'48	2°55'20
min. Earth dist.	12727 Jun 05 01:12	20°♂59'54	0.68494 AU	min. Earth dist.	12728 May 18 21:29	5°♂51'20	0.68841 AU
morning rise	12727 Jun 09 18:20	15°♂20'58			12728 May 23 14:51	30°♄	
direct	12727 Jun 15 01:23	13°♂01'30		morning rise	12728 May 24 02:49	29°♂33'02	
desc. node	12727 Jun 23 12:44	17°♂18'18		direct	12728 May 28 20:57	27°♂32'12	
morning max el	12727 Jun 25 17:14	19°♂22'57	23°32'35		12728 Jun 03 19:44	0°♂	
	12727 Jul 04 16:59	0°♂		morning max el	12728 Jun 07 05:43	3°♂01'34	22°04'00
	12727 Jul 25 02:25	0°♂		desc. node	12728 Jun 09 09:45	5°♂19'36	
morning set	12727 Jul 30 16:33	9°♂12'10			12728 Jun 27 16:56	0°♂	
max. Earth dist.	12727 Aug 03 15:58	16°♂01'37	1.39137 AU	morning set	12728 Jul 10 03:47	19°♂14'48	
				max. Earth dist.	12728 Jul 15 16:03	28°♂16'21	1.41426 AU
superior conj	12727 Aug 11 06:17	29°♂45'30	-0°53'37		12728 Jul 16 16:48	0°♂	
minimum elong	12727 Aug 11 10:07	0°♂03'25	0°53'32				
	12727 Aug 11 09:23	0°♂		superior conj	12728 Jul 23 10:15	11°♂35'38	-1°27'27
asc. node	12727 Aug 17 06:09	11°♂11'24		minimum elong	12728 Jul 23 16:33	12°♂03'30	1°27'24
evening rise	12727 Aug 20 12:30	17°♂32'02		evening rise	12728 Aug 02 23:36	0°♂50'03	
	12727 Aug 27 03:07	0°♂			12728 Aug 02 12:49	0°♂	
evening max el	12727 Sep 05 16:09	13°♂46'23	18°45'02	asc. node	12728 Aug 03 02:48	1°♂04'53	
retrograde	12727 Sep 14 00:09	17°♂57'28		evening max el	12728 Aug 18 23:47	26°♂21'01	18°14'17
evening set	12727 Sep 15 22:01	17°♂45'03			12728 Aug 25 19:32	0°♂	
desc. node	12727 Sep 19 09:44	16°♂25'02		retrograde	12728 Aug 26 05:04	0°♂00'40	

	12728 Aug 26 14:38	30° \mathbb{R} \mathbb{M}		asc. node	12729 Jul 20 23:31	20° \mathcal{Q} 46'02	
evening set	12728 Aug 28 09:28	29° \mathbb{M} 41'13			12729 Jul 26 11:00	0° \mathbb{M}	
inferior conj	12728 Sep 04 17:20	24° \mathbb{M} 58'12	0°10'43	evening max el	12729 Aug 02 12:35	9° \mathbb{M} 25'56	18°03'14
minimum elong	12728 Sep 04 17:42	24° \mathbb{M} 57'25	0°10'24	retrograde	12729 Aug 09 02:14	12° \mathbb{M} 48'56	
transit middle	12728 Sep 04 17:42	24° \mathbb{M} 57'25	0°10'24	evening set	12729 Aug 11 14:42	12° \mathbb{M} 18'46	
transit begin	12728 Sep 04 15:04	25° \mathbb{M} 03'04		inferior conj	12729 Aug 18 05:37	7° \mathbb{M} 15'49	1°26'33
transit end	12728 Sep 04 20:20	24° \mathbb{M} 51'45		minimum elong	12729 Aug 18 07:52	7° \mathbb{M} 10'14	1°25'20
desc. node	12728 Sep 05 07:14	24° \mathbb{M} 28'16		min. Earth dist.	12729 Aug 21 07:39	4° \mathbb{M} 14'18	0.61326 AU
min. Earth dist.	12728 Sep 08 01:04	22° \mathbb{M} 08'36	0.59039 AU	desc. node	12729 Aug 23 04:43	2° \mathbb{M} 34'31	
morning rise	12728 Sep 11 22:28	19° \mathbb{M} 24'03		morning rise	12729 Aug 24 22:24	1° \mathbb{M} 16'12	
direct	12728 Sep 18 07:09	17° \mathbb{M} 33'44			12729 Aug 27 04:17	30° \mathcal{R} \mathcal{Q}	
morning max el	12728 Oct 02 15:14	25° \mathbb{M} 19'37	27°32'48	direct	12729 Aug 31 13:59	29° \mathcal{Q} 00'47	
	12728 Oct 06 23:16	0° \mathcal{Q}			12729 Sep 05 05:08	0° \mathbb{M}	
	12728 Oct 26 13:53	0° \mathbb{M}		morning max el	12729 Sep 14 19:08	6° \mathbb{M} 58'51	27°57'52
asc. node	12728 Oct 30 04:34	6° \mathbb{M} 59'02			12729 Oct 02 06:46	0° \mathcal{Q}	
morning set	12728 Nov 03 01:03	14° \mathbb{M} 54'31		asc. node	12729 Oct 17 01:14	26° \mathcal{Q} 47'34	
max. Earth dist.	12728 Nov 09 13:19	29° \mathbb{M} 08'14	1.31258 AU	morning set	12729 Oct 18 03:18	29° \mathcal{Q} 01'18	
	12728 Nov 09 22:36	0° \mathcal{X}			12729 Oct 18 14:37	0° \mathbb{M}	
				max. Earth dist.	12729 Oct 23 20:04	11° \mathbb{M} 12'06	1.31563 AU
superior conj	12728 Nov 10 00:59	0° \mathcal{X} 13'20	1°27'32				
minimum elong	12728 Nov 09 23:12	0° \mathcal{X} 03'22	1°28'08	superior conj	12729 Oct 25 11:21	14° \mathbb{M} 48'37	1°13'30
evening rise	12728 Nov 16 18:25	15° \mathcal{X} 03'15		minimum elong	12729 Oct 25 09:08	14° \mathbb{M} 36'19	1°13'48
	12728 Nov 24 03:37	0° \mathcal{Z}		evening rise	12729 Nov 01 04:36	29° \mathbb{M} 36'26	
desc. node	12728 Dec 02 04:08	13° \mathcal{Z} 51'02			12729 Nov 01 08:59	0° \mathcal{X}	
	12728 Dec 14 15:46	0° \approx			12729 Nov 17 16:54	0° \mathcal{Z}	
evening max el	12728 Dec 15 19:03	1° \approx 06'33	26°23'25	desc. node	12729 Nov 19 01:18	1° \mathcal{Z} 55'53	
retrograde	12728 Dec 29 17:56	8° \approx 12'35		evening max el	12729 Nov 27 10:47	11° \mathcal{Z} 50'31	25°01'09
evening set	12729 Jan 05 05:18	6° \approx 30'54		retrograde	12729 Dec 11 06:09	18° \mathcal{Z} 45'27	
min. Earth dist.	12729 Jan 09 08:42	3° \approx 54'41	0.58637 AU	evening set	12729 Dec 16 21:27	17° \mathcal{Z} 34'19	
inferior conj	12729 Jan 12 11:52	1° \approx 34'03	-4°09'10	min. Earth dist.	12729 Dec 21 22:45	14° \mathcal{Z} 51'15	0.56694 AU
minimum elong	12729 Jan 12 20:12	1° \approx 18'24	4°05'45	inferior conj	12729 Dec 24 14:36	13° \mathcal{Z} 07'26	-5°18'01
	12729 Jan 14 15:25	30° \mathcal{R} \mathcal{Z}		minimum elong	12729 Dec 24 22:16	12° \mathcal{Z} 54'55	5°15'37
morning rise	12729 Jan 20 14:00	27° \mathcal{Z} 03'20		morning rise	12730 Jan 02 01:19	8° \mathcal{Z} 58'32	
direct	12729 Jan 22 15:33	26° \mathcal{Z} 48'44		direct	12730 Jan 04 08:25	8° \mathcal{Z} 43'32	
asc. node	12729 Jan 26 03:55	27° \mathcal{Z} 33'25		asc. node	12730 Jan 13 01:10	12° \mathcal{Z} 36'26	
	12729 Jan 29 21:28	0° \approx		morning max el	12730 Jan 13 18:16	13° \mathcal{Z} 16'15	19°17'19
morning max el	12729 Jan 30 18:23	0° \approx 48'30	18°25'57		12730 Jan 25 05:05	0° \approx	
morning set	12729 Feb 15 15:01	26° \approx 09'09		morning set	12730 Jan 30 16:17	10° \approx 35'12	
	12729 Feb 17 15:11	0° \mathcal{X}					
				superior conj	12730 Feb 07 20:32	26° \approx 48'07	0°55'29
superior conj	12729 Feb 24 18:07	13° \mathcal{X} 25'54	0°27'11	minimum elong	12730 Feb 07 23:21	27° \approx 01'44	0°55'41
minimum elong	12729 Feb 24 20:00	13° \mathcal{X} 34'32	0°27'15		12730 Feb 09 12:25	0° \mathcal{X}	
desc. node	12729 Feb 28 04:49	19° \mathcal{X} 40'46		max. Earth dist.	12730 Feb 14 12:19	9° \mathcal{X} 18'18	1.38364 AU
max. Earth dist.	12729 Mar 04 05:47	26° \mathcal{X} 45'35	1.40601 AU	desc. node	12730 Feb 15 01:23	10° \mathcal{X} 17'20	
	12729 Mar 06 03:25	0° \mathcal{Y}		evening rise	12730 Feb 18 06:09	15° \mathcal{X} 57'17	
evening rise	12729 Mar 08 14:38	4° \mathcal{Y} 07'22			12730 Feb 26 16:51	0° \mathcal{Y}	
	12729 Mar 25 10:14	0° \mathcal{B}			12730 Mar 20 00:51	0° \mathcal{B}	
evening max el	12729 Apr 12 01:06	22° \mathcal{B} 14'28	23°32'35	evening max el	12730 Mar 25 14:47	6° \mathcal{B} 06'40	24°51'42
retrograde	12729 Apr 22 18:44	28° \mathcal{B} 33'44		retrograde	12730 Apr 06 09:51	12° \mathcal{B} 58'45	
asc. node	12729 Apr 24 00:41	28° \mathcal{B} 26'35		asc. node	12730 Apr 10 22:04	11° \mathcal{B} 29'38	
evening set	12729 Apr 27 22:47	26° \mathcal{B} 23'16		evening set	12730 Apr 12 01:44	10° \mathcal{B} 36'43	
inferior conj	12729 May 03 08:27	19° \mathcal{B} 56'01	2°32'21	min. Earth dist.	12730 Apr 16 13:12	5° \mathcal{B} 34'15	0.68166 AU
minimum elong	12729 May 03 06:24	20° \mathcal{B} 03'03	2°31'11	inferior conj	12730 Apr 17 15:47	4° \mathcal{B} 06'24	1°58'16
min. Earth dist.	12729 May 02 18:14	20° \mathcal{B} 44'50	0.68730 AU	minimum elong	12730 Apr 17 13:39	4° \mathcal{B} 13'29	1°57'09
morning rise	12729 May 08 13:57	13° \mathcal{B} 50'44			12730 Apr 21 00:13	30° \mathcal{R} \mathcal{Y}	
direct	12729 May 12 19:17	12° \mathcal{B} 10'41		morning rise	12730 Apr 23 01:48	28° \mathcal{Y} 09'38	
morning max el	12729 May 20 23:36	16° \mathcal{B} 50'36	20°43'17	direct	12730 Apr 26 18:57	26° \mathcal{Y} 50'27	
desc. node	12729 May 27 06:39	24° \mathcal{B} 09'53			12730 May 03 03:18	0° \mathcal{B}	
	12729 May 31 14:44	0° \mathbb{I}		morning max el	12730 May 04 01:00	0° \mathcal{B} 51'06	19°35'31
morning set	12729 Jun 19 15:13	28° \mathbb{I} 15'29		desc. node	12730 May 14 03:26	13° \mathcal{B} 35'28	
	12729 Jun 20 18:04	0° \mathcal{E}		greatest brilliancy	12730 May 16 16:55	17° \mathcal{B} 18'10	-0.6m
max. Earth dist.	12729 Jun 27 22:47	11° \mathcal{E} 25'14	1.43422 AU		12730 May 25 04:05	0° \mathbb{I}	
				morning set	12730 May 29 15:58	6° \mathbb{I} 52'37	
superior conj	12729 Jul 04 16:03	22° \mathcal{E} 27'50	-1°55'48	max. Earth dist.	12730 Jun 10 12:32	25° \mathbb{I} 20'15	1.44886 AU
minimum elong	12729 Jul 04 22:51	22° \mathcal{E} 56'19	1°56'10		12730 Jun 13 11:01	0° \mathcal{E}	
	12729 Jul 09 02:46	0° \mathcal{Q}					
evening rise	12729 Jul 16 19:36	13° \mathcal{Q} 26'24		superior conj	12730 Jun 14 22:02	2° \mathcal{E} 19'58	-2°11'57

minimum elong	12730 Jun 15 00:52	2°☿31'21	2°12'51	greatest brilliancy	12731 Jun 16 13:32	16°☿40'22	-0.9m
evening rise	12730 Jun 28 19:29	25°☿09'35		asc. node	12731 Jun 24 17:16	29°☿09'02	
	12730 Jul 01 16:43	0°♊			12731 Jun 25 07:45	0°♊	
asc. node	12730 Jul 07 20:20	10°♊09'49		evening max el	12731 Jun 30 15:27	6°♊29'44	18°36'31
evening max el	12730 Jul 17 02:50	22°♊51'44	18°10'53	retrograde	12731 Jul 07 04:06	10°♊02'14	
retrograde	12730 Jul 23 11:20	26°♊12'42		evening set	12731 Jul 10 09:16	9°♊03'29	
evening set	12730 Jul 26 08:03	25°♊29'07		inferior conj	12731 Jul 16 01:14	3°♊26'53	2°52'48
inferior conj	12730 Aug 01 09:35	20°♊08'18	2°19'32	minimum elong	12731 Jul 16 03:07	3°♊21'07	2°51'38
minimum elong	12730 Aug 01 12:06	20°♊01'16	2°18'11	min. Earth dist.	12731 Jul 18 01:13	1°♊00'39	0.65450 AU
min. Earth dist.	12730 Aug 03 23:49	17°♊16'05	0.63525 AU		12731 Jul 18 22:00	30°☿☿	
morning rise	12730 Aug 07 14:27	13°♊53'09		morning rise	12731 Jul 21 19:58	27°☿04'32	
desc. node	12730 Aug 10 02:09	12°♊19'30		desc. node	12731 Jul 27 23:32	24°☿24'01	
direct	12730 Aug 14 06:17	11°♊20'14		direct	12731 Jul 28 06:41	24°☿23'42	
morning max el	12730 Aug 28 04:00	19°♊21'35	27°44'54		12731 Aug 08 05:54	0°♊	
	12730 Sep 06 05:14	0°♊		morning max el	12731 Aug 10 15:04	2°♊16'36	26°59'08
	12730 Sep 25 06:09	0°♊			12731 Aug 31 10:27	0°♊	
morning set	12730 Oct 01 22:15	12°♊45'15		morning set	12731 Sep 15 07:02	25°♊58'34	
asc. node	12730 Oct 03 21:51	16°♊46'32			12731 Sep 17 08:40	0°♊	
max. Earth dist.	12730 Oct 06 21:16	22°♊59'20	1.32397 AU	max. Earth dist.	12731 Sep 19 13:23	4°♊23'09	1.33752 AU
				asc. node	12731 Sep 20 18:28	6°♊51'01	
superior conj	12730 Oct 09 18:32	29°♊11'09	0°53'58	superior conj	12731 Sep 23 20:17	13°♊14'18	0°29'09
minimum elong	12730 Oct 09 16:23	28°♊59'27	0°53'59	minimum elong	12731 Sep 23 18:50	13°♊06'42	0°28'59
	12730 Oct 10 03:33	0°♊		evening rise	12731 Oct 01 02:18	28°♊39'18	
evening rise	12730 Oct 16 15:53	14°♊10'28			12731 Oct 01 17:37	0°♊	
	12730 Oct 24 11:55	0°♊			12731 Oct 19 11:13	0°♊	
desc. node	12730 Nov 05 22:34	18°♊51'38		evening max el	12731 Oct 21 10:15	2°♊04'19	21°41'45
evening max el	12730 Nov 08 20:59	21°♊58'22	23°21'19	desc. node	12731 Oct 23 19:56	4°♊13'02	
retrograde	12730 Nov 22 05:34	28°♊37'16		retrograde	12731 Nov 02 18:58	8°♊12'50	
evening set	12730 Nov 26 14:02	27°♊56'06		evening set	12731 Nov 05 17:48	7°♊53'06	
min. Earth dist.	12730 Dec 03 06:47	24°♊47'12	0.55244 AU	inferior conj	12731 Nov 14 14:45	3°♊58'11	-5°34'07
inferior conj	12730 Dec 04 21:20	23°♊51'06	-5°53'25	minimum elong	12731 Nov 14 07:42	4°♊08'03	5°32'17
minimum elong	12730 Dec 04 22:52	23°♊48'53	5°52'26	min. Earth dist.	12731 Nov 14 13:07	4°♊00'28	0.54558 AU
morning rise	12730 Dec 13 09:23	19°♊59'46		morning rise	12731 Nov 22 22:39	0°♊10'25	
direct	12730 Dec 16 06:07	19°♊40'01			12731 Nov 23 16:17	30°☿♊	
morning max el	12730 Dec 27 04:49	24°♊52'52	20°31'47	direct	12731 Nov 26 14:57	29°♊40'56	
asc. node	12730 Dec 30 22:20	29°♊00'53			12731 Nov 29 12:04	0°♊	
	12730 Dec 31 16:39	0°♊		morning max el	12731 Dec 09 01:32	5°♊37'26	22°07'23
morning set	12731 Jan 14 23:22	25°♊14'50		asc. node	12731 Dec 17 19:24	16°♊29'30	
	12731 Jan 17 06:31	0°♊			12731 Dec 25 12:08	0°♊	
superior conj	12731 Jan 22 11:41	10°♊44'50	1°16'24	morning set	12731 Dec 30 09:51	10°♊00'41	
minimum elong	12731 Jan 22 14:17	10°♊58'05	1°16'53	superior conj	12732 Jan 06 11:50	25°♊05'16	1°30'11
max. Earth dist.	12731 Jan 27 20:12	21°♊21'02	1.36198 AU	minimum elong	12732 Jan 06 13:38	25°♊14'42	1°30'56
evening rise	12731 Jan 31 16:31	28°♊34'45			12732 Jan 08 20:12	0°♊	
	12731 Feb 01 11:11	0°♊		max. Earth dist.	12732 Jan 10 09:39	3°♊12'13	1.34306 AU
desc. node	12731 Feb 01 22:00	0°♊49'01		evening rise	12732 Jan 14 18:15	11°♊50'47	
	12731 Feb 19 23:58	0°♊		desc. node	12732 Jan 19 18:44	21°♊11'39	
evening max el	12731 Mar 08 04:16	19°♊56'48	26°02'09		12732 Jan 24 20:45	0°♊	
retrograde	12731 Mar 20 20:10	27°♊11'09			12732 Feb 15 05:42	0°♊	
evening set	12731 Mar 26 23:27	24°♊41'08		evening max el	12732 Feb 18 17:49	3°♊38'09	26°56'42
asc. node	12731 Mar 28 19:30	22°♊57'21		retrograde	12732 Mar 03 01:02	11°♊03'33	
min. Earth dist.	12731 Mar 31 04:19	20°♊13'54	0.67172 AU	evening set	12732 Mar 09 14:07	8°♊30'47	
inferior conj	12731 Apr 01 19:14	18°♊12'38	1°13'55	min. Earth dist.	12732 Mar 13 13:33	4°♊37'12	0.65775 AU
minimum elong	12731 Apr 01 17:34	18°♊17'53	1°13'07	asc. node	12732 Mar 14 16:57	3°♊18'45	
morning rise	12731 Apr 07 12:23	12°♊25'51		inferior conj	12732 Mar 15 16:37	2°♊10'07	0°18'59
direct	12731 Apr 10 18:16	11°♊25'56		minimum elong	12732 Mar 15 16:06	2°♊11'37	0°18'50
morning max el	12731 Apr 17 09:51	15°♊00'24	18°43'17		12732 Mar 17 15:10	30°☿♊	
	12731 Apr 28 17:50	0°♊		morning rise	12732 Mar 21 19:28	26°♊35'07	
desc. node	12731 May 01 00:08	3°♊26'52		direct	12732 Mar 24 15:20	25°♊51'34	
morning set	12731 May 09 03:58	16°♊07'44		morning max el	12732 Mar 31 00:21	29°♊12'35	18°07'38
	12731 May 18 01:14	0°♊			12732 Mar 31 19:00	0°♊	
max. Earth dist.	12731 May 24 06:44	9°♊43'30	1.45673 AU	desc. node	12732 Apr 16 20:46	23°♊37'13	
superior conj	12731 May 25 09:37	11°♊28'39	-2°09'36	morning set	12732 Apr 18 18:30	26°♊42'19	
minimum elong	12731 May 25 04:51	11°♊10'02	2°10'19		12732 Apr 20 19:24	0°♊	
	12731 Jun 06 03:20	0°♊		superior conj	12732 May 03 17:59	20°♊36'16	-1°47'25
evening rise	12731 Jun 09 19:20	5°♊51'29					

minimum elong	12732 May 03 08:47	20°♄00'11	1°47'17	superior conj	12733 Apr 13 16:11	0°♄26'25	-1°11'23
max. Earth dist.	12732 May 06 02:28	24°♄17'34	1.45721 AU	minimum elong	12733 Apr 13 08:51	29°♅56'45	1°10'50
	12732 May 09 18:16	0°♄		max. Earth dist.	12733 Apr 18 21:34	8°♄47'23	1.45039 AU
evening rise	12732 May 19 20:20	15°♄39'26		evening rise	12733 Apr 29 08:21	25°♄02'09	
	12732 May 29 03:40	0°♄			12733 May 02 14:28	0°♄	
greatest brilliancy	12732 Jun 01 02:28	4°♄27'43	-0.7m		12733 May 23 13:12	0°♄	
asc. node	12732 Jun 10 14:19	17°♄35'34		evening max el	12733 May 27 03:15	4°♄01'16	20°17'09
evening max el	12732 Jun 13 00:05	20°♄14'25	19°19'09	asc. node	12733 May 28 11:26	5°♄17'47	
retrograde	12732 Jun 20 01:10	24°♄10'54		retrograde	12733 Jun 03 23:53	8°♄32'11	
evening set	12732 Jun 23 15:17	22°♄55'57		evening set	12733 Jun 07 23:42	7°♄00'40	
inferior conj	12732 Jun 29 01:09	17°♄05'09	3°09'51	inferior conj	12733 Jun 13 06:28	0°♄57'04	3°13'31
minimum elong	12732 Jun 29 02:01	17°♄02'18	3°08'52	minimum elong	12733 Jun 13 06:16	0°♄57'43	3°12'34
min. Earth dist.	12732 Jun 30 10:32	15°♄16'07	0.66990 AU		12733 Jun 13 23:10	30°♅♄	
morning rise	12732 Jul 04 12:13	10°♄41'42		min. Earth dist.	12733 Jun 14 01:40	29°♄51'31	0.68084 AU
direct	12732 Jul 10 14:01	8°♄02'40		morning rise	12733 Jun 18 12:32	24°♄36'23	
desc. node	12732 Jul 13 20:50	8°♄41'50		direct	12733 Jun 24 02:58	22°♄07'44	
morning max el	12732 Jul 23 01:57	15°♄31'37	25°48'55	desc. node	12733 Jun 30 18:01	24°♄46'19	
	12732 Aug 03 23:51	0°♄		morning max el	12733 Jul 05 11:56	28°♄56'53	24°24'03
	12732 Aug 23 07:00	0°♄			12733 Jul 06 12:17	0°♄	
morning set	12732 Aug 28 02:05	8°♄32'45			12733 Jul 28 18:11	0°♄	
max. Earth dist.	12732 Aug 31 19:10	15°♄29'16	1.35592 AU	morning set	12733 Aug 10 02:53	20°♄16'10	
				max. Earth dist.	12733 Aug 13 17:42	26°♄40'17	1.37792 AU
					12733 Aug 15 13:39	0°♄	
superior conj	12732 Sep 06 13:59	26°♄51'50	-0°00'27	superior conj	12733 Aug 20 20:17	9°♄55'21	-0°33'39
minimum elong	12732 Sep 06 14:00	26°♄51'59	0°00'36	minimum elong	12733 Aug 20 22:34	10°♄06'23	0°33'39
behind sun begin	12732 Sep 06 07:52	26°♄20'59		asc. node	12733 Aug 24 11:43	17°♄01'53	
behind sun end	12732 Sep 06 20:09	27°♄23'02		evening rise	12733 Aug 29 11:58	26°♄59'38	
asc. node	12732 Sep 06 15:06	26°♄57'29			12733 Aug 31 00:24	0°♄	
	12732 Sep 08 03:01	0°♄					
evening rise	12732 Sep 14 09:50	12°♄57'55		evening max el	12733 Sep 15 02:43	24°♄11'57	19°12'17
	12732 Sep 23 05:45	0°♄		retrograde	12733 Sep 24 06:24	28°♄46'26	
evening max el	12732 Oct 02 11:24	12°♄44'05	20°16'38	evening set	12733 Sep 26 02:50	28°♄36'00	
desc. node	12732 Oct 09 17:22	17°♄32'19		desc. node	12733 Sep 26 14:49	28°♄29'45	
retrograde	12732 Oct 13 07:01	18°♄06'43		inferior conj	12733 Oct 04 15:29	24°♄24'57	-2°31'01
evening set	12732 Oct 15 08:32	17°♄55'52		minimum elong	12733 Oct 04 08:57	24°♄35'52	2°28'12
inferior conj	12732 Oct 24 08:15	13°♄58'58	-4°18'19	min. Earth dist.	12733 Oct 07 08:29	22°♄36'30	0.55960 AU
minimum elong	12732 Oct 23 22:15	14°♄13'44	4°14'47	morning rise	12733 Oct 12 12:23	19°♄47'46	
min. Earth dist.	12732 Oct 25 21:02	13°♄04'41	0.54809 AU	direct	12733 Oct 17 22:03	18°♄40'40	
morning rise	12732 Nov 01 11:08	9°♄54'23		morning max el	12733 Oct 31 23:55	25°♄49'42	25°39'00
direct	12732 Nov 06 00:51	9°♄09'11			12733 Nov 04 22:35	0°♄	
morning max el	12732 Nov 19 13:06	15°♄46'02	23°55'08		12733 Nov 20 13:16	23°♄41'54	
	12732 Nov 30 18:49	0°♄		asc. node	12733 Nov 23 19:35	0°♄	
asc. node	12732 Dec 03 16:23	4°♄47'14		morning set	12733 Nov 28 09:08	9°♄28'39	
morning set	12732 Dec 13 21:41	24°♄46'48					
	12732 Dec 16 07:41	0°♄					
				superior conj	12733 Dec 05 03:58	24°♄23'40	1°38'08
superior conj	12732 Dec 20 18:03	9°♄40'30	1°37'17	minimum elong	12733 Dec 05 03:33	24°♄21'25	1°39'03
minimum elong	12732 Dec 20 18:45	9°♄44'18	1°38'12	max. Earth dist.	12733 Dec 06 11:13	27°♄16'18	1.31831 AU
max. Earth dist.	12732 Dec 23 06:56	15°♄08'36	1.32831 AU		12733 Dec 07 17:03	0°♄	
evening rise	12732 Dec 28 07:51	25°♄36'19		evening rise	12733 Dec 12 06:19	9°♄43'44	
	12732 Dec 30 13:09	0°♄			12733 Dec 22 20:54	0°♄	
desc. node	12733 Jan 05 15:32	11°♄19'47		desc. node	12733 Dec 23 12:27	1°♄07'05	
	12733 Jan 17 07:07	0°♄		evening max el	12734 Jan 13 16:38	29°♄50'26	27°29'43
evening max el	12733 Jan 31 06:37	17°♄00'15	27°28'05		12734 Jan 13 20:41	0°♄	
retrograde	12733 Feb 13 23:22	24°♄26'15		retrograde	12734 Jan 27 13:57	7°♄10'01	
evening set	12733 Feb 20 19:22	21°♄57'33		evening set	12734 Feb 03 12:27	4°♄53'10	
min. Earth dist.	12733 Feb 24 14:51	18°♄34'50	0.64033 AU	min. Earth dist.	12734 Feb 07 06:26	1°♄56'18	0.62027 AU
inferior conj	12733 Feb 27 05:16	15°♄51'54	-0°46'40		12734 Feb 09 08:48	30°♅♄	
minimum elong	12733 Feb 27 06:43	15°♄48'06	0°45'44	inferior conj	12734 Feb 10 06:05	29°♄10'06	-2°01'53
asc. node	12733 Mar 01 14:23	13°♄28'43		minimum elong	12734 Feb 10 10:16	29°♄00'20	1°59'38
morning rise	12733 Mar 05 20:11	10°♄31'02		asc. node	12734 Feb 16 11:45	24°♄28'46	
direct	12733 Mar 08 07:37	10°♄00'15		morning rise	12734 Feb 17 10:49	24°♄06'22	
morning max el	12733 Mar 14 17:46	13°♄19'04	17°49'06	direct	12734 Feb 19 15:54	23°♄44'37	
	12733 Mar 26 10:07	0°♄		morning max el	12734 Feb 26 10:59	27°♄11'19	17°48'18
morning set	12733 Mar 31 12:59	8°♄37'59			12734 Feb 28 23:00	0°♄	
desc. node	12733 Apr 03 17:20	14°♄00'32		morning set	12734 Mar 14 05:59	21°♄37'43	
	12733 Apr 13 09:39	0°♄			12734 Mar 18 23:26	0°♄	
				desc. node	12734 Mar 21 13:54	4°♄32'38	

superior conj	12734 Mar 25 13:44	11° Υ 22'52	-0°30'41	behind sun begin	12735 Mar 07 04:54	22° Υ 57'56	
minimum elong	12734 Mar 25 10:48	11° Υ 10'26	0°30'19	behind sun end	12735 Mar 07 18:28	23° Υ 58'26	
max. Earth dist.	12734 Apr 01 14:03	22° Υ 58'46	1.43698 AU	desc. node	12735 Mar 08 10:26	25° Υ 09'12	
	12734 Apr 05 23:30	0° Υ			12735 Mar 11 04:54	0° Υ	
evening rise	12734 Apr 08 23:16	4° Υ 40'52		max. Earth dist.	12735 Mar 15 02:07	6° Υ 36'46	1.41830 AU
	12734 Apr 25 23:27	0° Υ		evening rise	12735 Mar 20 05:45	15° Υ 04'14	
evening max el	12734 May 10 00:43	17° Υ 48'52	21°27'32		12735 Mar 29 20:18	0° Υ	
asc. node	12734 May 15 08:38	22° Υ 02'03			12735 Apr 21 03:58	0° Υ	
retrograde	12734 May 18 22:19	23° Υ 01'25		evening max el	12735 Apr 22 17:31	1° Υ 37'43	22°45'59
evening set	12734 May 23 08:38	21° Υ 13'35		asc. node	12735 May 02 05:53	7° Υ 32'28	
inferior conj	12734 May 28 14:51	14° Υ 58'47	3°05'41	retrograde	12735 May 02 19:00	7° Υ 33'51	
minimum elong	12734 May 28 13:44	15° Υ 02'41	3°04'40	evening set	12735 May 07 16:30	5° Υ 30'54	
min. Earth dist.	12734 May 28 20:34	14° Υ 38'54	0.68707 AU		12735 May 12 09:08	30° Υ	
morning rise	12734 Jun 02 18:39	8° Υ 43'09		min. Earth dist.	12735 May 12 17:12	29° Υ 32'00	0.68853 AU
direct	12734 Jun 07 20:20	6° Υ 31'05		inferior conj	12735 May 13 00:21	29° Υ 07'11	2°47'26
desc. node	12734 Jun 17 15:07	12° Υ 11'11		minimum elong	12735 May 12 22:33	29° Υ 13'27	2°46'18
morning max el	12734 Jun 17 22:37	12° Υ 29'54	22°54'19	morning rise	12735 May 18 04:29	22° Υ 57'55	
	12734 Jul 01 22:57	0° Υ		direct	12735 May 22 17:06	21° Υ 05'59	
	12734 Jul 21 14:52	0° Υ		morning max el	12735 May 31 13:10	26° Υ 13'04	21°28'24
morning set	12734 Jul 22 04:42	0° Υ 57'01			12735 Jun 04 00:12	0° Υ	
max. Earth dist.	12734 Jul 26 15:53	8° Υ 27'24	1.40132 AU	desc. node	12735 Jun 04 12:05	0° Υ 35'13	
					12735 Jun 25 10:24	0° Υ	
superior conj	12734 Aug 03 11:08	22° Υ 14'53	-1°08'17	morning set	12735 Jul 02 05:11	10° Υ 31'26	
minimum elong	12734 Aug 03 16:06	22° Υ 37'35	1°08'10	max. Earth dist.	12735 Jul 08 19:10	21° Υ 07'39	1.42325 AU
	12734 Aug 07 15:35	0° Υ			12735 Jul 14 02:31	0° Υ	
asc. node	12734 Aug 11 08:22	7° Υ 00'22					
evening rise	12734 Aug 13 05:38	10° Υ 36'10		superior conj	12735 Jul 16 06:07	3° Υ 41'05	-1°40'31
	12734 Aug 24 03:54	0° Υ		minimum elong	12735 Jul 16 13:02	4° Υ 10'56	1°40'35
evening max el	12734 Aug 29 05:29	6° Υ 24'04	18°29'29	evening rise	12735 Jul 27 10:57	23° Υ 38'14	
retrograde	12734 Sep 06 00:37	10° Υ 20'01		asc. node	12735 Jul 29 05:03	26° Υ 49'19	
evening set	12734 Sep 08 01:02	10° Υ 04'59			12735 Jul 30 23:19	0° Υ	
desc. node	12734 Sep 13 12:19	7° Υ 18'03		evening max el	12735 Aug 12 15:44	19° Υ 12'16	18°07'12
inferior conj	12734 Sep 15 19:37	5° Υ 33'32	-0°43'26	retrograde	12735 Aug 19 13:10	22° Υ 43'26	
minimum elong	12734 Sep 15 17:55	5° Υ 36'52	0°42'45	evening set	12735 Aug 21 20:51	22° Υ 19'52	
min. Earth dist.	12734 Sep 19 01:46	3° Υ 01'20	0.57790 AU	inferior conj	12735 Aug 28 21:05	17° Υ 27'55	0°45'48
morning rise	12734 Sep 23 07:20	0° Υ 18'50		minimum elong	12735 Aug 28 22:30	17° Υ 24'40	0°44'58
	12734 Sep 23 23:01	30° Υ		desc. node	12735 Aug 31 09:49	15° Υ 09'05	
direct	12734 Sep 29 09:00	28° Υ 45'03		min. Earth dist.	12735 Sep 01 03:18	14° Υ 30'33	0.59998 AU
	12734 Oct 04 22:00	0° Υ		morning rise	12735 Sep 04 21:00	11° Υ 41'24	
morning max el	12734 Oct 13 16:32	6° Υ 18'58	27°01'03	direct	12735 Sep 11 09:11	9° Υ 40'01	
	12734 Oct 31 06:21	0° Υ		morning max el	12735 Sep 25 16:55	17° Υ 32'16	27°48'25
asc. node	12734 Nov 07 10:04	13° Υ 03'01			12735 Oct 06 02:07	0° Υ	
morning set	12734 Nov 12 18:28	24° Υ 00'37			12735 Oct 23 22:03	0° Υ	
	12734 Nov 15 12:50	0° Υ		asc. node	12735 Oct 25 06:48	2° Υ 43'15	
				morning set	12735 Oct 27 23:54	8° Υ 18'02	
superior conj	12734 Nov 19 15:29	9° Υ 07'46	1°33'03	max. Earth dist.	12735 Nov 03 03:48	21° Υ 39'38	1.31323 AU
minimum elong	12734 Nov 19 14:07	9° Υ 00'10	1°33'49				
max. Earth dist.	12734 Nov 19 19:24	9° Υ 29'38	1.31324 AU	superior conj	12735 Nov 04 02:48	23° Υ 47'31	1°22'15
evening rise	12734 Nov 26 10:57	24° Υ 05'13		minimum elong	12735 Nov 04 00:46	23° Υ 36'15	1°22'45
	12734 Nov 29 07:01	0° Υ			12735 Nov 06 21:42	0° Υ	
desc. node	12734 Dec 10 09:26	20° Υ 24'16		evening rise	12735 Nov 10 19:40	8° Υ 35'11	
	12734 Dec 16 17:55	0° Υ			12735 Nov 21 17:25	0° Υ	
evening max el	12734 Dec 26 20:57	11° Υ 55'01	26°57'20	desc. node	12735 Nov 27 06:32	8° Υ 59'48	
retrograde	12735 Jan 09 19:32	19° Υ 05'49		evening max el	12735 Dec 08 17:12	23° Υ 06'48	25°51'26
evening set	12735 Jan 16 13:50	17° Υ 08'51			12735 Dec 20 16:55	0° Υ	
min. Earth dist.	12735 Jan 20 11:10	14° Υ 29'10	0.59877 AU	retrograde	12735 Dec 22 14:58	0° Υ 08'46	
inferior conj	12735 Jan 23 15:29	11° Υ 54'29	-3°22'59		12735 Dec 24 12:54	30° Υ	
minimum elong	12735 Jan 23 22:38	11° Υ 39'58	3°19'42	evening set	12735 Dec 28 19:24	28° Υ 39'15	
morning rise	12735 Jan 31 10:24	7° Υ 11'12		min. Earth dist.	12736 Jan 02 05:52	26° Υ 02'36	0.57774 AU
direct	12735 Feb 02 12:06	6° Υ 54'55		inferior conj	12736 Jan 05 06:04	23° Υ 55'37	-4°40'56
asc. node	12735 Feb 03 09:06	6° Υ 57'55		minimum elong	12736 Jan 05 14:41	23° Υ 40'25	4°37'46
morning max el	12735 Feb 10 00:34	10° Υ 39'22	18°06'24	morning rise	12736 Jan 13 12:42	19° Υ 34'43	
	12735 Feb 22 17:49	0° Υ		direct	12736 Jan 15 15:42	19° Υ 20'27	
morning set	12735 Feb 25 15:14	5° Υ 21'55		asc. node	12736 Jan 21 06:24	21° Υ 06'56	
				morning max el	12736 Jan 24 06:41	23° Υ 32'45	18°45'03
superior conj	12735 Mar 07 11:04	23° Υ 25'26	0°07'42		12736 Jan 29 12:05	0° Υ	
minimum elong	12735 Mar 07 11:41	23° Υ 28'13	0°07'48	morning set	12736 Feb 09 11:45	19° Υ 35'45	

	12736 Feb 14 20:00	0° H		superior conj	12737 Jan 31 12:39	20° \approx 01'31	1°05'14
				minimum elong	12737 Jan 31 15:29	20° \approx 15'31	1°05'32
superior conj	12736 Feb 18 04:15	6° H 22'39	0°40'05		12737 Feb 05 16:36	0° H	
minimum elong	12736 Feb 18 06:41	6° H 34'08	0°40'10	max. Earth dist.	12737 Feb 06 15:46	1° H 48'12	1.37417 AU
desc. node	12736 Feb 23 06:57	15° H 46'45		desc. node	12737 Feb 09 03:33	6° H 22'04	
max. Earth dist.	12736 Feb 25 09:35	19° H 31'29	1.39654 AU	evening rise	12737 Feb 10 09:12	8° H 34'58	
evening rise	12736 Feb 29 09:10	26° H 22'54			12737 Feb 23 08:13	0° Y	
	12736 Mar 02 13:09	0° Y		evening max el	12737 Mar 17 21:05	29° Y 20'25	25°23'08
	12736 Mar 22 11:27	0° B			12737 Mar 18 13:27	0° B	
evening max el	12736 Apr 04 07:35	15° B 28'06	24°06'49	retrograde	12737 Mar 30 01:59	6° B 24'01	
retrograde	12736 Apr 15 12:36	22° B 03'12		evening set	12737 Apr 04 22:41	3° B 58'12	
asc. node	12736 Apr 18 03:14	21° B 32'20		asc. node	12737 Apr 05 00:39	3° B 54'02	
evening set	12736 Apr 20 21:42	19° B 47'14			12737 Apr 08 15:36	30° R Y	
min. Earth dist.	12736 Apr 25 13:27	14° B 24'13	0.68540 AU	min. Earth dist.	12737 Apr 09 07:13	29° Y 10'34	0.67793 AU
inferior conj	12736 Apr 26 09:01	13° B 17'54	2°19'08	inferior conj	12737 Apr 10 15:01	27° Y 27'43	1°40'45
minimum elong	12736 Apr 26 06:53	13° B 25'10	2°17'58	minimum elong	12737 Apr 10 13:00	27° Y 34'15	1°39'44
morning rise	12736 May 01 16:08	7° B 16'08		morning rise	12737 Apr 16 03:44	21° Y 34'45	
direct	12736 May 05 16:04	5° B 45'18		direct	12737 Apr 19 15:53	20° Y 24'06	
morning max el	12736 May 13 10:14	10° B 07'21	20°12'41	morning max el	12737 Apr 26 14:56	24° Y 12'22	19°11'12
desc. node	12736 May 21 08:55	19° B 41'41			12737 May 01 14:35	0° B	
	12736 May 28 15:15	0° II		desc. node	12737 May 08 05:40	9° B 19'25	
morning set	12736 Jun 10 09:41	19° II 15'10		greatest brilliancy	12737 May 09 13:18	11° B 16'52	-0.7m
	12736 Jun 17 07:05	0° B		morning set	12737 May 20 12:30	28° B 00'40	
max. Earth dist.	12736 Jun 20 04:46	4° B 36'38	1.44115 AU		12737 May 21 19:24	0° II	
				max. Earth dist.	12737 Jun 02 20:09	18° II 43'34	1.45312 AU
superior conj	12736 Jun 26 01:37	14° B 06'26	-2°04'34				
minimum elong	12736 Jun 26 07:23	14° B 30'06	2°05'12	superior conj	12737 Jun 05 22:35	23° II 36'51	-2°13'28
	12736 Jul 05 12:57	0° O		minimum elong	12737 Jun 05 22:20	23° II 35'50	2°14'25
evening rise	12736 Jul 08 23:02	5° O 53'06			12737 Jun 09 22:59	0° B	
asc. node	12736 Jul 15 01:50	16° O 23'36		evening rise	12737 Jun 20 12:57	17° B 10'03	
	12736 Jul 24 00:52	0° M			12737 Jun 28 09:03	0° O	
evening max el	12736 Jul 26 05:31	2° M 26'30	18°04'16	asc. node	12737 Jul 01 22:43	5° O 37'42	
retrograde	12736 Aug 01 15:58	5° M 47'10		evening max el	12737 Jul 09 19:29	15° O 58'25	18°19'41
evening set	12736 Aug 04 07:48	5° M 11'44		retrograde	12737 Jul 16 04:38	19° O 22'28	
inferior conj	12736 Aug 10 16:34	0° M 01'06	1°51'38	evening set	12737 Jul 19 04:56	18° O 32'38	
minimum elong	12736 Aug 10 19:06	29° O 54'30	1°50'19	inferior conj	12737 Jul 25 01:58	13° O 05'11	2°35'47
	12736 Aug 10 16:59	30° R O		minimum elong	12737 Jul 25 04:18	12° O 58'25	2°34'31
min. Earth dist.	12736 Aug 13 14:09	27° O 00'49	0.62281 AU	min. Earth dist.	12737 Jul 27 10:25	10° O 22'04	0.64393 AU
morning rise	12736 Aug 17 04:06	23° O 53'24		morning rise	12737 Jul 31 02:16	6° O 46'11	
desc. node	12736 Aug 17 07:17	23° O 47'43		desc. node	12737 Aug 04 04:42	4° O 30'09	
direct	12736 Aug 23 20:29	21° O 29'10		direct	12737 Aug 06 16:40	4° O 08'18	
morning max el	12736 Sep 06 23:23	29° O 30'55	27°56'46	morning max el	12737 Aug 20 09:17	12° O 07'48	27°28'50
	12736 Sep 07 10:55	0° M			12737 Sep 03 15:29	0° M	
	12736 Sep 29 01:56	0° B			12737 Sep 21 14:31	0° B	
morning set	12736 Oct 10 23:22	22° B 15'27		morning set	12737 Sep 24 14:21	5° B 46'48	
asc. node	12736 Oct 11 03:28	22° B 36'25		asc. node	12737 Sep 28 00:06	12° B 37'56	
	12736 Oct 14 16:18	0° M		max. Earth dist.	12737 Sep 29 05:49	15° B 11'29	1.32905 AU
max. Earth dist.	12736 Oct 16 08:26	3° M 35'51	1.31844 AU				
				superior conj	12737 Oct 02 17:14	22° B 32'24	0°44'04
superior conj	12736 Oct 18 12:03	8° M 17'32	1°05'53	minimum elong	12737 Oct 02 15:18	22° B 21'59	0°43'59
minimum elong	12736 Oct 18 09:48	8° M 05'07	1°06'03		12737 Oct 06 04:11	0° M	
evening rise	12736 Oct 25 06:30	23° M 08'32		evening rise	12737 Oct 09 17:39	7° M 40'31	
	12736 Oct 28 12:28	0° A			12737 Oct 21 08:12	0° A	
desc. node	12736 Nov 13 03:45	26° A 37'49		desc. node	12737 Oct 31 01:05	12° A 56'34	
	12736 Nov 15 21:34	0° B		evening max el	12737 Oct 31 16:12	13° A 34'13	22°38'03
evening max el	12736 Nov 19 05:45	3° B 31'45	24°19'54	retrograde	12737 Nov 13 16:33	20° A 01'50	
retrograde	12736 Dec 02 22:19	10° B 21'51		evening set	12737 Nov 17 10:01	19° A 31'30	
evening set	12736 Dec 08 01:20	9° B 24'03		min. Earth dist.	12737 Nov 25 00:17	16° A 06'02	0.54837 AU
min. Earth dist.	12736 Dec 13 17:11	6° B 32'06	0.55990 AU	inferior conj	12737 Nov 25 23:49	15° A 32'42	-5°52'45
inferior conj	12736 Dec 15 24:00	5° B 07'27	-5°38'39	minimum elong	12737 Nov 25 21:30	15° A 35'58	5°51'45
minimum elong	12736 Dec 16 05:46	4° B 58'31	5°36'57	morning rise	12737 Dec 04 10:21	11° A 44'45	
morning rise	12736 Dec 24 12:13	1° B 07'01		direct	12737 Dec 07 15:04	11° A 21'23	
direct	12736 Dec 26 23:50	0° B 50'46		morning max el	12737 Dec 19 05:44	16° A 53'24	21°10'13
morning max el	12737 Jan 06 01:21	5° B 40'16	19°46'12	asc. node	12737 Dec 25 00:46	23° A 40'08	
asc. node	12737 Jan 07 03:37	6° B 46'43			12737 Dec 29 04:09	0° B	
	12737 Jan 21 14:18	0° \approx		morning set	12738 Jan 08 00:43	18° B 51'38	
morning set	12737 Jan 23 15:54	4° \approx 08'48			12738 Jan 13 08:08	0° \approx	

superior conj	12738 Jan 15 08:01	4° \approx 09'07	1°23'05	superior conj	12738 Dec 30 11:03	18° \approx 36'14	1°33'58
minimum elong	12738 Jan 15 10:20	4° \approx 21'04	1°23'41	minimum elong	12738 Dec 30 12:24	18° \approx 43'25	1°34'49
max. Earth dist.	12738 Jan 20 01:38	13° \approx 43'42	1.35350 AU	max. Earth dist.	12739 Jan 02 18:39	25° \approx 36'44	1.33626 AU
evening rise	12738 Jan 24 02:35	21° \approx 30'07			12739 Jan 04 21:52	0° \approx	
desc. node	12738 Jan 27 00:13	26° \approx 50'24		evening rise	12739 Jan 07 09:46	4° \approx 59'15	
	12738 Jan 28 18:45	0° \approx		desc. node	12739 Jan 13 20:59	17° \approx 07'19	
	12738 Feb 17 04:43	0° \approx			12739 Jan 21 12:22	0° \approx	
evening max el	12738 Feb 28 10:53	13° \approx 08'47	26°27'46	evening max el	12739 Feb 11 00:24	26° \approx 43'18	27°13'16
retrograde	12738 Mar 13 10:03	20° \approx 28'40			12739 Feb 14 18:42	0° \approx	
evening set	12738 Mar 19 17:39	17° \approx 57'06		retrograde	12739 Feb 24 11:57	4° \approx 09'08	
asc. node	12738 Mar 22 22:05	14° \approx 48'23		evening set	12739 Mar 03 04:34	1° \approx 37'17	
min. Earth dist.	12738 Mar 23 20:11	13° \approx 44'10	0.66629 AU		12739 Mar 05 01:59	30° \approx	
inferior conj	12738 Mar 25 16:13	11° \approx 31'10	0°51'58	min. Earth dist.	12739 Mar 07 02:10	27° \approx 57'22	0.65080 AU
minimum elong	12738 Mar 25 14:56	11° \approx 35'03	0°51'24	inferior conj	12739 Mar 09 10:12	25° \approx 22'24	-0°07'33
morning rise	12738 Mar 31 13:09	5° \approx 48'49		minimum elong	12739 Mar 09 10:24	25° \approx 21'48	0°07'17
direct	12738 Apr 03 14:40	4° \approx 56'07		transit middle	12739 Mar 09 10:24	25° \approx 21'48	0°07'17
morning max el	12738 Apr 10 02:24	8° \approx 23'21	18°25'57	transit begin	12739 Mar 09 07:43	25° \approx 29'18	
desc. node	12738 Apr 25 02:20	29° \approx 19'33		transit end	12739 Mar 09 13:06	25° \approx 14'19	
	12738 Apr 25 12:36	0° \approx		asc. node	12739 Mar 09 19:32	24° \approx 56'35	
morning set	12738 Apr 30 10:53	7° \approx 47'20		morning rise	12739 Mar 15 17:55	19° \approx 53'04	
	12738 May 14 13:52	0° \approx		direct	12739 Mar 18 10:06	19° \approx 15'15	
				morning max el	12739 Mar 24 18:27	22° \approx 33'37	17°57'38
superior conj	12738 May 16 06:36	2° \approx 39'08	-2°02'24		12739 Mar 30 17:16	0° \approx	
minimum elong	12738 May 15 23:10	2° \approx 10'07	2°02'46	morning set	12739 Apr 11 13:44	18° \approx 57'56	
max. Earth dist.	12738 May 16 15:32	3° \approx 14'02	1.45796 AU	desc. node	12739 Apr 11 22:55	19° \approx 35'47	
evening rise	12738 Jun 01 02:27	27° \approx 26'44			12739 Apr 18 07:26	0° \approx	
	12738 Jun 02 17:21	0° \approx					
greatest brilliancy	12738 Jun 10 11:45	12° \approx 10'44	-0.8m	superior conj	12739 Apr 25 18:59	11° \approx 59'43	-1°33'15
asc. node	12738 Jun 18 19:42	24° \approx 24'08		minimum elong	12739 Apr 25 09:57	11° \approx 23'56	1°32'52
evening max el	12738 Jun 23 06:44	29° \approx 40'15	18°52'41	max. Earth dist.	12739 Apr 29 11:52	17° \approx 50'10	1.45525 AU
	12738 Jun 23 14:47	0° \approx			12739 May 07 07:23	0° \approx	
retrograde	12738 Jun 29 23:31	3° \approx 21'04		evening rise	12739 May 11 20:16	6° \approx 59'34	
evening set	12738 Jul 03 08:32	2° \approx 15'21		greatest brilliancy	12739 May 25 20:30	28° \approx 11'42	-0.6m
	12738 Jul 05 23:23	30° \approx			12739 May 27 02:13	0° \approx	
inferior conj	12738 Jul 08 21:30	26° \approx 32'35	3°01'48	asc. node	12739 Jun 05 16:45	12° \approx 33'07	
minimum elong	12738 Jul 08 22:59	26° \approx 27'56	3°00'43	evening max el	12739 Jun 06 13:07	13° \approx 25'58	19°42'02
min. Earth dist.	12738 Jul 10 15:14	24° \approx 21'18	0.66164 AU	retrograde	12739 Jun 13 21:35	17° \approx 35'51	
morning rise	12738 Jul 14 12:42	20° \approx 09'29		evening set	12739 Jun 17 15:49	16° \approx 13'39	
direct	12738 Jul 20 20:07	17° \approx 28'19		inferior conj	12739 Jun 22 24:00	10° \approx 17'01	3°12'56
desc. node	12738 Jul 22 02:03	17° \approx 33'56		minimum elong	12739 Jun 23 00:25	10° \approx 15'37	3°11'57
morning max el	12738 Aug 02 20:19	25° \approx 12'07	26°31'39	min. Earth dist.	12739 Jun 24 03:10	8° \approx 46'19	0.67514 AU
	12738 Aug 07 05:06	0° \approx		morning rise	12739 Jun 28 08:38	3° \approx 54'29	
	12738 Aug 28 03:11	0° \approx		direct	12739 Jul 04 05:44	1° \approx 19'18	
morning set	12738 Sep 07 17:46	18° \approx 44'32		desc. node	12739 Jul 08 23:17	2° \approx 40'24	
max. Earth dist.	12738 Sep 11 17:34	26° \approx 26'40	1.34483 AU	morning max el	12739 Jul 16 06:54	8° \approx 32'36	25°14'04
	12738 Sep 13 12:23	0° \approx			12739 Aug 02 03:14	0° \approx	
asc. node	12738 Sep 14 20:43	2° \approx 43'46			12739 Aug 20 16:34	0° \approx	
				morning set	12739 Aug 21 05:35	0° \approx 58'08	
superior conj	12738 Sep 16 15:57	6° \approx 25'50	0°17'09	max. Earth dist.	12739 Aug 24 20:02	7° \approx 32'58	1.36499 AU
minimum elong	12738 Sep 16 15:02	6° \approx 21'05	0°16'58				
evening rise	12738 Sep 24 03:09	22° \approx 06'04		superior conj	12739 Aug 31 05:11	19° \approx 49'27	-0°14'12
	12738 Sep 27 23:40	0° \approx		minimum elong	12739 Aug 31 06:05	19° \approx 53'57	0°14'17
evening max el	12738 Oct 13 09:52	23° \approx 51'27	21°03'13	behind sun begin	12739 Aug 31 03:05	19° \approx 39'04	
desc. node	12738 Oct 17 22:29	27° \approx 29'38		behind sun end	12739 Aug 31 09:05	20° \approx 08'50	
retrograde	12738 Oct 25 03:30	29° \approx 41'18		asc. node	12739 Sep 01 17:19	22° \approx 49'29	
evening set	12738 Oct 27 15:27	29° \approx 26'34			12739 Sep 05 06:25	0° \approx	
inferior conj	12738 Nov 05 15:24	25° \approx 32'29	-5°07'53	evening rise	12739 Sep 08 08:42	6° \approx 18'16	
minimum elong	12738 Nov 05 06:06	25° \approx 45'37	5°05'10		12739 Sep 21 15:10	0° \approx	
min. Earth dist.	12738 Nov 06 06:37	25° \approx 10'56	0.54550 AU	evening max el	12739 Sep 25 16:56	4° \approx 50'05	19°46'30
morning rise	12738 Nov 13 21:11	21° \approx 40'29		desc. node	12739 Oct 04 19:57	9° \approx 49'32	
direct	12738 Nov 17 22:56	21° \approx 04'55		retrograde	12739 Oct 05 19:18	9° \approx 52'14	
morning max el	12738 Nov 30 21:29	27° \approx 18'42	22°52'35	evening set	12739 Oct 07 16:58	9° \approx 42'18	
	12738 Dec 03 12:16	0° \approx		inferior conj	12739 Oct 16 13:17	5° \approx 40'06	-3°34'38
asc. node	12738 Dec 11 21:48	11° \approx 31'07		minimum elong	12739 Oct 16 04:15	5° \approx 54'05	3°31'04
	12738 Dec 21 18:31	0° \approx		min. Earth dist.	12739 Oct 18 15:33	4° \approx 22'20	0.55197 AU
morning set	12738 Dec 23 12:00	3° \approx 38'06		morning rise	12739 Oct 24 13:56	1° \approx 23'04	
				direct	12739 Oct 29 12:10	0° \approx 29'36	

morning max el	12739 Nov 12 07:47	7° \mathbb{M} 20'48	24°41'03		12740 Nov 03 04:24	0° \mathbb{M}	
asc. node	12739 Nov 28 18:44	0° \mathbb{A} 05'22		asc. node	12740 Nov 14 15:34	19° \mathbb{M} 11'53	
	12739 Nov 28 17:32	0° \mathbb{A}			12740 Nov 20 00:35	0° \mathbb{A}	
morning set	12739 Dec 07 23:52	18° \mathbb{A} 22'38		morning set	12740 Nov 21 10:35	3° \mathbb{A} 00'28	
	12739 Dec 13 07:34	0° \mathbb{B}					
superior conj	12739 Dec 14 19:04	3° \mathbb{B} 15'08	1°38'22	superior conj	12740 Nov 28 05:53	17° \mathbb{A} 59'11	1°36'41
minimum elong	12739 Dec 14 19:17	3° \mathbb{B} 16'21	1°39'20	minimum elong	12740 Nov 28 05:02	17° \mathbb{A} 54'30	1°37'34
max. Earth dist.	12739 Dec 16 19:09	7° \mathbb{B} 37'25	1.32341 AU	max. Earth dist.	12740 Nov 29 01:16	19° \mathbb{A} 46'56	1.31546 AU
evening rise	12739 Dec 22 03:24	18° \mathbb{B} 54'06			12740 Dec 03 17:21	0° \mathbb{B}	
	12739 Dec 27 19:26	0° \mathbb{A}		evening rise	12740 Dec 05 04:44	3° \mathbb{B} 07'44	
desc. node	12739 Dec 31 17:51	7° \mathbb{A} 07'13		desc. node	12740 Dec 17 14:48	26° \mathbb{B} 42'37	
	12740 Jan 15 18:36	0° \mathbb{H}			12740 Dec 19 14:39	0° \mathbb{A}	
evening max el	12740 Jan 24 12:06	9° \mathbb{H} 52'22	27°32'42	evening max el	12741 Jan 05 19:49	22° \mathbb{A} 23'35	27°20'17
retrograde	12740 Feb 07 07:06	17° \mathbb{H} 16'31		retrograde	12741 Jan 19 18:20	29° \mathbb{A} 40'36	
evening set	12740 Feb 14 05:01	14° \mathbb{H} 51'30		evening set	12741 Jan 26 15:55	27° \mathbb{A} 31'01	
min. Earth dist.	12740 Feb 17 23:18	11° \mathbb{H} 40'57	0.63204 AU	min. Earth dist.	12741 Jan 30 10:21	24° \mathbb{A} 42'51	0.61108 AU
inferior conj	12740 Feb 20 18:11	8° \mathbb{H} 54'43	-1°17'31	inferior conj	12741 Feb 02 12:51	21° \mathbb{A} 59'17	-2°36'00
minimum elong	12740 Feb 20 20:43	8° \mathbb{H} 48'23	1°16'02	minimum elong	12741 Feb 02 18:21	21° \mathbb{A} 47'12	2°33'14
asc. node	12740 Feb 24 16:56	5° \mathbb{H} 20'45		morning rise	12741 Feb 09 23:44	17° \mathbb{A} 04'09	
morning rise	12740 Feb 27 14:51	3° \mathbb{H} 41'07		asc. node	12741 Feb 10 14:18	16° \mathbb{A} 55'00	
direct	12740 Feb 29 23:19	3° \mathbb{H} 14'37		direct	12741 Feb 12 02:47	16° \mathbb{A} 45'17	
morning max el	12740 Mar 07 12:14	6° \mathbb{H} 35'21	17°46'38	morning max el	12741 Feb 19 04:24	20° \mathbb{A} 18'36	17°53'40
	12740 Mar 22 23:20	0° \mathbb{Y}			12741 Feb 26 09:44	0° \mathbb{H}	
morning set	12740 Mar 23 18:35	1° \mathbb{Y} 23'12		morning set	12741 Mar 06 19:10	14° \mathbb{H} 43'28	
desc. node	12740 Mar 28 19:29	10° \mathbb{Y} 03'21		desc. node	12741 Mar 15 07:27	0° \mathbb{Y}	
					12741 Mar 15 16:01	0° \mathbb{Y} 37'32	
superior conj	12740 Apr 05 02:40	22° \mathbb{Y} 17'30	-0°54'13	superior conj	12741 Mar 17 10:37	3° \mathbb{Y} 42'54	-0°13'52
minimum elong	12740 Apr 04 21:09	21° \mathbb{Y} 54'47	0°53'42	minimum elong	12741 Mar 17 09:24	3° \mathbb{Y} 37'35	0°13'37
	12740 Apr 09 20:33	0° \mathbb{B}		behind sun begin	12741 Mar 17 05:01	3° \mathbb{Y} 18'37	
max. Earth dist.	12740 Apr 11 06:10	2° \mathbb{B} 14'24	1.44537 AU	behind sun end	12741 Mar 17 13:46	3° \mathbb{Y} 56'31	
evening rise	12740 Apr 20 07:36	16° \mathbb{B} 24'34		max. Earth dist.	12741 Mar 24 20:19	16° \mathbb{Y} 10'53	1.42947 AU
	12740 Apr 29 07:16	0° \mathbb{I}		evening rise	12741 Mar 31 03:54	26° \mathbb{Y} 19'20	
evening max el	12740 May 19 13:43	27° \mathbb{I} 13'13	20°45'41		12741 Apr 02 12:24	0° \mathbb{B}	
asc. node	12740 May 22 13:54	29° \mathbb{I} 52'59			12741 Apr 23 03:36	0° \mathbb{I}	
	12740 May 22 17:42	0° \mathbb{E}		evening max el	12741 May 02 08:57	11° \mathbb{I} 01'03	22°00'14
retrograde	12740 May 27 20:34	2° \mathbb{E} 01'44		asc. node	12741 May 09 11:08	16° \mathbb{I} 07'55	
evening set	12740 Jun 01 00:42	0° \mathbb{E} 23'10		retrograde	12741 May 11 18:30	16° \mathbb{I} 32'45	
	12740 Jun 01 11:46	30° \mathbb{R} \mathbb{I}		evening set	12741 May 16 09:22	14° \mathbb{I} 38'31	
inferior conj	12740 Jun 06 06:55	24° \mathbb{I} 14'19	3°11'33	inferior conj	12741 May 21 16:02	8° \mathbb{I} 19'33	2°59'11
minimum elong	12740 Jun 06 06:19	24° \mathbb{I} 16'24	3°10'34	minimum elong	12741 May 21 14:36	8° \mathbb{I} 24'36	2°58'08
min. Earth dist.	12740 Jun 06 20:15	23° \mathbb{I} 28'14	0.68404 AU	min. Earth dist.	12741 May 21 16:17	8° \mathbb{I} 18'43	0.68824 AU
morning rise	12740 Jun 11 11:41	17° \mathbb{I} 55'22		morning rise	12741 May 26 19:38	2° \mathbb{I} 06'12	
direct	12740 Jun 16 20:40	15° \mathbb{I} 33'22		direct	12741 May 31 15:44	0° \mathbb{I} 02'17	
desc. node	12740 Jun 24 20:24	19° \mathbb{I} 22'25		morning max el	12741 Jun 10 04:58	5° \mathbb{I} 39'18	22°16'48
morning max el	12740 Jun 27 17:07	22° \mathbb{I} 02'29	23°45'55	desc. node	12741 Jun 11 17:25	7° \mathbb{I} 14'32	
	12740 Jul 04 15:22	0° \mathbb{E}			12741 Jun 28 22:10	0° \mathbb{E}	
	12740 Jul 25 10:01	0° \mathbb{Q}		morning set	12741 Jul 13 12:18	22° \mathbb{E} 29'32	
morning set	12740 Aug 01 21:12	12° \mathbb{Q} 16'49			12741 Jul 18 01:52	0° \mathbb{Q}	
max. Earth dist.	12740 Aug 05 17:35	18° \mathbb{Q} 56'14	1.38789 AU	max. Earth dist.	12741 Jul 18 16:52	1° \mathbb{Q} 02'50	1.41101 AU
	12740 Aug 11 20:13	0° \mathbb{P}					
superior conj	12740 Aug 13 05:25	2° \mathbb{P} 35'20	-0°48'22	superior conj	12741 Jul 26 12:24	14° \mathbb{Q} 33'41	-1°22'33
minimum elong	12740 Aug 13 08:50	2° \mathbb{P} 51'27	0°48'17	minimum elong	12741 Jul 26 18:23	15° \mathbb{Q} 00'25	1°22'28
asc. node	12740 Aug 18 13:57	12° \mathbb{P} 51'51			12741 Aug 03 22:53	0° \mathbb{P}	
evening rise	12740 Aug 22 07:40	20° \mathbb{P} 10'25		asc. node	12741 Aug 05 10:38	2° \mathbb{P} 46'58	
	12740 Aug 27 10:42	0° \mathbb{U}		evening rise	12741 Aug 05 20:37	3° \mathbb{P} 33'38	
evening max el	12740 Sep 07 13:31	16° \mathbb{U} 37'21	18°51'25	evening max el	12741 Aug 21 20:05	29° \mathbb{P} 06'49	18°17'35
retrograde	12740 Sep 16 02:22	20° \mathbb{U} 54'06			12741 Aug 22 18:52	0° \mathbb{U}	
evening set	12740 Sep 17 23:37	20° \mathbb{U} 42'22		retrograde	12741 Aug 29 04:32	2° \mathbb{U} 50'02	
desc. node	12740 Sep 20 17:25	19° \mathbb{U} 47'00		evening set	12741 Aug 31 07:52	2° \mathbb{U} 31'50	
inferior conj	12740 Sep 26 05:00	16° \mathbb{U} 23'08	-1°43'53		12741 Sep 05 02:10	30° \mathbb{R} \mathbb{P}	
minimum elong	12740 Sep 26 00:37	16° \mathbb{U} 30'58	1°41'58	inferior conj	12741 Sep 07 18:29	27° \mathbb{P} 51'51	-0°02'48
min. Earth dist.	12740 Sep 29 05:31	14° \mathbb{U} 13'56	0.56672 AU	minimum elong	12741 Sep 07 18:22	27° \mathbb{P} 52'05	0°02'54
morning rise	12740 Oct 03 22:21	11° \mathbb{U} 29'22		transit middle	12741 Sep 07 18:22	27° \mathbb{P} 52'05	0°02'54
direct	12740 Oct 09 15:15	10° \mathbb{U} 11'14		transit begin	12741 Sep 07 14:57	27° \mathbb{P} 59'14	
morning max el	12740 Oct 23 20:43	17° \mathbb{U} 32'37	26°17'31	transit end	12741 Sep 07 21:48	27° \mathbb{P} 44'54	
				desc. node	12741 Sep 07 14:52	27° \mathbb{P} 59'25	

min. Earth dist.	12741 Sep 11 02:14	25° \cap 06'06	0.58708 AU	minimum elong	12742 Aug 21 06:13	9° \cap 58'40	1°15'24
morning rise	12741 Sep 15 01:24	22° \cap 22'37		min. Earth dist.	12742 Aug 24 07:25	7° \cap 02'43	0.60983 AU
direct	12741 Sep 21 08:35	20° \cap 36'27		desc. node	12742 Aug 25 12:21	5° \cap 58'27	
morning max el	12741 Oct 05 16:30	28° \cap 19'21	27°25'46	morning rise	12742 Aug 27 22:46	4° \cap 07'16	
	12741 Oct 07 08:08	0° $\underline{\cap}$		direct	12742 Sep 03 13:39	1° \cap 55'23	
	12741 Oct 27 22:47	0° \cap		morning max el	12742 Sep 17 19:34	9° \cap 51'54	27°56'41
asc. node	12741 Nov 01 12:20	8° \cap 42'10			12742 Oct 03 10:35	0° $\underline{\cap}$	
morning set	12741 Nov 05 18:30	17° \cap 27'07		asc. node	12742 Oct 19 09:03	28° $\underline{\cap}$ 28'43	
	12741 Nov 11 12:24	0° \times			12742 Oct 20 02:55	0° \cap	
				morning set	12742 Oct 20 21:40	1° \cap 36'47	
superior conj	12741 Nov 12 17:35	2° \times 42'44	1°29'10	max. Earth dist.	12742 Oct 26 17:17	14° \cap 05'57	1.31486 AU
minimum elong	12741 Nov 12 15:54	2° \times 33'20	1°29'49				
max. Earth dist.	12741 Nov 12 09:53	1° \times 59'50	1.31258 AU	superior conj	12742 Oct 28 04:16	17° \cap 19'13	1°16'00
evening rise	12741 Nov 19 11:24	17° \times 34'09		minimum elong	12742 Oct 28 02:05	17° \cap 07'07	1°16'20
	12741 Nov 25 13:21	0° \times			12742 Nov 02 21:54	0° \times	
desc. node	12741 Dec 04 11:51	15° \times 44'01		evening rise	12742 Nov 03 21:17	2° \times 06'41	
	12741 Dec 14 22:26	0° \approx			12742 Nov 18 17:17	0° \times	
evening max el	12741 Dec 18 21:06	4° \approx 07'07	26°33'18	desc. node	12742 Nov 21 09:00	3° \times 57'23	
retrograde	12742 Jan 01 20:01	11° \approx 14'11		evening max el	12742 Nov 30 14:00	14° \times 57'55	25°14'51
evening set	12742 Jan 08 09:27	9° \approx 28'28		retrograde	12742 Dec 14 10:01	21° \times 54'33	
min. Earth dist.	12742 Jan 12 10:58	6° \approx 51'44	0.58955 AU	evening set	12742 Dec 20 05:10	20° \times 38'32	
inferior conj	12742 Jan 15 14:42	4° \approx 27'02	-3°57'17	min. Earth dist.	12742 Dec 25 02:03	17° \times 57'50	0.56964 AU
minimum elong	12742 Jan 15 22:48	4° \approx 11'31	3°53'51	inferior conj	12742 Dec 27 20:33	16° \times 07'39	-5°09'11
	12742 Jan 23 04:12	30° \times		minimum elong	12742 Dec 28 04:39	15° \times 54'11	5°06'32
morning rise	12742 Jan 23 15:04	29° \times 52'52		morning rise	12743 Jan 05 06:27	11° \times 55'43	
direct	12742 Jan 25 16:30	29° \times 37'55		direct	12743 Jan 07 12:17	11° \times 41'01	
asc. node	12742 Jan 28 11:37	0° \approx 06'52		asc. node	12743 Jan 15 08:53	14° \times 55'54	
	12742 Jan 28 03:11	0° \approx		morning max el	12743 Jan 16 16:55	16° \times 08'01	19°08'13
morning max el	12742 Feb 02 15:18	3° \approx 33'29	18°20'10		12743 Jan 26 12:54	0° \approx	
morning set	12742 Feb 18 09:47	28° \approx 42'08		morning set	12743 Feb 02 09:58	13° \approx 05'21	
	12742 Feb 19 02:09	0° \times					
				superior conj	12743 Feb 10 17:09	29° \approx 26'15	0°51'40
superior conj	12742 Feb 27 16:58	16° \times 10'07	0°22'16	minimum elong	12743 Feb 10 19:54	29° \approx 39'29	0°51'49
minimum elong	12742 Feb 27 18:34	16° \times 17'26	0°22'20		12743 Feb 11 00:11	0° \times	
desc. node	12742 Mar 02 12:34	21° \times 15'03		desc. node	12743 Feb 17 09:10	11° \times 51'59	
max. Earth dist.	12742 Mar 07 06:07	29° \times 30'17	1.40930 AU	max. Earth dist.	12743 Feb 17 12:58	12° \times 09'08	1.38699 AU
	12742 Mar 07 13:05	0° γ		evening rise	12743 Feb 21 07:34	18° \times 48'15	
evening rise	12742 Mar 11 19:07	7° γ 06'21			12743 Feb 28 00:47	0° γ	
	12742 Mar 26 14:57	0° \times			12743 Mar 20 21:19	0° \times	
evening max el	12742 Apr 15 00:29	24° \times 50'56	23°20'32	evening max el	12743 Mar 28 14:15	8° \times 42'46	24°40'18
	12742 Apr 21 14:33	0° \cap		retrograde	12743 Apr 09 05:42	15° \times 30'41	
retrograde	12742 Apr 25 13:55	1° \cap 04'09		asc. node	12743 Apr 13 05:49	14° \times 19'44	
asc. node	12742 Apr 26 08:26	1° \cap 01'25		evening set	12743 Apr 14 19:54	13° \times 10'01	
	12742 Apr 29 05:03	30° \times		min. Earth dist.	12743 Apr 19 08:25	8° \times 02'22	0.68277 AU
evening set	12742 Apr 30 16:17	28° \times 55'35		inferior conj	12743 Apr 20 09:12	6° \times 39'51	2°04'06
min. Earth dist.	12742 May 05 13:03	23° \times 11'53	0.68778 AU	minimum elong	12743 Apr 20 07:03	6° \times 47'02	2°02'58
inferior conj	12742 May 06 01:25	22° \times 29'15	2°36'38	morning rise	12743 Apr 25 18:23	0° \times 41'52	
minimum elong	12742 May 05 23:26	22° \times 36'08	2°35'30		12743 Apr 26 21:28	30° \times	
morning rise	12742 May 11 06:29	16° \times 22'56		direct	12743 Apr 29 13:16	29° γ 19'43	
direct	12742 May 15 13:44	14° \times 39'42			12743 May 02 08:18	0° \times	
morning max el	12742 May 23 21:52	19° \times 26'12	20°54'36	morning max el	12743 May 06 22:13	3° \times 25'24	19°44'43
desc. node	12742 May 29 14:20	25° \times 57'55		desc. node	12743 May 16 11:09	15° \times 18'49	
	12742 Jun 01 16:12	0° \cap		greatest brilliancy	12743 May 19 17:16	19° \times 59'30	-0.6m
	12742 Jun 22 01:40	0° \ominus			12743 May 26 10:32	0° \cap	
morning set	12742 Jun 23 02:49	1° \ominus 37'51		morning set	12743 Jun 02 03:53	10° \cap 15'00	
max. Earth dist.	12742 Jun 30 22:52	14° \ominus 05'05	1.43154 AU	max. Earth dist.	12743 Jun 13 11:51	27° \cap 54'47	1.44705 AU
					12743 Jun 14 19:24	0° \ominus	
				superior conj	12743 Jun 18 07:09	5° \ominus 35'18	-2°10'35
superior conj	12742 Jul 07 21:44	25° \ominus 34'51	-1°52'07	minimum elong	12743 Jun 18 10:55	5° \ominus 50'31	2°11'26
minimum elong	12742 Jul 08 04:42	26° \ominus 04'15	1°52'24		12743 Jun 18 10:55	5° \ominus 50'31	2°11'26
	12742 Jul 10 12:08	0° \cap		evening rise	12743 Jul 01 22:28	28° \ominus 09'04	
evening rise	12742 Jul 19 19:13	16° \cap 17'03			12743 Jul 03 00:43	0° \cap	
asc. node	12742 Jul 23 07:22	22° \cap 30'23			12743 Jul 10 04:12	11° \cap 57'17	
	12742 Jul 27 15:35	0° \cap		asc. node	12743 Jul 19 22:39	25° \cap 30'57	18°08'35
evening max el	12742 Aug 05 08:22	12° \cap 07'47	18°03'39	evening max el	12743 Jul 26 07:22	28° \cap 51'30	
retrograde	12742 Aug 11 23:40	15° \cap 32'26		retrograde	12743 Jul 29 02:48	28° \cap 10'07	
evening set	12742 Aug 14 10:54	15° \cap 04'01		evening set	12743 Aug 04 06:05	22° \cap 51'47	2°12'46
inferior conj	12742 Aug 21 04:07	10° \cap 03'45	1°16'32	inferior conj			

minimum elong	12743 Aug 04 08:38	22° Ω 44'47	2°11'26	inferior conj	12744 Jul 17 20:13	6° Ω 06'46	2°48'49
min. Earth dist.	12743 Aug 06 22:16	19° Ω 56'58	0.63209 AU	minimum elong	12744 Jul 17 22:14	6° Ω 00'41	2°47'37
morning rise	12743 Aug 10 12:38	16° Ω 38'11		min. Earth dist.	12744 Jul 19 22:27	3° Ω 35'40	0.65186 AU
desc. node	12743 Aug 12 09:48	15° Ω 24'30			12744 Jul 23 09:16	30° \mathcal{R} \mathcal{S}	
direct	12743 Aug 17 04:42	14° Ω 07'20		morning rise	12744 Jul 23 16:19	29° \mathcal{S} 44'59	
morning max el	12743 Aug 31 04:03	22° Ω 09'12	27°49'04	desc. node	12744 Jul 29 07:11	27° \mathcal{S} 07'13	
	12743 Sep 07 01:29	0° \mathcal{M}		direct	12744 Jul 30 04:05	27° \mathcal{S} 04'31	
	12743 Sep 26 15:25	0° \mathcal{A}			12744 Aug 06 20:12	0° Ω	
morning set	12743 Oct 04 17:54	15° \mathcal{A} 24'23		morning max el	12744 Aug 12 14:55	4° Ω 59'55	27°07'40
asc. node	12743 Oct 06 05:43	18° \mathcal{A} 26'24			12744 Aug 31 16:01	0° \mathcal{M}	
max. Earth dist.	12743 Oct 09 19:33	25° \mathcal{A} 55'51	1.32240 AU	morning set	12744 Sep 17 04:25	28° \mathcal{M} 42'49	
	12743 Oct 11 16:57	0° \mathcal{M}			12744 Sep 17 20:19	0° \mathcal{A}	
				max. Earth dist.	12744 Sep 21 13:03	7° \mathcal{A} 22'25	1.33515 AU
superior conj	12743 Oct 12 12:04	1° \mathcal{M} 43'44	0°57'18	asc. node	12744 Sep 22 02:22	8° \mathcal{A} 30'24	
minimum elong	12743 Oct 12 09:52	1° \mathcal{M} 31'44	0°57'20				
evening rise	12743 Oct 19 08:31	16° \mathcal{M} 40'32		superior conj	12744 Sep 25 14:47	15° \mathcal{A} 50'11	0°33'15
	12743 Oct 25 20:34	0° \mathcal{A}		minimum elong	12744 Sep 25 13:11	15° \mathcal{A} 41'43	0°33'06
desc. node	12743 Nov 08 06:16	21° \mathcal{A} 04'43			12744 Oct 02 05:56	0° \mathcal{M}	
evening max el	12743 Nov 12 00:28	25° \mathcal{A} 08'33	23°36'32	evening rise	12744 Oct 02 19:12	1° \mathcal{M} 10'23	
	12743 Nov 18 11:56	0° \mathcal{S}			12744 Oct 18 23:31	0° \mathcal{A}	
retrograde	12743 Nov 25 11:29	1° \mathcal{S} 50'56		evening max el	12744 Oct 23 12:42	5° \mathcal{A} 12'40	21°55'57
evening set	12743 Nov 30 01:01	1° \mathcal{S} 05'36		desc. node	12744 Oct 25 03:36	6° \mathcal{A} 42'17	
	12743 Dec 02 18:36	30° \mathcal{R} \mathcal{A}		retrograde	12744 Nov 05 02:06	11° \mathcal{A} 26'48	
min. Earth dist.	12743 Dec 06 10:45	28° \mathcal{A} 01'39	0.55415 AU	evening set	12744 Nov 08 05:21	11° \mathcal{A} 04'48	
inferior conj	12743 Dec 08 05:59	26° \mathcal{A} 57'53	-5°51'12	min. Earth dist.	12744 Nov 16 17:19	7° \mathcal{A} 19'38	0.54598 AU
minimum elong	12743 Dec 08 08:46	26° \mathcal{A} 53'46	5°50'06	inferior conj	12744 Nov 17 00:43	7° \mathcal{A} 09'16	-5°41'01
morning rise	12743 Dec 16 18:19	23° \mathcal{A} 04'39		minimum elong	12744 Nov 16 18:46	7° \mathcal{A} 17'35	5°39'28
direct	12743 Dec 19 12:25	22° \mathcal{A} 46'02		morning rise	12744 Nov 25 09:19	3° \mathcal{A} 22'00	
morning max el	12743 Dec 30 05:39	27° \mathcal{A} 52'36	20°19'18	direct	12744 Nov 28 22:29	2° \mathcal{A} 54'17	
	12744 Jan 01 06:31	0° \mathcal{S}		morning max el	12744 Dec 11 04:18	8° \mathcal{A} 44'47	21°52'04
asc. node	12744 Jan 02 06:04	1° \mathcal{S} 08'55		asc. node	12744 Dec 19 03:10	18° \mathcal{A} 29'07	
morning set	12744 Jan 17 16:22	27° \mathcal{S} 43'21			12744 Dec 25 21:35	0° \mathcal{S}	
	12744 Jan 18 18:58	0° \mathcal{A}		morning set	12745 Jan 01 02:29	12° \mathcal{S} 28'54	
superior conj	12744 Jan 25 06:40	13° \mathcal{A} 18'40	1°13'42	superior conj	12745 Jan 08 05:42	27° \mathcal{S} 36'29	1°28'31
minimum elong	12744 Jan 25 09:22	13° \mathcal{A} 32'14	1°14'07	minimum elong	12745 Jan 08 07:39	27° \mathcal{S} 46'39	1°29'14
max. Earth dist.	12744 Jan 30 20:12	24° \mathcal{A} 14'33	1.36504 AU		12745 Jan 09 09:10	0° \mathcal{A}	
	12744 Feb 02 22:02	0° \mathcal{A}		max. Earth dist.	12745 Jan 12 08:33	6° \mathcal{A} 06'12	1.34563 AU
evening rise	12744 Feb 03 15:21	1° \mathcal{A} 19'14		evening rise	12745 Jan 16 15:05	14° \mathcal{A} 30'40	
desc. node	12744 Feb 04 05:48	2° \mathcal{A} 24'43		desc. node	12745 Jan 21 02:30	22° \mathcal{A} 49'17	
	12744 Feb 21 03:56	0° \mathcal{Y}			12745 Jan 25 05:04	0° \mathcal{A}	
evening max el	12744 Mar 10 03:37	22° \mathcal{Y} 33'20	25°52'31		12745 Feb 14 21:37	0° \mathcal{Y}	
retrograde	12744 Mar 22 16:54	29° \mathcal{Y} 45'35		evening max el	12745 Feb 20 17:15	6° \mathcal{Y} 17'07	26°49'52
evening set	12744 Mar 28 18:32	27° \mathcal{Y} 16'23		retrograde	12745 Mar 05 22:43	13° \mathcal{Y} 41'38	
asc. node	12744 Mar 30 03:14	26° \mathcal{Y} 01'04		evening set	12745 Mar 12 10:22	11° \mathcal{Y} 09'02	
min. Earth dist.	12744 Apr 02 00:16	22° \mathcal{Y} 43'58	0.67343 AU	min. Earth dist.	12745 Mar 16 10:34	7° \mathcal{Y} 10'26	0.66009 AU
inferior conj	12744 Apr 03 13:23	20° \mathcal{Y} 47'07	1°21'21	asc. node	12745 Mar 17 00:38	6° \mathcal{Y} 29'49	
minimum elong	12744 Apr 03 11:36	20° \mathcal{Y} 52'46	1°20'29	inferior conj	12745 Mar 18 11:49	4° \mathcal{Y} 46'39	0°28'04
morning rise	12744 Apr 09 05:19	14° \mathcal{Y} 58'44		minimum elong	12745 Mar 18 11:04	4° \mathcal{Y} 48'50	0°27'47
direct	12744 Apr 12 12:45	13° \mathcal{Y} 56'12			12745 Mar 23 05:19	30° \mathcal{R} \mathcal{A}	
morning max el	12744 Apr 19 06:04	17° \mathcal{Y} 33'54	18°50'00	morning rise	12745 Mar 24 13:04	29° \mathcal{A} 09'37	
	12744 Apr 28 22:01	0° \mathcal{S}		direct	12745 Mar 27 10:20	28° \mathcal{A} 23'50	
desc. node	12744 May 02 07:52	5° \mathcal{S} 06'48			12745 Mar 31 17:47	0° \mathcal{Y}	
greatest brilliancy	12744 May 03 05:04	6° \mathcal{S} 27'36	-0.8m	morning max el	12745 Apr 02 19:51	1° \mathcal{Y} 46'12	18°11'48
morning set	12744 May 11 12:52	19° \mathcal{S} 20'34		desc. node	12745 Apr 19 04:32	25° \mathcal{Y} 14'49	
	12744 May 18 09:09	0° \mathcal{I}		morning set	12745 Apr 21 23:05	29° \mathcal{Y} 42'27	
max. Earth dist.	12744 May 26 05:13	12° \mathcal{I} 13'36	1.45600 AU		12745 Apr 22 03:27	0° \mathcal{S}	
superior conj	12744 May 27 20:43	14° \mathcal{I} 48'15	-2°11'18	superior conj	12745 May 07 04:24	23° \mathcal{S} 53'02	-1°51'51
minimum elong	12744 May 27 17:06	14° \mathcal{I} 34'04	2°12'05	minimum elong	12745 May 06 19:27	23° \mathcal{S} 17'57	1°51'52
	12744 Jun 06 11:23	0° \mathcal{S}		max. Earth dist.	12745 May 09 00:46	26° \mathcal{S} 46'33	1.45767 AU
evening rise	12744 Jun 12 01:58	8° \mathcal{S} 59'50			12745 May 11 02:20	0° \mathcal{I}	
	12744 Jun 25 08:34	0° Ω		evening rise	12745 May 23 05:55	18° \mathcal{I} 54'08	
asc. node	12744 Jun 26 01:08	1° Ω 00'39			12745 Jun 30 09:37	0° \mathcal{S}	
evening max el	12744 Jul 02 11:40	9° Ω 07'19	18°31'37	greatest brilliancy	12745 Jun 03 19:26	6° \mathcal{S} 44'30	-0.7m
retrograde	12744 Jul 08 23:12	12° Ω 37'22		asc. node	12745 Jun 12 22:07	19° \mathcal{S} 32'28	
evening set	12744 Jul 12 03:03	11° Ω 41'02		evening max el	12745 Jun 15 21:00	22° \mathcal{S} 51'09	19°11'48

retrograde	12745 Jun 22 19:42	26°☿43'06		asc. node	12746 May 30 19:11	7°☿22'18	
evening set	12745 Jun 26 08:28	25°☿30'38		retrograde	12746 Jun 06 18:15	11°☿03'07	
inferior conj	12745 Jul 01 19:03	19°☿41'58	3°08'10	evening set	12746 Jun 10 16:37	9°☿33'56	
minimum elong	12745 Jul 01 20:05	19°☿38'37	3°07'08	inferior conj	12746 Jun 15 23:41	3°☿32'11	3°13'45
min. Earth dist.	12745 Jul 03 06:37	17°☿46'49	0.66792 AU	minimum elong	12746 Jun 15 23:39	3°☿32'17	3°12'47
morning rise	12745 Jul 07 07:06	13°☿18'28		min. Earth dist.	12746 Jun 16 20:55	2°☿20'02	0.67954 AU
direct	12745 Jul 13 10:30	10°☿38'30			12746 Jun 18 15:51	30°☿II	
desc. node	12745 Jul 16 04:29	11°☿05'57		morning rise	12746 Jun 21 06:21	27°II11'02	
morning max el	12745 Jul 26 01:46	18°☿11'52	26°00'29	direct	12746 Jun 26 22:35	24°II40'28	
	12745 Aug 05 00:09	0°♊		desc. node	12746 Jul 03 01:41	26°II56'18	
	12745 Aug 24 16:04	0°♊			12746 Jul 06 20:19	0°☿	
morning set	12745 Aug 31 01:43	11°♊23'08		morning max el	12746 Jul 08 11:48	1°☿36'00	24°37'14
max. Earth dist.	12745 Sep 03 20:08	18°♊29'25	1.35288 AU		12746 Jul 30 00:18	0°♊	
asc. node	12745 Sep 08 22:58	28°♊36'42		morning set	12746 Aug 13 05:30	23°♊14'47	
				max. Earth dist.	12746 Aug 16 19:31	29°♊38'32	1.37450 AU
superior conj	12745 Sep 09 09:51	29°♊31'54	0°04'20		12746 Aug 17 00:14	0°♊	
minimum elong	12745 Sep 09 09:36	29°♊30'40	0°04'11				
behind sun begin	12745 Sep 09 03:43	29°♊00'45		superior conj	12746 Aug 23 18:04	12°♊41'09	-0°28'28
behind sun end	12745 Sep 09 15:30	0°♊00'39		minimum elong	12746 Aug 23 19:58	12°♊50'24	0°28'29
	12745 Sep 09 15:22	0°♊		asc. node	12746 Aug 26 19:34	18°♊41'47	
evening rise	12745 Sep 17 03:16	15°♊30'42		evening rise	12746 Sep 01 06:22	29°♊35'31	
	12745 Sep 24 11:53	0°♊			12746 Sep 01 11:16	0°♊	
evening max el	12745 Oct 05 11:49	15°♊46'11	20°28'07	evening max el	12746 Sep 18 01:03	27°♊06'31	19°20'29
desc. node	12745 Oct 12 01:00	20°♊21'52			12746 Sep 21 14:24	0°♊	
retrograde	12745 Oct 16 13:17	21°♊15'53		retrograde	12746 Sep 27 10:21	1°♊47'55	
evening set	12745 Oct 18 16:58	21°♊04'20		desc. node	12746 Sep 28 22:28	1°♊41'10	
inferior conj	12745 Oct 27 17:14	17°♊08'45	-4°32'41	evening set	12746 Sep 29 06:50	1°♊37'44	
minimum elong	12745 Oct 27 07:09	17°♊23'24	4°29'15		12746 Oct 03 18:06	30°☿♊	
min. Earth dist.	12745 Oct 29 00:44	16°♊22'54	0.54710 AU	inferior conj	12746 Oct 07 21:43	27°♊29'09	-2°47'53
morning rise	12745 Nov 04 20:51	13°♊08'03		minimum elong	12746 Oct 07 14:28	27°♊41'02	2°44'49
direct	12745 Nov 09 07:35	12°♊25'26		min. Earth dist.	12746 Oct 10 11:20	25°♊48'31	0.55737 AU
morning max el	12745 Nov 22 16:37	18°♊56'38	23°38'53	morning rise	12746 Oct 15 19:42	22°♊57'36	
	12745 Dec 01 19:19	0°♋		direct	12746 Oct 21 02:32	21°♊54'15	
asc. node	12745 Dec 06 00:10	6°♋40'24		morning max el	12746 Nov 04 02:59	28°♊58'36	25°24'34
morning set	12745 Dec 16 14:12	27°♋15'16			12746 Nov 05 04:02	0°♊	
	12745 Dec 17 20:53	0°♋		asc. node	12746 Nov 22 21:04	25°♊30'09	
superior conj	12745 Dec 23 11:09	12°♋09'49	1°36'35		12746 Nov 25 05:59	0°♋	
minimum elong	12745 Dec 23 12:01	12°♋14'32	1°37'31	morning set	12746 Dec 01 01:48	11°♋57'56	
max. Earth dist.	12745 Dec 26 04:44	18°♋01'40	1.33023 AU	superior conj	12746 Dec 07 20:36	26°♋51'54	1°38'22
evening rise	12745 Dec 31 03:06	28°♋12'19		minimum elong	12746 Dec 07 20:21	26°♋50'33	1°39'19
	12746 Jan 01 00:46	0°♋			12746 Dec 09 06:44	0°♋	
desc. node	12746 Jan 07 23:17	13°♋00'00		max. Earth dist.	12746 Dec 09 08:10	0°♋07'55	1.31950 AU
	12746 Jan 18 09:50	0°♋		evening rise	12746 Dec 15 00:22	12°♋16'36	
evening max el	12746 Feb 03 06:21	19°♋43'05	27°25'08		12746 Dec 24 05:09	0°♋	
retrograde	12746 Feb 16 21:56	27°♋09'07		desc. node	12746 Dec 25 20:10	2°♋50'51	
evening set	12746 Feb 23 17:08	24°♋39'30			12747 Jan 14 02:06	0°♋	
min. Earth dist.	12746 Feb 27 13:10	21°♋12'21	0.64316 AU	evening max el	12747 Jan 16 16:54	2°♋38'29	27°31'30
inferior conj	12746 Mar 02 01:55	18°♋31'14	-0°35'59	retrograde	12747 Jan 30 13:35	9°♋59'03	
minimum elong	12746 Mar 02 03:01	18°♋28'18	0°35'15	evening set	12747 Feb 06 12:11	7°♋39'52	
asc. node	12746 Mar 03 22:03	16°♋37'11		min. Earth dist.	12747 Feb 10 06:09	4°♋39'43	0.62342 AU
morning rise	12746 Mar 08 14:54	13°♋07'56		inferior conj	12747 Feb 13 04:41	1°♋53'07	-1°49'58
direct	12746 Mar 11 03:31	12°♋35'25		minimum elong	12747 Feb 13 08:26	1°♋44'14	1°47'55
morning max el	12746 Mar 17 12:56	15°♋53'48	17°50'43		12747 Feb 15 05:59	30°☿♋	
	12746 Mar 27 16:49	0°♌		asc. node	12747 Feb 18 19:27	27°♋25'52	
morning set	12746 Apr 03 13:40	11°♌27'07		morning rise	12747 Feb 20 07:18	26°♋46'43	
desc. node	12746 Apr 06 01:06	15°♌36'33		direct	12747 Feb 22 13:14	26°♋23'47	
	12746 Apr 14 18:29	0°♌			12747 Mar 01 11:00	0°♌	
superior conj	12746 Apr 16 23:40	3°♌34'36	-1°17'20	morning max el	12747 Mar 01 06:22	29°♋48'30	17°47'16
minimum elong	12746 Apr 16 15:46	3°♌02'50	1°16'49	morning set	12747 Mar 17 03:40	24°♌18'21	
max. Earth dist.	12746 Apr 21 20:17	11°♌18'45	1.45192 AU		12747 Mar 20 09:14	0°♌	
evening rise	12746 May 02 18:56	28°♌18'23		desc. node	12747 Mar 23 21:38	6°♌07'29	
	12746 May 03 21:30	0°♌		superior conj	12747 Mar 28 17:30	14°♌20'41	-0°36'50
greatest brilliancy	12746 May 17 19:08	20°♌49'02	-0.6m	minimum elong	12747 Mar 28 13:54	14°♌05'34	0°36'24
	12746 May 24 09:43	0°♌		max. Earth dist.	12747 Apr 04 13:27	25°♌34'34	1.43934 AU
evening max el	12746 May 30 01:02	6°♌38'06	20°07'37		12747 Apr 07 07:50	0°♌	

evening rise	12747 Apr 12 08:25	7°♄52'22			12748 Mar 30 02:52	0°♄	
	12747 Apr 27 03:22	0°♄			12748 Apr 20 19:34	0°♄	
evening max el	12747 May 12 23:16	20°♄25'45	21°16'23	evening max el	12748 Apr 24 16:37	4°♄14'26	22°33'58
asc. node	12747 May 17 16:21	24°♄16'40		asc. node	12748 May 03 13:37	9°♄59'46	
retrograde	12747 May 21 16:52	25°♄31'55		retrograde	12748 May 04 14:00	10°♄04'35	
evening set	12747 May 26 01:36	23°♄46'21		evening set	12748 May 09 09:46	8°♄03'46	
inferior conj	12747 May 31 07:45	17°♄33'00	3°07'34	inferior conj	12748 May 14 17:14	1°♄41'06	2°50'50
minimum elong	12747 May 31 06:46	17°♄36'27	3°06'34	minimum elong	12748 May 14 15:31	1°♄47'05	2°49'44
min. Earth dist.	12747 May 31 15:23	17°♄06'27	0.68644 AU	min. Earth dist.	12748 May 14 11:58	1°♄59'27	0.68860 AU
morning rise	12747 Jun 05 11:43	11°♄16'31			12748 May 15 22:32	30°♄	
direct	12747 Jun 10 15:18	9°♄01'52		morning rise	12748 May 19 21:09	25°♄30'43	
desc. node	12747 Jun 19 22:47	14°♄10'50		direct	12748 May 24 11:39	23°♄35'42	
morning max el	12747 Jun 20 22:18	15°♄08'32	23°07'38	morning max el	12748 Jun 02 12:09	28°♄50'35	21°40'39
	12747 Jul 03 01:20	0°♄			12748 Jun 03 15:03	0°♄	
	12747 Jul 22 23:17	0°♄		desc. node	12748 Jun 05 19:45	2°♄27'17	
morning set	12747 Jul 25 11:00	4°♄05'47			12748 Jun 25 16:50	0°♄	
max. Earth dist.	12747 Jul 29 17:34	11°♄19'51	1.39789 AU	morning set	12748 Jul 04 15:14	13°♄50'19	
				max. Earth dist.	12748 Jul 10 19:42	23°♄51'29	1.42022 AU
superior conj	12747 Aug 06 11:28	25°♄07'51	-1°03'05		12748 Jul 14 11:51	0°♄	
minimum elong	12747 Aug 06 16:03	25°♄28'55	1°02'59				
	12747 Aug 09 02:23	0°♄		superior conj	12748 Jul 18 09:43	6°♄42'48	-1°35'59
asc. node	12747 Aug 13 16:12	8°♄41'29		minimum elong	12748 Jul 18 16:28	7°♄12'11	1°36'02
evening rise	12747 Aug 16 01:32	13°♄16'34		evening rise	12748 Jul 29 09:01	26°♄24'47	
	12747 Aug 25 05:42	0°♄		asc. node	12748 Jul 30 12:55	28°♄32'24	
evening max el	12747 Sep 01 02:18	9°♄12'11	18°34'28		12748 Jul 31 08:07	0°♄	
retrograde	12747 Sep 09 01:43	13°♄13'15		evening max el	12748 Aug 14 11:43	21°♄55'54	18°09'14
evening set	12747 Sep 11 01:10	12°♄59'14		retrograde	12748 Aug 21 11:43	25°♄29'47	
desc. node	12747 Sep 15 19:57	10°♄45'47		evening set	12748 Aug 23 18:11	25°♄07'46	
inferior conj	12747 Sep 18 22:34	8°♄30'52	-0°58'45	inferior conj	12748 Aug 30 21:03	20°♄18'55	0°33'44
minimum elong	12747 Sep 18 20:13	8°♄35'22	0°57'47	minimum elong	12748 Aug 30 22:08	20°♄16'29	0°33'05
min. Earth dist.	12747 Sep 22 03:40	6°♄04'06	0.57486 AU	desc. node	12748 Sep 01 17:26	18°♄39'11	
morning rise	12747 Sep 26 11:50	3°♄21'23		min. Earth dist.	12748 Sep 03 03:59	17°♄23'44	0.59663 AU
direct	12747 Oct 02 11:19	1°♄51'49		morning rise	12748 Sep 06 22:47	14°♄36'25	
morning max el	12747 Oct 16 18:37	9°♄22'43	26°50'52	direct	12748 Sep 13 09:52	12°♄38'45	
	12747 Nov 01 11:19	0°♄		morning max el	12748 Sep 27 17:54	20°♄29'09	27°43'46
asc. node	12747 Nov 09 17:53	14°♄47'40			12748 Oct 05 22:56	0°♄	
morning set	12747 Nov 15 11:34	26°♄31'34			12748 Oct 24 08:48	0°♄	
	12747 Nov 17 02:14	0°♄		asc. node	12748 Oct 26 14:39	4°♄25'28	
				morning set	12748 Oct 29 17:43	10°♄51'31	
superior conj	12747 Nov 22 08:00	11°♄36'05	1°34'12	max. Earth dist.	12748 Nov 05 00:27	24°♄31'00	1.31285 AU
minimum elong	12747 Nov 22 06:46	11°♄29'13	1°34'59				
max. Earth dist.	12747 Nov 22 15:58	12°♄20'32	1.31363 AU	superior conj	12748 Nov 05 19:30	26°♄16'59	1°24'17
evening rise	12747 Nov 29 04:13	26°♄36'05		minimum elong	12748 Nov 05 17:33	26°♄06'08	1°24'47
	12747 Nov 30 19:05	0°♄			12748 Nov 07 11:29	0°♄	
desc. node	12747 Dec 12 17:10	22°♄13'20		evening rise	12748 Nov 12 12:28	11°♄05'09	
	12747 Dec 17 17:19	0°♄			12748 Nov 22 00:37	0°♄	
evening max el	12747 Dec 29 22:09	14°♄50'21	27°04'25	desc. node	12748 Nov 28 14:16	10°♄56'06	
retrograde	12748 Jan 12 20:45	22°♄02'55		evening max el	12748 Dec 10 19:40	26°♄10'06	26°03'16
evening set	12748 Jan 19 16:13	20°♄02'17			12748 Dec 15 12:44	0°♄	
min. Earth dist.	12748 Jan 23 12:28	17°♄20'57	0.60195 AU	retrograde	12748 Dec 24 17:59	3°♄13'48	
inferior conj	12748 Jan 26 16:39	14°♄43'21	-3°10'40	evening set	12748 Dec 31 01:03	1°♄39'55	
minimum elong	12748 Jan 26 23:23	14°♄29'22	3°07'28		12749 Jan 02 23:13	30°♄	
morning rise	12748 Feb 03 09:32	9°♄57'03		min. Earth dist.	12749 Jan 04 08:42	29°♄03'47	0.58065 AU
direct	12748 Feb 05 11:27	9°♄40'12		inferior conj	12749 Jan 07 10:13	26°♄51'39	-4°30'02
asc. node	12748 Feb 05 16:49	9°♄40'24		minimum elong	12749 Jan 07 18:49	26°♄36'09	4°26'44
morning max el	12748 Feb 12 20:48	13°♄21'22	18°02'29	morning rise	12749 Jan 15 15:25	22°♄27'25	
	12748 Feb 24 02:45	0°♄		direct	12749 Jan 17 17:42	22°♄13'09	
morning set	12748 Feb 28 10:53	7°♄57'16		asc. node	12749 Jan 22 14:08	23°♄34'36	
				morning max el	12749 Jan 26 04:20	26°♄20'57	18°37'58
superior conj	12748 Mar 09 11:32	26°♄14'35	0°02'12		12749 Jan 29 09:03	0°♄	
minimum elong	12748 Mar 09 11:44	26°♄15'26	0°02'20	morning set	12749 Feb 11 06:04	22°♄07'48	
behind sun begin	12748 Mar 09 03:56	25°♄40'56			12749 Feb 15 07:31	0°♄	
behind sun end	12748 Mar 09 19:31	26°♄49'52					
desc. node	12748 Mar 09 18:14	26°♄44'10		superior conj	12749 Feb 20 02:07	9°♄04'47	0°35'37
	12748 Mar 11 14:56	0°♄		minimum elong	12749 Feb 20 04:23	9°♄15'23	0°35'40
max. Earth dist.	12748 Mar 17 02:09	9°♄18'16	1.42130 AU	desc. node	12749 Feb 24 14:45	17°♄21'54	
evening rise	12748 Mar 22 12:04	18°♄08'15		max. Earth dist.	12749 Feb 27 10:00	22°♄18'58	1.39986 AU

evening rise	12749 Mar 03 12:22	29° Υ 19'08		evening rise	12750 Feb 13 09:30	11° Υ 23'46	
	12749 Mar 03 22:08	0° Υ			12750 Feb 24 14:46	0° Υ	
	12749 Mar 23 13:42	0° δ			12750 Mar 18 22:43	0° δ	
evening max el	12749 Apr 07 07:01	18° δ 04'56	23°54'53	evening max el	12750 Mar 20 20:36	1° δ 57'29	25°12'22
retrograde	12749 Apr 18 08:11	24° δ 34'50		retrograde	12750 Apr 01 22:11	8° δ 57'11	
asc. node	12749 Apr 20 10:58	24° δ 14'26		asc. node	12750 Apr 07 08:21	6° δ 50'50	
evening set	12749 Apr 23 15:30	22° δ 20'46		evening set	12750 Apr 07 17:12	6° δ 32'41	
min. Earth dist.	12749 Apr 28 08:30	16° δ 52'16	0.68617 AU	min. Earth dist.	12750 Apr 12 02:45	1° δ 39'50	0.67934 AU
inferior conj	12749 Apr 29 02:11	15° δ 52'00	2°24'03	inferior conj	12750 Apr 13 08:43	0° δ 02'10	1°47'16
minimum elong	12749 Apr 29 00:04	15° δ 59'13	2°22'55	minimum elong	12750 Apr 13 06:38	0° δ 08'56	1°46'12
morning rise	12749 May 04 08:41	9° δ 48'55			12750 Apr 13 09:23	30° κ Υ	
direct	12749 May 08 10:29	8° δ 14'53		morning rise	12750 Apr 18 20:25	24° Υ 07'46	
morning max el	12749 May 16 08:05	12° δ 43'03	20°23'03	direct	12750 Apr 22 10:19	22° Υ 54'08	
desc. node	12749 May 23 16:37	21° δ 28'14		morning max el	12750 Apr 29 11:37	26° Υ 46'25	19°19'19
	12749 May 29 19:27	0° Π			12750 May 02 10:17	0° δ	
morning set	12749 Jun 13 21:50	22° Π 39'08		desc. node	12750 May 10 13:25	11° δ 01'52	
	12749 Jun 18 15:00	0° ϕ		greatest brilliancy	12750 May 12 06:15	13° δ 32'06	-0.7m
max. Earth dist.	12749 Jun 23 04:08	7° ϕ 12'59	1.43885 AU		12750 May 23 02:35	0° Π	
				morning set	12750 May 23 23:24	1° Π 20'08	
superior conj	12749 Jun 29 08:51	17° ϕ 17'44	-2°01'45	max. Earth dist.	12750 Jun 05 19:01	21° Π 16'11	1.45179 AU
minimum elong	12749 Jun 29 15:06	17° ϕ 43'32	2°02'17				
	12749 Jul 06 21:58	0° Ω		superior conj	12750 Jun 09 08:47	26° Π 55'09	-2°13'22
evening rise	12749 Jul 11 23:59	8° Ω 47'36		minimum elong	12750 Jun 09 09:41	26° Π 58'44	2°14'17
asc. node	12749 Jul 17 09:42	18° Ω 09'33			12750 Jun 11 07:12	0° ϕ	
	12749 Jul 24 19:56	0° \mp		evening rise	12750 Jun 23 17:25	20° ϕ 13'36	
evening max el	12749 Jul 29 01:17	5° \mp 07'34	18°03'32		12750 Jun 29 15:18	0° Ω	
retrograde	12749 Aug 04 12:39	8° \mp 28'45		asc. node	12750 Jul 04 06:33	7° Ω 27'10	
evening set	12749 Aug 07 03:18	7° \mp 55'14		evening max el	12750 Jul 12 15:25	18° Ω 37'33	18°16'17
inferior conj	12749 Aug 13 14:09	2° \mp 47'20	1°43'03	retrograde	12750 Jul 19 00:07	22° Ω 00'09	
minimum elong	12749 Aug 13 16:37	2° \mp 41'01	1°41'46	evening set	12750 Jul 21 23:11	21° Ω 12'31	
	12749 Aug 16 07:47	30° κ Ω		inferior conj	12750 Jul 27 21:43	15° Ω 47'23	2°30'19
min. Earth dist.	12749 Aug 16 13:26	29° Ω 46'08	0.61950 AU	minimum elong	12750 Jul 28 00:08	15° Ω 40'28	2°29'01
desc. node	12749 Aug 19 14:53	27° Ω 05'17		min. Earth dist.	12750 Jul 30 08:13	13° Ω 00'49	0.64095 AU
morning rise	12749 Aug 20 03:30	26° Ω 42'17		morning rise	12750 Aug 02 23:35	9° Ω 29'38	
direct	12749 Aug 26 19:46	24° Ω 20'52		desc. node	12750 Aug 06 12:18	7° Ω 26'35	
	12749 Sep 07 11:03	0° \mp		direct	12750 Aug 09 14:36	6° Ω 53'19	
morning max el	12749 Sep 09 23:31	2° \mp 21'38	27°57'55	morning max el	12750 Aug 23 09:04	14° Ω 53'36	27°35'06
	12749 Sep 30 08:35	0° $\underline{\alpha}$			12750 Sep 04 16:45	0° \mp	
asc. node	12749 Oct 13 11:22	24° $\underline{\alpha}$ 17'39			12750 Sep 23 00:52	0° $\underline{\alpha}$	
morning set	12749 Oct 13 18:15	24° $\underline{\alpha}$ 52'55		morning set	12750 Sep 27 10:39	8° $\underline{\alpha}$ 28'41	
	12749 Oct 16 05:12	0° \mathbb{M}		asc. node	12750 Sep 30 07:59	14° $\underline{\alpha}$ 18'27	
max. Earth dist.	12749 Oct 19 05:56	6° \mathbb{M} 30'35	1.31734 AU	max. Earth dist.	12750 Oct 02 04:42	18° $\underline{\alpha}$ 10'21	1.32718 AU
superior conj	12749 Oct 21 05:14	10° \mathbb{M} 49'36	1°08'45	superior conj	12750 Oct 05 11:08	25° $\underline{\alpha}$ 07'16	0°47'44
minimum elong	12749 Oct 21 02:58	10° \mathbb{M} 37'10	1°08'57	minimum elong	12750 Oct 05 09:06	24° $\underline{\alpha}$ 56'19	0°47'41
evening rise	12749 Oct 27 23:10	25° \mathbb{M} 39'07			12750 Oct 07 17:15	0° \mathbb{M}	
	12749 Oct 30 00:10	0° \mathcal{A}		evening rise	12750 Oct 12 10:22	10° \mathbb{M} 11'56	
desc. node	12749 Nov 15 11:28	28° \mathcal{A} 44'20			12750 Oct 22 12:18	0° \mathcal{A}	
	12749 Nov 16 10:30	0° \mathcal{B}		desc. node	12750 Nov 02 08:45	15° \mathcal{A} 16'47	
evening max el	12749 Nov 22 09:20	6° \mathcal{B} 41'46	24°34'38	evening max el	12750 Nov 03 19:31	16° \mathcal{A} 45'25	22°53'05
retrograde	12749 Dec 06 03:09	13° \mathcal{B} 33'39		retrograde	12750 Nov 16 22:57	23° \mathcal{A} 17'06	
evening set	12749 Dec 11 10:35	12° \mathcal{B} 31'19		evening set	12750 Nov 20 21:43	22° \mathcal{A} 43'11	
min. Earth dist.	12749 Dec 16 21:01	9° \mathcal{B} 42'48	0.56223 AU	min. Earth dist.	12750 Nov 28 04:19	19° \mathcal{A} 23'53	0.54965 AU
inferior conj	12749 Dec 19 07:14	8° \mathcal{B} 11'18	-5°32'08	inferior conj	12750 Nov 29 09:16	18° \mathcal{A} 42'34	-5°54'14
minimum elong	12749 Dec 19 13:48	8° \mathcal{B} 00'57	5°30'13	minimum elong	12750 Nov 29 08:21	18° \mathcal{A} 43'54	5°53'18
morning rise	12749 Dec 27 19:06	4° \mathcal{B} 07'57		morning rise	12750 Dec 07 20:27	14° \mathcal{A} 53'44	
direct	12749 Dec 30 04:55	3° \mathcal{B} 52'14		direct	12750 Dec 10 22:18	14° \mathcal{A} 31'43	
morning max el	12750 Jan 09 00:55	8° \mathcal{B} 35'56	19°35'37	morning max el	12750 Dec 22 07:23	19° \mathcal{A} 56'57	20°56'20
asc. node	12750 Jan 09 11:23	9° \mathcal{B} 01'39		asc. node	12750 Dec 27 08:32	25° \mathcal{A} 44'59	
	12750 Jan 23 00:51	0° \approx			12750 Dec 30 06:56	0° \mathcal{B}	
morning set	12750 Jan 26 09:16	6° \approx 38'39		morning set	12751 Jan 10 17:31	21° \mathcal{B} 20'25	
					12751 Jan 14 21:00	0° \approx	
superior conj	12750 Feb 03 08:31	22° \approx 38'06	1°01'53				
minimum elong	12750 Feb 03 11:21	22° \approx 52'03	1°02'08	superior conj	12751 Jan 18 02:26	6° \approx 41'52	1°20'49
	12750 Feb 07 04:03	0° \mathcal{H}		minimum elong	12751 Jan 18 04:52	6° \approx 54'21	1°21'23
max. Earth dist.	12750 Feb 09 16:10	4° \mathcal{H} 40'50	1.37746 AU	max. Earth dist.	12751 Jan 23 01:19	16° \approx 38'39	1.35641 AU
desc. node	12750 Feb 11 11:23	7° \mathcal{H} 57'54		evening rise	12751 Jan 27 00:29	24° \approx 12'48	

desc. node	12751 Jan 29 08:03	28° \approx 27'32		max. Earth dist.	12752 Jan 05 17:03	28° \approx 30'50	1.33855 AU
	12751 Jan 30 04:38	0° \mathbb{H}			12752 Jan 06 10:23	0° \approx	
	12751 Feb 18 05:26	0° \mathbb{Y}		evening rise	12752 Jan 10 05:47	7° \approx 37'24	
evening max el	12751 Mar 03 10:19	15° \mathbb{Y} 46'48	26°19'13	desc. node	12752 Jan 16 04:46	18° \approx 46'30	
retrograde	12751 Mar 16 07:00	23° \mathbb{Y} 04'50			12752 Jan 22 18:46	0° \mathbb{H}	
evening set	12751 Mar 22 13:09	20° \mathbb{Y} 33'43		evening max el	12752 Feb 13 23:49	29° \mathbb{H} 23'47	27°07'59
asc. node	12751 Mar 25 05:46	17° \mathbb{Y} 56'33			12752 Feb 14 15:04	0° \mathbb{Y}	
min. Earth dist.	12751 Mar 26 16:30	16° \mathbb{Y} 15'51	0.66826 AU	retrograde	12752 Feb 27 09:55	6° \mathbb{Y} 49'41	
inferior conj	12751 Mar 28 10:44	14° \mathbb{Y} 06'50	1°00'07	evening set	12752 Mar 05 01:23	4° \mathbb{Y} 17'18	
minimum elong	12751 Mar 28 09:17	14° \mathbb{Y} 11'15	0°59'26	min. Earth dist.	12752 Mar 08 23:34	0° \mathbb{Y} 32'48	0.65329 AU
morning rise	12751 Apr 03 06:17	8° \mathbb{Y} 22'55			12752 Mar 09 11:27	30° \mathbb{R} \mathbb{H}	
direct	12751 Apr 06 09:20	7° \mathbb{Y} 27'42		inferior conj	12752 Mar 11 05:55	28° \mathbb{H} 00'17	0°02'12
morning max el	12751 Apr 12 22:12	10° \mathbb{Y} 57'06	18°31'41	minimum elong	12752 Mar 11 05:51	28° \mathbb{H} 00'29	0°02'18
	12751 Apr 26 18:53	0° \mathbb{B}		transit middle	12752 Mar 11 05:51	28° \mathbb{H} 00'29	0°02'18
desc. node	12751 Apr 27 10:07	0° \mathbb{B} 59'21		transit begin	12752 Mar 11 02:52	28° \mathbb{H} 08'52	
morning set	12751 May 03 17:59	10° \mathbb{B} 55'41		transit end	12752 Mar 11 08:50	27° \mathbb{H} 52'06	
	12751 May 15 21:47	0° \mathbb{I}		asc. node	12752 Mar 11 03:11	28° \mathbb{H} 07'58	
				morning rise	12752 Mar 17 11:53	22° \mathbb{H} 29'01	
superior conj	12751 May 19 17:43	5° \mathbb{I} 59'05	-2°05'22	direct	12752 Mar 20 05:21	21° \mathbb{H} 49'15	
minimum elong	12751 May 19 11:08	5° \mathbb{I} 33'21	2°05'53	morning max el	12752 Mar 26 13:45	25° \mathbb{H} 08'16	18°00'49
max. Earth dist.	12751 May 19 14:13	5° \mathbb{I} 45'24	1.45770 AU		12752 Mar 30 16:51	0° \mathbb{Y}	
evening rise	12751 Jun 04 10:31	0° \mathbb{E} 39'21		desc. node	12752 Apr 13 06:44	21° \mathbb{Y} 13'39	
	12751 Jun 04 00:34	0° \mathbb{E}		morning set	12752 Apr 13 16:33	21° \mathbb{Y} 53'50	
greatest brilliancy	12751 Jun 12 23:45	14° \mathbb{E} 09'51	-0.8m		12752 Apr 18 15:46	0° \mathbb{B}	
asc. node	12751 Jun 21 03:28	26° \mathbb{E} 18'28					
	12751 Jun 24 00:39	0° \mathbb{Q}		superior conj	12752 Apr 28 04:21	15° \mathbb{B} 14'23	-1°38'32
evening max el	12751 Jun 26 03:11	2° \mathbb{Q} 18'21	18°46'39	minimum elong	12752 Apr 27 19:09	14° \mathbb{B} 38'00	1°38'14
retrograde	12751 Jul 02 18:20	5° \mathbb{Q} 55'58		max. Earth dist.	12752 May 01 10:26	20° \mathbb{B} 21'21	1.45607 AU
evening set	12751 Jul 06 02:00	4° \mathbb{Q} 52'40			12752 May 07 14:57	0° \mathbb{I}	
	12751 Jul 11 00:27	30° \mathbb{R} \mathbb{E}		evening rise	12752 May 14 06:36	10° \mathbb{I} 16'54	
inferior conj	12751 Jul 11 15:56	29° \mathbb{E} 11'57	2°58'53		12752 May 27 05:37	0° \mathbb{E}	
minimum elong	12751 Jul 11 17:34	29° \mathbb{E} 06'52	2°57'45	greatest brilliancy	12752 May 27 17:05	0° \mathbb{E} 42'21	-0.7m
min. Earth dist.	12751 Jul 13 11:50	26° \mathbb{E} 55'19	0.65924 AU	asc. node	12752 Jun 07 00:29	14° \mathbb{E} 33'57	
morning rise	12751 Jul 17 08:20	22° \mathbb{E} 49'01		evening max el	12752 Jun 08 10:20	16° \mathbb{E} 03'43	19°33'40
direct	12751 Jul 23 16:57	20° \mathbb{E} 07'52		retrograde	12752 Jun 15 16:06	20° \mathbb{E} 08'46	
desc. node	12751 Jul 24 09:39	20° \mathbb{E} 09'37		evening set	12752 Jun 19 08:52	18° \mathbb{E} 49'06	
morning max el	12751 Aug 05 20:08	27° \mathbb{E} 54'59	26°41'43	inferior conj	12752 Jun 24 17:34	12° \mathbb{E} 54'25	3°12'05
	12751 Aug 07 19:37	0° \mathbb{Q}		minimum elong	12752 Jun 24 18:09	12° \mathbb{E} 52'30	3°11'05
	12751 Aug 29 10:15	0° \mathbb{P}		min. Earth dist.	12752 Jun 25 22:53	11° \mathbb{E} 17'13	0.67341 AU
morning set	12751 Sep 10 15:58	21° \mathbb{P} 31'56		morning rise	12752 Jun 30 03:00	6° \mathbb{E} 31'25	
max. Earth dist.	12751 Sep 14 18:01	29° \mathbb{P} 28'36	1.34220 AU	direct	12752 Jul 06 01:44	3° \mathbb{E} 54'47	
	12751 Sep 15 00:19	0° \mathbb{A}		desc. node	12752 Jul 10 06:55	4° \mathbb{E} 59'15	
asc. node	12751 Sep 17 04:35	4° \mathbb{A} 23'56		morning max el	12752 Jul 18 06:53	11° \mathbb{E} 13'59	25°26'30
					12752 Aug 02 06:27	0° \mathbb{Q}	
superior conj	12751 Sep 19 10:55	9° \mathbb{A} 04'06	0°21'31		12752 Aug 21 02:10	0° \mathbb{P}	
minimum elong	12751 Sep 19 09:48	8° \mathbb{A} 58'15	0°21'22	morning set	12752 Aug 23 06:24	3° \mathbb{P} 52'59	
evening rise	12751 Sep 26 20:12	24° \mathbb{A} 38'45		max. Earth dist.	12752 Aug 26 21:33	10° \mathbb{P} 34'16	1.36174 AU
	12751 Sep 29 10:11	0° \mathbb{M}					
evening max el	12751 Oct 16 11:24	26° \mathbb{M} 57'48	21°16'19	superior conj	12752 Sep 02 01:46	22° \mathbb{P} 32'40	-0°09'14
desc. node	12751 Oct 20 06:05	0° \mathbb{J} 07'33		minimum elong	12752 Sep 02 02:20	22° \mathbb{P} 35'33	0°09'20
	12751 Oct 20 01:43	0° \mathbb{J}		behind sun begin	12752 Sep 01 21:09	22° \mathbb{P} 09'38	
retrograde	12751 Oct 28 10:29	2° \mathbb{J} 54'32		behind sun end	12752 Sep 02 07:32	23° \mathbb{P} 01'30	
evening set	12751 Oct 31 02:00	2° \mathbb{J} 38'15		asc. node	12752 Sep 03 01:11	24° \mathbb{P} 29'56	
	12751 Nov 06 18:15	30° \mathbb{R} \mathbb{M}			12752 Sep 05 18:18	0° \mathbb{A}	
inferior conj	12751 Nov 09 01:09	28° \mathbb{M} 44'05	-5°18'23	evening rise	12752 Sep 10 02:28	8° \mathbb{A} 53'14	
minimum elong	12751 Nov 08 16:29	28° \mathbb{M} 56'15	5°15'57		12752 Sep 21 12:33	0° \mathbb{M}	
min. Earth dist.	12751 Nov 09 10:29	28° \mathbb{M} 30'57	0.54535 AU	evening max el	12752 Sep 27 16:20	7° \mathbb{M} 49'37	19°56'36
morning rise	12751 Nov 17 07:40	24° \mathbb{M} 54'04		desc. node	12752 Oct 06 03:30	12° \mathbb{M} 49'05	
direct	12751 Nov 21 06:07	24° \mathbb{M} 20'47		retrograde	12752 Oct 08 00:50	12° \mathbb{M} 59'03	
	12751 Dec 03 12:23	0° \mathbb{J}		evening set	12752 Oct 09 23:28	12° \mathbb{M} 48'58	
morning max el	12751 Dec 04 00:42	0° \mathbb{J} 28'28	22°36'35	inferior conj	12752 Oct 18 21:14	8° \mathbb{M} 48'52	-3°50'41
asc. node	12751 Dec 14 05:35	13° \mathbb{J} 28'18		minimum elong	12752 Oct 18 11:44	9° \mathbb{M} 03'18	3°47'04
	12751 Dec 23 06:01	0° \mathbb{B}		min. Earth dist.	12752 Oct 20 19:01	7° \mathbb{M} 39'14	0.55039 AU
morning set	12751 Dec 26 04:31	6° \mathbb{B} 06'46		morning rise	12752 Oct 26 22:40	4° \mathbb{M} 36'28	
				direct	12752 Oct 31 17:55	3° \mathbb{M} 46'03	
superior conj	12752 Jan 02 04:29	21° \mathbb{B} 06'47	1°32'44	morning max el	12752 Nov 14 11:19	10° \mathbb{M} 32'35	24°25'12
minimum elong	12752 Jan 02 06:00	21° \mathbb{B} 14'48	1°33'34		12752 Nov 28 23:38	0° \mathbb{J}	

asc. node	12752 Nov 30 02:33	1°♊57'14			12753 Nov 21 12:28	0°♊	
morning set	12752 Dec 09 16:24	20°♊52'24		morning set	12753 Nov 24 03:25	5°♊31'34	
	12752 Dec 13 21:02	0°♊					
superior conj	12752 Dec 16 11:56	5°♊45'01	1°38'06	superior conj	12753 Nov 30 22:28	20°♊28'48	1°37'19
minimum elong	12752 Dec 16 12:19	5°♊47'10	1°39'03	minimum elong	12753 Nov 30 21:46	20°♊24'59	1°38'13
max. Earth dist.	12752 Dec 18 16:28	10°♊30'26	1.32500 AU	max. Earth dist.	12753 Dec 01 21:56	22°♊38'59	1.31632 AU
evening rise	12752 Dec 23 22:05	21°♊29'35		evening rise	12753 Dec 05 06:23	0°♊	
	12752 Dec 28 05:48	0°♊		evening rise	12753 Dec 07 22:26	5°♊41'04	
desc. node	12753 Jan 02 01:34	8°♊49'38		desc. node	12753 Dec 19 22:29	28°♊29'18	
	12753 Jan 15 16:07	0°♊			12753 Dec 20 20:03	0°♊	
evening max el	12753 Jan 26 11:54	12°♊37'52	27°31'42	evening max el	12754 Jan 08 20:29	25°♊16'01	27°24'21
retrograde	12753 Feb 09 06:16	20°♊03'01		retrograde	12754 Jan 14 20:36	0°♊	
evening set	12753 Feb 16 03:36	17°♊36'29		evening set	12754 Jan 22 18:45	2°♊34'06	
min. Earth dist.	12753 Feb 19 22:12	14°♊21'48	0.63500 AU	evening set	12754 Jan 29 16:45	0°♊21'52	
inferior conj	12753 Feb 22 15:36	11°♊36'22	-1°06'17		12754 Jan 30 06:11	30°♊	
minimum elong	12753 Feb 22 17:45	11°♊30'57	1°05'00	min. Earth dist.	12754 Feb 02 10:56	27°♊30'47	0.61432 AU
asc. node	12753 Feb 26 00:37	8°♊25'59		inferior conj	12754 Feb 05 12:32	24°♊45'57	-2°23'45
morning rise	12753 Mar 01 10:14	6°♊20'13		minimum elong	12754 Feb 05 17:33	24°♊34'39	2°21'08
direct	12753 Mar 03 19:40	5°♊52'20		morning rise	12754 Feb 12 21:16	19°♊47'43	
morning max el	12753 Mar 10 07:30	9°♊12'13	17°47'08	asc. node	12754 Feb 12 22:01	19°♊47'09	
	12753 Mar 24 07:46	0°♊		direct	12754 Feb 15 00:56	19°♊27'55	
morning set	12753 Mar 26 17:53	4°♊09'13		morning max el	12754 Feb 22 00:06	22°♊58'48	17°51'21
desc. node	12753 Mar 31 03:18	11°♊39'55			12754 Feb 27 12:39	0°♊	
				morning set	12754 Mar 09 15:56	17°♊22'36	
superior conj	12753 Apr 08 08:37	25°♊22'24	-1°00'24		12754 Mar 16 17:24	0°♊	
minimum elong	12753 Apr 08 02:25	24°♊57'05	0°59'51	desc. node	12754 Mar 17 23:50	2°♊13'16	
	12753 Apr 11 05:03	0°♊					
max. Earth dist.	12753 Apr 14 04:54	4°♊47'23	1.44727 AU	superior conj	12754 Mar 20 12:56	6°♊37'35	-0°19'48
evening rise	12753 Apr 23 17:49	19°♊40'13		minimum elong	12754 Mar 20 11:07	6°♊29'49	0°19'31
	12753 Apr 30 13:11	0°♊		max. Earth dist.	12754 Mar 27 19:46	18°♊48'51	1.43222 AU
evening max el	12753 May 22 11:50	29°♊50'48	20°35'25	evening rise	12754 Apr 03 11:59	29°♊28'47	
	12753 May 22 15:30	0°♊			12754 Apr 03 19:58	0°♊	
asc. node	12753 May 24 21:36	2°♊02'05		evening max el	12754 Apr 24 04:28	0°♊	
retrograde	12753 May 30 15:03	4°♊33'06		asc. node	12754 May 05 07:52	13°♊38'48	21°48'40
evening set	12753 Jun 03 17:37	2°♊57'02		retrograde	12754 May 11 18:51	18°♊28'05	
	12753 Jun 06 14:38	30°♊		evening set	12754 May 14 13:11	19°♊03'43	
inferior conj	12753 Jun 08 23:59	26°♊49'59	3°12'28	inferior conj	12754 May 19 02:27	17°♊11'44	
minimum elong	12753 Jun 08 23:31	26°♊51'34	3°11'30	minimum elong	12754 May 24 08:56	10°♊54'16	3°01'43
min. Earth dist.	12753 Jun 09 15:22	25°♊56'59	0.68304 AU	min. Earth dist.	12754 May 24 07:36	10°♊58'55	3°00'40
morning rise	12753 Jun 14 05:09	20°♊30'18		morning rise	12754 May 24 11:06	10°♊46'42	0.68793 AU
direct	12753 Jun 19 16:03	18°♊05'48		direct	12754 May 29 12:32	4°♊40'04	
desc. node	12753 Jun 27 04:06	21°♊28'23		morning max el	12754 Jun 03 10:37	2°♊33'11	
morning max el	12753 Jun 30 16:59	24°♊42'18	23°59'16	desc. node	12754 Jun 13 04:21	8°♊17'47	22°29'49
	12753 Jul 05 11:18	0°♊			12754 Jun 14 01:09	9°♊11'18	
	12753 Jul 26 17:08	0°♊		morning set	12754 Jun 30 02:34	0°♊	
morning set	12753 Aug 05 01:20	15°♊20'31			12754 Jul 16 20:17	25°♊43'40	
max. Earth dist.	12753 Aug 08 19:09	21°♊51'57	1.38439 AU	max. Earth dist.	12754 Jul 19 10:37	0°♊	
	12753 Aug 13 06:53	0°♊			12754 Jul 21 18:03	3°♊52'06	1.40766 AU
superior conj	12753 Aug 16 04:12	5°♊24'48	-0°43'06	superior conj	12754 Jul 29 14:07	17°♊31'26	-1°17'31
minimum elong	12753 Aug 16 07:13	5°♊39'07	0°43'03	minimum elong	12754 Jul 29 19:46	17°♊56'51	1°17'26
asc. node	12753 Aug 20 21:48	14°♊32'55			12754 Aug 05 09:04	0°♊	
evening rise	12753 Aug 25 02:37	22°♊48'46		asc. node	12754 Aug 07 18:28	4°♊29'33	
	12753 Aug 28 19:23	0°♊		evening rise	12754 Aug 08 17:22	6°♊17'21	
evening max el	12753 Sep 10 11:10	19°♊30'09	18°58'17		12754 Aug 22 22:46	0°♊	
retrograde	12753 Sep 19 05:02	23°♊52'48		evening max el	12754 Aug 24 16:34	1°♊54'19	18°21'20
evening set	12753 Sep 21 01:49	23°♊41'38		retrograde	12754 Sep 01 04:27	5°♊41'36	
desc. node	12753 Sep 23 00:59	23°♊07'21		evening set	12754 Sep 03 06:47	5°♊24'34	
inferior conj	12753 Sep 29 09:51	19°♊25'28	-2°00'30	desc. node	12754 Sep 09 22:29	1°♊31'26	
minimum elong	12753 Sep 29 04:43	19°♊34'27	1°58'15	inferior conj	12754 Sep 10 20:10	0°♊47'32	-0°16'53
min. Earth dist.	12753 Oct 02 08:07	17°♊23'11	0.56407 AU	minimum elong	12754 Sep 10 19:32	0°♊48'49	0°16'43
morning rise	12753 Oct 07 04:29	14°♊37'32			12754 Sep 11 19:15	30°♊	
direct	12753 Oct 12 18:59	13°♊23'15		min. Earth dist.	12754 Sep 14 03:37	28°♊06'07	0.58383 AU
morning max el	12753 Oct 26 23:21	20°♊40'40	26°04'38	morning rise	12754 Sep 18 04:48	25°♊23'18	
	12753 Nov 04 00:44	0°♊		direct	12754 Sep 24 10:15	23°♊41'26	
asc. node	12753 Nov 16 23:25	20°♊59'41			12754 Oct 07 07:26	0°♊	
				morning max el	12754 Oct 08 18:01	1°♊21'05	27°17'53

	12754 Oct 29 06:38	0°♌		asc. node	12755 Oct 21 16:56	0°♌11'06	
asc. node	12754 Nov 03 20:13	10°♌26'51			12755 Oct 21 14:45	0°♌	
morning set	12754 Nov 08 11:54	20°♌00'06		morning set	12755 Oct 23 15:55	4°♌12'29	
	12754 Nov 13 02:04	0°♌		max. Earth dist.	12755 Oct 29 14:24	16°♌59'56	1.31420 AU
superior conj	12754 Nov 15 10:10	5°♌12'37	1°30'41	superior conj	12755 Oct 30 21:08	19°♌50'11	1°18'22
minimum elong	12754 Nov 15 08:36	5°♌03'49	1°31'22	minimum elong	12755 Oct 30 19:00	19°♌38'19	1°18'45
max. Earth dist.	12754 Nov 15 06:31	4°♌52'14	1.31271 AU		12755 Nov 04 11:05	0°♌	
evening rise	12754 Nov 22 04:29	20°♌05'54		evening rise	12755 Nov 06 14:01	4°♌37'31	
	12754 Nov 26 23:44	0°♌			12755 Nov 19 19:57	0°♌	
desc. node	12754 Dec 06 19:31	17°♌36'24		desc. node	12755 Nov 23 16:40	5°♌57'49	
	12754 Dec 15 11:53	0°♌		evening max el	12755 Dec 03 17:01	18°♌04'52	25°28'07
evening max el	12754 Dec 21 22:59	7°♌07'08	26°42'26	retrograde	12755 Dec 17 13:39	25°♌03'22	
retrograde	12755 Jan 04 21:48	14°♌15'18		evening set	12755 Dec 23 12:21	23°♌42'32	
evening set	12755 Jan 11 13:07	12°♌25'35		min. Earth dist.	12755 Dec 28 05:13	21°♌03'41	0.57236 AU
min. Earth dist.	12755 Jan 15 13:00	9°♌48'06	0.59276 AU	inferior conj	12755 Dec 31 02:01	19°♌07'24	-4°59'40
inferior conj	12755 Jan 18 17:06	7°♌19'38	-3°45'13	minimum elong	12755 Dec 31 10:25	18°♌53'10	4°56'50
minimum elong	12755 Jan 19 00:54	7°♌04'23	3°41'48	morning rise	12756 Jan 08 10:56	14°♌52'27	
morning rise	12755 Jan 26 15:37	2°♌42'09		direct	12756 Jan 10 15:38	14°♌37'58	
direct	12755 Jan 28 17:03	2°♌26'47		asc. node	12756 Jan 17 16:40	17°♌18'22	
asc. node	12755 Jan 30 19:23	2°♌43'26		morning max el	12756 Jan 19 15:18	18°♌59'34	18°59'42
morning max el	12755 Feb 05 12:01	6°♌18'17	18°14'53		12756 Jan 27 18:47	0°♌	
	12755 Feb 20 12:35	0°♌		morning set	12756 Feb 05 03:48	15°♌36'51	
morning set	12755 Feb 21 04:47	1°♌16'27			12756 Feb 12 11:44	0°♌	
superior conj	12755 Mar 02 16:12	18°♌56'15	0°17'11	superior conj	12756 Feb 13 14:05	2°♌06'22	0°47'39
minimum elong	12755 Mar 02 17:30	19°♌02'05	0°17'15	minimum elong	12756 Feb 13 16:45	2°♌19'05	0°47'47
desc. node	12755 Mar 04 20:23	22°♌50'20		desc. node	12756 Feb 19 16:57	13°♌27'40	
	12755 Mar 08 22:46	0°♌		max. Earth dist.	12756 Feb 20 13:39	15°♌00'21	1.39032 AU
max. Earth dist.	12755 Mar 10 06:31	2°♌15'23	1.41253 AU	evening rise	12756 Feb 24 09:27	21°♌41'29	
evening rise	12755 Mar 15 00:06	10°♌07'19			12756 Feb 29 08:52	0°♌	
	12755 Mar 27 20:04	0°♌			12756 Mar 20 19:38	0°♌	
evening max el	12755 Apr 17 23:51	27°♌28'19	23°08'27	evening max el	12756 Mar 30 13:39	11°♌19'46	24°28'40
	12755 Apr 20 17:46	0°♌		retrograde	12756 Apr 11 01:30	18°♌03'27	
retrograde	12755 Apr 28 09:04	3°♌35'32		asc. node	12756 Apr 14 13:31	17°♌08'43	
asc. node	12755 Apr 28 16:10	3°♌35'07		evening set	12756 Apr 16 13:58	15°♌44'16	
evening set	12755 May 03 09:45	1°♌28'50		min. Earth dist.	12756 Apr 21 03:33	10°♌31'18	0.68381 AU
	12755 May 04 22:07	30°♌		inferior conj	12756 Apr 22 02:32	9°♌14'17	2°09'43
inferior conj	12755 May 08 18:24	25°♌03'23	2°40'42	minimum elong	12756 Apr 22 00:23	9°♌21'32	2°08'34
minimum elong	12755 May 08 16:28	25°♌10'05	2°39'34	morning rise	12756 Apr 27 10:57	3°♌15'00	
min. Earth dist.	12755 May 08 07:51	25°♌39'53	0.68815 AU	direct	12756 May 01 07:34	1°♌49'53	
morning rise	12755 May 13 23:06	18°♌56'06		morning max el	12756 May 08 19:36	6°♌00'59	19°54'11
direct	12755 May 18 08:14	17°♌09'48		desc. node	12756 May 17 18:56	17°♌03'55	
morning max el	12755 May 26 20:22	22°♌03'12	21°06'11		12756 May 26 16:20	0°♌	
desc. node	12755 May 31 22:06	27°♌47'55		morning set	12756 Jun 04 15:58	13°♌38'42	
	12755 Jun 02 15:41	0°♌			12756 Jun 15 03:31	0°♌	
	12755 Jun 23 08:47	0°♌		max. Earth dist.	12756 Jun 15 11:04	0°♌30'00	1.44513 AU
morning set	12755 Jun 26 14:07	5°♌00'26		superior conj	12756 Jun 20 15:46	8°♌50'08	-2°08'48
max. Earth dist.	12755 Jul 03 23:15	16°♌47'20	1.42874 AU	minimum elong	12756 Jun 20 20:22	9°♌08'46	2°09'34
superior conj	12755 Jul 11 02:54	28°♌41'23	-1°48'11		12756 Jul 03 08:58	0°♌	
minimum elong	12755 Jul 11 09:56	29°♌11'17	1°48'23	evening rise	12756 Jul 04 00:53	1°♌07'42	
	12755 Jul 11 21:21	0°♌		asc. node	12756 Jul 11 12:01	13°♌44'35	
evening rise	12755 Jul 22 18:27	19°♌07'33		evening max el	12756 Jul 21 18:23	28°♌10'50	18°06'40
asc. node	12755 Jul 25 15:12	24°♌15'00			12756 Jul 23 21:53	0°♌	
	12755 Jul 28 21:39	0°♌		retrograde	12756 Jul 28 03:33	1°♌31'15	
evening max el	12755 Aug 08 04:15	14°♌50'57	18°04'29	evening set	12756 Jul 30 21:41	0°♌52'02	
retrograde	12755 Aug 14 21:27	18°♌17'35			12756 Aug 01 09:29	30°♌	
evening set	12755 Aug 17 07:26	17°♌50'56		inferior conj	12756 Aug 06 02:48	25°♌36'19	2°05'36
inferior conj	12755 Aug 24 03:02	12°♌53'25	1°06'00	minimum elong	12756 Aug 06 05:22	25°♌29'23	2°04'15
minimum elong	12755 Aug 24 04:55	12°♌48'55	1°04'57	min. Earth dist.	12756 Aug 08 20:56	22°♌39'11	0.62889 AU
min. Earth dist.	12755 Aug 27 07:27	9°♌53'19	0.60640 AU	morning rise	12756 Aug 12 11:03	19°♌24'29	
desc. node	12755 Aug 27 19:59	9°♌25'27		desc. node	12756 Aug 13 17:26	18°♌33'10	
morning rise	12755 Aug 30 23:31	7°♌00'13		direct	12756 Aug 19 03:18	16°♌55'47	
direct	12755 Sep 06 13:36	4°♌51'58		morning max el	12756 Sep 02 04:06	24°♌57'57	27°52'30
morning max el	12755 Sep 20 20:14	12°♌46'58	27°54'36		12756 Sep 06 18:23	0°♌	
	12755 Oct 04 12:48	0°♌			12756 Sep 26 23:58	0°♌	

morning set	12756 Oct 06 13:19	18°♄03'37		direct	12757 Aug 02 01:38	29°♄46'33	
asc. node	12756 Oct 07 13:36	20°♄07'12			12757 Aug 04 01:51	0°♄	
max. Earth dist.	12756 Oct 11 17:35	28°♄52'12	1.32090 AU	morning max el	12757 Aug 15 14:40	7°♄43'58	27°15'40
	12756 Oct 12 06:11	0°♄			12757 Sep 01 20:30	0°♄	
					12757 Sep 19 07:32	0°♄	
superior conj	12756 Oct 14 05:29	4°♄16'37	1°00'29	morning set	12757 Sep 20 01:28	1°♄26'53	
minimum elong	12756 Oct 14 03:14	4°♄04'24	1°00'34	asc. node	12757 Sep 24 10:13	10°♄10'31	
evening rise	12756 Oct 21 01:08	19°♄11'09		max. Earth dist.	12757 Sep 24 12:26	10°♄21'54	1.33286 AU
	12756 Oct 26 06:11	0°♄					
desc. node	12756 Nov 09 13:54	23°♄16'28		superior conj	12757 Sep 28 09:06	18°♄26'18	0°37'14
evening max el	12756 Nov 14 03:59	28°♄19'29	23°51'48	minimum elong	12757 Sep 28 07:21	18°♄17'04	0°37'07
	12756 Nov 16 00:29	0°♄			12757 Oct 03 18:27	0°♄	
retrograde	12756 Nov 27 17:13	5°♄05'00		evening rise	12757 Oct 05 12:00	3°♄41'55	
evening set	12756 Dec 02 11:38	4°♄15'24			12757 Oct 19 18:22	0°♄	
min. Earth dist.	12756 Dec 08 14:44	1°♄16'00	0.55598 AU	evening max el	12757 Oct 26 15:27	8°♄22'46	22°10'32
inferior conj	12756 Dec 10 14:18	0°♄04'45	-5°47'50	desc. node	12757 Oct 27 11:12	9°♄09'39	
minimum elong	12756 Dec 10 18:15	29°♄58'49	5°46'33	retrograde	12757 Nov 08 09:05	14°♄41'58	
	12756 Dec 10 17:28	30°♄		evening set	12757 Nov 11 17:07	14°♄17'21	
morning rise	12756 Dec 19 02:47	26°♄09'17		inferior conj	12757 Nov 20 10:39	10°♄20'55	-5°46'32
direct	12756 Dec 21 18:23	25°♄51'38		minimum elong	12757 Nov 20 05:56	10°♄27'34	5°45'13
	12756 Dec 31 07:20	0°♄		min. Earth dist.	12757 Nov 19 21:31	10°♄39'23	0.54663 AU
morning max el	12757 Jan 01 06:10	0°♄52'12	20°07'19	morning rise	12757 Nov 28 19:58	6°♄33'43	
asc. node	12757 Jan 03 13:52	3°♄19'42		direct	12757 Dec 02 06:05	6°♄07'37	
morning set	12757 Jan 19 09:26	0°♄13'00		morning max el	12757 Dec 14 06:48	11°♄51'51	21°37'00
	12757 Jan 19 06:53	0°♄		asc. node	12757 Dec 21 10:58	20°♄30'49	
					12757 Dec 27 05:37	0°♄	
superior conj	12757 Jan 27 01:52	15°♄54'05	1°10'47	morning set	12758 Jan 03 19:06	14°♄57'34	
minimum elong	12757 Jan 27 04:38	16°♄07'53	1°11'11				
max. Earth dist.	12757 Feb 01 20:16	27°♄08'39	1.36814 AU	superior conj	12758 Jan 10 23:40	0°♄08'22	1°26'41
	12757 Feb 03 08:53	0°♄		minimum elong	12758 Jan 11 01:45	0°♄19'14	1°27'23
evening rise	12757 Feb 05 14:34	4°♄05'45			12758 Jan 10 22:04	0°♄	
desc. node	12757 Feb 05 13:33	4°♄01'11		max. Earth dist.	12758 Jan 15 07:36	9°♄00'50	1.34832 AU
	12757 Feb 21 08:33	0°♄		evening rise	12758 Jan 19 12:08	17°♄11'38	
evening max el	12757 Mar 13 02:59	25°♄10'46	25°42'29	desc. node	12758 Jan 23 10:14	24°♄27'05	
	12757 Mar 18 22:42	0°♄			12758 Jan 26 13:47	0°♄	
retrograde	12757 Mar 25 13:32	2°♄20'26			12758 Feb 15 16:46	0°♄	
	12757 Mar 31 09:42	30°♄		evening max el	12758 Feb 23 16:41	8°♄56'05	26°42'34
evening set	12757 Mar 31 13:26	29°♄52'17		retrograde	12758 Mar 08 20:07	16°♄19'16	
asc. node	12757 Apr 01 10:55	29°♄04'02		evening set	12758 Mar 15 06:22	13°♄46'58	
min. Earth dist.	12757 Apr 04 20:05	25°♄14'35	0.67510 AU	asc. node	12758 Mar 19 08:20	9°♄40'33	
inferior conj	12757 Apr 06 07:22	23°♄22'23	1°28'34	min. Earth dist.	12758 Mar 19 07:23	9°♄43'19	0.66234 AU
minimum elong	12757 Apr 06 05:29	23°♄28'23	1°27'37	inferior conj	12758 Mar 21 06:48	7°♄23'07	0°36'53
morning rise	12757 Apr 11 22:07	17°♄32'23		minimum elong	12758 Mar 21 05:50	7°♄25'58	0°36'29
direct	12757 Apr 15 07:10	16°♄27'05		morning rise	12758 Mar 27 06:28	1°♄44'07	
morning max el	12757 Apr 22 02:22	20°♄08'17	18°57'03	direct	12758 Mar 30 05:11	0°♄55'59	
	12757 Apr 30 00:31	0°♄		morning max el	12758 Apr 05 15:20	4°♄19'52	18°16'22
desc. node	12757 May 04 15:39	6°♄48'17		desc. node	12758 Apr 21 12:19	26°♄53'27	
greatest brilliancy	12757 May 05 12:52	8°♄08'21	-0.8m		12758 Apr 23 11:01	0°♄	
morning set	12757 May 14 22:20	22°♄35'50		morning set	12758 Apr 25 04:15	2°♄44'49	
	12757 May 19 16:45	0°♄					
max. Earth dist.	12757 May 29 03:39	14°♄44'18	1.45516 AU	superior conj	12758 May 10 15:01	27°♄10'59	-1°55'57
				minimum elong	12758 May 10 06:28	26°♄37'29	1°56'05
superior conj	12757 May 31 07:38	18°♄08'15	-2°12'30	max. Earth dist.	12758 May 11 23:04	29°♄16'12	1.45795 AU
minimum elong	12757 May 31 05:12	17°♄58'42	2°13'22		12758 May 12 10:17	0°♄	
	12757 Jun 07 19:24	0°♄		evening rise	12758 May 26 15:06	22°♄08'38	
evening rise	12757 Jun 15 08:00	12°♄07'16			12758 May 31 15:57	0°♄	
	12757 Jun 26 11:26	0°♄		greatest brilliancy	12758 Jun 06 11:04	8°♄57'04	-0.8m
asc. node	12757 Jun 28 08:52	2°♄51'45		asc. node	12758 Jun 15 05:50	21°♄28'47	
evening max el	12757 Jul 05 07:44	11°♄45'30	18°27'06	evening max el	12758 Jun 18 17:45	25°♄28'33	19°04'48
retrograde	12757 Jul 11 18:18	15°♄13'13		retrograde	12758 Jun 25 14:12	29°♄16'16	
evening set	12757 Jul 14 20:53	14°♄19'15		evening set	12758 Jun 29 01:40	28°♄06'11	
inferior conj	12757 Jul 20 15:20	8°♄47'23	2°44'28	inferior conj	12758 Jul 04 13:01	22°♄19'37	3°06'09
minimum elong	12757 Jul 20 17:28	8°♄41'01	2°43'15	minimum elong	12758 Jul 04 14:13	22°♄15'47	3°05'06
min. Earth dist.	12757 Jul 22 19:48	6°♄11'42	0.64914 AU	min. Earth dist.	12758 Jul 06 02:46	20°♄18'38	0.66583 AU
morning rise	12757 Jul 26 12:51	2°♄26'24		morning rise	12758 Jul 10 02:08	15°♄56'11	
	12757 Jul 31 03:07	30°♄		direct	12758 Jul 16 07:02	13°♄15'35	
desc. node	12757 Jul 31 14:49	29°♄54'02		desc. node	12758 Jul 18 12:09	13°♄33'20	

































































































































morning max el	12758 Jul 29 01:30	20°☿52'51	26°11'44	direct	12759 Jun 29 18:17	27°♄14'14	
	12758 Aug 05 22:31	0°♄		desc. node	12759 Jul 05 09:23	29°♄08'55	
	12758 Aug 26 00:36	0°♄			12759 Jul 06 15:32	0°☿	
morning set	12758 Sep 03 00:55	14°♄12'53		morning max el	12759 Jul 11 11:43	4°☿16'00	24°50'16
max. Earth dist.	12758 Sep 06 20:58	21°♄30'24	1.34996 AU		12759 Jul 31 05:42	0°♄	
asc. node	12758 Sep 11 06:47	0°♄16'20		morning set	12759 Aug 16 07:36	26°♄12'18	
	12758 Sep 11 03:34	0°♄			12759 Aug 18 10:37	0°♄	
				max. Earth dist.	12759 Aug 19 21:26	2°♄38'19	1.37118 AU
superior conj	12758 Sep 12 05:27	2°♄11'50	0°09'00				
minimum elong	12758 Sep 12 04:57	2°♄09'16	0°08'50	superior conj	12759 Aug 26 15:31	15°♄26'10	-0°23'19
behind sun begin	12758 Sep 11 23:54	1°♄43'27		minimum elong	12759 Aug 26 17:03	15°♄33'41	0°23'22
behind sun end	12758 Sep 12 10:00	2°♄35'07		asc. node	12759 Aug 29 03:24	20°♄21'34	
evening rise	12758 Sep 19 20:33	18°♄03'42			12759 Sep 02 22:33	0°♄	
	12758 Sep 25 19:38	0°♄		evening rise	12759 Sep 04 00:36	2°♄11'08	
evening max el	12758 Oct 08 12:33	18°♄49'49	20°40'04		12759 Sep 20 22:51	0°♄	
desc. node	12758 Oct 14 08:37	23°♄08'39		evening max el	12759 Sep 20 23:36	0°♄01'54	19°29'05
retrograde	12758 Oct 19 19:46	24°♄26'37		retrograde	12759 Sep 30 14:43	4°♄50'28	
evening set	12758 Oct 22 02:02	24°♄14'08		desc. node	12759 Oct 01 06:04	4°♄49'16	
inferior conj	12758 Oct 31 02:30	20°♄19'25	-4°46'06	evening set	12759 Oct 02 11:25	4°♄40'28	
minimum elong	12758 Oct 30 16:31	20°♄33'45	4°42'53	inferior conj	12759 Oct 11 04:23	0°♄34'11	-3°04'41
min. Earth dist.	12758 Nov 01 04:28	19°♄42'05	0.54634 AU	minimum elong	12759 Oct 10 20:26	0°♄46'57	3°01'23
morning rise	12758 Nov 08 06:51	16°♄22'14			12759 Oct 12 01:36	30°♄	
direct	12758 Nov 12 14:32	15°♄42'10		min. Earth dist.	12759 Oct 13 14:19	29°♄01'27	0.55533 AU
morning max el	12758 Nov 25 20:03	22°♄07'20	23°22'35	morning rise	12759 Oct 19 03:20	26°♄07'58	
	12758 Dec 02 16:08	0°♄		direct	12759 Oct 24 07:14	25°♄08'15	
asc. node	12758 Dec 08 07:59	8°♄34'59			12759 Nov 04 20:01	0°♄	
morning set	12758 Dec 19 06:43	29°♄43'55		morning max el	12759 Nov 07 06:11	2°♄07'59	25°09'46
	12758 Dec 19 09:44	0°☿		asc. node	12759 Nov 25 04:55	27°♄19'10	
					12759 Nov 26 15:31	0°♄	
superior conj	12758 Dec 26 04:18	14°☿39'28	1°35'47	morning set	12759 Dec 03 18:28	14°♄27'08	
minimum elong	12758 Dec 26 05:21	14°☿45'06	1°36'40				
max. Earth dist.	12758 Dec 29 02:43	20°☿55'18	1.33228 AU	superior conj	12759 Dec 10 13:18	29°♄20'17	1°38'30
evening rise	12759 Jan 02 22:32	0°☿48'59		minimum elong	12759 Dec 10 13:14	29°♄19'51	1°39'27
	12759 Jan 02 12:42	0°☿			12759 Dec 10 20:31	0°☿	
desc. node	12759 Jan 10 07:00	14°☿39'57		max. Earth dist.	12759 Dec 12 05:15	2°☿59'41	1.32075 AU
	12759 Jan 19 13:47	0°☿		evening rise	12759 Dec 17 18:35	14°☿49'49	
evening max el	12759 Feb 06 06:02	22°☿25'23	27°21'33		12759 Dec 25 14:09	0°☿	
retrograde	12759 Feb 19 20:17	29°☿51'17		desc. node	12759 Dec 28 03:51	4°☿33'54	
evening set	12759 Feb 26 14:38	27°☿20'50			12760 Jan 14 14:24	0°☿	
min. Earth dist.	12759 Mar 02 11:13	23°☿49'15	0.64590 AU	evening max el	12760 Jan 19 17:03	5°☿25'47	27°32'37
inferior conj	12759 Mar 04 22:19	21°☿10'06	-0°25'35	retrograde	12760 Feb 02 13:07	12°☿47'34	
minimum elong	12759 Mar 04 23:05	21°☿08'02	0°25'02	evening set	12760 Feb 09 11:40	10°☿26'07	
asc. node	12759 Mar 06 05:46	19°☿46'39		min. Earth dist.	12760 Feb 13 05:39	7°☿22'34	0.62648 AU
morning rise	12759 Mar 11 09:24	15°☿44'35		inferior conj	12760 Feb 16 03:01	4°☿35'48	-1°38'14
direct	12759 Mar 13 23:16	15°☿10'14		minimum elong	12760 Feb 16 06:19	4°☿27'50	1°36'22
morning max el	12759 Mar 20 08:06	18°☿28'22	17°52'47	asc. node	12760 Feb 21 03:12	0°☿25'23	
	12759 Mar 28 22:17	0°☿			12760 Feb 21 21:05	30°☿	
morning set	12759 Apr 06 14:52	14°☿18'04		morning rise	12760 Feb 23 03:32	29°☿26'50	
desc. node	12759 Apr 08 08:55	17°☿13'22		direct	12760 Feb 25 10:19	29°☿02'43	
	12759 Apr 16 03:11	0°☿			12760 Feb 28 21:55	0°☿	
				morning max el	12760 Mar 03 01:46	2°☿25'42	17°46'41
superior conj	12759 Apr 20 07:39	6°☿44'40	-1°23'10	morning set	12760 Mar 19 01:49	27°☿00'29	
minimum elong	12759 Apr 19 23:16	6°☿11'08	1°22'40		12760 Mar 20 18:48	0°☿	
max. Earth dist.	12759 Apr 24 19:04	13°☿50'39	1.45323 AU	desc. node	12760 Mar 25 05:28	7°☿42'59	
	12759 May 05 04:40	0°♄					
evening rise	12759 May 06 05:33	1°♄35'27		superior conj	12760 Mar 30 21:54	17°☿20'32	-0°43'00
greatest brilliancy	12759 May 21 02:21	23°♄56'24	-0.6m	minimum elong	12760 Mar 30 17:37	17°☿02'42	0°42'34
	12759 May 25 09:00	0°☿		max. Earth dist.	12760 Apr 06 12:49	28°☿10'02	1.44156 AU
evening max el	12759 Jun 01 22:41	9°☿15'33	19°58'21		12760 Apr 07 16:18	0°☿	
asc. node	12759 Jun 02 02:54	9°☿26'02		evening rise	12760 Apr 14 17:57	11°☿05'15	
retrograde	12759 Jun 09 12:39	13°☿34'56			12760 Apr 27 08:00	0°♄	
evening set	12759 Jun 13 09:35	12°☿08'08		evening max el	12760 May 14 21:45	23°♄02'52	21°05'25
inferior conj	12759 Jun 18 16:59	6°☿08'09	3°13'39	asc. node	12760 May 19 00:06	26°♄29'49	
minimum elong	12759 Jun 18 17:07	6°☿07'43	3°12'42	retrograde	12760 May 23 11:29	28°♄02'48	
min. Earth dist.	12759 Jun 19 16:16	4°☿49'29	0.67813 AU	evening set	12760 May 27 18:37	26°♄19'36	
	12759 Jun 23 18:25	30°☿♄		inferior conj	12760 Jun 02 00:43	20°♄07'44	3°09'11
morning rise	12759 Jun 24 00:18	29°♄46'31		minimum elong	12760 Jun 01 23:52	20°♄10'42	3°08'12

min. Earth dist.	12760 Jun 02 10:19	19° Π 34'26	0.68570 AU	min. Earth dist.	12761 May 17 06:48	4° Π 26'30	0.68859 AU
morning rise	12760 Jun 07 04:56	13° Π 50'21			12761 May 20 15:45	30° \mathbb{R} \mathcal{B}	
direct	12760 Jun 12 10:22	11° Π 33'08		morning rise	12761 May 22 13:54	28° \mathcal{B} 03'19	
desc. node	12760 Jun 21 06:31	16° Π 12'17		direct	12761 May 27 06:20	26° \mathcal{B} 05'10	
morning max el	12760 Jun 22 22:09	17° Π 47'47	23°21'01		12761 Jun 03 22:20	0° Π	
	12760 Jul 03 02:30	0° \mathcal{E}		morning max el	12761 Jun 05 11:16	1° Π 27'50	21°53'03
	12760 Jul 23 07:24	0° \mathcal{Q}		desc. node	12761 Jun 08 03:31	4° Π 20'17	
morning set	12760 Jul 27 16:47	7° \mathcal{Q} 13'18			12761 Jun 26 22:59	0° \mathcal{E}	
max. Earth dist.	12760 Jul 31 19:18	14° \mathcal{Q} 13'19	1.39444 AU	morning set	12761 Jul 08 00:46	17° \mathcal{E} 07'24	
				max. Earth dist.	12761 Jul 13 20:13	26° \mathcal{E} 35'21	1.41707 AU
					12761 Jul 15 21:10	0° \mathcal{Q}	
superior conj	12760 Aug 08 11:26	27° \mathcal{Q} 59'47	-0°57'50	superior conj	12761 Jul 21 12:47	9° \mathcal{Q} 42'50	-1°31'20
minimum elong	12760 Aug 08 15:36	28° \mathcal{Q} 19'08	0°57'45	minimum elong	12761 Jul 21 19:19	10° \mathcal{Q} 11'30	1°31'19
	12760 Aug 09 13:15	0° \mathbb{P}		evening rise	12761 Aug 01 06:42	29° \mathcal{Q} 09'56	
asc. node	12760 Aug 15 00:02	10° \mathbb{P} 22'14		asc. node	12761 Aug 01 20:43	0° \mathbb{P} 14'34	
evening rise	12760 Aug 17 21:13	15° \mathbb{P} 56'23			12761 Aug 01 17:34	0° \mathbb{P}	
	12760 Aug 25 10:23	0° \mathcal{L}		evening max el	12761 Aug 17 07:50	24° \mathbb{P} 40'08	18°11'45
evening max el	12760 Sep 02 23:18	12° \mathcal{L} 01'11	18°39'54	retrograde	12761 Aug 24 10:35	28° \mathbb{P} 17'01	
retrograde	12760 Sep 11 03:15	16° \mathcal{L} 07'32		evening set	12761 Aug 26 15:54	27° \mathbb{P} 56'26	
evening set	12760 Sep 13 01:47	15° \mathcal{L} 54'26		inferior conj	12761 Sep 02 21:27	23° \mathbb{P} 10'43	0°21'10
desc. node	12760 Sep 17 03:34	14° \mathcal{L} 11'49		minimum elong	12761 Sep 02 22:09	23° \mathbb{P} 09'10	0°20'41
inferior conj	12760 Sep 21 02:01	11° \mathcal{L} 29'16	-1°14'33	desc. node	12761 Sep 04 01:04	22° \mathbb{P} 09'58	
minimum elong	12760 Sep 20 22:59	11° \mathcal{L} 34'57	1°13'13	min. Earth dist.	12761 Sep 06 04:55	20° \mathbb{P} 18'18	0.59326 AU
min. Earth dist.	12760 Sep 24 05:48	9° \mathcal{L} 08'15	0.57191 AU	morning rise	12761 Sep 10 01:00	17° \mathbb{P} 32'37	
morning rise	12760 Sep 28 16:45	6° \mathcal{L} 25'08		direct	12761 Sep 16 10:52	15° \mathbb{P} 38'47	
direct	12760 Oct 04 14:01	4° \mathcal{L} 59'37		morning max el	12761 Sep 30 18:59	23° \mathbb{P} 26'54	27°38'18
morning max el	12760 Oct 18 20:55	12° \mathcal{L} 27'30	26°39'58		12761 Oct 06 16:24	0° \mathcal{L}	
	12760 Nov 01 14:39	0° \mathbb{L}			12761 Oct 25 18:58	0° \mathbb{L}	
asc. node	12760 Nov 11 01:46	16° \mathbb{L} 32'55		asc. node	12761 Oct 28 22:30	6° \mathbb{L} 07'58	
morning set	12760 Nov 17 04:39	29° \mathbb{L} 02'28		morning set	12761 Nov 01 11:25	13° \mathbb{L} 24'38	
	12760 Nov 17 15:22	0° \mathcal{X}		max. Earth dist.	12761 Nov 07 21:05	27° \mathbb{L} 22'20	1.31261 AU
superior conj	12760 Nov 24 00:35	14° \mathcal{X} 04'39	1°35'12	superior conj	12761 Nov 08 12:10	28° \mathbb{L} 46'24	1°26'08
minimum elong	12760 Nov 23 23:29	13° \mathcal{X} 58'33	1°36'02	minimum elong	12761 Nov 08 10:18	28° \mathbb{L} 36'02	1°26'43
max. Earth dist.	12760 Nov 24 12:33	15° \mathcal{X} 11'23	1.31410 AU		12761 Nov 09 01:22	0° \mathcal{X}	
evening rise	12760 Nov 30 21:37	29° \mathcal{X} 07'24		evening rise	12761 Nov 15 05:20	13° \mathcal{X} 35'23	
	12760 Dec 01 07:36	0° \mathcal{Z}			12761 Nov 23 08:59	0° \mathcal{Z}	
desc. node	12760 Dec 14 00:49	24° \mathcal{Z} 01'11		desc. node	12761 Nov 30 21:55	12° \mathcal{Z} 50'40	
	12760 Dec 17 18:54	0° \mathcal{A}		evening max el	12761 Dec 13 22:02	29° \mathcal{Z} 12'26	26°14'27
evening max el	12760 Dec 31 23:13	17° \mathcal{A} 44'42	27°10'45		12761 Dec 14 18:39	0° \mathcal{A}	
retrograde	12761 Jan 14 21:52	24° \mathcal{A} 59'07		retrograde	12761 Dec 27 20:46	6° \mathcal{A} 17'32	
evening set	12761 Jan 21 18:15	22° \mathcal{A} 55'07		evening set	12762 Jan 03 06:12	4° \mathcal{A} 39'27	
min. Earth dist.	12761 Jan 25 13:39	20° \mathcal{A} 11'42	0.60512 AU	min. Earth dist.	12762 Jan 07 11:25	2° \mathcal{A} 03'25	0.58367 AU
inferior conj	12761 Jan 28 17:27	17° \mathcal{A} 31'34	-2°58'16		12762 Jan 10 06:40	30° \mathcal{R} \mathcal{Z}	
minimum elong	12761 Jan 28 23:45	17° \mathcal{A} 18'13	2°55'12	inferior conj	12762 Jan 10 13:57	29° \mathcal{Z} 46'32	-4°18'39
morning rise	12761 Feb 05 08:17	12° \mathcal{A} 42'15		minimum elong	12762 Jan 10 22:26	29° \mathcal{Z} 30'53	4°15'17
direct	12761 Feb 07 10:29	12° \mathcal{A} 24'47		morning rise	12762 Jan 18 17:34	25° \mathcal{Z} 18'50	
asc. node	12761 Feb 07 00:37	12° \mathcal{A} 25'28		direct	12762 Jan 20 19:21	25° \mathcal{Z} 04'26	
morning max el	12761 Feb 14 16:57	16° \mathcal{A} 02'57	17°58'59	asc. node	12762 Jan 24 21:56	26° \mathcal{Z} 04'15	
	12761 Feb 24 10:41	0° \mathcal{H}		morning max el	12762 Jan 29 01:45	29° \mathcal{Z} 07'55	18°31'17
morning set	12761 Mar 02 06:52	10° \mathcal{H} 33'30			12762 Jan 29 22:07	0° \mathcal{A}	
desc. node	12761 Mar 12 01:59	28° \mathcal{H} 18'45		morning set	12762 Feb 14 00:31	24° \mathcal{A} 39'55	
superior conj	12761 Mar 12 12:33	29° \mathcal{H} 05'08	-0°03'29		12762 Feb 16 18:57	0° \mathcal{H}	
minimum elong	12761 Mar 12 12:16	29° \mathcal{H} 03'53	0°03'19	superior conj	12762 Feb 23 00:19	11° \mathcal{H} 47'22	0°30'57
behind sun begin	12761 Mar 12 04:24	28° \mathcal{H} 29'19		minimum elong	12762 Feb 23 02:23	11° \mathcal{H} 56'55	0°31'01
behind sun end	12761 Mar 12 20:08	29° \mathcal{H} 38'21		desc. node	12762 Feb 26 22:32	18° \mathcal{H} 56'23	
	12761 Mar 13 01:05	0° \mathcal{Y}		max. Earth dist.	12762 Mar 02 10:22	25° \mathcal{H} 05'07	1.40320 AU
max. Earth dist.	12761 Mar 20 01:59	11° \mathcal{Y} 58'20	1.42426 AU		12762 Mar 05 07:29	0° \mathcal{Y}	
evening rise	12761 Mar 25 18:56	21° \mathcal{Y} 13'36		evening rise	12762 Mar 06 16:01	2° \mathcal{Y} 16'07	
	12761 Mar 31 09:53	0° \mathcal{B}			12762 Mar 24 17:08	0° \mathcal{B}	
	12761 Apr 21 15:06	0° Π		evening max el	12762 Apr 10 06:28	20° \mathcal{B} 41'23	23°42'54
evening max el	12761 Apr 27 15:42	6° Π 50'59	22°22'02	retrograde	12762 Apr 21 03:38	27° \mathcal{B} 05'38	
asc. node	12761 May 05 21:22	12° Π 24'37		asc. node	12762 Apr 22 18:43	26° \mathcal{B} 53'30	
retrograde	12761 May 07 08:59	12° Π 34'53		evening set	12762 Apr 26 09:11	24° \mathcal{B} 53'30	
evening set	12761 May 12 03:01	10° Π 36'19		min. Earth dist.	12762 May 01 03:29	19° \mathcal{B} 19'37	0.68684 AU
inferior conj	12761 May 17 10:09	4° Π 14'49	2°54'03				
minimum elong	12761 May 17 08:32	4° Π 20'29	2°52'57				

inferior conj	12762 May 01 19:18	18° ♄ 25'29	2°28'49	inferior conj	12763 Apr 16 02:16	2° ♄ 35'49	1°53'33
minimum elong	12762 May 01 17:13	18° ♄ 32'37	2°27'39	minimum elong	12763 Apr 16 00:09	2° ♄ 42'46	1°52'27
morning rise	12762 May 07 01:14	12° ♄ 21'10			12763 Apr 18 03:12	30° ♄ ♁	
direct	12762 May 11 04:55	10° ♄ 43'53		morning rise	12763 Apr 21 13:02	26° ♄ 40'07	
morning max el	12762 May 19 06:04	15° ♄ 18'17	20°33'45	direct	12763 Apr 25 04:41	25° ♄ 23'28	
desc. node	12762 May 26 00:25	23° ♄ 15'15		morning max el	12763 May 02 08:27	29° ♄ 20'06	19°27'52
	12762 May 30 22:53	0° ♄			12763 May 03 00:16	0° ♄	
morning set	12762 Jun 17 09:51	26° ♄ 02'16		desc. node	12763 May 12 21:11	12° ♄ 44'27	
	12762 Jun 19 22:55	0° ♄		greatest brilliancy	12763 May 15 00:49	15° ♄ 52'47	-0.7m
max. Earth dist.	12762 Jun 26 03:45	9° ♄ 50'13	1.43640 AU		12763 May 24 09:36	0° ♄	
				morning set	12763 May 27 10:46	4° ♄ 40'36	
superior conj	12762 Jul 02 15:33	20° ♄ 27'13	-1°58'35	max. Earth dist.	12763 Jun 08 18:05	23° ♄ 49'19	1.45030 AU
minimum elong	12762 Jul 02 22:09	20° ♄ 54'42	1°59'02				
	12762 Jul 08 07:13	0° ♄		superior conj	12763 Jun 12 18:39	0° ♄ 12'16	-2°12'46
evening rise	12762 Jul 15 00:26	11° ♄ 40'17		minimum elong	12763 Jun 12 20:39	0° ♄ 20'16	2°13'42
asc. node	12762 Jul 19 17:29	19° ♄ 54'10			12763 Jun 12 15:35	0° ♄	
	12762 Jul 25 20:07	0° ♄		evening rise	12763 Jun 26 21:22	23° ♄ 15'26	
evening max el	12762 Jul 31 21:04	7° ♄ 48'37	18°03'13		12763 Jun 30 22:26	0° ♄	
retrograde	12762 Aug 07 09:33	11° ♄ 10'37		asc. node	12763 Jul 06 14:18	9° ♄ 15'07	
evening set	12762 Aug 09 23:01	10° ♄ 38'55		evening max el	12763 Jul 15 11:16	21° ♄ 16'09	18°13'12
inferior conj	12762 Aug 16 12:01	5° ♄ 33'43	1°34'02	retrograde	12763 Jul 21 19:45	24° ♄ 37'42	
minimum elong	12762 Aug 16 14:23	5° ♄ 27'46	1°32'46	evening set	12763 Jul 24 17:34	23° ♄ 52'15	
min. Earth dist.	12762 Aug 19 12:51	2° ♄ 32'08	0.61615 AU	inferior conj	12763 Jul 30 17:40	18° ♄ 29'23	2°24'25
desc. node	12762 Aug 21 22:32	0° ♄ 24'47		minimum elong	12763 Jul 30 20:09	18° ♄ 22'23	2°23'06
	12762 Aug 22 11:22	30° ♄ ♁		min. Earth dist.	12763 Aug 02 06:10	15° ♄ 39'42	0.63793 AU
morning rise	12762 Aug 23 03:13	29° ♄ 31'30		morning rise	12763 Aug 05 21:09	12° ♄ 13'00	
direct	12762 Aug 29 19:12	27° ♄ 13'13		desc. node	12763 Aug 08 19:59	10° ♄ 25'22	
	12762 Sep 06 17:51	0° ♄		direct	12763 Aug 12 12:39	9° ♄ 38'27	
morning max el	12762 Sep 12 23:42	5° ♄ 12'35	27°58'14	morning max el	12763 Aug 26 08:52	17° ♄ 39'17	27°40'39
	12762 Oct 01 14:21	0° ♄			12763 Sep 05 16:36	0° ♄	
asc. node	12762 Oct 15 19:10	25° ♄ 58'11			12763 Sep 24 10:57	0° ♄	
morning set	12762 Oct 16 12:53	27° ♄ 28'59		morning set	12763 Sep 30 06:39	11° ♄ 08'49	
	12762 Oct 17 17:58	0° ♄		asc. node	12763 Oct 02 15:47	15° ♄ 57'46	
max. Earth dist.	12762 Oct 22 03:16	9° ♄ 24'20	1.31638 AU	max. Earth dist.	12763 Oct 05 03:19	21° ♄ 07'42	1.32541 AU
superior conj	12762 Oct 23 22:15	13° ♄ 20'31	1°11'27	superior conj	12763 Oct 08 04:50	27° ♄ 40'32	0°51'16
minimum elong	12762 Oct 23 20:01	13° ♄ 08'08	1°11'43	minimum elong	12763 Oct 08 02:44	27° ♄ 29'07	0°51'15
evening rise	12762 Oct 30 15:46	28° ♄ 08'57			12763 Oct 09 06:35	0° ♄	
	12762 Oct 31 12:28	0° ♄		evening rise	12763 Oct 15 03:00	12° ♄ 42'08	
	12762 Nov 17 05:13	0° ♄			12763 Oct 23 18:35	0° ♄	
desc. node	12762 Nov 17 19:05	0° ♄ 48'06		desc. node	12763 Nov 04 16:21	17° ♄ 33'26	
evening max el	12762 Nov 25 12:46	9° ♄ 50'17	24°49'01	evening max el	12763 Nov 06 22:49	19° ♄ 55'29	23°08'12
retrograde	12762 Dec 09 07:29	16° ♄ 43'44		retrograde	12763 Nov 20 05:05	26° ♄ 31'06	
evening set	12762 Dec 14 19:14	15° ♄ 36'42		evening set	12763 Nov 24 09:08	25° ♄ 53'21	
min. Earth dist.	12762 Dec 20 00:37	12° ♄ 51'15	0.56472 AU	min. Earth dist.	12763 Dec 01 08:14	22° ♄ 39'47	0.55106 AU
inferior conj	12762 Dec 22 13:57	11° ♄ 13'07	-5°24'47	inferior conj	12763 Dec 02 18:23	21° ♄ 50'34	-5°54'25
minimum elong	12762 Dec 22 21:12	11° ♄ 01'30	5°22'35	minimum elong	12763 Dec 02 18:49	21° ♄ 49'57	5°53'28
morning rise	12762 Dec 31 01:18	7° ♄ 06'46		morning rise	12763 Dec 11 06:05	18° ♄ 00'32	
direct	12763 Jan 02 09:33	6° ♄ 51'29		direct	12763 Dec 14 05:10	17° ♄ 39'47	
asc. node	12763 Jan 11 19:10	11° ♄ 17'34		morning max el	12763 Dec 25 08:41	22° ♄ 58'21	20°43'00
morning max el	12763 Jan 12 00:04	11° ♄ 29'18	19°25'35	asc. node	12763 Dec 29 16:17	27° ♄ 50'19	
	12763 Jan 24 10:40	0° ♄			12763 Dec 31 06:28	0° ♄	
morning set	12763 Jan 29 02:41	9° ♄ 07'52		morning set	12764 Jan 13 10:19	23° ♄ 48'32	
					12764 Jan 16 09:48	0° ♄	
superior conj	12763 Feb 06 04:34	25° ♄ 14'25	0°58'22	superior conj	12764 Jan 20 21:00	9° ♄ 14'25	1°18'25
minimum elong	12763 Feb 06 07:24	25° ♄ 28'13	0°58'35	minimum elong	12764 Jan 20 23:32	9° ♄ 27'21	1°18'55
	12763 Feb 08 15:46	0° ♄		max. Earth dist.	12764 Jan 26 01:06	19° ♄ 32'47	1.35934 AU
max. Earth dist.	12763 Feb 12 16:40	7° ♄ 32'24	1.38077 AU	evening rise	12764 Jan 29 22:39	26° ♄ 55'32	
desc. node	12763 Feb 13 19:06	9° ♄ 32'25		desc. node	12764 Jan 31 15:45	0° ♄ 03'16	
evening rise	12763 Feb 16 10:08	14° ♄ 12'37			12764 Jan 31 15:01	0° ♄	
	12763 Feb 25 22:00	0° ♄			12764 Feb 19 07:39	0° ♄	
	12763 Mar 19 13:47	0° ♄		evening max el	12764 Mar 05 09:41	18° ♄ 23'52	26°10'14
evening max el	12763 Mar 23 20:06	4° ♄ 33'47	25°01'22	retrograde	12764 Mar 18 03:51	25° ♄ 40'04	
retrograde	12763 Apr 04 18:12	11° ♄ 29'27		evening set	12764 Mar 24 08:28	23° ♄ 09'30	
asc. node	12763 Apr 09 16:06	9° ♄ 44'40		asc. node	12764 Mar 26 13:30	21° ♄ 02'42	
evening set	12763 Apr 10 11:33	9° ♄ 06'14		min. Earth dist.	12764 Mar 28 12:36	18° ♄ 46'39	0.67015 AU
min. Earth dist.	12763 Apr 14 22:08	4° ♄ 08'14	0.68064 AU				

inferior conj	12764 Mar 30 05:05	16° Υ 41'41	1°07'58	evening set	12765 Mar 07 22:00	6° Υ 56'16	
minimum elong	12764 Mar 30 03:30	16° Υ 46'35	1°07'13	min. Earth dist.	12765 Mar 11 20:49	3° Υ 06'59	0.65572 AU
morning rise	12764 Apr 04 23:18	10° Υ 56'15		asc. node	12765 Mar 13 10:56	1° Υ 18'48	
direct	12764 Apr 08 03:54	9° Υ 58'30		inferior conj	12765 Mar 14 01:27	0° Υ 37'14	0°11'40
morning max el	12764 Apr 14 18:07	13° Υ 30'27	18°37'48	minimum elong	12765 Mar 14 01:07	0° Υ 38'10	0°11'38
	12764 Apr 27 00:37	0° \mathcal{B}		transit middle	12765 Mar 14 01:07	0° Υ 38'10	0°11'38
desc. node	12764 Apr 28 17:53	2° \mathcal{B} 38'48		transit begin	12765 Mar 13 23:04	0° Υ 44'02	
morning set	12764 May 06 01:46	14° \mathcal{B} 05'28		transit end	12765 Mar 14 03:10	0° Υ 32'18	
	12764 May 16 05:48	0° Π			12765 Mar 14 14:34	30° \mathcal{K}	
max. Earth dist.	12764 May 21 12:52	8° Π 16'07	1.45728 AU	morning rise	12765 Mar 20 05:43	25° \mathcal{K} 03'58	
				direct	12765 Mar 23 00:27	24° \mathcal{K} 22'12	
superior conj	12764 May 22 04:56	9° Π 18'51	-2°07'54	morning max el	12765 Mar 29 09:08	27° \mathcal{K} 42'11	18°04'21
minimum elong	12764 May 21 23:18	8° Π 56'53	2°08'31		12765 Mar 31 11:53	0° Υ	
	12764 Jun 04 08:14	0° \mathcal{B}		desc. node	12765 Apr 15 14:29	22° Υ 50'47	
evening rise	12764 Jun 06 18:08	3° \mathcal{B} 50'16		morning set	12765 Apr 16 19:58	24° Υ 50'45	
greatest brilliancy	12764 Jun 14 09:36	15° \mathcal{B} 59'42	-0.9m		12765 Apr 20 00:08	0° \mathcal{B}	
asc. node	12764 Jun 22 11:14	28° \mathcal{B} 11'08					
	12764 Jun 23 19:11	0° \mathcal{Q}		superior conj	12765 May 01 14:10	18° \mathcal{B} 29'31	-1°43'34
evening max el	12764 Jun 27 23:31	4° \mathcal{Q} 55'39	18°40'58	minimum elong	12765 May 01 04:54	17° \mathcal{B} 53'06	1°43'21
retrograde	12764 Jul 04 13:13	8° \mathcal{Q} 30'22		max. Earth dist.	12765 May 04 08:52	22° \mathcal{B} 51'13	1.45678 AU
evening set	12764 Jul 07 19:33	7° \mathcal{Q} 29'31			12765 May 08 22:50	0° Π	
inferior conj	12764 Jul 13 10:33	1° \mathcal{Q} 50'57	2°55'33	evening rise	12765 May 17 16:43	13° Π 33'01	
minimum elong	12764 Jul 13 12:19	1° \mathcal{Q} 45'28	2°54'24		12765 May 28 10:16	0° \mathcal{B}	
	12764 Jul 14 22:27	30° \mathcal{K}		greatest brilliancy	12765 May 30 12:13	3° \mathcal{B} 07'12	-0.7m
min. Earth dist.	12764 Jul 15 08:39	29° \mathcal{B} 29'04	0.65677 AU	asc. node	12765 Jun 09 08:16	16° \mathcal{B} 32'58	
morning rise	12764 Jul 19 04:12	25° \mathcal{B} 28'14		evening max el	12765 Jun 11 07:28	18° \mathcal{B} 40'41	19°25'40
direct	12764 Jul 25 13:56	22° \mathcal{B} 47'13		retrograde	12765 Jun 18 10:39	22° \mathcal{B} 41'01	
desc. node	12764 Jul 25 17:21	22° \mathcal{B} 47'18		evening set	12765 Jun 22 01:58	21° \mathcal{B} 23'55	
	12764 Aug 07 04:57	0° \mathcal{Q}		inferior conj	12765 Jun 27 11:17	15° \mathcal{B} 31'18	3°10'54
morning max el	12764 Aug 07 19:59	0° \mathcal{Q} 37'30	26°51'15	minimum elong	12765 Jun 27 12:02	15° \mathcal{B} 28'50	3°09'54
	12764 Aug 29 16:58	0° \mathcal{M}		min. Earth dist.	12765 Jun 28 18:47	13° \mathcal{B} 47'38	0.67158 AU
morning set	12764 Sep 12 13:51	24° \mathcal{M} 17'27		morning rise	12765 Jul 02 21:35	9° \mathcal{B} 07'57	
	12764 Sep 15 12:18	0° \mathcal{A}		direct	12765 Jul 08 21:59	6° \mathcal{B} 29'59	
max. Earth dist.	12764 Sep 16 18:12	2° \mathcal{A} 28'57	1.33964 AU	desc. node	12765 Jul 12 14:38	7° \mathcal{B} 19'33	
asc. node	12764 Sep 18 12:23	6° \mathcal{A} 02'41		morning max el	12765 Jul 21 06:52	13° \mathcal{B} 54'41	25°38'39
					12765 Aug 03 08:51	0° \mathcal{Q}	
superior conj	12764 Sep 21 05:42	11° \mathcal{A} 40'43	0°25'49		12765 Aug 22 11:40	0° \mathcal{M}	
minimum elong	12764 Sep 21 04:23	11° \mathcal{A} 33'51	0°25'39	morning set	12765 Aug 26 06:50	6° \mathcal{M} 45'59	
evening rise	12764 Sep 28 13:09	27° \mathcal{A} 10'02		max. Earth dist.	12765 Aug 29 22:53	13° \mathcal{M} 34'45	1.35856 AU
	12764 Sep 29 21:38	0° \mathcal{M}					
	12764 Oct 18 11:33	0° \mathcal{J}		superior conj	12765 Sep 04 22:07	25° \mathcal{M} 14'25	-0°04'19
evening max el	12764 Oct 18 13:13	0° \mathcal{J} 04'06	21°29'50	minimum elong	12765 Sep 04 22:24	25° \mathcal{M} 15'48	0°04'27
desc. node	12764 Oct 21 13:44	2° \mathcal{J} 41'33		behind sun begin	12765 Sep 04 16:22	24° \mathcal{M} 45'35	
retrograde	12764 Oct 30 17:35	6° \mathcal{J} 07'23		behind sun end	12765 Sep 05 04:25	25° \mathcal{M} 46'03	
evening set	12764 Nov 02 12:56	5° \mathcal{J} 49'20		asc. node	12765 Sep 05 09:01	26° \mathcal{M} 09'16	
inferior conj	12764 Nov 11 10:59	1° \mathcal{J} 54'53	-5°27'37		12765 Sep 07 06:30	0° \mathcal{A}	
minimum elong	12764 Nov 11 03:08	2° \mathcal{J} 05'53	5°25'31	evening rise	12765 Sep 12 20:09	11° \mathcal{A} 27'06	
min. Earth dist.	12764 Nov 11 14:25	1° \mathcal{J} 50'04	0.54535 AU		12765 Sep 22 14:23	0° \mathcal{M}	
	12764 Nov 14 23:47	30° \mathcal{K}		evening max el	12765 Sep 30 16:09	10° \mathcal{M} 49'49	20°07'13
morning rise	12764 Nov 19 18:14	28° \mathcal{M} 06'19		desc. node	12765 Oct 08 11:10	15° \mathcal{M} 44'42	
direct	12764 Nov 23 13:22	27° \mathcal{M} 35'09		retrograde	12765 Oct 11 06:42	16° \mathcal{M} 06'25	
	12764 Dec 01 12:01	0° \mathcal{J}		evening set	12765 Oct 13 06:42	15° \mathcal{M} 56'00	
morning max el	12764 Dec 06 03:47	3° \mathcal{J} 36'54	22°20'49	inferior conj	12765 Oct 22 05:38	11° \mathcal{M} 57'46	-4°06'15
asc. node	12764 Dec 15 13:21	15° \mathcal{J} 25'42		minimum elong	12765 Oct 21 19:48	12° \mathcal{M} 12'29	4°02'38
	12764 Dec 23 16:58	0° \mathcal{B}		min. Earth dist.	12765 Oct 23 22:40	10° \mathcal{M} 56'23	0.54903 AU
morning set	12764 Dec 27 21:02	8° \mathcal{B} 34'43		morning rise	12765 Oct 30 07:49	7° \mathcal{M} 49'44	
				direct	12765 Nov 04 00:07	7° \mathcal{M} 02'09	
superior conj	12765 Jan 03 22:02	23° \mathcal{B} 37'02	1°31'22	morning max el	12765 Nov 17 14:54	13° \mathcal{M} 43'40	24°09'06
minimum elong	12765 Jan 03 23:42	23° \mathcal{B} 45'51	1°32'09		12765 Nov 30 04:09	0° \mathcal{J}	
	12765 Jan 06 23:11	0° \approx		asc. node	12765 Dec 02 10:20	3° \mathcal{J} 48'51	
max. Earth dist.	12765 Jan 07 15:36	1° \approx 24'26	1.34090 AU	morning set	12765 Dec 12 08:57	23° \mathcal{J} 21'04	
evening rise	12765 Jan 12 02:02	10° \approx 15'32			12765 Dec 15 10:35	0° \mathcal{B}	
desc. node	12765 Jan 17 12:27	20° \approx 24'15					
	12765 Jan 23 02:05	0° \mathcal{K}		superior conj	12765 Dec 19 04:53	8° \mathcal{B} 14'06	1°37'41
	12765 Feb 13 22:18	0° Υ		minimum elong	12765 Dec 19 05:27	8° \mathcal{B} 17'11	1°38'37
evening max el	12765 Feb 15 23:11	2° Υ 03'09	27°02'10	max. Earth dist.	12765 Dec 21 13:54	13° \mathcal{B} 22'34	1.32673 AU
retrograde	12765 Mar 01 07:48	9° Υ 28'58		evening rise	12765 Dec 26 16:57	24° \mathcal{B} 04'36	

	12765 Dec 29 16:51	0°♊		desc. node	12766 Dec 22 06:12	0°♊14'18	
desc. node	12766 Jan 04 09:16	10°♊30'25			12766 Dec 22 02:51	0°♊	
	12766 Jan 16 16:11	0°♋		evening max el	12767 Jan 11 21:04	28°♊06'24	27°27'34
evening max el	12766 Jan 29 11:39	15°♋21'34	27°30'01		12767 Jan 13 23:48	0°♋	
retrograde	12766 Feb 12 05:14	22°♋47'20		retrograde	12767 Jan 25 18:54	5°♋25'17	
evening set	12766 Feb 19 01:52	20°♋19'35		evening set	12767 Feb 01 17:10	3°♋10'33	
min. Earth dist.	12766 Feb 22 20:56	17°♋00'36	0.63791 AU	min. Earth dist.	12767 Feb 05 11:13	0°♋16'25	0.61752 AU
inferior conj	12766 Feb 25 12:45	14°♋16'20	-0°55'16		12767 Feb 05 18:38	30°♌	
minimum elong	12766 Feb 25 14:30	14°♋11'49	0°54'11	inferior conj	12767 Feb 08 11:49	27°♌30'42	-2°11'34
asc. node	12766 Feb 28 08:22	11°♋31'29		minimum elong	12767 Feb 08 16:23	27°♌20'14	2°09'09
morning rise	12766 Mar 04 05:22	8°♋57'38		asc. node	12767 Feb 15 05:46	22°♌40'26	
direct	12766 Mar 06 15:51	8°♋28'14		morning rise	12767 Feb 15 18:24	22°♌29'26	
morning max el	12766 Mar 13 02:42	11°♋47'26	17°47'59	direct	12767 Feb 17 22:47	22°♌08'37	
	12766 Mar 25 15:52	0°♍		morning max el	12767 Feb 24 19:41	25°♌37'12	17°49'31
morning set	12766 Mar 29 17:37	6°♍55'22			12767 Feb 28 12:21	0°♋	
desc. node	12766 Apr 02 11:04	13°♍15'19		morning set	12767 Mar 12 13:01	20°♋01'41	
					12767 Mar 18 03:29	0°♍	
superior conj	12766 Apr 11 15:03	28°♍27'30	-1°06'29	desc. node	12767 Mar 20 07:36	3°♍48'00	
minimum elong	12766 Apr 11 08:12	27°♍59'42	1°05'57				
	12766 Apr 12 13:53	0°♎		superior conj	12767 Mar 23 15:44	9°♍32'43	-0°25'48
max. Earth dist.	12766 Apr 17 03:30	7°♎18'36	1.44901 AU	minimum elong	12767 Mar 23 13:18	9°♍22'24	0°25'29
evening rise	12766 Apr 27 04:09	22°♎55'19		max. Earth dist.	12767 Mar 30 19:17	21°♍25'48	1.43480 AU
	12766 May 01 19:45	0°♏			12767 Apr 05 03:58	0°♎	
	12766 May 23 03:15	0°♐		evening rise	12767 Apr 06 20:27	2°♎38'29	
evening max el	12766 May 25 09:52	2°♐27'45	20°25'29		12767 Apr 25 06:51	0°♏	
asc. node	12766 May 27 05:25	4°♐09'15		evening max el	12767 May 08 06:42	16°♏16'01	21°37'16
retrograde	12766 Jun 02 09:30	7°♐03'53		asc. node	12767 May 14 02:38	20°♏46'01	
evening set	12766 Jun 06 10:35	5°♐30'16		retrograde	12767 May 17 07:50	21°♏34'13	
	12766 Jun 11 06:57	30°♑		evening set	12767 May 21 19:31	19°♏44'27	
inferior conj	12766 Jun 11 17:08	29°♑25'06	3°13'08	inferior conj	12767 May 27 01:49	13°♑28'28	3°04'02
minimum elong	12766 Jun 11 16:50	29°♑26'10	3°12'10	minimum elong	12767 May 27 00:37	13°♑32'42	3°03'00
min. Earth dist.	12766 Jun 12 10:35	28°♑25'16	0.68190 AU	min. Earth dist.	12767 May 27 05:54	13°♑14'14	0.68749 AU
morning rise	12766 Jun 16 22:46	23°♑04'50		morning rise	12767 Jun 01 05:30	7°♑13'29	
direct	12766 Jun 22 11:34	20°♑38'02		direct	12767 Jun 06 05:33	5°♑03'45	
desc. node	12766 Jun 29 11:49	23°♑35'23		morning max el	12767 Jun 16 03:51	10°♑56'02	22°42'59
morning max el	12766 Jul 03 16:52	27°♑21'29	24°12'37	desc. node	12767 Jun 16 08:53	11°♑08'47	
	12766 Jul 06 04:15	0°♒			12767 Jul 01 06:23	0°♐	
	12766 Jul 28 00:00	0°♓		morning set	12767 Jul 20 03:43	28°♐55'43	
morning set	12766 Aug 08 05:00	18°♓22'26			12767 Jul 20 19:21	0°♓	
max. Earth dist.	12766 Aug 11 20:54	24°♓48'39	1.38091 AU	max. Earth dist.	12767 Jul 24 19:32	6°♓42'43	1.40430 AU
	12766 Aug 14 17:35	0°♑					
superior conj	12766 Aug 19 02:43	8°♑13'04	-0°37'50	superior conj	12767 Aug 01 15:23	20°♓27'20	-1°12'25
minimum elong	12766 Aug 19 05:20	8°♑25'34	0°37'49	minimum elong	12767 Aug 01 20:40	20°♓51'18	1°12'18
asc. node	12766 Aug 23 05:39	16°♑13'14			12767 Aug 06 19:34	0°♑	
evening rise	12766 Aug 27 21:27	25°♑26'15		asc. node	12767 Aug 10 02:19	6°♑11'23	
	12766 Aug 30 05:09	0°♒		evening rise	12767 Aug 11 13:51	8°♑59'43	
evening max el	12766 Sep 13 09:07	22°♒23'36	19°05'35		12767 Aug 23 15:50	0°♒	
retrograde	12766 Sep 22 08:10	26°♒52'28		evening max el	12767 Aug 27 13:11	4°♒41'44	18°25'27
evening set	12766 Sep 24 04:42	26°♒41'45		retrograde	12767 Sep 04 04:48	8°♒33'30	
desc. node	12766 Sep 25 08:40	26°♒24'35		evening set	12767 Sep 06 06:06	8°♒17'34	
inferior conj	12766 Oct 02 15:16	22°♒28'24	-2°17'20	desc. node	12767 Sep 12 06:09	5°♒01'55	
minimum elong	12766 Oct 02 09:21	22°♒38'29	2°14'45	inferior conj	12767 Sep 13 22:17	3°♒43'29	-0°31'26
min. Earth dist.	12766 Oct 05 10:53	20°♒33'25	0.56161 AU	minimum elong	12767 Sep 13 21:05	3°♒45'54	0°30'59
morning rise	12766 Oct 10 11:08	17°♒46'19		min. Earth dist.	12767 Sep 17 05:09	1°♒06'53	0.58066 AU
direct	12766 Oct 15 23:06	16°♒35'52			12767 Sep 18 17:52	30°♑	
morning max el	12766 Oct 30 02:11	23°♒48'50	25°51'06	morning rise	12767 Sep 21 08:36	28°♑24'20	
	12766 Nov 04 17:11	0°♓		direct	12767 Sep 27 12:06	26°♑46'48	
asc. node	12766 Nov 19 07:14	22°♓46'58			12767 Oct 06 12:48	0°♒	
	12766 Nov 22 23:59	0°♈		morning max el	12767 Oct 11 19:45	4°♒23'17	27°09'09
morning set	12766 Nov 26 20:14	8°♈01'36			12767 Oct 30 13:35	0°♓	
				asc. node	12767 Nov 06 04:03	12°♓10'56	
superior conj	12766 Dec 03 15:07	22°♈57'33	1°37'48	morning set	12767 Nov 11 05:11	22°♓31'59	
minimum elong	12766 Dec 03 14:35	22°♈54'36	1°38'44		12767 Nov 14 15:45	0°♈	
max. Earth dist.	12766 Dec 04 18:44	25°♈30'25	1.31734 AU	superior conj	12767 Nov 18 02:44	7°♈41'30	1°32'02
	12766 Dec 06 19:50	0°♉		minimum elong	12767 Nov 18 01:17	7°♈33'22	1°32'47
evening rise	12766 Dec 10 16:19	8°♉13'53		max. Earth dist.	12767 Nov 18 03:09	7°♈43'45	1.31295 AU

evening rise	12767 Nov 24 21:38	22°  36'56		minimum elong	12768 Nov 01 11:50	22°  09'06	1°21'03
	12767 Nov 28 10:55	0° 			12768 Nov 05 00:31	0° 	
desc. node	12767 Dec 09 03:12	19°  27'05		evening rise	12768 Nov 08 06:45	7°  08'05	
	12767 Dec 16 06:15	0° 			12768 Nov 20 00:35	0° 	
evening max el	12767 Dec 25 00:36	10°  05'00	26°50'49	desc. node	12768 Nov 25 00:20	7°  56'55	
retrograde	12768 Jan 07 23:16	17°  14'31		evening max el	12768 Dec 05 19:50	21°  10'42	25°40'57
evening set	12768 Jan 14 16:17	15°  20'53		retrograde	12768 Dec 19 17:07	28°  11'11	
min. Earth dist.	12768 Jan 18 14:44	12°  42'22	0.59595 AU	evening set	12768 Dec 25 19:02	26°  45'38	
inferior conj	12768 Jan 21 19:02	10°  10'27	-3°32'59	min. Earth dist.	12768 Dec 30 08:16	24°  08'11	0.57518 AU
minimum elong	12768 Jan 22 02:30	9°  55'33	3°29'38	inferior conj	12769 Jan 02 07:03	22°  06'00	-4°49'37
morning rise	12768 Jan 29 15:39	5°  29'50		minimum elong	12769 Jan 02 15:37	21°  51'10	4°46'34
direct	12768 Jan 31 17:11	5°  14'00		morning rise	12769 Jan 10 14:50	17°  47'56	
asc. node	12768 Feb 02 03:08	5°  21'44		direct	12769 Jan 12 18:31	17°  33'38	
morning max el	12768 Feb 08 08:32	9°  01'35	18°10'08	asc. node	12769 Jan 19 00:24	19°  42'49	
	12768 Feb 21 22:38	0° 		morning max el	12769 Jan 21 13:26	21°  50'08	18°51'37
morning set	12768 Feb 23 24:00	3°  50'47			12769 Jan 27 22:14	0° 	
				morning set	12769 Feb 06 21:45	18°  08'26	
superior conj	12768 Mar 04 15:51	21°  43'06	0°11'57		12769 Feb 12 23:19	0° 	
minimum elong	12768 Mar 04 16:47	21°  47'17	0°12'03	superior conj	12769 Feb 15 11:19	4°  47'08	0°43'28
behind sun begin	12768 Mar 04 11:46	21°  44'43		minimum elong	12769 Feb 15 13:52	4°  59'13	0°43'34
behind sun end	12768 Mar 04 21:48	22°  09'48		desc. node	12769 Feb 21 00:40	15°  02'52	
desc. node	12768 Mar 06 04:07	24°  42'56		max. Earth dist.	12769 Feb 22 14:11	17°  50'02	1.39367 AU
	12768 Mar 09 08:41	0° 		evening rise	12769 Feb 26 11:46	24°  43'37	
max. Earth dist.	12768 Mar 12 06:51	4°  59'13	1.41565 AU		12769 Mar 01 17:21	0° 	
evening rise	12768 Mar 17 05:30	13°  08'59			12769 Mar 21 19:44	0° 	
	12768 Mar 28 01:50	0° 		evening max el	12769 Apr 02 13:00	13°  56'17	24°16'52
	12768 Apr 19 21:03	0° 		retrograde	12769 Apr 13 21:11	20°  35'27	
evening max el	12768 Apr 19 23:04	0°  05'04	22°56'22	asc. node	12769 Apr 16 21:15	19°  54'53	
asc. node	12768 Apr 29 23:55	6°  06'12		evening set	12769 Apr 19 07:52	18°  17'55	
retrograde	12768 Apr 30 04:07	6°  06'21		min. Earth dist.	12769 Apr 23 22:35	12°  59'33	0.68476 AU
evening set	12768 May 05 03:07	4°  01'35		inferior conj	12769 Apr 24 19:45	11°  48'12	2°15'05
	12768 May 08 17:30	30° 		minimum elong	12769 Apr 24 17:36	11°  55'28	2°13'55
inferior conj	12768 May 10 11:18	27°  37'04	2°44'33	morning rise	12769 Apr 30 03:26	5°  47'34	
minimum elong	12768 May 10 09:26	27°  43'31	2°43'25	direct	12769 May 04 01:50	4°  19'25	
min. Earth dist.	12768 May 10 02:35	28°  07'20	0.68841 AU	morning max el	12769 May 11 17:06	8°  36'14	20°03'55
morning rise	12768 May 15 15:41	21°  28'45		desc. node	12769 May 20 02:39	18°  49'15	
direct	12768 May 20 02:41	19°  39'24			12769 May 27 21:41	0° 	
morning max el	12768 May 28 19:02	24°  40'03	21°18'01	morning set	12769 Jun 08 04:01	17°  02'02	
desc. node	12768 Jun 02 05:49	29°  38'19			12769 Jun 16 11:36	0° 	
	12768 Jun 02 12:55	0° 		max. Earth dist.	12769 Jun 18 10:10	3°  04'45	1.44307 AU
	12768 Jun 23 15:43	0° 					
morning set	12768 Jun 29 00:59	8°  21'28		superior conj	12769 Jun 23 23:48	12°  03'06	-2°06'37
max. Earth dist.	12768 Jul 05 23:38	19°  29'42	1.42585 AU	minimum elong	12769 Jun 24 05:06	12°  24'42	2°07'20
	12768 Jul 12 06:41	0° 			12769 Jul 04 17:35	0° 	
superior conj	12768 Jul 13 07:27	1°  45'45	-1°44'02	evening rise	12769 Jul 07 02:39	4°  04'14	
minimum elong	12768 Jul 13 14:27	2°  15'47	1°44'10	asc. node	12769 Jul 13 19:47	15°  03'10	
evening rise	12768 Jul 24 17:12	21°  56'15			12769 Jul 23 18:28	0° 	
asc. node	12768 Jul 26 23:01	25°  08'52		evening max el	12769 Jul 24 14:02	0°  50'41	18°05'14
	12768 Jul 29 05:00	0° 		retrograde	12769 Jul 30 23:49	4°  11'12	
evening max el	12768 Aug 10 00:05	17°  33'51	18°05'45	evening set	12769 Aug 02 16:42	3°  34'03	
retrograde	12768 Aug 16 19:29	21°  02'51			12769 Aug 07 09:25	30° 	
evening set	12768 Aug 19 04:12	20°  37'54		inferior conj	12769 Aug 08 23:45	28°  21'04	1°57'57
inferior conj	12768 Aug 26 02:17	15°  43'17	0°54'56	minimum elong	12769 Aug 09 02:19	28°  14'17	1°56'37
minimum elong	12768 Aug 26 03:55	15°  39'28	0°54'01	min. Earth dist.	12769 Aug 11 19:47	25°  02'20	0.62560 AU
desc. node	12768 Aug 29 03:38	12°  53'31		morning rise	12769 Aug 15 09:45	22°  01'21	
min. Earth dist.	12768 Aug 29 07:42	12°  44'31	0.60296 AU	desc. node	12769 Aug 16 01:05	21°  04'43	
morning rise	12768 Sep 02 00:36	9°  53'36		direct	12769 Aug 22 02:04	19°  04'58	
direct	12768 Sep 08 13:43	7°  49'00		morning max el	12769 Sep 05 04:07	27°  04'10	27°55'11
morning max el	12768 Sep 22 21:00	15°  42'33	27°51'41		12769 Sep 07 06:57	0° 	
	12768 Oct 04 13:20	0° 			12769 Sep 28 07:49	0° 	
	12768 Oct 22 02:10	0° 		morning set	12769 Oct 09 08:31	20°  42'20	
asc. node	12768 Oct 23 00:45	1°  53'16		asc. node	12769 Oct 09 21:24	21°  48'04	
morning set	12768 Oct 25 10:00	6°  47'29			12769 Oct 13 19:15	0° 	
max. Earth dist.	12768 Oct 31 11:21	19°  53'12	1.31360 AU	max. Earth dist.	12769 Oct 14 15:23	1°  48'10	1.31950 AU
superior conj	12768 Nov 01 13:55	22°  20'39	1°20'35	superior conj	12769 Oct 16 22:45	6°  49'20	1°03'34

minimum elong	12769 Oct 16 20:29	6° \mathbb{M} 36'57	1°03'42	superior conj	12770 Oct 01 03:13	21° \mathbb{A} 01'58	0°41'07
evening rise	12769 Oct 23 17:43	21° \mathbb{M} 41'51		minimum elong	12770 Oct 01 01:22	20° \mathbb{A} 52'02	0°41'00
	12769 Oct 27 16:39	0° \mathbb{A}			12770 Oct 05 07:12	0° \mathbb{M}	
desc. node	12769 Nov 11 21:34	25° \mathbb{A} 26'47		evening rise	12770 Oct 08 04:44	6° \mathbb{M} 13'22	
	12769 Nov 15 19:28	0° \mathbb{B}			12770 Oct 20 17:45	0° \mathbb{A}	
evening max el	12769 Nov 17 07:35	1° \mathbb{B} 30'46	24°07'01	desc. node	12770 Oct 29 18:53	11° \mathbb{A} 34'34	
retrograde	12769 Nov 30 22:45	8° \mathbb{B} 18'53		evening max el	12770 Oct 29 18:24	11° \mathbb{A} 33'23	22°25'18
evening set	12769 Dec 05 21:52	7° \mathbb{B} 24'54		retrograde	12770 Nov 11 15:48	17° \mathbb{A} 57'12	
min. Earth dist.	12769 Dec 11 18:42	4° \mathbb{B} 29'41	0.55803 AU	evening set	12770 Nov 15 04:53	17° \mathbb{A} 29'36	
inferior conj	12769 Dec 13 22:19	3° \mathbb{B} 11'07	-5°43'17	min. Earth dist.	12770 Nov 23 01:40	13° \mathbb{A} 58'31	0.54751 AU
minimum elong	12769 Dec 14 03:19	3° \mathbb{B} 03'29	5°41'47	inferior conj	12770 Nov 23 20:26	13° \mathbb{A} 32'03	-5°50'34
	12769 Dec 19 21:58	30° \mathbb{R} \mathbb{A}		minimum elong	12770 Nov 23 17:00	13° \mathbb{A} 36'53	5°49'27
morning rise	12769 Dec 22 10:45	29° \mathbb{A} 13'03		morning rise	12770 Dec 02 06:26	9° \mathbb{A} 44'34	
direct	12769 Dec 25 00:04	28° \mathbb{A} 56'14		direct	12770 Dec 05 13:35	9° \mathbb{A} 19'58	
	12769 Dec 29 19:25	0° \mathbb{B}		morning max el	12770 Dec 17 08:58	14° \mathbb{A} 57'41	21°22'21
morning max el	12770 Jan 04 06:22	3° \mathbb{B} 50'52	19°55'43	asc. node	12770 Dec 23 18:43	22° \mathbb{A} 33'40	
asc. node	12770 Jan 05 21:36	5° \mathbb{B} 32'14			12770 Dec 28 12:01	0° \mathbb{B}	
	12770 Jan 20 18:21	0° \approx		morning set	12771 Jan 06 11:47	17° \mathbb{B} 26'23	
morning set	12770 Jan 22 02:34	2° \approx 42'47			12771 Jan 12 10:59	0° \approx	
superior conj	12770 Jan 29 21:17	18° \approx 30'02	1°07'44	superior conj	12771 Jan 13 17:47	2° \approx 40'40	1°24'43
minimum elong	12770 Jan 30 00:05	18° \approx 43'58	1°08'04	minimum elong	12771 Jan 13 20:00	2° \approx 52'10	1°25'21
	12770 Feb 04 19:57	0° \mathbb{H}		max. Earth dist.	12771 Jan 18 06:53	11° \approx 55'44	1.35111 AU
max. Earth dist.	12770 Feb 04 20:25	0° \mathbb{H} 02'14	1.37138 AU	evening rise	12771 Jan 22 09:30	19° \approx 53'23	
desc. node	12770 Feb 07 21:17	5° \mathbb{H} 37'22		desc. node	12771 Jan 25 17:58	26° \approx 04'38	
evening rise	12770 Feb 08 14:09	6° \mathbb{H} 53'15			12771 Jan 27 22:57	0° \mathbb{H}	
	12770 Feb 22 13:59	0° \mathbb{Y}			12771 Feb 16 14:27	0° \mathbb{Y}	
evening max el	12770 Mar 16 02:23	27° \mathbb{Y} 47'59	25°32'10	evening max el	12771 Feb 26 16:09	11° \mathbb{Y} 34'59	26°34'48
	12770 Mar 18 11:29	0° \mathbb{B}		retrograde	12771 Mar 11 17:22	18° \mathbb{Y} 56'31	
retrograde	12770 Mar 28 09:59	4° \mathbb{B} 54'35		evening set	12771 Mar 18 02:12	16° \mathbb{Y} 24'37	
evening set	12770 Apr 03 08:09	2° \mathbb{B} 27'38		asc. node	12771 Mar 21 16:05	12° \mathbb{Y} 50'41	
asc. node	12770 Apr 03 18:38	2° \mathbb{B} 04'46		min. Earth dist.	12771 Mar 22 04:02	12° \mathbb{Y} 15'57	0.66449 AU
	12770 Apr 05 19:11	30° \mathbb{R} \mathbb{Y}		inferior conj	12771 Mar 24 01:37	9° \mathbb{Y} 59'34	0°45'25
min. Earth dist.	12770 Apr 07 15:48	27° \mathbb{Y} 44'34	0.67669 AU	minimum elong	12771 Mar 24 00:28	10° \mathbb{Y} 03'00	0°44'55
inferior conj	12770 Apr 09 01:13	25° \mathbb{Y} 57'19	1°35'29	morning rise	12771 Mar 29 23:47	4° \mathbb{Y} 18'43	
minimum elong	12770 Apr 08 23:15	26° \mathbb{Y} 03'38	1°34'30	direct	12771 Apr 02 00:00	3° \mathbb{Y} 28'08	
morning rise	12770 Apr 14 14:50	20° \mathbb{Y} 05'41		morning max el	12771 Apr 08 10:55	6° \mathbb{Y} 53'43	18°21'22
direct	12770 Apr 18 01:33	18° \mathbb{Y} 57'32		desc. node	12771 Apr 23 20:03	28° \mathbb{Y} 32'33	
morning max el	12770 Apr 24 22:46	22° \mathbb{Y} 42'28	19°04'29		12771 Apr 24 18:07	0° \mathbb{B}	
	12770 May 01 01:07	0° \mathbb{B}		morning set	12771 Apr 28 10:09	5° \mathbb{B} 49'44	
desc. node	12770 May 06 23:23	8° \mathbb{B} 30'05			12771 May 13 18:11	0° \mathbb{H}	
greatest brilliancy	12770 May 08 01:47	10° \mathbb{B} 08'51	-0.7m	superior conj	12771 May 14 01:56	0° \mathbb{H} 30'15	-1°59'41
morning set	12770 May 18 08:19	25° \mathbb{B} 52'41		minimum elong	12771 May 13 17:56	29° \mathbb{B} 58'59	1°59'57
	12770 May 21 00:13	0° \mathbb{H}		max. Earth dist.	12771 May 14 21:34	1° \mathbb{H} 46'57	1.45803 AU
max. Earth dist.	12770 Jun 01 02:08	17° \mathbb{H} 15'28	1.45414 AU	evening rise	12771 May 29 23:59	25° \mathbb{H} 23'09	
superior conj	12770 Jun 03 18:21	21° \mathbb{H} 27'56	-2°13'14		12771 Jun 01 22:36	0° \mathbb{B}	
minimum elong	12770 Jun 03 17:07	21° \mathbb{H} 23'05	2°14'09	greatest brilliancy	12771 Jun 09 01:40	11° \mathbb{B} 06'16	-0.8m
	12770 Jun 09 03:27	0° \mathbb{B}		asc. node	12771 Jun 17 13:38	23° \mathbb{B} 25'01	
evening rise	12770 Jun 18 13:29	15° \mathbb{B} 13'28		evening max el	12771 Jun 21 14:28	28° \mathbb{B} 06'48	18°58'05
	12770 Jun 27 15:51	0° \mathbb{Q}			12771 Jun 23 17:56	0° \mathbb{Q}	
asc. node	12770 Jun 30 16:39	4° \mathbb{Q} 42'28		retrograde	12771 Jun 28 08:50	1° \mathbb{Q} 50'36	
evening max el	12770 Jul 08 03:44	14° \mathbb{Q} 24'10	18°22'58	evening set	12771 Jul 01 18:59	0° \mathbb{Q} 42'51	
retrograde	12770 Jul 14 13:28	17° \mathbb{Q} 49'45			12771 Jul 02 18:06	30° \mathbb{R} \mathbb{B}	
evening set	12770 Jul 17 14:48	16° \mathbb{Q} 58'04		inferior conj	12771 Jul 07 07:11	24° \mathbb{B} 58'21	3°03'48
inferior conj	12770 Jul 23 10:37	11° \mathbb{Q} 28'36	2°39'44	minimum elong	12771 Jul 07 08:32	24° \mathbb{B} 54'02	3°02'44
minimum elong	12770 Jul 23 12:52	11° \mathbb{Q} 22'00	2°38'29	min. Earth dist.	12771 Jul 08 23:05	22° \mathbb{B} 51'44	0.66365 AU
min. Earth dist.	12770 Jul 25 17:15	8° \mathbb{Q} 48'45	0.64634 AU	morning rise	12771 Jul 12 21:24	18° \mathbb{B} 35'04	
morning rise	12770 Jul 29 09:37	5° \mathbb{Q} 08'36		direct	12771 Jul 19 03:41	15° \mathbb{B} 54'04	
desc. node	12770 Aug 02 22:29	2° \mathbb{Q} 44'19		desc. node	12771 Jul 20 19:50	16° \mathbb{B} 04'12	
direct	12770 Aug 04 23:19	2° \mathbb{Q} 29'43		morning max el	12771 Aug 01 01:16	23° \mathbb{B} 34'51	26°22'36
morning max el	12770 Aug 18 14:21	10° \mathbb{Q} 28'30	27°23'04		12771 Aug 06 18:27	0° \mathbb{Q}	
	12770 Sep 02 23:52	0° \mathbb{H}			12771 Aug 27 08:33	0° \mathbb{H}	
	12770 Sep 20 18:25	0° \mathbb{A}		morning set	12771 Sep 05 23:47	17° \mathbb{H} 02'04	
morning set	12770 Sep 22 22:12	4° \mathbb{A} 10'05		max. Earth dist.	12771 Sep 09 21:44	24° \mathbb{H} 32'14	1.34716 AU
asc. node	12770 Sep 26 18:01	11° \mathbb{A} 50'35			12771 Sep 12 15:40	0° \mathbb{A}	
max. Earth dist.	12770 Sep 27 11:32	13° \mathbb{A} 20'50	1.33074 AU	asc. node	12771 Sep 13 14:37	1° \mathbb{A} 56'17	

superior conj	12771 Sep 15 00:51	4° Ω 51'28	0°13'35	morning max el	12772 Jul 13 11:44	6° Ω 57'04	25°03'05
minimum elong	12771 Sep 15 00:06	4° Ω 47'39	0°13'24		12772 Jul 31 10:15	0° Ω	
behind sun begin	12771 Sep 14 20:48	4° Ω 30'38		morning set	12772 Aug 18 09:17	29° Ω 09'15	
behind sun end	12771 Sep 15 03:25	5° Ω 04'40			12772 Aug 18 20:39	0° Π	
evening rise	12771 Sep 22 13:47	20° Ω 36'50		max. Earth dist.	12772 Aug 21 23:18	5° Π 39'22	1.36787 AU
	12771 Sep 27 04:39	0° Π					
evening max el	12771 Oct 11 13:32	21° Π 54'26	20°52'21	superior conj	12772 Aug 28 12:40	18° Π 10'56	-0°18'14
desc. node	12771 Oct 16 16:18	25° Π 52'23		minimum elong	12772 Aug 28 13:51	18° Π 16'45	0°18'17
retrograde	12771 Oct 23 02:24	27° Π 38'18		asc. node	12772 Aug 30 11:15	22° Π 01'57	
evening set	12771 Oct 25 11:37	27° Π 24'41			12772 Sep 03 10:04	0° Ω	
inferior conj	12771 Nov 03 11:55	23° Π 30'29	-4°58'35	evening rise	12772 Sep 05 18:42	4° Ω 46'59	
minimum elong	12771 Nov 03 02:14	23° Π 44'15	4°55'36		12772 Sep 20 06:49	0° Π	
min. Earth dist.	12771 Nov 04 08:12	23° Π 01'37	0.54578 AU	evening max el	12772 Sep 22 22:27	2° Π 59'02	19°38'12
morning rise	12771 Nov 11 17:01	19° Π 36'20		retrograde	12772 Oct 02 19:34	7° Π 54'53	
direct	12771 Nov 15 21:34	18° Π 58'43		desc. node	12772 Oct 02 13:45	7° Π 54'43	
morning max el	12771 Nov 28 23:26	25° Π 17'50	23°06'28	evening set	12772 Oct 04 16:40	7° Π 44'58	
	12771 Dec 03 07:53	0° Σ		inferior conj	12772 Oct 13 11:31	3° Π 40'56	-3°21'18
asc. node	12771 Dec 10 15:46	10° Σ 30'32		minimum elong	12772 Oct 13 02:56	3° Π 54'25	3°17'50
	12771 Dec 20 22:06	0° Σ		min. Earth dist.	12772 Oct 15 17:28	2° Π 16'10	0.55343 AU
morning set	12771 Dec 21 23:16	2° Σ 13'02			12772 Oct 19 20:22	30° Σ	
				morning rise	12772 Oct 21 11:22	29° Σ 19'47	
superior conj	12771 Dec 28 21:35	17° Σ 09'51	1°34'48	direct	12772 Oct 26 12:17	28° Σ 23'29	
minimum elong	12771 Dec 28 22:48	17° Σ 16'21	1°35'41		12772 Nov 02 01:22	0° Π	
max. Earth dist.	12772 Jan 01 00:56	23° Σ 49'49	1.33436 AU	morning max el	12772 Nov 09 09:34	5° Π 18'43	24°54'36
	12772 Jan 04 00:51	0° \approx		asc. node	12772 Nov 26 12:42	29° Π 09'15	
evening rise	12772 Jan 05 18:11	3° \approx 26'35			12772 Nov 26 23:52	0° Σ	
desc. node	12772 Jan 12 14:45	16° \approx 20'04		morning set	12772 Dec 05 11:06	16° Σ 57'02	
	12772 Jan 20 18:40	0° Π			12772 Dec 11 10:10	0° Σ	
evening max el	12772 Feb 09 05:41	25° Π 07'50	27°17'23				
	12772 Feb 15 06:25	0° Υ		superior conj	12772 Dec 12 06:05	1° Σ 49'39	1°38'28
retrograde	12772 Feb 22 18:32	2° Υ 33'43		minimum elong	12772 Dec 12 06:10	1° Σ 50'09	1°39'26
evening set	12772 Feb 29 11:58	0° Υ 02'28		max. Earth dist.	12772 Dec 14 02:26	5° Σ 52'23	1.32208 AU
	12772 Feb 29 13:16	30° Σ		evening rise	12772 Dec 19 12:58	17° Σ 24'14	
min. Earth dist.	12772 Mar 04 09:05	26° Σ 26'28	0.64857 AU		12772 Dec 25 23:40	0° \approx	
inferior conj	12772 Mar 06 18:33	23° Σ 49'27	-0°15'23	desc. node	12772 Dec 29 11:37	6° \approx 17'25	
minimum elong	12772 Mar 06 19:00	23° Σ 48'13	0°15'00		12773 Jan 14 07:00	0° Σ	
transit middle	12772 Mar 06 19:00	23° Σ 48'13	0°15'00	evening max el	12773 Jan 21 17:05	8° Σ 13'02	27°33'01
transit begin	12772 Mar 06 17:57	23° Σ 51'07		retrograde	12773 Feb 04 12:35	15° Σ 36'12	
transit end	12772 Mar 06 20:04	23° Σ 45'19		evening set	12773 Feb 11 10:52	13° Σ 12'44	
asc. node	12772 Mar 07 13:31	22° Σ 57'53		min. Earth dist.	12773 Feb 15 04:58	10° Σ 05'33	0.62949 AU
morning rise	12772 Mar 13 03:47	18° Σ 21'51		inferior conj	12773 Feb 18 01:04	7° Σ 18'52	-1°26'36
direct	12772 Mar 15 18:55	17° Σ 45'38		minimum elong	12773 Feb 18 03:56	7° Σ 11'48	1°24'57
morning max el	12772 Mar 22 03:23	21° Σ 03'45	17°55'13	asc. node	12773 Feb 22 10:57	3° Σ 27'56	
	12772 Mar 29 02:00	0° Υ		morning rise	12773 Feb 24 23:30	2° Σ 07'25	
morning set	12772 Apr 08 16:40	17° Υ 11'21		direct	12773 Feb 27 07:10	1° Σ 42'03	
desc. node	12772 Apr 09 16:39	18° Υ 50'42		morning max el	12773 Mar 05 21:09	5° Σ 03'39	17°46'27
	12772 Apr 16 11:40	0° Σ		morning set	12773 Mar 22 00:22	29° Σ 44'37	
					12773 Mar 22 03:54	0° Υ	
superior conj	12772 Apr 22 16:12	9° Σ 56'57	-1°28'50	desc. node	12773 Mar 27 13:12	9° Υ 19'08	
minimum elong	12772 Apr 22 07:25	9° Σ 22'01	1°28'24				
max. Earth dist.	12772 Apr 26 17:56	16° Σ 23'14	1.45440 AU	superior conj	12773 Apr 03 02:52	20° Υ 22'56	-0°49'14
	12772 May 05 11:55	0° Π		minimum elong	12773 Apr 02 21:54	20° Υ 02'23	0°48'44
evening rise	12772 May 08 16:10	4° Π 53'16			12773 Apr 09 00:40	0° Σ	
greatest brilliancy	12772 May 23 03:01	26° Π 41'07	-0.6m	max. Earth dist.	12773 Apr 09 11:58	0° Σ 45'16	1.44370 AU
	12772 May 25 10:12	0° Ω		evening rise	12773 Apr 18 03:48	14° Σ 19'51	
asc. node	12772 Jun 03 10:44	11° Ω 29'19			12773 Apr 28 13:02	0° Π	
evening max el	12772 Jun 03 20:15	11° Ω 53'34	19°49'23	evening max el	12773 May 17 20:06	25° Π 40'32	20°54'40
retrograde	12772 Jun 11 07:09	16° Ω 07'40		asc. node	12773 May 21 07:55	28° Π 42'01	
evening set	12772 Jun 15 02:38	14° Ω 43'18			12773 May 23 14:57	0° Ω	
inferior conj	12772 Jun 20 10:26	8° Ω 45'05	3°13'19	retrograde	12773 May 26 06:06	0° Ω 34'18	
minimum elong	12772 Jun 20 10:43	8° Ω 44'06	3°12'20		12773 May 28 17:47	30° Σ	
min. Earth dist.	12772 Jun 21 11:47	7° Ω 19'56	0.67661 AU	evening set	12773 May 30 11:36	28° Π 53'33	
morning rise	12772 Jun 25 18:27	2° Ω 22'55		inferior conj	12773 Jun 04 17:45	22° Π 43'16	3°10'34
	12772 Jun 29 23:47	30° Σ		minimum elong	12773 Jun 04 17:02	22° Π 45'44	3°09'35
direct	12772 Jul 01 14:07	29° Π 49'05		min. Earth dist.	12773 Jun 05 05:21	22° Π 03'05	0.68489 AU
	12772 Jul 03 05:55	0° Ω		morning rise	12773 Jun 09 22:14	16° Π 24'59	
desc. node	12772 Jul 06 17:04	1° Ω 24'10		direct	12773 Jun 15 05:33	14° Π 05'12	

desc. node	12773 Jun 23 14:10	18° Π 15'36	direct	12774 May 30 01:03	28° \mathcal{B} 35'28	
morning max el	12773 Jun 25 22:03	20° Π 27'44 23°34'22		12774 Jun 03 10:36	0° Π	
	12773 Jul 04 01:54	0° \mathcal{E}	morning max el	12774 Jun 08 10:26	4° Π 05'51 22°05'41	
	12773 Jul 24 15:03	0° Ω	desc. node	12774 Jun 10 11:11	6° Π 14'46	
morning set	12773 Jul 30 21:59	10° Ω 20'02		12774 Jun 28 04:25	0° \mathcal{E}	
max. Earth dist.	12773 Aug 03 20:55	17° Ω 07'50 1.39091 AU	morning set	12774 Jul 11 09:45	20° \mathcal{E} 23'59	
	12773 Aug 10 23:57	0° \mathcal{N}	max. Earth dist.	12774 Jul 16 20:53	29° \mathcal{E} 21'18 1.41383 AU	
				12774 Jul 17 06:09	0° Ω	
superior conj	12773 Aug 11 10:59	0° \mathcal{N} 51'24 -0°52'36				
minimum elong	12773 Aug 11 14:44	1° \mathcal{N} 08'59 0°52'29	superior conj	12774 Jul 24 15:22	12° Ω 42'36 -1°26'31	
asc. node	12773 Aug 17 07:55	12° \mathcal{N} 03'52	minimum elong	12774 Jul 24 21:38	13° Ω 10'17 1°26'28	
evening rise	12773 Aug 20 16:39	18° \mathcal{N} 36'19		12774 Aug 03 03:15	0° \mathcal{N}	
	12773 Aug 26 16:50	0° \mathcal{E}	evening rise	12774 Aug 04 04:01	1° \mathcal{N} 55'01	
evening max el	12773 Sep 05 20:33	14° \mathcal{E} 52'18 18°45'53	asc. node	12774 Aug 04 04:36	1° \mathcal{N} 57'41	
retrograde	12773 Sep 14 05:14	19° \mathcal{E} 04'12	evening max el	12774 Aug 20 04:03	27° \mathcal{N} 26'09 18°14'42	
evening set	12773 Sep 16 02:59	18° \mathcal{E} 51'53		12774 Aug 23 10:55	0° \mathcal{E}	
desc. node	12773 Sep 19 11:12	17° \mathcal{E} 36'53	retrograde	12774 Aug 27 09:46	1° \mathcal{E} 06'19	
inferior conj	12773 Sep 24 06:00	14° \mathcal{E} 29'56 -1°30'40	evening set	12774 Aug 29 14:00	0° \mathcal{E} 47'04	
minimum elong	12773 Sep 24 02:14	14° \mathcal{E} 36'49 1°29'01		12774 Aug 31 12:24	30° \mathcal{R} \mathcal{N}	
min. Earth dist.	12773 Sep 27 08:10	12° \mathcal{E} 15'05 0.56905 AU	inferior conj	12774 Sep 05 22:15	26° \mathcal{N} 04'27 0°08'02	
morning rise	12773 Oct 01 22:08	9° \mathcal{E} 31'21	minimum elong	12774 Sep 05 22:32	26° \mathcal{N} 03'52 0°07'46	
direct	12773 Oct 07 17:06	8° \mathcal{E} 09'46	transit middle	12774 Sep 05 22:32	26° \mathcal{N} 03'52 0°07'46	
morning max el	12773 Oct 21 23:20	15° \mathcal{E} 34'18 26°28'16	transit begin	12774 Sep 05 19:30	26° \mathcal{N} 10'19	
	12773 Nov 02 15:39	0° \mathcal{M}	transit end	12774 Sep 06 01:33	25° \mathcal{N} 57'23	
asc. node	12773 Nov 13 09:32	18° \mathcal{M} 19'18	desc. node	12774 Sep 06 08:41	25° \mathcal{N} 42'06	
	12773 Nov 19 03:58	0° \mathcal{X}	min. Earth dist.	12774 Sep 09 05:59	23° \mathcal{N} 15'23 0.58991 AU	
morning set	12773 Nov 19 21:36	1° \mathcal{X} 33'58	morning rise	12774 Sep 13 03:36	20° \mathcal{N} 31'02	
			direct	12774 Sep 19 12:07	18° \mathcal{N} 41'14	
superior conj	12773 Nov 26 17:08	16° \mathcal{X} 34'07 1°36'04	morning max el	12774 Oct 03 20:10	26° \mathcal{N} 26'39 27°31'56	
minimum elong	12773 Nov 26 16:11	16° \mathcal{X} 28'49 1°36'57		12774 Oct 07 04:56	0° \mathcal{E}	
max. Earth dist.	12773 Nov 27 09:06	18° \mathcal{X} 02'58 1.31475 AU		12774 Oct 27 04:12	0° \mathcal{M}	
	12773 Dec 02 20:16	0° \mathcal{B}	asc. node	12774 Oct 31 06:18	7° \mathcal{M} 51'34	
evening rise	12773 Dec 03 15:07	1° \mathcal{B} 39'52	morning set	12774 Nov 04 04:58	15° \mathcal{M} 58'12	
desc. node	12773 Dec 16 08:34	25° \mathcal{B} 49'20	max. Earth dist.	12774 Nov 10 17:40	0° \mathcal{X} 14'32 1.31254 AU	
	12773 Dec 18 22:05	0° \approx		12774 Nov 10 15:03	0° \mathcal{X}	
evening max el	12774 Jan 04 00:03	20° \approx 38'30 27°16'13				
retrograde	12774 Jan 17 22:42	27° \approx 54'28	superior conj	12774 Nov 11 04:46	1° \mathcal{X} 16'30 1°27'53	
evening set	12774 Jan 24 19:47	25° \approx 47'23	minimum elong	12774 Nov 11 03:00	1° \mathcal{X} 06'39 1°28'30	
min. Earth dist.	12774 Jan 28 14:35	23° \approx 01'32 0.60833 AU	evening rise	12774 Nov 17 22:15	16° \mathcal{X} 06'38	
inferior conj	12774 Jan 31 17:47	20° \approx 19'19 -2°45'53		12774 Nov 24 18:08	0° \mathcal{B}	
minimum elong	12774 Jan 31 23:38	20° \approx 06'39 2°42'59	desc. node	12774 Dec 03 05:37	14° \mathcal{B} 45'05	
morning rise	12774 Feb 08 06:30	15° \approx 26'53		12774 Dec 14 18:39	0° \approx	
asc. node	12774 Feb 09 08:18	15° \approx 13'09	evening max el	12774 Dec 17 00:11	2° \approx 14'16 26°24'53	
direct	12774 Feb 10 09:07	15° \approx 08'43	retrograde	12774 Dec 30 23:05	9° \approx 20'25	
morning max el	12774 Feb 17 12:54	18° \approx 44'11 17°55'55	evening set	12775 Jan 06 10:42	7° \approx 38'13	
	12774 Feb 25 17:05	0° \mathcal{H}	min. Earth dist.	12775 Jan 10 13:51	5° \approx 01'54 0.58679 AU	
morning set	12774 Mar 05 03:04	13° \mathcal{H} 10'50	inferior conj	12775 Jan 13 17:07	2° \approx 40'42 -4°07'01	
desc. node	12774 Mar 14 09:46	29° \mathcal{H} 54'05	minimum elong	12775 Jan 14 01:25	2° \approx 25'04 4°03'35	
	12774 Mar 14 11:07	0° \mathcal{Y}		12775 Jan 17 13:14	30° \mathcal{R} \mathcal{B}	
superior conj	12774 Mar 15 13:57	1° \mathcal{Y} 57'15 -0°09'13	morning rise	12775 Jan 21 19:02	28° \mathcal{B} 09'28	
minimum elong	12774 Mar 15 13:09	1° \mathcal{Y} 53'47 0°09'01	direct	12775 Jan 23 20:31	27° \mathcal{B} 54'51	
behind sun begin	12774 Mar 15 06:21	1° \mathcal{Y} 24'08	asc. node	12775 Jan 27 05:36	28° \mathcal{B} 36'15	
behind sun end	12774 Mar 15 19:57	2° \mathcal{Y} 23'22		12775 Jan 29 16:58	0° \approx	
max. Earth dist.	12774 Mar 23 01:34	14° \mathcal{Y} 37'34 1.42713 AU	morning max el	12775 Jan 31 22:49	1° \approx 54'04 18°25'08	
evening rise	12774 Mar 29 02:10	24° \mathcal{Y} 20'36	morning set	12775 Feb 16 19:06	27° \approx 12'54	
	12774 Apr 01 17:04	0° \mathcal{B}		12775 Feb 18 06:01	0° \mathcal{H}	
	12774 Apr 22 13:02	0° Π	superior conj	12775 Feb 25 22:48	14° \mathcal{H} 31'16 0°26'11	
evening max el	12774 Apr 30 14:42	9° Π 28'20 22°10'14	minimum elong	12775 Feb 26 00:37	14° \mathcal{H} 39'37 0°26'13	
asc. node	12774 May 08 05:08	14° Π 48'03	desc. node	12775 Mar 01 06:19	20° \mathcal{H} 31'32	
retrograde	12774 May 10 03:50	15° Π 05'42	max. Earth dist.	12775 Mar 05 10:41	27° \mathcal{H} 51'01 1.40648 AU	
evening set	12774 May 14 20:09	13° Π 09'28		12775 Mar 06 16:53	0° \mathcal{Y}	
inferior conj	12774 May 20 03:01	6° Π 49'17 2°57'00	evening rise	12775 Mar 09 20:05	5° \mathcal{Y} 14'42	
minimum elong	12774 May 20 01:30	6° Π 54'36 2°55'55		12775 Mar 25 21:11	0° \mathcal{B}	
min. Earth dist.	12774 May 20 01:37	6° Π 54'12 0.68847 AU	evening max el	12775 Apr 13 05:52	23° \mathcal{B} 18'42 23°30'54	
morning rise	12774 May 25 06:40	0° Π 36'43	retrograde	12775 Apr 23 22:54	29° \mathcal{B} 37'05	
	12774 May 26 01:15	30° \mathcal{R} \mathcal{B}	asc. node	12775 Apr 25 02:24	29° \mathcal{B} 31'03	

evening set	12775 Apr 29 02:44	27°♄26'51		inferior conj	12776 Apr 17 19:43	5°♄10'09	1°59'34
min. Earth dist.	12775 May 03 22:21	21°♄47'41	0.68740 AU	minimum elong	12776 Apr 17 17:35	5°♄17'15	1°58'27
inferior conj	12775 May 04 12:18	20°♄59'44	2°33'18		12776 Apr 22 06:15	30°♄♂	
minimum elong	12775 May 04 10:16	21°♄06'44	2°32'08	morning rise	12776 Apr 23 05:36	29°♄13'13	
morning rise	12775 May 09 17:45	14°♄54'18		direct	12776 Apr 26 23:01	27°♄53'35	
direct	12775 May 13 23:22	13°♄13'47			12776 May 02 01:12	0°♄	
morning max el	12775 May 22 04:12	17°♄54'36	20°44'50	morning max el	12776 May 04 05:28	1°♄54'53	19°36'47
desc. node	12775 May 28 08:06	25°♄03'36		desc. node	12776 May 14 04:54	14°♄28'09	
	12775 Jun 01 00:55	0°♄		greatest brilliancy	12776 May 16 21:44	18°♄22'35	-0.6m
morning set	12775 Jun 20 21:41	29°♄26'00			12776 May 24 16:04	0°♄	
	12775 Jun 21 06:26	0°♄		morning set	12776 May 29 22:29	8°♄03'03	
max. Earth dist.	12775 Jun 29 03:39	12°♄29'50	1.43387 AU	max. Earth dist.	12776 Jun 10 17:19	26°♄24'02	1.44866 AU
					12776 Jun 12 23:46	0°♄	
superior conj	12775 Jul 05 21:42	23°♄36'13	-1°55'07	superior conj	12776 Jun 15 04:08	3°♄29'12	-2°11'45
minimum elong	12775 Jul 06 04:33	24°♄04'57	1°55'29	minimum elong	12776 Jun 15 07:09	3°♄41'20	2°12'38
	12775 Jul 09 16:21	0°♄		evening rise	12776 Jun 29 00:47	26°♄16'41	
evening rise	12775 Jul 18 00:26	14°♄32'34			12776 Jul 01 05:57	0°♄	
asc. node	12775 Jul 22 01:19	21°♄39'26		asc. node	12776 Jul 07 22:08	11°♄03'30	
	12775 Jul 26 23:12	0°♄		evening max el	12776 Jul 17 07:05	23°♄55'36	18°10'31
evening max el	12775 Aug 03 16:49	10°♄30'41	18°03'16	retrograde	12776 Jul 23 15:36	27°♄16'29	
retrograde	12775 Aug 10 06:42	13°♄53'55		evening set	12776 Jul 26 12:07	26°♄33'15	
evening set	12775 Aug 12 18:58	13°♄24'01		inferior conj	12776 Aug 01 13:54	21°♄12'44	2°18'02
inferior conj	12775 Aug 19 10:13	8°♄21'26	1°24'26	minimum elong	12776 Aug 01 16:26	21°♄05'42	2°16'43
minimum elong	12775 Aug 19 12:27	8°♄15'56	1°23'15	min. Earth dist.	12776 Aug 04 04:24	18°♄20'10	0.63485 AU
min. Earth dist.	12775 Aug 22 12:25	5°♄20'01	0.61278 AU	morning rise	12776 Aug 07 19:02	14°♄57'46	
desc. node	12775 Aug 24 06:09	3°♄47'23		desc. node	12776 Aug 10 03:36	13°♄28'08	
morning rise	12775 Aug 26 03:16	2°♄22'15		direct	12776 Aug 14 10:52	12°♄25'09	
direct	12775 Sep 01 18:45	0°♄07'20		morning max el	12776 Aug 28 08:48	20°♄26'31	27°45'28
morning max el	12775 Sep 15 24:00	8°♄05'07	27°57'44		12776 Sep 05 14:16	0°♄	
	12775 Oct 02 18:50	0°♄			12776 Sep 24 20:25	0°♄	
asc. node	12775 Oct 18 03:01	27°♄39'44		morning set	12776 Oct 02 02:28	13°♄49'00	
morning set	12775 Oct 19 07:21	0°♄05'06		asc. node	12776 Oct 03 23:40	17°♄38'11	
	12775 Oct 19 06:21	0°♄		max. Earth dist.	12776 Oct 07 01:48	24°♄05'19	1.32372 AU
max. Earth dist.	12775 Oct 25 00:30	12°♄18'23	1.31552 AU				
superior conj	12775 Oct 26 15:11	15°♄51'42	1°14'03	superior conj	12776 Oct 09 22:27	0°♄14'01	0°54'41
minimum elong	12775 Oct 26 12:58	15°♄39'26	1°14'21	minimum elong	12776 Oct 09 20:17	0°♄02'15	0°54'42
evening rise	12775 Nov 02 08:23	0°♄39'25			12776 Oct 09 19:52	0°♄	
	12775 Nov 02 01:05	0°♄		evening rise	12776 Oct 16 19:39	15°♄12'57	
	12775 Nov 18 03:37	0°♄			12776 Oct 24 02:17	0°♄	
desc. node	12775 Nov 20 02:46	2°♄51'09		desc. node	12776 Nov 06 00:02	19°♄48'59	
evening max el	12775 Nov 28 16:04	12°♄58'43	25°03'06	evening max el	12776 Nov 09 02:19	23°♄06'44	23°23'31
retrograde	12775 Dec 12 11:30	19°♄53'48		retrograde	12776 Nov 22 11:14	29°♄46'11	
evening set	12775 Dec 18 03:22	18°♄41'58		evening set	12776 Nov 26 20:29	29°♄04'23	
min. Earth dist.	12775 Dec 23 04:03	15°♄59'13	0.56729 AU	min. Earth dist.	12776 Dec 03 12:12	25°♄56'13	0.55261 AU
inferior conj	12775 Dec 25 20:14	14°♄14'36	-5°16'35	inferior conj	12776 Dec 05 03:23	24°♄59'06	-5°53'16
minimum elong	12775 Dec 26 04:01	14°♄01'54	5°14'08	minimum elong	12776 Dec 05 05:08	24°♄56'32	5°52'15
morning rise	12776 Jan 03 06:54	10°♄05'15		morning rise	12776 Dec 13 15:30	21°♄07'32	
direct	12776 Jan 05 13:46	9°♄50'20		direct	12776 Dec 16 11:50	20°♄47'59	
asc. node	12776 Jan 14 02:51	13°♄35'53		morning max el	12776 Dec 27 09:48	26°♄00'05	20°30'04
morning max el	12776 Jan 14 22:54	14°♄22'17	19°16'03	asc. node	12776 Dec 31 00:03	29°♄58'04	
	12776 Jan 25 19:11	0°♄			12776 Dec 31 00:40	0°♄	
morning set	12776 Jan 31 20:13	11°♄38'15		morning set	12777 Jan 15 03:14	26°♄17'50	
					12777 Jan 16 22:15	0°♄	
superior conj	12776 Feb 09 00:53	27°♄52'19	0°54'42	superior conj	12777 Jan 22 15:49	11°♄48'37	1°15'49
minimum elong	12776 Feb 09 03:41	28°♄05'50	0°54'52	minimum elong	12777 Jan 22 18:27	12°♄01'57	1°16'17
	12776 Feb 10 03:23	0°♄		max. Earth dist.	12777 Jan 28 01:06	22°♄27'49	1.36236 AU
max. Earth dist.	12776 Feb 15 17:15	10°♄24'24	1.38408 AU	evening rise	12777 Jan 31 21:13	29°♄40'07	
desc. node	12776 Feb 16 02:53	11°♄07'55			12777 Feb 01 01:33	0°♄	
evening rise	12776 Feb 19 11:09	17°♄03'17		desc. node	12777 Feb 01 23:32	1°♄39'53	
	12776 Feb 27 05:29	0°♄			12777 Feb 19 10:49	0°♄	
	12776 Mar 19 08:17	0°♄		evening max el	12777 Mar 08 09:03	21°♄01'16	26°00'48
evening max el	12776 Mar 25 19:33	7°♄10'46	24°50'07	retrograde	12777 Mar 21 00:37	28°♄15'25	
retrograde	12776 Apr 06 14:06	14°♄02'19		evening set	12777 Mar 27 03:39	25°♄45'29	
asc. node	12776 Apr 10 23:46	12°♄37'18		asc. node	12777 Mar 28 21:11	24°♄08'08	
evening set	12776 Apr 12 05:46	11°♄40'27		min. Earth dist.	12777 Mar 31 08:37	21°♄17'34	0.67199 AU
min. Earth dist.	12776 Apr 16 17:23	6°♄37'16	0.68184 AU				

inferior conj	12777 Apr 01 23:18	19°♿16'50	1°15'35	asc. node	12778 Mar 15 18:38	4°♿30'08	
minimum elong	12777 Apr 01 21:36	19°♿22'10	1°14'45	inferior conj	12778 Mar 16 20:49	3°♿14'06	0°20'57
morning rise	12777 Apr 07 16:15	13°♿29'49		minimum elong	12778 Mar 16 20:15	3°♿15'45	0°20'46
direct	12777 Apr 10 22:23	12°♿29'30			12778 Mar 19 20:27	30°♿	
morning max el	12777 Apr 17 14:12	16°♿04'23	18°44'12	morning rise	12778 Mar 22 23:25	27°♿38'49	
	12777 Apr 28 05:21	0°♿		direct	12778 Mar 25 19:30	26°♿54'55	
desc. node	12777 May 01 01:38	4°♿18'58			12778 Mar 31 21:51	0°♿	
morning set	12777 May 09 10:08	17°♿17'11		morning max el	12778 Apr 01 04:34	0°♿16'05	18°08'11
	12777 May 17 13:40	0°♿		desc. node	12778 Apr 17 22:16	24°♿28'25	
max. Earth dist.	12777 May 24 11:26	10°♿46'52	1.45671 AU	morning set	12778 Apr 19 23:59	27°♿49'24	
					12778 Apr 21 08:18	0°♿	
superior conj	12777 May 25 16:04	12°♿38'50	-2°09'57	superior conj	12778 May 05 00:18	21°♿45'42	-1°48'16
minimum elong	12777 May 25 11:31	12°♿21'03	2°10'42	minimum elong	12778 May 04 15:08	21°♿09'46	1°48'11
	12777 Jun 05 16:02	0°♿		max. Earth dist.	12778 May 07 07:05	25°♿20'17	1.45731 AU
evening rise	12777 Jun 10 01:12	7°♿00'05			12778 May 10 06:47	0°♿	
greatest brilliancy	12777 Jun 16 14:58	17°♿31'46	-0.9m	evening rise	12778 May 21 02:34	16°♿48'37	
asc. node	12777 Jun 24 19:03	0°♿03'32			12778 May 29 15:40	0°♿	
	12777 Jun 24 18:03	0°♿		greatest brilliancy	12778 Jun 02 06:22	5°♿28'40	-0.7m
evening max el	12777 Jun 30 19:46	7°♿33'24	18°35'44	asc. node	12778 Jun 11 16:03	18°♿31'10	
retrograde	12777 Jul 07 08:14	11°♿05'28		evening max el	12778 Jun 14 04:30	21°♿17'58	19°18'04
evening set	12777 Jul 10 13:13	10°♿07'05		retrograde	12778 Jun 21 05:13	25°♿13'44	
inferior conj	12777 Jul 16 05:21	4°♿30'46	2°51'54	evening set	12778 Jun 24 19:09	23°♿59'09	
minimum elong	12777 Jul 16 07:15	4°♿24'56	2°50'43	inferior conj	12778 Jun 30 05:06	18°♿08'39	3°09'28
min. Earth dist.	12777 Jul 18 05:40	2°♿03'49	0.65419 AU	minimum elong	12778 Jun 30 06:01	18°♿05'41	3°08'26
	12777 Jul 20 01:29	30°♿		min. Earth dist.	12778 Jul 01 14:49	16°♿18'42	0.66964 AU
morning rise	12777 Jul 22 00:18	28°♿08'26		morning rise	12778 Jul 05 16:20	11°♿45'09	
direct	12777 Jul 28 11:09	25°♿27'40		direct	12778 Jul 11 18:22	9°♿06'01	
desc. node	12777 Jul 28 00:59	25°♿28'19		desc. node	12778 Jul 14 22:17	9°♿42'24	
	12777 Aug 07 04:56	0°♿		morning max el	12778 Jul 24 06:46	16°♿35'38	25°50'33
morning max el	12777 Aug 10 19:52	3°♿20'54	27°00'16		12778 Aug 04 09:53	0°♿	
	12777 Aug 30 22:53	0°♿			12778 Aug 23 20:48	0°♿	
morning set	12777 Sep 15 11:30	27°♿02'51		morning set	12778 Aug 29 06:53	9°♿38'10	
	12777 Sep 16 24:00	0°♿		max. Earth dist.	12778 Sep 02 00:05	16°♿35'40	1.35548 AU
max. Earth dist.	12777 Sep 19 18:07	5°♿29'17	1.33716 AU				
asc. node	12777 Sep 20 20:18	7°♿42'29		superior conj	12778 Sep 07 18:16	27°♿55'51	0°00'32
				minimum elong	12778 Sep 07 18:15	27°♿55'44	0°00'24
superior conj	12777 Sep 24 00:21	14°♿17'30	0°30'00	behind sun begin	12778 Sep 07 12:07	27°♿24'46	
minimum elong	12777 Sep 23 22:52	14°♿09'43	0°29'51	behind sun end	12778 Sep 08 00:22	28°♿26'45	
evening rise	12777 Oct 01 06:07	29°♿41'47		asc. node	12778 Sep 07 16:55	27°♿49'00	
	12777 Oct 01 09:34	0°♿			12778 Sep 08 18:44	0°♿	
	12777 Oct 18 17:02	0°♿		evening rise	12778 Sep 15 13:45	14°♿00'51	
evening max el	12777 Oct 21 15:26	3°♿12'18	21°43'47		12778 Sep 23 19:06	0°♿	
desc. node	12777 Oct 23 21:24	5°♿13'31		evening max el	12778 Oct 03 16:18	13°♿51'15	20°18'14
retrograde	12777 Nov 03 00:51	9°♿21'38		desc. node	12778 Oct 10 18:49	18°♿37'03	
evening set	12777 Nov 06 00:20	9°♿01'35		retrograde	12778 Oct 14 12:45	19°♿14'53	
inferior conj	12777 Nov 14 20:59	5°♿06'39	-5°35'39	evening set	12778 Oct 16 14:34	19°♿03'56	
minimum elong	12777 Nov 14 14:07	5°♿16'16	5°33'50	inferior conj	12778 Oct 25 14:21	15°♿07'17	-4°21'08
min. Earth dist.	12777 Nov 14 18:34	5°♿10'03	0.54557 AU	minimum elong	12778 Oct 25 04:19	15°♿22'03	4°17'35
morning rise	12777 Nov 23 04:57	1°♿19'01		min. Earth dist.	12778 Oct 27 02:24	14°♿14'10	0.54792 AU
direct	12777 Nov 26 20:50	0°♿49'46		morning rise	12778 Nov 02 17:17	11°♿03'19	
morning max el	12777 Dec 09 06:47	6°♿45'35	22°05'15	direct	12778 Nov 07 06:37	10°♿18'26	
asc. node	12777 Dec 17 21:10	17°♿24'58		morning max el	12778 Nov 20 18:27	16°♿54'33	23°52'52
	12777 Dec 25 02:59	0°♿			12778 Dec 01 06:24	0°♿	
morning set	12777 Dec 30 13:40	11°♿03'26		asc. node	12778 Dec 04 18:10	5°♿41'27	
				morning set	12778 Dec 15 01:29	25°♿49'33	
superior conj	12778 Jan 06 15:49	26°♿08'25	1°29'48		12778 Dec 16 23:58	0°♿	
minimum elong	12778 Jan 06 17:38	26°♿18'01	1°30'34				
	12778 Jan 08 12:02	0°♿		superior conj	12778 Dec 21 21:56	10°♿43'16	1°37'06
max. Earth dist.	12778 Jan 10 14:23	4°♿18'51	1.34340 AU	minimum elong	12778 Dec 21 22:40	10°♿47'16	1°38'03
evening rise	12778 Jan 14 22:39	12°♿55'13		max. Earth dist.	12778 Dec 24 11:29	16°♿14'51	1.32857 AU
desc. node	12778 Jan 19 20:14	22°♿02'31		evening rise	12778 Dec 29 12:02	26°♿40'05	
	12778 Jan 24 10:00	0°♿			12778 Dec 31 04:19	0°♿	
	12778 Feb 14 11:32	0°♿		desc. node	12779 Jan 06 17:02	12°♿10'55	
evening max el	12778 Feb 18 22:35	4°♿42'28	26°55'45		12779 Jan 17 18:01	0°♿	
retrograde	12778 Mar 04 05:35	12°♿07'49		evening max el	12779 Feb 01 11:25	18°♿04'49	27°27'42
evening set	12778 Mar 10 18:27	9°♿35'05		retrograde	12779 Feb 15 04:01	25°♿30'51	
min. Earth dist.	12778 Mar 14 17:59	5°♿40'48	0.65811 AU				

evening set	12779 Feb 21 23:54	23° H 02'04		evening set	12780 Feb 04 17:16	5° H 58'21	
min. Earth dist.	12779 Feb 25 19:27	19° H 38'43	0.64075 AU	min. Earth dist.	12780 Feb 08 11:14	3° H 01'04	0.62067 AU
inferior conj	12779 Feb 28 09:40	16° H 55'58	-0°44'26	inferior conj	12780 Feb 11 10:46	0° H 14'45	-1°59'31
minimum elong	12779 Feb 28 11:03	16° H 52'20	0°43'33	minimum elong	12780 Feb 11 14:53	0° H 05'09	1°57'18
asc. node	12779 Mar 02 16:05	14° H 38'47			12780 Feb 11 17:06	30° R \approx	
morning rise	12779 Mar 07 00:18	11° H 34'45		asc. node	12780 Feb 17 13:29	25° \approx 36'13	
direct	12779 Mar 09 11:54	11° H 03'43		morning rise	12780 Feb 18 15:13	25° \approx 10'39	
morning max el	12779 Mar 15 21:54	14° H 22'24	17°49'15	direct	12780 Feb 20 20:24	24° \approx 48'44	
	12779 Mar 26 23:11	0° Y		morning max el	12780 Feb 27 15:11	28° \approx 15'08	17°48'07
morning set	12779 Apr 01 17:51	9° Y 43'08			12780 Feb 29 06:10	0° H	
desc. node	12779 Apr 04 18:50	14° Y 51'08		morning set	12780 Mar 14 10:28	22° H 41'53	
	12779 Apr 13 22:43	0° B			12780 Mar 18 13:25	0° Y	
				desc. node	12780 Mar 21 15:23	5° Y 23'00	
superior conj	12779 Apr 14 22:01	1° B 34'16	-1°12'32	superior conj	12780 Mar 25 19:05	12° Y 29'31	-0°31'54
minimum elong	12779 Apr 14 14:35	1° B 04'11	1°11'59	minimum elong	12780 Mar 25 16:01	12° Y 16'34	0°31'32
max. Earth dist.	12779 Apr 20 02:10	9° B 50'03	1.45061 AU	max. Earth dist.	12780 Apr 01 18:51	24° Y 02'38	1.43730 AU
evening rise	12779 Apr 30 14:38	26° B 11'08			12780 Apr 05 12:12	0° B	
	12779 May 03 02:35	0° II		evening rise	12780 Apr 09 05:21	5° B 49'24	
	12779 May 23 21:14	0° E			12780 Apr 25 10:17	0° II	
evening max el	12779 May 28 07:47	5° E 04'53	20°15'47	evening max el	12780 May 10 05:23	18° II 52'51	21°25'55
asc. node	12779 May 29 13:10	6° E 15'02		asc. node	12780 May 15 10:21	23° II 01'49	
retrograde	12779 Jun 05 03:54	9° E 34'54		retrograde	12780 May 19 02:24	24° II 04'27	
evening set	12779 Jun 09 03:32	8° E 03'41		evening set	12780 May 23 12:30	22° II 16'54	
inferior conj	12779 Jun 14 10:19	2° E 00'24	3°13'33	inferior conj	12780 May 28 18:42	16° II 02'19	3°06'04
minimum elong	12779 Jun 14 10:10	2° E 00'55	3°12'35	minimum elong	12780 May 28 17:37	16° II 06'07	3°05'03
min. Earth dist.	12779 Jun 15 05:50	0° E 53'51	0.68066 AU	min. Earth dist.	12780 May 29 00:41	15° II 41'28	0.68700 AU
	12779 Jun 15 21:49	30° R II		morning rise	12780 Jun 02 22:31	9° II 46'33	
morning rise	12779 Jun 19 16:30	25° II 39'36		direct	12780 Jun 08 00:28	7° II 34'08	
direct	12779 Jun 25 07:09	23° II 10'42		desc. node	12780 Jun 17 16:32	13° II 07'01	
desc. node	12779 Jul 01 19:28	25° II 44'05		morning max el	12780 Jun 18 03:25	13° II 34'06	22°56'11
morning max el	12779 Jul 06 16:43	0° E 00'45	24°25'55		12780 Jul 01 09:27	0° E	
	12779 Jul 06 16:26	0° E			12780 Jul 21 03:58	0° Q	
	12779 Jul 29 06:23	0° Q		morning set	12780 Jul 22 10:26	2° Q 05'16	
morning set	12779 Aug 11 08:05	21° Q 22'39		max. Earth dist.	12780 Jul 26 21:01	9° Q 33'33	1.40089 AU
max. Earth dist.	12779 Aug 14 22:47	27° Q 46'40	1.37748 AU				
	12779 Aug 16 04:10	0° P		superior conj	12780 Aug 03 16:03	23° Q 20'57	-1°07'15
superior conj	12779 Aug 22 00:50	11° P 00'06	-0°32'36	minimum elong	12780 Aug 03 20:57	23° Q 43'22	1°07'09
minimum elong	12779 Aug 22 03:03	11° P 10'47	0°32'36		12780 Aug 07 06:18	0° P	
asc. node	12779 Aug 25 13:30	17° P 53'28		asc. node	12780 Aug 11 10:09	7° P 52'26	
evening rise	12779 Aug 30 16:02	28° P 02'53		evening rise	12780 Aug 13 09:55	11° P 40'23	
	12779 Aug 31 15:38	0° A			12780 Aug 23 15:14	0° A	
evening max el	12779 Sep 16 07:16	25° A 17'33	19°13'20	evening max el	12780 Aug 29 09:50	7° A 29'01	18°30'05
retrograde	12779 Sep 25 11:41	29° A 52'59		retrograde	12780 Sep 06 05:32	11° A 25'38	
evening set	12779 Sep 27 08:09	29° A 42'34		evening set	12780 Sep 08 05:49	11° A 10'46	
desc. node	12779 Sep 27 16:17	29° A 38'30		desc. node	12780 Sep 13 13:44	8° A 30'34	
inferior conj	12779 Oct 05 21:06	25° A 31'50	-2°34'10	inferior conj	12780 Sep 16 00:48	6° A 39'42	-0°46'25
minimum elong	12779 Oct 05 14:27	25° A 42'57	2°31'19	minimum elong	12780 Sep 15 22:59	6° A 43'15	0°45'40
min. Earth dist.	12779 Oct 08 13:40	23° A 44'27	0.55931 AU	min. Earth dist.	12780 Sep 19 06:48	4° A 08'16	0.57753 AU
morning rise	12779 Oct 13 18:07	20° A 55'29		morning rise	12780 Sep 23 12:43	1° A 25'43	
direct	12779 Oct 19 03:27	19° A 48'50			12780 Sep 27 20:56	30° R P	
morning max el	12779 Nov 02 05:08	26° A 57'10	25°37'04	direct	12780 Sep 29 14:09	29° P 52'28	
	12779 Nov 05 03:59	0° M			12780 Oct 01 07:42	0° A	
asc. node	12779 Nov 21 15:04	24° M 34'40		morning max el	12780 Oct 13 21:37	7° A 25'51	26°59'41
	12779 Nov 24 10:53	0° X			12780 Oct 30 19:23	0° M	
morning set	12779 Nov 29 12:57	10° X 30'56		asc. node	12780 Nov 07 11:52	13° M 55'09	
				morning set	12780 Nov 12 22:21	25° M 03'06	
superior conj	12779 Dec 06 07:45	25° X 25'43	1°38'10		12780 Nov 15 05:17	0° X	
minimum elong	12779 Dec 06 07:22	25° X 23'40	1°39'06	superior conj	12780 Nov 19 19:15	10° X 09'49	1°33'18
max. Earth dist.	12779 Dec 07 15:36	28° X 21'38	1.31843 AU	minimum elong	12780 Nov 19 17:55	10° X 02'22	1°34'04
	12779 Dec 08 09:30	0° Z		max. Earth dist.	12780 Nov 19 23:43	10° X 34'45	1.31326 AU
evening rise	12779 Dec 13 10:17	10° Z 46'28		evening rise	12780 Nov 26 14:50	25° X 07'39	
	12779 Dec 23 10:37	0° \approx			12780 Nov 28 22:43	0° Z	
desc. node	12779 Dec 24 13:56	1° \approx 58'35		desc. node	12780 Dec 10 10:55	21° Z 16'44	
	12780 Jan 13 22:36	0° H			12780 Dec 16 04:01	0° \approx	
evening max el	12780 Jan 14 21:32	0° H 55'41	27°30'06	evening max el	12780 Dec 27 01:59	13° \approx 01'16	26°58'29
retrograde	12780 Jan 28 18:47	8° H 15'29					

retrograde	12781 Jan 10 00:36	20° \approx 12'27		evening max el	12781 Dec 08 22:27	24° \approx 14'43	25°53'11
evening set	12781 Jan 16 19:02	18° \approx 15'01			12781 Dec 17 02:31	0° \approx	
min. Earth dist.	12781 Jan 20 16:13	15° \approx 35'08	0.59914 AU	retrograde	12781 Dec 22 20:19	1° \approx 16'57	
inferior conj	12781 Jan 23 20:33	13° \approx 00'01	-3°20'42		12781 Dec 28 13:31	30° \approx 3	
minimum elong	12781 Jan 24 03:37	12° \approx 45'35	3°17'24	evening set	12781 Dec 29 01:06	29° \approx 46'52	
morning rise	12781 Jan 31 15:11	8° \approx 16'21		min. Earth dist.	12782 Jan 02 11:10	27° \approx 10'16	0.57812 AU
direct	12781 Feb 02 16:53	8° \approx 00'01		inferior conj	12782 Jan 05 11:34	25° \approx 02'33	-4°38'59
asc. node	12781 Feb 03 10:50	8° \approx 02'13		minimum elong	12782 Jan 05 20:12	24° \approx 47'17	4°35'47
morning max el	12781 Feb 10 04:54	11° \approx 44'00	18°05'50	morning rise	12782 Jan 13 18:03	20° \approx 41'12	
	12781 Feb 22 08:05	0° \approx		direct	12782 Jan 15 20:53	20° \approx 26'58	
morning set	12781 Feb 25 19:28	6° \approx 25'33		asc. node	12782 Jan 21 08:07	22° \approx 08'22	
				morning max el	12782 Jan 24 11:16	24° \approx 38'41	18°44'03
					12782 Jan 28 22:21	0° \approx	
superior conj	12781 Mar 07 15:59	24° \approx 31'06	0°06'35	morning set	12782 Feb 09 15:50	20° \approx 39'18	
minimum elong	12781 Mar 07 16:31	24° \approx 33'28	0°06'41		12782 Feb 14 11:02	0° \approx	
behind sun begin	12781 Mar 07 09:26	24° \approx 01'55					
behind sun end	12781 Mar 07 23:35	25° \approx 04'57					
desc. node	12781 Mar 08 11:55	25° \approx 59'36		superior conj	12782 Feb 18 08:51	7° \approx 27'41	0°39'09
	12781 Mar 10 18:46	0° \approx		minimum elong	12782 Feb 18 11:15	7° \approx 38'59	0°39'13
max. Earth dist.	12781 Mar 15 07:02	7° \approx 41'35	1.41874 AU	desc. node	12782 Feb 23 08:30	16° \approx 37'32	
evening rise	12781 Mar 20 11:28	16° \approx 11'50		max. Earth dist.	12782 Feb 25 14:34	20° \approx 37'19	1.39703 AU
	12781 Mar 29 08:12	0° \approx		evening rise	12782 Mar 01 14:31	27° \approx 29'53	
	12781 Apr 20 09:30	0° \approx			12782 Mar 03 02:23	0° \approx	
evening max el	12781 Apr 22 22:13	2° \approx 41'21	22°44'14		12782 Mar 22 21:30	0° \approx	
asc. node	12781 May 02 07:36	8° \approx 34'42		evening max el	12782 Apr 05 12:21	16° \approx 32'04	24°05'03
retrograde	12781 May 02 23:07	8° \approx 36'39		retrograde	12782 Apr 16 16:50	23° \approx 06'23	
evening set	12781 May 07 20:24	6° \approx 33'56		asc. node	12782 Apr 19 04:56	22° \approx 37'58	
inferior conj	12781 May 13 04:11	0° \approx 10'22	2°48'08	evening set	12782 Apr 22 01:41	20° \approx 50'39	
minimum elong	12781 May 13 02:24	0° \approx 16'34	2°47'02	min. Earth dist.	12782 Apr 26 17:37	15° \approx 26'51	0.68559 AU
min. Earth dist.	12781 May 12 21:18	0° \approx 34'16	0.68860 AU	inferior conj	12782 Apr 27 12:55	14° \approx 21'23	2°20'12
	12781 May 13 07:10	30° \approx 8		minimum elong	12782 Apr 27 10:47	14° \approx 28'38	2°19'03
morning rise	12781 May 18 08:18	24° \approx 00'55		morning rise	12782 May 02 19:57	8° \approx 19'25	
direct	12781 May 22 21:10	22° \approx 08'34		direct	12782 May 06 20:09	6° \approx 48'06	
morning max el	12781 May 31 17:51	27° \approx 16'44	21°30'02	morning max el	12782 May 14 14:47	11° \approx 10'58	20°14'03
	12781 Jun 03 06:52	0° \approx		desc. node	12782 May 22 10:24	20° \approx 34'40	
desc. node	12781 Jun 04 13:30	1° \approx 29'07			12782 May 29 02:35	0° \approx	
	12781 Jun 24 22:29	0° \approx		morning set	12782 Jun 11 16:11	20° \approx 25'13	
morning set	12781 Jul 02 11:23	11° \approx 40'39			12782 Jun 17 19:45	0° \approx	
max. Earth dist.	12781 Jul 08 23:59	22° \approx 11'47	1.42285 AU	max. Earth dist.	12782 Jun 21 09:26	5° \approx 39'48	1.44086 AU
	12781 Jul 13 16:09	0° \approx					
				superior conj	12782 Jun 27 07:26	15° \approx 14'39	-2°04'05
superior conj	12781 Jul 16 11:26	4° \approx 47'57	-1°39'40	minimum elong	12782 Jun 27 13:19	15° \approx 38'46	2°04'42
minimum elong	12781 Jul 16 18:20	5° \approx 17'46	1°39'45		12782 Jul 06 02:37	0° \approx	
evening rise	12781 Jul 27 15:31	24° \approx 43'04		evening rise	12782 Jul 10 04:00	6° \approx 59'04	
asc. node	12781 Jul 29 06:51	27° \approx 41'46		asc. node	12782 Jul 16 03:36	17° \approx 16'38	
	12781 Jul 30 13:24	0° \approx			12782 Jul 24 08:54	0° \approx	
evening max el	12781 Aug 12 19:58	20° \approx 16'38	18°07'29	evening max el	12782 Jul 27 09:44	3° \approx 30'31	18°04'10
retrograde	12781 Aug 19 17:47	23° \approx 48'15		retrograde	12782 Aug 02 20:18	6° \approx 51'17	
evening set	12781 Aug 22 01:15	23° \approx 24'56		evening set	12782 Aug 05 11:57	6° \approx 16'08	
inferior conj	12781 Aug 29 01:53	18° \approx 33'24	0°43'18	inferior conj	12782 Aug 11 21:02	1° \approx 05'54	1°49'49
minimum elong	12781 Aug 29 03:14	18° \approx 30'19	0°42'32	minimum elong	12782 Aug 11 23:32	0° \approx 59'22	1°48'31
desc. node	12781 Aug 31 11:12	16° \approx 22'36			12782 Aug 12 22:14	30° \approx 8	
min. Earth dist.	12781 Sep 01 08:11	15° \approx 36'22	0.59948 AU	min. Earth dist.	12782 Aug 14 18:52	28° \approx 05'29	0.62230 AU
morning rise	12781 Sep 05 02:01	12° \approx 47'29		morning rise	12782 Aug 18 08:48	24° \approx 58'36	
direct	12781 Sep 11 14:04	10° \approx 46'35		desc. node	12782 Aug 18 08:41	24° \approx 58'48	
morning max el	12781 Sep 25 21:51	18° \approx 38'36	27°47'53	direct	12782 Aug 25 01:10	22° \approx 34'46	
	12781 Oct 05 11:49	0° \approx			12782 Sep 07 13:23	0° \approx	
	12781 Oct 23 13:11	0° \approx		morning max el	12782 Sep 08 04:12	0° \approx 36'28	27°57'03
asc. node	12781 Oct 25 08:36	3° \approx 35'25			12782 Sep 29 15:07	0° \approx	
morning set	12781 Oct 28 03:55	9° \approx 21'32		morning set	12782 Oct 12 03:31	23° \approx 19'36	
max. Earth dist.	12781 Nov 03 08:12	22° \approx 45'38	1.31314 AU	asc. node	12782 Oct 12 05:16	23° \approx 28'35	
					12782 Oct 15 08:20	0° \approx	
superior conj	12781 Nov 04 06:38	24° \approx 50'25	1°22'43	max. Earth dist.	12782 Oct 17 12:58	4° \approx 42'32	1.31825 AU
minimum elong	12781 Nov 04 04:37	24° \approx 39'14	1°23'12				
	12781 Nov 06 14:12	0° \approx		superior conj	12782 Oct 19 15:57	9° \approx 20'54	1°06'31
evening rise	12781 Nov 10 23:30	9° \approx 38'09		minimum elong	12782 Oct 19 13:41	9° \approx 08'28	1°06'41
	12781 Nov 21 06:56	0° \approx		evening rise	12782 Oct 26 10:18	24° \approx 11'39	
desc. node	12781 Nov 27 08:01	9° \approx 54'07			12782 Oct 29 04:04	0° \approx	

desc. node	12782 Nov 14 05:13	27°♊34'10		12783 Oct 21 20:37	0°♊	
	12782 Nov 16 03:33	0°♊		desc. node	12783 Nov 01 02:31	13°♊55'38
evening max el	12782 Nov 20 11:09	4°♊40'37	24°22'02	evening max el	12783 Nov 01 21:32	14°♊43'13 22°40'13
retrograde	12782 Dec 04 03:52	11°♊30'50		retrograde	12783 Nov 14 22:17	21°♊11'21
evening set	12782 Dec 09 07:33	10°♊32'22		evening set	12783 Nov 18 16:36	20°♊40'28
min. Earth dist.	12782 Dec 14 22:37	7°♊40'54	0.56024 AU	min. Earth dist.	12783 Nov 26 05:45	17°♊15'54 0.54855 AU
inferior conj	12782 Dec 17 05:54	6°♊15'19	-5°37'35	inferior conj	12783 Nov 27 06:01	16°♊41'29 -5°53'16
minimum elong	12782 Dec 17 11:49	6°♊06'07	5°35'52	minimum elong	12783 Nov 27 03:57	16°♊44'25 5°52'16
morning rise	12782 Dec 25 18:08	2°♊14'25		morning rise	12783 Dec 05 16:40	12°♊53'25
direct	12782 Dec 28 05:25	1°♊58'16		direct	12783 Dec 08 20:57	12°♊30'15
morning max el	12783 Jan 07 06:12	6°♊47'00	19°44'39	morning max el	12783 Dec 20 10:51	18°♊01'21 21°08'12
asc. node	12783 Jan 08 05:22	7°♊45'19		asc. node	12783 Dec 26 02:32	24°♊36'54
	12783 Jan 22 05:28	0°♊			12783 Dec 29 16:32	0°♊
morning set	12783 Jan 24 19:48	5°♊11'37		morning set	12784 Jan 09 04:32	19°♊54'32
					12784 Jan 14 00:01	0°♊
superior conj	12783 Feb 01 16:55	21°♊05'19	1°04'31	superior conj	12784 Jan 16 12:04	5°♊12'31 1°22'35
minimum elong	12783 Feb 01 19:45	21°♊19'18	1°04'48	minimum elong	12784 Jan 16 14:24	5°♊24'36 1°23'11
	12783 Feb 06 07:27	0°♊		max. Earth dist.	12784 Jan 21 06:25	14°♊50'15 1.35392 AU
max. Earth dist.	12783 Feb 07 20:38	2°♊54'06	1.37465 AU	evening rise	12784 Jan 25 07:08	22°♊34'59
desc. node	12783 Feb 10 05:07	7°♊12'44		desc. node	12784 Jan 28 01:46	27°♊41'25
evening rise	12783 Feb 11 14:05	9°♊40'27			12784 Jan 29 08:44	0°♊
	12783 Feb 23 20:22	0°♊			12784 Feb 17 14:19	0°♊
	12783 Mar 18 16:02	0°♊		evening max el	12784 Feb 29 15:39	14°♊13'03 26°26'37
evening max el	12783 Mar 19 01:51	0°♊24'20	25°21'40	retrograde	12784 Mar 13 14:30	21°♊32'44
retrograde	12783 Mar 31 06:19	7°♊27'27		evening set	12784 Mar 19 21:54	19°♊01'14
evening set	12783 Apr 06 02:47	5°♊01'48		asc. node	12784 Mar 22 23:47	15°♊59'28
asc. node	12783 Apr 06 02:20	5°♊02'45		min. Earth dist.	12784 Mar 24 00:32	14°♊47'39 0.66657 AU
min. Earth dist.	12783 Apr 10 11:27	0°♊13'28	0.67814 AU	inferior conj	12784 Mar 25 20:19	12°♊35'08 0°53'46
	12783 Apr 10 15:39	30°♊		minimum elong	12784 Mar 25 19:00	12°♊39'08 0°53'09
inferior conj	12783 Apr 11 19:00	28°♊31'19	1°42'13	morning rise	12784 Mar 31 17:03	6°♊52'36
minimum elong	12783 Apr 11 16:58	28°♊37'55	1°41'10	direct	12784 Apr 03 18:48	5°♊59'31
morning rise	12783 Apr 17 07:33	22°♊38'10		morning max el	12784 Apr 10 06:39	9°♊27'00 18°26'43
direct	12783 Apr 20 19:58	21°♊27'05		desc. node	12784 Apr 25 03:52	0°♊11'35
morning max el	12783 Apr 27 19:19	25°♊15'53	19°12'19		12784 Apr 25 00:55	0°♊
	12783 May 01 23:14	0°♊		morning set	12784 Apr 30 16:43	8°♊55'53
desc. node	12783 May 09 07:11	10°♊11'50			12784 May 14 02:18	0°♊
greatest brilliancy	12783 May 10 17:04	12°♊17'23	-0.7m	superior conj	12784 May 16 13:00	3°♊49'18 -2°02'59
morning set	12783 May 21 18:53	29°♊10'39		minimum elong	12784 May 16 05:43	3°♊20'51 2°03'24
	12783 May 22 07:41	0°♊		max. Earth dist.	12784 May 16 20:15	4°♊17'37 1.45794 AU
max. Earth dist.	12783 Jun 04 00:52	19°♊47'00	1.45296 AU	evening rise	12784 Jun 01 08:29	28°♊36'05
					12784 Jun 02 05:47	0°♊
superior conj	12783 Jun 07 04:53	24°♊46'37	-2°13'30	greatest brilliancy	12784 Jun 10 15:03	13°♊09'59 -0.8m
minimum elong	12783 Jun 07 04:51	24°♊46'29	2°14'27	asc. node	12784 Jun 18 21:26	25°♊19'27
	12783 Jun 10 11:45	0°♊			12784 Jun 22 17:52	0°♊
evening rise	12783 Jun 21 18:29	18°♊17'54		evening max el	12784 Jun 23 11:05	0°♊44'23 18°51'44
	12783 Jun 28 21:38	0°♊		retrograde	12784 Jun 30 03:36	4°♊24'40
asc. node	12783 Jul 03 00:28	6°♊31'48		evening set	12784 Jul 03 12:25	3°♊19'18
evening max el	12783 Jul 10 23:45	17°♊02'32	18°19'10		12784 Jul 07 02:32	30°♊
retrograde	12783 Jul 17 08:49	20°♊26'19		inferior conj	12784 Jul 09 01:32	27°♊36'49 3°01'07
evening set	12783 Jul 20 08:56	19°♊36'50		minimum elong	12784 Jul 09 03:02	27°♊32'03 3°00'00
inferior conj	12783 Jul 26 06:11	14°♊09'42	2°34'35	min. Earth dist.	12784 Jul 10 19:35	25°♊24'45 0.66136 AU
minimum elong	12783 Jul 26 08:31	14°♊02'54	2°33'18	morning rise	12784 Jul 14 16:55	21°♊13'40
min. Earth dist.	12783 Jul 28 14:55	11°♊26'05	0.64351 AU	direct	12784 Jul 21 00:28	18°♊32'33
morning rise	12783 Aug 01 06:43	7°♊50'51		desc. node	12784 Jul 22 03:28	18°♊37'08
desc. node	12783 Aug 05 06:07	5°♊37'24		morning max el	12784 Aug 03 01:06	26°♊16'45 26°33'01
direct	12783 Aug 07 21:12	5°♊13'14			12784 Aug 06 11:38	0°♊
morning max el	12783 Aug 21 14:04	13°♊12'51	27°29'47		12784 Aug 27 16:10	0°♊
	12783 Sep 04 02:15	0°♊		morning set	12784 Sep 07 22:19	19°♊49'35
	12783 Sep 22 05:12	0°♊		max. Earth dist.	12784 Sep 11 22:23	27°♊33'27 1.34446 AU
morning set	12783 Sep 25 18:41	6°♊51'28			12784 Sep 13 03:50	0°♊
asc. node	12783 Sep 29 01:55	13°♊30'07		asc. node	12784 Sep 14 22:32	3°♊35'44
max. Earth dist.	12783 Sep 30 10:28	16°♊18'25	1.32876 AU	superior conj	12784 Sep 16 20:03	7°♊29'41 0°18'02
				minimum elong	12784 Sep 16 19:06	7°♊24'42 0°17'53
superior conj	12783 Oct 03 21:13	23°♊36'06	0°44'51	evening rise	12784 Sep 24 06:58	23°♊09'05
minimum elong	12783 Oct 03 19:15	23°♊25'34	0°44'47			
	12783 Oct 06 20:22	0°♊				
evening rise	12783 Oct 10 21:26	8°♊43'40				




































































































































	12784 Sep 27 14:51	0°♍		superior conj	12785 Aug 31 09:32	20°♎54'13	-0°13'12
evening max el	12784 Oct 13 14:52	24°♍59'21	21°05'04	minimum elong	12785 Aug 31 10:22	20°♎58'23	0°13'17
desc. node	12784 Oct 17 23:53	28°♍32'05		behind sun begin	12785 Aug 31 06:42	20°♎40'12	
	12784 Oct 20 21:49	0°♊		behind sun end	12785 Aug 31 14:02	21°♎16'35	
retrograde	12784 Oct 25 09:18	0°♊50'15		asc. node	12785 Sep 01 19:08	23°♎41'41	
evening set	12784 Oct 27 21:47	0°♊35'18			12785 Sep 04 21:57	0°♎	
	12784 Oct 30 02:12	30°♋♍		evening rise	12785 Sep 08 12:38	7°♎21'48	
inferior conj	12784 Nov 05 21:33	26°♍41'17	-5°10'01		12785 Sep 21 00:42	0°♍	
minimum elong	12784 Nov 05 12:21	26°♍54'16	5°07'20	evening max el	12785 Sep 25 21:37	5°♍56'58	19°47'51
min. Earth dist.	12784 Nov 06 11:59	26°♍20'53	0.54540 AU	desc. node	12785 Oct 04 21:19	10°♍56'24	
morning rise	12784 Nov 14 03:23	22°♍49'41		retrograde	12785 Oct 06 00:51	11°♍00'09	
direct	12784 Nov 18 04:43	22°♍14'26		evening set	12785 Oct 07 22:37	10°♍50'12	
morning max el	12784 Dec 01 02:46	28°♍27'31	22°50'26	inferior conj	12785 Oct 16 19:07	6°♍48'21	-3°37'40
	12784 Dec 02 16:01	0°♊		minimum elong	12785 Oct 16 10:00	7°♍02'26	3°34'05
asc. node	12784 Dec 11 23:35	12°♊26'40		min. Earth dist.	12785 Oct 18 20:48	5°♍31'40	0.55169 AU
	12784 Dec 21 10:03	0°♊		morning rise	12785 Oct 24 19:48	2°♍32'03	
morning set	12784 Dec 23 15:49	4°♊41'35		direct	12785 Oct 29 17:41	1°♍38'57	
				morning max el	12785 Nov 12 13:03	8°♍29'38	24°39'00
superior conj	12784 Dec 30 14:58	19°♊39'57	1°33'41		12785 Nov 28 07:01	0°♊	
minimum elong	12784 Dec 30 16:21	19°♊47'19	1°34'33	asc. node	12785 Nov 28 20:32	0°♊59'57	
max. Earth dist.	12785 Jan 02 23:21	26°♊44'09	1.33653 AU	morning set	12785 Dec 08 03:40	19°♊26'18	
	12785 Jan 04 13:21	0°♋			12785 Dec 12 23:49	0°♊	
evening rise	12785 Jan 07 14:04	6°♋04'09					
desc. node	12785 Jan 13 22:29	17°♋59'08		superior conj	12785 Dec 14 22:54	4°♊18'45	1°38'18
	12785 Jan 21 00:38	0°♋		minimum elong	12785 Dec 14 23:09	4°♊20'10	1°39'16
evening max el	12785 Feb 11 05:13	27°♋48'47	27°12'34	max. Earth dist.	12785 Dec 16 23:39	8°♊44'33	1.32356 AU
	12785 Feb 13 15:10	0°♌		evening rise	12785 Dec 22 07:29	19°♊58'35	
retrograde	12785 Feb 24 16:35	5°♌14'41			12785 Dec 27 09:53	0°♋	
evening set	12785 Mar 03 09:01	2°♌42'45		desc. node	12785 Dec 31 19:18	7°♋59'30	
	12785 Mar 06 08:49	30°♋♋			12786 Jan 15 03:07	0°♋	
min. Earth dist.	12785 Mar 07 06:42	29°♋02'14	0.65119 AU	evening max el	12786 Jan 24 16:54	10°♋58'28	27°32'38
inferior conj	12785 Mar 09 14:31	26°♋27'30	-0°05'25	retrograde	12786 Feb 07 11:52	18°♋22'53	
minimum elong	12785 Mar 09 14:40	26°♋27'05	0°05'13	evening set	12786 Feb 14 09:41	15°♋57'40	
transit middle	12785 Mar 09 14:40	26°♋27'05	0°05'13	min. Earth dist.	12786 Feb 18 04:00	12°♋46'34	0.63248 AU
transit begin	12785 Mar 09 11:48	26°♋35'03		inferior conj	12786 Feb 20 22:43	10°♋00'20	-1°15'12
transit end	12785 Mar 09 17:32	26°♋19'08		minimum elong	12786 Feb 21 01:10	9°♋54'11	1°13'46
asc. node	12785 Mar 09 21:13	26°♋08'54		asc. node	12786 Feb 24 18:38	6°♋31'12	
morning rise	12785 Mar 15 21:58	20°♋57'54		morning rise	12786 Feb 27 19:06	4°♋46'23	
direct	12785 Mar 18 14:21	20°♋19'48		direct	12786 Mar 02 03:42	4°♋19'42	
morning max el	12785 Mar 24 22:41	23°♋38'11	17°58'01	morning max el	12786 Mar 08 16:26	7°♋40'14	17°46'38
	12785 Mar 30 03:35	0°♌			12786 Mar 23 12:47	0°♌	
morning set	12785 Apr 11 18:59	20°♌05'16		morning set	12786 Mar 24 23:17	2°♌28'59	
desc. node	12785 Apr 12 00:29	20°♌27'52		desc. node	12786 Mar 29 21:01	10°♌55'04	
	12785 Apr 17 20:15	0°♍					
				superior conj	12786 Apr 06 08:19	23°♌25'55	-0°55'25
superior conj	12785 Apr 26 01:10	13°♍09'40	-1°34'18	minimum elong	12786 Apr 06 02:40	23°♌02'42	0°54'54
minimum elong	12785 Apr 25 16:07	12°♍33'45	1°33'55		12786 Apr 10 09:17	0°♍	
max. Earth dist.	12785 Apr 29 16:36	18°♍54'11	1.45543 AU	max. Earth dist.	12786 Apr 12 10:47	3°♍18'11	1.44570 AU
	12785 May 06 19:35	0°♎		evening rise	12786 Apr 21 13:49	17°♍34'16	
evening rise	12785 May 12 02:37	8°♎09'53			12786 Apr 29 18:48	0°♎	
greatest brilliancy	12785 May 26 00:58	29°♎15'29	-0.6m	evening max el	12786 May 20 18:17	28°♎17'30	20°44'13
	12785 May 26 13:08	0°♏			12786 May 22 14:03	0°♏	
asc. node	12785 Jun 05 18:28	13°♏30'05		asc. node	12786 May 23 15:35	0°♏51'45	
evening max el	12785 Jun 06 17:35	14°♏30'20	19°40'45	retrograde	12786 May 29 00:36	3°♏05'07	
retrograde	12785 Jun 14 01:39	18°♏39'27		evening set	12786 Jun 02 04:32	1°♏26'52	
evening set	12785 Jun 17 19:40	17°♏17'36			12786 Jun 03 17:53	30°♎♎	
inferior conj	12785 Jun 23 03:55	11°♏21'14	3°12'40	inferior conj	12786 Jun 07 10:46	25°♎18'18	3°11'42
minimum elong	12785 Jun 23 04:23	11°♏19'43	3°11'41	minimum elong	12786 Jun 07 10:12	25°♎20'17	3°10'43
min. Earth dist.	12785 Jun 24 07:23	9°♏49'35	0.67496 AU	min. Earth dist.	12786 Jun 08 00:25	24°♎31'10	0.68393 AU
morning rise	12785 Jun 28 12:41	4°♏58'34		morning rise	12786 Jun 12 15:36	18°♎59'13	
direct	12785 Jul 04 10:00	2°♏23'14		direct	12786 Jun 18 00:50	16°♎36'52	
desc. node	12785 Jul 09 00:44	3°♏40'28		desc. node	12786 Jun 25 21:53	20°♎19'58	
morning max el	12785 Jul 16 11:44	9°♏37'22	25°15'44	morning max el	12786 Jun 28 21:55	23°♎07'06	23°47'46
	12785 Aug 01 14:14	0°♏			12786 Jul 04 23:28	0°♏	
	12785 Aug 20 06:35	0°♎			12786 Jul 25 22:28	0°♏	
morning set	12785 Aug 21 10:30	2°♎04'24		morning set	12786 Aug 03 02:37	13°♏24'48	
max. Earth dist.	12785 Aug 25 00:59	8°♎39'48	1.36456 AU	max. Earth dist.	12786 Aug 06 22:34	20°♏02'49	1.38739 AU

	12786 Aug 12 10:42	0°♎			12787 Jul 18 15:02	0°♏	
				max. Earth dist.	12787 Jul 19 21:51	2°♏08'51	1.41057 AU
superior conj	12786 Aug 14 10:06	3°♎41'29 -0°47'18			12787 Jul 27 17:27	15°♏40'55 -1°21'35	
minimum elong	12786 Aug 14 13:27	3°♎57'15 0°47'15		superior conj	12787 Jul 27 23:24	16°♏07'25 1°21'30	
asc. node	12786 Aug 19 15:44	13°♎44'32		minimum elong	12787 Aug 04 13:19	0°♎	
evening rise	12786 Aug 23 11:48	21°♎14'58			12787 Aug 06 12:22	3°♎39'52	
	12786 Aug 28 00:53	0°♎		asc. node	12787 Aug 07 01:00	4°♎38'56	
evening max el	12786 Sep 08 18:00	17°♎43'56 18°52'21		evening rise	12787 Aug 22 19:24	0°♎	
retrograde	12786 Sep 17 07:33	22°♎01'33			12787 Aug 23 00:24	0°♎12'33 18°18'05	
evening set	12786 Sep 19 04:43	21°♎49'54		evening max el	12787 Aug 30 09:19	3°♎56'22	
desc. node	12786 Sep 21 18:47	20°♎59'00		retrograde	12787 Sep 01 12:30	3°♎38'20	
inferior conj	12786 Sep 27 10:29	17°♎31'07 -1°47'07		evening set	12787 Sep 07 17:41	30°♎	
minimum elong	12786 Sep 27 05:57	17°♎39'11 1°45'07			12787 Sep 08 23:31	28°♎58'44 -0°05'36	
min. Earth dist.	12786 Sep 30 10:42	15°♎22'52 0.56633 AU		inferior conj	12787 Sep 08 23:19	28°♎59'10 0°05'38	
morning rise	12786 Oct 05 03:57	12°♎38'14		minimum elong	12787 Sep 08 23:19	28°♎59'10 0°05'38	
direct	12786 Oct 10 20:34	11°♎20'34		transit middle	12787 Sep 08 20:03	29°♎05'59	
morning max el	12786 Oct 25 01:53	18°♎41'23 26°15'49		transit begin	12787 Sep 09 02:34	28°♎52'21	
	12786 Nov 03 14:09	0°♎		transit end	12787 Sep 08 16:18	29°♎13'45	
asc. node	12786 Nov 15 17:23	20°♎05'59		desc. node	12787 Sep 12 07:12	26°♎13'37 0.58665 AU	
	12786 Nov 20 16:14	0°♎		min. Earth dist.	12787 Sep 16 06:38	23°♎30'14	
morning set	12786 Nov 22 14:27	4°♎04'28		morning rise	12787 Sep 22 13:38	21°♎44'37	
				direct	12787 Oct 06 21:30	29°♎26'58 27°24'43	
superior conj	12786 Nov 29 09:41	19°♎02'54 1°36'49		morning max el	12787 Oct 07 10:51	0°♎	
minimum elong	12786 Nov 29 08:52	18°♎58'26 1°37'42			12787 Oct 28 12:42	0°♎	
max. Earth dist.	12786 Nov 30 05:39	20°♎53'53 1.31554 AU			12787 Nov 02 14:09	9°♎35'23	
	12786 Dec 04 09:19	0°♎		asc. node	12787 Nov 06 22:25	18°♎30'53	
evening rise	12786 Dec 06 08:41	4°♎12'01		morning set	12787 Nov 12 04:49	0°♎	
desc. node	12786 Dec 18 16:13	27°♎35'39					
	12786 Dec 20 02:56	0°♎					
evening max el	12787 Jan 07 00:46	23°♎30'41 27°20'56		superior conj	12787 Nov 13 21:21	3°♎46'01 1°29'30	
	12787 Jan 16 15:23	0°♎		minimum elong	12787 Nov 13 19:42	3°♎36'44 1°30'10	
retrograde	12787 Jan 20 23:18	0°♎47'54		max. Earth dist.	12787 Nov 13 14:13	3°♎06'11 1.31258 AU	
	12787 Jan 25 03:42	30°♎		evening rise	12787 Nov 20 15:14	18°♎37'42	
evening set	12787 Jan 27 20:53	28°♎38'01			12787 Nov 26 04:10	0°♎	
min. Earth dist.	12787 Jan 31 15:17	25°♎49'25 0.61153 AU		desc. node	12787 Dec 05 13:16	16°♎37'49	
inferior conj	12787 Feb 03 17:42	23°♎05'37 -2°33'37			12787 Dec 15 04:12	0°♎	
minimum elong	12787 Feb 03 23:06	22°♎53'41 2°30'52		evening max el	12787 Dec 20 02:13	5°♎14'55 26°34'41	
morning rise	12787 Feb 11 04:17	18°♎10'03		retrograde	12788 Jan 03 01:08	12°♎22'10	
asc. node	12787 Feb 11 16:02	18°♎02'24		evening set	12788 Jan 09 14:47	10°♎35'57	
direct	12787 Feb 13 07:23	17°♎51'03		min. Earth dist.	12788 Jan 13 16:07	7°♎59'06 0.58993 AU	
morning max el	12787 Feb 20 08:39	21°♎24'01 17°53'17		inferior conj	12788 Jan 16 19:53	5°♎33'55 -3°55'05	
	12787 Feb 26 21:39	0°♎		minimum elong	12788 Jan 17 03:57	5°♎18'26 3°51'40	
morning set	12787 Mar 07 23:31	15°♎48'27		morning rise	12788 Jan 24 20:01	0°♎59'18	
	12787 Mar 15 21:14	0°♎		direct	12788 Jan 26 21:24	0°♎44'19	
desc. node	12787 Mar 16 17:33	1°♎29'08		asc. node	12788 Jan 29 13:22	1°♎10'42	
				morning max el	12788 Feb 03 19:41	4°♎39'22 18°19'28	
superior conj	12787 Mar 18 15:46	4°♎50'06 -0°15'03		morning set	12788 Feb 19 13:56	29°♎46'39	
minimum elong	12787 Mar 18 14:26	4°♎44'18 0°14'49			12788 Feb 19 16:44	0°♎	
behind sun begin	12787 Mar 18 11:17	4°♎30'41					
behind sun end	12787 Mar 18 17:35	4°♎57'54		superior conj	12788 Feb 28 21:43	17°♎16'25 0°21'13	
max. Earth dist.	12787 Mar 26 01:04	17°♎15'41 1.42989 AU		minimum elong	12788 Feb 28 23:15	17°♎23'25 0°21'16	
evening rise	12787 Apr 01 09:50	27°♎28'25		desc. node	12788 Mar 02 14:06	22°♎06'39	
	12787 Apr 03 00:35	0°♎			12788 Mar 07 02:30	0°♎	
	12787 Apr 23 13:00	0°♎		max. Earth dist.	12788 Mar 07 11:06	0°♎36'44 1.40973 AU	
evening max el	12787 May 03 13:38	12°♎05'40 21°58'35		evening rise	12788 Mar 12 00:40	8°♎14'45	
asc. node	12787 May 10 12:48	17°♎09'20			12788 Mar 26 01:57	0°♎	
retrograde	12787 May 12 22:35	17°♎36'20		evening max el	12788 Apr 15 05:16	25°♎56'10 23°18'47	
evening set	12787 May 17 13:14	15°♎42'24			12788 Apr 19 23:39	0°♎	
inferior conj	12787 May 22 19:52	9°♎23'39 2°59'43		retrograde	12788 Apr 25 18:05	2°♎08'31	
minimum elong	12787 May 22 18:27	9°♎28'37 2°58'40		asc. node	12788 Apr 26 10:07	2°♎06'27	
min. Earth dist.	12787 May 22 20:23	9°♎21'51 0.68823 AU		evening set	12788 Apr 30 20:14	0°♎00'09	
morning rise	12787 May 27 23:28	3°♎10'10			12788 Apr 30 20:18	30°♎	
direct	12787 Jun 01 19:52	1°♎05'50		min. Earth dist.	12788 May 05 17:11	24°♎15'44 0.68788 AU	
morning max el	12787 Jun 11 09:42	6°♎43'54 22°18'33		inferior conj	12788 May 06 05:18	23°♎33'58 2°37'33	
desc. node	12787 Jun 12 18:56	8°♎10'27		minimum elong	12788 May 06 03:19	23°♎40'48 2°36'24	
	12787 Jun 29 09:18	0°♎		morning rise	12788 May 11 10:19	17°♎27'30	
morning set	12787 Jul 14 18:11	23°♎38'56		direct	12788 May 15 17:50	15°♎43'49	

morning max el	12788 May 24 02:31	20° ♄ 31'15	20°56'11	greatest brilliancy	12789 May 19 23:09	21° ♄ 08'43	-0.6m
desc. node	12788 May 29 15:52	26° ♄ 52'57			12789 May 25 22:07	0° ♄	
	12788 Jun 01 01:30	0° ♄		morning set	12789 Jun 02 10:26	11° ♄ 26'24	
	12788 Jun 21 13:44	0° ♄		max. Earth dist.	12789 Jun 13 16:34	28° ♄ 59'14	1.44686 AU
morning set	12788 Jun 23 09:15	2° ♄ 49'02			12789 Jun 14 07:54	0° ♄	
max. Earth dist.	12788 Jul 01 03:47	15° ♄ 10'38	1.43122 AU				
				superior conj	12789 Jun 18 13:11	6° ♄ 45'13	-2°10'17
superior conj	12788 Jul 08 03:19	26° ♄ 43'41	-1°51'24	minimum elong	12789 Jun 18 17:08	7° ♄ 01'07	2°11'07
minimum elong	12788 Jul 08 10:18	27° ♄ 13'14	1°51'40	evening rise	12789 Jul 02 03:41	29° ♄ 16'45	
	12788 Jul 10 01:33	0° ♄			12789 Jul 02 13:54	0° ♄	
evening rise	12788 Jul 19 23:59	17° ♄ 23'38		asc. node	12789 Jul 10 05:56	12° ♄ 51'22	
asc. node	12788 Jul 23 09:06	23° ♄ 23'54		evening max el	12789 Jul 20 02:51	26° ♄ 35'34	18°08'15
	12788 Jul 27 04:22	0° ♄		retrograde	12789 Jul 26 11:38	29° ♄ 56'06	
evening max el	12788 Aug 05 12:37	13° ♄ 13'00	18°03'43	evening set	12789 Jul 29 06:51	29° ♄ 15'03	
retrograde	12788 Aug 12 04:10	16° ♄ 37'55		inferior conj	12789 Aug 04 10:24	23° ♄ 57'04	2°11'15
evening set	12788 Aug 14 15:13	16° ♄ 09'46		minimum elong	12789 Aug 04 12:58	23° ♄ 50'03	2°09'54
inferior conj	12788 Aug 21 08:46	11° ♄ 09'50	1°14'23	min. Earth dist.	12789 Aug 07 02:53	21° ♄ 01'52	0.63165 AU
minimum elong	12788 Aug 21 10:50	11° ♄ 04'51	1°13'16	morning rise	12789 Aug 10 17:12	17° ♄ 43'40	
min. Earth dist.	12788 Aug 24 12:12	8° ♄ 08'59	0.60939 AU	desc. node	12789 Aug 12 11:15	16° ♄ 34'26	
desc. node	12788 Aug 25 13:48	7° ♄ 12'01		direct	12789 Aug 17 09:17	15° ♄ 13'08	
morning rise	12788 Aug 28 03:40	5° ♄ 13'49		morning max el	12789 Aug 31 08:51	23° ♄ 15'05	27°49'38
direct	12788 Sep 03 18:28	3° ♄ 02'25			12789 Sep 06 09:09	0° ♄	
morning max el	12788 Sep 18 00:27	10° ♄ 58'38	27°56'26		12789 Sep 26 05:14	0° ♄	
	12788 Oct 02 22:02	0° ♄		morning set	12789 Oct 04 22:07	16° ♄ 29'19	
asc. node	12788 Oct 19 10:52	29° ♄ 21'33		asc. node	12789 Oct 06 07:32	19° ♄ 19'06	
	12788 Oct 19 18:26	0° ♄		max. Earth dist.	12789 Oct 10 00:07	27° ♄ 03'06	1.32212 AU
morning set	12788 Oct 21 01:42	2° ♄ 40'57			12789 Oct 11 09:03	0° ♄	
max. Earth dist.	12788 Oct 26 21:41	15° ♄ 12'29	1.31474 AU				
				superior conj	12789 Oct 12 16:00	2° ♄ 47'47	0°57'59
superior conj	12788 Oct 28 08:06	18° ♄ 22'43	1°16'31	minimum elong	12789 Oct 12 13:47	2° ♄ 35'43	0°58'03
minimum elong	12788 Oct 28 05:55	18° ♄ 10'40	1°16'52	evening rise	12789 Oct 19 12:19	17° ♄ 44'14	
	12788 Nov 02 14:05	0° ♄			12789 Oct 25 11:09	0° ♄	
evening rise	12788 Nov 04 01:05	3° ♄ 10'09		desc. node	12789 Nov 08 07:41	22° ♄ 02'48	
	12788 Nov 18 04:51	0° ♄		evening max el	12789 Nov 12 05:52	26° ♄ 18'25	23°38'49
desc. node	12788 Nov 21 10:26	4° ♄ 52'48			12789 Nov 16 18:22	0° ♄	
evening max el	12788 Nov 30 19:17	16° ♄ 06'42	25°16'48	retrograde	12789 Nov 25 17:14	3° ♄ 01'17	
retrograde	12788 Dec 14 15:23	23° ♄ 03'37		evening set	12789 Nov 30 07:30	2° ♄ 15'19	
evening set	12788 Dec 20 11:03	21° ♄ 46'56			12789 Dec 05 06:39	30° ♄	
min. Earth dist.	12788 Dec 25 07:21	19° ♄ 06'30	0.56994 AU	min. Earth dist.	12789 Dec 06 16:13	29° ♄ 12'04	0.55435 AU
inferior conj	12788 Dec 28 02:09	17° ♄ 15'31	-5°07'36	inferior conj	12789 Dec 08 12:04	28° ♄ 07'16	-5°50'51
minimum elong	12788 Dec 28 10:20	17° ♄ 01'54	5°04'55	minimum elong	12789 Dec 08 15:05	28° ♄ 02'48	5°49'42
morning rise	12789 Jan 05 11:58	13° ♄ 03'12		morning rise	12789 Dec 17 00:28	24° ♄ 13'44	
direct	12789 Jan 07 17:36	12° ♄ 48'33		direct	12789 Dec 19 18:09	23° ♄ 55'17	
asc. node	12789 Jan 15 10:40	15° ♄ 56'54		morning max el	12789 Dec 30 10:39	29° ♄ 01'07	20°17'34
morning max el	12789 Jan 16 21:33	17° ♄ 14'54	19°07'04		12789 Dec 31 10:15	0° ♄	
	12789 Jan 26 02:10	0° ♄		asc. node	12790 Jan 02 07:52	2° ♄ 07'56	
morning set	12789 Feb 02 13:57	14° ♄ 09'33		morning set	12790 Jan 17 20:15	28° ♄ 47'31	
					12790 Jan 18 10:23	0° ♄	
superior conj	12789 Feb 10 21:35	0° ♄ 31'44	0°50'48				
minimum elong	12789 Feb 11 00:19	0° ♄ 44'51	0°50'58	superior conj	12790 Jan 25 10:52	14° ♄ 23'39	1°13'03
	12789 Feb 10 14:59	0° ♄		minimum elong	12790 Jan 25 13:34	14° ♄ 37'16	1°13'28
desc. node	12789 Feb 17 10:39	12° ♄ 43'32		max. Earth dist.	12790 Jan 31 01:08	25° ♄ 22'26	1.36547 AU
max. Earth dist.	12789 Feb 17 17:58	13° ♄ 16'27	1.38742 AU		12790 Feb 02 12:19	0° ♄	
evening rise	12789 Feb 21 12:41	19° ♄ 55'37		evening rise	12790 Feb 03 20:07	2° ♄ 25'49	
	12789 Feb 27 13:21	0° ♄		desc. node	12790 Feb 04 07:17	3° ♄ 16'26	
	12789 Mar 20 05:23	0° ♄			12790 Feb 20 14:56	0° ♄	
evening max el	12789 Mar 28 19:01	9° ♄ 47'58	24°38'37	evening max el	12790 Mar 11 08:23	23° ♄ 38'34	25°51'04
retrograde	12789 Apr 09 09:58	16° ♄ 35'19			12790 Mar 20 00:46	0° ♄	
asc. node	12789 Apr 13 07:31	15° ♄ 28'02		retrograde	12790 Mar 23 21:18	0° ♄ 50'30	
evening set	12789 Apr 14 23:56	14° ♄ 14'50			12790 Mar 27 11:00	30° ♄	
min. Earth dist.	12789 Apr 19 12:35	9° ♄ 06'26	0.68297 AU	evening set	12790 Mar 29 22:42	28° ♄ 21'25	
inferior conj	12789 Apr 20 13:07	7° ♄ 44'40	2°05'22	asc. node	12790 Mar 31 04:57	27° ♄ 12'07	
minimum elong	12789 Apr 20 10:58	7° ♄ 51'52	2°04'14	min. Earth dist.	12790 Apr 03 04:32	23° ♄ 48'16	0.67372 AU
morning rise	12789 Apr 25 22:11	1° ♄ 46'30		inferior conj	12790 Apr 04 17:25	21° ♄ 52'01	1°22'58
direct	12789 Apr 29 17:21	0° ♄ 23'55		minimum elong	12790 Apr 04 15:36	21° ♄ 57'45	1°22'04
morning max el	12789 May 07 02:42	4° ♄ 30'18	19°46'00	morning rise	12790 Apr 10 09:09	16° ♄ 03'24	
desc. node	12789 May 16 12:42	16° ♄ 12'50		direct	12790 Apr 13 16:50	15° ♄ 00'27	

morning max el	12790 Apr 20 10:24	18° Υ 38'37	18°50'56		12791 Mar 26 04:32	30° \mathbb{R} \mathbb{H}	
	12790 Apr 29 08:48	0° \mathbb{B}		direct	12791 Mar 28 14:27	29° \mathbb{H} 27'52	
desc. node	12790 May 03 09:25	6° \mathbb{B} 00'01			12791 Mar 31 01:17	0° Υ	
greatest brilliancy	12790 May 04 06:52	7° \mathbb{B} 21'40	-0.8m	morning max el	12791 Apr 04 00:02	2° Υ 50'24	18°12'24
morning set	12790 May 12 19:03	20° \mathbb{B} 30'52		desc. node	12791 Apr 20 06:03	26° Υ 07'11	
	12790 May 18 21:19	0° \mathbb{II}			12791 Apr 22 16:00	0° \mathbb{B}	
max. Earth dist.	12790 May 27 09:52	13° \mathbb{II} 17'37	1.45594 AU	morning set	12791 Apr 23 04:37	0° \mathbb{B} 50'42	
superior conj	12790 May 29 03:06	15° \mathbb{II} 59'07	-2°11'33	superior conj	12791 May 08 10:43	25° \mathbb{B} 03'35	-1°52'40
minimum elong	12790 May 28 23:42	15° \mathbb{II} 45'46	2°12'23	minimum elong	12791 May 08 01:50	24° \mathbb{B} 28'45	1°52'42
	12790 Jun 06 23:54	0° \mathbb{B}		max. Earth dist.	12791 May 10 05:21	27° \mathbb{B} 50'17	1.45770 AU
evening rise	12790 Jun 13 07:43	10° \mathbb{B} 09'01			12791 May 11 14:34	0° \mathbb{II}	
	12790 Jun 25 19:33	0° Ω		evening rise	12791 May 24 12:06	20° \mathbb{II} 04'25	
asc. node	12790 Jun 27 02:49	1° Ω 55'42			12791 May 30 21:30	0° \mathbb{B}	
evening max el	12790 Jul 03 15:55	10° Ω 11'55	18°30'54	greatest brilliancy	12791 Jun 04 23:17	7° \mathbb{B} 46'37	-0.7m
retrograde	12790 Jul 10 03:19	13° Ω 41'33		asc. node	12791 Jun 13 23:49	20° \mathbb{B} 29'03	
evening set	12790 Jul 13 06:58	12° Ω 45'36		evening max el	12791 Jun 17 01:24	23° \mathbb{B} 56'06	19°10'45
inferior conj	12790 Jul 19 00:19	7° Ω 11'40	2°47'50	retrograde	12791 Jun 23 23:45	27° \mathbb{B} 47'24	
minimum elong	12790 Jul 19 02:22	7° Ω 05'31	2°46'38	evening set	12791 Jun 27 12:20	26° \mathbb{B} 35'15	
min. Earth dist.	12790 Jul 21 02:52	4° Ω 39'52	0.65150 AU	inferior conj	12791 Jul 02 23:01	20° \mathbb{B} 46'55	3°07'39
morning rise	12790 Jul 24 20:38	0° Ω 49'56		minimum elong	12791 Jul 03 00:05	20° \mathbb{B} 43'27	3°06'37
	12790 Jul 25 22:48	30° \mathbb{R} \mathbb{B}		min. Earth dist.	12791 Jul 04 10:55	18° \mathbb{B} 50'54	0.66764 AU
desc. node	12790 Jul 30 08:39	28° \mathbb{B} 13'06		morning rise	12791 Jul 08 11:14	14° \mathbb{B} 23'23	
direct	12790 Jul 31 08:33	28° \mathbb{B} 09'34		direct	12791 Jul 14 14:50	11° \mathbb{B} 43'21	
	12790 Aug 06 07:58	0° Ω		desc. node	12791 Jul 17 05:57	12° \mathbb{B} 08'29	
morning max el	12790 Aug 13 19:41	6° Ω 05'18	27°08'48	morning max el	12791 Jul 27 06:33	19° \mathbb{B} 17'14	26°02'05
	12790 Sep 01 03:47	0° \mathbb{H}			12791 Aug 05 09:07	0° Ω	
morning set	12790 Sep 18 08:50	29° \mathbb{H} 48'13			12791 Aug 25 05:23	0° \mathbb{H}	
	12790 Sep 18 11:16	0° \mathbb{B}		morning set	12791 Sep 01 06:26	12° \mathbb{H} 29'32	
max. Earth dist.	12790 Sep 22 17:45	8° \mathbb{B} 29'45	1.33480 AU	max. Earth dist.	12791 Sep 05 01:04	19° \mathbb{H} 37'16	1.35250 AU
asc. node	12790 Sep 23 04:08	9° \mathbb{B} 22'47		asc. node	12791 Sep 10 00:43	29° \mathbb{H} 29'09	
					12791 Sep 10 06:48	0° \mathbb{B}	
superior conj	12790 Sep 26 18:49	16° \mathbb{B} 54'31	0°34'05	superior conj	12791 Sep 10 14:05	0° \mathbb{B} 37'00	0°05'19
minimum elong	12790 Sep 26 17:11	16° \mathbb{B} 45'53	0°33'57	minimum elong	12791 Sep 10 13:47	0° \mathbb{B} 35'27	0°05'09
	12790 Oct 02 21:48	0° \mathbb{H}		behind sun begin	12791 Sep 10 08:00	0° \mathbb{B} 06'06	
evening rise	12790 Oct 03 22:59	2° \mathbb{H} 13'59		behind sun end	12791 Sep 10 19:33	1° \mathbb{B} 04'52	
	12790 Oct 19 07:53	0° \mathbb{H}		evening rise	12791 Sep 18 07:09	16° \mathbb{B} 34'40	
evening max el	12790 Oct 24 17:56	6° \mathbb{H} 21'56	21°58'02		12791 Sep 25 01:44	0° \mathbb{H}	
desc. node	12790 Oct 26 05:02	7° \mathbb{H} 43'18		evening max el	12791 Oct 06 16:43	16° \mathbb{H} 54'16	20°29'43
retrograde	12790 Nov 06 07:56	12° \mathbb{H} 36'46		desc. node	12791 Oct 13 02:25	21° \mathbb{H} 26'39	
evening set	12790 Nov 09 11:55	12° \mathbb{H} 14'23		retrograde	12791 Oct 17 18:56	22° \mathbb{H} 24'53	
inferior conj	12790 Nov 18 06:57	8° \mathbb{H} 18'47	-5°42'15	evening set	12791 Oct 19 23:02	22° \mathbb{H} 13'11	
minimum elong	12790 Nov 18 01:13	8° \mathbb{H} 26'50	5°40'44	inferior conj	12791 Oct 28 23:18	18° \mathbb{H} 17'44	-4°35'14
min. Earth dist.	12790 Nov 17 22:46	8° \mathbb{H} 30'16	0.54605 AU	minimum elong	12791 Oct 28 13:14	18° \mathbb{H} 32'22	4°31'50
morning rise	12790 Nov 26 15:39	4° \mathbb{H} 31'33		min. Earth dist.	12791 Oct 30 06:05	17° \mathbb{H} 33'01	0.54701 AU
direct	12790 Nov 30 04:21	4° \mathbb{H} 04'05		morning rise	12791 Nov 06 02:59	14° \mathbb{H} 17'33	
morning max el	12790 Dec 12 09:31	9° \mathbb{H} 53'47	21°49'55	direct	12791 Nov 10 13:22	13° \mathbb{H} 35'15	
asc. node	12790 Dec 20 04:58	19° \mathbb{H} 25'57		morning max el	12791 Nov 23 21:54	20° \mathbb{H} 05'38	23°36'39
	12790 Dec 26 11:47	0° \mathbb{B}			12791 Dec 02 05:29	0° \mathbb{H}	
morning set	12791 Jan 02 06:17	13° \mathbb{B} 32'25		asc. node	12791 Dec 07 01:57	7° \mathbb{H} 35'31	
				morning set	12791 Dec 17 17:59	28° \mathbb{H} 18'33	
superior conj	12791 Jan 09 09:41	28° \mathbb{B} 40'23	1°28'07		12791 Dec 18 12:56	0° \mathbb{B}	
minimum elong	12791 Jan 09 11:39	28° \mathbb{B} 50'42	1°28'49				
	12791 Jan 10 00:53	0° \approx		superior conj	12791 Dec 24 15:00	13° \mathbb{B} 13'11	1°36'25
max. Earth dist.	12791 Jan 13 13:14	7° \approx 13'21	1.34601 AU	minimum elong	12791 Dec 24 15:55	13° \mathbb{B} 18'06	1°37'19
evening rise	12791 Jan 17 19:29	15° \approx 35'52		max. Earth dist.	12791 Dec 27 09:16	19° \mathbb{B} 08'24	1.33049 AU
desc. node	12791 Jan 22 03:58	23° \approx 40'45		evening rise	12792 Jan 01 07:17	29° \mathbb{B} 16'44	
	12791 Jan 25 18:22	0° \mathbb{H}			12792 Jan 01 15:58	0° \approx	
	12791 Feb 15 04:39	0° Υ		desc. node	12792 Jan 09 00:44	13° \approx 51'38	
evening max el	12791 Feb 21 22:00	7° Υ 22'02	26°48'55		12792 Jan 18 21:04	0° \mathbb{H}	
retrograde	12791 Mar 07 03:13	14° Υ 46'28		evening max el	12792 Feb 04 11:09	20° \mathbb{H} 48'28	27°24'44
evening set	12791 Mar 13 14:40	12° Υ 13'56		retrograde	12792 Feb 18 02:35	28° \mathbb{H} 14'30	
min. Earth dist.	12791 Mar 17 14:58	8° Υ 14'38	0.66040 AU	evening set	12792 Feb 24 21:38	25° \mathbb{H} 44'49	
asc. node	12791 Mar 18 02:23	7° Υ 41'42		min. Earth dist.	12792 Feb 28 17:44	22° \mathbb{H} 17'04	0.64353 AU
inferior conj	12791 Mar 19 15:59	5° Υ 51'17	0°29'58	inferior conj	12792 Mar 02 06:18	19° \mathbb{H} 36'07	-0°33'50
minimum elong	12791 Mar 19 15:11	5° Υ 53'37	0°29'39	minimum elong	12792 Mar 02 07:20	19° \mathbb{H} 33'22	0°33'08
morning rise	12791 Mar 25 16:59	0° Υ 14'00					

asc. node	12792 Mar 03 23:48	17° H 48'20		min. Earth dist.	12793 Feb 10 10:58	5° H 45'43	0.62380 AU
morning rise	12792 Mar 08 18:59	14° H 12'31		inferior conj	12793 Feb 13 09:22	2° H 59'01	-1°47'35
direct	12792 Mar 11 07:47	13° H 39'44		minimum elong	12793 Feb 13 13:02	2° H 50'19	1°45'35
morning max el	12792 Mar 17 17:05	16° H 58'02	17°50'58		12793 Feb 16 18:25	30° R \approx	
	12792 Mar 27 05:14	0° Y		asc. node	12793 Feb 18 21:12	28° \approx 35'09	
morning set	12792 Apr 03 18:38	12° Y 33'33		morning rise	12793 Feb 20 11:41	27° \approx 52'16	
desc. node	12792 Apr 06 02:37	16° Y 28'17		direct	12793 Feb 22 17:44	27° \approx 29'10	
	12792 Apr 14 07:19	0° Z			12793 Feb 28 11:16	0° H	
				morning max el	12793 Mar 01 10:36	0° H 53'35	17°47'11
superior conj	12792 Apr 17 05:35	4° Z 43'44	-1°18'28	morning set	12793 Mar 17 08:18	25° H 24'02	
minimum elong	12792 Apr 16 21:36	4° Z 11'38	1°17'57		12793 Mar 19 22:58	0° Y	
max. Earth dist.	12792 Apr 22 00:59	12° Z 22'48	1.45210 AU	desc. node	12793 Mar 23 23:10	6° Y 59'05	
evening rise	12792 May 03 01:14	29° Z 28'33					
	12792 May 03 09:27	0° II		superior conj	12793 Mar 28 23:01	15° Y 28'53	-0°38'03
greatest brilliancy	12792 May 18 02:10	22° II 02'08	-0.6m	minimum elong	12793 Mar 28 19:17	15° Y 13'15	0°37'39
	12792 May 23 18:43	0° E		max. Earth dist.	12793 Apr 04 18:19	26° Y 39'30	1.43970 AU
evening max el	12792 May 30 05:34	7° E 42'50	20°06'16		12793 Apr 06 20:24	0° Z	
asc. node	12792 May 30 20:54	8° E 20'20		evening rise	12793 Apr 12 14:38	9° Z 02'15	
retrograde	12792 Jun 06 22:17	12° E 06'58			12793 Apr 26 14:19	0° II	
evening set	12792 Jun 10 20:28	10° E 38'06		evening max el	12793 May 13 03:56	21° II 30'17	21°14'44
inferior conj	12792 Jun 16 03:34	4° E 36'36	3°13'39	asc. node	12793 May 17 18:04	25° II 16'37	
minimum elong	12792 Jun 16 03:34	4° E 36'35	3°12'42	retrograde	12793 May 21 20:57	26° II 35'29	
min. Earth dist.	12792 Jun 17 01:06	3° E 23'31	0.67937 AU	evening set	12793 May 26 05:29	24° II 50'13	
	12792 Jun 19 17:26	30° R II		inferior conj	12793 May 31 11:36	18° II 37'05	3°07'53
morning rise	12792 Jun 21 10:20	28° II 15'21		minimum elong	12793 May 31 10:39	18° II 40'24	3°06'53
direct	12792 Jun 27 02:48	25° II 44'35		min. Earth dist.	12793 May 31 19:32	18° II 09'31	0.68640 AU
desc. node	12792 Jul 03 03:10	27° II 55'35		morning rise	12793 Jun 05 15:37	12° II 20'26	
	12792 Jul 05 20:05	0° E		direct	12793 Jun 10 19:27	10° II 05'26	
morning max el	12792 Jul 08 16:37	2° E 41'00	24°39'02	desc. node	12793 Jun 20 00:18	15° II 07'39	
	12792 Jul 29 11:59	0° O		morning max el	12793 Jun 21 03:08	16° II 13'13	23°09'27
morning set	12792 Aug 13 10:36	24° O 21'54			12793 Jul 02 11:17	0° E	
	12792 Aug 16 14:28	0° P			12793 Jul 22 12:09	0° O	
max. Earth dist.	12792 Aug 17 00:36	0° P 46'00	1.37409 AU	morning set	12793 Jul 25 16:37	5° O 14'06	
				max. Earth dist.	12793 Jul 29 22:35	12° O 26'01	1.39742 AU
superior conj	12792 Aug 23 22:33	13° P 46'38	-0°27'25				
minimum elong	12792 Aug 24 00:23	13° P 55'32	0°27'26	superior conj	12793 Aug 06 16:18	26° O 14'05	-1°02'04
asc. node	12792 Aug 26 21:19	19° P 34'02		minimum elong	12793 Aug 06 20:49	26° O 34'50	1°01'57
evening rise	12792 Sep 01 10:23	0° A 39'34			12793 Aug 08 17:00	0° P	
	12792 Sep 01 02:28	0° A		asc. node	12793 Aug 13 17:57	9° P 33'48	
evening max el	12792 Sep 18 05:37	28° A 13'05	19°21'35	evening rise	12793 Aug 16 05:45	14° P 21'06	
	12792 Sep 20 05:19	0° M			12793 Aug 24 18:09	0° A	
retrograde	12792 Sep 27 15:41	2° M 55'27		evening max el	12793 Sep 01 06:40	10° A 17'55	18°35'13
desc. node	12792 Sep 28 23:51	2° M 50'06		retrograde	12793 Sep 09 06:45	14° A 19'46	
evening set	12792 Sep 29 12:12	2° M 45'18		evening set	12793 Sep 11 06:02	14° A 05'54	
	12792 Oct 05 23:15	30° R A		desc. node	12793 Sep 15 21:22	11° A 58'44	
inferior conj	12792 Oct 08 03:23	28° A 37'00	-2°51'06	inferior conj	12793 Sep 19 03:51	9° A 37'57	-1°01'52
minimum elong	12792 Oct 07 20:00	28° A 49'05	2°47'57	minimum elong	12793 Sep 19 01:22	9° A 42'41	1°00'48
min. Earth dist.	12792 Oct 10 16:31	26° A 57'27	0.55710 AU	min. Earth dist.	12793 Sep 22 08:45	7° A 12'00	0.57443 AU
morning rise	12792 Oct 16 01:26	24° A 06'15		morning rise	12793 Sep 26 17:16	4° A 29'17	
direct	12792 Oct 21 07:58	23° A 03'20		direct	12793 Oct 02 16:30	3° A 00'12	
	12792 Nov 04 05:14	0° M		morning max el	12793 Oct 16 23:44	10° A 30'39	26°49'27
morning max el	12792 Nov 04 08:12	0° M 07'02	25°22'38		12793 Oct 31 23:31	0° M	
asc. node	12792 Nov 22 22:51	26° M 24'01		asc. node	12793 Nov 09 19:40	15° M 40'50	
	12792 Nov 24 20:44	0° X		morning set	12793 Nov 15 15:27	27° M 35'08	
morning set	12792 Dec 01 05:38	13° X 01'18			12793 Nov 16 18:24	0° X	
superior conj	12792 Dec 08 00:25	27° X 55'05	1°38'24	superior conj	12793 Nov 22 11:48	12° X 39'15	1°34'24
minimum elong	12792 Dec 08 00:12	27° X 53'56	1°39'21	minimum elong	12793 Nov 22 10:36	12° X 32'33	1°35'14
	12792 Dec 08 23:04	0° Z		max. Earth dist.	12793 Nov 22 20:20	13° X 26'55	1.31366 AU
max. Earth dist.	12792 Dec 09 12:37	1° Z 14'27	1.31961 AU	evening rise	12793 Nov 29 08:08	27° X 39'40	
evening rise	12792 Dec 15 04:23	13° Z 20'33			12793 Nov 30 10:48	0° Z	
	12792 Dec 23 18:58	0° \approx		desc. node	12793 Dec 12 18:34	23° Z 06'12	
desc. node	12792 Dec 25 21:35	3° \approx 43'02			12793 Dec 17 04:03	0° \approx	
	12793 Jan 13 06:37	0° H		evening max el	12793 Dec 30 03:10	15° \approx 57'20	27°05'23
evening max el	12793 Jan 16 21:49	3° H 44'54	27°31'49	retrograde	12794 Jan 13 01:48	23° \approx 10'15	
retrograde	12793 Jan 30 18:26	11° H 05'46		evening set	12794 Jan 19 21:22	21° \approx 09'11	
evening set	12793 Feb 06 17:00	8° H 46'18		min. Earth dist.	12794 Jan 23 17:30	18° \approx 27'32	0.60237 AU

inferior conj	12794 Jan 26 21:39	15°  49'33	-3°08'16	evening set	12795 Jan 01 06:39	2°  47'32	
minimum elong	12794 Jan 27 04:19	15°  35'41	3°05'07	min. Earth dist.	12795 Jan 05 13:59	0°  11'22	0.58109 AU
morning rise	12794 Feb 03 14:16	11°  02'50			12795 Jan 05 20:28	30°  R 	
direct	12794 Feb 05 16:12	10°  45'55		inferior conj	12795 Jan 08 15:39	27°  358'34	-4°27'57
asc. node	12794 Feb 05 18:36	10°  45'57		minimum elong	12795 Jan 09 00:14	27°  343'01	4°24'38
morning max el	12794 Feb 13 01:08	14°  26'39	18°01'58	morning rise	12795 Jan 16 20:40	23°  333'47	
	12794 Feb 23 16:32	0°  H		direct	12795 Jan 18 22:49	23°  319'32	
morning set	12794 Feb 28 15:11	9°  H01'39		asc. node	12795 Jan 23 15:55	24°  336'38	
				morning max el	12795 Jan 27 08:51	27°  326'43	18°36'57
superior conj	12794 Mar 10 16:34	27°  H21'03	0°01'03		12795 Jan 29 16:41	0°  H	
minimum elong	12794 Mar 10 16:40	27°  H21'27	0°01'11	morning set	12795 Feb 12 10:06	23°  H11'08	
behind sun begin	12794 Mar 10 08:48	26°  H46'42			12795 Feb 15 22:31	0°  H	
behind sun end	12794 Mar 11 00:31	27°  H56'07					
desc. node	12794 Mar 10 19:43	27°  H34'56		superior conj	12795 Feb 21 06:42	10°  H09'39	0°34'38
	12794 Mar 12 04:46	0°  Y		minimum elong	12795 Feb 21 08:56	10°  H20'02	0°34'42
max. Earth dist.	12794 Mar 18 07:00	10°  Y23'11	1.42175 AU	desc. node	12795 Feb 25 16:15	18°  H12'19	
evening rise	12794 Mar 23 17:53	19°  Y16'35		max. Earth dist.	12795 Feb 28 14:52	23°  H24'12	1.40035 AU
	12794 Mar 30 14:50	0°  B			12795 Mar 04 11:31	0°  Y	
	12794 Apr 21 02:42	0°  II		evening rise	12795 Mar 04 17:43	0°  Y25'56	
evening max el	12794 Apr 25 21:20	5°  II18'32	22°32'14		12795 Mar 24 00:12	0°  B	
asc. node	12794 May 04 15:21	11°  II01'57		evening max el	12795 Apr 08 11:47	19°  B08'52	23°53'12
retrograde	12794 May 05 18:09	11°  II07'45		retrograde	12795 Apr 19 12:24	25°  B37'59	
evening set	12794 May 10 13:41	9°  II07'13		asc. node	12795 Apr 21 12:43	25°  B19'31	
inferior conj	12794 May 15 21:06	2°  II44'42	2°51'34	evening set	12795 Apr 24 19:29	23°  B24'09	
minimum elong	12794 May 15 19:24	2°  II50'37	2°50'26	min. Earth dist.	12795 Apr 29 12:39	17°  B54'54	0.68629 AU
min. Earth dist.	12794 May 15 16:06	3°  II02'05	0.68865 AU	inferior conj	12795 Apr 30 06:05	16°  B55'29	2°25'09
	12794 May 17 21:33	30°  R 		minimum elong	12795 Apr 30 03:58	17°  B02'41	2°23'58
morning rise	12794 May 21 00:59	26°  B34'08		morning rise	12795 May 05 12:29	10°  B52'13	
direct	12794 May 25 15:45	24°  B38'41		direct	12795 May 09 14:33	9°  B17'41	
morning max el	12794 Jun 03 16:52	29°  B54'38	21°42'19	morning max el	12795 May 17 12:39	13°  B46'45	20°24'31
	12794 Jun 03 19:01	0°  II		desc. node	12795 May 24 18:11	22°  B21'44	
desc. node	12794 Jun 06 21:18	3°  II22'06			12795 May 30 06:26	0°  II	
	12794 Jun 26 04:41	0°  B		morning set	12795 Jun 15 04:22	23°  II49'26	
morning set	12794 Jul 05 21:23	14°  B59'47			12795 Jun 19 03:34	0°  B	
max. Earth dist.	12794 Jul 12 00:33	24°  B56'05	1.41977 AU	max. Earth dist.	12795 Jun 24 08:56	8°  B16'52	1.43854 AU
	12794 Jul 15 01:20	0°  B					
superior conj	12794 Jul 19 14:59	7°  B49'56	-1°35'08	superior conj	12795 Jun 30 14:39	18°  B26'04	-2°01'11
minimum elong	12794 Jul 19 21:42	8°  B19'15	1°35'08	minimum elong	12795 Jun 30 20:59	18°  B52'15	2°01'43
evening rise	12794 Jul 30 13:32	27°  B29'54			12795 Jul 07 11:38	0°  B	
asc. node	12794 Jul 31 14:39	29°  B24'52		evening rise	12795 Jul 13 04:56	9°  B53'39	
	12794 Jul 31 22:20	0°  B		asc. node	12795 Jul 18 11:25	19°  B02'17	
evening max el	12794 Aug 15 16:00	23°  B00'56	18°09'37		12795 Jul 25 06:17	0°  B	
retrograde	12794 Aug 22 16:24	26°  B35'19		evening max el	12795 Jul 30 05:31	6°  B11'40	18°03'26
evening set	12794 Aug 24 22:41	26°  B13'32		retrograde	12795 Aug 05 17:01	9°  B32'55	
inferior conj	12794 Sep 01 01:56	21°  B25'08	0°31'12	evening set	12795 Aug 08 07:28	8°  B59'41	
minimum elong	12794 Sep 01 02:57	21°  B22'53	0°30'34	inferior conj	12795 Aug 14 18:38	3°  B52'08	1°41'12
desc. node	12794 Sep 02 18:54	19°  B53'21		minimum elong	12795 Aug 14 21:05	3°  B45'54	1°39'54
min. Earth dist.	12794 Sep 04 08:57	18°  B30'22	0.59610 AU	min. Earth dist.	12795 Aug 17 18:08	0°  B50'54	0.61904 AU
morning rise	12794 Sep 08 03:54	15°  B43'18			12795 Aug 18 15:34	30°  R 	
direct	12794 Sep 14 14:50	13°  B46'10		desc. node	12795 Aug 20 16:24	28°  B16'31	
morning max el	12794 Sep 28 22:53	21°  B36'16	27°43'07	morning rise	12795 Aug 21 08:15	27°  B47'29	
	12794 Oct 06 07:20	0°  B		direct	12795 Aug 28 00:30	25°  B26'30	
	12794 Oct 24 23:35	0°  B			12795 Sep 07 08:39	0°  B	
asc. node	12794 Oct 27 16:25	5°  B18'08		morning max el	12795 Sep 11 04:20	3°  B27'02	27°58'01
morning set	12794 Oct 30 21:43	11°  B55'31			12795 Sep 30 21:28	0°  B	
max. Earth dist.	12794 Nov 06 04:53	25°  B37'46	1.31280 AU	morning set	12795 Oct 14 22:20	25°  B56'25	
				asc. node	12795 Oct 14 13:06	25°  B09'12	
superior conj	12794 Nov 06 23:19	27°  B20'23	1°24'40		12795 Oct 16 21:12	0°  B	
minimum elong	12794 Nov 06 21:23	27°  B09'38	1°25'14	max. Earth dist.	12795 Oct 20 10:21	7°  B36'23	1.31717 AU
	12794 Nov 08 03:56	0°  B					
evening rise	12794 Nov 13 16:19	12°  B08'40		superior conj	12795 Oct 22 09:04	11°  B52'21	1°09'19
	12794 Nov 22 14:31	0°  B		minimum elong	12795 Oct 22 06:49	11°  B39'55	1°09'33
desc. node	12794 Nov 29 15:40	11°  B50'16		evening rise	12795 Oct 29 02:55	26°  B41'40	
evening max el	12794 Dec 12 00:54	27°  B18'11	26°04'53		12795 Oct 30 16:03	0°  B	
	12794 Dec 15 04:13	0°  B		desc. node	12795 Nov 16 12:53	29°  B39'46	
retrograde	12794 Dec 25 23:17	4°  B22'01			12795 Nov 16 18:55	0°  B	
				evening max el	12795 Nov 23 14:39	7°  B50'00	24°36'44

retrograde	12795 Dec 07 08:35	14° ♄ 42'03		retrograde	12796 Nov 17 04:37	24° ♄ 25'40	
evening set	12795 Dec 12 16:41	13° ♄ 39'03		evening set	12796 Nov 21 04:11	23° ♄ 51'12	
min. Earth dist.	12795 Dec 18 02:24	10° ♄ 50'59	0.56254 AU	min. Earth dist.	12796 Nov 28 09:41	20° ♄ 32'45	0.54978 AU
inferior conj	12795 Dec 20 13:01	9° ♄ 18'37	-5°31'01	inferior conj	12796 Nov 29 15:21	19° ♄ 50'23	-5°54'32
minimum elong	12795 Dec 20 19:44	9° ♄ 08'01	5°29'01	minimum elong	12796 Nov 29 14:40	19° ♄ 51'22	5°53'36
morning rise	12795 Dec 29 00:52	5° ♄ 14'50		morning rise	12796 Dec 08 02:37	16° ♄ 01'27	
direct	12795 Dec 31 10:25	4° ♄ 59'13		direct	12796 Dec 11 04:03	15° ♄ 39'37	
morning max el	12796 Jan 10 05:39	9° ♄ 42'09	19°34'11	morning max el	12796 Dec 22 12:25	21° ♄ 04'05	20°54'30
asc. node	12796 Jan 10 13:09	10° ♄ 00'29		asc. node	12796 Dec 27 10:18	26° ♄ 41'31	
	12796 Jan 23 15:42	0° ♄			12796 Dec 29 18:13	0° ♄	
morning set	12796 Jan 27 13:09	7° ♄ 41'23		morning set	12797 Jan 10 21:20	22° ♄ 23'02	
					12797 Jan 14 12:53	0° ♄	
superior conj	12796 Feb 04 12:47	23° ♄ 41'51	1°01'08	superior conj	12797 Jan 18 06:29	7° ♄ 45'06	1°20'18
minimum elong	12796 Feb 04 15:37	23° ♄ 55'46	1°01'23	minimum elong	12797 Jan 18 08:57	7° ♄ 57'40	1°20'50
	12796 Feb 07 18:58	0° ♄			12797 Jan 23 06:09	17° ♄ 45'14	1.35678 AU
max. Earth dist.	12796 Feb 10 21:04	5° ♄ 46'47	1.37792 AU	max. Earth dist.	12797 Jan 27 05:03	25° ♄ 17'31	
desc. node	12796 Feb 12 12:49	8° ♄ 48'03		evening rise	12797 Jan 27 05:03	25° ♄ 17'31	
evening rise	12796 Feb 14 14:24	12° ♄ 29'19		desc. node	12797 Jan 29 09:27	29° ♄ 17'43	
	12796 Feb 25 03:08	0° ♄			12797 Jan 29 18:50	0° ♄	
	12796 Mar 18 03:50	0° ♄			12797 Feb 17 15:38	0° ♄	
evening max el	12796 Mar 21 01:23	3° ♄ 01'29	25°10'51	evening max el	12797 Mar 03 15:04	16° ♄ 50'52	26°17'58
retrograde	12796 Apr 02 02:29	10° ♄ 00'40		retrograde	12797 Mar 16 11:25	24° ♄ 08'39	
asc. node	12796 Apr 07 10:07	7° ♄ 59'05		evening set	12797 Mar 22 17:21	21° ♄ 37'36	
evening set	12796 Apr 07 21:17	7° ♄ 36'20		asc. node	12797 Mar 25 07:32	19° ♄ 06'57	
min. Earth dist.	12796 Apr 12 06:58	2° ♄ 42'47	0.67953 AU	min. Earth dist.	12797 Mar 26 20:47	17° ♄ 19'04	0.66857 AU
inferior conj	12796 Apr 13 12:40	1° ♄ 05'50	1°48'40	inferior conj	12797 Mar 28 14:48	15° ♄ 10'33	1°01'49
minimum elong	12796 Apr 13 10:35	1° ♄ 12'39	1°47'36	minimum elong	12797 Mar 28 13:20	15° ♄ 15'04	1°01'07
	12796 Apr 14 08:58	30° ♄		morning rise	12797 Apr 03 10:09	9° ♄ 26'25	
morning rise	12796 Apr 19 00:13	25° ♄ 11'15		direct	12797 Apr 06 13:27	8° ♄ 30'49	
direct	12796 Apr 22 14:23	23° ♄ 57'09		morning max el	12797 Apr 13 02:28	12° ♄ 00'30	18°32'29
morning max el	12796 Apr 29 16:02	27° ♄ 50'01	19°20'32		12797 Apr 26 07:03	0° ♄	
	12796 May 01 16:55	0° ♄		desc. node	12797 Apr 27 11:35	1° ♄ 50'49	
desc. node	12796 May 10 14:56	11° ♄ 54'25		morning set	12797 May 03 23:53	12° ♄ 04'00	
greatest brilliancy	12796 May 12 10:04	14° ♄ 32'52	-0.7m		12797 May 15 10:21	0° ♄	
	12796 May 22 14:46	0° ♄					
morning set	12796 May 24 05:55	2° ♄ 30'31		superior conj	12797 May 20 00:06	7° ♄ 08'40	-2°05'53
max. Earth dist.	12796 Jun 05 23:48	22° ♄ 19'52	1.45163 AU	minimum elong	12797 May 19 17:41	6° ♄ 43'36	2°06'24
				max. Earth dist.	12797 May 19 18:54	6° ♄ 48'21	1.45770 AU
superior conj	12796 Jun 09 15:05	28° ♄ 04'58	-2°13'17		12797 Jun 03 13:14	0° ♄	
minimum elong	12796 Jun 09 16:12	28° ♄ 09'24	2°14'14	evening rise	12797 Jun 04 16:27	1° ♄ 47'48	
	12796 Jun 10 19:59	0° ♄		greatest brilliancy	12797 Jun 13 02:45	15° ♄ 07'23	-0.8m
evening rise	12796 Jun 23 22:56	21° ♄ 21'22		asc. node	12797 Jun 21 05:13	27° ♄ 12'59	
	12796 Jun 29 04:14	0° ♄			12797 Jun 23 08:08	0° ♄	
asc. node	12796 Jul 04 08:17	8° ♄ 20'50		evening max el	12797 Jun 26 07:30	3° ♄ 21'47	18°45'48
evening max el	12796 Jul 12 19:41	19° ♄ 41'25	18°15'44	retrograde	12797 Jul 02 22:25	6° ♄ 58'55	
retrograde	12796 Jul 19 04:19	23° ♄ 03'48		evening set	12797 Jul 06 05:54	5° ♄ 55'59	
evening set	12796 Jul 22 03:11	22° ♄ 16'29		inferior conj	12797 Jul 11 19:59	0° ♄ 15'33	2°58'04
inferior conj	12796 Jul 28 01:57	16° ♄ 51'37	2°29'00	minimum elong	12797 Jul 11 21:39	0° ♄ 10'22	2°56'57
minimum elong	12796 Jul 28 04:23	16° ♄ 44'41	2°27'42		12797 Jul 12 00:58	30° ♄	
min. Earth dist.	12796 Jul 30 12:44	14° ♄ 04'37	0.64059 AU	min. Earth dist.	12797 Jul 13 16:12	27° ♄ 58'09	0.65892 AU
morning rise	12796 Aug 03 04:04	10° ♄ 34'01		morning rise	12797 Jul 17 12:35	23° ♄ 52'35	
desc. node	12796 Aug 06 13:48	8° ♄ 33'58		direct	12797 Jul 23 21:20	21° ♄ 11'31	
direct	12796 Aug 09 19:09	7° ♄ 57'58		desc. node	12797 Jul 24 11:09	21° ♄ 12'42	
morning max el	12796 Aug 23 13:50	15° ♄ 58'11	27°35'52	morning max el	12797 Aug 06 00:56	28° ♄ 59'06	26°43'03
	12796 Sep 04 03:04	0° ♄			12797 Aug 07 00:32	0° ♄	
	12796 Sep 22 15:30	0° ♄			12797 Aug 28 23:08	0° ♄	
morning set	12796 Sep 27 14:55	9° ♄ 32'23		morning set	12797 Sep 10 20:31	22° ♄ 36'26	
asc. node	12796 Sep 30 09:44	15° ♄ 09'32			12797 Sep 14 15:49	0° ♄	
max. Earth dist.	12796 Oct 02 09:16	19° ♄ 16'08	1.32691 AU	max. Earth dist.	12797 Sep 14 22:50	0° ♄ 34'55	1.34181 AU
				asc. node	12797 Sep 17 06:21	5° ♄ 14'59	
superior conj	12796 Oct 05 15:04	26° ♄ 10'02	0°48'29	superior conj	12797 Sep 19 15:02	10° ♄ 07'27	0°22'26
minimum elong	12796 Oct 05 13:01	25° ♄ 58'58	0°48'26	minimum elong	12797 Sep 19 13:52	10° ♄ 01'22	0°22'16
	12796 Oct 07 09:36	0° ♄			12797 Sep 27 00:02	25° ♄ 41'15	
evening rise	12796 Oct 12 14:08	11° ♄ 14'11		evening rise	12797 Sep 29 01:47	0° ♄	
	12796 Oct 22 01:43	0° ♄					
desc. node	12796 Nov 02 10:10	16° ♄ 14'30		evening max el	12797 Oct 16 16:28	28° ♄ 05'24	21°18'13
evening max el	12796 Nov 04 00:47	17° ♄ 53'25	22°55'14		12797 Oct 18 19:09	0° ♄	

desc. node	12797 Oct 20 07:32	1°♊08'58		behind sun begin	12798 Sep 03 01:10	23°♎12'05	
retrograde	12797 Oct 28 16:20	4°♊03'06		behind sun end	12798 Sep 03 12:03	24°♎06'27	
evening set	12797 Oct 31 08:25	3°♊46'34		asc. node	12798 Sep 04 02:56	25°♎21'05	
inferior conj	12797 Nov 09 07:20	29°♍52'26	-5°20'15		12798 Sep 06 10:00	0°♊	
minimum elong	12797 Nov 08 22:49	0°♊04'24	5°17'53	evening rise	12798 Sep 11 06:25	9°♊56'07	
	12797 Nov 09 01:57	30°♍			12798 Sep 22 00:07	0°♍	
min. Earth dist.	12797 Nov 09 15:52	29°♍40'26	0.54528 AU	evening max el	12798 Sep 28 21:07	8°♍56'12	19°58'04
morning rise	12797 Nov 17 13:56	26°♍02'42		desc. node	12798 Oct 07 04:59	13°♍54'48	
direct	12797 Nov 21 11:55	25°♍29'43		retrograde	12798 Oct 09 06:28	14°♍06'39	
	12797 Dec 02 09:59	0°♊		evening set	12798 Oct 11 05:17	13°♍56'30	
morning max el	12797 Dec 04 06:00	1°♊36'42	22°34'26	inferior conj	12798 Oct 20 03:12	9°♍56'40	-3°53'40
asc. node	12797 Dec 14 07:20	14°♊23'18		minimum elong	12798 Oct 19 17:38	10°♍11'11	3°50'01
	12797 Dec 22 21:26	0°♊		min. Earth dist.	12798 Oct 22 00:22	8°♍48'09	0.55019 AU
morning set	12797 Dec 26 08:19	7°♊09'36		morning rise	12798 Oct 28 04:40	5°♍44'55	
				direct	12798 Nov 01 23:34	4°♍54'50	
superior conj	12798 Jan 02 08:26	22°♊09'53	1°32'26	morning max el	12798 Nov 15 16:38	11°♍40'42	24°23'00
minimum elong	12798 Jan 02 09:58	22°♊18'05	1°33'15		12798 Nov 29 12:42	0°♊	
max. Earth dist.	12798 Jan 05 21:46	29°♊37'36	1.33885 AU	asc. node	12798 Dec 01 04:17	2°♊50'40	
	12798 Jan 06 02:06	0°♊		morning set	12798 Dec 10 20:12	21°♊54'51	
evening rise	12798 Jan 10 10:07	8°♊41'42			12798 Dec 14 13:29	0°♊	
desc. node	12798 Jan 16 06:11	19°♊37'12					
	12798 Jan 22 07:33	0°♋		superior conj	12798 Dec 17 15:46	6°♊47'27	1°38'00
	12798 Feb 13 16:59	0°♋		minimum elong	12798 Dec 17 16:12	6°♊49'48	1°38'57
evening max el	12798 Feb 14 04:34	0°♋28'11	27°07'10	max. Earth dist.	12798 Dec 19 20:56	11°♊36'06	1.32522 AU
retrograde	12798 Feb 27 14:28	7°♋54'09		evening rise	12798 Dec 25 02:12	22°♊32'53	
evening set	12798 Mar 06 05:46	5°♋21'43			12798 Dec 28 20:45	0°♊	
min. Earth dist.	12798 Mar 10 04:02	1°♋36'33	0.65369 AU	desc. node	12799 Jan 03 03:01	9°♊40'32	
	12798 Mar 11 14:31	30°♋			12799 Jan 16 01:58	0°♋	
inferior conj	12798 Mar 12 10:10	29°♋04'20	0°04'13	evening max el	12799 Jan 27 16:41	13°♋42'25	27°31'31
minimum elong	12798 Mar 12 10:03	29°♋04'41	0°04'18	retrograde	12799 Feb 10 11:00	21°♋07'45	
transit middle	12798 Mar 12 10:03	29°♋04'41	0°04'18	evening set	12799 Feb 17 08:11	18°♋41'06	
transit begin	12798 Mar 12 07:09	29°♋12'52		min. Earth dist.	12799 Feb 21 02:51	15°♋25'50	0.63540 AU
transit end	12798 Mar 12 12:56	28°♋56'31		inferior conj	12799 Feb 23 20:04	12°♋40'28	-1°04'00
asc. node	12798 Mar 12 04:56	29°♋19'08		minimum elong	12799 Feb 23 22:08	12°♋35'14	1°02'47
morning rise	12798 Mar 18 15:53	23°♋32'47		asc. node	12799 Feb 27 02:21	9°♋35'17	
direct	12798 Mar 21 09:32	22°♋52'44		morning rise	12799 Mar 02 14:24	7°♋23'59	
morning max el	12798 Mar 27 17:57	26°♋11'47	18°01'13	direct	12799 Mar 04 23:59	6°♋55'53	
	12798 Mar 31 01:48	0°♋		morning max el	12799 Mar 11 11:39	10°♋15'39	17°47'13
desc. node	12798 Apr 14 08:11	22°♋04'28			12799 Mar 24 21:18	0°♋	
morning set	12798 Apr 14 21:48	23°♋00'09		morning set	12799 Mar 27 22:39	5°♋14'01	
	12798 Apr 19 04:46	0°♌		desc. node	12799 Apr 01 04:47	12°♋30'17	
superior conj	12798 Apr 29 10:30	16°♌23'07	-1°39'30	superior conj	12799 Apr 09 14:19	26°♋29'53	-1°01'34
minimum elong	12798 Apr 29 01:17	15°♌46'43	1°39'13	minimum elong	12799 Apr 09 08:00	26°♋04'05	1°01'03
max. Earth dist.	12798 May 02 15:00	21°♌23'48	1.45624 AU		12799 Apr 11 18:05	0°♌	
	12798 May 08 03:26	0°♌		max. Earth dist.	12799 Apr 15 09:31	5°♌50'08	1.44752 AU
evening rise	12798 May 15 12:49	11°♌25'44		evening rise	12799 Apr 25 00:04	20°♌49'02	
	12798 May 27 17:12	0°♌			12799 May 01 01:07	0°♌	
greatest brilliancy	12798 May 28 21:16	1°♌44'10	-0.7m		12799 May 22 19:24	0°♌	
asc. node	12798 Jun 08 02:14	15°♌29'43		evening max el	12799 May 23 16:24	0°♌54'23	20°34'00
evening max el	12798 Jun 09 14:45	17°♌06'55	19°32'32	asc. node	12799 May 25 23:22	2°♌59'56	
retrograde	12798 Jun 16 20:09	21°♌11'17		retrograde	12799 May 31 19:05	5°♌35'45	
evening set	12798 Jun 20 12:43	19°♌51'58		evening set	12799 Jun 04 21:28	4°♌00'01	
inferior conj	12798 Jun 25 21:30	13°♌57'34	3°11'45		12799 Jun 08 14:22	30°♌	
minimum elong	12798 Jun 25 22:07	13°♌55'32	3°10'46	inferior conj	12799 Jun 10 03:51	27°♌53'16	3°12'35
min. Earth dist.	12798 Jun 27 03:08	12°♌19'24	0.67317 AU	minimum elong	12799 Jun 10 03:25	27°♌54'44	3°11'36
morning rise	12798 Jul 01 07:04	7°♌34'28		min. Earth dist.	12799 Jun 10 19:33	26°♌59'14	0.68289 AU
direct	12798 Jul 07 06:01	4°♌57'41		morning rise	12799 Jun 15 09:06	21°♌33'28	
desc. node	12798 Jul 11 08:24	5°♌58'46		direct	12799 Jun 20 20:15	19°♌08'40	
morning max el	12798 Jul 19 11:41	12°♌17'42	25°28'11	desc. node	12799 Jun 28 05:34	22°♌25'31	
	12798 Aug 02 17:18	0°♌		morning max el	12799 Jul 01 21:47	25°♌46'11	24°01'08
	12798 Aug 21 16:12	0°♎			12799 Jul 05 18:30	0°♌	
morning set	12798 Aug 24 11:16	4°♎58'26			12799 Jul 27 05:38	0°♌	
max. Earth dist.	12798 Aug 28 02:31	11°♎40'33	1.36129 AU	morning set	12799 Aug 06 06:41	16°♌27'34	
				max. Earth dist.	12799 Aug 10 00:14	22°♌58'17	1.38391 AU
superior conj	12798 Sep 03 06:06	23°♎36'40	-0°08'13		12799 Aug 13 21:29	0°♎	
minimum elong	12798 Sep 03 06:37	23°♎39'15	0°08'20				

























































































































superior conj	12799 Aug 17 08:52	6° \mathbb{M} 30'04	-0°42'03	minimum elong	12800 Jul 30 00:42	19° \mathcal{O} 02'29	1°16'26
minimum elong	12799 Aug 17 11:48	6° \mathbb{M} 44'01	0°42'00		12800 Aug 04 23:48	0° \mathbb{M}	
asc. node	12799 Aug 21 23:34	15° \mathbb{M} 24'39		asc. node	12800 Aug 07 20:14	5° \mathbb{M} 21'25	
evening rise	12799 Aug 26 06:45	23° \mathbb{M} 52'28		evening rise	12800 Aug 08 21:41	7° \mathbb{M} 21'18	
	12799 Aug 29 10:09	0° \mathcal{L}			12800 Aug 22 06:13	0° \mathcal{L}	
evening max el	12799 Sep 11 15:43	20° \mathcal{L} 36'02	18°59'16	evening max el	12800 Aug 24 20:52	2° \mathcal{L} 58'49	18°21'51
retrograde	12799 Sep 20 10:16	24° \mathcal{L} 59'33		retrograde	12800 Sep 01 09:16	6° \mathcal{L} 46'44	
evening set	12799 Sep 22 07:02	24° \mathcal{L} 48'26		evening set	12800 Sep 03 11:26	6° \mathcal{L} 29'52	
desc. node	12799 Sep 24 02:28	24° \mathcal{L} 17'47		desc. node	12800 Sep 09 23:58	2° \mathcal{L} 44'06	
inferior conj	12799 Sep 30 15:26	20° \mathcal{L} 32'39	-2°03'45	inferior conj	12800 Sep 11 01:13	1° \mathcal{L} 53'13	-0°19'42
minimum elong	12799 Sep 30 10:09	20° \mathcal{L} 41'51	2°01'26	minimum elong	12800 Sep 11 00:29	1° \mathcal{L} 54'43	0°19'29
min. Earth dist.	12799 Oct 03 13:20	18° \mathcal{L} 31'24	0.56375 AU		12800 Sep 13 08:35	30° \mathbb{R} \mathbb{M}	
morning rise	12799 Oct 08 10:11	15° \mathcal{L} 45'34		min. Earth dist.	12800 Sep 14 08:35	29° \mathbb{M} 12'30	0.58339 AU
direct	12799 Oct 14 00:25	14° \mathcal{L} 31'44		morning rise	12800 Sep 18 10:03	26° \mathbb{M} 29'45	
morning max el	12799 Oct 28 04:34	21° \mathcal{L} 48'27	26°02'47	direct	12800 Sep 24 15:18	24° \mathbb{M} 48'25	
	12799 Nov 04 09:29	0° \mathbb{M}			12800 Oct 06 05:43	0° \mathcal{L}	
asc. node	12799 Nov 18 01:11	21° \mathbb{M} 52'16		morning max el	12800 Oct 08 23:02	2° \mathcal{L} 27'37	27°16'48
	12799 Nov 22 04:10	0° \mathcal{L}			12800 Oct 28 20:23	0° \mathbb{M}	
morning set	12799 Nov 25 07:16	6° \mathcal{L} 34'09		asc. node	12800 Nov 03 22:00	11° \mathbb{M} 18'53	
				morning set	12800 Nov 08 15:49	21° \mathbb{M} 02'58	
superior conj	12799 Dec 02 02:17	21° \mathcal{L} 31'09	1°37'24		12800 Nov 12 18:36	0° \mathcal{L}	
minimum elong	12799 Dec 02 01:38	21° \mathcal{L} 27'31	1°38'20	superior conj	12800 Nov 15 13:58	6° \mathcal{L} 15'02	1°30'58
max. Earth dist.	12799 Dec 03 02:19	23° \mathcal{L} 44'29	1.31645 AU	minimum elong	12800 Nov 15 12:25	6° \mathcal{L} 06'23	1°31'42
	12799 Dec 05 22:43	0° \mathcal{L}		max. Earth dist.	12800 Nov 15 10:53	5° \mathcal{L} 57'45	1.31267 AU
evening rise	12799 Dec 09 02:26	6° \mathcal{L} 44'01		evening rise	12800 Nov 22 08:21	21° \mathcal{L} 08'39	
desc. node	12799 Dec 20 23:57	29° \mathcal{L} 20'55			12800 Nov 26 15:01	0° \mathcal{L}	
	12799 Dec 21 09:11	0° \mathcal{L}		desc. node	12800 Dec 06 21:00	18° \mathcal{L} 29'22	
evening max el	12800 Jan 10 01:26	26° \mathcal{L} 21'31	27°24'53		12800 Dec 14 19:50	0° \mathcal{L}	
	12800 Jan 14 10:05	0° \mathcal{L}		evening max el	12800 Dec 22 04:06	8° \mathcal{L} 14'10	26°43'47
retrograde	12800 Jan 23 23:39	3° \mathcal{L} 39'45		retrograde	12801 Jan 05 02:55	15° \mathcal{L} 22'36	
evening set	12800 Jan 30 21:38	1° \mathcal{L} 27'14		evening set	12801 Jan 11 18:28	13° \mathcal{L} 32'24	
	12800 Feb 01 22:58	30° \mathbb{R} \mathcal{L}		min. Earth dist.	12801 Jan 15 18:09	10° \mathcal{L} 54'47	0.59314 AU
min. Earth dist.	12800 Feb 03 15:50	28° \mathcal{L} 35'43	0.61472 AU	inferior conj	12801 Jan 18 22:18	8° \mathcal{L} 25'49	-3°42'56
inferior conj	12800 Feb 06 17:18	25° \mathcal{L} 50'44	-2°21'20	minimum elong	12801 Jan 19 06:03	8° \mathcal{L} 10'36	3°39'31
minimum elong	12800 Feb 06 22:14	25° \mathcal{L} 39'36	2°18'47	morning rise	12801 Jan 26 20:34	3° \mathcal{L} 47'55	
asc. node	12800 Feb 13 23:46	20° \mathcal{L} 53'36		direct	12801 Jan 28 21:59	3° \mathcal{L} 32'31	
morning rise	12800 Feb 14 01:44	20° \mathcal{L} 52'04		asc. node	12801 Jan 30 21:08	3° \mathcal{L} 47'09	
direct	12800 Feb 16 05:28	20° \mathcal{L} 32'10		morning max el	12801 Feb 05 16:26	7° \mathcal{L} 23'28	18°14'14
morning max el	12800 Feb 23 04:20	24° \mathcal{L} 02'43	17°51'06		12801 Feb 20 03:11	0° \mathcal{L}	
	12800 Feb 27 23:41	0° \mathcal{L}		morning set	12801 Feb 21 09:00	2° \mathcal{L} 20'23	
morning set	12800 Mar 09 20:21	18° \mathcal{L} 26'36					
	12800 Mar 16 07:28	0° \mathcal{Y}		superior conj	12801 Mar 02 21:03	20° \mathcal{L} 02'03	0°16'06
desc. node	12800 Mar 18 01:19	3° \mathcal{Y} 03'33		minimum elong	12801 Mar 02 22:16	20° \mathcal{L} 07'33	0°16'10
superior conj	12800 Mar 20 18:10	7° \mathcal{Y} 43'57	-0°21'00	desc. node	12801 Mar 04 21:52	23° \mathcal{L} 40'55	
minimum elong	12800 Mar 20 16:15	7° \mathcal{Y} 35'41	0°20'43		12801 Mar 08 12:28	0° \mathcal{Y}	
max. Earth dist.	12800 Mar 28 00:36	19° \mathcal{Y} 52'53	1.43257 AU	max. Earth dist.	12801 Mar 10 11:31	3° \mathcal{Y} 21'01	1.41297 AU
	12800 Apr 03 08:31	0° \mathcal{L}		evening rise	12801 Mar 15 05:45	11° \mathcal{Y} 15'11	
evening rise	12800 Apr 03 18:00	0° \mathcal{L} 37'06			12801 Mar 27 07:33	0° \mathcal{L}	
	12800 Apr 23 14:41	0° \mathbb{I}		evening max el	12801 Apr 18 04:37	28° \mathcal{L} 32'34	23°06'38
evening max el	12800 May 05 12:33	14° \mathbb{I} 42'36	21°47'00		12801 Apr 19 17:08	0° \mathbb{I}	
asc. node	12800 May 11 20:36	19° \mathbb{I} 28'23		retrograde	12801 Apr 28 13:13	4° \mathbb{I} 38'52	
retrograde	12800 May 14 17:15	20° \mathbb{I} 06'30		asc. node	12801 Apr 28 17:54	4° \mathbb{I} 38'42	
evening set	12800 May 19 06:19	18° \mathbb{I} 14'48		evening set	12801 May 03 13:41	2° \mathbb{I} 32'25	
inferior conj	12800 May 24 12:45	11° \mathbb{I} 57'34	3°02'13		12801 May 06 00:05	30° \mathbb{R} \mathcal{L}	
minimum elong	12800 May 24 11:27	12° \mathbb{I} 02'07	3°01'10	inferior conj	12801 May 08 22:15	26° \mathcal{L} 07'06	2°41'34
min. Earth dist.	12800 May 24 15:12	11° \mathbb{I} 49'02	0.68792 AU	minimum elong	12801 May 08 20:20	26° \mathcal{L} 13'45	2°40'25
morning rise	12800 May 29 16:23	5° \mathbb{I} 43'14		min. Earth dist.	12801 May 08 11:58	26° \mathcal{L} 42'43	0.68827 AU
direct	12800 Jun 03 14:45	3° \mathbb{I} 35'57		morning rise	12801 May 14 02:55	19° \mathcal{L} 59'39	
morning max el	12800 Jun 13 09:06	9° \mathbb{I} 21'36	22°31'35	direct	12801 May 18 12:19	18° \mathcal{L} 12'55	
desc. node	12800 Jun 14 02:38	10° \mathbb{I} 06'33		morning max el	12801 May 27 01:02	23° \mathcal{L} 07'16	21°07'46
	12800 Jun 29 13:41	0° \mathcal{L}		desc. node	12801 May 31 23:35	28° \mathcal{L} 42'01	
morning set	12800 Jul 17 02:05	26° \mathcal{L} 51'44			12801 Jun 02 00:27	0° \mathbb{I}	
	12800 Jul 18 23:57	0° \mathcal{L}			12801 Jun 22 21:00	0° \mathcal{L}	
max. Earth dist.	12800 Jul 21 23:02	4° \mathcal{L} 57'11	1.40726 AU	morning set	12801 Jun 26 20:27	6° \mathcal{L} 10'14	
				max. Earth dist.	12801 Jul 04 04:05	17° \mathcal{L} 51'34	1.42842 AU
superior conj	12800 Jul 29 19:06	18° \mathcal{L} 37'18	-1°16'33				

superior conj	12801 Jul 11 08:21	29° \mathfrak{D} 48'44	-1°47'24			12802 Jul 03 22:24	0° \mathcal{O}	
minimum elong	12801 Jul 11 15:24	0° \mathcal{O} 18'44	1°47'37	evening rise		12802 Jul 05 06:01	2° \mathcal{O} 14'33	
	12801 Jul 11 11:00	0° \mathcal{O}		asc. node		12802 Jul 12 13:46	14° \mathcal{O} 38'08	
evening rise	12801 Jul 22 23:06	20° \mathcal{O} 12'42		evening max el		12802 Jul 22 22:34	29° \mathcal{O} 14'59	18°06'24
asc. node	12801 Jul 25 16:58	25° \mathcal{O} 07'31				12802 Jul 23 17:46	0° \mathfrak{M}	
	12801 Jul 28 11:11	0° \mathfrak{M}		retrograde		12802 Jul 29 07:49	2° \mathfrak{M} 35'24	
evening max el	12801 Aug 08 08:26	15° \mathfrak{M} 54'56	18°04'36	evening set		12802 Aug 01 01:45	1° \mathfrak{M} 56'31	
retrograde	12801 Aug 15 01:57	19° \mathfrak{M} 21'57				12802 Aug 03 22:56	30° \mathfrak{R} \mathcal{O}	
evening set	12801 Aug 17 11:43	18° \mathfrak{M} 55'33		inferior conj		12802 Aug 07 07:09	26° \mathcal{O} 41'11	2°03'57
inferior conj	12801 Aug 24 07:41	13° \mathfrak{M} 58'24	1°03'45	minimum elong		12802 Aug 07 09:43	26° \mathcal{O} 34'17	2°02'37
minimum elong	12801 Aug 24 09:32	13° \mathfrak{M} 54'02	1°02'45	min. Earth dist.		12802 Aug 10 01:33	23° \mathcal{O} 43'46	0.62842 AU
min. Earth dist.	12801 Aug 27 12:15	10° \mathfrak{M} 58'28	0.60592 AU	morning rise		12802 Aug 13 15:39	20° \mathcal{O} 29'38	
desc. node	12801 Aug 27 21:27	10° \mathfrak{M} 37'59		desc. node		12802 Aug 14 18:54	19° \mathcal{O} 43'14	
morning rise	12801 Aug 31 04:25	8° \mathfrak{M} 05'42		direct		12802 Aug 20 07:55	18° \mathcal{O} 01'16	
direct	12801 Sep 06 18:22	5° \mathfrak{M} 57'56		morning max el		12802 Sep 03 08:54	26° \mathcal{O} 03'31	27°52'57
morning max el	12801 Sep 21 01:06	13° \mathfrak{M} 52'44	27°54'19			12802 Sep 07 00:43	0° \mathfrak{M}	
	12801 Oct 03 23:51	0° \mathfrak{L}				12802 Sep 27 13:36	0° \mathfrak{L}	
	12801 Oct 21 06:12	0° \mathfrak{M}		morning set		12802 Oct 07 17:29	19° \mathfrak{L} 07'54	
asc. node	12801 Oct 21 18:42	1° \mathfrak{M} 03'00		asc. node		12802 Oct 08 15:21	20° \mathfrak{L} 59'12	
morning set	12801 Oct 23 19:56	5° \mathfrak{M} 15'56				12802 Oct 12 22:18	0° \mathfrak{M}	
max. Earth dist.	12801 Oct 29 18:48	18° \mathfrak{M} 05'58	1.31404 AU	max. Earth dist.		12802 Oct 12 22:06	29° \mathfrak{L} 58'51	1.32067 AU
superior conj	12801 Oct 31 00:56	20° \mathfrak{M} 52'58	1°18'51	superior conj		12802 Oct 15 09:21	5° \mathfrak{M} 20'04	1°01'10
minimum elong	12801 Oct 30 22:49	20° \mathfrak{M} 41'10	1°19'16	minimum elong		12802 Oct 15 07:07	5° \mathfrak{M} 07'47	1°01'15
	12801 Nov 04 03:28	0° \mathfrak{X}		evening rise		12802 Oct 22 04:54	20° \mathfrak{M} 14'15	
evening rise	12801 Nov 06 17:48	5° \mathfrak{X} 40'21				12802 Oct 26 21:15	0° \mathfrak{X}	
	12801 Nov 19 08:27	0° \mathfrak{Z}		desc. node		12802 Nov 10 15:21	24° \mathfrak{X} 13'43	
desc. node	12801 Nov 23 18:08	6° \mathfrak{Z} 52'41		evening max el		12802 Nov 15 09:22	29° \mathfrak{X} 28'38	23°54'01
evening max el	12801 Dec 03 22:19	19° \mathfrak{Z} 13'12	25°30'05			12802 Nov 15 22:39	0° \mathfrak{Z}	
retrograde	12801 Dec 17 19:04	26° \mathfrak{Z} 12'01		retrograde		12802 Nov 28 22:53	6° \mathfrak{Z} 14'30	
evening set	12801 Dec 23 18:14	24° \mathfrak{Z} 50'30		evening set		12802 Dec 03 18:00	5° \mathfrak{Z} 24'15	
min. Earth dist.	12801 Dec 28 10:32	22° \mathfrak{Z} 11'55	0.57272 AU	min. Earth dist.		12802 Dec 09 20:10	2° \mathfrak{Z} 25'28	0.55625 AU
inferior conj	12801 Dec 31 07:39	20° \mathfrak{Z} 14'46	-4°57'59	inferior conj		12802 Dec 11 20:18	1° \mathfrak{Z} 13'13	-5°47'13
minimum elong	12801 Dec 31 16:06	20° \mathfrak{Z} 00'24	4°55'04	minimum elong		12802 Dec 12 00:28	1° \mathfrak{Z} 06'58	5°45'53
morning rise	12802 Jan 08 16:28	15° \mathfrak{Z} 59'23				12802 Dec 13 22:01	30° \mathfrak{R} \mathfrak{X}	
direct	12802 Jan 10 20:56	15° \mathfrak{Z} 44'58		morning rise		12802 Dec 20 08:50	27° \mathfrak{X} 17'22	
asc. node	12802 Jan 17 18:25	18° \mathfrak{Z} 19'12		direct		12802 Dec 23 00:02	26° \mathfrak{X} 59'53	
morning max el	12802 Jan 19 19:57	20° \mathfrak{Z} 05'53	18°58'30			12802 Dec 31 02:54	0° \mathfrak{Z}	
	12802 Jan 27 07:19	0° \mathfrak{A}		morning max el		12803 Jan 02 11:05	1° \mathfrak{Z} 59'40	20°05'37
morning set	12802 Feb 05 07:47	16° \mathfrak{A} 40'16		asc. node		12803 Jan 04 15:36	4° \mathfrak{Z} 18'05	
	12802 Feb 12 02:45	0° \mathfrak{H}				12803 Jan 19 22:19	0° \mathfrak{A}	
				morning set		12803 Jan 20 13:18	1° \mathfrak{A} 16'10	
superior conj	12802 Feb 13 18:33	3° \mathfrak{H} 11'07	0°46'46	superior conj		12803 Jan 28 06:03	16° \mathfrak{A} 58'07	1°10'08
minimum elong	12802 Feb 13 21:11	3° \mathfrak{H} 23'41	0°46'53	minimum elong		12803 Jan 28 08:49	17° \mathfrak{A} 11'56	1°10'30
desc. node	12802 Feb 19 18:25	14° \mathfrak{H} 18'11		max. Earth dist.		12803 Feb 03 01:07	28° \mathfrak{A} 15'09	1.36862 AU
max. Earth dist.	12802 Feb 20 18:37	16° \mathfrak{H} 06'31	1.39081 AU			12803 Feb 03 23:28	0° \mathfrak{H}	
evening rise	12802 Feb 24 14:38	22° \mathfrak{H} 48'03		evening rise		12803 Feb 06 19:20	5° \mathfrak{H} 11'24	
	12802 Feb 28 21:51	0° \mathfrak{Y}		desc. node		12803 Feb 06 15:01	4° \mathfrak{H} 51'55	
	12802 Mar 21 04:46	0° \mathfrak{B}				12803 Feb 21 20:09	0° \mathfrak{Y}	
evening max el	12802 Mar 31 18:25	12° \mathfrak{B} 23'50	24°26'58	evening max el		12803 Mar 14 07:43	26° \mathfrak{Y} 14'53	25°41'04
retrograde	12802 Apr 12 05:45	19° \mathfrak{B} 06'54				12803 Mar 18 14:51	0° \mathfrak{B}	
asc. node	12802 Apr 15 15:16	18° \mathfrak{B} 15'21		retrograde		12803 Mar 26 17:53	3° \mathfrak{B} 24'13	
evening set	12802 Apr 17 17:58	16° \mathfrak{B} 47'54		evening set		12803 Apr 01 17:33	0° \mathfrak{B} 56'13	
min. Earth dist.	12802 Apr 22 07:42	11° \mathfrak{B} 34'12	0.68399 AU	asc. node		12803 Apr 02 12:40	0° \mathfrak{B} 13'34	
inferior conj	12802 Apr 23 06:26	10° \mathfrak{B} 17'57	2°10'54			12803 Apr 02 18:19	30° \mathfrak{R} \mathfrak{Y}	
minimum elong	12802 Apr 23 04:16	10° \mathfrak{B} 25'12	2°09'45	min. Earth dist.		12803 Apr 06 00:20	26° \mathfrak{Y} 17'45	0.67534 AU
morning rise	12802 Apr 28 14:44	4° \mathfrak{B} 18'29		inferior conj		12803 Apr 07 11:22	24° \mathfrak{Y} 26'13	1°30'04
direct	12802 May 02 11:37	2° \mathfrak{B} 52'55		minimum elong		12803 Apr 07 09:28	24° \mathfrak{Y} 32'18	1°29'07
morning max el	12802 May 10 00:05	7° \mathfrak{B} 04'49	19°55'29	morning rise		12803 Apr 13 01:56	18° \mathfrak{Y} 35'59	
desc. node	12802 May 18 20:24	17° \mathfrak{B} 56'55		direct		12803 Apr 16 11:13	17° \mathfrak{Y} 30'16	
	12802 May 27 03:58	0° \mathfrak{I}		morning max el		12803 Apr 23 06:41	21° \mathfrak{Y} 11'59	18°58'03
morning set	12802 Jun 05 22:30	14° \mathfrak{I} 49'15				12803 Apr 30 10:52	0° \mathfrak{B}	
	12802 Jun 15 16:09	0° \mathfrak{D}		desc. node		12803 May 05 17:07	7° \mathfrak{B} 40'33	
max. Earth dist.	12802 Jun 16 15:48	1° \mathfrak{D} 33'44	1.44488 AU	greatest brilliancy		12803 May 06 15:40	9° \mathfrak{B} 05'33	-0.8m
superior conj	12802 Jun 21 21:45	9° \mathfrak{D} 59'10	-2°08'25	morning set		12803 May 16 04:33	23° \mathfrak{B} 45'34	
minimum elong	12802 Jun 22 02:29	10° \mathfrak{D} 18'24	2°09'12			12803 May 20 05:03	0° \mathfrak{I}	

max. Earth dist.	12803 May 30 08:16	15° Π 47'40	1.45502 AU		12804 May 11 22:36	0° Π	
				max. Earth dist.	12804 May 12 03:46	0° Π 20'10	1.45797 AU
superior conj	12803 Jun 01 13:59	19° Π 18'27	-2°12'41	evening rise	12804 May 26 21:16	23° Π 18'47	
minimum elong	12803 Jun 01 11:46	19° Π 09'45	2°13'34		12804 May 31 04:03	0° \mathfrak{D}	
	12803 Jun 08 08:03	0° \mathfrak{D}		greatest brilliancy	12804 Jun 06 14:46	9° \mathfrak{D} 58'23	-0.8m
evening rise	12803 Jun 16 13:41	13° \mathfrak{D} 15'48		asc. node	12804 Jun 15 07:37	22° \mathfrak{D} 25'13	
	12803 Jun 26 23:12	0° Ω		evening max el	12804 Jun 18 22:11	26° \mathfrak{D} 33'25	19°03'47
asc. node	12803 Jun 29 10:38	3° Ω 46'31			12804 Jun 23 19:56	0° Ω	
evening max el	12803 Jul 06 12:00	12° Ω 49'51	18°26'27	retrograde	12804 Jun 25 18:18	0° Ω 20'30	
retrograde	12803 Jul 12 22:26	16° Ω 17'13			12804 Jun 27 15:30	30° \mathfrak{R} \mathfrak{D}	
evening set	12803 Jul 16 00:49	15° Ω 23'36		evening set	12804 Jun 29 05:34	29° \mathfrak{D} 10'44	
inferior conj	12803 Jul 21 19:28	9° Ω 52'05	2°43'23	inferior conj	12804 Jul 04 17:03	23° \mathfrak{D} 24'30	3°05'34
minimum elong	12803 Jul 21 21:37	9° Ω 45'39	2°42'10	minimum elong	12804 Jul 04 18:17	23° \mathfrak{D} 20'33	3°04'31
min. Earth dist.	12803 Jul 24 00:14	7° Ω 15'48	0.64877 AU	min. Earth dist.	12804 Jul 06 07:06	21° \mathfrak{D} 22'41	0.66555 AU
morning rise	12803 Jul 27 17:13	3° Ω 31'12		morning rise	12804 Jul 10 06:20	17° \mathfrak{D} 01'02	
desc. node	12803 Aug 01 16:17	1° Ω 00'20		direct	12804 Jul 16 11:24	14° \mathfrak{D} 20'26	
direct	12803 Aug 03 06:06	0° Ω 51'30		desc. node	12804 Jul 18 13:36	14° \mathfrak{D} 36'18	
morning max el	12803 Aug 16 19:24	8° Ω 49'04	27°16'41	morning max el	12804 Jul 29 06:18	21° \mathfrak{D} 58'09	26°13'14
	12803 Sep 02 07:57	0° \mathfrak{M}			12804 Aug 05 06:44	0° Ω	
	12803 Sep 19 22:25	0° $\underline{\Omega}$			12804 Aug 25 13:46	0° \mathfrak{M}	
morning set	12803 Sep 21 05:49	2° $\underline{\Omega}$ 31'38		morning set	12804 Sep 03 05:35	15° \mathfrak{M} 18'53	
asc. node	12803 Sep 25 11:57	11° $\underline{\Omega}$ 02'22		max. Earth dist.	12804 Sep 07 01:54	22° \mathfrak{M} 38'05	1.34960 AU
max. Earth dist.	12803 Sep 25 17:04	11° $\underline{\Omega}$ 28'35	1.33259 AU		12804 Sep 10 19:01	0° $\underline{\Omega}$	
				asc. node	12804 Sep 11 08:34	1° $\underline{\Omega}$ 08'40	
superior conj	12803 Sep 29 13:05	19° $\underline{\Omega}$ 30'00	0°38'04				
minimum elong	12803 Sep 29 11:19	19° $\underline{\Omega}$ 20'36	0°37'56	superior conj	12804 Sep 12 09:39	3° $\underline{\Omega}$ 16'33	0°09'57
	12803 Oct 04 10:30	0° \mathfrak{M}		minimum elong	12804 Sep 12 09:06	3° $\underline{\Omega}$ 13'43	0°09'48
evening rise	12803 Oct 06 15:46	4° \mathfrak{M} 44'56		behind sun begin	12804 Sep 12 04:19	2° $\underline{\Omega}$ 49'14	
	12803 Oct 20 04:51	0° \mathfrak{X}		behind sun end	12804 Sep 12 13:53	3° $\underline{\Omega}$ 38'14	
evening max el	12803 Oct 27 20:37	9° \mathfrak{X} 31'07	22°12'32	evening rise	12804 Sep 20 00:26	19° $\underline{\Omega}$ 07'23	
desc. node	12803 Oct 28 12:40	10° \mathfrak{X} 09'24			12804 Sep 25 10:06	0° \mathfrak{M}	
retrograde	12803 Nov 09 14:46	15° \mathfrak{X} 50'53		evening max el	12804 Oct 08 17:28	19° \mathfrak{M} 57'42	20°41'41
evening set	12803 Nov 12 23:32	15° \mathfrak{X} 25'51		desc. node	12804 Oct 14 10:04	24° \mathfrak{M} 12'32	
min. Earth dist.	12803 Nov 21 02:55	11° \mathfrak{X} 48'50	0.54673 AU	retrograde	12804 Oct 20 01:26	25° \mathfrak{M} 35'24	
inferior conj	12803 Nov 21 16:45	11° \mathfrak{X} 29'23	-5°47'27	evening set	12804 Oct 22 08:09	25° \mathfrak{M} 22'45	
minimum elong	12803 Nov 21 12:15	11° \mathfrak{X} 35'43	5°46'11	inferior conj	12804 Oct 31 08:33	21° \mathfrak{M} 28'07	-4°48'32
morning rise	12803 Nov 30 02:10	7° \mathfrak{X} 42'10		minimum elong	12804 Oct 30 22:37	21° \mathfrak{M} 42'22	4°45'20
direct	12803 Dec 03 11:52	7° \mathfrak{X} 16'17		min. Earth dist.	12804 Nov 01 09:47	20° \mathfrak{M} 51'54	0.54627 AU
morning max el	12803 Dec 15 11:55	12° \mathfrak{X} 59'46	21°35'01	morning rise	12804 Nov 08 12:58	17° \mathfrak{M} 31'24	
asc. node	12803 Dec 22 12:41	21° \mathfrak{X} 26'57		direct	12804 Nov 12 20:18	16° \mathfrak{M} 51'37	
	12803 Dec 27 19:20	0° \mathfrak{Z}		morning max el	12804 Nov 26 01:19	23° \mathfrak{M} 16'01	23°20'25
morning set	12804 Jan 04 22:55	16° \mathfrak{Z} 00'36			12804 Dec 02 00:41	0° \mathfrak{X}	
	12804 Jan 11 13:55	0° \approx		asc. node	12804 Dec 08 09:42	9° \mathfrak{X} 29'54	
				morning set	12804 Dec 19 10:30	0° \mathfrak{Z} 47'12	
superior conj	12804 Jan 12 03:39	1° \approx 11'54	1°26'16		12804 Dec 19 01:37	0° \mathfrak{Z}	
minimum elong	12804 Jan 12 05:46	1° \approx 22'54	1°26'56				
max. Earth dist.	12804 Jan 16 12:19	10° \approx 07'32	1.34866 AU	superior conj	12804 Dec 26 08:11	15° \mathfrak{Z} 42'53	1°35'33
evening rise	12804 Jan 20 16:35	18° \approx 16'33		minimum elong	12804 Dec 26 09:15	15° \mathfrak{Z} 48'42	1°36'27
desc. node	12804 Jan 24 11:43	25° \approx 18'13		max. Earth dist.	12804 Dec 29 07:18	22° \mathfrak{Z} 02'14	1.33251 AU
	12804 Jan 27 03:22	0° \mathfrak{H}			12805 Jan 02 04:02	0° \approx	
	12804 Feb 16 00:57	0° \mathfrak{Y}		evening rise	12805 Jan 03 02:44	1° \approx 53'30	
evening max el	12804 Feb 24 21:28	10° \mathfrak{Y} 00'57	26°41'34	desc. node	12805 Jan 10 08:29	15° \approx 31'46	
retrograde	12804 Mar 09 00:38	17° \mathfrak{Y} 24'00			12805 Jan 19 01:27	0° \mathfrak{H}	
evening set	12804 Mar 15 10:40	14° \mathfrak{Y} 51'47		evening max el	12805 Feb 06 10:50	23° \mathfrak{H} 31'01	27°21'05
asc. node	12804 Mar 19 10:04	10° \mathfrak{Y} 52'24			12805 Feb 15 13:50	0° \mathfrak{Y}	
min. Earth dist.	12804 Mar 19 11:46	10° \mathfrak{Y} 47'28	0.66262 AU	retrograde	12805 Feb 20 00:56	0° \mathfrak{Y} 57'02	
inferior conj	12804 Mar 21 10:57	8° \mathfrak{Y} 27'43	0°38'44		12805 Feb 24 05:25	30° \mathfrak{R} \mathfrak{H}	
minimum elong	12804 Mar 21 09:57	8° \mathfrak{Y} 30'41	0°38'19	evening set	12805 Feb 26 19:08	28° \mathfrak{H} 26'30	
morning rise	12804 Mar 27 10:24	2° \mathfrak{Y} 48'28		min. Earth dist.	12805 Mar 02 15:47	24° \mathfrak{H} 54'20	0.64626 AU
direct	12804 Mar 30 09:20	1° \mathfrak{Y} 59'58		inferior conj	12805 Mar 05 02:42	22° \mathfrak{H} 15'25	-0°23'25
morning max el	12804 Apr 05 19:34	5° \mathfrak{Y} 24'03	18°17'04	minimum elong	12805 Mar 05 03:24	22° \mathfrak{H} 13'31	0°22'54
desc. node	12804 Apr 21 13:46	27° \mathfrak{Y} 45'28		asc. node	12805 Mar 06 07:30	20° \mathfrak{H} 58'38	
	12804 Apr 22 23:30	0° \mathfrak{Z}		morning rise	12805 Mar 11 13:30	16° \mathfrak{H} 49'37	
morning set	12804 Apr 25 09:57	3° \mathfrak{Z} 53'27		direct	12805 Mar 14 03:33	16° \mathfrak{H} 14'59	
				morning max el	12805 Mar 20 12:19	19° \mathfrak{H} 33'03	17°53'06
superior conj	12804 May 10 21:26	28° \mathfrak{Z} 21'38	-1°56'41		12805 Mar 28 10:05	0° \mathfrak{Y}	
minimum elong	12804 May 10 12:58	27° \mathfrak{Z} 48'32	1°56'52	morning set	12805 Apr 06 19:59	15° \mathfrak{Y} 25'07	

desc. node	12805 Apr 08 10:23	18° Υ 05'04	morning max el	12806 Mar 04 05:59	3° X 30'59	17°46'37
	12805 Apr 15 16:00	0° B	morning set	12806 Mar 20 06:28	28° X 06'27	
				12806 Mar 21 08:25	0° Υ	
superior conj	12805 Apr 20 13:42	7° B 54'17 -1°24'16	desc. node	12806 Mar 26 06:58	8° Υ 34'44	
minimum elong	12805 Apr 20 05:14	7° B 20'28 1°23'47				
max. Earth dist.	12805 Apr 24 23:49	14° B 54'55 1.45344 AU	superior conj	12806 Apr 01 03:28	18° Υ 29'07 -0°44'15	
	12805 May 04 16:42	0° II	minimum elong	12806 Mar 31 23:04	18° Υ 10'46 0°43'47	
evening rise	12805 May 06 11:53	2° II 45'44	max. Earth dist.	12806 Apr 07 17:34	29° Υ 14'44 1.44192 AU	
greatest brilliancy	12805 May 21 07:19	25° II 02'02 -0.6m		12806 Apr 08 04:52	0° B	
	12805 May 24 18:55	0° E	evening rise	12806 Apr 16 00:12	12° B 15'21	
evening max el	12805 Jun 02 03:12	10° E 20'06 19°57'03		12806 Apr 27 19:07	0° II	
asc. node	12805 Jun 02 04:41	10° E 23'49	evening max el	12806 May 16 02:22	24° II 07'31 21°03'50	
retrograde	12805 Jun 09 16:43	14° E 38'41	asc. node	12806 May 20 01:52	27° II 29'39	
evening set	12805 Jun 13 13:28	13° E 12'13	retrograde	12806 May 24 15:34	29° II 06'30	
inferior conj	12805 Jun 18 20:54	7° E 12'28 3°13'32	evening set	12806 May 28 22:28	27° II 23'37	
minimum elong	12805 Jun 18 21:04	7° E 11'54 3°12'34	inferior conj	12806 Jun 03 04:35	21° II 11'58 3°09'28	
min. Earth dist.	12805 Jun 19 20:29	5° E 52'52 0.67795 AU	minimum elong	12806 Jun 03 03:46	21° II 14'50 3°08'28	
morning rise	12805 Jun 24 04:20	0° E 50'44	min. Earth dist.	12806 Jun 03 14:28	20° II 37'38 0.68564 AU	
	12805 Jun 25 05:09	30° R II	morning rise	12806 Jun 08 08:50	14° II 54'25	
direct	12805 Jun 29 22:32	28° II 18'16	direct	12806 Jun 13 14:31	12° II 36'52	
desc. node	12805 Jul 05 10:49	0° E 08'25	desc. node	12806 Jun 22 07:58	17° II 09'25	
	12805 Jul 05 05:16	0° E	morning max el	12806 Jun 24 02:58	18° II 52'36 23°22'49	
morning max el	12805 Jul 11 16:34	5° E 20'57 24°52'02		12806 Jul 03 11:49	0° E	
	12805 Jul 30 17:07	0° Ω		12806 Jul 23 20:04	0° Ω	
morning set	12805 Aug 16 12:40	27° Ω 19'30	morning set	12806 Jul 28 22:19	8° Ω 21'45	
	12805 Aug 18 00:42	0° M	max. Earth dist.	12806 Aug 02 00:17	15° Ω 19'47 1.39392 AU	
max. Earth dist.	12805 Aug 20 02:29	3° M 45'54 1.37068 AU				
			superior conj	12806 Aug 09 16:13	29° Ω 06'17 -0°56'49	
superior conj	12805 Aug 26 19:58	16° M 31'50 -0°22'18	minimum elong	12806 Aug 09 20:18	29° Ω 25'18 0°56'43	
minimum elong	12805 Aug 26 21:26	16° M 39'00 0°22'19		12806 Aug 10 03:46	0° M	
asc. node	12805 Aug 29 05:12	21° M 14'20	asc. node	12806 Aug 16 01:51	11° M 15'16	
	12805 Sep 02 13:49	0° A	evening rise	12806 Aug 19 01:24	17° M 01'15	
evening rise	12805 Sep 04 04:36	3° A 15'31		12806 Aug 25 23:35	0° A	
	12805 Sep 20 01:55	0° M	evening max el	12806 Sep 04 03:45	13° A 07'46 18°40'46	
evening max el	12805 Sep 21 04:17	1° M 09'27 19°30'23	retrograde	12806 Sep 12 08:23	17° A 15'01	
retrograde	12805 Sep 30 20:16	5° M 59'07	evening set	12806 Sep 14 06:47	17° A 02'02	
desc. node	12805 Oct 01 07:32	5° M 58'28	desc. node	12806 Sep 18 05:01	15° A 25'06	
evening set	12805 Oct 02 17:01	5° M 49'07	inferior conj	12806 Sep 22 07:25	12° A 37'20 -1°17'40	
inferior conj	12805 Oct 11 10:14	1° M 43'10 -3°07'54	minimum elong	12806 Sep 22 04:14	12° A 43'15 1°16'18	
minimum elong	12805 Oct 11 02:10	1° M 56'05 3°04'34	min. Earth dist.	12806 Sep 25 10:58	10° A 17'12 0.57146 AU	
min. Earth dist.	12805 Oct 13 19:36	0° M 11'36 0.55503 AU	morning rise	12806 Sep 29 22:17	7° A 34'03	
	12805 Oct 14 03:03	30° R A	direct	12806 Oct 05 19:16	6° A 09'02	
morning rise	12805 Oct 19 09:15	27° A 17'46	morning max el	12806 Oct 20 02:04	13° A 36'27 26°38'24	
direct	12805 Oct 24 12:47	26° A 18'28		12806 Nov 02 01:56	0° M	
	12805 Nov 03 12:44	0° M	asc. node	12806 Nov 12 03:31	17° M 26'45	
morning max el	12805 Nov 07 11:30	3° M 17'34 25°07'40	morning set	12806 Nov 18 08:31	0° A 06'44	
asc. node	12805 Nov 25 06:39	28° M 13'39		12806 Nov 18 07:15	0° A	
	12805 Nov 26 05:43	0° A				
morning set	12805 Dec 03 22:18	15° A 31'13	superior conj	12806 Nov 25 04:22	15° A 08'32 1°35'23	
			minimum elong	12806 Nov 25 03:18	15° A 02'36 1°36'14	
superior conj	12805 Dec 10 17:09	0° B 24'14 1°38'28	max. Earth dist.	12806 Nov 25 16:57	16° A 18'38 1.31419 AU	
minimum elong	12805 Dec 10 17:06	0° B 24'00 1°39'27		12806 Dec 01 23:20	0° B	
	12805 Dec 10 12:45	0° B	evening rise	12806 Dec 02 01:33	0° B 11'43	
max. Earth dist.	12805 Dec 12 09:45	4° B 07'07 1.32093 AU	desc. node	12806 Dec 15 02:20	24° B 54'53	
evening rise	12805 Dec 17 22:40	15° B 54'33		12806 Dec 18 06:15	0° \approx	
	12805 Dec 25 04:10	0° \approx	evening max el	12807 Jan 02 04:10	18° \approx 51'52 27°11'31	
desc. node	12805 Dec 28 05:22	5° \approx 26'50	retrograde	12807 Jan 16 02:50	26° \approx 06'29	
	12806 Jan 13 20:47	0° X	evening set	12807 Jan 22 23:17	24° \approx 02'05	
evening max el	12806 Jan 19 21:56	6° X 32'21 27°32'42	min. Earth dist.	12807 Jan 26 18:38	21° \approx 18'17 0.60559 AU	
retrograde	12806 Feb 02 17:57	13° X 54'24	inferior conj	12807 Jan 29 22:21	18° \approx 37'51 -2°55'53	
evening set	12806 Feb 09 16:25	11° X 32'45	minimum elong	12807 Jan 30 04:35	18° \approx 24'36 2°52'51	
min. Earth dist.	12806 Feb 13 10:26	8° X 28'40 0.62692 AU	morning rise	12807 Feb 06 12:54	13° \approx 48'04	
inferior conj	12806 Feb 16 07:38	5° X 41'50 -1°35'49	asc. node	12807 Feb 08 02:17	13° \approx 31'42	
minimum elong	12806 Feb 16 10:51	5° X 34'03 1°34'02	direct	12807 Feb 08 15:08	13° \approx 30'31	
asc. node	12806 Feb 21 04:54	1° X 35'26	morning max el	12807 Feb 15 21:13	17° \approx 08'18 17°58'31	
morning rise	12806 Feb 23 07:51	0° X 32'33		12807 Feb 24 23:52	0° X	
direct	12806 Feb 25 14:47	0° X 08'15	morning set	12807 Mar 03 11:08	11° X 38'06	

desc. node	12807 Mar 13 03:31	29° K 10'13			12808 Jan 30 00:19	0° \approx	
			morning max el	12808 Jan 30 06:11	0° \approx 14'06	18°30'22	
superior conj	12807 Mar 13 17:34	0° Y 11'55 -0°04'37	morning set	12808 Feb 15 04:33	25° \approx 44'00		
minimum elong	12807 Mar 13 17:11	0° Y 10'14 0°04'28		12808 Feb 17 09:43	0° K		
behind sun begin	12807 Mar 13 09:25	29° K 36'12					
behind sun end	12807 Mar 14 00:56	0° Y 44'11	superior conj	12808 Feb 24 04:54	12° K 53'01	0°29'59	
	12807 Mar 13 14:51	0° Y	minimum elong	12808 Feb 24 06:54	13° K 02'20	0°30'01	
max. Earth dist.	12807 Mar 21 06:44	13° Y 03'18 1.42466 AU	desc. node	12808 Feb 28 00:02	19° K 47'48		
evening rise	12807 Mar 27 00:44	22° Y 22'22	max. Earth dist.	12808 Mar 02 15:12	26° K 11'01	1.40366 AU	
	12807 Mar 31 21:52	0° B		12808 Mar 04 20:45	0° Y		
	12807 Apr 21 23:10	0° II	evening rise	12808 Mar 06 21:22	3° Y 23'47		
evening max el	12807 Apr 28 20:24	7° II 55'52 22°20'22		12808 Mar 24 03:43	0° B		
asc. node	12807 May 06 23:06	13° II 27'09	evening max el	12808 Apr 10 11:11	21° B 46'13	23°41'13	
retrograde	12807 May 08 13:06	13° II 38'51	retrograde	12808 Apr 21 07:47	28° B 09'40		
evening set	12807 May 13 06:54	11° II 40'35	asc. node	12808 Apr 22 20:25	27° B 59'00		
inferior conj	12807 May 18 13:59	5° II 19'17 2°54'41	evening set	12808 Apr 26 13:07	25° B 57'46		
minimum elong	12807 May 18 12:23	5° II 24'52 2°53'36	inferior conj	12808 May 01 23:08	19° B 29'54	2°29'47	
min. Earth dist.	12807 May 18 10:55	5° II 29'59 0.68858 AU	minimum elong	12808 May 01 21:04	19° B 37'00	2°28'38	
	12807 May 22 19:16	30° K 8	min. Earth dist.	12808 May 01 07:36	20° B 23'09	0.68695 AU	
morning rise	12807 May 23 17:43	29° B 07'36	morning rise	12808 May 07 05:00	13° B 25'25		
direct	12807 May 28 10:26	27° B 09'01	direct	12808 May 11 08:58	11° B 47'40		
	12807 Jun 03 20:32	0° II	morning max el	12808 May 19 10:38	16° B 22'57	20°35'17	
morning max el	12807 Jun 06 16:00	2° II 32'50 21°54'50	desc. node	12808 May 26 01:52	24° B 09'36		
desc. node	12807 Jun 09 04:59	5° II 15'58		12808 May 30 09:09	0° II		
	12807 Jun 27 10:25	0° B	morning set	12808 Jun 17 16:20	27° II 13'32		
morning set	12807 Jul 09 06:54	18° B 17'48		12808 Jun 19 11:09	0° B		
max. Earth dist.	12807 Jul 15 01:10	27° B 41'20 1.41664 AU	max. Earth dist.	12808 Jun 26 08:34	10° B 55'15	1.43611 AU	
	12807 Jul 16 10:23	0° B					
superior conj	12807 Jul 22 18:02	10° B 50'53 -1°30'25	superior conj	12808 Jul 02 21:15	21° B 36'20	-1°57'58	
minimum elong	12807 Jul 23 00:32	11° B 19'24 1°30'23	minimum elong	12808 Jul 03 03:55	22° B 04'07	1°58'24	
evening rise	12807 Aug 02 11:13	0° B 15'53		12808 Jul 07 20:39	0° B		
	12807 Aug 02 07:46	0° B	evening rise	12808 Jul 15 05:19	12° B 47'05		
asc. node	12807 Aug 02 22:33	1° B 08'11	asc. node	12808 Jul 19 19:16	20° B 48'03		
evening max el	12807 Aug 18 12:07	25° B 46'00 18°12'07		12808 Jul 25 07:37	0° B		
retrograde	12807 Aug 25 15:17	29° B 23'20	evening max el	12808 Aug 01 01:15	8° B 53'32	18°03'08	
evening set	12807 Aug 27 20:25	29° B 02'58	retrograde	12808 Aug 07 13:55	12° B 15'40		
inferior conj	12807 Sep 04 02:22	24° B 17'41 0°18'31	evening set	12808 Aug 10 03:12	11° B 44'15		
minimum elong	12807 Sep 04 02:59	24° B 16'20 0°18'05	inferior conj	12808 Aug 16 16:32	6° B 39'21	1°32'01	
desc. node	12807 Sep 05 02:30	23° B 24'48	minimum elong	12808 Aug 16 18:52	6° B 33'30	1°30'47	
min. Earth dist.	12807 Sep 07 09:52	21° B 25'45 0.59278 AU	min. Earth dist.	12808 Aug 19 17:33	3° B 37'48	0.61571 AU	
morning rise	12807 Sep 11 06:09	18° B 40'17	desc. node	12808 Aug 21 23:58	1° B 37'22		
direct	12807 Sep 17 15:53	16° B 46'58	morning rise	12808 Aug 23 07:59	0° B 37'34		
morning max el	12807 Oct 01 23:58	24° B 34'42 27°37'30	direct	12808 Aug 24 07:31	30° K 8		
	12807 Oct 06 23:06	0° B		12808 Aug 29 23:55	28° B 19'43		
	12807 Oct 26 09:21	0° B	morning max el	12808 Sep 05 01:37	0° B		
asc. node	12807 Oct 30 00:17	7° B 01'19		12808 Sep 13 04:31	6° B 18'48	27°58'15	
morning set	12807 Nov 02 15:23	14° B 29'02		12808 Oct 01 02:38	0° B		
max. Earth dist.	12807 Nov 09 01:27	28° B 29'19 1.31257 AU	asc. node	12808 Oct 15 20:59	26° B 50'57		
			morning set	12808 Oct 16 16:58	28° B 33'19		
superior conj	12807 Nov 09 15:58	29° B 50'14 1°26'32		12808 Oct 17 09:42	0° B		
minimum elong	12807 Nov 09 14:07	29° B 39'58 1°27'07	max. Earth dist.	12808 Oct 22 07:40	10° B 30'56	1.31618 AU	
	12807 Nov 09 17:43	0° K					
evening rise	12807 Nov 16 09:10	14° K 39'21	superior conj	12808 Oct 24 02:06	14° B 24'10	1°12'01	
	12807 Nov 23 23:11	0° B	minimum elong	12808 Oct 23 23:51	14° B 11'48	1°12'18	
desc. node	12807 Dec 01 23:23	13° B 45'28	evening rise	12808 Oct 30 19:32	29° B 12'28		
	12807 Dec 14 18:28	0° \approx		12808 Oct 31 04:22	0° K		
evening max el	12807 Dec 15 03:11	0° \approx 20'50 26°16'00	desc. node	12808 Nov 16 14:55	0° B		
retrograde	12807 Dec 29 01:57	7° \approx 26'04	evening max el	12808 Nov 17 20:33	1° B 44'32		
evening set	12808 Jan 04 11:41	5° \approx 47'26	retrograde	12808 Nov 25 18:08	10° B 59'48	24°51'12	
min. Earth dist.	12808 Jan 08 16:38	3° \approx 11'20 0.58409 AU	evening set	12808 Dec 09 12:59	17° B 53'33		
inferior conj	12808 Jan 11 19:15	0° \approx 53'50 -4°16'34	min. Earth dist.	12808 Dec 15 01:20	16° B 45'51		
minimum elong	12808 Jan 12 03:44	0° \approx 38'11 4°13'10	inferior conj	12808 Dec 20 06:00	14° B 00'52	0.56499 AU	
	12808 Jan 13 00:43	30° K 8	minimum elong	12808 Dec 22 19:46	12° B 21'49	-5°23'27	
morning rise	12808 Jan 19 22:41	26° B 25'38		12808 Dec 23 03:07	12° B 09'59	5°21'13	
direct	12808 Jan 22 00:22	26° B 11'14	morning rise	12808 Dec 31 07:03	8° B 15'05		
asc. node	12808 Jan 25 23:37	27° B 07'15	direct	12809 Jan 02 15:03	7° B 59'53		
			asc. node	12809 Jan 11 20:53	12° B 18'07		

morning max el	12809 Jan 12 04:49	12°  36'58	19°24'12	asc. node	12809 Dec 29 18:03	28°  48'27	
	12809 Jan 24 00:48	0° 			12809 Dec 30 15:40	0° 	
morning set	12809 Jan 29 06:38	10°  12'15		morning set	12810 Jan 13 14:11	24°  52'35	
					12810 Jan 16 01:25	0° 	
superior conj	12809 Feb 06 08:54	26°  19'53	0°57'35				
minimum elong	12809 Feb 06 11:44	26°  33'37	0°57'46	superior conj	12810 Jan 21 01:08	10°  19'08	1°17'50
	12809 Feb 08 06:27	0° 		minimum elong	12810 Jan 21 03:42	10°  32'09	1°18'20
max. Earth dist.	12809 Feb 12 21:41	8°  40'12	1.38125 AU	max. Earth dist.	12810 Jan 26 06:03	20°  40'52	1.35976 AU
desc. node	12809 Feb 13 20:37	10°  42'15		evening rise	12810 Jan 30 03:19	28°  01'45	
evening rise	12809 Feb 16 15:08	15°  19'54			12810 Jan 31 05:08	0° 	
	12809 Feb 25 10:14	0° 		desc. node	12810 Jan 31 17:15	0°  55'00	
	12809 Mar 18 20:08	0° 			12810 Feb 18 18:03	0° 	
evening max el	12809 Mar 24 00:53	5°  39'00	24°59'42	evening max el	12810 Mar 06 14:26	19°  28'51	26°08'51
retrograde	12809 Apr 04 22:28	12°  34'02		retrograde	12810 Mar 19 08:13	26°  44'44	
asc. node	12809 Apr 09 17:46	10°  35'42		evening set	12810 Mar 25 12:39	24°  14'14	
evening set	12809 Apr 10 15:36	10°  10'59		asc. node	12810 Mar 27 15:11	22°  13'58	
min. Earth dist.	12809 Apr 15 02:19	5°  12'15	0.68089 AU	min. Earth dist.	12810 Mar 29 16:54	19°  50'41	0.67049 AU
inferior conj	12809 Apr 16 06:12	3°  40'33	1°54'53	inferior conj	12810 Mar 31 09:08	17°  46'16	1°09'39
minimum elong	12809 Apr 16 04:05	3°  47'32	1°53'46	minimum elong	12810 Mar 31 07:31	17°  51'15	1°08'52
	12809 Apr 19 05:30	30°  49'00		morning rise	12810 Apr 06 03:10	12°  00'36	
morning rise	12809 Apr 21 16:50	27°  44'40		direct	12810 Apr 09 07:59	11°  02'29	
direct	12809 Apr 25 08:45	26°  27'34		morning max el	12810 Apr 15 22:24	14°  34'44	18°38'35
	12809 May 02 02:34	0° 			12810 Apr 27 12:16	0° 	
morning max el	12809 May 02 12:52	0°  24'47	19°29'02	desc. node	12810 Apr 29 19:22	3°  31'16	
desc. node	12809 May 12 22:39	13°  37'55		morning set	12810 May 07 07:42	15°  31'43	
greatest brilliancy	12809 May 15 05:01	16°  55'55	-0.7m		12810 May 16 18:08	0° 	
	12809 May 23 21:25	0° 		max. Earth dist.	12810 May 22 17:28	9°  19'34	1.45725 AU
morning set	12809 May 27 17:12	5°  51'39					
max. Earth dist.	12809 Jun 08 22:49	24°  53'42	1.45015 AU	superior conj	12810 May 23 11:15	10°  29'05	-2°08'18
	12809 Jun 12 04:07	0° 		minimum elong	12810 May 23 05:49	10°  07'51	2°08'58
					12810 Jun 04 20:44	0° 	
superior conj	12809 Jun 13 00:47	1°  22'24	-2°12'37	evening rise	12810 Jun 07 23:57	4°  59'14	
minimum elong	12809 Jun 13 02:59	1°  31'12	2°13'33	greatest brilliancy	12810 Jun 15 12:14	16°  56'39	-0.9m
evening rise	12809 Jun 27 02:43	24°  23'29		asc. node	12810 Jun 23 12:58	29°  06'23	
	12809 Jun 30 11:21	0° 			12810 Jun 24 04:26	0° 	
asc. node	12809 Jul 06 16:04	10°  09'36		evening max el	12810 Jun 29 03:48	5°  59'58	18°40'13
evening max el	12809 Jul 15 15:30	22°  02'46	18°12'46	retrograde	12810 Jul 05 17:20	9°  34'18	
retrograde	12809 Jul 21 23:57	25°  04'21		evening set	12810 Jul 08 23:27	8°  33'49	
evening set	12809 Jul 24 21:34	24°  05'04		inferior conj	12810 Jul 14 14:36	2°  55'34	2°54'44
inferior conj	12809 Jul 30 21:55	19°  34'30	2°23'01	minimum elong	12810 Jul 14 16:24	2°  50'00	2°53'34
minimum elong	12809 Jul 31 00:25	19°  27'29	2°21'42	min. Earth dist.	12810 Jul 16 13:01	0°  32'56	0.65640 AU
min. Earth dist.	12809 Aug 02 10:42	16°  04'23	0.63753 AU		12810 Jul 17 00:05	30°  49'00	
morning rise	12809 Aug 06 01:39	13°  01'15		morning rise	12810 Jul 20 08:27	26°  52'51	
desc. node	12809 Aug 08 21:23	11°  03'14		direct	12810 Jul 26 18:20	23°  51'55	
direct	12809 Aug 12 17:10	10°  04'00		desc. node	12810 Jul 26 18:46	23°  51'56	
morning max el	12809 Aug 26 13:39	18°  04'53	27°41'21		12810 Aug 07 06:28	0° 	
	12809 Sep 05 01:55	0° 		morning max el	12810 Aug 09 00:47	1°  42'42	26°52'33
	12809 Sep 24 01:09	0° 			12810 Aug 30 05:16	0° 	
morning set	12809 Sep 30 10:54	12°  13'33		morning set	12810 Sep 13 18:22	25°  17'06	
asc. node	12809 Oct 02 17:36	16°  05'18			12810 Sep 16 03:28	0° 	
max. Earth dist.	12809 Oct 05 07:54	22°  05'14	1.32513 AU	max. Earth dist.	12810 Sep 17 23:00	3°  36'33	1.33927 AU
				asc. node	12810 Sep 19 14:13	6°  05'16	
superior conj	12809 Oct 08 08:47	28°  04'23	0°52'00				
minimum elong	12809 Oct 08 06:39	28°  03'54	0°52'00	superior conj	12810 Sep 22 09:48	12°  45'14	0°26'42
	12809 Oct 08 22:44	0° 		minimum elong	12810 Sep 22 08:27	12°  38'09	0°26'33
evening rise	12809 Oct 15 06:47	13°  45'35		evening rise	12810 Sep 29 17:01	28°  13'48	
	12809 Oct 23 08:24	0° 			12810 Sep 30 13:15	0° 	
desc. node	12809 Nov 04 17:49	18°  32'08			12810 Oct 18 14:01	0° 	
evening max el	12809 Nov 07 04:11	21°  30'04	23°10'27	evening max el	12810 Oct 19 18:22	1°  13'05	21°31'48
retrograde	12809 Nov 20 10:51	27°  41'15		desc. node	12810 Oct 22 15:10	3°  43'30	
evening set	12809 Nov 24 15:41	27°  02'54		retrograde	12810 Oct 31 23:27	7°  17'12	
min. Earth dist.	12809 Dec 01 13:39	23°  30'10	0.55120 AU	evening set	12810 Nov 03 19:26	6°  58'50	
inferior conj	12809 Dec 03 00:31	22°  35'52	-5°54'28	inferior conj	12810 Nov 12 17:13	3°  40'42	-5°29'19
minimum elong	12809 Dec 03 01:12	22° 38'53	5°53'31	minimum elong	12810 Nov 12 09:32	3° 15'08	5°27'15
morning rise	12809 Dec 11 12:19	19° 09'40		min. Earth dist.	12810 Nov 12 19:52	3° 00'38	0.54536 AU
direct	12809 Dec 14 10:56	18° 49'07			12810 Nov 18 19:28	30° 49'00	
morning max el	12809 Dec 25 13:45	24° 06'54	20°41'11	morning rise	12810 Nov 21 00:33	29° 15'56	

direct	12810 Nov 24 19:14	28° \mathbb{M} 45'02		retrograde	12811 Oct 12 12:17	17° \mathbb{M} 14'35	
	12810 Nov 30 12:20	0° \mathbb{A}		evening set	12811 Oct 14 12:34	17° \mathbb{M} 04'05	
morning max el	12810 Dec 07 09:05	4° \mathbb{A} 46'02	22°18'40	inferior conj	12811 Oct 23 11:36	13° \mathbb{M} 06'05	-4°09'03
asc. node	12810 Dec 16 15:08	16° \mathbb{A} 21'52		minimum elong	12811 Oct 23 01:43	13° \mathbb{M} 20'50	4°05'26
	12810 Dec 24 07:55	0° \mathbb{B}		min. Earth dist.	12811 Oct 25 04:00	12° \mathbb{M} 05'47	0.54889 AU
morning set	12810 Dec 29 00:53	9° \mathbb{B} 38'22		morning rise	12811 Oct 31 13:49	8° \mathbb{M} 58'38	
				direct	12811 Nov 05 05:49	8° \mathbb{M} 11'21	
superior conj	12811 Jan 05 02:02	24° \mathbb{B} 41'01	1°31'00	morning max el	12811 Nov 18 20:12	14° \mathbb{M} 52'10	24°06'55
minimum elong	12811 Jan 05 03:44	24° \mathbb{B} 50'01	1°31'48		12811 Nov 30 16:17	0° \mathbb{A}	
	12811 Jan 07 14:52	0° \mathbb{A}		asc. node	12811 Dec 03 12:08	4° \mathbb{A} 43'11	
max. Earth dist.	12811 Jan 08 20:18	2° \mathbb{A} 31'42	1.34124 AU	morning set	12811 Dec 13 12:45	24° \mathbb{A} 24'00	
evening rise	12811 Jan 13 06:27	11° \mathbb{A} 20'45			12811 Dec 16 02:52	0° \mathbb{B}	
desc. node	12811 Jan 18 13:58	21° \mathbb{A} 15'57					
	12811 Jan 23 15:01	0° \mathbb{H}		superior conj	12811 Dec 20 08:45	9° \mathbb{B} 17'06	1°37'33
	12811 Feb 14 02:44	0° \mathbb{Y}		minimum elong	12811 Dec 20 09:21	9° \mathbb{B} 20'23	1°38'30
evening max el	12811 Feb 17 03:57	3° \mathbb{Y} 08'10	27°01'17	max. Earth dist.	12811 Dec 22 18:23	14° \mathbb{B} 28'44	1.32693 AU
retrograde	12811 Mar 02 12:21	10° \mathbb{Y} 34'00		evening rise	12811 Dec 27 21:06	25° \mathbb{B} 08'32	
evening set	12811 Mar 09 02:22	8° \mathbb{Y} 01'18			12811 Dec 30 07:52	0° \mathbb{A}	
min. Earth dist.	12811 Mar 13 01:16	4° \mathbb{Y} 11'20	0.65608 AU	desc. node	12812 Jan 05 10:47	11° \mathbb{A} 22'05	
asc. node	12811 Mar 14 12:38	2° \mathbb{Y} 30'51			12812 Jan 17 02:34	0° \mathbb{H}	
inferior conj	12811 Mar 15 05:41	1° \mathbb{Y} 41'53	0°13'42	evening max el	12812 Jan 30 16:30	16° \mathbb{H} 27'04	27°29'51
minimum elong	12811 Mar 15 05:18	1° \mathbb{Y} 42'59	0°13'36	retrograde	12812 Feb 13 10:00	23° \mathbb{H} 53'01	
transit middle	12811 Mar 15 05:18	1° \mathbb{Y} 42'59	0°13'36	evening set	12812 Feb 20 06:29	21° \mathbb{H} 25'10	
transit begin	12811 Mar 15 03:43	1° \mathbb{Y} 47'30		min. Earth dist.	12812 Feb 24 01:36	18° \mathbb{H} 05'36	0.63824 AU
transit end	12811 Mar 15 06:52	1° \mathbb{Y} 38'29		inferior conj	12812 Feb 26 17:14	15° \mathbb{H} 21'28	-0°53'00
	12811 Mar 16 18:06	30° \mathbb{R} \mathbb{H}		minimum elong	12812 Feb 26 18:54	15° \mathbb{H} 17'08	0°51'58
morning rise	12811 Mar 21 09:41	26° \mathbb{H} 08'22		asc. node	12812 Feb 29 10:05	12° \mathbb{H} 42'23	
direct	12811 Mar 24 04:38	25° \mathbb{H} 26'17		morning rise	12812 Mar 04 09:33	10° \mathbb{H} 02'25	
morning max el	12811 Mar 30 13:20	28° \mathbb{H} 46'22	18°04'49	direct	12812 Mar 06 20:11	9° \mathbb{H} 32'48	
	12811 Mar 31 17:41	0° \mathbb{Y}		morning max el	12812 Mar 13 06:54	12° \mathbb{H} 51'55	17°48'11
desc. node	12811 Apr 16 16:01	23° \mathbb{Y} 42'40			12812 Mar 25 04:56	0° \mathbb{Y}	
morning set	12811 Apr 18 01:20	25° \mathbb{Y} 58'08		morning set	12812 Mar 29 22:32	8° \mathbb{Y} 01'42	
	12811 Apr 20 12:56	0° \mathbb{B}		desc. node	12812 Apr 02 12:36	14° \mathbb{Y} 06'56	
superior conj	12811 May 02 20:23	19° \mathbb{B} 39'18	-1°44'28	superior conj	12812 Apr 11 20:56	29° \mathbb{Y} 36'36	-1°07'42
minimum elong	12811 May 02 11:08	19° \mathbb{B} 02'55	1°44'17	minimum elong	12812 Apr 11 13:59	29° \mathbb{Y} 08'21	1°07'09
max. Earth dist.	12811 May 05 13:25	23° \mathbb{B} 54'23	1.45689 AU		12812 Apr 12 02:42	0° \mathbb{B}	
	12811 May 09 11:09	0° \mathbb{II}		max. Earth dist.	12812 Apr 17 08:17	8° \mathbb{B} 22'57	1.44925 AU
evening rise	12811 May 18 22:56	14° \mathbb{II} 42'42		evening rise	12812 Apr 27 10:32	24° \mathbb{B} 05'37	
	12811 May 28 21:54	0° \mathbb{B}			12812 May 01 07:33	0° \mathbb{II}	
greatest brilliancy	12811 May 31 16:19	4° \mathbb{B} 09'37	-0.7m		12812 May 22 09:50	0° \mathbb{B}	
asc. node	12811 Jun 10 09:59	17° \mathbb{B} 29'19		evening max el	12812 May 25 14:27	3° \mathbb{B} 32'20	20°24'01
evening max el	12811 Jun 12 11:52	19° \mathbb{B} 44'50	19°24'34	asc. node	12812 May 27 07:07	5° \mathbb{B} 07'34	
retrograde	12811 Jun 19 14:42	23° \mathbb{B} 44'28		retrograde	12812 Jun 02 13:33	8° \mathbb{B} 07'27	
evening set	12811 Jun 23 05:49	22° \mathbb{B} 27'44		evening set	12812 Jun 06 14:26	6° \mathbb{B} 34'10	
inferior conj	12811 Jun 28 15:13	16° \mathbb{B} 35'25	3°10'33	inferior conj	12812 Jun 11 21:01	0° \mathbb{B} 29'17	3°13'10
minimum elong	12811 Jun 28 16:00	16° \mathbb{B} 32'51	3°09'32	minimum elong	12812 Jun 11 20:45	0° \mathbb{B} 30'13	3°12'12
min. Earth dist.	12811 Jun 29 23:03	14° \mathbb{B} 50'49	0.67133 AU		12812 Jun 12 05:33	30° \mathbb{R} \mathbb{II}	
morning rise	12811 Jul 04 01:40	10° \mathbb{B} 12'00		min. Earth dist.	12812 Jun 12 14:46	29° \mathbb{II} 28'27	0.68179 AU
direct	12811 Jul 10 02:16	7° \mathbb{B} 33'54		morning rise	12812 Jun 17 02:45	24° \mathbb{II} 08'52	
desc. node	12811 Jul 13 16:05	8° \mathbb{B} 20'25		direct	12812 Jun 22 15:49	21° \mathbb{II} 41'48	
morning max el	12811 Jul 22 11:39	14° \mathbb{B} 59'18	25°40'17	desc. node	12812 Jun 29 13:16	24° \mathbb{II} 33'36	
	12811 Aug 03 18:59	0° \mathbb{Q}		morning max el	12812 Jul 03 21:41	28° \mathbb{II} 26'08	24°14'24
	12811 Aug 23 01:22	0° \mathbb{M}			12812 Jul 05 09:33	0° \mathbb{B}	
morning set	12811 Aug 27 11:38	7° \mathbb{M} 52'00			12812 Jul 27 12:10	0° \mathbb{Q}	
max. Earth dist.	12811 Aug 31 03:51	14° \mathbb{M} 41'58	1.35815 AU	morning set	12812 Aug 08 10:12	19° \mathbb{Q} 29'22	
				max. Earth dist.	12812 Aug 12 01:55	25° \mathbb{Q} 55'09	1.38049 AU
					12812 Aug 14 08:01	0° \mathbb{M}	
superior conj	12811 Sep 06 02:24	26° \mathbb{M} 19'04	-0°03'20				
minimum elong	12811 Sep 06 02:37	26° \mathbb{M} 20'06	0°03'27	superior conj	12812 Aug 19 07:15	9° \mathbb{M} 18'15	-0°36'48
behind sun begin	12811 Sep 05 20:31	25° \mathbb{M} 49'29		minimum elong	12812 Aug 19 09:48	9° \mathbb{M} 30'23	0°36'46
behind sun end	12811 Sep 06 08:42	26° \mathbb{M} 50'47		asc. node	12812 Aug 23 07:26	17° \mathbb{M} 05'19	
asc. node	12811 Sep 06 10:49	27° \mathbb{M} 01'24		evening rise	12812 Aug 28 01:29	26° \mathbb{M} 29'52	
	12811 Sep 07 22:03	0° \mathbb{B}			12812 Aug 29 20:08	0° \mathbb{B}	
evening rise	12811 Sep 14 00:04	12° \mathbb{B} 30'34		evening max el	12812 Sep 13 13:37	23° \mathbb{B} 29'30	19°06'37
	12811 Sep 23 03:01	0° \mathbb{M}		retrograde	12812 Sep 22 13:24	27° \mathbb{B} 59'16	
evening max el	12811 Oct 01 20:56	11° \mathbb{M} 57'03	20°08'42	evening set	12812 Sep 24 09:55	27° \mathbb{B} 48'35	
desc. node	12811 Oct 09 12:36	16° \mathbb{M} 50'11					

desc. node	12812 Sep 25 10:04	27° Ω 34'16		desc. node	12813 Sep 12 07:32	6° Ω 14'42	
inferior conj	12812 Oct 02 20:50	23° Ω 35'34	-2°20'29	inferior conj	12813 Sep 14 03:23	4° Ω 49'35	-0°34'21
minimum elong	12812 Oct 02 14:47	23° Ω 45'52	2°17'52	minimum elong	12813 Sep 14 02:04	4° Ω 52'13	0°33'51
min. Earth dist.	12812 Oct 05 16:02	21° Ω 41'39	0.56130 AU	min. Earth dist.	12813 Sep 17 10:08	2° Ω 13'41	0.58020 AU
morning rise	12812 Oct 10 16:47	18° Ω 54'22			12813 Sep 20 16:54	30° \Re Π	
direct	12812 Oct 16 04:30	17° Ω 44'20		morning rise	12813 Sep 21 13:52	29° Π 31'13	
morning max el	12812 Oct 30 07:21	24° Ω 56'37	25°49'15	direct	12813 Sep 27 17:08	27° Π 54'14	
	12812 Nov 04 00:02	0° Π			12813 Oct 04 22:19	0° Ω	
asc. node	12812 Nov 19 09:02	23° Π 40'14		morning max el	12813 Oct 12 00:45	5° Ω 30'17	27°08'00
	12812 Nov 22 15:20	0° \Re			12813 Oct 30 02:46	0° Π	
morning set	12812 Nov 27 00:02	9° \Re 04'22		asc. node	12813 Nov 06 05:50	13° Π 03'39	
				morning set	12813 Nov 11 09:04	23° Π 35'14	
					12813 Nov 14 08:07	0° \Re	
superior conj	12812 Dec 03 18:53	24° \Re 00'06	1°37'53	superior conj	12813 Nov 18 06:30	8° \Re 44'18	1°32'20
minimum elong	12812 Dec 03 18:23	23° \Re 57'21	1°38'49	minimum elong	12813 Nov 18 05:05	8° \Re 36'19	1°33'04
max. Earth dist.	12812 Dec 04 23:06	26° \Re 36'13	1.31744 AU	max. Earth dist.	12813 Nov 18 07:31	8° \Re 49'55	1.31293 AU
	12812 Dec 06 12:10	0° \Re		evening rise	12813 Nov 25 01:29	23° \Re 40'07	
evening rise	12812 Dec 10 20:17	9° \Re 17'08			12813 Nov 28 02:20	0° \Re	
	12812 Dec 21 16:15	0° \approx		desc. node	12813 Dec 09 04:41	20° \Re 20'19	
desc. node	12812 Dec 22 07:41	1° \approx 06'25			12813 Dec 15 15:27	0° \approx	
evening max el	12813 Jan 12 02:01	29° \approx 12'27	27°28'06	evening max el	12813 Dec 25 05:41	11° \approx 12'09	26°52'01
	12813 Jan 12 22:31	0° \Re		retrograde	12814 Jan 08 04:22	18° \approx 21'55	
retrograde	12813 Jan 25 23:48	6° \Re 31'35		evening set	12814 Jan 14 21:33	16° \approx 27'46	
evening set	12813 Feb 01 22:04	4° \Re 16'35		min. Earth dist.	12814 Jan 18 19:49	13° \approx 49'04	0.59638 AU
min. Earth dist.	12813 Feb 05 16:06	1° \Re 22'01	0.61790 AU	inferior conj	12814 Jan 22 00:10	11° \approx 16'38	-3°30'40
	12813 Feb 07 04:20	30° \Re \approx		minimum elong	12814 Jan 22 07:33	11° \approx 01'50	3°27'19
inferior conj	12813 Feb 08 16:35	28° \approx 36'09	-2°09'12	morning rise	12814 Jan 29 20:31	6° \approx 35'35	
minimum elong	12813 Feb 08 21:04	28° \approx 25'51	2°06'49	direct	12814 Jan 31 22:02	6° \approx 19'42	
asc. node	12813 Feb 15 07:31	23° \approx 48'13		asc. node	12814 Feb 02 04:51	6° \approx 26'05	
morning rise	12813 Feb 15 22:51	23° \approx 34'30		morning max el	12814 Feb 08 12:54	10° \approx 06'45	18°09'29
direct	12813 Feb 18 03:21	23° \approx 13'32			12814 Feb 21 13:00	0° \Re	
morning max el	12813 Feb 24 23:55	26° \approx 41'47	17°49'19	morning set	12814 Feb 24 04:12	4° \Re 54'40	
	12813 Feb 27 21:11	0° \Re					
morning set	12813 Mar 12 17:31	21° \Re 06'35		superior conj	12814 Mar 05 20:44	22° \Re 48'54	0°10'52
	12813 Mar 17 17:24	0° Υ		minimum elong	12814 Mar 05 21:35	22° \Re 52'43	0°10'56
desc. node	12813 Mar 20 09:08	4° Υ 39'07		behind sun begin	12814 Mar 05 16:00	22° \Re 27'37	
				behind sun end	12814 Mar 06 03:10	23° \Re 17'46	
superior conj	12813 Mar 23 21:05	10° Υ 40'02	-0°27'01	desc. node	12814 Mar 07 05:40	25° \Re 15'47	
minimum elong	12813 Mar 23 18:32	10° Υ 29'12	0°26'42		12814 Mar 09 22:29	0° Υ	
max. Earth dist.	12813 Mar 31 00:09	22° Υ 30'30	1.43517 AU	max. Earth dist.	12814 Mar 13 11:46	6° Υ 04'18	1.41611 AU
	12813 Apr 04 16:29	0° \Re		evening rise	12814 Mar 18 11:11	14° Υ 16'46	
evening rise	12813 Apr 07 02:34	3° \Re 47'42			12814 Mar 28 13:34	0° \Re	
	12813 Apr 24 17:22	0° Π			12814 Apr 20 00:57	0° Π	
evening max el	12813 May 08 11:23	17° Π 20'13	21°35'33	evening max el	12814 Apr 21 03:49	1° Π 09'05	22°54'35
asc. node	12813 May 14 04:20	21° Π 46'16		retrograde	12814 May 01 08:15	7° Π 09'27	
retrograde	12813 May 17 11:53	22° Π 37'23		asc. node	12814 May 01 01:37	7° Π 09'06	
evening set	12813 May 21 23:22	20° Π 47'53		evening set	12814 May 06 07:02	5° Π 04'56	
inferior conj	12813 May 27 05:39	14° Π 32'07	3°04'26		12814 May 10 16:10	30° \Re \Re	
minimum elong	12813 May 27 04:28	14° Π 36'14	3°03'24	inferior conj	12814 May 11 15:09	28° \Re 40'33	2°45'19
min. Earth dist.	12813 May 27 10:01	14° Π 16'54	0.68751 AU	minimum elong	12814 May 11 13:18	28° \Re 46'57	2°44'12
morning rise	12813 Jun 01 09:22	8° Π 16'58		min. Earth dist.	12814 May 11 06:41	29° \Re 09'55	0.68849 AU
direct	12813 Jun 06 09:40	6° Π 06'53		morning rise	12814 May 16 19:29	22° \Re 32'03	
desc. node	12813 Jun 16 10:20	12° Π 04'30		direct	12814 May 21 06:45	20° \Re 42'17	
morning max el	12813 Jun 16 08:36	12° Π 00'09	22°44'44	morning max el	12814 May 29 23:42	25° \Re 43'59	21°19'39
	12813 Jun 30 17:06	0° \Re			12814 Jun 02 20:30	0° Π	
morning set	12813 Jul 20 09:25	0° Ω 03'43		desc. node	12814 Jun 03 07:18	0° Π 32'28	
	12813 Jul 20 08:31	0° Ω			12814 Jun 24 03:49	0° \Re	
max. Earth dist.	12813 Jul 25 00:27	7° Ω 47'50	1.40387 AU	morning set	12814 Jun 30 07:17	9° \Re 31'11	
				max. Earth dist.	12814 Jul 07 04:31	20° \Re 34'11	1.42547 AU
superior conj	12813 Aug 01 20:16	21° Ω 33'11	-1°11'25		12814 Jul 12 20:18	0° Ω	
minimum elong	12813 Aug 02 01:30	21° Ω 56'53	1°11'19	superior conj	12814 Jul 14 12:52	2° Ω 53'04	-1°43'13
	12813 Aug 06 10:16	0° Π		minimum elong	12814 Jul 14 19:52	3° Ω 23'07	1°43'20
asc. node	12813 Aug 10 04:05	7° Π 03'28		evening rise	12814 Jul 25 21:50	23° Ω 01'24	
evening rise	12813 Aug 11 18:06	10° Π 03'43		asc. node	12814 Jul 28 00:47	26° Ω 51'20	
	12813 Aug 23 02:03	0° Ω			12814 Jul 29 18:52	0° Π	
evening max el	12813 Aug 27 17:28	5° Ω 46'32	18°26'04				
retrograde	12813 Sep 04 09:40	9° Ω 39'01					
evening set	12813 Sep 06 10:47	9° Ω 23'16					

evening max el	12814 Aug 11 04:18	18° \cap 38'05	18°05'55	evening set	12815 Aug 03 20:50	4° \cap 38'38	
retrograde	12814 Aug 18 00:01	22° \cap 07'27			12815 Aug 09 15:15	30° \mathbb{R} \mathbb{Q}	
evening set	12814 Aug 20 08:32	21° \cap 42'46		inferior conj	12815 Aug 10 04:12	29° \mathbb{Q} 26'00	1°56'12
inferior conj	12814 Aug 27 06:59	16° \cap 48'34	0°52'34	minimum elong	12815 Aug 10 06:44	29° \mathbb{Q} 19'16	1°54'53
minimum elong	12814 Aug 27 08:34	16° \cap 44'54	0°51'41	min. Earth dist.	12815 Aug 13 00:28	26° \mathbb{Q} 26'48	0.62516 AU
desc. node	12814 Aug 30 05:02	14° \cap 06'38		morning rise	12815 Aug 16 14:27	23° \mathbb{Q} 16'36	
min. Earth dist.	12814 Aug 30 12:31	13° \cap 50'01	0.60247 AU	desc. node	12815 Aug 17 02:29	22° \mathbb{Q} 55'28	
morning rise	12814 Sep 03 05:32	10° \cap 59'24		direct	12815 Aug 23 06:48	20° \mathbb{Q} 50'34	
direct	12814 Sep 09 18:32	8° \cap 55'18		morning max el	12815 Sep 06 08:57	28° \mathbb{Q} 52'37	27°55'27
morning max el	12814 Sep 24 01:53	16° \cap 48'38	27°51'15		12815 Sep 07 11:18	0° \cap	
	12814 Oct 04 23:37	0° \mathbb{Q}			12815 Sep 28 21:17	0° \mathbb{Q}	
	12814 Oct 22 17:25	0° \mathbb{M}		morning set	12815 Oct 10 12:39	21° \mathbb{Q} 45'55	
asc. node	12814 Oct 24 02:32	2° \mathbb{M} 45'20		asc. node	12815 Oct 10 23:13	22° \mathbb{Q} 39'48	
morning set	12814 Oct 26 13:58	7° \mathbb{M} 50'44			12815 Oct 14 11:25	0° \mathbb{M}	
max. Earth dist.	12814 Nov 01 15:44	20° \mathbb{M} 59'03	1.31351 AU	max. Earth dist.	12815 Oct 15 19:50	2° \mathbb{M} 53'53	1.31933 AU
superior conj	12814 Nov 02 17:42	23° \mathbb{M} 23'14	1°21'04	superior conj	12815 Oct 18 02:37	7° \mathbb{M} 52'03	1°04'12
minimum elong	12814 Nov 02 15:38	23° \mathbb{M} 11'46	1°21'31	minimum elong	12815 Oct 18 00:22	7° \mathbb{M} 39'40	1°04'21
	12814 Nov 05 17:00	0° \mathbb{X}		evening rise	12815 Oct 24 21:29	22° \mathbb{M} 44'15	
evening rise	12814 Nov 09 10:31	8° \mathbb{X} 10'42			12815 Oct 28 08:12	0° \mathbb{X}	
	12814 Nov 20 13:47	0° \mathbb{Z}		desc. node	12815 Nov 12 22:58	26° \mathbb{X} 22'33	
desc. node	12814 Nov 26 01:46	8° \mathbb{Z} 51'04			12815 Nov 15 23:36	0° \mathbb{Z}	
evening max el	12814 Dec 07 01:01	22° \mathbb{Z} 18'11	25°42'44	evening max el	12815 Nov 18 12:53	2° \mathbb{Z} 38'42	24°09'07
retrograde	12814 Dec 20 22:23	29° \mathbb{Z} 18'53		retrograde	12815 Dec 02 04:16	9° \mathbb{Z} 27'04	
evening set	12814 Dec 27 00:42	27° \mathbb{Z} 52'43		evening set	12815 Dec 07 04:03	8° \mathbb{Z} 32'27	
min. Earth dist.	12814 Dec 31 13:30	25° \mathbb{Z} 15'22	0.57558 AU	min. Earth dist.	12815 Dec 13 00:06	5° \mathbb{Z} 37'45	0.55830 AU
inferior conj	12815 Jan 03 12:31	23° \mathbb{Z} 12'25	-4°47'44	inferior conj	12815 Dec 15 04:10	4° \mathbb{Z} 18'18	-5°42'27
minimum elong	12815 Jan 03 21:07	22° \mathbb{Z} 57'29	4°44'40	minimum elong	12815 Dec 15 09:21	4° \mathbb{Z} 10'22	5°40'54
morning rise	12815 Jan 11 20:10	18° \mathbb{Z} 53'53		morning rise	12815 Dec 23 16:39	0° \mathbb{Z} 19'50	
direct	12815 Jan 13 23:40	18° \mathbb{Z} 39'38		direct	12815 Dec 26 05:37	0° \mathbb{Z} 03'09	
asc. node	12815 Jan 20 02:08	20° \mathbb{Z} 43'21		morning max el	12816 Jan 05 11:11	4° \mathbb{Z} 57'04	19°54'10
morning max el	12815 Jan 22 17:58	22° \mathbb{Z} 55'28	18°50'31	asc. node	12816 Jan 06 23:21	6° \mathbb{Z} 30'04	
	12815 Jan 28 09:39	0° \approx			12816 Jan 21 09:44	0° \approx	
morning set	12815 Feb 08 01:43	19° \approx 11'04		morning set	12816 Jan 23 06:25	3° \approx 45'08	
	12815 Feb 13 14:27	0° \mathbb{H}					
				superior conj	12816 Jan 31 01:28	19° \approx 33'16	1°07'03
superior conj	12815 Feb 16 15:46	5° \mathbb{H} 51'10	0°42'35	minimum elong	12816 Jan 31 04:16	19° \approx 47'13	1°07'22
minimum elong	12815 Feb 16 18:17	6° \mathbb{H} 03'05	0°42'40		12816 Feb 05 10:47	0° \mathbb{H}	
desc. node	12815 Feb 22 02:13	15° \mathbb{H} 53'11		max. Earth dist.	12816 Feb 06 01:14	1° \mathbb{H} 07'45	1.37182 AU
max. Earth dist.	12815 Feb 23 19:01	18° \mathbb{H} 54'57	1.39414 AU	desc. node	12816 Feb 08 22:48	6° \mathbb{H} 27'39	
evening rise	12815 Feb 27 16:55	25° \mathbb{H} 41'28		evening rise	12816 Feb 09 18:55	7° \mathbb{H} 58'09	
	12815 Mar 02 06:37	0° \mathbb{Y}			12816 Feb 23 02:02	0° \mathbb{Y}	
	12815 Mar 22 05:36	0° \mathbb{B}		evening max el	12816 Mar 16 07:08	28° \mathbb{Y} 51'34	25°30'45
evening max el	12815 Apr 03 17:44	14° \mathbb{B} 59'50	24°15'16		12816 Mar 17 11:50	0° \mathbb{B}	
retrograde	12815 Apr 15 01:26	21° \mathbb{B} 38'26		retrograde	12816 Mar 28 14:20	5° \mathbb{B} 57'44	
asc. node	12815 Apr 17 22:56	21° \mathbb{B} 00'40		evening set	12816 Apr 03 12:16	3° \mathbb{B} 30'58	
evening set	12815 Apr 20 11:52	19° \mathbb{B} 21'06		asc. node	12816 Apr 03 20:20	3° \mathbb{B} 13'30	
min. Earth dist.	12815 Apr 25 02:45	14° \mathbb{B} 01'59	0.68487 AU		12816 Apr 06 20:42	30° \mathbb{R} \mathbb{Y}	
inferior conj	12815 Apr 25 23:38	12° \mathbb{B} 51'27	2°16'14	min. Earth dist.	12816 Apr 07 20:03	28° \mathbb{Y} 47'12	0.67689 AU
minimum elong	12815 Apr 25 21:29	12° \mathbb{B} 58'43	2°15'04	inferior conj	12816 Apr 09 05:13	27° \mathbb{Y} 00'36	1°37'00
morning rise	12815 May 01 07:13	6° \mathbb{B} 50'38		minimum elong	12816 Apr 09 03:14	27° \mathbb{Y} 06'59	1°35'59
direct	12815 May 05 05:52	5° \mathbb{B} 22'01		morning rise	12816 Apr 14 18:40	21° \mathbb{Y} 08'46	
morning max el	12815 May 12 21:37	9° \mathbb{B} 39'44	20°05'21	direct	12816 Apr 18 05:38	20° \mathbb{Y} 00'11	
desc. node	12815 May 21 04:09	19° \mathbb{B} 42'11		morning max el	12816 Apr 25 03:07	23° \mathbb{Y} 45'37	19°05'33
	12815 May 28 09:11	0° \mathbb{I}			12816 Apr 30 10:40	0° \mathbb{B}	
morning set	12815 Jun 09 10:38	18° \mathbb{I} 12'41		desc. node	12816 May 07 00:55	9° \mathbb{B} 22'06	
	12815 Jun 17 00:15	0° \mathbb{G}		greatest brilliancy	12816 May 08 05:11	11° \mathbb{B} 07'42	-0.7m
max. Earth dist.	12815 Jun 19 14:58	4° \mathbb{G} 08'37	1.44276 AU	morning set	12816 May 18 14:38	27° \mathbb{B} 02'07	
					12816 May 20 12:37	0° \mathbb{I}	
superior conj	12815 Jun 25 05:47	13° \mathbb{G} 12'06	-2°06'11	max. Earth dist.	12816 Jun 01 06:48	18° \mathbb{I} 18'27	1.45399 AU
minimum elong	12815 Jun 25 11:13	13° \mathbb{G} 34'15	2°06'52				
	12815 Jul 05 07:08	0° \mathbb{Q}		superior conj	12816 Jun 04 00:40	22° \mathbb{I} 37'26	-2°13'19
evening rise	12815 Jul 08 07:47	5° \mathbb{Q} 11'00		minimum elong	12816 Jun 03 23:39	22° \mathbb{I} 33'28	2°14'16
asc. node	12815 Jul 14 21:33	16° \mathbb{Q} 24'24			12816 Jun 08 16:17	0° \mathbb{G}	
	12815 Jul 24 00:04	0° \cap		evening rise	12816 Jun 18 19:05	16° \mathbb{G} 21'10	
evening max el	12815 Jul 25 18:16	1° \cap 54'55	18°05'01		12816 Jun 27 04:16	0° \mathbb{Q}	
retrograde	12815 Aug 01 04:10	5° \cap 15'27		asc. node	12816 Jun 30 18:24	5° \mathbb{Q} 36'19	

evening max el	12816 Jul 08 08:02	15°Ω28'00	18°22'24	retrograde	12817 Jun 28 12:56	2°Ω53'35	
retrograde	12816 Jul 14 17:40	18°Ω53'18		evening set	12817 Jul 01 22:54	1°Ω46'11	
evening set	12816 Jul 17 18:49	18°Ω01'56			12817 Jul 04 01:48	30°R☿	
inferior conj	12816 Jul 23 14:50	12°Ω32'48	2°38'34	inferior conj	12817 Jul 07 11:14	26°☿01'57	3°03'09
minimum elong	12816 Jul 23 17:06	12°Ω26'09	2°37'19	minimum elong	12817 Jul 07 12:37	25°☿57'32	3°02'04
min. Earth dist.	12816 Jul 25 21:46	9°Ω52'24	0.64596 AU	min. Earth dist.	12817 Jul 09 03:26	23°☿54'32	0.66335 AU
morning rise	12816 Jul 29 14:04	6°Ω12'55		morning rise	12817 Jul 13 01:38	19°☿38'38	
desc. node	12816 Aug 02 23:55	3°Ω50'45		direct	12817 Jul 19 08:05	16°☿57'41	
direct	12816 Aug 05 03:52	3°Ω34'14		desc. node	12817 Jul 20 21:17	17°☿06'23	
morning max el	12816 Aug 18 19:08	11°Ω33'06	27°23'59	morning max el	12817 Aug 01 06:05	24°☿38'58	26°24'03
	12816 Sep 02 11:04	0°♊			12817 Aug 06 02:01	0°Ω	
	12816 Sep 20 09:19	0°♊			12817 Aug 26 21:46	0°♊	
morning set	12816 Sep 23 02:33	5°♊14'11		morning set	12817 Sep 06 04:26	18°♊07'01	
asc. node	12816 Sep 26 19:51	12°♊42'07		max. Earth dist.	12817 Sep 10 02:38	25°♊38'51	1.34675 AU
max. Earth dist.	12816 Sep 27 16:12	14°♊27'00	1.33045 AU		12817 Sep 12 07:15	0°♊	
				asc. node	12817 Sep 13 16:27	2°♊47'50	
superior conj	12816 Oct 01 07:14	22°♊05'04	0°41'54	superior conj	12817 Sep 15 05:03	5°♊55'14	0°14'30
minimum elong	12816 Oct 01 05:21	21°♊55'00	0°41'50	minimum elong	12817 Sep 15 04:15	5°♊51'09	0°14'21
	12816 Oct 04 23:28	0°♊		behind sun begin	12817 Sep 15 01:34	5°♊37'18	
evening rise	12816 Oct 08 08:32	7°♊15'51		behind sun end	12817 Sep 15 06:57	6°♊05'02	
	12816 Oct 20 05:43	0°♊		evening rise	12817 Sep 22 17:40	21°♊39'43	
desc. node	12816 Oct 29 20:17	12°♊33'11			12817 Sep 26 19:43	0°♊	
evening max el	12816 Oct 29 23:41	12°♊41'32	22°27'24	evening max el	12817 Oct 11 18:35	23°♊02'07	20°54'09
retrograde	12816 Nov 11 21:33	19°♊05'54		desc. node	12817 Oct 16 17:41	26°♊55'05	
evening set	12816 Nov 15 11:25	18°♊37'51		retrograde	12817 Oct 23 08:14	28°♊46'58	
min. Earth dist.	12816 Nov 23 07:06	15°♊07'42	0.54761 AU	evening set	12817 Oct 25 17:57	28°♊33'09	
inferior conj	12816 Nov 24 02:36	14°♊40'11	-5°51'20	inferior conj	12817 Nov 03 18:07	24°♊39'00	-5°00'52
minimum elong	12816 Nov 23 23:25	14°♊44'41	5°50'14	minimum elong	12817 Nov 03 08:30	24°♊52'39	4°57'55
morning rise	12816 Dec 02 12:42	10°♊52'39		min. Earth dist.	12817 Nov 04 13:35	24°♊11'19	0.54570 AU
direct	12816 Dec 05 19:27	10°♊28'16		morning rise	12817 Nov 11 23:17	20°♊45'16	
morning max el	12816 Dec 17 14:06	16°♊05'13	21°20'24	direct	12817 Nov 16 03:25	20°♊07'58	
asc. node	12816 Dec 23 20:30	23°♊29'50		morning max el	12817 Nov 29 04:46	26°♊26'15	23°04'13
	12816 Dec 28 01:04	0°♋			12817 Dec 02 14:07	0°♊	
morning set	12817 Jan 06 15:38	18°♋29'09		asc. node	12817 Dec 10 17:34	11°♊25'26	
	12817 Jan 12 02:56	0°♋			12817 Dec 20 13:55	0°♋	
superior conj	12817 Jan 13 21:50	3°♋43'57	1°24'14	morning set	12817 Dec 22 03:05	3°♋15'49	
minimum elong	12817 Jan 14 00:04	3°♋55'34	1°24'53	superior conj	12817 Dec 29 01:30	18°♋12'47	1°34'33
max. Earth dist.	12817 Jan 18 11:43	13°♋02'30	1.35147 AU	minimum elong	12817 Dec 29 02:45	18°♋19'28	1°35'26
evening rise	12817 Jan 22 14:02	20°♋58'09		max. Earth dist.	12818 Jan 01 05:36	24°♋56'23	1.33466 AU
desc. node	12817 Jan 25 19:28	26°♋55'22			12818 Jan 03 16:27	0°♋	
	12817 Jan 27 12:52	0°♋		evening rise	12818 Jan 05 22:28	4°♋30'40	
	12817 Feb 15 23:38	0°♋		desc. node	12818 Jan 12 16:13	17°♋10'55	
evening max el	12817 Feb 26 20:58	12°♋39'25	26°33'40		12818 Jan 20 06:57	0°♋	
retrograde	12817 Mar 11 21:52	20°♋00'43		evening max el	12818 Feb 09 10:28	26°♋12'17	27°16'42
evening set	12817 Mar 18 06:29	17°♋28'52			12818 Feb 13 21:25	0°♋	
asc. node	12817 Mar 21 17:46	14°♋02'04		retrograde	12818 Feb 22 23:07	3°♋38'12	
min. Earth dist.	12817 Mar 22 08:25	13°♋19'32	0.66483 AU	evening set	12818 Mar 01 16:23	1°♋06'55	
inferior conj	12817 Mar 24 05:46	11°♋03'38	0°47'18		12818 Mar 03 00:54	30°R♋	
minimum elong	12817 Mar 24 04:35	11°♋07'12	0°46'44	min. Earth dist.	12818 Mar 05 13:35	27°♋30'17	0.64897 AU
morning rise	12817 Mar 30 03:43	5°♋22'32		inferior conj	12818 Mar 07 22:51	24°♋53'30	-0°13'17
direct	12817 Apr 02 04:10	4°♋31'34		minimum elong	12818 Mar 07 23:14	24°♋52'27	0°12'56
morning max el	12817 Apr 08 15:12	7°♋57'20	18°22'04	transit middle	12818 Mar 07 23:14	24°♋52'27	0°12'56
desc. node	12817 Apr 23 21:37	29°♋24'17		transit begin	12818 Mar 07 21:27	24°♋57'23	
	12817 Apr 24 06:39	0°♌		transit end	12818 Mar 08 01:02	24°♋47'31	
morning set	12817 Apr 28 15:56	6°♌57'44		asc. node	12818 Mar 08 15:13	24°♋08'50	
	12817 May 13 06:46	0°♌		morning rise	12818 Mar 14 07:49	19°♋25'39	
superior conj	12817 May 14 08:20	1°♌39'52	-2°00'19	direct	12818 Mar 16 23:09	18°♋49'09	
minimum elong	12817 May 14 00:27	1°♌09'06	2°00'38	morning max el	12818 Mar 23 07:33	22°♋07'13	17°55'34
max. Earth dist.	12817 May 15 02:16	2°♌49'57	1.45809 AU		12818 Mar 29 13:15	0°♋	
evening rise	12817 May 30 06:04	26°♌31'57		morning set	12818 Apr 09 21:49	18°♋17'23	
	12817 Jun 01 11:06	0°♌		desc. node	12818 Apr 10 18:13	19°♋41'50	
greatest brilliancy	12817 Jun 09 05:02	12°♌05'09	-0.8m		12818 Apr 17 00:45	0°♌	
asc. node	12817 Jun 17 15:22	24°♌19'48		superior conj	12818 Apr 23 22:17	11°♌05'34	-1°29'53
evening max el	12817 Jun 21 18:51	29°♌10'21	18°57'10	minimum elong	12818 Apr 23 13:27	10°♌30'26	1°29'28
	12817 Jun 22 15:43	0°♌					

max. Earth dist.	12818 Apr 27 22:34	17°♄25'59	1.45459 AU		12819 Apr 09 13:35	0°♄	
	12818 May 06 00:19	0°♄		max. Earth dist.	12819 Apr 10 16:37	1°♄48'21	1.44400 AU
evening rise	12818 May 09 22:28	6°♄02'22		evening rise	12819 Apr 19 09:59	15°♄28'36	
greatest brilliancy	12818 May 24 07:36	27°♄44'19	-0.6m		12819 Apr 29 00:39	0°♄	
	12818 May 25 21:03	0°♄		evening max el	12819 May 19 00:40	26°♄44'06	20°53'09
asc. node	12818 Jun 04 12:25	12°♄25'25		asc. node	12819 May 22 09:34	29°♄40'18	
evening max el	12818 Jun 05 00:42	12°♄56'53	19°48'08		12819 May 22 21:01	0°♄	
retrograde	12818 Jun 12 11:11	17°♄10'14		retrograde	12819 May 27 10:08	1°♄36'58	
evening set	12818 Jun 16 06:28	15°♄46'13		evening set	12819 May 31 15:25	29°♄56'33	
inferior conj	12818 Jun 21 14:19	9°♄48'16	3°13'07		12819 May 31 13:41	30°♄	
minimum elong	12818 Jun 21 14:39	9°♄47'10	3°12'09	inferior conj	12819 Jun 05 21:34	23°♄46'31	3°10'47
min. Earth dist.	12818 Jun 22 16:00	8°♄22'08	0.67639 AU	minimum elong	12819 Jun 05 20:53	23°♄48'53	3°09'48
morning rise	12818 Jun 26 22:28	3°♄25'59		min. Earth dist.	12819 Jun 06 09:28	23°♄05'20	0.68478 AU
direct	12818 Jul 02 18:20	0°♄51'59		morning rise	12819 Jun 11 02:07	17°♄28'06	
desc. node	12818 Jul 07 18:34	2°♄23'02		direct	12819 Jun 16 09:42	15°♄07'58	
morning max el	12818 Jul 14 16:33	8°♄00'53	25°04'53	desc. node	12819 Jun 24 15:42	19°♄12'20	
	12818 Jul 31 21:40	0°♄		morning max el	12819 Jun 27 02:50	21°♄31'38	23°36'13
	12818 Aug 19 10:51	0°♄			12819 Jul 04 10:46	0°♄	
morning set	12818 Aug 19 14:18	0°♄15'23			12819 Jul 25 03:47	0°♄	
max. Earth dist.	12818 Aug 23 04:21	6°♄46'00	1.36735 AU	morning set	12819 Aug 01 03:25	11°♄27'15	
				max. Earth dist.	12819 Aug 05 01:56	18°♄13'38	1.39045 AU
superior conj	12818 Aug 29 17:06	19°♄15'32	-0°17'11		12819 Aug 11 14:38	0°♄	
minimum elong	12818 Aug 29 18:13	19°♄21'01	0°17'16				
asc. node	12818 Aug 31 13:03	22°♄53'36		superior conj	12819 Aug 12 15:40	1°♄56'38	-0°51'32
	12818 Sep 04 01:37	0°♄		minimum elong	12819 Aug 12 19:21	2°♄13'53	0°51'28
evening rise	12818 Sep 06 22:42	5°♄50'22		asc. node	12819 Aug 18 09:39	12°♄55'23	
	12818 Sep 20 14:45	0°♄		evening rise	12819 Aug 21 20:47	19°♄39'54	
evening max el	12818 Sep 24 03:11	4°♄05'55	19°39'36		12819 Aug 27 06:55	0°♄	
desc. node	12818 Oct 03 15:08	9°♄02'23		evening max el	12819 Sep 07 00:58	15°♄57'36	18°46'45
retrograde	12818 Oct 04 01:12	9°♄02'54		retrograde	12819 Sep 15 10:19	20°♄10'19	
evening set	12818 Oct 05 22:24	8°♄52'58		evening set	12819 Sep 17 07:58	19°♄58'07	
inferior conj	12818 Oct 14 17:28	4°♄49'16	-3°24'30	desc. node	12819 Sep 20 12:38	18°♄48'03	
minimum elong	12818 Oct 14 08:47	5°♄02'54	3°20'59	inferior conj	12819 Sep 25 11:24	15°♄36'37	-1°33'50
min. Earth dist.	12818 Oct 16 22:48	3°♄25'41	0.55314 AU	minimum elong	12819 Sep 25 07:30	15°♄43'44	1°32'06
morning rise	12818 Oct 22 17:22	0°♄28'54		min. Earth dist.	12819 Sep 28 13:18	13°♄22'41	0.56866 AU
	12818 Oct 24 06:43	30°♄33'01		morning rise	12819 Oct 03 03:39	10°♄38'52	
direct	12818 Oct 27 17:53	29°♄33'01		direct	12819 Oct 08 22:23	9°♄17'47	
	12818 Oct 31 04:32	0°♄		morning max el	12819 Oct 23 04:29	16°♄41'50	26°26'38
morning max el	12818 Nov 10 14:56	6°♄27'37	24°52'24		12819 Nov 03 02:24	0°♄	
asc. node	12818 Nov 27 14:31	0°♄03'22		asc. node	12819 Nov 14 11:21	19°♄12'10	
	12818 Nov 27 13:47	0°♄			12819 Nov 19 19:55	0°♄	
morning set	12818 Dec 06 14:55	18°♄00'08		morning set	12819 Nov 21 01:26	2°♄36'47	
	12818 Dec 12 02:34	0°♄					
superior conj	12818 Dec 13 09:55	2°♄52'38	1°38'25	superior conj	12819 Nov 27 20:54	17°♄36'37	1°36'14
minimum elong	12818 Dec 13 10:03	2°♄53'20	1°39'23	minimum elong	12819 Nov 27 19:59	17°♄31'29	1°37'07
max. Earth dist.	12818 Dec 15 06:56	6°♄58'50	1.32230 AU	max. Earth dist.	12819 Nov 28 13:27	19°♄08'39	1.31481 AU
evening rise	12818 Dec 20 17:03	18°♄27'59			12819 Dec 03 12:22	0°♄	
	12818 Dec 26 14:11	0°♄		evening rise	12819 Dec 04 19:01	2°♄42'52	
desc. node	12818 Dec 30 13:02	7°♄08'46		desc. node	12819 Dec 17 09:59	26°♄41'23	
	12819 Jan 14 15:11	0°♄			12819 Dec 19 10:20	0°♄	
evening max el	12819 Jan 22 21:54	9°♄18'06	27°32'57	evening max el	12820 Jan 05 05:01	21°♄44'40	27°17'02
retrograde	12819 Feb 05 17:20	16°♄41'27		retrograde	12820 Jan 19 03:41	29°♄00'56	
evening set	12819 Feb 12 15:32	14°♄17'46		evening set	12820 Jan 26 00:48	26°♄53'30	
min. Earth dist.	12819 Feb 16 09:40	11°♄10'01	0.62994 AU	min. Earth dist.	12820 Jan 29 19:34	24°♄07'16	0.60874 AU
inferior conj	12819 Feb 19 05:35	8°♄23'20	-1°24'18	inferior conj	12820 Feb 01 22:40	21°♄24'46	-2°43'31
minimum elong	12819 Feb 19 08:23	8°♄16'27	1°22'41	minimum elong	12820 Feb 02 04:27	21°♄12'14	2°40'38
asc. node	12819 Feb 23 12:40	4°♄36'46		morning rise	12820 Feb 09 11:06	16°♄31'55	
morning rise	12819 Feb 26 03:44	3°♄11'32		asc. node	12820 Feb 10 10:04	16°♄19'11	
direct	12819 Feb 28 11:32	2°♄45'59		direct	12820 Feb 11 13:45	16°♄13'39	
morning max el	12819 Mar 07 01:19	6°♄07'23	17°46'26	morning max el	12820 Feb 18 17:09	19°♄48'44	17°55'30
	12819 Mar 22 17:41	0°♄			12820 Feb 26 05:45	0°♄	
morning set	12819 Mar 23 05:00	0°♄49'13		morning set	12820 Mar 05 07:22	14°♄14'54	
desc. node	12819 Mar 28 14:45	10°♄09'54		desc. node	12820 Mar 14 11:16	0°♄44'48	
					12820 Mar 14 01:04	0°♄	
superior conj	12819 Apr 04 08:26	21°♄30'11	-0°50'25	superior conj	12820 Mar 15 19:02	3°♄03'34	-0°10'23
minimum elong	12819 Apr 04 03:20	21°♄09'08	0°49'57	minimum elong	12820 Mar 15 18:07	2°♄59'38	0°10'12

behind sun begin	12820 Mar 15 11:46	2° Υ 31'56			12821 Jan 28 01:56	0° \approx	
behind sun end	12820 Mar 16 00:29	3° Υ 27'17		morning max el	12821 Feb 01 03:16	2° \approx 59'46	18°24'19
max. Earth dist.	12820 Mar 23 06:21	15° Υ 41'57	1.42752 AU	morning set	12821 Feb 16 23:13	28° \approx 16'49	
evening rise	12820 Mar 29 08:04	25° Υ 28'58			12821 Feb 17 20:48	0° X	
	12820 Apr 01 05:20	0° B					
	12820 Apr 21 22:10	0° Π		superior conj	12821 Feb 26 03:30	15° X 36'50	0°25'08
evening max el	12820 Apr 30 19:23	10° Π 32'31	22°08'32	minimum elong	12821 Feb 26 05:16	15° X 44'55	0°25'11
asc. node	12820 May 08 06:49	15° Π 49'25		desc. node	12821 Mar 01 07:47	21° X 22'17	
retrograde	12820 May 10 07:56	16° Π 08'55		max. Earth dist.	12821 Mar 05 15:39	28° X 56'53	1.40696 AU
evening set	12820 May 15 00:02	14° Π 12'59			12821 Mar 06 06:24	0° Υ	
inferior conj	12820 May 20 06:50	7° Π 53'01	2°57'35	evening rise	12821 Mar 10 01:34	6° Υ 22'19	
minimum elong	12820 May 20 05:20	7° Π 58'16	2°56'30		12821 Mar 25 08:14	0° B	
min. Earth dist.	12820 May 20 05:43	7° Π 56'58	0.68848 AU	evening max el	12821 Apr 13 10:38	24° B 22'59	23°29'06
morning rise	12820 May 25 10:29	1° Π 40'18			12821 Apr 20 23:52	0° Π	
	12820 May 28 04:15	30° R B		retrograde	12821 Apr 24 03:03	0° Π 40'26	
direct	12820 May 30 05:09	29° B 38'36		asc. node	12821 Apr 25 04:08	0° Π 35'25	
	12820 Jun 01 08:34	0° Π			12821 Apr 27 00:58	30° R B	
morning max el	12820 Jun 08 15:10	5° Π 10'06	22°07'27	evening set	12821 Apr 29 06:40	28° B 30'26	
desc. node	12820 Jun 10 12:42	7° Π 10'08		min. Earth dist.	12821 May 04 02:28	22° B 50'32	0.68755 AU
	12820 Jun 27 15:50	0° B		inferior conj	12821 May 04 16:10	22° B 03'27	2°34'14
morning set	12820 Jul 11 15:44	21° B 33'04		minimum elong	12821 May 04 14:08	22° B 10'25	2°33'04
	12820 Jul 16 19:29	0° Ω		morning rise	12821 May 09 21:33	15° B 57'52	
max. Earth dist.	12820 Jul 17 01:49	0° Ω 26'28	1.41345 AU	direct	12821 May 14 03:26	14° B 16'53	
				morning max el	12821 May 22 08:47	18° B 58'33	20°46'19
superior conj	12820 Jul 24 20:30	13° Ω 49'20	-1°25'35	desc. node	12821 May 28 09:36	25° B 57'32	
minimum elong	12820 Jul 25 02:42	14° Ω 16'50	1°25'31		12821 May 31 10:53	0° Π	
	12820 Aug 02 17:46	0° B			12821 Jun 20 18:46	0° B	
evening rise	12820 Aug 04 08:26	2° B 59'42		morning set	12821 Jun 21 04:04	0° B 36'07	
asc. node	12820 Aug 04 06:18	2° B 49'45		max. Earth dist.	12821 Jun 29 08:26	13° B 33'59	1.43355 AU
evening max el	12820 Aug 20 08:19	28° B 30'48	18°15'05				
	12820 Aug 22 00:33	0° B		superior conj	12821 Jul 06 03:17	24° B 44'11	-1°54'28
retrograde	12820 Aug 27 14:27	2° B 11'26		minimum elong	12821 Jul 06 10:11	25° B 13'08	1°54'48
evening set	12820 Aug 29 18:31	1° B 52'23			12821 Jul 09 05:56	0° Ω	
	12820 Sep 02 12:39	30° R B		evening rise	12821 Jul 18 05:12	15° Ω 38'19	
inferior conj	12820 Sep 06 03:11	27° B 10'08	0°05'22	asc. node	12821 Jul 22 03:02	22° Ω 32'12	
minimum elong	12820 Sep 06 03:22	27° B 09'45	0°05'08		12821 Jul 26 11:45	0° B	
transit middle	12820 Sep 06 03:22	27° B 09'45	0°05'08	evening max el	12821 Aug 03 21:01	11° B 34'59	18°03'17
transit begin	12820 Sep 06 00:05	27° B 16'43		retrograde	12821 Aug 10 11:06	14° B 58'28	
transit end	12820 Sep 06 06:38	27° B 02'46		evening set	12821 Aug 12 23:11	14° B 28'50	
desc. node	12820 Sep 06 10:07	26° B 55'19		inferior conj	12821 Aug 19 14:47	9° B 26'36	1°22'23
min. Earth dist.	12820 Sep 09 10:55	24° B 21'37	0.58949 AU	minimum elong	12821 Aug 19 16:58	9° B 21'12	1°21'12
morning rise	12820 Sep 13 08:45	21° B 37'27		min. Earth dist.	12821 Aug 22 17:09	6° B 25'16	0.61230 AU
direct	12820 Sep 19 17:07	19° B 48'09		desc. node	12821 Aug 24 07:35	4° B 59'45	
morning max el	12820 Oct 04 01:06	27° B 33'03	27°31'03	morning rise	12821 Aug 26 08:04	3° B 27'52	
	12820 Oct 06 09:56	0° B		direct	12821 Sep 01 23:28	1° B 13'26	
	12820 Oct 26 18:31	0° B		morning max el	12821 Sep 16 04:50	9° B 11'01	27°57'40
asc. node	12820 Oct 31 08:06	8° B 43'48			12821 Oct 02 06:44	0° B	
morning set	12820 Nov 04 08:54	17° B 01'15		asc. node	12821 Oct 18 04:47	28° B 31'54	
	12820 Nov 10 07:37	0° B			12821 Oct 18 22:01	0° B	
				morning set	12821 Oct 19 11:25	1° B 09'04	
superior conj	12820 Nov 11 08:33	2° B 19'06	1°28'14	max. Earth dist.	12821 Oct 25 04:57	13° B 24'51	1.31535 AU
minimum elong	12820 Nov 11 06:49	2° B 09'23	1°28'53				
max. Earth dist.	12820 Nov 10 21:58	1° B 20'03	1.31247 AU	superior conj	12821 Oct 26 19:03	16° B 54'59	1°14'35
evening rise	12820 Nov 18 02:04	17° B 09'28		minimum elong	12821 Oct 26 16:50	16° B 42'46	1°14'55
	12820 Nov 24 08:54	0° B			12821 Nov 01 17:14	0° B	
desc. node	12820 Dec 03 07:02	15° B 38'27		evening rise	12821 Nov 02 12:12	1° B 42'41	
	12820 Dec 13 22:53	0° \approx			12821 Nov 17 14:38	0° B	
evening max el	12820 Dec 17 05:22	3° \approx 21'52	26°26'27	desc. node	12821 Nov 20 04:12	3° B 46'41	
retrograde	12820 Dec 31 04:19	10° \approx 28'16		evening max el	12821 Nov 28 21:27	14° B 07'47	25°05'10
evening set	12821 Jan 06 16:12	8° \approx 45'33		retrograde	12821 Dec 12 16:59	21° B 03'08	
min. Earth dist.	12821 Jan 10 19:04	6° \approx 09'12	0.58716 AU	evening set	12821 Dec 18 09:24	19° B 50'37	
inferior conj	12821 Jan 13 22:25	3° \approx 47'25	-4°04'49	min. Earth dist.	12821 Dec 23 09:25	17° B 08'15	0.56760 AU
minimum elong	12821 Jan 14 06:41	3° \approx 31'48	4°01'24	inferior conj	12821 Dec 26 02:00	15° B 22'45	-5°15'04
	12821 Jan 19 20:28	30° R B		minimum elong	12821 Dec 29 09:52	15° B 09'51	5°12'35
morning rise	12821 Jan 22 00:07	29° B 15'43		morning rise	12822 Jan 03 12:35	11° B 13'00	
direct	12821 Jan 24 01:32	29° B 01'04		direct	12822 Jan 05 19:13	10° B 58'09	
asc. node	12821 Jan 27 07:24	29° B 39'23		asc. node	12822 Jan 14 04:39	14° B 36'30	

morning max el	12822 Jan 15 03:39	15° Z 29'24	19°14'46	direct	12822 Dec 17 17:31	21° Z 56'29	
	12822 Jan 25 08:54	0° \approx		morning max el	12822 Dec 28 14:48	27° Z 07'48	20°28'20
morning set	12822 Feb 01 00:13	12° \approx 42'16			12822 Dec 31 07:20	0° Z	
				asc. node	12823 Jan 01 01:50	0° Z 56'00	
superior conj	12822 Feb 09 05:19	28° \approx 57'31	0°53'51	morning set	12823 Jan 16 07:07	27° Z 21'14	
minimum elong	12822 Feb 09 08:06	29° \approx 10'56	0°54'01		12823 Jan 17 13:55	0° \approx	
	12822 Feb 09 18:16	0° H					
max. Earth dist.	12822 Feb 15 22:20	11° H 31'40	1.38458 AU	superior conj	12823 Jan 23 19:59	12° \approx 52'46	1°15'13
desc. node	12822 Feb 16 04:22	11° H 58'59		minimum elong	12823 Jan 23 22:37	13° \approx 06'08	1°15'40
evening rise	12822 Feb 19 16:17	18° H 10'16		max. Earth dist.	12823 Jan 29 05:57	23° \approx 34'42	1.36278 AU
	12822 Feb 26 18:05	0° Y			12823 Feb 01 15:56	0° H	
	12822 Mar 19 16:01	0° B		evening rise	12823 Feb 02 01:55	0° H 45'46	
evening max el	12822 Mar 27 00:20	8° B 15'20	24°48'25	desc. node	12823 Feb 03 01:01	2° H 30'54	
retrograde	12822 Apr 07 18:22	15° B 06'14			12823 Feb 19 21:47	0° Y	
asc. node	12822 Apr 12 01:31	13° B 45'08		evening max el	12823 Mar 09 13:48	22° Y 05'52	25°59'29
evening set	12822 Apr 13 09:49	12° B 44'30		retrograde	12823 Mar 22 05:01	29° Y 19'50	
min. Earth dist.	12822 Apr 17 21:34	7° B 40'36	0.68208 AU	evening set	12823 Mar 28 07:51	26° Y 50'01	
inferior conj	12822 Apr 18 23:39	6° B 14'13	2°00'52	asc. node	12823 Mar 29 22:56	25° Y 18'51	
minimum elong	12822 Apr 18 21:31	6° B 21'20	1°59'44	min. Earth dist.	12823 Apr 01 12:55	22° Y 21'24	0.67224 AU
morning rise	12822 Apr 24 09:25	0° B 17'06		inferior conj	12823 Apr 03 03:22	20° Y 21'13	1°17'14
	12822 Apr 24 19:32	30° R Y		minimum elong	12823 Apr 03 01:38	20° Y 26'38	1°16'22
direct	12822 Apr 28 03:05	28° Y 57'02		morning rise	12823 Apr 08 20:08	14° Y 34'01	
	12822 May 01 15:29	0° B		direct	12823 Apr 12 02:29	13° Y 33'19	
morning max el	12822 May 05 09:55	2° B 58'58	19°37'59	morning max el	12823 Apr 18 18:32	17° Y 08'36	18°45'07
desc. node	12822 May 15 06:26	15° B 21'16			12823 Apr 28 16:37	0° B	
greatest brilliancy	12822 May 18 02:33	19° B 27'18	-0.6m	desc. node	12823 May 02 03:10	5° B 11'37	
	12822 May 25 03:56	0° II		morning set	12823 May 10 16:14	18° B 26'55	
morning set	12822 May 31 04:56	9° II 13'28			12823 May 18 01:57	0° II	
max. Earth dist.	12822 Jun 11 22:01	27° II 27'45	1.44846 AU	max. Earth dist.	12823 May 25 16:04	11° II 50'33	1.45662 AU
	12822 Jun 13 12:26	0° E					
				superior conj	12823 May 26 22:27	13° II 49'25	-2°10'18
superior conj	12822 Jun 16 10:11	4° E 38'30	-2°11'31	minimum elong	12823 May 26 18:07	13° II 32'25	2°11'04
minimum elong	12822 Jun 16 13:24	4° E 51'22	2°12'24		12823 Jun 06 04:34	0° E	
evening rise	12822 Jun 30 06:02	27° E 23'56		evening rise	12823 Jun 11 07:01	8° E 09'14	
	12822 Jul 01 19:10	0° O		greatest brilliancy	12823 Jun 17 16:10	18° E 23'05	-0.9m
asc. node	12822 Jul 08 23:51	11° O 57'12			12823 Jun 25 04:31	0° O	
evening max el	12822 Jul 18 11:17	24° O 59'51	18°10'11	asc. node	12823 Jun 25 20:46	0° O 58'44	
retrograde	12822 Jul 24 19:51	28° O 20'40		evening max el	12823 Jul 02 00:04	8° O 37'59	18°35'01
evening set	12822 Jul 27 16:10	27° O 37'46		retrograde	12823 Jul 08 12:22	12° O 09'42	
inferior conj	12822 Aug 02 18:12	22° O 17'36	2°16'35	evening set	12823 Jul 11 17:09	11° O 11'40	
minimum elong	12822 Aug 02 20:44	22° O 10'34	2°15'15	inferior conj	12823 Jul 17 09:28	5° O 35'42	2°50'56
min. Earth dist.	12822 Aug 05 08:57	19° O 24'40	0.63438 AU	minimum elong	12823 Jul 17 11:24	5° O 29'48	2°49'46
morning rise	12822 Aug 08 23:34	16° O 02'50		min. Earth dist.	12823 Jul 19 10:07	3° O 08'02	0.65382 AU
desc. node	12822 Aug 11 05:04	14° O 37'15			12823 Jul 22 07:43	30° R E	
direct	12822 Aug 15 15:25	13° O 30'33		morning rise	12823 Jul 23 04:38	29° E 13'24	
morning max el	12822 Aug 29 13:36	21° O 32'02	27°46'07	desc. node	12823 Jul 29 02:28	26° E 33'48	
	12822 Sep 05 22:43	0° M		direct	12823 Jul 29 15:35	26° E 32'44	
	12822 Sep 25 10:25	0° A			12823 Aug 07 00:34	0° O	
morning set	12822 Oct 03 06:42	14° A 53'36		morning max el	12823 Aug 12 00:40	4° O 26'19	27°01'28
asc. node	12822 Oct 05 01:25	18° A 30'16			12823 Aug 31 10:51	0° M	
max. Earth dist.	12822 Oct 08 06:23	25° A 12'17	1.32347 AU	morning set	12823 Sep 16 15:57	28° M 08'20	
	12822 Oct 10 12:02	0° M			12823 Sep 17 15:01	0° A	
				max. Earth dist.	12823 Sep 20 22:53	6° A 36'51	1.33684 AU
superior conj	12822 Oct 11 02:23	1° M 17'42	0°55'23	asc. node	12823 Sep 21 22:03	8° A 34'44	
minimum elong	12822 Oct 11 00:11	1° M 05'51	0°55'26				
evening rise	12822 Oct 17 23:26	16° M 16'15		superior conj	12823 Sep 25 04:24	15° A 21'50	0°30'52
	12822 Oct 24 16:41	0° Z		minimum elong	12823 Sep 25 02:53	15° A 13'51	0°30'44
desc. node	12822 Nov 07 01:28	20° Z 46'50		evening rise	12823 Oct 02 09:56	0° M 45'22	
evening max el	12822 Nov 10 07:39	24° Z 15'48	23°25'41		12823 Oct 02 01:21	0° M	
	12822 Nov 18 18:25	0° Z			12823 Oct 18 23:48	0° Z	
retrograde	12822 Nov 23 16:54	0° Z 55'42		evening max el	12823 Oct 22 20:35	4° Z 21'05	21°45'45
evening set	12822 Nov 28 02:54	0° Z 13'17		desc. node	12823 Oct 24 22:49	6° Z 14'39	
	12822 Nov 28 18:57	30° R Z		retrograde	12823 Nov 04 06:37	10° Z 31'08	
min. Earth dist.	12822 Dec 04 17:38	27° Z 05'48	0.55283 AU	evening set	12823 Nov 07 06:48	10° Z 10'43	
inferior conj	12822 Dec 06 09:25	26° Z 07'41	-5°53'04	inferior conj	12823 Nov 16 03:10	6° Z 15'45	-5°37'01
minimum elong	12822 Dec 06 11:24	26° Z 04'47	5°52'02	minimum elong	12823 Nov 15 20:29	6° Z 25'06	5°35'16
morning rise	12822 Dec 14 21:38	22° Z 15'51		min. Earth dist.	12823 Nov 15 23:59	6° Z 20'12	0.54564 AU

morning rise	12823 Nov 24 11:13	2°♊28'09		minimum elong	12824 Oct 25 10:18	16°♊30'53	4°20'19
direct	12823 Nov 28 02:41	1°♊59'09		min. Earth dist.	12824 Oct 27 07:42	15°♊24'09	0.54775 AU
morning max el	12823 Dec 10 12:01	7°♊54'12	22°03'07	morning rise	12824 Nov 02 23:19	12°♊12'46	
asc. node	12823 Dec 18 22:56	18°♊21'07		direct	12824 Nov 07 12:20	11°♊28'11	
	12823 Dec 25 17:32	0°♊		morning max el	12824 Nov 20 23:43	18°♊03'36	23°50'42
morning set	12823 Dec 31 17:27	12°♊06'41			12824 Nov 30 17:19	0°♊	
				asc. node	12824 Dec 04 19:56	6°♊36'32	
superior conj	12824 Jan 07 19:47	27°♊12'05	1°29'26	morning set	12824 Dec 15 05:16	26°♊53'11	
minimum elong	12824 Jan 07 21:38	27°♊21'49	1°30'11		12824 Dec 16 16:00	0°♊	
	12824 Jan 09 03:48	0°♊					
max. Earth dist.	12824 Jan 11 19:01	5°♊25'35	1.34373 AU	superior conj	12824 Dec 22 01:46	11°♊47'01	1°36'57
evening rise	12824 Jan 16 03:02	14°♊00'09		minimum elong	12824 Dec 22 02:33	11°♊51'13	1°37'53
desc. node	12824 Jan 20 21:42	22°♊53'51		max. Earth dist.	12824 Dec 24 16:02	17°♊22'07	1.32878 AU
	12824 Jan 24 23:12	0°♊		evening rise	12824 Dec 29 16:12	27°♊44'53	
	12824 Feb 14 17:44	0°♊			12824 Dec 30 19:20	0°♊	
evening max el	12824 Feb 20 03:22	5°♊47'36	26°54'54	desc. node	12825 Jan 06 18:28	13°♊03'00	
retrograde	12824 Mar 04 10:10	13°♊12'57			12825 Jan 17 04:48	0°♊	
evening set	12824 Mar 10 22:48	10°♊40'15		evening max el	12825 Feb 01 16:15	19°♊11'01	27°27'23
min. Earth dist.	12824 Mar 14 22:25	6°♊45'20	0.65841 AU	retrograde	12825 Feb 15 08:44	26°♊37'11	
asc. node	12824 Mar 15 20:24	5°♊42'18		evening set	12825 Feb 22 04:28	24°♊08'19	
inferior conj	12824 Mar 17 01:02	4°♊19'00	0°22'53	min. Earth dist.	12825 Feb 26 00:06	20°♊44'21	0.64112 AU
minimum elong	12824 Mar 17 00:24	4°♊20'48	0°22'41	inferior conj	12825 Feb 28 14:06	18°♊01'47	-0°42'12
	12824 Mar 21 05:35	30°♊		minimum elong	12825 Feb 28 15:24	17°♊58'21	0°41'21
morning rise	12824 Mar 23 03:23	28°♊43'28		asc. node	12825 Mar 02 17:49	15°♊50'42	
direct	12824 Mar 25 23:40	27°♊59'14		morning rise	12825 Mar 07 04:26	12°♊40'15	
	12824 Mar 30 20:19	0°♊		direct	12825 Mar 09 16:13	12°♊08'58	
morning max el	12824 Apr 01 08:47	1°♊20'35	18°08'46	morning max el	12825 Mar 16 02:06	15°♊27'32	17°49'30
desc. node	12824 Apr 17 23:47	25°♊20'45			12825 Mar 26 11:43	0°♊	
morning set	12824 Apr 20 05:30	28°♊57'42		morning set	12825 Apr 01 22:52	10°♊50'22	
	12824 Apr 20 20:56	0°♊		desc. node	12825 Apr 04 20:22	15°♊43'26	
					12825 Apr 13 11:26	0°♊	
superior conj	12824 May 05 06:38	22°♊56'19	-1°49'08	superior conj	12825 Apr 15 04:01	2°♊44'16	-1°13'42
minimum elong	12824 May 04 21:31	22°♊20'34	1°49'04	minimum elong	12825 Apr 14 20:28	2°♊13'47	1°13'11
max. Earth dist.	12824 May 07 11:47	26°♊24'25	1.45740 AU	max. Earth dist.	12825 Apr 20 06:57	10°♊54'55	1.45088 AU
	12824 May 09 19:01	0°♊		evening rise	12825 Apr 30 21:04	27°♊22'13	
evening rise	12824 May 21 08:49	17°♊58'58			12825 May 02 14:22	0°♊	
	12824 May 29 03:26	0°♊			12825 May 23 05:24	0°♊	
greatest brilliancy	12824 Jun 02 10:14	6°♊30'41	-0.7m	evening max el	12825 May 28 12:21	6°♊09'53	20°14'18
asc. node	12824 Jun 11 17:48	19°♊27'47		asc. node	12825 May 29 14:53	7°♊13'35	
evening max el	12824 Jun 14 08:55	22°♊22'38	19°16'56	retrograde	12825 Jun 05 07:56	10°♊38'56	
retrograde	12824 Jun 21 09:16	26°♊17'39		evening set	12825 Jun 09 07:22	9°♊08'02	
evening set	12824 Jun 24 23:00	25°♊03'25		inferior conj	12825 Jun 14 14:12	3°♊05'00	3°13'31
inferior conj	12824 Jun 30 09:04	19°♊13'14	3°08'58	minimum elong	12825 Jun 14 14:05	3°♊05'24	3°12'32
minimum elong	12824 Jun 30 10:01	19°♊10'09	3°07'58	min. Earth dist.	12825 Jun 15 10:00	1°♊57'29	0.68057 AU
min. Earth dist.	12824 Jul 01 19:05	17°♊22'23	0.66943 AU		12825 Jun 16 21:31	30°♊	
morning rise	12824 Jul 05 20:28	12°♊49'39		morning rise	12825 Jun 19 20:29	26°♊44'05	
direct	12824 Jul 11 22:42	10°♊10'26		direct	12825 Jun 25 11:23	24°♊14'57	
desc. node	12824 Jul 14 23:47	10°♊44'11		desc. node	12825 Jul 01 20:59	26°♊43'15	
morning max el	12824 Jul 24 11:33	17°♊40'37	25°52'04		12825 Jul 05 18:50	0°♊	
	12824 Aug 03 19:21	0°♊		morning max el	12825 Jul 06 21:32	1°♊05'48	24°27'39
	12824 Aug 23 10:17	0°♊			12825 Jul 28 18:12	0°♊	
morning set	12824 Aug 29 11:35	10°♊44'05		morning set	12825 Aug 11 13:12	22°♊29'51	
max. Earth dist.	12824 Sep 02 04:55	17°♊42'42	1.35507 AU	max. Earth dist.	12825 Aug 15 03:43	28°♊53'25	1.37704 AU
					12825 Aug 15 18:25	0°♊	
superior conj	12824 Sep 07 22:28	29°♊00'26	0°01'31	superior conj	12825 Aug 22 05:19	12°♊05'39	-0°31'34
minimum elong	12824 Sep 07 22:23	29°♊00'03	0°01'23	minimum elong	12825 Aug 22 07:28	12°♊15'59	0°31'34
behind sun begin	12824 Sep 07 16:17	28°♊29'09		asc. node	12825 Aug 25 15:15	18°♊45'52	
behind sun end	12824 Sep 08 04:30	29°♊31'00		evening rise	12825 Aug 30 20:02	29°♊06'57	
asc. node	12824 Sep 07 18:39	28°♊41'06			12825 Aug 31 06:42	0°♊	
	12824 Sep 08 10:13	0°♊		evening max el	12825 Sep 16 11:47	26°♊24'13	19°14'27
evening rise	12824 Sep 15 17:36	15°♊04'21			12825 Sep 21 08:47	0°♊	
	12824 Sep 23 08:33	0°♊			12825 Sep 25 17:00	1°♊00'39	
evening max el	12824 Oct 03 21:07	14°♊58'59	20°19'50	retrograde	12825 Sep 27 13:27	0°♊50'17	
desc. node	12824 Oct 10 20:13	19°♊42'13		evening set	12825 Sep 27 17:42	0°♊48'14	
retrograde	12824 Oct 14 18:23	20°♊23'36		desc. node	12825 Sep 30 07:20	30°♊	
evening set	12824 Oct 16 20:32	20°♊12'32					
inferior conj	12824 Oct 25 20:21	16°♊16'07	-4°23'52				

inferior conj	12825 Oct 06 02:43	26°♄39'54	-2°37'24	inferior conj	12826 Sep 17 06:01	7°♄47'17	-0°49'25
minimum elong	12825 Oct 05 19:55	26°♄51'12	2°34'28	minimum elong	12826 Sep 17 04:05	7°♄51'04	0°48'37
min. Earth dist.	12825 Oct 08 18:50	24°♄53'35	0.55896 AU	min. Earth dist.	12826 Sep 20 11:52	5°♄16'37	0.57708 AU
morning rise	12825 Oct 13 23:48	22°♄04'26		morning rise	12826 Sep 24 18:06	2°♄34'05	
direct	12825 Oct 19 08:48	20°♄58'15		direct	12826 Sep 30 19:16	1°♄01'23	
morning max el	12825 Nov 02 10:17	28°♄05'56	25°35'12	morning max el	12826 Oct 15 02:43	8°♄34'21	26°58'21
	12825 Nov 04 07:43	0°♄			12826 Oct 31 07:48	0°♄	
asc. node	12825 Nov 21 16:49	25°♄28'57		asc. node	12826 Nov 08 13:37	14°♄48'48	
	12825 Nov 24 01:42	0°♄		morning set	12826 Nov 14 02:14	26°♄07'18	
morning set	12825 Nov 29 16:45	11°♄34'49			12826 Nov 15 21:23	0°♄	
superior conj	12825 Dec 06 11:31	26°♄29'24	1°38'12	superior conj	12826 Nov 20 23:01	11°♄13'32	1°33'31
minimum elong	12825 Dec 06 11:11	26°♄27'33	1°39'10	minimum elong	12826 Nov 20 21:43	11°♄06'16	1°34'20
max. Earth dist.	12825 Dec 07 20:01	29°♄28'50	1.31854 AU	max. Earth dist.	12826 Nov 21 04:06	11°♄41'54	1.31328 AU
	12825 Dec 08 01:41	0°♄		evening rise	12826 Nov 27 18:42	26°♄11'47	
evening rise	12825 Dec 13 14:15	11°♄50'53			12826 Nov 29 14:11	0°♄	
	12825 Dec 23 00:08	0°♄		desc. node	12826 Dec 11 12:19	22°♄10'22	
desc. node	12825 Dec 24 15:20	2°♄51'18			12826 Dec 16 14:03	0°♄	
	12826 Jan 13 01:17	0°♄		evening max el	12826 Dec 28 07:00	14°♄08'54	26°59'32
evening max el	12826 Jan 15 02:25	2°♄02'25	27°30'26	retrograde	12827 Jan 11 05:37	21°♄20'19	
retrograde	12826 Jan 28 23:36	9°♄22'24		evening set	12827 Jan 18 00:12	19°♄22'24	
evening set	12826 Feb 04 22:04	7°♄04'59		min. Earth dist.	12827 Jan 21 21:14	16°♄42'15	0.59960 AU
min. Earth dist.	12826 Feb 08 16:02	4°♄07'14	0.62111 AU	inferior conj	12827 Jan 25 01:34	14°♄06'41	-3°18'19
inferior conj	12826 Feb 11 15:27	1°♄20'47	-1°57'07	minimum elong	12827 Jan 25 08:34	13°♄52'22	3°15'04
minimum elong	12826 Feb 11 19:28	1°♄11'22	1°54'57	morning rise	12827 Feb 01 19:57	9°♄22'35	
	12826 Feb 13 02:38	30°♄		direct	12827 Feb 03 21:39	9°♄06'11	
asc. node	12826 Feb 17 15:13	26°♄45'09		asc. node	12827 Feb 04 12:35	9°♄07'43	
morning rise	12826 Feb 18 19:35	26°♄16'19		morning max el	12827 Feb 11 09:12	12°♄49'40	18°05'14
direct	12826 Feb 21 00:54	25°♄54'14			12827 Feb 22 22:00	0°♄	
morning max el	12826 Feb 27 19:22	29°♄20'19	17°47'57	morning set	12827 Feb 26 23:38	7°♄29'58	
	12826 Feb 28 10:57	0°♄		superior conj	12827 Mar 08 20:50	25°♄37'29	0°05'28
morning set	12826 Mar 15 14:58	23°♄47'24		minimum elong	12827 Mar 08 21:18	25°♄39'29	0°05'34
	12826 Mar 19 03:09	0°♄		behind sun begin	12827 Mar 08 13:59	25°♄06'55	
desc. node	12826 Mar 22 16:52	6°♄14'39		behind sun end	12827 Mar 09 04:36	26°♄11'59	
superior conj	12826 Mar 27 00:28	13°♄37'30	-0°33'07	desc. node	12827 Mar 09 13:22	26°♄50'49	
minimum elong	12826 Mar 26 21:16	13°♄24'02	0°32'45		12827 Mar 11 08:27	0°♄	
max. Earth dist.	12826 Apr 02 23:37	25°♄07'28	1.43766 AU	max. Earth dist.	12827 Mar 16 11:50	8°♄46'52	1.41917 AU
	12826 Apr 06 00:39	0°♄		evening rise	12827 Mar 21 17:06	17°♄20'09	
evening rise	12826 Apr 10 11:28	6°♄59'11			12827 Mar 29 19:55	0°♄	
	12826 Apr 25 20:56	0°♄			12827 Apr 20 15:27	0°♄	
evening max el	12826 May 11 10:02	19°♄57'46	21°24'18	evening max el	12827 Apr 24 02:55	3°♄46'08	22°42'35
asc. node	12826 May 16 12:04	24°♄02'29		asc. node	12827 May 03 09:21	9°♄38'01	
retrograde	12826 May 20 06:28	25°♄08'25		retrograde	12827 May 04 03:16	9°♄40'37	
evening set	12826 May 24 16:22	23°♄21'09		evening set	12827 May 09 00:19	7°♄38'09	
inferior conj	12826 May 29 22:32	17°♄06'48	3°06'28	inferior conj	12827 May 14 08:02	1°♄14'45	2°48'55
minimum elong	12826 May 29 21:29	17°♄10'29	3°05'26	minimum elong	12827 May 14 06:16	1°♄20'53	2°47'47
min. Earth dist.	12826 May 30 04:48	16°♄44'57	0.68694 AU	min. Earth dist.	12827 May 14 01:25	1°♄37'43	0.68861 AU
morning rise	12826 Jun 04 02:23	10°♄50'52			12827 May 15 05:39	30°♄	
direct	12826 Jun 09 04:36	8°♄38'07		morning rise	12827 May 19 12:06	25°♄05'09	
desc. node	12826 Jun 18 18:04	14°♄04'08		direct	12827 May 24 01:14	23°♄12'20	
morning max el	12826 Jun 19 08:14	14°♄39'13	22°58'03	morning max el	12827 Jun 01 22:34	28°♄21'41	21°31'46
	12826 Jul 01 19:31	0°♄			12827 Jun 03 12:13	0°♄	
	12826 Jul 21 16:46	0°♄		desc. node	12827 Jun 05 15:02	2°♄24'36	
morning set	12826 Jul 23 16:10	3°♄14'31			12827 Jun 25 10:10	0°♄	
max. Earth dist.	12826 Jul 28 02:05	10°♄40'27	1.40042 AU	morning set	12827 Jul 03 17:39	12°♄51'29	
				max. Earth dist.	12827 Jul 10 04:58	23°♄17'54	1.42245 AU
superior conj	12826 Aug 04 20:58	24°♄28'04	-1°06'14		12827 Jul 14 05:26	0°♄	
minimum elong	12826 Aug 05 01:48	24°♄50'11	1°06'07	superior conj	12827 Jul 17 16:49	5°♄56'23	-1°38'49
	12826 Aug 07 20:47	0°♄		minimum elong	12827 Jul 17 23:42	6°♄26'10	1°38'52
asc. node	12826 Aug 12 11:53	8°♄45'24		evening rise	12827 Jul 28 20:09	25°♄49'25	
evening rise	12826 Aug 14 14:12	12°♄45'41		asc. node	12827 Jul 30 08:35	28°♄35'10	
	12826 Aug 24 02:50	0°♄			12827 Jul 31 03:17	0°♄	
evening max el	12826 Aug 30 14:12	8°♄35'14	18°30'44	evening max el	12827 Aug 14 00:14	21°♄22'14	18°07'42
retrograde	12826 Sep 07 10:30	12°♄32'38		retrograde	12827 Aug 20 22:24	24°♄54'12	
evening set	12826 Sep 09 10:36	12°♄17'56		evening set	12827 Aug 23 05:41	24°♄31'08	
desc. node	12826 Sep 14 15:12	9°♄44'21					

inferior conj	12827 Aug 30 06:42	19° \cap 40'00	0°40'53	inferior conj	12828 Aug 12 01:32	2° \cap 11'55	1°47'58
minimum elong	12827 Aug 30 07:59	19° \cap 37'06	0°40'08	minimum elong	12828 Aug 12 04:02	2° \cap 05'26	1°46'40
desc. node	12827 Sep 01 12:42	17° \cap 37'00			12828 Aug 14 04:19	30° \Re Ω	
min. Earth dist.	12827 Sep 02 13:05	16° \cap 43'19	0.59906 AU	min. Earth dist.	12828 Aug 14 23:36	29° Ω 11'24	0.62189 AU
morning rise	12827 Sep 06 07:05	13° \cap 54'39		desc. node	12828 Aug 18 10:11	26° Ω 11'05	
direct	12827 Sep 12 19:01	11° \cap 54'14		morning rise	12828 Aug 18 13:35	26° Ω 04'58	
morning max el	12827 Sep 27 02:48	19° \cap 45'53	27°47'13	direct	12828 Aug 25 05:56	23° Ω 41'31	
	12827 Oct 05 20:53	0° $\underline{\cap}$			12828 Sep 06 13:59	0° \cap	
	12827 Oct 24 04:04	0° \cap		morning max el	12828 Sep 08 09:03	1° \cap 42'56	27°57'10
asc. node	12827 Oct 26 10:21	4° \cap 28'03			12828 Sep 29 04:02	0° $\underline{\cap}$	
morning set	12827 Oct 29 07:53	10° \cap 25'26		morning set	12828 Oct 12 07:39	24° $\underline{\cap}$ 24'02	
max. Earth dist.	12827 Nov 04 12:30	23° \cap 51'46	1.31307 AU	asc. node	12828 Oct 12 07:02	24° $\underline{\cap}$ 20'54	
					12828 Oct 15 00:16	0° \cap	
superior conj	12827 Nov 05 10:25	25° \cap 53'40	1°23'08	max. Earth dist.	12828 Oct 17 17:25	5° \cap 49'05	1.31810 AU
minimum elong	12827 Nov 05 08:26	25° \cap 42'35	1°23'39				
	12827 Nov 07 06:37	0° \times		superior conj	12828 Oct 19 19:50	10° \cap 24'33	1°07'07
evening rise	12827 Nov 12 03:18	10° \times 41'27		minimum elong	12828 Oct 19 17:34	10° \cap 12'06	1°07'19
	12827 Nov 21 20:32	0° $\underline{\times}$		evening rise	12828 Oct 26 14:07	25° \cap 15'02	
desc. node	12827 Nov 28 09:27	10° $\underline{\times}$ 48'43			12828 Oct 28 19:43	0° \times	
evening max el	12827 Dec 10 03:37	25° $\underline{\times}$ 22'50	25°54'55	desc. node	12828 Nov 14 06:41	28° \times 30'37	
	12827 Dec 16 02:42	0° \approx			12828 Nov 15 10:26	0° $\underline{\times}$	
retrograde	12827 Dec 24 01:36	2° \approx 25'23		evening max el	12828 Nov 20 16:29	5° $\underline{\times}$ 49'32	24°24'06
evening set	12827 Dec 30 06:43	0° \approx 54'44		retrograde	12828 Dec 04 09:24	12° $\underline{\times}$ 39'57	
	12828 Jan 01 00:23	30° \Re $\underline{\times}$		evening set	12828 Dec 09 13:41	11° $\underline{\times}$ 40'52	
min. Earth dist.	12828 Jan 03 16:25	28° $\underline{\times}$ 18'12	0.57845 AU	min. Earth dist.	12828 Dec 15 04:00	8° $\underline{\times}$ 49'52	0.56050 AU
inferior conj	12828 Jan 06 16:59	26° $\underline{\times}$ 09'48	-4°37'05	inferior conj	12828 Dec 17 11:43	7° $\underline{\times}$ 23'26	-5°36'39
minimum elong	12828 Jan 07 01:38	25° $\underline{\times}$ 54'28	4°33'51	minimum elong	12828 Dec 17 17:48	7° $\underline{\times}$ 13'58	5°34'51
morning rise	12828 Jan 14 23:18	21° $\underline{\times}$ 48'01		morning rise	12828 Dec 25 23:56	3° $\underline{\times}$ 22'08	
direct	12828 Jan 17 01:58	21° $\underline{\times}$ 33'49		direct	12828 Dec 28 10:56	3° $\underline{\times}$ 06'05	
asc. node	12828 Jan 22 09:53	23° $\underline{\times}$ 10'27		morning max el	12829 Jan 07 10:59	7° $\underline{\times}$ 54'10	19°43'14
morning max el	12828 Jan 25 15:47	25° $\underline{\times}$ 44'59	18°43'04	asc. node	12829 Jan 08 07:07	8° $\underline{\times}$ 44'36	
	12828 Jan 29 07:33	0° \approx			12829 Jan 21 20:21	0° \approx	
morning set	12828 Feb 10 19:51	21° \approx 43'19		morning set	12829 Jan 24 23:43	6° \approx 15'21	
	12828 Feb 15 01:55	0° \times					
superior conj	12828 Feb 19 13:22	8° \times 33'12	0°38'12	superior conj	12829 Feb 01 21:11	22° \approx 10'03	1°03'48
minimum elong	12828 Feb 19 15:44	8° \times 44'18	0°38'16	minimum elong	12829 Feb 02 00:00	22° \approx 24'01	1°04'04
desc. node	12828 Feb 24 09:57	17° \times 28'38			12829 Feb 05 22:09	0° \times	
max. Earth dist.	12828 Feb 26 19:27	21° \times 43'38	1.39746 AU	max. Earth dist.	12829 Feb 08 01:35	4° \times 01'22	1.37507 AU
evening rise	12828 Mar 01 19:46	28° \times 37'19		desc. node	12829 Feb 10 06:33	8° \times 03'47	
	12828 Mar 02 15:29	0° Υ		evening rise	12829 Feb 11 18:58	10° \times 46'58	
	12828 Mar 22 07:27	0° \mathcal{B}			12829 Feb 23 08:21	0° Υ	
evening max el	12828 Apr 05 17:07	17° \mathcal{B} 37'02	24°03'24		12829 Mar 17 19:25	0° \mathcal{B}	
retrograde	12828 Apr 16 21:04	24° \mathcal{B} 10'40		evening max el	12829 Mar 19 06:38	1° \mathcal{B} 29'16	25°20'08
asc. node	12828 Apr 19 06:42	23° \mathcal{B} 44'33		retrograde	12829 Mar 31 10:38	8° \mathcal{B} 31'49	
evening set	12828 Apr 22 05:42	21° \mathcal{B} 55'10		evening set	12829 Apr 06 06:52	6° \mathcal{B} 06'20	
min. Earth dist.	12828 Apr 26 21:47	16° \mathcal{B} 30'36	0.68570 AU	asc. node	12829 Apr 06 04:06	6° \mathcal{B} 12'09	
inferior conj	12828 Apr 27 16:49	15° \mathcal{B} 25'58	2°21'20	min. Earth dist.	12829 Apr 10 15:40	1° \mathcal{B} 17'17	0.67839 AU
minimum elong	12828 Apr 27 14:41	15° \mathcal{B} 33'13	2°20'09	inferior conj	12829 Apr 11 22:58	29° Υ 35'49	1°43'38
morning rise	12828 May 02 23:45	9° \mathcal{B} 23'49		minimum elong	12829 Apr 11 20:56	29° Υ 42'27	1°42'35
direct	12828 May 07 00:14	7° \mathcal{B} 52'02			12829 Apr 11 15:32	30° \Re Υ	
morning max el	12828 May 14 19:21	12° \mathcal{B} 15'46	20°15'30	morning rise	12829 Apr 17 11:22	23° Υ 42'27	
desc. node	12828 May 22 11:53	21° \mathcal{B} 28'54		direct	12829 Apr 21 00:03	22° Υ 30'54	
	12828 May 28 13:28	0° Π		morning max el	12829 Apr 27 23:42	26° Υ 20'13	19°13'24
morning set	12828 Jun 11 22:47	21° Π 36'53			12829 May 01 06:57	0° \mathcal{B}	
	12828 Jun 17 08:04	0° \mathfrak{S}		desc. node	12829 May 09 08:40	11° \mathcal{B} 04'47	
max. Earth dist.	12828 Jun 21 14:14	6° \mathfrak{S} 44'46	1.44057 AU	greatest brilliancy	12829 May 10 21:01	13° \mathcal{B} 19'19	-0.7m
					12829 May 21 19:46	0° Π	
superior conj	12828 Jun 27 13:20	16° \mathfrak{S} 24'28	-2°03'33	morning set	12829 May 22 01:15	0° Π 21'06	
minimum elong	12828 Jun 27 19:19	16° \mathfrak{S} 49'03	2°04'10	max. Earth dist.	12829 Jun 04 05:31	20° Π 50'46	1.45282 AU
	12828 Jul 05 15:58	0° Ω					
evening rise	12828 Jul 10 09:04	8° Ω 06'38		superior conj	12829 Jun 07 11:06	25° Π 56'42	-2°13'30
asc. node	12828 Jul 16 05:22	18° Ω 10'46		minimum elong	12829 Jun 07 11:17	25° Π 57'24	2°14'27
	12828 Jul 23 17:41	0° \cap			12829 Jun 10 00:22	0° \mathfrak{S}	
evening max el	12828 Jul 27 14:00	4° \cap 35'50	18°04'00	evening rise	12829 Jun 21 23:58	19° \mathfrak{S} 26'00	
retrograde	12828 Aug 03 00:42	7° \cap 56'39			12829 Jun 28 10:13	0° Ω	
evening set	12828 Aug 05 16:09	7° \cap 21'48		asc. node	12829 Jul 03 02:14	7° Ω 26'21	
				evening max el	12829 Jul 11 04:01	18° Ω 07'04	18°18'41

retrograde	12829 Jul 17 13:01	21° Ω 30'38		evening set	12830 Jul 04 16:17	4° Ω 23'05	
evening set	12829 Jul 20 12:56	20° Ω 41'29			12830 Jul 09 04:03	30° \mathbb{R} \mathfrak{S}	
inferior conj	12829 Jul 26 10:24	15° Ω 14'40	2°33'20	inferior conj	12830 Jul 10 05:32	28° \mathfrak{S} 40'52	3°00'24
minimum elong	12829 Jul 26 12:46	15° Ω 07'50	2°32'03	minimum elong	12830 Jul 10 07:04	28° \mathfrak{S} 36'01	2°59'18
min. Earth dist.	12829 Jul 28 19:26	12° Ω 30'34	0.64307 AU	min. Earth dist.	12830 Jul 11 23:53	26° \mathfrak{S} 28'01	0.66101 AU
morning rise	12829 Aug 01 11:11	8° Ω 55'58		morning rise	12830 Jul 15 21:06	22° \mathfrak{S} 17'42	
desc. node	12829 Aug 05 07:36	6° Ω 45'09		direct	12830 Jul 22 04:48	19° \mathfrak{S} 36'39	
direct	12829 Aug 08 01:43	6° Ω 18'37		desc. node	12830 Jul 23 04:57	19° \mathfrak{S} 40'18	
morning max el	12829 Aug 21 18:52	14° Ω 18'23	27°30'43	morning max el	12830 Aug 04 05:51	27° \mathfrak{S} 21'21	26°34'28
	12829 Sep 03 12:38	0° \mathfrak{M}			12830 Aug 06 17:31	0° Ω	
	12829 Sep 21 19:41	0° \mathfrak{L}			12830 Aug 28 04:57	0° \mathfrak{M}	
morning set	12829 Sep 25 23:03	7° \mathfrak{L} 56'45		morning set	12830 Sep 09 02:54	20° \mathfrak{M} 55'07	
asc. node	12829 Sep 29 03:41	14° \mathfrak{L} 22'24		max. Earth dist.	12830 Sep 13 03:15	28° \mathfrak{M} 40'57	1.34404 AU
max. Earth dist.	12829 Sep 30 15:11	17° \mathfrak{L} 25'59	1.32846 AU		12830 Sep 13 19:11	0° \mathfrak{L}	
				asc. node	12830 Sep 16 00:16	4° \mathfrak{L} 27'40	
superior conj	12829 Oct 04 01:15	24° \mathfrak{L} 40'27	0°45'39	superior conj	12830 Sep 18 00:11	8° \mathfrak{L} 34'02	0°18'59
minimum elong	12829 Oct 03 23:15	24° \mathfrak{L} 29'48	0°45'35	minimum elong	12830 Sep 17 23:11	8° \mathfrak{L} 28'48	0°18'49
	12829 Oct 06 12:28	0° \mathfrak{M}		evening rise	12830 Sep 25 10:48	24° \mathfrak{L} 12'36	
evening rise	12829 Oct 11 01:16	9° \mathfrak{M} 47'28			12830 Sep 28 06:05	0° \mathfrak{M}	
	12829 Oct 21 09:16	0° \mathfrak{J}		evening max el	12830 Oct 14 19:56	26° \mathfrak{M} 07'53	21°06'58
desc. node	12829 Nov 01 03:59	14° \mathfrak{J} 55'16		desc. node	12830 Oct 19 01:23	29° \mathfrak{M} 35'04	
evening max el	12829 Nov 02 02:54	15° \mathfrak{J} 52'53	22°42'23		12830 Oct 19 17:40	0° \mathfrak{J}	
retrograde	12829 Nov 15 04:04	22° \mathfrak{J} 21'32		retrograde	12830 Oct 26 15:08	1° \mathfrak{J} 59'48	
evening set	12829 Nov 18 23:12	21° \mathfrak{J} 50'06		evening set	12830 Oct 29 04:12	1° \mathfrak{J} 44'35	
min. Earth dist.	12829 Nov 26 11:13	18° \mathfrak{J} 26'26	0.54871 AU		12830 Nov 03 03:08	30° \mathfrak{R} \mathfrak{M}	
inferior conj	12829 Nov 27 12:14	17° \mathfrak{J} 50'55	-5°53'42	inferior conj	12830 Nov 07 03:47	27° \mathfrak{M} 50'35	-5°12'05
minimum elong	12829 Nov 27 10:25	17° \mathfrak{J} 53'30	5°52'44	minimum elong	12830 Nov 06 18:42	28° \mathfrak{M} 03'24	5°09'26
morning rise	12829 Dec 05 23:00	14° \mathfrak{J} 02'43		min. Earth dist.	12830 Nov 07 17:24	27° \mathfrak{M} 31'22	0.54538 AU
direct	12829 Dec 09 02:51	13° \mathfrak{J} 39'46		morning rise	12830 Nov 15 09:43	23° \mathfrak{M} 59'16	
morning max el	12829 Dec 20 15:59	19° \mathfrak{J} 09'57	21°06'12	direct	12830 Nov 19 10:34	23° \mathfrak{M} 24'21	
asc. node	12829 Dec 26 04:16	25° \mathfrak{J} 34'15		morning max el	12830 Dec 02 08:06	29° \mathfrak{M} 36'33	22°48'06
	12829 Dec 29 04:20	0° \mathfrak{Z}			12830 Dec 02 17:55	0° \mathfrak{J}	
morning set	12830 Jan 09 08:23	20° \mathfrak{Z} 58'11		asc. node	12830 Dec 13 01:19	13° \mathfrak{J} 21'59	
	12830 Jan 13 15:48	0° \approx			12830 Dec 22 01:33	0° \mathfrak{Z}	
superior conj	12830 Jan 16 16:08	6° \approx 16'42	1°22'05	morning set	12830 Dec 24 19:36	5° \mathfrak{Z} 44'39	
minimum elong	12830 Jan 16 18:30	6° \approx 28'53	1°22'40	superior conj	12830 Dec 31 18:53	20° \mathfrak{Z} 43'12	1°33'24
max. Earth dist.	12830 Jan 21 11:16	15° \approx 57'43	1.35434 AU	minimum elong	12830 Dec 31 20:17	20° \mathfrak{Z} 50'45	1°34'15
evening rise	12830 Jan 25 11:43	23° \approx 40'37		max. Earth dist.	12831 Jan 04 03:57	27° \mathfrak{Z} 50'44	1.33688 AU
desc. node	12830 Jan 28 03:13	28° \approx 32'36			12831 Jan 05 04:59	0° \approx	
	12830 Jan 28 22:40	0° \mathfrak{H}		evening rise	12831 Jan 08 18:20	7° \approx 08'29	
	12830 Feb 16 23:59	0° \mathfrak{Y}		desc. node	12831 Jan 14 23:57	18° \approx 50'14	
evening max el	12830 Mar 01 20:25	15° \mathfrak{Y} 17'49	26°25'22		12831 Jan 21 13:12	0° \mathfrak{H}	
retrograde	12830 Mar 14 18:54	22° \mathfrak{Y} 37'14		evening max el	12831 Feb 12 09:57	28° \mathfrak{H} 53'14	27°11'50
evening set	12830 Mar 21 02:06	20° \mathfrak{Y} 05'48			12831 Feb 13 14:30	0° \mathfrak{Y}	
asc. node	12830 Mar 24 01:31	17° \mathfrak{Y} 10'45		retrograde	12831 Feb 25 21:08	6° \mathfrak{Y} 19'11	
min. Earth dist.	12830 Mar 25 04:51	15° \mathfrak{Y} 51'32	0.66690 AU	evening set	12831 Mar 04 13:23	3° \mathfrak{Y} 47'12	
inferior conj	12830 Mar 27 00:24	13° \mathfrak{Y} 39'32	0°55'31	min. Earth dist.	12831 Mar 08 11:08	0° \mathfrak{Y} 06'04	0.65154 AU
minimum elong	12830 Mar 26 23:03	13° \mathfrak{Y} 43'39	0°54'53		12831 Mar 08 13:22	30° \mathfrak{R} \mathfrak{H}	
morning rise	12830 Apr 01 20:55	7° \mathfrak{Y} 56'46		inferior conj	12831 Mar 10 18:45	27° \mathfrak{H} 31'36	-0°03'23
direct	12830 Apr 04 22:54	7° \mathfrak{Y} 03'18		minimum elong	12831 Mar 10 18:50	27° \mathfrak{H} 31'21	0°03'13
morning max el	12830 Apr 11 10:53	10° \mathfrak{Y} 31'00	18°27'28	transit middle	12831 Mar 10 18:50	27° \mathfrak{H} 31'21	0°03'13
	12830 Apr 25 13:05	0° \mathfrak{B}		transit begin	12831 Mar 10 15:53	27° \mathfrak{H} 39'37	
desc. node	12830 Apr 26 05:20	1° \mathfrak{B} 03'37		transit end	12831 Mar 10 21:48	27° \mathfrak{H} 23'05	
morning set	12830 May 01 22:31	10° \mathfrak{B} 04'31		asc. node	12831 Mar 10 22:57	27° \mathfrak{H} 19'55	
	12830 May 14 14:43	0° \mathfrak{I}		morning rise	12831 Mar 17 01:56	22° \mathfrak{H} 01'46	
superior conj	12830 May 17 19:20	4° \mathfrak{I} 59'20	-2°03'34	direct	12831 Mar 19 18:30	21° \mathfrak{H} 23'22	
minimum elong	12830 May 17 12:12	4° \mathfrak{I} 31'30	2°04'00	morning max el	12831 Mar 26 02:49	24° \mathfrak{H} 41'48	17°58'26
max. Earth dist.	12830 May 18 00:52	5° \mathfrak{I} 20'55	1.45796 AU		12831 Mar 30 13:32	0° \mathfrak{Y}	
evening rise	12830 Jun 02 14:26	29° \mathfrak{I} 45'06		morning set	12831 Apr 13 00:10	21° \mathfrak{Y} 11'49	
	12830 Jun 02 18:13	0° \mathfrak{S}		desc. node	12831 Apr 13 01:56	21° \mathfrak{Y} 19'04	
greatest brilliancy	12830 Jun 11 18:08	14° \mathfrak{S} 08'31	-0.8m		12831 Apr 18 09:10	0° \mathfrak{B}	
asc. node	12830 Jun 19 23:10	26° \mathfrak{S} 14'42		superior conj	12831 Apr 27 07:17	14° \mathfrak{B} 18'53	-1°35'17
	12830 Jun 22 23:05	0° Ω		minimum elong	12831 Apr 26 22:11	13° \mathfrak{B} 42'52	1°34'57
evening max el	12830 Jun 24 15:23	1° Ω 48'19	18°50'53	max. Earth dist.	12831 Apr 30 21:14	19° \mathfrak{B} 57'27	1.45553 AU
retrograde	12830 Jul 01 07:39	5° Ω 28'07					

	12831 May 07 07:52	0°♂		max. Earth dist.	12832 Apr 12 15:27	4°♂21'36	1.44596 AU
evening rise	12831 May 13 08:53	9°♂19'34		evening rise	12832 Apr 21 20:03	18°♂43'27	
greatest brilliancy	12831 May 27 05:27	0°♂19'11	-0.6m		12832 Apr 29 06:31	0°♂	
	12831 May 27 00:14	0°♂		evening max el	12832 May 20 22:51	29°♂21'24	20°42'43
asc. node	12831 Jun 06 20:13	14°♂26'56			12832 May 21 14:34	0°♂	
evening max el	12831 Jun 07 22:01	15°♂34'28	19°39'33	asc. node	12832 May 23 17:21	1°♂50'11	
retrograde	12831 Jun 15 05:41	19°♂42'51		retrograde	12832 May 29 04:39	4°♂08'06	
evening set	12831 Jun 18 23:30	18°♂21'22		evening set	12832 Jun 02 08:22	2°♂30'11	
inferior conj	12831 Jun 24 07:49	12°♂25'16	3°12'26		12832 Jun 04 20:12	30°♂♂	
minimum elong	12831 Jun 24 08:18	12°♂23'38	3°11'26	inferior conj	12832 Jun 07 14:36	26°♂21'53	3°11'52
min. Earth dist.	12831 Jun 25 11:36	10°♂52'39	0.67472 AU	minimum elong	12832 Jun 07 14:04	26°♂23'44	3°10'52
morning rise	12831 Jun 29 16:43	6°♂02'28		min. Earth dist.	12832 Jun 08 04:32	25°♂33'44	0.68383 AU
direct	12831 Jul 05 14:14	3°♂26'59		morning rise	12832 Jun 12 19:30	20°♂02'38	
desc. node	12831 Jul 10 02:11	4°♂40'29		direct	12832 Jun 18 05:00	17°♂39'57	
morning max el	12831 Jul 17 16:33	10°♂41'59	25°17'29	desc. node	12832 Jun 25 23:20	21°♂17'05	
	12831 Aug 02 01:06	0°♂		morning max el	12832 Jun 29 02:42	24°♂11'13	23°49'34
	12831 Aug 20 20:30	0°♂			12832 Jul 04 07:19	0°♂	
morning set	12831 Aug 22 15:25	3°♂10'47			12832 Jul 25 11:01	0°♂	
max. Earth dist.	12831 Aug 26 06:00	9°♂47'06	1.36410 AU	morning set	12832 Aug 03 07:57	14°♂31'48	
				max. Earth dist.	12832 Aug 07 03:30	21°♂08'31	1.38696 AU
superior conj	12831 Sep 01 13:53	21°♂59'03	-0°12'11		12832 Aug 12 01:19	0°♂	
minimum elong	12831 Sep 01 14:39	22°♂02'53	0°12'15				
behind sun begin	12831 Sep 01 10:28	21°♂42'06		superior conj	12832 Aug 14 14:44	4°♂46'34	-0°46'17
behind sun end	12831 Sep 01 18:51	22°♂23'42		minimum elong	12832 Aug 14 18:00	5°♂01'59	0°46'12
asc. node	12831 Sep 02 20:53	24°♂33'39		asc. node	12832 Aug 19 17:30	14°♂36'19	
	12831 Sep 05 13:28	0°♂		evening rise	12832 Aug 23 15:54	22°♂18'26	
evening rise	12831 Sep 09 16:34	8°♂25'24			12832 Aug 27 15:25	0°♂	
	12831 Sep 21 11:02	0°♂		evening max el	12832 Sep 08 22:26	18°♂49'15	18°53'15
evening max el	12831 Sep 27 02:20	7°♂04'05	19°49'16	retrograde	12832 Sep 17 12:40	23°♂07'40	
desc. node	12831 Oct 05 22:47	12°♂03'22		evening set	12832 Sep 19 09:45	22°♂56'07	
retrograde	12831 Oct 07 06:26	12°♂08'17		desc. node	12832 Sep 21 20:14	22°♂09'22	
evening set	12831 Oct 09 04:22	11°♂58'19		inferior conj	12832 Sep 27 15:53	18°♂37'45	-1°50'15
inferior conj	12831 Oct 18 01:04	7°♂56'45	-3°40'45	minimum elong	12832 Sep 27 11:13	18°♂46'02	1°48'12
minimum elong	12831 Oct 17 15:51	8°♂10'57	3°37'08	min. Earth dist.	12832 Sep 30 15:49	16°♂30'26	0.56595 AU
min. Earth dist.	12831 Oct 20 02:07	6°♂41'13	0.55148 AU	morning rise	12832 Oct 05 09:28	13°♂45'45	
morning rise	12831 Oct 26 01:47	3°♂41'09		direct	12832 Oct 11 01:51	12°♂28'30	
direct	12831 Oct 30 23:20	2°♂48'25		morning max el	12832 Oct 25 07:00	19°♂48'48	26°14'12
morning max el	12831 Nov 13 18:24	9°♂38'27	24°36'47		12832 Nov 02 23:47	0°♂	
	12831 Nov 28 20:21	0°♂		asc. node	12832 Nov 15 19:08	20°♂58'41	
asc. node	12831 Nov 29 22:16	1°♂53'48			12832 Nov 20 07:59	0°♂	
morning set	12831 Dec 09 07:28	20°♂29'18		morning set	12832 Nov 22 18:19	5°♂07'29	
	12831 Dec 13 16:12	0°♂					
superior conj	12831 Dec 16 02:43	5°♂21'41	1°38'13	superior conj	12832 Nov 29 13:29	20°♂05'41	1°36'56
minimum elong	12831 Dec 16 03:01	5°♂23'19	1°39'12	minimum elong	12832 Nov 29 12:43	20°♂01'24	1°37'51
max. Earth dist.	12831 Dec 18 04:07	9°♂50'51	1.32378 AU	max. Earth dist.	12832 Nov 30 10:02	21°♂59'50	1.31558 AU
evening rise	12831 Dec 23 11:35	21°♂02'21			12832 Dec 04 01:30	0°♂	
	12831 Dec 28 00:37	0°♂		evening rise	12832 Dec 06 12:39	5°♂15'22	
desc. node	12832 Jan 01 20:47	8°♂51'05		desc. node	12832 Dec 18 17:42	28°♂28'06	
	12832 Jan 15 12:19	0°♂			12832 Dec 19 15:39	0°♂	
evening max el	12832 Jan 25 21:44	12°♂03'35	27°32'32	evening max el	12833 Jan 07 05:46	24°♂37'12	27°21'39
retrograde	12832 Feb 08 16:37	19°♂28'12			12833 Jan 14 09:05	0°♂	
evening set	12832 Feb 15 14:19	17°♂02'49		retrograde	12833 Jan 21 04:18	1°♂54'42	
min. Earth dist.	12832 Feb 19 08:42	13°♂51'07	0.63289 AU		12833 Jan 27 15:36	30°♂	
inferior conj	12832 Feb 22 03:13	11°♂04'56	-1°12'53	evening set	12833 Jan 28 01:54	29°♂44'30	
minimum elong	12832 Feb 22 05:36	10°♂58'58	1°11'31	min. Earth dist.	12833 Jan 31 20:17	26°♂55'31	0.61195 AU
asc. node	12832 Feb 25 20:22	7°♂40'39		inferior conj	12833 Feb 03 22:35	24°♂11'27	-2°31'09
morning rise	12832 Feb 28 23:18	5°♂50'38		minimum elong	12833 Feb 04 03:54	23°♂59'40	2°28'27
direct	12832 Mar 02 08:02	5°♂23'46		morning rise	12833 Feb 11 08:52	19°♂15'27	
morning max el	12832 Mar 08 20:36	8°♂44'08	17°46'40	asc. node	12833 Feb 11 17:45	19°♂09'28	
	12832 Mar 23 02:22	0°♂		direct	12833 Feb 13 12:03	18°♂56'20	
morning set	12832 Mar 25 03:59	3°♂34'00		morning max el	12833 Feb 20 12:57	22°♂28'55	17°52'56
desc. node	12832 Mar 29 22:29	11°♂45'45			12833 Feb 26 09:19	0°♂	
				morning set	12833 Mar 08 03:57	16°♂53'02	
superior conj	12832 Apr 06 13:58	24°♂33'39	-0°56'37		12833 Mar 15 11:13	0°♂	
minimum elong	12832 Apr 06 08:11	24°♂09'57	0°56'07	desc. node	12833 Mar 16 19:02	2°♂19'51	
	12832 Apr 09 22:11	0°♂					
				superior conj	12833 Mar 18 21:00	5°♂56'55	-0°16'16

minimum elong	12833 Mar 18 19:33	5° Υ 50'38	0°16'01	superior conj	12834 Mar 01 02:30	18° X 21'46	0°20'09
max. Earth dist.	12833 Mar 26 05:54	18° Υ 20'07	1.43033 AU	minimum elong	12834 Mar 01 03:58	18° X 28'27	0°20'12
evening rise	12833 Apr 01 15:51	28° Υ 37'10		desc. node	12834 Mar 03 15:36	22° X 56'59	
	12833 Apr 02 13:00	0° B			12834 Mar 07 16:14	0° Υ	
	12833 Apr 22 22:51	0° Π		max. Earth dist.	12834 Mar 08 16:04	1° Υ 41'59	1.41024 AU
evening max el	12833 May 03 18:21	13° Π 09'36	21°56'51	evening rise	12834 Mar 13 06:14	9° Υ 22'00	
asc. node	12833 May 10 14:34	18° Π 10'01			12834 Mar 26 13:25	0° B	
retrograde	12833 May 13 02:39	18° Π 39'12		evening max el	12834 Apr 16 10:02	26° B 59'49	23°17'01
evening set	12833 May 17 17:07	16° Π 45'33			12834 Apr 19 17:57	0° Π	
inferior conj	12833 May 22 23:43	10° Π 27'03	3°00'16	retrograde	12834 Apr 26 22:14	3° Π 11'14	
minimum elong	12833 May 22 22:19	10° Π 31'54	2°59'11	asc. node	12834 Apr 27 11:52	3° Π 09'45	
min. Earth dist.	12833 May 23 00:31	10° Π 24'13	0.68827 AU	evening set	12834 May 02 00:11	1° Π 03'06	
morning rise	12833 May 28 03:19	4° Π 13'23			12834 May 03 02:52	30° R B	
direct	12833 Jun 01 23:59	2° Π 08'38		inferior conj	12834 May 07 09:10	24° B 37'02	2°38'26
morning max el	12833 Jun 11 14:26	7° Π 47'42	22°20'17	minimum elong	12834 May 07 07:12	24° B 43'49	2°37'16
desc. node	12833 Jun 12 20:23	9° Π 05'26		min. Earth dist.	12834 May 06 21:19	25° B 17'56	0.68800 AU
	12833 Jun 28 20:35	0° E		morning rise	12834 May 12 14:08	18° B 30'26	
morning set	12833 Jul 15 00:04	24° E 47'15		direct	12834 May 16 21:56	16° B 46'19	
	12833 Jul 18 04:23	0° Ω		morning max el	12834 May 25 07:09	21° B 34'41	20°57'43
max. Earth dist.	12833 Jul 20 02:45	3° Ω 13'33	1.41015 AU	desc. node	12834 May 30 17:20	27° B 46'17	
					12834 Jun 01 10:59	0° Π	
superior conj	12833 Jul 27 22:30	16° Ω 47'01	-1°20'38		12834 Jun 22 02:07	0° E	
minimum elong	12833 Jul 28 04:24	17° Ω 13'20	1°20'32	morning set	12834 Jun 24 15:37	3° E 58'32	
	12833 Aug 04 04:00	0° M		max. Earth dist.	12834 Jul 02 08:38	16° E 14'32	1.43084 AU
asc. node	12833 Aug 06 14:10	4° M 31'56					
evening rise	12833 Aug 07 05:22	5° M 43'03		superior conj	12834 Jul 09 08:50	27° E 51'00	-1°50'40
	12833 Aug 21 23:42	0° A		minimum elong	12834 Jul 09 15:52	28° E 20'42	1°50'56
evening max el	12833 Aug 23 04:41	1° A 17'03	18°18'33		12834 Jul 10 15:15	0° Ω	
retrograde	12833 Aug 30 14:03	5° A 01'27		evening rise	12834 Jul 21 04:43	18° Ω 28'50	
evening set	12833 Sep 01 17:05	4° A 43'35		asc. node	12834 Jul 24 10:54	24° Ω 16'29	
desc. node	12833 Sep 08 17:45	0° A 26'40			12834 Jul 27 17:38	0° M	
inferior conj	12833 Sep 09 04:30	0° A 04'22	-0°08'22	evening max el	12834 Aug 06 16:51	14° M 17'08	18°03'50
minimum elong	12833 Sep 09 04:12	0° A 05'01	0°08'20	retrograde	12834 Aug 13 08:41	17° M 42'23	
transit middle	12833 Sep 09 04:12	0° A 05'01	0°08'20	evening set	12834 Aug 15 19:31	17° M 14'31	
transit begin	12833 Sep 09 01:13	0° A 11'13		inferior conj	12834 Aug 22 13:26	12° M 14'56	1°12'10
transit end	12833 Sep 09 07:11	29° M 58'47		minimum elong	12834 Aug 22 15:26	12° M 10'05	1°11'05
	12833 Sep 09 06:36	30° R M		min. Earth dist.	12834 Aug 25 17:00	9° M 14'15	0.60887 AU
min. Earth dist.	12833 Sep 12 12:09	27° M 19'51	0.58618 AU	desc. node	12834 Aug 26 15:15	8° M 24'40	
morning rise	12833 Sep 16 11:49	24° M 36'36		morning rise	12834 Aug 29 08:34	6° M 19'24	
direct	12833 Sep 22 18:37	22° M 51'31		direct	12834 Sep 04 23:15	4° M 08'31	
	12833 Oct 06 12:35	0° A		morning max el	12834 Sep 19 05:21	12° M 04'31	27°56'14
morning max el	12833 Oct 07 02:28	0° A 33'24	27°23'47		12834 Oct 03 09:28	0° A	
	12833 Oct 28 02:40	0° M			12834 Oct 20 10:00	0° M	
asc. node	12833 Nov 02 15:55	10° M 27'29		asc. node	12834 Oct 20 12:39	0° M 13'23	
morning set	12833 Nov 07 02:21	19° M 34'01		morning set	12834 Oct 22 05:45	3° M 44'26	
	12833 Nov 11 21:21	0° X		max. Earth dist.	12834 Oct 28 02:08	16° M 18'34	1.31461 AU
superior conj	12833 Nov 14 01:09	4° X 48'40	1°29'49	superior conj	12834 Oct 29 11:56	19° M 25'30	1°17'01
minimum elong	12833 Nov 13 23:31	4° X 39'31	1°30'31	minimum elong	12834 Oct 29 09:46	19° M 13'29	1°17'24
max. Earth dist.	12833 Nov 13 18:36	4° X 12'04	1.31251 AU		12834 Nov 03 06:27	0° X	
evening rise	12833 Nov 20 19:06	19° X 40'40		evening rise	12834 Nov 05 04:54	4° X 12'54	
	12833 Nov 25 19:15	0° B			12834 Nov 18 16:57	0° B	
desc. node	12833 Dec 05 14:45	17° B 31'12		desc. node	12834 Nov 22 11:54	5° B 47'33	
	12833 Dec 14 10:58	0° \approx		evening max el	12834 Dec 02 00:35	17° B 14'44	25°18'44
evening max el	12833 Dec 20 07:24	6° \approx 22'21	26°36'07	retrograde	12834 Dec 15 20:45	24° B 11'52	
retrograde	12834 Jan 03 06:19	13° \approx 29'47		evening set	12834 Dec 21 16:56	22° B 54'30	
evening set	12834 Jan 09 20:13	11° \approx 43'03		min. Earth dist.	12834 Dec 26 12:41	20° B 14'19	0.57031 AU
min. Earth dist.	12834 Jan 13 21:18	9° \approx 06'07	0.59035 AU	inferior conj	12834 Dec 29 07:48	18° B 22'30	-5°05'59
inferior conj	12834 Jan 17 01:10	6° \approx 40'22	-3°52'50	minimum elong	12834 Dec 29 16:03	18° B 08'44	5°03'15
minimum elong	12834 Jan 17 09:10	6° \approx 24'55	3°49'24	morning rise	12835 Jan 06 17:32	14° B 09'45	
morning rise	12834 Jan 25 01:03	2° \approx 05'17		direct	12835 Jan 08 22:56	13° B 55'10	
direct	12834 Jan 27 02:24	1° \approx 50'16		asc. node	12835 Jan 16 12:23	16° B 56'47	
asc. node	12834 Jan 29 15:06	2° \approx 14'05		morning max el	12835 Jan 18 02:12	18° B 20'46	19°05'50
morning max el	12834 Feb 04 00:08	5° \approx 44'45	18°18'41		12835 Jan 26 15:22	0° \approx	
	12834 Feb 19 07:29	0° X		morning set	12835 Feb 03 17:56	15° \approx 12'28	
morning set	12834 Feb 19 18:06	0° X 50'19			12835 Feb 11 06:06	0° X	

superior conj	12835 Feb 12 02:01	1° H 35'54	0°49'58		12836 Jan 19 02:04	0° \approx	
minimum elong	12835 Feb 12 04:43	1° H 48'54	0°50'05				
desc. node	12835 Feb 18 12:10	13° H 33'45		superior conj	12836 Jan 26 15:01	15° \approx 26'57	1°12'26
max. Earth dist.	12835 Feb 18 22:56	14° H 22'09	1.38792 AU	minimum elong	12836 Jan 26 17:44	15° \approx 40'36	1°12'50
evening rise	12835 Feb 22 17:49	21° H 01'34		max. Earth dist.	12836 Feb 01 05:58	26° \approx 28'22	1.36585 AU
	12835 Feb 28 02:23	0° Y			12836 Feb 03 02:59	0° H	
	12835 Mar 20 14:16	0° B		evening rise	12836 Feb 05 00:50	3° H 30'44	
evening max el	12835 Mar 29 23:46	10° B 51'29	24°36'57	desc. node	12836 Feb 05 08:47	4° H 06'45	
retrograde	12835 Apr 10 14:13	17° B 38'16			12836 Feb 21 02:28	0° Y	
asc. node	12835 Apr 14 09:15	16° B 34'31		evening max el	12836 Mar 11 13:09	24° Y 42'33	25°49'42
evening set	12835 Apr 16 03:58	15° B 17'57			12836 Mar 18 03:03	0° B	
min. Earth dist.	12835 Apr 20 16:45	10° B 08'50	0.68316 AU	retrograde	12836 Mar 24 01:43	1° B 54'15	
inferior conj	12835 Apr 21 17:03	8° B 47'48	2°06'36		12836 Mar 29 09:10	30° R Y	
minimum elong	12835 Apr 21 14:54	8° B 55'01	2°05'27	evening set	12836 Mar 30 02:51	29° Y 25'18	
morning rise	12835 Apr 27 02:00	2° B 49'27		asc. node	12836 Mar 31 06:38	28° Y 22'01	
direct	12835 Apr 30 21:24	1° B 26'27		min. Earth dist.	12836 Apr 03 08:48	24° Y 51'28	0.67395 AU
morning max el	12835 May 08 07:11	5° B 33'32	19°47'15	inferior conj	12836 Apr 04 21:26	22° Y 55'47	1°24'33
desc. node	12835 May 17 14:10	17° B 05'08		minimum elong	12836 Apr 04 19:36	23° Y 01'36	1°23'38
greatest brilliancy	12835 May 21 05:13	22° B 17'06	-0.6m	morning rise	12836 Apr 10 12:59	17° Y 06'58	
	12835 May 26 10:02	0° II		direct	12836 Apr 13 20:55	16° Y 03'35	
morning set	12835 Jun 03 16:55	12° II 36'12		morning max el	12836 Apr 20 14:45	19° Y 42'14	18°51'56
	12835 Jun 14 20:43	0° B			12836 Apr 28 19:41	0° B	
max. Earth dist.	12835 Jun 14 21:17	0° B 02'17	1.44662 AU	desc. node	12836 May 03 10:54	6° B 51'56	
				greatest brilliancy	12836 May 04 09:02	8° B 16'02	-0.8m
superior conj	12835 Jun 19 19:11	7° B 53'39	-2°09'59	morning set	12836 May 13 01:18	21° B 40'22	
minimum elong	12835 Jun 19 23:17	8° B 10'13	2°10'49		12836 May 18 09:46	0° II	
evening rise	12835 Jul 03 08:52	0° B 23'07		max. Earth dist.	12836 May 27 14:35	14° II 20'51	1.45587 AU
	12835 Jul 03 03:24	0° B					
asc. node	12835 Jul 11 07:42	13° B 44'26		superior conj	12836 May 29 09:32	17° II 09'06	-2°11'49
evening max el	12835 Jul 21 07:04	27° B 39'02	18°07'57	minimum elong	12836 May 29 06:21	16° II 56'38	2°12'39
	12835 Jul 24 06:28	0° B			12836 Jun 06 12:40	0° B	
retrograde	12835 Jul 27 15:54	0° B 59'33		evening rise	12836 Jun 13 13:30	11° B 17'16	
evening set	12835 Jul 30 10:55	0° B 18'50			12836 Jun 25 07:07	0° B	
	12835 Jul 31 01:14	30° R B		asc. node	12836 Jun 27 04:36	2° B 49'53	
inferior conj	12835 Aug 05 14:44	25° B 01'12	2°09'40	evening max el	12836 Jul 03 20:13	11° B 15'28	18°30'10
minimum elong	12835 Aug 05 17:18	24° B 54'13	2°08'20	retrograde	12836 Jul 10 07:26	14° B 44'41	
min. Earth dist.	12835 Aug 08 07:28	22° B 05'42	0.63122 AU	evening set	12836 Jul 13 10:54	13° B 49'05	
morning rise	12835 Aug 11 21:47	18° B 48'02		inferior conj	12836 Jul 19 04:27	8° B 15'29	2°46'49
desc. node	12835 Aug 13 12:42	17° B 43'24		minimum elong	12836 Jul 19 06:30	8° B 09'17	2°45'36
direct	12835 Aug 18 13:52	16° B 17'48		min. Earth dist.	12836 Jul 21 07:19	5° B 43'01	0.65118 AU
morning max el	12835 Sep 01 13:38	24° B 19'46	27°50'06	morning rise	12836 Jul 25 00:59	1° B 53'49	
	12835 Sep 06 16:41	0° B			12836 Jul 28 00:01	30° R B	
	12835 Sep 26 19:11	0° B		desc. node	12836 Jul 30 10:06	29° B 18'04	
morning set	12835 Oct 06 02:16	17° B 32'39		direct	12836 Jul 31 13:01	29° B 13'35	
asc. node	12835 Oct 07 09:18	20° B 10'20			12836 Aug 04 07:53	0° B	
max. Earth dist.	12835 Oct 11 04:36	28° B 08'40	1.32190 AU	morning max el	12836 Aug 14 00:27	7° B 09'31	27°09'50
	12835 Oct 12 01:22	0° B			12836 Aug 31 15:44	0° B	
					12836 Sep 18 02:24	0° B	
superior conj	12835 Oct 13 19:52	3° B 50'13	0°58'40	morning set	12836 Sep 18 13:12	0° B 52'07	
minimum elong	12835 Oct 13 17:38	3° B 38'06	0°58'44	max. Earth dist.	12836 Sep 22 22:23	9° B 35'32	1.33448 AU
evening rise	12835 Oct 20 16:04	18° B 46'19		asc. node	12836 Sep 23 05:55	10° B 14'01	
	12835 Oct 26 02:12	0° B					
desc. node	12835 Nov 09 09:09	22° B 59'13		superior conj	12836 Sep 26 22:49	17° B 57'22	0°34'55
evening max el	12835 Nov 13 11:09	27° B 26'10	23°40'57	minimum elong	12836 Sep 26 21:09	17° B 48'33	0°34'48
	12835 Nov 16 09:57	0° B			12836 Oct 02 13:57	0° B	
retrograde	12835 Nov 26 22:49	4° B 09'27		evening rise	12836 Oct 04 02:45	3° B 16'07	
evening set	12835 Dec 01 13:48	3° B 22'52			12836 Oct 18 17:29	0° B	
min. Earth dist.	12835 Dec 07 21:35	0° B 20'14	0.55456 AU	evening max el	12836 Oct 24 23:05	7° B 29'32	22°00'04
	12835 Dec 08 11:20	30° R B		desc. node	12836 Oct 26 06:28	8° B 42'43	
inferior conj	12835 Dec 09 17:59	29° B 14'28	-5°50'25	retrograde	12836 Nov 06 13:41	13° B 45'02	
minimum elong	12835 Dec 09 21:13	29° B 09'41	5°49'15	evening set	12836 Nov 09 18:22	13° B 22'15	
morning rise	12835 Dec 18 06:27	25° B 20'39		min. Earth dist.	12836 Nov 18 04:09	9° B 39'08	0.54609 AU
direct	12835 Dec 20 23:44	25° B 02'21		inferior conj	12836 Nov 18 13:04	9° B 26'38	-5°43'26
morning max el	12835 Dec 31 15:32	0° B 07'30	20°15'58	minimum elong	12836 Nov 18 07:33	9° B 34'23	5°41'57
	12835 Dec 31 12:23	0° B		morning rise	12836 Nov 26 21:52	5° B 39'25	
asc. node	12836 Jan 03 09:34	3° B 04'56		direct	12836 Nov 30 10:10	5° B 12'09	
morning set	12836 Jan 19 00:06	29° B 49'56		morning max el	12836 Dec 12 14:40	11° B 01'09	21°47'53

asc. node	12836 Dec 20 06:41	20°♊21'14			12837 Dec 01 15:14	0°♊	
	12836 Dec 26 02:00	0°♊		asc. node	12837 Dec 07 03:42	8°♊29'57	
morning set	12837 Jan 02 10:03	14°♊34'46		morning set	12837 Dec 17 21:47	29°♊21'26	
					12837 Dec 18 05:00	0°♊	
superior conj	12837 Jan 09 13:38	29°♊43'12	1°27'42	superior conj	12837 Dec 24 18:52	14°♊16'09	1°36'12
minimum elong	12837 Jan 09 15:37	29°♊53'39	1°28'25	minimum elong	12837 Dec 24 19:49	14°♊21'16	1°37'08
	12837 Jan 09 16:50	0°♊		max. Earth dist.	12837 Dec 27 13:51	20°♊15'01	1.33075 AU
max. Earth dist.	12837 Jan 13 17:56	8°♊19'33	1.34632 AU	evening rise	12838 Jan 01 11:28	0°♊20'46	
evening rise	12837 Jan 17 23:53	16°♊40'04			12838 Jan 01 07:19	0°♊	
desc. node	12837 Jan 22 05:27	24°♊31'22		desc. node	12838 Jan 09 02:13	14°♊43'01	
	12837 Jan 25 07:59	0°♊			12838 Jan 18 08:38	0°♊	
	12837 Feb 14 12:25	0°♊		evening max el	12838 Feb 04 15:57	21°♊53'22	27°24'15
evening max el	12837 Feb 22 02:45	8°♊26'18	26°47'57	retrograde	12838 Feb 18 07:13	29°♊19'26	
retrograde	12837 Mar 07 07:43	15°♊50'40		evening set	12838 Feb 25 02:08	26°♊49'40	
evening set	12837 Mar 13 18:58	13°♊18'11		min. Earth dist.	12838 Feb 28 22:19	23°♊21'18	0.64393 AU
min. Earth dist.	12837 Mar 17 19:22	9°♊18'12	0.66071 AU	inferior conj	12838 Mar 03 10:40	20°♊40'33	-0°31'37
asc. node	12837 Mar 18 04:04	8°♊53'04		minimum elong	12838 Mar 03 11:37	20°♊37'59	0°30'58
inferior conj	12837 Mar 19 20:08	6°♊55'17	0°31'53	asc. node	12838 Mar 05 01:29	18°♊59'15	
minimum elong	12837 Mar 19 19:18	6°♊57'45	0°31'32	morning rise	12838 Mar 09 23:04	15°♊16'39	
morning rise	12837 Mar 25 20:53	1°♊17'43		direct	12838 Mar 12 12:04	14°♊43'35	
direct	12837 Mar 28 18:35	0°♊31'14		morning max el	12838 Mar 18 21:14	18°♊01'46	17°51'13
morning max el	12837 Apr 04 04:15	3°♊53'57	18°13'03		12838 Mar 27 17:36	0°♊	
desc. node	12837 Apr 20 07:31	26°♊58'28		morning set	12838 Apr 04 23:38	13°♊39'26	
	12837 Apr 22 04:45	0°♊		desc. node	12838 Apr 07 04:06	17°♊19'15	
morning set	12837 Apr 23 10:14	1°♊58'19			12838 Apr 14 20:20	0°♊	
superior conj	12837 May 08 17:06	26°♊13'17	-1°53'27	superior conj	12838 Apr 18 11:33	5°♊52'18	-1°19'36
minimum elong	12837 May 08 08:16	25°♊38'45	1°53'31	minimum elong	12838 Apr 18 03:28	5°♊19'52	1°19'05
max. Earth dist.	12837 May 10 10:01	28°♊53'18	1.45780 AU	max. Earth dist.	12838 Apr 23 05:39	13°♊25'58	1.45232 AU
	12837 May 11 03:06	0°♊			12838 May 03 21:38	0°♊	
evening rise	12837 May 24 18:17	21°♊13'36		evening rise	12838 May 04 07:34	0°♊38'04	
	12837 May 30 09:45	0°♊		greatest brilliancy	12838 May 19 08:22	23°♊11'29	-0.6m
greatest brilliancy	12837 Jun 05 02:51	8°♊46'26	-0.7m		12838 May 24 04:21	0°♊	
asc. node	12837 Jun 14 01:34	21°♊24'24		evening max el	12838 May 31 10:05	8°♊46'39	20°04'55
evening max el	12837 Jun 17 05:47	24°♊59'35	19°09'41	asc. node	12838 May 31 22:38	9°♊17'30	
retrograde	12837 Jun 24 03:47	28°♊50'12		retrograde	12838 Jun 08 02:19	13°♊09'55	
evening set	12837 Jun 27 16:11	27°♊38'24		evening set	12838 Jun 12 00:19	11°♊41'23	
inferior conj	12837 Jul 03 02:59	21°♊50'21	3°07'09	inferior conj	12838 Jun 17 07:27	5°♊40'09	3°13'36
minimum elong	12837 Jul 03 04:05	21°♊46'47	3°06'06	minimum elong	12838 Jun 17 07:29	5°♊40'00	3°12'37
min. Earth dist.	12837 Jul 04 15:11	19°♊53'29	0.66740 AU	min. Earth dist.	12838 Jun 18 05:17	4°♊26'05	0.67920 AU
morning rise	12837 Jul 08 15:23	15°♊26'47			12838 Jun 21 21:02	30°♊	
direct	12837 Jul 14 19:10	12°♊46'43		morning rise	12838 Jun 22 14:20	29°♊18'46	
desc. node	12837 Jul 17 07:23	13°♊09'37		direct	12838 Jun 28 07:01	26°♊47'49	
morning max el	12837 Jul 27 11:20	20°♊21'07	26°03'35	desc. node	12838 Jul 04 04:36	28°♊54'00	
	12837 Aug 04 18:14	0°♊			12838 Jul 05 17:31	0°♊	
	12837 Aug 24 18:56	0°♊		morning max el	12838 Jul 09 21:25	3°♊45'05	24°40'50
morning set	12837 Sep 01 11:07	13°♊34'28			12838 Jul 29 23:47	0°♊	
max. Earth dist.	12837 Sep 05 05:54	20°♊43'20	1.35208 AU	morning set	12838 Aug 14 15:42	25°♊28'20	
	12837 Sep 09 22:27	0°♊			12838 Aug 17 04:48	0°♊	
asc. node	12837 Sep 10 02:31	0°♊20'36		max. Earth dist.	12838 Aug 18 05:41	1°♊52'41	1.37363 AU
superior conj	12837 Sep 10 18:17	1°♊40'40	0°06'15	superior conj	12838 Aug 25 03:02	14°♊51'26	-0°26'23
minimum elong	12837 Sep 10 17:56	1°♊38'52	0°06'07	minimum elong	12838 Aug 25 04:48	15°♊00'00	0°26'24
behind sun begin	12837 Sep 10 12:18	1°♊10'13		asc. node	12838 Aug 27 23:07	20°♊25'53	
behind sun end	12837 Sep 10 23:34	2°♊07'35			12838 Sep 01 17:51	0°♊	
evening rise	12837 Sep 18 11:00	17°♊37'18		evening rise	12838 Sep 02 14:24	1°♊43'00	
	12837 Sep 24 16:03	0°♊		evening max el	12838 Sep 19 10:13	29°♊19'16	19°22'46
evening max el	12837 Oct 06 21:37	18°♊01'29	20°31'25		12838 Sep 20 03:08	0°♊	
desc. node	12837 Oct 13 03:52	22°♊30'31		retrograde	12838 Sep 28 21:06	4°♊02'42	
retrograde	12837 Oct 18 00:41	23°♊33'09		desc. node	12838 Sep 30 01:19	3°♊58'36	
evening set	12837 Oct 20 05:09	23°♊21'18		evening set	12838 Sep 30 17:39	3°♊52'34	
inferior conj	12837 Oct 29 05:25	19°♊26'03	-4°37'52		12838 Oct 08 23:40	30°♊	
minimum elong	12837 Oct 28 19:21	19°♊40'38	4°34'29	inferior conj	12838 Oct 09 09:08	29°♊44'37	-2°54'15
min. Earth dist.	12837 Oct 30 11:27	18°♊42'31	0.54685 AU	minimum elong	12838 Oct 09 01:37	29°♊56'51	2°51'05
morning rise	12837 Nov 06 09:08	15°♊26'28		min. Earth dist.	12838 Oct 11 21:45	28°♊06'09	0.55681 AU
direct	12837 Nov 10 19:08	14°♊44'30		morning rise	12838 Oct 17 07:15	25°♊14'40	
morning max el	12837 Nov 24 03:13	21°♊14'06	23°34'24				

direct	12838 Oct 22 13:25	24° Ω 12'13		direct	12839 Oct 03 21:44	4° Ω 08'34	
	12838 Nov 04 04:28	0° \mathbb{M}		morning max el	12839 Oct 18 04:53	11° Ω 38'30	26°47'56
morning max el	12838 Nov 05 13:28	1° \mathbb{M} 15'15	25°20'36		12839 Nov 01 11:33	0° \mathbb{M}	
asc. node	12838 Nov 24 00:37	27° \mathbb{M} 17'23		asc. node	12839 Nov 10 21:29	16° \mathbb{M} 33'42	
	12838 Nov 25 11:25	0° \mathcal{A}		morning set	12839 Nov 16 19:21	28° \mathbb{M} 38'18	
morning set	12838 Dec 02 09:27	14° \mathcal{A} 04'07			12839 Nov 17 10:35	0° \mathcal{A}	
superior conj	12838 Dec 09 04:12	28° \mathcal{A} 57'41	1°38'24	superior conj	12839 Nov 23 15:36	13° \mathcal{A} 42'00	1°34'37
minimum elong	12838 Dec 09 04:02	28° \mathcal{A} 56'45	1°39'22	minimum elong	12839 Nov 23 14:26	13° \mathcal{A} 35'28	1°35'27
	12838 Dec 09 15:30	0° \mathcal{B}		max. Earth dist.	12839 Nov 24 00:41	14° \mathcal{A} 32'43	1.31372 AU
max. Earth dist.	12838 Dec 10 17:03	2° \mathcal{B} 20'32	1.31978 AU	evening rise	12839 Nov 30 12:03	28° \mathcal{A} 42'48	
evening rise	12838 Dec 16 08:24	14° \mathcal{B} 23'53			12839 Dec 01 02:40	0° \mathcal{B}	
	12838 Dec 24 09:04	0° \approx		desc. node	12839 Dec 13 20:05	23° \mathcal{B} 58'59	
desc. node	12838 Dec 26 23:06	4° \approx 34'54			12839 Dec 17 15:14	0° \approx	
	12839 Jan 13 12:20	0° \mathcal{H}		evening max el	12839 Dec 31 08:09	17° \approx 03'44	27°06'20
evening max el	12839 Jan 18 02:40	4° \mathcal{H} 50'12	27°32'00	retrograde	12840 Jan 14 06:49	24° \approx 17'00	
retrograde	12839 Jan 31 23:13	12° \mathcal{H} 11'16		evening set	12840 Jan 21 02:28	22° \approx 15'32	
evening set	12839 Feb 07 21:45	9° \mathcal{H} 51'32		min. Earth dist.	12840 Jan 24 22:31	19° \approx 33'35	0.60277 AU
min. Earth dist.	12839 Feb 11 15:44	6° \mathcal{H} 50'28	0.62423 AU	inferior conj	12840 Jan 28 02:37	16° \approx 55'13	-3°05'57
inferior conj	12839 Feb 14 13:59	4° \mathcal{H} 03'42	-1°45'13	minimum elong	12840 Jan 28 09:12	16° \approx 41'28	3°02'48
minimum elong	12839 Feb 14 17:34	3° \mathcal{H} 55'10	1°43'16	morning rise	12840 Feb 04 18:58	12° \approx 08'07	
	12839 Feb 19 11:40	30° \mathcal{R} \approx		direct	12840 Feb 06 20:54	11° \approx 51'08	
asc. node	12839 Feb 19 22:54	29° \approx 43'20		asc. node	12840 Feb 06 20:18	11° \approx 51'09	
morning rise	12839 Feb 21 16:00	28° \approx 56'36		morning max el	12840 Feb 14 05:26	15° \approx 31'27	18°01'29
direct	12839 Feb 23 22:10	28° \approx 33'21			12840 Feb 24 06:13	0° \mathcal{H}	
	12839 Feb 28 05:46	0° \mathcal{H}		morning set	12840 Feb 29 19:26	10° \mathcal{H} 05'36	
morning max el	12839 Mar 02 14:47	1° \mathcal{H} 57'28	17°47'04	superior conj	12840 Mar 10 21:31	28° \mathcal{H} 27'03	-0°00'06
morning set	12839 Mar 18 12:49	26° \mathcal{H} 28'28		minimum elong	12840 Mar 10 21:31	28° \mathcal{H} 27'05	0°00'01
	12839 Mar 20 12:53	0° \mathcal{Y}		behind sun begin	12840 Mar 10 14:18	27° \mathcal{H} 55'09	
desc. node	12839 Mar 25 00:41	7° \mathcal{Y} 49'48		behind sun end	12840 Mar 11 04:45	28° \mathcal{H} 58'56	
superior conj	12839 Mar 30 04:26	16° \mathcal{Y} 35'53	-0°39'16	desc. node	12840 Mar 10 21:13	28° \mathcal{H} 25'45	
minimum elong	12839 Mar 30 00:34	16° \mathcal{Y} 19'44	0°38'52		12840 Mar 11 18:39	0° \mathcal{Y}	
max. Earth dist.	12839 Apr 05 23:03	27° \mathcal{Y} 43'14	1.43999 AU	max. Earth dist.	12840 Mar 18 11:48	11° \mathcal{Y} 27'49	1.42214 AU
	12839 Apr 07 09:11	0° \mathcal{B}		evening rise	12840 Mar 23 23:37	20° \mathcal{Y} 24'35	
evening rise	12839 Apr 13 20:44	10° \mathcal{B} 11'01			12840 Mar 30 02:53	0° \mathcal{B}	
	12839 Apr 27 01:28	0° \mathbb{I}			12840 Apr 20 10:19	0° \mathbb{I}	
evening max el	12839 May 14 08:34	22° \mathbb{I} 34'30	21°13'13	evening max el	12840 Apr 26 02:02	6° \mathbb{I} 22'44	22°30'34
asc. node	12839 May 18 19:48	26° \mathbb{I} 16'15		asc. node	12840 May 04 17:04	12° \mathbb{I} 04'13	
retrograde	12839 May 23 01:03	27° \mathbb{I} 38'50		retrograde	12840 May 05 22:16	12° \mathbb{I} 11'07	
evening set	12839 May 27 09:21	25° \mathbb{I} 53'52		evening set	12840 May 10 17:35	10° \mathbb{I} 10'51	
inferior conj	12839 Jun 01 15:28	19° \mathbb{I} 40'57	3°08'13	inferior conj	12840 May 16 00:56	3° \mathbb{I} 48'33	2°52'13
minimum elong	12839 Jun 01 14:32	19° \mathbb{I} 44'10	3°07'12	minimum elong	12840 May 15 23:15	3° \mathbb{I} 54'22	2°51'07
min. Earth dist.	12839 Jun 01 23:40	19° \mathbb{I} 12'25	0.68628 AU	min. Earth dist.	12840 May 15 20:14	4° \mathbb{I} 04'56	0.68866 AU
morning rise	12839 Jun 06 19:31	13° \mathbb{I} 24'09			12840 May 18 21:47	30° \mathcal{R} \mathcal{B}	
direct	12839 Jun 11 23:35	11° \mathbb{I} 08'49		morning rise	12840 May 21 04:48	27° \mathcal{B} 37'46	
desc. node	12839 Jun 21 01:43	16° \mathbb{I} 04'11		direct	12840 May 25 19:50	25° \mathcal{B} 41'53	
morning max el	12839 Jun 22 07:59	17° \mathbb{I} 17'50	23°11'23		12840 Jun 02 21:12	0° \mathbb{I}	
	12839 Jul 02 21:02	0° \mathcal{B}		morning max el	12840 Jun 03 21:35	0° \mathbb{I} 58'58	21°44'03
	12839 Jul 23 00:57	0° Ω		desc. node	12840 Jun 06 22:44	4° \mathbb{I} 16'57	
morning set	12839 Jul 26 22:19	6° Ω 22'47			12840 Jun 25 16:22	0° \mathcal{B}	
max. Earth dist.	12839 Jul 31 03:45	13° Ω 32'55	1.39697 AU	morning set	12840 Jul 06 03:33	16° \mathcal{B} 09'39	
				max. Earth dist.	12840 Jul 12 05:26	26° \mathcal{B} 01'16	1.41936 AU
superior conj	12839 Aug 07 21:13	27° Ω 20'39	-1°01'01		12840 Jul 14 14:42	0° Ω	
minimum elong	12839 Aug 08 01:39	27° Ω 41'05	1°00'54	superior conj	12840 Jul 19 20:16	8° Ω 57'25	-1°34'14
	12839 Aug 09 07:36	0° \mathbb{P}		minimum elong	12840 Jul 20 02:57	9° Ω 26'38	1°34'15
asc. node	12839 Aug 14 19:46	10° \mathbb{P} 26'29		evening rise	12840 Jul 30 18:05	28° Ω 35'20	
evening rise	12839 Aug 17 10:03	15° \mathbb{P} 25'54		asc. node	12840 Jul 31 16:27	0° \mathbb{P} 17'54	
	12839 Aug 25 07:00	0° $\underline{\Omega}$			12840 Jul 31 12:33	0° \mathbb{P}	
evening max el	12839 Sep 02 11:06	11° $\underline{\Omega}$ 23'44	18°35'53	evening max el	12840 Aug 15 20:16	24° \mathbb{P} 06'02	18°09'55
retrograde	12839 Sep 10 11:48	15° $\underline{\Omega}$ 26'19		retrograde	12840 Aug 22 21:04	27° \mathbb{P} 40'51	
evening set	12839 Sep 12 10:56	15° $\underline{\Omega}$ 12'35		evening set	12840 Aug 25 03:09	27° \mathbb{P} 19'18	
desc. node	12839 Sep 16 22:48	13° $\underline{\Omega}$ 11'37		inferior conj	12840 Sep 01 06:49	22° \mathbb{P} 31'19	0°28'36
inferior conj	12839 Sep 20 09:10	10° $\underline{\Omega}$ 45'03	-1°04'57	minimum elong	12840 Sep 01 07:45	22° \mathbb{P} 29'15	0°28'02
minimum elong	12839 Sep 20 06:33	10° $\underline{\Omega}$ 50'02	1°03'49	desc. node	12840 Sep 02 20:18	21° \mathbb{P} 07'34	
min. Earth dist.	12839 Sep 23 13:52	8° $\underline{\Omega}$ 19'57	0.57407 AU	min. Earth dist.	12840 Sep 04 13:53	19° \mathbb{P} 36'57	0.59565 AU
morning rise	12839 Sep 27 22:45	5° $\underline{\Omega}$ 37'09					

morning rise	12840 Sep 08 09:00	16° \mathbb{M} 50'08		desc. node	12841 Aug 20 17:47	29° Ω 28'47	
direct	12840 Sep 14 19:47	14° \mathbb{M} 53'29		morning rise	12841 Aug 21 13:00	28° Ω 53'22	
morning max el	12840 Sep 29 03:51	22° \mathbb{M} 43'13	27°42'25	direct	12841 Aug 28 05:13	26° Ω 32'50	
	12840 Oct 05 15:15	0° \mathfrak{A}			12841 Sep 06 02:39	0° \mathbb{M}	
	12840 Oct 24 14:17	0° \mathbb{M}		morning max el	12841 Sep 11 09:09	4° \mathbb{M} 33'12	27°58'10
asc. node	12840 Oct 27 18:15	6° \mathbb{M} 10'53			12841 Sep 30 10:00	0° \mathfrak{A}	
morning set	12840 Oct 31 01:42	12° \mathbb{M} 59'20		asc. node	12841 Oct 14 14:55	26° \mathfrak{A} 02'02	
max. Earth dist.	12840 Nov 06 09:15	26° \mathbb{M} 43'57	1.31272 AU	morning set	12841 Oct 15 02:26	27° \mathfrak{A} 00'59	
					12841 Oct 16 12:58	0° \mathbb{M}	
superior conj	12840 Nov 07 03:09	28° \mathbb{M} 23'38	1°25'05	max. Earth dist.	12841 Oct 20 14:50	8° \mathbb{M} 43'28	1.31698 AU
minimum elong	12840 Nov 07 01:14	28° \mathbb{M} 12'59	1°25'39				
	12840 Nov 07 20:26	0° \mathfrak{A}		superior conj	12841 Oct 22 12:56	12° \mathbb{M} 56'12	1°09'55
evening rise	12840 Nov 13 20:10	13° \mathfrak{A} 12'02		minimum elong	12841 Oct 22 10:41	12° \mathbb{M} 43'46	1°10'10
	12840 Nov 22 04:37	0° \mathfrak{B}		evening rise	12841 Oct 29 06:43	27° \mathbb{M} 45'21	
desc. node	12840 Nov 29 17:09	12° \mathfrak{B} 44'39			12841 Oct 30 07:50	0° \mathfrak{A}	
evening max el	12840 Dec 12 06:08	28° \mathfrak{B} 26'24	26°06'34		12841 Nov 16 03:41	0° \mathfrak{B}	
	12840 Dec 13 23:46	0° \approx		desc. node	12841 Nov 16 14:20	0° \mathfrak{B} 36'20	
retrograde	12840 Dec 26 04:37	5° \approx 30'29		evening max el	12841 Nov 23 20:04	8° \mathfrak{B} 59'35	24°38'52
evening set	12841 Jan 01 12:16	3° \approx 55'30		retrograde	12841 Dec 07 14:07	15° \mathfrak{B} 51'49	
min. Earth dist.	12841 Jan 05 19:16	1° \approx 19'21	0.58145 AU	evening set	12841 Dec 12 22:51	14° \mathfrak{B} 48'07	
	12841 Jan 07 15:27	30° \mathfrak{R} \mathfrak{B}		min. Earth dist.	12841 Dec 18 07:49	12° \mathfrak{B} 00'31	0.56288 AU
inferior conj	12841 Jan 08 21:04	29° \mathfrak{B} 05'53	-4°25'55	inferior conj	12841 Dec 20 18:53	10° \mathfrak{B} 27'15	-5°29'47
minimum elong	12841 Jan 09 05:40	28° \mathfrak{B} 50'18	4°22'35	minimum elong	12841 Dec 21 01:44	10° \mathfrak{B} 16'24	5°27'44
morning rise	12841 Jan 17 01:54	24° \mathfrak{B} 40'39		morning rise	12841 Dec 29 06:43	6° \mathfrak{B} 23'01	
direct	12841 Jan 19 03:55	24° \mathfrak{B} 26'25		direct	12841 Dec 31 15:58	6° \mathfrak{B} 07'30	
asc. node	12841 Jan 23 17:38	25° \mathfrak{B} 39'13		morning max el	12842 Jan 10 10:27	10° \mathfrak{B} 49'38	19°32'42
morning max el	12841 Jan 27 13:24	28° \mathfrak{B} 33'06	18°36'01	asc. node	12842 Jan 10 14:54	11° \mathfrak{B} 00'27	
	12841 Jan 28 22:31	0° \approx			12842 Jan 23 06:13	0° \approx	
morning set	12841 Feb 12 14:12	24° \approx 15'24		morning set	12842 Jan 27 17:05	8° \approx 45'15	
	12841 Feb 15 13:23	0° \mathfrak{H}					
superior conj	12841 Feb 21 11:20	11° \mathfrak{H} 15'28	0°33'40	superior conj	12842 Feb 04 17:05	24° \approx 46'44	1°00'22
minimum elong	12841 Feb 21 13:31	11° \mathfrak{H} 25'37	0°33'42	minimum elong	12842 Feb 04 19:55	25° \approx 00'37	1°00'36
desc. node	12841 Feb 25 17:47	19° \mathfrak{H} 03'47			12842 Feb 07 09:45	0° \mathfrak{H}	
max. Earth dist.	12841 Feb 28 19:51	24° \mathfrak{H} 30'43	1.40082 AU	max. Earth dist.	12842 Feb 11 02:02	6° \mathfrak{H} 53'57	1.37842 AU
	12841 Mar 04 00:46	0° \mathfrak{Y}		desc. node	12842 Feb 12 14:21	9° \mathfrak{H} 39'29	
evening rise	12841 Mar 04 23:06	1° \mathfrak{Y} 33'46		evening rise	12842 Feb 14 19:22	13° \mathfrak{H} 35'59	
	12841 Mar 23 10:37	0° \mathfrak{B}			12842 Feb 24 15:23	0° \mathfrak{Y}	
evening max el	12841 Apr 08 16:33	20° \mathfrak{B} 13'36	23°51'25		12842 Mar 18 09:26	0° \mathfrak{B}	
retrograde	12841 Apr 19 16:36	26° \mathfrak{B} 41'51		evening max el	12842 Mar 22 06:09	4° \mathfrak{B} 06'07	25°09'14
asc. node	12841 Apr 21 14:23	26° \mathfrak{B} 25'16		retrograde	12842 Apr 03 06:45	11° \mathfrak{B} 04'44	
evening set	12841 Apr 24 23:26	24° \mathfrak{B} 28'16		asc. node	12842 Apr 08 11:46	9° \mathfrak{B} 07'54	
min. Earth dist.	12841 Apr 29 16:48	18° \mathfrak{B} 58'15	0.68647 AU	evening set	12842 Apr 09 01:19	8° \mathfrak{B} 40'33	
inferior conj	12841 Apr 30 09:57	17° \mathfrak{B} 59'42	2°26'10	min. Earth dist.	12842 Apr 13 11:09	3° \mathfrak{B} 46'18	0.67978 AU
minimum elong	12841 Apr 30 07:51	18° \mathfrak{B} 06'53	2°25'00	inferior conj	12842 Apr 14 16:36	2° \mathfrak{B} 10'04	1°50'04
morning rise	12841 May 05 16:17	11° \mathfrak{B} 56'14		minimum elong	12842 Apr 14 14:31	2° \mathfrak{B} 16'55	1°48'58
direct	12841 May 09 18:38	10° \mathfrak{B} 21'14			12842 Apr 16 09:19	30° \mathfrak{R} \mathfrak{Y}	
morning max el	12841 May 17 17:13	14° \mathfrak{B} 51'06	20°25'56	morning rise	12842 Apr 20 04:01	26° \mathfrak{Y} 15'18	
desc. node	12841 May 24 19:39	23° \mathfrak{B} 15'37		direct	12842 Apr 23 18:26	25° \mathfrak{Y} 00'45	
	12841 May 29 17:05	0° \mathbb{I}		morning max el	12842 Apr 30 20:24	28° \mathfrak{Y} 54'11	19°21'39
morning set	12841 Jun 15 10:49	25° \mathbb{I} 00'06			12842 May 01 22:04	0° \mathfrak{B}	
	12841 Jun 18 15:57	0° \mathfrak{E}		desc. node	12842 May 11 16:26	12° \mathfrak{B} 47'33	
max. Earth dist.	12841 Jun 24 13:38	9° \mathfrak{E} 21'00	1.43825 AU	greatest brilliancy	12842 May 13 14:09	15° \mathfrak{B} 35'16	-0.7m
					12842 May 23 02:45	0° \mathbb{I}	
superior conj	12841 Jun 30 20:22	19° \mathfrak{E} 34'44	-2°00'37	morning set	12842 May 25 12:17	3° \mathbb{I} 41'00	
minimum elong	12841 Jul 01 02:46	20° \mathfrak{E} 01'17	2°01'07	max. Earth dist.	12842 Jun 07 04:26	23° \mathbb{I} 23'37	1.45146 AU
	12841 Jul 07 01:07	0° Ω					
evening rise	12841 Jul 13 09:49	11° Ω 00'02		superior conj	12842 Jun 10 21:14	29° \mathbb{I} 14'50	-2°13'12
asc. node	12841 Jul 18 13:11	19° Ω 55'50		minimum elong	12842 Jun 10 22:33	29° \mathbb{I} 20'07	2°14'09
	12841 Jul 24 17:04	0° \mathbb{M}			12842 Jun 11 08:35	0° \mathfrak{E}	
evening max el	12841 Jul 30 09:43	7° \mathbb{M} 16'21	18°03'24	evening rise	12842 Jun 25 04:18	22° \mathfrak{E} 29'13	
retrograde	12841 Aug 05 21:23	10° \mathbb{M} 37'44			12842 Jun 29 17:03	0° Ω	
evening set	12841 Aug 08 11:39	10° \mathbb{M} 04'46		asc. node	12842 Jul 05 10:00	9° Ω 15'09	
inferior conj	12841 Aug 14 23:08	4° \mathbb{M} 57'36	1°39'15	evening max el	12842 Jul 13 23:53	20° Ω 45'54	18°15'18
minimum elong	12841 Aug 15 01:34	4° \mathbb{M} 51'27	1°38'00	retrograde	12842 Jul 20 08:29	24° Ω 08'08	
min. Earth dist.	12841 Aug 17 22:51	1° \mathbb{M} 56'19	0.61854 AU	evening set	12842 Jul 23 07:10	23° Ω 21'09	
	12841 Aug 20 02:12	30° \mathfrak{R} Ω		inferior conj	12842 Jul 29 06:10	17° Ω 56'36	2°27'43
				minimum elong	12842 Jul 29 08:36	17° Ω 49'39	2°26'24

min. Earth dist.	12842 Jul 31 17:13	15° Ω 09'09	0.64013 AU	min. Earth dist.	12843 Jul 14 20:32	29° Θ 02'04	0.65860 AU
morning rise	12842 Aug 04 08:31	11° Ω 39'12		morning rise	12843 Jul 18 16:47	24° Θ 57'14	
desc. node	12842 Aug 07 15:12	9° Ω 42'20		direct	12843 Jul 25 01:40	22° Θ 16'14	
direct	12842 Aug 10 23:38	9° Ω 03'25		desc. node	12843 Jul 25 12:34	22° Θ 16'59	
morning max el	12842 Aug 24 18:35	17° Ω 03'47	27°36'45	morning max el	12843 Aug 07 05:41	0° Ω 04'16	26°44'22
	12842 Sep 04 12:47	0° Π			12843 Aug 07 04:00	0° Ω	
	12842 Sep 23 05:44	0° $\underline{\Omega}$			12843 Aug 29 11:35	0° Π	
morning set	12842 Sep 28 19:12	10° $\underline{\Omega}$ 37'41		morning set	12843 Sep 12 01:00	23° Π 41'54	
asc. node	12842 Oct 01 11:32	16° $\underline{\Omega}$ 02'23			12843 Sep 15 07:00	0° $\underline{\Omega}$	
max. Earth dist.	12842 Oct 03 13:54	20° $\underline{\Omega}$ 23'52	1.32660 AU	max. Earth dist.	12843 Sep 16 03:37	1° $\underline{\Omega}$ 42'21	1.34145 AU
				asc. node	12843 Sep 18 08:07	6° $\underline{\Omega}$ 07'23	
superior conj	12842 Oct 06 19:01	27° $\underline{\Omega}$ 14'25	0°49'14	superior conj	12843 Sep 20 19:06	11° $\underline{\Omega}$ 11'44	0°23'19
minimum elong	12842 Oct 06 16:57	27° $\underline{\Omega}$ 03'15	0°49'13	minimum elong	12843 Sep 20 17:53	11° $\underline{\Omega}$ 05'26	0°23'10
	12842 Oct 08 01:40	0° Π		evening rise	12843 Sep 28 03:49	26° $\underline{\Omega}$ 44'44	
evening rise	12842 Oct 13 17:55	12° Π 18'07			12843 Sep 29 17:15	0° Π	
	12842 Oct 22 15:03	0° \mathcal{X}		evening max el	12843 Oct 17 21:30	29° Π 13'52	21°20'07
desc. node	12842 Nov 03 11:35	17° \mathcal{X} 13'50			12843 Oct 18 16:47	0° \mathcal{X}	
evening max el	12842 Nov 05 06:09	19° \mathcal{X} 03'25	22°57'29	desc. node	12843 Oct 21 08:56	2° \mathcal{X} 11'07	
retrograde	12842 Nov 18 10:22	25° \mathcal{X} 36'12		retrograde	12843 Oct 29 22:06	5° \mathcal{X} 12'30	
evening set	12842 Nov 22 10:47	25° \mathcal{X} 01'07		evening set	12843 Nov 01 14:46	4° \mathcal{X} 55'42	
min. Earth dist.	12842 Nov 29 15:09	21° \mathcal{X} 43'32	0.54998 AU	inferior conj	12843 Nov 10 13:28	1° \mathcal{X} 01'34	-5°22'07
inferior conj	12842 Nov 30 21:33	21° \mathcal{X} 00'03	-5°54'46	minimum elong	12843 Nov 10 05:05	1° \mathcal{X} 13'22	5°19'47
minimum elong	12842 Nov 30 21:07	21° \mathcal{X} 00'41	5°53'49	min. Earth dist.	12843 Nov 10 21:13	0° \mathcal{X} 50'42	0.54524 AU
morning rise	12842 Dec 09 08:56	17° \mathcal{X} 10'56			12843 Nov 12 09:39	30° \mathcal{R} Π	
direct	12842 Dec 12 09:56	16° \mathcal{X} 49'19		morning rise	12843 Nov 18 20:09	27° Π 12'06	
morning max el	12842 Dec 23 17:30	22° \mathcal{X} 12'49	20°52'32	direct	12843 Nov 22 17:42	26° Π 39'23	
asc. node	12842 Dec 28 12:03	27° \mathcal{X} 39'29			12843 Dec 02 02:59	0° \mathcal{X}	
	12842 Dec 30 04:33	0° \mathcal{Z}		morning max el	12843 Dec 05 11:15	2° \mathcal{X} 45'41	22°32'18
morning set	12843 Jan 12 01:09	23° \mathcal{Z} 26'49		asc. node	12843 Dec 15 09:07	15° \mathcal{X} 19'22	
	12843 Jan 15 04:35	0° \approx			12843 Dec 23 12:32	0° \mathcal{Z}	
superior conj	12843 Jan 19 10:35	8° \approx 49'28	1°19'44	morning set	12843 Dec 27 12:07	8° \mathcal{Z} 13'14	
minimum elong	12843 Jan 19 13:03	9° \approx 02'08	1°20'18	superior conj	12844 Jan 03 12:21	23° \mathcal{Z} 13'50	1°32'06
max. Earth dist.	12843 Jan 24 10:59	18° \approx 52'39	1.35725 AU	minimum elong	12844 Jan 03 13:56	23° \mathcal{Z} 22'12	1°32'56
evening rise	12843 Jan 28 09:40	26° \approx 23'21			12844 Jan 06 17:42	0° \approx	
desc. node	12843 Jan 30 10:59	0° \mathcal{H} 09'20		max. Earth dist.	12844 Jan 07 02:25	0° \approx 44'59	1.33914 AU
	12843 Jan 30 08:55	0° \mathcal{H}		evening rise	12844 Jan 11 14:26	9° \approx 46'50	
	12843 Feb 18 01:50	0° Υ		desc. node	12844 Jan 17 07:41	20° \approx 29'08	
evening max el	12843 Mar 04 19:49	17° Υ 55'35	26°16'40		12844 Jan 22 20:15	0° \mathcal{H}	
retrograde	12843 Mar 17 15:49	25° Υ 13'08			12844 Feb 13 19:45	0° Υ	
evening set	12843 Mar 23 21:32	22° Υ 42'10		evening max el	12844 Feb 15 09:20	1° Υ 33'44	27°06'25
asc. node	12843 Mar 26 09:12	20° Υ 18'10		retrograde	12844 Feb 28 19:04	8° Υ 59'48	
min. Earth dist.	12843 Mar 28 01:04	18° Υ 22'57	0.66888 AU	evening set	12844 Mar 06 10:11	6° Υ 27'20	
inferior conj	12843 Mar 29 18:51	16° Υ 14'56	1°03'33	min. Earth dist.	12844 Mar 10 08:31	2° Υ 41'32	0.65403 AU
minimum elong	12843 Mar 29 17:21	16° Υ 19'33	1°02'48	asc. node	12844 Mar 12 06:39	0° Υ 31'41	
morning rise	12843 Apr 04 14:00	10° Υ 30'38		inferior conj	12844 Mar 12 14:26	0° Υ 09'36	0°06'17
direct	12843 Apr 07 17:32	9° Υ 34'39		minimum elong	12844 Mar 12 14:16	0° Υ 10'07	0°06'18
morning max el	12843 Apr 14 06:42	13° Υ 04'38	18°33'17	transit middle	12844 Mar 12 14:16	0° Υ 10'07	0°06'18
	12843 Apr 26 18:55	0° \mathcal{B}		transit begin	12844 Mar 12 11:30	0° Υ 17'56	
desc. node	12843 Apr 28 13:07	2° \mathcal{B} 43'26		transit end	12844 Mar 12 17:01	0° Υ 02'19	
morning set	12843 May 05 05:47	13° \mathcal{B} 13'12			12844 Mar 12 17:50	30° \mathcal{R} \mathcal{H}	
	12843 May 15 22:39	0° Π		morning rise	12844 Mar 18 19:53	24° \mathcal{H} 37'47	
superior conj	12843 May 21 06:28	8° Π 19'13	-2°06'21	direct	12844 Mar 21 13:44	23° \mathcal{H} 57'27	
minimum elong	12843 May 21 00:13	7° Π 54'49	2°06'56	morning max el	12844 Mar 27 22:10	27° \mathcal{H} 16'36	18°01'42
max. Earth dist.	12843 May 20 23:32	7° Π 52'09	1.45765 AU		12844 Mar 30 09:23	0° Υ	
	12843 Jun 04 01:37	0° Θ		desc. node	12844 Apr 14 09:44	22° Υ 56'58	
evening rise	12843 Jun 05 22:23	2° Θ 57'19		morning set	12844 Apr 15 03:10	24° Υ 08'12	
greatest brilliancy	12843 Jun 14 05:45	16° Θ 06'01	-0.8m		12844 Apr 18 17:28	0° \mathcal{B}	
asc. node	12843 Jun 22 06:55	28° Θ 08'26		superior conj	12844 Apr 29 16:46	17° \mathcal{B} 33'46	-1°40'29
	12843 Jun 23 16:13	0° Ω		minimum elong	12844 Apr 29 07:32	16° \mathcal{B} 57'21	1°40'13
evening max el	12843 Jun 27 11:48	4° Ω 26'16	18°44'56	max. Earth dist.	12844 May 02 19:43	22° \mathcal{B} 28'15	1.45636 AU
retrograde	12843 Jul 04 02:29	8° Ω 02'57			12844 May 07 15:34	0° Π	
evening set	12843 Jul 07 09:46	7° Ω 00'23		evening rise	12844 May 15 19:09	12° Π 36'33	
inferior conj	12843 Jul 13 00:00	1° Ω 20'15	2°57'19		12844 May 27 04:28	0° Θ	
minimum elong	12843 Jul 13 01:41	1° Ω 14'59	2°56'10	greatest brilliancy	12844 May 29 01:30	2° Θ 47'43	-0.7m
	12843 Jul 14 01:43	30° \mathcal{R} Θ					

asc. node	12844 Jun 08 03:57	16°☿26'58		evening max el	12845 May 23 20:58	1°☿59'05	20°32'32
evening max el	12844 Jun 09 19:13	18°☿11'54	19°31'18	asc. node	12845 May 26 01:05	3°☿58'44	
retrograde	12844 Jun 17 00:13	22°☿15'30		retrograde	12845 May 31 23:09	6°☿39'30	
evening set	12844 Jun 20 16:34	20°☿56'34		evening set	12845 Jun 05 01:19	5°☿04'06	
inferior conj	12844 Jun 26 01:26	15°☿02'29	3°11'26		12845 Jun 09 13:30	30°☿II	
minimum elong	12844 Jun 26 02:05	15°☿00'19	3°10'25	inferior conj	12845 Jun 10 07:43	28°II57'38	3°12'38
min. Earth dist.	12844 Jun 27 07:23	13°☿23'22	0.67297 AU	minimum elong	12845 Jun 10 07:20	28°II58'58	3°11'40
morning rise	12844 Jul 01 11:09	8°☿39'15		min. Earth dist.	12845 Jun 10 23:44	28°II02'34	0.68280 AU
direct	12844 Jul 07 10:19	6°☿02'19		morning rise	12845 Jun 15 13:03	22°II37'41	
desc. node	12844 Jul 11 09:52	6°☿59'59		direct	12845 Jun 21 00:27	20°II12'36	
morning max el	12844 Jul 19 16:31	13°☿23'06	25°29'48	desc. node	12845 Jun 28 07:03	23°II23'45	
	12844 Aug 02 03:35	0°☿		morning max el	12845 Jul 02 02:36	26°II51'03	24°02'54
	12844 Aug 21 05:53	0°☿			12845 Jul 05 00:47	0°☿	
morning set	12844 Aug 24 16:07	6°☿04'57			12845 Jul 26 17:47	0°☿	
max. Earth dist.	12844 Aug 28 07:26	12°☿47'51	1.36089 AU	morning set	12845 Aug 06 11:58	17°☿35'16	
				max. Earth dist.	12845 Aug 10 05:11	24°☿04'57	1.38345 AU
					12845 Aug 13 11:50	0°☿	
superior conj	12844 Sep 03 10:23	24°☿41'40	-0°07'14				
minimum elong	12844 Sep 03 10:51	24°☿43'57	0°07'20	superior conj	12845 Aug 17 13:28	7°☿36'01	-0°41'00
behind sun begin	12844 Sep 03 05:12	24°☿15'44		minimum elong	12845 Aug 17 16:20	7°☿49'38	0°40'57
behind sun end	12844 Sep 03 16:30	25°☿12'12		asc. node	12845 Aug 22 01:21	16°☿17'19	
asc. node	12844 Sep 04 04:43	26°☿13'32		evening rise	12845 Aug 26 10:50	24°☿56'51	
	12844 Sep 06 01:29	0°☿			12845 Aug 29 00:50	0°☿	
evening rise	12844 Sep 11 10:19	10°☿59'54		evening max el	12845 Sep 11 20:12	21°☿42'39	19°00'16
	12844 Sep 21 11:57	0°☿		retrograde	12845 Sep 20 15:29	26°☿07'05	
evening max el	12844 Sep 29 01:50	10°☿03'31	19°59'29	evening set	12845 Sep 22 12:12	25°☿56'02	
desc. node	12844 Oct 07 06:23	15°☿01'01		desc. node	12845 Sep 24 03:52	25°☿28'52	
retrograde	12844 Oct 09 12:01	15°☿14'55		inferior conj	12845 Sep 30 20:57	21°☿40'38	-2°06'57
evening set	12844 Oct 11 11:02	15°☿04'44		minimum elong	12845 Sep 30 15:32	21°☿50'03	2°04'34
inferior conj	12844 Oct 20 09:05	11°☿05'11	-3°56'33	min. Earth dist.	12845 Oct 03 18:30	19°☿40'23	0.56338 AU
minimum elong	12844 Oct 19 23:27	11°☿19'46	3°52'54	morning rise	12845 Oct 08 15:48	16°☿54'28	
min. Earth dist.	12844 Oct 22 05:38	9°☿57'44	0.54998 AU	direct	12845 Oct 14 05:46	15°☿41'05	
morning rise	12844 Oct 28 10:35	6°☿54'05		morning max el	12845 Oct 28 09:44	22°☿57'11	26°01'03
direct	12844 Nov 02 05:10	6°☿04'19			12845 Nov 03 17:15	0°☿	
morning max el	12844 Nov 15 21:53	12°☿49'35	24°20'55	asc. node	12845 Nov 18 02:59	22°☿46'28	
	12844 Nov 29 01:12	0°☿			12845 Nov 21 19:28	0°☿	
asc. node	12844 Dec 01 06:06	3°☿45'32		morning set	12845 Nov 25 11:08	7°☿38'13	
morning set	12844 Dec 11 00:00	22°☿58'30					
	12844 Dec 14 05:41	0°☿		superior conj	12845 Dec 02 06:05	22°☿34'59	1°37'31
				minimum elong	12845 Dec 02 05:28	22°☿31'33	1°38'26
superior conj	12844 Dec 17 19:36	7°☿51'08	1°37'54	max. Earth dist.	12845 Dec 03 06:44	24°☿51'39	1.31652 AU
minimum elong	12844 Dec 17 20:04	7°☿53'41	1°38'51		12845 Dec 05 14:49	0°☿	
max. Earth dist.	12844 Dec 20 01:24	12°☿43'08	1.32537 AU	evening rise	12845 Dec 09 06:25	7°☿48'30	
evening rise	12844 Dec 25 06:18	23°☿37'29			12845 Dec 20 22:06	0°☿	
	12844 Dec 28 11:30	0°☿		desc. node	12845 Dec 21 01:25	0°☿14'07	
desc. node	12845 Jan 03 04:29	10°☿32'55		evening max el	12846 Jan 10 06:25	27°☿28'51	27°25'27
	12845 Jan 15 11:42	0°☿			12846 Jan 13 03:29	0°☿	
evening max el	12845 Jan 27 21:31	14°☿48'42	27°31'25	retrograde	12846 Jan 24 04:36	4°☿47'15	
retrograde	12845 Feb 10 15:46	22°☿14'18		evening set	12846 Jan 31 02:35	2°☿34'26	
evening set	12845 Feb 17 12:51	19°☿47'31			12846 Feb 03 12:37	30°☿☿	
min. Earth dist.	12845 Feb 21 07:34	16°☿31'40	0.63579 AU	min. Earth dist.	12846 Feb 03 20:45	29°☿42'30	0.61516 AU
inferior conj	12845 Feb 24 00:36	13°☿46'22	-1°01'44	inferior conj	12846 Feb 06 22:07	26°☿57'19	-2°18'56
minimum elong	12845 Feb 24 02:34	13°☿41'18	1°00'32	minimum elong	12846 Feb 07 02:58	26°☿46'21	2°16'24
asc. node	12845 Feb 27 04:06	10°☿46'33		morning rise	12846 Feb 14 06:15	21°☿58'12	
morning rise	12845 Mar 02 18:38	8°☿29'32		asc. node	12846 Feb 14 01:30	22°☿01'59	
direct	12845 Mar 05 04:22	8°☿01'13		direct	12846 Feb 16 10:05	21°☿38'09	
morning max el	12845 Mar 11 15:52	11°☿20'49	17°47'18	morning max el	12846 Feb 23 08:35	25°☿08'21	17°50'48
	12845 Mar 24 10:25	0°☿			12846 Feb 27 09:35	0°☿	
morning set	12845 Mar 28 03:28	6°☿20'31		morning set	12846 Mar 11 00:48	19°☿32'05	
desc. node	12845 Apr 01 06:18	13°☿22'19			12846 Mar 16 21:15	0°☿	
				desc. node	12846 Mar 19 02:52	3°☿55'24	
superior conj	12845 Apr 09 20:06	27°☿39'01	-1°02'47				
minimum elong	12845 Apr 09 13:39	27°☿12'46	1°02'15	superior conj	12846 Mar 21 23:27	8°☿51'42	-0°22'12
	12845 Apr 11 06:47	0°☿		minimum elong	12846 Mar 21 21:24	8°☿42'56	0°21'56
max. Earth dist.	12845 Apr 15 14:12	6°☿54'31	1.44783 AU	max. Earth dist.	12846 Mar 29 05:26	20°☿58'04	1.43300 AU
evening rise	12845 Apr 25 06:21	21°☿59'22			12846 Apr 03 20:50	0°☿	
	12845 Apr 30 12:45	0°☿		evening rise	12846 Apr 05 00:03	1°☿46'42	
	12845 May 22 00:22	0°☿					

	12846 Apr 24 00:47	0°♊		evening rise	12847 Mar 16 11:19	12°♑23'14	
evening max el	12846 May 06 17:15	15°♊47'22	21°45'21		12847 Mar 27 18:59	0°♌	
asc. node	12846 May 12 22:18	20°♊29'28		evening max el	12847 Apr 19 09:20	29°♌37'15	23°04'56
retrograde	12846 May 15 21:20	21°♊10'13			12847 Apr 19 18:32	0°♊	
evening set	12846 May 20 10:12	19°♊18'47		retrograde	12847 Apr 29 17:21	5°♊42'44	
inferior conj	12846 May 25 16:37	13°♊01'45	3°02'39	asc. node	12847 Apr 29 19:35	5°♊42'42	
minimum elong	12846 May 25 15:20	13°♊06'13	3°01'37	evening set	12847 May 04 17:36	3°♊36'29	
min. Earth dist.	12846 May 25 19:20	12°♊52'15	0.68793 AU		12847 May 08 00:23	30°♌♌	
morning rise	12846 May 30 20:15	6°♊47'17		min. Earth dist.	12847 May 09 16:04	27°♌46'03	0.68833 AU
direct	12846 Jun 04 18:53	4°♊39'37		inferior conj	12847 May 10 02:06	27°♌11'20	2°42'24
morning max el	12846 Jun 14 13:52	10°♊26'18	22°33'20	minimum elong	12847 May 10 00:12	27°♌17'55	2°41'15
desc. node	12846 Jun 15 04:08	11°♊02'45		morning rise	12847 May 15 06:43	21°♌03'43	
	12846 Jun 30 00:25	0°♌		direct	12847 May 19 16:23	19°♌16'33	
morning set	12846 Jul 18 07:54	28°♌00'51		morning max el	12847 May 28 05:42	24°♌11'56	21°09'25
	12846 Jul 19 12:58	0°♏		desc. node	12847 Jun 02 01:06	29°♌36'53	
max. Earth dist.	12846 Jul 23 04:01	6°♏03'19	1.40681 AU		12847 Jun 02 08:34	0°♊	
					12847 Jun 23 08:58	0°♌	
superior conj	12846 Jul 31 00:06	19°♏44'22	-1°15'34	morning set	12847 Jun 28 02:49	7°♌21'01	
minimum elong	12846 Jul 31 05:38	20°♏09'17	1°15'27	max. Earth dist.	12847 Jul 05 09:00	18°♌56'59	1.42804 AU
	12846 Aug 05 14:17	0°♎			12847 Jul 12 00:24	0°♏	
asc. node	12846 Aug 08 22:00	6°♎14'22					
evening rise	12846 Aug 10 02:02	8°♎26'30		superior conj	12847 Jul 12 13:51	0°♏57'09	-1°46'39
	12846 Aug 22 14:37	0°♎		minimum elong	12847 Jul 12 20:54	1°♏27'12	1°46'49
evening max el	12846 Aug 26 01:12	4°♎04'42	18°22'24	evening rise	12847 Jul 24 03:48	21°♏18'59	
retrograde	12846 Sep 02 14:07	7°♎53'16		asc. node	12847 Jul 26 18:43	26°♏00'55	
evening set	12846 Sep 04 16:07	7°♎36'34			12847 Jul 29 00:37	0°♎	
desc. node	12846 Sep 11 01:22	3°♎58'18		evening max el	12847 Aug 09 12:40	17°♎00'09	18°04'44
inferior conj	12846 Sep 12 06:19	3°♎00'19	-0°22'37	retrograde	12847 Aug 16 06:30	20°♎27'30	
minimum elong	12846 Sep 12 05:28	3°♎02'03	0°22'19	evening set	12847 Aug 18 16:04	20°♎01'23	
min. Earth dist.	12846 Sep 15 13:34	0°♎20'18	0.58295 AU	inferior conj	12847 Aug 25 12:23	15°♎04'36	1°01'27
	12846 Sep 16 00:11	30°♌♎		minimum elong	12847 Aug 25 14:11	15°♎00'22	1°00'29
morning rise	12846 Sep 19 15:20	27°♎37'36		min. Earth dist.	12847 Aug 28 17:04	12°♎04'54	0.60546 AU
direct	12846 Sep 25 20:21	25°♎56'51		desc. node	12847 Aug 28 22:51	11°♎52'01	
	12846 Oct 06 00:18	0°♎		morning rise	12847 Sep 01 09:22	9°♎12'24	
morning max el	12846 Oct 10 04:03	3°♎35'31	27°15'39	direct	12847 Sep 07 23:12	7°♎05'07	
	12846 Oct 29 09:41	0°♎		morning max el	12847 Sep 22 06:00	14°♎59'38	27°53'55
asc. node	12846 Nov 04 23:47	12°♎12'13			12847 Oct 04 10:23	0°♎	
morning set	12846 Nov 09 19:43	22°♎06'52			12847 Oct 21 21:26	0°♎	
	12846 Nov 13 10:55	0°♏		asc. node	12847 Oct 22 20:30	1°♎55'48	
				morning set	12847 Oct 24 23:55	6°♎19'55	
superior conj	12846 Nov 16 17:44	7°♏18'25	1°31'16	max. Earth dist.	12847 Oct 30 23:10	19°♎12'22	1.31396 AU
minimum elong	12846 Nov 16 16:13	7°♏09'55	1°32'00				
max. Earth dist.	12846 Nov 16 15:14	7°♏04'26	1.31270 AU	superior conj	12847 Nov 01 04:44	21°♎56'15	1°19'19
evening rise	12846 Nov 23 12:12	22°♏12'22		minimum elong	12847 Nov 01 02:37	21°♎44'31	1°19'45
	12846 Nov 27 06:12	0°♏			12847 Nov 04 19:48	0°♏	
desc. node	12846 Dec 07 22:26	19°♏23'03		evening rise	12847 Nov 07 21:35	6°♏43'37	
	12846 Dec 15 04:08	0°♏			12847 Nov 19 21:08	0°♏	
evening max el	12846 Dec 23 09:09	9°♏21'38	26°44'59	desc. node	12847 Nov 24 19:32	7°♏47'28	
retrograde	12847 Jan 06 07:56	16°♏30'15		evening max el	12847 Dec 05 03:30	20°♏21'17	25°31'53
evening set	12847 Jan 12 23:42	14°♏39'32		retrograde	12847 Dec 19 00:19	27°♏20'21	
min. Earth dist.	12847 Jan 16 23:13	12°♏01'44	0.59356 AU	evening set	12847 Dec 24 23:56	25°♏58'13	
inferior conj	12847 Jan 20 03:23	9°♏32'19	-3°40'40	min. Earth dist.	12847 Dec 29 15:45	23°♏19'45	0.57307 AU
minimum elong	12847 Jan 20 11:05	9°♏17'11	3°37'16	inferior conj	12848 Jan 01 13:07	21°♏21'51	-4°56'13
morning rise	12847 Jan 28 01:25	4°♏53'59		minimum elong	12848 Jan 01 21:37	21°♏07'22	4°53'17
direct	12847 Jan 30 02:49	4°♏38'32		morning rise	12848 Jan 09 21:49	17°♏06'03	
asc. node	12847 Jan 31 22:51	4°♏51'20		direct	12848 Jan 12 02:07	16°♏51'41	
morning max el	12847 Feb 06 20:45	8°♏28'57	18°13'35	asc. node	12848 Jan 18 20:09	19°♏20'04	
	12847 Feb 20 17:35	0°♏		morning max el	12848 Jan 21 00:29	21°♏11'58	18°57'25
morning set	12847 Feb 22 13:08	3°♏24'36			12848 Jan 27 19:21	0°♏	
				morning set	12848 Feb 06 11:44	17°♏43'46	
superior conj	12847 Mar 04 01:50	21°♏08'07	0°15'02		12848 Feb 12 17:42	0°♏	
minimum elong	12847 Mar 04 02:59	21°♏13'16	0°15'05				
behind sun begin	12847 Mar 04 00:32	21°♏02'14		superior conj	12848 Feb 14 22:58	4°♏15'58	0°45'54
behind sun end	12847 Mar 04 05:25	21°♏24'17		minimum elong	12848 Feb 15 01:34	4°♏28'25	0°46'00
desc. node	12847 Mar 05 23:24	24°♏32'19		desc. node	12848 Feb 20 19:55	15°♏09'19	
	12847 Mar 09 02:06	0°♑		max. Earth dist.	12848 Feb 21 23:29	17°♏12'38	1.39123 AU
max. Earth dist.	12847 Mar 11 16:25	4°♑26'42	1.41340 AU	evening rise	12848 Feb 25 19:44	23°♏54'46	

	12848 Feb 29 10:48	0°♿		desc. node	12849 Feb 06 16:31	5°♿43'13	
	12848 Mar 20 13:59	0°♿		evening rise	12849 Feb 07 00:07	6°♿17'35	
evening max el	12848 Mar 31 23:08	13°♿28'24	24°25'20		12849 Feb 21 07:44	0°♿	
retrograde	12848 Apr 12 09:59	20°♿10'53		evening max el	12849 Mar 14 12:30	27°♿19'44	25°39'36
asc. node	12848 Apr 15 16:56	19°♿22'30			12849 Mar 17 10:56	0°♿	
evening set	12848 Apr 17 21:58	17°♿52'06		retrograde	12849 Mar 26 22:15	4°♿28'41	
min. Earth dist.	12848 Apr 22 11:49	12°♿37'40	0.68413 AU	evening set	12849 Apr 01 21:40	2°♿00'49	
inferior conj	12848 Apr 23 10:19	11°♿22'10	2°12'07	asc. node	12849 Apr 02 14:20	1°♿23'53	
minimum elong	12848 Apr 23 08:09	11°♿29'25	2°10'57		12849 Apr 03 23:20	30°♿♿	
morning rise	12848 Apr 28 18:30	5°♿22'30		min. Earth dist.	12849 Apr 06 04:35	27°♿21'38	0.67560 AU
direct	12848 May 02 15:39	3°♿56'30		inferior conj	12849 Apr 07 15:21	25°♿30'44	1°31'39
morning max el	12848 May 10 04:35	8°♿09'11	19°56'52	minimum elong	12849 Apr 07 13:26	25°♿36'53	1°30'40
desc. node	12848 May 18 21:56	18°♿50'41		morning rise	12849 Apr 13 05:45	19°♿40'16	
	12848 May 26 15:24	0°♿		direct	12849 Apr 16 15:17	18°♿34'07	
morning set	12848 Jun 06 05:02	16°♿00'17		morning max el	12849 Apr 23 11:02	22°♿16'19	18°59'04
	12848 Jun 15 04:39	0°♿			12849 Apr 29 20:43	0°♿	
max. Earth dist.	12848 Jun 16 20:32	2°♿37'58	1.44464 AU	desc. node	12849 May 05 18:40	8°♿33'34	
				greatest brilliancy	12849 May 06 18:53	10°♿04'44	-0.7m
superior conj	12848 Jun 22 03:41	11°♿08'30	-2°08'03	morning set	12849 May 16 10:50	24°♿55'48	
minimum elong	12848 Jun 22 08:35	11°♿28'21	2°08'48		12849 May 19 17:17	0°♿	
	12848 Jul 03 11:46	0°♿		max. Earth dist.	12849 May 30 12:56	16°♿51'23	1.45495 AU
evening rise	12848 Jul 05 11:07	3°♿21'37					
asc. node	12848 Jul 12 15:28	15°♿31'45		superior conj	12849 Jun 01 20:20	20°♿28'51	-2°12'50
	12848 Jul 22 19:06	0°♿		minimum elong	12849 Jun 01 18:21	20°♿21'02	2°13'45
evening max el	12848 Jul 23 02:45	0°♿19'18	18°06'09		12849 Jun 07 20:41	0°♿	
retrograde	12848 Jul 29 12:05	3°♿39'42		evening rise	12849 Jun 16 19:20	14°♿24'18	
evening set	12848 Aug 01 05:49	3°♿01'08			12849 Jun 26 11:11	0°♿	
	12848 Aug 05 07:32	30°♿♿		asc. node	12849 Jun 29 12:20	4°♿40'51	
inferior conj	12848 Aug 07 11:31	27°♿46'09	2°02'19	evening max el	12849 Jul 06 16:15	13°♿53'58	18°25'48
minimum elong	12848 Aug 07 14:05	27°♿39'17	2°00'59	retrograde	12849 Jul 13 02:33	17°♿20'57	
min. Earth dist.	12848 Aug 10 06:12	24°♿48'27	0.62800 AU	evening set	12849 Jul 16 04:45	16°♿27'40	
morning rise	12848 Aug 13 20:16	21°♿34'51		inferior conj	12849 Jul 21 23:36	10°♿56'28	2°42'19
desc. node	12848 Aug 14 20:19	20°♿53'33		minimum elong	12849 Jul 22 01:47	10°♿50'00	2°41'04
direct	12848 Aug 20 12:32	19°♿06'49		min. Earth dist.	12849 Jul 24 04:41	8°♿19'35	0.64842 AU
morning max el	12848 Sep 03 13:42	27°♿09'03	27°53'19	morning rise	12849 Jul 27 21:35	4°♿35'40	
	12848 Sep 06 06:21	0°♿		desc. node	12849 Aug 01 17:44	2°♿06'26	
	12848 Sep 27 03:07	0°♿		direct	12849 Aug 03 10:36	1°♿56'08	
morning set	12848 Oct 07 21:38	20°♿12'05		morning max el	12849 Aug 17 00:10	9°♿53'51	27°17'41
asc. node	12848 Oct 08 17:09	21°♿51'29			12849 Sep 01 19:20	0°♿	
	12848 Oct 12 14:24	0°♿			12849 Sep 19 13:18	0°♿	
max. Earth dist.	12848 Oct 13 02:34	1°♿05'16	1.32042 AU	morning set	12849 Sep 21 10:10	3°♿36'11	
				asc. node	12849 Sep 25 13:45	11°♿54'14	
superior conj	12848 Oct 15 13:13	6°♿23'23	1°01'48	max. Earth dist.	12849 Sep 25 21:41	12°♿34'59	1.33225 AU
minimum elong	12848 Oct 15 10:58	6°♿11'05	1°01'56				
evening rise	12848 Oct 22 08:39	21°♿17'17		superior conj	12849 Sep 29 17:05	20°♿33'34	0°38'51
	12848 Oct 26 12:28	0°♿		minimum elong	12849 Sep 29 15:17	20°♿24'01	0°38'46
desc. node	12848 Nov 10 16:45	25°♿10'39			12849 Oct 04 02:37	0°♿	
	12848 Nov 14 23:20	0°♿		evening rise	12849 Oct 06 19:33	5°♿47'52	
evening max el	12848 Nov 15 14:43	0°♿37'46	23°56'16		12849 Oct 19 15:52	0°♿	
retrograde	12848 Nov 29 04:33	7°♿24'00		evening max el	12849 Oct 28 01:54	10°♿40'00	22°14'42
evening set	12848 Dec 04 00:21	6°♿33'07		desc. node	12849 Oct 28 14:04	11°♿09'13	
min. Earth dist.	12848 Dec 10 01:35	3°♿34'58	0.55647 AU	retrograde	12849 Nov 09 20:35	17°♿00'26	
inferior conj	12848 Dec 12 02:17	2°♿21'44	-5°46'36	evening set	12849 Nov 13 06:08	16°♿34'57	
minimum elong	12848 Dec 12 06:38	2°♿15'10	5°45'13	inferior conj	12849 Nov 21 22:59	12°♿38'26	-5°48'26
	12848 Dec 16 07:11	30°♿♿		minimum elong	12849 Nov 21 18:43	12°♿44'27	5°47'11
morning rise	12848 Dec 20 14:51	28°♿25'32		min. Earth dist.	12849 Nov 21 08:23	12°♿58'58	0.54680 AU
direct	12848 Dec 23 05:39	28°♿08'11		morning rise	12849 Nov 30 08:30	8°♿51'11	
	12848 Dec 29 15:15	0°♿		direct	12849 Dec 03 17:46	8°♿25'32	
morning max el	12849 Jan 02 15:59	3°♿07'17	20°03'59	morning max el	12849 Dec 15 17:06	14°♿08'12	21°32'56
asc. node	12849 Jan 04 17:22	5°♿16'51		asc. node	12849 Dec 22 14:29	22°♿23'43	
	12849 Jan 19 13:37	0°♿			12849 Dec 27 08:43	0°♿	
morning set	12849 Jan 20 17:10	2°♿19'45		morning set	12850 Jan 05 02:43	17°♿03'48	
					12850 Jan 11 05:46	0°♿	
superior conj	12849 Jan 28 10:15	18°♿02'37	1°09'28				
minimum elong	12849 Jan 28 13:01	18°♿16'28	1°09'49	superior conj	12850 Jan 12 07:40	2°♿15'33	1°25'49
max. Earth dist.	12849 Feb 03 06:02	29°♿22'23	1.36905 AU	minimum elong	12850 Jan 12 09:48	2°♿26'40	1°26'29
	12849 Feb 03 14:02	0°♿		max. Earth dist.	12850 Jan 16 17:05	11°♿14'35	1.34907 AU

evening rise	12850 Jan 20 21:04	19° \approx 21'36		minimum elong	12850 Dec 27 13:12	16° \approx 52'03	1°36'13
desc. node	12850 Jan 24 13:10	26° \approx 09'13		max. Earth dist.	12850 Dec 30 11:56	23° \approx 08'56	1.33281 AU
	12850 Jan 26 17:06	0° \approx			12851 Jan 02 19:32	0° \approx	
	12850 Feb 15 09:36	0° \approx		evening rise	12851 Jan 04 07:00	2° \approx 57'43	
evening max el	12850 Feb 25 02:13	11° \approx 05'25	26°40'28	desc. node	12851 Jan 11 09:55	16° \approx 22'46	
retrograde	12850 Mar 10 05:06	18° \approx 28'15			12851 Jan 19 13:28	0° \approx	
evening set	12850 Mar 16 14:55	15° \approx 56'05		evening max el	12851 Feb 07 15:39	24° \approx 35'42	27°20'29
asc. node	12850 Mar 20 11:47	12° \approx 03'42			12851 Feb 14 14:00	0° \approx	
min. Earth dist.	12850 Mar 20 16:09	11° \approx 51'04	0.66297 AU	retrograde	12851 Feb 21 05:32	2° \approx 01'40	
inferior conj	12850 Mar 22 15:05	9° \approx 31'48	0°40'36		12851 Feb 27 07:18	30° \approx	
minimum elong	12850 Mar 22 14:02	9° \approx 34'54	0°40'08	evening set	12851 Feb 27 23:36	29° \approx 31'03	
morning rise	12850 Mar 28 14:17	3° \approx 52'18		min. Earth dist.	12851 Mar 03 20:19	25° \approx 58'16	0.64667 AU
direct	12850 Mar 31 13:28	3° \approx 03'25		inferior conj	12851 Mar 06 07:02	23° \approx 19'34	-0°21'18
morning max el	12850 Apr 06 23:46	6° \approx 27'40	18°17'42	minimum elong	12851 Mar 06 07:40	23° \approx 17'51	0°20'49
desc. node	12850 Apr 22 15:19	28° \approx 37'23		asc. node	12851 Mar 07 09:15	22° \approx 09'23	
	12850 Apr 23 12:04	0° \approx		morning rise	12851 Mar 12 17:33	17° \approx 53'29	
morning set	12850 Apr 26 15:36	5° \approx 01'21		direct	12851 Mar 15 07:48	17° \approx 18'35	
				morning max el	12851 Mar 21 16:28	20° \approx 36'34	17°53'23
superior conj	12850 May 12 03:47	29° \approx 31'31	-1°57'24		12851 Mar 28 21:51	0° \approx	
minimum elong	12850 May 11 19:25	28° \approx 58'48	1°57'36	morning set	12851 Apr 08 01:01	16° \approx 30'57	
	12850 May 12 11:04	0° \approx		desc. node	12851 Apr 09 11:55	18° \approx 56'12	
max. Earth dist.	12850 May 13 08:22	1° \approx 23'11	1.45800 AU		12851 Apr 16 05:03	0° \approx	
evening rise	12850 May 28 03:23	24° \approx 28'07					
	12850 May 31 16:20	0° \approx		superior conj	12851 Apr 21 19:41	9° \approx 02'47	-1°25'21
greatest brilliancy	12850 Jun 07 18:22	10° \approx 58'48	-0.8m	minimum elong	12851 Apr 21 11:09	8° \approx 28'43	1°24'53
asc. node	12850 Jun 16 09:18	23° \approx 20'40		max. Earth dist.	12851 Apr 26 04:29	15° \approx 58'00	1.45360 AU
evening max el	12850 Jun 20 02:33	27° \approx 37'29	19°02'48		12851 May 05 04:58	0° \approx	
	12850 Jun 22 22:20	0° \approx		evening rise	12851 May 07 18:10	3° \approx 55'04	
retrograde	12850 Jun 26 22:21	1° \approx 23'58		greatest brilliancy	12851 May 22 12:37	26° \approx 08'13	-0.6m
evening set	12850 Jun 30 09:27	0° \approx 14'32			12851 May 25 05:18	0° \approx	
	12850 Jun 30 17:47	30° \approx		asc. node	12851 Jun 03 06:23	11° \approx 20'42	
inferior conj	12850 Jul 05 21:02	24° \approx 28'35	3°04'59	evening max el	12851 Jun 03 07:43	11° \approx 24'02	19°55'47
minimum elong	12850 Jul 05 22:18	24° \approx 24'32	3°03'55	retrograde	12851 Jun 10 20:46	15° \approx 41'50	
min. Earth dist.	12850 Jul 07 11:25	22° \approx 25'56	0.66525 AU	evening set	12851 Jun 14 17:19	14° \approx 15'41	
morning rise	12850 Jul 11 10:30	18° \approx 05'06		inferior conj	12851 Jun 20 00:48	8° \approx 16'12	3°13'23
direct	12850 Jul 17 15:45	15° \approx 24'29		minimum elong	12851 Jun 20 01:00	8° \approx 15'31	3°12'25
desc. node	12850 Jul 19 15:05	15° \approx 38'36		min. Earth dist.	12851 Jun 21 00:41	6° \approx 55'39	0.67772 AU
morning max el	12850 Jul 30 11:05	23° \approx 02'40	26°14'47	morning rise	12851 Jun 25 08:21	1° \approx 54'20	
	12850 Aug 05 14:45	0° \approx			12851 Jun 28 04:15	30° \approx	
	12850 Aug 26 02:59	0° \approx		direct	12851 Jul 01 02:46	29° \approx 21'43	
morning set	12850 Sep 04 10:17	16° \approx 24'30			12851 Jul 04 06:22	0° \approx	
max. Earth dist.	12850 Sep 08 06:50	23° \approx 45'18	1.34920 AU	desc. node	12851 Jul 06 12:21	1° \approx 07'32	
	12850 Sep 11 10:31	0° \approx		morning max el	12851 Jul 12 21:24	6° \approx 25'19	24°53'51
asc. node	12850 Sep 12 10:21	2° \approx 00'28			12851 Jul 31 04:36	0° \approx	
				morning set	12851 Aug 17 17:44	28° \approx 25'54	
superior conj	12850 Sep 13 13:53	4° \approx 20'55	0°10'55		12851 Aug 18 14:54	0° \approx	
minimum elong	12850 Sep 13 13:16	4° \approx 17'48	0°10'46	max. Earth dist.	12851 Aug 21 07:36	4° \approx 53'01	1.37026 AU
behind sun begin	12850 Sep 13 08:48	3° \approx 54'52					
behind sun end	12850 Sep 13 17:45	4° \approx 40'47		superior conj	12851 Aug 28 00:26	17° \approx 36'37	-0°21'14
evening rise	12850 Sep 21 04:20	20° \approx 10'44		minimum elong	12851 Aug 28 01:49	17° \approx 43'26	0°21'17
	12850 Sep 26 00:49	0° \approx		asc. node	12851 Aug 30 06:56	22° \approx 05'50	
evening max el	12850 Oct 09 22:27	21° \approx 05'34	20°43'24		12851 Sep 03 05:18	0° \approx	
desc. node	12850 Oct 15 11:29	25° \approx 16'08		evening rise	12851 Sep 05 08:37	4° \approx 18'56	
retrograde	12850 Oct 21 07:12	26° \approx 44'15			12851 Sep 20 07:35	0° \approx	
evening set	12850 Oct 23 14:23	26° \approx 31'25		evening max el	12851 Sep 22 08:55	2° \approx 15'36	19°31'34
inferior conj	12850 Nov 01 14:43	22° \approx 36'54	-4°50'56	retrograde	12851 Oct 02 01:42	7° \approx 06'13	
minimum elong	12850 Nov 01 04:49	22° \approx 51'04	4°47'46	desc. node	12851 Oct 02 08:57	7° \approx 05'57	
min. Earth dist.	12850 Nov 02 15:10	22° \approx 01'51	0.54618 AU	evening set	12851 Oct 03 22:31	6° \approx 56'14	
morning rise	12850 Nov 09 19:12	18° \approx 40'40		inferior conj	12851 Oct 12 16:00	2° \approx 50'33	-3°11'02
direct	12850 Nov 14 02:09	18° \approx 01'12		minimum elong	12851 Oct 12 07:48	3° \approx 03'37	3°07'39
morning max el	12850 Nov 27 06:40	24° \approx 24'47	23°18'10	min. Earth dist.	12851 Oct 15 00:49	1° \approx 20'03	0.55480 AU
	12850 Dec 02 08:29	0° \approx			12851 Oct 17 06:49	30° \approx	
asc. node	12850 Dec 09 11:32	10° \approx 24'58		morning rise	12851 Oct 20 15:04	28° \approx 25'52	
	12850 Dec 19 17:32	0° \approx		direct	12851 Oct 25 18:17	27° \approx 26'58	
morning set	12850 Dec 20 14:20	1° \approx 50'14			12851 Nov 03 00:42	0° \approx	
				morning max el	12851 Nov 08 16:47	4° \approx 25'25	25°05'39
superior conj	12850 Dec 27 12:05	16° \approx 34'02	1°35'19	asc. node	12851 Nov 26 08:28	29° \approx 06'58	

	12851 Nov 26 20:03	0°♊			12852 Nov 17 23:21	0°♊	
morning set	12851 Dec 05 02:07	16°♊33'44		morning set	12852 Nov 18 12:22	1°♊09'19	
	12851 Dec 11 05:16	0°♋					
superior conj	12851 Dec 11 20:58	1°♋26'36	1°38'28	superior conj	12852 Nov 25 08:09	16°♊10'47	1°35'34
minimum elong	12851 Dec 11 20:58	1°♋26'34	1°39'26	minimum elong	12852 Nov 25 07:07	16°♊05'02	1°36'26
max. Earth dist.	12851 Dec 13 14:11	5°♋12'45	1.32106 AU	max. Earth dist.	12852 Nov 25 21:16	17°♊23'52	1.31424 AU
evening rise	12851 Dec 19 02:42	16°♋57'41		evening rise	12852 Dec 01 15:26	0°♋	
	12851 Dec 25 18:36	0°♌		desc. node	12852 Dec 02 05:28	1°♋14'26	
desc. node	12851 Dec 29 06:48	6°♌17'59			12852 Dec 15 03:45	25°♋46'48	
	12852 Jan 14 04:12	0°♍			12852 Dec 17 18:12	0°♌	
evening max el	12852 Jan 21 02:48	7°♍37'38	27°32'54	evening max el	12853 Jan 02 09:10	19°♌57'59	27°12'26
retrograde	12852 Feb 03 22:46	15°♍00'02		retrograde	12853 Jan 16 07:53	27°♌12'58	
evening set	12852 Feb 10 21:11	12°♍38'08		evening set	12853 Jan 23 04:22	25°♌08'13	
min. Earth dist.	12852 Feb 14 15:12	9°♍33'36	0.62729 AU	min. Earth dist.	12853 Jan 26 23:37	22°♌24'06	0.60597 AU
inferior conj	12852 Feb 17 12:16	6°♍46'41	-1°33'30	inferior conj	12853 Jan 30 03:18	19°♌43'18	-2°53'30
minimum elong	12852 Feb 17 15:24	6°♍39'04	1°31'44	minimum elong	12853 Jan 30 09:27	19°♌30'12	2°50'30
asc. node	12852 Feb 22 06:41	2°♍44'16		morning rise	12853 Feb 06 17:33	14°♌53'07	
morning rise	12852 Feb 24 12:11	1°♍37'04		asc. node	12853 Feb 08 04:05	14°♌37'16	
direct	12852 Feb 26 19:13	1°♍12'37		direct	12853 Feb 08 19:49	14°♌35'30	
morning max el	12852 Mar 04 10:12	4°♍35'06	17°46'34	morning max el	12853 Feb 16 01:32	18°♌12'55	17°58'05
morning set	12852 Mar 20 11:06	29°♍11'20		morning set	12853 Feb 24 13:02	0°♎	
	12852 Mar 20 22:14	0°♏		desc. node	12853 Mar 03 15:27	12°♎42'06	
desc. node	12852 Mar 26 08:28	9°♏25'31			12853 Mar 13 04:59	0°♏00'35	
					12853 Mar 13 04:51	0°♏	
superior conj	12852 Apr 01 09:01	19°♏36'38	-0°45'27	superior conj	12853 Mar 13 22:38	1°♏18'04	-0°05'48
minimum elong	12852 Apr 01 04:29	19°♏17'46	0°45'01	minimum elong	12853 Mar 13 22:09	1°♏15'57	0°05'38
	12852 Apr 07 17:43	0°♐		behind sun begin	12853 Mar 14 13:44	0°♏42'41	
max. Earth dist.	12852 Apr 07 22:21	0°♐18'35	1.44222 AU	behind sun end	12853 Mar 14 05:44	1°♏49'08	
evening rise	12852 Apr 16 06:24	13°♐24'28		max. Earth dist.	12853 Mar 21 11:37	14°♏07'49	1.42509 AU
	12852 Apr 27 06:32	0°♑		evening rise	12853 Mar 27 06:37	23°♏30'30	
evening max el	12852 May 16 07:00	25°♑11'27	21°02'16		12853 Mar 31 10:08	0°♐	
asc. node	12852 May 20 03:34	28°♑28'35			12853 Apr 21 07:57	0°♑	
	12852 May 23 10:46	0°♒		evening max el	12853 Apr 29 01:06	8°♑59'31	22°18'36
retrograde	12852 May 24 19:38	0°♒09'33		asc. node	12853 May 07 00:49	14°♑28'17	
	12852 May 26 03:32	30°♒11		retrograde	12853 May 08 17:12	14°♑41'28	
evening set	12852 May 29 02:20	28°♒26'58		evening set	12853 May 13 10:46	12°♑43'30	
inferior conj	12852 Jun 03 08:26	22°♒15'34	3°09'43	inferior conj	12853 May 18 17:49	6°♒22'23	2°55'19
minimum elong	12852 Jun 03 07:39	22°♒18'19	3°08'43	minimum elong	12853 May 18 16:14	6°♒27'54	2°54'13
min. Earth dist.	12852 Jun 03 18:37	21°♒40'13	0.68556 AU	min. Earth dist.	12853 May 18 15:02	6°♒32'06	0.68865 AU
morning rise	12852 Jun 08 12:45	15°♒57'51		morning rise	12853 May 23 21:32	0°♒10'31	
direct	12852 Jun 13 18:41	13°♒39'56			12853 May 24 02:34	30°♒8	
desc. node	12852 Jun 22 09:29	18°♒06'07		direct	12853 May 28 14:31	28°♒11'30	
morning max el	12852 Jun 24 07:48	19°♒56'50	23°24'40		12853 Jun 02 14:43	0°♒	
	12852 Jul 02 21:04	0°♓		morning max el	12853 Jun 06 20:42	3°♒36'20	21°56'29
	12852 Jul 23 08:50	0°♑		desc. node	12853 Jun 09 06:29	6°♒10'28	
morning set	12852 Jul 29 03:51	9°♑29'24			12853 Jun 26 22:07	0°♓	
max. Earth dist.	12852 Aug 02 05:19	16°♑25'44	1.39347 AU	morning set	12853 Jul 09 12:54	19°♓26'17	
				max. Earth dist.	12853 Jul 15 05:57	28°♓45'21	1.41621 AU
superior conj	12852 Aug 09 20:59	0°♒11'52	-0°55'46		12853 Jul 15 23:52	0°♑	
minimum elong	12852 Aug 10 01:00	0°♒30'33	0°55'40				
	12852 Aug 09 18:26	0°♓		superior conj	12853 Jul 22 23:10	11°♑57'06	-1°29'31
asc. node	12852 Aug 16 03:34	12°♓06'55		minimum elong	12853 Jul 23 05:37	12°♑25'28	1°29'28
evening rise	12852 Aug 19 05:36	18°♓05'09			12853 Aug 01 22:17	0°♓	
	12852 Aug 25 13:18	0°♔		evening rise	12853 Aug 02 15:37	1°♓20'07	
evening max el	12852 Sep 04 08:09	14°♔13'01	18°41'33	asc. node	12853 Aug 03 00:15	1°♓59'57	
retrograde	12852 Sep 12 13:27	18°♔21'02		evening max el	12853 Aug 18 16:22	26°♓50'27	18°12'33
evening set	12852 Sep 14 11:43	18°♔08'11			12853 Aug 23 06:27	0°♔	
desc. node	12852 Sep 18 06:27	16°♔36'43		retrograde	12853 Aug 25 19:58	0°♔28'18	
inferior conj	12852 Sep 22 12:45	13°♔43'53	-1°20'49	evening set	12853 Aug 28 00:56	0°♔08'08	
minimum elong	12852 Sep 22 09:27	13°♔50'03	1°19'21		12853 Aug 28 10:55	30°♒♓	
min. Earth dist.	12852 Sep 25 16:05	11°♔24'37	0.57109 AU	inferior conj	12853 Sep 04 07:16	25°♓23'18	0°15'53
morning rise	12852 Sep 30 03:46	8°♔41'24		minimum elong	12853 Sep 04 07:48	25°♓22'08	0°15'30
direct	12852 Oct 06 00:30	7°♔16'50		transit middle	12853 Sep 04 07:48	25°♓22'08	0°15'30
morning max el	12852 Oct 20 07:11	14°♔43'43	26°36'50	transit begin	12853 Sep 04 06:50	25°♓24'16	
	12852 Nov 01 13:18	0°♕		transit end	12853 Sep 04 08:47	25°♓20'01	
asc. node	12852 Nov 12 05:17	18°♕19'12		desc. node	12853 Sep 05 03:56	24°♓38'10	

min. Earth dist.	12853 Sep 07 14:48	22° \cap 31'51	0.59227 AU	desc. node	12854 Aug 23 01:26	2° \cap 48'49	
morning rise	12853 Sep 11 11:16	19° \cap 46'37		morning rise	12854 Aug 24 12:45	1° \cap 42'34	
direct	12853 Sep 17 20:50	17° \cap 53'50			12854 Aug 27 19:46	30° \cap 0	
morning max el	12853 Oct 02 04:55	25° \cap 41'13	27°36'44	direct	12854 Aug 31 04:37	29° \cap 25'13	
	12853 Oct 06 05:28	0° \cap			12854 Sep 03 16:48	0° \cap	
	12853 Oct 25 23:49	0° \cap		morning max el	12854 Sep 14 09:19	7° \cap 24'05	27°58'18
asc. node	12853 Oct 30 02:02	7° \cap 53'25			12854 Oct 01 14:56	0° \cap	
morning set	12853 Nov 02 19:20	15° \cap 32'24		asc. node	12854 Oct 16 22:42	27° \cap 42'25	
max. Earth dist.	12853 Nov 09 05:50	29° \cap 35'25	1.31251 AU	morning set	12854 Oct 17 21:01	29° \cap 36'45	
	12853 Nov 09 10:15	0° \cap			12854 Oct 18 01:31	0° \cap	
				max. Earth dist.	12854 Oct 23 12:06	11° \cap 36'55	1.31602 AU
superior conj	12853 Nov 09 19:46	0° \cap 53'04	1°26'54				
minimum elong	12853 Nov 09 17:56	0° \cap 42'55	1°27'31	superior conj	12854 Oct 25 05:55	15° \cap 26'53	1°12'34
evening rise	12853 Nov 16 13:00	15° \cap 42'23		minimum elong	12854 Oct 25 03:41	15° \cap 14'32	1°12'53
	12853 Nov 23 13:45	0° \cap		evening rise	12854 Oct 31 23:18	0° \cap 15'03	
desc. node	12853 Dec 02 00:48	14° \cap 39'00			12854 Oct 31 20:31	0° \cap	
	12853 Dec 13 20:29	0° \cap			12854 Nov 17 01:25	0° \cap	
evening max el	12853 Dec 15 08:24	1° \cap 28'28	26°17'34	desc. node	12854 Nov 18 21:58	2° \cap 39'36	
retrograde	12853 Dec 29 07:11	8° \cap 33'48		evening max el	12854 Nov 26 23:26	12° \cap 07'55	24°53'14
evening set	12854 Jan 04 17:12	6° \cap 54'36		retrograde	12854 Dec 10 18:21	19° \cap 01'48	
min. Earth dist.	12854 Jan 08 21:53	4° \cap 18'26	0.58453 AU	evening set	12854 Dec 16 07:20	17° \cap 53'24	
inferior conj	12854 Jan 12 00:36	2° \cap 00'21	-4°14'24	min. Earth dist.	12854 Dec 21 11:21	15° \cap 08'47	0.56536 AU
minimum elong	12854 Jan 12 09:03	1° \cap 44'41	4°11'00	inferior conj	12854 Dec 24 01:29	13° \cap 28'52	-5°22'05
	12854 Jan 14 20:30	30° \cap 0		minimum elong	12854 Dec 24 08:57	13° \cap 16'49	5°19'47
morning rise	12854 Jan 20 03:49	27° \cap 31'35		morning rise	12855 Jan 01 12:44	9° \cap 21'41	
direct	12854 Jan 22 05:25	27° \cap 17'12		direct	12855 Jan 03 20:30	9° \cap 06'33	
asc. node	12854 Jan 26 01:23	28° \cap 09'34		asc. node	12855 Jan 12 22:37	13° \cap 17'08	
	12854 Jan 28 23:01	0° \cap		morning max el	12855 Jan 13 09:30	13° \cap 42'50	19°22'49
morning max el	12854 Jan 30 10:39	1° \cap 19'29	18°29'28		12855 Jan 24 15:06	0° \cap	
morning set	12854 Feb 15 08:38	26° \cap 47'19		morning set	12855 Jan 30 10:32	11° \cap 14'46	
	12854 Feb 17 00:42	0° \cap					
superior conj	12854 Feb 24 09:34	13° \cap 57'58	0°28'58	superior conj	12855 Feb 07 13:13	27° \cap 23'28	0°56'47
minimum elong	12854 Feb 24 11:32	14° \cap 07'01	0°29'01	minimum elong	12855 Feb 07 16:01	27° \cap 37'08	0°56'59
desc. node	12854 Feb 28 01:31	20° \cap 38'00			12855 Feb 08 21:34	0° \cap	
max. Earth dist.	12854 Mar 03 20:08	27° \cap 16'15	1.40416 AU	max. Earth dist.	12855 Feb 14 02:33	9° \cap 45'36	1.38172 AU
	12854 Mar 05 10:22	0° \cap		desc. node	12855 Feb 14 22:05	11° \cap 14'10	
evening rise	12854 Mar 08 02:50	4° \cap 30'44		evening rise	12855 Feb 17 20:06	16° \cap 25'16	
	12854 Mar 24 14:46	0° \cap			12855 Feb 25 23:00	0° \cap	
evening max el	12854 Apr 11 15:57	22° \cap 49'54	23°39'26		12855 Mar 19 03:32	0° \cap	
retrograde	12854 Apr 22 11:57	29° \cap 12'27		evening max el	12855 Mar 25 05:38	6° \cap 42'34	24°58'10
asc. node	12854 Apr 23 22:08	29° \cap 03'10		retrograde	12855 Apr 06 02:45	13° \cap 37'05	
evening set	12854 Apr 27 17:03	27° \cap 00'47		asc. node	12855 Apr 10 19:31	12° \cap 01'00	
min. Earth dist.	12854 May 02 11:43	21° \cap 25'25	0.68710 AU	evening set	12855 Apr 11 19:39	11° \cap 14'11	
inferior conj	12854 May 03 03:00	20° \cap 33'03	2°30'48	min. Earth dist.	12855 Apr 16 06:30	6° \cap 14'47	0.68106 AU
minimum elong	12854 May 03 00:56	20° \cap 40'07	2°29'36	inferior conj	12855 Apr 17 10:08	4° \cap 43'48	1°56'14
morning rise	12854 May 08 08:47	14° \cap 28'23		minimum elong	12855 Apr 17 08:00	4° \cap 50'48	1°55'06
direct	12854 May 12 13:02	12° \cap 50'09			12855 Apr 21 09:54	30° \cap 0	
morning max el	12854 May 20 15:12	17° \cap 26'18	20°36'45	morning rise	12855 Apr 22 20:37	28° \cap 47'45	
desc. node	12854 May 27 03:23	25° \cap 02'51		direct	12855 Apr 26 12:48	27° \cap 30'13	
	12854 May 30 19:38	0° \cap			12855 May 02 02:23	0° \cap	
morning set	12854 Jun 18 22:46	28° \cap 23'09		morning max el	12855 May 03 17:17	1° \cap 28'04	19°30'18
	12854 Jun 19 23:42	0° \cap		desc. node	12855 May 14 00:10	14° \cap 30'18	
max. Earth dist.	12854 Jun 27 13:18	11° \cap 58'35	1.43580 AU	greatest brilliancy	12855 May 16 09:08	17° \cap 57'29	-0.7m
					12855 May 24 09:31	0° \cap	
superior conj	12854 Jul 04 02:54	22° \cap 43'52	-1°57'20	morning set	12855 May 28 23:45	7° \cap 01'55	
minimum elong	12854 Jul 04 09:38	23° \cap 11'56	1°57'45	max. Earth dist.	12855 Jun 10 03:36	25° \cap 57'17	1.44993 AU
	12854 Jul 08 10:22	0° \cap			12855 Jun 12 16:54	0° \cap	
evening rise	12854 Jul 16 10:08	13° \cap 52'21		superior conj	12855 Jun 14 07:00	2° \cap 31'48	-2°12'27
asc. node	12854 Jul 20 20:59	21° \cap 40'18		minimum elong	12855 Jun 14 09:24	2° \cap 41'24	2°13'23
	12854 Jul 25 19:47	0° \cap		evening rise	12855 Jun 28 08:07	25° \cap 30'49	
evening max el	12854 Aug 02 05:27	9° \cap 57'15	18°03'08		12855 Jul 01 00:33	0° \cap	
retrograde	12854 Aug 08 18:18	13° \cap 19'34		asc. node	12855 Jul 07 17:49	11° \cap 03'06	
evening set	12854 Aug 11 07:23	12° \cap 48'26		evening max el	12855 Jul 16 19:44	23° \cap 24'36	18°12'19
inferior conj	12854 Aug 17 21:03	7° \cap 43'54	1°30'03	retrograde	12855 Jul 23 04:11	26° \cap 45'55	
minimum elong	12854 Aug 17 23:21	7° \cap 38'08	1°28'50	evening set	12855 Jul 26 01:36	26° \cap 01'07	
min. Earth dist.	12854 Aug 20 22:15	4° \cap 42'24	0.61521 AU	inferior conj	12855 Aug 01 02:12	20° \cap 38'52	2°21'36

minimum elong	12855 Aug 01 04:42	20°Ω31'51	2°20'17	min. Earth dist.	12856 Jul 16 17:26	1°Ω36'09	0.65609 AU
min. Earth dist.	12855 Aug 03 15:16	17°Ω48'21	0.63712 AU		12856 Jul 18 02:37	30°κϢ	
morning rise	12855 Aug 07 06:10	14°Ω22'47		morning rise	12856 Jul 20 12:46	27°Ϣ36'46	
desc. node	12855 Aug 09 22:52	12°Ω42'26		direct	12856 Jul 26 22:46	24°Ϣ55'56	
direct	12855 Aug 13 21:44	11°Ω48'51		desc. node	12856 Jul 26 20:15	24°Ϣ55'58	
morning max el	12855 Aug 27 18:27	19°Ω49'45	27°42'02		12856 Aug 06 06:36	0°Ω	
	12855 Sep 05 11:09	0°൬		morning max el	12856 Aug 09 05:36	2°Ω47'06	26°53'45
	12855 Sep 24 15:27	0°♎			12856 Aug 29 17:43	0°൬	
morning set	12855 Oct 01 15:08	13°♎17'24		morning set	12856 Sep 13 22:51	26°൬27'28	
asc. node	12855 Oct 03 19:21	17°♎41'34			12856 Sep 15 18:46	0°♎	
max. Earth dist.	12855 Oct 06 12:29	23°♎20'51	1.32488 AU	max. Earth dist.	12856 Sep 18 03:44	4°♎42'39	1.33892 AU
				asc. node	12856 Sep 19 15:59	7°♎46'26	
superior conj	12855 Oct 09 12:42	29°♎47'16	0°52'43				
minimum elong	12855 Oct 09 10:33	29°♎35'42	0°52'44	superior conj	12856 Sep 22 13:52	13°♎48'28	0°27'34
	12855 Oct 09 15:03	0°♎		minimum elong	12856 Sep 22 12:29	13°♎41'11	0°27'26
evening rise	12855 Oct 16 10:33	14°♎48'03		evening rise	12856 Sep 29 20:49	29°♎16'15	
	12855 Oct 23 22:39	0°♎			12856 Sep 30 05:08	0°♎	
desc. node	12855 Nov 05 19:15	19°♎29'31			12856 Oct 17 18:46	0°♎	
evening max el	12855 Nov 08 09:30	22°♎13'17	23°12'38	evening max el	12856 Oct 19 23:29	2°♎20'50	21°33'46
retrograde	12855 Nov 21 16:31	28°♎49'59		desc. node	12856 Oct 22 16:37	4°♎44'12	
evening set	12855 Nov 25 22:09	28°♎11'03		retrograde	12856 Nov 01 05:19	8°♎25'51	
min. Earth dist.	12855 Dec 02 19:02	24°♎59'05	0.55139 AU	evening set	12856 Nov 04 01:54	8°♎07'12	
inferior conj	12855 Dec 04 06:35	24°♎07'43	-5°54'27	inferior conj	12856 Nov 12 23:24	4°♎12'45	-5°30'56
minimum elong	12855 Dec 04 07:30	24°♎06'23	5°53'29	minimum elong	12856 Nov 12 15:53	4°♎23'17	5°28'55
morning rise	12855 Dec 12 18:29	20°♎17'20		min. Earth dist.	12856 Nov 13 01:17	4°♎10'07	0.54532 AU
direct	12855 Dec 15 16:41	19°♎56'58		morning rise	12856 Nov 21 06:49	0°♎24'31	
morning max el	12855 Dec 26 18:45	25°♎13'57	20°39'22		12856 Nov 23 09:12	30°κ♎	
asc. node	12855 Dec 30 19:48	29°♎45'15		direct	12856 Nov 25 01:02	29°♎53'53	
	12855 Dec 31 00:22	0°♎			12856 Nov 26 16:23	0°♎	
morning set	12856 Jan 14 18:01	25°♎55'04		morning max el	12856 Dec 07 14:21	5°♎54'15	22°16'34
	12856 Jan 16 17:16	0°♎		asc. node	12856 Dec 16 16:53	17°♎17'16	
					12856 Dec 23 22:49	0°♎	
superior conj	12856 Jan 22 05:13	11°♎22'18	1°17'16	morning set	12856 Dec 29 04:42	10°♎41'24	
minimum elong	12856 Jan 22 07:47	11°♎35'23	1°17'45				
max. Earth dist.	12856 Jan 27 10:52	21°♎47'01	1.36016 AU	superior conj	12857 Jan 05 06:01	25°♎44'25	1°30'39
evening rise	12856 Jan 31 07:56	29°♎06'23		minimum elong	12857 Jan 05 07:45	25°♎53'34	1°31'26
	12856 Jan 31 19:36	0°♎			12857 Jan 07 06:40	0°♎	
desc. node	12856 Feb 01 18:42	1°♎45'10		max. Earth dist.	12857 Jan 09 01:03	3°♎38'40	1.34154 AU
	12856 Feb 19 04:59	0°♎		evening rise	12857 Jan 13 10:50	12°♎25'25	
evening max el	12856 Mar 06 19:12	20°♎32'43	26°07'35	desc. node	12857 Jan 18 15:25	22°♎06'55	
retrograde	12856 Mar 19 12:39	27°♎48'25			12857 Jan 23 04:10	0°♎	
evening set	12856 Mar 25 16:51	25°♎17'58			12857 Feb 13 08:05	0°♎	
asc. node	12856 Mar 27 16:57	23°♎24'01		evening max el	12857 Feb 17 08:44	4°♎12'59	27°00'24
min. Earth dist.	12856 Mar 29 21:11	20°♎53'47	0.67074 AU	retrograde	12857 Mar 02 16:57	11°♎38'52	
inferior conj	12856 Mar 31 13:12	18°♎49'52	1°11'18	evening set	12857 Mar 09 06:46	9°♎06'11	
minimum elong	12856 Mar 31 11:33	18°♎54'56	1°10'30	min. Earth dist.	12857 Mar 13 05:46	5°♎15'31	0.65645 AU
morning rise	12856 Apr 06 07:02	13°♎04'00		asc. node	12857 Mar 14 14:23	3°♎42'43	
direct	12856 Apr 09 12:05	12°♎05'30		inferior conj	12857 Mar 15 09:56	2°♎46'25	0°15'41
morning max el	12856 Apr 16 02:43	15°♎38'09	18°39'28	minimum elong	12857 Mar 15 09:30	2°♎47'40	0°15'34
	12856 Apr 27 00:00	0°♎		transit middle	12857 Mar 15 09:30	2°♎47'40	0°15'34
desc. node	12856 Apr 29 20:52	4°♎22'57		transit begin	12857 Mar 15 08:48	2°♎49'40	
morning set	12856 May 07 13:44	16°♎23'24		transit end	12857 Mar 15 10:12	2°♎45'40	
	12856 May 16 06:38	0°♎			12857 Mar 17 23:01	30°κ♎	
max. Earth dist.	12856 May 22 22:12	10°♎22'50	1.45720 AU	morning rise	12857 Mar 21 13:42	27°♎12'37	
				direct	12857 Mar 24 08:51	26°♎30'14	
superior conj	12856 May 23 17:39	11°♎38'53	-2°08'44	morning max el	12857 Mar 30 17:34	29°♎50'24	18°05'18
minimum elong	12856 May 23 12:25	11°♎18'25	2°09'24		12857 Mar 30 21:28	0°♎	
	12856 Jun 04 09:25	0°♎		desc. node	12857 Apr 16 17:30	24°♎34'08	
evening rise	12856 Jun 08 05:51	6°♎07'48		morning set	12857 Apr 18 06:46	27°♎05'26	
greatest brilliancy	12856 Jun 15 14:46	17°♎52'29	-0.9m		12857 Apr 20 01:48	0°♎	
asc. node	12856 Jun 23 14:44	0°Ω00'56					
	12856 Jun 23 14:28	0°Ω		superior conj	12857 May 03 02:40	20°♎48'57	-1°45'22
evening max el	12856 Jun 29 08:08	7°Ω03'40	18°39'25	minimum elong	12857 May 02 17:27	20°♎12'41	1°45'14
retrograde	12856 Jul 05 21:28	10°Ω37'33		max. Earth dist.	12857 May 05 18:03	24°♎57'26	1.45703 AU
evening set	12856 Jul 09 03:23	9°Ω37'27			12857 May 08 23:35	0°♎	
inferior conj	12856 Jul 14 18:42	3°Ω59'29	2°53'49	evening rise	12857 May 19 05:12	15°♎52'14	
minimum elong	12856 Jul 14 20:32	3°Ω53'51	2°52'40		12857 May 28 09:45	0°♎	

greatest brilliancy	12857 May 31 20:25	5°☿11'31	-0.7m			12858 May 22 17:25	0°☿	
asc. node	12857 Jun 10 11:46	18°☿25'19		evening max el	12858 May 26 18:59	4°☿36'13	20°22'38	
evening max el	12857 Jun 12 16:19	20°☿48'37	19°23'25	asc. node	12858 May 28 08:52	6°☿05'21		
retrograde	12857 Jun 19 18:46	24°☿47'33		retrograde	12858 Jun 03 17:35	9°☿10'25		
evening set	12857 Jun 23 09:42	23°☿31'09		evening set	12858 Jun 07 18:16	7°☿37'27		
inferior conj	12857 Jun 28 19:11	17°☿39'08	3°10'07	inferior conj	12858 Jun 13 00:53	1°☿32'52	3°13'13	
minimum elong	12857 Jun 28 20:00	17°☿36'27	3°09'07	minimum elong	12858 Jun 13 00:39	1°☿33'40	3°12'14	
min. Earth dist.	12857 Jun 30 03:20	15°☿53'37	0.67112 AU	min. Earth dist.	12858 Jun 13 18:56	0°☿31'01	0.68164 AU	
morning rise	12857 Jul 04 05:47	11°☿15'38			12858 Jun 14 04:04	30°☿II		
direct	12857 Jul 10 06:35	8°☿37'25		morning rise	12858 Jun 18 06:42	25°II12'20		
desc. node	12857 Jul 13 17:34	9°☿20'58		direct	12858 Jun 23 20:00	22°II45'01		
morning max el	12857 Jul 22 16:27	16°☿03'29	25°41'52	desc. node	12858 Jun 30 14:46	25°II31'30		
	12857 Aug 03 05:03	0°♌		morning max el	12858 Jul 05 02:29	29°II30'18	24°16'15	
	12857 Aug 22 15:07	0°♍			12858 Jul 05 14:05	0°☿		
morning set	12857 Aug 27 16:27	8°♍57'32			12858 Jul 28 00:17	0°♌		
max. Earth dist.	12857 Aug 31 08:44	15°♍48'18	1.35772 AU	morning set	12858 Aug 09 15:27	20°♌36'33		
				max. Earth dist.	12858 Aug 13 06:59	27°♌01'56	1.38000 AU	
superior conj	12857 Sep 06 06:42	27°♍23'13	-0°02'20		12858 Aug 14 22:24	0°♍		
minimum elong	12857 Sep 06 06:51	27°♍23'58	0°02'28					
behind sun begin	12857 Sep 06 00:42	26°♍53'04		superior conj	12858 Aug 20 11:51	10°♍23'46	-0°35'45	
behind sun end	12857 Sep 06 13:00	27°♍54'56		minimum elong	12858 Aug 20 14:19	10°♍35'33	0°35'43	
asc. node	12857 Sep 06 12:35	27°♍52'52		asc. node	12858 Aug 24 09:12	17°♍57'25		
	12857 Sep 07 13:42	0°♎		evening rise	12858 Aug 29 05:34	27°♍33'53		
evening rise	12857 Sep 14 04:00	13°♎33'36			12858 Aug 30 11:09	0°♎		
	12857 Sep 22 16:08	0°♏		evening max el	12858 Sep 14 18:11	24°♎36'01	19°07'41	
evening max el	12857 Oct 02 01:45	13°♏04'02	20°10'13	retrograde	12858 Sep 23 18:43	29°♎06'43		
desc. node	12857 Oct 09 14:03	17°♏55'17		evening set	12858 Sep 25 15:13	28°♎56'05		
retrograde	12857 Oct 12 17:55	18°♏22'34		desc. node	12858 Sep 26 11:32	28°♎44'29		
evening set	12857 Oct 14 18:29	18°♏11'59		inferior conj	12858 Oct 04 02:28	24°♎43'27	-2°23'46	
inferior conj	12857 Oct 23 17:35	14°♏14'17	-4°11'55	minimum elong	12858 Oct 03 20:16	24°♎53'57	2°21'04	
minimum elong	12857 Oct 23 07:40	14°♏29'03	4°08'17	min. Earth dist.	12858 Oct 06 21:14	22°♎50'36	0.56097 AU	
min. Earth dist.	12857 Oct 25 09:21	13°♏15'04	0.54869 AU	morning rise	12858 Oct 11 22:31	20°♎03'07		
morning rise	12857 Oct 31 19:51	10°♏07'28		direct	12858 Oct 17 09:57	18°♎53'34		
direct	12857 Nov 05 11:29	9°♏20'31		morning max el	12858 Oct 31 12:34	26°♎05'09	25°47'21	
morning max el	12857 Nov 19 01:29	16°♏00'41	24°04'45		12858 Nov 04 05:50	0°♏		
	12857 Nov 30 04:03	0°♐		asc. node	12858 Nov 20 10:47	24°♏33'45		
asc. node	12857 Dec 03 13:53	5°♐37'24			12858 Nov 23 06:29	0°♐		
morning set	12857 Dec 13 16:34	25°♐27'05		morning set	12858 Nov 28 03:52	10°♐07'42		
	12857 Dec 15 19:07	0°♑						
superior conj	12857 Dec 20 12:36	10°♑20'15	1°37'24	superior conj	12858 Dec 04 22:41	25°♐03'10	1°37'56	
minimum elong	12857 Dec 20 13:15	10°♑23'44	1°38'22	minimum elong	12858 Dec 04 22:14	25°♐00'38	1°38'54	
max. Earth dist.	12857 Dec 22 22:54	15°♑35'19	1.32715 AU	max. Earth dist.	12858 Dec 06 03:31	27°♐42'41	1.31758 AU	
evening rise	12857 Dec 28 01:16	26°♑12'40			12858 Dec 07 04:28	0°♑		
	12857 Dec 29 22:57	0°♒		evening rise	12858 Dec 12 00:16	10°♑20'52		
desc. node	12858 Jan 05 12:13	12°♒13'30			12858 Dec 22 05:45	0°♒		
	12858 Jan 16 13:13	0°♓		desc. node	12858 Dec 23 09:06	1°♒58'32		
evening max el	12858 Jan 30 21:19	17°♓32'20	27°29'32		12859 Jan 12 23:10	0°♓		
retrograde	12858 Feb 13 14:42	24°♓58'23		evening max el	12859 Jan 13 06:55	0°♓18'31	27°28'29	
evening set	12858 Feb 20 11:03	22°♓30'26		retrograde	12859 Jan 27 04:37	7°♓37'47		
min. Earth dist.	12858 Feb 24 06:14	19°♓10'16	0.63868 AU	evening set	12859 Feb 03 02:53	5°♓22'30		
inferior conj	12858 Feb 26 21:40	16°♓26'15	-0°50'44	min. Earth dist.	12859 Feb 06 20:56	2°♓27'28	0.61834 AU	
minimum elong	12858 Feb 26 23:16	16°♓22'06	0°49'45	inferior conj	12859 Feb 09 21:16	29°♓41'30	-2°06'47	
asc. node	12858 Mar 01 11:49	13°♓52'55		minimum elong	12859 Feb 10 01:40	29°♓31'23	2°04'28	
morning rise	12858 Mar 05 13:42	11°♓06'51			12859 Feb 09 13:17	30°♓		
direct	12858 Mar 08 00:30	10°♓36'59		asc. node	12859 Feb 16 09:13	24°♓55'59		
morning max el	12858 Mar 14 11:05	13°♓55'59	17°48'18	morning rise	12859 Feb 17 03:15	24°♓39'28		
	12858 Mar 25 17:58	0°♔		direct	12859 Feb 19 07:50	24°♓18'21		
morning set	12858 Mar 31 03:23	9°♔07'18		morning max el	12859 Feb 26 04:06	27°♓46'15	17°49'06	
desc. node	12858 Apr 03 14:05	14°♔57'55			12859 Feb 28 04:48	0°♔		
	12858 Apr 12 15:41	0°♕		morning set	12859 Mar 13 21:57	22°♔11'14		
					12859 Mar 18 07:19	0°♔		
superior conj	12858 Apr 13 02:44	0°♕44'49	-1°08'51	desc. node	12859 Mar 21 10:35	5°♔29'58		
minimum elong	12858 Apr 12 19:40	0°♕16'09	1°08'20					
max. Earth dist.	12858 Apr 18 12:54	9°♕26'08	1.44952 AU	superior conj	12859 Mar 25 02:21	11°♔47'03	-0°28'14	
evening rise	12858 Apr 28 16:48	25°♕14'58		minimum elong	12859 Mar 24 23:41	11°♔35'43	0°27'54	
	12858 May 01 19:33	0°♖		max. Earth dist.	12859 Apr 01 04:55	23°♔34'46	1.43554 AU	
					12859 Apr 05 05:03	0°♕		

evening rise	12859 Apr 08 08:36	4°♄56'34		max. Earth dist.	12860 Mar 13 16:40	7°♄10'01	1.41652 AU
	12859 Apr 25 03:59	0°♄		evening rise	12860 Mar 18 16:51	15°♄25'09	
evening max el	12859 May 09 16:00	18°♄24'23	21°33'57		12860 Mar 28 01:11	0°♄	
asc. node	12859 May 15 06:03	22°♄46'30			12860 Apr 19 05:39	0°♄	
retrograde	12859 May 18 15:55	23°♄40'36		evening max el	12860 Apr 21 08:32	2°♄13'52	22°52'49
evening set	12859 May 23 03:12	21°♄51'21		asc. node	12860 May 01 03:20	8°♄12'44	
inferior conj	12859 May 28 09:28	15°♄35'49	3°04'53	retrograde	12860 May 01 12:23	8°♄13'24	
minimum elong	12859 May 28 08:18	15°♄39'50	3°03'50	evening set	12860 May 06 10:56	6°♄09'08	
min. Earth dist.	12859 May 28 14:06	15°♄19'39	0.68747 AU	inferior conj	12860 May 11 18:59	29°♄44'53	2°46'08
morning rise	12859 Jun 02 13:12	9°♄20'33		minimum elong	12860 May 11 17:09	29°♄51'14	2°44'59
direct	12859 Jun 07 13:46	7°♄10'06		min. Earth dist.	12860 May 11 10:47	0°♄13'21	0.68856 AU
desc. node	12859 Jun 17 11:50	13°♄00'37			12860 May 11 14:37	30°♄	
morning max el	12859 Jun 17 13:22	13°♄04'27	22°46'34	morning rise	12860 May 16 23:17	23°♄36'13	
	12859 Jul 01 03:36	0°♄		direct	12860 May 21 10:49	21°♄46'01	
	12859 Jul 20 21:31	0°♄		morning max el	12860 May 30 04:23	26°♄48'46	21°21'18
morning set	12859 Jul 21 15:07	1°♄12'10			12860 Jun 02 03:08	0°♄	
max. Earth dist.	12859 Jul 26 05:27	8°♄53'49	1.40343 AU	desc. node	12860 Jun 03 08:46	1°♄27'31	
					12860 Jun 23 15:40	0°♄	
superior conj	12859 Aug 03 01:10	22°♄39'31	-1°10'26	morning set	12860 Jun 30 13:32	10°♄41'33	
minimum elong	12859 Aug 03 06:20	23°♄02'57	1°10'18	max. Earth dist.	12860 Jul 07 09:24	21°♄39'24	1.42512 AU
	12859 Aug 07 00:51	0°♄			12860 Jul 12 09:41	0°♄	
asc. node	12859 Aug 11 05:49	7°♄55'49		superior conj	12860 Jul 14 18:14	4°♄00'56	-1°42'23
evening rise	12859 Aug 12 22:21	11°♄08'15		minimum elong	12860 Jul 15 01:14	4°♄31'00	1°42'30
	12859 Aug 23 12:54	0°♄		evening rise	12860 Jul 26 02:25	24°♄07'07	
evening max el	12859 Aug 28 21:47	6°♄51'52	18°26'40	asc. node	12860 Jul 28 02:31	27°♄44'24	
retrograde	12859 Sep 05 14:33	10°♄45'04			12860 Jul 29 08:41	0°♄	
evening set	12859 Sep 07 15:31	10°♄29'28		evening max el	12860 Aug 11 08:30	19°♄42'54	18°06'06
desc. node	12859 Sep 13 09:02	7°♄27'47		retrograde	12860 Aug 18 04:34	23°♄12'38	
inferior conj	12859 Sep 15 08:31	5°♄56'10	-0°37'15	evening set	12860 Aug 20 12:52	22°♄48'12	
minimum elong	12859 Sep 15 07:05	5°♄59'01	0°36'42	inferior conj	12860 Aug 27 11:42	17°♄54'24	0°50'14
min. Earth dist.	12859 Sep 18 15:07	3°♄21'03	0.57979 AU	minimum elong	12860 Aug 27 13:14	17°♄50'52	0°49'22
morning rise	12859 Sep 22 19:11	0°♄38'34		desc. node	12860 Aug 30 06:31	15°♄20'10	
	12859 Sep 24 04:39	30°♄		min. Earth dist.	12860 Aug 30 17:22	14°♄56'05	0.60202 AU
direct	12859 Sep 28 22:13	29°♄02'07		morning rise	12860 Sep 03 10:30	12°♄05'45	
	12859 Oct 03 18:22	0°♄		direct	12860 Sep 09 23:21	10°♄02'07	
morning max el	12859 Oct 13 05:47	6°♄37'38	27°06'44	morning max el	12860 Sep 24 06:47	17°♄55'12	27°50'45
	12859 Oct 30 15:43	0°♄			12860 Oct 04 09:25	0°♄	
asc. node	12859 Nov 07 07:35	13°♄56'17			12860 Oct 22 08:29	0°♄	
morning set	12859 Nov 12 12:56	24°♄38'25		asc. node	12860 Oct 24 04:17	3°♄37'42	
	12859 Nov 15 00:26	0°♄		morning set	12860 Oct 26 17:56	8°♄54'28	
superior conj	12859 Nov 19 10:15	9°♄47'01	1°32'34	max. Earth dist.	12860 Nov 01 20:04	22°♄05'13	1.31339 AU
minimum elong	12859 Nov 19 08:51	9°♄39'11	1°33'21	superior conj	12860 Nov 02 21:29	24°♄26'19	1°21'30
max. Earth dist.	12859 Nov 19 11:49	9°♄55'44	1.31294 AU	minimum elong	12860 Nov 02 19:26	24°♄14'56	1°21'59
evening rise	12859 Nov 26 05:20	24°♄43'13			12860 Nov 05 09:25	0°♄	
	12859 Nov 28 17:52	0°♄		evening rise	12860 Nov 09 14:18	9°♄13'51	
desc. node	12859 Dec 10 06:07	21°♄13'25			12860 Nov 20 03:05	0°♄	
	12859 Dec 16 01:07	0°♄		desc. node	12860 Nov 26 03:14	9°♄45'55	
evening max el	12859 Dec 26 10:42	12°♄19'06	26°53'12	evening max el	12860 Dec 07 06:15	23°♄26'31	25°44'34
retrograde	12860 Jan 09 09:24	19°♄29'13			12860 Dec 17 17:41	0°♄	
evening set	12860 Jan 16 02:46	17°♄34'36		retrograde	12860 Dec 21 03:44	0°♄27'32	
min. Earth dist.	12860 Jan 20 00:51	14°♄55'43	0.59676 AU		12860 Dec 24 13:35	30°♄	
inferior conj	12860 Jan 23 05:13	12°♄22'50	-3°28'22	evening set	12860 Dec 27 06:25	29°♄00'45	
minimum elong	12860 Jan 23 12:32	12°♄08'06	3°25'02	min. Earth dist.	12860 Dec 31 18:45	26°♄23'33	0.57591 AU
morning rise	12860 Jan 31 01:18	7°♄41'24		inferior conj	12861 Jan 03 18:00	24°♄19'50	-4°45'57
direct	12860 Feb 02 02:49	7°♄25'28		minimum elong	12861 Jan 04 02:38	24°♄04'49	4°42'49
asc. node	12860 Feb 03 06:35	7°♄30'40		morning rise	12861 Jan 12 01:31	20°♄00'52	
morning max el	12860 Feb 09 17:13	11°♄12'03	18°08'55	direct	12861 Jan 14 04:49	19°♄46'39	
	12860 Feb 22 03:10	0°♄		asc. node	12861 Jan 20 03:53	21°♄45'05	
morning set	12860 Feb 25 08:23	5°♄58'59		morning max el	12861 Jan 22 22:31	24°♄01'56	18°49'29
					12861 Jan 27 20:08	0°♄	
superior conj	12860 Mar 06 01:35	23°♄55'13	0°09'45	morning set	12861 Feb 08 05:43	20°♄15'04	
minimum elong	12860 Mar 06 02:22	23°♄58'39	0°09'50		12861 Feb 13 05:22	0°♄	
behind sun begin	12860 Mar 05 20:18	23°♄31'28		superior conj	12861 Feb 16 20:16	6°♄56'38	0°41'39
behind sun end	12860 Mar 06 08:25	24°♄25'47		minimum elong	12861 Feb 16 22:45	7°♄08'23	0°41'44
desc. node	12860 Mar 07 07:06	26°♄06'47					
	12860 Mar 09 12:10	0°♄					

desc. node	12861 Feb 22 03:39	16° H 44'16		max. Earth dist.	12862 Feb 06 06:09	2° H 15'05	1.37230 AU
max. Earth dist.	12861 Feb 23 23:59	20° H 01'40	1.39459 AU	desc. node	12862 Feb 09 00:17	7° H 19'02	
evening rise	12861 Feb 27 22:09	26° H 48'53		evening rise	12862 Feb 09 23:48	9° H 04'46	
	12861 Mar 01 19:40	0° Y			12862 Feb 22 13:53	0° Y	
	12861 Mar 21 15:18	0° B		evening max el	12862 Mar 17 11:54	29° Y 56'27	25°29'15
evening max el	12861 Apr 03 22:29	16° B 04'42	24°13'33		12862 Mar 17 13:21	0° B	
retrograde	12861 Apr 15 05:40	22° B 42'37		retrograde	12862 Mar 29 18:40	7° B 02'09	
asc. node	12861 Apr 18 00:41	22° B 07'29		evening set	12862 Apr 04 16:22	4° B 35'33	
evening set	12861 Apr 20 15:51	20° B 25'30		asc. node	12862 Apr 04 22:05	4° B 23'16	
min. Earth dist.	12861 Apr 25 06:53	15° B 05'38	0.68504 AU		12862 Apr 08 21:28	30° K Y	
inferior conj	12861 Apr 26 03:31	13° B 55'55	2°17'21	min. Earth dist.	12862 Apr 09 00:17	29° Y 51'02	0.67714 AU
minimum elong	12861 Apr 26 01:22	14° B 03'10	2°16'11	inferior conj	12862 Apr 10 09:11	28° Y 05'08	1°38'27
morning rise	12861 May 01 11:00	7° B 54'53		minimum elong	12862 Apr 10 07:12	28° Y 11'34	1°37'26
direct	12861 May 05 09:55	6° B 25'48		morning rise	12862 Apr 15 22:29	22° Y 13'04	
morning max el	12861 May 13 02:08	10° B 44'22	20°06'43	direct	12862 Apr 19 09:42	21° Y 04'03	
desc. node	12861 May 21 05:37	20° B 36'04		morning max el	12862 Apr 26 07:28	24° Y 49'58	19°06'35
	12861 May 27 20:19	0° II			12862 Apr 30 19:20	0° B	
morning set	12861 Jun 09 17:10	19° II 23'53		desc. node	12862 May 08 02:23	10° B 15'04	
	12861 Jun 16 12:39	0° E		greatest brilliancy	12862 May 09 08:39	12° B 08'00	-0.7m
max. Earth dist.	12861 Jun 19 19:41	5° E 12'58	1.44251 AU	morning set	12862 May 19 20:56	28° B 12'39	
					12862 May 21 00:43	0° II	
superior conj	12861 Jun 25 11:41	14° E 21'31	-2°05'43	max. Earth dist.	12862 Jun 02 11:26	19° II 22'19	1.45385 AU
minimum elong	12861 Jun 25 17:13	14° E 44'10	2°06'24				
	12861 Jul 04 20:30	0° Q		superior conj	12862 Jun 05 06:58	23° II 48'00	-2°13'25
evening rise	12861 Jul 08 12:50	6° Q 18'08		minimum elong	12862 Jun 05 06:10	23° II 44'53	2°14'21
asc. node	12861 Jul 14 23:18	17° Q 18'20			12862 Jun 09 04:49	0° E	
	12861 Jul 23 07:11	0° P		evening rise	12862 Jun 20 00:40	17° E 29'52	
evening max el	12861 Jul 25 22:28	2° P 59'36	18°04'49		12862 Jun 27 16:33	0° Q	
retrograde	12861 Aug 01 08:27	6° P 20'08		asc. node	12862 Jul 01 20:11	6° Q 31'21	
evening set	12861 Aug 04 00:56	5° P 43'38		evening max el	12862 Jul 09 12:18	16° Q 32'45	18°21'49
inferior conj	12861 Aug 10 08:35	0° P 31'23	1°54'27	retrograde	12862 Jul 15 21:49	19° Q 57'46	
minimum elong	12861 Aug 10 11:07	0° P 24'42	1°53'08	evening set	12862 Jul 18 22:46	19° Q 06'44	
	12861 Aug 10 20:28	30° K Q		inferior conj	12862 Jul 24 19:00	13° Q 37'55	2°37'23
min. Earth dist.	12861 Aug 13 05:07	27° Q 31'58	0.62471 AU	minimum elong	12862 Jul 24 21:17	13° Q 31'13	2°36'08
morning rise	12861 Aug 16 19:06	24° Q 22'19		min. Earth dist.	12862 Jul 27 02:14	10° Q 56'59	0.64557 AU
desc. node	12861 Aug 17 03:58	24° Q 06'38		morning rise	12862 Jul 30 18:28	7° Q 18'11	
direct	12861 Aug 23 11:27	21° Q 56'38		desc. node	12862 Aug 04 01:23	4° Q 58'12	
morning max el	12861 Sep 06 13:46	29° Q 58'40	27°55'47	direct	12862 Aug 06 08:22	4° Q 39'43	
	12861 Sep 06 14:18	0° P		morning max el	12862 Aug 19 23:53	12° Q 38'39	27°24'57
	12861 Sep 28 10:23	0° A			12862 Sep 02 21:44	0° P	
morning set	12861 Oct 10 16:48	22° A 50'38			12862 Sep 20 23:52	0° A	
asc. node	12861 Oct 11 00:58	23° A 32'16		morning set	12862 Sep 24 06:54	6° A 19'26	
	12861 Oct 14 03:21	0° M		asc. node	12862 Sep 27 21:35	13° A 34'29	
max. Earth dist.	12861 Oct 16 00:18	4° M 00'50	1.31910 AU	max. Earth dist.	12862 Sep 28 20:51	15° A 34'22	1.33017 AU
superior conj	12861 Oct 18 06:31	8° M 55'59	1°04'50	superior conj	12862 Oct 02 11:13	23° A 09'20	0°42'43
minimum elong	12861 Oct 18 04:15	8° M 43'34	1°05'00	minimum elong	12862 Oct 02 09:19	22° A 59'08	0°42'38
evening rise	12861 Oct 25 01:16	23° M 47'53			12862 Oct 05 15:31	0° M	
	12861 Oct 27 23:37	0° J		evening rise	12862 Oct 09 12:19	8° M 19'30	
desc. node	12861 Nov 13 00:28	27° J 19'59			12862 Oct 20 17:48	0° J	
	12861 Nov 15 04:29	0° B		desc. node	12862 Oct 30 21:47	13° J 33'08	
evening max el	12861 Nov 18 18:17	3° B 48'27	24°11'21	evening max el	12862 Oct 31 04:57	13° J 50'47	22°29'29
retrograde	12861 Dec 02 09:54	10° B 37'06		retrograde	12862 Nov 13 03:15	20° J 15'41	
evening set	12861 Dec 07 10:22	9° B 41'50		evening set	12862 Nov 16 17:56	19° J 47'08	
min. Earth dist.	12861 Dec 13 05:33	6° B 47'42	0.55857 AU	min. Earth dist.	12862 Nov 24 12:32	16° J 17'55	0.54774 AU
inferior conj	12861 Dec 15 10:08	5° B 27'18	-5°41'36	inferior conj	12862 Nov 25 08:44	15° J 49'22	-5°51'57
minimum elong	12861 Dec 15 15:30	5° B 19'04	5°40'00	minimum elong	12862 Nov 25 05:48	15° J 53'32	5°50'53
morning rise	12861 Dec 23 22:38	1° B 28'25		morning rise	12862 Dec 03 18:58	12° J 01'45	
direct	12861 Dec 26 11:14	1° B 11'52		direct	12862 Dec 07 01:18	11° J 37'35	
morning max el	12862 Jan 05 16:04	6° B 05'02	19°52'34	morning max el	12862 Dec 18 19:14	17° J 13'41	21°18'25
asc. node	12862 Jan 07 01:06	7° B 29'31		asc. node	12862 Dec 24 22:14	24° J 26'49	
	12862 Jan 21 00:45	0° A			12862 Dec 28 13:33	0° B	
morning set	12862 Jan 23 10:20	4° A 49'06		morning set	12863 Jan 07 19:28	19° B 32'38	
					12863 Jan 12 18:45	0° A	
superior conj	12862 Jan 31 05:43	20° A 38'11	1°06'21				
minimum elong	12862 Jan 31 08:32	20° A 52'07	1°06'39	superior conj	12863 Jan 15 01:52	4° A 47'55	1°23'46
	12862 Feb 05 01:25	0° H		minimum elong	12863 Jan 15 04:07	4° A 59'39	1°24'23

max. Earth dist.	12863 Jan 19 16:28	14° \approx 09'34	1.35185 AU	superior conj	12863 Dec 30 05:24	19° Z 16'25	1°34'17
evening rise	12863 Jan 23 18:31	22° \approx 03'29		minimum elong	12863 Dec 30 06:41	19° Z 23'18	1°35'10
desc. node	12863 Jan 26 20:58	27° \approx 46'50		max. Earth dist.	12864 Jan 02 10:12	26° Z 03'28	1.33494 AU
	12863 Jan 28 02:42	0° X			12864 Jan 04 07:57	0° \approx	
	12863 Feb 16 08:55	0° Y		evening rise	12864 Jan 07 02:43	5° \approx 35'25	
evening max el	12863 Feb 28 01:44	13° Y 44'21	26°32'35	desc. node	12864 Jan 13 17:43	18° \approx 02'51	
retrograde	12863 Mar 13 02:19	21° Y 05'26			12864 Jan 20 19:10	0° X	
evening set	12863 Mar 19 10:44	18° Y 33'39		evening max el	12864 Feb 10 15:14	27° X 17'45	27°16'08
asc. node	12863 Mar 22 19:31	15° Y 13'43			12864 Feb 13 16:15	0° Y	
min. Earth dist.	12863 Mar 23 12:46	14° Y 23'41	0.66511 AU	retrograde	12864 Feb 24 03:42	4° Y 43'47	
inferior conj	12863 Mar 25 09:54	12° Y 08'14	0°49'04	evening set	12864 Mar 01 20:50	2° Y 12'24	
minimum elong	12863 Mar 25 08:40	12° Y 11'55	0°48'30		12864 Mar 04 09:10	30° R X	
morning rise	12863 Mar 31 07:37	6° Y 26'55		min. Earth dist.	12864 Mar 05 18:06	28° X 35'12	0.64931 AU
direct	12863 Apr 03 08:18	5° Y 35'35		inferior conj	12864 Mar 08 03:10	25° X 58'39	-0°11'10
morning max el	12863 Apr 09 19:26	9° Y 01'35	18°22'47	minimum elong	12864 Mar 08 03:29	25° X 57'46	0°10'52
desc. node	12863 Apr 24 23:04	0° Z 16'34		transit middle	12864 Mar 08 03:29	25° X 57'46	0°10'52
	12863 Apr 24 18:52	0° Z		transit begin	12864 Mar 08 01:15	26° X 03'55	
morning set	12863 Apr 29 21:41	8° Z 06'41		transit end	12864 Mar 08 05:43	25° X 51'37	
	12863 May 13 19:02	0° II		asc. node	12864 Mar 08 16:57	25° X 20'54	
superior conj	12863 May 15 14:42	2° II 50'39	-2°00'58	morning rise	12864 Mar 14 11:52	20° X 30'32	
minimum elong	12863 May 15 06:57	2° II 20'24	2°01'19	direct	12864 Mar 17 03:22	19° X 53'46	
max. Earth dist.	12863 May 16 06:58	3° II 54'09	1.45805 AU	morning max el	12864 Mar 23 11:44	23° X 11'48	17°55'56
evening rise	12863 May 31 12:08	27° II 42'07			12864 Mar 28 23:47	0° Y	
	12863 Jun 01 23:15	0° Z		morning set	12864 Apr 10 02:58	19° Y 24'37	
greatest brilliancy	12863 Jun 10 08:33	13° Z 06'10	-0.8m	desc. node	12864 Apr 10 19:40	20° Y 33'44	
asc. node	12863 Jun 18 17:09	25° Z 16'22			12864 Apr 16 13:31	0° Z	
	12863 Jun 22 17:04	0° Z		superior conj	12864 Apr 24 04:21	12° Z 15'24	-1°30'55
evening max el	12863 Jun 22 23:15	0° Z 15'34	18°56'14	minimum elong	12864 Apr 23 19:28	11° Z 40'05	1°30'32
retrograde	12863 Jun 29 17:03	3° Z 58'16		max. Earth dist.	12864 Apr 28 03:17	18° Z 30'15	1.45474 AU
evening set	12863 Jul 03 02:49	2° Z 51'12			12864 May 05 12:23	0° II	
	12863 Jul 06 06:18	30° R Z		evening rise	12864 May 10 04:45	7° II 12'46	
inferior conj	12863 Jul 08 15:16	27° Z 07'16	3°02'29	greatest brilliancy	12864 May 24 12:17	28° II 49'18	-0.6m
minimum elong	12863 Jul 08 16:41	27° Z 02'45	3°01'24		12864 May 25 07:42	0° Z	
min. Earth dist.	12863 Jul 10 07:47	24° Z 59'04	0.66301 AU	asc. node	12864 Jun 04 14:12	13° Z 23'09	
morning rise	12863 Jul 14 05:51	20° Z 43'55		evening max el	12864 Jun 05 05:10	14° Z 01'40	19°46'52
direct	12863 Jul 20 12:27	18° Z 03'02		retrograde	12864 Jun 12 15:15	18° Z 14'17	
desc. node	12863 Jul 21 22:43	18° Z 10'25		evening set	12864 Jun 16 10:20	16° Z 50'36	
morning max el	12863 Aug 02 10:53	25° Z 44'47	26°25'32	inferior conj	12864 Jun 21 18:14	10° Z 52'55	3°12'55
	12863 Aug 06 08:28	0° Z		minimum elong	12864 Jun 21 18:36	10° Z 51'41	3°11'56
	12863 Aug 27 10:30	0° Z		min. Earth dist.	12864 Jun 22 20:12	9° Z 25'51	0.67618 AU
morning set	12863 Sep 07 09:04	19° Z 13'27		morning rise	12864 Jun 27 02:30	4° Z 30'31	
max. Earth dist.	12863 Sep 11 07:35	26° Z 47'19	1.34641 AU	direct	12864 Jul 02 22:34	1° Z 56'20	
	12863 Sep 12 22:29	0° Z		desc. node	12864 Jul 07 19:58	3° Z 23'17	
asc. node	12863 Sep 14 18:13	3° Z 40'35		morning max el	12864 Jul 14 21:23	9° Z 06'08	25°06'37
					12864 Jul 31 08:34	0° Z	
superior conj	12863 Sep 16 09:13	7° Z 00'24	0°15'27		12864 Aug 19 00:42	0° Z	
minimum elong	12863 Sep 16 08:23	6° Z 56'05	0°15'18	morning set	12864 Aug 19 19:16	1° Z 22'26	
behind sun begin	12863 Sep 16 06:33	6° Z 46'36		max. Earth dist.	12864 Aug 23 09:21	7° Z 53'41	1.36691 AU
behind sun end	12863 Sep 16 10:13	7° Z 05'34					
evening rise	12863 Sep 23 21:33	22° Z 43'55		superior conj	12864 Aug 29 21:29	20° Z 21'03	-0°16'11
	12863 Sep 27 10:39	0° Z		minimum elong	12864 Aug 29 22:31	20° Z 26'12	0°16'14
evening max el	12863 Oct 12 23:34	24° Z 10'41	20°55'51	asc. node	12864 Aug 31 14:50	23° Z 46'23	
desc. node	12863 Oct 17 19:10	27° Z 58'43			12864 Sep 03 16:58	0° Z	
retrograde	12863 Oct 24 13:57	29° Z 56'26		evening rise	12864 Sep 07 02:39	6° Z 54'39	
evening set	12863 Oct 27 00:11	29° Z 42'24			12864 Sep 19 23:33	0° Z	
inferior conj	12863 Nov 05 00:14	25° Z 48'16	-5°03'04	evening max el	12864 Sep 24 07:51	5° Z 13'25	19°40'55
minimum elong	12863 Nov 04 14:42	26° Z 01'48	5°00'09	desc. node	12864 Oct 03 16:34	10° Z 10'26	
min. Earth dist.	12863 Nov 05 18:55	25° Z 21'43	0.54568 AU	retrograde	12864 Oct 04 06:44	10° Z 11'26	
morning rise	12863 Nov 13 05:29	21° Z 54'54		evening set	12864 Oct 06 04:01	10° Z 01'30	
direct	12863 Nov 17 09:13	21° Z 17'53		inferior conj	12864 Oct 14 23:18	5° Z 58'06	-3°27'37
morning max el	12863 Nov 30 10:03	27° Z 35'21	23°02'00	minimum elong	12864 Oct 14 14:31	6° Z 11'52	3°24'04
	12863 Dec 02 18:51	0° Z		min. Earth dist.	12864 Oct 17 04:04	4° Z 35'38	0.55290 AU
asc. node	12863 Dec 11 19:17	12° Z 20'49		morning rise	12864 Oct 22 23:15	1° Z 38'27	
	12863 Dec 21 05:29	0° Z		direct	12864 Oct 27 23:25	0° Z 42'57	
morning set	12863 Dec 23 06:52	4° Z 19'18		morning max el	12864 Nov 10 20:13	7° Z 36'56	24°50'18
					12864 Nov 27 03:17	0° Z	

asc. node	12864 Nov 27 16:14	0°♊57'48			12865 Nov 19 11:33	0°♊	
morning set	12864 Dec 06 18:44	19°♊03'59		morning set	12865 Nov 21 05:17	3°♊40'56	
	12864 Dec 11 18:49	0°♊					
superior conj	12864 Dec 13 13:45	3°♊56'25	1°38'22	superior conj	12865 Nov 28 00:41	18°♊40'27	1°36'23
minimum elong	12864 Dec 13 13:55	3°♊57'20	1°39'21	minimum elong	12865 Nov 27 23:48	18°♊35'31	1°37'17
max. Earth dist.	12864 Dec 15 11:23	8°♊05'56	1.32247 AU	max. Earth dist.	12865 Nov 28 17:50	20°♊15'52	1.31489 AU
evening rise	12864 Dec 20 21:08	19°♊32'36		evening rise	12865 Dec 03 04:17	0°♊	
	12864 Dec 26 04:35	0°♊		desc. node	12865 Dec 04 22:57	3°♊47'15	
desc. node	12864 Dec 30 14:33	8°♊01'31			12865 Dec 17 11:27	27°♊34'48	
	12865 Jan 13 23:26	0°♊		evening max el	12865 Dec 18 22:31	0°♊	
evening max el	12865 Jan 23 02:45	10°♊24'33	27°32'59		12866 Jan 05 09:58	22°♊51'49	27°17'42
retrograde	12865 Feb 05 22:09	17°♊48'13		retrograde	12866 Jan 17 13:59	0°♊	
evening set	12865 Feb 12 20:14	15°♊24'20			12866 Jan 19 08:38	0°♊08'15	
min. Earth dist.	12865 Feb 16 14:23	12°♊16'03	0.63034 AU	evening set	12866 Jan 21 02:42	30°♊	
inferior conj	12865 Feb 19 10:09	9°♊29'20	-1°21'54	min. Earth dist.	12866 Jan 26 05:47	28°♊00'29	
minimum elong	12865 Feb 19 12:52	9°♊22'39	1°20'22	inferior conj	12866 Jan 30 00:31	25°♊13'48	0.60922 AU
asc. node	12865 Feb 23 14:21	5°♊47'26		minimum elong	12866 Feb 02 03:31	22°♊31'03	-2°41'06
morning rise	12865 Feb 26 08:00	4°♊17'13		morning rise	12866 Feb 02 09:13	22°♊18'39	2°38'15
direct	12865 Feb 28 15:56	3°♊51'29		morning rise	12866 Feb 09 15:39	17°♊37'44	
morning max el	12865 Mar 07 05:31	7°♊12'41	17°46'27	asc. node	12866 Feb 10 11:44	17°♊26'08	
	12865 Mar 22 07:07	0°♊		direct	12866 Feb 11 18:21	17°♊19'22	
morning set	12865 Mar 23 09:44	1°♊55'32		morning max el	12866 Feb 18 21:24	20°♊54'04	17°55'06
desc. node	12865 Mar 28 16:15	11°♊01'50			12866 Feb 25 17:54	0°♊	
				morning set	12866 Mar 06 11:42	15°♊19'41	
superior conj	12865 Apr 04 14:06	22°♊39'11	-0°51'39		12866 Mar 14 14:55	0°♊	
minimum elong	12865 Apr 04 08:53	22°♊17'37	0°51'11	desc. node	12866 Mar 15 12:46	1°♊36'10	
	12865 Apr 09 02:13	0°♊					
max. Earth dist.	12865 Apr 10 21:22	2°♊53'03	1.44433 AU	superior conj	12866 Mar 17 00:08	4°♊10'33	-0°11'34
evening rise	12865 Apr 19 16:17	16°♊39'00		minimum elong	12866 Mar 16 23:08	4°♊06'10	0°11'22
	12865 Apr 28 12:02	0°♊		behind sun begin	12866 Mar 16 17:18	3°♊40'51	
evening max el	12865 May 19 05:15	27°♊48'48	20°51'35	behind sun end	12866 Mar 17 04:57	4°♊31'27	
	12865 May 21 14:39	0°♊		max. Earth dist.	12866 Mar 24 11:07	16°♊46'42	1.42795 AU
asc. node	12865 May 22 11:19	0°♊39'43		evening rise	12866 Mar 30 13:58	26°♊37'53	
retrograde	12865 May 27 14:10	2°♊40'41			12866 Apr 01 17:32	0°♊	
evening set	12865 May 31 19:15	1°♊00'36			12866 Apr 22 07:26	0°♊	
	12865 Jun 01 22:12	30°♊		evening max el	12866 May 02 00:04	11°♊37'03	22°06'52
inferior conj	12865 Jun 06 01:24	24°♊50'49	3°11'00	asc. node	12866 May 09 08:31	16°♊51'02	
minimum elong	12865 Jun 06 00:46	24°♊53'04	3°09'59	retrograde	12866 May 11 12:01	17°♊12'27	
min. Earth dist.	12865 Jun 06 13:37	24°♊08'34	0.68471 AU	evening set	12866 May 16 03:53	15°♊16'48	
morning rise	12865 Jun 11 06:02	18°♊32'12		inferior conj	12866 May 21 10:40	8°♊57'04	2°58'10
direct	12865 Jun 16 13:51	16°♊11'44		minimum elong	12866 May 21 09:11	9°♊02'13	2°57'05
desc. node	12865 Jun 24 17:08	20°♊09'49		min. Earth dist.	12866 May 21 09:49	9°♊00'01	0.68848 AU
morning max el	12865 Jun 27 07:38	22°♊36'27	23°38'00	morning rise	12866 May 26 14:18	2°♊44'11	
	12865 Jul 03 19:00	0°♊		direct	12866 May 31 09:16	0°♊42'02	
	12865 Jul 24 16:14	0°♊		morning max el	12866 Jun 09 19:54	6°♊14'38	22°09'13
morning set	12865 Aug 01 08:50	12°♊35'18		desc. node	12866 Jun 11 14:10	8°♊05'43	
max. Earth dist.	12865 Aug 05 06:52	19°♊20'03	1.38995 AU		12866 Jun 28 03:03	0°♊	
	12865 Aug 11 05:04	0°♊		morning set	12866 Jul 12 21:44	22°♊42'38	
					12866 Jul 17 08:39	0°♊	
superior conj	12865 Aug 12 20:21	3°♊02'47	-0°50'31	max. Earth dist.	12866 Jul 18 06:43	1°♊32'01	1.41299 AU
minimum elong	12865 Aug 12 23:58	3°♊19'41	0°50'25				
asc. node	12865 Aug 18 11:26	13°♊48'16		superior conj	12866 Jul 26 01:37	14°♊56'39	-1°24'38
evening rise	12865 Aug 22 00:53	20°♊44'26		minimum elong	12866 Jul 26 07:47	15°♊23'59	1°24'34
	12865 Aug 26 20:58	0°♊			12866 Aug 03 08:10	0°♊	
evening max el	12865 Sep 07 05:24	17°♊04'06	18°47'41	asc. node	12866 Aug 05 08:06	3°♊42'53	
retrograde	12865 Sep 15 15:27	21°♊17'42		evening rise	12866 Aug 05 12:51	4°♊05'00	
evening set	12865 Sep 17 13:00	21°♊05'35		evening max el	12866 Aug 21 12:37	29°♊36'31	18°15'35
desc. node	12865 Sep 20 14:03	20°♊00'23			12866 Aug 21 22:20	0°♊	
inferior conj	12865 Sep 25 16:49	16°♊44'34	-1°37'00	retrograde	12866 Aug 28 19:13	3°♊17'43	
minimum elong	12865 Sep 25 12:46	16°♊51'55	1°35'13	evening set	12866 Aug 30 23:06	2°♊58'51	
min. Earth dist.	12865 Sep 28 18:28	14°♊31'34	0.56823 AU		12866 Sep 05 05:57	30°♊	
morning rise	12865 Oct 03 09:12	11°♊47'43		inferior conj	12866 Sep 07 08:11	28°♊17'02	0°02'36
direct	12865 Oct 09 03:39	10°♊27'06		minimum elong	12866 Sep 07 08:16	28°♊16'51	0°02'27
morning max el	12865 Oct 23 09:38	17°♊50'40	26°25'00	transit middle	12866 Sep 07 08:16	28°♊16'51	0°02'27
	12865 Nov 02 12:23	0°♊		transit begin	12866 Sep 07 04:51	28°♊24'06	
asc. node	12865 Nov 14 13:06	20°♊06'03		transit end	12866 Sep 07 11:41	28°♊09'35	
				desc. node	12866 Sep 07 11:33	28°♊09'52	

min. Earth dist.	12866 Sep 10 15:53	25° \mathbb{M} 29'07	0.58898 AU	desc. node	12867 Aug 25 09:03	6° \mathbb{M} 12'29	
morning rise	12866 Sep 14 13:57	22° \mathbb{M} 45'07		morning rise	12867 Aug 27 12:55	4° \mathbb{M} 33'46	
direct	12866 Sep 20 22:09	20° \mathbb{M} 56'22		direct	12867 Sep 03 04:14	2° \mathbb{M} 19'49	
morning max el	12866 Oct 05 06:06	28° \mathbb{M} 40'51	27°30'09	morning max el	12867 Sep 17 09:41	10° \mathbb{M} 17'04	27°57'32
	12866 Oct 06 13:28	0° \mathbb{L}			12867 Oct 02 18:26	0° \mathbb{L}	
	12866 Oct 27 08:26	0° \mathbb{M}		asc. node	12867 Oct 19 06:35	29° \mathbb{L} 24'12	
asc. node	12866 Nov 01 09:53	9° \mathbb{M} 37'10			12867 Oct 19 13:37	0° \mathbb{M}	
morning set	12866 Nov 05 12:50	18° \mathbb{M} 05'34		morning set	12867 Oct 20 15:28	2° \mathbb{M} 12'50	
	12866 Nov 10 23:57	0° \mathbb{X}		max. Earth dist.	12867 Oct 26 09:20	14° \mathbb{M} 31'01	1.31519 AU
max. Earth dist.	12866 Nov 12 02:22	2° \mathbb{X} 27'10	1.31244 AU				
				superior conj	12867 Oct 27 22:52	17° \mathbb{M} 58'02	1°15'07
superior conj	12866 Nov 12 12:21	3° \mathbb{X} 22'53	1°28'35	minimum elong	12867 Oct 27 20:40	17° \mathbb{M} 45'51	1°15'27
minimum elong	12866 Nov 12 10:38	3° \mathbb{X} 13'17	1°29'15		12867 Nov 02 09:27	0° \mathbb{X}	
evening rise	12866 Nov 19 05:55	18° \mathbb{X} 13'28		evening rise	12867 Nov 03 15:58	2° \mathbb{X} 45'41	
	12866 Nov 24 23:36	0° \mathbb{Z}			12867 Nov 18 02:05	0° \mathbb{Z}	
desc. node	12866 Dec 04 08:30	16° \mathbb{Z} 32'50		desc. node	12867 Nov 21 05:40	4° \mathbb{Z} 42'07	
	12866 Dec 14 03:57	0° \mathbb{Z}		evening max el	12867 Nov 30 02:45	15° \mathbb{Z} 16'22	25°07'13
evening max el	12866 Dec 18 10:31	4° \mathbb{Z} 30'03	26°27'53	retrograde	12867 Dec 13 22:24	22° \mathbb{Z} 12'00	
retrograde	12867 Jan 01 09:26	11° \mathbb{Z} 36'32		evening set	12867 Dec 19 15:21	20° \mathbb{Z} 58'49	
evening set	12867 Jan 07 21:37	9° \mathbb{Z} 53'17		min. Earth dist.	12867 Dec 24 14:44	18° \mathbb{Z} 16'49	0.56792 AU
min. Earth dist.	12867 Jan 12 00:16	7° \mathbb{Z} 16'49	0.58763 AU	inferior conj	12867 Dec 27 07:41	16° \mathbb{Z} 30'26	-5°13'35
inferior conj	12867 Jan 15 03:41	4° \mathbb{Z} 54'27	-4°02'38	minimum elong	12867 Dec 27 15:39	16° \mathbb{Z} 17'21	5°11'01
minimum elong	12867 Jan 15 11:55	4° \mathbb{Z} 38'51	3°59'11	morning rise	12868 Jan 04 18:13	12° \mathbb{Z} 20'18	
morning rise	12867 Jan 23 05:10	0° \mathbb{Z} 22'15		direct	12868 Jan 07 00:36	12° \mathbb{Z} 05'31	
direct	12867 Jan 25 06:33	0° \mathbb{Z} 07'34		asc. node	12868 Jan 15 06:22	15° \mathbb{Z} 36'45	
asc. node	12867 Jan 28 09:05	0° \mathbb{Z} 42'47		morning max el	12868 Jan 16 08:19	16° \mathbb{Z} 36'02	19°13'30
morning max el	12867 Feb 02 07:40	4° \mathbb{Z} 05'36	18°23'25		12868 Jan 25 22:24	0° \mathbb{Z}	
morning set	12867 Feb 18 03:17	29° \mathbb{Z} 20'40		morning set	12868 Feb 02 04:10	13° \mathbb{Z} 45'52	
	12867 Feb 18 11:31	0° \mathbb{X}					
				superior conj	12868 Feb 10 09:42	0° \mathbb{X} 02'18	0°53'01
superior conj	12867 Feb 27 08:09	16° \mathbb{X} 42'18	0°24'08	minimum elong	12868 Feb 10 12:27	0° \mathbb{X} 15'38	0°53'10
minimum elong	12867 Feb 27 09:51	16° \mathbb{X} 50'05	0°24'10		12868 Feb 10 09:13	0° \mathbb{X}	
desc. node	12867 Mar 02 09:18	22° \mathbb{X} 13'18		max. Earth dist.	12868 Feb 17 03:18	12° \mathbb{X} 38'25	1.38504 AU
	12867 Mar 06 19:57	0° \mathbb{Y}		desc. node	12868 Feb 17 05:53	12° \mathbb{X} 50'02	
max. Earth dist.	12867 Mar 06 20:28	0° \mathbb{Y} 02'12	1.40745 AU	evening rise	12868 Feb 20 21:20	19° \mathbb{X} 16'53	
evening rise	12867 Mar 11 07:00	7° \mathbb{Y} 29'45			12868 Feb 27 06:48	0° \mathbb{Y}	
	12867 Mar 25 19:23	0° \mathbb{Z}			12868 Mar 19 00:08	0° \mathbb{Z}	
evening max el	12867 Apr 14 15:22	25° \mathbb{Z} 27'18	23°27'25	evening max el	12868 Mar 27 05:08	9° \mathbb{Z} 19'53	24°46'47
	12867 Apr 20 03:13	0° \mathbb{I}		retrograde	12868 Apr 07 22:39	16° \mathbb{Z} 10'12	
retrograde	12867 Apr 25 07:11	1° \mathbb{I} 43'54		asc. node	12868 Apr 12 03:13	14° \mathbb{Z} 53'03	
asc. node	12867 Apr 26 05:50	1° \mathbb{I} 39'48		evening set	12868 Apr 13 13:53	13° \mathbb{Z} 48'38	
	12867 Apr 29 21:52	30° \mathbb{R} \mathbb{Z}		min. Earth dist.	12868 Apr 18 01:45	8° \mathbb{Z} 44'02	0.68228 AU
evening set	12867 Apr 30 10:36	29° \mathbb{Z} 34'07		inferior conj	12868 Apr 19 03:36	7° \mathbb{Z} 18'21	2°02'08
inferior conj	12867 May 05 20:01	23° \mathbb{Z} 07'17	2°35'09	minimum elong	12868 Apr 19 01:27	7° \mathbb{Z} 25'29	2°01'00
minimum elong	12867 May 05 18:00	23° \mathbb{Z} 14'13	2°33'59	morning rise	12868 Apr 24 13:14	1° \mathbb{Z} 21'04	
min. Earth dist.	12867 May 05 06:35	23° \mathbb{Z} 53'29	0.68763 AU	direct	12868 Apr 28 07:10	0° \mathbb{Z} 00'34	
morning rise	12867 May 11 01:20	17° \mathbb{Z} 01'33		morning max el	12868 May 05 14:23	4° \mathbb{Z} 03'11	19°39'14
direct	12867 May 15 07:29	15° \mathbb{Z} 20'07		desc. node	12868 May 15 07:55	16° \mathbb{Z} 14'23	
morning max el	12867 May 23 13:22	20° \mathbb{Z} 02'42	20°47'54	greatest brilliancy	12868 May 18 07:10	20° \mathbb{Z} 31'21	-0.6m
desc. node	12867 May 29 11:05	26° \mathbb{Z} 51'37			12868 May 24 15:43	0° \mathbb{I}	
	12867 May 31 20:33	0° \mathbb{I}		morning set	12868 May 31 11:29	10° \mathbb{I} 24'22	
	12867 Jun 21 07:00	0° \mathbb{E}		max. Earth dist.	12868 Jun 12 02:50	28° \mathbb{I} 32'02	1.44826 AU
morning set	12867 Jun 22 10:31	1° \mathbb{E} 46'45			12868 Jun 13 01:03	0° \mathbb{E}	
max. Earth dist.	12867 Jun 30 13:18	14° \mathbb{E} 38'46	1.43321 AU				
				superior conj	12868 Jun 16 16:19	5° \mathbb{E} 48'13	-2°11'16
superior conj	12867 Jul 07 08:55	25° \mathbb{E} 52'35	-1°53'45	minimum elong	12868 Jun 16 19:42	6° \mathbb{E} 01'49	2°12'09
minimum elong	12867 Jul 07 15:51	26° \mathbb{E} 21'45	1°54'06	evening rise	12868 Jun 30 11:22	28° \mathbb{E} 31'31	
	12867 Jul 09 19:26	0° \mathbb{Q}			12868 Jul 01 08:24	0° \mathbb{Q}	
evening rise	12867 Jul 19 10:00	16° \mathbb{Q} 44'30		asc. node	12868 Jul 09 01:38	12° \mathbb{Q} 51'07	
asc. node	12867 Jul 23 04:49	23° \mathbb{Q} 25'29		evening max el	12868 Jul 18 15:32	26° \mathbb{Q} 04'06	18°09'46
	12867 Jul 27 00:29	0° \mathbb{M}		retrograde	12868 Jul 25 00:06	29° \mathbb{Q} 24'49	
evening max el	12867 Aug 05 01:14	12° \mathbb{M} 39'38	18°03'17	evening set	12868 Jul 27 20:13	28° \mathbb{Q} 42'15	
retrograde	12867 Aug 11 15:34	16° \mathbb{M} 03'21		inferior conj	12868 Aug 02 22:31	23° \mathbb{Q} 22'23	2°15'05
evening set	12867 Aug 14 03:27	15° \mathbb{M} 33'59		minimum elong	12868 Aug 03 01:04	23° \mathbb{Q} 15'22	2°13'45
inferior conj	12867 Aug 20 19:22	10° \mathbb{M} 32'03	1°20'16	min. Earth dist.	12868 Aug 05 13:33	20° \mathbb{Q} 29'05	0.63399 AU
minimum elong	12867 Aug 20 21:31	10° \mathbb{M} 26'46	1°19'07	morning rise	12868 Aug 09 04:08	17° \mathbb{Q} 07'46	
min. Earth dist.	12867 Aug 23 21:54	7° \mathbb{M} 30'49	0.61185 AU	desc. node	12868 Aug 11 06:30	15° \mathbb{Q} 46'26	

direct	12868 Aug 15 20:01	14°♊35'47		min. Earth dist.	12869 Jul 19 14:31	4°♊11'14	0.65346 AU
morning max el	12868 Aug 29 18:25	22°♊37'18	27°46'40	morning rise	12869 Jul 23 08:56	0°♊17'22	
	12868 Sep 05 06:53	0°♎			12869 Jul 23 17:27	30°♎♌	
	12868 Sep 25 00:26	0°♊		desc. node	12869 Jul 29 03:53	27°♌38'23	
morning set	12868 Oct 03 10:55	15°♊57'34		direct	12869 Jul 29 20:01	27°♌36'46	
asc. node	12868 Oct 05 03:15	19°♊22'07			12869 Aug 05 16:20	0°♊	
max. Earth dist.	12868 Oct 08 10:55	26°♊18'23	1.32322 AU	morning max el	12869 Aug 12 05:26	5°♊30'46	27°02'40
	12868 Oct 10 04:17	0°♌			12869 Aug 30 22:55	0°♎	
				morning set	12869 Sep 16 20:25	29°♎13'04	
superior conj	12868 Oct 11 06:18	2°♌20'47	0°56'05		12869 Sep 17 06:08	0°♊	
minimum elong	12868 Oct 11 04:06	2°♌08'52	0°56'08	max. Earth dist.	12869 Sep 21 03:36	7°♊43'19	1.33646 AU
evening rise	12868 Oct 18 03:13	17°♌18'56		asc. node	12869 Sep 21 23:52	9°♊26'31	
	12868 Oct 24 07:23	0°♌					
desc. node	12868 Nov 07 02:55	21°♌44'09		superior conj	12869 Sep 25 08:29	16°♊25'27	0°31'43
evening max el	12868 Nov 10 12:59	25°♌24'24	23°27'53	minimum elong	12869 Sep 25 06:56	16°♊17'17	0°31'36
	12868 Nov 16 12:56	0°♌			12869 Oct 01 17:21	0°♌	
retrograde	12868 Nov 23 22:36	2°♌04'48		evening rise	12869 Oct 02 13:45	1°♌48'15	
evening set	12868 Nov 28 09:20	1°♌21'48			12869 Oct 18 07:48	0°♌	
	12868 Dec 01 17:38	30°♎♌		evening max el	12869 Oct 23 01:47	5°♌29'29	21°47'47
min. Earth dist.	12868 Dec 04 23:02	28°♌15'03	0.55298 AU	desc. node	12869 Oct 25 00:16	7°♌15'14	
inferior conj	12868 Dec 06 15:26	27°♌15'55	-5°52'50	retrograde	12869 Nov 04 12:28	11°♌40'19	
minimum elong	12868 Dec 06 17:40	27°♌12'40	5°51'47	evening set	12869 Nov 07 13:20	11°♌19'33	
morning rise	12868 Dec 15 03:44	23°♌23'51		inferior conj	12869 Nov 16 09:23	7°♌24'35	-5°38'27
direct	12868 Dec 17 23:11	23°♌04'41		minimum elong	12869 Nov 16 02:54	7°♌33'40	5°36'44
morning max el	12868 Dec 28 19:46	28°♌15'17	20°26'38	min. Earth dist.	12869 Nov 16 05:27	7°♌30'06	0.54564 AU
	12868 Dec 30 12:34	0°♌		morning rise	12869 Nov 24 17:33	3°♌37'04	
asc. node	12869 Jan 01 03:35	1°♌53'41		direct	12869 Nov 28 08:32	3°♌08'19	
morning set	12869 Jan 16 10:59	28°♌24'32		morning max el	12869 Dec 10 17:16	9°♌02'41	22°01'00
	12869 Jan 17 05:32	0°♌		asc. node	12869 Dec 19 00:41	19°♌16'59	
					12869 Dec 25 07:57	0°♌	
superior conj	12869 Jan 24 00:08	13°♌56'51	1°14'36	morning set	12869 Dec 31 21:18	13°♌09'51	
minimum elong	12869 Jan 24 02:47	14°♌10'17	1°15'03				
max. Earth dist.	12869 Jan 29 10:53	24°♌41'57	1.36318 AU	superior conj	12870 Jan 07 23:46	28°♌15'39	1°29'02
	12869 Feb 01 06:24	0°♌		minimum elong	12870 Jan 08 01:39	28°♌25'33	1°29'47
evening rise	12869 Feb 02 06:37	1°♌51'25			12870 Jan 08 19:39	0°♌	
desc. node	12869 Feb 03 02:30	3°♌21'55		max. Earth dist.	12870 Jan 11 23:46	6°♌32'33	1.34407 AU
	12869 Feb 19 08:56	0°♌		evening rise	12870 Jan 16 07:28	15°♌05'01	
evening max el	12869 Mar 09 18:33	23°♌10'15	25°58'04	desc. node	12870 Jan 20 23:12	23°♌45'03	
	12869 Mar 19 18:16	0°♌			12870 Jan 24 12:36	0°♌	
retrograde	12869 Mar 22 09:24	0°♌23'57			12870 Feb 14 00:40	0°♌	
	12869 Mar 24 21:17	30°♎♌		evening max el	12870 Feb 20 08:07	6°♌52'09	26°53'54
evening set	12869 Mar 28 12:00	27°♌54'13		retrograde	12870 Mar 05 14:41	14°♌17'24	
asc. node	12869 Mar 30 00:38	26°♌29'16		evening set	12870 Mar 12 03:07	11°♌44'45	
min. Earth dist.	12869 Apr 01 17:11	23°♌24'53	0.67256 AU	min. Earth dist.	12870 Mar 16 02:50	7°♌49'08	0.65879 AU
inferior conj	12869 Apr 03 07:24	21°♌25'16	1°18'51	asc. node	12870 Mar 16 22:04	6°♌53'56	
minimum elong	12869 Apr 03 05:39	21°♌30'46	1°17'58	inferior conj	12870 Mar 18 05:13	5°♌23'10	0°24'52
morning rise	12869 Apr 08 23:59	15°♌37'49		minimum elong	12870 Mar 18 04:33	5°♌25'07	0°24'36
direct	12869 Apr 12 06:34	14°♌36'44			12870 Mar 23 22:06	30°♎♌	
morning max el	12869 Apr 18 22:50	18°♌12'25	18°45'58	morning rise	12870 Mar 24 07:20	29°♌47'21	
	12869 Apr 28 03:48	0°♌		direct	12870 Mar 27 03:50	29°♌02'47	
desc. node	12869 May 02 04:38	6°♌03'37			12870 Mar 30 10:57	0°♌	
morning set	12869 May 10 22:17	19°♌35'53		morning max el	12870 Apr 02 12:59	2°♌24'14	18°09'16
	12869 May 17 14:23	0°♌		desc. node	12870 Apr 19 01:17	26°♌12'05	
max. Earth dist.	12869 May 25 20:40	12°♌53'23	1.45659 AU	morning set	12870 Apr 21 10:56	0°♌04'47	
					12870 Apr 21 09:45	0°♌	
superior conj	12869 May 27 04:47	14°♌59'05	-2°10'37	superior conj	12870 May 06 12:52	24°♌05'32	-1°49'58
minimum elong	12869 May 27 00:39	14°♌42'54	2°11'24	minimum elong	12870 May 06 03:48	23°♌29'59	1°49'56
	12869 Jun 05 17:17	0°♌		max. Earth dist.	12870 May 08 16:18	27°♌26'51	1.45752 AU
evening rise	12869 Jun 11 12:46	9°♌17'24			12870 May 10 07:31	0°♌	
greatest brilliancy	12869 Jun 17 16:45	19°♌11'07	-0.9m	evening rise	12870 May 22 14:56	19°♌07'49	
	12869 Jun 24 15:35	0°♌			12870 May 29 15:33	0°♌	
asc. node	12869 Jun 25 22:32	1°♌53'08		greatest brilliancy	12870 Jun 03 14:03	7°♌31'27	-0.7m
evening max el	12869 Jul 02 04:20	9°♌41'35	18°34'18	asc. node	12870 Jun 12 19:30	20°♌23'09	
retrograde	12869 Jul 08 16:29	13°♌12'56		evening max el	12870 Jun 15 13:16	23°♌26'00	19°15'53
evening set	12869 Jul 11 21:04	12°♌15'16		retrograde	12870 Jun 22 13:17	27°♌20'20	
inferior conj	12869 Jul 17 13:33	6°♌39'37	2°50'01	evening set	12870 Jun 26 02:50	26°♌06'27	
minimum elong	12869 Jul 17 15:31	6°♌33'39	2°48'49				

inferior conj	12870 Jul 01 13:00	20°☿16'35	3°08'33	inferior conj	12871 Jun 15 18:03	4°☿08'25	3°13'29
minimum elong	12870 Jul 01 13:59	20°☿13'23	3°07'30	minimum elong	12871 Jun 15 17:58	4°☿08'42	3°12'30
min. Earth dist.	12870 Jul 02 23:21	18°☿24'49	0.66916 AU	min. Earth dist.	12871 Jun 16 14:09	2°☿59'57	0.68042 AU
morning rise	12870 Jul 07 00:33	13°☿52'57			12871 Jun 18 22:00	30°☿II	
direct	12870 Jul 13 02:58	11°☿13'39		morning rise	12871 Jun 21 00:26	27°II47'25	
desc. node	12870 Jul 16 01:12	11°☿44'50		direct	12871 Jun 26 15:35	25°II18'04	
morning max el	12870 Jul 25 16:18	18°☿44'27	25°53'40	desc. node	12871 Jul 02 22:23	27°II41'13	
	12870 Aug 04 04:52	0°♊			12871 Jul 05 19:59	0°☿	
	12870 Aug 23 23:52	0°♊		morning max el	12871 Jul 08 02:20	2°☿09'48	24°29'28
morning set	12870 Aug 30 16:19	11°♊49'21			12871 Jul 29 06:09	0°♊	
max. Earth dist.	12870 Sep 03 09:50	18°♊49'20	1.35464 AU	morning set	12871 Aug 12 18:20	23°♊36'12	
asc. node	12870 Sep 08 20:26	29°♊32'42			12871 Aug 16 08:48	0°♊	
				max. Earth dist.	12871 Aug 16 08:46	29°♊59'51	1.37660 AU
superior conj	12870 Sep 09 02:43	0°♊04'27	0°02'30	superior conj	12871 Aug 23 09:49	13°♊10'20	-0°30'32
minimum elong	12870 Sep 09 02:34	0°♊03'43	0°02'22	minimum elong	12871 Aug 23 11:53	13°♊20'20	0°30'31
behind sun begin	12870 Sep 08 20:30	29°♊33'02		asc. node	12871 Aug 26 17:02	19°♊37'34	
behind sun end	12870 Sep 09 08:38	0°♊34'28			12871 Aug 31 21:59	0°♊	
	12870 Sep 09 01:50	0°♊		evening rise	12871 Sep 01 00:02	0°♊10'12	
evening rise	12870 Sep 16 21:29	16°♊07'14		evening max el	12871 Sep 17 16:21	27°♊30'04	19°15'34
	12870 Sep 23 22:27	0°♊			12871 Sep 20 15:33	0°♊	
evening max el	12870 Oct 05 01:59	16°♊06'03	20°21'26	retrograde	12871 Sep 26 22:20	2°♊07'28	
desc. node	12870 Oct 11 21:40	20°♊46'34		evening set	12871 Sep 28 18:48	1°♊57'08	
retrograde	12870 Oct 16 00:02	21°♊31'37		desc. node	12871 Sep 28 19:06	1°♊56'59	
evening set	12870 Oct 18 02:33	21°♊20'26			12871 Oct 03 19:12	30°☿♊	
inferior conj	12870 Oct 27 02:24	17°♊24'11	-4°26'32	inferior conj	12871 Oct 07 08:23	27°♊47'02	-2°40'35
minimum elong	12870 Oct 26 16:20	17°♊38'57	4°23'01	minimum elong	12871 Oct 07 01:27	27°♊58'32	2°37'36
min. Earth dist.	12870 Oct 28 13:02	16°♊33'22	0.54762 AU	min. Earth dist.	12871 Oct 10 00:00	26°♊01'50	0.55868 AU
morning rise	12870 Nov 04 05:25	13°♊21'24		morning rise	12871 Oct 15 05:33	23°♊12'24	
direct	12870 Nov 08 18:06	12°♊37'08		direct	12871 Oct 20 14:16	22°♊06'39	
morning max el	12870 Nov 22 05:01	19°♊11'45	23°48'27	morning max el	12871 Nov 03 15:30	29°♊13'35	25°33'14
	12870 Dec 01 04:03	0°♊			12871 Nov 04 10:33	0°♊	
asc. node	12870 Dec 05 21:41	7°♊30'32		asc. node	12871 Nov 22 18:36	26°♊21'52	
morning set	12870 Dec 16 09:03	27°♊55'35			12871 Nov 24 16:41	0°♊	
	12870 Dec 17 08:14	0°♊		morning set	12871 Nov 30 20:33	12°♊37'08	
superior conj	12870 Dec 23 05:37	12°♊49'29	1°36'47	superior conj	12871 Dec 07 15:18	27°♊31'30	1°38'15
minimum elong	12870 Dec 23 06:26	12°♊53'53	1°37'43	minimum elong	12871 Dec 07 15:00	27°♊29'50	1°39'12
max. Earth dist.	12870 Dec 25 20:32	18°♊27'56	1.32903 AU		12871 Dec 08 18:11	0°♊	
evening rise	12870 Dec 30 20:21	28°♊48'21		max. Earth dist.	12871 Dec 09 00:24	0°♊34'11	1.31869 AU
	12870 Dec 31 10:42	0°♊		evening rise	12871 Dec 14 18:15	12°♊53'42	
desc. node	12871 Jan 07 19:59	13°♊54'06			12871 Dec 23 14:10	0°♊	
	12871 Jan 17 16:12	0°♊		desc. node	12871 Dec 25 16:50	3°♊42'48	
evening max el	12871 Feb 02 21:03	20°♊15'36	27°27'03		12872 Jan 13 05:42	0°♊	
retrograde	12871 Feb 16 13:23	27°♊41'49		evening max el	12872 Jan 16 07:18	3°♊07'34	27°30'46
evening set	12871 Feb 23 08:59	25°♊12'53		retrograde	12872 Jan 30 04:25	10°♊27'48	
min. Earth dist.	12871 Feb 27 04:42	21°♊48'19	0.64149 AU	evening set	12872 Feb 06 02:52	8°♊10'08	
inferior conj	12871 Mar 01 18:29	19°♊05'56	-0°39'58	min. Earth dist.	12872 Feb 09 20:51	5°♊11'55	0.62149 AU
minimum elong	12871 Mar 01 19:43	19°♊02'41	0°39'11	inferior conj	12872 Feb 12 20:07	2°♊25'22	-1°54'46
asc. node	12871 Mar 03 19:29	17°♊01'03		minimum elong	12872 Feb 13 00:03	2°♊16'08	1°52'38
morning rise	12871 Mar 08 08:31	13°♊44'05			12872 Feb 15 13:18	30°☿♊	
direct	12871 Mar 10 20:28	13°♊12'32		asc. node	12872 Feb 18 16:55	27°♊52'48	
morning max el	12871 Mar 17 06:14	16°♊31'01	17°49'44	morning rise	12872 Feb 19 23:56	27°♊20'34	
	12871 Mar 27 00:27	0°♊		direct	12872 Feb 22 05:22	26°♊58'19	
morning set	12871 Apr 03 03:47	11°♊55'54			12872 Feb 28 13:27	0°♊	
desc. node	12871 Apr 05 21:52	16°♊34'18		morning max el	12872 Feb 28 23:33	0°♊24'05	17°47'51
	12871 Apr 14 00:29	0°♊		morning set	12872 Mar 15 19:30	24°♊51'49	
superior conj	12871 Apr 16 09:54	3°♊52'29	-1°14'51		12872 Mar 18 17:08	0°♊	
minimum elong	12871 Apr 16 02:15	3°♊21'39	1°14'20	desc. node	12872 Mar 22 18:24	7°♊05'19	
max. Earth dist.	12871 Apr 21 11:39	11°♊58'10	1.45109 AU	superior conj	12872 Mar 27 05:52	14°♊44'27	-0°34'20
evening rise	12871 May 02 03:22	28°♊31'31		minimum elong	12872 Mar 27 02:33	14°♊30'28	0°33'58
	12871 May 03 02:30	0°♊		max. Earth dist.	12872 Apr 03 04:27	26°♊11'29	1.43798 AU
	12871 May 23 14:25	0°☿			12872 Apr 05 13:26	0°♊	
evening max el	12871 May 29 16:52	7°☿13'38	20°12'55	evening rise	12872 Apr 10 17:37	8°♊07'59	
asc. node	12871 May 30 16:35	8°☿10'50			12872 Apr 25 08:00	0°♊	
retrograde	12871 Jun 06 11:57	11°☿41'47		evening max el	12872 May 11 14:40	21°♊01'32	21°22'38
evening set	12871 Jun 10 11:11	10°☿11'12					

asc. node	12872 May 16 13:46	25° Π 01'53		asc. node	12873 May 03 11:02	10° Π 40'19	
retrograde	12872 May 20 10:31	26° Π 11'12		retrograde	12873 May 04 07:25	10° Π 43'41	
evening set	12872 May 24 20:12	24° Π 24'14		evening set	12873 May 09 04:14	8° Π 41'29	
inferior conj	12872 May 30 02:21	18° Π 10'06	3°06'47	inferior conj	12873 May 14 11:53	2° Π 18'15	2°49'37
minimum elong	12872 May 30 01:20	18° Π 13'41	3°05'46	minimum elong	12873 May 14 10:08	2° Π 24'18	2°48'30
min. Earth dist.	12872 May 30 08:54	17° Π 47'17	0.68692 AU	min. Earth dist.	12873 May 14 05:33	2° Π 40'16	0.68869 AU
morning rise	12872 Jun 04 06:15	11° Π 54'00			12873 May 16 04:20	30° \mathbb{R} 8	
direct	12872 Jun 09 08:43	9° Π 40'55		morning rise	12873 May 19 15:56	26° \mathbb{B} 08'26	
desc. node	12872 Jun 18 19:30	14° Π 59'51		direct	12873 May 24 05:20	24° \mathbb{B} 15'11	
morning max el	12872 Jun 19 13:00	15° Π 43'03	22°59'50	morning max el	12873 Jun 02 03:17	29° \mathbb{B} 25'37	21°33'25
	12872 Jul 01 05:47	0° \mathbb{E}			12873 Jun 02 16:50	0° Π	
	12872 Jul 21 05:49	0° Ω		desc. node	12873 Jun 05 16:31	3° Π 18'56	
morning set	12872 Jul 23 21:46	4° Ω 21'53			12873 Jun 24 22:08	0° \mathbb{E}	
max. Earth dist.	12872 Jul 28 07:02	11° Ω 45'27	1.40001 AU	morning set	12873 Jul 03 23:52	14° \mathbb{E} 00'43	
				max. Earth dist.	12873 Jul 10 09:51	24° \mathbb{E} 22'11	1.42208 AU
					12873 Jul 13 19:01	0° Ω	
superior conj	12872 Aug 05 01:47	25° Ω 33'17	-1°05'14				
minimum elong	12872 Aug 05 06:33	25° Ω 55'06	1°05'07				
	12872 Aug 07 11:33	0° \mathbb{M}		superior conj	12873 Jul 17 22:08	7° Ω 03'09	-1°37'57
asc. node	12872 Aug 12 13:40	9° \mathbb{M} 37'04		minimum elong	12873 Jul 18 05:00	7° Ω 32'52	1°38'00
evening rise	12872 Aug 14 18:25	13° \mathbb{M} 49'08		evening rise	12873 Jul 29 00:42	26° Ω 54'02	
	12872 Aug 23 15:17	0° \mathbb{L}		asc. node	12873 Jul 30 10:21	29° Ω 27'16	
evening max el	12872 Aug 30 18:30	9° \mathbb{L} 39'39	18°31'24		12873 Jul 30 17:33	0° \mathbb{M}	
retrograde	12872 Sep 07 15:26	13° \mathbb{L} 37'50		evening max el	12873 Aug 14 04:27	22° \mathbb{M} 26'11	18°07'56
evening set	12872 Sep 09 15:22	13° \mathbb{L} 23'17		retrograde	12873 Aug 21 02:58	25° \mathbb{M} 58'32	
desc. node	12872 Sep 14 16:35	10° \mathbb{L} 56'15		evening set	12873 Aug 23 10:03	25° \mathbb{M} 35'43	
inferior conj	12872 Sep 17 11:11	8° \mathbb{L} 53'02	-0°52'26	inferior conj	12873 Aug 30 11:28	20° \mathbb{M} 45'02	0°38'24
minimum elong	12872 Sep 17 09:07	8° \mathbb{L} 57'03	0°51'33	minimum elong	12873 Aug 30 12:41	20° \mathbb{M} 42'16	0°37'42
min. Earth dist.	12872 Sep 20 16:54	6° \mathbb{L} 23'07	0.57665 AU	desc. node	12873 Sep 01 14:06	18° \mathbb{M} 49'57	
morning rise	12872 Sep 24 23:25	3° \mathbb{L} 40'38		min. Earth dist.	12873 Sep 02 17:57	17° \mathbb{M} 48'37	0.59858 AU
direct	12872 Oct 01 00:19	2° \mathbb{L} 08'26		morning rise	12873 Sep 06 12:04	15° \mathbb{M} 00'15	
morning max el	12872 Oct 15 07:46	9° \mathbb{L} 41'01	26°57'04	direct	12873 Sep 12 23:53	13° \mathbb{M} 00'19	
	12872 Oct 30 20:22	0° \mathbb{M}		morning max el	12873 Sep 27 07:44	20° \mathbb{M} 51'46	27°46'41
asc. node	12872 Nov 08 15:26	15° \mathbb{M} 41'11			12873 Oct 05 05:52	0° \mathbb{L}	
morning set	12872 Nov 14 06:07	27° \mathbb{M} 10'03			12873 Oct 23 19:03	0° \mathbb{M}	
	12872 Nov 15 13:43	0° \mathbb{X}		asc. node	12873 Oct 26 12:10	5° \mathbb{M} 20'07	
				morning set	12873 Oct 29 11:51	11° \mathbb{M} 28'32	
superior conj	12872 Nov 21 02:48	12° \mathbb{X} 15'52	1°33'46	max. Earth dist.	12873 Nov 04 16:53	24° \mathbb{M} 57'28	1.31295 AU
minimum elong	12872 Nov 21 01:32	12° \mathbb{X} 08'46	1°34'35				
max. Earth dist.	12872 Nov 21 08:28	12° \mathbb{X} 47'28	1.31326 AU	superior conj	12873 Nov 05 14:13	26° \mathbb{M} 56'11	1°23'34
evening rise	12872 Nov 27 22:35	27° \mathbb{X} 14'31		minimum elong	12873 Nov 05 12:15	26° \mathbb{M} 45'11	1°24'05
	12872 Nov 29 06:00	0° \mathbb{Z}			12873 Nov 06 23:12	0° \mathbb{X}	
desc. node	12872 Dec 11 13:48	23° \mathbb{Z} 02'59		evening rise	12873 Nov 12 07:06	11° \mathbb{X} 44'04	
	12872 Dec 16 00:48	0° \approx			12873 Nov 21 10:29	0° \mathbb{Z}	
evening max el	12872 Dec 28 12:04	15° \approx 15'31	27°00'39	desc. node	12873 Nov 28 10:54	11° \mathbb{Z} 42'36	
retrograde	12873 Jan 11 10:43	22° \approx 27'18		evening max el	12873 Dec 10 08:51	26° \mathbb{Z} 30'31	25°56'42
evening set	12873 Jan 18 05:25	20° \approx 28'53			12873 Dec 14 14:04	0° \approx	
min. Earth dist.	12873 Jan 22 02:18	17° \approx 48'31	0.59999 AU	retrograde	12873 Dec 24 06:55	3° \approx 33'20	
inferior conj	12873 Jan 25 06:38	15° \approx 12'30	-3°15'58	evening set	12873 Dec 30 12:24	2° \approx 02'05	
minimum elong	12873 Jan 25 13:34	14° \approx 58'16	3°12'43		12874 Jan 03 01:17	30° \mathbb{R} 3	
morning rise	12873 Feb 02 00:44	10° \approx 27'59		min. Earth dist.	12874 Jan 03 21:42	29° \mathbb{Z} 25'36	0.57885 AU
direct	12873 Feb 04 02:27	10° \approx 11'32		inferior conj	12874 Jan 06 22:28	27° \mathbb{Z} 16'29	-4°35'05
asc. node	12873 Feb 04 14:18	10° \approx 12'30		minimum elong	12874 Jan 07 07:07	27° \mathbb{Z} 01'05	4°31'50
morning max el	12873 Feb 11 13:35	13° \approx 54'34	18°04'42	morning rise	12874 Jan 15 04:37	22° \mathbb{Z} 54'12	
	12873 Feb 22 11:59	0° \mathbb{H}		direct	12874 Jan 17 07:08	22° \mathbb{Z} 40'02	
morning set	12873 Feb 27 03:55	8° \mathbb{H} 33'56		asc. node	12874 Jan 22 11:39	24° \mathbb{Z} 11'53	
				morning max el	12874 Jan 25 20:21	26° \mathbb{Z} 50'35	18°42'01
					12874 Jan 28 15:56	0° \approx	
superior conj	12873 Mar 09 01:51	26° \mathbb{H} 43'34	0°04'20	morning set	12874 Feb 10 23:54	22° \approx 46'21	
minimum elong	12873 Mar 09 02:12	26° \mathbb{H} 45'08	0°04'25		12874 Feb 14 17:02	0° \mathbb{H}	
behind sun begin	12873 Mar 08 18:41	26° \mathbb{H} 11'42					
behind sun end	12873 Mar 09 09:43	27° \mathbb{H} 18'28		superior conj	12874 Feb 19 17:56	9° \mathbb{H} 37'42	0°37'15
desc. node	12873 Mar 09 14:57	27° \mathbb{H} 41'37		minimum elong	12874 Feb 19 20:15	9° \mathbb{H} 48'36	0°37'19
	12873 Mar 10 22:23	0° \mathbb{Y}		desc. node	12874 Feb 24 11:30	18° \mathbb{H} 19'04	
max. Earth dist.	12873 Mar 16 16:48	9° \mathbb{Y} 51'55	1.41960 AU	max. Earth dist.	12874 Feb 27 00:21	22° \mathbb{H} 48'46	1.39796 AU
evening rise	12873 Mar 21 22:55	18° \mathbb{Y} 28'13		evening rise	12874 Mar 03 01:03	29° \mathbb{H} 43'42	
	12873 Mar 29 07:57	0° \mathbb{B}			12874 Mar 03 04:56	0° \mathbb{Y}	
	12873 Apr 19 22:23	0° Π			12874 Mar 22 17:57	0° \mathbb{B}	
evening max el	12873 Apr 24 07:41	4° Π 50'07	22°40'46				

evening max el	12874 Apr 06 21:53	18° ♁ 40'41	24°01'44	evening max el	12875 Mar 20 11:25	2° ♁ 32'57	25°18'39
retrograde	12874 Apr 18 01:19	25° ♁ 13'38		retrograde	12875 Apr 01 14:57	9° ♁ 34'58	
asc. node	12874 Apr 20 08:23	24° ♁ 49'46		evening set	12875 Apr 07 10:58	7° ♁ 09'39	
evening set	12874 Apr 23 09:42	22° ♁ 58'22		asc. node	12875 Apr 07 05:48	7° ♁ 20'23	
min. Earth dist.	12874 Apr 28 01:57	17° ♁ 33'01	0.68583 AU	min. Earth dist.	12875 Apr 11 19:54	2° ♁ 19'53	0.67859 AU
inferior conj	12874 Apr 28 20:43	16° ♁ 29'16	2°22'25	inferior conj	12875 Apr 13 02:56	0° ♁ 39'07	1°45'05
minimum elong	12874 Apr 28 18:36	16° ♁ 36'29	2°21'13	minimum elong	12875 Apr 13 00:53	0° ♁ 45'48	1°44'00
morning rise	12874 May 04 03:33	10° ♁ 26'55			12875 Apr 13 15:01	30° ♁	
direct	12874 May 08 04:18	8° ♁ 54'39		morning rise	12875 Apr 18 15:11	24° ♁ 45'33	
morning max el	12874 May 15 23:54	13° ♁ 19'17	20°16'56	direct	12875 Apr 22 04:07	23° ♁ 33'33	
desc. node	12874 May 23 13:25	22° ♁ 22'02		morning max el	12875 Apr 29 04:04	27° ♁ 23'24	19°14'31
	12874 May 29 00:35	0° ♁			12875 May 01 14:09	0° ♁	
morning set	12874 Jun 13 05:21	22° ♁ 47'15		desc. node	12875 May 10 10:12	11° ♁ 57'03	
	12874 Jun 17 20:39	0° ♁		greatest brilliancy	12875 May 12 00:29	14° ♁ 18'35	-0.7m
max. Earth dist.	12874 Jun 22 19:00	7° ♁ 48'26	1.44025 AU		12875 May 22 08:02	0° ♁	
				morning set	12875 May 23 07:37	1° ♁ 30'49	
superior conj	12874 Jun 28 19:13	17° ♁ 33'02	-2°03'03	max. Earth dist.	12875 Jun 05 10:14	21° ♁ 54'03	1.45263 AU
minimum elong	12874 Jun 29 01:18	17° ♁ 58'03	2°03'37				
	12874 Jul 06 05:34	0° ♁		superior conj	12875 Jun 08 17:22	27° ♁ 06'13	-2°13'29
evening rise	12874 Jul 11 14:05	9° ♁ 12'56		minimum elong	12875 Jun 08 17:46	27° ♁ 07'48	2°14'27
asc. node	12874 Jul 17 07:07	19° ♁ 03'43			12875 Jun 10 13:08	0° ♁	
	12874 Jul 24 03:38	0° ♁		evening rise	12875 Jun 23 05:29	20° ♁ 33'41	
evening max el	12874 Jul 28 18:14	5° ♁ 39'59	18°03'51		12875 Jun 28 23:02	0° ♁	
retrograde	12874 Aug 04 05:03	9° ♁ 00'51		asc. node	12875 Jul 04 03:57	8° ♁ 20'09	
evening set	12874 Aug 06 20:19	8° ♁ 26'19		evening max el	12875 Jul 12 08:17	19° ♁ 11'06	18°18'09
inferior conj	12874 Aug 13 06:01	3° ♁ 16'48	1°46'07	retrograde	12875 Jul 18 17:12	22° ♁ 34'27	
minimum elong	12874 Aug 13 08:29	3° ♁ 10'23	1°44'49	evening set	12875 Jul 21 16:56	21° ♁ 45'36	
min. Earth dist.	12874 Aug 16 04:18	0° ♁ 16'11	0.62143 AU	inferior conj	12875 Jul 27 14:37	16° ♁ 19'06	2°32'05
	12874 Aug 16 10:54	30° ♁		minimum elong	12875 Jul 27 17:00	16° ♁ 12'15	2°30'48
desc. node	12874 Aug 19 11:35	27° ♁ 22'27		min. Earth dist.	12875 Jul 29 23:56	13° ♁ 34'33	0.64269 AU
morning rise	12874 Aug 19 18:19	27° ♁ 10'14		morning rise	12875 Aug 02 15:38	10° ♁ 00'34	
direct	12874 Aug 26 10:39	24° ♁ 47'11		desc. node	12875 Aug 06 09:02	7° ♁ 52'32	
	12874 Sep 06 13:02	0° ♁		direct	12875 Aug 09 06:14	7° ♁ 23'29	
morning max el	12874 Sep 09 13:52	2° ♁ 48'24	27°57'21	morning max el	12875 Aug 22 23:37	15° ♁ 23'15	27°31'32
	12874 Sep 29 16:59	0° ♁			12875 Sep 03 22:59	0° ♁	
morning set	12874 Oct 13 11:46	25° ♁ 27'44			12875 Sep 22 10:16	0° ♁	
asc. node	12874 Oct 13 08:51	25° ♁ 12'51		morning set	12875 Sep 27 03:19	9° ♁ 00'46	
	12874 Oct 15 16:15	0° ♁		asc. node	12875 Sep 30 05:28	15° ♁ 14'00	
max. Earth dist.	12874 Oct 18 21:52	6° ♁ 55'04	1.31793 AU	max. Earth dist.	12875 Oct 01 19:47	18° ♁ 32'12	1.32823 AU
superior conj	12874 Oct 20 23:42	11° ♁ 27'28	1°07'43	superior conj	12875 Oct 05 05:11	25° ♁ 43'31	0°46'24
minimum elong	12874 Oct 20 21:26	11° ♁ 15'01	1°07'57	minimum elong	12875 Oct 05 03:11	25° ♁ 32'44	0°46'22
evening rise	12874 Oct 27 17:53	26° ♁ 17'43			12875 Oct 07 04:44	0° ♁	
	12874 Oct 29 11:34	0° ♁		evening rise	12875 Oct 12 05:02	10° ♁ 49'58	
desc. node	12874 Nov 15 08:05	29° ♁ 26'18			12875 Oct 21 22:29	0° ♁	
	12874 Nov 15 18:20	0° ♁		desc. node	12875 Nov 02 05:22	15° ♁ 53'11	
evening max el	12874 Nov 21 21:50	6° ♁ 57'55	24°26'13	evening max el	12875 Nov 03 08:08	17° ♁ 00'50	22°44'26
retrograde	12874 Dec 05 14:54	13° ♁ 48'33		retrograde	12875 Nov 16 09:43	23° ♁ 29'58	
evening set	12874 Dec 10 19:52	12° ♁ 48'50		evening set	12875 Nov 20 05:37	22° ♁ 58'01	
min. Earth dist.	12874 Dec 16 09:25	9° ♁ 58'19	0.56081 AU	min. Earth dist.	12875 Nov 27 16:33	19° ♁ 35'12	0.54885 AU
inferior conj	12874 Dec 18 17:34	8° ♁ 30'59	-5°35'34	inferior conj	12875 Nov 28 18:16	18° ♁ 58'41	-5°54'10
minimum elong	12874 Dec 18 23:49	8° ♁ 21'15	5°33'44	minimum elong	12875 Nov 28 16:41	19° ♁ 00'55	5°53'10
morning rise	12874 Dec 27 05:49	4° ♁ 29'16		morning rise	12875 Dec 07 05:09	15° ♁ 10'24	
direct	12874 Dec 29 16:30	4° ♁ 13'19		direct	12875 Dec 10 08:35	14° ♁ 47'38	
morning max el	12875 Jan 08 15:47	9° ♁ 00'39	19°41'42	morning max el	12875 Dec 21 21:00	20° ♁ 17'03	21°04'22
asc. node	12875 Jan 09 08:54	9° ♁ 43'15		asc. node	12875 Dec 27 06:02	26° ♁ 30'38	
	12875 Jan 22 11:18	0° ♁			12875 Dec 29 15:55	0° ♁	
morning set	12875 Jan 26 03:37	7° ♁ 18'02		morning set	12876 Jan 10 12:12	22° ♁ 00'49	
					12876 Jan 14 07:43	0° ♁	
superior conj	12875 Feb 03 01:25	23° ♁ 13'41	1°03'03	superior conj	12876 Jan 17 20:11	7° ♁ 19'57	1°21'34
minimum elong	12875 Feb 03 04:15	23° ♁ 27'37	1°03'20	minimum elong	12876 Jan 17 22:34	7° ♁ 32'13	1°22'09
	12875 Feb 06 13:07	0° ♁		max. Earth dist.	12876 Jan 22 16:05	17° ♁ 04'18	1.35469 AU
max. Earth dist.	12875 Feb 09 06:27	5° ♁ 07'09	1.37555 AU	evening rise	12876 Jan 26 16:15	24° ♁ 45'21	
desc. node	12875 Feb 11 08:05	8° ♁ 54'13		desc. node	12876 Jan 29 04:42	29° ♁ 23'19	
evening rise	12875 Feb 12 23:50	11° ♁ 52'17			12876 Jan 29 12:50	0° ♁	
	12875 Feb 23 20:45	0° ♁			12876 Feb 17 10:03	0° ♁	
	12875 Mar 18 00:15	0° ♁					

evening max el	12876 Mar 02 01:11	16° Υ 22'14	26°24'13	desc. node	12877 Jan 15 01:24	19° \approx 41'18	
retrograde	12876 Mar 14 23:21	23° Υ 41'29			12877 Jan 21 01:54	0° H	
evening set	12876 Mar 21 06:20	21° Υ 10'06		evening max el	12877 Feb 12 14:40	29° H 57'59	27°11'07
asc. node	12876 Mar 24 03:12	18° Υ 21'57			12877 Feb 12 15:31	0° Υ	
min. Earth dist.	12876 Mar 25 09:11	16° Υ 55'11	0.66718 AU	retrograde	12877 Feb 26 01:41	7° Υ 24'06	
inferior conj	12876 Mar 27 04:30	14° Υ 43'40	0°57'19	evening set	12877 Mar 04 17:46	4° Υ 52'05	
minimum elong	12876 Mar 27 03:07	14° Υ 47'54	0°56'38	min. Earth dist.	12877 Mar 08 15:35	1° Υ 10'20	0.65190 AU
morning rise	12876 Apr 02 00:48	9° Υ 00'42			12877 Mar 09 17:05	30° R H	
direct	12876 Apr 05 03:02	8° Υ 06'51		inferior conj	12877 Mar 10 23:00	28° H 36'07	-0°01'20
morning max el	12876 Apr 11 15:10	11° Υ 34'49	18°28'16	minimum elong	12877 Mar 10 23:02	28° H 36'02	0°01'11
	12876 Apr 25 01:15	0° B		transit middle	12877 Mar 10 23:02	28° H 36'02	0°01'11
desc. node	12876 Apr 26 06:53	1° B 55'43		transit begin	12877 Mar 10 20:01	28° H 44'27	
morning set	12876 May 02 04:25	11° B 13'15		transit end	12877 Mar 11 02:03	28° H 27'37	
	12876 May 14 03:10	0° II		asc. node	12877 Mar 11 00:39	28° H 31'31	
				morning rise	12877 Mar 17 05:55	23° H 06'03	
superior conj	12876 May 18 01:46	6° II 09'32	-2°04'07	direct	12877 Mar 19 22:41	22° H 27'22	
minimum elong	12876 May 17 18:47	5° II 42'17	2°04'36	morning max el	12877 Mar 26 07:00	25° H 45'50	17°58'53
max. Earth dist.	12876 May 18 05:36	6° II 24'30	1.45796 AU		12877 Mar 29 22:42	0° Υ	
	12876 Jun 02 06:41	0° B		morning set	12877 Apr 13 05:25	22° Υ 18'45	
evening rise	12876 Jun 02 20:28	0° B 54'21		desc. node	12877 Apr 13 03:28	22° Υ 10'45	
greatest brilliancy	12876 Jun 11 21:18	15° B 07'12	-0.8m		12877 Apr 17 22:05	0° B	
asc. node	12876 Jun 20 00:53	27° B 09'47					
	12876 Jun 22 05:47	0° Ω		superior conj	12877 Apr 27 13:26	15° B 28'18	-1°36'18
evening max el	12876 Jun 24 19:44	2° Ω 52'26	18°49'59	minimum elong	12877 Apr 27 04:18	14° B 52'11	1°35'58
retrograde	12876 Jul 01 11:46	6° Ω 31'44		max. Earth dist.	12877 May 01 01:51	21° B 00'43	1.45571 AU
evening set	12876 Jul 04 20:12	5° Ω 27'04			12877 May 06 20:12	0° II	
inferior conj	12876 Jul 10 09:35	29° B 45'07	2°59'40	evening rise	12877 May 13 15:09	10° II 29'10	
minimum elong	12876 Jul 10 11:09	29° B 40'11	2°58'33		12877 May 26 11:32	0° B	
	12876 Jul 10 04:50	30° R B		greatest brilliancy	12877 May 27 09:40	1° B 21'41	-0.7m
min. Earth dist.	12876 Jul 12 04:15	27° B 31'31	0.66070 AU	asc. node	12877 Jun 06 21:54	15° B 23'13	
morning rise	12876 Jul 16 01:21	23° B 21'56		evening max el	12877 Jun 08 02:26	16° B 38'14	19°38'21
direct	12876 Jul 22 09:12	20° B 40'57		retrograde	12877 Jun 15 09:43	20° B 45'53	
desc. node	12876 Jul 23 06:24	20° B 43'46		evening set	12877 Jun 19 03:20	19° B 24'45	
morning max el	12876 Aug 04 10:40	28° B 26'07	26°35'50	inferior conj	12877 Jun 24 11:43	13° B 28'58	3°12'09
	12876 Aug 05 22:39	0° Ω		minimum elong	12877 Jun 24 12:15	13° B 27'12	3°11'09
	12876 Aug 27 17:42	0° H		min. Earth dist.	12877 Jun 25 15:50	11° B 55'21	0.67450 AU
morning set	12876 Sep 09 07:27	22° H 00'13		morning rise	12877 Jun 29 20:45	7° B 06'02	
	12876 Sep 13 10:32	0° B		direct	12877 Jul 05 18:28	4° B 30'23	
max. Earth dist.	12876 Sep 13 08:06	29° H 47'57	1.34369 AU	desc. node	12877 Jul 10 03:40	5° B 40'17	
asc. node	12876 Sep 16 02:03	5° B 19'28		morning max el	12877 Jul 17 21:21	11° B 46'15	25°19'12
					12877 Aug 01 11:53	0° Ω	
superior conj	12876 Sep 18 04:18	9° B 37'57	0°19'53		12877 Aug 20 10:23	0° H	
minimum elong	12876 Sep 18 03:15	9° B 32'29	0°19'44	morning set	12877 Aug 22 20:20	4° H 17'02	
evening rise	12876 Sep 25 14:38	25° B 15'38		max. Earth dist.	12877 Aug 26 10:58	10° H 54'01	1.36360 AU
	12876 Sep 27 21:30	0° H					
evening max el	12876 Oct 15 00:56	27° H 15'35	21°08'45	superior conj	12877 Sep 01 18:14	23° H 03'50	-0°11'10
	12876 Oct 18 05:23	0° A		minimum elong	12877 Sep 01 18:56	23° H 07'20	0°11'15
desc. node	12876 Oct 19 02:44	0° A 36'56		behind sun begin	12877 Sep 01 14:20	22° H 44'26	
retrograde	12876 Oct 26 20:52	3° A 08'24		behind sun end	12877 Sep 01 23:33	23° H 30'16	
evening set	12876 Oct 29 10:28	2° A 52'56		asc. node	12877 Sep 02 22:38	25° H 25'38	
	12876 Nov 05 14:06	30° R H			12877 Sep 05 04:59	0° B	
inferior conj	12876 Nov 07 09:53	28° H 58'57	-5°14'05	evening rise	12877 Sep 09 20:30	9° B 29'01	
minimum elong	12876 Nov 07 00:54	29° H 11'37	5°11'29		12877 Sep 20 22:00	0° H	
min. Earth dist.	12876 Nov 07 22:43	28° H 40'51	0.54535 AU	evening max el	12877 Sep 27 07:05	8° H 11'30	19°50'46
morning rise	12876 Nov 15 15:53	25° H 07'55		desc. node	12877 Oct 06 00:11	13° H 10'31	
direct	12876 Nov 19 16:19	24° H 33'17		retrograde	12877 Oct 07 12:05	13° H 16'50	
	12876 Dec 01 17:46	0° A		evening set	12877 Oct 09 10:11	13° H 06'50	
morning max el	12876 Dec 02 13:20	0° A 44'44	22°45'57	inferior conj	12877 Oct 18 07:02	9° H 05'36	-3°43'49
asc. node	12876 Dec 13 03:05	14° A 17'08		minimum elong	12877 Oct 17 21:45	9° H 19'54	3°40'11
	12876 Dec 21 16:58	0° B		min. Earth dist.	12877 Oct 20 07:28	7° H 51'14	0.55121 AU
morning set	12876 Dec 24 23:22	6° B 47'27		morning rise	12877 Oct 26 07:48	4° H 50'43	
				direct	12877 Oct 31 04:59	3° H 58'22	
superior conj	12876 Dec 31 22:46	21° B 46'16	1°33'07	morning max el	12877 Nov 13 23:44	10° H 47'48	24°34'34
minimum elong	12877 Jan 01 00:13	21° B 53'59	1°33'58		12877 Nov 28 09:18	0° A	
max. Earth dist.	12877 Jan 04 08:33	28° B 57'12	1.33716 AU	asc. node	12877 Nov 30 00:03	2° A 48'29	
	12877 Jan 04 20:41	0° \approx		morning set	12877 Dec 09 11:16	21° A 32'51	
evening rise	12877 Jan 08 22:36	8° \approx 12'43			12877 Dec 13 08:27	0° B	






























































































































superior conj	12877 Dec 16 06:33	6°♄25'13	1°38'09	minimum elong	12878 Nov 30 16:32	21°♄04'56	1°37'59
minimum elong	12877 Dec 16 06:53	6°♄27'03	1°39'07	max. Earth dist.	12878 Dec 01 14:25	23°♄06'32	1.31570 AU
max. Earth dist.	12877 Dec 18 08:37	10°♄57'52	1.32401 AU		12878 Dec 04 17:38	0°♄	
evening rise	12877 Dec 23 15:41	22°♄06'45		evening rise	12878 Dec 07 16:36	6°♄19'18	
	12877 Dec 27 15:20	0°♄		desc. node	12878 Dec 19 19:09	29°♄20'44	
desc. node	12878 Jan 01 22:13	9°♄43'01			12878 Dec 20 04:27	0°♄	
	12878 Jan 14 21:42	0°♄		evening max el	12879 Jan 08 10:41	25°♄43'41	27°22'14
evening max el	12878 Jan 26 02:32	13°♄09'15	27°32'22		12879 Jan 13 17:31	0°♄	
retrograde	12878 Feb 08 21:22	20°♄34'02		retrograde	12879 Jan 22 09:12	3°♄01'20	
evening set	12878 Feb 15 18:56	18°♄08'29		evening set	12879 Jan 29 06:49	0°♄50'50	
min. Earth dist.	12878 Feb 19 13:22	14°♄56'12	0.63333 AU		12879 Jan 30 13:12	30°♄	
inferior conj	12878 Feb 22 07:43	12°♄10'04	-1°10'37	min. Earth dist.	12879 Feb 02 01:12	28°♄01'23	0.61240 AU
minimum elong	12878 Feb 22 10:01	12°♄04'17	1°09'16	inferior conj	12879 Feb 05 03:23	25°♄17'08	-2°28'46
asc. node	12878 Feb 25 22:05	8°♄50'44		minimum elong	12879 Feb 05 08:37	25°♄05'31	2°26'06
morning rise	12878 Mar 01 03:30	6°♄55'24		morning rise	12879 Feb 12 13:22	20°♄20'42	
direct	12878 Mar 03 12:22	6°♄28'20		asc. node	12879 Feb 12 19:30	20°♄16'26	
morning max el	12878 Mar 10 00:45	9°♄48'33	17°46'42	direct	12879 Feb 14 16:38	20°♄01'29	
	12878 Mar 23 15:46	0°♄		morning max el	12879 Feb 21 17:10	23°♄33'41	17°52'35
morning set	12878 Mar 26 08:43	4°♄39'34			12879 Feb 26 20:23	0°♄	
desc. node	12878 Mar 31 00:01	12°♄37'12		morning set	12879 Mar 09 08:17	17°♄57'33	
					12879 Mar 16 01:08	0°♄	
superior conj	12878 Apr 07 19:38	25°♄41'55	-0°57'49	desc. node	12879 Mar 17 20:34	3°♄11'05	
minimum elong	12878 Apr 07 13:45	25°♄17'44	0°57'19				
	12878 Apr 10 11:01	0°♄		superior conj	12879 Mar 20 02:09	7°♄03'44	-0°17'26
max. Earth dist.	12878 Apr 13 20:06	5°♄25'19	1.44626 AU	minimum elong	12879 Mar 20 00:35	6°♄56'57	0°17'12
evening rise	12878 Apr 23 02:18	19°♄53'04		max. Earth dist.	12879 Mar 27 10:37	19°♄24'32	1.43070 AU
	12878 Apr 29 18:13	0°♄		evening rise	12879 Apr 02 21:47	29°♄45'59	
	12878 May 21 17:23	0°♄			12879 Apr 03 01:21	0°♄	
evening max el	12878 May 22 03:25	0°♄25'35	20°41'15		12879 Apr 23 08:42	0°♄	
asc. node	12878 May 24 19:02	2°♄48'41		evening max el	12879 May 04 23:02	14°♄14'16	21°55'13
retrograde	12878 May 30 08:41	5°♄11'19		asc. node	12879 May 11 16:16	19°♄11'25	
evening set	12878 Jun 03 12:11	3°♄33'45		retrograde	12879 May 14 06:44	19°♄42'55	
	12878 Jun 06 20:36	30°♄		evening set	12879 May 18 20:59	17°♄49'32	
inferior conj	12878 Jun 08 18:27	27°♄25'42	3°11'59	inferior conj	12879 May 24 03:32	11°♄31'17	3°00'46
minimum elong	12878 Jun 08 17:57	27°♄27'27	3°11'00	minimum elong	12879 May 24 02:11	11°♄36'03	2°59'42
min. Earth dist.	12878 Jun 09 08:41	26°♄36'32	0.68372 AU	min. Earth dist.	12879 May 24 04:38	11°♄27'28	0.68824 AU
morning rise	12878 Jun 13 23:26	21°♄06'19		morning rise	12879 May 29 07:10	5°♄17'29	
direct	12878 Jun 19 09:10	18°♄43'19		direct	12879 Jun 03 04:06	3°♄12'20	
desc. node	12878 Jun 27 00:51	22°♄14'39		morning max el	12879 Jun 12 19:12	8°♄52'30	22°22'07
morning max el	12878 Jun 30 07:30	25°♄15'38	23°51'24	desc. node	12879 Jun 13 21:54	10°♄01'36	
	12878 Jul 04 14:36	0°♄			12879 Jun 29 07:29	0°♄	
	12878 Jul 25 23:23	0°♄		morning set	12879 Jul 16 06:01	25°♄56'54	
morning set	12878 Aug 04 13:18	15°♄39'23			12879 Jul 18 17:26	0°♄	
max. Earth dist.	12878 Aug 08 08:30	22°♄14'55	1.38646 AU	max. Earth dist.	12879 Jul 21 07:45	4°♄19'46	1.40973 AU
	12878 Aug 12 15:45	0°♄					
superior conj	12878 Aug 15 19:23	5°♄52'20	-0°45'14	superior conj	12879 Jul 29 03:37	17°♄54'26	-1°19'39
minimum elong	12878 Aug 15 22:35	6°♄07'25	0°45'10	minimum elong	12879 Jul 29 09:26	18°♄20'30	1°19'33
asc. node	12878 Aug 20 19:15	15°♄28'31			12879 Aug 04 18:26	0°♄	
evening rise	12878 Aug 24 20:00	23°♄22'39		asc. node	12879 Aug 07 15:55	5°♄24'48	
	12878 Aug 28 05:56	0°♄		evening rise	12879 Aug 08 09:46	6°♄48'28	
evening max el	12878 Sep 10 02:56	19°♄55'42	18°54'15		12879 Aug 22 05:50	0°♄	
retrograde	12878 Sep 18 17:52	24°♄15'00		evening max el	12879 Aug 24 09:00	2°♄22'44	18°19'01
evening set	12878 Sep 20 14:54	24°♄03'31		retrograde	12879 Aug 31 18:51	6°♄07'42	
desc. node	12878 Sep 22 21:41	23°♄20'55		evening set	12879 Sep 02 21:43	5°♄50'01	
inferior conj	12878 Sep 28 21:25	19°♄45'36	-1°53'30	desc. node	12879 Sep 09 19:11	1°♄40'46	
minimum elong	12878 Sep 28 16:36	19°♄54'07	1°51'21	inferior conj	12879 Sep 10 09:33	1°♄11'10	-0°11'11
min. Earth dist.	12878 Oct 01 21:00	17°♄39'18	0.56556 AU	minimum elong	12879 Sep 10 09:08	1°♄12'01	0°11'05
morning rise	12878 Oct 06 15:06	14°♄54'30		transit middle	12879 Sep 10 09:08	1°♄12'01	0°11'05
direct	12878 Oct 12 07:14	13°♄37'44		transit begin	12879 Sep 10 06:35	1°♄17'17	
morning max el	12878 Oct 26 12:12	20°♄57'28	26°12'26	transit end	12879 Sep 10 11:40	1°♄06'45	
	12878 Nov 03 08:37	0°♄			12879 Sep 11 19:39	30°♄	
asc. node	12878 Nov 16 20:55	21°♄52'28		min. Earth dist.	12879 Sep 13 17:08	28°♄27'17	0.58575 AU
	12878 Nov 20 23:30	0°♄		morning rise	12879 Sep 17 17:04	25°♄44'09	
morning set	12878 Nov 23 22:09	6°♄11'08		direct	12879 Sep 23 23:40	23°♄59'36	
					12879 Oct 06 12:04	0°♄	
superior conj	12878 Nov 30 17:16	21°♄09'02	1°37'04	morning max el	12879 Oct 08 07:28	1°♄40'55	27°22'45
					12879 Oct 28 16:18	0°♄	

asc. node	12879 Nov 03 17:43	11°♍20'35		asc. node	12880 Oct 20 14:27	1°♍06'08	
morning set	12879 Nov 08 06:17	20°♍37'51		morning set	12880 Oct 22 09:49	4°♍48'45	
	12879 Nov 12 13:43	0°♌		max. Earth dist.	12880 Oct 28 06:33	17°♍25'19	1.31444 AU
superior conj	12879 Nov 15 04:57	5°♌52'01	1°30'08	superior conj	12880 Oct 29 15:46	20°♍29'08	1°17'31
minimum elong	12879 Nov 15 03:20	5°♌43'00	1°30'50	minimum elong	12880 Oct 29 13:37	20°♍17'10	1°17'56
max. Earth dist.	12879 Nov 14 22:57	5°♌18'30	1.31249 AU		12880 Nov 02 22:41	0°♌	
evening rise	12879 Nov 21 22:57	20°♌44'17		evening rise	12880 Nov 05 08:42	5°♌16'32	
	12879 Nov 26 10:19	0°♍			12880 Nov 18 05:06	0°♍	
desc. node	12879 Dec 06 16:11	18°♍24'56		desc. node	12880 Nov 22 13:19	6°♍43'09	
	12879 Dec 14 18:16	0°♍		evening max el	12880 Dec 02 05:55	18°♍24'04	25°20'47
evening max el	12879 Dec 21 12:30	7°♍30'08	26°37'29	retrograde	12880 Dec 16 02:12	25°♍21'34	
retrograde	12880 Jan 04 11:26	14°♍37'45		evening set	12880 Dec 21 22:53	24°♍03'30	
evening set	12880 Jan 11 01:34	12°♍50'30		min. Earth dist.	12880 Dec 26 18:01	21°♍23'39	0.57061 AU
min. Earth dist.	12880 Jan 15 02:26	10°♍13'28	0.59075 AU	inferior conj	12880 Dec 29 13:29	19°♍30'59	-5°04'19
inferior conj	12880 Jan 18 06:21	7°♍47'11	-3°50'34	minimum elong	12880 Dec 29 21:48	19°♍17'03	5°01'32
minimum elong	12880 Jan 18 14:19	7°♍31'47	3°47'09	morning rise	12881 Jan 06 23:07	15°♍17'50	
morning rise	12880 Jan 26 06:01	3°♍11'39		direct	12881 Jan 09 04:17	15°♍03'19	
direct	12880 Jan 28 07:20	2°♍56'35		asc. node	12881 Jan 16 14:10	17°♍58'27	
asc. node	12880 Jan 30 16:52	3°♍18'03		morning max el	12881 Jan 18 06:53	19°♍28'14	19°04'38
morning max el	12880 Feb 05 04:31	6°♍50'31	18°17'56		12881 Jan 26 03:51	0°♍	
	12880 Feb 19 22:01	0°♋		morning set	12881 Feb 03 21:56	16°♍17'03	
morning set	12880 Feb 20 22:13	1°♋54'33			12881 Feb 10 20:55	0°♋	
superior conj	12880 Mar 01 07:13	19°♋27'44	0°19'06	superior conj	12881 Feb 12 06:28	2°♋41'46	0°49'05
minimum elong	12880 Mar 01 08:38	19°♋34'06	0°19'09	minimum elong	12881 Feb 12 09:09	2°♋54'38	0°49'12
desc. node	12880 Mar 03 17:05	23°♋48'16		desc. node	12881 Feb 18 13:39	14°♋25'27	
	12880 Mar 07 05:49	0°♎		max. Earth dist.	12881 Feb 19 04:00	15°♋29'56	1.38839 AU
max. Earth dist.	12880 Mar 08 20:59	2°♎47'55	1.41068 AU	evening rise	12881 Feb 22 22:58	22°♋09'16	
evening rise	12880 Mar 13 11:45	10°♎30'00			12881 Feb 27 15:05	0°♎	
	12880 Mar 26 00:42	0°♏			12881 Mar 19 22:56	0°♏	
evening max el	12880 Apr 16 14:47	28°♏04'35	23°15'17	evening max el	12881 Mar 30 04:32	11°♏56'38	24°35'14
	12880 Apr 18 15:47	0°♐		retrograde	12881 Apr 10 18:28	18°♏42'46	
retrograde	12880 Apr 27 02:23	4°♐15'08		asc. node	12881 Apr 14 10:57	17°♏42'29	
asc. node	12880 Apr 27 13:35	4°♐14'08		evening set	12881 Apr 16 07:59	16°♏22'36	
evening set	12880 May 02 04:06	2°♐07'13		min. Earth dist.	12881 Apr 20 20:55	11°♏12'45	0.68339 AU
	12880 May 04 06:03	30°♑♏		inferior conj	12881 Apr 21 20:58	9°♏52'28	2°07'51
min. Earth dist.	12880 May 07 01:24	26°♏21'20	0.68810 AU	minimum elong	12881 Apr 21 18:48	9°♏59'41	2°06'40
inferior conj	12880 May 07 13:00	25°♏41'18	2°39'19	morning rise	12881 Apr 27 05:48	3°♏53'55	
minimum elong	12880 May 07 11:03	25°♏48'02	2°38'08	direct	12881 May 01 01:27	2°♏30'29	
morning rise	12880 May 12 17:55	19°♏34'33		morning max el	12881 May 08 11:39	6°♏38'17	19°48'29
direct	12880 May 17 01:59	17°♏50'00		desc. node	12881 May 17 15:41	17°♏59'04	
morning max el	12880 May 25 11:46	22°♏39'19	20°59'18	greatest brilliancy	12881 May 21 12:09	23°♏30'06	-0.6m
desc. node	12880 May 30 18:51	28°♏41'04			12881 May 25 21:31	0°♐	
	12880 May 31 19:43	0°♐		morning set	12881 Jun 03 23:23	13°♐47'17	
	12880 Jun 21 14:09	0°♑			12881 Jun 14 09:09	0°♑	
morning set	12880 Jun 24 21:59	5°♑09'19		max. Earth dist.	12881 Jun 15 01:58	1°♑06'34	1.44642 AU
max. Earth dist.	12880 Jul 02 13:31	17°♑19'49	1.43052 AU	superior conj	12881 Jun 20 01:10	9°♑03'19	-2°09'39
superior conj	12880 Jul 09 14:22	28°♑59'27	-1°49'56	minimum elong	12881 Jun 20 05:25	9°♑20'33	2°10'29
minimum elong	12880 Jul 09 21:25	29°♑29'17	1°50'10		12881 Jul 02 16:37	0°♒	
	12880 Jul 10 04:39	0°♒		evening rise	12881 Jul 03 14:01	1°♒30'37	
evening rise	12880 Jul 21 09:26	19°♒35'05		asc. node	12881 Jul 11 09:25	14°♒38'27	
asc. node	12880 Jul 24 12:38	25°♒09'47		evening max el	12881 Jul 21 11:15	28°♒43'41	18°07'40
	12880 Jul 27 06:50	0°♓			12881 Jul 22 21:14	0°♓	
evening max el	12880 Aug 06 21:03	15°♓22'02	18°03'53	retrograde	12881 Jul 27 20:09	2°♓04'11	
retrograde	12880 Aug 13 13:09	18°♓47'35		evening set	12881 Jul 30 14:58	1°♓23'48	
evening set	12880 Aug 15 23:47	18°♓19'59			12881 Aug 01 19:18	30°♓♒	
inferior conj	12880 Aug 22 18:03	13°♓20'45	1°09'59	inferior conj	12881 Aug 05 19:04	26°♒06'31	2°08'06
minimum elong	12880 Aug 22 20:01	13°♓16'02	1°08'56	minimum elong	12881 Aug 05 21:37	25°♒59'33	2°06'46
min. Earth dist.	12880 Aug 25 21:46	10°♓20'11	0.60842 AU	min. Earth dist.	12881 Aug 08 12:03	23°♒10'43	0.63078 AU
desc. node	12880 Aug 26 16:41	9°♓37'58		morning rise	12881 Aug 12 02:21	19°♒53'35	
morning rise	12880 Aug 29 13:25	7°♓25'40		desc. node	12881 Aug 13 14:09	18°♒53'37	
direct	12880 Sep 05 04:00	5°♓15'16		direct	12881 Aug 18 18:27	17°♒23'40	
morning max el	12880 Sep 19 10:14	13°♓11'04	27°56'02	morning max el	12881 Sep 01 18:26	25°♒25'43	27°50'36
	12880 Oct 02 20:28	0°♐			12881 Sep 05 23:15	0°♓	
	12880 Oct 20 01:20	0°♑			12881 Sep 26 08:44	0°♐	

morning set	12881 Oct 06 06:27	18°♄37'29		morning max el	12882 Aug 15 05:12	8°♄15'01	27°10'58
asc. node	12881 Oct 07 11:04	21°♄02'54			12882 Sep 01 03:06	0°♄	
max. Earth dist.	12881 Oct 11 09:07	29°♄15'43	1.32165 AU		12882 Sep 18 17:08	0°♄	
	12881 Oct 11 17:23	0°♄		morning set	12882 Sep 19 17:36	1°♄57'47	
superior conj	12881 Oct 13 23:45	4°♄54'11	0°59'19	max. Earth dist.	12882 Sep 24 03:07	10°♄43'20	1.33415 AU
minimum elong	12881 Oct 13 21:31	4°♄42'01	0°59'26	asc. node	12882 Sep 24 07:40	11°♄06'36	
evening rise	12881 Oct 20 19:50	19°♄49'57		superior conj	12882 Sep 28 02:50	19°♄01'58	0°35'45
	12881 Oct 25 17:06	0°♄		minimum elong	12882 Sep 28 01:08	18°♄52'59	0°35'39
desc. node	12881 Nov 09 10:33	23°♄57'05			12882 Oct 03 05:49	0°♄	
evening max el	12881 Nov 13 16:30	28°♄35'52	23°43'12	evening rise	12882 Oct 05 06:33	4°♄20'02	
	12881 Nov 15 05:18	0°♄			12882 Oct 19 03:19	0°♄	
retrograde	12881 Nov 27 04:30	5°♄19'36		evening max el	12882 Oct 26 04:18	8°♄39'00	22°02'08
evening set	12881 Dec 01 20:13	4°♄32'24		desc. node	12882 Oct 27 07:52	9°♄43'39	
min. Earth dist.	12881 Dec 08 03:02	1°♄30'26	0.55477 AU	retrograde	12882 Nov 07 19:28	14°♄55'07	
inferior conj	12881 Dec 10 00:01	0°♄23'40	-5°49'59	evening set	12882 Nov 11 00:54	14°♄31'56	
minimum elong	12881 Dec 10 03:27	0°♄18'32	5°48'46	inferior conj	12882 Nov 19 19:17	10°♄36'14	-5°44'33
	12881 Dec 10 15:59	30°♄		minimum elong	12882 Nov 19 13:58	10°♄43'42	5°43'06
morning rise	12881 Dec 18 12:33	26°♄29'31		min. Earth dist.	12882 Nov 19 09:36	10°♄49'49	0.54619 AU
direct	12881 Dec 21 05:25	26°♄11'25		morning rise	12882 Nov 28 04:10	6°♄49'00	
	12881 Dec 30 10:35	0°♄		direct	12882 Dec 01 16:04	6°♄21'58	
morning max el	12881 Dec 31 20:30	1°♄15'49	20°14'16	morning max el	12882 Dec 13 19:52	12°♄10'10	21°45'47
asc. node	12882 Jan 03 11:21	4°♄03'58		asc. node	12882 Dec 21 08:28	21°♄18'10	
	12882 Jan 18 17:25	0°♄			12882 Dec 26 15:41	0°♄	
morning set	12882 Jan 19 03:59	0°♄54'00		morning set	12883 Jan 03 13:52	15°♄38'27	
					12883 Jan 10 08:36	0°♄	
superior conj	12882 Jan 26 19:12	16°♄31'50	1°11'47	superior conj	12883 Jan 10 17:38	0°♄47'21	1°27'17
minimum elong	12882 Jan 26 21:55	16°♄45'31	1°12'10	minimum elong	12883 Jan 10 19:39	0°♄57'57	1°27'59
max. Earth dist.	12882 Feb 01 10:51	27°♄35'56	1.36630 AU	max. Earth dist.	12883 Jan 14 22:39	9°♄26'52	1.34670 AU
	12882 Feb 02 17:25	0°♄		evening rise	12883 Jan 19 04:20	17°♄45'34	
evening rise	12882 Feb 05 05:36	4°♄37'12		desc. node	12883 Jan 23 06:54	25°♄22'54	
desc. node	12882 Feb 05 10:14	4°♄58'15			12883 Jan 25 21:29	0°♄	
	12882 Feb 20 13:48	0°♄			12883 Feb 14 20:18	0°♄	
evening max el	12882 Mar 12 17:53	25°♄47'27	25°48'15	evening max el	12883 Feb 23 07:32	9°♄31'30	26°46'56
	12882 Mar 17 16:03	0°♄		retrograde	12883 Mar 08 12:13	16°♄55'41	
retrograde	12882 Mar 25 06:04	2°♄58'49		evening set	12883 Mar 14 23:14	14°♄23'15	
evening set	12882 Mar 31 06:59	0°♄30'00		min. Earth dist.	12883 Mar 18 23:45	10°♄22'35	0.66104 AU
	12882 Mar 31 20:42	30°♄		asc. node	12883 Mar 19 05:48	10°♄05'08	
asc. node	12882 Apr 01 08:21	29°♄32'33		inferior conj	12883 Mar 21 00:17	8°♄00'07	0°33'45
min. Earth dist.	12882 Apr 04 13:03	25°♄55'26	0.67424 AU	minimum elong	12883 Mar 20 23:24	8°♄02'43	0°33'23
inferior conj	12882 Apr 06 01:26	24°♄00'22	1°26'08	morning rise	12883 Mar 27 00:48	2°♄22'16	
minimum elong	12882 Apr 05 23:35	24°♄06'15	1°25'11	direct	12883 Mar 29 22:43	1°♄35'25	
morning rise	12882 Apr 11 16:48	18°♄11'19		morning max el	12883 Apr 05 08:27	4°♄58'19	18°13'40
direct	12882 Apr 15 00:58	17°♄07'32		desc. node	12883 Apr 21 09:03	27°♄50'57	
morning max el	12882 Apr 21 19:03	20°♄46'37	18°52'51		12883 Apr 22 17:15	0°♄	
	12882 Apr 29 06:01	0°♄		morning set	12883 Apr 24 15:48	3°♄06'43	
desc. node	12882 May 04 12:25	7°♄44'58					
greatest brilliancy	12882 May 05 11:24	9°♄12'11	-0.8m	superior conj	12883 May 09 23:24	27°♄23'45	-1°54'14
morning set	12882 May 14 07:24	22°♄50'15		minimum elong	12883 May 09 14:39	26°♄49'31	1°54'20
	12882 May 18 21:57	0°♄		max. Earth dist.	12883 May 11 14:39	29°♄57'10	1.45786 AU
max. Earth dist.	12882 May 28 19:06	15°♄24'19	1.45578 AU		12883 May 11 15:22	0°♄	
				evening rise	12883 May 26 00:24	22°♄23'35	
superior conj	12882 May 30 15:48	18°♄19'30	-2°12'02		12883 May 30 21:45	0°♄	
minimum elong	12882 May 30 12:50	18°♄07'51	2°12'55	greatest brilliancy	12883 Jun 06 06:30	9°♄47'39	-0.7m
	12882 Jun 07 01:11	0°♄		asc. node	12883 Jun 15 03:15	22°♄20'38	
evening rise	12882 Jun 14 19:09	12°♄26'03		evening max el	12883 Jun 18 10:08	26°♄04'11	19°08'39
	12882 Jun 25 18:37	0°♄		retrograde	12883 Jun 25 07:48	29°♄54'07	
asc. node	12882 Jun 28 06:17	3°♄44'53		evening set	12883 Jun 28 20:01	28°♄42'40	
evening max el	12882 Jul 05 00:27	12°♄20'05	18°29'32	inferior conj	12883 Jul 04 06:56	22°♄54'55	3°06'36
retrograde	12882 Jul 11 11:32	15°♄48'59		minimum elong	12883 Jul 04 08:04	22°♄51'14	3°05'34
evening set	12882 Jul 14 14:49	14°♄53'43		min. Earth dist.	12883 Jul 05 19:27	20°♄57'12	0.66714 AU
inferior conj	12882 Jul 20 08:33	9°♄20'28	2°45'47	morning rise	12883 Jul 09 19:30	16°♄31'18	
minimum elong	12882 Jul 20 10:38	9°♄14'12	2°44'35	direct	12883 Jul 15 23:29	13°♄51'12	
min. Earth dist.	12882 Jul 22 11:45	6°♄47'21	0.65079 AU	desc. node	12883 Jul 18 08:54	14°♄12'02	
morning rise	12882 Jul 26 05:18	2°♄58'54		morning max el	12883 Jul 28 16:04	21°♄26'07	26°05'06
desc. node	12882 Jul 31 11:33	0°♄24'20			12883 Aug 05 02:39	0°♄	
direct	12882 Aug 01 17:26	0°♄18'47					

































































































































	12883 Aug 25 08:06	0°♍		direct	12884 Jun 28 11:16	27°♊52'07	
morning set	12883 Sep 02 15:46	14°♍40'21		desc. node	12884 Jul 04 06:08	29°♊53'39	
max. Earth dist.	12883 Sep 06 10:45	21°♍50'44	1.35170 AU		12884 Jul 04 10:02	0°♋	
	12883 Sep 10 13:50	0°♌		morning max el	12884 Jul 10 02:14	4°♋50'10	24°42'34
asc. node	12883 Sep 11 04:14	1°♌12'45			12884 Jul 29 11:15	0°♍	
				morning set	12884 Aug 14 20:45	26°♍35'11	
superior conj	12883 Sep 11 22:27	2°♌45'17	0°07'13		12884 Aug 16 18:54	0°♍	
minimum elong	12883 Sep 11 22:02	2°♌43'13	0°07'04	max. Earth dist.	12884 Aug 18 10:39	2°♍59'39	1.37321 AU
behind sun begin	12883 Sep 11 16:35	2°♌15'24					
behind sun end	12883 Sep 12 03:30	3°♌11'05		superior conj	12884 Aug 25 07:28	15°♍56'39	-0°25'21
evening rise	12883 Sep 19 14:50	18°♌40'53		minimum elong	12884 Aug 25 09:09	16°♍04'52	0°25'23
	12883 Sep 25 06:22	0°♎		asc. node	12884 Aug 28 00:51	21°♍18'00	
evening max el	12883 Oct 08 02:29	19°♎09'19	20°33'03		12884 Sep 01 09:08	0°♏	
desc. node	12883 Oct 14 05:17	23°♎34'49		evening rise	12884 Sep 02 18:23	2°♏46'50	
retrograde	12883 Oct 19 06:19	24°♎41'55			12884 Sep 19 04:40	0°♎	
evening set	12883 Oct 21 11:12	24°♎29'55		evening max el	12884 Sep 19 14:47	0°♎25'48	19°23'56
inferior conj	12883 Oct 30 11:25	20°♎34'47	-4°40'21	retrograde	12884 Sep 29 02:29	5°♎10'15	
minimum elong	12883 Oct 30 01:23	20°♎49'19	4°37'00	desc. node	12884 Sep 30 02:46	5°♎07'13	
min. Earth dist.	12883 Oct 31 16:43	19°♎52'23	0.54675 AU	evening set	12884 Sep 30 23:04	5°♎00'09	
morning rise	12883 Nov 07 15:12	16°♎35'43		inferior conj	12884 Oct 09 14:48	0°♎52'30	-2°57'26
direct	12883 Nov 12 00:51	15°♎54'02		minimum elong	12884 Oct 09 07:10	1°♎04'55	2°54'12
morning max el	12883 Nov 25 08:27	22°♎22'51	23°32'14		12884 Oct 10 23:00	30°♏♌	
	12883 Dec 02 00:13	0°♐		min. Earth dist.	12884 Oct 12 02:56	29°♏15'06	0.55651 AU
asc. node	12883 Dec 08 05:28	9°♐25'04		morning rise	12884 Oct 17 13:00	26°♏23'21	
	12883 Dec 18 20:55	0°♑		direct	12884 Oct 22 18:49	25°♏21'20	
morning set	12883 Dec 19 01:34	0°♑24'47			12884 Nov 03 00:45	0°♎	
				morning max el	12884 Nov 05 18:40	2°♎23'44	25°18'39
superior conj	12883 Dec 25 22:44	15°♑19'37	1°36'01	asc. node	12884 Nov 24 02:23	28°♎11'25	
minimum elong	12883 Dec 25 23:43	15°♑24'56	1°36'56		12884 Nov 25 01:48	0°♐	
max. Earth dist.	12883 Dec 28 18:24	21°♑21'55	1.33099 AU	morning set	12884 Dec 02 13:14	15°♐07'30	
	12884 Jan 01 22:38	0°♑					
evening rise	12884 Jan 02 15:40	1°♑25'21		superior conj	12884 Dec 09 07:59	0°♑00'55	1°38'24
desc. node	12884 Jan 10 03:39	15°♑34'43		minimum elong	12884 Dec 09 07:51	0°♑00'11	1°39'23
	12884 Jan 18 20:14	0°♒			12884 Dec 09 07:49	0°♑	
evening max el	12884 Feb 05 20:47	22°♒59'10	27°23'52	max. Earth dist.	12884 Dec 10 21:28	3°♑27'10	1.31989 AU
	12884 Feb 16 13:07	0°♓		evening rise	12884 Dec 16 12:24	15°♑27'52	
retrograde	12884 Feb 19 11:53	0°♓25'22			12884 Dec 23 23:08	0°♑	
	12884 Feb 22 07:42	30°♒♒		desc. node	12884 Dec 27 00:31	5°♑27'07	
evening set	12884 Feb 26 06:40	27°♒55'31			12885 Jan 12 18:27	0°♒	
min. Earth dist.	12884 Mar 01 02:54	24°♒26'34	0.64427 AU	evening max el	12885 Jan 18 07:33	5°♒56'34	27°32'16
inferior conj	12884 Mar 03 15:03	21°♒46'02	-0°29'27	retrograde	12885 Feb 01 04:04	13°♒17'56	
minimum elong	12884 Mar 03 15:56	21°♒43'39	0°28'50	evening set	12885 Feb 08 02:33	10°♒57'55	
asc. node	12884 Mar 05 03:15	20°♒11'09		min. Earth dist.	12885 Feb 11 20:31	7°♒56'24	0.62463 AU
morning rise	12884 Mar 10 03:09	16°♒21'51		inferior conj	12885 Feb 14 18:39	5°♒09'30	-1°42'52
direct	12884 Mar 12 16:21	15°♒48'30		minimum elong	12885 Feb 14 22:09	5°♒01'10	1°40'57
morning max el	12884 Mar 19 01:26	19°♒06'37	17°51'33	asc. node	12885 Feb 20 00:42	0°♒52'43	
	12884 Mar 27 05:30	0°♓		morning rise	12885 Feb 21 20:22	0°♒02'05	
morning set	12884 Apr 05 04:44	14°♓46'48			12885 Feb 21 22:52	30°♒♑	
desc. node	12884 Apr 07 05:37	18°♓11'27		direct	12885 Feb 24 02:39	29°♑38'40	
	12884 Apr 14 09:07	0°♔			12885 Feb 26 05:49	0°♒	
				morning max el	12885 Mar 02 19:00	3°♒02'31	17°46'59
superior conj	12884 Apr 18 17:37	7°♔02'24	-1°20'43	morning set	12885 Mar 18 17:26	27°♒34'10	
minimum elong	12884 Apr 18 09:27	6°♔29'38	1°20'15		12885 Mar 20 02:35	0°♓	
max. Earth dist.	12884 Apr 23 10:27	14°♔30'47	1.45253 AU	desc. node	12885 Mar 25 02:09	8°♓41'16	
	12884 May 03 09:33	0°♕					
evening rise	12884 May 04 14:00	1°♕49'05		superior conj	12885 Mar 30 09:57	17°♓44'10	-0°40'30
greatest brilliancy	12884 May 19 14:06	24°♕20'13	-0.6m	minimum elong	12885 Mar 30 05:58	17°♓27'29	0°40'05
	12884 May 23 13:58	0°♖		max. Earth dist.	12885 Apr 06 03:54	28°♓48'09	1.44033 AU
evening max el	12884 May 31 14:37	9°♖51'36	20°03'30		12885 Apr 06 21:48	0°♔	
asc. node	12884 Jun 01 00:21	10°♖15'38		evening rise	12885 Apr 14 02:58	11°♔20'59	
retrograde	12884 Jun 08 06:21	14°♖13'59			12885 Apr 26 12:33	0°♕	
evening set	12884 Jun 12 04:10	12°♖45'45		evening max el	12885 May 14 13:14	23°♕39'11	21°11'35
inferior conj	12884 Jun 17 11:20	6°♖44'47	3°13'29	asc. node	12885 May 18 21:34	27°♕16'15	
minimum elong	12884 Jun 17 11:25	6°♖44'30	3°12'30	retrograde	12885 May 23 05:08	28°♕42'32	
min. Earth dist.	12884 Jun 18 09:29	5°♖29'45	0.67907 AU	evening set	12885 May 27 13:14	26°♕57'53	
morning rise	12884 Jun 22 18:21	0°♖23'16		inferior conj	12885 Jun 01 19:19	20°♕45'11	3°08'31
	12884 Jun 23 05:07	30°♒♕		minimum elong	12885 Jun 01 18:25	20°♕48'17	3°07'29

min. Earth dist.	12885 Jun 02 03:49	20° Π 15'39	0.68624 AU	min. Earth dist.	12886 May 17 00:21	5° Π 07'55	0.68869 AU
morning rise	12885 Jun 06 23:25	14° Π 28'12			12886 May 21 00:02	30° \mathbb{R} \mathcal{B}	
direct	12885 Jun 12 03:45	12° Π 12'32		morning rise	12886 May 22 08:38	28° \mathcal{B} 41'32	
desc. node	12885 Jun 21 03:14	17° Π 01'17		direct	12886 May 26 23:56	26° \mathcal{B} 45'11	
morning max el	12885 Jun 22 12:48	18° Π 22'39	23°13'11		12886 Jun 02 20:57	0° Π	
	12885 Jul 02 06:31	0° \mathcal{E}		morning max el	12886 Jun 05 02:19	2° Π 03'25	21°45'45
	12885 Jul 22 13:40	0° \mathcal{Q}		desc. node	12886 Jun 08 00:14	5° Π 12'07	
morning set	12885 Jul 27 03:54	7° \mathcal{Q} 31'05			12886 Jun 26 03:59	0° \mathcal{E}	
max. Earth dist.	12885 Jul 31 08:46	14° \mathcal{Q} 39'10	1.39651 AU	morning set	12886 Jul 07 09:43	17° \mathcal{E} 19'33	
				max. Earth dist.	12886 Jul 13 10:20	27° \mathcal{E} 06'28	1.41894 AU
					12886 Jul 15 04:02	0° \mathcal{Q}	
superior conj	12885 Aug 08 02:01	28° \mathcal{Q} 26'52	-1°00'00				
minimum elong	12885 Aug 08 06:23	28° \mathcal{Q} 46'59	0°59'52	superior conj	12886 Jul 21 01:33	10° \mathcal{Q} 04'59	-1°33'20
	12885 Aug 08 22:08	0° \mathbb{P}		minimum elong	12886 Jul 21 08:13	10° \mathcal{Q} 34'05	1°33'20
asc. node	12885 Aug 14 21:30	11° \mathbb{P} 18'48		evening rise	12886 Jul 31 22:37	29° \mathcal{Q} 40'50	
evening rise	12885 Aug 17 14:15	16° \mathbb{P} 30'23			12886 Aug 01 02:48	0° \mathbb{P}	
	12885 Aug 24 20:09	0° \mathcal{A}		asc. node	12886 Aug 01 18:12	1° \mathbb{P} 10'39	
evening max el	12885 Sep 02 15:27	12° \mathcal{A} 29'27	18°36'38	evening max el	12886 Aug 17 00:32	25° \mathbb{P} 11'08	18°10'12
retrograde	12885 Sep 10 16:48	16° \mathcal{A} 32'51		retrograde	12886 Aug 24 01:42	28° \mathbb{P} 46'21	
evening set	12885 Sep 12 15:47	16° \mathcal{A} 19'16		evening set	12886 Aug 26 07:36	28° \mathbb{P} 25'01	
desc. node	12885 Sep 17 00:16	14° \mathcal{A} 24'13		inferior conj	12886 Sep 02 11:39	23° \mathbb{P} 37'27	0°26'05
inferior conj	12885 Sep 20 14:26	11° \mathcal{A} 52'12	-1°08'00	minimum elong	12886 Sep 02 12:30	23° \mathbb{P} 35'33	0°25'32
minimum elong	12885 Sep 20 11:42	11° \mathcal{A} 57'24	1°06'48	desc. node	12886 Sep 03 21:47	22° \mathbb{P} 21'24	
min. Earth dist.	12885 Sep 23 18:57	9° \mathcal{A} 27'52	0.57362 AU	min. Earth dist.	12886 Sep 05 18:47	20° \mathbb{P} 43'30	0.59520 AU
morning rise	12885 Sep 28 04:09	6° \mathcal{A} 45'06		morning rise	12886 Sep 09 14:04	17° \mathbb{P} 56'55	
direct	12885 Oct 04 02:53	5° \mathcal{A} 17'01		direct	12886 Sep 16 00:45	16° \mathbb{P} 00'43	
morning max el	12885 Oct 18 10:00	12° \mathcal{A} 46'35	26°46'32	morning max el	12886 Sep 30 08:46	23° \mathbb{P} 50'04	27°41'41
	12885 Oct 31 23:09	0° \mathbb{L}			12886 Oct 05 22:36	0° \mathcal{A}	
asc. node	12885 Nov 10 23:13	17° \mathbb{L} 26'57			12886 Oct 25 04:51	0° \mathbb{L}	
morning set	12885 Nov 16 23:13	29° \mathbb{L} 42'07		asc. node	12886 Oct 28 19:58	7° \mathbb{L} 03'05	
	12885 Nov 17 02:34	0° \mathcal{X}		morning set	12886 Nov 01 05:38	14° \mathbb{L} 02'49	
				max. Earth dist.	12886 Nov 07 13:33	27° \mathbb{L} 49'49	1.31267 AU
superior conj	12885 Nov 23 19:22	14° \mathcal{X} 45'24	1°34'49				
minimum elong	12885 Nov 23 18:14	14° \mathcal{X} 39'03	1°35'40	superior conj	12886 Nov 08 06:55	29° \mathbb{L} 26'32	1°25'28
max. Earth dist.	12885 Nov 24 05:05	15° \mathcal{X} 39'32	1.31373 AU	minimum elong	12886 Nov 08 05:02	29° \mathbb{L} 16'00	1°26'04
evening rise	12885 Nov 30 15:56	29° \mathcal{X} 46'40			12886 Nov 08 12:55	0° \mathcal{X}	
	12885 Nov 30 18:27	0° \mathcal{Z}		evening rise	12886 Nov 14 23:57	14° \mathcal{X} 15'01	
desc. node	12885 Dec 13 21:31	24° \mathcal{Z} 52'14			12886 Nov 22 18:55	0° \mathcal{Z}	
	12885 Dec 17 02:30	0° \mathcal{A}		desc. node	12886 Nov 30 18:36	13° \mathcal{Z} 38'36	
evening max el	12885 Dec 31 13:10	18° \mathcal{A} 11'01	27°07'18	evening max el	12886 Dec 13 11:15	29° \mathcal{Z} 33'53	26°08'10
retrograde	12886 Jan 14 11:51	25° \mathcal{A} 24'35			12886 Dec 13 22:26	0° \mathcal{A}	
evening set	12886 Jan 21 07:37	23° \mathcal{A} 22'40		retrograde	12886 Dec 27 09:48	6° \mathcal{A} 38'10	
min. Earth dist.	12886 Jan 25 03:33	20° \mathcal{A} 40'24	0.60322 AU	evening set	12887 Jan 02 17:46	5° \mathcal{A} 02'38	
inferior conj	12886 Jan 28 07:37	18° \mathcal{A} 01'37	-3°03'31	min. Earth dist.	12887 Jan 07 00:27	2° \mathcal{A} 26'28	0.58184 AU
minimum elong	12886 Jan 28 14:08	17° \mathcal{A} 47'59	3°00'24	inferior conj	12887 Jan 10 02:23	0° \mathcal{A} 12'22	-4°23'52
morning rise	12886 Feb 04 23:41	13° \mathcal{A} 14'05		minimum elong	12887 Jan 10 10:58	29° \mathcal{Z} 56'46	4°20'31
asc. node	12886 Feb 06 22:04	12° \mathcal{A} 57'08			12887 Jan 10 09:11	30° \mathbb{R} \mathcal{Z}	
direct	12886 Feb 07 01:39	12° \mathcal{A} 57'02		morning rise	12887 Jan 18 07:02	25° \mathcal{Z} 46'40	
morning max el	12886 Feb 14 09:45	16° \mathcal{A} 36'53	18°00'56	direct	12887 Jan 20 08:57	25° \mathcal{Z} 32'26	
	12886 Feb 23 19:35	0° \mathcal{H}		asc. node	12887 Jan 24 19:22	26° \mathcal{Z} 41'08	
morning set	12886 Mar 01 23:41	11° \mathcal{H} 09'59		morning max el	12887 Jan 28 17:51	29° \mathcal{Z} 38'33	18°35'05
desc. node	12886 Mar 11 22:41	29° \mathcal{H} 16'41			12887 Jan 29 02:28	0° \mathcal{A}	
				morning set	12887 Feb 13 18:13	25° \mathcal{A} 18'40	
superior conj	12886 Mar 12 02:31	29° \mathcal{H} 33'36	-0°01'16		12887 Feb 16 04:22	0° \mathcal{H}	
minimum elong	12886 Mar 12 02:25	29° \mathcal{H} 33'09	0°01'08				
behind sun begin	12886 Mar 11 18:31	28° \mathcal{H} 58'17		superior conj	12887 Feb 22 15:53	12° \mathcal{H} 20'16	0°32'41
behind sun end	12886 Mar 12 10:19	0° \mathcal{Y} 07'55		minimum elong	12887 Feb 22 18:01	12° \mathcal{H} 30'11	0°32'44
	12886 Mar 12 08:31	0° \mathcal{Y}		desc. node	12887 Feb 26 19:14	19° \mathcal{H} 54'12	
max. Earth dist.	12886 Mar 19 16:37	12° \mathcal{Y} 32'46	1.42259 AU	max. Earth dist.	12887 Mar 02 00:40	25° \mathcal{H} 35'50	1.40128 AU
evening rise	12886 Mar 25 05:25	21° \mathcal{Y} 33'00			12887 Mar 04 14:14	0° \mathcal{Y}	
	12886 Mar 30 14:56	0° \mathcal{B}		evening rise	12887 Mar 06 04:24	2° \mathcal{Y} 40'30	
	12886 Apr 20 18:20	0° Π			12887 Mar 23 21:21	0° \mathcal{B}	
evening max el	12886 Apr 27 06:45	7° Π 27'08	22°28'51				
asc. node	12886 May 05 18:50	13° Π 06'33		evening max el	12887 Apr 09 21:18	21° \mathcal{B} 17'45	23°49'47
retrograde	12886 May 07 02:25	13° Π 14'36		retrograde	12887 Apr 20 20:48	27° \mathcal{B} 45'15	
evening set	12886 May 11 21:30	11° Π 14'37		asc. node	12887 Apr 22 16:08	27° \mathcal{B} 30'24	
inferior conj	12886 May 17 04:47	4° Π 52'29	2°52'55	evening set	12887 Apr 26 03:25	25° \mathcal{B} 31'54	
minimum elong	12886 May 17 03:08	4° Π 58'14	2°51'47	min. Earth dist.	12887 Apr 30 20:56	20° \mathcal{B} 01'09	0.68655 AU

inferior conj	12887 May 01 13:50	19°  03'29	2°27'13	inferior conj	12888 Apr 14 20:32	3°  13'44	1°51'26
minimum elong	12887 May 01 11:44	19°  10'38	2°26'02	minimum elong	12888 Apr 14 18:26	3°  20'37	1°50'19
morning rise	12887 May 06 20:04	12°  59'50			12888 Apr 17 10:40	30°  R 	
direct	12887 May 10 22:42	11°  824'21		morning rise	12888 Apr 20 07:48	27°  Y18'47	
morning max el	12887 May 18 21:46	15°  855'07	20°27'28	direct	12888 Apr 23 22:30	26°  Y03'47	
desc. node	12887 May 25 21:08	24°  809'20		morning max el	12888 May 01 00:47	29°  Y57'48	19°22'49
	12887 May 30 03:39	0°  II			12888 May 01 01:41	0°  8	
morning set	12887 Jun 16 17:25	26°  II11'10		desc. node	12888 May 11 17:54	13°  839'58	
	12887 Jun 19 04:19	0°  ☿		greatest brilliancy	12888 May 13 18:18	16°  837'16	-0.7m
max. Earth dist.	12887 Jun 25 18:29	10°  ☿25'37	1.43791 AU		12888 May 22 14:51	0°  II	
				morning set	12888 May 25 18:42	4°  II51'05	
superior conj	12887 Jul 02 02:12	20°  ☿43'52	-2°00'01	max. Earth dist.	12888 Jun 07 09:11	24°  II27'13	1.45128 AU
minimum elong	12887 Jul 02 08:42	21°  ☿10'46	2°00'31		12888 Jun 10 21:18	0°  ☿	
	12887 Jul 07 14:36	0°  Ω					
evening rise	12887 Jul 14 14:48	12°  Ω06'53		superior conj	12888 Jun 11 03:24	0°  ☿24'15	-2°13'06
asc. node	12887 Jul 19 14:57	20°  Ω49'21		minimum elong	12888 Jun 11 04:56	0°  ☿30'20	2°14'04
	12887 Jul 25 04:22	0°  ♍		evening rise	12888 Jun 25 09:42	23°  ☿36'37	
evening max el	12887 Jul 31 13:58	8°  ♍21'14	18°03'18		12888 Jun 29 06:04	0°  Ω	
retrograde	12887 Aug 07 01:47	11°  ♍42'44		asc. node	12888 Jul 05 11:46	10°  Ω08'58	
evening set	12887 Aug 09 15:52	11°  ♍10'03		evening max el	12888 Jul 14 04:08	21°  Ω49'53	18°14'52
inferior conj	12887 Aug 16 03:41	6°  ♍03'13	1°37'17	retrograde	12888 Jul 20 12:42	25°  Ω11'58	
minimum elong	12887 Aug 16 06:04	5°  ♍57'08	1°36'02	evening set	12888 Jul 23 11:12	24°  Ω25'19	
min. Earth dist.	12887 Aug 19 03:35	3°  ♍01'56	0.61811 AU	inferior conj	12888 Jul 29 10:25	19°  Ω01'03	2°26'20
desc. node	12887 Aug 21 19:15	0°  ♍41'11		minimum elong	12888 Jul 29 12:52	18°  Ω54'05	2°25'02
morning rise	12887 Aug 22 17:48	29°  Ω59'23		min. Earth dist.	12888 Jul 31 21:45	16°  Ω13'11	0.63971 AU
	12887 Aug 22 17:27	30°  R 		morning rise	12888 Aug 04 13:01	12°  Ω43'48	
direct	12887 Aug 29 09:58	27°  Ω39'17		desc. node	12888 Aug 07 16:40	10°  Ω50'15	
	12887 Sep 05 15:34	0°  ♍		direct	12888 Aug 11 04:11	10°  Ω08'20	
morning max el	12887 Sep 12 14:00	5°  ♍39'17	27°58'10	morning max el	12888 Aug 24 23:23	18°  Ω08'46	27°37'32
	12887 Sep 30 22:27	0°  ♌			12888 Sep 03 22:26	0°  ♍	
asc. node	12887 Oct 15 16:39	26°  ♌53'49			12888 Sep 22 20:06	0°  ♌	
morning set	12887 Oct 16 06:31	28°  ♌04'45		morning set	12888 Sep 28 23:29	11°  ♌41'56	
	12887 Oct 17 04:48	0°  ♌		asc. node	12888 Oct 01 13:18	16°  ♌53'57	
max. Earth dist.	12887 Oct 21 19:16	9°  ♌49'31	1.31686 AU	max. Earth dist.	12888 Oct 03 18:31	21°  ♌30'22	1.32633 AU
superior conj	12887 Oct 23 16:47	13°  ♌59'12	1°10'29	superior conj	12888 Oct 06 22:59	28°  ♌17'44	0°49'59
minimum elong	12887 Oct 23 14:31	13°  ♌46'47	1°10'45	minimum elong	12888 Oct 06 20:53	28°  ♌06'28	0°49'59
evening rise	12887 Oct 30 10:29	28°  ♌48'08			12888 Oct 07 17:55	0°  ♌	
	12887 Oct 30 23:52	0°  ♌		evening rise	12888 Oct 13 21:42	13°  ♌20'57	
	12887 Nov 16 13:21	0°  ♌			12888 Oct 22 04:54	0°  ♌	
desc. node	12887 Nov 17 15:46	1°  ♌31'45		desc. node	12888 Nov 03 13:02	18°  ♌11'59	
evening max el	12887 Nov 25 01:21	10°  ♌07'39	24°40'52	evening max el	12888 Nov 05 11:29	20°  ♌12'08	22°59'40
retrograde	12887 Dec 08 19:30	17°  ♌00'00		retrograde	12888 Nov 18 16:05	26°  ♌45'26	
evening set	12887 Dec 14 04:50	15°  ♌55'40		evening set	12888 Nov 22 17:19	26°  ♌09'46	
min. Earth dist.	12887 Dec 19 13:07	13°  ♌08'28	0.56318 AU	min. Earth dist.	12888 Nov 29 20:34	22°  ♌53'00	0.55014 AU
inferior conj	12887 Dec 22 00:35	11°  ♌34'22	-5°28'36	inferior conj	12888 Dec 01 03:40	22°  ♌08'28	-5°54'56
minimum elong	12887 Dec 22 07:34	11°  ♌23'17	5°26'29	minimum elong	12888 Dec 01 03:29	22°  ♌08'44	5°53'59
morning rise	12887 Dec 30 12:23	7°  ♌29'43		morning rise	12888 Dec 09 15:10	18°  ♌19'10	
direct	12888 Jan 01 21:22	7°  ♌14'16		direct	12888 Dec 12 15:43	17°  ♌57'46	
morning max el	12888 Jan 11 15:08	11°  ♌55'43	19°31'21	morning max el	12888 Dec 23 22:33	23°  ♌20'25	20°50'40
asc. node	12888 Jan 11 16:36	11°  ♌59'16		asc. node	12888 Dec 28 13:46	28°  ♌36'22	
	12888 Jan 23 20:44	0°  ♌			12888 Dec 29 14:27	0°  ♌	
morning set	12888 Jan 28 20:58	9°  ♌48'05		morning set	12889 Jan 12 05:00	24°  ♌29'50	
					12889 Jan 14 20:24	0°  ♌	
superior conj	12888 Feb 05 21:20	25°  ♌50'37	0°59'37	superior conj	12889 Jan 19 14:40	9°  ♌53'07	1°19'13
minimum elong	12888 Feb 06 00:10	26°  ♌04'26	0°59'50	minimum elong	12889 Jan 19 17:09	10°  ♌05'53	1°19'44
	12888 Feb 08 00:44	0°  ♌		max. Earth dist.	12889 Jan 24 15:52	19°  ♌59'36	1.35764 AU
max. Earth dist.	12888 Feb 12 06:56	8°  ♌00'06	1.37884 AU	evening rise	12889 Jan 28 14:16	27°  ♌28'32	
desc. node	12888 Feb 13 15:48	10°  ♌29'48			12889 Jan 29 23:13	0°  ♌	
evening rise	12888 Feb 16 00:15	14°  ♌41'37		desc. node	12889 Jan 30 12:26	1°  ♌00'01	
	12888 Feb 25 03:54	0°  ♌			12889 Feb 17 12:23	0°  ♌	
	12888 Mar 17 15:51	0°  ♌		evening max el	12889 Mar 05 00:34	18°  ♌59'57	26°15'22
evening max el	12888 Mar 22 10:53	5°  ♌10'13	25°07'43	retrograde	12889 Mar 17 20:13	26°  ♌Y17'17	
retrograde	12888 Apr 03 11:01	12°  ♌08'15		evening set	12889 Mar 24 01:44	23°  ♌Y46'22	
asc. node	12888 Apr 08 13:30	10° ♌15'58		asc. node	12889 Mar 26 10:54	21° ♌Y29'00	
evening set	12888 Apr 09 05:22	9° ♌44'13		min. Earth dist.	12889 Mar 28 05:22	19° ♌Y26'29	0.66919 AU
min. Earth dist.	12888 Apr 13 15:20	4° ♌49'16	0.67999 AU				

inferior conj	12889 Mar 29 22:55	17° Υ 18'59	1°05'15	evening set	12890 Mar 07 14:31	7° Υ 31'23	
minimum elong	12889 Mar 29 21:23	17° Υ 23'42	1°04'30	min. Earth dist.	12890 Mar 11 12:57	3° Υ 44'55	0.65440 AU
morning rise	12889 Apr 04 17:52	11° Υ 34'27		asc. node	12890 Mar 13 08:21	1° Υ 42'33	
direct	12889 Apr 07 21:38	10° Υ 38'06		inferior conj	12890 Mar 13 18:39	1° Υ 13'18	0°08'17
morning max el	12889 Apr 14 10:59	14° Υ 08'21	18°34'06	minimum elong	12890 Mar 13 18:25	1° Υ 13'59	0°08'16
	12889 Apr 26 06:49	0° \mathcal{B}		transit middle	12890 Mar 13 18:25	1° Υ 13'59	0°08'16
desc. node	12889 Apr 28 14:36	3° \mathcal{B} 35'11		transit begin	12890 Mar 13 15:51	1° Υ 21'16	
morning set	12889 May 05 11:43	14° \mathcal{B} 21'51		transit end	12890 Mar 13 20:59	1° Υ 06'42	
	12889 May 15 11:09	0° Π			12890 Mar 14 20:54	30° \mathcal{K}	
max. Earth dist.	12889 May 21 04:10	8° Π 55'06	1.45767 AU	morning rise	12890 Mar 19 23:51	25° \mathcal{K} 41'14	
				direct	12890 Mar 22 17:53	25° \mathcal{K} 00'36	
superior conj	12889 May 21 12:51	9° Π 28'58	-2°06'50	morning max el	12890 Mar 29 02:20	28° \mathcal{K} 19'50	18°02'09
minimum elong	12889 May 21 06:47	9° Π 05'17	2°07'26		12890 Mar 30 16:08	0° Υ	
	12889 Jun 03 14:15	0° \mathcal{G}		desc. node	12890 Apr 15 11:13	23° Υ 47'50	
evening rise	12889 Jun 06 04:17	4° \mathcal{G} 05'47		morning set	12890 Apr 16 08:28	25° Υ 14'35	
greatest brilliancy	12889 Jun 14 08:30	17° \mathcal{G} 02'38	-0.8m		12890 Apr 19 06:30	0° \mathcal{B}	
asc. node	12889 Jun 22 08:40	29° \mathcal{G} 02'58					
	12889 Jun 23 01:23	0° Ω		superior conj	12890 Apr 30 22:58	18° \mathcal{B} 42'41	-1°41'24
evening max el	12889 Jun 27 16:05	5° Ω 29'42	18°44'07	minimum elong	12890 Apr 30 13:44	18° \mathcal{B} 06'16	1°41'12
retrograde	12889 Jul 04 06:35	9° Ω 05'58		max. Earth dist.	12890 May 04 00:19	23° \mathcal{B} 30'48	1.45647 AU
evening set	12889 Jul 07 13:40	8° Ω 03'45			12890 May 08 04:05	0° Π	
inferior conj	12889 Jul 13 04:04	2° Ω 23'54	2°56'30	evening rise	12890 May 17 01:24	13° Π 45'35	
minimum elong	12889 Jul 13 05:47	2° Ω 18'33	2°55'22		12890 May 27 16:12	0° \mathcal{G}	
min. Earth dist.	12889 Jul 15 00:54	0° Ω 04'57	0.65826 AU	greatest brilliancy	12890 May 30 05:41	3° \mathcal{G} 49'43	-0.7m
	12889 Jul 15 02:32	30° \mathcal{K} \mathcal{G}		asc. node	12890 Jun 09 05:42	17° \mathcal{G} 22'49	
morning rise	12889 Jul 18 21:02	26° \mathcal{G} 00'53		evening max el	12890 Jun 10 23:38	19° \mathcal{G} 15'20	19°30'09
direct	12889 Jul 25 06:03	23° \mathcal{G} 19'57		retrograde	12890 Jun 18 04:15	23° \mathcal{G} 18'13	
desc. node	12889 Jul 25 14:03	23° \mathcal{G} 20'21		evening set	12890 Jun 21 20:25	21° \mathcal{G} 59'39	
	12889 Aug 06 06:42	0° Ω		inferior conj	12890 Jun 27 05:21	16° \mathcal{G} 05'52	3°11'06
morning max el	12889 Aug 07 10:29	1° Ω 08'26	26°45'42	minimum elong	12890 Jun 27 06:03	16° \mathcal{G} 03'35	3°10'05
	12889 Aug 29 00:09	0° \mathcal{M}		min. Earth dist.	12890 Jun 28 11:38	14° \mathcal{G} 25'47	0.67272 AU
morning set	12889 Sep 12 05:32	24° \mathcal{M} 46'40		morning rise	12890 Jul 02 15:13	9° \mathcal{G} 42'33	
	12889 Sep 14 22:19	0° \mathcal{L}		direct	12890 Jul 08 14:35	7° \mathcal{G} 05'28	
max. Earth dist.	12889 Sep 16 08:26	2° \mathcal{L} 49'01	1.34104 AU	desc. node	12890 Jul 12 11:21	7° \mathcal{G} 59'53	
asc. node	12889 Sep 18 09:54	6° \mathcal{L} 58'48		morning max el	12890 Jul 20 21:20	14° \mathcal{G} 27'04	25°31'31
					12890 Aug 02 14:01	0° Ω	
superior conj	12889 Sep 20 23:12	12° \mathcal{L} 15'22	0°24'13		12890 Aug 21 19:44	0° \mathcal{M}	
minimum elong	12889 Sep 20 21:57	12° \mathcal{L} 08'51	0°24'05	morning set	12890 Aug 25 21:01	7° \mathcal{M} 10'43	
evening rise	12889 Sep 28 07:39	27° \mathcal{L} 47'37		max. Earth dist.	12890 Aug 29 12:26	13° \mathcal{M} 54'35	1.36042 AU
	12889 Sep 29 08:57	0° \mathcal{M}					
	12889 Oct 17 17:49	0° \mathcal{J}		superior conj	12890 Sep 04 14:45	25° \mathcal{M} 46'01	-0°06'13
evening max el	12889 Oct 18 02:38	0° \mathcal{J} 22'07	21°22'07	minimum elong	12890 Sep 04 15:08	25° \mathcal{M} 47'57	0°06'19
desc. node	12889 Oct 21 10:25	3° \mathcal{J} 12'50		behind sun begin	12890 Sep 04 09:19	25° \mathcal{M} 18'52	
retrograde	12889 Oct 30 04:00	6° \mathcal{J} 21'43		behind sun end	12890 Sep 04 20:57	26° \mathcal{M} 17'06	
evening set	12889 Nov 01 21:18	6° \mathcal{J} 04'37		asc. node	12890 Sep 05 06:30	27° \mathcal{M} 05'05	
inferior conj	12889 Nov 10 19:45	2° \mathcal{J} 10'30	-5°23'57		12890 Sep 06 17:07	0° \mathcal{L}	
minimum elong	12889 Nov 10 11:30	2° \mathcal{J} 22'05	5°21'40	evening rise	12890 Sep 12 14:17	12° \mathcal{L} 03'04	
min. Earth dist.	12889 Nov 11 02:40	2° \mathcal{J} 00'47	0.54522 AU		12890 Sep 22 00:26	0° \mathcal{M}	
	12889 Nov 14 20:53	30° \mathcal{K} \mathcal{M}		evening max el	12890 Sep 30 06:40	11° \mathcal{M} 10'37	20°01'00
morning rise	12889 Nov 19 02:30	28° \mathcal{M} 21'13		desc. node	12890 Oct 08 07:51	16° \mathcal{M} 06'56	
direct	12889 Nov 22 23:36	27° \mathcal{M} 48'49		retrograde	12890 Oct 10 17:42	16° \mathcal{M} 23'03	
	12889 Nov 30 13:28	0° \mathcal{J}		evening set	12890 Oct 12 16:57	16° \mathcal{M} 12'49	
morning max el	12889 Dec 05 16:35	3° \mathcal{J} 54'20	22°30'01	inferior conj	12890 Oct 21 15:08	12° \mathcal{M} 13'34	-3°59'34
asc. node	12889 Dec 15 10:51	16° \mathcal{J} 14'34		minimum elong	12890 Oct 21 05:26	12° \mathcal{M} 28'13	3°55'54
	12889 Dec 23 03:40	0° \mathcal{Z}		min. Earth dist.	12890 Oct 23 11:01	11° \mathcal{M} 07'18	0.54977 AU
morning set	12889 Dec 27 15:56	9° \mathcal{Z} 16'04		morning rise	12890 Oct 29 16:40	8° \mathcal{M} 03'08	
				direct	12890 Nov 03 10:55	7° \mathcal{M} 13'43	
superior conj	12890 Jan 03 16:18	24° \mathcal{Z} 16'57	1°31'47	morning max el	12890 Nov 17 03:16	13° \mathcal{M} 58'19	24°18'40
minimum elong	12890 Jan 03 17:55	24° \mathcal{Z} 25'29	1°32'35		12890 Nov 29 13:35	0° \mathcal{J}	
	12890 Jan 06 09:32	0° \approx		asc. node	12890 Dec 02 07:51	4° \mathcal{J} 39'26	
max. Earth dist.	12890 Jan 07 07:06	1° \approx 51'29	1.33950 AU	morning set	12890 Dec 12 03:50	24° \mathcal{J} 01'20	
evening rise	12890 Jan 11 18:47	10° \approx 51'06			12890 Dec 14 22:02	0° \mathcal{Z}	
desc. node	12890 Jan 17 09:09	21° \approx 19'50					
	12890 Jan 22 09:21	0° \mathcal{K}		superior conj	12890 Dec 18 23:29	8° \mathcal{Z} 53'56	1°37'46
	12890 Feb 13 00:05	0° Υ		minimum elong	12890 Dec 18 23:59	8° \mathcal{Z} 56'42	1°38'44
evening max el	12890 Feb 15 14:05	2° Υ 37'49	27°05'32	max. Earth dist.	12890 Dec 21 05:57	13° \mathcal{Z} 49'23	1.32563 AU
retrograde	12890 Feb 28 23:37	10° Υ 03'53		evening rise	12890 Dec 26 10:27	24° \mathcal{Z} 41'12	

	12890 Dec 29 02:35	0°♊			12891 Dec 21 11:33	0°♊	
desc. node	12891 Jan 04 05:58	11°♊24'00		desc. node	12891 Dec 22 02:53	1°♊05'50	
	12891 Jan 15 22:08	0°♋		evening max el	12892 Jan 11 11:22	28°♊34'36	27°26'03
evening max el	12891 Jan 29 02:20	15°♋53'21	27°31'10		12892 Jan 13 00:55	0°♋	
retrograde	12891 Feb 11 20:28	23°♋19'02		retrograde	12892 Jan 25 09:33	5°♋53'14	
evening set	12891 Feb 18 17:25	20°♋52'08		evening set	12892 Feb 01 07:31	3°♋40'09	
min. Earth dist.	12891 Feb 22 12:14	17°♋35'38	0.63621 AU	min. Earth dist.	12892 Feb 05 01:40	0°♋47'48	0.61556 AU
inferior conj	12891 Feb 25 05:03	14°♋50'27	-0°59'27		12892 Feb 05 23:16	30°♌	
minimum elong	12891 Feb 25 06:57	14°♋45'35	0°58'19	inferior conj	12892 Feb 08 02:55	28°♌02'25	-2°16'30
asc. node	12891 Feb 28 05:49	11°♋56'00		minimum elong	12892 Feb 08 07:41	27°♌51'37	2°14'01
morning rise	12891 Mar 03 22:48	9°♋33'15		morning rise	12892 Feb 15 10:44	23°♌02'55	
direct	12891 Mar 06 08:40	9°♋04'44		asc. node	12892 Feb 15 03:14	23°♌09'03	
morning max el	12891 Mar 12 20:01	12°♋24'10	17°47'22	direct	12892 Feb 17 14:40	22°♌42'43	
	12891 Mar 24 23:49	0°♍		morning max el	12892 Feb 24 12:50	26°♌12'34	17°50'31
morning set	12891 Mar 29 08:14	7°♍25'14			12892 Feb 27 19:01	0°♋	
desc. node	12891 Apr 02 07:47	14°♍12'40		morning set	12892 Mar 11 05:14	20°♋36'18	
					12892 Mar 16 11:19	0°♍	
superior conj	12891 Apr 11 01:48	28°♍46'27	-1°03'56	desc. node	12892 Mar 19 04:19	4°♍45'43	
minimum elong	12891 Apr 10 19:15	28°♍19'44	1°03'26				
	12891 Apr 11 19:54	0°♎		superior conj	12892 Mar 22 04:42	9°♍58'13	-0°23'25
max. Earth dist.	12891 Apr 16 18:49	7°♎57'12	1.44807 AU	minimum elong	12892 Mar 22 02:32	9°♍48'57	0°23'08
evening rise	12891 Apr 26 12:36	23°♎08'08		max. Earth dist.	12892 Mar 29 10:14	22°♍02'06	1.43337 AU
	12891 May 01 00:48	0°♏			12892 Apr 03 09:28	0°♎	
	12891 May 22 06:50	0°♐		evening rise	12892 Apr 05 06:04	2°♎55'10	
evening max el	12891 May 25 01:31	3°♐02'36	20°31'07		12892 Apr 23 11:19	0°♏	
asc. node	12891 May 27 02:50	4°♐56'23		evening max el	12892 May 06 21:56	16°♏51'11	21°43'40
retrograde	12891 Jun 02 03:10	7°♐42'07		asc. node	12892 May 13 00:03	21°♏29'36	
evening set	12891 Jun 06 05:09	6°♐07'02		retrograde	12892 May 16 01:24	22°♏13'00	
inferior conj	12891 Jun 11 11:34	0°♐00'52	3°12'45	evening set	12892 May 20 14:04	20°♏21'51	
minimum elong	12891 Jun 11 11:13	0°♐02'04	3°11'45	inferior conj	12892 May 25 20:26	14°♏05'03	3°03'08
	12891 Jun 11 11:49	30°♑		minimum elong	12892 May 25 19:11	14°♏09'25	3°02'04
min. Earth dist.	12891 Jun 12 03:52	29°♑04'47	0.68266 AU	min. Earth dist.	12892 May 25 23:26	13°♑54'34	0.68792 AU
morning rise	12891 Jun 16 16:59	23°♑40'47		morning rise	12892 May 31 00:06	7°♑50'26	
direct	12891 Jun 22 04:38	21°♑15'24		direct	12892 Jun 04 23:00	5°♑42'23	
desc. node	12891 Jun 29 08:32	24°♑20'59		morning max el	12892 Jun 14 18:36	11°♑30'06	22°35'07
morning max el	12891 Jul 03 07:23	27°♑54'50	24°04'45	desc. node	12892 Jun 15 05:35	11°♑58'02	
	12891 Jul 05 06:45	0°♒			12892 Jun 29 11:17	0°♐	
	12891 Jul 27 06:09	0°♓		morning set	12892 Jul 18 13:41	29°♐08'55	
morning set	12891 Aug 07 17:14	18°♓41'50			12892 Jul 19 02:10	0°♓	
max. Earth dist.	12891 Aug 11 10:11	25°♓10'43	1.38302 AU	max. Earth dist.	12892 Jul 23 09:00	7°♓08'27	1.40640 AU
	12891 Aug 14 02:23	0°♔					
superior conj	12891 Aug 18 18:04	8°♔40'46	-0°39'58	superior conj	12892 Jul 31 05:04	20°♓50'12	-1°14'35
minimum elong	12891 Aug 18 20:51	8°♔54'02	0°39'55	minimum elong	12892 Jul 31 10:32	21°♓14'53	1°14'28
asc. node	12891 Aug 23 03:07	17°♔08'43			12892 Aug 05 04:59	0°♔	
evening rise	12891 Aug 27 14:55	26°♔00'02		asc. node	12892 Aug 08 23:46	7°♔06'09	
	12891 Aug 29 15:51	0°♕		evening rise	12892 Aug 10 06:20	9°♔30'25	
evening max el	12891 Sep 13 00:41	22°♕47'53	19°01'13		12892 Aug 22 00:27	0°♕	
retrograde	12891 Sep 21 20:41	27°♕13'09		evening max el	12892 Aug 26 05:29	5°♕09'03	18°22'55
evening set	12891 Sep 23 17:21	27°♕02'10		retrograde	12892 Sep 02 18:54	8°♕58'16	
desc. node	12891 Sep 25 05:20	26°♕38'16		evening set	12892 Sep 04 20:45	8°♕41'44	
inferior conj	12891 Oct 02 02:27	22°♕47'08	-2°10'07	desc. node	12892 Sep 11 02:50	5°♕10'37	
minimum elong	12891 Oct 01 20:53	22°♕56'46	2°07'40	inferior conj	12892 Sep 12 11:21	4°♕05'50	-0°25'26
min. Earth dist.	12891 Oct 04 23:39	20°♕47'52	0.56306 AU	minimum elong	12892 Sep 12 10:23	4°♕07'47	0°25'05
morning rise	12891 Oct 09 21:25	18°♕01'51		min. Earth dist.	12892 Sep 15 18:31	1°♕26'29	0.58253 AU
direct	12891 Oct 15 11:07	16°♕48'53			12892 Sep 17 18:10	30°♖	
morning max el	12891 Oct 29 14:53	24°♕04'21	25°59'17	morning rise	12892 Sep 19 20:33	28°♖43'51	
	12891 Nov 04 00:50	0°♗		direct	12892 Sep 26 01:20	27°♖03'38	
asc. node	12891 Nov 19 04:45	23°♗38'57			12892 Oct 04 15:20	0°♕	
	12891 Nov 22 10:58	0°♘		morning max el	12892 Oct 10 09:02	4°♕41'49	27°14'33
morning set	12891 Nov 26 14:58	8°♘40'39			12892 Oct 28 23:07	0°♗	
				asc. node	12892 Nov 05 01:32	13°♗04'03	
superior conj	12891 Dec 03 09:53	23°♘37'11	1°37'35	morning set	12892 Nov 09 23:36	23°♗09'28	
minimum elong	12891 Dec 03 09:18	23°♘33'57	1°38'33		12892 Nov 13 03:25	0°♘	
max. Earth dist.	12891 Dec 04 11:06	25°♘57'01	1.31660 AU	superior conj	12892 Nov 16 21:30	8°♘20'33	1°31'33
	12891 Dec 06 07:14	0°♙		minimum elong	12892 Nov 16 20:00	8°♘12'12	1°32'18
evening rise	12891 Dec 10 10:22	8°♙51'19		max. Earth dist.	12892 Nov 16 19:34	8°♘09'44	1.31266 AU

evening rise	12892 Nov 23 16:03	23°  14'53		minimum elong	12893 Nov 01 06:27	22°  47'23	1°20'15
	12892 Nov 26 21:43	0° 			12893 Nov 04 12:15	0° 	
desc. node	12892 Dec 07 23:54	20°  15'54		evening rise	12893 Nov 08 01:23	7°  46'26	
	12892 Dec 14 13:13	0° 			12893 Nov 19 10:11	0° 	
evening max el	12892 Dec 23 14:16	10°  28'31	26°46'19	desc. node	12893 Nov 24 21:01	8°  42'09	
retrograde	12893 Jan 06 13:04	17°  37'25		evening max el	12893 Dec 05 08:45	21°  32'20	25°33'46
evening set	12893 Jan 13 05:01	15°  46'12		retrograde	12893 Dec 19 05:41	28°  32'44	
min. Earth dist.	12893 Jan 17 04:19	13°  08'18	0.59394 AU	evening set	12893 Dec 25 05:44	27°  30'56	
inferior conj	12893 Jan 20 08:34	10°  38'21	-3°38'23	min. Earth dist.	12893 Dec 29 21:04	24°  32'40	0.57343 AU
minimum elong	12893 Jan 20 16:12	10°  23'17	3°34'59	inferior conj	12894 Jan 01 18:41	22°  32'57	-4°54'27
morning rise	12893 Jan 28 06:20	5°  59'36		minimum elong	12894 Jan 02 03:14	22°  31'42	4°51'28
direct	12893 Jan 30 07:43	5°  44'07		morning rise	12894 Jan 10 03:17	18°  31'24	
asc. node	12893 Feb 01 00:35	5°  55'10		direct	12894 Jan 12 07:22	17°  35'25	
morning max el	12893 Feb 07 01:09	9°  33'59	18°12'54	asc. node	12894 Jan 18 21:51	20°  32'49	
	12893 Feb 20 08:05	0° 		morning max el	12894 Jan 21 05:06	22°  31'01	18°56'17
morning set	12893 Feb 22 17:19	4°  38'16			12894 Jan 27 06:57	0° 	
				morning set	12894 Feb 06 15:44	18°  47'04	
superior conj	12893 Mar 04 06:40	22°  31'35	0°13'56		12894 Feb 12 08:48	0° 	
minimum elong	12893 Mar 04 07:43	22°  31'23	0°14'00	superior conj	12894 Feb 15 03:27	5°  32'40	0°45'00
behind sun begin	12893 Mar 04 04:06	22°  30'00		minimum elong	12894 Feb 15 06:02	5°  32'57	0°45'05
behind sun end	12893 Mar 04 11:21	22°  34'45		desc. node	12894 Feb 20 21:25	15°  35'48	
desc. node	12893 Mar 06 00:51	25°  32'34		max. Earth dist.	12894 Feb 22 04:27	18°  38'33	1.39173 AU
	12893 Mar 08 15:57	0° 		evening rise	12894 Feb 26 00:56	25°  38'01	17
max. Earth dist.	12893 Mar 11 21:24	5°  32'00	1.41387 AU		12894 Feb 28 23:59	0° 	
evening rise	12893 Mar 16 16:55	13°  30'40			12894 Mar 20 23:40	0° 	
	12893 Mar 27 06:44	0° 		evening max el	12894 Apr 02 03:52	14°  32'05	24°23'37
	12893 Apr 18 21:58	0° 		retrograde	12894 Apr 13 14:11	21°  31'56	
evening max el	12893 Apr 19 14:04	0°  40'54	23°03'09	asc. node	12894 Apr 16 18:39	20°  32'32	
retrograde	12893 Apr 29 21:28	6°  45'28		evening set	12894 Apr 19 01:57	18°  35'20	
asc. node	12893 Apr 29 21:19	6°  45'28		min. Earth dist.	12894 Apr 23 15:58	13°  34'09	0.68433 AU
evening set	12893 May 04 21:30	4°  39'27		inferior conj	12894 Apr 24 14:12	12°  32'26	2°13'15
	12893 May 08 23:14	30°  38'38		minimum elong	12894 Apr 24 12:02	12°  32'42	2°12'05
inferior conj	12893 May 10 05:56	28°  31'24	2°43'12	morning rise	12894 Apr 29 22:17	6°  32'34	
minimum elong	12893 May 10 04:03	28°  30'56	2°42'03	direct	12894 May 03 19:41	4°  35'08	
min. Earth dist.	12893 May 09 20:09	28°  34'15	0.68844 AU	morning max el	12894 May 11 09:03	9°  32'34	19°58'08
morning rise	12893 May 15 10:30	22°  30'38		desc. node	12894 May 19 23:23	19°  34'15	
direct	12893 May 19 20:26	20°  31'02			12894 May 27 03:00	0° 	
morning max el	12893 May 28 10:19	25°  31'25	21°10'58	morning set	12894 Jun 07 11:29	17°  31'05	
	12893 Jun 01 16:33	0° 			12894 Jun 15 17:21	0° 	
desc. node	12893 Jun 02 02:31	0°  30'26		max. Earth dist.	12894 Jun 18 01:08	3°  34'49	1.44438 AU
	12893 Jun 22 21:10	0° 		superior conj	12894 Jun 23 09:34	12°  36'45	-2°07'39
morning set	12893 Jun 28 09:03	8°  30'15		minimum elong	12894 Jun 23 14:35	12°  37'09	2°08'24
max. Earth dist.	12893 Jul 05 13:48	20°  30'54	1.42767 AU		12894 Jul 04 01:18	0° 	
	12893 Jul 11 14:01	0° 		evening rise	12894 Jul 06 16:10	4°  32'45	
superior conj	12893 Jul 12 19:14	2°  30'07	-1°45'51	asc. node	12894 Jul 13 17:14	16°  32'45	
minimum elong	12893 Jul 13 02:18	2°  34'14	1°46'02		12894 Jul 22 23:44	0° 	
evening rise	12893 Jul 24 08:25	22°  23'52		evening max el	12894 Jul 24 06:56	1°  32'58	18°05'57
asc. node	12893 Jul 26 20:29	26°  33'20		retrograde	12894 Jul 30 16:21	4°  32'26	
	12893 Jul 28 14:25	0° 		evening set	12894 Aug 02 09:53	4°  30'11	
evening max el	12893 Aug 09 16:51	18°  30'41	18°04'54		12894 Aug 07 13:31	30°  30'31	
retrograde	12893 Aug 16 11:00	21°  31'54		inferior conj	12894 Aug 08 15:52	28°  30'35	2°00'38
evening set	12893 Aug 18 20:22	21°  30'03		minimum elong	12894 Aug 08 18:25	28°  34'45	1°59'19
inferior conj	12893 Aug 25 17:03	16°  30'41	0°59'09	min. Earth dist.	12894 Aug 11 10:48	25°  32'38	0.62753 AU
minimum elong	12893 Aug 25 18:47	16°  30'53	0°58'13	morning rise	12894 Aug 15 00:52	22°  33'36	
min. Earth dist.	12893 Aug 28 21:51	13°  30'12	0.60496 AU	desc. node	12894 Aug 15 21:46	22°  30'26	
desc. node	12893 Aug 29 00:17	13°  30'45		direct	12894 Aug 21 17:07	20°  31'53	
morning rise	12893 Sep 01 14:15	10°  31'00		morning max el	12894 Sep 04 18:27	28°  31'06	27°53'44
direct	12893 Sep 08 03:58	8°  31'12			12894 Sep 06 11:18	0° 	
morning max el	12893 Sep 22 10:53	16°  30'53	27°53'36		12894 Sep 27 16:34	0° 	
	12893 Oct 03 20:51	0° 		morning set	12894 Oct 09 01:46	21°  31'51	
	12893 Oct 21 12:42	0° 		asc. node	12894 Oct 09 18:53	22°  33'05	
asc. node	12893 Oct 22 22:14	2°  31'35			12894 Oct 13 06:30	0° 	
morning set	12893 Oct 25 03:55	7°  31'21		max. Earth dist.	12894 Oct 14 07:03	2°  31'22	1.32022 AU
max. Earth dist.	12893 Oct 31 03:34	20°  31'18	1.31383 AU	superior conj	12894 Oct 16 17:05	7°  31'18	1°02'28
superior conj	12893 Nov 01 08:33	22°  31'59	0°19'48				























































































































minimum elong	12894 Oct 16 14:49	7° \mathbb{M} 13'58	1°02'36	superior conj	12895 Sep 30 21:04	21° \mathbb{A} 37'09	0°39'40
evening rise	12894 Oct 23 12:24	22° \mathbb{M} 19'52		minimum elong	12895 Sep 30 19:15	21° \mathbb{A} 27'26	0°39'36
	12894 Oct 27 03:54	0° \mathbb{A}			12895 Oct 04 18:45	0° \mathbb{M}	
desc. node	12894 Nov 11 18:14	26° \mathbb{A} 07'11		evening rise	12895 Oct 07 23:19	6° \mathbb{M} 50'46	
	12894 Nov 15 02:12	0° \mathbb{B}			12895 Oct 20 03:25	0° \mathbb{A}	
evening max el	12894 Nov 16 20:00	1° \mathbb{B} 45'58	23°58'22	evening max el	12895 Oct 29 07:08	11° \mathbb{A} 48'28	22°16'46
retrograde	12894 Nov 30 10:05	8° \mathbb{B} 32'29		desc. node	12895 Oct 29 15:33	12° \mathbb{A} 08'46	
evening set	12894 Dec 05 06:34	7° \mathbb{B} 40'59		retrograde	12895 Nov 11 02:18	18° \mathbb{A} 09'26	
min. Earth dist.	12894 Dec 11 06:57	4° \mathbb{B} 43'23	0.55674 AU	evening set	12895 Nov 14 12:38	17° \mathbb{A} 43'29	
inferior conj	12894 Dec 13 08:08	3° \mathbb{B} 29'13	-5°45'53	min. Earth dist.	12895 Nov 22 13:47	14° \mathbb{A} 08'27	0.54692 AU
minimum elong	12894 Dec 13 12:42	3° \mathbb{B} 22'20	5°44'29	inferior conj	12895 Nov 23 05:08	13° \mathbb{A} 46'51	-5°49'17
	12894 Dec 20 05:16	30° \mathbb{R} \mathbb{A}		minimum elong	12895 Nov 23 01:05	13° \mathbb{A} 52'33	5°48'04
morning rise	12894 Dec 21 20:45	29° \mathbb{A} 32'37		morning rise	12895 Dec 01 14:45	9° \mathbb{A} 59'34	
direct	12894 Dec 24 11:12	29° \mathbb{A} 15'25		direct	12895 Dec 04 23:36	9° \mathbb{A} 34'07	
	12894 Dec 28 12:31	0° \mathbb{B}		morning max el	12895 Dec 16 22:13	15° \mathbb{A} 15'57	21°30'55
morning max el	12895 Jan 03 20:49	4° \mathbb{B} 13'50	20°02'26	asc. node	12895 Dec 23 16:12	23° \mathbb{A} 19'43	
asc. node	12895 Jan 05 19:03	6° \mathbb{B} 14'32			12895 Dec 27 21:53	0° \mathbb{B}	
	12895 Jan 20 05:01	0° \approx		morning set	12896 Jan 06 06:31	18° \mathbb{B} 06'32	
morning set	12895 Jan 21 21:01	3° \approx 22'24			12896 Jan 11 21:42	0° \approx	
superior conj	12895 Jan 29 14:26	19° \approx 06'11	1°08'48	superior conj	12896 Jan 13 11:39	3° \approx 18'46	1°25'22
minimum elong	12895 Jan 29 17:13	19° \approx 20'03	1°09'09	minimum elong	12896 Jan 13 13:49	3° \approx 30'02	1°26'02
	12895 Feb 04 04:51	0° \mathbb{H}		max. Earth dist.	12896 Jan 17 21:48	12° \approx 21'03	1.34942 AU
max. Earth dist.	12895 Feb 04 10:50	0° \mathbb{H} 28'15	1.36947 AU	evening rise	12896 Jan 22 01:31	20° \approx 26'15	
desc. node	12895 Feb 07 18:02	6° \mathbb{H} 33'46		desc. node	12896 Jan 25 14:41	27° \approx 00'16	
evening rise	12895 Feb 08 04:54	7° \mathbb{H} 22'48			12896 Jan 27 06:58	0° \mathbb{H}	
	12895 Feb 21 19:41	0° \mathbb{Y}			12896 Feb 15 18:35	0° \mathbb{Y}	
evening max el	12895 Mar 15 17:15	28° \mathbb{Y} 23'46	25°38'12	evening max el	12896 Feb 26 07:00	12° \mathbb{Y} 10'03	26°39'27
	12895 Mar 17 10:08	0° \mathbb{B}		retrograde	12896 Mar 10 09:35	19° \mathbb{Y} 32'46	
retrograde	12895 Mar 28 02:37	5° \mathbb{B} 32'22		evening set	12896 Mar 16 19:13	17° \mathbb{Y} 00'41	
evening set	12895 Apr 03 01:48	3° \mathbb{B} 04'40		asc. node	12896 Mar 20 13:29	13° \mathbb{Y} 15'25	
asc. node	12895 Apr 03 16:02	2° \mathbb{B} 33'18		min. Earth dist.	12896 Mar 20 20:32	12° \mathbb{Y} 55'01	0.66325 AU
	12895 Apr 06 01:47	30° \mathbb{R} \mathbb{Y}		inferior conj	12896 Mar 22 19:14	10° \mathbb{Y} 36'13	0°42'27
min. Earth dist.	12895 Apr 07 08:49	28° \mathbb{Y} 24'47	0.67581 AU	minimum elong	12896 Mar 22 18:09	10° \mathbb{Y} 39'27	0°41'57
inferior conj	12895 Apr 08 19:21	26° \mathbb{Y} 34'31	1°33'10	morning rise	12896 Mar 28 18:12	4° \mathbb{Y} 56'28	
minimum elong	12895 Apr 08 17:25	26° \mathbb{Y} 40'44	1°32'10	direct	12896 Mar 31 17:36	4° \mathbb{Y} 07'14	
morning rise	12895 Apr 14 09:34	20° \mathbb{Y} 43'51		morning max el	12896 Apr 07 04:01	7° \mathbb{Y} 31'42	18°18'25
direct	12895 Apr 17 19:22	19° \mathbb{Y} 37'16		desc. node	12896 Apr 22 16:48	29° \mathbb{Y} 29'19	
morning max el	12895 Apr 24 15:23	23° \mathbb{Y} 19'59	19°00'07		12896 Apr 23 00:31	0° \mathbb{B}	
	12895 Apr 30 06:22	0° \mathbb{B}		morning set	12896 Apr 26 21:20	6° \mathbb{B} 09'53	
desc. node	12895 May 06 20:08	9° \mathbb{B} 25'46			12896 May 11 23:28	0° \mathbb{H}	
greatest brilliancy	12895 May 07 22:08	11° \mathbb{B} 03'29	-0.7m	superior conj	12896 May 12 10:11	0° \mathbb{H} 41'56	-1°58'06
morning set	12895 May 17 17:07	26° \mathbb{B} 05'37		minimum elong	12896 May 12 01:56	0° \mathbb{H} 09'38	1°58'21
	12895 May 20 05:36	0° \mathbb{H}		max. Earth dist.	12896 May 13 13:06	2° \mathbb{H} 27'03	1.45806 AU
max. Earth dist.	12895 May 31 17:37	17° \mathbb{H} 54'49	1.45483 AU	evening rise	12896 May 28 09:32	25° \mathbb{H} 37'52	
superior conj	12895 Jun 03 02:41	21° \mathbb{H} 38'54	-2°13'00		12896 May 31 04:35	0° \mathbb{B}	
minimum elong	12895 Jun 03 00:56	21° \mathbb{H} 31'58	2°13'55	greatest brilliancy	12896 Jun 07 21:46	11° \mathbb{B} 58'32	-0.8m
	12895 Jun 08 09:22	0° \mathbb{B}		asc. node	12896 Jun 16 11:05	24° \mathbb{B} 16'28	
evening rise	12895 Jun 18 01:00	15° \mathbb{B} 32'33		evening max el	12896 Jun 20 06:56	28° \mathbb{B} 41'41	19°01'47
	12895 Jun 26 23:22	0° \mathbb{Q}			12896 Jun 21 16:52	0° \mathbb{Q}	
asc. node	12895 Jun 30 14:06	5° \mathbb{Q} 35'22		retrograde	12896 Jun 27 02:25	2° \mathbb{Q} 27'32	
evening max el	12895 Jul 07 20:32	14° \mathbb{Q} 58'06	18°25'11	evening set	12896 Jun 30 13:20	1° \mathbb{Q} 18'26	
retrograde	12895 Jul 14 06:42	18° \mathbb{Q} 24'44			12896 Jul 02 04:18	30° \mathbb{R} \mathbb{B}	
evening set	12895 Jul 17 08:42	17° \mathbb{Q} 31'48		inferior conj	12896 Jul 06 01:03	25° \mathbb{B} 32'45	3°04'23
inferior conj	12895 Jul 23 03:46	12° \mathbb{Q} 00'56	2°41'12	minimum elong	12896 Jul 06 02:21	25° \mathbb{B} 28'35	3°03'18
minimum elong	12895 Jul 23 05:58	11° \mathbb{Q} 54'25	2°39'57	min. Earth dist.	12896 Jul 07 15:43	23° \mathbb{B} 29'18	0.66501 AU
min. Earth dist.	12895 Jul 25 09:09	9° \mathbb{Q} 23'27	0.64804 AU	morning rise	12896 Jul 11 14:42	19° \mathbb{B} 09'14	
morning rise	12895 Jul 29 01:59	5° \mathbb{Q} 40'15		direct	12896 Jul 17 20:07	16° \mathbb{B} 28'37	
desc. node	12895 Aug 02 19:10	3° \mathbb{Q} 12'48		desc. node	12896 Jul 19 16:31	16° \mathbb{B} 41'04	
direct	12895 Aug 04 15:07	3° \mathbb{Q} 00'54		morning max el	12896 Jul 30 15:52	24° \mathbb{B} 07'14	26°16'12
morning max el	12895 Aug 18 04:57	10° \mathbb{Q} 58'47	27°18'42		12896 Aug 04 22:22	0° \mathbb{Q}	
	12895 Sep 02 06:29	0° \mathbb{H}			12896 Aug 25 16:05	0° \mathbb{H}	
	12895 Sep 20 04:04	0° \mathbb{A}		morning set	12896 Sep 04 14:54	17° \mathbb{H} 29'43	
morning set	12895 Sep 22 14:31	4° \mathbb{A} 40'46		max. Earth dist.	12896 Sep 08 11:38	24° \mathbb{H} 51'55	1.34880 AU
asc. node	12895 Sep 26 15:32	12° \mathbb{A} 46'08			12896 Sep 11 01:58	0° \mathbb{A}	
max. Earth dist.	12895 Sep 27 02:21	13° \mathbb{A} 41'42	1.33196 AU	asc. node	12896 Sep 12 12:10	2° \mathbb{A} 52'29	

superior conj	12896 Sep 13 18:02	5° Ω 24'56	0°11'50	superior conj	12897 Aug 28 04:52	18° η 41'43	-0°20'14
minimum elong	12896 Sep 13 17:22	5° Ω 21'34	0°11'42	minimum elong	12897 Aug 28 06:11	18° η 48'12	0°20'15
behind sun begin	12896 Sep 13 13:15	5° Ω 00'25		asc. node	12897 Aug 30 08:46	22° η 58'17	
behind sun end	12896 Sep 13 21:30	5° Ω 42'45			12897 Sep 02 20:43	0° Ω	
evening rise	12896 Sep 21 08:10	21° Ω 13'49		evening rise	12897 Sep 05 12:36	5° Ω 22'44	
	12896 Sep 25 15:42	0° \mathbb{M}			12897 Sep 19 14:37	0° \mathbb{M}	
evening max el	12896 Oct 10 03:24	22° \mathbb{M} 13'21	20°45'11	evening max el	12897 Sep 22 13:32	3° \mathbb{M} 22'26	19°32'50
desc. node	12896 Oct 15 12:56	26° \mathbb{M} 19'39		retrograde	12897 Oct 02 07:10	8° \mathbb{M} 14'09	
retrograde	12896 Oct 21 12:57	27° \mathbb{M} 53'06		desc. node	12897 Oct 02 10:23	8° \mathbb{M} 14'06	
evening set	12896 Oct 23 20:36	27° \mathbb{M} 40'05		evening set	12897 Oct 04 04:03	8° \mathbb{M} 04'11	
inferior conj	12896 Nov 01 20:50	23° \mathbb{M} 45'42	-4°53'22	inferior conj	12897 Oct 12 21:46	3° \mathbb{M} 58'52	-3°14'10
minimum elong	12896 Nov 01 10:59	23° \mathbb{M} 59'47	4°50'13	minimum elong	12897 Oct 12 13:28	4° \mathbb{M} 12'05	3°10'45
min. Earth dist.	12896 Nov 02 20:31	23° \mathbb{M} 11'49	0.54604 AU	min. Earth dist.	12897 Oct 15 06:03	2° \mathbb{M} 29'27	0.55448 AU
morning rise	12896 Nov 10 01:22	19° \mathbb{M} 49'58			12897 Oct 19 20:03	30° \mathbb{R} Ω	
direct	12896 Nov 14 07:54	19° \mathbb{M} 10'50		morning rise	12897 Oct 20 20:54	29° Ω 34'58	
morning max el	12896 Nov 27 11:57	25° \mathbb{M} 33'38	23°15'58	direct	12897 Oct 25 23:45	28° Ω 36'31	
	12896 Dec 01 15:17	0° \mathbb{X}			12897 Nov 01 01:30	0° \mathbb{M}	
asc. node	12896 Dec 09 13:16	11° \mathbb{X} 20'05		morning max el	12897 Nov 08 22:03	5° \mathbb{M} 34'25	25°03'38
	12896 Dec 19 09:15	0° \mathbb{Z}		asc. node	12897 Nov 26 10:13	0° \mathbb{X} 01'18	
morning set	12896 Dec 20 18:07	2° \mathbb{Z} 53'40			12897 Nov 26 09:56	0° \mathbb{X}	
				morning set	12897 Dec 05 05:56	17° \mathbb{X} 37'28	
superior conj	12896 Dec 27 15:58	17° \mathbb{Z} 49'36	1°35'05		12897 Dec 10 21:33	0° \mathbb{Z}	
minimum elong	12896 Dec 27 17:08	17° \mathbb{Z} 55'48	1°35'59	superior conj	12897 Dec 12 00:46	2° \mathbb{Z} 30'09	1°38'25
max. Earth dist.	12896 Dec 30 16:34	24° \mathbb{Z} 16'11	1.33307 AU	minimum elong	12897 Dec 12 00:48	2° \mathbb{Z} 30'20	1°39'24
	12897 Jan 02 10:59	0° \approx		max. Earth dist.	12897 Dec 13 18:40	6° \mathbb{Z} 19'56	1.32121 AU
evening rise	12897 Jan 04 11:14	4° \approx 02'26		evening rise	12897 Dec 19 06:44	18° \mathbb{Z} 02'02	
desc. node	12897 Jan 11 11:27	17° \approx 14'46			12897 Dec 25 08:55	0° \approx	
	12897 Jan 19 01:30	0° \mathbb{H}		desc. node	12897 Dec 29 08:17	7° \approx 10'35	
evening max el	12897 Feb 07 20:28	25° \mathbb{H} 41'17	27°19'56		12898 Jan 13 11:51	0° \mathbb{H}	
	12897 Feb 13 01:06	0° \mathbb{Y}		evening max el	12898 Jan 21 07:37	8° \mathbb{H} 43'43	27°32'57
retrograde	12897 Feb 21 10:11	3° \mathbb{Y} 07'21		retrograde	12898 Feb 04 03:31	16° \mathbb{H} 06'19	
evening set	12897 Feb 28 04:06	0° \mathbb{Y} 36'39		evening set	12898 Feb 11 01:52	13° \mathbb{H} 44'09	
	12897 Feb 28 22:43	30° \mathbb{R} \mathbb{H}		min. Earth dist.	12898 Feb 14 19:55	10° \mathbb{H} 39'06	0.62774 AU
min. Earth dist.	12897 Mar 04 00:53	27° \mathbb{H} 03'17	0.64705 AU	inferior conj	12898 Feb 17 16:50	7° \mathbb{H} 52'08	-1°31'08
inferior conj	12897 Mar 06 11:23	24° \mathbb{H} 24'47	-0°19'06	minimum elong	12898 Feb 17 19:53	7° \mathbb{H} 44'43	1°29'25
minimum elong	12897 Mar 06 11:57	24° \mathbb{H} 23'15	0°18'42	asc. node	12898 Feb 22 08:22	3° \mathbb{H} 53'53	
asc. node	12897 Mar 07 10:56	23° \mathbb{H} 21'31		morning rise	12898 Feb 24 16:27	2° \mathbb{H} 42'10	
morning rise	12897 Mar 12 21:38	18° \mathbb{H} 58'26		direct	12898 Feb 26 23:36	2° \mathbb{H} 17'33	
direct	12897 Mar 15 12:04	18° \mathbb{H} 23'15		morning max el	12898 Mar 05 14:22	5° \mathbb{H} 39'47	17°46'29
morning max el	12897 Mar 21 20:40	21° \mathbb{H} 41'10	17°53'43		12898 Mar 21 11:53	0° \mathbb{Y}	
	12897 Mar 28 09:02	0° \mathbb{Y}		morning set	12898 Mar 21 15:41	0° \mathbb{Y} 16'40	
morning set	12897 Apr 08 06:09	17° \mathbb{Y} 38'06		desc. node	12898 Mar 27 09:59	10° \mathbb{Y} 17'02	
desc. node	12897 Apr 09 13:26	19° \mathbb{Y} 48'08					
	12897 Apr 15 17:54	0° \mathbb{B}		superior conj	12898 Apr 02 14:31	20° \mathbb{Y} 44'35	-0°46'40
superior conj	12897 Apr 22 01:47	10° \mathbb{B} 12'37	-1°26'26	minimum elong	12898 Apr 02 09:52	20° \mathbb{Y} 25'13	0°46'14
minimum elong	12897 Apr 21 17:11	9° \mathbb{B} 38'18	1°26'00		12898 Apr 08 06:26	0° \mathbb{B}	
max. Earth dist.	12897 Apr 26 09:14	17° \mathbb{B} 02'14	1.45382 AU	max. Earth dist.	12898 Apr 09 03:02	1° \mathbb{B} 22'41	1.44253 AU
	12897 May 04 17:04	0° \mathbb{I}		evening rise	12898 Apr 17 12:34	14° \mathbb{B} 34'01	
evening rise	12897 May 08 00:35	5° \mathbb{I} 05'38			12898 Apr 27 17:51	0° \mathbb{I}	
greatest brilliancy	12897 May 22 17:38	27° \mathbb{I} 14'01	-0.6m	evening max el	12898 May 17 11:36	26° \mathbb{I} 16'04	21°00'45
	12897 May 24 15:43	0° \mathbb{E}		asc. node	12898 May 21 05:17	29° \mathbb{I} 28'11	
asc. node	12897 Jun 03 08:09	12° \mathbb{E} 18'16			12898 May 22 01:21	0° \mathbb{E}	
evening max el	12897 Jun 03 12:14	12° \mathbb{E} 28'34	19°54'24	retrograde	12898 May 25 23:43	1° \mathbb{E} 13'18	
retrograde	12897 Jun 11 00:49	16° \mathbb{E} 45'31			12898 May 29 14:39	30° \mathbb{R} \mathbb{I}	
evening set	12897 Jun 14 21:10	15° \mathbb{E} 19'43		evening set	12898 May 30 06:12	29° \mathbb{I} 31'03	
inferior conj	12897 Jun 20 04:42	9° \mathbb{E} 20'29	3°13'14	inferior conj	12898 Jun 04 12:17	23° \mathbb{I} 19'54	3°09'59
minimum elong	12897 Jun 20 04:57	9° \mathbb{E} 19'41	3°12'15	minimum elong	12898 Jun 04 11:31	23° \mathbb{I} 22'31	3°08'58
min. Earth dist.	12897 Jun 21 04:54	7° \mathbb{E} 58'57	0.67758 AU	min. Earth dist.	12898 Jun 04 22:45	22° \mathbb{I} 43'32	0.68544 AU
morning rise	12897 Jun 25 12:23	2° \mathbb{E} 58'29		morning rise	12898 Jun 09 16:38	17° \mathbb{I} 02'01	
direct	12897 Jul 01 07:00	0° \mathbb{E} 25'42		direct	12898 Jun 14 22:49	14° \mathbb{I} 43'46	
desc. node	12897 Jul 06 13:46	2° \mathbb{E} 07'06		desc. node	12898 Jun 23 10:55	19° \mathbb{I} 03'31	
morning max el	12897 Jul 13 02:13	7° \mathbb{E} 30'07	24°55'34	morning max el	12898 Jun 25 12:38	21° \mathbb{I} 01'54	23°26'34
	12897 Jul 30 15:50	0° \mathbb{Q}			12898 Jul 03 05:46	0° \mathbb{E}	
morning set	12897 Aug 17 22:45	29° \mathbb{Q} 32'34			12898 Jul 23 21:18	0° \mathbb{Q}	
	12897 Aug 18 04:57	0° \mathbb{P}		morning set	12898 Jul 30 09:26	10° \mathbb{Q} 38'16	
max. Earth dist.	12897 Aug 21 12:37	6° \mathbb{P} 00'00	1.36981 AU	max. Earth dist.	12898 Aug 03 10:24	17° \mathbb{Q} 32'54	1.39299 AU

	12898 Aug 10 08:50	0°♎		max. Earth dist.	12899 Jul 16 10:53	29°♊51'22	1.41578 AU
					12899 Jul 16 12:58	0°♎	
superior conj	12898 Aug 11 01:48	1°♎18'41	-0°54'43				
minimum elong	12898 Aug 11 05:45	1°♎37'03	0°54'37	superior conj	12899 Jul 24 04:22	13°♎05'00	-1°28'34
asc. node	12898 Aug 17 05:23	13°♎00'04		minimum elong	12899 Jul 24 10:47	13°♎33'13	1°28'32
evening rise	12898 Aug 20 09:49	19°♎10'17			12899 Aug 02 12:31	0°♎	
	12898 Aug 26 02:59	0°♎		evening rise	12899 Aug 03 20:06	2°♎25'58	
evening max el	12898 Sep 05 12:34	15°♎19'33	18°42'20	asc. node	12899 Aug 04 02:01	2°♎53'22	
retrograde	12898 Sep 13 18:32	19°♎28'20		evening max el	12899 Aug 19 20:39	27°♎56'14	18°12'55
evening set	12898 Sep 15 16:40	19°♎15'37			12899 Aug 22 08:04	0°♎	
desc. node	12898 Sep 19 07:51	17°♎49'36		retrograde	12899 Aug 27 00:39	1°♎34'34	
inferior conj	12898 Sep 23 18:08	14°♎51'46	-1°23'57	evening set	12899 Aug 29 05:27	1°♎14'36	
minimum elong	12898 Sep 23 14:41	14°♎58'10	1°22'25		12899 Aug 31 22:35	30°♎	
min. Earth dist.	12898 Sep 26 21:13	12°♎33'23	0.57071 AU	inferior conj	12899 Sep 05 12:12	26°♎30'08	0°13'12
morning rise	12898 Oct 01 09:17	9°♎50'07		minimum elong	12899 Sep 05 12:39	26°♎29'10	0°12'53
direct	12898 Oct 07 05:46	8°♎26'02		transit middle	12899 Sep 05 12:39	26°♎29'10	0°12'53
morning max el	12898 Oct 21 12:21	15°♎52'25	26°35'15	transit begin	12899 Sep 05 10:34	26°♎33'39	
	12898 Nov 01 23:59	0°♎		transit end	12899 Sep 05 14:43	26°♎24'41	
asc. node	12898 Nov 13 07:05	19°♎13'00		desc. node	12899 Sep 06 05:21	25°♎52'49	
	12898 Nov 18 15:08	0°♎		min. Earth dist.	12899 Sep 08 19:45	23°♎39'13	0.59185 AU
morning set	12898 Nov 19 16:13	2°♎13'17		morning rise	12899 Sep 12 16:25	20°♎54'09	
				direct	12899 Sep 19 01:50	19°♎01'52	
superior conj	12898 Nov 26 11:55	17°♎14'22	1°35'44	morning max el	12899 Oct 03 09:52	26°♎48'43	27°35'50
minimum elong	12898 Nov 26 10:56	17°♎08'48	1°36'37		12899 Oct 06 10:43	0°♎	
max. Earth dist.	12898 Nov 27 01:36	18°♎30'36	1.31430 AU		12899 Oct 26 13:59	0°♎	
	12898 Dec 02 07:20	0°♎		asc. node	12899 Oct 31 03:50	8°♎46'31	
evening rise	12898 Dec 03 09:22	2°♎18'27		morning set	12899 Nov 03 23:15	16°♎36'18	
desc. node	12898 Dec 16 05:13	26°♎40'08			12899 Nov 10 02:39	0°♎	
	12898 Dec 18 06:05	0°♎					
evening max el	12899 Jan 03 14:05	21°♎04'58	27°13'15	superior conj	12899 Nov 10 23:32	1°♎56'26	1°27'16
retrograde	12899 Jan 17 12:50	28°♎20'14		minimum elong	12899 Nov 10 21:44	1°♎46'25	1°27'54
evening set	12899 Jan 24 09:23	26°♎15'07		max. Earth dist.	12899 Nov 10 10:08	0°♎41'41	1.31248 AU
min. Earth dist.	12899 Jan 28 04:35	23°♎30'37	0.60641 AU	evening rise	12899 Nov 17 16:49	16°♎45'55	
inferior conj	12899 Jan 31 08:11	20°♎49'29	-2°51'08		12899 Nov 24 04:19	0°♎	
minimum elong	12899 Jan 31 14:15	20°♎36'30	2°48'09	desc. node	12899 Dec 03 02:16	15°♎33'20	
morning rise	12899 Feb 07 22:09	15°♎58'53			12899 Dec 13 23:42	0°♎	
asc. node	12899 Feb 09 05:45	15°♎43'40		evening max el	12899 Dec 16 13:33	2°♎36'36	26°19'08
direct	12899 Feb 10 00:27	15°♎41'11		retrograde	12899 Dec 30 12:24	9°♎42'09	
morning max el	12899 Feb 17 05:46	19°♎18'11	17°57'37	evening set	12900 Jan 05 22:40	8°♎02'27	
	12899 Feb 25 01:43	0°♎		min. Earth dist.	12900 Jan 10 03:04	5°♎26'16	0.58488 AU
morning set	12899 Mar 04 19:41	13°♎46'34		inferior conj	12900 Jan 13 05:54	3°♎07'35	-4°12'18
	12899 Mar 13 18:42	0°♎		minimum elong	12900 Jan 13 14:19	2°♎51'55	4°08'53
desc. node	12899 Mar 14 06:29	0°♎52'00			12900 Jan 17 22:09	30°♎	
				morning rise	12900 Jan 21 08:54	28°♎38'22	
superior conj	12899 Mar 15 03:37	2°♎24'39	-0°06'56	direct	12900 Jan 23 10:24	28°♎23'58	
minimum elong	12899 Mar 15 03:01	2°♎22'04	0°06'47	asc. node	12900 Jan 27 03:05	29°♎12'49	
behind sun begin	12899 Mar 14 19:39	1°♎49'49			12900 Jan 28 14:25	0°♎	
behind sun end	12899 Mar 15 10:23	2°♎54'15		morning max el	12900 Jan 31 15:06	2°♎25'45	18°28'38
max. Earth dist.	12899 Mar 22 16:17	15°♎12'22	1.42549 AU	morning set	12900 Feb 16 12:43	27°♎51'49	
evening rise	12899 Mar 28 12:21	24°♎38'58			12900 Feb 17 15:24	0°♎	
	12899 Mar 31 22:15	0°♎					
	12899 Apr 21 16:45	0°♎		superior conj	12900 Feb 25 14:13	15°♎04'06	0°27'58
evening max el	12899 Apr 30 05:45	10°♎04'06	22°16'59	minimum elong	12900 Feb 25 16:07	15°♎12'53	0°27'59
asc. node	12899 May 08 02:30	15°♎30'23		desc. node	12900 Mar 01 03:02	21°♎29'43	
retrograde	12899 May 09 21:17	15°♎45'10		max. Earth dist.	12900 Mar 05 01:05	28°♎22'55	1.40461 AU
evening set	12899 May 14 14:38	13°♎47'30			12900 Mar 05 23:42	0°♎	
inferior conj	12899 May 19 21:37	7°♎26'36	2°55'56	evening rise	12900 Mar 09 08:14	5°♎38'54	
minimum elong	12899 May 19 20:04	7°♎32'02	2°54'50		12900 Mar 25 01:32	0°♎	
min. Earth dist.	12899 May 19 19:07	7°♎35'19	0.68863 AU	evening max el	12900 Apr 12 20:43	23°♎55'05	23°37'42
morning rise	12899 May 25 01:20	1°♎14'34			12900 Apr 21 16:17	0°♎	
	12899 May 26 20:31	30°♎		retrograde	12900 Apr 23 16:07	0°♎16'44	
direct	12899 May 29 18:35	29°♎15'06		asc. node	12900 Apr 24 23:48	0°♎08'46	
	12899 Jun 01 21:49	0°♎			12900 Apr 25 13:44	30°♎	
morning max el	12899 Jun 08 01:24	4°♎41'05	21°58'16	evening set	12900 Apr 28 21:00	28°♎05'18	
desc. node	12899 Jun 10 07:56	7°♎06'07		min. Earth dist.	12900 May 03 15:50	22°♎29'11	0.68723 AU
	12899 Jun 27 09:23	0°♎		inferior conj	12900 May 04 06:51	21°♎37'41	2°31'45
morning set	12899 Jul 10 18:58	20°♎36'28		minimum elong	12900 May 04 04:48	21°♎44'44	2°30'34

morning rise	12900 May 09 12:34	15°♄32'52		direct	12901 Apr 27 16:52	28°♄34'13	
direct	12900 May 13 17:06	13°♄54'09			12901 May 01 19:57	0°♄	
morning max el	12900 May 21 19:46	18°♄31'10	20°38'15	morning max el	12901 May 04 21:42	2°♄32'39	19°31'28
desc. node	12900 May 28 04:51	25°♄57'26		desc. node	12901 May 15 01:40	15°♄23'50	
	12900 May 31 05:29	0°♄		greatest brilliancy	12901 May 17 13:48	19°♄02'13	-0.7m
morning set	12900 Jun 20 05:13	29°♄34'24			12901 May 24 21:16	0°♄	
	12900 Jun 20 11:49	0°♄		morning set	12901 May 30 06:11	8°♄12'49	
max. Earth dist.	12900 Jun 28 18:07	13°♄03'45	1.43548 AU	max. Earth dist.	12901 Jun 11 08:16	27°♄01'19	1.44976 AU
					12901 Jun 13 05:25	0°♄	
superior conj	12900 Jul 05 08:33	23°♄52'58	-1°56'41				
minimum elong	12900 Jul 05 15:21	24°♄21'18	1°57'06	superior conj	12901 Jun 15 13:05	3°♄41'40	-2°12'16
	12900 Jul 08 23:42	0°♄		minimum elong	12901 Jun 15 15:41	3°♄52'02	2°13'12
evening rise	12900 Jul 17 14:57	14°♄59'11		evening rise	12901 Jun 29 13:23	26°♄38'35	
asc. node	12900 Jul 21 22:43	22°♄34'10			12901 Jul 01 13:34	0°♄	
	12900 Jul 26 07:56	0°♄		asc. node	12901 Jul 08 19:32	11°♄57'24	
evening max el	12900 Aug 03 09:40	11°♄02'34	18°03'08	evening max el	12901 Jul 17 23:56	24°♄29'12	18°11'57
retrograde	12900 Aug 09 22:43	14°♄25'04		retrograde	12901 Jul 24 08:24	27°♄50'26	
evening set	12900 Aug 12 11:37	13°♄54'12		evening set	12901 Jul 27 05:37	27°♄05'59	
inferior conj	12900 Aug 19 01:37	8°♄50'01	1°27'59	inferior conj	12901 Aug 02 06:28	21°♄44'03	2°20'13
minimum elong	12900 Aug 19 03:54	8°♄44'20	1°26'48	minimum elong	12901 Aug 02 08:58	21°♄37'01	2°18'53
min. Earth dist.	12900 Aug 22 02:59	5°♄48'35	0.61475 AU	min. Earth dist.	12901 Aug 04 19:48	18°♄53'08	0.63665 AU
desc. node	12900 Aug 24 02:50	4°♄02'07		morning rise	12901 Aug 08 10:40	15°♄28'10	
morning rise	12900 Aug 25 17:35	2°♄49'06		desc. node	12901 Aug 11 00:17	13°♄51'38	
direct	12900 Sep 01 09:23	0°♄32'14		direct	12901 Aug 15 02:15	12°♄54'32	
morning max el	12900 Sep 15 14:10	8°♄30'50	27°58'14	morning max el	12901 Aug 28 23:14	20°♄55'35	27°42'49
	12900 Oct 02 02:45	0°♄			12901 Sep 05 19:41	0°♄	
asc. node	12900 Oct 18 00:31	28°♄35'25			12901 Sep 25 05:21	0°♄	
	12900 Oct 18 17:03	0°♄		morning set	12901 Oct 02 19:25	14°♄22'49	
morning set	12900 Oct 19 01:05	0°♄41'18		asc. node	12901 Oct 04 21:10	18°♄34'32	
max. Earth dist.	12900 Oct 24 16:33	12°♄43'54	1.31588 AU	max. Earth dist.	12901 Oct 07 17:08	24°♄28'41	1.32457 AU
					12901 Oct 10 07:05	0°♄	
superior conj	12900 Oct 26 09:46	16°♄30'44	1°13'08				
minimum elong	12900 Oct 26 07:32	16°♄18'25	1°13'27	superior conj	12901 Oct 10 16:40	0°♄51'47	0°53'27
	12900 Nov 01 12:32	0°♄		minimum elong	12901 Oct 10 14:30	0°♄40'07	0°53'29
evening rise	12900 Nov 02 03:06	1°♄18'50		evening rise	12901 Oct 17 14:21	15°♄52'10	
	12900 Nov 17 12:05	0°♄			12901 Oct 24 12:48	0°♄	
desc. node	12900 Nov 19 23:25	3°♄35'47		desc. node	12901 Nov 06 20:41	20°♄28'33	
evening max el	12900 Nov 28 04:48	13°♄17'16	24°55'16	evening max el	12901 Nov 09 14:54	23°♄23'31	23°14'53
retrograde	12900 Dec 11 23:47	20°♄11'21			12901 Nov 22 08:24	0°♄	
evening set	12900 Dec 17 13:21	19°♄02'16		retrograde	12901 Nov 22 22:17	0°♄00'45	
min. Earth dist.	12900 Dec 22 16:43	16°♄18'02	0.56567 AU		12901 Nov 23 12:13	30°♄	
inferior conj	12900 Dec 25 07:13	14°♄37'17	-5°20'41	evening set	12901 Nov 27 04:44	29°♄21'11	
minimum elong	12900 Dec 25 14:48	14°♄25'01	5°18'20	min. Earth dist.	12901 Dec 04 00:32	26°♄10'01	0.55160 AU
morning rise	12901 Jan 02 18:26	10°♄29'40		inferior conj	12901 Dec 05 12:46	25°♄17'34	-5°54'23
direct	12901 Jan 05 01:56	10°♄14'38		minimum elong	12901 Dec 05 13:56	25°♄15'52	5°53'24
asc. node	12901 Jan 14 00:22	14°♄17'40		morning rise	12901 Dec 14 00:46	21°♄26'56	
morning max el	12901 Jan 14 14:13	14°♄50'10	19°21'31	direct	12901 Dec 16 22:32	21°♄06'47	
	12901 Jan 25 04:52	0°♄		morning max el	12901 Dec 27 23:50	26°♄22'53	20°37'29
morning set	12901 Jan 31 14:29	12°♄18'59			12901 Dec 31 07:30	0°♄	
				asc. node	12901 Dec 31 21:34	0°♄43'51	
superior conj	12901 Feb 08 17:34	28°♄28'49	0°55'59	morning set	12902 Jan 15 21:53	26°♄59'15	
minimum elong	12901 Feb 08 20:22	28°♄42'24	0°56'10		12902 Jan 17 08:49	0°♄	
	12901 Feb 09 12:23	0°♄					
max. Earth dist.	12901 Feb 15 07:34	10°♄53'11	1.38219 AU	superior conj	12902 Jan 23 09:23	12°♄27'10	1°16'40
desc. node	12901 Feb 15 23:36	12°♄05'51		minimum elong	12902 Jan 23 11:58	12°♄40'20	1°17'10
evening rise	12901 Feb 19 01:08	17°♄32'27		max. Earth dist.	12902 Jan 28 15:46	22°♄54'48	1.36063 AU
	12901 Feb 26 11:28	0°♄			12902 Feb 01 09:52	0°♄	
	12901 Mar 19 10:52	0°♄		evening rise	12902 Feb 01 12:38	0°♄12'45	
evening max el	12901 Mar 26 10:24	7°♄47'38	24°56'30	desc. node	12902 Feb 02 20:14	2°♄36'58	
retrograde	12901 Apr 07 06:59	14°♄41'33			12902 Feb 19 15:46	0°♄	
asc. node	12901 Apr 11 21:11	13°♄09'43		evening max el	12902 Mar 08 23:57	21°♄37'42	26°06'11
evening set	12901 Apr 12 23:40	12°♄18'49		retrograde	12902 Mar 21 17:02	28°♄53'07	
min. Earth dist.	12901 Apr 17 10:40	7°♄18'41	0.68131 AU	evening set	12902 Mar 27 21:01	26°♄22'46	
inferior conj	12901 Apr 18 14:03	5°♄48'25	1°57'32	asc. node	12902 Mar 29 18:38	24°♄35'12	
minimum elong	12901 Apr 18 11:55	5°♄55'28	1°56'24	min. Earth dist.	12902 Apr 01 01:27	21°♄57'52	0.67105 AU
	12901 Apr 23 20:06	30°♄		inferior conj	12902 Apr 02 17:14	19°♄54'29	1°12'59
morning rise	12901 Apr 24 00:25	29°♄52'12		minimum elong	12902 Apr 02 15:34	19°♄59'39	1°12'08

morning rise	12902 Apr 08 10:52	14° Υ 08'25		minimum elong	12903 Mar 17 13:40	3° Υ 52'35	0°17'31
direct	12902 Apr 11 16:10	13° Υ 09'32			12903 Mar 21 06:37	30° \Re	
morning max el	12902 Apr 18 06:59	16° Υ 42'32	18°40'19	morning rise	12903 Mar 23 17:40	28° \Re 17'06	
	12902 Apr 28 11:20	0° \mathcal{B}		direct	12903 Mar 26 13:00	27° \Re 34'24	
desc. node	12902 May 01 22:23	5° \mathcal{B} 15'44			12903 Mar 31 21:52	0° Υ	
morning set	12902 May 09 19:44	17° \mathcal{B} 33'00		morning max el	12903 Apr 01 21:46	0° Υ 54'42	18°05'49
	12902 May 17 18:54	0° Π		desc. node	12903 Apr 18 19:01	25° Υ 26'18	
max. Earth dist.	12902 May 25 02:48	11° Π 26'32	1.45715 AU	morning set	12903 Apr 20 12:10	28° Υ 13'14	
					12903 Apr 21 14:30	0° \mathcal{B}	
superior conj	12902 May 26 00:01	12° Π 49'27	-2°09'06				
minimum elong	12902 May 25 18:59	12° Π 29'45	2°09'50	superior conj	12903 May 05 08:55	21° \mathcal{B} 59'14	-1°46'16
	12902 Jun 05 21:53	0° \mathcal{B}		minimum elong	12903 May 04 23:43	21° \mathcal{B} 23'03	1°46'09
evening rise	12902 Jun 10 11:41	7° \mathcal{B} 17'00		max. Earth dist.	12903 May 07 22:40	26° \mathcal{B} 01'15	1.45710 AU
greatest brilliancy	12902 Jun 17 17:13	18° \mathcal{B} 48'51	-0.9m		12903 May 10 11:50	0° Π	
	12902 Jun 25 00:42	0° Ω		evening rise	12903 May 21 11:27	17° Π 02'31	
asc. node	12902 Jun 25 16:27	0° Ω 56'09			12903 May 29 21:26	0° \mathcal{B}	
evening max el	12902 Jul 01 12:24	8° Ω 08'04	18°38'38	greatest brilliancy	12903 Jun 03 00:29	6° \mathcal{B} 14'20	-0.7m
retrograde	12902 Jul 08 01:33	11° Ω 41'33		asc. node	12903 Jun 12 13:28	19° \mathcal{B} 22'07	
evening set	12902 Jul 11 07:16	10° Ω 41'48		evening max el	12903 Jun 14 20:44	21° \mathcal{B} 53'23	19°22'18
inferior conj	12902 Jul 16 22:45	5° Ω 04'11	2°52'59	retrograde	12903 Jun 21 22:50	25° \mathcal{B} 51'36	
minimum elong	12902 Jul 17 00:37	4° Ω 58'28	2°51'48	evening set	12903 Jun 25 13:33	24° \mathcal{B} 35'34	
min. Earth dist.	12902 Jul 18 21:49	2° Ω 40'04	0.65572 AU	inferior conj	12903 Jun 30 23:08	18° \mathcal{B} 43'53	3°09'43
	12902 Jul 21 07:12	30° \Re		minimum elong	12903 Jun 30 23:59	18° \mathcal{B} 41'04	3°08'42
morning rise	12902 Jul 22 17:01	28° \mathcal{B} 41'27		min. Earth dist.	12903 Jul 02 07:36	16° \mathcal{B} 57'25	0.67087 AU
desc. node	12902 Jul 28 21:42	26° \mathcal{B} 00'52		morning rise	12903 Jul 06 09:53	12° \mathcal{B} 20'17	
direct	12902 Jul 29 03:09	26° \mathcal{B} 00'41		direct	12903 Jul 12 10:54	9° \mathcal{B} 41'56	
	12902 Aug 07 03:58	0° Ω		desc. node	12903 Jul 15 18:59	10° \mathcal{B} 22'33	
morning max el	12902 Aug 11 10:22	3° Ω 52'18	26°55'02	morning max el	12903 Jul 24 21:15	17° \mathcal{B} 08'41	25°43'30
	12902 Aug 31 05:44	0° \mathcal{M}			12903 Aug 04 14:36	0° Ω	
morning set	12902 Sep 16 03:20	27° \mathcal{M} 33'05			12903 Aug 24 04:34	0° \mathcal{M}	
	12902 Sep 17 09:46	0° \mathcal{L}		morning set	12903 Aug 29 21:14	10° \mathcal{M} 03'54	
max. Earth dist.	12902 Sep 20 08:31	5° \mathcal{L} 50'18	1.33854 AU	max. Earth dist.	12903 Sep 02 13:39	16° \mathcal{M} 55'41	1.35732 AU
asc. node	12902 Sep 21 17:46	8° \mathcal{L} 38'56					
				superior conj	12903 Sep 08 10:58	28° \mathcal{M} 28'07	-0°01'21
superior conj	12902 Sep 24 17:56	14° \mathcal{L} 52'56	0°28'26	minimum elong	12903 Sep 08 11:03	28° \mathcal{M} 28'35	0°01'28
minimum elong	12902 Sep 24 16:31	14° \mathcal{L} 45'27	0°28'19	behind sun begin	12903 Sep 08 04:53	27° \mathcal{M} 57'32	
	12902 Oct 01 20:51	0° \mathcal{M}		behind sun end	12903 Sep 08 17:13	28° \mathcal{M} 59'41	
evening rise	12902 Oct 02 00:38	0° \mathcal{M} 19'56		asc. node	12903 Sep 08 14:23	28° \mathcal{M} 45'23	
	12902 Oct 19 00:35	0° \mathcal{A}			12903 Sep 09 05:09	0° \mathcal{L}	
evening max el	12902 Oct 22 04:38	3° \mathcal{A} 29'54	21°35'46	evening rise	12903 Sep 16 07:53	14° \mathcal{L} 37'21	
desc. node	12902 Oct 24 18:03	5° \mathcal{A} 46'02			12903 Sep 24 05:25	0° \mathcal{M}	
retrograde	12902 Nov 03 11:10	9° \mathcal{A} 35'44		evening max el	12903 Oct 04 06:34	14° \mathcal{M} 11'38	20°11'44
evening set	12902 Nov 06 08:24	9° \mathcal{A} 16'46		desc. node	12903 Oct 11 15:27	19° \mathcal{M} 00'47	
inferior conj	12902 Nov 15 05:38	5° \mathcal{A} 22'18	-5°32'32	retrograde	12903 Oct 14 23:32	19° \mathcal{M} 31'07	
minimum elong	12902 Nov 14 22:18	5° \mathcal{A} 32'36	5°30'33	evening set	12903 Oct 17 00:23	19° \mathcal{M} 20'26	
min. Earth dist.	12902 Nov 15 06:43	5° \mathcal{A} 20'48	0.54534 AU	inferior conj	12903 Oct 25 23:34	15° \mathcal{M} 22'57	-4°14'40
morning rise	12902 Nov 23 13:09	1° \mathcal{A} 34'12		minimum elong	12903 Oct 25 13:36	15° \mathcal{M} 37'45	4°11'03
direct	12902 Nov 27 06:55	1° \mathcal{A} 03'50		min. Earth dist.	12903 Oct 27 14:40	14° \mathcal{M} 24'52	0.54853 AU
morning max el	12902 Dec 09 19:39	7° \mathcal{A} 03'28	22°14'21	morning rise	12903 Nov 03 01:52	11° \mathcal{M} 16'45	
asc. node	12902 Dec 18 18:41	18° \mathcal{A} 13'39		direct	12903 Nov 07 17:10	10° \mathcal{M} 30'06	
	12902 Dec 25 13:25	0° \mathcal{B}		morning max el	12903 Nov 21 06:46	17° \mathcal{M} 09'33	24°02'34
morning set	12902 Dec 31 08:31	11° \mathcal{B} 44'57			12903 Dec 01 15:19	0° \mathcal{A}	
				asc. node	12903 Dec 05 15:40	6° \mathcal{A} 32'11	
superior conj	12903 Jan 07 09:58	26° \mathcal{B} 48'18	1°30'17	morning set	12903 Dec 15 20:21	26° \mathcal{A} 30'24	
minimum elong	12903 Jan 07 11:44	26° \mathcal{B} 57'37	1°31'04		12903 Dec 17 11:15	0° \mathcal{B}	
	12903 Jan 08 22:25	0° \approx					
max. Earth dist.	12903 Jan 11 05:43	4° \approx 45'51	1.34189 AU	superior conj	12903 Dec 22 16:27	11° \mathcal{B} 23'36	1°37'16
evening rise	12903 Jan 15 15:12	13° \approx 30'30		minimum elong	12903 Dec 22 17:07	11° \mathcal{B} 27'17	1°38'13
desc. node	12903 Jan 20 16:56	22° \approx 58'38		max. Earth dist.	12903 Dec 25 03:24	16° \mathcal{B} 42'00	1.32736 AU
	12903 Jan 24 17:21	0° \Re		evening rise	12903 Dec 30 05:23	27° \mathcal{B} 17'00	
	12903 Feb 14 14:00	0° Υ			12903 Dec 31 14:03	0° \approx	
evening max el	12903 Feb 19 13:30	5° Υ 18'02	26°59'33	desc. node	12904 Jan 07 13:43	13° \approx 05'29	
retrograde	12903 Mar 04 21:31	12° Υ 43'56			12904 Jan 18 00:02	0° \Re	
evening set	12903 Mar 11 11:07	10° Υ 11'15		evening max el	12904 Feb 02 02:08	18° \Re 38'01	27°29'18
min. Earth dist.	12903 Mar 15 10:12	6° Υ 19'55	0.65678 AU	retrograde	12904 Feb 15 19:26	26° \Re 04'12	
asc. node	12903 Mar 16 16:05	4° Υ 54'48		evening set	12904 Feb 22 15:39	23° \Re 36'10	
inferior conj	12903 Mar 17 14:09	3° Υ 51'11	0°17'41	min. Earth dist.	12904 Feb 26 10:54	20° \Re 15'24	0.63905 AU

inferior conj	12904 Feb 29 02:08	17°  31'31	-0°48'30	evening set	12905 Feb 04 07:46	6°  29'15	
minimum elong	12904 Feb 29 03:39	17°  27'33	0°47'33	min. Earth dist.	12905 Feb 08 01:49	3°  33'48	0.61877 AU
asc. node	12904 Mar 02 13:32	15°  04'04		inferior conj	12905 Feb 11 02:02	0°  47'39	-2°04'21
morning rise	12904 Mar 06 17:51	12°  11'47		minimum elong	12905 Feb 11 06:21	0°  37'43	2°02'04
direct	12904 Mar 09 04:50	11°  41'41			12905 Feb 11 22:51	30°  R \approx	
morning max el	12904 Mar 15 15:15	15°  00'32	17°48'27	asc. node	12905 Feb 17 10:55	26° \approx 04'46	
	12904 Mar 26 06:45	0°  Y		morning rise	12905 Feb 18 07:42	25° \approx 45'13	
morning set	12904 Apr 01 08:15	10°  Y13'32		direct	12905 Feb 20 12:24	25° \approx 23'57	
desc. node	12904 Apr 04 15:36	15°  Y49'39		morning max el	12905 Feb 27 08:21	28° \approx 51'30	17°48'53
	12904 Apr 13 04:33	0°  8			12905 Feb 28 10:34	0°  H	
				morning set	12905 Mar 15 02:29	23°  H16'39	
superior conj	12904 Apr 14 08:33	1°  853'43	-1°10'02		12905 Mar 18 21:09	0°  Y	
minimum elong	12904 Apr 14 01:23	1°  824'39	1°09'30	desc. node	12905 Mar 22 12:09	6°  Y21'37	
max. Earth dist.	12904 Apr 19 17:35	10°  830'08	1.44978 AU				
evening rise	12904 Apr 29 23:07	26°  825'04		superior conj	12905 Mar 26 07:45	12°  Y54'52	-0°29'27
	12904 May 02 07:25	0°  II		minimum elong	12905 Mar 26 04:57	12°  Y43'00	0°29'08
	12904 May 23 01:26	0°  E		max. Earth dist.	12905 Apr 02 09:48	24°  Y39'49	1.43595 AU
evening max el	12904 May 27 23:32	5°  E40'40	20°21'11		12905 Apr 05 17:36	0°  8	
asc. node	12904 May 29 10:34	7°  E03'32		evening rise	12905 Apr 09 14:44	6°  806'10	
retrograde	12904 Jun 04 21:36	10°  E13'55			12905 Apr 25 14:41	0°  II	
evening set	12904 Jun 08 22:06	8°  E41'16		evening max el	12905 May 10 20:41	19°  II28'46	21°32'15
inferior conj	12904 Jun 14 04:44	2°  E36'57	3°13'11	asc. node	12905 May 16 07:44	23°  II46'43	
minimum elong	12904 Jun 14 04:32	2°  E37'38	3°12'13	retrograde	12905 May 19 19:59	24°  II43'54	
min. Earth dist.	12904 Jun 14 23:05	1°  E34'07	0.68153 AU	evening set	12905 May 24 07:04	22°  II54'57	
	12904 Jun 16 03:12	30°  R \approx II		inferior conj	12905 May 29 13:17	16°  II39'36	3°05'15
morning rise	12904 Jun 19 10:39	26°  II16'18		minimum elong	12905 May 29 12:10	16°  II43'30	3°04'12
direct	12904 Jun 25 00:12	23°  II48'43		min. Earth dist.	12905 May 29 18:12	16°  II22'27	0.68748 AU
desc. node	12904 Jul 01 16:12	26°  II29'50		morning rise	12905 Jun 03 17:04	10°  II24'10	
	12904 Jul 05 17:18	0°  E		direct	12905 Jun 08 17:54	8°  II13'22	
morning max el	12904 Jul 06 07:15	0°  E34'50	24°18'00	desc. node	12905 Jun 18 13:18	13°  II56'41	
	12904 Jul 28 12:12	0°  O		morning max el	12905 Jun 18 18:08	14°  II08'46	22°48'18
morning set	12904 Aug 10 20:37	21°  O43'30			12905 Jul 01 13:58	0°  E	
max. Earth dist.	12904 Aug 14 11:56	28°  O08'22	1.37956 AU		12905 Jul 21 10:29	0°  O	
	12904 Aug 15 12:41	0°  np		morning set	12905 Jul 22 20:49	2°  O20'23	
				max. Earth dist.	12905 Jul 27 10:25	9°  O59'26	1.40299 AU
superior conj	12904 Aug 21 16:22	11°  np29'02	-0°34'43	superior conj	12905 Aug 04 06:04	23°  O45'39	-1°09'25
minimum elong	12904 Aug 21 18:45	11°  np40'28	0°34'41	minimum elong	12905 Aug 04 11:09	24°  O08'48	1°09'18
asc. node	12904 Aug 25 10:58	18°  np49'39			12905 Aug 07 15:27	0°  np	
evening rise	12904 Aug 30 09:35	28°  np37'38		asc. node	12905 Aug 12 07:35	8°  np48'07	
	12904 Aug 31 02:13	0°  E		evening rise	12905 Aug 14 02:37	12°  np12'34	
evening max el	12904 Sep 15 22:40	25°  E42'07	19°08'43		12905 Aug 24 00:24	0°  E	
	12904 Sep 22 22:23	0°  ml		evening max el	12905 Aug 30 02:05	7°  E57'03	18°27'18
retrograde	12904 Sep 24 23:56	0°  ml13'46		retrograde	12905 Sep 06 19:26	11°  E50'58	
evening set	12904 Sep 26 20:26	0°  ml03'10		evening set	12905 Sep 08 20:13	11°  E35'31	
	12904 Sep 27 02:46	30°  R \approx E		desc. node	12905 Sep 14 10:23	8°  E40'51	
desc. node	12904 Sep 27 12:53	29°  E54'06		inferior conj	12905 Sep 16 13:38	7°  E02'37	-0°40'15
inferior conj	12904 Oct 05 08:00	25°  E50'53	-2°26'57	minimum elong	12905 Sep 16 12:04	7°  E05'42	0°39'35
minimum elong	12904 Oct 05 01:40	26°  E01'35	2°24'11	min. Earth dist.	12905 Sep 19 20:05	4°  E28'14	0.57933 AU
min. Earth dist.	12904 Oct 08 02:22	23°  E59'03	0.56062 AU	morning rise	12905 Sep 24 00:27	1°  E45'47	
morning rise	12904 Oct 13 04:08	21°  E11'25		direct	12905 Sep 30 03:15	0°  E09'52	
direct	12904 Oct 18 15:16	20°  E02'19		morning max el	12905 Oct 14 10:49	7°  E44'59	27°05'33
morning max el	12904 Nov 01 17:43	27°  E13'17	25°45'34		12905 Oct 31 04:27	0°  ml	
	12904 Nov 04 10:40	0°  ml		asc. node	12905 Nov 08 09:22	14°  ml49'15	
asc. node	12904 Nov 21 12:34	25°  ml27'29		morning set	12905 Nov 13 16:49	25°  ml41'52	
	12904 Nov 23 21:28	0°  x			12905 Nov 15 16:41	0°  x	
morning set	12904 Nov 29 07:42	11°  x11'11					
superior conj	12904 Dec 06 02:29	26°  x06'28	1°38'01	superior conj	12905 Nov 20 14:01	10°  x50'00	1°32'50
minimum elong	12904 Dec 06 02:03	26°  x04'07	1°38'58	minimum elong	12905 Nov 20 12:39	10°  x42'20	1°33'38
max. Earth dist.	12904 Dec 07 07:56	28°  x49'22	1.31765 AU	max. Earth dist.	12905 Nov 20 16:11	11°  x02'04	1.31293 AU
	12904 Dec 07 20:45	0°  E		evening rise	12905 Nov 27 09:11	25°  x46'35	
evening rise	12904 Dec 13 04:15	11°  E24'53			12905 Nov 29 09:27	0°  E	
	12904 Dec 22 19:18	0° \approx		desc. node	12905 Dec 11 07:32	22°  E06'34	
desc. node	12904 Dec 24 10:35	2° \approx 51'13			12905 Dec 16 11:08	0° \approx	
	12905 Jan 13 01:08	0°  H		evening max el	12905 Dec 27 15:44	13° \approx 26'15	26°54'21
evening max el	12905 Jan 14 11:52	1°  H25'21	27°28'57	retrograde	12906 Jan 10 14:26	20° \approx 36'38	
retrograde	12905 Jan 28 09:31	8°  H44'49		evening set	12906 Jan 17 07:58	18° \approx 41'32	

min. Earth dist.	12906 Jan 21 05:54	16° \approx 02'26	0.59718 AU	retrograde	12906 Dec 23 09:01	1° \approx 35'28	
inferior conj	12906 Jan 24 10:17	13° \approx 29'05	-3°26'01	evening set	12906 Dec 29 12:05	0° \approx 08'04	
minimum elong	12906 Jan 24 17:33	13° \approx 14'26	3°22'42		12906 Dec 29 18:57	30° \approx 00	
morning rise	12906 Feb 01 06:07	8° \approx 47'13		min. Earth dist.	12907 Jan 03 00:00	27° \approx 30'56	0.57629 AU
direct	12906 Feb 03 07:38	8° \approx 31'14		inferior conj	12907 Jan 05 23:27	25° \approx 26'29	-4°44'02
asc. node	12906 Feb 04 08:17	8° \approx 35'20		minimum elong	12907 Jan 06 08:06	25° \approx 11'22	4°40'53
morning max el	12906 Feb 10 21:34	12° \approx 17'17	18°08'19	morning rise	12907 Jan 14 06:49	21° \approx 07'03	
	12906 Feb 22 17:18	0° \approx		direct	12907 Jan 16 09:58	20° \approx 52'53	
morning set	12906 Feb 26 12:35	7° \approx 03'00		asc. node	12907 Jan 22 05:37	22° \approx 34'05	
				morning max el	12907 Jan 25 03:03	25° \approx 07'32	18°48'26
superior conj	12906 Mar 08 06:29	25° \approx 01'10	0°08'39		12907 Jan 29 06:02	0° \approx	
minimum elong	12906 Mar 08 07:10	25° \approx 04'15	0°08'43	morning set	12907 Feb 10 09:42	21° \approx 18'09	
behind sun begin	12906 Mar 08 00:42	24° \approx 35'17			12907 Feb 14 20:28	0° \approx	
behind sun end	12906 Mar 08 13:38	25° \approx 33'08		superior conj	12907 Feb 19 00:45	8° \approx 01'09	0°40'44
desc. node	12906 Mar 09 08:40	26° \approx 57'49		minimum elong	12907 Feb 19 03:12	8° \approx 12'42	0°40'49
	12906 Mar 11 02:02	0° \approx		desc. node	12907 Feb 24 05:12	17° \approx 34'52	
max. Earth dist.	12906 Mar 15 21:33	8° \approx 15'04	1.41698 AU	max. Earth dist.	12907 Feb 26 04:51	21° \approx 06'58	1.39505 AU
evening rise	12906 Mar 20 22:32	16° \approx 33'01		evening rise	12907 Mar 02 03:22	27° \approx 55'15	
	12906 Mar 29 13:03	0° \approx			12907 Mar 03 09:00	0° \approx	
	12906 Apr 20 11:30	0° \approx			12907 Mar 23 01:28	0° \approx	
evening max el	12906 Apr 23 13:14	3° \approx 17'51	22°51'05	evening max el	12907 Apr 06 03:14	17° \approx 08'34	24°11'54
asc. node	12906 May 03 05:00	9° \approx 15'29		retrograde	12907 Apr 17 09:55	23° \approx 45'49	
retrograde	12906 May 03 16:30	9° \approx 16'33		asc. node	12907 Apr 20 02:22	23° \approx 13'19	
evening set	12906 May 08 14:50	7° \approx 12'31		evening set	12907 Apr 22 19:51	21° \approx 28'56	
inferior conj	12906 May 13 22:49	0° \approx 48'26	2°46'55	min. Earth dist.	12907 Apr 27 11:02	16° \approx 08'19	0.68518 AU
minimum elong	12906 May 13 21:01	0° \approx 54'42	2°45'45	inferior conj	12907 Apr 28 07:25	14° \approx 59'23	2°18'31
min. Earth dist.	12906 May 13 14:54	1° \approx 15'57	0.68863 AU	minimum elong	12907 Apr 28 05:16	15° \approx 06'39	2°17'19
	12906 May 14 12:48	30° \approx 00		morning rise	12907 May 03 14:48	8° \approx 58'11	
morning rise	12906 May 19 03:06	24° \approx 39'34		direct	12907 May 07 13:59	7° \approx 28'38	
direct	12906 May 23 14:53	22° \approx 48'57		morning max el	12907 May 15 06:40	11° \approx 48'02	20°08'07
morning max el	12906 Jun 01 09:04	27° \approx 52'46	21°22'57	desc. node	12907 May 23 07:11	21° \approx 29'22	
	12906 Jun 03 09:15	0° \approx			12907 May 29 07:35	0° \approx	
desc. node	12906 Jun 05 10:18	2° \approx 21'58		morning set	12907 Jun 11 23:42	20° \approx 34'11	
	12906 Jun 25 03:37	0° \approx			12907 Jun 18 01:14	0° \approx	
morning set	12906 Jul 02 19:48	11° \approx 51'18		max. Earth dist.	12907 Jun 22 00:27	6° \approx 16'40	1.44225 AU
max. Earth dist.	12906 Jul 09 14:15	22° \approx 43'57	1.42472 AU				
	12906 Jul 13 23:10	0° \approx		superior conj	12907 Jun 27 17:33	15° \approx 30'01	-2°05'15
superior conj	12906 Jul 16 23:36	5° \approx 08'19	-1°41'34	minimum elong	12907 Jun 27 23:13	15° \approx 53'11	2°05'55
minimum elong	12906 Jul 17 06:36	5° \approx 38'22	1°41'40		12907 Jul 06 10:05	0° \approx	
evening rise	12906 Jul 28 07:02	25° \approx 12'27		evening rise	12907 Jul 10 17:52	7° \approx 24'23	
asc. node	12906 Jul 30 04:16	28° \approx 37'01		asc. node	12907 Jul 17 01:01	18° \approx 11'10	
	12906 Jul 30 22:40	0° \approx			12907 Jul 24 15:49	0° \approx	
evening max el	12906 Aug 13 12:44	20° \approx 47'35	18°06'21	evening max el	12907 Jul 28 02:41	4° \approx 03'28	18°04'37
retrograde	12906 Aug 20 09:10	24° \approx 17'44		retrograde	12907 Aug 03 12:47	7° \approx 24'01	
evening set	12906 Aug 22 17:16	23° \approx 53'34		evening set	12907 Aug 06 05:04	6° \approx 47'49	
inferior conj	12906 Aug 29 16:29	19° \approx 00'10	0°47'48	inferior conj	12907 Aug 12 13:02	1° \approx 35'57	1°52'43
minimum elong	12906 Aug 29 17:56	18° \approx 56'48	0°46'59	minimum elong	12907 Aug 12 15:33	1° \approx 29'19	1°51'24
desc. node	12906 Sep 01 07:54	16° \approx 33'57			12907 Aug 14 01:22	30° \approx 00	
min. Earth dist.	12906 Sep 01 22:14	16° \approx 02'10	0.60153 AU	min. Earth dist.	12907 Aug 15 09:48	28° \approx 36'21	0.62429 AU
morning rise	12906 Sep 05 15:30	13° \approx 12'05		morning rise	12907 Aug 18 23:47	25° \approx 27'12	
direct	12906 Sep 12 04:14	11° \approx 08'56		desc. node	12907 Aug 19 05:25	25° \approx 17'11	
morning max el	12906 Sep 26 11:42	19° \approx 01'46	27°50'15	direct	12907 Aug 25 16:09	23° \approx 01'53	
	12906 Oct 05 18:53	0° \approx			12907 Sep 07 16:23	0° \approx	
	12906 Oct 23 23:29	0° \approx		morning max el	12907 Sep 08 18:34	1° \approx 03'45	27°55'59
asc. node	12906 Oct 26 06:06	4° \approx 30'10			12907 Sep 29 23:36	0° \approx	
morning set	12906 Oct 28 21:55	9° \approx 58'02		morning set	12907 Oct 12 20:54	23° \approx 53'55	
max. Earth dist.	12906 Nov 04 00:27	23° \approx 11'18	1.31331 AU	asc. node	12907 Oct 13 02:46	24° \approx 23'52	
					12907 Oct 15 19:26	0° \approx	
superior conj	12906 Nov 05 01:16	25° \approx 29'14	1°21'56	max. Earth dist.	12907 Oct 18 04:44	5° \approx 06'20	1.31891 AU
minimum elong	12906 Nov 04 23:15	25° \approx 17'55	1°22'27				
	12906 Nov 07 01:53	0° \approx		superior conj	12907 Oct 20 10:21	9° \approx 58'29	1°05'26
evening rise	12906 Nov 11 18:06	10° \approx 16'47		minimum elong	12907 Oct 20 08:05	9° \approx 46'03	1°05'38
	12906 Nov 21 16:42	0° \approx		evening rise	12907 Oct 27 05:01	24° \approx 50'06	
desc. node	12906 Nov 28 04:38	10° \approx 34'01			12907 Oct 29 15:24	0° \approx	
evening max el	12906 Dec 09 11:26	24° \approx 34'12	25°46'19	desc. node	12907 Nov 15 01:51	28° \approx 15'34	
	12906 Dec 16 22:56	0° \approx			12907 Nov 16 11:00	0° \approx	

evening max el	12907 Nov 20 23:37	4° ☿ 56'29	24°13'30	evening max el	12908 Nov 01 10:12	14° ♊ 58'42	22°31'36
retrograde	12907 Dec 04 15:27	11° ☿ 45'23		retrograde	12908 Nov 14 08:57	21° ♊ 24'11	
evening set	12907 Dec 09 16:33	10° ☿ 49'29		evening set	12908 Nov 18 00:25	20° ♊ 55'07	
min. Earth dist.	12907 Dec 15 10:56	7° ☿ 55'52	0.55882 AU	min. Earth dist.	12908 Nov 25 17:55	17° ♊ 26'50	0.54783 AU
inferior conj	12907 Dec 17 15:59	6° ☿ 34'34	-5°40'45	inferior conj	12908 Nov 26 14:52	16° ♊ 57'16	-5°52'39
minimum elong	12907 Dec 17 21:32	6° ☿ 26'03	5°39'06	minimum elong	12908 Nov 26 12:09	17° ♊ 01'05	5°51'34
morning rise	12907 Dec 26 04:29	2° ☿ 35'17		morning rise	12908 Dec 05 01:12	13° ♊ 09'35	
direct	12907 Dec 28 16:45	2° ☿ 18'51		direct	12908 Dec 08 07:06	12° ♊ 45'38	
morning max el	12908 Jan 07 20:52	7° ☿ 11'21	19°51'05	morning max el	12908 Dec 20 00:18	18° ♊ 20'55	21°16'29
asc. node	12908 Jan 09 02:52	8° ☿ 27'44		asc. node	12908 Dec 26 00:02	25° ♊ 23'03	
	12908 Jan 22 15:54	0° ☿			12908 Dec 29 01:51	0° ☿	
morning set	12908 Jan 25 14:13	5° ☿ 51'49		morning set	12909 Jan 08 23:15	20° ☿ 35'06	
					12909 Jan 13 10:43	0° ☿	
superior conj	12908 Feb 02 09:57	21° ☿ 41'53	1°05'38	superior conj	12909 Jan 16 05:52	5° ☿ 50'54	1°23'17
minimum elong	12908 Feb 02 12:45	21° ☿ 55'50	1°05'57	minimum elong	12909 Jan 16 08:09	6° ☿ 02'45	1°23'54
	12908 Feb 06 16:20	0° ☿			12909 Jan 16 08:09	6° ☿ 02'45	1°23'54
max. Earth dist.	12908 Feb 08 11:04	3° ☿ 21'21	1.37270 AU	max. Earth dist.	12909 Jan 20 21:15	15° ☿ 15'56	1.35221 AU
desc. node	12908 Feb 11 01:46	8° ☿ 09'31		evening rise	12909 Jan 24 23:01	23° ☿ 07'55	
evening rise	12908 Feb 12 04:38	10° ☿ 10'14		desc. node	12909 Jan 27 22:24	28° ☿ 37'09	
	12908 Feb 24 02:05	0° ☿			12909 Jan 28 16:50	0° ☿	
	12908 Mar 17 16:29	0° ☿			12909 Feb 16 18:43	0° ☿	
evening max el	12908 Mar 18 16:42	1° ☿ 00'44	25°27'47	evening max el	12909 Mar 01 06:29	14° ☿ 48'24	26°31'27
retrograde	12908 Mar 30 23:02	8° ☿ 06'01		retrograde	12909 Mar 14 06:45	22° ☿ 09'17	
evening set	12908 Apr 05 20:30	5° ☿ 39'34		evening set	12909 Mar 20 14:58	19° ☿ 37'33	
asc. node	12908 Apr 05 23:47	5° ☿ 32'34		asc. node	12909 Mar 23 21:14	16° ☿ 24'28	
min. Earth dist.	12908 Apr 10 04:32	0° ☿ 54'20	0.67736 AU	min. Earth dist.	12909 Mar 24 17:06	15° ☿ 26'55	0.66542 AU
	12908 Apr 10 21:27	30° ☿		inferior conj	12909 Mar 26 13:59	13° ☿ 11'57	0°50'52
inferior conj	12908 Apr 11 13:11	29° ☿ 09'07	1°39'59	minimum elong	12909 Mar 26 12:44	13° ☿ 15'45	0°50'16
minimum elong	12908 Apr 11 11:11	29° ☿ 15'37	1°38'55	morning rise	12909 Apr 01 11:29	7° ☿ 30'25	
morning rise	12908 Apr 17 02:18	23° ☿ 16'50		direct	12909 Apr 04 12:25	6° ☿ 38'42	
direct	12908 Apr 20 13:47	22° ☿ 07'21		morning max el	12909 Apr 10 23:39	10° ☿ 04'53	18°23'31
morning max el	12908 Apr 27 11:52	25° ☿ 53'49	19°07'43		12909 Apr 25 07:17	0° ☿	
	12908 May 01 03:34	0° ☿		desc. node	12909 Apr 26 00:36	1° ☿ 08'10	
desc. node	12908 May 09 03:57	11° ☿ 07'46		morning set	12909 May 01 03:27	9° ☿ 14'38	
greatest brilliancy	12908 May 10 12:17	13° ☿ 08'10	-0.7m		12909 May 14 07:37	0° ☿	
morning set	12908 May 21 03:22	29° ☿ 22'52		superior conj	12909 May 16 21:05	4° ☿ 00'16	-2°01'36
	12908 May 21 12:59	0° ☿		minimum elong	12909 May 16 13:29	3° ☿ 30'31	2°01'58
max. Earth dist.	12908 Jun 03 16:12	20° ☿ 25'58	1.45376 AU	max. Earth dist.	12909 May 17 11:37	4° ☿ 56'58	1.45808 AU
superior conj	12908 Jun 06 13:21	24° ☿ 58'03	-2°13'27	evening rise	12909 Jun 01 18:12	28° ☿ 50'53	
minimum elong	12908 Jun 06 12:47	24° ☿ 55'51	2°14'25		12909 Jun 02 11:47	0° ☿	
	12908 Jun 09 17:33	0° ☿		greatest brilliancy	12909 Jun 11 11:51	14° ☿ 04'54	-0.8m
evening rise	12908 Jun 21 06:18	18° ☿ 37'54		asc. node	12909 Jun 19 18:50	26° ☿ 10'59	
	12908 Jun 28 05:12	0° ☿			12909 Jun 22 21:39	0° ☿	
asc. node	12908 Jul 02 21:53	7° ☿ 25'02		evening max el	12909 Jun 24 03:35	1° ☿ 18'59	18°55'17
evening max el	12908 Jul 10 16:35	17° ☿ 36'30	18°21'11	retrograde	12909 Jun 30 21:06	5° ☿ 01'09	
retrograde	12908 Jul 17 01:58	21° ☿ 01'10		evening set	12909 Jul 04 06:41	3° ☿ 54'25	
evening set	12908 Jul 20 02:45	20° ☿ 10'29			12909 Jul 08 08:03	30° ☿	
inferior conj	12908 Jul 25 23:12	14° ☿ 41'57	2°36'13	inferior conj	12909 Jul 09 19:16	28° ☿ 10'45	3°01'48
minimum elong	12908 Jul 26 01:30	14° ☿ 35'13	2°34'56	minimum elong	12909 Jul 09 20:43	28° ☿ 06'09	3°00'43
min. Earth dist.	12908 Jul 28 06:43	12° ☿ 00'31	0.64524 AU	min. Earth dist.	12909 Jul 11 12:05	26° ☿ 01'46	0.66272 AU
morning rise	12908 Jul 31 22:55	8° ☿ 22'20		morning rise	12909 Jul 15 10:03	21° ☿ 47'23	
desc. node	12908 Aug 05 02:52	6° ☿ 04'41		direct	12909 Jul 21 16:47	19° ☿ 06'32	
direct	12908 Aug 07 12:54	5° ☿ 44'05		desc. node	12909 Jul 23 00:13	19° ☿ 12'45	
morning max el	12908 Aug 21 04:39	13° ☿ 43'02	27°25'49	morning max el	12909 Aug 03 15:40	26° ☿ 48'45	26°26'58
	12908 Sep 03 08:33	0° ☿			12909 Aug 06 14:56	0° ☿	
	12908 Sep 21 14:38	0° ☿			12909 Aug 27 23:31	0° ☿	
morning set	12908 Sep 25 11:12	7° ☿ 23'08		morning set	12909 Sep 08 13:41	20° ☿ 18'10	
asc. node	12908 Sep 28 23:24	14° ☿ 25'42		max. Earth dist.	12909 Sep 12 12:27	27° ☿ 53'44	1.34601 AU
max. Earth dist.	12908 Sep 30 01:26	16° ☿ 39'57	1.32988 AU		12909 Sep 13 13:59	0° ☿	
				asc. node	12909 Sep 15 19:59	4° ☿ 31'44	
superior conj	12908 Oct 03 15:12	24° ☿ 12'06	0°43'28	superior conj	12909 Sep 17 13:23	8° ☿ 03'55	0°16'23
minimum elong	12908 Oct 03 13:16	24° ☿ 01'46	0°43'26	minimum elong	12909 Sep 17 12:30	7° ☿ 59'20	0°16'14
	12908 Oct 06 07:50	0° ☿		evening rise	12909 Sep 25 01:24	23° ☿ 46'31	
evening rise	12908 Oct 10 16:06	9° ☿ 21'40			12909 Sep 28 02:00	0° ☿	
	12908 Oct 21 06:35	0° ☿		evening max el	12909 Oct 14 04:34	25° ☿ 18'03	20°57'39
desc. node	12908 Oct 31 23:10	14° ☿ 31'21					

desc. node	12909 Oct 18 20:33	29°♄00'57		minimum elong	12910 Sep 01 02:51	21°♄30'18	0°15'12
	12909 Oct 20 18:26	0°♄		behind sun begin	12910 Sep 01 00:40	21°♄19'32	
retrograde	12909 Oct 25 19:44	1°♄04'51		behind sun end	12910 Sep 01 05:02	21°♄41'04	
evening set	12909 Oct 28 06:29	0°♄50'36		asc. node	12910 Sep 02 16:33	24°♄37'37	
	12909 Oct 31 04:19	30°♄			12910 Sep 05 08:33	0°♄	
inferior conj	12909 Nov 06 06:24	26°♄56'34	-5°05'14	evening rise	12910 Sep 09 06:37	7°♄57'49	
minimum elong	12909 Nov 05 20:57	27°♄09'58	5°02'23		12910 Sep 21 09:36	0°♄	
min. Earth dist.	12909 Nov 07 00:17	26°♄31'11	0.54559 AU	evening max el	12910 Sep 26 12:32	6°♄19'43	19°42'13
morning rise	12909 Nov 14 11:43	23°♄03'37		desc. node	12910 Oct 05 18:01	11°♄17'04	
direct	12909 Nov 18 15:02	22°♄26'56		retrograde	12910 Oct 06 12:16	11°♄18'43	
morning max el	12909 Dec 01 15:22	28°♄43'39	22°59'46	evening set	12910 Oct 08 09:39	11°♄08'47	
	12909 Dec 02 22:24	0°♄		inferior conj	12910 Oct 17 05:10	7°♄05'40	-3°30'40
asc. node	12909 Dec 12 21:05	13°♄15'43		minimum elong	12910 Oct 16 20:16	7°♄19'33	3°27'06
	12909 Dec 21 21:08	0°♄		min. Earth dist.	12910 Oct 19 09:20	5°♄44'19	0.55269 AU
morning set	12909 Dec 24 10:39	5°♄21'57		morning rise	12910 Oct 25 05:10	2°♄46'44	
				direct	12910 Oct 30 05:00	1°♄51'36	
superior conj	12909 Dec 31 09:17	20°♄19'14	1°34'02	morning max el	12910 Nov 13 01:31	8°♄44'56	24°48'08
minimum elong	12909 Dec 31 10:36	20°♄26'18	1°34'53		12910 Nov 28 16:54	0°♄	
max. Earth dist.	12910 Jan 03 14:50	27°♄09'55	1.33523 AU	asc. node	12910 Nov 29 18:01	1°♄51'08	
	12910 Jan 04 23:40	0°♄		morning set	12910 Dec 08 22:31	20°♄06'17	
evening rise	12910 Jan 08 06:58	6°♄39'19			12910 Dec 13 11:18	0°♄	
desc. node	12910 Jan 14 19:08	18°♄53'27					
	12910 Jan 21 07:46	0°♄		superior conj	12910 Dec 15 17:32	4°♄58'37	1°38'19
evening max el	12910 Feb 11 19:59	28°♄21'59	27°15'26	minimum elong	12910 Dec 15 17:45	4°♄59'44	1°39'17
	12910 Feb 13 14:35	0°♄		max. Earth dist.	12910 Dec 17 15:48	9°♄11'23	1.32266 AU
retrograde	12910 Feb 25 08:15	5°♄48'03		evening rise	12910 Dec 23 01:10	20°♄35'34	
evening set	12910 Mar 04 01:14	3°♄16'34			12910 Dec 27 19:25	0°♄	
	12910 Mar 07 14:34	30°♄		desc. node	12911 Jan 01 15:58	8°♄52'22	
min. Earth dist.	12910 Mar 07 22:34	29°♄38'44	0.64971 AU		12911 Jan 15 08:36	0°♄	
inferior conj	12910 Mar 10 07:26	27°♄02'26	-0°09'06	evening max el	12911 Jan 25 07:31	11°♄29'07	27°32'59
minimum elong	12910 Mar 10 07:42	27°♄01'43	0°08'50	retrograde	12911 Feb 08 02:53	18°♄53'05	
transit middle	12910 Mar 10 07:42	27°♄01'43	0°08'50	evening set	12911 Feb 15 00:52	16°♄29'01	
transit begin	12910 Mar 10 05:09	27°♄08'43		min. Earth dist.	12911 Feb 18 19:04	13°♄20'12	0.63073 AU
transit end	12910 Mar 10 10:14	26°♄54'43		inferior conj	12911 Feb 21 14:40	10°♄33'28	-1°19'38
asc. node	12910 Mar 10 18:41	26°♄31'32		minimum elong	12911 Feb 21 17:18	10°♄26'58	1°18'08
morning rise	12910 Mar 16 15:52	21°♄34'03		asc. node	12911 Feb 25 16:05	6°♄56'05	
direct	12910 Mar 19 07:33	20°♄57'00		morning rise	12911 Feb 28 12:12	5°♄21'02	
morning max el	12910 Mar 25 15:53	24°♄15'01	17°56'17	direct	12911 Mar 02 20:16	4°♄55'07	
	12910 Mar 30 10:08	0°♄		morning max el	12911 Mar 09 09:40	8°♄16'08	17°46'27
morning set	12910 Apr 12 08:04	20°♄30'25			12911 Mar 23 20:51	0°♄	
desc. node	12910 Apr 12 21:11	21°♄24'35		morning set	12911 Mar 25 14:22	2°♄59'58	
	12910 Apr 18 02:37	0°♄		desc. node	12911 Mar 30 17:44	11°♄52'17	
superior conj	12910 Apr 26 10:23	13°♄23'48	-1°31'58	superior conj	12911 Apr 06 19:39	23°♄46'18	-0°52'51
minimum elong	12910 Apr 26 01:27	12°♄48'20	1°31'35	minimum elong	12911 Apr 06 14:18	23°♄24'14	0°52'23
max. Earth dist.	12910 Apr 30 07:54	19°♄32'56	1.45489 AU		12911 Apr 10 15:13	0°♄	
	12910 May 07 00:49	0°♄		max. Earth dist.	12911 Apr 13 01:59	3°♄55'59	1.44458 AU
evening rise	12910 May 12 11:00	8°♄21'43		evening rise	12911 Apr 21 22:27	17°♄47'39	
greatest brilliancy	12910 May 26 16:56	29°♄52'54	-0.6m		12911 Apr 29 23:46	0°♄	
	12910 May 26 18:52	0°♄		evening max el	12911 May 21 09:50	28°♄52'32	20°50'08
asc. node	12910 Jun 06 15:52	14°♄19'19			12911 May 22 13:50	0°♄	
evening max el	12910 Jun 07 09:37	15°♄05'09	19°45'40	asc. node	12911 May 24 13:01	1°♄38'07	
retrograde	12910 Jun 14 19:17	19°♄17'01		retrograde	12911 May 29 18:13	3°♄43'35	
evening set	12910 Jun 18 14:10	17°♄53'41		evening set	12911 Jun 02 23:06	2°♄03'49	
inferior conj	12910 Jun 23 22:07	11°♄56'16	3°12'41		12911 Jun 05 01:39	30°♄	
minimum elong	12910 Jun 23 22:31	11°♄54'56	3°11'42	inferior conj	12911 Jun 08 05:15	25°♄54'19	3°11'10
min. Earth dist.	12910 Jun 25 00:24	10°♄28'15	0.67594 AU	minimum elong	12911 Jun 08 04:38	25°♄56'26	3°10'10
morning rise	12910 Jun 29 06:30	5°♄33'45		min. Earth dist.	12911 Jun 08 17:45	25°♄11'01	0.68456 AU
direct	12910 Jul 05 02:47	2°♄59'25		morning rise	12911 Jun 13 09:55	19°♄35'33	
desc. node	12910 Jul 09 21:28	4°♄22'30		direct	12911 Jun 18 18:00	17°♄14'44	
morning max el	12910 Jul 17 02:12	10°♄10'09	25°08'24	desc. node	12911 Jun 26 18:36	21°♄06'47	
	12910 Aug 01 19:39	0°♄		morning max el	12911 Jun 29 12:27	23°♄40'36	23°39'55
	12910 Aug 20 14:44	0°♄			12911 Jul 05 03:04	0°♄	
morning set	12910 Aug 22 00:15	2°♄28'26			12911 Jul 26 04:45	0°♄	
max. Earth dist.	12910 Aug 25 14:25	9°♄00'31	1.36646 AU	morning set	12911 Aug 03 14:18	13°♄42'58	
				max. Earth dist.	12911 Aug 07 11:57	20°♄26'25	1.38949 AU
superior conj	12910 Sep 01 01:53	21°♄25'29	-0°15'08		12911 Aug 12 19:36	0°♄	






















































































































superior conj	12911 Aug 15 01:05	4° \mathbb{M} 08'28	-0°49'27	superior conj	12912 Jul 27 06:42	16° \mathcal{O} 03'01	-1°23'42
minimum elong	12911 Aug 15 04:37	4° \mathbb{M} 25'01	0°49'22	minimum elong	12912 Jul 27 12:49	16° \mathcal{O} 30'08	1°23'36
asc. node	12911 Aug 20 13:09	14° \mathbb{M} 40'01			12912 Aug 03 22:44	0° \mathbb{M}	
evening rise	12911 Aug 24 05:04	21° \mathbb{M} 48'28		asc. node	12912 Aug 06 09:49	4° \mathbb{M} 34'53	
	12911 Aug 28 11:21	0° \mathcal{L}		evening rise	12912 Aug 06 17:13	5° \mathbb{M} 09'21	
evening max el	12911 Sep 09 09:51	18° \mathcal{L} 09'46	18°48'32		12912 Aug 22 00:54	0° \mathcal{L}	
retrograde	12911 Sep 17 20:35	22° \mathcal{L} 24'09		evening max el	12912 Aug 22 16:54	0° \mathcal{L} 41'18	18°16'04
evening set	12911 Sep 19 18:03	22° \mathcal{L} 12'09		retrograde	12912 Aug 29 23:57	4° \mathcal{L} 23'03	
desc. node	12911 Sep 22 15:29	21° \mathcal{L} 11'38		evening set	12912 Sep 01 03:41	4° \mathcal{L} 04'22	
inferior conj	12911 Sep 27 22:16	17° \mathcal{L} 51'31	-1°40'13		12912 Sep 07 19:31	30° \mathbb{R} \mathbb{M}	
minimum elong	12911 Sep 27 18:05	17° \mathcal{L} 59'06	1°38'20	inferior conj	12912 Sep 08 13:10	29° \mathbb{M} 22'59	-0°00'09
min. Earth dist.	12911 Sep 30 23:37	15° \mathcal{L} 39'27	0.56791 AU	minimum elong	12912 Sep 08 13:09	29° \mathbb{M} 23'00	0°00'15
morning rise	12911 Oct 05 14:47	12° \mathcal{L} 55'29		transit middle	12912 Sep 08 13:09	29° \mathbb{M} 23'00	0°00'15
direct	12911 Oct 11 08:59	11° \mathcal{L} 35'19		transit begin	12912 Sep 08 09:41	29° \mathbb{M} 30'19	
morning max el	12911 Oct 25 14:47	18° \mathcal{L} 58'13	26°23'15	transit end	12912 Sep 08 16:37	29° \mathbb{M} 15'40	
	12911 Nov 03 22:21	0° \mathbb{M}		desc. node	12912 Sep 08 12:59	29° \mathbb{M} 23'22	
asc. node	12911 Nov 16 14:51	20° \mathbb{M} 58'31		min. Earth dist.	12912 Sep 11 20:51	26° \mathbb{M} 35'39	0.58850 AU
	12911 Nov 21 03:24	0° \mathcal{A}		morning rise	12912 Sep 15 19:09	23° \mathbb{M} 51'49	
morning set	12911 Nov 23 09:07	4° \mathcal{A} 43'26		direct	12912 Sep 22 03:10	22° \mathbb{M} 03'37	
				morning max el	12912 Oct 06 11:05	29° \mathbb{M} 47'40	27°29'14
superior conj	12911 Nov 30 04:28	19° \mathcal{A} 42'40	1°36'32		12912 Oct 06 16:06	0° \mathcal{L}	
minimum elong	12911 Nov 30 03:37	19° \mathcal{A} 37'55	1°37'26		12912 Oct 27 22:24	0° \mathbb{M}	
max. Earth dist.	12911 Nov 30 22:09	21° \mathcal{A} 21'00	1.31500 AU	asc. node	12912 Nov 02 11:38	10° \mathbb{M} 29'29	
	12911 Dec 04 20:35	0° \mathcal{B}		morning set	12912 Nov 06 16:48	19° \mathbb{M} 09'00	
evening rise	12911 Dec 07 02:53	4° \mathcal{B} 49'58			12912 Nov 11 16:27	0° \mathcal{A}	
desc. node	12911 Dec 19 12:54	28° \mathcal{B} 26'29					
	12911 Dec 20 11:18	0° \approx		superior conj	12912 Nov 13 16:10	4° \mathcal{A} 25'50	1°28'55
evening max el	12912 Jan 07 14:55	23° \approx 57'30	27°18'26	minimum elong	12912 Nov 13 14:28	4° \mathcal{A} 16'22	1°29'37
	12912 Jan 16 03:07	0° \mathcal{H}		max. Earth dist.	12912 Nov 13 06:46	3° \mathcal{A} 33'21	1.31241 AU
retrograde	12912 Jan 21 13:37	1° \mathcal{H} 14'11		evening rise	12912 Nov 20 09:48	19° \mathcal{A} 16'42	
	12912 Jan 26 19:02	30° \mathbb{R} \approx			12912 Nov 25 14:37	0° \mathcal{B}	
evening set	12912 Jan 28 10:45	29° \approx 06'08		desc. node	12912 Dec 05 09:56	17° \mathcal{B} 26'17	
min. Earth dist.	12912 Feb 01 05:26	26° \approx 19'04	0.60960 AU		12912 Dec 14 10:09	0° \approx	
inferior conj	12912 Feb 04 08:21	23° \approx 36'04	-2°38'43	evening max el	12912 Dec 19 15:43	5° \approx 37'44	26°29'20
minimum elong	12912 Feb 04 13:58	23° \approx 23'49	2°35'54	retrograde	12913 Jan 02 14:39	12° \approx 44'22	
morning rise	12912 Feb 11 20:12	18° \approx 42'20		evening set	12913 Jan 09 03:04	11° \approx 00'36	
asc. node	12912 Feb 12 13:29	18° \approx 31'58		min. Earth dist.	12913 Jan 13 05:30	8° \approx 24'01	0.58804 AU
direct	12912 Feb 13 22:57	18° \approx 23'52		inferior conj	12913 Jan 16 08:59	6° \approx 01'08	-4°00'22
morning max el	12912 Feb 21 01:39	21° \approx 58'16	17°54'46	minimum elong	12913 Jan 16 17:11	5° \approx 45'34	3°56'56
	12912 Feb 27 05:55	0° \mathcal{H}		morning rise	12913 Jan 24 10:14	1° \approx 28'26	
morning set	12912 Mar 07 16:03	16° \mathcal{H} 23'37		direct	12913 Jan 26 11:34	1° \approx 13'44	
	12912 Mar 15 05:01	0° \mathcal{Y}		asc. node	12913 Jan 29 10:51	1° \approx 46'03	
desc. node	12912 Mar 16 14:15	2° \mathcal{Y} 26'34		morning max el	12913 Feb 03 12:08	5° \approx 11'13	18°22'38
				morning set	12913 Feb 19 07:27	0° \mathcal{H} 24'37	
superior conj	12912 Mar 18 05:16	5° \mathcal{Y} 16'43	-0°12'44		12913 Feb 19 02:17	0° \mathcal{H}	
minimum elong	12912 Mar 18 04:08	5° \mathcal{Y} 11'51	0°12'33				
behind sun begin	12912 Mar 17 23:00	4° \mathcal{Y} 49'30		superior conj	12913 Feb 28 12:56	17° \mathcal{H} 47'59	0°23'04
behind sun end	12912 Mar 18 09:17	5° \mathcal{Y} 34'10		minimum elong	12913 Feb 28 14:34	17° \mathcal{H} 55'28	0°23'06
max. Earth dist.	12912 Mar 25 15:55	17° \mathcal{Y} 50'53	1.42833 AU	desc. node	12913 Mar 03 10:48	23° \mathcal{H} 04'02	
evening rise	12912 Mar 31 19:52	27° \mathcal{Y} 46'02			12913 Mar 07 09:38	0° \mathcal{Y}	
	12912 Apr 02 06:00	0° \mathcal{B}		max. Earth dist.	12913 Mar 08 01:29	1° \mathcal{Y} 08'05	1.40793 AU
	12912 Apr 22 17:10	0° \mathbb{I}		evening rise	12913 Mar 12 12:35	8° \mathcal{Y} 37'29	
evening max el	12912 May 03 04:45	12° \mathbb{I} 40'51	22°05'10		12913 Mar 26 06:42	0° \mathcal{B}	
asc. node	12912 May 10 10:15	17° \mathbb{I} 51'50		evening max el	12913 Apr 15 20:09	26° \mathcal{B} 31'32	23°25'36
retrograde	12912 May 12 16:05	18° \mathbb{I} 15'13			12913 Apr 19 18:39	0° \mathbb{I}	
evening set	12912 May 17 07:45	16° \mathbb{I} 19'52		retrograde	12913 Apr 26 11:21	2° \mathbb{I} 47'11	
inferior conj	12912 May 22 14:29	10° \mathbb{I} 00'21	2°58'44	asc. node	12913 Apr 27 07:34	2° \mathbb{I} 43'56	
minimum elong	12912 May 22 13:02	10° \mathbb{I} 05'25	2°57'38	evening set	12913 May 01 14:32	0° \mathbb{I} 37'38	
min. Earth dist.	12912 May 22 13:55	10° \mathbb{I} 02'19	0.68850 AU		12913 May 02 07:02	30° \mathbb{R} \mathcal{B}	
morning rise	12912 May 27 18:07	3° \mathbb{I} 47'18		inferior conj	12913 May 06 23:52	24° \mathcal{B} 10'57	2°36'06
direct	12912 Jun 01 13:22	1° \mathbb{I} 44'44		minimum elong	12913 May 06 21:52	24° \mathcal{B} 17'50	2°34'54
morning max el	12912 Jun 11 00:36	7° \mathbb{I} 18'22	22°10'58	min. Earth dist.	12913 May 06 10:42	24° \mathcal{B} 56'15	0.68779 AU
desc. node	12912 Jun 12 15:40	9° \mathbb{I} 00'40		morning rise	12913 May 12 05:08	18° \mathcal{B} 05'02	
	12912 Jun 28 14:23	0° \mathcal{B}		direct	12913 May 16 11:34	16° \mathcal{B} 23'09	
morning set	12912 Jul 14 03:40	23° \mathcal{B} 51'13		morning max el	12913 May 24 17:59	21° \mathcal{B} 06'37	20°49'25
	12912 Jul 17 21:57	0° \mathcal{O}		desc. node	12913 May 30 12:37	27° \mathcal{B} 45'30	
max. Earth dist.	12912 Jul 19 11:37	2° \mathcal{O} 36'46	1.41256 AU		12913 Jun 01 06:03	0° \mathbb{I}	

	12913 Jun 21 19:19	0°☿		max. Earth dist.	12914 Jun 14 07:33	29°☿35'40	1.44803 AU
morning set	12913 Jun 23 16:55	2°☿56'41			12914 Jun 14 13:42	0°☿	
max. Earth dist.	12913 Jul 01 18:05	15°☿42'40	1.43289 AU				
				superior conj	12914 Jun 18 22:24	6°☿57'32	-2°11'00
superior conj	12913 Jul 08 14:28	27°☿00'15	-1°53'04	minimum elong	12914 Jun 19 01:58	7°☿11'52	2°11'53
minimum elong	12913 Jul 08 21:27	27°☿29'36	1°53'23	evening rise	12914 Jul 02 16:37	29°☿38'46	
	12913 Jul 10 09:02	0°♊			12914 Jul 02 21:40	0°♊	
evening rise	12913 Jul 20 14:45	17°♊49'55		asc. node	12914 Jul 11 03:22	13°♊44'47	
asc. node	12913 Jul 24 06:33	24°♊18'03		evening max el	12914 Jul 20 19:45	27°♊08'17	18°09'25
	12913 Jul 27 13:33	0°♋			12914 Jul 24 20:02	0°♋	
evening max el	12913 Aug 06 05:26	13°♋43'48	18°03'22	retrograde	12914 Jul 27 04:21	0°♋28'58	
retrograde	12913 Aug 12 20:01	17°♋07'47			12914 Jul 29 12:28	30°♋♊	
evening set	12913 Aug 15 07:42	16°♋38'42		evening set	12914 Jul 30 00:15	29°♊46'44	
inferior conj	12913 Aug 21 23:57	11°♋37'08	1°18'11	inferior conj	12914 Aug 05 02:49	24°♊27'14	2°13'34
minimum elong	12913 Aug 22 02:04	11°♋31'57	1°17'03	minimum elong	12914 Aug 05 05:22	24°♊20'13	2°12'14
min. Earth dist.	12913 Aug 25 02:38	8°♋36'01	0.61133 AU	min. Earth dist.	12914 Aug 07 18:08	21°♊33'33	0.63353 AU
desc. node	12913 Aug 26 10:30	7°♋24'52		morning rise	12914 Aug 11 08:40	18°♊12'49	
morning rise	12913 Aug 28 17:44	5°♋39'20		desc. node	12914 Aug 13 07:58	16°♊55'44	
direct	12913 Sep 04 08:58	3°♋25'52		direct	12914 Aug 18 00:34	15°♊41'09	
morning max el	12913 Sep 18 14:32	11°♋22'57	27°57'30	morning max el	12914 Aug 31 23:13	23°♊42'47	27°47'19
	12913 Oct 03 05:54	0°♌			12914 Sep 06 14:27	0°♋	
asc. node	12913 Oct 20 08:20	0°♌16'20			12914 Sep 26 14:13	0°♌	
	12913 Oct 20 05:07	0°♌		morning set	12914 Oct 05 15:08	17°♌02'11	
morning set	12913 Oct 21 19:32	3°♌16'51		asc. node	12914 Oct 07 04:59	20°♌14'11	
max. Earth dist.	12913 Oct 27 13:49	15°♌37'42	1.31502 AU	max. Earth dist.	12914 Oct 10 15:31	27°♌25'28	1.32295 AU
					12914 Oct 11 20:24	0°♌	
superior conj	12913 Oct 29 02:42	19°♌01'22	1°15'38				
minimum elong	12913 Oct 29 00:31	18°♌49'13	1°16'01	superior conj	12914 Oct 13 10:13	3°♌24'27	0°56'47
	12913 Nov 03 01:41	0°♍		minimum elong	12914 Oct 13 08:00	3°♌12'28	0°56'52
evening rise	12913 Nov 04 19:46	3°♍48'58		evening rise	12914 Oct 20 06:59	18°♌22'14	
	12913 Nov 18 13:51	0°♎			12914 Oct 25 22:07	0°♍	
desc. node	12913 Nov 22 07:06	5°♎37'31		desc. node	12914 Nov 09 04:21	22°♍41'57	
evening max el	12913 Dec 01 08:06	16°♎25'14	25°09'15	evening max el	12914 Nov 12 18:21	26°♍33'44	23°30'08
retrograde	12913 Dec 15 03:49	23°♎21'07			12914 Nov 16 21:49	0°♎	
evening set	12913 Dec 20 21:21	22°♎07'12		retrograde	12914 Nov 26 04:19	3°♎14'36	
min. Earth dist.	12913 Dec 25 20:07	19°♎25'33	0.56830 AU	evening set	12914 Nov 30 15:49	2°♎30'58	
inferior conj	12913 Dec 28 13:26	17°♎38'16	-5°12'00		12914 Dec 06 03:56	30°♎♍	
minimum elong	12913 Dec 28 21:29	17°♎25'00	5°09'24	min. Earth dist.	12914 Dec 07 04:27	29°♍24'56	0.55322 AU
morning rise	12914 Jan 05 23:54	13°♎27'41		inferior conj	12914 Dec 08 21:32	28°♍24'44	-5°52'34
direct	12914 Jan 08 06:03	13°♎12'59		minimum elong	12914 Dec 08 23:59	28°♍21'07	5°51'27
asc. node	12914 Jan 16 08:09	16°♎37'10		morning rise	12914 Dec 17 09:55	24°♍32'23	
morning max el	12914 Jan 17 13:02	17°♎42'42	19°12'09	direct	12914 Dec 20 04:56	24°♍13'23	
	12914 Jan 26 11:39	0°♏		morning max el	12914 Dec 31 00:47	29°♍23'11	20°24'49
morning set	12914 Feb 03 08:08	14°♏49'12			12914 Dec 31 15:47	0°♎	
	12914 Feb 11 00:17	0°♏		asc. node	12915 Jan 03 05:20	2°♎51'48	
				morning set	12915 Jan 18 14:50	29°♎27'46	
superior conj	12914 Feb 11 14:05	1°♏06'47	0°52'11		12915 Jan 18 21:06	0°♏	
minimum elong	12914 Feb 11 16:50	1°♏20'01	0°52'20				
desc. node	12914 Feb 18 07:22	13°♏40'34		superior conj	12915 Jan 26 04:16	15°♏00'52	1°14'00
max. Earth dist.	12914 Feb 18 08:14	13°♏44'31	1.38556 AU	minimum elong	12915 Jan 26 06:56	15°♏14'21	1°14'25
evening rise	12914 Feb 22 02:24	20°♏23'08		max. Earth dist.	12915 Jan 31 15:43	25°♏48'42	1.36365 AU
	12914 Feb 27 19:43	0°♐			12915 Feb 02 20:57	0°♏	
	12914 Mar 20 08:44	0°♑		evening rise	12915 Feb 04 11:18	2°♏56'57	
evening max el	12914 Mar 29 09:53	10°♑23'51	24°45'08	desc. node	12915 Feb 05 03:57	4°♏12'41	
retrograde	12914 Apr 10 02:55	17°♑13'38			12915 Feb 20 20:17	0°♐	
asc. node	12914 Apr 14 04:57	16°♑00'13		evening max el	12915 Mar 11 23:18	24°♐14'29	25°56'42
evening set	12914 Apr 15 17:54	14°♑52'14			12915 Mar 19 09:13	0°♑	
min. Earth dist.	12914 Apr 20 05:55	9°♑46'55	0.68247 AU	retrograde	12915 Mar 24 13:48	1°♑27'54	
inferior conj	12914 Apr 21 07:31	8°♑21'57	2°03'26		12915 Mar 29 06:37	30°♑♐	
minimum elong	12914 Apr 21 05:22	8°♑29'07	2°02'15	evening set	12915 Mar 30 16:09	28°♐58'16	
morning rise	12914 Apr 26 17:02	2°♑24'31		asc. node	12915 Apr 01 02:23	27°♐39'18	
direct	12914 Apr 30 11:12	1°♑03'36		min. Earth dist.	12915 Apr 03 21:27	24°♐28'14	0.67282 AU
morning max el	12914 May 07 18:50	5°♑06'55	19°40'29	inferior conj	12915 Apr 05 11:25	22°♐29'12	1°20'27
desc. node	12914 May 17 09:26	17°♑07'21		minimum elong	12915 Apr 05 09:39	22°♐34'47	1°19'32
greatest brilliancy	12914 May 20 11:48	21°♑35'08	-0.6m	morning rise	12915 Apr 11 03:49	16°♐41'32	
	12914 May 26 03:31	0°♒		direct	12915 Apr 14 10:38	15°♐40'03	
morning set	12914 Jun 02 17:59	11°♒34'51		morning max el	12915 Apr 21 03:08	19°♐16'12	18°46'52

	12915 Apr 29 14:43	0°♄		morning max el	12916 Apr 03 17:12	3°♄28'44	18°09'51
desc. node	12915 May 04 06:08	6°♄55'56		desc. node	12916 Apr 20 02:46	27°♄04'17	
morning set	12915 May 13 04:21	20°♄45'12			12916 Apr 21 22:21	0°♄	
	12915 May 19 02:44	0°♄		morning set	12916 Apr 22 16:28	1°♄13'04	
max. Earth dist.	12915 May 28 01:19	13°♄56'56	1.45649 AU				
				superior conj	12916 May 07 19:12	25°♄16'04	-1°50'48
superior conj	12915 May 29 11:09	16°♄09'18	-2°10'55	minimum elong	12916 May 07 10:12	24°♄40'45	1°50'48
minimum elong	12915 May 29 07:13	15°♄53'55	2°11'44	max. Earth dist.	12916 May 09 20:56	28°♄30'39	1.45763 AU
	12915 Jun 07 05:52	0°♄			12916 May 10 19:48	0°♄	
evening rise	12915 Jun 13 18:34	10°♄26'13		evening rise	12916 May 23 21:11	20°♄18'04	
greatest brilliancy	12915 Jun 19 16:21	19°♄55'39	-0.9m		12916 May 30 03:28	0°♄	
	12915 Jun 26 02:46	0°♄		greatest brilliancy	12916 Jun 04 17:56	8°♄33'24	-0.7m
asc. node	12915 Jun 28 00:16	2°♄47'58		asc. node	12916 Jun 13 21:15	21°♄19'34	
evening max el	12915 Jul 04 08:37	10°♄45'47	18°33'33	evening max el	12916 Jun 16 17:41	24°♄30'32	19°14'46
retrograde	12915 Jul 10 20:35	14°♄16'44		retrograde	12916 Jun 23 17:19	28°♄24'09	
evening set	12915 Jul 14 00:58	13°♄19'26		evening set	12916 Jun 27 06:41	27°♄10'37	
inferior conj	12915 Jul 19 17:38	7°♄44'07	2°49'02	inferior conj	12916 Jul 02 16:57	21°♄21'03	3°08'02
minimum elong	12915 Jul 19 19:37	7°♄38'05	2°47'50	minimum elong	12916 Jul 02 17:58	21°♄17'45	3°07'00
min. Earth dist.	12915 Jul 21 18:55	5°♄15'04	0.65313 AU	min. Earth dist.	12916 Jul 04 03:37	19°♄28'25	0.66894 AU
morning rise	12915 Jul 25 13:13	1°♄21'54		morning rise	12916 Jul 08 04:41	14°♄57'23	
	12915 Jul 27 11:06	30°♄		direct	12916 Jul 14 07:18	12°♄18'00	
desc. node	12915 Jul 31 05:22	28°♄43'40		desc. node	12916 Jul 17 02:41	12°♄46'45	
direct	12915 Aug 01 00:27	28°♄41'24		morning max el	12916 Jul 26 21:03	19°♄49'18	25°55'11
	12915 Aug 05 23:42	0°♄			12916 Aug 04 13:48	0°♄	
morning max el	12915 Aug 14 10:11	6°♄35'43	27°03'48		12916 Aug 24 13:12	0°♄	
	12915 Sep 01 10:41	0°♄		morning set	12916 Aug 31 21:01	12°♄55'11	
	12915 Sep 18 21:06	0°♄		max. Earth dist.	12916 Sep 04 14:40	19°♄56'11	1.35426 AU
morning set	12915 Sep 19 00:48	0°♄17'50		asc. node	12916 Sep 09 22:11	0°♄24'40	
max. Earth dist.	12915 Sep 23 08:15	8°♄49'52	1.33614 AU		12916 Sep 09 17:17	0°♄	
asc. node	12915 Sep 24 01:36	10°♄18'13					
				superior conj	12916 Sep 10 06:55	1°♄08'55	0°03'28
superior conj	12915 Sep 27 12:29	17°♄29'07	0°32'34	minimum elong	12916 Sep 10 06:43	1°♄07'56	0°03'20
minimum elong	12915 Sep 27 10:54	17°♄20'46	0°32'27	behind sun begin	12916 Sep 10 00:44	0°♄37'33	
	12915 Oct 03 09:18	0°♄		behind sun end	12916 Sep 10 12:43	1°♄38'22	
evening rise	12915 Oct 04 17:31	2°♄51'10		evening rise	12916 Sep 18 01:20	17°♄10'37	
	12915 Oct 19 16:39	0°♄			12916 Sep 24 12:30	0°♄	
evening max el	12915 Oct 25 06:54	6°♄37'46	21°49'47	evening max el	12916 Oct 06 06:47	17°♄13'28	20°22'59
desc. node	12915 Oct 27 01:41	8°♄15'43		desc. node	12916 Oct 12 23:06	21°♄51'08	
retrograde	12915 Nov 06 18:15	12°♄49'21		retrograde	12916 Oct 17 05:37	22°♄39'59	
evening set	12915 Nov 09 19:45	12°♄28'15		evening set	12916 Oct 19 08:29	22°♄28'40	
inferior conj	12915 Nov 18 15:31	8°♄33'17	-5°39'46	inferior conj	12916 Oct 28 08:21	18°♄32'40	-4°29'11
minimum elong	12915 Nov 18 09:13	8°♄42'06	5°38'06	minimum elong	12916 Oct 27 22:16	18°♄47'25	4°25'40
min. Earth dist.	12915 Nov 18 10:50	8°♄39'50	0.54565 AU	min. Earth dist.	12916 Oct 29 18:20	17°♄42'55	0.54746 AU
morning rise	12915 Nov 26 23:45	4°♄45'51		morning rise	12916 Nov 05 11:25	14°♄30'27	
direct	12915 Nov 30 14:17	4°♄17'21		direct	12916 Nov 09 23:45	13°♄46'29	
morning max el	12915 Dec 12 22:26	10°♄11'03	21°58'58	morning max el	12916 Nov 23 10:15	20°♄20'26	23°46'21
asc. node	12915 Dec 21 02:25	20°♄13'06			12916 Dec 01 14:02	0°♄	
	12915 Dec 26 22:06	0°♄		asc. node	12916 Dec 06 23:25	8°♄25'23	
morning set	12916 Jan 03 01:05	14°♄13'12		morning set	12916 Dec 17 12:50	28°♄59'05	
					12916 Dec 18 00:13	0°♄	
superior conj	12916 Jan 10 03:44	29°♄19'25	1°28'39				
minimum elong	12916 Jan 10 05:39	29°♄29'28	1°29'23	superior conj	12916 Dec 24 09:28	13°♄53'05	1°36'36
	12916 Jan 10 11:27	0°♄		minimum elong	12916 Dec 24 10:19	13°♄57'42	1°37'33
max. Earth dist.	12916 Jan 14 04:28	7°♄39'43	1.34438 AU	max. Earth dist.	12916 Dec 27 01:04	19°♄35'04	1.32922 AU
evening rise	12916 Jan 18 11:51	16°♄10'08		evening rise	12917 Jan 01 00:30	29°♄53'01	
desc. node	12916 Jan 23 00:38	24°♄36'20			12917 Jan 01 01:54	0°♄	
	12916 Jan 26 02:01	0°♄		desc. node	12917 Jan 08 21:23	14°♄45'59	
	12916 Feb 15 07:55	0°♄			12917 Jan 18 03:27	0°♄	
evening max el	12916 Feb 22 12:53	7°♄57'22	26°52'59	evening max el	12917 Feb 04 01:52	21°♄21'35	27°26'42
retrograde	12916 Mar 06 19:14	15°♄22'37		retrograde	12917 Feb 17 18:04	28°♄47'53	
evening set	12916 Mar 13 07:27	12°♄50'01		evening set	12917 Feb 24 13:31	26°♄18'51	
min. Earth dist.	12916 Mar 17 07:16	8°♄53'42	0.65912 AU	min. Earth dist.	12917 Feb 28 09:17	22°♄53'43	0.64189 AU
asc. node	12916 Mar 17 23:48	8°♄06'13		inferior conj	12917 Mar 02 22:53	20°♄11'29	-0°37'46
inferior conj	12916 Mar 19 09:25	6°♄28'08	0°26'47	minimum elong	12917 Mar 03 00:03	20°♄08'24	0°37'01
minimum elong	12916 Mar 19 08:42	6°♄30'14	0°26'30	asc. node	12917 Mar 04 21:14	18°♄12'47	
morning rise	12916 Mar 25 11:17	0°♄52'03		morning rise	12917 Mar 09 12:38	14°♄49'17	
direct	12916 Mar 28 08:00	0°♄07'09		direct	12917 Mar 12 00:47	14°♄17'28	

morning max el	12917 Mar 18 10:25	17° H 35'51	17°49'56	asc. node	12918 Feb 19 18:39	29° \approx 02'04	
	12917 Mar 27 12:43	0° Y		morning rise	12918 Feb 21 04:18	28° \approx 26'20	
morning set	12917 Apr 04 08:44	13° Y 02'38		direct	12918 Feb 23 09:52	28° \approx 03'55	
desc. node	12917 Apr 06 23:20	17° Y 26'03			12918 Feb 28 10:40	0° H	
	12917 Apr 14 13:20	0° B		morning max el	12918 Mar 02 03:46	1° H 29'20	17°47'41
				morning set	12918 Mar 18 00:01	25° H 57'24	
superior conj	12917 Apr 17 15:48	5° B 01'48	-1°15'59		12918 Mar 20 06:52	0° Y	
minimum elong	12917 Apr 17 08:03	4° B 30'35	1°15'30	desc. node	12918 Mar 24 19:52	7° Y 56'51	
max. Earth dist.	12917 Apr 22 16:20	13° B 02'19	1.45136 AU				
evening rise	12917 May 03 09:40	29° B 41'45		superior conj	12918 Mar 29 11:17	15° Y 52'30	-0°35'34
	12917 May 03 14:27	0° II		minimum elong	12918 Mar 29 07:50	15° Y 38'00	0°35'11
	12917 May 23 23:37	0° E		max. Earth dist.	12918 Apr 05 09:14	27° Y 16'22	1.43836 AU
evening max el	12917 May 30 21:23	8° E 18'06	20°11'33		12918 Apr 07 01:59	0° B	
asc. node	12917 May 31 18:20	9° E 08'51		evening rise	12918 Apr 12 23:44	9° B 17'43	
retrograde	12917 Jun 07 15:58	12° E 45'20			12918 Apr 26 18:53	0° II	
evening set	12917 Jun 11 15:01	11° E 15'04		evening max el	12918 May 13 19:18	22° II 06'11	21°21'03
inferior conj	12917 Jun 16 21:56	5° E 12'34	3°13'26	asc. node	12918 May 18 15:31	26° II 02'11	
minimum elong	12917 Jun 16 21:53	5° E 12'43	3°12'27	retrograde	12918 May 22 14:34	27° II 14'55	
min. Earth dist.	12917 Jun 17 18:20	4° E 03'08	0.68027 AU	evening set	12918 May 27 00:04	25° II 28'13	
	12917 Jun 21 00:37	30° R II		inferior conj	12918 Jun 01 06:12	19° II 14'17	3°07'10
morning rise	12917 Jun 22 04:25	28° II 51'27		minimum elong	12918 Jun 01 05:12	19° II 17'45	3°06'07
direct	12917 Jun 27 19:48	26° II 21'54		min. Earth dist.	12918 Jun 01 13:02	18° II 50'30	0.68687 AU
desc. node	12917 Jul 03 23:54	28° II 40'09		morning rise	12918 Jun 06 10:08	12° II 58'02	
	12917 Jul 05 18:29	0° E		direct	12918 Jun 11 12:51	10° II 44'37	
morning max el	12917 Jul 09 07:08	3° E 14'32	24°31'14	desc. node	12918 Jun 20 21:00	15° II 56'44	
	12917 Jul 29 17:46	0° O		morning max el	12918 Jun 21 17:48	16° II 47'52	23°01'38
morning set	12917 Aug 13 23:28	24° O 43'27			12918 Jul 02 15:33	0° E	
	12917 Aug 16 22:55	0° M			12918 Jul 22 18:32	0° O	
max. Earth dist.	12917 Aug 17 13:48	1° M 07'06	1.37612 AU	morning set	12918 Jul 26 03:24	5° O 30'35	
				max. Earth dist.	12918 Jul 30 12:03	12° O 51'59	1.39954 AU
superior conj	12917 Aug 24 14:19	14° M 16'01	-0°29'30				
minimum elong	12917 Aug 24 16:19	14° M 25'39	0°29'29	superior conj	12918 Aug 07 06:38	26° O 39'58	-1°04'13
asc. node	12917 Aug 27 18:47	20° M 30'00		minimum elong	12918 Aug 07 11:20	27° O 01'29	1°04'05
	12917 Sep 01 13:08	0° L			12918 Aug 09 02:00	0° M	
evening rise	12917 Sep 02 04:04	1° L 14'28		asc. node	12918 Aug 14 15:25	10° M 29'53	
evening max el	12917 Sep 18 20:55	28° L 37'05	19°16'43	evening rise	12918 Aug 16 22:39	14° M 54'08	
	12917 Sep 20 08:56	0° M			12918 Aug 25 03:49	0° L	
retrograde	12917 Sep 28 03:42	3° M 15'30		evening max el	12918 Sep 01 22:52	10° L 45'47	18°32'07
desc. node	12917 Sep 29 20:34	3° M 06'47		retrograde	12918 Sep 09 20:27	14° L 44'45	
evening set	12917 Sep 30 00:11	3° M 05'12		evening set	12918 Sep 11 20:12	14° L 30'21	
	12917 Oct 06 22:23	30° R L		desc. node	12918 Sep 16 18:05	12° L 09'41	
inferior conj	12917 Oct 08 14:04	28° L 55'27	-2°43'50	inferior conj	12918 Sep 19 16:26	10° L 00'31	-0°55'26
minimum elong	12917 Oct 08 07:00	29° L 07'09	2°40'47	minimum elong	12918 Sep 19 14:15	10° L 04'46	0°54'30
min. Earth dist.	12917 Oct 11 05:12	27° L 11'21	0.55835 AU	min. Earth dist.	12918 Sep 22 21:57	7° L 31'25	0.57624 AU
morning rise	12917 Oct 16 11:18	24° L 21'40		morning rise	12918 Sep 27 04:49	4° L 48'54	
direct	12917 Oct 21 19:42	23° L 16'23		direct	12918 Oct 03 05:29	3° L 17'13	
	12917 Nov 04 11:06	0° M		morning max el	12918 Oct 17 12:51	10° L 49'18	26°55'39
morning max el	12917 Nov 04 20:44	0° M 22'42	25°31'17		12918 Nov 01 08:21	0° M	
asc. node	12917 Nov 23 20:19	27° M 16'02		asc. node	12918 Nov 10 17:09	16° M 34'24	
	12917 Nov 25 07:13	0° X		morning set	12918 Nov 16 09:58	28° M 13'50	
morning set	12917 Dec 02 00:23	13° X 41'06			12918 Nov 17 05:46	0° X	
superior conj	12917 Dec 08 19:06	28° X 35'15	1°38'16	superior conj	12918 Nov 23 06:34	13° X 19'13	1°33'59
minimum elong	12917 Dec 08 18:50	28° X 33'48	1°39'15	minimum elong	12918 Nov 23 05:20	13° X 12'16	1°34'49
	12917 Dec 09 10:26	0° Z		max. Earth dist.	12918 Nov 23 12:48	13° X 53'57	1.31332 AU
max. Earth dist.	12917 Dec 10 04:51	1° Z 41'30	1.31882 AU	evening rise	12918 Nov 30 02:28	28° X 18'15	
evening rise	12917 Dec 15 22:16	13° Z 58'13			12918 Nov 30 21:43	0° Z	
	12917 Dec 24 03:59	0° \approx		desc. node	12918 Dec 13 15:17	23° Z 56'25	
desc. node	12917 Dec 26 18:17	4° \approx 35'35			12918 Dec 17 11:38	0° \approx	
	12918 Jan 13 10:28	0° H		evening max el	12918 Dec 30 17:02	16° \approx 22'35	27°01'39
evening max el	12918 Jan 17 12:11	4° H 14'21	27°31'04	retrograde	12919 Jan 13 15:43	23° \approx 34'42	
retrograde	12918 Jan 31 09:13	11° H 34'47		evening set	12919 Jan 20 10:32	21° \approx 35'52	
evening set	12918 Feb 07 07:39	9° H 16'49		min. Earth dist.	12919 Jan 24 07:18	18° \approx 55'13	0.60039 AU
min. Earth dist.	12918 Feb 11 01:39	6° H 18'09	0.62193 AU	inferior conj	12919 Jan 27 11:36	16° \approx 18'48	-3°13'37
inferior conj	12918 Feb 14 00:47	3° H 31'30	-1°52'21	minimum elong	12919 Jan 27 18:28	16° \approx 04'41	3°10'24
minimum elong	12918 Feb 14 04:38	3° H 22'26	1°50'16	morning rise	12919 Feb 04 05:26	11° \approx 33'55	
	12918 Feb 18 04:34	30° R \approx		direct	12919 Feb 06 07:09	11° \approx 17'23	

asc. node	12919 Feb 06 16:01	11° \approx 17'56		minimum elong	12920 Jan 09 12:30	28° \approx 08'13	4°29'52
morning max el	12919 Feb 13 17:52	15° \approx 00'00	18°04'12	morning rise	12920 Jan 17 09:49	24° \approx 00'55	
	12919 Feb 24 01:37	0° \approx		direct	12920 Jan 19 12:11	23° \approx 34'46	
morning set	12919 Mar 01 08:08	9° \approx 38'33		asc. node	12920 Jan 24 13:22	25° \approx 34'03	
				morning max el	12920 Jan 28 00:50	27° \approx 56'47	18°41'04
superior conj	12919 Mar 11 06:46	27° \approx 50'14	0°03'12		12920 Jan 29 22:39	0° \approx	
minimum elong	12919 Mar 11 07:02	27° \approx 51'26	0°03'18	morning set	12920 Feb 13 03:54	23° \approx 50'23	
behind sun begin	12919 Mar 10 23:23	27° \approx 17'24			12920 Feb 16 07:55	0° \approx	
behind sun end	12919 Mar 11 14:42	28° \approx 25'22					
desc. node	12919 Mar 11 16:25	28° \approx 32'59		superior conj	12920 Feb 21 22:27	10° \approx 43'17	0°36'18
	12919 Mar 12 12:09	0° \approx		minimum elong	12920 Feb 22 00:44	10° \approx 53'59	0°36'21
max. Earth dist.	12919 Mar 18 21:37	10° \approx 57'25	1.41999 AU	desc. node	12920 Feb 26 12:57	19° \approx 10'20	
evening rise	12919 Mar 24 04:38	19° \approx 36'55		max. Earth dist.	12920 Feb 29 05:15	23° \approx 55'12	1.39838 AU
	12919 Mar 30 19:46	0° \approx			12920 Mar 03 18:09	0° \approx	
	12919 Apr 21 05:28	0° \approx		evening rise	12920 Mar 04 06:19	0° \approx 51'17	
evening max el	12919 Apr 26 12:24	5° \approx 55'11	22°39'04		12920 Mar 23 04:13	0° \approx	
asc. node	12919 May 05 12:47	11° \approx 43'42		evening max el	12920 Apr 08 02:39	19° \approx 45'46	24°00'02
retrograde	12919 May 06 11:33	11° \approx 47'53		retrograde	12920 Apr 19 05:32	26° \approx 18'00	
evening set	12919 May 11 08:09	9° \approx 45'58		asc. node	12920 Apr 21 10:08	25° \approx 56'13	
inferior conj	12919 May 16 15:44	3° \approx 22'53	2°50'22	evening set	12920 Apr 24 13:40	24° \approx 02'57	
minimum elong	12919 May 16 14:00	3° \approx 28'53	2°49'14	min. Earth dist.	12920 Apr 29 06:05	18° \approx 36'52	0.68596 AU
min. Earth dist.	12919 May 16 09:40	3° \approx 43'58	0.68871 AU	inferior conj	12920 Apr 30 00:35	17° \approx 33'58	2°23'29
	12919 May 19 04:19	30° \approx 8		minimum elong	12920 Apr 29 22:28	17° \approx 41'10	2°22'17
morning rise	12919 May 21 19:45	27° \approx 8'12'53		morning rise	12920 May 05 07:20	11° \approx 31'24	
direct	12919 May 26 09:25	25° \approx 8'19'13		direct	12920 May 09 08:21	9° \approx 58'39	
	12919 Jun 03 19:29	0° \approx		morning max el	12920 May 17 04:27	14° \approx 24'09	20°18'23
morning max el	12919 Jun 04 08:00	0° \approx 30'44	21°35'09	desc. node	12920 May 24 14:52	23° \approx 16'18	
desc. node	12919 Jun 07 18:00	4° \approx 14'31			12920 May 29 11:12	0° \approx	
	12919 Jun 26 09:40	0° \approx		morning set	12920 Jun 14 11:53	23° \approx 15'58'43	
morning set	12919 Jul 06 06:06	15° \approx 11'27			12920 Jun 18 08:54	0° \approx	
max. Earth dist.	12919 Jul 12 14:47	25° \approx 28'04	1.42170 AU	max. Earth dist.	12920 Jun 23 23:47	8° \approx 53'17	1.44000 AU
	12919 Jul 15 08:13	0° \approx					
superior conj	12919 Jul 20 03:29	8° \approx 11'26	-1°37'05	superior conj	12920 Jun 30 01:02	18° \approx 42'28	-2°02'30
minimum elong	12919 Jul 20 10:19	8° \approx 41'06	1°37'07	minimum elong	12920 Jun 30 07:13	19° \approx 07'54	2°03'05
evening rise	12919 Jul 31 05:17	28° \approx 00'12			12920 Jul 06 18:56	0° \approx	
	12919 Aug 01 07:34	0° \approx		evening rise	12920 Jul 12 19:03	10° \approx 20'00	
asc. node	12919 Aug 01 12:08	0° \approx 20'48		asc. node	12920 Jul 18 08:53	19° \approx 05'41	
evening max el	12919 Aug 16 08:43	23° \approx 31'45	18°08'11		12920 Jul 24 14:02	0° \approx	
retrograde	12919 Aug 23 07:36	27° \approx 04'31		evening max el	12920 Jul 29 22:26	6° \approx 44'48	18°03'42
evening set	12919 Aug 25 14:29	26° \approx 41'55		retrograde	12920 Aug 05 09:22	10° \approx 05'43	
inferior conj	12919 Sep 01 16:18	21° \approx 51'39	0°35'56	evening set	12920 Aug 08 00:26	9° \approx 31'28	
minimum elong	12919 Sep 01 17:26	21° \approx 49'04	0°35'15	inferior conj	12920 Aug 14 10:27	4° \approx 22'18	1°44'15
desc. node	12919 Sep 03 15:35	20° \approx 04'25		minimum elong	12920 Aug 14 12:55	4° \approx 15'57	1°42'59
min. Earth dist.	12919 Sep 04 22:52	18° \approx 55'35	0.59814 AU	min. Earth dist.	12920 Aug 17 08:58	1° \approx 21'35	0.62099 AU
morning rise	12919 Sep 08 17:08	16° \approx 07'28			12920 Aug 18 19:33	30° \approx 8	
direct	12919 Sep 15 04:49	14° \approx 08'01		morning rise	12920 Aug 20 23:01	28° \approx 16'07	
morning max el	12919 Sep 29 12:41	21° \approx 59'07	27°46'01	desc. node	12920 Aug 20 13:03	28° \approx 34'18	
	12919 Oct 06 13:59	0° \approx		direct	12920 Aug 27 15:21	25° \approx 05'27	
	12919 Oct 25 09:41	0° \approx			12920 Sep 06 09:11	0° \approx	
asc. node	12919 Oct 28 13:55	6° \approx 12'54		morning max el	12920 Sep 10 18:41	3° \approx 54'31	27°57'32
morning set	12919 Oct 31 15:49	12° \approx 32'38			12920 Sep 30 05:35	0° \approx	
max. Earth dist.	12919 Nov 06 21:14	26° \approx 03'58	1.31289 AU	asc. node	12920 Oct 14 10:37	26° \approx 05'23	
				morning set	12920 Oct 14 15:53	26° \approx 32'14	
superior conj	12919 Nov 07 18:01	27° \approx 59'39	1°23'58		12920 Oct 16 08:02	0° \approx	
minimum elong	12919 Nov 07 16:03	27° \approx 48'45	1°24'31	max. Earth dist.	12920 Oct 20 02:17	8° \approx 01'46	1.31771 AU
	12919 Nov 08 15:36	0° \approx					
evening rise	12919 Nov 14 10:54	12° \approx 47'36		superior conj	12920 Oct 22 03:34	12° \approx 31'14	1°08'19
	12919 Nov 23 00:27	0° \approx		minimum elong	12920 Oct 22 01:18	12° \approx 18'47	1°08'34
desc. node	12919 Nov 30 12:22	12° \approx 33'21		evening rise	12920 Oct 28 21:39	27° \approx 21'15	
evening max el	12919 Dec 12 14:01	27° \approx 38'42	25°58'23		12920 Oct 30 03:19	0° \approx	
	12919 Dec 15 06:49	0° \approx		desc. node	12920 Nov 16 09:34	0° \approx 23'13	
retrograde	12919 Dec 26 12:11	4° \approx 41'43			12920 Nov 16 02:38	0° \approx	
evening set	12920 Jan 01 17:58	3° \approx 09'54		evening max el	12920 Nov 23 03:13	8° \approx 07'32	24°28'26
min. Earth dist.	12920 Jan 06 02:55	0° \approx 33'27	0.57921 AU	retrograde	12920 Dec 06 20:27	14° \approx 58'26	
	12920 Jan 06 22:05	30° \approx 8		evening set	12920 Dec 12 02:04	13° \approx 58'03	
inferior conj	12920 Jan 09 03:50	28° \approx 23'40	-4°33'09	min. Earth dist.	12920 Dec 17 14:51	11° \approx 08'04	0.56108 AU
				inferior conj	12920 Dec 19 23:28	9° \approx 39'49	-5°34'30

minimum elong	12920 Dec 20 05:51	9°  29'49	5°32'36	minimum elong	12921 Nov 29 23:07	20°  09'54	5°53'33
morning rise	12920 Dec 28 11:42	5°  37'41		morning rise	12921 Dec 08 11:27	16°  19'38	
direct	12920 Dec 30 22:03	5°  21'51		direct	12921 Dec 11 14:27	15°  17'05	
morning max el	12921 Jan 09 20:36	10°  08'26	19°40'11	morning max el	12921 Dec 23 02:07	21°  15'39	21°02'23
asc. node	12921 Jan 10 10:36	10°  43'08		asc. node	12921 Dec 28 07:45	27°  12'07	
	12921 Jan 23 01:50	0° 			12921 Dec 30 02:38	0° 	
morning set	12921 Jan 27 07:31	8°  22'09		morning set	12922 Jan 11 16:01	23°  04'26	
					12922 Jan 14 23:28	0° 	
superior conj	12921 Feb 04 05:41	24°  18'46	1°02'19	superior conj	12922 Jan 19 00:13	8°  24'05	1°21'03
minimum elong	12921 Feb 04 08:31	24°  32'41	1°02'34	minimum elong	12922 Jan 19 02:37	8°  36'28	1°21'37
	12921 Feb 07 03:51	0° 			12922 Jan 23 20:54	18°  11'43	1.35512 AU
max. Earth dist.	12921 Feb 10 11:24	6°  14'42	1.37601 AU	max. Earth dist.	12922 Jan 27 20:47	25°  15'54	
desc. node	12921 Feb 12 09:32	9°  45'45		evening rise	12922 Jan 30 06:11	0°  14'42	
evening rise	12921 Feb 14 04:45	12°  59'11		desc. node	12922 Jan 30 02:56	0° 	
	12921 Feb 24 08:54	0° 			12922 Feb 17 20:11	0° 	
	12921 Mar 18 05:20	0° 		evening max el	12922 Mar 04 05:55	17°  26'54	26°22'59
evening max el	12921 Mar 21 16:11	3°  38'06	25°17'05	retrograde	12922 Mar 17 03:44	24°  45'53	
retrograde	12921 Apr 02 19:15	10°  39'35		evening set	12922 Mar 23 10:31	22°  14'32	
asc. node	12921 Apr 08 07:31	8°  29'56		asc. node	12922 Mar 26 04:55	19°  33'03	
evening set	12921 Apr 08 15:02	8°  14'26		min. Earth dist.	12922 Mar 27 13:28	17°  58'58	0.66750 AU
min. Earth dist.	12921 Apr 13 00:06	3°  23'57	0.67884 AU	inferior conj	12922 Mar 29 08:33	15°  47'56	0°59'02
inferior conj	12921 Apr 14 06:54	1°  43'53	1°46'29	minimum elong	12922 Mar 29 07:08	15°  52'16	0°58'20
minimum elong	12921 Apr 14 04:49	1°  50'37	1°45'24	morning rise	12922 Apr 04 04:39	10°  04'47	
	12921 Apr 15 15:21	30° 		direct	12922 Apr 07 07:06	9°  10'33	
morning rise	12921 Apr 19 18:59	25°  50'07		morning max el	12922 Apr 13 19:22	12°  38'47	18°29'01
direct	12921 Apr 23 08:11	24°  37'40			12922 Apr 26 13:13	0° 	
morning max el	12921 Apr 30 08:26	28°  28'02	19°15'38	desc. node	12922 Apr 28 08:19	2°  47'51	
	12921 May 01 19:44	0° 		morning set	12922 May 04 10:12	12°  22'04	
desc. node	12921 May 11 11:38	12°  50'20			12922 May 15 15:30	0° 	
greatest brilliancy	12921 May 13 04:17	15°  20'19	-0.7m	superior conj	12922 May 20 08:06	7°  19'53	-2°04'40
	12921 May 22 19:58	0° 		minimum elong	12922 May 20 01:17	6°  53'16	2°05'11
morning set	12921 May 24 14:00	2°  41'49		max. Earth dist.	12922 May 20 10:14	7°  28'12	1.45791 AU
max. Earth dist.	12921 Jun 06 14:54	22°  58'15	1.45250 AU		12922 Jun 03 19:02	0° 	
superior conj	12921 Jun 09 23:37	28°  16'46	-2°13'27	evening rise	12922 Jun 05 02:25	2°  03'52	
minimum elong	12921 Jun 10 00:14	28°  19'12	2°14'26	greatest brilliancy	12922 Jun 14 00:34	16°  06'58	-0.8m
	12921 Jun 11 01:38	0° 		asc. node	12922 Jun 22 02:38	28°  05'36	
evening rise	12921 Jun 24 10:57	21°  04'21			12922 Jun 23 13:23	0° 	
	12921 Jun 29 11:42	0° 		evening max el	12922 Jun 27 00:04	3°  05'07	18°49'08
asc. node	12921 Jul 05 05:43	9°  14'55		retrograde	12922 Jul 03 15:51	7°  35'57	
evening max el	12921 Jul 13 12:30	20°  15'44	18°17'37	evening set	12922 Jul 07 00:05	6°  31'38	
retrograde	12921 Jul 19 21:21	23°  38'51		inferior conj	12922 Jul 12 13:36	0°  50'00	2°58'55
evening set	12921 Jul 22 20:54	22°  50'20		minimum elong	12922 Jul 12 15:13	0°  44'58	2°57'48
inferior conj	12921 Jul 28 18:49	17°  02'40'6	2°30'48		12922 Jul 13 05:30	30° 	
minimum elong	12921 Jul 28 21:12	17°  17'13	2°29'31	min. Earth dist.	12922 Jul 14 08:35	28°  35'37	0.66034 AU
min. Earth dist.	12921 Jul 31 04:24	14°  39'04	0.64230 AU	morning rise	12922 Jul 18 05:33	24°  02'47	
morning rise	12921 Aug 03 20:03	11°  05'43		direct	12922 Jul 24 13:33	21°  04'52	
desc. node	12921 Aug 07 10:28	9°  00'32		desc. node	12922 Jul 25 07:49	21°  04'57	
direct	12921 Aug 10 10:44	8°  02'52		morning max el	12922 Aug 06 15:27	29°  31'32	26°37'17
morning max el	12921 Aug 24 04:22	16°  02'39	27°32'24		12922 Aug 07 02:36	0° 	
	12921 Sep 04 08:52	0° 			12922 Aug 29 06:07	0° 	
	12921 Sep 23 00:34	0° 		morning set	12922 Sep 11 12:01	23°  06'11	
morning set	12921 Sep 28 07:36	10°  05'43			12922 Sep 15 01:41	0° 	
asc. node	12921 Oct 01 07:14	16°  06'18		max. Earth dist.	12922 Sep 15 13:00	0°  56'01	1.34333 AU
max. Earth dist.	12921 Oct 03 00:23	19°  03'19	1.32792 AU	asc. node	12922 Sep 18 03:49	6°  11'55	
superior conj	12921 Oct 06 09:08	26°  04'31	0°47'10	superior conj	12922 Sep 20 08:27	10°  04'42	0°20'48
minimum elong	12921 Oct 06 07:06	26°  03'38	0°47'09	minimum elong	12922 Sep 20 07:21	10°  03'00	0°20'40
	12921 Oct 07 20:50	0° 		evening rise	12922 Sep 27 18:29	26°  01'31	
evening rise	12921 Oct 13 08:48	11°  53'28			12922 Sep 29 12:54	0° 	
	12921 Oct 22 11:45	0° 		evening max el	12922 Oct 17 05:59	28°  12'43	21°10'34
desc. node	12921 Nov 03 06:51	16° 15'23'6			12922 Oct 18 23:39	0°	
evening max el	12921 Nov 04 13:27	18° 10'18	22°46'38	desc. node	12922 Oct 21 04:12	1° 39'41	
retrograde	12921 Nov 17 15:27	24° 14'02		retrograde	12922 Oct 29 02:40	4° 17'54	
evening set	12921 Nov 21 12:11	24° 10'32		evening set	12922 Oct 31 16:50	4° 02'12	
min. Earth dist.	12921 Nov 28 21:58	20° 14'53'8	0.54899 AU	inferior conj	12922 Nov 09 16:04	0° 08'11	-5°16'04
inferior conj	12921 Nov 30 00:26	20° 14'08'01	-5°54'31				

minimum elong	12922 Nov 09 07:12	0°♄20'41	5°13'30	evening rise	12923 Sep 12 00:27	10°♄32'45	
	12922 Nov 09 21:52	30°♄			12923 Sep 22 09:36	0°♄	
min. Earth dist.	12922 Nov 10 04:06	29°♄51'13	0.54534 AU	evening max el	12923 Sep 29 11:48	9°♄18'31	19°52'07
morning rise	12922 Nov 17 22:09	26°♄17'25		desc. node	12923 Oct 08 01:38	14°♄16'59	
direct	12922 Nov 21 22:09	25°♄43'05		retrograde	12923 Oct 09 17:37	14°♄24'49	
	12922 Dec 02 14:12	0°♄		evening set	12923 Oct 11 15:53	14°♄14'46	
morning max el	12922 Dec 04 18:38	1°♄53'44	22°43'44	inferior conj	12923 Oct 20 12:55	10°♄13'48	-3°46'49
asc. node	12922 Dec 15 04:49	15°♄12'37		minimum elong	12923 Oct 20 03:32	10°♄28'11	3°43'09
	12922 Dec 23 08:12	0°♄		min. Earth dist.	12923 Oct 22 12:45	9°♄00'29	0.55103 AU
morning set	12922 Dec 27 03:10	7°♄50'47		morning rise	12923 Oct 28 13:43	5°♄59'32	
				direct	12923 Nov 02 10:34	5°♄07'31	
superior conj	12923 Jan 03 02:41	22°♄49'49	1°32'48	morning max el	12923 Nov 16 05:00	11°♄56'17	24°32'26
minimum elong	12923 Jan 03 04:10	22°♄57'43	1°33'39		12923 Nov 29 22:07	0°♄	
max. Earth dist.	12923 Jan 06 13:11	0°♄04'10	1.33748 AU	asc. node	12923 Dec 02 01:47	3°♄42'21	
	12923 Jan 06 12:23	0°♄		morning set	12923 Dec 11 15:04	22°♄35'51	
evening rise	12923 Jan 11 02:54	9°♄17'24			12923 Dec 15 00:48	0°♄	
desc. node	12923 Jan 17 02:54	20°♄32'48					
	12923 Jan 22 14:41	0°♄		superior conj	12923 Dec 18 10:24	7°♄28'11	1°38'03
	12923 Feb 13 17:56	0°♄		minimum elong	12923 Dec 18 10:46	7°♄30'14	1°39'02
evening max el	12923 Feb 14 19:24	1°♄02'47	27°10'23	max. Earth dist.	12923 Dec 20 13:03	12°♄03'54	1.32418 AU
retrograde	12923 Feb 28 06:14	8°♄28'59		evening rise	12923 Dec 25 19:47	23°♄10'35	
evening set	12923 Mar 06 22:09	5°♄56'54			12923 Dec 29 06:14	0°♄	
min. Earth dist.	12923 Mar 10 20:03	2°♄14'30	0.65226 AU	desc. node	12924 Jan 03 23:43	10°♄34'47	
	12923 Mar 12 20:19	30°♄			12924 Jan 16 07:31	0°♄	
inferior conj	12923 Mar 13 03:15	29°♄40'34	0°00'44	evening max el	12924 Jan 28 07:22	14°♄14'49	27°32'20
minimum elong	12923 Mar 13 03:13	29°♄40'38	0°00'49	retrograde	12924 Feb 11 02:09	21°♄39'53	
transit middle	12923 Mar 13 03:13	29°♄40'38	0°00'49	evening set	12924 Feb 17 23:36	19°♄14'13	
transit begin	12923 Mar 13 00:12	29°♄49'05		min. Earth dist.	12924 Feb 21 18:04	16°♄01'22	0.63368 AU
transit end	12923 Mar 13 06:14	29°♄32'12		inferior conj	12924 Feb 24 12:14	13°♄15'16	-1°08'17
asc. node	12923 Mar 13 02:21	29°♄43'05		minimum elong	12924 Feb 24 14:27	13°♄09'40	1°06'59
morning rise	12923 Mar 19 09:55	24°♄10'14		asc. node	12924 Feb 27 23:47	10°♄01'07	
direct	12923 Mar 22 02:52	23°♄31'16		morning rise	12924 Mar 02 07:43	8°♄00'17	
morning max el	12923 Mar 28 11:10	26°♄49'45	17°59'17	direct	12924 Mar 04 16:44	7°♄33'00	
	12923 Mar 31 06:59	0°♄		morning max el	12924 Mar 11 04:58	10°♄53'06	17°46'48
morning set	12923 Apr 15 10:37	23°♄25'32			12924 Mar 24 05:07	0°♄	
desc. node	12923 Apr 15 04:56	23°♄02'13		morning set	12924 Mar 27 13:31	5°♄45'29	
	12923 Apr 19 10:59	0°♄		desc. node	12924 Apr 01 01:31	13°♄28'32	
superior conj	12923 Apr 29 19:32	16°♄37'40	-1°37'16	superior conj	12924 Apr 09 01:24	26°♄50'31	-0°59'02
minimum elong	12923 Apr 29 10:23	16°♄01'28	1°36'59	minimum elong	12924 Apr 08 19:23	26°♄25'51	0°58'32
max. Earth dist.	12923 May 03 06:27	22°♄04'03	1.45582 AU		12924 Apr 10 23:53	0°♄	
	12923 May 08 08:29	0°♄		max. Earth dist.	12924 Apr 15 00:50	6°♄29'23	1.44655 AU
evening rise	12923 May 15 21:23	11°♄38'54		evening rise	12924 Apr 24 08:37	21°♄03'00	
	12923 May 27 22:50	0°♄			12924 Apr 30 05:56	0°♄	
greatest brilliancy	12923 May 29 14:07	2°♄25'27	-0.7m		12924 May 21 21:52	0°♄	
asc. node	12923 Jun 08 23:39	16°♄20'08		evening max el	12924 May 23 08:00	1°♄29'52	20°39'44
evening max el	12923 Jun 10 06:53	17°♄42'33	19°37'10	asc. node	12924 May 25 20:46	3°♄47'14	
retrograde	12923 Jun 17 13:46	21°♄49'32		retrograde	12924 May 31 12:44	6°♄14'36	
evening set	12923 Jun 21 07:11	20°♄28'45		evening set	12924 Jun 04 16:02	4°♄37'22	
inferior conj	12923 Jun 26 15:38	14°♄33'15	3°11'53		12924 Jun 08 19:51	30°♄	
minimum elong	12923 Jun 26 16:12	14°♄31'22	3°10'53	inferior conj	12924 Jun 09 22:18	28°♄29'37	3°12'08
min. Earth dist.	12923 Jun 27 20:04	12°♄58'41	0.67425 AU	minimum elong	12924 Jun 09 21:50	28°♄31'14	3°11'07
morning rise	12923 Jul 02 00:48	8°♄10'13		min. Earth dist.	12924 Jun 10 12:52	27°♄39'24	0.68363 AU
direct	12923 Jul 07 22:43	5°♄34'24		morning rise	12924 Jun 15 03:22	22°♄10'04	
desc. node	12923 Jul 12 05:06	6°♄40'43		direct	12924 Jun 20 13:22	19°♄46'45	
morning max el	12923 Jul 20 02:09	12°♄51'08	25°20'56	desc. node	12924 Jun 28 02:18	23°♄12'09	
	12923 Aug 02 22:20	0°♄		morning max el	12924 Jul 01 12:19	26°♄20'02	23°53'12
	12923 Aug 22 00:06	0°♄			12924 Jul 04 21:21	0°♄	
morning set	12923 Aug 25 01:14	5°♄23'34			12924 Jul 26 11:41	0°♄	
max. Earth dist.	12923 Aug 28 15:59	12°♄01'28	1.36318 AU	morning set	12924 Aug 05 18:38	16°♄46'43	
				max. Earth dist.	12924 Aug 09 13:29	23°♄21'08	1.38599 AU
superior conj	12923 Sep 03 22:34	24°♄08'47	-0°10'09		12924 Aug 13 06:12	0°♄	
minimum elong	12923 Sep 03 23:13	24°♄11'59	0°10'13				
behind sun begin	12923 Sep 03 18:15	23°♄47'19		superior conj	12924 Aug 17 00:01	6°♄57'48	-0°44'12
behind sun end	12923 Sep 04 04:10	24°♄36'41		minimum elong	12924 Aug 17 03:08	7°♄12'32	0°44'07
asc. node	12923 Sep 05 00:25	26°♄17'51		asc. node	12924 Aug 21 21:02	16°♄20'42	
	12923 Sep 06 20:27	0°♄		evening rise	12924 Aug 26 00:06	24°♄26'30	

































































































































	12924 Aug 28 20:38	0°♄			12925 Aug 22 13:46	0°♄	
evening max el	12924 Sep 11 07:24	21°♄01'39	18°55'13	evening max el	12925 Aug 25 13:18	3°♄27'46	18°19'35
retrograde	12924 Sep 19 23:03	25°♄21'48		retrograde	12925 Sep 01 23:41	7°♄13'23	
evening set	12924 Sep 21 20:01	25°♄10'24		evening set	12925 Sep 04 02:22	6°♄55'53	
desc. node	12924 Sep 23 23:07	24°♄31'43		desc. node	12925 Sep 10 20:37	2°♄54'19	
inferior conj	12924 Sep 30 02:54	20°♄52'53	-1°56'41	inferior conj	12925 Sep 11 14:36	2°♄17'27	-0°14'00
minimum elong	12924 Sep 29 21:57	21°♄01'37	1°54'29	minimum elong	12925 Sep 11 14:05	2°♄18'31	0°13'52
min. Earth dist.	12924 Oct 03 02:10	18°♄47'34	0.56519 AU	transit middle	12925 Sep 11 14:05	2°♄18'31	0°13'52
morning rise	12924 Oct 07 20:42	16°♄02'39		transit begin	12925 Sep 11 12:17	2°♄22'14	
direct	12924 Oct 13 12:35	14°♄46'21		transit end	12925 Sep 11 15:52	2°♄14'48	
morning max el	12924 Oct 27 17:22	22°♄05'28	26°10'41		12925 Sep 14 09:09	30°♄	
	12924 Nov 03 17:04	0°♄		min. Earth dist.	12925 Sep 14 22:07	29°♄34'14	0.58524 AU
asc. node	12924 Nov 17 22:41	22°♄45'36		morning rise	12925 Sep 18 22:19	26°♄51'14	
	12924 Nov 21 15:00	0°♄		direct	12925 Sep 25 04:43	25°♄07'16	
morning set	12924 Nov 25 01:59	7°♄14'16			12925 Oct 06 09:19	0°♄	
				morning max el	12925 Oct 09 12:29	2°♄48'09	27°21'46
superior conj	12924 Dec 01 21:03	22°♄11'54	1°37'10		12925 Oct 29 05:47	0°♄	
minimum elong	12924 Dec 01 20:21	22°♄08'00	1°38'07	asc. node	12925 Nov 04 19:29	12°♄13'18	
max. Earth dist.	12924 Dec 02 18:48	24°♄12'41	1.31579 AU	morning set	12925 Nov 09 10:12	21°♄41'30	
	12924 Dec 05 09:53	0°♄			12925 Nov 13 06:06	0°♄	
evening rise	12924 Dec 08 20:33	7°♄22'47					
desc. node	12924 Dec 20 20:38	0°♄13'10		superior conj	12925 Nov 16 08:45	6°♄55'10	1°30'27
	12924 Dec 20 17:32	0°♄		minimum elong	12925 Nov 16 07:09	6°♄46'19	1°31'10
evening max el	12925 Jan 09 15:40	26°♄50'05	27°22'52	max. Earth dist.	12925 Nov 16 03:22	6°♄25'06	1.31247 AU
	12925 Jan 13 08:48	0°♄		evening rise	12925 Nov 23 02:49	21°♄47'46	
retrograde	12925 Jan 23 14:09	4°♄07'54			12925 Nov 27 01:33	0°♄	
evening set	12925 Jan 30 11:47	1°♄57'05		desc. node	12925 Dec 07 17:40	19°♄18'36	
	12925 Feb 02 04:47	30°♄			12925 Dec 15 02:18	0°♄	
min. Earth dist.	12925 Feb 03 06:09	29°♄07'13	0.61282 AU	evening max el	12925 Dec 22 17:39	8°♄37'40	26°38'48
inferior conj	12925 Feb 06 08:13	26°♄22'46	-2°26'22	retrograde	12926 Jan 05 16:31	15°♄45'25	
minimum elong	12925 Feb 06 13:22	26°♄11'18	2°23'43	evening set	12926 Jan 12 06:56	13°♄57'39	
morning rise	12925 Feb 13 17:54	21°♄25'53		min. Earth dist.	12926 Jan 16 07:36	11°♄20'27	0.59123 AU
asc. node	12925 Feb 13 21:13	21°♄23'30		inferior conj	12926 Jan 19 11:35	8°♄53'37	-3°48'18
direct	12925 Feb 15 21:14	21°♄06'33		minimum elong	12926 Jan 19 19:29	8°♄38'16	3°44'52
morning max el	12925 Feb 22 21:26	24°♄38'25	17°52'17	morning rise	12926 Jan 27 11:00	4°♄17'35	
	12925 Feb 27 06:54	0°♄		direct	12926 Jan 29 12:18	4°♄02'29	
morning set	12925 Mar 10 12:42	19°♄02'06		asc. node	12926 Jan 31 18:34	4°♄21'38	
	12925 Mar 16 15:09	0°♄		morning max el	12926 Feb 06 08:55	7°♄55'46	18°17'08
desc. node	12925 Mar 18 22:03	4°♄01'52			12926 Feb 20 12:38	0°♄	
				morning set	12926 Feb 22 02:20	2°♄58'03	
superior conj	12925 Mar 21 07:23	8°♄10'34	-0°18'38				
minimum elong	12925 Mar 21 05:41	8°♄03'18	0°18'24	superior conj	12926 Mar 03 11:59	20°♄32'58	0°18'03
max. Earth dist.	12925 Mar 28 15:29	20°♄29'07	1.43111 AU	minimum elong	12926 Mar 03 13:19	20°♄39'01	0°18'05
	12925 Apr 03 13:52	0°♄		desc. node	12926 Mar 05 18:36	24°♄38'44	
evening rise	12925 Apr 04 03:47	0°♄54'44			12926 Mar 08 19:40	0°♄	
	12925 Apr 23 18:54	0°♄		max. Earth dist.	12926 Mar 11 01:51	3°♄52'45	1.41118 AU
evening max el	12925 May 06 03:43	15°♄18'15	21°53'31	evening rise	12926 Mar 15 17:18	11°♄37'12	
asc. node	12925 May 12 18:00	20°♄11'58			12926 Mar 27 12:21	0°♄	
retrograde	12925 May 15 10:49	20°♄45'50		evening max el	12926 Apr 18 19:30	29°♄08'15	23°13'32
evening set	12925 May 20 00:51	18°♄52'44			12926 Apr 19 16:44	0°♄	
inferior conj	12925 May 25 07:22	12°♄34'42	3°01'16	retrograde	12926 Apr 29 06:30	5°♄17'56	
minimum elong	12925 May 25 06:02	12°♄39'22	3°00'11	asc. node	12926 Apr 29 15:19	5°♄17'18	
min. Earth dist.	12925 May 25 08:45	12°♄29'55	0.68827 AU	evening set	12926 May 04 08:01	3°♄10'14	
morning rise	12925 May 30 11:01	6°♄20'45			12926 May 07 06:39	30°♄	
direct	12925 Jun 04 08:13	4°♄15'11		min. Earth dist.	12926 May 09 05:30	27°♄23'36	0.68820 AU
morning max el	12925 Jun 13 23:56	9°♄56'23	22°23'51	inferior conj	12926 May 09 16:51	26°♄44'27	2°40'09
desc. node	12925 Jun 14 23:22	10°♄56'46		minimum elong	12926 May 09 14:54	26°♄51'08	2°38'59
	12925 Jun 29 18:31	0°♄		morning rise	12926 May 14 21:42	20°♄37'32	
morning set	12925 Jul 17 11:52	27°♄05'17		direct	12926 May 19 06:02	18°♄52'33	
	12925 Jul 19 06:38	0°♄		morning max el	12926 May 27 16:23	23°♄42'49	21°00'52
max. Earth dist.	12925 Jul 22 12:39	5°♄24'37	1.40928 AU	desc. node	12926 Jun 01 20:18	29°♄34'37	
					12926 Jun 02 04:24	0°♄	
superior conj	12925 Jul 30 08:37	19°♄00'40	-1°18'41		12926 Jun 23 02:24	0°♄	
minimum elong	12925 Jul 30 14:24	19°♄26'31	1°18'35	morning set	12926 Jun 27 04:20	6°♄18'55	
	12925 Aug 05 09:02	0°♄		max. Earth dist.	12926 Jul 04 18:21	18°♄23'46	1.43016 AU
asc. node	12925 Aug 08 17:42	6°♄17'05					
evening rise	12925 Aug 09 14:06	7°♄52'46		superior conj	12926 Jul 11 19:52	0°♄06'48	-1°49'11

minimum elong	12926 Jul 12 02:56	0°Ω36'45	1°49'25		12927 Jul 04 06:04	0°Ω	
	12926 Jul 11 18:16	0°Ω		evening rise	12927 Jul 05 19:15	2°Ω37'30	
evening rise	12926 Jul 23 14:09	20°Ω40'17		asc. node	12927 Jul 13 11:12	15°Ω31'51	
asc. node	12926 Jul 26 14:25	26°Ω02'19		evening max el	12927 Jul 23 15:28	29°Ω47'33	18°07'19
	12926 Jul 28 20:24	0°൬			12927 Jul 23 20:34	0°൬	
evening max el	12926 Aug 09 01:15	16°൬26'00	18°03'57	retrograde	12927 Jul 30 00:25	3°൬07'59	
retrograde	12926 Aug 15 17:37	19°൬51'51		evening set	12927 Aug 01 19:02	2°൬27'56	
evening set	12926 Aug 18 04:02	19°൬24'32			12927 Aug 05 05:22	30°℞Ω	
inferior conj	12926 Aug 24 22:39	14°൬25'40	1°07'47	inferior conj	12927 Aug 07 23:24	27°Ω11'01	2°06'29
minimum elong	12926 Aug 25 00:35	14°൬21'04	1°06'45	minimum elong	12927 Aug 08 01:58	27°Ω04'04	2°05'09
min. Earth dist.	12926 Aug 28 02:32	11°൬25'15	0.60793 AU	min. Earth dist.	12927 Aug 10 16:40	24°Ω14'54	0.63036 AU
desc. node	12926 Aug 28 18:07	10°൬50'25		morning rise	12927 Aug 14 06:56	20°Ω58'18	
morning rise	12926 Aug 31 18:16	8°൬31'04		desc. node	12927 Aug 15 15:33	20°Ω03'12	
direct	12926 Sep 07 08:45	6°൬21'09		direct	12927 Aug 20 23:04	18°Ω28'42	
morning max el	12926 Sep 21 15:04	14°൬16'43	27°55'48	morning max el	12927 Sep 03 23:14	26°Ω30'45	27°51'03
	12926 Oct 04 07:24	0°♁			12927 Sep 07 05:30	0°൬	
	12926 Oct 21 16:44	0°ℳ			12927 Sep 27 22:26	0°♁	
asc. node	12926 Oct 22 16:12	1°ℳ57'53		morning set	12927 Oct 08 10:37	19°♁41'00	
morning set	12926 Oct 24 13:48	5°ℳ52'00		asc. node	12927 Oct 09 12:51	21°♁54'20	
max. Earth dist.	12926 Oct 30 10:56	18°ℳ31'08	1.31431 AU		12927 Oct 13 09:36	0°ℳ	
				max. Earth dist.	12927 Oct 13 13:36	0°ℳ21'24	1.32143 AU
superior conj	12926 Oct 31 19:33	21°ℳ31'39	1°18'01				
minimum elong	12926 Oct 31 17:25	21°ℳ19'45	1°18'26	superior conj	12927 Oct 16 03:38	5°ℳ56'48	1°00'00
	12926 Nov 04 15:07	0°♂		minimum elong	12927 Oct 16 01:23	5°ℳ44'36	1°00'07
evening rise	12926 Nov 07 12:27	6°♂19'03		evening rise	12927 Oct 22 23:34	20°ℳ52'11	
	12926 Nov 19 17:48	0°♂			12927 Oct 27 08:25	0°♂	
desc. node	12926 Nov 24 14:47	7°♂37'45		desc. node	12927 Nov 11 12:00	24°♂53'30	
evening max el	12926 Dec 04 11:09	19°♂31'45	25°22'41	evening max el	12927 Nov 15 21:48	29°♂43'53	23°45'22
retrograde	12926 Dec 18 07:31	26°♂29'29			12927 Nov 16 04:33	0°♂	
evening set	12926 Dec 24 04:41	25°♂10'46		retrograde	12927 Nov 29 10:06	6°♂28'01	
min. Earth dist.	12926 Dec 28 23:16	22°♂31'10	0.57098 AU	evening set	12927 Dec 04 02:31	5°♂40'11	
inferior conj	12926 Dec 31 19:03	20°♂37'38	-5°02'38	min. Earth dist.	12927 Dec 10 08:24	2°♂38'52	0.55498 AU
minimum elong	12927 Jan 01 03:25	20°♂23'34	4°59'49	inferior conj	12927 Dec 12 05:57	1°♂31'07	-5°49'27
morning rise	12927 Jan 09 04:36	16°♂24'04		minimum elong	12927 Dec 12 09:36	1°♂25'41	5°48'13
direct	12927 Jan 11 09:33	16°♂09'37			12927 Dec 14 20:59	30°℞♂	
asc. node	12927 Jan 18 15:51	18°♂58'20		morning rise	12927 Dec 20 18:33	27°♂36'39	
morning max el	12927 Jan 20 11:29	20°♂33'49	19°03'26	direct	12927 Dec 23 10:59	27°♂18'43	
	12927 Jan 27 16:18	0°♁			12927 Dec 31 04:42	0°♂	
morning set	12927 Feb 06 01:51	17°♁19'41		morning max el	12928 Jan 03 01:23	2°♂22'24	20°12'37
	12927 Feb 12 12:06	0°♂		asc. node	12928 Jan 05 13:03	5°♂01'19	
					12928 Jan 20 08:57	0°♁	
superior conj	12927 Feb 14 10:50	3°♂45'41	0°48'14	morning set	12928 Jan 21 07:49	1°♁56'30	
minimum elong	12927 Feb 14 13:30	3°♂58'26	0°48'20				
desc. node	12927 Feb 20 15:09	15°♂15'42		superior conj	12928 Jan 28 23:20	17°♁35'10	1°11'08
max. Earth dist.	12927 Feb 21 08:53	16°♂35'18	1.38886 AU	minimum elong	12928 Jan 29 02:04	17°♁48'54	1°11'31
evening rise	12927 Feb 25 04:02	23°♂14'58		max. Earth dist.	12928 Feb 03 15:41	28°♁42'01	1.36672 AU
	12927 Mar 01 04:16	0°♂			12928 Feb 04 08:12	0°♂	
	12927 Mar 21 08:20	0°♂		evening rise	12928 Feb 07 10:17	5°♂42'09	
evening max el	12927 Apr 01 09:16	13°♂00'13	24°33'37	desc. node	12928 Feb 07 11:44	5°♂48'41	
retrograde	12927 Apr 12 22:42	19°♂45'47			12928 Feb 22 01:36	0°♂	
asc. node	12927 Apr 16 12:39	18°♂48'52		evening max el	12928 Mar 13 22:36	26°♂51'12	25°46'52
evening set	12927 Apr 18 11:59	17°♂25'48			12928 Mar 17 11:04	0°♂	
min. Earth dist.	12927 Apr 23 01:03	12°♂15'14	0.68353 AU	retrograde	12928 Mar 26 10:26	4°♂02'17	
inferior conj	12927 Apr 24 00:51	10°♂55'42	2°09'02	evening set	12928 Apr 01 11:06	1°♂33'36	
minimum elong	12927 Apr 23 22:41	11°♂02'55	2°07'52	asc. node	12928 Apr 02 10:02	0°♂42'00	
morning rise	12927 Apr 29 09:34	4°♂56'58			12928 Apr 03 02:47	30°℞♂	
direct	12927 May 03 05:29	3°♂33'05		min. Earth dist.	12928 Apr 05 17:18	26°♂58'17	0.67449 AU
morning max el	12927 May 10 16:07	7°♂41'42	19°49'50	inferior conj	12928 Apr 07 05:26	25°♂03'50	1°27'41
desc. node	12927 May 19 17:08	18°♂51'34		minimum elong	12928 Apr 07 03:33	25°♂09'47	1°26'43
greatest brilliancy	12927 May 23 18:58	24°♂41'29	-0.6m	morning rise	12928 Apr 12 20:38	19°♂14'33	
	12927 May 27 09:13	0°♂		direct	12928 Apr 16 05:02	18°♂10'22	
morning set	12927 Jun 06 05:58	14°♂57'41		morning max el	12928 Apr 22 23:22	21°♂49'54	18°53'49
	12927 Jun 15 21:50	0°♂			12928 Apr 29 16:21	0°♂	
max. Earth dist.	12927 Jun 17 06:47	2°♂10'17	1.44616 AU	desc. node	12928 May 05 13:52	8°♂36'38	
				greatest brilliancy	12928 May 06 14:08	10°♂08'32	-0.8m
superior conj	12927 Jun 22 07:13	10°♂12'21	-2°09'19	morning set	12928 May 15 13:34	23°♂59'14	
minimum elong	12927 Jun 22 11:38	10°♂30'13	2°10'08		12928 May 19 10:25	0°♂	

max. Earth dist.	12928 May 29 23:43	16° II 27'00	1.45570 AU		12929 May 12 03:56	0° II	
				max. Earth dist.	12929 May 12 19:14	0° II 59'46	1.45796 AU
superior conj	12928 May 31 22:08	19° II 28'55	-2°12'15	evening rise	12929 May 27 06:31	23° II 32'21	
minimum elong	12928 May 31 19:23	19° II 18'09	2°13'09		12929 May 31 10:06	0° III	
	12928 Jun 07 13:58	0° III		greatest brilliancy	12929 Jun 07 10:07	10° III 47'27	-0.7m
evening rise	12928 Jun 16 00:50	13° III 33'48		asc. node	12929 Jun 16 05:00	23° III 15'40	
	12928 Jun 26 06:38	0° IV		evening max el	12929 Jun 19 14:31	27° III 07'31	19°07'39
asc. node	12928 Jun 29 08:03	4° IV 38'52			12929 Jun 23 05:28	0° IV	
evening max el	12928 Jul 06 04:43	13° IV 23'28	18°28'53	retrograde	12929 Jun 26 11:51	0° IV 56'47	
retrograde	12928 Jul 12 15:40	16° IV 52'00		evening set	12929 Jun 29 23:53	29° IV 45'39	
evening set	12928 Jul 15 18:45	15° IV 57'06			12929 Jun 29 14:55	30° IV III	
inferior conj	12928 Jul 21 12:40	10° IV 24'10	2°44'45	inferior conj	12929 Jul 05 10:55	23° IV 58'13	3°06'05
minimum elong	12928 Jul 21 14:47	10° IV 17'50	2°43'32	minimum elong	12929 Jul 05 12:05	23° IV 54'25	3°05'01
min. Earth dist.	12928 Jul 23 16:11	7° IV 50'24	0.65044 AU	min. Earth dist.	12929 Jul 06 23:45	21° IV 59'38	0.66687 AU
morning rise	12928 Jul 27 09:39	4° IV 02'40		morning rise	12929 Jul 10 23:39	17° IV 34'33	
desc. node	12928 Aug 01 12:57	1° IV 29'25		direct	12929 Jul 17 03:48	14° IV 54'26	
direct	12928 Aug 02 21:55	1° IV 22'41		desc. node	12929 Jul 19 10:18	15° IV 13'13	
morning max el	12928 Aug 16 09:57	9° IV 19'08	27°12'02	morning max el	12929 Jul 29 20:50	22° IV 29'51	26°06'37
	12928 Sep 01 14:43	0° V			12929 Aug 05 11:06	0° IV	
	12928 Sep 19 08:08	0° V			12929 Aug 25 21:29	0° V	
morning set	12928 Sep 20 21:59	3° V 01'49		morning set	12929 Sep 03 20:27	15° V 45'16	
asc. node	12928 Sep 25 09:29	11° V 57'58		max. Earth dist.	12929 Sep 07 15:39	22° V 57'06	1.35128 AU
max. Earth dist.	12928 Sep 25 07:45	11° V 49'07	1.33381 AU		12929 Sep 11 05:25	0° V	
				asc. node	12929 Sep 12 06:04	2° V 04'15	
superior conj	12928 Sep 29 06:51	20° V 04'58	0°36'34				
minimum elong	12928 Sep 29 05:08	19° V 55'49	0°36'30	superior conj	12929 Sep 13 02:40	3° V 49'01	0°08'10
	12928 Oct 03 22:01	0° VI		minimum elong	12929 Sep 13 02:12	3° V 46'39	0°08'03
evening rise	12928 Oct 06 10:20	5° VI 22'20		behind sun begin	12929 Sep 12 20:57	3° V 19'50	
	12928 Oct 19 14:10	0° VI		behind sun end	12929 Sep 13 07:28	4° V 13'31	
evening max el	12928 Oct 27 09:31	9° VI 47'01	22°04'14	evening rise	12929 Sep 20 18:43	19° V 43'36	
desc. node	12928 Oct 28 09:18	10° VI 43'08			12929 Sep 25 21:06	0° VI	
retrograde	12928 Nov 09 01:15	16° VI 03'51		evening max el	12929 Oct 09 07:26	20° VI 16'35	20°34'45
evening set	12928 Nov 12 07:26	15° VI 40'15		desc. node	12929 Oct 15 06:43	24° VI 38'23	
min. Earth dist.	12928 Nov 20 15:03	11° VI 59'11	0.54621 AU	retrograde	12929 Oct 20 12:04	25° VI 50'11	
inferior conj	12928 Nov 21 01:29	11° VI 44'34	-5°45'41	evening set	12929 Oct 22 17:22	25° VI 38'02	
minimum elong	12928 Nov 20 20:23	11° VI 51'43	5°44'16	inferior conj	12929 Oct 31 17:33	21° VI 43'03	-4°42'55
morning rise	12928 Nov 29 10:28	7° VI 57'23		minimum elong	12929 Oct 31 07:31	21° VI 57'31	4°39'34
direct	12928 Dec 02 21:55	7° VI 30'35		min. Earth dist.	12929 Nov 01 22:05	21° VI 01'49	0.54662 AU
morning max el	12928 Dec 15 01:04	13° VI 18'05	21°43'44	morning rise	12929 Nov 08 21:23	17° VI 44'31	
asc. node	12928 Dec 22 10:11	22° VI 13'54		direct	12929 Nov 13 06:40	17° VI 03'09	
	12928 Dec 27 05:20	0° VII		morning max el	12929 Nov 26 13:47	23° VI 31'11	23°30'00
morning set	12929 Jan 04 17:42	16° VII 41'19			12929 Dec 02 08:41	0° VI	
	12929 Jan 11 00:33	0° VII		asc. node	12929 Dec 09 07:14	10° VI 19'26	
					12929 Dec 19 12:54	0° VII	
superior conj	12929 Jan 11 21:38	1° VII 50'40	1°26'51	morning set	12929 Dec 20 05:22	1° VII 27'31	
minimum elong	12929 Jan 11 23:41	2° VII 01'25	1°27'33				
max. Earth dist.	12929 Jan 16 03:25	10° VII 33'39	1.34704 AU	superior conj	12929 Dec 27 02:37	16° VII 22'27	1°35'48
evening rise	12929 Jan 20 08:48	18° VII 50'17		minimum elong	12929 Dec 27 03:38	16° VII 27'57	1°36'43
desc. node	12929 Jan 24 08:25	26° VII 13'56		max. Earth dist.	12929 Dec 29 23:02	22° VII 28'24	1.33126 AU
	12929 Jan 26 11:15	0° VIII			12930 Jan 02 14:12	0° VII	
	12929 Feb 15 04:49	0° VIII		evening rise	12930 Jan 03 19:54	2° VII 29'16	
evening max el	12929 Feb 24 12:19	10° VIII 35'57	26°45'52	desc. node	12930 Jan 11 05:11	16° VII 25'55	
retrograde	12929 Mar 09 16:44	17° VIII 59'58			12930 Jan 19 08:15	0° VIII	
evening set	12929 Mar 16 03:32	15° VIII 27'36		evening max el	12930 Feb 07 01:35	24° VIII 03'47	27°23'20
min. Earth dist.	12929 Mar 20 04:09	11° VIII 26'15	0.66141 AU		12930 Feb 15 00:02	0° VIII	
asc. node	12929 Mar 20 07:27	11° VIII 16'44		retrograde	12930 Feb 20 16:30	1° VIII 29'59	
inferior conj	12929 Mar 22 04:28	9° VIII 04'11	0°35'42		12930 Feb 25 22:48	30° VIII VII	
minimum elong	12929 Mar 22 03:32	9° VIII 06'56	0°35'16	evening set	12930 Feb 27 11:08	29° VIII 00'03	
morning rise	12929 Mar 28 04:44	3° VIII 26'05		min. Earth dist.	12930 Mar 03 07:28	25° VIII 30'29	0.64469 AU
direct	12929 Mar 31 02:53	2° VIII 38'52		inferior conj	12930 Mar 05 19:24	22° VIII 50'11	-0°27'14
morning max el	12929 Apr 06 12:40	6° VIII 01'54	18°14'15	minimum elong	12930 Mar 05 20:13	22° VIII 47'59	0°26'42
desc. node	12929 Apr 22 10:33	28° VIII 42'18		asc. node	12930 Mar 07 04:54	21° VIII 21'58	
	12929 Apr 23 05:58	0° IX		morning rise	12930 Mar 12 07:14	17° VIII 25'41	
morning set	12929 Apr 25 21:23	4° IX 14'07		direct	12930 Mar 14 20:36	16° VIII 52'05	
				morning max el	12930 Mar 21 05:36	20° VIII 10'06	17°51'49
superior conj	12929 May 11 05:43	28° IX 33'05	-1°54'58		12930 Mar 28 17:28	0° VIII	
minimum elong	12929 May 10 21:03	27° IX 59'11	1°55'07	morning set	12930 Apr 07 09:44	15° VIII 52'27	

desc. node	12930 Apr 09 07:10	19° Υ 02'25	morning max el	12931 Mar 04 23:11	4° X 06'21	17°46'54
	12930 Apr 15 22:15	0° B	morning set	12931 Mar 20 22:00	28° X 38'40	
				12931 Mar 21 16:30	0° Υ	
superior conj	12930 Apr 20 23:34	8° B 10'40	desc. node	12931 Mar 27 03:43	9° Υ 32'07	
minimum elong	12930 Apr 20 15:19	7° B 37'37				
max. Earth dist.	12930 Apr 25 15:07	15° B 33'43	superior conj	12931 Apr 01 15:25	18° Υ 51'16	-0°41'43
	12930 May 04 21:52	0° II	minimum elong	12931 Apr 01 11:18	18° Υ 34'04	0°41'18
evening rise	12930 May 06 20:18	2° II 58'11		12931 Apr 08 10:41	0° B	
greatest brilliancy	12930 May 21 19:38	25° II 26'53	max. Earth dist.	12931 Apr 08 08:37	29° Υ 51'42	1.44064 AU
	12930 May 25 00:16	0° E	evening rise	12931 Apr 16 09:07	12° B 29'45	
evening max el	12930 Jun 02 19:07	10° E 55'07		12931 Apr 27 23:56	0° II	
asc. node	12930 Jun 03 02:03	11° E 12'19	evening max el	12931 May 16 17:49	24° II 42'55	21°10'00
retrograde	12930 Jun 10 10:23	15° E 16'40	asc. node	12931 May 20 23:13	28° II 15'11	
evening set	12930 Jun 14 08:00	13° E 48'46	retrograde	12931 May 25 09:11	29° II 45'22	
inferior conj	12930 Jun 19 15:13	7° E 48'02	evening set	12931 May 29 17:04	28° II 01'01	
minimum elong	12930 Jun 19 15:20	7° E 47'38	inferior conj	12931 Jun 03 23:08	21° II 48'33	3°08'48
min. Earth dist.	12930 Jun 20 13:39	6° E 32'03	minimum elong	12931 Jun 03 22:17	21° II 51'33	3°07'47
morning rise	12930 Jun 24 22:20	1° E 26'26	min. Earth dist.	12931 Jun 04 07:55	21° II 18'01	0.68617 AU
	12930 Jun 26 20:45	30° R II	morning rise	12931 Jun 09 03:17	15° II 31'24	
direct	12930 Jun 30 15:29	28° II 55'05	direct	12931 Jun 14 07:51	13° II 15'24	
	12930 Jul 04 18:46	0° E	desc. node	12931 Jun 23 04:43	17° II 57'33	
desc. node	12930 Jul 06 07:34	0° E 51'59	morning max el	12931 Jun 24 17:35	19° II 26'37	23°15'00
morning max el	12930 Jul 12 07:04	5° E 54'05		12931 Jul 03 15:57	0° E	
	12930 Jul 30 22:50	0° Ω		12931 Jul 24 02:28	0° Ω	
morning set	12930 Aug 17 01:52	27° Ω 41'33	morning set	12931 Jul 29 09:26	8° Ω 38'34	
	12930 Aug 18 09:07	0° M	max. Earth dist.	12931 Aug 02 13:45	15° Ω 44'44	1.39607 AU
max. Earth dist.	12930 Aug 20 15:44	4° M 06'20				
			superior conj	12931 Aug 10 06:47	29° Ω 32'16	-0°58'58
superior conj	12930 Aug 27 11:58	17° M 01'27	minimum elong	12931 Aug 10 11:04	29° Ω 52'04	0°58'51
minimum elong	12930 Aug 27 13:35	17° M 09'19		12931 Aug 10 12:47	0° M	
asc. node	12930 Aug 30 02:40	22° M 09'53	asc. node	12931 Aug 16 23:17	12° M 10'40	
	12930 Sep 03 00:35	0° Ω	evening rise	12931 Aug 19 18:26	17° M 34'04	
evening rise	12930 Sep 04 22:25	3° Ω 50'18		12931 Aug 26 09:43	0° Ω	
	12930 Sep 20 08:59	0° M	evening max el	12931 Sep 04 19:48	13° Ω 34'23	18°37'23
evening max el	12930 Sep 21 19:26	1° M 32'14	retrograde	12931 Sep 12 21:48	17° Ω 38'33	
retrograde	12930 Oct 01 07:58	6° M 17'43	evening set	12931 Sep 14 20:38	17° Ω 25'06	
desc. node	12930 Oct 02 04:10	6° M 15'37	desc. node	12931 Sep 19 01:40	15° Ω 35'57	
evening set	12930 Oct 03 04:35	6° M 07'37	inferior conj	12931 Sep 22 19:42	12° Ω 58'28	-1°11'05
inferior conj	12930 Oct 11 20:36	2° M 00'16	minimum elong	12931 Sep 22 16:49	13° Ω 03'54	1°09'48
minimum elong	12930 Oct 11 12:50	2° M 12'51	min. Earth dist.	12931 Sep 26 00:02	10° Ω 34'56	0.57322 AU
min. Earth dist.	12930 Oct 14 08:11	0° M 24'02	morning rise	12931 Sep 30 09:34	7° Ω 52'09	
	12930 Oct 14 23:35	30° R Ω	direct	12931 Oct 06 08:02	6° Ω 24'34	
morning rise	12930 Oct 19 18:51	27° Ω 31'55	morning max el	12931 Oct 20 15:05	13° Ω 53'42	26°45'05
direct	12930 Oct 25 00:20	26° Ω 30'20		12931 Nov 02 10:42	0° M	
	12930 Nov 03 17:16	0° M	asc. node	12931 Nov 13 01:03	18° M 19'41	
morning max el	12930 Nov 07 23:57	3° M 32'03		12931 Nov 18 18:40	0° X	
asc. node	12930 Nov 26 04:12	29° M 04'56	morning set	12931 Nov 19 03:05	0° X 44'54	
	12930 Nov 26 16:10	0° X				
morning set	12930 Dec 04 17:05	16° X 10'19	superior conj	12931 Nov 25 23:09	15° X 47'48	1°35'01
			minimum elong	12931 Nov 25 22:02	15° X 41'38	1°35'53
superior conj	12930 Dec 11 11:49	1° Z 03'32	max. Earth dist.	12931 Nov 26 09:24	16° X 45'03	1.31374 AU
minimum elong	12930 Dec 11 11:43	1° Z 03'00		12931 Dec 02 10:30	0° Z	
	12930 Dec 11 00:19	0° Z	evening rise	12931 Dec 02 19:49	0° Z 49'30	
max. Earth dist.	12930 Dec 13 01:55	4° Z 33'08	desc. node	12931 Dec 15 22:58	25° Z 44'40	
evening rise	12930 Dec 18 16:27	16° Z 31'14		12931 Dec 18 14:16	0° \approx	
	12930 Dec 25 13:32	0° \approx	evening max el	12932 Jan 02 18:10	19° \approx 17'29	27°08'18
desc. node	12930 Dec 29 02:01	6° \approx 18'43	retrograde	12932 Jan 16 16:55	26° \approx 31'25	
	12931 Jan 14 01:35	0° X	evening set	12932 Jan 23 12:44	24° \approx 29'05	
evening max el	12931 Jan 20 12:24	7° X 01'43	min. Earth dist.	12932 Jan 27 08:34	21° \approx 46'33	0.60360 AU
retrograde	12931 Feb 03 08:50	14° X 23'20	inferior conj	12932 Jan 30 12:36	19° \approx 07'23	-3°01'10
evening set	12931 Feb 10 07:16	12° X 03'05	minimum elong	12932 Jan 30 19:02	18° \approx 53'52	2°58'04
min. Earth dist.	12931 Feb 14 01:16	9° X 01'05	morning rise	12932 Feb 07 04:22	14° \approx 19'26	
inferior conj	12931 Feb 16 23:15	6° X 14'07	asc. node	12932 Feb 08 23:47	14° \approx 02'38	
minimum elong	12931 Feb 17 02:39	6° X 05'57	direct	12932 Feb 09 06:21	14° \approx 02'20	
asc. node	12931 Feb 22 02:22	2° X 01'05	morning max el	12932 Feb 16 14:04	17° \approx 41'49	18°00'28
morning rise	12931 Feb 24 00:39	1° X 06'22		12932 Feb 25 08:49	0° X	
direct	12931 Feb 26 07:05	0° X 42'47	morning set	12932 Mar 03 03:58	12° X 14'14	

	12932 Mar 12 22:28	0°♿			12933 Jan 29 03:14	0°♿	
				morning max el	12933 Jan 29 22:20	0°♿44'27	18°34'08
superior conj	12932 Mar 13 07:32	0°♿40'00	-0°02'25	morning set	12933 Feb 14 22:15	26°♿22'25	
minimum elong	12932 Mar 13 07:20	0°♿39'09	0°02'18		12933 Feb 16 19:17	0°♿	
behind sun begin	12932 Mar 12 23:28	0°♿04'25					
behind sun end	12932 Mar 13 15:13	1°♿13'48		superior conj	12933 Feb 23 20:29	13°♿25'35	0°31'42
desc. node	12932 Mar 13 00:13	0°♿07'47		minimum elong	12933 Feb 23 22:34	13°♿35'16	0°31'45
max. Earth dist.	12932 Mar 20 21:32	13°♿37'55	1.42299 AU	desc. node	12933 Feb 27 20:44	20°♿45'10	
evening rise	12932 Mar 26 11:15	22°♿41'31		max. Earth dist.	12933 Mar 03 05:36	26°♿41'47	1.40176 AU
	12932 Mar 31 03:04	0°♿			12933 Mar 05 03:42	0°♿	
	12932 Apr 21 02:43	0°♿		evening rise	12933 Mar 07 09:45	3°♿47'49	
evening max el	12932 Apr 28 11:29	8°♿31'32	22°27'04		12933 Mar 24 08:10	0°♿	
asc. node	12932 May 06 20:29	14°♿08'42		evening max el	12933 Apr 11 02:03	22°♿22'05	23°48'02
retrograde	12932 May 08 06:32	14°♿18'03		retrograde	12933 Apr 22 00:58	28°♿48'45	
evening set	12932 May 13 01:23	12°♿18'23		asc. node	12933 Apr 23 17:49	28°♿35'33	
inferior conj	12932 May 18 08:37	5°♿56'25	2°53'33	evening set	12933 Apr 27 07:21	26°♿35'39	
minimum elong	12932 May 18 06:59	6°♿02'06	2°52'26	min. Earth dist.	12933 May 02 01:04	21°♿04'07	0.68671 AU
min. Earth dist.	12932 May 18 04:28	6°♿10'53	0.68875 AU	inferior conj	12933 May 02 17:41	20°♿07'21	2°28'13
	12932 May 23 05:42	30°♿♿		minimum elong	12933 May 02 15:36	20°♿14'28	2°27'01
morning rise	12932 May 23 12:27	29°♿45'16		morning rise	12933 May 07 23:50	14°♿03'31	
direct	12932 May 28 04:02	27°♿48'29		direct	12933 May 12 02:44	12°♿27'34	
	12932 Jun 02 16:55	0°♿		morning max el	12933 May 20 02:18	16°♿59'11	20°28'54
morning max el	12932 Jun 06 07:02	3°♿07'48	21°47'27	desc. node	12933 May 26 22:36	25°♿03'08	
desc. node	12932 Jun 09 01:43	6°♿07'11			12933 May 30 14:01	0°♿	
	12932 Jun 26 15:34	0°♿		morning set	12933 Jun 17 23:53	27°♿21'43	
morning set	12932 Jul 08 15:48	18°♿28'55			12933 Jun 19 16:40	0°♿	
max. Earth dist.	12932 Jul 14 15:13	28°♿11'18	1.41859 AU	max. Earth dist.	12933 Jun 26 23:11	11°♿29'38	1.43762 AU
	12932 Jul 15 17:22	0°♿					
				superior conj	12933 Jul 03 07:55	21°♿52'25	-1°59'26
superior conj	12932 Jul 22 06:45	11°♿11'54	-1°32'26	minimum elong	12933 Jul 03 14:29	22°♿19'39	1°59'54
minimum elong	12932 Jul 22 13:23	11°♿40'53	1°32'26		12933 Jul 08 04:05	0°♿	
	12932 Aug 01 17:10	0°♿		evening rise	12933 Jul 15 19:40	13°♿13'08	
evening rise	12932 Aug 02 03:05	0°♿45'36		asc. node	12933 Jul 20 16:40	21°♿42'28	
asc. node	12932 Aug 02 19:56	2°♿03'00			12933 Jul 25 16:08	0°♿	
evening max el	12932 Aug 18 04:44	26°♿15'31	18°10'30	evening max el	12933 Aug 01 18:09	9°♿25'37	18°03'12
retrograde	12932 Aug 25 06:17	29°♿51'08		retrograde	12933 Aug 08 06:07	12°♿47'14	
evening set	12932 Aug 27 12:00	29°♿30'01		evening set	12933 Aug 10 20:00	12°♿14'50	
inferior conj	12932 Sep 03 16:28	24°♿42'52	0°23'31	inferior conj	12933 Aug 17 08:09	7°♿08'22	1°35'21
minimum elong	12932 Sep 03 17:14	24°♿41'10	0°23'02	minimum elong	12933 Aug 17 10:31	7°♿02'22	1°34'07
desc. node	12932 Sep 04 23:10	23°♿34'40		min. Earth dist.	12933 Aug 20 08:15	4°♿07'03	0.61765 AU
min. Earth dist.	12932 Sep 06 23:39	21°♿49'19	0.59475 AU	desc. node	12933 Aug 22 20:38	1°♿53'10	
morning rise	12932 Sep 10 19:06	19°♿02'59		morning rise	12933 Aug 23 22:31	1°♿04'58	
direct	12932 Sep 17 05:40	17°♿07'16			12933 Aug 25 17:23	30°♿♿	
morning max el	12932 Oct 01 13:40	24°♿56'17	27°40'59	direct	12933 Aug 30 14:39	28°♿45'18	
	12932 Oct 06 05:30	0°♿			12933 Sep 04 19:06	0°♿	
	12932 Oct 25 19:22	0°♿		morning max el	12933 Sep 13 18:46	6°♿45'04	27°58'17
asc. node	12932 Oct 29 21:47	7°♿55'29			12933 Oct 01 10:41	0°♿	
morning set	12932 Nov 02 09:34	15°♿06'01		asc. node	12933 Oct 16 18:26	27°♿46'12	
max. Earth dist.	12932 Nov 08 17:52	28°♿55'29	1.31257 AU	morning set	12933 Oct 17 10:35	29°♿08'51	
					12933 Oct 17 20:30	0°♿	
superior conj	12932 Nov 09 10:41	0°♿29'12	1°25'52	max. Earth dist.	12933 Oct 22 23:41	10°♿55'59	1.31667 AU
minimum elong	12932 Nov 09 08:49	0°♿18'46	1°26'28				
	12932 Nov 09 05:27	0°♿		superior conj	12933 Oct 24 20:37	15°♿02'35	1°11'04
evening rise	12932 Nov 16 03:44	15°♿17'50		minimum elong	12933 Oct 24 18:22	14°♿50'11	1°11'21
	12932 Nov 23 09:24	0°♿		evening rise	12933 Oct 31 14:15	29°♿51'23	
desc. node	12932 Dec 01 20:01	14°♿32'31			12933 Oct 31 15:51	0°♿	
	12932 Dec 13 23:08	0°♿			12933 Nov 16 23:20	0°♿	
evening max el	12932 Dec 14 16:27	0°♿41'47	26°09'54	desc. node	12933 Nov 18 17:11	2°♿27'48	
retrograde	12932 Dec 28 15:04	7°♿46'20		evening max el	12933 Nov 26 06:42	11°♿16'49	24°43'01
evening set	12933 Jan 03 23:21	6°♿10'15		retrograde	12933 Dec 10 01:00	18°♿09'24	
min. Earth dist.	12933 Jan 08 05:43	3°♿34'06	0.58220 AU	evening set	12933 Dec 15 10:57	17°♿04'24	
inferior conj	12933 Jan 11 07:47	1°♿19'20	-4°21'48	min. Earth dist.	12933 Dec 20 18:31	14°♿17'40	0.56349 AU
minimum elong	12933 Jan 11 16:21	1°♿03'42	4°18'25	inferior conj	12933 Dec 23 06:24	12°♿42'38	-5°27'18
	12933 Jan 13 04:14	30°♿♿		minimum elong	12933 Dec 23 13:31	12°♿31'19	5°25'09
morning rise	12933 Jan 19 12:14	26°♿53'09		morning rise	12933 Dec 31 18:11	8°♿37'34	
direct	12933 Jan 21 14:01	26°♿38'56		direct	12934 Jan 03 02:54	8°♿22'13	
asc. node	12933 Jan 25 21:07	27°♿43'37		asc. node	12934 Jan 12 18:22	12°♿59'12	

morning max el	12934 Jan 12 19:54	13°  02'54	19°29'55	asc. node	12934 Dec 30 15:31	29°  33'40	
	12934 Jan 24 10:55	0° 			12934 Dec 30 23:30	0° 	
morning set	12934 Jan 30 00:53	10°  51'45		morning set	12935 Jan 14 08:50	25°  33'05	
					12935 Jan 16 12:10	0° 	
superior conj	12934 Feb 07 01:39	26°  55'18	0°58'49				
minimum elong	12934 Feb 07 04:28	27°  09'04	0°59'03	superior conj	12935 Jan 21 18:45	10°  57'01	1°18'39
	12934 Feb 08 15:39	0° 		minimum elong	12935 Jan 21 21:15	11°  09'51	1°19'10
max. Earth dist.	12934 Feb 13 11:52	9°  06'55	1.37934 AU	max. Earth dist.	12935 Jan 26 20:41	21°  06'35	1.35802 AU
desc. node	12934 Feb 14 17:19	11°  20'58		evening rise	12935 Jan 30 18:51	28°  33'53	
evening rise	12934 Feb 17 05:13	15°  48'03			12935 Jan 31 13:32	0° 	
	12934 Feb 25 16:25	0° 		desc. node	12935 Feb 01 13:57	1°  51'17	
	12934 Mar 18 22:43	0° 			12935 Feb 18 23:02	0° 	
evening max el	12934 Mar 24 15:40	6°  14'38	25°06'07	evening max el	12935 Mar 07 05:19	20°  04'41	26°14'09
retrograde	12934 Apr 05 15:17	13°  12'05		retrograde	12935 Mar 20 00:38	27°  21'51	
asc. node	12934 Apr 10 15:12	11°  24'21		evening set	12935 Mar 26 05:56	24°  50'59	
evening set	12934 Apr 11 09:25	10°  48'12		asc. node	12935 Mar 28 12:37	22°  40'14	
min. Earth dist.	12934 Apr 15 19:31	5°  52'33	0.68022 AU	min. Earth dist.	12935 Mar 30 09:40	20°  30'27	0.66944 AU
inferior conj	12934 Apr 17 00:28	4°  17'43	1°52'48	inferior conj	12935 Apr 01 03:00	18°  23'27	1°06'59
minimum elong	12934 Apr 16 22:22	4°  24'38	1°51'40	minimum elong	12935 Apr 01 01:26	18°  28'17	1°06'11
	12934 Apr 20 14:14	30°  49'00		morning rise	12935 Apr 06 21:44	12°  38'44	
morning rise	12934 Apr 22 11:36	28°  22'36		direct	12935 Apr 10 01:44	11°  42'00	
direct	12934 Apr 26 02:33	27°  07'09		morning max el	12935 Apr 16 15:17	15°  12'37	18°34'58
	12934 May 02 02:36	0° 			12935 Apr 27 18:27	0° 	
morning max el	12934 May 03 05:10	1°  01'44	19°23'58	desc. node	12935 Apr 30 16:07	4°  27'50	
desc. node	12934 May 13 19:24	14°  32'58		morning set	12935 May 07 17:42	15°  31'22	
greatest brilliancy	12934 May 15 22:06	17°  38'26	-0.7m		12935 May 16 23:26	0° 	
	12934 May 24 02:49	0° 					
morning set	12934 May 28 01:07	6°  11'35		superior conj	12935 May 23 19:16	10°  13'46	-2°07'18
max. Earth dist.	12934 Jun 09 13:53	25°  13'06	1.45108 AU	minimum elong	12935 May 23 13:23	10°  16'47	2°07'57
	12934 Jun 12 09:54	0° 		max. Earth dist.	12935 May 23 08:53	9°  15'14	1.45759 AU
					12935 Jun 05 02:38	0° 	
superior conj	12934 Jun 13 09:35	1°  34'09	-2°12'59	evening rise	12935 Jun 08 10:14	5°  15'31	
minimum elong	12934 Jun 13 11:19	1°  41'05	2°13'57	greatest brilliancy	12935 Jun 16 11:24	18°  01'04	-0.8m
evening rise	12934 Jun 27 15:06	24°  44'35		asc. node	12935 Jun 24 10:23	29°  05'38	
	12934 Jun 30 19:00	0° 			12935 Jun 24 10:47	0° 	
asc. node	12934 Jul 07 13:28	11°  03'09		evening max el	12935 Jun 29 20:26	6°  14'39	18°43'19
evening max el	12934 Jul 16 08:22	22°  15'26	18°14'24	retrograde	12935 Jul 06 10:44	10°  10'30	
retrograde	12934 Jul 22 16:54	26°  16'23		evening set	12935 Jul 09 17:37	9°  08'39	
evening set	12934 Jul 25 15:12	25°  30'03		inferior conj	12935 Jul 15 08:09	3°  29'06	2°55'40
inferior conj	12934 Jul 31 14:39	20°  06'07	2°25'01	minimum elong	12935 Jul 15 09:54	3°  23'41	2°54'31
minimum elong	12934 Jul 31 17:07	19°  59'08	2°23'42	min. Earth dist.	12935 Jul 17 05:19	1°  09'26	0.65791 AU
min. Earth dist.	12934 Aug 03 02:16	17°  17'50	0.63929 AU		12935 Jul 18 04:45	30°  49'00	
morning rise	12934 Aug 06 17:29	13°  49'02		morning rise	12935 Jul 21 01:20	27°  06'06	
desc. node	12934 Aug 09 18:05	11°  58'54		direct	12935 Jul 27 10:29	24°  05'14	
direct	12934 Aug 13 08:41	11°  13'52		desc. node	12935 Jul 27 15:29	24°  05'23	
morning max el	12934 Aug 27 04:09	19°  14'21	27°38'17		12935 Aug 07 07:14	0° 	
	12934 Sep 05 07:35	0° 		morning max el	12935 Aug 09 15:18	2°  14'11	26°47'01
	12934 Sep 24 10:12	0° 			12935 Aug 30 12:17	0° 	
morning set	12934 Oct 01 03:43	12°  46'38		morning set	12935 Sep 14 10:04	25°  17'33	
asc. node	12934 Oct 03 15:03	17°  46'09			12935 Sep 16 13:21	0° 	
max. Earth dist.	12934 Oct 05 23:08	22°  43'27	1.32610 AU	max. Earth dist.	12935 Sep 18 13:16	3°  56'55	1.34072 AU
				asc. node	12935 Sep 20 11:40	7°  51'18	
superior conj	12934 Oct 09 02:54	29°  42'28	0°50'44				
minimum elong	12934 Oct 09 00:48	29°  42'07	0°50'45	superior conj	12935 Sep 23 03:18	13°  42'01	0°25'06
	12934 Oct 09 10:03	0° 		minimum elong	12935 Sep 23 02:01	13°  43'17	0°24'59
evening rise	12934 Oct 16 01:28	14°  12'41		evening rise	12935 Sep 30 11:30	28°  45'26	
	12934 Oct 23 18:53	0° 			12935 Oct 01 00:34	0° 	
desc. node	12934 Nov 05 14:27	19°  10'14			12935 Oct 18 20:56	0° 	
evening max el	12934 Nov 07 16:45	21°  10'55	23°01'44	evening max el	12935 Oct 20 07:42	1°  30'41	21°23'57
retrograde	12934 Nov 20 21:43	27°  15'40		desc. node	12935 Oct 23 11:49	4°  31'43	
evening set	12934 Nov 24 23:42	27°  18'26		retrograde	12935 Nov 01 09:46	7°  31'05	
min. Earth dist.	12934 Dec 02 01:55	24°  12'26	0.55032 AU	evening set	12935 Nov 04 03:39	7°  13'42	
inferior conj	12934 Dec 03 09:41	23°  16'53	-5°55'04	inferior conj	12935 Nov 13 01:54	3°  19'33	-5°25'40
minimum elong	12934 Dec 03 09:44	23°  16'48	5°54'06	minimum elong	12935 Nov 12 17:47	3°  30'56	5°23'26
morning rise	12934 Dec 11 21:18	19°  27'25		min. Earth dist.	12935 Nov 13 08:03	3°  10'54	0.54525 AU
direct	12934 Dec 14 21:26	19°  26'12			12935 Nov 19 19:28	30°  49'00	
morning max el	12934 Dec 26 03:33	24°  28'04	20°48'53	morning rise	12935 Nov 21 08:44	29°  49'00	

direct	12935 Nov 25 05:22	28°♄58'18		retrograde	12936 Oct 11 23:21	17°♄32'09	
	12935 Nov 30 10:05	0°♄		evening set	12936 Oct 13 22:51	17°♄21'50	
morning max el	12935 Dec 07 21:49	5°♄03'03	22°27'52	inferior conj	12936 Oct 22 21:09	13°♄22'55	-4°02'30
asc. node	12935 Dec 17 12:37	17°♄10'25		minimum elong	12936 Oct 22 11:23	13°♄37'37	3°58'49
	12935 Dec 24 18:33	0°♄		min. Earth dist.	12936 Oct 24 16:23	12°♄17'46	0.54956 AU
morning set	12935 Dec 29 19:43	10°♄19'21		morning rise	12936 Oct 30 22:44	9°♄13'09	
				direct	12936 Nov 04 16:37	8°♄24'04	
superior conj	12936 Jan 05 20:14	25°♄20'33	1°31'27	morning max el	12936 Nov 18 08:36	15°♄08'02	24°16'26
minimum elong	12936 Jan 05 21:52	25°♄29'15	1°32'15		12936 Nov 30 01:18	0°♄	
	12936 Jan 08 01:17	0°♄		asc. node	12936 Dec 03 09:37	5°♄34'40	
max. Earth dist.	12936 Jan 09 11:41	2°♄58'15	1.33978 AU	morning set	12936 Dec 13 07:38	25°♄05'20	
evening rise	12936 Jan 13 23:06	11°♄55'54			12936 Dec 15 14:07	0°♄	
desc. node	12936 Jan 19 10:39	22°♄11'27					
	12936 Jan 23 22:23	0°♄		superior conj	12936 Dec 20 03:20	9°♄58'00	1°37'39
	12936 Feb 14 04:51	0°♄		minimum elong	12936 Dec 20 03:52	10°♄00'58	1°38'37
evening max el	12936 Feb 17 18:51	3°♄43'08	27°04'49	max. Earth dist.	12936 Dec 22 10:28	14°♄56'52	1.32585 AU
retrograde	12936 Mar 02 04:13	11°♄09'22		evening rise	12936 Dec 27 14:36	25°♄46'12	
evening set	12936 Mar 08 18:55	8°♄36'52			12936 Dec 29 17:29	0°♄	
min. Earth dist.	12936 Mar 12 17:25	4°♄49'46	0.65471 AU	desc. node	12937 Jan 05 07:26	12°♄16'29	
asc. node	12936 Mar 14 10:05	2°♄54'59			12937 Jan 16 08:26	0°♄	
inferior conj	12936 Mar 14 22:55	2°♄18'27	0°10'19	evening max el	12937 Jan 30 07:11	16°♄59'44	27°30'57
minimum elong	12936 Mar 14 22:37	2°♄19'16	0°10'15	retrograde	12937 Feb 13 01:15	24°♄25'33	
transit middle	12936 Mar 14 22:37	2°♄19'16	0°10'15	evening set	12937 Feb 19 22:03	21°♄58'32	
transit begin	12936 Mar 14 20:19	2°♄25'49		min. Earth dist.	12937 Feb 23 16:55	18°♄41'26	0.63662 AU
transit end	12936 Mar 15 00:55	2°♄12'45		inferior conj	12937 Feb 26 09:32	15°♄56'21	-0°57'10
	12936 Mar 17 01:33	30°♄		minimum elong	12937 Feb 26 11:21	15°♄51'40	0°56'04
morning rise	12936 Mar 21 03:51	26°♄46'08		asc. node	12937 Mar 01 07:31	13°♄07'29	
direct	12936 Mar 23 22:05	26°♄05'11		morning rise	12937 Mar 05 02:58	10°♄38'47	
morning max el	12936 Mar 30 06:33	29°♄24'32	18°02'40	direct	12937 Mar 07 13:01	10°♄10'02	
	12936 Mar 30 20:38	0°♄		morning max el	12937 Mar 14 00:13	13°♄29'22	17°47'30
desc. node	12936 Apr 16 12:45	24°♄40'13			12937 Mar 25 12:42	0°♄	
morning set	12936 Apr 17 13:50	26°♄22'33		morning set	12937 Mar 30 13:06	8°♄32'00	
	12936 Apr 19 19:13	0°♄		desc. node	12937 Apr 03 09:21	15°♄04'58	
superior conj	12936 May 02 05:13	19°♄53'05	-1°42'22	superior conj	12937 Apr 12 07:39	29°♄55'56	-1°05'08
minimum elong	12936 May 01 19:59	19°♄16'42	1°42'10	minimum elong	12937 Apr 12 00:59	29°♄28'46	1°04'39
max. Earth dist.	12936 May 05 04:58	24°♄34'51	1.45660 AU		12937 Apr 12 08:39	0°♄	
	12936 May 08 16:17	0°♄		max. Earth dist.	12937 Apr 17 23:34	9°♄01'54	1.44837 AU
evening rise	12936 May 18 07:40	14°♄56'01		evening rise	12937 Apr 27 18:58	24°♄18'50	
	12936 May 28 03:42	0°♄			12937 May 01 12:30	0°♄	
greatest brilliancy	12936 May 31 09:49	4°♄52'42	-0.7m		12937 May 22 13:43	0°♄	
asc. node	12936 Jun 10 07:25	18°♄19'41		evening max el	12937 May 26 06:06	4°♄07'29	20°29'37
evening max el	12936 Jun 12 04:04	20°♄20'00	19°28'59	asc. node	12937 May 28 04:32	5°♄55'08	
retrograde	12936 Jun 19 08:19	24°♄22'09		retrograde	12937 Jun 03 07:13	8°♄45'58	
evening set	12936 Jun 23 00:17	23°♄03'56		evening set	12937 Jun 07 08:59	7°♄11'13	
inferior conj	12936 Jun 28 09:19	17°♄10'27	3°10'43	inferior conj	12937 Jun 12 15:26	1°♄05'18	3°12'47
minimum elong	12936 Jun 28 10:02	17°♄08'03	3°09'43	minimum elong	12937 Jun 12 15:07	1°♄06'23	3°11'48
min. Earth dist.	12936 Jun 29 15:55	15°♄29'24	0.67250 AU		12937 Jun 13 10:26	30°♄	
morning rise	12936 Jul 03 19:19	10°♄47'01		min. Earth dist.	12937 Jun 13 08:02	0°♄08'14	0.68257 AU
direct	12936 Jul 09 18:53	8°♄09'49		morning rise	12937 Jun 17 20:56	24°♄45'05	
desc. node	12936 Jul 13 12:48	9°♄01'01		direct	12937 Jun 23 08:51	22°♄19'25	
morning max el	12936 Jul 22 02:09	15°♄32'09	25°33'08	desc. node	12937 Jun 30 10:01	25°♄19'27	
	12936 Aug 02 23:56	0°♄		morning max el	12937 Jul 04 12:11	28°♄59'46	24°06'32
	12936 Aug 22 09:14	0°♄			12937 Jul 05 11:28	0°♄	
morning set	12936 Aug 27 01:51	8°♄17'20			12937 Jul 27 18:07	0°♄	
max. Earth dist.	12936 Aug 30 17:22	15°♄02'06	1.35996 AU	morning set	12937 Aug 08 22:30	19°♄49'31	
				max. Earth dist.	12937 Aug 12 15:08	26°♄17'28	1.38253 AU
					12937 Aug 14 16:37	0°♄	
superior conj	12936 Sep 05 19:02	26°♄51'12	-0°05'14				
minimum elong	12936 Sep 05 19:22	26°♄52'50	0°05'19	superior conj	12937 Aug 19 22:40	9°♄46'45	-0°38'55
behind sun begin	12936 Sep 05 13:24	26°♄23'02		minimum elong	12937 Aug 20 01:22	9°♄59'39	0°38'52
behind sun end	12936 Sep 06 01:19	27°♄22'42		asc. node	12937 Aug 24 04:53	18°♄01'24	
asc. node	12936 Sep 06 08:17	27°♄57'41		evening rise	12937 Aug 28 18:59	27°♄04'28	
	12936 Sep 07 08:31	0°♄			12937 Aug 30 06:41	0°♄	
evening rise	12936 Sep 13 18:11	13°♄07'06		evening max el	12937 Sep 14 05:12	23°♄54'50	19°02'17
	12936 Sep 22 13:04	0°♄		retrograde	12937 Sep 23 01:57	28°♄21'03	
evening max el	12936 Oct 01 11:28	12°♄18'39	20°02'33	evening set	12937 Sep 24 22:34	28°♄10'08	
desc. node	12936 Oct 09 09:14	17°♄13'36					

desc. node	12937 Sep 26 06:43	27° Ω 49'28		desc. node	12938 Sep 13 04:13	6° Ω 24'57	
inferior conj	12937 Oct 03 08:01	23° Ω 55'31	-2°13'23	inferior conj	12938 Sep 14 16:27	5° Ω 13'12	-0°28'22
minimum elong	12937 Oct 03 02:19	24° Ω 05'22	2°10'51	minimum elong	12938 Sep 14 15:23	5° Ω 15'22	0°27'57
min. Earth dist.	12937 Oct 06 04:50	21° Ω 57'20	0.56266 AU	min. Earth dist.	12938 Sep 17 23:31	2° Ω 34'34	0.58207 AU
morning rise	12937 Oct 11 03:05	19° Ω 11'10			12938 Sep 21 19:53	30° \mathbb{R} \mathbb{M}	
direct	12937 Oct 16 16:30	17° Ω 58'42		morning rise	12938 Sep 22 01:51	29° \mathbb{M} 52'00	
morning max el	12937 Oct 30 20:04	25° Ω 13'33	25°57'28	direct	12938 Sep 28 06:24	28° \mathbb{M} 12'20	
	12937 Nov 04 07:01	0° \mathbb{M}			12938 Oct 04 21:42	0° Ω	
asc. node	12937 Nov 20 06:32	24° \mathbb{M} 33'28		morning max el	12938 Oct 12 14:03	5° Ω 50'01	27°13'24
	12937 Nov 23 01:59	0° \mathbb{A}			12938 Oct 30 11:58	0° \mathbb{M}	
morning set	12937 Nov 27 18:48	9° \mathbb{A} 44'52		asc. node	12938 Nov 07 03:20	13° \mathbb{M} 57'48	
				morning set	12938 Nov 12 03:30	24° \mathbb{M} 13'44	
					12938 Nov 14 19:34	0° \mathbb{A}	
superior conj	12937 Dec 04 13:39	24° \mathbb{A} 41'08	1°37'41	superior conj	12938 Nov 19 01:16	9° \mathbb{A} 24'19	1°31'49
minimum elong	12937 Dec 04 13:07	24° \mathbb{A} 38'06	1°38'38	minimum elong	12938 Nov 18 23:48	9° \mathbb{A} 16'07	1°32'36
max. Earth dist.	12937 Dec 05 15:32	27° \mathbb{A} 04'31	1.31673 AU	max. Earth dist.	12938 Nov 18 23:56	9° \mathbb{A} 16'50	1.31266 AU
	12937 Dec 06 23:22	0° \mathbb{B}		evening rise	12938 Nov 25 19:54	24° \mathbb{A} 18'58	
evening rise	12937 Dec 11 14:20	9° \mathbb{B} 55'58			12938 Nov 28 13:02	0° \mathbb{B}	
	12937 Dec 22 00:48	0° \approx		desc. node	12938 Dec 10 01:17	21° \mathbb{B} 09'42	
desc. node	12937 Dec 23 04:18	1° \approx 58'52			12938 Dec 15 22:23	0° \approx	
evening max el	12938 Jan 12 16:16	29° \approx 41'32	27°26'28	evening max el	12938 Dec 25 19:19	11° \approx 36'21	26°47'31
	12938 Jan 13 00:07	0° \mathbb{H}		retrograde	12939 Jan 08 18:06	18° \approx 45'27	
retrograde	12938 Jan 26 14:22	7° \mathbb{H} 00'16		evening set	12939 Jan 15 10:15	16° \approx 53'43	
evening set	12938 Feb 02 12:22	4° \mathbb{H} 46'54		min. Earth dist.	12939 Jan 19 09:22	14° \approx 15'39	0.59440 AU
min. Earth dist.	12938 Feb 06 06:32	1° \mathbb{H} 54'03	0.61605 AU	inferior conj	12939 Jan 22 13:40	11° \approx 45'11	-3°36'03
	12938 Feb 08 09:10	30° \mathbb{R} \approx		minimum elong	12939 Jan 22 21:14	11° \approx 30'11	3°32'40
inferior conj	12938 Feb 09 07:39	29° \approx 08'32	-2°14'06	morning rise	12939 Jan 30 11:11	7° \approx 06'00	
minimum elong	12938 Feb 09 12:20	28° \approx 57'54	2°11'39	direct	12939 Feb 01 12:33	6° \approx 50'27	
asc. node	12938 Feb 16 04:57	24° \approx 17'12		asc. node	12939 Feb 03 02:19	6° \approx 59'55	
morning rise	12938 Feb 16 15:10	24° \approx 08'36		morning max el	12939 Feb 09 05:28	10° \approx 39'45	18°12'11
direct	12938 Feb 18 19:13	23° \approx 48'15			12939 Feb 21 22:16	0° \mathbb{H}	
morning max el	12938 Feb 25 17:01	27° \approx 17'43	17°50'14	morning set	12939 Feb 24 21:25	5° \mathbb{H} 32'30	
	12938 Feb 28 03:01	0° \mathbb{H}					
morning set	12938 Mar 13 09:38	21° \mathbb{H} 41'23		superior conj	12939 Mar 06 11:24	23° \mathbb{H} 19'39	0°12'52
	12938 Mar 18 01:09	0° \mathbb{Y}		minimum elong	12939 Mar 06 12:23	23° \mathbb{H} 24'06	0°12'55
desc. node	12938 Mar 21 05:51	5° \mathbb{Y} 37'26		behind sun begin	12939 Mar 06 07:56	23° \mathbb{H} 04'01	
				behind sun end	12939 Mar 06 16:51	23° \mathbb{H} 44'08	
superior conj	12938 Mar 24 09:56	11° \mathbb{Y} 05'39	-0°24'36	desc. node	12939 Mar 08 02:21	26° \mathbb{H} 13'57	
minimum elong	12938 Mar 24 07:38	10° \mathbb{Y} 55'52	0°24'20		12939 Mar 10 05:39	0° \mathbb{Y}	
max. Earth dist.	12938 Mar 31 14:57	23° \mathbb{Y} 06'44	1.43376 AU	max. Earth dist.	12939 Mar 14 02:12	6° \mathbb{Y} 37'25	1.41432 AU
	12938 Apr 04 21:54	0° \mathbb{B}		evening rise	12939 Mar 18 22:27	14° \mathbb{Y} 38'39	
evening rise	12938 Apr 07 12:04	4° \mathbb{B} 04'30			12939 Mar 28 18:19	0° \mathbb{B}	
	12938 Apr 24 21:41	0° \mathbb{I}			12939 Apr 20 02:12	0° \mathbb{I}	
evening max el	12938 May 09 02:35	17° \mathbb{I} 56'01	21°42'02	evening max el	12939 Apr 21 18:45	1° \mathbb{I} 45'31	23°01'28
asc. node	12938 May 15 01:43	22° \mathbb{I} 30'40		asc. node	12939 May 01 23:00	7° \mathbb{I} 49'12	
retrograde	12938 May 18 05:27	23° \mathbb{I} 16'52		retrograde	12939 May 02 01:34	7° \mathbb{I} 49'15	
evening set	12938 May 22 17:55	21° \mathbb{I} 25'59		evening set	12939 May 07 01:24	5° \mathbb{I} 43'28	
inferior conj	12938 May 28 00:14	15° \mathbb{I} 09'27	3°03'35		12939 May 11 21:46	30° \mathbb{R} \mathbb{B}	
minimum elong	12938 May 27 23:01	15° \mathbb{I} 13'41	3°02'31	inferior conj	12939 May 12 09:44	29° \mathbb{B} 18'34	2°44'02
min. Earth dist.	12938 May 28 03:32	14° \mathbb{I} 57'57	0.68787 AU	minimum elong	12939 May 12 07:52	29° \mathbb{B} 25'02	2°42'52
morning rise	12938 Jun 02 03:56	8° \mathbb{I} 54'40		min. Earth dist.	12939 May 12 00:13	29° \mathbb{B} 51'32	0.68849 AU
direct	12938 Jun 07 03:06	6° \mathbb{I} 46'15		morning rise	12939 May 17 14:16	23° \mathbb{B} 10'39	
morning max el	12938 Jun 16 23:22	12° \mathbb{I} 35'03	22°36'59	direct	12939 May 22 00:28	21° \mathbb{B} 22'38	
desc. node	12938 Jun 17 07:06	12° \mathbb{I} 54'42		morning max el	12939 May 30 14:57	26° \mathbb{B} 20'03	21°12'37
	12938 Jun 30 21:41	0° \mathbb{C}			12939 Jun 02 23:31	0° \mathbb{I}	
morning set	12938 Jul 20 19:32	0° \mathbb{O} 18'29		desc. node	12939 Jun 04 04:04	1° \mathbb{I} 25'32	
	12938 Jul 20 15:01	0° \mathbb{O}			12939 Jun 24 08:59	0° \mathbb{C}	
max. Earth dist.	12938 Jul 25 14:00	8° \mathbb{O} 14'57	1.40594 AU	morning set	12939 Jun 30 15:22	9° \mathbb{C} 40'59	
				max. Earth dist.	12939 Jul 07 18:45	21° \mathbb{C} 06'33	1.42730 AU
superior conj	12938 Aug 02 10:05	21° \mathbb{O} 57'37	-1°13'35		12939 Jul 13 03:19	0° \mathbb{O}	
minimum elong	12938 Aug 02 15:29	22° \mathbb{O} 22'01	1°13'27	superior conj	12939 Jul 15 00:40	3° \mathbb{O} 12'28	-1°45'04
	12938 Aug 06 19:22	0° \mathbb{M}		minimum elong	12939 Jul 15 07:44	3° \mathbb{O} 42'38	1°45'13
asc. node	12938 Aug 11 01:31	7° \mathbb{M} 59'16		evening rise	12939 Jul 26 13:05	23° \mathbb{O} 30'04	
evening rise	12938 Aug 12 10:40	10° \mathbb{M} 35'53		asc. node	12939 Jul 28 22:11	27° \mathbb{O} 46'35	
	12938 Aug 23 10:42	0° Ω			12939 Jul 30 04:04	0° \mathbb{M}	
evening max el	12938 Aug 28 09:48	6° Ω 15'10	18°23'28				
retrograde	12938 Sep 04 23:47	10° Ω 05'04					
evening set	12938 Sep 07 01:26	9° Ω 48'42					

































































































































evening max el	12939 Aug 11 21:04	19° \cap 09'17	18°05'01	evening set	12940 Aug 03 13:59	5° \cap 10'13	
retrograde	12939 Aug 18 15:31	22° \cap 37'20		inferior conj	12940 Aug 09 20:16	29° Ω 55'57	1°58'58
evening set	12939 Aug 21 00:40	22° \cap 11'44		minimum elong	12940 Aug 09 22:48	29° Ω 49'10	1°57'38
inferior conj	12939 Aug 27 21:44	17° \cap 15'44	0°56'53		12940 Aug 09 18:45	30° \mathbb{R} Ω	
minimum elong	12939 Aug 27 23:25	17° \cap 11'47	0°55'57	min. Earth dist.	12940 Aug 12 15:26	26° Ω 57'48	0.62711 AU
min. Earth dist.	12939 Aug 31 02:39	14° \cap 16'26	0.60451 AU	morning rise	12940 Aug 16 05:31	23° Ω 45'15	
desc. node	12939 Aug 31 01:44	14° \cap 18'30		desc. node	12940 Aug 16 23:13	23° Ω 14'22	
morning rise	12939 Sep 03 19:10	11° \cap 24'31		direct	12940 Aug 22 21:47	21° Ω 17'51	
direct	12939 Sep 10 08:47	9° \cap 18'12		morning max el	12940 Sep 05 23:15	29° Ω 19'59	27°54'03
morning max el	12939 Sep 24 15:46	17° \cap 12'18	27°53'12		12940 Sep 06 15:02	0° \cap	
	12939 Oct 05 06:48	0° Ξ			12940 Sep 28 05:47	0° Ξ	
	12939 Oct 23 03:45	0° \mathbb{L}		morning set	12940 Oct 10 05:54	22° Ξ 20'10	
asc. node	12939 Oct 25 00:02	3° \mathbb{L} 40'19		asc. node	12940 Oct 10 20:40	23° Ξ 35'20	
morning set	12939 Oct 27 07:55	8° \mathbb{L} 27'20			12940 Oct 13 22:29	0° \mathbb{L}	
max. Earth dist.	12939 Nov 02 07:55	21° \mathbb{L} 24'42	1.31370 AU	max. Earth dist.	12940 Oct 15 11:29	3° \mathbb{L} 17'41	1.32000 AU
superior conj	12939 Nov 03 12:20	24° \mathbb{L} 02'20	1°20'15	superior conj	12940 Oct 17 20:58	8° \mathbb{L} 29'48	1°03'05
minimum elong	12939 Nov 03 10:15	23° \mathbb{L} 50'44	1°20'44	minimum elong	12940 Oct 17 18:42	8° \mathbb{L} 17'26	1°03'16
	12939 Nov 06 04:37	0° \mathbb{A}		evening rise	12940 Oct 24 16:11	23° \mathbb{L} 23'04	
evening rise	12939 Nov 10 05:09	8° \mathbb{A} 49'44			12940 Oct 27 19:21	0° \mathbb{A}	
	12939 Nov 20 23:19	0° \mathbb{B}		desc. node	12940 Nov 12 19:38	27° \mathbb{A} 04'05	
desc. node	12939 Nov 26 22:24	9° \mathbb{B} 37'06			12940 Nov 15 06:20	0° \mathbb{B}	
evening max el	12939 Dec 07 14:00	22° \mathbb{B} 38'01	25°35'42	evening max el	12940 Nov 18 01:22	2° \mathbb{B} 55'08	24°00'35
retrograde	12939 Dec 21 11:03	29° \mathbb{B} 37'46		retrograde	12940 Dec 01 15:42	9° \mathbb{B} 42'02	
evening set	12939 Dec 27 11:31	28° \mathbb{B} 14'20		evening set	12940 Dec 06 12:52	8° \mathbb{B} 49'55	
min. Earth dist.	12940 Jan 01 02:20	25° \mathbb{B} 36'17	0.57375 AU	min. Earth dist.	12940 Dec 12 12:23	5° \mathbb{B} 52'53	0.55695 AU
inferior conj	12940 Jan 04 00:14	23° \mathbb{B} 36'46	-4°52'40	inferior conj	12940 Dec 14 14:05	4° \mathbb{B} 37'48	-5°45'14
minimum elong	12940 Jan 04 08:49	23° \mathbb{B} 22'03	4°49'38	minimum elong	12940 Dec 14 18:50	4° \mathbb{B} 30'36	5°43'45
morning rise	12940 Jan 12 08:42	19° \mathbb{B} 20'07		morning rise	12940 Dec 23 02:44	0° \mathbb{B} 40'51	
direct	12940 Jan 14 12:34	19° \mathbb{B} 05'53		direct	12940 Dec 25 16:48	0° \mathbb{B} 23'48	
asc. node	12940 Jan 20 23:37	21° \mathbb{B} 22'36		morning max el	12941 Jan 05 01:43	5° \mathbb{B} 21'33	20°00'52
morning max el	12940 Jan 23 09:41	23° \mathbb{B} 24'52	18°55'11	asc. node	12941 Jan 06 20:51	7° \mathbb{B} 13'38	
	12940 Jan 28 17:42	0° \approx			12941 Jan 20 20:07	0° \approx	
morning set	12940 Feb 08 19:43	19° \approx 51'17		morning set	12941 Jan 23 00:55	4° \approx 26'14	
	12940 Feb 13 23:42	0° \mathbb{H}					
				superior conj	12941 Jan 30 18:39	20° \approx 10'56	1°08'06
superior conj	12940 Feb 17 07:55	6° \mathbb{H} 26'16	0°44'05	minimum elong	12941 Jan 30 21:26	20° \approx 24'49	1°08'27
minimum elong	12940 Feb 17 10:28	6° \mathbb{H} 38'24	0°44'11		12941 Feb 04 19:30	0° \mathbb{H}	
desc. node	12940 Feb 22 22:53	16° \mathbb{H} 51'16		max. Earth dist.	12941 Feb 05 15:46	1° \mathbb{H} 35'40	1.36991 AU
max. Earth dist.	12940 Feb 24 09:25	19° \mathbb{H} 25'39	1.39219 AU	desc. node	12941 Feb 08 19:28	7° \mathbb{H} 25'00	
evening rise	12940 Feb 28 06:07	26° \mathbb{H} 08'46		evening rise	12941 Feb 09 09:43	8° \mathbb{H} 29'15	
	12940 Mar 01 12:59	0° \mathbb{Y}			12941 Feb 22 07:31	0° \mathbb{Y}	
	12940 Mar 21 09:12	0° \mathbb{B}		evening max el	12941 Mar 16 22:00	29° \mathbb{Y} 28'34	25°36'40
evening max el	12940 Apr 03 08:36	15° \mathbb{B} 37'05	24°21'54		12941 Mar 17 10:59	0° \mathbb{B}	
retrograde	12940 Apr 14 18:26	22° \mathbb{B} 18'19		retrograde	12941 Mar 29 06:58	6° \mathbb{B} 36'41	
asc. node	12940 Apr 17 20:21	21° \mathbb{B} 35'51		evening set	12941 Apr 04 05:54	4° \mathbb{B} 09'10	
evening set	12940 Apr 20 05:57	19° \mathbb{B} 59'54		asc. node	12941 Apr 04 17:46	3° \mathbb{B} 43'13	
min. Earth dist.	12940 Apr 24 20:07	14° \mathbb{B} 43'57	0.68452 AU		12941 Apr 08 03:02	30° \mathbb{R} \mathbb{Y}	
inferior conj	12940 Apr 25 18:06	13° \mathbb{B} 30'02	2°14'28	min. Earth dist.	12941 Apr 08 13:04	29° \mathbb{Y} 28'32	0.67611 AU
minimum elong	12940 Apr 25 15:56	13° \mathbb{B} 37'17	2°13'15	inferior conj	12941 Apr 09 23:20	27° \mathbb{Y} 38'55	1°34'41
morning rise	12940 May 01 02:04	7° \mathbb{B} 29'58		minimum elong	12941 Apr 09 21:23	27° \mathbb{Y} 45'12	1°33'39
direct	12940 May 04 23:43	6° \mathbb{B} 03'04		morning rise	12941 Apr 15 13:23	21° \mathbb{Y} 48'00	
morning max el	12940 May 12 13:33	10° \mathbb{B} 17'19	19°59'28	direct	12941 Apr 18 23:26	20° \mathbb{Y} 40'59	
desc. node	12940 May 21 00:54	20° \mathbb{B} 37'23		morning max el	12941 Apr 25 19:43	24° \mathbb{Y} 24'09	19°01'04
	12940 May 27 14:10	0° \mathbb{I}			12941 Apr 30 15:22	0° \mathbb{B}	
morning set	12940 Jun 08 18:00	18° \mathbb{I} 21'22		desc. node	12941 May 07 21:40	10° \mathbb{B} 18'39	
	12940 Jun 16 05:43	0° \mathbb{E}		greatest brilliancy	12941 May 09 01:33	12° \mathbb{B} 03'19	-0.7m
max. Earth dist.	12940 Jun 19 05:52	4° \mathbb{E} 45'19	1.44415 AU	morning set	12941 May 18 23:19	27° \mathbb{B} 15'26	
					12941 May 20 17:48	0° \mathbb{I}	
superior conj	12940 Jun 24 15:30	13° \mathbb{E} 26'23	-2°07'14	max. Earth dist.	12941 Jun 01 22:09	18° \mathbb{I} 57'57	1.45474 AU
minimum elong	12940 Jun 24 20:40	13° \mathbb{E} 47'22	2°07'58				
	12940 Jul 04 14:36	0° Ω		superior conj	12941 Jun 04 08:56	22° \mathbb{I} 48'50	-2°13'06
evening rise	12940 Jul 07 21:17	5° Ω 35'09		minimum elong	12941 Jun 04 07:24	22° \mathbb{I} 42'45	2°14'04
asc. node	12940 Jul 14 18:56	17° Ω 18'41			12941 Jun 08 21:58	0° \mathbb{E}	
	12940 Jul 23 06:03	0° \cap		evening rise	12941 Jun 19 06:33	16° \mathbb{E} 40'40	
evening max el	12940 Jul 25 11:08	2° \cap 27'42	18°05'42		12941 Jun 27 11:38	0° Ω	
retrograde	12940 Jul 31 20:39	5° \cap 48'09		asc. node	12941 Jul 01 15:48	6° Ω 29'42	

evening max el	12941 Jul 09 00:47	16° Ω 02'14	18°24'37	retrograde	12942 Jun 29 06:28	3° Ω 30'53	
retrograde	12941 Jul 15 10:49	19° Ω 28'35		evening set	12942 Jul 02 17:11	2° Ω 22'07	
evening set	12941 Jul 18 12:39	18° Ω 35'59			12942 Jul 05 09:27	30° \mathbb{R} \mathfrak{E}	
inferior conj	12941 Jul 24 07:55	13° Ω 05'27	2°40'05	inferior conj	12942 Jul 08 05:01	26° \mathfrak{E} 36'43	3°03'45
minimum elong	12941 Jul 24 10:08	12° Ω 58'53	2°38'50	minimum elong	12942 Jul 08 06:21	26° \mathfrak{E} 32'28	3°02'41
min. Earth dist.	12941 Jul 26 13:36	10° Ω 27'23	0.64765 AU	min. Earth dist.	12942 Jul 09 20:00	24° \mathfrak{E} 32'28	0.66470 AU
morning rise	12941 Jul 30 06:20	6° Ω 44'53		morning rise	12942 Jul 13 18:51	20° \mathfrak{E} 13'12	
desc. node	12941 Aug 03 20:39	4° Ω 19'17		direct	12942 Jul 20 00:26	17° \mathfrak{E} 32'36	
direct	12941 Aug 05 19:34	4° Ω 05'43		desc. node	12942 Jul 21 18:02	17° \mathfrak{E} 43'32	
morning max el	12941 Aug 19 09:41	12° Ω 03'47	27°19'44	morning max el	12942 Aug 01 20:37	25° \mathfrak{E} 11'44	26°17'43
	12941 Sep 02 17:22	0° \mathfrak{M}			12942 Aug 06 05:29	0° Ω	
	12941 Sep 20 18:42	0° \mathfrak{L}			12942 Aug 27 05:04	0° \mathfrak{M}	
morning set	12941 Sep 23 18:54	5° \mathfrak{L} 45'50		morning set	12942 Sep 06 19:31	18° \mathfrak{M} 35'11	
asc. node	12941 Sep 27 17:17	13° \mathfrak{L} 38'11		max. Earth dist.	12942 Sep 10 16:31	25° \mathfrak{M} 59'09	1.34841 AU
max. Earth dist.	12941 Sep 28 07:03	14° \mathfrak{L} 48'52	1.33163 AU		12942 Sep 12 17:20	0° \mathfrak{L}	
				asc. node	12942 Sep 14 13:52	3° \mathfrak{L} 44'08	
superior conj	12941 Oct 02 01:06	22° \mathfrak{L} 41'14	0°40'29				
minimum elong	12941 Oct 01 23:15	22° \mathfrak{L} 31'23	0°40'25	superior conj	12942 Sep 15 22:12	6° \mathfrak{L} 29'10	0°12'47
	12941 Oct 05 10:50	0° \mathfrak{M}		minimum elong	12942 Sep 15 21:29	6° \mathfrak{L} 25'33	0°12'39
evening rise	12941 Oct 09 03:09	7° \mathfrak{M} 54'13		behind sun begin	12942 Sep 15 17:46	6° \mathfrak{L} 06'30	
	12941 Oct 20 15:19	0° \mathfrak{J}		behind sun end	12942 Sep 16 01:12	6° \mathfrak{L} 44'38	
evening max el	12941 Oct 30 12:26	12° \mathfrak{J} 57'42	22°18'53	evening rise	12942 Sep 23 12:01	22° \mathfrak{L} 17'05	
desc. node	12941 Oct 30 16:58	13° \mathfrak{J} 08'43			12942 Sep 27 06:42	0° \mathfrak{M}	
retrograde	12941 Nov 12 08:05	19° \mathfrak{J} 19'14		evening max el	12942 Oct 12 08:22	23° \mathfrak{M} 21'10	20°46'54
evening set	12941 Nov 15 19:13	18° \mathfrak{J} 52'49		desc. node	12942 Oct 17 14:23	27° \mathfrak{M} 22'59	
inferior conj	12941 Nov 24 11:20	14° \mathfrak{J} 56'06	-5°50'08	retrograde	12942 Oct 23 18:40	29° \mathfrak{M} 01'51	
minimum elong	12941 Nov 24 07:31	15° \mathfrak{J} 01'28	5°48'56	evening set	12942 Oct 26 02:48	28° \mathfrak{M} 48'38	
min. Earth dist.	12941 Nov 23 19:14	15° \mathfrak{J} 18'46	0.54701 AU	inferior conj	12942 Nov 04 02:57	24° \mathfrak{M} 54'17	-4°55'38
morning rise	12941 Dec 02 21:04	11° \mathfrak{J} 08'45		minimum elong	12942 Nov 03 17:10	25° \mathfrak{M} 08'16	4°52'33
direct	12941 Dec 06 05:31	10° \mathfrak{J} 43'31		min. Earth dist.	12942 Nov 05 01:51	24° \mathfrak{M} 21'34	0.54599 AU
morning max el	12941 Dec 18 03:24	16° \mathfrak{J} 24'33	21°28'54	morning rise	12942 Nov 12 07:34	20° \mathfrak{M} 58'58	
asc. node	12941 Dec 24 17:59	24° \mathfrak{J} 16'41		direct	12942 Nov 16 13:42	20° \mathfrak{M} 20'09	
	12941 Dec 28 10:35	0° \mathfrak{Z}		morning max el	12942 Nov 29 17:14	26° \mathfrak{M} 42'04	23°13'44
morning set	12942 Jan 07 10:22	19° \mathfrak{Z} 10'05			12942 Dec 02 21:10	0° \mathfrak{J}	
	12942 Jan 12 13:34	0° \mathfrak{X}		asc. node	12942 Dec 11 15:02	12° \mathfrak{J} 14'55	
					12942 Dec 21 01:00	0° \mathfrak{Z}	
superior conj	12942 Jan 14 15:42	4° \mathfrak{X} 22'49	1°24'54	morning set	12942 Dec 22 21:55	3° \mathfrak{Z} 56'27	
minimum elong	12942 Jan 14 17:54	4° \mathfrak{X} 34'12	1°25'33				
max. Earth dist.	12942 Jan 19 02:37	13° \mathfrak{X} 28'26	1.34980 AU	superior conj	12942 Dec 29 19:51	18° \mathfrak{Z} 52'30	1°34'51
evening rise	12942 Jan 23 06:02	21° \mathfrak{X} 31'41		minimum elong	12942 Dec 29 21:02	18° \mathfrak{Z} 58'54	1°35'45
desc. node	12942 Jan 26 16:08	27° \mathfrak{X} 51'25		max. Earth dist.	12943 Jan 01 21:08	25° \mathfrak{Z} 22'28	1.33334 AU
	12942 Jan 27 20:50	0° \mathfrak{H}			12943 Jan 04 02:38	0° \mathfrak{X}	
	12942 Feb 16 03:46	0° \mathfrak{Y}		evening rise	12943 Jan 06 15:27	5° \mathfrak{X} 06'25	
evening max el	12942 Feb 27 11:47	13° \mathfrak{Y} 14'53	26°38'19	desc. node	12943 Jan 13 12:53	18° \mathfrak{X} 05'44	
retrograde	12942 Mar 12 14:02	20° \mathfrak{Y} 37'20			12943 Jan 20 13:51	0° \mathfrak{H}	
evening set	12942 Mar 18 23:28	18° \mathfrak{Y} 05'18		evening max el	12943 Feb 10 01:14	26° \mathfrak{H} 46'06	27°19'25
asc. node	12942 Mar 22 15:14	14° \mathfrak{Y} 26'56			12943 Feb 13 18:20	0° \mathfrak{Y}	
min. Earth dist.	12942 Mar 23 00:54	13° \mathfrak{Y} 58'57	0.66360 AU	retrograde	12943 Feb 23 14:47	4° \mathfrak{Y} 12'18	
inferior conj	12942 Mar 24 23:22	11° \mathfrak{Y} 40'38	0°44'17	evening set	12943 Mar 02 08:33	1° \mathfrak{Y} 41'31	
minimum elong	12942 Mar 24 22:14	11° \mathfrak{Y} 43'59	0°43'46		12943 Mar 04 08:31	30° \mathbb{R} \mathfrak{H}	
morning rise	12942 Mar 30 22:06	6° \mathfrak{Y} 00'37		min. Earth dist.	12943 Mar 06 05:24	28° \mathfrak{H} 07'34	0.64738 AU
direct	12942 Apr 02 21:44	5° \mathfrak{Y} 11'00		inferior conj	12943 Mar 08 15:42	25° \mathfrak{H} 29'17	-0°17'01
morning max el	12942 Apr 09 08:14	8° \mathfrak{Y} 35'38	18°19'04	minimum elong	12943 Mar 08 16:12	25° \mathfrak{H} 27'56	0°16'37
desc. node	12942 Apr 24 18:20	0° \mathfrak{B} 21'23		asc. node	12943 Mar 09 12:41	24° \mathfrak{H} 32'42	
	12942 Apr 24 12:56	0° \mathfrak{B}		morning rise	12943 Mar 15 01:40	20° \mathfrak{H} 02'41	
morning set	12942 Apr 29 02:59	7° \mathfrak{B} 17'59		direct	12943 Mar 17 16:18	19° \mathfrak{H} 27'13	
	12942 May 13 11:55	0° \mathfrak{I}		morning max el	12943 Mar 24 00:50	22° \mathfrak{H} 45'06	17°54'05
					12943 Mar 29 19:58	0° \mathfrak{Y}	
superior conj	12942 May 14 16:30	1° \mathfrak{I} 51'47	-1°58'48	morning set	12943 Apr 10 11:16	18° \mathfrak{Y} 44'43	
minimum elong	12942 May 14 08:21	1° \mathfrak{I} 19'56	1°59'04	desc. node	12943 Apr 11 14:55	20° \mathfrak{Y} 39'33	
max. Earth dist.	12942 May 15 17:43	3° \mathfrak{I} 30'18	1.45811 AU		12943 Apr 17 06:51	0° \mathfrak{B}	
evening rise	12942 May 30 15:34	26° \mathfrak{I} 47'01					
	12942 Jun 01 16:54	0° \mathfrak{E}		superior conj	12943 Apr 24 07:52	11° \mathfrak{B} 21'57	-1°27'31
greatest brilliancy	12942 Jun 10 01:11	12° \mathfrak{E} 58'17	-0.8m	minimum elong	12943 Apr 23 23:12	10° \mathfrak{B} 47'24	1°27'06
asc. node	12942 Jun 18 12:46	25° \mathfrak{E} 11'49		max. Earth dist.	12943 Apr 28 13:58	18° \mathfrak{B} 06'05	1.45397 AU
evening max el	12942 Jun 22 11:17	29° \mathfrak{E} 45'38	19°00'50		12943 May 06 05:16	0° \mathfrak{I}	
	12942 Jun 22 17:07	0° Ω		evening rise	12943 May 10 06:56	6° \mathfrak{I} 15'43	

greatest brilliancy	12943 May 24 22:28	28° Π 19'01	-0.6m			12944 Apr 28 05:22	0° Π	
	12943 May 26 02:23	0° \mathfrak{E}		evening max el		12944 May 18 16:12	27° Π 20'08	20°59'09
asc. node	12943 Jun 05 09:51	13° \mathfrak{E} 15'26				12944 May 21 16:02	0° \mathfrak{E}	
evening max el	12943 Jun 05 16:42	13° \mathfrak{E} 32'49	19°53'05	asc. node		12944 May 22 07:01	0° \mathfrak{E} 27'10	
retrograde	12943 Jun 13 04:51	17° \mathfrak{E} 48'58		retrograde		12944 May 27 03:46	2° \mathfrak{E} 16'23	
evening set	12943 Jun 17 01:00	16° \mathfrak{E} 23'30		evening set		12944 May 31 10:01	0° \mathfrak{E} 34'29	
inferior conj	12943 Jun 22 08:36	10° \mathfrak{E} 24'32	3°13'02			12944 Jun 01 01:58	30° \mathfrak{R} Π	
minimum elong	12943 Jun 22 08:52	10° \mathfrak{E} 23'36	3°12'03	inferior conj		12944 Jun 05 16:06	24° Π 23'33	3°10'11
min. Earth dist.	12943 Jun 23 09:06	9° \mathfrak{E} 02'02	0.67740 AU	minimum elong		12944 Jun 05 15:23	24° Π 26'04	3°09'10
morning rise	12943 Jun 27 16:23	4° \mathfrak{E} 02'23		min. Earth dist.		12944 Jun 06 02:52	23° Π 46'11	0.68539 AU
direct	12943 Jul 03 11:13	1° \mathfrak{E} 29'26		morning rise		12944 Jun 10 20:31	18° Π 05'29	
desc. node	12943 Jul 08 15:16	3° \mathfrak{E} 06'38		direct		12944 Jun 16 02:58	15° Π 46'54	
morning max el	12943 Jul 15 07:02	8° \mathfrak{E} 34'41	24°57'19	desc. node		12944 Jun 24 12:23	20° Π 00'20	
	12943 Aug 01 02:59	0° \mathfrak{Q}		morning max el		12944 Jun 26 17:26	22° Π 06'06	23°28'21
	12943 Aug 19 18:57	0° \mathfrak{M}				12944 Jul 03 14:24	0° \mathfrak{E}	
morning set	12943 Aug 20 03:44	0° \mathfrak{M} 38'52				12944 Jul 24 09:56	0° \mathfrak{Q}	
max. Earth dist.	12943 Aug 23 17:37	7° \mathfrak{M} 06'50	1.36939 AU	morning set		12944 Jul 31 14:52	11° \mathfrak{Q} 45'30	
				max. Earth dist.		12944 Aug 04 15:21	18° \mathfrak{Q} 38'25	1.39256 AU
						12944 Aug 10 23:26	0° \mathfrak{M}	
superior conj	12943 Aug 30 09:14	19° \mathfrak{M} 46'23	-0°19'11					
minimum elong	12943 Aug 30 10:30	19° \mathfrak{M} 52'32	0°19'14					
asc. node	12943 Sep 01 10:28	23° \mathfrak{M} 49'51		superior conj		12944 Aug 12 06:29	2° \mathfrak{M} 23'54	-0°53'42
	12943 Sep 04 12:11	0° \mathfrak{L}		minimum elong		12944 Aug 12 10:22	2° \mathfrak{M} 41'55	0°53'35
evening rise	12943 Sep 07 16:33	6° \mathfrak{L} 26'06		asc. node		12944 Aug 18 07:06	13° \mathfrak{M} 51'38	
	12943 Sep 20 23:03	0° \mathfrak{M}		evening rise		12944 Aug 21 13:56	20° \mathfrak{M} 13'48	
evening max el	12943 Sep 24 18:09	4° \mathfrak{M} 28'45	19°34'05			12944 Aug 26 17:07	0° \mathfrak{L}	
desc. node	12943 Oct 04 11:50	9° \mathfrak{M} 21'29		evening max el		12944 Sep 06 16:55	16° \mathfrak{L} 24'35	18°43'08
retrograde	12943 Oct 04 12:38	9° \mathfrak{M} 21'30		retrograde		12944 Sep 14 23:33	20° \mathfrak{L} 34'10	
evening set	12943 Oct 06 09:35	9° \mathfrak{M} 11'31		evening set		12944 Sep 16 21:34	20° \mathfrak{L} 21'33	
inferior conj	12943 Oct 15 03:33	5° \mathfrak{M} 06'29	-3°17'18	desc. node		12944 Sep 20 09:17	19° \mathfrak{L} 00'42	
minimum elong	12943 Oct 14 19:08	5° \mathfrak{M} 19'51	3°13'49	inferior conj		12944 Sep 24 23:25	15° \mathfrak{L} 58'12	-1°27'04
min. Earth dist.	12943 Oct 17 11:17	3° \mathfrak{M} 38'10	0.55424 AU	minimum elong		12944 Sep 24 19:50	16° \mathfrak{L} 04'49	1°25'28
morning rise	12943 Oct 23 02:44	0° \mathfrak{M} 43'18		min. Earth dist.		12944 Sep 28 02:17	13° \mathfrak{L} 40'39	0.57029 AU
	12943 Oct 25 16:06	30° \mathfrak{R} \mathfrak{L}		morning rise		12944 Oct 02 14:42	10° \mathfrak{L} 57'23	
direct	12943 Oct 28 05:13	29° \mathfrak{L} 45'15		direct		12944 Oct 08 10:57	9° \mathfrak{L} 33'46	
	12943 Oct 30 18:08	0° \mathfrak{M}		morning max el		12944 Oct 22 17:26	16° \mathfrak{L} 59'45	26°33'44
morning max el	12943 Nov 11 03:18	6° \mathfrak{M} 42'30	25°01'32			12944 Nov 02 10:35	0° \mathfrak{M}	
	12943 Nov 27 23:48	0° \mathfrak{X}		asc. node		12944 Nov 14 08:48	20° \mathfrak{M} 05'35	
asc. node	12943 Nov 28 11:58	0° \mathfrak{X} 54'43				12944 Nov 19 07:00	0° \mathfrak{X}	
morning set	12943 Dec 07 09:42	18° \mathfrak{X} 40'01		morning set		12944 Nov 20 20:04	3° \mathfrak{X} 16'18	
	12943 Dec 12 14:00	0° \mathfrak{Z}						
				superior conj		12944 Nov 27 15:41	18° \mathfrak{X} 17'03	1°35'54
superior conj	12943 Dec 14 04:33	3° \mathfrak{Z} 32'35	1°38'24	minimum elong		12944 Nov 27 14:43	18° \mathfrak{X} 11'40	1°36'48
minimum elong	12943 Dec 14 04:37	3° \mathfrak{Z} 32'59	1°39'23	max. Earth dist.		12944 Nov 28 05:58	19° \mathfrak{X} 36'35	1.31433 AU
max. Earth dist.	12943 Dec 15 23:03	7° \mathfrak{Z} 25'36	1.32137 AU			12944 Dec 02 23:27	0° \mathfrak{Z}	
evening rise	12943 Dec 21 10:45	19° \mathfrak{Z} 05'13		evening rise		12944 Dec 04 13:15	3° \mathfrak{Z} 21'39	
	12943 Dec 26 23:33	0° \mathfrak{Z}		desc. node		12944 Dec 17 06:39	27° \mathfrak{Z} 32'34	
desc. node	12943 Dec 31 09:43	8° \mathfrak{Z} 01'54				12944 Dec 18 18:24	0° \mathfrak{Z}	
	12944 Jan 14 20:15	0° \mathfrak{H}		evening max el		12945 Jan 04 19:04	22° \mathfrak{Z} 11'32	27°14'07
evening max el	12944 Jan 23 12:28	9° \mathfrak{H} 48'58	27°33'06	retrograde		12945 Jan 18 17:51	29° \mathfrak{Z} 27'06	
retrograde	12944 Feb 06 08:20	17° \mathfrak{H} 11'54		evening set		12945 Jan 25 14:27	27° \mathfrak{Z} 21'36	
evening set	12944 Feb 13 06:35	14° \mathfrak{H} 49'29		min. Earth dist.		12945 Jan 29 09:35	24° \mathfrak{Z} 36'43	0.60684 AU
min. Earth dist.	12944 Feb 17 00:38	11° \mathfrak{H} 43'57	0.62810 AU	inferior conj		12945 Feb 01 13:07	21° \mathfrak{Z} 55'16	-2°48'40
inferior conj	12944 Feb 19 21:24	8° \mathfrak{H} 56'55	-1°28'49	minimum elong		12945 Feb 01 19:06	21° \mathfrak{Z} 42'25	2°45'44
minimum elong	12944 Feb 20 00:22	8° \mathfrak{H} 49'41	1°27'09	morning rise		12945 Feb 09 02:48	17° \mathfrak{Z} 04'13	
asc. node	12944 Feb 24 10:08	5° \mathfrak{H} 02'49		asc. node		12945 Feb 10 07:30	16° \mathfrak{Z} 49'46	
morning rise	12944 Feb 26 20:43	3° \mathfrak{H} 46'39		direct		12945 Feb 11 05:08	16° \mathfrak{Z} 46'26	
direct	12944 Feb 29 04:00	3° \mathfrak{H} 21'50		morning max el		12945 Feb 18 10:04	20° \mathfrak{Z} 23'01	17°57'11
morning max el	12944 Mar 06 18:33	6° \mathfrak{H} 43'53	17°46'30			12945 Feb 25 14:13	0° \mathfrak{H}	
	12944 Mar 22 01:36	0° \mathfrak{Y}		morning set		12945 Mar 06 00:01	14° \mathfrak{H} 50'45	
morning set	12944 Mar 22 20:20	1° \mathfrak{Y} 21'46				12945 Mar 14 08:44	0° \mathfrak{Y}	
desc. node	12944 Mar 28 11:26	11° \mathfrak{Y} 07'50		desc. node		12945 Mar 15 07:58	1° \mathfrak{Y} 42'35	
superior conj	12944 Apr 03 20:06	21° \mathfrak{Y} 52'23	-0°47'53	superior conj		12945 Mar 16 08:43	3° \mathfrak{Y} 31'03	-0°08'07
minimum elong	12944 Apr 03 15:18	21° \mathfrak{Y} 32'30	0°47'27	minimum elong		12945 Mar 16 08:01	3° \mathfrak{Y} 28'01	0°07'58
	12944 Apr 08 19:18	0° \mathfrak{B}		behind sun begin		12945 Mar 16 00:56	2° \mathfrak{Y} 57'04	
max. Earth dist.	12944 Apr 10 07:49	2° \mathfrak{B} 26'49	1.44282 AU	behind sun end		12945 Mar 16 15:06	3° \mathfrak{Y} 58'55	
evening rise	12944 Apr 18 18:48	15° \mathfrak{B} 43'28		max. Earth dist.		12945 Mar 23 21:07	16° \mathfrak{Y} 16'54	1.42592 AU

evening rise	12945 Mar 29 18:16	25° Υ 47'22		superior conj	12946 Feb 26 18:50	16° X 08'40	0°26'57
	12945 Apr 01 10:37	0° B		minimum elong	12946 Feb 26 20:41	16° X 17'11	0°26'59
	12945 Apr 22 02:03	0° Π		desc. node	12946 Mar 02 04:30	22° X 19'44	
evening max el	12945 May 01 10:28	11° Π 08'07	22°15'14	max. Earth dist.	12946 Mar 06 05:55	29° X 27'29	1.40509 AU
asc. node	12945 May 09 04:15	16° Π 31'45			12946 Mar 06 13:28	0° Υ	
retrograde	12945 May 11 01:24	16° Π 48'12		evening rise	12946 Mar 10 13:37	6° Υ 45'24	
evening set	12945 May 15 18:31	14° Π 50'49			12946 Mar 25 12:51	0° B	
inferior conj	12945 May 21 01:27	8° Π 30'08	2°56'33	evening max el	12946 Apr 14 01:28	24° B 58'40	23°36'02
minimum elong	12945 May 20 23:55	8° Π 35'28	2°55'26		12946 Apr 20 08:23	0° Π	
min. Earth dist.	12945 May 20 23:15	8° Π 37'51	0.68867 AU	retrograde	12946 Apr 24 20:17	1° Π 19'29	
morning rise	12945 May 26 05:09	2° Π 17'54		asc. node	12946 Apr 26 01:33	1° Π 12'41	
direct	12945 May 30 22:41	0° Π 17'59			12946 Apr 28 21:53	30° R B	
morning max el	12945 Jun 09 06:07	5° Π 45'04	22°00'00	evening set	12946 Apr 30 00:57	29° B 08'17	
desc. node	12945 Jun 11 09:25	8° Π 01'02		inferior conj	12946 May 05 10:43	22° B 40'50	2°32'45
	12945 Jun 27 20:50	0° B		minimum elong	12946 May 05 08:41	22° B 47'50	2°31'33
morning set	12945 Jul 12 01:01	21° B 45'27		min. Earth dist.	12946 May 04 19:58	23° B 31'27	0.68731 AU
	12945 Jul 17 02:17	0° Ω		morning rise	12946 May 10 16:22	16° B 35'51	
max. Earth dist.	12945 Jul 17 15:46	0° Ω 55'59	1.41537 AU	direct	12946 May 14 21:10	14° B 56'40	
				morning max el	12946 May 23 00:21	19° B 34'35	20°39'49
superior conj	12945 Jul 25 09:33	14° Ω 11'38	-1°27'39	desc. node	12946 May 29 06:21	26° B 50'47	
minimum elong	12945 Jul 25 15:55	14° Ω 39'42	1°27'35		12946 May 31 15:30	0° Π	
	12945 Aug 03 03:02	0° P		morning set	12946 Jun 21 11:45	0° B 44'43	
evening rise	12945 Aug 05 00:33	3° P 30'31			12946 Jun 21 00:13	0° B	
asc. node	12945 Aug 05 03:46	3° P 45'24		max. Earth dist.	12946 Jun 29 22:59	14° B 07'57	1.43511 AU
evening max el	12945 Aug 21 00:54	29° P 00'41	18°13'17				
	12945 Aug 22 02:33	0° $\underline{\Omega}$		superior conj	12946 Jul 06 14:17	25° B 01'15	-1°56'01
retrograde	12945 Aug 28 05:19	2° $\underline{\Omega}$ 39'28		minimum elong	12946 Jul 06 21:08	25° B 29'51	1°56'25
evening set	12945 Aug 30 09:55	2° $\underline{\Omega}$ 19'43			12946 Jul 09 13:16	0° Ω	
	12945 Sep 03 18:04	30° R P		evening rise	12946 Jul 18 19:51	16° Ω 05'14	
inferior conj	12945 Sep 06 17:04	27° P 35'40	0°10'35	asc. node	12946 Jul 23 00:29	23° Ω 27'03	
minimum elong	12945 Sep 06 17:26	27° P 34'54	0°10'17		12946 Jul 26 20:35	0° P	
transit middle	12945 Sep 06 17:26	27° P 34'54	0°10'17	evening max el	12946 Aug 04 13:55	12° P 07'03	18°03'07
transit begin	12945 Sep 06 14:47	27° P 40'36		retrograde	12946 Aug 11 03:10	15° P 29'46	
transit end	12945 Sep 06 20:05	27° P 29'10		evening set	12946 Aug 13 15:53	14° P 59'10	
desc. node	12945 Sep 07 06:48	27° P 05'56		inferior conj	12946 Aug 20 06:13	9° P 55'19	1°25'55
min. Earth dist.	12945 Sep 10 00:39	24° P 45'14	0.59139 AU	minimum elong	12946 Aug 20 08:28	9° P 49'45	1°24'44
morning rise	12945 Sep 13 21:31	22° P 00'24		min. Earth dist.	12946 Aug 23 07:45	6° P 53'59	0.61427 AU
direct	12945 Sep 20 06:48	20° P 08'37		desc. node	12946 Aug 25 04:18	5° P 14'38	
morning max el	12945 Oct 04 14:47	27° P 55'02	27°35'02	morning rise	12946 Aug 26 22:26	3° P 54'52	
	12945 Oct 06 15:27	0° $\underline{\Omega}$		direct	12946 Sep 02 14:09	1° P 38'29	
	12945 Oct 27 04:12	0° M		morning max el	12946 Sep 16 19:02	9° P 36'46	27°58'09
asc. node	12945 Nov 01 05:33	9° M 38'25			12946 Oct 02 14:35	0° $\underline{\Omega}$	
morning set	12945 Nov 05 03:11	17° M 39'23		asc. node	12946 Oct 19 02:15	29° $\underline{\Omega}$ 27'03	
	12945 Nov 10 19:11	0° X			12946 Oct 19 08:44	0° M	
max. Earth dist.	12945 Nov 11 14:28	1° X 47'21	1.31242 AU	morning set	12946 Oct 20 05:09	1° M 44'51	
				max. Earth dist.	12946 Oct 25 21:00	13° M 49'58	1.31577 AU
superior conj	12945 Nov 12 03:18	2° X 59'01	1°27'37				
minimum elong	12945 Nov 12 01:32	2° X 49'07	1°28'17	superior conj	12946 Oct 27 13:36	17° M 33'32	1°13'40
evening rise	12945 Nov 18 20:37	17° X 48'41		minimum elong	12946 Oct 27 11:23	17° M 21'15	1°14'01
	12945 Nov 24 19:11	0° B			12946 Nov 02 04:48	0° X	
desc. node	12945 Dec 04 03:41	16° B 26'42		evening rise	12946 Nov 03 06:54	2° X 21'31	
	12945 Dec 14 04:24	0° \approx			12946 Nov 17 23:29	0° B	
evening max el	12945 Dec 17 18:41	3° \approx 43'51	26°20'40	desc. node	12946 Nov 21 00:52	4° B 30'39	
retrograde	12945 Dec 31 17:35	10° \approx 49'34		evening max el	12946 Nov 29 10:06	14° B 25'14	24°57'14
evening set	12946 Jan 07 04:07	9° \approx 09'21		retrograde	12946 Dec 13 05:11	21° B 19'27	
min. Earth dist.	12946 Jan 11 08:16	6° \approx 33'05	0.58531 AU	evening set	12946 Dec 18 19:18	20° B 09'42	
inferior conj	12946 Jan 14 11:12	4° \approx 13'48	-4°10'07	min. Earth dist.	12946 Dec 23 22:01	17° B 25'50	0.56602 AU
minimum elong	12946 Jan 14 19:36	3° \approx 58'08	4°06'41	inferior conj	12946 Dec 26 12:55	15° B 44'13	-5°19'17
	12946 Jan 21 15:09	30° R B		minimum elong	12946 Dec 26 20:36	15° B 31'46	5°16'52
morning rise	12946 Jan 22 13:59	29° B 44'05		morning rise	12947 Jan 04 00:05	11° B 36'11	
direct	12946 Jan 24 15:26	29° B 29'39		direct	12947 Jan 06 07:20	11° B 21'13	
	12946 Jan 27 13:19	0° \approx		asc. node	12947 Jan 15 02:05	15° B 16'48	
asc. node	12946 Jan 28 04:49	0° \approx 15'06		morning max el	12947 Jan 15 18:54	15° B 56'00	19°20'10
morning max el	12946 Feb 01 19:32	3° \approx 30'51	18°27'44		12947 Jan 25 18:42	0° \approx	
morning set	12946 Feb 17 16:47	28° \approx 54'50		morning set	12947 Feb 01 18:24	13° \approx 21'35	
	12946 Feb 18 06:22	0° X					
				superior conj	12947 Feb 09 21:54	29° \approx 32'30	0°55'11

minimum elong	12947 Feb 10 00:40	29° \approx 46'01	0°55'21		12948 Jan 18 00:37	0° \approx	
	12947 Feb 10 03:34	0° \mathbb{H}					
max. Earth dist.	12947 Feb 16 12:30	11° \mathbb{H} 58'52	1.38266 AU	superior conj	12948 Jan 24 13:30	13° \approx 30'32	1°16'06
desc. node	12947 Feb 17 01:04	12° \mathbb{H} 55'49		minimum elong	12948 Jan 24 16:06	13° \approx 43'45	1°16'34
evening rise	12947 Feb 20 06:07	18° \mathbb{H} 37'53		max. Earth dist.	12948 Jan 29 20:37	24° \approx 01'10	1.36101 AU
	12947 Feb 27 00:24	0° \mathbb{Y}			12948 Feb 02 00:29	0° \mathbb{H}	
	12947 Mar 19 19:07	0° \mathbb{B}		evening rise	12948 Feb 02 17:18	1° \mathbb{H} 17'40	
evening max el	12947 Mar 27 15:09	8° \mathbb{B} 51'10	24°54'57	desc. node	12948 Feb 03 21:41	3° \mathbb{H} 27'17	
retrograde	12947 Apr 08 11:15	15° \mathbb{B} 44'31			12948 Feb 20 03:00	0° \mathbb{Y}	
asc. node	12947 Apr 12 22:56	14° \mathbb{B} 16'45		evening max el	12948 Mar 09 04:42	22° \mathbb{Y} 41'48	26°04'52
evening set	12947 Apr 14 03:44	13° \mathbb{B} 21'54		retrograde	12948 Mar 21 21:27	29° \mathbb{Y} 57'04	
min. Earth dist.	12947 Apr 18 14:51	8° \mathbb{B} 21'05	0.68148 AU	evening set	12948 Mar 28 01:13	27° \mathbb{Y} 26'47	
inferior conj	12947 Apr 19 18:00	6° \mathbb{B} 51'32	1°58'52	asc. node	12948 Mar 29 20:21	25° \mathbb{Y} 45'35	
minimum elong	12947 Apr 19 15:51	6° \mathbb{B} 58'36	1°57'42	min. Earth dist.	12948 Apr 01 05:45	23° \mathbb{Y} 01'12	0.67133 AU
morning rise	12947 Apr 25 04:13	0° \mathbb{B} 55'09		inferior conj	12948 Apr 02 21:18	20° \mathbb{Y} 58'21	1°14'38
	12947 Apr 26 20:24	30° \mathbb{R} \mathbb{Y}		minimum elong	12948 Apr 02 19:36	21° \mathbb{Y} 03'37	1°13'47
direct	12947 Apr 28 20:55	29° \mathbb{Y} 36'44		morning rise	12948 Apr 08 14:45	15° \mathbb{Y} 12'05	
	12947 Apr 30 23:13	0° \mathbb{B}		direct	12948 Apr 11 20:16	14° \mathbb{Y} 12'48	
morning max el	12947 May 06 02:08	3° \mathbb{B} 35'50	19°32'42	morning max el	12948 Apr 18 11:19	17° \mathbb{Y} 46'11	18°41'13
desc. node	12947 May 16 03:10	16° \mathbb{B} 16'03			12948 Apr 27 22:43	0° \mathbb{B}	
greatest brilliancy	12947 May 18 18:06	20° \mathbb{B} 04'19	-0.7m	desc. node	12948 May 01 23:53	6° \mathbb{B} 07'33	
	12947 May 25 09:19	0° \mathbb{II}		morning set	12948 May 10 01:49	18° \mathbb{B} 41'58	
morning set	12947 May 31 12:39	9° \mathbb{II} 22'41			12948 May 17 07:24	0° \mathbb{II}	
max. Earth dist.	12947 Jun 12 13:03	28° \mathbb{II} 04'45	1.44952 AU	max. Earth dist.	12948 May 25 07:28	12° \mathbb{II} 29'30	1.45712 AU
	12947 Jun 13 18:12	0° \mathbb{E}					
				superior conj	12948 May 26 06:26	13° \mathbb{II} 59'18	-2°09'29
superior conj	12947 Jun 16 19:13	4° \mathbb{E} 50'39	-2°12'04	minimum elong	12948 May 26 01:36	13° \mathbb{II} 40'23	2°10'14
minimum elong	12947 Jun 16 22:00	5° \mathbb{E} 01'47	2°13'00		12948 Jun 05 10:36	0° \mathbb{E}	
evening rise	12947 Jun 30 18:44	27° \mathbb{E} 45'36		evening rise	12948 Jun 10 17:33	8° \mathbb{E} 25'24	
	12947 Jul 02 02:51	0° \mathbb{O}		greatest brilliancy	12948 Jun 17 19:26	19° \mathbb{E} 43'17	-0.9m
asc. node	12947 Jul 09 21:18	12° \mathbb{O} 50'49			12948 Jun 24 11:35	0° \mathbb{O}	
evening max el	12947 Jul 19 04:12	25° \mathbb{O} 33'07	18°11'35	asc. node	12948 Jun 25 18:13	1° \mathbb{O} 50'30	
retrograde	12947 Jul 25 12:41	28° \mathbb{O} 54'15		evening max el	12948 Jul 01 16:43	9° \mathbb{O} 11'35	18°37'52
evening set	12947 Jul 28 09:42	28° \mathbb{O} 10'09		retrograde	12948 Jul 08 05:40	12° \mathbb{O} 44'41	
inferior conj	12947 Aug 03 10:47	22° \mathbb{O} 48'31	2°18'43	evening set	12948 Jul 11 11:12	11° \mathbb{O} 45'18	
minimum elong	12947 Aug 03 13:18	22° \mathbb{O} 41'30	2°17'25	inferior conj	12948 Jul 17 02:51	6° \mathbb{O} 07'59	2°52'03
min. Earth dist.	12947 Aug 06 00:23	19° \mathbb{O} 57'15	0.63622 AU	minimum elong	12948 Jul 17 04:45	6° \mathbb{O} 02'11	2°50'53
morning rise	12947 Aug 09 15:14	16° \mathbb{O} 32'49		min. Earth dist.	12948 Jul 19 02:14	3° \mathbb{O} 43'07	0.65539 AU
desc. node	12947 Aug 12 01:46	15° \mathbb{O} 00'12		morning rise	12948 Jul 22 21:19	29° \mathbb{E} 45'16	
direct	12947 Aug 16 06:51	13° \mathbb{O} 59'30			12948 Jul 22 14:28	30° \mathbb{R} \mathbb{E}	
morning max el	12947 Aug 30 04:03	22° \mathbb{O} 00'36	27°43'27	desc. node	12948 Jul 28 23:11	27° \mathbb{E} 05'00	
	12947 Sep 06 04:09	0° \mathbb{N}		direct	12948 Jul 29 07:34	27° \mathbb{E} 04'33	
	12947 Sep 25 19:25	0° \mathbb{A}			12948 Aug 05 22:21	0° \mathbb{O}	
morning set	12947 Oct 03 23:39	15° \mathbb{A} 26'36		morning max el	12948 Aug 11 15:09	4° \mathbb{O} 56'34	26°56'16
asc. node	12947 Oct 05 22:55	19° \mathbb{A} 25'46			12948 Aug 30 17:54	0° \mathbb{N}	
max. Earth dist.	12947 Oct 08 21:43	25° \mathbb{A} 34'46	1.32435 AU	morning set	12948 Sep 16 07:49	28° \mathbb{N} 37'36	
	12947 Oct 10 23:22	0° \mathbb{M}			12948 Sep 17 00:56	0° \mathbb{A}	
				max. Earth dist.	12948 Sep 20 13:17	6° \mathbb{A} 56'42	1.33816 AU
superior conj	12947 Oct 11 20:35	1° \mathbb{M} 54'38	0°54'10	asc. node	12948 Sep 21 19:32	9° \mathbb{A} 30'13	
minimum elong	12947 Oct 11 18:25	1° \mathbb{M} 42'54	0°54'13				
evening rise	12947 Oct 18 18:08	16° \mathbb{M} 54'36		superior conj	12948 Sep 24 22:01	15° \mathbb{A} 56'18	0°29'19
	12947 Oct 25 03:29	0° \mathbb{J}		minimum elong	12948 Sep 24 20:33	15° \mathbb{A} 48'38	0°29'12
desc. node	12947 Nov 07 22:08	21° \mathbb{J} 25'40			12948 Oct 01 12:50	0° \mathbb{M}	
evening max el	12947 Nov 10 20:13	24° \mathbb{J} 31'36	23°17'01	evening rise	12948 Oct 02 04:27	1° \mathbb{M} 22'34	
	12947 Nov 18 15:51	0° \mathbb{Z}			12948 Oct 18 07:59	0° \mathbb{J}	
retrograde	12947 Nov 24 03:56	1° \mathbb{Z} 09'19		evening max el	12948 Oct 22 09:46	4° \mathbb{J} 37'53	21°37'46
evening set	12947 Nov 28 11:09	0° \mathbb{Z} 29'08		desc. node	12948 Oct 24 19:30	6° \mathbb{J} 46'40	
	12947 Nov 29 20:55	30° \mathbb{R} \mathbb{J}		retrograde	12948 Nov 03 17:00	10° \mathbb{J} 44'33	
min. Earth dist.	12947 Dec 05 05:56	27° \mathbb{J} 18'41	0.55179 AU	evening set	12948 Nov 06 14:53	10° \mathbb{J} 25'16	
inferior conj	12947 Dec 06 18:48	26° \mathbb{J} 25'14	-5°54'17	inferior conj	12948 Nov 15 11:51	6° \mathbb{J} 30'48	-5°34'04
minimum elong	12947 Dec 06 20:12	26° \mathbb{J} 23'12	5°53'17	minimum elong	12948 Nov 15 04:41	6° \mathbb{J} 40'51	5°32'09
morning rise	12947 Dec 15 06:54	22° \mathbb{J} 34'23		min. Earth dist.	12948 Nov 15 12:09	6° \mathbb{J} 30'23	0.54534 AU
direct	12947 Dec 18 04:13	22° \mathbb{J} 14'26		morning rise	12948 Nov 23 19:26	2° \mathbb{J} 42'49	
morning max el	12947 Dec 29 04:49	27° \mathbb{J} 29'45	20°35'45	direct	12948 Nov 27 12:46	2° \mathbb{J} 12'43	
	12947 Dec 31 13:55	0° \mathbb{Z}		morning max el	12948 Dec 10 00:54	8° \mathbb{J} 11'38	22°12'12
asc. node	12948 Jan 01 23:17	1° \mathbb{Z} 40'38		asc. node	12948 Dec 18 20:24	19° \mathbb{J} 08'59	
morning set	12948 Jan 17 01:44	28° \mathbb{Z} 01'51			12948 Dec 25 03:59	0° \mathbb{Z}	

morning set	12948 Dec 31 12:18	12°  47'39			12949 Dec 01 02:10	0° 		
				asc. node	12949 Dec 05 17:24	7°  26'36		
superior conj	12949 Jan 07 13:55	27°  51'24	1°29'55	morning set	12949 Dec 16 00:09	27°  33'33		
minimum elong	12949 Jan 07 15:43	28°  00'53	1°30'42		12949 Dec 17 03:23	0° 		
	12949 Jan 08 14:20	0° 						
max. Earth dist.	12949 Jan 11 10:23	5°  52'19	1.34223 AU	superior conj	12949 Dec 22 20:18	12°  26'47	1°37'06	
evening rise	12949 Jan 15 19:34	14°  34'52		minimum elong	12949 Dec 22 21:01	12°  30'41	1°38'04	
desc. node	12949 Jan 20 18:22	23°  49'15		max. Earth dist.	12949 Dec 25 07:58	17°  34'50	1.32763 AU	
	12949 Jan 24 06:48	0° 		evening rise	12949 Dec 30 09:33	28°  21'11		
	12949 Feb 13 20:46	0° 			12949 Dec 31 05:17	0° 		
evening max el	12949 Feb 19 18:14	6°  22'20	26°58'37	desc. node	12950 Jan 07 15:09	13°  35'49		
retrograde	12949 Mar 05 02:04	13°  48'12			12950 Jan 17 11:13	0° 		
evening set	12949 Mar 11 15:26	11°  15'33		evening max el	12950 Feb 02 06:55	19°  43'00	27°28'55	
min. Earth dist.	12949 Mar 15 14:37	7°  23'32	0.65715 AU	retrograde	12950 Feb 16 00:04	27°  09'12		
asc. node	12949 Mar 16 17:48	6°  06'02		evening set	12950 Feb 22 20:10	24°  41'05		
inferior conj	12949 Mar 17 18:20	4°  55'09	0°19'38	min. Earth dist.	12950 Feb 26 15:31	21°  19'40	0.63950 AU	
minimum elong	12949 Mar 17 17:48	4°  56'43	0°19'26	inferior conj	12950 Mar 01 06:32	18°  35'56	-0°46'15	
	12949 Mar 22 19:16	30°  48'48		minimum elong	12950 Mar 01 07:58	18°  32'10	0°45'22	
morning rise	12949 Mar 23 21:36	29°  48'20		asc. node	12950 Mar 03 15:14	16°  14'22		
direct	12949 Mar 26 17:09	28°  37'46		morning rise	12950 Mar 07 21:58	13°  15'52		
	12949 Mar 30 16:41	0° 		direct	12950 Mar 10 09:06	12°  45'31		
morning max el	12949 Apr 02 01:57	1°  58'14	18°06'20	morning max el	12950 Mar 16 19:23	16°  04'12	17°48'34	
desc. node	12949 Apr 18 20:30	26°  17'24			12950 Mar 26 19:33	0° 		
morning set	12949 Apr 20 17:35	29°  20'12		morning set	12950 Apr 02 13:05	11°  18'50		
	12949 Apr 21 03:24	0° 		desc. node	12950 Apr 05 17:02	16°  40'19		
					12950 Apr 13 17:37	0° 		
superior conj	12949 May 05 15:11	23°  08'31	-1°47'08	superior conj	12950 Apr 15 14:20	3°  01'41	-1°11'10	
minimum elong	12949 May 05 06:01	22°  32'29	1°47'04	minimum elong	12950 Apr 15 07:04	2°  32'12	1°10'40	
max. Earth dist.	12949 May 08 03:16	27°  03'55	1.45723 AU	max. Earth dist.	12950 Apr 20 22:10	11°  33'02	1.45004 AU	
	12949 May 10 00:21	0° 		evening rise	12950 May 01 05:22	27°  34'12		
evening rise	12949 May 21 17:39	18°  11'35			12950 May 02 19:32	0° 		
	12949 May 29 09:28	0° 			12950 May 23 10:11	0° 		
greatest brilliancy	12949 Jun 03 04:23	7°  15'19	-0.7m	evening max el	12950 May 29 04:02	6°  44'19	20°19'47	
asc. node	12949 Jun 12 15:13	20°  17'40		asc. node	12950 May 30 12:18	8°  00'59		
evening max el	12949 Jun 15 01:07	22°  56'46	19°21'11	retrograde	12950 Jun 06 01:35	11°  16'39		
retrograde	12949 Jun 22 02:51	26°  54'14		evening set	12950 Jun 10 01:54	9°  44'19		
evening set	12949 Jun 25 17:23	25°  38'35		inferior conj	12950 Jun 15 08:34	3°  40'17	3°13'14	
inferior conj	12949 Jul 01 03:03	19°  47'12	3°09'18	minimum elong	12950 Jun 15 08:24	3°  40'51	3°12'14	
minimum elong	12949 Jul 01 03:56	19°  44'17	3°08'16	min. Earth dist.	12950 Jun 16 03:13	2°  36'29	0.68138 AU	
min. Earth dist.	12949 Jul 02 11:51	17°  59'48	0.67062 AU		12950 Jun 18 03:00	30°  48'11		
morning rise	12949 Jul 06 13:58	13°  23'32		morning rise	12950 Jun 20 14:35	27°  19'32		
direct	12949 Jul 12 15:12	10°  45'05		direct	12950 Jun 26 04:22	24°  51'43		
desc. node	12949 Jul 15 20:29	11°  22'56		desc. node	12950 Jul 02 17:40	27°  12'41		
morning max el	12949 Jul 25 02:03	18°  12'33	25°45'09		12950 Jul 05 19:18	0° 		
	12949 Aug 04 00:16	0° 		morning max el	12950 Jul 07 12:01	1°  38'45	24°19'50	
	12949 Aug 23 18:10	0° 			12950 Jul 29 00:10	0° 		
morning set	12949 Aug 30 02:02	11°  09'25		morning set	12950 Aug 12 01:48	22°  05'08		
max. Earth dist.	12949 Sep 02 18:33	18°  02'10	1.35683 AU	max. Earth dist.	12950 Aug 15 16:56	29°  01'37	1.37910 AU	
					12950 Aug 16 03:01	0° 		
superior conj	12949 Sep 08 15:15	29°  03'20	-0°00'21	superior conj	12950 Aug 22 20:54	12°  03'59	-0°33'41	
minimum elong	12949 Sep 08 15:16	29°  03'27	0°00'28	minimum elong	12950 Aug 22 23:12	12°  04'04	0°33'38	
behind sun begin	12949 Sep 08 09:06	29°  01'23		asc. node	12950 Aug 26 12:43	19°  41'18		
behind sun end	12949 Sep 08 21:26	0°  03'35		evening rise	12950 Aug 31 13:37	29°  41'05		
asc. node	12949 Sep 08 16:08	29°  03'48			12950 Aug 31 17:26	0° 		
	12949 Sep 08 20:44	0° 		evening max el	12950 Sep 17 03:12	26°  48'06	19°09'48	
evening rise	12949 Sep 16 11:47	15°  40'24			12950 Sep 21 06:08	0° 		
	12949 Sep 23 19:07	0° 		retrograde	12950 Sep 26 05:14	1°  20'43		
evening max el	12949 Oct 04 11:26	15°  19'05	20°13'23	evening set	12950 Sep 28 01:43	1°  10'09		
desc. node	12949 Oct 11 16:55	20°  06'03		desc. node	12950 Sep 28 14:23	1°  03'26		
retrograde	12949 Oct 15 05:16	20°  39'37			12950 Oct 01 12:31	30°  48'11		
evening set	12949 Oct 17 06:25	20°  28'51		inferior conj	12950 Oct 06 13:36	26°  58'13	-2°30'08	
inferior conj	12949 Oct 26 05:40	16°  31'39	-4°17'34	minimum elong	12950 Oct 06 07:08	27°  09'07	2°27'19	
minimum elong	12949 Oct 25 19:40	16°  46'28	4°13'56	min. Earth dist.	12950 Oct 09 07:33	25°  07'27	0.56030 AU	
min. Earth dist.	12949 Oct 27 20:02	15°  34'46	0.54832 AU	morning rise	12950 Oct 14 09:50	22°  19'37		
morning rise	12949 Nov 03 08:01	12°  26'07		direct	12950 Oct 19 20:39	21°  11'00		
direct	12949 Nov 07 22:57	11°  39'48						
morning max el	12949 Nov 21 12:08	18°  18'33	24°00'17					

morning max el	12950 Nov 02 22:54	28° Ω 21'16	25°43'40	morning max el	12951 Oct 15 15:52	8° Ω 52'15	27°04'16
	12950 Nov 04 14:27	0° \mathbb{M}			12951 Oct 31 17:00	0° \mathbb{M}	
asc. node	12950 Nov 22 14:17	26° \mathbb{M} 20'34		asc. node	12951 Nov 09 11:06	15° \mathbb{M} 41'41	
	12950 Nov 24 12:25	0° \mathcal{A}		morning set	12951 Nov 14 20:42	26° \mathbb{M} 45'01	
morning set	12950 Nov 30 11:31	12° \mathcal{A} 14'02			12951 Nov 16 08:57	0° \mathcal{A}	
superior conj	12950 Dec 07 06:15	27° \mathcal{A} 09'06	1°38'03	superior conj	12951 Nov 21 17:48	11° \mathcal{A} 52'41	1°33'05
minimum elong	12950 Dec 07 05:52	27° \mathcal{A} 06'57	1°39'02	minimum elong	12951 Nov 21 16:27	11° \mathcal{A} 45'10	1°33'54
max. Earth dist.	12950 Dec 08 12:19	29° \mathcal{A} 55'20	1.31777 AU	max. Earth dist.	12951 Nov 21 20:31	12° \mathcal{A} 07'55	1.31293 AU
	12950 Dec 08 13:09	0° \mathcal{B}		evening rise	12951 Nov 28 13:04	26° \mathcal{A} 49'40	
evening rise	12950 Dec 14 08:13	12° \mathcal{B} 28'12			12951 Nov 30 01:11	0° \mathcal{B}	
	12950 Dec 23 09:10	0° \approx		desc. node	12951 Dec 12 09:02	22° \mathcal{B} 59'44	
desc. node	12950 Dec 25 12:03	3° \approx 43'13			12951 Dec 16 21:36	0° \approx	
	12951 Jan 13 04:43	0° \mathcal{H}		evening max el	12951 Dec 28 20:48	14° \approx 33'14	26°55'32
evening max el	12951 Jan 15 16:45	2° \mathcal{H} 31'06	27°29'21	retrograde	12952 Jan 11 19:30	21° \approx 43'58	
retrograde	12951 Jan 29 14:21	9° \mathcal{H} 50'46		evening set	12952 Jan 18 13:11	19° \approx 48'22	
evening set	12951 Feb 05 12:36	7° \mathcal{H} 34'55		min. Earth dist.	12952 Jan 22 10:57	17° \approx 09'05	0.59756 AU
min. Earth dist.	12951 Feb 09 06:38	4° \mathcal{H} 39'03	0.61919 AU	inferior conj	12952 Jan 25 15:21	14° \approx 35'16	-3°23'41
inferior conj	12951 Feb 12 06:44	1° \mathcal{H} 52'45	-2°01'57	minimum elong	12952 Jan 25 22:33	14° \approx 20'43	3°20'23
minimum elong	12951 Feb 12 10:57	1° \mathcal{H} 42'59	1°59'43	morning rise	12952 Feb 02 10:55	9° \approx 53'01	
	12951 Feb 14 09:05	30° \mathcal{R} \approx		direct	12952 Feb 04 12:25	9° \approx 36'59	
asc. node	12951 Feb 18 12:38	27° \approx 12'33		asc. node	12952 Feb 05 10:00	9° \approx 40'08	
morning rise	12951 Feb 19 12:05	26° \approx 49'57		morning max el	12952 Feb 12 01:54	13° \approx 22'33	18°07'44
direct	12951 Feb 21 16:55	26° \approx 28'31			12952 Feb 23 07:17	0° \mathcal{H}	
morning max el	12951 Feb 28 12:32	29° \approx 55'44	17°48'40	morning set	12952 Feb 27 16:48	8° \mathcal{H} 07'12	
	12951 Feb 28 14:16	0° \mathcal{H}					
morning set	12951 Mar 16 06:55	24° \mathcal{H} 21'07		superior conj	12952 Mar 08 11:22	26° \mathcal{H} 07'20	0°07'32
	12951 Mar 19 11:07	0° \mathcal{Y}		minimum elong	12952 Mar 08 11:58	26° \mathcal{H} 10'02	0°07'36
desc. node	12951 Mar 23 13:35	7° \mathcal{Y} 12'12		behind sun begin	12952 Mar 08 05:10	25° \mathcal{H} 39'36	
				behind sun end	12952 Mar 08 18:46	26° \mathcal{H} 40'23	
superior conj	12951 Mar 27 13:02	14° \mathcal{Y} 01'46	-0°30'40	desc. node	12952 Mar 09 10:07	27° \mathcal{H} 48'39	
minimum elong	12951 Mar 27 10:07	13° \mathcal{Y} 49'24	0°30'20		12952 Mar 10 15:53	0° \mathcal{Y}	
max. Earth dist.	12951 Apr 03 14:33	25° \mathcal{Y} 43'54	1.43629 AU	max. Earth dist.	12952 Mar 16 02:30	9° \mathcal{Y} 20'40	1.41741 AU
	12951 Apr 06 06:17	0° \mathcal{B}		evening rise	12952 Mar 21 04:12	17° \mathcal{Y} 41'10	
evening rise	12951 Apr 10 20:47	7° \mathcal{B} 14'58			12952 Mar 29 00:55	0° \mathcal{B}	
	12951 Apr 26 01:34	0° \mathbb{I}			12952 Apr 19 17:57	0° \mathbb{I}	
evening max el	12951 May 12 01:19	20° \mathbb{I} 32'59	21°30'37	evening max el	12952 Apr 23 17:57	4° \mathbb{I} 22'13	22°49'20
asc. node	12951 May 17 09:29	24° \mathbb{I} 46'52		asc. node	12952 May 03 06:45	10° \mathbb{I} 18'29	
retrograde	12951 May 21 00:02	25° \mathbb{I} 47'10		retrograde	12952 May 03 20:38	10° \mathbb{I} 20'02	
evening set	12951 May 25 10:54	23° \mathbb{I} 58'30		evening set	12952 May 08 18:44	8° \mathbb{I} 16'15	
inferior conj	12951 May 30 17:06	17° \mathbb{I} 43'22	3°05'39	inferior conj	12952 May 14 02:39	1° \mathbb{I} 52'18	2°47'39
minimum elong	12951 May 30 16:01	17° \mathbb{I} 47'11	3°04'36	minimum elong	12952 May 14 00:52	1° \mathbb{I} 58'31	2°46'30
min. Earth dist.	12951 May 30 22:18	17° \mathbb{I} 25'16	0.68742 AU	min. Earth dist.	12952 May 13 18:59	2° \mathbb{I} 18'55	0.68871 AU
morning rise	12951 Jun 04 20:55	11° \mathbb{I} 27'49			12952 May 15 11:23	30° \mathcal{R} \mathcal{B}	
direct	12951 Jun 09 22:00	9° \mathbb{I} 16'41		morning rise	12952 May 19 06:54	25° \mathcal{B} 43'15	
desc. node	12951 Jun 19 14:44	14° \mathbb{I} 52'50		direct	12952 May 23 18:57	23° \mathcal{B} 52'13	
morning max el	12951 Jun 19 22:54	15° \mathbb{I} 13'11	22°50'10	morning max el	12952 Jun 01 13:45	28° \mathcal{B} 57'06	21°24'34
	12951 Jul 02 00:07	0° \mathcal{E}			12952 Jun 02 14:12	0° \mathbb{I}	
	12951 Jul 21 23:21	0° Ω		desc. node	12952 Jun 05 11:43	3° \mathbb{I} 16'31	
morning set	12951 Jul 24 02:32	3° Ω 28'59			12952 Jun 24 15:26	0° \mathcal{E}	
max. Earth dist.	12951 Jul 28 15:30	11° Ω 05'42	1.40256 AU	morning set	12952 Jul 03 02:00	13° \mathcal{E} 01'09	
				max. Earth dist.	12952 Jul 09 19:06	23° \mathcal{E} 48'45	1.42436 AU
superior conj	12951 Aug 05 10:59	24° Ω 52'05	-1°08'25		12952 Jul 13 12:33	0° Ω	
minimum elong	12951 Aug 05 16:00	25° Ω 14'56	1°08'17				
	12951 Aug 08 05:59	0° \mathbb{N}		superior conj	12952 Jul 17 04:57	6° Ω 15'48	-1°40'44
asc. node	12951 Aug 13 09:21	9° \mathbb{N} 40'32		minimum elong	12952 Jul 17 11:55	6° Ω 45'50	1°40'49
evening rise	12951 Aug 15 06:54	13° \mathbb{N} 17'09		evening rise	12952 Jul 28 11:36	26° Ω 17'51	
	12951 Aug 24 12:25	0° $\underline{\Omega}$		asc. node	12952 Jul 30 06:03	29° Ω 30'00	
evening max el	12951 Aug 31 06:25	9° $\underline{\Omega}$ 02'18	18°27'52		12952 Jul 30 12:41	0° \mathbb{N}	
retrograde	12951 Sep 08 00:20	12° $\underline{\Omega}$ 56'56		evening max el	12952 Aug 13 16:57	21° \mathbb{N} 52'15	18°06'33
evening set	12951 Sep 10 00:58	12° $\underline{\Omega}$ 41'39		retrograde	12952 Aug 20 13:43	25° \mathbb{N} 22'47	
desc. node	12951 Sep 15 11:52	9° $\underline{\Omega}$ 53'42		evening set	12952 Aug 22 21:37	24° \mathbb{N} 58'52	
inferior conj	12951 Sep 17 18:47	8° $\underline{\Omega}$ 09'07	-0°43'10	inferior conj	12952 Aug 29 21:13	20° \mathbb{N} 05'54	0°45'24
minimum elong	12951 Sep 17 17:06	8° $\underline{\Omega}$ 12'26	0°42'28	minimum elong	12952 Aug 29 22:36	20° \mathbb{N} 02'41	0°44'37
min. Earth dist.	12951 Sep 21 01:07	5° $\underline{\Omega}$ 35'27	0.57893 AU	desc. node	12952 Sep 01 09:21	17° \mathbb{N} 47'30	
morning rise	12951 Sep 25 05:47	2° $\underline{\Omega}$ 53'01		min. Earth dist.	12952 Sep 02 03:04	17° \mathbb{N} 08'10	0.60106 AU
direct	12951 Oct 01 08:20	1° $\underline{\Omega}$ 17'38		morning rise	12952 Sep 05 20:28	14° \mathbb{N} 18'23	

direct	12952 Sep 12 09:05	12° \mathbb{M} 15'42		desc. node	12953 Aug 19 06:51	26° Ω 28'30	
morning max el	12952 Sep 26 16:37	20° \mathbb{M} 08'20	27°49'47	direct	12953 Aug 25 20:48	24° Ω 07'50	
	12952 Oct 05 03:56	0° $\underline{\Omega}$			12953 Sep 06 16:29	0° \mathbb{M}	
	12952 Oct 23 14:20	0° \mathbb{M}		morning max el	12953 Sep 08 23:21	2° \mathbb{M} 09'36	27°56'17
asc. node	12952 Oct 26 07:51	5° \mathbb{M} 22'32			12953 Sep 29 12:26	0° $\underline{\Omega}$	
morning set	12952 Oct 29 01:56	11° \mathbb{M} 01'58		morning set	12953 Oct 13 01:02	24° $\underline{\Omega}$ 58'27	
max. Earth dist.	12952 Nov 04 04:50	24° \mathbb{M} 17'37	1.31318 AU	asc. node	12953 Oct 13 04:32	25° $\underline{\Omega}$ 16'19	
					12953 Oct 15 11:16	0° \mathbb{M}	
superior conj	12952 Nov 05 05:06	26° \mathbb{M} 32'33	1°22'24	max. Earth dist.	12953 Oct 18 09:13	6° \mathbb{M} 13'12	1.31870 AU
minimum elong	12952 Nov 05 03:05	26° \mathbb{M} 21'20	1°22'55				
	12952 Nov 06 18:21	0° \mathbb{X}		superior conj	12953 Oct 20 14:14	11° \mathbb{M} 02'13	1°06'05
evening rise	12952 Nov 11 21:56	11° \mathbb{X} 20'10		minimum elong	12953 Oct 20 11:57	10° \mathbb{M} 49'46	1°06'17
	12952 Nov 21 06:24	0° \mathbb{Z}		evening rise	12953 Oct 27 08:48	25° \mathbb{M} 53'36	
desc. node	12952 Nov 28 06:08	11° \mathbb{Z} 35'04			12953 Oct 29 07:03	0° \mathbb{X}	
evening max el	12952 Dec 09 16:42	25° \mathbb{Z} 42'52	25°48'11	desc. node	12953 Nov 15 03:21	29° \mathbb{X} 12'37	
	12952 Dec 15 02:42	0° \approx			12953 Nov 15 18:03	0° \mathbb{Z}	
retrograde	12952 Dec 23 14:24	2° \approx 44'30		evening max el	12953 Nov 21 04:59	6° \mathbb{Z} 05'51	24°15'40
evening set	12952 Dec 29 17:51	1° \approx 16'30		retrograde	12953 Dec 04 21:02	12° \mathbb{Z} 55'00	
	12953 Jan 01 03:07	30° \mathbb{K} \mathbb{Z}		evening set	12953 Dec 09 22:47	11° \mathbb{Z} 58'28	
min. Earth dist.	12953 Jan 03 05:20	28° \mathbb{Z} 39'29	0.57663 AU	min. Earth dist.	12953 Dec 15 16:22	9° \mathbb{Z} 05'22	0.55911 AU
inferior conj	12953 Jan 06 05:00	26° \mathbb{Z} 34'17	-4°42'07	inferior conj	12953 Dec 17 21:53	7° \mathbb{Z} 43'09	-5°39'47
minimum elong	12953 Jan 06 13:40	26° \mathbb{Z} 19'05	4°38'56	minimum elong	12953 Dec 18 03:36	7° \mathbb{Z} 34'21	5°38'06
morning rise	12953 Jan 14 12:13	22° \mathbb{Z} 14'25		morning rise	12953 Dec 26 10:25	3° \mathbb{Z} 43'27	
direct	12953 Jan 16 15:11	22° \mathbb{Z} 00'17		direct	12953 Dec 28 22:21	3° \mathbb{Z} 27'08	
asc. node	12953 Jan 22 07:19	23° \mathbb{Z} 48'13		morning max el	12954 Jan 08 01:43	8° \mathbb{Z} 18'55	19°49'32
morning max el	12953 Jan 25 07:40	26° \mathbb{Z} 14'22	18°47'24	asc. node	12954 Jan 09 04:35	9° \mathbb{Z} 26'55	
	12953 Jan 28 14:41	0° \approx			12954 Jan 22 06:44	0° \approx	
morning set	12953 Feb 10 13:47	22° \approx 22'30		morning set	12954 Jan 25 18:07	6° \approx 55'31	
	12953 Feb 14 11:24	0° \mathbb{X}					
superior conj	12953 Feb 19 05:21	9° \mathbb{X} 06'59	0°39'48	superior conj	12954 Feb 02 14:12	22° \approx 46'32	1°04'56
minimum elong	12953 Feb 19 07:45	9° \mathbb{X} 18'21	0°39'51	minimum elong	12954 Feb 02 17:00	23° \approx 00'28	1°05'13
desc. node	12953 Feb 24 06:42	18° \mathbb{X} 26'16			12954 Feb 06 07:08	0° \mathbb{X}	
max. Earth dist.	12953 Feb 26 09:51	22° \mathbb{X} 13'47	1.39554 AU	max. Earth dist.	12954 Feb 08 15:57	4° \mathbb{X} 28'18	1.37316 AU
evening rise	12953 Mar 02 08:41	29° \mathbb{X} 02'59		desc. node	12954 Feb 11 03:18	9° \mathbb{X} 00'53	
	12953 Mar 02 22:12	0° \mathbb{Y}		evening rise	12954 Feb 12 09:30	11° \mathbb{X} 16'34	
	12953 Mar 22 11:33	0° \mathbb{B}			12954 Feb 23 14:13	0° \mathbb{Y}	
evening max el	12953 Apr 06 08:00	18° \mathbb{B} 13'19	24°10'08		12954 Mar 17 20:30	0° \mathbb{B}	
retrograde	12953 Apr 17 14:08	24° \mathbb{B} 49'50		evening max el	12954 Mar 19 21:28	2° \mathbb{B} 05'28	25°26'17
asc. node	12953 Apr 20 04:05	24° \mathbb{B} 19'49		retrograde	12954 Apr 01 03:22	9° \mathbb{B} 10'14	
evening set	12953 Apr 22 23:51	22° \mathbb{B} 33'11		evening set	12954 Apr 07 00:36	6° \mathbb{B} 43'57	
min. Earth dist.	12953 Apr 27 15:12	17° \mathbb{B} 11'47	0.68538 AU	asc. node	12954 Apr 07 01:29	6° \mathbb{B} 42'05	
inferior conj	12953 Apr 28 11:19	16° \mathbb{B} 03'42	2°19'36	min. Earth dist.	12954 Apr 11 08:46	1° \mathbb{B} 58'01	0.67760 AU
minimum elong	12953 Apr 28 09:11	16° \mathbb{B} 10'56	2°18'25	inferior conj	12954 Apr 12 17:10	0° \mathbb{B} 13'28	1°41'25
morning rise	12953 May 03 18:36	10° \mathbb{B} 02'16		minimum elong	12954 Apr 12 15:08	0° \mathbb{B} 20'01	1°40'21
direct	12953 May 07 18:03	8° \mathbb{B} 32'15			12954 Apr 12 21:20	30° \mathbb{K} \mathbb{Y}	
morning max el	12953 May 15 11:12	12° \mathbb{B} 52'27	20°09'27	morning rise	12954 Apr 18 06:07	24° \mathbb{Y} 20'59	
desc. node	12953 May 23 08:37	22° \mathbb{B} 23'00		direct	12954 Apr 21 17:52	23° \mathbb{Y} 11'03	
	12953 May 28 18:34	0° \mathbb{I}		morning max el	12954 Apr 28 16:13	26° \mathbb{Y} 58'03	19°08'46
morning set	12953 Jun 12 06:10	21° \mathbb{I} 44'55			12954 May 01 10:51	0° \mathbb{B}	
	12953 Jun 17 13:39	0° \mathbb{E}		desc. node	12954 May 10 05:25	12° \mathbb{B} 00'40	
max. Earth dist.	12953 Jun 22 05:05	7° \mathbb{E} 20'27	1.44199 AU	greatest brilliancy	12954 May 11 15:52	14° \mathbb{B} 08'47	-0.7m
				morning set	12954 May 22 09:40	0° \mathbb{I} 33'15	
superior conj	12953 Jun 27 23:23	16° \mathbb{E} 38'57	-2°04'46		12954 May 22 01:03	0° \mathbb{I}	
minimum elong	12953 Jun 28 05:09	17° \mathbb{E} 02'35	2°05'26	max. Earth dist.	12954 Jun 04 20:51	21° \mathbb{I} 29'51	1.45361 AU
	12953 Jul 05 23:29	0° Ω					
evening rise	12953 Jul 10 22:52	8° Ω 31'05		superior conj	12954 Jun 07 19:35	26° \mathbb{I} 08'20	-2°13'30
asc. node	12953 Jul 17 02:48	19° Ω 04'55		minimum elong	12954 Jun 07 19:15	26° \mathbb{I} 07'00	2°14'28
	12953 Jul 24 01:12	0° \mathbb{M}			12954 Jun 10 06:05	0° \mathbb{E}	
evening max el	12953 Jul 28 06:52	5° \mathbb{M} 07'57	18°04'28	evening rise	12954 Jun 22 11:49	19° \mathbb{E} 46'18	
retrograde	12953 Aug 03 17:05	8° \mathbb{M} 28'34			12954 Jun 28 17:42	0° Ω	
evening set	12953 Aug 06 09:10	7° \mathbb{M} 52'40		asc. node	12954 Jul 03 23:39	8° Ω 19'53	
inferior conj	12953 Aug 12 17:26	2° \mathbb{M} 41'10	1°50'54	evening max el	12954 Jul 11 20:49	18° Ω 41'12	18°20'40
minimum elong	12953 Aug 12 19:57	2° \mathbb{M} 34'35	1°49'37	retrograde	12954 Jul 18 06:07	22° Ω 05'36	
	12953 Aug 15 07:06	30° \mathbb{K} Ω		evening set	12954 Jul 21 06:43	21° Ω 15'15	
min. Earth dist.	12953 Aug 15 14:28	29° Ω 41'24	0.62382 AU	inferior conj	12954 Jul 27 03:23	15° Ω 47'03	2°35'00
morning rise	12953 Aug 19 04:27	26° Ω 32'47		minimum elong	12954 Jul 27 05:42	15° Ω 40'17	2°33'44
				min. Earth dist.	12954 Jul 29 11:11	13° Ω 05'06	0.64482 AU

morning rise	12954 Aug 02 03:19	9°♎27'35		morning rise	12955 Jul 16 14:13	22°♊52'06	
desc. node	12954 Aug 06 04:16	7°♎12'24		direct	12955 Jul 22 21:07	20°♊11'17	
direct	12954 Aug 08 17:23	6°♎49'35		desc. node	12955 Jul 24 01:38	20°♊16'24	
morning max el	12954 Aug 22 09:25	14°♎48'40	27°26'47	morning max el	12955 Aug 04 20:24	27°♊53'54	26°28'21
	12954 Sep 03 18:45	0°♎			12955 Aug 06 20:15	0°♎	
	12954 Sep 22 04:59	0°♎			12955 Aug 28 12:07	0°♎	
morning set	12954 Sep 26 15:31	8°♎28'25		morning set	12955 Sep 09 18:12	21°♎23'43	
asc. node	12954 Sep 30 01:10	15°♎18'23		max. Earth dist.	12955 Sep 13 17:14	29°♎01'00	1.34566 AU
max. Earth dist.	12954 Oct 01 06:06	17°♎47'35	1.32960 AU		12955 Sep 14 05:11	0°♎	
				asc. node	12955 Sep 16 21:46	5°♎24'11	
superior conj	12954 Oct 04 19:10	25°♎16'26	0°44'16	superior conj	12955 Sep 18 17:28	9°♎08'15	0°17'17
minimum elong	12954 Oct 04 17:12	25°♎05'58	0°44'14	minimum elong	12955 Sep 18 16:32	9°♎03'26	0°17'09
	12954 Oct 06 23:52	0°♎		evening rise	12955 Sep 26 05:11	24°♎49'59	
evening rise	12954 Oct 11 19:52	10°♎25'25			12955 Sep 28 17:14	0°♎	
	12954 Oct 21 19:20	0°♎		evening max el	12955 Oct 15 09:30	26°♎26'10	20°59'26
desc. node	12954 Nov 02 00:37	15°♎31'09		desc. node	12955 Oct 19 21:59	0°♎03'53	
evening max el	12954 Nov 02 15:30	16°♎08'10	22°33'43		12955 Oct 19 19:28	0°♎	
retrograde	12954 Nov 15 14:40	22°♎34'08		retrograde	12955 Oct 27 01:26	2°♎13'57	
evening set	12954 Nov 19 06:57	22°♎04'33		evening set	12955 Oct 29 12:42	1°♎59'29	
min. Earth dist.	12954 Nov 26 23:20	18°♎37'10	0.54801 AU		12955 Nov 04 00:14	30°♎	
inferior conj	12954 Nov 27 21:01	18°♎06'31	-5°53'11	inferior conj	12955 Nov 07 12:28	28°♎05'30	-5°07'25
minimum elong	12954 Nov 27 18:33	18°♎09'59	5°52'08	minimum elong	12955 Nov 07 03:06	28°♎18'46	5°04'34
morning rise	12954 Dec 06 07:28	14°♎18'43		min. Earth dist.	12955 Nov 08 05:36	27°♎41'14	0.54552 AU
direct	12954 Dec 09 12:57	13°♎54'58		morning rise	12955 Nov 15 17:51	24°♎12'55	
morning max el	12954 Dec 21 05:24	19°♎29'21	21°14'29	direct	12955 Nov 19 20:44	23°♎36'34	
asc. node	12954 Dec 27 01:44	26°♎20'06			12955 Dec 02 23:45	0°♎	
	12954 Dec 29 13:27	0°♎		morning max el	12955 Dec 02 20:35	29°♎52'31	22°57'36
morning set	12955 Jan 10 03:03	21°♎38'32		asc. node	12955 Dec 13 22:48	14°♎11'13	
	12955 Jan 14 02:32	0°♎			12955 Dec 22 12:28	0°♎	
superior conj	12955 Jan 17 09:53	6°♎54'52	1°22'47	morning set	12955 Dec 25 14:25	6°♎25'26	
minimum elong	12955 Jan 17 12:12	7°♎06'50	1°23'24	superior conj	12956 Jan 01 13:09	21°♎22'56	1°33'44
max. Earth dist.	12955 Jan 22 02:01	16°♎23'06	1.35262 AU	minimum elong	12956 Jan 01 14:30	21°♎30'11	1°34'38
evening rise	12955 Jan 26 03:32	24°♎13'20		max. Earth dist.	12956 Jan 04 19:25	28°♎17'04	1.33550 AU
desc. node	12955 Jan 28 23:56	29°♎28'45			12956 Jan 05 15:15	0°♎	
	12955 Jan 29 06:51	0°♎		evening rise	12956 Jan 09 11:12	7°♎44'10	
	12955 Feb 17 04:31	0°♎		desc. node	12956 Jan 15 20:38	19°♎45'31	
evening max el	12955 Mar 02 11:15	15°♎53'22	26°30'19		12956 Jan 21 20:15	0°♎	
retrograde	12955 Mar 15 11:11	23°♎14'04		evening max el	12956 Feb 13 00:46	29°♎27'39	27°14'50
evening set	12955 Mar 21 19:12	20°♎42'24			12956 Feb 13 14:24	0°♎	
asc. node	12955 Mar 24 22:55	17°♎36'16		retrograde	12956 Feb 26 12:52	6°♎53'52	
min. Earth dist.	12955 Mar 25 21:26	16°♎31'06	0.66571 AU	evening set	12956 Mar 04 05:40	4°♎22'19	
inferior conj	12955 Mar 27 18:05	14°♎16'38	0°52'40	min. Earth dist.	12956 Mar 08 03:04	0°♎43'55	0.65004 AU
minimum elong	12955 Mar 27 16:47	14°♎20'33	0°52'02		12956 Mar 08 19:14	30°♎	
morning rise	12955 Apr 02 15:21	8°♎34'53		inferior conj	12956 Mar 10 11:43	28°♎07'50	-0°06'58
direct	12955 Apr 05 16:31	7°♎42'47		minimum elong	12956 Mar 10 11:55	28°♎07'17	0°06'46
morning max el	12955 Apr 12 03:52	11°♎09'13	18°24'17	transit middle	12956 Mar 10 11:55	28°♎07'17	0°06'46
	12955 Apr 25 19:22	0°♎		transit begin	12956 Mar 10 09:10	28°♎14'54	
desc. node	12955 Apr 27 02:05	2°♎00'40		transit end	12956 Mar 10 14:40	27°♎59'41	
morning set	12955 May 02 09:15	10°♎23'46		asc. node	12956 Mar 10 20:21	27°♎44'03	
	12955 May 14 19:54	0°♎		morning rise	12956 Mar 16 19:52	22°♎39'13	
superior conj	12955 May 18 03:29	5°♎11'05	-2°02'12	direct	12956 Mar 19 11:46	22°♎01'52	
minimum elong	12955 May 17 20:00	4°♎41'53	2°02'37	morning max el	12956 Mar 25 20:04	25°♎19'55	17°56'43
max. Earth dist.	12955 May 18 16:19	6°♎01'11	1.45808 AU		12956 Mar 29 19:25	0°♎	
evening rise	12955 Jun 03 00:15	0°♎00'54		morning set	12956 Apr 12 13:18	21°♎38'17	
	12955 Jun 03 00:01	0°♎		desc. node	12956 Apr 12 22:41	22°♎16'59	
greatest brilliancy	12955 Jun 12 15:05	15°♎04'39	-0.8m		12956 Apr 17 15:21	0°♎	
asc. node	12955 Jun 20 20:35	27°♎07'00		superior conj	12956 Apr 26 16:35	14°♎34'22	-1°33'00
	12955 Jun 23 03:28	0°♎		minimum elong	12956 Apr 26 07:36	13°♎58'44	1°32'40
evening max el	12955 Jun 25 07:54	2°♎23'40	18°54'19	max. Earth dist.	12956 Apr 30 12:39	20°♎37'38	1.45505 AU
retrograde	12955 Jul 02 01:09	6°♎05'16			12956 May 06 12:53	0°♎	
evening set	12955 Jul 05 10:32	4°♎58'54		evening rise	12956 May 12 17:24	9°♎32'48	
	12955 Jul 10 09:06	30°♎			12956 May 26 05:46	0°♎	
inferior conj	12955 Jul 10 23:15	29°♎15'30	3°01'08	greatest brilliancy	12956 May 26 21:27	0°♎57'31	-0.6m
minimum elong	12955 Jul 11 00:44	29°♎10'47	3°00'01	asc. node	12956 Jun 06 17:36	15°♎16'57	
min. Earth dist.	12955 Jul 12 16:23	27°♎05'44	0.66244 AU				

evening max el	12956 Jun 07 14:05	16°☿10'06	19°44'19	asc. node	12957 May 24 14:44	2°☿37'29	
retrograde	12956 Jun 14 23:19	20°☿21'09		retrograde	12957 May 29 22:17	4°☿47'29	
evening set	12956 Jun 18 18:00	18°☿58'11		evening set	12957 Jun 03 02:57	3°☿08'03	
inferior conj	12956 Jun 24 02:01	13°☿01'02	3°12'28		12957 Jun 06 02:56	30°☿II	
minimum elong	12956 Jun 24 02:27	12°☿59'34	3°11'27	inferior conj	12957 Jun 08 09:06	26°II58'49	3°11'21
min. Earth dist.	12956 Jun 25 04:37	11°☿32'01	0.67578 AU	minimum elong	12957 Jun 08 08:31	27°II00'49	3°10'20
morning rise	12956 Jun 29 10:32	6°☿38'21		min. Earth dist.	12957 Jun 08 21:55	26°II14'30	0.68446 AU
direct	12956 Jul 05 07:02	4°☿03'52		morning rise	12957 Jun 13 13:50	20°II39'54	
desc. node	12956 Jul 09 22:54	5°☿23'00		direct	12957 Jun 18 22:11	18°II18'44	
morning max el	12956 Jul 17 07:00	11°☿15'23	25°10'05	desc. node	12957 Jun 26 20:03	22°II04'41	
	12956 Aug 01 06:16	0°♊		morning max el	12957 Jun 29 17:17	24°II45'44	23°41'46
	12956 Aug 20 04:29	0°♊			12957 Jul 04 10:23	0°☿	
morning set	12956 Aug 22 05:09	3°♊35'05			12957 Jul 25 16:58	0°♊	
max. Earth dist.	12956 Aug 25 19:21	10°♊07'44	1.36604 AU	morning set	12957 Aug 03 19:45	14°♊51'25	
				max. Earth dist.	12957 Aug 07 16:57	21°♊33'20	1.38901 AU
					12957 Aug 12 09:54	0°♊	
superior conj	12956 Sep 01 06:13	22°♊30'33	-0°14'09				
minimum elong	12956 Sep 01 07:07	22°♊35'02	0°14'12	superior conj	12957 Aug 15 05:48	5°♊14'59	-0°48'24
behind sun begin	12956 Sep 01 04:02	22°♊19'45		minimum elong	12957 Aug 15 09:15	5°♊31'11	0°48'19
behind sun end	12956 Sep 01 10:13	22°♊50'20		asc. node	12957 Aug 20 14:57	15°♊33'01	
asc. node	12956 Sep 02 18:21	25°♊30'12		evening rise	12957 Aug 24 09:13	22°♊53'20	
	12956 Sep 04 23:57	0°♋			12957 Aug 28 01:40	0°♋	
evening rise	12956 Sep 09 10:32	9°♋01'37			12957 Sep 09 14:19	19°♋16'28	18°49'26
	12956 Sep 20 20:09	0°♌		evening max el	12957 Sep 09 14:19	19°♋16'28	18°49'26
evening max el	12956 Sep 26 17:09	7°♌26'43	19°43'33	retrograde	12957 Sep 18 01:44	23°♋31'40	
desc. node	12956 Oct 05 19:25	12°♌24'18		evening set	12957 Sep 19 23:06	23°♋19'45	
retrograde	12956 Oct 06 17:44	12°♌26'47		desc. node	12957 Sep 22 16:54	22°♋23'49	
evening set	12956 Oct 08 15:14	12°♌16'50		inferior conj	12957 Sep 28 03:42	18°♋59'35	-1°43'22
inferior conj	12956 Oct 17 10:57	8°♌14'04	-3°33'43	minimum elong	12957 Sep 27 23:22	19°♋07'23	1°41'26
minimum elong	12956 Oct 17 01:57	8°♌28'03	3°30'07	min. Earth dist.	12957 Oct 01 04:47	16°♋48'27	0.56751 AU
min. Earth dist.	12956 Oct 19 14:33	6°♌53'47	0.55241 AU	morning rise	12957 Oct 05 20:20	14°♋04'26	
morning rise	12956 Oct 25 10:59	3°♌55'50		direct	12957 Oct 11 14:18	12°♋44'43	
direct	12956 Oct 30 10:28	3°♌01'05		morning max el	12957 Oct 25 19:57	20°♋07'06	26°21'36
morning max el	12956 Nov 13 06:45	9°♌53'55	24°46'05		12957 Nov 03 07:26	0°♌	
	12956 Nov 28 05:57	0°♍		asc. node	12957 Nov 16 16:38	21°♌52'35	
asc. node	12956 Nov 29 19:46	2°♍45'44			12957 Nov 20 18:51	0°♍	
morning set	12956 Dec 09 02:17	21°♍10'00		morning set	12957 Nov 23 12:58	5°♍47'36	
	12956 Dec 13 03:31	0°☊					
				superior conj	12957 Nov 30 08:15	20°♍46'32	1°36'40
superior conj	12956 Dec 15 21:19	6°☊02'16	1°38'14	minimum elong	12957 Nov 30 07:26	20°♍41'59	1°37'35
minimum elong	12956 Dec 15 21:34	6°☊03'35	1°39'14	max. Earth dist.	12957 Dec 01 02:31	22°♍28'09	1.31507 AU
max. Earth dist.	12956 Dec 17 20:15	10°☊18'33	1.32281 AU		12957 Dec 04 12:36	0°☊	
evening rise	12956 Dec 23 05:12	21°☊40'04		evening rise	12957 Dec 07 06:49	5°☊54'22	
	12956 Dec 27 10:01	0°♎		desc. node	12957 Dec 19 14:22	29°☊19'57	
desc. node	12957 Jan 01 17:26	9°♎44'58			12957 Dec 19 23:54	0°♎	
	12957 Jan 14 17:40	0°♏		evening max el	12958 Jan 07 19:51	25°♎04'46	27°19'08
evening max el	12957 Jan 25 12:19	12°♏35'22	27°32'59		12958 Jan 14 03:50	0°♏	
retrograde	12957 Feb 08 07:38	19°♏59'36		retrograde	12958 Jan 21 18:34	2°♏21'40	
evening set	12957 Feb 15 05:32	17°♏35'20		evening set	12958 Jan 28 15:45	0°♏13'17	
min. Earth dist.	12957 Feb 18 23:46	14°♏25'57	0.63114 AU		12958 Jan 29 00:14	30°☊♎	
inferior conj	12957 Feb 21 19:12	11°♏39'13	-1°17'18	min. Earth dist.	12958 Feb 01 10:24	27°♎25'48	0.61006 AU
minimum elong	12957 Feb 21 21:45	11°♏32'54	1°15'51	inferior conj	12958 Feb 04 13:13	24°♎42'31	-2°36'18
asc. node	12957 Feb 25 17:47	8°♏06'34		minimum elong	12958 Feb 04 18:45	24°♎30'25	2°33'31
morning rise	12957 Feb 28 16:26	6°♏26'26		morning rise	12958 Feb 12 00:46	19°♎48'20	
direct	12957 Mar 03 00:37	6°♏00'20		asc. node	12958 Feb 12 15:11	19°♎39'22	
morning max el	12957 Mar 09 13:51	9°♏21'10	17°46'28	direct	12958 Feb 14 03:35	19°♎29'46	
	12957 Mar 23 10:13	0°♐		morning max el	12958 Feb 21 05:54	23°♎03'44	17°54'20
morning set	12957 Mar 25 19:03	4°♐05'59			12958 Feb 26 17:07	0°♏	
desc. node	12957 Mar 30 19:13	12°♐44'04		morning set	12958 Mar 08 20:21	17°♏28'27	
					12958 Mar 15 18:54	0°♐	
superior conj	12957 Apr 07 01:17	24°♐54'59	-0°54'04	desc. node	12958 Mar 17 15:46	3°♐18'03	
minimum elong	12957 Apr 06 19:48	24°♐32'26	0°53'36				
	12957 Apr 10 03:57	0°♑		superior conj	12958 Mar 19 10:21	6°♐23'42	-0°13'55
max. Earth dist.	12957 Apr 13 06:40	5°♑00'24	1.44489 AU	minimum elong	12958 Mar 19 09:07	6°♐18'22	0°13'43
evening rise	12957 Apr 22 04:40	18°♑57'45		behind sun begin	12958 Mar 19 04:51	5°♐59'51	
	12957 Apr 29 11:16	0°♒		behind sun end	12958 Mar 19 13:23	6°♐36'53	
evening max el	12957 May 21 14:25	29°♒57'21	20°48'38	max. Earth dist.	12958 Mar 26 20:36	18°♐55'28	1.42876 AU
	12957 May 21 15:28	0°☎		evening rise	12958 Apr 02 01:44	28°♐54'54	

	12958 Apr 02 18:17	0°♄			12959 Mar 07 23:15	0°♅	
	12958 Apr 23 02:52	0°♅		max. Earth dist.	12959 Mar 09 06:24	2°♅14'02	1.40837 AU
evening max el	12958 May 04 09:27	13°♅45'31	22°03'33	evening rise	12959 Mar 13 18:02	9°♅45'16	
asc. node	12958 May 11 11:57	18°♅53'26			12959 Mar 26 17:57	0°♄	
retrograde	12958 May 13 20:10	19°♅18'55		evening max el	12959 Apr 17 00:54	27°♄36'19	23°23'55
evening set	12958 May 18 11:38	17°♅23'50			12959 Apr 19 15:00	0°♅	
inferior conj	12958 May 23 18:19	11°♅04'34	2°59'16	retrograde	12959 Apr 27 15:30	3°♅51'07	
minimum elong	12958 May 23 16:54	11°♅09'32	2°58'10	asc. node	12959 Apr 28 09:15	3°♅48'36	
min. Earth dist.	12958 May 23 18:03	11°♅05'31	0.68848 AU	evening set	12959 May 02 18:29	1°♅41'46	
morning rise	12958 May 28 21:58	4°♅51'22			12959 May 04 11:32	30°♄	
direct	12958 Jun 02 17:28	2°♅48'23		min. Earth dist.	12959 May 07 14:49	25°♄59'40	0.68786 AU
morning max el	12958 Jun 12 05:20	8°♅23'05	22°12'45	inferior conj	12959 May 08 03:44	25°♄15'13	2°36'59
desc. node	12958 Jun 13 17:07	9°♅56'31		minimum elong	12959 May 08 01:45	25°♄22'03	2°35'48
	12958 Jun 29 01:19	0°♄		morning rise	12959 May 13 08:56	19°♄09'11	
morning set	12958 Jul 15 09:40	25°♄01'05		direct	12959 May 17 15:39	17°♄26'49	
	12958 Jul 18 10:57	0°♄		morning max el	12959 May 25 22:37	22°♄11'16	20°51'01
max. Earth dist.	12958 Jul 20 16:36	3°♄42'57	1.41211 AU	desc. node	12959 May 31 14:05	28°♄40'00	
					12959 Jun 01 15:00	0°♅	
superior conj	12958 Jul 28 11:51	17°♄10'42	-1°22'43		12959 Jun 22 07:20	0°♄	
minimum elong	12958 Jul 28 17:54	17°♄37'38	1°22'39	morning set	12959 Jun 24 23:23	4°♄07'53	
	12958 Aug 04 13:05	0°♄		max. Earth dist.	12959 Jul 02 23:01	16°♄48'12	1.43252 AU
asc. node	12958 Aug 07 11:36	5°♄28'09					
evening rise	12958 Aug 07 21:40	6°♄15'04		superior conj	12959 Jul 09 20:07	28°♄09'15	-1°52'21
	12958 Aug 22 05:49	0°♄		minimum elong	12959 Jul 10 03:08	28°♄38'47	1°52'39
evening max el	12958 Aug 23 21:13	1°♄47'14	18°16'30		12959 Jul 10 22:22	0°♄	
retrograde	12958 Aug 31 04:43	5°♄29'32		evening rise	12959 Jul 21 19:34	18°♄56'43	
evening set	12958 Sep 02 08:18	5°♄11'02		asc. node	12959 Jul 25 08:20	25°♄11'50	
inferior conj	12958 Sep 09 18:10	0°♄30'01	-0°02'55		12959 Jul 28 02:34	0°♄	
minimum elong	12958 Sep 09 18:04	0°♄30'14	0°02'58	evening max el	12959 Aug 07 09:42	14°♄49'14	18°03'24
transit middle	12958 Sep 09 18:04	0°♄30'14	0°02'58	retrograde	12959 Aug 14 00:31	18°♄13'29	
transit begin	12958 Sep 09 14:39	0°♄37'25		evening set	12959 Aug 16 12:00	17°♄44'40	
transit end	12958 Sep 09 21:28	0°♄23'03		inferior conj	12959 Aug 23 04:37	12°♄43'26	1°15'58
desc. node	12958 Sep 09 14:25	0°♄37'54		minimum elong	12959 Aug 23 06:42	12°♄38'22	1°14'53
	12958 Sep 10 08:20	30°♄		min. Earth dist.	12959 Aug 26 07:26	9°♄42'28	0.61087 AU
min. Earth dist.	12958 Sep 13 01:49	27°♄43'17	0.58807 AU	desc. node	12959 Aug 27 11:55	8°♄38'46	
morning rise	12958 Sep 17 00:22	24°♄59'34		morning rise	12959 Aug 29 22:39	6°♄46'05	
direct	12958 Sep 23 08:12	23°♄11'54		direct	12959 Sep 05 13:47	4°♄33'07	
	12958 Oct 06 16:51	0°♄		morning max el	12959 Sep 19 19:26	12°♄29'53	27°57'17
morning max el	12958 Oct 07 16:04	0°♄55'21	27°28'13		12959 Oct 03 16:58	0°♄	
	12958 Oct 28 12:04	0°♄			12959 Oct 20 20:28	0°♄	
asc. node	12958 Nov 03 13:25	11°♄22'32		asc. node	12959 Oct 21 10:09	1°♄09'05	
morning set	12958 Nov 07 20:42	20°♄12'49		morning set	12959 Oct 22 23:35	4°♄21'07	
	12958 Nov 12 08:49	0°♄		max. Earth dist.	12959 Oct 28 18:14	16°♄44'24	1.31492 AU
superior conj	12958 Nov 14 19:56	5°♄29'08	1°29'16	superior conj	12959 Oct 30 06:33	20°♄04'54	1°16'10
minimum elong	12958 Nov 14 18:16	5°♄19'48	1°29'57	minimum elong	12959 Oct 30 04:22	19°♄52'48	1°16'33
max. Earth dist.	12958 Nov 14 11:05	4°♄39'42	1.31241 AU		12959 Nov 03 17:57	0°♄	
evening rise	12958 Nov 21 13:38	20°♄20'14		evening rise	12959 Nov 05 23:35	4°♄52'26	
	12958 Nov 26 05:39	0°♄			12959 Nov 19 01:57	0°♄	
desc. node	12958 Dec 06 11:25	18°♄20'18		desc. node	12959 Nov 23 08:33	6°♄32'55	
	12958 Dec 14 17:03	0°♄		evening max el	12959 Dec 02 13:23	17°♄33'47	25°11'09
evening max el	12958 Dec 20 20:49	6°♄45'24	26°30'44	retrograde	12959 Dec 16 09:09	24°♄29'51	
retrograde	12959 Jan 03 19:46	13°♄52'11		evening set	12959 Dec 22 03:12	23°♄15'16	
evening set	12959 Jan 10 08:25	12°♄07'55		min. Earth dist.	12959 Dec 27 01:24	20°♄33'52	0.56863 AU
min. Earth dist.	12959 Jan 14 10:37	9°♄31'16	0.58843 AU	inferior conj	12959 Dec 29 19:02	18°♄45'48	-5°10'26
inferior conj	12959 Jan 17 14:11	7°♄07'50	-3°58'12	minimum elong	12959 Dec 30 03:10	18°♄32'22	5°07'47
minimum elong	12959 Jan 17 22:20	6°♄52'18	3°54'45	morning rise	12960 Jan 07 05:26	14°♄34'48	
morning rise	12959 Jan 25 15:12	2°♄34'41		direct	12960 Jan 09 11:21	14°♄20'10	
direct	12959 Jan 27 16:29	2°♄19'57		asc. node	12960 Jan 17 09:51	17°♄37'29	
asc. node	12959 Jan 30 12:32	2°♄49'30		morning max el	12960 Jan 18 17:39	18°♄49'10	19°10'57
morning max el	12959 Feb 04 16:31	6°♄16'54	18°21'52		12960 Jan 27 00:30	0°♄	
	12959 Feb 19 16:53	0°♄		morning set	12960 Feb 04 12:04	15°♄52'51	
morning set	12959 Feb 20 11:32	1°♄28'43			12960 Feb 11 15:16	0°♄	
superior conj	12959 Mar 01 17:37	18°♄53'46	0°22'03	superior conj	12960 Feb 12 18:27	2°♄11'42	0°51'21
minimum elong	12959 Mar 01 19:11	19°♄00'58	0°22'04	minimum elong	12960 Feb 12 21:11	2°♄24'49	0°51'29
desc. node	12959 Mar 04 12:20	23°♄55'22		desc. node	12960 Feb 19 08:53	14°♄31'50	

max. Earth dist.	12960 Feb 19 13:12	14° H 51'20	1.38598 AU	minimum elong	12961 Jan 26 11:06	16° \approx 18'52	1°13'47
evening rise	12960 Feb 23 07:27	21° H 29'52		max. Earth dist.	12961 Jan 31 20:36	26° \approx 55'58	1.36409 AU
	12960 Feb 28 08:34	0° Y			12961 Feb 02 11:29	0° H	
	12960 Mar 19 17:25	0° B		evening rise	12961 Feb 04 16:01	4° H 02'58	
evening max el	12960 Mar 29 14:37	11° B 28'31	24°43'29	desc. node	12961 Feb 05 05:29	5° H 04'08	
retrograde	12960 Apr 10 07:08	18° B 17'44			12961 Feb 20 07:41	0° Y	
asc. node	12960 Apr 14 06:37	17° B 08'03		evening max el	12961 Mar 12 04:02	25° Y 19'08	25°55'15
evening set	12960 Apr 15 21:55	15° B 56'29			12961 Mar 17 18:45	0° B	
min. Earth dist.	12960 Apr 20 10:04	10° B 50'27	0.68267 AU	retrograde	12961 Mar 24 18:10	2° B 32'15	
inferior conj	12960 Apr 21 11:25	9° B 26'14	2°04'40	evening set	12961 Mar 30 20:17	0° B 02'44	
minimum elong	12960 Apr 21 09:16	9° B 33'24	2°03'30		12961 Mar 30 21:36	30° R Y	
morning rise	12960 Apr 26 20:48	3° B 28'36		asc. node	12961 Apr 01 04:02	28° Y 49'55	
direct	12960 Apr 30 15:15	2° B 07'15		min. Earth dist.	12961 Apr 04 01:41	25° Y 31'58	0.67312 AU
morning max el	12960 May 07 23:17	6° B 11'14	19°41'45	inferior conj	12961 Apr 05 15:25	23° Y 33'30	1°22'04
desc. node	12960 May 17 10:55	18° B 00'41		minimum elong	12961 Apr 05 13:37	23° Y 39'10	1°21'08
greatest brilliancy	12960 May 20 17:12	22° B 42'14	-0.6m	morning rise	12961 Apr 11 07:38	17° Y 45'37	
	12960 May 25 15:09	0° II		direct	12961 Apr 14 14:41	16° Y 43'44	
morning set	12960 Jun 03 00:28	12° II 45'39		morning max el	12961 Apr 21 07:26	20° Y 20'17	18°47'47
	12960 Jun 14 02:14	0° E			12961 Apr 29 01:20	0° B	
max. Earth dist.	12960 Jun 14 12:14	0° E 39'33	1.44783 AU	desc. node	12961 May 04 07:38	7° B 48'27	
				greatest brilliancy	12961 May 05 12:51	9° B 40'05	-0.8m
superior conj	12960 Jun 19 04:26	8° E 06'59	-2°10'44	morning set	12961 May 13 10:27	21° B 54'43	
minimum elong	12960 Jun 19 08:10	8° E 22'01	2°11'36		12961 May 18 15:03	0° II	
	12960 Jul 02 10:54	0° O		max. Earth dist.	12961 May 28 05:55	15° II 00'11	1.45645 AU
evening rise	12960 Jul 02 21:50	0° O 46'03					
asc. node	12960 Jul 11 05:07	14° O 38'40		superior conj	12961 May 29 17:29	17° II 19'24	-2°11'12
evening max el	12960 Jul 20 23:56	28° O 12'33	18°09'07	minimum elong	12961 May 29 13:47	17° II 04'53	2°12'03
	12960 Jul 23 02:22	0° M			12961 Jun 06 18:28	0° E	
retrograde	12960 Jul 27 08:36	1° M 33'13		evening rise	12961 Jun 14 00:17	11° E 34'40	
evening set	12960 Jul 30 04:18	0° M 51'20			12961 Jun 25 14:16	0° O	
	12960 Jul 31 14:33	30° R O		asc. node	12961 Jun 28 01:58	3° O 42'28	
inferior conj	12960 Aug 05 07:08	25° O 32'09	2°12'03	evening max el	12961 Jul 04 12:51	11° O 49'37	18°32'50
minimum elong	12960 Aug 05 09:40	25° O 25'09	2°10'43	retrograde	12961 Jul 11 00:40	15° O 20'09	
min. Earth dist.	12960 Aug 07 22:43	22° O 38'07	0.63307 AU	evening set	12961 Jul 14 04:51	14° O 23'13	
morning rise	12960 Aug 11 13:13	19° O 17'58		inferior conj	12961 Jul 19 21:42	8° O 48'14	2°48'05
desc. node	12960 Aug 13 09:22	18° O 05'21		minimum elong	12961 Jul 19 23:43	8° O 42'08	2°46'53
direct	12960 Aug 18 05:08	16° O 46'36		min. Earth dist.	12961 Jul 21 23:19	6° O 18'26	0.65276 AU
morning max el	12960 Sep 01 04:02	24° O 48'21	27°47'57	morning rise	12961 Jul 25 17:30	2° O 26'03	
	12960 Sep 05 21:28	0° M			12961 Jul 30 05:17	30° R E	
	12960 Sep 26 03:52	0° E		desc. node	12961 Jul 31 06:46	29° E 48'42	
morning set	12960 Oct 05 19:22	18° E 06'55		direct	12961 Aug 01 04:51	29° E 45'39	
asc. node	12960 Oct 07 06:49	21° E 06'41			12961 Aug 03 06:16	0° O	
max. Earth dist.	12960 Oct 10 20:05	28° E 32'32	1.32266 AU	morning max el	12961 Aug 14 14:57	7° O 40'20	27°04'59
	12960 Oct 11 12:27	0° M			12961 Aug 31 22:21	0° M	
					12961 Sep 18 12:00	0° E	
superior conj	12960 Oct 13 14:08	4° M 28'17	0°57'29	morning set	12961 Sep 19 05:14	1° E 22'47	
minimum elong	12960 Oct 13 11:55	4° M 16'14	0°57'35	max. Earth dist.	12961 Sep 23 12:58	9° E 56'49	1.33575 AU
evening rise	12960 Oct 20 10:46	19° M 25'42		asc. node	12961 Sep 24 03:23	11° E 10'19	
	12960 Oct 25 13:00	0° J					
desc. node	12960 Nov 09 05:46	23° J 39'54		superior conj	12961 Sep 27 16:31	18° E 33'01	0°33'24
evening max el	12960 Nov 12 23:44	27° J 43'18	23°32'24	minimum elong	12961 Sep 27 14:54	18° E 24'28	0°33'19
	12960 Nov 15 13:46	0° B			12961 Oct 03 01:16	0° M	
retrograde	12960 Nov 26 10:03	4° B 24'40		evening rise	12961 Oct 04 21:18	3° M 54'21	
evening set	12960 Nov 30 22:19	3° B 40'24			12961 Oct 19 02:11	0° J	
min. Earth dist.	12960 Dec 07 09:55	0° B 35'06	0.55342 AU	evening max el	12961 Oct 25 12:07	7° J 46'48	21°51'56
	12960 Dec 08 09:52	30° R J		desc. node	12961 Oct 27 03:06	9° J 16'35	
inferior conj	12960 Dec 09 03:38	29° J 33'49	-5°52'13	retrograde	12961 Nov 07 00:08	13° J 59'09	
minimum elong	12960 Dec 09 06:19	29° J 29'52	5°51'05	evening set	12961 Nov 10 02:22	13° J 37'41	
morning rise	12960 Dec 17 16:06	25° J 41'11		inferior conj	12961 Nov 18 21:48	9° J 42'41	-5°41'07
direct	12960 Dec 20 10:42	25° J 22'23		minimum elong	12961 Nov 18 15:43	9° J 51'13	5°39'28
	12960 Dec 30 16:18	0° B		min. Earth dist.	12961 Nov 18 16:18	9° J 50'23	0.54569 AU
morning max el	12960 Dec 31 05:47	0° B 31'23	20°23'02	morning rise	12961 Nov 27 06:09	5° J 55'19	
asc. node	12961 Jan 03 07:04	3° B 50'10		direct	12961 Nov 30 20:15	5° J 27'03	
morning set	12961 Jan 18 18:41	0° \approx 31'28		morning max el	12961 Dec 13 03:43	11° J 19'58	21°56'45
	12961 Jan 18 12:33	0° \approx		asc. node	12961 Dec 21 04:11	21° J 09'28	
					12961 Dec 26 12:01	0° B	
superior conj	12961 Jan 26 08:25	16° \approx 05'20	1°13'21	morning set	12962 Jan 03 04:53	15° B 16'25	

superior conj	12962 Jan 10 07:42	0° \approx 23'01	1°28'14	superior conj	12962 Dec 25 13:20	14° \approx 56'06	1°36'25
minimum elong	12962 Jan 10 09:39	0° \approx 33'13	1°28'59	minimum elong	12962 Dec 25 14:13	15° \approx 00'54	1°37'21
	12962 Jan 10 03:20	0° \approx		max. Earth dist.	12962 Dec 28 05:38	20° \approx 41'32	1.32950 AU
max. Earth dist.	12962 Jan 14 09:11	8° \approx 46'43	1.34479 AU		12963 Jan 01 17:21	0° \approx	
evening rise	12962 Jan 18 16:16	17° \approx 15'01		evening rise	12963 Jan 02 04:42	0° \approx 57'04	
desc. node	12962 Jan 23 02:08	25° \approx 27'36		desc. node	12963 Jan 09 22:53	15° \approx 37'20	
	12962 Jan 25 15:38	0° \approx			12963 Jan 18 15:11	0° \approx	
	12962 Feb 14 15:50	0° \approx		evening max el	12963 Feb 05 06:40	22° \approx 26'24	27°26'16
evening max el	12962 Feb 22 17:37	9° \approx 01'45	26°51'59	retrograde	12963 Feb 18 22:43	29° \approx 52'42	
retrograde	12962 Mar 07 23:43	16° \approx 26'50		evening set	12963 Feb 25 18:02	27° \approx 23'35	
evening set	12962 Mar 14 11:44	13° \approx 54'16		min. Earth dist.	12963 Mar 01 13:53	23° \approx 57'50	0.64229 AU
min. Earth dist.	12962 Mar 18 11:40	9° \approx 57'14	0.65948 AU	inferior conj	12963 Mar 04 03:16	21° \approx 15'47	-0°35'33
asc. node	12962 Mar 19 01:28	9° \approx 17'35		minimum elong	12963 Mar 04 04:21	21° \approx 12'53	0°34'51
inferior conj	12962 Mar 20 13:34	7° \approx 32'07	0°28'44	asc. node	12963 Mar 05 22:55	19° \approx 23'25	
minimum elong	12962 Mar 20 12:48	7° \approx 34'21	0°28'23	morning rise	12963 Mar 10 16:44	15° \approx 53'16	
morning rise	12962 Mar 26 15:11	1° \approx 55'44		direct	12963 Mar 13 05:04	15° \approx 21'11	
direct	12962 Mar 29 12:06	1° \approx 10'30		morning max el	12963 Mar 19 14:34	18° \approx 39'26	17°50'08
morning max el	12962 Apr 04 21:22	4° \approx 32'14	18°10'24		12963 Mar 28 01:03	0° \approx	
desc. node	12962 Apr 21 04:17	27° \approx 55'53		morning set	12963 Apr 05 13:39	14° \approx 08'10	
	12962 Apr 22 11:06	0° \approx		desc. node	12963 Apr 08 00:52	18° \approx 17'09	
morning set	12962 Apr 23 21:56	2° \approx 20'18			12963 Apr 15 02:26	0° \approx	
superior conj	12962 May 09 01:27	26° \approx 25'35	-1°51'36	superior conj	12963 Apr 18 21:40	6° \approx 10'00	-1°17'07
minimum elong	12962 May 08 16:30	25° \approx 50'29	1°51'39	minimum elong	12963 Apr 18 13:50	5° \approx 38'26	1°16'38
max. Earth dist.	12962 May 11 01:29	29° \approx 33'31	1.45768 AU	max. Earth dist.	12963 Apr 23 20:58	14° \approx 05'20	1.45157 AU
	12962 May 11 08:16	0° \approx			12963 May 04 02:38	0° \approx	
evening rise	12962 May 25 03:19	21° \approx 27'21		evening rise	12963 May 04 15:57	0° \approx 51'01	
	12962 May 30 15:35	0° \approx		greatest brilliancy	12963 May 19 12:40	23° \approx 08'03	-0.6m
greatest brilliancy	12962 Jun 05 21:46	9° \approx 34'36	-0.7m		12963 May 24 09:22	0° \approx	
asc. node	12962 Jun 14 22:56	22° \approx 15'18		evening max el	12963 Jun 01 01:54	9° \approx 21'52	20°10'11
evening max el	12962 Jun 17 22:03	25° \approx 34'29	19°13'43	asc. node	12963 Jun 01 20:01	10° \approx 05'58	
retrograde	12962 Jun 24 21:21	29° \approx 27'26		retrograde	12963 Jun 08 19:59	13° \approx 48'14	
evening set	12962 Jun 28 10:31	28° \approx 14'15		evening set	12963 Jun 12 18:51	12° \approx 18'16	
inferior conj	12962 Jul 03 20:53	22° \approx 25'00	3°07'33	inferior conj	12963 Jun 18 01:47	6° \approx 16'03	3°13'22
minimum elong	12962 Jul 03 21:56	22° \approx 21'35	3°06'30	minimum elong	12963 Jun 18 01:46	6° \approx 16'04	3°12'22
min. Earth dist.	12962 Jul 05 07:52	20° \approx 31'28	0.66866 AU	min. Earth dist.	12963 Jun 18 22:29	5° \approx 05'38	0.68011 AU
morning rise	12962 Jul 09 08:46	16° \approx 01'16		morning rise	12963 Jun 23 08:23	29° \approx 12'48	
direct	12962 Jul 15 11:36	13° \approx 21'49			12963 Jun 23 06:05	30° \approx 12'48	
desc. node	12962 Jul 18 04:05	13° \approx 48'10		direct	12963 Jun 28 23:59	27° \approx 25'02	
morning max el	12962 Jul 28 01:49	20° \approx 53'43	25°56'49	desc. node	12963 Jul 05 01:20	29° \approx 12'38	25°56'49
	12962 Aug 04 22:34	0° \approx			12963 Jul 05 13:48	0° \approx	
	12962 Aug 25 02:31	0° \approx		morning max el	12963 Jul 10 11:54	4° \approx 18'31	24°33'02
morning set	12962 Sep 02 01:45	14° \approx 00'53			12963 Jul 30 05:29	0° \approx	
max. Earth dist.	12962 Sep 05 19:34	21° \approx 03'08	1.35384 AU	morning set	12963 Aug 15 04:34	25° \approx 04'49	43
	12962 Sep 10 08:46	0° \approx			12963 Aug 17 13:11	0° \approx	
asc. node	12962 Sep 10 23:58	1° \approx 16'40		max. Earth dist.	12963 Aug 18 18:50	2° \approx 13'26	1.37570 AU
superior conj	12962 Sep 11 11:09	2° \approx 13'18	0°04'26	superior conj	12963 Aug 25 18:48	15° \approx 20'36	-0°28'27
minimum elong	12962 Sep 11 10:54	2° \approx 12'02	0°04'20	minimum elong	12963 Aug 25 20:43	15° \approx 29'53	0°28'27
behind sun begin	12962 Sep 11 05:00	1° \approx 42'07		asc. node	12963 Aug 28 20:33	21° \approx 21'35	
behind sun end	12962 Sep 11 16:48	2° \approx 42'00			12963 Sep 02 04:32	0° \approx	
evening rise	12962 Sep 19 05:13	18° \approx 13'55		evening rise	12963 Sep 03 08:04	2° \approx 17'37	
	12962 Sep 25 02:48	0° \approx		evening max el	12963 Sep 20 01:27	29° \approx 42'40	19°17'48
evening max el	12962 Oct 07 11:42	18° \approx 21'05	20°24'38		12963 Sep 20 08:30	0° \approx	
desc. node	12962 Oct 14 00:29	22° \approx 15'53		retrograde	12963 Sep 29 09:00	4° \approx 22'04	
retrograde	12962 Oct 18 11:19	23° \approx 14'35		desc. node	12963 Sep 30 21:57	4° \approx 14'57	
evening set	12962 Oct 20 14:34	23° \approx 13'08		evening set	12963 Oct 01 05:30	4° \approx 11'47	
inferior conj	12962 Oct 29 14:27	19° \approx 41'17	-4°31'50	inferior conj	12963 Oct 09 19:41	0° \approx 02'22	-2°46'59
minimum elong	12962 Oct 29 04:22	19° \approx 15'01	4°28'21	minimum elong	12963 Oct 09 12:29	0° \approx 14'14	2°43'52
min. Earth dist.	12962 Oct 30 23:42	18° \approx 15'24	0.54733 AU		12963 Oct 09 21:07	30° \approx 15'24	
morning rise	12962 Nov 06 17:34	15° \approx 39'40		min. Earth dist.	12963 Oct 12 10:22	28° \approx 19'18	0.55805 AU
direct	12962 Nov 11 05:32	14° \approx 15'01		morning rise	12963 Oct 17 16:59	25° \approx 29'23	
morning max el	12962 Nov 24 15:34	21° \approx 29'08	23°44'05	direct	12963 Oct 23 01:03	24° \approx 24'33	
	12962 Dec 01 23:33	0° \approx			12963 Nov 04 10:05	0° \approx	
asc. node	12962 Dec 08 01:12	9° \approx 20'02		morning max el	12963 Nov 06 01:56	1° \approx 30'16	25°29'26
morning set	12962 Dec 18 16:39	0° \approx 02'02		asc. node	12963 Nov 24 22:08	28° \approx 10'16	
	12962 Dec 18 16:16	0° \approx			12963 Nov 25 21:52	0° \approx	

morning set	12963 Dec 03 04:13	14° ♁ 43'49			12964 Nov 16 21:58	0° ♁	
superior conj	12963 Dec 09 22:55	29° ♁ 37'47	1°38'18	superior conj	12964 Nov 23 10:21	14° ♁ 21'34	1°34'13
minimum elong	12963 Dec 09 22:42	29° ♁ 36'33	1°39'17	minimum elong	12964 Nov 23 09:08	14° ♁ 14'48	1°35'04
	12963 Dec 10 02:56	0° ♁		max. Earth dist.	12964 Nov 23 17:09	14° ♁ 59'30	1.31330 AU
max. Earth dist.	12963 Dec 11 09:18	2° ♁ 47'24	1.31891 AU	evening rise	12964 Nov 30 06:21	29° ♁ 21'02	
evening rise	12963 Dec 17 02:17	15° ♁ 01'30			12964 Nov 30 13:42	0° ♁	
	12963 Dec 24 18:11	0° ♁		desc. node	12964 Dec 13 16:43	24° ♁ 48'51	
desc. node	12963 Dec 27 19:45	5° ♁ 27'19			12964 Dec 16 23:00	0° ♁	
	12964 Jan 13 16:26	0° ♁		evening max el	12964 Dec 30 22:04	17° ♁ 29'13	27°02'46
evening max el	12964 Jan 18 17:08	5° ♁ 20'14	27°31'25	retrograde	12965 Jan 13 20:48	24° ♁ 41'45	
retrograde	12964 Feb 01 14:06	12° ♁ 40'58		evening set	12965 Jan 20 15:44	22° ♁ 42'28	
evening set	12964 Feb 08 12:31	10° ♁ 22'42		min. Earth dist.	12965 Jan 24 12:22	20° ♁ 01'35	0.60078 AU
min. Earth dist.	12964 Feb 12 06:30	7° ♁ 23'37	0.62233 AU	inferior conj	12965 Jan 27 16:40	17° ♁ 24'42	-3°11'14
inferior conj	12964 Feb 15 05:31	4° ♁ 36'49	-1°49'57	minimum elong	12965 Jan 27 23:28	17° ♁ 10'42	3°08'02
minimum elong	12964 Feb 15 09:16	4° ♁ 27'57	1°47'54	morning rise	12965 Feb 04 10:14	12° ♁ 39'25	
asc. node	12964 Feb 20 20:22	0° ♁ 10'45		direct	12965 Feb 06 11:57	12° ♁ 22'50	
	12964 Feb 21 04:48	30° ♁		asc. node	12965 Feb 06 17:47	12° ♁ 23'05	
morning rise	12964 Feb 22 08:43	29° ♁ 31'18		morning max el	12965 Feb 13 22:14	16° ♁ 05'00	18°03'40
direct	12964 Feb 24 14:23	29° ♁ 08'44			12965 Feb 23 15:16	0° ♁	
	12964 Feb 27 22:15	0° ♁		morning set	12965 Mar 01 12:25	10° ♁ 42'29	
morning max el	12964 Mar 02 08:01	2° ♁ 33'51	17°47'34				
morning set	12964 Mar 18 04:37	27° ♁ 02'23		superior conj	12965 Mar 11 11:46	28° ♁ 56'13	0°02'03
	12964 Mar 19 20:48	0° ♁		minimum elong	12965 Mar 11 11:56	28° ♁ 57'00	0°02'09
desc. node	12964 Mar 24 21:25	8° ♁ 47'57		behind sun begin	12965 Mar 11 04:11	28° ♁ 22'33	
				behind sun end	12965 Mar 11 19:42	29° ♁ 31'21	
superior conj	12964 Mar 29 16:45	16° ♁ 59'59	-0°36'47	desc. node	12965 Mar 11 17:59	29° ♁ 23'48	
minimum elong	12964 Mar 29 13:11	16° ♁ 44'57	0°36'26		12965 Mar 12 02:11	0° ♁	
max. Earth dist.	12964 Apr 05 14:08	28° ♁ 20'50	1.43872 AU	max. Earth dist.	12965 Mar 19 02:32	12° ♁ 02'13	1.42045 AU
	12964 Apr 06 14:48	0° ♁		evening rise	12965 Mar 24 10:25	20° ♁ 44'48	
evening rise	12964 Apr 13 05:56	10° ♁ 26'54			12965 Mar 30 07:59	0° ♁	
	12964 Apr 26 06:06	0° ♁			12965 Apr 20 13:29	0° ♁	
evening max el	12964 May 13 23:58	23° ♁ 10'06	21°19'23	evening max el	12965 Apr 26 17:07	6° ♁ 58'45	22°37'18
asc. node	12964 May 18 17:11	27° ♁ 01'30		asc. node	12965 May 05 14:28	12° ♁ 45'26	
retrograde	12964 May 22 18:39	28° ♁ 17'50		retrograde	12965 May 06 15:41	12° ♁ 50'33	
evening set	12964 May 27 03:55	26° ♁ 31'25		evening set	12965 May 11 12:03	10° ♁ 48'54	
inferior conj	12964 Jun 01 10:02	20° ♁ 17'42	3°07'28	inferior conj	12965 May 16 19:34	4° ♁ 25'58	2°51'03
minimum elong	12964 Jun 01 09:04	20° ♁ 21'03	3°06'26	minimum elong	12965 May 16 17:52	4° ♁ 31'54	2°49'55
min. Earth dist.	12964 Jun 01 17:09	19° ♁ 52'56	0.68685 AU	min. Earth dist.	12965 May 16 13:48	4° ♁ 46'06	0.68880 AU
morning rise	12964 Jun 06 14:01	14° ♁ 01'17			12965 May 20 05:25	30° ♁	
direct	12964 Jun 11 16:59	11° ♁ 47'31		morning rise	12965 May 21 23:34	28° ♁ 15'46	
desc. node	12964 Jun 20 22:29	16° ♁ 52'47		direct	12965 May 26 13:30	26° ♁ 21'40	
morning max el	12964 Jun 21 22:36	17° ♁ 51'51	23°03'25		12965 Jun 02 20:42	0° ♁	
	12964 Jul 02 01:23	0° ♁		morning max el	12965 Jun 04 12:42	1° ♁ 34'15	21°36'45
	12964 Jul 22 07:26	0° ♁		desc. node	12965 Jun 07 19:30	5° ♁ 08'42	
morning set	12964 Jul 26 09:01	6° ♁ 38'07			12965 Jun 25 21:33	0° ♁	
max. Earth dist.	12964 Jul 30 17:04	13° ♁ 57'24	1.39911 AU	morning set	12965 Jul 06 12:13	16° ♁ 20'13	
				max. Earth dist.	12965 Jul 12 19:33	26° ♁ 31'48	1.42129 AU
					12965 Jul 14 21:42	0° ♁	
superior conj	12964 Aug 07 11:28	27° ♁ 45'24	-1°03'11				
minimum elong	12964 Aug 07 16:05	28° ♁ 06'37	1°03'04				
	12964 Aug 08 16:41	0° ♁		superior conj	12965 Jul 20 08:44	9° ♁ 17'52	-1°36'13
asc. node	12964 Aug 14 17:10	11° ♁ 21'31		minimum elong	12965 Jul 20 15:33	9° ♁ 47'28	1°36'15
evening rise	12964 Aug 17 02:53	15° ♁ 57'48		evening rise	12965 Jul 31 09:47	29° ♁ 04'39	
	12964 Aug 24 16:59	0° ♁			12965 Jul 31 21:55	0° ♁	
evening max el	12964 Sep 02 03:12	11° ♁ 50'27	18°32'47	asc. node	12965 Aug 01 13:51	1° ♁ 12'42	
retrograde	12964 Sep 10 01:23	15° ♁ 50'08		evening max el	12965 Aug 16 12:56	24° ♁ 35'54	18°08'30
evening set	12964 Sep 12 00:59	15° ♁ 35'53		retrograde	12965 Aug 23 12:13	28° ♁ 09'08	
desc. node	12964 Sep 16 19:28	13° ♁ 21'36		evening set	12965 Aug 25 18:54	27° ♁ 46'47	
inferior conj	12964 Sep 19 21:38	11° ♁ 06'28	-0°58'29	inferior conj	12965 Sep 01 21:06	22° ♁ 56'55	0°33'25
minimum elong	12964 Sep 19 19:18	11° ♁ 10'57	0°57'27	minimum elong	12965 Sep 01 22:10	22° ♁ 54'31	0°32'48
min. Earth dist.	12964 Sep 23 02:59	8° ♁ 38'07	0.57582 AU	desc. node	12965 Sep 03 16:59	21° ♁ 17'40	
morning rise	12964 Sep 27 10:10	5° ♁ 55'37		min. Earth dist.	12965 Sep 05 03:45	20° ♁ 01'14	0.59764 AU
direct	12964 Oct 03 10:36	4° ♁ 24'24		morning rise	12965 Sep 08 22:09	17° ♁ 13'24	
morning max el	12964 Oct 17 17:55	11° ♁ 56'05	26°54'21	direct	12965 Sep 15 09:42	15° ♁ 14'24	
	12964 Oct 31 20:24	0° ♁		morning max el	12965 Sep 29 17:35	23° ♁ 05'13	27°45'26
asc. node	12964 Nov 10 18:58	17° ♁ 26'52			12965 Oct 05 21:55	0° ♁	
morning set	12964 Nov 16 13:51	29° ♁ 16'35			12965 Oct 25 00:23	0° ♁	

asc. node	12965 Oct 28 15:42	7°♄04'58			12966 Sep 30 18:15	0°♄		
morning set	12965 Oct 31 19:47	13°♄35'52		morning set	12966 Oct 15 19:55	27°♄35'23		
max. Earth dist.	12965 Nov 07 01:35	27°♄09'44	1.31280 AU	asc. node	12966 Oct 15 12:22	26°♄56'47		
					12966 Oct 16 23:56	0°♄		
superior conj	12965 Nov 07 21:48	29°♄02'17	1°24'23	max. Earth dist.	12966 Oct 21 06:42	9°♄07'19	1.31755 AU	
minimum elong	12965 Nov 07 19:52	28°♄51'29	1°24'58					
	12965 Nov 08 08:10	0°♄		superior conj	12966 Oct 23 07:22	13°♄33'38	1°08'54	
evening rise	12965 Nov 14 14:43	13°♄50'20		minimum elong	12966 Oct 23 05:06	13°♄21'11	1°09'10	
	12965 Nov 22 14:46	0°♄		evening rise	12966 Oct 30 01:23	28°♄23'26		
desc. node	12965 Nov 30 13:47	13°♄31'03			12966 Oct 30 19:22	0°♄		
evening max el	12965 Dec 12 19:14	28°♄46'19	26°00'06		12966 Nov 16 12:02	0°♄		
	12965 Dec 14 03:36	0°♄		desc. node	12966 Nov 17 10:57	1°♄18'17		
retrograde	12965 Dec 26 17:29	5°♄49'34		evening max el	12966 Nov 24 08:30	9°♄15'16	24°30'30	
evening set	12966 Jan 01 23:36	4°♄17'11		retrograde	12966 Dec 08 01:52	16°♄06'19		
min. Earth dist.	12966 Jan 06 08:11	1°♄40'46	0.57960 AU	evening set	12966 Dec 13 08:06	15°♄05'17		
	12966 Jan 08 16:46	30°♄		min. Earth dist.	12966 Dec 18 20:10	12°♄15'44	0.56138 AU	
inferior conj	12966 Jan 09 09:16	29°♄30'16	-4°31'06	inferior conj	12966 Dec 21 05:12	10°♄46'37	-5°33'24	
minimum elong	12966 Jan 09 17:56	29°♄14'46	4°27'48	minimum elong	12966 Dec 21 11:44	10°♄36'22	5°31'27	
morning rise	12966 Jan 17 15:05	25°♄07'01		morning rise	12966 Dec 29 17:25	6°♄44'04		
direct	12966 Jan 19 17:18	24°♄52'54		direct	12967 Jan 01 03:29	6°♄28'20		
asc. node	12966 Jan 24 15:06	26°♄15'39		morning max el	12967 Jan 11 01:18	11°♄14'12	19°38'47	
morning max el	12966 Jan 28 05:21	29°♄02'20	18°40'04	asc. node	12967 Jan 11 12:21	11°♄41'25		
	12966 Jan 29 03:52	0°♄			12967 Jan 23 16:32	0°♄		
morning set	12966 Feb 13 07:57	24°♄53'35		morning set	12967 Jan 28 11:23	9°♄24'34		
	12966 Feb 15 23:01	0°♄						
superior conj	12966 Feb 22 03:03	11°♄47'59	0°35'20	superior conj	12967 Feb 05 09:55	25°♄22'14	1°01'34	
minimum elong	12966 Feb 22 05:17	11°♄58'28	0°35'23	minimum elong	12967 Feb 05 12:45	25°♄36'06	1°01'49	
desc. node	12966 Feb 26 14:29	20°♄00'46			12967 Feb 07 18:56	0°♄		
max. Earth dist.	12966 Mar 01 10:09	25°♄00'28	1.39888 AU	max. Earth dist.	12967 Feb 11 16:17	7°♄20'27	1.37644 AU	
	12966 Mar 04 07:44	0°♄		desc. node	12967 Feb 13 11:02	10°♄35'57		
evening rise	12966 Mar 05 11:40	1°♄57'55		evening rise	12967 Feb 15 09:37	14°♄04'25		
	12966 Mar 23 15:01	0°♄			12967 Feb 24 21:30	0°♄		
evening max el	12966 Apr 09 07:24	20°♄49'25	23°58'17	evening max el	12967 Mar 18 11:33	0°♄		
retrograde	12966 Apr 20 09:44	27°♄20'49			12967 Mar 22 20:57	4°♄42'02	25°15'35	
asc. node	12966 Apr 22 11:49	27°♄01'05		retrograde	12967 Apr 03 23:33	11°♄43'02		
evening set	12966 Apr 25 17:38	25°♄06'02		asc. node	12967 Apr 09 09:12	9°♄38'18		
min. Earth dist.	12966 Apr 30 10:14	19°♄39'10	0.68613 AU	evening set	12967 Apr 09 19:07	9°♄18'02		
inferior conj	12966 May 01 04:28	18°♄37'06	2°24'33	min. Earth dist.	12967 Apr 14 04:19	4°♄26'52	0.67903 AU	
minimum elong	12966 May 01 02:21	18°♄44'18	2°23'20	inferior conj	12967 Apr 15 10:51	2°♄47'31	1°47'56	
morning rise	12966 May 06 11:07	12°♄34'21		minimum elong	12967 Apr 15 08:46	2°♄54'18	1°46'49	
direct	12966 May 10 12:25	11°♄01'08			12967 Apr 17 16:15	30°♄		
morning max el	12966 May 18 08:58	15°♄27'27	20°19'46	morning rise	12967 Apr 20 22:46	26°♄53'34		
desc. node	12966 May 25 16:24	24°♄09'23		direct	12967 Apr 24 12:15	25°♄40'39		
	12966 May 29 22:05	0°♄		morning max el	12967 May 01 12:50	29°♄31'37	19°16'49	
morning set	12966 Jun 15 18:21	25°♄08'26			12967 May 02 00:10	0°♄		
	12966 Jun 18 21:29	0°♄		desc. node	12967 May 12 13:10	13°♄42'54		
max. Earth dist.	12966 Jun 25 04:29	9°♄56'26	1.43971 AU	greatest brilliancy	12967 May 14 08:11	16°♄21'22	-0.7m	
					12967 May 23 08:08	0°♄		
superior conj	12966 Jul 01 06:48	19°♄50'19	-2°01'58	morning set	12967 May 25 20:29	3°♄52'04		
minimum elong	12966 Jul 01 13:04	20°♄16'09	2°02'31	max. Earth dist.	12967 Jun 07 19:41	24°♄01'54	1.45235 AU	
	12966 Jul 07 08:34	0°♄						
evening rise	12966 Jul 13 23:59	11°♄25'35		superior conj	12967 Jun 11 05:55	29°♄26'34	-2°13'24	
asc. node	12966 Jul 19 10:35	20°♄50'04		minimum elong	12967 Jun 11 06:45	29°♄29'53	2°14'23	
	12966 Jul 25 01:19	0°♄			12967 Jun 11 14:21	0°♄		
evening max el	12966 Jul 31 02:37	7°♄48'26	18°03'36	evening rise	12967 Jun 25 16:29	22°♄49'55		
retrograde	12966 Aug 06 13:40	11°♄09'25			12967 Jun 30 00:39	0°♄		
evening set	12966 Aug 09 04:34	10°♄35'27		asc. node	12967 Jul 06 07:25	10°♄08'28		
inferior conj	12966 Aug 15 14:53	5°♄26'40	1°42'25	evening max el	12967 Jul 14 16:45	21°♄19'31	18°17'04	
minimum elong	12966 Aug 15 17:20	5°♄20'23	1°41'08	retrograde	12967 Jul 21 01:31	24°♄42'23		
min. Earth dist.	12966 Aug 18 13:38	2°♄25'52	0.62053 AU	evening set	12967 Jul 24 00:52	23°♄54'13		
	12966 Aug 21 06:48	30°♄		inferior conj	12967 Jul 29 23:01	18°♄28'17	2°29'31	
desc. node	12966 Aug 21 14:29	29°♄45'08		minimum elong	12967 Jul 30 01:25	18°♄21'22	2°28'13	
morning rise	12966 Aug 22 03:42	26°♄20'51		min. Earth dist.	12967 Aug 01 08:53	15°♄42'48	0.64193 AU	
direct	12966 Aug 28 20:01	26°♄58'38		morning rise	12967 Aug 05 00:31	12°♄10'02		
	12966 Sep 06 02:07	0°♄		desc. node	12967 Aug 08 11:55	10°♄07'50		
morning max el	12966 Sep 11 23:27	4°♄59'29	27°57'41	direct	12967 Aug 11 15:15	9°♄33'27		
				morning max el	12967 Aug 25 09:07	17°♄33'13	27°33'11	






























































































































	12967 Sep 04 18:45	0° \mathbb{M}		morning max el	12968 Aug 06 20:15	0° Ω 35'49	26°38'35
	12967 Sep 23 15:00	0° $\underline{\Omega}$			12968 Aug 28 18:44	0° \mathbb{M}	
morning set	12967 Sep 29 11:51	11° $\underline{\Omega}$ 09'24		morning set	12968 Sep 11 16:33	24° \mathbb{M} 10'46	
asc. node	12967 Oct 02 08:59	16° $\underline{\Omega}$ 57'35			12968 Sep 14 17:00	0° $\underline{\Omega}$	
max. Earth dist.	12967 Oct 04 04:57	20° $\underline{\Omega}$ 45'08	1.32766 AU	max. Earth dist.	12968 Sep 15 17:47	2° $\underline{\Omega}$ 02'21	1.34295 AU
				asc. node	12968 Sep 18 05:35	7° $\underline{\Omega}$ 03'14	
superior conj	12967 Oct 07 13:03	27° $\underline{\Omega}$ 50'16	0°47'55				
minimum elong	12967 Oct 07 11:00	27° $\underline{\Omega}$ 39'16	0°47'55	superior conj	12968 Sep 20 12:32	11° $\underline{\Omega}$ 46'05	0°21'41
	12967 Oct 08 13:07	0° \mathbb{M}		minimum elong	12968 Sep 20 11:24	11° $\underline{\Omega}$ 40'10	0°21'34
evening rise	12967 Oct 14 12:32	12° \mathbb{M} 55'41		evening rise	12968 Sep 27 22:17	27° $\underline{\Omega}$ 22'05	
	12967 Oct 23 01:34	0° \mathbb{X}			12968 Sep 29 04:34	0° \mathbb{M}	
desc. node	12967 Nov 04 08:13	17° \mathbb{X} 50'16		evening max el	12968 Oct 17 11:01	29° \mathbb{M} 31'51	21°12'28
evening max el	12967 Nov 05 18:41	19° \mathbb{X} 18'11	22°48'45		12968 Oct 17 22:38	0° \mathbb{X}	
retrograde	12967 Nov 18 21:04	25° \mathbb{X} 48'26		desc. node	12968 Oct 21 05:35	2° \mathbb{X} 41'16	
evening set	12967 Nov 22 18:37	25° \mathbb{X} 15'22		retrograde	12968 Oct 29 08:30	5° \mathbb{X} 26'34	
min. Earth dist.	12967 Nov 30 03:20	21° \mathbb{X} 54'19	0.54913 AU	evening set	12968 Oct 31 23:13	5° \mathbb{X} 10'37	
inferior conj	12967 Dec 01 06:29	21° \mathbb{X} 15'41	-5°54'53	inferior conj	12968 Nov 09 22:15	1° \mathbb{X} 16'41	-5°18'00
minimum elong	12967 Dec 01 05:24	21° \mathbb{X} 17'13	5°53'54	minimum elong	12968 Nov 09 13:30	1° \mathbb{X} 29'00	5°15'30
morning rise	12967 Dec 09 17:36	17° \mathbb{X} 27'09		min. Earth dist.	12968 Nov 10 09:28	1° \mathbb{X} 00'52	0.54526 AU
direct	12967 Dec 12 20:10	17° \mathbb{X} 04'49			12968 Nov 12 05:21	30° \mathbb{R} \mathbb{M}	
morning max el	12967 Dec 24 07:06	22° \mathbb{X} 32'32	21°00'32	morning rise	12968 Nov 18 04:24	27° \mathbb{M} 26'15	
asc. node	12967 Dec 29 09:31	28° \mathbb{X} 24'27		direct	12968 Nov 22 03:57	26° \mathbb{M} 52'13	
	12967 Dec 30 13:05	0° \mathbb{Z}			12968 Dec 01 06:21	0° \mathbb{X}	
morning set	12968 Jan 12 19:48	24° \mathbb{Z} 06'47		morning max el	12968 Dec 04 23:56	3° \mathbb{X} 02'12	22°41'33
	12968 Jan 15 15:24	0° \approx		asc. node	12968 Dec 15 06:35	16° \mathbb{X} 07'55	
					12968 Dec 22 23:22	0° \mathbb{Z}	
superior conj	12968 Jan 20 04:13	9° \approx 27'01	1°20'32	morning set	12968 Dec 27 06:57	8° \mathbb{Z} 53'47	
minimum elong	12968 Jan 20 06:39	9° \approx 39'29	1°21'05				
max. Earth dist.	12968 Jan 25 01:39	19° \approx 17'51	1.35547 AU	superior conj	12969 Jan 03 06:36	23° \mathbb{Z} 53'04	1°32'31
evening rise	12968 Jan 29 01:17	26° \approx 55'19		minimum elong	12969 Jan 03 08:07	24° \mathbb{Z} 01'08	1°33'20
	12968 Jan 30 17:19	0° \mathbb{X}			12969 Jan 06 04:10	0° \approx	
desc. node	12968 Jan 31 07:38	1° \mathbb{X} 05'02		max. Earth dist.	12969 Jan 06 17:51	1° \approx 11'04	1.33776 AU
	12968 Feb 18 06:45	0° \mathbb{Y}		evening rise	12969 Jan 11 07:12	10° \approx 21'49	
evening max el	12968 Mar 04 10:40	18° \mathbb{Y} 31'02	26°21'49	desc. node	12969 Jan 17 04:21	21° \approx 23'53	
retrograde	12968 Mar 17 08:10	25° \mathbb{Y} 49'53			12969 Jan 22 03:39	0° \mathbb{X}	
evening set	12968 Mar 23 14:44	23° \mathbb{Y} 18'37			12969 Feb 12 21:32	0° \mathbb{Y}	
asc. node	12968 Mar 26 06:38	20° \mathbb{Y} 43'49		evening max el	12969 Feb 15 00:11	2° \mathbb{Y} 07'36	27°09'38
min. Earth dist.	12968 Mar 27 17:45	19° \mathbb{Y} 02'24	0.66776 AU	retrograde	12969 Feb 28 10:49	9° \mathbb{Y} 33'52	
inferior conj	12968 Mar 29 12:38	16° \mathbb{Y} 51'51	1°00'47	evening set	12969 Mar 07 02:34	7° \mathbb{Y} 01'43	
minimum elong	12968 Mar 29 11:10	16° \mathbb{Y} 56'18	1°00'04	min. Earth dist.	12969 Mar 11 00:32	3° \mathbb{Y} 18'42	0.65263 AU
morning rise	12968 Apr 04 08:30	11° \mathbb{Y} 08'31		inferior conj	12969 Mar 13 07:31	0° \mathbb{Y} 45'02	0°02'47
direct	12968 Apr 07 11:12	10° \mathbb{Y} 13'54		minimum elong	12969 Mar 13 07:26	0° \mathbb{Y} 45'16	0°02'50
morning max el	12968 Apr 13 23:38	13° \mathbb{Y} 42'25	18°29'52	transit middle	12969 Mar 13 07:26	0° \mathbb{Y} 45'16	0°02'50
	12968 Apr 26 01:14	0° \mathbb{Z}		transit begin	12969 Mar 13 04:28	0° \mathbb{Y} 53'36	
desc. node	12968 Apr 28 09:50	3° \mathbb{Z} 39'48		transit end	12969 Mar 13 10:24	0° \mathbb{Y} 36'57	
morning set	12968 May 04 16:08	13° \mathbb{Z} 30'50		asc. node	12969 Mar 13 04:04	0° \mathbb{Y} 54'43	
	12968 May 15 03:59	0° \mathbb{I}			12969 Mar 13 23:41	30° \mathbb{R} \mathbb{X}	
				morning rise	12969 Mar 19 13:55	25° \mathbb{X} 14'25	
superior conj	12968 May 20 14:33	8° \mathbb{I} 30'04	-2°05'12	direct	12969 Mar 22 07:03	24° \mathbb{X} 35'10	
minimum elong	12968 May 20 07:54	8° \mathbb{I} 04'05	2°05'44	morning max el	12969 Mar 28 15:21	27° \mathbb{X} 53'43	17°59'42
max. Earth dist.	12968 May 20 14:58	8° \mathbb{I} 31'41	1.45792 AU		12969 Mar 30 14:09	0° \mathbb{Y}	
	12968 Jun 03 07:34	0° \mathbb{E}		desc. node	12969 Apr 15 06:27	23° \mathbb{Y} 53'46	
evening rise	12968 Jun 05 08:26	3° \mathbb{E} 12'58		morning set	12969 Apr 15 15:53	24° \mathbb{Y} 32'27	
greatest brilliancy	12968 Jun 14 03:33	17° \mathbb{E} 04'44	-0.8m		12969 Apr 18 23:55	0° \mathbb{Z}	
asc. node	12968 Jun 22 04:20	29° \mathbb{E} 00'18					
	12968 Jun 22 22:07	0° Ω		superior conj	12969 Apr 30 01:44	17° \mathbb{Z} 47'12	-1°38'16
evening max el	12968 Jun 27 04:23	5° Ω 00'49	18°48'12	minimum elong	12969 Apr 29 16:34	17° \mathbb{Z} 10'58	1°38'00
retrograde	12968 Jul 03 19:56	8° Ω 39'09		max. Earth dist.	12969 May 03 11:08	23° \mathbb{Z} 07'28	1.45597 AU
evening set	12968 Jul 07 03:58	7° Ω 35'12			12969 May 07 20:51	0° \mathbb{I}	
inferior conj	12968 Jul 12 17:39	1° Ω 53'50	2°58'08	evening rise	12969 May 16 03:42	12° \mathbb{I} 48'43	
minimum elong	12968 Jul 12 19:17	1° Ω 48'43	2°57'01		12969 May 27 10:20	0° \mathbb{E}	
	12968 Jul 14 06:01	30° \mathbb{R} \mathbb{E}		greatest brilliancy	12969 May 29 18:26	3° \mathbb{E} 28'22	-0.7m
min. Earth dist.	12968 Jul 14 12:56	29° \mathbb{E} 38'40	0.66006 AU	asc. node	12969 Jun 09 01:22	17° \mathbb{E} 16'33	
morning rise	12968 Jul 18 09:48	25° \mathbb{E} 30'35		evening max el	12969 Jun 10 11:21	18° \mathbb{E} 46'36	19°35'57
direct	12968 Jul 24 17:55	22° \mathbb{E} 49'44		retrograde	12969 Jun 17 17:50	22° \mathbb{E} 52'50	
desc. node	12968 Jul 25 09:17	22° \mathbb{E} 51'13		evening set	12969 Jun 21 11:03	21° \mathbb{E} 32'25	
	12968 Aug 06 05:54	0° Ω		inferior conj	12969 Jun 26 19:35	15° \mathbb{E} 37'12	3°11'33

minimum elong	12969 Jun 26 20:11	15°☿35'12	3°10'33	inferior conj	12970 Jun 11 02:10	29°♄33'40	3°12'14
min. Earth dist.	12969 Jun 28 00:19	14°☿01'42	0.67404 AU	minimum elong	12970 Jun 11 01:44	29°♄35'09	3°11'14
morning rise	12969 Jul 02 04:53	9°☿14'03		min. Earth dist.	12970 Jun 11 17:02	28°♄42'24	0.68346 AU
direct	12969 Jul 08 03:01	6°☿38'05		morning rise	12970 Jun 16 07:18	23°♄13'59	
desc. node	12969 Jul 12 06:35	7°☿40'54		direct	12970 Jun 21 17:33	20°♄50'22	
morning max el	12969 Jul 20 07:00	13°☿55'40	25°22'37	desc. node	12970 Jun 29 03:48	24°♄10'03	
	12969 Aug 02 08:44	0°♁		morning max el	12970 Jul 02 17:09	27°♄24'45	23°55'08
	12969 Aug 21 13:52	0°♂			12970 Jul 05 03:22	0°☿	
morning set	12969 Aug 25 06:09	6°♂29'39			12970 Jul 26 23:49	0°♁	
max. Earth dist.	12969 Aug 28 20:58	13°♂08'17	1.36275 AU	morning set	12970 Aug 07 00:05	17°♁54'53	
				max. Earth dist.	12970 Aug 10 18:36	24°♁28'19	1.38552 AU
					12970 Aug 13 20:30	0°♂	
superior conj	12969 Sep 04 02:56	25°♂13'24	-0°09'08				
minimum elong	12969 Sep 04 03:31	25°♂16'16	0°09'13	superior conj	12970 Aug 18 04:45	8°♂04'07	-0°43'07
behind sun begin	12969 Sep 03 22:15	24°♂50'07		minimum elong	12970 Aug 18 07:47	8°♂18'30	0°43'03
behind sun end	12969 Sep 04 08:46	25°♂42'27		asc. node	12970 Aug 22 22:47	17°♂13'07	
asc. node	12969 Sep 05 02:10	27°♂09'31		evening rise	12970 Aug 27 04:17	25°♂31'12	
	12969 Sep 06 12:00	0°♂			12970 Aug 29 11:22	0°♂	
evening rise	12969 Sep 12 04:25	11°♂36'09		evening max el	12970 Sep 12 11:56	22°♂08'15	18°56'07
	12969 Sep 21 21:47	0°♂		retrograde	12970 Sep 21 04:16	26°♂29'14	
evening max el	12969 Sep 29 16:33	10°♂25'29	19°53'32	evening set	12970 Sep 23 01:11	26°♂17'54	
desc. node	12969 Oct 08 03:03	15°♂23'14		desc. node	12970 Sep 25 00:32	25°♂43'04	
retrograde	12969 Oct 09 23:14	15°♂32'46		inferior conj	12970 Oct 01 08:27	22°♂00'46	-1°59'57
evening set	12969 Oct 11 21:39	15°♂22'42		minimum elong	12970 Oct 01 03:21	22°♂09'44	1°57'39
inferior conj	12969 Oct 20 18:51	11°♂22'03	-3°49'48	min. Earth dist.	12970 Oct 04 07:23	19°♂56'27	0.56489 AU
minimum elong	12969 Oct 20 09:24	11°♂36'30	3°46'07	morning rise	12970 Oct 09 02:23	17°♂11'24	
min. Earth dist.	12969 Oct 22 18:05	10°♂09'51	0.55081 AU	direct	12970 Oct 14 17:59	15°♂55'33	
morning rise	12969 Oct 28 19:42	7°♂08'28		morning max el	12970 Oct 28 22:34	23°♂13'57	26°08'50
direct	12969 Nov 02 16:12	6°♂16'48			12970 Nov 04 00:47	0°♂	
morning max el	12969 Nov 16 10:19	13°♂04'58	24°30'15	asc. node	12970 Nov 19 00:28	23°♂39'01	
	12969 Nov 29 10:37	0°♂			12970 Nov 22 06:23	0°♂	
asc. node	12969 Dec 02 03:34	4°♂36'30		morning set	12970 Nov 26 05:50	8°♂17'32	
morning set	12969 Dec 11 18:53	23°♂38'55					
	12969 Dec 14 17:06	0°♂		superior conj	12970 Dec 03 00:51	23°♂14'54	1°37'17
				minimum elong	12970 Dec 03 00:11	23°♂11'12	1°38'13
superior conj	12969 Dec 18 14:13	8°♂31'13	1°37'58	max. Earth dist.	12970 Dec 03 23:09	25°♂18'45	1.31592 AU
minimum elong	12969 Dec 18 14:38	8°♂33'28	1°38'56		12970 Dec 06 02:11	0°♂	
max. Earth dist.	12969 Dec 20 17:31	13°♂10'20	1.32439 AU	evening rise	12970 Dec 10 00:31	8°♂26'21	
evening rise	12969 Dec 25 23:53	24°♂14'29			12970 Dec 21 06:48	0°♂	
	12969 Dec 28 21:14	0°♂		desc. node	12970 Dec 21 22:04	1°♂05'18	
desc. node	12970 Jan 04 01:09	11°♂26'16		evening max el	12971 Jan 10 20:35	27°♂56'13	27°23'26
	12970 Jan 15 17:40	0°♂			12971 Jan 13 04:15	0°♂	
evening max el	12970 Jan 28 12:09	15°♂19'58	27°32'11	retrograde	12971 Jan 24 19:02	5°♂14'11	
retrograde	12970 Feb 11 06:53	22°♂45'15		evening set	12971 Jan 31 16:40	3°♂03'06	
evening set	12970 Feb 18 04:12	20°♂19'26		min. Earth dist.	12971 Feb 04 11:01	0°♂12'49	0.61324 AU
min. Earth dist.	12970 Feb 21 22:45	17°♂05'59	0.63410 AU		12971 Feb 04 16:58	30°♂	
inferior conj	12970 Feb 24 16:43	14°♂19'56	-1°06'01	inferior conj	12971 Feb 07 12:59	27°♂28'11	-2°23'58
minimum elong	12970 Feb 24 18:51	14°♂14'32	1°04'46	minimum elong	12971 Feb 07 18:03	27°♂16'52	2°21'22
asc. node	12970 Feb 28 01:31	11°♂10'54		morning rise	12971 Feb 14 22:22	22°♂30'52	
morning rise	12970 Mar 03 11:54	9°♂04'37		asc. node	12971 Feb 14 22:57	22°♂30'26	
direct	12970 Mar 05 21:04	8°♂37'07		direct	12971 Feb 17 01:46	22°♂11'24	
morning max el	12970 Mar 12 09:07	11°♂57'03	17°46'51	morning max el	12971 Feb 24 01:38	25°♂42'56	17°51'58
	12970 Mar 24 18:28	0°♂			12971 Feb 27 16:37	0°♂	
morning set	12970 Mar 28 18:14	6°♂50'39		morning set	12971 Mar 11 17:04	20°♂06'29	
desc. node	12970 Apr 02 03:02	14°♂19'37			12971 Mar 17 05:10	0°♂	
				desc. node	12971 Mar 19 23:34	4°♂52'51	
superior conj	12970 Apr 10 07:03	27°♂58'22	-1°00'12				
minimum elong	12970 Apr 10 00:55	27°♂33'14	0°59'44	superior conj	12971 Mar 22 12:31	9°♂17'11	-0°19'49
	12970 Apr 11 12:52	0°♂		minimum elong	12971 Mar 22 10:43	9°♂09'26	0°19'35
max. Earth dist.	12970 Apr 16 05:25	7°♂32'33	1.44680 AU	max. Earth dist.	12971 Mar 29 20:13	21°♂33'24	1.43148 AU
evening rise	12970 Apr 25 14:50	22°♂12'16			12971 Apr 04 02:22	0°♂	
	12970 Apr 30 17:47	0°♂		evening rise	12971 Apr 05 09:42	2°♂03'17	
	12970 May 22 03:36	0°♂			12971 Apr 24 05:10	0°♂	
evening max el	12970 May 24 12:35	2°♂34'09	20°38'19	evening max el	12971 May 07 08:23	16°♂22'34	21°51'54
asc. node	12970 May 26 22:29	4°♂45'44		asc. node	12971 May 13 19:42	21°♂12'49	
retrograde	12970 Jun 01 16:48	7°♂18'01		retrograde	12971 May 16 14:52	21°♂49'09	
evening set	12970 Jun 05 19:54	5°♂41'07		evening set	12971 May 21 04:43	19°♂56'20	
	12970 Jun 10 18:32	30°♂					

inferior conj	12971 May 26 11:11	13° Π 38'33	3°01'47		12972 May 08 06:16	30° κ 8	
minimum elong	12971 May 26 09:52	13° Π 43'07	3°00'41	inferior conj	12972 May 09 20:40	27° δ 48'47	2°41'03
min. Earth dist.	12971 May 26 12:50	13° Π 32'47	0.68822 AU	minimum elong	12972 May 09 18:45	27° δ 55'25	2°39'51
morning rise	12971 May 31 14:50	7° Π 24'27		min. Earth dist.	12972 May 09 09:36	28° δ 27'03	0.68831 AU
direct	12971 Jun 05 12:19	5° Π 18'30		morning rise	12972 May 15 01:29	21° δ 41'43	
morning max el	12971 Jun 15 04:40	11° Π 00'47	22°25'41	direct	12972 May 19 10:05	19° δ 56'17	
desc. node	12971 Jun 16 00:53	11° Π 52'43		morning max el	12972 May 27 21:00	24° δ 47'30	21°02'28
	12971 Jun 30 05:14	0° ϕ		desc. node	12972 Jun 01 21:50	0° Π 29'30	
morning set	12971 Jul 18 17:45	28° ϕ 14'30			12972 Jun 01 12:16	0° Π	
	12971 Jul 19 19:37	0° Ω			12972 Jun 22 14:19	0° ϕ	
max. Earth dist.	12971 Jul 23 17:40	6° Ω 30'45	1.40883 AU	morning set	12972 Jun 27 10:40	7° ϕ 29'31	
				max. Earth dist.	12972 Jul 04 23:10	19° ϕ 28'45	1.42981 AU
					12972 Jul 11 07:36	0° Ω	
superior conj	12971 Jul 31 13:40	20° Ω 07'42	-1°17'42				
minimum elong	12971 Jul 31 19:22	20° Ω 33'18	1°17'35	superior conj	12972 Jul 12 01:20	1° Ω 15'01	-1°48'26
	12971 Aug 05 23:29	0° η		minimum elong	12972 Jul 12 08:25	1° Ω 45'05	1°48'39
asc. node	12971 Aug 09 19:25	7° η 09'40		evening rise	12972 Jul 23 18:48	21° Ω 46'18	
evening rise	12971 Aug 10 18:27	8° η 57'51		asc. node	12972 Jul 26 16:06	26° Ω 55'25	
	12971 Aug 22 22:44	0° $\underline{\alpha}$			12972 Jul 28 09:52	0° η	
evening max el	12971 Aug 26 17:37	4° $\underline{\alpha}$ 33'21	18°20'06	evening max el	12972 Aug 09 05:26	17° η 30'57	18°04'06
retrograde	12971 Sep 03 04:29	8° $\underline{\alpha}$ 19'35		retrograde	12972 Aug 15 22:07	20° η 57'09	
evening set	12971 Sep 05 07:01	8° $\underline{\alpha}$ 02'15		evening set	12972 Aug 18 08:19	20° η 30'06	
desc. node	12971 Sep 11 22:04	4° $\underline{\alpha}$ 08'16		inferior conj	12972 Aug 25 03:18	15° η 31'36	1°05'34
inferior conj	12971 Sep 12 19:39	3° $\underline{\alpha}$ 24'13	-0°16'51	minimum elong	12972 Aug 25 05:11	15° η 27'08	1°04'33
minimum elong	12971 Sep 12 19:02	3° $\underline{\alpha}$ 25'30	0°16'39	min. Earth dist.	12972 Aug 28 07:19	12° η 31'22	0.60744 AU
min. Earth dist.	12971 Sep 16 03:06	0° $\underline{\alpha}$ 41'41	0.58481 AU	desc. node	12972 Aug 28 19:34	12° η 03'56	
	12971 Sep 17 00:55	30° κ η		morning rise	12972 Aug 31 23:09	9° η 37'30	
morning rise	12971 Sep 20 03:34	27° η 58'44		direct	12972 Sep 07 13:31	7° η 28'04	
direct	12971 Sep 26 09:46	26° η 15'20		morning max el	12972 Sep 21 19:56	15° η 23'26	27°55'33
	12971 Oct 06 03:05	0° $\underline{\alpha}$			12972 Oct 03 17:48	0° $\underline{\alpha}$	
morning max el	12971 Oct 10 17:30	3° $\underline{\alpha}$ 55'42	27°20'39		12972 Oct 21 07:51	0° η	
	12971 Oct 29 19:04	0° η		asc. node	12972 Oct 22 17:57	2° η 50'38	
asc. node	12971 Nov 05 21:15	13° η 06'12		morning set	12972 Oct 24 17:49	6° η 56'20	
morning set	12971 Nov 10 14:07	22° η 45'08		max. Earth dist.	12972 Oct 30 15:21	19° η 38'02	1.31417 AU
	12971 Nov 13 22:27	0° χ					
superior conj	12971 Nov 17 12:32	7° χ 58'18	1°30'44	superior conj	12972 Oct 31 23:22	22° η 35'18	1°18'30
minimum elong	12971 Nov 17 10:58	7° χ 49'35	1°31'29	minimum elong	12972 Oct 31 21:14	22° η 23'28	1°18'57
max. Earth dist.	12971 Nov 17 07:43	7° χ 31'24	1.31247 AU		12972 Nov 04 07:24	0° χ	
evening rise	12971 Nov 24 06:41	22° χ 51'13		evening rise	12972 Nov 07 16:14	7° χ 22'44	
	12971 Nov 27 16:52	0° ζ			12972 Nov 19 06:30	0° ζ	
desc. node	12971 Dec 08 19:04	20° ζ 12'02		desc. node	12972 Nov 24 16:11	8° ζ 33'12	
	12971 Dec 15 10:51	0° \approx		evening max el	12972 Dec 04 16:26	20° ζ 40'49	25°24'38
evening max el	12971 Dec 23 22:45	9° \approx 45'17	26°40'09	retrograde	12972 Dec 18 12:54	27° ζ 38'52	
retrograde	12972 Jan 06 21:38	16° \approx 53'15		evening set	12972 Dec 24 10:33	26° ζ 19'29	
evening set	12972 Jan 13 12:15	15° \approx 04'59		min. Earth dist.	12972 Dec 29 04:35	23° ζ 40'07	0.57135 AU
min. Earth dist.	12972 Jan 17 12:44	12° \approx 27'40	0.59161 AU	inferior conj	12973 Jan 01 00:41	21° ζ 45'45	-5°00'56
inferior conj	12972 Jan 20 16:45	10° \approx 00'20	-3°46'00	minimum elong	12973 Jan 01 09:07	21° ζ 31'32	4°58'03
minimum elong	12972 Jan 21 00:37	9° \approx 45'03	3°42'35	morning rise	12973 Jan 09 10:08	17° ζ 31'45	
morning rise	12972 Jan 28 15:56	5° \approx 23'54		direct	12973 Jan 11 14:52	17° ζ 17'22	
direct	12972 Jan 30 17:12	5° \approx 08'45		asc. node	12973 Jan 18 17:37	19° ζ 59'50	
asc. node	12972 Feb 01 20:19	5° \approx 25'48		morning max el	12973 Jan 20 16:07	21° ζ 40'51	19°02'12
morning max el	12972 Feb 07 13:18	9° \approx 01'30	18°16'27		12973 Jan 27 03:57	0° \approx	
	12972 Feb 21 03:01	0° χ		morning set	12973 Feb 06 05:48	18° \approx 23'43	
morning set	12972 Feb 23 06:29	4° χ 02'29			12973 Feb 12 03:02	0° χ	
superior conj	12972 Mar 03 16:45	21° χ 39'13	0°16'58	superior conj	12973 Feb 14 15:16	4° χ 51'01	0°47'21
minimum elong	12972 Mar 03 18:01	21° χ 44'56	0°17'01	minimum elong	12973 Feb 14 17:54	5° χ 03'38	0°47'28
desc. node	12972 Mar 05 20:04	25° χ 29'59		desc. node	12973 Feb 20 16:35	16° χ 06'49	
	12972 Mar 08 09:20	0° γ		max. Earth dist.	12973 Feb 21 13:48	17° χ 42'03	1.38935 AU
max. Earth dist.	12972 Mar 11 06:50	4° γ 59'02	1.41161 AU	evening rise	12973 Feb 25 09:09	24° χ 22'07	
evening rise	12972 Mar 15 22:52	12° γ 45'30			12973 Feb 28 17:15	0° γ	
	12972 Mar 26 23:47	0° δ			12973 Mar 20 17:38	0° δ	
	12972 Apr 18 19:01	0° Π		evening max el	12973 Apr 01 13:59	14° δ 04'49	24°31'54
evening max el	12972 Apr 19 00:14	0° Π 13'07	23°11'45	retrograde	12973 Apr 13 02:55	20° δ 49'47	
retrograde	12972 Apr 29 10:38	6° Π 21'55		asc. node	12973 Apr 16 14:22	19° δ 56'05	
asc. node	12972 Apr 29 16:59	6° Π 21'35		evening set	12973 Apr 18 15:58	18° δ 30'00	
evening set	12972 May 04 11:56	4° Π 14'26		min. Earth dist.	12973 Apr 23 05:10	13° δ 18'40	0.68374 AU

inferior conj	12973 Apr 24 04:43	11°♄59'53	2°10'15	asc. node	12974 Apr 03 11:47	1°♄52'02	
minimum elong	12973 Apr 24 02:33	12°♄07'07	2°09'03		12974 Apr 05 06:22	30°♄♂	
morning rise	12973 Apr 29 13:19	6°♄00'59		min. Earth dist.	12974 Apr 06 21:32	28°♄02'00	0.67477 AU
direct	12973 May 03 09:29	4°♄36'40		inferior conj	12974 Apr 08 09:25	26°♄08'11	1°29'13
morning max el	12973 May 10 20:34	8°♄46'02	19°51'07	minimum elong	12974 Apr 08 07:31	26°♄14'13	1°28'14
desc. node	12973 May 19 18:38	19°♄45'16		morning rise	12974 Apr 14 00:25	20°♄18'40	
	12973 May 26 20:37	0°♄		direct	12974 Apr 17 09:04	19°♄14'04	
morning set	12973 Jun 06 12:25	16°♄08'32		morning max el	12974 Apr 24 03:39	22°♄54'05	18°54'45
	12973 Jun 15 10:16	0°♄			12974 Apr 30 02:02	0°♄	
max. Earth dist.	12973 Jun 17 11:24	3°♄14'12	1.44592 AU	desc. node	12974 May 06 15:22	9°♄29'31	
				greatest brilliancy	12974 May 07 16:46	11°♄05'36	-0.8m
superior conj	12973 Jun 22 13:09	11°♄21'45	-2°08'57	morning set	12974 May 16 19:42	25°♄09'09	
minimum elong	12973 Jun 22 17:44	11°♄40'15	2°09'47		12974 May 19 22:36	0°♄	
	12973 Jul 03 19:19	0°♄		max. Earth dist.	12974 May 31 04:17	17°♄30'39	1.45559 AU
evening rise	12973 Jul 06 00:21	3°♄44'44					
asc. node	12973 Jul 13 12:53	16°♄25'41		superior conj	12974 Jun 02 04:26	20°♄39'22	-2°12'27
	12973 Jul 22 23:33	0°♄		minimum elong	12974 Jun 02 01:54	20°♄29'26	2°13'22
evening max el	12973 Jul 23 19:37	0°♄52'04	18°07'04		12974 Jun 08 02:28	0°♄	
retrograde	12973 Jul 30 04:39	4°♄12'31		evening rise	12974 Jun 17 06:30	14°♄42'38	
evening set	12973 Aug 01 23:03	3°♄32'48			12974 Jun 26 18:31	0°♄	
	12973 Aug 06 12:22	30°♄♂		asc. node	12974 Jun 30 09:45	5°♄33'52	
inferior conj	12973 Aug 08 03:43	28°♄16'15	2°04'53	evening max el	12974 Jul 07 08:58	14°♄28'04	18°28'14
minimum elong	12973 Aug 08 06:16	28°♄09'20	2°03'34	retrograde	12974 Jul 13 19:46	17°♄56'15	
min. Earth dist.	12973 Aug 10 21:15	25°♄19'48	0.62988 AU	evening set	12974 Jul 16 22:39	17°♄01'42	
morning rise	12973 Aug 14 11:29	22°♄03'47		inferior conj	12974 Jul 22 16:46	11°♄29'06	2°43'42
desc. node	12973 Aug 15 17:02	21°♄13'28		minimum elong	12974 Jul 22 18:54	11°♄22'43	2°42'29
direct	12973 Aug 21 03:37	19°♄34'31		min. Earth dist.	12974 Jul 24 20:35	8°♄54'43	0.65006 AU
morning max el	12973 Sep 04 04:00	27°♄36'40	27°51'36	morning rise	12974 Jul 28 13:58	5°♄07'42	
	12973 Sep 06 10:38	0°♄		desc. node	12974 Aug 02 14:27	2°♄35'50	
	12973 Sep 27 11:42	0°♄		direct	12974 Aug 04 02:22	2°♄27'50	
morning set	12973 Oct 08 14:48	20°♄46'05		morning max el	12974 Aug 17 14:41	10°♄24'33	27°13'09
asc. node	12973 Oct 09 14:35	22°♄46'55			12974 Sep 02 01:46	0°♄	
	12973 Oct 13 01:29	0°♄			12974 Sep 19 22:45	0°♄	
max. Earth dist.	12973 Oct 13 18:08	1°♄28'56	1.32115 AU	morning set	12974 Sep 22 02:21	4°♄07'11	
				asc. node	12974 Sep 26 11:11	12°♄50'10	
superior conj	12973 Oct 16 07:31	7°♄01'01	1°00'40	max. Earth dist.	12974 Sep 26 12:24	12°♄56'26	1.33349 AU
minimum elong	12973 Oct 16 05:16	6°♄48'46	1°00'49				
evening rise	12973 Oct 23 03:20	21°♄56'05		superior conj	12974 Sep 30 10:51	21°♄09'17	0°37'25
	12973 Oct 26 23:33	0°♄		minimum elong	12974 Sep 30 09:06	20°♄59'58	0°37'19
desc. node	12973 Nov 11 13:25	25°♄51'32			12974 Oct 04 13:59	0°♄	
	12973 Nov 15 05:25	0°♄		evening rise	12974 Oct 07 14:07	6°♄25'57	
evening max el	12973 Nov 16 03:12	0°♄53'59	23°47'39		12974 Oct 20 01:13	0°♄	
retrograde	12973 Nov 29 15:49	7°♄38'30		evening max el	12974 Oct 28 14:43	10°♄56'12	22°06'17
evening set	12973 Dec 04 08:57	6°♄50'02		desc. node	12974 Oct 29 10:45	11°♄43'44	
min. Earth dist.	12973 Dec 10 13:51	3°♄49'23	0.55524 AU	retrograde	12974 Nov 10 07:00	17°♄13'39	
inferior conj	12973 Dec 12 12:00	2°♄40'35	-5°48'55	evening set	12974 Nov 13 13:56	16°♄49'39	
minimum elong	12973 Dec 12 15:53	2°♄34'48	5°47'37	inferior conj	12974 Nov 22 07:38	12°♄53'54	-5°46'41
	12973 Dec 17 09:55	30°♄♂		minimum elong	12974 Nov 22 02:45	13°♄00'45	5°45'19
morning rise	12973 Dec 21 00:40	28°♄45'45		min. Earth dist.	12974 Nov 21 20:28	13°♄09'34	0.54629 AU
direct	12973 Dec 23 16:41	28°♄27'59		morning rise	12974 Nov 30 16:44	9°♄06'42	
	12973 Dec 29 13:08	0°♄		direct	12974 Dec 04 03:45	8°♄40'08	
morning max el	12974 Jan 03 06:21	3°♄30'54	20°10'52	morning max el	12974 Dec 16 06:13	14°♄26'51	21°41'41
asc. node	12974 Jan 05 14:49	6°♄00'34		asc. node	12974 Dec 23 11:56	23°♄10'45	
	12974 Jan 20 00:08	0°♄			12974 Dec 27 18:29	0°♄	
morning set	12974 Jan 21 11:41	3°♄00'28		morning set	12975 Jan 05 21:30	17°♄44'58	
					12975 Jan 11 16:22	0°♄	
superior conj	12974 Jan 29 03:31	18°♄40'01	1°10'29				
minimum elong	12974 Jan 29 06:15	18°♄53'46	1°10'51	superior conj	12975 Jan 13 01:38	2°♄54'47	1°26'26
	12974 Feb 03 22:47	0°♄		minimum elong	12975 Jan 13 03:43	3°♄05'40	1°27'06
max. Earth dist.	12974 Feb 03 20:34	29°♄49'27	1.36722 AU	max. Earth dist.	12975 Jan 17 08:08	11°♄40'59	1.34741 AU
evening rise	12974 Feb 07 15:04	6°♄48'35		evening rise	12975 Jan 21 13:14	19°♄55'46	
desc. node	12974 Feb 07 13:10	6°♄39'59		desc. node	12975 Jan 25 09:51	27°♄05'25	
	12974 Feb 21 13:16	0°♄			12975 Jan 27 00:57	0°♄	
evening max el	12974 Mar 15 03:20	27°♄55'56	25°45'23		12975 Feb 15 13:26	0°♄	
	12974 Mar 17 08:51	0°♄		evening max el	12975 Feb 25 17:05	11°♄41'14	26°44'53
retrograde	12974 Mar 27 14:46	5°♄06'36		retrograde	12975 Mar 10 21:14	19°♄05'07	
evening set	12974 Apr 02 15:12	2°♄38'03		evening set	12975 Mar 17 07:51	16°♄32'50	

asc. node	12975 Mar 21 09:13	12°♊28'55			12976 Feb 14 06:21	0°♊	
min. Earth dist.	12975 Mar 21 08:34	12°♊30'48	0.66172 AU	retrograde	12976 Feb 21 21:10	2°♊36'03	
inferior conj	12975 Mar 23 08:38	10°♊09'11	0°37'33	evening set	12976 Feb 28 15:40	0°♊06'01	
minimum elong	12975 Mar 23 07:40	10°♊12'04	0°37'06		12976 Feb 28 18:53	30°♊	
morning rise	12975 Mar 29 08:40	4°♊30'50		min. Earth dist.	12976 Mar 03 12:03	26°♊35'54	0.64505 AU
direct	12975 Apr 01 07:03	3°♊43'16		inferior conj	12976 Mar 05 23:48	23°♊55'46	-0°25'05
morning max el	12975 Apr 07 16:54	7°♊06'27	18°14'53	minimum elong	12976 Mar 06 00:33	23°♊53'45	0°24'34
desc. node	12975 Apr 23 12:01	29°♊34'45		asc. node	12976 Mar 07 06:41	22°♊34'07	
	12975 Apr 23 18:21	0°♊		morning rise	12976 Mar 12 11:21	18°♊31'00	
morning set	12975 Apr 27 03:00	5°♊22'52		direct	12976 Mar 15 00:54	17°♊57'07	
				morning max el	12976 Mar 21 09:48	21°♊15'03	17°52'05
superior conj	12975 May 12 12:04	29°♊43'55	-1°55'44		12976 Mar 28 04:46	0°♊	
minimum elong	12975 May 12 03:30	29°♊10'23	1°55'54	morning set	12976 Apr 07 14:47	16°♊59'38	
	12975 May 12 16:11	0°♊		desc. node	12976 Apr 09 08:37	19°♊54'23	
max. Earth dist.	12975 May 13 23:53	2°♊03'53	1.45800 AU		12976 Apr 15 11:04	0°♊	
evening rise	12975 May 28 12:42	24°♊42'46					
	12975 May 31 22:07	0°♊		superior conj	12976 Apr 21 05:34	9°♊20'26	-1°22'56
greatest brilliancy	12975 Jun 08 13:51	11°♊49'13	-0.8m	minimum elong	12976 Apr 20 21:14	8°♊47'06	1°22'30
asc. node	12975 Jun 17 06:45	24°♊12'18		max. Earth dist.	12976 Apr 25 19:53	16°♊38'22	1.45297 AU
evening max el	12975 Jun 20 18:55	28°♊12'33	19°06'37		12976 May 04 09:51	0°♊	
	12975 Jun 22 19:07	0°♊		evening rise	12976 May 07 02:38	4°♊08'46	
retrograde	12975 Jun 27 15:55	2°♊01'10		greatest brilliancy	12976 May 22 01:08	26°♊34'41	-0.6m
evening set	12975 Jul 01 03:46	0°♊50'22			12976 May 24 10:27	0°♊	
	12975 Jul 02 05:57	30°♊		evening max el	12976 Jun 02 23:38	11°♊59'52	20°00'50
inferior conj	12975 Jul 06 14:54	25°♊03'14	3°05'29	asc. node	12976 Jun 03 03:50	12°♊10'19	
minimum elong	12975 Jul 06 16:07	24°♊59'20	3°04'25	retrograde	12976 Jun 10 14:26	16°♊20'32	
min. Earth dist.	12975 Jul 08 04:03	23°♊03'49	0.66660 AU	evening set	12976 Jun 14 11:51	14°♊52'57	
morning rise	12975 Jul 12 03:49	18°♊39'33		inferior conj	12976 Jun 19 19:07	8°♊52'28	3°13'15
direct	12975 Jul 18 08:09	15°♊59'24		minimum elong	12976 Jun 19 19:16	8°♊51'57	3°12'15
desc. node	12975 Jul 20 11:47	16°♊16'17		min. Earth dist.	12976 Jun 20 17:51	7°♊35'33	0.67873 AU
morning max el	12975 Jul 31 01:36	23°♊35'15	26°08'08	morning rise	12976 Jun 25 02:21	2°♊30'44	
	12975 Aug 05 18:38	0°♊			12976 Jun 30 09:27	30°♊	
	12975 Aug 26 10:24	0°♊		direct	12976 Jun 30 19:42	29°♊59'13	
morning set	12975 Sep 05 01:07	16°♊51'29			12976 Jul 01 06:04	0°♊	
max. Earth dist.	12975 Sep 08 20:32	24°♊04'47	1.35091 AU	desc. node	12976 Jul 06 09:02	1°♊51'35	
	12975 Sep 11 20:42	0°♊		morning max el	12976 Jul 12 11:52	6°♊59'04	24°46'07
asc. node	12975 Sep 13 07:47	2°♊56'33			12976 Jul 30 10:02	0°♊	
				morning set	12976 Aug 17 06:54	28°♊48'33	
superior conj	12975 Sep 14 06:52	4°♊53'54	0°09'08		12976 Aug 17 23:04	0°♊	
minimum elong	12975 Sep 14 06:21	4°♊51'17	0°09'00	max. Earth dist.	12976 Aug 20 20:45	5°♊13'37	1.37228 AU
behind sun begin	12975 Sep 14 01:19	4°♊25'38					
behind sun end	12975 Sep 14 11:23	5°♊16'59		superior conj	12976 Aug 27 16:24	18°♊06'54	-0°23'17
evening rise	12975 Sep 21 22:35	20°♊47'26		minimum elong	12976 Aug 27 17:56	18°♊14'26	0°23'18
	12975 Sep 26 11:46	0°♊		asc. node	12976 Aug 30 04:25	23°♊02'18	
evening max el	12975 Oct 10 12:19	21°♊24'36	20°36'22		12976 Sep 02 15:52	0°♊	
desc. node	12975 Oct 16 08:10	25°♊42'37		evening rise	12976 Sep 05 02:23	4°♊54'25	
retrograde	12975 Oct 21 17:41	26°♊59'08			12976 Sep 19 14:58	0°♊	
evening set	12975 Oct 23 23:26	26°♊46'49		evening max el	12976 Sep 22 00:01	2°♊39'16	19°26'23
inferior conj	12975 Nov 01 23:35	22°♊51'58	-4°45'21	retrograde	12976 Oct 01 13:23	7°♊25'48	
minimum elong	12975 Nov 01 13:35	23°♊06'23	4°42'02	desc. node	12976 Oct 02 05:37	7°♊24'26	
min. Earth dist.	12975 Nov 03 03:24	22°♊11'50	0.54651 AU	evening set	12976 Oct 03 10:03	7°♊15'43	
morning rise	12975 Nov 10 03:28	18°♊53'56		inferior conj	12976 Oct 12 02:20	3°♊08'42	-3°03'50
direct	12975 Nov 14 12:24	18°♊12'53		minimum elong	12976 Oct 11 18:26	3°♊21'27	3°00'29
morning max el	12975 Nov 27 19:02	24°♊40'08	23°27'50	min. Earth dist.	12976 Oct 14 13:23	1°♊33'33	0.55591 AU
	12975 Dec 02 16:05	0°♊			12976 Oct 17 04:44	30°♊	
asc. node	12975 Dec 10 08:57	11°♊14'37		morning rise	12976 Oct 20 00:38	28°♊41'09	
	12975 Dec 20 04:38	0°♊		direct	12976 Oct 25 05:47	27°♊40'00	
morning set	12975 Dec 21 09:10	2°♊31'05			12976 Nov 02 03:04	0°♊	
				morning max el	12976 Nov 08 05:12	4°♊41'08	25°14'39
superior conj	12975 Dec 28 06:29	17°♊26'09	1°35'35	asc. node	12976 Nov 26 05:54	29°♊59'09	
minimum elong	12975 Dec 28 07:32	17°♊31'51	1°36'30		12976 Nov 26 06:05	0°♊	
max. Earth dist.	12975 Dec 31 03:35	23°♊35'34	1.33148 AU	morning set	12976 Dec 04 20:54	17°♊14'20	
	12976 Jan 03 05:37	0°♊			12976 Dec 10 16:34	0°♊	
evening rise	12976 Jan 05 00:05	3°♊34'02					
desc. node	12976 Jan 12 06:37	17°♊17'52		superior conj	12976 Dec 11 15:38	2°♊07'23	1°38'24
	12976 Jan 19 20:09	0°♊		minimum elong	12976 Dec 11 15:34	2°♊07'04	1°39'23
evening max el	12976 Feb 08 06:25	25°♊09'46	27°22'54	max. Earth dist.	12976 Dec 13 06:24	5°♊40'34	1.32018 AU

evening rise	12976 Dec 18 20:30	17°  35'53		evening rise	12977 Dec 02 23:42	1°  53'24	
	12976 Dec 25 03:45	0°  ≈		desc. node	12977 Dec 16 00:25	26°  37'59	
desc. node	12976 Dec 29 03:29	7°  ≈11'36			12977 Dec 18 02:04	0°  ≈	
	12977 Jan 13 08:48	0°  ✕		evening max el	12978 Jan 02 23:06	20°  ≈24'30	27°09'11
evening max el	12977 Jan 20 17:18	8°  ✕08'36	27°32'37	retrograde	12978 Jan 16 21:53	27°  ≈38'44	
retrograde	12977 Feb 03 13:40	15°  ✕30'31		evening set	12978 Jan 23 17:47	25°  ≈36'01	
evening set	12977 Feb 10 12:04	13°  ✕09'59		min. Earth dist.	12978 Jan 27 13:31	22°  ≈53'07	0.60403 AU
min. Earth dist.	12977 Feb 14 06:03	10°  ✕07'30	0.62547 AU	inferior conj	12978 Jan 30 17:30	20°  ≈13'35	-2°58'45
inferior conj	12977 Feb 17 03:55	7°  ✕20'25	-1°38'04	minimum elong	12978 Jan 30 23:52	20°  ≈00'12	2°55'41
minimum elong	12977 Feb 17 07:14	7°  ✕12'28	1°36'16	morning rise	12978 Feb 07 09:00	15°  ≈25'13	
asc. node	12977 Feb 22 04:05	3°  ✕11'17		direct	12978 Feb 09 11:00	15°  ≈08'02	
morning rise	12977 Feb 24 05:01	2°  ✕12'20		asc. node	12978 Feb 09 01:28	15°  ≈08'40	
direct	12977 Feb 26 11:33	1°  ✕48'35		morning max el	12978 Feb 16 18:20	18°  ≈47'06	18°00'00
morning max el	12977 Mar 05 03:24	5°  ✕11'52	17°46'49		12978 Feb 24 21:40	0°  ✕	
morning set	12977 Mar 21 02:37	29°  ✕44'45		morning set	12978 Mar 04 08:13	13°  ✕18'45	
	12977 Mar 21 06:06	0°  Υ			12978 Mar 13 12:22	0°  Υ	
desc. node	12977 Mar 27 05:11	10°  Υ23'54		desc. node	12978 Mar 14 01:42	0°  Υ58'56	
superior conj	12977 Apr 01 20:58	19°  Υ59'54	-0°42'56	superior conj	12978 Mar 14 12:32	1°  Υ46'39	-0°03'35
minimum elong	12977 Apr 01 16:43	19°  Υ42'11	0°42'33	minimum elong	12978 Mar 14 12:14	1°  Υ45'21	0°03'27
	12977 Apr 07 23:20	0°  ⋈		behind sun begin	12978 Mar 14 04:25	1°  Υ10'58	
max. Earth dist.	12977 Apr 08 13:25	0°  ⋈56'42	1.44102 AU	behind sun end	12978 Mar 14 20:03	2°  Υ19'40	
evening rise	12977 Apr 16 15:21	13°  ⋈39'57		max. Earth dist.	12978 Mar 22 02:17	14°  Υ42'47	1.42340 AU
	12977 Apr 27 11:08	0°  ♊		evening rise	12978 Mar 27 17:02	23°  Υ50'05	
evening max el	12977 May 16 22:26	25°  ♊47'35	21°08'22		12978 Mar 31 15:12	0°  ⋈	
asc. node	12977 May 21 00:59	29°  ♊15'05			12978 Apr 21 11:22	0°  ♊	
	12977 May 22 08:32	0°  ♊		evening max el	12978 Apr 29 16:10	9°  ♊36'05	22°25'23
retrograde	12977 May 25 13:14	0°  ♊49'05		asc. node	12978 May 07 22:12	15°  ♊10'58	
	12977 May 28 12:50	30°  ♊12'50		retrograde	12978 May 09 10:38	15°  ♊21'40	
evening set	12977 May 29 20:55	29°  ♊05'02		evening set	12978 May 14 05:15	13°  ♊22'17	
inferior conj	12977 Jun 04 02:59	22°  ♊52'47	3°09'05	inferior conj	12978 May 19 12:25	7°  ♊00'31	2°54'14
minimum elong	12977 Jun 04 02:09	22°  ♊55'40	3°08'02	minimum elong	12978 May 19 10:49	7°  ♊06'07	2°53'06
min. Earth dist.	12977 Jun 04 12:03	22°  ♊21'14	0.68614 AU	min. Earth dist.	12978 May 19 08:34	7°  ♊14'00	0.68877 AU
morning rise	12977 Jun 09 07:11	16°  ♊35'27		morning rise	12978 May 24 16:15	0°  ♊49'12	
direct	12977 Jun 14 12:00	14°  ♊19'07			12978 May 25 18:30	30°  ♊⋈	
desc. node	12977 Jun 23 06:11	18°  ♊54'42		direct	12978 May 29 08:06	28°  ♊51'58	
morning max el	12977 Jun 24 22:23	20°  ♊31'26	23°16'46		12978 Jun 02 05:23	0°  ♊	
	12977 Jul 03 00:53	0°  ♊		morning max el	12978 Jun 07 11:44	4°  ♊12'24	21°49'11
	12977 Jul 23 14:59	0°  ♊		desc. node	12978 Jun 10 03:12	7°  ♊02'35	
morning set	12977 Jul 29 14:58	9°  ♊46'50			12978 Jun 27 02:57	0°  ♊	
max. Earth dist.	12977 Aug 02 18:41	16°  ♊50'54	1.39560 AU	morning set	12978 Jul 09 21:56	19°  ♊38'55	
				max. Earth dist.	12978 Jul 15 20:06	29°  ♊16'45	1.41816 AU
superior conj	12977 Aug 10 11:34	0°  ♊38'33	-0°57'57		12978 Jul 16 06:31	0°  ♊	
minimum elong	12977 Aug 10 15:46	0°  ♊58'01	0°57'49	superior conj	12978 Jul 23 12:00	12°  ♊19'34	-1°31'32
	12977 Aug 10 03:13	0°  ♊		minimum elong	12978 Jul 23 18:35	12°  ♊48'25	1°31'30
asc. node	12977 Aug 17 01:02	13°  ♊03'18			12978 Aug 02 07:24	0°  ♊	
evening rise	12977 Aug 19 22:37	18°  ♊38'43		evening rise	12978 Aug 03 07:35	1°  ♊51'12	
	12977 Aug 25 23:20	0°  ♊		asc. node	12978 Aug 03 21:42	2°  ♊56'07	
evening max el	12977 Sep 05 00:11	14°  ♊40'27	18°38'10	evening max el	12978 Aug 19 09:00	27°  ♊20'58	18°10'51
retrograde	12977 Sep 13 02:50	18°  ♊45'26			12978 Aug 22 20:13	0°  ♊	
evening set	12977 Sep 15 01:32	18°  ♊32'07		retrograde	12978 Aug 26 10:57	0°  ♊57'03	
desc. node	12977 Sep 19 03:07	16°  ♊48'41		evening set	12978 Aug 28 16:29	0°  ♊36'09	
inferior conj	12977 Sep 23 00:59	14°  ♊05'56	-1°14'10		12978 Aug 30 04:32	30°  ♊⋈	
minimum elong	12977 Sep 22 21:58	14°  ♊11'36	1°12'49	inferior conj	12978 Sep 04 21:21	25°  ♊49'26	0°20'55
min. Earth dist.	12977 Sep 26 05:07	11°  ♊43'15	0.57279 AU	minimum elong	12978 Sep 04 22:02	25°  ♊47'54	0°20'28
morning rise	12977 Sep 30 14:59	9°  ♊00'27		desc. node	12978 Sep 06 00:37	24°  ♊49'04	
direct	12977 Oct 06 13:12	7°  ♊33'20		min. Earth dist.	12978 Sep 08 04:36	22°  ♊56'20	0.59428 AU
morning max el	12977 Oct 20 20:10	15°  ♊02'01	26°43'37	morning rise	12978 Sep 12 00:13	20°  ♊10'14	
	12977 Nov 01 21:37	0°  ♊		direct	12978 Sep 18 10:37	18°  ♊15'01	
asc. node	12977 Nov 13 02:45	19°  ♊12'59		morning max el	12978 Oct 02 18:37	26°  ♊03'38	27°40'12
	12977 Nov 18 10:28	0°  ♊			12978 Oct 06 11:21	0°  ♊	
morning set	12977 Nov 19 06:55	1°  ♊48'46			12978 Oct 26 09:36	0°  ♊	
superior conj	12977 Nov 26 02:54	16°  ♊51'17	1°35'12	asc. node	12978 Oct 30 23:31	8°  ♊48'12	
minimum elong	12977 Nov 26 01:49	16°  ♊45'17	1°36'05	morning set	12978 Nov 03 13:30	16°  ♊09'55	
max. Earth dist.	12977 Nov 26 13:44	17° ♊51'44	1.31379 AU		12978 Nov 09 21:51	0° ♊	
	12977 Dec 02 02:25	0° ♊		max. Earth dist.	12978 Nov 09 22:12	0° ♊01'58	1.31253 AU

superior conj	12978 Nov 10 14:27	1° ♄ 32'31	1°26'14	superior conj	12979 Oct 26 00:25	16° ♄ 05'33	1°11'37
minimum elong	12978 Nov 10 12:36	1° ♄ 22'12	1°26'52	minimum elong	12979 Oct 25 22:11	15° ♄ 53'10	1°11'56
evening rise	12978 Nov 17 07:32	16° ♄ 21'17			12979 Nov 01 07:58	0° ♄	
	12978 Nov 23 23:57	0° ♄		evening rise	12979 Nov 01 18:00	0° ♄ 54'12	
desc. node	12978 Dec 02 21:28	15° ♄ 26'43			12979 Nov 17 09:55	0° ♄	
	12978 Dec 14 01:29	0° ♄		desc. node	12979 Nov 19 18:38	3° ♄ 23'30	
evening max el	12978 Dec 15 21:35	1° ♄ 49'37	26°11'28	evening max el	12979 Nov 27 12:02	12° ♄ 25'27	24°45'09
retrograde	12978 Dec 29 20:14	8° ♄ 54'16		retrograde	12979 Dec 11 06:25	19° ♄ 18'16	
evening set	12979 Jan 05 04:49	7° ♄ 17'38		evening set	12979 Dec 16 17:00	18° ♄ 12'36	
min. Earth dist.	12979 Jan 09 10:54	4° ♄ 41'25	0.58261 AU	min. Earth dist.	12979 Dec 21 23:52	15° ♄ 26'19	0.56377 AU
inferior conj	12979 Jan 12 13:04	2° ♄ 26'04	-4°19'44	inferior conj	12979 Dec 24 12:10	13° ♄ 50'24	-5°26'04
minimum elong	12979 Jan 12 21:38	2° ♄ 10'25	4°16'20	minimum elong	12979 Dec 24 19:24	13° ♄ 38'52	5°23'50
	12979 Jan 16 02:15	30° ♄		morning rise	12980 Jan 01 23:55	9° ♄ 44'56	
morning rise	12979 Jan 20 17:19	27° ♄ 59'21		direct	12980 Jan 04 08:22	9° ♄ 29'40	
direct	12979 Jan 22 19:00	27° ♄ 45'08		asc. node	12980 Jan 13 20:04	13° ♄ 58'44	
asc. node	12979 Jan 26 22:48	28° ♄ 45'56		morning max el	12980 Jan 14 00:37	14° ♄ 09'36	19°28'32
	12979 Jan 28 23:13	0° ♄			12980 Jan 25 00:56	0° ♄	
morning max el	12979 Jan 31 02:45	1° ♄ 50'06	18°33'14	morning set	12980 Jan 31 04:48	11° ♄ 55'11	
morning set	12979 Feb 16 02:16	27° ♄ 26'00					
	12979 Feb 17 10:10	0° ♄		superior conj	12980 Feb 08 05:56	27° ♄ 59'49	0°58'04
				minimum elong	12980 Feb 08 08:45	28° ♄ 13'31	0°58'15
superior conj	12979 Feb 25 01:02	14° ♄ 30'45	0°30'44		12980 Feb 09 06:38	0° ♄	
minimum elong	12979 Feb 25 03:04	14° ♄ 40'11	0°30'45	max. Earth dist.	12980 Feb 14 16:49	10° ♄ 13'44	1.37977 AU
desc. node	12979 Feb 28 22:12	21° ♄ 35'59		desc. node	12980 Feb 15 18:46	12° ♄ 11'50	
max. Earth dist.	12979 Mar 04 10:27	27° ♄ 47'24	1.40220 AU	evening rise	12980 Feb 18 10:10	16° ♄ 54'25	
	12979 Mar 05 17:13	0° ♄			12980 Feb 26 05:01	0° ♄	
evening rise	12979 Mar 08 15:04	4° ♄ 54'59			12980 Mar 18 06:00	0° ♄	
	12979 Mar 24 19:03	0° ♄		evening max el	12980 Mar 24 20:27	7° ♄ 19'21	25°04'32
evening max el	12979 Apr 12 06:47	23° ♄ 26'34	23°46'21	retrograde	12980 Apr 05 19:35	14° ♄ 16'15	
retrograde	12979 Apr 23 05:08	29° ♄ 52'26		asc. node	12980 Apr 10 16:54	12° ♄ 32'59	
asc. node	12979 Apr 24 19:31	29° ♄ 40'47		evening set	12980 Apr 11 13:29	11° ♄ 52'31	
evening set	12979 Apr 28 11:17	27° ♄ 39'33		min. Earth dist.	12980 Apr 15 23:42	6° ♄ 56'09	0.68043 AU
min. Earth dist.	12979 May 03 05:10	22° ♄ 07'18	0.68681 AU	inferior conj	12980 Apr 17 04:25	5° ♄ 22'02	1°54'09
inferior conj	12979 May 03 21:31	21° ♄ 11'24	2°29'14	minimum elong	12980 Apr 17 02:18	5° ♄ 28'59	1°53'01
minimum elong	12979 May 03 19:27	21° ♄ 18'29	2°28'02		12980 Apr 21 21:57	30° ♄	
morning rise	12979 May 09 03:36	15° ♄ 07'23		morning rise	12980 Apr 22 15:24	29° ♄ 26'44	
direct	12979 May 13 06:47	13° ♄ 30'57		direct	12980 Apr 26 06:37	28° ♄ 10'50	
morning max el	12979 May 21 06:52	18° ♄ 03'28	20°30'26		12980 Apr 30 22:59	0° ♄	
desc. node	12979 May 28 00:05	25° ♄ 57'08		morning max el	12980 May 03 09:35	2° ♄ 05'59	19°25'11
	12979 May 31 00:09	0° ♄		desc. node	12980 May 13 20:52	15° ♄ 26'01	
morning set	12979 Jun 19 06:22	28° ♄ 32'35		greatest brilliancy	12980 May 16 02:10	18° ♄ 40'40	-0.7m
	12979 Jun 20 04:56	0° ♄			12980 May 23 14:43	0° ♄	
max. Earth dist.	12979 Jun 28 04:01	12° ♄ 34'17	1.43733 AU	morning set	12980 May 28 07:38	7° ♄ 12'29	
				max. Earth dist.	12980 Jun 09 18:39	26° ♄ 35'14	1.45094 AU
superior conj	12979 Jul 04 13:38	23° ♄ 01'09	-1°58'48		12980 Jun 11 22:29	0° ♄	
minimum elong	12979 Jul 04 20:17	23° ♄ 28'43	1°59'17				
	12979 Jul 08 17:30	0° ♄		superior conj	12980 Jun 13 15:49	2° ♄ 44'13	-2°12'51
evening rise	12979 Jul 17 00:33	14° ♄ 19'32		minimum elong	12980 Jun 13 17:45	2° ♄ 51'57	2°13'49
asc. node	12979 Jul 21 18:25	22° ♄ 35'48		evening rise	12980 Jun 27 20:32	25° ♄ 52'29	
	12979 Jul 26 04:14	0° ♄			12980 Jun 30 08:02	0° ♄	
evening max el	12979 Aug 02 22:21	10° ♄ 30'06	18°03'07	asc. node	12980 Jul 07 15:14	11° ♄ 57'11	
retrograde	12979 Aug 09 10:29	13° ♄ 51'50		evening max el	12980 Jul 16 12:36	23° ♄ 58'35	18°13'54
evening set	12979 Aug 12 00:11	13° ♄ 19'43		retrograde	12980 Jul 22 21:06	27° ♄ 20'21	
inferior conj	12979 Aug 18 12:39	8° ♄ 13'34	1°33'23	evening set	12980 Jul 25 19:12	26° ♄ 34'21	
minimum elong	12979 Aug 18 14:59	8° ♄ 07'38	1°32'10	inferior conj	12980 Jul 31 18:54	21° ♄ 10'42	2°23'36
min. Earth dist.	12979 Aug 21 12:57	5° ♄ 12'16	0.61722 AU	minimum elong	12980 Jul 31 21:22	21° ♄ 03'42	2°22'18
desc. node	12979 Aug 23 22:06	3° ♄ 05'10		min. Earth dist.	12980 Aug 03 06:47	18° ♄ 21'59	0.63892 AU
morning rise	12979 Aug 25 03:17	2° ♄ 10'33		morning rise	12980 Aug 06 21:59	14° ♄ 53'45	
	12979 Aug 30 02:57	30° ♄		desc. node	12980 Aug 09 19:33	13° ♄ 07'06	
direct	12979 Aug 31 19:24	29° ♄ 51'20		direct	12980 Aug 13 13:14	12° ♄ 18'52	
	12979 Sep 02 12:42	0° ♄		morning max el	12980 Aug 27 08:55	20° ♄ 19'20	27°38'59
morning max el	12979 Sep 14 23:35	7° ♄ 50'49	27°58'17		12980 Sep 04 16:35	0° ♄	
	12979 Oct 01 22:47	0° ♄			12980 Sep 24 00:22	0° ♄	
asc. node	12979 Oct 17 20:12	28° ♄ 38'11		morning set	12980 Oct 01 07:58	13° ♄ 50'41	
morning set	12979 Oct 18 14:38	0° ♄		asc. node	12980 Oct 03 16:50	18° ♄ 37'48	
	12979 Oct 18 12:12	0° ♄		max. Earth dist.	12980 Oct 06 03:42	23° ♄ 43'40	1.32583 AU
max. Earth dist.	12979 Oct 24 04:03	12° ♄ 01'56	1.31650 AU				

superior conj	12980 Oct 09 06:50	0° \mathbb{M} 24'36	0°51'28	superior conj	12981 Sep 23 07:27	14° \mathbb{A} 23'59	0°26'01
minimum elong	12980 Oct 09 04:43	0° \mathbb{M} 13'09	0°51'29	minimum elong	12981 Sep 23 06:07	14° \mathbb{A} 17'02	0°25'53
	12980 Oct 09 02:17	0° \mathbb{M}		evening rise	12981 Sep 30 15:21	29° \mathbb{A} 54'35	
evening rise	12980 Oct 16 05:14	15° \mathbb{M} 26'56			12981 Sep 30 16:23	0° \mathbb{M}	
	12980 Oct 23 09:12	0° \mathbb{A}			12981 Oct 18 02:01	0° \mathbb{A}	
desc. node	12980 Nov 05 15:55	20° \mathbb{A} 08'16		evening max el	12981 Oct 20 12:51	2° \mathbb{A} 38'57	21°25'52
evening max el	12980 Nov 07 22:05	22° \mathbb{A} 29'36	23°03'57	desc. node	12981 Oct 23 13:17	5° \mathbb{A} 16'11	
retrograde	12980 Nov 21 03:27	29° \mathbb{A} 03'57		retrograde	12981 Nov 01 15:39	8° \mathbb{A} 40'12	
evening set	12980 Nov 25 06:14	28° \mathbb{A} 27'09		evening set	12981 Nov 04 10:07	8° \mathbb{A} 22'33	
min. Earth dist.	12980 Dec 02 07:20	25° \mathbb{A} 12'01	0.55045 AU	inferior conj	12981 Nov 13 08:08	4° \mathbb{A} 28'24	-5°27'25
inferior conj	12980 Dec 03 15:48	24° \mathbb{A} 25'23	-5°55'11	minimum elong	12981 Nov 13 00:11	4° \mathbb{A} 39'33	5°25'13
minimum elong	12980 Dec 03 16:06	24° \mathbb{A} 24'57	5°54'13	min. Earth dist.	12981 Nov 13 13:30	4° \mathbb{A} 20'52	0.54524 AU
morning rise	12980 Dec 12 03:31	20° \mathbb{A} 35'47		morning rise	12981 Nov 21 15:03	0° \mathbb{A} 39'28	
direct	12980 Dec 15 03:13	20° \mathbb{A} 14'47		direct	12981 Nov 25 11:14	0° \mathbb{A} 07'37	
morning max el	12980 Dec 26 08:37	25° \mathbb{A} 35'51	20°47'01	morning max el	12981 Dec 08 03:08	6° \mathbb{A} 11'39	22°25'40
	12980 Dec 30 07:38	0° \mathbb{B}		asc. node	12981 Dec 17 14:22	18° \mathbb{A} 05'49	
asc. node	12980 Dec 30 17:16	0° \mathbb{B} 30'55			12981 Dec 24 09:22	0° \mathbb{B}	
morning set	12981 Jan 14 12:40	26° \mathbb{B} 36'14		morning set	12981 Dec 29 23:32	11° \mathbb{B} 22'22	
	12981 Jan 16 03:55	0° \mathbb{A}					
				superior conj	12982 Jan 06 00:12	26° \mathbb{B} 23'52	1°31'06
superior conj	12981 Jan 21 22:50	12° \mathbb{A} 00'49	1°18'06	minimum elong	12982 Jan 06 01:52	26° \mathbb{B} 32'45	1°31'54
minimum elong	12981 Jan 22 01:22	12° \mathbb{A} 13'44	1°18'36		12982 Jan 07 17:10	0° \mathbb{A}	
max. Earth dist.	12981 Jan 27 01:34	22° \mathbb{A} 13'39	1.35843 AU	max. Earth dist.	12982 Jan 09 16:24	4° \mathbb{A} 05'02	1.34012 AU
evening rise	12981 Jan 30 23:28	29° \mathbb{A} 39'09		evening rise	12982 Jan 14 03:27	13° \mathbb{A} 00'24	
	12981 Jan 31 03:59	0° \mathbb{H}		desc. node	12982 Jan 19 12:07	23° \mathbb{A} 02'22	
desc. node	12981 Feb 01 15:24	2° \mathbb{H} 42'01			12982 Jan 23 11:41	0° \mathbb{H}	
	12981 Feb 18 09:57	0° \mathbb{Y}			12982 Feb 13 10:42	0° \mathbb{Y}	
evening max el	12981 Mar 07 10:05	21° \mathbb{Y} 08'58	26°12'50	evening max el	12982 Feb 17 23:35	4° \mathbb{Y} 47'25	27°03'56
retrograde	12981 Mar 20 05:01	28° \mathbb{Y} 25'53		retrograde	12982 Mar 03 08:45	12° \mathbb{Y} 13'39	
evening set	12981 Mar 26 10:07	25° \mathbb{Y} 55'04		evening set	12982 Mar 09 23:16	9° \mathbb{Y} 41'08	
asc. node	12981 Mar 28 14:20	23° \mathbb{Y} 50'44		min. Earth dist.	12982 Mar 13 21:52	5° \mathbb{Y} 53'21	0.65509 AU
min. Earth dist.	12981 Mar 30 13:57	21° \mathbb{Y} 33'51	0.66976 AU	asc. node	12982 Mar 15 11:47	4° \mathbb{Y} 06'09	
inferior conj	12981 Apr 01 07:03	19° \mathbb{Y} 27'21	1°08'39	inferior conj	12982 Mar 16 03:08	3° \mathbb{Y} 22'21	0°12'19
minimum elong	12981 Apr 01 05:27	19° \mathbb{Y} 32'17	1°07'50	minimum elong	12982 Mar 16 02:47	3° \mathbb{Y} 23'20	0°12'13
morning rise	12981 Apr 07 01:35	13° \mathbb{Y} 42'26		transit middle	12982 Mar 16 02:47	3° \mathbb{Y} 23'20	0°12'13
direct	12981 Apr 10 05:49	12° \mathbb{Y} 45'19		transit begin	12982 Mar 16 00:51	3° \mathbb{Y} 28'50	
morning max el	12981 Apr 16 19:32	16° \mathbb{Y} 16'15	18°35'47	transit end	12982 Mar 16 04:43	3° \mathbb{Y} 17'49	
	12981 Apr 27 06:05	0° \mathbb{B}			12982 Mar 19 07:43	30° \mathbb{R} \mathbb{H}	
desc. node	12981 Apr 30 17:35	5° \mathbb{B} 19'35		morning rise	12982 Mar 22 07:49	27° \mathbb{H} 49'45	
morning set	12981 May 07 23:39	16° \mathbb{B} 40'05		direct	12982 Mar 25 02:14	27° \mathbb{H} 08'30	
	12981 May 16 11:54	0° \mathbb{II}			12982 Mar 30 22:55	0° \mathbb{Y}	
max. Earth dist.	12981 May 23 13:33	11° \mathbb{II} 02'25	1.45755 AU	morning max el	12982 Mar 31 10:44	0° \mathbb{Y} 27'55	18°03'06
				desc. node	12982 Apr 17 14:13	25° \mathbb{Y} 31'08	
superior conj	12981 May 24 01:39	11° \mathbb{II} 49'42	-2°07'45	morning set	12982 Apr 18 19:07	27° \mathbb{Y} 28'59	
minimum elong	12981 May 23 19:57	11° \mathbb{II} 27'27	2°08'25		12982 Apr 20 08:12	0° \mathbb{B}	
	12981 Jun 04 15:14	0° \mathbb{B}					
evening rise	12981 Jun 08 16:08	6° \mathbb{B} 24'17		superior conj	12982 May 03 11:22	21° \mathbb{B} 01'58	-1°43'16
greatest brilliancy	12981 Jun 16 14:20	18° \mathbb{B} 58'41	-0.8m	minimum elong	12982 May 03 02:08	20° \mathbb{B} 25'37	1°43'07
	12981 Jun 23 20:56	0° \mathbb{Q}		max. Earth dist.	12982 May 06 09:29	25° \mathbb{B} 37'14	1.45670 AU
asc. node	12981 Jun 24 12:09	0° \mathbb{Q} 53'30			12982 May 09 04:47	0° \mathbb{II}	
evening max el	12981 Jun 30 00:45	7° \mathbb{Q} 38'33	18°42'30	evening rise	12982 May 19 13:52	16° \mathbb{II} 04'59	
retrograde	12981 Jul 06 14:50	11° \mathbb{Q} 13'58			12982 May 28 15:34	0° \mathbb{B}	
evening set	12981 Jul 09 21:31	10° \mathbb{Q} 12'29		greatest brilliancy	12982 Jun 01 14:05	5° \mathbb{B} 55'11	-0.7m
inferior conj	12981 Jul 15 12:13	4° \mathbb{Q} 33'16	2°54'50	asc. node	12982 Jun 11 09:09	19° \mathbb{B} 15'40	
minimum elong	12981 Jul 15 14:00	4° \mathbb{Q} 27'45	2°53'40	evening max el	12982 Jun 13 08:29	21° \mathbb{B} 23'39	19°27'54
min. Earth dist.	12981 Jul 17 09:41	2° \mathbb{Q} 12'50	0.65755 AU	retrograde	12982 Jun 20 12:22	25° \mathbb{B} 25'10	
	12981 Jul 19 08:01	30° \mathbb{R} \mathbb{B}		evening set	12982 Jun 24 04:08	24° \mathbb{B} 07'18	
morning rise	12981 Jul 21 05:36	28° \mathbb{B} 10'14		inferior conj	12982 Jun 29 13:14	18° \mathbb{B} 14'08	3°10'23
direct	12981 Jul 27 14:52	25° \mathbb{B} 29'27		minimum elong	12982 Jun 29 14:00	18° \mathbb{B} 11'36	3°09'21
desc. node	12981 Jul 27 16:57	25° \mathbb{B} 29'28		min. Earth dist.	12982 Jun 30 20:10	16° \mathbb{B} 32'08	0.67221 AU
	12981 Aug 06 06:11	0° \mathbb{Q}		morning rise	12982 Jul 04 23:23	11° \mathbb{B} 50'38	
morning max el	12981 Aug 09 20:07	3° \mathbb{Q} 18'54	26°48'21	direct	12982 Jul 10 23:10	9° \mathbb{B} 13'15	
	12981 Aug 30 00:32	0° \mathbb{P}		desc. node	12982 Jul 14 14:15	10° \mathbb{B} 01'22	
morning set	12981 Sep 14 14:37	26° \mathbb{P} 57'41		morning max el	12982 Jul 23 06:57	16° \mathbb{B} 36'24	25°34'52
	12981 Sep 16 04:30	0° \mathbb{A}			12982 Aug 03 09:51	0° \mathbb{Q}	
max. Earth dist.	12981 Sep 18 18:07	5° \mathbb{A} 03'58	1.34035 AU		12982 Aug 22 22:51	0° \mathbb{P}	
asc. node	12981 Sep 20 13:27	8° \mathbb{A} 43'00		morning set	12982 Aug 28 06:43	9° \mathbb{P} 23'16	

































































































































max. Earth dist.	12982 Aug 31 22:22	16° \mathbb{M} 09'05	1.35954 AU	morning set	12983 Aug 10 03:46	20° Ω 56'29	
				max. Earth dist.	12983 Aug 13 20:12	27° Ω 23'57	1.38206 AU
					12983 Aug 15 06:57	0° \mathbb{M}	
superior conj	12982 Sep 06 23:21	27° \mathbb{M} 55'38	-0°04'13	superior conj	12983 Aug 21 03:15	10° \mathbb{M} 51'55	-0°37'53
minimum elong	12982 Sep 06 23:37	27° \mathbb{M} 56'57	0°04'18	minimum elong	12983 Aug 21 05:52	11° \mathbb{M} 04'28	0°37'49
behind sun begin	12982 Sep 06 17:34	27° \mathbb{M} 26'36		asc. node	12983 Aug 25 06:38	18° \mathbb{M} 53'11	
behind sun end	12982 Sep 07 05:41	28° \mathbb{M} 27'22		evening rise	12983 Aug 29 23:02	28° \mathbb{M} 08'02	
asc. node	12982 Sep 07 10:03	28° \mathbb{M} 49'19			12983 Aug 30 21:46	0° Ω	
evening rise	12982 Sep 14 22:07	14° Ω 10'21		evening max el	12983 Sep 15 09:43	25° Ω 00'42	19°03'18
	12982 Sep 23 02:19	0° \mathbb{M}		retrograde	12983 Sep 24 07:10	29° Ω 27'48	
evening max el	12982 Oct 02 16:15	13° \mathbb{M} 25'31	20°03'59	evening set	12983 Sep 26 03:48	29° Ω 16'55	
desc. node	12982 Oct 10 10:44	18° \mathbb{M} 18'54		desc. node	12983 Sep 27 08:11	28° Ω 59'16	
retrograde	12982 Oct 13 04:56	18° \mathbb{M} 39'55		inferior conj	12983 Oct 04 13:36	25° Ω 02'40	-2°16'35
evening set	12982 Oct 15 04:42	18° \mathbb{M} 29'32		minimum elong	12983 Oct 04 07:45	25° Ω 12'43	2°14'00
inferior conj	12982 Oct 24 03:07	14° \mathbb{M} 30'50	-4°05'22	min. Earth dist.	12983 Oct 07 10:00	23° Ω 05'32	0.56235 AU
minimum elong	12982 Oct 23 17:18	14° \mathbb{M} 45'35	4°01'40	morning rise	12983 Oct 12 08:46	20° Ω 19'09	
min. Earth dist.	12982 Oct 25 21:43	13° \mathbb{M} 26'48	0.54942 AU	direct	12983 Oct 17 21:55	19° Ω 07'09	
morning rise	12982 Nov 01 04:45	10° \mathbb{M} 21'40		morning max el	12983 Nov 01 01:15	26° Ω 21'16	25°55'34
direct	12982 Nov 05 22:18	9° \mathbb{M} 32'55			12983 Nov 04 12:50	0° \mathbb{M}	
morning max el	12982 Nov 19 13:54	16° \mathbb{M} 16'07	24°14'12	asc. node	12983 Nov 21 08:14	25° \mathbb{M} 26'03	
	12982 Nov 30 13:03	0° \mathbb{X}			12983 Nov 23 17:11	0° \mathbb{X}	
asc. node	12982 Dec 04 11:21	6° \mathbb{X} 28'09		morning set	12983 Nov 28 22:36	10° \mathbb{X} 47'19	
morning set	12982 Dec 14 11:25	26° \mathbb{X} 07'39					
	12982 Dec 16 06:28	0° \mathbb{Z}		superior conj	12983 Dec 05 17:26	25° \mathbb{X} 43'21	1°37'45
superior conj	12982 Dec 21 07:10	11° \mathbb{Z} 00'21	1°37'31	minimum elong	12983 Dec 05 16:55	25° \mathbb{X} 40'31	1°38'44
minimum elong	12982 Dec 21 07:45	11° \mathbb{Z} 03'31	1°38'30	max. Earth dist.	12983 Dec 06 19:53	28° \mathbb{X} 09'57	1.31686 AU
max. Earth dist.	12982 Dec 23 14:53	16° \mathbb{Z} 02'16	1.32607 AU		12983 Dec 07 15:50	0° \mathbb{Z}	
evening rise	12982 Dec 28 18:43	26° \mathbb{Z} 49'27		evening rise	12983 Dec 12 18:18	10° \mathbb{Z} 58'50	
	12982 Dec 30 08:48	0° \approx			12983 Dec 22 14:35	0° \approx	
desc. node	12983 Jan 06 08:56	13° \approx 07'32		desc. node	12983 Dec 24 05:49	2° \approx 50'38	
	12983 Jan 16 19:25	0° \mathbb{H}			12984 Jan 13 01:44	0° \mathbb{H}	
evening max el	12983 Jan 31 11:59	18° \mathbb{H} 04'26	27°30'47	evening max el	12984 Jan 13 21:12	0° \mathbb{H} 47'05	27°26'59
retrograde	12983 Feb 14 05:58	25° \mathbb{H} 30'26		retrograde	12984 Jan 27 19:15	8° \mathbb{H} 06'00	
evening set	12983 Feb 21 02:38	23° \mathbb{H} 03'19		evening set	12984 Feb 03 17:14	5° \mathbb{H} 52'21	
min. Earth dist.	12983 Feb 24 21:34	19° \mathbb{H} 45'40	0.63698 AU	min. Earth dist.	12984 Feb 07 11:25	2° \mathbb{H} 59'05	0.61644 AU
inferior conj	12983 Feb 27 13:59	17° \mathbb{H} 00'40	-0°54'53	inferior conj	12984 Feb 10 12:24	0° \mathbb{H} 13'26	-2°11'42
minimum elong	12983 Feb 27 15:44	16° \mathbb{H} 56'11	0°53'51	minimum elong	12984 Feb 10 17:00	0° \mathbb{H} 02'58	2°09'18
asc. node	12983 Mar 02 09:13	14° \mathbb{H} 17'28			12984 Feb 10 18:18	30° \mathbb{R} \approx	
morning rise	12983 Mar 06 07:08	11° \mathbb{H} 42'47		asc. node	12984 Feb 17 06:38	25° \approx 24'19	
direct	12983 Mar 08 17:19	11° \mathbb{H} 13'48		morning rise	12984 Feb 17 19:36	25° \approx 13'06	
morning max el	12983 Mar 15 04:23	14° \mathbb{H} 33'01	17°47'38	direct	12984 Feb 19 23:44	24° \approx 52'37	
	12983 Mar 26 01:48	0° \mathbb{Y}		morning max el	12984 Feb 26 21:14	28° \approx 21'45	17°50'01
morning set	12983 Mar 31 17:55	9° \mathbb{Y} 37'15			12984 Feb 28 09:57	0° \mathbb{H}	
desc. node	12983 Apr 04 10:48	15° \mathbb{Y} 55'34		morning set	12984 Mar 13 14:05	22° \mathbb{H} 45'40	
	12983 Apr 12 21:44	0° \mathbb{Z}			12984 Mar 17 15:14	0° \mathbb{Y}	
superior conj	12983 Apr 13 13:24	1° \mathbb{Z} 03'52	-1°06'19	desc. node	12984 Mar 21 07:19	6° \mathbb{Y} 27'51	
minimum elong	12983 Apr 13 06:37	0° \mathbb{Z} 36'15	1°05'50	superior conj	12984 Mar 24 15:13	12° \mathbb{Y} 12'20	-0°25'49
max. Earth dist.	12983 Apr 19 04:13	10° \mathbb{Z} 05'05	1.44861 AU	minimum elong	12984 Mar 24 12:48	12° \mathbb{Y} 02'03	0°25'32
evening rise	12983 Apr 29 01:14	25° \mathbb{Z} 28'03		max. Earth dist.	12984 Mar 31 19:50	24° \mathbb{Y} 11'04	1.43413 AU
	12983 May 02 00:32	0° \mathbb{I}			12984 Apr 04 10:37	0° \mathbb{Z}	
	12983 May 22 21:37	0° \mathbb{E}		evening rise	12984 Apr 07 18:07	5° \mathbb{Z} 13'07	
evening max el	12983 May 27 10:39	5° \mathbb{E} 11'19	20°28'12		12984 Apr 24 08:29	0° \mathbb{I}	
asc. node	12983 May 29 06:15	6° \mathbb{E} 52'55		evening max el	12984 May 09 07:14	18° \mathbb{I} 59'43	21°40'19
retrograde	12983 Jun 04 11:14	9° \mathbb{E} 48'50		asc. node	12984 May 15 03:26	23° \mathbb{I} 30'30	
evening set	12983 Jun 08 12:49	8° \mathbb{E} 14'25		retrograde	12984 May 18 09:29	24° \mathbb{I} 19'31	
inferior conj	12983 Jun 13 19:17	2° \mathbb{E} 08'48	3°12'52	evening set	12984 May 22 21:44	22° \mathbb{I} 28'54	
minimum elong	12983 Jun 13 19:00	2° \mathbb{E} 09'46	3°11'51	inferior conj	12984 May 28 04:03	16° \mathbb{I} 12'33	3°04'00
min. Earth dist.	12983 Jun 14 12:12	1° \mathbb{E} 10'43	0.68242 AU	minimum elong	12984 May 28 02:51	16° \mathbb{I} 16'43	3°02'56
	12983 Jun 15 09:05	30° \mathbb{R} \mathbb{I}		min. Earth dist.	12984 May 28 07:37	16° \mathbb{I} 00'07	0.68789 AU
morning rise	12983 Jun 19 00:52	25° \mathbb{I} 48'28		morning rise	12984 Jun 02 07:46	9° \mathbb{I} 57'39	
direct	12983 Jun 24 13:02	23° \mathbb{I} 22'31		direct	12984 Jun 07 07:12	7° \mathbb{I} 48'50	
desc. node	12983 Jul 01 11:26	26° \mathbb{I} 16'58		morning max el	12984 Jun 17 04:06	13° \mathbb{I} 38'40	22°38'44
morning max el	12983 Jul 05 16:59	0° \mathbb{E} 03'49	24°08'23	desc. node	12984 Jun 17 08:31	13° \mathbb{I} 49'50	
	12983 Jul 05 15:28	0° \mathbb{E}			12984 Jun 30 08:18	0° \mathbb{E}	
	12983 Jul 28 06:12	0° Ω			12984 Jul 20 04:07	0° Ω	

morning set	12984 Jul 21 01:15	1°♎26'11				12985 Jun 02 06:08	0°♐		
max. Earth dist.	12984 Jul 25 18:53	9°♎19'37	1.40549 AU	desc. node		12985 Jun 04 05:29	2°♐19'18		
						12985 Jun 23 21:04	0°♑		
superior conj	12984 Aug 02 14:59	23°♎03'11	-1°12'36	morning set		12985 Jun 30 21:39	10°♑50'18		
minimum elong	12984 Aug 02 20:19	23°♎27'20	1°12'28	max. Earth dist.		12985 Jul 07 23:32	22°♑10'19	1.42694 AU	
	12984 Aug 06 10:02	0°♐				12985 Jul 12 16:53	0°♒		
asc. node	12984 Aug 11 03:17	8°♐51'08							
evening rise	12984 Aug 12 14:55	11°♐39'37		superior conj		12985 Jul 15 06:05	4°♒19'24	-1°44'16	
	12984 Aug 22 22:00	0°♑		minimum elong		12985 Jul 15 13:08	4°♒49'36	1°44'25	
evening max el	12984 Aug 28 14:05	7°♑19'48	18°24'07	evening rise		12985 Jul 26 17:41	24°♒34'51		
retrograde	12984 Sep 05 04:38	11°♑10'26		asc. node		12985 Jul 28 23:58	28°♒38'54		
evening set	12984 Sep 07 06:07	10°♑54'15				12985 Jul 29 18:05	0°♓		
desc. node	12984 Sep 13 05:38	7°♑37'42		evening max el		12985 Aug 12 01:15	20°♓13'09	18°05'12	
inferior conj	12984 Sep 14 21:32	6°♑19'09	-0°31'17	retrograde		12985 Aug 18 20:01	23°♓41'35		
minimum elong	12984 Sep 14 20:21	6°♑21'33	0°30'48	evening set		12985 Aug 21 04:58	23°♓16'15		
min. Earth dist.	12984 Sep 18 04:30	3°♑41'15	0.58157 AU	inferior conj		12985 Aug 28 02:24	18°♓20'40	0°54'32	
morning rise	12984 Sep 22 07:07	0°♑58'46		minimum elong		12985 Aug 28 04:02	18°♓16'51	0°53'40	
	12984 Sep 24 13:08	30°♓♐		desc. node		12985 Aug 31 03:08	15°♓31'13		
direct	12984 Sep 28 11:26	29°♓19'39		min. Earth dist.		12985 Aug 31 07:28	15°♓21'34	0.60399 AU	
	12984 Oct 02 11:43	0°♑		morning rise		12985 Sep 04 00:04	12°♓29'59		
morning max el	12984 Oct 12 19:04	6°♑56'55	27°12'17	direct		12985 Sep 10 13:32	10°♓24'09		
	12984 Oct 30 00:52	0°♒		morning max el		12985 Sep 24 20:38	18°♓18'07	27°52'54	
asc. node	12984 Nov 07 05:03	14°♒50'07				12985 Oct 04 16:38	0°♓		
morning set	12984 Nov 12 07:24	25°♒16'58				12985 Oct 22 18:49	0°♓		
	12984 Nov 14 11:53	0°♓		asc. node		12985 Oct 25 01:47	4°♓32'16		
				morning set		12985 Oct 27 11:55	9°♓30'46		
superior conj	12984 Nov 19 05:03	10°♓27'05	1°32'06	max. Earth dist.		12985 Nov 02 12:20	22°♓30'51	1.31356 AU	
minimum elong	12984 Nov 19 03:36	10°♓19'02	1°32'54						
max. Earth dist.	12984 Nov 19 04:19	10°♓23'01	1.31264 AU	superior conj		12985 Nov 03 16:07	25°♓05'05	1°20'44	
evening rise	12984 Nov 25 23:46	25°♓22'07		minimum elong		12985 Nov 03 14:03	24°♓53'34	1°21'13	
	12984 Nov 28 04:39	0°♔				12985 Nov 05 21:06	0°♔		
desc. node	12984 Dec 10 02:47	22°♔03'00		evening rise		12985 Nov 10 08:55	9°♔52'32		
	12984 Dec 15 08:16	0°♕				12985 Nov 20 12:49	0°♔		
evening max el	12984 Dec 26 00:25	12°♕43'30	26°48'45	desc. node		12985 Nov 26 23:53	10°♔31'42		
retrograde	12985 Jan 08 23:12	19°♕52'51		evening max el		12985 Dec 07 19:14	23°♔46'00	25°37'34	
evening set	12985 Jan 15 15:34	18°♕00'36				12985 Dec 17 05:52	0°♕		
min. Earth dist.	12985 Jan 19 14:30	15°♕22'21	0.59484 AU	retrograde		12985 Dec 21 16:24	0°♕46'00		
inferior conj	12985 Jan 22 18:49	12°♕51'21	-3°33'42			12985 Dec 26 02:50	30°♓♔		
minimum elong	12985 Jan 23 02:20	12°♕36'26	3°30'19	evening set		12985 Dec 27 17:17	29°♔21'55		
morning rise	12985 Jan 30 16:05	8°♕11'44		min. Earth dist.		12986 Jan 01 07:36	26°♔44'02	0.57415 AU	
direct	12985 Feb 01 17:27	7°♕56'08		inferior conj		12986 Jan 04 05:47	24°♔43'41	-4°50'48	
asc. node	12985 Feb 03 03:59	8°♕04'04		minimum elong		12986 Jan 04 14:24	24°♔28'51	4°47'45	
morning max el	12985 Feb 09 09:51	11°♕44'52	18°11'30	morning rise		12986 Jan 12 14:08	20°♔26'34		
	12985 Feb 21 12:33	0°♕		direct		12986 Jan 14 17:49	20°♔12'22		
morning set	12985 Feb 25 01:36	6°♕36'14		asc. node		12986 Jan 21 01:18	22°♔23'19		
				morning max el		12986 Jan 23 14:17	24°♔30'40	18°54'00	
superior conj	12985 Mar 06 16:17	24°♕25'18	0°11'46			12986 Jan 28 04:03	0°♕		
minimum elong	12985 Mar 06 17:11	24°♕29'23	0°11'49	morning set		12986 Feb 08 23:42	20°♕54'09		
behind sun begin	12985 Mar 06 12:04	24°♕06'20				12986 Feb 13 14:53	0°♕		
behind sun end	12985 Mar 06 22:18	24°♕52'24							
desc. node	12985 Mar 08 03:52	27°♕04'29		superior conj		12986 Feb 17 12:22	7°♕30'31	0°43'12	
	12985 Mar 09 19:37	0°♖		minimum elong		12986 Feb 17 14:54	7°♕42'28	0°43'16	
max. Earth dist.	12985 Mar 14 07:07	7°♖42'25	1.41480 AU	desc. node		12986 Feb 23 00:25	17°♕41'36		
evening rise	12985 Mar 19 04:08	15°♖46'18		max. Earth dist.		12986 Feb 24 14:18	20°♕30'51	1.39269 AU	
	12985 Mar 28 06:14	0°♖		evening rise		12986 Feb 28 11:17	27°♕14'48		
	12985 Apr 19 07:46	0°♗				12986 Mar 02 02:24	0°♖		
evening max el	12985 Apr 21 23:29	2°♗49'16	22°59'39			12986 Mar 21 19:22	0°♖		
retrograde	12985 May 02 05:42	8°♗52'07		evening max el		12986 Apr 04 13:21	16°♖40'36	24°20'16	
asc. node	12985 May 02 00:42	8°♗51'55		retrograde		12986 Apr 15 22:40	23°♖21'13		
evening set	12985 May 07 05:18	6°♗46'35		asc. node		12986 Apr 18 22:03	22°♖41'36		
min. Earth dist.	12985 May 12 04:19	0°♗53'52	0.68860 AU	evening set		12986 Apr 21 09:57	21°♖03'01		
inferior conj	12985 May 12 13:34	0°♗21'49	2°44'49	min. Earth dist.		12986 Apr 26 00:16	15°♖46'19	0.68466 AU	
minimum elong	12985 May 12 11:43	0°♗28'13	2°43'39	inferior conj		12986 Apr 26 21:59	14°♖33'12	2°15'35	
	12985 May 12 19:52	30°♓♖		minimum elong		12986 Apr 26 19:50	14°♖40'27	2°14'23	
morning rise	12985 May 17 18:03	24°♖13'42		morning rise		12986 May 02 05:51	8°♖32'57		
direct	12985 May 22 04:31	22°♖25'16		direct		12986 May 06 03:46	7°♖05'35		
morning max el	12985 May 30 19:36	27°♖23'41	21°14'13	morning max el		12986 May 13 18:04	11°♖20'43	20°00'50	

desc. node	12986 May 22 02:22	21°♄30'04		morning max el	12987 Apr 27 00:04	25°♄27'33	19°02'06
	12986 May 28 01:34	0°♄			12987 May 01 00:01	0°♄	
morning set	12986 Jun 10 00:34	19°♄31'42		desc. node	12987 May 08 23:09	11°♄10'43	
	12986 Jun 16 18:19	0°♄		greatest brilliancy	12987 May 10 04:47	13°♄01'46	-0.7m
max. Earth dist.	12986 Jun 20 10:38	5°♄48'57	1.44386 AU	morning set	12987 May 20 05:35	28°♄24'57	
					12987 May 21 06:09	0°♄	
superior conj	12986 Jun 25 21:28	14°♄35'11	-2°06'49	max. Earth dist.	12987 Jun 03 02:48	20°♄01'06	1.45461 AU
minimum elong	12986 Jun 26 02:46	14°♄56'43	2°07'32				
	12986 Jul 05 04:06	0°♄		superior conj	12987 Jun 05 15:15	23°♄58'33	-2°13'14
evening rise	12986 Jul 09 02:25	6°♄41'45		minimum elong	12987 Jun 05 13:56	23°♄53'22	2°14'11
asc. node	12986 Jul 15 20:44	18°♄12'01			12987 Jun 09 10:41	0°♄	
	12986 Jul 23 14:02	0°♄		evening rise	12987 Jun 20 12:12	17°♄48'40	
evening max el	12986 Jul 26 15:22	3°♄31'45	18°05'28		12987 Jun 28 00:08	0°♄	
retrograde	12986 Aug 02 00:58	6°♄52'11		asc. node	12987 Jul 02 17:35	7°♄23'53	
evening set	12986 Aug 04 18:05	6°♄14'35		evening max el	12987 Jul 10 05:04	17°♄06'09	18°23'59
inferior conj	12986 Aug 11 00:40	1°♄00'43	1°57'13	retrograde	12987 Jul 16 14:59	20°♄32'10	
minimum elong	12986 Aug 11 03:12	0°♄53'57	1°55'55	evening set	12987 Jul 19 16:37	19°♄39'54	
	12986 Aug 11 23:21	30°♄♄		inferior conj	12987 Jul 25 12:05	14°♄09'41	2°38'56
min. Earth dist.	12986 Aug 13 20:06	28°♄02'19	0.62666 AU	minimum elong	12987 Jul 25 14:19	14°♄03'04	2°37'41
morning rise	12986 Aug 17 10:10	24°♄50'18		min. Earth dist.	12987 Jul 27 18:04	11°♄31'05	0.64730 AU
desc. node	12986 Aug 18 00:37	24°♄24'54		morning rise	12987 Jul 31 10:45	7°♄49'15	
direct	12986 Aug 24 02:28	22°♄23'15		desc. node	12987 Aug 04 22:04	5°♄25'40	
	12986 Sep 06 17:51	0°♄		direct	12987 Aug 07 00:05	5°♄10'16	
morning max el	12986 Sep 07 04:05	0°♄25'21	27°54'25	morning max el	12987 Aug 20 14:26	13°♄08'23	27°20'40
	12986 Sep 28 18:58	0°♄			12987 Sep 03 04:11	0°♄	
morning set	12986 Oct 11 10:04	23°♄24'03			12987 Sep 21 09:23	0°♄	
asc. node	12986 Oct 11 22:28	24°♄27'12		morning set	12987 Sep 24 23:14	6°♄49'56	
	12986 Oct 14 14:31	0°♄		asc. node	12987 Sep 28 19:06	14°♄29'50	
max. Earth dist.	12986 Oct 16 15:58	4°♄23'50	1.31978 AU	max. Earth dist.	12987 Sep 29 11:38	15°♄54'49	1.33134 AU
superior conj	12986 Oct 19 00:50	9°♄32'49	1°03'44	superior conj	12987 Oct 03 05:05	23°♄44'21	0°41'17
minimum elong	12986 Oct 18 22:34	9°♄20'25	1°03'55	minimum elong	12987 Oct 03 03:12	23°♄34'21	0°41'14
evening rise	12986 Oct 25 19:56	24°♄25'44			12987 Oct 06 03:04	0°♄	
	12986 Oct 28 11:01	0°♄		evening rise	12987 Oct 10 06:55	8°♄56'42	
desc. node	12986 Nov 13 21:05	28°♄00'30			12987 Oct 21 03:49	0°♄	
	12986 Nov 15 11:55	0°♄		evening max el	12987 Oct 31 17:39	14°♄05'48	22°20'58
evening max el	12986 Nov 19 06:43	4°♄03'42	24°02'47	desc. node	12987 Oct 31 18:23	14°♄07'38	
retrograde	12986 Dec 02 21:18	10°♄50'53		retrograde	12987 Nov 13 13:47	20°♄27'58	
evening set	12986 Dec 07 19:09	9°♄58'07		evening set	12987 Nov 17 01:42	20°♄01'06	
min. Earth dist.	12986 Dec 13 17:49	7°♄01'40	0.55722 AU	min. Earth dist.	12987 Nov 25 00:39	16°♄28'01	0.54707 AU
inferior conj	12986 Dec 15 20:02	5°♄45'38	-5°44'25	inferior conj	12987 Nov 25 17:28	16°♄04'20	-5°50'58
minimum elong	12986 Dec 16 00:58	5°♄38'08	5°42'55	minimum elong	12987 Nov 25 13:53	16°♄09'23	5°49'46
morning rise	12986 Dec 24 08:43	1°♄48'16		morning rise	12987 Dec 04 03:18	12°♄16'59	
direct	12986 Dec 26 22:23	1°♄31'23		direct	12987 Dec 07 11:19	11°♄51'58	
morning max el	12987 Jan 06 06:35	6°♄28'21	19°59'14	morning max el	12987 Dec 19 08:31	17°♄32'17	21°26'57
asc. node	12987 Jan 07 22:33	8°♄11'43		asc. node	12987 Dec 25 19:43	25°♄12'51	
	12987 Jan 21 11:19	0°♄			12987 Dec 28 23:02	0°♄	
morning set	12987 Jan 24 04:47	5°♄28'57		morning set	12988 Jan 08 14:11	20°♄13'04	
					12988 Jan 13 05:30	0°♄	
superior conj	12987 Jan 31 22:51	21°♄14'33	1°07'26	superior conj	12988 Jan 15 19:43	5°♄26'19	1°24'26
minimum elong	12987 Feb 01 01:38	21°♄28'26	1°07'45	minimum elong	12988 Jan 15 21:56	5°♄37'50	1°25'05
	12987 Feb 05 10:26	0°♄		max. Earth dist.	12988 Jan 20 07:24	14°♄35'22	1.35014 AU
max. Earth dist.	12987 Feb 06 20:37	2°♄41'44	1.37037 AU	evening rise	12988 Jan 24 10:32	22°♄36'39	
desc. node	12987 Feb 09 21:00	8°♄15'36		desc. node	12988 Jan 27 17:40	28°♄42'37	
evening rise	12987 Feb 10 14:30	9°♄34'30			12988 Jan 28 10:51	0°♄	
	12987 Feb 22 19:43	0°♄			12988 Feb 16 13:18	0°♄	
	12987 Mar 17 13:41	0°♄		evening max el	12988 Feb 28 16:35	14°♄19'41	26°37'13
evening max el	12987 Mar 18 02:45	0°♄32'24	25°35'15	retrograde	12988 Mar 12 18:32	21°♄41'56	
retrograde	12987 Mar 30 11:19	7°♄40'08		evening set	12988 Mar 19 03:45	19°♄09'57	
evening set	12987 Apr 05 10:02	5°♄12'47		asc. node	12988 Mar 22 16:53	15°♄38'47	
asc. node	12987 Apr 05 19:28	4°♄52'18		min. Earth dist.	12988 Mar 23 05:17	15°♄02'57	0.66393 AU
min. Earth dist.	12987 Apr 09 17:19	0°♄31'25	0.67634 AU	inferior conj	12988 Mar 25 03:31	12°♄45'05	0°46'10
	12987 Apr 10 03:12	30°♄♄		minimum elong	12988 Mar 25 02:21	12°♄48'34	0°45'36
inferior conj	12987 Apr 11 03:20	28°♄42'28	1°36'11	morning rise	12988 Mar 31 02:02	7°♄04'50	
minimum elong	12987 Apr 11 01:22	28°♄48'48	1°35'08	direct	12988 Apr 03 01:54	6°♄14'50	
morning rise	12987 Apr 16 17:13	22°♄51'21		morning max el	12988 Apr 09 12:29	9°♄39'39	18°19'45
direct	12987 Apr 20 03:31	21°♄43'54					

	12988 Apr 24 01:19	0°♄		inferior conj	12989 Mar 08 20:01	26°♄34'03	-0°14'51
desc. node	12988 Apr 24 19:50	1°♄13'22		minimum elong	12989 Mar 08 20:27	26°♄32'52	0°14'31
morning set	12988 Apr 29 08:43	8°♄26'20		transit middle	12989 Mar 08 20:27	26°♄32'52	0°14'31
	12988 May 13 00:22	0°♂		transit begin	12989 Mar 08 19:10	26°♄36'22	
				transit end	12989 Mar 08 21:44	26°♄29'21	
superior conj	12988 May 14 22:53	3°♂01'52	-1°59'27	asc. node	12989 Mar 09 14:20	25°♄44'26	
minimum elong	12988 May 14 14:51	2°♂30'30	1°59'47	morning rise	12989 Mar 15 05:42	21°♄07'10	
max. Earth dist.	12988 May 15 22:24	4°♂33'45	1.45818 AU	direct	12989 Mar 17 20:32	20°♄31'26	
evening rise	12988 May 30 21:41	27°♂56'24		morning max el	12989 Mar 24 05:00	23°♄49'15	17°54'24
	12988 Jun 01 05:16	0°♅			12989 Mar 29 06:22	0°♄	
greatest brilliancy	12988 Jun 10 04:40	13°♅58'05	-0.8m	morning set	12989 Apr 10 16:22	19°♄51'15	
asc. node	12988 Jun 18 14:31	26°♅07'08		desc. node	12989 Apr 11 16:26	21°♄31'09	
	12988 Jun 21 20:30	0°♆			12989 Apr 16 19:50	0°♄	
evening max el	12988 Jun 22 15:39	0°♆49'33	18°59'50				
retrograde	12988 Jun 29 10:31	4°♆34'11		superior conj	12989 Apr 24 13:53	12°♄31'02	-1°28'35
evening set	12988 Jul 02 21:04	3°♆25'45		minimum elong	12989 Apr 24 05:10	11°♄56'16	1°28'11
	12988 Jul 06 11:59	30°♄♅		max. Earth dist.	12989 Apr 28 18:37	19°♄09'31	1.45419 AU
inferior conj	12988 Jul 08 09:01	27°♅40'38	3°03'08		12989 May 05 17:32	0°♂	
minimum elong	12988 Jul 08 10:23	27°♅36'16	3°02'02	evening rise	12989 May 10 13:12	7°♂25'20	
min. Earth dist.	12988 Jul 10 00:19	25°♅35'34	0.66444 AU	greatest brilliancy	12989 May 25 03:06	29°♂23'01	-0.6m
morning rise	12988 Jul 13 23:02	21°♅17'04			12989 May 25 13:17	0°♅	
direct	12988 Jul 20 04:46	18°♅36'30		asc. node	12989 Jun 05 11:32	14°♅12'12	
desc. node	12988 Jul 21 19:26	18°♅45'57		evening max el	12989 Jun 05 21:09	14°♅36'42	19°51'49
morning max el	12988 Aug 02 01:23	26°♅16'05	26°19'08	retrograde	12989 Jun 13 08:53	18°♅52'04	
	12988 Aug 05 12:07	0°♆		evening set	12989 Jun 17 04:49	17°♅26'56	
	12988 Aug 26 18:00	0°♄		inferior conj	12989 Jun 22 12:28	11°♅28'14	3°12'53
morning set	12988 Sep 07 00:08	19°♄40'13		minimum elong	12989 Jun 22 12:47	11°♅27'10	3°11'53
max. Earth dist.	12988 Sep 10 21:22	27°♄05'48	1.34803 AU	min. Earth dist.	12989 Jun 23 13:16	10°♅04'47	0.67719 AU
	12988 Sep 12 08:44	0°♅		morning rise	12989 Jun 27 20:23	5°♅05'59	
asc. node	12988 Sep 14 15:42	4°♅35'59		direct	12989 Jul 03 15:26	2°♅32'51	
				desc. node	12989 Jul 08 16:42	4°♅05'54	
superior conj	12988 Sep 16 02:21	7°♅33'02	0°13'42	morning max el	12989 Jul 15 11:50	9°♅39'03	24°59'05
minimum elong	12988 Sep 16 01:36	7°♅29'09	0°13'36		12989 Jul 31 14:00	0°♆	
behind sun begin	12988 Sep 15 22:23	7°♅12'40			12989 Aug 19 08:52	0°♄	
behind sun end	12988 Sep 16 04:48	7°♅45'39		morning set	12989 Aug 20 08:45	1°♄45'28	
evening rise	12988 Sep 23 15:51	23°♅20'00		max. Earth dist.	12989 Aug 23 22:38	8°♄13'53	1.36889 AU
	12988 Sep 26 21:55	0°♄					
evening max el	12988 Oct 12 13:17	24°♄28'35	20°48'36	superior conj	12989 Aug 30 13:39	20°♄51'27	-0°18'10
desc. node	12988 Oct 17 15:46	28°♄25'46		minimum elong	12989 Aug 30 14:50	20°♄57'16	0°18'12
	12988 Oct 22 00:03	0°♄		asc. node	12989 Sep 01 12:16	24°♄42'08	
retrograde	12988 Oct 24 00:23	0°♄10'15			12989 Sep 04 03:35	0°♅	
evening set	12988 Oct 26 08:58	29°♄56'51		evening rise	12989 Sep 07 20:32	7°♅29'56	
	12988 Oct 26 01:46	30°♄♄			12989 Sep 20 08:21	0°♄	
inferior conj	12988 Nov 04 09:01	26°♄02'37	-4°57'59	evening max el	12989 Sep 24 22:49	5°♄35'51	19°35'25
minimum elong	12988 Nov 03 23:16	26°♄16'30	4°54'54	retrograde	12989 Oct 04 18:11	10°♄29'42	
min. Earth dist.	12988 Nov 05 07:09	25°♄31'01	0.54587 AU	desc. node	12989 Oct 04 13:13	10°♄29'35	
morning rise	12988 Nov 12 13:40	22°♄07'46		evening set	12989 Oct 06 15:12	10°♄19'44	
direct	12988 Nov 16 19:25	21°♄29'15		inferior conj	12989 Oct 15 09:24	6°♄15'02	-3°20'27
morning max el	12988 Nov 29 22:30	27°♄50'29	23°11'36	minimum elong	12989 Oct 15 00:52	6°♄28'32	3°16'56
	12988 Dec 02 01:45	0°♄		min. Earth dist.	12989 Oct 17 16:33	4°♄47'51	0.55396 AU
asc. node	12988 Dec 11 16:47	13°♄09'51		morning rise	12989 Oct 23 08:38	1°♄52'37	
	12988 Dec 20 16:36	0°♅		direct	12989 Oct 28 10:45	0°♄54'59	
morning set	12988 Dec 23 01:42	4°♅59'35		morning max el	12989 Nov 11 08:35	7°♄51'37	24°59'25
					12989 Nov 27 13:16	0°♄	
superior conj	12988 Dec 29 23:44	19°♅55'48	1°34'35	asc. node	12989 Nov 28 13:44	1°♄49'05	
minimum elong	12988 Dec 30 00:57	20°♅02'23	1°35'30	morning set	12989 Dec 07 13:30	19°♄43'34	
max. Earth dist.	12989 Jan 02 01:46	26°♅29'29	1.33358 AU		12989 Dec 12 06:19	0°♅	
	12989 Jan 03 18:16	0°♄					
evening rise	12989 Jan 06 19:41	6°♄10'52		superior conj	12989 Dec 14 08:21	4°♅36'01	1°38'21
desc. node	12989 Jan 13 14:22	18°♄57'19		minimum elong	12989 Dec 14 08:28	4°♅36'37	1°39'21
	12989 Jan 20 02:15	0°♄		max. Earth dist.	12989 Dec 16 03:30	8°♅32'27	1.32155 AU
evening max el	12989 Feb 10 06:00	27°♄51'15	27°18'49	evening rise	12989 Dec 21 14:48	20°♅09'25	
	12989 Feb 12 14:55	0°♄			12989 Dec 26 14:07	0°♄	
retrograde	12989 Feb 23 19:21	5°♄17'32		desc. node	12989 Dec 31 11:11	8°♄54'09	
evening set	12989 Mar 02 12:59	2°♄46'39			12990 Jan 14 04:53	0°♄	
	12989 Mar 05 15:28	30°♄♄		evening max el	12990 Jan 23 17:16	10°♄54'47	27°33'07
min. Earth dist.	12989 Mar 06 09:55	29°♄12'06	0.64778 AU	retrograde	12990 Feb 06 13:04	18°♄18'00	

evening set	12990 Feb 13 11:15	15° K 55'22		12991 Jan 23 12:11	30° R	
min. Earth dist.	12990 Feb 17 05:20	12° K 49'17	0.62853 AU	evening set	12991 Jan 26 19:27	28° \approx 28'08
inferior conj	12990 Feb 20 01:57	10° K 02'13	-1°26'28	min. Earth dist.	12991 Jan 30 14:31	25° \approx 42'53 0.60723 AU
minimum elong	12990 Feb 20 04:50	9° K 55'10	1°24'51	inferior conj	12991 Feb 02 17:58	23° \approx 01'08 -2°46'20
asc. node	12990 Feb 24 11:47	6° K 12'31		minimum elong	12991 Feb 02 23:52	22° \approx 48'26 2°43'24
morning rise	12990 Feb 27 00:57	4° K 51'37		morning rise	12991 Feb 10 07:21	18° \approx 09'41
direct	12990 Mar 01 08:22	4° K 26'38		asc. node	12991 Feb 11 09:11	17° \approx 56'06
morning max el	12990 Mar 07 22:42	7° K 48'27	17°46'27	direct	12991 Feb 12 09:43	17° \approx 51'48
	12990 Mar 22 15:11	0° Y		morning max el	12991 Feb 19 14:18	21° \approx 28'04 17°56'48
morning set	12990 Mar 24 00:56	2° Y 27'06			12991 Feb 26 02:13	0° K
desc. node	12990 Mar 29 12:57	11° Y 59'19		morning set	12991 Mar 07 04:18	15° K 55'24
					12991 Mar 14 22:39	0° Y
superior conj	12990 Apr 05 01:38	23° Y 00'21	-0°49'06	desc. node	12991 Mar 16 09:29	2° Y 34'04
minimum elong	12990 Apr 04 20:42	22° Y 39'57	0°48'40			
	12990 Apr 09 08:07	0° B		superior conj	12991 Mar 17 13:46	4° Y 37'58 -0°09'17
max. Earth dist.	12990 Apr 11 12:28	3° B 30'39	1.44314 AU	minimum elong	12991 Mar 17 12:58	4° Y 34'29 0°09'08
evening rise	12990 Apr 20 00:58	16° B 52'54		behind sun begin	12991 Mar 17 06:15	4° Y 05'07
	12990 Apr 28 16:52	0° II		behind sun end	12991 Mar 17 19:41	5° Y 03'47
evening max el	12990 May 19 20:45	28° II 24'19	20°57'37	max. Earth dist.	12991 Mar 25 01:55	17° Y 22'03 1.42629 AU
	12990 May 21 13:17	0° B		evening rise	12991 Mar 31 00:07	26° Y 56'22
asc. node	12990 May 23 08:40	1° B 26'09			12991 Apr 01 22:49	0° B
retrograde	12990 May 28 07:46	3° B 19'39			12991 Apr 22 11:18	0° II
evening set	12990 Jun 01 13:50	1° B 38'04		evening max el	12991 May 02 15:10	12° II 13'05 22°13'32
	12990 Jun 03 06:58	30° R II		asc. node	12991 May 10 05:54	17° II 33'56
inferior conj	12990 Jun 06 19:55	25° II 27'24	3°10'25	retrograde	12991 May 12 05:30	17° II 52'12
minimum elong	12990 Jun 06 19:13	25° II 29'48	3°09'24	evening set	12991 May 16 22:24	15° II 55'06
min. Earth dist.	12990 Jun 07 06:59	24° II 48'59	0.68529 AU	inferior conj	12991 May 22 05:16	9° II 34'39 2°57'07
morning rise	12990 Jun 12 00:23	19° II 09'09		minimum elong	12991 May 22 03:46	9° II 39'54 2°56'01
direct	12990 Jun 17 07:04	16° II 50'15		min. Earth dist.	12991 May 22 03:21	9° II 41'22 0.68868 AU
desc. node	12990 Jun 25 13:51	20° II 57'28		morning rise	12991 May 27 08:58	3° II 22'15
morning max el	12990 Jun 27 22:12	23° II 10'32	23°30'11	direct	12991 Jun 01 02:48	1° II 21'53
	12990 Jul 03 22:32	0° B		morning max el	12991 Jun 10 10:51	6° II 50'04 22°01'47
	12990 Jul 24 22:21	0° Q		desc. node	12991 Jun 12 10:53	8° II 56'57
morning set	12990 Aug 01 20:19	12° Q 53'24			12991 Jun 28 07:54	0° B
max. Earth dist.	12990 Aug 05 20:20	19° Q 44'45	1.39209 AU	morning set	12991 Jul 13 07:02	22° B 55'25
	12990 Aug 11 13:50	0° P			12991 Jul 17 15:19	0° Q
superior conj	12990 Aug 13 11:11	3° P 29'50	-0°52'39	max. Earth dist.	12991 Jul 18 20:42	2° Q 01'57 1.41499 AU
minimum elong	12990 Aug 13 14:59	3° P 47'31	0°52'33	superior conj	12991 Jul 26 14:42	15° Q 19'14 -1°26'42
asc. node	12990 Aug 19 08:51	14° P 44'03		minimum elong	12991 Jul 26 21:01	15° Q 47'07 1°26'39
evening rise	12990 Aug 22 18:04	21° P 18'06			12991 Aug 03 17:21	0° P
	12990 Aug 27 07:17	0° A		evening rise	12991 Aug 06 04:59	4° P 36'02
evening max el	12990 Sep 07 21:20	17° A 30'33	18°43'59	asc. node	12991 Aug 06 05:30	4° P 38'28
retrograde	12990 Sep 16 04:37	21° A 40'58		evening max el	12991 Aug 22 05:10	0° A 06'09 18°13'39
evening set	12990 Sep 18 02:32	21° A 28'27			12991 Aug 22 02:42	0° A
desc. node	12990 Sep 21 10:43	20° A 12'43		retrograde	12991 Aug 29 10:00	3° A 45'23
inferior conj	12990 Sep 26 04:47	17° A 05'32	-1°30'12	evening set	12991 Aug 31 14:26	3° A 25'50
minimum elong	12990 Sep 26 01:04	17° A 12'24	1°28'31		12991 Sep 06 08:59	30° R P
min. Earth dist.	12990 Sep 29 07:25	14° A 48'53	0.56991 AU	inferior conj	12991 Sep 07 22:00	28° P 42'11 0°07'53
morning rise	12990 Oct 03 20:12	12° A 05'33		minimum elong	12991 Sep 07 22:16	28° P 41'36 0°07'40
direct	12990 Oct 09 16:11	10° A 42'26		transit middle	12991 Sep 07 22:16	28° P 41'36 0°07'40
morning max el	12990 Oct 23 22:33	18° A 07'53	26°32'06	transit begin	12991 Sep 07 19:14	28° P 48'06
	12990 Nov 02 20:36	0° M		transit end	12991 Sep 08 01:17	28° P 35'05
asc. node	12990 Nov 15 10:35	20° M 58'58		desc. node	12991 Sep 08 08:12	28° P 20'08
	12990 Nov 19 22:42	0° X		min. Earth dist.	12991 Sep 11 05:35	25° P 52'16 0.59096 AU
morning set	12990 Nov 21 23:53	4° X 19'36		morning rise	12991 Sep 15 02:39	23° P 07'36
				direct	12991 Sep 21 11:48	21° P 16'20
superior conj	12990 Nov 28 19:26	19° X 20'01	1°36'04	morning max el	12991 Oct 05 19:44	29° P 02'16 27°34'09
minimum elong	12990 Nov 28 18:30	19° X 14'49	1°36'58		12991 Oct 06 18:46	0° A
max. Earth dist.	12990 Nov 29 10:16	20° X 42'39	1.31440 AU		12991 Oct 27 18:07	0° M
	12990 Dec 03 15:33	0° B		asc. node	12991 Nov 02 07:21	10° M 31'27
evening rise	12990 Dec 05 17:08	4° B 25'06		morning set	12991 Nov 06 07:06	18° M 43'10
desc. node	12990 Dec 18 08:07	28° B 25'23			12991 Nov 11 11:35	0° X
	12990 Dec 19 06:53	0° \approx				
evening max el	12991 Jan 06 00:00	23° \approx 18'07	27°14'57	superior conj	12991 Nov 13 07:05	4° X 02'17 1°27'59
	12991 Jan 16 07:11	0° K		minimum elong	12991 Nov 13 05:20	3° X 52'30 1°28'39
retrograde	12991 Jan 19 22:49	0° K 33'58		max. Earth dist.	12991 Nov 12 18:47	2° X 53'38 1.31238 AU

evening rise	12991 Nov 20 00:26	18°  52'10		evening rise	12992 Nov 03 10:41	3°  25'18	
	12991 Nov 25 10:03	0° 			12992 Nov 17 10:54	0° 	
desc. node	12991 Dec 05 05:09	17°  20'51		desc. node	12992 Nov 21 02:18	5°  26'54	
	12991 Dec 14 09:52	0° 		evening max el	12992 Nov 29 15:29	15°  34'52	24°59'21
evening max el	12991 Dec 18 23:50	4°  51'53	26°22'13	retrograde	12992 Dec 13 10:40	22°  29'24	
retrograde	12992 Jan 01 22:45	11°  57'48		evening set	12992 Dec 19 01:23	21°  18'58	
evening set	12992 Jan 08 09:35	10°  17'04		min. Earth dist.	12992 Dec 24 03:24	18°  35'31	0.56633 AU
min. Earth dist.	12992 Jan 12 13:28	7°  40'44	0.58568 AU	inferior conj	12992 Dec 26 18:42	16°  52'59	-5°17'47
inferior conj	12992 Jan 15 16:29	5°  20'54	-4°07'59	minimum elong	12992 Dec 27 02:30	16°  40'20	5°15'20
minimum elong	12992 Jan 16 00:51	5°  05'15	4°04'32	morning rise	12993 Jan 04 05:50	12°  44'34	
morning rise	12992 Jan 23 19:03	0°  50'42		direct	12993 Jan 06 12:49	12°  29'41	
direct	12992 Jan 25 20:25	0°  36'16		asc. node	12993 Jan 15 03:51	16°  17'51	
asc. node	12992 Jan 29 06:33	1°  18'27		morning max el	12993 Jan 15 23:39	17°  03'43	19°18'49
morning max el	12992 Feb 02 23:57	4°  36'54	18°26'55		12993 Jan 25 07:53	0° 	
morning set	12992 Feb 18 20:52	29°  59'09		morning set	12993 Feb 01 22:22	14°  26'01	
	12992 Feb 18 21:02	0° 			12993 Feb 09 18:27	0° 	
superior conj	12992 Feb 27 23:30	17°  14'39	0°25'56	superior conj	12993 Feb 10 02:16	0°  38'04	0°54'21
minimum elong	12992 Feb 28 01:17	17°  22'54	0°25'58	minimum elong	12993 Feb 10 05:02	0°  51'29	0°54'31
desc. node	12992 Mar 02 06:01	23°  11'15		max. Earth dist.	12993 Feb 16 17:30	13°  06'29	1.38315 AU
	12992 Mar 06 03:00	0° 		desc. node	12993 Feb 17 02:35	13° 	47'38
max. Earth dist.	12992 Mar 06 10:51	0°  33'53	1.40554 AU	evening rise	12993 Feb 20 11:10	19°  45'12	
evening rise	12992 Mar 10 19:04	7°  53'29			12993 Feb 26 13:03	0° 	
	12992 Mar 24 23:54	0° 			12993 Mar 19 03:13	0° 	
evening max el	12992 Apr 14 06:14	26°  03'47	23°34'17	evening max el	12993 Mar 27 19:57	9°  56'19	24°53'17
	12992 Apr 18 19:51	0° 		retrograde	12993 Apr 08 15:32	16°  49'03	
retrograde	12992 Apr 25 00:27	2°  12'34		asc. node	12993 Apr 13 00:37	15°  25'22	
asc. node	12992 Apr 26 03:14	2°  18'03		evening set	12993 Apr 14 07:47	14°  26'36	
evening set	12992 Apr 30 04:54	0°  12'46		min. Earth dist.	12993 Apr 18 19:01	9°  25'04	0.68171 AU
	12992 Apr 30 10:43	30° 		inferior conj	12993 Apr 19 21:55	7°  56'13	2°00'10
min. Earth dist.	12992 May 05 00:05	24°  35'11	0.68744 AU	minimum elong	12993 Apr 19 19:47	8°  03'18	1°58'59
inferior conj	12992 May 05 14:34	23°  45'28	2°33'40	morning rise	12993 Apr 25 08:01	1°  59'41	
minimum elong	12992 May 05 12:33	23°  52'25	2°32'29	direct	12993 Apr 29 00:59	0°  40'49	
morning rise	12992 May 10 20:09	17°  40'18		morning max el	12993 May 06 06:34	4°  40'33	19°33'54
direct	12992 May 15 01:14	16°  00'40		desc. node	12993 May 16 04:39	17°  09'46	
morning max el	12992 May 23 04:57	20°  39'28	20°41'21	greatest brilliancy	12993 May 18 22:20	21°  07'36	-0.6m
desc. node	12992 May 29 07:49	27°  45'27			12993 May 24 20:57	0° 	
	12992 May 31 00:51	0° 		morning set	12993 May 31 19:09	10°  13'40	
	12992 Jun 20 12:16	0° 		max. Earth dist.	12993 Jun 12 17:47	29°  09'19	1.44932 AU
morning set	12992 Jun 21 18:13	1°  55'57			12993 Jun 13 06:37	0° 	
max. Earth dist.	12992 Jun 30 03:47	15°  52'57	1.43482 AU	superior conj	12993 Jun 17 01:21	6°  50'58	-2°11'52
superior conj	12992 Jul 06 19:57	26°  51'15	-1°55'22	minimum elong	12993 Jun 17 04:19	6°  12'53	2°12'47
minimum elong	12992 Jul 07 02:51	26°  39'05	1°55'44	evening rise	12993 Jul 01 00:03	28°  53'50	
	12992 Jul 09 02:35	0° 			12993 Jul 01 15:52	0° 	
evening rise	12992 Jul 19 00:40	17°  11'54		asc. node	12993 Jul 09 23:02	13°  45'18	
asc. node	12992 Jul 23 02:14	24°  20'41		evening max el	12993 Jul 19 08:25	26°  38'02	18°11'10
	12992 Jul 26 09:17	0° 		retrograde	12993 Jul 25 16:55	29°  59'06	
evening max el	12992 Aug 04 18:07	13°  11'59	18°03'05	evening set	12993 Jul 28 13:43	29°  15'19	
retrograde	12992 Aug 11 07:34	16°  13'45		inferior conj	12993 Aug 03 15:04	23°  54'01	2°17'17
evening set	12992 Aug 13 20:05	16°  10'43		minimum elong	12993 Aug 03 17:35	23°  47'00	2°15'58
inferior conj	12992 Aug 20 10:45	11°  10'05	1°23'51	min. Earth dist.	12993 Aug 06 04:56	21°  02'21	0.63578 AU
minimum elong	12992 Aug 20 12:58	10°  55'36	1°22'42	morning rise	12993 Aug 09 19:45	17°  38'29	
min. Earth dist.	12992 Aug 23 12:29	7°  59'46	0.61381 AU	desc. node	12993 Aug 12 03:11	16°  09'56	
desc. node	12992 Aug 25 05:42	6°  17'38		direct	12993 Aug 16 11:23	15°  05'29	
morning rise	12992 Aug 27 03:13	5°  01'04		morning max el	12993 Aug 30 08:51	23°  06'41	27°44'08
direct	12992 Sep 02 18:52	2°  14'50			12993 Sep 05 11:48	0° 	
morning max el	12992 Sep 16 23:52	10°  14'39	27°58'09		12993 Sep 25 09:06	0° 	
	12992 Oct 02 02:01	0° 		morning set	12993 Oct 04 03:54	16°  31'46	
asc. node	12992 Oct 19 04:04	0°  19'59		asc. node	12993 Oct 06 00:42	20°  18'34	
	12992 Oct 19 00:08	0° 		max. Earth dist.	12993 Oct 09 02:19	26°  42'20	1.32409 AU
morning set	12992 Oct 20 09:14	2°  49'24			12993 Oct 10 15:22	0° 	
max. Earth dist.	12992 Oct 26 01:26	14°  56'55	1.31558 AU	superior conj	12993 Oct 12 00:31	2°  58'52	0°54'53
superior conj	12992 Oct 27 17:27	18°  37'23	1°14'13	minimum elong	12993 Oct 11 22:20	2°  47'03	0°54'57
minimum elong	12992 Oct 27 15:14	18°  25'08	1°14'34	evening rise	12993 Oct 18 21:55	17°  58'25	
	12992 Nov 01 20:56	0° 			12993 Oct 24 18:03	0° 	

desc. node	12993 Nov 07 23:34	22° ♁ 24'08		superior conj	12994 Sep 26 02:05	17° ♁ 01'17	0°30'11
evening max el	12993 Nov 11 01:33	25° ♁ 41'19	23°19'13	minimum elong	12994 Sep 26 00:35	16° ♁ 53'25	0°30'06
	12993 Nov 16 13:55	0° ♁			12994 Oct 02 04:34	0° ♁	
retrograde	12993 Nov 24 09:40	2° ♁ 19'30		evening rise	12994 Oct 03 08:16	2° ♁ 26'46	
evening set	12993 Nov 28 17:38	1° ♁ 38'44			12994 Oct 18 15:59	0° ♁	
	12993 Dec 02 16:52	30° ♁		evening max el	12994 Oct 23 14:55	5° ♁ 47'08	21°39'42
min. Earth dist.	12993 Dec 05 11:21	28° ♁ 29'02	0.55199 AU	desc. node	12994 Oct 25 20:53	7° ♁ 48'20	
inferior conj	12993 Dec 07 00:53	27° ♁ 34'32	-5°54'09	retrograde	12994 Nov 04 22:47	11° ♁ 54'31	
minimum elong	12993 Dec 07 02:32	27° ♁ 32'08	5°53'06	evening set	12994 Nov 07 21:21	11° ♁ 34'53	
morning rise	12993 Dec 15 13:05	23° ♁ 43'26		inferior conj	12994 Nov 16 18:03	7° ♁ 40'22	-5°35'32
direct	12993 Dec 18 09:57	23° ♁ 23'42		minimum elong	12994 Nov 16 11:03	7° ♁ 50'10	5°33'39
morning max el	12993 Dec 29 09:50	28° ♁ 38'13	20°33'56	min. Earth dist.	12994 Nov 16 17:35	7° ♁ 41'01	0.54541 AU
	12993 Dec 30 18:13	0° ♁		morning rise	12994 Nov 25 01:44	3° ♁ 52'26	
asc. node	12994 Jan 02 01:03	2° ♁ 39'04		direct	12994 Nov 28 18:36	3° ♁ 22'36	
morning set	12994 Jan 17 05:35	29° ♁ 05'43		morning max el	12994 Dec 11 06:08	9° ♁ 20'43	22°10'01
	12994 Jan 17 16:07	0° ♁		asc. node	12994 Dec 19 22:09	20° ♁ 05'25	
					12994 Dec 25 18:10	0° ♁	
superior conj	12994 Jan 24 17:37	14° ♁ 35'06	1°15'30	morning set	12995 Jan 01 16:05	13° ♁ 51'12	
minimum elong	12994 Jan 24 20:14	14° ♁ 48'23	1°15'57				
max. Earth dist.	12994 Jan 30 01:28	25° ♁ 08'41	1.36144 AU	superior conj	12995 Jan 08 17:52	28° ♁ 55'19	1°29'33
	12994 Feb 01 14:55	0° ♁		minimum elong	12995 Jan 08 19:41	29° ♁ 04'57	1°30'19
evening rise	12994 Feb 02 21:57	2° ♁ 23'42			12995 Jan 09 06:08	0° ♁	
desc. node	12994 Feb 03 23:12	4° ♁ 18'58		max. Earth dist.	12995 Jan 12 15:00	6° ♁ 59'17	1.34257 AU
	12994 Feb 19 14:07	0° ♁		evening rise	12995 Jan 16 23:56	15° ♁ 40'02	
evening max el	12994 Mar 10 09:26	23° ♁ 46'38	26°03'33	desc. node	12995 Jan 21 19:52	24° ♁ 41'00	
	12994 Mar 18 18:04	0° ♁			12995 Jan 24 20:11	0° ♁	
retrograde	12994 Mar 23 01:50	1° ♁ 01'41			12995 Feb 14 03:46	0° ♁	
	12994 Mar 27 01:20	30° ♁		evening max el	12995 Feb 20 22:58	7° ♁ 27'30	26°57'45
evening set	12994 Mar 29 05:23	28° ♁ 31'29		retrograde	12995 Mar 06 06:36	14° ♁ 53'22	
asc. node	12994 Mar 30 22:02	26° ♁ 56'36		evening set	12995 Mar 12 19:46	12° ♁ 20'45	
min. Earth dist.	12994 Apr 02 10:02	24° ♁ 05'12	0.67160 AU	min. Earth dist.	12995 Mar 16 19:02	8° ♁ 28'05	0.65747 AU
inferior conj	12994 Apr 04 01:20	22° ♁ 02'54	1°16'18	asc. node	12995 Mar 17 19:29	7° ♁ 18'19	
minimum elong	12994 Apr 03 23:37	22° ♁ 08'16	1°15'24	inferior conj	12995 Mar 18 22:32	6° ♁ 00'03	0°21'37
morning rise	12994 Apr 09 18:35	16° ♁ 16'25		minimum elong	12995 Mar 18 21:57	6° ♁ 01'45	0°21'22
direct	12994 Apr 13 00:20	15° ♁ 16'46		morning rise	12995 Mar 25 01:32	0° ♁ 25'26	
morning max el	12994 Apr 19 15:36	18° ♁ 50'33	18°42'04		12995 Mar 26 01:50	30° ♁	
	12994 Apr 28 09:38	0° ♁		direct	12995 Mar 27 21:18	29° ♁ 42'05	
desc. node	12994 May 03 01:24	7° ♁ 00'27			12995 Mar 29 17:10	0° ♁	
morning set	12994 May 11 07:49	19° ♁ 51'39		morning max el	12995 Apr 03 06:08	3° ♁ 02'40	18°06'52
	12994 May 17 19:36	0° ♁		desc. node	12995 Apr 19 22:02	27° ♁ 09'52	
max. Earth dist.	12994 May 26 12:04	13° ♁ 33'25	1.45702 AU	morning set	12995 Apr 21 23:00	0° ♁ 28'10	
					12995 Apr 21 16:02	0° ♁	
superior conj	12994 May 27 12:47	15° ♁ 10'03	-2°09'51				
minimum elong	12994 May 27 08:09	14° ♁ 51'55	2°10'38	superior conj	12995 May 06 21:25	24° ♁ 18'49	-1°48'01
	12994 Jun 05 22:59	0° ♁		minimum elong	12995 May 06 12:17	23° ♁ 42'56	1°47'58
evening rise	12994 Jun 11 23:22	9° ♁ 34'56		max. Earth dist.	12995 May 09 07:50	28° ♁ 07'39	1.45732 AU
greatest brilliancy	12994 Jun 18 21:43	20° ♁ 39'23	-0.9m		12995 May 10 12:36	0° ♁	
	12994 Jun 24 22:23	0° ♁		evening rise	12995 May 22 23:50	19° ♁ 21'45	
asc. node	12994 Jun 26 19:55	2° ♁ 46'07			12995 May 29 21:15	0° ♁	
evening max el	12994 Jul 02 21:01	10° ♁ 16'41	18°37'09	greatest brilliancy	12995 Jun 04 08:25	8° ♁ 18'01	-0.7m
retrograde	12994 Jul 09 09:49	13° ♁ 49'25		asc. node	12995 Jun 13 16:53	21° ♁ 14'15	
evening set	12994 Jul 12 15:08	12° ♁ 50'24		evening max el	12995 Jun 16 05:31	24° ♁ 01'26	19°20'05
inferior conj	12994 Jul 18 06:57	7° ♁ 13'25	2°51'08	retrograde	12995 Jun 23 06:52	27° ♁ 58'13	
minimum elong	12994 Jul 18 08:52	7° ♁ 07'34	2°49'57	evening set	12995 Jun 26 21:13	26° ♁ 42'54	
min. Earth dist.	12994 Jul 20 06:39	4° ♁ 47'51	0.65499 AU	inferior conj	12995 Jul 02 06:59	20° ♁ 51'50	3°08'51
morning rise	12994 Jul 24 01:37	0° ♁ 50'45		minimum elong	12995 Jul 02 07:54	20° ♁ 48'49	3°07'49
	12994 Jul 25 03:54	30° ♁		min. Earth dist.	12995 Jul 03 16:06	19° ♁ 03'31	0.67037 AU
direct	12994 Jul 30 12:00	28° ♁ 10'07		morning rise	12995 Jul 07 18:03	14° ♁ 28'08	
desc. node	12994 Jul 30 00:35	28° ♁ 10'56		direct	12995 Jul 13 19:28	11° ♁ 49'34	
	12994 Aug 05 09:58	0° ♁		desc. node	12995 Jul 16 21:55	12° ♁ 24'44	
morning max el	12994 Aug 12 19:57	6° ♁ 02'34	26°57'32	morning max el	12995 Jul 26 06:48	19° ♁ 17'39	25°46'45
	12994 Aug 31 05:28	0° ♁			12995 Aug 04 09:15	0° ♁	
morning set	12994 Sep 17 12:18	29° ♁ 43'46			12995 Aug 24 07:23	0° ♁	
	12994 Sep 17 15:41	0° ♁		morning set	12995 Aug 31 06:47	12° ♁ 15'51	
max. Earth dist.	12994 Sep 21 18:05	8° ♁ 04'57	1.33784 AU	max. Earth dist.	12995 Sep 03 23:27	19° ♁ 09'46	1.35642 AU
asc. node	12994 Sep 22 21:18	10° ♁ 23'08					
				superior conj	12995 Sep 09 19:28	0° ♁ 37'22	0°00'38

minimum elong	12995 Sep 09 19:26	0° Ω 37'12	0°00'32	superior conj	12996 Aug 23 01:24	13° Π 39'29	-0°32'38
behind sun begin	12995 Sep 09 13:17	0° Ω 06'10		minimum elong	12996 Aug 23 03:38	13° Π 50'13	0°32'36
behind sun end	12995 Sep 10 01:36	1° Ω 08'18		asc. node	12996 Aug 26 14:27	20° Π 33'40	
asc. node	12995 Sep 09 17:52	0° Ω 29'17			12996 Aug 31 08:32	0° Ω	
	12995 Sep 09 12:03	0° Ω		evening rise	12996 Aug 31 17:37	0° Ω 45'07	
evening rise	12995 Sep 17 15:38	16° Ω 44'18		evening max el	12996 Sep 17 07:43	27° Ω 54'46	19°10'56
	12995 Sep 24 08:54	0° Π			12996 Sep 19 17:13	0° Π	
evening max el	12995 Oct 05 16:14	16° Π 27'03	20°14'56	retrograde	12996 Sep 26 10:32	2° Π 28'22	
desc. node	12995 Oct 12 18:16	21° Π 11'34		evening set	12996 Sep 28 07:01	2° Π 17'51	
retrograde	12995 Oct 16 10:51	21° Π 48'32		desc. node	12996 Sep 28 15:45	2° Π 13'25	
evening set	12995 Oct 18 12:21	21° Π 37'39			12996 Oct 03 20:25	30° \mathcal{R} Ω	
inferior conj	12995 Oct 27 11:39	17° Π 40'41	-4°20'18	inferior conj	12996 Oct 06 19:13	28° Ω 06'17	-2°33'24
minimum elong	12995 Oct 27 01:38	17° Π 55'31	4°16'41	minimum elong	12996 Oct 06 12:37	28° Ω 17'22	2°30'29
min. Earth dist.	12995 Oct 29 01:20	16° Π 44'55	0.54817 AU	min. Earth dist.	12996 Oct 09 12:42	26° Ω 16'37	0.55993 AU
morning rise	12995 Nov 04 14:03	13° Π 35'44		morning rise	12996 Oct 14 15:32	23° Ω 28'35	
direct	12995 Nov 09 04:40	12° Π 49'45		direct	12996 Oct 20 02:03	22° Ω 20'25	
morning max el	12995 Nov 22 17:24	19° Π 27'46	23°58'05	morning max el	12996 Nov 03 04:05	29° Ω 30'04	25°41'48
	12995 Dec 01 12:25	0° \mathcal{A}			12996 Nov 03 16:27	0° Π	
asc. node	12995 Dec 06 19:09	8° \mathcal{A} 21'44		asc. node	12996 Nov 22 16:04	27° Π 14'53	
morning set	12995 Dec 17 03:56	28° \mathcal{A} 37'10			12996 Nov 24 03:01	0° \mathcal{A}	
	12995 Dec 17 19:22	0° \mathcal{B}		morning set	12996 Nov 30 15:19	13° \mathcal{A} 17'53	
superior conj	12995 Dec 24 00:08	13° \mathcal{B} 30'30	1°36'57	superior conj	12996 Dec 07 10:02	28° \mathcal{A} 12'42	1°38'06
minimum elong	12995 Dec 24 00:53	13° \mathcal{B} 34'36	1°37'54	minimum elong	12996 Dec 07 09:40	28° \mathcal{A} 10'46	1°39'05
max. Earth dist.	12995 Dec 26 12:28	18° \mathcal{B} 55'55	1.32785 AU		12996 Dec 08 05:25	0° \mathcal{B}	
evening rise	12995 Dec 31 13:42	29° \mathcal{B} 25'55		max. Earth dist.	12996 Dec 08 16:44	1° \mathcal{B} 02'31	1.31789 AU
	12995 Dec 31 20:29	0° \approx		evening rise	12996 Dec 14 12:12	13° \mathcal{B} 32'33	
desc. node	12996 Jan 08 16:36	14° \approx 48'58			12996 Dec 22 22:58	0° \approx	
	12996 Jan 17 22:24	0° \mathcal{H}		desc. node	12996 Dec 25 13:27	4° \approx 35'50	
evening max el	12996 Feb 03 11:46	20° \mathcal{H} 49'08	27°28'39		12997 Jan 12 09:01	0° \mathcal{H}	
retrograde	12996 Feb 17 04:47	28° \mathcal{H} 15'27		evening max el	12997 Jan 15 21:39	3° \mathcal{H} 37'49	27°29'43
evening set	12996 Feb 24 00:44	25° \mathcal{H} 47'13		retrograde	12997 Jan 29 19:10	10° \mathcal{H} 57'39	
min. Earth dist.	12996 Feb 27 20:09	22° \mathcal{H} 25'12	0.63987 AU	evening set	12997 Feb 05 17:26	8° \mathcal{H} 41'31	
inferior conj	12996 Mar 01 10:57	19° \mathcal{H} 41'39	-0°44'00	min. Earth dist.	12997 Feb 09 11:28	5° \mathcal{H} 45'10	0.61964 AU
minimum elong	12996 Mar 01 12:20	19° \mathcal{H} 38'04	0°43'09	inferior conj	12997 Feb 12 11:27	2° \mathcal{H} 58'45	-1°59'34
asc. node	12996 Mar 03 16:55	17° \mathcal{H} 26'10		minimum elong	12997 Feb 12 15:35	2° \mathcal{H} 49'09	1°57'21
morning rise	12996 Mar 08 02:05	14° \mathcal{H} 21'14			12997 Feb 15 22:28	30° \mathcal{R} \approx	
direct	12996 Mar 10 13:24	13° \mathcal{H} 50'37		asc. node	12997 Feb 18 14:22	28° \approx 21'19	
morning max el	12996 Mar 16 23:34	17° \mathcal{H} 09'14	17°48'48	morning rise	12997 Feb 19 16:30	27° \approx 55'33	
	12996 Mar 26 07:55	0° \mathcal{Y}		direct	12997 Feb 21 21:27	27° \approx 33'58	
morning set	12996 Apr 02 18:03	12° \mathcal{Y} 25'53			12997 Feb 27 14:00	0° \mathcal{H}	
desc. node	12996 Apr 05 18:36	17° \mathcal{Y} 32'42		morning max el	12997 Feb 28 16:44	1° \mathcal{H} 00'48	17°48'29
	12996 Apr 13 06:26	0° \mathcal{B}		morning set	12997 Mar 16 11:25	25° \mathcal{H} 26'25	
superior conj	12996 Apr 15 20:17	4° \mathcal{B} 11'27	-1°12'20		12997 Mar 19 00:57	0° \mathcal{Y}	
minimum elong	12996 Apr 15 12:54	3° \mathcal{B} 41'34	1°11'52	desc. node	12997 Mar 23 15:07	8° \mathcal{Y} 03'48	
max. Earth dist.	12996 Apr 21 02:57	12° \mathcal{B} 37'51	1.45031 AU	superior conj	12997 Mar 27 18:24	15° \mathcal{Y} 09'29	-0°31'52
evening rise	12996 May 01 11:46	28° \mathcal{B} 45'02		minimum elong	12997 Mar 27 15:21	14° \mathcal{Y} 56'35	0°31'34
	12996 May 02 07:22	0° Π		max. Earth dist.	12997 Apr 03 19:20	26° \mathcal{Y} 48'33	1.43668 AU
	12996 May 22 19:03	0° \mathcal{E}			12997 Apr 05 18:55	0° \mathcal{B}	
evening max el	12996 May 29 08:35	7° \mathcal{E} 49'06	20°18'18	evening rise	12997 Apr 11 02:53	8° \mathcal{B} 24'27	
asc. node	12996 May 30 13:57	8° \mathcal{E} 59'14			12997 Apr 25 12:27	0° Π	
retrograde	12996 Jun 06 05:36	12° \mathcal{E} 20'27		evening max el	12997 May 12 05:58	21° Π 37'28	21°28'59
evening set	12996 Jun 10 05:43	10° \mathcal{E} 48'26		asc. node	12997 May 17 11:09	25° Π 47'06	
inferior conj	12996 Jun 15 12:25	4° \mathcal{E} 44'39	3°13'11	retrograde	12997 May 21 04:05	26° Π 50'41	
minimum elong	12996 Jun 15 12:17	4° \mathcal{E} 45'05	3°12'12	evening set	12997 May 25 14:45	25° Π 02'17	
min. Earth dist.	12996 Jun 16 07:22	3° \mathcal{E} 39'52	0.68129 AU	inferior conj	12997 May 30 20:56	18° Π 47'23	3°06'01
	12996 Jun 19 04:41	30° \mathcal{R} Π		minimum elong	12997 May 30 19:52	18° Π 51'05	3°04'58
morning rise	12996 Jun 20 18:32	28° Π 23'47		min. Earth dist.	12997 May 31 02:25	18° Π 28'17	0.68739 AU
direct	12996 Jun 26 08:35	25° Π 55'42		morning rise	12997 Jun 05 00:47	12° Π 31'39	
desc. node	12996 Jul 02 19:09	28° Π 26'32		direct	12997 Jun 10 02:07	10° Π 20'10	
	12996 Jul 04 18:55	0° \mathcal{E}		desc. node	12997 Jun 19 16:16	15° Π 49'24	
morning max el	12996 Jul 07 16:49	2° \mathcal{E} 43'36	24°21'36	morning max el	12997 Jun 20 03:41	16° Π 17'45	22°51'58
	12996 Jul 28 11:50	0° \mathcal{Q}			12997 Jul 01 10:04	0° \mathcal{E}	
morning set	12996 Aug 12 06:57	23° \mathcal{Q} 57'19			12997 Jul 21 12:08	0° \mathcal{Q}	
	12996 Aug 15 17:08	0° Π		morning set	12997 Jul 24 08:15	4° \mathcal{Q} 37'36	
max. Earth dist.	12996 Aug 15 21:53	0° Π 21'19	1.37864 AU	max. Earth dist.	12997 Jul 28 20:28	12° \mathcal{Q} 11'37	1.40210 AU


































































































































superior conj	12997 Aug 05 15:53	25°♎58'35	-1°07'24		12998 Jul 14 01:53	0°♎	
minimum elong	12997 Aug 05 20:50	26°♎21'09	1°07'16				
	12997 Aug 07 20:28	0°♎		superior conj	12998 Jul 18 10:19	7°♎23'27	-1°39'54
asc. node	12997 Aug 13 11:05	10°♎32'58		minimum elong	12998 Jul 18 17:17	7°♎53'27	1°39'58
evening rise	12997 Aug 15 11:09	14°♎21'50		evening rise	12998 Jul 29 16:14	27°♎23'25	
	12997 Aug 24 00:46	0°♎		asc. node	12998 Jul 31 07:46	0°♎22'37	
evening max el	12997 Aug 31 10:45	10°♎08'00	18°28'33		12998 Jul 31 02:46	0°♎	
retrograde	12997 Sep 08 05:17	14°♎03'25		evening max el	12998 Aug 14 21:11	22°♎57'01	18°06'45
evening set	12997 Sep 10 05:44	13°♎48'18		retrograde	12998 Aug 21 18:17	26°♎27'55	
desc. node	12997 Sep 15 13:16	11°♎07'11		evening set	12998 Aug 24 01:59	26°♎04'14	
inferior conj	12997 Sep 17 23:58	9°♎16'13	-0°46'11	inferior conj	12998 Aug 31 01:58	21°♎11'41	0°43'00
minimum elong	12997 Sep 17 22:10	9°♎19'45	0°45'24	minimum elong	12998 Aug 31 03:18	21°♎08'38	0°42'15
min. Earth dist.	12997 Sep 21 06:10	6°♎43'18	0.57845 AU	desc. node	12998 Sep 02 10:48	19°♎01'06	
morning rise	12997 Sep 25 11:08	4°♎00'55		min. Earth dist.	12998 Sep 03 07:56	18°♎14'14	0.60061 AU
direct	12997 Oct 01 13:25	2°♎26'04		morning rise	12998 Sep 07 01:27	15°♎24'42	
morning max el	12997 Oct 15 20:56	10°♎00'18	27°03'01	direct	12998 Sep 13 13:57	13°♎22'30	
	12997 Oct 31 05:08	0°♎		morning max el	12998 Sep 27 21:32	21°♎14'52	27°49'15
asc. node	12997 Nov 09 12:53	16°♎35'13			12998 Oct 05 12:34	0°♎	
morning set	12997 Nov 15 00:36	27°♎49'04			12998 Oct 24 05:08	0°♎	
	12997 Nov 16 01:00	0°♎		asc. node	12998 Oct 27 09:37	6°♎14'48	
				morning set	12998 Oct 30 05:54	12°♎05'27	
superior conj	12997 Nov 21 21:35	12°♎56'16	1°33'20	max. Earth dist.	12998 Nov 05 09:10	25°♎23'32	1.31309 AU
minimum elong	12997 Nov 21 20:16	12°♎48'55	1°34'09				
max. Earth dist.	12997 Nov 22 00:56	13°♎14'58	1.31293 AU	superior conj	12998 Nov 06 08:53	27°♎35'23	1°22'49
evening rise	12997 Nov 28 16:56	27°♎53'38		minimum elong	12998 Nov 06 06:53	27°♎24'15	1°23'22
	12997 Nov 29 16:51	0°♎			12998 Nov 07 10:51	0°♎	
desc. node	12997 Dec 12 10:26	23°♎53'10		evening rise	12998 Nov 13 01:42	12°♎23'02	
	12997 Dec 16 08:13	0°♎			12998 Nov 21 20:24	0°♎	
evening max el	12997 Dec 29 01:51	15°♎40'52	26°56'38	desc. node	12998 Nov 29 07:33	12°♎29'11	
retrograde	12998 Jan 12 00:34	22°♎51'50		evening max el	12998 Dec 10 21:54	26°♎50'41	25°49'58
evening set	12998 Jan 18 18:25	20°♎55'43			12998 Dec 14 15:53	0°♎	
min. Earth dist.	12998 Jan 22 16:01	18°♎16'13	0.59804 AU	retrograde	12998 Dec 24 19:42	3°♎52'36	
inferior conj	12998 Jan 25 20:27	15°♎41'53	-3°21'18	evening set	12998 Dec 30 23:30	2°♎24'00	
minimum elong	12998 Jan 26 03:34	15°♎27'26	3°18'01		12999 Jan 04 02:55	30°♎	
morning rise	12998 Feb 02 15:45	10°♎59'11		min. Earth dist.	12999 Jan 04 10:35	29°♎47'05	0.57698 AU
direct	12998 Feb 04 17:15	10°♎43'06		inferior conj	12999 Jan 07 10:27	27°♎41'09	-4°40'11
asc. node	12998 Feb 05 11:46	10°♎45'25		minimum elong	12999 Jan 07 19:08	27°♎25'53	4°36'58
morning max el	12998 Feb 12 06:15	14°♎28'07	18°07'04	morning rise	12999 Jan 15 17:31	23°♎20'50	
	12998 Feb 22 21:04	0°♎		direct	12999 Jan 17 20:18	23°♎06'45	
morning set	12998 Feb 27 20:58	9°♎11'21		asc. node	12999 Jan 23 09:05	24°♎49'45	
				morning max el	12999 Jan 26 12:12	27°♎20'13	18°46'22
					12999 Jan 28 22:19	0°♎	
superior conj	12998 Mar 09 16:14	27°♎13'27	0°06'25				
minimum elong	12998 Mar 09 16:45	27°♎15'44	0°06'29	morning set	12999 Feb 11 17:47	23°♎25'55	
behind sun begin	12998 Mar 09 09:40	26°♎44'06			12999 Feb 15 02:27	0°♎	
behind sun end	12998 Mar 09 23:50	27°♎47'18					
desc. node	12998 Mar 10 11:37	28°♎39'42		superior conj	12999 Feb 20 09:50	10°♎11'51	0°38'51
	12998 Mar 11 05:47	0°♎		minimum elong	12999 Feb 20 12:13	10°♎23'03	0°38'55
max. Earth dist.	12998 Mar 17 07:19	10°♎25'41	1.41788 AU	desc. node	12999 Feb 25 08:10	19°♎16'58	
evening rise	12998 Mar 22 09:52	18°♎49'09		max. Earth dist.	12999 Feb 27 14:45	23°♎19'37	1.39599 AU
	12998 Mar 29 12:54	0°♎			12999 Mar 03 11:36	0°♎	
	12998 Apr 20 01:02	0°♎		evening rise	12999 Mar 03 13:55	0°♎09'47	
evening max el	12998 Apr 24 22:40	5°♎26'25	22°47'37		12999 Mar 22 21:57	0°♎	
asc. node	12998 May 04 08:27	11°♎21'13		evening max el	12999 Apr 07 12:45	19°♎17'36	24°08'28
retrograde	12998 May 05 00:46	11°♎23'21		retrograde	12999 Apr 18 18:22	25°♎53'28	
evening set	12998 May 09 22:39	9°♎19'50		asc. node	12999 Apr 21 05:48	25°♎25'50	
inferior conj	12998 May 15 06:30	2°♎56'01	2°48'24	evening set	12999 Apr 24 03:51	23°♎37'02	
minimum elong	12998 May 15 04:44	3°♎02'09	2°47'14	min. Earth dist.	12999 Apr 28 19:22	18°♎14'51	0.68551 AU
min. Earth dist.	12998 May 14 23:06	3°♎21'43	0.68875 AU	inferior conj	12999 Apr 29 15:13	17°♎07'37	2°20'44
	12998 May 17 10:40	30°♎		minimum elong	12999 Apr 29 13:05	17°♎14'51	2°19'31
morning rise	12998 May 20 10:42	26°♎46'48		morning rise	12999 May 04 22:24	11°♎05'59	
direct	12998 May 24 23:01	24°♎55'20		direct	12999 May 08 22:07	9°♎35'30	
	12998 Jun 02 17:54	0°♎		morning max el	12999 May 16 15:44	13°♎56'34	20°10'53
morning max el	12998 Jun 02 18:26	0°♎01'19	21°26'14	desc. node	12999 May 24 10:09	23°♎16'40	
desc. node	12998 Jun 06 13:16	4°♎11'20			12999 May 29 05:29	0°♎	
	12998 Jun 25 03:12	0°♎		morning set	12999 Jun 13 12:46	22°♎55'51	
morning set	12998 Jul 04 08:15	14°♎11'09			12999 Jun 18 02:04	0°♎	
max. Earth dist.	12998 Jul 11 00:01	24°♎53'51	1.42396 AU	max. Earth dist.	12999 Jun 23 09:52	8°♎24'40	1.44172 AU

superior conj	12999 Jun 29 05:18	17°☿48'07	-2°04'16	max. Earth dist.	13000 Jun 06 01:29	22°♊32'57	1.45350 AU
minimum elong	12999 Jun 29 11:12	18°☿12'14	2°04'55				
	12999 Jul 06 12:56	0°♊		superior conj	13000 Jun 09 01:50	27°♊17'49	-2°13'31
evening rise	12999 Jul 12 03:57	9°♊37'57		minimum elong	13000 Jun 09 01:43	27°♊17'21	2°14'30
asc. node	12999 Jul 18 04:32	19°♊58'10			13000 Jun 10 18:48	0°☿	
	12999 Jul 24 11:24	0°♊		evening rise	13000 Jun 23 17:19	20°☿53'48	
evening max el	12999 Jul 29 11:06	6°♊12'21	18°04'15		13000 Jun 29 06:30	0°♊	
retrograde	12999 Aug 04 21:25	9°♊32'59		asc. node	13000 Jul 05 01:21	9°♊13'32	
evening set	12999 Aug 07 13:19	8°♊57'23		evening max el	13000 Jul 13 01:03	19°♊44'50	18°20'07
inferior conj	12999 Aug 13 21:53	3°♊46'13	1°49'07	retrograde	13000 Jul 19 10:15	23°♊08'59	
minimum elong	12999 Aug 14 00:23	3°♊39'42	1°47'49	evening set	13000 Jul 22 10:40	22°♊18'56	
min. Earth dist.	12999 Aug 16 19:08	0°♊46'20	0.62341 AU	inferior conj	13000 Jul 28 07:33	16°♊51'03	2°33'46
	12999 Aug 17 14:05	30°♊		minimum elong	13000 Jul 28 09:53	16°♊44'15	2°32'30
morning rise	12999 Aug 20 09:09	27°♊38'10		min. Earth dist.	13000 Jul 30 15:39	14°♊08'35	0.64444 AU
desc. node	12999 Aug 20 08:18	27°♊39'43		morning rise	13000 Aug 03 07:43	10°♊31'44	
direct	12999 Aug 27 01:31	25°♊13'34		desc. node	13000 Aug 07 05:44	8°♊19'04	
	12999 Sep 06 14:36	0°♊		direct	13000 Aug 09 21:52	7°♊53'57	
morning max el	12999 Sep 10 04:09	3°♊15'07	27°56'28	morning max el	13000 Aug 23 14:09	15°♊53'06	27°27'42
	12999 Sep 30 01:16	0°♊			13000 Sep 04 05:02	0°♊	
morning set	12999 Oct 14 05:09	26°♊02'04			13000 Sep 22 19:30	0°♊	
asc. node	12999 Oct 14 06:18	26°♊07'56		morning set	13000 Sep 27 19:50	9°♊32'34	
	12999 Oct 16 03:13	0°♊		asc. node	13000 Oct 01 02:55	16°♊09'43	
max. Earth dist.	12999 Oct 19 13:37	7°♊18'50	1.31852 AU	max. Earth dist.	13000 Oct 02 10:43	18°♊53'49	1.32929 AU
superior conj	12999 Oct 21 18:05	12°♊05'02	1°06'40	superior conj	13000 Oct 05 23:08	26°♊19'37	0°45'02
minimum elong	12999 Oct 21 15:49	11°♊52'35	1°06'55	minimum elong	13000 Oct 05 21:09	26°♊09'02	0°45'02
evening rise	12999 Oct 28 12:33	26°♊56'07			13000 Oct 07 16:07	0°♊	
	12999 Oct 29 22:58	0°♊		evening rise	13000 Oct 12 23:39	11°♊28'02	
desc. node	12999 Nov 16 04:45	0°♊08'19			13000 Oct 22 08:40	0°♊	
	12999 Nov 16 02:13	0°♊		desc. node	13000 Nov 03 02:02	16°♊29'44	
evening max el	12999 Nov 22 10:17	7°♊14'03	24°17'47	evening max el	13000 Nov 03 20:47	17°♊16'41	22°35'53
retrograde	12999 Dec 06 02:32	14°♊03'27		retrograde	13000 Nov 16 20:25	23°♊43'14	
evening set	12999 Dec 11 04:56	13°♊06'19		evening set	13000 Nov 20 13:30	23°♊13'08	
min. Earth dist.	12999 Dec 16 21:44	10°♊13'44	0.55934 AU	min. Earth dist.	13000 Nov 28 04:45	19°♊46'42	0.54810 AU
inferior conj	12999 Dec 19 03:43	8°♊50'38	-5°38'53	inferior conj	13000 Nov 29 03:10	19°♊14'58	-5°53'45
minimum elong	12999 Dec 19 09:35	8°♊41'33	5°37'08	minimum elong	13000 Nov 29 00:57	19°♊18'07	5°52'42
morning rise	12999 Dec 27 16:15	4°♊50'34		morning rise	13000 Dec 07 13:44	15°♊27'07	
direct	12999 Dec 30 03:51	4°♊34'22		direct	13000 Dec 10 18:47	15°♊03'35	
morning max el	13000 Jan 09 06:30	9°♊25'29	19°48'04	morning max el	13000 Dec 22 10:31	20°♊37'11	21°12'32
asc. node	13000 Jan 10 06:20	10°♊25'32		asc. node	13000 Dec 28 03:29	27°♊16'44	
	13000 Jan 22 21:34	0°♊			13000 Dec 30 00:41	0°♊	
morning set	13000 Jan 26 22:00	7°♊58'33		morning set	13001 Jan 11 06:53	22°♊41'36	
					13001 Jan 14 18:26	0°♊	
superior conj	13000 Feb 03 18:25	23°♊50'32	1°04'12	superior conj	13001 Jan 18 13:56	7°♊58'28	1°22'18
minimum elong	13000 Feb 03 21:14	24°♊04'27	1°04'29	minimum elong	13001 Jan 18 16:16	8°♊10'32	1°22'53
	13000 Feb 06 22:05	0°♊			13001 Jan 23 06:52	17°♊30'14	1.35299 AU
max. Earth dist.	13000 Feb 09 20:51	5°♊34'49	1.37358 AU	max. Earth dist.	13001 Jan 27 08:04	25°♊18'24	
desc. node	13000 Feb 12 04:44	9°♊51'24		evening rise	13001 Jan 29 21:05	0°♊	
evening rise	13000 Feb 13 14:20	12°♊22'19			13001 Jan 30 01:22	0°♊19'27	
	13000 Feb 24 02:33	0°♊		desc. node	13001 Feb 17 14:41	0°♊	
	13000 Mar 18 01:32	0°♊		evening max el	13001 Mar 03 16:01	16°♊57'48	26°29'06
evening max el	13000 Mar 21 02:14	3°♊09'44	25°24'46	retrograde	13001 Mar 16 15:36	24°♊18'14	
retrograde	13000 Apr 02 07:40	10°♊13'59		evening set	13001 Mar 22 23:25	21°♊46'36	
evening set	13000 Apr 08 04:41	7°♊47'53		asc. node	13001 Mar 26 00:37	18°♊47'19	
asc. node	13000 Apr 08 03:12	7°♊51'00		min. Earth dist.	13001 Mar 27 01:46	17°♊34'38	0.66606 AU
min. Earth dist.	13000 Apr 12 12:59	3°♊01'14	0.67785 AU	inferior conj	13001 Mar 28 22:11	15°♊20'39	0°54'28
inferior conj	13000 Apr 13 21:08	1°♊17'22	1°42'53	minimum elong	13001 Mar 28 20:51	15°♊24'41	0°53'48
minimum elong	13000 Apr 13 19:05	1°♊23'58	1°41'47	morning rise	13001 Apr 03 19:14	9°♊38'41	
	13000 Apr 14 21:18	30°♊		direct	13001 Apr 06 20:38	8°♊46'12	
morning rise	13000 Apr 19 09:56	25°♊24'40		morning max el	13001 Apr 13 08:06	12°♊12'50	18°25'00
direct	13000 Apr 22 21:56	24°♊14'16			13001 Apr 26 07:35	0°♊	
morning max el	13000 Apr 29 20:34	28°♊01'44	19°09'49		13001 Apr 28 03:35	2°♊52'23	
	13000 May 01 17:17	0°♊		desc. node	13001 May 03 15:00	11°♊31'49	
desc. node	13000 May 11 06:55	12°♊53'09		morning set	13001 May 15 08:27	0°♊	
greatest brilliancy	13000 May 12 19:36	15°♊09'22	-0.7m				
	13000 May 22 13:17	0°♊		superior conj	13001 May 19 09:48	6°♊20'35	-2°02'48
morning set	13000 May 23 15:59	1°♊43'01					

minimum elong	13001 May 19 02:29	5° Π 51'57	2°03'14	morning max el	13002 Mar 28 00:12	26° X 23'12	17°57'07
max. Earth dist.	13001 May 19 20:57	7° Π 04'05	1.45814 AU		13002 Mar 31 04:19	0° Υ	
	13001 Jun 03 12:33	0° Ξ		morning set	13002 Apr 14 18:28	22° Υ 44'24	
evening rise	13001 Jun 04 06:13	1° Ξ 09'28		desc. node	13002 Apr 15 00:11	23° Υ 07'58	
greatest brilliancy	13001 Jun 13 18:13	16° Ξ 02'46	-0.8m		13002 Apr 19 04:27	0° B	
asc. node	13001 Jun 21 22:16	28° Ξ 01'33					
	13001 Jun 23 10:57	0° Ω		superior conj	13002 Apr 28 22:40	15° B 43'09	-1°34'01
evening max el	13001 Jun 26 12:12	3° Ω 27'01	18°53'26	minimum elong	13002 Apr 28 13:40	15° B 07'23	1°33'42
retrograde	13001 Jul 03 05:12	7° Ω 08'06		max. Earth dist.	13002 May 02 17:16	21° B 40'27	1.45519 AU
evening set	13001 Jul 06 14:24	6° Ω 02'04			13002 May 08 01:20	0° Π	
inferior conj	13001 Jul 12 03:15	0° Ω 18'56	3°00'25	evening rise	13002 May 14 23:41	10° Π 42'04	
minimum elong	13001 Jul 12 04:46	0° Ω 14'08	2°59'19		13002 May 27 17:09	0° Ξ	
	13001 Jul 12 09:14	30° $\text{R}\Xi$		greatest brilliancy	13002 May 29 01:56	2° Ξ 00'41	-0.6m
min. Earth dist.	13001 Jul 13 20:41	28° Ξ 08'24	0.66212 AU	asc. node	13002 Jun 08 19:18	16° Ξ 13'10	
morning rise	13001 Jul 17 18:24	23° Ξ 55'31		evening max el	13002 Jun 09 18:31	17° Ξ 13'41	19°43'05
direct	13001 Jul 24 01:27	21° Ξ 14'44		retrograde	13002 Jun 17 03:20	21° Ξ 24'00	
desc. node	13001 Jul 25 03:06	21° Ξ 18'53		evening set	13002 Jun 20 21:49	20° Ξ 01'23	
morning max el	13001 Aug 06 01:10	28° Ξ 57'52	26°29'47	inferior conj	13002 Jun 26 05:54	14° Ξ 04'31	3°12'12
	13001 Aug 07 01:12	0° Ω		minimum elong	13002 Jun 26 06:23	14° Ξ 02'56	3°11'12
	13001 Aug 29 00:52	0° H		min. Earth dist.	13002 Jun 27 08:49	12° Ξ 34'32	0.67555 AU
morning set	13001 Sep 10 22:46	22° H 28'28		morning rise	13002 Jul 01 14:33	7° Ξ 41'43	
	13001 Sep 14 20:32	0° A		direct	13002 Jul 07 11:15	5° Ξ 07'04	
max. Earth dist.	13001 Sep 14 22:05	0° A 07'38	1.34525 AU	desc. node	13002 Jul 12 00:23	6° Ξ 22'29	
asc. node	13001 Sep 17 23:29	6° A 15'21		morning max el	13002 Jul 19 11:49	12° Ξ 19'27	25°11'50
					13002 Aug 02 17:01	0° Ω	
superior conj	13001 Sep 19 21:35	10° A 11'50	0°18'13		13002 Aug 21 18:21	0° H	
minimum elong	13001 Sep 19 20:36	10° A 06'47	0°18'05	morning set	13002 Aug 24 10:05	4° H 41'00	
evening rise	13001 Sep 27 09:01	25° A 52'43		max. Earth dist.	13002 Aug 28 00:23	11° H 14'28	1.36559 AU
	13001 Sep 29 08:45	0° M					
evening max el	13001 Oct 16 14:32	27° M 33'48	21°01'17	superior conj	13002 Sep 03 10:34	23° H 34'55	-0°13'07
	13001 Oct 19 09:17	0° J		minimum elong	13002 Sep 03 11:25	23° H 39'04	0°13'10
desc. node	13001 Oct 20 23:25	1° J 06'04		behind sun begin	13002 Sep 03 07:40	23° H 20'31	
retrograde	13001 Oct 28 07:14	3° J 22'33		behind sun end	13002 Sep 03 15:10	23° H 57'37	
evening set	13001 Oct 30 19:03	3° J 07'51		asc. node	13002 Sep 04 20:04	26° H 21'32	
	13001 Nov 07 09:51	30° RM			13002 Sep 06 15:30	0° A	
inferior conj	13001 Nov 08 18:39	29° M 13'53	-5°09'29	evening rise	13002 Sep 11 14:29	10° A 04'44	
minimum elong	13001 Nov 08 09:22	29° M 27'00	5°06'43		13002 Sep 22 07:33	0° M	
min. Earth dist.	13001 Nov 09 10:57	28° M 50'48	0.54547 AU	evening max el	13002 Sep 28 21:51	8° M 33'13	19°44'55
morning rise	13001 Nov 17 00:06	25° M 21'39		desc. node	13002 Oct 07 20:51	13° M 30'50	
direct	13001 Nov 21 02:32	24° M 45'36		retrograde	13002 Oct 08 23:17	13° M 34'19	
	13001 Dec 02 23:03	0° J		evening set	13002 Oct 10 20:57	13° M 24'20	
morning max el	13001 Dec 04 01:53	1° J 00'43	22°55'21	inferior conj	13002 Oct 19 16:51	9° M 21'51	-3°36'49
asc. node	13001 Dec 15 00:32	15° J 05'55		minimum elong	13002 Oct 19 07:46	9° M 35'57	3°33'10
	13001 Dec 23 03:54	0° Z		min. Earth dist.	13002 Oct 21 19:52	8° M 02'40	0.55220 AU
morning set	13001 Dec 26 18:11	7° Z 27'56		morning rise	13002 Oct 27 16:56	5° M 04'17	
				direct	13002 Nov 01 16:04	4° M 09'55	
superior conj	13002 Jan 02 17:03	22° Z 25'37	1°33'29	morning max el	13002 Nov 15 12:03	11° M 02'04	24°43'53
minimum elong	13002 Jan 02 18:26	22° Z 33'02	1°34'20		13002 Nov 29 19:02	0° J	
max. Earth dist.	13002 Jan 06 00:01	29° Z 23'10	1.33581 AU	asc. node	13002 Dec 01 21:31	3° J 39'05	
	13002 Jan 06 07:06	0° \approx		morning set	13002 Dec 11 06:04	22° J 12'20	
evening rise	13002 Jan 10 15:27	8° \approx 47'58			13002 Dec 14 19:59	0° Z	
desc. node	13002 Jan 16 22:04	20° \approx 36'04					
	13002 Jan 22 09:12	0° X		superior conj	13002 Dec 18 01:08	7° Z 04'32	1°38'10
	13002 Feb 13 16:26	0° Υ		minimum elong	13002 Dec 18 01:25	7° Z 06'04	1°39'10
evening max el	13002 Feb 14 05:29	0° Υ 31'46	27°14'08	max. Earth dist.	13002 Dec 20 00:40	11° Z 24'00	1.32302 AU
retrograde	13002 Feb 27 17:24	7° Υ 58'06		evening rise	13002 Dec 25 09:16	22° Z 43'08	
evening set	13002 Mar 06 10:03	5° Υ 26'30			13002 Dec 29 01:05	0° \approx	
min. Earth dist.	13002 Mar 10 07:31	1° Υ 47'28	0.65040 AU	desc. node	13003 Jan 03 18:53	10° \approx 35'48	
	13002 Mar 11 22:35	30° RX			13003 Jan 16 03:35	0° X	
inferior conj	13002 Mar 12 15:58	29° X 11'38	-0°04'55	evening max el	13003 Jan 27 17:07	13° X 39'56	27°32'57
minimum elong	13002 Mar 12 16:07	29° X 11'15	0°04'44	retrograde	13003 Feb 10 12:24	21° X 04'25	
transit middle	13002 Mar 12 16:07	29° X 11'15	0°04'44	evening set	13003 Feb 17 10:10	18° X 39'57	
transit begin	13002 Mar 12 13:13	29° X 19'17		min. Earth dist.	13003 Feb 21 04:27	15° X 30'01	0.63152 AU
transit end	13002 Mar 12 19:00	29° X 03'14		inferior conj	13003 Feb 23 23:42	12° X 43'19	-1°15'01
asc. node	13002 Mar 12 22:03	28° X 54'49		minimum elong	13003 Feb 24 02:10	12° X 37'11	1°13'36
morning rise	13002 Mar 18 23:51	23° X 42'47		asc. node	13003 Feb 27 19:31	9° X 15'23	
direct	13002 Mar 21 15:56	23° X 05'09		morning rise	13003 Mar 02 20:38	7° X 30'11	

direct	13003 Mar 05 04:57	7° X 03'54		asc. node	13004 Feb 14 16:57	20° \approx 45'44	
morning max el	13003 Mar 11 18:00	10° X 24'36	17°46'31	direct	13004 Feb 16 08:13	20° \approx 34'32	
	13003 Mar 24 23:50	0° Y		morning max el	13004 Feb 23 10:11	24° \approx 08'09	17°53'59
morning set	13003 Mar 27 23:44	5° Y 10'39			13004 Feb 28 04:02	0° X	
desc. node	13003 Apr 01 20:43	13° Y 34'35		morning set	13004 Mar 10 00:45	18° X 32'38	
					13004 Mar 16 09:01	0° Y	
superior conj	13003 Apr 09 06:55	26° Y 02'24	-0°55'15	desc. node	13004 Mar 18 17:15	4° Y 08'32	
minimum elong	13003 Apr 09 01:19	25° Y 39'21	0°54'49				
	13003 Apr 11 17:01	0° Z		superior conj	13004 Mar 20 15:32	7° Y 30'11	-0°15'07
max. Earth dist.	13003 Apr 15 11:23	6° Z 03'41	1.44514 AU	minimum elong	13004 Mar 20 14:11	7° Y 24'22	0°14'55
evening rise	13003 Apr 24 10:55	20° Z 06'44		behind sun begin	13004 Mar 20 11:11	7° Y 11'24	
	13003 Apr 30 23:07	0° II		behind sun end	13004 Mar 20 17:11	7° Y 37'20	
	13003 May 22 19:29	0° E		max. Earth dist.	13004 Mar 28 01:28	19° Y 59'55	1.42915 AU
evening max el	13003 May 23 19:00	1° E 01'02	20°47'06	evening rise	13004 Apr 03 07:43	0° Z 03'26	
asc. node	13003 May 26 16:27	3° E 35'38			13004 Apr 03 06:50	0° Z	
retrograde	13003 Jun 01 02:20	5° E 50'11			13004 Apr 23 12:57	0° II	
evening set	13003 Jun 05 06:47	4° E 11'07		evening max el	13004 May 05 14:10	14° II 49'37	22°01'48
	13003 Jun 09 02:20	30° R II		asc. node	13004 May 12 13:41	19° II 54'21	
inferior conj	13003 Jun 10 12:56	28° II 02'09	3°11'30	retrograde	13004 May 15 00:16	20° II 21'59	
minimum elong	13003 Jun 10 12:23	28° II 04'02	3°10'29	evening set	13004 May 19 15:31	18° II 27'12	
min. Earth dist.	13003 Jun 11 02:02	27° II 16'48	0.68436 AU	inferior conj	13004 May 24 22:09	12° II 08'10	2°59'50
morning rise	13003 Jun 15 17:44	21° II 43'04		minimum elong	13004 May 24 20:46	12° II 13'03	2°58'43
direct	13003 Jun 21 02:20	19° II 21'35		min. Earth dist.	13004 May 24 22:10	12° II 08'07	0.68851 AU
desc. node	13003 Jun 28 21:34	23° II 01'37		morning rise	13004 May 30 01:48	5° II 54'48	
morning max el	13003 Jul 01 22:04	25° II 49'37	23°43'35	direct	13004 Jun 03 21:36	3° II 51'23	
	13003 Jul 05 17:35	0° E		morning max el	13004 Jun 13 10:05	9° II 27'09	22°14'31
	13003 Jul 27 05:25	0° O		desc. node	13004 Jun 14 18:38	10° II 51'48	
morning set	13003 Aug 06 01:07	15° O 58'13			13004 Jun 29 12:24	0° E	
max. Earth dist.	13003 Aug 09 21:55	22° O 38'51	1.38858 AU	morning set	13004 Jul 16 15:37	26° E 09'46	
	13003 Aug 14 00:27	0° P			13004 Jul 19 00:09	0° O	
				max. Earth dist.	13004 Jul 21 21:31	4° O 47'48	1.41172 AU
superior conj	13003 Aug 17 10:27	6° P 19'48	-0°47'23				
minimum elong	13003 Aug 17 13:49	6° P 35'40	0°47'17	superior conj	13004 Jul 29 16:57	18° O 17'04	-1°21'46
asc. node	13003 Aug 22 16:41	16° P 24'17		minimum elong	13004 Jul 29 22:57	18° O 43'47	1°21'40
evening rise	13003 Aug 26 13:18	23° P 56'29			13004 Aug 05 03:41	0° P	
	13003 Aug 29 16:25	0° A		asc. node	13004 Aug 08 13:20	6° P 19'59	
evening max el	13003 Sep 11 18:43	20° A 21'22	18°50'17	evening rise	13004 Aug 09 02:03	7° P 19'20	
retrograde	13003 Sep 20 06:48	24° A 37'21			13004 Aug 22 13:06	0° A	
evening set	13003 Sep 22 04:06	24° A 25'32		evening max el	13004 Aug 25 01:29	2° A 51'37	18°16'55
desc. node	13003 Sep 24 18:21	23° A 33'55		retrograde	13004 Sep 01 09:26	6° A 34'27	
inferior conj	13003 Sep 30 09:05	20° A 05'47	-1°46'32	evening set	13004 Sep 03 12:50	6° A 16'07	
minimum elong	13003 Sep 30 04:37	20° A 13'50	1°44'31	inferior conj	13004 Sep 10 23:07	1° A 35'29	-0°05'38
min. Earth dist.	13003 Oct 03 09:53	17° A 55'35	0.56714 AU	minimum elong	13004 Sep 10 22:55	1° A 35'55	0°05'38
morning rise	13003 Oct 08 01:50	15° A 11'30		transit middle	13004 Sep 10 22:55	1° A 35'55	0°05'38
direct	13003 Oct 13 19:34	13° A 52'14		transit begin	13004 Sep 10 19:39	1° A 42'45	
morning max el	13003 Oct 28 01:03	21° A 14'07	26°19'59	transit end	13004 Sep 11 02:10	1° A 29'04	
	13003 Nov 04 16:30	0° M		desc. node	13004 Sep 10 15:52	1° A 50'40	
asc. node	13003 Nov 18 18:24	22° M 44'59			13004 Sep 12 20:19	30° R P	
	13003 Nov 22 10:31	0° X		min. Earth dist.	13004 Sep 14 06:45	28° P 49'20	0.58764 AU
morning set	13003 Nov 25 16:49	6° X 50'07		morning rise	13004 Sep 18 05:31	26° P 05'47	
				direct	13004 Sep 24 13:12	24° P 18'38	
superior conj	13003 Dec 02 12:02	21° X 48'45	1°36'47		13004 Oct 06 16:14	0° A	
minimum elong	13003 Dec 02 11:15	21° X 44'23	1°37'44	morning max el	13004 Oct 08 21:00	2° A 01'36	27°27'18
max. Earth dist.	13003 Dec 03 06:52	23° X 33'33	1.31511 AU		13004 Oct 29 01:48	0° M	
	13003 Dec 06 04:58	0° Z		asc. node	13004 Nov 04 15:10	12° M 14'28	
evening rise	13003 Dec 09 10:45	6° Z 57'09		morning set	13004 Nov 09 00:37	21° M 15'42	
desc. node	13003 Dec 21 15:48	0° \approx 11'41			13004 Nov 13 01:18	0° X	
	13003 Dec 21 13:02	0° \approx					
evening max el	13004 Jan 10 00:50	26° \approx 10'45	27°19'55	superior conj	13004 Nov 15 23:43	6° X 31'33	1°29'34
	13004 Jan 14 15:46	0° X		minimum elong	13004 Nov 15 22:04	6° X 22'21	1°30'18
retrograde	13004 Jan 23 23:33	3° X 27'56		max. Earth dist.	13004 Nov 15 15:25	5° X 45'15	1.31235 AU
evening set	13004 Jan 30 20:46	1° X 19'13		evening rise	13004 Nov 22 17:27	21° X 22'56	
	13004 Feb 01 19:04	30° R \approx			13004 Nov 26 20:57	0° Z	
min. Earth dist.	13004 Feb 03 15:23	28° \approx 31'21	0.61045 AU	desc. node	13004 Dec 07 12:50	19° Z 13'22	
inferior conj	13004 Feb 06 18:06	25° \approx 47'49	-2°33'52		13004 Dec 15 00:49	0° \approx	
minimum elong	13004 Feb 06 23:33	25° \approx 35'52	2°31'08	evening max el	13004 Dec 22 01:58	7° \approx 52'41	26°32'14
morning rise	13004 Feb 14 05:20	20° \approx 53'13		retrograde	13005 Jan 05 00:57	14° \approx 59'41	

evening set	13005 Jan 11 13:51	13° \approx 14'55		min. Earth dist.	13005 Dec 28 06:43	21° \approx 42'01	0.56899 AU
min. Earth dist.	13005 Jan 15 15:48	10° \approx 38'11	0.58884 AU	inferior conj	13005 Dec 31 00:42	19° \approx 53'05	-5°08'51
inferior conj	13005 Jan 18 19:28	8° \approx 14'10	-3°55'56	minimum elong	13005 Dec 31 08:54	19° \approx 39'30	5°06'08
minimum elong	13005 Jan 19 03:35	7° \approx 58'39	3°52'29	morning rise	13006 Jan 08 11:01	15° \approx 41'40	
morning rise	13005 Jan 26 20:16	3° \approx 40'33		direct	13006 Jan 10 16:42	15° \approx 27'06	
direct	13005 Jan 28 21:30	3° \approx 25'47		asc. node	13006 Jan 18 11:35	18° \approx 37'38	
asc. node	13005 Jan 31 14:19	3° \approx 52'40		morning max el	13006 Jan 19 22:18	19° \approx 55'21	19°09'41
morning max el	13005 Feb 05 20:57	7° \approx 22'08	18°21'02		13006 Jan 27 13:04	0° \approx	
	13005 Feb 20 07:36	0° \approx		morning set	13006 Feb 05 16:01	16° \approx 55'56	
morning set	13005 Feb 21 15:39	2° \approx 32'08			13006 Feb 12 06:25	0° \approx	
superior conj	13005 Mar 02 22:19	19° \approx 58'49	0°20'59	superior conj	13006 Feb 13 22:50	3° \approx 15'58	0°50'30
minimum elong	13005 Mar 02 23:50	20° \approx 05'42	0°21'01	minimum elong	13006 Feb 14 01:32	3° \approx 28'58	0°50'37
desc. node	13005 Mar 05 13:46	24° \approx 45'29		desc. node	13006 Feb 20 10:19	15° \approx 22'04	
	13005 Mar 08 13:08	0° \approx		max. Earth dist.	13006 Feb 20 18:09	15° \approx 57'21	1.38648 AU
max. Earth dist.	13005 Mar 10 11:19	3° \approx 19'05	1.40886 AU	evening rise	13006 Feb 24 12:30	22° \approx 35'52	
evening rise	13005 Mar 14 23:31	10° \approx 52'15			13006 Feb 28 21:42	0° \approx	
	13005 Mar 27 05:34	0° \approx			13006 Mar 21 02:39	0° \approx	
evening max el	13005 Apr 18 05:39	28° \approx 40'03	23°22'11	evening max el	13006 Mar 31 19:21	12° \approx 32'11	24°41'52
	13005 Apr 19 14:57	0° \approx		retrograde	13006 Apr 12 11:22	19° \approx 20'48	
retrograde	13005 Apr 28 19:40	4° \approx 53'59		asc. node	13006 Apr 16 08:22	18° \approx 14'38	
asc. node	13005 Apr 29 11:01	4° \approx 52'06		evening set	13006 Apr 18 01:56	16° \approx 59'42	
evening set	13005 May 03 22:26	2° \approx 44'51		min. Earth dist.	13006 Apr 22 14:12	11° \approx 52'57	0.68286 AU
	13005 May 06 12:56	30° \approx 8'8		inferior conj	13006 Apr 23 15:19	10° \approx 29'27	2°05'55
inferior conj	13005 May 09 07:35	26° \approx 18'26	2°37'54	minimum elong	13006 Apr 23 13:09	10° \approx 36'38	2°04'43
minimum elong	13005 May 09 05:37	26° \approx 25'14	2°36'42	morning rise	13006 Apr 29 00:35	4° \approx 31'39	
min. Earth dist.	13005 May 08 18:56	27° \approx 02'01	0.68797 AU	direct	13006 May 02 19:16	3° \approx 09'52	
morning rise	13005 May 14 12:43	20° \approx 12'15		morning max el	13006 May 10 03:43	7° \approx 14'35	19°42'59
direct	13005 May 18 19:42	18° \approx 29'28		desc. node	13006 May 19 12:23	18° \approx 53'13	
morning max el	13005 May 27 03:12	23° \approx 14'50	20°52'33	greatest brilliancy	13006 May 22 22:03	23° \approx 46'33	-0.6m
desc. node	13005 Jun 01 15:33	29° \approx 33'37			13006 May 27 02:55	0° \approx	
	13005 Jun 01 23:52	0° \approx		morning set	13006 Jun 05 06:56	13° \approx 55'42	
	13005 Jun 22 19:34	0° \approx			13006 Jun 15 14:52	0° \approx	
morning set	13005 Jun 26 05:48	5° \approx 17'52		max. Earth dist.	13006 Jun 16 16:56	1° \approx 42'59	1.44756 AU
max. Earth dist.	13005 Jul 04 03:52	17° \approx 52'25	1.43216 AU				
superior conj	13005 Jul 11 01:42	29° \approx 17'05	-1°51'38	superior conj	13006 Jun 21 10:27	9° \approx 15'58	-2°10'26
minimum elong	13005 Jul 11 08:45	29° \approx 46'47	1°51'55	minimum elong	13006 Jun 21 14:22	9° \approx 31'41	2°11'19
	13005 Jul 11 11:53	0° \approx			13006 Jul 04 00:13	0° \approx	
evening rise	13005 Jul 23 00:20	20° \approx 02'22		evening rise	13006 Jul 05 03:03	1° \approx 53'03	
asc. node	13005 Jul 26 10:04	26° \approx 04'28		asc. node	13006 Jul 13 06:50	15° \approx 32'10	
	13005 Jul 28 15:57	0° \approx		evening max el	13006 Jul 23 04:09	29° \approx 16'43	18°08'48
evening max el	13005 Aug 08 13:55	15° \approx 53'32	18°03'27		13006 Jul 23 22:33	0° \approx	
retrograde	13005 Aug 15 04:59	19° \approx 18'05		retrograde	13006 Jul 29 12:52	2° \approx 37'22	
evening set	13005 Aug 17 16:15	18° \approx 49'32		evening set	13006 Aug 01 08:21	1° \approx 55'49	
inferior conj	13005 Aug 24 09:13	13° \approx 48'41	1°13'49	inferior conj	13006 Aug 07 11:27	26° \approx 37'01	2°10'29
minimum elong	13005 Aug 24 11:15	13° \approx 43'44	1°12'44	minimum elong	13006 Aug 07 13:59	26° \approx 30'01	2°09'10
min. Earth dist.	13005 Aug 27 12:12	10° \approx 47'50	0.61038 AU	min. Earth dist.	13006 Aug 10 03:17	23° \approx 42'40	0.63262 AU
desc. node	13005 Aug 28 13:22	9° \approx 51'25		morning rise	13006 Aug 13 17:46	20° \approx 23'03	
morning rise	13005 Aug 31 03:30	7° \approx 51'48		desc. node	13006 Aug 15 10:50	19° \approx 14'55	
direct	13005 Sep 06 18:31	5° \approx 39'19		direct	13006 Aug 20 09:42	17° \approx 52'00	
morning max el	13005 Sep 21 00:18	13° \approx 35'52	27°57'07	morning max el	13006 Sep 03 08:49	25° \approx 53'49	27°48'29
	13005 Oct 04 03:58	0° \approx			13006 Sep 07 03:55	0° \approx	
	13005 Oct 21 11:50	0° \approx			13006 Sep 27 17:26	0° \approx	
asc. node	13005 Oct 22 11:52	2° \approx 00'52		morning set	13006 Oct 07 23:33	19° \approx 11'02	
morning set	13005 Oct 24 03:37	5° \approx 24'45		asc. node	13006 Oct 09 08:30	21° \approx 58'14	
max. Earth dist.	13005 Oct 29 22:40	17° \approx 50'37	1.31479 AU	max. Earth dist.	13006 Oct 13 00:37	29° \approx 38'59	1.32247 AU
					13006 Oct 13 04:33	0° \approx	
superior conj	13005 Oct 31 10:22	21° \approx 07'48	1°16'40	superior conj	13006 Oct 15 18:01	5° \approx 31'29	0°58'11
minimum elong	13005 Oct 31 08:11	20° \approx 55'45	1°17'05	minimum elong	13006 Oct 15 15:47	5° \approx 19'23	0°58'17
	13005 Nov 04 10:19	0° \approx		evening rise	13006 Oct 22 14:31	20° \approx 28'30	
evening rise	13005 Nov 07 03:22	5° \approx 55'19			13006 Oct 27 04:09	0° \approx	
	13005 Nov 19 14:26	0° \approx			13006 Nov 11 07:13	24° \approx 36'54	
desc. node	13005 Nov 24 09:59	7° \approx 27'50		desc. node	13006 Nov 15 05:00	28° \approx 51'34	23°34'29
evening max el	13005 Dec 03 18:41	18° \approx 42'04	25°13'07	evening max el	13006 Nov 16 10:35	0° \approx	
retrograde	13005 Dec 17 14:32	25° \approx 38'22			13006 Nov 28 15:36	5° \approx 33'18	
evening set	13005 Dec 23 09:07	24° \approx 23'06		retrograde			

evening set	13006 Dec 03 04:36	4°  48'26		desc. node	13007 Oct 29 04:33	10°  17'01	
min. Earth dist.	13006 Dec 09 15:17	1°  43'44	0.55366 AU	retrograde	13007 Nov 09 05:52	15°  08'16	
inferior conj	13006 Dec 11 09:33	0°  41'31	-5°51'49	evening set	13007 Nov 12 08:49	14°  46'26	
minimum elong	13006 Dec 11 12:27	0°  37'14	5°50'40	inferior conj	13007 Nov 21 03:57	10°  51'23	-5°42'19
	13006 Dec 12 13:56	30°  		minimum elong	13007 Nov 20 22:04	10°  59'38	5°40'43
morning rise	13006 Dec 19 22:06	26°  48'34		min. Earth dist.	13007 Nov 20 21:43	11°  00'08	0.54577 AU
direct	13006 Dec 22 16:17	26°  29'57		morning rise	13007 Nov 29 12:24	7°  04'02	
	13006 Dec 31 13:44	0° 		direct	13007 Dec 03 02:05	6°  36'01	
morning max el	13007 Jan 02 10:40	1°  38'13	20°21'22	morning max el	13007 Dec 15 08:53	12°  28'10	21°54'38
asc. node	13007 Jan 05 08:45	4°  47'30		asc. node	13007 Dec 23 05:52	22°  05'17	
	13007 Jan 20 04:05	0° 			13007 Dec 28 01:43	0° 	
morning set	13007 Jan 20 22:31	1°  34'12		morning set	13008 Jan 05 08:39	16°  39'18	
					13008 Jan 11 19:15	0° 	
superior conj	13007 Jan 28 12:32	17°  08'55	1°12'45	superior conj	13008 Jan 12 11:38	1°  26'22	1°27'51
minimum elong	13007 Jan 28 15:14	17°  22'29	1°13'09	minimum elong	13008 Jan 12 13:37	1°  36'43	1°28'34
max. Earth dist.	13007 Feb 03 01:23	28°  02'09	1.36448 AU	max. Earth dist.	13008 Jan 16 13:49	9°  53'13	1.34512 AU
	13007 Feb 04 02:14	0° 		evening rise	13008 Jan 20 20:38	18°  19'42	
evening rise	13007 Feb 06 20:42	5°  08'07		desc. node	13008 Jan 25 03:35	26°  18'36	
desc. node	13007 Feb 07 06:56	5°  54'37			13008 Jan 27 05:21	0° 	
	13007 Feb 21 19:21	0° 			13008 Feb 16 00:04	0° 	
evening max el	13007 Mar 14 08:45	26°  09'23'21	25°53'56	evening max el	13008 Feb 24 22:22	10°  06'32	26°51'03
	13007 Mar 18 11:32	0° 		retrograde	13008 Mar 09 04:14	17°  31'35	
retrograde	13007 Mar 26 22:33	3°  36'16		evening set	13008 Mar 15 16:02	14°  09'04	
evening set	13007 Apr 02 00:26	1°  06'52		min. Earth dist.	13008 Mar 19 16:03	11°  01'23	0.65979 AU
asc. node	13007 Apr 03 05:45	29°  09'59'59		asc. node	13008 Mar 20 03:11	10°  09'24	
	13007 Apr 03 05:45	30°  09'00		inferior conj	13008 Mar 21 17:43	8°  36'40	0°30'38
min. Earth dist.	13007 Apr 06 05:56	26°  09'35'25	0.67334 AU	minimum elong	13008 Mar 21 16:54	8°  39'03	0°30'16
inferior conj	13007 Apr 07 19:26	24°  09'37'31	1°23'39	morning rise	13008 Mar 27 19:05	3°  00'01	
minimum elong	13007 Apr 07 17:37	24°  09'43'16	1°22'42	direct	13008 Mar 30 16:14	2°  09'14'26	
morning rise	13007 Apr 13 11:27	18°  09'49'26		morning max el	13008 Apr 06 01:35	5°  36'22	18°11'02
direct	13007 Apr 16 18:45	17°  09'47'08		desc. node	13008 Apr 22 05:44	28°  09'47'42	
morning max el	13007 Apr 23 11:44	21°  09'24'09	18°48'45		13008 Apr 22 23:43	0° 	
	13007 Apr 30 11:42	0° 		morning set	13008 Apr 25 03:29	3°  28'25	
desc. node	13007 May 06 09:06	8°  34'04'41		superior conj	13008 May 10 07:47	27°  35'48	-1°52'25
greatest brilliancy	13007 May 07 13:18	10°  38'28'14	-0.8m	minimum elong	13008 May 09 22:54	27°  00'58	1°52'29
morning set	13007 May 15 16:37	23°  38'04'21			13008 May 11 20:38	0° 	
	13007 May 20 03:23	0° 		max. Earth dist.	13008 May 12 06:10	0°  37'12	1.45779 AU
max. Earth dist.	13007 May 30 10:32	16°  03'31	1.45635 AU	evening rise	13008 May 26 09:30	22°  37'06	
					13008 May 31 03:40	0° 	
superior conj	13007 May 31 23:52	18°  37'29'42	-2°11'29	greatest brilliancy	13008 Jun 07 01:24	10°  35'18	-0.7m
minimum elong	13007 May 31 20:23	18°  37'16'01	2°12'20	asc. node	13008 Jun 16 00:41	23°  35'11'19	
	13007 Jun 08 07:04	0° 		evening max el	13008 Jun 19 02:26	26°  38'37	19°12'40
evening rise	13007 Jun 16 06:04	12°  35'43'25			13008 Jun 23 16:07	0° 	
	13007 Jun 27 01:56	0° 		retrograde	13008 Jun 26 01:23	0°  30'50	
asc. node	13007 Jun 30 03:43	4°  37'16			13008 Jun 28 08:44	30°  00'00	
evening max el	13007 Jul 06 17:09	12°  53'53	18°32'09	evening set	13008 Jun 29 14:22	29°  35'17'59	
retrograde	13007 Jul 13 04:48	16°  24'04		inferior conj	13008 Jul 05 00:51	23°  35'29'03	3°07'02
evening set	13007 Jul 16 08:47	15°  27'29		minimum elong	13008 Jul 05 01:56	23°  35'25'31	3°06'00
inferior conj	13007 Jul 22 01:49	9°  52'51	2°47'03	min. Earth dist.	13008 Jul 06 12:09	21°  34'38	0.66841 AU
minimum elong	13007 Jul 22 03:52	9°  46'41	2°45'52	morning rise	13008 Jul 10 12:54	17°  35'05'16	
min. Earth dist.	13007 Jul 24 03:45	7°  22'23	0.65239 AU	direct	13008 Jul 16 15:55	14°  35'25'46	
morning rise	13007 Jul 27 21:50	3°  30'44		desc. node	13008 Jul 19 05:34	14°  35'49'52	
desc. node	13007 Aug 02 08:15	0° 		morning max el	13008 Jul 29 06:36	21°  35'58'15	25°58'22
direct	13007 Aug 03 09:18	0° 			13008 Aug 05 06:58	0° 	
morning max el	13007 Aug 16 19:43	8°  45'25	27°06'08		13008 Aug 25 15:42	0° 	
	13007 Sep 02 09:47	0° 		morning set	13008 Sep 03 06:29	15°  35'06'44	
	13007 Sep 20 02:47	0° 		max. Earth dist.	13008 Sep 07 00:26	22°  35'10'11	1.35338 AU
morning set	13007 Sep 21 09:39	2°  35'27'50			13008 Sep 11 00:08	0° 	
max. Earth dist.	13007 Sep 25 17:42	11°  35'03'55	1.33543 AU	asc. node	13008 Sep 12 01:43	2°  35'08'42	
asc. node	13007 Sep 26 05:06	12°  35'02'06		superior conj	13008 Sep 12 15:23	3°  35'17'55	0°05'25
				minimum elong	13008 Sep 12 15:04	3°  35'16'20	0°05'18
superior conj	13007 Sep 29 20:32	19°  35'36'56	0°34'16	behind sun begin	13008 Sep 12 09:17	2°  35'47'00	
minimum elong	13007 Sep 29 18:53	19°  35'28'13	0°34'10	behind sun end	13008 Sep 12 20:51	3°  35'45'44	
	13007 Oct 04 17:17	0° 		evening rise	13008 Sep 20 09:05	19°  35'17'27	
evening rise	13007 Oct 07 01:05	4°  35'57'31					
	13007 Oct 20 12:28	0° 					
evening max el	13007 Oct 27 17:17	8°  35'55'16	21°53'55				

























































































































	13008 Sep 25 17:13	0°♍		asc. node	13009 Aug 29 22:20	22°♎14'00	
evening max el	13008 Oct 08 16:37	19°♍29'18	20°26'22		13009 Sep 02 19:46	0°♏	
desc. node	13008 Oct 15 01:57	24°♍00'41		evening rise	13009 Sep 04 12:06	3°♏21'44	
retrograde	13008 Oct 19 17:06	24°♍57'51			13009 Sep 20 10:56	0°♍	
evening set	13008 Oct 21 20:43	24°♍46'17		evening max el	13009 Sep 21 06:03	0°♍49'42	19°19'01
inferior conj	13008 Oct 30 20:35	20°♍50'39	-4°34'33	retrograde	13009 Sep 30 14:26	5°♍30'11	
minimum elong	13008 Oct 30 10:30	21°♍05'21	4°31'03	desc. node	13009 Oct 01 23:26	5°♍24'31	
min. Earth dist.	13008 Nov 01 05:04	20°♍03'18	0.54715 AU	evening set	13009 Oct 02 10:57	5°♍19'56	
morning rise	13008 Nov 07 23:46	16°♍49'39		inferior conj	13009 Oct 11 01:25	1°♍10'52	-2°50'13
direct	13008 Nov 12 11:20	16°♍06'20		minimum elong	13009 Oct 10 18:05	1°♍22'55	2°47'03
morning max el	13008 Nov 25 20:55	22°♍38'42	23°41'48		13009 Oct 12 20:23	30°♎	
	13008 Dec 02 08:09	0°♎		min. Earth dist.	13009 Oct 13 15:36	29°♏28'55	0.55771 AU
asc. node	13008 Dec 09 02:54	10°♎15'13		morning rise	13009 Oct 18 22:47	26°♏38'45	
	13008 Dec 19 08:04	0°♏		direct	13009 Oct 24 06:30	25°♏34'24	
morning set	13008 Dec 19 20:27	1°♏05'52			13009 Nov 04 05:26	0°♍	
				morning max el	13009 Nov 07 07:12	2°♍39'28	25°27'27
superior conj	13008 Dec 26 17:12	16°♏00'01	1°36'13	asc. node	13009 Nov 25 23:51	29°♍03'27	
minimum elong	13008 Dec 26 18:08	16°♏05'01	1°37'10		13009 Nov 26 12:04	0°♎	
max. Earth dist.	13008 Dec 29 10:15	21°♏49'13	1.32978 AU	morning set	13009 Dec 04 08:03	15°♎47'45	
	13009 Jan 02 08:41	0°♏			13009 Dec 10 19:13	0°♏	
evening rise	13009 Jan 03 08:55	2°♏02'04					
desc. node	13009 Jan 11 00:21	16°♏29'26		superior conj	13009 Dec 11 02:43	0°♏41'30	1°38'18
	13009 Jan 19 02:52	0°♐		minimum elong	13009 Dec 11 02:32	0°♏40'28	1°39'18
evening max el	13009 Feb 06 11:30	23°♐32'13	27°25'47	max. Earth dist.	13009 Dec 12 13:46	3°♏54'42	1.31907 AU
	13009 Feb 15 14:01	0°♑		evening rise	13009 Dec 18 06:18	16°♏05'57	
retrograde	13009 Feb 20 03:22	0°♑58'32			13009 Dec 25 08:18	0°♏	
	13009 Feb 24 10:07	30°♐		desc. node	13009 Dec 28 21:13	6°♏20'04	
evening set	13009 Feb 26 22:33	28°♐29'19			13010 Jan 13 22:51	0°♐	
min. Earth dist.	13009 Mar 02 18:29	25°♐02'56	0.64273 AU	evening max el	13010 Jan 19 22:00	6°♐26'35	27°31'36
inferior conj	13009 Mar 05 07:39	22°♐21'06	-0°33'20	retrograde	13010 Feb 02 18:54	13°♐47'28	
minimum elong	13009 Mar 05 08:41	22°♐18'23	0°32'41	evening set	13010 Feb 09 17:16	11°♐28'57	
asc. node	13009 Mar 07 00:38	20°♐35'07		min. Earth dist.	13010 Feb 13 11:16	8°♐29'23	0.62280 AU
morning rise	13009 Mar 11 20:50	16°♐58'15		inferior conj	13010 Feb 16 10:09	5°♐42'28	-1°47'32
direct	13009 Mar 14 09:21	16°♐25'54		minimum elong	13010 Feb 16 13:50	5°♐33'46	1°45'33
morning max el	13009 Mar 20 18:44	19°♐44'01	17°50'21	asc. node	13010 Feb 21 22:04	1°♐19'48	
	13009 Mar 28 12:54	0°♑		morning rise	13010 Feb 23 13:04	0°♐36'36	
morning set	13009 Apr 06 18:38	15°♑14'47		direct	13010 Feb 25 18:52	0°♐13'52	
desc. node	13009 Apr 09 02:20	19°♑08'46		morning max el	13010 Mar 04 12:11	3°♐38'39	17°47'23
	13009 Apr 15 15:21	0°♒		morning set	13010 Mar 20 09:07	28°♐07'30	
					13010 Mar 21 10:34	0°♑	
superior conj	13009 Apr 20 03:37	7°♒19'16	-1°18'14	desc. node	13010 Mar 26 22:53	9°♑39'14	
minimum elong	13009 Apr 19 19:41	6°♒47'22	1°17'47				
max. Earth dist.	13009 Apr 25 01:39	15°♒09'18	1.45182 AU	superior conj	13010 Mar 31 22:08	18°♑07'36	-0°38'00
	13009 May 04 14:40	0°♒		minimum elong	13010 Mar 31 18:26	17°♑52'03	0°37'38
evening rise	13009 May 05 22:18	2°♒01'16		max. Earth dist.	13010 Apr 07 18:49	29°♑25'04	1.43906 AU
greatest brilliancy	13009 May 20 21:02	24°♒25'52	-0.6m		13010 Apr 08 03:30	0°♒	
	13009 May 24 19:12	0°♓		evening rise	13010 Apr 15 12:01	11°♒36'16	
evening max el	13009 Jun 02 06:25	10°♓26'20	20°08'48		13010 Apr 27 17:13	0°♒	
asc. node	13009 Jun 02 21:46	11°♓03'53		evening max el	13010 May 16 04:35	24°♒14'45	21°17'49
retrograde	13009 Jun 10 00:00	14°♓51'49		asc. node	13010 May 20 18:56	28°♒01'41	
evening set	13009 Jun 13 22:41	13°♓22'09		retrograde	13010 May 24 22:43	29°♒21'34	
inferior conj	13009 Jun 19 05:39	7°♓20'11	3°13'18	evening set	13010 May 29 07:47	27°♒35'28	
minimum elong	13009 Jun 19 05:41	7°♓20'05	3°12'18	inferior conj	13010 Jun 03 13:52	21°♒21'59	3°07'49
min. Earth dist.	13009 Jun 20 02:39	6°♓08'48	0.67996 AU	minimum elong	13010 Jun 03 12:56	21°♒25'13	3°06'46
morning rise	13009 Jun 24 12:22	0°♓58'50		min. Earth dist.	13010 Jun 03 21:16	20°♒56'13	0.68675 AU
	13009 Jun 25 17:43	30°♒♒		morning rise	13010 Jun 08 17:53	15°♒05'24	
direct	13009 Jun 30 04:12	28°♒28'51		direct	13010 Jun 13 21:06	12°♒51'19	
	13009 Jul 05 02:36	0°♓		desc. node	13010 Jun 22 23:56	17°♒49'48	
desc. node	13009 Jul 06 02:48	0°♓37'24		morning max el	13010 Jun 24 03:24	18°♒56'50	23°05'19
morning max el	13009 Jul 11 16:42	5°♓23'11	24°34'50		13010 Jul 03 10:39	0°♓	
	13009 Jul 30 16:55	0°♑			13010 Jul 23 19:58	0°♑	
morning set	13009 Aug 16 09:42	26°♑56'48		morning set	13010 Jul 28 14:42	7°♑47'16	
	13009 Aug 18 03:13	0°♒		max. Earth dist.	13010 Aug 01 22:11	15°♑04'29	1.39864 AU
max. Earth dist.	13009 Aug 19 23:49	3°♒20'20	1.37522 AU				
				superior conj	13010 Aug 09 16:22	28°♑52'27	-1°02'10
superior conj	13009 Aug 26 23:18	16°♒26'06	-0°27'26	minimum elong	13010 Aug 09 20:55	29°♑13'20	1°02'02
minimum elong	13009 Aug 27 01:09	16°♒35'03	0°27'24		13010 Aug 10 07:03	0°♒	

asc. node	13010 Aug 16 18:59	12° \mathbb{M} 14'41		minimum elong	13011 Jul 22 20:47	10° Ω 55'17	1°35'21
evening rise	13010 Aug 19 07:09	17° \mathbb{M} 03'04		evening rise	13011 Aug 02 14:19	0° \mathbb{M} 10'29	
	13010 Aug 26 06:07	0° Ω			13011 Aug 02 12:02	0° \mathbb{M}	
evening max el	13010 Sep 04 07:35	12° Ω 56'44	18°33'27	asc. node	13011 Aug 03 15:38	2° \mathbb{M} 06'06	
retrograde	13010 Sep 12 06:22	16° Ω 57'11		evening max el	13011 Aug 18 17:10	25° \mathbb{M} 41'13	18°08'46
evening set	13010 Sep 14 05:50	16° Ω 43'04		retrograde	13011 Aug 25 16:48	29° \mathbb{M} 14'49	
desc. node	13010 Sep 18 20:55	14° Ω 35'02		evening set	13011 Aug 27 23:18	28° \mathbb{M} 52'42	
inferior conj	13010 Sep 22 02:53	12° Ω 14'06	-1°01'31	inferior conj	13011 Sep 04 01:53	24° \mathbb{M} 03'16	0°30'54
minimum elong	13010 Sep 22 00:26	12° Ω 18'48	1°00'26	minimum elong	13011 Sep 04 02:53	24° \mathbb{M} 01'01	0°30'20
min. Earth dist.	13010 Sep 25 08:04	9° Ω 46'31	0.57540 AU	desc. node	13011 Sep 05 18:25	22° \mathbb{M} 31'49	
morning rise	13010 Sep 29 15:34	7° Ω 04'01		min. Earth dist.	13011 Sep 07 08:37	21° \mathbb{M} 07'55	0.59720 AU
direct	13010 Oct 05 15:45	5° Ω 33'19		morning rise	13011 Sep 11 03:11	18° \mathbb{M} 20'20	
morning max el	13010 Oct 19 23:02	13° Ω 04'34	26°52'57	direct	13011 Sep 17 14:37	16° \mathbb{M} 21'47	
	13010 Nov 02 07:49	0° \mathbb{M}		morning max el	13011 Oct 01 22:30	24° \mathbb{M} 12'17	27°44'49
asc. node	13010 Nov 12 20:43	18° \mathbb{M} 20'19			13011 Oct 07 04:58	0° Ω	
morning set	13010 Nov 18 17:45	0° \mathbb{M} 20'39			13011 Oct 26 14:47	0° \mathbb{M}	
	13010 Nov 18 13:53	0° \mathbb{M}		asc. node	13011 Oct 30 17:28	7° \mathbb{M} 57'50	
				morning set	13011 Nov 02 23:45	14° \mathbb{M} 39'57	
superior conj	13010 Nov 25 14:08	15° \mathbb{M} 25'11	1°34'25	max. Earth dist.	13011 Nov 09 05:54	28° \mathbb{M} 16'07	1.31269 AU
minimum elong	13010 Nov 25 12:57	15° \mathbb{M} 18'35	1°35'17				
max. Earth dist.	13010 Nov 25 21:31	16° \mathbb{M} 06'22	1.31333 AU	superior conj	13011 Nov 10 01:36	0° \mathbb{M} 05'48	1°24'47
evening rise	13010 Dec 02 10:14	0° \mathbb{Z} 25'02		minimum elong	13011 Nov 09 23:41	29° \mathbb{M} 55'06	1°25'23
	13010 Dec 02 05:32	0° \mathbb{Z}			13011 Nov 10 00:33	0° \mathbb{M}	
desc. node	13010 Dec 15 18:11	25° \mathbb{Z} 42'29		evening rise	13011 Nov 16 18:31	14° \mathbb{M} 53'56	
	13010 Dec 18 10:23	0° \approx			13011 Nov 24 05:01	0° \mathbb{Z}	
evening max el	13011 Jan 02 03:04	18° \approx 36'36	27°03'45	desc. node	13011 Dec 02 15:15	14° \mathbb{Z} 26'00	
retrograde	13011 Jan 16 01:49	25° \approx 49'25		evening max el	13011 Dec 15 00:26	29° \mathbb{Z} 55'03	26°01'53
evening set	13011 Jan 22 20:51	23° \approx 49'41			13011 Dec 15 02:31	0° \approx	
min. Earth dist.	13011 Jan 26 17:22	21° \approx 08'31	0.60122 AU	retrograde	13011 Dec 28 22:48	6° \approx 58'38	
inferior conj	13011 Jan 29 21:39	18° \approx 31'14	-3°08'51	evening set	13012 Jan 04 05:14	5° \approx 25'42	
minimum elong	13011 Jan 30 04:22	18° \approx 17'20	3°05'40	min. Earth dist.	13012 Jan 08 13:27	2° \approx 49'21	0.57993 AU
morning rise	13011 Feb 06 14:57	13° \approx 45'31		inferior conj	13012 Jan 11 14:42	0° \approx 38'09	-4°29'06
direct	13011 Feb 08 16:39	13° \approx 28'53		minimum elong	13012 Jan 11 23:22	0° \approx 22'36	4°25'46
asc. node	13011 Feb 08 19:28	13° \approx 28'57			13012 Jan 12 12:05	30° \mathbb{R} \mathbb{Z}	
morning max el	13011 Feb 16 02:31	17° \approx 10'35	18°03'06	morning rise	13012 Jan 19 20:20	26° \mathbb{Z} 14'28	
	13011 Feb 25 04:28	0° \mathbb{H}		direct	13012 Jan 21 22:25	26° \mathbb{Z} 00'22	
morning set	13011 Mar 03 16:37	11° \mathbb{H} 47'01		asc. node	13012 Jan 26 16:47	27° \mathbb{Z} 18'37	
					13012 Jan 30 06:03	0° \approx	
superior conj	13011 Mar 13 16:40	0° \mathbb{Y} 02'49	0°00'55	morning max el	13012 Jan 30 09:53	0° \approx 09'15	18°39'06
minimum elong	13011 Mar 13 16:45	0° \mathbb{Y} 03'10	0°01'00	morning set	13012 Feb 15 12:00	25° \approx 58'16	
behind sun begin	13011 Mar 13 08:56	29° \mathbb{H} 28'31			13012 Feb 17 13:47	0° \mathbb{H}	
behind sun end	13011 Mar 14 00:34	0° \mathbb{Y} 37'44					
desc. node	13011 Mar 13 19:25	0° \mathbb{Y} 15'00		superior conj	13012 Feb 24 07:37	12° \mathbb{H} 54'13	0°34'22
	13011 Mar 13 16:02	0° \mathbb{Y}		minimum elong	13012 Feb 24 09:49	13° \mathbb{H} 04'28	0°34'24
max. Earth dist.	13011 Mar 21 07:20	13° \mathbb{Y} 07'33	1.42088 AU	desc. node	13012 Feb 28 15:57	20° \mathbb{H} 52'31	
evening rise	13011 Mar 26 16:07	21° \mathbb{Y} 53'20		max. Earth dist.	13012 Mar 02 15:06	26° \mathbb{H} 07'30	1.39935 AU
	13011 Mar 31 19:58	0° \mathbb{B}			13012 Mar 04 21:00	0° \mathbb{Y}	
	13011 Apr 21 21:32	0° \mathbb{II}		evening rise	13012 Mar 06 17:00	3° \mathbb{Y} 06'08	
evening max el	13011 Apr 28 21:47	8° \mathbb{II} 03'27	22°35'36		13012 Mar 24 01:30	0° \mathbb{B}	
asc. node	13011 May 07 16:11	13° \mathbb{II} 48'15		evening max el	13012 Apr 10 12:09	21° \mathbb{B} 54'38	23°56'31
retrograde	13011 May 08 19:47	13° \mathbb{II} 54'23		retrograde	13012 Apr 21 13:55	28° \mathbb{B} 25'12	
evening set	13011 May 13 15:56	11° \mathbb{II} 53'01		asc. node	13012 Apr 23 13:29	28° \mathbb{B} 07'24	
inferior conj	13011 May 18 23:23	5° \mathbb{II} 30'16	2°51'45	evening set	13012 Apr 26 21:35	26° \mathbb{B} 10'40	
minimum elong	13011 May 18 21:42	5° \mathbb{II} 36'06	2°50'36	min. Earth dist.	13012 May 01 14:22	20° \mathbb{B} 43'02	0.68631 AU
min. Earth dist.	13011 May 18 17:52	5° \mathbb{II} 49'26	0.68883 AU	inferior conj	13012 May 02 08:20	19° \mathbb{B} 41'50	2°25'36
	13011 May 23 09:39	30° \mathbb{R} \mathbb{B}		minimum elong	13012 May 02 06:14	19° \mathbb{B} 49'00	2°24'23
morning rise	13011 May 24 03:22	29° \mathbb{B} 19'53		morning rise	13012 May 07 14:54	13° \mathbb{B} 38'53	
direct	13011 May 28 17:33	27° \mathbb{B} 25'20		direct	13012 May 11 16:28	12° \mathbb{B} 05'12	
	13011 Jun 03 18:12	0° \mathbb{II}		morning max el	13012 May 19 13:30	16° \mathbb{B} 32'18	20°21'10
morning max el	13011 Jun 06 17:23	2° \mathbb{II} 39'04	21°38'27	desc. node	13012 May 26 17:50	25° \mathbb{B} 03'42	
desc. node	13011 Jun 09 20:56	6° \mathbb{II} 04'03			13012 May 30 08:22	0° \mathbb{II}	
	13011 Jun 27 08:59	0° \mathbb{B}		morning set	13012 Jun 17 00:47	26° \mathbb{II} 19'32	
morning set	13011 Jul 08 18:22	17° \mathbb{B} 30'30			13012 Jun 19 09:40	0° \mathbb{B}	
max. Earth dist.	13011 Jul 15 00:26	27° \mathbb{B} 37'25	1.42090 AU	max. Earth dist.	13012 Jun 26 09:08	11° \mathbb{B} 00'52	1.43946 AU
	13011 Jul 16 10:50	0° Ω					
superior conj	13011 Jul 22 14:00	10° Ω 25'47	-1°35'20	superior conj	13012 Jul 02 12:31	20° \mathbb{B} 59'27	-2°01'23
				minimum elong	13012 Jul 02 18:53	21° \mathbb{B} 25'40	2°01'57

	13012 Jul 07 21:52	0°♎		superior conj	13013 Jun 12 12:04	0°♊36'36	-2°13'21
evening rise	13012 Jul 15 04:52	12°♎32'26		minimum elong	13013 Jun 12 13:06	0°♊40'45	2°14'20
asc. node	13012 Jul 20 12:20	21°♎43'58		evening rise	13013 Jun 26 21:51	23°♊57'58	
	13012 Jul 25 12:42	0°♏			13013 Jun 30 13:27	0°♎	
evening max el	13012 Aug 01 06:47	8°♏53'17	18°03'30	asc. node	13013 Jul 07 09:09	11°♎03'02	
retrograde	13012 Aug 07 17:59	12°♏14'22		evening max el	13013 Jul 15 20:57	22°♎24'06	18°16'36
evening set	13012 Aug 10 08:42	11°♏40'41		retrograde	13013 Jul 22 05:40	25°♎46'47	
inferior conj	13012 Aug 16 19:20	6°♏32'14	1°40'30	evening set	13013 Jul 25 04:50	24°♎58'56	
minimum elong	13012 Aug 16 21:45	6°♏26'01	1°39'15	inferior conj	13013 Jul 31 03:12	19°♎33'19	2°28'13
min. Earth dist.	13012 Aug 19 18:17	3°♏31'22	0.62008 AU	minimum elong	13013 Jul 31 05:37	19°♎26'23	2°26'56
desc. node	13012 Aug 22 15:54	0°♏57'17		min. Earth dist.	13013 Aug 02 13:21	16°♎47'22	0.64150 AU
morning rise	13012 Aug 23 08:24	0°♏26'49		morning rise	13013 Aug 06 04:56	13°♎15'14	
	13012 Aug 24 00:20	30°♋♎		desc. node	13013 Aug 09 13:20	11°♎16'08	
direct	13012 Aug 30 00:42	28°♎04'59		direct	13013 Aug 12 19:43	10°♎38'57	
	13012 Sep 05 12:10	0°♏		morning max el	13013 Aug 26 13:51	18°♎38'51	27°34'04
morning max el	13012 Sep 13 04:13	6°♏05'36	27°57'50		13013 Sep 05 04:00	0°♏	
	13012 Oct 01 06:28	0°♎			13013 Sep 24 05:02	0°♎	
morning set	13012 Oct 16 24:00	28°♎39'52		morning set	13013 Sep 30 16:07	12°♎14'40	
asc. node	13012 Oct 16 14:08	27°♎49'24		asc. node	13013 Oct 03 10:45	17°♎50'14	
	13012 Oct 17 15:34	0°♌		max. Earth dist.	13013 Oct 05 09:35	21°♎52'47	1.32737 AU
max. Earth dist.	13012 Oct 22 11:06	10°♌14'04	1.31735 AU				
				superior conj	13013 Oct 08 17:00	28°♎54'38	0°48'41
superior conj	13012 Oct 24 11:12	14°♌37'24	1°09'30	minimum elong	13013 Oct 08 14:56	28°♎43'31	0°48'42
minimum elong	13012 Oct 24 08:56	14°♌24'57	1°09'47		13013 Oct 09 05:08	0°♌	
evening rise	13012 Oct 31 05:09	29°♌27'01		evening rise	13013 Oct 15 16:19	13°♌59'34	
	13012 Oct 31 11:16	0°♐			13013 Oct 23 15:17	0°♐	
	13012 Nov 16 21:35	0°♑		desc. node	13013 Nov 05 09:42	18°♐49'46	
desc. node	13012 Nov 18 12:25	2°♑15'07		evening max el	13013 Nov 07 00:01	20°♐28'01	22°50'57
evening max el	13012 Nov 25 13:53	10°♑24'54	24°32'41	retrograde	13013 Nov 20 02:48	26°♐58'47	
retrograde	13012 Dec 09 07:25	17°♑16'11		evening set	13013 Nov 24 01:10	26°♐25'08	
evening set	13012 Dec 14 14:16	16°♑14'30		min. Earth dist.	13013 Dec 01 08:45	23°♐04'55	0.54930 AU
min. Earth dist.	13012 Dec 20 01:34	13°♑25'28	0.56165 AU	inferior conj	13013 Dec 02 12:38	22°♐25'13	-5°55'09
inferior conj	13012 Dec 22 11:03	11°♑55'26	-5°32'15	minimum elong	13013 Dec 02 11:48	22°♐26'23	5°54'11
minimum elong	13012 Dec 22 17:44	11°♑44'56	5°30'15	morning rise	13013 Dec 10 23:52	18°♐36'31	
morning rise	13012 Dec 30 23:15	7°♑52'28		direct	13013 Dec 14 02:00	18°♐14'24	
direct	13013 Jan 02 09:01	7°♑36'50		morning max el	13013 Dec 25 12:11	23°♐41'12	20°58'37
morning max el	13013 Jan 12 06:05	12°♑22'00	19°37'21	asc. node	13013 Dec 30 11:13	29°♐22'09	
asc. node	13013 Jan 12 14:03	12°♑41'29			13013 Dec 30 22:25	0°♑	
	13013 Jan 24 06:42	0°♒		morning set	13014 Jan 13 23:38	25°♑10'41	
morning set	13013 Jan 29 15:18	10°♒28'51			13014 Jan 16 07:05	0°♒	
superior conj	13013 Feb 06 14:13	26°♒27'32	1°00'49	superior conj	13014 Jan 21 08:19	10°♒31'31	1°19'59
minimum elong	13013 Feb 06 17:02	26°♒41'22	1°01'03	minimum elong	13014 Jan 21 10:45	10°♒44'05	1°20'33
	13013 Feb 08 09:45	0°♓		max. Earth dist.	13014 Jan 26 06:31	20°♒25'33	1.35589 AU
max. Earth dist.	13013 Feb 12 21:16	8°♓28'15	1.37691 AU	evening rise	13014 Jan 30 05:54	28°♒01'18	
desc. node	13013 Feb 14 12:31	11°♓27'38			13014 Jan 31 07:33	0°♓	
evening rise	13013 Feb 16 14:33	15°♓11'30		desc. node	13014 Feb 01 09:08	1°♓56'44	
	13013 Feb 25 09:50	0°♑			13014 Feb 18 17:13	0°♑	
	13013 Mar 18 17:56	0°♒		evening max el	13014 Mar 06 15:25	19°♑36'05	26°20'33
evening max el	13013 Mar 24 01:43	5°♒47'07	25°13'58	retrograde	13014 Mar 19 12:33	26°♑54'42	
retrograde	13013 Apr 05 03:49	12°♒47'30		evening set	13014 Mar 25 18:56	24°♑23'28	
asc. node	13013 Apr 10 10:52	10°♒47'33		asc. node	13014 Mar 28 08:18	21°♑55'24	
evening set	13013 Apr 10 23:09	10°♒22'39		min. Earth dist.	13014 Mar 29 22:03	20°♑06'35	0.66808 AU
min. Earth dist.	13013 Apr 15 08:29	5°♒30'46	0.67931 AU	inferior conj	13014 Mar 31 16:42	17°♑56'32	1°02'31
inferior conj	13013 Apr 16 14:47	3°♒52'07	1°49'18	minimum elong	13014 Mar 31 15:12	18°♑01'05	1°01'46
minimum elong	13013 Apr 16 12:41	3°♒58'56	1°48'11	morning rise	13014 Apr 06 12:21	12°♑12'59	
	13013 Apr 19 19:12	30°♋♑		direct	13014 Apr 09 15:18	11°♑18'00	
morning rise	13013 Apr 22 02:34	27°♑57'58		morning max el	13014 Apr 16 03:53	14°♑46'47	18°30'39
direct	13013 Apr 25 16:18	26°♑44'36			13014 Apr 27 12:56	0°♒	
	13013 May 02 02:00	0°♒		desc. node	13014 Apr 30 11:19	4°♒32'20	
morning max el	13013 May 02 17:11	0°♒36'05	19°17'54	morning set	13014 May 06 22:00	14°♒40'04	
desc. node	13013 May 13 14:37	14°♒36'07			13014 May 16 16:17	0°♐	
greatest brilliancy	13013 May 15 12:12	17°♒23'49	-0.7m				
	13013 May 23 20:02	0°♐		superior conj	13014 May 22 20:54	9°♐40'39	-2°05'42
morning set	13013 May 27 02:48	5°♐02'38		minimum elong	13014 May 22 14:26	9°♐15'20	2°06'17
max. Earth dist.	13013 Jun 09 00:19	25°♐05'52	1.45221 AU	max. Earth dist.	13014 May 22 19:36	9°♐35'31	1.45790 AU
	13013 Jun 12 02:50	0°♑			13014 Jun 04 19:55	0°♑	

evening rise	13014 Jun 07 14:23	4°☿22'29		morning set	13015 Apr 17 21:14	25°♄40'23	
greatest brilliancy	13014 Jun 16 06:33	18°☿03'26	-0.8m		13015 Apr 20 12:41	0°♄	
asc. node	13014 Jun 24 06:03	29°☿55'52					
	13014 Jun 24 07:16	0°♌		superior conj	13015 May 02 08:00	18°♄57'46	-1°39'15
evening max el	13014 Jun 29 08:40	6°♌05'16	18°47'20	minimum elong	13015 May 01 22:49	18°♄21'29	1°39'01
retrograde	13014 Jul 05 24:00	9°♌43'09		max. Earth dist.	13015 May 05 15:52	24°♄11'54	1.45607 AU
evening set	13014 Jul 09 07:50	8°♌39'33			13015 May 09 09:02	0°♄	
inferior conj	13014 Jul 14 21:39	2°♌58'28	2°57'24	evening rise	13015 May 18 10:05	13°♄59'35	
minimum elong	13014 Jul 14 23:19	2°♌53'16	2°56'15		13015 May 28 21:43	0°☿	
min. Earth dist.	13014 Jul 16 17:15	0°♌42'32	0.65974 AU	greatest brilliancy	13015 May 31 22:43	4°☿32'02	-0.7m
	13014 Jul 17 07:20	30°♌☿		asc. node	13015 Jun 11 03:06	18°☿13'49	
morning rise	13014 Jul 20 14:00	26°☿35'12		evening max el	13015 Jun 12 15:48	19°☿51'29	19°34'42
direct	13014 Jul 26 22:15	23°☿54'24		retrograde	13015 Jun 19 21:54	23°☿56'56	
desc. node	13014 Jul 27 10:44	23°☿55'23		evening set	13015 Jun 23 14:54	22°☿36'53	
	13014 Aug 07 07:28	0°♌		inferior conj	13015 Jun 28 23:30	16°☿41'58	3°11'15
morning max el	13014 Aug 09 01:00	1°♌40'56	26°39'56	minimum elong	13015 Jun 29 00:08	16°☿39'51	3°10'13
	13014 Aug 30 06:58	0°♍		min. Earth dist.	13015 Jun 30 04:34	15°☿05'29	0.67384 AU
morning set	13014 Sep 13 21:03	25°♍16'18		morning rise	13015 Jul 04 08:57	10°☿18'41	
	13014 Sep 16 08:03	0°♌		direct	13015 Jul 10 07:18	7°☿42'33	
max. Earth dist.	13014 Sep 17 22:35	3°♌09'50	1.34259 AU	desc. node	13015 Jul 14 08:01	8°☿41'53	
asc. node	13014 Sep 20 07:21	7°♌55'31		morning max el	13015 Jul 22 11:50	15°☿00'53	25°24'15
					13015 Aug 03 18:45	0°♌	
superior conj	13014 Sep 22 16:36	12°♌50'25	0°22'35		13015 Aug 23 03:25	0°♍	
minimum elong	13014 Sep 22 15:25	12°♌44'16	0°22'28	morning set	13015 Aug 27 11:01	7°♍36'02	
evening rise	13014 Sep 30 02:05	28°♌25'36		max. Earth dist.	13015 Aug 31 01:55	14°♍15'31	1.36235 AU
	13014 Sep 30 20:08	0°♍					
	13014 Oct 19 00:11	0°♎		superior conj	13015 Sep 06 07:14	26°♍18'14	-0°08'09
evening max el	13014 Oct 19 16:02	0°♎40'11	21°14'19	minimum elong	13015 Sep 06 07:45	26°♍20'47	0°08'12
desc. node	13014 Oct 23 07:03	3°♎43'33		behind sun begin	13015 Sep 06 02:15	25°♍53'25	
retrograde	13014 Oct 31 14:14	6°♎35'48		behind sun end	13015 Sep 06 13:15	26°♍48'13	
evening set	13014 Nov 03 05:32	6°♎19'35		asc. node	13015 Sep 07 03:57	28°♍01'49	
inferior conj	13014 Nov 12 04:22	2°♎25'39	-5°19'55		13015 Sep 08 03:26	0°♌	
minimum elong	13014 Nov 11 19:45	2°♎37'47	5°17'26	evening rise	13015 Sep 14 08:19	12°♌39'45	
min. Earth dist.	13014 Nov 12 14:49	2°♎10'55	0.54525 AU		13015 Sep 23 10:19	0°♍	
	13014 Nov 16 17:42	30°♍♌		evening max el	13015 Oct 01 21:15	11°♍32'32	19°54'55
morning rise	13014 Nov 20 10:36	28°♍35'26		desc. node	13015 Oct 10 04:30	16°♍29'26	
direct	13014 Nov 24 09:43	28°♍01'42		retrograde	13015 Oct 12 04:45	16°♍40'47	
	13014 Dec 01 14:48	0°♎		evening set	13015 Oct 14 03:22	16°♍30'40	
morning max el	13014 Dec 07 05:10	4°♎10'55	22°39'23	inferior conj	13015 Oct 23 00:44	12°♍30'20	-3°52'44
asc. node	13014 Dec 17 08:19	17°♎03'26		minimum elong	13015 Oct 22 15:12	12°♍44'52	3°49'02
	13014 Dec 24 14:19	0°♏		min. Earth dist.	13015 Oct 24 23:21	11°♍19'13	0.55061 AU
morning set	13014 Dec 29 10:44	9°♏57'01		morning rise	13015 Oct 31 01:37	8°♍17'25	
				direct	13015 Nov 04 21:48	7°♍26'05	
superior conj	13015 Jan 05 10:30	24°♏56'35	1°32'11	morning max el	13015 Nov 18 15:36	14°♍13'38	24°28'07
minimum elong	13015 Jan 05 12:03	25°♏04'50	1°33'02		13015 Nov 30 22:44	0°♎	
	13015 Jan 07 19:57	0°♏		asc. node	13015 Dec 04 05:19	5°♎30'47	
max. Earth dist.	13015 Jan 08 22:27	2°♏17'47	1.33804 AU	morning set	13015 Dec 13 22:39	24°♎42'02	
evening rise	13015 Jan 13 11:29	11°♏26'28			13015 Dec 16 09:20	0°♏	
desc. node	13015 Jan 19 05:51	22°♏15'33					
	13015 Jan 23 16:41	0°♐		superior conj	13015 Dec 20 18:01	9°♏34'21	1°37'51
	13015 Feb 14 01:57	0°♑		minimum elong	13015 Dec 20 18:28	9°♏36'48	1°38'51
evening max el	13015 Feb 17 04:57	3°♑12'52	27°08'58	max. Earth dist.	13015 Dec 22 21:58	14°♏16'47	1.32457 AU
retrograde	13015 Mar 02 15:26	10°♑39'18		evening rise	13015 Dec 28 03:57	25°♏18'29	
evening set	13015 Mar 09 06:59	8°♑07'06			13015 Dec 30 12:16	0°♏	
min. Earth dist.	13015 Mar 13 05:00	4°♑23'28	0.65293 AU	desc. node	13016 Jan 06 02:39	12°♏18'19	
inferior conj	13015 Mar 15 11:47	1°♑50'04	0°04'51		13016 Jan 17 04:01	0°♐	
minimum elong	13015 Mar 15 11:38	1°♑50'28	0°04'51	evening max el	13016 Jan 30 16:59	16°♐25'44	27°32'09
transit middle	13015 Mar 15 11:38	1°♑50'28	0°04'51	retrograde	13016 Feb 13 11:39	23°♐51'17	
transit begin	13015 Mar 15 08:46	1°♑58'33		evening set	13016 Feb 20 08:52	21°♐25'18	
transit end	13015 Mar 15 14:31	1°♑42'24		min. Earth dist.	13016 Feb 24 03:27	18°♐11'17	0.63446 AU
asc. node	13015 Mar 15 05:46	2°♑07'01		inferior conj	13016 Feb 26 21:14	15°♐25'17	-1°03'42
	13015 Mar 17 03:59	30°♐♐		minimum elong	13016 Feb 26 23:18	15°♐20'04	1°02'30
morning rise	13015 Mar 21 17:54	26°♐19'14		asc. node	13016 Mar 01 03:14	12°♐21'32	
direct	13015 Mar 24 11:15	25°♐39'40		morning rise	13016 Mar 04 16:06	10°♐09'37	
morning max el	13015 Mar 30 19:34	28°♐58'20	18°00'13	direct	13016 Mar 07 01:24	9°♐41'56	
	13015 Mar 31 19:30	0°♑		morning max el	13016 Mar 13 13:18	13°♐01'43	17°46'56
desc. node	13015 Apr 17 07:57	24°♑45'55			13016 Mar 25 07:34	0°♑	

morning set	13016 Mar 29 23:02	7° Υ 56'43		13017 Feb 28 01:14	0° H	
desc. node	13016 Apr 03 04:31	15° Υ 11'07		morning set	13017 Mar 12 21:28	21° H 11'19
					13017 Mar 17 19:08	0° Υ
superior conj	13016 Apr 11 12:48	29° Υ 07'12	-1°01'25	desc. node	13017 Mar 21 01:04	5° Υ 44'04
minimum elong	13016 Apr 11 06:32	28° Υ 41'35	1°00'56			
	13016 Apr 12 01:44	0° B		superior conj	13017 Mar 23 17:45	10° Υ 24'18 -0°21'01
max. Earth dist.	13016 Apr 17 10:10	8° B 36'58	1.44707 AU	minimum elong	13017 Mar 23 15:49	10° Υ 16'03 0°20'47
evening rise	13016 Apr 26 21:09	23° B 22'30		max. Earth dist.	13017 Mar 31 01:00	22° Υ 37'58 1.43189 AU
	13016 May 01 05:31	0° II			13017 Apr 04 14:54	0° B
	13016 May 22 10:10	0° E		evening rise	13017 Apr 06 15:42	3° B 12'18
evening max el	13016 May 25 17:11	3° E 38'48	20°36'48		13017 Apr 24 15:35	0° II
asc. node	13016 May 28 00:13	5° E 44'33		evening max el	13017 May 08 13:05	17° II 26'59 21°50'13
retrograde	13016 Jun 02 20:51	8° E 21'41		asc. node	13017 May 14 21:25	22° II 13'40
evening set	13016 Jun 06 23:45	6° E 45'07		retrograde	13017 May 17 18:56	22° II 52'32
inferior conj	13016 Jun 12 06:02	0° E 37'56	3°12'19	evening set	13017 May 22 08:35	20° II 59'59
minimum elong	13016 Jun 12 05:38	0° E 39'19	3°11'19	inferior conj	13017 May 27 15:01	14° II 42'26 3°02'14
	13016 Jun 12 17:02	30° R II		minimum elong	13017 May 27 13:44	14° II 46'54 3°01'09
min. Earth dist.	13016 Jun 12 21:12	29° II 45'40	0.68338 AU	min. Earth dist.	13017 May 27 16:57	14° II 35'40 0.68822 AU
morning rise	13016 Jun 17 11:15	24° II 18'07		morning rise	13017 Jun 01 18:41	8° II 28'11
direct	13016 Jun 22 21:46	21° II 54'10		direct	13017 Jun 06 16:26	6° II 21'50
desc. node	13016 Jun 30 05:12	25° II 07'59		morning max el	13017 Jun 16 09:25	12° II 05'09 22°27'29
morning max el	13016 Jul 03 21:58	28° II 29'31	23°56'55	desc. node	13017 Jun 17 02:18	12° II 48'22
	13016 Jul 05 08:35	0° E			13017 Jun 30 15:52	0° E
	13016 Jul 27 11:53	0° Ω		morning set	13017 Jul 19 23:39	29° E 23'33
morning set	13016 Aug 08 05:23	19° Ω 02'22			13017 Jul 20 08:36	0° Ω
max. Earth dist.	13016 Aug 11 23:32	25° Ω 34'36	1.38508 AU	max. Earth dist.	13017 Jul 24 22:38	7° Ω 36'27 1.40838 AU
	13016 Aug 14 10:47	0° np				
superior conj	13016 Aug 19 09:22	9° np 09'45	-0°42'05	superior conj	13017 Aug 01 18:43	21° Ω 14'35 -1°16'42
minimum elong	13016 Aug 19 12:19	9° np 23'47	0°42'00	minimum elong	13017 Aug 02 00:22	21° Ω 39'56 1°16'36
asc. node	13016 Aug 24 00:35	18° np 05'32			13017 Aug 06 13:58	0° np
evening rise	13016 Aug 28 08:21	26° np 35'12		asc. node	13017 Aug 10 21:13	8° np 02'23
	13016 Aug 30 02:13	0° $\underline{\text{A}}$		evening rise	13017 Aug 11 22:49	10° np 02'45
evening max el	13016 Sep 13 16:22	23° $\underline{\text{A}}$ 14'18	18°57'04		13017 Aug 23 08:44	0° $\underline{\text{A}}$
retrograde	13016 Sep 22 09:26	27° $\underline{\text{A}}$ 36'09		evening max el	13017 Aug 27 21:55	5° $\underline{\text{A}}$ 38'39 18°20'35
evening set	13016 Sep 24 06:17	27° $\underline{\text{A}}$ 24'53		retrograde	13017 Sep 04 09:16	9° $\underline{\text{A}}$ 25'31
desc. node	13016 Sep 26 01:57	26° $\underline{\text{A}}$ 53'41		evening set	13017 Sep 06 11:38	9° $\underline{\text{A}}$ 08'22
inferior conj	13016 Oct 02 13:54	23° $\underline{\text{A}}$ 08'10	-2°03'06	desc. node	13017 Sep 12 23:27	5° $\underline{\text{A}}$ 21'54
minimum elong	13016 Oct 02 08:41	23° $\underline{\text{A}}$ 17'20	2°00'45	inferior conj	13017 Sep 14 00:41	4° $\underline{\text{A}}$ 30'42 -0°19'43
min. Earth dist.	13016 Oct 05 12:31	21° $\underline{\text{A}}$ 04'50	0.56451 AU	minimum elong	13017 Sep 13 23:57	4° $\underline{\text{A}}$ 32'12 0°19'27
morning rise	13016 Oct 10 07:57	18° $\underline{\text{A}}$ 19'43		min. Earth dist.	13017 Sep 17 08:03	1° $\underline{\text{A}}$ 48'49 0.58437 AU
direct	13016 Oct 15 23:18	17° $\underline{\text{A}}$ 04'19			13017 Sep 19 20:29	30° R np
morning max el	13016 Oct 30 03:42	24° $\underline{\text{A}}$ 22'07	26°07'07	morning rise	13017 Sep 21 08:48	29° np 05'58
	13016 Nov 04 07:49	0° ML		direct	13017 Sep 27 14:46	27° np 23'07
asc. node	13016 Nov 20 02:12	24° ML 32'32			13017 Oct 05 15:56	0° $\underline{\text{A}}$
	13016 Nov 22 21:34	0° A		morning max el	13017 Oct 11 22:29	5° $\underline{\text{A}}$ 02'57 27°19'33
morning set	13016 Nov 27 09:40	9° A 21'04			13017 Oct 30 08:11	0° ML
				asc. node	13017 Nov 06 23:00	13° ML 58'51
superior conj	13016 Dec 04 04:38	24° A 18'12	1°37'23	morning set	13017 Nov 11 18:00	23° ML 48'31
minimum elong	13016 Dec 04 04:00	24° A 14'42	1°38'20		13017 Nov 14 14:45	0° A
max. Earth dist.	13016 Dec 05 03:32	26° A 25'22	1.31599 AU	superior conj	13017 Nov 18 16:17	9° A 01'10 1°31'03
	13016 Dec 06 18:25	0° B		minimum elong	13017 Nov 18 14:45	8° A 52'36 1°31'48
evening rise	13016 Dec 11 04:28	9° B 30'17		max. Earth dist.	13017 Nov 18 12:03	8° A 37'33 1.31248 AU
	13016 Dec 21 20:07	0° \approx		evening rise	13017 Nov 25 10:30	23° A 54'24
desc. node	13016 Dec 22 23:33	1° \approx 58'15			13017 Nov 28 08:19	0° B
evening max el	13017 Jan 12 01:32	29° \approx 03'03	27°24'04	desc. node	13017 Dec 09 20:32	21° B 05'28
	13017 Jan 13 02:14	0° H			13017 Dec 15 20:01	0° \approx
retrograde	13017 Jan 25 23:59	6° H 21'13		evening max el	13017 Dec 25 03:49	10° \approx 52'22 26°41'24
evening set	13017 Feb 01 21:38	4° H 09'50		retrograde	13018 Jan 08 02:40	18° \approx 00'30
min. Earth dist.	13017 Feb 05 15:58	1° H 19'07	0.61369 AU	evening set	13018 Jan 14 17:30	16° \approx 11'42
	13017 Feb 07 03:49	30° R \approx		min. Earth dist.	13018 Jan 18 17:47	13° \approx 34'15 0.59205 AU
inferior conj	13017 Feb 08 17:49	28° \approx 34'15	-2°21'31	inferior conj	13018 Jan 21 21:52	11° \approx 06'24 -3°43'44
minimum elong	13017 Feb 08 22:47	28° \approx 23'06	2°18'58	minimum elong	13018 Jan 22 05:40	10° \approx 51'11 3°40'19
morning rise	13017 Feb 16 02:53	23° \approx 36'30		morning rise	13018 Jan 29 20:49	6° \approx 29'31
asc. node	13017 Feb 16 00:37	23° \approx 38'14		direct	13018 Jan 31 22:03	6° \approx 14'20
direct	13017 Feb 18 06:24	23° \approx 16'53		asc. node	13018 Feb 02 21:58	6° \approx 29'21
morning max el	13017 Feb 25 05:53	26° \approx 48'01	17°51'38	morning max el	13018 Feb 08 17:38	10° \approx 06'31 18°15'44

	13018 Feb 21 17:28	0° 		morning set	13019 Feb 08 09:44	19°  26'32	
morning set	13018 Feb 24 10:35	5°  05'57			13019 Feb 13 18:13	0° 	
superior conj	13018 Mar 05 21:29	22°  44'26	0°15'56	superior conj	13019 Feb 16 19:39	5°  55'09	0°46'29
minimum elong	13018 Mar 05 22:40	22°  49'50	0°15'56	minimum elong	13019 Feb 16 22:15	6°  07'37	0°46'34
desc. node	13018 Mar 07 21:36	26°  20'43		desc. node	13019 Feb 22 18:07	16°  57'24	
	13018 Mar 09 23:15	0° 		max. Earth dist.	13019 Feb 23 18:40	18°  47'31	1.38980 AU
max. Earth dist.	13018 Mar 13 11:41	6°  03'57	1.41207 AU	evening rise	13019 Feb 27 14:13	25°  28'03	
evening rise	13018 Mar 18 04:22	13°  52'38			13019 Mar 02 06:32	0° 	
	13018 Mar 28 11:33	0° 			13019 Mar 22 03:25	0° 	
	13018 Apr 19 23:01	0° 		evening max el	13019 Apr 03 18:41	15°  08'32	24°30'18
evening max el	13018 Apr 21 04:57	1°  17'00	23°10'05	retrograde	13019 Apr 15 07:08	21°  52'59	
retrograde	13018 May 01 14:45	7°  24'58		asc. node	13019 Apr 18 16:00	21°  02'31	
asc. node	13018 May 01 18:40	7°  24'50		evening set	13019 Apr 20 19:57	19°  33'22	
evening set	13018 May 06 15:50	5°  17'42		min. Earth dist.	13019 Apr 25 09:18	14°  21'19	0.68388 AU
	13018 May 11 04:50	30°  08'08		inferior conj	13019 Apr 26 08:36	13°  03'18	2°11'27
min. Earth dist.	13018 May 11 13:41	29°  08'34	0.68835 AU	minimum elong	13019 Apr 26 06:26	13°  10'32	2°10'15
inferior conj	13018 May 12 00:30	28°  52'12	2°41'52	morning rise	13019 May 01 17:05	7°  04'12	
minimum elong	13018 May 11 22:36	28°  58'46	2°40'41	direct	13019 May 05 13:30	5°  39'27	
morning rise	13018 May 17 05:16	22°  44'59		morning max el	13019 May 13 01:02	9°  49'35	19°52'27
direct	13018 May 21 14:08	20°  59'07		desc. node	13019 May 21 20:08	20°  38'07	
morning max el	13018 May 30 01:38	25°  51'23	21°04'07		13019 May 28 08:09	0° 	
	13018 Jun 02 19:50	0° 		morning set	13019 Jun 08 18:56	17°  18'49	
desc. node	13018 Jun 03 23:16	1°  23'28			13019 Jun 16 22:52	0° 	
	13018 Jun 24 02:21	0° 		max. Earth dist.	13019 Jun 19 16:06	4°  17'39	1.44566 AU
morning set	13018 Jun 29 17:05	8°  39'57					
max. Earth dist.	13018 Jul 07 04:07	20°  33'46	1.42939 AU	superior conj	13019 Jun 24 19:07	12°  30'31	-2°08'36
	13018 Jul 12 21:00	0° 		minimum elong	13019 Jun 24 23:51	12°  49'39	2°09'24
					13019 Jul 05 08:44	0° 	
superior conj	13018 Jul 14 06:53	2°  23'12	-1°47'39	evening rise	13019 Jul 08 05:30	4°  51'21	
minimum elong	13018 Jul 14 13:59	2°  53'21	1°47'51	asc. node	13019 Jul 15 14:37	17°  18'58	
evening rise	13018 Jul 25 23:33	22°  52'21			13019 Jul 24 05:13	0° 	
asc. node	13018 Jul 28 17:53	27°  04'38		evening max el	13019 Jul 25 23:50	1°  56'03	18°06'50
	13018 Jul 29 23:30	0° 		retrograde	13019 Aug 01 08:57	5°  16'31	
evening max el	13018 Aug 11 09:41	18°  35'56	18°04'13	evening set	13019 Aug 04 03:10	4°  37'08	
retrograde	13018 Aug 18 02:39	22°  02'28			13019 Aug 09 17:32	30°  08'00	
evening set	13018 Aug 20 12:40	21°  35'42		inferior conj	13019 Aug 10 08:06	29°  20'55	2°03'14
inferior conj	13018 Aug 27 08:01	16°  37'35	1°03'14	minimum elong	13019 Aug 10 10:39	29°  14'02	2°01'55
minimum elong	13018 Aug 27 09:50	16°  33'15	1°02'16	min. Earth dist.	13019 Aug 13 01:54	26°  24'12	0.62942 AU
min. Earth dist.	13018 Aug 30 12:08	13°  37'34	0.60695 AU	morning rise	13019 Aug 16 16:07	23°  20'44	
desc. node	13018 Aug 30 20:56	13°  17'50		desc. node	13019 Aug 17 18:26	22°  23'33	
morning rise	13018 Sep 03 04:06	10°  43'58		direct	13019 Aug 23 08:15	20°  39'46	
direct	13018 Sep 09 18:22	8°  35'02		morning max el	13019 Sep 06 08:49	28°  41'55	27°52'03
morning max el	13018 Sep 24 00:52	16°  30'08	27°55'12		13019 Sep 07 15:12	0° 	
	13018 Oct 05 03:59	0° 			13019 Sep 29 01:04	0° 	
	13018 Oct 22 22:59	0° 		morning set	13019 Oct 10 18:59	21°  49'59	
asc. node	13018 Oct 24 19:44	3°  14'25'58		asc. node	13019 Oct 11 16:23	23°  43'50	
morning set	13018 Oct 26 21:49	8°  10'00'03			13019 Oct 14 17:33	0° 	
max. Earth dist.	13018 Nov 01 19:45	20°  14'41'17	1.31410 AU	max. Earth dist.	13019 Oct 15 22:39	2°  35'06	1.32092 AU
superior conj	13018 Nov 03 03:10	23°  18'38'17	1°18'59	superior conj	13019 Oct 18 11:24	8°  04'01	1°01'20
minimum elong	13018 Nov 03 01:03	23°  26'31	1°19'27	minimum elong	13019 Oct 18 09:09	7°  15'43	1°01'30
	13018 Nov 05 23:50	0° 		evening rise	13019 Oct 25 07:06	22°  15'58'45	
evening rise	13018 Nov 09 20:01	8°  25'40			13019 Oct 28 15:03	0° 	
	13018 Nov 20 19:41	0° 		desc. node	13019 Nov 13 14:50	26°  27'48'08	
desc. node	13018 Nov 26 17:38	9°  27'44			13019 Nov 16 08:40	0° 	
evening max el	13018 Dec 06 21:38	21°  34'8'30	25°26'26	evening max el	13019 Nov 18 08:33	2°  30'23'33	23°49'51
retrograde	13018 Dec 20 18:10	28°  34'6'46		retrograde	13019 Dec 01 21:28	8°  34'7'26	
evening set	13018 Dec 26 16:17	27°  32'6'44		evening set	13019 Dec 06 15:18	7°  35'8'21	
min. Earth dist.	13018 Dec 31 09:49	24°  34'7'31	0.57172 AU	min. Earth dist.	13019 Dec 12 19:17	4°  35'8'18	0.55548 AU
inferior conj	13019 Jan 03 06:11	22°  35'2'23	-4°59'11	inferior conj	13019 Dec 14 17:59	3°  34'8'31	-5°48'18
minimum elong	13019 Jan 03 14:40	22°  33'8'03	4°56'17	minimum elong	13019 Dec 14 22:04	3°  34'2'25	5°46'58
morning rise	13019 Jan 11 15:32	18°  33'7'57			13019 Dec 22 19:21	30°  08'27'19	
direct	13019 Jan 13 20:04	18° 32'3'38		morning rise	13019 Dec 23 06:43	29° 27'3'20	
asc. node	13019 Jan 20 19:17	20° 35'9'55		direct	13019 Dec 25 22:20	29° 27'3'43	
morning max el	13019 Jan 22 20:40	22° 34'6'25	19°01'03		13019 Dec 28 22:51	0°	
	13019 Jan 28 15:20	0°		morning max el	13020 Jan 05 11:16	4° 33'7'55	20°09'12

asc. node	13020 Jan 07 16:32	6°♄58'27		asc. node	13020 Dec 24 13:42	24°♄06'58	
	13020 Jan 21 15:28	0°♄			13020 Dec 28 07:29	0°♄	
morning set	13020 Jan 23 15:32	4°♄03'20		morning set	13021 Jan 07 01:19	18°♄47'48	
					13021 Jan 12 08:21	0°♄	
superior conj	13020 Jan 31 07:41	19°♄43'47	1°09'48	superior conj	13021 Jan 14 05:38	3°♄58'05	1°25'58
minimum elong	13020 Jan 31 10:26	19°♄57'33	1°10'10	minimum elong	13021 Jan 14 07:45	4°♄09'06	1°26'40
	13020 Feb 05 13:39	0°♄		max. Earth dist.	13021 Jan 18 12:56	12°♄47'49	1.34781 AU
max. Earth dist.	13020 Feb 06 01:25	0°♄55'49	1.36764 AU	evening rise	13021 Jan 22 17:43	21°♄00'28	
evening rise	13020 Feb 09 19:50	7°♄54'00		desc. node	13021 Jan 26 11:21	27°♄56'12	
desc. node	13020 Feb 09 14:42	7°♄30'48			13021 Jan 27 14:58	0°♄	
	13020 Feb 23 01:17	0°♄			13021 Feb 15 22:43	0°♄	
evening max el	13020 Mar 16 08:06	29°♄00'05	25°43'56	evening max el	13021 Feb 26 21:50	12°♄45'18	26°43'45
	13020 Mar 17 09:10	0°♄		retrograde	13021 Mar 12 01:41	20°♄08'57	
retrograde	13020 Mar 28 19:09	6°♄10'23		evening set	13021 Mar 18 12:06	17°♄36'43	
evening set	13020 Apr 03 19:20	3°♄42'00		asc. node	13021 Mar 22 10:53	13°♄39'54	
asc. node	13020 Apr 04 13:25	3°♄01'49		min. Earth dist.	13021 Mar 22 12:57	13°♄33'58	0.66210 AU
	13020 Apr 07 08:03	30°♄		inferior conj	13021 Mar 24 12:45	11°♄12'51	0°39'26
min. Earth dist.	13020 Apr 08 01:46	29°♄05'13	0.67504 AU	minimum elong	13021 Mar 24 11:44	11°♄15'52	0°38'57
inferior conj	13020 Apr 09 13:24	27°♄12'02	1°30'48	morning rise	13021 Mar 30 12:34	5°♄34'12	
minimum elong	13020 Apr 09 11:29	27°♄18'08	1°29'46	direct	13021 Apr 02 11:10	4°♄46'17	
morning rise	13020 Apr 15 04:15	21°♄22'17		morning max el	13021 Apr 08 21:05	8°♄09'37	18°15'30
direct	13020 Apr 18 13:09	20°♄17'15			13021 Apr 24 07:01	0°♄	
morning max el	13020 Apr 25 07:59	23°♄57'44	18°55'45	desc. node	13021 Apr 24 13:33	0°♄26'05	
	13020 Apr 30 11:28	0°♄		morning set	13021 Apr 28 08:36	6°♄30'05	
desc. node	13020 May 07 16:53	10°♄21'46			13021 May 13 04:48	0°♄	
greatest brilliancy	13020 May 08 19:46	12°♄03'15	-0.8m				
morning set	13020 May 18 01:56	26°♄18'34		superior conj	13021 May 13 18:23	0°♄53'08	-1°56'27
	13020 May 20 10:59	0°♄		minimum elong	13021 May 13 09:54	0°♄19'56	1°56'40
max. Earth dist.	13020 Jun 01 08:56	18°♄33'36	1.45553 AU	max. Earth dist.	13021 May 15 04:28	3°♄06'21	1.45808 AU
				evening rise	13021 May 29 18:48	25°♄51'29	
superior conj	13020 Jun 03 10:47	21°♄49'03	-2°12'38		13021 Jun 01 10:33	0°♄	
minimum elong	13020 Jun 03 08:29	21°♄40'00	2°13'34	greatest brilliancy	13021 Jun 09 17:24	12°♄48'50	-0.8m
	13020 Jun 08 15:12	0°♄		asc. node	13021 Jun 18 08:26	25°♄07'09	
evening rise	13020 Jun 18 12:10	15°♄50'28		evening max el	13021 Jun 21 23:17	29°♄15'54	19°05'37
	13020 Jun 27 06:50	0°♄			13021 Jun 22 17:40	0°♄	
asc. node	13020 Jul 01 11:28	6°♄27'40		retrograde	13021 Jun 28 19:57	3°♄03'53	
evening max el	13020 Jul 08 13:14	15°♄31'31	18°27'34	evening set	13021 Jul 02 07:37	1°♄53'26	
retrograde	13020 Jul 14 23:53	18°♄59'19			13021 Jul 04 12:27	30°♄	
evening set	13020 Jul 18 02:35	18°♄05'06		inferior conj	13021 Jul 07 18:52	26°♄06'34	3°04'56
inferior conj	13020 Jul 23 20:54	12°♄32'50	2°42'39	minimum elong	13021 Jul 07 20:06	26°♄02'34	3°03'51
minimum elong	13020 Jul 23 23:03	12°♄26'23	2°41'25	min. Earth dist.	13021 Jul 09 08:19	24°♄06'20	0.66631 AU
min. Earth dist.	13020 Jul 26 01:02	9°♄57'48	0.64970 AU	morning rise	13021 Jul 13 07:57	19°♄42'52	
morning rise	13020 Jul 29 18:19	6°♄11'30		direct	13021 Jul 19 12:28	17°♄02'42	
desc. node	13020 Aug 03 15:52	3°♄41'12		desc. node	13021 Jul 21 13:14	17°♄17'46	
direct	13020 Aug 05 06:50	3°♄31'47		morning max el	13021 Aug 01 06:22	24°♄39'06	26°09'43
morning max el	13020 Aug 18 19:27	11°♄28'43	27°14'12		13021 Aug 06 02:13	0°♄	
	13020 Sep 02 12:59	0°♄			13021 Aug 26 23:33	0°♄	
	13020 Sep 20 13:34	0°♄		morning set	13021 Sep 06 05:50	17°♄56'40	
morning set	13020 Sep 23 06:45	5°♄11'23		max. Earth dist.	13021 Sep 10 01:26	25°♄11'18	1.35046 AU
max. Earth dist.	13020 Sep 27 17:04	14°♄02'32	1.33312 AU		13021 Sep 12 12:11	0°♄	
asc. node	13020 Sep 27 13:00	13°♄41'43		asc. node	13021 Sep 14 09:36	3°♄48'07	
				superior conj	13021 Sep 15 11:06	5°♄57'51	0°10'05
superior conj	13020 Oct 01 14:52	22°♄12'28	0°38'13	minimum elong	13021 Sep 15 10:32	5°♄54'57	0°09'58
minimum elong	13020 Oct 01 13:05	22°♄03'00	0°38'10	behind sun begin	13021 Sep 15 05:46	5°♄30'40	
	13020 Oct 05 06:12	0°♄		behind sun end	13021 Sep 15 15:17	6°♄19'17	
evening rise	13020 Oct 08 17:54	7°♄28'28		evening rise	13021 Sep 23 02:28	21°♄50'23	
	13020 Oct 20 13:02	0°♄			13021 Sep 27 02:47	0°♄	
evening max el	13020 Oct 29 20:00	12°♄04'43	22°08'28	evening max el	13021 Oct 11 17:18	22°♄32'15	20°38'08
desc. node	13020 Oct 30 12:10	12°♄43'17		desc. node	13021 Oct 17 09:34	26°♄46'11	
retrograde	13020 Nov 11 12:52	18°♄22'51		retrograde	13021 Oct 22 23:30	28°♄07'51	
evening set	13020 Nov 14 20:33	17°♄58'25		evening set	13021 Oct 25 05:41	27°♄55'21	
min. Earth dist.	13020 Nov 23 01:56	14°♄19'25	0.54634 AU	inferior conj	13021 Nov 03 05:46	24°♄00'39	-4°47'52
inferior conj	13020 Nov 23 13:54	14°♄02'37	-5°47'46	minimum elong	13021 Nov 02 19:48	24°♄15'00	4°44'35
minimum elong	13020 Nov 23 09:15	14°♄09'10	5°46'24	min. Earth dist.	13021 Nov 04 08:48	23°♄21'43	0.54637 AU
morning rise	13020 Dec 01 23:06	10°♄15'26		morning rise	13021 Nov 11 09:43	20°♄03'09	
direct	13020 Dec 05 09:40	9°♄49'06					
morning max el	13020 Dec 17 11:26	15°♄35'02	21°39'34				

direct	13021 Nov 15 18:13	19° \mathbb{M} 22'27			13022 Oct 21 19:16	30° \mathbb{R} $\underline{\mathbb{A}}$	
morning max el	13021 Nov 29 00:24	25° \mathbb{M} 48'53	23°25'34	morning rise	13022 Oct 22 06:25	29° $\underline{\mathbb{A}}$ 49'01	
	13021 Dec 02 22:43	0° \mathbb{A}		direct	13022 Oct 27 11:14	28° $\underline{\mathbb{A}}$ 48'18	
asc. node	13021 Dec 11 10:46	12° \mathbb{A} 09'31			13022 Nov 02 01:54	0° \mathbb{M}	
	13021 Dec 20 20:26	0° \mathbb{B}		morning max el	13022 Nov 10 10:27	5° \mathbb{M} 48'50	25°12'39
morning set	13021 Dec 22 12:59	3° \mathbb{B} 34'05			13022 Nov 27 20:08	0° \mathbb{A}	
				asc. node	13022 Nov 28 07:42	0° \mathbb{A} 52'23	
superior conj	13021 Dec 29 10:23	18° \mathbb{B} 29'13	1°35'21	morning set	13022 Dec 07 00:43	18° \mathbb{A} 16'46	
minimum elong	13021 Dec 29 11:29	18° \mathbb{B} 35'07	1°36'16		13022 Dec 12 09:06	0° \mathbb{B}	
max. Earth dist.	13022 Jan 01 08:14	24° \mathbb{B} 42'18	1.33178 AU				
	13022 Jan 03 21:16	0° \approx		superior conj	13022 Dec 13 19:25	3° \mathbb{B} 09'39	1°38'23
evening rise	13022 Jan 06 04:20	4° \approx 38'11		minimum elong	13022 Dec 13 19:24	3° \mathbb{B} 09'32	1°39'22
desc. node	13022 Jan 13 08:05	18° \approx 08'55		max. Earth dist.	13022 Dec 15 10:49	6° \mathbb{B} 46'11	1.32031 AU
	13022 Jan 20 08:30	0° \mathbb{H}		evening rise	13022 Dec 21 00:30	18° \mathbb{B} 38'53	
evening max el	13022 Feb 09 11:12	26° \mathbb{H} 14'19	27°22'19		13022 Dec 26 18:25	0° \approx	
	13022 Feb 13 21:20	0° \mathbb{Y}		desc. node	13022 Dec 31 04:56	8° \approx 02'54	
retrograde	13022 Feb 23 01:46	3° \mathbb{Y} 40'35			13023 Jan 14 17:01	0° \mathbb{H}	
evening set	13022 Mar 01 20:08	1° \mathbb{Y} 10'28		evening max el	13023 Jan 22 22:09	9° \mathbb{H} 13'50	27°32'51
	13022 Mar 03 06:47	30° \mathbb{R} \mathbb{H}		retrograde	13023 Feb 05 18:28	16° \mathbb{H} 36'03	
min. Earth dist.	13022 Mar 05 16:35	27° \mathbb{H} 39'43	0.64549 AU	evening set	13023 Feb 12 16:49	14° \mathbb{H} 15'15	
inferior conj	13022 Mar 08 04:08	24° \mathbb{H} 59'47	-0°22'55	min. Earth dist.	13023 Feb 16 10:48	11° \mathbb{H} 12'19	0.62586 AU
minimum elong	13022 Mar 08 04:49	24° \mathbb{H} 57'56	0°22'27	inferior conj	13023 Feb 19 08:32	8° \mathbb{H} 25'09	-1°35'44
asc. node	13022 Mar 09 08:22	23° \mathbb{H} 44'49		minimum elong	13023 Feb 19 11:46	8° \mathbb{H} 17'22	1°33'57
morning rise	13022 Mar 14 15:24	19° \mathbb{H} 34'43		asc. node	13023 Feb 24 05:48	4° \mathbb{H} 19'57	
direct	13022 Mar 17 05:10	19° \mathbb{H} 00'33		morning rise	13023 Feb 26 09:20	3° \mathbb{H} 16'44	
morning max el	13022 Mar 23 13:56	22° \mathbb{H} 18'22	17°52'19	direct	13023 Feb 28 15:59	2° \mathbb{H} 52'49	
	13022 Mar 29 16:04	0° \mathbb{Y}		morning max el	13023 Mar 07 07:36	6° \mathbb{H} 15'50	17°46'43
morning set	13022 Apr 09 19:46	18° \mathbb{Y} 05'04			13023 Mar 22 19:56	0° \mathbb{Y}	
desc. node	13022 Apr 11 10:08	20° \mathbb{Y} 45'14		morning set	13023 Mar 23 07:12	0° \mathbb{Y} 49'23	
	13022 Apr 17 00:15	0° \mathbb{B}		desc. node	13023 Mar 29 06:41	11° \mathbb{Y} 14'40	
superior conj	13022 Apr 23 11:29	10° \mathbb{B} 28'29	-1°24'01	superior conj	13023 Apr 04 02:26	21° \mathbb{Y} 07'08	-0°44'09
minimum elong	13022 Apr 23 03:05	9° \mathbb{B} 54'52	1°23'35	minimum elong	13023 Apr 03 22:04	20° \mathbb{Y} 48'54	0°43'46
max. Earth dist.	13022 Apr 28 00:29	17° \mathbb{B} 40'55	1.45318 AU		13023 Apr 09 12:16	0° \mathbb{B}	
	13022 May 05 22:15	0° \mathbb{H}		max. Earth dist.	13023 Apr 10 18:12	2° \mathbb{B} 00'32	1.44133 AU
evening rise	13022 May 09 08:54	5° \mathbb{H} 17'39		evening rise	13023 Apr 18 21:30	14° \mathbb{B} 48'51	
greatest brilliancy	13022 May 24 06:43	27° \mathbb{H} 41'27	-0.6m		13023 Apr 28 22:39	0° \mathbb{H}	
	13022 May 25 21:13	0° \mathbb{B}		evening max el	13023 May 19 03:02	26° \mathbb{H} 51'23	21°06'47
evening max el	13022 Jun 05 04:06	13° \mathbb{B} 03'13	19°59'32		13023 May 22 18:27	0° \mathbb{B}	
asc. node	13022 Jun 05 05:30	13° \mathbb{B} 06'43		asc. node	13023 May 23 02:39	0° \mathbb{B} 13'54	
retrograde	13022 Jun 12 18:26	17° \mathbb{B} 23'06		retrograde	13023 May 27 17:17	1° \mathbb{B} 51'57	
evening set	13022 Jun 16 15:40	15° \mathbb{B} 55'50		evening set	13023 Jun 01 00:44	0° \mathbb{B} 08'14	
inferior conj	13022 Jun 21 22:58	9° \mathbb{B} 55'38	3°13'07		13023 Jun 01 04:44	30° \mathbb{R} \mathbb{H}	
minimum elong	13022 Jun 21 23:09	9° \mathbb{B} 54'59	3°12'07	inferior conj	13023 Jun 06 06:48	23° \mathbb{H} 56'12	3°09'19
min. Earth dist.	13022 Jun 22 22:00	8° \mathbb{B} 37'44	0.67853 AU	minimum elong	13023 Jun 06 06:00	23° \mathbb{H} 58'59	3°08'17
morning rise	13022 Jun 27 06:18	3° \mathbb{B} 33'46		min. Earth dist.	13023 Jun 06 16:10	23° \mathbb{H} 23'40	0.68607 AU
direct	13022 Jul 02 23:52	1° \mathbb{B} 02'05		morning rise	13023 Jun 11 11:03	17° \mathbb{H} 38'42	
desc. node	13022 Jul 08 10:30	2° \mathbb{B} 50'04		direct	13023 Jun 16 16:07	15° \mathbb{H} 22'02	
morning max el	13022 Jul 14 16:39	8° \mathbb{B} 02'50	24°47'55	desc. node	13023 Jun 25 07:38	19° \mathbb{H} 51'08	
	13022 Jul 31 21:24	0° \mathbb{Q}		morning max el	13023 Jun 27 03:11	21° \mathbb{H} 35'31	23°18'36
morning set	13022 Aug 19 11:57	29° \mathbb{Q} 54'32			13023 Jul 04 09:42	0° \mathbb{B}	
	13022 Aug 19 13:11	0° \mathbb{H}			13023 Jul 25 03:38	0° \mathbb{Q}	
max. Earth dist.	13022 Aug 23 01:48	6° \mathbb{H} 20'04	1.37184 AU	morning set	13023 Jul 31 20:29	10° \mathbb{Q} 54'21	
				max. Earth dist.	13023 Aug 04 23:42	17° \mathbb{Q} 56'41	1.39517 AU
superior conj	13022 Aug 29 20:50	19° \mathbb{H} 11'16	-0°22'15		13023 Aug 11 17:46	0° \mathbb{H}	
minimum elong	13022 Aug 29 22:18	19° \mathbb{H} 18'27	0°22'16				
asc. node	13022 Sep 01 06:10	23° \mathbb{H} 53'39		superior conj	13023 Aug 12 16:19	1° \mathbb{H} 44'00	-0°56'54
	13022 Sep 04 07:23	0° $\underline{\mathbb{A}}$		minimum elong	13023 Aug 12 20:27	2° \mathbb{H} 03'08	0°56'47
evening rise	13022 Sep 07 06:23	5° $\underline{\mathbb{A}}$ 57'26		asc. node	13023 Aug 19 02:46	13° \mathbb{H} 54'58	
	13022 Sep 20 22:49	0° \mathbb{M}		evening rise	13023 Aug 22 02:48	19° \mathbb{H} 42'27	
evening max el	13022 Sep 24 04:36	3° \mathbb{M} 45'02	19°27'34		13023 Aug 27 13:21	0° $\underline{\mathbb{A}}$	
retrograde	13022 Oct 03 18:47	8° \mathbb{M} 32'36		evening max el	13023 Sep 07 04:32	15° $\underline{\mathbb{A}}$ 45'24	18°38'53
desc. node	13022 Oct 04 07:02	8° \mathbb{M} 31'50		retrograde	13023 Sep 15 07:49	19° $\underline{\mathbb{A}}$ 51'07	
evening set	13022 Oct 05 15:30	8° \mathbb{M} 22'32		evening set	13023 Sep 17 06:23	19° $\underline{\mathbb{A}}$ 37'55	
inferior conj	13022 Oct 14 08:03	4° \mathbb{M} 15'49	-3°06'56	desc. node	13023 Sep 21 04:30	18° $\underline{\mathbb{A}}$ 00'08	
minimum elong	13022 Oct 14 00:02	4° \mathbb{M} 28'43	3°03'33	inferior conj	13023 Sep 25 06:15	15° $\underline{\mathbb{A}}$ 12'10	-1°17'15
min. Earth dist.	13022 Oct 16 18:35	2° \mathbb{M} 41'44	0.55564 AU	minimum elong	13023 Sep 25 03:06	15° $\underline{\mathbb{A}}$ 18'04	1°15'49

min. Earth dist.	13023 Sep 28 10:10	12° Ω 50'18	0.57241 AU	inferior conj	13024 Sep 06 02:10	26° \mathbb{M} 54'54	0°18'18
morning rise	13023 Oct 02 20:23	10° Ω 07'27		minimum elong	13024 Sep 06 02:47	26° \mathbb{M} 53'34	0°17'55
direct	13023 Oct 08 18:23	8° Ω 40'48		desc. node	13024 Sep 07 01:59	26° \mathbb{M} 02'22	
morning max el	13023 Oct 23 01:15	16° Ω 09'01	26°42'08	min. Earth dist.	13024 Sep 09 09:29	24° \mathbb{M} 02'15	0.59380 AU
	13023 Nov 03 08:32	0° \mathbb{M}		morning rise	13024 Sep 13 05:16	21° \mathbb{M} 16'24	
asc. node	13023 Nov 15 04:32	20° \mathbb{M} 05'26		direct	13024 Sep 19 15:31	19° \mathbb{M} 21'41	
	13023 Nov 20 02:26	0° \mathbb{X}		morning max el	13024 Oct 03 23:30	27° \mathbb{M} 09'55	27°39'29
morning set	13023 Nov 21 10:46	2° \mathbb{X} 51'21			13024 Oct 06 16:41	0° Ω	
					13024 Oct 26 23:50	0° \mathbb{M}	
superior conj	13023 Nov 28 06:40	17° \mathbb{X} 53'31	1°35'24	asc. node	13024 Nov 01 01:16	9° \mathbb{M} 40'27	
minimum elong	13023 Nov 28 05:37	17° \mathbb{X} 47'42	1°36'17	morning set	13024 Nov 04 17:26	17° \mathbb{M} 13'17	
max. Earth dist.	13023 Nov 28 18:02	18° \mathbb{X} 56'59	1.31381 AU		13024 Nov 10 14:21	0° \mathbb{X}	
	13023 Dec 03 18:36	0° \mathbb{Z}		max. Earth dist.	13024 Nov 11 02:32	1° \mathbb{X} 07'51	1.31245 AU
evening rise	13023 Dec 05 03:35	2° \mathbb{Z} 56'05					
desc. node	13023 Dec 18 01:52	27° \mathbb{Z} 30'11		superior conj	13024 Nov 11 18:14	2° \mathbb{X} 35'22	1°26'38
	13023 Dec 19 14:22	0° \approx		minimum elong	13024 Nov 11 16:24	2° \mathbb{X} 25'10	1°27'16
evening max el	13024 Jan 05 04:05	21° \approx 30'48	27°10'11	evening rise	13024 Nov 18 11:21	17° \mathbb{X} 24'19	
retrograde	13024 Jan 19 02:56	28° \approx 45'27			13024 Nov 24 14:43	0° \mathbb{Z}	
evening set	13024 Jan 25 22:53	26° \approx 42'21		desc. node	13024 Dec 03 22:54	16° \mathbb{Z} 20'33	
min. Earth dist.	13024 Jan 29 18:31	23° \approx 59'09	0.60440 AU		13024 Dec 14 05:16	0° \approx	
inferior conj	13024 Feb 01 22:28	21° \approx 19'14	-2°56'22	evening max el	13024 Dec 17 02:47	2° \approx 57'33	26°13'08
minimum elong	13024 Feb 02 04:45	21° \approx 05'58	2°53'20	retrograde	13024 Dec 31 01:32	10° \approx 02'26	
morning rise	13024 Feb 09 13:40	16° \approx 30'29		evening set	13025 Jan 06 10:23	8° \approx 25'16	
asc. node	13024 Feb 11 03:12	16° \approx 14'19		min. Earth dist.	13025 Jan 10 16:09	5° \approx 49'03	0.58299 AU
direct	13024 Feb 11 15:42	16° \approx 13'13		inferior conj	13025 Jan 13 18:27	3° \approx 33'03	-4°17'34
morning max el	13024 Feb 18 22:38	19° \approx 51'54	17°59'33	minimum elong	13025 Jan 14 02:59	3° \approx 17'23	4°14'10
	13024 Feb 26 10:22	0° \mathbb{X}			13025 Jan 19 08:42	30° \mathbb{K} \mathbb{Z}	
morning set	13024 Mar 05 12:30	14° \mathbb{X} 22'51		morning rise	13025 Jan 21 22:30	29° \mathbb{Z} 05'49	
	13024 Mar 14 02:26	0° \mathbb{Y}		direct	13025 Jan 24 00:05	28° \mathbb{Z} 51'37	
desc. node	13024 Mar 15 03:12	1° \mathbb{Y} 49'43		asc. node	13025 Jan 28 00:31	29° \mathbb{Z} 48'35	
					13025 Jan 28 09:40	0° \approx	
superior conj	13024 Mar 15 17:34	2° \mathbb{Y} 52'55	-0°04'44	morning max el	13025 Feb 01 07:15	2° \approx 56'02	18°32'21
minimum elong	13024 Mar 15 17:10	2° \mathbb{Y} 51'11	0°04'38	morning set	13025 Feb 17 06:23	28° \approx 29'56	
behind sun begin	13024 Mar 15 09:29	2° \mathbb{Y} 17'22			13025 Feb 18 01:04	0° \mathbb{X}	
behind sun end	13024 Mar 16 00:51	3° \mathbb{Y} 24'56					
max. Earth dist.	13024 Mar 23 07:08	15° \mathbb{Y} 47'31	1.42383 AU	superior conj	13025 Feb 26 05:43	15° \mathbb{X} 36'17	0°29'43
evening rise	13024 Mar 28 22:52	24° \mathbb{Y} 58'20		minimum elong	13025 Feb 26 07:42	15° \mathbb{X} 45'28	0°29'44
	13024 Apr 01 03:32	0° \mathbb{B}		desc. node	13025 Mar 01 23:45	22° \mathbb{X} 27'00	
	13024 Apr 21 20:30	0° \mathbb{I}		max. Earth dist.	13025 Mar 05 15:26	28° \mathbb{X} 53'24	1.40270 AU
evening max el	13024 Apr 30 20:51	10° \mathbb{I} 39'58	22°23'37		13025 Mar 06 06:51	0° \mathbb{Y}	
asc. node	13024 May 08 23:53	16° \mathbb{I} 12'26		evening rise	13025 Mar 09 20:31	6° \mathbb{Y} 02'31	
retrograde	13024 May 10 14:43	16° \mathbb{I} 24'35			13025 Mar 25 06:09	0° \mathbb{B}	
evening set	13024 May 15 09:07	14° \mathbb{I} 25'29		evening max el	13025 Apr 13 11:34	24° \mathbb{B} 30'49	23°44'34
inferior conj	13024 May 20 16:14	8° \mathbb{I} 03'54	2°54'50		13025 Apr 20 15:29	0° \mathbb{I}	
minimum elong	13024 May 20 14:39	8° \mathbb{I} 09'25	2°53'42	retrograde	13025 Apr 24 09:19	0° \mathbb{I} 55'45	
min. Earth dist.	13024 May 20 12:40	8° \mathbb{I} 16'23	0.68884 AU	asc. node	13025 Apr 25 21:12	0° \mathbb{I} 45'35	
morning rise	13024 May 25 20:03	1° \mathbb{I} 52'22			13025 Apr 27 19:49	30° \mathbb{R} \mathbb{B}	
	13024 May 29 11:47	30° \mathbb{R} \mathbb{B}		evening set	13025 Apr 29 15:14	28° \mathbb{B} 43'07	
direct	13024 May 30 12:11	29° \mathbb{B} 54'43		min. Earth dist.	13025 May 04 09:18	23° \mathbb{B} 10'06	0.68698 AU
	13024 May 31 13:11	0° \mathbb{I}		inferior conj	13025 May 05 01:23	22° \mathbb{B} 15'04	2°30'14
morning max el	13024 Jun 08 16:25	5° \mathbb{I} 16'11	21°50'50	minimum elong	13025 May 04 23:19	22° \mathbb{B} 22'08	2°29'01
desc. node	13024 Jun 11 04:40	7° \mathbb{I} 57'14		morning rise	13025 May 10 07:24	16° \mathbb{B} 10'52	
	13024 Jun 27 14:27	0° \mathbb{E}		direct	13025 May 14 10:51	14° \mathbb{B} 33'58	
morning set	13024 Jul 11 03:55	20° \mathbb{E} 47'37		morning max el	13025 May 22 11:25	19° \mathbb{B} 07'18	20°31'52
	13024 Jul 16 19:49	0° \mathbb{O}		desc. node	13025 May 29 01:36	26° \mathbb{B} 50'49	
max. Earth dist.	13024 Jul 17 00:51	0° \mathbb{O} 20'50	1.41777 AU		13025 May 31 10:13	0° \mathbb{I}	
				morning set	13025 Jun 20 12:48	29° \mathbb{I} 42'37	
superior conj	13024 Jul 24 17:08	13° \mathbb{O} 25'59	-1°30'38		13025 Jun 20 17:17	0° \mathbb{E}	
minimum elong	13024 Jul 24 23:41	13° \mathbb{O} 54'42	1°30'36	max. Earth dist.	13025 Jun 29 08:44	13° \mathbb{E} 37'58	1.43703 AU
	13024 Aug 02 21:51	0° \mathbb{M}					
evening rise	13024 Aug 04 12:00	2° \mathbb{M} 55'36		superior conj	13025 Jul 05 19:18	24° \mathbb{E} 09'08	-1°58'12
asc. node	13024 Aug 04 23:25	3° \mathbb{M} 48'08		minimum elong	13025 Jul 06 02:00	24° \mathbb{E} 37'00	1°58'38
evening max el	13024 Aug 20 13:13	28° \mathbb{M} 25'19	18°11'13		13025 Jul 09 07:01	0° \mathbb{O}	
	13024 Aug 22 08:24	0° Ω		evening rise	13025 Jul 18 05:23	15° \mathbb{O} 25'15	
retrograde	13024 Aug 27 15:34	2° Ω 01'54		asc. node	13025 Jul 22 20:08	23° \mathbb{O} 28'30	
evening set	13024 Aug 29 20:55	1° Ω 41'12			13025 Jul 26 16:43	0° \mathbb{M}	
	13024 Sep 02 05:32	30° \mathbb{R} \mathbb{M}		evening max el	13025 Aug 04 02:31	11° \mathbb{M} 34'12	18°03'06

retrograde	13025 Aug 10 14:50	14° \cap 56'05		retrograde	13026 Jul 25 01:20	28° Ω 24'38	
evening set	13025 Aug 13 04:21	14° \cap 24'15		evening set	13026 Jul 27 23:13	27° Ω 38'59	
inferior conj	13025 Aug 19 17:08	9° \cap 18'28	1°31'25	inferior conj	13026 Aug 02 23:10	22° Ω 15'38	2°22'14
minimum elong	13025 Aug 19 19:27	9° \cap 12'38	1°30'13	minimum elong	13026 Aug 03 01:39	22° Ω 08'37	2°20'55
min. Earth dist.	13025 Aug 22 17:38	6° \cap 17'11	0.61673 AU	min. Earth dist.	13026 Aug 05 11:19	19° Ω 26'31	0.63849 AU
desc. node	13025 Aug 24 23:31	4° \cap 17'03		morning rise	13026 Aug 09 02:29	15° Ω 58'52	
morning rise	13025 Aug 26 08:01	3° \cap 15'54		desc. node	13026 Aug 11 20:59	14° Ω 15'53	
direct	13025 Sep 02 00:04	0° \cap 57'09		direct	13026 Aug 15 17:47	13° Ω 24'17	
morning max el	13025 Sep 16 04:22	8° \cap 56'27	27°58'22	morning max el	13026 Aug 29 13:43	21° Ω 24'48	27°39'44
	13025 Oct 02 10:40	0° Ω			13026 Sep 06 01:04	0° \cap	
asc. node	13025 Oct 18 21:57	29° Ω 30'14			13026 Sep 25 14:18	0° Ω	
	13025 Oct 19 03:48	0° \cap		morning set	13026 Oct 03 12:13	14° Ω 55'16	
morning set	13025 Oct 19 18:41	1° \cap 16'22		asc. node	13026 Oct 05 18:36	19° Ω 29'58	
max. Earth dist.	13025 Oct 25 08:30	13° \cap 08'20	1.31634 AU	max. Earth dist.	13026 Oct 08 08:19	24° Ω 50'40	1.32557 AU
					13026 Oct 10 18:23	0° \cap	
superior conj	13025 Oct 27 04:15	17° \cap 08'41	1°12'11	superior conj	13026 Oct 11 10:46	1° \cap 28'14	0°52'11
minimum elong	13025 Oct 27 02:00	16° \cap 56'19	1°12'31	minimum elong	13026 Oct 11 08:37	1° \cap 16'42	0°52'15
	13025 Nov 02 00:07	0° Ω		evening rise	13026 Oct 18 09:00	16° \cap 30'08	
evening rise	13025 Nov 02 21:45	1° Ω 57'13			13026 Oct 24 23:36	0° Ω	
	13025 Nov 17 20:56	0° Ω		desc. node	13026 Nov 07 17:19	21° Ω 06'19	
desc. node	13025 Nov 20 20:03	4° Ω 19'01		evening max el	13026 Nov 10 03:23	23° Ω 38'31	23°06'06
evening max el	13025 Nov 28 17:21	13° Ω 34'02	24°47'11		13026 Nov 20 23:03	0° Ω	
retrograde	13025 Dec 12 11:50	20° Ω 27'01		retrograde	13026 Nov 23 09:06	0° Ω 13'21	
evening set	13025 Dec 17 23:01	19° Ω 20'39			13026 Nov 25 20:02	30° \cap Ω	
min. Earth dist.	13025 Dec 23 05:13	16° Ω 34'45	0.56412 AU	evening set	13026 Nov 27 12:42	29° Ω 35'57	
inferior conj	13025 Dec 25 17:54	14° Ω 58'00	-5°24'41	min. Earth dist.	13026 Dec 04 12:43	26° Ω 21'34	0.55066 AU
minimum elong	13025 Dec 26 01:16	14° Ω 46'14	5°22'26	inferior conj	13026 Dec 05 21:53	25° Ω 33'54	-5°55'14
morning rise	13026 Jan 03 05:37	10° Ω 52'05		minimum elong	13026 Dec 05 22:26	25° Ω 33'06	5°54'14
direct	13026 Jan 05 13:48	10° Ω 36'54		morning rise	13026 Dec 14 09:43	21° Ω 44'06	
asc. node	13026 Jan 14 21:48	14° Ω 58'12		direct	13026 Dec 17 08:58	21° Ω 23'18	
morning max el	13026 Jan 15 05:19	15° Ω 16'04	19°27'11	morning max el	13026 Dec 28 13:37	26° Ω 43'30	20°45'10
	13026 Jan 25 14:47	0° \approx			13026 Dec 31 14:38	0° Ω	
morning set	13026 Feb 01 08:43	12° \approx 58'22		asc. node	13027 Jan 01 19:01	1° Ω 28'18	
				morning set	13027 Jan 16 16:28	27° Ω 39'14	
superior conj	13026 Feb 09 10:16	29° \approx 04'04	0°57'16		13027 Jan 17 19:38	0° \approx	
minimum elong	13026 Feb 09 13:03	29° \approx 17'43	0°57'27				
	13026 Feb 09 21:44	0° \cap		superior conj	13027 Jan 24 02:54	13° \approx 04'28	1°17'32
max. Earth dist.	13026 Feb 15 21:45	11° \cap 20'03	1.38024 AU	minimum elong	13027 Jan 24 05:26	13° \approx 17'28	1°18'02
desc. node	13026 Feb 16 20:18	13° \cap 02'40		max. Earth dist.	13027 Jan 29 06:20	23° \approx 20'11	1.35883 AU
evening rise	13026 Feb 19 15:08	18° \cap 00'26			13027 Feb 01 18:30	0° \cap	
	13026 Feb 26 17:48	0° \cap		evening rise	13027 Feb 02 04:03	0° \cap 44'18	
	13026 Mar 19 13:50	0° Ω		desc. node	13027 Feb 03 16:54	3° \cap 32'59	
evening max el	13026 Mar 27 01:13	8° Ω 23'38	25°02'59		13027 Feb 19 21:01	0° \cap	
retrograde	13026 Apr 07 23:51	15° Ω 20'00		evening max el	13027 Mar 09 14:50	22° \cap 13'30	26°11'37
asc. node	13026 Apr 12 18:35	13° Ω 41'10		retrograde	13027 Mar 22 09:27	29° \cap 30'18	
evening set	13026 Apr 13 17:33	12° Ω 56'25		evening set	13027 Mar 28 14:20	26° \cap 59'33	
min. Earth dist.	13026 Apr 18 03:54	7° Ω 59'22	0.68062 AU	asc. node	13027 Mar 30 16:03	25° \cap 01'43	
inferior conj	13026 Apr 19 08:22	6° Ω 25'59	1°55'32	min. Earth dist.	13027 Apr 01 18:15	22° \cap 37'41	0.67000 AU
minimum elong	13026 Apr 19 06:14	6° Ω 32'58	1°54'22	inferior conj	13027 Apr 03 11:07	20° \cap 31'42	1°10'21
morning rise	13026 Apr 24 19:12	0° Ω 30'31		minimum elong	13027 Apr 03 09:29	20° \cap 36'43	1°09'31
	13026 Apr 25 14:50	30° \cap \cap		morning rise	13027 Apr 09 05:27	14° \cap 46'36	
direct	13026 Apr 28 10:41	29° \cap 14'10		direct	13027 Apr 12 09:54	13° \cap 49'06	
	13026 May 01 09:52	0° Ω		morning max el	13027 Apr 18 23:50	17° \cap 20'25	18°36'40
morning max el	13026 May 05 14:01	3° Ω 09'57	19°26'24		13027 Apr 28 17:26	0° Ω	
desc. node	13026 May 15 22:25	16° Ω 19'07		desc. node	13027 May 02 19:08	6° Ω 12'14	
greatest brilliancy	13026 May 18 06:23	19° Ω 43'13	-0.7m	morning set	13027 May 10 05:41	17° Ω 49'39	
	13026 May 25 02:37	0° \cap			13027 May 18 00:13	0° \cap	
morning set	13026 May 30 14:08	8° \cap 23'10					
max. Earth dist.	13026 Jun 11 23:24	27° \cap 39'14	1.45074 AU	superior conj	13027 May 26 08:06	13° \cap 00'26	-2°08'11
	13026 Jun 13 11:03	0° Ω		minimum elong	13027 May 26 02:35	12° \cap 38'56	2°08'53
superior conj	13026 Jun 15 22:01	3° Ω 54'08	-2°12'42	max. Earth dist.	13027 May 25 18:17	12° \cap 06'28	1.45751 AU
minimum elong	13026 Jun 16 00:10	4° Ω 02'41	2°13'40		13027 Jun 06 03:41	0° Ω	
evening rise	13026 Jun 30 01:56	27° Ω 00'21		evening rise	13027 Jun 10 22:06	7° Ω 33'49	
	13026 Jul 01 21:05	0° Ω		greatest brilliancy	13027 Jun 18 17:04	19° Ω 56'06	-0.9m
asc. node	13026 Jul 09 16:56	12° Ω 51'08			13027 Jun 25 07:21	0° Ω	
evening max el	13026 Jul 18 16:50	25° Ω 02'59	18°13'28	asc. node	13027 Jun 26 13:51	1° Ω 48'39	

evening max el	13027 Jul 02 05:04	8°♎42'58	18°41'38			13028 May 09 17:01	0°♊	
retrograde	13027 Jul 08 18:56	12°♎17'55		evening rise		13028 May 20 20:13	17°♊15'45	
evening set	13027 Jul 12 01:25	11°♎16'48				13028 May 29 03:13	0°♋	
inferior conj	13027 Jul 17 16:17	5°♎37'53	2°53'57	greatest brilliancy		13028 Jun 02 18:14	6°♋58'15	-0.7m
minimum elong	13027 Jul 17 18:05	5°♎32'18	2°52'48	asc. node		13028 Jun 12 10:51	20°♋12'30	
min. Earth dist.	13027 Jul 19 14:05	3°♎16'41	0.65726 AU	evening max el		13028 Jun 14 12:56	22°♋28'26	19°26'40
	13027 Jul 22 13:48	30°♋		retrograde		13028 Jun 21 16:26	26°♋29'10	
morning rise	13027 Jul 23 09:52	29°♋14'49		evening set		13028 Jun 25 07:59	25°♋11'41	
direct	13027 Jul 29 19:16	26°♋34'06		inferior conj		13028 Jun 30 17:11	19°♋18'48	3°09'57
desc. node	13027 Jul 29 18:24	26°♋34'07		minimum elong		13028 Jun 30 17:59	19°♋16'10	3°08'56
	13027 Aug 07 02:05	0°♎		min. Earth dist.		13028 Jul 02 00:25	17°♋35'52	0.67202 AU
morning max el	13027 Aug 12 00:54	4°♎23'55	26°49'34	morning rise		13028 Jul 06 03:29	12°♋55'12	
	13027 Aug 31 12:32	0°♏		direct		13028 Jul 12 03:29	10°♋17'42	
morning set	13027 Sep 16 19:04	28°♏02'41		desc. node		13028 Jul 15 15:44	11°♋02'46	
	13027 Sep 17 19:31	0°♏		morning max el		13028 Jul 24 11:45	17°♋41'31	25°36'28
max. Earth dist.	13027 Sep 20 22:51	6°♏10'47	1.34000 AU			13028 Aug 03 19:18	0°♌	
asc. node	13027 Sep 22 15:13	9°♏34'57				13028 Aug 23 12:15	0°♏	
				morning set		13028 Aug 29 11:31	10°♏29'33	
superior conj	13027 Sep 25 11:29	15°♏27'48	0°26'52	max. Earth dist.		13028 Sep 02 03:14	17°♏16'03	1.35912 AU
minimum elong	13027 Sep 25 10:07	15°♏20'39	0°26'46					
	13027 Oct 02 08:12	0°♏		superior conj		13028 Sep 08 03:39	29°♏00'30	-0°03'13
evening rise	13027 Oct 02 19:08	0°♏57'37		minimum elong		13028 Sep 08 03:51	29°♏01'30	0°03'19
	13027 Oct 19 08:26	0°♏		behind sun begin		13028 Sep 07 21:43	28°♏30'45	
evening max el	13027 Oct 22 17:54	3°♏47'11	21°27'49	behind sun end		13028 Sep 08 09:59	29°♏32'18	
desc. node	13027 Oct 25 14:40	6°♏17'30		asc. node		13028 Sep 08 11:48	29°♏41'26	
retrograde	13027 Nov 03 21:27	9°♏49'21				13028 Sep 08 15:29	0°♏	
evening set	13027 Nov 06 16:31	9°♏31'25		evening rise		13028 Sep 16 02:01	15°♏14'00	
inferior conj	13027 Nov 15 14:17	5°♏37'19	-5°29'07			13028 Sep 23 15:44	0°♏	
minimum elong	13027 Nov 15 06:29	5°♏48'15	5°26'58	evening max el		13028 Oct 03 21:00	14°♏32'57	20°05'28
min. Earth dist.	13027 Nov 15 18:52	5°♏30'53	0.54520 AU	desc. node		13028 Oct 11 12:06	19°♏24'35	
morning rise	13027 Nov 23 21:17	1°♏48'36		retrograde		13028 Oct 14 10:32	19°♏48'19	
direct	13027 Nov 27 17:00	1°♏17'03		evening set		13028 Oct 16 10:31	19°♏37'53	
morning max el	13027 Dec 10 08:23	7°♏20'26	22°23'32	inferior conj		13028 Oct 25 09:02	15°♏39'29	-4°08'12
asc. node	13027 Dec 19 16:08	19°♏01'54		minimum elong		13028 Oct 24 23:10	15°♏54'17	4°04'31
	13027 Dec 25 23:52	0°♏		min. Earth dist.		13028 Oct 27 03:00	14°♏36'32	0.54920 AU
morning set	13028 Jan 01 03:19	12°♏25'49		morning rise		13028 Nov 02 10:42	11°♏30'59	
				direct		13028 Nov 07 03:55	10°♏42'34	
superior conj	13028 Jan 08 04:07	27°♏27'40	1°30'45	morning max el		13028 Nov 20 19:10	17°♏25'11	24°12'04
minimum elong	13028 Jan 08 05:49	27°♏36'43	1°31'33			13028 Dec 01 00:04	0°♏	
	13028 Jan 09 08:57	0°♏		asc. node		13028 Dec 05 13:08	7°♏23'12	
max. Earth dist.	13028 Jan 11 21:04	5°♏12'20	1.34042 AU	morning set		13028 Dec 15 15:12	27°♏11'21	
evening rise	13028 Jan 16 07:47	14°♏05'26				13028 Dec 16 22:30	0°♏	
desc. node	13028 Jan 21 13:34	23°♏53'57						
	13028 Jan 25 00:56	0°♏		superior conj		13028 Dec 22 10:58	12°♏04'05	1°37'23
	13028 Feb 14 16:52	0°♏		minimum elong		13028 Dec 22 11:36	12°♏07'28	1°38'22
evening max el	13028 Feb 20 04:21	5°♏52'51	27°03'08	max. Earth dist.		13028 Dec 24 19:23	17°♏09'33	1.32627 AU
retrograde	13028 Mar 04 13:21	13°♏19'11		evening rise		13028 Dec 29 22:49	27°♏54'09	
evening set	13028 Mar 11 03:40	10°♏46'38				13028 Dec 30 23:53	0°♏	
min. Earth dist.	13028 Mar 15 02:20	6°♏58'12	0.65543 AU	desc. node		13029 Jan 07 10:19	13°♏59'34	
asc. node	13028 Mar 16 13:30	5°♏18'40				13029 Jan 17 06:16	0°♏	
inferior conj	13028 Mar 17 07:22	4°♏27'32	0°14'20	evening max el		13029 Feb 01 16:46	19°♏10'24	27°30'33
minimum elong	13028 Mar 17 06:58	4°♏28'40	0°14'12	retrograde		13029 Feb 15 10:40	26°♏36'32	
transit middle	13028 Mar 17 06:58	4°♏28'40	0°14'12	evening set		13029 Feb 22 07:12	24°♏09'19	
transit begin	13028 Mar 17 05:35	4°♏32'37		min. Earth dist.		13029 Feb 26 02:12	20°♏51'02	0.63742 AU
transit end	13028 Mar 17 08:21	4°♏24'44		inferior conj		13029 Feb 28 18:26	18°♏06'08	-0°52'38
	13028 Mar 21 18:29	30°♏		minimum elong		13029 Feb 28 20:06	18°♏01'50	0°51'38
morning rise	13028 Mar 23 11:47	28°♏54'39		asc. node		13029 Mar 03 10:56	15°♏28'34	
direct	13028 Mar 26 06:25	28°♏13'06		morning rise		13029 Mar 07 11:16	12°♏47'54	
	13028 Mar 30 20:04	0°♏		direct		13029 Mar 09 21:38	12°♏18'41	
morning max el	13028 Apr 01 14:57	1°♏32'39	18°03'37	morning max el		13029 Mar 16 08:31	15°♏37'44	17°47'44
desc. node	13028 Apr 18 15:45	26°♏23'37				13029 Mar 26 14:31	0°♏	
morning set	13028 Apr 20 00:32	28°♏37'09		morning set		13029 Apr 01 22:43	10°♏43'26	
	13028 Apr 20 20:54	0°♏		desc. node		13029 Apr 05 12:18	16°♏47'24	
						13029 Apr 13 10:36	0°♏	
superior conj	13028 May 04 17:41	22°♏12'41	-1°44'13					
minimum elong	13028 May 04 08:28	21°♏36'24	1°44'05	superior conj		13029 Apr 14 19:09	2°♏12'42	-1°07'29
max. Earth dist.	13028 May 07 14:12	26°♏41'32	1.45683 AU	minimum elong		13029 Apr 14 12:16	1°♏44'40	1°07'01

max. Earth dist.	13029 Apr 20 08:47	11°♄08'53	1.44888 AU	superior conj	13030 Mar 26 20:26	13°♁19'45	-0°27'00
evening rise	13029 Apr 30 07:30	26°♄38'09		minimum elong	13030 Mar 26 17:54	13°♁08'58	0°26'44
	13029 May 02 12:21	0°♄		max. Earth dist.	13030 Apr 03 00:33	25°♁15'46	1.43452 AU
	13029 May 23 05:47	0°♄			13030 Apr 05 23:09	0°♄	
evening max el	13029 May 28 15:12	6°♄16'04	20°26'47	evening rise	13030 Apr 10 00:05	6°♄22'21	
asc. node	13029 May 30 07:56	7°♄51'29			13030 Apr 25 19:07	0°♄	
retrograde	13029 Jun 05 15:16	10°♄52'41		evening max el	13030 May 11 11:52	20°♄04'25	21°38'45
evening set	13029 Jun 09 16:39	9°♄18'34		asc. node	13030 May 17 05:07	24°♄31'16	
inferior conj	13029 Jun 14 23:08	3°♄13'16	3°12'53	retrograde	13030 May 20 13:31	25°♄23'14	
minimum elong	13029 Jun 14 22:53	3°♄14'07	3°11'53	evening set	13030 May 25 01:35	23°♄32'53	
min. Earth dist.	13029 Jun 15 16:21	2°♄14'09	0.68226 AU	inferior conj	13030 May 30 07:51	17°♄16'46	3°04'27
	13029 Jun 17 08:45	30°♄		minimum elong	13030 May 30 06:41	17°♄20'49	3°03'22
morning rise	13029 Jun 20 04:48	26°♄52'49		min. Earth dist.	13030 May 30 11:42	17°♄03'22	0.68783 AU
direct	13029 Jun 25 17:13	24°♄26'36		morning rise	13030 Jun 04 11:36	11°♄01'45	
desc. node	13029 Jul 02 12:56	27°♄15'44		direct	13030 Jun 09 11:17	8°♄52'35	
	13029 Jul 05 17:46	0°♄		desc. node	13030 Jun 19 10:02	14°♄46'32	
morning max el	13029 Jul 06 21:47	1°♄08'53	24°10'16	morning max el	13030 Jun 19 08:51	14°♄43'33	22°40'35
	13029 Jul 28 17:54	0°♄			13030 Jul 01 18:22	0°♄	
morning set	13029 Aug 11 09:05	22°♄04'39			13030 Jul 21 16:49	0°♄	
max. Earth dist.	13029 Aug 15 01:16	28°♄31'27	1.38158 AU	morning set	13030 Jul 23 07:03	2°♄35'41	
	13029 Aug 15 21:01	0°♄		max. Earth dist.	13030 Jul 27 23:58	10°♄26'36	1.40502 AU
superior conj	13029 Aug 22 07:52	11°♄58'20	-0°36'48	superior conj	13030 Aug 04 19:57	24°♄10'34	-1°11'35
minimum elong	13029 Aug 22 10:25	12°♄10'31	0°36'45	minimum elong	13030 Aug 05 01:13	24°♄34'27	1°11'27
asc. node	13029 Aug 26 08:22	19°♄45'55			13030 Aug 08 00:21	0°♄	
evening rise	13029 Aug 31 03:08	29°♄12'53		asc. node	13030 Aug 13 04:58	9°♄44'05	
	13029 Aug 31 12:41	0°♄		evening rise	13030 Aug 14 19:14	12°♄45'10	
evening max el	13029 Sep 16 14:14	26°♄07'49	19°04'19		13030 Aug 24 09:29	0°♄	
	13029 Sep 22 05:29	0°♄		evening max el	13030 Aug 30 18:26	8°♄26'06	18°24'42
retrograde	13029 Sep 25 12:26	0°♄35'51		retrograde	13030 Sep 07 09:32	12°♄17'25	
evening set	13029 Sep 27 09:02	0°♄25'01		evening set	13030 Sep 09 10:52	12°♄01'24	
desc. node	13029 Sep 28 09:35	0°♄10'17		desc. node	13030 Sep 15 07:06	8°♄51'57	
	13029 Sep 28 22:44	30°♄		inferior conj	13030 Sep 17 02:42	7°♄26'41	-0°34'13
inferior conj	13029 Oct 05 19:11	26°♄11'08	-2°19'51	minimum elong	13030 Sep 17 01:23	7°♄29'18	0°33'40
minimum elong	13029 Oct 05 13:12	26°♄21'24	2°17'11	min. Earth dist.	13030 Sep 20 09:30	4°♄49'32	0.58116 AU
min. Earth dist.	13029 Oct 08 15:12	24°♄15'03	0.56202 AU	morning rise	13030 Sep 24 12:27	2°♄07'02	
morning rise	13029 Oct 13 14:27	21°♄28'31		direct	13030 Sep 30 16:33	0°♄28'29	
direct	13029 Oct 19 03:19	20°♄16'59		morning max el	13030 Oct 15 00:08	8°♄05'12	27°11'00
morning max el	13029 Nov 02 06:27	27°♄30'24	25°53'41		13030 Oct 31 13:19	0°♄	
	13029 Nov 04 17:06	0°♄		asc. node	13030 Nov 09 06:48	15°♄43'26	
asc. node	13029 Nov 22 10:01	26°♄20'21		morning set	13030 Nov 14 11:16	26°♄20'50	
	13029 Nov 24 07:58	0°♄			13030 Nov 16 04:01	0°♄	
morning set	13029 Nov 30 02:25	11°♄51'19		superior conj	13030 Nov 21 08:48	11°♄30'28	1°32'22
superior conj	13029 Dec 06 21:12	26°♄47'06	1°37'50	minimum elong	13030 Nov 21 07:23	11°♄22'34	1°33'10
minimum elong	13029 Dec 06 20:44	26°♄44'28	1°38'48	max. Earth dist.	13030 Nov 21 08:39	11°♄29'34	1.31268 AU
max. Earth dist.	13029 Dec 08 00:16	29°♄17'03	1.31698 AU	evening rise	13030 Nov 28 03:37	26°♄25'51	
	13029 Dec 08 08:03	0°♄			13030 Nov 29 20:14	0°♄	
evening rise	13029 Dec 13 22:16	12°♄03'14		desc. node	13030 Dec 12 04:12	22°♄56'30	
	13029 Dec 23 04:10	0°♄			13030 Dec 16 18:23	0°♄	
desc. node	13029 Dec 25 07:12	3°♄43'22		evening max el	13030 Dec 28 05:27	13°♄50'58	26°49'57
	13030 Jan 13 04:12	0°♄		retrograde	13031 Jan 11 04:12	21°♄00'36	
evening max el	13030 Jan 15 02:06	1°♄53'58	27°27'26	evening set	13031 Jan 17 20:46	19°♄07'52	
retrograde	13030 Jan 29 00:05	9°♄13'01		min. Earth dist.	13031 Jan 21 19:32	16°♄29'26	0.59523 AU
evening set	13030 Feb 04 22:05	6°♄59'04		inferior conj	13031 Jan 24 23:52	13°♄58'00	-3°31'23
min. Earth dist.	13030 Feb 08 16:14	4°♄05'22	0.61689 AU	minimum elong	13031 Jan 25 07:20	13°♄43'09	3°28'01
inferior conj	13030 Feb 11 17:07	1°♄19'33	-2°09'17	morning rise	13031 Feb 01 20:53	9°♄17'58	
minimum elong	13030 Feb 11 21:37	1°♄09'15	2°06'55	direct	13031 Feb 03 22:14	9°♄02'20	
	13030 Feb 13 04:37	30°♄		asc. node	13031 Feb 05 05:43	9°♄08'57	
asc. node	13030 Feb 18 08:21	26°♄32'42		morning max el	13031 Feb 11 14:10	12°♄50'34	18°10'55
morning rise	13030 Feb 19 00:01	26°♄18'49			13031 Feb 23 02:30	0°♄	
direct	13030 Feb 21 04:15	25°♄58'11		morning set	13031 Feb 27 05:46	7°♄40'53	
morning max el	13030 Feb 28 01:25	29°♄26'56	17°49'44	superior conj	13031 Mar 08 21:06	25°♄31'52	0°10'40
	13030 Feb 28 14:28	0°♄		minimum elong	13031 Mar 08 21:56	25°♄35'36	0°10'43
morning set	13030 Mar 15 18:28	23°♄50'48		behind sun begin	13031 Mar 08 16:16	25°♄10'09	
	13030 Mar 19 05:05	0°♄		behind sun end	13031 Mar 09 03:35	26°♄01'00	
desc. node	13030 Mar 23 08:48	7°♄19'24					

desc. node	13031 Mar 10 05:20	27° X 55'58		superior conj	13032 Feb 19 16:51	8° X 36'09	0°42'17
	13031 Mar 11 09:22	0° Y		minimum elong	13032 Feb 19 19:21	8° X 47'57	0°42'21
max. Earth dist.	13031 Mar 16 12:02	8° Y 48'36	1.41521 AU	desc. node	13032 Feb 25 01:51	18° X 32'56	
evening rise	13031 Mar 21 09:45	16° Y 54'54		max. Earth dist.	13032 Feb 26 19:13	21° X 37'38	1.39314 AU
	13031 Mar 29 17:53	0° Z		evening rise	13032 Mar 01 16:29	28° X 22'20	
	13031 Apr 20 13:36	0° II			13032 Mar 02 15:33	0° Y	
evening max el	13031 Apr 24 04:12	3° II 54'24	22°57'54		13032 Mar 22 05:17	0° Z	
retrograde	13031 May 04 09:49	9° II 56'25		evening max el	13032 Apr 05 18:06	17° Z 45'40	24°18'33
asc. node	13031 May 04 02:24	9° II 55'58		retrograde	13032 Apr 17 02:54	24° Z 25'39	
evening set	13031 May 09 09:12	7° II 51'06		asc. node	13032 Apr 19 23:47	23° Z 48'45	
inferior conj	13031 May 14 17:24	1° II 26'29	2°45'38	evening set	13032 Apr 22 13:56	22° Z 07'40	
minimum elong	13031 May 14 15:34	1° II 32'50	2°44'27	min. Earth dist.	13032 Apr 27 04:24	16° Z 50'12	0.68483 AU
min. Earth dist.	13031 May 14 08:25	1° II 57'37	0.68866 AU	inferior conj	13032 Apr 28 01:52	15° Z 37'53	2°16'45
	13031 May 15 18:32	30° R Z		minimum elong	13032 Apr 27 23:43	15° Z 45'08	2°15'32
morning rise	13031 May 19 21:51	25° Z 18'12		morning rise	13032 May 03 09:38	9° Z 37'25	
direct	13031 May 24 08:34	23° Z 29'19		direct	13032 May 07 07:48	8° Z 09'37	
morning max el	13031 Jun 02 00:16	28° Z 28'48	21°15'53	morning max el	13032 May 14 22:34	12° Z 25'32	20°02'12
	13031 Jun 03 11:19	0° II		desc. node	13032 May 23 03:53	22° Z 24'16	
desc. node	13031 Jun 06 07:01	3° II 14'46			13032 May 28 12:31	0° II	
	13031 Jun 25 08:42	0° S		morning set	13032 Jun 11 07:05	20° II 43'00	
morning set	13031 Jul 03 03:57	12° S 01'18			13032 Jun 17 06:37	0° S	
max. Earth dist.	13031 Jul 10 04:25	23° S 16'02	1.42656 AU	max. Earth dist.	13032 Jun 21 15:19	6° S 53'17	1.44363 AU
	13031 Jul 14 06:02	0° Q					
				superior conj	13032 Jun 27 03:23	15° S 44'43	-2°06'22
superior conj	13031 Jul 17 11:30	5° Q 27'58	-1°43'27	minimum elong	13032 Jun 27 08:48	16° S 06'48	2°07'05
minimum elong	13031 Jul 17 18:34	5° Q 58'12	1°43'35		13032 Jul 05 17:22	0° Q	
evening rise	13031 Jul 28 22:20	25° Q 41'18		evening rise	13032 Jul 10 07:28	7° Q 48'59	
asc. node	13031 Jul 31 01:40	29° Q 32'21		asc. node	13032 Jul 16 22:26	19° Q 05'53	
	13031 Jul 31 07:49	0° P			13032 Jul 23 22:52	0° P	
evening max el	13031 Aug 14 05:29	21° P 18'44	18°05'23	evening max el	13032 Jul 27 19:33	4° P 36'28	18°05'15
retrograde	13031 Aug 21 00:36	24° P 47'33		retrograde	13032 Aug 03 05:14	7° P 56'55	
evening set	13031 Aug 23 09:20	24° P 22'29		evening set	13032 Aug 05 22:10	7° P 19'37	
inferior conj	13031 Aug 30 07:09	19° P 27'17	0°52'12	inferior conj	13032 Aug 12 05:02	2° P 06'08	1°55'31
minimum elong	13031 Aug 30 08:43	19° P 23'37	0°51'20	minimum elong	13032 Aug 12 07:34	1° P 59'25	1°54'13
desc. node	13031 Sep 02 04:37	16° P 45'40			13032 Aug 14 04:26	30° R Q	
min. Earth dist.	13031 Sep 02 12:20	16° P 28'27	0.60353 AU	min. Earth dist.	13032 Aug 15 00:45	29° Q 07'29	0.62619 AU
morning rise	13031 Sep 06 05:04	13° P 37'08		morning rise	13032 Aug 18 14:47	25° Q 56'03	
direct	13031 Sep 12 18:25	11° P 31'46		desc. node	13032 Aug 19 02:06	25° Q 36'01	
morning max el	13031 Sep 27 01:34	19° P 25'28	27°52'26	direct	13032 Aug 25 07:05	23° Q 29'20	
	13031 Oct 06 01:43	0° U			13032 Sep 06 18:54	0° P	
	13031 Oct 24 09:35	0° M		morning max el	13032 Sep 08 08:53	1° P 31'27	27°54'50
asc. node	13031 Oct 27 03:32	5° M 25'10			13032 Sep 29 07:48	0° U	
morning set	13031 Oct 29 15:55	10° M 35'11		morning set	13032 Oct 12 14:15	24° U 29'03	
max. Earth dist.	13031 Nov 04 16:43	23° M 37'41	1.31347 AU	asc. node	13032 Oct 13 00:13	25° U 19'48	
					13032 Oct 15 06:17	0° M	
superior conj	13031 Nov 05 19:56	26° M 08'50	1°21'11	max. Earth dist.	13032 Oct 17 20:29	5° M 31'10	1.31952 AU
minimum elong	13031 Nov 05 17:53	25° M 57'23	1°21'42				
	13031 Nov 07 13:28	0° X		superior conj	13032 Oct 20 04:45	10° M 37'00	1°04'22
evening rise	13031 Nov 12 12:44	10° X 56'18		minimum elong	13032 Oct 20 02:28	10° M 24'35	1°04'35
	13031 Nov 22 02:22	0° Z		evening rise	13032 Oct 26 23:44	25° M 29'38	
desc. node	13031 Nov 29 01:18	11° Z 26'50			13032 Oct 29 02:33	0° X	
evening max el	13031 Dec 10 00:28	24° Z 54'43	25°39'23	desc. node	13032 Nov 14 22:32	28° X 58'07	
	13031 Dec 16 20:01	0° W			13032 Nov 15 18:09	0° Z	
retrograde	13031 Dec 23 21:44	1° W 55'00		evening max el	13032 Nov 20 12:09	5° Z 13'50	24°05'03
evening set	13031 Dec 29 23:01	0° W 30'18		retrograde	13032 Dec 04 03:00	12° Z 01'20	
	13031 Dec 31 00:02	30° R Z		evening set	13032 Dec 09 01:32	11° Z 07'56	
min. Earth dist.	13032 Jan 03 12:53	27° Z 52'32	0.57450 AU	min. Earth dist.	13032 Dec 14 23:18	8° Z 12'06	0.55748 AU
inferior conj	13032 Jan 06 11:18	25° Z 51'25	-4°48'58	inferior conj	13032 Dec 17 02:03	6° Z 55'03	-5°43'38
minimum elong	13032 Jan 06 19:57	25° Z 36'30	4°45'52	minimum elong	13032 Dec 17 07:11	6° Z 47'14	5°42'04
morning rise	13032 Jan 14 19:31	21° Z 33'53		morning rise	13032 Dec 25 14:47	2° Z 57'17	
direct	13032 Jan 16 23:00	21° Z 19'44		direct	13032 Dec 28 04:04	2° Z 40'32	
asc. node	13032 Jan 23 03:04	23° Z 25'13		morning max el	13033 Jan 07 11:31	7° Z 36'45	19°57'34
morning max el	13032 Jan 25 18:51	25° Z 37'25	18°52'56	asc. node	13033 Jan 09 00:19	9° Z 11'27	
	13032 Jan 29 13:12	0° W			13033 Jan 22 02:08	0° W	
morning set	13032 Feb 11 03:41	21° W 58'22		morning set	13033 Jan 25 08:41	6° W 33'09	
	13032 Feb 15 05:50	0° X					
				superior conj	13033 Feb 02 03:05	22° W 19'40	1°06'43

minimum elong	13033 Feb 02 05:52	22° \approx 33'33	1°07'02	superior conj	13034 Jan 16 23:44	6° \approx 30'19	1°23'58
	13033 Feb 06 01:10	0° \mathbb{H}		minimum elong	13034 Jan 17 01:58	6° \approx 41'57	1°24'35
max. Earth dist.	13033 Feb 08 01:33	3° \mathbb{H} 49'25	1.37085 AU	max. Earth dist.	13034 Jan 21 12:10	15° \approx 42'37	1.35055 AU
desc. node	13033 Feb 10 22:27	9° \mathbb{H} 07'03		evening rise	13034 Jan 25 15:01	23° \approx 42'02	
evening rise	13033 Feb 11 19:21	10° \mathbb{H} 41'18		desc. node	13034 Jan 28 19:06	29° \approx 33'51	
	13033 Feb 23 07:45	0° \mathbb{Y}			13034 Jan 29 00:53	0° \mathbb{H}	
	13033 Mar 17 17:07	0° \mathbb{B}			13034 Feb 16 23:02	0° \mathbb{Y}	
evening max el	13033 Mar 19 07:31	1° \mathbb{B} 37'25	25°33'43	evening max el	13034 Mar 01 21:20	15° \mathbb{Y} 24'27	26°36'07
retrograde	13033 Mar 31 15:39	8° \mathbb{B} 44'38		retrograde	13034 Mar 14 22:58	22° \mathbb{Y} 46'29	
evening set	13033 Apr 06 14:07	6° \mathbb{B} 17'25		evening set	13034 Mar 21 07:59	20° \mathbb{Y} 14'34	
asc. node	13033 Apr 06 21:12	6° \mathbb{B} 02'10		asc. node	13034 Mar 24 18:38	16° \mathbb{Y} 50'12	
min. Earth dist.	13033 Apr 10 21:33	1° \mathbb{B} 35'18	0.67662 AU	min. Earth dist.	13034 Mar 25 09:38	16° \mathbb{Y} 06'53	0.66425 AU
inferior conj	13033 Apr 12 07:19	29° \mathbb{Y} 47'03	1°37'39	inferior conj	13034 Mar 27 07:37	13° \mathbb{Y} 49'29	0°47'57
minimum elong	13033 Apr 12 05:19	29° \mathbb{Y} 53'27	1°36'36	minimum elong	13034 Mar 27 06:25	13° \mathbb{Y} 53'05	0°47'22
	13033 Apr 12 03:17	30° \mathbb{R} \mathbb{Y}		morning rise	13034 Apr 02 05:55	8° \mathbb{Y} 09'00	
morning rise	13033 Apr 17 21:01	23° \mathbb{Y} 55'41		direct	13034 Apr 05 06:01	7° \mathbb{Y} 18'38	
direct	13033 Apr 21 07:34	22° \mathbb{Y} 47'48		morning max el	13034 Apr 11 16:40	10° \mathbb{Y} 43'37	18°20'25
morning max el	13033 Apr 28 04:23	26° \mathbb{Y} 31'57	19°03'07		13034 Apr 25 13:32	0° \mathbb{B}	
	13033 May 01 07:37	0° \mathbb{B}		desc. node	13034 Apr 26 21:18	2° \mathbb{B} 05'28	
desc. node	13033 May 10 00:38	12° \mathbb{B} 03'49		morning set	13034 May 01 14:23	9° \mathbb{B} 34'45	
greatest brilliancy	13033 May 11 08:12	14° \mathbb{B} 01'54	-0.7m		13034 May 14 12:44	0° \mathbb{I}	
morning set	13033 May 21 11:51	29° \mathbb{B} 35'19					
	13033 May 21 18:14	0° \mathbb{I}		superior conj	13034 May 17 05:12	4° \mathbb{I} 12'11	-2°00'08
max. Earth dist.	13033 Jun 04 07:26	21° \mathbb{I} 04'57	1.45451 AU	minimum elong	13034 May 16 21:18	3° \mathbb{I} 41'16	2°00'28
				max. Earth dist.	13034 May 18 03:00	5° \mathbb{I} 37'19	1.45818 AU
superior conj	13033 Jun 06 21:33	25° \mathbb{I} 09'01	-2°13'19	evening rise	13034 Jun 02 03:44	29° \mathbb{I} 06'09	
minimum elong	13033 Jun 06 20:27	25° \mathbb{I} 04'42	2°14'18		13034 Jun 02 17:29	0° \mathbb{B}	
	13033 Jun 09 23:11	0° \mathbb{B}		greatest brilliancy	13034 Jun 12 08:12	14° \mathbb{B} 58'49	-0.8m
evening rise	13033 Jun 21 17:47	18° \mathbb{B} 57'15		asc. node	13034 Jun 20 16:15	27° \mathbb{B} 03'09	
	13033 Jun 28 12:32	0° \mathbb{Q}			13034 Jun 23 01:36	0° \mathbb{Q}	
asc. node	13033 Jul 03 19:18	8° \mathbb{Q} 18'36		evening max el	13034 Jun 24 20:00	1° \mathbb{Q} 54'12	18°58'53
evening max el	13033 Jul 11 09:18	18° \mathbb{Q} 10'38	18°23'23	retrograde	13034 Jul 01 14:35	5° \mathbb{Q} 38'17	
retrograde	13033 Jul 17 19:05	21° \mathbb{Q} 36'20		evening set	13034 Jul 05 00:55	4° \mathbb{Q} 30'11	
evening set	13033 Jul 20 20:32	20° \mathbb{Q} 44'24			13034 Jul 09 13:18	30° \mathbb{R} \mathbb{B}	
inferior conj	13033 Jul 26 16:13	15° \mathbb{Q} 14'30	2°37'46	inferior conj	13034 Jul 10 13:00	28° \mathbb{B} 45'22	3°02'27
minimum elong	13033 Jul 26 18:28	15° \mathbb{Q} 07'50	2°36'32	minimum elong	13034 Jul 10 14:24	28° \mathbb{B} 40'54	3°01'22
min. Earth dist.	13033 Jul 28 22:30	12° \mathbb{Q} 35'19	0.64691 AU	min. Earth dist.	13034 Jul 12 04:36	26° \mathbb{B} 39'30	0.66412 AU
morning rise	13033 Aug 01 15:06	8° \mathbb{Q} 54'11		morning rise	13034 Jul 16 03:12	22° \mathbb{B} 21'46	
desc. node	13033 Aug 05 23:33	6° \mathbb{Q} 32'41		direct	13034 Jul 22 09:06	19° \mathbb{B} 41'13	
direct	13033 Aug 08 04:33	6° \mathbb{Q} 15'23		desc. node	13034 Jul 23 20:53	19° \mathbb{B} 49'19	
morning max el	13033 Aug 21 19:10	14° \mathbb{Q} 13'39	27°21'43	morning max el	13034 Aug 04 06:09	27° \mathbb{B} 21'15	26°20'38
	13033 Sep 03 14:34	0° \mathbb{P}			13034 Aug 06 17:48	0° \mathbb{Q}	
	13033 Sep 21 23:47	0° \mathbb{A}			13034 Aug 28 06:37	0° \mathbb{P}	
morning set	13033 Sep 26 03:35	7° \mathbb{A} 55'09		morning set	13034 Sep 09 04:45	20° \mathbb{P} 46'10	
asc. node	13033 Sep 29 20:49	15° \mathbb{A} 22'00		max. Earth dist.	13034 Sep 13 02:16	28° \mathbb{P} 13'35	1.34767 AU
max. Earth dist.	13033 Sep 30 16:17	17° \mathbb{A} 02'05	1.33101 AU		13034 Sep 13 23:55	0° \mathbb{A}	
				asc. node	13034 Sep 16 17:25	5° \mathbb{A} 28'06	
superior conj	13033 Oct 04 09:04	24° \mathbb{A} 48'35	0°42'05				
minimum elong	13033 Oct 04 07:10	24° \mathbb{A} 38'27	0°42'03	superior conj	13034 Sep 18 06:31	8° \mathbb{A} 37'42	0°14'39
	13033 Oct 06 19:06	0° \mathbb{M}		minimum elong	13034 Sep 18 05:42	8° \mathbb{A} 33'34	0°14'32
evening rise	13033 Oct 11 10:41	10° \mathbb{M} 00'18		behind sun begin	13034 Sep 18 03:08	8° \mathbb{A} 20'22	
	13033 Oct 21 16:24	0° \mathbb{J}		behind sun end	13034 Sep 18 08:16	8° \mathbb{A} 46'46	
desc. node	13033 Nov 01 19:51	15° \mathbb{J} 07'45		evening rise	13034 Sep 25 19:42	24° \mathbb{A} 23'42	
evening max el	13033 Nov 01 22:56	15° \mathbb{J} 15'19	22°23'08		13034 Sep 28 13:05	0° \mathbb{M}	
retrograde	13033 Nov 14 19:34	21° \mathbb{J} 38'04		evening max el	13034 Oct 14 18:14	25° \mathbb{M} 36'42	20°50'19
evening set	13033 Nov 18 08:17	21° \mathbb{J} 10'43		desc. node	13034 Oct 19 17:13	29° \mathbb{M} 29'09	
inferior conj	13033 Nov 26 23:41	17° \mathbb{J} 13'51	-5°51'41		13034 Oct 20 16:46	0° \mathbb{J}	
minimum elong	13033 Nov 26 20:21	17° \mathbb{J} 18'34	5°50'32	retrograde	13034 Oct 26 06:04	1° \mathbb{J} 19'19	
min. Earth dist.	13033 Nov 26 06:06	17° \mathbb{J} 38'38	0.54719 AU	evening set	13034 Oct 28 15:10	1° \mathbb{J} 05'43	
morning rise	13033 Dec 05 09:39	13° \mathbb{J} 26'27			13034 Nov 01 04:33	30° \mathbb{R} \mathbb{M}	
direct	13033 Dec 08 17:13	13° \mathbb{J} 01'40		inferior conj	13034 Nov 06 15:07	27° \mathbb{M} 11'33	-5°00'13
morning max el	13033 Dec 20 13:41	18° \mathbb{J} 41'06	21°24'52	minimum elong	13034 Nov 06 05:27	27° \mathbb{M} 25'19	4°57'11
asc. node	13033 Dec 26 21:28	26° \mathbb{J} 10'03		min. Earth dist.	13034 Nov 07 12:29	26° \mathbb{M} 41'05	0.54582 AU
	13033 Dec 29 10:51	0° \mathbb{Z}		morning rise	13034 Nov 14 19:52	23° \mathbb{M} 17'06	
morning set	13034 Jan 09 18:00	21° \mathbb{Z} 16'38		direct	13034 Nov 19 01:12	22° \mathbb{M} 38'55	
	13034 Jan 13 21:20	0° \mathbb{A}		morning max el	13034 Dec 02 03:46	28° \mathbb{M} 59'19	23°09'21
					13034 Dec 03 04:39	0° \mathbb{J}	

asc. node	13034 Dec 13 18:30	14°♊04'58		morning rise	13035 Oct 25 14:24	3°♍01'03	
	13034 Dec 22 08:04	0°♊		direct	13035 Oct 30 16:12	2°♍03'47	
morning set	13034 Dec 25 05:28	6°♊02'45		morning max el	13035 Nov 13 13:49	8°♍59'52	24°57'25
					13035 Nov 29 02:37	0°♊	
superior conj	13035 Jan 01 03:36	20°♊59'06	1°34'21	asc. node	13035 Nov 30 15:26	2°♊42'43	
minimum elong	13035 Jan 01 04:52	21°♊05'52	1°35'14	morning set	13035 Dec 09 17:18	20°♊46'43	
max. Earth dist.	13035 Jan 04 06:20	27°♊36'13	1.33387 AU		13035 Dec 13 22:40	0°♊	
	13035 Jan 05 09:57	0°♊					
evening rise	13035 Jan 08 23:54	7°♊15'14		superior conj	13035 Dec 16 12:09	5°♊39'04	1°38'18
desc. node	13035 Jan 15 15:49	19°♊48'41		minimum elong	13035 Dec 16 12:18	5°♊39'52	1°39'19
	13035 Jan 21 14:50	0°♊		max. Earth dist.	13035 Dec 18 07:56	9°♊38'51	1.32168 AU
evening max el	13035 Feb 12 10:46	28°♊56'17	27°18'15	evening rise	13035 Dec 23 18:51	21°♊13'18	
	13035 Feb 13 14:03	0°♊			13035 Dec 28 04:52	0°♊	
retrograde	13035 Feb 25 23:56	6°♊22'36		desc. node	13036 Jan 02 12:38	9°♊46'04	
evening set	13035 Mar 04 17:25	3°♊51'38			13036 Jan 15 13:56	0°♊	
min. Earth dist.	13035 Mar 08 14:24	0°♊16'30	0.64815 AU	evening max el	13036 Jan 25 22:06	12°♊00'42	27°33'14
	13035 Mar 08 20:36	30°♊		retrograde	13036 Feb 08 17:53	19°♊24'16	
inferior conj	13035 Mar 11 00:19	27°♊38'40	-0°12'45	evening set	13036 Feb 15 15:59	17°♊01'25	
minimum elong	13035 Mar 11 00:41	27°♊37'39	0°12'27	min. Earth dist.	13036 Feb 19 10:04	13°♊54'50	0.62892 AU
transit middle	13035 Mar 11 00:41	27°♊37'39	0°12'27	inferior conj	13036 Feb 22 06:32	11°♊07'42	-1°24'04
transit begin	13035 Mar 10 22:46	27°♊42'54		minimum elong	13036 Feb 22 09:20	11°♊00'50	1°22'31
transit end	13035 Mar 11 02:36	27°♊32'24		asc. node	13036 Feb 26 13:29	7°♊22'29	
asc. node	13035 Mar 11 16:04	26°♊55'50		morning rise	13036 Feb 29 05:14	5°♊56'46	
morning rise	13035 Mar 17 09:44	22°♊11'31		direct	13036 Mar 02 12:47	5°♊31'36	
direct	13035 Mar 20 00:45	21°♊35'30		morning max el	13036 Mar 09 02:55	8°♊53'12	17°46'27
morning max el	13035 Mar 26 09:09	24°♊53'17	17°54'44		13036 Mar 23 04:45	0°♊	
	13035 Mar 30 16:11	0°♊		morning set	13036 Mar 25 05:38	3°♊32'46	
morning set	13035 Apr 12 21:27	20°♊57'48		desc. node	13036 Mar 30 14:26	12°♊50'36	
desc. node	13035 Apr 13 17:53	22°♊22'35					
	13035 Apr 18 08:47	0°♊		superior conj	13036 Apr 06 07:16	24°♊08'40	-0°50'19
				minimum elong	13036 Apr 06 02:13	23°♊47'45	0°49'54
superior conj	13035 Apr 26 19:53	13°♊40'11	-1°29'37		13036 Apr 09 20:59	0°♊	
minimum elong	13035 Apr 26 11:07	13°♊05'14	1°29'16	max. Earth dist.	13036 Apr 12 17:14	4°♊34'56	1.44347 AU
max. Earth dist.	13035 Apr 30 23:19	20°♊13'17	1.45435 AU	evening rise	13036 Apr 21 07:14	18°♊02'41	
	13035 May 07 05:46	0°♊			13036 Apr 29 04:27	0°♊	
evening rise	13035 May 12 19:28	8°♊35'10		evening max el	13036 May 21 01:20	29°♊28'28	20°56'02
	13035 May 27 00:16	0°♊			13036 May 21 14:07	0°♊	
greatest brilliancy	13035 May 27 07:57	0°♊28'05	-0.6m	asc. node	13036 May 24 10:24	2°♊25'03	
asc. node	13035 Jun 07 13:17	15°♊09'19		retrograde	13036 May 29 11:49	4°♊22'51	
evening max el	13035 Jun 08 01:36	15°♊40'52	19°50'32	evening set	13036 Jun 02 17:40	2°♊41'35	
retrograde	13035 Jun 15 12:54	19°♊55'27			13036 Jun 05 08:48	30°♊	
evening set	13035 Jun 19 08:38	18°♊30'40		inferior conj	13036 Jun 07 23:45	26°♊31'10	3°10'38
inferior conj	13035 Jun 24 16:20	12°♊32'12	3°12'40	minimum elong	13036 Jun 07 23:06	26°♊33'26	3°09'35
minimum elong	13035 Jun 24 16:41	12°♊31'01	3°11'40	min. Earth dist.	13036 Jun 08 11:08	25°♊51'42	0.68523 AU
min. Earth dist.	13035 Jun 25 17:26	11°♊07'49	0.67700 AU	morning rise	13036 Jun 13 04:17	20°♊12'43	
morning rise	13035 Jun 30 00:22	6°♊09'49		direct	13036 Jun 18 11:14	17°♊53'28	
direct	13035 Jul 05 19:37	3°♊36'31		desc. node	13036 Jun 26 15:20	21°♊54'30	
desc. node	13035 Jul 10 18:09	5°♊05'32		morning max el	13036 Jun 29 03:00	24°♊14'50	23°31'58
morning max el	13035 Jul 17 16:37	10°♊43'35	25°00'49		13036 Jul 04 06:20	0°♊	
	13035 Aug 02 00:49	0°♊			13036 Jul 25 10:47	0°♊	
	13035 Aug 20 22:42	0°♊		morning set	13036 Aug 03 01:44	14°♊00'50	
morning set	13035 Aug 22 13:41	2°♊51'43		max. Earth dist.	13036 Aug 07 01:14	20°♊50'22	1.39162 AU
max. Earth dist.	13035 Aug 26 03:36	9°♊20'45	1.36847 AU		13036 Aug 12 04:17	0°♊	
superior conj	13035 Sep 01 18:01	21°♊56'09	-0°17'09	superior conj	13036 Aug 14 15:53	4°♊35'18	-0°51'38
minimum elong	13035 Sep 01 19:07	22°♊01'37	0°17'11	minimum elong	13036 Aug 14 19:36	4°♊52'39	0°51'31
asc. node	13035 Sep 03 14:00	25°♊33'56		asc. node	13036 Aug 20 10:35	15°♊35'58	
	13035 Sep 05 19:02	0°♊		evening rise	13036 Aug 23 22:12	22°♊21'55	
evening rise	13035 Sep 10 00:27	8°♊33'20			13036 Aug 27 21:41	0°♊	
	13035 Sep 21 18:36	0°♊		evening max el	13036 Sep 09 01:43	18°♊36'02	18°44'51
evening max el	13035 Sep 27 03:24	6°♊42'15	19°36'40	retrograde	13036 Sep 17 09:41	22°♊47'15	
retrograde	13035 Oct 06 23:36	11°♊37'05		evening set	13036 Sep 19 07:29	22°♊34'51	
desc. node	13035 Oct 06 14:38	11°♊36'41		desc. node	13036 Sep 22 12:09	21°♊24'03	
evening set	13035 Oct 08 20:42	11°♊27'08		inferior conj	13036 Sep 27 10:08	18°♊12'22	-1°33'20
inferior conj	13035 Oct 17 15:07	7°♊22'44	-3°23'34	minimum elong	13036 Sep 27 06:16	18°♊19'28	1°31'35
minimum elong	13035 Oct 17 06:29	7°♊36'22	3°19'59	min. Earth dist.	13036 Sep 30 12:31	15°♊56'36	0.56950 AU
min. Earth dist.	13035 Oct 19 21:44	5°♊56'37	0.55370 AU	morning rise	13036 Oct 05 01:40	13°♊13'14	

direct	13036 Oct 10 21:24	11° Ω 50'33		transit middle	13037 Sep 09 03:07	29° Π 47'47	0°05'01
morning max el	13036 Oct 25 03:38	19° Ω 15'31	26°30'33	transit begin	13037 Sep 08 23:51	29° Π 54'47	
	13036 Nov 03 06:18	0° Π		transit end	13037 Sep 09 06:24	29° Π 40'45	
asc. node	13036 Nov 16 12:18	21° Π 51'47		desc. node	13037 Sep 09 09:40	29° Π 33'42	
	13036 Nov 20 14:22	0° \mathcal{A}		min. Earth dist.	13037 Sep 12 10:32	26° Π 58'48	0.59046 AU
morning set	13036 Nov 23 03:43	5° \mathcal{A} 22'48		morning rise	13037 Sep 16 07:49	24° Π 14'20	
				direct	13037 Sep 22 16:47	22° Π 23'36	
superior conj	13036 Nov 29 23:12	20° \mathcal{A} 22'55	1°36'13		13037 Oct 06 20:57	0° Ω	
minimum elong	13036 Nov 29 22:18	20° \mathcal{A} 17'54	1°37'09	morning max el	13037 Oct 07 00:41	0° Ω 09'06	27°33'18
max. Earth dist.	13036 Nov 30 14:36	21° \mathcal{A} 48'43	1.31444 AU		13037 Oct 28 07:58	0° Π	
	13036 Dec 04 07:45	0° \mathcal{B}		asc. node	13037 Nov 03 09:05	11° Π 23'42	
evening rise	13036 Dec 06 21:03	5° \mathcal{B} 28'30		morning set	13037 Nov 07 11:01	19° Π 46'34	
desc. node	13036 Dec 19 09:33	29° \mathcal{B} 17'55			13037 Nov 12 04:02	0° \mathcal{A}	
	13036 Dec 19 19:36	0° \approx					
evening max el	13037 Jan 07 04:58	24° \approx 24'43	27°15'45	superior conj	13037 Nov 14 10:52	5° \mathcal{A} 05'10	1°28'19
	13037 Jan 14 18:28	0° \mathcal{H}		minimum elong	13037 Nov 14 09:08	4° \mathcal{A} 55'30	1°29'01
retrograde	13037 Jan 21 03:49	1° \mathcal{H} 40'50		max. Earth dist.	13037 Nov 13 23:09	3° \mathcal{A} 59'48	1.31235 AU
	13037 Jan 27 06:47	30° $\mathcal{R}\approx$		evening rise	13037 Nov 21 04:16	19° \mathcal{A} 55'15	
evening set	13037 Jan 28 00:29	29° \approx 34'39			13037 Nov 26 01:08	0° \mathcal{B}	
min. Earth dist.	13037 Jan 31 19:29	26° \approx 49'03	0.60766 AU	desc. node	13037 Dec 06 06:36	18° \mathcal{B} 14'23	
inferior conj	13037 Feb 03 22:52	24° \approx 06'59	-2°43'52		13037 Dec 14 16:25	0° \approx	
minimum elong	13037 Feb 04 04:41	23° \approx 54'25	2°41'00	evening max el	13037 Dec 20 05:00	5° \approx 59'20	26°23'42
morning rise	13037 Feb 11 11:57	19° \approx 15'04		retrograde	13038 Jan 03 03:55	13° \approx 05'20	
asc. node	13037 Feb 12 10:54	19° \approx 02'30		evening set	13038 Jan 09 15:01	11° \approx 24'04	
direct	13037 Feb 13 14:23	18° \approx 57'06		min. Earth dist.	13038 Jan 13 18:40	8° \approx 47'39	0.58612 AU
morning max el	13037 Feb 20 18:35	22° \approx 32'59	17°56'23	inferior conj	13038 Jan 16 21:45	6° \approx 27'14	-4°05'47
	13037 Feb 26 13:52	0° \mathcal{H}		minimum elong	13038 Jan 17 06:06	6° \approx 11'36	4°02'20
morning set	13037 Mar 08 08:39	16° \mathcal{H} 59'44		morning rise	13038 Jan 25 00:07	1° \approx 56'32	
	13037 Mar 15 12:44	0° \mathcal{Y}		direct	13038 Jan 27 01:25	1° \approx 42'04	
desc. node	13037 Mar 17 10:58	3° \mathcal{Y} 24'42		asc. node	13038 Jan 30 08:16	2° \approx 21'03	
				morning max el	13038 Feb 04 04:23	5° \approx 42'06	18°26'03
superior conj	13037 Mar 18 18:53	5° \mathcal{Y} 44'26	-0°10'28		13038 Feb 19 11:53	0° \mathcal{H}	
minimum elong	13037 Mar 18 17:58	5° \mathcal{Y} 40'29	0°10'19	morning set	13038 Feb 20 00:56	1° \mathcal{H} 02'27	
behind sun begin	13037 Mar 18 11:42	5° \mathcal{Y} 13'07					
behind sun end	13037 Mar 19 00:15	6° \mathcal{Y} 07'49		superior conj	13038 Mar 01 04:10	18° \mathcal{H} 19'36	0°24'55
max. Earth dist.	13037 Mar 26 06:42	18° \mathcal{Y} 26'25	1.42674 AU	minimum elong	13038 Mar 01 05:53	18° \mathcal{H} 27'34	0°24'56
evening rise	13037 Apr 01 06:01	28° \mathcal{Y} 04'43		desc. node	13038 Mar 04 07:29	24° \mathcal{H} 01'31	
	13037 Apr 02 11:17	0° \mathcal{B}			13038 Mar 07 16:50	0° \mathcal{Y}	
	13037 Apr 22 21:05	0° Π		max. Earth dist.	13038 Mar 08 15:46	1° \mathcal{Y} 39'00	1.40602 AU
evening max el	13037 May 03 19:52	13° Π 16'58	22°11'50	evening rise	13038 Mar 13 00:30	9° \mathcal{Y} 00'24	
asc. node	13037 May 11 07:38	18° Π 34'57			13038 Mar 26 11:22	0° \mathcal{B}	
retrograde	13037 May 13 09:35	18° Π 55'02		evening max el	13038 Apr 16 11:00	27° \mathcal{B} 07'33	23°32'34
evening set	13037 May 18 02:16	16° Π 58'15			13038 Apr 19 14:58	0° Π	
inferior conj	13037 May 23 09:06	10° Π 38'00	2°57'44	retrograde	13038 Apr 27 04:36	3° Π 26'39	
minimum elong	13037 May 23 07:37	10° Π 43'10	2°56'36	asc. node	13038 Apr 28 04:58	3° Π 21'57	
min. Earth dist.	13037 May 23 07:28	10° Π 43'44	0.68871 AU	evening set	13038 May 02 08:50	1° Π 15'53	
morning rise	13037 May 28 12:48	4° Π 25'26			13038 May 03 16:23	30° $\mathcal{R}\mathcal{B}$	
direct	13037 Jun 02 06:54	2° Π 24'39		min. Earth dist.	13038 May 07 04:13	25° \mathcal{B} 37'35	0.68756 AU
morning max el	13037 Jun 11 15:35	7° Π 53'52	22°03'29	inferior conj	13038 May 07 18:26	24° \mathcal{B} 48'44	2°34'38
desc. node	13037 Jun 13 12:23	9° Π 51'53		minimum elong	13038 May 07 16:25	24° \mathcal{B} 55'39	2°33'25
	13037 Jun 28 19:11	0° \mathcal{E}		morning rise	13038 May 12 23:57	18° \mathcal{B} 43'25	
morning set	13037 Jul 14 13:01	24° \mathcal{E} 04'10		direct	13038 May 17 05:18	17° \mathcal{B} 03'18	
	13037 Jul 18 04:32	0° \mathcal{O}		morning max el	13038 May 25 09:32	21° \mathcal{B} 43'01	20°42'53
max. Earth dist.	13037 Jul 20 01:34	3° \mathcal{O} 06'33	1.41454 AU	desc. node	13038 May 31 09:19	28° \mathcal{B} 38'55	
					13038 Jun 01 10:18	0° Π	
superior conj	13037 Jul 27 19:50	16° \mathcal{O} 25'45	-1°25'46		13038 Jun 22 00:35	0° \mathcal{E}	
minimum elong	13037 Jul 28 02:06	16° \mathcal{O} 53'28	1°25'42	morning set	13038 Jun 24 00:39	3° \mathcal{E} 05'50	
	13037 Aug 04 07:51	0° Π		max. Earth dist.	13038 Jul 02 08:38	16° \mathcal{E} 16'57	1.43449 AU
evening rise	13037 Aug 07 09:23	5° Π 40'32					
asc. node	13037 Aug 07 07:15	5° Π 30'38		superior conj	13038 Jul 09 01:35	27° \mathcal{E} 17'59	-1°54'40
	13037 Aug 22 06:37	0° Ω		minimum elong	13038 Jul 09 08:31	27° \mathcal{E} 47'03	1°55'03
evening max el	13037 Aug 23 09:27	1° Ω 10'58	18°14'07		13038 Jul 10 16:08	0° \mathcal{O}	
retrograde	13037 Aug 30 14:42	4° Ω 50'45		evening rise	13038 Jul 21 05:29	18° \mathcal{O} 17'24	
evening set	13037 Sep 01 18:59	4° Ω 31'23		asc. node	13038 Jul 25 03:59	25° \mathcal{O} 13'13	
	13037 Sep 08 21:25	30° $\mathcal{R}\Pi$			13038 Jul 27 22:26	0° Π	
inferior conj	13037 Sep 09 02:57	29° Π 48'10	0°05'12	evening max el	13038 Aug 06 22:19	14° Π 15'58	18°03'05
minimum elong	13037 Sep 09 03:07	29° Π 47'47	0°05'01	retrograde	13038 Aug 13 12:00	17° Π 39'06	































































































































evening set	13038 Aug 16 00:18	17° \cap 09'03			13039 Jul 31 07:52	30° \mathbb{R} Ω	
inferior conj	13038 Aug 22 15:19	12° \cap 05'51	1°21'47	inferior conj	13039 Aug 05 19:21	24° Ω 58'20	2°15'46
minimum elong	13038 Aug 22 17:29	12° \cap 00'29	1°20'39	minimum elong	13039 Aug 05 21:52	24° Ω 51'19	2°14'28
min. Earth dist.	13038 Aug 25 17:11	9° \cap 04'39	0.61336 AU	min. Earth dist.	13039 Aug 08 09:30	22° Ω 06'16	0.63540 AU
desc. node	13038 Aug 27 07:11	7° \cap 39'33		morning rise	13039 Aug 12 00:17	18° Ω 42'57	
morning rise	13038 Aug 29 08:02	6° \cap 06'18		desc. node	13039 Aug 14 04:38	17° Ω 18'31	
direct	13038 Sep 04 23:37	3° \cap 50'50		direct	13039 Aug 18 15:57	16° Ω 10'14	
morning max el	13038 Sep 19 04:41	11° \cap 48'34	27°58'03	morning max el	13039 Sep 01 13:39	24° Ω 11'26	27°44'43
	13038 Oct 03 13:30	0° $\underline{\Omega}$			13039 Sep 06 19:24	0° \cap	
	13038 Oct 20 15:41	0° \mathbb{M}			13039 Sep 26 23:00	0° $\underline{\Omega}$	
asc. node	13038 Oct 21 05:48	1° \mathbb{M} 11'22		morning set	13039 Oct 06 08:06	17° $\underline{\Omega}$ 35'14	
morning set	13038 Oct 22 13:15	3° \mathbb{M} 52'30		asc. node	13039 Oct 08 02:27	21° $\underline{\Omega}$ 09'41	
max. Earth dist.	13038 Oct 28 05:49	16° \mathbb{M} 02'26	1.31545 AU	max. Earth dist.	13039 Oct 11 06:50	27° $\underline{\Omega}$ 47'59	1.32384 AU
					13039 Oct 12 07:37	0° \mathbb{M}	
superior conj	13038 Oct 29 21:15	19° \mathbb{M} 39'46	1°14'45				
minimum elong	13038 Oct 29 19:02	19° \mathbb{M} 27'34	1°15'07	superior conj	13039 Oct 14 04:24	4° \mathbb{M} 01'23	0°55'35
	13038 Nov 03 13:19	0° \mathbb{X}		minimum elong	13039 Oct 14 02:13	3° \mathbb{M} 49'30	0°55'40
evening rise	13038 Nov 05 14:26	4° \mathbb{X} 27'36		evening rise	13039 Oct 21 01:40	19° \mathbb{M} 00'32	
	13038 Nov 18 23:02	0° \mathbb{Z}			13039 Oct 26 09:05	0° \mathbb{X}	
desc. node	13038 Nov 23 03:46	6° \mathbb{Z} 21'38		desc. node	13039 Nov 10 01:01	23° \mathbb{X} 21'00	
evening max el	13038 Dec 01 20:44	16° \mathbb{Z} 42'34	25°01'21	evening max el	13039 Nov 13 06:50	26° \mathbb{X} 49'12	23°21'23
retrograde	13038 Dec 15 16:00	23° \mathbb{Z} 37'19			13039 Nov 17 01:30	0° \mathbb{Z}	
evening set	13038 Dec 21 07:17	22° \mathbb{Z} 26'12		retrograde	13039 Nov 26 15:18	3° \mathbb{Z} 27'54	
min. Earth dist.	13038 Dec 26 08:42	19° \mathbb{Z} 43'05	0.56665 AU	evening set	13039 Dec 01 00:01	2° \mathbb{Z} 46'32	
inferior conj	13038 Dec 29 00:21	17° \mathbb{Z} 59'43	-5°16'21		13039 Dec 07 01:01	30° \mathbb{R} \mathbb{X}	
minimum elong	13038 Dec 29 08:14	17° \mathbb{Z} 46'53	5°13'50	min. Earth dist.	13039 Dec 07 16:41	29° \mathbb{X} 37'35	0.55215 AU
morning rise	13039 Jan 06 11:25	13° \mathbb{Z} 50'53		inferior conj	13039 Dec 09 06:52	28° \mathbb{X} 42'02	-5°53'58
direct	13039 Jan 08 18:10	13° \mathbb{Z} 36'05		minimum elong	13039 Dec 09 08:45	28° \mathbb{X} 39'18	5°52'55
asc. node	13039 Jan 17 05:33	17° \mathbb{Z} 17'02		morning rise	13039 Dec 17 19:10	24° \mathbb{X} 50'45	
morning max el	13039 Jan 18 04:17	18° \mathbb{Z} 09'21	19°17'33	direct	13039 Dec 20 15:37	24° \mathbb{X} 31'11	
	13039 Jan 26 21:07	0° \approx		morning max el	13039 Dec 31 14:47	29° \mathbb{X} 44'58	20°32'12
morning set	13039 Feb 04 02:17	15° \approx 28'41			13039 Dec 31 21:00	0° \mathbb{Z}	
	13039 Feb 11 09:39	0° \mathbb{H}		asc. node	13040 Jan 04 02:45	3° \mathbb{Z} 35'54	
				morning set	13040 Jan 19 09:24	0° \approx 08'09	
superior conj	13039 Feb 12 06:36	1° \mathbb{H} 41'54	0°53'33		13040 Jan 19 07:49	0° \approx	
minimum elong	13039 Feb 12 09:21	1° \mathbb{H} 55'14	0°53'41				
max. Earth dist.	13039 Feb 18 22:25	14° \mathbb{H} 12'17	1.38357 AU	superior conj	13040 Jan 26 21:41	15° \approx 38'17	1°14'54
desc. node	13039 Feb 19 04:03	14° \mathbb{H} 37'45		minimum elong	13040 Jan 27 00:19	15° \approx 51'38	1°15'21
evening rise	13039 Feb 22 16:09	20° \mathbb{H} 50'53		max. Earth dist.	13040 Feb 01 06:18	26° \approx 14'54	1.36182 AU
	13039 Feb 28 02:07	0° \mathbb{Y}			13040 Feb 03 05:40	0° \mathbb{H}	
	13039 Mar 20 12:00	0° \mathbb{B}		evening rise	13040 Feb 05 02:33	3° \mathbb{H} 28'24	
evening max el	13039 Mar 30 00:43	11° \mathbb{B} 00'19	24°51'42	desc. node	13040 Feb 06 00:38	5° \mathbb{H} 09'09	
retrograde	13039 Apr 10 19:49	17° \mathbb{B} 52'33			13040 Feb 21 01:41	0° \mathbb{Y}	
asc. node	13039 Apr 15 02:20	16° \mathbb{B} 32'49		evening max el	13040 Mar 11 14:09	24° \mathbb{Y} 50'31	26°02'14
evening set	13039 Apr 16 11:50	15° \mathbb{B} 30'15			13040 Mar 17 22:52	0° \mathbb{B}	
min. Earth dist.	13039 Apr 20 23:12	10° \mathbb{B} 28'01	0.68188 AU	retrograde	13040 Mar 24 06:13	2° \mathbb{B} 05'21	
inferior conj	13039 Apr 22 01:51	8° \mathbb{B} 59'54	2°01'27		13040 Mar 29 21:03	30° \mathbb{R} \mathbb{Y}	
minimum elong	13039 Apr 21 23:42	9° \mathbb{B} 07'00	2°00'17	evening set	13040 Mar 30 09:32	29° \mathbb{Y} 35'14	
morning rise	13039 Apr 27 11:49	3° \mathbb{B} 03'12		asc. node	13040 Mar 31 23:45	28° \mathbb{Y} 06'28	
direct	13039 May 01 05:03	1° \mathbb{B} 43'54		min. Earth dist.	13040 Apr 03 14:16	25° \mathbb{Y} 08'16	0.67187 AU
morning max el	13039 May 08 11:02	5° \mathbb{B} 44'18	19°35'12	inferior conj	13040 Apr 05 05:21	23° \mathbb{Y} 06'30	1°17'54
desc. node	13039 May 18 06:07	18° \mathbb{B} 02'25		minimum elong	13040 Apr 05 03:36	23° \mathbb{Y} 11'57	1°17'00
greatest brilliancy	13039 May 21 02:43	22° \mathbb{B} 10'24	-0.6m	morning rise	13040 Apr 10 22:24	17° \mathbb{Y} 19'49	
	13039 May 26 08:47	0° \mathbb{I}		direct	13040 Apr 14 04:23	16° \mathbb{Y} 19'46	
morning set	13039 Jun 03 01:44	11° \mathbb{I} 44'40		morning max el	13040 Apr 20 19:53	19° \mathbb{Y} 53'59	18°42'59
	13039 Jun 14 19:16	0° \mathbb{S}			13040 Apr 28 20:35	0° \mathbb{B}	
max. Earth dist.	13039 Jun 14 22:36	0° \mathbb{S} 13'11	1.44913 AU	desc. node	13040 May 04 02:49	7° \mathbb{B} 52'01	
				morning set	13040 May 12 13:54	21° \mathbb{B} 00'33	
superior conj	13039 Jun 19 07:33	7° \mathbb{S} 10'31	-2°11'38		13040 May 18 08:05	0° \mathbb{I}	
minimum elong	13039 Jun 19 10:42	7° \mathbb{S} 23'10	2°12'33	max. Earth dist.	13040 May 27 16:45	14° \mathbb{I} 36'28	1.45697 AU
evening rise	13039 Jul 03 05:26	0° Ω 01'12					
	13039 Jul 03 05:09	0° Ω		superior conj	13040 May 28 19:11	16° \mathbb{I} 19'51	-2°10'12
asc. node	13039 Jul 12 00:48	14° Ω 38'48		minimum elong	13040 May 28 14:46	16° \mathbb{I} 02'33	2°10'59
evening max el	13039 Jul 21 12:39	27° Ω 41'49	18°10'42		13040 Jun 06 11:41	0° \mathbb{S}	
	13039 Jul 24 09:57	0° \cap		evening rise	13040 Jun 13 05:13	10° \mathbb{S} 43'18	
retrograde	13039 Jul 27 21:09	1° \cap 02'45		greatest brilliancy	13040 Jun 19 23:35	21° \mathbb{S} 32'30	-0.9m
evening set	13039 Jul 30 17:44	0° \cap 19'20			13040 Jun 25 09:50	0° Ω	

asc. node	13040 Jun 27 21:41	3°Ω40'29		asc. node	13041 Jun 14 18:38	22°♄09'54	
evening max el	13040 Jul 04 01:18	11°Ω20'11	18°36'22	evening max el	13041 Jun 17 09:54	25°♄05'01	19°19'02
retrograde	13040 Jul 10 13:54	14°Ω52'29		retrograde	13041 Jun 24 10:54	29°♄01'07	
evening set	13040 Jul 13 19:01	13°Ω53'51		evening set	13041 Jun 28 01:04	27°♄46'09	
inferior conj	13040 Jul 19 11:02	8°Ω17'12	2°50'11	inferior conj	13041 Jul 03 10:55	21°♄55'25	3°08'25
minimum elong	13040 Jul 19 12:58	8°Ω11'16	2°49'00	minimum elong	13041 Jul 03 11:53	21°♄52'16	3°07'22
min. Earth dist.	13040 Jul 21 11:02	5°Ω50'54	0.65466 AU	min. Earth dist.	13041 Jul 04 20:22	20°♄06'10	0.67009 AU
morning rise	13040 Jul 25 05:54	1°Ω54'32		morning rise	13041 Jul 08 22:08	15°♄31'38	
	13040 Jul 28 04:38	30°♄		direct	13041 Jul 14 23:46	12°♄52'59	
desc. node	13040 Jul 31 02:01	29°♄15'18		desc. node	13041 Jul 17 23:20	13°♄25'31	
direct	13040 Jul 31 16:25	29°♄14'00		morning max el	13041 Jul 27 11:34	20°♄21'43	25°48'24
	13040 Aug 04 10:08	0°Ω			13041 Aug 04 18:16	0°Ω	
morning max el	13040 Aug 14 00:45	7°Ω06'51	26°58'44		13041 Aug 24 20:47	0°♄	
	13040 Aug 31 17:20	0°♄		morning set	13041 Sep 01 11:34	13°♄21'26	
	13040 Sep 18 06:42	0°♄		max. Earth dist.	13041 Sep 05 04:23	20°♄16'33	1.35599 AU
morning set	13040 Sep 18 16:46	0°♄48'10			13041 Sep 10 03:34	0°♄	
max. Earth dist.	13040 Sep 22 22:48	9°♄11'05	1.33747 AU				
asc. node	13040 Sep 23 23:04	11°♄14'21		superior conj	13041 Sep 10 23:45	1°♄41'35	0°01'38
				minimum elong	13041 Sep 10 23:39	1°♄41'08	0°01'33
superior conj	13040 Sep 27 06:09	18°♄04'32	0°31'03	behind sun begin	13041 Sep 10 17:31	1°♄10'11	
minimum elong	13040 Sep 27 04:37	17°♄56'29	0°30'58	behind sun end	13041 Sep 11 05:47	2°♄12'08	
	13040 Oct 02 20:39	0°♄		asc. node	13041 Sep 10 19:37	1°♄20'43	
evening rise	13040 Oct 04 12:04	3°♄29'14		evening rise	13041 Sep 18 19:33	17°♄47'25	
	13040 Oct 19 01:16	0°♄			13041 Sep 24 23:09	0°♄	
evening max el	13040 Oct 24 20:04	6°♄55'05	21°41'44	evening max el	13041 Oct 06 21:06	17°♄34'12	20°16'30
desc. node	13040 Oct 26 22:20	8°♄48'44		desc. node	13041 Oct 13 19:45	22°♄16'12	
retrograde	13040 Nov 06 04:39	13°♄03'17		retrograde	13041 Oct 17 16:31	22°♄56'39	
evening set	13040 Nov 09 03:51	12°♄43'20		evening set	13041 Oct 19 18:20	22°♄45'39	
inferior conj	13040 Nov 18 00:15	8°♄48'51	-5°37'00	inferior conj	13041 Oct 28 17:42	18°♄48'54	-4°23'03
minimum elong	13040 Nov 17 17:27	8°♄58'23	5°35'10	minimum elong	13041 Oct 28 07:39	19°♄03'44	4°19'26
min. Earth dist.	13040 Nov 17 23:01	8°♄50'35	0.54540 AU	min. Earth dist.	13041 Oct 30 06:42	17°♄54'16	0.54804 AU
morning rise	13040 Nov 26 08:02	5°♄01'03		morning rise	13041 Nov 05 20:10	14°♄44'32	
direct	13040 Nov 30 00:26	4°♄31'29		direct	13041 Nov 10 10:25	13°♄58'53	
morning max el	13040 Dec 12 11:23	10°♄28'55	22°07'52	morning max el	13041 Nov 23 22:43	20°♄36'06	23°55'48
asc. node	13040 Dec 20 23:51	21°♄00'48			13041 Dec 01 22:24	0°♄	
	13040 Dec 26 08:18	0°♄		asc. node	13041 Dec 07 20:51	9°♄15'33	
morning set	13041 Jan 02 19:53	14°♄54'01		morning set	13041 Dec 18 07:42	29°♄39'40	
					13041 Dec 18 11:30	0°♄	
superior conj	13041 Jan 09 21:49	29°♄58'30	1°29'10	superior conj	13041 Dec 25 03:58	14°♄33'04	1°36'46
minimum elong	13041 Jan 09 23:40	0°♄08'17	1°29'55	minimum elong	13041 Dec 25 04:46	14°♄37'22	1°37'44
	13041 Jan 09 22:06	0°♄		max. Earth dist.	13041 Dec 27 16:57	20°♄01'48	1.32811 AU
max. Earth dist.	13041 Jan 13 19:43	8°♄05'59	1.34291 AU	evening rise	13042 Jan 01 17:51	0°♄29'27	
evening rise	13041 Jan 18 04:18	16°♄44'29			13042 Jan 01 12:00	0°♄	
desc. node	13041 Jan 22 21:20	25°♄31'49		desc. node	13042 Jan 09 18:06	15°♄40'05	
	13041 Jan 25 09:51	0°♄			13042 Jan 18 10:08	0°♄	
	13041 Feb 14 11:32	0°♄		evening max el	13042 Feb 04 16:32	21°♄53'41	27°28'18
evening max el	13041 Feb 22 03:42	8°♄31'45	26°56'49	retrograde	13042 Feb 18 09:26	29°♄20'02	
retrograde	13041 Mar 07 11:06	15°♄57'34		evening set	13042 Feb 25 05:14	26°♄51'44	
evening set	13041 Mar 14 00:05	13°♄24'58		min. Earth dist.	13042 Mar 01 00:44	23°♄29'07	0.64027 AU
min. Earth dist.	13041 Mar 17 23:27	9°♄31'35	0.65784 AU	inferior conj	13042 Mar 03 15:20	20°♄45'43	-0°41'45
asc. node	13041 Mar 18 21:10	8°♄29'34		minimum elong	13042 Mar 03 16:38	20°♄42'19	0°40'58
inferior conj	13041 Mar 20 02:42	7°♄03'56	0°23'34	asc. node	13042 Mar 05 18:35	18°♄36'22	
minimum elong	13041 Mar 20 02:04	7°♄05'47	0°23'17	morning rise	13042 Mar 10 06:11	15°♄24'58	
morning rise	13041 Mar 26 05:28	1°♄29'02		direct	13042 Mar 12 17:40	14°♄54'06	
direct	13041 Mar 29 01:26	0°♄45'21		morning max el	13042 Mar 19 03:41	18°♄12'36	17°48'58
morning max el	13041 Apr 04 10:18	4°♄06'02	18°07'22		13042 Mar 27 20:26	0°♄	
desc. node	13041 Apr 20 23:27	28°♄00'47		morning set	13042 Apr 04 22:54	13°♄31'03	
	13041 Apr 22 04:55	0°♄		desc. node	13042 Apr 07 20:04	18°♄23'16	
morning set	13041 Apr 23 04:23	1°♄34'59			13042 Apr 14 19:36	0°♄	
superior conj	13041 May 08 03:38	25°♄27'56	-1°48'51	superior conj	13042 Apr 18 02:04	5°♄19'16	-1°13'29
minimum elong	13041 May 07 18:32	24°♄52'13	1°48'51	minimum elong	13042 Apr 17 18:35	4°♄49'00	1°13'01
max. Earth dist.	13041 May 10 12:21	29°♄10'02	1.45742 AU	max. Earth dist.	13042 Apr 23 07:33	13°♄40'39	1.45052 AU
	13041 May 11 01:08	0°♄		evening rise	13042 May 03 18:00	29°♄54'01	
evening rise	13041 May 24 06:00	20°♄30'43			13042 May 03 19:34	0°♄	
	13041 May 30 09:23	0°♄			13042 May 24 04:37	0°♄	
greatest brilliancy	13041 Jun 05 12:22	9°♄19'18	-0.7m				

evening max el	13042 May 31 13:07	8°☿52'53	20°16'59			13043 Apr 07 07:45	0°♄	
asc. node	13042 Jun 01 15:41	9°☿56'39		evening rise		13043 Apr 13 08:58	9°♄33'10	
retrograde	13042 Jun 08 09:37	13°☿23'21				13043 Apr 26 23:35	0°♄	
evening set	13042 Jun 12 09:33	11°☿51'39		evening max el		13043 May 14 10:36	22°♄41'21	21°27'21
inferior conj	13042 Jun 17 16:16	5°☿48'10	3°13'12	asc. node		13043 May 19 12:52	26°♄46'43	
minimum elong	13042 Jun 17 16:11	5°☿48'29	3°12'11	retrograde		13043 May 23 08:08	27°♄53'36	
min. Earth dist.	13042 Jun 18 11:32	4°☿42'23	0.68108 AU	evening set		13043 May 27 18:35	26°♄05'29	
	13042 Jun 22 08:35	30°♄		inferior conj		13043 Jun 02 00:44	19°♄50'47	3°06'24
morning rise	13042 Jun 22 22:29	29°♄27'12		minimum elong		13043 Jun 01 23:42	19°♄54'23	3°05'20
direct	13042 Jun 28 12:45	26°♄58'53		min. Earth dist.		13043 Jun 02 06:30	19°♄30'43	0.68735 AU
desc. node	13042 Jul 04 20:33	29°♄24'34		morning rise		13043 Jun 07 04:37	13°♄34'55	
	13042 Jul 05 15:57	0°☿		direct		13043 Jun 12 06:13	11°♄23'04	
morning max el	13042 Jul 09 21:37	3°☿47'46	24°23'31	desc. node		13043 Jun 21 17:42	16°♄45'16	
	13042 Jul 29 23:30	0°♄		morning max el		13043 Jun 22 08:27	17°♄21'46	22°53'48
morning set	13042 Aug 14 12:11	25°♄04'27				13043 Jul 02 19:58	0°☿	
	13042 Aug 17 07:17	0°♄				13043 Jul 23 00:58	0°♄	
max. Earth dist.	13042 Aug 18 03:02	1°♄28'33	1.37816 AU	morning set		13043 Jul 26 13:55	5°♄45'37	
				max. Earth dist.		13043 Jul 31 01:27	13°♄17'12	1.40164 AU
superior conj	13042 Aug 25 05:59	14°♄44'57	-0°31'35			13043 Aug 07 20:45	27°♄04'28	-1°06'23
minimum elong	13042 Aug 25 08:08	14°♄55'19	0°31'32	superior conj		13043 Aug 08 01:38	27°♄26'45	1°06'15
asc. node	13042 Aug 28 16:14	21°♄25'48		minimum elong		13043 Aug 09 11:01	0°♄	
	13042 Sep 01 23:46	0°♄				13043 Aug 15 12:51	11°♄25'11	
evening rise	13042 Sep 02 21:41	1°♄49'05		asc. node		13043 Aug 17 15:24	15°♄25'58	
evening max el	13042 Sep 19 12:19	29°♄01'17	19°12'02	evening rise		13043 Aug 25 13:38	0°♄	
	13042 Sep 20 13:11	0°♄				13043 Sep 02 15:05	11°♄13'10	18°29'14
retrograde	13042 Sep 28 15:54	3°♄35'51		evening max el		13043 Sep 10 10:15	15°♄09'21	
evening set	13042 Sep 30 12:24	3°♄25'22		retrograde		13043 Sep 12 10:31	14°♄54'24	
desc. node	13042 Sep 30 17:12	3°♄23'02		evening set		13043 Sep 17 14:42	12°♄19'59	
	13042 Oct 07 21:16	30°♄		desc. node		13043 Sep 20 05:09	10°♄22'44	-0°49'11
inferior conj	13042 Oct 09 00:55	29°♄14'07	-2°36'38	inferior conj		13043 Sep 20 03:14	10°♄26'30	0°48'20
minimum elong	13042 Oct 08 18:11	29°♄25'24	2°33'40	minimum elong		13043 Sep 23 11:12	7°♄50'36	0.57800 AU
min. Earth dist.	13042 Oct 11 17:55	27°♄25'35	0.55966 AU	min. Earth dist.		13043 Sep 27 16:29	5°♄08'15	
morning rise	13042 Oct 16 21:20	24°♄37'15		morning rise		13043 Oct 03 18:31	3°♄33'55	
direct	13042 Oct 22 07:33	23°♄29'33		direct		13043 Oct 18 02:01	11°♄07'44	27°01'45
	13042 Nov 04 16:55	0°♄		morning max el		13043 Nov 01 17:11	0°♄	
morning max el	13042 Nov 05 09:21	0°♄38'26	25°39'46			13043 Nov 11 14:39	17°♄27'57	
asc. node	13042 Nov 24 17:47	28°♄07'55		asc. node		13043 Nov 17 04:30	28°♄52'28	
	13042 Nov 25 17:41	0°♄		morning set		13043 Nov 17 17:08	0°♄	
morning set	13042 Dec 02 19:09	14°♄20'40						
superior conj	13042 Dec 09 13:50	29°♄15'15	1°38'08	superior conj		13043 Nov 24 01:23	13°♄59'14	1°33'34
minimum elong	13042 Dec 09 13:31	29°♄13'30	1°39'08	minimum elong		13043 Nov 24 00:06	13°♄52'03	1°34'25
	13042 Dec 09 21:55	0°♄		max. Earth dist.		13043 Nov 24 05:19	14°♄21'11	1.31294 AU
max. Earth dist.	13042 Dec 10 21:09	2°♄08'21	1.31807 AU	evening rise		13043 Nov 30 20:51	28°♄57'00	
evening rise	13042 Dec 16 16:13	14°♄35'48				13043 Dec 01 08:43	0°♄	
	13042 Dec 24 13:11	0°♄		desc. node		13043 Dec 14 11:56	24°♄46'23	
desc. node	13042 Dec 27 14:58	5°♄27'40				13043 Dec 17 19:20	0°♄	
	13043 Jan 13 14:41	0°♄		evening max el		13043 Dec 31 06:55	16°♄47'57	26°57'45
evening max el	13043 Jan 18 02:33	4°♄43'12	27°30'02	retrograde		13044 Jan 14 05:40	23°♄59'17	
retrograde	13043 Jan 31 23:59	12°♄03'14		evening set		13044 Jan 20 23:39	22°♄02'42	
evening set	13043 Feb 07 22:13	9°♄46'50		min. Earth dist.		13044 Jan 24 21:06	19°♄22'58	0.59845 AU
min. Earth dist.	13043 Feb 11 16:17	6°♄50'01	0.62005 AU	inferior conj		13044 Jan 28 01:32	16°♄48'11	-3°18'56
inferior conj	13043 Feb 14 16:07	4°♄03'30	-1°57'09	minimum elong		13044 Jan 28 08:36	16°♄33'50	3°15'39
minimum elong	13043 Feb 14 20:09	3°♄54'06	1°55'00	morning rise		13044 Feb 04 20:34	12°♄05'05	
	13043 Feb 19 17:06	30°♄		direct		13044 Feb 06 22:05	11°♄48'56	
asc. node	13043 Feb 20 16:02	29°♄29'03		asc. node		13044 Feb 07 13:27	11°♄50'33	
morning rise	13043 Feb 21 20:51	28°♄59'58		morning max el		13044 Feb 14 10:37	15°♄33'29	18°06'30
direct	13043 Feb 24 01:55	28°♄38'13				13044 Feb 24 10:44	0°♄	
	13043 Feb 28 07:33	0°♄		morning set		13044 Mar 01 01:13	10°♄15'38	
morning max el	13043 Mar 02 20:55	2°♄04'44	17°48'20					
morning set	13043 Mar 18 15:54	26°♄30'50		superior conj		13044 Mar 10 21:11	28°♄19'45	0°05'18
	13043 Mar 20 14:59	0°♄		minimum elong		13044 Mar 10 21:37	28°♄21'41	0°05'21
desc. node	13043 Mar 25 16:37	8°♄54'28		behind sun begin		13044 Mar 10 14:18	27°♄49'02	
				behind sun end		13044 Mar 11 04:55	28°♄54'14	
superior conj	13043 Mar 29 23:45	16°♄16'22	-0°33'06	desc. node		13044 Mar 11 13:09	29°♄30'45	
minimum elong	13043 Mar 29 20:35	16°♄02'58	0°32'46			13044 Mar 11 19:45	0°♄	
max. Earth dist.	13043 Apr 06 00:09	27°♄52'39	1.43701 AU	max. Earth dist.		13044 Mar 18 12:14	11°♄31'03	1.41832 AU

evening rise	13044 Mar 23 15:38	19° Υ 57'30		max. Earth dist.	13045 Feb 28 19:40	24° X 25'41	1.39652 AU
	13044 Mar 30 00:56	0° B			13045 Mar 04 01:02	0° Υ	
	13044 Apr 20 08:35	0° Π		evening rise	13045 Mar 04 19:11	1° Υ 16'54	
evening max el	13044 Apr 26 03:24	6° Π 30'46	22°45'48		13045 Mar 23 08:30	0° B	
asc. node	13044 May 05 10:08	12° Π 23'58		evening max el	13045 Apr 08 17:30	20° B 21'46	24°06'44
retrograde	13044 May 06 04:54	12° Π 26'48		retrograde	13045 Apr 19 22:35	26° B 56'53	
evening set	13044 May 11 02:33	10° Π 23'33		asc. node	13045 Apr 22 07:29	26° B 31'32	
inferior conj	13044 May 16 10:19	3° Π 59'53	2°49'08	evening set	13045 Apr 25 07:48	24° B 40'41	
minimum elong	13044 May 16 08:34	4° Π 05'57	2°47'58	min. Earth dist.	13045 Apr 29 23:29	19° B 17'44	0.68568 AU
min. Earth dist.	13044 May 16 03:12	4° Π 24'38	0.68884 AU	inferior conj	13045 Apr 30 19:04	18° B 11'21	2°21'47
	13044 May 19 11:18	30° R B		minimum elong	13045 Apr 30 16:57	18° B 18'34	2°20'35
morning rise	13044 May 21 14:30	27° B 50'27		morning rise	13045 May 06 02:10	12° B 09'32	
direct	13044 May 26 03:05	25° B 58'34		direct	13045 May 10 02:09	10° B 38'34	
	13044 Jun 02 19:46	0° Π		morning max el	13045 May 17 20:14	15° B 00'30	20°12'14
morning max el	13044 Jun 03 23:07	1° Π 05'35	21°27'52	desc. node	13045 May 25 11:36	24° B 10'04	
desc. node	13044 Jun 07 14:43	5° Π 05'58			13045 May 29 16:16	0° Π	
	13044 Jun 25 14:56	0° E		morning set	13045 Jun 14 19:14	24° Π 06'23	
morning set	13044 Jul 05 14:27	15° E 20'46			13045 Jun 18 14:27	0° E	
max. Earth dist.	13044 Jul 12 04:49	25° E 58'13	1.42359 AU	max. Earth dist.	13045 Jun 24 14:33	9° E 28'29	1.44143 AU
	13044 Jul 14 15:14	0° O					
superior conj	13044 Jul 19 15:38	8° O 30'37	-1°39'02	superior conj	13045 Jun 30 11:08	18° E 56'55	-2°03'46
minimum elong	13044 Jul 19 22:35	9° O 00'35	1°39'07	minimum elong	13045 Jun 30 17:07	19° E 21'29	2°04'24
evening rise	13044 Jul 30 20:46	28° O 28'26			13045 Jul 07 02:20	0° O	
	13044 Jul 31 16:56	0° P		evening rise	13045 Jul 13 08:56	10° O 44'31	
asc. node	13044 Aug 01 09:32	1° P 15'17		asc. node	13045 Jul 19 06:17	20° O 51'40	
evening max el	13044 Aug 16 01:22	24° P 01'25	18°07'00		13045 Jul 24 22:09	0° P	
retrograde	13044 Aug 22 22:50	27° P 32'44		evening max el	13045 Jul 30 15:17	7° P 16'45	18°04'06
evening set	13044 Aug 25 06:20	27° P 09'19		retrograde	13045 Aug 06 01:42	10° P 37'25	
inferior conj	13044 Sep 01 06:42	22° P 17'11	0°40'33	evening set	13045 Aug 08 17:24	10° P 02'08	
minimum elong	13044 Sep 01 07:58	22° P 14'18	0°39'51	inferior conj	13045 Aug 15 02:17	4° P 51'21	1°47'17
desc. node	13044 Sep 03 12:13	20° P 14'30		minimum elong	13045 Aug 15 04:45	4° P 44'53	1°46'00
min. Earth dist.	13044 Sep 04 12:48	19° P 19'59	0.60010 AU	min. Earth dist.	13045 Aug 17 23:46	1° P 51'19	0.62293 AU
morning rise	13044 Sep 08 06:25	16° P 30'48			13045 Aug 19 23:20	30° R O	
direct	13044 Sep 14 18:47	14° P 29'04		desc. node	13045 Aug 21 09:42	28° O 51'08	
morning max el	13044 Sep 29 02:26	22° P 21'15	27°48'48	morning rise	13045 Aug 21 13:48	28° O 43'40	
	13044 Oct 05 20:44	0° A		direct	13045 Aug 28 06:10	26° O 19'27	
	13044 Oct 24 19:46	0° M			13045 Sep 06 09:37	0° P	
asc. node	13044 Oct 28 11:24	7° M 07'21		morning max el	13045 Sep 11 08:56	4° P 20'55	27°56'47
morning set	13044 Oct 31 09:53	13° M 09'21			13045 Sep 30 13:47	0° A	
max. Earth dist.	13044 Nov 06 13:34	26° M 30'04	1.31295 AU	morning set	13045 Oct 15 09:16	27° A 06'33	
				asc. node	13045 Oct 15 08:04	27° A 00'28	
superior conj	13044 Nov 07 12:41	28° M 38'39	1°23'15		13045 Oct 16 18:56	0° M	
minimum elong	13044 Nov 07 10:42	28° M 27'36	1°23'49	max. Earth dist.	13045 Oct 20 18:04	8° M 25'41	1.31829 AU
	13044 Nov 08 03:17	0° A					
evening rise	13044 Nov 14 05:30	13° A 26'24		superior conj	13045 Oct 22 21:56	13° M 08'45	1°07'18
	13044 Nov 22 10:29	0° B		minimum elong	13045 Oct 22 19:40	12° M 56'17	1°07'32
desc. node	13044 Nov 30 09:01	13° B 24'03		evening rise	13045 Oct 29 16:19	27° M 59'35	
evening max el	13044 Dec 12 03:10	27° B 59'20	25°51'49		13045 Oct 30 14:46	0° A	
	13044 Dec 14 09:44	0° \approx			13045 Nov 16 10:46	0° B	
retrograde	13044 Dec 26 01:05	5° \approx 01'32		desc. node	13045 Nov 17 06:11	1° B 05'12	
evening set	13045 Jan 01 05:15	3° \approx 32'20		evening max el	13045 Nov 23 15:40	8° B 23'37	24°20'02
min. Earth dist.	13045 Jan 05 15:53	0° \approx 55'32	0.57738 AU	retrograde	13045 Dec 07 08:07	15° B 13'17	
	13045 Jan 06 23:51	30° R B		evening set	13045 Dec 12 11:11	14° B 15'29	
inferior conj	13045 Jan 08 15:59	28° B 48'48	-4°38'13	min. Earth dist.	13045 Dec 18 03:11	11° B 23'26	0.55964 AU
minimum elong	13045 Jan 09 00:42	28° B 33'28	4°34'57	inferior conj	13045 Dec 20 09:39	9° B 59'23	-5°37'50
morning rise	13045 Jan 16 22:54	24° B 28'00		minimum elong	13045 Dec 20 15:41	9° B 50'02	5°36'02
direct	13045 Jan 19 01:31	24° B 13'57		morning rise	13045 Dec 28 22:12	5° B 58'53	
asc. node	13045 Jan 24 10:48	25° B 51'55		direct	13045 Dec 31 09:28	5° B 42'48	
morning max el	13045 Jan 27 16:47	28° B 26'47	18°45'14	morning max el	13046 Jan 10 11:21	10° B 33'08	19°46'29
	13045 Jan 29 04:14	0° \approx		asc. node	13046 Jan 11 08:03	11° B 25'01	
morning set	13045 Feb 12 21:47	24° \approx 29'42			13046 Jan 23 12:06	0° \approx	
	13045 Feb 15 17:28	0° X		morning set	13046 Jan 28 01:53	9° \approx 02'12	
superior conj	13045 Feb 21 14:22	11° X 17'06	0°37'55				
minimum elong	13045 Feb 21 16:42	11° X 28'05	0°37'57	superior conj	13046 Feb 04 22:40	24° \approx 55'08	1°03'28
desc. node	13045 Feb 26 09:40	20° X 07'58		minimum elong	13046 Feb 05 01:28	25° \approx 09'01	1°03'44
					13046 Feb 07 12:59	0° X	
				max. Earth dist.	13046 Feb 11 01:45	6° X 41'44	1.37410 AU

desc. node	13046 Feb 13 06:15	10° H 42'40		evening rise	13047 Jan 28 12:35	26° \approx 23'51	
evening rise	13046 Feb 14 19:12	13° H 28'38			13047 Jan 30 11:16	0° H	
	13046 Feb 24 14:56	0° Y		desc. node	13047 Jan 31 02:52	1° H 11'01	
	13046 Mar 18 07:14	0° B			13047 Feb 18 00:54	0° Y	
evening max el	13046 Mar 22 06:58	4° B 14'08	25°23'13	evening max el	13047 Mar 04 20:47	18° Y 02'58	26°27'57
retrograde	13046 Apr 03 11:57	11° B 17'50		retrograde	13047 Mar 17 20:03	25° Y 23'12	
evening set	13046 Apr 09 08:45	8° B 51'53		evening set	13047 Mar 24 03:39	22° Y 51'37	
asc. node	13046 Apr 09 04:53	8° B 59'57		asc. node	13047 Mar 27 02:17	19° Y 59'17	
min. Earth dist.	13046 Apr 13 17:11	4° B 04'30	0.67811 AU	min. Earth dist.	13047 Mar 28 06:05	18° Y 39'02	0.66636 AU
inferior conj	13046 Apr 15 01:04	2° B 21'21	1°44'17	inferior conj	13047 Mar 30 02:17	16° Y 25'31	0°56'15
minimum elong	13046 Apr 14 23:02	2° B 28'00	1°43'11	minimum elong	13047 Mar 30 00:55	16° Y 29'40	0°55'33
	13046 Apr 16 21:59	30° R Y		morning rise	13047 Apr 04 23:07	10° Y 43'20	
morning rise	13046 Apr 20 13:43	26° Y 28'26		direct	13047 Apr 08 00:46	9° Y 50'28	
direct	13046 Apr 24 01:59	25° Y 17'37		morning max el	13047 Apr 14 12:22	13° Y 17'21	18°25'45
morning max el	13046 May 01 00:54	29° Y 05'34	19°10'52		13047 Apr 26 19:28	0° B	
	13046 May 01 22:16	0° B		desc. node	13047 Apr 29 05:04	3° B 44'58	
desc. node	13046 May 12 08:22	13° B 45'50		morning set	13047 May 04 20:50	12° B 41'07	
greatest brilliancy	13046 May 13 23:09	16° B 09'38	-0.7m		13047 May 15 20:44	0° II	
	13046 May 23 01:21	0° II					
morning set	13046 May 24 22:16	2° II 53'04		superior conj	13047 May 20 16:13	7° II 31'27	-2°03'22
max. Earth dist.	13046 Jun 07 06:06	23° II 36'28	1.45335 AU	minimum elong	13047 May 20 09:02	7° II 03'25	2°03'52
				max. Earth dist.	13047 May 21 01:40	8° II 08'22	1.45815 AU
superior conj	13046 Jun 10 08:03	28° II 27'47	-2°13'32		13047 Jun 04 00:49	0° B	
minimum elong	13046 Jun 10 08:09	28° II 28'11	2°14'31	evening rise	13047 Jun 05 12:16	2° B 19'28	
	13046 Jun 11 07:21	0° B		greatest brilliancy	13047 Jun 14 21:29	17° B 02'36	-0.8m
evening rise	13046 Jun 24 22:49	22° B 01'57		asc. node	13047 Jun 22 24:00	28° B 57'25	
	13046 Jun 29 19:13	0° B			13047 Jun 23 18:58	0° B	
asc. node	13046 Jul 06 03:06	10° B 08'00		evening max el	13047 Jun 27 16:33	4° B 31'43	18°52'29
evening max el	13046 Jul 14 05:17	20° B 49'13	18°19'33	retrograde	13047 Jul 04 09:16	8° B 12'16	
retrograde	13046 Jul 20 14:23	24° B 13'07		evening set	13047 Jul 07 18:16	7° B 06'35	
evening set	13046 Jul 23 14:36	23° B 23'24		inferior conj	13047 Jul 13 07:16	1° B 23'44	2°59'42
inferior conj	13046 Jul 29 11:42	17° B 55'49	2°32'33	minimum elong	13047 Jul 13 08:49	1° B 18'50	2°58'35
minimum elong	13046 Jul 29 14:03	17° B 48'59	2°31'16		13047 Jul 14 09:45	30° R B	
min. Earth dist.	13046 Jul 31 20:05	15° B 12'51	0.64405 AU	min. Earth dist.	13047 Jul 15 01:00	29° B 12'25	0.66184 AU
morning rise	13046 Aug 04 12:06	11° B 36'38		morning rise	13047 Jul 18 22:36	25° B 00'16	
desc. node	13046 Aug 08 07:08	9° B 26'39		direct	13047 Jul 25 05:48	22° B 19'34	
direct	13046 Aug 11 02:19	8° B 59'06		desc. node	13047 Jul 26 04:30	22° B 22'49	
morning max el	13046 Aug 24 18:50	16° B 58'16	27°28'35	morning max el	13047 Aug 07 05:56	0° B 03'07	26°31'09
	13046 Sep 04 14:48	0° B			13047 Aug 07 04:42	0° B	
	13046 Sep 23 09:44	0° B			13047 Aug 29 13:15	0° B	
morning set	13046 Sep 29 00:06	10° B 37'13		morning set	13047 Sep 12 03:18	23° B 34'01	
asc. node	13046 Oct 02 04:41	17° B 01'54			13047 Sep 15 11:38	0° B	
max. Earth dist.	13046 Oct 03 15:18	20° B 00'35	1.32902 AU	max. Earth dist.	13047 Sep 16 02:53	1° B 15'00	1.34491 AU
				asc. node	13047 Sep 19 01:16	7° B 07'41	
superior conj	13046 Oct 07 03:04	27° B 23'18	0°45'49				
minimum elong	13046 Oct 07 01:04	27° B 12'36	0°45'48	superior conj	13047 Sep 21 01:41	11° B 16'11	0°19'07
	13046 Oct 08 08:13	0° B		minimum elong	13047 Sep 21 00:40	11° B 10'53	0°19'00
evening rise	13046 Oct 14 03:23	12° B 31'09		evening rise	13047 Sep 28 12:49	26° B 56'10	
	13046 Oct 22 22:08	0° B			13047 Sep 30 00:12	0° B	
desc. node	13046 Nov 04 03:27	17° B 28'42		evening max el	13047 Oct 17 19:29	28° B 41'48	21°03'02
evening max el	13046 Nov 05 02:00	18° B 25'24	22°37'59		13047 Oct 19 04:59	0° B	
retrograde	13046 Nov 18 02:03	24° B 52'31		desc. node	13047 Oct 22 00:49	2° B 08'35	
evening set	13046 Nov 21 19:56	24° B 21'54		retrograde	13047 Oct 29 12:56	4° B 31'29	
min. Earth dist.	13046 Nov 29 10:06	20° B 56'22	0.54821 AU	evening set	13047 Nov 01 01:15	4° B 16'33	
inferior conj	13046 Nov 30 09:14	20° B 23'37	-5°54'15	inferior conj	13047 Nov 10 00:41	0° B 22'38	-5°11'34
minimum elong	13046 Nov 30 07:15	20° B 26'25	5°53'13	minimum elong	13047 Nov 09 15:31	0° B 35'36	5°08'49
morning rise	13046 Dec 08 19:55	16° B 35'42		min. Earth dist.	13047 Nov 10 16:14	0° B 00'38	0.54540 AU
direct	13046 Dec 12 00:33	16° B 12'23			13047 Nov 10 16:41	30° R B	
morning max el	13046 Dec 23 15:33	21° B 45'11	21°10'40	morning rise	13047 Nov 18 06:13	26° B 30'44	
asc. node	13046 Dec 29 05:11	28° B 13'42		direct	13047 Nov 22 08:15	25° B 54'58	
	13046 Dec 30 11:15	0° B			13047 Dec 02 18:45	0° B	
morning set	13047 Jan 12 10:42	23° B 45'02		morning max el	13047 Dec 05 07:06	2° B 09'24	22°53'15
	13047 Jan 15 10:13	0° \approx		asc. node	13047 Dec 16 02:16	16° B 01'25	
					13047 Dec 23 19:01	0° B	
superior conj	13047 Jan 19 17:57	9° \approx 02'28	1°21'47	morning set	13047 Dec 27 21:58	8° B 31'26	
minimum elong	13047 Jan 19 20:19	9° \approx 14'38	1°22'23				
max. Earth dist.	13047 Jan 24 11:39	18° \approx 37'32	1.35335 AU	superior conj	13048 Jan 03 20:55	23° B 29'21	1°33'11

minimum elong	13048 Jan 03 22:21	23°  36'57	1°34'03			13048 Nov 29 07:30	0° 	
	13048 Jan 06 22:47	0° 		asc. node		13048 Dec 01 23:15	4°  33'53	
max. Earth dist.	13048 Jan 07 04:38	0°  30'29	1.33604 AU	morning set		13048 Dec 11 09:52	23°  16'22	
evening rise	13048 Jan 11 19:42	9°  52'51				13048 Dec 14 12:09	0° 	
desc. node	13048 Jan 17 23:34	21°  28'06						
	13048 Jan 22 21:58	0° 		superior conj		13048 Dec 18 04:58	8°  08'32	1°38'06
	13048 Feb 13 19:10	0° 		minimum elong		13048 Dec 18 05:17	8°  10'16	1°39'06
evening max el	13048 Feb 15 10:15	1°  37'27	27°13'31	max. Earth dist.		13048 Dec 20 05:08	12°  31'22	1.32319 AU
retrograde	13048 Feb 28 22:00	9°  03'57		evening rise		13048 Dec 25 13:21	23°  34'59	
evening set	13048 Mar 06 14:29	6°  32'17				13048 Dec 28 15:52	0° 	
min. Earth dist.	13048 Mar 10 12:01	2°  52'39	0.65076 AU	desc. node		13049 Jan 03 20:23	11°  28'40	
inferior conj	13048 Mar 12 20:16	0°  17'03	-0°02'48			13049 Jan 15 13:17	0° 	
minimum elong	13048 Mar 12 20:21	0°  16'50	0°02'40	evening max el		13049 Jan 27 21:58	14°  46'29	27°32'55
transit middle	13048 Mar 12 20:21	0°  16'50	0°02'40	retrograde		13049 Feb 10 17:12	22°  11'14	
transit begin	13048 Mar 12 17:21	0°  25'09		evening set		13049 Feb 17 14:51	19°  46'36	
transit end	13048 Mar 12 23:20	0°  08'33		min. Earth dist.		13049 Feb 21 09:09	16°  36'06	0.63194 AU
asc. node	13048 Mar 12 23:44	0°  07'27		inferior conj		13049 Feb 24 04:14	13°  49'23	-1°12'39
	13048 Mar 13 02:25	30°  18'18		minimum elong		13049 Feb 24 06:37	13°  43'27	1°11'18
morning rise	13048 Mar 19 03:53	24°  47'56		asc. node		13049 Feb 27 21:10	10°  26'31	
direct	13048 Mar 21 20:09	24°  10'02		morning rise		13049 Mar 03 00:52	8°  35'55	
morning max el	13048 Mar 28 04:25	27°  28'06	17°57'32	direct		13049 Mar 05 09:20	8°  09'26	
	13048 Mar 30 11:44	0° 		morning max el		13049 Mar 11 22:11	11°  29'57	17°46'33
morning set	13048 Apr 14 23:42	23°  52'04				13049 Mar 24 13:01	0° 	
desc. node	13048 Apr 15 01:41	24°  00'13		morning set		13049 Mar 28 04:29	6°  17'04	
	13048 Apr 18 17:14	0° 		desc. node		13049 Apr 01 22:15	14°  26'45	
superior conj	13048 Apr 29 04:49	16°  53'20	-1°35'03	superior conj		13049 Apr 09 12:36	27°  11'30	-0°56'29
minimum elong	13048 Apr 28 19:46	16°  17'28	1°34'45	minimum elong		13049 Apr 09 06:53	26°  04'58	0°56'01
max. Earth dist.	13048 May 02 21:58	22°  44'45	1.45539 AU			13049 Apr 11 05:47	0° 	
	13048 May 07 13:29	0° 		max. Earth dist.		13049 Apr 15 16:04	7°  08'16	1.44547 AU
evening rise	13048 May 15 05:59	11°  52'33		evening rise		13049 Apr 24 17:13	21°  17'11	
	13048 May 27 04:22	0° 				13049 Apr 30 10:42	0° 	
greatest brilliancy	13048 May 29 06:12	3°  04'06	-0.6m			13049 May 22 00:28	0° 	
asc. node	13048 Jun 08 21:01	17°  10'20		evening max el		13049 May 23 23:35	2°  05'52	20°45'34
evening max el	13048 Jun 09 22:58	18°  18'13	19°41'51	asc. node		13049 May 26 18:08	4°  34'49	
retrograde	13048 Jun 17 07:23	22°  27'48		retrograde		13049 Jun 01 06:23	6°  54'02	
evening set	13048 Jun 21 01:40	21°  05'32		evening set		13049 Jun 05 10:37	5°  15'18	
inferior conj	13048 Jun 26 09:49	15°  08'56	3°11'56			13049 Jun 10 01:17	30°  11'11	
minimum elong	13048 Jun 26 10:20	15°  07'14	3°10'55	inferior conj		13049 Jun 10 16:47	29°  10'35	3°11'38
min. Earth dist.	13048 Jun 27 13:03	13°  38'00	0.67537 AU	minimum elong		13049 Jun 10 16:17	29°  10'22	3°10'37
morning rise	13048 Jul 01 18:36	8°  46'00		min. Earth dist.		13049 Jun 11 06:12	28°  20'12	0.68429 AU
direct	13048 Jul 07 15:30	6°  11'12		morning rise		13049 Jun 15 21:40	22°  47'20	
desc. node	13048 Jul 12 01:48	7°  22'52		direct		13049 Jun 21 06:31	20°  25'33	
morning max el	13048 Jul 19 16:38	13°  24'27	25°13'30	desc. node		13049 Jun 28 23:00	23°  15'34	
	13048 Aug 02 03:20	0° 		morning max el		13049 Jul 02 02:53	26°  15'35	23°45'22
	13048 Aug 21 07:57	0° 				13049 Jul 04 23:49	0° 	
morning set	13048 Aug 24 15:00	5°  17'42				13049 Jul 26 17:30	0° 	
max. Earth dist.	13048 Aug 28 05:19	12°  21'42	1.36513 AU	morning set		13049 Aug 06 06:30	17°  06'16	
				max. Earth dist.		13049 Aug 10 02:53	23°  04'32	1.38811 AU
superior conj	13048 Sep 03 14:55	24°  14'08	-0°12'07			13049 Aug 13 14:40	0° 	
minimum elong	13048 Sep 03 15:41	24°  14'57	0°12'09	superior conj		13049 Aug 17 15:07	7°  26'01	-0°46'20
behind sun begin	13048 Sep 03 11:26	24°  12'51		minimum elong		13049 Aug 17 18:25	7°  41'32	0°46'14
behind sun end	13048 Sep 03 19:57	25°  10'04		asc. node		13049 Aug 22 18:28	17°  17'08	
asc. node	13048 Sep 04 21:52	27°  14'09		evening rise		13049 Aug 26 17:26	25°  01'07	
	13048 Sep 06 06:52	0° 				13049 Aug 29 07:00	0° 	
evening rise	13048 Sep 11 18:25	11°  08'46		evening max el		13049 Sep 11 23:10	21°  08'00	18°51'13
	13048 Sep 21 19:15	0° 		retrograde		13049 Sep 20 11:57	25°  04'51	
evening max el	13048 Sep 29 02:33	9°  40'46	19°46'20	evening set		13049 Sep 22 09:11	25°  03'07	
desc. node	13048 Oct 07 22:16	14°  38'17		desc. node		13049 Sep 24 19:46	24°  04'56	
retrograde	13048 Oct 09 04:52	14°  42'56		inferior conj		13049 Sep 30 14:32	21°  03'49	-1°49'42
evening set	13048 Oct 11 02:39	14°  32'56		minimum elong		13049 Sep 30 09:56	21°  02'04	1°47'37
inferior conj	13048 Oct 19 22:44	10°  30'47	-3°39'50	min. Earth dist.		13049 Oct 03 15:02	19°  04'34	0.56676 AU
minimum elong	13048 Oct 19 13:33	10°  44'59	3°36'11	morning rise		13049 Oct 08 07:25	16°  02'24	
min. Earth dist.	13048 Oct 22 01:09	9°  12'42	0.55194 AU	direct		13049 Oct 14 00:52	15°  01'36	
morning rise	13048 Oct 27 22:51	6°  13'56		morning max el		13049 Oct 28 06:12	22°  02'54	26°18'15
direct	13048 Nov 01 21:37	5° 19'56				13049 Nov 04 00:31	0°	
morning max el	13048 Nov 15 17:21	12° 11'30	24°41'46					

asc. node	13049 Nov 18 20:09	23° \mathbb{M} 38'55		morning rise	13050 Sep 19 10:44	27° \mathbb{M} 13'35	
	13049 Nov 22 01:48	0° \mathbb{A}		direct	13050 Sep 25 18:14	25° \mathbb{M} 26'59	
morning set	13049 Nov 25 20:38	7° \mathbb{A} 53'57			13050 Oct 06 12:21	0° \mathbb{A}	
				morning max el	13050 Oct 10 02:00	3° \mathbb{A} 09'25	27°26'16
superior conj	13049 Dec 02 15:47	22° \mathbb{A} 52'18	1°36'55		13050 Oct 29 15:03	0° \mathbb{M}	
minimum elong	13049 Dec 02 15:02	22° \mathbb{A} 48'07	1°37'52	asc. node	13050 Nov 05 16:58	13° \mathbb{M} 07'53	
max. Earth dist.	13049 Dec 03 11:13	24° \mathbb{A} 40'19	1.31522 AU	morning set	13050 Nov 10 04:31	22° \mathbb{M} 19'41	
	13049 Dec 05 21:08	0° \mathbb{B}			13050 Nov 13 17:34	0° \mathbb{A}	
evening rise	13049 Dec 09 14:40	8° \mathbb{B} 01'14					
	13049 Dec 21 02:05	0° \mathbb{A}		superior conj	13050 Nov 17 03:28	7° \mathbb{A} 35'01	1°29'54
desc. node	13049 Dec 21 17:17	1° \mathbb{A} 04'51		minimum elong	13050 Nov 17 01:51	7° \mathbb{A} 25'57	1°30'37
evening max el	13050 Jan 10 05:45	27° \mathbb{A} 17'35	27°20'34	max. Earth dist.	13050 Nov 16 19:45	6° \mathbb{A} 51'52	1.31235 AU
	13050 Jan 13 08:37	0° \mathbb{H}		evening rise	13050 Nov 23 21:16	22° \mathbb{A} 26'39	
retrograde	13050 Jan 24 04:27	4° \mathbb{H} 34'55			13050 Nov 27 12:10	0° \mathbb{B}	
evening set	13050 Jan 31 01:40	2° \mathbb{H} 25'53		desc. node	13050 Dec 08 14:17	20° \mathbb{B} 07'20	
	13050 Feb 03 09:34	30° \mathbb{R} \mathbb{A}			13050 Dec 15 08:58	0° \mathbb{A}	
min. Earth dist.	13050 Feb 03 20:17	29° \mathbb{A} 37'35	0.61088 AU	evening max el	13050 Dec 23 07:03	9° \mathbb{A} 00'23	26°33'35
inferior conj	13050 Feb 06 22:53	26° \mathbb{A} 53'51	-2°31'29	retrograde	13051 Jan 06 05:59	16° \mathbb{A} 07'31	
minimum elong	13050 Feb 07 04:15	26° \mathbb{A} 42'03	2°28'47	evening set	13051 Jan 12 19:09	14° \mathbb{A} 22'14	
morning rise	13050 Feb 14 09:49	21° \mathbb{A} 58'48		min. Earth dist.	13051 Jan 16 20:54	11° \mathbb{A} 45'23	0.58925 AU
asc. node	13050 Feb 14 18:36	21° \mathbb{A} 52'56		inferior conj	13051 Jan 20 00:37	9° \mathbb{A} 20'51	-3°53'43
direct	13050 Feb 16 12:46	21° \mathbb{A} 40'00		minimum elong	13051 Jan 20 08:41	9° \mathbb{A} 05'23	3°50'16
morning max el	13050 Feb 23 14:23	25° \mathbb{A} 13'17	17°53'40	morning rise	13051 Jan 28 01:11	4° \mathbb{A} 46'46	
	13050 Feb 27 13:58	0° \mathbb{H}		direct	13051 Jan 30 02:23	4° \mathbb{A} 31'57	
morning set	13050 Mar 11 05:05	19° \mathbb{H} 37'34		asc. node	13051 Feb 01 16:00	4° \mathbb{A} 56'19	
	13050 Mar 16 22:56	0° \mathbb{Y}		morning max el	13051 Feb 07 01:17	8° \mathbb{A} 27'44	18°20'18
desc. node	13050 Mar 19 18:48	5° \mathbb{Y} 00'18			13051 Feb 20 22:03	0° \mathbb{H}	
				morning set	13051 Feb 22 19:43	3° \mathbb{H} 36'13	
superior conj	13050 Mar 21 20:39	8° \mathbb{Y} 37'24	-0°16'17				
minimum elong	13050 Mar 21 19:12	8° \mathbb{Y} 31'07	0°16'06	superior conj	13051 Mar 04 02:59	21° \mathbb{H} 04'37	0°19'58
max. Earth dist.	13050 Mar 29 06:15	21° \mathbb{Y} 05'00	1.42952 AU	minimum elong	13051 Mar 04 04:26	21° \mathbb{H} 11'12	0°19'59
	13050 Apr 03 19:12	0° \mathbb{B}		desc. node	13051 Mar 06 15:18	25° \mathbb{H} 37'00	
evening rise	13050 Apr 04 13:38	1° \mathbb{B} 12'40			13051 Mar 09 02:49	0° \mathbb{Y}	
	13050 Apr 23 22:56	0° \mathbb{I}		max. Earth dist.	13051 Mar 11 16:09	4° \mathbb{Y} 24'52	1.40927 AU
evening max el	13050 May 06 18:51	15° \mathbb{I} 54'38	22°00'09	evening rise	13051 Mar 16 04:57	12° \mathbb{Y} 00'06	
asc. node	13050 May 13 15:21	20° \mathbb{I} 56'05			13051 Mar 27 16:58	0° \mathbb{B}	
retrograde	13050 May 16 04:21	21° \mathbb{I} 26'01		evening max el	13051 Apr 19 10:23	29° \mathbb{B} 45'00	23°20'29
evening set	13050 May 20 19:23	19° \mathbb{I} 31'30			13051 Apr 19 16:26	0° \mathbb{I}	
inferior conj	13050 May 26 01:59	13° \mathbb{I} 12'43	3°00'20	retrograde	13051 Apr 29 23:47	5° \mathbb{I} 58'07	
minimum elong	13050 May 26 00:36	13° \mathbb{I} 17'30	2°59'14	asc. node	13051 Apr 30 12:39	5° \mathbb{I} 56'48	
min. Earth dist.	13050 May 26 02:16	13° \mathbb{I} 11'41	0.68849 AU	evening set	13051 May 05 02:20	3° \mathbb{I} 49'12	
morning rise	13050 May 31 05:38	6° \mathbb{I} 59'12			13051 May 08 13:06	30° \mathbb{R} \mathbb{B}	
direct	13050 Jun 05 01:42	4° \mathbb{I} 55'22		inferior conj	13051 May 10 11:24	27° \mathbb{B} 22'57	2°38'46
morning max el	13050 Jun 14 14:50	10° \mathbb{I} 32'13	22°16'21	minimum elong	13051 May 10 09:27	27° \mathbb{B} 29'41	2°37'35
desc. node	13050 Jun 15 20:06	11° \mathbb{I} 48'05		min. Earth dist.	13051 May 09 23:01	28° \mathbb{B} 05'38	0.68803 AU
	13050 Jun 29 23:02	0° \mathbb{B}		morning rise	13051 May 15 16:29	21° \mathbb{B} 16'36	
morning set	13050 Jul 17 21:35	27° \mathbb{B} 19'45		direct	13051 May 19 23:44	19° \mathbb{B} 33'22	
	13050 Jul 19 13:00	0° \mathbb{Q}		morning max el	13051 May 28 07:48	24° \mathbb{B} 19'42	20°54'11
max. Earth dist.	13050 Jul 23 02:31	5° \mathbb{Q} 54'13	1.41130 AU		13051 Jun 02 07:55	0° \mathbb{I}	
				desc. node	13051 Jun 02 17:02	0° \mathbb{I} 28'32	
superior conj	13050 Jul 30 22:04	19° \mathbb{Q} 24'48	-1°20'47		13051 Jun 23 07:26	0° \mathbb{B}	
minimum elong	13050 Jul 31 04:01	19° \mathbb{Q} 51'17	1°20'41	morning set	13051 Jun 27 12:14	6° \mathbb{B} 29'05	
	13050 Aug 05 17:59	0° \mathbb{M}		max. Earth dist.	13051 Jul 05 08:46	18° \mathbb{B} 57'55	1.43184 AU
asc. node	13050 Aug 09 15:07	7° \mathbb{M} 13'21					
evening rise	13050 Aug 10 06:28	8° \mathbb{M} 25'02		superior conj	13051 Jul 12 07:17	0° \mathbb{Q} 25'56	-1°50'54
	13050 Aug 22 21:20	0° \mathbb{A}		minimum elong	13051 Jul 12 14:21	0° \mathbb{Q} 55'47	1°51'10
evening max el	13050 Aug 26 05:47	3° \mathbb{A} 57'34	18°17'21		13051 Jul 12 01:07	0° \mathbb{Q}	
retrograde	13050 Sep 02 14:12	7° \mathbb{A} 40'56		evening rise	13051 Jul 24 05:05	21° \mathbb{Q} 08'55	
evening set	13050 Sep 04 17:25	7° \mathbb{A} 22'48		asc. node	13051 Jul 27 11:48	26° \mathbb{Q} 58'02	
desc. node	13050 Sep 11 17:16	3° \mathbb{A} 05'12			13051 Jul 29 05:16	0° \mathbb{M}	
inferior conj	13050 Sep 12 04:07	2° \mathbb{A} 42'33	-0°08'27	evening max el	13051 Aug 09 18:06	16° \mathbb{M} 58'31	18°03'27
minimum elong	13050 Sep 12 03:49	2° \mathbb{A} 43'11	0°08'23	retrograde	13051 Aug 16 09:25	20° \mathbb{M} 23'20	
transit middle	13050 Sep 12 03:49	2° \mathbb{A} 43'11	0°08'23	evening set	13051 Aug 18 20:29	19° \mathbb{M} 55'04	
transit begin	13050 Sep 12 00:50	2° \mathbb{A} 49'25		inferior conj	13051 Aug 25 13:48	14° \mathbb{M} 54'33	1°11'38
transit end	13050 Sep 12 06:47	2° \mathbb{A} 36'57		minimum elong	13051 Aug 25 15:48	14° \mathbb{M} 49'43	1°10'36
	13050 Sep 15 10:12	30° \mathbb{R} \mathbb{M}		min. Earth dist.	13051 Aug 28 16:57	11° \mathbb{M} 53'48	0.60995 AU
min. Earth dist.	13050 Sep 15 11:42	29° \mathbb{M} 57'01	0.58720 AU	desc. node	13051 Aug 29 14:45	11° \mathbb{M} 04'51	


































































































































morning rise	13051 Sep 01 08:20	8°♎58'06		desc. node	13052 Aug 15 12:14	20°♏25'00	
direct	13051 Sep 07 23:16	6°♎46'06		direct	13052 Aug 20 14:17	18°♏57'43	
morning max el	13051 Sep 22 05:08	14°♎42'22	27°56'55	morning max el	13052 Sep 03 13:36	26°♏59'34	27°49'00
	13051 Oct 04 14:33	0°♏			13052 Sep 06 09:35	0°♎	
	13051 Oct 22 03:00	0°♎			13052 Sep 27 06:50	0°♏	
asc. node	13051 Oct 23 13:41	2°♎53'46		morning set	13052 Oct 08 03:43	20°♏15'33	
morning set	13051 Oct 25 07:38	6°♎28'54		asc. node	13052 Oct 09 10:18	22°♏50'43	
max. Earth dist.	13051 Oct 31 03:03	18°♎57'10	1.31463 AU		13052 Oct 12 20:32	0°♎	
				max. Earth dist.	13052 Oct 13 05:06	0°♎45'40	1.32221 AU
superior conj	13051 Nov 01 14:09	22°♎11'13	1°17'10	superior conj	13052 Oct 15 21:54	6°♎35'06	0°58'50
minimum elong	13051 Nov 01 12:00	21°♎59'14	1°17'36	minimum elong	13052 Oct 15 19:40	6°♎22'57	0°58'59
	13051 Nov 05 02:37	0°♎		evening rise	13052 Oct 22 18:16	21°♎31'45	
evening rise	13051 Nov 08 07:07	6°♎58'43			13052 Oct 26 19:20	0°♎	
	13051 Nov 20 03:02	0°♎		desc. node	13052 Nov 11 08:37	25°♎34'27	
desc. node	13051 Nov 25 11:23	8°♎23'19			13052 Nov 15 09:58	0°♎	
evening max el	13051 Dec 04 23:57	19°♎51'02	25°15'09	evening max el	13052 Nov 15 10:20	0°♎00'55	23°36'44
retrograde	13051 Dec 18 19:56	26°♎47'41		retrograde	13052 Nov 28 21:19	6°♎43'08	
evening set	13051 Dec 24 15:01	25°♎31'45		evening set	13052 Dec 03 11:01	5°♎57'38	
min. Earth dist.	13051 Dec 29 12:00	22°♎51'00	0.56930 AU	min. Earth dist.	13052 Dec 09 20:42	2°♎53'39	0.55385 AU
inferior conj	13052 Jan 01 06:21	21°♎01'11	-5°07'12	inferior conj	13052 Dec 11 15:35	1°♎50'25	-5°51'26
minimum elong	13052 Jan 01 14:37	20°♎47'26	5°04'27	minimum elong	13052 Dec 11 18:43	1°♎45'47	5°50'14
morning rise	13052 Jan 09 16:35	16°♎49'23			13052 Dec 14 21:37	30°♎♎	
direct	13052 Jan 11 22:02	16°♎34'53		morning rise	13052 Dec 20 04:12	27°♎57'11	
asc. node	13052 Jan 19 13:19	19°♎38'46		direct	13052 Dec 22 21:56	27°♎38'46	
morning max el	13052 Jan 21 02:57	21°♎02'25	19°08'26		13052 Dec 30 04:58	0°♎	
	13052 Jan 28 00:58	0°♎		morning max el	13053 Jan 02 15:38	2°♎46'17	20°19'38
morning set	13052 Feb 06 19:56	17°♎59'59		asc. node	13053 Jan 05 10:32	5°♎46'10	
	13052 Feb 12 21:23	0°♎			13053 Jan 19 19:24	0°♎	
superior conj	13052 Feb 15 03:12	4°♎21'15	0°49'39	morning set	13053 Jan 21 02:21	2°♎37'52	
minimum elong	13052 Feb 15 05:53	4°♎34'09	0°49'46	superior conj	13053 Jan 28 16:41	18°♎13'23	1°12'06
desc. node	13052 Feb 21 11:49	16°♎13'40		minimum elong	13053 Jan 28 19:23	18°♎27'00	1°12'30
max. Earth dist.	13052 Feb 21 23:06	17°♎04'29	1.38694 AU	max. Earth dist.	13053 Feb 03 06:16	29°♎09'32	1.36494 AU
evening rise	13052 Feb 25 17:33	23°♎42'58			13053 Feb 03 16:53	0°♎	
	13052 Feb 29 10:38	0°♎		evening rise	13053 Feb 07 01:24	6°♎14'08	
	13052 Mar 20 11:46	0°♎		desc. node	13053 Feb 07 08:24	6°♎45'59	
evening max el	13052 Apr 01 00:06	13°♎37'09	24°40'12		13053 Feb 21 07:02	0°♎	
retrograde	13052 Apr 12 15:37	20°♎25'12		evening max el	13053 Mar 14 13:27	27°♎27'49	25°52'30
asc. node	13052 Apr 16 10:00	19°♎22'38			13053 Mar 17 08:09	0°♎	
evening set	13052 Apr 18 05:56	18°♎04'15		retrograde	13053 Mar 27 02:53	4°♎40'24	
min. Earth dist.	13052 Apr 22 18:20	12°♎56'47	0.68305 AU	evening set	13053 Apr 02 04:33	2°♎11'07	
inferior conj	13052 Apr 23 19:12	11°♎34'00	2°07'10	asc. node	13053 Apr 03 07:25	1°♎10'10	
minimum elong	13052 Apr 23 17:03	11°♎41'12	2°05'57		13053 Apr 04 10:23	30°♎♎	
morning rise	13052 Apr 29 04:21	5°♎36'02		min. Earth dist.	13053 Apr 06 10:11	27°♎38'54	0.67364 AU
direct	13052 May 02 23:18	4°♎13'48		inferior conj	13053 Apr 07 23:25	25°♎41'38	1°25'15
morning max el	13052 May 10 08:10	8°♎19'16	19°44'17	minimum elong	13053 Apr 07 21:34	25°♎47'27	1°24'15
desc. node	13052 May 19 13:52	19°♎47'03		morning rise	13053 Apr 13 15:15	19°♎53'17	
greatest brilliancy	13052 May 23 03:06	24°♎52'42	-0.6m	direct	13053 Apr 16 22:47	18°♎50'36	
	13052 May 26 14:18	0°♎		morning max el	13053 Apr 23 16:01	22°♎28'03	18°49'39
morning set	13052 Jun 05 13:27	15°♎07'02			13053 Apr 29 21:41	0°♎	
	13052 Jun 15 03:14	0°♎		desc. node	13053 May 06 10:37	9°♎33'17	
max. Earth dist.	13052 Jun 16 21:41	2°♎47'35	1.44735 AU	greatest brilliancy	13053 May 07 14:38	11°♎19'58	-0.8m
superior conj	13052 Jun 21 16:30	10°♎25'57	-2°10'08	morning set	13053 May 15 22:40	24°♎13'45	
minimum elong	13052 Jun 21 20:35	10°♎42'22	2°10'59		13053 May 19 15:39	0°♎	
	13052 Jul 03 13:22	0°♎		max. Earth dist.	13053 May 30 15:03	17°♎06'41	1.45624 AU
evening rise	13052 Jul 05 08:16	3°♎00'50		superior conj	13053 Jun 01 06:10	19°♎39'50	-2°11'44
asc. node	13052 Jul 13 08:33	16°♎26'15		minimum elong	13053 Jun 01 02:53	19°♎26'59	2°12'38
	13052 Jul 22 23:53	0°♎			13053 Jun 07 19:36	0°♎	
evening max el	13052 Jul 23 08:20	0°♎21'20	18°08'27	evening rise	13053 Jun 16 11:45	13°♎52'04	
retrograde	13052 Jul 29 17:05	3°♎41'56			13053 Jun 26 13:43	0°♎	
evening set	13052 Aug 01 12:23	3°♎00'42		asc. node	13053 Jun 30 05:23	5°♎32'04	
	13052 Aug 05 11:22	30°♎♎		evening max el	13053 Jul 06 21:25	13°♎58'21	18°31'30
inferior conj	13052 Aug 07 15:45	27°♎42'14	2°08'56	retrograde	13053 Jul 13 08:55	17°♎28'12	
minimum elong	13052 Aug 07 18:17	27°♎35'16	2°07'36	evening set	13053 Jul 16 12:43	16°♎31'59	
min. Earth dist.	13052 Aug 10 07:52	24°♎47'32	0.63220 AU	inferior conj	13053 Jul 22 05:56	10°♎57'41	2°46'05
morning rise	13052 Aug 13 22:19	21°♎28'28					

minimum elong	13053 Jul 22 07:59	10°Ω51'27	2°44'51	minimum elong	13054 Jul 06 05:55	24° Ω 29'32	3°05'29
min. Earth dist.	13053 Jul 24 08:10	8°Ω26'33	0.65198 AU	min. Earth dist.	13054 Jul 07 16:25	22° Ω 37'53	0.66810 AU
morning rise	13053 Jul 28 02:09	4°Ω35'39		morning rise	13054 Jul 11 17:01	18° Ω 09'21	
desc. node	13053 Aug 02 09:39	2°Ω00'23		direct	13054 Jul 17 20:13	15° Ω 29'48	
direct	13053 Aug 03 13:45	1°Ω55'28		desc. node	13054 Jul 20 07:02	15° Ω 51'45	
morning max el	13053 Aug 17 00:29	9°Ω50'46	27°07'21	morning max el	13054 Jul 30 11:21	23° Ω 02'51	25°59'59
	13053 Sep 01 20:56	0° Π			13054 Aug 05 14:56	0° Ω	
	13053 Sep 19 17:25	0° Ω			13054 Aug 26 04:46	0° Π	
morning set	13053 Sep 21 14:06	3° Ω 33'26		morning set	13054 Sep 04 11:12	16° Π 12'41	
max. Earth dist.	13053 Sep 25 22:27	12° Ω 11'31	1.33509 AU	max. Earth dist.	13054 Sep 08 05:24	23° Π 17'45	1.35298 AU
asc. node	13053 Sep 26 06:53	12° Ω 54'34			13054 Sep 11 15:29	0° Ω	
				asc. node	13054 Sep 13 03:27	3° Ω 00'40	
superior conj	13053 Sep 30 00:36	20° Ω 41'25	0°35'06	superior conj	13054 Sep 13 19:36	4° Ω 22'31	0°06'23
minimum elong	13053 Sep 29 22:55	20° Ω 32'32	0°35'03	minimum elong	13054 Sep 13 19:14	4° Ω 20'40	0°06'17
	13053 Oct 04 09:14	0° Π		behind sun begin	13054 Sep 13 13:36	3° Ω 52'04	
evening rise	13053 Oct 07 04:55	6° Π 01'17		behind sun end	13054 Sep 14 00:52	4° Ω 49'19	
	13053 Oct 19 23:13	0° ♂		evening rise	13054 Sep 21 12:57	20° Ω 20'58	
evening max el	13053 Oct 27 22:30	10° ♂ 04'28	21°55'57		13054 Sep 26 07:52	0° Π	
desc. node	13053 Oct 29 05:56	11° ♂ 17'45		evening max el	13054 Oct 09 21:30	20° Π 36'57	20°27'58
retrograde	13053 Nov 09 11:40	16° ♂ 18'07		desc. node	13054 Oct 16 03:21	25° Π 04'56	
evening set	13053 Nov 12 15:22	15° ♂ 55'53		retrograde	13054 Oct 20 22:44	26° Π 06'25	
inferior conj	13053 Nov 21 10:11	12° ♂ 00'47	-5°43'32	evening set	13054 Oct 23 02:47	25° Π 54'41	
minimum elong	13053 Nov 21 04:31	12° ♂ 08'45	5°41'58	inferior conj	13054 Nov 01 02:39	21° Π 59'11	-4°37'04
min. Earth dist.	13053 Nov 21 03:11	12° ♂ 10'36	0.54585 AU	minimum elong	13054 Oct 31 16:34	22° Π 13'51	4°33'37
morning rise	13053 Nov 29 18:44	8° ♂ 13'27		min. Earth dist.	13054 Nov 02 10:23	21° Π 12'59	0.54707 AU
direct	13053 Dec 03 08:00	7° ♂ 45'39		morning rise	13054 Nov 09 05:53	17° Π 58'42	
morning max el	13053 Dec 15 14:07	13° ♂ 37'01	21°52'30	direct	13054 Nov 13 17:08	17° Π 15'41	
asc. node	13053 Dec 23 07:39	23° ♂ 01'52		morning max el	13054 Nov 27 02:13	23° Π 47'13	23°39'34
	13053 Dec 27 15:05	0° ♂			13054 Dec 02 16:19	0° ♂	
morning set	13054 Jan 05 12:28	17° ♂ 22'42		asc. node	13054 Dec 10 04:41	11° ♂ 09'50	
	13054 Jan 11 11:09	0° ≈			13054 Dec 19 24:00	0° ♂	
superior conj	13054 Jan 12 15:39	2° ≈ 30'13	1°27'25	morning set	13054 Dec 21 00:14	2° ♂ 08'41	
minimum elong	13054 Jan 12 17:39	2° ≈ 40'42	1°28'08	superior conj	13054 Dec 27 21:04	17° ♂ 02'56	1°36'02
max. Earth dist.	13054 Jan 16 18:31	11° ≈ 00'12	1.34551 AU	minimum elong	13054 Dec 27 22:02	17° ♂ 08'08	1°36'58
evening rise	13054 Jan 21 01:05	19° ≈ 24'52		max. Earth dist.	13054 Dec 30 14:47	22° ♂ 55'26	1.33003 AU
desc. node	13054 Jan 25 05:04	27° ≈ 09'55			13055 Jan 03 00:17	0° ≈	
	13054 Jan 26 19:08	0° ♂		evening rise	13055 Jan 04 13:06	3° ≈ 06'02	
	13054 Feb 15 08:41	0° ♀		desc. node	13055 Jan 12 01:49	17° ≈ 20'40	
evening max el	13054 Feb 25 03:07	11° ♀ 11'13	26°50'01		13055 Jan 19 14:57	0° ♂	
retrograde	13054 Mar 10 08:43	18° ♀ 36'05		evening max el	13055 Feb 07 16:19	24° ♂ 37'21	27°25'25
evening set	13054 Mar 16 20:19	16° ♀ 03'38			13055 Feb 14 13:59	0° ♀	
min. Earth dist.	13054 Mar 20 20:27	12° ♀ 05'15	0.66015 AU	retrograde	13055 Feb 21 08:02	2° ♀ 03'45	
asc. node	13054 Mar 21 04:52	11° ♀ 41'02			13055 Feb 27 12:33	30° ♂	
inferior conj	13054 Mar 22 21:52	9° ♀ 40'57	0°32'33	evening set	13055 Feb 28 03:04	29° ♂ 34'28	
minimum elong	13054 Mar 22 21:01	9° ♀ 43'28	0°32'09	min. Earth dist.	13055 Mar 03 23:05	26° ♂ 07'30	0.64308 AU
morning rise	13054 Mar 28 23:00	4° ♀ 04'01		inferior conj	13055 Mar 06 12:03	23° ♂ 25'52	-0°31'09
direct	13054 Mar 31 20:23	3° ♀ 18'05		minimum elong	13055 Mar 06 13:00	23° ♂ 23'21	0°30'32
morning max el	13054 Apr 07 05:46	6° ♀ 40'07	18°11'35	asc. node	13055 Mar 08 02:20	21° ♂ 46'21	
desc. node	13054 Apr 23 07:17	29° ♀ 39'38		morning rise	13055 Mar 13 00:56	18° ♂ 02'44	
	13054 Apr 23 12:21	0° ♂		direct	13055 Mar 15 13:38	17° ♂ 30'07	
morning set	13054 Apr 26 08:58	4° ♂ 35'53		morning max el	13055 Mar 21 22:55	20° ♂ 48'10	17°50'38
					13055 Mar 29 00:35	0° ♀	
superior conj	13054 May 11 14:01	28° ♂ 45'23	-1°53'12	morning set	13055 Apr 07 23:40	16° ♀ 21'13	
minimum elong	13054 May 11 05:12	28° ♂ 10'49	1°53'18	desc. node	13055 Apr 10 03:53	20° ♀ 00'24	
	13054 May 12 09:05	0° Π			13055 Apr 16 04:22	0° ♂	
max. Earth dist.	13054 May 13 10:41	1° Π 40'02	1.45784 AU	superior conj	13055 Apr 21 09:36	8° ♂ 28'23	-1°19'23
evening rise	13054 May 27 15:35	23° Π 46'21		minimum elong	13055 Apr 21 01:35	7° ♂ 56'09	1°18'56
	13054 May 31 15:50	0° ♂		max. Earth dist.	13055 Apr 26 06:26	16° ♂ 13'24	1.45204 AU
greatest brilliancy	13054 Jun 08 05:15	11° ♂ 36'42	-0.7m		13055 May 05 02:48	0° Π	
asc. node	13054 Jun 17 02:21	24° ♂ 07'00		evening rise	13055 May 07 04:40	3° Π 11'21	
evening max el	13054 Jun 20 06:49	27° ♂ 42'43	19°11'41	greatest brilliancy	13055 May 22 04:04	25° Π 38'33	-0.6m
	13054 Jun 22 23:00	0° Ω			13055 May 25 05:23	0° ♂	
retrograde	13054 Jun 27 05:25	1° Ω 34'18		evening max el	13055 Jun 03 10:56	11° ♂ 30'32	20°07'24
evening set	13054 Jun 30 18:13	0° Ω 21'47		asc. node	13055 Jun 03 23:26	12° ♂ 01'14	
	13054 Jul 01 06:12	30° ♂					
inferior conj	13054 Jul 06 04:48	24° ♂ 33'10	3°06'32				

retrograde	13055 Jun 11 04:02	15°☿55'06		asc. node	13056 May 20 20:38	29°♊00'55	
evening set	13055 Jun 15 02:31	14°☿25'45			13056 May 22 21:03	0°☿	
inferior conj	13055 Jun 20 09:32	8°☿24'02	3°13'11	retrograde	13056 May 25 02:45	0°☿24'30	
minimum elong	13055 Jun 20 09:36	8°☿23'49	3°12'12		13056 May 27 05:50	30°♊	
min. Earth dist.	13055 Jun 21 06:49	7°☿11'42	0.67982 AU	evening set	13056 May 29 11:37	28°♊38'42	
morning rise	13055 Jun 25 16:21	2°☿02'34		inferior conj	13056 Jun 03 17:41	22°♊25'25	3°08'05
	13055 Jun 28 20:51	30°♊		minimum elong	13056 Jun 03 16:47	22°♊28'33	3°07'03
direct	13055 Jul 01 08:25	29°♊32'23		min. Earth dist.	13056 Jun 04 01:22	21°♊58'39	0.68674 AU
	13055 Jul 03 23:39	0°☿		morning rise	13056 Jun 08 21:45	16°♊08'39	
desc. node	13055 Jul 07 04:18	1°☿36'14		direct	13056 Jun 14 01:12	13°♊54'14	
morning max el	13055 Jul 12 21:31	6°☿27'35	24°36'37	desc. node	13056 Jun 23 01:25	18°♊46'03	
	13055 Jul 31 04:20	0°♊		morning max el	13056 Jun 24 08:11	20°♊00'49	23°07'04
morning set	13055 Aug 17 14:48	28°♊03'22			13056 Jul 02 19:58	0°☿	
	13055 Aug 18 17:17	0°♊			13056 Jul 23 08:42	0°♊	
max. Earth dist.	13055 Aug 21 04:50	4°♊26'59	1.37476 AU	morning set	13056 Jul 28 20:16	8°♊54'44	
				max. Earth dist.	13056 Aug 02 03:04	16°♊09'32	1.39818 AU
superior conj	13055 Aug 28 03:45	17°♊31'01	-0°26'22				
minimum elong	13055 Aug 28 05:32	17°♊39'37	0°26'22	superior conj	13056 Aug 09 21:09	29°♊57'51	-1°01'09
asc. node	13055 Aug 31 00:03	23°♊05'44		minimum elong	13056 Aug 10 01:37	0°♊18'25	1°01'01
	13055 Sep 03 11:07	0°♊			13056 Aug 09 21:37	0°♊	
evening rise	13055 Sep 05 16:05	4°♊25'15		asc. node	13056 Aug 16 20:41	13°♊06'18	
	13055 Sep 20 16:01	0°♊		evening rise	13056 Aug 19 11:19	18°♊06'45	
evening max el	13055 Sep 22 10:38	1°♊56'01	19°20'12		13056 Aug 25 19:46	0°♊	
retrograde	13055 Oct 01 19:50	6°♊37'31		evening max el	13056 Sep 04 11:55	14°♊01'44	18°34'13
desc. node	13055 Oct 03 00:50	6°♊33'09		retrograde	13056 Sep 12 11:21	18°♊03'00	
evening set	13055 Oct 03 16:23	6°♊27'18		evening set	13056 Sep 14 10:40	17°♊49'03	
inferior conj	13055 Oct 12 07:07	2°♊18'31	-2°53'25	desc. node	13056 Sep 18 22:19	15°♊47'10	
minimum elong	13055 Oct 11 23:40	2°♊30'45	2°50'12	inferior conj	13056 Sep 22 08:07	13°♊20'32	-1°04'36
min. Earth dist.	13055 Oct 14 20:47	0°♊37'42	0.55740 AU	minimum elong	13056 Sep 22 05:32	13°♊25'29	1°03'25
	13055 Oct 15 20:55	30°♊		min. Earth dist.	13056 Sep 25 13:08	10°♊53'44	0.57492 AU
morning rise	13055 Oct 20 04:34	27°♊47'14		morning rise	13056 Sep 29 20:56	8°♊11'16	
direct	13055 Oct 25 11:57	26°♊43'19		direct	13056 Oct 05 20:51	6°♊41'05	
	13055 Nov 03 20:59	0°♊		morning max el	13056 Oct 20 04:07	14°♊11'59	26°51'37
morning max el	13055 Nov 08 12:26	3°♊47'42	25°25'27		13056 Nov 01 19:08	0°♊	
asc. node	13055 Nov 27 01:38	29°♊57'03		asc. node	13056 Nov 12 22:28	19°♊13'12	
	13055 Nov 27 02:16	0°♊			13056 Nov 18 05:49	0°♊	
morning set	13055 Dec 05 11:51	16°♊50'41		morning set	13056 Nov 18 21:37	1°♊24'03	
	13055 Dec 11 11:40	0°♊					
superior conj	13055 Dec 12 06:30	1°♊44'14	1°38'20	superior conj	13056 Nov 25 17:55	16°♊28'10	1°34'39
minimum elong	13055 Dec 12 06:21	1°♊43'24	1°39'19	minimum elong	13056 Nov 25 16:45	16°♊21'44	1°35'31
max. Earth dist.	13055 Dec 13 18:11	5°♊00'52	1.31921 AU	max. Earth dist.	13056 Nov 26 01:54	17°♊12'47	1.31332 AU
evening rise	13055 Dec 19 10:19	17°♊09'27			13056 Dec 01 21:32	0°♊	
	13055 Dec 25 22:44	0°♊		evening rise	13056 Dec 02 14:07	1°♊28'27	
desc. node	13055 Dec 29 22:40	7°♊11'48		desc. node	13056 Dec 15 19:36	26°♊35'17	
	13056 Jan 14 06:08	0°♊			13056 Dec 17 22:10	0°♊	
evening max el	13056 Jan 21 02:53	7°♊32'21	27°31'53	evening max el	13057 Jan 02 08:06	19°♊43'36	27°04'47
retrograde	13056 Feb 03 23:44	14°♊53'31		retrograde	13057 Jan 16 06:54	26°♊56'43	
evening set	13056 Feb 10 22:05	12°♊34'43		evening set	13057 Jan 23 02:02	24°♊56'31	
min. Earth dist.	13056 Feb 14 16:04	9°♊34'42	0.62321 AU	min. Earth dist.	13057 Jan 26 22:25	22°♊15'05	0.60168 AU
inferior conj	13056 Feb 17 14:49	6°♊47'40	-1°45'11	inferior conj	13057 Jan 30 02:42	19°♊37'19	-3°06'24
minimum elong	13056 Feb 17 18:25	6°♊39'09	1°43'13	minimum elong	13057 Jan 30 09:20	19°♊23'33	3°03'15
asc. node	13056 Feb 22 23:49	2°♊28'29		morning rise	13057 Feb 06 19:42	14°♊51'10	
morning rise	13056 Feb 24 17:26	1°♊41'28		direct	13057 Feb 08 21:26	14°♊34'28	
direct	13056 Feb 26 23:21	1°♊18'34		asc. node	13057 Feb 08 21:12	14°♊34'28	
morning max el	13056 Mar 04 16:24	4°♊43'03	17°47'16	morning max el	13057 Feb 16 06:51	18°♊15'40	18°02'31
morning set	13056 Mar 20 13:41	29°♊12'27			13057 Feb 24 17:36	0°♊	
	13056 Mar 21 00:27	0°♊		morning set	13057 Mar 03 20:51	12°♊50'57	
desc. node	13056 Mar 27 00:24	10°♊30'15			13057 Mar 13 06:07	0°♊	
superior conj	13056 Apr 01 03:36	19°♊15'06	-0°39'13	superior conj	13057 Mar 13 21:38	1°♊08'47	-0°00'14
minimum elong	13056 Mar 31 23:46	18°♊59'02	0°38'52	minimum elong	13057 Mar 13 21:38	1°♊08'45	0°00'09
	13056 Apr 07 16:22	0°♊		behind sun begin	13057 Mar 13 13:49	0°♊34'07	
max. Earth dist.	13056 Apr 07 23:39	0°♊29'20	1.43941 AU	behind sun end	13057 Mar 14 05:27	1°♊43'18	
evening rise	13056 Apr 15 18:12	12°♊45'31		desc. node	13057 Mar 13 20:55	1°♊05'33	
	13056 Apr 27 04:34	0°♊		max. Earth dist.	13057 Mar 21 12:10	14°♊12'07	1.42135 AU
evening max el	13056 May 16 09:12	25°♊18'39	21°16'09	evening rise	13057 Mar 26 21:54	23°♊01'16	
					13057 Mar 31 08:17	0°♊	

	13057 Apr 21 06:16	0°♊		max. Earth dist.	13058 Mar 03 19:57	27°♎12'23	1.39984 AU
evening max el	13057 Apr 29 02:29	9°♊07'10	22°33'50		13058 Mar 05 10:43	0°♎	
asc. node	13057 May 07 17:53	14°♊49'55		evening rise	13058 Mar 07 22:17	4°♎12'27	
retrograde	13057 May 08 23:54	14°♊57'09			13058 Mar 24 12:35	0°♎	
evening set	13057 May 13 19:48	12°♊56'04		evening max el	13058 Apr 11 16:53	22°♎58'11	23°54'51
inferior conj	13057 May 19 03:12	6°♊33'28	2°52'24	retrograde	13058 Apr 22 18:06	29°♎28'01	
minimum elong	13057 May 19 01:32	6°♊39'14	2°51'15	asc. node	13058 Apr 24 15:11	29°♎12'01	
min. Earth dist.	13057 May 18 21:58	6°♊51'41	0.68890 AU	evening set	13058 Apr 28 01:33	27°♎13'43	
morning rise	13057 May 24 07:09	0°♊22'54		min. Earth dist.	13058 May 02 18:29	21°♎45'19	0.68643 AU
	13057 May 24 18:36	30°♎8		inferior conj	13058 May 03 12:11	20°♎45'01	2°26'39
direct	13057 May 28 21:37	28°♎27'55		minimum elong	13058 May 03 10:05	20°♎52'09	2°25'25
	13057 Jun 02 10:48	0°♊		morning rise	13058 May 08 18:40	14°♎41'51	
morning max el	13057 Jun 06 22:04	3°♊42'45	21°40'06	direct	13058 May 12 20:30	13°♎07'42	
desc. node	13057 Jun 09 22:26	6°♊58'31		morning max el	13058 May 20 18:02	17°♎35'42	20°22'39
	13057 Jun 26 20:39	0°♎		desc. node	13058 May 27 19:21	25°♎56'56	
morning set	13057 Jul 09 00:29	18°♎39'31			13058 May 30 18:51	0°♊	
max. Earth dist.	13057 Jul 15 05:15	28°♎41'37	1.42050 AU	morning set	13058 Jun 18 07:20	27°♊29'50	
	13057 Jul 16 00:12	0°♎			13058 Jun 19 22:06	0°♎	
				max. Earth dist.	13058 Jun 27 13:55	12°♎04'37	1.43914 AU
superior conj	13057 Jul 22 19:15	11°♎32'28	-1°34'28	superior conj	13058 Jul 03 18:21	22°♎07'53	-2°00'50
minimum elong	13057 Jul 23 02:01	12°♎01'52	1°34'27	minimum elong	13058 Jul 04 00:47	22°♎34'29	2°01'21
	13057 Aug 02 02:25	0°♎			13058 Jul 08 11:23	0°♎	
evening rise	13057 Aug 02 18:50	1°♎15'04		evening rise	13058 Jul 16 09:51	13°♎38'35	
asc. node	13057 Aug 03 17:21	2°♎58'01		asc. node	13058 Jul 21 14:04	22°♎36'43	
evening max el	13057 Aug 18 21:22	26°♎45'23	18°09'03		13058 Jul 26 00:42	0°♎	
	13057 Aug 23 19:10	0°♎		evening max el	13058 Aug 02 11:00	9°♎57'24	18°03'22
retrograde	13057 Aug 25 21:22	0°♎19'24		retrograde	13058 Aug 08 22:21	13°♎18'34	
evening set	13057 Aug 28 03:41	29°♎57'30		evening set	13058 Aug 11 12:51	12°♎45'10	
	13057 Aug 28 00:26	30°♎		inferior conj	13058 Aug 17 23:49	7°♎37'04	1°38'35
inferior conj	13057 Sep 04 06:39	25°♎08'30	0°28'24	minimum elong	13058 Aug 18 02:13	7°♎30'55	1°37'21
minimum elong	13057 Sep 04 07:35	25°♎06'26	0°27'52	min. Earth dist.	13058 Aug 20 22:58	4°♎36'10	0.61964 AU
desc. node	13057 Sep 05 19:50	23°♎44'53		desc. node	13058 Aug 23 17:19	2°♎08'51	
min. Earth dist.	13057 Sep 07 13:29	22°♎13'31	0.59671 AU	morning rise	13058 Aug 24 13:08	1°♎32'03	
morning rise	13057 Sep 11 08:10	19°♎26'13			13058 Aug 27 06:21	30°♎	
direct	13057 Sep 17 19:29	17°♎28'09		direct	13058 Aug 31 05:25	29°♎10'38	
morning max el	13057 Oct 02 03:23	25°♎18'22	27°44'13		13058 Sep 04 09:25	0°♎	
	13057 Oct 06 11:40	0°♎		morning max el	13058 Sep 14 09:01	7°♎10'57	27°57'55
	13057 Oct 26 05:14	0°♎			13058 Oct 01 18:45	0°♎	
asc. node	13057 Oct 30 19:12	8°♎49'46		asc. node	13058 Oct 17 15:53	28°♎40'54	
morning set	13057 Nov 03 03:41	15°♎43'07		morning set	13058 Oct 18 04:04	29°♎43'13	
max. Earth dist.	13057 Nov 09 10:14	29°♎21'50	1.31260 AU		13058 Oct 18 07:20	0°♎	
	13057 Nov 09 17:05	0°♎		max. Earth dist.	13058 Oct 23 15:31	11°♎19'40	1.31719 AU
superior conj	13057 Nov 10 05:21	1°♎08'21	1°25'11	superior conj	13058 Oct 25 15:02	15°♎39'59	1°10'04
minimum elong	13057 Nov 10 03:27	0°♎57'46	1°25'48	minimum elong	13058 Oct 25 12:46	15°♎27'33	1°10'23
evening rise	13057 Nov 16 22:17	15°♎56'35		evening rise	13058 Nov 01 08:54	0°♎29'23	
	13057 Nov 23 19:39	0°♎			13058 Nov 01 03:27	0°♎	
desc. node	13057 Dec 02 16:39	15°♎19'35			13058 Nov 17 08:01	0°♎	
	13057 Dec 14 03:58	0°♎		desc. node	13058 Nov 19 13:48	3°♎10'10	
evening max el	13057 Dec 15 05:35	1°♎02'28	26°03'34	evening max el	13058 Nov 26 19:10	11°♎32'50	24°34'46
retrograde	13057 Dec 29 04:01	8°♎06'15		retrograde	13058 Dec 10 12:50	18°♎24'18	
evening set	13058 Jan 04 10:48	6°♎32'44		evening set	13058 Dec 15 20:19	17°♎21'59	
min. Earth dist.	13058 Jan 08 18:41	3°♎56'22	0.58034 AU	min. Earth dist.	13058 Dec 21 06:54	14°♎33'24	0.56194 AU
inferior conj	13058 Jan 11 20:05	1°♎44'31	-4°27'00	inferior conj	13058 Dec 23 16:48	13°♎02'29	-5°31'05
minimum elong	13058 Jan 12 04:44	1°♎28'55	4°23'40	minimum elong	13058 Dec 23 23:38	12°♎51'44	5°29'02
	13058 Jan 14 08:12	30°♎		morning rise	13059 Jan 01 05:00	8°♎59'07	
morning rise	13058 Jan 20 01:32	27°♎20'18		direct	13059 Jan 03 14:30	8°♎43'34	
direct	13058 Jan 22 03:29	27°♎06'14		morning max el	13059 Jan 13 10:49	13°♎28'00	19°35'56
asc. node	13058 Jan 26 18:31	28°♎20'13		asc. node	13059 Jan 13 15:47	13°♎40'07	
	13058 Jan 29 05:11	0°♎			13059 Jan 24 20:59	0°♎	
morning max el	13058 Jan 30 14:21	1°♎14'30	18°38'07	morning set	13059 Jan 30 19:10	11°♎31'24	
morning set	13058 Feb 15 16:00	27°♎01'09					
	13058 Feb 17 04:53	0°♎		superior conj	13059 Feb 07 18:27	27°♎31'05	1°00'04
superior conj	13058 Feb 24 12:09	13°♎58'37	0°33'24	minimum elong	13059 Feb 07 21:15	27°♎44'52	1°00'17
minimum elong	13058 Feb 24 14:18	14°♎08'39	0°33'25		13059 Feb 09 00:55	0°♎	
desc. node	13058 Feb 28 17:26	21°♎42'42		max. Earth dist.	13059 Feb 14 02:08	9°♎34'01	1.37735 AU

































































































































desc. node	13059 Feb 15 13:58	12° X 17'46		evening rise	13060 Jan 31 10:29	29° \approx 06'19	
evening rise	13059 Feb 17 19:25	16° X 16'47			13060 Jan 31 22:04	0° X	
	13059 Feb 25 22:37	0° Y		desc. node	13060 Feb 02 10:36	2° X 47'20	
	13059 Mar 19 01:16	0° B			13060 Feb 19 04:07	0° Y	
evening max el	13059 Mar 25 06:28	6° B 50'53	25°12'27	evening max el	13060 Mar 06 20:12	20° Y 40'29	26°19'17
retrograde	13059 Apr 06 08:06	13° B 50'43		retrograde	13060 Mar 19 16:59	27° Y 58'54	
asc. node	13059 Apr 11 12:34	11° B 55'28		evening set	13060 Mar 25 23:09	25° Y 27'43	
evening set	13059 Apr 12 03:13	11° B 26'01		asc. node	13060 Mar 28 10:00	23° Y 06'22	
min. Earth dist.	13059 Apr 16 12:41	6° B 33'27	0.67952 AU	min. Earth dist.	13060 Mar 30 02:23	21° Y 10'09	0.66840 AU
inferior conj	13059 Apr 17 18:43	4° B 55'29	1°50'43	inferior conj	13060 Mar 31 20:47	19° Y 00'37	1°04'17
minimum elong	13059 Apr 17 16:37	5° B 02'21	1°49'34	minimum elong	13060 Mar 31 19:16	19° Y 05'16	1°03'29
	13059 Apr 22 00:48	30° R Y		morning rise	13060 Apr 06 16:15	13° Y 16'51	
morning rise	13059 Apr 23 06:22	29° Y 01'10		direct	13060 Apr 09 19:25	12° Y 21'29	
direct	13059 Apr 26 20:22	27° Y 47'21		morning max el	13060 Apr 16 08:10	15° Y 50'32	18°31'27
	13059 May 02 00:50	0° B			13060 Apr 27 00:42	0° B	
morning max el	13059 May 03 21:34	1° B 39'22	19°19'03	desc. node	13060 Apr 30 12:51	5° B 24'17	
desc. node	13059 May 14 16:08	15° B 28'26		morning set	13060 May 07 03:56	15° B 48'39	
greatest brilliancy	13059 May 16 16:05	18° B 24'37	-0.7m		13060 May 16 04:49	0° II	
	13059 May 24 08:11	0° II					
morning set	13059 May 28 09:12	6° II 12'22		superior conj	13060 May 23 03:18	10° II 50'26	-2°06'12
max. Earth dist.	13059 Jun 10 05:02	26° II 09'06	1.45206 AU	minimum elong	13060 May 22 21:00	10° II 25'48	2°06'49
	13059 Jun 12 15:34	0° B		max. Earth dist.	13060 May 23 00:18	10° II 38'41	1.45793 AU
					13060 Jun 04 08:32	0° B	
superior conj	13059 Jun 13 18:15	1° B 45'47	-2°13'16	evening rise	13060 Jun 07 20:20	5° B 31'08	
minimum elong	13059 Jun 13 19:31	1° B 50'46	2°14'15	greatest brilliancy	13060 Jun 16 09:28	19° B 00'41	-0.8m
evening rise	13059 Jun 28 03:18	25° B 05'10			13060 Jun 23 17:16	0° B	
	13059 Jul 01 02:33	0° B		asc. node	13060 Jun 24 07:46	0° B 50'16	
asc. node	13059 Jul 08 10:52	11° B 56'21		evening max el	13060 Jun 29 13:00	7° B 08'43	18°46'29
evening max el	13059 Jul 17 01:11	23° B 27'40	18°16'06	retrograde	13060 Jul 06 04:06	10° B 46'08	
retrograde	13059 Jul 23 09:51	26° B 50'10		evening set	13060 Jul 09 11:44	9° B 42'54	
evening set	13059 Jul 26 08:50	26° B 02'38		inferior conj	13060 Jul 15 01:42	4° B 02'06	2°56'34
inferior conj	13059 Aug 01 07:26	20° B 37'18	2°26'53	minimum elong	13060 Jul 15 03:24	3° B 56'48	2°55'26
minimum elong	13059 Aug 01 09:52	20° B 30'21	2°25'36	min. Earth dist.	13060 Jul 16 21:37	1° B 45'24	0.65943 AU
min. Earth dist.	13059 Aug 03 17:51	17° B 50'56	0.64112 AU		13060 Jul 18 09:29	30° R B	
morning rise	13059 Aug 07 09:24	14° B 19'22		morning rise	13060 Jul 20 18:15	27° B 38'47	
desc. node	13059 Aug 10 14:48	12° B 23'28		direct	13060 Jul 27 02:38	24° B 58'03	
direct	13059 Aug 14 00:14	11° B 43'22		desc. node	13060 Jul 27 12:13	24° B 58'38	
morning max el	13059 Aug 27 18:37	19° B 43'18	27°34'50		13060 Aug 06 07:46	0° B	
	13059 Sep 05 13:19	0° B		morning max el	13060 Aug 09 05:47	2° B 45'03	26°41'14
	13059 Sep 24 19:19	0° B			13060 Aug 29 19:21	0° B	
morning set	13059 Oct 01 20:23	13° B 18'18		morning set	13060 Sep 14 01:35	26° B 20'48	
asc. node	13059 Oct 04 12:30	18° B 41'21			13060 Sep 15 23:16	0° B	
max. Earth dist.	13059 Oct 06 14:10	22° B 58'36	1.32710 AU	max. Earth dist.	13060 Sep 18 03:22	4° B 16'05	1.34221 AU
				asc. node	13060 Sep 20 09:06	8° B 46'40	
superior conj	13059 Oct 09 20:56	29° B 57'19	0°49'25	superior conj	13060 Sep 22 20:43	13° B 53'46	0°23'29
minimum elong	13059 Oct 09 18:51	29° B 46'07	0°49'28	minimum elong	13060 Sep 22 19:29	13° B 47'25	0°23'23
	13059 Oct 09 21:26	0° B		evening rise	13060 Sep 30 05:55	29° B 28'11	
evening rise	13059 Oct 16 20:05	15° B 01'47			13060 Sep 30 11:59	0° B	
	13059 Oct 24 05:35	0° B			13060 Oct 18 04:14	0° B	
desc. node	13059 Nov 06 11:05	19° B 47'19		evening max el	13060 Oct 19 21:06	1° B 47'49	21°16'13
evening max el	13059 Nov 08 05:19	21° B 36'06	22°53'07	desc. node	13060 Oct 23 08:28	4° B 44'49	
retrograde	13059 Nov 21 08:31	28° B 07'27		retrograde	13060 Oct 31 20:04	7° B 44'24	
evening set	13059 Nov 25 07:40	27° B 33'16		evening set	13060 Nov 03 11:56	7° B 27'55	
min. Earth dist.	13059 Dec 02 14:08	24° B 13'56	0.54941 AU	inferior conj	13060 Nov 12 10:33	3° B 34'01	-5°21'46
inferior conj	13059 Dec 03 18:44	23° B 33'09	-5°55'27	minimum elong	13060 Nov 12 02:03	3° B 45'58	5°19'21
minimum elong	13059 Dec 03 18:09	23° B 33'59	5°54'28	min. Earth dist.	13060 Nov 12 20:13	3° B 20'25	0.54519 AU
morning rise	13059 Dec 12 06:04	19° B 44'23			13060 Nov 19 19:45	30° R B	
direct	13059 Dec 15 07:46	19° B 22'27		morning rise	13060 Nov 20 16:51	29° B 44'03	
morning max el	13059 Dec 26 17:14	24° B 48'30	20°56'47	direct	13060 Nov 24 15:29	29° B 10'38	
	13059 Dec 31 07:16	0° B			13060 Nov 29 07:18	0° B	
asc. node	13059 Dec 31 12:58	0° B 18'48		morning max el	13060 Dec 07 10:27	5° B 19'08	22°37'12
morning set	13060 Jan 15 03:29	26° B 13'33		asc. node	13060 Dec 17 10:04	17° B 58'33	
	13060 Jan 16 22:56	0° \approx			13060 Dec 24 05:14	0° B	
				morning set	13060 Dec 29 14:32	10° B 59'50	
superior conj	13060 Jan 22 12:23	11° \approx 35'01	1°19'28				
minimum elong	13060 Jan 22 14:51	11° \approx 47'41	1°19'59	superior conj	13061 Jan 05 14:26	25° B 59'41	1°31'53
max. Earth dist.	13060 Jan 27 11:24	21° \approx 32'32	1.35625 AU				

minimum elong	13061 Jan 05 16:01	26°  08'06	1°32'42			13061 Nov 30 10:35	0° 	
	13061 Jan 07 11:52	0° 		asc. node		13061 Dec 04 07:05	6°  24'52	
max. Earth dist.	13061 Jan 09 03:07	3°  24'23	1.33835 AU	morning set		13061 Dec 14 02:26	25°  44'57	
evening rise	13061 Jan 13 15:48	12°  30'45				13061 Dec 16 01:37	0° 	
desc. node	13061 Jan 19 07:17	23°  06'16						
	13061 Jan 23 05:59	0° 		superior conj		13061 Dec 20 21:51	10°  37'14	1°37'44
	13061 Feb 13 07:25	0° 		minimum elong		13061 Dec 20 22:21	10°  39'54	1°38'44
evening max el	13061 Feb 17 09:41	4°  17'18	27°08'09	max. Earth dist.		13061 Dec 23 02:26	15°  23'00	1.32480 AU
retrograde	13061 Mar 02 20:00	11°  43'49		evening rise		13061 Dec 28 08:03	26°  22'16	
evening set	13061 Mar 09 11:21	9°  11'35				13061 Dec 30 03:29	0° 	
min. Earth dist.	13061 Mar 13 09:27	5°  27'18	0.65331 AU	desc. node		13062 Jan 06 04:04	13°  09'27	
asc. node	13061 Mar 15 07:28	3°  18'18				13062 Jan 16 14:48	0° 	
inferior conj	13061 Mar 15 16:01	2°  54'11	0°06'52	evening max el		13062 Jan 30 21:47	17°  30'45	27°31'58
minimum elong	13061 Mar 15 15:49	2°  54'44	0°06'51	retrograde		13062 Feb 13 16:23	24°  56'26	
transit middle	13061 Mar 15 15:49	2°  54'44	0°06'51	evening set		13062 Feb 20 13:27	22°  30'19	
transit begin	13061 Mar 15 13:06	3°  02'24		min. Earth dist.		13062 Feb 24 08:05	19°  15'42	0.63488 AU
transit end	13061 Mar 15 18:32	2°  47'05		inferior conj		13062 Feb 27 01:41	16°  29'47	-1°01'26
	13061 Mar 18 09:29	30°  38'38		minimum elong		13062 Feb 27 03:40	16°  24'45	1°00'17
morning rise	13061 Mar 21 21:53	27°  32'05		asc. node		13062 Mar 02 04:57	13°  31'19	
direct	13061 Mar 24 15:25	26°  34'14		morning rise		13062 Mar 05 20:15	11°  31'46	
	13061 Mar 30 22:56	0° 		direct		13062 Mar 08 05:42	10°  45'51	
morning max el	13061 Mar 30 23:44	0°  01'56	18°00'39	morning max el		13062 Mar 14 17:27	14°  05'31	17°47'02
desc. node	13061 Apr 17 09:28	25°  37'11				13062 Mar 25 20:44	0° 	
morning set	13061 Apr 18 02:31	26°  46'59		morning set		13062 Mar 31 03:46	9°  01'55	
	13061 Apr 20 01:43	0° 		desc. node		13062 Apr 04 06:00	16°  02'01	
superior conj	13061 May 02 14:10	20°  06'52	-1°40'13	superior conj		13062 Apr 12 18:30	0°  15'06	-1°02'35
minimum elong	13061 May 02 04:59	19°  30'34	1°40'01	minimum elong		13062 Apr 12 12:07	29°  49'01	1°02'08
max. Earth dist.	13061 May 05 20:26	25°  14'34	1.45622 AU			13062 Apr 12 14:48	0° 	
	13061 May 08 21:31	0° 		max. Earth dist.		13062 Apr 18 14:48	9°  40'13	1.44733 AU
evening rise	13061 May 18 16:20	15°  08'50		evening rise		13062 Apr 28 03:24	24°  31'46	
	13061 May 28 09:29	0° 				13062 May 01 17:30	0° 	
greatest brilliancy	13061 Jun 01 02:57	5°  34'20	-0.7m			13062 May 22 17:41	0° 	
asc. node	13061 Jun 11 04:47	19°  09'40		evening max el		13062 May 26 21:43	4°  42'41	20°35'20
evening max el	13061 Jun 12 20:13	20°  55'00	19°33'31	asc. node		13062 May 29 01:54	6°  42'30	
retrograde	13061 Jun 20 01:55	24°  59'45		retrograde		13062 Jun 04 00:52	9°  24'36	
evening set	13061 Jun 23 18:44	23°  40'03		evening set		13062 Jun 08 03:33	7°  48'22	
inferior conj	13061 Jun 29 03:25	17°  45'26	3°10'54	inferior conj		13062 Jun 13 09:51	1°  41'29	3°12'25
minimum elong	13061 Jun 29 04:05	17°  43'12	3°09'53	minimum elong		13062 Jun 13 09:29	1°  42'43	3°11'24
min. Earth dist.	13061 Jun 30 08:48	16°  07'58	0.67360 AU	min. Earth dist.		13062 Jun 14 01:19	0°  48'11	0.68325 AU
morning rise	13061 Jul 04 13:00	11°  22'03				13062 Jun 14 15:27	30°  38'38	
direct	13061 Jul 10 11:33	8°  45'46		morning rise		13062 Jun 18 15:09	25°  21'31	
desc. node	13061 Jul 14 09:32	9°  41'52		direct		13062 Jun 24 01:56	22°  22'16	
morning max el	13061 Jul 22 16:38	16°  04'55	25°25'58	desc. node		13062 Jul 01 06:44	26°  05'35	
	13061 Aug 03 04:50	0° 		morning max el		13062 Jul 05 02:44	29°  33'38	23°58'46
	13061 Aug 22 17:03	0° 				13062 Jul 05 13:03	0° 	
morning set	13061 Aug 27 15:55	8°  41'57				13062 Jul 27 23:58	0° 	
max. Earth dist.	13061 Aug 31 06:54	15°  22'15	1.36188 AU	morning set		13062 Aug 09 10:40	20°  09'22	
				max. Earth dist.		13062 Aug 13 04:32	26°  04'47	1.38463 AU
superior conj	13061 Sep 06 11:35	27°  22'41	-0°07'07			13062 Aug 15 01:05	0° 	
minimum elong	13061 Sep 06 12:01	27°  24'55	0°07'12	superior conj		13062 Aug 20 13:57	10°  14'55	-0°41'02
behind sun begin	13061 Sep 06 06:19	26°  26'30		minimum elong		13062 Aug 20 16:50	10°  28'35	0°40'58
behind sun end	13061 Sep 06 17:44	27°  23'23		asc. node		13062 Aug 25 02:16	18°  27'04	
asc. node	13061 Sep 07 05:41	28°  23'17		evening rise		13062 Aug 29 12:25	27°  38'46	
	13061 Sep 07 18:58	0° 				13062 Aug 30 17:13	0° 	
evening rise	13061 Sep 14 12:15	13°  43'01		evening max el		13062 Sep 14 20:50	24°  19'57	18°58'01
	13061 Sep 22 23:19	0° 		retrograde		13062 Sep 23 14:35	28°  42'38	
evening max el	13061 Oct 02 02:02	12°  39'35	19°56'24	evening set		13062 Sep 25 11:24	28°  31'27	
desc. node	13061 Oct 10 05:55	17°  35'30		desc. node		13062 Sep 27 03:25	28°  03'41	
retrograde	13061 Oct 12 10:23	17°  48'53		inferior conj		13062 Oct 03 19:23	24°  15'07	-2°06'17
evening set	13061 Oct 14 09:13	17°  38'42		minimum elong		13062 Oct 03 14:01	24°  24'30	2°03'52
inferior conj	13061 Oct 23 06:43	13°  38'41	-3°55'44	min. Earth dist.		13062 Oct 06 17:38	22°  12'47	0.56418 AU
minimum elong	13061 Oct 22 21:07	13°  53'18	3°52'01	morning rise		13062 Oct 11 13:32	19°  27'32	
min. Earth dist.	13061 Oct 25 04:42	12°  28'42	0.55040 AU	direct		13062 Oct 17 04:38	18°  12'35	
morning rise	13061 Oct 31 07:39	9°  26'27		morning max el		13062 Oct 31 08:50	25°  29'46	26°05'20
direct	13061 Nov 05 03:29	8°  35'29				13062 Nov 04 14:15	0° 	
morning max el	13061 Nov 18 20:56	15°  22'23	24°25'52					

asc. node	13062 Nov 21 03:57	25° \mathbb{M} 25'27		morning max el	13063 Oct 13 03:26	6° \mathbb{L} 09'50	27°18'28
	13062 Nov 23 12:47	0° \mathbb{A}			13063 Oct 30 21:09	0° \mathbb{M}	
morning set	13062 Nov 28 13:27	10° \mathbb{A} 23'46		asc. node	13063 Nov 08 00:44	14° \mathbb{M} 51'14	
				morning set	13063 Nov 12 21:52	24° \mathbb{M} 51'39	
superior conj	13062 Dec 05 08:22	25° \mathbb{A} 20'38	1°37'28		13063 Nov 15 07:04	0° \mathbb{A}	
minimum elong	13062 Dec 05 07:46	25° \mathbb{A} 17'19	1°38'26				
max. Earth dist.	13062 Dec 06 07:52	27° \mathbb{A} 31'00	1.31609 AU	superior conj	13063 Nov 19 20:01	10° \mathbb{A} 03'50	1°31'19
	13062 Dec 07 10:49	0° \mathbb{B}		minimum elong	13063 Nov 19 18:30	9° \mathbb{A} 55'25	1°32'06
evening rise	13062 Dec 12 08:22	10° \mathbb{B} 33'20		max. Earth dist.	13063 Nov 19 16:21	9° \mathbb{A} 43'19	1.31245 AU
	13062 Dec 22 09:46	0° \mathbb{A}		evening rise	13063 Nov 26 14:19	24° \mathbb{A} 57'24	
desc. node	13062 Dec 24 00:58	2° \mathbb{A} 50'05			13063 Nov 28 23:53	0° \mathbb{B}	
	13063 Jan 13 02:40	0° \mathbb{H}		desc. node	13063 Dec 10 21:58	21° \mathbb{B} 58'41	
evening max el	13063 Jan 13 06:26	0° \mathbb{H} 08'59	27°24'41		13063 Dec 16 05:36	0° \mathbb{A}	
retrograde	13063 Jan 27 04:52	7° \mathbb{H} 27'24		evening max el	13063 Dec 26 08:54	11° \mathbb{A} 59'42	26°42'47
evening set	13063 Feb 03 02:32	5° \mathbb{H} 15'44		retrograde	13064 Jan 09 07:47	19° \mathbb{A} 08'07	
min. Earth dist.	13063 Feb 06 20:51	2° \mathbb{H} 24'36	0.61408 AU	evening set	13064 Jan 15 22:49	17° \mathbb{A} 18'50	
inferior conj	13063 Feb 09 22:35	29° \mathbb{A} 39'33	-2°19'07	min. Earth dist.	13064 Jan 19 22:52	14° \mathbb{A} 41'17	0.59243 AU
minimum elong	13063 Feb 10 03:28	29° \mathbb{A} 28'35	2°16'36	inferior conj	13064 Jan 23 03:02	12° \mathbb{A} 12'53	-3°41'26
	13063 Feb 09 13:31	30° \mathbb{R} \mathbb{A}		minimum elong	13064 Jan 23 10:47	11° \mathbb{A} 57'43	3°38'02
morning rise	13063 Feb 17 07:20	24° \mathbb{A} 41'25		morning rise	13064 Jan 31 01:43	7° \mathbb{A} 35'35	
asc. node	13063 Feb 17 02:22	24° \mathbb{A} 45'19		direct	13064 Feb 02 02:57	7° \mathbb{A} 20'21	
direct	13063 Feb 19 10:56	24° \mathbb{A} 21'41		asc. node	13064 Feb 03 23:44	7° \mathbb{A} 33'31	
morning max el	13063 Feb 26 10:04	27° \mathbb{A} 52'28	17°51'22	morning max el	13064 Feb 09 22:00	11° \mathbb{A} 12'00	18°15'01
	13063 Feb 28 08:43	0° \mathbb{H}			13064 Feb 22 07:43	0° \mathbb{H}	
morning set	13063 Mar 14 01:51	22° \mathbb{H} 15'52		morning set	13064 Feb 25 14:43	6° \mathbb{H} 10'02	
	13063 Mar 18 09:09	0° \mathbb{Y}					
desc. node	13063 Mar 22 02:30	6° \mathbb{Y} 34'52		superior conj	13064 Mar 06 02:14	23° \mathbb{H} 50'20	0°14'50
				minimum elong	13064 Mar 06 03:21	23° \mathbb{H} 55'23	0°14'52
superior conj	13063 Mar 24 22:56	11° \mathbb{Y} 31'13	-0°22'13	behind sun begin	13064 Mar 06 00:39	23° \mathbb{H} 43'07	
minimum elong	13063 Mar 24 20:54	11° \mathbb{Y} 22'28	0°21'59	behind sun end	13064 Mar 06 06:04	24° \mathbb{H} 07'38	
max. Earth dist.	13063 Apr 01 05:48	23° \mathbb{Y} 42'38	1.43224 AU	desc. node	13064 Mar 07 23:00	27° \mathbb{H} 11'27	
	13063 Apr 05 03:29	0° \mathbb{B}			13064 Mar 09 13:05	0° \mathbb{Y}	
evening rise	13063 Apr 07 21:42	4° \mathbb{B} 21'18		max. Earth dist.	13064 Mar 13 16:36	7° \mathbb{Y} 09'43	1.41251 AU
	13063 Apr 25 02:05	0° \mathbb{II}		evening rise	13064 Mar 18 09:55	15° \mathbb{Y} 00'33	
evening max el	13063 May 09 17:46	18° \mathbb{II} 31'35	21°48'32		13064 Mar 27 23:15	0° \mathbb{B}	
asc. node	13063 May 15 23:07	23° \mathbb{II} 14'37			13064 Apr 19 03:51	0° \mathbb{II}	
retrograde	13063 May 18 23:00	23° \mathbb{II} 56'08		evening max el	13064 Apr 21 09:41	2° \mathbb{II} 21'34	23°08'19
evening set	13063 May 23 12:26	22° \mathbb{II} 03'51		retrograde	13064 May 01 18:53	8° \mathbb{II} 28'39	
inferior conj	13063 May 28 18:50	15° \mathbb{II} 46'32	3°02'43	asc. node	13064 May 01 20:25	8° \mathbb{II} 28'38	
minimum elong	13063 May 28 17:34	15° \mathbb{II} 50'55	3°01'37	evening set	13064 May 06 19:45	6° \mathbb{II} 21'37	
min. Earth dist.	13063 May 28 21:03	15° \mathbb{II} 38'48	0.68821 AU	min. Earth dist.	13064 May 11 17:46	0° \mathbb{II} 32'45	0.68845 AU
morning rise	13063 Jun 02 22:30	9° \mathbb{II} 32'09		inferior conj	13064 May 12 04:19	29° \mathbb{B} 56'14	2°42'42
direct	13063 Jun 07 20:32	7° \mathbb{II} 25'24		minimum elong	13064 May 12 02:26	0° \mathbb{II} 02'46	2°41'30
morning max el	13063 Jun 17 14:10	13° \mathbb{II} 09'47	22°29'18		13064 May 12 03:14	30° \mathbb{R} \mathbb{B}	
desc. node	13063 Jun 18 03:46	13° \mathbb{II} 44'31		morning rise	13064 May 17 09:02	23° \mathbb{B} 48'52	
	13063 Jul 01 02:18	0° \mathbb{B}		direct	13064 May 21 18:10	22° \mathbb{B} 02'35	
	13063 Jul 20 21:29	0° \mathbb{Q}		morning max el	13064 May 30 06:16	26° \mathbb{B} 55'51	21°05'43
morning set	13063 Jul 21 05:29	0° \mathbb{Q} 32'33			13064 Jun 02 02:30	0° \mathbb{II}	
max. Earth dist.	13063 Jul 26 03:37	8° \mathbb{Q} 42'16	1.40799 AU	desc. node	13064 Jun 04 00:43	2° \mathbb{II} 18'02	
					13064 Jun 23 14:12	0° \mathbb{B}	
superior conj	13063 Aug 02 23:43	22° \mathbb{Q} 21'17	-1°15'43	morning set	13064 Jun 29 23:25	9° \mathbb{B} 50'27	
minimum elong	13063 Aug 03 05:18	22° \mathbb{Q} 46'23	1°15'35	max. Earth dist.	13064 Jul 07 08:58	21° \mathbb{B} 38'46	1.42904 AU
	13063 Aug 07 04:25	0° \mathbb{M}			13064 Jul 12 10:18	0° \mathbb{Q}	
asc. node	13063 Aug 11 22:54	8° \mathbb{M} 54'37					
evening rise	13063 Aug 13 03:08	11° \mathbb{M} 07'27		superior conj	13064 Jul 14 12:22	3° \mathbb{Q} 31'22	-1°46'53
	13063 Aug 23 19:32	0° \mathbb{L}		minimum elong	13064 Jul 14 19:29	4° \mathbb{Q} 01'36	1°47'03
evening max el	13063 Aug 29 02:10	6° \mathbb{L} 43'39	18°21'03	evening rise	13064 Jul 26 04:13	23° \mathbb{Q} 58'20	
retrograde	13063 Sep 05 14:02	10° \mathbb{L} 31'07		asc. node	13064 Jul 28 19:36	28° \mathbb{Q} 41'42	
evening set	13063 Sep 07 16:14	10° \mathbb{L} 14'09			13064 Jul 29 13:12	0° \mathbb{M}	
desc. node	13063 Sep 14 00:55	6° \mathbb{L} 34'54		evening max el	13064 Aug 11 13:52	19° \mathbb{M} 40'42	18°04'18
inferior conj	13063 Sep 15 05:41	5° \mathbb{L} 36'50	-0°22'31	retrograde	13064 Aug 18 07:08	23° \mathbb{M} 07'34	
minimum elong	13063 Sep 15 04:51	5° \mathbb{L} 38'33	0°22'12	evening set	13064 Aug 20 16:55	22° \mathbb{M} 41'04	
min. Earth dist.	13063 Sep 18 12:59	2° \mathbb{L} 55'37	0.58396 AU	inferior conj	13064 Aug 27 12:38	17° \mathbb{M} 43'21	1°00'59
morning rise	13063 Sep 22 14:00	0° \mathbb{L} 12'51		minimum elong	13064 Aug 27 14:25	17° \mathbb{M} 39'08	1°00'03
	13063 Sep 22 23:52	30° \mathbb{R} \mathbb{M}		min. Earth dist.	13064 Aug 30 16:54	14° \mathbb{M} 43'28	0.60648 AU
direct	13063 Sep 28 19:46	28° \mathbb{M} 30'31		desc. node	13064 Aug 30 22:23	14° \mathbb{M} 31'10	
	13063 Oct 04 20:04	0° \mathbb{L}		morning rise	13064 Sep 03 08:58	11° \mathbb{M} 50'12	

direct	13064 Sep 09 23:07	9° \mathbb{M} 41'45		morning max el	13065 Sep 06 13:37	29° Ω 48'07	27°52'30
morning max el	13064 Sep 24 05:44	17° \mathbb{M} 36'40	27°54'55		13065 Sep 06 18:21	0° \mathbb{M}	
	13064 Oct 04 13:48	0° $\underline{\mathfrak{A}}$			13065 Sep 28 14:04	0° $\underline{\mathfrak{A}}$	
	13064 Oct 22 13:57	0° \mathbb{M}		morning set	13065 Oct 10 23:09	22° $\underline{\mathfrak{A}}$ 54'50	
asc. node	13064 Oct 24 21:26	4° \mathbb{M} 35'16		asc. node	13065 Oct 11 18:05	24° $\underline{\mathfrak{A}}$ 31'08	
morning set	13064 Oct 27 01:50	9° \mathbb{M} 04'09			13065 Oct 14 09:24	0° \mathbb{M}	
max. Earth dist.	13064 Nov 02 00:09	21° \mathbb{M} 50'54	1.31396 AU	max. Earth dist.	13065 Oct 16 03:10	3° \mathbb{M} 42'15	1.32072 AU
superior conj	13064 Nov 03 06:58	24° \mathbb{M} 41'42	1°19'28	superior conj	13065 Oct 18 15:18	9° \mathbb{M} 07'59	1°02'00
minimum elong	13064 Nov 03 04:52	24° \mathbb{M} 29'59	1°19'57	minimum elong	13065 Oct 18 13:02	8° \mathbb{M} 55'39	1°02'10
	13064 Nov 05 16:12	0° \mathfrak{A}		evening rise	13065 Oct 25 10:53	24° \mathbb{M} 02'21	
evening rise	13064 Nov 09 23:48	9° \mathfrak{A} 29'06			13065 Oct 28 06:29	0° \mathfrak{A}	
	13064 Nov 20 08:56	0° \mathfrak{B}		desc. node	13065 Nov 13 16:19	27° \mathfrak{A} 45'36	
desc. node	13064 Nov 26 19:05	10° \mathfrak{B} 23'03			13065 Nov 15 13:07	0° \mathfrak{B}	
evening max el	13064 Dec 07 02:55	22° \mathfrak{B} 57'24	25°28'23	evening max el	13065 Nov 18 13:52	3° \mathfrak{B} 11'44	23°51'58
retrograde	13064 Dec 20 23:34	29° \mathfrak{B} 55'59		retrograde	13065 Dec 02 03:02	9° \mathfrak{B} 56'56	
evening set	13064 Dec 26 22:08	28° \mathfrak{B} 35'17		evening set	13065 Dec 06 21:34	9° \mathfrak{B} 07'14	
min. Earth dist.	13064 Dec 31 15:08	25° \mathfrak{B} 56'20	0.57207 AU	min. Earth dist.	13065 Dec 13 00:41	6° \mathfrak{B} 07'44	0.55575 AU
inferior conj	13065 Jan 03 11:48	24° \mathfrak{B} 00'21	-4°57'26	inferior conj	13065 Dec 14 23:55	4° \mathfrak{B} 57'02	-5°47'39
minimum elong	13065 Jan 03 20:20	23° \mathfrak{B} 45'53	4°54'28	minimum elong	13065 Dec 15 04:11	4° \mathfrak{B} 50'37	5°46'16
morning rise	13065 Jan 11 21:03	19° \mathfrak{B} 45'30		morning rise	13065 Dec 23 12:42	1° \mathfrak{B} 01'28	
direct	13065 Jan 14 01:21	19° \mathfrak{B} 31'15		direct	13065 Dec 26 03:56	0° \mathfrak{B} 44'01	
asc. node	13065 Jan 20 21:01	22° \mathfrak{B} 01'27		morning max el	13066 Jan 05 16:09	5° \mathfrak{B} 45'29	20°07'35
morning max el	13065 Jan 23 01:18	23° \mathfrak{B} 53'21	18°59'52	asc. node	13066 Jan 07 18:14	7° \mathfrak{B} 57'00	
	13065 Jan 28 01:46	0° \approx			13066 Jan 21 06:36	0° \approx	
morning set	13065 Feb 08 13:44	20° \approx 30'35		morning set	13066 Jan 23 19:24	5° \approx 06'49	
	13065 Feb 13 09:14	0° \mathfrak{H}					
superior conj	13065 Feb 17 00:06	7° \mathfrak{H} 00'32	0°45'36	superior conj	13066 Jan 31 11:52	20° \approx 48'07	1°09'10
minimum elong	13065 Feb 17 02:41	7° \mathfrak{H} 12'51	0°45'40	minimum elong	13066 Jan 31 14:37	21° \approx 01'55	1°09'29
desc. node	13065 Feb 22 19:34	17° \mathfrak{H} 48'27		max. Earth dist.	13066 Feb 05 04:27	0° \mathfrak{H}	
max. Earth dist.	13065 Feb 23 23:39	19° \mathfrak{H} 54'22	1.39030 AU	desc. node	13066 Feb 06 06:13	2° \mathfrak{H} 02'29	1.36808 AU
evening rise	13065 Feb 27 19:23	26° \mathfrak{H} 35'13		evening rise	13066 Feb 09 16:11	8° \mathfrak{H} 21'55	
	13065 Mar 01 19:42	0° \mathfrak{Y}			13066 Feb 10 00:35	8° \mathfrak{H} 59'56	
	13065 Mar 21 13:11	0° \mathfrak{B}			13066 Feb 22 13:16	0° \mathfrak{Y}	
evening max el	13065 Apr 03 23:26	16° \mathfrak{B} 13'04	24°28'36	evening max el	13066 Mar 17 10:54	0° \mathfrak{B}	
retrograde	13065 Apr 15 11:22	22° \mathfrak{B} 56'54		retrograde	13066 Mar 17 12:50	0° \mathfrak{B} 04'45	25°42'34
asc. node	13065 Apr 18 17:45	22° \mathfrak{B} 09'26		evening set	13066 Mar 29 23:31	7° \mathfrak{B} 14'43	
evening set	13065 Apr 20 23:57	20° \mathfrak{B} 37'27		asc. node	13066 Apr 04 23:28	4° \mathfrak{B} 46'30	
min. Earth dist.	13065 Apr 25 13:27	15° \mathfrak{B} 24'38	0.68407 AU		13066 Apr 05 15:09	4° \mathfrak{B} 11'52	
inferior conj	13065 Apr 26 12:29	14° \mathfrak{B} 07'25	2°12'37	min. Earth dist.	13066 Apr 09 08:53	30° \mathfrak{R} \mathfrak{Y}	
minimum elong	13065 Apr 26 10:20	14° \mathfrak{B} 14'39	2°11'25	inferior conj	13066 Apr 09 06:01	0° \mathfrak{B} 09'00	0.67526 AU
morning rise	13065 May 01 20:52	8° \mathfrak{B} 08'06		minimum elong	13066 Apr 10 17:25	28° \mathfrak{Y} 16'26	1°32'19
direct	13065 May 05 17:32	6° \mathfrak{B} 42'55		morning rise	13066 Apr 10 15:29	28° \mathfrak{Y} 22'36	1°31'17
morning max el	13065 May 13 05:30	10° \mathfrak{B} 53'52	19°53'45	direct	13066 Apr 16 08:04	22° \mathfrak{Y} 26'29	
desc. node	13065 May 21 21:35	21° \mathfrak{B} 31'35		morning max el	13066 Apr 19 17:13	21° \mathfrak{Y} 21'01	
	13065 May 27 19:24	0° \mathbb{I}			13066 Apr 26 12:19	25° \mathfrak{Y} 02'00	18°56'45
morning set	13065 Jun 09 01:26	18° \mathbb{I} 29'46		desc. node	13066 Apr 30 20:09	0° \mathfrak{B}	
	13065 Jun 16 11:15	0° \mathfrak{E}		greatest brilliancy	13066 May 08 18:22	11° \mathfrak{B} 14'36	
max. Earth dist.	13065 Jun 19 20:47	5° \mathfrak{E} 21'45	1.44539 AU	morning set	13066 May 09 22:41	13° \mathfrak{B} 01'26	-0.8m
					13066 May 19 08:09	27° \mathfrak{B} 28'50	
superior conj	13065 Jun 25 01:05	13° \mathfrak{E} 40'05	-2°08'13		13066 May 20 23:08	0° \mathbb{I}	
minimum elong	13065 Jun 25 05:58	13° \mathfrak{E} 59'48	2°09'01	max. Earth dist.	13066 Jun 02 13:32	19° \mathbb{I} 37'25	1.45538 AU
	13065 Jul 04 21:59	0° Ω		superior conj	13066 Jun 04 17:07	22° \mathbb{I} 59'45	-2°12'49
evening rise	13065 Jul 08 10:38	5° Ω 58'47		minimum elong	13066 Jun 04 15:02	22° \mathbb{I} 51'35	2°13'45
asc. node	13065 Jul 15 16:22	18° Ω 13'02			13066 Jun 09 03:39	0° \mathfrak{E}	
	13065 Jul 23 12:17	0° \mathbb{M}		evening rise	13066 Jun 19 17:50	16° \mathfrak{E} 59'33	
evening max el	13065 Jul 26 04:03	3° \mathbb{M} 00'53	18°06'36		13066 Jun 27 18:56	0° Ω	
retrograde	13065 Aug 01 13:15	6° \mathbb{M} 21'22		asc. node	13066 Jul 02 13:14	7° Ω 23'01	
evening set	13065 Aug 04 07:14	5° \mathbb{M} 42'19		evening max el	13066 Jul 09 17:32	16° Ω 36'38	18°26'59
inferior conj	13065 Aug 10 12:27	0° \mathbb{M} 26'30	2°01'34	retrograde	13066 Jul 16 04:03	20° Ω 04'08	
minimum elong	13065 Aug 10 15:00	0° \mathbb{M} 19'39	2°00'16	evening set	13066 Jul 19 06:34	19° Ω 10'15	
	13065 Aug 10 22:15	30° \mathfrak{R} Ω		inferior conj	13066 Jul 25 01:04	13° Ω 38'21	2°41'31
min. Earth dist.	13065 Aug 13 06:31	27° Ω 29'31	0.62895 AU	minimum elong	13066 Jul 25 03:15	13° Ω 31'51	2°40'17
morning rise	13065 Aug 16 20:43	24° Ω 14'36		min. Earth dist.	13066 Jul 27 05:31	11° Ω 02'42	0.64929 AU
desc. node	13065 Aug 17 19:53	23° Ω 34'29		morning rise	13066 Jul 30 22:43	7° Ω 17'08	
direct	13065 Aug 23 12:53	21° Ω 45'57		desc. node	13066 Aug 04 17:20	4° Ω 48'32	

direct	13066 Aug 06 11:20	4°♎37'36		desc. node	13067 Jul 22 14:41	18°♊20'41	
morning max el	13066 Aug 20 00:14	12°♎34'43	27°15'18	morning max el	13067 Aug 02 11:08	25°♊44'14	26°11'12
	13066 Sep 02 23:31	0°♎			13067 Aug 06 08:52	0°♎	
	13066 Sep 21 03:57	0°♎			13067 Aug 27 12:17	0°♎	
morning set	13066 Sep 24 11:09	6°♎17'14		morning set	13067 Sep 07 10:28	19°♎02'42	
asc. node	13066 Sep 28 14:44	14°♎34'21		max. Earth dist.	13067 Sep 11 06:16	26°♎18'51	1.35005 AU
max. Earth dist.	13066 Sep 28 21:49	15°♎10'40	1.33284 AU		13067 Sep 13 03:21	0°♎	
				asc. node	13067 Sep 15 11:20	4°♎40'35	
superior conj	13066 Oct 02 18:54	23°♎17'15	0°39'04				
minimum elong	13066 Oct 02 17:05	23°♎07'38	0°39'01	superior conj	13067 Sep 16 15:15	7°♎02'41	0°11'02
	13066 Oct 05 22:08	0°♎		minimum elong	13067 Sep 16 14:38	6°♎59'31	0°10'55
evening rise	13066 Oct 09 21:43	8°♎32'33		behind sun begin	13067 Sep 16 10:11	6°♎36'48	
	13066 Oct 21 00:58	0°♎		behind sun end	13067 Sep 16 19:04	7°♎22'15	
evening max el	13066 Oct 31 01:14	13°♎14'08	22°10'29	evening rise	13067 Sep 24 06:17	22°♎54'13	
desc. node	13066 Oct 31 13:38	13°♎43'52			13067 Sep 27 17:42	0°♎	
retrograde	13066 Nov 12 18:36	19°♎32'46		evening max el	13067 Oct 12 22:14	23°♎40'45	20°39'53
evening set	13066 Nov 16 03:03	19°♎07'54		desc. node	13067 Oct 18 11:00	27°♎50'34	
inferior conj	13066 Nov 24 20:04	15°♎11'59	-5°48'38	retrograde	13067 Oct 24 05:14	29°♎17'22	
minimum elong	13066 Nov 24 15:38	15°♎18'12	5°47'19	evening set	13067 Oct 26 11:52	29°♎04'42	
min. Earth dist.	13066 Nov 24 07:21	15°♎29'50	0.54649 AU	inferior conj	13067 Nov 04 11:53	25°♎10'07	-4°50'20
morning rise	13066 Dec 03 05:24	11°♎24'44		minimum elong	13067 Nov 04 01:57	25°♎24'23	4°47'04
direct	13066 Dec 06 15:35	10°♎58'36		min. Earth dist.	13067 Nov 05 14:08	24°♎32'23	0.54625 AU
morning max el	13066 Dec 18 16:36	16°♎43'41	21°37'29	morning rise	13067 Nov 12 15:53	21°♎13'09	
asc. node	13066 Dec 25 15:23	25°♎03'35		direct	13067 Nov 16 24:00	20°♎32'46	
	13066 Dec 28 19:59	0°♎		morning max el	13067 Nov 30 05:41	26°♎58'24	23°23'19
morning set	13067 Jan 08 05:06	19°♎51'08			13067 Dec 03 03:53	0°♎	
	13067 Jan 13 00:14	0°♎		asc. node	13067 Dec 12 12:27	13°♎05'03	
					13067 Dec 21 11:55	0°♎	
superior conj	13067 Jan 15 09:37	5°♎01'54	1°25'32	morning set	13067 Dec 23 16:46	4°♎38'01	
minimum elong	13067 Jan 15 11:45	5°♎13'02	1°26'12				
max. Earth dist.	13067 Jan 19 17:36	13°♎54'40	1.34818 AU	superior conj	13067 Dec 30 14:15	19°♎33'16	1°35'07
evening rise	13067 Jan 23 22:09	22°♎05'38		minimum elong	13067 Dec 30 15:23	19°♎39'21	1°36'03
desc. node	13067 Jan 27 12:50	28°♎47'40		max. Earth dist.	13068 Jan 02 12:50	25°♎50'00	1.33205 AU
	13067 Jan 28 04:54	0°♎			13068 Jan 04 12:46	0°♎	
	13067 Feb 16 08:01	0°♎		evening rise	13068 Jan 07 08:33	5°♎43'22	
evening max el	13067 Feb 28 02:36	13°♎50'24	26°42'47	desc. node	13068 Jan 14 09:34	19°♎01'12	
retrograde	13067 Mar 13 06:11	21°♎13'56			13068 Jan 20 20:42	0°♎	
evening set	13067 Mar 19 16:23	18°♎41'45		evening max el	13068 Feb 10 16:00	27°♎20'18	27°21'47
min. Earth dist.	13067 Mar 23 17:19	14°♎38'22	0.66238 AU		13068 Feb 13 15:56	0°♎	
asc. node	13067 Mar 23 12:36	14°♎51'57		retrograde	13068 Feb 24 06:23	4°♎46'38	
inferior conj	13067 Mar 25 16:54	12°♎17'41	0°41'17	evening set	13068 Mar 02 00:36	2°♎16'26	
minimum elong	13067 Mar 25 15:50	12°♎20'50	0°40'46		13068 Mar 04 15:34	30°♎	
morning rise	13067 Mar 31 16:28	6°♎38'48		min. Earth dist.	13068 Mar 05 21:08	28°♎45'05	0.64588 AU
direct	13067 Apr 03 15:18	5°♎50'30		inferior conj	13068 Mar 08 08:28	26°♎05'23	-0°20'44
morning max el	13067 Apr 10 01:18	9°♎14'03	18°16'10	minimum elong	13068 Mar 08 09:05	26°♎03'42	0°20'19
	13067 Apr 24 19:19	0°♎		asc. node	13068 Mar 09 10:03	24°♎57'11	
desc. node	13067 Apr 25 15:02	1°♎18'30		morning rise	13068 Mar 14 19:27	20°♎40'02	
morning set	13067 Apr 29 14:14	7°♎38'49		direct	13068 Mar 17 09:25	20°♎05'35	
	13067 May 13 17:05	0°♎		morning max el	13068 Mar 23 18:06	23°♎23'19	17°52'38
					13068 Mar 29 02:31	0°♎	
superior conj	13067 May 15 00:43	2°♎03'47	-1°57'10	morning set	13068 Apr 10 00:51	19°♎12'28	
minimum elong	13067 May 14 16:20	1°♎31'00	1°57'25	desc. node	13068 Apr 11 11:38	21°♎37'28	
max. Earth dist.	13067 May 16 09:10	4°♎10'35	1.45813 AU		13068 Apr 16 13:04	0°♎	
evening rise	13067 May 31 00:55	27°♎01'35					
	13067 Jun 01 22:39	0°♎		superior conj	13068 Apr 23 17:33	11°♎38'34	-1°25'06
greatest brilliancy	13067 Jun 10 20:56	13°♎49'39	-0.8m	minimum elong	13068 Apr 23 09:04	11°♎04'42	1°24'43
asc. node	13067 Jun 19 10:12	26°♎03'29		max. Earth dist.	13068 Apr 28 05:14	18°♎45'33	1.45339 AU
	13067 Jun 22 19:31	0°♎			13068 May 05 10:16	0°♎	
evening max el	13067 Jun 23 03:39	0°♎20'35	19°04'37	evening rise	13068 May 09 15:17	6°♎28'33	
retrograde	13067 Jun 29 23:59	4°♎07'56		greatest brilliancy	13068 May 24 11:52	28°♎48'12	-0.6m
evening set	13067 Jul 03 11:28	2°♎57'49			13068 May 25 07:44	0°♎	
	13067 Jul 06 16:03	30°♎		asc. node	13068 Jun 05 07:15	14°♎04'39	
inferior conj	13067 Jul 08 22:50	27°♎11'14	3°04'19	evening max el	13068 Jun 05 08:35	14°♎08'03	19°58'08
minimum elong	13067 Jul 09 00:07	27°♎07'08	3°03'15	retrograde	13068 Jun 12 22:27	18°♎27'04	
min. Earth dist.	13067 Jul 10 12:36	25°♎10'11	0.66605 AU	evening set	13068 Jun 16 19:29	17°♎00'08	
morning rise	13067 Jul 14 12:06	20°♎47'30		inferior conj	13068 Jun 22 02:50	11°♎00'10	3°12'58
direct	13067 Jul 20 16:48	18°♎07'20		minimum elong	13068 Jun 22 03:03	10°♎59'24	3°11'57

min. Earth dist.	13068 Jun 23 02:10	9°  41'19	0.67839 AU	minimum elong	13069 Jun 06 09:50	25°  03'07	3°08'33
morning rise	13068 Jun 27 10:18	4°  38'10		min. Earth dist.	13069 Jun 06 20:16	24°  26'54	0.68597 AU
direct	13068 Jul 03 04:05	2°  06'18		morning rise	13069 Jun 11 14:54	18°  42'47	
desc. node	13068 Jul 08 11:57	3°  49'54		direct	13069 Jun 16 20:13	16°  25'47	
morning max el	13068 Jul 14 21:26	9°  07'52	24°49'39	desc. node	13069 Jun 25 09:05	20°  48'31	
	13068 Jul 31 08:18	0°  Ω		morning max el	13069 Jun 27 07:58	22°  40'26	23°20'28
	13068 Aug 19 02:58	0°  ൬			13069 Jul 03 17:55	0°  ☿	
morning set	13068 Aug 19 16:58	1°  ൬01'36			13069 Jul 24 15:56	0°  Ω	
max. Earth dist.	13068 Aug 23 06:45	7°  ൬27'11	1.37136 AU	morning set	13069 Aug 01 02:03	12°  Ω03'04	
				max. Earth dist.	13069 Aug 05 04:43	19°  Ω03'30	1.39467 AU
					13069 Aug 11 08:03	0°  ൬	
superior conj	13068 Aug 30 01:15	20°  ൬16'44	-0°21'14	superior conj	13069 Aug 12 21:06	2°  ൬50'41	-0°55'52
minimum elong	13068 Aug 30 02:39	20°  ൬23'35	0°21'14	minimum elong	13069 Aug 13 01:10	3°  ൬09'29	0°55'44
asc. node	13068 Sep 01 07:56	24°  ൬46'15		asc. node	13069 Aug 19 04:32	14°  ൬47'57	
	13068 Sep 03 22:39	0°  ♌		evening rise	13069 Aug 22 06:59	20°  ൬47'26	
evening rise	13068 Sep 07 10:20	7°  ♌01'35			13069 Aug 27 03:17	0°  ♌	
	13068 Sep 20 07:24	0°  ♌		evening max el	13069 Sep 07 08:55	16°  ♌51'50	18°39'41
evening max el	13068 Sep 24 09:12	4°  ♌52'16	19°28'51	retrograde	13069 Sep 15 12:52	20°  ♌58'21	
retrograde	13068 Oct 04 00:15	9°  ♌40'58		evening set	13069 Sep 17 11:18	20°  ♌45'18	
desc. node	13068 Oct 04 08:28	9°  ♌40'37		desc. node	13069 Sep 21 05:57	19°  ♌13'02	
evening set	13068 Oct 05 21:01	9°  ♌30'55		inferior conj	13069 Sep 25 11:34	16°  ♌20'01	-1°20'21
inferior conj	13068 Oct 14 13:48	5°  ♌24'35	-3°10'09	minimum elong	13069 Sep 25 08:17	16°  ♌26'10	1°18'52
minimum elong	13068 Oct 14 05:40	5°  ♌37'38	3°06'43	min. Earth dist.	13069 Sep 28 15:16	13°  ♌59'00	0.57198 AU
min. Earth dist.	13068 Oct 16 23:49	3°  ♌51'36	0.55530 AU	morning rise	13069 Oct 03 01:50	11°  ♌16'09	
morning rise	13068 Oct 22 12:13	0°  ♌58'36		direct	13069 Oct 08 23:35	9°  ♌49'59	
	13068 Oct 26 20:12	30°  ♌♌		morning max el	13069 Oct 23 06:23	17°  ♌17'49	26°40'38
direct	13068 Oct 27 16:38	29°  ♌58'20			13069 Nov 02 18:39	0°  ♌	
	13068 Oct 28 13:04	0°  ♌		asc. node	13069 Nov 15 06:15	20°  ♌59'13	
morning max el	13068 Nov 10 15:42	6°  ♌58'19	25°10'38		13069 Nov 19 18:01	0°  ♌	
	13068 Nov 27 09:34	0°  ♌		morning set	13069 Nov 21 14:37	3°  ♌55'37	
asc. node	13068 Nov 28 09:24	1°  ♌47'03					
morning set	13068 Dec 07 04:30	19°  ♌21'00		superior conj	13069 Nov 28 10:25	18°  ♌57'23	1°35'34
	13068 Dec 12 01:17	0°  ♌		minimum elong	13069 Nov 28 09:25	18°  ♌51'45	1°36'29
superior conj	13068 Dec 13 23:13	4°  ♌13'43	1°38'21	max. Earth dist.	13069 Nov 28 22:25	20°  ♌04'13	1.31386 AU
minimum elong	13068 Dec 13 23:14	4°  ♌13'48	1°39'22		13069 Dec 03 10:33	0°  ♌	
max. Earth dist.	13068 Dec 15 15:17	7°  ♌53'52	1.32046 AU	evening rise	13069 Dec 05 07:28	4°  ♌00'25	
evening rise	13068 Dec 21 04:31	19°  ♌43'44		desc. node	13069 Dec 18 03:18	28°  ♌23'46	
	13068 Dec 26 08:49	0°  ♌			13069 Dec 19 02:33	0°  ♌	
desc. node	13068 Dec 31 06:22	8°  ♌55'47		evening max el	13070 Jan 05 09:02	22°  ♌38'14	27°11'02
	13069 Jan 14 01:13	0°  ♌		retrograde	13070 Jan 19 07:54	29°  ♌53'07	
evening max el	13069 Jan 23 02:59	10°  ♌20'25	27°32'55	evening set	13070 Jan 26 03:56	27°  ♌49'37	
retrograde	13069 Feb 05 23:14	17°  ♌42'51		min. Earth dist.	13070 Jan 29 23:30	25°  ♌06'03	0.60487 AU
evening set	13069 Feb 12 21:31	15°  ♌21'46		inferior conj	13070 Feb 02 03:23	22°  ♌25'46	-2°53'56
min. Earth dist.	13069 Feb 16 15:32	12°  ♌18'20	0.62634 AU	minimum elong	13070 Feb 02 09:35	22°  ♌12'39	2°50'56
inferior conj	13069 Feb 19 13:07	9°  ♌31'04	-1°33'20	morning rise	13070 Feb 09 18:19	17°  ♌36'35	
minimum elong	13069 Feb 19 16:16	9°  ♌23'28	1°31'36	asc. node	13070 Feb 11 04:52	17°  ♌20'56	
asc. node	13069 Feb 24 07:29	5°  ♌29'54		direct	13070 Feb 11 20:21	17°  ♌19'14	
morning rise	13069 Feb 26 13:36	4°  ♌22'18		morning max el	13070 Feb 19 02:53	20°  ♌57'28	17°59'01
direct	13069 Feb 28 20:23	3°  ♌58'12			13070 Feb 25 22:30	0°  ♌	
morning max el	13069 Mar 07 11:46	7°  ♌20'56	17°46'36	morning set	13070 Mar 06 16:43	15°  ♌27'25	
	13069 Mar 22 09:31	0°  ♌			13070 Mar 14 16:21	0°  ♌	
morning set	13069 Mar 23 11:45	1°  ♌54'57		desc. node	13070 Mar 16 04:39	2°  ♌40'57	
desc. node	13069 Mar 29 08:09	12°  ♌06'14					
				superior conj	13070 Mar 16 22:31	3°  ♌59'32	-0°05'54
superior conj	13069 Apr 04 07:54	22°  ♌15'16	-0°45'22	minimum elong	13070 Mar 16 22:01	3°  ♌57'23	0°05'46
minimum elong	13069 Apr 04 03:24	21°  ♌56'31	0°44'58	behind sun begin	13070 Mar 16 14:30	3°  ♌24'21	
	13069 Apr 09 01:01	0°  ♌		behind sun end	13070 Mar 17 05:32	4°  ♌30'21	
max. Earth dist.	13069 Apr 10 22:51	3°  ♌04'47	1.44167 AU	max. Earth dist.	13070 Mar 24 11:50	16°  ♌52'18	1.42428 AU
evening rise	13069 Apr 19 03:38	15°  ♌58'33		evening rise	13070 Mar 30 04:36	26°  ♌06'51	
	13069 Apr 28 10:00	0°  ♌			13070 Apr 01 15:46	0°  ♌	
evening max el	13069 May 19 07:37	27°  ♌55'59	21°05'15		13070 Apr 22 05:42	0°  ♌	
	13069 May 21 13:20	0°  ♌		evening max el	13070 May 02 01:30	11°  ♌44'24	22°21'58
asc. node	13069 May 23 04:22	1°  ♌13'36		asc. node	13070 May 10 01:36	17°  ♌14'28	
retrograde	13069 May 27 21:19	2°  ♌55'39		retrograde	13070 May 11 18:48	17°  ♌28'07	
evening set	13069 Jun 01 04:34	1°  ♌12'15		evening set	13070 May 16 12:58	15°  ♌29'18	
	13069 Jun 02 11:49	30°  ♌♌		inferior conj	13070 May 21 20:02	9°  ♌07'55	2°55'28
inferior conj	13069 Jun 06 10:36	25°  ♌00'28	3°09'36				

minimum elong	13070 May 21 18:29	9° Π 13'22	2°54'20		13071 Apr 19 22:16	0° Π	
min. Earth dist.	13070 May 21 16:44	9° Π 19'26	0.68885 AU	retrograde	13071 Apr 25 13:29	1° Π 59'49	
morning rise	13070 May 26 23:50	2° Π 56'13		asc. node	13071 Apr 26 22:54	1° Π 51'00	
direct	13070 May 31 16:14	0° Π 58'07		evening set	13071 Apr 30 19:11	29° \mathcal{R} 47'26	
morning max el	13070 Jun 09 21:06	6° Π 20'43	21°52'34		13071 Apr 30 13:12	30° \mathcal{R} 8	
desc. node	13070 Jun 12 06:07	8° Π 52'41		min. Earth dist.	13071 May 05 13:26	24° \mathcal{R} 13'39	0.68712 AU
	13070 Jun 28 01:38	0° \mathcal{E}		inferior conj	13071 May 06 05:15	23° \mathcal{R} 19'30	2°31'13
morning set	13070 Jul 12 09:59	21° \mathcal{E} 57'32		minimum elong	13071 May 06 03:12	23° \mathcal{R} 26'32	2°29'59
	13070 Jul 17 08:51	0° \mathcal{Q}		morning rise	13071 May 11 11:11	17° \mathcal{R} 15'08	
max. Earth dist.	13070 Jul 18 05:45	1° \mathcal{Q} 26'28	1.41734 AU	direct	13071 May 15 14:56	15° \mathcal{R} 37'44	
				morning max el	13071 May 23 15:59	20° \mathcal{R} 11'55	20°33'21
superior conj	13070 Jul 25 22:20	14° \mathcal{Q} 33'37	-1°29'42	desc. node	13071 May 30 03:02	27° \mathcal{R} 45'04	
minimum elong	13070 Jul 26 04:51	15° \mathcal{Q} 02'12	1°29'40		13071 May 31 19:47	0° Π	
	13070 Aug 03 12:06	0° \mathcal{P}			13071 Jun 21 05:24	0° \mathcal{E}	
evening rise	13070 Aug 05 16:28	4° \mathcal{P} 01'12		morning set	13071 Jun 21 19:16	0° \mathcal{E} 53'40	
asc. node	13070 Aug 06 01:10	4° \mathcal{P} 41'16		max. Earth dist.	13071 Jun 30 13:33	14° \mathcal{E} 42'48	1.43674 AU
evening max el	13070 Aug 21 17:28	29° \mathcal{P} 30'47	18°11'34				
	13070 Aug 22 05:39	0° \mathcal{L}		superior conj	13071 Jul 07 01:00	25° \mathcal{E} 18'06	-1°57'33
retrograde	13070 Aug 28 20:13	3° \mathcal{L} 07'47		minimum elong	13071 Jul 07 07:46	25° \mathcal{E} 46'15	1°58'00
evening set	13070 Aug 31 01:24	2° \mathcal{L} 47'18			13071 Jul 09 20:20	0° \mathcal{Q}	
	13070 Sep 04 22:27	30° \mathcal{R} \mathcal{P}		evening rise	13071 Jul 19 10:15	16° \mathcal{Q} 31'55	
inferior conj	13070 Sep 07 07:03	28° \mathcal{P} 01'24	0°15'42	asc. node	13071 Jul 23 21:54	24° \mathcal{Q} 22'08	
minimum elong	13070 Sep 07 07:35	28° \mathcal{P} 00'14	0°15'22		13071 Jul 27 05:17	0° \mathcal{P}	
transit middle	13070 Sep 07 07:35	28° \mathcal{P} 00'14	0°15'22	evening max el	13071 Aug 05 06:45	12° \mathcal{P} 39'05	18°03'02
transit begin	13070 Sep 07 06:30	28° \mathcal{P} 02'35		retrograde	13071 Aug 11 19:13	16° \mathcal{P} 01'07	
transit end	13070 Sep 07 08:39	27° \mathcal{P} 57'54		evening set	13071 Aug 14 08:33	15° \mathcal{P} 29'33	
desc. node	13070 Sep 08 03:28	27° \mathcal{P} 16'31		inferior conj	13071 Aug 20 21:41	10° \mathcal{P} 24'05	1°29'23
min. Earth dist.	13070 Sep 10 14:23	25° \mathcal{P} 09'13	0.59337 AU	minimum elong	13071 Aug 20 23:57	10° \mathcal{P} 18'20	1°28'12
morning rise	13070 Sep 14 10:21	22° \mathcal{P} 23'34		min. Earth dist.	13071 Aug 23 22:21	7° \mathcal{P} 22'50	0.61630 AU
direct	13070 Sep 20 20:30	20° \mathcal{P} 29'19		desc. node	13071 Aug 26 00:58	5° \mathcal{P} 29'41	
morning max el	13070 Oct 05 04:26	28° \mathcal{P} 17'05	27°38'41	morning rise	13071 Aug 27 12:48	4° \mathcal{P} 21'55	
	13070 Oct 06 20:47	0° \mathcal{L}		direct	13071 Sep 03 04:48	2° \mathcal{P} 03'37	
	13070 Oct 27 13:47	0° \mathcal{M}		morning max el	13071 Sep 17 09:11	10° \mathcal{P} 02'34	27°58'20
asc. node	13070 Nov 02 03:01	10° \mathcal{M} 33'08			13071 Oct 02 22:18	0° \mathcal{L}	
morning set	13070 Nov 05 21:21	18° \mathcal{M} 17'04		asc. node	13071 Oct 19 23:43	0° \mathcal{M} 22'27	
	13070 Nov 11 06:44	0° \mathcal{X}			13071 Oct 19 19:18	0° \mathcal{M}	
				morning set	13071 Oct 20 22:45	2° \mathcal{M} 20'21	
superior conj	13070 Nov 12 22:00	3° \mathcal{X} 38'37	1°26'59	max. Earth dist.	13071 Oct 26 12:54	14° \mathcal{M} 14'36	1.31619 AU
minimum elong	13070 Nov 12 20:12	3° \mathcal{X} 28'32	1°27'39				
max. Earth dist.	13070 Nov 12 06:49	2° \mathcal{X} 13'59	1.31239 AU	superior conj	13071 Oct 28 08:05	18° \mathcal{M} 11'57	1°12'45
evening rise	13070 Nov 19 15:09	18° \mathcal{X} 27'42		minimum elong	13071 Oct 28 05:51	17° \mathcal{M} 59'37	1°13'05
	13070 Nov 25 05:33	0° \mathcal{Z}			13071 Nov 02 16:20	0° \mathcal{X}	
desc. node	13070 Dec 05 00:22	17° \mathcal{Z} 14'54		evening rise	13071 Nov 04 01:32	3° \mathcal{X} 00'21	
	13070 Dec 14 10:03	0° \approx			13071 Nov 18 08:19	0° \mathcal{Z}	
evening max el	13070 Dec 18 07:56	4° \approx 05'38	26°14'45	desc. node	13071 Nov 21 21:32	5° \mathcal{Z} 14'51	
retrograde	13071 Jan 01 06:45	11° \approx 10'46		evening max el	13071 Nov 29 22:41	14° \mathcal{Z} 42'50	24°49'16
evening set	13071 Jan 07 15:53	9° \approx 33'05		retrograde	13071 Dec 13 17:17	21° \mathcal{Z} 36'02	
min. Earth dist.	13071 Jan 11 21:21	6° \approx 56'51	0.58335 AU	evening set	13071 Dec 19 05:03	20° \mathcal{Z} 29'01	
inferior conj	13071 Jan 14 23:46	4° \approx 40'14	-4°15'29	min. Earth dist.	13071 Dec 24 10:33	17° \mathcal{Z} 43'33	0.56439 AU
minimum elong	13071 Jan 15 08:17	4° \approx 24'33	4°12'03	inferior conj	13071 Dec 26 23:38	16° \mathcal{Z} 05'56	-5°23'23
morning rise	13071 Jan 23 03:37	0° \approx 12'33		minimum elong	13071 Dec 27 07:07	15° \mathcal{Z} 53'57	5°21'04
	13071 Jan 24 12:20	30° \mathcal{R} \mathcal{Z}		morning rise	13072 Jan 04 11:19	11° \mathcal{Z} 59'37	
direct	13071 Jan 25 05:06	29° \mathcal{Z} 58'20		direct	13072 Jan 06 19:14	11° \mathcal{Z} 44'32	
	13071 Jan 25 21:45	0° \approx		asc. node	13072 Jan 15 23:30	15° \mathcal{Z} 58'07	
asc. node	13071 Jan 29 02:13	0° \approx 51'37		morning max el	13072 Jan 16 10:02	16° \mathcal{Z} 23'00	19°25'52
morning max el	13071 Feb 02 11:42	4° \approx 02'13	18°31'28		13072 Jan 26 04:14	0° \approx	
morning set	13071 Feb 18 10:26	29° \approx 34'10		morning set	13072 Feb 02 12:39	14° \approx 02'12	
	13071 Feb 18 15:48	0° \mathcal{H}					
				superior conj	13072 Feb 10 14:35	0° \mathcal{H} 09'01	0°56'29
superior conj	13071 Feb 27 10:20	16° \mathcal{H} 42'07	0°28'43	minimum elong	13072 Feb 10 17:22	0° \mathcal{H} 22'36	0°56'39
minimum elong	13071 Feb 27 12:15	16° \mathcal{H} 51'03	0°28'44		13072 Feb 10 12:45	0° \mathcal{H}	
desc. node	13071 Mar 03 01:12	23° \mathcal{H} 18'15		max. Earth dist.	13072 Feb 17 02:46	12° \mathcal{H} 27'26	1.38068 AU
	13071 Mar 06 20:24	0° \mathcal{Y}		desc. node	13072 Feb 17 21:46	13° \mathcal{H} 53'50	
max. Earth dist.	13071 Mar 06 20:20	29° \mathcal{H} 59'42	1.40316 AU	evening rise	13072 Feb 20 20:08	19° \mathcal{H} 07'12	
evening rise	13071 Mar 11 01:54	7° \mathcal{Y} 10'23			13072 Feb 27 06:32	0° \mathcal{Y}	
	13071 Mar 25 17:11	0° \mathcal{B}			13072 Mar 18 21:53	0° \mathcal{B}	
evening max el	13071 Apr 14 16:20	25° \mathcal{B} 35'45	23°42'49	evening max el	13072 Mar 27 05:59	9° \mathcal{B} 28'25	25°01'20

retrograde	13072 Apr 08 04:07	16°♄24'10			13073 Mar 19 08:37	0°♄	
asc. node	13072 Apr 12 20:17	14°♄49'35		retrograde	13073 Mar 22 13:50	0°♄34'41	
evening set	13072 Apr 13 21:36	14°♄00'43			13073 Mar 25 14:22	30°♄	
min. Earth dist.	13072 Apr 18 08:04	9°♄02'58	0.68088 AU	evening set	13073 Mar 28 18:30	28°♄04'01	
inferior conj	13072 Apr 19 12:17	7°♄30'17	1°56'50	asc. node	13073 Mar 30 17:43	26°♄12'39	
minimum elong	13072 Apr 19 10:10	7°♄37'17	1°55'40	min. Earth dist.	13073 Apr 01 22:31	23°♄41'27	0.67032 AU
morning rise	13072 Apr 24 23:00	1°♄34'38		inferior conj	13073 Apr 03 15:09	21°♄35'59	1°12'01
direct	13072 Apr 28 14:45	0°♄17'50		minimum elong	13073 Apr 03 13:30	21°♄41'06	1°11'10
morning max el	13072 May 05 18:25	4°♄14'11	19°27'33	morning rise	13073 Apr 09 09:17	15°♄50'40	
desc. node	13072 May 15 23:52	17°♄12'04		direct	13073 Apr 12 13:59	14°♄52'47	
greatest brilliancy	13072 May 18 10:49	20°♄46'44	-0.7m	morning max el	13073 Apr 19 04:06	18°♄24'25	18°37'29
	13072 May 24 14:26	0°♄			13073 Apr 28 04:37	0°♄	
morning set	13072 May 30 20:32	9°♄33'36		desc. node	13073 May 02 20:35	7°♄04'20	
max. Earth dist.	13072 Jun 12 04:06	28°♄42'58	1.45059 AU	morning set	13073 May 10 11:38	18°♄58'38	
	13072 Jun 12 23:37	0°♄			13073 May 17 12:37	0°♄	
				max. Earth dist.	13073 May 25 22:51	13°♄09'33	1.45750 AU
superior conj	13072 Jun 16 04:07	5°♄03'38	-2°12'33				
minimum elong	13072 Jun 16 06:28	5°♄12'58	2°13'30	superior conj	13073 May 26 14:26	14°♄10'25	-2°08'36
evening rise	13072 Jun 30 07:15	28°♄07'46		minimum elong	13073 May 26 09:08	13°♄49'40	2°09'19
	13072 Jul 01 10:11	0°♄			13073 Jun 05 16:14	0°♄	
asc. node	13072 Jul 09 18:42	13°♄45'06		evening rise	13073 Jun 11 03:56	8°♄42'28	
evening max el	13072 Jul 18 21:02	26°♄07'04	18°13'03	greatest brilliancy	13073 Jun 18 19:37	20°♄52'21	-0.9m
retrograde	13072 Jul 25 05:31	29°♄28'35			13073 Jun 24 18:14	0°♄	
evening set	13072 Jul 28 03:13	28°♄43'16		asc. node	13073 Jun 26 15:35	2°♄43'23	
inferior conj	13072 Aug 03 03:24	23°♄20'13	2°20'49	evening max el	13073 Jul 02 09:19	9°♄46'41	18°40'51
minimum elong	13072 Aug 03 05:53	23°♄13'12	2°19'31	retrograde	13073 Jul 08 23:00	13°♄21'14	
min. Earth dist.	13072 Aug 05 15:50	20°♄30'41	0.63805 AU	evening set	13073 Jul 12 05:17	12°♄20'29	
morning rise	13072 Aug 09 06:57	17°♄03'37		inferior conj	13073 Jul 17 20:19	6°♄41'52	2°53'06
desc. node	13072 Aug 11 22:25	15°♄24'21		minimum elong	13073 Jul 17 22:09	6°♄36'12	2°51'56
direct	13072 Aug 15 22:17	14°♄29'20		min. Earth dist.	13073 Jul 19 18:26	4°♄19'54	0.65690 AU
morning max el	13072 Aug 29 18:29	22°♄30'00	27°40'30	morning rise	13073 Jul 23 14:05	0°♄18'48	
	13072 Sep 05 09:12	0°♄			13073 Jul 23 23:14	30°♄	
	13072 Sep 25 04:09	0°♄		direct	13073 Jul 29 23:37	27°♄38'09	
morning set	13072 Oct 03 16:29	15°♄59'54		desc. node	13073 Jul 29 19:50	27°♄38'14	
asc. node	13072 Oct 05 20:23	20°♄22'02			13073 Aug 05 17:53	0°♄	
max. Earth dist.	13072 Oct 08 12:55	25°♄57'35	1.32528 AU	morning max el	13073 Aug 12 05:39	5°♄28'25	26°50'52
	13072 Oct 10 10:29	0°♄			13073 Aug 31 00:28	0°♄	
				morning set	13073 Sep 16 23:33	29°♄07'40	
superior conj	13072 Oct 11 14:43	2°♄31'58	0°52'56		13073 Sep 17 10:28	0°♄	
minimum elong	13072 Oct 11 12:34	2°♄20'20	0°52'59	max. Earth dist.	13073 Sep 21 03:37	7°♄17'46	1.33961 AU
evening rise	13072 Oct 18 12:47	17°♄33'25		asc. node	13073 Sep 22 16:58	10°♄26'46	
	13072 Oct 24 14:12	0°♄					
desc. node	13072 Nov 07 18:48	22°♄04'45		superior conj	13073 Sep 25 15:32	16°♄31'37	0°27'45
evening max el	13072 Nov 10 08:44	24°♄47'50	23°08'20	minimum elong	13073 Sep 25 14:08	16°♄24'16	0°27'39
	13072 Nov 17 14:13	0°♄			13073 Oct 02 00:05	0°♄	
retrograde	13072 Nov 23 14:51	1°♄23'13		evening rise	13073 Oct 02 22:55	2°♄00'40	
evening set	13072 Nov 27 19:14	0°♄45'12			13073 Oct 18 16:03	0°♄	
	13072 Nov 29 21:52	30°♄		evening max el	13073 Oct 22 23:00	4°♄55'29	21°29'48
min. Earth dist.	13072 Dec 04 18:10	27°♄31'38	0.55082 AU	desc. node	13073 Oct 25 16:08	7°♄18'51	
inferior conj	13072 Dec 06 04:01	26°♄42'54	-5°55'13	retrograde	13073 Nov 04 03:16	10°♄58'31	
minimum elong	13072 Dec 06 04:48	26°♄41'45	5°54'14	evening set	13073 Nov 06 22:59	10°♄40'16	
morning rise	13072 Dec 14 15:57	22°♄52'54		inferior conj	13073 Nov 15 20:29	6°♄46'08	-5°30'45
direct	13072 Dec 17 14:45	22°♄32'19		minimum elong	13073 Nov 15 12:51	6°♄56'51	5°28'39
morning max el	13072 Dec 28 18:41	27°♄51'41	20°43'20	min. Earth dist.	13073 Nov 16 00:17	6°♄40'49	0.54522 AU
	13072 Dec 30 20:08	0°♄		morning rise	13073 Nov 24 03:35	2°♄57'33	
asc. node	13073 Jan 01 20:43	2°♄25'56		direct	13073 Nov 27 22:51	2°♄26'17	
morning set	13073 Jan 16 20:21	28°♄42'53		morning max el	13073 Dec 10 13:39	8°♄28'53	22°21'19
	13073 Jan 17 11:15	0°♄		asc. node	13073 Dec 19 17:50	19°♄57'14	
					13073 Dec 25 14:19	0°♄	
superior conj	13073 Jan 24 07:02	14°♄08'48	1°16'57	morning set	13074 Jan 01 07:05	13°♄28'34	
minimum elong	13073 Jan 24 09:35	14°♄21'52	1°17'26				
max. Earth dist.	13073 Jan 29 11:14	24°♄27'40	1.35924 AU	superior conj	13074 Jan 08 08:02	28°♄30'44	1°30'24
	13073 Feb 01 09:01	0°♄		minimum elong	13074 Jan 08 09:46	28°♄39'56	1°31'12
evening rise	13073 Feb 02 08:43	1°♄50'07			13074 Jan 09 00:55	0°♄	
desc. node	13073 Feb 03 18:24	4°♄24'18		max. Earth dist.	13074 Jan 12 01:40	6°♄18'33	1.34075 AU
	13073 Feb 19 08:10	0°♄		evening rise	13074 Jan 16 12:06	15°♄09'40	
evening max el	13073 Mar 09 19:34	23°♄18'08	26°10'15	desc. node	13074 Jan 21 15:05	24°♄45'02	

	13074 Jan 24 14:29	0° H		evening rise	13074 Dec 31 02:54	28° Z 57'36	
	13074 Feb 13 23:54	0° Y			13074 Dec 31 15:18	0° \approx	
evening max el	13074 Feb 20 09:05	6° Y 57'12	27°02'20	desc. node	13075 Jan 08 11:50	14° \approx 50'53	
retrograde	13074 Mar 05 17:54	14° Y 23'35			13075 Jan 17 17:41	0° H	
evening set	13074 Mar 12 08:00	11° Y 51'02		evening max el	13075 Feb 02 21:33	20° H 15'10	27°30'21
min. Earth dist.	13074 Mar 16 06:45	8° Y 01'57	0.65575 AU	retrograde	13075 Feb 16 15:21	27° H 41'26	
asc. node	13074 Mar 17 15:09	6° Y 30'07		evening set	13075 Feb 23 11:46	25° H 14'06	
inferior conj	13074 Mar 18 11:34	5° Y 31'37	0°16'20	min. Earth dist.	13075 Feb 27 06:50	21° H 55'13	0.63777 AU
minimum elong	13074 Mar 18 11:07	5° Y 32'54	0°16'09	inferior conj	13075 Mar 01 22:51	19° H 10'28	-0°50'22
morning rise	13074 Mar 24 15:43	29° H 58'29		minimum elong	13075 Mar 02 00:26	19° H 06'21	0°49'26
	13074 Mar 24 14:30	30° R H		asc. node	13075 Mar 04 12:36	16° H 38'42	
direct	13074 Mar 27 10:33	29° H 16'36		morning rise	13075 Mar 08 15:23	13° H 51'53	
	13074 Mar 30 07:25	0° Y		direct	13075 Mar 11 01:54	13° H 22'26	
morning max el	13074 Apr 02 19:06	2° Y 36'18	18°04'07	morning max el	13075 Mar 17 12:39	16° H 41'23	17°47'54
desc. node	13074 Apr 19 17:13	27° Y 15'01			13075 Mar 27 03:17	0° Y	
morning set	13074 Apr 21 05:54	29° Y 44'16		morning set	13075 Apr 03 03:33	11° Y 48'53	
	13074 Apr 21 09:46	0° B		desc. node	13075 Apr 06 13:47	17° Y 38'19	
					13075 Apr 13 23:42	0° B	
superior conj	13074 May 05 23:55	23° B 22'18	-1°45'07	superior conj	13075 Apr 16 00:57	3° B 20'55	-1°08'40
minimum elong	13074 May 05 14:43	22° B 46'06	1°45'01	minimum elong	13075 Apr 15 17:57	2° B 52'27	1°08'11
max. Earth dist.	13074 May 08 18:49	27° B 44'45	1.45692 AU	max. Earth dist.	13075 Apr 21 13:30	12° B 12'25	1.44911 AU
	13074 May 10 05:25	0° II		evening rise	13075 May 01 13:49	27° B 47'43	
evening rise	13074 May 22 02:28	18° II 25'26			13075 May 03 00:25	0° II	
	13074 May 29 15:05	0° E			13075 May 23 14:39	0° E	
greatest brilliancy	13074 Jun 03 22:17	8° E 00'25	-0.7m	evening max el	13075 May 29 19:45	7° E 20'02	20°25'18
asc. node	13074 Jun 13 12:34	21° E 08'42		asc. node	13075 May 31 09:39	8° E 49'16	
evening max el	13074 Jun 15 17:20	23° E 32'28	19°25'31	retrograde	13075 Jun 06 19:16	11° E 55'42	
retrograde	13074 Jun 22 20:27	27° E 32'27		evening set	13075 Jun 10 20:27	10° E 21'55	
evening set	13074 Jun 26 11:48	26° E 15'20		inferior conj	13075 Jun 16 02:58	4° E 16'53	3°12'54
inferior conj	13074 Jul 01 21:05	20° E 22'47	3°09'35	minimum elong	13075 Jun 16 02:45	4° E 17'36	3°11'53
minimum elong	13074 Jul 01 21:55	20° E 20'02	3°08'32	min. Earth dist.	13075 Jun 16 20:29	3° E 16'47	0.68216 AU
min. Earth dist.	13074 Jul 03 04:39	18° E 38'54	0.67178 AU		13075 Jun 19 09:23	30° R II	
morning rise	13074 Jul 07 07:32	13° E 59'05		morning rise	13075 Jun 21 08:44	27° II 56'19	
direct	13074 Jul 13 07:46	11° E 21'27		direct	13075 Jun 26 21:24	25° II 29'48	
desc. node	13074 Jul 16 17:07	12° E 03'32		desc. node	13075 Jul 03 14:20	28° II 13'30	
morning max el	13074 Jul 25 16:32	18° E 45'59	25°38'07		13075 Jul 05 18:41	0° E	
	13074 Aug 04 04:39	0° O		morning max el	13075 Jul 08 02:33	2° E 12'58	24°12'03
	13074 Aug 24 01:39	0° M			13075 Jul 29 05:47	0° O	
morning set	13074 Aug 30 16:18	11° M 35'18		morning set	13075 Aug 12 14:16	23° O 11'07	
max. Earth dist.	13074 Sep 03 08:09	18° M 22'53	1.35871 AU		13075 Aug 16 11:17	0° M	
				max. Earth dist.	13075 Aug 16 06:12	29° O 137'12	1.38117 AU
superior conj	13074 Sep 09 07:54	0° O 04'46	-0°02'15	superior conj	13075 Aug 23 12:24	13° M 03'02	-0°35'47
minimum elong	13074 Sep 09 08:02	0° O 05'29	0°02'19	minimum elong	13075 Aug 23 14:52	13° M 14'52	0°35'42
behind sun begin	13074 Sep 09 01:51	29° M 34'28		asc. node	13075 Aug 27 10:09	20° M 37'38	
behind sun end	13074 Sep 09 14:13	0° O 36'33		evening rise	13075 Sep 01 07:09	0° O 16'01	
	13074 Sep 09 06:57	0° O			13075 Sep 01 03:54	0° O	
asc. node	13074 Sep 09 13:34	0° O 33'17		evening max el	13075 Sep 17 18:41	27° O 13'09	19°05'19
evening rise	13074 Sep 17 05:53	16° O 17'07			13075 Sep 21 04:52	0° M	
	13074 Sep 24 05:33	0° M		retrograde	13075 Sep 26 17:37	1° M 42'05	
evening max el	13074 Oct 05 01:47	15° M 39'56	20°06'58	evening set	13075 Sep 28 14:12	1° M 31'19	
desc. node	13074 Oct 12 13:31	20° M 29'42		desc. node	13075 Sep 29 10:58	1° M 19'16	
retrograde	13074 Oct 15 16:07	20° M 56'15			13075 Oct 02 16:48	30° R O	
evening set	13074 Oct 17 16:23	20° M 45'43		inferior conj	13075 Oct 07 00:41	27° O 17'47	-2°23'00
inferior conj	13074 Oct 26 15:00	16° M 47'35	-4°11'03	minimum elong	13075 Oct 06 18:33	27° O 28'15	2°20'16
minimum elong	13074 Oct 26 05:05	17° M 02'24	4°07'21	min. Earth dist.	13075 Oct 09 20:19	25° O 22'42	0.56167 AU
min. Earth dist.	13074 Oct 28 08:18	15° M 45'47	0.54904 AU	morning rise	13075 Oct 14 20:02	22° O 36'03	
morning rise	13074 Nov 03 16:44	12° M 39'42		direct	13075 Oct 20 08:37	21° O 24'59	
direct	13074 Nov 08 09:37	11° M 51'35		morning max el	13075 Nov 03 11:34	28° O 37'46	25°51'55
morning max el	13074 Nov 22 00:27	18° M 33'28	24°09'49		13075 Nov 04 20:42	0° M	
	13074 Dec 01 10:53	0° A		asc. node	13075 Nov 23 11:45	27° M 13'15	
asc. node	13074 Dec 06 14:50	8° A 17'02			13075 Nov 24 22:52	0° A	
morning set	13074 Dec 16 18:57	28° A 13'50		morning set	13075 Dec 01 06:14	12° A 54'02	
	13074 Dec 17 14:42	0° Z					
superior conj	13074 Dec 23 14:47	13° Z 06'35	1°37'14	superior conj	13075 Dec 08 00:58	27° A 49'37	1°37'53
minimum elong	13074 Dec 23 15:26	13° Z 10'10	1°38'13	minimum elong	13075 Dec 08 00:32	27° A 47'10	1°38'53
max. Earth dist.	13074 Dec 25 23:50	18° Z 15'22	1.32650 AU				

max. Earth dist.	13075 Dec 09 04:39	0° S 22'54	1.31706 AU	max. Earth dist.	13076 Nov 21 13:00	12° S 35'21	1.31265 AU
	13075 Dec 09 00:30	0° S		evening rise	13076 Nov 28 07:27	27° S 28'41	
evening rise	13075 Dec 15 02:13	13° S 06'26			13076 Nov 29 12:04	0° S	
	13075 Dec 23 18:09	0° \approx		desc. node	13076 Dec 12 05:40	23° S 49'24	
desc. node	13075 Dec 26 08:41	4° \approx 35'29			13076 Dec 16 05:04	0° \approx	
	13076 Jan 13 08:13	0° H		evening max el	13076 Dec 28 10:31	14° \approx 57'50	26°51'11
evening max el	13076 Jan 16 07:02	3° H 00'00	27°27'57	retrograde	13077 Jan 11 09:17	22° \approx 07'45	
retrograde	13076 Jan 30 04:59	10° H 19'17		evening set	13077 Jan 18 02:01	20° \approx 14'30	
evening set	13076 Feb 06 02:59	8° H 05'03		min. Earth dist.	13077 Jan 22 00:37	17° \approx 35'55	0.59566 AU
min. Earth dist.	13076 Feb 09 21:07	5° H 10'55	0.61730 AU	inferior conj	13077 Jan 25 05:00	15° \approx 03'57	-3°29'03
inferior conj	13076 Feb 12 21:53	2° H 24'55	-2°06'51	minimum elong	13077 Jan 25 12:24	14° \approx 49'12	3°25'41
minimum elong	13076 Feb 13 02:18	2° H 14'47	2°04'32	morning rise	13077 Feb 02 01:46	10° \approx 23'30	
	13076 Feb 15 16:32	30° R \approx		direct	13077 Feb 04 03:06	10° \approx 07'49	
asc. node	13076 Feb 19 10:01	27° \approx 40'35		asc. node	13077 Feb 05 07:25	10° \approx 13'10	
morning rise	13076 Feb 20 04:29	27° \approx 23'46		morning max el	13077 Feb 11 18:32	13° \approx 55'29	18°10'15
direct	13076 Feb 22 08:50	27° \approx 02'59			13077 Feb 22 16:34	0° H	
	13076 Feb 28 16:23	0° H		morning set	13077 Feb 27 09:57	8° H 44'22	
morning max el	13076 Feb 29 05:39	0° H 31'23	17°49'31				
morning set	13076 Mar 15 22:57	24° H 55'25		superior conj	13077 Mar 09 01:57	26° H 37'14	0°09'35
	13076 Mar 18 19:08	0° Y		minimum elong	13077 Mar 09 02:41	26° H 40'35	0°09'37
desc. node	13076 Mar 23 10:19	8° Y 10'15		behind sun begin	13077 Mar 08 20:35	26° H 13'07	
				behind sun end	13077 Mar 09 08:48	27° H 07'59	
superior conj	13076 Mar 27 01:46	14° Y 26'45	-0°28'14	desc. node	13077 Mar 10 06:51	28° H 46'25	
minimum elong	13076 Mar 26 23:07	14° Y 15'27	0°27'58		13077 Mar 10 23:27	0° Y	
max. Earth dist.	13076 Apr 03 05:24	26° Y 20'05	1.43490 AU	max. Earth dist.	13077 Mar 16 16:56	9° Y 53'16	1.41568 AU
	13076 Apr 05 11:56	0° S		evening rise	13077 Mar 21 15:22	18° Y 02'06	
evening rise	13076 Apr 10 06:11	7° S 31'16			13077 Mar 29 06:01	0° S	
	13076 Apr 25 06:05	0° II			13077 Apr 19 20:38	0° II	
evening max el	13076 May 11 16:34	21° II 08'28	21°37'02	evening max el	13077 Apr 24 08:55	4° II 57'55	22°56'12
asc. node	13076 May 17 06:49	25° II 31'15		asc. node	13077 May 04 04:05	10° II 58'18	
retrograde	13076 May 20 17:36	26° II 26'15		retrograde	13077 May 04 13:58	10° II 59'05	
evening set	13076 May 25 05:26	24° II 36'11		evening set	13077 May 09 13:07	8° II 54'00	
inferior conj	13076 May 30 11:41	18° II 20'18	3°04'50	inferior conj	13077 May 14 21:15	2° II 29'32	2°46'23
minimum elong	13076 May 30 10:33	18° II 24'14	3°03'46	minimum elong	13077 May 14 19:26	2° II 35'49	2°45'13
min. Earth dist.	13076 May 30 15:48	18° II 05'54	0.68782 AU	min. Earth dist.	13077 May 14 12:32	2° II 59'46	0.68871 AU
morning rise	13076 Jun 04 15:27	12° II 05'06			13077 May 16 17:19	30° R S	
direct	13076 Jun 09 15:25	9° II 55'35		morning rise	13077 May 20 01:39	26° S 21'05	
desc. node	13076 Jun 19 11:27	15° II 42'09		direct	13077 May 24 12:38	24° S 31'47	
morning max el	13076 Jun 19 13:37	15° II 47'36	22°42'24	morning max el	13077 Jun 02 04:57	29° S 32'22	21°17'32
	13076 Jul 01 04:35	0° S			13077 Jun 02 15:53	0° II	
	13076 Jul 21 05:44	0° Ω		desc. node	13077 Jun 06 08:28	4° II 08'34	
morning set	13076 Jul 23 12:49	3° Ω 43'52			13077 Jun 24 20:39	0° S	
max. Earth dist.	13076 Jul 28 04:58	11° Ω 31'59	1.40460 AU	morning set	13077 Jul 03 10:17	13° S 10'58	
				max. Earth dist.	13077 Jul 10 09:19	24° S 20'27	1.42613 AU
superior conj	13076 Aug 05 00:54	25° Ω 16'33	-1°10'34		13077 Jul 13 19:28	0° Ω	
minimum elong	13076 Aug 05 06:07	25° Ω 40'09	1°10'26				
	13076 Aug 07 14:56	0° H		superior conj	13077 Jul 17 16:57	6° Ω 35'21	-1°42'37
asc. node	13076 Aug 13 06:46	10° H 36'08		minimum elong	13077 Jul 18 00:00	7° Ω 05'36	1°42'44
evening rise	13076 Aug 14 23:32	13° H 49'13		evening rise	13077 Jul 29 03:00	26° Ω 46'37	
	13076 Aug 23 21:49	0° Ω			13077 Jul 30 21:53	0° H	
evening max el	13076 Aug 30 22:43	9° Ω 30'42	18°25'14	asc. node	13077 Jul 31 03:26	0° H 24'56	
retrograde	13076 Sep 07 14:22	13° Ω 22'44		evening max el	13077 Aug 14 09:44	22° H 23'18	18°05'36
evening set	13076 Sep 09 15:32	13° Ω 06'52		retrograde	13077 Aug 21 05:12	25° H 52'30	
desc. node	13076 Sep 15 08:29	10° Ω 04'28		evening set	13077 Aug 23 13:43	25° H 27'42	
inferior conj	13076 Sep 17 07:46	8° Ω 32'33	-0°37'09	inferior conj	13077 Aug 30 11:55	20° H 32'56	0°49'46
minimum elong	13076 Sep 17 06:21	8° Ω 35'24	0°36'32	minimum elong	13077 Aug 30 13:25	20° H 29'26	0°48'57
min. Earth dist.	13076 Sep 20 14:29	5° Ω 56'04	0.58072 AU	desc. node	13077 Sep 02 06:00	17° H 59'23	
morning rise	13076 Sep 24 17:42	3° Ω 13'39		min. Earth dist.	13077 Sep 02 17:11	17° H 34'23	0.60303 AU
direct	13076 Sep 30 21:33	1° Ω 35'37		morning rise	13077 Sep 06 10:04	14° H 43'20	
morning max el	13076 Oct 15 05:09	9° Ω 11'55	27°09'51	direct	13077 Sep 12 23:18	12° H 38'28	
	13076 Oct 31 01:51	0° H		morning max el	13077 Sep 27 06:31	20° H 31'56	27°51'59
asc. node	13076 Nov 09 08:34	16° H 35'45			13077 Oct 05 10:40	0° Ω	
morning set	13076 Nov 14 15:09	27° H 23'46			13077 Oct 24 00:26	0° H	
	13076 Nov 15 20:16	0° S		asc. node	13077 Oct 27 05:19	6° H 17'20	
				morning set	13077 Oct 29 19:55	11° H 38'41	
superior conj	13076 Nov 21 12:34	12° S 32'54	1°32'38	max. Earth dist.	13077 Nov 04 21:07	24° H 43'44	1.31339 AU
minimum elong	13076 Nov 21 11:11	12° S 25'10	1°33'27				

superior conj	13077 Nov 05 23:45	27°♄11'38	1°21'38	max. Earth dist.	13078 Oct 19 00:57	6°♄37'05	1.31935 AU
minimum elong	13077 Nov 05 21:43	27°♄00'17	1°22'10				
	13077 Nov 07 05:59	0°♄		superior conj	13078 Oct 21 08:36	11°♄39'46	1°05'01
evening rise	13077 Nov 12 16:33	11°♄59'07		minimum elong	13078 Oct 21 06:20	11°♄27'20	1°05'14
	13077 Nov 21 16:20	0°♄		evening rise	13078 Oct 28 03:29	26°♄32'06	
desc. node	13077 Nov 29 02:45	12°♄21'00			13078 Oct 29 18:27	0°♄	
evening max el	13077 Dec 10 05:41	26°♄02'21	25°41'10	desc. node	13078 Nov 15 23:57	29°♄53'58	
	13077 Dec 15 03:36	0°♄			13078 Nov 16 01:49	0°♄	
retrograde	13077 Dec 24 03:02	3°♄02'54		evening max el	13078 Nov 21 17:27	6°♄21'52	24°07'09
evening set	13077 Dec 30 04:44	1°♄37'36		retrograde	13078 Dec 05 08:33	13°♄09'36	
	13078 Jan 02 04:54	30°♄♄		evening set	13078 Dec 10 07:43	12°♄15'35	
min. Earth dist.	13078 Jan 03 18:10	28°♄59'55	0.57489 AU	min. Earth dist.	13078 Dec 16 04:40	9°♄20'16	0.55775 AU
inferior conj	13078 Jan 06 16:48	26°♄58'03	-4°47'05	inferior conj	13078 Dec 18 07:54	8°♄02'19	-5°42'45
minimum elong	13078 Jan 07 01:29	26°♄43'02	4°43'57	minimum elong	13078 Dec 18 13:13	7°♄54'13	5°41'09
morning rise	13078 Jan 15 00:53	22°♄40'04		morning rise	13078 Dec 26 20:40	4°♄04'10	
direct	13078 Jan 17 04:12	22°♄25'58		direct	13078 Dec 29 09:37	3°♄47'32	
asc. node	13078 Jan 23 04:45	24°♄25'57		morning max el	13079 Jan 08 16:19	8°♄43'04	19°56'02
morning max el	13078 Jan 25 23:24	26°♄42'59	18°51'49	asc. node	13079 Jan 10 02:01	10°♄09'20	
	13078 Jan 28 21:38	0°♄			13079 Jan 22 17:07	0°♄	
morning set	13078 Feb 11 07:40	23°♄01'14		morning set	13079 Jan 26 12:32	7°♄35'40	
	13078 Feb 14 21:02	0°♄					
superior conj	13078 Feb 19 21:20	9°♄40'25	0°41'22	superior conj	13079 Feb 03 07:17	23°♄23'10	1°06'01
minimum elong	13078 Feb 19 23:47	9°♄52'02	0°41'25	minimum elong	13079 Feb 03 10:04	23°♄37'03	1°06'20
desc. node	13078 Feb 25 03:24	19°♄23'21			13079 Feb 06 16:14	0°♄	
max. Earth dist.	13078 Feb 27 00:06	22°♄42'49	1.39362 AU	max. Earth dist.	13079 Feb 09 06:23	4°♄55'18	1.37127 AU
evening rise	13078 Mar 02 21:40	29°♄28'25		desc. node	13079 Feb 11 23:58	9°♄57'34	
	13078 Mar 03 05:07	0°♄		evening rise	13079 Feb 13 00:09	11°♄46'31	
	13078 Mar 22 15:48	0°♄			13079 Feb 23 20:11	0°♄	
evening max el	13078 Apr 06 22:49	18°♄49'07	24°16'53		13079 Mar 17 21:52	0°♄	
retrograde	13078 Apr 18 07:08	25°♄28'27		evening max el	13079 Mar 20 12:17	2°♄41'29	25°32'17
asc. node	13078 Apr 21 01:26	24°♄54'14		retrograde	13079 Apr 01 20:00	9°♄48'18	
evening set	13078 Apr 23 17:55	23°♄10'40		evening set	13079 Apr 07 18:14	7°♄21'16	
min. Earth dist.	13078 Apr 28 08:33	17°♄52'26	0.68498 AU	asc. node	13079 Apr 07 22:50	7°♄11'24	
inferior conj	13078 Apr 29 05:45	16°♄40'56	2°17'53	min. Earth dist.	13079 Apr 12 01:47	2°♄38'26	0.67684 AU
minimum elong	13078 Apr 29 03:37	16°♄48'11	2°16'39	inferior conj	13079 Apr 13 11:17	0°♄50'51	1°39'10
morning rise	13078 May 04 13:25	10°♄40'16		minimum elong	13079 Apr 13 09:17	0°♄57'18	1°38'05
direct	13078 May 08 11:51	9°♄12'01			13079 Apr 14 03:12	30°♄♄	
morning max el	13078 May 16 03:04	13°♄28'45	20°03'33	morning rise	13079 Apr 19 00:50	24°♄59'16	
desc. node	13078 May 24 05:22	23°♄16'58		direct	13079 Apr 22 11:39	23°♄50'55	
	13078 May 28 23:45	0°♄		morning max el	13079 Apr 29 08:45	27°♄35'36	19°04'12
morning set	13078 Jun 12 13:35	21°♄52'55			13079 May 01 14:34	0°♄	
	13078 Jun 17 19:12	0°♄		desc. node	13079 May 11 02:09	12°♄56'13	
max. Earth dist.	13078 Jun 22 20:00	7°♄56'23	1.44333 AU	greatest brilliancy	13079 May 12 11:42	15°♄01'33	-0.7m
					13079 May 22 06:30	0°♄	
superior conj	13078 Jun 28 09:16	16°♄53'04	-2°05'55	morning set	13079 May 22 18:12	0°♄45'11	
minimum elong	13078 Jun 28 14:49	17°♄15'40	2°06'37	max. Earth dist.	13079 Jun 05 12:09	22°♄08'18	1.45440 AU
	13078 Jul 06 06:54	0°♄					
evening rise	13078 Jul 11 12:32	8°♄55'12		superior conj	13079 Jun 08 03:54	26°♄18'52	-2°13'24
asc. node	13078 Jul 18 00:11	19°♄58'48		minimum elong	13079 Jun 08 03:02	26°♄15'27	2°14'23
	13078 Jul 24 08:48	0°♄			13079 Jun 10 11:53	0°♄	
evening max el	13078 Jul 28 23:46	5°♄40'24	18°05'05	evening rise	13079 Jun 22 23:24	20°♄05'09	
retrograde	13078 Aug 04 09:34	9°♄00'55			13079 Jun 29 01:15	0°♄	
evening set	13078 Aug 07 02:18	8°♄23'56		asc. node	13079 Jul 04 21:01	9°♄12'23	
inferior conj	13078 Aug 13 09:28	3°♄10'49	1°53'45	evening max el	13079 Jul 12 13:33	19°♄14'22	18°22'46
minimum elong	13078 Aug 13 11:59	3°♄04'09	1°52'28	retrograde	13079 Jul 18 23:13	22°♄39'43	
min. Earth dist.	13078 Aug 16 05:25	0°♄11'59	0.62573 AU	evening set	13079 Jul 22 00:29	21°♄48'07	
	13078 Aug 16 10:10	30°♄♄		inferior conj	13079 Jul 27 20:22	16°♄18'32	2°36'38
morning rise	13078 Aug 19 19:28	27°♄01'04		minimum elong	13079 Jul 27 22:39	16°♄11'50	2°35'21
desc. node	13078 Aug 20 03:31	26°♄46'43		min. Earth dist.	13079 Jul 30 02:58	13°♄38'48	0.64655 AU
direct	13078 Aug 26 11:45	24°♄34'42		morning rise	13079 Aug 02 19:29	9°♄58'20	
	13078 Sep 06 18:31	0°♄		desc. node	13079 Aug 07 00:57	7°♄39'06	
morning max el	13078 Sep 09 13:41	2°♄36'41	27°55'08	direct	13079 Aug 09 09:02	7°♄19'45	
	13078 Sep 29 20:43	0°♄		morning max el	13079 Aug 22 23:55	15°♄18'07	27°22'40
morning set	13078 Oct 13 18:22	25°♄32'40			13079 Sep 04 00:58	0°♄	
asc. node	13078 Oct 14 01:59	26°♄11'30			13079 Sep 22 14:18	0°♄	
	13078 Oct 15 22:14	0°♄		morning set	13079 Sep 27 07:54	8°♄59'16	
				asc. node	13079 Sep 30 22:37	16°♄13'34	

































































































































max. Earth dist.	13079 Oct 01 20:54	18°♄08'15	1.33070 AU			13080 Sep 13 15:13	0°♄	
				asc. node		13080 Sep 16 19:12	6°♄19'45	
superior conj	13079 Oct 05 13:02	25°♄51'43	0°42'52					
minimum elong	13079 Oct 05 11:07	25°♄41'27	0°42'51	superior conj	13080 Sep 18 10:39	9°♄41'30	0°15'34	
	13079 Oct 07 11:19	0°♄		minimum elong	13080 Sep 18 09:48	9°♄37'07	0°15'29	
evening rise	13079 Oct 12 14:27	11°♄02'49		behind sun begin	13080 Sep 18 08:10	9°♄28'42		
	13079 Oct 22 05:34	0°♄		behind sun end	13080 Sep 18 11:26	9°♄45'33		
desc. node	13079 Nov 02 21:14	16°♄06'29		evening rise	13080 Sep 25 23:31	25°♄26'36		
evening max el	13079 Nov 03 04:11	16°♄23'36	22°25'16		13080 Sep 28 04:29	0°♄		
retrograde	13079 Nov 16 01:18	22°♄46'56		evening max el	13080 Oct 14 23:14	26°♄44'35	20°52'11	
evening set	13079 Nov 19 14:47	22°♄19'05			13080 Oct 18 21:54	0°♄		
min. Earth dist.	13079 Nov 27 11:29	18°♄47'58	0.54729 AU	desc. node	13080 Oct 19 18:36	0°♄32'03		
inferior conj	13079 Nov 28 05:49	18°♄22'07	-5°52'25	retrograde	13080 Oct 26 11:54	2°♄28'18		
minimum elong	13079 Nov 28 02:43	18°♄26'30	5°51'16	evening set	13080 Oct 28 21:29	2°♄14'30		
morning rise	13079 Dec 06 15:54	14°♄34'40			13080 Nov 03 21:06	30°♄		
direct	13079 Dec 09 23:02	14°♄10'06		inferior conj	13080 Nov 06 21:18	28°♄20'27	-5°02'30	
morning max el	13079 Dec 21 18:46	19°♄48'42	21°22'52	minimum elong	13080 Nov 06 11:42	28°♄34'06	4°59'31	
asc. node	13079 Dec 27 23:12	27°♄06'18		min. Earth dist.	13080 Nov 07 17:51	27°♄51'11	0.54568 AU	
	13079 Dec 29 22:25	0°♄		morning rise	13080 Nov 15 02:07	24°♄26'28		
morning set	13080 Jan 10 21:46	22°♄19'18		direct	13080 Nov 19 06:59	23°♄48'38		
	13080 Jan 14 13:17	0°♄			13080 Dec 02 05:34	0°♄		
				morning max el	13080 Dec 02 09:06	0°♄08'17	23°07'06	
superior conj	13080 Jan 18 03:43	7°♄33'30	1°23'28	asc. node	13080 Dec 13 20:15	15°♄00'17		
minimum elong	13080 Jan 18 05:58	7°♄45'15	1°24'06		13080 Dec 21 23:25	0°♄		
max. Earth dist.	13080 Jan 22 16:56	16°♄49'17	1.35093 AU	morning set	13080 Dec 25 09:15	7°♄06'03		
evening rise	13080 Jan 26 19:29	24°♄46'40						
desc. node	13080 Jan 29 20:34	0°♄24'38		superior conj	13081 Jan 01 07:29	22°♄02'33	1°34'05	
	13080 Jan 29 15:09	0°♄		minimum elong	13081 Jan 01 08:47	22°♄09'31	1°34'58	
	13080 Feb 17 09:10	0°♄		max. Earth dist.	13081 Jan 04 10:59	28°♄43'25	1.33417 AU	
evening max el	13080 Mar 02 02:04	16°♄28'43	26°34'59		13081 Jan 05 01:40	0°♄		
retrograde	13080 Mar 15 03:23	23°♄50'33		evening rise	13081 Jan 09 04:09	8°♄19'49		
evening set	13080 Mar 21 12:12	21°♄18'40		desc. node	13081 Jan 15 17:17	20°♄40'09		
asc. node	13080 Mar 24 20:17	18°♄01'19			13081 Jan 21 03:33	0°♄		
min. Earth dist.	13080 Mar 25 13:57	17°♄10'19	0.66458 AU	evening max el	13081 Feb 12 15:32	0°♄01'13	27°17'33	
inferior conj	13080 Mar 27 11:42	14°♄53'26	0°49'47		13081 Feb 12 15:02	0°♄		
minimum elong	13080 Mar 27 10:28	14°♄57'09	0°49'09	retrograde	13081 Feb 26 04:31	7°♄27'35		
morning rise	13080 Apr 02 09:46	9°♄12'43		evening set	13081 Mar 04 21:50	4°♄56'31		
direct	13080 Apr 05 10:07	8°♄21'58		min. Earth dist.	13081 Mar 08 18:54	1°♄20'46	0.64858 AU	
morning max el	13080 Apr 11 20:53	11°♄47'09	18°21'08		13081 Mar 10 00:41	30°♄		
	13080 Apr 25 01:50	0°♄		inferior conj	13081 Mar 11 04:36	28°♄43'09	-0°10'37	
desc. node	13080 Apr 26 22:48	2°♄57'11		minimum elong	13081 Mar 11 04:54	28°♄42'18	0°10'22	
morning set	13080 May 01 20:06	10°♄42'49		transit middle	13081 Mar 11 04:54	28°♄42'18	0°10'22	
	13080 May 14 01:15	0°♄		transit begin	13081 Mar 11 02:35	28°♄48'40		
				transit end	13081 Mar 11 07:14	28°♄35'56		
superior conj	13080 May 17 11:34	5°♄21'57	-2°00'46	asc. node	13081 Mar 11 17:44	28°♄07'19		
minimum elong	13080 May 17 03:47	4°♄51'32	2°01'09	morning rise	13081 Mar 17 13:45	23°♄15'45		
max. Earth dist.	13080 May 18 07:39	6°♄40'23	1.45824 AU	direct	13081 Mar 20 04:57	22°♄39'27		
evening rise	13080 Jun 02 09:48	0°♄15'08		morning max el	13081 Mar 26 13:17	25°♄57'10	17°55'02	
	13080 Jun 02 05:56	0°♄			13081 Mar 30 01:19	0°♄		
greatest brilliancy	13080 Jun 12 11:26	15°♄57'32	-0.8m	morning set	13081 Apr 13 02:31	22°♄04'05		
asc. node	13080 Jun 20 17:56	27°♄58'01		desc. node	13081 Apr 13 19:23	23°♄13'59		
	13080 Jun 22 08:28	0°♄			13081 Apr 17 21:49	0°♄		
evening max el	13080 Jun 25 00:19	2°♄57'43	18°57'55					
retrograde	13080 Jul 01 18:36	6°♄41'14		superior conj	13081 Apr 27 01:55	14°♄49'04	-1°30'40	
evening set	13080 Jul 05 04:46	5°♄33'29		minimum elong	13081 Apr 26 17:05	14°♄13'56	1°30'19	
inferior conj	13080 Jul 10 16:58	29°♄48'54	3°01'49	max. Earth dist.	13081 May 01 03:54	21°♄16'21	1.45454 AU	
minimum elong	13080 Jul 10 18:24	29°♄44'21	3°00'43		13081 May 06 18:06	0°♄		
	13080 Jul 10 13:29	30°♄		evening rise	13081 May 13 01:44	9°♄44'40		
min. Earth dist.	13080 Jul 12 08:53	27°♄42'15	0.66384 AU		13081 May 26 11:28	0°♄		
morning rise	13080 Jul 16 07:21	23°♄25'18		greatest brilliancy	13081 May 27 12:40	1°♄32'19	-0.6m	
direct	13080 Jul 22 13:24	20°♄44'46		asc. node	13081 Jun 07 14:57	16°♄05'51		
desc. node	13080 Jul 23 22:18	20°♄51'37		evening max el	13081 Jun 08 06:03	16°♄44'39	19°49'16	
morning max el	13080 Aug 04 10:54	28°♄25'17	26°22'07	retrograde	13081 Jun 15 16:54	20°♄58'28		
	13080 Aug 05 23:09	0°♄		evening set	13081 Jun 19 12:27	19°♄34'02		
	13080 Aug 27 19:23	0°♄		inferior conj	13081 Jun 24 20:12	13°♄35'50	3°12'27	
morning set	13080 Sep 09 09:22	21°♄51'10		minimum elong	13081 Jun 24 20:35	13°♄34'32	3°11'27	
max. Earth dist.	13080 Sep 13 07:05	29°♄20'05	1.34722 AU	min. Earth dist.	13081 Jun 25 21:37	12°♄10'29	0.67679 AU	

morning rise	13081 Jun 30 04:21	7°☿13'18	direct	13082 Jun 19 15:22	18°♂56'51	
direct	13081 Jul 05 23:49	4°☿39'52	desc. node	13082 Jun 27 16:46	22°♂51'45	
desc. node	13081 Jul 10 19:35	6°☿04'53	morning max el	13082 Jun 30 07:48	25°♂19'23	23°33'51
morning max el	13081 Jul 17 21:24	11°☿47'50		13082 Jul 04 13:34	0°☿	
	13081 Aug 01 11:34	0°♂		13082 Jul 25 23:02	0°♂	
	13081 Aug 20 12:30	0°♏	morning set	13082 Aug 04 07:13	15°♂08'55	
morning set	13081 Aug 22 18:39	3°♏57'59	max. Earth dist.	13082 Aug 08 06:17	21°♂57'01	1.39116 AU
max. Earth dist.	13081 Aug 26 08:38	10°♏27'39		13082 Aug 12 18:36	0°♏	
		1.36801 AU				
superior conj	13081 Sep 01 22:24	23°♏00'51	superior conj	13082 Aug 15 20:37	5°♏41'24	-0°50'34
minimum elong	13081 Sep 01 23:26	23°♏06'00	minimum elong	13082 Aug 16 00:15	5°♏58'24	0°50'28
asc. node	13081 Sep 03 15:45	26°♏25'47	asc. node	13082 Aug 21 12:22	16°♏28'24	
	13081 Sep 05 10:29	0°♏	evening rise	13082 Aug 25 02:22	23°♏26'23	
evening rise	13081 Sep 10 04:25	9°♏36'48		13082 Aug 28 12:09	0°♏	
	13081 Sep 21 05:34	0°♏	evening max el	13082 Sep 10 06:09	19°♏42'03	18°45'40
evening max el	13081 Sep 27 08:03	7°♏48'55	retrograde	13082 Sep 18 14:46	23°♏54'01	
desc. node	13081 Oct 06 16:03	12°♏43'58	evening set	13082 Sep 20 12:29	23°♏41'44	
retrograde	13081 Oct 07 05:07	12°♏44'50	desc. node	13082 Sep 23 13:32	22°♏35'49	
evening set	13081 Oct 09 02:19	12°♏34'51	inferior conj	13082 Sep 28 15:31	19°♏19'40	-1°36'30
inferior conj	13081 Oct 17 20:57	8°♏30'48	minimum elong	13082 Sep 28 11:30	19°♏26'59	1°34'40
minimum elong	13081 Oct 17 12:13	8°♏44'33	min. Earth dist.	13082 Oct 01 17:38	17°♏04'47	0.56915 AU
min. Earth dist.	13081 Oct 20 03:00	7°♏05'47	morning rise	13082 Oct 06 07:10	14°♏21'21	
morning rise	13081 Oct 25 20:17	4°♏09'51	direct	13082 Oct 12 02:42	12°♏59'06	
direct	13081 Oct 30 21:43	3°♏13'00	morning max el	13082 Oct 26 08:46	20°♏23'30	26°28'55
morning max el	13081 Nov 13 19:06	10°♏08'31		13082 Nov 03 15:28	0°♏	
	13081 Nov 28 15:42	0°♏	asc. node	13082 Nov 17 14:05	22°♏45'01	
asc. node	13081 Nov 30 17:13	3°♏36'43		13082 Nov 21 05:55	0°♏	
morning set	13081 Dec 09 21:05	21°♏49'47	morning set	13082 Nov 24 07:34	6°♏26'04	
	13081 Dec 13 15:02	0°♏				
superior conj	13081 Dec 16 15:57	6°♏42'01	superior conj	13082 Dec 01 02:59	21°♏25'52	1°36'23
minimum elong	13081 Dec 16 16:08	6°♏43'01	minimum elong	13082 Dec 01 02:07	21°♏21'02	1°37'18
max. Earth dist.	13081 Dec 18 12:23	10°♏45'14	max. Earth dist.	13082 Dec 01 18:56	22°♏54'40	1.31451 AU
evening rise	13081 Dec 23 22:53	22°♏17'01		13082 Dec 04 24:00	0°♏	
	13081 Dec 27 19:45	0°♏	evening rise	13082 Dec 08 00:58	6°♏31'57	
desc. node	13082 Jan 02 14:06	10°♏37'52	desc. node	13082 Dec 20 11:01	0°♏10'30	
	13082 Jan 14 23:27	0°♏		13082 Dec 20 08:31	0°♏	
evening max el	13082 Jan 26 02:54	13°♏06'04	evening max el	13083 Jan 08 09:54	25°♏31'12	27°16'33
retrograde	13082 Feb 08 22:37	20°♏29'53	retrograde	13083 Jan 14 00:44	0°♏	
evening set	13082 Feb 15 20:38	18°♏06'49	evening set	13083 Jan 22 08:47	2°♏47'36	
min. Earth dist.	13082 Feb 19 14:46	14°♏59'42		13083 Jan 29 05:29	0°♏41'06	
inferior conj	13082 Feb 22 11:04	12°♏12'33	min. Earth dist.	13083 Jan 30 07:01	30°♏	
minimum elong	13082 Feb 22 13:47	12°♏05'52	inferior conj	13083 Feb 02 00:26	27°♏55'07	0.60805 AU
asc. node	13082 Feb 26 15:10	8°♏31'52	minimum elong	13083 Feb 05 03:44	25°♏12'45	-2°41'29
morning rise	13082 Mar 01 09:28	7°♏01'16	morning rise	13083 Feb 05 09:28	25°♏00'21	2°38'38
direct	13082 Mar 03 17:07	6°♏35'56	asc. node	13083 Feb 12 16:31	20°♏20'27	
morning max el	13082 Mar 10 07:04	9°♏57'20	direct	13083 Feb 13 12:36	20°♏09'00	
	13082 Mar 23 18:18	0°♏	morning max el	13083 Feb 14 19:00	20°♏02'22	
morning set	13082 Mar 26 10:14	4°♏37'42		13083 Feb 21 22:50	23°♏37'54	17°56'00
desc. node	13082 Mar 31 15:58	13°♏41'46	morning set	13083 Feb 27 00:55	0°♏	
				13083 Mar 09 12:57	18°♏04'13	
superior conj	13082 Apr 07 12:47	25°♏16'15	desc. node	13083 Mar 16 02:46	0°♏	
minimum elong	13082 Apr 07 07:36	24°♏54'51		13083 Mar 18 12:30	4°♏16'00	
	13082 Apr 10 09:56	0°♏	superior conj	13083 Mar 19 23:57	6°♏51'07	-0°11'38
max. Earth dist.	13082 Apr 13 21:53	5°♏38'32	minimum elong	13083 Mar 19 22:56	6°♏46'42	0°11'29
evening rise	13082 Apr 22 13:23	19°♏11'49	behind sun begin	13083 Mar 19 17:12	6°♏21'45	
	13082 Apr 29 16:08	0°♏	behind sun end	13083 Mar 20 04:39	7°♏11'37	
	13082 May 21 17:10	0°♏	max. Earth dist.	13083 Mar 27 11:29	19°♏31'09	1.42713 AU
evening max el	13082 May 22 05:54	0°♏32'37	evening rise	13083 Apr 02 11:52	29°♏13'24	
asc. node	13082 May 25 12:04	3°♏23'52		13083 Apr 02 23:41	0°♏	
retrograde	13082 May 30 15:52	5°♏26'07		13083 Apr 23 06:54	0°♏	
evening set	13082 Jun 03 21:30	3°♏45'11	evening max el	13083 May 05 00:33	14°♏21'25	22°10'08
	13082 Jun 07 08:50	30°♏	asc. node	13083 May 12 09:18	19°♏36'29	
inferior conj	13082 Jun 09 03:34	27°♏35'02	retrograde	13083 May 14 13:39	19°♏58'30	
minimum elong	13082 Jun 09 02:57	27°♏37'11	evening set	13083 May 19 06:08	18°♏02'01	
min. Earth dist.	13082 Jun 09 15:15	26°♏54'33	inferior conj	13083 May 24 12:55	11°♏42'01	2°58'16
morning rise	13082 Jun 14 08:10	21°♏16'27	minimum elong	13083 May 24 11:28	11°♏47'05	2°57'09






























































































































min. Earth dist.	13083 May 24 11:34	11° Π 46'44	0.68873 AU	evening set	13084 May 02 12:46	2° Π 20'09	
morning rise	13083 May 29 16:37	5° Π 29'16			13084 May 04 19:08	30° \mathbb{R} \mathcal{B}	
direct	13083 Jun 03 10:59	3° Π 28'03		inferior conj	13084 May 07 22:17	25° \mathcal{B} 53'07	2°35'34
morning max el	13083 Jun 12 20:16	8° Π 58'19	22°05'13	minimum elong	13084 May 07 20:17	26° \mathcal{B} 00'00	2°34'20
desc. node	13083 Jun 14 13:51	10° Π 47'28		min. Earth dist.	13084 May 07 08:19	26° \mathcal{B} 41'06	0.68772 AU
	13083 Jun 29 06:09	0° \mathcal{E}		morning rise	13084 May 13 03:44	19° \mathcal{B} 47'39	
morning set	13083 Jul 15 18:59	25° \mathcal{E} 13'29		direct	13084 May 17 09:23	18° \mathcal{B} 07'04	
	13083 Jul 18 17:33	0° \mathcal{Q}		morning max el	13084 May 25 14:07	22° \mathcal{B} 47'39	20°44'21
max. Earth dist.	13083 Jul 21 06:26	4° \mathcal{Q} 11'52	1.41415 AU	desc. node	13084 May 31 10:49	29° \mathcal{B} 33'31	
					13084 May 31 19:05	0° Π	
superior conj	13083 Jul 29 00:56	17° \mathcal{Q} 32'50	-1°24'50		13084 Jun 21 12:37	0° \mathcal{E}	
minimum elong	13083 Jul 29 07:09	18° \mathcal{Q} 00'21	1°24'45	morning set	13084 Jun 24 07:01	4° \mathcal{E} 16'25	
	13083 Aug 04 22:13	0° \mathbb{N}		max. Earth dist.	13084 Jul 02 13:25	17° \mathcal{E} 21'38	1.43420 AU
asc. node	13083 Aug 08 09:00	6° \mathbb{N} 23'20					
evening rise	13083 Aug 08 13:47	6° \mathbb{N} 45'35		superior conj	13084 Jul 09 07:09	28° \mathcal{E} 26'21	-1°54'00
	13083 Aug 22 12:41	0° \mathcal{A}		minimum elong	13084 Jul 09 14:08	28° \mathcal{E} 55'38	1°54'20
evening max el	13083 Aug 24 13:42	2° \mathcal{A} 16'08	18°14'31		13084 Jul 10 05:27	0° \mathcal{Q}	
retrograde	13083 Aug 31 19:24	5° \mathcal{A} 56'26		evening rise	13084 Jul 21 10:13	19° \mathcal{Q} 23'31	
evening set	13083 Sep 02 23:30	5° \mathcal{A} 37'15		asc. node	13084 Jul 25 05:41	26° \mathcal{Q} 06'24	
inferior conj	13083 Sep 10 07:52	0° \mathcal{A} 54'25	0°02'28		13084 Jul 27 11:33	0° \mathbb{N}	
minimum elong	13083 Sep 10 07:57	0° \mathcal{A} 54'14	0°02'22	evening max el	13084 Aug 07 02:30	15° \mathbb{N} 20'37	18°03'06
transit middle	13083 Sep 10 07:57	0° \mathcal{A} 54'14	0°02'22	retrograde	13084 Aug 13 16:23	18° \mathbb{N} 44'00	
transit begin	13083 Sep 10 04:32	1° \mathcal{A} 01'31		evening set	13084 Aug 16 04:30	18° \mathbb{N} 14'13	
transit end	13083 Sep 10 11:21	0° \mathcal{A} 46'57		inferior conj	13084 Aug 22 19:51	13° \mathbb{N} 11'23	1°19'43
desc. node	13083 Sep 10 11:03	0° \mathcal{A} 47'36		minimum elong	13084 Aug 22 21:59	13° \mathbb{N} 06'07	1°18'36
	13083 Sep 11 09:11	30° \mathcal{R} \mathbb{N}		min. Earth dist.	13084 Aug 25 21:54	10° \mathbb{N} 10'15	0.61288 AU
min. Earth dist.	13083 Sep 13 15:27	28° \mathbb{N} 05'36	0.59002 AU	desc. node	13084 Aug 27 08:35	8° \mathbb{N} 52'24	
morning rise	13083 Sep 17 12:56	25° \mathbb{N} 21'19		morning rise	13084 Aug 29 12:48	7° \mathbb{N} 12'15	
direct	13083 Sep 23 21:45	23° \mathbb{N} 31'05		direct	13084 Sep 05 04:19	4° \mathbb{N} 57'17	
	13083 Oct 06 21:25	0° \mathcal{A}		morning max el	13084 Sep 19 09:30	12° \mathbb{N} 54'49	27°58'00
morning max el	13083 Oct 08 05:37	1° \mathcal{A} 16'07	27°32'27		13084 Oct 03 00:29	0° \mathcal{A}	
	13083 Oct 28 21:35	0° \mathbb{M}			13084 Oct 20 06:56	0° \mathbb{M}	
asc. node	13083 Nov 04 10:53	12° \mathbb{M} 16'38		asc. node	13084 Oct 21 07:35	2° \mathbb{M} 04'06	
morning set	13083 Nov 08 14:58	20° \mathbb{M} 50'22		morning set	13084 Oct 22 17:17	4° \mathbb{M} 56'46	
	13083 Nov 12 20:24	0° \mathcal{X}		max. Earth dist.	13084 Oct 28 10:14	17° \mathbb{M} 09'14	1.31528 AU
max. Earth dist.	13083 Nov 15 03:30	5° \mathcal{X} 06'08	1.31227 AU				
				superior conj	13084 Oct 30 01:03	20° \mathbb{M} 43'22	1°15'16
superior conj	13083 Nov 15 14:40	6° \mathcal{X} 08'28	1°28'40	minimum elong	13084 Oct 29 22:52	20° \mathbb{M} 31'11	1°15'41
minimum elong	13083 Nov 15 12:57	5° \mathcal{X} 58'57	1°29'23		13084 Nov 03 05:32	0° \mathcal{X}	
evening rise	13083 Nov 22 08:07	20° \mathcal{X} 58'49		evening rise	13084 Nov 05 18:12	5° \mathcal{X} 31'09	
	13083 Nov 26 16:16	0° \mathcal{Z}			13084 Nov 18 11:10	0° \mathcal{Z}	
desc. node	13083 Dec 07 08:02	19° \mathcal{Z} 08'24		desc. node	13084 Nov 23 05:10	7° \mathcal{Z} 17'24	
	13083 Dec 14 23:29	0° \approx		evening max el	13084 Dec 02 02:04	17° \mathcal{Z} 51'49	25°03'25
evening max el	13083 Dec 21 10:12	7° \approx 07'38	26°25'16	retrograde	13084 Dec 15 21:25	24° \mathcal{Z} 46'50	
retrograde	13084 Jan 04 09:09	14° \approx 13'52		evening set	13084 Dec 21 13:16	23° \mathcal{Z} 35'01	
evening set	13084 Jan 10 20:30	12° \approx 32'05		min. Earth dist.	13084 Dec 26 14:02	20° \mathcal{Z} 52'16	0.56698 AU
min. Earth dist.	13084 Jan 14 23:52	9° \approx 55'38	0.58648 AU	inferior conj	13084 Dec 29 06:04	19° \mathcal{Z} 08'02	-5°14'49
inferior conj	13084 Jan 18 03:04	7° \approx 34'37	-4°03'33	minimum elong	13084 Dec 29 14:03	18° \mathcal{Z} 55'00	5°12'15
minimum elong	13084 Jan 18 11:23	7° \approx 19'00	4°00'06	morning rise	13085 Jan 06 17:04	14° \mathcal{Z} 58'47	
morning rise	13084 Jan 26 05:12	3° \approx 03'27		direct	13085 Jan 08 23:34	14° \mathcal{Z} 44'04	
direct	13084 Jan 28 06:26	2° \approx 48'58		asc. node	13085 Jan 17 07:18	18° \mathcal{Z} 17'53	
asc. node	13084 Jan 31 09:59	3° \approx 24'53		morning max el	13085 Jan 18 08:58	19° \mathcal{Z} 16'34	19°16'15
morning max el	13084 Feb 05 08:51	6° \approx 48'29	18°25'15		13085 Jan 26 09:40	0° \approx	
	13084 Feb 20 02:26	0° \mathcal{H}		morning set	13085 Feb 04 06:13	16° \approx 32'46	
morning set	13084 Feb 21 05:05	2° \mathcal{H} 07'08			13085 Feb 11 00:39	0° \mathcal{H}	
superior conj	13084 Mar 01 08:53	19° \mathcal{H} 25'57	0°23'53	superior conj	13085 Feb 12 10:58	2° \mathcal{H} 47'09	0°52'43
minimum elong	13084 Mar 01 10:33	19° \mathcal{H} 33'37	0°23'53	minimum elong	13085 Feb 12 13:42	3° \mathcal{H} 00'22	0°52'51
desc. node	13084 Mar 04 09:02	24° \mathcal{H} 53'14		max. Earth dist.	13085 Feb 19 03:24	15° \mathcal{H} 19'33	1.38406 AU
	13084 Mar 07 06:28	0° \mathcal{Y}		desc. node	13085 Feb 19 05:33	15° \mathcal{H} 29'16	
max. Earth dist.	13084 Mar 08 20:47	2° \mathcal{Y} 45'46	1.40649 AU	evening rise	13085 Feb 22 21:12	21° \mathcal{H} 57'54	
evening rise	13084 Mar 13 06:01	10° \mathcal{Y} 08'46			13085 Feb 27 15:00	0° \mathcal{Y}	
	13084 Mar 25 22:38	0° \mathcal{B}			13085 Mar 19 20:48	0° \mathcal{B}	
evening max el	13084 Apr 16 15:46	28° \mathcal{B} 12'33	23°30'45	evening max el	13085 Mar 30 05:27	12° \mathcal{B} 05'04	24°50'02
	13084 Apr 18 13:12	0° Π		retrograde	13085 Apr 11 00:02	18° \mathcal{B} 56'43	
retrograde	13084 Apr 27 08:45	4° Π 30'41		asc. node	13085 Apr 15 04:00	17° \mathcal{B} 40'52	
asc. node	13084 Apr 28 06:37	4° Π 26'54		evening set	13085 Apr 16 15:50	16° \mathcal{B} 34'35	

min. Earth dist.	13085 Apr 21 03:20	11° ♁ 31'38	0.68210 AU	retrograde	13086 Mar 25 10:35	3° ♁ 09'59	
inferior conj	13085 Apr 22 05:45	10° ♁ 04'14	2°02'46	evening set	13086 Mar 31 13:40	0° ♁ 39'57	
minimum elong	13085 Apr 22 03:36	10° ♁ 11'22	2°01'33		13086 Apr 01 07:51	30° ♁	
morning rise	13085 Apr 27 15:35	4° ♁ 07'21		asc. node	13086 Apr 02 01:26	29° ♁ 17'21	
direct	13085 May 01 09:04	2° ♁ 47'38		min. Earth dist.	13086 Apr 04 18:31	26° ♁ 12'17	0.67213 AU
morning max el	13085 May 08 15:26	6° ♁ 48'42	19°36'24	inferior conj	13086 Apr 06 09:21	24° ♁ 11'05	1°19'33
desc. node	13085 May 18 07:39	18° ♁ 56'06		minimum elong	13086 Apr 06 07:35	24° ♁ 16'37	1°18'36
greatest brilliancy	13085 May 21 07:20	23° ♁ 14'52	-0.6m	morning rise	13086 Apr 12 02:13	18° ♁ 24'11	
	13085 May 25 20:21	0° ♁		direct	13086 Apr 15 08:26	17° ♁ 23'44	
morning set	13085 Jun 03 08:09	12° ♁ 55'31		morning max el	13086 Apr 22 00:09	20° ♁ 58'23	18°43'54
	13085 Jun 14 07:41	0° ♁			13086 Apr 29 06:58	0° ♁	
max. Earth dist.	13085 Jun 15 03:15	1° ♁ 17'13	1.44892 AU	desc. node	13086 May 05 04:22	8° ♁ 45'07	
				morning set	13086 May 13 19:57	22° ♁ 10'29	
superior conj	13085 Jun 19 13:35	8° ♁ 20'16	-2°11'23		13086 May 18 20:16	0° ♁	
minimum elong	13085 Jun 19 16:55	8° ♁ 33'41	2°12'18	max. Earth dist.	13086 May 28 21:22	15° ♁ 40'27	1.45690 AU
	13085 Jul 02 18:13	0° ♁					
evening rise	13085 Jul 03 10:40	1° ♁ 08'54		superior conj	13086 May 30 01:33	17° ♁ 30'41	-2°10'31
asc. node	13085 Jul 12 02:28	15° ♁ 32'50		minimum elong	13086 May 29 21:20	17° ♁ 14'10	2°11'21
evening max el	13085 Jul 21 16:49	28° ♁ 46'26	18°10'22		13086 Jun 07 00:04	0° ♁	
	13085 Jul 23 01:24	0° ♁		evening rise	13086 Jun 14 11:01	11° ♁ 52'42	
retrograde	13085 Jul 28 01:21	2° ♁ 07'20		greatest brilliancy	13086 Jun 21 01:16	22° ♁ 26'03	-0.9m
evening set	13085 Jul 30 21:44	1° ♁ 24'16			13086 Jun 25 21:10	0° ♁	
	13085 Aug 02 00:46	30° ♁		asc. node	13086 Jun 28 23:20	4° ♁ 35'38	
inferior conj	13085 Aug 05 23:36	26° ♁ 03'36	2°14'19	evening max el	13086 Jul 05 05:32	12° ♁ 24'49	18°35'35
minimum elong	13085 Aug 06 02:08	25° ♁ 56'35	2°13'00	retrograde	13086 Jul 11 17:58	15° ♁ 56'43	
min. Earth dist.	13085 Aug 08 14:02	23° ♁ 11'10	0.63494 AU	evening set	13086 Jul 14 22:53	14° ♁ 58'26	
morning rise	13085 Aug 12 04:46	19° ♁ 48'27		inferior conj	13086 Jul 20 15:04	9° ♁ 22'07	2°49'15
desc. node	13085 Aug 14 06:03	18° ♁ 28'13		minimum elong	13086 Jul 20 17:02	9° ♁ 16'08	2°48'03
direct	13085 Aug 18 20:28	17° ♁ 16'01		min. Earth dist.	13086 Jul 22 15:24	6° ♁ 55'07	0.65433 AU
morning max el	13085 Sep 01 18:24	25° ♁ 17'21	27°45'23	morning rise	13086 Jul 26 10:09	2° ♁ 59'29	
	13085 Sep 06 02:00	0° ♁		desc. node	13086 Aug 01 03:29	0° ♁ 20'55	
	13085 Sep 26 12:25	0° ♁		direct	13086 Aug 01 20:48	0° ♁ 19'02	
morning set	13085 Oct 06 12:17	18° ♁ 40'21		morning max el	13086 Aug 15 05:28	8° ♁ 12'13	26°59'54
asc. node	13085 Oct 08 04:12	22° ♁ 02'26			13086 Sep 01 04:42	0° ♁	
max. Earth dist.	13085 Oct 11 11:24	28° ♁ 55'32	1.32358 AU		13086 Sep 18 21:23	0° ♁	
	13085 Oct 11 23:31	0° ♁		morning set	13086 Sep 19 21:08	1° ♁ 53'27	
superior conj	13085 Oct 14 08:18	5° ♁ 05'35	0°56'16	max. Earth dist.	13086 Sep 24 03:28	10° ♁ 18'20	1.33715 AU
minimum elong	13085 Oct 14 06:05	4° ♁ 53'38	0°56'24	asc. node	13086 Sep 25 00:47	12° ♁ 06'38	
evening rise	13085 Oct 21 05:24	20° ♁ 04'21		superior conj	13086 Sep 28 10:08	19° ♁ 08'41	0°31'53
	13085 Oct 25 23:57	0° ♁		minimum elong	13086 Sep 28 08:34	19° ♁ 00'26	0°31'49
desc. node	13085 Nov 10 02:23	24° ♁ 19'17			13086 Oct 03 12:32	0° ♁	
evening max el	13085 Nov 13 12:09	27° ♁ 58'56	23°23'37	evening rise	13086 Oct 05 15:49	4° ♁ 32'37	
	13085 Nov 15 18:25	0° ♁			13086 Oct 19 11:01	0° ♁	
retrograde	13085 Nov 26 20:58	4° ♁ 38'07		evening max el	13086 Oct 26 01:08	8° ♁ 03'42	21°43'41
evening set	13085 Dec 01 06:28	3° ♁ 56'08		desc. node	13086 Oct 27 23:42	9° ♁ 49'39	
min. Earth dist.	13085 Dec 07 22:06	0° ♁ 47'53	0.55238 AU	retrograde	13086 Nov 07 10:23	14° ♁ 12'38	
	13085 Dec 09 06:58	30° ♁		evening set	13086 Nov 10 10:13	13° ♁ 52'22	
inferior conj	13085 Dec 09 12:56	29° ♁ 51'17	-5°53'45	inferior conj	13086 Nov 19 06:21	9° ♁ 57'52	-5°38'23
minimum elong	13085 Dec 09 15:03	29° ♁ 48'12	5°52'39	minimum elong	13086 Nov 18 23:44	10° ♁ 07'09	5°36'36
morning rise	13085 Dec 18 01:20	25° ♁ 59'42		min. Earth dist.	13086 Nov 19 04:21	10° ♁ 00'40	0.54543 AU
direct	13085 Dec 20 21:21	25° ♁ 40'20		morning rise	13086 Nov 27 14:14	6° ♁ 10'10	
	13085 Dec 30 20:25	0° ♁		direct	13086 Dec 01 06:13	5° ♁ 40'50	
morning max el	13085 Dec 31 19:46	0° ♁ 53'18	20°30'23	morning max el	13086 Dec 13 16:33	11° ♁ 37'35	22°05'47
asc. node	13086 Jan 04 04:31	4° ♁ 34'25		asc. node	13086 Dec 22 01:37	21° ♁ 57'15	
	13086 Jan 18 23:12	0° ♁			13086 Dec 26 22:02	0° ♁	
morning set	13086 Jan 19 13:13	1° ♁ 11'53		morning set	13087 Jan 03 23:38	15° ♁ 57'25	
					13087 Jan 10 13:56	0° ♁	
superior conj	13086 Jan 27 01:48	16° ♁ 42'47	1°14'17	superior conj	13087 Jan 11 01:44	1° ♁ 02'20	1°28'47
minimum elong	13086 Jan 27 04:26	16° ♁ 56'11	1°14'44	minimum elong	13087 Jan 11 03:37	1° ♁ 12'16	1°29'32
max. Earth dist.	13086 Feb 01 11:05	27° ♁ 22'04	1.36227 AU	max. Earth dist.	13087 Jan 15 00:20	9° ♁ 13'03	1.34322 AU
	13086 Feb 02 20:15	0° ♁		evening rise	13087 Jan 19 08:38	17° ♁ 49'36	
evening rise	13086 Feb 05 07:13	4° ♁ 34'24		desc. node	13087 Jan 23 22:46	26° ♁ 23'23	
desc. node	13086 Feb 06 02:07	6° ♁ 00'37			13087 Jan 25 23:26	0° ♁	
	13086 Feb 20 13:08	0° ♁			13087 Feb 14 19:24	0° ♁	
evening max el	13086 Mar 12 18:53	25° ♁ 55'23	26°00'53	evening max el	13087 Feb 23 08:27	9° ♁ 37'10	26°55'59
	13086 Mar 17 12:48	0° ♁					

retrograde	13087 Mar 08 15:39	17° Υ 03'02			13088 Jan 18 21:43	0° H	
evening set	13087 Mar 15 04:25	14° Υ 30'27		evening max el	13088 Feb 05 21:20	22° H 59'42	27°28'01
min. Earth dist.	13087 Mar 19 03:53	10° Υ 36'23	0.65813 AU		13088 Feb 16 13:40	0° Υ	
asc. node	13087 Mar 19 22:53	9° Υ 42'05		retrograde	13088 Feb 19 14:07	0° Υ 26'11	
inferior conj	13087 Mar 21 06:54	8° Υ 09'08	0°25'31		13088 Feb 22 11:37	30° R H	
minimum elong	13087 Mar 21 06:12	8° Υ 11'08	0°25'12	evening set	13088 Feb 26 09:48	27° H 57'46	
morning rise	13087 Mar 27 09:23	2° Υ 33'58		min. Earth dist.	13088 Mar 01 05:21	24° H 34'35	0.64065 AU
direct	13087 Mar 30 05:34	1° Υ 49'57		inferior conj	13088 Mar 03 19:45	21° H 51'19	-0°39'34
morning max el	13087 Apr 05 14:31	5° Υ 10'49	18°07'59	minimum elong	13088 Mar 03 20:59	21° H 48'06	0°38'48
desc. node	13087 Apr 22 00:59	28° Υ 53'34		asc. node	13088 Mar 05 20:21	19° H 48'02	
	13087 Apr 22 17:25	0° B		morning rise	13088 Mar 10 10:18	16° H 30'14	
morning set	13087 Apr 24 09:55	2° B 43'43		direct	13088 Mar 12 21:59	15° H 59'07	
				morning max el	13088 Mar 19 07:51	19° H 17'29	17°49'10
					13088 Mar 27 08:22	0° Υ	
superior conj	13087 May 09 10:01	26° B 39'05	-1°49'44	morning set	13088 Apr 05 03:50	14° Υ 37'52	
minimum elong	13087 May 09 00:57	26° B 03'33	1°49'44	desc. node	13088 Apr 07 21:33	19° Υ 15'18	
max. Earth dist.	13087 May 11 17:04	0° II 14'39	1.45749 AU		13088 Apr 14 08:28	0° B	
	13087 May 11 13:19	0° II					
evening rise	13087 May 25 12:18	21° II 41'43		superior conj	13088 Apr 18 07:57	6° B 28'44	-1°14'38
	13087 May 30 21:11	0° B		minimum elong	13088 Apr 18 00:22	5° B 58'06	1°14'11
greatest brilliancy	13087 Jun 06 16:15	10° B 21'48	-0.7m	max. Earth dist.	13088 Apr 23 12:15	14° B 45'05	1.45076 AU
asc. node	13087 Jun 15 20:19	23° B 06'46			13088 May 03 07:28	0° II	
evening max el	13087 Jun 18 14:20	26° B 10'09	19°17'52	evening rise	13088 May 04 00:20	1° II 04'37	
	13087 Jun 24 15:05	0° Ω			13088 May 23 14:09	0° B	
retrograde	13087 Jun 25 14:57	0° Ω 05'30		evening max el	13088 May 31 17:40	9° B 57'51	20°15'35
	13087 Jun 26 14:27	30° R B		asc. node	13088 Jun 01 17:24	10° B 55'05	
evening set	13087 Jun 29 04:54	28° B 50'54		retrograde	13088 Jun 08 13:40	14° B 27'24	
inferior conj	13087 Jul 04 14:52	23° B 00'27	3°07'55	evening set	13088 Jun 12 13:24	12° B 56'00	
minimum elong	13087 Jul 04 15:52	22° B 57'12	3°06'52	inferior conj	13088 Jun 17 20:09	6° B 52'48	3°13'07
min. Earth dist.	13087 Jul 06 00:37	21° B 10'20	0.66988 AU	minimum elong	13088 Jun 17 20:06	6° B 52'59	3°12'07
morning rise	13087 Jul 10 02:15	16° B 36'37		min. Earth dist.	13088 Jun 18 15:43	5° B 46'02	0.68094 AU
direct	13087 Jul 16 04:06	13° B 57'51		morning rise	13088 Jun 23 02:28	0° B 31'42	
desc. node	13087 Jul 19 00:49	14° B 27'53			13088 Jun 23 17:24	30° R II	
morning max el	13087 Jul 28 16:21	21° B 27'08	25°49'57	direct	13088 Jun 28 16:59	28° II 03'10	
	13087 Aug 05 02:35	0° Ω			13088 Jul 04 07:41	0° B	
	13087 Aug 25 09:50	0° H		desc. node	13088 Jul 04 22:03	0° B 23'51	
morning set	13087 Sep 02 16:17	14° H 27'42		morning max el	13088 Jul 10 02:25	4° B 52'54	24°25'19
max. Earth dist.	13087 Sep 06 09:13	21° H 23'46	1.35562 AU		13088 Jul 29 10:52	0° Ω	
	13087 Sep 10 18:50	0° B		morning set	13088 Aug 14 17:22	26° Ω 12'08	
asc. node	13087 Sep 11 21:22	2° B 13'06			13088 Aug 16 21:13	0° H	
				max. Earth dist.	13088 Aug 18 08:04	2° H 35'57	1.37770 AU
superior conj	13087 Sep 12 03:58	2° B 46'28	0°02'37				
minimum elong	13087 Sep 12 03:49	2° B 45'42	0°02'31	superior conj	13088 Aug 25 10:31	15° H 50'57	-0°30'31
behind sun begin	13087 Sep 11 21:44	2° B 14'58		minimum elong	13088 Aug 25 12:36	16° H 00'58	0°30'29
behind sun end	13087 Sep 12 09:54	3° B 16'29		asc. node	13088 Aug 28 17:58	22° H 18'21	
evening rise	13087 Sep 19 23:24	18° B 51'07			13088 Sep 01 14:53	0° B	
	13087 Sep 25 13:25	0° H		evening rise	13088 Sep 03 01:44	2° B 53'35	
evening max el	13087 Oct 08 01:53	18° H 41'50	20°18'01	evening max el	13088 Sep 19 16:52	0° H 08'17	19°13'07
desc. node	13087 Oct 14 21:08	23° H 21'07			13088 Sep 19 13:35	0° H	
retrograde	13087 Oct 18 22:05	24° H 05'12		retrograde	13088 Sep 28 21:13	4° H 43'51	
evening set	13087 Oct 21 00:14	23° H 54'06		evening set	13088 Sep 30 17:44	4° H 33'24	
inferior conj	13087 Oct 29 23:39	19° H 57'34	-4°25'42	desc. node	13088 Sep 30 18:37	4° H 32'59	
minimum elong	13087 Oct 29 13:34	20° H 12'24	4°22'06	inferior conj	13088 Oct 09 06:34	0° H 22'30	-2°39'52
min. Earth dist.	13087 Oct 31 11:59	19° H 04'03	0.54788 AU	minimum elong	13088 Oct 08 23:41	0° H 33'59	2°36'50
morning rise	13087 Nov 07 02:09	15° H 53'49			13088 Oct 09 19:59	30° R B	
direct	13087 Nov 11 16:03	15° H 08'29		min. Earth dist.	13088 Oct 11 23:07	28° B 35'01	0.55933 AU
morning max el	13087 Nov 25 03:57	21° H 45'00	23°53'39	morning rise	13088 Oct 17 03:03	25° B 46'29	
	13087 Dec 02 07:32	0° H		direct	13088 Oct 22 12:57	24° B 39'17	
asc. node	13087 Dec 08 22:38	10° H 10'45			13088 Nov 03 14:41	0° H	
morning set	13087 Dec 19 11:28	0° B 43'13		morning max el	13088 Nov 05 14:34	1° H 47'31	25°37'52
	13087 Dec 19 03:22	0° B		asc. node	13088 Nov 24 19:33	29° H 02'15	
					13088 Nov 25 07:57	0° H	
superior conj	13087 Dec 26 07:47	15° B 36'41	1°36'37	morning set	13088 Dec 02 22:58	15° H 24'40	
minimum elong	13087 Dec 26 08:37	15° B 41'11	1°37'34				
max. Earth dist.	13087 Dec 28 21:27	21° B 08'54	1.32832 AU	superior conj	13088 Dec 09 17:37	0° B 19'02	1°38'11
	13088 Jan 02 03:20	0° \approx		minimum elong	13088 Dec 09 17:21	0° B 17'30	1°39'10
evening rise	13088 Jan 02 21:58	1° \approx 34'07			13088 Dec 09 14:11	0° B	
desc. node	13088 Jan 10 19:30	16° \approx 32'03					

max. Earth dist.	13088 Dec 11 01:36	3°  15'40	1.31818 AU	evening rise	13089 Dec 01 00:43	0°  00'43	
evening rise	13088 Dec 16 20:13	15°  40'20			13089 Dec 01 00:35	0°  0	
	13088 Dec 24 03:14	0°  00		desc. node	13089 Dec 14 13:21	25°  39'36	
desc. node	13088 Dec 27 16:23	6°  20'27			13089 Dec 17 06:39	0°  00	
	13089 Jan 12 20:36	0°  00		evening max el	13089 Dec 31 11:53	17°  54'57	26°58'46
evening max el	13089 Jan 18 07:28	5°  50'09	27°30'22	retrograde	13090 Jan 14 10:38	25°  06'34	
retrograde	13089 Feb 01 04:49	13°  10'21		evening set	13090 Jan 21 04:46	23°  09'33	
evening set	13089 Feb 08 03:03	10°  53'39		min. Earth dist.	13090 Jan 25 02:06	20°  29'32	0.59887 AU
min. Earth dist.	13089 Feb 11 21:06	7°  56'24	0.62051 AU	inferior conj	13090 Jan 28 06:31	17°  54'20	-3°16'32
inferior conj	13089 Feb 14 20:50	5°  09'44	-1°54'44	minimum elong	13090 Jan 28 13:30	17°  40'05	3°13'18
minimum elong	13089 Feb 15 00:47	5°  00'30	1°52'37	morning rise	13090 Feb 05 01:17	13°  10'51	
asc. node	13089 Feb 20 17:46	0°  38'18		direct	13090 Feb 07 02:48	12°  54'39	
morning rise	13089 Feb 22 01:16	0°  05'48		asc. node	13090 Feb 07 15:09	12°  55'41	
	13089 Feb 22 08:56	30°  00		morning max el	13090 Feb 14 14:54	16°  38'43	18°05'56
direct	13089 Feb 24 06:26	29°  43'54			13090 Feb 24 00:10	0°  00	
	13089 Feb 26 03:23	0°  00		morning set	13090 Mar 02 05:24	11°  19'51	
morning max el	13089 Mar 03 01:08	3°  10'03	17°48'07				
morning set	13089 Mar 18 20:24	27°  36'17		superior conj	13090 Mar 12 02:04	29°  26'01	0°04'11
	13089 Mar 20 04:46	0°  00		minimum elong	13090 Mar 12 02:24	29°  27'30	0°04'14
desc. node	13089 Mar 25 18:06	9°  00'46		behind sun begin	13090 Mar 11 18:54	28°  54'05	
				behind sun end	13090 Mar 12 09:53	0°  00'50	
superior conj	13089 Mar 30 05:06	17°  00'24	-0°34'18		13090 Mar 12 09:42	0°  00	
minimum elong	13089 Mar 30 01:49	17°  10'17	0°33'59	desc. node	13090 Mar 12 14:38	0°  00'21	
max. Earth dist.	13089 Apr 06 04:56	28°  00'57	1.43740 AU	max. Earth dist.	13090 Mar 19 17:03	12°  36'12	1.41874 AU
	13089 Apr 06 20:26	0°  00		evening rise	13090 Mar 24 21:17	21°  05'40	
evening rise	13089 Apr 13 15:03	10°  42'43			13090 Mar 30 12:59	0°  00	
	13089 Apr 26 10:37	0°  00			13090 Apr 20 16:30	0°  00	
evening max el	13089 May 14 15:15	23°  00'46	21°25'46	evening max el	13090 Apr 27 08:05	7°  35'14	22°44'07
asc. node	13089 May 19 14:35	27°  00'47		asc. node	13090 May 06 11:50	13°  26'52	
retrograde	13089 May 23 12:12	28°  00'57		retrograde	13090 May 07 09:01	13°  30'27	
evening set	13089 May 27 22:28	27°  00'09		evening set	13090 May 12 06:26	11°  27'28	
inferior conj	13089 Jun 02 04:35	20°  00'54	3°06'45	inferior conj	13090 May 17 14:08	5°  03'58	2°49'53
minimum elong	13089 Jun 02 03:35	20°  00'58	3°05'41	minimum elong	13090 May 17 12:25	5°  09'57	2°48'42
min. Earth dist.	13089 Jun 02 10:37	20°  00'33	0.68728 AU	min. Earth dist.	13090 May 17 07:18	5°  27'46	0.68886 AU
morning rise	13089 Jun 07 08:30	14°  00'38			13090 May 21 14:15	30°  00	
direct	13089 Jun 12 10:21	12°  00'26		morning rise	13090 May 22 18:17	28°  05'42	
desc. node	13089 Jun 21 19:12	17°  00'42		direct	13090 May 27 07:08	27°  02'01	
morning max el	13089 Jun 22 13:15	18°  00'26	22°55'38		13090 Jun 02 18:50	0°  00	
	13089 Jul 02 05:24	0°  00		morning max el	13090 Jun 05 03:48	2°  00'11	21°29'36
	13089 Jul 22 13:32	0°  00		desc. node	13090 Jun 08 16:13	6°  00'10	
morning set	13089 Jul 26 19:39	6°  00'54			13090 Jun 26 02:28	0°  00	
max. Earth dist.	13089 Jul 31 06:32	14°  00'24	1.40115 AU	morning set	13090 Jul 06 20:43	16°  03'19	
				max. Earth dist.	13090 Jul 13 09:42	27°  03'40	1.42316 AU
superior conj	13089 Aug 08 01:41	28°  00'11	-1°05'22		13090 Jul 15 04:22	0°  00	
minimum elong	13089 Aug 08 06:29	28°  00'33	1°05'13				
	13089 Aug 09 01:21	0°  00		superior conj	13090 Jul 20 21:01	9°  38'47	-1°38'11
asc. node	13089 Aug 15 14:35	12°  00'17		minimum elong	13090 Jul 21 03:56	10°  08'43	1°38'13
evening rise	13089 Aug 17 19:41	16°  00'31		evening rise	13090 Aug 01 01:22	29°  03'42	
	13089 Aug 25 02:36	0°  00			13090 Aug 01 06:58	0°  00	
evening max el	13089 Sep 02 19:28	12°  00'19	18°29'54	asc. node	13090 Aug 02 11:16	2°  00'08	
retrograde	13089 Sep 10 15:13	16°  00'16		evening max el	13090 Aug 17 05:38	25°  07'00	18°07'16
evening set	13089 Sep 12 15:20	16°  00'01		retrograde	13090 Aug 24 03:29	28°  00'38	
desc. node	13089 Sep 17 16:09	13°  00'33		evening set	13090 Aug 26 10:47	28°  00'15	
inferior conj	13089 Sep 20 10:23	11°  00'30	-0°52'13	inferior conj	13090 Sep 02 11:32	23°  00'23	0°38'05
minimum elong	13089 Sep 20 08:20	11°  00'34	0°51'18	minimum elong	13090 Sep 02 12:44	23°  00'21	0°37'24
min. Earth dist.	13089 Sep 23 16:15	8°  00'58	0.57757 AU	desc. node	13090 Sep 04 13:40	21°  00'29	
morning rise	13089 Sep 27 21:52	6°  00'16		min. Earth dist.	13090 Sep 05 17:42	20°  00'27	0.59962 AU
direct	13089 Oct 03 23:40	4°  00'42		morning rise	13090 Sep 09 11:28	17°  00'38	
morning max el	13089 Oct 18 07:07	12°  00'16	27°00'22	direct	13090 Sep 15 23:43	15°  00'36	
	13089 Nov 01 04:46	0°  00		morning max el	13090 Sep 30 07:23	23°  00'28	27°48'11
asc. node	13089 Nov 11 16:23	18°  00'21			13090 Oct 06 04:07	0°  00	
morning set	13089 Nov 17 08:22	29°  00'56			13090 Oct 25 10:11	0°  00	
	13089 Nov 17 09:04	0°  00		asc. node	13090 Oct 29 13:08	8°  00'00	
				morning set	13090 Nov 01 13:51	14°  00'13	
superior conj	13089 Nov 24 05:08	15°  00'27	1°33'48	max. Earth dist.	13090 Nov 07 17:55	27°  00'36	1.31290 AU
minimum elong	13089 Nov 24 03:53	14°  00'55	1°34'39				
max. Earth dist.	13089 Nov 24 09:39	15°  00'27	1.31300 AU	superior conj	13090 Nov 08 16:29	29°  00'42	1°23'40

minimum elong	13090 Nov 08 14:31	29° \mathbb{M} 31'08	1°24'16	superior conj	13091 Oct 24 01:47	14° \mathbb{M} 12'07	1°07'53
	13090 Nov 08 19:42	0° \mathbb{A}		minimum elong	13091 Oct 23 23:31	13° \mathbb{M} 59'39	1°08'10
evening rise	13090 Nov 15 09:18	14° \mathbb{A} 29'51		evening rise	13091 Oct 30 20:04	29° \mathbb{M} 02'43	
	13090 Nov 23 00:45	0° \mathbb{B}			13091 Oct 31 06:43	0° \mathbb{A}	
desc. node	13090 Dec 01 10:25	14° \mathbb{B} 18'25			13091 Nov 16 20:03	0° \mathbb{B}	
evening max el	13090 Dec 13 08:19	29° \mathbb{B} 07'15	25°53'29	desc. node	13091 Nov 18 07:35	2° \mathbb{B} 01'35	
	13090 Dec 14 07:12	0° \mathbb{A}		evening max el	13091 Nov 24 21:04	9° \mathbb{B} 32'54	24°22'16
retrograde	13090 Dec 27 06:19	6° \mathbb{A} 09'38		retrograde	13091 Dec 08 13:42	16° \mathbb{B} 22'48	
evening set	13091 Jan 02 10:49	4° \mathbb{A} 39'51		evening set	13091 Dec 13 17:26	15° \mathbb{B} 24'20	
min. Earth dist.	13091 Jan 06 21:06	2° \mathbb{A} 03'04	0.57777 AU	min. Earth dist.	13091 Dec 19 08:36	12° \mathbb{B} 32'51	0.55991 AU
inferior conj	13091 Jan 09 21:22	29° \mathbb{B} 55'39	-4°36'13	inferior conj	13091 Dec 21 15:33	11° \mathbb{B} 07'50	-5°36'49
minimum elong	13091 Jan 10 06:05	29° \mathbb{B} 40'15	4°32'57	minimum elong	13091 Dec 21 21:46	10° \mathbb{B} 58'12	5°34'57
	13091 Jan 09 18:55	30° \mathbb{R} \mathbb{B}		morning rise	13091 Dec 30 04:07	7° \mathbb{B} 06'54	
morning rise	13091 Jan 18 04:07	25° \mathbb{B} 34'22		direct	13092 Jan 01 15:02	6° \mathbb{B} 50'56	
direct	13091 Jan 20 06:35	25° \mathbb{B} 20'20		morning max el	13092 Jan 11 16:10	11° \mathbb{B} 40'31	19°44'55
asc. node	13091 Jan 25 12:30	26° \mathbb{B} 53'34		asc. node	13092 Jan 12 09:46	12° \mathbb{B} 24'24	
morning max el	13091 Jan 28 21:15	29° \mathbb{B} 32'36	18°44'14		13092 Jan 24 02:29	0° \mathbb{A}	
	13091 Jan 29 08:14	0° \mathbb{A}		morning set	13092 Jan 29 05:45	10° \mathbb{A} 05'44	
morning set	13091 Feb 14 01:45	25° \mathbb{A} 33'08					
	13091 Feb 16 08:28	0° \mathbb{H}		superior conj	13092 Feb 06 02:54	25° \mathbb{A} 59'39	1°02'44
superior conj	13091 Feb 22 18:51	12° \mathbb{H} 22'02	0°36'59	minimum elong	13092 Feb 06 05:42	26° \mathbb{A} 13'31	1°02'59
minimum elong	13091 Feb 22 21:09	12° \mathbb{H} 32'49	0°37'01		13092 Feb 08 03:57	0° \mathbb{H}	
desc. node	13091 Feb 27 11:08	20° \mathbb{H} 58'46		max. Earth dist.	13092 Feb 12 06:41	7° \mathbb{H} 48'50	1.37457 AU
max. Earth dist.	13091 Mar 02 00:29	25° \mathbb{H} 31'20	1.39695 AU	desc. node	13092 Feb 14 07:41	11° \mathbb{H} 33'35	
	13091 Mar 04 14:31	0° \mathbb{Y}		evening rise	13092 Feb 16 00:04	14° \mathbb{H} 34'55	
evening rise	13091 Mar 06 00:23	2° \mathbb{Y} 23'46			13092 Feb 25 03:25	0° \mathbb{Y}	
	13091 Mar 23 19:09	0° \mathbb{B}		evening max el	13092 Mar 22 11:44	5° \mathbb{B} 18'41	25°21'39
evening max el	13091 Apr 09 22:12	21° \mathbb{B} 26'12	24°05'03	retrograde	13092 Apr 03 16:14	12° \mathbb{B} 21'50	
retrograde	13091 Apr 21 02:46	28° \mathbb{B} 00'35		asc. node	13092 Apr 09 06:34	10° \mathbb{B} 08'56	
asc. node	13091 Apr 23 09:10	27° \mathbb{B} 37'25		evening set	13092 Apr 09 12:48	9° \mathbb{B} 56'03	
evening set	13091 Apr 26 11:45	25° \mathbb{B} 44'38		min. Earth dist.	13092 Apr 13 21:23	5° \mathbb{B} 07'56	0.67838 AU
min. Earth dist.	13091 May 01 03:35	20° \mathbb{B} 20'56	0.68582 AU	inferior conj	13092 Apr 15 05:01	3° \mathbb{B} 25'30	1°45'44
inferior conj	13091 May 01 22:55	19° \mathbb{B} 15'23	2°22'54	minimum elong	13092 Apr 15 02:57	3° \mathbb{B} 32'11	1°44'36
minimum elong	13091 May 01 20:48	19° \mathbb{B} 22'35	2°21'40		13092 Apr 18 00:05	30° \mathbb{R} \mathbb{Y}	
morning rise	13091 May 07 05:55	13° \mathbb{B} 13'21		morning rise	13092 Apr 20 17:30	27° \mathbb{Y} 32'22	
direct	13091 May 11 06:10	11° \mathbb{B} 41'55		direct	13092 Apr 24 06:01	26° \mathbb{Y} 21'05	
morning max el	13091 May 19 00:44	16° \mathbb{B} 04'41	20°13'40	morning max el	13092 May 01 05:14	0° \mathbb{B} 09'34	19°11'57
desc. node	13091 May 26 13:06	25° \mathbb{B} 03'56			13092 May 01 01:18	0° \mathbb{B}	
	13091 May 30 02:50	0° \mathbb{II}		desc. node	13092 May 12 09:51	14° \mathbb{B} 38'41	
morning set	13091 Jun 16 01:44	25° \mathbb{II} 17'08		greatest brilliancy	13092 May 14 02:57	17° \mathbb{B} 10'49	-0.7m
	13091 Jun 19 02:46	0° \mathbb{B}			13092 May 22 13:25	0° \mathbb{II}	
max. Earth dist.	13091 Jun 25 19:16	10° \mathbb{B} 32'32	1.44117 AU	morning set	13092 May 25 04:37	4° \mathbb{II} 03'16	
				max. Earth dist.	13092 Jun 07 10:46	24° \mathbb{II} 40'02	1.45325 AU
superior conj	13091 Jul 01 16:56	20° \mathbb{B} 05'45	-2°03'15				
minimum elong	13091 Jul 01 23:02	20° \mathbb{B} 30'46	2°03'52	superior conj	13092 Jun 10 14:17	29° \mathbb{II} 37'38	-2°13'31
	13091 Jul 07 15:43	0° \mathbb{Q}		minimum elong	13092 Jun 10 14:37	29° \mathbb{II} 38'54	2°14'31
evening rise	13091 Jul 14 13:53	11° \mathbb{Q} 51'00			13092 Jun 10 19:57	0° \mathbb{B}	
asc. node	13091 Jul 20 07:59	21° \mathbb{Q} 44'52		evening rise	13092 Jun 25 04:18	23° \mathbb{B} 09'46	
	13091 Jul 25 09:25	0° \mathbb{M}			13092 Jun 29 08:05	0° \mathbb{Q}	
evening max el	13091 Jul 31 19:27	8° \mathbb{M} 21'03	18°03'58	asc. node	13092 Jul 06 04:47	11° \mathbb{Q} 01'50	
retrograde	13091 Aug 07 06:00	11° \mathbb{M} 41'45		evening max el	13092 Jul 14 09:29	21° \mathbb{Q} 53'03	18°19'00
evening set	13091 Aug 09 21:31	11° \mathbb{M} 06'45		retrograde	13092 Jul 20 18:30	25° \mathbb{Q} 16'41	
inferior conj	13091 Aug 16 06:42	5° \mathbb{M} 56'20	1°45'28	evening set	13092 Jul 23 18:32	24° \mathbb{Q} 27'17	
minimum elong	13091 Aug 16 09:10	5° \mathbb{M} 49'57	1°44'12	inferior conj	13092 Jul 29 15:51	18° \mathbb{Q} 59'59	2°31'17
min. Earth dist.	13091 Aug 19 04:26	2° \mathbb{M} 56'09	0.62247 AU	minimum elong	13092 Jul 29 18:13	18° \mathbb{Q} 53'07	2°30'01
desc. node	13091 Aug 22 11:09	0° \mathbb{M} 02'24		min. Earth dist.	13092 Aug 01 00:32	16° \mathbb{Q} 16'32	0.64367 AU
morning rise	13091 Aug 22 18:28	29° \mathbb{Q} 49'01		morning rise	13092 Aug 04 16:30	12° \mathbb{Q} 40'56	
	13091 Aug 22 12:27	30° \mathbb{R} \mathbb{Q}		desc. node	13092 Aug 08 08:36	10° \mathbb{Q} 33'41	
direct	13091 Aug 29 10:51	27° \mathbb{Q} 25'11		direct	13092 Aug 11 06:48	10° \mathbb{Q} 03'38	
	13091 Sep 06 00:15	0° \mathbb{M}		morning max el	13092 Aug 24 23:34	18° \mathbb{Q} 02'53	27°29'30
morning max el	13091 Sep 12 13:44	5° \mathbb{M} 26'32	27°57'02		13092 Sep 04 00:29	0° \mathbb{M}	
	13091 Oct 01 02:12	0° \mathbb{B}			13092 Sep 23 00:01	0° \mathbb{B}	
asc. node	13091 Oct 16 09:49	27° \mathbb{B} 52'31		morning set	13092 Sep 29 04:23	11° \mathbb{B} 41'31	
morning set	13091 Oct 16 13:22	28° \mathbb{B} 10'42		asc. node	13092 Oct 02 06:25	17° \mathbb{B} 53'27	
	13091 Oct 17 10:39	0° \mathbb{M}		max. Earth dist.	13092 Oct 03 19:53	21° \mathbb{B} 06'56	1.32868 AU
max. Earth dist.	13091 Oct 21 22:31	9° \mathbb{M} 32'09	1.31806 AU				

superior conj	13092 Oct 07 07:00	28°  26'41	0°46'35	superior conj	13093 Sep 21 05:50	12°  20'08	0°20'02
minimum elong	13092 Oct 07 04:59	28°  15'51	0°46'36	minimum elong	13093 Sep 21 04:46	12°  14'36	0°19'56
	13092 Oct 08 00:23	0°  11		evening rise	13093 Sep 28 16:40	27°  59'16	
evening rise	13092 Oct 14 07:09	13°  13'40'01			13093 Sep 29 15:50	0°  11	
	13092 Oct 22 11:55	0°  17		evening max el	13093 Oct 18 00:31	29°  14'49'46	21°04'53
desc. node	13092 Nov 04 04:53	18°  27'37			13093 Oct 18 04:41	0°  17	
evening max el	13092 Nov 05 07:20	19°  34'29	22°40'15	desc. node	13093 Oct 22 02:15	3°  31'0'49	
retrograde	13092 Nov 18 07:50	26°  30'2'13		retrograde	13093 Oct 29 18:45	5°  34'40'26	
evening set	13092 Nov 22 02:33	25°  31'0'4		evening set	13093 Nov 01 07:37	5°  32'25'16	
min. Earth dist.	13092 Nov 29 15:33	22°  30'6'30	0.54832 AU	inferior conj	13093 Nov 10 06:53	1°  31'23	-5°13'37
inferior conj	13092 Nov 30 15:27	21°  32'3'38	-5°54'44	minimum elong	13093 Nov 09 21:49	1°  34'12	5°10'55
minimum elong	13092 Nov 30 13:44	21°  35'0'5	5°53'42	min. Earth dist.	13093 Nov 10 21:38	1°  31'0'33	0.54534 AU
morning rise	13092 Dec 09 02:15	17°  34'44'38			13093 Nov 13 00:41	30°  13'11	
direct	13092 Dec 12 06:25	17°  31'21'32		morning rise	13093 Nov 18 12:30	27°  13'39'49	
morning max el	13092 Dec 23 20:41	22°  35'53'28	21°08'39	direct	13093 Nov 22 14:05	27°  13'04'23	
asc. node	13092 Dec 29 06:56	29°  31'10'50			13093 Dec 01 09:41	0°  17	
	13092 Dec 29 21:10	0°  23		morning max el	13093 Dec 05 12:26	3°  31'18'03	22°51'01
morning set	13093 Jan 12 14:31	24°  34'48'16		asc. node	13093 Dec 16 04:01	16°  31'56'31	
	13093 Jan 15 02:03	0°  28			13093 Dec 23 10:08	0°  23	
				morning set	13093 Dec 28 01:47	9°  34'24	
superior conj	13093 Jan 19 22:00	10°  30'6'13	1°21'17	superior conj	13094 Jan 04 00:51	24°  32'3'31	1°32'53
minimum elong	13093 Jan 20 00:22	10°  38'18'30	1°21'51	minimum elong	13094 Jan 04 02:19	24°  34'40'18	1°33'45
max. Earth dist.	13093 Jan 24 16:30	19°  34'44'43	1.35378 AU		13094 Jan 06 14:41	0°  28	
evening rise	13093 Jan 28 17:07	27°  32'29'04		max. Earth dist.	13094 Jan 07 09:18	1°  37'37'10	1.33635 AU
	13093 Jan 30 01:38	0°  38		evening rise	13094 Jan 12 00:00	10°  35'57'07	
desc. node	13093 Jan 31 04:17	2°  38'01'44		desc. node	13094 Jan 18 01:00	22°  35'18'52	
	13093 Feb 17 11:32	0°  39			13094 Jan 22 11:07	0°  39	
evening max el	13093 Mar 05 01:31	19°  39'07'08	26°26'41		13094 Feb 12 23:25	0°  39	
retrograde	13093 Mar 18 00:26	26°  39'27'06		evening max el	13094 Feb 15 15:01	2°  39'41'53	27°12'46
evening set	13093 Mar 24 07:51	23°  39'55'34		retrograde	13094 Mar 01 02:33	10°  39'08'24	
asc. node	13093 Mar 27 04:00	21°  39'09'51		evening set	13094 Mar 07 18:53	7°  39'36'37	
min. Earth dist.	13093 Mar 28 10:23	19°  39'42'17	0.66671 AU	min. Earth dist.	13094 Mar 11 16:29	3°  39'56'23	0.65115 AU
inferior conj	13093 Mar 30 06:21	17°  39'29'15	0°57'59	inferior conj	13094 Mar 14 00:32	1°  39'21'02	-0°00'45
minimum elong	13093 Mar 30 04:56	17°  39'33'31	0°57'16	minimum elong	13094 Mar 14 00:33	1°  39'20'59	0°00'39
morning rise	13093 Apr 05 02:58	11°  39'46'52		transit middle	13094 Mar 14 00:33	1°  39'20'59	0°00'39
direct	13093 Apr 08 04:51	10°  39'53'37		transit begin	13094 Mar 13 21:31	1°  39'29'24	
morning max el	13093 Apr 14 16:34	14°  39'20'43	18°26'28	transit end	13094 Mar 14 03:34	1°  39'12'34	
	13093 Apr 26 07:29	0°  39		asc. node	13094 Mar 14 01:28	1°  39'18'26	
desc. node	13093 Apr 29 06:32	4°  39'36'34			13094 Mar 15 06:09	30°  39'13'11	
morning set	13093 May 05 02:35	13°  39'49'05		morning rise	13094 Mar 20 07:53	25°  39'11'51'38	
	13093 May 15 09:15	0°  39		direct	13094 Mar 23 00:21	25°  39'13'27	
superior conj	13093 May 20 22:32	8°  39'40'59	-2°03'57	morning max el	13094 Mar 29 08:34	28°  39'11'31'32	17°57'53
minimum elong	13093 May 20 15:30	8°  39'13'33	2°04'27		13094 Mar 30 18:13	0°  39	
max. Earth dist.	13093 May 21 06:15	9°  39'11'07	1.45815 AU	morning set	13094 Apr 16 04:51	24°  39'58'08	
	13093 Jun 03 13:20	0°  39		desc. node	13094 Apr 16 03:09	24°  39'51'07	
evening rise	13093 Jun 05 18:14	3°  39'28'12			13094 Apr 19 06:19	0°  39	
greatest brilliancy	13093 Jun 15 00:47	18°  39'01'38	-0.8m	superior conj	13094 Apr 30 10:53	18°  39'01'57	-1°36'02
asc. node	13093 Jun 23 01:42	29°  39'05'2'16		minimum elong	13094 Apr 30 01:48	17°  39'02'55'59	1°35'46
	13093 Jun 23 04:01	0°  39		max. Earth dist.	13094 May 04 02:34	23°  39'04'47'28	1.45553 AU
evening max el	13093 Jun 27 20:51	5°  39'03'52'25	18°51'36		13094 May 08 01:58	0°  39	
retrograde	13093 Jul 04 13:19	9°  39'01'53'30		evening rise	13094 May 16 12:13	13°  39'01'36	
evening set	13093 Jul 07 22:08	8°  39'01'10'10			13094 May 27 15:59	0°  39	
inferior conj	13093 Jul 13 11:15	2°  39'02'27'36	2°58'57	greatest brilliancy	13094 May 30 10:44	4°  39'07'23	-0.6m
minimum elong	13093 Jul 13 12:50	2°  39'02'22'37	2°57'50	asc. node	13094 Jun 09 22:44	18°  39'06'27	
min. Earth dist.	13093 Jul 15 05:18	0°  39'15'29	0.66150 AU	evening max el	13094 Jun 11 03:24	19°  39'02'21'43	19°40'38
	13093 Jul 15 10:21	30°  39'08'18		retrograde	13094 Jun 18 11:25	23°  39'03'30'35	
morning rise	13093 Jul 19 02:47	26°  39'04'07		evening set	13094 Jun 22 05:29	22°  39'08'41	
direct	13093 Jul 25 10:07	23°  39'02'23'27		inferior conj	13094 Jun 27 13:42	16°  39'02'12'22	3°11'39
desc. node	13093 Jul 26 05:59	23°  39'02'25'56		minimum elong	13094 Jun 27 14:15	16°  39'02'10'32	3°10'38
	13093 Aug 06 07:19	0°  39		min. Earth dist.	13094 Jun 28 17:14	14°  39'02'40'29	0.67514 AU
morning max el	13093 Aug 07 10:41	1°  39'02'07'29	26°32'36	morning rise	13094 Jul 02 22:37	9°  39'02'49'19	
	13093 Aug 29 01:41	0°  39		direct	13094 Jul 08 19:44	7°  39'02'14'21	
morning set	13093 Sep 12 07:53	24°  39'03'39'11		desc. node	13094 Jul 13 03:17	8°  39'02'22'28	
	13093 Sep 15 02:49	0° 39		morning max el	13094 Jul 20 21:25	14° 39'02'28'29	25°15'13
max. Earth dist.	13093 Sep 16 07:46	2° 39'02'22'04	1.34451 AU		13094 Aug 02 13:43	0° 39	
asc. node	13093 Sep 19 03:00	7° 39'02'59'10					

	13094 Aug 21 21:41	0°♍			13095 Jul 05 05:42	0°♊		
morning set	13094 Aug 25 19:54	6°♍53'23			13095 Jul 27 05:46	0°♊		
max. Earth dist.	13094 Aug 29 10:18	13°♍28'14	1.36471 AU	morning set	13095 Aug 07 11:50	18°♊13'06		
				max. Earth dist.	13095 Aug 11 07:50	24°♊51'06	1.38768 AU	
superior conj	13094 Sep 04 19:15	25°♍44'16	-0°11'06		13095 Aug 14 05:04	0°♍		
minimum elong	13094 Sep 04 19:58	25°♍47'46	0°11'08					
behind sun begin	13094 Sep 04 15:17	25°♍24'37		superior conj	13095 Aug 18 19:45	8°♍30'58	-0°45'17	
behind sun end	13094 Sep 05 00:38	26°♍10'57		minimum elong	13095 Aug 18 22:58	8°♍46'08	0°45'11	
asc. node	13094 Sep 05 23:35	28°♍05'19		asc. node	13095 Aug 23 20:11	18°♍08'30		
	13094 Sep 06 22:26	0°♌		evening rise	13095 Aug 27 21:31	26°♍04'25		
evening rise	13094 Sep 12 22:21	12°♌11'40			13095 Aug 29 21:55	0°♌		
	13094 Sep 22 07:45	0°♌		evening max el	13095 Sep 13 03:35	22°♌33'06	18°52'06	
evening max el	13094 Sep 30 07:13	10°♌46'52	19°47'38	retrograde	13095 Sep 21 17:02	26°♌50'45		
desc. node	13094 Oct 08 23:43	15°♌44'01		evening set	13095 Sep 23 14:12	26°♌39'06		
retrograde	13094 Oct 10 10:21	15°♌49'57		desc. node	13095 Sep 25 21:13	25°♌55'46		
evening set	13094 Oct 12 08:17	15°♌39'56		inferior conj	13095 Oct 01 19:56	22°♌20'10	-1°52'52	
inferior conj	13094 Oct 21 04:33	11°♌38'05	-3°42'51	minimum elong	13095 Oct 01 15:11	22°♌28'39	1°50'42	
minimum elong	13094 Oct 20 19:17	11°♌52'23	3°39'09	min. Earth dist.	13095 Oct 04 20:10	20°♌11'51	0.56642 AU	
min. Earth dist.	13094 Oct 23 06:24	10°♌21'03	0.55173 AU	morning rise	13095 Oct 09 12:56	17°♌27'37		
morning rise	13094 Oct 29 04:43	7°♌21'54		direct	13095 Oct 15 06:08	16°♌09'15		
direct	13094 Nov 03 03:11	6°♌28'13		morning max el	13095 Oct 29 11:18	23°♌29'55	26°16'34	
morning max el	13094 Nov 16 22:36	13°♌19'13	24°39'42		13095 Nov 04 08:24	0°♌		
	13094 Nov 29 20:03	0°♌		asc. node	13095 Nov 19 21:52	24°♌31'09		
asc. node	13094 Dec 03 01:00	5°♌27'05			13095 Nov 22 17:15	0°♌		
morning set	13094 Dec 12 13:41	24°♌18'46		morning set	13095 Nov 27 00:27	8°♌56'19		
	13094 Dec 15 04:35	0°♋						
superior conj	13094 Dec 19 08:48	9°♋10'53	1°38'01	superior conj	13095 Dec 03 19:33	23°♌54'26	1°37'02	
minimum elong	13094 Dec 19 09:09	9°♋12'50	1°39'01	minimum elong	13095 Dec 03 18:50	23°♌50'27	1°38'00	
max. Earth dist.	13094 Dec 21 09:34	13°♋36'56	1.32333 AU	max. Earth dist.	13095 Dec 04 15:32	25°♌45'30	1.31527 AU	
evening rise	13094 Dec 26 17:26	24°♋51'11		evening rise	13095 Dec 06 13:35	0°♋		
	13094 Dec 29 07:05	0°♋			13095 Dec 10 18:35	9°♋03'57		
desc. node	13095 Jan 04 21:49	12°♋19'40		desc. node	13095 Dec 21 15:36	0°♋		
	13095 Jan 15 23:43	0°♋		evening max el	13095 Dec 22 18:44	1°♋56'38		
evening max el	13095 Jan 29 02:47	15°♋51'32	27°32'57		13096 Jan 11 10:43	28°♋23'34	27°21'19	
retrograde	13095 Feb 11 22:00	23°♋16'38		retrograde	13096 Jan 13 05:25	0°♋		
evening set	13095 Feb 18 19:32	20°♋51'50		evening set	13096 Jan 25 09:26	5°♋41'11		
min. Earth dist.	13095 Feb 22 13:52	17°♋40'48	0.63230 AU	min. Earth dist.	13096 Feb 01 06:40	3°♋31'52		
inferior conj	13095 Feb 25 08:47	14°♋54'05	-1°10'19		13096 Feb 05 01:14	0°♋43'11	0.61126 AU	
minimum elong	13095 Feb 25 11:05	14°♋48'20	1°09'01	inferior conj	13096 Feb 05 21:17	30°♋		
asc. node	13095 Feb 28 22:55	11°♋36'13		minimum elong	13096 Feb 08 03:45	27°♋59'12	-2°29'02	
morning rise	13095 Mar 04 05:06	9°♋40'18		morning rise	13096 Feb 08 09:01	27°♋47'34	2°26'22	
direct	13095 Mar 06 13:43	9°♋13'37		asc. node	13096 Feb 15 14:22	23°♋03'43		
morning max el	13095 Mar 13 02:24	12°♋33'58	17°46'36	direct	13096 Feb 15 20:21	22°♋59'36		
	13095 Mar 25 02:25	0°♐		morning max el	13096 Feb 17 17:23	22°♋44'48		
morning set	13095 Mar 29 09:14	7°♐22'18			13096 Feb 24 18:39	26°♋17'45	17°53'20	
desc. node	13095 Apr 02 23:43	15°♐17'25		morning set	13096 Feb 27 23:17	0°♋		
					13096 Mar 11 09:29	20°♋41'49		
superior conj	13095 Apr 10 18:18	28°♐19'25	-0°57'41	desc. node	13096 Mar 16 13:06	0°♐		
minimum elong	13095 Apr 10 12:27	27°♐55'23	0°57'15		13096 Mar 19 20:14	5°♐50'37		
	13095 Apr 11 18:51	0°♏		superior conj	13096 Mar 22 01:51	9°♐43'54	-0°17'30	
max. Earth dist.	13095 Apr 16 20:48	8°♏11'50	1.44576 AU	minimum elong	13096 Mar 22 00:17	9°♐37'07	0°17'18	
evening rise	13095 Apr 25 23:30	22°♏26'32		max. Earth dist.	13096 Mar 29 11:07	22°♐09'26	1.42993 AU	
	13095 Apr 30 22:37	0°♏			13096 Apr 03 07:52	0°♏		
evening max el	13095 May 22 06:52	0°♏		evening rise	13096 Apr 04 19:36	2°♏21'06		
asc. node	13095 May 25 04:10	3°♏09'41	20°44'02		13096 Apr 23 09:25	0°♏		
retrograde	13095 May 27 19:52	5°♏32'59		evening max el	13096 May 06 23:33	16°♏58'22	21°58'25	
evening set	13095 Jun 02 10:25	7°♏56'53		asc. node	13096 May 13 17:05	21°♏56'26		
inferior conj	13095 Jun 06 14:27	6°♏18'29		retrograde	13096 May 16 08:25	22°♏28'38		
minimum elong	13095 Jun 11 20:38	0°♏10'03	3°11'47	evening set	13096 May 20 23:14	20°♏34'26		
	13095 Jun 11 20:10	0°♏11'42	3°10'45	inferior conj	13096 May 26 05:48	14°♏15'51	3°00'51	
min. Earth dist.	13095 Jun 11 23:32	30°♏		minimum elong	13096 May 26 04:27	14°♏20'32	2°59'44	
morning rise	13095 Jun 12 10:22	29°♏22'37	0.68420 AU	min. Earth dist.	13096 May 26 06:22	14°♏13'50	0.68854 AU	
direct	13095 Jun 17 01:36	23°♏50'38		morning rise	13096 May 31 09:28	8°♏02'10		
	13095 Jun 22 10:42	21°♏28'31		direct	13096 Jun 05 05:49	5°♏57'55		
desc. node	13095 Jun 30 00:29	24°♏56'40		morning max el	13096 Jun 14 19:33	11°♏35'46	22°18'02	
morning max el	13095 Jul 03 07:40	27°♏58'33	23°47'09	desc. node	13096 Jun 15 21:33	12°♏42'57		

	13096 Jun 29 09:57	0°☿		morning rise	13097 May 15 20:15	22°♄19'33	
morning set	13096 Jul 18 03:25	28°☿27'44		direct	13097 May 20 03:47	20°♄35'52	
	13096 Jul 19 02:09	0°♁		morning max el	13097 May 28 12:24	25°♄23'08	20°55'44
max. Earth dist.	13096 Jul 23 07:22	6°♁58'38	1.41087 AU		13097 Jun 01 15:54	0°♂	
				desc. node	13097 Jun 02 18:29	1°♂21'59	
superior conj	13096 Jul 31 03:04	20°♁30'38	-1°19'50		13097 Jun 22 19:37	0°☿	
minimum elong	13096 Jul 31 08:57	20°♁56'53	1°19'43	morning set	13097 Jun 27 18:34	7°☿38'31	
	13096 Aug 05 08:34	0°♊		max. Earth dist.	13097 Jul 05 13:32	20°☿01'35	1.43149 AU
asc. node	13096 Aug 09 16:50	8°♊05'02			13097 Jul 11 14:38	0°♁	
evening rise	13096 Aug 10 10:47	9°♊28'54					
	13096 Aug 22 07:03	0°♊		superior conj	13097 Jul 12 12:46	1°♁33'08	-1°50'10
evening max el	13096 Aug 26 10:02	5°♊01'56	18°17'51	minimum elong	13097 Jul 12 19:52	2°♁03'07	1°50'25
retrograde	13096 Sep 02 18:56	8°♊45'55		evening rise	13097 Jul 24 09:47	22°♁13'56	
evening set	13096 Sep 04 21:59	8°♊27'58		asc. node	13097 Jul 27 13:32	27°♁50'19	
desc. node	13096 Sep 11 18:43	4°♊17'58			13097 Jul 28 18:59	0°♊	
inferior conj	13096 Sep 12 09:05	3°♊48'07	-0°11'12	evening max el	13097 Aug 09 22:15	18°♊02'20	18°03'32
minimum elong	13096 Sep 12 08:41	3°♊48'59	0°11'05	retrograde	13097 Aug 16 13:51	21°♊27'27	
transit middle	13096 Sep 12 08:41	3°♊48'59	0°11'05	evening set	13097 Aug 19 00:42	20°♊59'28	
transit begin	13096 Sep 12 06:09	3°♊54'16		inferior conj	13097 Aug 25 18:23	15°♊59'17	1°09'28
transit end	13096 Sep 12 11:13	3°♊43'41		minimum elong	13097 Aug 25 20:20	15°♊54'35	1°08'27
min. Earth dist.	13096 Sep 15 16:37	1°♊03'13	0.58673 AU	min. Earth dist.	13097 Aug 28 21:40	12°♊58'42	0.60945 AU
	13096 Sep 17 01:47	30°♋		desc. node	13097 Aug 29 16:13	12°♊17'00	
morning rise	13096 Sep 19 15:54	28°♋19'55		morning rise	13097 Sep 01 13:09	10°♋03'20	
direct	13096 Sep 25 23:12	26°♋33'53		direct	13097 Sep 08 03:59	7°♋51'49	
	13096 Oct 05 05:30	0°♌		morning max el	13097 Sep 22 09:57	15°♋47'52	27°56'44
morning max el	13096 Oct 10 06:56	4°♌15'52	27°25'19		13097 Oct 04 01:05	0°♌	
	13096 Oct 29 04:23	0°♍			13097 Oct 21 18:14	0°♍	
asc. node	13096 Nov 05 18:39	13°♍59'44		asc. node	13097 Oct 23 15:22	3°♍45'10	
morning set	13096 Nov 10 08:24	23°♍22'40		morning set	13097 Oct 25 11:36	7°♍32'03	
	13096 Nov 13 09:58	0°♎		max. Earth dist.	13097 Oct 31 07:25	20°♍02'56	1.31452 AU
superior conj	13096 Nov 17 07:14	8°♎37'30	1°30'12	superior conj	13097 Nov 01 17:55	23°♍13'40	1°17'40
minimum elong	13096 Nov 17 05:38	8°♎28'35	1°30'58	minimum elong	13097 Nov 01 15:46	23°♍01'44	1°18'07
max. Earth dist.	13096 Nov 17 00:06	7°♎57'40	1.31232 AU		13097 Nov 04 19:05	0°♏	
evening rise	13096 Nov 24 01:06	23°♎29'27		evening rise	13097 Nov 08 10:51	8°♎01'08	
	13096 Nov 27 03:40	0°♐			13097 Nov 19 16:09	0°♐	
desc. node	13096 Dec 08 15:45	21°♐00'31		desc. node	13097 Nov 25 12:51	9°♐17'51	
	13096 Dec 14 17:55	0°♑		evening max el	13097 Dec 05 05:09	20°♐58'31	25°17'01
evening max el	13096 Dec 23 12:10	10°♑07'32	26°34'59	retrograde	13097 Dec 19 01:12	27°♐55'24	
retrograde	13097 Jan 06 11:06	17°♑14'51		evening set	13097 Dec 24 20:48	26°♐38'48	
evening set	13097 Jan 13 00:31	15°♑29'02		min. Earth dist.	13097 Dec 29 17:14	23°♐58'16	0.56967 AU
min. Earth dist.	13097 Jan 17 02:03	12°♑52'04	0.58967 AU	inferior conj	13098 Jan 01 11:53	22°♐07'38	-5°05'34
inferior conj	13097 Jan 20 05:50	10°♑26'59	-3°51'26	minimum elong	13098 Jan 01 20:14	21°♐53'45	5°02'46
minimum elong	13097 Jan 20 13:51	10°♑11'34	3°47'59	morning rise	13098 Jan 09 22:03	17°♐55'25	
morning rise	13097 Jan 28 06:09	5°♑52'27		direct	13098 Jan 12 03:17	17°♐40'59	
direct	13097 Jan 30 07:19	5°♑37'36		asc. node	13098 Jan 19 14:58	20°♐38'19	
asc. node	13097 Feb 01 17:41	5°♑59'31		morning max el	13098 Jan 21 07:31	22°♐07'48	19°07'14
morning max el	13097 Feb 07 05:41	9°♑32'47	18°19'32		13098 Jan 27 12:42	0°♑	
	13097 Feb 20 12:37	0°♒		morning set	13098 Feb 06 23:51	19°♑02'29	
morning set	13097 Feb 22 23:50	4°♒39'41			13098 Feb 12 12:39	0°♒	
superior conj	13097 Mar 04 07:44	22°♒09'51	0°18'54	superior conj	13098 Feb 15 07:33	5°♒25'02	0°48'49
minimum elong	13097 Mar 04 09:07	22°♒16'07	0°18'55	minimum elong	13098 Feb 15 10:12	5°♒37'48	0°48'54
desc. node	13097 Mar 06 16:46	26°♒27'15		desc. node	13098 Feb 21 13:18	17°♒03'44	
	13097 Mar 08 16:49	0°♓		max. Earth dist.	13098 Feb 22 03:56	18°♒09'40	1.38738 AU
max. Earth dist.	13097 Mar 11 21:06	5°♓30'05	1.40976 AU	evening rise	13098 Feb 25 22:35	24°♒48'33	
evening rise	13097 Mar 16 10:29	13°♓07'20			13098 Feb 28 23:59	0°♓	
	13097 Mar 27 04:46	0°♈			13098 Mar 20 21:30	0°♈	
	13097 Apr 18 19:58	0°♉		evening max el	13098 Apr 02 04:49	14°♈40'50	24°38'37
evening max el	13097 Apr 19 15:06	0°♉48'41	23°18'42	retrograde	13098 Apr 13 19:51	21°♈28'23	
retrograde	13097 Apr 30 03:54	7°♉00'53		asc. node	13098 Apr 17 11:43	20°♈29'14	
asc. node	13097 Apr 30 14:23	7°♉00'00		evening set	13098 Apr 19 09:57	19°♈07'37	
evening set	13097 May 05 06:14	4°♉52'11		min. Earth dist.	13098 Apr 23 22:28	13°♈59'26	0.68318 AU
	13097 May 09 11:52	30°♊		inferior conj	13098 Apr 24 23:05	12°♈37'25	2°08'23
min. Earth dist.	13097 May 10 03:06	29°♊07'51	0.68816 AU	minimum elong	13098 Apr 24 20:56	12°♈44'37	2°07'11
inferior conj	13097 May 10 15:14	28°♊26'04	2°39'39	morning rise	13098 Apr 30 08:07	6°♊39'16	
minimum elong	13097 May 10 13:17	28°♊32'45	2°38'26	direct	13098 May 04 03:19	5°♊16'36	

morning max el	13098 May 11 12:37	9°8'22"51	19°45'38	inferior conj	13099 Apr 09 03:25	26°9'45"18	1°26'47
desc. node	13098 May 20 15:20	20°8'39"45		minimum elong	13099 Apr 09 01:33	26°9'51"12	1°25'48
greatest brilliancy	13098 May 24 08:25	25°8'58"51	-0.6m	morning rise	13099 Apr 14 19:04	20°9'56"46	
	13098 May 27 01:53	0°II		direct	13099 Apr 18 02:50	19°9'53"39	
morning set	13098 Jun 06 20:03	16°II'17"42		morning max el	13099 Apr 24 20:19	23°9'31"37	18°50'39
	13098 Jun 15 15:48	0°☾			13099 Apr 30 07:21	0°8	
max. Earth dist.	13098 Jun 18 02:28	3°☾51'23	1.44709 AU	desc. node	13099 May 07 12:04	10°8'25"16	
				greatest brilliancy	13099 May 08 16:20	12°8'12"45	-0.8m
superior conj	13098 Jun 22 22:36	11°☾35'17	-2°09'49	morning set	13099 May 17 04:51	25°8'23"14	
minimum elong	13098 Jun 23 02:50	11°☾52'22	2°10'40		13099 May 20 04:01	0°II	
	13098 Jul 04 02:42	0°♂		max. Earth dist.	13099 May 31 19:45	18°II'10"10	1.45615 AU
evening rise	13098 Jul 06 13:31	4°♂07'59					
asc. node	13098 Jul 14 10:18	17°♂19'49		superior conj	13099 Jun 02 12:34	20°II'49'58	-2°11'59
	13098 Jul 23 04:28	0°♍		minimum elong	13099 Jun 02 09:30	20°II'37'59	2°12'53
evening max el	13098 Jul 24 12:33	1°♍25'24	18°08'06		13099 Jun 08 08:13	0°☾	
retrograde	13098 Jul 30 21:21	4°♍45'57		evening rise	13099 Jun 17 17:31	15°☾00'36	
evening set	13098 Aug 02 16:26	4°♍05'04			13099 Jun 27 01:48	0°♂	
	13098 Aug 07 16:56	30°♋♂		asc. node	13099 Jul 01 07:10	6°♂26'37	
inferior conj	13098 Aug 08 20:05	28°♂46'57	2°07'18	evening max el	13099 Jul 08 01:42	15°♂02'17	18°30'47
minimum elong	13098 Aug 08 22:37	28°♂40'00	2°06'00	retrograde	13099 Jul 14 13:03	18°♂31'44	
min. Earth dist.	13098 Aug 11 12:28	25°♂51'55	0.63178 AU	evening set	13099 Jul 17 16:38	17°♂35'52	
morning rise	13098 Aug 15 02:54	22°♂33'23		inferior conj	13099 Jul 23 10:03	12°♂01'53	2°45'00
desc. node	13098 Aug 16 13:40	21°♂34'41		minimum elong	13099 Jul 23 12:08	11°♂55'36	2°43'48
direct	13098 Aug 21 18:52	20°♂02'58		min. Earth dist.	13099 Jul 25 12:36	9°♂30'06	0.65166 AU
morning max el	13098 Sep 04 18:24	28°♂04'49	27°49'29	morning rise	13099 Jul 29 06:29	5°♂39'54	
	13098 Sep 06 14:39	0°♍		desc. node	13099 Aug 03 11:05	3°♂05'53	
	13098 Sep 27 20:14	0°♂		direct	13099 Aug 04 18:14	2°♂59'50	
morning set	13098 Oct 09 07:53	21°♂19'21		morning max el	13099 Aug 18 05:15	10°♂55'22	27°08'24
asc. node	13098 Oct 10 12:02	23°♂42'11			13099 Sep 02 08:09	0°♍	
	13098 Oct 13 12:35	0°♌			13099 Sep 20 08:11	0°♂	
max. Earth dist.	13098 Oct 14 09:37	1°♌51'49	1.32200 AU	morning set	13099 Sep 22 18:29	4°♂37'47	
				max. Earth dist.	13099 Sep 27 03:04	13°♂17'35	1.33476 AU
superior conj	13098 Oct 17 01:46	7°♌37'58	0°59'31	asc. node	13099 Sep 27 08:39	13°♂46'06	
minimum elong	13098 Oct 16 23:31	7°♌25'46	0°59'40				
evening rise	13098 Oct 23 22:00	22°♌34'14		superior conj	13099 Oct 01 04:36	21°♂44'42	0°35'56
	13098 Oct 27 10:47	0°♌		minimum elong	13099 Oct 01 02:54	21°♂35'39	0°35'53
desc. node	13098 Nov 12 10:04	26°♌31'12			13099 Oct 05 01:23	0°♌	
	13098 Nov 15 11:59	0°♍		evening rise	13099 Oct 08 08:41	7°♌03'51	
evening max el	13098 Nov 16 15:37	1°♍09'04	23°38'52		13099 Oct 20 10:43	0°♌	
retrograde	13098 Nov 30 02:54	7°♍51'39		evening max el	13099 Oct 29 03:41	11°♌12'40	21°58'02
evening set	13098 Dec 04 17:19	7°♍05'34		desc. node	13099 Oct 30 07:23	12°♌17'39	
min. Earth dist.	13098 Dec 11 02:02	4°♍02'13	0.55410 AU	retrograde	13099 Nov 10 17:29	17°♌27'03	
inferior conj	13098 Dec 12 21:31	2°♍57'59	-5°50'57	evening set	13099 Nov 13 21:52	17°♌04'26	
minimum elong	13098 Dec 13 00:52	2°♍53'01	5°49'44	inferior conj	13099 Nov 22 16:22	13°♌09'21	-5°44'42
	13098 Dec 18 12:39	30°♋♌		minimum elong	13099 Nov 22 10:54	13°♌17'01	5°43'11
morning rise	13098 Dec 21 10:13	29°♌04'25		min. Earth dist.	13099 Nov 22 08:37	13°♌20'13	0.54587 AU
direct	13098 Dec 24 03:32	28°♌46'10		morning rise	13099 Dec 01 01:01	9°♌22'05	
	13098 Dec 29 10:18	0°♍		direct	13099 Dec 04 13:48	8°♌54'32	
morning max el	13099 Jan 03 20:31	3°♍52'56	20°17'56	morning max el	13099 Dec 16 19:19	14°♌45'12	21°50'25
asc. node	13099 Jan 06 12:12	6°♍43'25		asc. node	13099 Dec 24 09:21	23°♌57'48	
	13099 Jan 20 10:49	0°♌			13099 Dec 28 04:13	0°♍	
morning set	13099 Jan 22 06:09	3°♌40'13		morning set	13100 Jan 06 16:16	18°♍25'46	
					13100 Jan 12 03:06	0°♌	
superior conj	13099 Jan 29 20:46	19°♌16'33	1°11'29				
minimum elong	13099 Jan 29 23:28	19°♌30'12	1°11'51	superior conj	13100 Jan 13 19:37	3°♌33'42	1°27'00
	13099 Feb 04 07:48	0°♋		minimum elong	13100 Jan 13 21:38	3°♌44'20	1°27'43
max. Earth dist.	13099 Feb 04 11:01	0°♋15'18	1.36535 AU	max. Earth dist.	13100 Jan 17 23:15	12°♌07'12	1.34585 AU
evening rise	13099 Feb 08 06:02	7°♋18'51		evening rise	13100 Jan 22 05:30	20°♌29'44	
desc. node	13099 Feb 08 09:52	7°♋36'16		desc. node	13100 Jan 26 06:33	28°♌01'05	
	13099 Feb 21 19:04	0°♎			13100 Jan 27 09:03	0°♋	
evening max el	13099 Mar 15 18:10	28°♎31'41	25°51'12		13100 Feb 15 17:39	0°♎	
	13099 Mar 17 07:38	0°♏		evening max el	13100 Feb 26 07:53	12°♎15'57	26°49'01
retrograde	13099 Mar 28 07:16	5°♏44'03		retrograde	13100 Mar 11 13:14	19°♎40'43	
evening set	13099 Apr 03 08:40	3°♏14'53		evening set	13100 Mar 18 00:37	17°♎08'19	
asc. node	13099 Apr 04 09:08	2°♏19'46		min. Earth dist.	13100 Mar 22 00:52	13°♎09'14	0.66049 AU
	13099 Apr 06 12:45	30°♋♎		asc. node	13100 Mar 22 06:34	12°♎52'51	
min. Earth dist.	13099 Apr 07 14:25	28°♎41'59	0.67385 AU	inferior conj	13100 Mar 24 02:03	10°♎45'22	0°34'28

minimum elong	13100 Mar 24 01:09	10° Υ 48'01	0°34'01			13101 Mar 02 03:56	30° \mathbb{R} \mathbb{H}	
morning rise	13100 Mar 30 02:56	5° Υ 08'10		min. Earth dist.		13101 Mar 05 03:38	27° \mathbb{H} 12'04	0.64352 AU
direct	13100 Apr 02 00:32	4° Υ 21'53		inferior conj		13101 Mar 07 16:24	24° \mathbb{H} 30'37	-0°28'55
morning max el	13100 Apr 08 09:58	7° Υ 44'03	18°12'10	minimum elong		13101 Mar 07 17:17	24° \mathbb{H} 28'17	0°28'23
desc. node	13100 Apr 24 08:44	0° \mathbb{B} 31'19		asc. node		13101 Mar 09 04:01	22° \mathbb{H} 57'40	
	13100 Apr 24 00:56	0° \mathbb{B}		morning rise		13101 Mar 14 05:00	19° \mathbb{H} 07'10	
morning set	13100 Apr 27 14:32	5° \mathbb{B} 43'46		direct		13101 Mar 16 17:53	18° \mathbb{H} 34'17	
				morning max el		13101 Mar 23 03:03	21° \mathbb{H} 52'12	17°50'50
superior conj	13100 May 12 20:21	29° \mathbb{B} 55'25	-1°53'58			13101 Mar 29 11:55	0° Υ	
minimum elong	13100 May 12 11:37	29° \mathbb{B} 21'09	1°54'07	morning set		13101 Apr 09 04:36	17° Υ 27'13	
	13100 May 12 21:32	0° \mathbb{H}		desc. node		13101 Apr 11 05:21	20° Υ 51'39	
max. Earth dist.	13100 May 14 15:17	2° \mathbb{H} 43'18	1.45793 AU			13101 Apr 16 17:26	0° \mathbb{B}	
evening rise	13100 May 28 21:47	24° \mathbb{H} 56'03						
	13100 Jun 01 04:01	0° \mathbb{B}		superior conj		13101 Apr 22 15:28	9° \mathbb{B} 36'58	-1°20'28
greatest brilliancy	13100 Jun 09 09:02	12° \mathbb{B} 37'55	-0.7m	minimum elong		13101 Apr 22 07:22	9° \mathbb{B} 04'25	1°20'03
asc. node	13100 Jun 18 04:08	25° \mathbb{B} 02'59		max. Earth dist.		13101 Apr 27 11:03	17° \mathbb{B} 16'42	1.45226 AU
evening max el	13100 Jun 21 11:14	28° \mathbb{B} 46'56	19°10'38			13101 May 05 15:00	0° \mathbb{H}	
	13100 Jun 22 18:35	0° \mathbb{Q}		evening rise		13101 May 08 10:55	4° \mathbb{H} 20'52	
retrograde	13100 Jun 28 09:29	2° \mathbb{Q} 37'51		greatest brilliancy		13101 May 23 11:03	26° \mathbb{H} 51'07	-0.6m
evening set	13100 Jul 01 22:06	1° \mathbb{Q} 25'40				13101 May 25 15:47	0° \mathbb{B}	
	13100 Jul 03 15:23	30° \mathbb{R} \mathbb{B}		evening max el		13101 Jun 04 15:27	12° \mathbb{B} 34'44	20°06'07
inferior conj	13100 Jul 07 08:47	25° \mathbb{B} 37'21	3°05'59	asc. node		13101 Jun 05 01:10	12° \mathbb{B} 58'44	
minimum elong	13100 Jul 07 09:56	25° \mathbb{B} 33'36	3°04'55	retrograde		13101 Jun 12 08:04	16° \mathbb{B} 58'28	
min. Earth dist.	13100 Jul 08 20:43	23° \mathbb{B} 41'13	0.66784 AU	evening set		13101 Jun 16 06:21	15° \mathbb{B} 29'27	
morning rise	13100 Jul 12 21:10	19° \mathbb{B} 13'30		inferior conj		13101 Jun 21 13:24	9° \mathbb{B} 28'01	3°13'08
direct	13100 Jul 19 00:34	16° \mathbb{B} 33'54		minimum elong		13101 Jun 21 13:30	9° \mathbb{B} 27'39	3°12'07
desc. node	13100 Jul 21 08:27	16° \mathbb{B} 53'45		min. Earth dist.		13101 Jun 22 11:00	8° \mathbb{B} 14'42	0.67959 AU
morning max el	13100 Jul 31 16:08	24° \mathbb{B} 07'28	26°01'32	morning rise		13101 Jun 26 20:19	3° \mathbb{B} 06'26	
	13100 Aug 05 22:31	0° \mathbb{Q}		direct		13101 Jul 02 12:36	0° \mathbb{B} 36'04	
	13100 Aug 26 17:46	0° \mathbb{H}		desc. node		13101 Jul 08 05:43	2° \mathbb{B} 35'15	
morning set	13100 Sep 05 15:56	17° \mathbb{H} 18'26		morning max el		13101 Jul 14 02:20	7° \mathbb{B} 32'16	24°38'30
max. Earth dist.	13100 Sep 09 10:18	24° \mathbb{H} 24'45	1.35256 AU			13101 Jul 31 15:29	0° \mathbb{Q}	
	13100 Sep 12 06:49	0° \mathbb{B}		morning set		13101 Aug 18 19:58	29° \mathbb{Q} 10'53	
asc. node	13100 Sep 14 05:15	3° \mathbb{B} 52'42				13101 Aug 19 07:09	0° \mathbb{H}	
				max. Earth dist.		13101 Aug 22 09:59	5° \mathbb{H} 34'50	1.37426 AU
superior conj	13100 Sep 14 23:51	5° \mathbb{B} 27'00	0°07'21					
minimum elong	13100 Sep 14 23:26	5° \mathbb{B} 24'52	0°07'16	superior conj		13101 Aug 29 08:18	18° \mathbb{H} 36'56	-0°25'20
behind sun begin	13100 Sep 14 17:59	4° \mathbb{B} 57'09		minimum elong		13101 Aug 29 10:00	18° \mathbb{H} 45'10	0°25'18
behind sun end	13100 Sep 15 04:53	5° \mathbb{B} 52'38		asc. node		13101 Sep 01 01:51	23° \mathbb{H} 58'25	
evening rise	13100 Sep 22 16:51	21° \mathbb{B} 24'23				13101 Sep 04 02:22	0° \mathbb{B}	
	13100 Sep 26 22:42	0° \mathbb{H}		evening rise		13101 Sep 06 20:08	5° \mathbb{B} 29'46	
evening max el	13100 Oct 11 02:25	21° \mathbb{H} 44'40	20°29'36			13101 Sep 20 22:35	0° \mathbb{H}	
desc. node	13100 Oct 17 04:48	26° \mathbb{H} 09'10		evening max el		13101 Sep 23 15:16	3° \mathbb{H} 03'19	19°21'23
retrograde	13100 Oct 22 04:25	27° \mathbb{H} 15'08		retrograde		13101 Oct 03 01:17	7° \mathbb{H} 45'51	
evening set	13100 Oct 24 08:52	27° \mathbb{H} 03'15		desc. node		13101 Oct 04 02:16	7° \mathbb{H} 42'36	
inferior conj	13100 Nov 02 08:43	23° \mathbb{H} 07'57	-4°39'41	evening set		13101 Oct 04 21:52	7° \mathbb{H} 35'39	
minimum elong	13100 Nov 01 22:39	23° \mathbb{H} 22'34	4°36'14	inferior conj		13101 Oct 13 12:54	3° \mathbb{H} 27'12	-2°56'39
min. Earth dist.	13100 Nov 03 15:45	22° \mathbb{H} 22'53	0.54692 AU	minimum elong		13101 Oct 13 05:19	3° \mathbb{H} 39'36	2°53'23
morning rise	13100 Nov 10 12:01	19° \mathbb{H} 08'01		min. Earth dist.		13101 Oct 16 02:02	1° \mathbb{H} 47'31	0.55712 AU
direct	13100 Nov 14 22:53	18° \mathbb{H} 25'21				13101 Oct 19 03:16	30° \mathbb{R} \mathbb{B}	
morning max el	13100 Nov 28 07:31	24° \mathbb{H} 56'08	23°37'20	morning rise		13101 Oct 21 10:25	28° \mathbb{B} 56'43	
	13100 Dec 02 23:30	0° \mathbb{H}		direct		13101 Oct 26 17:29	27° \mathbb{B} 53'16	
asc. node	13100 Dec 11 06:24	12° \mathbb{H} 04'39				13101 Nov 03 05:03	0° \mathbb{H}	
	13100 Dec 20 15:44	0° \mathbb{B}		morning max el		13101 Nov 09 17:44	4° \mathbb{H} 56'57	25°23'23
morning set	13100 Dec 22 04:02	3° \mathbb{B} 12'02				13101 Nov 27 16:09	0° \mathbb{H}	
				asc. node		13101 Nov 28 03:22	0° \mathbb{H} 51'07	
superior conj	13100 Dec 29 00:56	18° \mathbb{B} 06'22	1°35'49	morning set		13101 Dec 06 15:40	17° \mathbb{H} 54'18	
minimum elong	13100 Dec 29 01:56	18° \mathbb{B} 11'47	1°36'45			13101 Dec 12 04:01	0° \mathbb{B}	
max. Earth dist.	13100 Dec 31 19:22	24° \mathbb{B} 02'30	1.33029 AU					
	13101 Jan 03 15:50	0° \mathbb{B}		superior conj		13101 Dec 13 10:19	2° \mathbb{B} 47'38	1°38'19
evening rise	13101 Jan 05 17:18	4° \mathbb{B} 10'33		minimum elong		13101 Dec 13 10:12	2° \mathbb{B} 47'00	1°39'20
desc. node	13101 Jan 13 03:18	18° \mathbb{B} 12'25		max. Earth dist.		13101 Dec 14 22:38	6° \mathbb{B} 07'41	1.31939 AU
	13101 Jan 20 03:06	0° \mathbb{H}		evening rise		13101 Dec 20 14:20	18° \mathbb{B} 13'34	
evening max el	13101 Feb 08 21:06	25° \mathbb{H} 42'37	27°24'54			13101 Dec 26 13:10	0° \mathbb{B}	
	13101 Feb 14 01:18	0° Υ		desc. node		13101 Dec 31 00:08	8° \mathbb{B} 04'11	
retrograde	13101 Feb 22 12:38	3° Υ 09'01				13102 Jan 14 13:51	0° \mathbb{H}	
evening set	13101 Mar 01 07:33	0° Υ 39'38						